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# REPORT

# SD 6-3 Geochemical Characterization of Waste Rock, Ore, Tailings and Overburden Meliadine Gold Project, Nunavut

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REPORT

Golder Associates

# Executive Summary

Agnico Eagle Mines Limited (AEM) proposes to construct and operate a gold mine, known as the Meliadine Gold Project (the Project), located approximately 25 km north of Rankin Inlet in Nunavut. The Project is situated on Inuit Owned Land administered by the Kivalliq Inuit Association (KIA), on a peninsula between the east, south, and west basins of Meliadine Lake. The Project comprises five deposits that include, from west to east: Tiriganiaq, Pump, Wesmeg, F Zone, and the Discovery deposit. The Wolf deposit is considered in this report, although it is not currently part of Project feasibility. AEM retained Golder Associates Ltd. (Golder) to conduct a geochemical sampling and analysis program of mine waste materials that will be generated from exploitation of the six deposits, including waste rock, ore, tailings, and overburden. The objectives of the geochemical characterization program are to: 1) evaluate the acid rock drainage (ARD) potential of mine waste according to INAC (1992) and MEND (2009); and, 2) identify chemicals of environmental interest in the framework of mine water and waste management and probable future mine water quality.

This report discusses the static and kinetic test results for waste rock, ore, tailings and overburden expected to be produced through the exploitation of the six deposits. Static and kinetic testing methods were used to assess the chemical composition of the mine waste, its potential to generate ARD, and its potential to leach metals to the receiving environment upon exposure to ambient conditions.

This Executive Summary is a synopsis of the findings of this study. For a full understanding of the study, the reader is required to read the entire document presented herein.

## Waste Rock

Most waste rock lithologies are non acid-generating except for Discovery greywacke and iron formation that are uncertain because of their variability. The iron formation waste rock from the Pump and F Zone deposits has an uncertain potential to generate ARD but these rock units constitute minor proportions of the waste rock to be generated from these deposits (14% and 8% by tonnage, respectively). The other rock types from these deposits have excess buffering capacity such that the overall ARD potential of the F Zone stockpile and the stockpiles that will contain waste rock from the Tiriganiaq, Wesmeg and Wolf deposits are expected to be non-potentially acid-generating (non-PAG). Some metal carbonate minerals are present but analytical data demonstrates that buffering capacity of non-PAG rock units is sufficient to neutralize acid that could potentially be released. Waste rock of most stockpiles does not require means to prevent oxidation, with the possible exception of Discovery. The Discovery waste rock pile is not expected to generate acidic drainage in the short to medium term based both on the low reactivity of potentially acid-generating (PAG) rock samples demonstrated through kinetic testing, and on AEM's experience at the Meadowbank Mine where the waste rock pile containing similar iron formation PAG rock froze within the first year of deposition. The Discovery pile is expected to freeze prior to the onset of ARD. The long-term ARD potential of Discovery waste rock, and particularly in the active thaw layer on the surface of the waste rock stockpile, is uncertain at this time.

The buffering capacity and sulphur content of Discovery waste rock and rock pile contact water quality should be monitored during operation. The Discovery waste rock will need to be managed according to its ARD potential.

Kinetic tests completed on all waste rock types and at various scales show that leachate is expected to meet Metal Mining Effluent Regulations (MMER) monthly mean effluent limits. Waste rock pile seepage and contact water should be managed in a way to capture water and monitor water quality prior to discharge. Suspended solids and explosives residues (ammonia and/or nitrate) have not been assessed in this study but can be present in mine rock contact water.

## Tailings

All but the Discovery deposit tailings are non acid-generating. Discovery whole ore tailings are potentially acid-generating. Based on the 2011 mining plan provided by AEM, the bulk of the tailings in the impoundment is calculated to be non acid-generating on an annual basis over most of the mine life, except for a short periods during operation where the acid generation potential of the bulk tailings is uncertain. The tailings mass is not anticipated to develop acidic drainage because tailings will be deposited as a water-saturated, thickened slurry which will minimize oxygen intake; Discovery ore will be milled together with other ore resulting in a mixture that will have available excess buffering capacity; and the milling rate is such that fresh tailings are continually being deposited on the surface limiting tailing exposure time during operations. A long lag time to oxidation of sulphide minerals in tailings is expected based on kinetic testing. Tailings production in the last 3 years of operations are non acid-generating; this should be managed in a way to cover the entire tailings mass with a layer that is sufficiently thick to protect the underlying tailings from oxidizing agents. Prolonged exposure of Discovery tailings should be avoided.

Some tailings solids streams leach concentrations of arsenic that exceed the MMER monthly mean effluent criterion. Long-term chemical release from the tailings will need to be controlled.

Process water will be treated to destroy cyanide prior to discharge to the Tailings Storage Facility (TSF) to meet International Cyanide Code guidance concentrations. Tailings water within the TSF is likely to require attenuation of pH, arsenic, cyanide and suspended solids to meet MMER criteria prior to discharge to the receiving environment. Other parameters may also require treatment for discharge if recycling of the TSF water results in further concentration of the process water.

## Overburden

Overburden from within the pit outlines is non acid-generating and does not require means to prevent oxidation. Metal release under laboratory conditions is low despite the relatively high total arsenic content. Leachate concentrations in overburden are generally lower than waste rock and all meet MMER monthly mean limits. Waste rock and overburden have compatible geochemical characteristics such that they could be managed together in the same facility.

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# 1.0 INTRODUCTION

Agnico Eagle Mines Limited (AEM) proposes to construct and operate a gold mine, known as the Meliadine Gold Project (Project), located approximately 25 km north of Rankin Inlet in Nunavut (Map 1). The Project is situated on Inuit Owned Land administered by the Kivalliq Inuit Association (KIA), on a peninsula between the east, south, and west basins of Meliadine Lake.

The Project comprises five deposits that include, from west to east: Tiriganiaq, Pump, Wesmeg, F Zone, and the Discovery deposit, located approximately 16 km southeast of Tiriganiaq and 18 km north east of Rankin Inlet (AEM 2011). It is important to mention that the Wolf deposit located west of the 5 deposits is also presented as part of this document even though it is currently not part of Project feasibility. The locations of the deposits are presented in Map 1 together with key project infrastructure.

It is understood that multiple aspects of the project are currently being developed and may change as the project advances. The surface of the Tiriganiaq deposit is anticipated to be operated as an open pit, extracting roughly 15.4 million tonnes (Mt) of ore, while deeper portions will be exploited by underground mining techniques and will extract roughly 10.9 Mt of ore. The other four pits will be mined through open pit methods, from which approximately 2.6 Mt of ore will be mined (AEM 2011). It is understood that if Wolf advances, it would also be mined through open pit methods.

The main infrastructures (mill and camp) for the proposed project will be constructed immediately north of the Tiriganiaq open pit. Ore will be processed at on-site-facilities. It is currently planned to use the Lake B7 basin as a tailings management area with a portion of the tailings possibly used as backfill. Waste rock and overburden will go to four (4) stockpile facilities: the DE Rock Pile at the Discovery area, Rock Pile A45-2 at F Zone, Rock Pile B-7 north of Tiriganiaq, and B-4, west of the Pump and Wesmeg deposits (AEM, 2011).

Golder Associates Ltd. (Golder) initiated a staged geochemical characterization program for the Project in 2008 that is consistent with INAC (1992) and MEND (2009) recommended methods for mine waste characterization. The objective of the first stage of the program was to perform a scoping-level assessment of the chemical characteristics of the waste rock that is likely to be generated from exploitation of the Tiriganiaq deposit. Further sampling and testing of mining wastes was conducted in 2009 to characterize waste rock, tailings and overburden from the Tiriganiaq, F Zone and Discovery deposits. In 2011, additional sampling and testing was conducted on all five deposits plus Wolf. Static and kinetic testing methods were used to assess the chemical composition of the mine waste, its potential to generate acid rock drainage (ARD) and its potential to leach metals (ML) upon exposure to ambient conditions. Results of the geochemical characterization program are meant to guide mine waste management practices for the proposed mining operation.

This report discusses the static and kinetic test results for waste rock, ore, tailings and overburden expected to be produced through the exploitation of the Tiriganiaq, F Zone, Pump, Wesmeg, Wolf (if it was to be exploited), and Discovery deposits. It describes the methods utilized as part of the static and kinetic testing program, presents the interpreted test results, and provides recommendations on mine waste management planning.

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6990000 6989000 6988000 6987000 6986000 6985000

N

Meliadine Lake

Tiriganiaq Pit #2

Tiriganiaq Pit

Wesmeg #1

Wesmeg #2

Wesmeg #3

Wesmeg #5

Wesmeg #4

Pump Pit #1

Pump Pit #2

F-Zone Pit #3

F-Zone Pit #2

F-Zone Pit #1

Control Lake

STUDY AREA

**LEGEND**

- All Weather Access Road (AWAR)
- Proposed Project Infrastructure
- Topographic Contour (1.0 m Interval above sea level)
- Watercourse
- Open Pit
- Tailings Storage Facility
- Waste Rock/ Overburden Storage Facility
- Waterbody

**REFERENCE**

Base data obtained from Agnico-Eagle Mines Ltd (AEM).

Datum: NAD 83 Projection: UTM Zone 15

1 0 1

SCALE 1:30000 KILOMETRES

PROJECT

AGNICO-EAGLE MINES LTD.
MELIADINE GOLD PROJECT
NUNAVUT

TITLE

# SITE PLAN

Golder Associates

| | | | | |
|---|---|---|---|---|
| PROJECT NO. | 10-1373-0076 | | FILE No. | |
| DESIGN | VB | 12 Oct. 2012 | SCALE AS SHOWN | REV. 0 |
| GIS | JW | 12 Oct. 2012 | MAP 1 | |
| CHECK | VJB | 24 Oct. 2012 | | |
| REVIEW | VJB | 24 Oct. 2012 | | |

N:\Bur-Graphics\Projects\2010\1373\10-1373-0076\Mapping\MXD\GeochemistryFigure_1_Site_Plan.mxd

## 1.1 Information Reviewed

Background information on the geology, mineralogy, and chemistry of rock types present at the site was extracted from the following documentation:

- Project Description, Meliadine Gold Project, Nunavut (AEM 2011);
- Tailings Mineralogy reports (SGS 2011) and (PMC 2011);
- Preliminary Project Description, Meliadine Gold Project, Nunavut (Comaplex 2010);
- Tiriganiaq Gold Deposit, Nunavut – Resource Update (NI43-101 report) (Snowden 2008);
- Technical Report for the Meliadine East Project (NI43-101 report) (Pincock, Allen & Holt 2008);
- Report on Tiriganiaq Geochemistry (SRK 2006);
- Final Report on Meliadine West Gold Project: Water Quality Baseline Studies (Golder 2008);
- Interim Static Test Report for Waste Rock from the Tiriganiaq Deposit (Golder 2009); and
- Geological cross-sections, borehole logs and maps provided by Comaplex, Meliadine Resources Inc. and AEM.

## 1.2 Regional and Site Geology

The following summary is adapted from Snowden (2008), Pincock, Allen & Holt (2008), Comaplex (2009) and AEM (2011).

The Meliadine properties are located in the Rankin Inlet Greenstone Belt of the Churchill Structural Province. This is an Archean, deformed and metamorphosed sequence of mafic volcanic, felsic pyroclastic, sedimentary rocks and gabbro sills. The Meliadine trend is defined by the regional Pyke Fault, a prominent high-strain fault zone which is northwest trending within the stratigraphy of the Archean Rankin Inlet Group. The Rankin Inlet Group was subjected to lower to middle greenschist facies metamorphism and multiple periods of deformation, including two identified periods of Archean and Proterozoic age. The Meliadine ore deposits are low-sulphide, gold-quartz vein deposits as per the geo-environmental classifications provided in Plumlee et al. (1999).

Stratigraphy in the Project area strikes east-west, and dips to the north at inclinations of 60 to 70 degrees. The stratigraphy is interpreted as being overturned. The principal lithological units that are likely to be disturbed by mining include:

1) Turbiditic sedimentary rocks of the hanging wall, comprising greywacke, siltstone and argillite (Sam Formation) with gabbro dykes;
2) Volcanic-hosted and sediment-hosted iron formation, including greywacke, siltstone and argillite (Upper Iron Formation) with abundant magnetite and chert layers;
3) Sericite altered siltstones and graphitic argillite near the Lower Fault zone contact (Tiriganiaq Formation); and,
4) Schistose and carbonate-altered mafic volcanic rocks in the footwall (Wesmeg Formation).

The geology of each targeted deposit is described individually in the following sections.

### 1.2.1 Tiriganiaq Deposit

Gold ore in the Tiriganiaq deposit is hosted in the Tiriganiaq Formation which constitutes the hanging wall of the Lower Fault. The Lower Fault zone is a basal detachment surface of unknown age from which listric (i.e. “spoon-shaped”) faults emanate. This results in the repetition of the Tiriganiaq Deposit stratigraphy in multiple sequences above the Lower Fault.

The Tiriganiaq deposit is hosted in sulphidized iron formation and quartz veins associated with the iron formation, sedimentary units and mafic volcanics. Gold mineralization is divided into multiple lodes based on structural features, shearing, quartz veining, grade, and the occurrence of coarse arsenopyrite. Of the major lodes, five are parallel to the stratigraphic sequence and the Lower Fault, and two are controlled by shear structures associated with the listric faults splays. The two major lodes, the 1000 and 1100 lodes, have a strike length exceeding 800 metres and are open down-plunge (easterly) along a length exceeding 500 metres. Underground mining would target these and other lodes (1150 and 1250).

Sulphide mineralization in the Tiriganiaq Deposit developed in two distinct generations. Primary sulphides are found parallel to bedding in the oxide iron formations and black argillite, and include laminations of pyrrhotite, pyrite, and chalcopyrite. Gold values are low to absent in this generation, indicating gold mineralization is not strongly correlated with primary sulphidization (lodes 1100, 1150, 1250). The second phase of sulphidization includes coarse-grained arsenopyrite and pyrrhotite associated with gold-bearing zones and quartz veining (1000 lode). Galena and sphalerite are also present in both sulphide assemblages and are associated with gold-bearing zones.

### 1.2.2 F Zone Deposit

The F Zone deposit is hosted in sheared, quartz vein-bearing portions of iron formation hosted entirely in mafic volcanics of the Wesmeg formation. The deposit occurs as a series of mineralized pods of pyrrhotite and arsenopyrite-bearing iron formation that extend over a distance of just over 1 kilometre in length. These pods extend to the bedrock surface and are the target of several proposed shallow open pits. Underground potential also exists with gold mineralization present at depths of approximately 250 meters below ground surface (mbgs).

### 1.2.3 Pump Deposit

Host rocks for the Pump deposit are similar to those at F Zone, in that they are chlorite-rich, massive and pillowed basalts of the Wesmeg Formation, which are cut by gabbro dykes and interflow sediments (AEM, 2011). The main structural feature is a kilometer-long Z-shaped fold. Mineralization in the Pump gold deposit is associated with shearing and quartz veining within the Lower Lean Iron Formation. Higher grade gold sections are found to be associated with east-west shearing. The orientation of the shearing is similar to that found at F Zone.

Free gold occurs as discrete blebs in pyrrhotite and quartz shears, while occurring to a lesser extent along grain boundaries in large recrystallized arsenopyrite (AEM, 2011).

### 1.2.4 Wesmeg Deposit

The Wesmeg deposit was the target of a dedicated drilling program for the first time in 2010 (AEM, 2011). Similar to the Wolf deposit, the Wesmeg deposit is divided into two parts: a northern and southern part.

The stratigraphic sequence of the northern part has a similar orientation (east – west) of its stratigraphy to that of the Tiriganiaq deposit. This orientation has been observed in a high resolution magnetic survey (AEM, 2011).

The host Wesmeg Formation is similar in geology to other deposits in that it is comprised of chlorite-rich massive and pillowed basalts, while also containing interbeds of mafic volcaniclastics. There are also interflow sediments comprised of siltstone, mudstone and minor iron formations in the stratigraphy.

Similar to the Pump deposit, mineralization in Wesmeg is associated with shearing and quartz veining while gold occurs as discrete to coarse blebs, disseminated, while being closely associated with coarse to finely disseminated arsenopyrite (AEM, 2011).

### 1.2.5 Wolf Deposit

The Wolf gold deposit is divided into two areas based on stratigraphy: the northerly “Wolf North” which is similar to Tiriganiaq stratigraphy, and the southerly “Wolf Main” which is similar to F Zone stratigraphy. The geology of the Wolf deposit contains chlorite-rich, massive basalts and pillowed basalts belonging to the Wesmeg Formation, which forms the structural footwall. Most of the mineralization is hosted in a chert-magnetite-chlorite iron formation.

Mineralization at the Wolf gold deposit is divided into three areas: Wolf North (similar to Tiriganiaq mineralization), Wolf Main (similar to Pump and F zone mineralization), and Wolf Central. Wolf North is similar to lode 1100 of Tiriganiaq, in that is associated with shearing and quartz veining. Gold occurs as disseminated and coarse blebs with arsenopyrite and pyrrhotite concentrations in veins (AEM, 2011). Wolf Main is similar to Pump and F Zone in that it is associated with the lower Lean Iron Formation. Wolf Central is similar to lode 1000 of Tiriganiaq in that is associated with lode quartz near the Lower Fault, which is the contact between Upper Oxide Formation and the Wesmeg formation. Gold mineralization appears as free gold in laminated and non-laminated quartz veins with lesser concentrations of arsenopyrite and pyrrhotite.

### 1.2.6 Discovery Deposit

The Discovery deposit is hosted in NW-trending mineralized iron formation belts of approximately 20 km in overall length. The principal lithological units associated with the deposit include greywacke with lesser argillites, pelites and siltstone, and argillite (Sam Formation) interbedded with oxide facies iron formation units. Late gabbro dykes are present, trending east-west across the deposit area.

Gold mineralization is predominantly hosted in the northernmost ‘upper oxide’ iron formation, located parallel to the trend of the Pyke fault, within southeast-northwest trending stratigraphy. Gold mineralization is structurally controlled within folds and shear zones and is associated with quartz veining, silica flooding and sulphidization of magnetite by pyrrhotite and/or arsenopyrite. Alteration envelopes occur adjacent to veins of quartz with variable calcite content. Alteration is characterized by assemblages of hornblende/grunerite, biotite and calcite overprinting the iron formation and greywacke greenschist facies. Sulphide mineralization includes arsenopyrite and pyrrhotite with minor chalcopyrite and trace sphalerite. The highest gold concentrations are in structurally

controlled zones (shearing, folds) associated with pyrrhotite and porphyroblastic arsenopyrite, as well as disseminated in quartz veins and silicate iron formation.

### 1.2.7 Mineralogy and Arsenic in the Project Area

Arsenopyrite (FeAsS), pyrite ($FeS_2$), pyrrhotite ($Fe_{1-x}S$, with x varying from 0 to 0.17), and chalcopyrite (CuFeS) are associated with gold mineralization and are sometimes detected in trace quantities in waste rock. Mineralogical testing of whole ore tailing samples from each deposit also identifies arsenopyrite and pyrite in quantities up to 10 wt%.

The Geological Survey of Canada (GSC) gathered information on the composition of till from the Meliadine Trend (McMartin, 2000) and have found that background arsenic levels are anormalously high on a regional level in soil and surface water samples collected in the area. The arsenic concentration in surficial till corroborates with the presence of arsenic enrichment in the underlying basement rocks associated with gold mineralization. Soil samples analyzed as part of this study confirms the findings of McMartin: 33 samples of soils collected near the deposits show concentrations ranging from 1.0 to 10,000 mg/kg, with an average of 30 mg/kg (Section 5.1).

Arsenopyrite is typically abundant in low-sulphide, gold-quartz vein deposits (Plumlee et al. 1999). However, arsenic may also be present in other mineral phases, such as arsenic-rich pyrite and as impurities in non-sulphide minerals. Arsenic may replace sulphur and/or iron in magnetite, pyrite and other sulphides, aluminum in feldspars and micas, silicon in quartz, and carbonate in calcite and possibly ankerite (Onishi and Sandell 1955; Horton *et al.* 2001; Di Benedetto *et al*, 2006). The mode of occurrence of arsenic will influence its mobility upon weathering. If arsenic is present in minerals other than sulphides, arsenic releases may not be exclusively associated with their oxidation, but may also be released by mineral dissolution or buffering reactions. As such, arsenic has been identified as a parameter of environmental interest and will be discussed throughout this report.

## 1.3 Mine Plan

This section describes the mine plan at the time of report preparation. Multiple aspects of the project are currently being developed and may change as the project advances. The project will be operated using conventional underground and open pit mining techniques to exploit five separate deposits (Tiriganiaq, F Zone, Wesmeg, Pump and Discovery). Wolf deposit is also presented even though it is currently not part of the Project. All deposits will be exploited through open pit mining, while underground development is currently proposed for the Tiriganiaq deposit only. However, underground mining cannot be discounted for other deposits, including Wesmeg and F Zone deposits, and is subject to further exploratory drilling and the results of the Project feasibility study (AEM, 2011).

### 1.3.1 Mining Schedule and Techniques

The five target gold deposits at Meliadine will be mined by open pit, with a portion of Tiriganiaq also mined by underground methods. The geochemical characterization study was designed based on a 10,000 tonnes per day (tpd) maximum pit scenario (*Lithology_proportion_pit 10000tpd.xlsx* dated June 13, 2011, D. Duquette pers. comm.), which represents the largest possible open pit configurations at all six deposits (i.e., including Wolf) based on the available geological information to date. The actual mining rate is likely to be 8,500 tpd with

slightly smaller pit dimensions. The total ore production rate from all open pits is planned to be 6,000 tpd, while 2,500 tpd is planned from the Tiriganiaq underground (AEM, 2011).

Based on current resources, construction will require two years and the operational mine life is estimated at about 14 years, with an anticipated minimum project life of approximately 13 years (AEM, 2011). Pre-development of the underground workings at Tiriganiaq and the stripping of overburden and waste rock at Tiriganiaq for construction use will begin in mine year -1 (construction period). The open pits will be mined as summarized in Table 1, and waste rock will be placed in rock storage facilities (RSF) as also identified in this table.

**Table 1: Summary of Mining Sequence and Waste Management**

| Deposit | Mine Year [1,2,3] | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | -1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Discovery | | | | | | | *to DE Waste Rock Pile* | | | | | | | |
| F Zone | | | | *to A45-2* | | | | | | | | | | |
| Pump | | | | | | | *to B4* | | | *to B4* | | | | |
| Tiriganiaq open pit | *to B7* | | | | | | | | | | | *to B4* | | |
| Tiriganiaq underground | *to B7/B4 and portion used as backfill* | | | | | | | | | | | | | |
| Wesmeg | | | | *to B4* | | | | | | | | | | |
| Wolf[4] | | | | | | | | | | | *to B7* | | | |

**Notes:**
[1] From *Production Plan (2011-11-01)YEARS.xlsx* dated November 11, 2011, from J. Noël, pers. commun.)
[2] Year -1 – overburden pre-stripping and ore stockpiling
[3] Year 1-13 – milling
[4] Wolf not part of the current Project

**Discovery Deposit –** The ore will be extracted through one shallow open pit.

**F Zone Deposit –** This deposit will be exploited as a series of 3 shallow open pits aligned along the east-west geological trend. A small bay of Lake A6 will be closed by a dike and dewatered in order to allow excavation of the westernmost pit.

**Tiriganiaq Deposit –** Mineralization extends to the ground surface and will be exploited through two proposed shallow open pits (less than 200m depth), including a main pit and one smaller pit later in mine life, which is located to the west of the main pit, in Lake B5. Underground mining is currently expected to extend to 750 m below ground surface, although the ore is open at depth. The underground development will extend below the base of the permafrost.

**Pump, Wesmeg and Wolf Deposits –** mineralization at these deposits extends to surface which allows for exploitation by open pit mining. These deposits will be mined by a series of shallow open pits (Wolf is not part of the current Project).

### 1.3.2 Overburden and Waste Rock Management

The preliminary expected tonnages of overburden, waste rock and ore are summarized in Table 2 as tonnes, based on the 10,000 tpd maximum pit scenario. Although the current mine plan is based on a production rate of approximately 8,500 tpd, the geochemistry study utilized the maximum pit scenario of 10,000 tpd to be more inclusive and support possible future pit expansions.

**Table 2: Estimated Production (10,000 tpd) of Mine Waste Material per Deposit and Rock Type (tonnes)**

| Type | Rock Type | Total Tonnage[1] | Tiriganiaq | F Zone | Discovery | Wesmeg | Wolf | Pump |
|---|---|---|---|---|---|---|---|---|
| Waste Rock | Gabbro | 11,233,453 | 4,654,075 | 287,615 | 6,055,218 | - | 236,545 | |
| | Iron Formation | 22,859,390 | - | 2,666,736 | 12,410,757 | 30 | 2,251,056 | 5,530,812 |
| | Mafic Volcanic | 155,450,855 | 13,781,944 | 29,549,458 | - | 74,378,368 | 5,162,693 | 32,578,392 |
| | Greywacke / Siltstone | 99,556,572 | 81,484,332 | - | 6,908,652 | - | 10,966,869 | 196,718 |
| | Ultramafic | 717,915 | - | - | - | 717,915 | - | - |
| | Undefined | 90,935,846 | 41,310,909 | - | 46,703,570 | - | 2,921,367 | - |
| **Total Waste** | | **380,754,032** | **141,231,271** | **32,503,810** | **72,078,198** | **75,096,312** | **21,538,531** | **38,305,922** |
| Ore | Gabbro | 8,749 | - | - | 8,749 | - | - | - |
| | Iron Formation | 6,839,679 | - | 1,943,457 | 2,518,951 | - | 864,690 | 1,512,581 |
| | Mafic Volcanic | 9,029,704 | 779,912 | 607,879 | - | 6,484,585 | 280,345 | 876,982 |
| | Greywacke / Siltstone | 1,207,832 | 1,075,307 | - | - | - | 132,525 | - |
| | Ultramafic | 78,499 | - | - | - | 78,499 | - | - |
| | Undefined | 13,859,135 | 13,072,281 | - | 482,063 | - | 304,792 | - |
| **Total Ore** | | **31,023,598** | **14,927,501** | **2,551,336** | **3,009,763** | **6,563,084** | **1,582,352** | **2,389,562** |

**Note:** [1] *Lithology_proportion_pit 10000tpd.xlsx* dated June 13, 2011, D. Duquette pers. comm.)

The anticipated mine waste management plan (AEM, 2012) is illustrated on the site plan (Map 1) and presented in Table 1 above. It is anticipated that suitable waste rock from the development of the Tiriganiaq open pit and access ramps will be used as an aggregate source for construction. Waste rock and overburden will report four (4) different rock storage facilities (RSF), where they will be stockpiled separately.

Waste rock and overburden from Discovery and F Zone will report to RSF DE and A45-2, respectively. Pump, Wesmeg and Tiriganiaq (Year 11 to 12 only) will share the B4 RSF, while Tiriganiaq (Year -1 to 10 only) and Wolf will share the B7 RSF. Waste rock from the Tiriganiaq underground development will report to waste stockpiles and a portion will be used for backfill.

### 1.3.3 Metallurgical Process and Tailings Management

Based on information provided to date (AEM, 2011), the Project will use a conventional milling and gold recovery process. This is a series of sequential steps consisting of crushing, grinding, gravity separation of free gold and cyanide leaching of the whole ore and gold recovery by carbon-in-pulp (CIP). The current mine plan is based on a production rate of approximately 8,500 tonnes per day. The milling process is likely to include the following steps:

- Primary crushing and storage of the ore in a stockpile;
- Grinding;
- Gravity separation;
- Cyanidation and carbon adsorption in a carbon-in-leach (CIL) circuit;
- Gold recovery;
- Thickening of cyanidation tailings and recovery/recycling of cyanide solution; and,
- Cyanide destruction of tailings slurry.

Details of the process flow sheet are dependent on the outcome of the feasibility study. Ore from all deposits will be stockpiled and processed at Tiriganiaq where the mill and ore processing facilities will be located. A proportion of the tailings may be thickened and used as backfill in Tiriganiaq underground development. The feasibility of this is currently being assessed. The remaining tailings will be deposited in the tailings storage facility (TSF) to be located in the Tiriganiaq area. A tailings management plan was being developed at the time of this report.

## 1.4 Previous Studies

Geochemical investigations were initiated by previous owners of the Project in 1998 and 2001 in conjunction with a metallurgical testing program (SRK 2006). A total of 150 Tiriganiaq samples were collected from the metasediments in the hanging wall, mafic volcanic of the footwall, iron formation and quartz vein ore, and overburden, all of which were subjected to geochemical testing; namely static tests, principally acid base accounting and solid chemistry composition.

Another geochemical investigation was completed in 2005. Forty eight (48) samples of rock were collected from diamond drill core from the area of the underground exploration decline at Tiriganiaq, all of which were tested for ARD potential, rock chemistry, and a smaller subset for metal leaching. The study report is included in Appendix E, and also includes results from the 1998-2001 testing program.

Golder initiated a mine waste geochemical characterisation program in 2008 for waste rock, ore, overburden and tailings from the Tiriganiaq, F Zone and Discovery deposits with subsequent sampling conducted in 2009 (Golder 2009). These data have been incorporated into the results database for the present study.

All previous studies concluded that most of the samples collected were non acid-generating, although a few samples were potentially acid-generating. Buffering capacity or neutralization potential (NP) was found to be high in all rock types analyzed. Short-term leach testing by shake flask extraction (SFE) found that, for all samples tested, leachate concentrations were below Metal Mining Effluent Regulations (MMER).

In addition to the above, water quality from a Primary Containment Pond located adjacent an Operations Pad for placement of the crushed ore from bulk sampling has been monitored since 2008 (Comaplex 2008, 2009). The Operations Pad was constructed from development rock that was removed and placed adjacent to an exploration decline portal (Figure 1). This waste rock has remained exposed to ambient conditions since 2008 and the edge of the Pad is regularly flooded by overland flows accumulating in topographical depressions called the “Primary Containment Pond” and “Sump” which also receive runoff that contacts the Pad and ore stockpiles. Waste rock contained in the Operations Pad is analogous to that which will be stored in the proposed RSFs, and the Containment Pond and Sump water quality is anticipated to reflect future greywacke waste rock contact water quality.

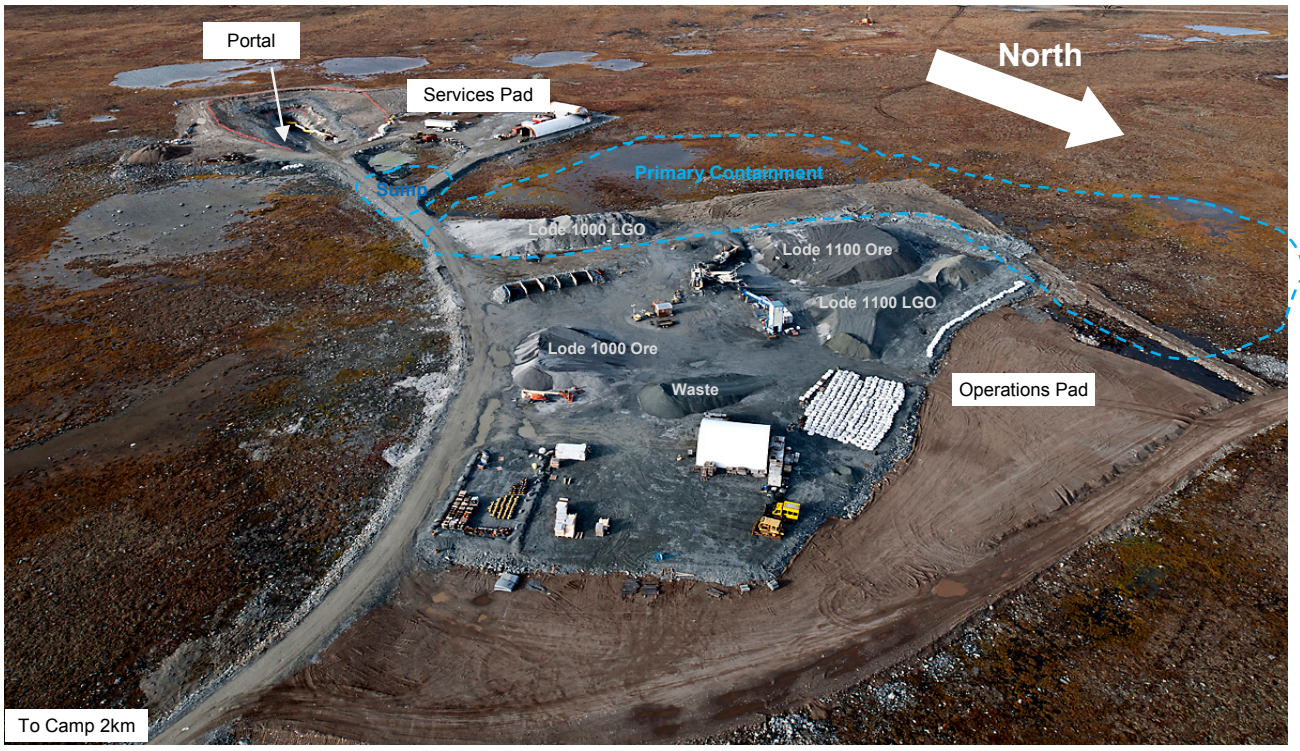



*Figure 1: Layout of the Operations Pad and Primary Containment Pond*

# 2.0 SAMPLE COLLECTION AND TEST METHODS

Canadian guidelines (INAC 1992 and MEND 2009) recommend that the number of samples required for an appropriate volumetric representation of geochemical characteristics be based on the quantity of waste rock to be excavated for each lithology disturbed by mining. INAC (1992) recommends a minimum number of samples as a function of the tonnage of specific rock types. These recommendations are in line with the MEND (2009) guidelines presented in Table 3.

**Table 3: Suggested Initial Sampling Frequency Based on Tonnage (MEND 2009)**

| Mass of Each Separate Rock Type (tonnes) | Minimum Number of Samples |
|---|---|
| <10,000 | 3 |
| <100,000 | 8 |
| <1,000,000 | 26 |
| <10,000,000 | 80 |

## 2.1 Sample Selection and Collection

Cross-sections showing the waste rock sample intervals are presented in Appendix A. A summary of the waste rock and ore, tailings and overburden sampling and analysis programs is provided below.

### 2.1.1 Waste Rock and Ore Samples

Golder geochemists and registered professional geologists in Nunavut reviewed geological cross-sections through the Tiriganiaq, F Zone, Discovery, Pump, Wesmeg and Wolf deposits to target sample intervals that represented waste rock to be disturbed by mining. Golder's sample selection plan had different goals based on the deposit. Sampling of waste rock from the Tiriganiaq deposit was focused on areas within the east and west extensions of the 2008 pit footprint, below the pit outline, and in the underground extensions. Discovery and F Zone waste rock was focused on supplementing the previous waste rock collection in 2008, by selecting samples for improved spatial representation within the proposed open pit. Sample selection at the new Pump, Wesmeg and Wolf deposits focused on obtaining samples that were evenly distributed both spatially and lithologically, and according to the anticipated tonnage of each rock type.

Table 4 compares the total number of waste rock samples with the total tonnage expected to be produced per deposit and rock type. The preliminary expected tonnages of waste rock and ore are based on the 10,000 tpd max pit scenario. The actual pits and waste rock volumes are likely to be around 8,500 tpd. An "undefined unit" identified by AEM geologists refers to units that contain multiple rock types. This was attributed to other rock types in the following manner: 78% is attributed to the greywacke/siltstone, 18% to iron formation, 1% to mafic volcanic, and 0.5% to gabbro (S. Patry, pers. comm. June 28, 2011). The remaining 2.5% is associated with minor rock types and will continue to be referred to as undefined.

For each deposit, the aim was to collect a total number of samples that would adequately characterize all rock lithologies present at site, and capture the compositional and spatial variability of the deposits. Waste rock sampling focussed on the major lithologies at each deposit and minor lithologies at the Project scale. Analytical

results of static testing support observations by the Project geologists that lithologies have similar geo-environmental properties across deposits with few exceptions. Consequently, although the total number of samples per rock type at each deposit is less than the recommendations outlined in Table 3, the total number of samples collected for each lithology across the deposits is considered sufficient to provide an adequate basis of evaluation of the range of geoenvironmental properties of each lithology to be disturbed by mining.

**Table 4: Summary of Total Waste Rock Tonnage and Waste Rock Sample Count**

| Deposit | Rock Type | Tonnage (tonnes) | | Number of Samples | |
|---|---|---|---|---|---|
| | | Estimated Tonnage[1] (tonne) | Proportion of Total Tonnage | Count | Proportion of Total |
| Discovery | Gabbro | 6,284,066 | 9% | 11 | 11% |
| | Greywacke/Siltstone | 43,323,426 | 60% | 54 | 55% |
| | Iron Formation | 20,906,136 | 29% | 33 | 34% |
| | Mafic Volcanic | 485,717 | 1% | - | - |
| | Undefined[2] | 1,078,852 | 1% | - | - |
| | Total | 72,078,198 | 100% | 98 | 100% |
| F Zone | Gabbro | 287,615 | 1% | - | - |
| | Greywacke/Siltstone | - | - | - | - |
| | Iron Formation | 2,666,736 | 8% | 7 | 9% |
| | Mafic Volcanic | 29,549,458 | 91% | 70 | 91% |
| | Total | 32,503,810 | 100% | 77 | 100% |
| Pump | Greywacke/Siltstone | 196,718 | 1% | - | - |
| | Iron Formation | 5,530,812 | 14% | 8 | 18% |
| | Mafic Volcanic | 32,578,392 | 85% | 36 | 82% |
| | Total | 38,305,922 | 100% | 44 | 100% |
| Tiriganiaq | Gabbro | 4,856,498 | 3% | 10 | 4% |
| | Greywacke/Siltstone | 113,694,449 | 81% | 194 | 77% |
| | Iron Formation | 7,514,454 | 5% | 6 | 2% |
| | Mafic Volcanic | 14,211,578 | 10% | 43 | 17% |
| | Undefined | 954,282 | 1% | | |
| | Total | 141,231,271 | 100% | 253 | 100% |
| Wesmeg | Iron Formation | 30 | 0% | - | - |
| | Greywacke/Siltstone | - | - | - | - |
| | Mafic Volcanic | 74,378,368 | 99% | 56 | 95% |
| | Ultramafic | 717,915 | 1% | 3 | 5% |
| | Total | 75,096,312 | 100% | 59 | 100% |
| Wolf | Gabbro | 250,860 | 1% | - | - |
| | Greywacke/Siltstone | 13,244,659 | 61% | 17 | 53% |
| | Iron Formation | 2,782,452 | 13% | 5 | 16% |
| | Mafic Volcanic | 5,193,075 | 24% | 10 | 31% |
| | Undefined | 67,484 | 0.3% | | |
| | Total | 21,538,531 | 100% | 32 | 100% |
| **Total** | | **380,754,044** | | **563** | |

**Notes:**
[1] Tonnages from *Lithology_proportion_pit 10000tpd.xlsx* dated June 13, 2011, D. Duquette pers. comm.
[2] Undefined material associated with minor rock types (2.5% of total undefined unit)

Each waste rock sample was described in terms of rock type, sulphide mineralogy, metamorphism, alteration, and staining associated with sulphide mineral oxidation. Each sample consisted of a composite of 3 to 5 kilograms of core (whole or split) collected from previously drilled diamond drill core over an interval of up to 10 metres. The length of the sample interval was intended to circumvent the effect of mineral clusters, particularly sulphide minerals, which may not be representative of the bulk rock mass along the targeted interval.

All waste rock samples were forwarded to SGS for geochemical testing, as summarized in Appendix B.1 and detailed in Section 2.2.

#### *2.1.1.1 Pad Samples*

Composite samples were generated from the Operations Pad for use as charge material for field cell construction as detailed in Appendix F. The composite samples were generated from test pits spread throughout accessible portions of the Operations Pad to collect samples of Tiriganiaq greywacke/siltstone waste rock mined from the existing decline (Map 2), which was placed as a flat surface stockpile and later was used as an Operations Pad. Low grade ore stockpiles were placed on this Pad including Tiriganiaq Lode 1000 and Lode 1100 ore. The Lode 1100 ore is associated with the primary sulphidization of the iron formation, while the Lode 1000 ore is part of the second phase of sulphidization of quartz veins.

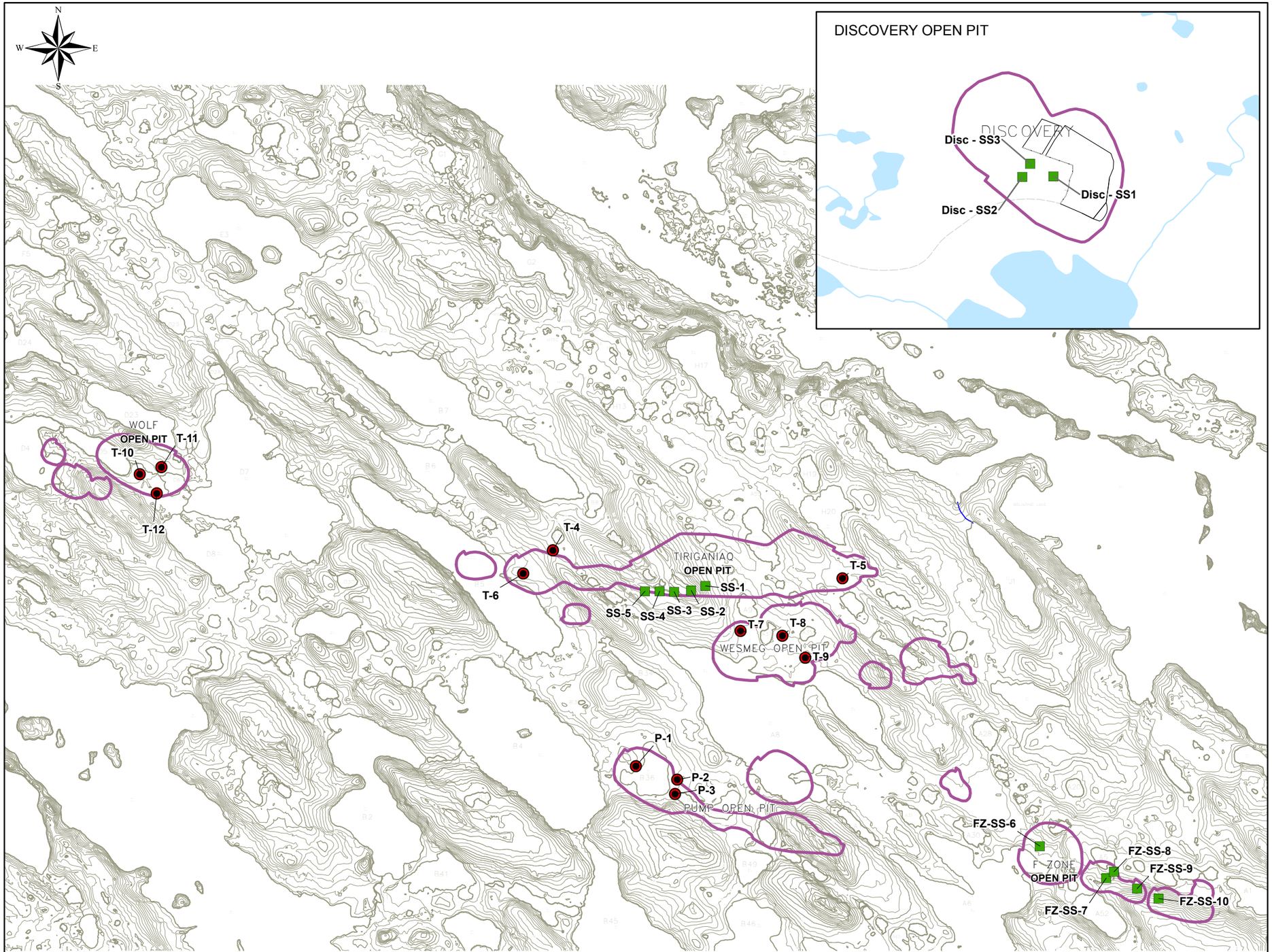
As stated earlier, this waste rock has been exposed to ambient conditions for 3 years and is considered analogous to the future RSFs.

Tiriganiaq Greywacke/Siltstone Waste Rock: 12 test pits were completed in the Operations Pad to a depth of 1 to 2 meters using a mechanical shovel. A composite sample was collected from each test pit for static testing. Sample collection targeted material from throughout the test pit after scraping off surface material. A composite sample representing the field cell charge material was generated using equal proportions of prepped material from each of the 12 composite samples. All 13 samples were submitted to SGS for static testing as summarized in Appendix B.1 and detailed in Section 2.2.

Of the 12 test pits completed, 6 contained enough material passing the 200 µm sieve size to allow for this material to be submitted for static testing of the fines. The results from this material are also reported in Appendix B.1.

Tiriganiaq Lode 1000 Ore: A composite sample was generated from a combined high and low grade ore stockpile by collecting samples at 12 discreet locations around the base and top surface of the stockpile using a shovel. A total of 25 kg (55 pounds) was collected from each discreet location to generate a composite from which one sample was collected for static testing as summarized in Appendix B.1 and detailed in Section 2.2. It is understood that the high and low grade stockpiles were combined into one pile by AEM.

Tiriganiaq Lode 1100 ore: A composite sample was generated from a high grade ore stockpile by collecting samples at 12 discreet locations around the base and top surface of the stockpile using a shovel. A total of 25 kg (55 pounds) was collected from each discreet location to generate a composite from which one sample was collected for static testing as summarized in Appendix B.1 and detailed in Section 2.2.




**LEGEND**

- Soil Samples (2011)
- Soil Samples (2009)

**NOTE**

This figure is to be read in conjunction with the accompanying Golder Associates Ltd. report No. 11-1428-0011

250 0 1,000

SCALE 1:30,000 METRES

PROJECT

MELIADINE GOLD PROJECT
AGNICO-EAGLE MINES LTD.

TITLE

# 2009 AND 2011 OVERBURDEN SAMPLE LOCATIONS

Golder Associates
Ottawa, Ontario

| | | | | |
|---|---|---|---|---|
| PROJECT No. 11-1428-0011 | | | SCALE AS SHOWN | REV. 0 |
| DESIGN | AS | 13 JAN 2012 | MAP 2 | |
| GIS | BR | August 2012 | | |
| CHECK | JMC | August 2012 | | |
| REVIEW | VJB | August 2012 | | |

Path: N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\GIS\MXD\11114280011-02.mxd

### 2.1.2 Tailings Samples

Samples of the anticipated tailings were obtained from preliminary metallurgical test work conducted at SGS in 2009 under the direction of Comaplex, and again in 2011 under the direction of AEM; the latter being representative of the proposed metallurgical process and therefore of the tailings to be generated during mine operation. Metallurgical testing was conducted on ore samples from each deposit. Samples retained for geochemical tests at SGS are described in Table 5, with test work summarized in Appendix C.1 and detailed in Section 2.2. Supernatant samples were retained for chemical analysis from all whole ore tailing samples generated.

**Table 5: Summary of the Tailings Samples Subjected to Geochemical Testing**

| Deposit | Sample Year | Sample ID | Tailings Type | Process Water |
|---|---|---|---|---|
| Tiriganiaq mixed lodes + F Zone (14%) | 2009[1] | CND9-1A | Whole Ore | x |
| Tiriganiaq mixed lodes + F Zone (14%) | 2009[1] | CND-10 | Concentrate | x |
| Tiriganiaq mixed lodes + F Zone (14%) | 2009[1] | CND 11 | Flotation | x |
| Master Composite | 2011 | CN50-51 Composite | Whole Ore | x |
| Discovery | 2011 | CN8 (CND5-7) Discovery | Whole Ore | x |
| | 2009 | F-3R Ro Conc | Concentrate | n.s. |
| | | F-3R Ro Tls | Flotation | n.s. |
| F Zone | 2011 | F Zone Open Pit CN6 CND residue | Whole Ore | x |
| | | F Zone Underground CN5 | Whole Ore | x |
| | 2009 | F-4 Ro Conc | Concentrate | n.s. |
| | | F-4 Ro Tls | Flotation | n.s. |
| Pump | 2011 | CN7 Pump | Whole Ore | x |
| Tiriganiaq | 2011 | Tiriganiaq Open Pit CN2 | Whole Ore | x |
| | | Tiriganiaq Underground CN1 | Whole Ore | x |
| Tiriganiaq (lode 1000) | 2009 | F-1 Ro Conc | Concentrate | n.s. |
| | | F-1 Ro Tls | Flotation | n.s. |
| Tiriganiaq (lode 1150) | 2009 | F-2 Ro Conc | Concentrate | n.s. |
| | | F-2 Ro Tls | Flotation | n.s. |
| Wesmeg | 2011 | CN3 Wesmeg Open Pit | Whole Ore | x |
| Wolf | 2011 | WFOP CN4 CND residue | Whole Ore | x |
| **Total number of samples** | | | 20 | 12 |

**Notes:**
[1] Metallurgical test material produced in 2009 (by Comaplex) but cyanide destruction conducted in 2011
n.s. - no sample

The 2009 testing generated a sulphide-poor flotation reject solid (flotation tailings) and a sulphide-rich concentrate reject (concentrate tailings) from Discovery, F Zone and Tiriganiaq. The Tiriganiaq ore samples used for metallurgical testing were collected from two different lodes (lode 1000 and lode 1150). One concentrate and one flotation samples were obtained from ore processing batch tests of each lode. The relative proportion of lode 1000 and lode 1150 was not known at the time of reporting.

In 2011, testing was completed on different sets of samples. Cyanide destruction was conducted on a mixture of Tiriganiaq and F Zone tailings generated by Comaplex in 2009 to test the effectiveness of the cyanide destruction process. Other, more representative samples of tailings, were generated by AEM in 2011 from

samples of ore collected from drill core at each deposit. These were subjected to a "whole ore" recovery process after gravity recovery, as described in Section 1.3.3. They include samples of ore collected from the open pit and underground areas of F Zone and Tiriganiaq, and open pit area samples from Discovery, Pump, Wesmeg and Wolf. A master composite sample (CN50-51) was also generated and represents all deposits as follows: Discovery (5%), F Zone open pit (9%), F Zone underground (3%), Pump (5%), Tiriganiaq underground (26%), Tiriganiaq open pit (29%), Wesmeg (17%), and Wolf (6%).

Geochemical results presented in this report are based on metallurgical test work completed to date. Further testing is required if any changes are made to the metallurgical process. Conclusions and recommendations regarding tailings geochemistry are subject to change based on the final metallurgical process design.

### 2.1.3 Overburden Samples

Overburden samples were collected in 2009 and 2011, and sampling locations are shown on Map 3. The samples are summarized in Table 6 and described in detail in Appendix D.1.

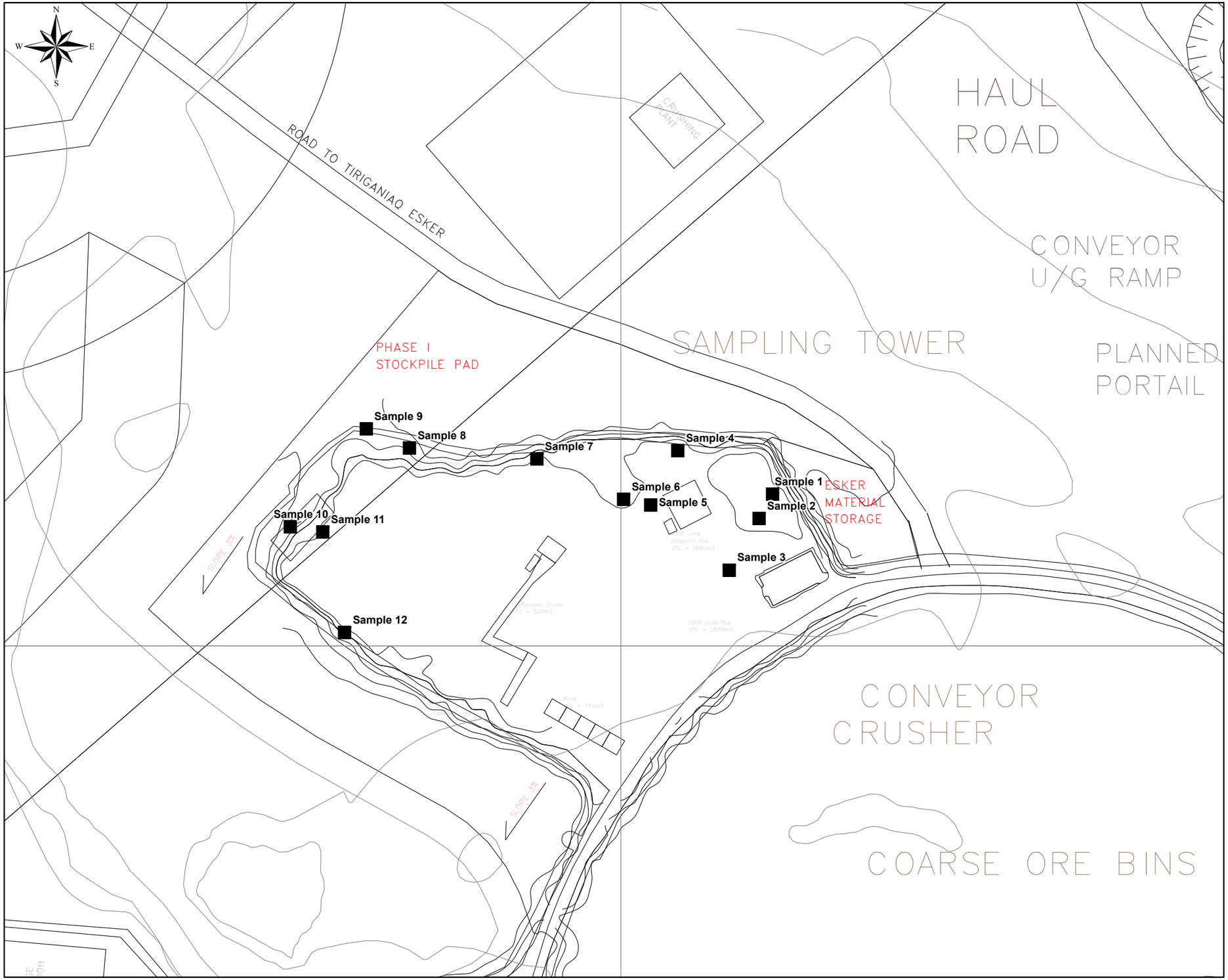
**Table 6: Summary of Overburden Samples Collected**

| Deposit | Sample Year | Number of Soil Samples | Location | Average Test Pit Depth (mbgs) |
|---|---|---|---|---|
| Discovery | 2009 | 3 | Pit Surface | 0.3 |
| F Zone | 2009 | 5 | Pit Surface | 0.4 |
| Pump | 2011 | 6 | Pit Surface | 0.5 |
| Tiriganiaq | 2009 & 2011 | 10 | Pit Surface | 0.5 |
| Wesmeg | 2011 | 6 | Pit Surface | 0.7 |
| Wolf | 2011 | 4 | Pit Surface | 0.4 |

The 2009 overburden samples were grab samples collected by Golder using a metal shovel. Sample depth was in all cases limited by the presence of ground ice. Each overburden sample consisted of approximately 5 kg of material and was described in terms of texture, colour and water/ice content (Appendix D.1).

The 2011 overburden grab samples were collected by Golder using a Kubota mechanical shovel provided by AEM. Sample depth was again limited by the presence of ground ice and test pit slope stability and/or the reach of the mechanical shovel. Each sample consisted of approximately 2 kg of material and was described in terms of texture, colour and water/ice content (Appendix D.1). All overburden test pits were backfilled immediately after sampling.

All overburden samples were forwarded to SGS for geochemical testing as summarized in Appendix D.1 and detailed in Section 2.2.




**LEGEND**

- Pad Samples

**NOTE**

This figure is to be read in conjunction with the accompanying Golder Associates Ltd. report No. 11-1428-0011

25 0 50

SCALE 1:1,445 METRES

PROJECT

MELIADINE GOLD PROJECT
AGNICO-EAGLE MINES LTD.

TITLE

## 2011 PAD SAMPLE LOCATIONS

Golder Associates
Ottawa, Ontario

| PROJECT No. 11-1428-0011 | | | SCALE AS SHOWN | REV. 0 |
|---|---|---|---|---|
| DESIGN | AS | 13 JAN 2012 | MAP 3 | |
| GIS | BT | August 2012 | | |
| CHECK | JMC | August 2012 | | |
| REVIEW | VJB | August 2012 | | |

Path: N:\Active\20110_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\GIS\MXD\1114280011-02-pad.mxd

## 2.2 Test Methods

The test program incorporated a comprehensive set of standard and project specific geochemical test methods to characterize the ARD/ML potential of the different material types expected to be produced during mine life. The static testing program included the following analyses:

- Mineralogical composition on select waste rock samples (XRD and Rietveld analysis);
- Chemical composition through whole rock (XRF) and trace element chemistry (ICP-MS);
- ARD potential through acid base accounting (ABA) by the Modified Sobek method (MEND 2009);
- Net acid generation (NAG) tests on select waste rock samples (Amira 2002); and,
- Leaching tests:
    - i) Readily leachable metals through short-term metal leach testing by a modified version of the shake flask extraction (SFE; Modified ASTM D3987); and,
    - ii) Long term leach tests, including:
        - i. Humidity cell tests (HCTs; ASTM method D5744) on 46 waste rock samples from five deposits;
        - ii. Large column tests on 9 composite samples from each deposit, with 3 from Tiriganiaq; and,
        - iii. Four field cells comprising Tiriganiaq waste rock and ore.

All tests and analyses except the mineralogical investigation, were performed at SGS. Geochemical characterization methods are discussed in the next sections.

### 2.2.1 Mineralogical Analyses

In total, 46 samples were submitted to Dr. Mati Raudsepp of the University of British Columbia, Earth and Ocean Sciences Department for mineralogical analysis by X-Ray Diffraction (XRD) and evaluation of the XRD patterns by the Rietveld method.

The Rietveld method allows for a quantitative characterisation of the mineralogical composition of a sample for crystalline mineral phases with a detection limit of approximately 1%. XRD does not detect amorphous mineral phases. This analysis was used to assist in the identification and quantification of minerals that provide buffering capacity and acidification potential to the sample.

### 2.2.2 Chemical Composition

The chemical composition of each sample was determined through whole rock and trace element analysis to determine the content of major rock forming elements and trace metals, respectively. This information is used to assess the variation in chemical composition by lithology and to identify parameters of potential environmental concern. Results for waste rock are compared to typical crustal abundances (Price 1997) for similar lithologies, while overburden results are compared against Canadian Environmental Quality Guidelines (CEQG, 2006) for Soil for the Protection of Environmental and Human Health, for Industrial Land Use.

The following components were included in the chemical analyses:

- Metals (including arsenic and selenium) by inductively coupled plasma-mass spectroscopy (ICP-MS), with samples extracted using a concentrated strong acid solution of perchloric, nitric, hydrochloric and hydrofluoric acids;
- Mercury by cold vapour atomic absorption spectroscopy (CVAAS), EPA245.1 methodology; and,
- Whole rock analysis for major metals by borate fusion / x-ray fluorescence (XRF).

### 2.2.3 Potential for Acid Rock Drainage

The potential of geologic material to oxidize and generate acidic drainage is evaluated through acid-base accounting (ABA). This test was conducted following the Modified Sobek method (MEND 2009) and included determination of the following parameters:

- Paste pH;
- Total sulphur by LECO furnace (ASTM E 1915 method);
- Sulphide and sulphate sulphur;
- Total Carbon (TC as %C), Total Inorganic Carbon (TIC as %C) and carbonate (as %C) by LECO furnace; and,
- Bulk neutralization potential (NP; by the 1996 Modified NP procedure (MEND 2009)).

A subset of samples of waste rock were subjected to net acid generation (NAG) tests (AMIRA 2002) to further assess ARD potential, as discussed in Section 2.2.3.1.

#### *Neutralization Potential (NP)*

The NP is a measurement of the acid-buffering capacity of a sample that can be provided by various minerals of different reactivities and effective neutralization capacity. Because the type and occurrence of neutralizing minerals present in the sample will have an effect on whether the ARD potential of a sample will be realized, NP was evaluated using the following four different analytical techniques, the results of which were compared to one another to estimate the amount of available NP:

1) *1996 Modified NP Procedure (NP)*: Represents the bulk NP of the sample, including contributions from some reactive aluminosilicate minerals, if present. It is calculated from the amount of base consumed to neutralize acid remaining from the sample acid-digested at room temperature. This test method is modified from the Standard (Sobek) NP method (MEND 2009) which more aggressively dissolves neutralization minerals and may thus overestimate NP because of the higher digestion temperature (boiling).

2) *Carbonate NP (CaNP)*: Represents the NP available from reactive carbonate minerals, including siderite and other divalent metal carbonates (which provide less neutralization per mole of carbonate ions released than calcite or dolomite). CaNP was calculated based on the total inorganic carbon or the carbonate (%C) content of the sample, assuming all carbonate and TIC is in the form of carbonate minerals. Carbonate NP was calculated using the detection limit value for carbonate and TIC when these were measured as less than detection limit (<0.005 or 0.0025).

3) *Carbonate NP (CaNP-adj):* Represents the NP available from the carbonate minerals taking into consideration the mineralogical content of the sample or the average mineralogy of the lithology for samples without mineralogical data. The available buffering capacity was calculated based on the carbonate content for each sample proportioned on the mineralogy. The moles of carbonate ions released from each mineral (calcite, dolomite, ankerite and/or siderite were observed) was defined from Paktunc (1999) as follows: both calcite and dolomite as 100%, ankerite as 70%, and siderite as 0% as it does not provide any net buffering capacity. Where no mineralogical information was available for a specific rock type, or where carbonate minerals were not detected in XRD, the paste pH was buffered to neutral. This suggested that some carbonate minerals were present but in concentrations that may not be detected by mineralogical observation (i.e., less than 1%). In these instances, the CaNP-adj was assumed to be that of reactive carbonate minerals and the CaNP value was used (calculated from carbonate as $\%CO_3$).

4) *Carbonate NP from mineralogy (CaNP-min):* Represents the NP available from the carbonate minerals identified by mineralogical investigations on a subset of waste rock and tailings samples, including calcite, dolomite, ankerite, and siderite, but without consideration of the carbonate content of the samples. It considers the net buffering potential provided by each of the detected carbonate minerals based on the mole of carbonate ions released from each mineral and calculated following Paktunc (1999). This method utilizes the weight percent (wt%) XRD results and was applied only to those samples that were subjected to mineralogical analysis.

The carbonate mineral-based methods of defining buffering capacity negate the contribution of silicate minerals to buffering. The presence of a substantial quantity of silicate minerals documented to provide buffering capacity (Jambor *et al,* 2002; 2007) combined with low sulphide mineral content can be a non-negligible source of buffering. Furthermore, the carbonate mineral-based methods negate the contribution of carbonate minerals that may be present at concentrations that are below the X-ray diffraction instrument detection limit (typically 1%). Similarly, imprecision on mineral identification and estimated content arise when the quantity of a given mineral nears the instrument detection limit. This is the case for carbonate mineral content of waste rock from the Discovery deposit. Consequently, the CaNP and CaNP-adj methods of NP estimation are considered conservative and may underestimate the amount of available buffering capacity, particularly in cases where carbonate mineral content is low.

Results of the four NP calculation methods described above were compared against each other (Appendix B.2). Of all the NP determination methods, the CaNP-adj provided the most conservative values when considering the contribution of individual carbonate minerals to buffering capacity. For this study, the NP and CaNP-adj were carried forward to assess the ARD potential of each waste type.

## *Acid Potential (AP)*

The AP for waste rock and overburden is calculated from the total sulphur content of the sample, on the basis that the entire sulphur content of the rock will oxidize to generate acid. This considers that sulphate, when present, was generated from weathering of the sample after drilling (that there are no sulphate minerals present in the deposit).

The AP for tailings is calculated based on sulphide sulphur because sulphate is expected to have been produced during the cyanidation process. This is typical of iron-bearing sulphide ores, like the pyrite and pyrrhotite-bearing Meliadine ore (Breuer *et al*, 2008). During processing, iron sulphide minerals are dissolved,

the sulphur species is oxidized and forms secondary sulphate minerals once saturation is reached. Flotation with pre-oxidation can also transform some of the sulphide minerals to sulphate during processing (the flotation process tested in 2009 will not be used at the Project). Furthermore, sulphate was added to cyanide-destructed slurry in the form of copper sulphate and sulphite which would have oxidized, at least in part, to sulphate. Being in an oxidized form in the mill effluent, sulphate would not participate in acid generation reactions. The elevated sulphate content of the process water solutions suggest of saturated conditions (Section 4.3.4).

Values of AP, NP and CaNP and CaNP-adj are reported as kg equivalent calcium carbonate per tonne of rock.

#### 2.2.3.1 Net Acid Generation (NAG)

Net acid generation (NAG) tests are used in combination with ABA to assess the ARD potential of a sample. The NAG test (Amira, 2002) uses hydrogen peroxide to induce complete oxidation of sulphide minerals and concurrent buffering by available minerals in the sample. Unlike ABA results, NAG tests do not provide an estimate of NP relative to AP, but rather the net effect of sulphide oxidation and buffering reactions within a sample. This test is particularly useful for samples containing low AP and low NP or where results from other tests yield conflicting predictions. Results of NAG pH are used to verify ARD potential, while NAG leachate chemical composition can be used to assess the potential degree of metal release upon sulphide oxidation.

Single addition NAG tests were conducted in the first phase of static testing (2009) on nine samples of Tiriganiaq waste rock, three samples of F Zone waste rock and 20 samples of Discovery rock (NAG pH and acidity only). Where available NAG sulphate results were converted to sulphur (as wt%) to compare the amount of sulphur released to the measured sulphur content of the sample in order to assess the efficiency of the NAG test.

#### 2.2.3.2 ARD Screening Criteria

ABA results were compared to *Guidelines for Acid Rock Drainage Prediction in the North* (INAC 1992). The suggested screening criteria for inferring ARD potential based on the net potential ratio (NPR) are summarized in Table 7 and Table 8 for waste rock and tailings, respectively. The NPR is the ratio of NP to AP. For this study both the NPR (NP/AP) and the CaNPR-adj (CaNP-adj/AP) were compared to the screening criteria to bracket the effect of the possible range of buffering capacity. Acid potential (AP) was calculated from total sulphur content for both methods. Given the uncertainty and imprecision associated with both methods of calculating buffering capacity, where the two approaches yielded values in different ranges per Table 7 and Table 8, the ARD potential was considered to be uncertain.

**Table 7: Acid-Base Accounting Screening Criteria for Waste Rock (INAC 1992)**

| Potential for ARD | Initial Screening Criteria | Description |
|---|---|---|
| Likely | NPR<1 | Likely to generate acidity, unless sulphide minerals are non-reactive |
| Uncertain | 1≤NPR<2 to 3 | Neither clearly acid-generating nor acid consuming |
| None | NPR≥2 to 3 | Acid consuming |

**Table 8: Acid-Base Accounting Screening Criteria for Tailings (INAC 1992)**

| Potential for ARD | Initial Screening Criteria | Description |
|---|---|---|
| Likely | NPR<1.2 | Likely to generate acidity |
| None | NPR>1.2 | Non acid-generating |

In evaluating the ARD potential of the waste material at this site, given the elevated buffering capacity of the samples made up of reactive carbonate minerals, NPR and CaNPR-adj values of greater than 2 were considered as non-PAG. The ratio of 2 is consistent with national guidelines (MEND 2009): the *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials* (MEND 2009). According to MEND (2009), any mine waste (waste rock and tailings) samples with NPR values between 1 and 2 are considered "possibly acid-generating" if buffering capacity is insufficiently reactive or is depleted at a rate faster than the sulphide oxidation rate. Samples with NPR values greater than 2 are considered to have a low potential to generate acid unless there is a significant preferential exposure of sulphides along fracture planes, or extremely reactive sulphides in combination with insufficiently reactive buffering minerals, which is not the case for Meliadine waste rock.

An NPR of 1.2 (INAC 1992), based on both NP and CaNP-adj buffering capacity evaluation methods, along with NAG and kinetic test results were used to evaluate long term ARD potential of tailings.

Results of NAG tests were compared to criteria defined by AMIRA (2002) to identify the ARD potential of the test material, as summarized in Table 9.

**Table 9: Net Acid Generation Criteria (AMIRA, 2002)**

| NAG pH | NAG Acidity (to pH 4.5) kg $H_2SO_4$/t | Potential for Acid Generation |
|---|---|---|
| ≥ 4.5 | 0 | Non acid-generating. |
| < 4.5 | ≤ 5 [1] | Low potential to be acid-generating. |
| < 4.5 | > 5 [1] | Potentially acid-generating. |

**Note:** The NAG criteria used may vary from site to site with a cut-off up to 10 kg $H_2SO_4$/t (Source: AMIRA 2002).

The static test NPR and CaNPR-adj values, along with NAG pH and kinetic test results were used to evaluate long term ARD potential of mine wastes.

### 2.2.4 Metal Leaching Potential

Metal leaching tests are used to assess the potential of the waste rock to release readily-soluble metals to the receiving environment by simulating interaction between water and solids. Short-term leach tests provide an estimate of which metals have a potential to leach from a particular material and are considered an initial screening tool in the identification of potential constituents of concern for mine site water management planning and potential treatment requirements. Short-term leach tests methods have limitations in their ability to represent field leaching conditions and, consequently, subsequent stages of kinetic testing were initiated on a representative subset of samples to provide a more representative assessment of likely chemical release rates

under site conditions. The leach tests completed on Meliadine waste rock are described in Table 10 and discussed further in sections below. All leach test results were screened against MMER for effluent quality (MMER; DFO 2006).

**Table 10: Summary of Metal Leach Potential Tests**

| Test Type | Test Method | Location | Number of Samples[1] | Status |
|---|---|---|---|---|
| Short-Term Leach Test | Shake Flask Extraction | Laboratory | 577 | Completed |
| Long-term Leach Test | Humidity Cell Tests | Laboratory | 46 | 46 cells terminated |
| | Large Column Tests | Laboratory | 9 | 9 columns terminated |
| | Field Cells | Site | 4 | 4 cells on-going |

**Note:** [1] Suites of samples for kinetic tests (one suite per test)

### 2.2.4.1 Shake Flask Extraction (SFE)

Samples were subjected to short-term leach tests using a modified version of the shake flask extraction (Modified ASTM D3987). Crushed samples (9.5 mm) were mixed with distilled water (4:1 solution to solid ratio) and the pulp was placed in a flask and shaken for 24 hours using a variable speed shaker table. Leachate was collected from the pump through a 0.45-μm filter and analyzed for pH, sulphate, chloride, and dissolved metals.

### 2.2.4.2 Humidity Cell Tests (HCTs)

HCTs are an accelerated repetitive leach test meant to simulated accelerated weathering conditions by promoting sulphide mineral oxidation and accelerating the dissolution of acid-buffering minerals.

The original humidity cell test (HCT) program was initiated in 2009 and included 13 waste rock samples from Discovery, F Zone and Tiriganiaq deposits; these HCTs were terminated at 32 or 40 weeks of testing. In 2011, HCTs were initiated for an additional 33 samples selected from the Discovery, F Zone, Pump, Tiriganiaq, Wesmeg, and Wolf deposits. The purpose of these additional samples was to target deposits not characterized previously (Pump, Wesmeg, and Wolf), as well as to augment existing HCT data. Sample selection rationale and test methods are described below.

#### Sample Selection Rationale

Kinetic test sample selection was designed to proportionally represent the dominant waste rock groups, specifically those that will generate the largest volume of waste, and to capture average and high-end or upper quartile concentration ranges of constituents of interest. These include sulphide sulphur and short-term leachate concentrations of As which exceeded MMER limits in some samples. Although many samples selected for HCTs are non-PAG, they contain representative sulphide content for their rock type.

Percentile rankings for constituents of environmental interest are included in Appendix B.6. Table 11 summarizes the sample selection rationale as well as the relative proportion of each rock type at each deposit and the ARD designation for each rock type.

## Humidity Cell Test Method

The test apparatus used in the study consists of a humidity cell (ASTM D5744). A 1-kg aliquot (sub sample) of the crushed (9.5 mm) solid sample is placed in a cylindrical vessel and subjected to a seven day cycle leaching test, which includes three days of dry air circulation followed by three days of humid air and subsequent flushing with 1 litre (L) of distilled water (1:1 liquid to solid ratio by weight) on the seventh day.

Approximately 1 L of leachate was collected for analysis of short- and long-suite groups as follows:

- Short suite parameter group with weekly analysis from Cycle 0, including;
  - Volume recovered, pH, conductivity, alkalinity, acidity, sulphate, and calcium; and,
- Long suite parameter group analyzed at Cycle 0-5, 8, 12, 16, 20, and 24, 26, 31 or 25, 30, 35, 40 including;
  - Chloride, dissolved aluminum, antimony, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, sodium, strontium, tin, titanium, uranium, vanadium, and zinc.

Results from humidity cells are used to assess the release rates of chemicals from mine wastes upon exposure to precipitation. However, the leachates may not be direct analogues of expected water quality because the testing does not consider the scale of the mine waste infrastructure (size, shape, moisture content), nor the effect of climate on drainage quality, such as freshet conditions and frozen winter conditions.

Modified kinetic (large column) tests were done to provide a more representative assessment of the likely leaching rates and leachate composition from waste rock (Appendix B-6). These are described in the following sections.

**Table 11: ARD Designation of Selected Kinetic Test Samples and Sample Selection Rationale for Kinetic testing**

| Deposit | Rock Type | Estimated Waste Rock Tonnage[1] | | Bulk ARD Potential | Sample Information | | Ranking of the Sample Based on Static Results per Rock Type | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Tonnage (Kt)[2] | Proportion[3] | | Sample ID | ARD Potential[4] | Total As (ICP) | Leachable As (SFE) | Sulphide Sulphur |
| Discovery | Greywacke/ Siltstone | 42,323 | 60% | uncertain | ML08-232-01 | uncertain | upper quartile | upper quartile | lower quartile |
| | | | | | ML90-14-2 | uncertain | median | 75th percentile | median |
| | | | | | ML92-061-01 | ***PAG*** | median-75th | median | median-75th |
| | | | | | ML95-82-1 | uncertain | upper quartile | 75th percentile | upper quartile |
| | Iron Formation | 20,906 | 29% | uncertain | ML08-226-02 | **PAG** | lower quartile | <median | upper quartile |
| | | | | | ML95-82-01 | **PAG** | upper quartile | 75th percentile | upper quartile |
| | | | | | ML95-95-01 | non-PAG | upper quartile | upper quartile | median-75th |
| F Zone | Iron Formation | 2,667 | 8% | uncertain | M09-802-02 | **PAG** | upper quartile | median-75th | upper quartile |
| | | | | | M10-935-02 | **PAG** | maximum | maximum | <median |
| | | | | | M98-248-01 | **PAG** | lower quartile | lower quartile | 75th percentile |
| | Mafic Volcanic | 29,549 | 91% | non-PAG | M09-859-01 | non-PAG | upper quartile | 75th percentile | upper quartile |
| | | | | | M08-740-05 | non-PAG | 75th percentile | upper quartile | median |
| | | | | | M08-750-03 | non-PAG | median-75th | <median | <75th percentile |
| | | | | | M08-734-03 | non-PAG | median-75th | upper quartile | slightly <75th |
| Pump | Iron Formation | 5,531 | 14% | uncertain | W94-61-01 | **PAG** | upper quartile | median-75th | <median |
| | | | | | W94-73-02 | *uncertain* | median-75th | upper quartile | median-75th |
| | Mafic Volcanic | 32,578 | 85% | non-PAG | M96-58-02 | non-PAG | upper quartile | <75th percentile | upper quartile |
| | | | | | M97-123-01 | non-PAG | median | upper quartile | lower quartile |
| | | | | | M97-124-01 | non-PAG | lower quartile | median | 75th percentile |
| | | | | | M98-184-01 | non-PAG | lower quartile | 75th percentile | <median |

| Deposit | Rock Type | Estimated Waste Rock Tonnage[1] | | Bulk ARD Potential | Sample Information | | Ranking of the Sample Based on Static Results per Rock Type | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Tonnage (Kt)[2] | Proportion[3] | | Sample ID | ARD Potential | Total As (ICP) | Leachable As (SFE) | Sulphide Sulphur |
| Tiriganiaq | Greywacke/ Siltstone | 113,694 | 81% | non-PAG | M03-508-01 | non-PAG | >median | median | 75th percentile |
| | | | | | M06-623-01 | non-PAG | <median | upper quartile | lower quartile |
| | | | | | M06-625-01 | non-PAG | 75th percentile | 75th percentile | lower quartile |
| | | | | | M97-95-02 | non-PAG | upper quartile | median | median |
| | | | | | M98-194-01 | non-PAG | upper quartile | upper quartile | 75th percentile |
| | | | | | M99-403-03 | non-PAG | upper quartile | median-75th | <median |
| | | | | | M04-533-01 | non-PAG | upper quartile | median | <median |
| | Iron Formation | 7,514 | 5% | non-PAG | M04-526-01 | non-PAG | median | 75th percentile | upper quartile |
| | | | | | M96-74-01 | non-PAG | upper quartile | upper quartile | median |
| | Mafic Volcanic | 14,211 | 10% | non-PAG | M99-409-05 | non-PAG | upper quartile | 75th percentile | median |
| | | | | | GT08-04-02 | non-PAG | upper quartile | upper quartile | lower quartile |
| | | | | | M05-536A-01 | non-PAG | upper quartile | >75th percentile | slightly <75th |
| | | | | | M97-141-01 | non-PAG | >median | median | upper quartile |
| Wesmeg | Mafic Volcanic | 74,378 | 99% | non-PAG | M10-981-03 | non-PAG | median | median | 75th percentile |
| | | | | | M10-985-01 | non-PAG | median | upper quartile | median |
| | | | | | M10-987-04 | non-PAG | median-75th | <median | 75th percentile |
| | | | | | M10-994-04 | non-PAG | median-75th | median-75th | <median |
| | | | | | M98-222-01 | non-PAG | 75th percentile | 75th percentile | <median |
| | Ultramafic | 718 | 1% | non-PAG | M10-992-04 | non-PAG | median | median | 75th percentile |
| Wolf | Greywacke/ Siltstone | 13,245 | 61% | non-PAG | M10-968-02 | non-PAG | <75th percentile | 75th percentile | lower quartile |
| | | | | | M10-976-02 | non-PAG | median | upper quartile | lower quartile |
| | | | | | M10-993-02 | non-PAG | <median | median-75th | upper quartile |
| | Iron Formation | 2,782 | 13% | non-PAG | M10-970-01 | non-PAG | 75th percentile | upper quartile | median |
| | | | | | M10-972A-03 | non-PAG | lower quartile | <median | <median |
| | Mafic Volcanic | 5,193 | 24% | non-PAG | M96-16-01 | non-PAG | <median | 75th percentile | lower quartile |
| | | | | | M98-238-02 | non-PAG | lower quartile | median-75th | 75th percentile |

**Notes:**
[1] Based on the 10,000 tpd max pit scenario (*Lithology_proportion_pit 10000tpd.xlsx* dated June 13, 2011, D. Duquette pers. comm.)
[2] Kt = kilotonnes
[3] Proportion of Total Tonnage Per Deposit
[4] ARD potential based on static test results

### 2.2.4.3 Large Column Tests

Large scale (between 42 kg and 100 kg) laboratory leaching column tests were used to define the potential effects of weathering on chemical leaching rates from larger, mixed samples of rock, using lower water leaching volumes than the 1-kg HCT tests. The large columns are considered to provide a closer approximation of likely contact water quality than the small scale tests.

The large column test program was initiated in 2011 and includes 9 columns holding waste rock of various rock types from the Discovery, F Zone, Pump, Tiriganiaq, Wesmeg, and Wolf deposits as described in Table 12. The charge material for each column consist of waste rock samples left over from the static testing program and therefore of known chemical characteristics. Rock samples of similar lithologies were mixed together prior to charging the columns.

**Table 12: Summary of Large Column Test Samples**

| Column ID | Deposit | Rock Type | Location | Column Mass (kg) | Number of Samples[1] |
|---|---|---|---|---|---|
| C-1 | Tiriganiaq | Greywacke/Siltstone | Open Pit East | 98 | 49 |
| C-2 | Tiriganiaq | Greywacke/Siltstone | Open Pit West | 48 | 21 |
| C-3 | Tiriganiaq | Greywacke/Siltstone | underground | 50 | 40 |
| C-4 | Tiriganiaq | Mafic Volcanic | underground | 48 | 21 |
| C-5 | F Zone | Mafic Volcanic | Open Pit | 99 | 55 |
| C-6 | Discovery | Greywacke/Siltstone | Open Pit | 52 | 29 |
| C-7 | Pump | 14% Iron Formation; 86% Mafic Volcanic | Open Pit | 42 | 44 |
| C-8 | Wesmeg | Mafic Volcanic | Open Pit | 100 | 55 |
| C-9 | Wolf | 13% Iron Formation; 62% Greywacke; 25% Mafic Volcanic | Open Pit | 50 | 29 |

**Note:** [1] Number of samples used to construct large column.

#### Large Column Test Method

Each large column test sample comprised a 42 to 100 kg composite of crushed (9.5 mm) static test sample reject. The mass of the column was limited by the amount of static test reject material available as an equal mass of reject was used to make up each composite to avoid biasing the charge material with any particular sample(s). The large column rock types were selected to represent the dominant lithology from each deposit as well as the major rock types for the entire project.

The selection criteria for bulk column tests were: 1) to test the most represented rock type (largest volume) for each deposit; 2) to define the bulk weathering characteristics for the element of interest in that deposit (arsenic in all deposits); and, 3) for the overall Project, that each major rock type be represented. The weathering of other rock types is represented by the standard size (1-kg) humidity test cell which focussed on describing end-member weathering behaviour including ARD generation and samples with high end-member arsenic concentration. As such, columns from Discovery, F Zone, Tiriganiaq, and Wesmeg contain one individual rock type to define its bulk weathering characteristics for the element of interest, especially arsenic. Pump and Wolf columns contain a mixture of the major rock types expected to be removed by mining in their respective lithological proportions. Rock types were combined in these columns in order to have a larger column size as the available sample reject mass was limited. The set-up of the columns at the laboratory is shown in Figure 2.

The ARD potential from Iron Formation rock is represented by the standard 1-kg HCTs which include a focus on samples that are PAG rather than a large column where PAG samples would be mixed with higher NP and lower AP rock that would delay the occurrence of ARD, if ARD was to develop such as for F Zone and Discovery. Smaller scale testing of the ARD potential on targeted samples is expected to provide better indication of the actual acidification potential of samples that are PAG rather than mixing these samples in a neutralizing mass.



*Figure 2: Large Column Leach Tests at SGS*

The crushed rock material was placed in specially built cylindrical PVC columns of 91 cm height by 35.5 cm diameter (100 kg column) and 24 cm diameter (42 kg column). The columns were fitted with a valve at the bottom to release leachate and are trickle leached (slow rain-like precipitation of water at the top) on a weekly basis with laboratory grade de-ionized water at a 10:1 solid to liquid ratio (i.e., the 42 kg column is leached with 5 litres of water). Unlike the standard HCT, the leaching columns were not subjected to 3 days of dry air circulation and 3 days of humid air circulation between weekly leaching cycles. Leachate was collected on the seventh day for analysis following the same analytical suite and schedule as described for the HCTs in Section 2.2.4.2.

### 2.2.4.4 Field Cell Tests

Field test cells were constructed using new 50 gallon plastic drums and 1) duplicate samples of a composite of run-of-mine Tiriganiaq greywacke waste rock collected from 12 test pits completed in the Operations Pad (Section 2.1.1.1 and Appendix F), and 2) of two types of ore from crushed ore piles located on the Operations Pad. The constructed field cells are shown in Figure 3.



*Figure 3: Field Cell Tests at Meliadine*

The field cells were used to assess the effects of mixed rock, wider grain size distribution and field weathering conditions on chemical leaching rates from the charge material, and the results were used to extrapolate laboratory results to provide more realistic, field-specific chemical loadings to mine contact water.

The four test cells include:

- WR 1 and WR 2: Duplicate field cells (2) were constructed using a composite of waste rock material collected from 12 test pits completed in the Operations Pad to a depth of 1 to 2 meters using a mechanical shovel. A composite sample was collected from each test pit for static testing and 50 kg of material was collected from each test pit as charge material for the field cells, resulting in 300 kg of charge material per field cell. Sample collection targeted material from throughout the test pit after scraping off surface material that could contain some crushed ore scattered on the surface of the Pad during ore processing activities at site. One overall composite sample representative of the field cell charge material was also generated for static testing and grain size analysis using equal proportions of prepped material from each of the 12 composite samples;
- Lode 1000 ore: Collected from a combined high and low grade ore stockpile at 12 discreet locations around the base and top surface of the stockpile using a shovel. A total of 25 kg was collected from each discreet location to generate a composite, from which one sample was collected for static testing. It is understood that the high and low grade stockpiles were combined into one pile by AEM The total mass of the composite sample used as charge material in the field test cell was 300 kg; and,
- Lode 1100 ore: Collected from the high grade ore stockpile at 12 discreet locations around the base and top surface of the stockpile using a shovel. A total of 25 kg was collected from each discreet location to generate a composite, from which one sample was collected for static testing. The total mass of the composite sample used as charge material in the field test cell was 300 kg.

A photo documentary of the cell construction and set up is included in Appendix F.

Leaching cycles and sampling events completed in 2011 are summarized in Table 13. Since the installation of the field test cells during the summer of 2011, precipitation has been too scarce to collect adequate volumes of water for analysis and consequently the cells have been actively leached on a monthly basis with nearby lake water. The field cells were leached at a 60:1 solid to liquid ratio (5 litres of water for 300 kg of charge material). This represents approximately 47 mm of rain, or an average summer month's precipitation fully infiltrated into the rock. A higher volume of water was added to the ore cells (30:1 to 38:1 ratio) due to their higher proportion of fine material, and higher water retention capacity.

Water collecting in the receptacles was filtered and placed in laboratory-supplied bottles with preservative for shipping to a commercial analytical laboratory. Samples of lake water that was used for field cell leachate were also collected for each cycle.

**Table 13: Summary of Field Barrel Leachate Sampling Events Completed in 2011**

| Date | Cycle | Leach Water | | |
|---|---|---|---|---|
| | | Source[1] | Volume (L) – Waste Rock | Volume (L) – Ore |
| 16 July 2011 | 0 | Lake A12 | 5 | 10 |
| 17 July 2011 | 1 | Lake A12 | 5 | 8 |
| 11 September 2011[2] | 2 | Meliadine Lake | 35 | 5 |
| 27 June 2012 | 3 | Lake A12 | 5 | 5 |
| 24 July 2012 | 4 | Lake A12 | 5 | 5 |

**Notes:**
[1] Lake A12 was identified as receiving drilling fluids after cycles 0-1 were completed.
[2] Corresponds to leaching event for toxicity test sampling of waste rock which requires large sample volume.

The samples were stored in a cooler in a fridge until transportation by Golder to Maxxam Laboratory in Ottawa for analysis of the following parameters:

- General chemistry (pH, conductivity, total alkalinity (as CaCO3), chloride, sulphate);
- Nutrients (ammonia (as nitrogen), nitrate, nitrite, total phosphorus (colorimetric)); and
- Dissolved metals and total metals (aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, tellurium, thallium, thorium, tin, titanium, tungsten, uranium, vanadium, zinc, and zirconium).

### *2.2.4.5 Scale-up Considerations*

Results from kinetic testing are used to assess the release rates of chemicals from mine wastes upon exposure to precipitation. Small scale (1kg) HCTs are a standard tool used to assess the variability of weathering characteristics by simulating accelerated weathering conditions compared to actual site conditions. These results may not adequately represent the effects of weathering under site conditions and may lead to erroneous conclusions for this project. In addition to the standard static tests and HCTs, the following tests were done to evaluate the effects of test scale and site climate on chemical release rates, and to improve data interpretation and extrapolation to site conditions:

- Correlation of rock leaching characteristics with field-derived waste rock contact water quality data (Primary Containment Pond);
- Large column kinetic weathering tests in laboratory; and,
- Larger scale field leaching tests using run-of-mine rock.

In practice, the Meliadine waste rock will be mixed in a larger pile, will have a wider grain size distribution, lower water infiltration and moisture content, and will be exposed to a much different (colder and dryer) climate than laboratory and field cell tests. Each of these factors will influence weathering characteristics of the waste rock. Specifically, important differences between laboratory and field leaching tests and actual site conditions include the following:

- Oxidation of mine waste is expected to occur all year at the Meliadine project site, albeit at much slower rates when the rock piles are frozen 8 months of the year (Smith et al., 2009). Reaction rates are affected by temperature (e.g., slower at lower temperatures) according to well-established geochemical principles (the Arrhenius equation):
  - HCTs and large column tests are conducted at room temperature which is higher than any monthly mean temperatures at the site. Case studies of leaching tests performed at different temperatures document the slower rates of sulphide oxidation in cold temperature relative to room temperature (Meldrum *et al*., 2001; Davé and Blanchette, 1999; Davé and Clulow, 1996);
- Field cells are subjected to climate conditions at site, however, given the low precipitation at site, there is the need to force-leach the field cells to obtain a sufficiently large volume of water for sample analysis and obtain water quality data within the testing period. The higher volume of water used to flush the laboratory HCT cells, leaching columns and the field tests compared to natural precipitation, have the effect of accelerating mineral dissolution. This causes mineral buffering capacity to be consumed at a much higher rate than would be under site climate conditions, the effect of which is estimated as follows:
  - Frost free months occur from June to September inclusively. The rest of the year has below freezing conditions (FEIS SD 2-6, Section 2.2). Similar to Meadowbank waste rock piles, the Meliadine rock stockpiles are expected to be and remain frozen during winter months, where water will remain frozen in the pile and no leaching of buffering minerals will occur. The surface layer of rock piles will thaw during above-freezing months (4 months annually).
  - Natural rainfall precipitation at site averages 203.9 mm per year, occurring between April and September. Average monthly lake evaporation occurring between June and September is higher than average monthly precipitation during these months conditions (FEIS SD 2-6, Section 2.2). Like at Meadowbank, snow accumulation is expected to be minimal on the surface of rock stockpiles. A conservative evaluation of water contacting the stockpile annually is 203.9 mm, which translates to 1.6 litres of water annually over a surface area equivalent to that of an HCT (10 cm diameter HCT), 10 litres and 19 litres annually for the leaching columns of 50kg and 100 kg respectively (25 and 34 cm diameter respectively).

- HCT weekly leaching cycles added 1.0 litre of water to the crushed rock, while leaching columns added 5 and 10 litres of water for the 50 kg and 100 kg cells respectively. Thus 1 year of rainfall onto a stockpile is represented by roughly two leaching cycles for each laboratory leaching cell.

- Mineral salts produced from weathering are expected to be released (washed out) when water infiltrates the waste pile and reports to the drainage capture systems. Waste rock piles located in dry climate areas such as Meliadine may not release any of the infiltrated water for a number of years (such as at the Meadowbank site where seepage has not yet been observed after 3 years of RSF construction (Robert and Bertrand, 2012). Chemicals are thus retained within moist areas of the pile and are not released to the environment. Conversely in laboratory tests, the large volume of water flushing the waste releases a greater chemical load per mass of waste. The release rate of chemicals from waste rock at site will be much lower on site compared to laboratory conditions given the large amount of water added to laboratory tests on a weekly basis and to the field cell tests on a monthly basis. The chemical loading rate from waste rock at site, specifically buffering mineral consumption, is expected to be substantially lower than at site.

Given the above differences between site and laboratory test conditions, the buffering mineral consumption rate and the chemical release rates (or loading rates) at site are expected to be far slower than release rates generated under laboratory conditions, especially those extrapolated from the static leach tests and HCTs. The mineral depletion calculations represent conservative assessment of buffering mineral consumption and salt release compared to expectations at the Meliadine site.

In this study, the results of standard size laboratory leaching tests are used to assess the variability in weathering characteristics according to sample composition, while the results of the larger laboratory column and field weathering tests are used in combination with site contact water quality data to determine likely chemical release rates, waste rock contact water quality, and ultimately, the likelihood of the need for water quality control measures.

#### 2.2.4.6 Leaching Rate Calculation

Arsenic leaching rates were calculated from all leaching tests (static leach test (SFE), HCT, large column, and field cell leachate) concentrations in order to compare and extrapolate test results to anticipated site conditions (Section 3.3.3.1). Leaching rates were calculated as follows:

$$Leaching\ Rate\left(\frac{\frac{mg}{kg}}{week}\right) = \frac{concentration\left(\frac{mg}{L}/week\right) x\ volume\ (L)}{mass\ (kg)}$$

Leaching rates for kinetic tests were calculated based on the final two test cycles reported. Leaching rates will be calculated for each parameter as input to predictive water quality modeling reported under separate cover.

#### 2.2.4.7 Mineral Depletion Calculations

Humidity cell leachate concentrations were used in conjunction with ABA data to calculate and compare the rate at which sulphide minerals are oxidized and neutralization minerals are dissolved or depleted under the conditions of the test, in this case, laboratory accelerated weathering conditions. These comparisons serve to predict the time to onset of acid generation for cells that have not yet generated acidic drainage. Total sulphur, sulphide, bulk neutralization (NP), and carbonate NP (CaNP) depletion calculations were conducted to evaluate the rate of depletion of acid producing (i.e., sulphide) and acid neutralizing (i.e., carbonate and aluminosilicate) minerals in the sample.

Empirical rates of NP and CaNP depletion were calculated according to MEND (2009). This calculation assumes that the NP and CaNP depletion is equivalent to the rate of sulphate production (i.e. acid production) and the rate of alkalinity production / acidity consumption. If acid producing minerals are depleted from the material prior to soluble, neutralizing minerals, it is unlikely that acid generating conditions would be realized. However, if the rate of dissolution of neutralizing minerals exceeds the rate of oxidation of sulphide minerals, acid generation could occur. The following criteria were applied:

- If the time to depletion of NP or CaNP is greater than the time to depletion of the sulphides, the sample is non acid-generating; and,
- If the time to depletion of NP or CaNP is less than the time to depletion of the sulphides, the sample may be potentially acid generating.

Depletion calculations were completed for all PAG and uncertain samples from Iron formation at Discovery, F Zone, and Pump, and greywacke/siltstone at Discovery, for data from HCT, large, column, and field barrel tests. Results of the depletion calculations were compared to the potential for acid generation calculated using ABA data for each sample based on NPR and CaNPR.

Given that conditions at site, an arctic desert, are substantially different from those in the laboratory, the mineral depletion calculations are considered a conservative approach of the rate of consumption of buffering capacity as discussed in Section 2.2.4.5

## 2.3 Quality Assurance and Quality Control

The objective of a quality assurance/quality control (QA/QC) program is to assess sample representativeness and defensibility of reported results based on the level of accuracy and precision achieved during the study. Samples of core and overburden collected by Golder were obtained using a consistent sampling procedure and sample size. Sampled material was bagged individually to avoid cross-contamination, sealed, numbered and sent to the analytical laboratory with chain-of-custody records. Similar analytical methods were used on all solid samples (rock, tailings, overburdens) to allow direct comparison of results.

# 3.0 RESULTS OF WASTE ROCK AND ORE GEOCHEMICAL CHARACTERIZATION

Static test results for waste rock and ore samples, including Pad samples, are discussed in the following sections. Tabulated results and figures are presented in Appendix B and laboratory analytical certificates are included in Part 2 of this document.

Results are reported by deposit and rock type. Samples collected from Tiriganiaq deposit were grouped based on sample location with respect to the open pit and underground development areas, as well as by lithology. Samples collected from F Zone, Discovery, Pump, Wesmeg, and Wolf deposits were grouped based on lithology and sample location within the pit (i.e., hanging wall and foot wall).

For purposes of data evaluation, samples of greywacke, siltstone, and argillite collected from the Sam Formation and Tiriganiaq Formation are considered one rock type as sample composition is frequently a combination of greywacke and siltstone. Little variation was found between the pure greywacke and siltstone samples in terms of chemical composition or acid rock drainage potential.

## 3.1 Chemical Composition – Waste Rock and Ore

### 3.1.1 Mineralogy – Waste Rock

Results of mineralogical analyses are presented in Appendix B, Table B.2 for the 49 samples analyzed from all the deposits. The focus of the mineralogical investigation was to identify the source of potential acidity (sulphide minerals) and buffering capacity, including carbonate minerals and some silicate minerals that may offer some neutralization potential. The mineralogical investigation also aimed to identify arsenic-bearing minerals.

The mineralogical analyses are in agreement with the results of ABA tests and chemical composition for the samples tested, as discussed hereafter.

#### Discovery

The four greywacke samples consisted primarily of plagioclase feldspar (30 to 39 weight percent or wt%), quartz (30 to 32 wt%), and muscovite (7.5 to 20 wt%) with lesser biotite (6.1 to 8.4 wt%) and clinochlore (7.5 to 11 wt%). Some samples contain calcite, ilmenite and gypsum at concentrations <1 wt% each. One sample contains actinolite (3.9 wt%). No sulphide minerals were detected in any samples.

The three iron formation samples consisted primarily of quartz (34 to 42 wt%), magnetite (10 to 38 wt%) cummingtonite (12 to 14 wt%), plagioclase feldspar (5.9 to 11 wt%) and actinolite (8.2 to 8.8 wt%), with lesser biotite (3.0 to 7.1 wt%) and clinochlore (1.2 to 5.4 wt%). All samples contain calcite (approximately 0.5 to 1.9 wt%). Sulphides were present in two samples as pyrite (0.9 wt%) and pyrrhotite (1.7 wt%).

The mineralogical analyses show good agreement with the results of ABA and chemical composition tests for the samples tested. The bulk of the reactive buffering capacity appears to be provided by calcite and slower reacting aluminosilicate minerals, which is reflected in the lower NP content of these samples compared to similar lithologies at other deposits.

## F Zone

The three iron formation samples consisted primarily of quartz (69 to 75 wt%), cummingtonite (6.6 to 10 wt%) and ankerite (3.6 to 5.8 wt%), with lesser amounts of clinochlore (1.4 to 4.7 wt%), siderite (0.6 to 6.5%) and magnetite (0.4 to 3.6 wt%). Pyrrhotite is the only sulphide mineral detected (3.6 to 8.7 wt%).

The four mafic volcanic samples consisted primarily of quartz (20 to 25 wt%), plagioclase (20 to 30 wt%), clinochlore (22 to 30 wt%) and calcite (7 to 25 wt%), with lesser ilmenite (0.9 to 2.7 wt%) and biotite (2.6 to 6.6 wt%). One sample (M09-859-01) contained significant dolomite (22 wt%) and another (M08-75-03) contained ankerite (15 wt%). No sulphide minerals were detected.

Buffering capacity at the F Zone deposit is expected to be provided by calcite and dolomite, which are generally fast-reacting buffering minerals. Some buffering capacity may be provided by plagioclase and clinochlore. Ankerite was considered to contribute to buffering capacity at a reduced equivalent (70%) because its dissolution also releases a metal ion which generates acidity.

## Pump

The two iron formation samples consisted primarily of quartz (53 to 56 wt%) and siderite (18 to 24 wt%), with lesser amounts of clinochlore (4.3 to 6.5 wt%), magnetite (2.7 to 7.7 wt%), ankerite (4.9 to 8.4 wt%) and cummingtonite (1.0 to 1.4 wt%). Calcite was detected in one sample (1.5 wt%). Sulphides minerals were detected in both samples as pyrrhotite (3.6 to 3.8 wt%) and pyrite (1.2 wt%).

The four mafic volcanic samples consisted primarily of quartz (25 to 31 wt%), plagioclase (14 to 33 wt%), clinochlore (10 to 28 wt%) and calcite (15 to 17 wt%), with lesser ilmenite (0.6 to 1.8 wt%), muscovite (4.4 to 14 wt%) and biotite (1.9 to 4.3 wt%). One sample (M96-58-02) contained magnetite (1.1 wt%), actinolite (7.2 wt%) and epidote (4.7 wt%). No sulphide minerals were detected.

Buffering capacity at the Pump deposit is expected to be provided by calcite. Some buffering capacity may also be provided by plagioclase and clinochlore but their reaction kinetics are considerably slower, and as such they are less effective at buffering than carbonate minerals.

## Tiriganiaq

The eight greywacke/siltstone samples consisted primarily of quartz (27 to 43 wt%), plagioclase feldspar (21 to 37 wt%) and muscovite (14 to 29 wt%) with lesser clinochlore (4.7 to 13 wt%), ankerite (4.2 to 8.4 wt%), and calcite (0.8 to 2.8 wt%). One sample contained dolomite (1.5 wt%). Other minerals were present in lower amounts. Two samples contained detectable sulphide minerals, including arsenopyrite (0.3 wt%) and pyrite (0.4 wt%).

The two iron formation samples principally consisted of quartz (42 to 57 wt%), clinochlore (14 to 17 wt%), cummingtonite (10 wt%), and magnetite (8.6 to 25 wt%) with calcite (3.7 to 11 wt%). Other minerals were present in lower amounts. Pyrrhotite (2.3 wt%) was detected in one sample.

The six mafic volcanic samples consisted primarily of quartz (17 to 27 wt%) and ankerite (2.7 to 39 wt%), with lesser plagioclase feldspar (6.5 to 21 wt%), muscovite (7.2 to 21 wt%), calcite (1.4 to 18 wt%) and clinochlore (3.8% to 23 wt%). One mafic volcanic sample (M99-409-05) had relatively low ankerite (2.7 wt%) and a high clinochlore (23 wt%) content. Other minerals were present in lower amounts. Four of the six samples contained detectable sulphide minerals as pyrite (0.3 to 0.6 wt%).

In all samples analyzed, the bulk of the buffering capacity is provided by calcite. Ankerite also releases a portion of the net buffering capacity. Plagioclase feldspar, muscovite and clinochlore aluminosilicate minerals may also provide some buffering capacity but their reaction kinetics are slower, and may not be able to neutralize very acidic drainage should it ever develop.

### Wesmeg

The five mafic volcanic samples consisted primarily of quartz (14 to 34 wt%), plagioclase (16 to 30 wt%), clinochlore (11 to 28 wt%) and calcite (1.6 to 20 wt%), with lesser ankerite (1.9 to 10 wt%) and ilmenite (0.9 to 2.9 wt%). One sample (M10-994-04) contained clinozoisite (22 wt%), biotite (2.5 wt%) and diopside (1.8 wt%). Other minerals were present in lower amounts. No sulphide minerals were detected.

The one ultramafic sample consisted primarily of clinochlore (28 wt%), quartz (27 wt%) calcite (20 wt%) and plagioclase (15 wt%), with lesser amounts of magnetite (3.6 wt%), ankerite (3.2 wt%), actinolite (1.5 wt%) and ilmenite (1.1 wt%). No sulphide minerals were detected.

In all samples analyzed, the bulk of the reactive buffering capacity is provided by calcite with a lesser portion from ankerite. Plagioclase feldspar, muscovite and clinochlore alumino-silicate minerals may also provide buffering capacity but their reaction kinetics are considerably slower, and as such they are less effective at buffering than carbonate minerals.

### Wolf

The three greywacke/siltstone samples consisted primarily of quartz (34 to 41 wt%), muscovite (23 to 27 wt%), plagioclase feldspar (17 to 26 wt%) and clinochlore (10 to 13 wt%) with lesser ankerite (0.5 to 3.0 wt%), calcite (1.0 to 2.1 wt%), and potassium feldspar (1.3 to 2.3 wt%). Sample M10-993-02 contained pyrite (0.4 wt%). No other sulphide minerals were detected.

The two iron formation samples mainly consisted of quartz (43 to 48 wt%), magnetite (15 to 24 wt%) and clinochlore (13 to 15 wt%) with lesser calcite (5.7 to 13 wt%), cummingtonite (5.9 to 9.8 wt%) and biotite (3.0 to 3.8 wt%). No sulphides were detected.

The two mafic volcanic samples consisted primarily of quartz (18 to 23 wt%), plagioclase feldspar (13 to 28 wt%), clinozoisite (13 to 16 wt%), clinochlore (12 to 16 wt%), actinolite (7.4 to 15 wt%), calcite (3.0 to 11 wt%) and muscovite (5.2 to 10 wt%). No sulphides were detected.

In all samples analyzed, the bulk of the buffering capacity is provided by calcite. Plagioclase feldspar, muscovite and clinochlore alumino-silicate minerals may also provide some buffering capacity but their reaction kinetics are considerably slower, and as such they are less effective at buffering than carbonate minerals.

## 3.1.2 Major and Trace Element Composition – Waste Rock and Ore

The results of chemical analyses are presented in Appendix B.2 as tables and figures. Summary statistics are provided for each sample type, including: minimum, maximum, average, median, 75$^{th}$ percentile and standard deviation.

Major constituents are similar for all rock types from all deposits and include silica, aluminum and iron in greywacke/siltstone and iron formation as well as calcium in gabbro and mafic volcanic rocks. Minor constituents include calcium, magnesium, potassium and sodium. Major constituents show little variation within each sample group as demonstrated by standard deviation values.

Figures showing trace metal content (Appendix Figures B.2-1 to B.2-22) plot the median concentration for each element. Figures include typical crustal abundance concentrations for comparison purposes only. Element concentrations that are greater than five times the typical crustal abundance for a similar rock type are considered to be significantly enriched compared to typical crustal abundance and include arsenic, gold, bismuth, antimony and selenium. The results of the comparisons are summarized in Table 14.

There was some variation in trace element composition within each sample group with standard deviation values generally equal to or less than median values.

**Table 14: Summary of Waste Rock Chemical Composition**

| Deposit | Rock Type | Number of Samples | Parameter Concentrations Greater than Five Times Typical Crustal Abundance (Price 1997) [1,2,3] |
|---|---|---|---|
| Discovery | Gabbro | 11 | As, **Au**, Bi |
| | Greywacke/Siltstone | 54 | Ag, **As**, **Au**, **Bi** |
| | Iron Formation | 33 | Ag, As, **Au**, **Bi**, Fe, Sb, Se |
| | Ore/IF | 5 | **As**, **Au**, **Bi**, Fe, Sb |
| F Zone | Iron Formation | 7 | Ag, **As**, **Au**, **Bi**, Cd, Mn, Sb, **Se** |
| | Mafic Volcanic | 70 | Ag, As, Au, Bi, Cd, Cu, Sb, **Se** |
| | Ore/IF | 3 | **As**, **Au**, **Bi**, **Cd**, **Sb**, **Se** |
| Pump | Iron Formation | 8 | **As**, **Au**, **Bi**, **Cd**, Cu, **Sb**, **Se**, **Zn** |
| | Mafic Volcanic | 36 | **As**, **Au**, Bi, Sb, Se |
| | Ore/Iron Formation | 4 | **As**, **Au**, **Bi**, **Cd**, Cu, **Sb**, **Se**, **Zn** |
| Tiriganiaq | Gabbro | 10 | **As**, **Au**, Sb |
| | Greywacke/Siltstone | 194 | Ag, **As**, Au, Ba, **Bi**, Cr, Cu, Pb, Sb, **Se** |
| | PAD waste rock[4] | 13 | **As, Bi** |
| | PAD WR[4] (-200 µm) | 6 | **As, Bi** |
| | Iron Formation | 6 | **As**, Au, Bi, Fe, Se |
| | Mafic Volcanic | 43 | Ag, **As**, **Au**, Bi, Cd, Sb, **Se**, Zn |
| | Ore/Greywacke | 3 | **As**, **Au**, Bi, Sb |
| | Ore/Mafic Volcanic | 4 | **As**, **Au**, **Bi**, **Cd**, Mo, Pb, **Sb**, Zn |
| | PAD Lode 1000[4] | 1 | **As, Au, Bi, Cd, Mo, Pb, Sb, Y, Zn** |
| | PAD Lode 1100[4] | 1 | **As, Au, Bi, Mo, Pb, Sb** |

| Deposit | Rock Type | Number of Samples | Parameter Concentrations Greater than Five Times Typical Crustal Abundance (Price 1997) [1,2,3] |
|---|---|---|---|
| Wesmeg | Mafic Volcanic | 56 | **As**, **Au**, Bi, Cr, Cu, Ni, **Sb**, **Se**, Zn |
| | Ore/mafic volcanic | 3 | **As**, **Au**, Cu, **Sb**, Se |
| | Ultramafic | 3 | **As**, **Au**, Cr, Mg, Ni, Sb, Se |
| Wolf | Greywacke/Siltstone | 17 | **As**, **Au**, **Bi**, Pb, **Sb,** Se |
| | Iron Formation | 5 | **As**, **Au** |
| | Mafic Volcanic | 10 | **As**, **Au**, Bi, Cd, Cr, Sb, **Se** |
| | Ore/Iron Formation | 3 | **As**, **Au**, **Bi**, Cd, Zn |

**Notes:**
[1] Where at least one sample exceeds five times crustal abundance
[2] Bold values indicate parameters where median concentration exceed five times the stated typical crustal abundance
[3] Selenium detection limit is greater than five-times crustal abundance concentration
[4] Composite samples from test pits completed at the Operations Pad

### 3.1.3 Total Arsenic Content – Waste Rock and Ore

Arsenic has been identified as a parameter of environmental interest because of its documented presence in the Project area (Section 1.2.7) as a natural anomaly in soil and surface water, as well as its association with gold mineralization. The mineralogical form of arsenic has an important influence on its mobility upon weathering: if arsenic is present in minerals other than sulphides, such as trace occurrences as impurities in other more soluble minerals, arsenic may be released with mineral dissolution or buffering reactions in addition to sulphide oxidation.

Arsenic was found at concentrations exceeding five times typical crustal abundance in samples from all rock types, and the median concentration also exceeded five times the crustal abundance for most rock groups. Other elements also have median concentrations that exceed five times its typical crustal abundance as shown in Table 14, but these elements are released at lower concentrations in leaching tests (Section 3.3). Thus they do not constitute elements of environmental interest and are not further discussed.

There is no correlation between total arsenic concentration and depth (Appendix Figure B.2-23) for any rock group, and a weak correlation with sulphide sulphur (Appendix Figure B.2-24). Arsenic is likely associated with arsenopyrite (FeAsS), and possibly as impurities in pyrite ($FeS_2$) and pyrrhotite ($Fe_{1-x}S$), both of which are documented to be associated with mineralization at the Project.

The following discussion focuses on total arsenic content by deposit as summarized in Table 15. The highest median arsenic concentrations are associated with ore samples in the greywacke/siltstone, iron formation, and mafic volcanic units into which ore is hosted. All waste rock units report enriched arsenic content, with the highest reported median concentrations from the iron formation and greywacke/siltstone waste rock units.

**Table 15: Summary of Median Arsenic Content (mg/kg)**

| Deposit | Location | Waste Rock | | | | Ore | | |
|---|---|---|---|---|---|---|---|---|
| | | Gabbro | Greywacke / Siltstone | Iron Formation | Mafic Volcanic | Grey-wacke | Iron Formation | Mafic Volcanic |
| Discovery | open pit | 4.9 | 34 | 7.7 | -[1] | - | 390 | - |
| F Zone | hanging wall | - | - | 48 [2] | 6.7 | - | 970 | - |
| | Footwall | - | - | 108 | 23 | - | | - |
| Pump | hanging wall | - | - | 103 | 22 | - | 7250 | - |
| | Footwall | - | - | 58 | 19 | - | 295 | - |
| Tiriganiaq | Pad | - | 76 | - | - | 7200 | - | - |
| | open pit/FW | 14 | 60 | 490 | 54 | - | - | 2400 |
| | open pit/HW | 7.9 | 51 | 47 | 24 | 260 | - | 7200 [2] |
| | underground | - | 47 | 215 | 11 | - | - | - |
| Wesmeg[2] | open pit | - | - | - | 23 | - | - | 10 |
| Wolf | open pit/FW | - | - | - | 6.6 | - | 340 | - |
| | open pit/HW | - | 33 | 240 | 30 | - | 2500 | - |

**Notes:**
- not analyzed
[1] Either rock type does not present at specific deposit or rock type was not sampled
[2] One sample analyzed

**Discovery –** Arsenic concentrations are relatively uniform in all rock types at Discovery with similar median concentrations reported for hanging wall and footwall samples. Median concentrations reported for all Discovery rock types are lower than those reported for the same rock types at F Zone, Pump, Tiriganiaq, Wesmeg, and Wolf deposits.

**F Zone –** The median arsenic concentration in iron formation and mafic volcanic waste rock is higher in the footwall than in the hanging wall. The iron formation waste rock contains the highest median arsenic concentration of the F Zone rocks.

**Pump –** The median arsenic concentration in iron formation is higher in the hanging wall than in the footwall. The median concentration for ore/iron formation samples is the highest reported for the ore/iron formation samples collected from all deposits.

**Tiriganiaq –** The median arsenic concentration in greywacke waste rock is similar whether samples are from open pit, deeper underground development, or associated with the shallow access ramp as exposed Pad rock or previously characterized samples (54 ppm; SRK 2006, Appendix E).

The median arsenic concentration of 94 mg/kg (for 6 samples) within the fines fraction of the PAD waste rock is similar to that of the overall PAD WR median arsenic of 76 mg/kg (for 12 samples). The arsenic concentration between the fines and whole sample is very similar as the concentrations are within 10 mg/kg of each other (i.e PAD-11-08 (coarse) = 90 mg/kg vs. PAD-11-08 (fines) = 80 mg/kg). The only exception to the above is

sample PAD-11-10 in which there is a 70 mg/kg difference between the coarse and fine fraction, with the coarse fraction having the higher value.

The median arsenic content of mafic volcanic waste rock is slightly lower in the underground footwall development area than the open pit footwall, which is closer to the mineralized zone. Notwithstanding this, all concentrations are low compared to other rock types.

Iron formation waste rock has the highest median arsenic concentration of all Tiriganiaq waste rock. The highest concentration is reported from the open pit/footwall, followed by the underground development. The lowest concentration is reported from the open pit/hanging wall. At Tiriganiaq, gold is hosted in the iron formation (and in quartz veins) and arsenopyrite mineralisation is observed and documented to occur (Pincock, Allen and Holt 2008).

The median concentration of arsenic in ore from mafic volcanic rock is the highest reported for all ore samples from all deposits, and substantially higher than the median concentration for Tiriganiaq ore/greywacke samples.

**Wesmeg –** The median arsenic concentrations in waste rock from Wesmeg are lower than those reported at other deposits. The median concentration for ore/mafic volcanic samples is an order of magnitude lower than ore samples collected from other deposits.

**Wolf –** The median arsenic concentration for mafic volcanic samples is higher in the hanging wall than in the footwall. The median concentration for iron formation is the highest of all deposits.

## 3.2 Acid Generation Potential – Waste Rock and Ore

The results of ABA and NAG pH testing are presented as tables and figures in Appendix B.3. The results provide information on the ARD potential of each sample as determined based on sulphur content, net neutralization potential (NNP = NP - AP), NPR, CaNPR (CaNPR-adj) and NAG pH when available. Presented with the data are results of statistical analyses and the calculated bulk characteristics for each sample group using CaNNP, CaNPR, NNP and NPR. Where the bulk CaNPR and bulk NPR values result in differing ARD potential designations, the rock type is considered to have an uncertain bulk ARD potential.

A summary of the ARD potential of all samples and the designated ARD potential for each sample group is presented in Table 16. Samples that have a potential to generate ARD are referred to as “potentially acid-generating” (PAG), while those that are acid-buffering are referred to as non-PAG. All other material is referred to as “uncertain” as these samples are either not clearly net acid-generating or acid producing. This includes samples that have variable NPR results within the sample group and samples/sample groups that have conflicting NPR values from the different methods used to evaluate ARD potential (NPR, CaNPR, CaNPR-adj and NAG results).

Most samples of waste rock have no potential to generate acid drainage with the exception of iron formation from Discovery, F Zone, and Pump, and greywacke/siltstone from Discovery, all of which have an uncertain ARD potential based on the different values obtained from the various methods used to calculate NPR for the bulk rock lithologies. Tiriganiaq, Wesmeg and Wolf ores are non-PAG, Discovery ore is PAG, and Pump and F Zone ores have an uncertain ARD potential.

The low ARD potential generally stems from the low sulphide content and excess buffering capacity from reactive carbonate minerals including calcite, dolomite, and some ankerite. In samples where no carbonate minerals were detected by mineralogical analysis, all yielded neutral pH values which indicates that some

immediately available buffering capacity was present in the sample, albeit at concentrations that were below the XRD detection limits. It is possible that non-detection is affected by the small size of the subsample subjected to XRD analysis. Individual sample NPR indicates that of 603 tested samples, 20 (3.3%) could be considered as PAG and 82 (14%) as uncertain; of these, 12 PAG samples and 67 uncertain samples are from the Discovery deposit. Bulk NPR supports that most waste rock types are non-PAG with the exception of those listed above; however, many ores have an uncertain ARD potential. The ore will eventually report to tailings after metallurgical processing, and is more accurately assessed as such (Section 4.2).

**Table 16: Summary of ARD Potential for Waste Rock and Ore Samples**

| Deposit | Rock Type | Number of Samples[1] | Sample Count[2] | | | Bulk Potential by Rock Type | | | Bulk ARD Designation[4] |
|---|---|---|---|---|---|---|---|---|---|
| | | | non-PAG | un-certain | PAG | Median S(T) | Bulk NPR | Bulk CaNPR -adj[3] | |
| Discovery | Gabbro | 11 | 6 | 5 | 0 | 0.12 | 7.8 | 4.2 | Non-PAG |
| | Greywacke/Siltstone | 54 | 2 | 51 | 1 | 0.13 | 3.3 | 0.40 | *uncertain* |
| | Iron Formation | 33 | 16 | 11 | 6 | 0.39 | 2.1 | 1.3 | *uncertain* |
| | Ore/IF | 5 | 0 | 0 | 5 | 1.1 | 0.61 | 0.37 | **PAG** |
| F Zone | Iron Formation | 7 | 1 | 2 | 4 | 2.2 | 1.2 | 0.42 | *uncertain* |
| | Mafic Volcanic | 70 [5] | 56 | 0 | 0 | 0.11 | 29 | 25 | Non-PAG |
| | Ore/IF | 3 | 0 | 1 | 2 | 1.9 | 1.3 | 1.0 | *uncertain* |
| Pump | Iron Formation | 8 | 1 | 5 | 2 | 2.0 | 1.5 | 0.33 | *uncertain* |
| | Mafic Volcanic | 36 | 36 | 0 | 0 | 0.09 | 44 | 44 | Non-PAG |
| | Ore/Iron Formation | 4 | 2 | 1 | 1 | 1.9 | 1.5 | 1.6 | *uncertain* |
| Tiriganiaq | Gabbro | 10 | 10 | 0 | 0 | 0.12 | 10 | 8.5 | Non-PAG |
| | Greywacke/Siltstone | 194 [5] | 163 | 0 | 0 | 0.19 | 8.0 | 5.9 | Non-PAG |
| | PAD waste rock | 13 | 13 | 0 | 0 | 0.19 | 7.9 | 5.8 | Non-PAG |
| | PAD WR (-200 µm) | 6 | 6 | 0 | 0 | 0.23 | 6.8 | 5.4 | Non-PAG |
| | Iron Formation | 6 | 6 | 0 | 0 | 0.30 | 5.6 | 6.3 | Non-PAG |
| | Mafic Volcanic | 43 | 43 | 0 | 0 | 0.23 | 25 | 20 | Non-PAG |
| | Ore/Greywacke | 3 | 3 | 0 | 0 | 0.49 | 5.3 | 5.7 | Non-PAG |
| | Ore/Mafic Volcanic | 4 | 4 | 0 | 0 | 0.86 | 8.6 | 10 | Non-PAG |
| | PAD Ore Lode 1000 | 1 [6] | 1 | 0 | 0 | 1.1 | 3.6 | 3.7 | Non-PAG |
| | PAD Ore Lode 1100 | 1 [6] | 0 | 1 | 0 | 1.7 | 1.3 | 1.2 | *uncertain* |
| Wesmeg | Mafic Volcanic | 56 | 56 | 0 | 0 | 0.10 | 42 | 41 | Non-PAG |
| | Ultramafic | 3 | 3 | 0 | 0 | 0.066 | 26 | 30 | Non-PAG |
| | Ore/mafic volcanic | 3 | 3 | 0 | 0 | 0.27 | 97 | 105 | Non-PAG |
| Wolf | Greywacke/Siltstone | 17 | 17 | 0 | 0 | 0.22 | 5.2 | 3.7 | Non-PAG |
| | Iron Formation | 5 | 5 | 0 | 0 | 0.24 | 13 | 15 | Non-PAG |
| | Mafic Volcanic | 10 | 10 | 0 | 0 | 0.14 | 27 | 28 | Non-PAG |
| | Ore/Iron Formation | 3 | 2 | 1 | 0 | 0.36 | 3.1 | 3.4 | Non-PAG |

**Notes:** [1] Total number of samples subjected to static testing
[2] Number of samples classified as PAG, uncertain and non-PAG following INAP (1992)
[3] CaNPR calculated using CaNP-adj
[4] Bulk ARD potential per rock type following INAP (1992) and based on calculated bulk characteristics using CaNPR and NPR (i.e. where different ARD potentials are defined the unit is considered "uncertain")
[5] In 2009, 14 mafic volcanic samples (F Zone) and 31 greywacke/siltstone (Tiriganiaq) samples were not subjected to ABA testing
[6] Composite samples from test pits completed in stockpiled ore at the Operations Pad

## Acid Potential

Total sulphur concentrations range from <0.01 to 5.7% in all waste rock samples, with median values for each rock type presented in Table 16 above. The dominant sulphur species in most samples is sulphide sulphur (Appendix B, Figure B.3-1) although some samples have some sulphate that is likely attributed to weathering of the core during storage. The differences between total sulphur and sulphide sulphur are greatest for samples with low sulphur content. This apparent discrepancy may be due to increasing analytical uncertainty as the analytical detection limit is approached. The sulphide sulphur content ranges from <0.01 to 5.4% and is highest in ore and iron formation proximal to the ore zone, and lowest in gabbro, mafic volcanic and greywacke/siltstones. AP is calculated from the total sulphur values rather than sulphide sulphur for all rock types to account for the potential for weathering of core between drilling and geochemical testing.

## Neutralization Potential

All paste pH values are circum-neutral to alkaline, ranging from 6.7 to 10.2. The bulk NP is generally high and is similar to that of the Carbonate NP (Appendix Figure B.3-2), inferring that carbonate minerals are the primary source of NP, although as stated in Section 3.1.1, some metal carbonate minerals offer a smaller proportion (ankerite) or no (siderite) net buffering capacity as upon dissolution they simultaneously release metal acidity to the system. A deviation of this general trend is observed in the low-NP portion, mostly for Discovery deposit samples including greywacke/siltstone, gabbro, and iron formation rock. This is likely due to aluminosilicate minerals being a contributor to NP values.

Buffering capacity is typically highest in the mafic volcanic samples for all deposits, followed by greywacke/siltstone. Discovery-area greywacke tends to have lower buffering capacity than other waste rock groups. Ankerite is present in concentrations higher than calcite in the Tiriganiaq samples subjected to mineralogy testing, including mafic volcanics, greywackes and iron formation samples. Siderite is detected in iron formation samples from F Zone and Pump.

## ARD Potential

For the **Tiriganiaq, Wesmeg, and Wolf** deposits, all waste rock samples are non-PAG and although a few individual samples may be PAG or have uncertain ARD potential, and some metal carbonates contribute to NP values, there is a large excess of buffering capacity in waste rock and ore. **Therefore, ARD is not anticipated to be of concern from a waste rock management perspective at these deposits.**

At **F Zone and Pump**, the iron formation and ore samples have an uncertain ARD potential. X-ray diffraction identified ankerite and siderite carbonate minerals in these rock types, with minor calcite in Pump iron formation. this waste rock lithology is expected to make up 8% and 14% of the total tonnage produced by mining these deposits respectively. Conversely, Mafic Volcanic waste rock, which constitutes 91% and 85% of the total waste at these respective deposits, has an excess of buffering capacity generally in the form of calcite with some ankerite contributing to NP in one sample of F Zone Mafic Volcanic waste rock. Given the low proportion of uncertain ARD rock in the F Zone and Pump stockpiles**, ARD is not anticipated to be of concern from a waste rock management perspective at these deposits.**

At **Discovery**, most of the greywacke/siltstone samples have an uncertain ARD potential. Half of the iron formation samples are uncertain or PAG and the ore samples are PAG. Although sulphur content is low in these units, NP is also low although the gabbro samples contain available NP. **Therefore, there is potential for ARD**

**at Discovery and waste rock requires management practices to prevent the onset of ARD.** This will need to be further evaluated during operations as more information becomes available.

**ABA tests**: ARD classification (INAC 1992) is shown graphically for all samples in Appendix Figures B.3-3 and B.3-4. Based on the low sulphur content and high NPR (Figure 4) and CaNPR (Figure 5) values, most samples are classified as non acid-generating (non-PAG). Samples classified as PAG or uncertain include greywacke/siltstone, iron formation and ore samples from Discovery (79 samples), F Zone (9 samples), Pump (9 samples), Tiriganiaq (4 samples), and Wolf (1 sample) deposits.

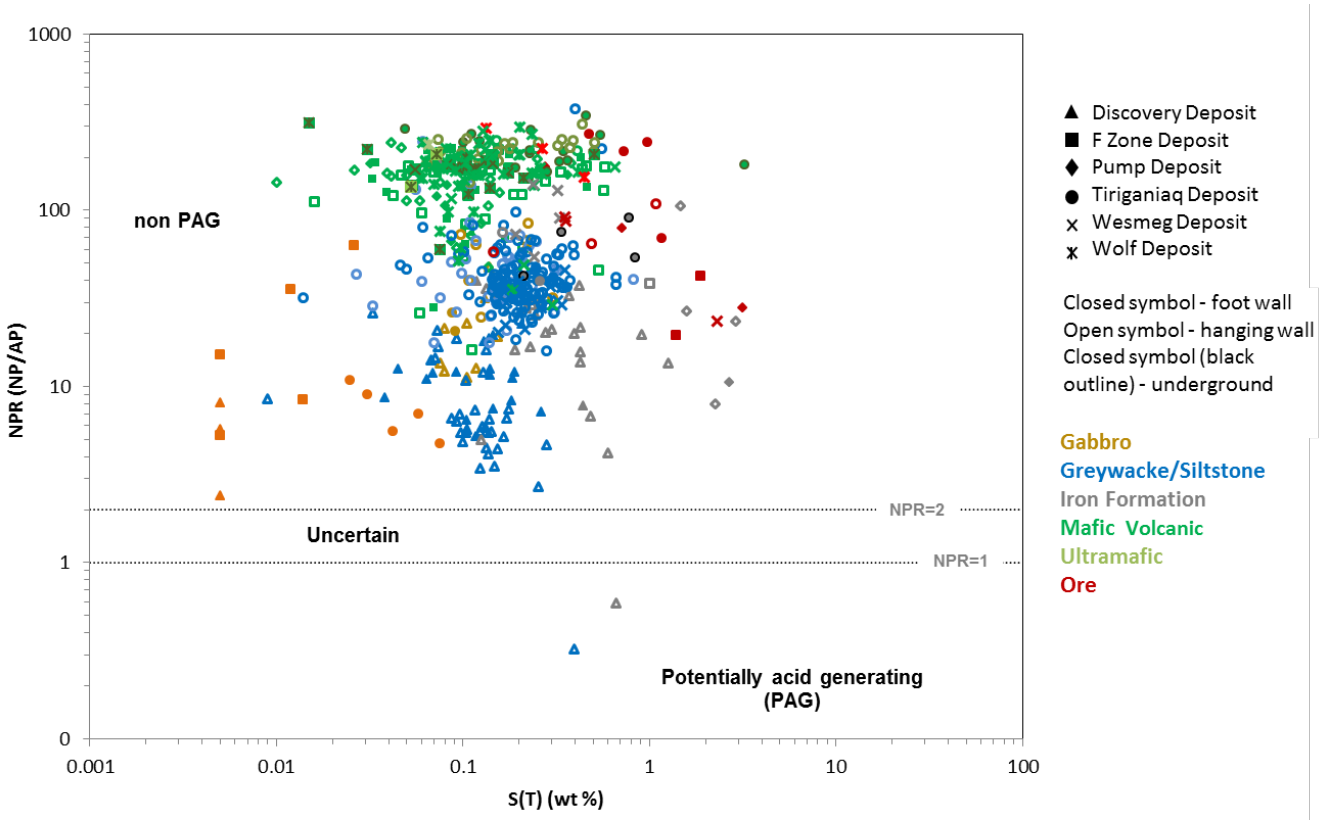



*Figure 4: Total Sulphur (S(T)) versus Net Potential Ratio (NPR) for Waste Rock and Ore*

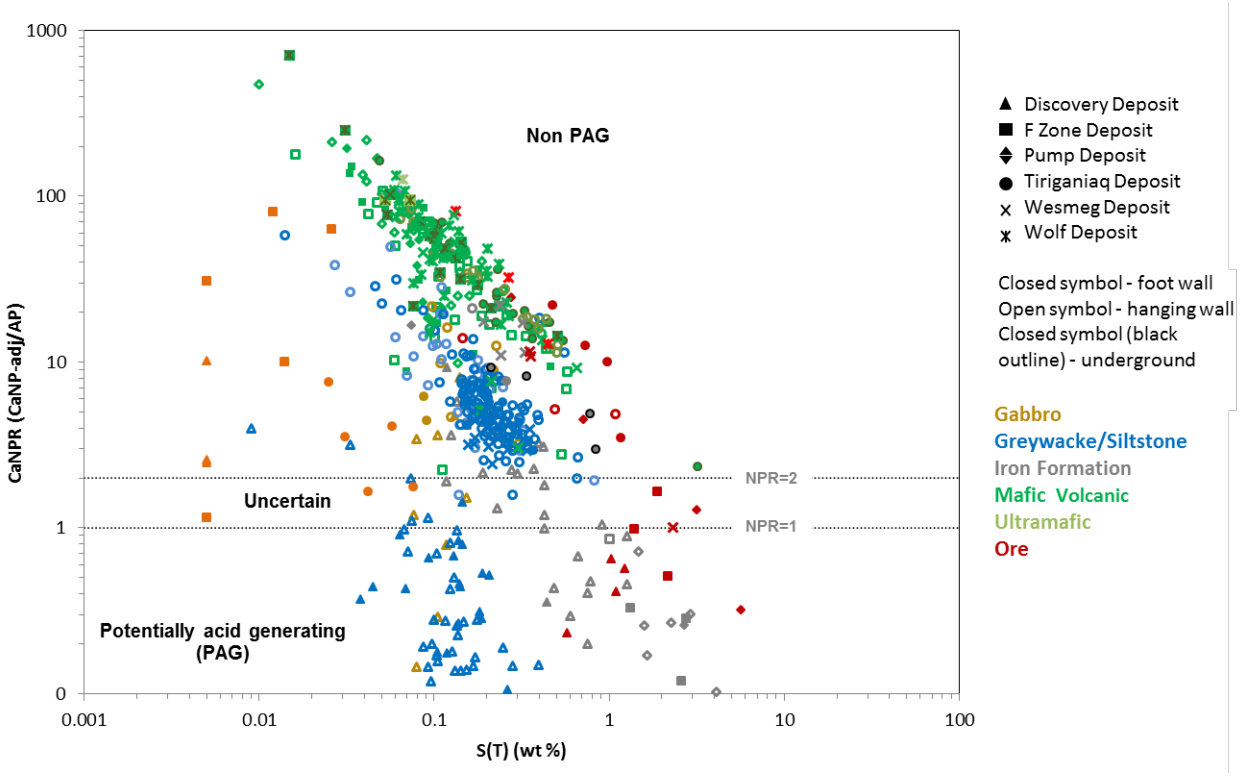



*Figure 5: Total Sulphur (S(T)) versus Carbonate Net Potential Ratio (CaNP-adj) for Waste Rock and Ore*

**NAG tests**: NAG pH values are mostly alkaline for the samples subjected to testing, with only 3 samples from Discovery showing a NAG pH of less than 4.5 (one iron formation sample, two hanging wall greywacke samples). For two of these samples the maximum NPR and CaNPR values is 1.0 t $CaCO_3$/1000 tonne rock and for the third sample it is 2.0 t $CaCO_3$/1000 tonne rock. Of the 12 hanging wall greywacke samples from Discovery subjected to NAG testing, four samples are classified as having uncertain ARD potential based on the NPR criteria, but produce NAG pH values ranging from 4.1 to 10.0. These samples may generate some acid but the bulk NPR of this rock is high and any acid generated is likely to be buffered within the pile of waste rock before reporting to base drainage. For samples classified as having uncertain ARD potential using NPR and CaNPR (INAC 1992), but that produce neutral to alkaline NAG, pH values should be considered as non-PAG. Since NAG tests are more representative of terminal conditions, it is considered that some of these samples do have sufficient buffering capacity to neutralize the acidity they may generate.

## 3.3 Metal Leaching Potential – Waste Rock and Ore

### 3.3.1 SFE Leach Tests

Leachate quality results for waste rock and ore samples are presented in Appendix B.4. Results are compared with effluent regulations (MMER 2006) with Table 17 summarizing parameters exceeding screening criteria.

**Table 17: Summary of Waste Rock and Ore Static Leach Test (SFE) Results**

| Deposit | Rock Type | Number of Samples | Median Final pH | Average As (mg/L) | MMER* (number of samples) |
|---|---|---|---|---|---|
| Discovery | Gabbro | 11 | 8.3 | 0.05 | n.e. |
| | Greywacke/Siltstone | 54 | 8.3 | 0.08 | n.e. |
| | Iron Formation | 33 | 7.8 | 0.008 | n.e. |
| | Ore/IF | 5 | 7.7 | 0.2 | **As (1)** |
| F Zone | Iron Formation | 7 | 8.0 | 0.01 | n.e. |
| | Mafic Volcanic | 70 | 8.3 | 0.01 | n.e. |
| | Ore/IF | 3 | 8.1 | 0.1 | n.e. |
| Pump | Iron Formation | 8 | 8.0 | 0.004 | n.e. |
| | Mafic Volcanic | 36 | 8.1 | 0.01 | n.e. |
| | Ore/IF | 4 | 8.2 | 0.09 | n.e. |
| Tiriganiaq | Gabbro | 10 | 8.4 | 0.007 | n.e. |
| | Greywacke/Siltstone | 194 | 8.2 | 0.05 | **As (1)** |
| | PAD waste rock | 13 | 7.9 | 0.05 | n.e. |
| | PAD WR (-200 µm) | 6 | 7.8 | 0.02 | n.e |
| | Iron Formation | 6 | 8.1 | 0.009 | n.e. |
| | Mafic Volcanic | 43 | 8.0 | 0.01 | n.e. |
| | Ore/GW | 3 | 8.0 | 0.3 | **As (1)** |
| | Ore/MV | 4 | 8.1 | 0.4 | **As (1)** |
| | PAD Lode 1000 | 1 | 7.8 | 0.3 | n.e. |
| | PAD Lode 1100 | 1 | 8.0 | 0.2 | n.e. |
| Wesmeg | Mafic Volcanic | 56 | 8.1 | 0.03 | n.e. |
| | Ore/MV | 3 | 8.4 | 0.003 | n.e. |
| | Ultramafic | 3 | 8.0 | 0.05 | n.e. |
| Wolf | Greywacke/Siltstone | 17 | 7.8 | 0.03 | n.e. |
| | Iron Formation | 5 | 7.7 | 0.02 | n.e. |
| | Mafic Volcanic | 10 | 7.9 | 0.04 | n.e. |
| | Ore/IF | 3 | 7.9 | 0.05 | n.e. |

**Notes:**
* Metal Mining Effluent Regulations (DFO 2006),
n.e = no exceedances

The final pH values of the SFE leachates are circum-neutral to alkaline, with values ranging from 6.1 to 9.5. Given that the initial leaching solution has a lower pH (around 5), buffering of SFE leachates are suggestive of the presence of available buffering capacity. The alkaline pH values reported by samples classified as PAG and uncertain ARD potential indicate that these samples have some readily available buffering capacity to neutralize acid in the short term even though carbonate minerals were not detected by XRD. This suggests that a mineralogy-based approach to the evaluation of ARD potential is conservative.

For all rock types investigated in the six deposits, the concentrations of almost all leachate parameters meet most effluent criteria (MMER; DFO 2006) with the exception of arsenic (in <1% of samples). Arsenic is leached in concentrations marginally higher than the MMER effluent limit (maximum monthly mean of 0.5 mg/L) in four leachate samples of the 577 samples subjected to the SFE test. These include one Discovery ore sample, one Tiriganiaq greywacke/siltstone sample, and two Tiriganiaq ore samples. The average arsenic concentration for each rock type is well below the MMER effluent limit.

For all waste rock types, leachable arsenic shows no correlation to sulphide content (Appendix Figure B.4-1). There is a positive correlation between leachable and total arsenic content for gabbro ($R^2$=1.0), iron formation ($R^2$=0.8), and ore ($R^2$=0.7) samples as shown in Figure 6 (Appendix Figure B.4-2). Greywacke ($R^2$=0.5) and mafic volcanic ($R^2$=0.2) samples show weaker correlation.

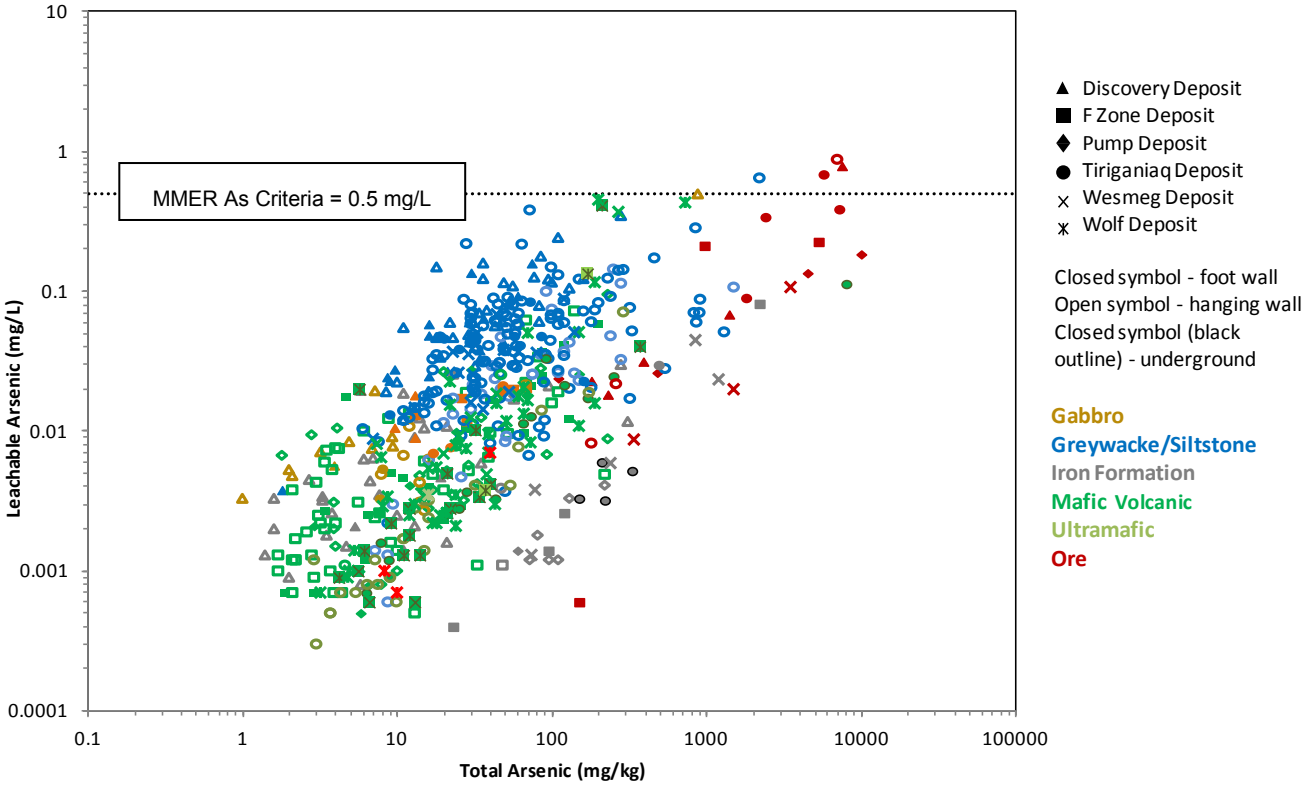



*Figure 6: Total Arsenic (mg/kg) versus Leachable Arsenic (mg/L) for Waste Rock and Ore*

Exceedances in leachates from laboratory tests do not necessarily imply non-compliance of mine site contact water quality. To this end, kinetic tests were completed at multiple scales to simulate leaching conditions that are closer to anticipated field conditions, and to define for these scenarios, the likely arsenic release rates from waste rock (Sections 3.3.3 and 3.3.3.1).

#### *3.3.1.1 Speciation Modelling*

Chemical principles dictate that the dissolved aluminum and iron concentrations should be lower in the pH range of the SFE test. The reported concentrations of aluminum and iron in the leachate samples likely include a portion of colloidal (particulate) aluminum and iron. Colloidal particles are typically smaller than the 0.45-µm filter pore size used to collect leach test water for analysis, and thus this solid-phase fraction can be erroneously reported as a dissolved phase concentration.

To assess the proportion of the aluminum and iron concentrations that may be precipitated (colloidal), SFE results for 26 samples were used as input for chemical speciation and saturation modelling using the USGS Code PhreeqC (Parkhurst, 1995). Samples were selected from all deposits and include gabbro, greywacke/siltstone, iron formation and mafic volcanic rock types.

Modelling results (Appendix G) show that aluminum and iron are supersaturated in the 26 solutions. When allowed to precipitate as metal oxides, the remaining aqueous aluminum and iron concentrations dropped by several orders of magnitude from the original SFE concentrations. This supports the likelihood that reported aluminum and iron concentrations are artefacts of the SFE test, and that dissolved concentrations in mine contact water at site are likely to be much lower.

### 3.3.2 NAG Leach Tests – Waste Rock and Ore

Results for NAG pH and acidity releases are presented with the ABA results (Appendix B.3). Metal results and terminal pH values for NAG leachates are presented in Appendix B.5 and summarized in Table 18. Results are compared with MMER (2006) Regulations, but it should be noted that leachate generated by NAG represents “terminal conditions”, or complete and instantaneous oxidation and leaching from all reactive sulphides and reactive carbonates. In actuality, sulphide oxidation and chemical release will occur gradually and concentrations in drainage water are expected to be much lower than NAG leachate chemistry at any given time. NAG leachate chemistry is more appropriately used to evaluate the total chemical load that could be released through sulphide oxidation.

For all rock types tested, NAG leachate arsenic concentrations are lower than neutral pH SFE leachate arsenic concentrations. The cause of this is not known but may be due to: 1) the more dilute NAG test leachate than the SFE leachate (100:1 solution to solid for NAG vs. 4:1 for SFE) and/or 2) to arsenic attenuation reactions occurring during sulphide oxidation and neutralization in the NAG test (such as adsorption of arsenic (and other chemicals) onto secondary minerals or coatings of iron or aluminum oxyhydroxides).

**Table 18: Summary of Waste Rock and Ore NAG Leach Test Results**

| Deposit | Rock Type | Number of Samples | Median NAG Leachate pH | Average As | MMER[1] |
|---|---|---|---|---|---|
| F Zone | Mafic Volcanic | 3 | 11 | 0.001 | - |
| Tiriganiaq | Greywacke/Siltstone | 4 | 11 | 0.01 | - |
| | Iron Formation | 1 | 11 | 0.005 | - |
| | Mafic Volcanic | 4 | 11 | 0.0006 | - |

**Notes:**
[1] Metal Mining Effluent Regulations (DFO 2006)
- No exceedances

### 3.3.3 Kinetic Tests – Waste Rock and Ore

Kinetic sample composition is detailed in Appendix B.6 and leachate quality results for humidity cells, large columns, and field cell tests on waste rock and ore are presented as tabulated results and time-series graphs in Appendix B.7. Results are compared with mine effluent regulations (MMER, DFO 2006). Table 19 presents a summary of static test results and kinetic test results for all kinetic test samples.

The final pH values of all kinetic leachates are circum-neutral to alkaline with values ranging from 6.5 to 9.3, corroborating high available buffering capacity in the short to medium term at least, in waste rock material. Field cell tests report pH ranging from 7.7 to 7.8 for waste rock, and 7.4 to 7.8 for ore (Lode 1000 and Lode 1100), after three cycles of testing.

For all test types, kinetic leachate concentrations are below mine effluent criteria (MMER; DFO 2006). The following general trends in kinetic leachate chemistry are observed for all waste rock tested:

- All samples produce slightly alkaline to slightly acidic leachate throughout the reported test period. Values decrease from cycle 0 (7.2 to 8.7) to the latest test cycle (6.7 to 8.6);
- Alkalinity concentrations are stable and exhibit a slight decreasing trend in all tested material. HCTs initial (Cycle 0) concentrations range from 7 to 18 mg $CaCO_3$/L, with final test cycle concentrations ranging from 4 to 20 mg $CaCO_3$/L. The large column test initial concentrations are slightly higher, ranging from 31 to 56 mg $CaCO_3$/L, with final test cycle concentrations ranging from 33 to 53 mg $CaCO_3$/L;
- Sulphate concentrations are generally stable with little to no active oxidation of sulphide minerals occurring, suggesting low reactivity of the material under accelerated weathering conditions. Concentrations range from 1 to 24 mg/L in the HCTs and 1.3 to 150 mg/L in the large columns;
- Calcium concentrations are generally stable and range from 1.6 to 9.0 mg/L in the HCTs and 9.1 to 31 mg/L in the large columns. The Discovery and F Zone large columns report increasing calcium concentrations through testing, from 11 and 12 in Cycle 0 to 27 and 14 in the last reported test cycle, respectively;
- Antimony, barium, boron, chloride, fluoride, magnesium, molybdenum, potassium, sodium, strontium, tin, and tungsten concentrations peak in Cycle 0 to 1, followed by decreasing concentrations. This is characteristic of the initial “first flush” which removes soluble salts and fine particles that are present on the surface of the charge material;

- Acidity, chloride, beryllium, bismuth, cadmium, chromium, copper, iron, lithium, mercury, phosphorus, selenium, thallium, titanium, and zinc concentrations were frequently below method detection limit in all samples; and,
- Arsenic concentrations report stable to slightly decreasing trends in all samples. For waste rock HCTs, initial concentrations range from 0.0003 to 0.008 mg/L (Cycle 0), and those for the final test cycle to date range from 0.0006 to 0.03 mg/L. The higher concentrations are from the Tiriganiaq greywacke underground, mafic volcanic open pit and underground, F Zone mafic volcanic, and Discovery greywacke samples. For large columns, initial concentrations range from 0.004 to 0.08 mg/L (Cycle 0), and the final test cycle to date range from 0.03 to 0.1 mg/L, with the highest concentrations leaching from the greywacke Discovery and Tiriganiaq underground columns.

Arsenic leachability is further discussed in Section 3.3.4.

**Table 19: Summary of Kinetic Test Leachate Concentrations for Parameters of Interest**

| Deposit | Rock Type | Sample | Test Type | ARD Potential (Static Tests) | Solid As (ppm) | Static Test Results[1] | | | Kinetic Test Results | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | final pH | As[2] (mg/L) | As[3] (mg) | Test Week | final pH | As[2] (mg/L) | As[3] (mg/kg/ cycle) |
| Discovery | Greywacke/ siltstone | ML90-14-2 | HCT | *uncertain* | 29 | 9.5 | 0.06 | 0.2 | 40 | 6.7 | 0.03 | 0.02 |
| | | ML92-061-01 | HCT | *uncertain* | 49 | 9.5 | 0.08 | 0.3 | 40 | 6.7 | 0.02 | 0.02 |
| | | ML95-82-1 | HCT | **PAG** | 100 | 9.5 | 0.1 | 0.5 | 40 | 7.0 | 0.03 | 0.03 |
| | | ML08-232-01 | HCT | *uncertain* | 77 | 9.6 | 0.1 | 0.5 | 20 | 6.7 | 0.05 | 0.05 |
| | | Col. 6 Disc GW (OP) | Column | *uncertain* | 51 | 9.6 | 0.1 | 0.5 | 30 | 7.6 | 0.1 | 0.01 |
| | Iron Formation | ML08-226-02 | HCT | **PAG** | 3.3 | 9.4 | 0.003 | 0.01 | 20 | 7.1 | 0.0005 | 0.004 |
| | | ML95-82-01 | HCT | **PAG** | 310 | 9.1 | 0.01 | 0.05 | 20 | 7.2 | 0.003 | 0.003 |
| | | ML95-95-01 | HCT | non-PAG | 23 | 9.5 | 0.03 | 0.1 | 20 | 7.4 | 0.004 | 0.004 |
| F Zone | Iron Formation | M09-802-02 | HCT | **PAG** | 120 | 8.1 | 0.003 | 0.01 | 20 | 7.2 | 0.0003 | 0.0003 |
| | | M10-935-02 | HCT | **PAG** | 2200 | 8.5 | 0.08 | 0.3 | 20 | 7.2 | 0.0008 | 0.0008 |
| | | M98-248-01 | HCT | **PAG** | 23 | 8.1 | 0.0004 | 0.002 | 20 | 7.2 | <0.0002 | 0.0002 |
| | Mafic Volcanic | M08-750-03 | HCT | non-PAG | 66 | 9.3 | 0.01 | 0.04 | 40 | 7.5 | 0.02 | 0.02 |
| | | M08-740-05 | HCT | non-PAG | 87 | 9.5 | 0.04 | 0.2 | 40 | 7.5 | 0.02 | 0.02 |
| | | M08-734-03 | HCT | non-PAG | 12 | 9.2 | 0.01 | 0.05 | 40 | 7.4 | 0.004 | 0.004 |
| | | M09-859-01 | HCT | non-PAG | 130 | 8.8 | 0.01 | 0.05 | 20 | 7.8 | 0.02 | 0.02 |
| | | Col. 5 F Zone MV (OP) | Column | non-PAG | 28 | 9.3 | 0.01 | 0.05 | 30 | 8.2 | 0.04 | 0.004 |
| Pump | Iron Formation | W94-61-01 | HCT | **PAG** | 130 | 7.3 | 0.003 | 0.01 | 20 | 7.2 | <0.0002 | 0.0002 |
| | | W94-73-02 | HCT | *uncertain* | 96 | 7.8 | 0.001 | 0.00 | 20 | 7.3 | <0.0002 | 0.0002 |
| | Mafic Volcanic | M96-58-02 | HCT | non-PAG | 230 | 9.4 | 0.009 | 0.04 | 20 | 7.5 | 0.007 | 0.007 |
| | | M97-123-01 | HCT | non-PAG | 20 | 9.4 | 0.03 | 0.1 | 20 | 7.6 | 0.03 | 0.02 |
| | | M97-124-01 | HCT | non-PAG | 14 | 9.1 | 0.005 | 0.02 | 20 | 7.6 | 0.005 | 0.005 |
| | | M98-184-01 | HCT | non-PAG | 4.1 | 9.7 | 0.01 | 0.04 | 20 | 7.49 | 0.003 | 0.003 |
| | 14% Iron Formation; 86% Mafic Volcanic | C-7 Pump | Column | non-PAG | 28 | 9.1 | 0.005 | 0.02 | 20 | 8.0 | 0.008 | 0.0008 |

| Deposit | Rock Type | Sample | Test Type | ARD Potential (Static Tests) | Solid As (ppm) | Static Test Results[1] | | | Kinetic Test Results | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | final pH | As[2] (mg/L) | As[3] (mg) | Test Week | final pH | As[2] (mg/L) | As[3] (mg/kg/ cycle) |
| Tiriganiaq | Greywacke/ siltstone | M98-194-01 | HCT | non-PAG | 830 | 9.2 | 0.07 | 0.3 | 32 | 7.9 | 0.002 | 0.001 |
| | | M99-403-03 | HCT | non-PAG | 1300 | 9.1 | 0.05 | 0.2 | 40 | 7.4 | 0.002 | 0.002 |
| | | M04-533-01 | HCT | non-PAG | 130 | 9.4 | 0.04 | 0.2 | 32 | 8.1 | 0.02 | 0.02 |
| | | M03-508-01 | HCT | non-PAG | 59 | 9.3 | 0.04 | 0.2 | 20 | 7.2 | 0.01 | 0.01 |
| | | M06-623-01 | HCT | non-PAG | 27 | 9.3 | 0.09 | 0.4 | 20 | 7.3 | 0.02 | 0.01 |
| | | M06-625-01 | HCT | non-PAG | 110 | 9.3 | 0.07 | 0.3 | 20 | 7.1 | 0.02 | 0.02 |
| | | M97-95-02 | HCT | non-PAG | 120 | 9.2 | 0.03 | 0.1 | 20 | 7.3 | 0.01 | 0.01 |
| | | Col. 1 Tiri GW OP E | Column | non-PAG | 330 | 9.1 | 0.05 | 0.2 | 30 | 7.9 | 0.02 | 0.001 |
| | | Col. 2 Tiri GW OP W | Column | non-PAG | 220 | 9.2 | 0.09 | 0.4 | 30 | 7.8 | 0.04 | 0.003 |
| | | Col. 3 Tiri GW UG (All) | Column | non-PAG | 74 | 9.3 | 0.05 | 0.2 | 30 | 8.0 | 0.1 | 0.01 |
| | | WR1 | Field cell | non-PAG | 160 | 9.2 | 0.03 | 0.1 | 1-2 | 7.7 | 0.008 | 0.0002 |
| | | WR2 | Field cell | non-PAG | 160 | 9.2 | 0.03 | 0.1 | 1-2 | 7.7 | 0.009 | 0.0002 |
| | Iron Formation | M04-526-01 | HCT | non-PAG | 210 | 8.7 | 0.006 | 0.02 | 32 | 8.2 | 0.0006 | 0.0005 |
| | | M96-74-01 | HCT | non-PAG | 490 | 8.9 | 0.03 | 0.1 | 20 | 7.4 | 0.001 | 0.0009 |
| | Mafic Volcanic | GT08-04-02 | HCT | non-PAG | 91 | 9.0 | 0.03 | 0.1 | 32 | 8.6 | 0.03 | 0.03 |
| | | M05-536A-01 | HCT | non-PAG | 86 | 8.7 | 0.01 | 0.06 | 40 | 7.5 | 0.02 | 0.02 |
| | | M97-141-01 | HCT | non-PAG | 15 | 8.8 | 0.001 | 0.01 | 40 | 7.2 | 0.001 | 0.001 |
| | | M99-409-05 | HCT | non-PAG | 170 | 9.1 | 0.02 | 0.07 | 20 | 7.9 | 0.007 | 0.007 |
| | | Col. 4 Tiri MV UG (All) | Column | non-PAG | 35 | 8.9 | 0.005 | 0.02 | 30 | 8.1 | 0.02 | 0.002 |
| | Ore | LODE 1000 | Field cell | non-PAG | 9400 | 8.5 | 0.3 | 1.1 | 1-2 | 7.5 | 0.09 | 0.002 |
| | | LODE 1100 | Field cell | non-PAG | 5000 | 8.5 | 0.2 | 0.9 | 1-2 | 7.8 | 0.01 | 0.0003 |
| Wesmeg | Mafic Volcanic | M10-981-03 | HCT | non-PAG | 21 | 8.9 | 0.005 | 0.02 | 20 | 7.7 | 0.003 | 0.003 |
| | | M10-987-04 | HCT | non-PAG | 34 | 9.3 | 0.003 | 0.01 | 20 | 7.7 | 0.0005 | 0.0004 |
| | | M10-994-04 | HCT | non-PAG | 32 | 9.9 | 0.01 | 0.04 | 20 | 7.3 | 0.01 | 0.01 |
| | | M10-985-01 | HCT | non-PAG | 22 | 9.2 | 0.02 | 0.09 | 20 | 7.5 | 0.03 | 0.03 |
| | | M98-222-01 | HCT | non-PAG | 51 | 8.9 | 0.01 | 0.05 | 20 | 7.3 | 0.03 | 0.03 |
| | | C-8 Wesmeg | Column | non-PAG | 49 | 9.1 | 0.03 | 0.1 | 20 | 8.1 | 0.08 | 0.007 |
| | Ultramafic | M10-992-04 | HCT | non-PAG | 37 | 9.2 | 0.004 | 0.02 | 20 | 7.9 | 0.04 | 0.04 |

| Deposit | Rock Type | Sample | Test Type | ARD Potential (Static Tests) | Solid As (ppm) | Static Test Results[1] | | | Kinetic Test Results | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | final pH | As[2] (mg/L) | As[3] (mg) | Test Week | final pH | As[2] (mg/L) | As[3] (mg/kg/ cycle) |
| Wolf | Greywacke/ siltstone | M10-968-02 | HCT | non-PAG | 49 | 9.4 | 0.04 | 0.2 | 20 | 7.1 | 0.04 | - |
| | | M10-976-02 | HCT | non-PAG | 33 | 9.4 | 0.05 | 0.2 | 20 | 7.1 | 0.05 | - |
| | | M10-993-02 | HCT | non-PAG | 23 | 9.4 | 0.04 | 0.2 | 20 | 7.2 | 0.03 | - |
| | Iron Formation | M10-970-01 | HCT | non-PAG | 850 | 8.7 | 0.04 | 0.2 | 20 | 7.5 | 0.001 | - |
| | | M10-972A-03 | HCT | non-PAG | 78 | 8.9 | 0.004 | 0.02 | 20 | 7.3 | 0.0007 | - |
| | Mafic Volcanic | M96-16-01 | HCT | non-PAG | 30 | 9.5 | 0.01 | 0.05 | 20 | 7.5 | 0.02 | - |
| | | M98-238-02 | HCT | non-PAG | 7.4 | 9.7 | 0.008 | 0.03 | 20 | 7.3 | 0.004 | - |
| | 13% Iron Formation; 62% Greywacke; 25% Mafic Volcanic | C-9 Wolf | Column | non-PAG | 83 | 9.2 | 0.02 | 0.07 | 20 | 8.0 | 0.03 | |

**Notes:**
- Not calculated
[1] SFE test
[2] Leachate concentration – average of last 5 weeks
[3] Arsenic load in leachate (mg/kg rock/cycle)
[-] Tests underway at the time of reporting, leaching rates not calculated

### 3.3.3.1 Mineral Depletion Calculation Results – Waste Rock

Results of the mineral depletion calculations are presented in Table 20 for samples that reported PAG and uncertain ARD potentials in static testing. These include iron formation samples from Discovery, F Zone and Pump deposits, as well as Discovery greywacke/siltstone samples. Results are presented as the number of years to depletion of sulphide minerals and carbonate minerals based on total sulphur (%), CaNP-adj and NP (t $CaCO_3$ / 1000 t of rock). Where the two methods to calculate the initial buffering capacity resulted in conflicting ARD designation, the sample was considered to have an uncertain ARD potential given that neither CaNP-adj (based on carbonate content and sample mineralogy) nor NP (bulk value, all mineral phases) provide a precise account of available buffering capacity.

**Table 20: Depletion Calculation Results for Select Waste Rock Samples**

| Deposit | Rock Type | Sample ID | Test Type | ARD Potential (static tests) | Years to Depletion | | | ARD Potential (Depletion Rate) |
|---|---|---|---|---|---|---|---|---|
| | | | | | S(T) | CaNP-adj | NP | |
| Discovery | Greywacke/ Siltstone | ML90-14-2 | HCT | uncertain | 17 | 25 | 47 | non-PAG |
| | | ML92-061-01 | HCT | uncertain | 13 | 14 | 34 | non-PAG |
| | | ML95-82-1 | HCT | PAG | 22 | 3.3 | 20 | PAG |
| | | ML08-232-01 | HCT | uncertain | 22 | 3.9 | 28 | uncertain |
| | | Col. 6 Disc GW (OP) | Column | uncertain | 20 | 2.7 | 27 | uncertain |
| | Iron Formation | ML08-226-02 | HCT | PAG | 57 | 3.3 | 26 | PAG |
| | | ML95-82-01 | HCT | PAG | 101 | 17 | 33 | PAG |
| | | ML95-95-01 | HCT | non-PAG | 75 | 31 | 52 | PAG |
| F Zone | Iron Formation | M09-802-02 | HCT | PAG | 222 | 11 | 38 | PAG |
| | | M10-935-02 | HCT | PAG | 54 | 10 | 26 | PAG |
| | | M98-248-01 | HCT | PAG | 168 | 7.1 | 45 | PAG |
| Pump | Iron Formation | W94-61-01 | HCT | PAG | 10 | 2.4 | 13 | uncertain |
| | | W94-73-02 | HCT | uncertain | 40 | 12 | 52 | uncertain |

**Discovery Greywacke/Siltstone:** The results of depletion calculations corroborate the PAG and uncertain classification from static test results for three of the five samples tested (shorter depletion times for neutralization potential (NP and CaNP-adj) compared with sulphur). Two uncertain samples are expected to be non-PAG over the long-term. Although 3 of the 4 samples had no detectable carbonate minerals in XRD analysis and one sample detected 0.3% calcite content (ML90-14-2), the buffering capacity continued to supply a buffered pH suggesting that some available reactive NP is present in these samples. All samples continued to generate neutral HCT leachate after 30 weeks of testing, confirming the long lag time until ARD conditions are realized, if it is realized at all given the accelerated rates of buffering mineral consumption in laboratory leaching tests compared to expected conditions at site (Section 2.2.4.6).

**Discovery, F Zone and Pump Iron Formation:** The results of depletion calculations corroborate the PAG and uncertain classification based on static testing for six of the eight samples tested (shorter depletion times for neutralization potential (NP and CaNP) compared with sulphur). One sample from Discovery, classified as non-PAG using static test methods, reported shorter depletion times for both NP and CaNP compared to sulphur, suggesting that this sample may generate acidity in the long term under laboratory conditions of high buffering

depletion rate. One sample from Pump, classified as PAG using static test methods, reported a longer depletion time of NP than sulphur (faster depletion time based on CaNP buffering capacity). F Zone iron formation samples showed no calcite under XRD analysis, while the Discovery and Pump samples showed calcite as the only carbonate mineral present in these samples of iron formation. All samples generate neutral HCT leachate after 30 weeks of testing, confirming the long lag time until ARD conditions may be initiated, if at all under Meliadine climate.

### 3.3.4 Arsenic Leachability and Scale-up Considerations

Arsenic concentrations reported from the field cells and large column tests are one or more orders of magnitude higher than the HCT concentrations, which is proportional to the lower water to solid ratio. Arsenic leaching rates are calculated for comparison between the different kinetic tests as well as static tests (SFE) and are presented in Table 19 and as figures in Appendix B.8. Figure 7 presents the comparison of arsenic leaching rates from the various test methods for Tiriganiaq greywacke for the purposes of the discussion below.

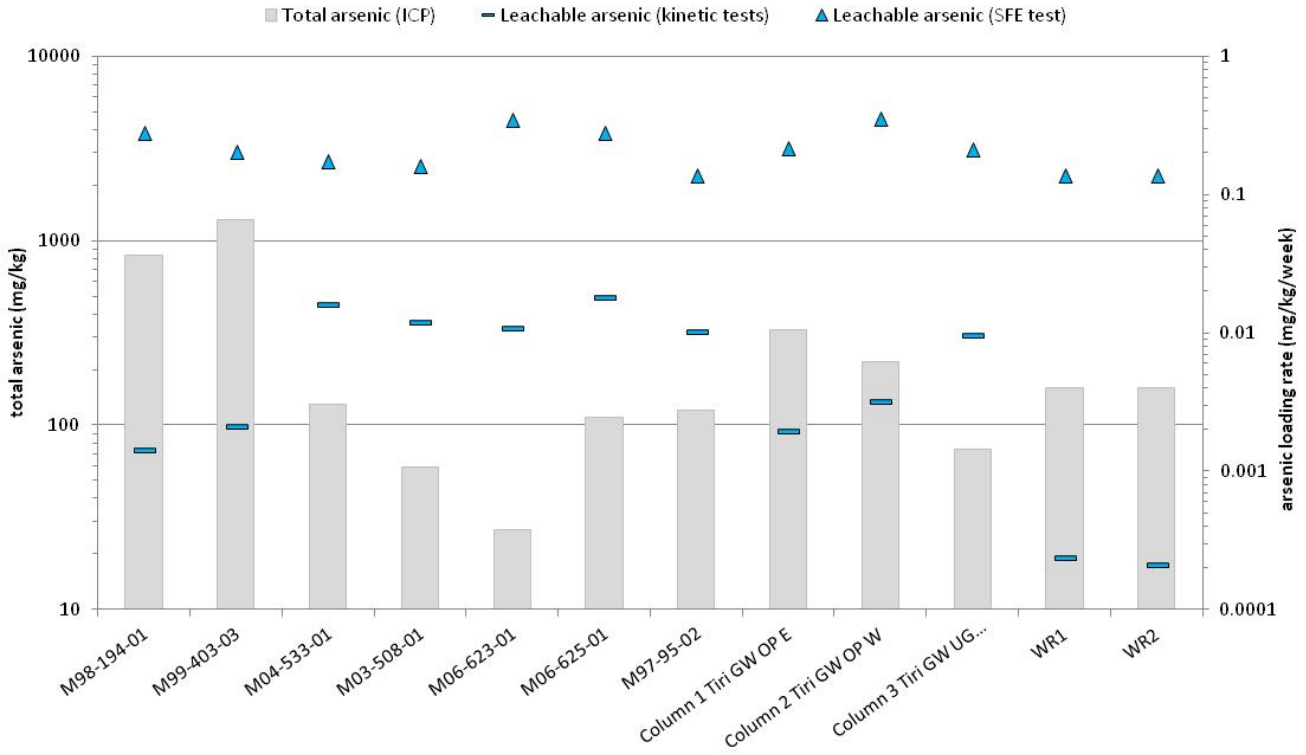



*Figure 7: Total Arsenic versus Calculated Arsenic Leaching Rates for Various Leach Tests – Tiriganiaq Greywacke*

The following summarizes the observations on arsenic leachability:

- All leach tests, regardless of the mass of the charge material, generate arsenic leachate concentrations below the MMER limit (0.5 mg/L);
- Although some of the static (short term) leaching tests (less than 1%) did show MMER exceedances of arsenic in leachates, the weathering behaviour and arsenic release from rock piles at site is more closely simulated by the larger scale tests; and,
- Static leaching rates (SFE) are higher than kinetic leaching rates (HCT's and LC's) by more than one order of magnitude because of the higher liquid-to-solid ratio used in the static test. This higher amount of liquid enhances the dissolution of soluble mineral phases faster than under the dryer conditions in larger columns, field cells and at site. Thus, standard short-term leach tests (SFE) are likely overestimating anticipated leachate concentrations and providing an overly conservative estimate of potential arsenic concentrations.

The Operations Pad is a good analogue for the chemical behaviour of waste rock at surface, in this case specifically the Tiriganiaq and greywacke/siltstone removed during the development of the existing underground ramp. This material has highest median total arsenic content (Section 3.1.3) compared to greywacke/siltstone from other deposits, and as such provides a conservative representation of arsenic leaching.

Water quality results from the adjacent Primary Containment Pond provide an estimate of possible future contact water quality where greywacke/siltstone waste rock contacts a surface water pond, under site climate conditions. AEM monitors water quality at P1 and in downstream shallow lakes and ponds and arsenic concentrations from this monitoring are presented in Table 21.

**Table 21: Total Arsenic Concentration Ranges at Surface Water Monitoring Stations (mg/L)**

| | Primary Containment (P1) | Lake A54 downstream of P1 | Lake A38 downstream of A54 | Lake A8 downstream of A38 |
|---|---|---|---|---|
| April 1997 - October 2007, before underground development | | | | |
| minimum | n/a | 0.003 | 0.004 | 0.002 |
| maximum | n/a | 0.004 | 0.005 | 0.004 |
| median | n/a | 0.004 | 0.005 | 0.002 |
| average | n/a | 0.004 | 0.005 | 0.002 |
| May 2008 - September 2010, after underground development | | | | |
| minimum | 0.002 | 0.001 | 0.003 | 0.001 |
| maximum | 0.029 | 0.004 | 0.006 | 0.003 |
| median | 0.009 | 0.003 | 0.004 | 0.002 |
| average | 0.012 | 0.003 | 0.004 | 0.002 |

The Primary Containment Pond is very shallow and the volume of the pond as well as the area that contacts the pad varies during the year. Nonetheless, concentrations remain similar at various time except during freshet when pond water is at the largest. The pond water quality is not a precise simulation of future conditions but do have commonality with anticipated future conditions. The results of standard static leaching tests are an order of magnitude higher than the Primary Containment Pond water quality which is in close contact with the waste rock pile, while the large column and field cell leaching tests are more in line with site water quality monitoring data.

### 3.3.5 PAD Waste Rock Grain Size Comparison

Of the 12 PAD samples collected from the Operations PAD, 6 contained enough material passing the 200 µm fraction to send to SGS for static testing. A summary of the static testing results on these samples is presented in Table 22.

**Table 22: Summary of Static Testing for Samples Collected from the Operation Waste Rock Pad**

| Tiriganiaq PAD samples | Number of Samples | Average As (mg/kg) | Median S(T) | BULK CaNPR-adj | BULK NPR | ARD Potential | Median Final pH | Leachable As (mg/L) |
|---|---|---|---|---|---|---|---|---|
| bulk waste rock | 12 | 147 | 0.19 | 5.8 | 7.9 | non-PAG | 7.9 | n.e. |
| waste rock fines ( -200 µm) | 6 | 135 | 0.23 | 5.4 | 6.8 | non-PAG | 7.8 | n.e. |

The focus of the testing of the finer grained material was to determine if the finer particles showed an increase in reactivity and/or leachability due to the increase in surface area. The results show no substantial differences in ARD parameters (sulphur content and buffering capacity) between the coarse sample size and the finer fraction size that would affect the potential for acid generation.

# 4.0 TAILINGS GEOCHEMICAL CHARACTERIZATION

Static test results for tailings samples are discussed in the following sections. Tabulated results and figures are presented in Appendix C and SGS analytical certificates are included in Appendix H.

Whole ore tailings samples reported below were generated from the latest metallurgical testing at SGS and are most relevant to the current metallurgical process design. As such these samples are discussed in detail. Results for flotation and concentrate samples are briefly included in the discussions below and results for these samples are reported in the Appendix tables and figures.

## 4.1 Chemical Composition of Tailings

### 4.1.1 Mineralogical Analysis of Tailings

Mineralogical testing of whole ore tailing samples by XRD and Automated Rapid Mineral Scan by QEMSCAN was conducted at SGS and Process Mineralogical Consulting under the direction of AEM (SGS 2011 and PMC 2011; Appendix G.7). X-ray diffraction (XRD) analyses identified similar mineralogical assemblages for all samples and estimated the proportions of major, moderate, minor, and trace minerals based on the relative XRD peak heights.

Major and moderate minerals include quartz, plagioclase, and chlorites. Minor minerals include one or more of amphibole, ankerite, calcite, dolomite, Fe/Ti-oxides, magnetite, mica, and pyrrhotite. Trace minerals include arsenopyrite, kaolinite, magnesite, pyrite, and siderite. Carbonate minerals considered in the CaNP-adj ARD assessment include dolomite, ankerite and calcite. Siderite was only measured for samples from Wesmeg Open Pit and F Zone Open Pit, where mass percentages of 17.4 and 4.9 are reported, respectively.

The majority of sulphide occurred as pyrite with lesser arsenopyrite. Tailings of F Zone underground ore contained the most total sulphide (16%), followed by Pump (11%). All other samples contained total sulphides between 3.5% and 10%.

Quantitative results from QEMSCAN are summarized in Table 23 for sulphide and carbonate minerals.

**Table 23: Summary of Mineralogy Results for Whole Ore Tailings Samples from QEMSCAN**

| Deposit | Sample ID | Pyrite (%) | Arseno-pyrite (%) | Other Sulphides (%) | Total Sulphides (%) | Ankerite (%) | Dolomite (%) | Calcite (%) | Total Carbonates (%) |
|---|---|---|---|---|---|---|---|---|---|
| Discovery | CN8 (CND5-7) Discovery | 5.9 | 1.5 | 0.1 | 7.5 | 1.0 | 0.2 | 0.7 | 1.9 |
| F Zone | F Zone Open Pit CN6 CND residue | 7.1 | 2.6 | 0.1 | 9.8 | 2.4 | 9.7 | 0.3 | 12.4 |
| | F Zone Underground CN5 | 8.7 | 7.3 | 0.1 | 16 | 1.4 | 6.9 | 1.3 | 9.6 |
| Pump | CN7 Pump | 7.4 | 3.8 | 0.2 | 11 | 2.6 | 11.7 | 1.0 | 15.3 |
| Tiriganiaq | Tiriganiaq Open Pit CN2 | 4.1 | 6.2 | 0.0 | 10 | 2.1 | 3.9 | 0.9 | 6.9 |
| | Tiriganiaq Underground CN1 | 4.4 | 2.8 | 0.1 | 7.3 | 3.0 | 5.7 | 1.3 | 10 |
| Wesmeg | CN3 Wesmeg Open Pit | 9.2 | 0.3 | 0.1 | 9.6 | 6.2 | 5.3 | 0.8 | 12.3 |
| Wolf | WFOP CN4 CND residue | 2.5 | 0.8 | 0.2 | 3.5 | 2.4 | 7.8 | 1.3 | 11.5 |

### 4.1.2 Major and Trace Element Composition of Tailings

The results of whole rock and trace metal chemistry of all tailings samples are presented in Appendix C.2 as tables and figures.

The major constituents all tailings samples included silica, iron and aluminum. Calcium, magnesium, sodium and potassium were present in minor amounts.

Trace metal concentrations were higher in the concentrate tailings than the flotation and whole ore tailings for any given sample. Arsenic and sulphide had the highest concentration difference between the three tailing sample groups: concentrate (median 60,000 ppm; 12%), flotation (median 150 ppm; 0.04%), and whole ore (median 6100 ppm; 1.5%). Other parameters showed the same trend to a lesser degree, including antimony, bismuth, copper, molybdenum, and lead. Trace elements that exceeded 5x typical crustal abundance (Price 1997) are listed in Table 24.

**Table 24: Summary of Constituents in Tailings that Exceed 5x Typical Crustal Abundance (Price 1997)**

| Deposit | Sample ID | Tailing Description | Parameter Concentrations Greater than Five Times Typical Crustal Abundance (Price 1997) [1,2,3] |
|---|---|---|---|
| Tir mixed lodes + F Zone (14%) | CND9-1A | Whole Ore | As, Bi, Cu, Mo, Pb, Sb, Se |
| Master Composite[4] | CN50-51 Composite | Whole Ore | As, Bi, Mo, Pb, Sb, Se |
| Discovery | CN8 (CND5-7) Discovery | Whole Ore | As, Bi, Mo, Sb, Se |
| F Zone | F Zone Open Pit CN6 CND residue | Whole Ore | As, Bi, Sb, Se |
| | F Zone Underground CN5 | Whole Ore | As, Bi, Sb, Se |
| Pump | CN7 Pump | Whole Ore | As, Bi, Cd, Sb, Se |
| Tiriganiaq | Tiriganiaq Open Pit CN2 | Whole Ore | As, Bi, Pb, Sb, Se |
| | Tiriganiaq Underground CN1 | Whole Ore | As, Bi, Mo, Pb, Sb, Se |
| Wesmeg | CN3 Wesmeg Open Pit | Whole Ore | As, Bi, Cd, Pb, Se, Zn |
| Wolf | WFOP CN4 CND residue | Whole Ore | As, Bi, Mo, Pb, Se |

**Notes:**
[1] Where at least one sample exceeds five times crustal abundance
[2] Bold values indicate parameters where median concentration exceed five times the stated typical crustal abundance
[3] Selenium detection limit is greater than five-times crustal abundance concentration
[4] Master composite comprises: 29% Tiriganiaq open pit, 26% Tiriganiaq underground, 17% Wesmeg, <10% Discovery, F Zone, Pump, and Wolf

## 4.2 Acid Generation Potential

Results of ABA and NAG testing are presented in Appendix C.3 as tables and figures. The ARD potential of each sample is determined based on ABA and NAG test results. A summary of the ARD designation for each whole ore tailing sample is presented in Table 25. Results for flotation and concentrate tailings are included in Appendix C.

**Table 25: Summary of ARD Potential for Tailings**

| Deposit | Sample ID | Tailing Description | NAG pH | $S(S^{2-})$ (%) | CaNPR-adj | NPR | ARD Potential[1] |
|---|---|---|---|---|---|---|---|
| Tir mixed lodes + F Zone (14%) | CND9-1A | Whole Ore | 9.9 | 0.9 | 3.1 | 3.1 | non-PAG |
| Master Composite[2] | CN50-51 Composite | Whole Ore | 9.1 | 1.4 | 1.8 | 2.0 | non-PAG |
| Discovery | CN8 (CND5-7) Discovery | Whole Ore | **2.5** | **1.6** | **0.093** | **0.47** | **PAG** |
| F Zone | F Zone Open Pit CN6 CND residue | Whole Ore | 8.3 | 2.1 | 1.5 | 1.8 | non-PAG |
| | F Zone Underground CN5 | Whole Ore | 8.1 | 2.6 | 1.2 | 1.3 | uncertain |
| Pump | CN7 Pump | Whole Ore | 8.9 | 2.2 | 1.5 | 1.8 | non-PAG |
| Tiriganiaq | Tiriganiaq Open Pit CN2 | Whole Ore | 9.9 | 0.9 | 2.5 | 2.7 | non-PAG |
| | Tiriganiaq Underground CN1 | Whole Ore | 9.0 | 1.0 | 2.3 | 2.8 | non-PAG |
| Wesmeg | CN3 Wesmeg Open Pit | Whole Ore | 8.9 | 1.5 | 1.2 | 2.0 | non-PAG |
| Wolf | WFOP CN4 CND residue | Whole Ore | 10.5 | 0.6 | 5.3 | 6.1 | non-PAG |

**Notes:**
[1] Following INAC (1992), tailings compared to NPR 1.2
[2] Master composite comprises: 29% Tiriganiaq open pit, 26% Tiriganiaq underground, 17% Wesmeg, <10% Discovery, F Zone, Pump, and Wolf

According to INAC guidance, most whole ore tailings have no potential for ARD except for the Discovery whole ore tailing sample. The F Zone underground sample has an uncertain ARD potential due to the small variation of NPR based on bulk NP or CaNP-adj. The more stringent MEND criteria suggests that the Master Composite, F Zone (open pit), Pump and Wesmeg tailings may, in addition, have an uncertain ARD potential; however, all tailings having an uncertain ARD potential under either criteria generated an alkaline NAG pH and thus are considered more likely to be non acid-generating. The concentrate tailings are potentially acid-generating while all flotation tailings are non acid-generating; however, these tailings will not be generated.

## Acid Potential

The concentrate samples reported higher sulphide content (ranges from 6.5 to 17%, median of 12%) than the flotation samples (ranges from 0.02 to 0.2%, median of 0.04%) and whole ore tailings (ranges from 0.6 to 2.6%, median of 1.5%). The master composite whole ore sample (CN50-51 composite) reported near median sulphide (1.4%). For most tailings streams, the sulphur was in the form of sulphide (Appendix Figure C.3-1). In the Discovery flotation tailings, a substantial proportion of sulphur was in the form of sulphate.

## Neutralization Potential

Buffering capacity was similar in the whole ore, flotation and concentrate tailings within each deposit and lode, but varied between deposits. The buffering capacity was highest in the F Zone, Pump, Tiriganiaq lode 1000, and Wolf tailings (average NP 102 t $CaCO_3$ /1000t), and was lowest in Discovery tailings (24 t $CaCO_3$ /1000t). Buffering capacity is largely provided by carbonate minerals in the form of calcite, dolomite and ankerite, as shown by mineralogical observation (Section 4.1.1) and the similar Carbonate NP and bulk NP values for most tailings except Discovery tailings, F Zone concentrate tailings, and Wolf whole ore tailings samples (Appendix Figure C.3-2) (Section 4.1.1). All paste pH values were alkaline, ranging from 7.4 to 9.6, indicating there is some immediately available buffering capacity from all tailings streams.

## ARD Potential

Total sulphur is plotted against the NPR and CaNPR (using CaNP-adj buffering capacity) in Figure 8 and Figure 9 below (and in Appendix Figure C.3-3). The figures show the trend of lower NPR as sulphur content increases. AP versus NP is shown in Appendix Figure C.3-4, illustrating that high sulphide sulphur content (or AP), as opposed to differences in buffering capacity, is the dominant control on the ARD potential of each sample.

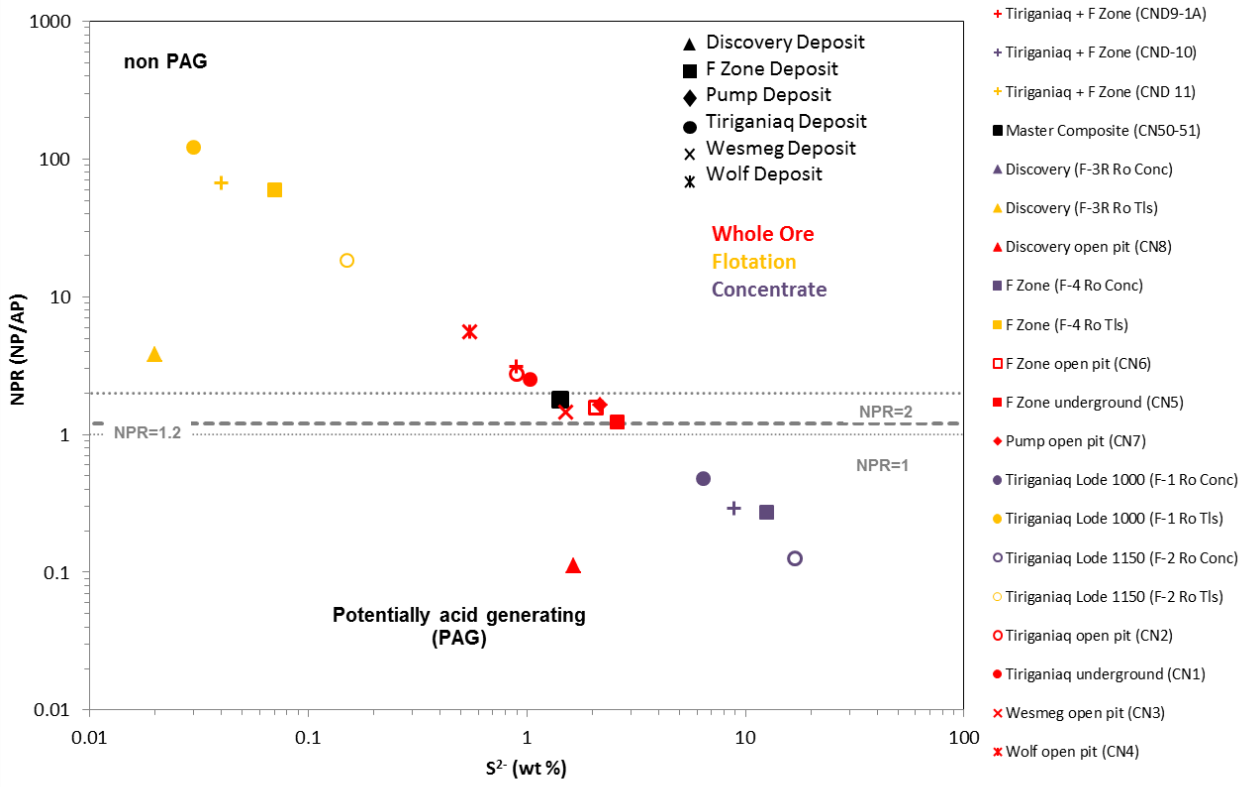



*Figure 8: Sulphide (S(S2-)) versus Net Potential Ratio (NPR) for Whole Ore, Concentrate and Flotation Tailings*

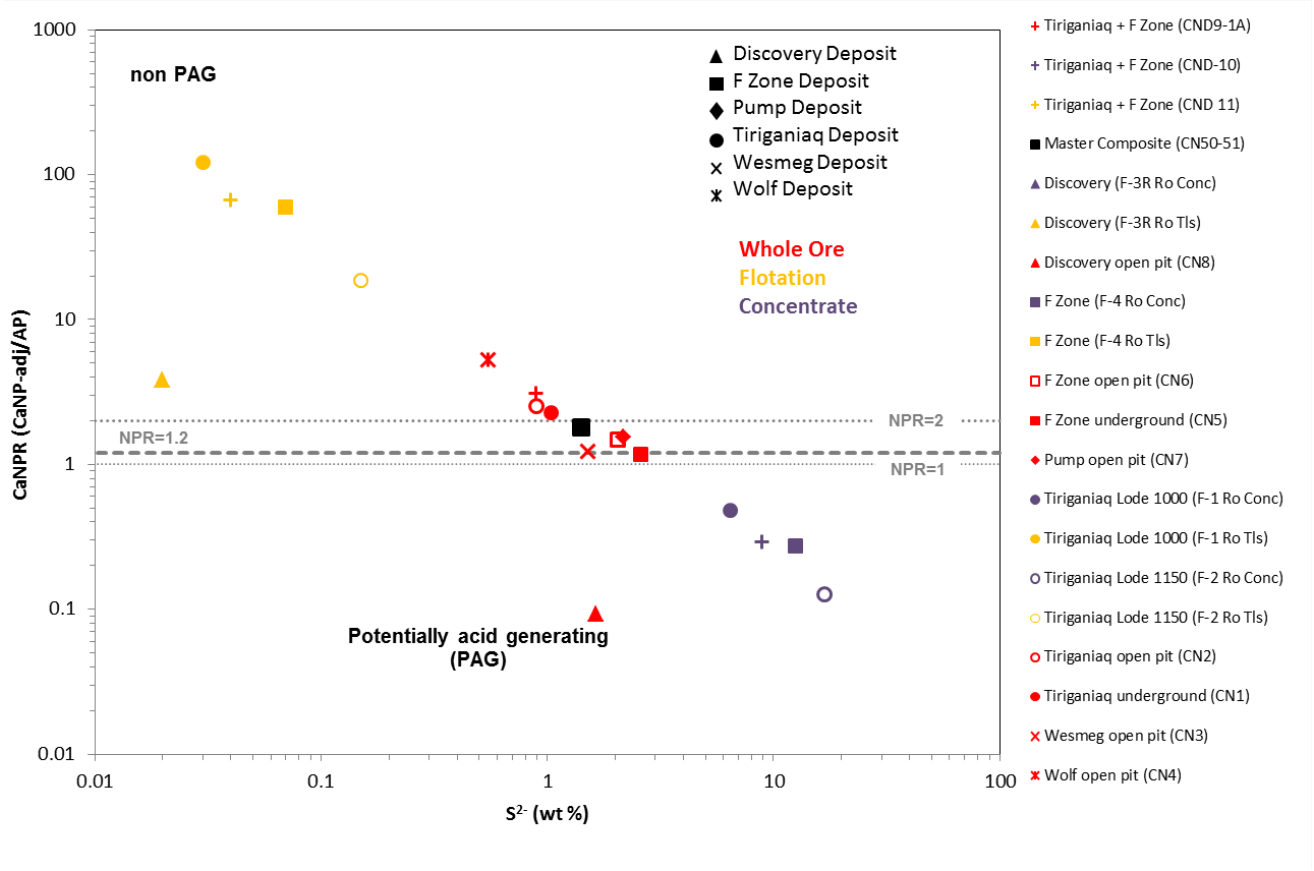



*Figure 9: Sulphide (S(S2-)) versus Carbonate Net Potential Ratio (CaNPR) for Whole Ore, Concentrate and Flotation Tailings*

Flotation tailings are classified as non-PAG based on the low AP and high NP, while concentrate tailings samples are PAG due to high sulphur content.

NAG pH and acidity values are included in the ABA results table and plotted against NPR in Appendix Figure C.3-5. NAG pH values (Table 25) support the ARD potential based on the Nunavut ARD criteria (INAC, 1992). Flotation and whole ore samples reported alkaline NAG pH values, ranging from 8.0 to 10.9. All concentrate tailings had NAG pH values of less than 4.5 and showed substantial acidity release, confirming the ARD potential of concentrate tailings.

## 4.3 Metal Leaching Potential

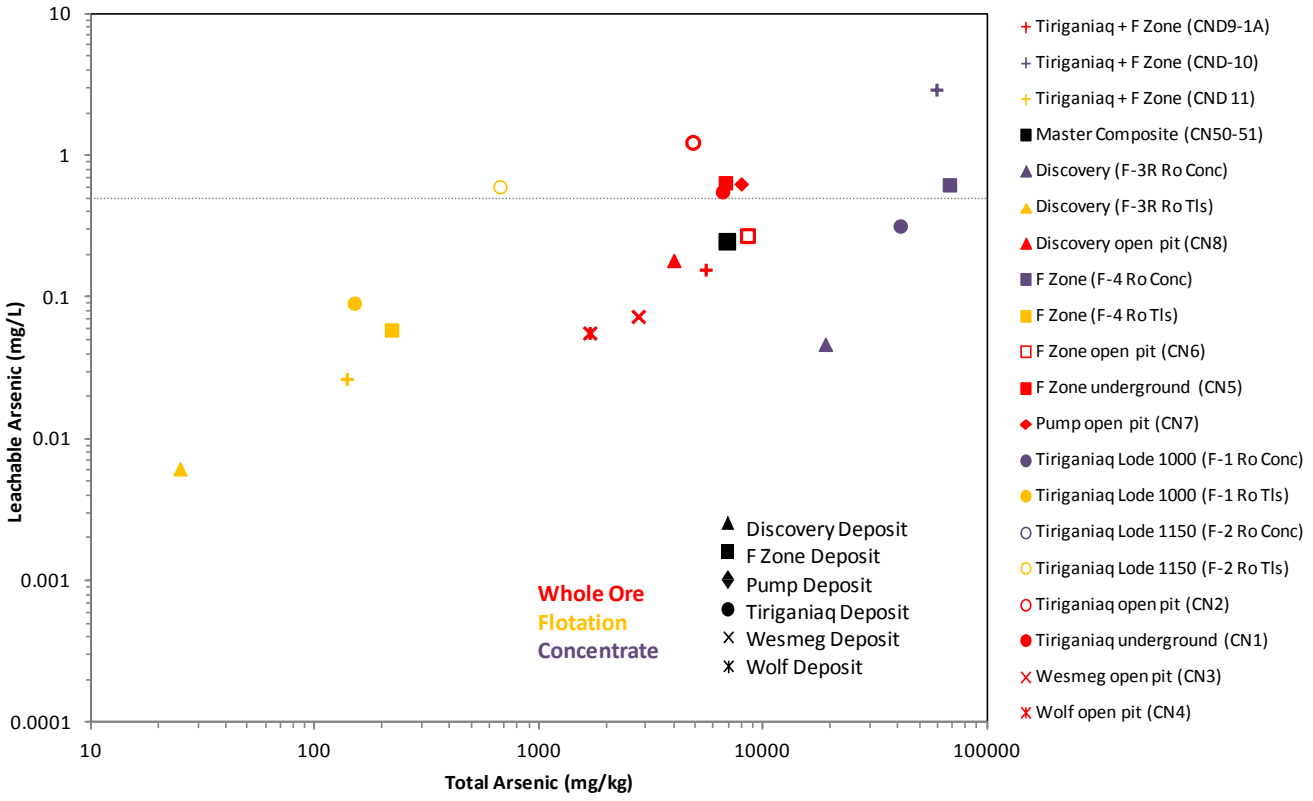
### 4.3.1 SFE Leach Tests

Results for metal leaching under SFE conditions are presented in Appendix C4. Results are compared with MMER (2006) maximum monthly mean criterion for arsenic of 0.5 mg/L. Table 26 presents a summary of SFE results for elements of environmental interest, namely, pH and arsenic. Figure 10 (Appendix C.4-1) illustrates the relationship between total and leachate arsenic concentrations in all tailings samples.

**Table 26: Summary of Tailings Static Test (SFE) Leachate Results**

| Deposit | Sample ID | Tailing Description | SFE Final pH | Arsenic Concentration (mg/L) | MMER average monthly[1] |
|---|---|---|---|---|---|
| Tir mixed lodes + F Zone (14%) | CND9-1A | Whole Ore | 8.1 | 0.15 | n.e. |
| Master Composite[2] | CN50-51 Composite | Whole Ore | 8.1 | 0.25 | n.e. |
| Discovery | CN8 (CND5-7) Discovery | Whole Ore | 7.4 | 0.18 | n.e. |
| F Zone | F Zone Open Pit CN6 CND residue | Whole Ore | 8.1 | 0.27 | n.e. |
| | F Zone Underground CN5 | Whole Ore | 8.0 | **0.64** | As |
| Pump | CN7 Pump | Whole Ore | 7.9 | **0.62** | As |
| Tiriganiaq | Tiriganiaq Open Pit CN2 | Whole Ore | 7.9 | 1.2 | As |
| | Tiriganiaq Underground CN1 | Whole Ore | 8.0 | **0.55** | As |
| Wesmeg | CN3 Wesmeg Open Pit | Whole Ore | 8.2 | 0.072 | n.e. |
| Wolf | WFOP CN4 CND residue | Whole Ore | 7.8 | 0.055 | n.e. |

**Notes:**
[1] Metal Mining Effluent Regulations (DFO 2006) exceedance
[2] Master composite comprises: 29% Tiriganiaq open pit, 26% Tiriganiaq underground, 17% Wesmeg, <10% Discovery, F Zone, Pump, and Wolf
n.e = no exceedances




Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with F Zone deposit (14%)

*Figure 10: Total versus Leachable Arsenic for Tailings Samples*

The final pH value of each SFE leachate was alkaline, ranging from 7.4 to 8.2, indicating the presence of immediately available buffering capacity. Most leachates had constituent concentrations below MMER effluent regulations (DFO 2006) with the exception of arsenic in the Tiriganiaq and Pump whole ore tailings and the whole ore tailings from the underground ore sample at F Zone (F Zone in not currently expected to be exploited underground).

The predominant form of arsenic leached from all concentrate tailings and Discovery flotation tailings was arsenite ($As^{+3}$) (80 to 87% of total dissolved arsenic), while arsenate ($As^{+5}$) was the predominant arsenic species in leachates of flotation tailings (69 to 82% of total dissolved arsenic). Speciated arsenic was not tested on the whole ore tailings.

Concentrate tailings leachate arsenic concentrations (median 0.6 mg/L) were up to 10 times higher than flotation tailings (median 0.06 mg/L) and slightly (2 times) higher than whole ore tailings (median 0.3 mg/L).

### 4.3.2 NAG Leach Tests

Results for metal leaching under NAG conditions are presented in Appendix C.4. Results are compared with MMER (2006) criteria for arsenic (maximum monthly mean concentration). Table 27 presents a summary of NAG pH and leachate arsenic concentrations.

NAG pH corroborate the non-PAG designation determined based on the Nunavut criteria for acid generation with the exception of the F Zone underground sample, which has an uncertain ARD potential but reports a NAG leachate pH of 8.1. NAG leachate arsenic concentrations (and numerous other metals) were lower in whole ore and flotation tailings than concentrate tailings because of the higher sulphide content in concentrate tailings and thus more opportunity of release of associated metals upon oxidation of these minerals during the test. NAG leachate concentrations from whole ore and flotation tailings were generally similar to those of SFE leachates while concentrate tailings reported substantially higher NAG than SFE leachate concentrations because of their higher sulphide content.

**Table 27: Tailings Static Test (NAG) Leachate Results for pH and arsenic**

| Deposit | Sample ID | Tailing Description | Final pH | Arsenic Concentration (mg/L) | Exceedance to MMER[1] |
|---|---|---|---|---|---|
| Tir mixed lodes + F Zone (14%) | CND9-1A | Whole Ore | 9.9 | **0.89** | As |
| Master Composite[2] | CN50-51 Composite | Whole Ore | 9.1 | **0.53** | As |
| Discovery | CN8 (CND5-7) Discovery | Whole Ore | 2.6 | 0.056 | - |
| F Zone | F Zone Open Pit CN6 CND residue | Whole Ore | 8.6 | 0.29 | - |
| | F Zone Underground CN5 | Whole Ore | 8.1 | 0.20 | |
| Pump | CN7 Pump | Whole Ore | 8.9 | 0.040 | |
| Tiriganiaq | Tiriganiaq Open Pit CN2 | Whole Ore | 9.7 | 0.33 | |
| | Tiriganiaq Underground CN1 | Whole Ore | 9.0 | **4.1** | As |
| Wesmeg | CN3 Wesmeg Open Pit | Whole Ore | 8.9 | 0.0084 | - |
| Wolf | WFOP CN4 CND residue | Whole Ore | **10.5** | 0.092 | pH (>9.5) |

**Notes:**
[1] Metal Mining Effluent Regulations (DFO 2006) exceedance
[2] Master composite comprises: 29% Tiriganiaq open pit, 26% Tiriganiaq underground, 17% Wesmeg, <10% Discovery, F Zone, Pump, and Wolf
- No exceedances

### 4.3.3 Humidity Cell Tests – Tailings

The following sections present the results to date of the HCT kinetic testing program completed on all 17 tailings samples. Tabulated results and time-series graphs are included in Appendix C.5, up to cycles 9 to 12, depending on the test initiation date. The following discussion focuses on the results of the whole ore tailings samples since these are most representative of the anticipated ore processing circuit. Results for testing of flotation and concentrate samples are included in Appendix C.5

All nine (9) whole ore samples maintained neutral pH (>6.5) and stable to decreasing parameter concentrations through testing to date indicating that ARD conditions have not yet developed in any sample. The data indicates that there is available buffering capacity in tailings that can keep a neutral pH over a fairly long lag time, considering the scale and climate difference between the laboratory and site.

Most metals concentrations were stable and below mine effluent criteria (MMER; DFO 2006) in all samples with the exception of arsenic in 4 tailings samples in the early cycles of testing, and iron which shows a delayed concentration increase in the early cycles. Arsenic exceeded the MMER effluent limit (0.5 mg/L) in leachate from the F Zone underground (cycles 0-2), Tiriganiaq open pit (cycle 0) and Tiriganiaq underground (cycles 0-2) whole ore tailings samples, and the Tiriganiaq underground concentrate (F1-Concentrate) in cycles 1 and 2. Arsenic concentrations decreased rapidly such that all samples reported concentrations below the MMER limit by cycle 4.

The following trends in HCT leachate chemistry are observed for whole ore tailings samples tested:

- All samples produced relatively stable pH leachates (slightly alkaline to slightly acidic) throughout the reported test period. Values decreased slightly from cycle 0 (7.0 to 8.0) to the latest test cycle (7.0 to 7.8) (Appendix C.5- 1);
- Initial alkalinity (22 to 74 mg $CaCO_3$/L) for the CN50-51 Composite, F Zone and Tiriganiaq open pit and underground, Wesmeg and Wolf samples stabilized to concentrations ranging from 9 to 30 mg $CaCO_3$/L. The Discovery sample alkalinity concentrations increased from 13 to 28 mg $CaCO_3$/L, while the Pump sample remained steady near 15 mg $CaCO_3$/L;
- Sulphate concentrations decreased from a range of between 38 and 730 mg/L in cycle 0, to between 8 and 94 mg/L in the last tested cycle. The Wolf sample reported the highest initial sulphate concentrations (730 mg/L) despite having the lowest sulphur content of all samples. The CN50-51 composite sample reported the lowest sulphate concentration of all whole ore tailing samples. Low sulphate concentrations indicate there has been little sulphide mineral reactivity to date under accelerated weathering conditions; however trends will be monitored as testing is on-going;
- Calcium concentrations reported a similar trend as sulphate. Concentrations decreased from 17 to 320 mg/L at cycle 0 to between 7.9 and 45 mg/L at cycle 10. Like sulphate, the Wolf and CN50-51 composite tailings samples reported the highest and lowest calcium concentrations, respectively;
- Conductivity, and major ions including magnesium, potassium, sodium, and strontium concentrations peaked at Cycle 0, followed by decreasing concentrations. This is characteristic of the initial “first flush” which removes soluble salts and fine particles that are present on the surface of the HCT charge;

- Fluoride, beryllium, bismuth, chromium, lithium, mercury, selenium, thallium, and titanium concentrations were frequently below method detection limit in both samples; and,
- Arsenic concentrations reported decreasing trends in all samples, with initial concentrations ranging from 0.05 to 0.9 mg/L (Cycle 0), and the final test cycle to date ranging from 0.003 to 0.05 mg/L. This is substantially lower than reported from static leach tests (Appendix C-5).

#### *4.3.3.1 Mineral Depletion Calculation Results – Tailings*

Results of the mineral depletion calculations are presented in Table 28 for samples that are PAG and uncertain; namely, the Discovery and F Zone whole ore tailings samples. Results are presented as the number of years to depletion of sulphide minerals and carbonate minerals based on sulphide sulphur (%), CaNP-adj and NP (t $CaCO_3$ / 1000 t of rock).

**Table 28: Depletion Calculation Results for Select Samples**

| Deposit | Sample ID | Test Type | ARD Potential (static tests) | Years to Depletion | | | ARD Potential (Depletion Rate) |
|---|---|---|---|---|---|---|---|
| | | | | $S(S^{2-})$ | CaNP-adj | NP | |
| Discovery | Discovery CN8 (CND5-7) | HCT | **PAG** | 11 | 0.5 | 5 | PAG |
| F Zone | F Zone Underground CN5 | HCT | *uncertain* | 41 | 27 | 31 | PAG |

The results of depletion calculations indicate that for both samples the neutralization potential may be depleted prior to sulphur being fully oxidized under the laboratory conditions of the test. Both samples continued to generate neutral HCT leachate after 30 weeks of testing, confirming the long lag time until sulphide oxidation can be initiated and for ARD conditions to be realized, if ARD is to be generated at all given the climate conditions of the Meliadine site (see Section 2.2.4.6).

### 4.3.4 Process Water

Process water results are presented in Appendix C.6. Table 29 presents a summary of process water results. Results are compared with MMER (2006) criteria for arsenic and cyanide (maximum monthly mean)..

**Table 29: Summary of Tailings Process Water Results**

| Deposit | Sample ID | Tailing Description | Process Water pH | Total Cyanide (mg/L) | Total Arsenic Concentration (mg/L) | MMER[1] |
|---|---|---|---|---|---|---|
| Tir mixed lodes + F Zone (14%) | CND9-1A | Whole Ore | 7.8 | 1.6 | **0.83** | As[4], Cu (total) |
| Master Composite[2] | CN50-51 Composite | Whole Ore | **10.3** | 273 | **6.5** [3] | pH (>9.5), As, Zn[3] (dissolved) |
| Discovery | CN8 (CND5-7) Discovery | Whole Ore | 8.8 | 15 | 0.46 | Cu |
| F Zone | F Zone Open Pit CN6 CND residue | Whole Ore | 8.0 | <0.01 | **1.2** | As[4] |
| | F Zone Underground CN5 | Whole Ore | 8.3 | 17 | **3.2** | As[4] |
| Pump | CN7 Pump | Whole Ore | 9.2 | 17 | **4.4** | As[4], Cu (total) |
| Tiriganiaq | Tiriganiaq Open Pit CN2 | Whole Ore | 8.2 | 6.0 | **9.3** | As[4] |
| | Tiriganiaq Underground CN1 | Whole Ore | 8.2 | 14 | **7.3** | As[4] |
| Wesmeg | CN3 Wesmeg Open Pit | Whole Ore | 8.3 | 20 | 0.26 | - |
| Wolf | WFOP CN4 CND residue | Whole Ore | 8.2 | <0.01 | 0.31 | pH (>9.5) |

**Notes:**
[1] Metal Mining Effluent Regulations (DFO 2006) exceedance
[2] Master composite comprises: 29% Tiriganiaq open pit, 26% Tiriganiaq underground, 17% Wesmeg, <10% Discovery, F Zone, Pump, and Wolf
[3] Total concentrations not analyzed for this sample
[4] Dissolved total arsenic
- No exceedances

Process water pH values were alkaline, ranging from 7.8 to 10.3, which is expected given the cyanide circuit. Most leachates had constituent concentrations below MMER effluent criteria (DFO 2006) with the exception of total arsenic and total copper in the Pump sample. Dissolved zinc was also above the criteria for total zinc in the Master Composite sample (total zinc not analyzed).

Process water metal concentrations were up to an order of magnitude higher than the leach test results. Arsenate ($As^{+5}$) was more prevalent than arsenite ($As^{+3}$) in process waters.

Cyanide was not detected in the F Zone open pit and Wolf samples. In all other samples, cyanide was present as total (CN(T)), weak acid dissociable (WAD), free cyanide (CN(F)), cyanate (CNO), and thiocyanate (CNS). In the CN50-51 composite sample, WAD cyanide appeared to be the major form of cyanide. In all other samples the majority of cyanide was present as the less toxic form of thiocyanate and cyanate (CNS and CNO, respectively).

Sulphate concentrations are substantially higher in whole ore process waters than in static leaching tests. This reflects the addition of sulphate substances in the mineral process (copper sulphate and sulfite for cyanide destruction).

# 5.0 OVERBURDEN GEOCHEMICAL CHARACTERIZATION

Static test results for overburden samples are discussed in the following sections. Tabulated results and figures are presented in Appendix D and SGS analytical certificates are included in Appendix H.

## 5.1 Chemical Composition

Overburden sample results were compared to CEQG soil quality guidelines (Appendix D.2) as summarized in Table 30. Overburden samples from all deposits contained arsenic and chromium at concentrations exceeding CEQG industrial guidelines (Appendix Figures D.2-1 to D.2-6). Overburden from F Zone also exceeded CEQG guidelines for nickel and vanadium. Overburden concentrations for these parameters were within the range of observed concentrations for waste rock as well as local till concentrations (Section 1.2.7).

**Table 30: Summary of Overburden Chemical Composition**

| Deposit | Rock Type | Number of Samples | Parameter Concentrations Exceeding CEQG Industrial Soil Guideline |
|---|---|---|---|
| Discovery | Surface Overburden | 3 | As, Cr |
| F Zone | Surface Overburden | 5 | As, Cr, Ni, V |
| Pump | Surface Overburden | 4 | As, Cr |
| Tiriganiaq | Surface Overburden | 10 | As, Cr |
| Wesmeg | Surface Overburden | 6 | As, Cr |
| Wolf | Surface Overburden | 3 | As, Cr |

## 5.2 Acid Generation Potential

Results of ABA testing are presented in Appendix D.3 as tables and figures. The ARD potential of each sample is determined based on ABA test results (classification according to INAC 1992). A summary of the ARD designation for each sample is presented in Table 31. NPR was calculated using both the bulk NP and the bulk CaNP. Overburden was not subjected to mineralogical analysis and thus mineralogy-based NP calculations were not done.

Overburden samples reported total sulphur between <0.005 and 0.076% and NPR values between 8.7 and 206 indicating that all samples were non acid-generating. One Wolf sample reported a negative NP (-12 t $CaCO_3$ /1000t), total sulphur less than the method detection limit (<0.005%) and paste pH of 5.5, which suggests that this sample was slightly acidic as it has no available buffering capacity in the short term.

**Table 31: Summary of ARD Potential for Surface Overburden Samples**

| Deposit | Rock Type | Number of Samples[1] | Sample Count[2] | | | Bulk Potential by Rock Type | | | Bulk ARD Designation[3] |
|---|---|---|---|---|---|---|---|---|---|
| | | | non-PAG | un-certain | PAG | Median S(T) | Bulk NPR | Bulk CaNPR | |
| Discovery | Surface Overburden | 3 | 3 | 0 | 0 | <0.01 | 22 | 4.0 | non-PAG |
| F Zone | Surface Overburden | 5 | 5 | 0 | 0 | 0.012 | 58 | 43 | non-PAG |
| Pump | Surface Overburden | 4 | 4 | 0 | 0 | 0.021 | 39 | 33 | non-PAG |
| Tiriganiaq | Surface Overburden | 10 | 10 | 0 | 0 | 0.028 | 11 | 6.6 | non-PAG |
| Wesmeg | Surface Overburden | 6 | 6 | 0 | 0 | 0.007 | 40 | 23 | non-PAG |
| Wolf | Surface Overburden | 3 | 3 | 0 | 0 | <0.01 | 17 | 23 | non-PAG |

**Notes:**
[1] Total number of samples subjected to static testing
[2] Number of samples classified as PAG, uncertain and non-PAG following INAP (1992)
[3] Bulk ARD potential per rock type following INAP (1992)and based on calculated bulk characteristics for both NPR and CaNPR

## 5.3 Metal Leaching Potential

### 5.3.1 SFE Leach Tests

Results for metal leaching under SFE test conditions are presented in Appendix D.4. Results are compared with MMER (2006) Regulations. Table 32 presents a summary of parameters exceeding the screening criteria.

For all overburden samples, the concentrations of all leachate parameters met mine effluent criteria (MMER; DFO 2006) with the exception of zinc in 1 sample of Tiriganiaq surface overburden. This sample exceeded the MMER effluent maximum monthly mean limit (0.5 mg/L) for zinc. The average zinc concentration for Tiriganiaq overburden samples (0.09 mg/L) was an order of magnitude below the MMER limit.

**Table 32: Overburden SFE Parameters Exceeding Screening Criteria**

| Deposit | Rock Type | Number of Samples | Median Final pH | MMER[1] |
|---|---|---|---|---|
| Discovery | Surface Overburden | 3 | 6.9 | - |
| F Zone | Surface Overburden | 5 | 7.7 | - |
| Pump | Surface Overburden | 4 | 8.8 | - |
| Tiriganiaq | Surface Overburden | 10 | 7.6 | **Zn** |
| Wesmeg | Surface Overburden | 6 | 8.4 | - |
| Wolf | Surface Overburden | 3 | 8.0 | - |

**Notes:**
[1] Metal Mining Effluent Regulations (DFO 2006) exceedance
- No exceedances

Leachable arsenic was found to correlate weakly ($R^2$=0.6) with total arsenic content (Figure 11) for all samples. Leachate arsenic concentrations were quite low, more than an order of magnitude lower than the MMER maximum monthly mean criterion (0.5 mg/L).

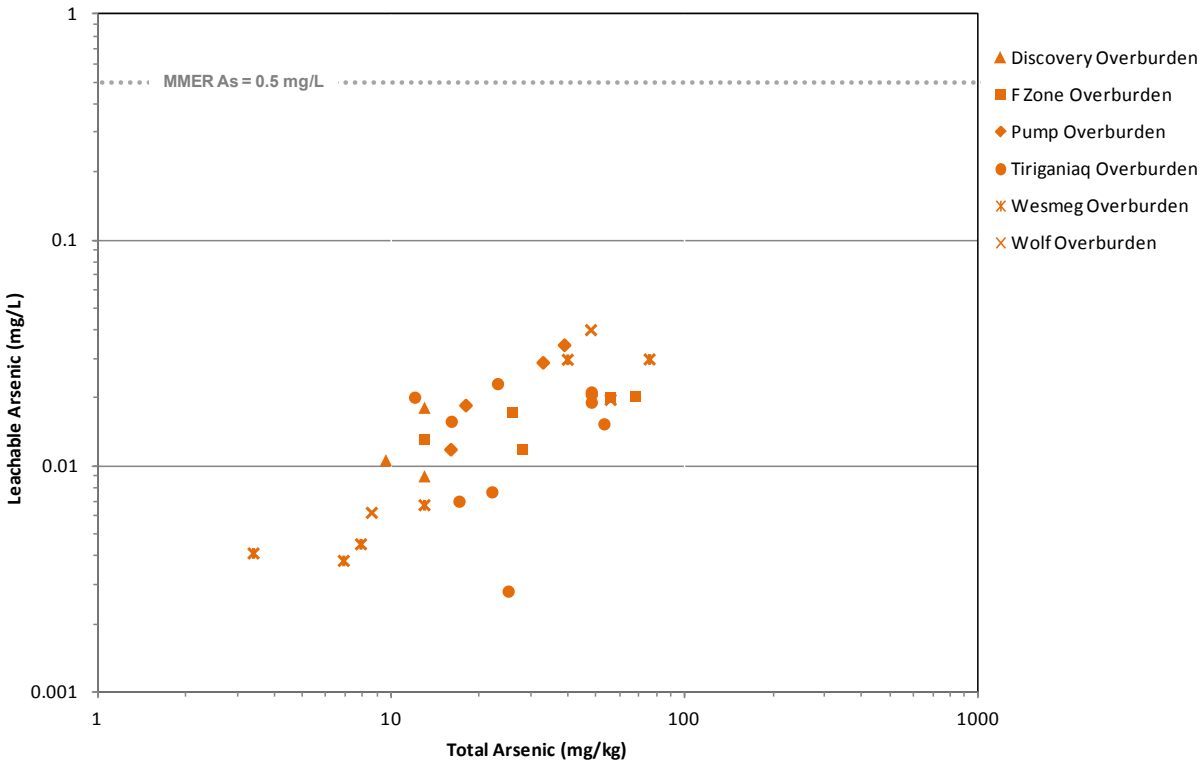



*Figure 11: Total Arsenic (mg/kg) versus Leachable Arsenic (mg/L) – Overburden*

# 6.0 SUMMARY OF ENVIRONMENTAL CHARACTERISTICS

The geochemical characterization program conducted to date includes standard static tests for waste rock, ore, tailings, and overburden, as well as standard kinetic tests for the waste rock and tailings, and modified kinetic tests (laboratory and field) for waste rock.

The results of the geochemical characterization programs can be summarized as follows:

## 6.1 Waste Rock and Ore

Most tested waste rock and ore samples have no potential to generate acid rock drainage (non-PAG), with only 3% of samples characterized as PAG (Table 33) and 15 % as uncertain. Similarly, most waste rock lithologies are non-PAG except for Discovery greywacke/siltstone and iron formation that have an uncertain ARD potential stemming from the uncertainty related to the available buffering capacity present in these rock units. The iron formation waste rock from the Pump and F Zone deposits has an uncertain potential to generate ARD, but this rock unit constitutes a minor proportion of the waste generated from these deposits (14% and 8% by tonnage, respectively). The other rock types from these deposits have excess buffering capacity such that the overall ARD potential of the mixture of waste rock types generated from Pump and F Zone, as well as from Tiriganiaq, Wesmeg and Wolf deposits, is expected to be non-PAG.

The majority of Discovery waste rock has an uncertain ARD potential based on static testing. All samples have low sulphur content, but also low buffering capacity. The uncertainty stems from the uncertainty in the type and availability of buffering minerals present in the rock. Different means of estimating the buffering capacity have yielded conflicting results in terms of ARD potential based on static testing. More representative kinetic tests have shown sustained buffering during the entire test period (20 to 40 weeks of accelerated testing) from samples that have minimal carbonate mineral content (less than 2% in iron formation, no detected carbonate minerals to 0.3% carbonate minerals in greywacke/siltstone rock) and median to upper quartile sulphur content. Mineral depletion calculations suggest that iron formation is likely to be PAG in the long-term for the upper quartile sulphide content samples tested, but greywacke/siltstone is variable. ARD is not expected to be realized on the short to medium term for Discovery waste rock, but the long-term ARD potential is uncertain based on the samples and conservative tests and assumptions used. The ARD potential of Discovery iron formation and greywacke/siltstone rock will depend on the availability and reactivity of sulphide minerals and the availability and effectiveness of buffering minerals under site conditions.

The low ARD potential of most waste rock types from Meliadine stems from the low sulphide content and excess buffering capacity sourced from reactive carbonate minerals. Although some metal carbonates were present which provide less or no net buffering capacity compared to calcite, static and kinetic test results on these samples corroborate the low ARD potential of these waste rock units.

Ore from Tiriganiaq, Wesmeg and Wolf is non-PAG, while ore from F Zone and Pump has an uncertain ARD potential, and Discovery ore is PAG. F Zone and Pump ore which is hosted in iron formation, have similar AP and NP than iron formation waste rock from these deposits. The sulphur content of these ores is slightly higher than that of other waste rock. Discovery ore, also hosted in iron formation, is PAG because of the slightly higher sulphur content than other waste rock from this deposit.

Arsenic is the principal element of environmental interest because of its natural enrichment in soil and mineralized rock in the area, and because arsenic can be mobile under the neutral conditions which are likely to prevail at Meliadine. Rock from all deposits is indeed enriched in arsenic (Section 1.2.7); the median arsenic concentration for most rock types was more than five times the typical crustal abundance. The median arsenic content was highest in Pump and Tiriganiaq ores, while arsenic content in waste rock was highest in iron formation (which is generally proximal to the ore), particularly at Tiriganiaq and Wolf deposits.

For all deposits, the concentration of leached arsenic was generally proportional to the total arsenic content of the rock, but it did not correlate with sulphur content; likely because of the presence of other non-arsenic-bearing sulphide minerals. The labile arsenic is anticipated to originate from arsenopyrite and other arsenic-rich sulphide minerals, but may also come from soluble non-sulphide mineral phases such as carbonates in which arsenic may be present in trace amounts. Short term water leach test results yielded concentrations that met the MMER chemical criteria in all samples of waste rock and ore tested, with the exception of arsenic in one Tiriganiaq greywacke/siltstone sample and three ore samples from Discovery and Tiriganiaq. However, short term leach tests are considered a conservative estimate of arsenic leachability (Section 3.3.3.1). Large column and field cell tests, conducted at lower water-to-rock ratios that are more appropriate to site conditions, generated leachate concentrations well below MMER criteria. Scale up studies further support this conclusion. On-site surface water quality monitoring results from the Operations Pad (Operations Pad made of Tiriganiaq greywacke run of mine rock) are also below the MMER criteria. Table 33 illustrates the results of arsenic leachability from static and all kinetic leaching tests (all scales).

**Table 33: Summary of ARD and ML Potential for Waste Rock and Ore**

| Deposit | Rock Type | Estimated Waste Rock Tonnage[1] | | Number of Samples[4] | Bulk Potential by Rock Type | | | Bulk ARD Design-ation[5] | Median Arsenic Content (mg/kg) | Static Leach Test (SFE) | | Kinetic Test Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Tonna-ge (Kt)[2] | Prop-ortion[3] | | Median S(T) | Bulk CaNPR-adj | Bulk NPR | | | pH | >MMER[6] | average pH | >MMER[6] |
| Discovery | Gabbro | 6,284 | 9% | 11 | 0.12 | 4.2 | 7.8 | non-PAG | 4.9 | 8.3 | - | n.a. | n.a. |
| | Greywacke/Siltstone | 43,323 | 60% | 54 | 0.13 | 0.40 | 3.3 | *uncertain* | 34 | 8.3 | - | 7.1 | - |
| | Iron Formation | 20,906 | 29% | 33 | 0.39 | 1.3 | 2.1 | *uncertain* | 7.7 | 7.8 | - | 7.4 | - |
| | Ore/IF | - | - | 5 | 1.1 | 0.37 | 0.61 | **PAG** | 390 | 7.7 | **As (1)** | n.a. | n.a. |
| F Zone | Iron Formation | 2,667 | 8% | 7 | 2.2 | 0.42 | 1.2 | *uncertain* | 95 | 8.0 | - | 7.2 | - |
| | Mafic Volcanic | 29,549 | 91% | 70 [7] | 0.11 | 25 | 29 | non-PAG | 8.8 | 8.3 | - | 8.0 | - |
| | Ore/IF | - | - | 3 | 1.9 | 1.0 | 1.3 | *uncertain* | 970 | 8.1 | - | n.a. | n.a. |
| Pump | Iron Formation | 5,531 | 14% | 8 | 2.0 | 0.33 | 1.5 | *uncertain* | 89 | 8.0 | - | 7.2 | - |
| | Mafic Volcanic | 32,578 | 85% | 36 | 0.086 | 44 | 44 | non-PAG | 21 | 8.1 | - | 7.8 | - |
| | Ore/Iron Formation | - | - | 4 | 1.9 | 1.6 | 1.5 | *uncertain* | 2490 | 8.2 | - | n.a. | n.a. |
| Tiriganiaq | Gabbro | 4,856 | 3% | 10 | 0.12 | 8.5 | 10 | non-PAG | 13 | 8.4 | - | n.a. | n.a. |
| | Greywacke/Siltstone | 113,694 | 81% | 194 [7] | 0.19 | 6.2 | 8.4 | non-PAG | 51 | 8.2 | **As (1)** | 7.6 | - |
| | PAD Greywacke/siltstone waste rock [8] | - | - | 13 | 0.19 | 5.8 | 7.9 | non-PAG | 76 | 7.9 | - | 7.6 | - |
| | Iron Formation | 7,514 | 5% | 6 | 0.30 | 6.3 | 5.6 | non-PAG | 215 | 8.0 | - | 7.6 | - |
| | Mafic Volcanic | 14,212 | 10% | 43 | 0.23 | 20 | 25 | non-PAG | 16 | 8.0 | - | 8.0 | - |
| | Ore/Greywacke | - | - | 3 | 0.49 | 5.7 | 5.3 | non-PAG | 260 | 8.0 | **As (1)** | n.a. | n.a. |
| | Ore/Mafic Volcanic | - | - | 4 | 0.86 | 10 | 8.6 | non-PAG | 4050 | 8.1 | **As (1)** | n.a. | n.a. |
| | Ore PAD Lode 1000 [8] | - | - | 1 | 1.1 | 3.7 | 3.6 | non-PAG | 9400 | 7.8 | - | 7.5 | - |
| | Ore PAD Lode 1100 [8] | - | - | 1 | 1.7 | 1.2 | 1.3 | *uncertain* | 5000 | 8.0 | - | 7.7 | - |

| Deposit | Rock Type | Estimated Waste Rock Tonnage[1] | | Number of Samples[4] | Bulk Potential by Rock Type | | | Bulk ARD Design-ation[5] | Median Arsenic Content (mg/kg) | Static Leach Test (SFE) | | Kinetic Test Results | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Tonna-ge (Kt)[2] | Prop-ortion[3] | | Median S(T) | Bulk CaNPR-adj | Bulk NPR | | | pH | >MMER[6] | average pH | >MMER[6] |
| Wesmeg | Mafic Volcanic | 74,378 | 99% | 56 | 0.10 | 41 | 42 | non-PAG | 23 | 8.1 | - | 7.8 | - |
| | Ultramafic | 718 | 1% | 3 | 0.066 | 105 | 97 | non-PAG | 37 | 8.0 | - | 8.1 | - |
| | Ore/mafic volcanic | - | - | 3 | 0.27 | 30 | 26 | non-PAG | 10 | 8.4 | - | n.a. | n.a. |
| Wolf | Greywacke/Siltstone | 13,245 | 61% | 17 | 0.22 | 3.7 | 5.2 | non-PAG | 33 | 7.8 | - | 7.2 | - |
| | Iron Formation | 2,782 | 13% | 5 | 0.24 | 15 | 13 | non-PAG | 240 | 7.7 | - | 7.5 | - |
| | Mafic Volcanic | 5,193 | 24% | 10 | 0.14 | 28 | 27 | non-PAG | 18 | 7.8 | - | 7.4 | - |
| | Ore/Iron Formation | - | - | 3 | 0.36 | 3.4 | 3.1 | non-PAG | 1500 | 7.9 | - | n.a. | n.a. |

**Notes:**
[1] Based on the 10,000 tpd max pit scenario (Lithology_proportion_pit 10000tpd.xlsx dated June 13, 2011, D. Duquette pers. comm.)
[2] Kt = kilotonnes
[3] Proportion of total tonnage per deposit
[4] Total number of samples subjected to static testing
[5] Bulk ARD potential per rock type following INAP (1992) and based on calculated bulk characteristics
[6] Metal Mining Effluent Regulations (DFO 2006) exceedance
[7] In 2009, 14 mafic volcanic samples (F Zone) and 31 greywacke/siltstone (Tiriganiaq) samples were not subjected to ABA testing
[8] Composite samples from test pits completed at the Operations Pad
- no exceedances
n.a. = not analyzed

## 6.2 Tailings

Based on INAC 1992 criteria, out of the 9 whole ore tailings samples tested, most were non acid-generating except the Discovery tailings which was PAG and the F Zone underground tailings sample which was uncertain (no underground mining is currently proposed at F Zone). The Discovery whole ore tailings sample has a lower buffering capacity and slightly lower proportion of carbonate minerals compared to other samples, while the F Zone underground sample contains similar buffering capacity but slightly higher sulphide and sulphide mineral content than other whole ore tailings. Other than Discovery tailings, all others had similar buffering capacity and alkaline paste pH values indicating the presence of immediately available NP. This is demonstrated in kinetic testing of all whole ore tailings including Discovery tailings, where the sample reported neutral pH values through nearly 20 weeks of testing under laboratory conditions. This suggest that a long lag time can be expected until sulphide mineral oxidation and acid generation under the arid arctic climate site conditions, if the ARD potential is ever realized.

Figure 12 presents a calculated bulk NPR for tailings per mine year using the conservative CaNP-adj value for each sample. The bulk NPR per year was calculated based on the proportion of ore generated per deposit per year, based on the September 2012 8,500 tpd mine plan (AEM, 2012). This figure shows that the tailings are expected to be non acid-generating over most of mine life and in the last 3 years of tailings production, with some periods of uncertain ARD potential and one year of possible PAG tailings (year 9) corresponding with periods when Discovery ore is being milled.

Whole ore tailings samples reported temporary exceedances to the MMER (DFO 2006) criterion for arsenic in 4 samples (F Zone underground, Pump open pit, and Tiriganiaq underground and open pit) but concentrations dropped to below the criterion after 3 cycles of kinetic testing and continued to decrease with time.

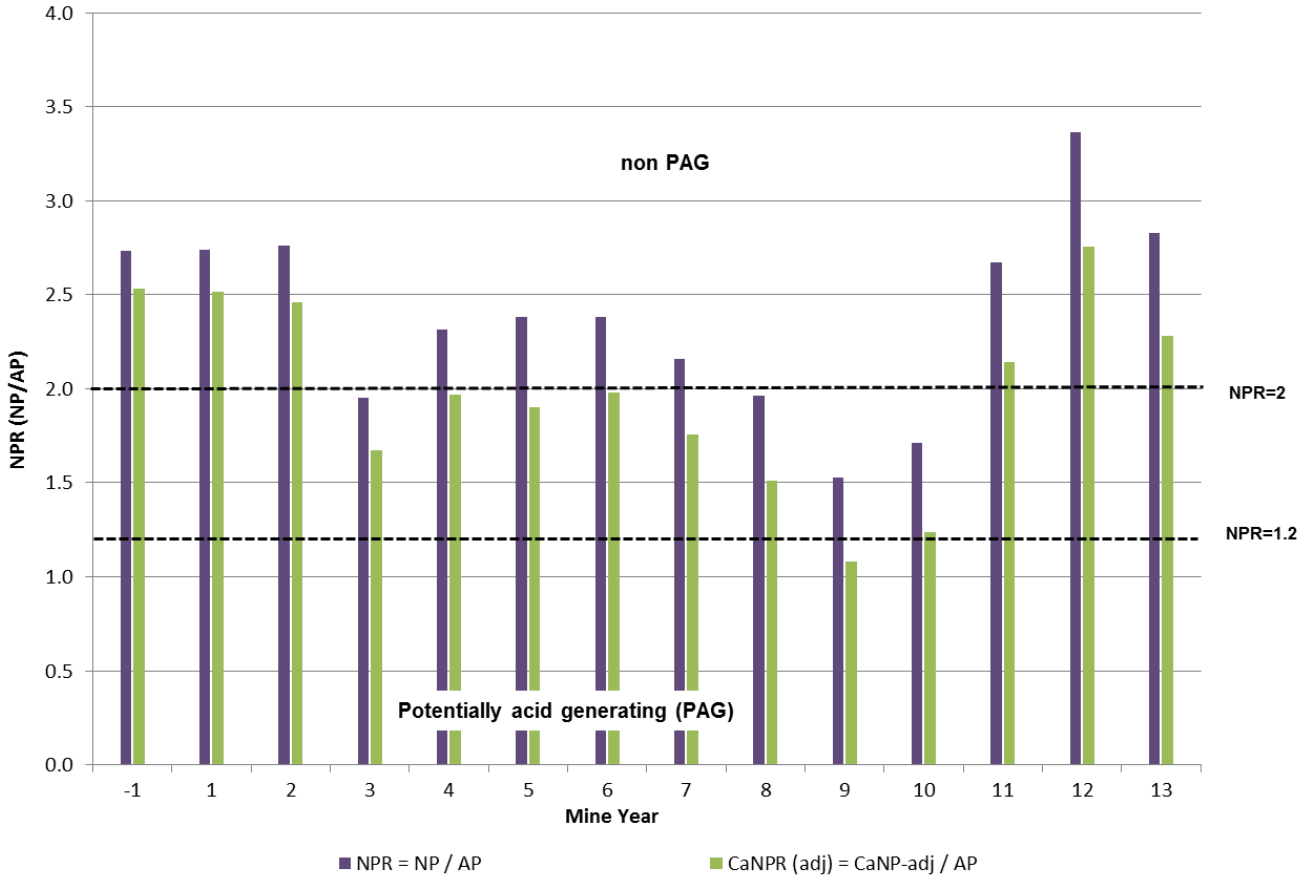



*Figure 12: Calculated Bulk ARD Potential for Tailings per Production Year (as NPR and CaNPR)*

## 6.3 Overburden

All overburden samples tested were non acid-generating. Sulphide content was low (equal to or less than the MDL) and buffering capacity was high.

For all overburden samples, the concentrations of all leachate parameters met mine effluent criteria (MMER; DFO 2006) with the exception of zinc in one Tiriganiaq surface overburden sample. The average zinc concentration for Tiriganiaq overburden samples was, however, an order of magnitude below the MMER limit (0.09 mg/L).

Total arsenic content in the overburden samples tested ranged from 3 to 76 mg/kg with median concentrations from each deposit above CCME Industrial Soil Guidelines (12 mg/kg). Results are consistent with the GSC study (McMartin 2000) which documented naturally elevated arsenic levels on a regional level in soil and surface water samples collected in the area (Section 1.2.7).

# 7.0 MINE WASTE MANAGEMENT CONSIDERATIONS

The following mine waste management considerations are subject to re-evaluation upon completion of additional studies, further sampling, and/or modification/finalization of the mining plan and mine waste management plans.

## 7.1 Waste Rock

Most waste rock lithologies have no potential to generate ARD. The iron formation waste rock from the Pump and F Zone deposits has an uncertain potential to generate ARD but this rock unit constitutes a minor proportion of the waste rock to be generated from these deposits (14% and 8% by tonnage, respectively). All other rock types from these deposits have excess buffering capacity such that the overall ARD potential of the rock stockpiles to be built from Pump and F Zone waste rock, as well as from Tiriganiaq, Wesmeg and Wolf waste rock, is expected to be non-PAG. Waste rock from most deposits in most WRSFs does not require means to prevent oxidation, with the possible exception of the Discovery WRSF.

The Discovery WRSF is not expected to generate acidic drainage in the short to medium term based both on the low reactivity of potentially PAG rock samples demonstrated through kinetic testing, and on AEM's experience at the Meadowbank Mine where the waste rock pile containing similar iron formation PAG rock froze within the first year of placement. The long-term ARD potential of Discovery waste rock, and particularly in the active thaw layer on the surface of the waste rock stockpile, is uncertain; it will depend on the availability and reactivity of sulphide minerals and the availability and effectiveness of buffering minerals under site conditions. The discovery waste rock will need to be managed according to its ARD potential.

Suspended solids and blasting residues (ammonia and nitrate) have not been included in this study but based on experience at other mine sites, may be present in waste rock contact water.

### 7.1.1 Waste Rock for Construction Use

Early mine development rock from the Tiriganiaq deposit (greywacke/siltstone rock from the shallow open pit and underground development) is being considered for use as construction material. Waste rock from all deposits except Discovery PAG and uncertain waste rock and Pump and F Zone iron formation rock may be used for construction as needed. These rock types do not require means to prevent ARD, and contact water quality is expected to meet MMER monthly mean criteria for chemical constituents. Should waste rock be used in construction, contact water quality should be monitored prior to release to the receiving environment.

## 7.2 Tailings

Most whole ore tailings are non acid-generating, except for Discovery tailings. The bulk of tailings produced on an annual basis are expected to be non acid-generating over most of the mine life and in the last 3 years of tailings production, based on the 8500 tpd scenario of the 2012 mining plan. Some periods of uncertain ARD potential correspond with Discovery ore being milled. Notwithstanding this, the tailing mass is not anticipated to develop acidic drainage during operations because tailings will be deposited as a water-saturated, thickened slurry which will minimize oxygen intake for sulphide oxidation; Discovery ore will be milled together with other ore resulting in a mixture that will have immediately available excess buffering capacity; and the milling rate will be such that tailings will continually be covered with fresh material, resulting in a short exposure period that is

expected to minimize the possibility of sulphide mineral oxidation during operations. The last 3 years of tailings deposition are non-PAG; this should be managed in a way to cover the entire tailings mass with a layer that is sufficiently thick to protect the underlying tailings from oxidizing agents. Prolonged exposure of Discovery tailings should be avoided.

Some of the whole ore tailings solids streams leach concentrations of arsenic and pH that exceed the MMER monthly mean effluent criterion. Long-term chemical release from the tailings will need to be controlled.

## 7.3 Overburden

Overburden from within the pit outlines are non acid-generating and do not require means to prevent oxidation. Metal release from overburden under laboratory conditions is low despite the relatively high total arsenic content. Leachate concentrations in overburden are generally lower than waste rock. These two materials have compatible geochemical characteristics such that they could be managed together in the same facility.

# 8.0 RECOMMENDATIONS

Upon modification or finalization of the mine plan, the geochemical characterization program results should be re-evaluated according to the chosen mining technique, development sequence and new pit outlines.

Feld cells should continue to be monitored (leached and leachate analyzed) during frost-free months to verify rock leaching rates under site conditions.

The ARD potential of Discovery waste rock should be monitored during operations to feed into a mine waste management plan and closure plan that will not expose potentially acid generating rock.

# 9.0 LIMITATIONS AND USE OF REPORT

This report was prepared for the use of Agnico Eagle Mines Limited. The report, which specifically includes all tables, figures and appendices, is based on data and information collected during the subsurface environmental investigation conducted by Golder Associates Ltd. and from samples provided to Golder Associates Ltd. for analysis, and is based solely on the conditions of the properties and samples at the time of the investigation, supplemented by historical information and data obtained by Golder Associates Ltd. as described in this report.

Except where specifically stated to the contrary, the information contained in this report (such as geology data, mine plans, metallurgical process information amongst other data) was provided to Golder Associates Ltd. by others and has not been independently verified or otherwise examined by Golder Associates Ltd. to determine its accuracy or completeness. Golder Associates Ltd. has relied in good faith on this information and does not accept responsibility for any deficiency, misstatements, or inaccuracies contained in the information as a result of omissions, misinterpretation, fraudulent acts or the persons interviewed or contacted or errors or omissions in the reviewed documentation.

The assessment of the geochemical characteristics of mining wastes for this project has been made using the results of chemical analysis of discrete samples from a limited number of locations. The geochemical characteristics between sampling locations or during operation have been inferred based on conditions observed

at these specific locations. Subsurface conditions may vary between sample locations. Additional study, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of study. However, it is never possible, even with exhaustive sampling and testing, to dismiss the possibility that part of a site may have considerably different characteristics.

The services performed as described in this report were conducted in a manner consistent with that level of care and skill normally exercised by other members of the geoscience profession currently practising under similar conditions, subject to the time limits and financial and physical constraints applicable to the services. Any use which a third party makes of this report, or any reliance on, or decisions to be made based of it, are the responsibilities of such third parties. Golder Associates Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The content of this report is based on information collected during our investigation, our present understanding of the site conditions, and our professional judgement in light of such information at the time of this report. This report provides a professional opinion and therefore no warranty is either expressed, implied, or made as to the conclusions, advice and recommendations offered in this report. This report does not provide a legal opinion regarding compliance with applicable laws; regulatory statutes and the interpretation of regulatory statutes are subject to change.

The findings and conclusions of this report are valid as of the date of this report. If new information is discovered in future work, including excavations, borings, samples collected during mine operation or other studies, Golder Associates Ltd. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required.

# 10.0 CLOSURE

We trust this report meets your current requirements. If you have any comments or questions regarding this report, please contact the undersigned.

**GOLDER ASSOCIATES LTD.**

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# ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ABA | acid-base accounting |
| AP | acid potential |
| ARD | acid rock drainage |
| ASTM | American Society for Testing and Materials |
| CaNP | Carbonate Neutralization Potential |
| CIP | carbon-in-pulp |
| CVAAS | cold vapour atomic absorption spectroscopy |
| ICP | Inductively Coupled Plasma |
| ICP-MS | Inductively Coupled Plasma – Mass Spectrometry |
| KIA | Kivalliq Inuit Association |
| km | kilometre |
| Ktonne | kilotonnes |
| masl | metres above sea level |
| mbgs | metres below ground surface |
| MDL | method detection limit |
| mg/kg | milligrams per kilogram |
| mg/L | milligrams per litre |
| ML | metals leaching |
| MMER | Metal Mining Effluent Regulations |
| Mt | million tonnes |
| NAG | net acid generation |
| NNP | net neutralization potential |
| non-PAG | non acid-generating |
| NP | neutralization potential |
| NPR | net potential ratio |
| PAG | potentially acid-generating |
| pH | The pH is an indication of the acidic or basic, i.e., alkaline, nature of water. Neutral water has a pH of 7. |
| ppm | Parts per million |
| QA/QC | quality assurance/quality control |
| RSF | Rock Storage Facility |
| SFE | Shake Flask Extraction |
| SGS | SGS Canada Inc. |
| t | tonnes |
| t $CaCO_3$ /1000t | tonnes calcium carbonate per 1000 tonnes |
| TC | total carbon |
| TDS | total dissolved solids |
| TIC | total inorganic carbon |
| TSF | Tailings Storage Facility |
| XRD | x-ray diffraction |
| XRF | x-ray fluorescence |
| wt % | Weight percent |

# GLOSSARY OF TERMS

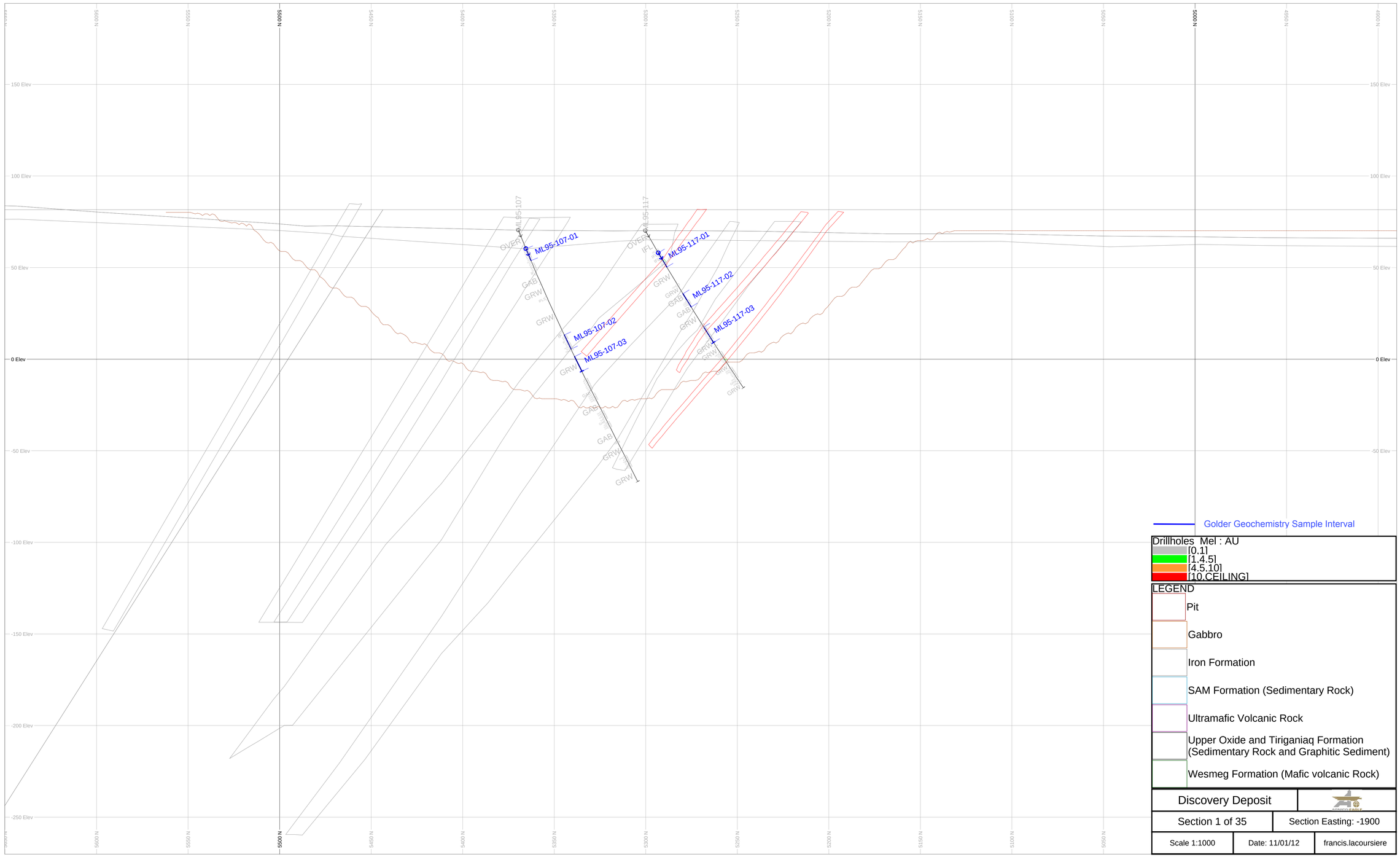
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|---|---|
| Acid Base Accounting (ABA) | An analytical technique applied to mine wastes and geologic materials that determines the potential acidity from sulphur analysis versus the neutralization potential. It is used to predict the potential of that material to be acid producing or acid neutralizing. |
| Acid rock drainage (ARD) | A low pH, metal-laden, sulphate-rich drainage that occurs during land disturbance where sulphur or metal sulphides are exposed to atmospheric conditions. It forms under natural conditions from the oxidation of sulfide minerals and where the acidity exceeds the alkalinity. |
| Acid Potential (AP) | The ability of a rock or other geologic material to produce acid leachates. |
| Bedrock | A general term for the rock, usually solid, that underlies overburden or other unconsolidated, superficial material. |
| Geochemistry | A discipline of geology that studies chemical composition of the Earth and of the reactions that control the distribution of chemical elements in its minerals, rocks, overburden, waters, and atmosphere. |
| Metal leaching (ML) | The release of metals from mineral phases. |
| Net Neutralization Potential (NNP) | The difference of neutralization potential (NP) and acid potential (AP) that determines, based on defined criteria, whether a material is acid-generating or not. The lower the NNP, the higher the potential for acid generation. |
| Net Potential Ratio (NPR) | The ratio of neutralization potential (NP) and acid potential (AP) that determines, based on defined criteria, whether a material is acid-generating or not. The lower the NPR, the higher the potential for acid generation. |
| Neutralization Potential (NP) | The amount of alkaline or basic material in rock or overburden materials that is estimated by acid reaction followed by titration to determine the capability of neutralizing acid from exchangeable acidity or pyrite ($FeS_2$) oxidation. Neutralization potential is comprised of more reactive minerals, such as carbonate, that provide short-term buffering and less reactive minerals, such as alumino-silicates, that provide longer-term buffering. |
| Overburden | Barren rock material, either loose or consolidated, overlying a mineral deposit, which must be removed prior to mining. |
| pH | A measure of the acidity (pH less than 7) or alkalinity (pH greater than 7) of a solution; a pH of 7 is considered neutral. It is a measure of the hydrogen ion concentration (more specifically, the negative log of the hydrogen ion activity for glass electrodes) of a overburden suspension or solution. |
| Shake Flask Extraction (SFE) | A static test that simulates the dissolution, or flushing, of soluble mineral phases from a sample. Solid material is placed in a flask, with a solution and shaken over a specified period of time. |
| Static test | A procedure for characterizing the physical and/or chemical properties of a sample at a point in time, such as acid base accounting. Static tests, unlike kinetic tests, do not evaluate the relative weathering rates of different minerals contained in geologic materials. Static tests provide a snapshot of the balance between acid producing and acid consuming minerals. |
| Sulphate sulphur | The sulphur component of a solid material that is comprised of sulphate. See also sulphide sulphur and total sulphur. |

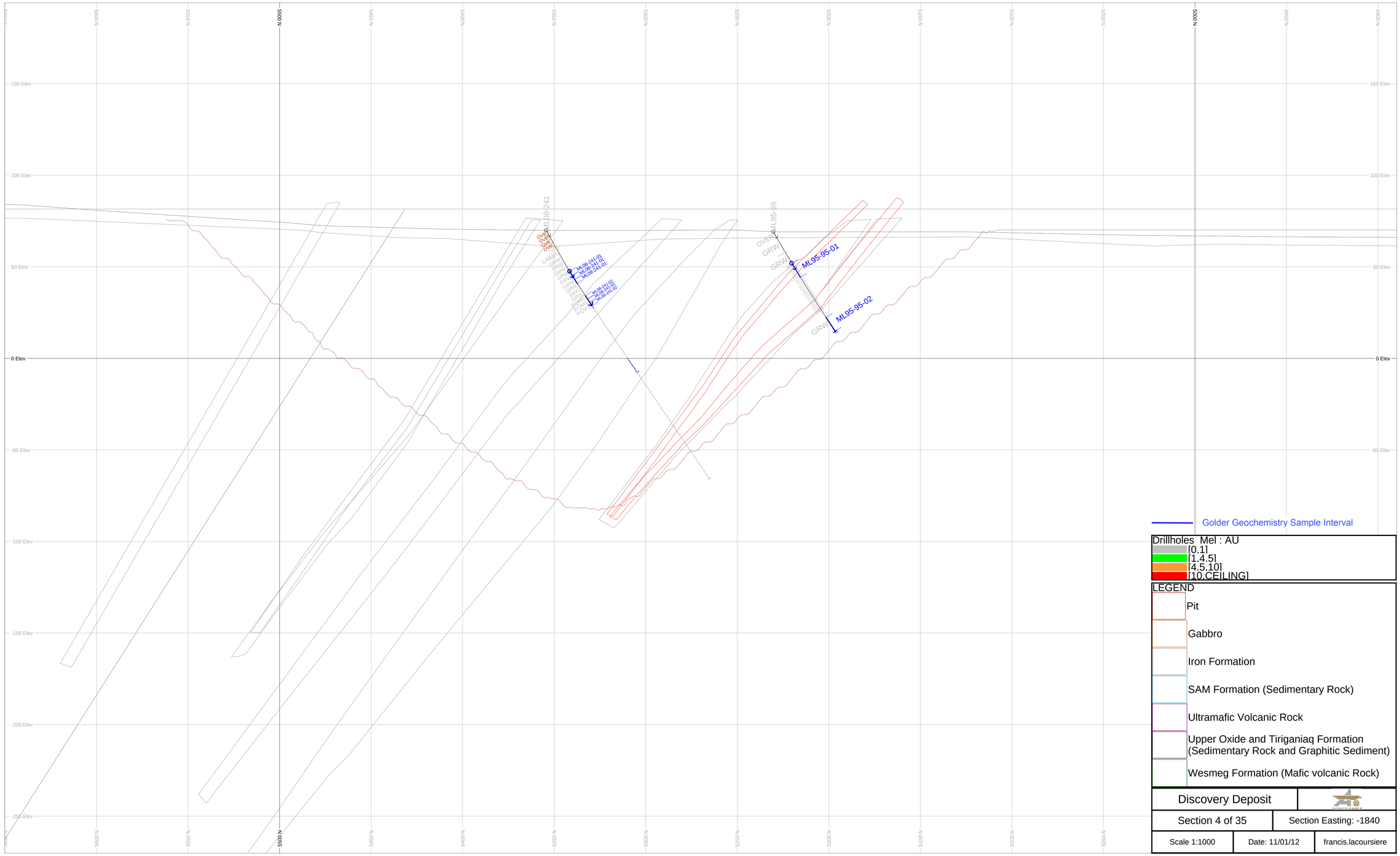
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|---|---|
| Sulphide oxidation | A chemical process involving a reaction(s) that produces an increase in the oxidation state of sulphur. Generally used to refer to the oxidation of the sulphide in pyrite ($FeS_2$) to sulphate ($SO_4$), which can result in acid drainage. |
| Sulphide sulphur | The sulphur component of a solid material that is comprised of sulphide. With respect to acid base accounting, sulphide sulphur is the component that is most commonly used to calculate the acid potential. See also sulphate sulphur and total sulphur. |
| Shake Flask Extraction (SFE) | A static test that simulates the dissolution, or flushing, of soluble mineral phases from a sample. Solid material is placed in a flask with de-ionized water at an established ratio, and shaken over a specified period of time. |
| Tailings | The solid waste product resulting from the milling and mineral concentration process (washing, concentration, and/or treatment) applied to ore. This term is usually used for sand to clay-sized rock particles that remain after the valuable minerals have been extracted from the rest of the rock. |
| Total sulphur | The sum of all sulphur species of a solid material, including sulphide sulphur and sulphate sulphur. |
| Waste rock | In mining, rock that must be broken and disposed of in engineered storage facilities to gain access to and excavate the ore. |

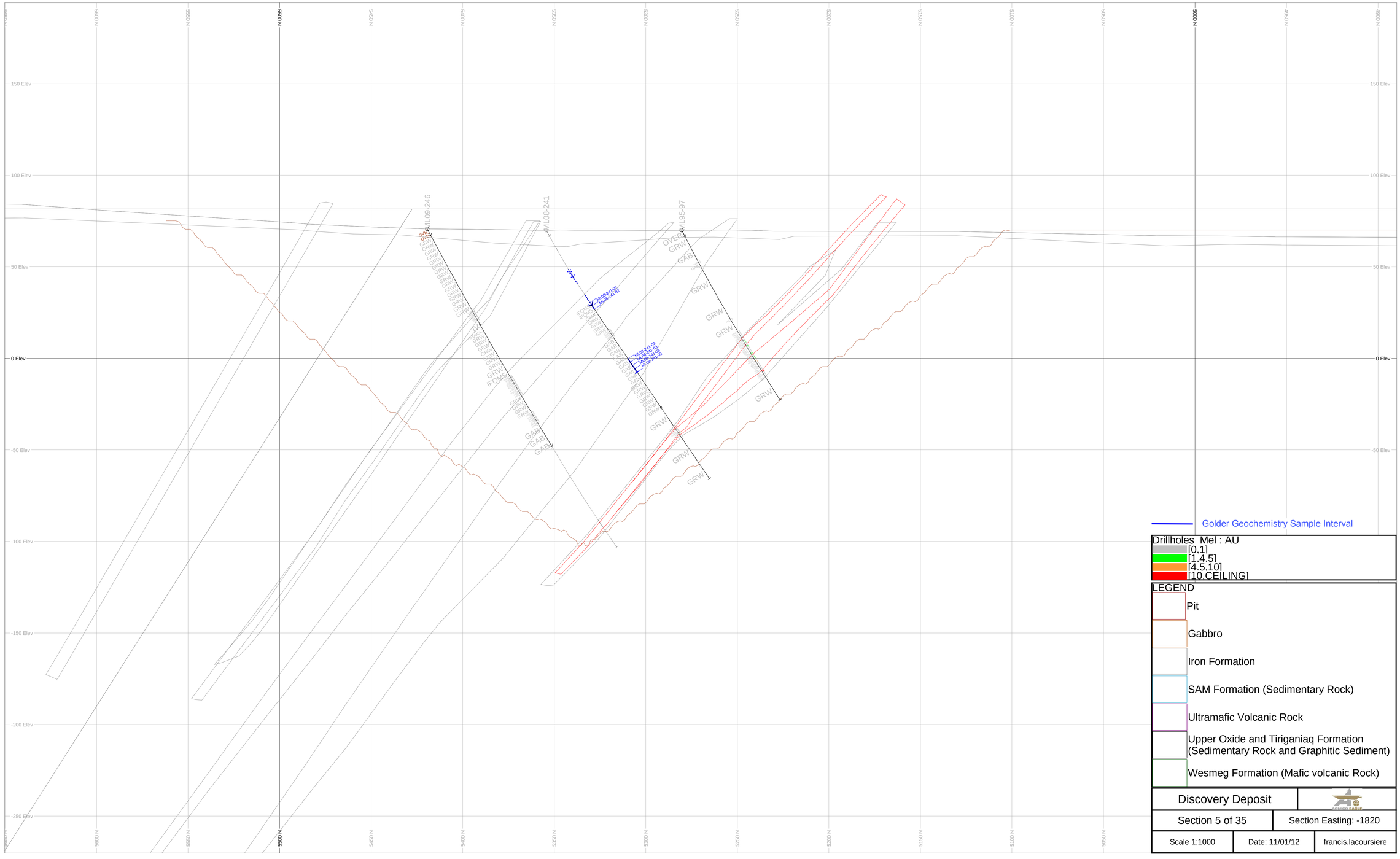
# APPENDIX A

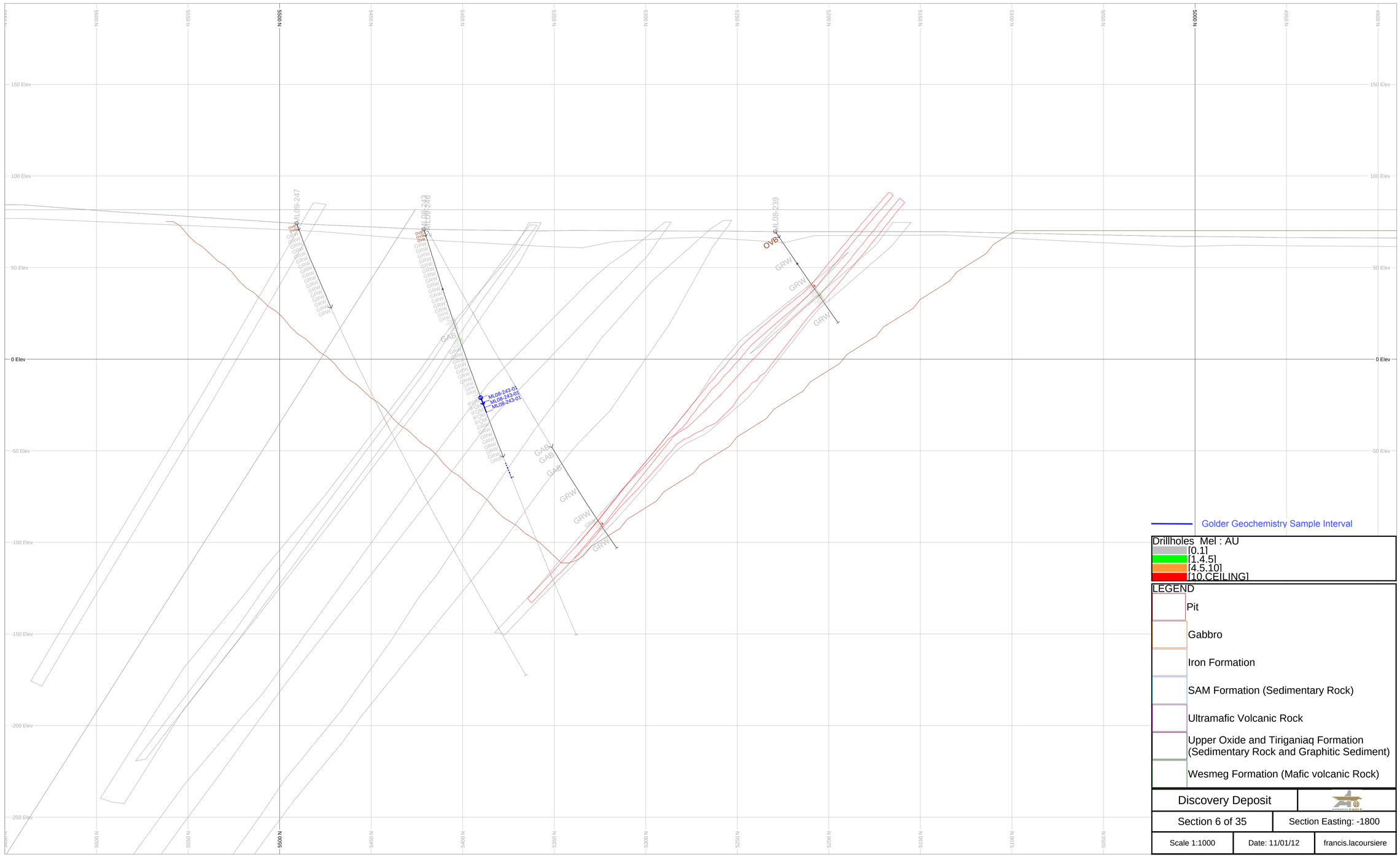
## Geological Cross-Sections

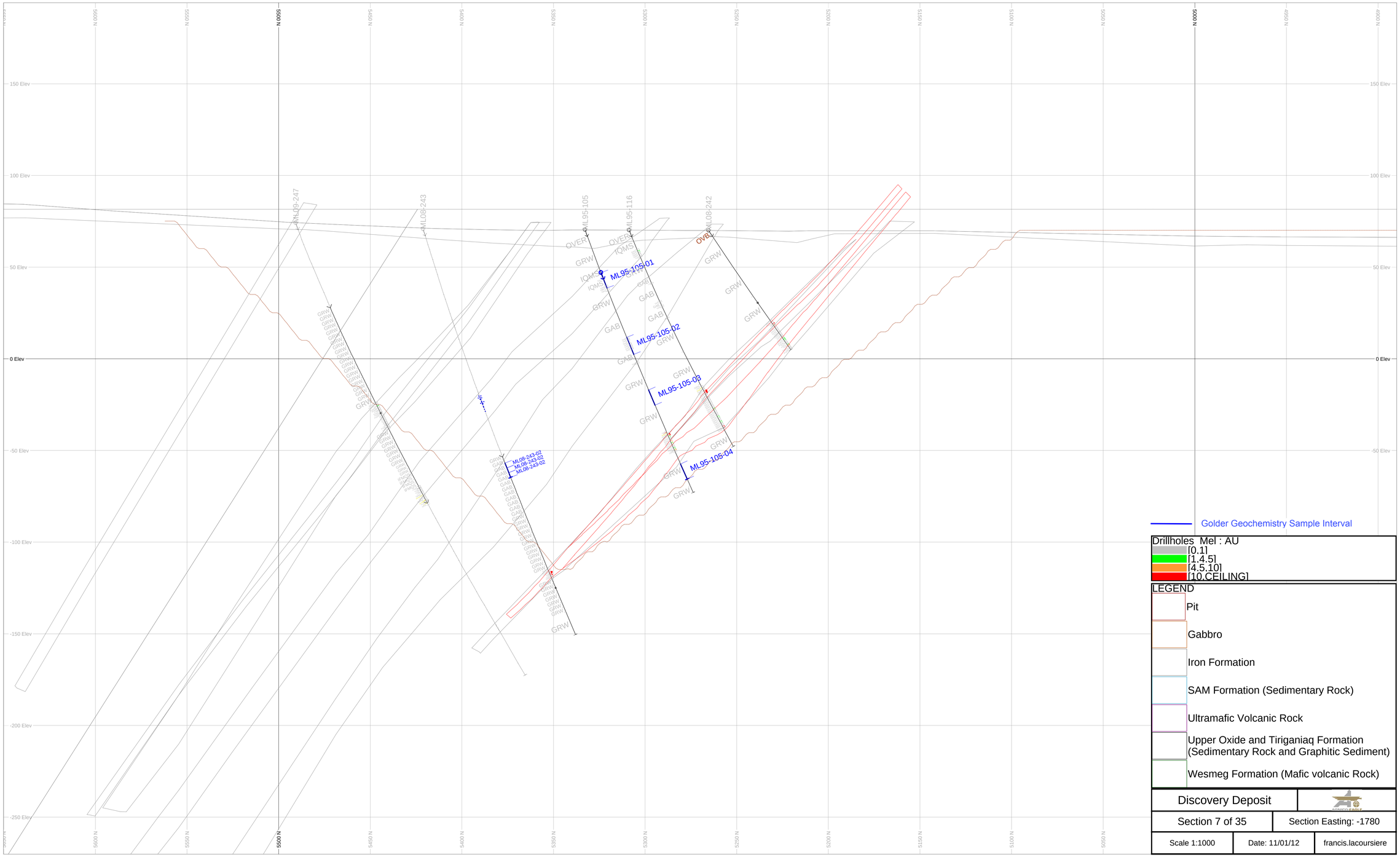
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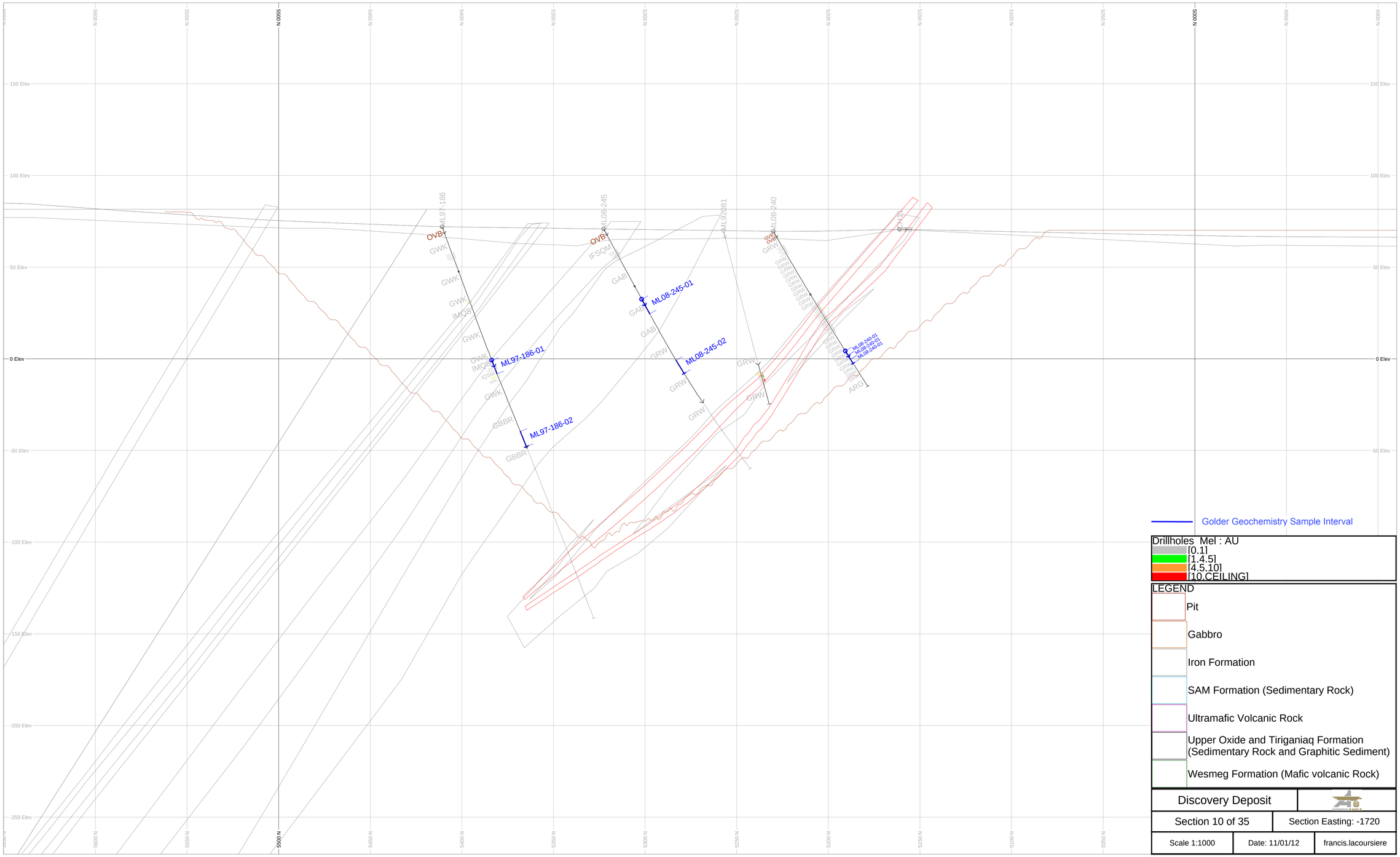

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50 Elev
0 Elev
-50 Elev
-100 Elev
-150 Elev
-200 Elev
-250 Elev
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ML95-107-01
ML95-107-02
ML95-107-03
ML95-117
ML95-117-01
ML95-117-02
ML95-117-03
OVERBURDEN
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Golder Geochemistry Sample Interval
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 1 of 35
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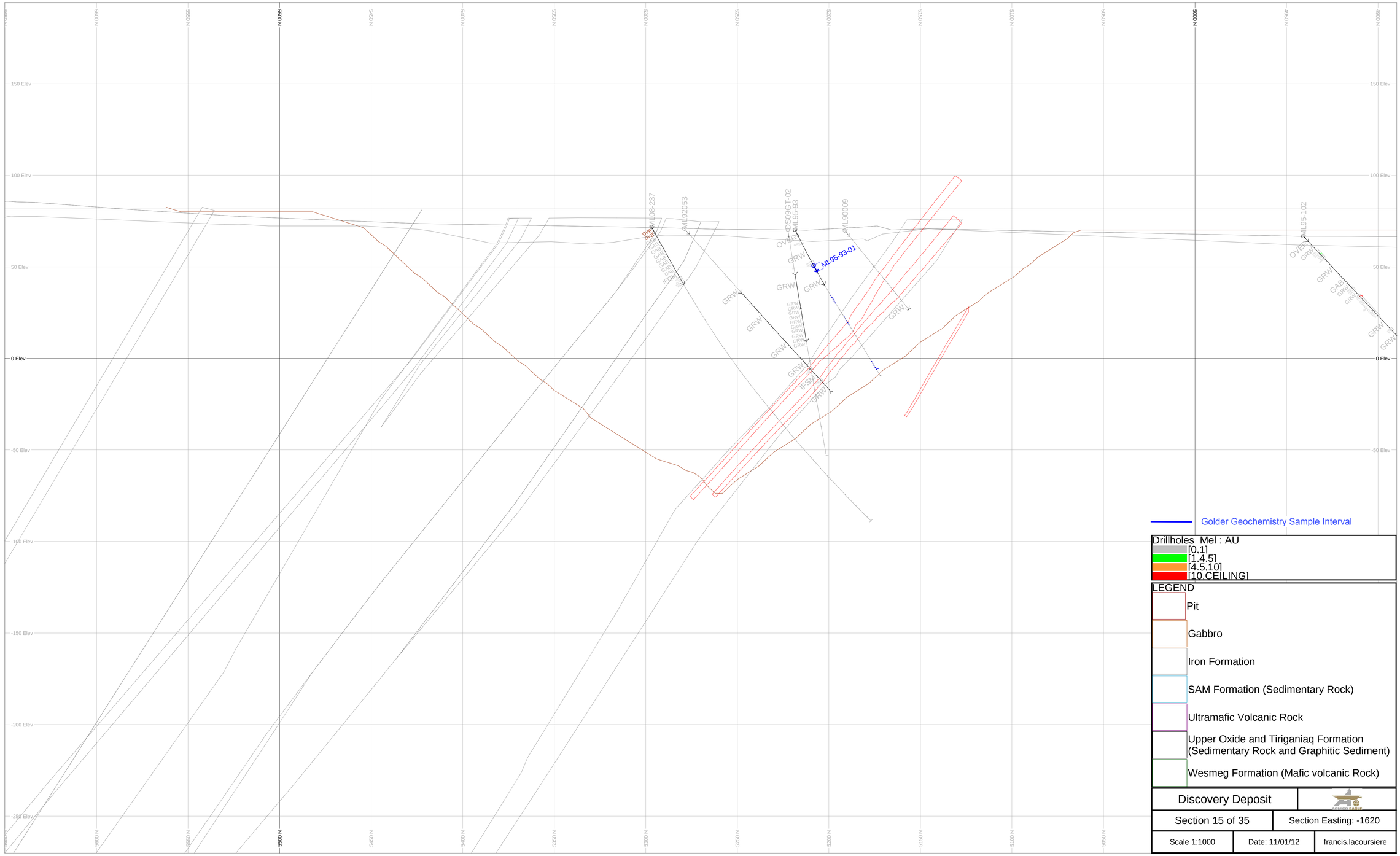

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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 4 of 35
Section Easting: -1840
Scale 1:1000
Date: 11/01/12
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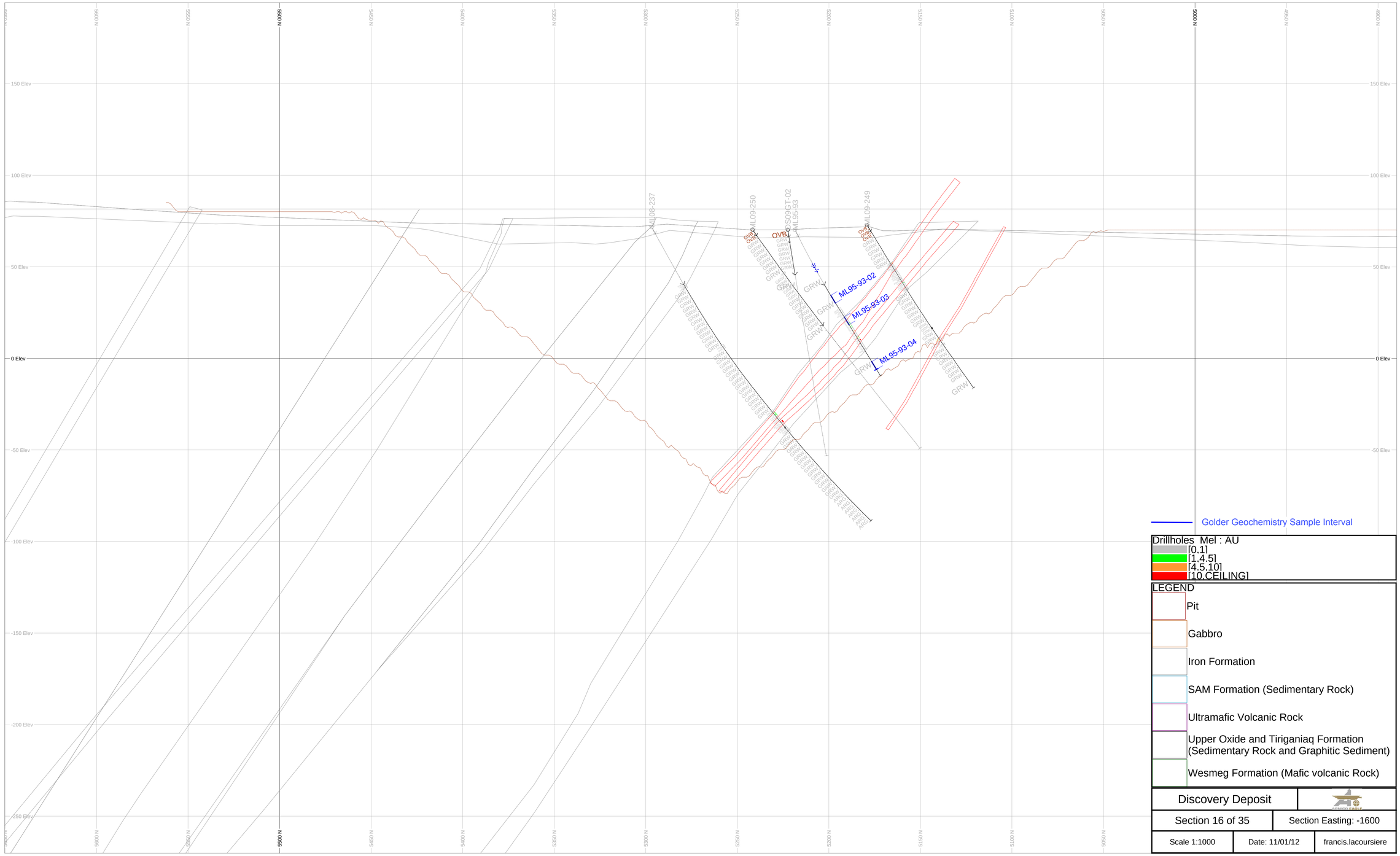

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IFQM
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 5 of 35
Section Easting: -1820
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

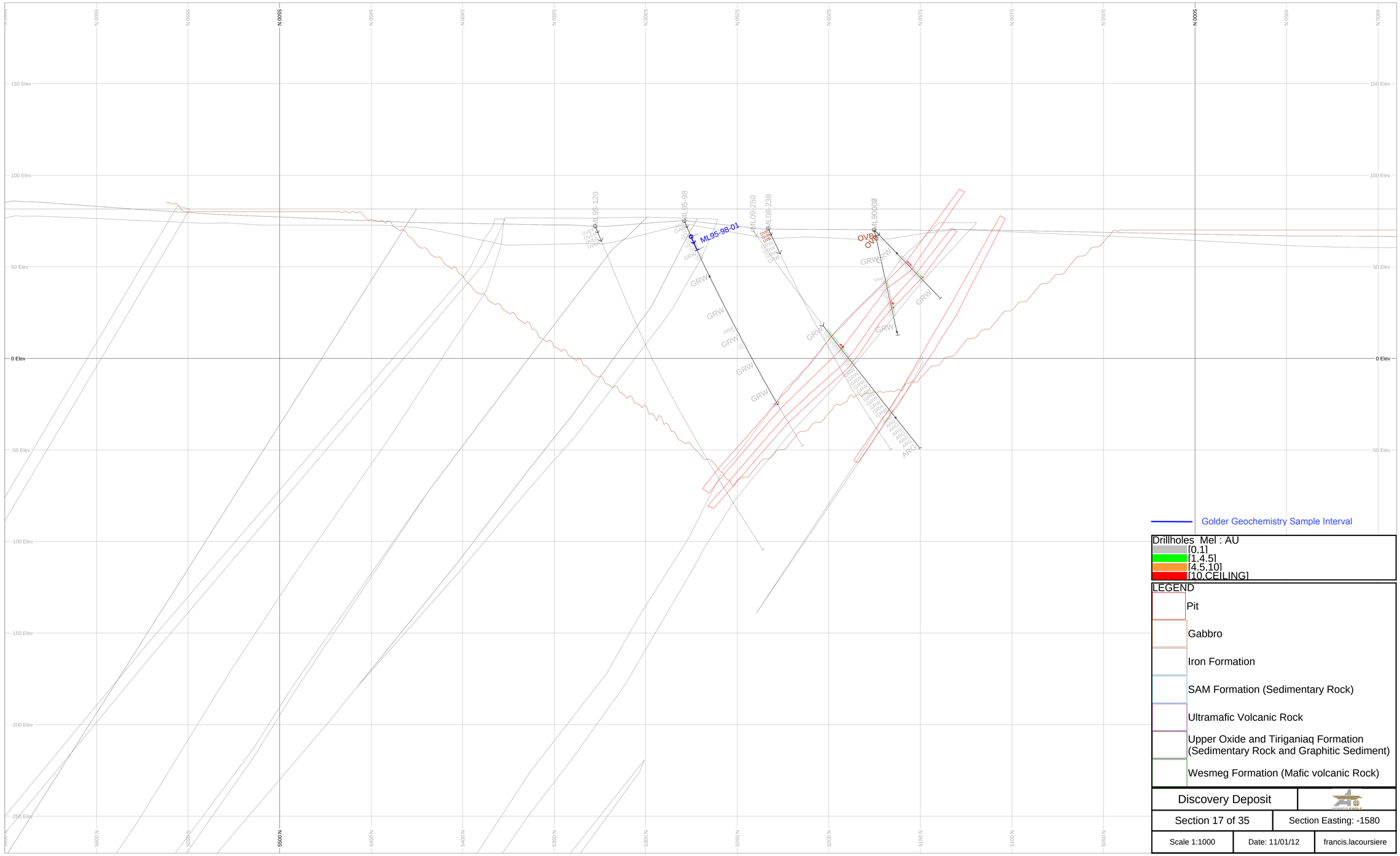

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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 6 of 35
Section Easting: -1800
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

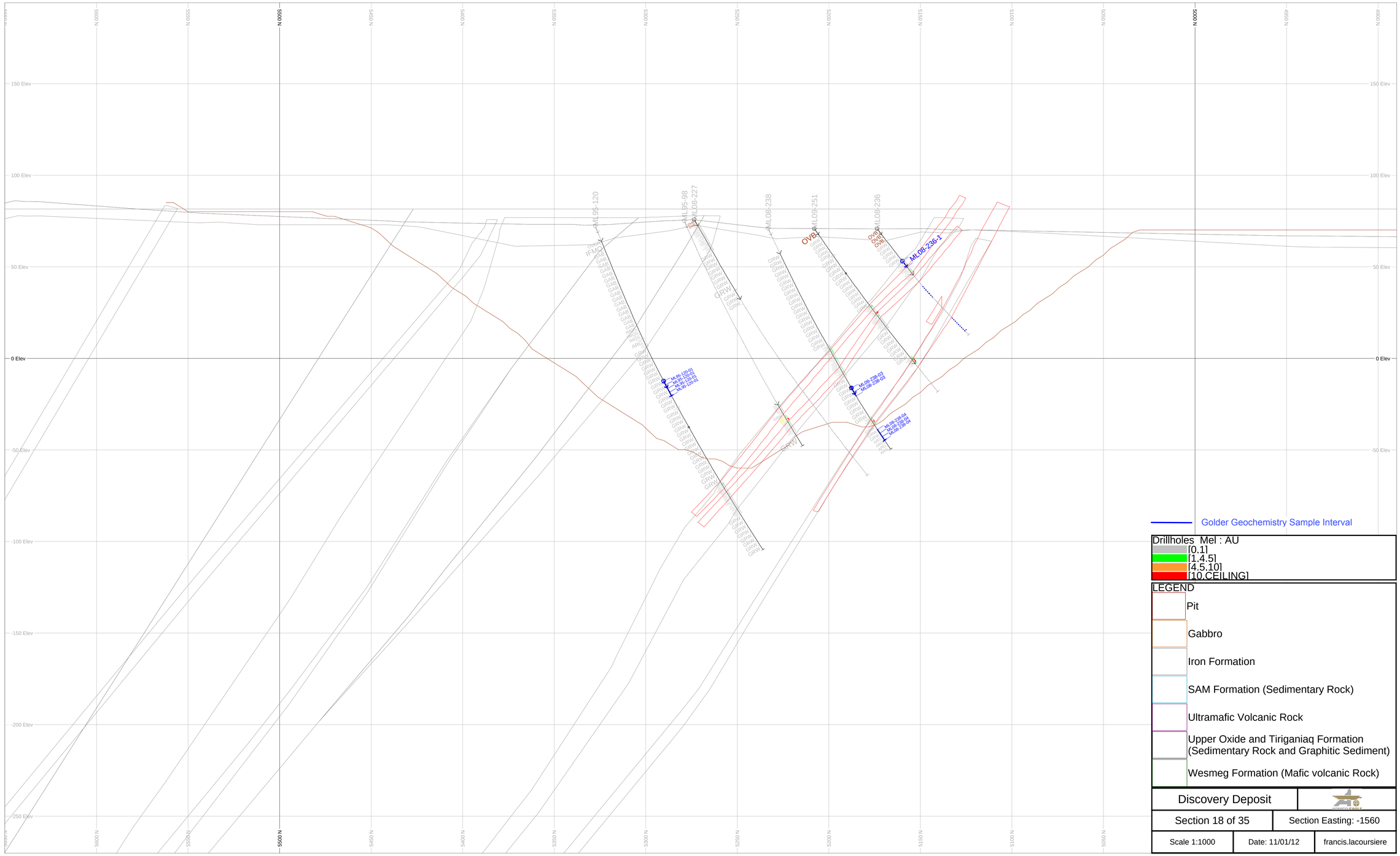

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GRW
GAB
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
KINROSS GOLD
Section 7 of 35
Section Easting: -1780
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

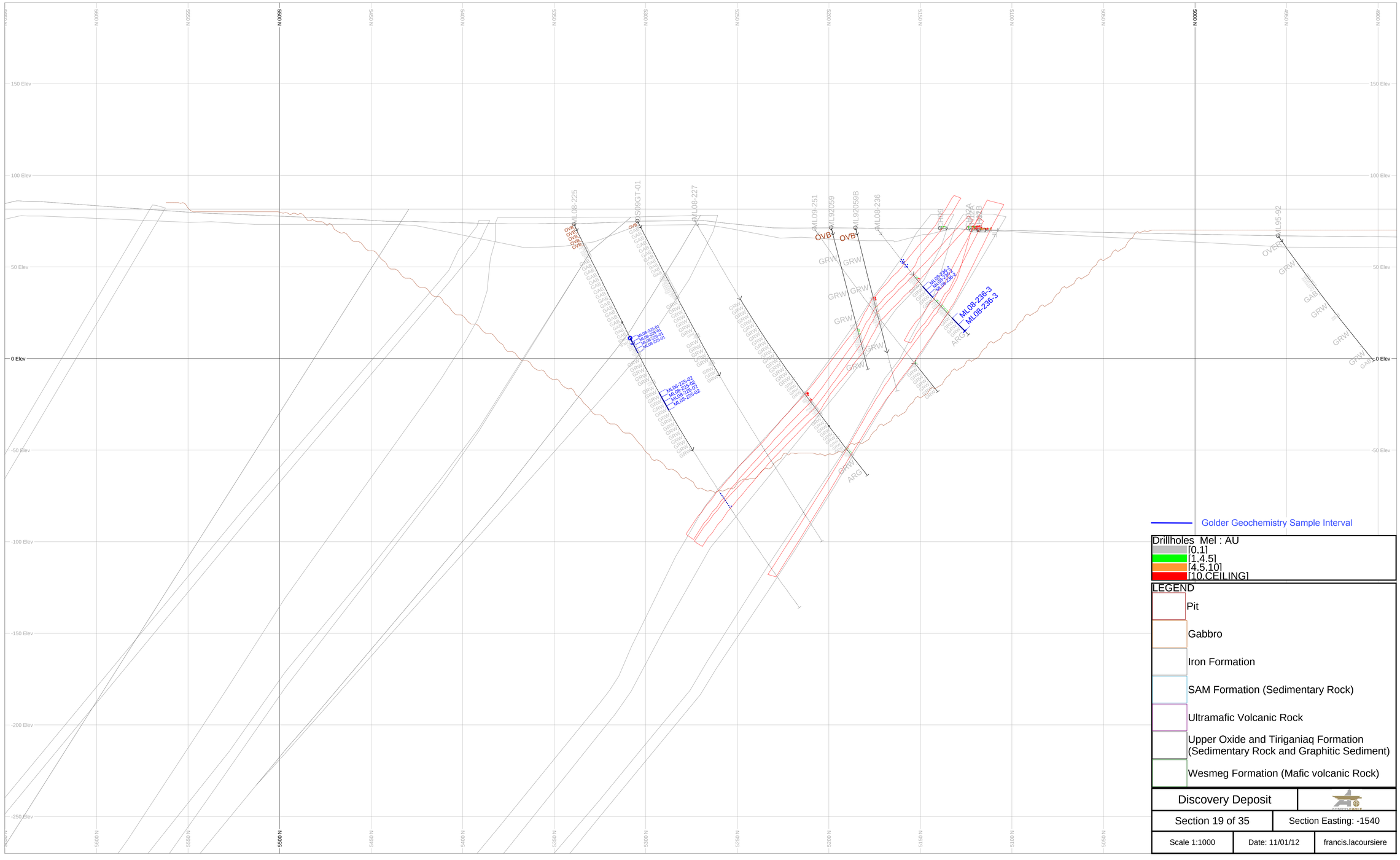

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GAB
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GBBR
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
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Discovery Deposit
Section 10 of 35
Section Easting: -1720
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

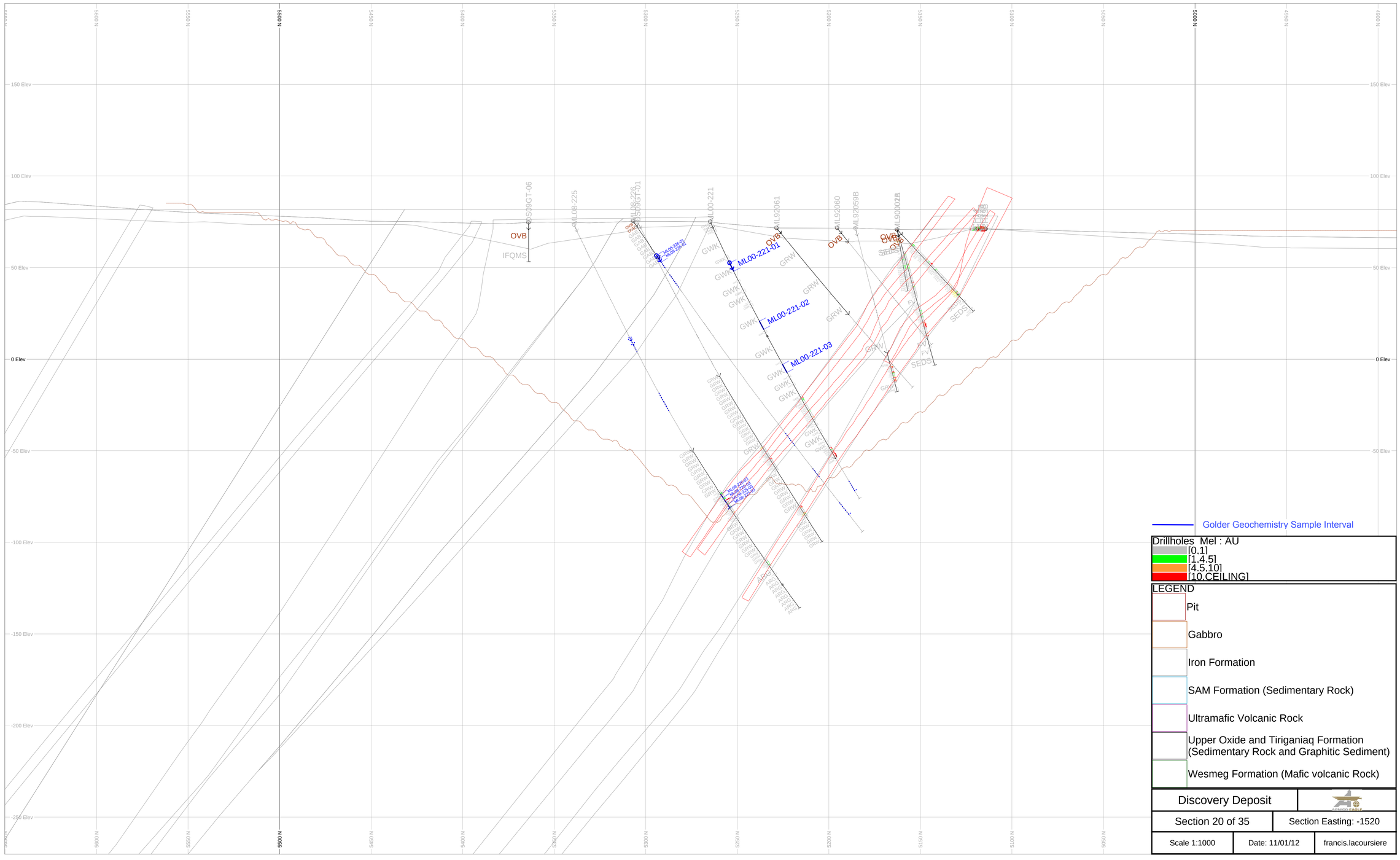

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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 15 of 35
Section Easting: -1620
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

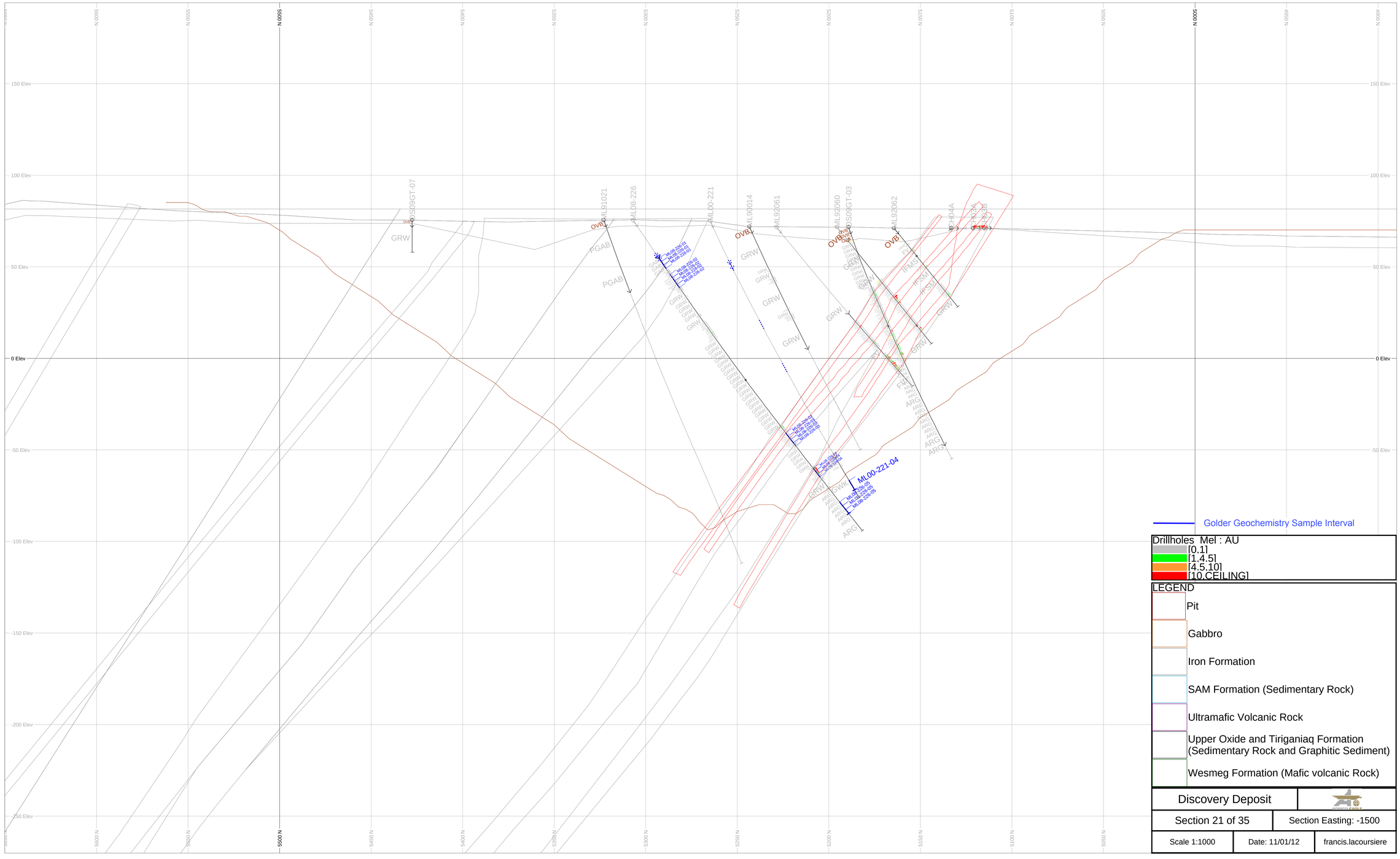

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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 16 of 35
Section Easting: -1600
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

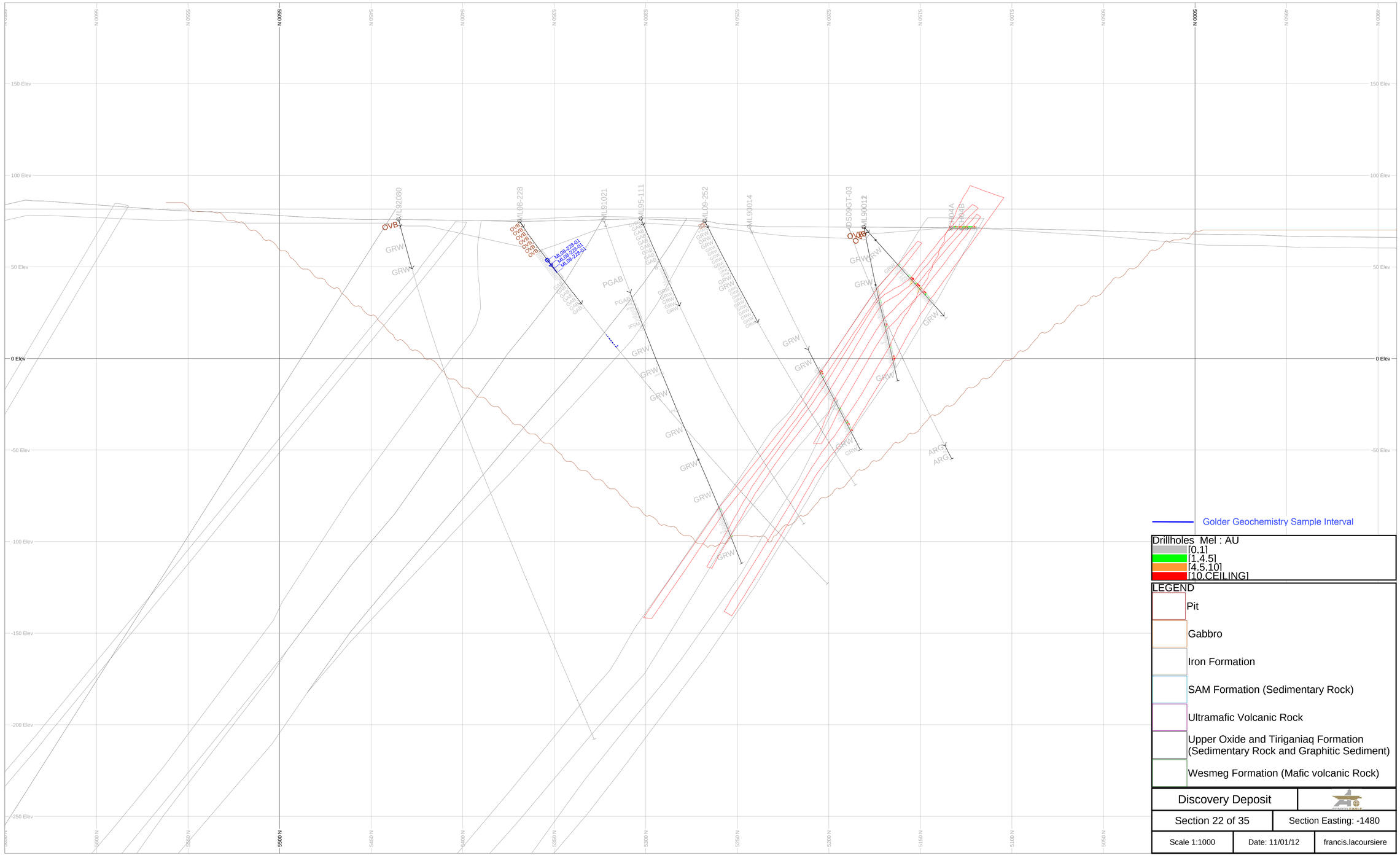

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ML08-238
ML90008
OVB
GRW
ARG
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 17 of 35
Section Easting: -1580
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

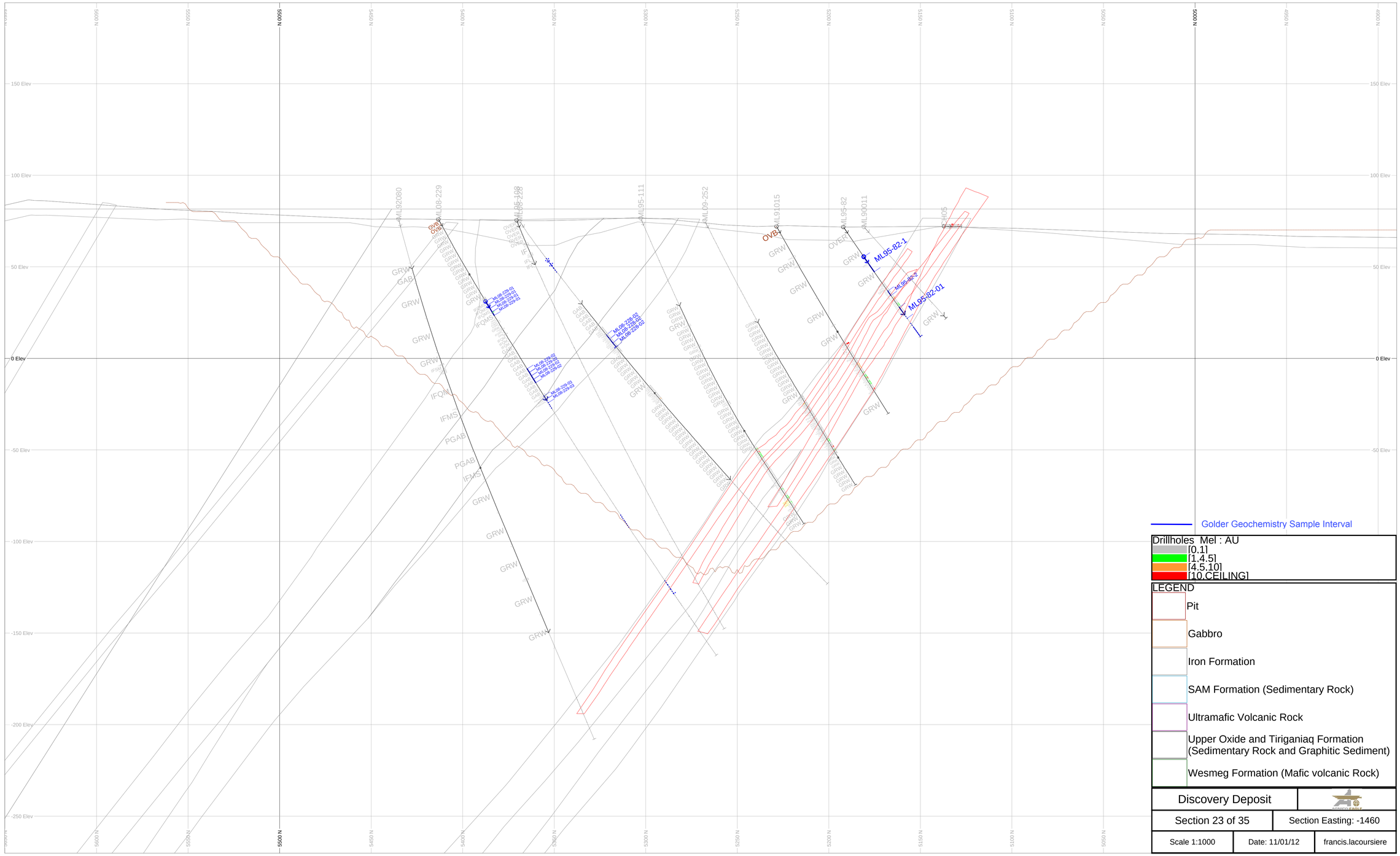

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OVB
IFM
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 18 of 35
Section Easting: -1560
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

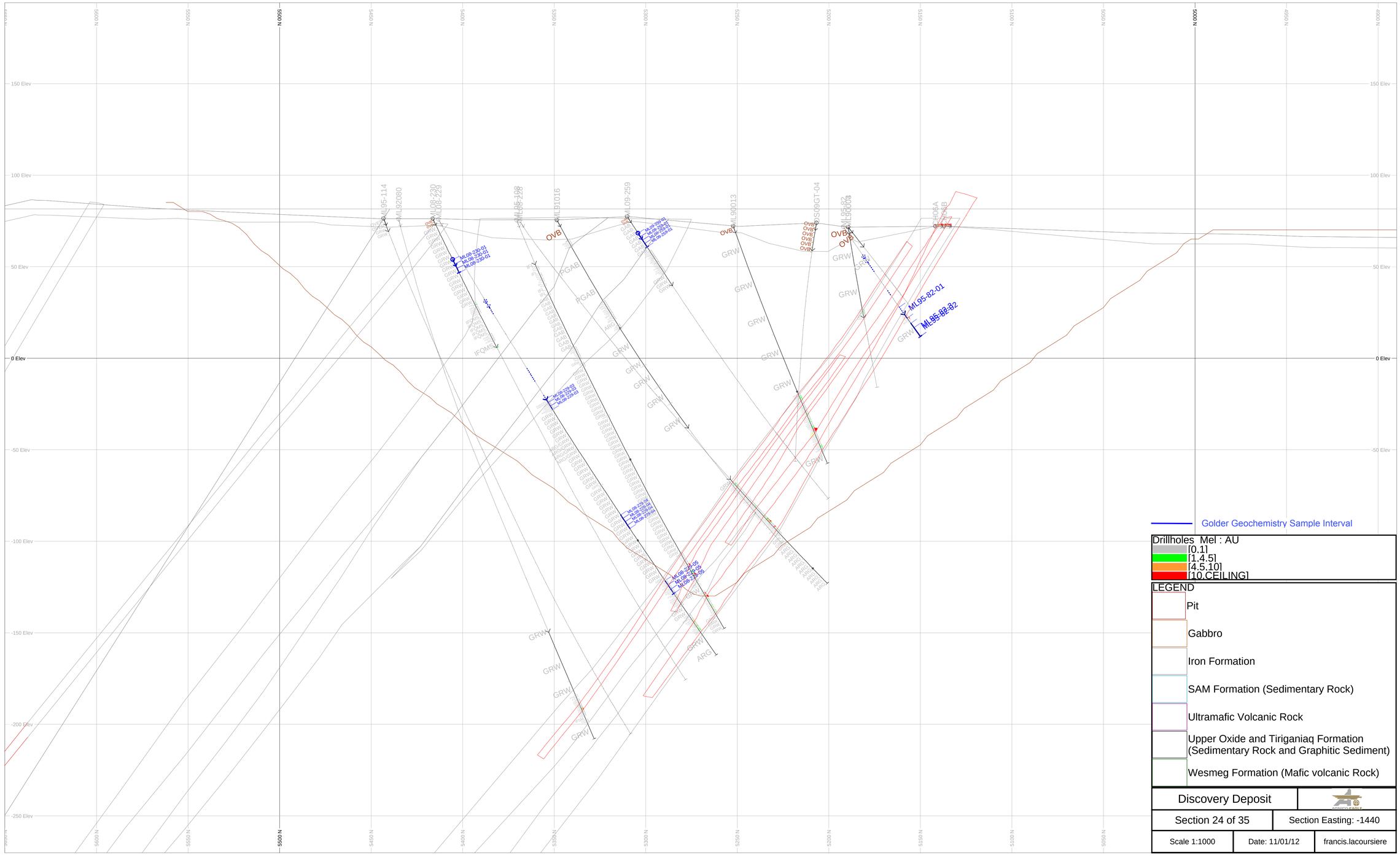

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HN2B
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GABB
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Golder Geochemistry Sample Interval
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LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 19 of 35
Section Easting: -1540
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

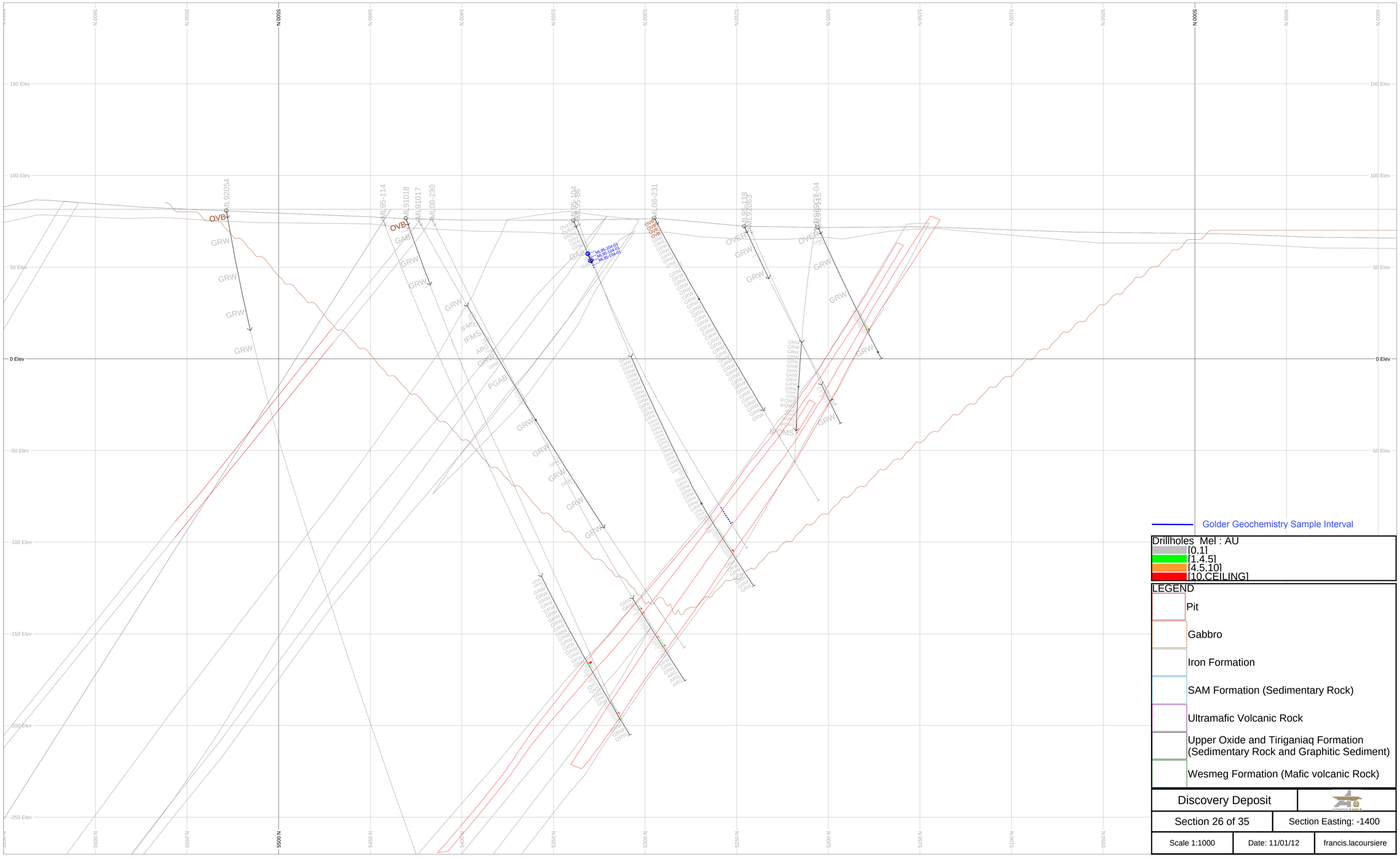

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GRW
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SEDS
FV
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 20 of 35
Section Easting: -1520
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

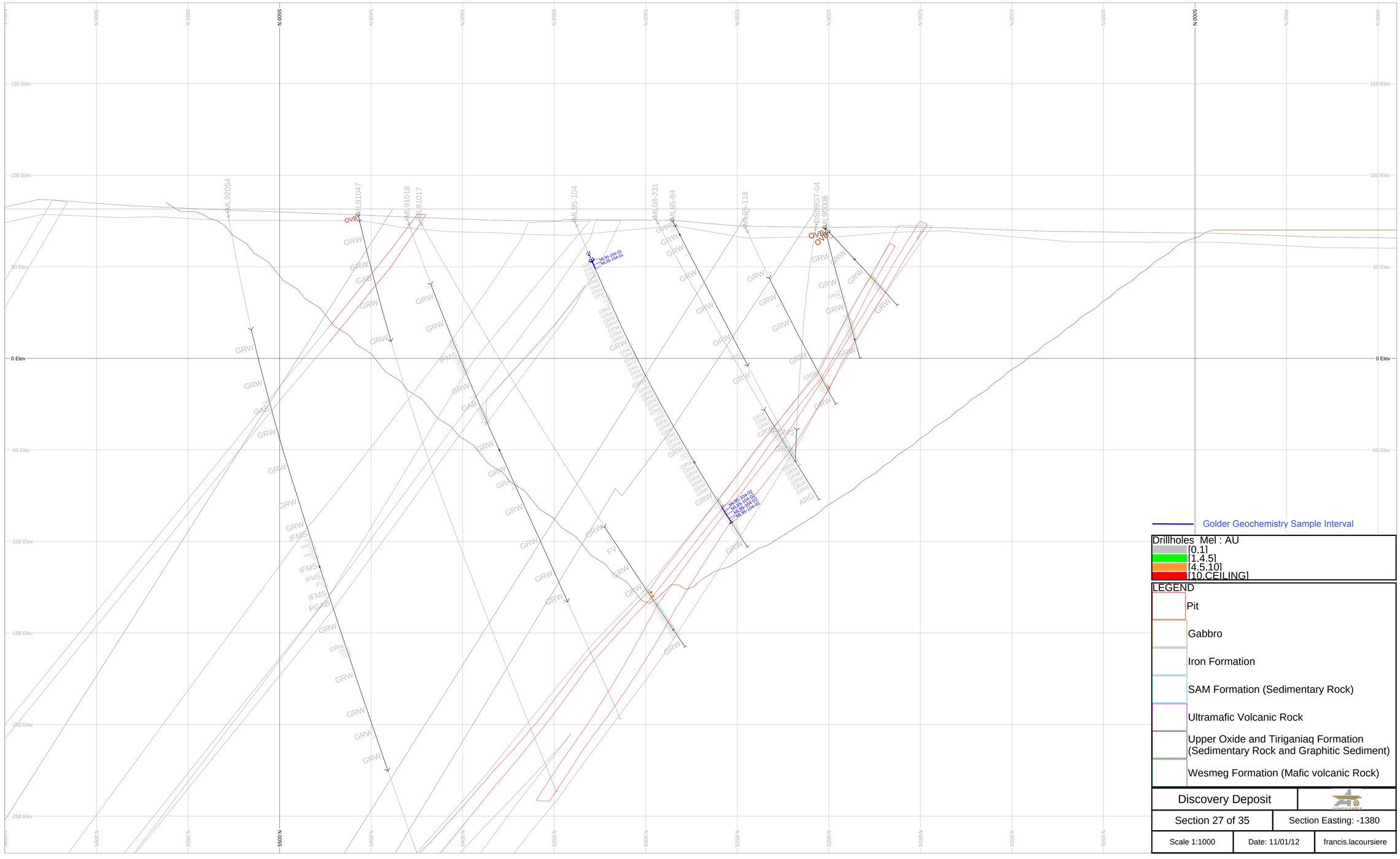

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IHS03B
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IFSW
ARG
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 21 of 35
Section Easting: -1500
Scale 1:1000
Date: 11/01/12
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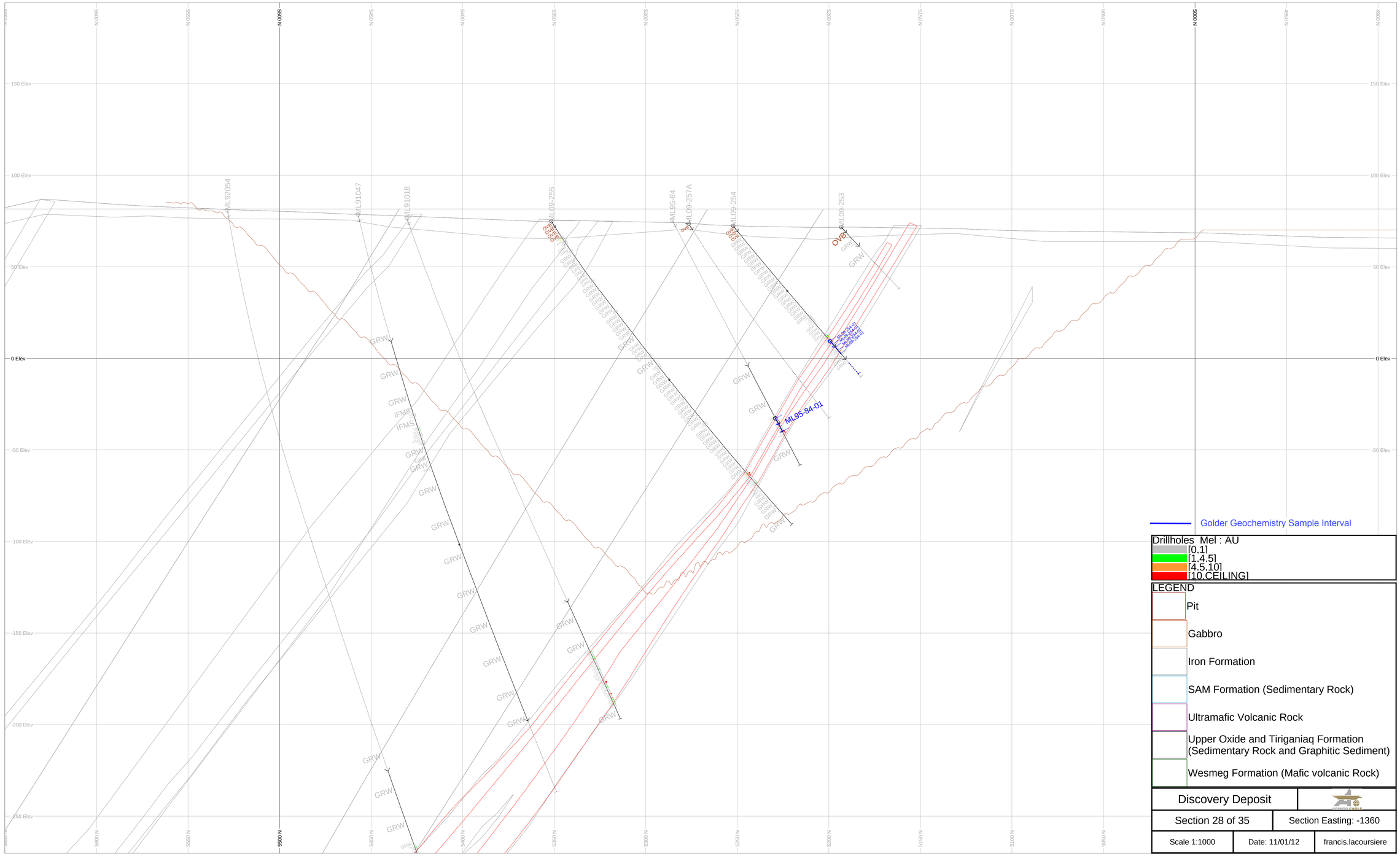

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PGAB
ARG
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 22 of 35
Section Easting: -1480
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

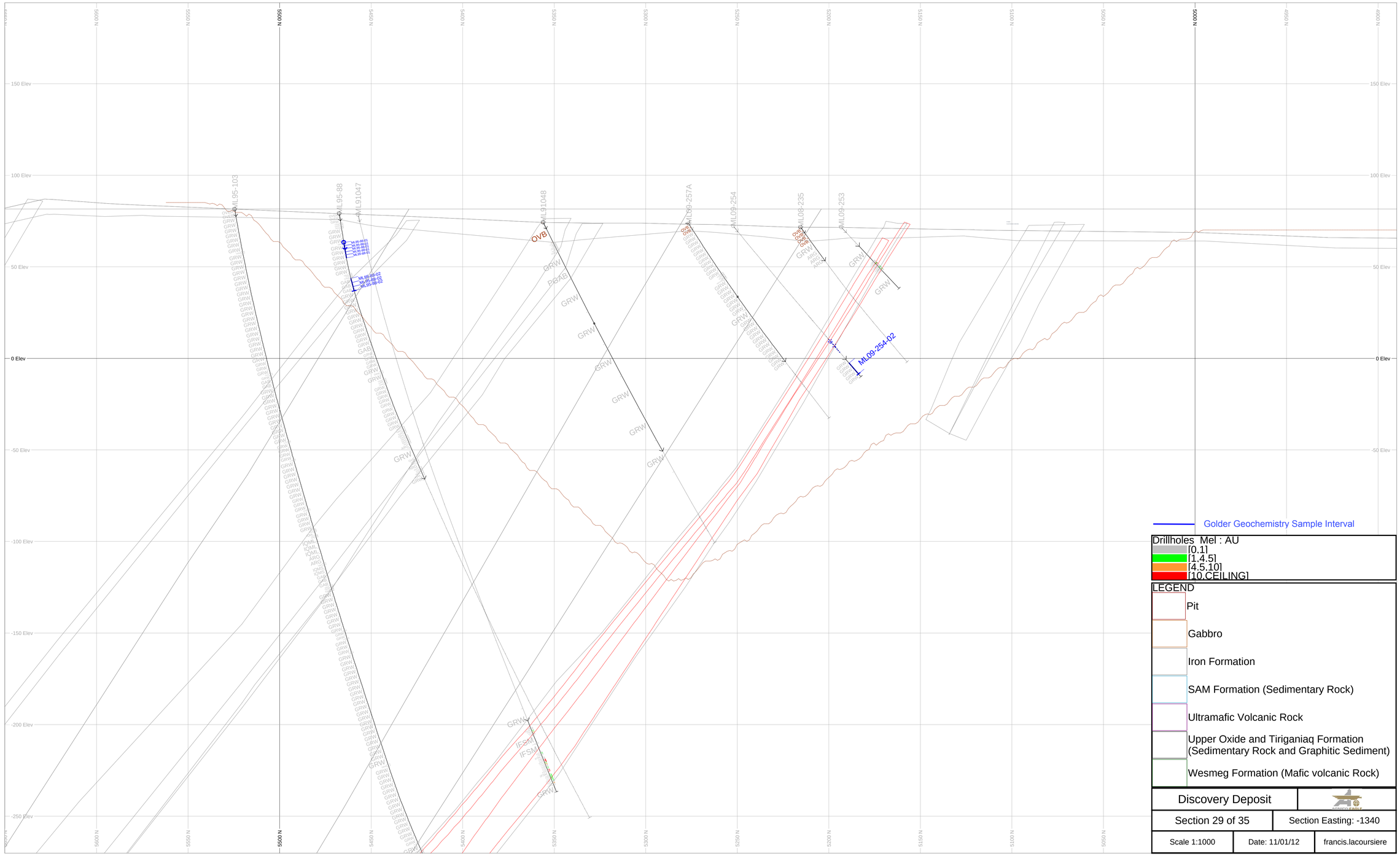

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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 23 of 35
Section Easting: -1460
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

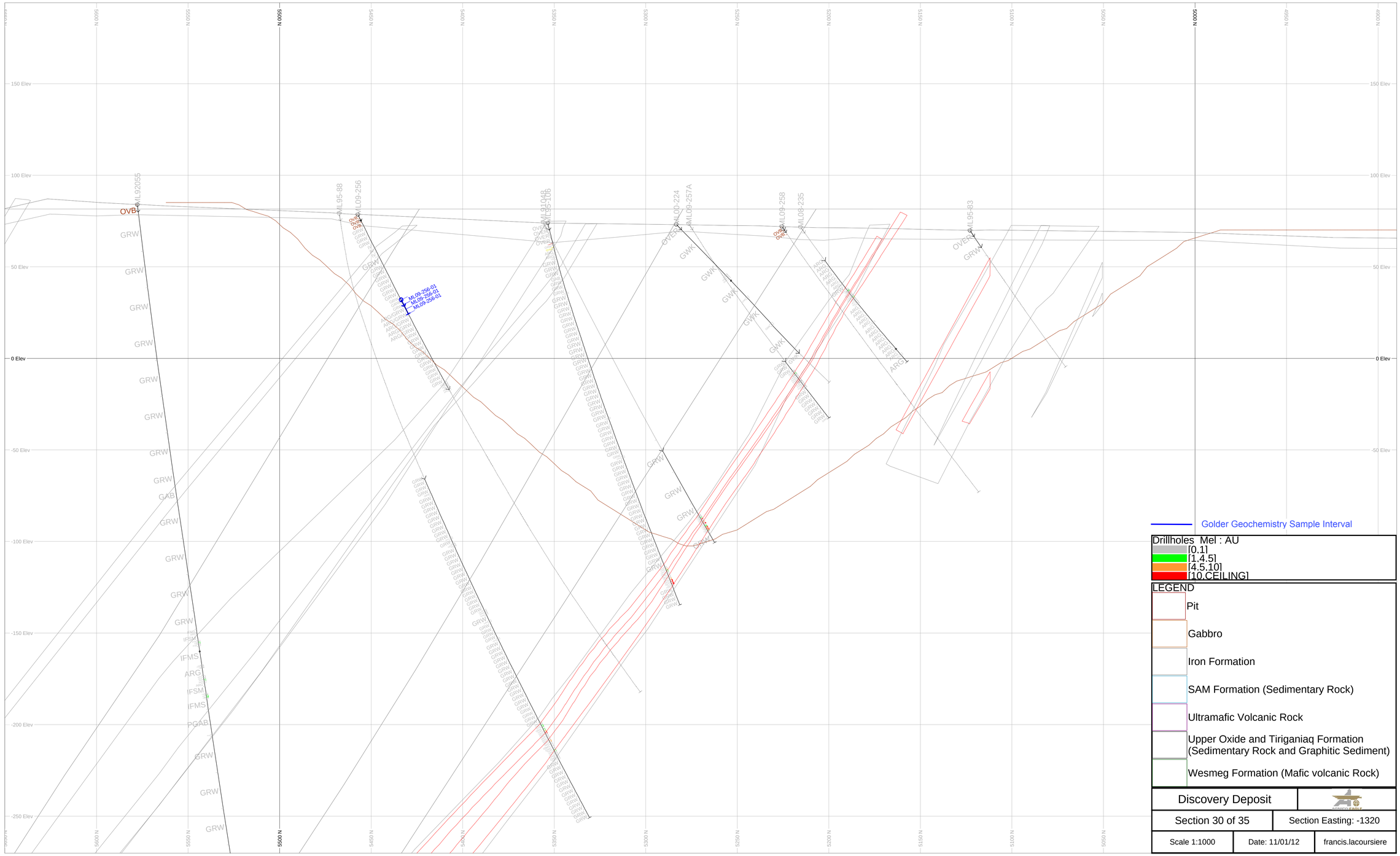

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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 24 of 35
Section Easting: -1440
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

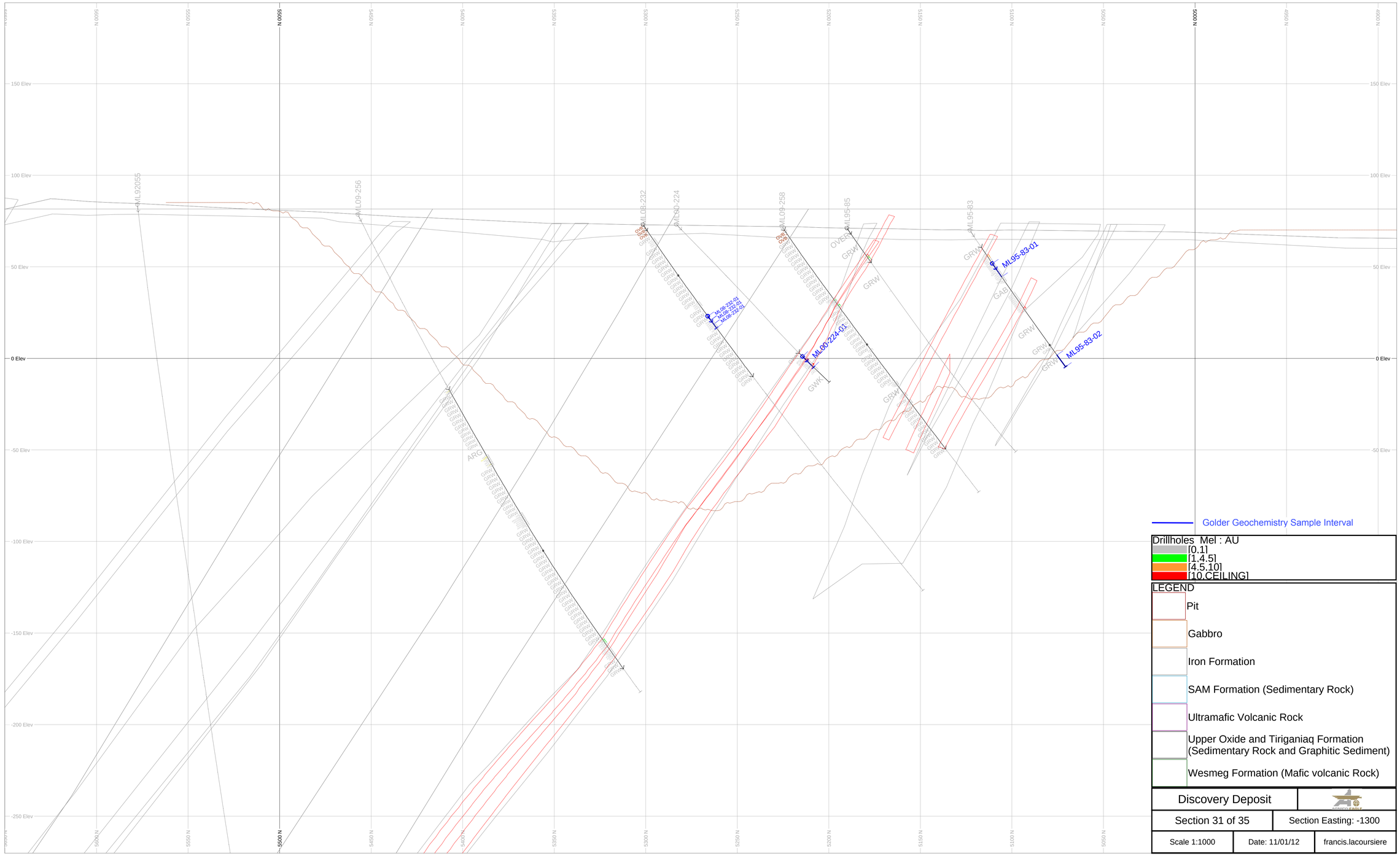

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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 26 of 35
Section Easting: -1400
Scale 1:1000
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francis.lacoursiere

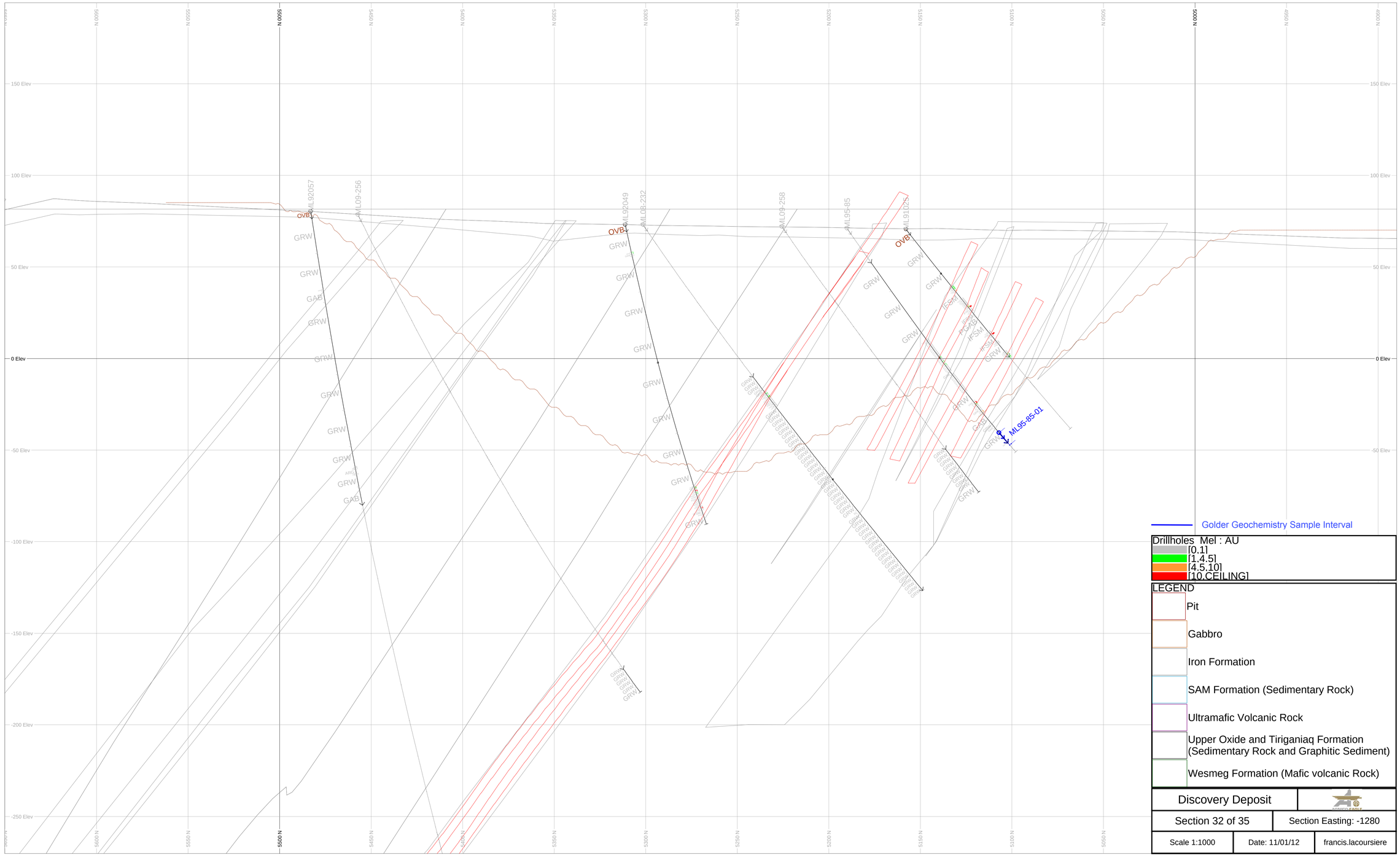

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-100 Elev
-150 Elev
-200 Elev
-250 Elev
ML92054
ML91047
ML91018
ML91017
ML95-104
ML08-231
ML95-84
ML95-118
DSN9GT-04
ML90006
OVB
GRW
GAB
IFMS
FV
PGAB
ARG
ML95-104-01
ML95-104-03
ML95-104-02
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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 27 of 35
Section Easting: -1380
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

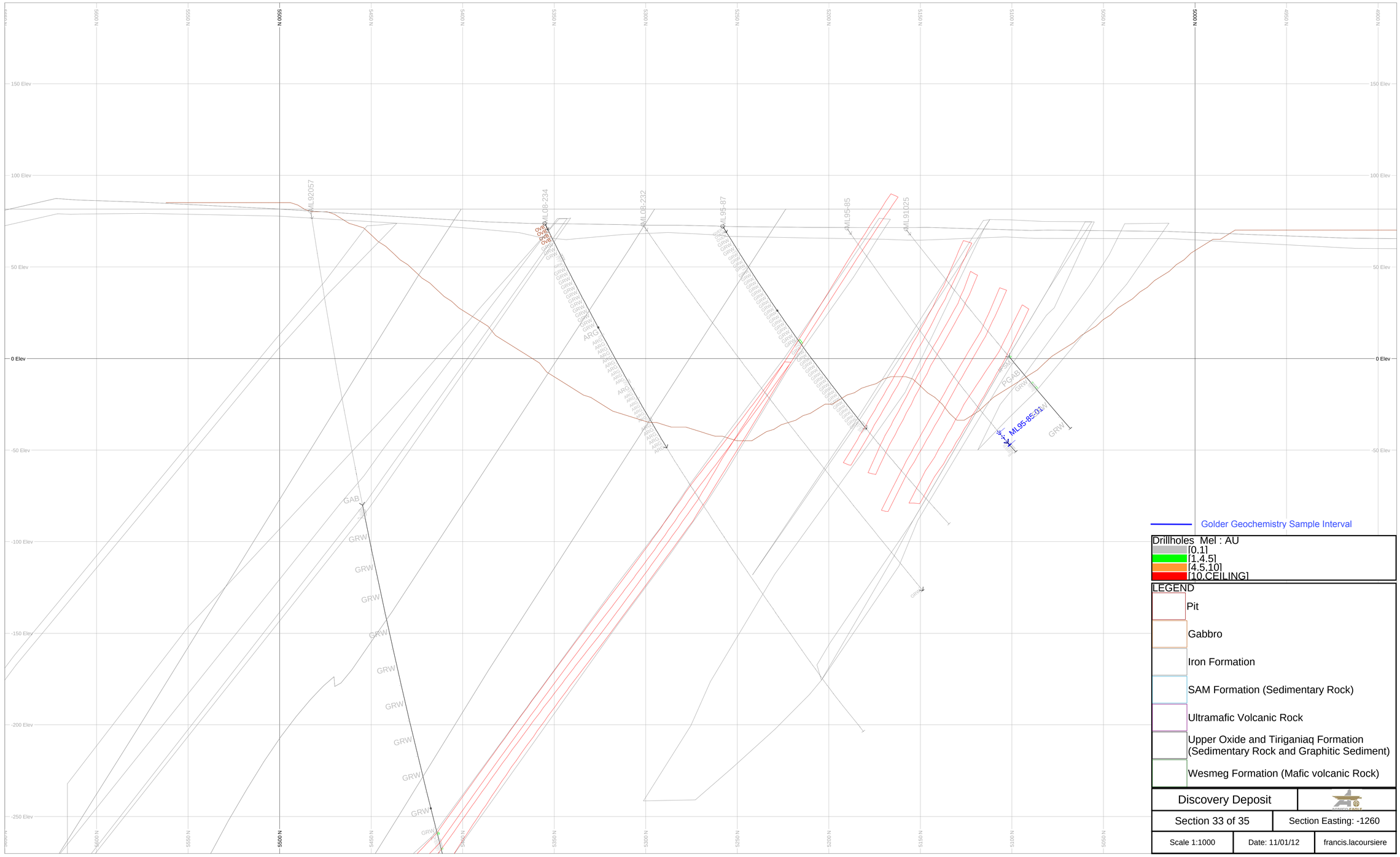

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5000 N
4950 N
4900 N
150 Elev
100 Elev
50 Elev
0 Elev
-50 Elev
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-250 Elev
ML92054
ML91047
ML91018
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ML09-257A
ML09-254
ML09-253
OVB
GRW
IFMS
ML95-84-01
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 28 of 35
Section Easting: -1360
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

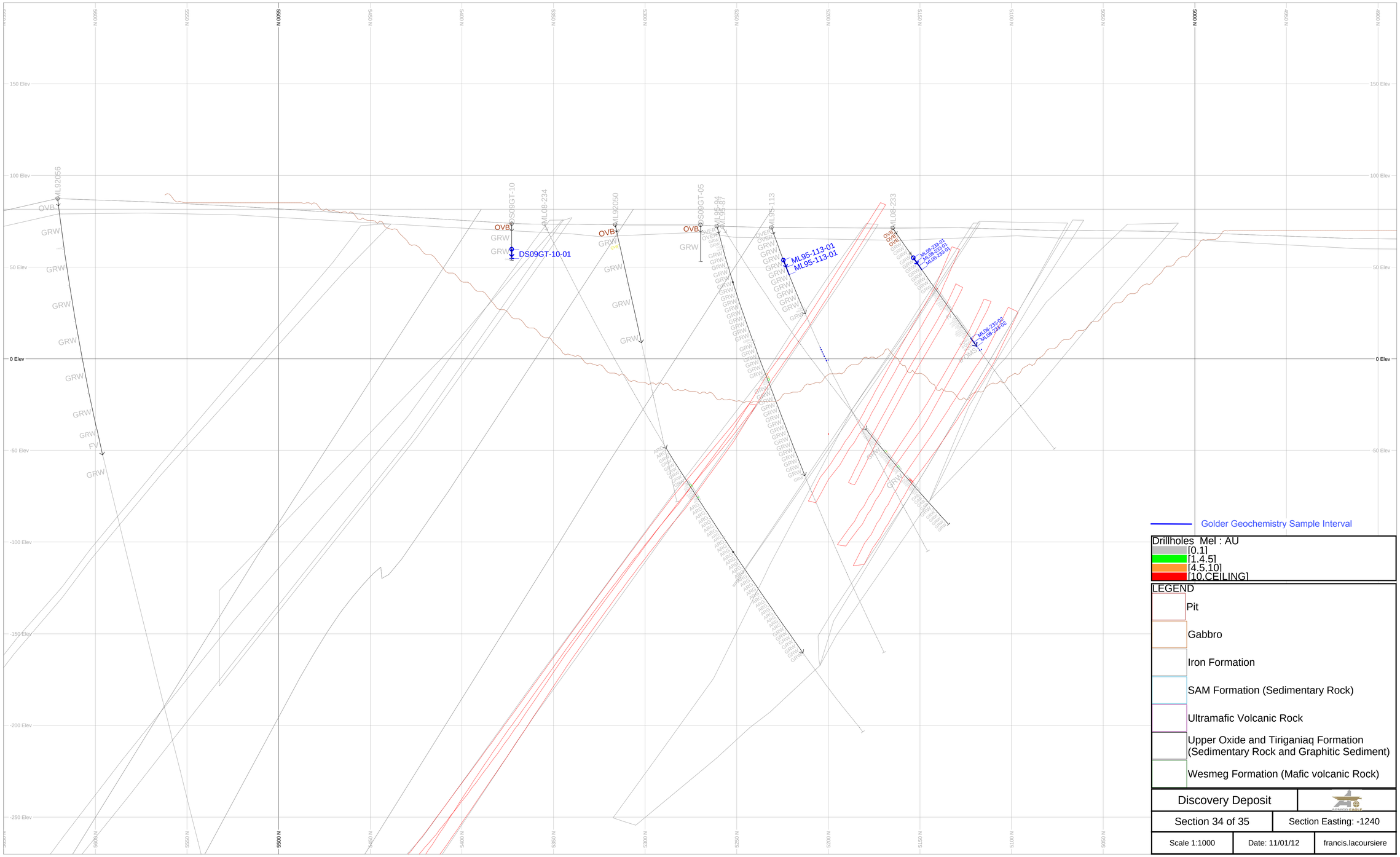

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4900 N
150 Elev
100 Elev
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0 Elev
-50 Elev
-100 Elev
-150 Elev
-200 Elev
-250 Elev
ML95-103
ML95-88
ML91047
ML91048
ML09-257A
ML09-254
ML08-235
ML09-253
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ML95-88-01
ML95-88-02
ML95-88-03
OVB
GRW
PGAB
IFSM
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 29 of 35
Section Easting: -1340
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

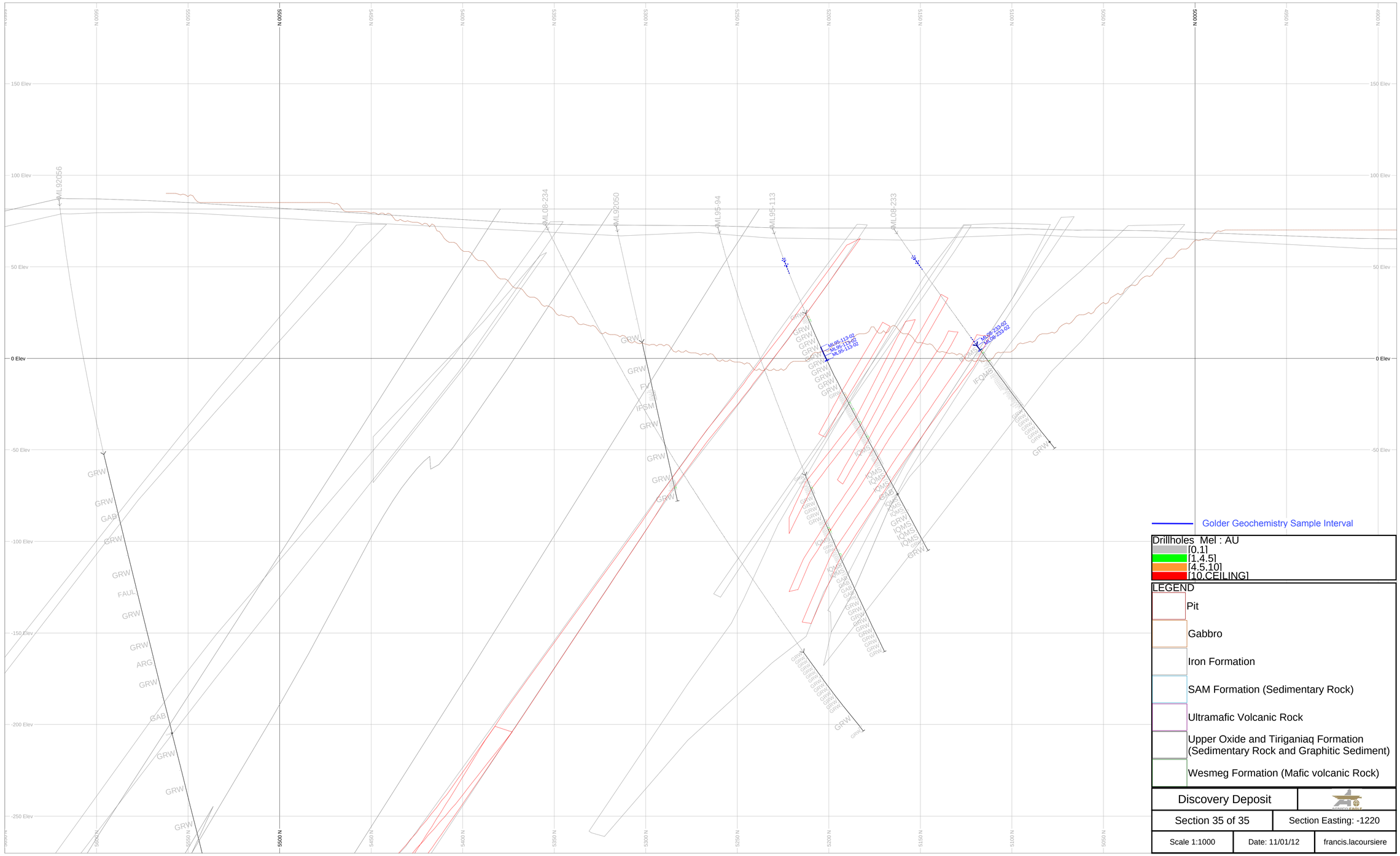

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150 Elev
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-50 Elev
-100 Elev
-150 Elev
-200 Elev
-250 Elev
OVB
GRW
GAB
IFMS
ARG
PGAB
ML92055
ML95-88
ML09-256
ML09-256-01
ML09-256-01
ML09-256-01
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Drillholes Mel : AU
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 30 of 35
Section Easting: -1320
Scale 1:1000
Date: 11/01/12
francis.lacoursiere


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5500 N
5400 N
5300 N
5200 N
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150 Elev
100 Elev
50 Elev
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-50 Elev
-100 Elev
-150 Elev
-200 Elev
-250 Elev
ML92055
ML09-256
ML08-232
ML00-224
ML09-258
ML95-85
ML95-83
ML08-232-01
ML08-224-01
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ML95-83-01
ML95-83-02
GRW
OVB
ARG
GAB
GWF
Golder Geochemistry Sample Interval
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 31 of 35
Section Easting: -1300
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

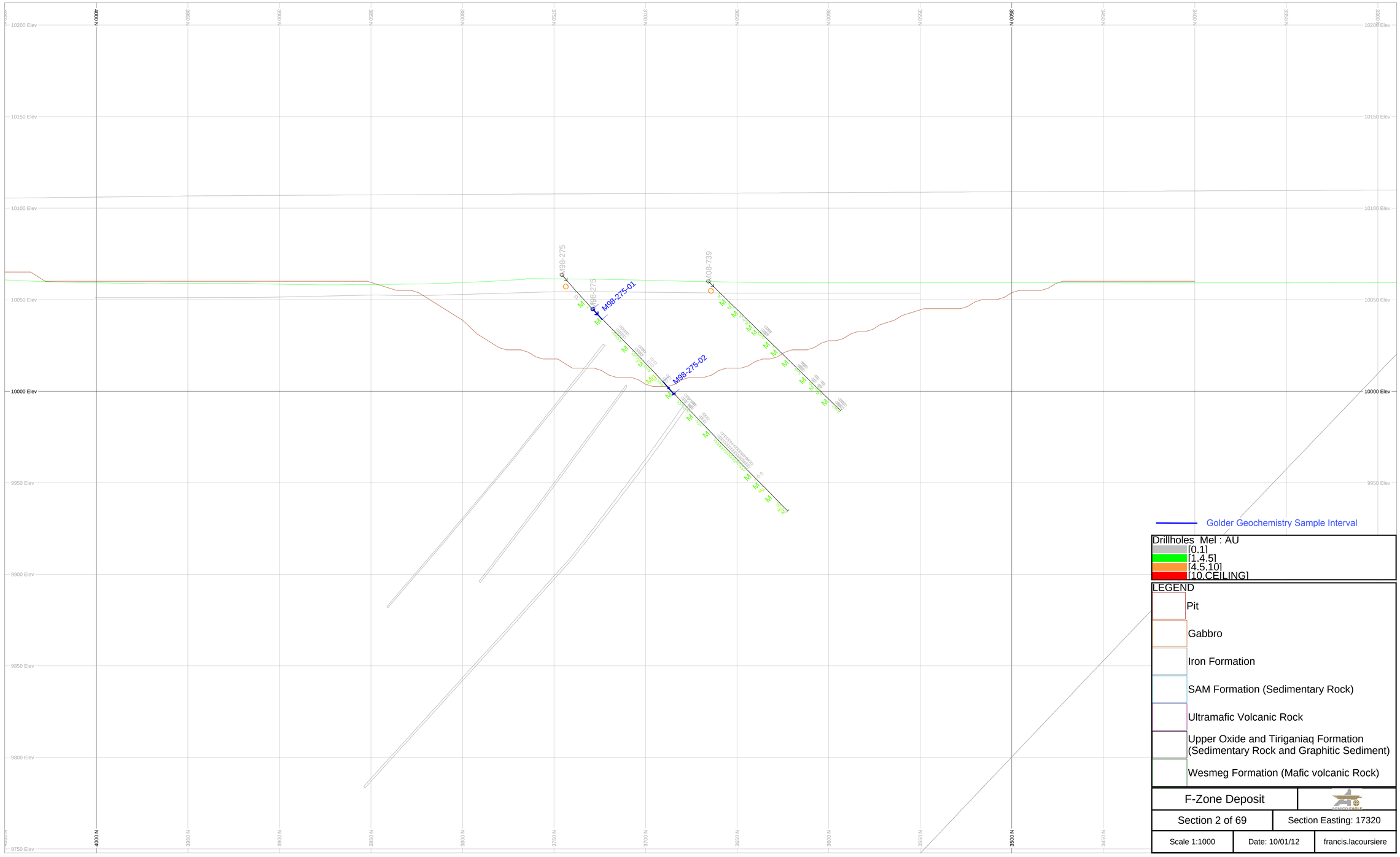

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5000 N
4950 N
4900 N
150 Elev
100 Elev
50 Elev
0 Elev
-50 Elev
-100 Elev
-150 Elev
-200 Elev
-250 Elev
ML92057
ML09-256
ML92049
ML08-232
ML09-258
ML95-85
ML91025
ML95-85-01
OVB
GRW
GAB
IFSM
PGAB
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 32 of 35
Section Easting: -1280
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

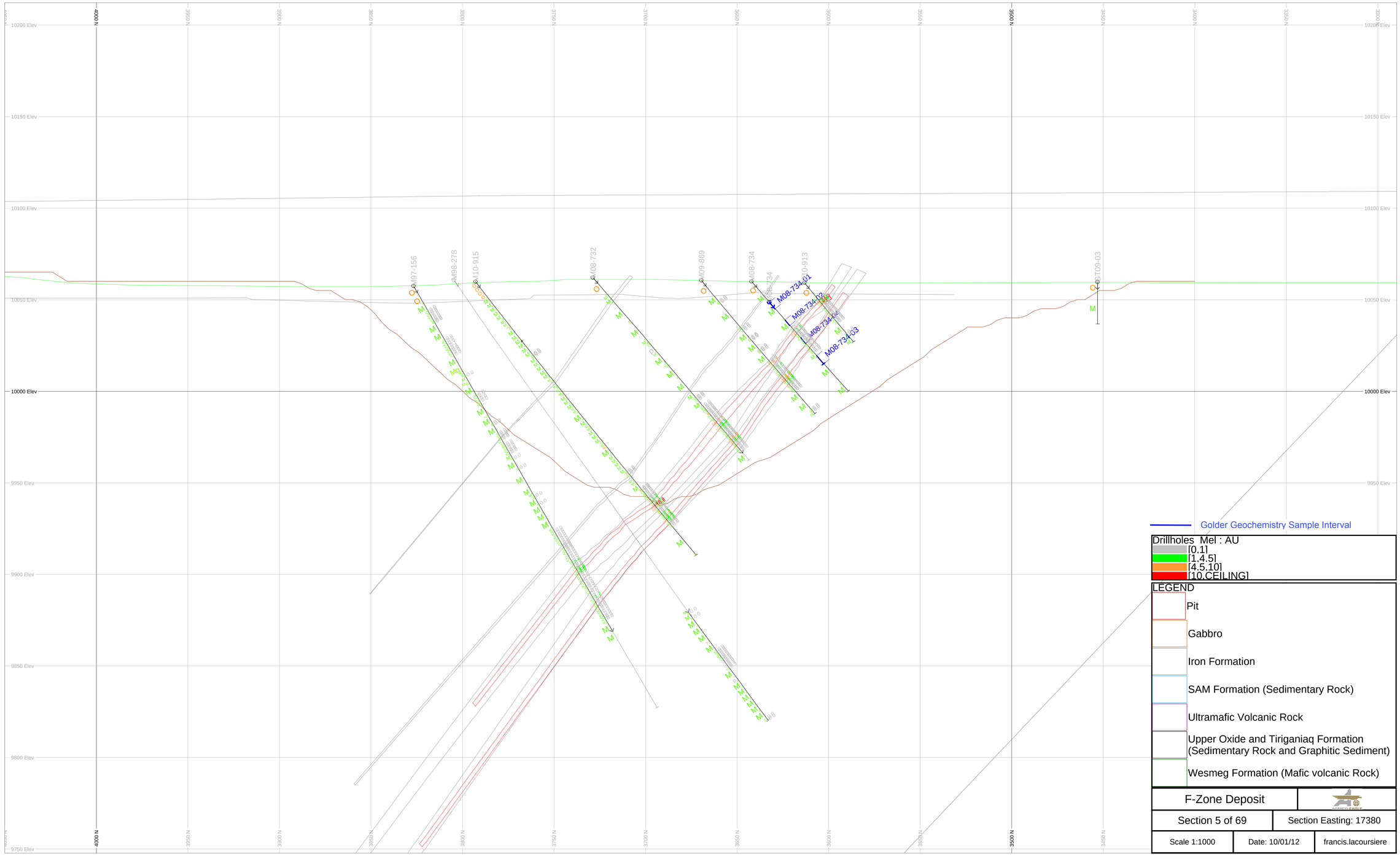

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5000 N
4950 N
4900 N
150 Elev
100 Elev
50 Elev
0 Elev
-50 Elev
-100 Elev
-150 Elev
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-250 Elev
GML92057
GML08-234
GML08-232
GML95-87
GML95-85
GML91025
ML95-85-01
ARG
GRW
GAB
PGAB
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 33 of 35
Section Easting: -1260
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

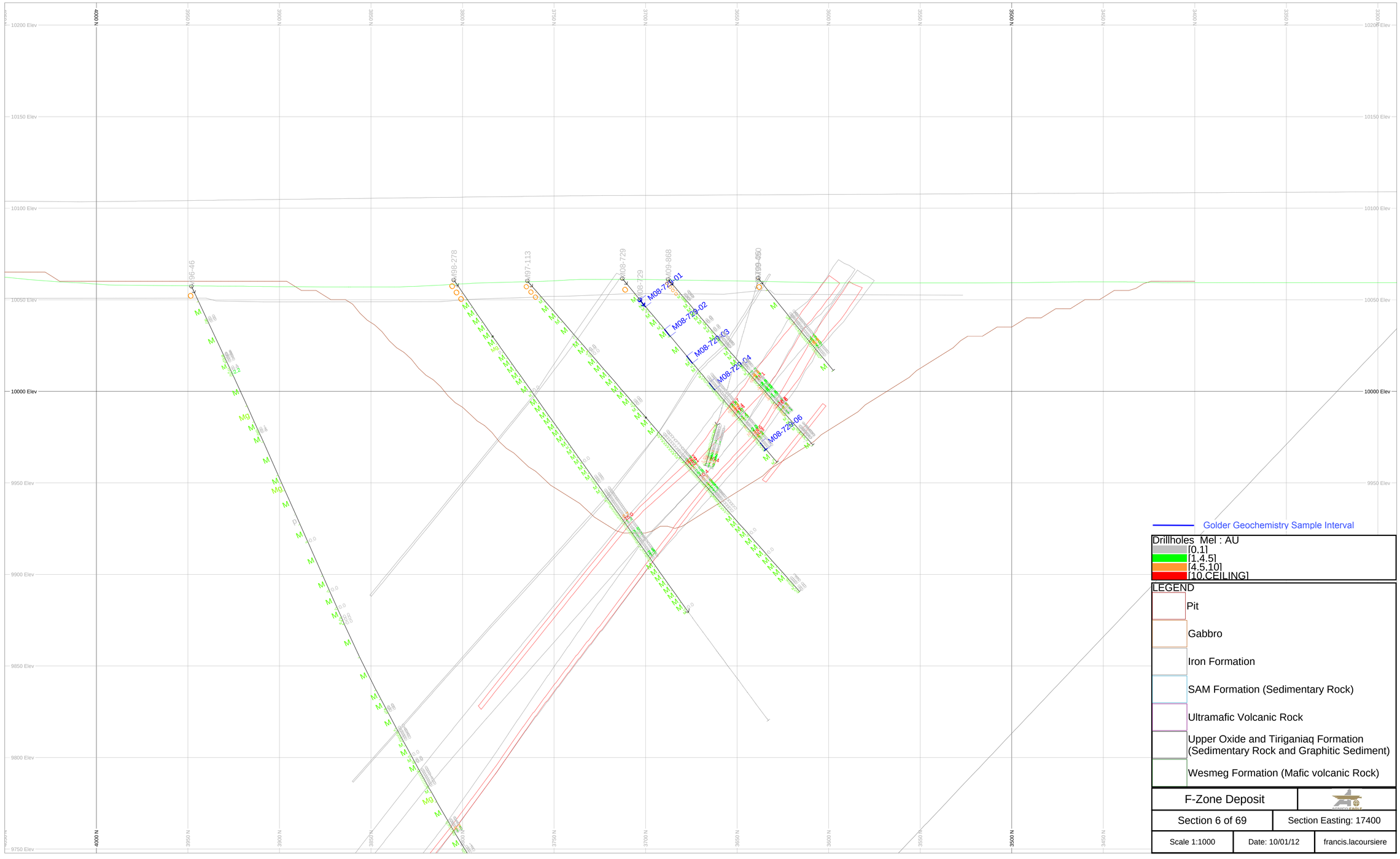

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150 Elev
100 Elev
50 Elev
0 Elev
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-100 Elev
-150 Elev
-200 Elev
-250 Elev
ML92056
DS09GT-10
ML08-234
ML92050
DS09GT-05
ML95-84
ML95-87
ML95-113
ML08-233
OVB
GRW
FW
DS09GT-10-01
ML95-113-01
ML95-113-01
ML08-233-01
ML08-233-01
ML08-233-01
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Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 34 of 35
Section Easting: -1240
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

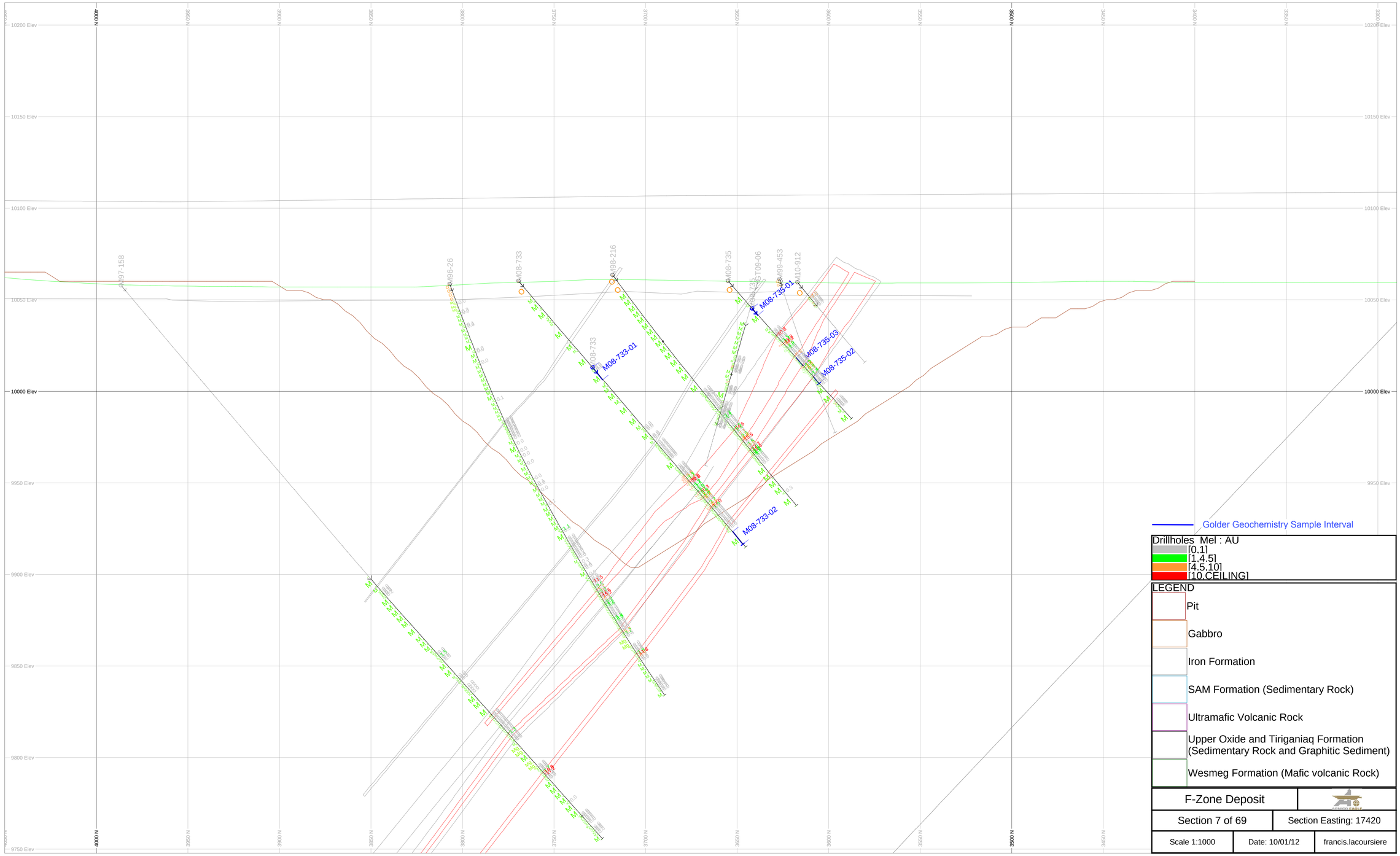

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5200 N
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5100 N
5050 N
5000 N
4950 N
4900 N
150 Elev
100 Elev
50 Elev
0 Elev
-50 Elev
-100 Elev
-150 Elev
-200 Elev
-250 Elev
DML92056
DML08-234
DML92050
DML95-94
DML95-113
DML08-233
DML95-113-02
DML08-213-02
DML08-229-03
GRW
FAUL
IPSM
GAB
ARG
IQMS
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Discovery Deposit
Section 35 of 35
Section Easting: -1220
Scale 1:1000
Date: 11/01/12
francis.lacoursiere

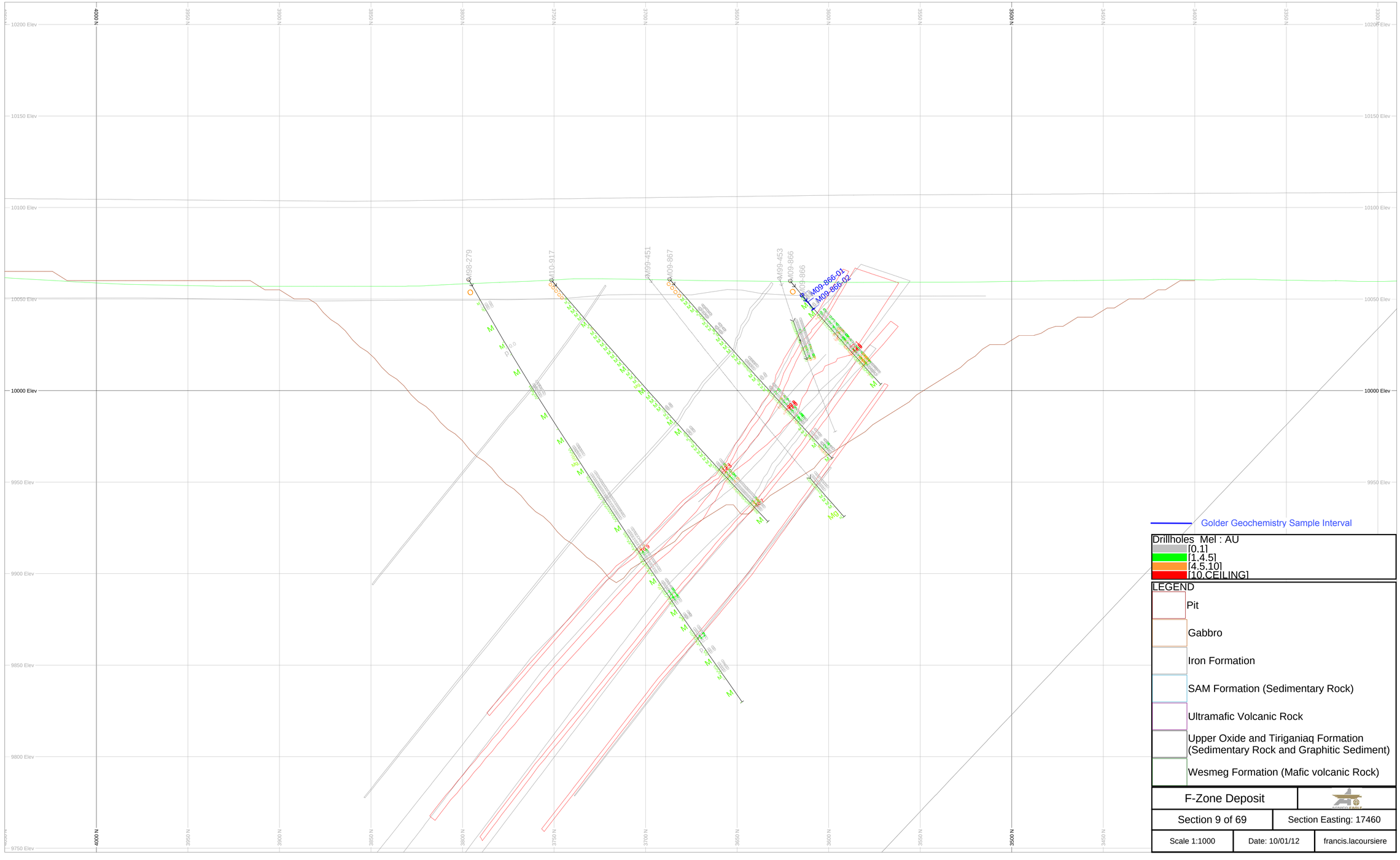
# A.2 F Zone Cross-Sections

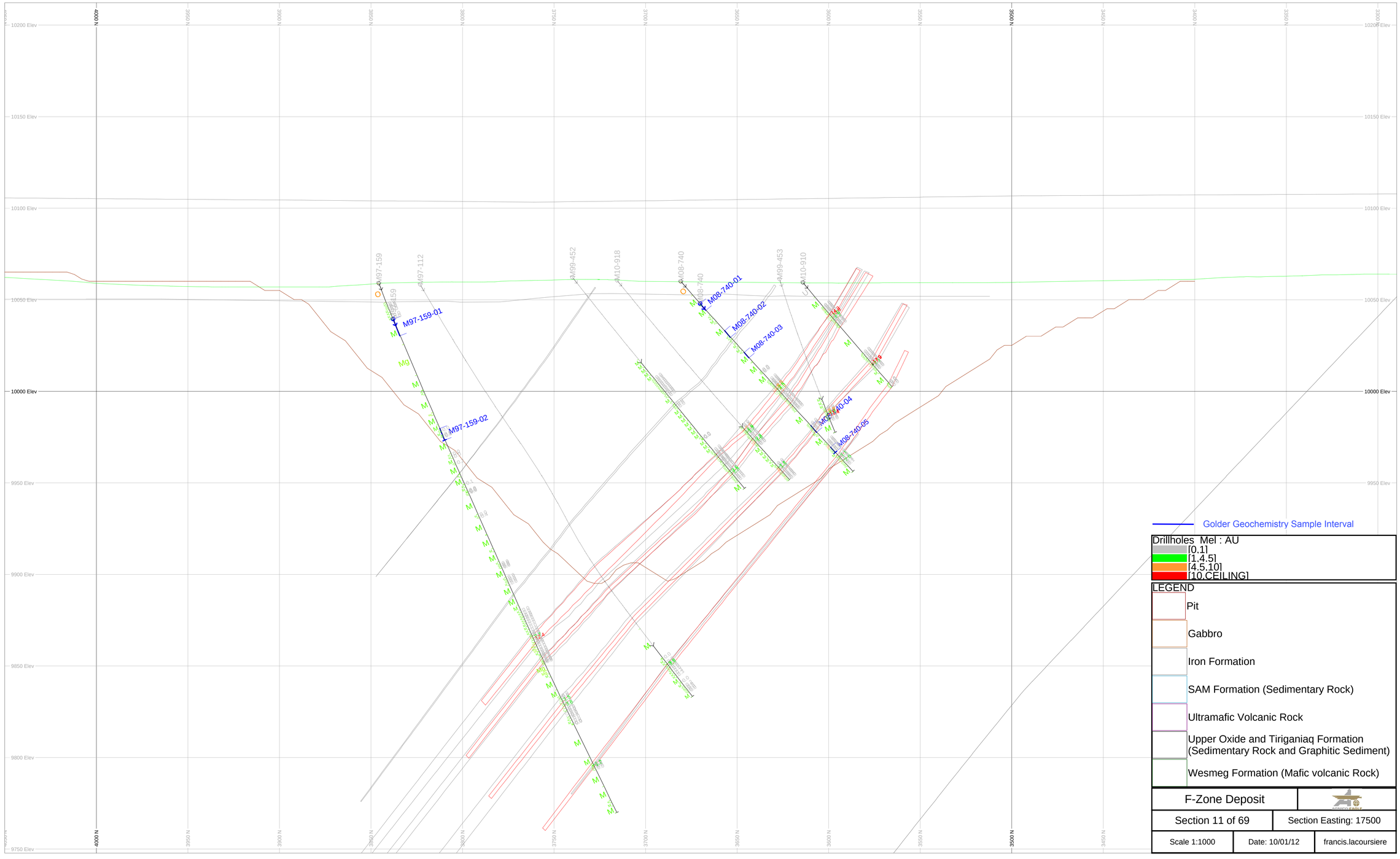

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10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
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9750 Elev
M98-275
M98-275
M98-275-01
M98-275-02
M98-739
Golder Geochemistry Sample Interval
Drillholes Mel : AU
[0,1]
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 2 of 69
Section Easting: 17320
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

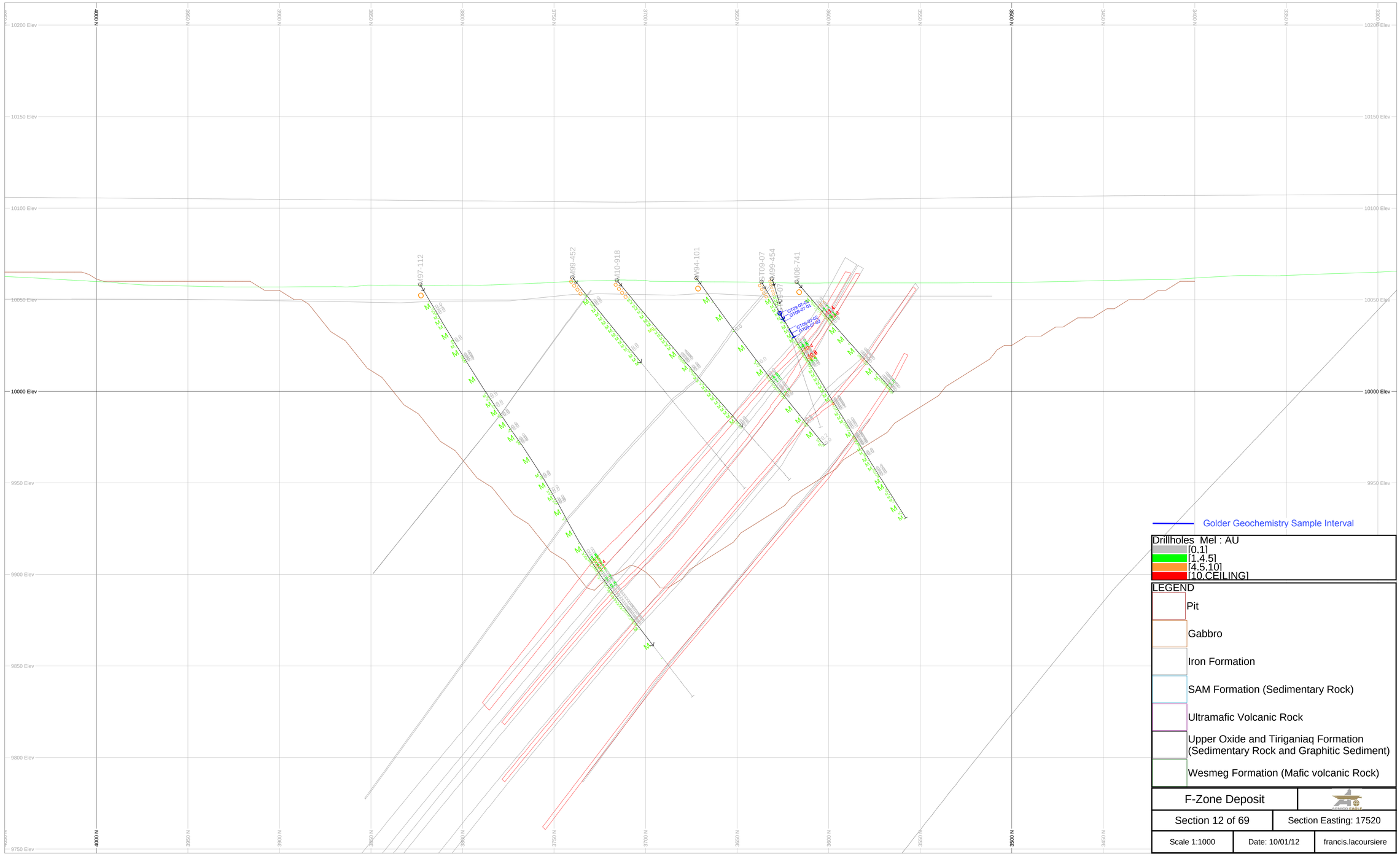

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3700 N
3650 N
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3550 N
3500 N
3450 N
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3350 N
3300 N
10200 Elev
10150 Elev
10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
M97-156
M98-278
M10-915
M08-732
M09-869
M08-734
M08-734-01
M08-734-02
M08-734-04
M08-734-03
M10-913
T09-03
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 5 of 69
Section Easting: 17380
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

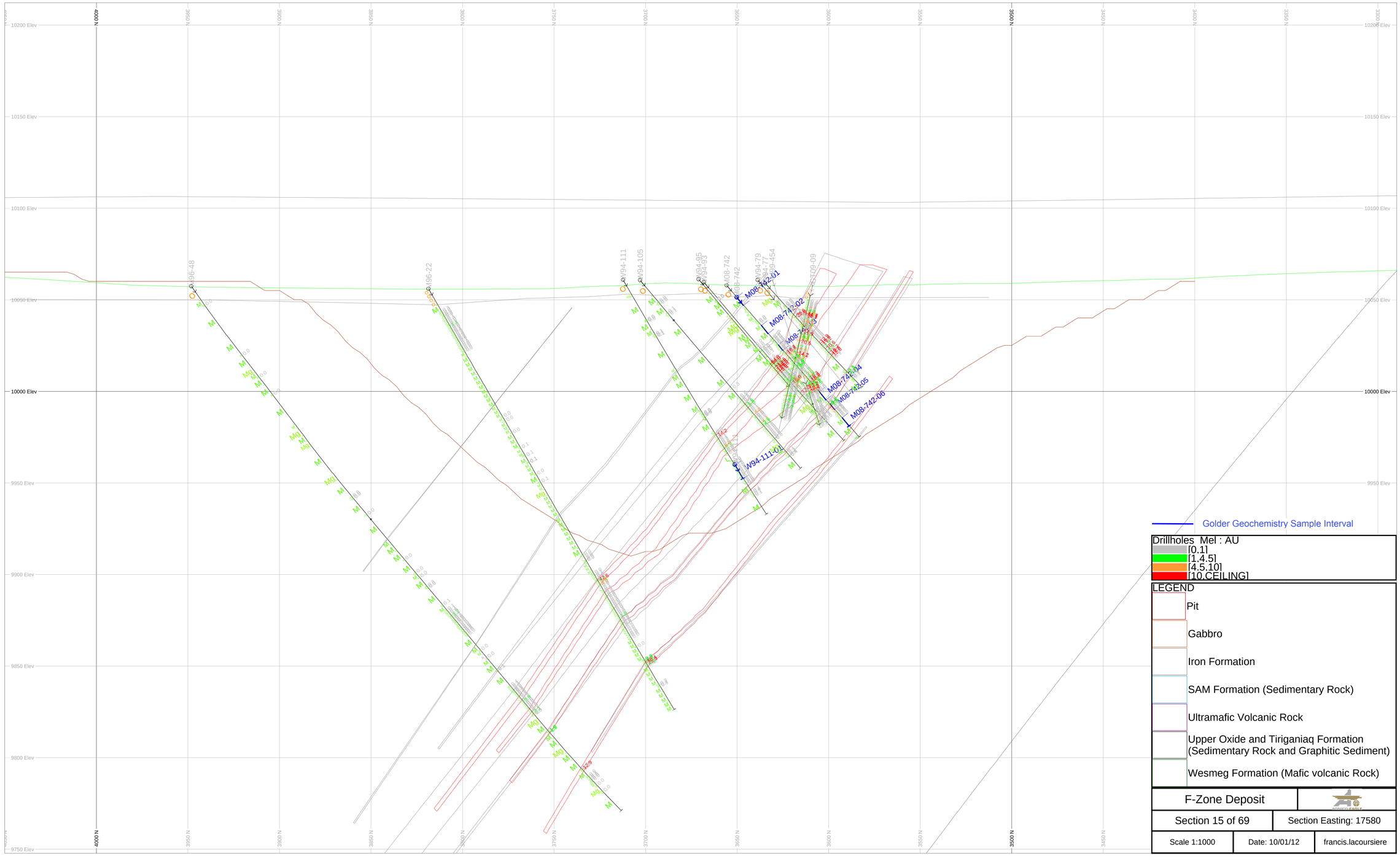

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M09-868
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M08-729-02
M08-729-03
M08-729-04
M08-729-06
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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 6 of 69
Section Easting: 17400
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

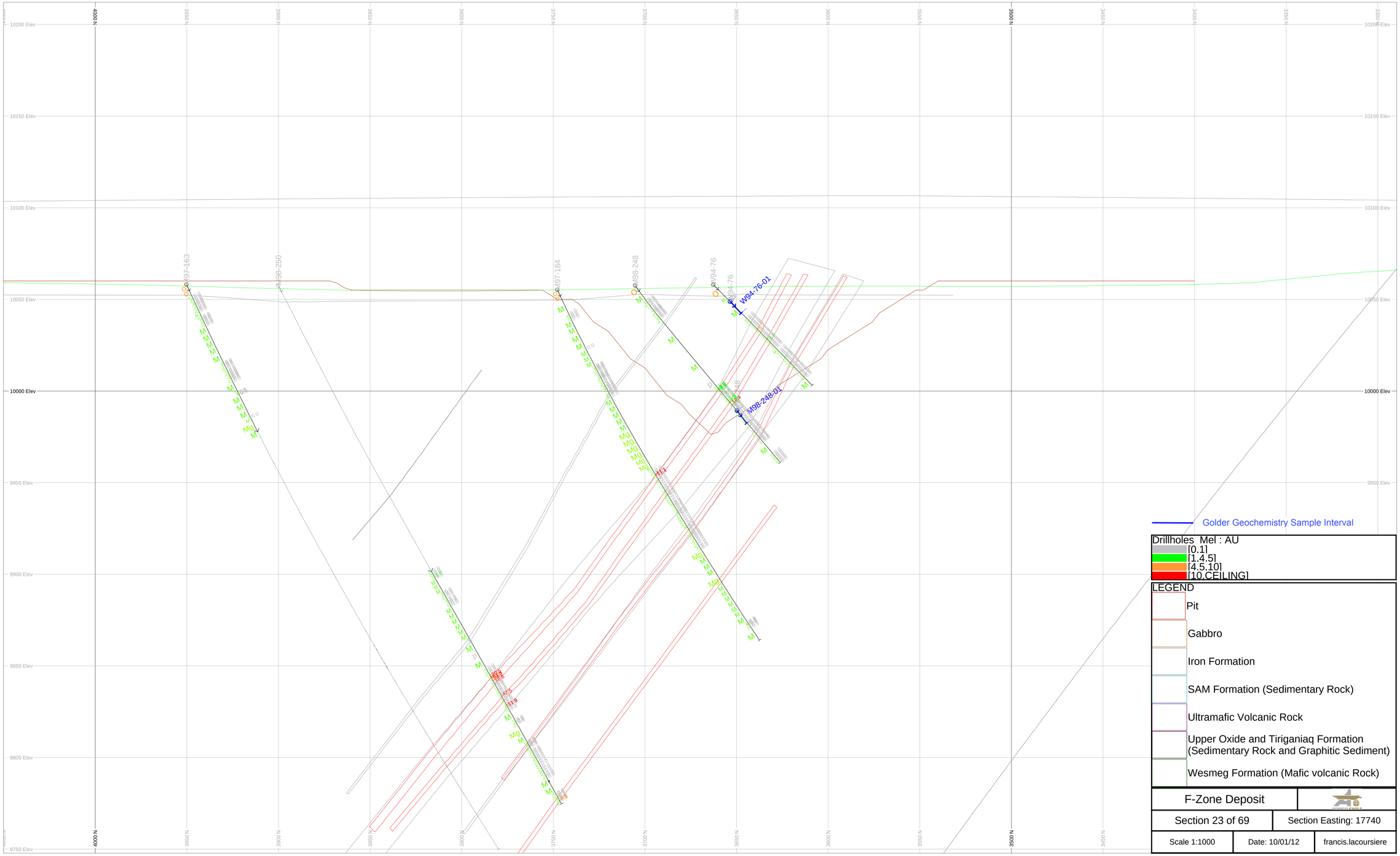

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9750 Elev
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M08-733
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M08-735
M98-236
T09-06
M99-453
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M08-733-01
M08-733-02
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M08-735-03
M08-735-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[4.5,10]
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 7 of 69
Section Easting: 17420
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

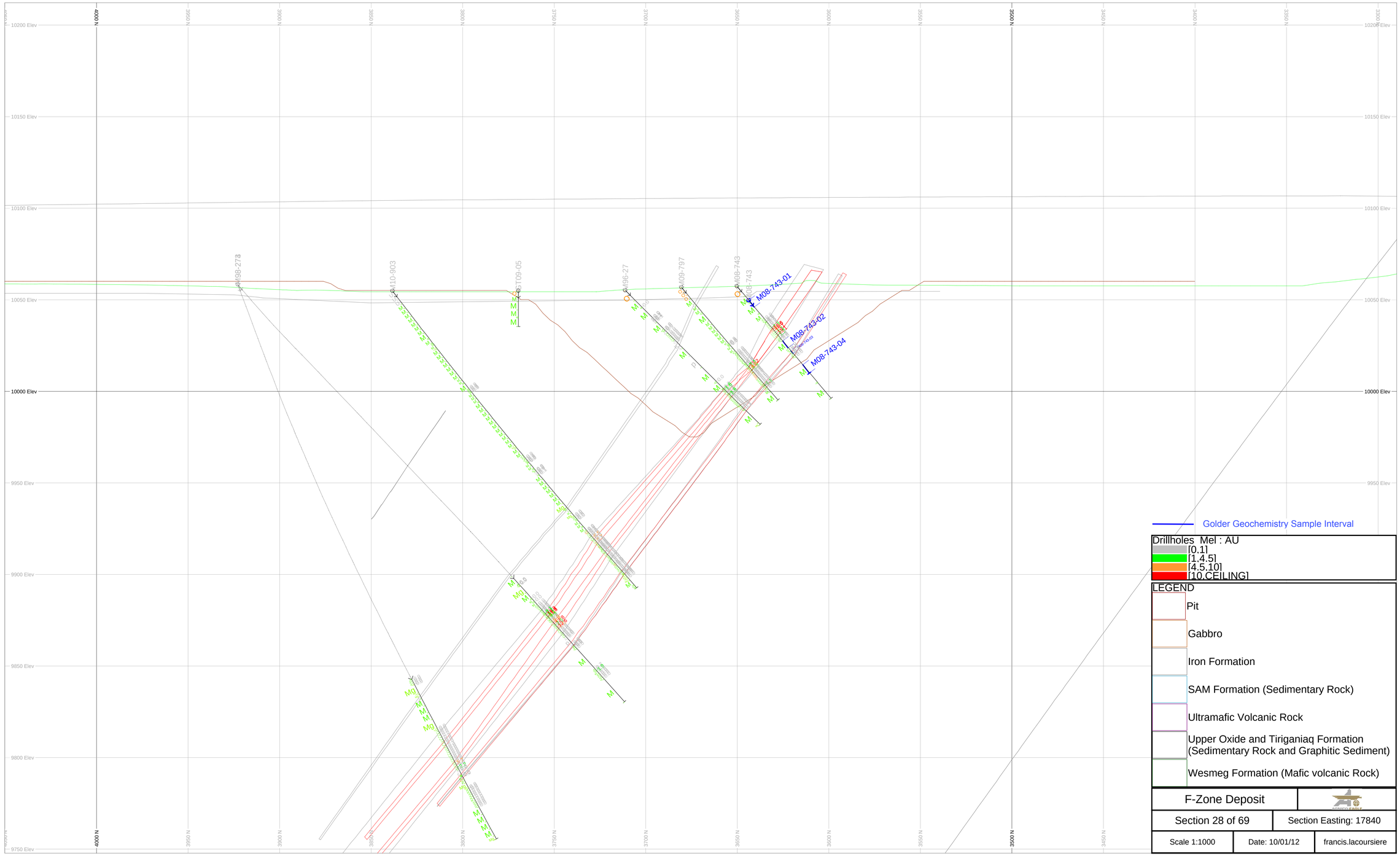

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10000 Elev
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M98-279
M10-917
M99-451
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M09-866
M09-866-01
M09-866-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 9 of 69
Section Easting: 17460
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

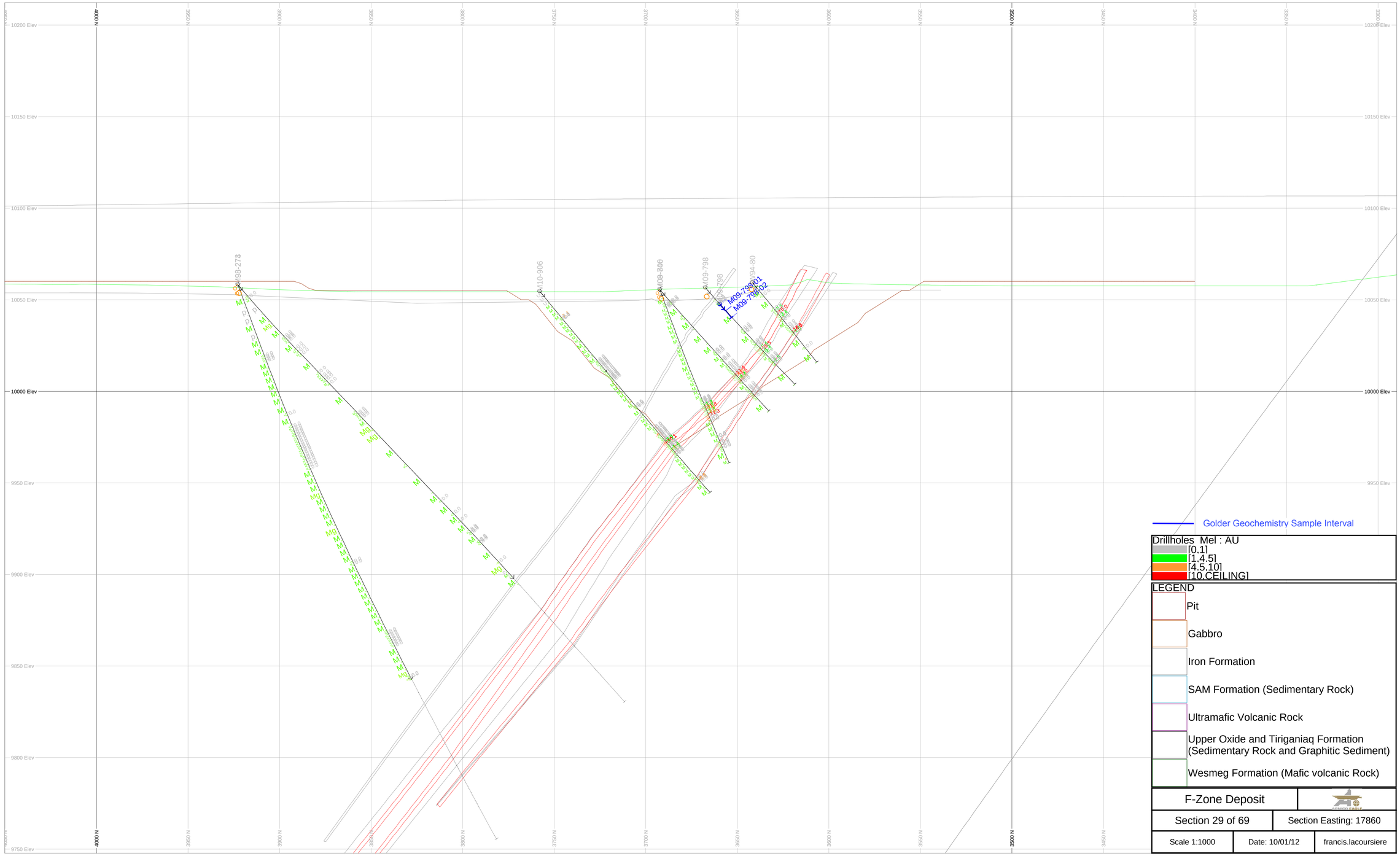

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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 11 of 69
Section Easting: 17500
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

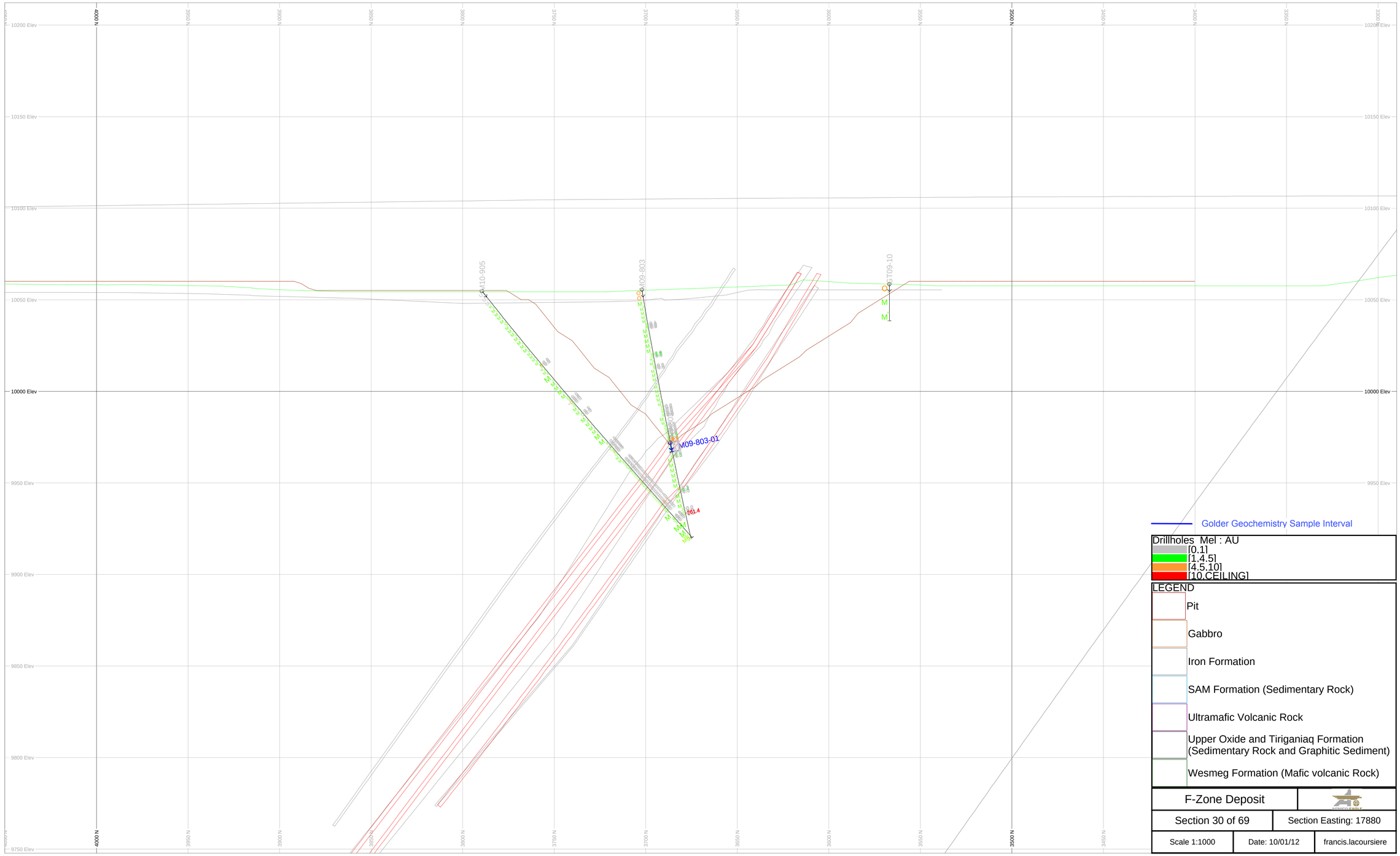

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10100 Elev
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10000 Elev
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9750 Elev
DDH97-112
DDH99-452
DDH10-918
DDH94-101
DDH09-07
DDH99-454
DDH08-741
GT09-07
GT09-07_06
GT09-07_01
GT09-07_02
GT09-07_03
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 12 of 69
Section Easting: 17520
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

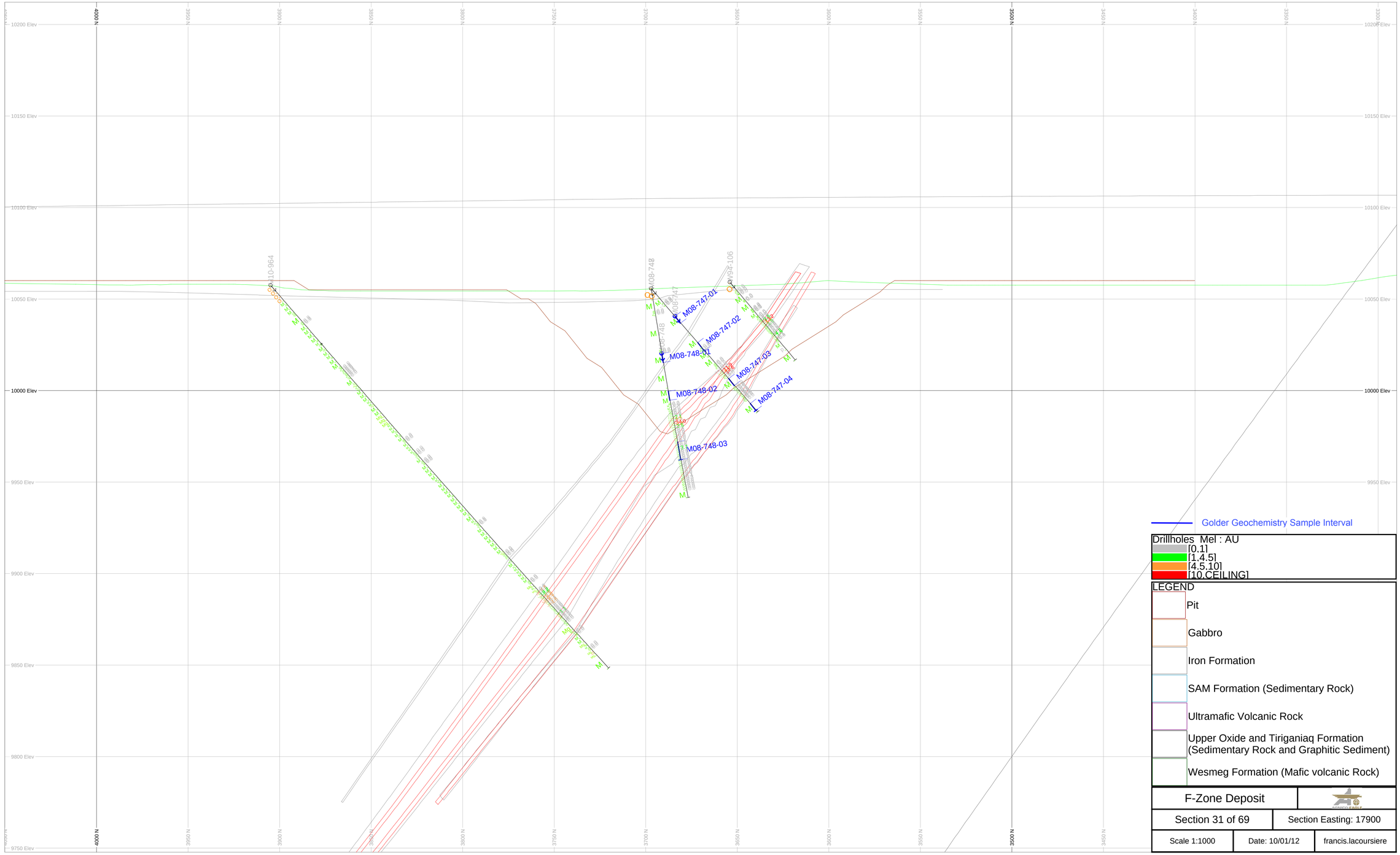

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W96-22
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W94-95
W94-93
M08-742
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W94-77
W09-454
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M08-742-06
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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 15 of 69
Section Easting: 17580
Scale 1:1000
Date: 10/01/12
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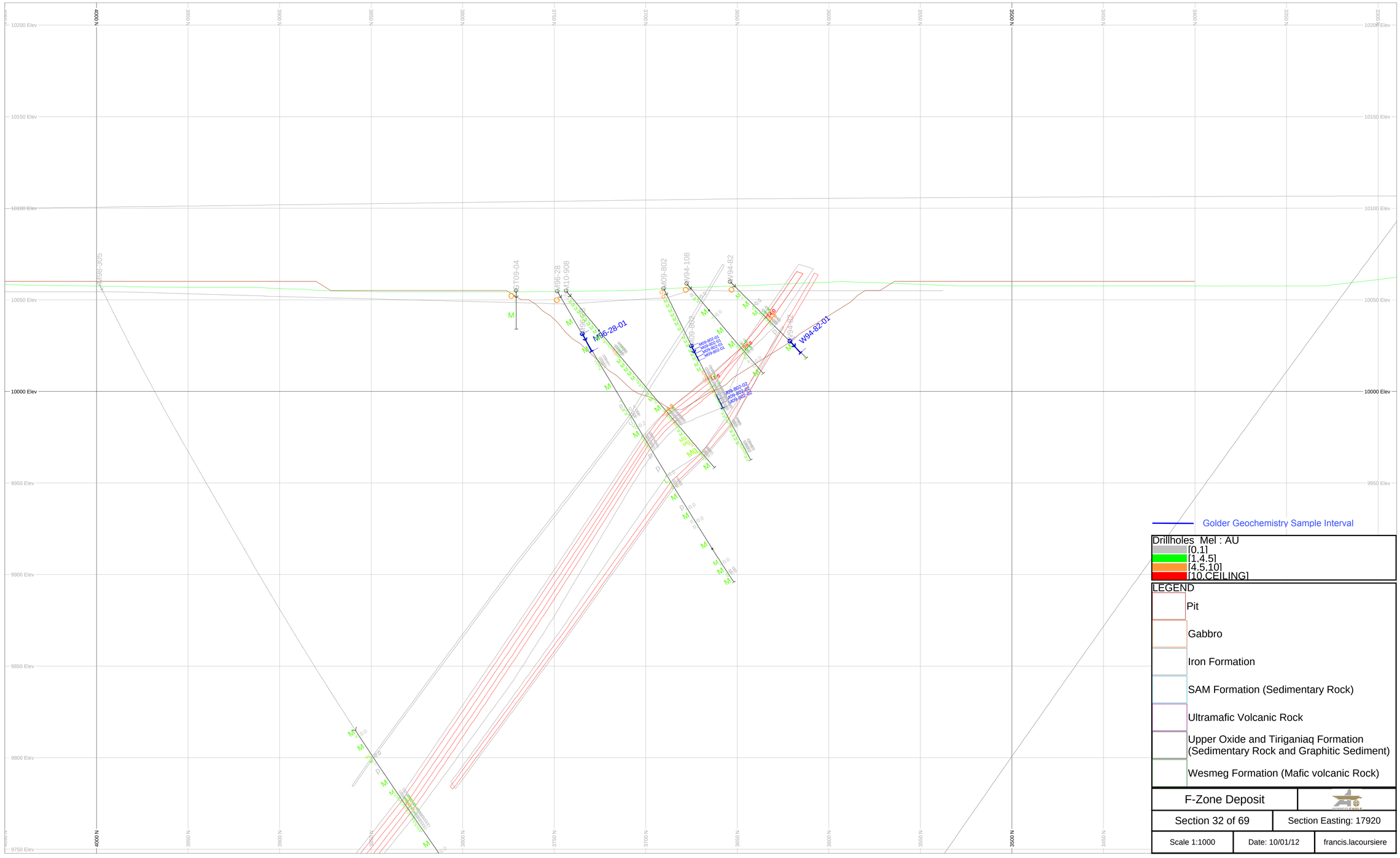

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9750 Elev
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W94-76
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 23 of 69
Section Easting: 17740
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

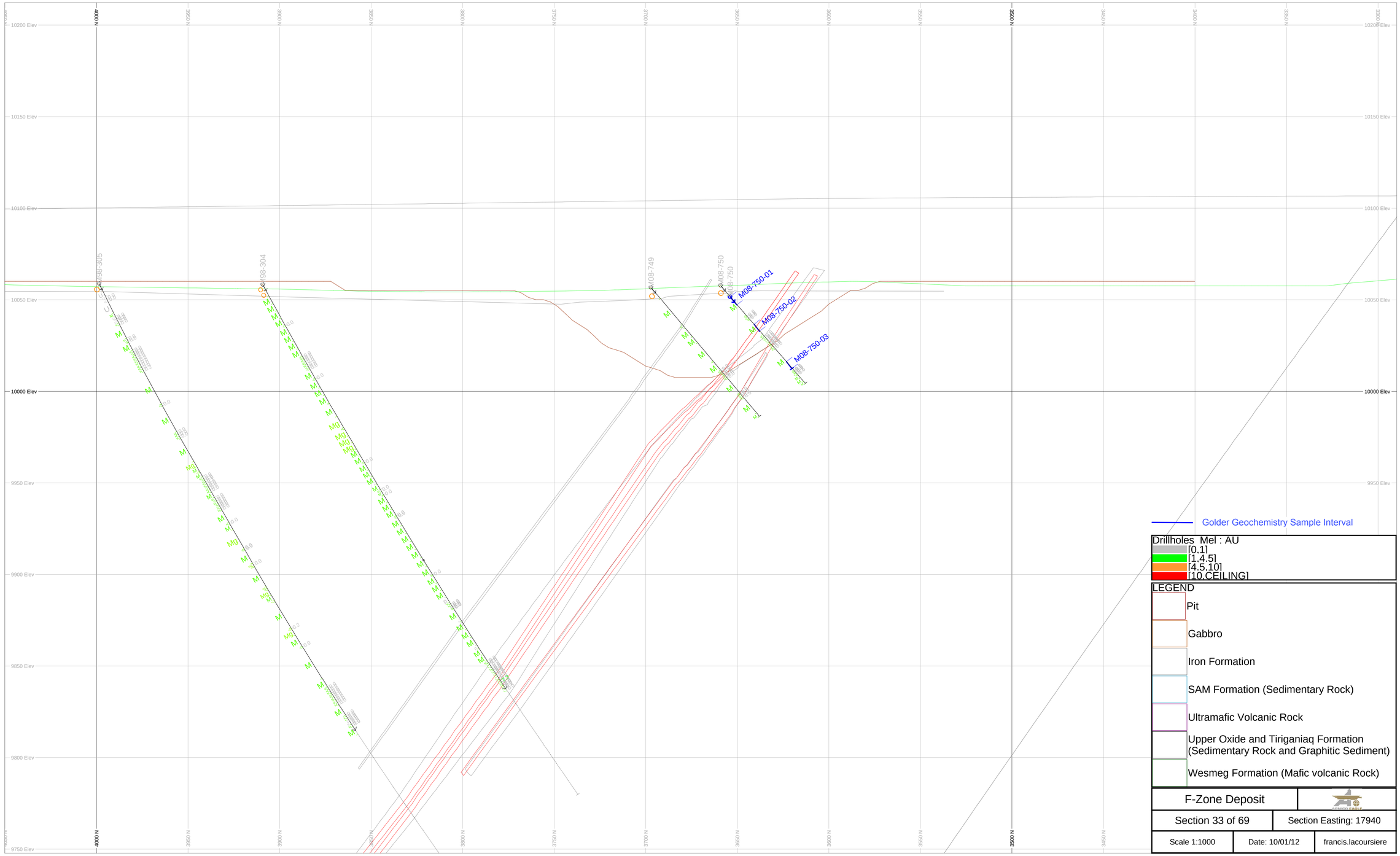

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10150 Elev
10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
M98-273
M10-903
M10T09-05
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M09-797
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M08-743-01
M08-743-02
M08-743-04
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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 28 of 69
Section Easting: 17840
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

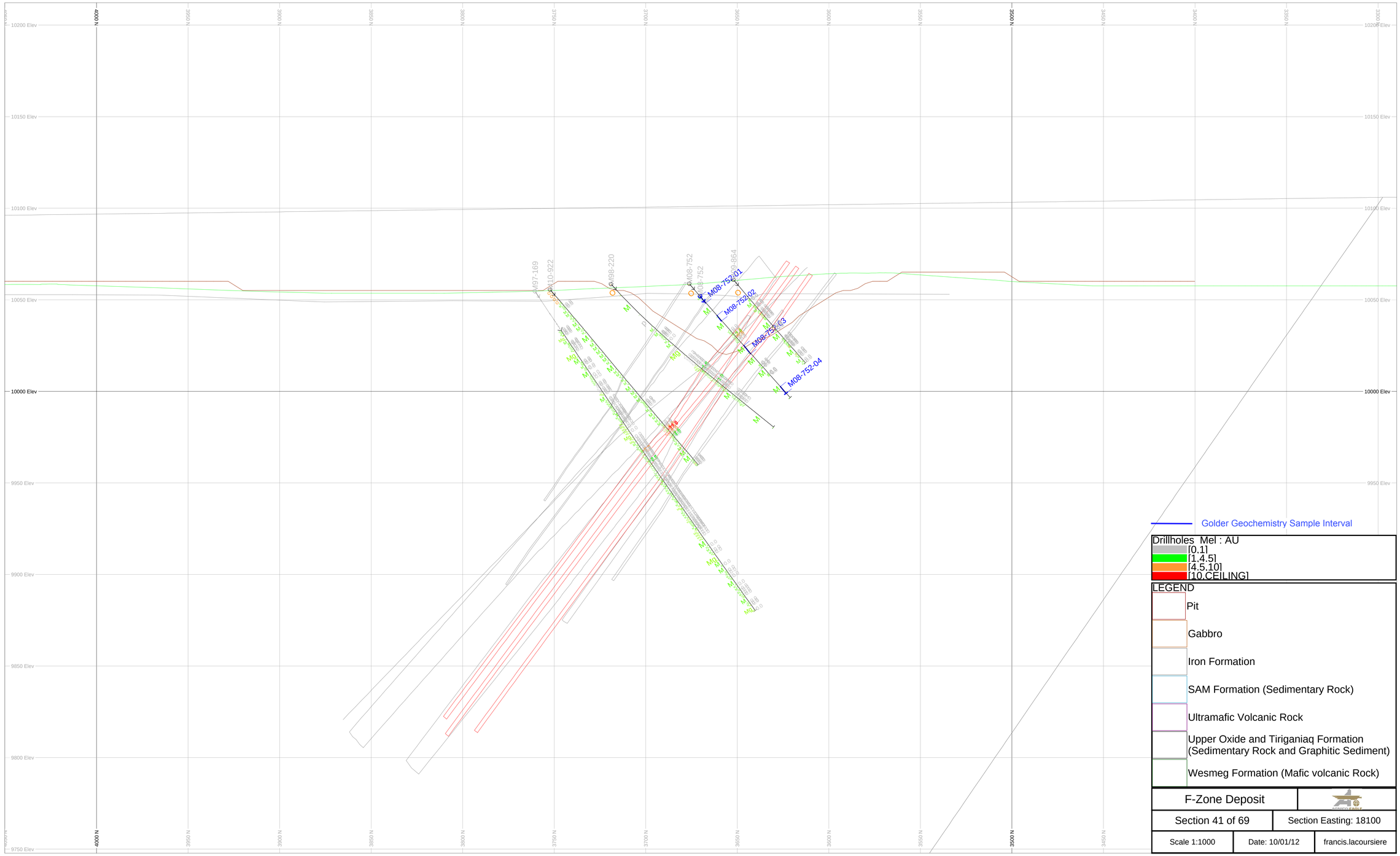

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M09-798

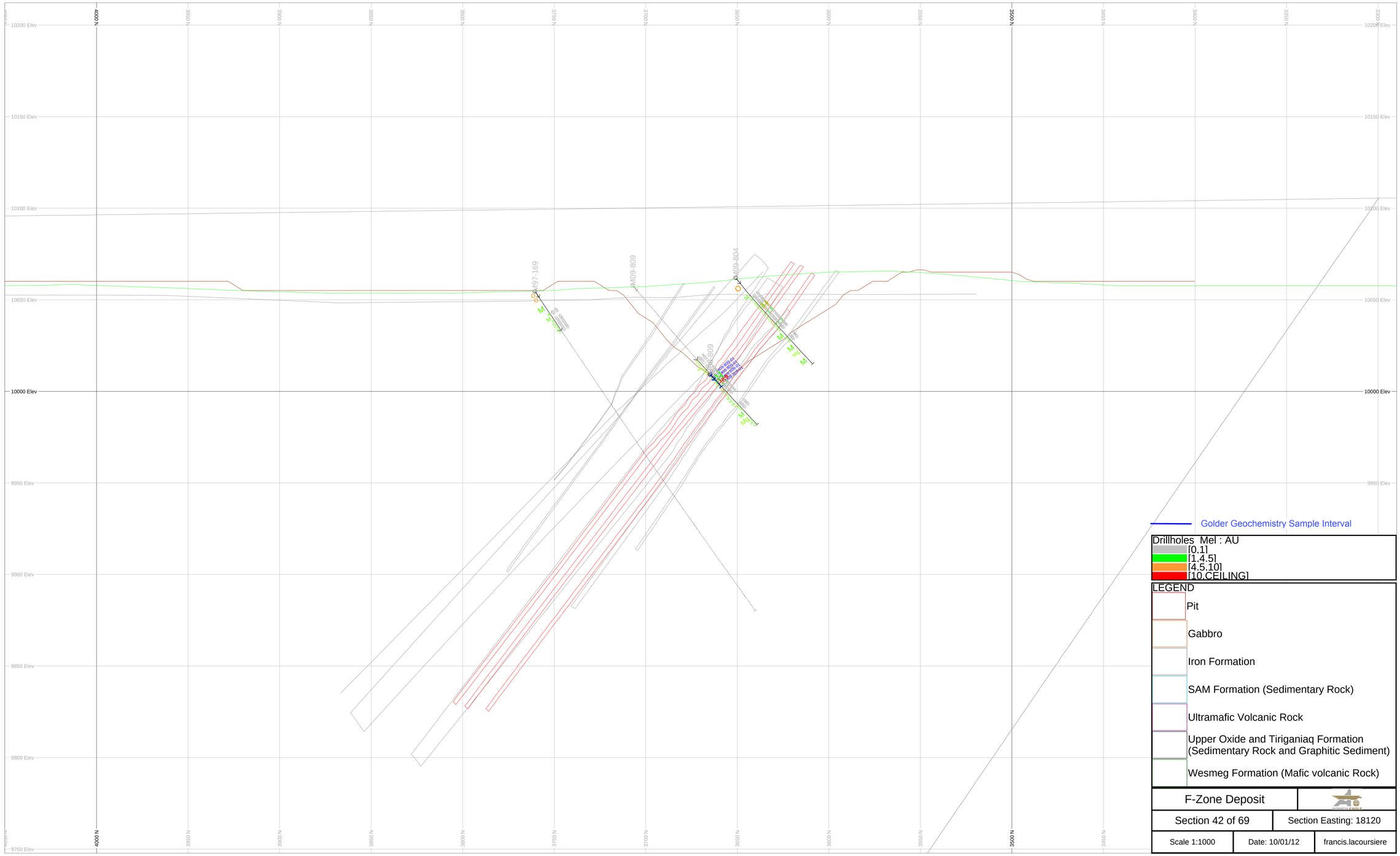

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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 30 of 69
Section Easting: 17880
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

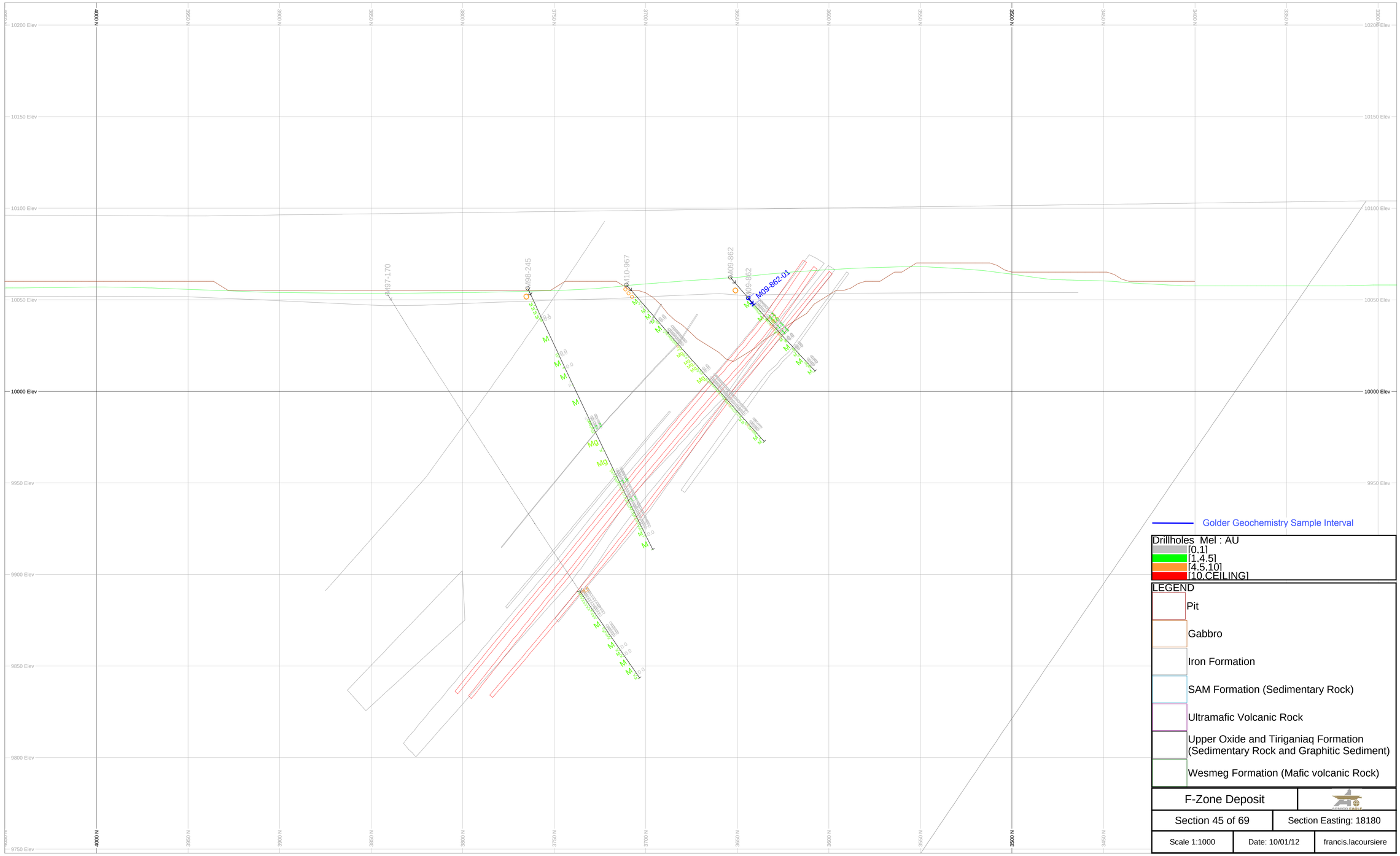

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M08-748-03
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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 31 of 69
Section Easting: 17900
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

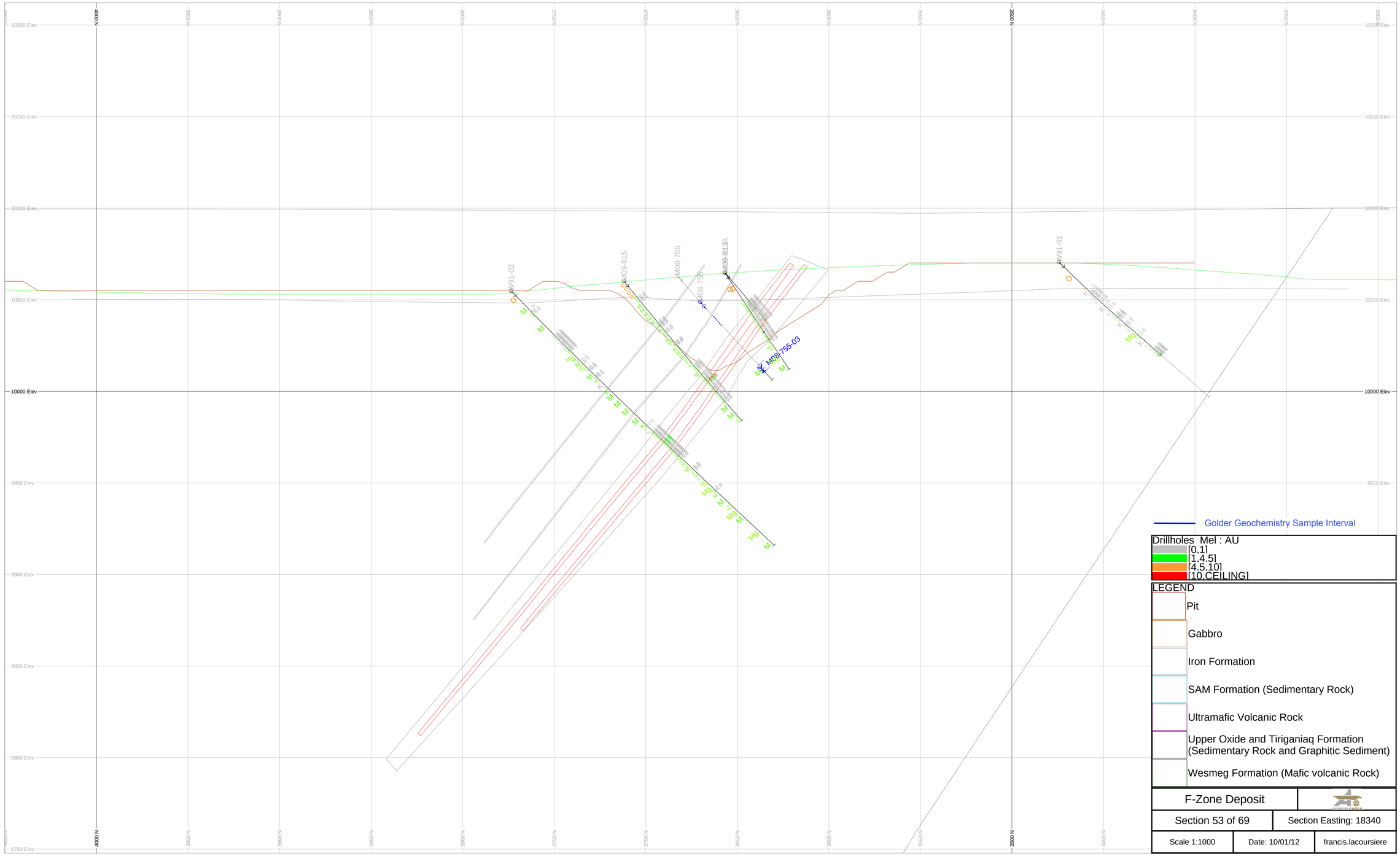

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9750 Elev
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T09-04
M96-28
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M09-803
M94-108
M94-82
M96-28-01
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M09-802-02
M09-803-01
M09-803-02
M09-804-01
M09-804-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 32 of 69
Section Easting: 17920
Scale 1:1000
Date: 10/01/12
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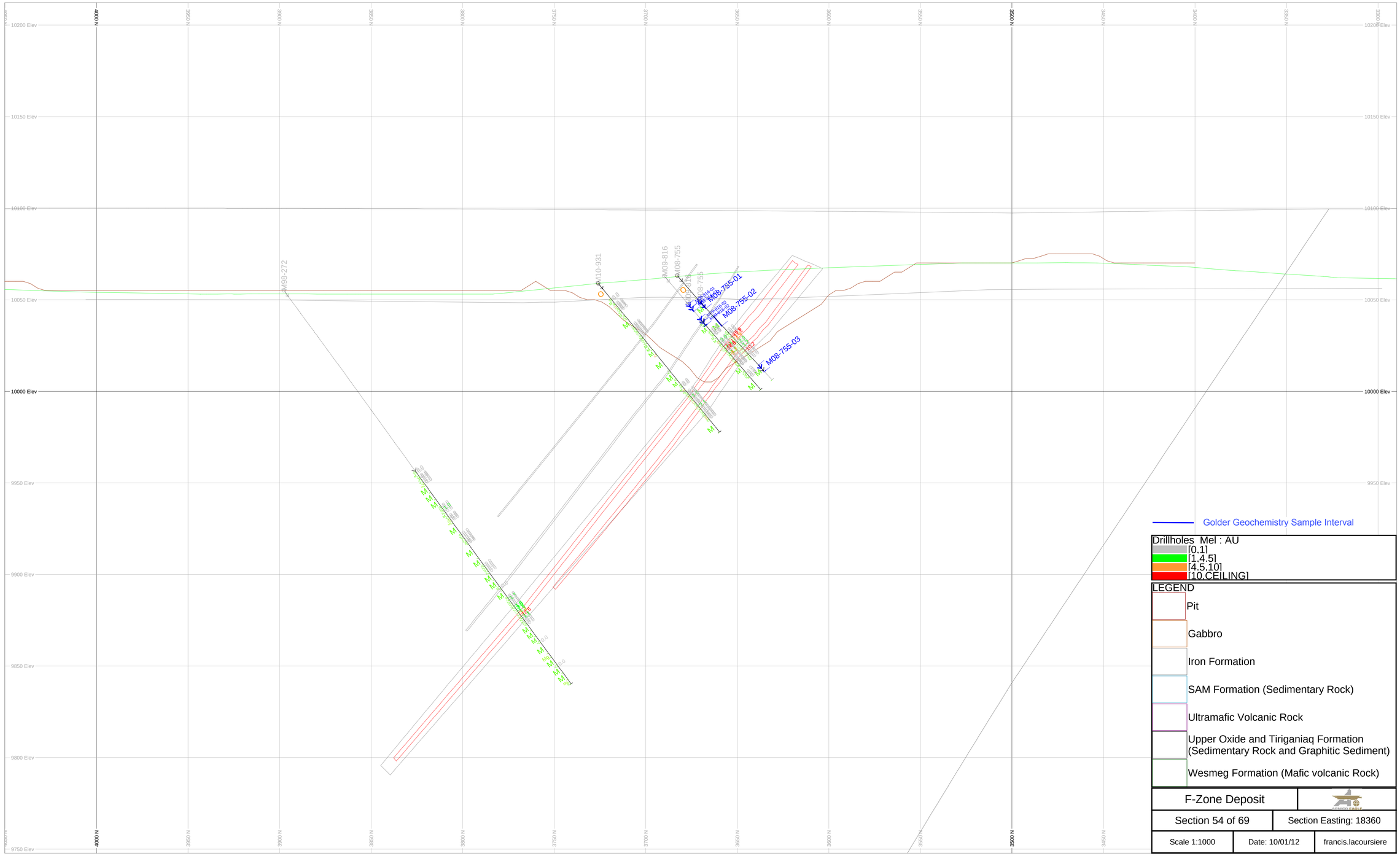

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M98-305
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M08-750-02
M08-750-03
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 33 of 69
Section Easting: 17940
Scale 1:1000
Date: 10/01/12
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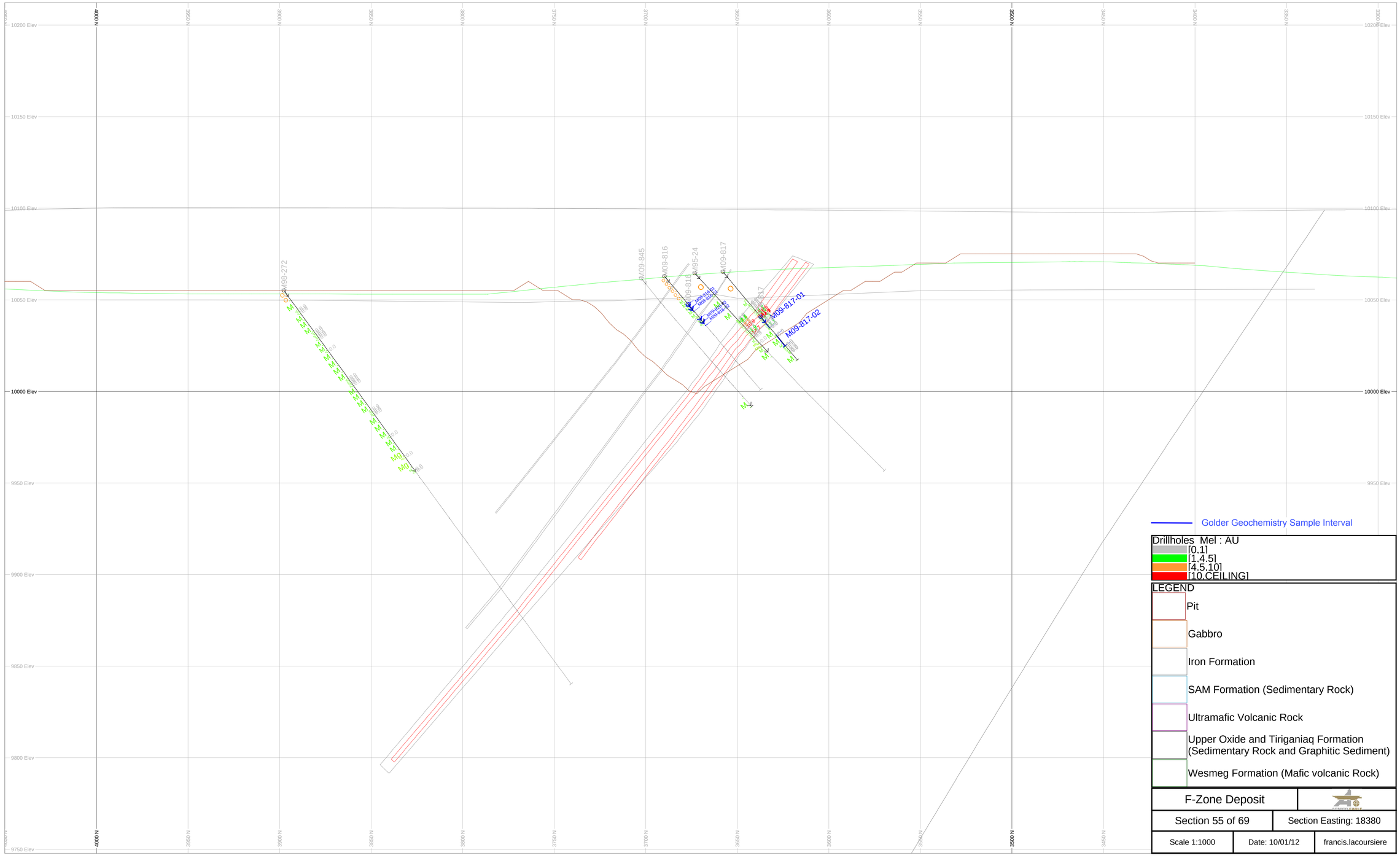

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3300 N
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Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 41 of 69
Section Easting: 18100
Scale 1:1000
Date: 10/01/12
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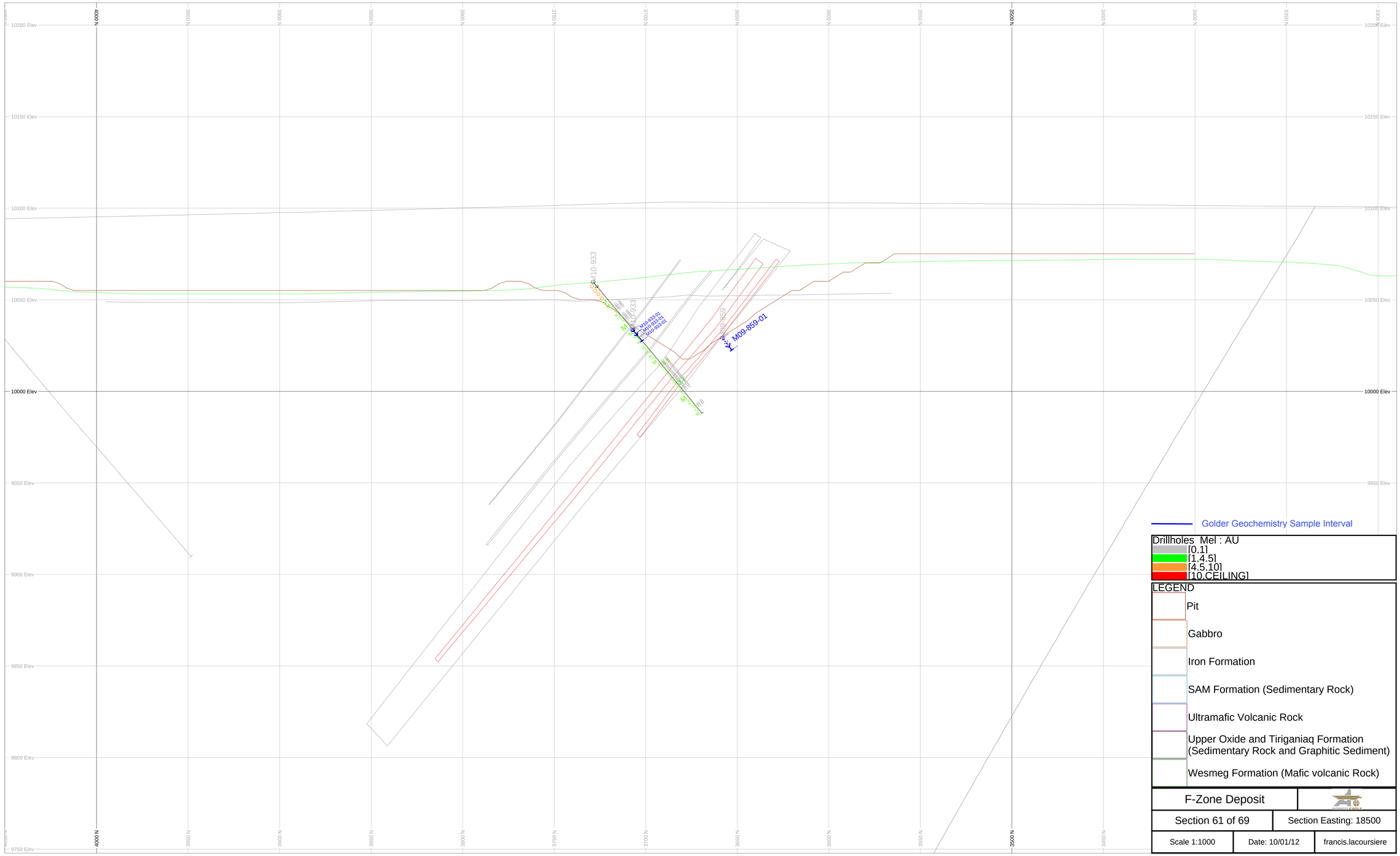

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M97-169
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Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 42 of 69
Section Easting: 18120
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

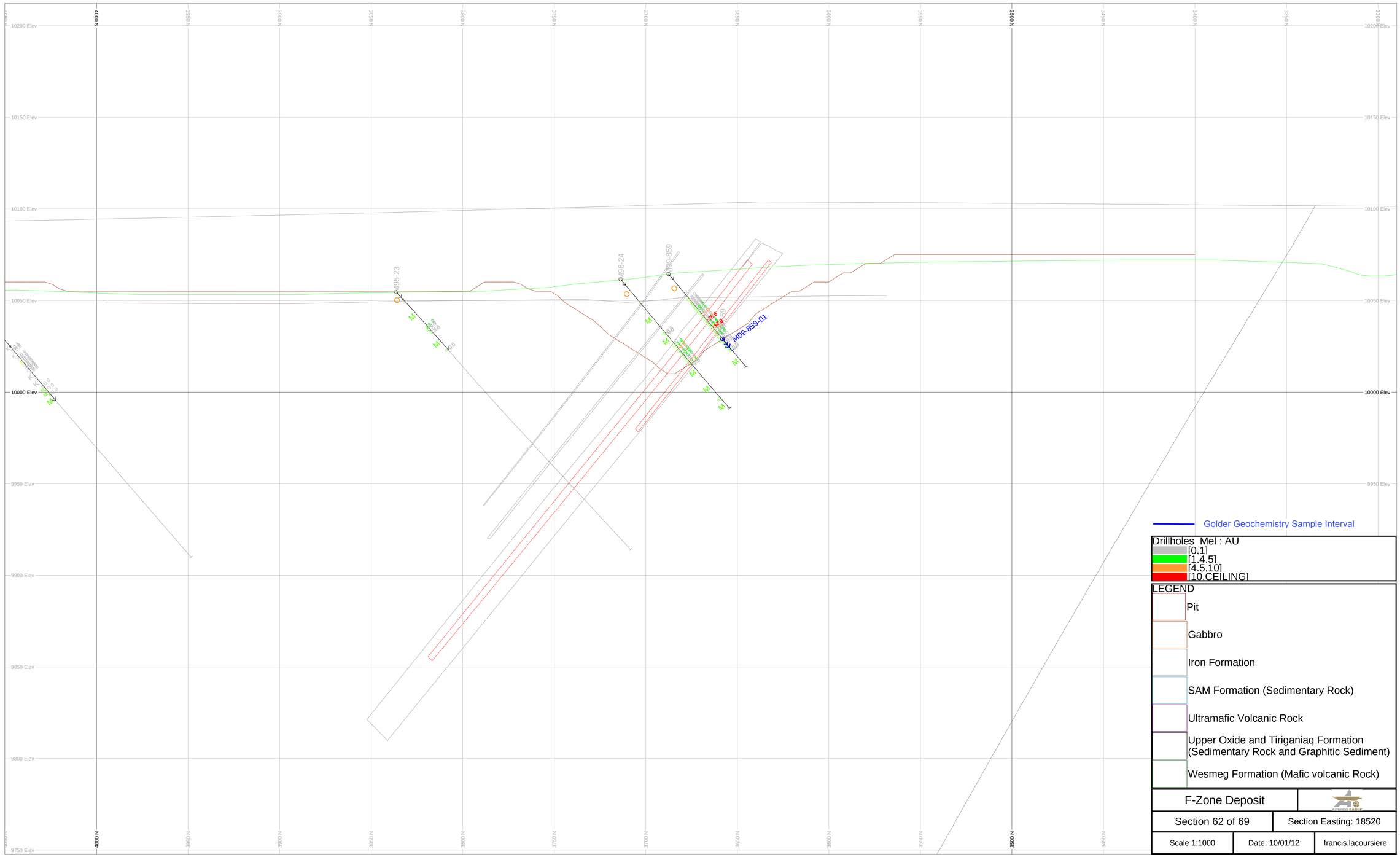

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M98-245
M10-967
M09-862
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Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 45 of 69
Section Easting: 18180
Scale 1:1000
Date: 10/01/12
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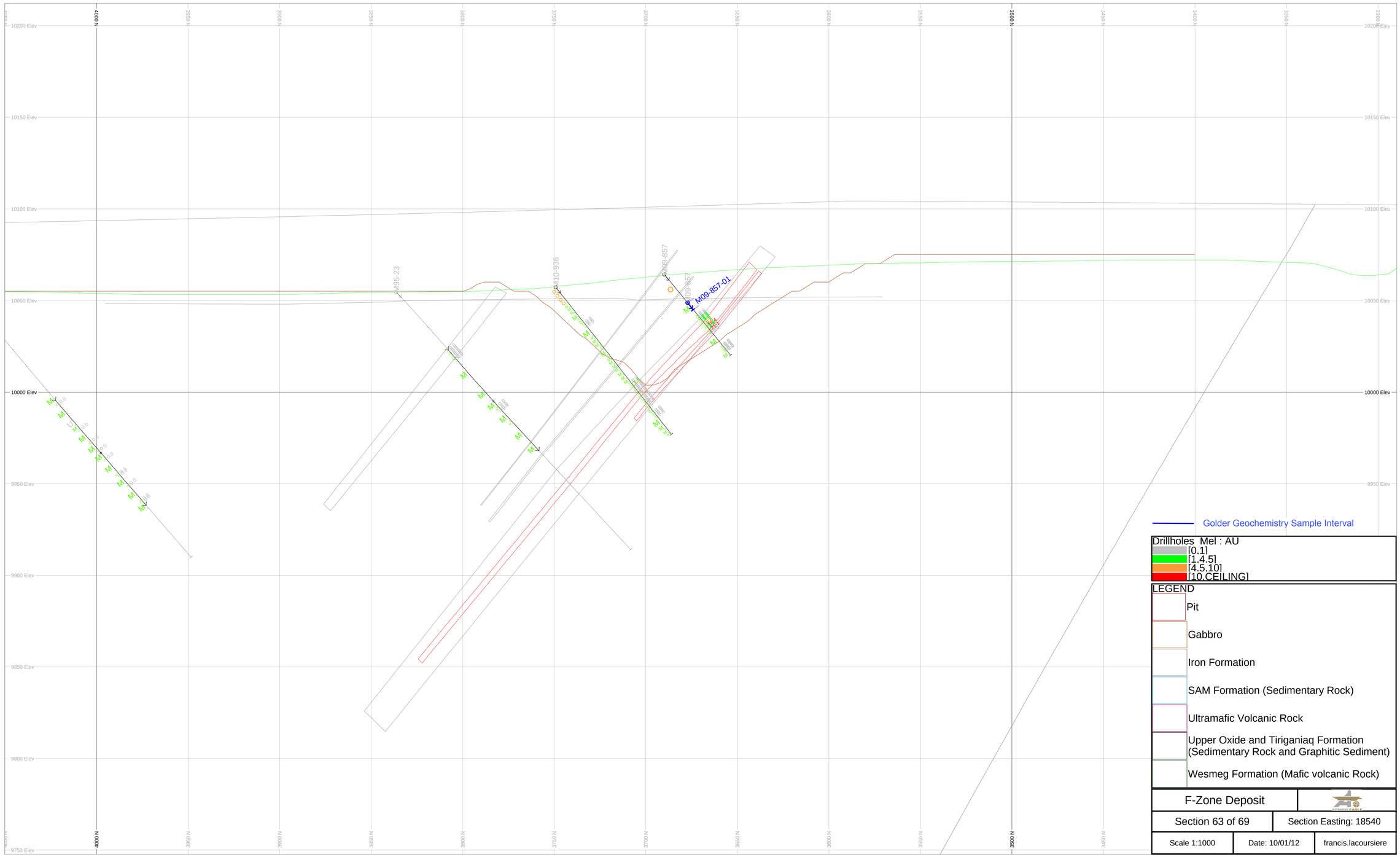

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9750 Elev
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RM08-755
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RV91-01
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 53 of 69
Section Easting: 18340
Scale 1:1000
Date: 10/01/12
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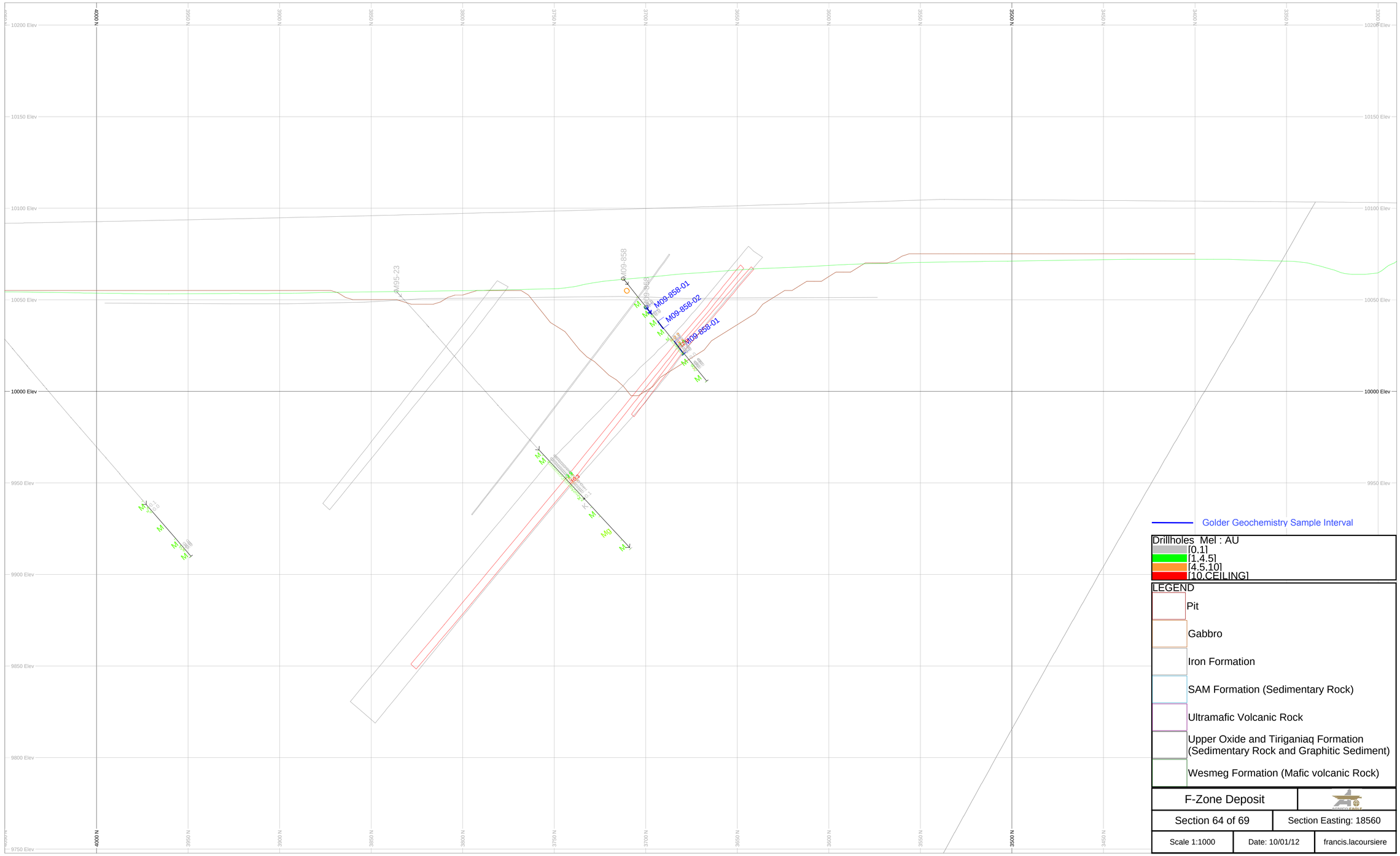

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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 54 of 69
Section Easting: 18360
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

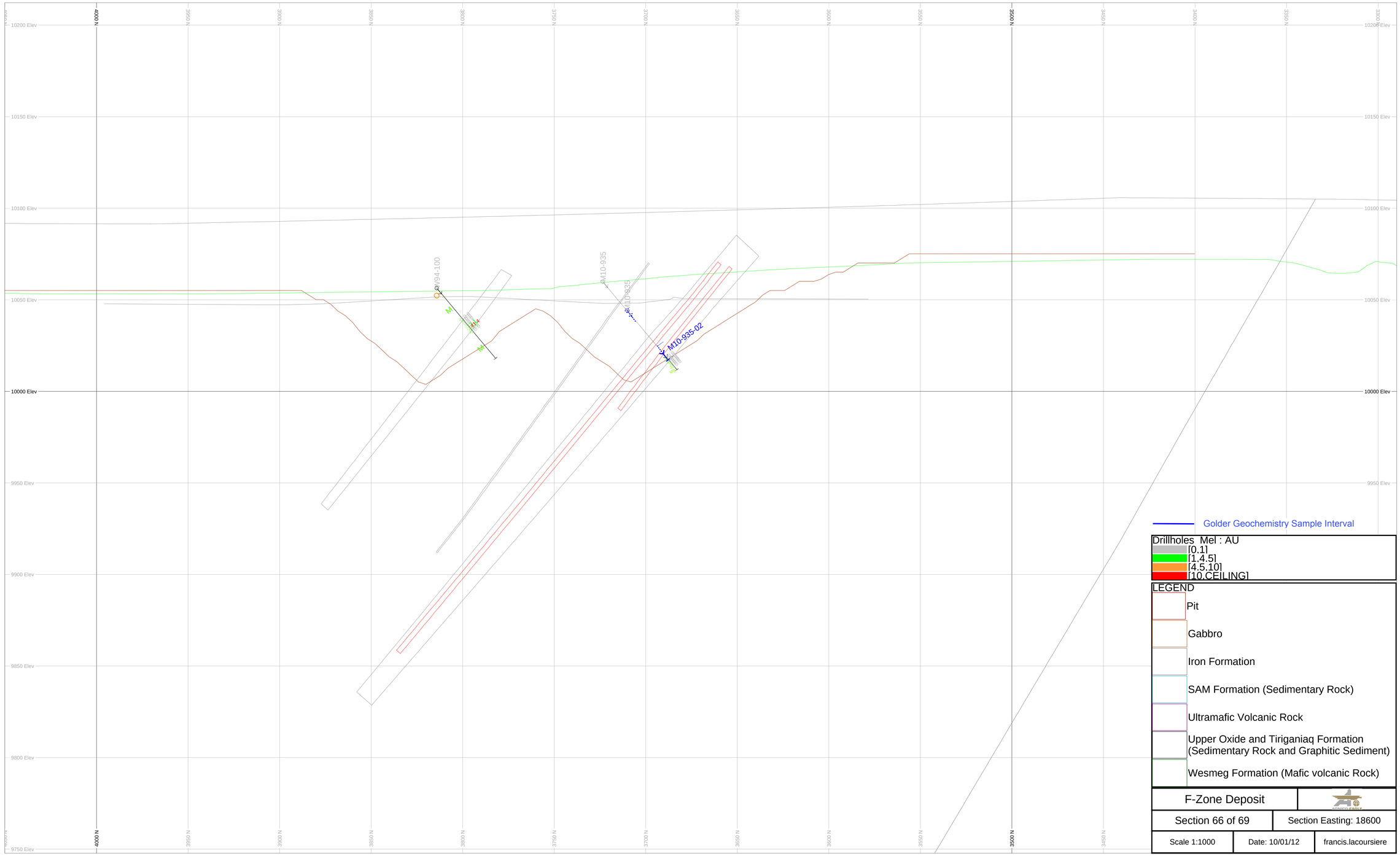

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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 55 of 69
Section Easting: 18380
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

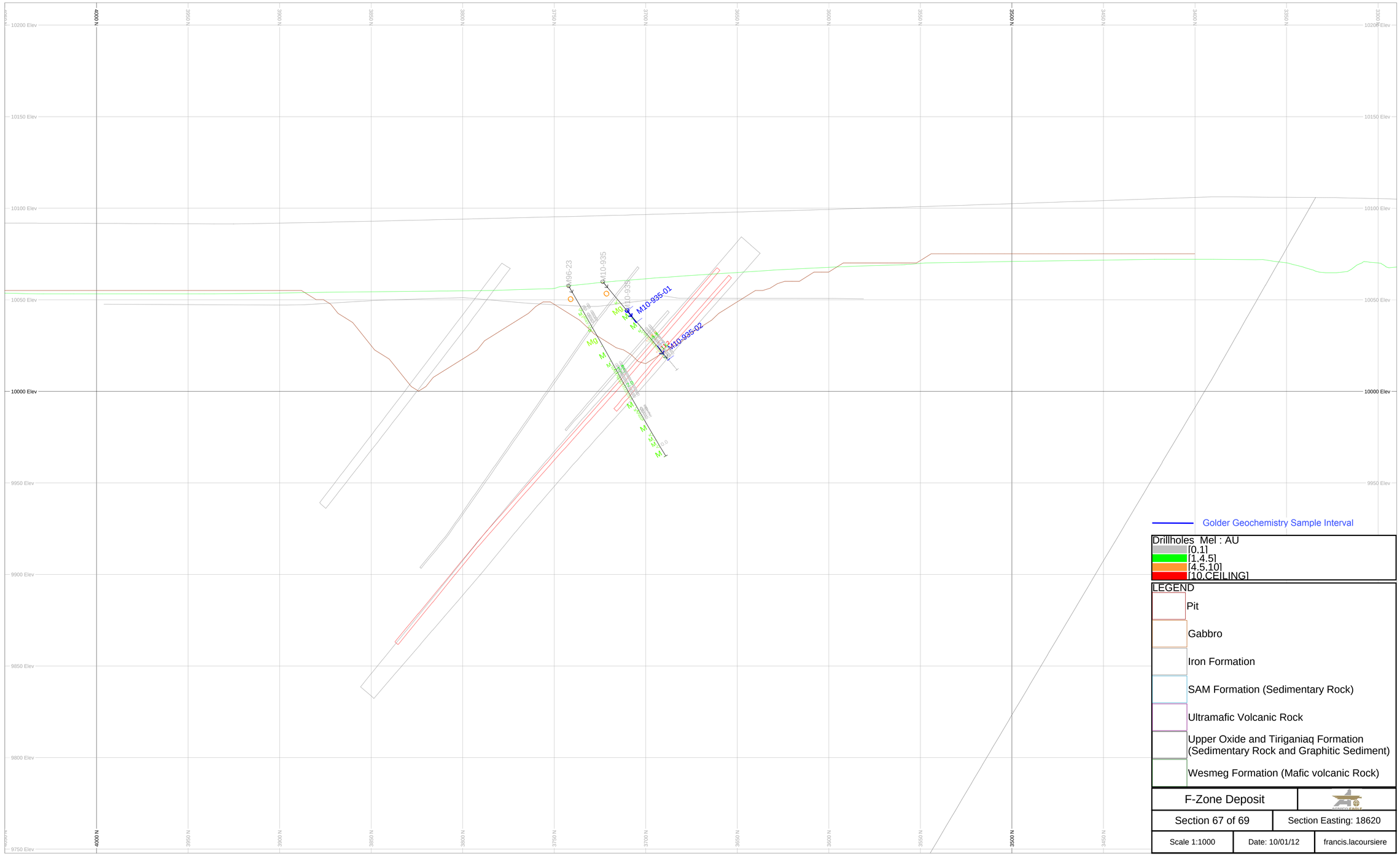

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9850 Elev
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Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 61 of 69
Section Easting: 18500
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

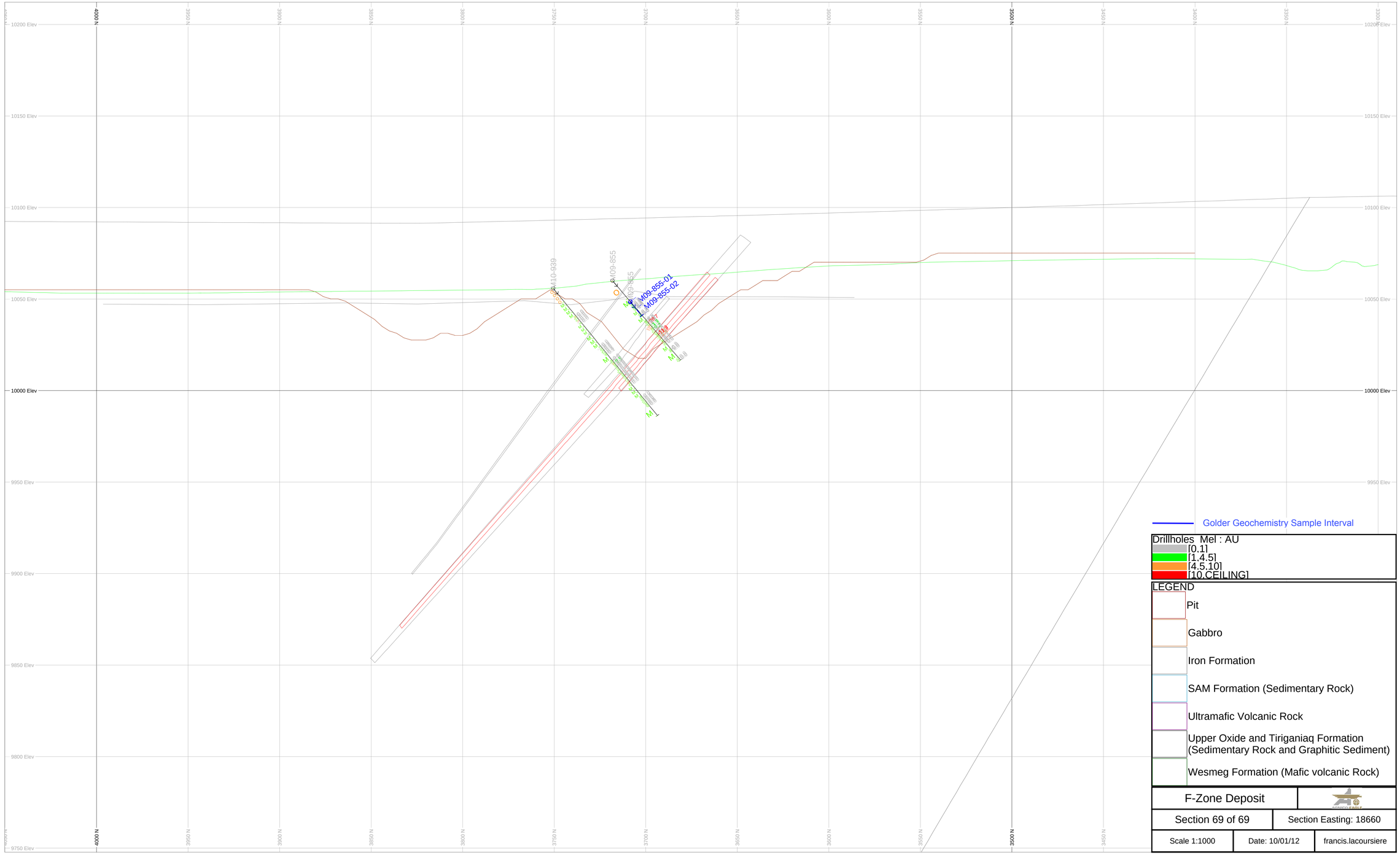

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9900 Elev
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9750 Elev
M95-23
M96-24
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M09-859-01
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 62 of 69
Section Easting: 18520
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 63 of 69
Section Easting: 18540
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

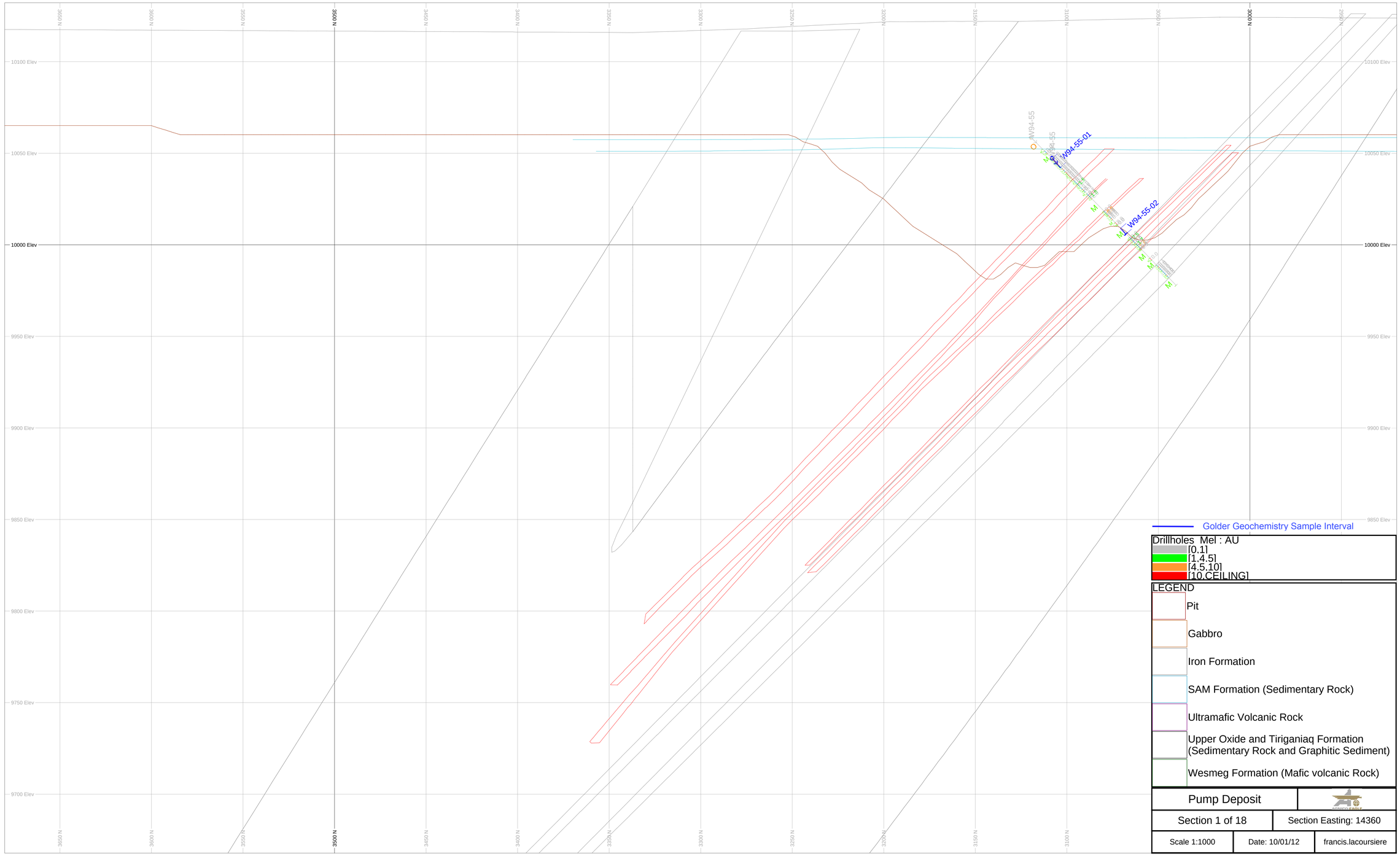

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M09-858
M09-858
M09-858

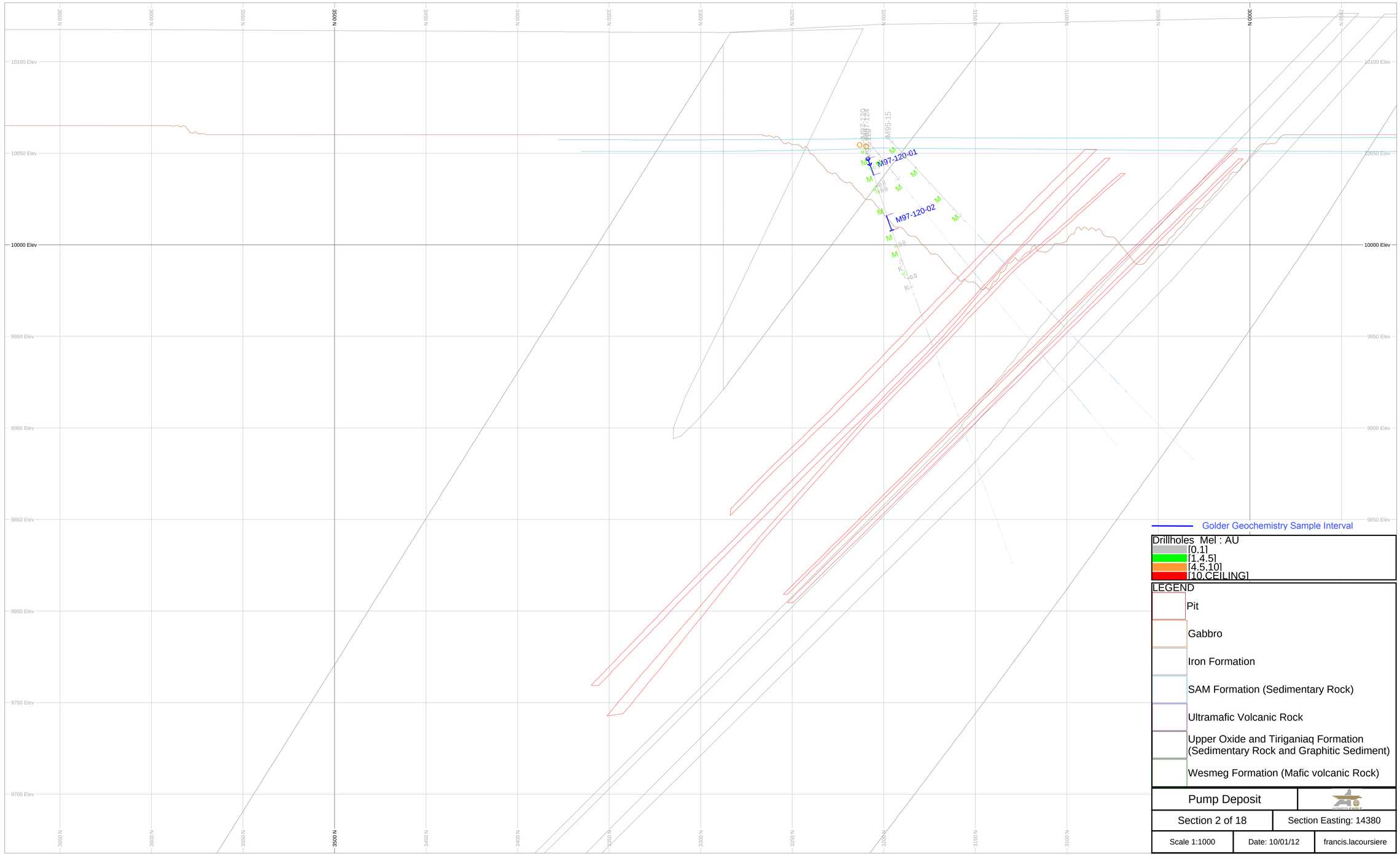

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3300 N
10200 Elev
10150 Elev
10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
W94-100
M10-935
M10-835
M10-935-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 66 of 69
Section Easting: 18600
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

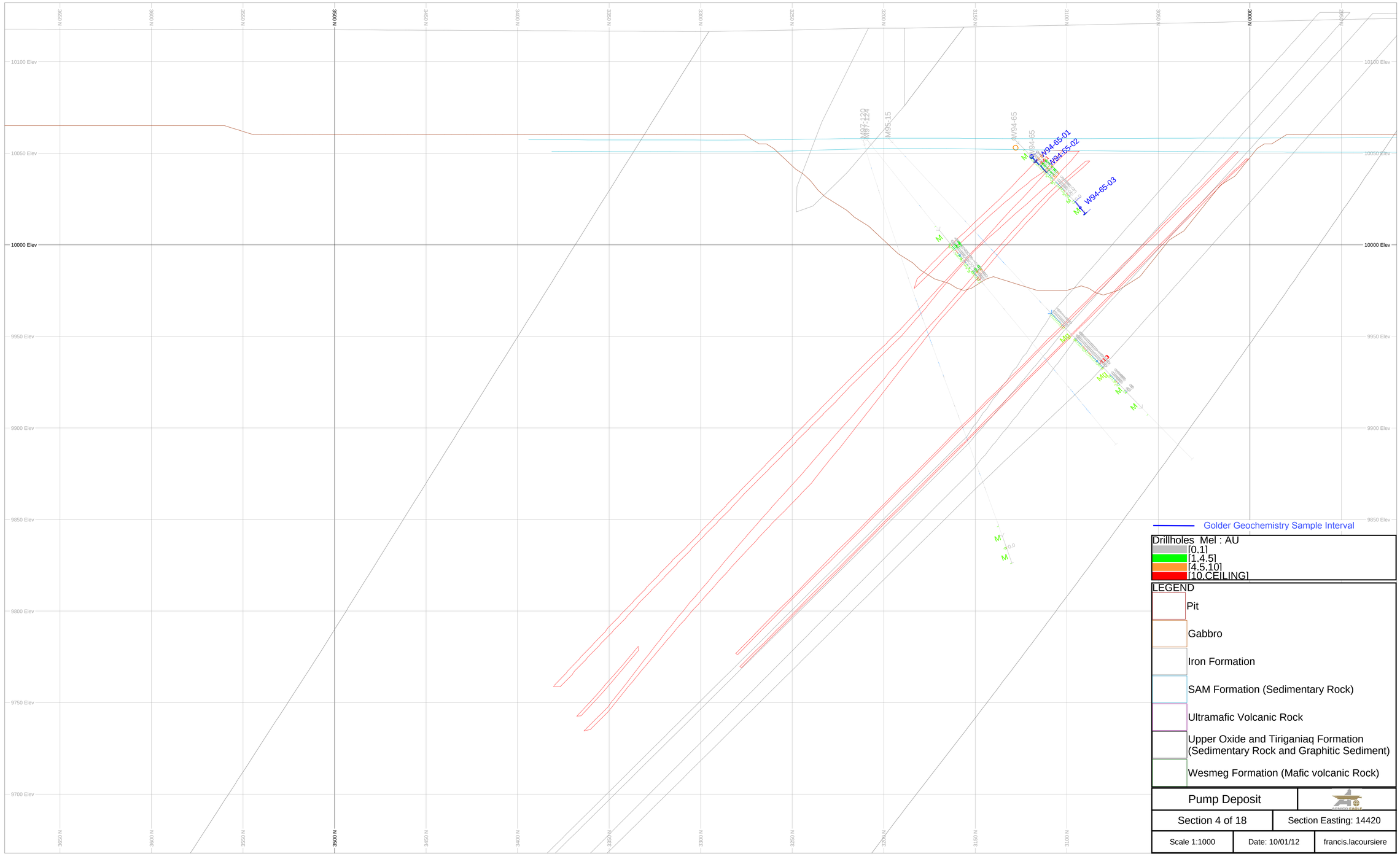

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9900 Elev
9850 Elev
9800 Elev
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M10-935
M10-935-01
M10-935-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 67 of 69
Section Easting: 18620
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

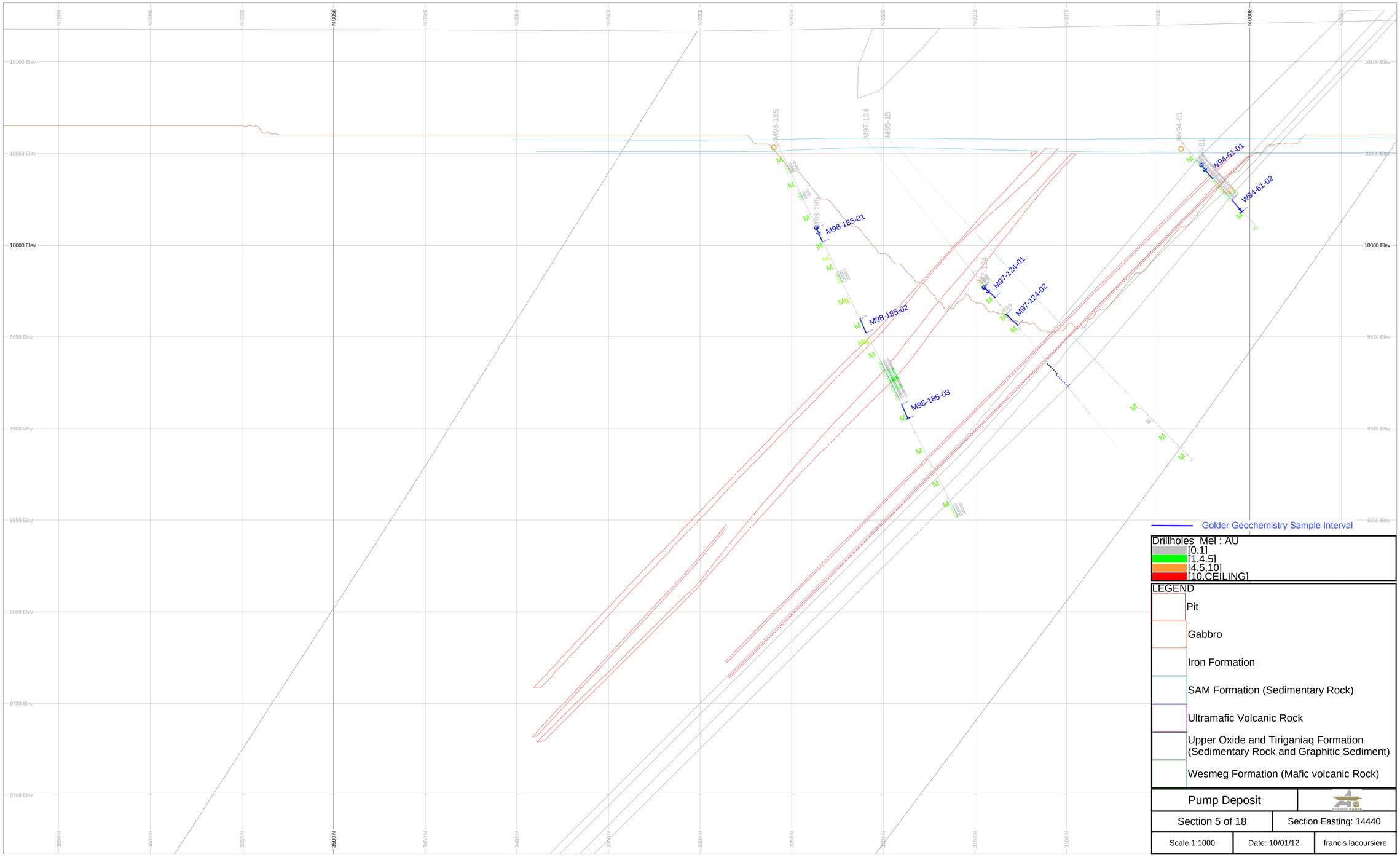

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9850 Elev
9800 Elev
9750 Elev
M10-939
M09-855
M09-855
M09-855-01
M09-855-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
F-Zone Deposit
Section 69 of 69
Section Easting: 18660
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

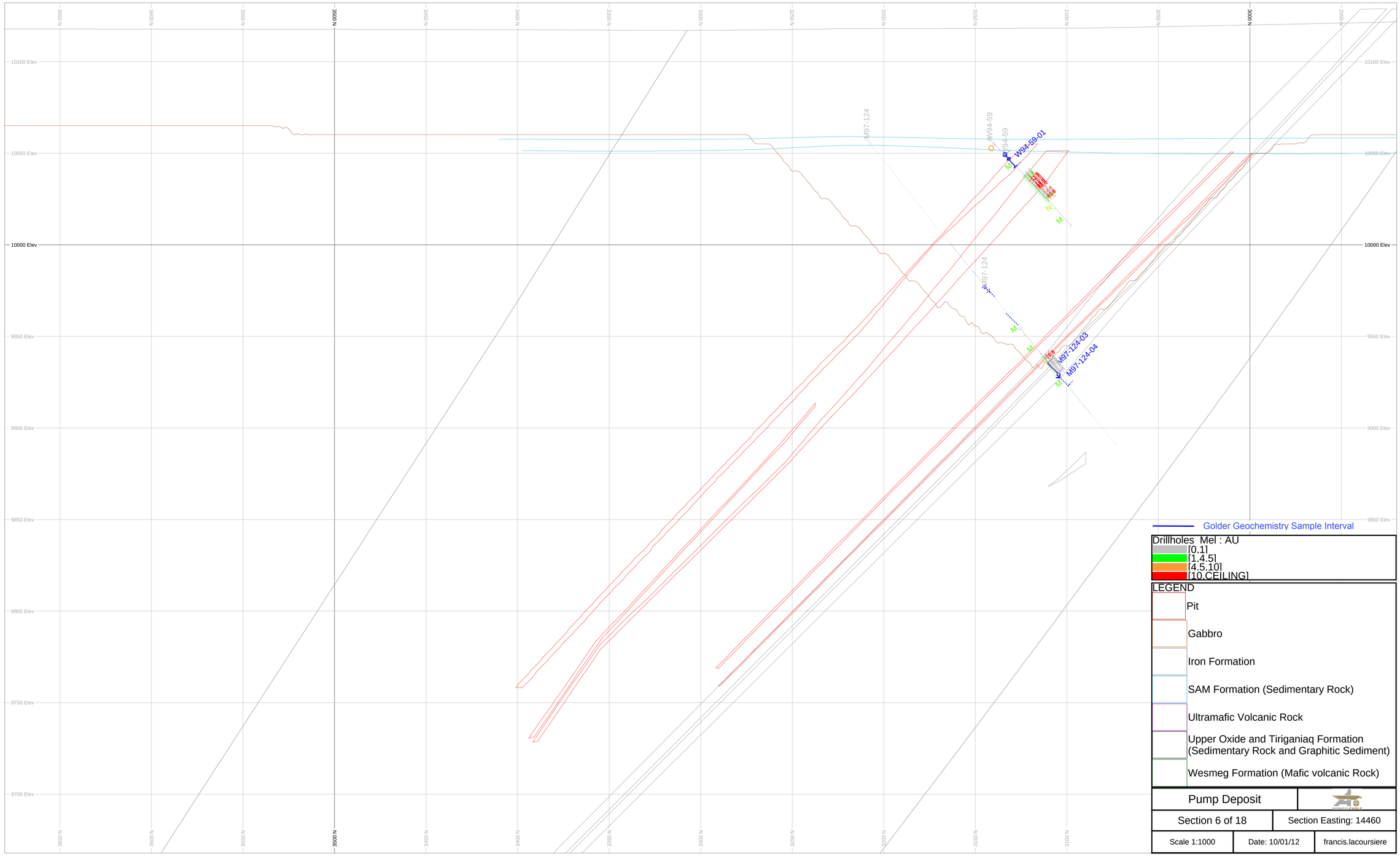
# A.3 F Pump Cross-Sections

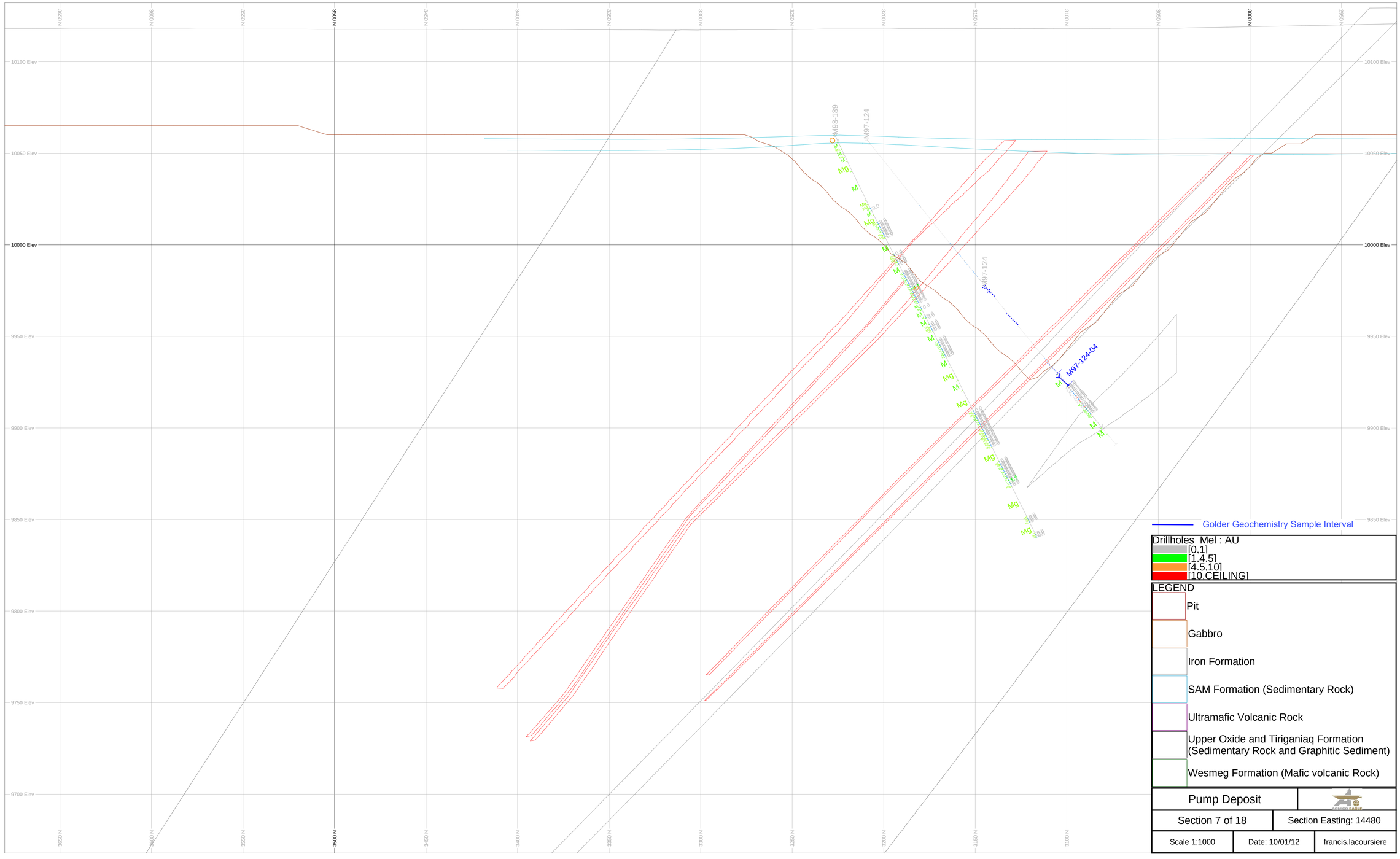

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2950 N
10100 Elev
10050 Elev
10000 Elev
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9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
W94-55
W94-55-01
W94-55-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
[0,1]
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 1 of 18
Section Easting: 14360
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

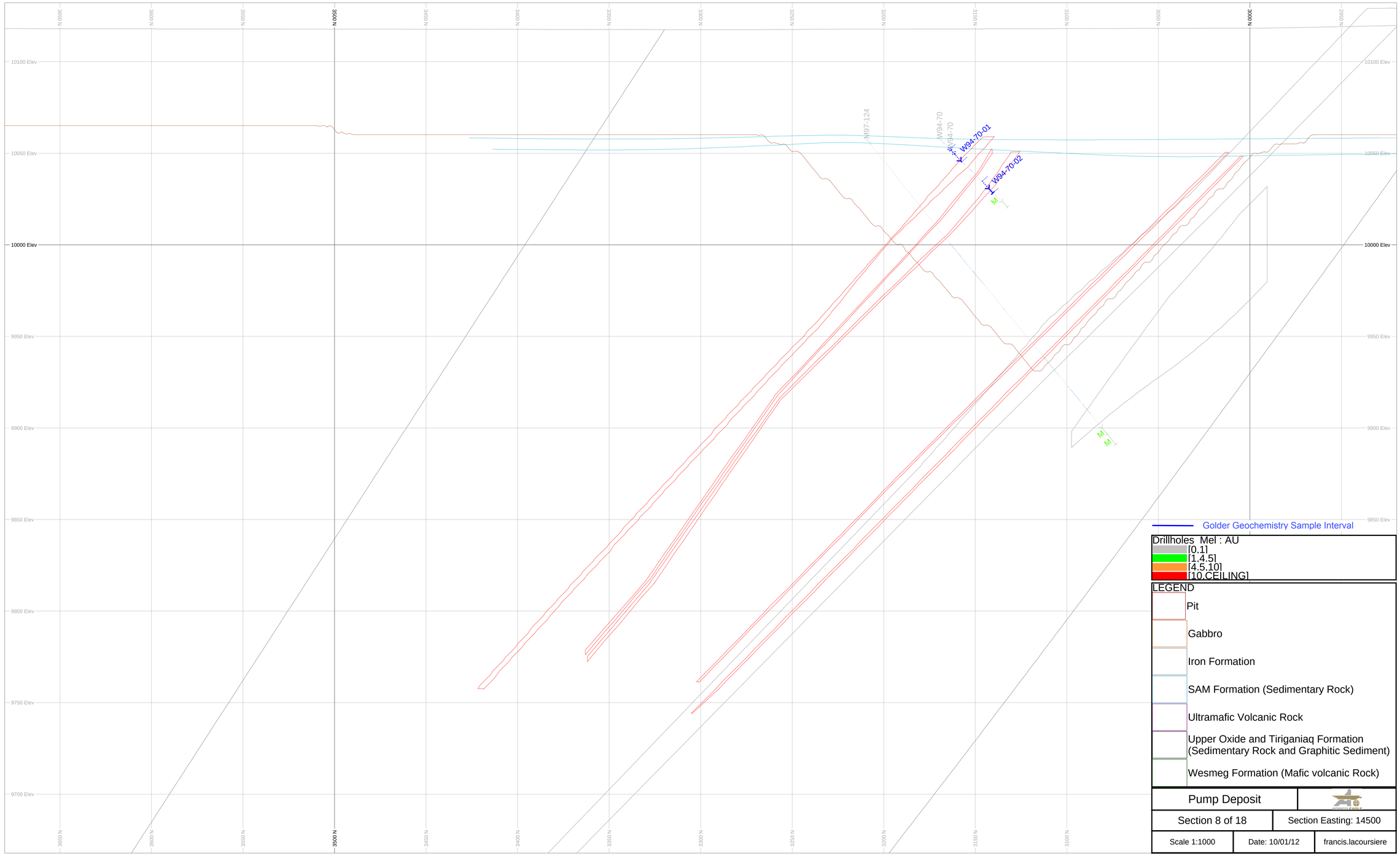

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3400 N
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3300 N
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3200 N
3150 N
3100 N
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10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
M97-120
M97-124
M95-15
M97-120-01
M97-120-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 2 of 18
Section Easting: 14380
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

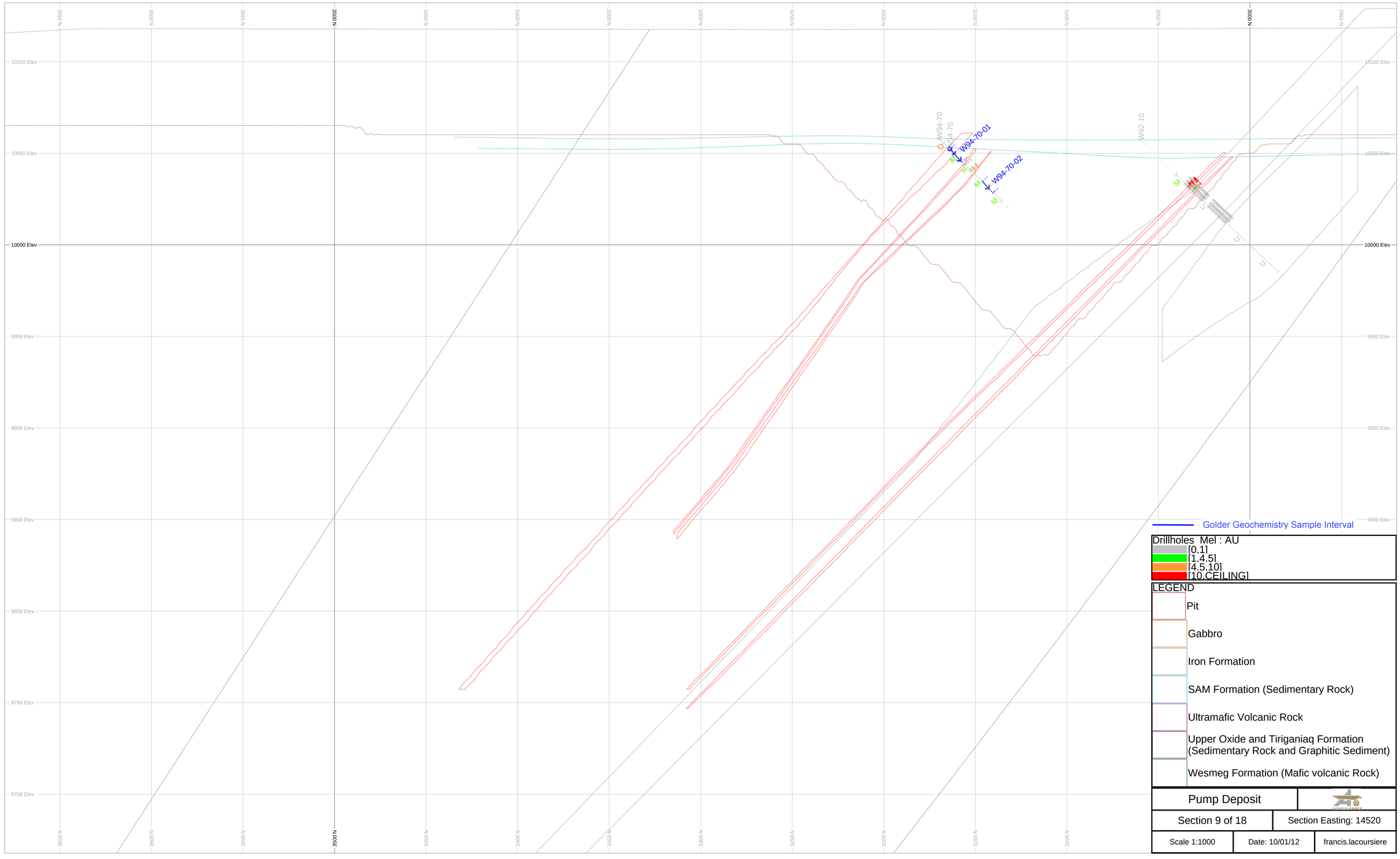

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9750 Elev
9700 Elev
M97-124
M95-15
W94-65
W94-65-01
W94-65-02
W94-65-03
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 4 of 18
Section Easting: 14420
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

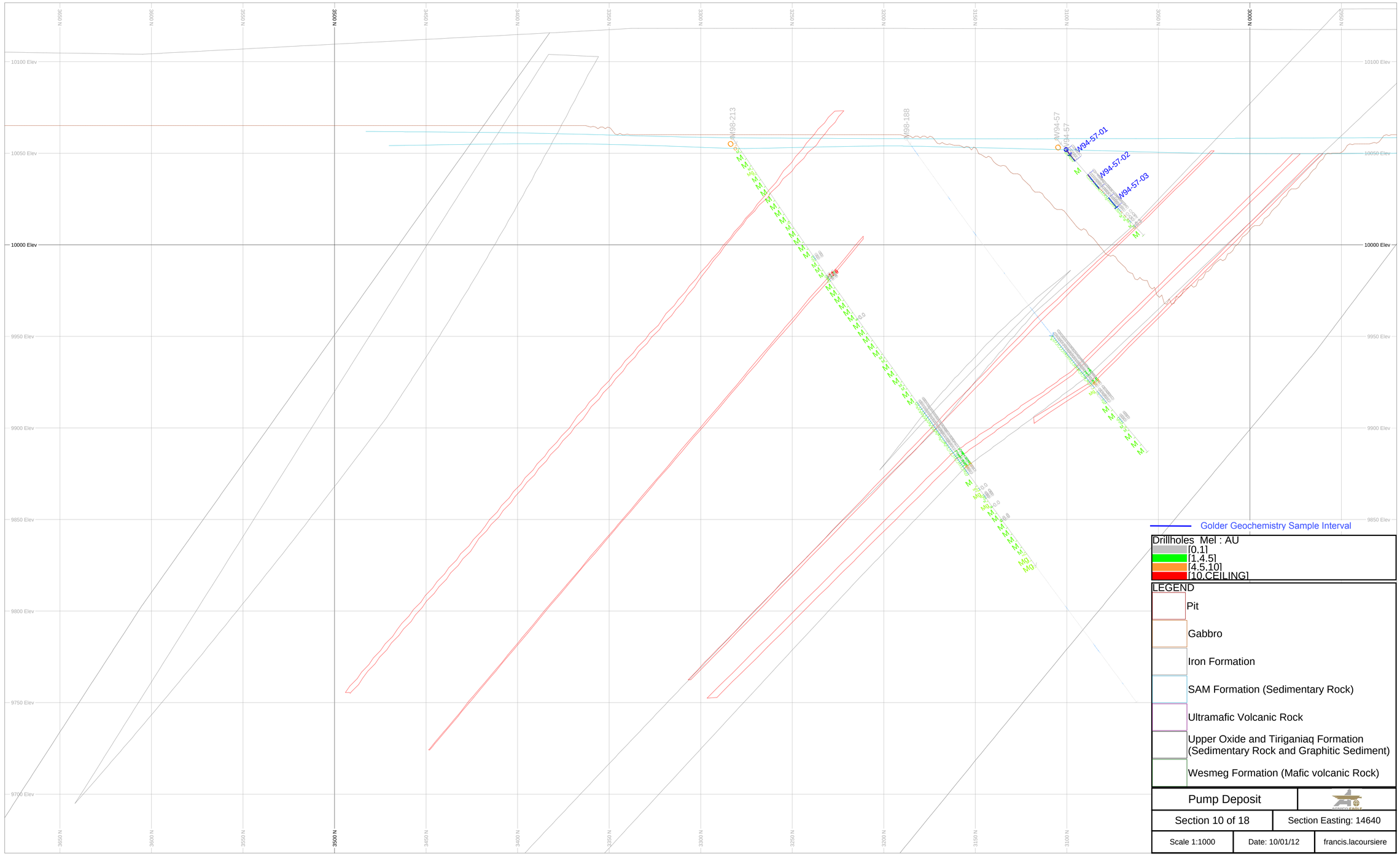

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9700 Elev
M98-185
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M94-61
M98-185-01
M98-185-02
M98-185-03
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M97-124-02
W94-61-01
W94-61-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 5 of 18
Section Easting: 14440
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

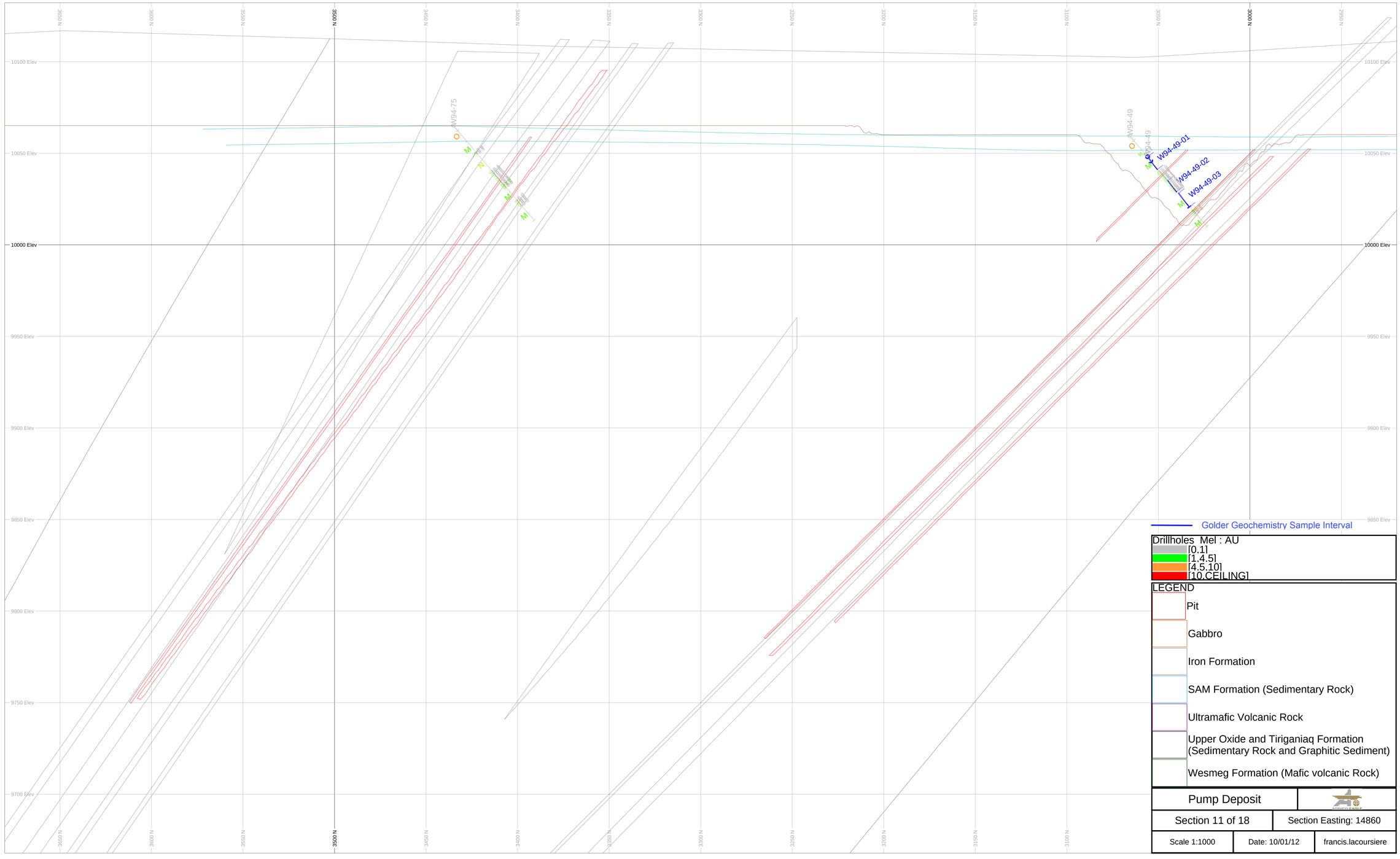

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9750 Elev
9700 Elev
M97-124
W94-59
94-59
W94-59-01
M97-124-03
M97-124-04
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 6 of 18
Section Easting: 14460
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

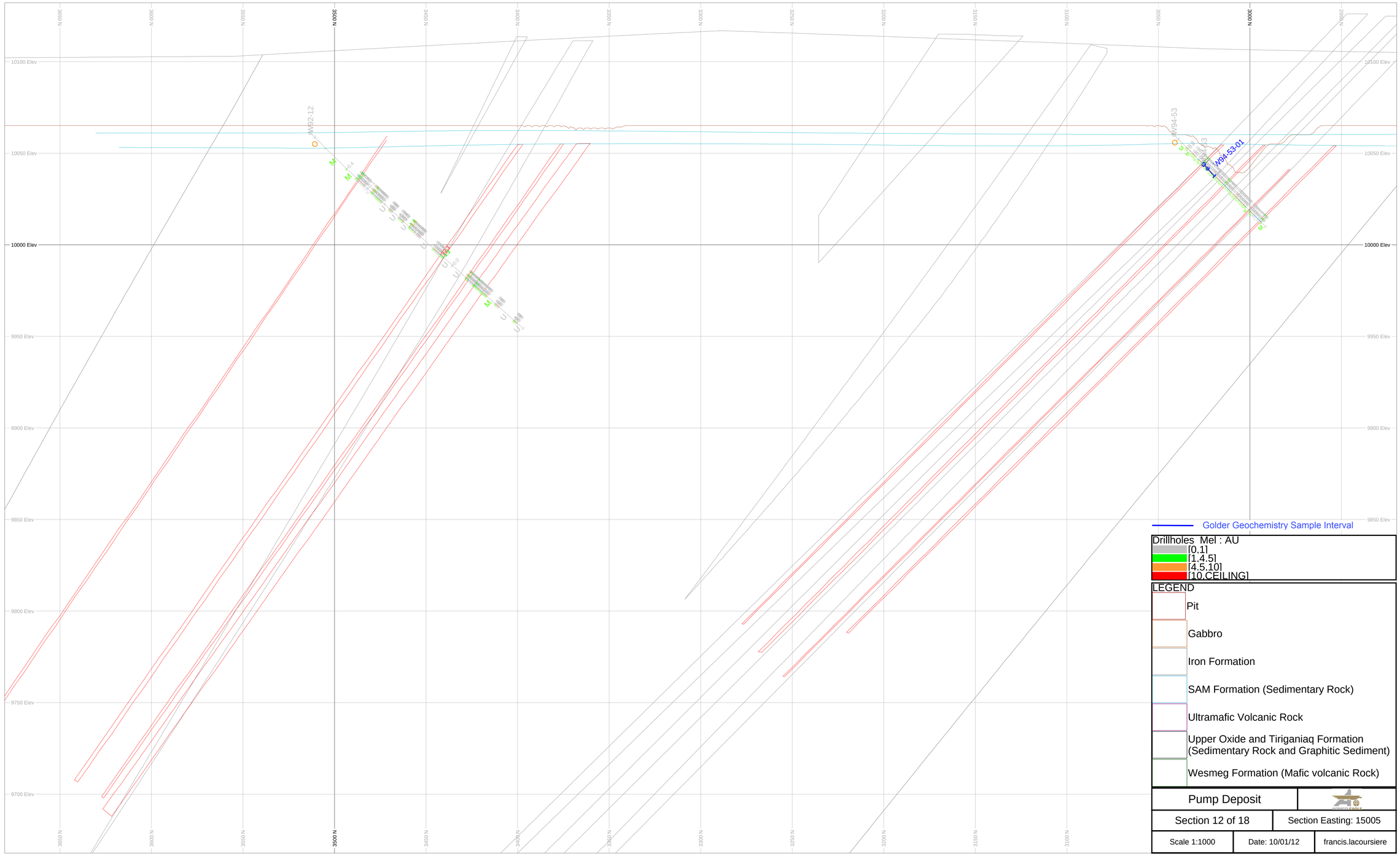

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9900 Elev
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M97-124
M97-124-04
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 7 of 18
Section Easting: 14480
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

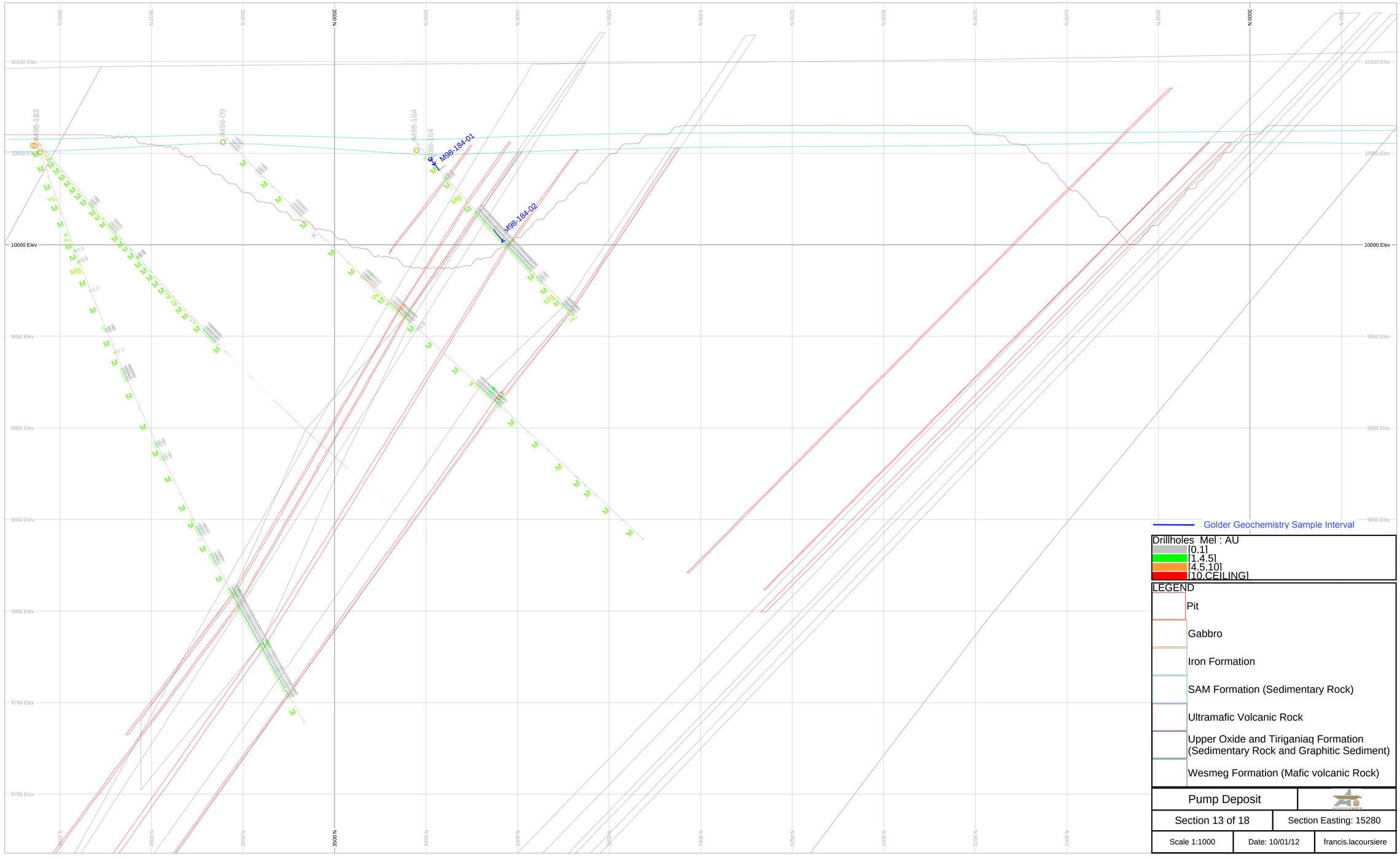

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9750 Elev
9700 Elev
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W94-70
W94-70-01
W94-70-02
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M
M
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 8 of 18
Section Easting: 14500
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

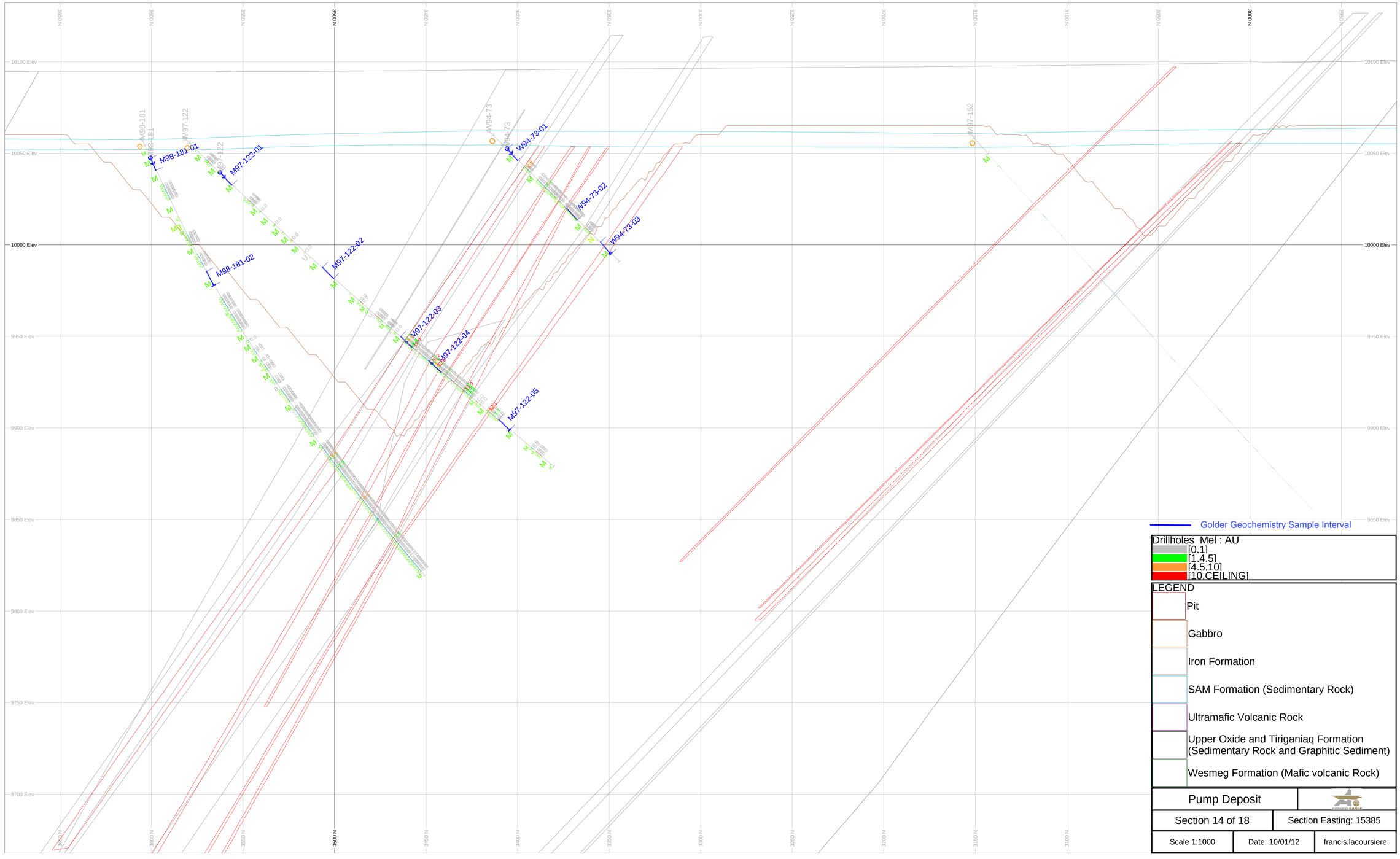

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9700 Elev
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W94-70
W94-70-01
W94-70-02
W92-10
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 9 of 18
Section Easting: 14520
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

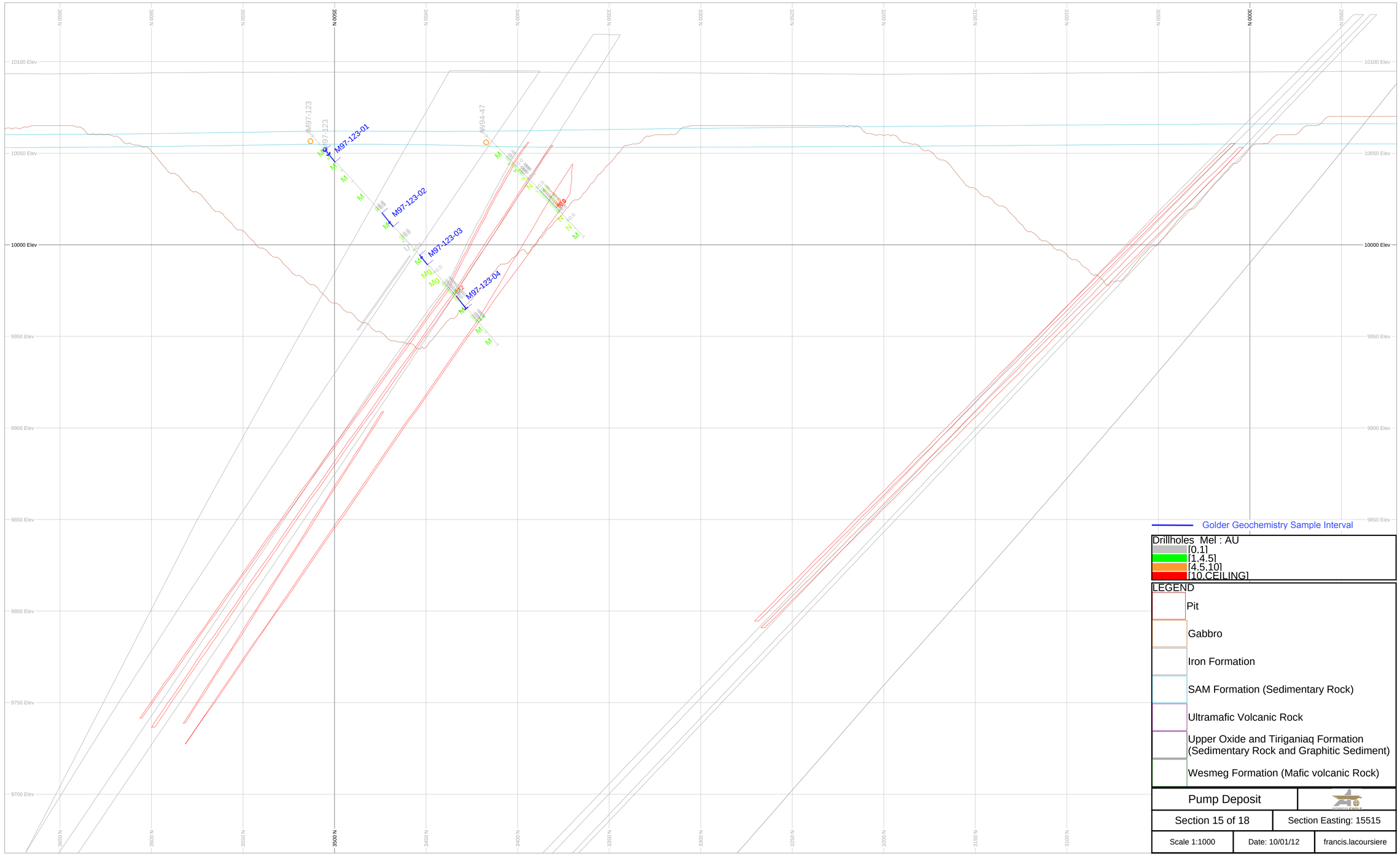

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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 10 of 18
Section Easting: 14640
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

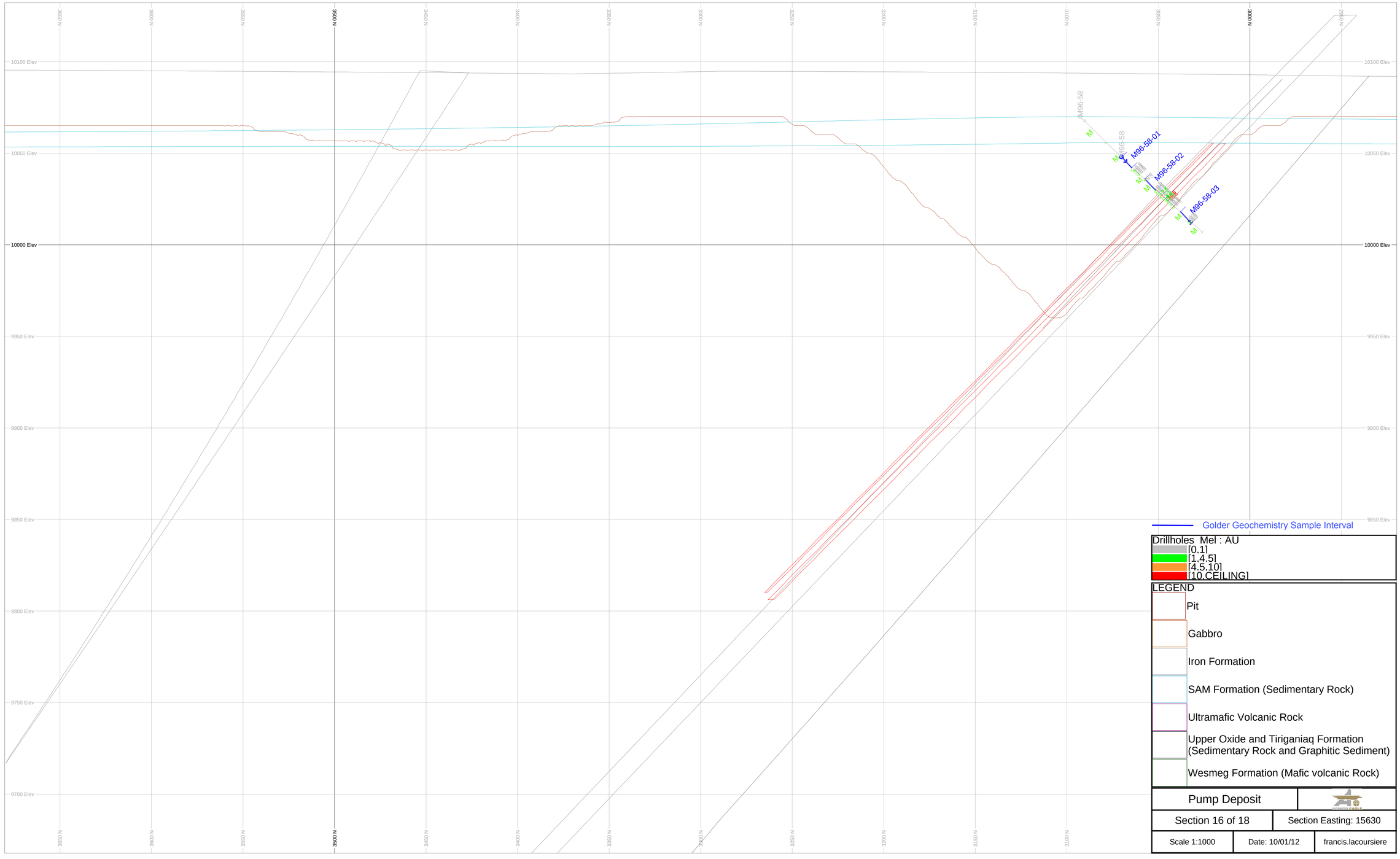

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Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 11 of 18
Section Easting: 14860
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

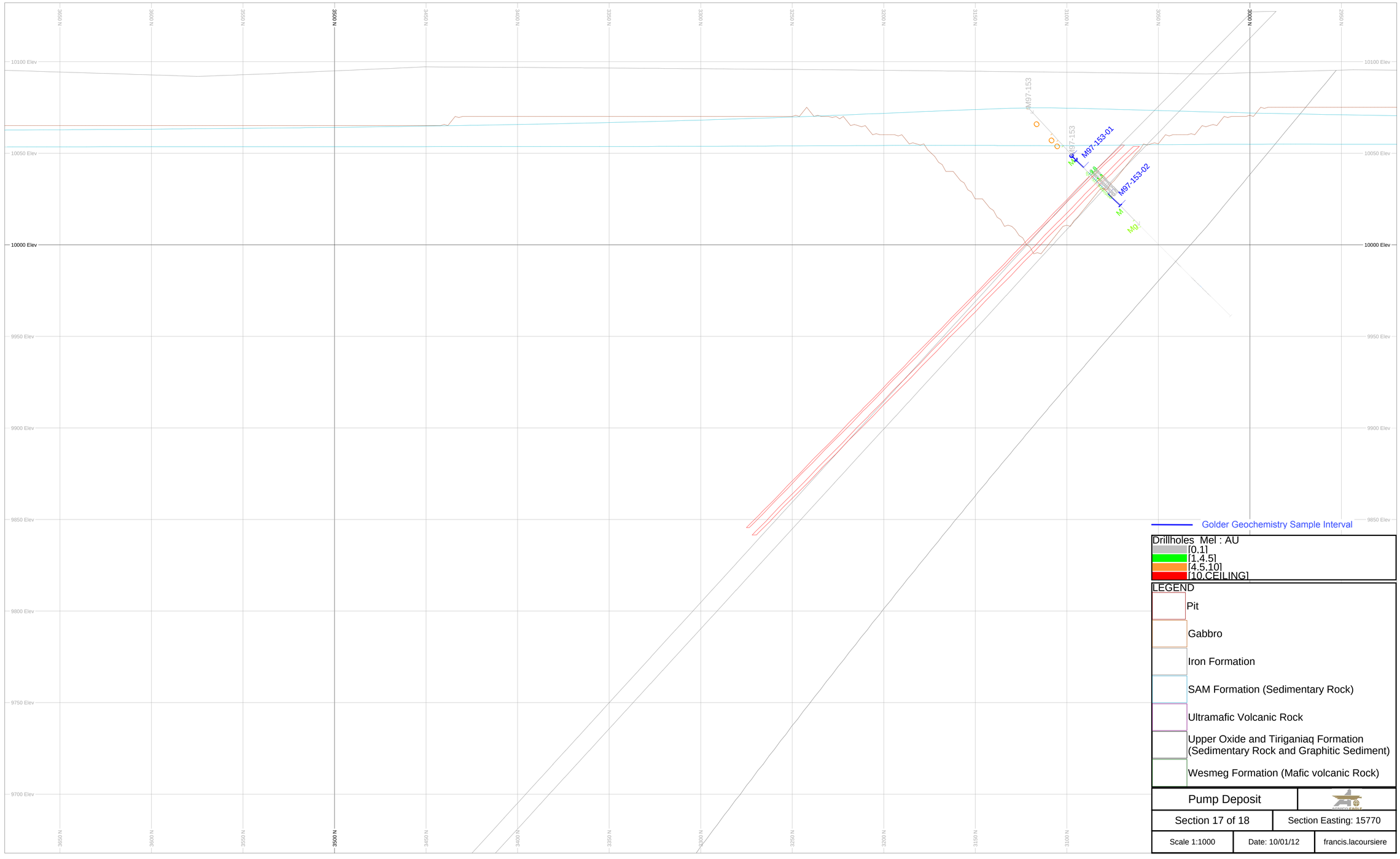

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9900 Elev
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AW92-12
AW94-53
W94-53-01
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 12 of 18
Section Easting: 15005
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

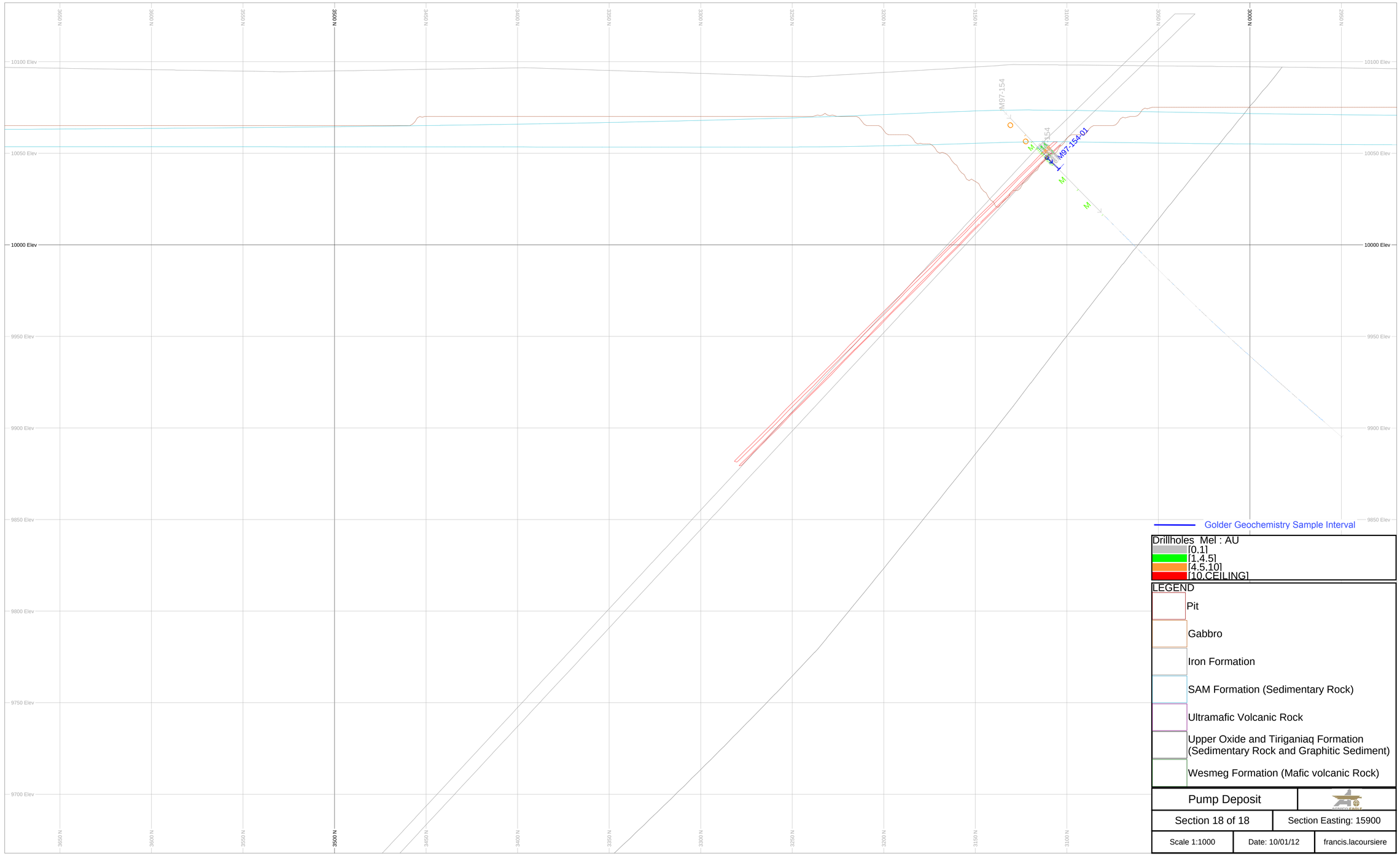

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M96-09
M98-184
M98-184
M98-184-01
M98-184-02
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10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 13 of 18
Section Easting: 15280
Scale 1:1000
Date: 10/01/12
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M98-181
M97-122
W94-73
M97-152
M98-181-01
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W94-73-01
M98-181-02
M97-122-02
W94-73-02
W94-73-03
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3600 N
3550 N
3500 N
3450 N
3400 N
3350 N
3300 N
3250 N
3200 N
3150 N
3100 N
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 14 of 18
Section Easting: 15385
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

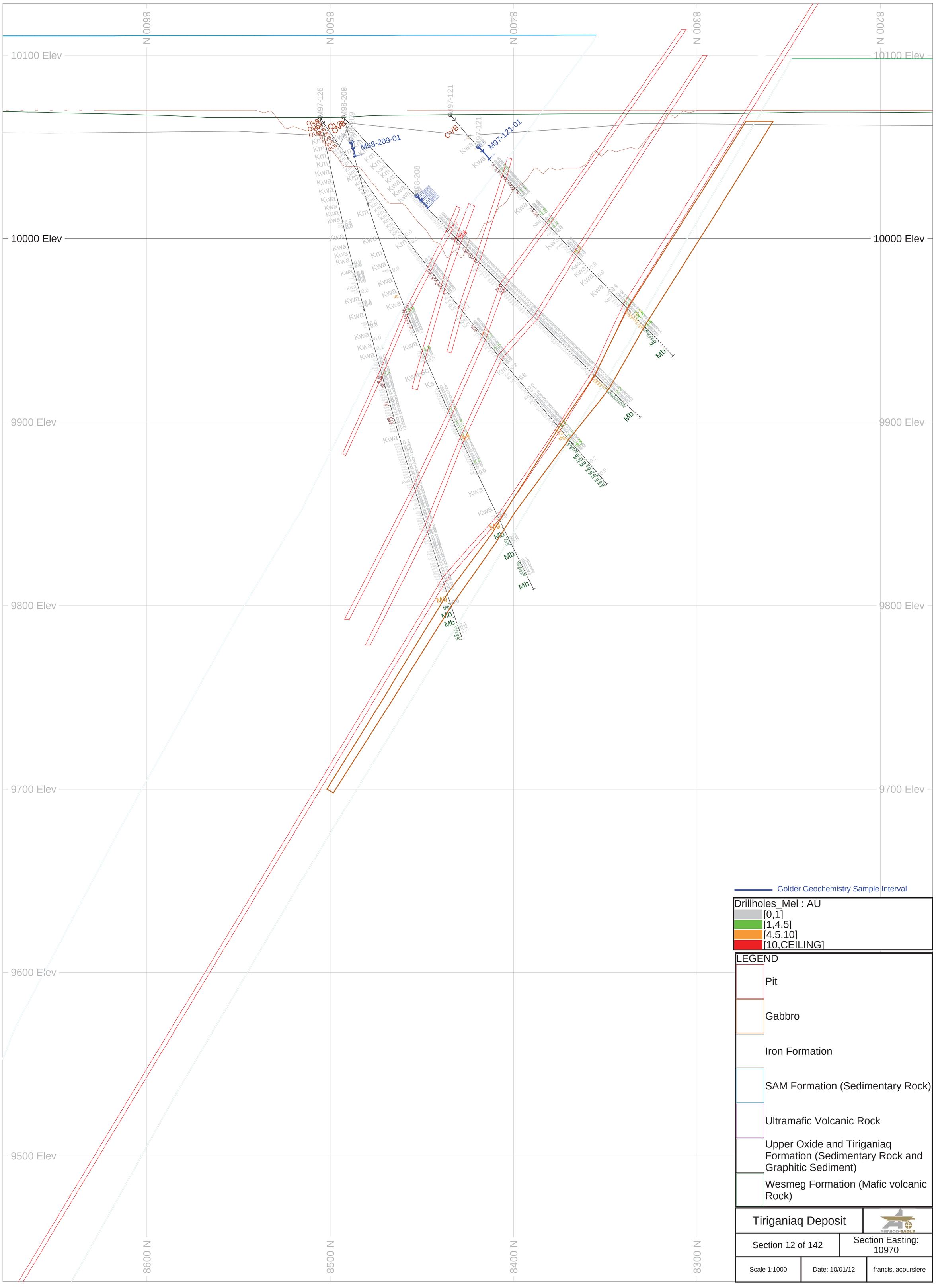

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9700 Elev
M97-123
M97-123
M97-123-01
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M97-123-04
M94-47
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 15 of 18
Section Easting: 15515
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

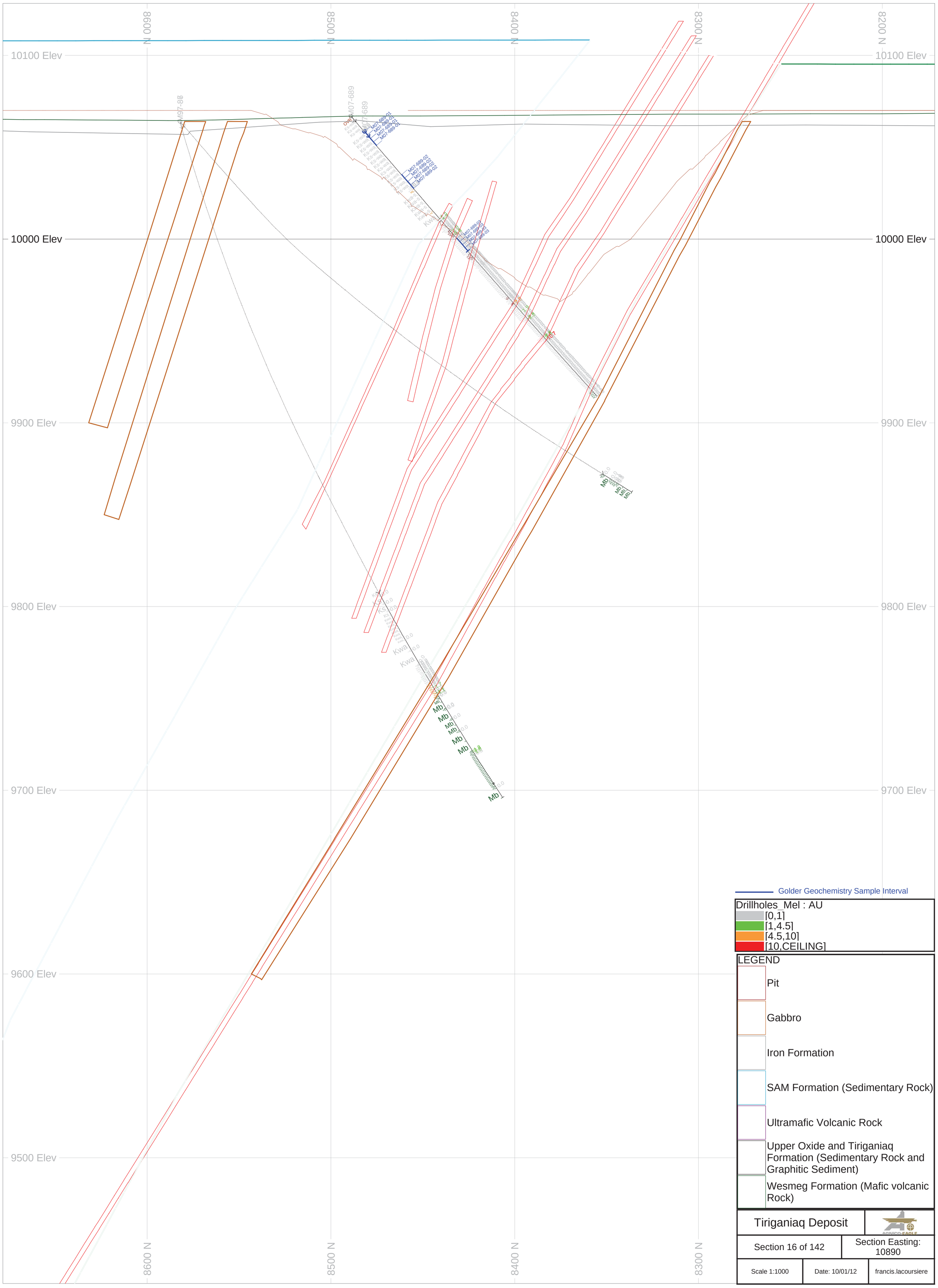

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3400 N
3350 N
3300 N
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3200 N
3150 N
3100 N
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2950 N
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10050 Elev
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9850 Elev
9800 Elev
9750 Elev
9700 Elev
M96-58
M96-58-01
M96-58-02
M96-58-03
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 16 of 18
Section Easting: 15630
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

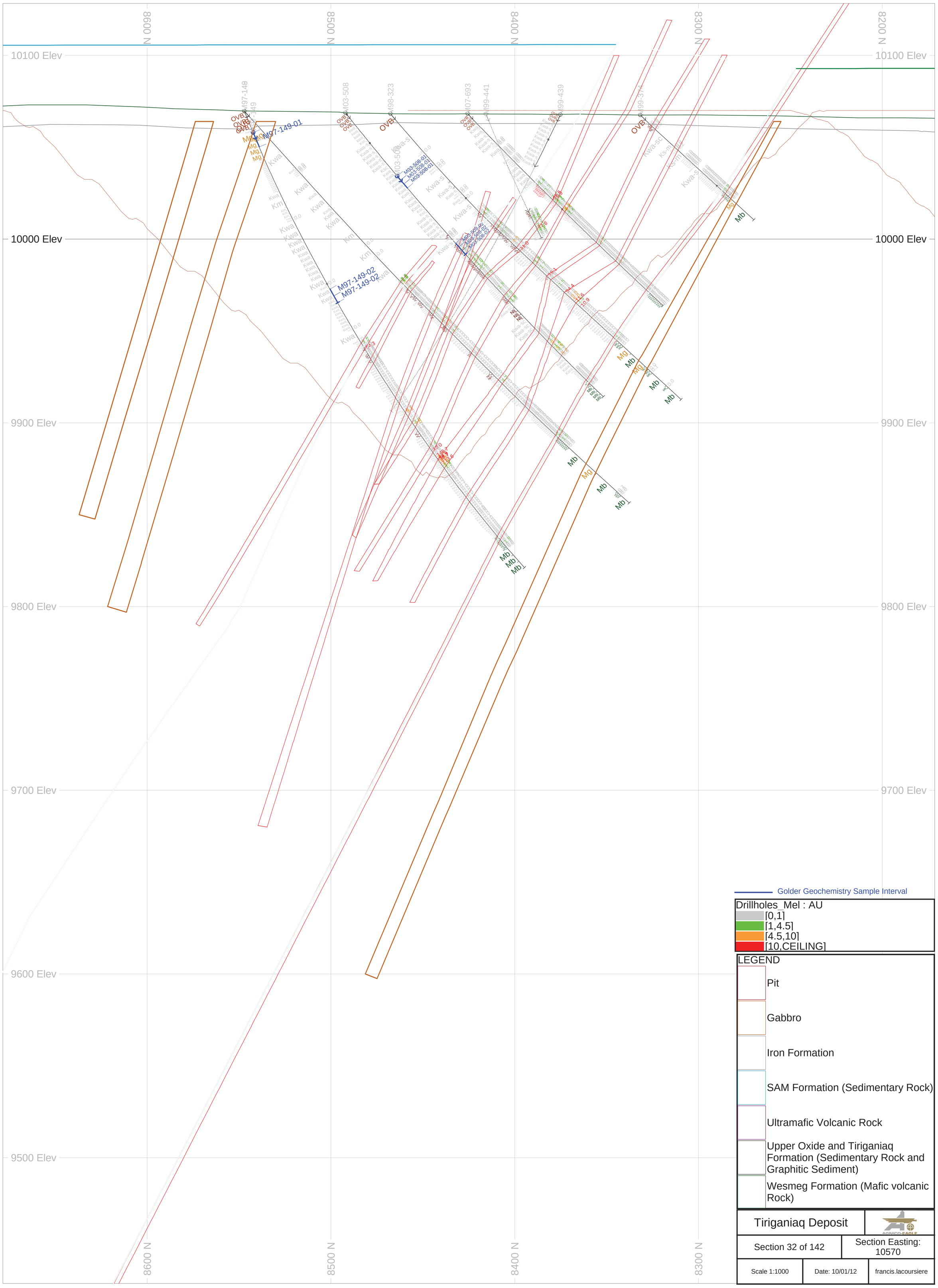

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3150 N
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9850 Elev
9800 Elev
9750 Elev
9700 Elev
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M97-153
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M97-153-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[10,CEILING]
LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 17 of 18
Section Easting: 15770
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


3650 N
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3350 N
3300 N
3250 N
3200 N
3150 N
3100 N
3050 N
2950 N
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10050 Elev
10000 Elev
9950 Elev
9900 Elev
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9800 Elev
9750 Elev
9700 Elev
M97-154
M97-154-01
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Pump Deposit
Section 18 of 18
Section Easting: 15900
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

# A.4 Tiriganiaq Cross-Sections


8600 N
8500 N
8400 N
8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
M97-126
M98-209
M98-209-01
M98-208
M97-121
M97-121-01
OVB
Mb
Mg
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 12 of 142
Section Easting: 10970
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


8600 N
8500 N
8400 N
8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
M07-689
M07-689-01
M07-689-02
M07-689-03
Mb
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 16 of 142
Section Easting: 10890
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


8600 N
8500 N
8400 N
8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
M97-149
M03-508
M98-323
M07-693
M99-441
M99-439
M99-374
M97-149-01
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M03-506-02
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 32 of 142
Section Easting: 10570
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

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8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
OVB
Mb
MgL
Mv
M97-143-01

Golder Geochemistry Sample Interval

Drillholes_Mel : AU
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[1,4.5]
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[10,CEILING]

LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)

Tiriganiaq Deposit

AGNICO-EAGLE

Section 44 of 142

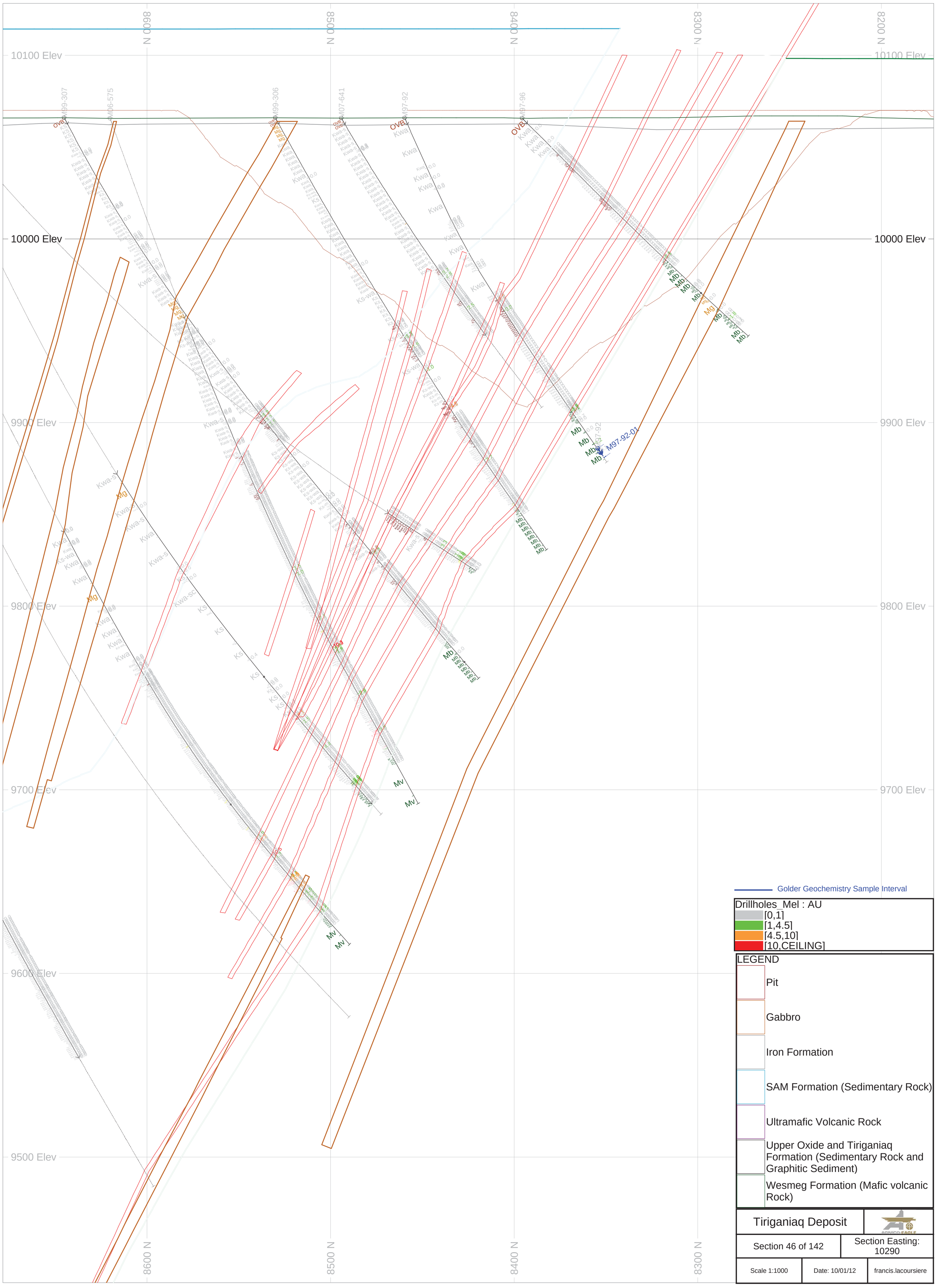
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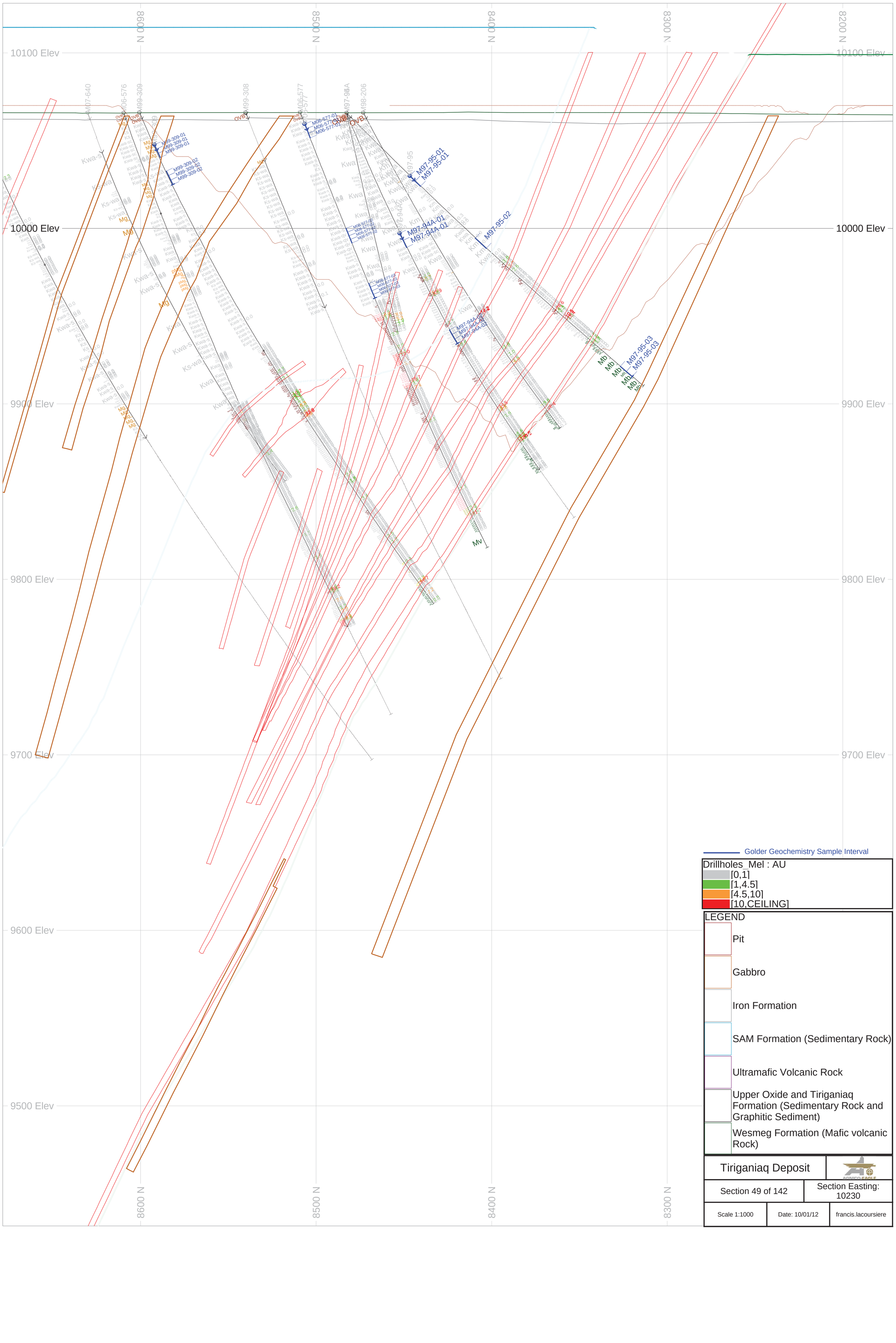
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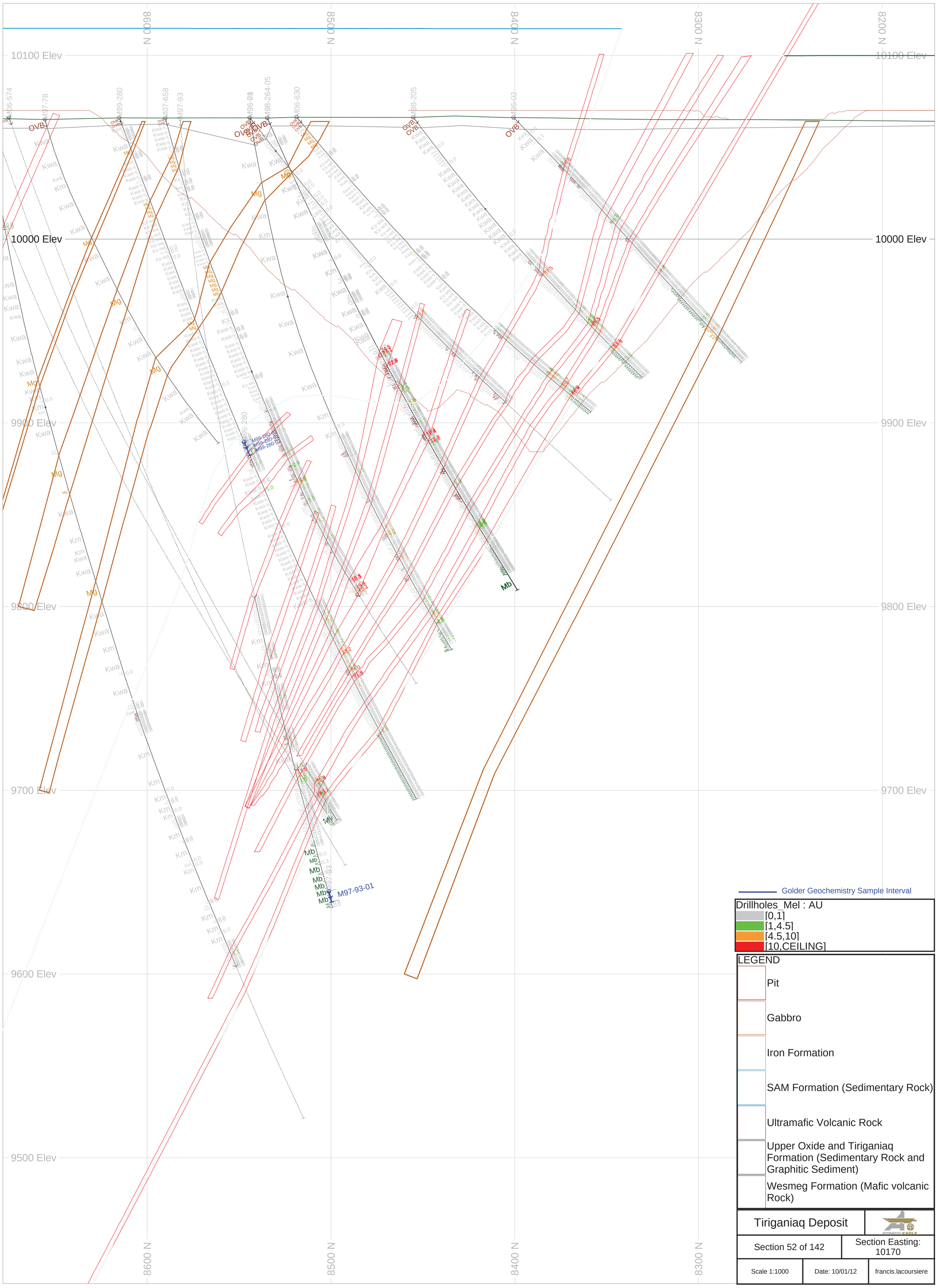
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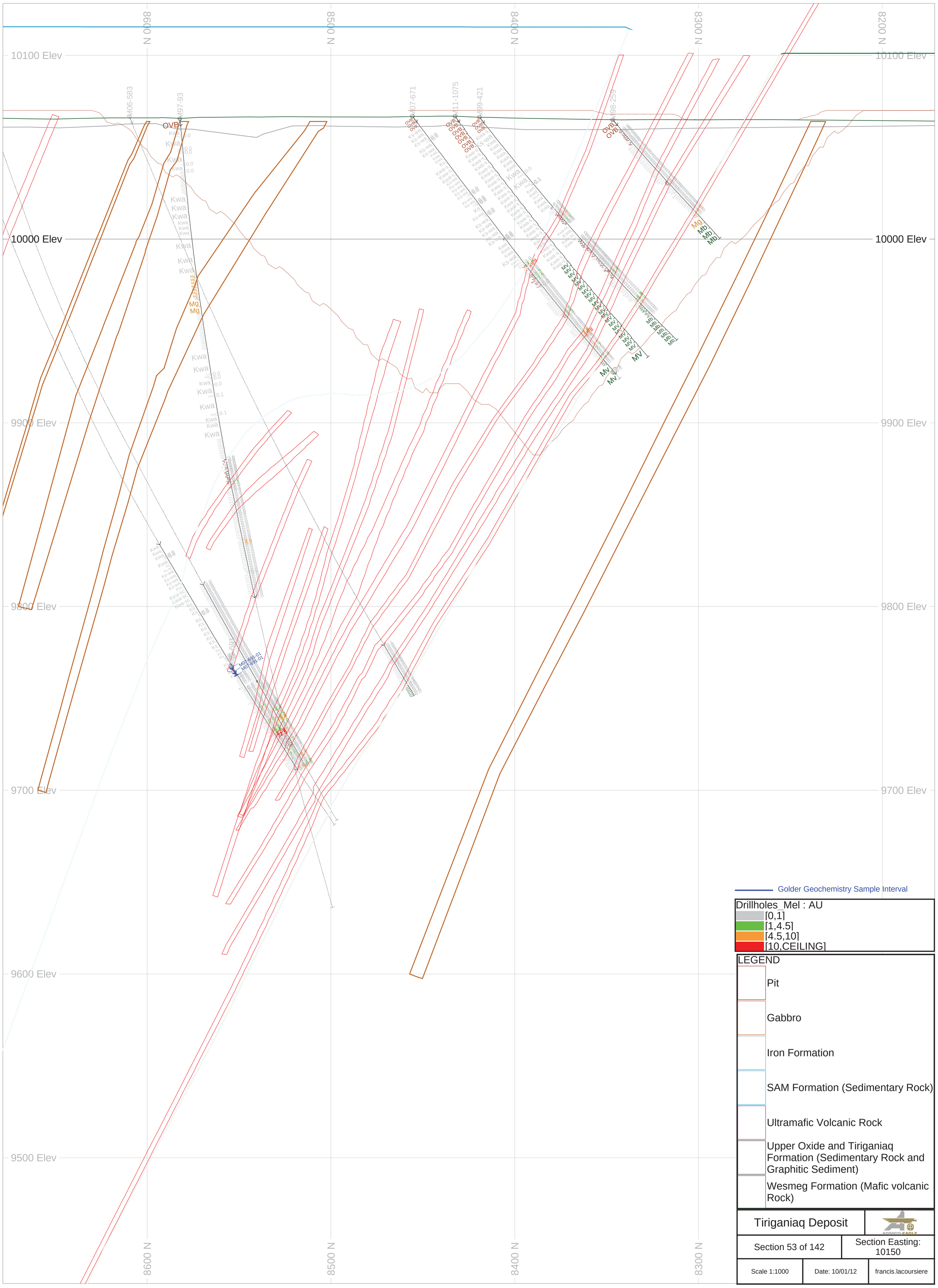
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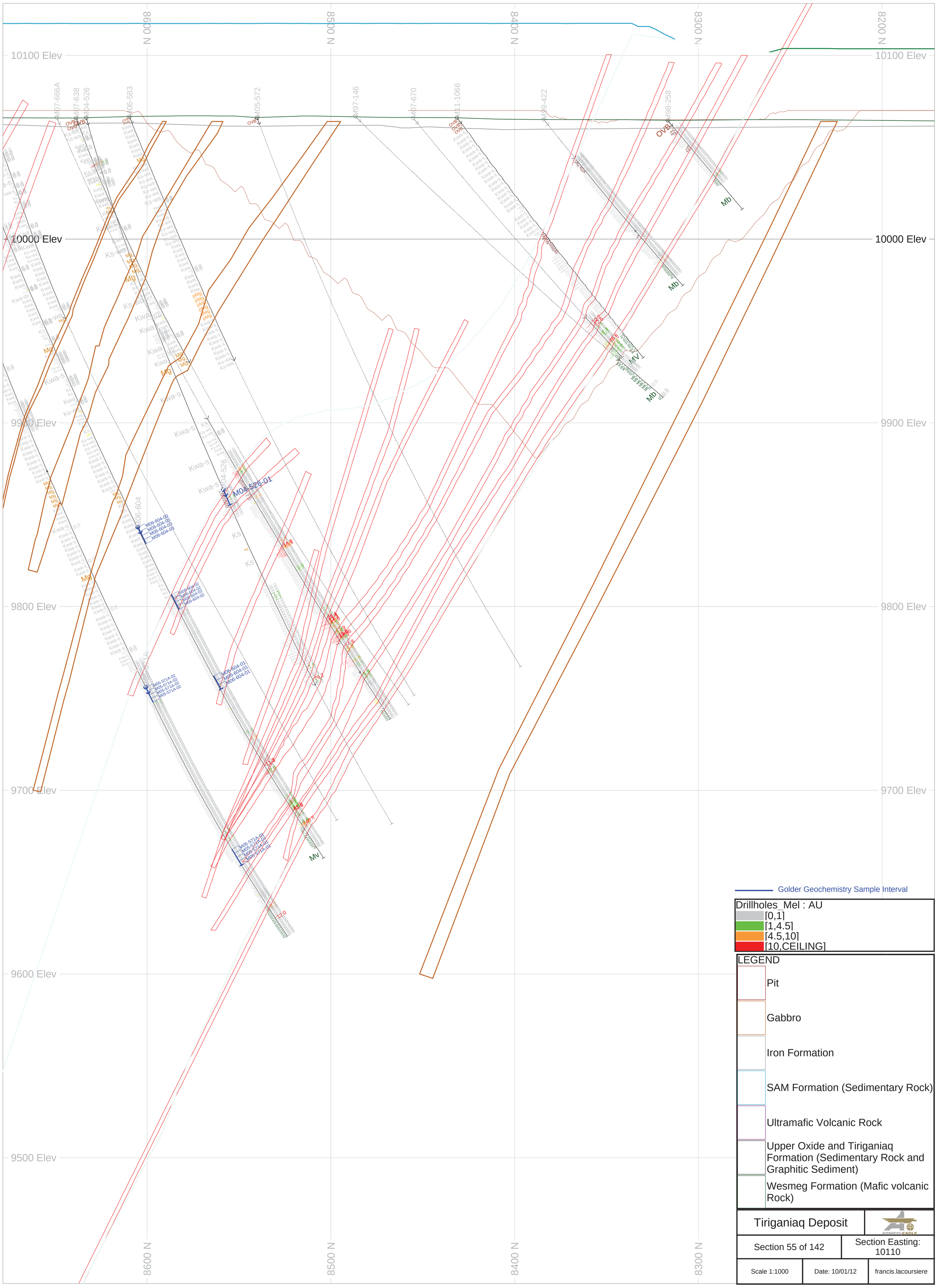
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8500 N
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10000 Elev
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9600 Elev
9500 Elev
M06-575
M06-578
M07-641
M06-581
M97-92
M97-92-01
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[4.5,10]
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 45 of 142
Section Easting: 10310
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

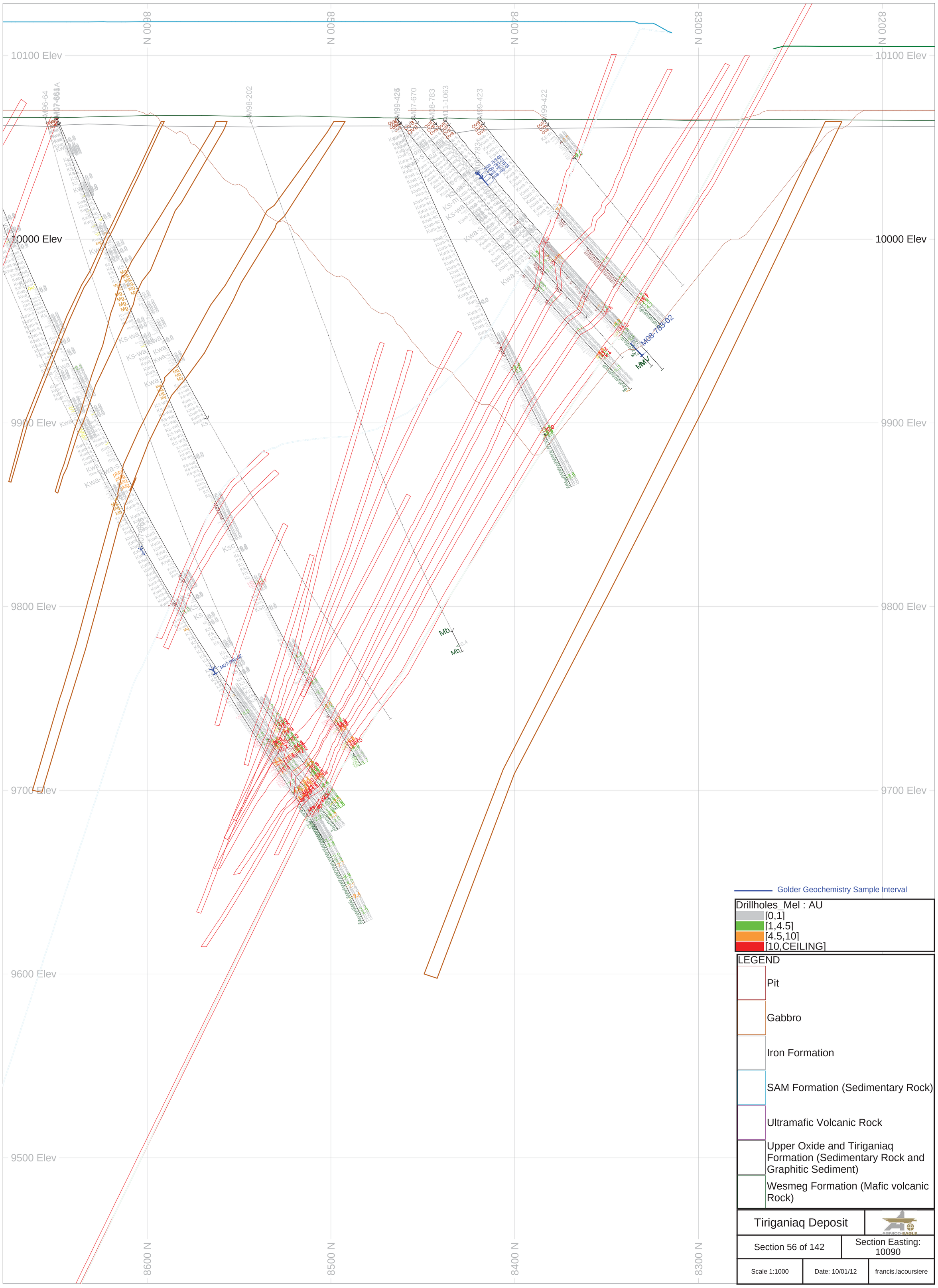

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8400 N
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9600 Elev
9500 Elev
M99-307
M06-575
M99-306
M07-641
M97-92
M97-96
M97-92-01
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 46 of 142
Section Easting: 10290
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

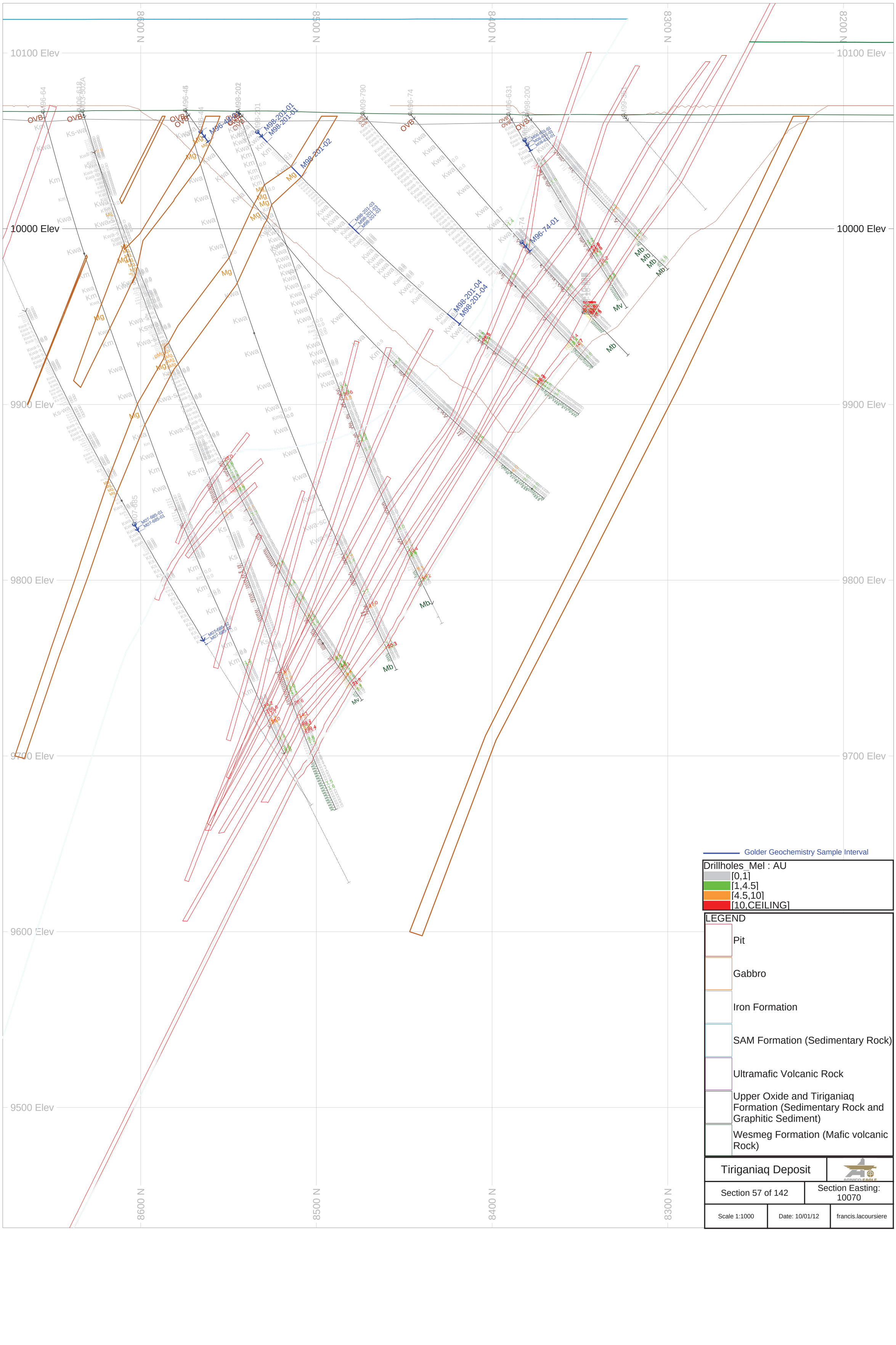

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9700 Elev
9600 Elev
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M99-308
M06-577
M97-94A
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M97-95-02
M97-94A-01
M97-94A-02
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OVB
Kwa-S
Ks-wa
Mg
Mv
Mb
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 49 of 142
Section Easting: 10230
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

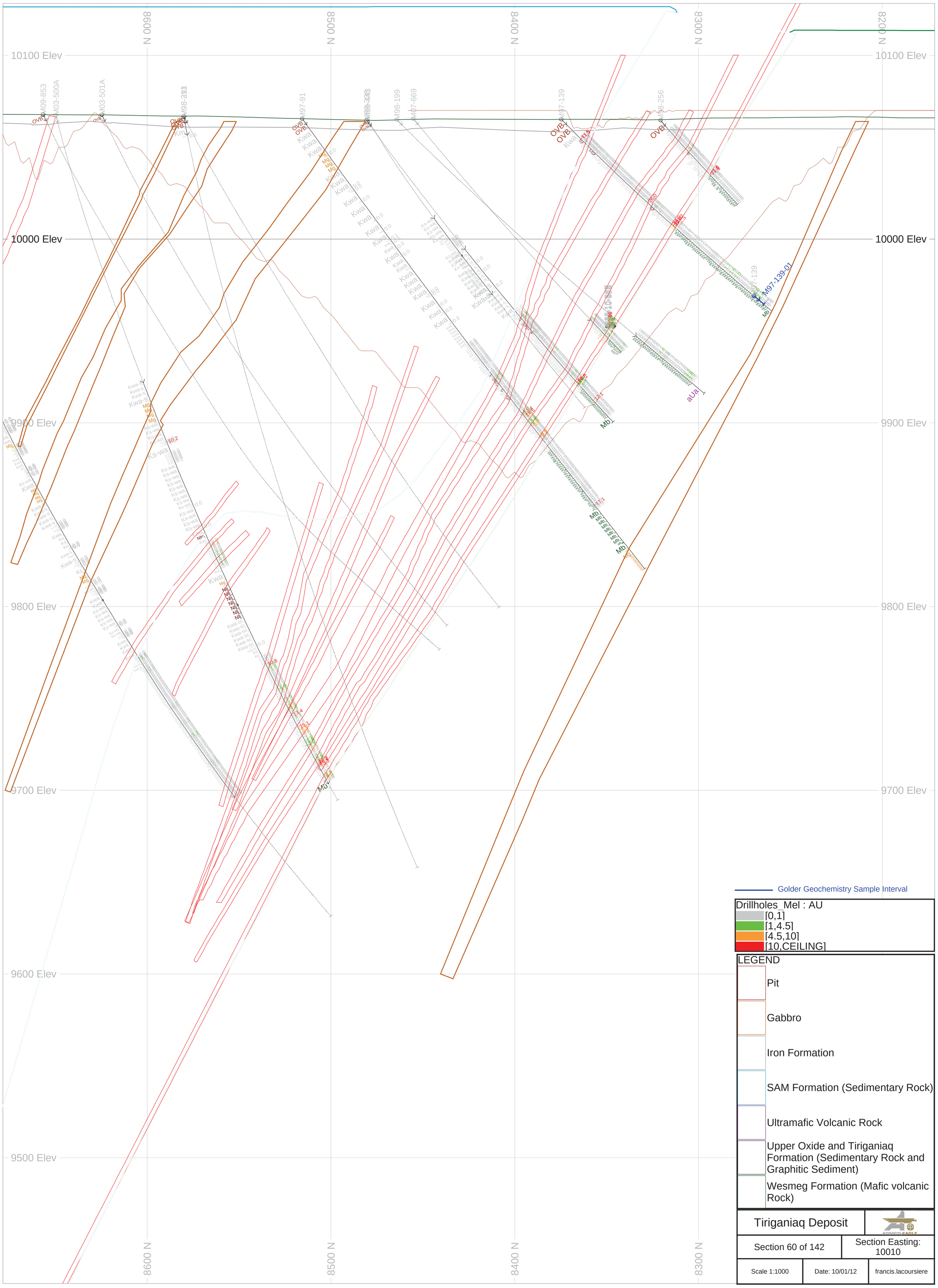

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M97-78
M99-280
M07-658
M97-93
M96-08
M98-264-05
M06-630
M98-205
M95-02
M99-280-03
M99-280-04
M99-280-01
M97-93-01
OVB
Mg
Km
Kwa
Ks-wa
Kwa-s
Mb
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 52 of 142
Section Easting: 10170
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

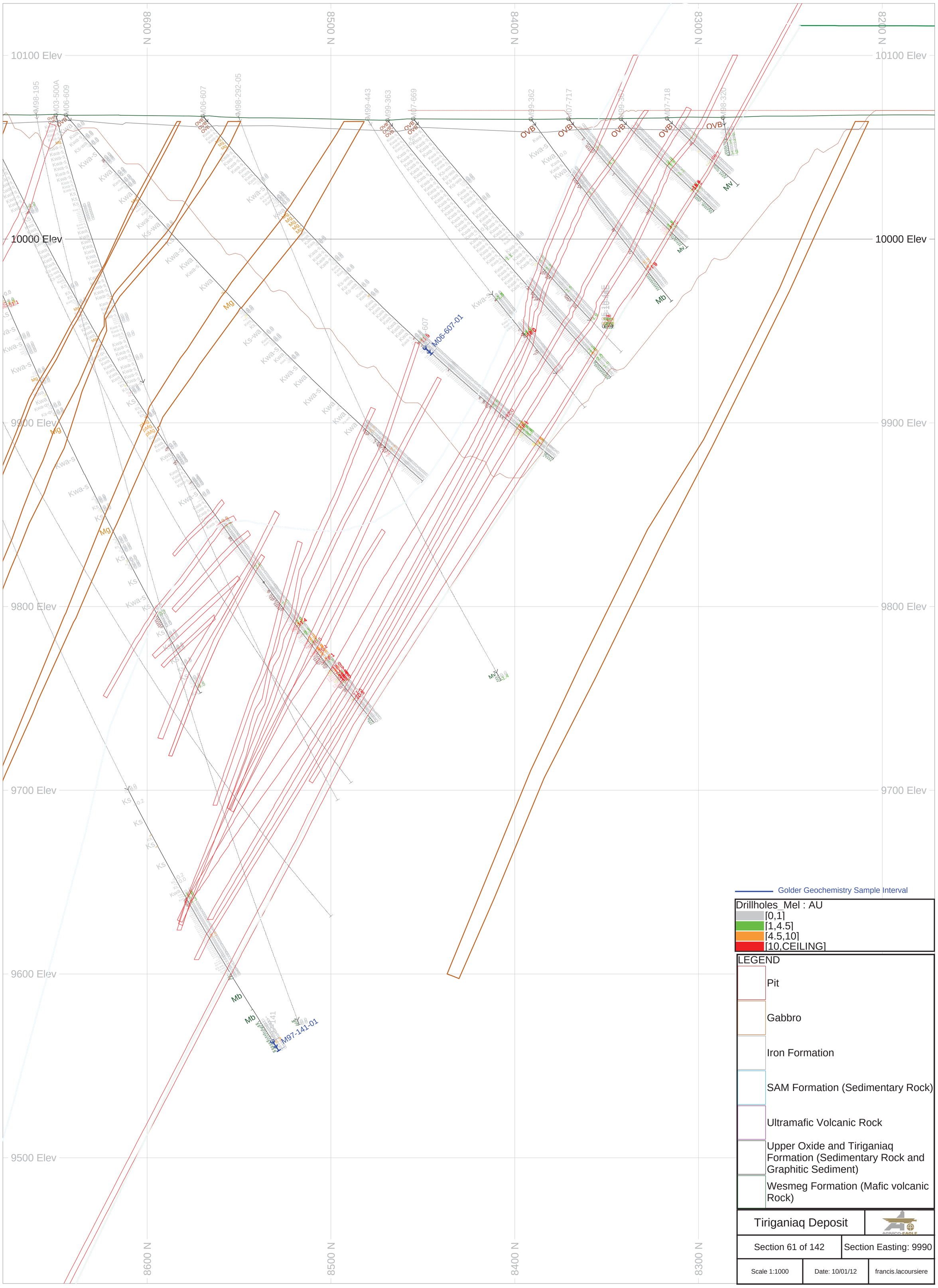

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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 53 of 142
Section Easting: 10150
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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8500 N
8400 N
8300 N
8200 N
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10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
M07-666A
M07-638
M04-526
M06-583
M05-572
M97-146
M07-670
M11-1066
M09-422
M98-258
M04-526-01
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M06-604-03
M05-604-03
M06-604-02
M05-604-02
M06-604-01
M05-604-01
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Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 55 of 142
Section Easting: 10110
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

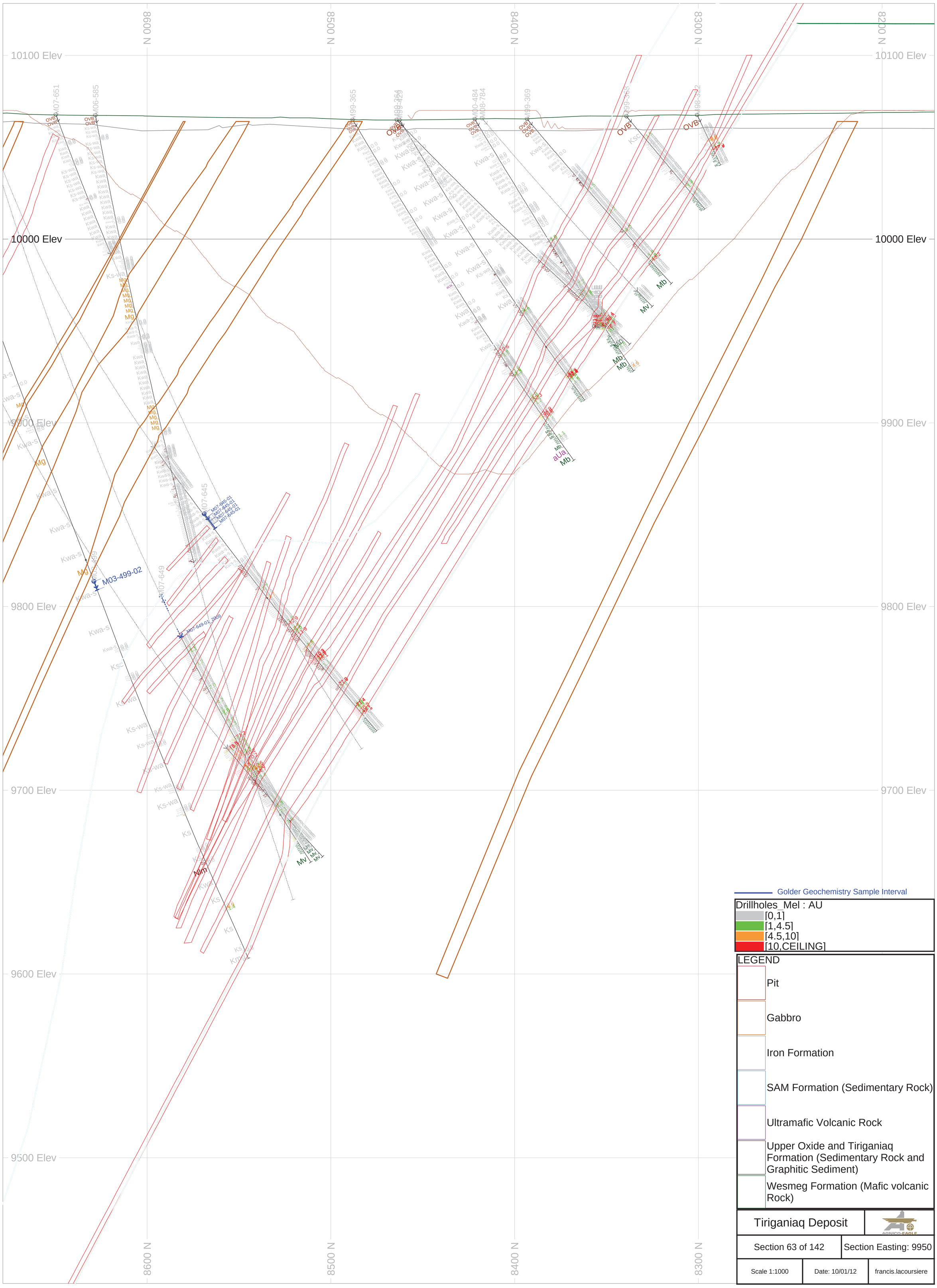

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M07-670
M08-783
M11-1063
M99-423
M99-422
M08-783-01
M08-783-02
M07-685-02
MMV
Mb
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Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 56 of 142
Section Easting: 10090
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

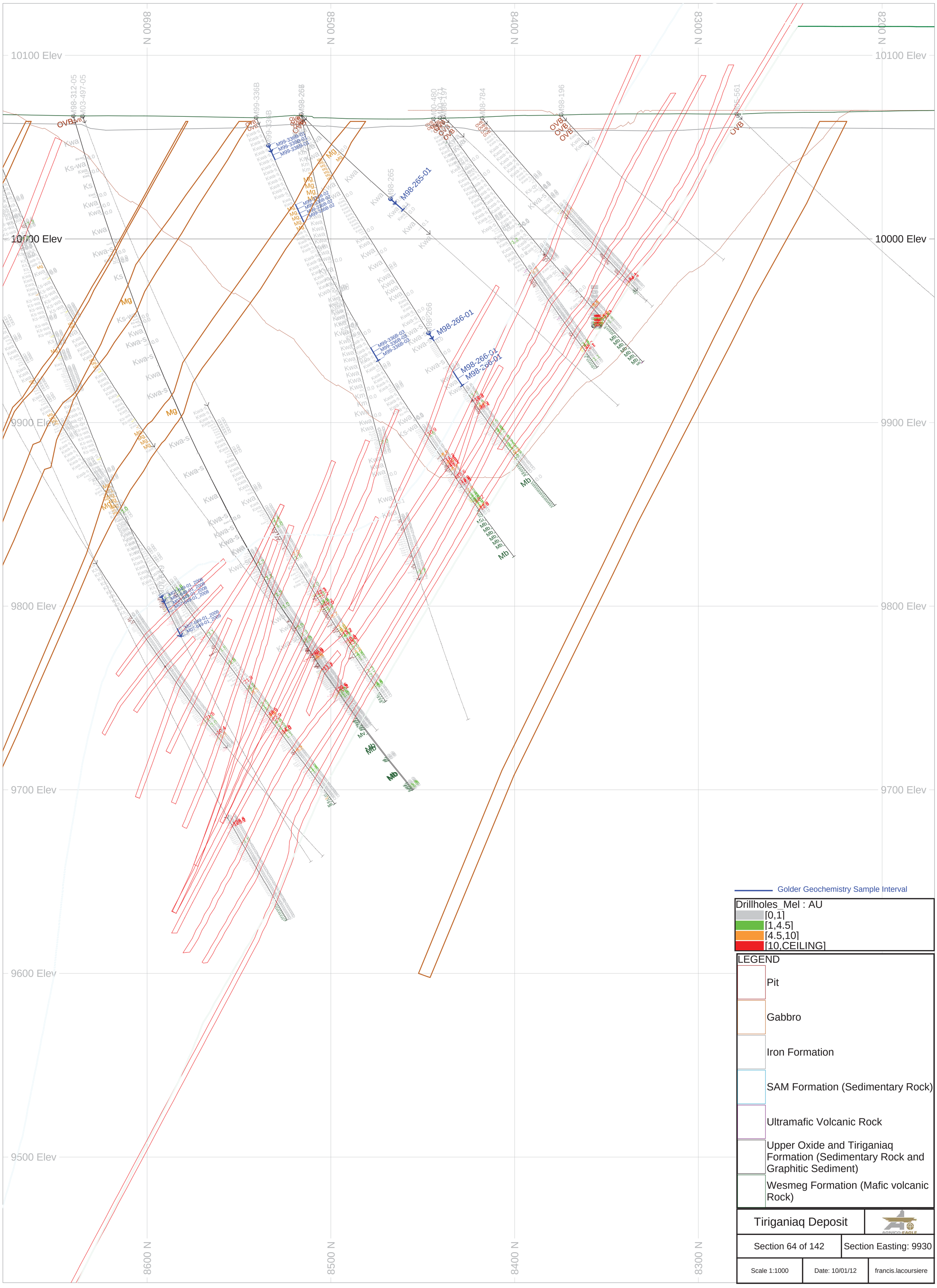

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8400 N
8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
OVB
Mg
Mb
Mv
Km
Kwa
Ks-wa
Ks-m
Ks
Kwa-sc
M96-44-01
M98-201-01
M98-201-02
M98-201-03
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M07-685-01
M07-685-02
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 57 of 142
Section Easting: 10070
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

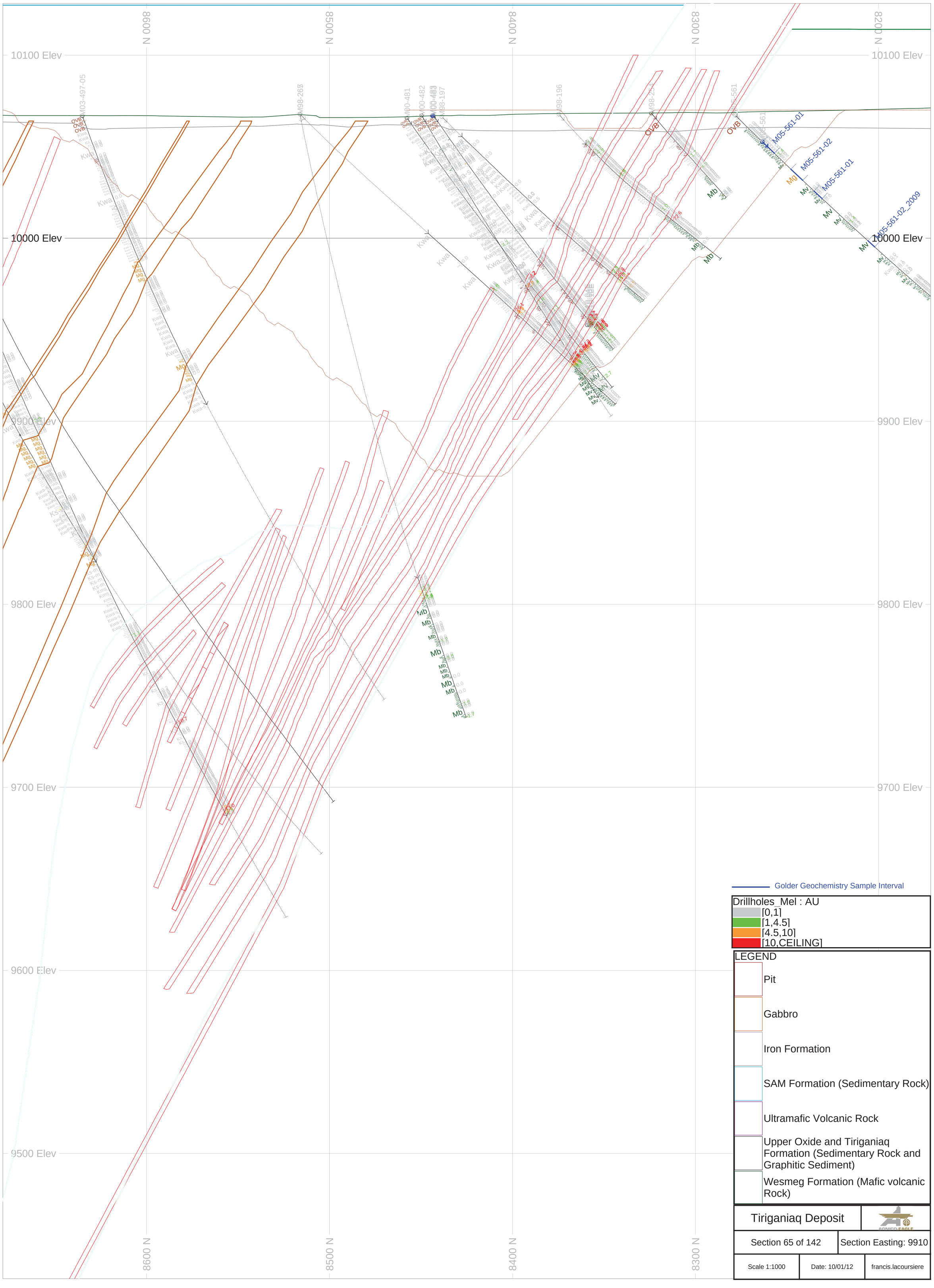

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M97-139-01
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
Section 60 of 142
Section Easting: 10010
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

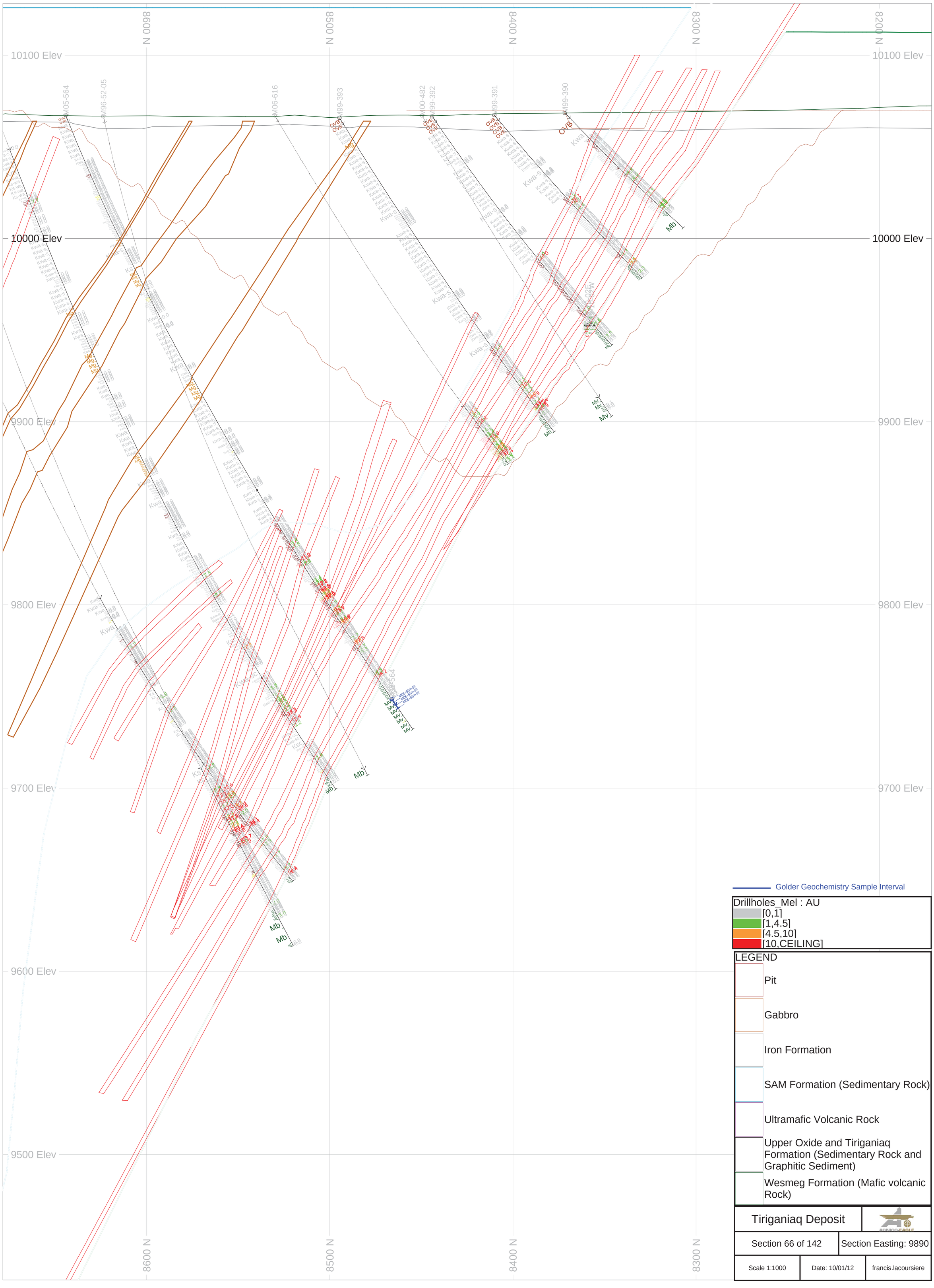

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9500 Elev
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M03-500A
M06-609
M06-607
M98-292-05
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M07-669
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M07-717
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OVB
Mg
Mv
Mb
Golder Geochemistry Sample Interval
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LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 61 of 142
Section Easting: 9990
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

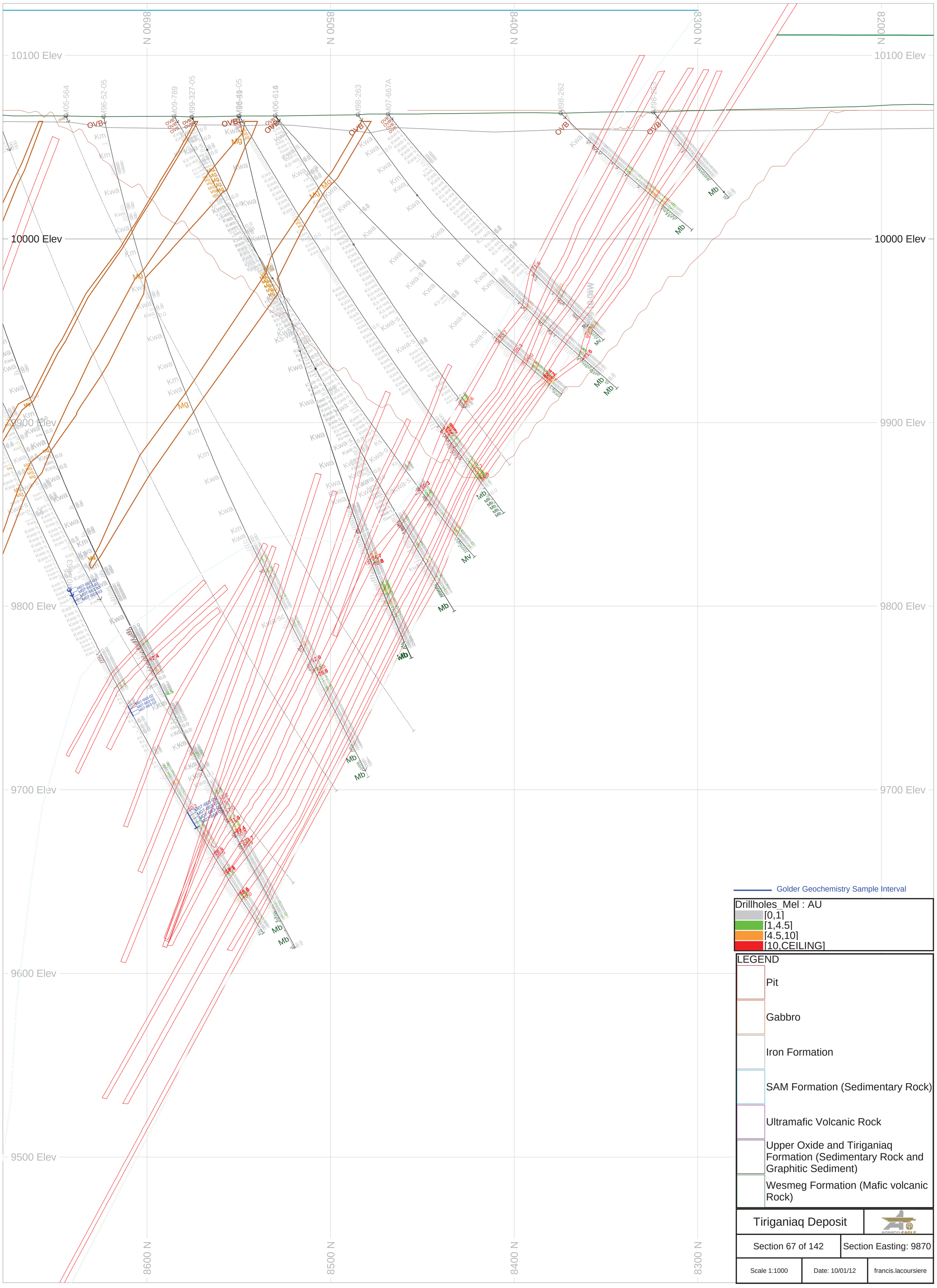

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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 62 of 142
Section Easting: 9970
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

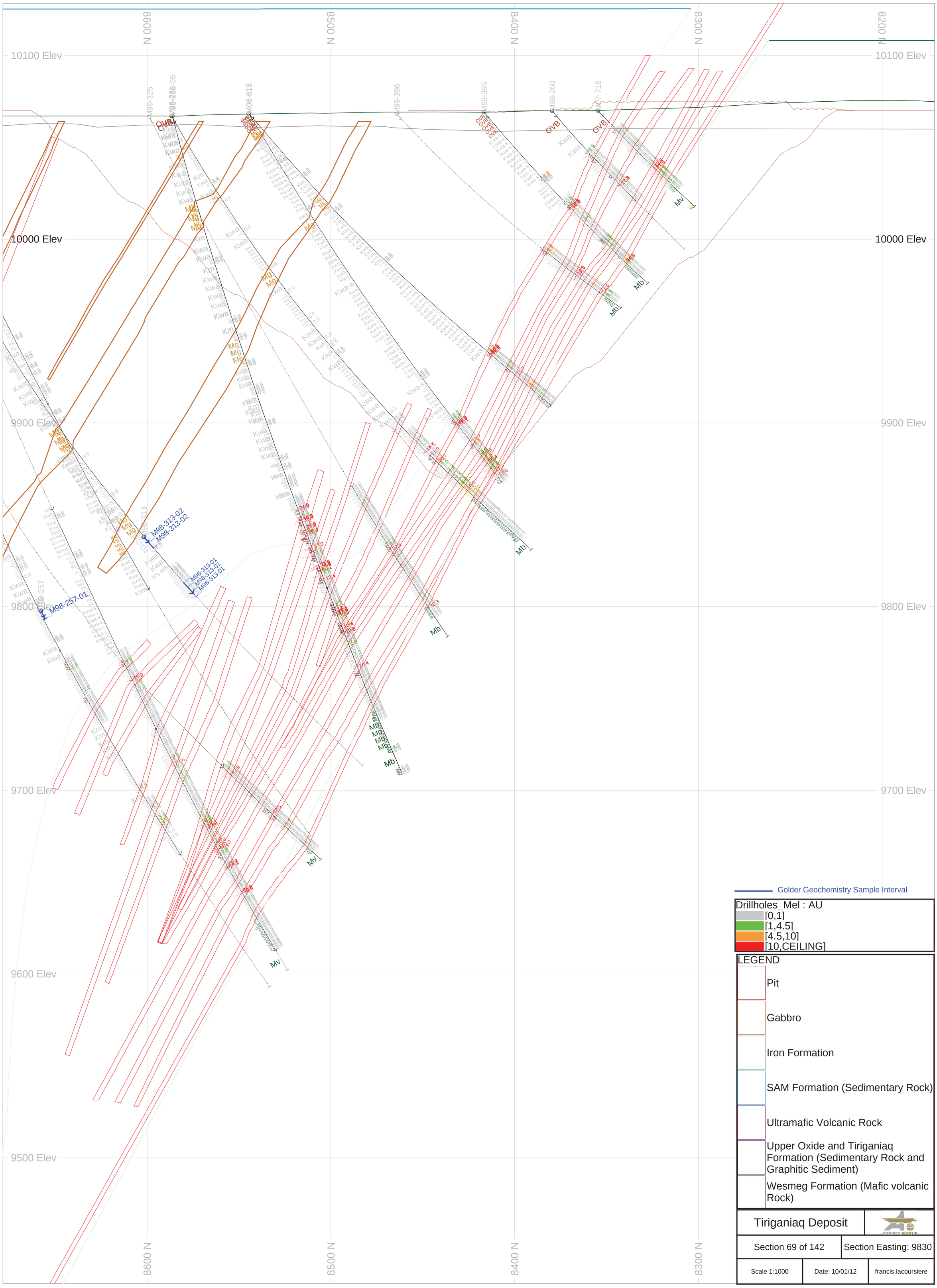

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Mb
Mv
Mm
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 63 of 142
Section Easting: 9950
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

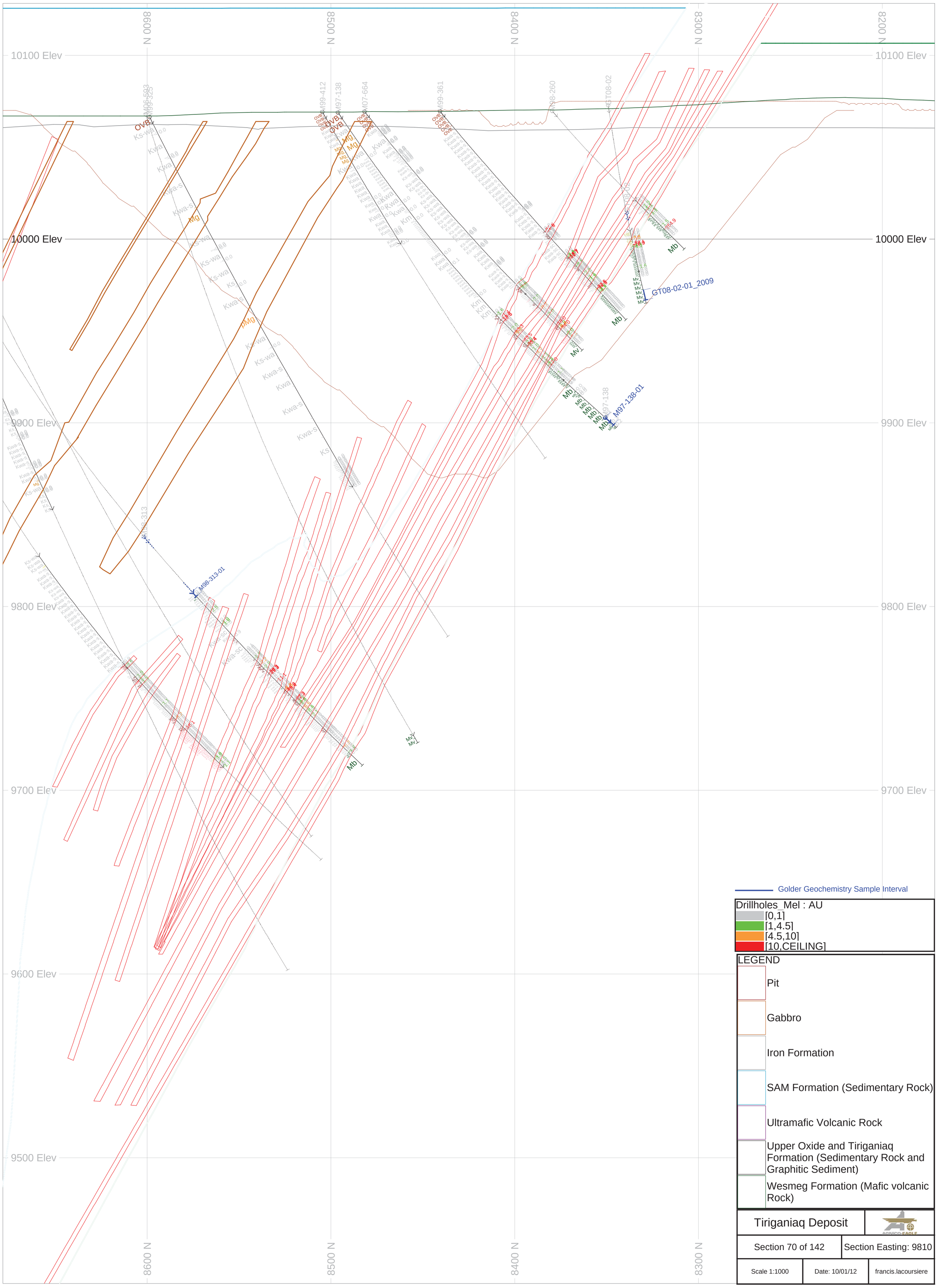

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Kwa-s
Ks-wa
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Km
Mg
Mb
MV
MD
Golder Geochemistry Sample Interval
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LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 64 of 142
Section Easting: 9930
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

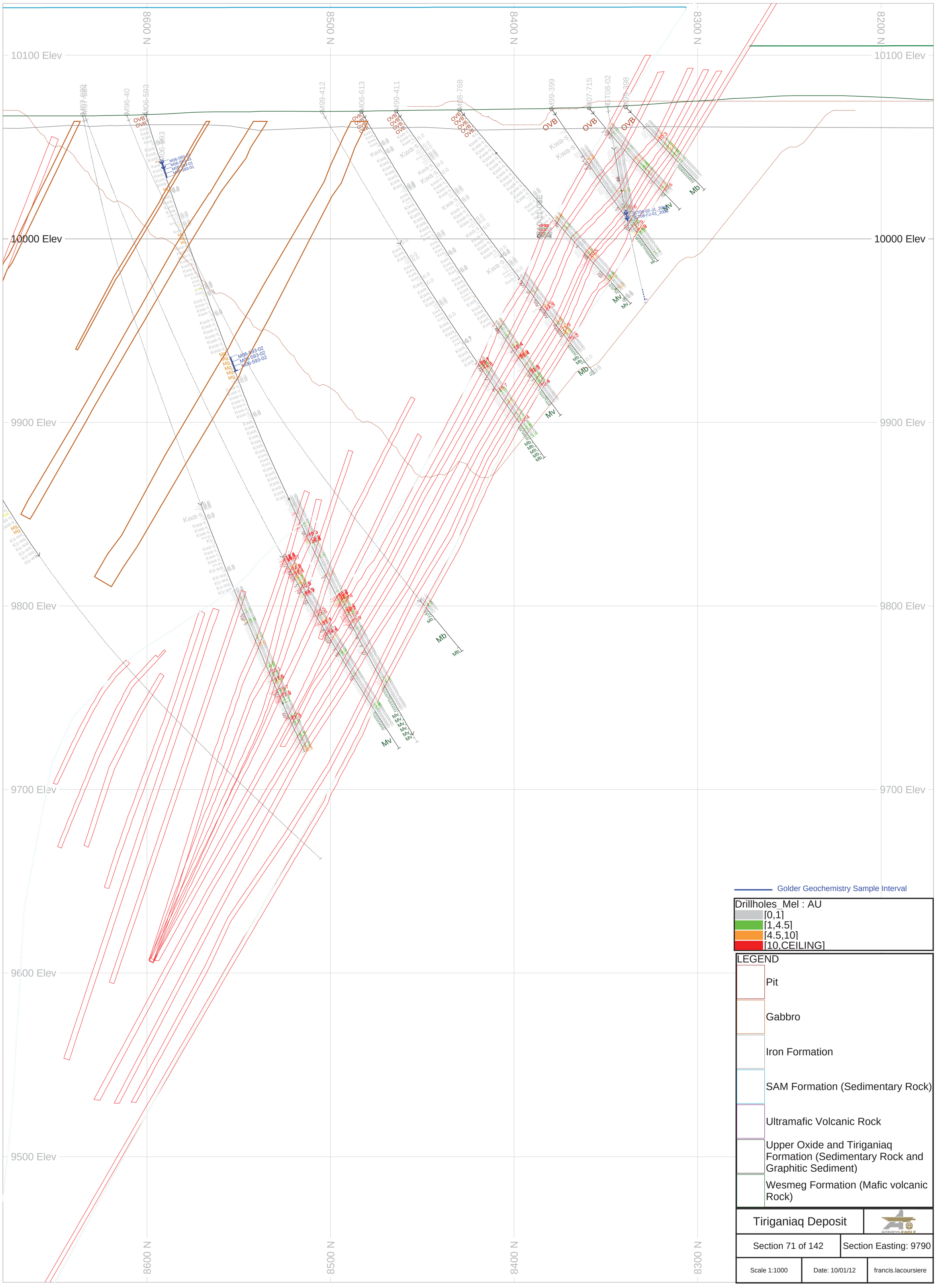

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OVB
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Mv
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 65 of 142
Section Easting: 9910
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

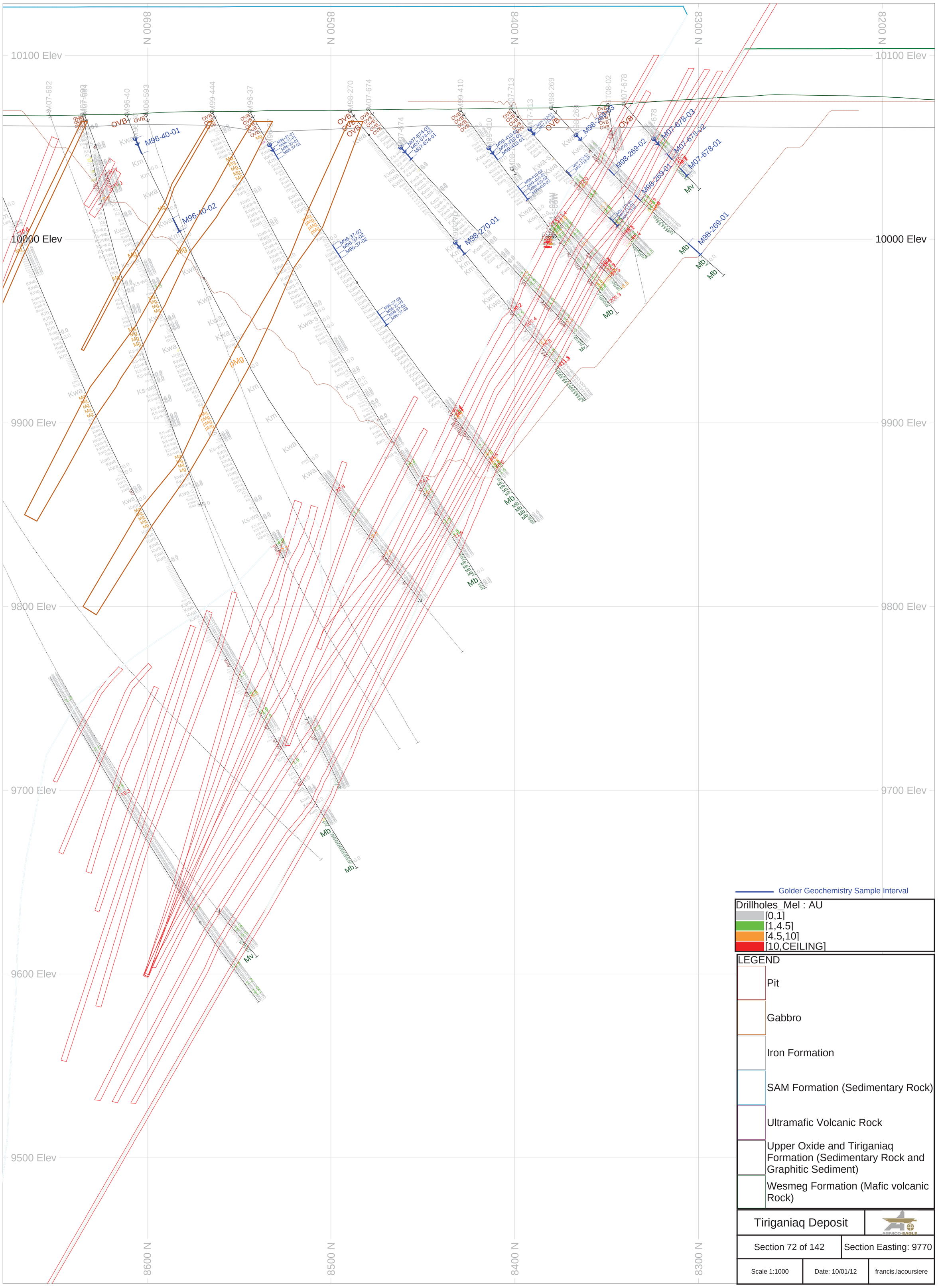

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M99-391
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Kwa-s
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Gabbro
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SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 66 of 142
Section Easting: 9890
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

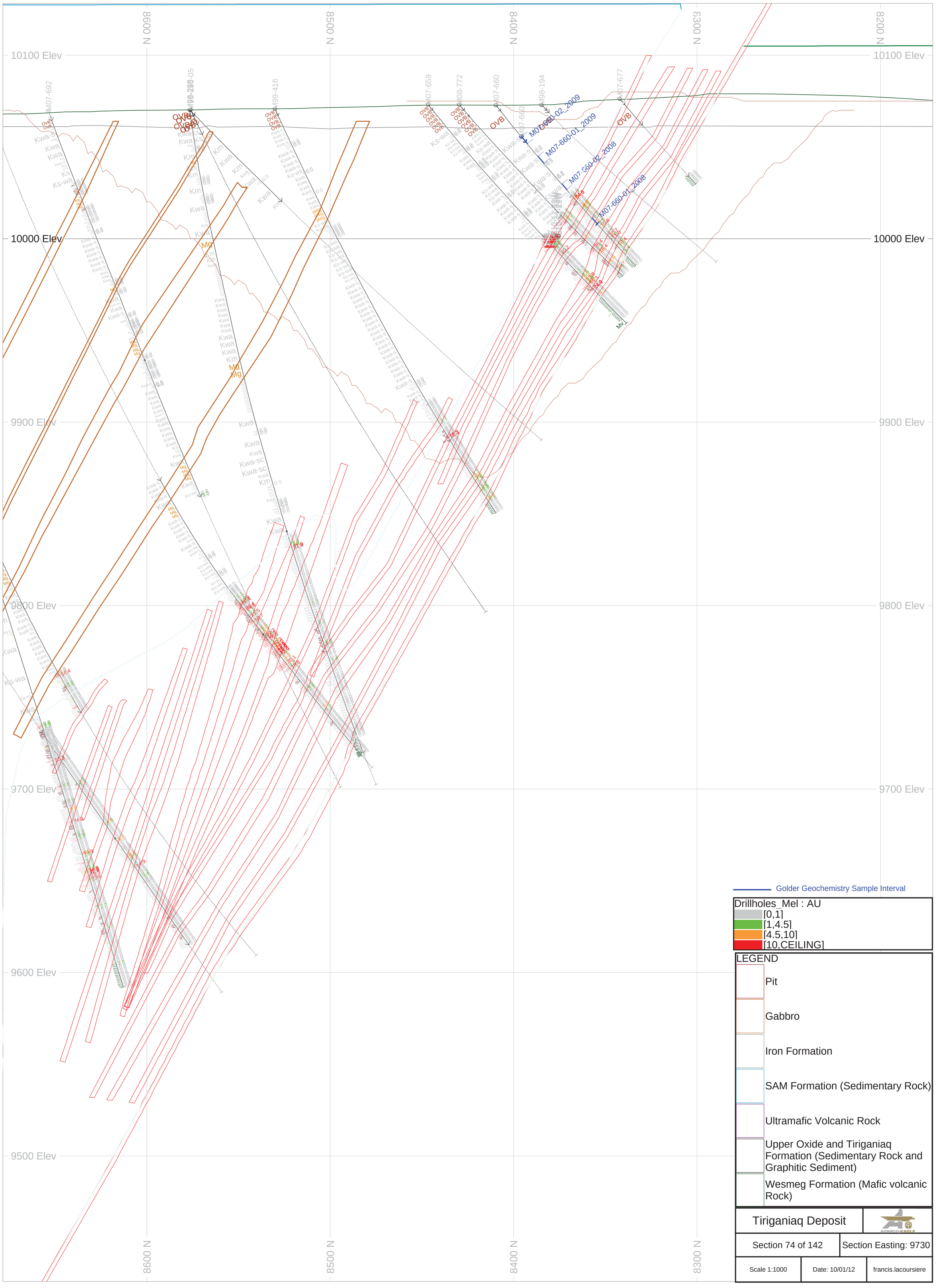

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OVB
Mg
Mb
Mv
Kwa
Km
Kwa-S
Ks-wa
Kwa-sc
M05-564
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M99-327-05
M06-614
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 67 of 142
Section Easting: 9870
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

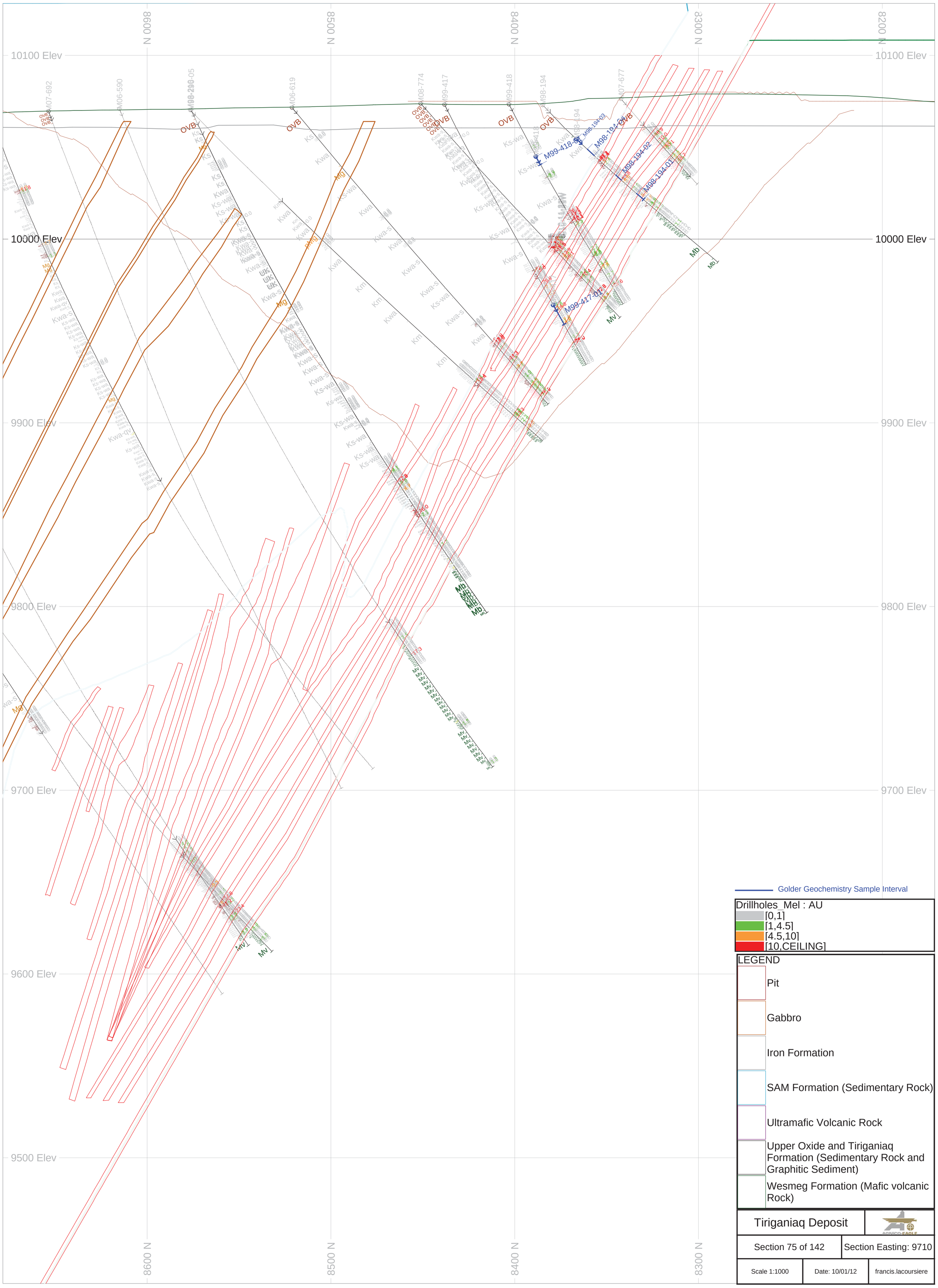

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Mv
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 69 of 142
Section Easting: 9830
Scale 1:1000
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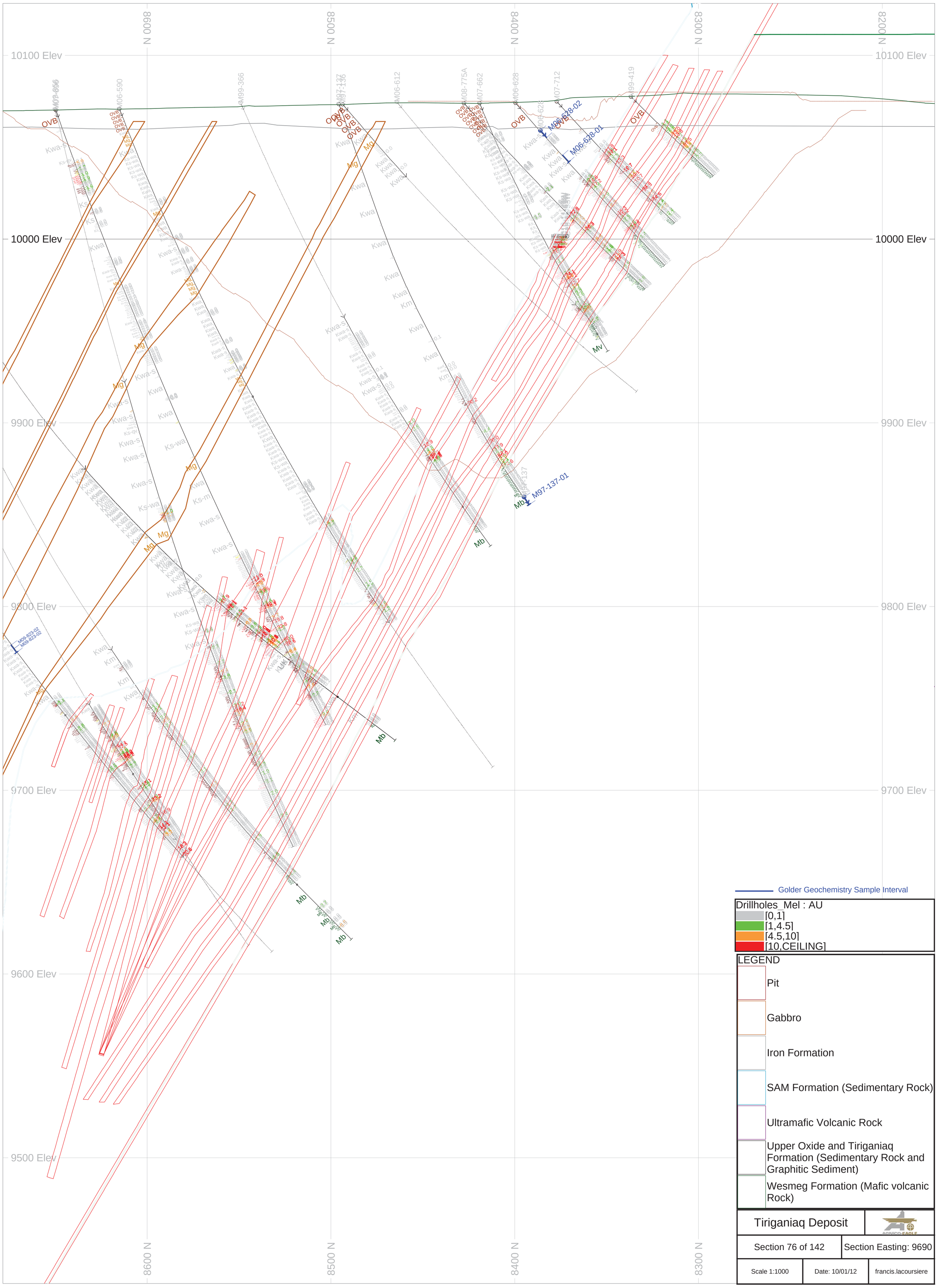

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Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 70 of 142
Section Easting: 9810
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

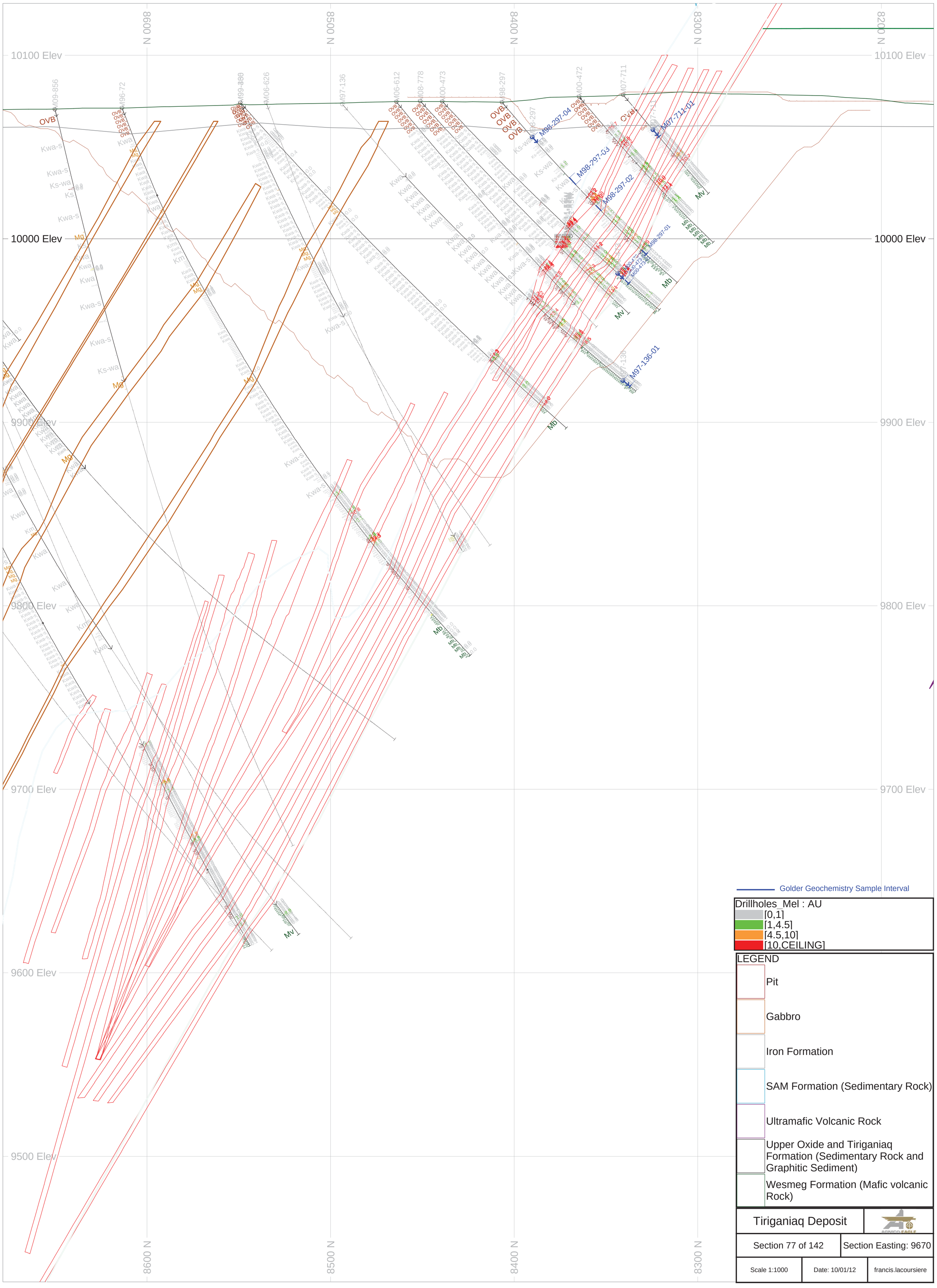

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Ks-wa
Mb
Mv
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Gabbro
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SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 71 of 142
Section Easting: 9790
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

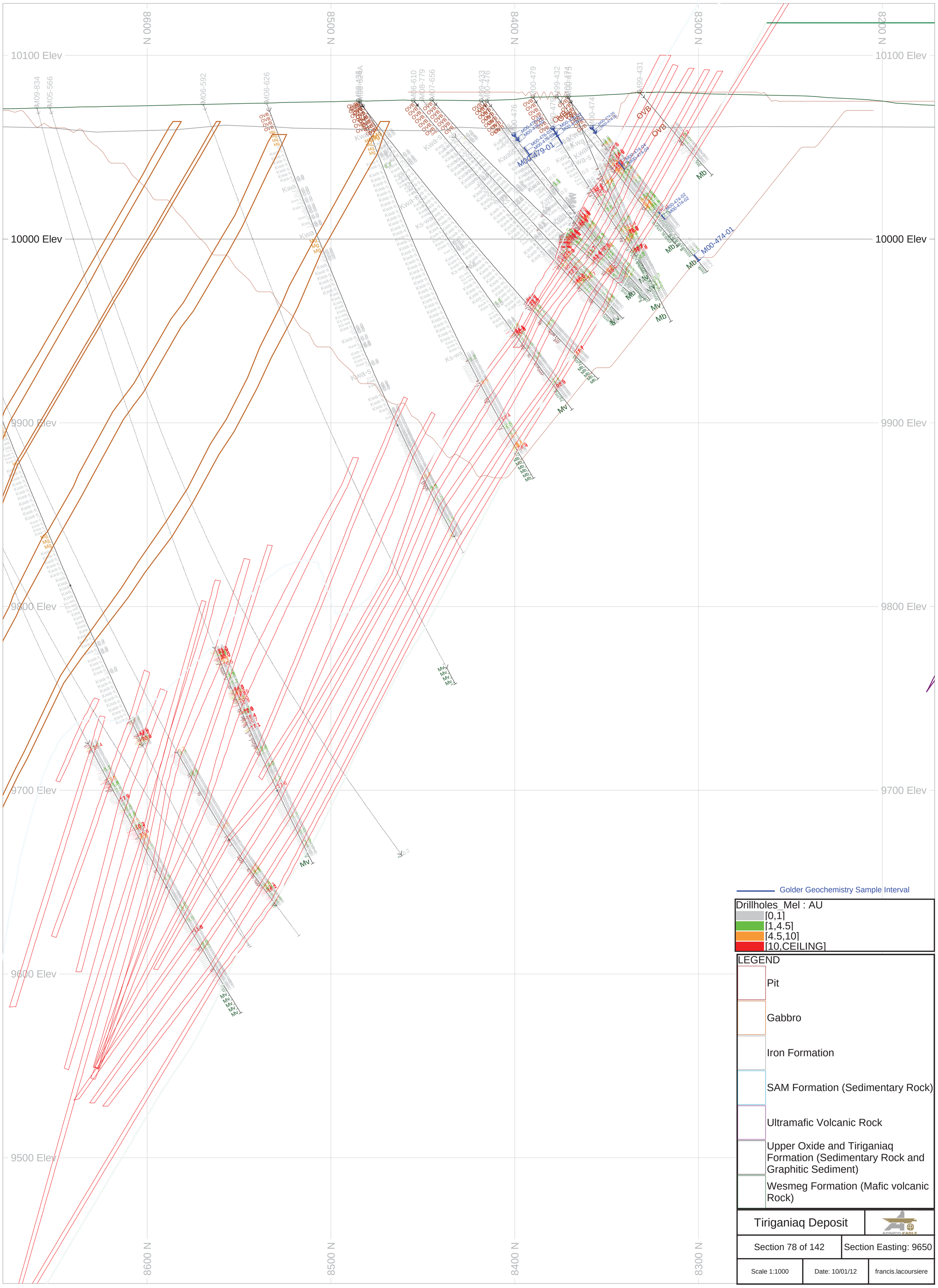

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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 72 of 142
Section Easting: 9770
Scale 1:1000
Date: 10/01/12
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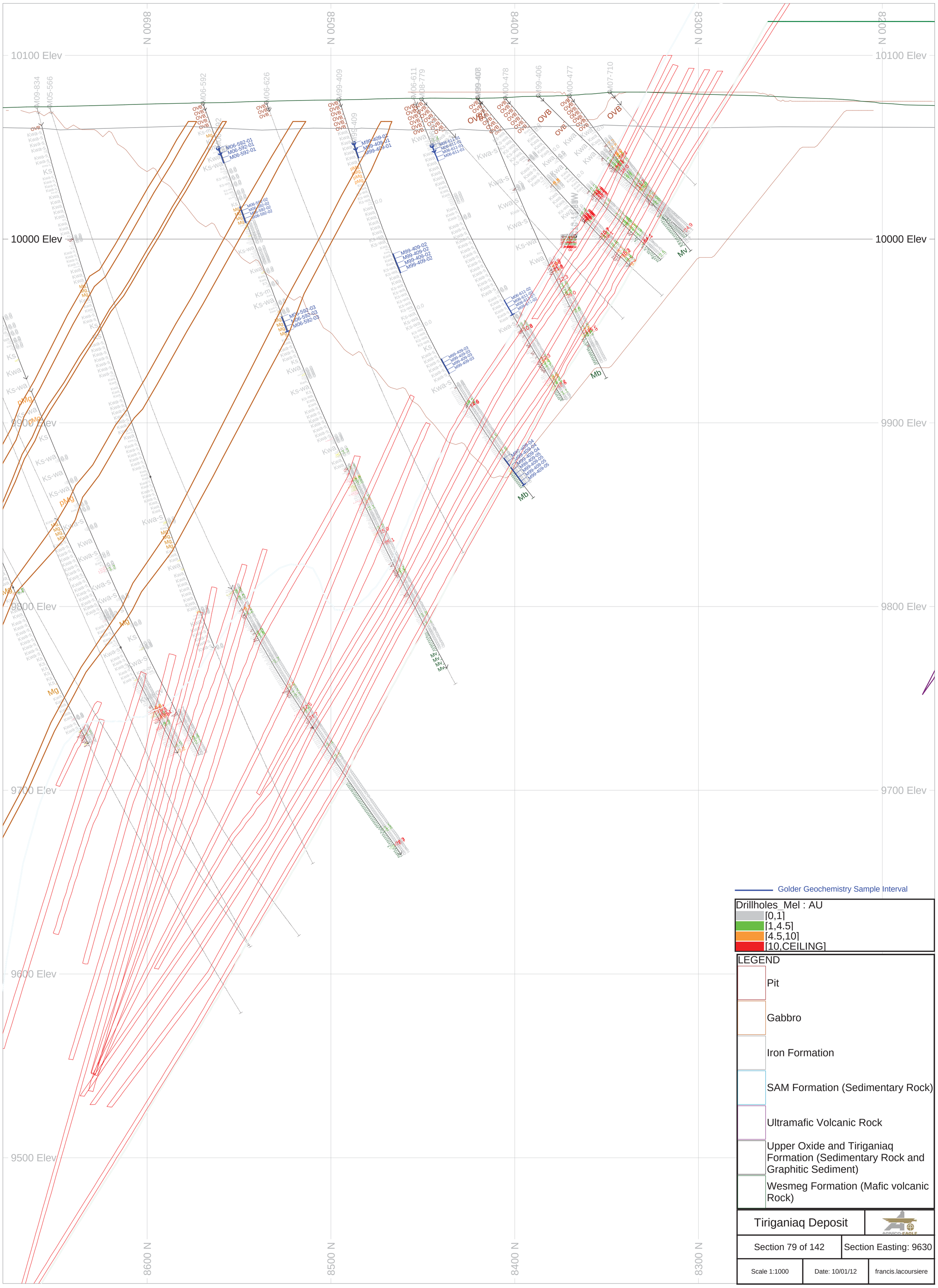

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Ks-wa
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Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 74 of 142
Section Easting: 9730
Scale 1:1000
Date: 10/01/12
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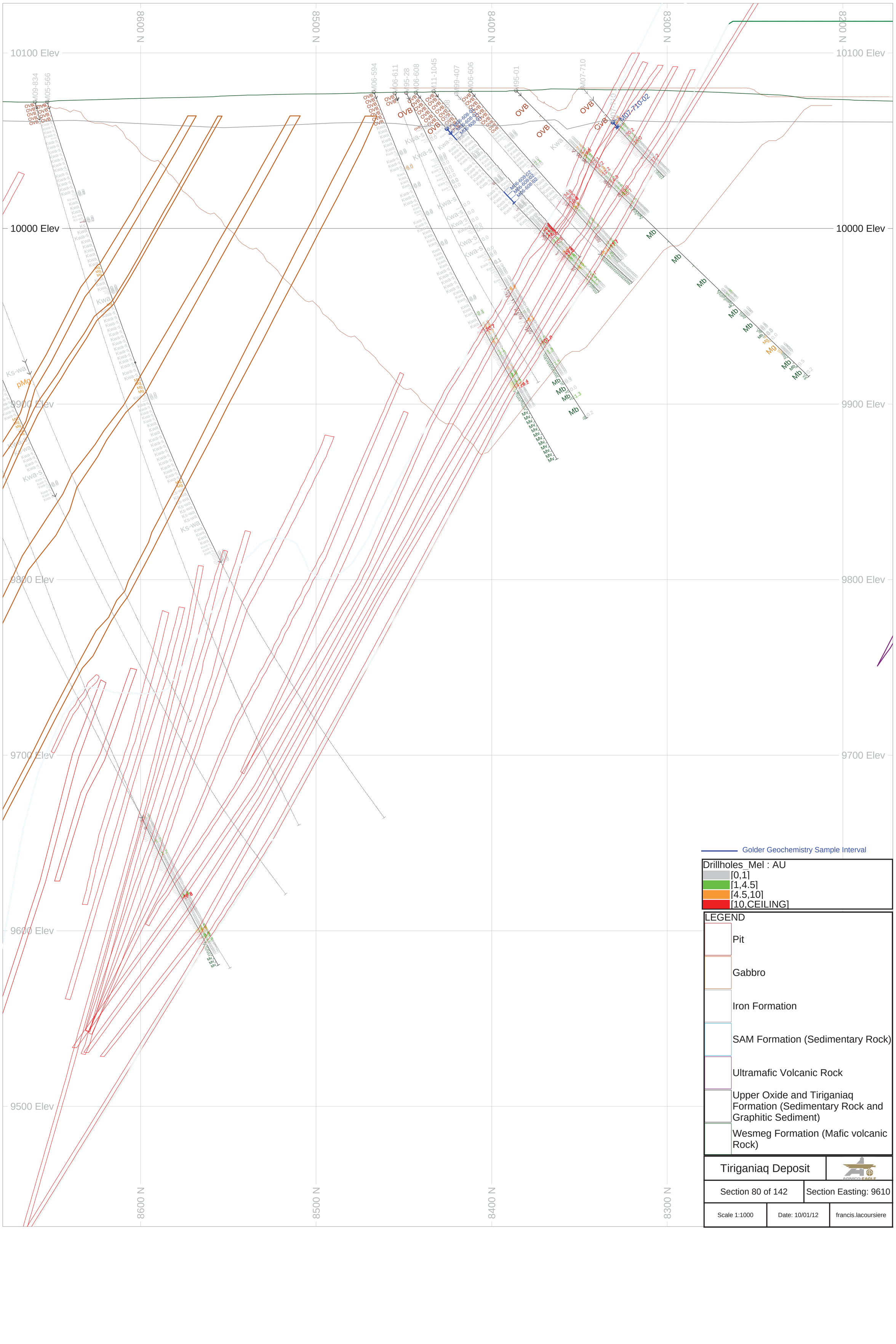

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OVB
Mg
Mb
Mv
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 75 of 142
Section Easting: 9710
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

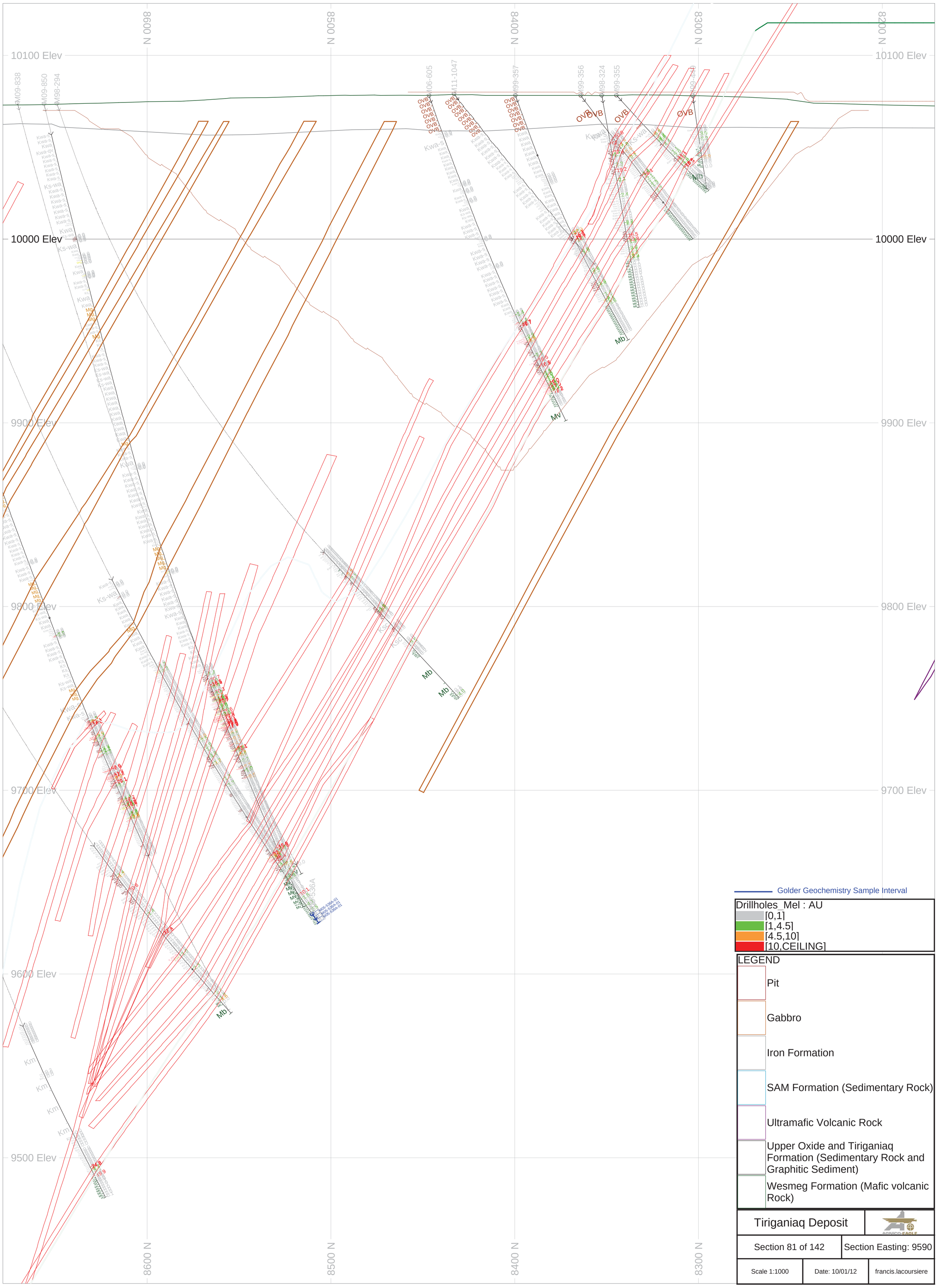

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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 76 of 142
Section Easting: 9690
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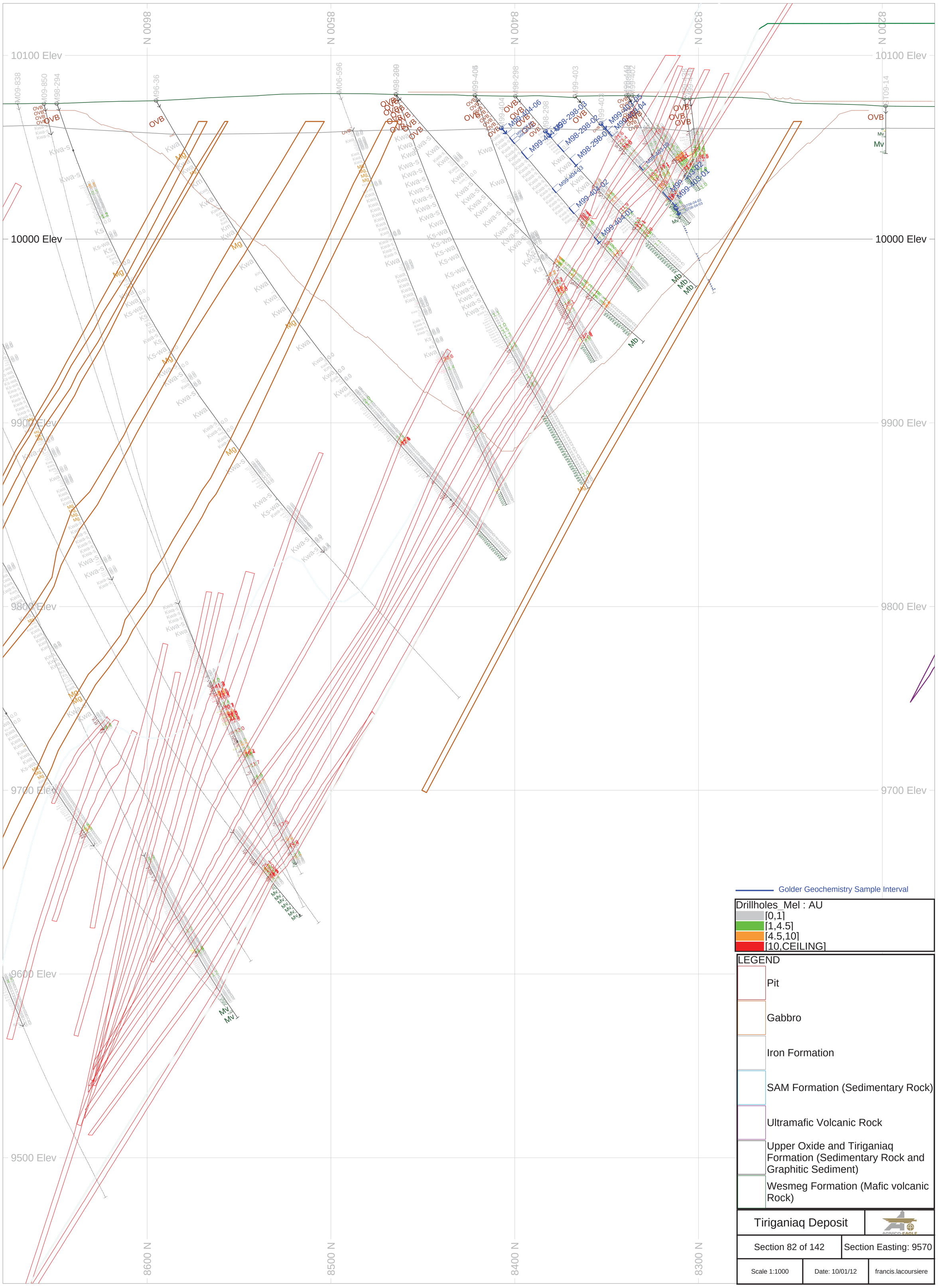

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Kwa-s
Ks-wa
Km
Mg
Mv
Mb
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 77 of 142
Section Easting: 9670
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

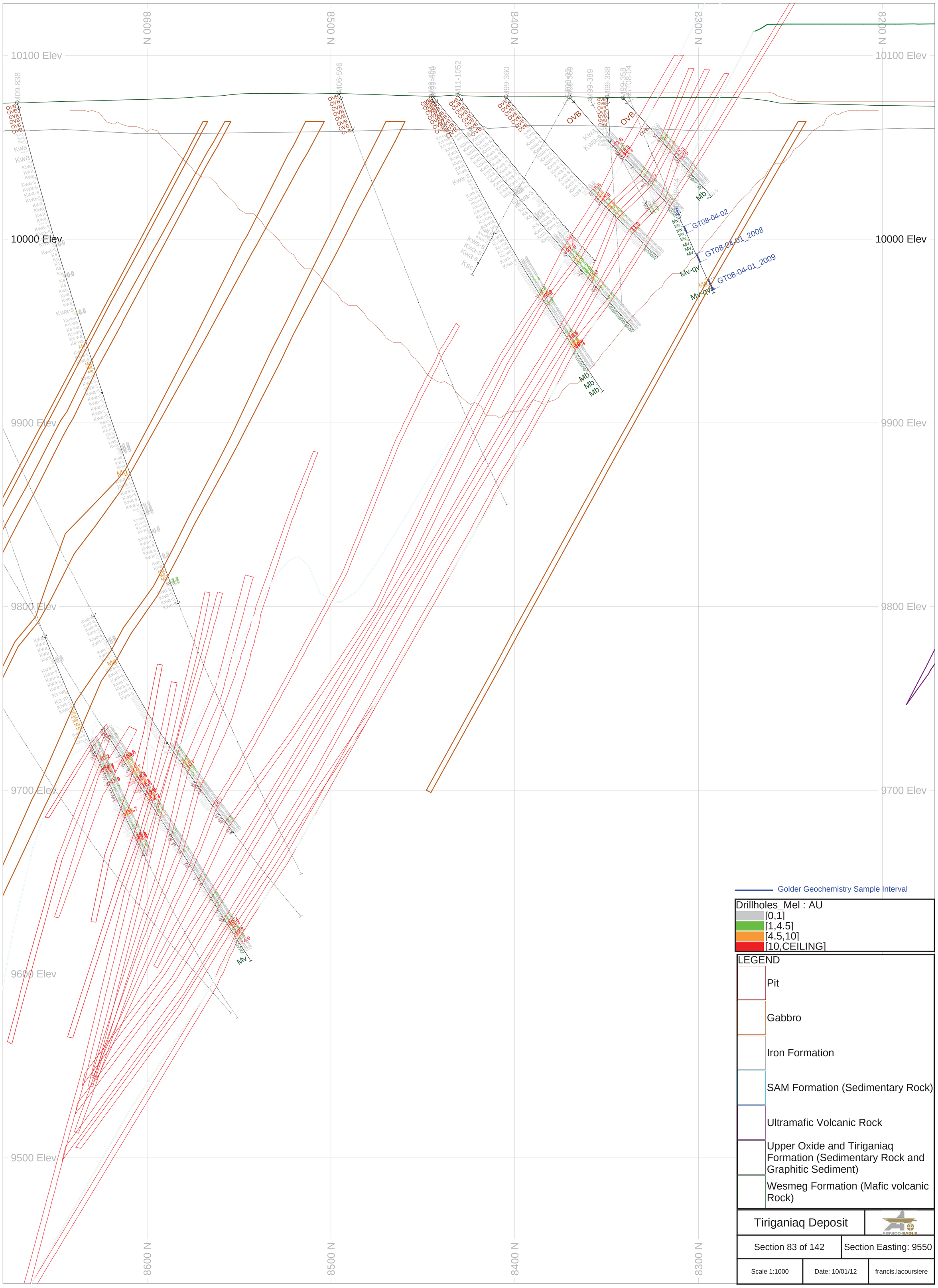

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Mg
Kwa-s
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 78 of 142
Section Easting: 9650
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 79 of 142
Section Easting: 9630
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francis.lacoursiere

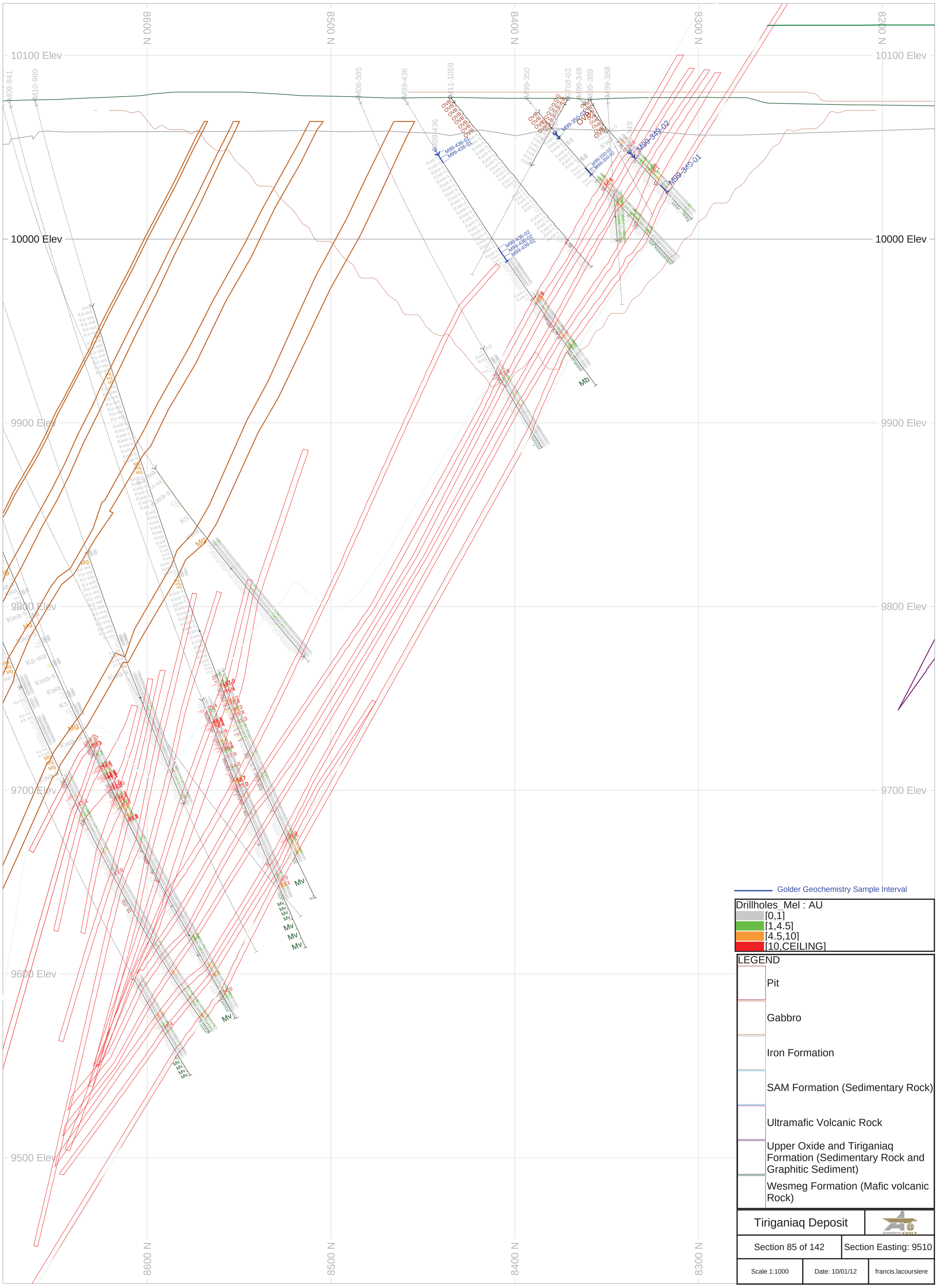

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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 80 of 142
Section Easting: 9610
Scale 1:1000
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francis.lacoursiere


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GW99-356
GW98-324
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GW99-440
OVB
Kwa-s
Ks-wa
Kwa
Mg
Mv
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Md
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KSC
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 81 of 142
Section Easting: 9590
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

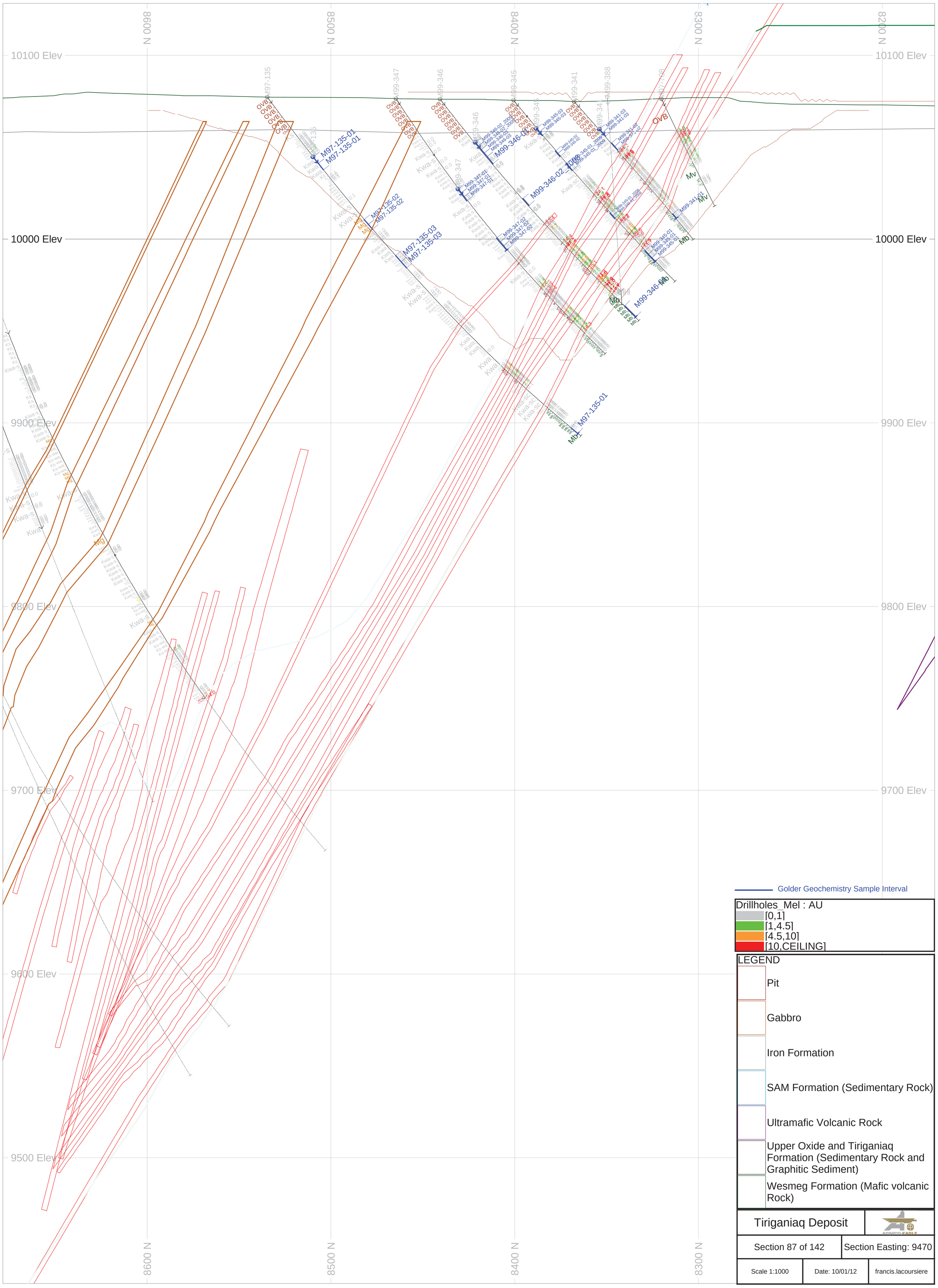

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9500 Elev
OVB
Mg
Mb
Mv
Kwa
Kwa-s
Ks-wa
Km
M98-298-01
M98-298-02
M98-298-03
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LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 82 of 142
Section Easting: 9570
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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8500 N
8400 N
8300 N
8200 N
10100 Elev
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9800 Elev
9700 Elev
9600 Elev
9500 Elev
OVB
Kwa
Kwa-s
Ks-wa
Ks-m
Mg
Mb
Mv
Mv-qv
GT08-04-02
GT08-04-01_2008
GT08-04-01_2009
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 83 of 142
Section Easting: 9550
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

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8500 N
8400 N
8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
OVB
Mg
Kwa-S
Ks-wa
Mv
Mb
M96-77-01
M96-77-02
M95-17-01
M95-17-02
M99-436-01
M99-436-01
M96-77
M106-598
M99-436
M106-602
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GT08-03
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 84 of 142
Section Easting: 9530
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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8500 N
8400 N
8300 N
8200 N
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9700 Elev
9600 Elev
9500 Elev
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M10-989
M06-595
M99-436
M11-1059
M99-350
T08-03
M99-349
M99-389
M99-388
M99-436-01
M99-436-02
M99-350-01
M99-350-02
M99-349-01
M99-349-02
OVB
Mb
Mv
Mg
Ks
Kwa-S
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 85 of 142
Section Easting: 9510
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

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8400 N
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9500 Elev
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M99-343
M98-318
M99-388
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M06-445
M98-318-01
M08-731W1-01
M08-731W1-02
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Kwa-S
Ks-wa
Kwa-sc
Kms
Mg
Mb
Mv
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 86 of 142
Section Easting: 9490
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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8400 N
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 87 of 142
Section Easting: 9470
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

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8500 N
8400 N
8300 N
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10100 Elev
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M99-386-01
Kwa-S
Mg
MV

Golder Geochemistry Sample Interval

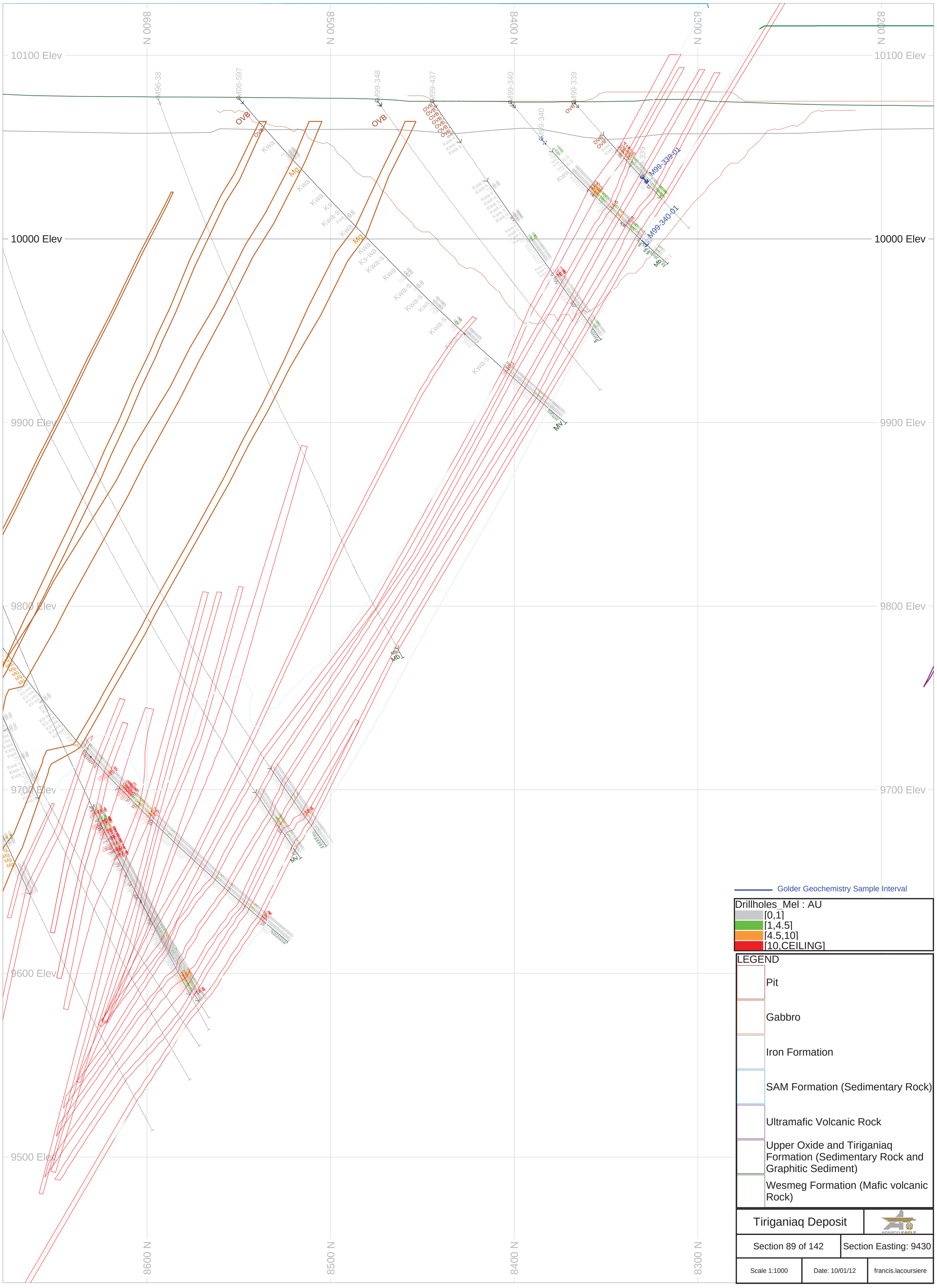
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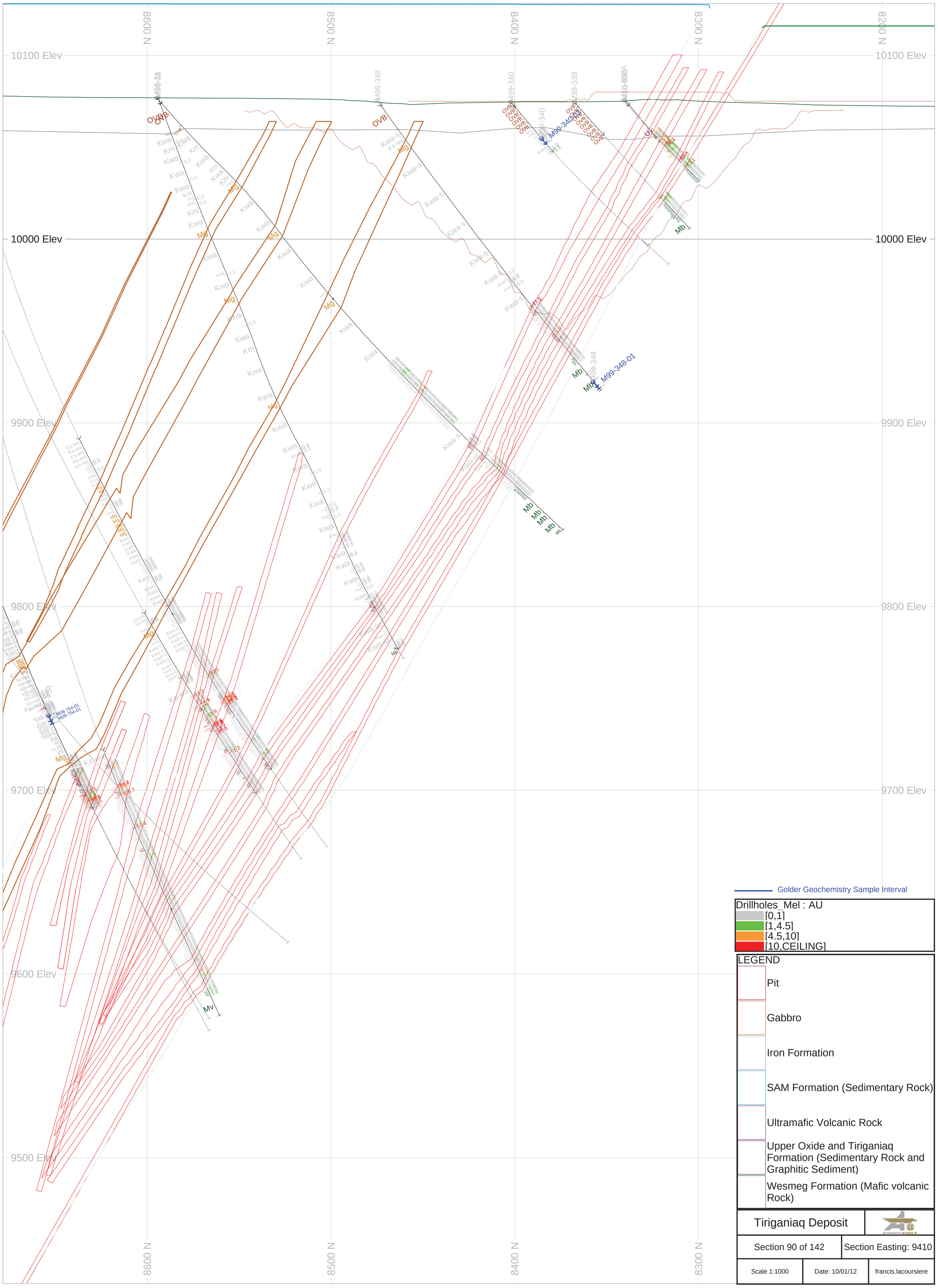
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)

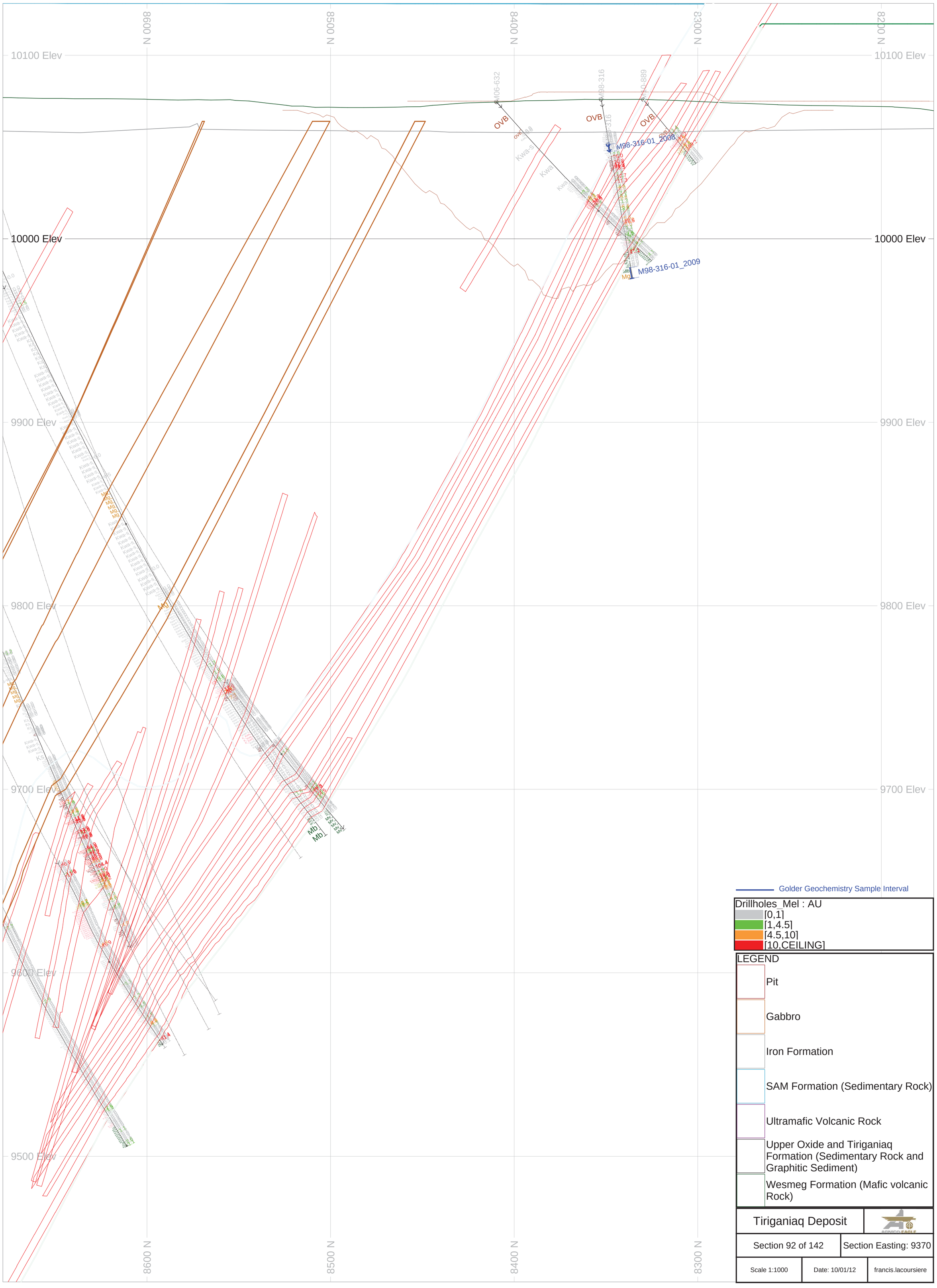
Tiriganiaq Deposit

AGNICO-EAGLE

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Section Easting: 9450
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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M99-339
OVB
Mg
Kwa
Ks-wa
Kwa-s
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MV
MD
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 89 of 142
Section Easting: 9430
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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8400 N
8300 N
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9500 Elev
OVB
Mg
Mb
Mv
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M99-340-01
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 90 of 142
Section Easting: 9410
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


8600 N
8500 N
8400 N
8300 N
8200 N
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OVB
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Golder Geochemistry Sample Interval
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LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 92 of 142
Section Easting: 9370
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

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8500 N
8400 N
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9800 Elev
9700 Elev
9600 Elev
9500 Elev
OVB
Kwa-S
M08-761-01
M08-763-01
M98-317-01
M06-629-01
GT08-01-01
Mb
Mv

Golder Geochemistry Sample Interval

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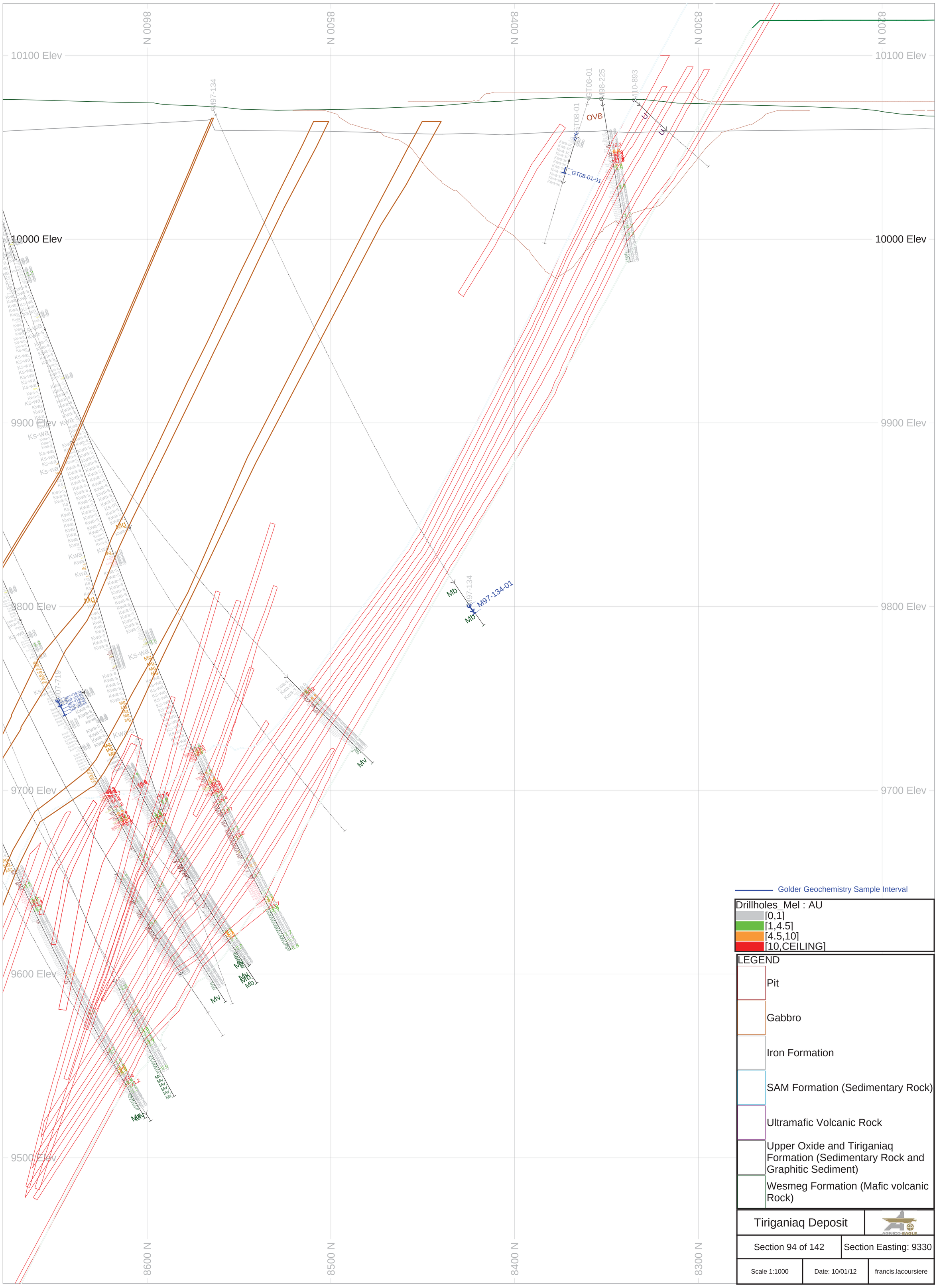
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Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)

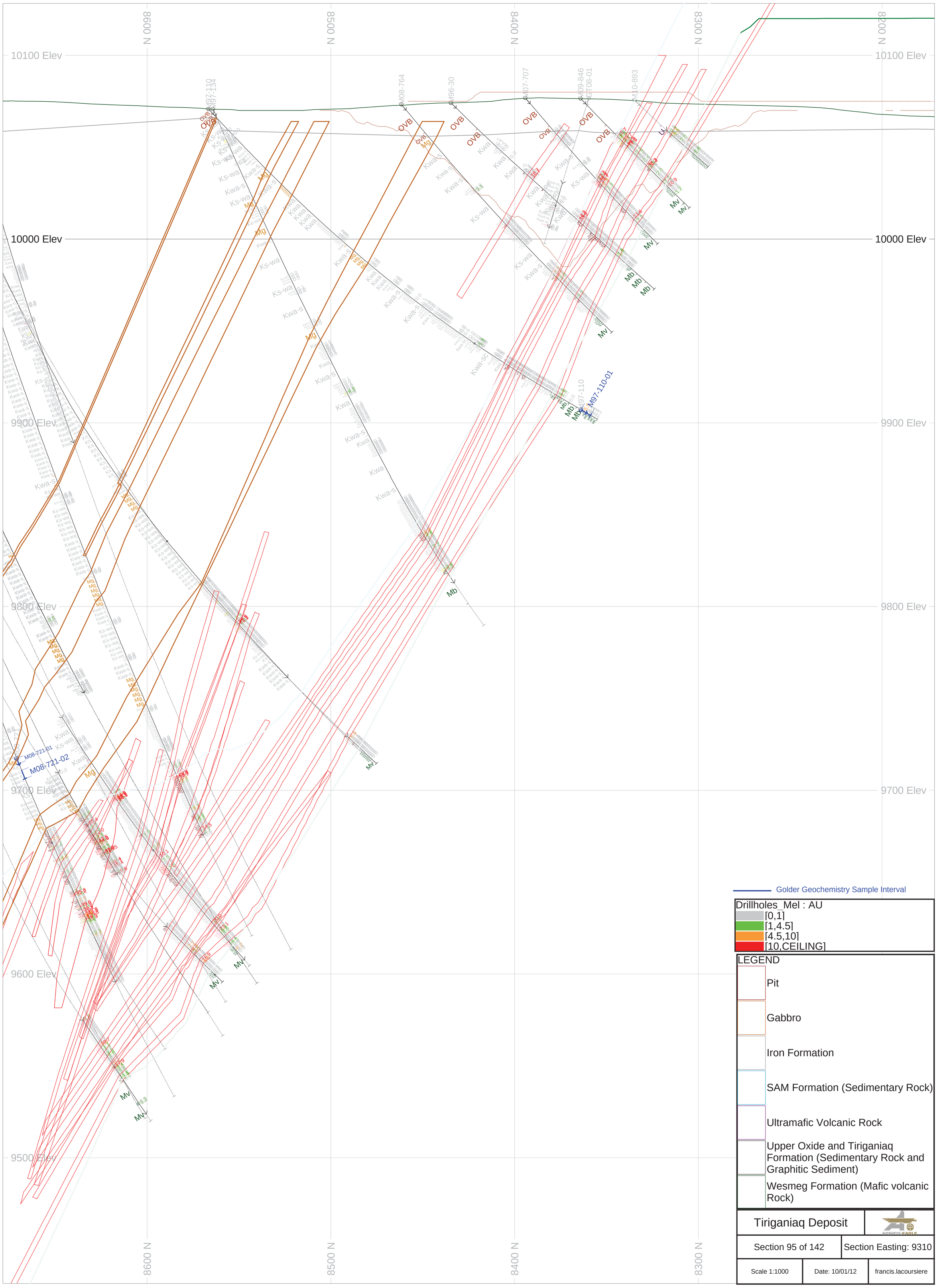
Tiriganiaq Deposit

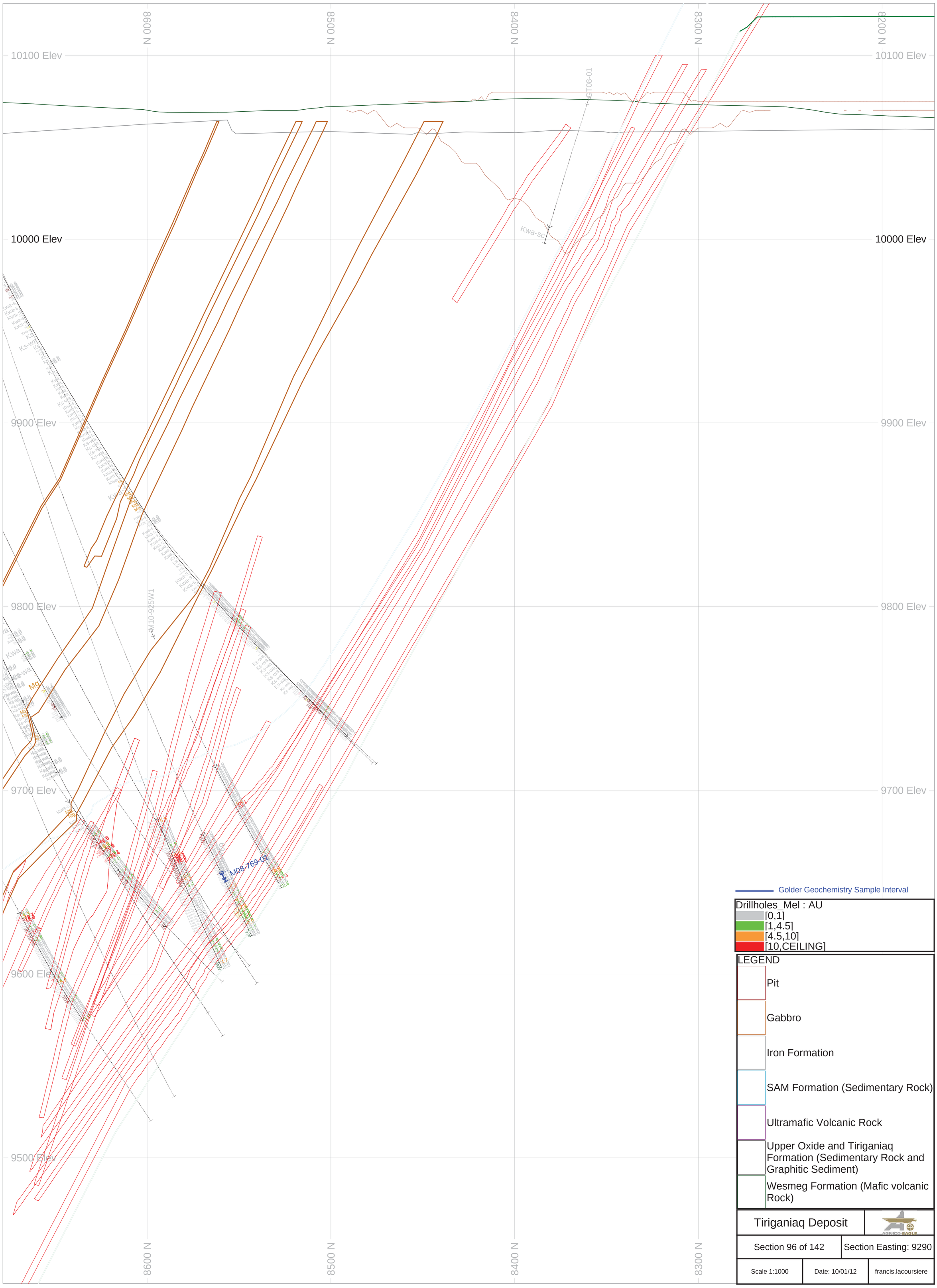
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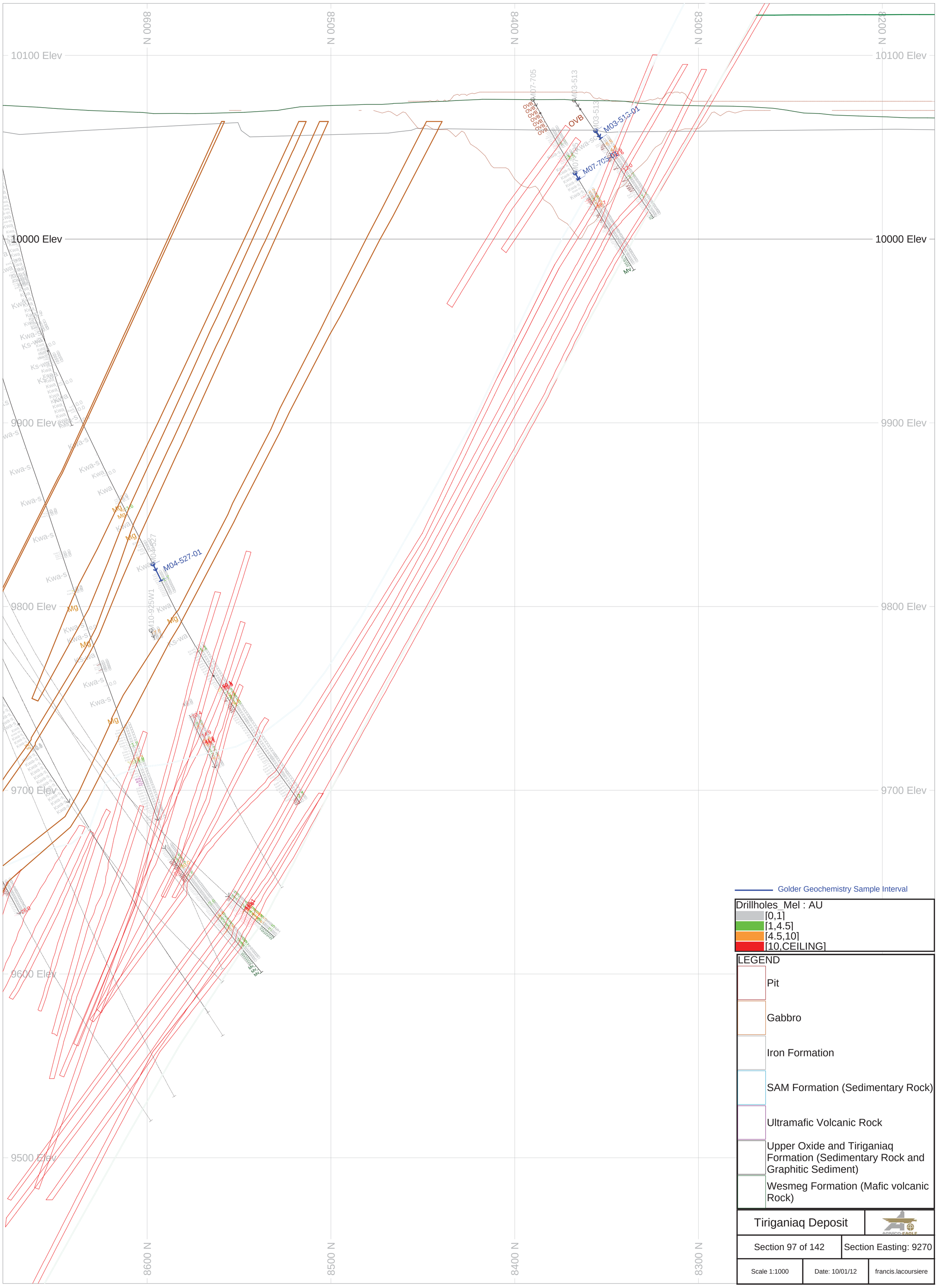
Section 93 of 142 | Section Easting: 9350

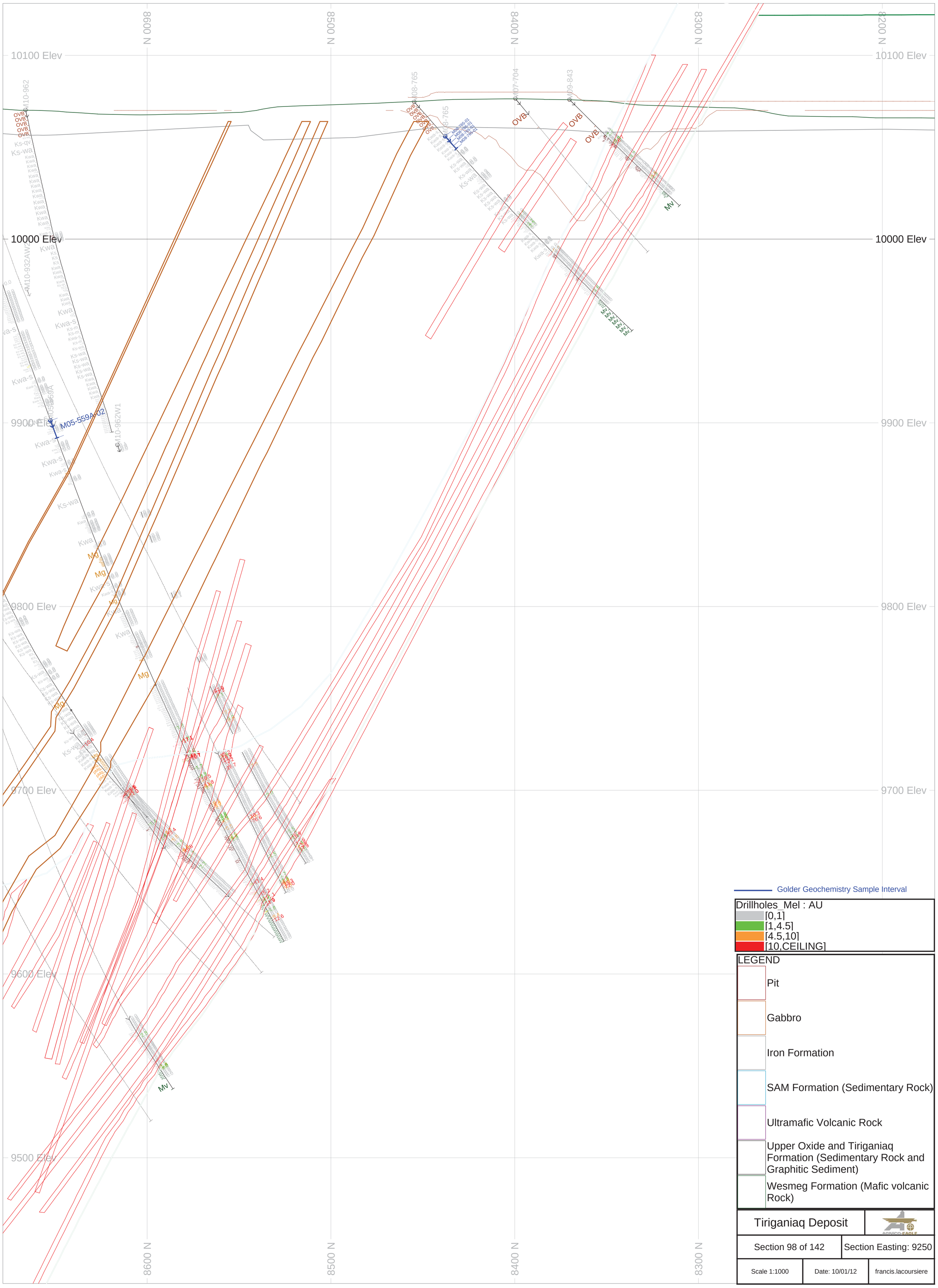
Scale 1:1000 | Date: 10/01/12 | francis.lacoursiere


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M97-134
GT08-01
M98-225
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OVB
GT08-01-01
M97-134-01
M07-719
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 94 of 142
Section Easting: 9330
Scale 1:1000
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francis.lacoursiere


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8500 N
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8300 N
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9600 Elev
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M96-30
M07-707
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M09T08-01
M10-893
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 95 of 142
Section Easting: 9310
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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8400 N
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Kwa-sc
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 96 of 142
Section Easting: 9290
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

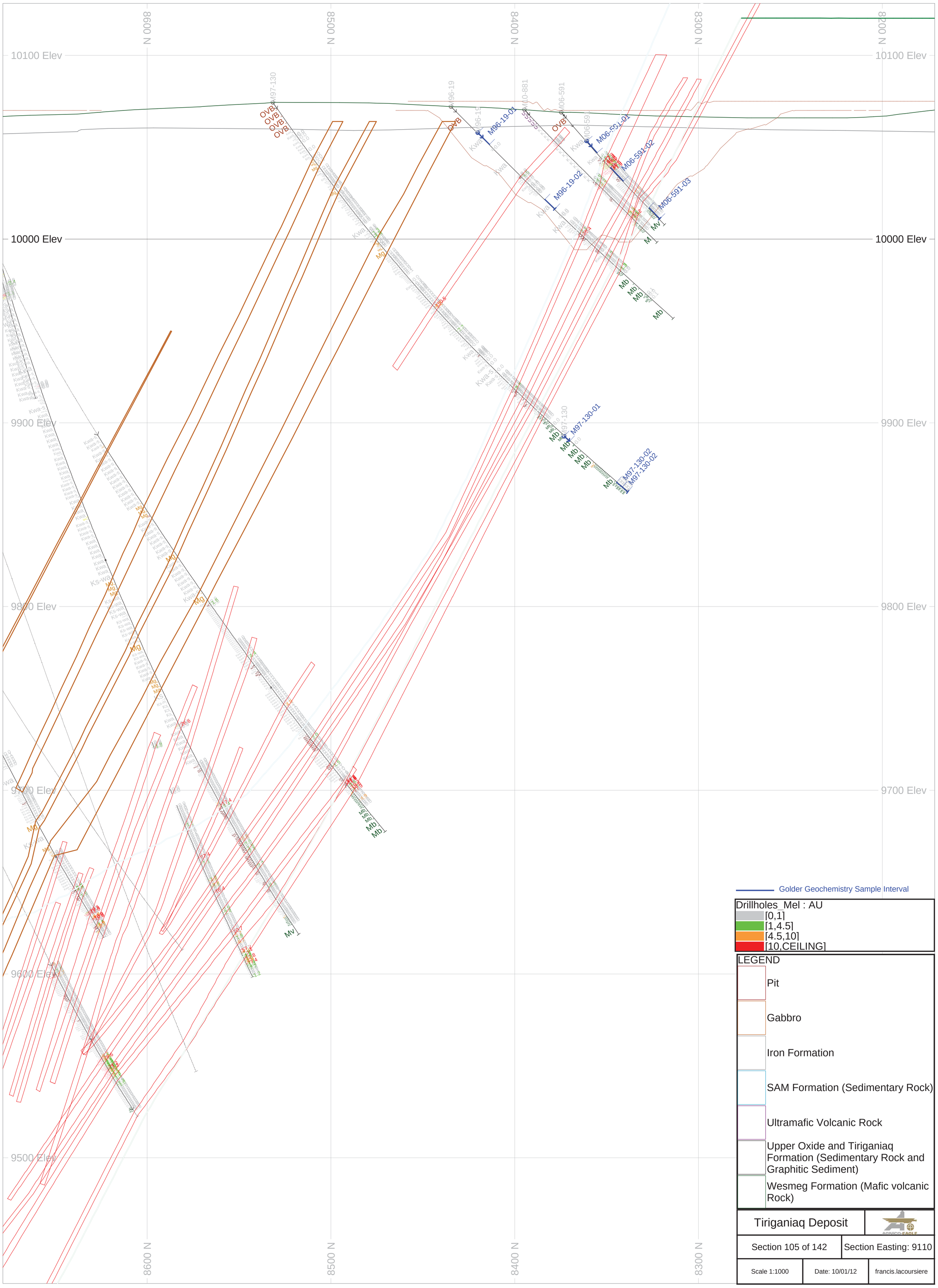

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Ks-wa
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
Section 97 of 142
Section Easting: 9270
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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8300 N
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9700 Elev
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OVB
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Mv
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M07-704
M09-843
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LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 98 of 142
Section Easting: 9250
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

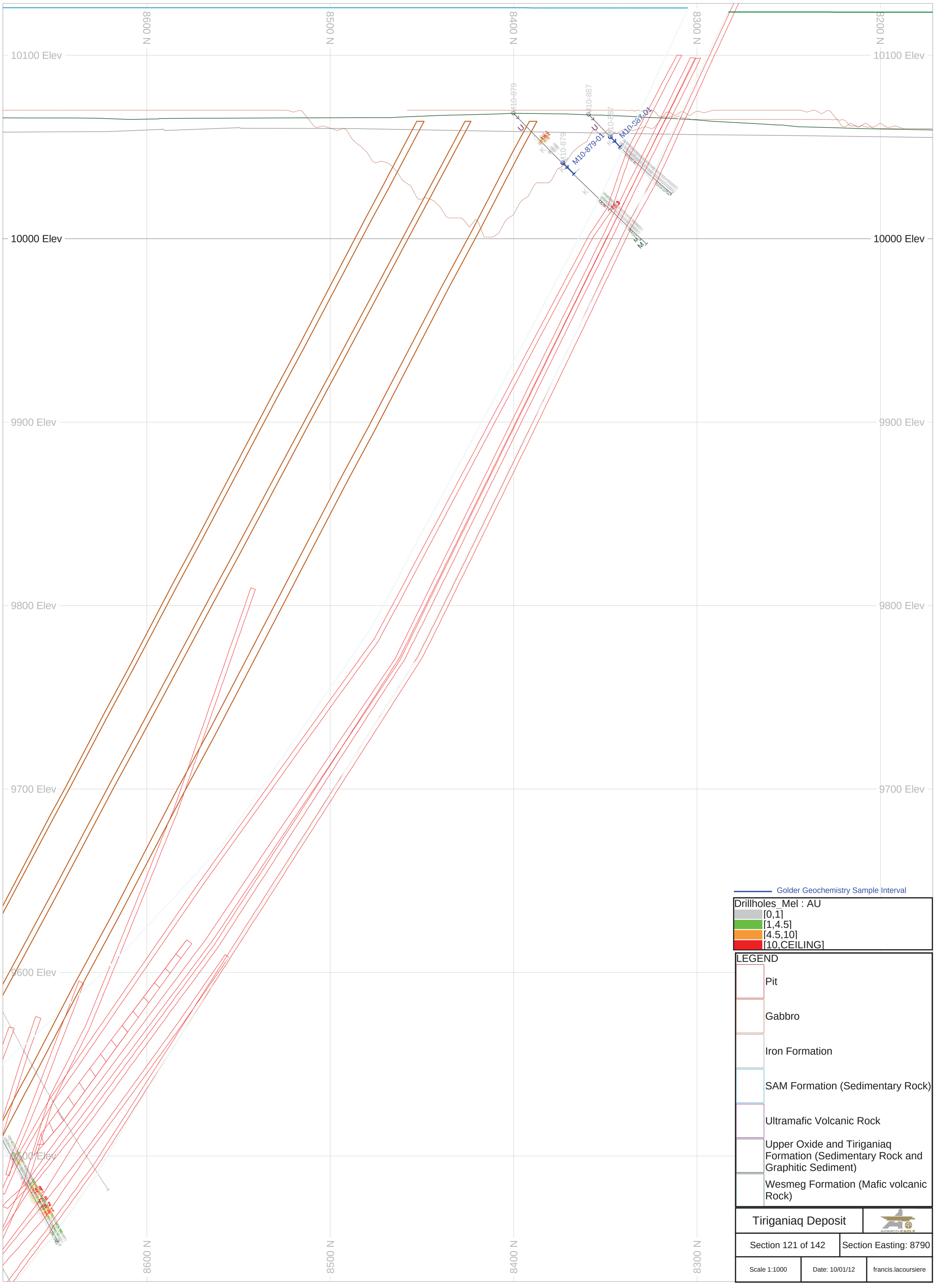
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Mg
Mv
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 99 of 142
Section Easting: 9230
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

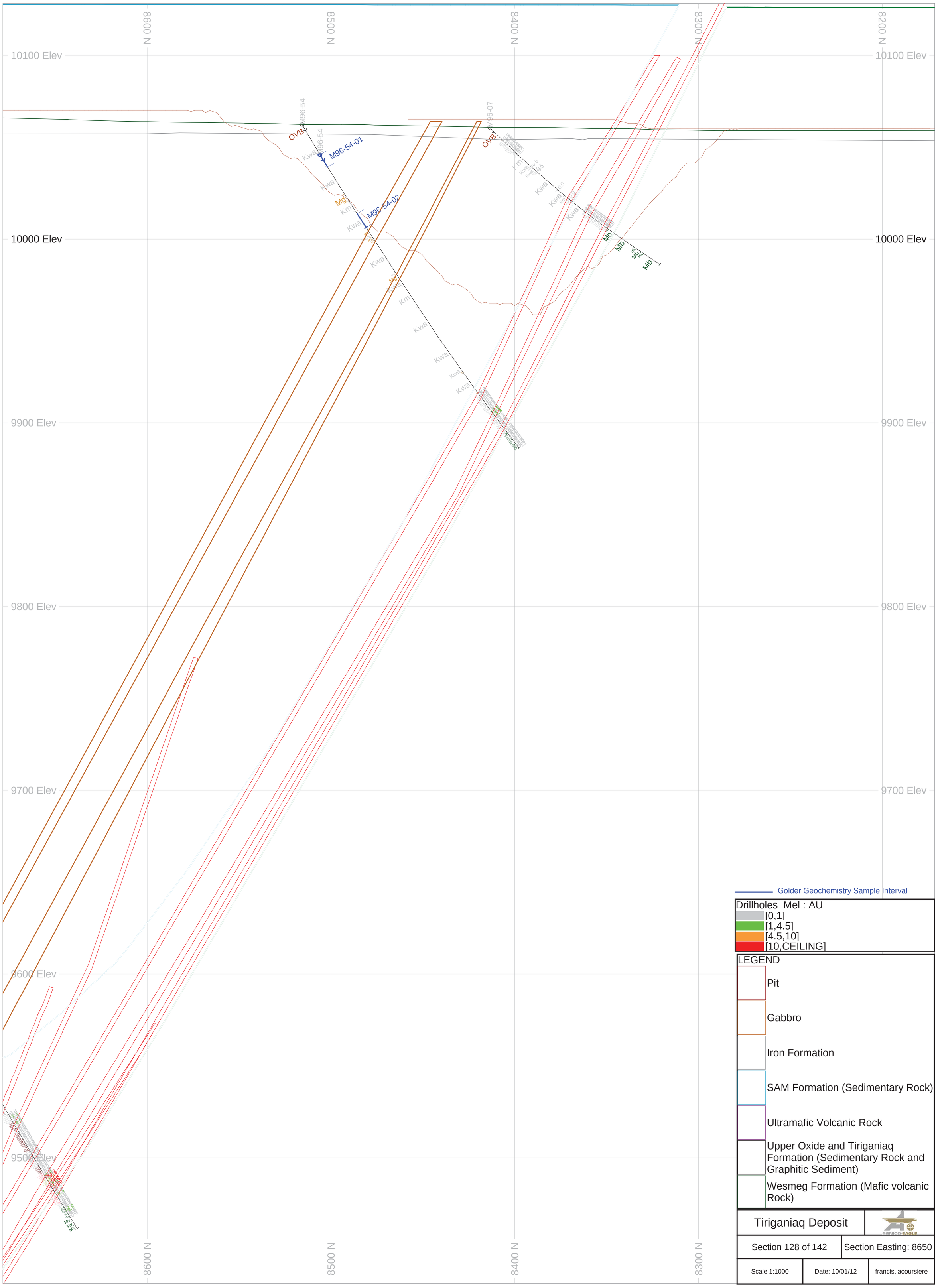
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Mb
Mv
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 100 of 142
Section Easting: 9210
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

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AM97-132
AM07-703
OVB
Mv
Mb
Golder Geochemistry Sample Interval
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LEGEND
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Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
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Section Easting: 9190
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

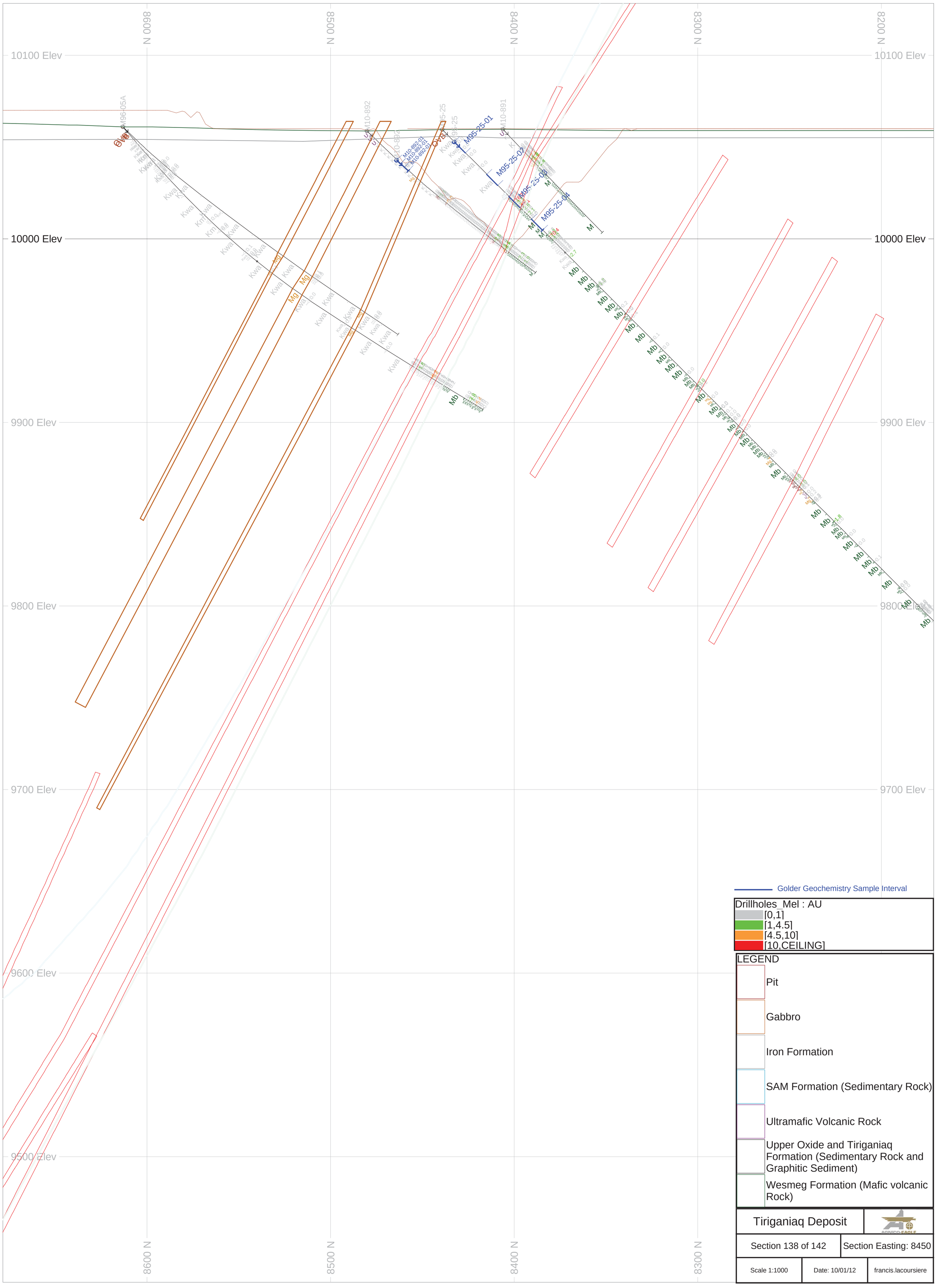

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9600 Elev
9500 Elev
OVB
Mg
Mb
Mv
M
Kwa
Kwa-s
Ks-wa
M97-130
M96-19
M10-881
M06-591
M96-19-01
M96-19-02
M06-591-01
M06-591-02
M06-591-03
M97-130-01
M97-130-02
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 105 of 142
Section Easting: 9110
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

8600 N
8500 N
8400 N
8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
M00-466
M06-623
M10-877
OVB
Kwa-s
Ks-wa
M06-625-01
M06-625-02
M06-623-01
M06-623-02
M
Mv
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 113 of 142
Section Easting: 8950
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

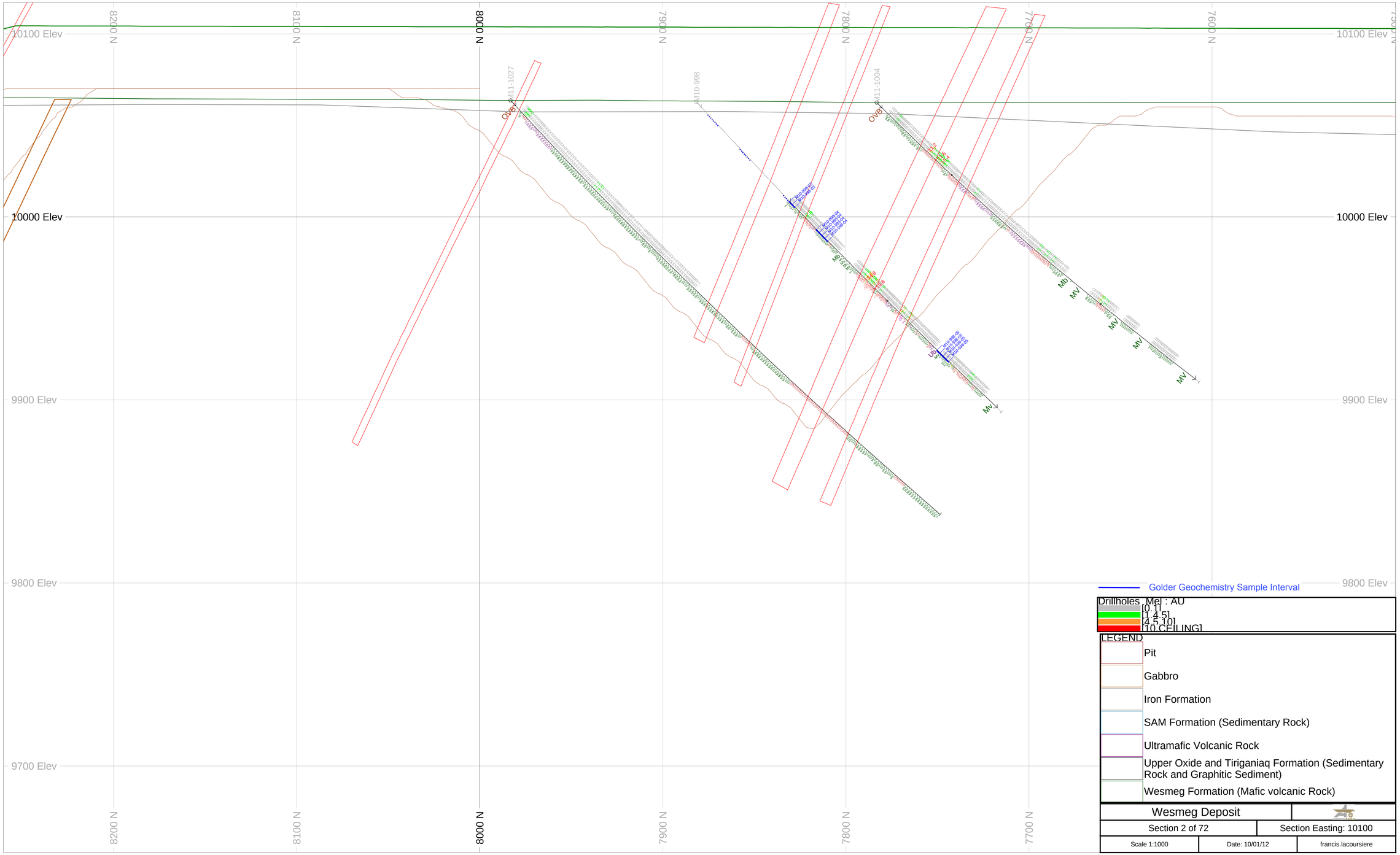

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9700 Elev
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M10-887
M10-879-01
M10-887-01
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
Section 121 of 142
Section Easting: 8790
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

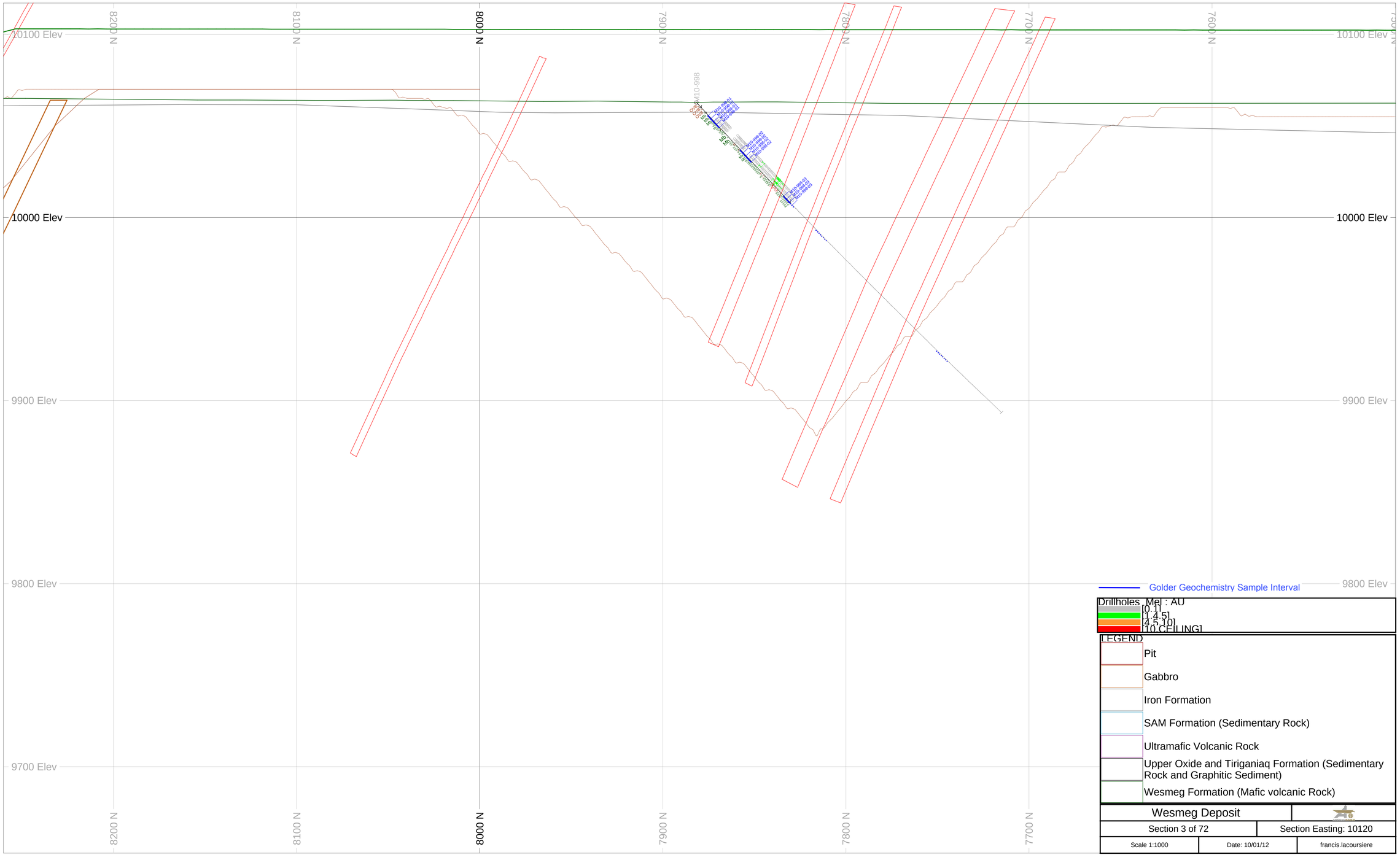

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8400 N
8300 N
8200 N
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10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
OVB
M96-54-01
M96-54-02
Mg
Mb
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 128 of 142
Section Easting: 8650
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

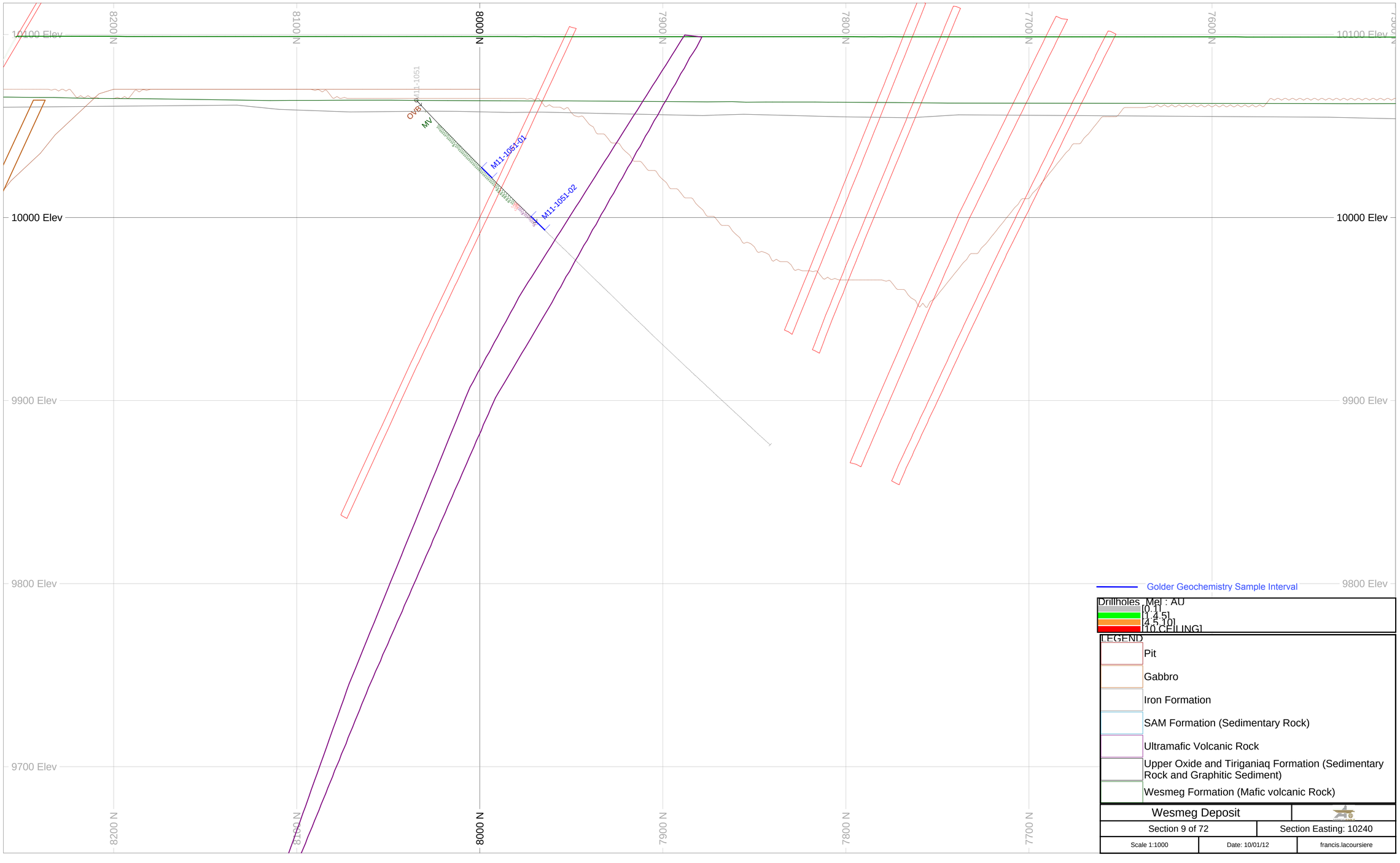
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8500 N
8400 N
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9900 Elev
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OVB
M96-18
M10-999
M96-65
M96-65-01
M96-04
M10-999-01
M10-999-02
Km
Kwa
Ks-Kwa
Kwa-Sed
Mg
Mv
Mb
Mio
Md
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 133 of 142
Section Easting: 8550
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

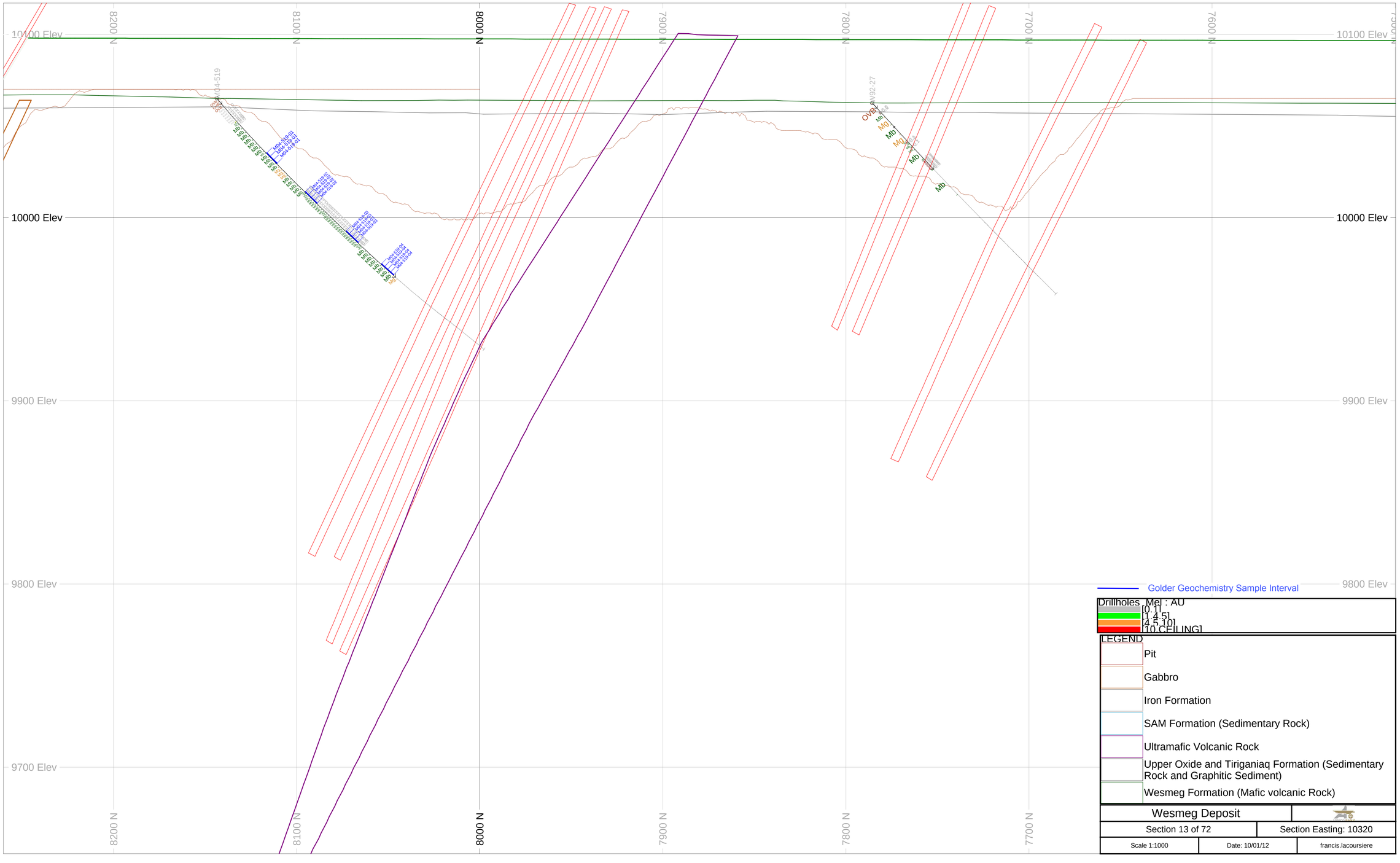

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8500 N
8400 N
8300 N
8200 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
9600 Elev
9500 Elev
M96-05A
M10-892
M95-25
M10-891
M95-25-01
M95-25-02
M95-25-03
M95-25-04
M10-892-01
OVB
Kwa
Mg
Mb
M
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Tiriganiaq Deposit
AGNICO-EAGLE
Section 138 of 142
Section Easting: 8450
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

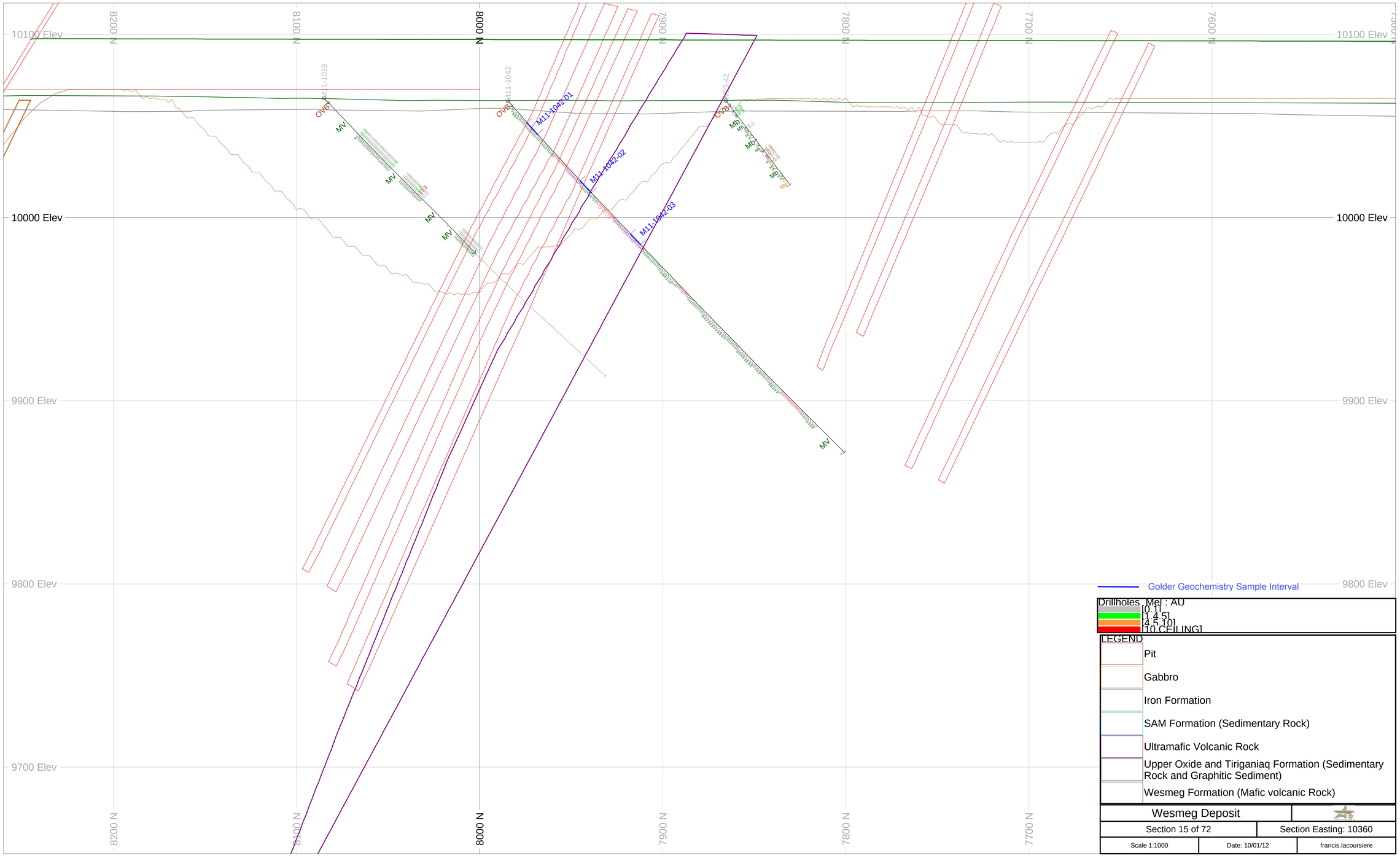
# A.5 Wesmeg Cross-Sections

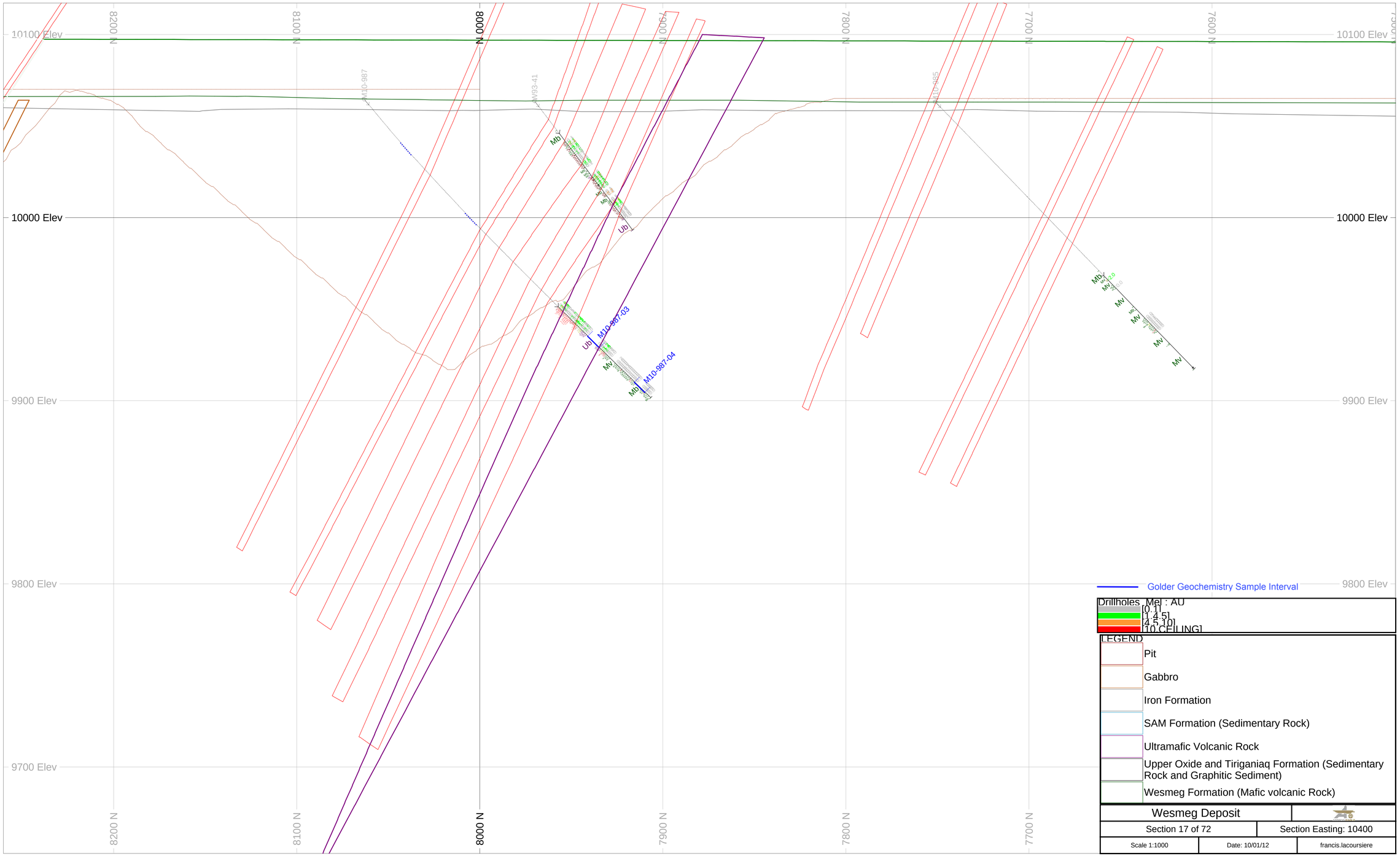

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8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
OVBD
MD
MV
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 2 of 72
Section Easting: 10100
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

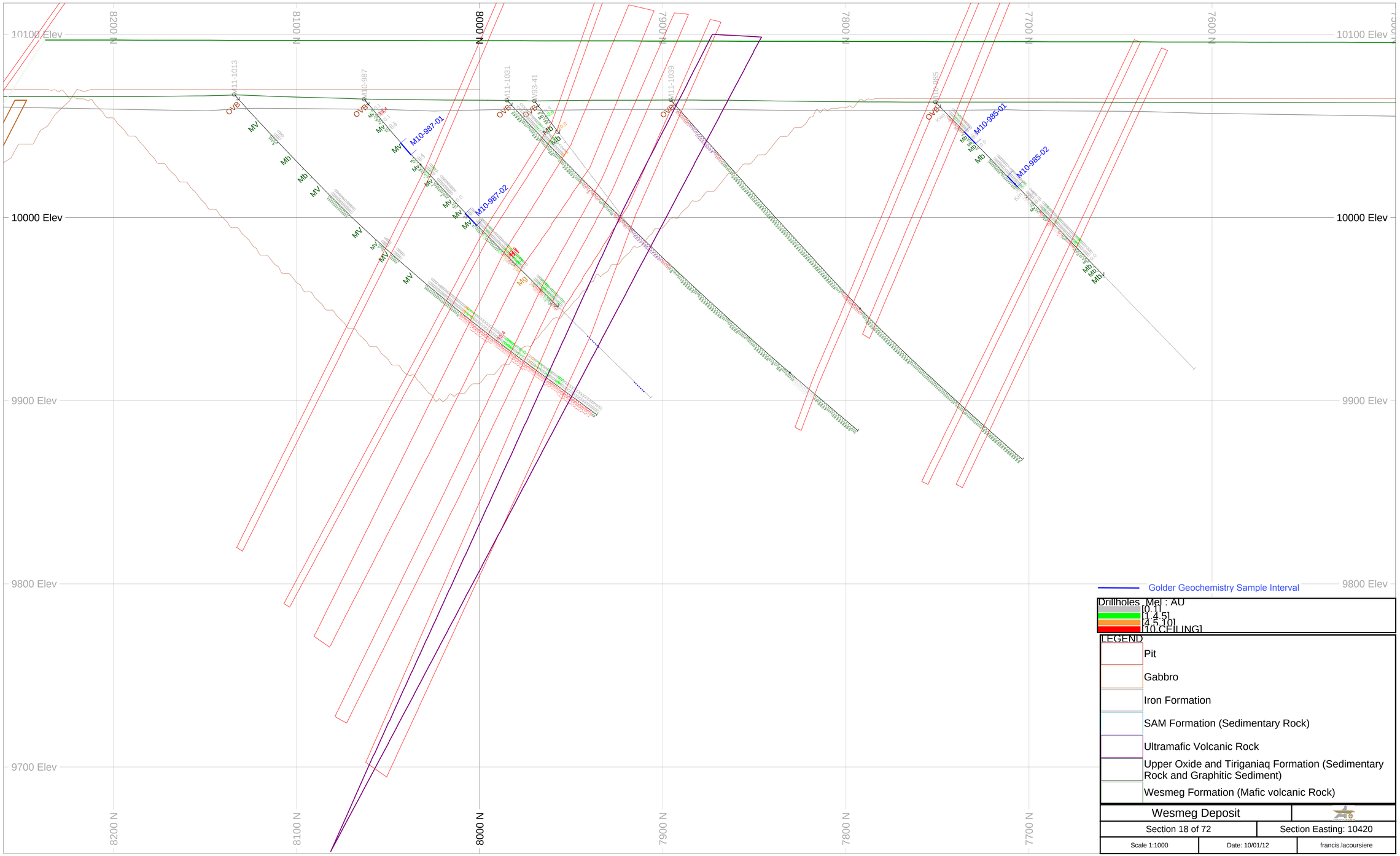

8200 N
8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
7500 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 3 of 72
Section Easting: 10120
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

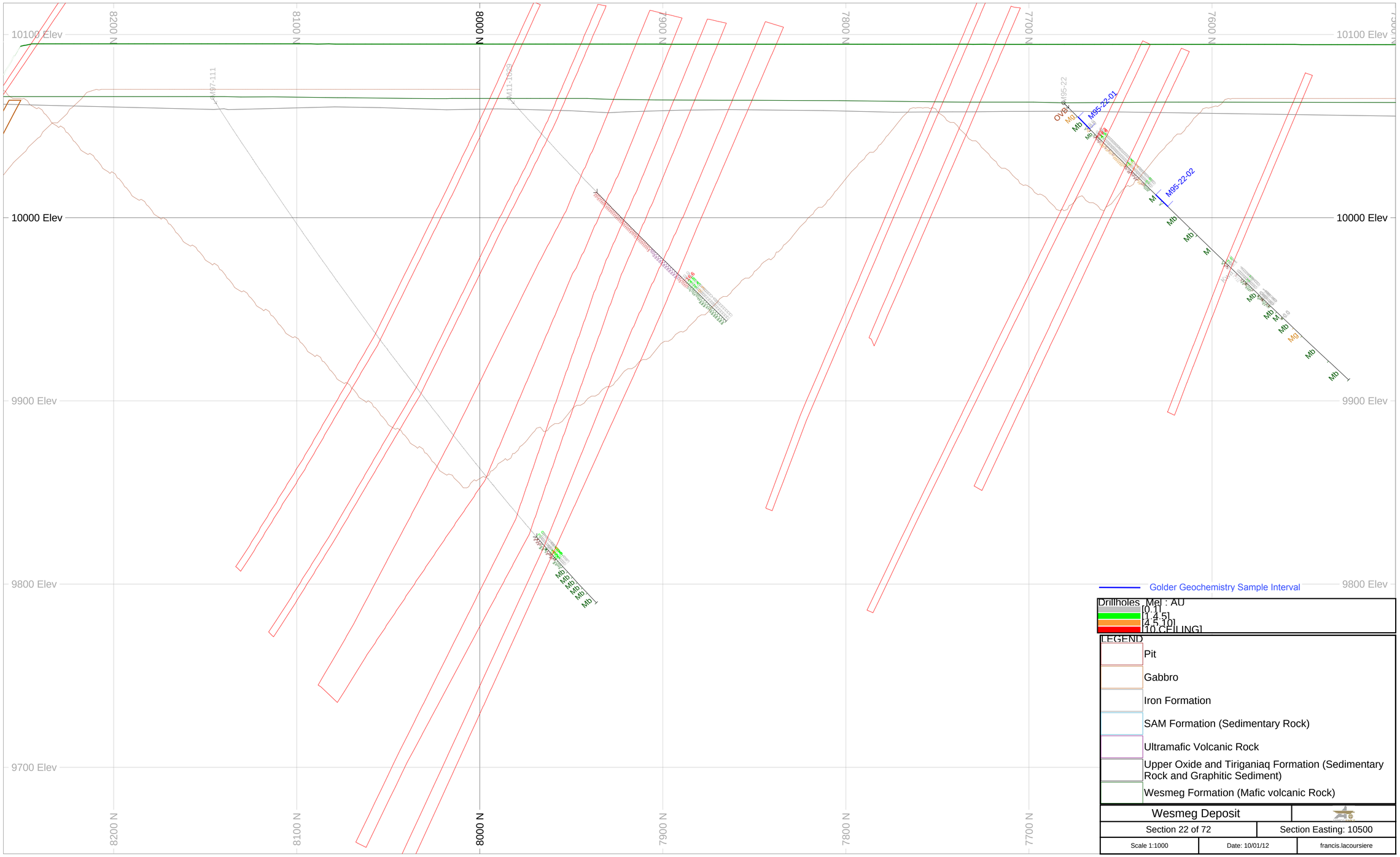

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9900 Elev
9800 Elev
9700 Elev
8200 N
8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
OVB
MV
M11-1051
M11-1051-01
M11-1051-02
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 9 of 72
Section Easting: 10240
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

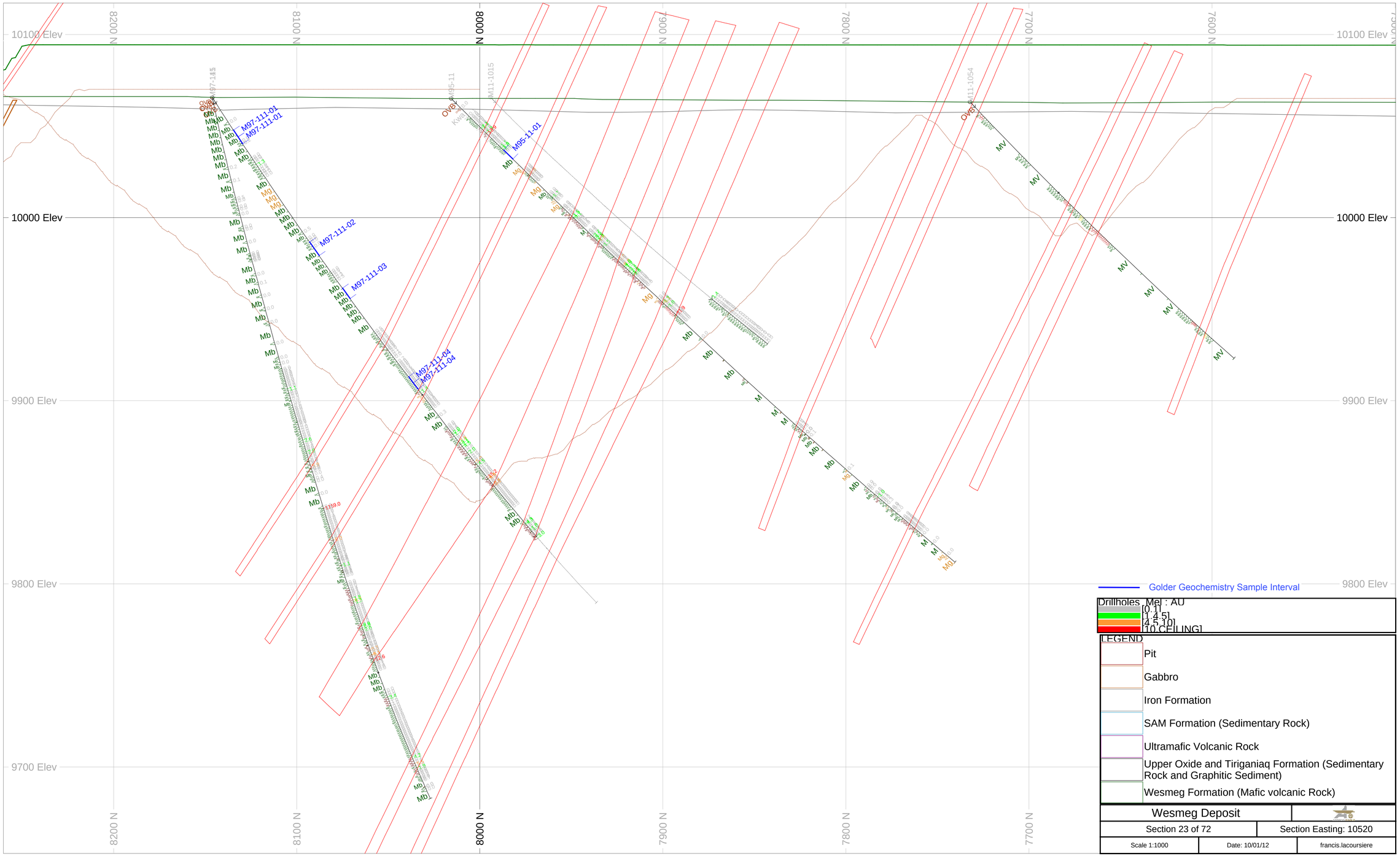

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8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 13 of 72
Section Easting: 10320
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

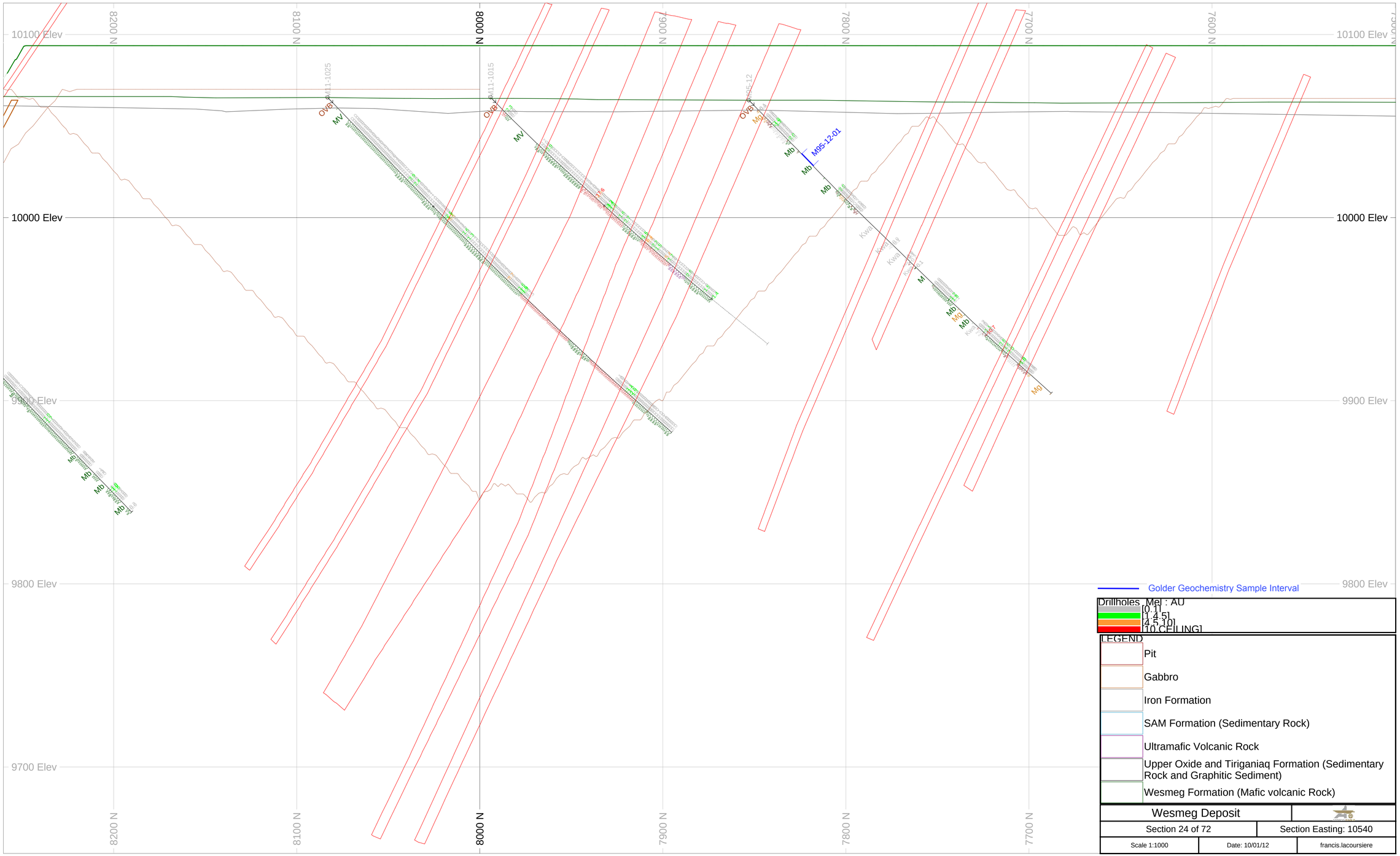

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8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
M11-1019
M11-1042
M11-1042
OVB
MV
MD
M11-1042-01
M11-1042-02
M11-1042-03
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 15 of 72
Section Easting: 10360
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

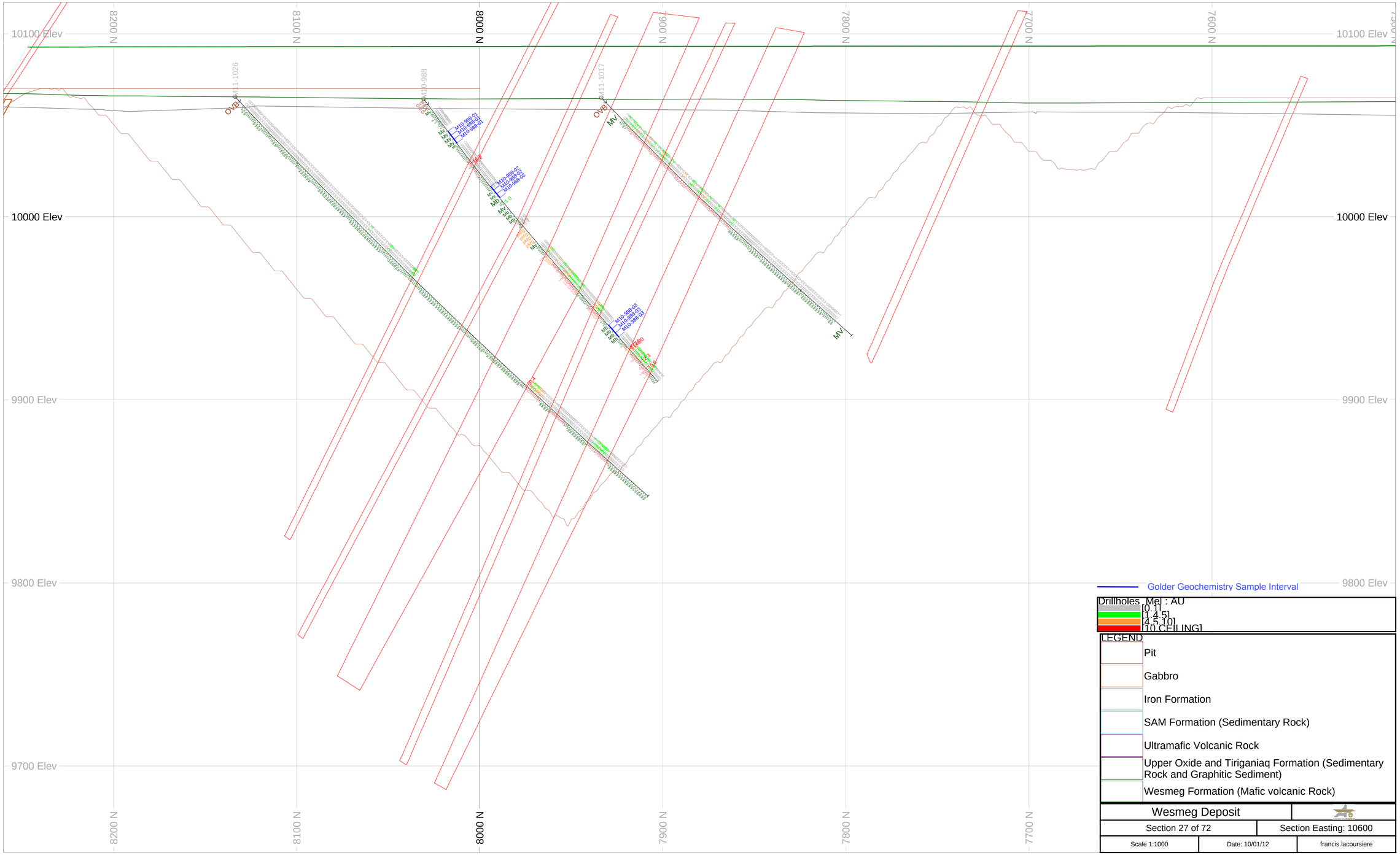

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10000 Elev
9900 Elev
9800 Elev
9700 Elev
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8100 N
8000 N
7900 N
7800 N
7700 N
M10-987
W93-41
M10-985
M10-987-03
M10-987-04
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 17 of 72
Section Easting: 10400
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

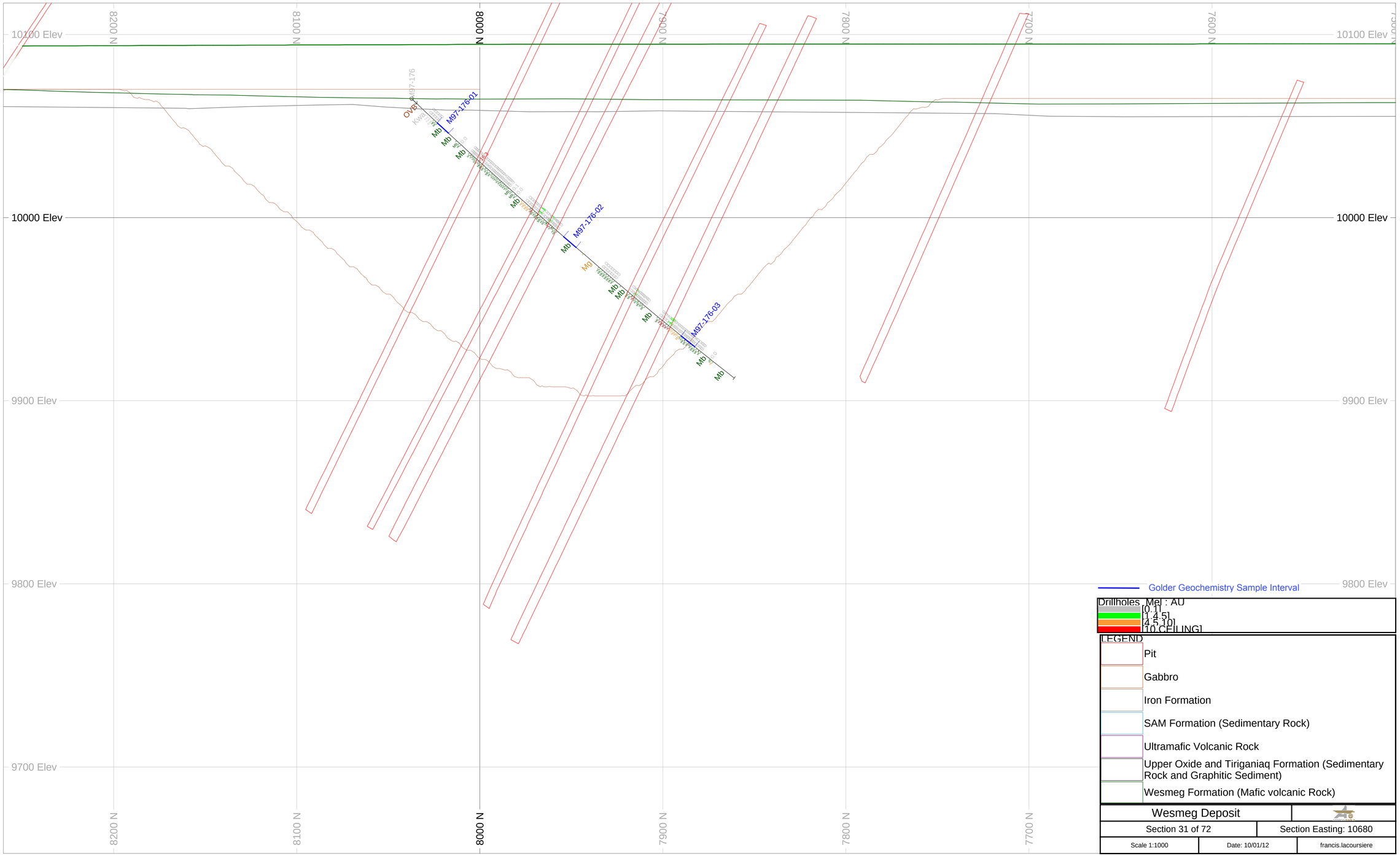

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8100 N
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7900 N
7800 N
7700 N
7600 N
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M10-987-02
M10-985-01
M10-985-02
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 18 of 72
Section Easting: 10420
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

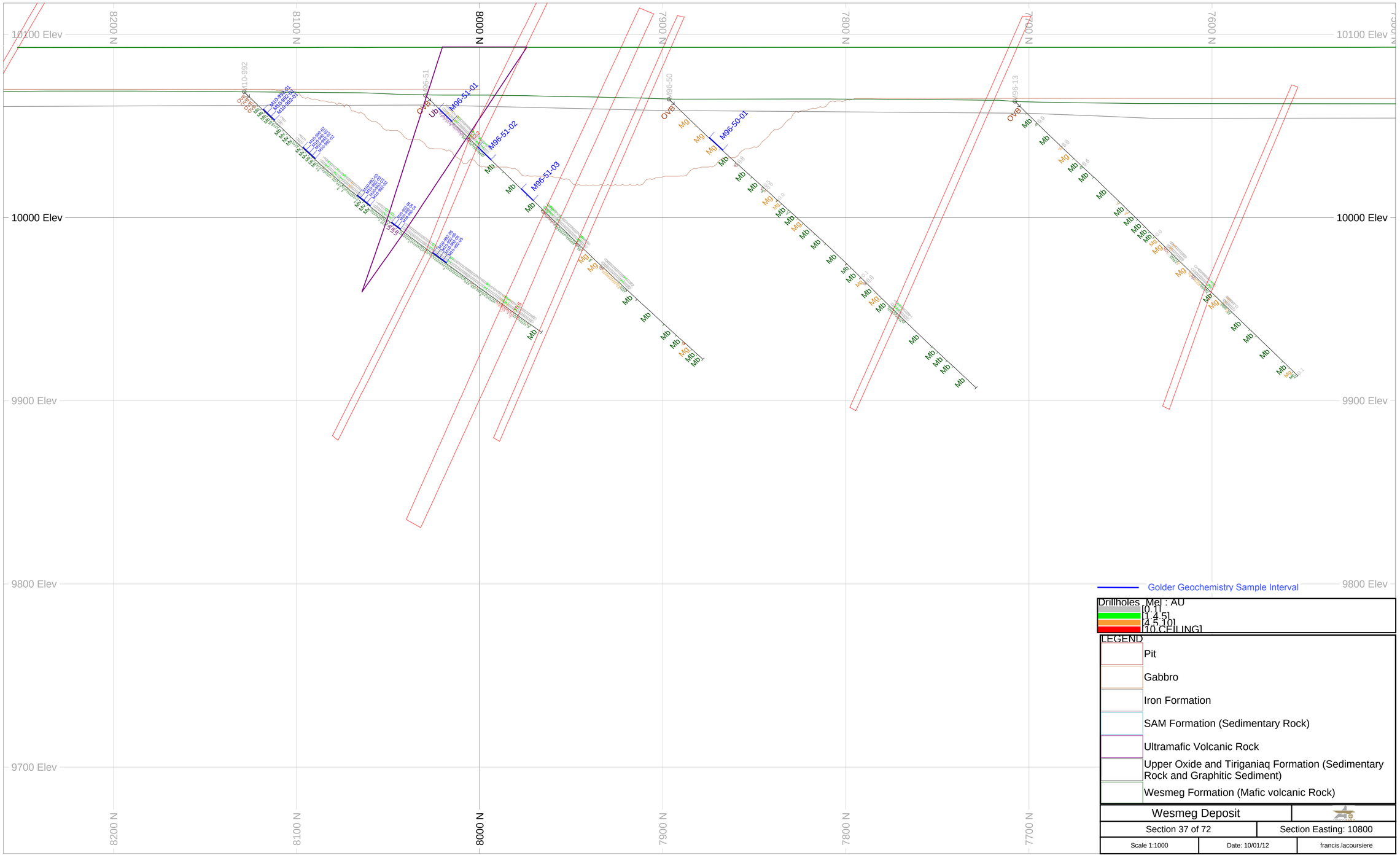

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9700 Elev
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8000 N
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7800 N
7700 N
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7500 N
M97-111
M11-1356
M95-22
OVBV
MGI
MDb
M95-22-01
M95-22-02
Golder Geochemistry Sample Interval
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 22 of 72
Section Easting: 10500
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

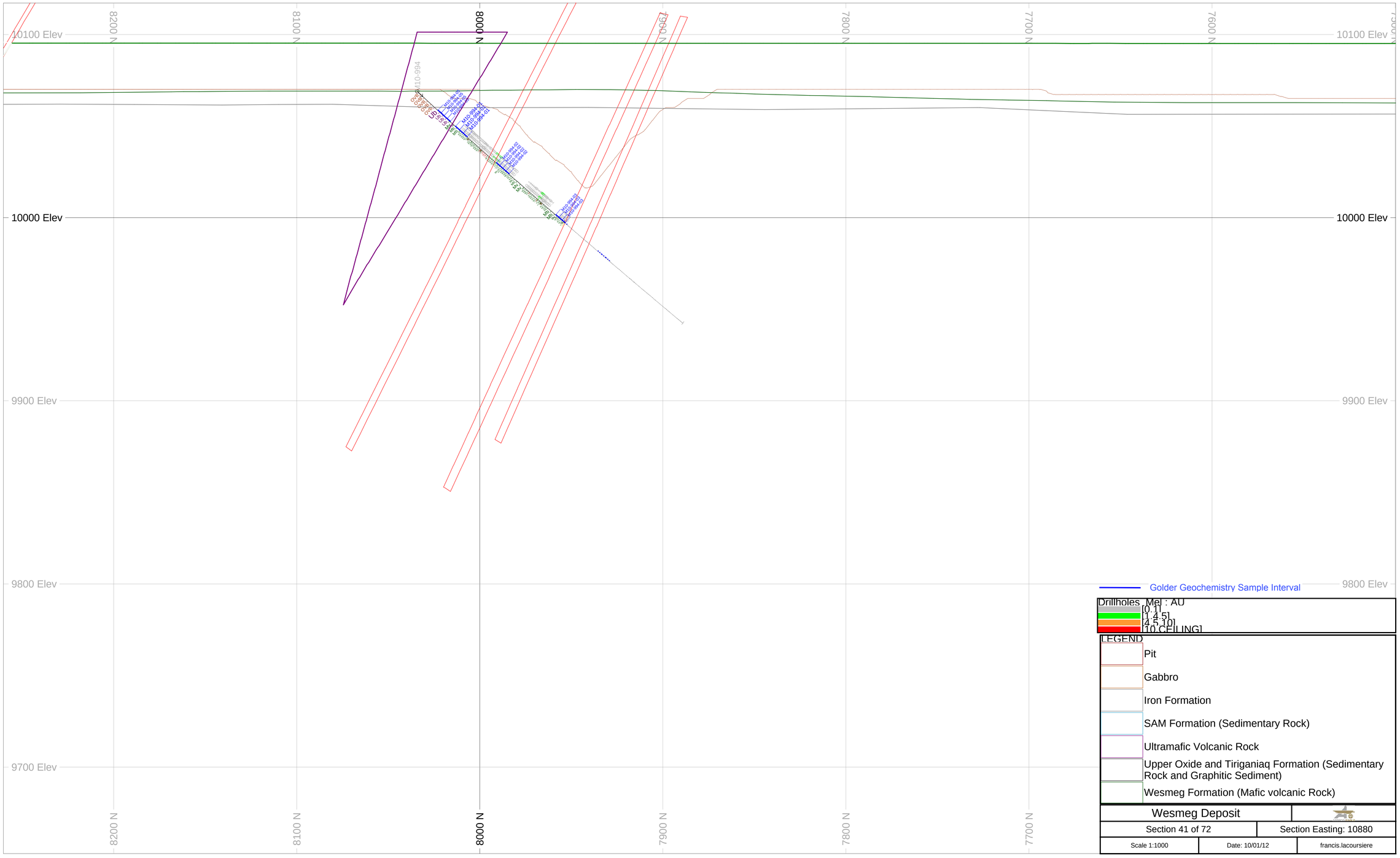

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9700 Elev
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8100 N
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7800 N
7700 N
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M97-111-01
M97-111-01
M97-111-02
M97-111-03
M97-111-04
M97-111-04
M95-11-01
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 23 of 72
Section Easting: 10520
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

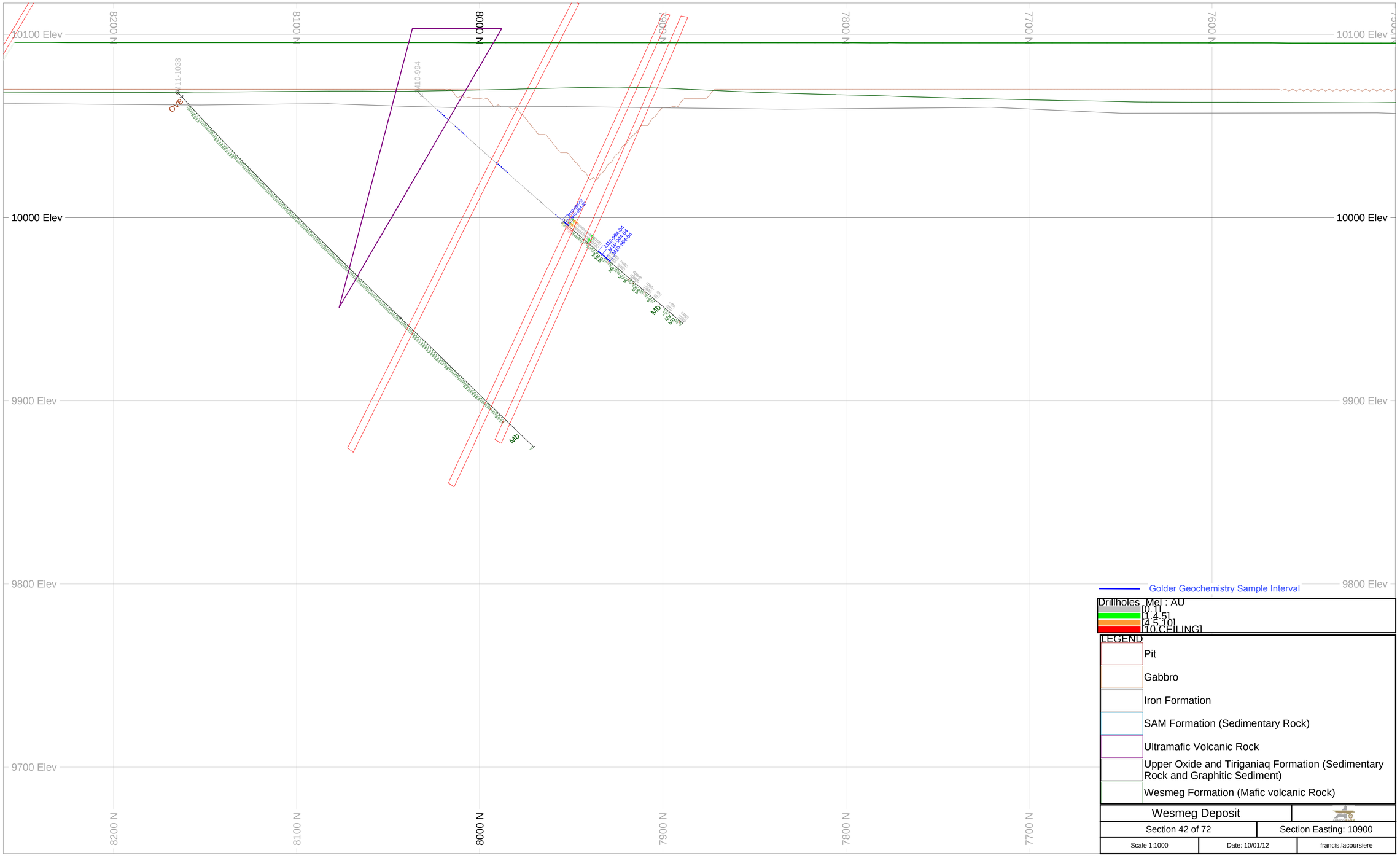

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9800 Elev
9700 Elev
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8000 N
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7800 N
7700 N
7600 N
M95-12-01
Golder Geochemistry Sample Interval
Drillholes . Mel : AU
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 24 of 72
Section Easting: 10540
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

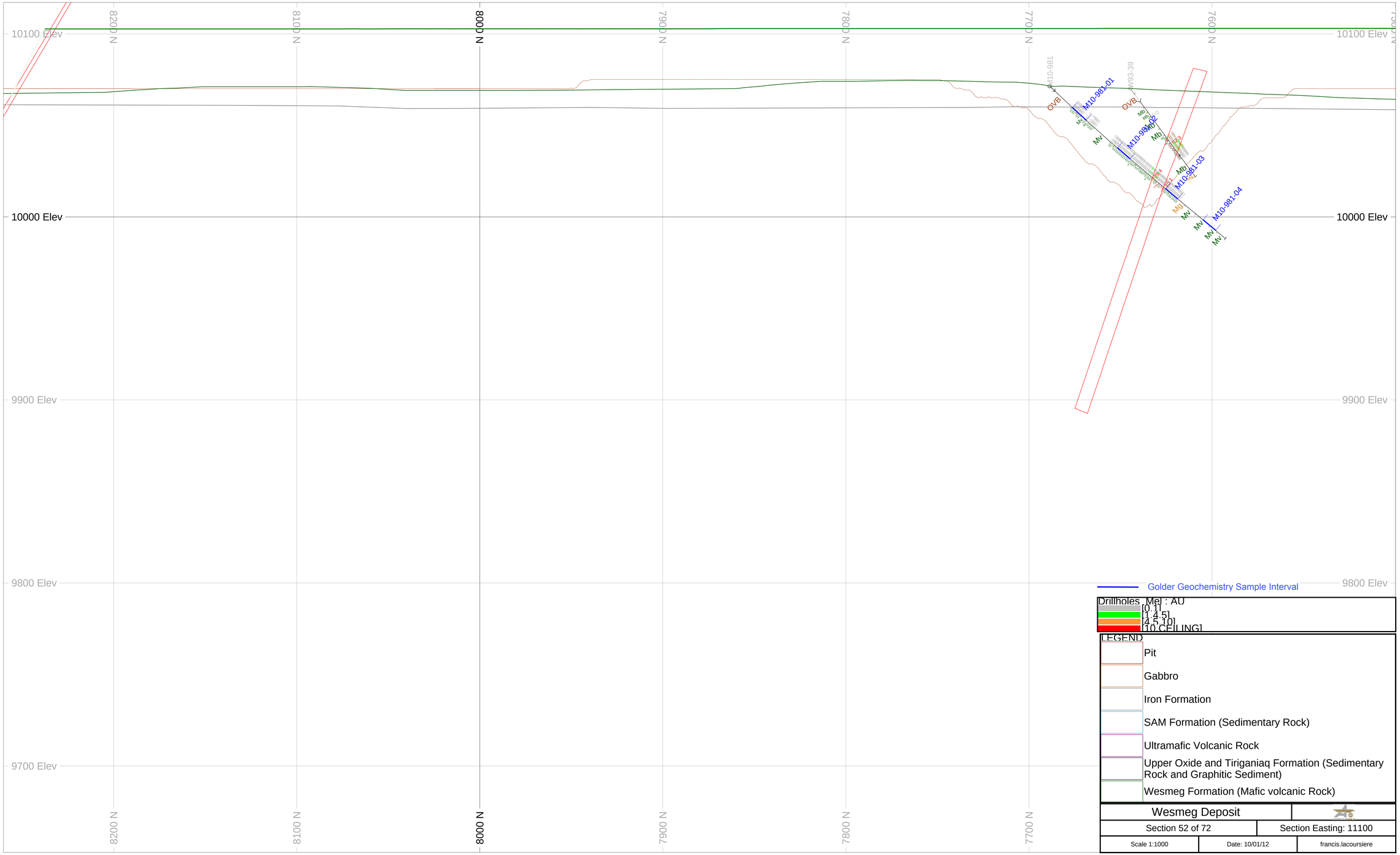

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8100 N
8000 N
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7800 N
7700 N
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7500 N
OVB
MV
M10-988-01
M10-988-02
M10-988-03
M11-1026
M10-988
M11-1017
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 27 of 72
Section Easting: 10600
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

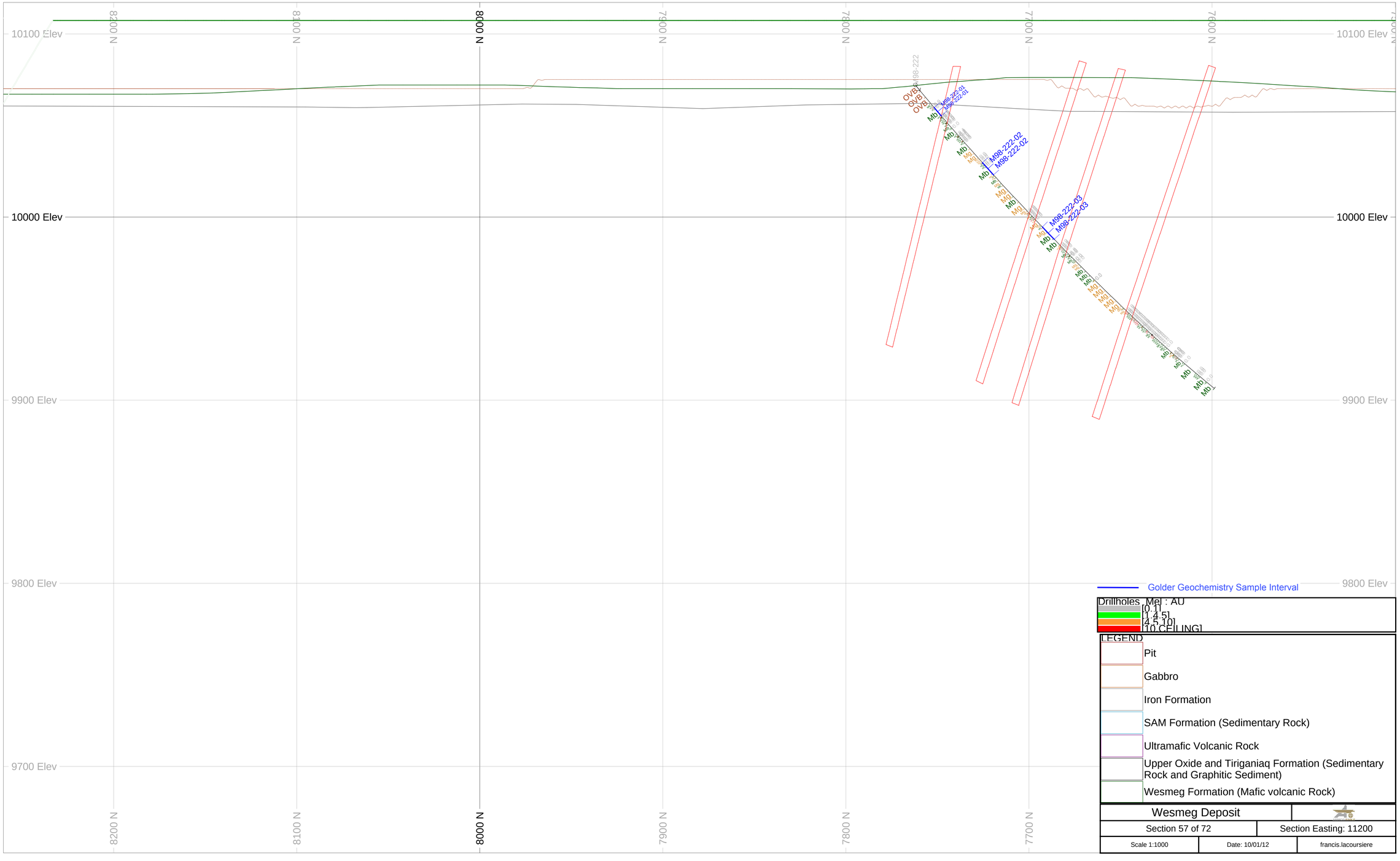

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9700 Elev
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8100 N
8000 N
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7800 N
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7500 N
M97-176-01
M97-176-02
M97-176-03
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 31 of 72
Section Easting: 10680
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

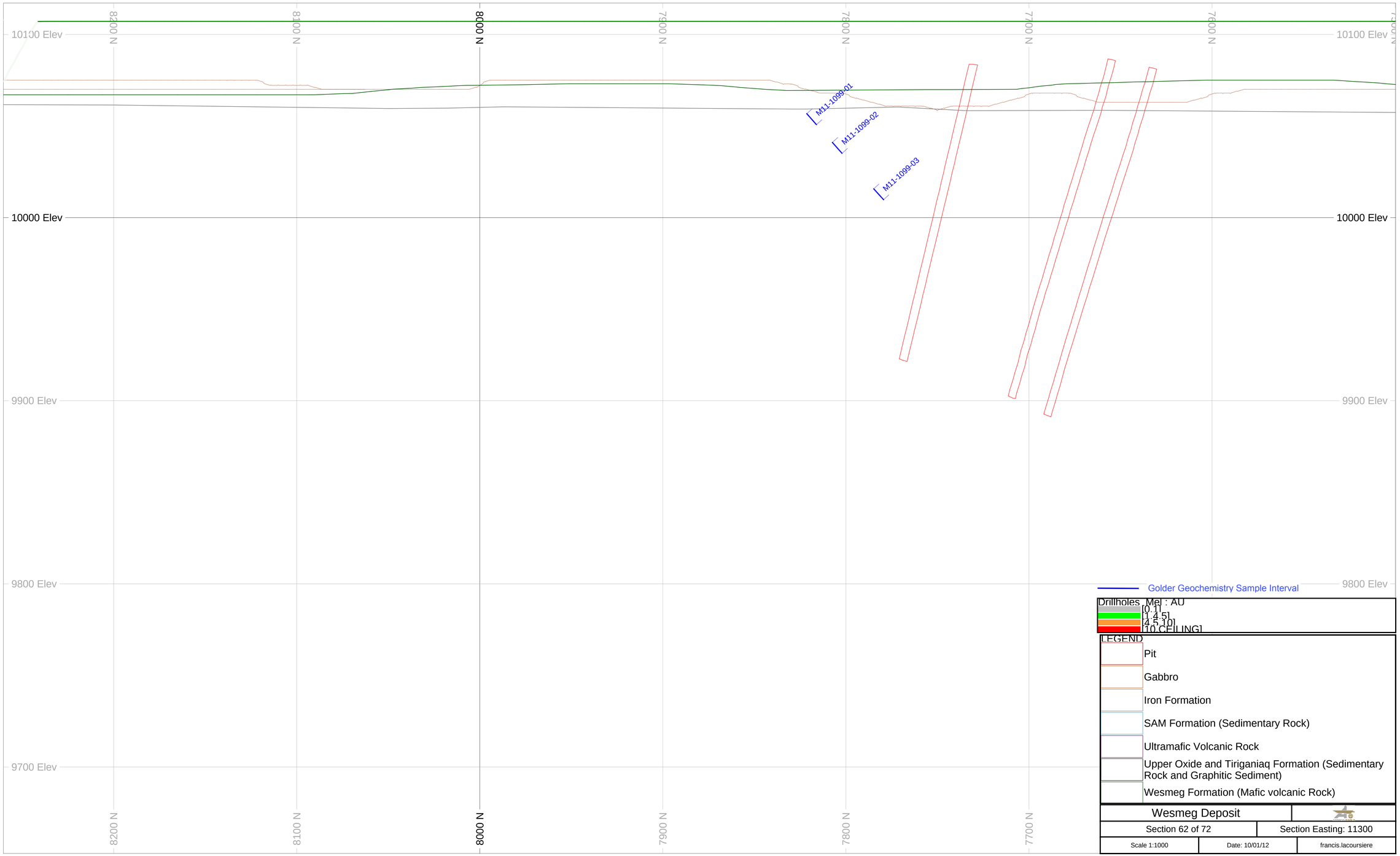

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9900 Elev
9800 Elev
9700 Elev
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8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
M96-51-01
M96-51-02
M96-51-03
M96-50-01
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 37 of 72
Section Easting: 10800
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

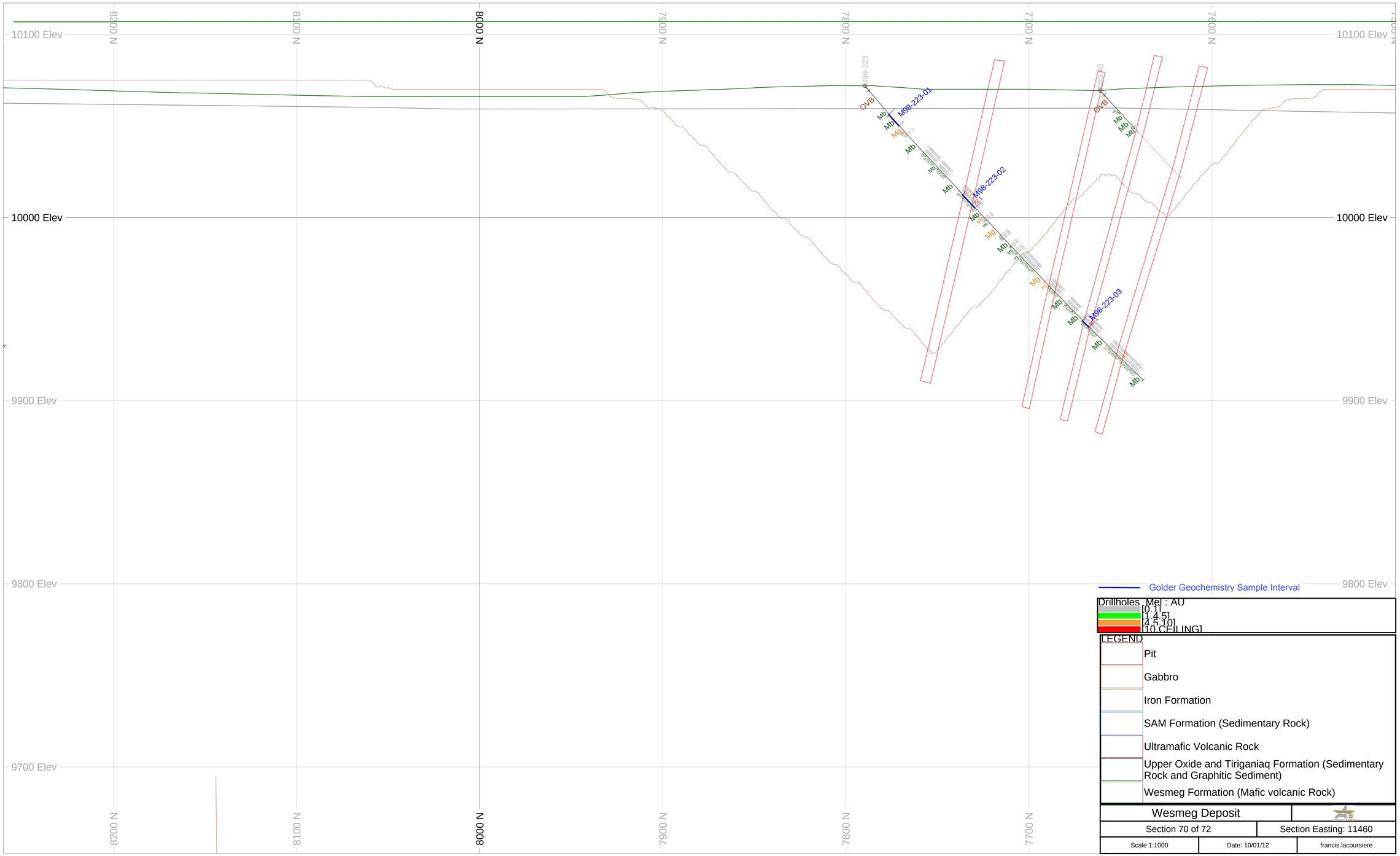

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10000 Elev
9900 Elev
9800 Elev
9700 Elev
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8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
7500 N
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 41 of 72
Section Easting: 10880
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


8200 N
8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
7500 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
M11-1038
M10-994
OVB
Md
M10-994-010
M10-994-04
M10-994-04
M10-994-04.04
M10-994-04.05
M10-994-04.04
Golder Geochemistry Sample Interval
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[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 42 of 72
Section Easting: 10900
Scale 1:1000
Date: 10/01/12
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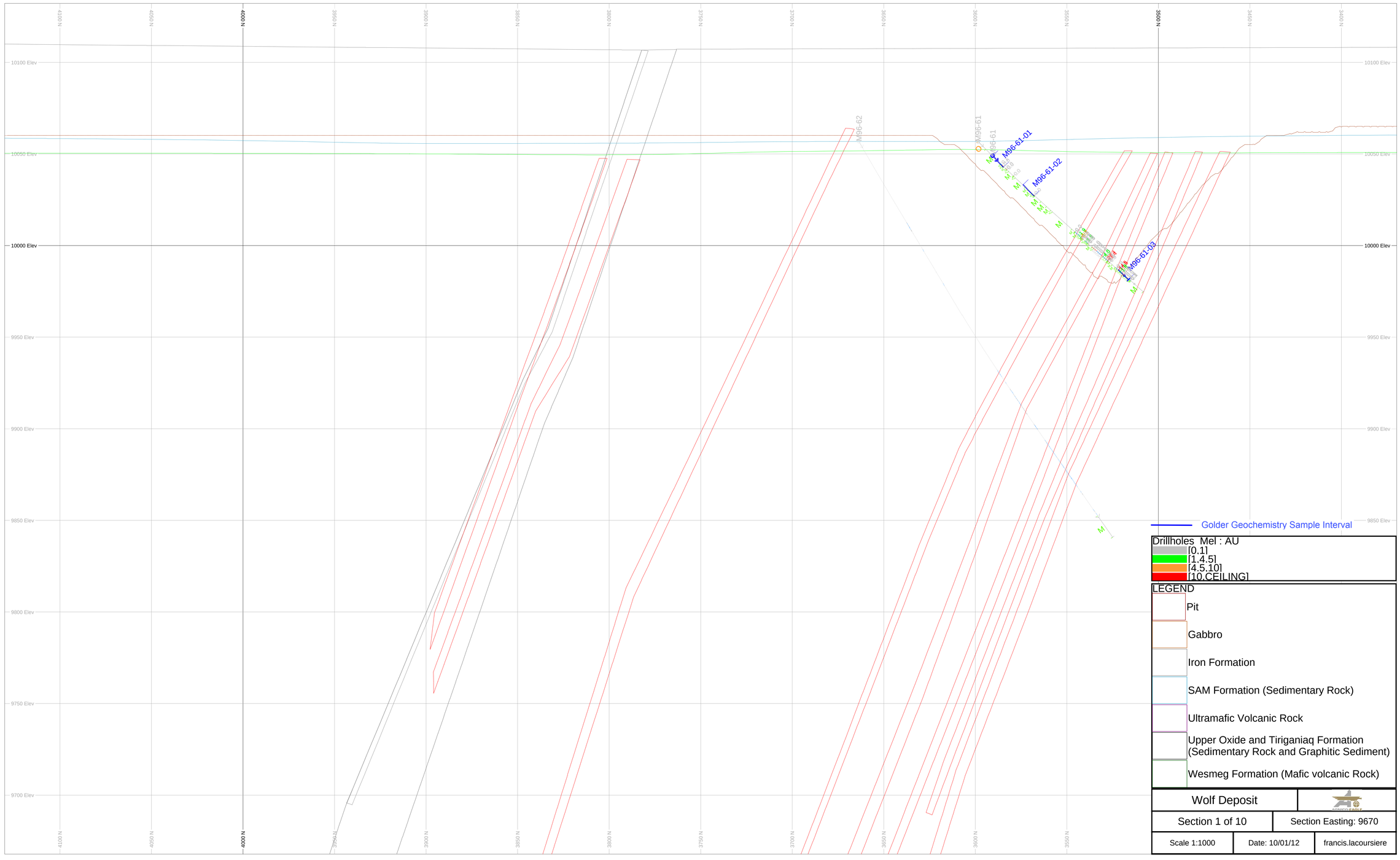

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10000 Elev
9900 Elev
9800 Elev
9700 Elev
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8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
M10-981
M93-39
OVB
Mv
Md
M10-981-01
M10-981-02
M10-981-03
M10-981-04
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 52 of 72
Section Easting: 11100
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

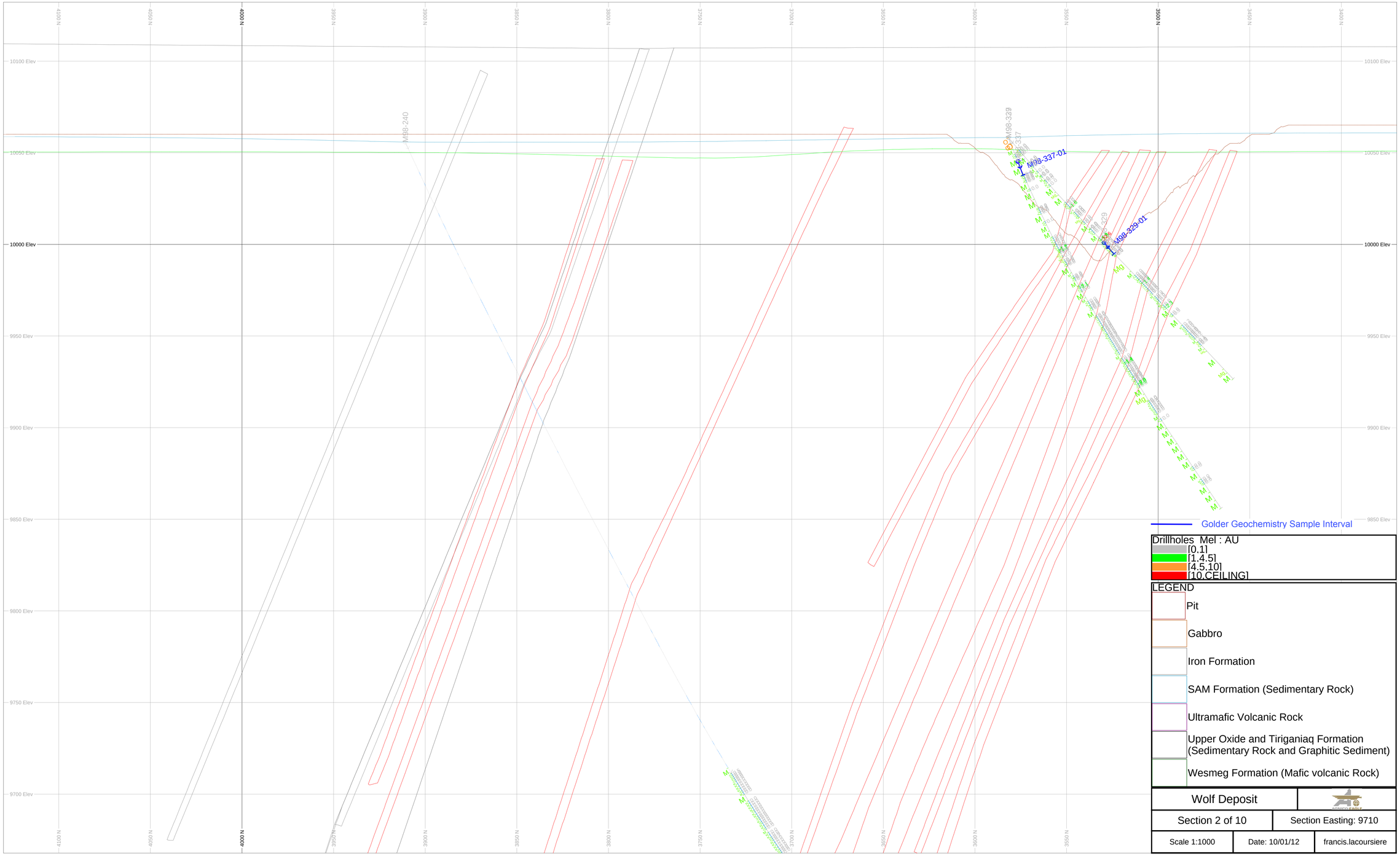

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8000 N
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7700 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
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OVB
MD
M98-222-01
M98-222-02
M98-222-03
Golder Geochemistry Sample Interval
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 57 of 72
Section Easting: 11200
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

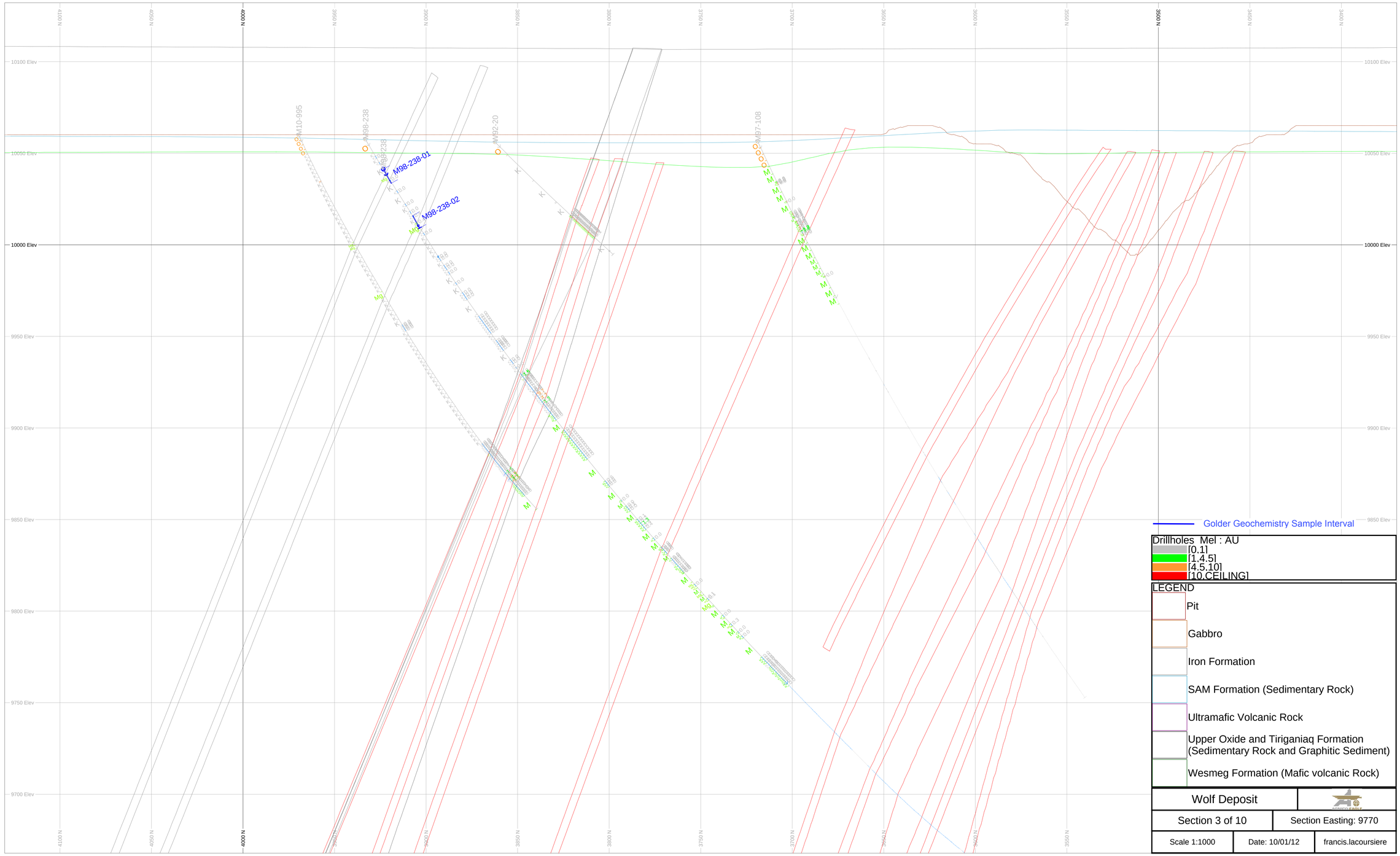

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8100 N
8000 N
7900 N
7800 N
7700 N
7600 N
10100 Elev
10000 Elev
9900 Elev
9800 Elev
9700 Elev
M11-1099-01
M11-1099-02
M11-1099-03
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 62 of 72
Section Easting: 11300
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

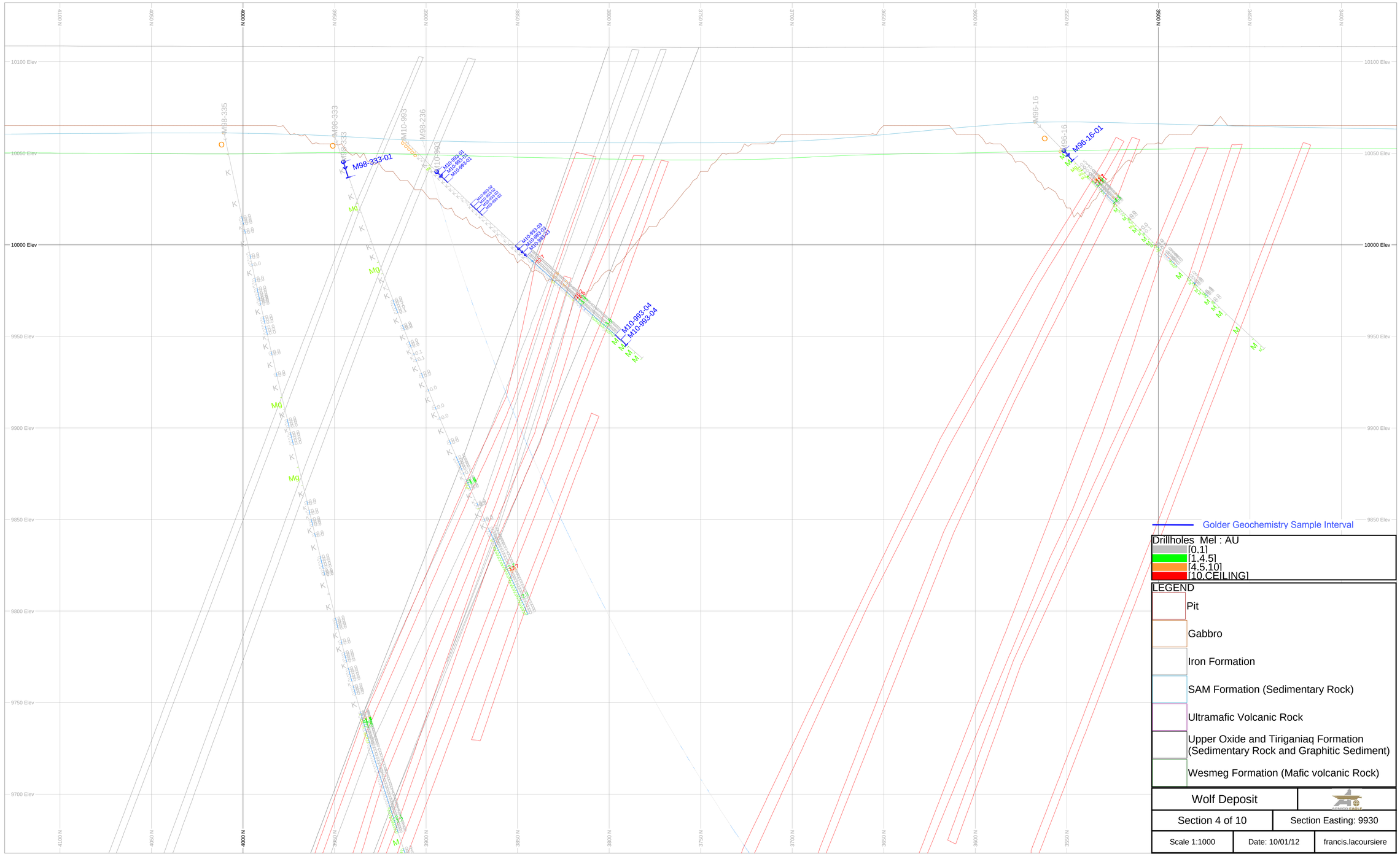

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9900 Elev
9800 Elev
9700 Elev
8200 N
8100 N
8000 N
7900 N
7800 N
7700 N
M98-223
M98-223-01
M98-223-02
M98-223-03
OVB
Mb
Mg
Golder Geochemistry Sample Interval
Drillholes_Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wesmeg Deposit
Section 70 of 72
Section Easting: 11460
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

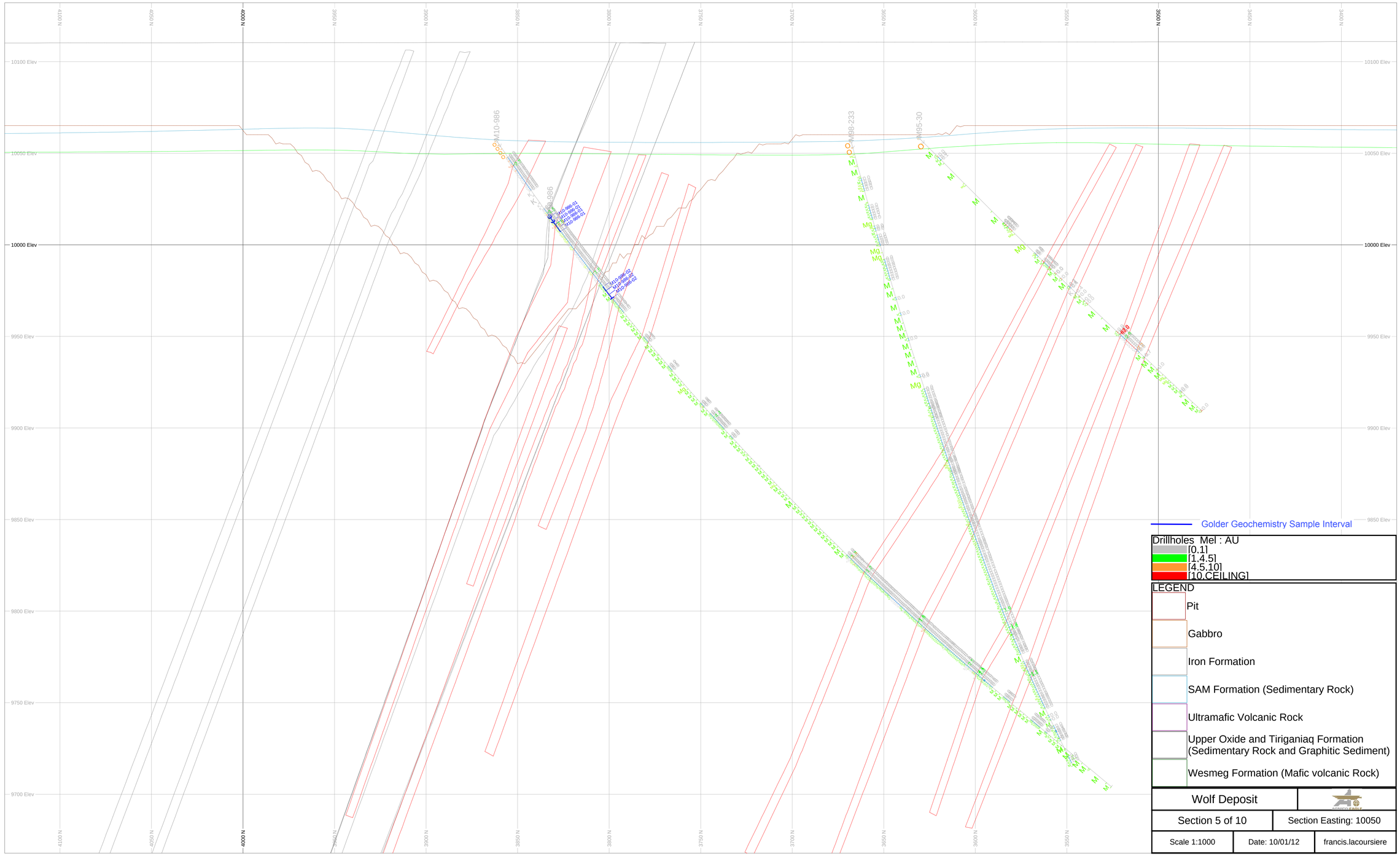
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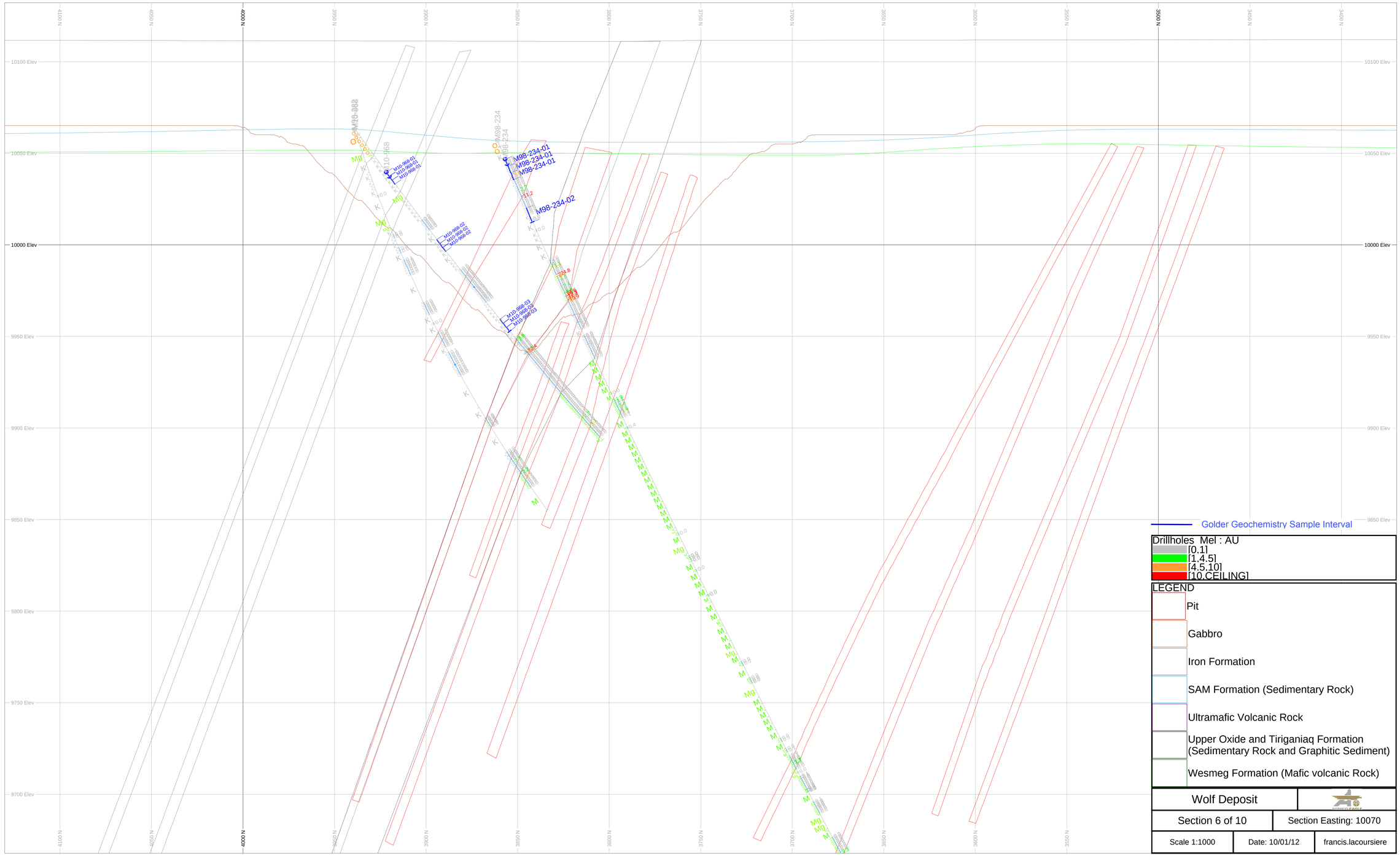

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3550 N
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3450 N
3400 N
10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
M96-62
M96-61
M96-61
M96-61-01
M96-61-02
M96-61-03
Golder Geochemistry Sample Interval
Drillholes Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 1 of 10
Section Easting: 9670
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

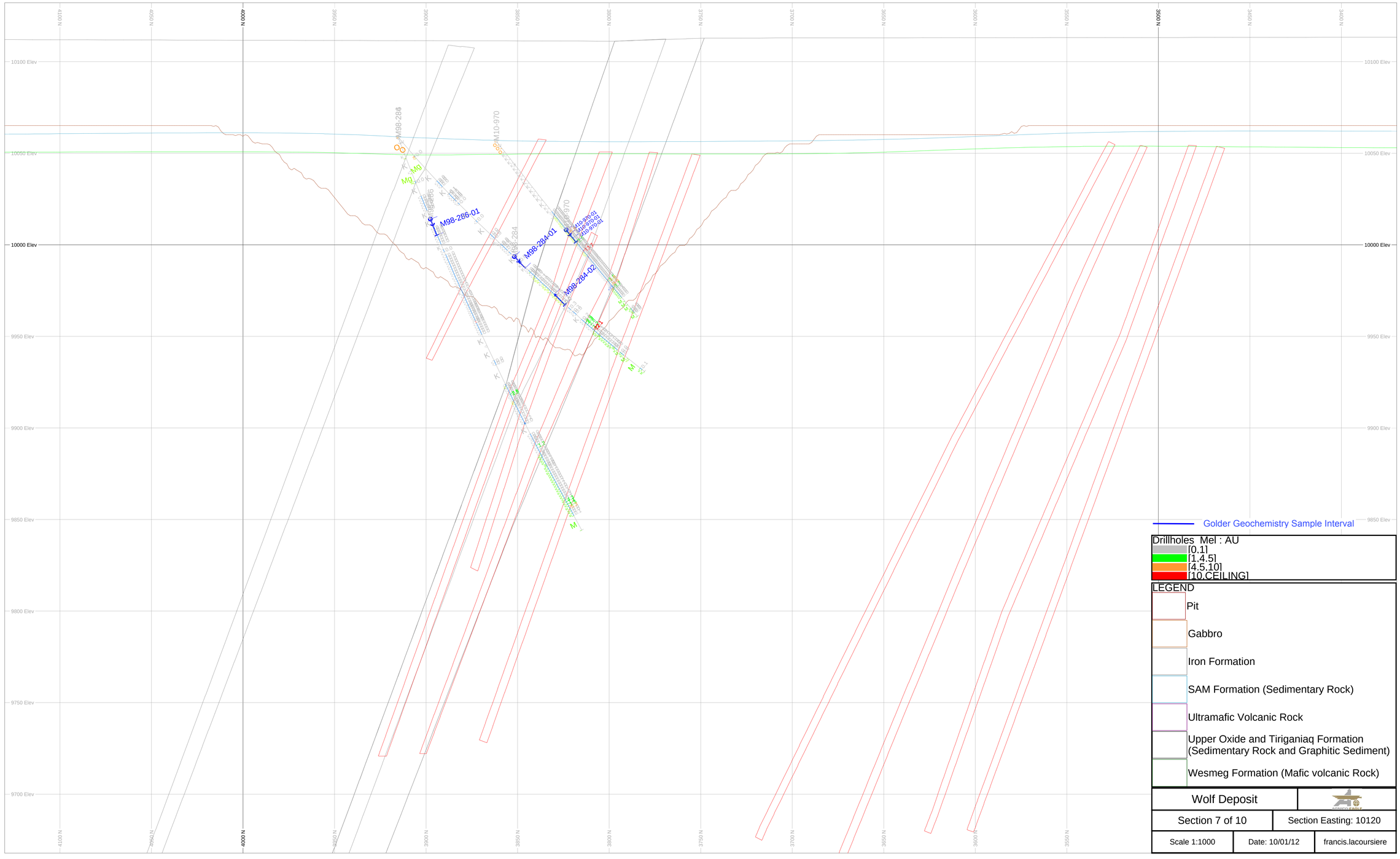

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3750 N
3700 N
3650 N
3600 N
3550 N
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3450 N
3400 N
10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
M98-240
M98-337
M98-337-01
M98-329
M98-329-01
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Drillholes Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 2 of 10
Section Easting: 9710
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

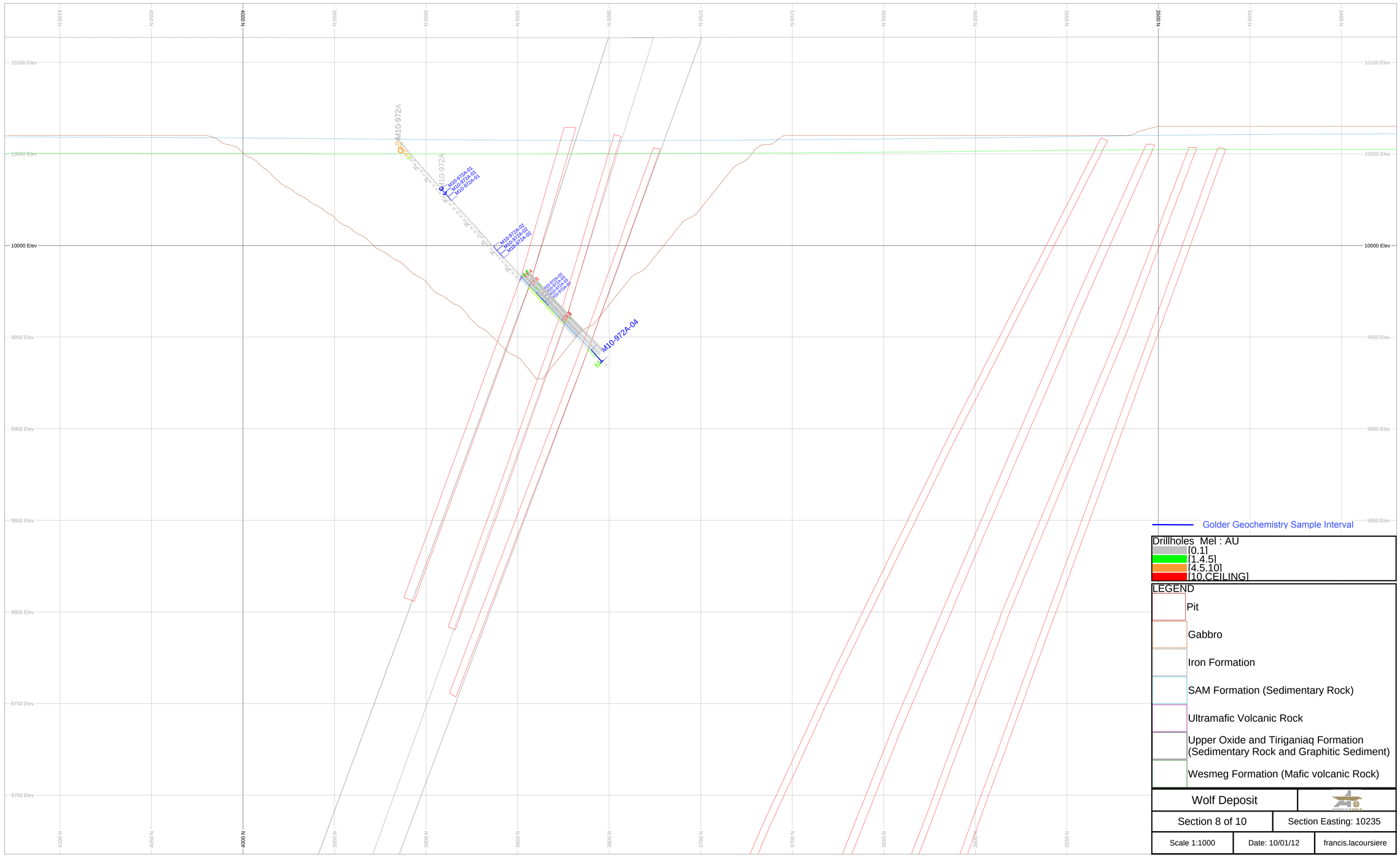

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3750 N
3700 N
3650 N
3600 N
3550 N
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3450 N
3400 N
10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
M10-995
M98-238
M98-238
M92-20
M97-108
M98-238-01
M98-238-02
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[4,5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 3 of 10
Section Easting: 9770
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

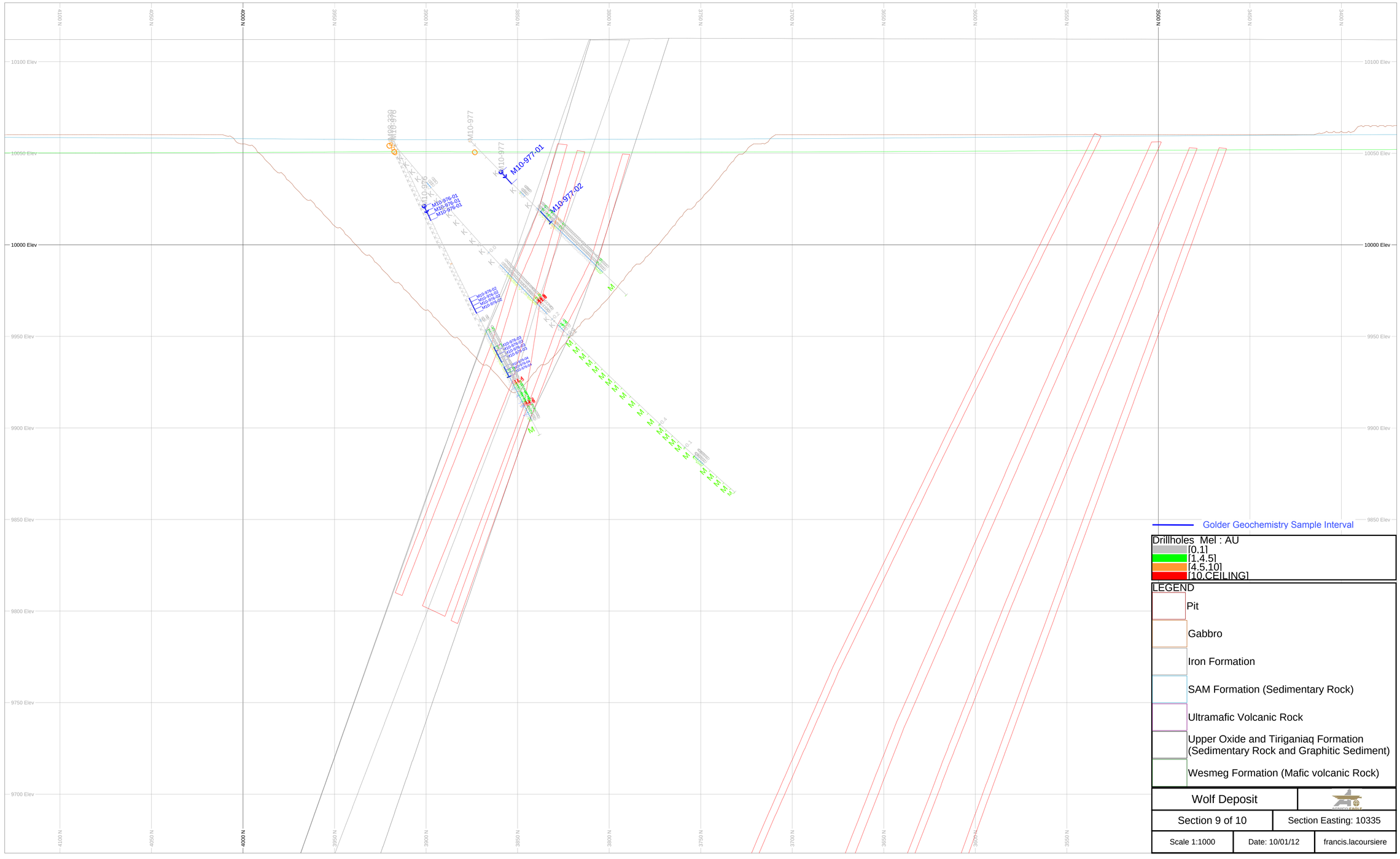

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3600 N
3550 N
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3450 N
3400 N
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10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
M98-335
M98-333
M98-333-01
M10-993
M98-236
M10-993-01
M10-993-02
M10-993-03
M10-993-04
M96-16
M96-16-01
Golder Geochemistry Sample Interval
Drillholes Mel : AU
[0,1]
[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 4 of 10
Section Easting: 9930
Scale 1:1000
Date: 10/01/12
francis.lacoursiere

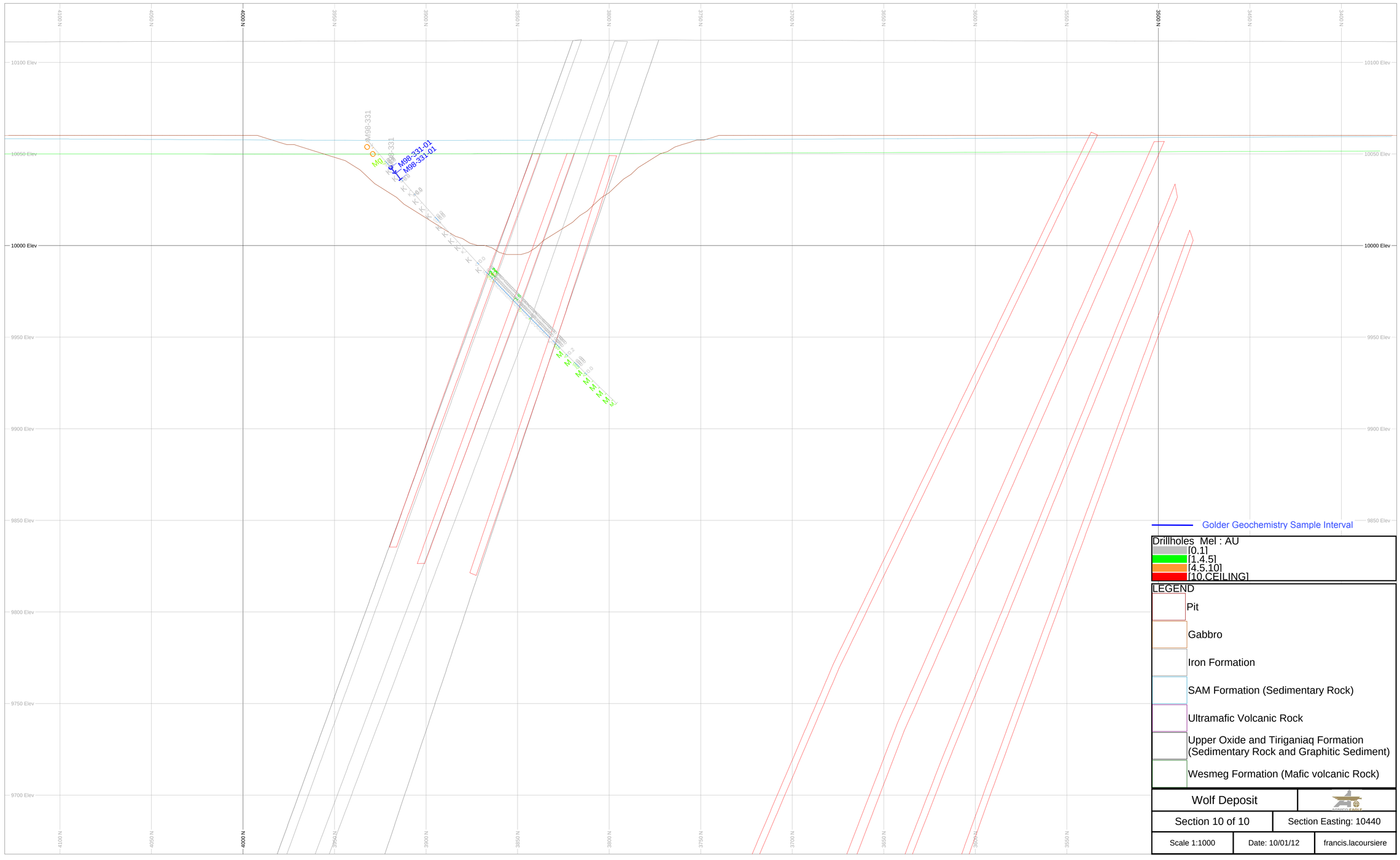

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10050 Elev
10000 Elev
9950 Elev
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9800 Elev
9750 Elev
9700 Elev
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M08-233
M95-30
M10-986-01
M10-986-01
M10-986-01
M10-986-01
M10-986-02
M10-986-02
M10-986-02
Golder Geochemistry Sample Interval
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[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 5 of 10
Section Easting: 10050
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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4000 N
3950 N
3900 N
3850 N
3800 N
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3700 N
3650 N
3600 N
3550 N
3500 N
3450 N
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10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
M10-968
M98-234
M98-234-01
M98-234-02
M10-968-01
M10-968-02
M10-968-03
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 6 of 10
Section Easting: 10070
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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3800 N
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3700 N
3650 N
3600 N
3550 N
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M98-284
M98-286-01
M98-284-01
M98-284-02
M10-970-01
M10-970-01
M10-970-01
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 7 of 10
Section Easting: 10120
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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3650 N
3600 N
3550 N
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LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 8 of 10
Section Easting: 10235
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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3800 N
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3700 N
3650 N
3600 N
3550 N
3500 N
3450 N
3400 N
10100 Elev
10050 Elev
10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
9750 Elev
9700 Elev
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M10-977-02
M10-976-01
M10-976-02
M10-976-03
M10-976-04
M10-976-05
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 9 of 10
Section Easting: 10335
Scale 1:1000
Date: 10/01/12
francis.lacoursiere


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4000 N
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3900 N
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3800 N
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3700 N
3650 N
3600 N
3550 N
3500 N
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10000 Elev
9950 Elev
9900 Elev
9850 Elev
9800 Elev
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9700 Elev
M98-331
M98-331-01
Golder Geochemistry Sample Interval
Drillholes Mel : AU
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[1,4.5]
[4.5,10]
[10,CEILING]
LEGEND
Pit
Gabbro
Iron Formation
SAM Formation (Sedimentary Rock)
Ultramafic Volcanic Rock
Upper Oxide and Tiriganiaq Formation (Sedimentary Rock and Graphitic Sediment)
Wesmeg Formation (Mafic volcanic Rock)
Wolf Deposit
Section 10 of 10
Section Easting: 10440
Scale 1:1000
Date: 10/01/12
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# APPENDIX B

## Tabulated Geochemical Results for Waste Rock, Ore, and Pad Samples

# B.1 Summary of Analytical Program

# Appendix B.1: Summary of Analytical Program - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample Number | Year (analysis) | from (m) | to (m) | Rock Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE | NAG | Moisture Content | HCT | Mineralogy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ML08-243-02 | 2011 | 136 | 144.5 | Gabbro | Discovery | OP/FW | x | x | x | x | | | | |
| ML08-226-01 | 2011 | 23 | 32 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-229-02 | 2011 | 95.5 | 104.5 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-241-03 | 2011 | 84 | 93 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-245-01 | 2011 | 44 | 53 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML09-259-01 | 2011 | 11 | 20 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-104-01 | 2011 | 20 | 29 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-105-02 | 2011 | 63 | 73 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-117-02 | 2011 | 40 | 48.5 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-88-02 | 2011 | 36 | 43 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML97-186-02 | 2011 | 120 | 129 | Gabbro | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-225-02 | 2011 | 104 | 115 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML09-256-01 | 2011 | 52.5 | 61 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML95-85-01 | 2011 | 141 | 150 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| DS09GT-10-01 | 2011 | 14 | 19 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-226-05 | 2011 | 192 | 200 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-229-04 | 2011 | 191 | 200 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-230-01 | 2011 | 25 | 33 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-232-01 | 2011 | 62 | 70 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | x | x |
| ML08-233-01 | 2011 | 20 | 28 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-240-01 | 2011 | 77 | 85 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-241-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-245-02 | 2011 | 82.5 | 91 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML09-254-02 | 2011 | 100 | 108 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-105-03 | 2011 | 94 | 103 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-105-04 | 2011 | 138 | 147 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-107-03 | 2011 | 75.5 | 84.5 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-113-01 | 2011 | 19 | 27.5 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-113-02 | 2011 | 71 | 79 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-120-01 | 2011 | 93 | 102 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-82-02 | 2011 | 68 | 74 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-83-02 | 2011 | 84 | 92 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-88-01 | 2011 | 16 | 24.5 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-95-02 | 2011 | 55 | 64 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-238-03 | 2009 | 99 | 104 | Greywacke/Siltstone | Discovery | inter ore | x | x | x | x | | | | |
| ML00-221-04 | 2009 | 162 | 168 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | x | | | |
| ML08-236-3 | 2009 | 65 | 75 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | x | | | |
| ML08-238-04 | 2009 | 126 | 133 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML90-03-02 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML90-04-03 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML90-07-01 | 2009 | 46 | 51 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML90-08-02 | 2009 | 53 | 58 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML90-09-2 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | x | | | |
| ML90-10-3 | 2009 | 56 | 64 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | x | | | |
| ML90-12-02 | 2009 | 80 | 84 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML90-14-2 | 2009 | 129 | 137 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | x | | x | x |
| ML92-061-04 | 2009 | 109 | 114 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML92-062-03 | 2009 | 50 | 55 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML95-82-3 | 2009 | 65 | 74 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | x | | | |
| ML95-93-04 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | x | x | x | x | | | | |
| ML00-221-01 | 2009 | 25 | 30 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML00-221-02 | 2009 | 61 | 66 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML00-221-03 | 2009 | 88 | 93 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML90-03-01 | 2009 | 17 | 24 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML90-04-01 | 2009 | 10 | 15 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | x | | | |
| ML90-04-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML90-08-01 | 2009 | 16 | 21 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML90-10-1 | 2009 | 11 | 18 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | x | | | |
| ML90-12-01 | 2009 | 24 | 29 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | x | | | |
| ML92-061-01 | 2009 | 21 | 26 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | x | | x | x |
| ML92-061-02 | 2009 | 50 | 56 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-82-1 | 2009 | 20 | 30 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | x | | x | x |
| ML95-93-01 | 2009 | 22 | 26 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-93-02 | 2009 | 41 | 46 | Greywacke/Siltstone | Discovery | OP/HW | x | x | x | x | x | | | |
| ML08-236-2 | 2009 | 41 | 49 | Greywacke/Siltstone | Discovery | OP/HW-interore | x | x | x | x | x | | | |
| ML92-053-1 | 2009 | 105 | 112 | Iron Formation | Discovery | OP/FW | x | x | x | x | | | | |
| ML08-236-1 | 2009 | 23 | 27 | Iron Formation | Discovery | OP/HW | x | x | x | x | x | | | |
| ML90-09-1 | 2009 | 33 | 40 | Iron Formation | Discovery | OP/HW | x | x | x | x | x | | | |
| ML90-10-2 | 2009 | 33 | 41 | Iron Formation | Discovery | OP/HW | x | x | x | x | x | | | |
| ML92-060-1 | 2009 | 42 | 49 | Iron Formation | Discovery | OP/HW | x | x | x | x | x | | | |
| ML92-061-03 | 2009 | 75 | 81 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML92-062-01 | 2009 | 20 | 25 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML92-062-02 | 2009 | 35 | 39.5 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-82-2 | 2009 | 43 | 46 | Iron Formation | Discovery | OP/HW | x | x | x | x | x | | | |
| ML95-93-03 | 2009 | 55 | 60 | Iron Formation | Discovery | OP/HW | x | x | x | x | x | | | |
| ML08-225-01 | 2011 | 70 | 79 | Iron Formation | Discovery | OP/FW | x | x | x | x | | | | |
| ML08-243-01 | 2011 | 97.5 | 106 | Iron Formation | Discovery | OP/FW | x | x | x | x | | | | |
| ML08-226-02 | 2011 | 36 | 45 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | x | x |
| ML08-226-03 | 2011 | 144 | 153 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-228-01 | 2011 | 26.5 | 35 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-228-02 | 2011 | 79 | 87.5 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-229-01 | 2011 | 52 | 61 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-229-03 | 2011 | 113 | 122 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-229-05 | 2011 | 234.5 | 243 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-233-02 | 2011 | 74.5 | 83 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-241-02 | 2011 | 42 | 51 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML09-254-01 | 2011 | 84 | 93 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML92062-01 | 2011 | 17.5 | 26 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-105-01 | 2011 | 25 | 34 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-107-01 | 2011 | 11 | 18 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-107-02 | 2011 | 62.5 | 71 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-117-01 | 2011 | 14 | 23 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-117-03 | 2011 | 61.5 | 71.5 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-82-01 | 2011 | 54 | 61.5 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | x | x |
| ML95-83-01 | 2011 | 22 | 31 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML95-95-01 | 2011 | 20 | 29 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | x | x |
| ML95-98-01 | 2011 | 9.5 | 17.5 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML97-186-01 | 2011 | 78 | 86 | Iron Formation | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-225-03 | 2011 | 169 | 178 | Ore/IF | Discovery | OP/FW | x | x | x | x | | | | |
| ML95-104-02 | 2011 | 177 | 187 | Ore/IF | Discovery | OP/FW | x | x | x | x | | | | |
| ML95-84-01 | 2011 | 123 | 131 | Ore/IF | Discovery | OP/FW | x | x | x | x | | | | |
| ML00-224-01 | 2011 | 101.5 | 110 | Ore/IF | Discovery | OP/HW | x | x | x | x | | | | |
| ML08-226-04 | 2011 | 168.5 | 174.5 | Ore/IF | Discovery | OP/HW | x | x | x | x | | | | |
| M08-743-03 | 2009 | 46 | 48 | Iron Formation | F Zone | OP-ore zone | x | x | x | x | | | | |
| M08-748-03 | 2009 | 85 | 95 | Iron Formation | F Zone | OP-ore zone | x | x | x | x | | | | |
| M09-802-02 | 2011 | 65 | 73 | Iron Formation | F Zone | OP/FW | x | x | x | x | | | x | x |

| Sample Number | Year (analysis) | from (m) | to (m) | Rock Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE | NAG | Moisture Content | HCT | Mineralogy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M09-803-01 | 2011 | 85 | 90 | Iron Formation | F Zone | OP/FW | x | x | x | x | | | | |
| M10-935-02 | 2011 | 46 | 56 | Iron Formation | F Zone | OP/FW | x | x | x | x | | | x | x |
| M98-248-01 | 2011 | 88 | 97 | Iron Formation | F Zone | OP/FW | x | x | x | x | | | x | x |
| W94-111-01 | 2011 | 118 | 127 | Iron Formation | F Zone | OP/HW | x | x | x | x | | | | |
| M08-729-06 | 2009 | 117 | 122 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-734-04 | 2009 | 41 | 45 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-735-02 | 2009 | 70 | 75 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-735-03 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-740-04 | 2009 | 106 | 111 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | x | | x | x |
| M08-742-04 | 2009 | 77 | 83 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-742-06 | 2009 | 96 | 102 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-743-02 | 2009 | 39 | 44 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-743-04 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-747-03 | 2009 | 65 | 70 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-747-04 | 2009 | 83 | 88 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | x | | x | x |
| M08-752-03 | 2009 | 45 | 51 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-752-04 | 2009 | 75 | 80 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-755-03 | 2009 | 66 | 71 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| GT09-07-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| GT09-07-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M08-729-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-729-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-729-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-729-04 | 2009 | 74 | 79 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-734-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-734-02 | 2009 | 28 | 32 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | x | | x | x |
| M08-735-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-740-01 | 2009 | 16 | 21 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-740-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-740-03 | 2009 | 52 | 56 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-742-01 | 2009 | 8.5 | 14.5 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-742-02 | 2009 | 29 | 35 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-742-03 | 2009 | 43 | 47 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-743-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-747-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-747-02 | 2009 | 39 | 45 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-748-01 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-748-02 | 2009 | 57 | 62 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-750-01 | 2009 | 8 | 14 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-750-02 | 2009 | 28 | 33 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-752-01 | 2009 | 9 | 14 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-752-02 | 2009 | 23 | 27 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-755-01 | 2009 | 19 | 24 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M08-755-02 | 2009 | 30 | 37 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M09-798-01 | 2009 | 12 | 17 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-798-02 | 2009 | 17 | 22 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-816-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-816-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-855-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-855-02 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-857-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-858-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-858-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-862-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-866-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M09-866-02 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | x | x | | x | | | | |
| M08-733-02 | 2011 | 180 | 189 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M09-859-01 | 2011 | 46 | 54.5 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | x | x |
| M10-933-01 | 2011 | 34 | 42 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M97-159-02 | 2011 | 86 | 93 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M98-275-02 | 2011 | 80 | 89.5 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| W94-76-02 | 2011 | 70.5 | 77 | Mafic Volcanic | F Zone | OP/FW | x | x | x | x | | | | |
| M08-733-01 | 2011 | 62 | 71 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M09-802-01 | 2011 | 35 | 44 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M09-817-02 | 2011 | 45 | 53 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M10-935-01 | 2011 | 20.5 | 29 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M96-28-01 | 2011 | 27 | 38 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M97-159-01 | 2011 | 21 | 31 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M98-275-01 | 2011 | 25 | 33 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| W94-76-01 | 2011 | 13 | 22 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| W94-82-01 | 2011 | 46 | 55 | Mafic Volcanic | F Zone | OP/HW | x | x | x | x | | | | |
| M09-809-01 | 2011 | 64.5 | 73.8 | Ore/IF | F Zone | OP/HW | x | x | x | x | | | | |
| M09-817-01 | 2011 | 32 | 40 | Ore/IF | F Zone | OP/HW | x | x | x | x | | | | |
| M09-858-01 | 2011 | 44 | 53 | Ore/IF | F Zone | OP/HW | x | x | x | x | | | | |
| M08-742-05 | 2009 | 86 | 90 | quartz vein | F Zone | OP/FW-ore zone | x | x | x | x | | | | |
| M97-124-03 | 2011 | 182 | 190 | Iron Formation | Pump | OP/FW | x | x | x | x | | | | |
| M97-154-01 | 2011 | 38 | 47 | Iron Formation | Pump | OP/FW | x | x | x | x | | | | |
| W94-49-02 | 2011 | 32 | 40 | Iron Formation | Pump | OP/HW | x | x | x | x | | | | |
| W94-55-01 | 2011 | 16 | 23 | Iron Formation | Pump | OP/HW | x | x | x | x | | | | |
| W94-57-02 | 2011 | 26 | 36 | Iron Formation | Pump | OP/HW | x | x | x | x | | | | |
| W94-57-03 | 2011 | 43 | 50 | Iron Formation | Pump | OP/HW | x | x | x | x | | | | |
| W94-61-01 | 2011 | 19 | 29 | Iron Formation | Pump | OP/HW | x | x | x | x | | | x | x |
| W94-73-02 | 2011 | 60 | 69 | Iron Formation | Pump | OP/HW | x | x | x | x | | | x | x |
| M96-58-03 | 2011 | 75.5 | 84.5 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M97-120-02 | 2011 | 44.5 | 53 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M97-122-05 | 2011 | 230 | 239 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M97-124-04 | 2011 | 191 | 200 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M97-153-02 | 2011 | 67 | 76 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M98-181-02 | 2011 | 80 | 89 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M98-185-01 | 2011 | 53 | 61.5 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M98-185-02 | 2011 | 108 | 116.5 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M98-185-03 | 2011 | 160 | 168.5 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| W94-53-01 | 2011 | 23 | 32 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| W94-61-02 | 2011 | 44 | 53 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| W94-73-03 | 2011 | 86 | 95 | Mafic Volcanic | Pump | OP/FW | x | x | x | x | | | | |
| M96-58-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M96-58-02 | 2011 | 49 | 58 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | x | x |
| M97-120-01 | 2011 | 11.5 | 21 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M97-122-01 | 2011 | 26.5 | 36.5 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M97-122-02 | 2011 | 103 | 112 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M97-123-01 | 2011 | 13.5 | 22.5 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | x | x |
| M97-123-02 | 2011 | 60 | 70 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M97-123-03 | 2011 | 91 | 98 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |

| Sample Number | Year (analysis) | from (m) | to (m) | Rock Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE | NAG | Moisture Content | HCT | Mineralogy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M97-123-04 | 2011 | 121 | 130 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M97-124-01 | 2011 | 119.5 | 128 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | x | x |
| M97-124-02 | 2011 | 141.5 | 150.5 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M97-153-01 | 2011 | 37 | 46 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M98-181-01 | 2011 | 11 | 18.5 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M98-184-01 | 2011 | 14 | 22 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | x | x |
| M98-184-02 | 2011 | 66 | 74.5 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-49-01 | 2011 | 15 | 24 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-49-03 | 2011 | 41 | 51 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-55-02 | 2011 | 69.5 | 74 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-57-01 | 2011 | 8 | 16 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-59-01 | 2011 | 12 | 21 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-65-03 | 2011 | 48 | 57 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-70-01 | 2011 | 8 | 18 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-70-02 | 2011 | 33 | 42 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| W94-73-01 | 2011 | 14 | 23 | Mafic Volcanic | Pump | OP/HW | x | x | x | x | | | | |
| M97-122-03 | 2011 | 160 | 169 | Ore/IF | Pump | OP/FW | x | x | x | x | | | | |
| M97-122-04 | 2011 | 180 | 190 | Ore/IF | Pump | OP/FW | x | x | x | x | | | | |
| W94-65-01 | 2011 | 14 | 20 | Ore/IF | Pump | OP/HW | x | x | x | x | | | | |
| W94-65-02 | 2011 | 21 | 26 | Ore/IF | Pump | OP/HW | x | x | x | x | | | | |
| M06-592-03 | 2011 | 124 | 132.5 | Gabbro | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M06-593-02 | 2011 | 140 | 148 | Gabbro | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M05-561-02 | 2011 | 43.5 | 52.5 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-592-02 | 2011 | 60 | 69 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-44-01 | 2011 | 15 | 22 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-135-02 | 2011 | 85 | 92 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-149-01 | 2011 | 12.5 | 21 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-201-02 | 2011 | 44 | 52 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-309-01 | 2011 | 20 | 28 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-336B-02 | 2011 | 52 | 62 | Gabbro | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-625-02 | 2011 | 49 | 57 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M08-765-01 | 2011 | 25 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M10-879-01 | 2011 | 38 | 46.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M10-887-01 | 2011 | 17 | 24.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M10-999-02 | 2011 | 121.5 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M96-54-02 | 2011 | 57 | 66 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M98-270-01 | 2011 | 92 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M99-409-04 | 2011 | 216 | 224 | Greywacke/Siltstone | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M03-508-01 | 2011 | 44.5 | 53 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | x | x |
| M06-577-01 | 2011 | 7 | 15.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-577-02 | 2011 | 71 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-577-03 | 2011 | 105 | 114 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-591-01 | 2011 | 20.5 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-592-01 | 2011 | 26 | 34.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-593-01 | 2011 | 27 | 36 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-608-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-608-02 | 2011 | 75.5 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-611-01 | 2011 | 28 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-611-02 | 2011 | 121 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-623-01 | 2011 | 63 | 72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | x | x |
| M06-625-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | x | x |
| M06-631-01 | 2011 | 17 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-674-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-689-01 | 2011 | 11 | 21 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-689-02 | 2011 | 42 | 52 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-689-03 | 2011 | 88 | 97 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M08-761-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M08-761-02 | 2011 | 91 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M08-763-01 | 2011 | 55.5 | 64 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M08-783-01 | 2011 | 38 | 47 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M10-892-01 | 2011 | 23 | 31.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M10-999-01 | 2011 | 13 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M95-25-01 | 2011 | 9.5 | 18 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M95-25-02 | 2011 | 34.5 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-03-01 | 2011 | 10 | 19 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-03-02 | 2011 | 45 | 53.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-19-01 | 2011 | 20 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-19-02 | 2011 | 71.5 | 79 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-37-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-37-02 | 2011 | 85.5 | 94 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-37-03 | 2011 | 129 | 138 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-40-01 | 2011 | 14 | 23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-40-02 | 2011 | 62 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-4-01 | 2011 | 10 | 20 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-54-01 | 2011 | 19 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-65-01 | 2011 | 36 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-7-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-7-02 | 2011 | 42 | 51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-77-01 | 2011 | 41 | 49.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M96-77-02 | 2011 | 140 | 149 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-121-01 | 2011 | 23 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-135-03 | 2011 | 111 | 120 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-149-02 | 2011 | 107.5 | 116 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-94A-01 | 2011 | 75 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-94A-02 | 2011 | 137 | 146 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-95-01 | 2011 | 51 | 59.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-95-02 | 2011 | 102.5 | 111 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | x | x |
| M98-201-01 | 2011 | 16 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-201-03 | 2011 | 90 | 98 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-201-04 | 2011 | 166 | 175 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-208-01 | 2011 | 58 | 67 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-209-01 | 2011 | 14 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-265-01 | 2011 | 67 | 76 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-317-01 | 2011 | 61 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |

# Appendix B.1: Summary of Analytical Program - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Sample Number | Year (analysis) | from (m) | to (m) | Rock Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE | NAG | Moisture Content | HCT | Mineralogy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M99-309-02 | 2011 | 36.5 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-336B-01 | 2011 | 16.5 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-336B-03 | 2011 | 140 | 148 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-347-01 | 2011 | 60 | 68 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-347-02 | 2011 | 94 | 102.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-409-01 | 2011 | 25 | 33.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-409-02 | 2011 | 89 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-409-03 | 2011 | 152 | 161 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-410-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-410-02 | 2011 | 52 | 61 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-436-01 | 2011 | 32.5 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-436-02 | 2011 | 96.5 | 105 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M97-135-01 | 2011 | 41 | 50 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M98-266-01 | 2011 | 163 | 172 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| GT08-01-02 | 2008 | 25 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| GT08-02-01_2008 | 2008 | 65 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M00-474-02 | 2008 | 80 | 85 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M00-474-04 | 2008 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M00-474-05 | 2008 | 21 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M03-513-01 | 2008 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M07-660-01_2008 | 2008 | 81 | 85 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M07-660-02_2008 | 2008 | 56 | 60 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-678-02 | 2008 | 36 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M07-678-03 | 2008 | 25 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M07-704-01 | 2008 | 41 | 46 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-704-02 | 2008 | 25 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-705-01 | 2008 | 46 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M07-710-02 | 2008 | 26 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-711-01 | 2008 | 25 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M07-713-01 | 2008 | 80 | 86 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-713-02 | 2008 | 45 | 49 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M07-713-03 | 2008 | 15 | 19 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M95-17-01 | 2008 | 61 | 66 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M95-17-02 | 2008 | 30 | 35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-194-01 | 2008 | 70 | 75 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | x | | | x |
| M98-194-02 | 2008 | 55 | 59 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-194-03 | 2008 | 26 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-269-01 | 2008 | 66 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M98-269-02 | 2008 | 46 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M98-269-03 | 2008 | 20 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-297-02 | 2008 | 76 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M98-297-03 | 2008 | 55 | 60 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M98-297-04 | 2008 | 25 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-316-01_2008 | 2008 | 25 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M99-339-01 | 2008 | 55 | 59 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-340-03 | 2008 | 26 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-341-02 | 2008 | 30 | 35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-345-01_2008 | 2008 | 81 | 85 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-345-02 | 2008 | 36 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-346-02_2008 | 2008 | 70 | 75 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-346-03 | 2008 | 35 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-349-01 | 2008 | 65 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-349-02 | 2008 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-350-02 | 2008 | 50 | 55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-350-03 | 2008 | 25 | 28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-403-01 | 2008 | 75 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M99-403-02 | 2008 | 70 | 75 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-403-03 | 2008 | 51 | 54 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | x | | x | x |
| M99-403-04 | 2008 | 25 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M99-404-01 | 2008 | 101 | 105 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M99-404-02 | 2008 | 80 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | | | | | |
| M99-404-03 | 2008 | 66 | 69 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-404-04 | 2008 | 30 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | x | | | |
| M03-496-01 | 2008 | 360 | 370 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | | | | | |
| M04-527-01 | 2008 | 270 | 280 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M04-533-01 | 2008 | 380 | 390 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | x | | x | x |
| M04-533-02 | 2008 | 297 | 307 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M05-559A-02 | 2008 | 180 | 190 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M05-571A-01 | 2008 | 435 | 445 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | | | | | |
| M05-571A-02 | 2008 | 335 | 344 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M06-604-01 | 2008 | 336 | 344 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M06-604-02 | 2008 | 286 | 295 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M06-604-03 | 2008 | 245 | 255 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | | | | | |
| M07-645-01 | 2008 | 250 | 260 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-663-01 | 2008 | 417 | 427 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | x |
| M07-663-02 | 2008 | 351 | 357 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-663-03 | 2008 | 280 | 289 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M98-313-01 | 2008 | 305 | 315 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M98-313-02 | 2008 | 272 | 280 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | | | | | |
| M99-327-01 | 2008 | 195 | 205 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | | | | | |
| GT08-01-01 | 2008 | 50 | 54 | Greywacke/Siltstone | Tiriganiaq | | x | x | x | x | | | | |
| M00-476-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M00-476-02 | 2009 | 23 | 28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M00-479-01 | 2009 | 30 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M00-479-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M06-628-01 | 2009 | 38 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-628-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M07-660-01_2009 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M07-660-02_2009 | 2009 | 22 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M98-194-04 | 2009 | 34 | 39 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-298-01 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-298-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M98-298-03 | 2009 | 25 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-341-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-345-01_2009 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-345-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-346-02_2009 | 2009 | 30 | 35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-385-01 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-386-01 | 2009 | 39 | 44 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-386-02 | 2009 | 27 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-403-05 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |

# Appendix B.1: Summary of Analytical Program - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample Number | Year (analysis) | from (m) | to (m) | Rock Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE | NAG | Moisture Content | HCT | Mineralogy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M99-404-05 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M99-404-06 | 2009 | 23 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-418-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | x | x | | x | | | | |
| M03-498-01 | 2009 | 315 | 320 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M03-499-02 | 2009 | 270 | 275 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M04-520-01 | 2009 | 405 | 410 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M04-520-02 | 2009 | 411 | 416 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M06-601A-01 | 2009 | 266 | 270 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M06-607-01 | 2009 | 175 | 180 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| m06-621-01 | 2009 | 240 | 245 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-649-01_2009 | 2009 | 300 | 305 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-672B-01 | 2009 | 323 | 328 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-685-01 | 2009 | 260 | 265 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-685-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-691-01 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M07-719-01 | 2009 | 351 | 360 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | | | | | |
| M08-721-01 | 2009 | 381 | 384 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M08-721-02 | 2009 | 388 | 393 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M08-731W1-01 | 2009 | 330 | 335 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M08-731W1-02 | 2009 | 350 | 355 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M08-754-01 | 2009 | 360 | 365 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M08-769-01 | 2009 | 451 | 456 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M09-823-01 | 2009 | 320 | 325 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M09-823-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M98-257-01 | 2009 | 291 | 296 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | x | x | x | x | | | | |
| LODE 1000 ORE | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| LODE 1100 ORE | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| LODE 1000 ORE (MOIST) | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | | | | | | x | | |
| TP-PAD-11-06 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-04 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-03 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-01 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-02 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-05 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-09 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-12 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-07 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-08 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-10 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11-11 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| TP-PAD-11 COMPOSITE | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | Pad Surface | x | x | x | x | | | | |
| M03-496-02 | 2008 | 281 | 290 | Iron Formation | Tiriganiaq | UG | x | x | x | x | | | | |
| M04-526-01 | 2008 | 216 | 225 | Iron Formation | Tiriganiaq | UG | x | x | x | x | x | | x | x |
| M07-649-01_2008 | 2008 | 280 | 290 | Iron Formation | Tiriganiaq | UG | x | x | x | x | | | | |
| M99-280-01 | 2008 | 189 | 197 | Iron Formation | Tiriganiaq | UG | x | x | x | x | | | | |
| M96-74-01 | 2011 | 96.5 | 103.5 | Iron Formation | Tiriganiaq | OP/FW | x | x | x | x | | | x | x |
| M03-508-02 | 2011 | 93 | 101 | Iron Formation | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M95-17-01 | 2011 | 114 | 122 | Iron Formation | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| GT08-04-01_2008 | 2008 | 97 | 102 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | | | | | |
| GT08-04-02 | 2008 | 80 | 84 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | x | | x | x |
| GT08-04-03 | 2008 | 69 | 73 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M00-474-01 | 2008 | 110 | 114 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M07-678-01 | 2008 | 47 | 52 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M98-297-01 | 2008 | 111 | 114 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | | | | | |
| M99-340-01 | 2008 | 103 | 108 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M99-341-01 | 2008 | 81 | 84 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | x | | | x |
| GT08-02-01_2009 | 2009 | 112 | 118 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M98-316-01_2009 | 2009 | 93 | 99 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| GT08-04-01_2009 | 2009 | 113 | 119 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | x | | x | x |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M05-561-02_2009 | 2009 | 101 | 106 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M05-561-03 | 2009 | 178 | 183 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M05-564-01 | 2009 | 366 | 372 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-110-01 | 2009 | 262 | 268 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-130-01 | 2009 | 242 | 246 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-130-02 | 2009 | 280 | 288 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-133-01 | 2009 | 255 | 261 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-134-01 | 2009 | 305 | 310 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-136-01 | 2009 | 215 | 220 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-137-01 | 2009 | 237 | 242 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-138-01 | 2009 | 222 | 228 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-139-01 | 2009 | 142 | 149 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | x |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | x | | x | x |
| M97-143-01 | 2009 | 564 | 570 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-92-01 | 2009 | 209 | 215 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M97-93-01 | 2009 | 429 | 435 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M98-318-01 | 2009 | 100 | 105 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M99-348-01 | 2009 | 193 | 198 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M08-783-02 | 2011 | 163 | 172 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M95-25-04 | 2011 | 69 | 77.5 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M96-03-03 | 2011 | 87 | 96 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M97-95-03 | 2011 | 213 | 222 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M99-336B-04 | 2011 | 249 | 258 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M99-409-05 | 2011 | 224 | 234 | Mafic Volcanic | Tiriganiaq | OP/FW | x | x | x | x | | | x | x |
| M06-591-03 | 2011 | 70 | 78.5 | Mafic Volcanic | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-623-02 | 2011 | 81 | 87 | Mafic Volcanic | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M98-269-01 | 2011 | 105 | 114 | Mafic Volcanic | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-345-01 | 2011 | 109 | 117 | Mafic Volcanic | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-346-01 | 2011 | 150.5 | 159 | Mafic Volcanic | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M05-561-01 | 2011 | 22 | 31 | Mafic Volcanic | Tiriganiaq | UG | x | x | x | x | | | | |
| M06-591-02 | 2011 | 40 | 50 | Ore/GW | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M06-629-01 | 2011 | 107 | 115 | Ore/GW | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M99-417-01 | 2011 | 124 | 136 | Ore/GW | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M00-473-01 | 2011 | 134 | 142 | Ore/MV | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M00-483-01 | 2011 | 0 | 0 | Ore/MV | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M00-490-01 | 2011 | 0 | 0 | Ore/MV | Tiriganiaq | OP/FW | x | x | x | x | | | | |
| M95-25-03 | 2011 | 51.5 | 60 | Ore/MV | Tiriganiaq | OP/HW | x | x | x | x | | | | |
| M10-981-03 | 2011 | 84.5 | 93 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | x | x |
| M10-981-04 | 2011 | 111 | 120 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |

| Sample Number | Year (analysis) | from (m) | to (m) | Rock Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE | NAG | Moisture Content | HCT | Mineralogy |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M10-987-04 | 2011 | 215 | 223 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | x | x |
| M10-992-01 | 2011 | 13.5 | 22 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M10-992-02 | 2011 | 43.5 | 52.5 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M10-992-03 | 2011 | 83 | 92 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M10-992-05 | 2011 | 135 | 144 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M10-994-04 | 2011 | 131.5 | 140 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | x | x |
| M10-998-04 | 2011 | 97 | 106 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M10-998-05 | 2011 | 191 | 200 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M95-22-02 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M96-51-03 | 2011 | 73 | 82 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M97-111-02 | 2011 | 95 | 104 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M97-111-03 | 2011 | 126 | 133 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M97-111-04 | 2011 | 186.5 | 195 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M97-176-03 | 2011 | 196 | 205.5 | Mafic Volcanic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M04-519-01 | 2011 | 40 | 48 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M04-519-02 | 2011 | 70 | 79 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M04-519-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M04-519-04 | 2011 | 127.5 | 136.5 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-981-01 | 2011 | 17 | 27 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-981-02 | 2011 | 50 | 59 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-985-01 | 2011 | 23 | 32 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | x | x |
| M10-985-02 | 2011 | 57 | 65 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-987-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-987-02 | 2011 | 84 | 93 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-988-01 | 2011 | 22 | 30 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-988-02 | 2011 | 60 | 68 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-988-03 | 2011 | 159.5 | 168 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-994-01 | 2011 | 28 | 36.5 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-994-02 | 2011 | 58 | 67 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-994-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-998-01 | 2011 | 10 | 19 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-998-02 | 2011 | 36 | 45 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-998-03 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1042-01 | 2011 | 16 | 24.5 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1042-02 | 2011 | 59 | 68 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1042-03 | 2011 | 99 | 107 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1051-01 | 2011 | 51 | 59 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1051-02 | 2011 | 89 | 99.5 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1099-01 | 2011 | 17 | 25 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1099-02 | 2011 | 38 | 46 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M11-1099-03 | 2011 | 72 | 80 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M95-11-01 | 2011 | 40 | 47 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M95-12-01 | 2011 | 41 | 50 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M95-22-01 | 2011 | 11 | 20 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M96-50-01 | 2011 | 30 | 40 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M96-51-02 | 2011 | 40 | 50 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M97-111-01 | 2011 | 21 | 30 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M97-176-01 | 2011 | 19 | 27.5 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M97-176-02 | 2011 | 112 | 121 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M98-222-01 | 2011 | 16 | 22 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | x | x |
| M98-222-02 | 2011 | 56 | 65 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M98-222-03 | 2011 | 104 | 113.5 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M98-223-01 | 2011 | 20.5 | 29 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| W94-48-01 | 2011 | 15 | 20 | Mafic Volcanic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M98-223-03 | 2011 | 175 | 180 | Ore/MV | Wesmeg | OP/FW | x | x | x | x | | | | |
| M96-51-01 | 2011 | 10 | 20 | Ore/MV | Wesmeg | OP/HW | x | x | x | x | | | | |
| M98-223-02 | 2011 | 80 | 90 | Ore/MV | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-987-03 | 2011 | 179 | 188 | Ultramafic | Wesmeg | OP/FW | x | x | x | x | | | | |
| M10-992-04 | 2011 | 107 | 113 | Ultramafic | Wesmeg | OP/FW | x | x | x | x | | | x | x |
| M10-994-05 | 2011 | 15 | 24 | Ultramafic | Wesmeg | OP/HW | x | x | x | x | | | | |
| M10-968-01 | 2011 | 29 | 37 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-968-02 | 2011 | 75 | 83 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | x | x |
| M10-968-03 | 2011 | 130.5 | 139 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-972A-01 | 2011 | 36 | 44.5 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-972A-02 | 2011 | 78.5 | 87 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-976-01 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-976-02 | 2011 | 96 | 105 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | x | x |
| M10-977-01 | 2011 | 24 | 33 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-993-01 | 2011 | 25.5 | 34 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-993-02 | 2011 | 51 | 60 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | x | x |
| M10-993-03 | 2011 | 84.5 | 93 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-234-01 | 2011 | 11 | 23 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-234-02 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-234-01 | 2011 | 11 | 23 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-234-02 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-284-01 | 2011 | 91 | 100 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-286-01 | 2011 | 48 | 57.5 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-331-01 | 2011 | 19.5 | 28 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M98-333-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Wolf | OP/HW | x | x | x | x | | | | |
| M10-970-01 | 2011 | 62 | 70.5 | Iron Formation | Wolf | OP/HW | x | x | x | x | | | x | x |
| M10-972A-03 | 2011 | 113 | 122 | Iron Formation | Wolf | OP/HW | x | x | x | x | | | x | x |
| M10-976-03 | 2011 | 126 | 135 | Iron Formation | Wolf | OP/HW | x | x | x | x | | | | |
| M10-986-01 | 2011 | 51 | 61 | Iron Formation | Wolf | OP/HW | x | x | x | x | | | | |
| M98-284-02 | 2011 | 121 | 129.5 | Iron Formation | Wolf | OP/HW | x | x | x | x | | | | |
| M10-972A-04 | 2011 | 156 | 165 | Mafic Volcanic | Wolf | OP/FW | x | x | x | x | | | | |
| M10-986-02 | 2011 | 99 | 107 | Mafic Volcanic | Wolf | OP/FW | x | x | x | x | | | | |
| M10-993-04 | 2011 | 157.5 | 166 | Mafic Volcanic | Wolf | OP/FW | x | x | x | x | | | | |
| M96-16-01 | 2011 | 22 | 29.5 | Mafic Volcanic | Wolf | OP/HW | x | x | x | x | | | x | x |
| M96-61-01 | 2011 | 11 | 20 | Mafic Volcanic | Wolf | OP/HW | x | x | x | x | | | | |
| M96-61-02 | 2011 | 34 | 43 | Mafic Volcanic | Wolf | OP/HW | x | x | x | x | | | | |
| M98-238-01 | 2011 | 19 | 28 | Mafic Volcanic | Wolf | OP/HW | x | x | x | x | | | | |
| M98-238-02 | 2011 | 49 | 57 | Mafic Volcanic | Wolf | OP/HW | x | x | x | x | | | x | x |
| M98-329-01 | 2011 | 77.5 | 86 | Mafic Volcanic | Wolf | OP/HW | x | x | x | x | | | | |
| M98-337-01 | 2011 | 14 | 22 | Mafic Volcanic | Wolf | OP/HW | x | x | x | x | | | | |
| M96-61-03 | 2011 | 104 | 112 | Ore/IF | Wolf | OP/FW | x | x | x | x | | | | |
| M10-976-04 | 2011 | 138 | 144 | Ore/IF | Wolf | OP/HW | x | x | x | x | | | | |
| M10-977-02 | 2011 | 54.5 | 63 | Ore/IF | Wolf | OP/HW | x | x | x | x | | | | |
| | | | | | | TOTAL: | 604 | 604 | 569 | 581 | 31 | 1 | 45 | 49 |

**Notes:**

Whole rock was completed using Borate fusion and XRF methods.

ICP = Metals (including arsenic and selenium) by inductively coupled plasma-mass spectroscopy (ICP-MS), with samples extracted using a strong acid solution.

Mercury by cold vapour atomic absorption spectroscopy (CVAAS), EPA245.1 methodology

ABA = Acid Base Accounting (modified Sobek method(1996)) - paste pH, NP, total sulphur, sulphate, sulphide, total carbon, total inorganic carbon, and carbonate

SFE = Shake Flask Extraction according to Modified ASTM D3987; 4:1 solution to solid ratio, 24 hour shake (2001)

NAG: Net Acid Generation; single addition NAG pH and leachate (AMIRA, 2002)

HCT = Humidity Cell Test

Mineralogy - quantitative phase analysis using the Rietveld method and x-ray powder diffraction

**Appendix B.1: Summary of Analytical Program - PAD Samples**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**



| Sample Number | Year (analysis) | Rock Type | Deposit | Location | Grain Size | Whole Rock | Trace Metals | ABA | SFE |
|---|---|---|---|---|---|---|---|---|---|
| TP-PAD-11-06 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-04 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-03 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-01 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-02 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-05 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-09 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-12 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-07 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-08 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-10 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11-11 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11 COMPOSITE | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | x | x | x | x |
| TP-PAD-11 COMPOSITE -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | x | x | x | x |
| TP-PAD-11-02 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | x | x | x | x |
| TP-PAD-11-03 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | x | x | x | x |
| TP-PAD-11-06 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | x | x | x | x |
| TP-PAD-11-08 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | x | x | x | x |
| TP-PAD-11-10 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | x | x | x | x |
| TP-PAD-11-12 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | x | x | x | x |
| | | | | | TOTAL: | 20 | 20 | 20 | 20 |

**Notes:**

Whole rock was completed using Borate fusion and XRF methods.

ICP = Metals (including arsenic and selenium) by inductively coupled plasma-mass spectroscopy (ICP-MS), with samples extracted using a strong acid solution.

Mercury by cold vapour atomic absorption spectroscopy (CVAAS), EPA245.1 methodology

ABA = Acid Base Accounting (modified Sobek method(1996)) - paste pH, NP, total sulphur, sulphate, sulphide, total carbon, total inorganic carbon, and carbonate

SFE = Shake Flask Extraction according to Modified ASTM D3987; 4:1 solution to solid ratio, 24 hour shake (2001)

# B.2 Chemical Composition and Mineralogy Results: Tables and Figures

| Mineral Group/Name | Mineral Formula | Discovery Deposit | | | | | | | F-Zone Deposit | | | | | | | Pump Deposit | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Greywacke/Siltstone | | | | Iron Formation | | | Iron Formation | | | Mafic Volcanic | | | | Mafic Volcanic | | | |
| | | ML95-82-1 | ML92-061-01 | ML90-14-2 | ML08-232-01 | ML08-226-02 | ML95-82-01 | ML95-95-01 | M09-802-02 | M10-935-02 | M98-248-01 | M09-859-01 | M08-734-03 | M08-740-05 | M08-750-03 | M96-58-02 | M97-123-01 | M97-124-01 | M98-184-01 |
| | | 2009 | 2009 | 2009 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2009 | 2009 | 2009 | 2011 | 2011 | 2011 | 2011 |
| ***Carbonates*** | | | | | | | | | | | | | | | | | | | |
| Calcite | $CaCO_3$ | - | - | 0.30 | - | 0.45 | 1.0 | 1.9 | - | - | - | 7.0 | 20 | 25 | 15 | 15 | 15 | 17 | 16 |
| Ankerite | $Ca(Fe,Mg,Mn)(CO_3)_2$ | - | - | - | - | - | - | - | 3.7 | 3.6 | 5.8 | - | - | - | 15 | - | - | - | - |
| Siderite | $FeCO_3$ | - | - | - | - | - | - | - | 0.59 | 2.7 | 6.5 | - | - | - | - | - | - | - | - |
| ***Carbonates (Dolomite Group)*** | | | | | | | | | | | | | | | | | | | |
| Dolomite | $CaMg(CO_3)_2$ | - | - | - | - | - | - | - | - | - | - | 22 | - | - | - | - | - | 0.63 | 0.59 |
| ***Silicates*** | | | | | | | | | | | | | | | | | | | |
| Quartz | $SiO_2$ | 32 | 31 | 30 | 31 | 42 | 42 | 34 | 69 | 75 | 72 | 20 | 20 | 23 | 25 | 25 | 28 | 31 | 29 |
| K-feldspar | $KAlSi_3O_8$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Plagioclase | $(Na,Ca)AlSi_3O_8$ | 30 | 35 | 39 | 37 | 5.9 | 11 | 8.0 | - | - | - | 25 | 27 | 20 | 30 | 14 | 33 | 21 | 25 |
| Clinozoisite | $(Ca_2)(Al_3)[O\|OH\|SiO_4\|Si_2O_7]$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diopside | $CaMg[Si_2O_6]$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Epidote | $Ca_2(Al_2Fe^{3+}[O(OH)SiO_4(Si_2O_7)]$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4.7 | - | - | - |
| Biotite | $K(Mg,Fe)_3(Al,Fe)Si_3O_{10}(OH,F)_2$ | 6.1 | 7.5 | 8.4 | 6.4 | 3.0 | 5.6 | 7.1 | - | - | - | 2.6 | 2.8 | 6.6 | 4.9 | 4.3 | - | 3.0 | 1.9 |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si,Al)_4O_{10}(OH)_8$ | 11 | 9.9 | 9.2 | 7.5 | 1.2 | 5.4 | 5.4 | 4.7 | 1.4 | 2.0 | 23 | 30 | 25 | 22 | 28 | 10 | 21 | 16 |
| Paragonite | $NaAl_2AlSi_3O_{10}(OH)_2$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Titanite | $CaTi(SiO_4)O$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Illite | $K_{0.65}Al_2(Al_{0.65}Si_{3.35}O_{10})(OH)2$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Muscovite | $KAl_2(AlSi_3)O_{10}(OH)_2$ | 20 | 16 | 7.5 | 18 | - | - | - | - | - | - | - | - | - | - | - | 14 | 4.4 | 11 |
| ***Oxides*** | | | | | | | | | | | | | | | | | | | |
| Magnetite | $Fe_3O_4$ | - | - | - | - | 38 | 10 | 22 | 3.1 | 3.6 | 0.37 | - | - | - | - | 1.1 | - | - | - |
| ***Sulphides*** | | | | | | | | | | | | | | | | | | | |
| Pyrite | $FeS_2$ | - | - | - | - | 0.85 | - | - | - | 0.43 | - | - | - | - | - | - | - | - | - |
| Pyrrhotite | $Fe_{1-x}S$ | - | - | - | - | - | 1.7 | - | 8.7 | 3.6 | 7.0 | - | - | - | - | - | - | - | - |
| Arsenopyrite | FeAsS | - | - | - | - | - | - | - | - | 0.63 | - | - | - | - | - | - | - | - | - |
| ***Sulphates*** | | | | | | | | | | | | | | | | | | | |
| Gypsum | $CaSO_4$ | - | - | 0.70 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Amphibole Group*** | | | | | | | | | | | | | | | | | | | |
| Actinolite | $Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$ | - | - | 3.9 | - | 8.8 | 8.6 | 8.2 | - | - | - | - | - | - | - | 7.2 | - | - | - |
| Cummingtonite | $Mg_7Si_8O_{22}(OH)_2$ | - | - | - | - | - | 14 | 12 | 10 | 9.0 | 6.6 | - | - | - | - | - | - | - | - |
| ***Spinel Group*** | | | | | | | | | | | | | | | | | | | |
| Chromite | $FeCr_2O_4$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ilmenite | $FeTiO_3$ | - | - | - | 0.82 | - | - | - | - | - | - | 0.92 | 1.5 | 0.90 | 2.7 | 1.2 | 0.64 | 1.8 | 0.86 |
| ***Garnet Group*** | | | | | | | | | | | | | | | | | | | |
| Almandine | $Fe_3Al_2(SiO_4)_3$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Grossular | $Ca_3Al_2(SiO_4)_3$ | - | - | - | - | 0.51 | - | 1.4 | - | - | - | - | - | - | - | - | - | - | - |
| ***Total (%)*** | | 99 | 99 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 114 | 100 | 100 | 100 | 100 |
| ***Selected chemical characteristics*** | | | | | | | | | | | | | | | | | | | |
| Net Acid Generation (NAG) pH | | 3.3 | 4.5 | 7.1 | | | | | | | | | | | | | | | |
| Neutralization Potential (NP as kg $CaCO_3$ equivalent/tonne) | | 7.4 | 7.3 | 12 | 8.1 | 15 | 22 | 44 | 31 | 34 | 53 | 211 | 176 | 222 | 134 | 131 | 144 | 155 | 158 |
| Adjusted Carbonate NP (CaNP-adj as kg $CaCO_3$ equivalent/tonne) - from carbonate ($CO_3$) | | 1.5 | 3.1 | 6.5 | 1.2 | 2.0 | 12 | 26 | 9.6 | 14 | 8.8 | 232 | 157 | 188 | 100 | 125 | 149 | 154 | 159 |
| Mineral CaNP-adj (as kg $CaCO_3$ equivalent/tonne) - from XRD data | | 0.0 | 0.0 | 3.1 | 0.0 | 4.6 | 10 | 20 | 26 | 26 | 41 | 310 | 203 | 252 | 256 | 152 | 150 | 177 | 167 |
| Acid Potential (AP as kg $CaCO_3$ equivalent/tonne) | | 7.7 | 3.9 | 4.5 | 4.6 | 21 | 24 | 12 | 81 | 42 | 100 | 14 | 8.2 | 3.1 | 3.7 | 4.9 | 0.31 | 4.4 | 1.3 |
| Total Sulphur content (%) | | 0.25 | 0.12 | 0.15 | 0.15 | 0.66 | 0.78 | 0.37 | 2.6 | 1.3 | 3.2 | 0.43 | 0.26 | 0.10 | 0.12 | 0.16 | 0.010 | 0.14 | 0.041 |
| Net Potential Ratio (NPR) | | 0.96 | 1.9 | 2.6 | 1.8 | 0.70 | 0.90 | 3.8 | 0.38 | 0.81 | 0.53 | 16 | 22 | 71 | 36 | 27 | 461 | 35 | 123 |
| Adjusted Carbonate Net Potential Ratio (CaNPR-adj) | | 0.19 | 0.81 | 1.4 | 0.27 | 0.098 | 0.48 | 2.3 | 0.12 | 0.33 | 0.088 | 17 | 19 | 60 | 27 | 25 | 476 | 35 | 124 |
| Acid Rock Drainage (ARD) potential[1] | | PAG | uncertain | uncertain | uncertain | PAG | PAG | non PAG | PAG | PAG | PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG |

Notes:

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR and NPR (i.e. where different ARD potentials are defined the unit is considered uncertain).

| Mineral Group/Name | Mineral Formula | Pump Deposit | | Tiriganiaq Deposit | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Iron Formation | | Mafic Volcanic | | | | | | Greywacke/Siltstone | | | | | | | | Iron Formation | |
| | | W94-61-01 | W94-73-02 | M99-341-01 | GT08-04-02 | M05-536A-01 | M97-141-01 | M97-139-01 | M99-409-05 | M98-194-01 | M99-403-03 | M07-663-01 | M04-533-01 | M03-508-01 | M06-623-01 | M06-625-01 | M97-95-02 | M04-526-01 | M96-74-01 |
| | | 2011 | 2011 | 2009 | 2009 | 2009 | 2009 | 2009 | 2011 | 2009 | 2009 | 2009 | 2009 | 2011 | 2011 | 2011 | 2011 | 2009 | 2011 |
| ***Carbonates*** | | | | | | | | | | | | | | | | | | | |
| Calcite | $CaCO_3$ | - | 1.5 | 8.1 | 11 | 13 | 1.4 | 1.8 | 18 | 0.80 | 1.2 | 1.0 | 0.80 | 2.8 | 1.7 | - | - | 11 | 3.7 |
| Ankerite | $Ca(Fe,Mg,Mn)(CO_3)_2$ | 4.9 | 8.4 | 26 | 25 | 19 | 28 | 39 | 2.7 | 8.2 | 5.5 | 4.2 | 8.4 | - | 4.9 | 5.3 | 5.2 | 0.50 | - |
| Siderite | $FeCO_3$ | 24 | 18 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Carbonates (Dolomite Group)*** | | | | | | | | | | | | | | | | | | | |
| Dolomite | $CaMg(CO_3)_2$ | - | - | - | - | - | - | - | - | - | - | - | - | 1.5 | - | - | - | - | - |
| ***Silicates*** | | | | | | | | | | | | | | | | | | | |
| Quartz | $SiO_2$ | 53 | 56 | 27 | 27 | 21 | 22 | 17 | 25 | 33 | 43 | 34 | 27 | 36 | 32 | 37 | 34 | 57 | 42 |
| K-feldspar | $KAlSi_3O_8$ | - | - | 2.6 | 2.7 | - | - | 1.9 | 1.4 | - | - | - | - | 1.4 | - | 1.7 | 1.2 | - | - |
| Plagioclase | $(Na,Ca)AlSi_3O_8$ | - | 1.6 | 6.5 | 8.4 | 18 | 21 | 14 | 18 | 37 | 24 | 23 | 21 | 29 | 34 | 25 | 24 | - | 1.1 |
| Clinozoisite | $(Ca_2)(Al_3)[O\|OH\|SiO_4Si_2O_7]$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Diopside | $CaMg[Si_2O_6]$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Epidote | $Ca_2(Al_2Fe^{3+}[O(OH)SiO_4(Si_2O_7)]$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Biotite | $K(Mg,Fe)_3(Al,Fe)Si_3O_{10}(OH,F)_2$ | - | - | - | - | - | - | - | - | - | - | - | 5.4 | - | - | - | - | - | 3.8 |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si,Al)_4O_{10}(OH)_8$ | 4.3 | 6.5 | 9.9 | 7.0 | 18 | 18 | 3.8 | 23 | 4.7 | 12 | 13 | 6.4 | 8.2 | 6.8 | 8.2 | 7.4 | 17 | 14 |
| Paragonite | $NaAl_2AlSi_3O_{10}(OH)_2$ | - | - | 6.5 | 8.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Titanite | $CaTi(SiO_4)O$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Illite | $K_{0.65}Al_2(Al_{0.65}Si_{3.35}O_{10})(OH)2$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Muscovite | $KAl_2(AlSi_3)O_{10}(OH)_2$ | - | - | 12 | 10 | 10 | 7.2 | 21 | 10 | 14 | 15 | 23 | 29 | 21 | 21 | 23 | 27 | 2.0 | - |
| ***Oxides*** | | | | | | | | | | | | | | | | | | | |
| Magnetite | $Fe_3O_4$ | 7.7 | 2.7 | 0.90 | 1.0 | - | - | - | - | 1.7 | - | - | - | - | - | - | - | 8.6 | 25 |
| ***Sulphides*** | | | | | | | | | | | | | | | | | | | |
| Pyrite | $FeS_2$ | 1.2 | - | - | - | 0.30 | 0.60 | 0.50 | 0.50 | - | - | - | - | 0.38 | - | - | - | - | - |
| Pyrrhotite | $Fe_{1-x}S$ | 3.6 | 3.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2.3 | - |
| Arsenopyrite | FeAsS | - | - | - | - | - | - | - | - | - | - | 0.30 | - | - | - | - | - | - | - |
| ***Sulphates*** | | | | | | | | | | | | | | | | | | | |
| Gypsum | $CaSO_4$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Amphibole Group*** | | | | | | | | | | | | | | | | | | | |
| Actinolite | $Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1.8 | - |
| Cummingtonite | $Mg_7Si_8O_{22}(OH)_2$ | 1.0 | 1.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10 |
| ***Spinel Group*** | | | | | | | | | | | | | | | | | | | |
| Chromite | $FeCr_2O_4$ | - | - | - | - | - | 0.70 | - | - | - | - | - | - | - | - | - | - | - | - |
| Ilmenite | $FeTiO_3$ | - | - | - | - | - | 1.1 | 0.80 | - | - | 0.40 | 1.0 | - | - | 0.38 | - | 0.62 | - | - |
| ***Garnet Group*** | | | | | | | | | | | | | | | | | | | |
| Almandine | $Fe_3Al_2(SiO_4)_3$ | - | - | - | - | - | - | - | - | - | - | - | 2.3 | - | - | - | - | - | - |
| Grossular | $Ca_3Al_2(SiO_4)_3$ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Total (%)*** | | 100 | 100 | 100 | 100 | 99 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| ***Selected chemical characteristics*** | | | | | | | | | | | | | | | | | | | |
| Net Acid Generation (NAG) pH | | | | 11 | 11 | 12 | 11 | | | 10 | 11 | | 11 | | | | | 11 | |
| Neutralization Potential (NP as kg $CaCO_3$ equivalent/tonne) | | 42 | 79 | 282 | 289 | 252 | 244 | 321 | 174 | 75 | 49 | 36 | 76 | 44 | 51 | 48 | 49 | 115 | 48 |
| Adjusted Carbonate NP (CaNP-adj as kg $CaCO_3$ equivalent/tonne) - from carbonate ($CO_3$) | | 8.8 | 19 | 229 | 250 | 217 | 185 | 251 | 173 | 60 | 44 | 28 | 57 | 42 | 41 | 35 | 35 | 119 | 63 |
| Mineral CaNP-adj (as kg $CaCO_3$ equivalent/tonne) - from XRD data | | 34 | 74 | 265 | 283 | 258 | 207 | 289 | 205 | 66 | 51 | 40 | 67 | 45 | 52 | 37 | 36 | 113 | 38 |
| Acid Potential (AP as kg $CaCO_3$ equivalent/tonne) | | 52 | 71 | 17 | 1.5 | 7.9 | 10 | 14 | 8.9 | 7.3 | 3.9 | 9.8 | 5.6 | 5.7 | 1.4 | 5.1 | 8.2 | 25 | 8.2 |
| Total Sulphur content (%) | | 1.7 | 2.3 | 0.55 | 0.049 | 0.25 | 0.32 | 0.44 | 0.28 | 0.23 | 0.13 | 0.31 | 0.18 | 0.18 | 0.046 | 0.16 | 0.26 | 0.78 | 0.26 |
| Net Potential Ratio (NPR) | | 0.82 | 1.1 | 17 | 189 | 32 | 24 | 23 | 20 | 10 | 12 | 3.7 | 14 | 7.6 | 35 | 9.6 | 6.0 | 4.7 | 5.8 |
| Adjusted Carbonate Net Potential Ratio (CaNPR-adj) | | 0.17 | 0.27 | 13 | 163 | 27 | 18 | 18 | 19 | 8.2 | 11 | 2.9 | 10 | 7.4 | 29 | 6.9 | 4.3 | 4.9 | 7.7 |
| Acid Rock Drainage (ARD) potential[1] | | PAG | uncertain | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG |

Notes:

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR and NPR (i.e. where different ARD potentials are

| Mineral Group/Name | Mineral Formula | Wesmeg Deposit | | | | | | Wolf Deposit | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Mafic Volcanic | | | | | Ultramafic | Greywacke/Siltstone | | | Iron Formation | | Mafic Volcanic | |
| | | M10-981-03 | M10-985-01 | M10-987-04 | M10-994-04 | M98-222-01 | M10-992-04 | M10-968-02 | M10-976-02 | M10-993-02 | M10-970-01 | M10-972A-03 | M96-16-01 | M98-238-02 |
| | | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 | 2011 |
| ***Carbonates*** | | | | | | | | | | | | | | |
| Calcite | $CaCO_3$ | 14 | 1.6 | 15 | 4.8 | 14 | 20 | 1.0 | 1.3 | 2.1 | 13 | 5.7 | 11 | 3.0 |
| Ankerite | $Ca(Fe,Mg,Mn)(CO_3)_2$ | 6.9 | 2.2 | 1.9 | - | 10 | 3.2 | 3.0 | 0.54 | 2.5 | - | - | - | - |
| Siderite | $FeCO_3$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Carbonates (Dolomite Group)*** | | | | | | | | | | | | | | |
| Dolomite | $CaMg(CO_3)_2$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Silicates*** | | | | | | | | | | | | | | |
| Quartz | $SiO_2$ | 26 | 34 | 26 | 14 | 25 | 27 | 35 | 41 | 34 | 43 | 48 | 18 | 23 |
| K-feldspar | $KAlSi_3O_8$ | - | 1.4 | - | 1.5 | - | - | 2.3 | 1.4 | 1.3 | - | - | 1.5 | 1.3 |
| Plagioclase | $(Na,Ca)AlSi_3O_8$ | 23 | 30 | 21 | 16 | 19 | 15 | 22 | 17 | 26 | - | - | 13 | 28 |
| Clinozoisite | $(Ca_2)(Al_3)[O\|OH\|SiO_4Si_2O_7]$ | - | - | - | 22 | - | - | - | - | - | - | - | 16 | 13 |
| Diopside | $CaMg[Si_2O_6]$ | - | - | - | 1.8 | - | - | - | - | - | - | - | - | - |
| Epidote | $Ca_2(Al_2Fe^{3+}[O(OH)SiO_4(Si_2O_7)]$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Biotite | $K(Mg,Fe)_3(Al,Fe)Si_3O_{10}(OH,F)_2$ | - | - | - | 2.5 | - | - | - | - | - | 3.8 | 3.0 | - | - |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si,Al)_4O_{10}(OH)_8$ | 20 | 11 | 27 | 20 | 20 | 28 | 13 | 12 | 10 | 15 | 13 | 16 | 12 |
| Paragonite | $NaAl_2AlSi_3O_{10}(OH)_2$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Titanite | $CaTi(SiO_4)O$ | - | - | 4.2 | - | - | - | - | - | - | - | - | - | - |
| Illite | $K_{0.65}Al_2(Al_{0.65}Si_{3.35}O_{10})(OH)2$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Muscovite | $KAl_2(AlSi_3)O_{10}(OH)_2$ | 7.0 | 20 | - | - | 9.9 | - | 24 | 27 | 23 | - | - | 9.7 | 5.2 |
| ***Oxides*** | | | | | | | | | | | | | | |
| Magnetite | $Fe_3O_4$ | 0.43 | - | 4.1 | - | - | 3.6 | - | - | - | 15 | 24 | 0.17 | 2.7 |
| ***Sulphides*** | | | | | | | | | | | | | | |
| Pyrite | $FeS_2$ | - | - | - | - | - | - | - | - | 0.39 | - | - | - | - |
| Pyrrhotite | $Fe_{1-x}S$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Arsenopyrite | FeAsS | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Sulphates*** | | | | | | | | | | | | | | |
| Gypsum | $CaSO_4$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Amphibole Group*** | | | | | | | | | | | | | | |
| Actinolite | $Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$ | - | - | - | 17 | - | 1.5 | - | - | - | - | - | 15 | 7.4 |
| Cummingtonite | $Mg_7Si_8O_{22}(OH)_2$ | - | - | - | - | - | - | - | - | - | 9.8 | 5.9 | - | - |
| ***Spinel Group*** | | | | | | | | | | | | | | |
| Chromite | $FeCr_2O_4$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Ilmenite | $FeTiO_3$ | 2.7 | - | 0.86 | - | 2.9 | 1.1 | - | - | - | - | - | - | - |
| ***Garnet Group*** | | | | | | | | | | | | | | |
| Almandine | $Fe_3Al_2(SiO_4)_3$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Grossular | $Ca_3Al_2(SiO_4)_3$ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ***Total (%)*** | | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 95 |
| ***Selected chemical characteristics*** | | | | | | | | | | | | | | |
| Net Acid Generation (NAG) pH | | | | | | | | | | | | | | |
| Neutralization Potential (NP as kg $CaCO_3$ equivalent/tonne) | | 168 | 41 | 138 | 62 | 155 | 209 | 33 | 25 | 39 | 148 | 79 | 120 | 38 |
| Adjusted Carbonate NP (CaNP-adj as kg $CaCO_3$ equivalent/tonne) - from carbonate ($CO_3$) | | 162 | 30 | 139 | 51 | 202 | 214 | 19 | 15 | 28 | 163 | 106 | 124 | 29 |
| Mineral CaNP-adj (as kg $CaCO_3$ equivalent/tonne) - from XRD data | | 189 | 32 | 165 | 49 | 210 | nc | 32 | 17 | 39 | 135 | 58 | 115 | 31 |
| Acid Potential (AP as kg $CaCO_3$ equivalent/tonne) | | 5.5 | 5.8 | 4.4 | 2.4 | 1.8 | 2.3 | 5.4 | 4.9 | 8.2 | 7.4 | 6.0 | 2.7 | 9.4 |
| Total Sulphur content (%) | | 0.18 | 0.18 | 0.14 | 0.076 | 0.059 | 0.073 | 0.17 | 0.16 | 0.26 | 0.24 | 0.19 | 0.087 | 0.30 |
| Net Potential Ratio (NPR) | | 30 | 7.2 | 31 | 26 | 84 | 92 | 6.1 | 5.2 | 4.8 | 20 | 13 | 44 | 4.1 |
| Adjusted Carbonate Net Potential Ratio (CaNPR-adj) | | 29 | 5.1 | 32 | 22 | 110 | 94 | 3.5 | 3.2 | 3.4 | 22 | 18 | 46 | 3.0 |
| Acid Rock Drainage (ARD) potential[1] | | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG | non PAG |

Notes:

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR and NPR (i.e. where different ARD potentials are

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | | | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| ML08-226-01 | 2011 | 23 | 32 | Gabbro | Discovery | OP/HW | - | 82000 | **4.9** | **0.30** | 390 | 0.72 | **0.090** | **62000** | **0.17** | **42** | 76 | 24 | **120000** | < 0.1 | 13000 |
| ML08-229-02 | 2011 | 95.5 | 104.5 | Gabbro | Discovery | OP/HW | - | 81000 | **6.9** | **0.090** | 400 | 0.80 | < 0.09 | **61000** | **0.18** | **37** | 72 | 44 | **110000** | < 0.1 | 11000 |
| ML08-241-03 | 2011 | 84 | 93 | Gabbro | Discovery | OP/HW | - | **84000** | **7.2** | **0.090** | **710** | 0.89 | < 0.09 | **55000** | **0.54** | **30** | 63 | 27 | **120000** | < 0.1 | **22000** |
| ML08-243-02 | 2011 | 136 | 144.5 | Gabbro | Discovery | OP/FW | - | 82000 | **3.9** | **0.090** | 420 | 1.0 | < 0.09 | **60000** | **0.39** | **28** | 61 | 49 | **110000** | < 0.1 | 10000 |
| ML08-245-01 | 2011 | 44 | 53 | Gabbro | Discovery | OP/HW | - | **87000** | **9.3** | **0.080** | 390 | 0.75 | < 0.09 | **60000** | **0.22** | **37** | 81 | 34 | **110000** | < 0.1 | 11000 |
| ML09-259-01 | 2011 | 11 | 20 | Gabbro | Discovery | OP/HW | - | 80000 | **2.1** | **0.070** | 420 | 0.72 | < 0.09 | **62000** | **0.23** | **37** | 81 | 53 | **110000** | < 0.1 | 12000 |
| ML95-104-01 | 2011 | 20 | 29 | Gabbro | Discovery | OP/HW | - | 73000 | 1.0 | **0.080** | **430** | 1.2 | < 0.09 | **59000** | **0.33** | **29** | 100 | 45 | **110000** | < 0.1 | 11000 |
| ML95-105-02 | 2011 | 63 | 73 | Gabbro | Discovery | OP/HW | - | 77000 | **880** | **0.080** | **700** | 0.96 | < 0.09 | **60000** | **0.70** | **28** | 65 | 45 | **110000** | < 0.1 | 18000 |
| ML95-117-02 | 2011 | 40 | 48.5 | Gabbro | Discovery | OP/HW | - | **85000** | **3.2** | **0.070** | 380 | 0.92 | < 0.09 | **59000** | **0.25** | **34** | 72 | 18 | **120000** | < 0.1 | 11000 |
| ML95-88-02 | 2011 | 36 | 43 | Gabbro | Discovery | OP/HW | - | 80000 | **2.0** | **0.050** | 230 | 0.63 | < 0.09 | **54000** | **0.25** | **30** | **120** | 28 | **69000** | < 0.1 | 6500 |
| ML97-186-02 | 2011 | 120 | 129 | Gabbro | Discovery | OP/HW | - | **89000** | **9.4** | **0.050** | 380 | 0.81 | < 0.09 | **65000** | **0.20** | **33** | 74 | 40 | **110000** | < 0.1 | 11000 |
| | | | | | | MINIMUM | nc | 73000 | 1.0 | 0.050 | 230 | 0.63 | < 0.09 | 54000 | 0.17 | 28 | 61 | 18 | 69000 | <0.1 | 6500 |
| | | | | | | MAXIMUM | nc | 89000 | 880 | 0.30 | 710 | 1.2 | 0.090 | 65000 | 0.70 | 42 | 120 | 53 | 120000 | <0.1 | 22000 |
| | | | | | | MEDIAN | nc | 82000 | 4.9 | 0.080 | 400 | 0.81 | nc | 60000 | 0.25 | 33 | 74 | 40 | 110000 | nc | 11000 |
| | | | | | | AVERAGE | nc | 81818 | 85 | 0.095 | 441 | 0.85 | nc | 59727 | 0.31 | 33 | 79 | 37 | 109000 | nc | 12409 |
| | | | | | | STANDARD DEVIATION | nc | 4490 | 264 | 0.069 | 141 | 0.16 | nc | 3101 | 0.17 | 4.6 | 17 | 11 | 14036 | nc | 4176 |
| | | | | | | 75TH PERCENTILE | nc | 84500 | 8.3 | 0.090 | 425 | 0.94 | nc | 61500 | 0.36 | 37 | 81 | 45 | 115000 | nc | 12500 |
| DS09GT-10-01 | 2011 | 14 | 19 | Greywacke/Siltstone | Discovery | OP/HW | - | 77000 | **18** | **0.050** | 410 | 0.85 | **0.21** | 13000 | **0.31** | 19 | **190** | 52 | 35000 | < 0.1 | 15000 |
| ML00-221-01 | 2009 | 25 | 30 | Greywacke/Siltstone | Discovery | OP/HW | **0.090** | **94000** | **280** | - | **660** | 1.0 | **0.14** | 13000 | **0.26** | 17 | **170** | 45 | 42000 | - | **22000** |
| ML00-221-02 | 2009 | 61 | 66 | Greywacke/Siltstone | Discovery | OP/HW | 0.040 | **89000** | **31** | - | 480 | 0.95 | **0.17** | 11000 | **0.22** | 17 | **220** | 50 | 39000 | - | **21000** |
| ML00-221-03 | 2009 | 88 | 93 | Greywacke/Siltstone | Discovery | OP/HW | 0.040 | **87000** | **48** | - | **540** | 0.92 | **0.14** | 7900 | **0.22** | 17 | **160** | 42 | 39000 | - | 20000 |
| ML00-221-04 | 2009 | 162 | 168 | Greywacke/Siltstone | Discovery | OP/FW | 0.050 | **92000** | **21** | - | **540** | 0.94 | **0.17** | 9300 | **0.27** | 18 | **130** | 46 | **57000** | - | **23000** |
| ML08-225-02 | 2011 | 104 | 115 | Greywacke/Siltstone | Discovery | OP/FW | - | **94000** | **60** | **0.080** | **610** | 1.1 | **0.35** | 12000 | **0.36** | 20 | **200** | 37 | 48000 | < 0.1 | **27000** |
| ML08-226-05 | 2011 | 192 | 200 | Greywacke/Siltstone | Discovery | OP/HW | - | **94000** | **95** | **0.070** | **480** | 1.1 | **0.26** | 14000 | **0.41** | 20 | **180** | 33 | **60000** | < 0.1 | **22000** |
| ML08-229-04 | 2011 | 191 | 200 | Greywacke/Siltstone | Discovery | OP/HW | - | 80000 | **38** | **0.060** | **470** | 0.98 | **0.75** | 13000 | **0.29** | 17 | **200** | **64** | 53000 | < 0.1 | 20000 |
| ML08-230-01 | 2011 | 25 | 33 | Greywacke/Siltstone | Discovery | OP/HW | - | **91000** | **36** | **0.060** | **510** | 1.2 | **0.10** | 15000 | **0.31** | 18 | **220** | 37 | 48000 | < 0.1 | **22000** |
| ML08-232-01 | 2011 | 62 | 70 | Greywacke/Siltstone | Discovery | OP/HW | - | **89000** | **77** | **0.050** | **600** | 1.0 | **0.10** | 10000 | **0.33** | 18 | **200** | 44 | 42000 | < 0.1 | **23000** |
| ML08-233-01 | 2011 | 20 | 28 | Greywacke/Siltstone | Discovery | OP/HW | - | **84000** | **10** | **0.060** | **520** | 0.93 | < 0.09 | 20000 | **0.30** | 14 | **140** | 25 | 53000 | < 0.1 | 17000 |
| ML08-236-2 | 2009 | 41 | 49 | Greywacke/Siltstone | Discovery | OP/HW-interore | **0.46** | **88000** | **29** | - | **650** | 1.1 | **0.16** | 20000 | **0.21** | 14 | **130** | 41 | 53000 | - | **23000** |
| ML08-236-3 | 2009 | 65 | 75 | Greywacke/Siltstone | Discovery | OP/FW | **0.43** | **89000** | **34** | - | **520** | 1.1 | **0.23** | 18000 | **0.23** | 17 | **170** | 44 | 55000 | - | 20000 |
| ML08-238-03 | 2009 | 99 | 104 | Greywacke/Siltstone | Discovery | inter ore | **0.080** | **89000** | **30** | - | **590** | 1.0 | **0.10** | 21000 | **0.25** | 14 | **130** | 31 | 54000 | - | **21000** |
| ML08-238-04 | 2009 | 126 | 132.5 | Greywacke/Siltstone | Discovery | OP/FW | **0.10** | **94000** | **36** | - | **580** | 1.1 | **0.22** | 12000 | **0.27** | 17 | **160** | 45 | 51000 | - | **24000** |
| ML08-240-01 | 2011 | 77 | 85 | Greywacke/Siltstone | Discovery | OP/HW | - | **86000** | **19** | **0.060** | **500** | 0.92 | **0.20** | 21000 | **0.34** | 17 | **150** | 40 | 55000 | < 0.1 | 19000 |
| ML08-241-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Discovery | OP/HW | - | **87000** | **32** | **0.060** | **560** | 1.0 | < 0.09 | 22000 | **0.28** | 16 | **150** | 42 | **72000** | < 0.1 | 20000 |
| ML08-245-02 | 2011 | 82.5 | 91 | Greywacke/Siltstone | Discovery | OP/HW | - | 79000 | **38** | **0.050** | **440** | 0.92 | **0.18** | 12000 | **0.36** | 17 | **190** | 51 | 40000 | < 0.1 | 20000 |
| ML09-254-02 | 2011 | 100 | 108 | Greywacke/Siltstone | Discovery | OP/HW | - | **84000** | **11** | **0.050** | **550** | 1.0 | < 0.09 | 22000 | **0.32** | 14 | **140** | 37 | 49000 | < 0.1 | 19000 |
| ML09-256-01 | 2011 | 52.5 | 61 | Greywacke/Siltstone | Discovery | OP/FW | - | 74000 | **29** | **0.050** | 400 | 0.87 | **0.23** | 13000 | **0.35** | 18 | **240** | 51 | 41000 | < 0.1 | 19000 |
| ML90-03-01 | 2009 | 17 | 24 | Greywacke/Siltstone | Discovery | OP/HW | **0.36** | **98000** | **160** | - | **680** | 1.3 | **0.20** | 11000 | **0.30** | 21 | **170** | 42 | 49000 | - | **25000** |
| ML90-03-02 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | **0.30** | **90000** | **16** | - | **570** | 0.96 | **0.15** | 18000 | **0.24** | 12 | **140** | 35 | 56000 | - | **22000** |
| ML90-04-01 | 2009 | 10 | 15 | Greywacke/Siltstone | Discovery | OP/HW | **0.36** | **92000** | **18** | - | **550** | 0.98 | **0.25** | 12000 | **0.31** | 18 | **210** | 54 | 40000 | - | **22000** |
| ML90-04-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Discovery | OP/HW | **0.34** | **92000** | **43** | - | **650** | 0.99 | **0.14** | 11000 | **0.33** | 18 | **170** | 49 | 42000 | - | **23000** |
| ML90-04-03 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | **0.27** | **85000** | **16** | - | **490** | 0.83 | **0.10** | 19000 | **0.22** | 13 | **110** | 36 | 50000 | - | 15000 |
| ML90-07-01 | 2009 | 46 | 51 | Greywacke/Siltstone | Discovery | OP/FW | 0.060 | 82000 | **16** | - | **580** | 0.94 | < 0.09 | 21000 | **0.26** | 12 | **150** | 20 | 44000 | - | 18000 |
| ML90-08-01 | 2009 | 16 | 21 | Greywacke/Siltstone | Discovery | OP/HW | **0.11** | **85000** | **16** | - | **570** | 0.88 | **0.11** | 11000 | **0.26** | 16 | **160** | 55 | 37000 | - | 19000 |
| ML90-08-02 | 2009 | 53 | 58 | Greywacke/Siltstone | Discovery | OP/FW | **0.11** | **87000** | **53** | - | **560** | 0.93 | **0.11** | 22000 | **0.25** | 15 | **120** | 40 | 44000 | - | **21000** |
| ML90-09-2 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | **0.49** | **84000** | **8.9** | - | **540** | 1.0 | **0.13** | 21000 | **0.26** | 13 | **120** | 23 | 43000 | - | 19000 |
| ML90-10-1 | 2009 | 11 | 18 | Greywacke/Siltstone | Discovery | OP/HW | **0.47** | **84000** | **36** | - | **550** | 0.97 | **0.18** | 9800 | **0.16** | 16 | **160** | 31 | 36000 | - | 20000 |
| ML90-10-3 | 2009 | 56 | 64 | Greywacke/Siltstone | Discovery | OP/FW | **0.41** | 78000 | **8.6** | - | **560** | 1.1 | **0.15** | 14000 | **0.18** | 12 | **120** | 18 | 45000 | - | 20000 |
| ML90-12-01 | 2009 | 24 | 29 | Greywacke/Siltstone | Discovery | OP/HW | 0.050 | **87000** | **110** | - | **650** | 0.91 | **0.19** | 11000 | **0.19** | 18 | **160** | **84** | 44000 | - | **21000** |
| ML90-12-02 | 2009 | 80 | 84 | Greywacke/Siltstone | Discovery | OP/FW | **0.51** | **91000** | **34** | - | **670** | 1.2 | **0.44** | 21000 | **0.40** | 14 | **130** | **79** | **63000** | - | **27000** |
| ML90-14-2 | 2009 | 129 | 137 | Greywacke/Siltstone | Discovery | OP/FW | **0.43** | **89000** | **29** | - | **650** | 1.1 | **0.18** | 20000 | **0.24** | 15 | **140** | 39 | 55000 | - | 19000 |
| ML92-061-01 | 2009 | 21 | 26 | Greywacke/Siltstone | Discovery | OP/HW | 0.050 | **91000** | **49** | - | **530** | 0.98 | **0.18** | 11000 | **0.24** | 18 | **170** | 48 | 43000 | - | **22000** |
| ML92-061-02 | 2009 | 50 | 56 | Greywacke/Siltstone | Discovery | OP/HW | 0.030 | **89000** | **32** | - | **570** | 0.93 | **0.17** | 9400 | **0.23** | 20 | **180** | 43 | 41000 | - | **21000** |
| ML92-061-04 | 2009 | 109 | 114 | Greywacke/Siltstone | Discovery | OP/FW | 0.010 | **90000** | **53** | - | **570** | 0.93 | **0.23** | 20000 | **0.26** | 16 | **120** | 30 | 50000 | - | 20000 |
| ML92-062-03 | 2009 | 50 | 55 | Greywacke/Siltstone | Discovery | OP/FW | 0.040 | **93000** | **48** | - | **740** | 1.0 | **0.17** | 22000 | **0.26** | 14 | **110** | 43 | 49000 | - | **25000** |
| ML95-105-03 | 2011 | 94 | 103 | Greywacke/Siltstone | Discovery | OP/HW | - | **88000** | **83** | **0.050** | **590** | 0.97 | **0.15** | 13000 | **0.30** | 18 | **180** | **73** | 45000 | < 0.1 | **24000** |
| ML95-105-04 | 2011 | 138 | 147 | Greywacke/Siltstone | Discovery | OP/HW | - | **86000** | **49** | **0.060** | **540** | 0.99 | < 0.09 | 23000 | **0.40** | 14 | **140** | 24 | 47000 | < 0.1 | 17000 |
| ML95-107-03 | 2011 | 75.5 | 84.5 | Greywacke/Siltstone | Discovery | OP/HW | - | **89000** | **130** | **0.050** | **570** | 1.0 | **0.14** | 12000 | **0.34** | 19 | **170** | 35 | 48000 | < 0.1 | **25000** |
| ML95-113-01 | 2011 | 19 | 27.5 | Greywacke/Siltstone | Discovery | OP/HW | - | **93000** | **23** | **0.050** | **680** | 1.1 | **0.10** | 8600 | **0.36** | 16 | **170** | 44 | 40000 | < 0.1 | **26000** |
| ML95-113-02 | 2011 | 71 | 79 | Greywacke/Siltstone | Discovery | OP/HW | - | **89000** | **8.5** | **0.070** | **580** | 1.2 | **0.13** | 25000 | **0.34** | 15 | **150** | 52 | **59000** | < 0.1 | **21000** |
| ML95-120-01 | 2011 | 93 | 102 | Greywacke/Siltstone | Discovery | OP/HW | - | **90000** | **83** | **0.040** | **470** | 1.0 | **0.26** | 10000 | **0.29** | 17 | **180** | 48 | 43000 | < 0.1 | **21000** |
| ML95-82-02 | 2011 | 68 | 74 | Greywacke/Siltstone | Discovery | OP/HW | - | 77000 | **19** | **0.040** | **500** | 0.95 | < 0.09 | 20000 | **0.23** | 12 | **170** | 24 | 49000 | < 0.1 | 18000 |
| ML95-82-1 | 2009 | 20 | 30 | Greywacke/Siltstone | Discovery | OP/HW | **0.59** | **92000** | **100** | - | **660** | 1.1 | **0.16** | 9600 | **0.25** | 18 | **140** | 50 | 44000 | - | **23000** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| ML08-226-01 | 2011 | 23 | 32 | Gabbro | Discovery | OP/HW | **26** | **27000** | **1200** | 0.80 | **24000** | 49 | 5.9 | < 0.8 | < 0.7 | 1.3 | 300 | **13000** | 0.23 | 0.55 | **190** | 23 | **170** |
| ML08-229-02 | 2011 | 95.5 | 104.5 | Gabbro | Discovery | OP/HW | 20 | 22000 | **1200** | **1.9** | 21000 | 34 | 5.6 | < 0.8 | < 0.7 | 0.80 | 280 | **15000** | 0.20 | 0.63 | **180** | 27 | **140** |
| ML08-241-03 | 2011 | 84 | 93 | Gabbro | Discovery | OP/HW | **44** | 22000 | **1200** | **1.3** | **24000** | 24 | 12 | < 0.8 | < 0.7 | 1.1 | 310 | **18000** | 0.45 | 1.0 | **200** | **34** | **170** |
| ML08-243-02 | 2011 | 136 | 144.5 | Gabbro | Discovery | OP/FW | **28** | 17000 | **1200** | 1.0 | **26000** | 17 | 9.9 | < 0.8 | < 0.7 | 1.5 | 300 | **17000** | 0.23 | 1.0 | **140** | **39** | **140** |
| ML08-245-01 | 2011 | 44 | 53 | Gabbro | Discovery | OP/HW | **27** | **24000** | **1200** | **2.1** | 23000 | 41 | 11 | < 0.8 | < 0.7 | 1.0 | 290 | **13000** | 0.19 | 0.59 | **180** | 25 | **150** |
| ML09-259-01 | 2011 | 11 | 20 | Gabbro | Discovery | OP/HW | **25** | 22000 | **1100** | 0.80 | 22000 | 32 | 5.9 | < 0.8 | < 0.7 | 0.90 | 270 | **15000** | 0.22 | 0.66 | **200** | 26 | **170** |
| ML95-104-01 | 2011 | 20 | 29 | Gabbro | Discovery | OP/HW | **28** | 17000 | **1100** | **1.3** | 19000 | 21 | 8.5 | < 0.8 | < 0.7 | 1.8 | 320 | **14000** | 0.28 | 1.1 | 110 | **40** | **120** |
| ML95-105-02 | 2011 | 63 | 73 | Gabbro | Discovery | OP/HW | **36** | 18000 | **1100** | **2.3** | 23000 | 20 | 11 | < 0.8 | < 0.7 | 1.2 | 260 | **16000** | 0.27 | 1.5 | **160** | 33 | **150** |
| ML95-117-02 | 2011 | 40 | 48.5 | Gabbro | Discovery | OP/HW | **28** | **24000** | **1200** | 1.1 | 23000 | 32 | 9.3 | < 0.8 | < 0.7 | 1.3 | 310 | **16000** | 0.23 | 0.68 | **170** | 31 | **150** |
| ML95-88-02 | 2011 | 36 | 43 | Gabbro | Discovery | OP/HW | **41** | **32000** | 870 | 0.50 | **29000** | **86** | 8.7 | < 0.8 | < 0.7 | 1.0 | 280 | 4800 | 0.18 | 0.98 | 120 | 18 | **98** |
| ML97-186-02 | 2011 | 120 | 129 | Gabbro | Discovery | OP/HW | **29** | **24000** | **1200** | **2.2** | **25000** | 35 | 11 | < 0.8 | < 0.7 | 1.7 | 320 | **14000** | 0.20 | 0.64 | **160** | 26 | **150** |
| | | | | | | MINIMUM | 20 | 17000 | 870 | 0.50 | 19000 | 17 | 5.6 | <0.8 | <0.7 | 0.80 | 260 | 4800 | 0.18 | 0.55 | 110 | 18 | 98 |
| | | | | | | MAXIMUM | 44 | 32000 | 1200 | 2.3 | 29000 | 86 | 12 | <0.8 | <0.7 | 1.8 | 320 | 18000 | 0.45 | 1.5 | 200 | 40 | 170 |
| | | | | | | MEDIAN | 28 | 22000 | 1200 | 1.3 | 23000 | 32 | 9.3 | nc | nc | 1.2 | 300 | 15000 | 0.23 | 0.68 | 170 | 27 | 150 |
| | | | | | | AVERAGE | 30 | 22636 | 1143 | 1.4 | 23545 | 36 | 9.0 | nc | nc | 1.2 | 295 | 14164 | 0.24 | 0.85 | 165 | 29 | 146 |
| | | | | | | STANDARD DEVIATION | 7.2 | 4456 | 101 | 0.63 | 2622 | 19 | 2.3 | nc | nc | 0.32 | 20 | 3483 | 0.075 | 0.29 | 30 | 6.8 | 22 |
| | | | | | | 75TH PERCENTILE | 33 | 24000 | 1200 | 2.0 | 24500 | 38 | 11 | nc | nc | 1.4 | 310 | 16000 | 0.25 | 1.0 | 185 | 34 | 160 |
| DS09GT-10-01 | 2011 | 14 | 19 | Greywacke/Siltstone | Discovery | OP/HW | **31** | 12000 | 320 | **1.3** | **27000** | 54 | 14 | < 0.8 | < 0.7 | 0.60 | 330 | 3400 | 0.30 | 2.1 | 81 | 7.2 | 67 |
| ML00-221-01 | 2009 | 25 | 30 | Greywacke/Siltstone | Discovery | OP/HW | **40** | 16000 | 350 | **3.1** | **24000** | 67 | 12 | < 0.8 | < 0.7 | 0.90 | 300 | 4200 | 0.43 | 1.8 | 98 | 8.3 | **94** |
| ML00-221-02 | 2009 | 61 | 66 | Greywacke/Siltstone | Discovery | OP/HW | **34** | 15000 | 320 | **1.7** | **24000** | 63 | 11 | < 0.8 | < 0.7 | 1.6 | 290 | 3900 | 0.42 | 1.9 | 87 | 7.1 | **88** |
| ML00-221-03 | 2009 | 88 | 93 | Greywacke/Siltstone | Discovery | OP/HW | **34** | 16000 | 290 | **2.0** | **24000** | 65 | 8.6 | < 0.8 | < 0.7 | 1.5 | 290 | 3700 | 0.36 | 1.7 | 93 | 7.4 | **77** |
| ML00-221-04 | 2009 | 162 | 168 | Greywacke/Siltstone | Discovery | OP/FW | **43** | 17000 | 330 | **1.4** | 16000 | 66 | 12 | < 0.8 | < 0.7 | 1.3 | 170 | 4500 | 0.42 | 1.7 | 110 | 8.1 | **99** |
| ML08-225-02 | 2011 | 104 | 115 | Greywacke/Siltstone | Discovery | OP/FW | **40** | 17000 | 350 | **1.6** | 23000 | 64 | **16** | < 0.8 | < 0.7 | 0.60 | 280 | 4200 | 0.65 | 2.2 | 100 | 8.8 | **98** |
| ML08-226-05 | 2011 | 192 | 200 | Greywacke/Siltstone | Discovery | OP/HW | **48** | 19000 | 400 | **2.6** | 20000 | 72 | 14 | < 0.8 | < 0.7 | 0.70 | 190 | 4500 | 0.44 | 2.1 | 110 | 8.9 | **100** |
| ML08-229-04 | 2011 | 191 | 200 | Greywacke/Siltstone | Discovery | OP/HW | **31** | 15000 | 380 | **4.2** | 17000 | 58 | 9.1 | < 0.8 | < 0.7 | 0.60 | 250 | 3400 | 0.40 | 1.8 | 89 | 7.6 | **79** |
| ML08-230-01 | 2011 | 25 | 33 | Greywacke/Siltstone | Discovery | OP/HW | **45** | 17000 | 400 | **3.3** | 20000 | 64 | 10 | < 0.8 | < 0.7 | 0.60 | 260 | 4000 | 0.46 | 2.7 | 100 | 9.1 | **86** |
| ML08-232-01 | 2011 | 62 | 70 | Greywacke/Siltstone | Discovery | OP/HW | **35** | 14000 | 320 | **1.5** | 23000 | 61 | 11 | < 0.8 | < 0.7 | 0.90 | 300 | 4100 | 0.44 | 2.1 | 100 | 8.0 | **88** |
| ML08-233-01 | 2011 | 20 | 28 | Greywacke/Siltstone | Discovery | OP/HW | **33** | 14000 | 370 | **2.2** | **25000** | 43 | 10 | < 0.8 | < 0.7 | 0.60 | 300 | 3500 | 0.29 | 1.7 | 85 | 9.7 | **74** |
| ML08-236-2 | 2009 | 41 | 49 | Greywacke/Siltstone | Discovery | OP/HW-interore | **42** | 15000 | 430 | **3.1** | 21000 | 45 | 11 | < 0.8 | < 0.7 | 1.7 | 240 | 3600 | 0.41 | 1.9 | 90 | 9.9 | **74** |
| ML08-236-3 | 2009 | 65 | 75 | Greywacke/Siltstone | Discovery | OP/FW | **44** | 17000 | 410 | **1.5** | 22000 | 54 | **16** | < 0.8 | < 0.7 | 1.0 | 260 | 3900 | 0.40 | 1.8 | 110 | 8.6 | **87** |
| ML08-238-03 | 2009 | 99 | 104 | Greywacke/Siltstone | Discovery | inter ore | **41** | 15000 | 440 | **1.3** | **27000** | 49 | 9.1 | < 0.8 | < 0.7 | 1.8 | 330 | 3800 | 0.40 | 1.8 | 87 | 8.9 | **76** |
| ML08-238-04 | 2009 | 126 | 132.5 | Greywacke/Siltstone | Discovery | OP/FW | **43** | 16000 | 340 | **1.3** | **24000** | 66 | 12 | < 0.8 | < 0.7 | 1.6 | 240 | 4100 | 0.53 | 1.9 | 100 | 9.2 | **86** |
| ML08-240-01 | 2011 | 77 | 85 | Greywacke/Siltstone | Discovery | OP/HW | **36** | 14000 | 390 | **2.4** | **30000** | 49 | **15** | < 0.8 | < 0.7 | 0.50 | 310 | 3600 | 0.37 | 1.6 | 86 | 8.9 | **95** |
| ML08-241-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Discovery | OP/HW | **36** | 15000 | 380 | **1.4** | 20000 | 49 | 11 | < 0.8 | < 0.7 | < 0.5 | 310 | 3900 | 0.34 | **2.8** | 99 | 8.8 | **84** |
| ML08-245-02 | 2011 | 82.5 | 91 | Greywacke/Siltstone | Discovery | OP/HW | **30** | 13000 | 320 | **1.3** | **24000** | 54 | 10 | < 0.8 | < 0.7 | 0.60 | 260 | 3500 | 0.42 | 2.6 | 83 | 7.2 | **110** |
| ML09-254-02 | 2011 | 100 | 108 | Greywacke/Siltstone | Discovery | OP/HW | **38** | 14000 | 360 | 0.80 | **28000** | 41 | 8.9 | < 0.8 | < 0.7 | 0.60 | 290 | 3400 | 0.31 | 2.4 | 80 | 8.6 | **72** |
| ML09-256-01 | 2011 | 52.5 | 61 | Greywacke/Siltstone | Discovery | OP/FW | **36** | 15000 | 350 | **4.3** | 17000 | 56 | 9.6 | < 0.8 | < 0.7 | 0.70 | 260 | 3400 | 0.41 | 1.8 | 83 | 8.3 | **79** |
| ML90-03-01 | 2009 | 17 | 24 | Greywacke/Siltstone | Discovery | OP/HW | **44** | 19000 | 380 | **5.0** | **24000** | 69 | 12 | < 0.8 | < 0.7 | 1.4 | 340 | 4600 | 0.56 | 2.0 | 110 | 8.7 | **98** |
| ML90-03-02 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | **45** | 15000 | 350 | **1.3** | **25000** | 39 | 9.9 | < 0.8 | < 0.7 | 1.0 | 290 | 3500 | 0.33 | 1.5 | 73 | 8.0 | **86** |
| ML90-04-01 | 2009 | 10 | 15 | Greywacke/Siltstone | Discovery | OP/HW | **37** | 15000 | 360 | **1.5** | **25000** | 58 | **16** | < 0.8 | < 0.7 | 1.2 | 320 | 4200 | 0.41 | 1.9 | 93 | 7.6 | **86** |
| ML90-04-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Discovery | OP/HW | **36** | 15000 | 330 | **1.9** | **26000** | 58 | 12 | < 0.8 | < 0.7 | 1.2 | 310 | 4100 | 0.43 | 1.8 | 91 | 7.7 | **93** |
| ML90-04-03 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | **36** | 15000 | 320 | 0.70 | **29000** | 39 | 9.3 | < 0.8 | < 0.7 | 0.80 | 300 | 3700 | 0.22 | 1.3 | 78 | 8.4 | **76** |
| ML90-07-01 | 2009 | 46 | 51 | Greywacke/Siltstone | Discovery | OP/FW | **35** | 14000 | 370 | 0.70 | **25000** | 44 | 8.5 | < 0.8 | < 0.7 | 1.3 | 320 | 3300 | 0.29 | 1.5 | 76 | 8.7 | 64 |
| ML90-08-01 | 2009 | 16 | 21 | Greywacke/Siltstone | Discovery | OP/HW | **31** | 12000 | 290 | **1.5** | **28000** | 51 | 12 | < 0.8 | < 0.7 | 1.4 | 260 | 3600 | 0.30 | 1.6 | 78 | 7.2 | **77** |
| ML90-08-02 | 2009 | 53 | 58 | Greywacke/Siltstone | Discovery | OP/FW | **42** | 13000 | 430 | **2.5** | **25000** | 46 | 7.3 | < 0.8 | < 0.7 | 1.2 | 290 | 3500 | 0.36 | 1.4 | 79 | 8.8 | 59 |
| ML90-09-2 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | **40** | 14000 | 410 | **3.0** | **27000** | 40 | 7.9 | < 0.8 | < 0.7 | 0.70 | 320 | 3300 | 0.40 | **3.7** | 82 | 11 | 61 |
| ML90-10-1 | 2009 | 11 | 18 | Greywacke/Siltstone | Discovery | OP/HW | **35** | 14000 | 270 | **3.8** | **24000** | 49 | 9.4 | < 0.8 | < 0.7 | 0.80 | 250 | 3100 | 0.42 | **2.9** | 77 | 9.0 | **71** |
| ML90-10-3 | 2009 | 56 | 64 | Greywacke/Siltstone | Discovery | OP/FW | **45** | 13000 | 320 | **1.5** | 21000 | 36 | 9.7 | < 0.8 | < 0.7 | 0.90 | 250 | 2700 | 0.45 | 1.6 | 66 | 7.3 | 69 |
| ML90-12-01 | 2009 | 24 | 29 | Greywacke/Siltstone | Discovery | OP/HW | **35** | 15000 | 320 | **1.3** | 23000 | 59 | 10 | < 0.8 | < 0.7 | 1.2 | 240 | 3900 | 0.38 | 2.4 | 88 | 9.1 | **93** |
| ML90-12-02 | 2009 | 80 | 84 | Greywacke/Siltstone | Discovery | OP/FW | **49** | 14000 | 430 | **3.2** | 23000 | 42 | 11 | < 0.8 | < 0.7 | 1.5 | 310 | 3500 | 0.51 | 1.8 | 80 | 10 | **92** |
| ML90-14-2 | 2009 | 129 | 137 | Greywacke/Siltstone | Discovery | OP/FW | **44** | 15000 | 400 | **1.4** | 22000 | 46 | 10 | < 0.8 | < 0.7 | 1.0 | 290 | 3700 | 0.38 | 1.8 | 94 | 9.0 | **76** |
| ML92-061-01 | 2009 | 21 | 26 | Greywacke/Siltstone | Discovery | OP/HW | **40** | 17000 | 380 | **2.6** | 23000 | 71 | 9.4 | < 0.8 | < 0.7 | 1.2 | 300 | 4100 | 0.45 | 1.7 | 100 | 8.0 | **92** |
| ML92-061-02 | 2009 | 50 | 56 | Greywacke/Siltstone | Discovery | OP/HW | **34** | 16000 | 330 | **1.5** | 21000 | 67 | 8.3 | < 0.8 | < 0.7 | 1.1 | 260 | 4000 | 0.42 | 1.7 | 97 | 7.4 | **82** |
| ML92-061-04 | 2009 | 109 | 114 | Greywacke/Siltstone | Discovery | OP/FW | **41** | 15000 | 360 | 1.0 | **29000** | 51 | 11 | < 0.8 | < 0.7 | 1.3 | 290 | 3700 | 0.32 | 1.5 | 84 | 8.5 | **75** |
| ML92-062-03 | 2009 | 50 | 55 | Greywacke/Siltstone | Discovery | OP/FW | **44** | 14000 | 350 | **2.5** | **26000** | 43 | 9.8 | < 0.8 | < 0.7 | 1.3 | 300 | 3500 | 0.44 | 1.7 | 75 | 9.0 | **73** |
| ML95-105-03 | 2011 | 94 | 103 | Greywacke/Siltstone | Discovery | OP/HW | **32** | 16000 | 320 | **1.5** | 22000 | 59 | 9.3 | < 0.8 | < 0.7 | 0.90 | 300 | 3900 | 0.45 | **4.1** | 95 | 8.3 | **84** |
| ML95-105-04 | 2011 | 138 | 147 | Greywacke/Siltstone | Discovery | OP/HW | **40** | 14000 | 370 | **2.4** | **35000** | 35 | 7.5 | < 0.8 | < 0.7 | 0.80 | 340 | 3500 | 0.32 | 1.4 | 77 | 9.0 | 64 |
| ML95-107-03 | 2011 | 75.5 | 84.5 | Greywacke/Siltstone | Discovery | OP/HW | **29** | 16000 | 310 | **1.4** | 20000 | 59 | 9.8 | < 0.8 | < 0.7 | < 0.5 | 320 | 4100 | 0.45 | 2.5 | 100 | 8.4 | **97** |
| ML95-113-01 | 2011 | 19 | 27.5 | Greywacke/Siltstone | Discovery | OP/HW | **39** | 16000 | 280 | **3.0** | 21000 | 52 | 11 | < 0.8 | < 0.7 | 0.90 | 280 | 3800 | 0.42 | 2.3 | 94 | 8.3 | **85** |
| ML95-113-02 | 2011 | 71 | 79 | Greywacke/Siltstone | Discovery | OP/HW | **38** | 15000 | 380 | 1.0 | 23000 | 46 | 9.8 | < 0.8 | < 0.7 | 1.1 | 310 | 3900 | 0.36 | 1.5 | 91 | 9.9 | **78** |
| ML95-120-01 | 2011 | 93 | 102 | Greywacke/Siltstone | Discovery | OP/HW | **32** | 16000 | 320 | **1.4** | **26000** | 58 | 9.4 | < 0.8 | < 0.7 | 1.1 | 260 | 4000 | 0.40 | 1.8 | 95 | 8.2 | **85** |
| ML95-82-02 | 2011 | 68 | 74 | Greywacke/Siltstone | Discovery | OP/HW | **35** | 14000 | 350 | 0.80 | **27000** | 37 | 7.9 | < 0.8 | < 0.7 | 0.90 | 280 | 3200 | 0.30 | 1.5 | 75 | 8.4 | **74** |
| ML95-82-1 | 2009 | 20 | 30 | Greywacke/Siltstone | Discovery | OP/HW | **39** | 17000 | 340 | **1.8** | 21000 | 62 | 11 | < 0.8 | < 0.7 | 1.2 | 270 | 4000 | 0.47 | 2.5 | 100 | 8.3 | **87** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| ML95-82-3 | 2009 | 65 | 74 | Greywacke/Siltstone | Discovery | OP/FW | **3.3** | 75000 | **74** | - | **520** | 0.99 | **0.37** | 21000 | **0.35** | 13 | **140** | 39 | 43000 | - | 16000 |
| ML95-83-02 | 2011 | 84 | 92 | Greywacke/Siltstone | Discovery | OP/HW | - | 81000 | **56** | **0.040** | **530** | 1.0 | **0.14** | 17000 | **0.25** | 14 | **140** | 38 | 54000 | < 0.1 | **22000** |
| ML95-85-01 | 2011 | 141 | 150 | Greywacke/Siltstone | Discovery | OP/FW | - | **93000** | **9.6** | **0.060** | **550** | 1.1 | **0.14** | 22000 | **0.30** | 14 | **150** | 42 | 55000 | < 0.1 | **22000** |
| ML95-88-01 | 2011 | 16 | 24.5 | Greywacke/Siltstone | Discovery | OP/HW | - | **100000** | **11** | **0.060** | **570** | 1.3 | **0.14** | 15000 | **0.35** | 18 | **190** | 57 | 47000 | < 0.1 | **26000** |
| ML95-93-01 | 2009 | 22 | 26 | Greywacke/Siltstone | Discovery | OP/HW | **0.30** | **96000** | **85** | - | **650** | 1.2 | **0.18** | 8400 | **0.25** | 20 | **170** | 56 | 50000 | - | **26000** |
| ML95-93-02 | 2009 | 41 | 46 | Greywacke/Siltstone | Discovery | OP/HW | **0.19** | **91000** | **34** | - | **600** | 0.99 | **0.11** | 11000 | **0.26** | 19 | **160** | 52 | 53000 | - | **22000** |
| ML95-93-04 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | **0.17** | **83000** | 1.8 | - | **500** | 0.89 | **0.15** | 23000 | **0.29** | 16 | **150** | 30 | **59000** | - | 15000 |
| ML95-95-02 | 2011 | 55 | 64 | Greywacke/Siltstone | Discovery | OP/HW | - | **94000** | **22** | **0.040** | **600** | 1.0 | **0.12** | 17000 | **0.30** | 15 | **150** | 43 | **61000** | < 0.1 | **23000** |
| | | | | | | MINIMUM | 0.010 | 74000 | 1.8 | 0.040 | 400 | 0.83 | <0.09 | 7900 | 0.16 | 12 | 110 | 18 | 35000 | <0.1 | 15000 |
| | | | | | | MAXIMUM | 3.3 | 100000 | 280 | 0.080 | 740 | 1.3 | 0.75 | 25000 | 0.41 | 21 | 240 | 84 | 72000 | <0.1 | 27000 |
| | | | | | | MEDIAN | 0.19 | 89000 | 34 | 0.050 | 560 | 1.00 | 0.15 | 14000 | 0.28 | 17 | 160 | 43 | 48000 | nc | 21000 |
| | | | | | | AVERAGE | 0.33 | 87870 | 46 | 0.055 | 563 | 1.0 | 0.18 | 15537 | 0.28 | 16 | 160 | 43 | 48407 | nc | 21167 |
| | | | | | | STANDARD DEVIATION | 0.58 | 5727 | 46 | 0.010 | 70 | 0.11 | 0.11 | 4999 | 0.056 | 2.4 | 29 | 13 | 7602 | nc | 2944 |
| | | | | | | 75TH PERCENTILE | 0.42 | 92000 | 53 | 0.060 | 600 | 1.1 | 0.20 | 20750 | 0.33 | 18 | 178 | 50 | 53750 | nc | 23000 |
| ML08-225-01 | 2011 | 70 | 79 | Iron Formation | Discovery | OP/FW | - | 37000 | **5.8** | **0.050** | **610** | 1.2 | < 0.09 | 18000 | 0.10 | 4.3 | **110** | 6.0 | **200000** | < 0.1 | 11000 |
| ML08-226-02 | 2011 | 36 | 45 | Iron Formation | Discovery | OP/HW | - | 18000 | **3.3** | **0.12** | 150 | 0.88 | **0.10** | 17000 | 0.020 | 3.5 | **140** | 4.6 | **310000** | < 0.1 | 4200 |
| ML08-226-03 | 2011 | 144 | 153 | Iron Formation | Discovery | OP/HW | - | 26000 | **3.8** | **0.29** | 300 | 0.64 | < 0.09 | 19000 | **0.21** | 4.2 | **140** | 8.9 | **280000** | < 0.1 | 5400 |
| ML08-228-01 | 2011 | 26.5 | 35 | Iron Formation | Discovery | OP/HW | - | 34000 | **21** | **0.070** | 410 | 0.96 | < 0.09 | 11000 | 0.13 | 4.9 | **130** | 4.0 | **220000** | < 0.1 | 13000 |
| ML08-228-02 | 2011 | 79 | 87.5 | Iron Formation | Discovery | OP/HW | - | 13000 | **5.8** | **0.070** | 96 | 0.84 | < 0.09 | 16000 | < 0.02 | 3.5 | **150** | 10 | **320000** | < 0.1 | 2600 |
| ML08-229-01 | 2011 | 52 | 61 | Iron Formation | Discovery | OP/HW | - | 16000 | **3.5** | **0.070** | 170 | 0.70 | < 0.09 | 13000 | 0.10 | 3.3 | **140** | 4.0 | **290000** | < 0.1 | 6500 |
| ML08-229-03 | 2011 | 113 | 122 | Iron Formation | Discovery | OP/HW | - | 53000 | **13** | **0.070** | **720** | 1.2 | < 0.09 | 24000 | **0.17** | 5.6 | **140** | 11 | **160000** | < 0.1 | 13000 |
| ML08-229-05 | 2011 | 234.5 | 243 | Iron Formation | Discovery | OP/HW | - | 25000 | **11** | **0.080** | 310 | 0.71 | **0.090** | 24000 | **0.19** | 3.6 | **130** | 3.8 | **260000** | < 0.1 | 4600 |
| ML08-233-02 | 2011 | 74.5 | 83 | Iron Formation | Discovery | OP/HW | - | 33000 | **15** | **0.080** | **580** | 0.99 | < 0.09 | 15000 | **0.18** | 4.2 | 100 | 6.6 | **250000** | < 0.1 | 7600 |
| ML08-236-1 | 2009 | 23 | 27 | Iron Formation | Discovery | OP/HW | **0.28** | 40000 | **14** | - | **720** | 1.3 | **0.22** | 21000 | **0.17** | 3.9 | **130** | 2.0 | **140000** | - | 15000 |
| ML08-241-02 | 2011 | 42 | 51 | Iron Formation | Discovery | OP/HW | - | 35000 | **4.7** | **0.060** | 390 | 0.96 | **0.13** | 23000 | **0.22** | 4.8 | **150** | 5.0 | **230000** | < 0.1 | 7800 |
| ML08-243-01 | 2011 | 97.5 | 106 | Iron Formation | Discovery | OP/FW | - | 31000 | **5.3** | **0.060** | **480** | 1.4 | < 0.09 | 20000 | **0.19** | 4.1 | **110** | 3.0 | **270000** | < 0.1 | 9300 |
| ML09-254-01 | 2011 | 84 | 93 | Iron Formation | Discovery | OP/FW | - | 35000 | **7.0** | **0.22** | 310 | 0.67 | **0.39** | 17000 | **0.22** | 5.6 | **120** | 14 | **260000** | < 0.1 | 7900 |
| ML90-09-1 | 2009 | 33 | 40 | Iron Formation | Discovery | OP/HW | **2.1** | 21000 | **96** | - | 81 | 0.24 | **0.20** | 21000 | **0.25** | 3.7 | 99 | **< 1** | **260000** | - | 2100 |
| ML90-10-2 | 2009 | 33 | 41 | Iron Formation | Discovery | OP/HW | **0.34** | 32000 | **35** | - | 410 | 0.82 | **0.11** | 26000 | **0.20** | 6.0 | **130** | 18 | **170000** | - | 9900 |
| ML92-053-1 | 2009 | 105 | 112 | Iron Formation | Discovery | OP/FW | **0.26** | 18000 | **19** | - | 75 | 0.34 | < 0.09 | 23000 | **0.24** | 2.9 | 99 | 5.0 | **260000** | - | 1200 |
| ML92-060-1 | 2009 | 42 | 49 | Iron Formation | Discovery | OP/HW | **0.28** | 16000 | **2.0** | - | 160 | 0.42 | < 0.09 | 16000 | 0.12 | 3.0 | 91 | 5.0 | **270000** | - | 2700 |
| ML92-061-03 | 2009 | 75 | 81 | Iron Formation | Discovery | OP/HW | **0.090** | 26000 | **6.7** | - | 420 | 0.79 | < 0.09 | 18000 | **0.16** | 3.4 | 70 | **< 6** | **240000** | - | 5700 |
| ML92062-01 | 2011 | 17.5 | 26 | Iron Formation | Discovery | OP/HW | - | 22000 | 1.6 | **0.060** | 370 | 0.79 | < 0.09 | 22000 | **0.22** | 4.7 | **160** | 17 | **260000** | < 0.1 | 5400 |
| ML92-062-01 | 2009 | 20 | 25 | Iron Formation | Discovery | OP/HW | 0.030 | 18000 | 1.4 | - | 150 | 0.42 | < 0.09 | 18000 | 0.15 | 2.8 | 84 | **< 6** | **280000** | - | 1600 |
| ML92-062-02 | 2009 | 35 | 39.5 | Iron Formation | Discovery | OP/HW | 0.030 | 65000 | **13** | - | **1400** | 2.0 | **0.17** | 16000 | **0.22** | 9.0 | **130** | **< 6** | **130000** | - | 20000 |
| ML95-105-01 | 2011 | 25 | 34 | Iron Formation | Discovery | OP/HW | - | 27000 | **21** | **0.22** | 380 | 0.84 | **0.14** | 17000 | **0.22** | 3.6 | **160** | 7.5 | **250000** | < 0.1 | 5400 |
| ML95-107-01 | 2011 | 11 | 18 | Iron Formation | Discovery | OP/HW | - | 30000 | **3.3** | **0.050** | **460** | 1.0 | < 0.09 | 14000 | **0.21** | 4.9 | **120** | 3.7 | **260000** | < 0.1 | 15000 |
| ML95-107-02 | 2011 | 62.5 | 71 | Iron Formation | Discovery | OP/HW | - | 46000 | **280** | **0.050** | **660** | 1.4 | **0.12** | 22000 | **0.23** | 7.2 | **130** | 27 | **170000** | < 0.1 | 18000 |
| ML95-117-01 | 2011 | 14 | 23 | Iron Formation | Discovery | OP/HW | - | 34000 | **7.7** | **0.050** | 290 | 0.73 | **0.090** | 17000 | 0.13 | 4.8 | **130** | 14 | **240000** | < 0.1 | 7700 |
| ML95-117-03 | 2011 | 61.5 | 71.5 | Iron Formation | Discovery | OP/HW | - | 53000 | **57** | **0.060** | 280 | 0.64 | **0.18** | 24000 | **0.22** | 8.8 | **160** | 31 | **150000** | < 0.1 | 9100 |
| ML95-82-01 | 2011 | 54 | 61.5 | Iron Formation | Discovery | OP/HW | - | 40000 | **310** | **0.30** | 390 | 0.76 | **0.23** | 19000 | **0.22** | 6.5 | **170** | 33 | **190000** | < 0.1 | 9200 |
| ML95-82-2 | 2009 | 43 | 46 | Iron Formation | Discovery | OP/HW | **0.52** | 14000 | **10** | - | 100 | 0.37 | **0.30** | 18000 | **0.21** | 2.3 | 68 | 25 | **220000** | - | 2300 |
| ML95-83-01 | 2011 | 22 | 31 | Iron Formation | Discovery | OP/HW | - | 49000 | **2.7** | **0.060** | **1100** | 1.7 | < 0.09 | 13000 | 0.15 | 5.4 | **120** | 3.4 | **170000** | < 0.1 | 20000 |
| ML95-93-03 | 2009 | 55 | 60 | Iron Formation | Discovery | OP/HW | 0.030 | 12000 | **11** | - | 72 | 0.15 | **0.19** | 24000 | **0.26** | 3.3 | **190** | 31 | **220000** | - | 2300 |
| ML95-95-01 | 2011 | 20 | 29 | Iron Formation | Discovery | OP/HW | - | 37000 | **23** | **0.65** | **650** | 0.97 | **0.23** | 27000 | **0.39** | 5.0 | **130** | 5.7 | **200000** | < 0.1 | 12000 |
| ML95-98-01 | 2011 | 9.5 | 17.5 | Iron Formation | Discovery | OP/HW | - | 29000 | 1.6 | **0.030** | 240 | 1.1 | < 0.09 | 16000 | 0.060 | 3.7 | **150** | 7.4 | **260000** | < 0.1 | 6600 |
| ML97-186-01 | 2011 | 78 | 86 | Iron Formation | Discovery | OP/HW | - | 30000 | **6.1** | **0.030** | 420 | 0.81 | **0.12** | 17000 | 0.15 | 4.3 | **150** | 9.5 | **230000** | < 0.1 | 10000 |
| | | | | | | MINIMUM | 0.030 | 12000 | 1.4 | 0.030 | 72 | 0.15 | < 0.09 | 11000 | 0.020 | 2.3 | 68 | <1 | 130000 | <0.1 | 1200 |
| | | | | | | MAXIMUM | 2.1 | 65000 | 310 | 0.65 | 1400 | 2.0 | 0.39 | 27000 | 0.39 | 9.0 | 190 | 33 | 320000 | <0.1 | 20000 |
| | | | | | | MEDIAN | 0.27 | 30000 | 7.7 | 0.070 | 380 | 0.82 | 0.090 | 18000 | 0.19 | 4.2 | 130 | 6.0 | 240000 | nc | 7700 |
| | | | | | | AVERAGE | 0.40 | 30758 | 31 | 0.12 | 405 | 0.87 | 0.13 | 18970 | 0.18 | 4.6 | 128 | 10 | 230909 | nc | 8306 |
| | | | | | | STANDARD DEVIATION | 0.62 | 12723 | 71 | 0.14 | 292 | 0.40 | 0.072 | 3988 | 0.072 | 1.6 | 28 | 9.1 | 49204 | nc | 5215 |
| | | | | | | 75TH PERCENTILE | 0.33 | 37000 | 19 | 0.10 | 480 | 1.0 | 0.17 | 22000 | 0.22 | 5.0 | 150 | 14 | 260000 | nc | 11000 |
| ML00-224-01 | 2011 | 101.5 | 110 | Ore/IF | Discovery | OP/HW | - | 29000 | **390** | **0.29** | 260 | 0.47 | **0.54** | 21000 | **0.17** | 4.4 | **130** | 13 | **240000** | < 0.1 | 5700 |
| ML08-225-03 | 2011 | 169 | 178 | Ore/IF | Discovery | OP/FW | - | 27000 | **230** | **23** | 300 | 0.59 | **0.24** | 21000 | **0.17** | 4.8 | **110** | 16 | **290000** | < 0.1 | 4700 |
| ML08-226-04 | 2011 | 168.5 | 174.5 | Ore/IF | Discovery | OP/HW | - | 24000 | **7500** | **1.4** | 130 | 0.29 | **2.1** | 12000 | **0.20** | 3.6 | **210** | 19 | **170000** | < 0.1 | 3600 |
| ML95-104-02 | 2011 | 177 | 187 | Ore/IF | Discovery | OP/FW | - | 31000 | **1400** | **0.12** | 380 | 0.57 | **0.10** | 15000 | **0.29** | 4.0 | **160** | 6.7 | **190000** | < 0.1 | 5300 |
| ML95-84-01 | 2011 | 123 | 131 | Ore/IF | Discovery | OP/FW | - | 33000 | **180** | **1.7** | 330 | 0.71 | **0.26** | 18000 | **0.22** | 5.2 | **170** | 24 | **190000** | < 0.1 | 6700 |
| | | | | | | MINIMUM | nc | 24000 | 180 | 0.12 | 130 | 0.29 | 0.10 | 12000 | 0.17 | 3.6 | 110 | 6.7 | 170000 | <0.1 | 3600 |
| | | | | | | MAXIMUM | nc | 33000 | 7500 | 23 | 380 | 0.71 | 2.1 | 21000 | 0.29 | 5.2 | 210 | 24 | 290000 | <0.1 | 6700 |
| | | | | | | MEDIAN | nc | 29000 | 390 | 1.4 | 300 | 0.57 | 0.26 | 18000 | 0.20 | 4.4 | 160 | 16 | 190000 | nc | 5300 |
| | | | | | | AVERAGE | nc | 28800 | 1940 | 5.3 | 280 | 0.53 | 0.65 | 17400 | 0.21 | 4.4 | 156 | 16 | 216000 | nc | 5200 |
| | | | | | | STANDARD DEVIATION | nc | 3493 | 3148 | 9.9 | 95 | 0.16 | 0.83 | 3912 | 0.049 | 0.63 | 38 | 6.5 | 48785 | nc | 1153 |
| | | | | | | 75TH PERCENTILE | nc | 31000 | 1400 | 1.7 | 330 | 0.59 | 0.54 | 21000 | 0.22 | 4.8 | 170 | 19 | 240000 | nc | 5700 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| ML95-82-3 | 2009 | 65 | 74 | Greywacke/Siltstone | Discovery | OP/FW | **33** | 13000 | 430 | 0.70 | **24000** | 44 | 8.6 | < 0.8 | < 0.7 | 1.0 | 310 | 3000 | 0.31 | 2.0 | 80 | 7.8 | 62 |
| ML95-83-02 | 2011 | 84 | 92 | Greywacke/Siltstone | Discovery | OP/HW | **39** | 14000 | 280 | **1.3** | **24000** | 41 | 8.7 | < 0.8 | < 0.7 | 1.2 | 250 | 3300 | 0.37 | 2.3 | 78 | 9.8 | **85** |
| ML95-85-01 | 2011 | 141 | 150 | Greywacke/Siltstone | Discovery | OP/FW | **38** | 15000 | 340 | 0.90 | **30000** | 39 | 9.9 | < 0.8 | < 0.7 | 1.3 | 330 | 3600 | 0.35 | 1.9 | 78 | 9.1 | **79** |
| ML95-88-01 | 2011 | 16 | 24.5 | Greywacke/Siltstone | Discovery | OP/HW | **45** | 19000 | 350 | **3.1** | 23000 | 61 | 13 | < 0.8 | < 0.7 | 0.60 | 290 | 4400 | 0.51 | 2.3 | 99 | 8.6 | **100** |
| ML95-93-01 | 2009 | 22 | 26 | Greywacke/Siltstone | Discovery | OP/HW | **37** | 18000 | 340 | **1.8** | 20000 | 79 | 8.5 | < 0.8 | < 0.7 | 1.6 | 230 | 4600 | 0.43 | 1.8 | 120 | 9.0 | **96** |
| ML95-93-02 | 2009 | 41 | 46 | Greywacke/Siltstone | Discovery | OP/HW | **38** | 17000 | 370 | **2.6** | 23000 | 72 | 11 | < 0.8 | < 0.7 | 1.4 | 260 | 4200 | 0.39 | 1.6 | 100 | 8.2 | **110** |
| ML95-93-04 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | **38** | 15000 | 510 | **1.4** | **29000** | 50 | 7.7 | < 0.8 | < 0.7 | 1.6 | 310 | 3600 | 0.31 | 2.4 | 85 | 9.2 | **79** |
| ML95-95-02 | 2011 | 55 | 64 | Greywacke/Siltstone | Discovery | OP/HW | **36** | 16000 | 350 | 1.0 | **28000** | 48 | **16** | < 0.8 | < 0.7 | 0.90 | 270 | 4000 | 0.37 | 1.6 | 94 | 9.2 | **88** |
| | | | | | | MINIMUM | 29 | 12000 | 270 | 0.70 | 16000 | 35 | 7.3 | <0.8 | <0.7 | < 0.5 | 170 | 2700 | 0.22 | 1.3 | 66 | 7.1 | 59 |
| | | | | | | MAXIMUM | 49 | 19000 | 510 | 5.0 | 35000 | 79 | 16 | <0.8 | <0.7 | 1.8 | 340 | 4600 | 0.65 | 4.1 | 120 | 11 | 110 |
| | | | | | | MEDIAN | 38 | 15000 | 350 | 1.5 | 24000 | 53 | 10 | nc | nc | 1.0 | 290 | 3750 | 0.40 | 1.8 | 90 | 8.6 | 85 |
| | | | | | | AVERAGE | 38 | 15222 | 357 | 2.0 | 24037 | 54 | 11 | nc | nc | 1.0 | 284 | 3772 | 0.40 | 2.0 | 90 | 8.6 | 83 |
| | | | | | | STANDARD DEVIATION | 4.8 | 1610 | 46 | 1.00 | 3571 | 11 | 2.3 | nc | nc | 0.36 | 35 | 410 | 0.075 | 0.53 | 11 | 0.81 | 12 |
| | | | | | | 75TH PERCENTILE | 42 | 16000 | 380 | 2.6 | 26000 | 62 | 12 | nc | nc | 1.3 | 310 | 4075 | 0.44 | 2.3 | 99 | 9.0 | 92 |
| ML08-225-01 | 2011 | 70 | 79 | Iron Formation | Discovery | OP/FW | 18 | 9200 | 310 | **2.4** | 9500 | 10 | 3.4 | < 0.8 | **1.1** | < 0.5 | 220 | 880 | 0.20 | 0.86 | 19 | 6.0 | 24 |
| ML08-226-02 | 2011 | 36 | 45 | Iron Formation | Discovery | OP/HW | 9.0 | 9600 | 270 | 0.80 | 5200 | 8.8 | 2.5 | < 0.8 | < 0.7 | < 0.5 | 110 | 540 | 0.12 | 0.43 | 15 | 5.7 | 36 |
| ML08-226-03 | 2011 | 144 | 153 | Iron Formation | Discovery | OP/HW | 13 | 10000 | 320 | **3.8** | 4400 | 11 | 4.1 | < 0.8 | < 0.7 | < 0.5 | 230 | 770 | 0.14 | 0.63 | 16 | 7.2 | 46 |
| ML08-228-01 | 2011 | 26.5 | 35 | Iron Formation | Discovery | OP/HW | **24** | 8200 | 250 | 0.70 | 13000 | 13 | 4.9 | < 0.8 | < 0.7 | < 0.5 | 93 | 1000 | 0.25 | 1.0 | 25 | 5.5 | 42 |
| ML08-228-02 | 2011 | 79 | 87.5 | Iron Formation | Discovery | OP/HW | 5.0 | 8100 | 380 | **3.4** | 1600 | 7.2 | 1.7 | < 0.8 | < 0.7 | 0.60 | 55 | 340 | 0.050 | 0.40 | 8.0 | 5.4 | 36 |
| ML08-229-01 | 2011 | 52 | 61 | Iron Formation | Discovery | OP/HW | 13 | 7600 | 210 | 0.50 | 5000 | 8.7 | 5.8 | < 0.8 | < 0.7 | < 0.5 | 190 | 510 | 0.29 | 0.47 | 13 | 5.4 | 36 |
| ML08-229-03 | 2011 | 113 | 122 | Iron Formation | Discovery | OP/HW | **21** | 12000 | 450 | **1.3** | 6800 | 18 | 4.9 | < 0.8 | < 0.7 | 0.60 | 220 | 1600 | 0.22 | 1.5 | 32 | 7.7 | 44 |
| ML08-229-05 | 2011 | 234.5 | 243 | Iron Formation | Discovery | OP/HW | 15 | 12000 | 330 | 0.80 | 4400 | 11 | 5.6 | < 0.8 | < 0.7 | < 0.5 | 340 | 720 | 0.12 | 0.68 | 16 | 6.9 | 52 |
| ML08-233-02 | 2011 | 74.5 | 83 | Iron Formation | Discovery | OP/HW | **24** | 9200 | 260 | 0.50 | 13000 | 12 | 7.4 | < 0.8 | < 0.7 | < 0.5 | 360 | 1000 | 0.28 | 0.92 | 24 | 7.2 | 54 |
| ML08-236-1 | 2009 | 23 | 27 | Iron Formation | Discovery | OP/HW | **23** | 8600 | 330 | **1.4** | 2700 | 12 | 8.8 | < 0.8 | < 0.7 | 1.6 | 280 | 1200 | 0.34 | 1.3 | 22 | 6.3 | 40 |
| ML08-241-02 | 2011 | 42 | 51 | Iron Formation | Discovery | OP/HW | 15 | 9200 | 390 | **4.5** | 4300 | 13 | 7.3 | **1.2** | < 0.7 | 0.70 | **420** | 1100 | 0.14 | 1.1 | 27 | 7.5 | 49 |
| ML08-243-01 | 2011 | 97.5 | 106 | Iron Formation | Discovery | OP/FW | **21** | 8100 | 260 | **3.4** | 8100 | 11 | 10 | < 0.8 | < 0.7 | 1.2 | **600** | 1000 | 0.24 | 0.96 | 23 | 6.9 | 43 |
| ML09-254-01 | 2011 | 84 | 93 | Iron Formation | Discovery | OP/HW | 17 | 9300 | 320 | **3.2** | 10000 | 14 | 6.6 | < 0.8 | < 0.7 | < 0.5 | 250 | 1100 | 0.16 | 1.2 | 27 | 8.2 | 51 |
| ML90-09-1 | 2009 | 33 | 40 | Iron Formation | Discovery | OP/HW | 6.0 | 9100 | 350 | **3.5** | 2000 | 9.0 | 3.4 | < 0.8 | < 0.7 | < 0.5 | 230 | 570 | 0.070 | 0.45 | 16 | 6.2 | **78** |
| ML90-10-2 | 2009 | 33 | 41 | Iron Formation | Discovery | OP/HW | 20 | 5600 | 380 | 1.2 | 2200 | 19 | 6.0 | < 0.8 | < 0.7 | 0.50 | 260 | 1300 | 0.19 | 1.4 | 28 | 6.6 | 41 |
| ML92-053-1 | 2009 | 105 | 112 | Iron Formation | Discovery | OP/FW | 6.0 | 9000 | 250 | 1.1 | 910 | 8.0 | 2.7 | < 0.8 | < 0.7 | < 0.5 | 220 | 560 | 0.030 | 0.40 | 14 | 5.7 | 42 |
| ML92-060-1 | 2009 | 42 | 49 | Iron Formation | Discovery | OP/HW | 5.0 | 10000 | 310 | **3.3** | 3500 | 7.7 | 3.2 | < 0.8 | < 0.7 | < 0.5 | 210 | 500 | 0.080 | 0.46 | 17 | 6.3 | 41 |
| ML92-061-03 | 2009 | 75 | 81 | Iron Formation | Discovery | OP/HW | 12 | 8100 | 210 | **1.3** | 11000 | 12 | 4.2 | < 0.8 | < 0.7 | < 0.5 | 290 | 810 | 0.20 | 0.66 | 16 | 5.5 | 36 |
| ML92062-01 | 2011 | 17.5 | 26 | Iron Formation | Discovery | OP/HW | 10 | 7700 | 250 | **3.9** | 6000 | 11 | 6.3 | < 0.8 | < 0.7 | < 0.5 | 350 | 740 | 0.13 | 0.55 | 16 | 6.7 | 34 |
| ML92-062-01 | 2009 | 20 | 25 | Iron Formation | Discovery | OP/HW | 6.0 | 11000 | 290 | **2.6** | 6500 | 8.6 | 3.2 | < 0.8 | < 0.7 | < 0.5 | 250 | 510 | 0.040 | 0.33 | 12 | 5.9 | 39 |
| ML92-062-02 | 2009 | 35 | 39.5 | Iron Formation | Discovery | OP/HW | **58** | 12000 | 190 | 1.0 | 15000 | 25 | **39** | < 0.8 | < 0.7 | 1.8 | **930** | 1900 | 0.51 | 1.3 | 37 | 7.4 | 67 |
| ML95-105-01 | 2011 | 25 | 34 | Iron Formation | Discovery | OP/HW | 13 | 9700 | 350 | 0.80 | 3400 | 8.3 | 6.1 | < 0.8 | < 0.7 | < 0.5 | 240 | 640 | 0.11 | 0.66 | 13 | 6.7 | 49 |
| ML95-107-01 | 2011 | 11 | 18 | Iron Formation | Discovery | OP/HW | **23** | 10000 | 260 | 1.0 | 3300 | 12 | 7.5 | < 0.8 | < 0.7 | < 0.5 | 150 | 930 | 0.29 | 0.74 | 22 | 6.1 | 48 |
| ML95-107-02 | 2011 | 62.5 | 71 | Iron Formation | Discovery | OP/HW | **31** | 11000 | 360 | **3.2** | 7500 | 15 | 8.1 | < 0.8 | < 0.7 | < 0.5 | 370 | 1400 | 0.30 | 1.0 | 31 | 7.1 | 54 |
| ML95-117-01 | 2011 | 14 | 23 | Iron Formation | Discovery | OP/HW | 13 | 9900 | 340 | **3.3** | 6600 | 13 | 4.0 | < 0.8 | < 0.7 | < 0.5 | 210 | 1200 | 0.14 | 0.63 | 25 | 6.4 | 46 |
| ML95-117-03 | 2011 | 61.5 | 71.5 | Iron Formation | Discovery | OP/HW | 16 | 11000 | 360 | **4.1** | 10000 | 28 | 5.1 | < 0.8 | < 0.7 | 1.1 | 230 | 2200 | 0.16 | 1.3 | 51 | 8.7 | 68 |
| ML95-82-01 | 2011 | 54 | 61.5 | Iron Formation | Discovery | OP/HW | 18 | 11000 | 330 | **4.0** | 5800 | 18 | 5.9 | < 0.8 | < 0.7 | < 0.5 | 240 | 1300 | 0.19 | 1.0 | 31 | 8.2 | 64 |
| ML95-82-2 | 2009 | 43 | 46 | Iron Formation | Discovery | OP/HW | 7.0 | 8800 | 630 | **2.4** | 1900 | 6.4 | 5.5 | < 0.8 | < 0.7 | < 0.5 | 270 | 330 | 0.060 | 0.65 | 9.0 | 8.0 | 53 |
| ML95-83-01 | 2011 | 22 | 31 | Iron Formation | Discovery | OP/HW | **32** | 9000 | 250 | **3.2** | 4800 | 14 | 6.8 | < 0.8 | < 0.7 | < 0.5 | 200 | 1500 | 0.41 | 1.1 | 29 | 7.0 | 45 |
| ML95-93-03 | 2009 | 55 | 60 | Iron Formation | Discovery | OP/HW | 8.0 | 5300 | 330 | 0.70 | 250 | 14 | 3.4 | < 0.8 | < 0.7 | 0.60 | 140 | 700 | 0.080 | 0.46 | 9.0 | 6.1 | 58 |
| ML95-95-01 | 2011 | 20 | 29 | Iron Formation | Discovery | OP/HW | **21** | 11000 | 380 | **3.7** | 5500 | 14 | 7.3 | < 0.8 | < 0.7 | < 0.5 | 240 | 1200 | 0.24 | 1.0 | 27 | 6.4 | 61 |
| ML95-98-01 | 2011 | 9.5 | 17.5 | Iron Formation | Discovery | OP/HW | 16 | 9700 | 260 | **3.7** | 9400 | 9.4 | 4.4 | < 0.8 | < 0.7 | < 0.5 | 290 | 660 | 0.23 | 0.63 | 17 | 5.7 | 33 |
| ML97-186-01 | 2011 | 78 | 86 | Iron Formation | Discovery | OP/HW | 19 | 9800 | 220 | 0.90 | 6000 | 12 | **38** | < 0.8 | < 0.7 | < 0.5 | 220 | 860 | 0.29 | 1.1 | 19 | 23 | 54 |
| | | | | | | MINIMUM | 5.0 | 5300 | 190 | 0.50 | 250 | 6.4 | 1.7 | <0.8 | <0.7 | < 0.5 | 55 | 330 | 0.030 | 0.33 | 8.0 | 5.4 | 24 |
| | | | | | | MAXIMUM | 58 | 12000 | 630 | 4.5 | 15000 | 28 | 39 | 1.2 | 1.1 | 1.8 | 930 | 2200 | 0.51 | 1.5 | 51 | 23 | 78 |
| | | | | | | MEDIAN | 16 | 9300 | 320 | 2.4 | 5500 | 12 | 5.6 | nc | nc | 0.50 | 240 | 880 | 0.19 | 0.74 | 19 | 6.6 | 46 |
| | | | | | | AVERAGE | 17 | 9388 | 315 | 2.3 | 6047 | 13 | 7.4 | nc | nc | 0.63 | 270 | 957 | 0.19 | 0.83 | 21 | 7.1 | 47 |
| | | | | | | STANDARD DEVIATION | 10 | 1583 | 83 | 1.3 | 3690 | 4.8 | 8.3 | nc | nc | 0.32 | 155 | 436 | 0.11 | 0.33 | 9.1 | 3.0 | 12 |
| | | | | | | 75TH PERCENTILE | 21 | 10000 | 350 | 3.4 | 8100 | 14 | 7.3 | nc | nc | 0.50 | 290 | 1200 | 0.25 | 1.1 | 27 | 7.2 | 54 |
| ML00-224-01 | 2011 | 101.5 | 110 | Ore/IF | Discovery | OP/HW | 14 | 9200 | 360 | 0.70 | 2700 | 11 | 6.2 | < 0.8 | < 0.7 | < 0.5 | 220 | 890 | 0.090 | 0.89 | 20 | 6.5 | 47 |
| ML08-225-03 | 2011 | 169 | 178 | Ore/IF | Discovery | OP/FW | 13 | 8600 | 350 | 1.0 | 3600 | 12 | 6.3 | < 0.8 | < 0.7 | < 0.5 | 240 | 890 | 0.12 | 0.67 | 22 | 6.2 | 52 |
| ML08-226-04 | 2011 | 168.5 | 174.5 | Ore/IF | Discovery | OP/HW | 8.0 | 6300 | 210 | **2.8** | 2400 | 8.5 | 8.6 | **1.6** | < 0.7 | < 0.5 | 170 | 590 | 0.14 | 0.72 | 12 | 4.6 | 52 |
| ML95-104-02 | 2011 | 177 | 187 | Ore/IF | Discovery | OP/FW | 15 | 8600 | 280 | **4.3** | 6200 | 11 | 6.8 | < 0.8 | < 0.7 | < 0.5 | 110 | 1200 | 0.13 | 0.94 | 19 | 5.9 | 51 |
| ML95-84-01 | 2011 | 123 | 131 | Ore/IF | Discovery | OP/FW | 17 | 9100 | 270 | **4.1** | 6100 | 15 | 12 | < 0.8 | < 0.7 | < 0.5 | 300 | 1100 | 0.16 | 0.76 | 23 | 6.4 | 62 |
| | | | | | | MINIMUM | 8.0 | 6300 | 210 | 0.70 | 2400 | 8.5 | 6.2 | <0.8 | <0.7 | <0.5 | 110 | 590 | 0.090 | 0.67 | 12 | 4.6 | 47 |
| | | | | | | MAXIMUM | 17 | 9200 | 360 | 4.3 | 6200 | 15 | 12 | 1.6 | <0.7 | <0.5 | 300 | 1200 | 0.16 | 0.94 | 23 | 6.5 | 62 |
| | | | | | | MEDIAN | 14 | 8600 | 280 | 2.8 | 3600 | 11 | 6.8 | nc | nc | nc | 220 | 890 | 0.13 | 0.76 | 20 | 6.2 | 52 |
| | | | | | | AVERAGE | 13 | 8360 | 294 | 2.6 | 4200 | 12 | 8.0 | nc | nc | nc | 208 | 934 | 0.13 | 0.80 | 19 | 5.9 | 53 |
| | | | | | | STANDARD DEVIATION | 3.4 | 1184 | 62 | 1.7 | 1834 | 2.3 | 2.4 | nc | nc | nc | 72 | 235 | 0.026 | 0.11 | 4.3 | 0.77 | 5.5 |
| | | | | | | 75TH PERCENTILE | 15 | 9100 | 350 | 4.1 | 6100 | 12 | 8.6 | nc | nc | nc | 240 | 1100 | 0.14 | 0.89 | 22 | 6.4 | 52 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M08-743-03 | 2009 | 46 | 48 | Iron Formation | F Zone | OP-ore zone | **0.60** | 15000 | **96** | - | 29 | 0.19 | **0.27** | 22000 | **1.4** | 15 | **240** | **70** | **91000** | - | 2600 |
| M08-748-03 | 2009 | 85 | 95 | Iron Formation | F Zone | OP-ore zone | < 0.01 | 73000 | **11** | - | 9.2 | 0.22 | < 0.09 | **76000** | 0.020 | **45** | **330** | **88** | **70000** | - | 500 |
| M09-802-02 | 2011 | 65 | 73 | Iron Formation | F Zone | OP/FW | - | 5700 | **120** | **0.020** | 9.4 | 0.25 | **0.090** | 8500 | **0.23** | 8.4 | **210** | **77** | **120000** | < 0.1 | 160 |
| M09-803-01 | 2011 | 85 | 90 | Iron Formation | F Zone | OP/FW | - | 4400 | **95** | **0.080** | 3.5 | 0.31 | **0.11** | 20000 | **0.51** | 7.8 | **140** | **110** | **180000** | < 0.1 | 180 |
| M10-935-02 | 2011 | 46 | 56 | Iron Formation | F Zone | OP/FW | - | 2400 | **2200** | **0.27** | 10 | 0.12 | **0.15** | 10000 | **0.17** | 7.1 | **240** | **110** | **97000** | < 0.1 | 340 |
| M98-248-01 | 2011 | 88 | 97 | Iron Formation | F Zone | OP/FW | - | 2300 | **23** | < 0.02 | 6.0 | 0.20 | **0.19** | 13000 | **0.62** | 7.9 | **230** | **78** | **110000** | < 0.1 | 360 |
| W94-111-01 | 2011 | 118 | 127 | Iron Formation | F Zone | OP/HW | - | 5300 | **48** | **0.050** | 5.4 | 0.20 | < 0.09 | 18000 | **0.33** | 4.2 | **170** | 28 | **150000** | < 0.1 | 280 |
| | | | | | | MINIMUM | <0.01 | 2300 | 11 | < 0.02 | 3.5 | 0.12 | < 0.09 | 8500 | 0.020 | 4.2 | 140 | 28 | 70000 | <0.1 | 160 |
| | | | | | | MAXIMUM | 0.60 | 73000 | 2200 | 0.27 | 29 | 0.31 | 0.27 | 76000 | 1.4 | 45 | 330 | 110 | 180000 | <0.1 | 2600 |
| | | | | | | MEDIAN | nc | 5300 | 95 | 0.050 | 9.2 | 0.20 | 0.11 | 18000 | 0.33 | 7.9 | 230 | 78 | 110000 | nc | 340 |
| | | | | | | AVERAGE | nc | 15443 | 370 | 0.088 | 10 | 0.21 | 0.14 | 23929 | 0.47 | 14 | 223 | 80 | 116857 | nc | 631 |
| | | | | | | STANDARD DEVIATION | nc | 25741 | 808 | 0.10 | 8.6 | 0.058 | 0.068 | 23513 | 0.46 | 14 | 60 | 28 | 37418 | nc | 876 |
| | | | | | | 75TH PERCENTILE | nc | 10350 | 108 | 0.080 | 9.7 | 0.24 | 0.17 | 21000 | 0.57 | 12 | 240 | 99 | 135000 | nc | 430 |
| GT09-07-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **0.090** | 76000 | **3.9** | - | 59 | 0.26 | < 0.09 | **68000** | 0.13 | **42** | **170** | **100** | **71000** | - | 2000 |
| GT09-07-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | **0.36** | 50000 | **9.1** | - | 64 | 0.54 | < 0.09 | **77000** | **0.34** | **34** | **170** | 59 | **68000** | - | 4800 |
| M08-729-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 79000 | **7.2** | - | 98 | 0.27 | < 0.09 | **77000** | 0.090 | **49** | **260** | **160** | **71000** | - | 4000 |
| M08-729-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | **0.12** | 73000 | **7.7** | - | 57 | 0.23 | < 0.09 | **74000** | 0.090 | **38** | **260** | **100** | **65000** | - | 1200 |
| M08-729-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 76000 | **40** | - | 220 | 0.24 | < 0.09 | **79000** | 0.14 | **46** | **260** | **84** | **76000** | - | 5500 |
| M08-729-04 | 2009 | 74 | 79 | Mafic Volcanic | F Zone | OP/HW | **0.12** | **90000** | **68** | - | 130 | 0.28 | < 0.09 | **58000** | 0.13 | **41** | **190** | **110** | **61000** | - | 6700 |
| M08-729-06 | 2009 | 117 | 122 | Mafic Volcanic | F Zone | OP/FW | 0.020 | 75000 | **120** | - | 64 | 0.43 | < 0.09 | **61000** | 0.070 | **43** | **230** | **81** | **82000** | - | 4000 |
| M08-733-01 | 2011 | 62 | 71 | Mafic Volcanic | F Zone | OP/HW | - | 73000 | **15** | **0.020** | 110 | 0.24 | < 0.09 | **86000** | **0.18** | **42** | **220** | **83** | **78000** | < 0.1 | 3500 |
| M08-733-02 | 2011 | 180 | 189 | Mafic Volcanic | F Zone | OP/FW | - | 71000 | **6.5** | **0.020** | 170 | 0.23 | < 0.09 | **79000** | **0.19** | **42** | **200** | **110** | **77000** | < 0.1 | 4100 |
| M08-734-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **0.14** | 78000 | **8.8** | - | 47 | 0.25 | < 0.09 | **65000** | **1.4** | **40** | **160** | **150** | **75000** | - | 1900 |
| M08-734-02 | 2009 | 28 | 32 | Mafic Volcanic | F Zone | OP/HW | **0.14** | 67000 | **3.7** | - | 110 | 0.32 | < 0.09 | **71000** | **2.0** | **34** | **150** | **91** | **95000** | - | 3000 |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | **0.080** | 71000 | **12** | - | 41 | 0.23 | < 0.09 | **65000** | **0.53** | **42** | **200** | **120** | **77000** | - | 2900 |
| M08-734-04 | 2009 | 41 | 45 | Mafic Volcanic | F Zone | OP/FW | **0.23** | 69000 | **86** | - | 68 | 0.26 | < 0.09 | **63000** | **0.59** | **41** | **200** | **190** | **75000** | - | 6200 |
| M08-735-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **0.15** | 81000 | **28** | - | 140 | 0.29 | < 0.09 | **60000** | **0.63** | **41** | **160** | **140** | **66000** | - | 8600 |
| M08-735-02 | 2009 | 70 | 75 | Mafic Volcanic | F Zone | OP/FW | **0.10** | 74000 | **200** | - | 230 | 0.36 | < 0.09 | **70000** | **0.39** | **44** | **210** | **120** | **82000** | - | 14000 |
| M08-735-03 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | 0.060 | 72000 | **28** | - | 69 | 0.26 | < 0.09 | **74000** | **0.30** | **40** | **190** | **110** | **80000** | - | 3800 |
| M08-740-01 | 2009 | 16 | 21 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 78000 | **68** | - | 66 | 0.23 | < 0.09 | **78000** | 0.050 | **47** | **260** | **87** | **83000** | - | 3100 |
| M08-740-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | **90000** | **140** | - | 84 | 0.17 | **0.15** | **68000** | < 0.02 | **53** | **420** | 46 | **58000** | - | 2400 |
| M08-740-03 | 2009 | 52 | 56 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 76000 | **3.1** | - | 120 | 0.20 | < 0.09 | **66000** | < 0.02 | **40** | **180** | **100** | **72000** | - | 2600 |
| M08-740-04 | 2009 | 106 | 111 | Mafic Volcanic | F Zone | OP/FW | **0.12** | 63000 | **40** | - | 64 | 0.29 | < 0.09 | **64000** | **0.16** | **38** | **200** | **84** | **70000** | - | 5400 |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | 0.050 | 69000 | **87** | - | 140 | 0.37 | < 0.09 | **81000** | 0.12 | **50** | **230** | **110** | **70000** | - | 8700 |
| M08-742-01 | 2009 | 8.5 | 14.5 | Mafic Volcanic | F Zone | OP/HW | 0.070 | 81000 | **4.0** | - | 120 | 0.21 | < 0.09 | **50000** | **0.38** | **42** | **210** | **110** | **60000** | - | 5700 |
| M08-742-02 | 2009 | 29 | 35 | Mafic Volcanic | F Zone | OP/HW | **0.080** | 74000 | **10** | - | 74 | 0.20 | < 0.09 | **60000** | **0.32** | **41** | **150** | **140** | **80000** | - | 3600 |
| M08-742-03 | 2009 | 43 | 47 | Mafic Volcanic | F Zone | OP/HW | **0.19** | 68000 | **29** | - | 68 | 0.37 | < 0.09 | **60000** | **0.43** | **37** | **170** | **62** | **77000** | - | 4700 |
| M08-742-04 | 2009 | 77 | 83 | Mafic Volcanic | F Zone | OP/FW | **0.080** | 74000 | **20** | - | 33 | 0.33 | < 0.09 | **71000** | **0.19** | **42** | **190** | **110** | **72000** | - | 4400 |
| M08-742-06 | 2009 | 96 | 102 | Mafic Volcanic | F Zone | OP/FW | 0.050 | 74000 | **7.6** | - | 14 | 0.17 | < 0.09 | **76000** | **0.19** | **46** | **350** | **130** | **76000** | - | 580 |
| M08-743-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | **0.11** | 74000 | **2.1** | - | 45 | 0.31 | < 0.09 | **70000** | **0.24** | **42** | **140** | **100** | **88000** | - | 2000 |
| M08-743-02 | 2009 | 39 | 44 | Mafic Volcanic | F Zone | OP/FW | **0.19** | 80000 | **74** | - | 79 | 0.24 | < 0.09 | **56000** | **0.19** | **44** | **210** | **120** | 52000 | - | 5700 |
| M08-743-04 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | **0.24** | **83000** | **4.7** | - | 110 | 0.35 | < 0.09 | **66000** | **0.55** | **51** | **240** | **120** | **85000** | - | 2800 |
| M08-747-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 71000 | **2.1** | - | 79 | 0.26 | < 0.09 | **93000** | **0.18** | **49** | **300** | **120** | **76000** | - | 1200 |
| M08-747-02 | 2009 | 39 | 45 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 74000 | **3.2** | - | 52 | 0.14 | < 0.09 | **76000** | **0.29** | **43** | **360** | **92** | **77000** | - | 1400 |
| M08-747-03 | 2009 | 65 | 70 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 72000 | **1.9** | - | 3.3 | 0.17 | < 0.09 | **71000** | < 0.02 | **47** | **190** | **90** | **73000** | - | 890 |
| M08-747-04 | 2009 | 83 | 88 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 80000 | **11** | - | 8.4 | 0.19 | < 0.09 | **71000** | 0.030 | **48** | **280** | **110** | **85000** | - | 570 |
| M08-748-01 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | **0.090** | 77000 | **5.6** | - | 320 | 0.55 | < 0.09 | **57000** | 0.070 | **49** | **140** | **110** | **91000** | - | 8400 |
| M08-748-02 | 2009 | 57 | 62 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 65000 | **4.4** | - | 130 | 0.34 | < 0.09 | **82000** | 0.13 | **39** | **280** | **88** | **90000** | - | 4800 |
| M08-750-01 | 2009 | 8 | 14 | Mafic Volcanic | F Zone | OP/HW | **0.18** | 67000 | **2.8** | - | 170 | 0.46 | < 0.09 | **81000** | **0.34** | **37** | **140** | **64** | **69000** | - | 9400 |
| M08-750-02 | 2009 | 28 | 33 | Mafic Volcanic | F Zone | OP/HW | **0.47** | 69000 | **100** | - | 220 | 0.80 | < 0.09 | **47000** | **0.58** | **43** | 64 | **97** | **85000** | - | 9500 |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | **0.75** | 70000 | **66** | - | 150 | 0.56 | < 0.09 | **51000** | **0.44** | **41** | 78 | **84** | **90000** | - | 5500 |
| M08-752-01 | 2009 | 9 | 14 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 72000 | **3.5** | - | 100 | 0.25 | < 0.09 | **90000** | 0.030 | **41** | **280** | **110** | **72000** | - | 3200 |
| M08-752-02 | 2009 | 23 | 27 | Mafic Volcanic | F Zone | OP/HW | **0.090** | 65000 | **3.8** | - | **510** | 0.79 | < 0.09 | **45000** | 0.13 | **39** | 77 | **90** | **95000** | - | 9800 |
| M08-752-03 | 2009 | 45 | 51 | Mafic Volcanic | F Zone | OP/FW | **0.20** | 70000 | **87** | - | 140 | 0.53 | < 0.09 | **51000** | **0.18** | **46** | **150** | **110** | **83000** | - | 7600 |
| M08-752-04 | 2009 | 75 | 80 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | **83000** | **2.9** | - | 62 | 0.32 | < 0.09 | **75000** | 0.13 | **50** | **200** | **120** | **72000** | - | 6300 |
| M08-755-01 | 2009 | 19 | 24 | Mafic Volcanic | F Zone | OP/HW | **0.10** | 78000 | **3.0** | - | 140 | 0.28 | < 0.09 | **80000** | 0.14 | **47** | **210** | **100** | **82000** | - | 3500 |
| M08-755-02 | 2009 | 30 | 37 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 73000 | **2.2** | - | 210 | 0.44 | < 0.09 | **86000** | 0.080 | **41** | **170** | **95** | **82000** | - | 4700 |
| M08-755-03 | 2009 | 66 | 71 | Mafic Volcanic | F Zone | OP/FW | 0.030 | 71000 | **16** | - | 11 | 0.24 | < 0.09 | **67000** | 0.090 | **46** | **260** | **110** | **77000** | - | 480 |
| M09-798-01 | 2009 | 12 | 17 | Mafic Volcanic | F Zone | OP/HW | **0.27** | 77000 | **4.2** | - | 320 | 0.73 | < 0.09 | **57000** | **0.28** | **47** | 72 | **120** | **93000** | - | 9100 |
| M09-798-02 | 2009 | 17 | 22 | Mafic Volcanic | F Zone | OP/HW | **0.22** | 78000 | **4.0** | - | 200 | 0.66 | < 0.09 | **57000** | **0.17** | **45** | **110** | **110** | **87000** | - | 6300 |
| M09-802-01 | 2011 | 35 | 44 | Mafic Volcanic | F Zone | OP/HW | - | 62000 | **2.9** | **0.020** | 140 | 0.22 | < 0.09 | **97000** | **0.53** | **42** | **360** | **100** | **84000** | < 0.1 | 2700 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M08-743-03 | 2009 | 46 | 48 | Iron Formation | F Zone | OP-ore zone | 7.0 | 11000 | **3500** | **4.4** | 2700 | 34 | 4.8 | < 0.8 | **1.5** | 1.3 | 30 | 840 | 0.22 | 0.19 | 37 | 3.4 | **170** |
| M08-748-03 | 2009 | 85 | 95 | Iron Formation | F Zone | OP-ore zone | **38** | **40000** | **1200** | 1.1 | 14000 | **110** | 3.3 | **0.90** | **1.6** | 1.5 | 130 | 4300 | < 0.02 | 0.061 | **250** | 12 | **81** |
| M09-802-02 | 2011 | 65 | 73 | Iron Formation | F Zone | OP/FW | < 2 | 8400 | **2600** | 0.80 | 210 | 12 | 2.5 | < 0.8 | < 0.7 | 0.60 | 9.9 | 200 | < 0.02 | 0.50 | 3.0 | 3.0 | **170** |
| M09-803-01 | 2011 | 85 | 90 | Iron Formation | F Zone | OP/FW | < 2 | 13000 | **3400** | **3.4** | 180 | 14 | 3.8 | **1.1** | **0.80** | 1.1 | 20 | 290 | < 0.02 | 0.23 | 7.0 | 4.1 | **260** |
| M10-935-02 | 2011 | 46 | 56 | Iron Formation | F Zone | OP/FW | < 2 | 5600 | **2900** | **1.3** | 280 | 10 | 2.2 | **1.3** | **1.2** | 0.90 | 13 | 100 | < 0.02 | 0.29 | < 1 | 2.4 | 67 |
| M98-248-01 | 2011 | 88 | 97 | Iron Formation | F Zone | OP/FW | < 2 | 7800 | **3800** | 0.60 | 550 | 11 | 5.7 | < 0.8 | **0.70** | 0.90 | 13 | 110 | < 0.02 | 0.10 | 2.0 | 2.5 | **250** |
| W94-111-01 | 2011 | 118 | 127 | Iron Formation | F Zone | OP/HW | 2.0 | 15000 | **5100** | 0.50 | 280 | 7.2 | 3.2 | < 0.8 | < 0.7 | < 0.5 | 25 | 240 | < 0.02 | 0.30 | 7.0 | 3.5 | **150** |
| | | | | | | MINIMUM | < 2 | 5600 | 1200 | 0.50 | 180 | 7.2 | 2.2 | <0.8 | < 0.7 | <0.5 | 9.9 | 100 | <0.02 | 0.061 | <1 | 2.4 | 67 |
| | | | | | | MAXIMUM | 38 | 40000 | 5100 | 4.4 | 14000 | 110 | 5.7 | 1.3 | 1.6 | 1.5 | 130 | 4300 | 0.22 | 0.50 | 250 | 12 | 260 |
| | | | | | | MEDIAN | 2.0 | 11000 | 3400 | 1.1 | 280 | 12 | 3.3 | 0.80 | 0.80 | 0.90 | 20 | 240 | nc | 0.23 | 7.0 | 3.4 | 170 |
| | | | | | | AVERAGE | 7.9 | 14400 | 3214 | 1.7 | 2600 | 28 | 3.6 | 0.93 | 1.0 | 0.97 | 34 | 869 | nc | 0.24 | 44 | 4.4 | 164 |
| | | | | | | STANDARD DEVIATION | 13 | 11735 | 1194 | 1.5 | 5107 | 37 | 1.2 | 0.20 | 0.40 | 0.36 | 43 | 1534 | nc | 0.15 | 92 | 3.4 | 74 |
| | | | | | | 75TH PERCENTILE | 4.5 | 14000 | 3650 | 2.4 | 1625 | 24 | 4.3 | 1.0 | 1.4 | 1.2 | 28 | 565 | nc | 0.30 | 22 | 3.8 | 210 |
| GT09-07-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **29** | **32000** | **1100** | 0.20 | 19000 | 60 | 1.2 | < 0.8 | < 0.7 | 1.0 | 93 | **6100** | 0.050 | 0.18 | **230** | 16 | **95** |
| GT09-07-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | **48** | **25000** | **1700** | 0.60 | 13000 | 69 | 3.4 | **2.2** | < 0.7 | 1.6 | 98 | **6800** | 0.16 | 0.37 | **200** | 20 | **100** |
| M08-729-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **55** | **35000** | **1300** | 1.0 | 15000 | **110** | 2.8 | **1.3** | < 0.7 | 0.90 | 140 | **5900** | 0.12 | 0.11 | **300** | 16 | **95** |
| M08-729-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | **49** | **35000** | **1500** | 0.80 | 14000 | 84 | 1.6 | < 0.8 | < 0.7 | 0.60 | 120 | 5600 | < 0.02 | 0.20 | **260** | 14 | **78** |
| M08-729-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/HW | **46** | **31000** | **1400** | 1.0 | 12000 | **87** | 1.6 | < 0.8 | **1.4** | **3.1** | 62 | **5800** | 0.19 | < 0.002 | **290** | 15 | **130** |
| M08-729-04 | 2009 | 74 | 79 | Mafic Volcanic | F Zone | OP/HW | **46** | **27000** | **1100** | 1.0 | 19000 | 78 | 6.1 | < 0.8 | **3.2** | 1.2 | 110 | **5900** | 0.33 | 0.16 | **290** | 6.7 | **90** |
| M08-729-06 | 2009 | 117 | 122 | Mafic Volcanic | F Zone | OP/FW | **43** | **37000** | **1200** | 0.80 | 22000 | **110** | 4.5 | < 0.8 | **2.0** | 0.80 | 130 | 4800 | 0.12 | 0.42 | **240** | 7.4 | **110** |
| M08-733-01 | 2011 | 62 | 71 | Mafic Volcanic | F Zone | OP/HW | **31** | **24000** | **1700** | 1.2 | 14000 | **110** | 1.9 | < 0.8 | < 0.7 | < 0.5 | 110 | 5300 | 0.030 | 0.31 | **180** | 16 | **89** |
| M08-733-02 | 2011 | 180 | 189 | Mafic Volcanic | F Zone | OP/FW | **33** | **30000** | **1200** | 0.20 | 17000 | **110** | 3.4 | < 0.8 | < 0.7 | 0.80 | 110 | 5000 | 0.030 | 0.076 | **180** | 13 | **130** |
| M08-734-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **21** | **32000** | **1100** | 1.0 | 19000 | 76 | 3.3 | < 0.8 | < 0.7 | 1.0 | 110 | **6400** | 0.050 | 0.21 | **230** | 18 | **110** |
| M08-734-02 | 2009 | 28 | 32 | Mafic Volcanic | F Zone | OP/HW | **46** | **40000** | **1800** | 0.90 | 6300 | 75 | 3.2 | < 0.8 | < 0.7 | 2.3 | 53 | **5700** | 0.14 | 0.37 | **190** | 22 | **170** |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | **37** | **35000** | **1100** | 0.60 | 18000 | **120** | 3.6 | **0.90** | < 0.7 | 0.80 | 120 | 5100 | 0.090 | 0.34 | **200** | 12 | **96** |
| M08-734-04 | 2009 | 41 | 45 | Mafic Volcanic | F Zone | OP/FW | **30** | **46000** | **1100** | 1.2 | 11000 | **140** | 6.1 | < 0.8 | < 0.7 | 0.50 | 120 | 3100 | 0.11 | 0.16 | **150** | 4.0 | **110** |
| M08-735-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **27** | **24000** | **1100** | 0.90 | 13000 | 76 | 2.4 | < 0.8 | < 0.7 | 1.0 | 88 | **6400** | 0.40 | 0.43 | **230** | 14 | **98** |
| M08-735-02 | 2009 | 70 | 75 | Mafic Volcanic | F Zone | OP/HW | **33** | **36000** | **1400** | 0.90 | 10000 | **130** | 5.5 | < 0.8 | **0.90** | 0.90 | 110 | 5300 | 0.44 | 0.20 | **190** | 6.5 | **100** |
| M08-735-03 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | **28** | **32000** | **1200** | 0.50 | 20000 | **100** | 2.7 | < 0.8 | < 0.7 | 1.1 | 100 | 5300 | 0.12 | 0.28 | **210** | 13 | **100** |
| M08-740-01 | 2009 | 16 | 21 | Mafic Volcanic | F Zone | OP/HW | **38** | **26000** | **1800** | 0.70 | 12000 | **120** | 3.5 | < 0.8 | **1.5** | < 0.5 | 92 | 5100 | 0.070 | 0.22 | **270** | 10 | **90** |
| M08-740-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | **51** | **40000** | 880 | 0.90 | 18000 | **130** | 5.1 | < 0.8 | < 0.7 | < 0.5 | 140 | 1700 | 0.060 | 0.0060 | **230** | 4.8 | **73** |
| M08-740-03 | 2009 | 52 | 56 | Mafic Volcanic | F Zone | OP/HW | **30** | **32000** | 910 | 0.90 | 17000 | 55 | 1.5 | < 0.8 | **0.70** | **3.1** | 110 | 5400 | 0.18 | 0.13 | **290** | 16 | **82** |
| M08-740-04 | 2009 | 106 | 111 | Mafic Volcanic | F Zone | OP/FW | **39** | **29000** | **1300** | 0.80 | 19000 | **87** | 3.4 | < 0.8 | **0.90** | 0.70 | 110 | 4100 | 0.21 | 0.21 | **210** | 7.3 | **110** |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | **49** | **40000** | **1600** | 0.80 | 12000 | **96** | 5.8 | < 0.8 | **1.1** | 1.7 | 130 | 4300 | 0.40 | 0.17 | **240** | 9.1 | **100** |
| M08-742-01 | 2009 | 8.5 | 14.5 | Mafic Volcanic | F Zone | OP/HW | 15 | **26000** | 940 | 0.80 | **24000** | 84 | 2.7 | < 0.8 | **1.3** | 1.0 | 99 | **5800** | 0.26 | 0.17 | **230** | 14 | **88** |
| M08-742-02 | 2009 | 29 | 35 | Mafic Volcanic | F Zone | OP/HW | **26** | **38000** | **1200** | 0.70 | 13000 | 71 | 4.1 | < 0.8 | < 0.7 | 1.1 | 86 | **5700** | 0.14 | 0.18 | **210** | 14 | **110** |
| M08-742-03 | 2009 | 43 | 47 | Mafic Volcanic | F Zone | OP/HW | **37** | **37000** | **1100** | 0.40 | 14000 | 67 | 6.8 | **1.2** | < 0.7 | 1.1 | 97 | **5900** | 0.25 | 0.28 | **200** | 11 | **120** |
| M08-742-04 | 2009 | 77 | 83 | Mafic Volcanic | F Zone | OP/FW | **49** | **40000** | **1100** | 0.90 | 15000 | **120** | 6.1 | < 0.8 | **0.80** | 1.2 | 130 | 4200 | 0.19 | 0.13 | **180** | 9.6 | **90** |
| M08-742-06 | 2009 | 96 | 102 | Mafic Volcanic | F Zone | OP/FW | **25** | **49000** | **1100** | 0.70 | 15000 | **130** | 1.4 | **1.0** | **0.70** | < 0.5 | 110 | 4100 | < 0.02 | 0.058 | **180** | 12 | **78** |
| M08-743-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | 18 | **37000** | **1100** | 1.1 | 15000 | 59 | 3.0 | < 0.8 | < 0.7 | 0.90 | 130 | **6100** | 0.070 | 0.41 | **190** | 17 | **110** |
| M08-743-02 | 2009 | 39 | 44 | Mafic Volcanic | F Zone | OP/FW | **43** | **33000** | **990** | 0.90 | 20000 | **110** | 2.4 | < 0.8 | < 0.7 | 0.60 | 91 | 3800 | 0.42 | 0.090 | **190** | 6.2 | **76** |
| M08-743-04 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | **24** | **44000** | **1200** | **1.3** | 19000 | **110** | 2.9 | **1.1** | < 0.7 | < 0.5 | 130 | **6500** | 0.14 | 0.40 | **200** | 16 | **110** |
| M08-747-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **25** | **26000** | **1900** | 1.0 | 12000 | **140** | 3.4 | < 0.8 | **2.1** | 2.1 | 93 | 5000 | 0.080 | 0.025 | **260** | 16 | **180** |
| M08-747-02 | 2009 | 39 | 45 | Mafic Volcanic | F Zone | OP/HW | **24** | **49000** | **1100** | 0.90 | 19000 | **110** | 3.0 | **1.8** | **2.6** | **15** | 110 | 3400 | 0.060 | 0.15 | **210** | 12 | **170** |
| M08-747-03 | 2009 | 65 | 70 | Mafic Volcanic | F Zone | OP/FW | **54** | **47000** | **1000** | 0.50 | 13000 | **150** | 2.4 | **1.5** | **1.8** | 2.0 | 120 | 3400 | 0.020 | < 0.002 | **200** | 10 | **73** |
| M08-747-04 | 2009 | 83 | 88 | Mafic Volcanic | F Zone | OP/FW | **32** | **48000** | **1400** | 0.70 | 13000 | **110** | 2.2 | **1.5** | **1.5** | **2.4** | 120 | 5100 | < 0.02 | 0.0050 | **260** | 14 | **140** |
| M08-748-01 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | **41** | **31000** | **1100** | **1.3** | 16000 | 81 | 7.7 | **1.0** | **1.4** | 1.5 | 200 | **6500** | 0.79 | 1.0 | **210** | 17 | **110** |
| M08-748-02 | 2009 | 57 | 62 | Mafic Volcanic | F Zone | OP/HW | **42** | **36000** | **1500** | 1.1 | 11000 | **86** | 3.8 | **1.6** | **0.80** | 2.2 | 140 | 4200 | 0.29 | 0.083 | **220** | 12 | **180** |
| M08-750-01 | 2009 | 8 | 14 | Mafic Volcanic | F Zone | OP/HW | **38** | **33000** | **1200** | 0.90 | 21000 | 51 | 3.8 | < 0.8 | < 0.7 | 0.50 | 190 | 5100 | 0.41 | 0.18 | **180** | 12 | **87** |
| M08-750-02 | 2009 | 28 | 33 | Mafic Volcanic | F Zone | OP/HW | **25** | **26000** | **1000** | **1.4** | 23000 | **88** | 10 | < 0.8 | < 0.7 | 0.70 | 150 | **6700** | 0.37 | 1.2 | **150** | 9.7 | **200** |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | **36** | 23000 | **1100** | **1.3** | 20000 | 55 | 5.1 | < 0.8 | < 0.7 | 0.90 | 160 | **8400** | 0.17 | 1.1 | **170** | 16 | **130** |
| M08-752-01 | 2009 | 9 | 14 | Mafic Volcanic | F Zone | OP/HW | **26** | **38000** | **1200** | 0.80 | 18000 | **85** | 6.3 | < 0.8 | **1.8** | 1.2 | 170 | 4300 | 0.16 | 0.11 | **230** | 13 | **110** |
| M08-752-02 | 2009 | 23 | 27 | Mafic Volcanic | F Zone | OP/HW | **32** | 22000 | **980** | **1.8** | 15000 | 34 | 9.4 | **0.90** | **0.70** | 1.1 | 170 | **8700** | **0.90** | 1.3 | **210** | 20 | **130** |
| M08-752-03 | 2009 | 45 | 51 | Mafic Volcanic | F Zone | OP/FW | **41** | **34000** | **1100** | **1.3** | 17000 | **91** | 11 | < 0.8 | **1.4** | 1.9 | 130 | **5700** | 0.35 | 0.56 | **220** | 8.6 | **110** |
| M08-752-04 | 2009 | 75 | 80 | Mafic Volcanic | F Zone | OP/FW | **71** | **34000** | **1200** | 0.80 | 16000 | **120** | 9.1 | < 0.8 | **1.3** | 1.6 | 120 | 4100 | 0.22 | < 0.002 | **250** | 12 | **110** |
| M08-755-01 | 2009 | 19 | 24 | Mafic Volcanic | F Zone | OP/HW | **27** | **35000** | **1300** | **1.3** | 15000 | 64 | 2.5 | < 0.8 | **0.90** | 1.9 | 100 | **5700** | 0.17 | 0.20 | **290** | 17 | **110** |
| M08-755-02 | 2009 | 30 | 37 | Mafic Volcanic | F Zone | OP/HW | **30** | **35000** | **1400** | **1.4** | 9900 | 60 | 5.9 | < 0.8 | **1.1** | 2.3 | 110 | 5600 | 0.34 | 0.23 | **250** | 22 | **160** |
| M08-755-03 | 2009 | 66 | 71 | Mafic Volcanic | F Zone | OP/FW | **43** | **45000** | 950 | 0.70 | 16000 | **96** | 4.8 | **0.90** | **1.5** | 0.60 | 120 | 4300 | < 0.02 | < 0.002 | **240** | 11 | **81** |
| M09-798-01 | 2009 | 12 | 17 | Mafic Volcanic | F Zone | OP/HW | **23** | **28000** | **1200** | 0.80 | 18000 | 67 | 7.6 | **1.0** | < 0.7 | 1.8 | 210 | **8200** | 0.44 | 1.1 | **190** | 19 | **120** |
| M09-798-02 | 2009 | 17 | 22 | Mafic Volcanic | F Zone | OP/HW | **22** | **29000** | **1100** | 0.60 | 19000 | 76 | 6.0 | **1.1** | < 0.7 | 1.3 | 260 | **6600** | 0.27 | 0.87 | **180** | 16 | **110** |
| M09-802-01 | 2011 | 35 | 44 | Mafic Volcanic | F Zone | OP/HW | **34** | **38000** | **1400** | 1.1 | 11000 | **130** | 3.7 | **0.80** | < 0.7 | 1.1 | 83 | 3700 | 0.11 | 0.18 | **150** | 13 | **210** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M09-816-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **0.12** | 69000 | 1.7 | - | 49 | 0.27 | < 0.09 | **88000** | 0.14 | **40** | **160** | **91** | **72000** | - | 850 |
| M09-816-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | **0.15** | 64000 | 1.7 | - | 88 | 0.40 | < 0.09 | **75000** | 0.10 | **41** | **170** | **110** | **73000** | - | 2300 |
| M09-817-02 | 2011 | 45 | 53 | Mafic Volcanic | F Zone | OP/HW | - | 59000 | **52** | **0.040** | 71 | 0.28 | < 0.09 | **75000** | **0.20** | **44** | **250** | **80** | **75000** | < 0.1 | 2700 |
| M09-855-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **0.53** | 55000 | **220** | - | 120 | 0.57 | **0.16** | **56000** | **1.2** | **53** | **180** | **330** | **110000** | - | 6300 |
| M09-855-02 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **0.27** | 24000 | **110** | - | 74 | 0.55 | < 0.09 | **61000** | **0.29** | **44** | **290** | **86** | **72000** | - | 3500 |
| M09-857-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **0.17** | 64000 | **6.1** | - | 170 | 0.37 | < 0.09 | **64000** | **0.24** | **40** | **150** | **110** | **61000** | - | 6500 |
| M09-858-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **0.11** | 66000 | **2.2** | - | 110 | 0.31 | < 0.09 | **84000** | 0.10 | **40** | **160** | **94** | **64000** | - | 1400 |
| M09-858-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | **0.13** | 66000 | **2.1** | - | 49 | 0.33 | < 0.09 | **77000** | 0.11 | **36** | **160** | **98** | **70000** | - | 1200 |
| M09-859-01 | 2011 | 46 | 54.5 | Mafic Volcanic | F Zone | OP/FW | - | 67000 | **130** | **0.030** | 40 | 0.28 | < 0.09 | **69000** | **0.21** | **44** | **230** | **100** | **90000** | < 0.1 | 3300 |
| M09-862-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **0.17** | 63000 | **13** | - | 89 | 0.31 | < 0.09 | **70000** | **0.19** | **41** | **150** | **83** | **74000** | - | 4100 |
| M09-866-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | **0.35** | 57000 | **33** | - | 200 | 0.49 | < 0.09 | **79000** | **0.54** | **37** | **140** | **130** | **98000** | - | 7400 |
| M09-866-02 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **0.36** | 59000 | **39** | - | 190 | 0.63 | < 0.09 | **75000** | **0.32** | **34** | **150** | **62** | **70000** | - | 5300 |
| M10-933-01 | 2011 | 34 | 42 | Mafic Volcanic | F Zone | OP/FW | - | 61000 | **9.2** | **0.020** | 60 | 0.19 | < 0.09 | **89000** | **0.39** | **38** | **170** | **170** | **79000** | < 0.1 | 2700 |
| M10-935-01 | 2011 | 20.5 | 29 | Mafic Volcanic | F Zone | OP/HW | - | 72000 | **3.4** | **0.020** | 52 | 0.24 | < 0.09 | **78000** | 0.12 | **42** | **170** | **89** | **81000** | < 0.1 | 1000 |
| M96-28-01 | 2011 | 27 | 38 | Mafic Volcanic | F Zone | OP/HW | - | 70000 | **82** | **0.030** | 150 | 0.26 | < 0.09 | **83000** | **0.16** | **43** | **180** | **85** | **78000** | < 0.1 | 5200 |
| M97-159-01 | 2011 | 21 | 31 | Mafic Volcanic | F Zone | OP/HW | - | 69000 | **17** | **0.020** | 69 | 0.25 | < 0.09 | **73000** | 0.13 | **41** | **180** | **93** | **87000** | < 0.1 | 3600 |
| M97-159-02 | 2011 | 86 | 93 | Mafic Volcanic | F Zone | OP/FW | - | 70000 | **26** | **0.030** | 77 | 0.33 | < 0.09 | **74000** | **0.18** | **42** | **180** | **94** | **81000** | < 0.1 | 4700 |
| M98-275-01 | 2011 | 25 | 33 | Mafic Volcanic | F Zone | OP/HW | - | 69000 | **20** | **0.020** | 61 | 0.28 | < 0.09 | **78000** | 0.13 | **40** | **200** | **89** | **78000** | < 0.1 | 2000 |
| M98-275-02 | 2011 | 80 | 89.5 | Mafic Volcanic | F Zone | OP/FW | - | 68000 | **6.2** | < 0.02 | 28 | 0.23 | < 0.09 | **80000** | **0.18** | **42** | **220** | **95** | **72000** | < 0.1 | 1200 |
| W94-76-01 | 2011 | 13 | 22 | Mafic Volcanic | F Zone | OP/HW | - | 69000 | **2.6** | **0.070** | 46 | 0.26 | < 0.09 | **81000** | **0.22** | **41** | **170** | **96** | **79000** | < 0.1 | 1300 |
| W94-76-02 | 2011 | 70.5 | 77 | Mafic Volcanic | F Zone | OP/FW | - | 62000 | **3.4** | **0.070** | 14 | 0.25 | < 0.09 | **61000** | 0.12 | **44** | **230** | **110** | **84000** | < 0.1 | 1000 |
| W94-82-01 | 2011 | 46 | 55 | Mafic Volcanic | F Zone | OP/HW | - | 77000 | **3.4** | **0.060** | 14 | 0.17 | < 0.09 | **85000** | 0.12 | **49** | **200** | **110** | **74000** | < 0.1 | 490 |
| | | | | | | MINIMUM | <0.01 | 24000 | 1.7 | < 0.02 | 3.3 | 0.14 | <0.09 | 45000 | <0.02 | 34 | 64 | 46 | 52000 | <0.1 | 480 |
| | | | | | | MAXIMUM | 0.75 | 90000 | 220 | 0.070 | 510 | 0.80 | 0.16 | 97000 | 2.0 | 53 | 420 | 330 | 110000 | <0.1 | 14000 |
| | | | | | | MEDIAN | 0.11 | 71000 | 8.8 | 0.020 | 79 | 0.28 | nc | 73000 | 0.18 | 42 | 190 | 100 | 77000 | nc | 3600 |
| | | | | | | AVERAGE | 0.14 | 70408 | 32 | 0.033 | 107 | 0.33 | nc | 71352 | 0.27 | 43 | 199 | 106 | 77338 | nc | 4122 |
| | | | | | | STANDARD DEVIATION | 0.14 | 9258 | 47 | 0.019 | 83 | 0.15 | nc | 11412 | 0.31 | 4.3 | 66 | 36 | 10011 | nc | 2772 |
| | | | | | | 75TH PERCENTILE | 0.18 | 76000 | 40 | 0.035 | 140 | 0.37 | nc | 79000 | 0.32 | 46 | 230 | 110 | 83000 | nc | 5600 |
| M09-809-01 | 2011 | 64.5 | 73.8 | Ore/IF | F Zone | OP/HW | - | 28000 | **5300** | **1.8** | 53 | 0.39 | **0.12** | 36000 | **0.51** | 13 | **150** | **68** | **140000** | < 0.1 | 4800 |
| M09-817-01 | 2011 | 32 | 40 | Ore/IF | F Zone | OP/HW | - | 21000 | **970** | **1.6** | 110 | 0.31 | **0.11** | 22000 | **0.81** | 17 | **200** | **130** | **120000** | < 0.1 | 6500 |
| M08-742-05 | 2009 | 86 | 90 | Quartz Vein | F Zone | OP/FW-ore zone | **0.22** | 12000 | **150** | - | 12 | 0.15 | < 0.09 | 15000 | **0.93** | 10 | **220** | **110** | **73000** | - | 530 |
| | | | | | | MINIMUM | 0.22 | 12000 | 150 | 1.6 | 12 | 0.15 | <0.09 | 15000 | 0.51 | 10 | 150 | 68 | 73000 | <0.1 | 530 |
| | | | | | | MAXIMUM | 0.22 | 28000 | 5300 | 1.8 | 110 | 0.39 | 0.12 | 36000 | 0.93 | 17 | 220 | 130 | 140000 | <0.1 | 6500 |
| | | | | | | MEDIAN | nc | 21000 | 970 | 1.7 | 53 | 0.31 | 0.11 | 22000 | 0.81 | 13 | 200 | 110 | 120000 | nc | 4800 |
| | | | | | | AVERAGE | nc | 20333 | 2140 | 1.7 | 58 | 0.28 | 0.11 | 24333 | 0.75 | 13 | 190 | 103 | 111000 | nc | 3943 |
| | | | | | | STANDARD DEVIATION | nc | 8021 | 2767 | 0.14 | 49 | 0.12 | 0.015 | 10693 | 0.22 | 3.5 | 36 | 32 | 34395 | nc | 3076 |
| | | | | | | 75TH PERCENTILE | nc | 24500 | 3135 | 1.8 | 82 | 0.35 | 0.12 | 29000 | 0.87 | 15 | 210 | 120 | 130000 | nc | 5650 |
| M97-124-03 | 2011 | 182 | 190 | Iron Formation | Pump | OP/FW | - | 12000 | **60** | **0.030** | 9.8 | 0.28 | **0.20** | 26000 | **1.6** | 21 | **120** | **420** | **180000** | < 0.1 | 360 |
| M97-154-01 | 2011 | 38 | 47 | Iron Formation | Pump | OP/FW | - | 66000 | **56** | **0.040** | 82 | 0.46 | < 0.09 | **66000** | **0.26** | **43** | **140** | **94** | **83000** | < 0.1 | 7900 |
| W94-49-02 | 2011 | 32 | 40 | Iron Formation | Pump | OP/HW | - | 15000 | **72** | **0.10** | 12 | 0.43 | **0.94** | 4400 | **2.0** | **42** | **230** | **440** | **180000** | < 0.1 | 250 |
| W94-55-01 | 2011 | 16 | 23 | Iron Formation | Pump | OP/HW | - | 15000 | **81** | **0.070** | 30 | 0.58 | < 0.09 | **43000** | **0.73** | 17 | 99 | **170** | **170000** | < 0.1 | 460 |
| W94-57-02 | 2011 | 26 | 36 | Iron Formation | Pump | OP/HW | - | 23000 | **220** | **0.14** | 12 | 0.50 | < 0.09 | 22000 | **1.1** | **26** | **120** | **260** | **150000** | < 0.1 | 610 |
| W94-57-03 | 2011 | 43 | 50 | Iron Formation | Pump | OP/HW | - | 14000 | **110** | **0.12** | 1.3 | 0.39 | **0.29** | 35000 | **3.3** | **26** | **130** | **670** | **170000** | < 0.1 | 66 |
| W94-61-01 | 2011 | 19 | 29 | Iron Formation | Pump | OP/HW | - | 9500 | **130** | **0.060** | 1.1 | 0.32 | **0.26** | 14000 | **0.32** | 22 | **120** | **190** | **230000** | < 0.1 | 43 |
| W94-73-02 | 2011 | 60 | 69 | Iron Formation | Pump | OP/HW | - | 12000 | **96** | **0.060** | 2.4 | 0.45 | **0.15** | 22000 | **1.2** | 17 | **130** | **100** | **160000** | < 0.1 | 130 |
| | | | | | | MINIMUM | nc | 9500 | 56 | 0.030 | 1.1 | 0.28 | <0.09 | 4400 | 0.26 | 17 | 99 | 94 | 83000 | <0.1 | 43 |
| | | | | | | MAXIMUM | nc | 66000 | 220 | 0.14 | 82 | 0.58 | 0.94 | 66000 | 3.3 | 43 | 230 | 670 | 230000 | <0.1 | 7900 |
| | | | | | | MEDIAN | nc | 14500 | 89 | 0.065 | 11 | 0.44 | 0.18 | 24000 | 1.2 | 24 | 125 | 225 | 170000 | nc | 305 |
| | | | | | | AVERAGE | nc | 20813 | 103 | 0.078 | 19 | 0.43 | 0.26 | 29050 | 1.3 | 27 | 136 | 293 | 165375 | nc | 1227 |
| | | | | | | STANDARD DEVIATION | nc | 18685 | 53 | 0.039 | 27 | 0.096 | 0.28 | 19042 | 1.00 | 10 | 40 | 201 | 40879 | nc | 2703 |
| | | | | | | 75TH PERCENTILE | nc | 17000 | 115 | 0.11 | 17 | 0.47 | 0.27 | 37000 | 1.7 | 30 | 133 | 425 | 180000 | nc | 498 |
| M96-58-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Pump | OP/HW | - | 76000 | **16** | **0.050** | 76 | 0.26 | < 0.09 | **62000** | **0.26** | **46** | **220** | **72** | **80000** | < 0.1 | 3400 |
| M96-58-02 | 2011 | 49 | 58 | Mafic Volcanic | Pump | OP/HW | - | 66000 | **230** | **0.060** | 75 | 0.31 | < 0.09 | **64000** | **0.16** | **45** | **180** | **64** | **91000** | < 0.1 | 3300 |
| M96-58-03 | 2011 | 75.5 | 84.5 | Mafic Volcanic | Pump | OP/FW | - | 69000 | **25** | **0.060** | 53 | 0.17 | < 0.09 | **76000** | **0.17** | **45** | **200** | **120** | **79000** | < 0.1 | 3000 |
| M97-120-01 | 2011 | 11.5 | 21 | Mafic Volcanic | Pump | OP/HW | - | 62000 | **21** | **0.050** | 17 | 0.23 | < 0.09 | **75000** | **0.19** | **41** | **200** | **93** | **72000** | < 0.1 | 1900 |
| M97-120-02 | 2011 | 44.5 | 53 | Mafic Volcanic | Pump | OP/FW | - | 61000 | **24** | **0.060** | 58 | 0.32 | < 0.09 | **87000** | **0.18** | **50** | **300** | **130** | **95000** | < 0.1 | 6300 |
| M97-122-01 | 2011 | 26.5 | 36.5 | Mafic Volcanic | Pump | OP/HW | - | 70000 | **3.9** | **0.040** | 28 | 0.14 | < 0.09 | **72000** | **0.26** | **45** | **220** | **110** | **79000** | < 0.1 | 680 |
| M97-122-02 | 2011 | 103 | 112 | Mafic Volcanic | Pump | OP/HW | - | 76000 | 1.8 | **0.040** | 170 | 0.57 | < 0.09 | **77000** | **0.34** | 15 | 85 | 45 | 33000 | < 0.1 | 11000 |
| M97-122-05 | 2011 | 230 | 239 | Mafic Volcanic | Pump | OP/FW | - | 71000 | **5.7** | **0.040** | 37 | 0.36 | < 0.09 | **62000** | **0.18** | **38** | **210** | **82** | **76000** | < 0.1 | 3600 |
| M97-123-01 | 2011 | 13.5 | 22.5 | Mafic Volcanic | Pump | OP/HW | - | 77000 | **20** | **0.030** | 200 | 0.57 | < 0.09 | **64000** | **0.37** | 14 | 70 | 28 | 38000 | < 0.1 | 14000 |
| M97-123-02 | 2011 | 60 | 70 | Mafic Volcanic | Pump | OP/HW | - | 75000 | **2.8** | **0.040** | 230 | 0.51 | < 0.09 | **78000** | **0.31** | 18 | 83 | 42 | 45000 | < 0.1 | 13000 |
| M97-123-03 | 2011 | 91 | 98 | Mafic Volcanic | Pump | OP/HW | - | 59000 | **35** | **0.040** | 67 | 0.26 | < 0.09 | **91000** | **0.16** | **39** | **260** | **100** | **72000** | < 0.1 | 2800 |
| M97-123-04 | 2011 | 121 | 130 | Mafic Volcanic | Pump | OP/HW | - | 65000 | **23** | **0.040** | 66 | 0.38 | < 0.09 | **67000** | **0.22** | **40** | **170** | **89** | **85000** | < 0.1 | 5000 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M09-816-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 14 | **30000** | **1300** | 0.30 | 13000 | 57 | 2.3 | < 0.8 | < 0.7 | 1.1 | 110 | 5400 | < 0.02 | 0.18 | **200** | 16 | **92** |
| M09-816-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | 16 | **34000** | **1100** | 1.1 | 14000 | 57 | **32** | **5.6** | < 0.7 | 2.2 | 180 | 5500 | < 0.02 | 0.27 | **210** | 17 | **76** |
| M09-817-02 | 2011 | 45 | 53 | Mafic Volcanic | F Zone | OP/HW | **47** | **41000** | **1000** | **1.3** | 8700 | **120** | 4.2 | < 0.8 | < 0.7 | < 0.5 | 99 | 4000 | 0.030 | 0.049 | **170** | 8.7 | **83** |
| M09-855-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **27** | 23000 | **2800** | **1.3** | 7000 | **86** | 9.5 | **11** | **1.7** | **6.3** | 68 | 3900 | 0.39 | 0.43 | **140** | 9.9 | **540** |
| M09-855-02 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **45** | 19000 | **1900** | 0.40 | 14000 | **89** | 5.7 | < 0.8 | < 0.7 | 0.60 | 120 | 4200 | 0.12 | 0.14 | **220** | 3.7 | **140** |
| M09-857-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | **34** | **30000** | **1200** | 0.20 | 17000 | 56 | 4.4 | < 0.8 | < 0.7 | 1.0 | 110 | 5200 | 0.19 | 0.39 | **200** | 13 | **110** |
| M09-858-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 15 | **32000** | **1300** | 0.30 | 17000 | 57 | 2.5 | < 0.8 | < 0.7 | 1.4 | 160 | 5600 | < 0.02 | 0.20 | **220** | 15 | **90** |
| M09-858-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | 20 | **31000** | **1200** | 0.40 | 15000 | 49 | 3.8 | < 0.8 | < 0.7 | 0.60 | 210 | 5300 | < 0.02 | 0.21 | **210** | 17 | **71** |
| M09-859-01 | 2011 | 46 | 54.5 | Mafic Volcanic | F Zone | OP/FW | **39** | **38000** | **1600** | **1.4** | 12000 | **110** | 5.8 | < 0.8 | < 0.7 | 0.90 | 100 | 3900 | 0.050 | 0.12 | **160** | 5.3 | **170** |
| M09-862-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **41** | **36000** | **1200** | 0.20 | 15000 | 53 | 3.6 | < 0.8 | < 0.7 | 1.3 | 90 | 4900 | 0.090 | 0.19 | **200** | 11 | **97** |
| M09-866-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | **40** | **30000** | **2200** | 0.50 | 2400 | 63 | 4.9 | < 0.8 | < 0.7 | **2.4** | 40 | 5300 | 0.27 | 0.28 | **170** | 13 | **230** |
| M09-866-02 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | **35** | **30000** | **1700** | 0.40 | 12000 | 67 | 4.9 | < 0.8 | < 0.7 | 1.3 | 91 | **6000** | 0.16 | 0.26 | **180** | 16 | **120** |
| M10-933-01 | 2011 | 34 | 42 | Mafic Volcanic | F Zone | OP/FW | 20 | **30000** | **1200** | 0.30 | 9200 | 61 | 8.6 | < 0.8 | < 0.7 | 0.60 | 100 | 4600 | < 0.02 | 0.23 | **170** | 14 | **130** |
| M10-935-01 | 2011 | 20.5 | 29 | Mafic Volcanic | F Zone | OP/HW | 18 | **38000** | **980** | 0.20 | 17000 | 58 | 1.6 | < 0.8 | < 0.7 | 0.60 | 92 | **6300** | < 0.02 | 0.19 | **200** | 15 | **110** |
| M96-28-01 | 2011 | 27 | 38 | Mafic Volcanic | F Zone | OP/HW | **37** | **24000** | **1400** | 0.30 | 14000 | **93** | 4.2 | < 0.8 | < 0.7 | 0.90 | 99 | **6400** | 0.090 | 0.13 | **200** | 16 | **98** |
| M97-159-01 | 2011 | 21 | 31 | Mafic Volcanic | F Zone | OP/HW | **39** | **32000** | **1100** | 0.10 | 15000 | 81 | 1.5 | < 0.8 | < 0.7 | 0.80 | 92 | **6400** | < 0.02 | 0.13 | **200** | 17 | **93** |
| M97-159-02 | 2011 | 86 | 93 | Mafic Volcanic | F Zone | OP/FW | **40** | **27000** | **1300** | 0.20 | 17000 | 77 | 2.9 | < 0.8 | < 0.7 | 0.60 | 110 | **6500** | 0.060 | 0.13 | **200** | 16 | **100** |
| M98-275-01 | 2011 | 25 | 33 | Mafic Volcanic | F Zone | OP/HW | **39** | **31000** | **1100** | 0.20 | 18000 | **91** | 1.8 | < 0.8 | < 0.7 | < 0.5 | 93 | **6300** | < 0.02 | 0.11 | **200** | 17 | **93** |
| M98-275-02 | 2011 | 80 | 89.5 | Mafic Volcanic | F Zone | OP/FW | **31** | **27000** | **1300** | 0.20 | 13000 | **87** | 3.5 | < 0.8 | < 0.7 | 0.70 | 99 | **5700** | < 0.02 | 0.059 | **190** | 16 | **84** |
| W94-76-01 | 2011 | 13 | 22 | Mafic Volcanic | F Zone | OP/HW | **24** | **36000** | **1100** | 0.20 | 14000 | 55 | 1.7 | < 0.8 | < 0.7 | 0.60 | 110 | **5700** | 0.040 | 0.19 | **190** | 18 | **94** |
| W94-76-02 | 2011 | 70.5 | 77 | Mafic Volcanic | F Zone | OP/FW | **31** | **41000** | **1500** | 0.20 | 13000 | **100** | 3.2 | < 0.8 | < 0.7 | 0.70 | 91 | 5200 | < 0.02 | 0.22 | **210** | 15 | **110** |
| W94-82-01 | 2011 | 46 | 55 | Mafic Volcanic | F Zone | OP/HW | **26** | **30000** | **1300** | 0.20 | 13000 | **120** | 0.87 | **1.2** | < 0.7 | < 0.5 | 98 | 4200 | < 0.02 | 0.062 | **180** | 13 | **75** |
| | | | | | | MINIMUM | 14 | 19000 | 880 | 0.10 | 2400 | 34 | 0.87 | < 0.8 | < 0.7 | < 0.5 | 40 | 1700 | < 0.02 | <0.002 | 140 | 3.7 | 71 |
| | | | | | | MAXIMUM | 71 | 49000 | 2800 | 1.8 | 24000 | 150 | 32 | 11 | 3.2 | 15 | 260 | 8700 | 0.90 | 1.3 | 300 | 22 | 540 |
| | | | | | | MEDIAN | 33 | 32000 | 1200 | 0.80 | 15000 | 86 | 3.6 | 0.80 | 0.70 | 1.0 | 110 | 5400 | 0.12 | 0.19 | 200 | 14 | 110 |
| | | | | | | AVERAGE | 34 | 33394 | 1288 | 0.75 | 15007 | 87 | 4.6 | 1.1 | 0.95 | 1.4 | 118 | 5324 | 0.17 | 0.27 | 210 | 13 | 118 |
| | | | | | | STANDARD DEVIATION | 11 | 6743 | 320 | 0.40 | 3900 | 27 | 4.0 | 1.3 | 0.49 | 1.9 | 37 | 1196 | 0.17 | 0.28 | 36 | 4.1 | 61 |
| | | | | | | 75TH PERCENTILE | 41 | 37500 | 1400 | 1.0 | 18000 | 110 | 5.8 | 0.85 | 0.90 | 1.6 | 130 | 5950 | 0.24 | 0.28 | 230 | 16 | 120 |
| M09-809-01 | 2011 | 64.5 | 73.8 | Ore/IF | F Zone | OP/HW | 17 | 11000 | **1300** | 1.1 | 480 | 17 | 4.6 | **2.3** | **0.90** | 0.90 | 47 | 1200 | 0.19 | 0.48 | 31 | 6.1 | **270** |
| M09-817-01 | 2011 | 32 | 40 | Ore/IF | F Zone | OP/HW | 17 | 17000 | **3500** | 0.80 | 3200 | 43 | 4.9 | **1.4** | **0.90** | 0.80 | 49 | 1200 | 0.39 | 0.35 | 54 | 4.2 | **240** |
| M08-742-05 | 2009 | 86 | 90 | Quartz Vein | F Zone | OP/FW-ore zone | 7.0 | 7400 | **1900** | **4.8** | 4000 | 17 | 3.7 | < 0.8 | < 0.7 | < 0.5 | 27 | 930 | 0.040 | 0.43 | 19 | 3.0 | **200** |
| | | | | | | MINIMUM | 7.0 | 7400 | 1300 | 0.80 | 480 | 17 | 3.7 | <0.8 | <0.7 | <0.5 | 27 | 930 | 0.040 | 0.35 | 19 | 3.0 | 200 |
| | | | | | | MAXIMUM | 17 | 17000 | 3500 | 4.8 | 4000 | 43 | 4.9 | 2.3 | 0.90 | 0.90 | 49 | 1200 | 0.39 | 0.48 | 54 | 6.1 | 270 |
| | | | | | | MEDIAN | 17 | 11000 | 1900 | 1.1 | 3200 | 17 | 4.6 | 1.4 | 0.90 | 0.80 | 47 | 1200 | 0.19 | 0.43 | 31 | 4.2 | 240 |
| | | | | | | AVERAGE | 14 | 11800 | 2233 | 2.2 | 2560 | 26 | 4.4 | 1.5 | 0.83 | 0.73 | 41 | 1110 | 0.21 | 0.42 | 35 | 4.4 | 237 |
| | | | | | | STANDARD DEVIATION | 5.8 | 4850 | 1137 | 2.2 | 1845 | 15 | 0.62 | 0.75 | 0.12 | 0.21 | 12 | 156 | 0.18 | 0.066 | 18 | 1.6 | 35 |
| | | | | | | 75TH PERCENTILE | 17 | 14000 | 2700 | 3.0 | 3600 | 30 | 4.8 | 1.9 | 0.90 | 0.85 | 48 | 1200 | 0.29 | 0.46 | 43 | 5.2 | 255 |
| M97-124-03 | 2011 | 182 | 190 | Iron Formation | Pump | OP/FW | 6.0 | 12000 | **1800** | 1.2 | 340 | 25 | **15** | **2.0** | **2.0** | 1.8 | 16 | 640 | 0.060 | 0.18 | 25 | 4.6 | **790** |
| M97-154-01 | 2011 | 38 | 47 | Iron Formation | Pump | OP/FW | **38** | **33000** | **1200** | 0.30 | 17000 | **86** | 5.3 | **0.90** | < 0.7 | < 0.5 | 130 | 5100 | 0.28 | 0.40 | **170** | 10 | **100** |
| W94-49-02 | 2011 | 32 | 40 | Iron Formation | Pump | OP/HW | 3.0 | 10000 | **1700** | **2.7** | 70 | 42 | **16** | **2.1** | **0.70** | 2.3 | 5.3 | 2800 | 0.20 | 0.59 | 39 | 7.4 | **1400** |
| W94-55-01 | 2011 | 16 | 23 | Iron Formation | Pump | OP/HW | 5.0 | 18000 | **1300** | 1.0 | 88 | 22 | 4.0 | **1.3** | < 0.7 | **2.5** | 20 | 770 | 0.070 | 0.27 | 29 | 5.0 | **460** |
| W94-57-02 | 2011 | 26 | 36 | Iron Formation | Pump | OP/HW | 11 | 13000 | **1200** | 1.0 | 150 | 37 | 11 | < 0.8 | **1.4** | 0.80 | 17 | 2700 | 0.030 | 0.49 | 66 | 5.6 | **570** |
| W94-57-03 | 2011 | 43 | 50 | Iron Formation | Pump | OP/HW | 3.0 | 13000 | **2200** | **2.2** | 48 | 23 | 13 | **1.2** | **0.90** | 1.3 | 22 | 700 | < 0.02 | 0.45 | 22 | 4.7 | **1700** |
| W94-61-01 | 2011 | 19 | 29 | Iron Formation | Pump | OP/HW | 3.0 | 11000 | **2600** | **1.8** | 230 | 19 | 7.8 | **0.80** | **0.90** | 0.90 | 8.0 | 470 | < 0.02 | 0.39 | 16 | 4.8 | **190** |
| W94-73-02 | 2011 | 60 | 69 | Iron Formation | Pump | OP/HW | 8.0 | 15000 | **2300** | **2.5** | 540 | 23 | 10 | < 0.8 | **1.0** | < 0.5 | 15 | 500 | < 0.02 | 0.35 | 24 | 5.5 | **620** |
| | | | | | | MINIMUM | 3.0 | 10000 | 1200 | 0.30 | 48 | 19 | 4.0 | < 0.8 | < 0.7 | <0.5 | 5.3 | 470 | <0.02 | 0.18 | 16 | 4.6 | 100 |
| | | | | | | MAXIMUM | 38 | 33000 | 2600 | 2.7 | 17000 | 86 | 16 | 2.1 | 2.0 | 2.5 | 130 | 5100 | 0.28 | 0.59 | 170 | 10 | 1700 |
| | | | | | | MEDIAN | 5.5 | 13000 | 1750 | 1.5 | 190 | 24 | 11 | 1.1 | 0.90 | 1.1 | 17 | 735 | 0.045 | 0.40 | 27 | 5.3 | 595 |
| | | | | | | AVERAGE | 9.6 | 15625 | 1788 | 1.6 | 2308 | 35 | 10 | 1.2 | 1.0 | 1.3 | 29 | 1710 | 0.088 | 0.39 | 49 | 6.0 | 729 |
| | | | | | | STANDARD DEVIATION | 12 | 7444 | 538 | 0.84 | 5939 | 22 | 4.4 | 0.54 | 0.45 | 0.79 | 41 | 1678 | 0.098 | 0.13 | 51 | 1.9 | 560 |
| | | | | | | 75TH PERCENTILE | 8.8 | 15750 | 2225 | 2.3 | 390 | 38 | 14 | 1.5 | 1.1 | 1.9 | 21 | 2725 | 0.10 | 0.46 | 46 | 6.1 | 943 |
| M96-58-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Pump | OP/HW | **39** | **29000** | **1400** | 0.40 | 14000 | **100** | 2.4 | **1.3** | < 0.7 | 1.4 | 100 | **6700** | 0.10 | 0.15 | **230** | 17 | **110** |
| M96-58-02 | 2011 | 49 | 58 | Mafic Volcanic | Pump | OP/HW | **46** | **37000** | **1200** | 0.30 | 8900 | 67 | 4.9 | **1.5** | **1.0** | < 0.5 | 94 | 5400 | 0.10 | 0.17 | **210** | 14 | **140** |
| M96-58-03 | 2011 | 75.5 | 84.5 | Mafic Volcanic | Pump | OP/FW | **33** | **30000** | **1400** | 0.30 | 9500 | **110** | 1.6 | **1.4** | < 0.7 | < 0.5 | 86 | 4300 | 0.080 | 0.13 | **190** | 13 | **110** |
| M97-120-01 | 2011 | 11.5 | 21 | Mafic Volcanic | Pump | OP/HW | **44** | **34000** | **1300** | 0.20 | 15000 | **91** | 3.0 | **0.90** | < 0.7 | < 0.5 | 67 | 3200 | < 0.02 | 0.066 | **180** | 5.9 | **88** |
| M97-120-02 | 2011 | 44.5 | 53 | Mafic Volcanic | Pump | OP/FW | 19 | **36000** | **1400** | 0.30 | 12000 | **130** | 3.2 | **1.0** | < 0.7 | 0.70 | 91 | 5600 | 0.22 | 0.13 | **190** | 12 | **130** |
| M97-122-01 | 2011 | 26.5 | 36.5 | Mafic Volcanic | Pump | OP/HW | 19 | **40000** | **1100** | 0.30 | 16000 | **100** | 1.2 | **1.4** | **0.70** | < 0.5 | 88 | 5000 | < 0.02 | 0.054 | **200** | 14 | **110** |
| M97-122-02 | 2011 | 103 | 112 | Mafic Volcanic | Pump | OP/HW | **24** | 15000 | 800 | 0.60 | 18000 | 40 | 3.0 | **0.90** | < 0.7 | 0.50 | 150 | 2100 | 0.090 | 0.69 | 78 | 8.3 | 54 |
| M97-122-05 | 2011 | 230 | 239 | Mafic Volcanic | Pump | OP/FW | **36** | **27000** | **1200** | 0.20 | **24000** | 79 | 3.2 | **0.80** | < 0.7 | < 0.5 | 78 | **6100** | 0.13 | 0.056 | **200** | 8.6 | **92** |
| M97-123-01 | 2011 | 13.5 | 22.5 | Mafic Volcanic | Pump | OP/HW | **25** | 14000 | 820 | **1.5** | 20000 | 46 | 3.4 | < 0.8 | < 0.7 | < 0.5 | 130 | 2700 | 0.16 | 0.71 | 79 | 8.3 | 60 |
| M97-123-02 | 2011 | 60 | 70 | Mafic Volcanic | Pump | OP/HW | **28** | 19000 | **1000** | 0.50 | 17000 | 52 | 3.4 | **0.90** | < 0.7 | 0.60 | 120 | 3100 | 0.15 | 0.66 | 92 | 9.8 | **72** |
| M97-123-03 | 2011 | 91 | 98 | Mafic Volcanic | Pump | OP/HW | **39** | **31000** | **1400** | 0.30 | 13000 | **110** | 1.4 | < 0.8 | < 0.7 | < 0.5 | 69 | 4500 | 0.11 | 0.097 | **170** | 14 | **91** |
| M97-123-04 | 2011 | 121 | 130 | Mafic Volcanic | Pump | OP/HW | **38** | **34000** | **970** | 0.30 | 13000 | 70 | 3.9 | **1.1** | < 0.7 | 0.50 | 130 | **5800** | 0.26 | 0.12 | **200** | 12 | **110** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M97-124-01 | 2011 | 119.5 | 128 | Mafic Volcanic | Pump | OP/HW | - | 63000 | **14** | **0.030** | 60 | 0.26 | < 0.09 | **61000** | **0.37** | **40** | **170** | **100** | **72000** | < 0.1 | 4400 |
| M97-124-02 | 2011 | 141.5 | 150.5 | Mafic Volcanic | Pump | OP/HW | - | **88000** | **33** | **0.040** | 98 | 0.48 | < 0.09 | 26000 | **0.23** | **54** | **240** | 60 | **100000** | < 0.1 | 6000 |
| M97-124-04 | 2011 | 191 | 200 | Mafic Volcanic | Pump | OP/FW | - | 67000 | **37** | **0.030** | 130 | 0.46 | < 0.09 | **51000** | **0.21** | **38** | 93 | **110** | **92000** | < 0.1 | 6300 |
| M97-153-01 | 2011 | 37 | 46 | Mafic Volcanic | Pump | OP/HW | - | 79000 | **230** | **0.040** | 220 | 0.52 | < 0.09 | **88000** | **0.53** | **42** | **300** | **110** | **89000** | < 0.1 | 8300 |
| M97-153-02 | 2011 | 67 | 76 | Mafic Volcanic | Pump | OP/FW | - | 59000 | **150** | **0.030** | 93 | 0.34 | < 0.09 | **87000** | **0.21** | **38** | **210** | **84** | **67000** | < 0.1 | 7700 |
| M98-181-01 | 2011 | 11 | 18.5 | Mafic Volcanic | Pump | OP/HW | - | 68000 | **4.0** | **0.040** | 67 | 0.26 | < 0.09 | **80000** | 0.10 | **39** | **200** | **96** | **77000** | < 0.1 | 4700 |
| M98-181-02 | 2011 | 80 | 89 | Mafic Volcanic | Pump | OP/FW | - | 64000 | **5.8** | **0.040** | 56 | 0.18 | < 0.09 | **70000** | **0.23** | **41** | 47 | **95** | **82000** | < 0.1 | 2000 |
| M98-184-01 | 2011 | 14 | 22 | Mafic Volcanic | Pump | OP/HW | - | 68000 | **4.1** | **0.030** | 190 | 0.47 | < 0.09 | **70000** | **0.28** | 22 | **120** | 45 | 49000 | < 0.1 | 10000 |
| M98-184-02 | 2011 | 66 | 74.5 | Mafic Volcanic | Pump | OP/HW | - | 65000 | **49** | **0.040** | 84 | 0.39 | < 0.09 | **69000** | **0.29** | **37** | **160** | **92** | **71000** | < 0.1 | 6300 |
| M98-185-01 | 2011 | 53 | 61.5 | Mafic Volcanic | Pump | OP/FW | - | 75000 | **69** | **0.040** | 120 | 0.23 | < 0.09 | **72000** | **0.23** | **45** | **200** | **63** | **76000** | < 0.1 | 4900 |
| M98-185-02 | 2011 | 108 | 116.5 | Mafic Volcanic | Pump | OP/FW | - | 75000 | **14** | **0.12** | 63 | 0.18 | < 0.09 | **77000** | **0.21** | **44** | **210** | **110** | **78000** | < 0.1 | 1900 |
| M98-185-03 | 2011 | 160 | 168.5 | Mafic Volcanic | Pump | OP/FW | - | 57000 | **2.9** | **0.11** | 17 | 0.26 | < 0.09 | **79000** | 0.12 | **43** | **200** | **100** | **84000** | < 0.1 | 710 |
| W94-49-01 | 2011 | 15 | 24 | Mafic Volcanic | Pump | OP/HW | - | 68000 | **3.9** | **0.090** | 93 | 0.47 | < 0.09 | **59000** | **0.32** | **36** | **180** | 50 | **78000** | < 0.1 | 2400 |
| W94-49-03 | 2011 | 41 | 51 | Mafic Volcanic | Pump | OP/HW | - | 45000 | **10** | **0.080** | 44 | 0.26 | < 0.09 | **53000** | **0.33** | **48** | 84 | **100** | **88000** | < 0.1 | 1500 |
| W94-53-01 | 2011 | 23 | 32 | Mafic Volcanic | Pump | OP/FW | - | **89000** | **30** | **0.070** | **630** | 0.97 | < 0.09 | 16000 | **0.32** | 18 | **140** | 40 | 52000 | < 0.1 | **26000** |
| W94-55-02 | 2011 | 69.5 | 74 | Mafic Volcanic | Pump | OP/HW | - | 62000 | **27** | **0.10** | 150 | 0.49 | < 0.09 | **76000** | **0.22** | **45** | **180** | **94** | **88000** | < 0.1 | 9300 |
| W94-57-01 | 2011 | 8 | 16 | Mafic Volcanic | Pump | OP/HW | - | 65000 | **85** | **0.080** | 190 | 0.71 | **0.22** | **63000** | **0.24** | **54** | **310** | **85** | **89000** | < 0.1 | 12000 |
| W94-59-01 | 2011 | 12 | 21 | Mafic Volcanic | Pump | OP/HW | - | 69000 | **25** | **0.070** | 22 | 0.25 | < 0.09 | **65000** | **0.16** | **49** | **220** | **120** | **84000** | < 0.1 | 760 |
| W94-61-02 | 2011 | 44 | 53 | Mafic Volcanic | Pump | OP/FW | - | 59000 | **12** | **0.060** | 52 | 0.24 | < 0.09 | **61000** | 0.14 | **55** | **110** | **98** | **86000** | < 0.1 | 2000 |
| W94-65-03 | 2011 | 48 | 57 | Mafic Volcanic | Pump | OP/HW | - | 64000 | **93** | **0.060** | 15 | 0.35 | < 0.09 | **74000** | **0.17** | **48** | **200** | **120** | **92000** | < 0.1 | 490 |
| W94-70-01 | 2011 | 8 | 18 | Mafic Volcanic | Pump | OP/HW | - | 66000 | **29** | **0.060** | 41 | 0.24 | < 0.09 | **75000** | 0.10 | **44** | **200** | **96** | **75000** | < 0.1 | 1600 |
| W94-70-02 | 2011 | 33 | 42 | Mafic Volcanic | Pump | OP/HW | - | 59000 | **7.9** | **0.050** | 6.1 | 0.33 | < 0.09 | **78000** | 0.13 | **43** | **170** | **110** | **82000** | < 0.1 | 360 |
| W94-73-01 | 2011 | 14 | 23 | Mafic Volcanic | Pump | OP/HW | - | 66000 | **17** | **0.060** | 23 | 0.32 | < 0.09 | **92000** | 0.12 | **46** | **200** | **110** | **77000** | < 0.1 | 760 |
| W94-73-03 | 2011 | 86 | 95 | Mafic Volcanic | Pump | OP/FW | - | 66000 | **6.6** | **0.050** | 37 | 0.29 | < 0.09 | **74000** | **0.20** | **41** | **210** | **76** | **85000** | < 0.1 | 2500 |
| | | | | | | MINIMUM | nc | 45000 | 1.8 | 0.030 | 6.1 | 0.14 | <0.09 | 16000 | 0.10 | 14 | 47 | 28 | 33000 | <0.1 | 360 |
| | | | | | | MAXIMUM | nc | 89000 | 230 | 0.12 | 630 | 0.97 | 0.22 | 92000 | 0.53 | 55 | 310 | 130 | 100000 | <0.1 | 26000 |
| | | | | | | MEDIAN | nc | 66000 | 21 | 0.050 | 67 | 0.32 | nc | 72000 | 0.22 | 43 | 200 | 95 | 79000 | nc | 3500 |
| | | | | | | AVERAGE | nc | 67583 | 38 | 0.055 | 99 | 0.36 | nc | 69194 | 0.23 | 40 | 182 | 87 | 76611 | nc | 5302 |
| | | | | | | STANDARD DEVIATION | nc | 8490 | 56 | 0.023 | 110 | 0.17 | nc | 15530 | 0.091 | 10 | 64 | 26 | 15590 | nc | 5185 |
| | | | | | | 75TH PERCENTILE | nc | 72000 | 34 | 0.060 | 123 | 0.47 | nc | 77250 | 0.28 | 45 | 210 | 110 | 86500 | nc | 6650 |
| M97-122-03 | 2011 | 160 | 169 | Ore/IF | Pump | OP/FW | - | 64000 | **110** | **0.030** | 90 | 0.48 | < 0.09 | **61000** | **0.34** | **42** | **180** | **86** | **87000** | < 0.1 | 5700 |
| M97-122-04 | 2011 | 180 | 190 | Ore/IF | Pump | OP/FW | - | 42000 | **480** | **0.88** | 120 | 0.41 | < 0.09 | 24000 | **0.78** | **32** | **140** | **84** | **160000** | < 0.1 | 4100 |
| W94-65-01 | 2011 | 14 | 20 | Ore/IF | Pump | OP/HW | - | 13000 | **10000** | **1.3** | 10 | 0.40 | **0.70** | 15000 | **5.4** | **66** | **110** | **650** | **200000** | < 0.1 | 96 |
| W94-65-02 | 2011 | 21 | 26 | Ore/IF | Pump | OP/HW | - | 5900 | **4500** | **0.44** | 2.5 | 0.23 | **0.31** | 37000 | **2.5** | **29** | **150** | **260** | **150000** | < 0.1 | 68 |
| | | | | | | MINIMUM | nc | 5900 | 110 | 0.030 | 2.5 | 0.23 | <0.09 | 15000 | 0.34 | 29 | 110 | 84 | 87000 | <0.1 | 68 |
| | | | | | | MAXIMUM | nc | 64000 | 10000 | 1.3 | 120 | 0.48 | 0.70 | 61000 | 5.4 | 66 | 180 | 650 | 200000 | <0.1 | 5700 |
| | | | | | | MEDIAN | nc | 27500 | 2490 | 0.66 | 50 | 0.41 | nc | 30500 | 1.6 | 37 | 145 | 173 | 155000 | nc | 2098 |
| | | | | | | AVERAGE | nc | 31225 | 3773 | 0.66 | 56 | 0.38 | nc | 34250 | 2.3 | 42 | 145 | 270 | 149250 | nc | 2491 |
| | | | | | | STANDARD DEVIATION | nc | 26856 | 4603 | 0.55 | 58 | 0.11 | nc | 19990 | 2.3 | 17 | 29 | 266 | 46786 | nc | 2857 |
| | | | | | | 75TH PERCENTILE | nc | 47500 | 5875 | 0.99 | 98 | 0.43 | nc | 43000 | 3.2 | 48 | 158 | 358 | 170000 | nc | 4500 |
| M05-561-02_2011 | 2011 | 43.5 | 52.5 | Gabbro | Tiriganiaq | OP/HW | - | 68000 | **68** | **0.070** | 400 | 0.93 | < 0.09 | **49000** | **0.31** | **55** | 81 | **130** | **110000** | < 0.1 | 12000 |
| M06-592-02 | 2011 | 60 | 69 | Gabbro | Tiriganiaq | OP/HW | - | 62000 | **14** | **0.050** | 63 | 0.49 | < 0.09 | **60000** | **0.25** | **47** | 63 | **96** | **100000** | < 0.1 | 3200 |
| M06-592-03 | 2011 | 124 | 132.5 | Gabbro | Tiriganiaq | OP/FW | - | 68000 | **8.0** | **0.050** | 110 | 0.41 | < 0.09 | **61000** | 0.15 | **40** | 84 | **69** | **88000** | < 0.1 | 5000 |
| M06-593-02 | 2011 | 140 | 148 | Gabbro | Tiriganiaq | OP/FW | - | 73000 | **7.7** | **0.050** | 120 | 0.37 | < 0.09 | **63000** | **0.30** | **43** | 100 | **83** | **87000** | < 0.1 | 3600 |
| M96-44-01 | 2011 | 15 | 22 | Gabbro | Tiriganiaq | OP/HW | - | 65000 | **16** | **0.020** | 110 | 0.42 | < 0.09 | **62000** | 0.13 | **44** | 93 | **72** | **88000** | < 0.1 | 5300 |
| M97-135-02 | 2011 | 85 | 92 | Gabbro | Tiriganiaq | OP/HW | - | 70000 | **12** | **0.040** | 91 | 0.36 | < 0.09 | **64000** | **0.21** | **37** | 95 | **81** | **90000** | < 0.1 | 4500 |
| M97-149-01 | 2011 | 12.5 | 21 | Gabbro | Tiriganiaq | OP/HW | - | 71000 | **7.9** | **0.040** | 90 | 0.34 | < 0.09 | **65000** | **0.19** | **40** | 90 | **99** | **90000** | < 0.1 | 4200 |
| M98-201-02 | 2011 | 44 | 52 | Gabbro | Tiriganiaq | OP/HW | - | 68000 | **11** | **0.030** | 100 | 0.38 | < 0.09 | **64000** | 0.14 | **40** | 75 | **89** | **91000** | < 0.1 | 4300 |
| M99-309-01 | 2011 | 20 | 28 | Gabbro | Tiriganiaq | OP/HW | - | 66000 | **15** | **0.030** | 90 | 0.37 | < 0.09 | **50000** | **0.25** | **42** | 69 | **91** | **95000** | < 0.1 | 2400 |
| M99-336B-02 | 2011 | 52 | 62 | Gabbro | Tiriganiaq | OP/HW | - | 66000 | **14** | **0.030** | 170 | 0.38 | < 0.09 | **75000** | **0.20** | **37** | 87 | **89** | **87000** | < 0.1 | 5600 |
| | | | | | | MINIMUM | nc | 62000 | 7.7 | 0.020 | 63 | 0.34 | <0.09 | 49000 | 0.13 | 37 | 63 | 69 | 87000 | <0.1 | 2400 |
| | | | | | | MAXIMUM | nc | 73000 | 68 | 0.070 | 400 | 0.93 | <0.09 | 75000 | 0.31 | 55 | 100 | 130 | 110000 | <0.1 | 12000 |
| | | | | | | MEDIAN | nc | 68000 | 13 | 0.040 | 105 | 0.38 | nc | 62500 | 0.21 | 41 | 86 | 89 | 90000 | nc | 4400 |
| | | | | | | AVERAGE | nc | 67700 | 17 | 0.041 | 134 | 0.45 | nc | 61300 | 0.21 | 43 | 84 | 90 | 92600 | nc | 5010 |
| | | | | | | STANDARD DEVIATION | nc | 3164 | 18 | 0.014 | 97 | 0.18 | nc | 7454 | 0.064 | 5.4 | 12 | 17 | 7336 | nc | 2641 |
| | | | | | | 75TH PERCENTILE | nc | 69500 | 15 | 0.050 | 118 | 0.42 | nc | 64000 | 0.25 | 44 | 92 | 95 | 94000 | nc | 5225 |
| GT08-01-01 | 2008 | 50.2 | 54.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.38** | 80000 | **17** | - | **790** | 0.93 | **0.23** | 13000 | **0.25** | 17 | 94 | 42 | 36000 | < 0.1 | **22000** |
| GT08-01-02 | 2008 | 25.16 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.30** | 80000 | **200** | - | **670** | 0.95 | < 0.09 | 11000 | **0.23** | 16 | 100 | 33 | 32000 | < 0.1 | **21000** |
| GT08-02-01_2008 | 2008 | 65.07 | 69.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.27** | 77000 | **180** | - | **450** | 0.97 | **0.090** | 19000 | **0.28** | 12 | 41 | 29 | 50000 | < 0.1 | 20000 |
| M00-474-02 | 2008 | 80.3 | 84.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.23** | 71000 | **2100** | - | 330 | 0.53 | < 0.09 | **79000** | **0.24** | **33** | **150** | **130** | **75000** | < 0.1 | 15000 |
| M00-474-04 | 2008 | 45.42 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.21** | 69000 | **89** | - | 360 | 0.82 | < 0.09 | 27000 | **0.16** | 7.5 | 21 | 28 | **64000** | < 0.1 | 13000 |
| M00-474-05 | 2008 | 20.53 | 24.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.35** | **85000** | **51** | - | **710** | 1.0 | **0.11** | 15000 | **0.25** | 17 | **110** | 43 | 46000 | < 0.1 | **26000** |
| M00-476-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.35** | 79000 | **30** | - | **670** | 0.96 | **0.13** | 8100 | **0.26** | 19 | **170** | 48 | 39000 | - | **22000** |
| M00-476-02 | 2009 | 23 | 28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.34** | 81000 | **36** | - | **550** | 0.98 | < 0.09 | 9000 | **0.25** | 21 | **160** | 45 | 39000 | - | **23000** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M97-124-01 | 2011 | 119.5 | 128 | Mafic Volcanic | Pump | OP/HW | **36** | **29000** | **1000** | 0.90 | 13000 | 81 | 3.1 | < 0.8 | **0.70** | < 0.5 | 75 | 5300 | 0.33 | 0.20 | **190** | 13 | **120** |
| M97-124-02 | 2011 | 141.5 | 150.5 | Mafic Volcanic | Pump | OP/HW | **60** | **42000** | **1100** | 0.30 | 10000 | **110** | 2.0 | < 0.8 | < 0.7 | 0.60 | 40 | **7300** | 0.56 | 0.15 | **260** | 9.8 | **130** |
| M97-124-04 | 2011 | 191 | 200 | Mafic Volcanic | Pump | OP/FW | **33** | **37000** | **980** | 0.20 | 9200 | 77 | 7.6 | < 0.8 | < 0.7 | 1.3 | 53 | 4100 | 0.61 | 0.061 | **180** | 7.7 | **190** |
| M97-153-01 | 2011 | 37 | 46 | Mafic Volcanic | Pump | OP/HW | **53** | **54000** | **1100** | 0.30 | 12000 | **110** | 13 | **0.90** | < 0.7 | 0.80 | 140 | 3900 | 0.48 | 0.13 | **180** | 10 | **250** |
| M97-153-02 | 2011 | 67 | 76 | Mafic Volcanic | Pump | OP/FW | **30** | **29000** | **1300** | 0.30 | 10000 | **90** | 13 | **1.4** | < 0.7 | < 0.5 | 100 | 3800 | 0.29 | 0.081 | **170** | 9.2 | **71** |
| M98-181-01 | 2011 | 11 | 18.5 | Mafic Volcanic | Pump | OP/HW | **45** | **37000** | **1100** | 0.10 | 13000 | **95** | 2.5 | **0.90** | < 0.7 | < 0.5 | 120 | 4600 | 0.090 | 0.053 | **180** | 13 | **78** |
| M98-181-02 | 2011 | 80 | 89 | Mafic Volcanic | Pump | OP/FW | **51** | **32000** | **1300** | 0.10 | 13000 | 51 | 1.5 | < 0.8 | < 0.7 | < 0.5 | 54 | 5100 | 0.040 | 0.13 | **200** | 8.5 | **97** |
| M98-184-01 | 2011 | 14 | 22 | Mafic Volcanic | Pump | OP/HW | **32** | **24000** | 940 | 0.30 | 13000 | 83 | 2.2 | < 0.8 | **0.80** | 0.60 | 110 | 3000 | 0.080 | 0.65 | 96 | 9.1 | 64 |
| M98-184-02 | 2011 | 66 | 74.5 | Mafic Volcanic | Pump | OP/HW | **27** | **33000** | **1000** | 0.30 | **24000** | 72 | 6.4 | < 0.8 | < 0.7 | < 0.5 | 110 | 5600 | 0.23 | 0.19 | **190** | 6.7 | **110** |
| M98-185-01 | 2011 | 53 | 61.5 | Mafic Volcanic | Pump | OP/FW | **37** | **30000** | **1500** | 0.20 | 18000 | **110** | 3.1 | < 0.8 | < 0.7 | < 0.5 | 64 | 4500 | 0.31 | 0.12 | **180** | 9.6 | **110** |
| M98-185-02 | 2011 | 108 | 116.5 | Mafic Volcanic | Pump | OP/FW | **25** | **30000** | **1400** | 0.40 | 14000 | **120** | 1.3 | **1.2** | < 0.7 | < 0.5 | 88 | 4900 | 0.060 | 0.086 | **190** | 14 | **87** |
| M98-185-03 | 2011 | 160 | 168.5 | Mafic Volcanic | Pump | OP/FW | **29** | **34000** | **1200** | 0.50 | 10000 | **93** | 1.9 | **1.2** | < 0.7 | 0.50 | 100 | **6000** | 0.020 | 0.15 | **200** | 18 | **88** |
| W94-49-01 | 2011 | 15 | 24 | Mafic Volcanic | Pump | OP/HW | **37** | **35000** | 880 | 0.50 | 16000 | 77 | 1.6 | **1.3** | < 0.7 | 1.2 | 78 | **8200** | 0.080 | 0.35 | **180** | 30 | **100** |
| W94-49-03 | 2011 | 41 | 51 | Mafic Volcanic | Pump | OP/HW | **42** | **39000** | **1200** | 0.30 | 8600 | **130** | 5.2 | < 0.8 | < 0.7 | < 0.5 | 67 | 4200 | 0.17 | 0.074 | **180** | 7.4 | **120** |
| W94-53-01 | 2011 | 23 | 32 | Mafic Volcanic | Pump | OP/FW | **42** | 16000 | 240 | **1.4** | 17000 | 63 | 6.2 | **0.90** | < 0.7 | 0.80 | 200 | 3500 | 0.45 | 1.6 | 97 | 6.7 | **77** |
| W94-55-02 | 2011 | 69.5 | 74 | Mafic Volcanic | Pump | OP/HW | **45** | **29000** | **1100** | 0.30 | 4300 | 79 | 3.5 | < 0.8 | < 0.7 | < 0.5 | 59 | **5900** | 0.48 | 0.16 | **200** | 14 | **130** |
| W94-57-01 | 2011 | 8 | 16 | Mafic Volcanic | Pump | OP/HW | **52** | **39000** | **1400** | 1.0 | 6000 | **170** | **320** | **0.90** | < 0.7 | < 0.5 | 80 | 4800 | 0.50 | 0.18 | **180** | 6.8 | **130** |
| W94-59-01 | 2011 | 12 | 21 | Mafic Volcanic | Pump | OP/HW | **32** | **37000** | **1300** | 0.40 | 17000 | **120** | 1.9 | **1.0** | < 0.7 | < 0.5 | 84 | 5000 | < 0.02 | 0.11 | **190** | 14 | **160** |
| W94-61-02 | 2011 | 44 | 53 | Mafic Volcanic | Pump | OP/FW | **30** | **41000** | **1200** | 0.30 | 8400 | **150** | 4.9 | **1.7** | < 0.7 | < 0.5 | 73 | 3800 | 0.15 | 0.079 | **170** | 13 | **120** |
| W94-65-03 | 2011 | 48 | 57 | Mafic Volcanic | Pump | OP/HW | **32** | **34000** | **1200** | 0.40 | 11000 | **86** | 1.6 | **0.90** | < 0.7 | < 0.5 | 88 | **6700** | < 0.02 | 0.18 | **210** | 21 | **140** |
| W94-70-01 | 2011 | 8 | 18 | Mafic Volcanic | Pump | OP/HW | **36** | **32000** | **1300** | 0.30 | 11000 | **110** | 2.5 | **1.1** | < 0.7 | < 0.5 | 90 | 4600 | 0.050 | 0.10 | **180** | 12 | **100** |
| W94-70-02 | 2011 | 33 | 42 | Mafic Volcanic | Pump | OP/HW | **47** | **34000** | **1100** | 0.40 | 11000 | 74 | 2.5 | **0.90** | < 0.7 | < 0.5 | 83 | **5700** | < 0.02 | 0.12 | **200** | 19 | **110** |
| W94-73-01 | 2011 | 14 | 23 | Mafic Volcanic | Pump | OP/HW | **34** | **34000** | **1300** | 0.70 | 12000 | **94** | 1.9 | **0.90** | < 0.7 | < 0.5 | 98 | **6000** | < 0.02 | 0.14 | **200** | 18 | **110** |
| W94-73-03 | 2011 | 86 | 95 | Mafic Volcanic | Pump | OP/FW | **41** | **26000** | **2100** | 0.30 | 14000 | **91** | 4.7 | < 0.8 | < 0.7 | < 0.5 | 54 | **5800** | 0.11 | 0.059 | **200** | 15 | **120** |
| | | | | | | MINIMUM | 19 | 14000 | 240 | 0.10 | 4300 | 40 | 1.2 | 0.80 | < 0.7 | < 0.5 | 40 | 2100 | < 0.02 | 0.053 | 78 | 5.9 | 54 |
| | | | | | | MAXIMUM | 60 | 54000 | 2100 | 1.5 | 24000 | 170 | 320 | 1.7 | 1.0 | 1.4 | 200 | 8200 | 0.61 | 1.6 | 260 | 30 | 250 |
| | | | | | | MEDIAN | 36 | 33500 | 1200 | 0.30 | 13000 | 91 | 3.1 | 0.90 | 0.70 | 0.50 | 88 | 4950 | 0.11 | 0.13 | 190 | 12 | 110 |
| | | | | | | AVERAGE | 37 | 32028 | 1173 | 0.43 | 13219 | 93 | 12 | 1.0 | 0.71 | 0.60 | 92 | 4911 | 0.18 | 0.23 | 178 | 12 | 111 |
| | | | | | | STANDARD DEVIATION | 9.6 | 7908 | 285 | 0.31 | 4352 | 28 | 53 | 0.25 | 0.052 | 0.23 | 32 | 1326 | 0.17 | 0.30 | 40 | 4.9 | 37 |
| | | | | | | 75TH PERCENTILE | 43 | 37000 | 1300 | 0.43 | 16000 | 110 | 4.8 | 1.1 | 0.70 | 0.53 | 103 | 5800 | 0.27 | 0.18 | 200 | 14 | 123 |
| M97-122-03 | 2011 | 160 | 169 | Ore/IF | Pump | OP/FW | **36** | **30000** | **1100** | 0.30 | 12000 | 81 | 5.7 | **1.8** | < 0.7 | 0.50 | 88 | 5400 | 0.22 | 0.13 | **180** | 5.3 | **150** |
| M97-122-04 | 2011 | 180 | 190 | Ore/IF | Pump | OP/FW | **36** | **34000** | **1000** | 0.60 | 420 | 68 | 3.7 | **1.6** | **0.70** | 1.0 | 21 | 2400 | 0.30 | 0.35 | 110 | 4.0 | **530** |
| W94-65-01 | 2011 | 14 | 20 | Ore/IF | Pump | OP/HW | 3.0 | 14000 | **2000** | **3.0** | 140 | 45 | 7.0 | **5.0** | **3.7** | 0.90 | 11 | 620 | < 0.02 | 0.42 | 28 | 4.4 | **2200** |
| W94-65-02 | 2011 | 21 | 26 | Ore/IF | Pump | OP/HW | < 2 | 11000 | **2300** | **2.6** | 40 | 27 | 4.4 | **2.6** | **1.0** | < 0.5 | 43 | 300 | < 0.02 | 0.21 | 13 | 3.5 | **1000** |
| | | | | | | MINIMUM | <2 | 11000 | 1000 | 0.30 | 40 | 27 | 3.7 | 1.6 | < 0.7 | < 0.5 | 11 | 300 | <0.02 | 0.13 | 13 | 3.5 | 150 |
| | | | | | | MAXIMUM | 36 | 34000 | 2300 | 3.0 | 12000 | 81 | 7.0 | 5.0 | 3.7 | 1.0 | 88 | 5400 | 0.30 | 0.42 | 180 | 5.3 | 2200 |
| | | | | | | MEDIAN | 20 | 22000 | 1550 | 1.6 | 280 | 57 | 5.1 | 2.2 | 0.85 | 0.70 | 32 | 1510 | nc | 0.28 | 69 | 4.2 | 765 |
| | | | | | | AVERAGE | 19 | 22250 | 1600 | 1.6 | 3150 | 55 | 5.2 | 2.8 | 1.5 | 0.73 | 41 | 2180 | nc | 0.28 | 83 | 4.3 | 970 |
| | | | | | | STANDARD DEVIATION | 19 | 11442 | 648 | 1.4 | 5902 | 24 | 1.5 | 1.6 | 1.5 | 0.26 | 34 | 2337 | nc | 0.13 | 78 | 0.76 | 891 |
| | | | | | | 75TH PERCENTILE | 36 | 31000 | 2075 | 2.7 | 3315 | 71 | 6.0 | 3.2 | 1.7 | 0.93 | 54 | 3150 | nc | 0.37 | 128 | 4.6 | 1300 |
| M05-561-02_2011 | 2011 | 43.5 | 52.5 | Gabbro | Tiriganiaq | OP/HW | **36** | **24000** | **1100** | 1.2 | 14000 | **90** | 11 | **1.0** | < 0.7 | 1.2 | 220 | **9700** | 0.47 | 1.4 | **150** | 22 | **130** |
| M06-592-02 | 2011 | 60 | 69 | Gabbro | Tiriganiaq | OP/HW | **27** | **27000** | **1300** | 0.50 | 16000 | 43 | 12 | **0.90** | < 0.7 | 0.70 | 290 | **7400** | 0.23 | 0.26 | **250** | 20 | **120** |
| M06-592-03 | 2011 | 124 | 132.5 | Gabbro | Tiriganiaq | OP/FW | **28** | **28000** | **1100** | 0.40 | 15000 | 47 | 8.2 | < 0.8 | < 0.7 | < 0.5 | 240 | **6500** | 0.20 | 0.23 | **210** | 18 | **88** |
| M06-593-02 | 2011 | 140 | 148 | Gabbro | Tiriganiaq | OP/FW | **28** | **30000** | **1100** | 0.40 | 16000 | 50 | 6.8 | < 0.8 | < 0.7 | 1.0 | 200 | **6500** | 0.10 | 0.24 | **210** | 18 | **79** |
| M96-44-01 | 2011 | 15 | 22 | Gabbro | Tiriganiaq | OP/HW | **31** | **30000** | **1000** | 0.40 | 13000 | 49 | 7.2 | < 0.8 | < 0.7 | < 0.5 | 250 | **6000** | 0.22 | 0.25 | **200** | 17 | **87** |
| M97-135-02 | 2011 | 85 | 92 | Gabbro | Tiriganiaq | OP/HW | **22** | **30000** | **1000** | **1.6** | 15000 | 47 | 8.7 | **1.1** | < 0.7 | 0.70 | 260 | **6600** | 0.14 | 0.23 | **200** | 18 | **93** |
| M97-149-01 | 2011 | 12.5 | 21 | Gabbro | Tiriganiaq | OP/HW | **24** | **30000** | **1000** | 0.40 | 17000 | 47 | 7.0 | **1.1** | < 0.7 | 0.90 | 230 | **6800** | 0.12 | 0.19 | **200** | 19 | **91** |
| M98-201-02 | 2011 | 44 | 52 | Gabbro | Tiriganiaq | OP/HW | **30** | **30000** | **1000** | 0.40 | 11000 | 47 | 8.2 | < 0.8 | < 0.7 | 0.60 | 300 | **6600** | 0.10 | 0.22 | **210** | 18 | **93** |
| M99-309-01 | 2011 | 20 | 28 | Gabbro | Tiriganiaq | OP/HW | **31** | **26000** | **1100** | 1.4 | 21000 | 43 | 8.1 | < 0.8 | < 0.7 | 0.70 | 210 | **6900** | 0.040 | 0.47 | **210** | 18 | **120** |
| M99-336B-02 | 2011 | 52 | 62 | Gabbro | Tiriganiaq | OP/HW | **28** | **30000** | **1000** | 0.40 | 15000 | 50 | 8.4 | **0.90** | < 0.7 | < 0.5 | 270 | **6200** | 0.13 | 0.26 | **190** | 16 | **85** |
| | | | | | | MINIMUM | 22 | 24000 | 1000 | 0.40 | 11000 | 43 | 6.8 | <0.8 | <0.7 | <0.5 | 200 | 6000 | 0.040 | 0.19 | 150 | 16 | 79 |
| | | | | | | MAXIMUM | 36 | 30000 | 1300 | 1.6 | 21000 | 90 | 12 | 1.1 | <0.7 | 1.2 | 300 | 9700 | 0.47 | 1.4 | 250 | 22 | 130 |
| | | | | | | MEDIAN | 28 | 30000 | 1050 | 0.40 | 15000 | 47 | 8.2 | 0.85 | nc | 0.70 | 245 | 6600 | 0.14 | 0.25 | 205 | 18 | 92 |
| | | | | | | AVERAGE | 29 | 28500 | 1070 | 0.71 | 15300 | 51 | 8.6 | 0.90 | nc | 0.73 | 247 | 6920 | 0.18 | 0.38 | 203 | 18 | 99 |
| | | | | | | STANDARD DEVIATION | 3.9 | 2173 | 95 | 0.49 | 2627 | 14 | 1.7 | 0.12 | nc | 0.24 | 33 | 1049 | 0.12 | 0.37 | 25 | 1.6 | 18 |
| | | | | | | 75TH PERCENTILE | 31 | 30000 | 1100 | 1.0 | 16000 | 50 | 8.6 | 0.98 | nc | 0.85 | 268 | 6875 | 0.22 | 0.26 | 210 | 19 | 113 |
| GT08-01-01 | 2008 | 50.2 | 54.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **22** | 11000 | 260 | **1.4** | 21000 | 53 | **19** | < 0.8 | < 0.7 | 1.0 | **460** | 1900 | 0.45 | 1.6 | 68 | 7.3 | 65 |
| GT08-01-02 | 2008 | 25.16 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **22** | 11000 | 220 | 1.2 | **24000** | 52 | 11 | < 0.8 | < 0.7 | < 0.9 | 350 | 1400 | 0.42 | 1.5 | 71 | 6.6 | 63 |
| GT08-02-01_2008 | 2008 | 65.07 | 69.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 16 | 9000 | 330 | 0.70 | **26000** | 31 | **16** | < 0.8 | < 0.7 | < 0.9 | 240 | 2200 | 0.31 | 1.3 | 52 | 6.3 | **75** |
| M00-474-02 | 2008 | 80.3 | 84.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **37** | **28000** | **1800** | 0.50 | 11000 | 74 | **18** | < 0.8 | < 0.7 | 1.6 | 160 | 2400 | 0.53 | 0.17 | **210** | 7.0 | **130** |
| M00-474-04 | 2008 | 45.42 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 20 | 7100 | 280 | 0.60 | 16000 | 12 | 7.8 | < 0.8 | < 0.7 | < 0.9 | 370 | 1400 | 0.18 | 0.61 | 33 | 4.1 | 42 |
| M00-474-05 | 2008 | 20.53 | 24.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 360 | 1.2 | 17000 | 56 | **31** | < 0.8 | < 0.7 | 1.0 | 290 | 2400 | 0.42 | 1.7 | 91 | 7.8 | **71** |
| M00-476-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **37** | 14000 | 280 | **1.4** | 19000 | 67 | 12 | < 0.8 | < 0.7 | 0.70 | 250 | 1300 | 0.39 | 1.6 | 89 | 6.7 | **84** |
| M00-476-02 | 2009 | 23 | 28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 300 | **1.4** | 20000 | 68 | 11 | < 0.8 | < 0.7 | 0.80 | 240 | 1100 | 0.39 | 1.7 | 92 | 7.0 | **83** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M00-479-01 | 2009 | 30 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.38** | 74000 | **110** | - | **750** | 0.92 | **0.21** | 9300 | **0.24** | 15 | **150** | 29 | 45000 | - | 19000 |
| M00-479-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.43** | 81000 | **58** | - | **740** | 1.2 | **0.21** | 12000 | **0.27** | 19 | **150** | 52 | 41000 | - | **26000** |
| M03-496-01 | 2008 | 360.07 | 370.13 | Greywacke/Siltstone | Tiriganiaq | UG | **0.52** | 54000 | **200** | - | **460** | 0.92 | < 0.09 | 21000 | 0.070 | 8.1 | 35 | 27 | **110000** | < 0.1 | 17000 |
| M03-498-01 | 2009 | 315 | 320 | Greywacke/Siltstone | Tiriganiaq | UG | **0.28** | 77000 | **240** | - | **620** | 0.89 | < 0.09 | 23000 | **0.18** | 12 | 44 | 24 | 36000 | - | **21000** |
| M03-499-02 | 2009 | 270 | 275 | Greywacke/Siltstone | Tiriganiaq | UG | **0.46** | 77000 | **35** | - | **1200** | 1.4 | **0.29** | 17000 | **0.26** | 19 | **120** | 45 | 41000 | - | **25000** |
| M03-508-01 | 2011 | 44.5 | 53 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 74000 | **59** | **0.80** | **630** | 0.98 | **0.11** | 16000 | **0.22** | 17 | **160** | 33 | 32000 | < 0.1 | 18000 |
| M03-513-01 | 2008 | 19.5 | 24.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.33** | 82000 | **24** | - | **610** | 0.97 | < 0.09 | 16000 | **0.23** | 18 | **120** | 36 | 41000 | < 0.1 | **28000** |
| M04-520-01 | 2009 | 405 | 410 | Greywacke/Siltstone | Tiriganiaq | UG | **0.35** | 78000 | **92** | - | **750** | 1.2 | < 0.09 | 11000 | **0.24** | 20 | **170** | 14 | 42000 | - | **26000** |
| M04-520-02 | 2009 | 411 | 416 | Greywacke/Siltstone | Tiriganiaq | UG | **0.17** | 71000 | **9.4** | - | 230 | 0.62 | < 0.09 | **49000** | 0.13 | **43** | **720** | 54 | **71000** | - | 11000 |
| M04-527-01 | 2008 | 270 | 279.9 | Greywacke/Siltstone | Tiriganiaq | UG | **0.89** | **84000** | **100** | - | **530** | 0.97 | **0.30** | 12000 | **0.18** | 19 | **150** | **86** | 39000 | < 0.1 | **25000** |
| M04-533-01 | 2008 | 380.18 | 389.64 | Greywacke/Siltstone | Tiriganiaq | UG | **0.58** | **89000** | **130** | - | **3100** | **3.5** | **0.54** | 20000 | **0.22** | 23 | **130** | 43 | **58000** | < 0.1 | **37000** |
| M04-533-02 | 2008 | 296.9 | 307.24 | Greywacke/Siltstone | Tiriganiaq | UG | **0.40** | **93000** | **250** | - | **790** | 1.1 | **0.13** | 18000 | **0.43** | 21 | **160** | **700** | 40000 | < 0.1 | **32000** |
| M05-559A-02 | 2008 | 180 | 189.99 | Greywacke/Siltstone | Tiriganiaq | UG | **0.64** | **92000** | **31** | - | **580** | 1.0 | **0.13** | 11000 | 0.14 | 20 | **160** | **68** | 44000 | < 0.1 | **28000** |
| M05-571A-01 | 2008 | 435.4 | 444.96 | Greywacke/Siltstone | Tiriganiaq | UG | **0.25** | 82000 | **380** | - | **710** | 1.4 | < 0.09 | 17000 | **0.21** | 13 | 63 | 22 | 55000 | < 0.1 | **28000** |
| M05-571A-02 | 2008 | 335.3 | 344.4 | Greywacke/Siltstone | Tiriganiaq | UG | **0.30** | **89000** | **46** | - | **670** | 1.2 | < 0.09 | 9700 | **0.24** | 20 | **120** | 28 | 53000 | < 0.1 | **30000** |
| M06-577-01 | 2011 | 7 | 15.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 82000 | **32** | **0.030** | **530** | 1.1 | **0.12** | 12000 | **0.23** | 20 | **160** | 47 | 39000 | < 0.1 | **22000** |
| M06-577-02 | 2011 | 71 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **89000** | **46** | **0.030** | **710** | 1.1 | < 0.09 | 13000 | **0.25** | 22 | **160** | 49 | 43000 | < 0.1 | **22000** |
| M06-577-03 | 2011 | 105 | 114 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **91000** | **59** | **0.040** | **660** | 1.2 | **0.10** | 12000 | **0.24** | 22 | **170** | 39 | 46000 | < 0.1 | **27000** |
| M06-591-01 | 2011 | 20.5 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **84000** | **33** | **0.040** | **610** | 1.1 | **0.11** | 11000 | **0.62** | 20 | **170** | 51 | 45000 | < 0.1 | **22000** |
| M06-592-01 | 2011 | 26 | 34.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **86000** | **31** | **0.030** | **570** | 1.2 | **0.15** | 12000 | **0.23** | 20 | **160** | 42 | 44000 | < 0.1 | **24000** |
| M06-593-01 | 2011 | 27 | 36 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 71000 | **7.6** | **0.030** | **880** | 0.92 | **0.13** | 14000 | **0.21** | 19 | **180** | 44 | 31000 | < 0.1 | 15000 |
| M06-601A-01 | 2009 | 266 | 270 | Greywacke/Siltstone | Tiriganiaq | UG | **0.19** | 64000 | **7.2** | - | 130 | 0.42 | < 0.09 | **50000** | **0.25** | **39** | 39 | 57 | **82000** | - | 6500 |
| M06-604-01 | 2008 | 335.56 | 344.42 | Greywacke/Siltstone | Tiriganiaq | UG | **0.37** | **98000** | **41** | - | **570** | 1.1 | **0.21** | 7600 | **0.24** | 20 | **120** | 43 | 50000 | < 0.1 | **29000** |
| M06-604-02 | 2008 | 285.56 | 294.76 | Greywacke/Siltstone | Tiriganiaq | UG | **0.28** | 82000 | **50** | - | **640** | 1.0 | **0.10** | 19000 | **0.22** | 13 | 72 | 35 | **64000** | < 0.1 | **25000** |
| M06-604-03 | 2008 | 245 | 255 | Greywacke/Siltstone | Tiriganiaq | UG | **0.41** | 76000 | **8.6** | - | 420 | 0.87 | **0.40** | 17000 | **0.30** | 18 | **110** | 48 | 32000 | < 0.1 | 20000 |
| M06-607-01 | 2009 | 175 | 180 | Greywacke/Siltstone | Tiriganiaq | UG | **0.38** | 72000 | **120** | - | **510** | 1.0 | < 0.09 | 8900 | **0.24** | 19 | **120** | 22 | 45000 | - | 20000 |
| M06-608-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **85000** | **15** | **0.020** | **590** | 1.0 | **0.19** | 12000 | **0.24** | 18 | **160** | 48 | 37000 | < 0.1 | **22000** |
| M06-608-02 | 2011 | 75.5 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 80000 | **31** | **0.030** | **610** | 1.2 | < 0.09 | 12000 | **0.21** | 19 | **160** | 35 | 38000 | < 0.1 | **21000** |
| M06-611-01 | 2011 | 28 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 76000 | **43** | **0.020** | **700** | 1.0 | < 0.09 | 11000 | **0.21** | 16 | **160** | 35 | 33000 | < 0.1 | 18000 |
| M06-611-02 | 2011 | 121 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 82000 | **30** | **0.030** | **740** | 1.2 | **0.12** | 12000 | **0.20** | 16 | **190** | 41 | 39000 | < 0.1 | **23000** |
| M06-621-01 | 2009 | 240 | 245 | Greywacke/Siltstone | Tiriganiaq | UG | **0.38** | 79000 | **30** | - | **560** | 0.98 | **0.13** | 11000 | **0.24** | 17 | **110** | 46 | 35000 | - | **22000** |
| M06-623-01 | 2011 | 63 | 72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 78000 | **27** | **0.030** | **610** | 1.1 | < 0.09 | 17000 | 0.14 | 11 | **110** | 33 | 46000 | < 0.1 | 19000 |
| M06-625-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 78000 | **110** | **0.070** | **620** | 1.0 | **0.12** | 13000 | **0.22** | 19 | **170** | 43 | 38000 | < 0.1 | **21000** |
| M06-625-02 | 2011 | 49 | 57 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | 79000 | **57** | **0.020** | **1000** | 1.1 | < 0.09 | 8000 | **0.22** | 17 | **170** | 42 | 41000 | < 0.1 | **21000** |
| M06-628-01 | 2009 | 38 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.39** | 78000 | **57** | - | **970** | 1.1 | < 0.09 | 12000 | **0.24** | 18 | **140** | **77** | 41000 | - | **23000** |
| M06-628-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.83** | 80000 | **37** | - | **2100** | 1.6 | **0.60** | 17000 | **0.55** | 19 | **150** | 39 | 44000 | - | **25000** |
| M06-631-01 | 2011 | 17 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 82000 | **49** | **0.030** | **750** | 1.3 | **0.22** | 11000 | **0.24** | 21 | **170** | 45 | 44000 | < 0.1 | **23000** |
| M07-645-01 | 2008 | 250.36 | 259.97 | Greywacke/Siltstone | Tiriganiaq | UG | **0.39** | **89000** | **140** | - | **620** | 1.0 | **0.19** | 11000 | 0.12 | 20 | **130** | 54 | 45000 | < 0.1 | **27000** |
| M07-649-01_2009 | 2009 | 300 | 305 | Greywacke/Siltstone | Tiriganiaq | UG | **0.31** | 77000 | **280** | - | **620** | 1.1 | < 0.09 | 15000 | **0.26** | 18 | 92 | 44 | 53000 | - | **24000** |
| M07-660-01_2008 | 2008 | 80.84 | 84.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.10** | 71000 | **23** | - | **1500** | 1.2 | < 0.09 | 23000 | **0.18** | 7.2 | 30 | 21 | 40000 | < 0.1 | **23000** |
| M07-660-01_2009 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.45** | 81000 | **35** | - | **770** | 1.1 | **0.16** | 11000 | **0.33** | 17 | **140** | 44 | 37000 | - | **21000** |
| M07-660-02_2008 | 2008 | 55.86 | 59.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.080** | **85000** | **40** | - | **710** | 1.1 | **0.15** | 16000 | **0.22** | **26** | **120** | 38 | **58000** | < 0.1 | **25000** |
| M07-660-02_2009 | 2009 | 22 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.38** | 79000 | **31** | - | **730** | 1.1 | < 0.09 | 8300 | **0.28** | 18 | **140** | 40 | 40000 | - | **21000** |
| M07-663-01 | 2008 | 417.35 | 426.56 | Greywacke/Siltstone | Tiriganiaq | UG | **0.37** | **85000** | **1500** | - | **720** | 1.2 | **0.15** | 11000 | **0.16** | 20 | **120** | **63** | **59000** | < 0.1 | **27000** |
| M07-663-02 | 2008 | 350.7 | 357.24 | Greywacke/Siltstone | Tiriganiaq | UG | **0.45** | **88000** | **110** | - | **1600** | 1.6 | **0.30** | 12000 | 0.15 | 20 | **130** | 41 | 52000 | < 0.1 | **30000** |
| M07-663-03 | 2008 | 280.15 | 289.09 | Greywacke/Siltstone | Tiriganiaq | UG | **0.38** | 80000 | **51** | - | **630** | 0.99 | **0.15** | 16000 | 0.13 | 22 | **110** | 59 | 53000 | < 0.1 | **23000** |
| M07-672B-01 | 2009 | 323 | 328 | Greywacke/Siltstone | Tiriganiaq | UG | **0.37** | 73000 | **43** | - | **490** | 1.0 | < 0.09 | 6700 | **0.24** | 21 | **120** | 27 | 48000 | - | **22000** |
| M07-674-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 80000 | **50** | **0.020** | **600** | 1.1 | **0.91** | 14000 | **0.32** | 19 | **160** | 54 | 40000 | < 0.1 | **21000** |
| M07-678-02 | 2008 | 35.55 | 39.74 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.070 | 72000 | **240** | - | **620** | 1.1 | < 0.09 | 24000 | **0.33** | 12 | 70 | **200** | **58000** | < 0.1 | **21000** |
| M07-678-03 | 2008 | 25.1 | 29.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.060 | 75000 | **1200** | - | **440** | 1.0 | < 0.09 | 14000 | **0.18** | 4.8 | 17 | 26 | 41000 | < 0.1 | 20000 |
| M07-685-01 | 2009 | 260 | 265 | Greywacke/Siltstone | Tiriganiaq | UG | **0.35** | 64000 | **20** | - | 350 | 0.76 | **0.10** | 9400 | **0.22** | 20 | 99 | 40 | 29000 | - | 17000 |
| M07-685-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | **0.43** | 80000 | **150** | - | **490** | 1.0 | **0.16** | 9000 | **0.30** | 22 | **130** | 47 | 45000 | - | **23000** |
| M07-689-01 | 2011 | 11 | 21 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **84000** | **31** | **0.020** | **550** | 1.2 | **0.19** | 8000 | **0.26** | 20 | **160** | 49 | 43000 | < 0.1 | **22000** |
| M07-689-02 | 2011 | 42 | 52 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **99000** | **58** | **0.030** | **750** | 1.4 | **0.15** | 12000 | **0.31** | 22 | **160** | 46 | 45000 | < 0.1 | **32000** |
| M07-689-03 | 2011 | 88 | 97 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 74000 | **90** | **0.050** | **990** | 1.4 | **0.28** | 16000 | **0.37** | 13 | **110** | 27 | 41000 | < 0.1 | **24000** |
| M07-691-01 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | **0.37** | 74000 | **47** | - | **450** | 0.94 | **0.11** | 6100 | **0.24** | 18 | 99 | 43 | 38000 | - | **21000** |
| M07-704-01 | 2008 | 41.38 | 45.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.40** | **85000** | **150** | - | **730** | 1.2 | **0.24** | 23000 | **0.31** | 20 | **110** | 50 | 45000 | < 0.1 | **29000** |
| M07-704-02 | 2008 | 25.09 | 25.28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.66** | **84000** | **270** | - | **670** | 1.0 | **0.31** | 11000 | **0.27** | 19 | **120** | 50 | 38000 | < 0.1 | **27000** |
| M07-705-01 | 2008 | 45.76 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.51** | 73000 | **11** | - | **750** | 0.98 | **0.25** | 16000 | **0.25** | 18 | **110** | 31 | 32000 | < 0.1 | **23000** |
| M07-710-02 | 2008 | 26 | 29.71 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.23** | 75000 | **71** | - | 420 | 0.92 | < 0.09 | 32000 | **0.17** | 6.7 | 24 | 24 | **66000** | < 0.1 | 16000 |
| M07-711-01 | 2008 | 25.3 | 29.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.090** | 61000 | **190** | - | 340 | 0.66 | **0.11** | 23000 | **0.17** | 6.0 | 21 | 27 | **86000** | < 0.1 | 14000 |
| M07-713-01 | 2008 | 80.2 | 85.51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.090** | 71000 | **130** | - | **600** | 1.1 | < 0.09 | 16000 | **0.19** | 9.2 | 47 | **62** | 49000 | < 0.1 | **22000** |
| M07-713-02 | 2008 | 45.23 | 49.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.13** | **84000** | **61** | - | **620** | 1.0 | **0.18** | 10000 | **0.22** | 21 | **130** | 52 | 55000 | < 0.1 | **26000** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | | | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M00-479-01 | 2009 | 30 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 13000 | 320 | 1.2 | 19000 | 56 | **19** | < 0.8 | < 0.7 | 0.60 | 280 | 2200 | 0.33 | 1.4 | 78 | 6.1 | **74** |
| M00-479-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 15000 | 360 | **2.4** | 16000 | 72 | **17** | < 0.8 | < 0.7 | 1.1 | 260 | 1400 | 0.49 | 2.1 | 99 | 7.3 | **82** |
| M03-496-01 | 2008 | 360.07 | 370.13 | Greywacke/Siltstone | Tiriganiaq | UG | 19 | 8400 | 340 | 0.50 | 9900 | 22 | **22** | < 0.8 | < 0.7 | < 0.9 | 220 | 1400 | 0.31 | 1.0 | 37 | 6.0 | 64 |
| M03-498-01 | 2009 | 315 | 320 | Greywacke/Siltstone | Tiriganiaq | UG | 18 | 7600 | 280 | 0.40 | **25000** | 34 | 9.2 | < 0.8 | < 0.7 | < 0.5 | **460** | 2800 | 0.30 | 1.0 | 54 | 5.7 | 55 |
| M03-499-02 | 2009 | 270 | 275 | Greywacke/Siltstone | Tiriganiaq | UG | **26** | 13000 | 400 | 1.2 | 16000 | 71 | **46** | < 0.8 | < 0.7 | 1.2 | 280 | 3800 | 0.38 | 1.5 | 96 | 7.5 | 62 |
| M03-508-01 | 2011 | 44.5 | 53 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **30** | 11000 | 320 | **1.4** | 20000 | 53 | 9.9 | < 0.8 | < 0.7 | < 0.5 | 310 | 1600 | 0.31 | 1.5 | 78 | 7.0 | **74** |
| M03-513-01 | 2008 | 19.5 | 24.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **22** | 12000 | 310 | **1.6** | 19000 | 61 | 8.6 | < 0.8 | < 0.7 | < 0.9 | 270 | 2800 | 0.53 | 1.7 | 85 | 8.1 | 67 |
| M04-520-01 | 2009 | 405 | 410 | Greywacke/Siltstone | Tiriganiaq | UG | **27** | 13000 | 360 | **1.6** | 14000 | 73 | 10 | < 0.8 | < 0.7 | 1.3 | 220 | 3700 | 0.48 | 1.6 | 96 | 7.0 | 65 |
| M04-520-02 | 2009 | 411 | 416 | Greywacke/Siltstone | Tiriganiaq | UG | **52** | **35000** | **1100** | 0.40 | 9600 | **250** | 14 | < 0.8 | **0.70** | 0.70 | 270 | 4400 | 0.51 | 0.28 | **200** | 6.5 | **94** |
| M04-527-01 | 2008 | 270 | 279.9 | Greywacke/Siltstone | Tiriganiaq | UG | **28** | 14000 | 320 | **2.0** | 21000 | 82 | 14 | < 0.8 | < 0.7 | < 0.9 | 330 | 2300 | 0.49 | 2.1 | 84 | 8.3 | **83** |
| M04-533-01 | 2008 | 380.18 | 389.64 | Greywacke/Siltstone | Tiriganiaq | UG | **40** | 19000 | 480 | 1.2 | 16000 | 81 | **130** | < 0.8 | < 0.7 | < 0.9 | **690** | 3700 | **1.2** | 1.9 | 120 | 11 | **130** |
| M04-533-02 | 2008 | 296.9 | 307.24 | Greywacke/Siltstone | Tiriganiaq | UG | **35** | 15000 | 350 | **1.7** | 19000 | **88** | 8.7 | < 0.8 | < 0.7 | 1.3 | 240 | 3400 | 0.49 | 2.0 | 110 | 10 | **110** |
| M05-559A-02 | 2008 | 180 | 189.99 | Greywacke/Siltstone | Tiriganiaq | UG | **47** | 17000 | 330 | **1.5** | 17000 | 71 | 12 | < 0.8 | < 0.7 | < 0.9 | 300 | 1100 | 0.52 | 1.8 | 100 | 8.3 | **88** |
| M05-571A-01 | 2008 | 435.4 | 444.96 | Greywacke/Siltstone | Tiriganiaq | UG | **28** | 12000 | 300 | 0.90 | 15000 | 41 | 8.4 | < 0.8 | < 0.7 | < 0.9 | 220 | 2200 | 0.47 | 1.8 | 66 | 7.1 | 56 |
| M05-571A-02 | 2008 | 335.3 | 344.4 | Greywacke/Siltstone | Tiriganiaq | UG | **33** | 15000 | 290 | **1.5** | 15000 | 72 | 7.5 | < 0.8 | < 0.7 | < 0.9 | 210 | 3200 | 0.50 | 1.8 | 110 | 7.6 | **75** |
| M06-577-01 | 2011 | 7 | 15.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 320 | **1.4** | 18000 | 63 | 12 | < 0.8 | < 0.7 | 0.80 | 280 | 1200 | 0.40 | 1.7 | 93 | 6.7 | **81** |
| M06-577-02 | 2011 | 71 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **41** | 16000 | 320 | **1.4** | 20000 | 67 | 14 | < 0.8 | < 0.7 | < 0.5 | 310 | 1900 | 0.43 | 1.8 | 100 | 6.8 | **96** |
| M06-577-03 | 2011 | 105 | 114 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **39** | 16000 | 340 | **1.6** | 17000 | 71 | 12 | < 0.8 | < 0.7 | 0.90 | 250 | 3500 | 0.52 | 1.8 | 110 | 6.6 | **93** |
| M06-591-01 | 2011 | 20.5 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 270 | **1.6** | 20000 | 69 | **44** | < 0.8 | < 0.7 | 0.90 | 230 | 3300 | 0.41 | 1.8 | 99 | 6.5 | **130** |
| M06-592-01 | 2011 | 26 | 34.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **41** | 17000 | 360 | **1.5** | 15000 | 68 | **15** | < 0.8 | < 0.7 | 0.90 | 270 | 1300 | 0.46 | 2.0 | 110 | 7.4 | **92** |
| M06-593-01 | 2011 | 27 | 36 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **25** | 11000 | 270 | 1.2 | **24000** | 48 | 11 | < 0.8 | **1.7** | 0.60 | **430** | 2100 | 0.31 | 1.6 | 68 | 7.0 | **73** |
| M06-601A-01 | 2009 | 266 | 270 | Greywacke/Siltstone | Tiriganiaq | UG | **39** | **27000** | **990** | 0.30 | 20000 | 63 | 8.5 | < 0.8 | < 0.7 | 0.50 | 270 | **7100** | 0.40 | 0.21 | **220** | 11 | **110** |
| M06-604-01 | 2008 | 335.56 | 344.42 | Greywacke/Siltstone | Tiriganiaq | UG | **33** | 17000 | 280 | **1.4** | 21000 | 70 | 14 | < 0.8 | < 0.7 | 1.3 | 230 | 3000 | 0.46 | 1.8 | 110 | 8.1 | **85** |
| M06-604-02 | 2008 | 285.56 | 294.76 | Greywacke/Siltstone | Tiriganiaq | UG | **25** | 12000 | 310 | 0.90 | 14000 | 45 | 8.2 | < 0.8 | < 0.7 | < 0.9 | 330 | 2500 | 0.39 | 1.3 | 72 | 6.4 | 59 |
| M06-604-03 | 2008 | 245 | 255 | Greywacke/Siltstone | Tiriganiaq | UG | **21** | 10000 | 320 | 1.2 | 21000 | 57 | **16** | < 0.8 | < 0.7 | < 0.9 | 350 | 1900 | 0.36 | 1.8 | 72 | 7.7 | 68 |
| M06-607-01 | 2009 | 175 | 180 | Greywacke/Siltstone | Tiriganiaq | UG | **37** | 13000 | 300 | 1.2 | 16000 | 73 | 11 | < 0.8 | < 0.7 | 1.0 | 220 | 3100 | 0.38 | 1.6 | 94 | 6.3 | **82** |
| M06-608-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **37** | 14000 | 350 | **1.5** | 22000 | 60 | **23** | < 0.8 | < 0.7 | 0.50 | 310 | 1000 | 0.40 | 1.6 | 94 | 6.5 | **74** |
| M06-608-02 | 2011 | 75.5 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **37** | 14000 | 360 | **1.6** | 18000 | 60 | 12 | < 0.8 | < 0.7 | 0.80 | 270 | 1600 | 0.45 | 1.7 | 91 | 6.5 | **82** |
| M06-611-01 | 2011 | 28 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **63** | 12000 | 270 | **1.5** | 21000 | 52 | 12 | < 0.8 | **0.80** | < 0.5 | 320 | 1100 | 0.37 | 1.6 | 78 | 6.3 | 70 |
| M06-611-02 | 2011 | 121 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 13000 | 270 | **1.7** | 18000 | 65 | 8.8 | < 0.8 | < 0.7 | 0.90 | 280 | 2200 | 0.46 | 1.8 | 92 | 6.6 | 70 |
| M06-621-01 | 2009 | 240 | 245 | Greywacke/Siltstone | Tiriganiaq | UG | **29** | 13000 | 290 | **1.3** | 20000 | 57 | 12 | < 0.8 | < 0.7 | 1.0 | 290 | 1500 | 0.41 | 1.6 | 86 | 6.2 | **74** |
| M06-623-01 | 2011 | 63 | 72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 8900 | 220 | 1.2 | **24000** | 31 | 6.0 | < 0.8 | < 0.7 | 1.1 | 330 | 2300 | 0.34 | 1.0 | 56 | 4.7 | 49 |
| M06-625-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 13000 | 310 | 1.2 | 18000 | 59 | 9.1 | < 0.8 | < 0.7 | 0.80 | 270 | 1800 | 0.42 | 1.7 | 87 | 6.7 | **74** |
| M06-625-02 | 2011 | 49 | 57 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **41** | 15000 | 300 | **1.6** | 17000 | 62 | 13 | < 0.8 | < 0.7 | 0.60 | 300 | 1900 | 0.44 | 1.7 | 98 | 6.9 | **86** |
| M06-628-01 | 2009 | 38 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **31** | 14000 | 310 | **1.5** | 19000 | 66 | **22** | < 0.8 | < 0.7 | 0.60 | 340 | 2500 | 0.40 | 1.7 | 89 | 6.6 | **79** |
| M06-628-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **38** | 15000 | 410 | **1.3** | 16000 | 73 | **42** | < 0.8 | **1.0** | 0.80 | **430** | 2600 | 0.71 | 1.8 | 95 | 10 | **90** |
| M06-631-01 | 2011 | 17 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **40** | 15000 | 290 | **1.6** | 17000 | 67 | 11 | < 0.8 | < 0.7 | < 0.5 | 270 | 2100 | 0.49 | 1.8 | 99 | 6.7 | **82** |
| M07-645-01 | 2008 | 250.36 | 259.97 | Greywacke/Siltstone | Tiriganiaq | UG | **41** | 16000 | 310 | **1.5** | 17000 | 71 | 13 | < 0.8 | < 0.7 | < 0.9 | 310 | 2200 | 0.50 | 1.9 | 110 | 8.5 | **89** |
| M07-649-01_2009 | 2009 | 300 | 305 | Greywacke/Siltstone | Tiriganiaq | UG | **26** | 14000 | 290 | 0.90 | 17000 | 63 | 8.3 | < 0.8 | < 0.7 | 0.70 | 230 | 3600 | 0.39 | 1.4 | 94 | 6.7 | **73** |
| M07-660-01_2008 | 2008 | 80.84 | 84.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 18 | 7100 | 280 | 0.70 | 21000 | 16 | 14 | < 0.8 | < 0.7 | < 0.9 | 360 | 1900 | 0.38 | 0.99 | 40 | 5.9 | 39 |
| M07-660-01_2009 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 13000 | 290 | **1.3** | 19000 | 57 | **15** | < 0.8 | < 0.7 | 0.80 | 310 | 1300 | 0.46 | 1.9 | 88 | 6.4 | **75** |
| M07-660-02_2008 | 2008 | 55.86 | 59.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **38** | 16000 | 380 | 0.90 | 14000 | 70 | 6.6 | < 0.8 | < 0.7 | 0.90 | 260 | 3000 | 0.41 | 1.6 | 100 | 8.4 | 69 |
| M07-660-02_2009 | 2009 | 22 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **38** | 15000 | 270 | **1.7** | 19000 | 65 | 10 | < 0.8 | < 0.7 | 0.80 | 270 | 1000 | 0.39 | 1.6 | 90 | 6.2 | **94** |
| M07-663-01 | 2008 | 417.35 | 426.56 | Greywacke/Siltstone | Tiriganiaq | UG | **34** | 16000 | 360 | **1.4** | 16000 | 69 | 8.7 | **0.90** | < 0.7 | < 0.9 | 210 | 3300 | 0.47 | 1.7 | 110 | 9.5 | **86** |
| M07-663-02 | 2008 | 350.7 | 357.24 | Greywacke/Siltstone | Tiriganiaq | UG | **39** | 15000 | 300 | **1.3** | 15000 | 71 | **36** | < 0.8 | < 0.7 | < 0.9 | 310 | 3500 | 0.57 | 1.8 | 120 | 8.8 | **90** |
| M07-663-03 | 2008 | 280.15 | 289.09 | Greywacke/Siltstone | Tiriganiaq | UG | **38** | 16000 | 420 | 1.0 | 17000 | 64 | 12 | < 0.8 | < 0.7 | < 0.9 | 270 | 3300 | 0.37 | 1.6 | 120 | 8.4 | **84** |
| M07-672B-01 | 2009 | 323 | 328 | Greywacke/Siltstone | Tiriganiaq | UG | **31** | 13000 | 260 | 1.2 | 14000 | 73 | 11 | < 0.8 | < 0.7 | 0.80 | 150 | 3800 | 0.41 | 1.5 | 110 | 6.1 | **77** |
| M07-674-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 14000 | 370 | **1.3** | 19000 | 60 | **59** | < 0.8 | < 0.7 | < 0.5 | 320 | 1100 | 0.43 | 1.6 | 92 | 6.4 | **86** |
| M07-678-02 | 2008 | 35.55 | 39.74 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 14 | 10000 | 350 | 0.70 | 18000 | 34 | 13 | < 0.8 | < 0.7 | 1.9 | 260 | 1900 | 0.48 | 1.2 | 54 | 6.3 | 64 |
| M07-678-03 | 2008 | 25.1 | 29.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 15 | 6500 | 180 | **1.5** | 20000 | 8.7 | **17** | < 0.8 | < 0.7 | < 0.9 | 250 | 1400 | 0.30 | 0.86 | 32 | 3.7 | 45 |
| M07-685-01 | 2009 | 260 | 265 | Greywacke/Siltstone | Tiriganiaq | UG | **22** | 9700 | 250 | 1.2 | 18000 | 57 | 8.9 | < 0.8 | < 0.7 | < 0.5 | 240 | 2200 | 0.29 | 1.5 | 66 | 5.7 | 62 |
| M07-685-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | **31** | 15000 | 350 | **1.4** | 18000 | 79 | 12 | < 0.8 | < 0.7 | 1.1 | 190 | 3800 | 0.44 | 1.7 | 110 | 6.7 | **84** |
| M07-689-01 | 2011 | 11 | 21 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **43** | 16000 | 310 | **1.4** | 17000 | 69 | 9.7 | < 0.8 | < 0.7 | < 0.5 | 280 | 1500 | 0.41 | 1.8 | 100 | 8.1 | **88** |
| M07-689-02 | 2011 | 42 | 52 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **45** | 17000 | 370 | **1.6** | 13000 | 70 | 13 | < 0.8 | < 0.7 | < 0.5 | 290 | 2000 | 0.60 | 2.1 | 120 | 10 | **91** |
| M07-689-03 | 2011 | 88 | 97 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **26** | 10000 | 170 | **1.7** | 20000 | 30 | **17** | < 0.8 | **1.0** | < 0.5 | 340 | 2100 | 0.50 | **3.2** | 53 | 7.1 | **100** |
| M07-691-01 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | **28** | 13000 | 250 | 1.1 | 18000 | 65 | 10 | < 0.8 | < 0.7 | 0.60 | 190 | 3100 | 0.39 | 1.6 | 91 | 5.5 | **75** |
| M07-704-01 | 2008 | 41.38 | 45.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 14000 | 490 | **1.5** | 15000 | 64 | **17** | < 0.8 | < 0.7 | < 0.9 | 360 | 2300 | 0.54 | 2.1 | 97 | 8.2 | **82** |
| M07-704-02 | 2008 | 25.09 | 25.28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **31** | 13000 | 280 | **1.4** | 17000 | 66 | 14 | < 0.8 | < 0.7 | < 0.9 | 310 | 1900 | 0.53 | 1.8 | 94 | 7.4 | **81** |
| M07-705-01 | 2008 | 45.76 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **23** | 9600 | 280 | **1.6** | 18000 | 56 | **29** | < 0.8 | < 0.7 | < 0.9 | 370 | 2500 | 0.45 | 1.9 | 73 | 7.8 | 64 |
| M07-710-02 | 2008 | 26 | 29.71 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **21** | 7400 | 280 | 0.80 | 21000 | 13 | 8.6 | < 0.8 | < 0.7 | < 0.9 | **520** | 1600 | 0.20 | 0.86 | 30 | 5.8 | 43 |
| M07-711-01 | 2008 | 25.3 | 29.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 20 | 7500 | 320 | 0.70 | 13000 | 13 | 5.6 | < 0.8 | < 0.7 | < 0.9 | 290 | 1500 | 0.19 | 0.66 | 31 | 4.7 | 51 |
| M07-713-01 | 2008 | 80.2 | 85.51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 16 | 7600 | 280 | 0.50 | 18000 | 21 | **23** | < 0.8 | < 0.7 | < 0.9 | 210 | 1900 | 0.32 | 0.90 | 40 | 4.6 | 45 |
| M07-713-02 | 2008 | 45.23 | 49.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 16000 | 320 | 0.80 | 16000 | 66 | 9.6 | < 0.8 | < 0.7 | < 0.9 | 220 | 2800 | 0.46 | 2.1 | 100 | 7.3 | **72** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M07-713-03 | 2008 | 15.26 | 19.48 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.36** | 69000 | **17** | - | **760** | 0.88 | < 0.09 | 11000 | **0.23** | 17 | 100 | 38 | 29000 | - | 18000 |
| M07-719-01 | 2009 | 351.45 | 359.9 | Greywacke/Siltstone | Tiriganiaq | UG | **0.37** | 78000 | **28** | - | **630** | 1.0 | **0.15** | 19000 | 0.12 | 19 | **120** | 33 | 33000 | < 0.1 | **27000** |
| M08-721-01 | 2009 | 381 | 384 | Greywacke/Siltstone | Tiriganiaq | UG | **0.14** | 22000 | **8.7** | - | 53 | 0.37 | < 0.09 | **52000** | 0.13 | **44** | **690** | 59 | **65000** | - | 610 |
| M08-721-02 | 2009 | 388 | 393 | Greywacke/Siltstone | Tiriganiaq | UG | **1.4** | 77000 | **280** | - | **920** | 1.2 | **2.4** | 15000 | **0.34** | 17 | **160** | 40 | 36000 | - | **25000** |
| M08-731W1-01 | 2009 | 330 | 335 | Greywacke/Siltstone | Tiriganiaq | UG | **0.21** | 62000 | **8.7** | - | 130 | 0.39 | < 0.09 | **58000** | **0.26** | **46** | 60 | **99** | **96000** | - | 2200 |
| M08-731W1-02 | 2009 | 350 | 355 | Greywacke/Siltstone | Tiriganiaq | UG | **0.37** | 80000 | **53** | - | **670** | 0.98 | **0.25** | 21000 | **0.23** | 20 | 97 | **61** | 41000 | - | **26000** |
| M08-754-01 | 2009 | 360 | 365 | Greywacke/Siltstone | Tiriganiaq | UG | **0.36** | 81000 | **47** | - | **750** | 1.0 | < 0.09 | 11000 | **0.23** | 18 | **140** | 30 | 42000 | - | **26000** |
| M08-761-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **84000** | **61** | **0.060** | **660** | 1.1 | **0.11** | 11000 | **0.30** | 20 | **170** | 39 | 40000 | < 0.1 | 20000 |
| M08-761-02 | 2011 | 91 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 74000 | **19** | **0.030** | **720** | 1.1 | **0.090** | 12000 | **0.23** | 16 | **160** | 28 | 32000 | < 0.1 | **21000** |
| M08-763-01 | 2011 | 55.5 | 64 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 79000 | **240** | **0.030** | **620** | 1.4 | < 0.09 | 16000 | **0.34** | 18 | **150** | 37 | 39000 | < 0.1 | **22000** |
| M08-765-01 | 2011 | 25 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | 73000 | **72** | < 0.02 | **600** | 1.0 | < 0.09 | 14000 | **0.25** | 16 | **160** | 41 | 31000 | < 0.1 | 19000 |
| M08-769-01 | 2009 | 451 | 456 | Greywacke/Siltstone | Tiriganiaq | UG | **0.22** | 62000 | **26** | - | 400 | 0.89 | < 0.09 | 28000 | **0.17** | 8.2 | 79 | 22 | **62000** | - | 12000 |
| M08-783-01 | 2011 | 38 | 47 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **83000** | **850** | **0.030** | **580** | 1.2 | **0.29** | 12000 | **0.28** | 20 | **170** | 51 | 43000 | < 0.1 | **24000** |
| M09-823-01 | 2009 | 320 | 325 | Greywacke/Siltstone | Tiriganiaq | UG | **0.19** | 64000 | **16** | - | 170 | 0.47 | < 0.09 | **57000** | **0.28** | **47** | 34 | **110** | **99000** | - | 7400 |
| M09-823-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | **0.33** | 77000 | **23** | - | **530** | 0.90 | < 0.09 | 11000 | **0.24** | 21 | **120** | 47 | 35000 | - | **21000** |
| M10-879-01 | 2011 | 38 | 46.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | 73000 | **20** | **0.020** | **570** | 1.0 | **0.12** | 15000 | **0.31** | 17 | **180** | 52 | 32000 | < 0.1 | 17000 |
| M10-887-01 | 2011 | 17 | 24.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | 74000 | **25** | **0.020** | **600** | 1.1 | **0.15** | 13000 | **0.28** | 20 | **180** | 43 | 35000 | < 0.1 | **22000** |
| M10-892-01 | 2011 | 23 | 31.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 80000 | **42** | < 0.02 | **590** | 1.0 | < 0.09 | 23000 | **0.26** | 18 | **170** | 44 | 42000 | < 0.1 | 19000 |
| M10-999-01 | 2011 | 13 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **91000** | **160** | **0.020** | **540** | 1.2 | < 0.09 | 11000 | **0.30** | 20 | **170** | 40 | 48000 | < 0.1 | **24000** |
| M10-999-02 | 2011 | 121.5 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | 78000 | **8.9** | **0.030** | **500** | 1.0 | **0.17** | 15000 | **0.29** | 20 | **170** | 47 | 36000 | < 0.1 | 19000 |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.37** | **89000** | **32** | - | **790** | 1.0 | **0.20** | 13000 | **0.27** | 19 | **120** | 47 | 51000 | < 0.1 | **25000** |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.37** | **89000** | **32** | - | **790** | 1.0 | **0.20** | 13000 | **0.27** | 19 | **120** | 47 | 51000 | < 0.1 | **25000** |
| M95-17-02 | 2008 | 30.39 | 34.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.41** | 82000 | **37** | - | **580** | 0.90 | **0.33** | 11000 | **0.27** | 17 | **120** | 44 | 36000 | < 0.1 | **22000** |
| M95-25-01 | 2011 | 9.5 | 18 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 82000 | **12** | **0.020** | **740** | 1.2 | **0.11** | 14000 | **0.26** | 17 | **180** | 28 | 36000 | < 0.1 | **21000** |
| M95-25-02 | 2011 | 34.5 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 71000 | **6.0** | < 0.02 | **540** | 1.0 | **0.11** | 21000 | **0.24** | 16 | **160** | 30 | 29000 | < 0.1 | 19000 |
| M96-03-01 | 2011 | 10 | 19 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **89000** | **180** | **0.020** | **600** | 1.2 | **0.12** | 12000 | **0.18** | 20 | **160** | 54 | 45000 | < 0.1 | **25000** |
| M96-03-02 | 2011 | 45 | 53.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 74000 | **11** | **0.030** | **590** | 1.0 | **0.15** | 16000 | **0.22** | 15 | **170** | 40 | 30000 | < 0.1 | 18000 |
| M96-19-01 | 2011 | 20 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 62000 | **230** | **0.020** | **500** | 0.96 | **0.13** | 12000 | **0.23** | 15 | **140** | 40 | 28000 | < 0.1 | 16000 |
| M96-19-02 | 2011 | 71.5 | 79 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 81000 | **110** | **0.020** | **810** | 1.2 | **0.21** | 13000 | **0.22** | 17 | **150** | 41 | 37000 | < 0.1 | **21000** |
| M96-37-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 81000 | **16** | **0.020** | **660** | 1.1 | **0.16** | 20000 | **0.26** | 19 | **180** | 50 | 38000 | < 0.1 | **22000** |
| M96-37-02 | 2011 | 85.5 | 94 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 74000 | **60** | < 0.02 | **680** | 1.0 | **0.20** | 14000 | **0.25** | 18 | **190** | **78** | 31000 | < 0.1 | 18000 |
| M96-37-03 | 2011 | 129 | 138 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 79000 | **36** | < 0.02 | **630** | 1.1 | **0.23** | 11000 | **0.21** | 17 | **170** | 60 | 36000 | < 0.1 | 18000 |
| M96-40-01 | 2011 | 14 | 23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **86000** | **72** | < 0.02 | **620** | 1.2 | **0.14** | 11000 | **0.23** | 20 | **170** | 38 | 44000 | < 0.1 | **24000** |
| M96-40-02 | 2011 | 62 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 80000 | **910** | < 0.02 | **730** | 1.3 | **0.16** | 10000 | **0.18** | 21 | **160** | 51 | 41000 | < 0.1 | **24000** |
| M96-4-01 | 2011 | 10 | 20 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 71000 | **17** | < 0.02 | **600** | 1.0 | **0.15** | 16000 | **0.21** | 15 | **190** | 41 | 29000 | < 0.1 | 18000 |
| M96-54-01 | 2011 | 19 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 79000 | **51** | < 0.02 | **520** | 1.1 | < 0.09 | 14000 | **0.24** | 18 | **180** | 36 | 35000 | < 0.1 | 20000 |
| M96-54-02 | 2011 | 57 | 66 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | **88000** | **62** | < 0.02 | **600** | 1.2 | **0.16** | 16000 | **0.23** | 19 | **170** | 43 | 42000 | < 0.1 | **25000** |
| M96-65-01 | 2011 | 36 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 77000 | **56** | < 0.02 | **600** | 1.0 | **0.15** | 13000 | **0.23** | 17 | **180** | 40 | 35000 | < 0.1 | **21000** |
| M96-7-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **85000** | **52** | < 0.02 | **650** | 1.2 | < 0.09 | 8700 | **0.18** | 17 | **170** | 16 | 48000 | < 0.1 | **23000** |
| M96-7-02 | 2011 | 42 | 51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 78000 | **61** | < 0.02 | **590** | 1.1 | **0.12** | 14000 | **0.22** | 20 | **170** | 48 | 35000 | < 0.1 | **22000** |
| M96-77-01 | 2011 | 41 | 49.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **86000** | **45** | **0.040** | **540** | 0.99 | **0.14** | 14000 | **0.28** | 17 | **180** | 45 | 42000 | < 0.1 | **23000** |
| M96-77-02 | 2011 | 140 | 149 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **87000** | **98** | **0.030** | **760** | 1.2 | **0.35** | 13000 | **0.34** | 20 | **170** | 55 | 44000 | < 0.1 | **24000** |
| M97-121-01 | 2011 | 23 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 77000 | **13** | **0.040** | **570** | 0.89 | **0.14** | 13000 | **0.26** | 15 | **180** | 43 | 33000 | < 0.1 | **22000** |
| M97-135-03 | 2011 | 111 | 120 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 77000 | **30** | **0.020** | **580** | 0.93 | **0.12** | 13000 | **0.28** | 17 | **180** | 40 | 35000 | < 0.1 | 19000 |
| M97-149-02 | 2011 | 107.5 | 116 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **84000** | **15** | **0.020** | **520** | 1.0 | **0.14** | 17000 | **0.34** | 16 | **190** | 45 | 38000 | < 0.1 | 18000 |
| M97-94A-01 | 2011 | 75 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 76000 | **99** | **0.020** | **510** | 0.96 | **0.18** | 14000 | **0.28** | 17 | **160** | 45 | 35000 | < 0.1 | 20000 |
| M97-94A-02 | 2011 | 137 | 146 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 82000 | **320** | **0.31** | **610** | 0.96 | **0.18** | 11000 | **0.26** | 17 | **180** | 43 | 42000 | < 0.1 | **24000** |
| M97-95-01 | 2011 | 51 | 59.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 81000 | **18** | **0.030** | **560** | 0.87 | **0.12** | 17000 | **0.30** | 16 | **170** | 33 | 37000 | < 0.1 | 19000 |
| M97-95-02 | 2011 | 102.5 | 111 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **84000** | **120** | **0.020** | **710** | 1.1 | **0.16** | 14000 | **0.25** | 18 | **160** | 44 | 40000 | < 0.1 | **26000** |
| M98-194-01 | 2008 | 70 | 74.63 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.090** | 67000 | **830** | - | **710** | 1.0 | **0.090** | 20000 | **0.20** | 8.0 | 33 | 22 | 53000 | < 0.1 | 17000 |
| M98-194-02 | 2008 | 55.45 | 58.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.13** | 63000 | **83** | - | **650** | 0.94 | < 0.09 | 20000 | **0.16** | 5.9 | 27 | 20 | 54000 | < 0.1 | 18000 |
| M98-194-03 | 2008 | 26.2 | 29.38 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.060 | **86000** | **99** | - | **2000** | 1.2 | **0.12** | 11000 | **0.22** | 17 | **110** | 46 | 47000 | < 0.1 | **29000** |
| M98-194-04 | 2009 | 34 | 39 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.48** | 76000 | **31** | - | **830** | 1.0 | **0.15** | 12000 | **0.35** | 16 | **140** | 41 | 37000 | - | **21000** |
| M98-201-01 | 2011 | 16 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **85000** | **32** | **0.020** | **600** | 0.99 | **0.15** | 9200 | **0.25** | 21 | **180** | 47 | 41000 | < 0.1 | **23000** |
| M98-201-03 | 2011 | 90 | 98 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 78000 | **21** | < 0.02 | **640** | 0.90 | **0.13** | 17000 | **0.31** | 15 | **160** | 43 | 36000 | < 0.1 | 19000 |
| M98-201-04 | 2011 | 166 | 175 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 78000 | **20** | **0.020** | **640** | 0.92 | **0.16** | 15000 | **0.25** | 16 | **170** | 44 | 35000 | < 0.1 | **21000** |
| M98-208-01 | 2011 | 58 | 67 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 80000 | **24** | **0.030** | **560** | 0.96 | **0.20** | 16000 | **0.24** | 19 | **180** | 51 | 36000 | < 0.1 | 20000 |
| M98-209-01 | 2011 | 14 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **95000** | **57** | < 0.02 | **560** | 1.1 | **0.18** | 12000 | **0.29** | 22 | **170** | 48 | 50000 | < 0.1 | **28000** |
| M98-257-01 | 2009 | 291 | 296 | Greywacke/Siltstone | Tiriganiaq | UG | **0.33** | 78000 | **23** | - | **470** | 0.97 | **0.10** | 13000 | **0.26** | 17 | **110** | 40 | 43000 | - | **21000** |
| M98-265-01 | 2011 | 67 | 76 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 77000 | **99** | < 0.02 | **630** | 0.92 | **0.66** | 14000 | **0.29** | 15 | **180** | 37 | 34000 | < 0.1 | 19000 |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | **0.66** | **84000** | **75** | - | **700** | 1.1 | **0.18** | 15000 | **0.24** | 22 | **130** | 51 | 44000 | - | **29000** |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | **0.66** | **84000** | **75** | - | **700** | 1.1 | **0.18** | 15000 | **0.24** | 22 | **130** | 51 | 44000 | - | **29000** |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.070 | 75000 | **340** | - | **520** | 1.1 | < 0.09 | 17000 | **0.25** | 8.0 | 50 | **97** | 52000 | < 0.1 | **21000** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | | | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M07-713-03 | 2008 | 15.26 | 19.48 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **29** | 10000 | 220 | 1.0 | 19000 | 52 | 12 | < 0.8 | < 0.7 | 0.70 | 320 | 960 | 0.37 | 1.6 | 68 | 6.4 | 67 |
| M07-719-01 | 2009 | 351.45 | 359.9 | Greywacke/Siltstone | Tiriganiaq | UG | 19 | 11000 | 220 | 1.2 | 18000 | 58 | 13 | < 0.8 | < 0.7 | < 0.9 | 330 | 2700 | 0.59 | 1.8 | 81 | 8.7 | 51 |
| M08-721-01 | 2009 | 381 | 384 | Greywacke/Siltstone | Tiriganiaq | UG | **54** | **40000** | **1200** | 0.30 | 12000 | **230** | 7.4 | < 0.8 | < 0.7 | < 0.5 | 280 | 620 | < 0.02 | 0.11 | **180** | 2.4 | **89** |
| M08-721-02 | 2009 | 388 | 393 | Greywacke/Siltstone | Tiriganiaq | UG | **23** | 13000 | 300 | 1.2 | 17000 | 67 | **340** | < 0.8 | < 0.7 | 1.1 | 230 | 3400 | 0.47 | 1.6 | 90 | 7.4 | 65 |
| M08-731W1-01 | 2009 | 330 | 335 | Greywacke/Siltstone | Tiriganiaq | UG | **22** | **27000** | **1300** | 0.40 | 15000 | 68 | 14 | **0.90** | < 0.7 | 0.50 | 320 | **7900** | 0.040 | 0.23 | **260** | 21 | **120** |
| M08-731W1-02 | 2009 | 350 | 355 | Greywacke/Siltstone | Tiriganiaq | UG | **26** | 14000 | 370 | 1.0 | 18000 | 63 | 12 | < 0.8 | < 0.7 | 1.3 | 290 | 3400 | 0.47 | 1.7 | 110 | 8.2 | **73** |
| M08-754-01 | 2009 | 360 | 365 | Greywacke/Siltstone | Tiriganiaq | UG | **29** | 14000 | 190 | **1.5** | 16000 | 75 | **17** | < 0.8 | < 0.7 | 0.90 | 230 | 3500 | 0.47 | 1.7 | 100 | 7.4 | 69 |
| M08-761-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 14000 | 260 | **1.4** | **24000** | 62 | 10 | < 0.8 | < 0.7 | 0.60 | 310 | 2300 | 0.44 | 1.8 | 96 | 6.9 | **95** |
| M08-761-02 | 2011 | 91 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 11000 | 230 | **1.3** | 20000 | 49 | 8.6 | < 0.8 | < 0.7 | 0.60 | 300 | 1900 | 0.46 | 1.5 | 75 | 6.1 | 64 |
| M08-763-01 | 2011 | 55.5 | 64 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **29** | 14000 | 360 | **1.5** | 20000 | 53 | **17** | < 0.8 | < 0.7 | 0.70 | 360 | 3100 | 0.48 | 1.8 | 92 | 6.3 | **87** |
| M08-765-01 | 2011 | 25 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **26** | 11000 | 290 | 1.2 | 19000 | 49 | 12 | < 0.8 | **1.0** | 0.70 | 320 | 1700 | 0.39 | 1.5 | 73 | 6.4 | **71** |
| M08-769-01 | 2009 | 451 | 456 | Greywacke/Siltstone | Tiriganiaq | UG | 19 | 7400 | 350 | 0.40 | 19000 | 23 | 11 | < 0.8 | < 0.7 | 0.90 | **420** | 2100 | 0.19 | 0.73 | 37 | 5.5 | 46 |
| M08-783-01 | 2011 | 38 | 47 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **41** | 16000 | 330 | **1.6** | 14000 | 67 | **17** | < 0.8 | < 0.7 | < 0.5 | 260 | 1700 | 0.49 | 1.8 | 100 | 6.5 | **89** |
| M09-823-01 | 2009 | 320 | 325 | Greywacke/Siltstone | Tiriganiaq | UG | **24** | **28000** | **1300** | 0.50 | 17000 | 70 | 14 | **1.2** | **0.70** | 1.2 | 250 | **8200** | 0.27 | 0.75 | **280** | 21 | **120** |
| M09-823-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | **29** | 13000 | 270 | 1.2 | 20000 | 64 | 10 | < 0.8 | < 0.7 | 0.70 | 260 | 2600 | 0.33 | 1.6 | 84 | 7.4 | **73** |
| M10-879-01 | 2011 | 38 | 46.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **29** | 10000 | 320 | 1.1 | 22000 | 50 | 11 | < 0.8 | < 0.7 | 0.60 | 350 | 1100 | 0.35 | 1.8 | 72 | 6.7 | **82** |
| M10-887-01 | 2011 | 17 | 24.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **24** | 11000 | 330 | 1.2 | 18000 | 55 | 12 | < 0.8 | < 0.7 | 0.50 | 250 | 2800 | 0.43 | 1.8 | 82 | 6.5 | 66 |
| M10-892-01 | 2011 | 23 | 31.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **37** | 15000 | 320 | 1.1 | 21000 | 55 | 12 | < 0.8 | < 0.7 | < 0.5 | 240 | 1500 | 0.39 | 1.6 | 100 | 6.6 | **93** |
| M10-999-01 | 2011 | 13 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **52** | 17000 | 350 | **1.4** | 16000 | 70 | 11 | < 0.8 | < 0.7 | < 0.5 | 260 | 1100 | 0.45 | 1.8 | 110 | 6.7 | **110** |
| M10-999-02 | 2011 | 121.5 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **36** | 12000 | 310 | 1.2 | 21000 | 56 | 11 | < 0.8 | < 0.7 | 0.50 | 260 | 1000 | 0.40 | 1.8 | 84 | 6.5 | 70 |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **40** | 16000 | 310 | 1.2 | 16000 | 58 | 11 | < 0.8 | < 0.7 | < 0.9 | 260 | 1400 | 0.40 | 1.6 | 88 | 6.8 | **75** |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **40** | 16000 | 310 | 1.2 | 16000 | 58 | 11 | < 0.8 | < 0.7 | < 0.9 | 260 | 1400 | 0.40 | 1.6 | 88 | 6.8 | **75** |
| M95-17-02 | 2008 | 30.39 | 34.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 310 | 1.2 | 19000 | 58 | 14 | < 0.8 | < 0.7 | < 0.9 | 290 | 790 | 0.38 | 1.5 | 84 | 6.8 | 69 |
| M95-25-01 | 2011 | 9.5 | 18 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 13000 | 310 | **1.3** | 21000 | 57 | 11 | < 0.8 | < 0.7 | < 0.5 | 320 | 1100 | 0.41 | 1.7 | 86 | 6.9 | **81** |
| M95-25-02 | 2011 | 34.5 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **24** | 8500 | 240 | 1.1 | 21000 | 47 | 8.3 | < 0.8 | **0.70** | < 0.5 | 290 | 1400 | 0.38 | 1.6 | 70 | 6.7 | 52 |
| M96-03-01 | 2011 | 10 | 19 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **42** | 17000 | 360 | **1.5** | 16000 | 72 | 12 | < 0.8 | < 0.7 | 1.6 | 240 | 1100 | 0.53 | 1.8 | 110 | 7.1 | **95** |
| M96-03-02 | 2011 | 45 | 53.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 9400 | 260 | **1.5** | 22000 | 47 | 12 | < 0.8 | **1.3** | 0.90 | 330 | 1200 | 0.38 | 1.7 | 70 | 6.5 | 61 |
| M96-19-01 | 2011 | 20 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **22** | 10000 | 260 | 1.2 | 18000 | 46 | **22** | < 0.8 | < 0.7 | 0.60 | 250 | 2000 | 0.34 | 1.5 | 67 | 5.4 | 68 |
| M96-19-02 | 2011 | 71.5 | 79 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 14000 | 360 | 1.2 | 20000 | 52 | **23** | < 0.8 | < 0.7 | 0.50 | 330 | 1500 | 0.42 | 1.7 | 86 | 6.5 | **83** |
| M96-37-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 13000 | 380 | **3.0** | 18000 | 59 | 14 | < 0.8 | < 0.7 | 0.70 | 360 | 2000 | 0.39 | 1.9 | 91 | 7.9 | **78** |
| M96-37-02 | 2011 | 85.5 | 94 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **25** | 11000 | 280 | **1.4** | 21000 | 50 | **20** | < 0.8 | < 0.7 | 1.3 | 360 | 1500 | 0.36 | 1.8 | 69 | 6.6 | 70 |
| M96-37-03 | 2011 | 129 | 138 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **33** | 13000 | 280 | **1.4** | 21000 | 55 | **21** | < 0.8 | **1.2** | 1.0 | 320 | 930 | 0.36 | 1.7 | 81 | 6.4 | **81** |
| M96-40-01 | 2011 | 14 | 23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **40** | 16000 | 310 | **2.6** | 18000 | 65 | **15** | < 0.8 | < 0.7 | 0.80 | 280 | 2200 | 0.44 | 1.8 | 110 | 7.0 | **85** |
| M96-40-02 | 2011 | 62 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 15000 | 320 | **1.6** | 14000 | 64 | 11 | < 0.8 | < 0.7 | < 0.5 | 280 | 1900 | 0.44 | 1.7 | 100 | 6.8 | **81** |
| M96-4-01 | 2011 | 10 | 20 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **21** | 10000 | 290 | **3.4** | 21000 | 46 | 13 | < 0.8 | < 0.7 | 0.70 | 310 | 1000 | 0.37 | 1.6 | 67 | 6.3 | 59 |
| M96-54-01 | 2011 | 19 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **33** | 13000 | 340 | **3.1** | 21000 | 56 | 13 | < 0.8 | < 0.7 | < 0.5 | 280 | 910 | 0.40 | 1.6 | 83 | 6.5 | **79** |
| M96-54-02 | 2011 | 57 | 66 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **36** | 15000 | 420 | **1.5** | 19000 | 66 | 12 | < 0.8 | < 0.7 | 0.90 | 270 | 1200 | 0.50 | 1.7 | 100 | 7.1 | **83** |
| M96-65-01 | 2011 | 36 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **30** | 12000 | 290 | **2.9** | 19000 | 54 | 12 | < 0.8 | < 0.7 | 0.70 | 270 | 1100 | 0.42 | 1.7 | 82 | 6.3 | **72** |
| M96-7-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **48** | 16000 | 260 | **1.5** | 14000 | 65 | 10 | < 0.8 | < 0.7 | 0.80 | 220 | 1600 | 0.43 | 1.7 | 110 | 6.8 | **83** |
| M96-7-02 | 2011 | 42 | 51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **28** | 12000 | 330 | **2.6** | 19000 | 55 | 13 | < 0.8 | **1.7** | 0.50 | 280 | 1200 | 0.42 | 1.8 | 83 | 7.1 | 67 |
| M96-77-01 | 2011 | 41 | 49.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 16000 | 310 | **2.8** | 17000 | 61 | 13 | < 0.8 | < 0.7 | 0.90 | 290 | 1200 | 0.36 | 1.7 | 97 | 7.3 | **92** |
| M96-77-02 | 2011 | 140 | 149 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 15000 | 340 | **1.8** | 20000 | 63 | **110** | < 0.8 | < 0.7 | 1.0 | 320 | 2000 | 0.45 | 1.9 | 100 | 7.2 | **96** |
| M97-121-01 | 2011 | 23 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **25** | 11000 | 230 | **2.9** | 21000 | 48 | 11 | < 0.8 | < 0.7 | 1.2 | 270 | 2800 | 0.33 | 1.9 | 80 | 6.6 | 59 |
| M97-135-03 | 2011 | 111 | 120 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **26** | 12000 | 280 | **3.0** | 22000 | 51 | 12 | < 0.8 | < 0.7 | 0.80 | 310 | 1600 | 0.32 | 1.6 | 77 | 6.4 | **76** |
| M97-149-02 | 2011 | 107.5 | 116 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 13000 | 330 | **2.7** | **26000** | 51 | **15** | < 0.8 | < 0.7 | 0.60 | **410** | 1800 | 0.25 | 1.9 | 82 | 7.6 | **84** |
| M97-94A-01 | 2011 | 75 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 13000 | 350 | 1.2 | 20000 | 54 | **15** | < 0.8 | < 0.7 | 0.70 | 300 | 2400 | 0.34 | 1.6 | 82 | 6.5 | **71** |
| M97-94A-02 | 2011 | 137 | 146 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 13000 | 250 | **2.8** | 20000 | 57 | 8.8 | < 0.8 | < 0.7 | 0.90 | 270 | 3400 | 0.37 | 1.7 | 90 | 6.6 | **73** |
| M97-95-01 | 2011 | 51 | 59.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 13000 | 340 | **1.4** | 21000 | 54 | 9.8 | < 0.8 | < 0.7 | 0.90 | 330 | 1300 | 0.29 | 1.6 | 85 | 7.3 | **78** |
| M97-95-02 | 2011 | 102.5 | 111 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 13000 | 250 | **2.9** | 19000 | 53 | 12 | < 0.8 | < 0.7 | 0.80 | 320 | 3200 | 0.40 | 1.7 | 89 | 6.2 | 64 |
| M98-194-01 | 2008 | 70 | 74.63 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 15 | 7200 | 270 | 0.60 | 19000 | 18 | 11 | < 0.8 | < 0.7 | < 0.9 | 310 | 1700 | 0.30 | 0.92 | 38 | 5.3 | 47 |
| M98-194-02 | 2008 | 55.45 | 58.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 15 | 5600 | 290 | 0.40 | 16000 | 12 | 7.8 | < 0.8 | < 0.7 | < 0.9 | 290 | 1600 | 0.27 | 0.65 | 32 | 4.3 | 36 |
| M98-194-03 | 2008 | 26.2 | 29.38 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **38** | 16000 | 310 | 0.90 | 15000 | 59 | **15** | < 0.8 | < 0.7 | 0.90 | 360 | 2600 | 0.51 | 1.5 | 93 | 7.5 | **75** |
| M98-194-04 | 2009 | 34 | 39 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **23** | 12000 | 270 | 1.1 | 19000 | 59 | 8.3 | < 0.8 | < 0.7 | 0.70 | 270 | 3300 | 0.43 | 1.6 | 79 | 6.4 | **77** |
| M98-201-01 | 2011 | 16 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 14000 | 240 | **2.9** | 18000 | 68 | 12 | < 0.8 | < 0.7 | 0.60 | 290 | 1200 | 0.34 | 1.7 | 93 | 6.8 | **80** |
| M98-201-03 | 2011 | 90 | 98 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **31** | 14000 | 360 | **2.6** | 22000 | 52 | 14 | < 0.8 | < 0.7 | < 0.5 | 330 | 1400 | 0.31 | 1.5 | 80 | 6.6 | **83** |
| M98-201-04 | 2011 | 166 | 175 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 11000 | 250 | **1.3** | 20000 | 53 | 8.0 | < 0.8 | < 0.7 | 0.90 | 300 | 2600 | 0.31 | 1.6 | 80 | 6.4 | 53 |
| M98-208-01 | 2011 | 58 | 67 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **31** | 13000 | 300 | **2.9** | 22000 | 54 | 9.1 | < 0.8 | < 0.7 | 0.80 | 280 | 2300 | 0.30 | 1.8 | 82 | 8.2 | 63 |
| M98-209-01 | 2011 | 14 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **46** | 19000 | 400 | **1.5** | 13000 | 73 | 12 | < 0.8 | < 0.7 | 0.70 | 260 | 1600 | 0.45 | 1.8 | 120 | 7.5 | **97** |
| M98-257-01 | 2009 | 291 | 296 | Greywacke/Siltstone | Tiriganiaq | UG | **27** | 13000 | 370 | **1.4** | 19000 | 64 | 11 | < 0.8 | < 0.7 | 1.4 | 250 | 3500 | 0.30 | 1.6 | 89 | 7.1 | **72** |
| M98-265-01 | 2011 | 67 | 76 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 13000 | 300 | **3.3** | 21000 | 51 | **38** | < 0.8 | < 0.7 | 0.90 | 320 | 1500 | 0.32 | 1.5 | 76 | 6.4 | **77** |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | **34** | 16000 | 360 | **1.4** | 14000 | 77 | **18** | < 0.8 | < 0.7 | 1.1 | 260 | 2400 | 0.50 | 1.7 | 110 | 7.3 | **90** |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | **34** | 16000 | 360 | **1.4** | 14000 | 77 | **18** | < 0.8 | < 0.7 | 1.1 | 260 | 2400 | 0.50 | 1.7 | 110 | 7.3 | **90** |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 17 | 8300 | 330 | 0.40 | 20000 | 21 | 9.5 | < 0.8 | < 0.7 | < 0.9 | 200 | 2000 | 0.30 | 1.1 | 43 | 6.3 | 61 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.070 | 75000 | **340** | - | **520** | 1.1 | < 0.09 | 17000 | **0.25** | 8.0 | 50 | **97** | 52000 | < 0.1 | **21000** |
| M98-269-02 | 2008 | 45.5 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.12** | 68000 | **18** | - | 390 | 0.92 | < 0.09 | 22000 | 0.15 | 6.9 | 19 | 20 | **77000** | < 0.1 | 17000 |
| M98-269-03 | 2008 | 20 | 24.24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.090** | 77000 | **31** | - | **560** | 0.90 | **0.14** | 16000 | **0.20** | 16 | **110** | 28 | 43000 | < 0.1 | **21000** |
| M98-270-01 | 2011 | 92 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | 81000 | **85** | **0.020** | **540** | 1.0 | **0.12** | 14000 | **0.27** | 17 | **170** | 45 | 36000 | < 0.1 | **21000** |
| M98-297-02 | 2008 | 75.8 | 79.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.090** | 76000 | **25** | - | **540** | 0.91 | **0.11** | 17000 | 0.15 | 6.6 | 24 | 18 | 44000 | < 0.1 | 20000 |
| M98-297-03 | 2008 | 55.16 | 59.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.38** | 79000 | **62** | - | **750** | 1.1 | **0.10** | 9800 | **0.22** | 16 | **110** | 42 | 45000 | - | **24000** |
| M98-297-04 | 2008 | 25.04 | 28.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.11** | **83000** | **27** | - | **820** | 0.92 | **0.15** | 11000 | **0.23** | 19 | **120** | 37 | 42000 | < 0.1 | **25000** |
| M98-298-01 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.39** | 80000 | **32** | - | **830** | 0.94 | **0.38** | 10000 | **0.23** | 21 | **150** | 43 | 41000 | - | **23000** |
| M98-298-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.32** | 80000 | **330** | - | **610** | 1.0 | **0.12** | 21000 | **0.27** | 18 | **140** | 40 | 39000 | - | **22000** |
| M98-298-03 | 2009 | 25 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.36** | 77000 | **15** | - | **800** | 0.89 | < 0.09 | 11000 | **0.25** | 17 | **150** | 42 | 33000 | - | 20000 |
| M98-313-01 | 2008 | 305 | 315 | Greywacke/Siltstone | Tiriganiaq | UG | **0.38** | **83000** | **84** | - | **660** | 1.1 | **0.21** | 14000 | 0.080 | 18 | **120** | 25 | 46000 | < 0.1 | **25000** |
| M98-313-02 | 2008 | 271.73 | 280 | Greywacke/Siltstone | Tiriganiaq | UG | **0.38** | **94000** | **25** | - | **1200** | 1.2 | **0.13** | 8800 | 0.15 | 20 | **160** | **66** | 45000 | < 0.1 | **33000** |
| M98-316-01_2008 | 2008 | 25 | 29.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.50** | 75000 | **2100** | - | **550** | 1.0 | **0.37** | 18000 | **0.28** | 17 | **110** | 47 | 33000 | < 0.1 | **24000** |
| M98-317-01 | 2011 | 61 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 55000 | **8.7** | **0.040** | 420 | 0.93 | **0.10** | 21000 | **0.16** | 7.3 | 93 | 15 | **130000** | < 0.1 | 13000 |
| M99-309-02 | 2011 | 36.5 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 81000 | **120** | < 0.02 | **510** | 0.95 | **0.21** | 16000 | **0.27** | 18 | **170** | 43 | 38000 | < 0.1 | **21000** |
| M99-327-01 | 2008 | 195.04 | 205.17 | Greywacke/Siltstone | Tiriganiaq | UG | **0.40** | 80000 | **44** | - | **570** | 1.1 | **0.20** | 16000 | 0.090 | 17 | **120** | **70** | 40000 | < 0.1 | **27000** |
| M99-336B-01 | 2011 | 16.5 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 78000 | **17** | < 0.02 | **740** | 1.0 | **0.12** | 21000 | **0.29** | 17 | **160** | 41 | 35000 | < 0.1 | **22000** |
| M99-336B-03 | 2011 | 140 | 148 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **87000** | **110** | **0.020** | **770** | 1.0 | **0.18** | 15000 | **0.32** | 18 | **190** | 45 | 40000 | < 0.1 | **25000** |
| M99-339-01 | 2008 | 55.3 | 59.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.31** | 71000 | **540** | - | 390 | 0.91 | **0.41** | 16000 | **0.18** | 9.2 | 40 | 21 | **68000** | < 0.1 | 17000 |
| M99-340-03 | 2008 | 26 | 29.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.38** | **83000** | **28** | - | **820** | 0.98 | **0.15** | 13000 | **0.26** | 18 | **120** | 49 | 36000 | < 0.1 | **23000** |
| M99-341-02 | 2008 | 30.25 | 34.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.36** | 78000 | **460** | - | **580** | 0.98 | **0.17** | 22000 | **0.30** | 16 | 95 | 33 | 35000 | < 0.1 | **23000** |
| M99-341-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.31** | 78000 | **64** | - | **560** | 1.0 | < 0.09 | 9000 | **0.22** | 18 | **150** | 37 | 52000 | - | **21000** |
| M99-345-01_2008 | 2008 | 80.6 | 84.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.33** | 78000 | **860** | - | **550** | 1.0 | **0.33** | 20000 | **0.16** | 8.6 | 33 | 17 | 48000 | < 0.1 | **24000** |
| M99-345-01_2009 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.37** | 74000 | **44** | - | **730** | 0.89 | **0.11** | 13000 | **0.27** | 19 | **170** | 48 | 35000 | - | 19000 |
| M99-345-02 | 2008 | 35.7 | 39.72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.43** | 75000 | **18** | - | **730** | 0.95 | **0.11** | 12000 | **0.61** | 19 | **150** | **130** | 35000 | - | **21000** |
| M99-345-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.30** | 71000 | **46** | - | **600** | 0.86 | **0.12** | 26000 | **0.29** | 18 | **150** | 43 | 41000 | - | 19000 |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.31** | 81000 | **91** | - | **610** | 1.0 | < 0.09 | 8400 | **0.23** | 20 | **140** | 42 | 40000 | - | **24000** |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.31** | 81000 | **91** | - | **610** | 1.0 | < 0.09 | 8400 | **0.23** | 20 | **140** | 42 | 40000 | - | **24000** |
| M99-346-02_2008 | 2008 | 70.23 | 74.93 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.35** | **85000** | **70** | - | **570** | 0.93 | **0.11** | 11000 | **0.25** | 21 | **120** | 45 | 40000 | < 0.1 | **25000** |
| M99-346-02_2009 | 2009 | 30 | 35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.37** | 71000 | **64** | - | **690** | 0.91 | **0.13** | 14000 | **0.31** | 18 | **170** | 45 | 31000 | - | 18000 |
| M99-346-03 | 2008 | 35.1 | 39.58 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.36** | 74000 | **11** | - | **720** | 0.95 | **0.13** | 13000 | **0.26** | 17 | **160** | 43 | 31000 | - | 20000 |
| M99-347-01 | 2011 | 60 | 68 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **85000** | **290** | **0.040** | **780** | 1.1 | **0.13** | 15000 | **0.29** | 19 | **170** | 45 | 41000 | < 0.1 | **23000** |
| M99-347-02 | 2011 | 94 | 102.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 80000 | **56** | **0.090** | **560** | 1.1 | **0.32** | 18000 | **0.25** | 18 | **160** | **63** | 39000 | < 0.1 | **21000** |
| M99-349-01 | 2008 | 65 | 69.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.26** | 73000 | **320** | - | 390 | 0.76 | < 0.09 | 17000 | **0.18** | 10 | 36 | 47 | **61000** | < 0.1 | 15000 |
| M99-349-02 | 2008 | 40.2 | 44.87 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.22** | 73000 | **50** | - | **580** | 0.99 | < 0.09 | 25000 | **0.19** | 7.1 | 20 | 16 | 54000 | < 0.1 | **22000** |
| M99-350-02 | 2008 | 50.07 | 54.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.32** | **89000** | **26** | - | **720** | 1.0 | **0.14** | 12000 | **0.23** | 17 | **120** | 29 | 42000 | < 0.1 | **29000** |
| M99-350-03 | 2008 | 25.15 | 27.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.38** | 73000 | **18** | - | **620** | 0.90 | **0.14** | 10000 | **0.24** | 17 | **110** | 36 | 34000 | - | 20000 |
| M99-385-01 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.34** | 76000 | **39** | - | **600** | 0.99 | **0.090** | 7200 | **0.27** | 20 | **150** | 39 | 38000 | - | **22000** |
| M99-386-01 | 2009 | 39 | 44 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.39** | 75000 | **2200** | - | **780** | 1.2 | **0.16** | 12000 | **0.27** | 18 | **160** | **73** | 37000 | - | **22000** |
| M99-386-02 | 2009 | 27 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.43** | 78000 | **31** | - | **870** | 1.0 | **0.13** | 7900 | **0.28** | 20 | **170** | **72** | 38000 | - | **22000** |
| M99-403-01 | 2008 | 75 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.16** | 64000 | **1300** | - | 370 | 0.67 | < 0.09 | **67000** | **0.49** | **27** | **140** | **76** | **71000** | < 0.1 | 20000 |
| M99-403-02 | 2008 | 70 | 74.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.24** | 78000 | **900** | - | **460** | 1.0 | < 0.09 | 19000 | **0.18** | 9.6 | 56 | 17 | **58000** | < 0.1 | 16000 |
| M99-403-03 | 2008 | 50.6 | 54.35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.30** | 73000 | **1300** | - | **450** | 0.98 | < 0.09 | 16000 | **0.19** | 7.6 | 34 | 13 | **71000** | < 0.1 | 20000 |
| M99-403-04 | 2008 | 25.33 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.36** | **85000** | **18** | - | **570** | 0.91 | < 0.09 | 18000 | **0.24** | 19 | **130** | 50 | 39000 | < 0.1 | **26000** |
| M99-403-05 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.43** | 75000 | **89** | - | **620** | 1.1 | **0.34** | 17000 | **0.25** | 18 | **160** | 37 | 47000 | - | **21000** |
| M99-404-01 | 2008 | 100.6 | 104.95 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.28** | 76000 | **21** | - | **430** | 0.83 | < 0.09 | 23000 | **0.21** | 9.4 | 33 | 23 | 51000 | < 0.1 | 19000 |
| M99-404-02 | 2008 | 80.28 | 84.23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.41** | 78000 | **250** | - | **520** | 0.95 | **0.17** | 15000 | **0.26** | 18 | **130** | 50 | 40000 | < 0.1 | **22000** |
| M99-404-03 | 2008 | 65.72 | 69.34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.36** | 72000 | **46** | - | **580** | 0.87 | < 0.09 | 9700 | **0.24** | 16 | **110** | 39 | 30000 | - | 16000 |
| M99-404-04 | 2008 | 30.19 | 34.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.39** | **89000** | **95** | - | **610** | 0.95 | **0.20** | 14000 | **0.30** | 19 | **130** | 47 | 43000 | < 0.1 | **25000** |
| M99-404-05 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.40** | 79000 | **45** | - | **830** | 1.1 | **0.090** | 11000 | **0.28** | 22 | **150** | 54 | 42000 | - | **22000** |
| M99-404-06 | 2009 | 23 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **0.33** | 80000 | **120** | - | **730** | 1.0 | < 0.09 | 7900 | **0.27** | 19 | **130** | 41 | 37000 | - | **23000** |
| M99-409-01 | 2011 | 25 | 33.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 75000 | **30** | < 0.02 | **540** | 0.95 | **0.14** | 13000 | **0.24** | 15 | **170** | 43 | 32000 | < 0.1 | 19000 |
| M99-409-02 | 2011 | 89 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 80000 | **31** | < 0.02 | **700** | 0.97 | **0.22** | 14000 | **0.29** | 17 | **160** | 45 | 37000 | < 0.1 | 20000 |
| M99-409-03 | 2011 | 152 | 161 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 81000 | **110** | < 0.02 | 560 | 0.98 | < 0.09 | 10000 | **0.26** | 16 | **180** | 40 | 37000 | < 0.1 | **21000** |
| M99-409-04 | 2011 | 216 | 224 | Greywacke/Siltstone | Tiriganiaq | OP/FW | - | 73000 | **160** | **0.060** | **440** | 1.0 | **0.19** | 20000 | **0.24** | 14 | **140** | 45 | **70000** | < 0.1 | 18000 |
| M99-410-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | **83000** | **44** | < 0.02 | **590** | 1.1 | **0.11** | 13000 | **0.29** | 19 | **170** | 52 | 39000 | < 0.1 | **23000** |
| M99-410-02 | 2011 | 52 | 61 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 82000 | **52** | < 0.02 | **650** | 1.1 | **0.14** | 12000 | **0.26** | 19 | **180** | 47 | 40000 | < 0.1 | **23000** |
| M99-418-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **1.2** | 80000 | **190** | - | **880** | 1.2 | **0.33** | 8900 | **0.38** | 20 | **150** | 56 | 39000 | - | **25000** |
| M99-436-01 | 2011 | 32.5 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 79000 | **30** | **0.020** | **630** | 0.98 | **0.21** | 12000 | **0.25** | 17 | **180** | 36 | 36000 | < 0.1 | 19000 |
| M99-436-02 | 2011 | 96.5 | 105 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | 81000 | **49** | < 0.02 | **570** | 1.0 | **0.17** | 10000 | **0.32** | 18 | **170** | 47 | 41000 | < 0.1 | **23000** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 17 | 8300 | 330 | 0.40 | 20000 | 21 | 9.5 | < 0.8 | < 0.7 | < 0.9 | 200 | 2000 | 0.30 | 1.1 | 43 | 6.3 | 61 |
| M98-269-02 | 2008 | 45.5 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **26** | 7500 | 250 | 0.70 | 14000 | 9.7 | 5.9 | < 0.8 | < 0.7 | < 0.9 | 330 | 1300 | 0.27 | 0.77 | 27 | 4.3 | 47 |
| M98-269-03 | 2008 | 20 | 24.24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **29** | 13000 | 290 | 1.0 | 19000 | 58 | 9.7 | < 0.8 | < 0.7 | < 0.9 | 290 | 2200 | 0.37 | 1.4 | 84 | 7.3 | 57 |
| M98-270-01 | 2011 | 92 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **32** | 13000 | 290 | **1.3** | 21000 | 56 | 10 | < 0.8 | < 0.7 | 0.80 | 290 | 1100 | 0.34 | 1.7 | 85 | 6.4 | **73** |
| M98-297-02 | 2008 | 75.8 | 79.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 18 | 6600 | 230 | 0.70 | 18000 | 13 | 8.2 | < 0.8 | < 0.7 | < 0.9 | 370 | 1600 | 0.26 | 0.82 | 36 | 4.7 | 45 |
| M98-297-03 | 2008 | 55.16 | 59.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 270 | **1.3** | 16000 | 66 | 9.2 | < 0.8 | < 0.7 | 1.1 | 260 | 2500 | 0.48 | 1.7 | 92 | 6.3 | **76** |
| M98-297-04 | 2008 | 25.04 | 28.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **40** | 16000 | 290 | **1.3** | 15000 | 67 | **15** | < 0.8 | < 0.7 | < 0.9 | 270 | 770 | 0.44 | 1.6 | 89 | 7.0 | **84** |
| M98-298-01 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 14000 | 300 | **1.5** | 18000 | 65 | 13 | < 0.8 | < 0.7 | < 0.5 | 280 | 1400 | 0.39 | 1.5 | 91 | 7.4 | **87** |
| M98-298-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **31** | 14000 | 460 | **1.5** | 20000 | 64 | **15** | **1.1** | < 0.7 | 1.2 | 330 | 1700 | 0.39 | 1.5 | 86 | 7.0 | **76** |
| M98-298-03 | 2009 | 25 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 12000 | 270 | 1.1 | 21000 | 56 | 13 | < 0.8 | < 0.7 | 1.3 | 350 | 930 | 0.33 | 1.7 | 74 | 7.4 | **74** |
| M98-313-01 | 2008 | 305 | 315 | Greywacke/Siltstone | Tiriganiaq | UG | **32** | 14000 | 260 | 1.2 | 18000 | 65 | 14 | < 0.8 | < 0.7 | < 0.9 | 290 | 3200 | 0.48 | 1.6 | 110 | 7.4 | 67 |
| M98-313-02 | 2008 | 271.73 | 280 | Greywacke/Siltstone | Tiriganiaq | UG | **44** | 16000 | 300 | **1.9** | 14000 | 76 | **15** | < 0.8 | < 0.7 | < 0.9 | 340 | 2500 | 0.53 | 1.9 | 110 | 9.8 | **97** |
| M98-316-01_2008 | 2008 | 25 | 29.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 14 | 10000 | 320 | **2.4** | 20000 | 55 | **15** | **1.0** | < 0.7 | < 0.9 | 270 | 2500 | 0.46 | 1.8 | 75 | 7.5 | 58 |
| M98-317-01 | 2011 | 61 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 19 | 8600 | 300 | 0.80 | 15000 | 17 | 6.0 | < 0.8 | < 0.7 | 0.60 | 230 | 1800 | 0.15 | 0.95 | 44 | 5.4 | 57 |
| M99-309-02 | 2011 | 36.5 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 15000 | 360 | **1.4** | 19000 | 59 | 12 | < 0.8 | < 0.7 | 0.70 | 290 | 1100 | 0.30 | 1.5 | 88 | 7.0 | **75** |
| M99-327-01 | 2008 | 195.04 | 205.17 | Greywacke/Siltstone | Tiriganiaq | UG | **26** | 12000 | 310 | 1.1 | 17000 | 69 | 11 | < 0.8 | < 0.7 | < 0.9 | 260 | 2600 | 0.52 | 1.6 | 87 | 7.8 | 62 |
| M99-336B-01 | 2011 | 16.5 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **30** | 15000 | 320 | **2.3** | 18000 | 64 | 13 | < 0.8 | < 0.7 | 0.60 | 370 | 1000 | 0.34 | 1.6 | 80 | 7.3 | 67 |
| M99-336B-03 | 2011 | 140 | 148 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **31** | 14000 | 330 | **2.9** | 20000 | 57 | **18** | < 0.8 | < 0.7 | 0.90 | 340 | 2600 | 0.43 | 1.8 | 98 | 7.1 | **88** |
| M99-339-01 | 2008 | 55.3 | 59.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **26** | 9900 | 260 | 0.60 | 16000 | 25 | **43** | < 0.8 | < 0.7 | < 0.9 | 190 | 1800 | 0.27 | 1.3 | 44 | 5.3 | 70 |
| M99-340-03 | 2008 | 26 | 29.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 13000 | 290 | 1.2 | 19000 | 56 | 13 | < 0.8 | < 0.7 | < 0.9 | 370 | 1000 | 0.45 | 1.9 | 84 | 9.0 | **83** |
| M99-341-02 | 2008 | 30.25 | 34.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 17 | 11000 | 360 | 0.80 | 22000 | 41 | 8.7 | < 0.8 | < 0.7 | < 0.9 | 330 | 2600 | 0.40 | 1.9 | 77 | 7.8 | 55 |
| M99-341-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **38** | 15000 | 320 | **1.3** | 16000 | 71 | 6.7 | < 0.8 | < 0.7 | 1.0 | 240 | 3700 | 0.35 | 1.6 | 99 | 6.9 | **80** |
| M99-345-01_2008 | 2008 | 80.6 | 84.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 20 | 8600 | 400 | 0.70 | 23000 | 18 | **45** | < 0.8 | < 0.7 | < 0.9 | 210 | 2000 | 0.36 | 1.3 | 45 | 6.2 | 43 |
| M99-345-01_2009 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 12000 | 310 | **1.3** | 20000 | 59 | 10 | < 0.8 | < 0.7 | 0.80 | 340 | 1100 | 0.32 | 1.7 | 79 | 6.9 | **72** |
| M99-345-02 | 2008 | 35.7 | 39.72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 12000 | 280 | **1.8** | 19000 | 58 | **17** | < 0.8 | < 0.7 | 1.1 | 300 | 990 | 0.35 | 1.6 | 79 | 7.9 | **150** |
| M99-345-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 13000 | 530 | **1.3** | 16000 | 61 | 12 | < 0.8 | < 0.7 | 0.70 | 310 | 1100 | 0.33 | 1.5 | 81 | 6.3 | **79** |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 290 | **1.5** | 17000 | 69 | 11 | **1.2** | < 0.7 | 1.5 | 270 | 1500 | 0.46 | 1.6 | 99 | 6.6 | **92** |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 290 | **1.5** | 17000 | 69 | 11 | **1.2** | < 0.7 | 1.5 | 270 | 1500 | 0.46 | 1.6 | 99 | 6.6 | **92** |
| M99-346-02_2008 | 2008 | 70.23 | 74.93 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 15000 | 290 | 1.2 | 19000 | 59 | 11 | < 0.8 | < 0.7 | < 0.9 | 250 | 1200 | 0.44 | 1.6 | 90 | 7.4 | 70 |
| M99-346-02_2009 | 2009 | 30 | 35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **23** | 10000 | 310 | **1.4** | 21000 | 58 | **17** | < 0.8 | < 0.7 | 1.2 | 360 | 1300 | 0.31 | 1.7 | 69 | 7.1 | **89** |
| M99-346-03 | 2008 | 35.1 | 39.58 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **25** | 11000 | 280 | 1.2 | 20000 | 54 | 14 | < 0.8 | < 0.7 | 0.80 | 330 | 1300 | 0.37 | 1.6 | 73 | 8.0 | **74** |
| M99-347-01 | 2011 | 60 | 68 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **33** | 15000 | 320 | **2.6** | 20000 | 61 | 13 | < 0.8 | < 0.7 | 0.70 | 330 | 1400 | 0.39 | 1.9 | 97 | 6.4 | **90** |
| M99-347-02 | 2011 | 94 | 102.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 14000 | 360 | **2.1** | 20000 | 60 | **19** | < 0.8 | < 0.7 | 1.4 | 280 | 1300 | 0.34 | 1.8 | 87 | 7.3 | **74** |
| M99-349-01 | 2008 | 65 | 69.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 17 | 9700 | 270 | 1.0 | 20000 | 19 | **17** | < 0.8 | < 0.7 | < 0.9 | 240 | 1900 | 0.27 | 1.1 | 45 | 5.3 | **92** |
| M99-349-02 | 2008 | 40.2 | 44.87 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 15 | 7800 | 330 | 0.50 | 19000 | 11 | 8.7 | < 0.8 | < 0.7 | < 0.9 | **450** | 1900 | 0.32 | 1.1 | 40 | 5.7 | 39 |
| M99-350-02 | 2008 | 50.07 | 54.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **32** | 15000 | 280 | **1.3** | 18000 | 57 | 7.4 | < 0.8 | < 0.7 | < 0.9 | 270 | 1800 | 0.45 | 1.5 | 93 | 7.1 | 60 |
| M99-350-03 | 2008 | 25.15 | 27.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 12000 | 260 | 1.2 | 18000 | 57 | 9.4 | < 0.8 | < 0.7 | 0.60 | 260 | 820 | 0.38 | 1.6 | 81 | 7.0 | 68 |
| M99-385-01 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 330 | **1.4** | 17000 | 66 | 12 | < 0.8 | < 0.7 | 0.70 | 250 | 1200 | 0.42 | 1.7 | 91 | 6.4 | **80** |
| M99-386-01 | 2009 | 39 | 44 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **28** | 13000 | 300 | **2.2** | 20000 | 59 | **27** | **1.0** | < 0.7 | 1.0 | 290 | 2500 | 0.45 | 1.5 | 78 | 6.7 | **87** |
| M99-386-02 | 2009 | 27 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 14000 | 290 | **1.3** | 20000 | 61 | 12 | < 0.8 | < 0.7 | 0.90 | 300 | 1200 | 0.40 | 1.7 | 85 | 7.8 | **97** |
| M99-403-01 | 2008 | 75 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **22** | 21000 | **1100** | 0.30 | 6000 | 70 | **69** | < 0.8 | < 0.7 | < 0.9 | 170 | 2800 | 0.68 | 0.51 | **160** | 6.5 | **170** |
| M99-403-02 | 2008 | 70 | 74.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 16 | 10000 | 320 | 0.70 | 18000 | 27 | **16** | < 0.8 | < 0.7 | < 0.9 | 160 | 2000 | 0.33 | 1.3 | 56 | 6.9 | 54 |
| M99-403-03 | 2008 | 50.6 | 54.35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **26** | 11000 | 250 | 0.60 | 16000 | 19 | 8.8 | < 0.8 | < 0.7 | < 0.9 | 190 | 1700 | 0.28 | 1.1 | 43 | 5.2 | 55 |
| M99-403-04 | 2008 | 25.33 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **30** | 12000 | 250 | **1.5** | 21000 | 57 | 13 | < 0.8 | < 0.7 | < 0.9 | 250 | 2800 | 0.46 | 1.8 | 87 | 7.3 | 56 |
| M99-403-05 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **36** | 14000 | 410 | **1.7** | 17000 | 71 | **32** | < 0.8 | < 0.7 | 1.1 | 290 | 3500 | 0.37 | 1.6 | 97 | 8.6 | **77** |
| M99-404-01 | 2008 | 100.6 | 104.95 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **22** | 7600 | 270 | 0.50 | 19000 | 19 | 5.6 | < 0.8 | < 0.7 | < 0.9 | 290 | 2200 | 0.26 | 0.92 | 43 | 6.0 | 50 |
| M99-404-02 | 2008 | 80.28 | 84.23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **22** | 11000 | 270 | 0.90 | 20000 | 53 | 9.4 | < 0.8 | < 0.7 | < 0.9 | 250 | 2600 | 0.36 | 1.7 | 80 | 7.1 | 52 |
| M99-404-03 | 2008 | 65.72 | 69.34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **29** | 11000 | 270 | **1.4** | 21000 | 53 | 9.0 | < 0.8 | < 0.7 | 0.90 | 300 | 1000 | 0.31 | 1.6 | 69 | 6.2 | **78** |
| M99-404-04 | 2008 | 30.19 | 34.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **40** | 16000 | 340 | 1.0 | 19000 | 60 | 14 | < 0.8 | < 0.7 | < 0.9 | 280 | 930 | 0.44 | 1.6 | 94 | 7.3 | **77** |
| M99-404-05 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **38** | 14000 | 290 | **1.4** | 19000 | 64 | 13 | < 0.8 | < 0.7 | 0.70 | 300 | 1100 | 0.39 | 1.7 | 85 | 7.0 | **93** |
| M99-404-06 | 2009 | 23 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 250 | **1.5** | 19000 | 65 | 9.4 | < 0.8 | < 0.7 | 1.4 | 260 | 1100 | 0.40 | 1.7 | 90 | 6.4 | **84** |
| M99-409-01 | 2011 | 25 | 33.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **27** | 12000 | 260 | **2.8** | 21000 | 50 | 9.1 | < 0.8 | < 0.7 | < 0.5 | 300 | 1500 | 0.25 | 1.5 | 72 | 6.2 | 70 |
| M99-409-02 | 2011 | 89 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **29** | 13000 | 300 | **1.3** | 23000 | 55 | **19** | < 0.8 | < 0.7 | 0.60 | 310 | 1200 | 0.31 | 1.5 | 84 | 6.3 | **82** |
| M99-409-03 | 2011 | 152 | 161 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **31** | 13000 | 240 | **3.1** | 22000 | 55 | 14 | < 0.8 | < 0.7 | 0.80 | 260 | 2000 | 0.34 | 1.7 | 83 | 6.4 | **81** |
| M99-409-04 | 2011 | 216 | 224 | Greywacke/Siltstone | Tiriganiaq | OP/FW | **26** | 14000 | 340 | **1.3** | 14000 | 46 | 11 | < 0.8 | < 0.7 | 0.90 | 150 | 2400 | 0.38 | 1.5 | 78 | 8.7 | **76** |
| M99-410-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **37** | 14000 | 310 | **1.5** | 19000 | 61 | **18** | < 0.8 | < 0.7 | 0.90 | 280 | 1300 | 0.38 | 1.8 | 94 | 6.6 | **80** |
| M99-410-02 | 2011 | 52 | 61 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **34** | 14000 | 290 | **3.2** | 19000 | 61 | **17** | < 0.8 | < 0.7 | 0.60 | 290 | 2000 | 0.40 | 1.8 | 90 | 6.3 | **80** |
| M99-418-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **35** | 14000 | 330 | **1.4** | 17000 | 67 | 14 | < 0.8 | < 0.7 | 0.60 | 280 | 1200 | 0.59 | 1.7 | 95 | 6.7 | **88** |
| M99-436-01 | 2011 | 32.5 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **29** | 13000 | 260 | **2.8** | 23000 | 63 | **56** | < 0.8 | < 0.7 | 0.80 | 330 | 1700 | 0.30 | 1.6 | 81 | 6.4 | **77** |
| M99-436-02 | 2011 | 96.5 | 105 | Greywacke/Siltstone | Tiriganiaq | OP/HW | **38** | 15000 | 290 | **1.4** | 18000 | 62 | 13 | < 0.8 | < 0.7 | 0.70 | 240 | 1400 | 0.37 | 1.9 | 97 | 6.5 | **83** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| | | | | | | MINIMUM | 0.060 | 22000 | 6.0 | < 0.02 | 53 | 0.37 | < 0.09 | 6100 | 0.070 | 4.8 | 17 | 13 | 28000 | <0.1 | 610 |
| | | | | | | MAXIMUM | 1.4 | 99000 | 2200 | 0.80 | 3100 | 3.5 | 2.4 | 79000 | 0.62 | 47 | 720 | 700 | 130000 | <0.1 | 37000 |
| | | | | | | MEDIAN | 0.36 | 79000 | 51 | 0.020 | 610 | 1.0 | 0.13 | 14000 | 0.24 | 18 | 150 | 43 | 41000 | nc | 22000 |
| | | | | | | AVERAGE | 0.35 | 78381 | 159 | 0.041 | 655 | 1.0 | 0.17 | 15866 | 0.25 | 18 | 137 | 48 | 44443 | nc | 21715 |
| | | | | | | STANDARD DEVIATION | 0.19 | 8192 | 340 | 0.095 | 292 | 0.25 | 0.19 | 9618 | 0.072 | 6.0 | 74 | 51 | 14094 | nc | 4656 |
| | | | | | | 75TH PERCENTILE | 0.39 | 83000 | 110 | 0.030 | 720 | 1.1 | 0.18 | 17000 | 0.27 | 20 | 170 | 49 | 46750 | nc | 24000 |
| TP-PAD-11-06 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 67000 | **88** | 0.20 | **630** | 0.98 | **0.22** | 12000 | **0.26** | 15 | **160** | 28 | 33000 | < 0.1 | 15000 |
| TP-PAD-11-04 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 69000 | **74** | 0.12 | **630** | 0.95 | **0.15** | 14000 | **0.29** | 17 | **180** | 37 | 37000 | < 0.1 | 17000 |
| TP-PAD-11-03 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 69000 | **32** | 0.13 | **1100** | 0.75 | **0.11** | 32000 | **0.24** | **28** | **150** | 53 | 55000 | < 0.1 | 13000 |
| TP-PAD-11-01 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 67000 | **42** | 0.25 | **710** | 0.86 | **0.19** | 14000 | **0.32** | 18 | **200** | 44 | 36000 | < 0.1 | 15000 |
| TP-PAD-11-02 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 82000 | **100** | 0.11 | **780** | 1.0 | **0.17** | 16000 | **0.29** | 20 | **220** | 46 | 40000 | < 0.1 | **22000** |
| TP-PAD-11-05 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 72000 | **45** | 0.13 | **750** | 0.79 | **0.10** | 21000 | **0.27** | 24 | **150** | 42 | 50000 | < 0.1 | 15000 |
| TP-PAD-11-09 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 76000 | **630** | 0.11 | **570** | 0.87 | **0.14** | 22000 | **0.24** | 24 | **170** | 58 | 47000 | < 0.1 | 19000 |
| TP-PAD-11-12 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 67000 | **76** | 0.090 | **720** | 0.94 | **0.16** | 11000 | **0.26** | 17 | **170** | 35 | 33000 | < 0.1 | 17000 |
| TP-PAD-11-07 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | **88000** | **68** | 0.090 | **660** | 1.1 | **0.15** | 14000 | **0.31** | 20 | **180** | 55 | 43000 | < 0.1 | **24000** |
| TP-PAD-11-08 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 74000 | **90** | 0.10 | **720** | 0.97 | **0.090** | 10000 | **0.27** | 18 | **150** | 29 | **58000** | < 0.1 | 18000 |
| TP-PAD-11-10 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 59000 | **470** | 0.15 | **490** | 0.70 | **0.13** | 24000 | **0.29** | 19 | **140** | 32 | **69000** | < 0.1 | 13000 |
| TP-PAD-11-11 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 78000 | **33** | 0.090 | **460** | 0.74 | **< 0.09** | 17000 | **0.24** | 22 | **150** | 47 | 50000 | < 0.1 | 13000 |
| TP-PAD-11 COMPOSITE | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | - | 76000 | **160** | 0.10 | **670** | 0.93 | **< 0.09** | 20000 | **0.29** | 21 | **170** | 40 | 49000 | < 0.1 | 17000 |
| | | | | | | MINIMUM | nc | 59000 | 32 | 0.090 | 460 | 0.70 | < 0.09 | 10000 | 0.24 | 15 | 140 | 28 | 33000 | < 0.1 | 13000 |
| | | | | | | MAXIMUM | nc | 88000 | 630 | 0.25 | 1100 | 1.1 | 0.22 | 32000 | 0.32 | 28 | 220 | 58 | 69000 | < 0.1 | 24000 |
| | | | | | | MEDIAN | nc | 72000 | 76 | 0.11 | 670 | 0.93 | 0.14 | 16000 | 0.27 | 20 | 170 | 42 | 47000 | nc | 17000 |
| | | | | | | AVERAGE | nc | 72615 | 147 | 0.13 | 684 | 0.89 | 0.14 | 17462 | 0.27 | 20 | 168 | 42 | 46154 | nc | 16769 |
| | | | | | | STANDARD DEVIATION | nc | 7556 | 185 | 0.048 | 157 | 0.12 | 0.041 | 6186 | 0.026 | 3.6 | 23 | 9.7 | 10645 | nc | 3395 |
| | | | | | | 75TH PERCENTILE | nc | 76000 | 100 | 0.13 | 720 | 0.97 | 0.16 | 21000 | 0.29 | 22 | 180 | 47 | 50000 | nc | 18000 |
| M03-496-02 | 2008 | 280.75 | 289.72 | Iron Formation | Tiriganiaq | UG | **0.25** | 59000 | **220** | - | **430** | 0.95 | < 0.09 | 30000 | 0.040 | 13 | 55 | 15 | **100000** | < 0.1 | 14000 |
| M03-508-02 | 2011 | 93 | 101 | Iron Formation | Tiriganiaq | OP/HW | - | 39000 | **47** | **0.23** | 360 | 0.93 | < 0.09 | 29000 | 0.15 | 6.9 | 100 | 7.6 | **160000** | < 0.1 | 10000 |
| M04-526-01 | 2008 | 216 | 225.05 | Iron Formation | Tiriganiaq | UG | **0.16** | 30000 | **210** | - | 66 | 0.36 | **0.13** | **46000** | 0.15 | 6.4 | 25 | 31 | **160000** | < 0.1 | 1600 |
| M07-649-01_2008 | 2008 | 280.3 | 289.65 | Iron Formation | Tiriganiaq | UG | **0.16** | 27000 | **330** | - | 73 | 0.26 | < 0.09 | 27000 | **0.33** | 5.1 | 19 | 41 | **180000** | < 0.1 | 2400 |
| M96-74-01 | 2011 | 96.5 | 103.5 | Iron Formation | Tiriganiaq | OP/FW | - | 28000 | **490** | **0.57** | 130 | 0.71 | < 0.09 | 19000 | 0.10 | 4.6 | 96 | 2.0 | **310000** | < 0.1 | 2800 |
| M99-280-01 | 2008 | 189 | 197.25 | Iron Formation | Tiriganiaq | UG | **0.13** | 31000 | **150** | - | 200 | 0.67 | < 0.09 | 21000 | 0.13 | 4.4 | 77 | 11 | **230000** | < 0.1 | 5900 |
| | | | | | | MINIMUM | 0.13 | 27000 | 47 | 0.23 | 66 | 0.26 | <0.09 | 19000 | 0.040 | 4.4 | 19 | 2.0 | 100000 | <0.1 | 1600 |
| | | | | | | MAXIMUM | 0.25 | 59000 | 490 | 0.57 | 430 | 0.95 | 0.13 | 46000 | 0.33 | 13 | 100 | 41 | 310000 | <0.1 | 14000 |
| | | | | | | MEDIAN | 0.16 | 30500 | 215 | nc | 165 | 0.69 | nc | 28000 | 0.14 | 5.8 | 66 | 13 | 170000 | nc | 4350 |
| | | | | | | AVERAGE | 0.18 | 35667 | 241 | nc | 210 | 0.65 | nc | 28667 | 0.15 | 6.7 | 62 | 18 | 190000 | nc | 6117 |
| | | | | | | STANDARD DEVIATION | 0.052 | 12193 | 153 | nc | 153 | 0.29 | nc | 9564 | 0.097 | 3.2 | 35 | 15 | 72111 | nc | 4950 |
| | | | | | | 75TH PERCENTILE | 0.18 | 37000 | 303 | nc | 320 | 0.88 | nc | 29750 | 0.15 | 6.8 | 91 | 27 | 217500 | nc | 8975 |
| GT08-02-01_2009 | 2009 | 112 | 118 | Mafic Volcanic | Tiriganiaq | OP/FW | 0.070 | 76000 | **8.9** | - | 8.4 | 0.25 | < 0.09 | **80000** | **0.72** | **45** | **140** | **97** | **84000** | - | 640 |
| GT08-04-01_2008 | 2008 | 97.41 | 102.29 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.15** | 70000 | **31** | - | 34 | 0.24 | < 0.09 | **77000** | **0.20** | **40** | **140** | **110** | **79000** | < 0.1 | 2900 |
| GT08-04-01_2009 | 2009 | 112.5 | 118.5 | Mafic Volcanic | Tiriganiaq | UG | **0.78** | 77000 | **13** | - | 87 | 0.25 | < 0.09 | **73000** | **0.56** | **43** | **160** | **120** | **85000** | - | 1800 |
| GT08-04-02 | 2008 | 80.38 | 84.3 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.14** | 63000 | **91** | - | 140 | 0.40 | < 0.09 | **86000** | **0.17** | **31** | **150** | **67** | **57000** | < 0.1 | 11000 |
| GT08-04-03 | 2008 | 69.07 | 72.93 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.49** | 54000 | **8000** | - | 250 | 0.61 | **0.28** | **80000** | **1.3** | **52** | **110** | **280** | **110000** | < 0.1 | 13000 |
| M00-474-01 | 2008 | 110 | 114.46 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.15** | 70000 | **65** | - | 160 | 0.19 | < 0.09 | **99000** | 0.14 | **45** | **160** | **130** | **74000** | < 0.1 | 4700 |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | **0.21** | 72000 | **86** | - | 140 | 0.43 | < 0.09 | **83000** | **0.27** | **42** | **150** | **110** | **78000** | - | 11000 |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | **0.10** | 74000 | **3.7** | - | 93 | 0.33 | < 0.09 | **64000** | 0.090 | **40** | **150** | **64** | **72000** | - | 7500 |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | **0.10** | 74000 | **3.7** | - | 93 | 0.33 | < 0.09 | **64000** | 0.090 | **40** | **150** | **64** | **72000** | - | 7500 |
| M05-561-02_2009 | 2009 | 101 | 106 | Mafic Volcanic | Tiriganiaq | UG | **0.17** | 68000 | **15** | - | 120 | 0.32 | < 0.09 | **80000** | 0.15 | **44** | **200** | **130** | **68000** | - | 8400 |
| M05-561-03 | 2009 | 178 | 183 | Mafic Volcanic | Tiriganiaq | UG | **0.25** | 65000 | **54** | - | 33 | 0.31 | < 0.09 | **58000** | **0.18** | **52** | 23 | **250** | **110000** | - | 1900 |
| M05-564-01 | 2009 | 366 | 372 | Mafic Volcanic | Tiriganiaq | UG | **0.090** | 81000 | **3.0** | - | 55 | 0.31 | < 0.09 | **82000** | **0.19** | **41** | **180** | **83** | **69000** | - | 2600 |
| M06-591-03 | 2011 | 70 | 78.5 | Mafic Volcanic | Tiriganiaq | OP/HW | - | 68000 | **24** | **0.11** | 140 | 0.44 | < 0.09 | **88000** | 0.080 | **43** | **180** | **100** | **65000** | < 0.1 | 11000 |
| M06-623-02 | 2011 | 81 | 87 | Mafic Volcanic | Tiriganiaq | OP/HW | - | 67000 | **4.6** | **0.040** | **1100** | 0.42 | < 0.09 | **100000** | 0.070 | **40** | **170** | **83** | **73000** | < 0.1 | 5700 |
| M07-678-01 | 2008 | 47.37 | 51.82 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.13** | 61000 | **120** | - | 100 | 0.33 | < 0.09 | **60000** | 0.15 | **36** | **110** | **100** | **72000** | < 0.1 | 7200 |
| M08-783-02 | 2011 | 163 | 172 | Mafic Volcanic | Tiriganiaq | OP/FW | - | 63000 | **25** | **0.030** | 170 | 0.41 | < 0.09 | **110000** | **0.22** | **43** | **160** | **140** | **71000** | < 0.1 | 8000 |
| M95-25-04 | 2011 | 69 | 77.5 | Mafic Volcanic | Tiriganiaq | OP/FW | - | 65000 | **43** | **0.060** | 64 | 0.36 | < 0.09 | **97000** | **0.16** | **37** | **160** | **81** | **68000** | < 0.1 | 5800 |
| M96-03-03 | 2011 | 87 | 96 | Mafic Volcanic | Tiriganiaq | OP/FW | - | 72000 | **6.3** | **0.020** | 55 | 0.29 | < 0.09 | **89000** | 0.13 | **40** | **180** | **120** | **78000** | < 0.1 | 3700 |
| M97-110-01 | 2009 | 262 | 268 | Mafic Volcanic | Tiriganiaq | UG | **0.21** | 76000 | **32** | - | **1300** | 0.69 | < 0.09 | **75000** | **0.21** | **45** | **170** | **120** | **75000** | - | 16000 |
| M97-130-01 | 2009 | 242 | 246 | Mafic Volcanic | Tiriganiaq | UG | **0.080** | 75000 | **7.2** | - | 49 | 0.21 | < 0.09 | **89000** | 0.11 | **45** | **170** | **120** | **68000** | - | 2800 |
| M97-130-02 | 2009 | 280 | 288 | Mafic Volcanic | Tiriganiaq | UG | **0.12** | 70000 | **6.4** | - | 87 | 0.23 | < 0.09 | **85000** | 0.12 | **48** | **170** | **120** | **74000** | - | 4500 |
| M97-133-01 | 2009 | 255 | 261 | Mafic Volcanic | Tiriganiaq | UG | **0.14** | 67000 | **9.0** | - | 57 | 0.17 | < 0.09 | **88000** | 0.13 | **42** | **180** | **140** | **71000** | - | 2700 |
| M97-134-01 | 2009 | 305 | 309.5 | Mafic Volcanic | Tiriganiaq | UG | **0.20** | 70000 | **9.9** | - | 90 | 0.23 | < 0.09 | **91000** | **0.16** | **48** | **170** | **140** | **67000** | - | 3300 |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | **0.18** | 73000 | **11** | - | 81 | 0.35 | < 0.09 | **89000** | **0.30** | **36** | **190** | **69** | **68000** | - | 6000 |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | **0.18** | 73000 | **11** | - | 81 | 0.35 | < 0.09 | **89000** | **0.30** | **36** | **190** | **69** | **68000** | - | 6000 |
| M97-136-01 | 2009 | 215 | 220 | Mafic Volcanic | Tiriganiaq | UG | **0.15** | 72000 | **174** | - | 130 | 0.27 | < 0.09 | **90000** | **0.16** | **47** | **160** | **110** | **77000** | - | 7000 |
| M97-137-01 | 2009 | 237 | 242 | Mafic Volcanic | Tiriganiaq | UG | **0.11** | 71000 | **4.3** | - | 170 | 0.34 | < 0.09 | **98000** | 0.10 | **39** | **190** | **90** | **62000** | - | 6400 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| | | | | | | MINIMUM | 14 | 5600 | 170 | 0.30 | 6000 | 8.7 | 5.6 | <0.8 | < 0.7 | < 0.5 | 150 | 620 | <0.02 | 0.11 | 27 | 2.4 | 36 |
| | | | | | | MAXIMUM | 63 | 40000 | 1800 | 3.4 | 26000 | 250 | 340 | 1.2 | 1.7 | 1.9 | 690 | 8200 | 1.2 | 3.2 | 280 | 21 | 170 |
| | | | | | | MEDIAN | 32 | 13000 | 310 | 1.3 | 19000 | 59 | 12 | 0.80 | 0.70 | 0.90 | 280 | 1900 | 0.40 | 1.6 | 87 | 6.7 | 76 |
| | | | | | | AVERAGE | 31 | 13394 | 342 | 1.4 | 18343 | 57 | 17 | 0.81 | 0.72 | 0.85 | 290 | 2068 | 0.40 | 1.6 | 88 | 7.0 | 77 |
| | | | | | | STANDARD DEVIATION | 8.2 | 4207 | 190 | 0.66 | 2944 | 25 | 27 | 0.058 | 0.12 | 0.25 | 64 | 1079 | 0.11 | 0.39 | 33 | 1.8 | 19 |
| | | | | | | 75TH PERCENTILE | 36 | 15000 | 340 | 1.5 | 20000 | 67 | 15 | 0.80 | 0.70 | 0.90 | 320 | 2500 | 0.46 | 1.8 | 98 | 7.4 | 85 |
| TP-PAD-11-06 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **27** | 10000 | 290 | **1.4** | 21000 | 50 | **22** | < 0.8 | < 0.7 | 0.70 | 320 | 1400 | 0.31 | 1.5 | 74 | 6.4 | 56 |
| TP-PAD-11-04 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **29** | 12000 | 370 | **2.3** | 18000 | 57 | **17** | < 0.8 | < 0.7 | < 0.5 | 290 | 1900 | 0.34 | 1.6 | 84 | 6.5 | 66 |
| TP-PAD-11-03 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **36** | 20000 | 630 | 0.90 | 17000 | 57 | **15** | < 0.8 | < 0.7 | < 0.5 | 370 | 2900 | 0.31 | 1.0 | **140** | 11 | **76** |
| TP-PAD-11-01 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **26** | 12000 | 320 | **2.3** | 19000 | 53 | **17** | < 0.8 | < 0.7 | < 0.5 | 330 | 2300 | 0.33 | 1.8 | 78 | 7.0 | 68 |
| TP-PAD-11-02 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **33** | 14000 | 350 | **1.6** | 19000 | 61 | **19** | < 0.8 | < 0.7 | 0.50 | 340 | 1800 | 0.43 | 1.7 | 94 | 7.4 | **79** |
| TP-PAD-11-05 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **35** | 17000 | 490 | **1.8** | 21000 | 56 | 11 | < 0.8 | < 0.7 | 0.70 | 280 | 3100 | 0.36 | 1.3 | **130** | 10 | **75** |
| TP-PAD-11-09 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **34** | 16000 | 470 | 1.1 | 18000 | 59 | 11 | < 0.8 | < 0.7 | < 0.5 | 300 | 2900 | 0.42 | 1.3 | 120 | 8.5 | **77** |
| TP-PAD-11-12 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **30** | 11000 | 320 | **2.2** | 17000 | 57 | 14 | < 0.8 | < 0.7 | 0.50 | 320 | 1500 | 0.37 | 1.6 | 88 | 7.1 | 67 |
| TP-PAD-11-07 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **35** | 15000 | 340 | **1.5** | 15000 | 65 | 13 | < 0.8 | < 0.7 | < 0.5 | 270 | 1900 | 0.43 | 1.7 | 110 | 7.4 | **84** |
| TP-PAD-11-08 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **34** | 14000 | 330 | **2.2** | 17000 | 61 | 11 | < 0.8 | < 0.7 | 0.60 | 260 | 2000 | 0.34 | 1.5 | 93 | 7.3 | **74** |
| TP-PAD-11-10 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **28** | 14000 | 650 | 1.1 | 13000 | 47 | **22** | < 0.8 | < 0.7 | < 0.5 | 280 | 2200 | 0.26 | 1.1 | 110 | 9.6 | **76** |
| TP-PAD-11-11 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **31** | 17000 | 440 | **1.5** | **24000** | 58 | 12 | < 0.8 | < 0.7 | < 0.5 | 270 | 3200 | 0.28 | 1.3 | **130** | 9.5 | **79** |
| TP-PAD-11 COMPOSITE | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | **34** | 16000 | 450 | **1.9** | 18000 | 58 | 14 | < 0.8 | < 0.7 | < 0.5 | 300 | 2400 | 0.34 | 1.4 | 110 | 8.4 | **79** |
| | | | | | | MINIMUM | 26 | 10000 | 290 | 0.90 | 13000 | 47 | 11 | <0.8 | <0.7 | < 0.5 | 260 | 1400 | 0.26 | 1.0 | 74 | 6.4 | 56 |
| | | | | | | MAXIMUM | 36 | 20000 | 650 | 2.3 | 24000 | 65 | 22 | <0.8 | <0.7 | 0.70 | 370 | 3200 | 0.43 | 1.8 | 140 | 11 | 84 |
| | | | | | | MEDIAN | 33 | 14000 | 370 | 1.6 | 18000 | 57 | 14 | nc | nc | 0.50 | 300 | 2200 | 0.34 | 1.5 | 110 | 7.4 | 76 |
| | | | | | | AVERAGE | 32 | 14462 | 419 | 1.7 | 18231 | 57 | 15 | nc | nc | 0.54 | 302 | 2269 | 0.35 | 1.4 | 105 | 8.2 | 74 |
| | | | | | | STANDARD DEVIATION | 3.4 | 2787 | 117 | 0.48 | 2774 | 4.7 | 3.9 | nc | nc | 0.077 | 32 | 598 | 0.054 | 0.24 | 21 | 1.5 | 7.4 |
| | | | | | | 75TH PERCENTILE | 34 | 16000 | 470 | 2.2 | 19000 | 59 | 17 | nc | nc | 0.50 | 320 | 2900 | 0.37 | 1.6 | 120 | 9.5 | 79 |
| M03-496-02 | 2008 | 280.75 | 289.72 | Iron Formation | Tiriganiaq | UG | **28** | 10000 | 340 | **3.6** | 5800 | 33 | 12 | < 0.8 | < 0.7 | < 0.9 | 210 | 1800 | 0.26 | 1.4 | 51 | 7.1 | 63 |
| M03-508-02 | 2011 | 93 | 101 | Iron Formation | Tiriganiaq | OP/HW | 18 | 7900 | 430 | 1.0 | 1600 | 19 | 6.7 | < 0.8 | < 0.7 | < 0.5 | 240 | 1300 | 0.17 | 0.69 | 33 | 5.1 | 41 |
| M04-526-01 | 2008 | 216 | 225.05 | Iron Formation | Tiriganiaq | UG | 4.0 | 7300 | 330 | 0.40 | 62 | 13 | 11 | < 0.8 | **0.70** | < 0.9 | 270 | 690 | 0.040 | 0.55 | 16 | 6.0 | 41 |
| M07-649-01_2008 | 2008 | 280.3 | 289.65 | Iron Formation | Tiriganiaq | UG | 6.0 | 7600 | 460 | 0.60 | 3300 | 8.3 | 4.6 | < 0.8 | **1.0** | < 0.9 | 170 | 570 | 0.050 | 0.40 | 21 | 4.4 | 37 |
| M96-74-01 | 2011 | 96.5 | 103.5 | Iron Formation | Tiriganiaq | OP/FW | 8.0 | 8100 | 350 | **2.1** | 960 | 11 | 5.8 | < 0.8 | < 0.7 | < 0.5 | 200 | 870 | 0.070 | 0.54 | 22 | 5.2 | 57 |
| M99-280-01 | 2008 | 189 | 197.25 | Iron Formation | Tiriganiaq | UG | 5.0 | 8900 | 310 | 0.80 | 330 | 15 | 7.3 | < 0.8 | < 0.7 | < 0.9 | 150 | 790 | 0.12 | 0.71 | 19 | 5.5 | 41 |
| | | | | | | MINIMUM | 4.0 | 7300 | 310 | 0.40 | 62 | 8.3 | 4.6 | <0.8 | < 0.7 | <0.5 | 150 | 570 | 0.040 | 0.40 | 16 | 4.4 | 37 |
| | | | | | | MAXIMUM | 28 | 10000 | 460 | 3.6 | 5800 | 33 | 12 | <0.8 | 1.0 | <0.9 | 270 | 1800 | 0.26 | 1.4 | 51 | 7.1 | 63 |
| | | | | | | MEDIAN | 7.0 | 8000 | 345 | 0.90 | 1280 | 14 | 7.0 | nc | nc | nc | 205 | 830 | 0.095 | 0.62 | 22 | 5.4 | 41 |
| | | | | | | AVERAGE | 12 | 8300 | 370 | 1.4 | 2009 | 17 | 7.9 | nc | nc | nc | 207 | 1003 | 0.12 | 0.72 | 27 | 5.6 | 47 |
| | | | | | | STANDARD DEVIATION | 9.5 | 994 | 60 | 1.2 | 2187 | 8.8 | 3.0 | nc | nc | nc | 44 | 463 | 0.085 | 0.35 | 13 | 0.92 | 11 |
| | | | | | | 75TH PERCENTILE | 16 | 8700 | 410 | 1.8 | 2875 | 18 | 10 | nc | nc | nc | 233 | 1193 | 0.16 | 0.71 | 30 | 5.9 | 53 |
| GT08-02-01_2009 | 2009 | 112 | 118 | Mafic Volcanic | Tiriganiaq | OP/FW | **40** | **24000** | **1300** | 0.50 | 18000 | **110** | 2.6 | **1.0** | < 0.7 | 0.70 | 130 | 5200 | 0.070 | 0.11 | **220** | 16 | **100** |
| GT08-04-01_2008 | 2008 | 97.41 | 102.29 | Mafic Volcanic | Tiriganiaq | OP/FW | **56** | **25000** | **1400** | 1.0 | 16000 | **96** | 3.3 | < 0.8 | < 0.7 | < 0.9 | 110 | 2800 | 0.090 | 0.077 | **220** | 8.0 | **100** |
| GT08-04-01_2009 | 2009 | 112.5 | 118.5 | Mafic Volcanic | Tiriganiaq | UG | **37** | **41000** | **1100** | 0.50 | 14000 | **150** | 2.7 | **0.90** | < 0.7 | 1.0 | 140 | 5000 | 0.090 | 0.056 | **200** | 14 | **88** |
| GT08-04-02 | 2008 | 80.38 | 84.3 | Mafic Volcanic | Tiriganiaq | OP/FW | **34** | 22000 | **1500** | 0.20 | 11000 | **87** | 7.4 | < 0.8 | < 0.7 | < 0.9 | 120 | 1900 | 0.36 | 0.092 | **190** | 5.3 | 64 |
| GT08-04-03 | 2008 | 69.07 | 72.93 | Mafic Volcanic | Tiriganiaq | OP/FW | **26** | 18000 | **3200** | **4.0** | 6500 | **88** | **28** | **1.4** | **3.1** | < 0.9 | 140 | 1800 | 0.58 | 0.64 | **140** | 6.2 | **410** |
| M00-474-01 | 2008 | 110 | 114.46 | Mafic Volcanic | Tiriganiaq | OP/FW | **45** | 23000 | **1900** | 0.20 | 18000 | **120** | 4.2 | < 0.8 | < 0.7 | < 0.9 | 96 | 2800 | 0.12 | 0.051 | **210** | 9.1 | **82** |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | **32** | **29000** | **1300** | 0.50 | 12000 | **120** | 9.9 | < 0.8 | < 0.7 | 0.80 | 110 | 4600 | 0.31 | 0.056 | **210** | 6.4 | **110** |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | **70** | **34000** | **1300** | 0.60 | 11000 | **110** | 4.3 | < 0.8 | < 0.7 | 1.6 | 130 | 1100 | 0.20 | 0.044 | **240** | 8.8 | **80** |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | **70** | **34000** | **1300** | 0.60 | 11000 | **110** | 4.3 | < 0.8 | < 0.7 | 1.6 | 130 | 1100 | 0.20 | 0.044 | **240** | 8.8 | **80** |
| M05-561-02_2009 | 2009 | 101 | 106 | Mafic Volcanic | Tiriganiaq | UG | **46** | **30000** | **1600** | 1.1 | 16000 | **110** | 5.1 | < 0.8 | < 0.7 | 1.3 | 100 | 2500 | 0.31 | 0.071 | **230** | 6.2 | **79** |
| M05-561-03 | 2009 | 178 | 183 | Mafic Volcanic | Tiriganiaq | UG | **31** | **33000** | **1400** | 0.60 | 21000 | 59 | 2.3 | < 0.8 | < 0.7 | 2.1 | 130 | **7400** | 0.030 | 0.12 | **280** | 5.2 | **120** |
| M05-564-01 | 2009 | 366 | 372 | Mafic Volcanic | Tiriganiaq | UG | **52** | **24000** | **1400** | 0.50 | 18000 | **110** | 4.2 | < 0.8 | < 0.7 | 0.80 | 140 | 4600 | 0.10 | 0.063 | **210** | 15 | **91** |
| M06-591-03 | 2011 | 70 | 78.5 | Mafic Volcanic | Tiriganiaq | OP/HW | **49** | 20000 | **1210** | 0.30 | 10000 | **96** | 4.1 | < 0.8 | < 0.7 | 0.50 | 160 | 1400 | 0.30 | 0.27 | **160** | 8.7 | **79** |
| M06-623-02 | 2011 | 81 | 87 | Mafic Volcanic | Tiriganiaq | OP/HW | **51** | **25000** | **1400** | 0.50 | 12000 | **96** | 13 | < 0.8 | **0.70** | < 0.5 | 230 | 2100 | 0.16 | 0.11 | **160** | 12 | **92** |
| M07-678-01 | 2008 | 47.37 | 51.82 | Mafic Volcanic | Tiriganiaq | OP/FW | **46** | **32000** | **960** | 0.20 | 11000 | 80 | 9.3 | < 0.8 | < 0.7 | < 0.9 | 170 | 1200 | 0.24 | 0.095 | **160** | 4.2 | **89** |
| M08-783-02 | 2011 | 163 | 172 | Mafic Volcanic | Tiriganiaq | OP/FW | **56** | 23000 | **1800** | 0.40 | 9100 | **95** | 7.2 | < 0.8 | **0.80** | < 0.5 | 140 | 4100 | 0.32 | 0.14 | **180** | 9.8 | **110** |
| M95-25-04 | 2011 | 69 | 77.5 | Mafic Volcanic | Tiriganiaq | OP/FW | **54** | 23000 | **1400** | 0.20 | 15000 | **93** | 6.4 | < 0.8 | **0.90** | < 0.5 | 160 | 2400 | 0.16 | 0.14 | **160** | 9.3 | **89** |
| M96-03-03 | 2011 | 87 | 96 | Mafic Volcanic | Tiriganiaq | OP/FW | **77** | **27000** | **1300** | 0.20 | 13000 | **100** | 3.0 | < 0.8 | < 0.7 | < 0.5 | 140 | 1000 | 0.10 | 0.097 | **170** | 12 | **110** |
| M97-110-01 | 2009 | 262 | 268 | Mafic Volcanic | Tiriganiaq | UG | **44** | 22000 | **1800** | 1.0 | 14000 | **100** | **42** | < 0.8 | < 0.7 | 0.80 | 240 | 4400 | 0.76 | 0.36 | **280** | 8.8 | **110** |
| M97-130-01 | 2009 | 242 | 246 | Mafic Volcanic | Tiriganiaq | UG | **44** | 21000 | **1700** | 0.50 | **24000** | **110** | 2.5 | < 0.8 | < 0.7 | 1.4 | 96 | 3700 | 0.080 | 0.045 | **260** | 13 | **92** |
| M97-130-02 | 2009 | 280 | 288 | Mafic Volcanic | Tiriganiaq | UG | **53** | **35000** | **1400** | 0.90 | 16000 | **110** | 3.9 | < 0.8 | < 0.7 | 1.3 | 98 | 1100 | 0.13 | 0.038 | **220** | 4.4 | **81** |
| M97-133-01 | 2009 | 255 | 261 | Mafic Volcanic | Tiriganiaq | UG | **54** | **26000** | **1600** | 0.70 | 18000 | **120** | 2.7 | < 0.8 | < 0.7 | 0.50 | 95 | 2000 | 0.080 | 0.031 | **250** | 6.6 | **87** |
| M97-134-01 | 2009 | 305 | 309.5 | Mafic Volcanic | Tiriganiaq | UG | **65** | **26000** | **1600** | 0.60 | 12000 | **120** | 3.8 | < 0.8 | < 0.7 | 2.1 | 130 | 1200 | 0.10 | 0.048 | **240** | 9.1 | **95** |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | **54** | 20000 | **2000** | 1.1 | 13000 | **100** | 7.1 | < 0.8 | < 0.7 | 1.6 | 130 | 4500 | 0.23 | 0.080 | **280** | 5.4 | **110** |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | **54** | 20000 | **2000** | 1.1 | 13000 | **100** | 7.1 | < 0.8 | < 0.7 | 1.6 | 130 | 4500 | 0.23 | 0.080 | **280** | 5.4 | **110** |
| M97-136-01 | 2009 | 215 | 220 | Mafic Volcanic | Tiriganiaq | UG | **44** | 23000 | **1600** | 0.60 | 15000 | **110** | 6.6 | < 0.8 | < 0.7 | 2.1 | 110 | 4300 | 0.29 | 0.051 | **270** | 7.3 | **96** |
| M97-137-01 | 2009 | 237 | 242 | Mafic Volcanic | Tiriganiaq | UG | **54** | 21000 | **1600** | 0.60 | 16000 | **94** | 4.4 | < 0.8 | < 0.7 | **3.4** | 110 | 3700 | 0.26 | 0.052 | **240** | 9.3 | **83** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M97-138-01 | 2009 | 221.5 | 227.5 | Mafic Volcanic | Tiriganiaq | UG | **0.19** | 72000 | **16** | - | 53 | 0.25 | < 0.09 | **87000** | **0.23** | **47** | **170** | **120** | **74000** | - | 4400 |
| M97-139-01 | 2009 | 142 | 149 | Mafic Volcanic | Tiriganiaq | UG | **0.64** | 68000 | **290** | - | 290 | 0.77 | **0.29** | **83000** | **0.69** | **46** | **140** | **170** | **69000** | - | **21000** |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | **0.32** | 68000 | **15** | - | 150 | 0.30 | < 0.09 | **63000** | **0.26** | **37** | **150** | **130** | **80000** | - | 6800 |
| M97-143-01 | 2009 | 564 | 570 | Mafic Volcanic | Tiriganiaq | UG | **0.080** | 64000 | **2.9** | - | 26 | 0.21 | < 0.09 | **79000** | 0.080 | **38** | **190** | 58 | **65000** | - | 2100 |
| M97-92-01 | 2009 | 209 | 215 | Mafic Volcanic | Tiriganiaq | UG | **0.11** | 68000 | **16** | - | 140 | 0.30 | < 0.09 | **73000** | **0.24** | **38** | **150** | **110** | **64000** | - | 5000 |
| M97-93-01 | 2009 | 428.5 | 434.5 | Mafic Volcanic | Tiriganiaq | UG | **0.17** | 75000 | **61** | - | 72 | 0.26 | < 0.09 | **68000** | **0.18** | **42** | **140** | **100** | **86000** | - | 4800 |
| M97-95-03 | 2011 | 213 | 222 | Mafic Volcanic | Tiriganiaq | OP/FW | - | 65000 | **7.8** | **0.070** | 70 | 0.30 | < 0.09 | **91000** | 0.14 | **43** | **160** | **110** | **74000** | < 0.1 | 3800 |
| M98-297-01 | 2008 | 111 | 114 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.11** | 69000 | **1000** | - | **430** | 0.61 | < 0.09 | **80000** | **0.27** | **37** | **150** | **81** | **64000** | < 0.1 | 20000 |
| M98-316-01_2009 | 2009 | 93 | 99 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.14** | 75000 | **8.8** | - | 6.9 | 0.22 | < 0.09 | **89000** | **0.33** | **46** | **170** | **110** | **75000** | - | 620 |
| M98-318-01 | 2009 | 100 | 105 | Mafic Volcanic | Tiriganiaq | UG | **0.20** | 66000 | **7.5** | - | 86 | 0.30 | < 0.09 | **83000** | **0.20** | **41** | **200** | **130** | **66000** | - | 5700 |
| M99-336B-04 | 2011 | 249 | 258 | Mafic Volcanic | Tiriganiaq | OP/FW | - | 67000 | **28** | **0.020** | 41 | 0.28 | < 0.09 | **100000** | **0.21** | **42** | **180** | **110** | **65000** | < 0.1 | 3400 |
| M99-340-01 | 2008 | 103 | 107.78 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.14** | 67000 | **73** | - | 170 | 0.43 | < 0.09 | **68000** | 0.15 | **36** | **180** | **68** | **64000** | < 0.1 | 14000 |
| M99-341-01 | 2008 | 80.6 | 84.4 | Mafic Volcanic | Tiriganiaq | OP/FW | **0.24** | 66000 | **250** | - | 120 | 0.50 | < 0.09 | **79000** | 0.12 | **41** | **170** | **62** | **72000** | < 0.1 | 14000 |
| M99-345-01 | 2011 | 109 | 117 | Mafic Volcanic | Tiriganiaq | OP/HW | - | 67000 | **47** | **0.050** | 130 | 0.39 | < 0.09 | **80000** | **0.16** | **37** | **190** | **87** | **61000** | < 0.1 | 10000 |
| M99-348-01 | 2009 | 193 | 198 | Mafic Volcanic | Tiriganiaq | UG | **0.18** | 73000 | **5.4** | - | 85 | 0.26 | < 0.09 | **91000** | **0.18** | **45** | **200** | **130** | **60000** | - | 5400 |
| M99-409-05 | 2011 | 224 | 234 | Mafic Volcanic | Tiriganiaq | OP/FW | - | 74000 | **170** | **0.030** | 180 | 0.42 | < 0.09 | **66000** | **0.33** | **37** | **170** | **68** | **72000** | < 0.1 | 10000 |
| | | | | | | MINIMUM | 0.070 | 54000 | 2.9 | 0.020 | 6.9 | 0.17 | <0.09 | 58000 | 0.070 | 31 | 23 | 58 | 57000 | <0.1 | 620 |
| | | | | | | MAXIMUM | 0.78 | 81000 | 8000 | 0.11 | 1300 | 0.77 | 0.29 | 110000 | 1.3 | 52 | 200 | 280 | 110000 | <0.1 | 21000 |
| | | | | | | MEDIAN | 0.15 | 70000 | 16 | 0.040 | 93 | 0.31 | nc | 83000 | 0.18 | 42 | 170 | 110 | 72000 | nc | 5800 |
| | | | | | | AVERAGE | 0.20 | 69558 | 253 | 0.048 | 161 | 0.35 | nc | 82419 | 0.24 | 42 | 162 | 110 | 72698 | nc | 6978 |
| | | | | | | STANDARD DEVIATION | 0.15 | 4987 | 1220 | 0.029 | 246 | 0.13 | nc | 11815 | 0.22 | 4.5 | 30 | 44 | 10591 | nc | 4793 |
| | | | | | | 75TH PERCENTILE | 0.20 | 73000 | 63 | 0.060 | 145 | 0.41 | nc | 89000 | 0.25 | 45 | 180 | 125 | 75000 | nc | 9200 |
| M06-591-02 | 2011 | 40 | 50 | Ore/GW | Tiriganiaq | OP/HW | - | 63000 | **180** | **0.040** | **430** | 1.1 | < 0.09 | 20000 | **0.16** | 7.6 | 81 | 7.0 | **100000** | < 0.1 | 15000 |
| M06-629-01 | 2011 | 107 | 115 | Ore/GW | Tiriganiaq | OP/HW | - | 76000 | **7000** | **0.79** | 390 | 1.1 | **0.54** | **47000** | **0.17** | **34** | **190** | **88** | **63000** | < 0.1 | **22000** |
| M99-417-01 | 2011 | 124 | 136 | Ore/GW | Tiriganiaq | OP/HW | - | 58000 | **260** | **1.8** | **570** | 1.1 | < 0.09 | 24000 | **0.18** | 6.9 | **120** | 21 | **94000** | < 0.1 | 17000 |
| | | | | | | MINIMUM | nc | 58000 | 180 | 0.040 | 390 | 1.1 | <0.09 | 20000 | 0.16 | 6.9 | 81 | 7.0 | 63000 | <0.1 | 15000 |
| | | | | | | MAXIMUM | nc | 76000 | 7000 | 1.8 | 570 | 1.1 | 0.54 | 47000 | 0.18 | 34 | 190 | 88 | 100000 | <0.1 | 22000 |
| | | | | | | MEDIAN | nc | 63000 | 260 | 0.79 | 430 | 1.1 | nc | 24000 | 0.17 | 7.6 | 120 | 21 | 94000 | nc | 17000 |
| | | | | | | AVERAGE | nc | 65667 | 2480 | 0.88 | 463 | 1.1 | nc | 30333 | 0.17 | 16 | 130 | 39 | 85667 | nc | 18000 |
| | | | | | | STANDARD DEVIATION | nc | 9292 | 3915 | 0.88 | 95 | 0 | nc | 14572 | 0.0100 | 15 | 55 | 43 | 19858 | nc | 3606 |
| | | | | | | 75TH PERCENTILE | nc | 69500 | 3630 | 1.3 | 500 | 1.1 | nc | 35500 | 0.18 | 21 | 155 | 55 | 97000 | nc | 19500 |
| M00-473-01 | 2011 | 134 | 142 | Ore/MV | Tiriganiaq | OP/FW | - | 58000 | **2400** | **1.3** | 340 | 0.62 | **0.19** | **79000** | **1.7** | **39** | **180** | **110** | **62000** | < 0.1 | 15000 |
| M00-483-01 | 2011 | 147 | 156 | Ore/MV | Tiriganiaq | OP/FW | - | 63000 | **1800** | **0.32** | 270 | 0.95 | < 0.09 | **83000** | **0.35** | **37** | **170** | **93** | **63000** | < 0.1 | **22000** |
| M00-490-01 | 2011 | 181 | 189 | Ore/MV | Tiriganiaq | OP/FW | - | 64000 | **5700** | **113** | 220 | 0.96 | **0.27** | **72000** | **1.2** | **39** | **180** | **73** | **60000** | < 0.1 | 18000 |
| M95-25-03 | 2011 | 51.5 | 60 | Ore/MV | Tiriganiaq | OP/HW | - | 71000 | **7200** | **1.5** | **450** | 1.4 | **0.46** | 28000 | **0.31** | 18 | **170** | **76** | **72000** | < 0.1 | **23000** |
| | | | | | | MINIMUM | nc | 58000 | 1800 | 0.32 | 220 | 0.62 | <0.09 | 28000 | 0.31 | 18 | 170 | 73 | 60000 | <0.1 | 15000 |
| | | | | | | MAXIMUM | nc | 71000 | 7200 | 113 | 450 | 1.4 | 0.46 | 83000 | 1.7 | 39 | 180 | 110 | 72000 | <0.1 | 23000 |
| | | | | | | MEDIAN | nc | 63500 | 4050 | 1.4 | 305 | 0.96 | 0.23 | 75500 | 0.78 | 38 | 175 | 85 | 62500 | nc | 20000 |
| | | | | | | AVERAGE | nc | 64000 | 4275 | 29 | 320 | 0.98 | 0.25 | 65500 | 0.89 | 33 | 175 | 88 | 64250 | nc | 19500 |
| | | | | | | STANDARD DEVIATION | nc | 5354 | 2597 | 56 | 100 | 0.32 | 0.16 | 25410 | 0.68 | 10 | 5.8 | 17 | 5315 | nc | 3697 |
| | | | | | | 75TH PERCENTILE | nc | 65750 | 6075 | 29 | 368 | 1.1 | 0.32 | 80000 | 1.3 | 39 | 180 | 97 | 65250 | nc | 22250 |
| LODE 1000 ORE | 2011 | - | - | LODE 1000 Ore | Tiriganiaq | PAD | - | 48000 | **9400** | 17 | 320 | 0.93 | **1.7** | 37000 | **2.2** | 21 | **200** | **130** | 46000 | < 0.1 | 18000 |
| LODE 1100 ORE | 2011 | - | - | LODE 1100 Ore | Tiriganiaq | PAD | - | 43000 | **5000** | 3.1 | **580** | 1.0 | **4.0** | 20000 | **0.59** | 6.4 | **150** | 29 | **110000** | < 0.1 | 13000 |
| | | | | | | | | | | | | | | | | | | | | | |
| M04-519-01 | 2011 | 40 | 48 | Mafic Volcanic | Wesmeg | OP/HW | - | 50000 | **4.8** | **0.040** | 70 | 0.30 | < 0.09 | **82000** | 0.13 | **40** | **150** | **82** | **74000** | < 0.1 | 6500 |
| M04-519-02 | 2011 | 70 | 79 | Mafic Volcanic | Wesmeg | OP/HW | - | 52000 | **39** | **0.060** | 110 | 0.33 | < 0.09 | **59000** | 0.12 | **39** | **180** | **75** | **75000** | < 0.1 | 8600 |
| M04-519-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | - | 47000 | **70** | **0.17** | 77 | 0.46 | < 0.09 | **83000** | **0.19** | **47** | **300** | **150** | **85000** | < 0.1 | 7000 |
| M04-519-04 | 2011 | 127.5 | 136.5 | Mafic Volcanic | Wesmeg | OP/HW | - | 55000 | **43** | **0.080** | 72 | 0.44 | < 0.09 | **56000** | **0.19** | **37** | 94 | **79** | **93000** | < 0.1 | 4700 |
| M10-981-01 | 2011 | 17 | 27 | Mafic Volcanic | Wesmeg | OP/HW | - | 61000 | **5.3** | **0.070** | 180 | 0.66 | < 0.09 | **61000** | **0.28** | **37** | 80 | **130** | **98000** | < 0.1 | 4100 |
| M10-981-02 | 2011 | 50 | 59 | Mafic Volcanic | Wesmeg | OP/HW | - | 69000 | **3.2** | **0.070** | 150 | 0.45 | < 0.09 | **66000** | **0.20** | **36** | **180** | **130** | **95000** | < 0.1 | 5500 |
| M10-981-03 | 2011 | 84.5 | 93 | Mafic Volcanic | Wesmeg | OP/FW | - | 44000 | **21** | **0.060** | 290 | 0.77 | < 0.09 | **60000** | **0.44** | **40** | 72 | **170** | **96000** | < 0.1 | 5600 |
| M10-981-04 | 2011 | 111 | 120 | Mafic Volcanic | Wesmeg | OP/FW | - | 64000 | **5.7** | **0.070** | 220 | 0.37 | < 0.09 | **70000** | **0.20** | **42** | **220** | **110** | **82000** | < 0.1 | 4500 |
| M10-985-01 | 2011 | 23 | 32 | Mafic Volcanic | Wesmeg | OP/HW | - | **90000** | **22** | **0.040** | **680** | 0.90 | < 0.09 | 15000 | **0.31** | 18 | **160** | 53 | 42000 | < 0.1 | **21000** |
| M10-985-02 | 2011 | 57 | 65 | Mafic Volcanic | Wesmeg | OP/HW | - | 80000 | **22** | **0.040** | **490** | 0.92 | < 0.09 | 23000 | **0.24** | 21 | **130** | 21 | **90000** | < 0.1 | 18600 |
| M10-987-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Wesmeg | OP/HW | - | 39000 | **190** | **0.050** | 49 | 0.26 | < 0.09 | **74000** | **0.18** | **48** | **310** | **130** | **79000** | < 0.1 | 1500 |
| M10-987-02 | 2011 | 84 | 93 | Mafic Volcanic | Wesmeg | OP/HW | - | 66000 | **150** | **0.040** | 120 | 0.35 | < 0.09 | **70000** | **0.19** | **37** | **240** | **110** | **84000** | < 0.1 | 8300 |
| M10-987-04 | 2011 | 215 | 223 | Mafic Volcanic | Wesmeg | OP/FW | - | 51000 | **34** | **0.050** | 20 | 0.38 | < 0.09 | **74000** | **0.18** | **37** | **200** | **87** | **110000** | < 0.1 | 860 |
| M10-988-01 | 2011 | 22 | 30 | Mafic Volcanic | Wesmeg | OP/HW | - | 28000 | **24** | **0.040** | 11 | 0.34 | < 0.09 | **57000** | 0.15 | **47** | **260** | **150** | **93000** | < 0.1 | 620 |
| M10-988-02 | 2011 | 60 | 68 | Mafic Volcanic | Wesmeg | OP/HW | - | 64000 | **35** | **0.070** | 29 | 0.43 | < 0.09 | **82000** | **0.20** | **37** | **140** | **130** | **88000** | < 0.1 | 1200 |
| M10-988-03 | 2011 | 159.5 | 168 | Mafic Volcanic | Wesmeg | OP/HW | - | 57000 | **15** | **0.040** | 4.5 | 0.29 | < 0.09 | **85000** | 0.10 | **40** | **230** | **100** | **83000** | < 0.1 | 320 |
| M10-992-01 | 2011 | 13.5 | 22 | Mafic Volcanic | Wesmeg | OP/FW | - | 67000 | **12** | **0.070** | 8.9 | 0.17 | < 0.09 | **83000** | 0.060 | **45** | **190** | **110** | **80000** | < 0.1 | 940 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M97-138-01 | 2009 | 221.5 | 227.5 | Mafic Volcanic | Tiriganiaq | UG | **40** | **25000** | **1500** | 0.60 | 14000 | **150** | 3.2 | < 0.8 | < 0.7 | 1.0 | 120 | 4100 | 0.14 | 0.053 | **200** | 12 | **87** |
| M97-139-01 | 2009 | 142 | 149 | Mafic Volcanic | Tiriganiaq | UG | 9.0 | **29000** | **1500** | 0.70 | 13000 | **120** | **410** | **0.90** | < 0.7 | 0.90 | 150 | 3700 | 0.66 | 0.26 | **190** | 3.1 | 67 |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | **32** | **41000** | **1100** | 0.80 | 16000 | **120** | 12 | < 0.8 | < 0.7 | 0.90 | 100 | 4000 | 0.19 | 0.051 | **180** | 3.4 | **110** |
| M97-143-01 | 2009 | 564 | 570 | Mafic Volcanic | Tiriganiaq | UG | **67** | **34000** | **1400** | 0.50 | 11000 | **110** | 3.0 | < 0.8 | < 0.7 | 1.3 | 110 | 1600 | 0.050 | 0.035 | **210** | 8.0 | **71** |
| M97-92-01 | 2009 | 209 | 215 | Mafic Volcanic | Tiriganiaq | UG | **37** | **27000** | **1400** | 0.60 | 21000 | **110** | 2.8 | < 0.8 | **0.90** | 1.2 | 140 | 2600 | 0.13 | 0.31 | **170** | 7.7 | **78** |
| M97-93-01 | 2009 | 428.5 | 434.5 | Mafic Volcanic | Tiriganiaq | UG | **35** | **24000** | **1700** | 0.80 | 18000 | **110** | 6.2 | < 0.8 | < 0.7 | 1.1 | 89 | 5600 | 0.17 | 0.060 | **220** | 6.3 | **120** |
| M97-95-03 | 2011 | 213 | 222 | Mafic Volcanic | Tiriganiaq | OP/FW | **45** | **27000** | **1300** | 0.20 | 16000 | **100** | 2.0 | < 0.8 | < 0.7 | < 0.5 | 99 | 2900 | 0.040 | 0.079 | **170** | 12 | **73** |
| M98-297-01 | 2008 | 111 | 114 | Mafic Volcanic | Tiriganiaq | OP/FW | **26** | 22000 | **1700** | 0.20 | 9700 | **95** | **16** | < 0.8 | < 0.7 | < 0.9 | 160 | 2300 | 0.69 | 0.15 | **180** | 8.1 | **100** |
| M98-316-01_2009 | 2009 | 93 | 99 | Mafic Volcanic | Tiriganiaq | OP/FW | **60** | **31000** | **1300** | 0.50 | 7000 | **110** | 7.5 | **0.90** | < 0.7 | 1.2 | 190 | 1500 | 0.030 | 0.074 | **200** | 15 | **88** |
| M98-318-01 | 2009 | 100 | 105 | Mafic Volcanic | Tiriganiaq | UG | **67** | 23000 | **1800** | 1.1 | 12000 | **98** | 5.1 | < 0.8 | < 0.7 | 0.90 | 130 | 2100 | 0.26 | 0.076 | **250** | 5.9 | **100** |
| M99-336B-04 | 2011 | 249 | 258 | Mafic Volcanic | Tiriganiaq | OP/FW | **43** | 19000 | **2000** | 0.30 | 15000 | **97** | 4.7 | < 0.8 | < 0.7 | < 0.5 | 110 | 4400 | 0.050 | 0.18 | **180** | 15 | **110** |
| M99-340-01 | 2008 | 103 | 107.78 | Mafic Volcanic | Tiriganiaq | OP/FW | **47** | 21000 | **1200** | 0.40 | 12000 | **95** | 7.5 | < 0.8 | < 0.7 | < 0.9 | 160 | 3000 | 0.55 | 0.10 | **220** | 6.5 | **110** |
| M99-341-01 | 2008 | 80.6 | 84.4 | Mafic Volcanic | Tiriganiaq | OP/FW | **36** | **27000** | **1100** | 0.50 | 8800 | **85** | 11 | < 0.8 | < 0.7 | < 0.9 | 180 | 2500 | 0.52 | 0.19 | **190** | 5.6 | **99** |
| M99-345-01 | 2011 | 109 | 117 | Mafic Volcanic | Tiriganiaq | OP/HW | **52** | 20000 | **1100** | **1.8** | 11000 | **97** | 5.4 | < 0.8 | < 0.7 | 0.50 | 160 | 3100 | 0.32 | 0.085 | **170** | 7.9 | **86** |
| M99-348-01 | 2009 | 193 | 198 | Mafic Volcanic | Tiriganiaq | UG | **65** | 23000 | **1500** | 0.70 | 14000 | **100** | 3.8 | < 0.8 | < 0.7 | 0.80 | 120 | 1700 | 0.23 | 0.063 | **240** | 7.2 | **85** |
| M99-409-05 | 2011 | 224 | 234 | Mafic Volcanic | Tiriganiaq | OP/FW | **56** | 23000 | 930 | **1.4** | 14000 | **88** | 7.1 | < 0.8 | < 0.7 | 0.60 | 140 | 2900 | 0.26 | 0.33 | **180** | 9.5 | **130** |
| | | | | | | MINIMUM | 9.0 | 18000 | 930 | 0.20 | 6500 | 59 | 2.0 | <0.8 | < 0.7 | < 0.5 | 89 | 1000 | 0.030 | 0.031 | 140 | 3.1 | 64 |
| | | | | | | MAXIMUM | 77 | 41000 | 3200 | 4.0 | 24000 | 150 | 410 | 1.4 | 3.1 | 3.4 | 240 | 7400 | 0.76 | 0.64 | 280 | 16 | 410 |
| | | | | | | MEDIAN | 47 | 24000 | 1400 | 0.60 | 14000 | 100 | 5.1 | 0.80 | 0.70 | 0.90 | 130 | 2800 | 0.20 | 0.079 | 210 | 8.0 | 92 |
| | | | | | | AVERAGE | 48 | 25977 | 1502 | 0.70 | 13863 | 104 | 16 | 0.83 | 0.77 | 1.1 | 134 | 3033 | 0.24 | 0.12 | 210 | 8.5 | 101 |
| | | | | | | STANDARD DEVIATION | 14 | 5625 | 379 | 0.62 | 3694 | 16 | 62 | 0.098 | 0.37 | 0.58 | 33 | 1478 | 0.19 | 0.12 | 38 | 3.3 | 51 |
| | | | | | | 75TH PERCENTILE | 55 | 29000 | 1650 | 0.80 | 16000 | 110 | 7.5 | 0.80 | 0.70 | 1.3 | 145 | 4200 | 0.31 | 0.13 | 240 | 9.7 | 110 |
| M06-591-02 | 2011 | 40 | 50 | Ore/GW | Tiriganiaq | OP/HW | 20 | 7900 | 330 | 1.1 | 19000 | 17 | **18** | < 0.8 | < 0.7 | 0.60 | 270 | 1900 | 0.24 | 1.0 | 37 | 4.8 | 53 |
| M06-629-01 | 2011 | 107 | 115 | Ore/GW | Tiriganiaq | OP/HW | **33** | 16000 | 660 | **1.6** | 8000 | 83 | **27** | **4.2** | < 0.7 | 1.1 | 190 | 2600 | 0.72 | 1.1 | **140** | 7.8 | 62 |
| M99-417-01 | 2011 | 124 | 136 | Ore/GW | Tiriganiaq | OP/HW | 18 | 7700 | 310 | 0.90 | 17000 | 17 | 9.8 | < 0.8 | < 0.7 | 1.5 | 290 | 2300 | 0.22 | 0.98 | 42 | 5.4 | 61 |
| | | | | | | MINIMUM | 18 | 7700 | 310 | 0.90 | 8000 | 17 | 9.8 | <0.8 | <0.7 | 0.60 | 190 | 1900 | 0.22 | 0.98 | 37 | 4.8 | 53 |
| | | | | | | MAXIMUM | 33 | 16000 | 660 | 1.6 | 19000 | 83 | 27 | 4.2 | <0.7 | 1.5 | 290 | 2600 | 0.72 | 1.1 | 140 | 7.8 | 62 |
| | | | | | | MEDIAN | 20 | 7900 | 330 | 1.1 | 17000 | 17 | 18 | nc | nc | 1.1 | 270 | 2300 | 0.24 | 1.0 | 42 | 5.4 | 61 |
| | | | | | | AVERAGE | 24 | 10533 | 433 | 1.2 | 14667 | 39 | 18 | nc | nc | 1.1 | 250 | 2267 | 0.39 | 1.0 | 73 | 6.0 | 59 |
| | | | | | | STANDARD DEVIATION | 8.1 | 4735 | 197 | 0.36 | 5859 | 38 | 8.6 | nc | nc | 0.45 | 53 | 351 | 0.28 | 0.064 | 58 | 1.6 | 4.9 |
| | | | | | | 75TH PERCENTILE | 27 | 11950 | 495 | 1.4 | 18000 | 50 | 23 | nc | nc | 1.3 | 280 | 2450 | 0.48 | 1.1 | 91 | 6.6 | 62 |
| M00-473-01 | 2011 | 134 | 142 | Ore/MV | Tiriganiaq | OP/FW | **30** | 21000 | **1500** | **1.5** | 7100 | **92** | **17** | **0.80** | < 0.7 | 0.50 | 160 | 2000 | 0.64 | 0.21 | **160** | 7.2 | **640** |
| M00-483-01 | 2011 | 147 | 156 | Ore/MV | Tiriganiaq | OP/FW | 17 | 19000 | **1600** | 0.60 | 8200 | **88** | **17** | < 0.8 | < 0.7 | < 0.5 | 160 | 4000 | 0.83 | 0.36 | **170** | 9.6 | **110** |
| M00-490-01 | 2011 | 181 | 189 | Ore/MV | Tiriganiaq | OP/FW | 17 | 20000 | **1200** | **8.8** | 15000 | **90** | **130** | **1.9** | < 0.7 | < 0.5 | 220 | 3100 | 0.71 | 0.51 | **150** | 4.9 | **310** |
| M95-25-03 | 2011 | 51.5 | 60 | Ore/MV | Tiriganiaq | OP/HW | **28** | 17000 | 510 | **5.0** | 11000 | 54 | **66** | **2.4** | < 0.7 | 0.70 | 180 | 2800 | 0.48 | 1.6 | 96 | 7.5 | **73** |
| | | | | | | MINIMUM | 17 | 17000 | 510 | 0.60 | 7100 | 54 | 17 | < 0.8 | <0.7 | < 0.5 | 160 | 2000 | 0.48 | 0.21 | 96 | 4.9 | 73 |
| | | | | | | MAXIMUM | 30 | 21000 | 1600 | 8.8 | 15000 | 92 | 130 | 2.4 | <0.7 | 0.70 | 220 | 4000 | 0.83 | 1.6 | 170 | 9.6 | 640 |
| | | | | | | MEDIAN | 23 | 19500 | 1350 | 3.3 | 9600 | 89 | 42 | 1.4 | nc | nc | 170 | 2950 | 0.68 | 0.44 | 155 | 7.4 | 210 |
| | | | | | | AVERAGE | 23 | 19250 | 1203 | 4.0 | 10325 | 81 | 58 | 1.5 | nc | nc | 180 | 2975 | 0.67 | 0.67 | 144 | 7.3 | 283 |
| | | | | | | STANDARD DEVIATION | 7.0 | 1708 | 492 | 3.7 | 3523 | 18 | 54 | 0.81 | nc | nc | 28 | 826 | 0.15 | 0.63 | 33 | 1.9 | 260 |
| | | | | | | 75TH PERCENTILE | 29 | 20250 | 1525 | 6.0 | 12000 | 91 | 82 | 2.0 | nc | nc | 190 | 3325 | 0.74 | 0.78 | 163 | 8.0 | 393 |
| LODE 1000 ORE | 2011 | - | - | LODE 1000 Ore | Tiriganiaq | PAD | 12 | 12000 | 650 | **6.2** | 4600 | 53 | **210** | 1.8 | < 0.7 | 1.7 | 140 | 1500 | 0.64 | 0.99 | 84 | 7.0 | **580** |
| LODE 1100 ORE | 2011 | - | - | LODE 1100 Ore | Tiriganiaq | PAD | 15 | 7500 | 330 | **9.6** | 7300 | 20 | **2600** | 1.7 | < 0.7 | < 0.5 | 300 | 1300 | 0.39 | 1.3 | 42 | 5.6 | 53 |
| | | | | | | | | | | | | | | | | | | | | | | |
| M04-519-01 | 2011 | 40 | 48 | Mafic Volcanic | Wesmeg | OP/HW | **50** | **35000** | **1200** | 0.10 | 14000 | **110** | 3.4 | < 0.8 | < 0.7 | < 0.5 | 100 | 1200 | 0.16 | 0.073 | **150** | 3.1 | **78** |
| M04-519-02 | 2011 | 70 | 79 | Mafic Volcanic | Wesmeg | OP/HW | **40** | **36000** | 950 | 0.20 | 15000 | **93** | 3.2 | < 0.8 | < 0.7 | < 0.5 | 75 | 1600 | 0.24 | 0.049 | **170** | 2.4 | **96** |
| M04-519-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | **24** | **38000** | **1400** | 0.60 | 12000 | **96** | 4.2 | < 0.8 | < 0.7 | < 0.5 | 110 | 5200 | 0.18 | 0.27 | **180** | 4.2 | **90** |
| M04-519-04 | 2011 | 127.5 | 136.5 | Mafic Volcanic | Wesmeg | OP/HW | **26** | 22000 | **1400** | 0.30 | 17000 | 40 | 2.3 | **1.0** | < 0.7 | 0.70 | 77 | **9400** | 0.14 | 0.14 | **240** | 7.8 | **110** |
| M10-981-01 | 2011 | 17 | 27 | Mafic Volcanic | Wesmeg | OP/HW | **24** | **30000** | **1000** | 0.50 | 18000 | 51 | 3.3 | < 0.8 | < 0.7 | 0.90 | 140 | **11000** | 0.19 | 0.23 | **260** | 16 | **130** |
| M10-981-02 | 2011 | 50 | 59 | Mafic Volcanic | Wesmeg | OP/HW | **31** | **30000** | **1100** | 0.40 | 18000 | 65 | 2.5 | < 0.8 | < 0.7 | 0.60 | 100 | **7500** | 0.13 | 0.43 | **200** | 14 | **110** |
| M10-981-03 | 2011 | 84.5 | 93 | Mafic Volcanic | Wesmeg | OP/FW | **33** | **24000** | **1800** | 0.30 | 17000 | 62 | 3.7 | < 0.8 | < 0.7 | < 0.5 | 83 | **11000** | 0.18 | 0.37 | **300** | 11 | **180** |
| M10-981-04 | 2011 | 111 | 120 | Mafic Volcanic | Wesmeg | OP/FW | **27** | **29000** | **1200** | 0.50 | 15000 | **86** | 2.8 | **1.1** | < 0.7 | 0.70 | 120 | **6500** | 0.13 | 0.22 | **210** | 20 | **98** |
| M10-985-01 | 2011 | 23 | 32 | Mafic Volcanic | Wesmeg | OP/HW | **34** | 15000 | 350 | **1.5** | 23000 | 56 | 14 | < 0.8 | < 0.7 | 0.70 | **390** | 1200 | 0.36 | 1.4 | 89 | 7.0 | **91** |
| M10-985-02 | 2011 | 57 | 65 | Mafic Volcanic | Wesmeg | OP/HW | **39** | 20000 | 580 | 1.0 | 12000 | 51 | 4.1 | < 0.8 | < 0.7 | 0.70 | 160 | 5200 | 0.27 | 1.0 | **150** | 9.9 | **99** |
| M10-987-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Wesmeg | OP/HW | **33** | **34000** | **1600** | 0.40 | 8600 | **110** | 2.4 | < 0.8 | < 0.7 | 0.70 | 120 | 4700 | 0.050 | 0.080 | **190** | 5.2 | **84** |
| M10-987-02 | 2011 | 84 | 93 | Mafic Volcanic | Wesmeg | OP/HW | **37** | **38000** | **1000** | 0.30 | 14000 | **88** | 3.5 | < 0.8 | < 0.7 | < 0.5 | 120 | 2900 | 0.23 | 0.23 | **160** | 6.0 | **110** |
| M10-987-04 | 2011 | 215 | 223 | Mafic Volcanic | Wesmeg | OP/FW | **30** | **28000** | **1200** | 0.30 | 13000 | 66 | 2.1 | **1.4** | < 0.7 | 0.60 | 94 | **8700** | < 0.02 | 0.14 | **270** | 19 | **110** |
| M10-988-01 | 2011 | 22 | 30 | Mafic Volcanic | Wesmeg | OP/HW | **34** | **29000** | **1600** | 0.20 | 10000 | **100** | 1.7 | < 0.8 | < 0.7 | 0.60 | 69 | 5400 | 0.060 | 0.15 | **240** | 8.6 | **130** |
| M10-988-02 | 2011 | 60 | 68 | Mafic Volcanic | Wesmeg | OP/HW | **32** | **27000** | **1700** | 0.30 | 18000 | 64 | 1.7 | **0.90** | < 0.7 | 0.60 | 110 | **7500** | < 0.02 | 0.16 | **200** | 18 | **96** |
| M10-988-03 | 2011 | 159.5 | 168 | Mafic Volcanic | Wesmeg | OP/HW | **28** | **30000** | **1200** | 0.20 | 12000 | **110** | 1.2 | **2.0** | < 0.7 | < 0.5 | 100 | **6100** | < 0.02 | 0.095 | **240** | 13 | **95** |
| M10-992-01 | 2011 | 13.5 | 22 | Mafic Volcanic | Wesmeg | OP/FW | **29** | **29000** | **1400** | 0.10 | 10000 | **90** | 1.9 | **1.1** | < 0.7 | < 0.5 | 130 | 4200 | < 0.02 | 0.069 | **190** | 12 | **79** |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M10-992-02 | 2011 | 43.5 | 52.5 | Mafic Volcanic | Wesmeg | OP/FW | - | 73000 | **22** | **0.060** | 14 | 0.23 | < 0.09 | **83000** | 0.10 | **42** | **170** | **96** | **79000** | < 0.1 | 1300 |
| M10-992-03 | 2011 | 83 | 92 | Mafic Volcanic | Wesmeg | OP/FW | - | 33000 | **11** | **0.030** | 41 | 0.29 | < 0.09 | **64000** | 0.11 | **45** | **230** | 55 | **63000** | < 0.1 | 3800 |
| M10-992-05 | 2011 | 135 | 144 | Mafic Volcanic | Wesmeg | OP/FW | - | 65000 | **40** | **0.060** | 33 | 0.43 | < 0.09 | **68000** | **0.22** | **36** | **110** | **150** | **95000** | < 0.1 | 2400 |
| M10-994-01 | 2011 | 28 | 36.5 | Mafic Volcanic | Wesmeg | OP/HW | - | 53000 | **17** | **0.050** | 3.3 | 0.22 | < 0.09 | **78000** | **0.17** | **45** | **390** | **120** | **93000** | < 0.1 | 220 |
| M10-994-02 | 2011 | 58 | 67 | Mafic Volcanic | Wesmeg | OP/HW | - | 69000 | **61** | **0.040** | 170 | 0.59 | < 0.09 | **61000** | **0.23** | **43** | **110** | **84** | **92000** | < 0.1 | 7200 |
| M10-994-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | - | 68000 | **44** | **0.10** | 87 | 0.44 | < 0.09 | **80000** | 0.14 | **35** | **180** | **79** | **82000** | < 0.1 | 8000 |
| M10-994-04 | 2011 | 131.5 | 140 | Mafic Volcanic | Wesmeg | OP/FW | - | 71000 | **32** | **0.090** | 31 | 0.26 | < 0.09 | **69000** | 0.14 | **45** | **210** | **90** | **84000** | < 0.1 | 1700 |
| M10-998-01 | 2011 | 10 | 19 | Mafic Volcanic | Wesmeg | OP/HW | - | 67000 | **24** | **0.060** | 12 | 0.35 | < 0.09 | **63000** | **0.16** | **42** | **170** | **99** | **92000** | < 0.1 | 740 |
| M10-998-02 | 2011 | 36 | 45 | Mafic Volcanic | Wesmeg | OP/HW | - | 62000 | **13** | **0.10** | 160 | 0.60 | < 0.09 | **59000** | **0.39** | **40** | 64 | **140** | **100000** | < 0.1 | 6400 |
| M10-998-03 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/HW | - | 78000 | **28** | **0.050** | 180 | 0.56 | < 0.09 | **64000** | **0.28** | **46** | **210** | **110** | **81000** | < 0.1 | 12000 |
| M10-998-04 | 2011 | 97 | 106 | Mafic Volcanic | Wesmeg | OP/FW | - | 60000 | **9.1** | **0.050** | 100 | 0.39 | < 0.09 | **71000** | **0.20** | **38** | **260** | **100** | **75000** | < 0.1 | 4700 |
| M10-998-05 | 2011 | 191 | 200 | Mafic Volcanic | Wesmeg | OP/FW | - | 33000 | **210** | **0.040** | 9.9 | 0.25 | < 0.09 | **78000** | **0.23** | **63** | **1100** | 31 | **72000** | < 0.1 | 360 |
| M11-1042-01 | 2011 | 16 | 24.5 | Mafic Volcanic | Wesmeg | OP/HW | - | 65000 | **66** | **0.060** | 190 | 0.40 | < 0.09 | **61000** | **0.18** | **40** | **190** | **75** | **83000** | < 0.1 | 9700 |
| M11-1042-02 | 2011 | 59 | 68 | Mafic Volcanic | Wesmeg | OP/HW | - | 57000 | **730** | **0.080** | **1300** | 1.9 | < 0.09 | **46000** | **0.42** | **82** | **540** | **320** | **87000** | < 0.1 | 11000 |
| M11-1042-03 | 2011 | 99 | 107 | Mafic Volcanic | Wesmeg | OP/HW | - | 31000 | **70** | **0.050** | 31 | 0.53 | < 0.09 | **42000** | **0.23** | **77** | **960** | 54 | **86000** | < 0.1 | 720 |
| M11-1051-01 | 2011 | 51 | 59 | Mafic Volcanic | Wesmeg | OP/HW | - | 60000 | **190** | **0.050** | 230 | 0.46 | < 0.09 | **59000** | **0.20** | **39** | **210** | **77** | **68000** | < 0.1 | 13000 |
| M11-1051-02 | 2011 | 89 | 99.5 | Mafic Volcanic | Wesmeg | OP/HW | - | 46000 | **200** | **0.050** | 68 | 0.49 | < 0.09 | **63000** | **0.18** | **76** | **990** | **75** | **88000** | < 0.1 | 2100 |
| M11-1099-01 | 2011 | 17 | 25 | Mafic Volcanic | Wesmeg | OP/HW | - | 74000 | **73** | **0.10** | 300 | 0.66 | **0.39** | **62000** | **0.37** | **39** | **270** | **150** | **130000** | < 0.1 | 14000 |
| M11-1099-02 | 2011 | 38 | 46 | Mafic Volcanic | Wesmeg | OP/HW | - | 80000 | **39** | **0.060** | 110 | 0.45 | < 0.09 | **96000** | **0.18** | **46** | **280** | **150** | **96000** | < 0.1 | 1300 |
| M11-1099-03 | 2011 | 72 | 80 | Mafic Volcanic | Wesmeg | OP/HW | - | 62000 | **8.1** | **0.060** | 62 | 0.55 | < 0.09 | **60000** | **0.53** | **37** | **170** | 59 | **86000** | < 0.1 | 3200 |
| M95-11-01 | 2011 | 40 | 47 | Mafic Volcanic | Wesmeg | OP/HW | - | 58000 | **19** | **0.12** | 99 | 0.48 | < 0.09 | **83000** | **0.35** | **34** | **150** | **110** | **83000** | < 0.1 | 3200 |
| M95-12-01 | 2011 | 41 | 50 | Mafic Volcanic | Wesmeg | OP/HW | - | 62000 | **18** | **0.060** | 140 | 0.69 | < 0.09 | **69000** | **0.43** | **36** | **130** | 48 | **86000** | < 0.1 | 6600 |
| M95-22-01 | 2011 | 11 | 20 | Mafic Volcanic | Wesmeg | OP/HW | - | 64000 | **25** | **0.040** | **510** | 0.43 | < 0.09 | **85000** | **0.24** | **43** | **270** | **97** | **76000** | < 0.1 | 5800 |
| M95-22-02 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/FW | - | 66000 | **4.2** | **0.040** | 140 | 0.42 | < 0.09 | **66000** | **0.19** | **43** | **240** | **95** | **80000** | < 0.1 | 3900 |
| M96-50-01 | 2011 | 30 | 40 | Mafic Volcanic | Wesmeg | OP/HW | - | 75000 | **24** | **0.040** | 30 | 0.25 | < 0.09 | **75000** | 0.12 | **46** | **160** | **67** | **85000** | < 0.1 | 1400 |
| M96-51-02 | 2011 | 40 | 50 | Mafic Volcanic | Wesmeg | OP/HW | - | 64000 | **66** | **0.090** | 87 | 0.49 | < 0.09 | **55000** | **0.29** | **43** | 68 | **190** | **89000** | < 0.1 | 3800 |
| M96-51-03 | 2011 | 73 | 82 | Mafic Volcanic | Wesmeg | OP/FW | - | 67000 | **370** | **0.060** | 98 | 0.40 | < 0.09 | **76000** | **0.18** | **45** | **210** | **79** | **79000** | < 0.1 | 6900 |
| M97-111-01 | 2011 | 21 | 30 | Mafic Volcanic | Wesmeg | OP/HW | - | 66000 | **21** | **0.060** | 110 | 0.19 | < 0.09 | **92000** | 0.14 | **45** | **140** | **130** | **73000** | < 0.1 | 5800 |
| M97-111-02 | 2011 | 95 | 104 | Mafic Volcanic | Wesmeg | OP/FW | - | 59000 | **14** | **0.13** | 79 | 0.22 | < 0.09 | **71000** | **0.20** | **43** | **130** | **130** | **75000** | < 0.1 | 4500 |
| M97-111-03 | 2011 | 126 | 133 | Mafic Volcanic | Wesmeg | OP/FW | - | 51000 | **12** | **0.050** | 13 | 0.23 | < 0.09 | **65000** | **0.18** | **47** | **270** | **110** | **98000** | < 0.1 | 350 |
| M97-111-04 | 2011 | 186.5 | 195 | Mafic Volcanic | Wesmeg | OP/FW | - | 64000 | **6.1** | **0.060** | 65 | 0.25 | < 0.09 | **63000** | **0.16** | **43** | **300** | **99** | **80000** | < 0.1 | 1900 |
| M97-176-01 | 2011 | 19 | 27.5 | Mafic Volcanic | Wesmeg | OP/HW | - | 55000 | **18** | **0.090** | 25 | 0.25 | < 0.09 | **85000** | **0.21** | **50** | **330** | **180** | **100000** | < 0.1 | 780 |
| M97-176-02 | 2011 | 112 | 121 | Mafic Volcanic | Wesmeg | OP/HW | - | 70000 | **4.9** | **0.060** | 40 | 0.23 | < 0.09 | **65000** | 0.11 | **41** | **180** | 55 | **79000** | < 0.1 | 2400 |
| M97-176-03 | 2011 | 196 | 205.5 | Mafic Volcanic | Wesmeg | OP/FW | - | 60000 | **21** | **0.050** | 74 | 0.32 | < 0.09 | **77000** | **0.21** | **37** | **120** | **83** | **89000** | < 0.1 | 6000 |
| M98-222-01 | 2011 | 16 | 22 | Mafic Volcanic | Wesmeg | OP/HW | - | 65000 | **51** | **0.060** | 170 | 0.50 | < 0.09 | **70000** | **0.42** | **39** | **140** | **80** | **85000** | < 0.1 | 12000 |
| M98-222-02 | 2011 | 56 | 65 | Mafic Volcanic | Wesmeg | OP/HW | - | 63000 | **7.9** | **0.060** | 150 | 0.36 | < 0.09 | **78000** | **0.23** | **40** | **220** | **95** | **78000** | < 0.1 | 5900 |
| M98-222-03 | 2011 | 104 | 113.5 | Mafic Volcanic | Wesmeg | OP/HW | - | 66000 | **8.7** | **0.070** | 87 | 0.36 | < 0.09 | **73000** | **0.20** | **41** | **190** | **130** | **77000** | < 0.1 | 2700 |
| M98-223-01 | 2011 | 20.5 | 29 | Mafic Volcanic | Wesmeg | OP/HW | - | 64000 | **150** | **0.080** | 43 | 0.31 | < 0.09 | **87000** | 0.13 | **44** | **270** | **110** | **78000** | < 0.1 | 3200 |
| W94-48-01 | 2011 | 15 | 20 | Mafic Volcanic | Wesmeg | OP/HW | - | 56000 | **12** | **0.070** | 25 | 0.49 | < 0.09 | **65000** | 0.14 | **42** | **160** | **120** | **90000** | < 0.1 | 920 |
| | | | | | | MINIMUM | nc | 28000 | 3.2 | 0.030 | 3.3 | 0.17 | <0.09 | 15000 | 0.060 | 18 | 64 | 21 | 42000 | <0.1 | 220 |
| | | | | | | MAXIMUM | nc | 90000 | 730 | 0.17 | 1300 | 1.9 | 0.39 | 96000 | 0.53 | 82 | 1100 | 320 | 130000 | <0.1 | 21000 |
| | | | | | | MEDIAN | nc | 63500 | 23 | 0.060 | 83 | 0.40 | nc | 69000 | 0.20 | 42 | 190 | 100 | 84500 | nc | 4000 |
| | | | | | | AVERAGE | nc | 60464 | 61 | 0.064 | 137 | 0.44 | nc | 68339 | 0.22 | 43 | 243 | 106 | 84982 | nc | 5031 |
| | | | | | | STANDARD DEVIATION | nc | 12345 | 114 | 0.025 | 204 | 0.26 | nc | 14625 | 0.098 | 11 | 204 | 46 | 12168 | nc | 4552 |
| | | | | | | 75TH PERCENTILE | nc | 67000 | 54 | 0.070 | 153 | 0.49 | nc | 78000 | 0.23 | 45 | 263 | 130 | 92000 | nc | 6675 |
| M10-987-03 | 2011 | 179 | 188 | Ultramafic | Wesmeg | OP/FW | - | 26000 | **170** | **0.060** | 9.0 | 0.75 | < 0.09 | 31000 | 0.13 | **100** | **1900** | 45 | **110000** | < 0.1 | 130 |
| M10-992-04 | 2011 | 107 | 113 | Ultramafic | Wesmeg | OP/FW | - | 36000 | **37** | **0.040** | 7.1 | 0.30 | < 0.09 | **84000** | 0.13 | **48** | **310** | **180** | **94000** | < 0.1 | 230 |
| M10-994-05 | 2011 | 15 | 24 | Ultramafic | Wesmeg | OP/HW | - | 66000 | **16** | **0.070** | 100 | 0.31 | < 0.09 | **74000** | 0.13 | **37** | **260** | 48 | **67000** | < 0.1 | 6300 |
| | | | | | | MINIMUM | nc | 26000 | 16 | 0.040 | 7.1 | 0.30 | <0.09 | 31000 | 0.13 | 37 | 260 | 45 | 67000 | <0.1 | 130 |
| | | | | | | MAXIMUM | nc | 66000 | 170 | 0.070 | 100 | 0.75 | <0.09 | 84000 | 0.13 | 100 | 1900 | 180 | 110000 | <0.1 | 6300 |
| | | | | | | MEDIAN | nc | 36000 | 37 | 0.060 | 9.0 | 0.31 | nc | 74000 | 0.13 | 48 | 310 | 48 | 94000 | nc | 230 |
| | | | | | | AVERAGE | nc | 42667 | 74 | 0.057 | 39 | 0.45 | nc | 63000 | 0.13 | 62 | 823 | 91 | 90333 | nc | 2220 |
| | | | | | | STANDARD DEVIATION | nc | 20817 | 84 | 0.015 | 53 | 0.26 | nc | 28160 | 0 | 34 | 933 | 77 | 21733 | nc | 3534 |
| | | | | | | 75TH PERCENTILE | nc | 51000 | 104 | 0.065 | 55 | 0.53 | nc | 79000 | 0.13 | 74 | 1105 | 114 | 102000 | nc | 3265 |
| M96-51-01 | 2011 | 10 | 20 | Ore/MV | Wesmeg | OP/HW | - | 54000 | **40** | **0.13** | 120 | 0.51 | < 0.09 | **75000** | **0.16** | **43** | **290** | **97** | **70000** | < 0.1 | 8300 |
| M98-223-02 | 2011 | 80 | 90 | Ore/MV | Wesmeg | OP/HW | - | 52000 | **8.3** | **0.46** | 140 | 0.53 | < 0.09 | **66000** | **0.28** | **37** | **130** | **330** | **89000** | < 0.1 | 8900 |
| M98-223-03 | 2011 | 175 | 180 | Ore/MV | Wesmeg | OP/FW | - | 54000 | **10** | **0.17** | 79 | 0.37 | < 0.09 | **54000** | **0.34** | **31** | 100 | **130** | **100000** | < 0.1 | 3800 |
| | | | | | | MINIMUM | nc | 52000 | 8.3 | 0.13 | 79 | 0.37 | <0.09 | 54000 | 0.16 | 31 | 100 | 97 | 70000 | <0.1 | 3800 |
| | | | | | | MAXIMUM | nc | 54000 | 40 | 0.46 | 140 | 0.53 | <0.09 | 75000 | 0.34 | 43 | 290 | 330 | 100000 | <0.1 | 8900 |
| | | | | | | MEDIAN | nc | 54000 | 10 | 0.17 | 120 | 0.51 | nc | 66000 | 0.28 | 37 | 130 | 130 | 89000 | nc | 8300 |
| | | | | | | AVERAGE | nc | 53333 | 19 | 0.25 | 113 | 0.47 | nc | 65000 | 0.26 | 37 | 173 | 186 | 86333 | nc | 7000 |
| | | | | | | STANDARD DEVIATION | nc | 1155 | 18 | 0.18 | 31 | 0.087 | nc | 10536 | 0.092 | 6.0 | 102 | 126 | 15177 | nc | 2787 |
| | | | | | | 75TH PERCENTILE | nc | 54000 | 25 | 0.32 | 130 | 0.52 | nc | 70500 | 0.31 | 40 | 210 | 230 | 94500 | nc | 8600 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M10-992-02 | 2011 | 43.5 | 52.5 | Mafic Volcanic | Wesmeg | OP/FW | **37** | **28000** | **1300** | 0.20 | 22000 | 81 | 1.4 | < 0.8 | < 0.7 | < 0.5 | 82 | 3400 | 0.020 | 0.069 | **170** | 9.1 | **78** |
| M10-992-03 | 2011 | 83 | 92 | Mafic Volcanic | Wesmeg | OP/FW | **58** | **32000** | **1100** | 0.10 | 11000 | **140** | 9.1 | < 0.8 | < 0.7 | < 0.5 | 92 | 750 | 0.090 | 0.049 | **150** | 2.7 | 60 |
| M10-992-05 | 2011 | 135 | 144 | Mafic Volcanic | Wesmeg | OP/FW | **28** | **30000** | **1500** | 0.40 | 21000 | 56 | 2.1 | **0.80** | < 0.7 | 0.80 | 95 | **8500** | 0.040 | 0.17 | **200** | 14 | **120** |
| M10-994-01 | 2011 | 28 | 36.5 | Mafic Volcanic | Wesmeg | OP/HW | **29** | **49000** | **1200** | 0.20 | 11000 | **110** | 2.4 | < 0.8 | < 0.7 | < 0.5 | 100 | 5600 | < 0.02 | 0.16 | **190** | 9.5 | **100** |
| M10-994-02 | 2011 | 58 | 67 | Mafic Volcanic | Wesmeg | OP/HW | **31** | **30000** | **1200** | 0.40 | 23000 | 62 | 3.5 | < 0.8 | < 0.7 | 0.50 | 120 | **7100** | 0.17 | 0.49 | **180** | 10 | **110** |
| M10-994-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | **33** | **32000** | **1100** | 0.40 | 16000 | 81 | 4.9 | < 0.8 | < 0.7 | 0.70 | 81 | 4900 | 0.28 | 0.23 | **170** | 10 | **93** |
| M10-994-04 | 2011 | 131.5 | 140 | Mafic Volcanic | Wesmeg | OP/FW | **27** | **43000** | **1000** | 0.30 | 12000 | **110** | 2.2 | **1.8** | < 0.7 | 0.60 | 110 | **5900** | 0.060 | 0.092 | **220** | 17 | **92** |
| M10-998-01 | 2011 | 10 | 19 | Mafic Volcanic | Wesmeg | OP/HW | **29** | **33000** | **1040** | 0.30 | 14000 | 63 | 1.7 | **2.1** | < 0.7 | 0.80 | 110 | **9500** | < 0.02 | 0.16 | **280** | 23 | **100** |
| M10-998-02 | 2011 | 36 | 45 | Mafic Volcanic | Wesmeg | OP/HW | **31** | **31000** | **1100** | 0.50 | 18000 | 60 | 4.5 | **1.0** | < 0.7 | 1.1 | 150 | **12000** | 0.32 | 0.36 | **300** | 21 | **110** |
| M10-998-03 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/HW | **42** | **36000** | **1180** | 0.30 | 18000 | **120** | 5.6 | < 0.8 | < 0.7 | 1.2 | 87 | 5500 | 0.47 | 0.17 | **220** | 10 | **130** |
| M10-998-04 | 2011 | 97 | 106 | Mafic Volcanic | Wesmeg | OP/FW | **43** | **28000** | **1270** | 0.30 | 13000 | **100** | 4.9 | < 0.8 | < 0.7 | 0.70 | 95 | 5300 | 0.26 | 0.15 | **180** | 14 | **99** |
| M10-998-05 | 2011 | 191 | 200 | Mafic Volcanic | Wesmeg | OP/FW | **23** | **70000** | **1100** | 0.30 | 2200 | **330** | 8.2 | < 0.8 | < 0.7 | < 0.5 | 130 | 2200 | 0.030 | 0.15 | 120 | 3.7 | **110** |
| M11-1042-01 | 2011 | 16 | 24.5 | Mafic Volcanic | Wesmeg | OP/HW | **43** | **39000** | **970** | 0.30 | 11000 | **96** | 1.7 | < 0.8 | < 0.7 | < 0.5 | 70 | 2900 | 0.32 | 0.15 | **180** | 4.6 | **110** |
| M11-1042-02 | 2011 | 59 | 68 | Mafic Volcanic | Wesmeg | OP/HW | **33** | **54000** | 930 | 0.60 | 14000 | **500** | 8.1 | **143** | < 0.7 | 1.7 | 360 | 5000 | 0.51 | 1.1 | **150** | 11 | **190** |
| M11-1042-03 | 2011 | 99 | 107 | Mafic Volcanic | Wesmeg | OP/HW | **24** | **82000** | **1200** | 0.30 | 7500 | **470** | 4.9 | **47** | < 0.7 | 0.70 | 97 | 4100 | 0.030 | 0.35 | **140** | 3.5 | **180** |
| M11-1051-01 | 2011 | 51 | 59 | Mafic Volcanic | Wesmeg | OP/HW | **29** | **36000** | 930 | 0.40 | 14000 | **100** | 2.3 | **39** | < 0.7 | 0.60 | 88 | 3200 | 0.36 | 0.21 | **160** | 4.0 | **85** |
| M11-1051-02 | 2011 | 89 | 99.5 | Mafic Volcanic | Wesmeg | OP/HW | **21** | **73000** | **1300** | 0.40 | 8000 | **470** | 3.2 | **19** | < 0.7 | 0.90 | 150 | 4700 | 0.070 | 0.52 | **160** | 11 | **120** |
| M11-1099-01 | 2011 | 17 | 25 | Mafic Volcanic | Wesmeg | OP/HW | **35** | **40000** | **1700** | 1.0 | 8700 | **94** | **39** | **18** | < 0.7 | 2.2 | 82 | **6100** | 0.58 | 0.77 | **210** | 6.2 | **360** |
| M11-1099-02 | 2011 | 38 | 46 | Mafic Volcanic | Wesmeg | OP/HW | **26** | **39000** | **1700** | 0.50 | 18000 | **120** | 6.1 | **13** | < 0.7 | 1.8 | 180 | **7500** | 0.030 | 0.18 | **230** | 23 | **110** |
| M11-1099-03 | 2011 | 72 | 80 | Mafic Volcanic | Wesmeg | OP/HW | **41** | **32000** | **1300** | 0.80 | 11000 | 81 | 4.8 | **7.2** | < 0.7 | 1.5 | 80 | **7200** | 0.050 | 0.27 | **190** | 30 | **120** |
| M95-11-01 | 2011 | 40 | 47 | Mafic Volcanic | Wesmeg | OP/HW | **34** | **26000** | **1600** | 0.40 | 14000 | 74 | 3.4 | **5.9** | < 0.7 | 0.80 | 180 | **6500** | 0.070 | 0.20 | **190** | 16 | **100** |
| M95-12-01 | 2011 | 41 | 50 | Mafic Volcanic | Wesmeg | OP/HW | **33** | **25000** | **1300** | 0.60 | 15000 | 66 | 3.3 | **4.1** | < 0.7 | 1.6 | 110 | **9000** | 0.22 | 0.55 | **190** | 24 | **110** |
| M95-22-01 | 2011 | 11 | 20 | Mafic Volcanic | Wesmeg | OP/HW | **41** | **33000** | **1300** | 0.30 | 13000 | **120** | 7.3 | **3.2** | < 0.7 | 0.70 | 140 | 4500 | 0.20 | 0.15 | **180** | 13 | **110** |
| M95-22-02 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/FW | **39** | **35000** | **1200** | 0.30 | 17000 | **110** | 3.7 | **2.8** | < 0.7 | 1.1 | 110 | **6700** | 0.21 | 0.20 | **200** | 20 | **110** |
| M96-50-01 | 2011 | 30 | 40 | Mafic Volcanic | Wesmeg | OP/HW | 20 | **30000** | **1200** | 0.30 | 20000 | **110** | 2.9 | **3.9** | < 0.7 | 0.90 | 140 | **6000** | 0.040 | 0.23 | **200** | 16 | **99** |
| M96-51-02 | 2011 | 40 | 50 | Mafic Volcanic | Wesmeg | OP/HW | **33** | **32000** | **1300** | 0.50 | 22000 | 65 | 3.5 | **2.9** | < 0.7 | 1.1 | 99 | **8600** | 0.11 | 0.39 | **240** | 8.7 | **110** |
| M96-51-03 | 2011 | 73 | 82 | Mafic Volcanic | Wesmeg | OP/FW | **41** | **33000** | **1200** | 0.20 | 14000 | **110** | 3.2 | **2.6** | < 0.7 | < 0.5 | 130 | 5200 | 0.17 | 0.12 | **200** | 11 | **86** |
| M97-111-01 | 2011 | 21 | 30 | Mafic Volcanic | Wesmeg | OP/HW | **28** | **30000** | **1300** | 0.20 | 13000 | **88** | 1.7 | **2.3** | < 0.7 | < 0.5 | 100 | 3200 | 0.16 | 0.092 | **170** | 9.7 | **77** |
| M97-111-02 | 2011 | 95 | 104 | Mafic Volcanic | Wesmeg | OP/FW | **42** | **39000** | **1000** | 0.50 | 14000 | **100** | 2.4 | **1.9** | < 0.7 | < 0.5 | 120 | 1400 | 0.10 | 0.17 | **140** | 4.3 | **110** |
| M97-111-03 | 2011 | 126 | 133 | Mafic Volcanic | Wesmeg | OP/FW | **30** | **43000** | **1400** | 0.20 | 11000 | **120** | 1.7 | **1.7** | < 0.7 | < 0.5 | 79 | 5500 | < 0.02 | 0.10 | **190** | 9.0 | **120** |
| M97-111-04 | 2011 | 186.5 | 195 | Mafic Volcanic | Wesmeg | OP/FW | **42** | **41000** | **1000** | 0.30 | 10000 | **110** | 1.5 | **1.9** | **0.80** | 0.80 | 95 | 5100 | 0.040 | 0.10 | **190** | 14 | **86** |
| M97-176-01 | 2011 | 19 | 27.5 | Mafic Volcanic | Wesmeg | OP/HW | **35** | **48000** | **1500** | 0.20 | 8500 | **130** | 2.9 | **1.5** | < 0.7 | 0.50 | 92 | **6000** | 0.050 | 0.16 | **190** | 9.3 | **110** |
| M97-176-02 | 2011 | 112 | 121 | Mafic Volcanic | Wesmeg | OP/HW | **41** | **39000** | 940 | 0.20 | 15000 | **110** | 1.9 | **1.3** | < 0.7 | < 0.5 | 78 | 5500 | 0.060 | 0.088 | **200** | 16 | **88** |
| M97-176-03 | 2011 | 196 | 205.5 | Mafic Volcanic | Wesmeg | OP/FW | **31** | **28000** | **1200** | 0.30 | 11000 | 68 | 2.6 | **1.4** | < 0.7 | < 0.5 | 86 | **6300** | 0.20 | 0.086 | **200** | 14 | **94** |
| M98-222-01 | 2011 | 16 | 22 | Mafic Volcanic | Wesmeg | OP/HW | **26** | **25000** | **1400** | 0.60 | 13000 | 63 | 6.2 | **1.5** | < 0.7 | 1.0 | 98 | **8900** | 0.32 | 0.35 | **260** | 9.3 | **160** |
| M98-222-02 | 2011 | 56 | 65 | Mafic Volcanic | Wesmeg | OP/HW | **29** | **26000** | **1400** | 0.20 | 17000 | **98** | 2.9 | **1.2** | < 0.7 | 0.70 | 82 | **5800** | 0.18 | 0.18 | **200** | 16 | **95** |
| M98-222-03 | 2011 | 104 | 113.5 | Mafic Volcanic | Wesmeg | OP/HW | **32** | **34000** | 940 | 0.30 | 16000 | **88** | 4.7 | **1.6** | < 0.7 | < 0.5 | 120 | **6200** | 0.050 | 0.23 | **190** | 14 | **94** |
| M98-223-01 | 2011 | 20.5 | 29 | Mafic Volcanic | Wesmeg | OP/HW | **33** | **33000** | **1400** | 0.20 | 11000 | **110** | 2.8 | **1.4** | < 0.7 | < 0.5 | 120 | 5400 | 0.070 | 0.25 | **190** | 15 | **88** |
| W94-48-01 | 2011 | 15 | 20 | Mafic Volcanic | Wesmeg | OP/HW | 20 | **27000** | **1200** | 0.40 | 13000 | 72 | 2.2 | **2.3** | < 0.7 | 0.80 | 190 | **8500** | 0.030 | 0.23 | **240** | 23 | **120** |
| | | | | | | MINIMUM | 20 | 15000 | 350 | 0.10 | 2200 | 40 | 1.2 | < 0.8 | <0.7 | < 0.5 | 69 | 750 | < 0.02 | 0.049 | 89 | 2.4 | 60 |
| | | | | | | MAXIMUM | 58 | 82000 | 1800 | 1.5 | 23000 | 500 | 39 | 143 | 0.80 | 2.2 | 390 | 12000 | 0.58 | 1.4 | 300 | 30 | 360 |
| | | | | | | MEDIAN | 33 | 32000 | 1200 | 0.30 | 14000 | 95 | 3.2 | 1.4 | 0.70 | 0.65 | 100 | 5550 | 0.12 | 0.18 | 190 | 11 | 105 |
| | | | | | | AVERAGE | 33 | 34964 | 1225 | 0.38 | 14063 | 114 | 4.3 | 6.4 | 0.70 | 0.76 | 118 | 5803 | 0.15 | 0.26 | 196 | 12 | 111 |
| | | | | | | STANDARD DEVIATION | 7.4 | 11933 | 265 | 0.24 | 4171 | 96 | 5.2 | 20 | nc | 0.37 | 57 | 2530 | 0.13 | 0.26 | 42 | 6.2 | 42 |
| | | | | | | 75TH PERCENTILE | 38 | 38250 | 1400 | 0.43 | 17000 | 110 | 4.6 | 2.4 | 0.70 | 0.80 | 123 | 7275 | 0.21 | 0.27 | 213 | 16 | 110 |
| M10-987-03 | 2011 | 179 | 188 | Ultramafic | Wesmeg | OP/FW | 15 | **132000** | **1300** | 0.10 | 210 | **860** | 4.1 | **1.2** | < 0.7 | < 0.5 | 75 | 3000 | < 0.02 | 0.81 | 98 | 2.5 | **110** |
| M10-992-04 | 2011 | 107 | 113 | Ultramafic | Wesmeg | OP/FW | **26** | **38000** | **1700** | 0.20 | 12000 | **120** | 1.9 | < 0.8 | **0.80** | 0.60 | 87 | **6100** | < 0.02 | 0.11 | **210** | 8.8 | **100** |
| M10-994-05 | 2011 | 15 | 24 | Ultramafic | Wesmeg | OP/HW | **42** | **40000** | 910 | 0.20 | 17000 | 77 | 7.5 | < 0.8 | < 0.7 | < 0.5 | 120 | 1100 | 0.16 | 0.13 | **150** | 5.7 | **71** |
| | | | | | | MINIMUM | 15 | 38000 | 910 | 0.10 | 210 | 77 | 1.9 | <0.8 | <0.7 | <0.5 | 75 | 1100 | <0.02 | 0.11 | 98 | 2.5 | 71 |
| | | | | | | MAXIMUM | 42 | 132000 | 1700 | 0.20 | 17000 | 860 | 7.5 | 1.2 | 0.80 | 0.60 | 120 | 6100 | 0.16 | 0.81 | 210 | 8.8 | 110 |
| | | | | | | MEDIAN | 26 | 40000 | 1300 | 0.20 | 12000 | 120 | 4.1 | nc | nc | nc | 87 | 3000 | nc | 0.13 | 150 | 5.7 | 100 |
| | | | | | | AVERAGE | 28 | 70000 | 1303 | 0.17 | 9737 | 352 | 4.5 | nc | nc | nc | 94 | 3400 | nc | 0.35 | 153 | 5.7 | 94 |
| | | | | | | STANDARD DEVIATION | 14 | 53703 | 395 | 0.058 | 8621 | 440 | 2.8 | nc | nc | nc | 23 | 2524 | nc | 0.40 | 56 | 3.2 | 20 |
| | | | | | | 75TH PERCENTILE | 34 | 86000 | 1500 | 0.20 | 14500 | 490 | 5.8 | nc | nc | nc | 104 | 4550 | nc | 0.47 | 180 | 7.3 | 105 |
| M96-51-01 | 2011 | 10 | 20 | Ore/MV | Wesmeg | OP/HW | **26** | **39000** | **1200** | 1.1 | 16000 | **96** | 4.2 | **2.2** | < 0.7 | 0.50 | 120 | 2600 | 0.21 | 0.19 | **160** | 4.1 | **79** |
| M98-223-02 | 2011 | 80 | 90 | Ore/MV | Wesmeg | OP/HW | **25** | **31000** | **1100** | 0.40 | 12000 | **95** | 5.2 | **1.4** | **0.80** | < 0.5 | 130 | **8100** | 0.29 | 0.18 | **230** | 7.7 | **96** |
| M98-223-03 | 2011 | 175 | 180 | Ore/MV | Wesmeg | OP/FW | **26** | **27000** | **1000** | 0.60 | 15000 | 66 | 4.1 | **1.7** | < 0.7 | < 0.5 | 91 | **8700** | 0.12 | 0.66 | **240** | 9.6 | **150** |
| | | | | | | MINIMUM | 25 | 27000 | 1000 | 0.40 | 12000 | 66 | 4.1 | 1.4 | <0.7 | < 0.5 | 91 | 2600 | 0.12 | 0.18 | 160 | 4.1 | 79 |
| | | | | | | MAXIMUM | 26 | 39000 | 1200 | 1.1 | 16000 | 96 | 5.2 | 2.2 | 0.80 | 0.50 | 130 | 8700 | 0.29 | 0.66 | 240 | 9.6 | 150 |
| | | | | | | MEDIAN | 26 | 31000 | 1100 | 0.60 | 15000 | 95 | 4.2 | 1.7 | nc | nc | 120 | 8100 | 0.21 | 0.19 | 230 | 7.7 | 96 |
| | | | | | | AVERAGE | 26 | 32333 | 1100 | 0.70 | 14333 | 86 | 4.5 | 1.8 | nc | nc | 114 | 6467 | 0.21 | 0.34 | 210 | 7.1 | 108 |
| | | | | | | STANDARD DEVIATION | 0.58 | 6110 | 100 | 0.36 | 2082 | 17 | 0.61 | 0.40 | nc | nc | 20 | 3362 | 0.085 | 0.27 | 44 | 2.8 | 37 |
| | | | | | | 75TH PERCENTILE | 26 | 35000 | 1150 | 0.85 | 15500 | 96 | 4.7 | 2.0 | nc | nc | 125 | 8400 | 0.25 | 0.43 | 235 | 8.7 | 123 |

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | | | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 |
| M10-968-01 | 2011 | 29 | 37 | Greywacke/Siltstone | Wolf | OP/HW | - | **90000** | **140** | **0.14** | **600** | 1.1 | **0.28** | 11000 | **0.30** | 22 | **170** | 52 | 44000 | < 0.1 | **27000** |
| M10-968-02 | 2011 | 75 | 83 | Greywacke/Siltstone | Wolf | OP/HW | - | **88000** | **49** | **0.12** | **650** | 1.1 | **0.17** | 10000 | **0.28** | 20 | **150** | 49 | 43000 | < 0.1 | **27000** |
| M10-968-03 | 2011 | 130.5 | 139 | Greywacke/Siltstone | Wolf | OP/HW | - | **85000** | **36** | **0.11** | **580** | 1.1 | **0.19** | 10000 | **0.24** | 17 | **160** | 36 | 48000 | < 0.1 | **27000** |
| M10-972A-01 | 2011 | 36 | 44.5 | Greywacke/Siltstone | Wolf | OP/HW | - | 79000 | **44** | **0.11** | **680** | 0.95 | < 0.09 | 12000 | **0.30** | 16 | **170** | 42 | 35000 | < 0.1 | **23000** |
| M10-972A-02 | 2011 | 78.5 | 87 | Greywacke/Siltstone | Wolf | OP/HW | - | 76000 | **25** | **0.10** | **580** | 1.0 | **0.090** | 11000 | **0.32** | 17 | **160** | 52 | 36000 | < 0.1 | **21000** |
| M10-976-01 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | - | 76000 | **13** | **0.15** | **580** | 0.94 | **0.16** | 18000 | **0.33** | 17 | **180** | 36 | 35000 | < 0.1 | 20000 |
| M10-976-02 | 2011 | 96 | 105 | Greywacke/Siltstone | Wolf | OP/HW | - | **88000** | **33** | **0.090** | **670** | 1.2 | < 0.09 | 8400 | **0.25** | 16 | **150** | 44 | 49000 | < 0.1 | **30000** |
| M10-977-01 | 2011 | 24 | 33 | Greywacke/Siltstone | Wolf | OP/HW | - | 80000 | **31** | **0.21** | **620** | 1.0 | **0.12** | 11000 | **0.31** | 19 | **170** | 53 | 39000 | < 0.1 | **22000** |
| M10-993-01 | 2011 | 25.5 | 34 | Greywacke/Siltstone | Wolf | OP/HW | - | **84000** | **29** | **0.090** | **560** | 0.93 | < 0.09 | 11000 | **0.29** | 18 | **170** | 42 | 39000 | < 0.1 | **22000** |
| M10-993-02 | 2011 | 51 | 60 | Greywacke/Siltstone | Wolf | OP/HW | - | **84000** | **23** | **0.090** | **660** | 1.1 | < 0.09 | 13000 | **0.28** | 17 | **160** | 52 | 40000 | < 0.1 | **25000** |
| M10-993-03 | 2011 | 84.5 | 93 | Greywacke/Siltstone | Wolf | OP/HW | - | **83000** | **53** | **0.050** | **580** | 0.98 | **0.12** | 16000 | **0.29** | 21 | **150** | 40 | 48000 | < 0.1 | **23000** |
| M98-234-01 | 2011 | 11 | 23 | Greywacke/Siltstone | Wolf | OP/HW | - | **86000** | **120** | **0.040** | **710** | 1.2 | **0.10** | 10000 | **0.36** | 17 | **180** | 50 | 44000 | < 0.1 | **30000** |
| M98-234-02 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | - | 73000 | **31** | **0.040** | **590** | 0.98 | **0.090** | 16000 | **0.30** | 17 | **150** | 43 | 44000 | < 0.1 | 19000 |
| M98-284-01 | 2011 | 91 | 100 | Greywacke/Siltstone | Wolf | OP/HW | - | 75000 | **30** | **0.040** | **470** | 0.77 | **0.15** | 22000 | **0.25** | 23 | **140** | **62** | **62000** | < 0.1 | 18000 |
| M98-286-01 | 2011 | 48 | 57.5 | Greywacke/Siltstone | Wolf | OP/HW | - | **97000** | **80** | **0.040** | **860** | 1.2 | < 0.09 | 14000 | **0.35** | 22 | **170** | **83** | 56000 | < 0.1 | **32000** |
| M98-331-01 | 2011 | 19.5 | 28 | Greywacke/Siltstone | Wolf | OP/HW | - | **85000** | **7.0** | **0.040** | **640** | 0.96 | **0.12** | 14000 | **0.27** | 20 | **160** | 33 | 43000 | < 0.1 | **25000** |
| M98-333-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Wolf | OP/HW | - | **89000** | **61** | **0.030** | **560** | 0.94 | **0.69** | 12000 | **0.37** | 17 | **160** | 49 | 45000 | < 0.1 | **24000** |
| | | | | | | MINIMUM | nc | 73000 | 7.0 | 0.030 | 470 | 0.77 | < 0.09 | 8400 | 0.24 | 16 | 140 | 33 | 35000 | <0.1 | 18000 |
| | | | | | | MAXIMUM | nc | 97000 | 140 | 0.21 | 860 | 1.2 | 0.69 | 22000 | 0.37 | 23 | 180 | 83 | 62000 | <0.1 | 32000 |
| | | | | | | MEDIAN | nc | 84000 | 33 | 0.090 | 600 | 1.0 | 0.12 | 12000 | 0.30 | 17 | 160 | 49 | 44000 | nc | 24000 |
| | | | | | | AVERAGE | nc | 83412 | 47 | 0.088 | 623 | 1.0 | 0.16 | 12906 | 0.30 | 19 | 162 | 48 | 44118 | nc | 24412 |
| | | | | | | STANDARD DEVIATION | nc | 6295 | 36 | 0.050 | 84 | 0.12 | 0.15 | 3464 | 0.038 | 2.3 | 11 | 12 | 7158 | nc | 4017 |
| | | | | | | 75TH PERCENTILE | nc | 88000 | 53 | 0.11 | 660 | 1.1 | 0.16 | 14000 | 0.32 | 20 | 170 | 52 | 48000 | nc | 27000 |
| M10-970-01 | 2011 | 62 | 70.5 | Iron Formation | Wolf | OP/HW | - | 23000 | **850** | **0.26** | 53 | 0.44 | < 0.09 | **54000** | 0.13 | 3.3 | 100 | 3.2 | **200000** | < 0.1 | 1900 |
| M10-972A-03 | 2011 | 113 | 122 | Iron Formation | Wolf | OP/HW | - | 23000 | **78** | **0.090** | 190 | 0.83 | < 0.09 | 29000 | 0.080 | 3.4 | **120** | 1.8 | **200000** | < 0.1 | 5400 |
| M10-976-03 | 2011 | 126 | 135 | Iron Formation | Wolf | OP/HW | - | 27000 | **1200** | **1.8** | 270 | 0.70 | < 0.09 | **48000** | 0.13 | 3.9 | **110** | 2.4 | **170000** | < 0.1 | 7300 |
| M10-986-01 | 2011 | 51 | 61 | Iron Formation | Wolf | OP/HW | - | 35000 | **240** | **0.25** | 260 | 0.95 | < 0.09 | 35000 | 0.12 | 4.2 | 94 | 5.2 | **210000** | < 0.1 | 8100 |
| M98-284-02 | 2011 | 121 | 129.5 | Iron Formation | Wolf | OP/HW | - | 36000 | **74** | **0.10** | 72 | 0.53 | < 0.09 | 25000 | **0.16** | 5.3 | **110** | 1.0 | **270000** | < 0.1 | 1500 |
| | | | | | | MINIMUM | nc | 23000 | 74 | 0.090 | 53 | 0.44 | <0.09 | 25000 | 0.080 | 3.3 | 94 | 1.0 | 170000 | <0.1 | 1500 |
| | | | | | | MAXIMUM | nc | 36000 | 1200 | 1.8 | 270 | 0.95 | <0.09 | 54000 | 0.16 | 5.3 | 120 | 5.2 | 270000 | <0.1 | 8100 |
| | | | | | | MEDIAN | nc | 27000 | 240 | 0.25 | 190 | 0.70 | nc | 35000 | 0.13 | 3.9 | 110 | 2.4 | 200000 | nc | 5400 |
| | | | | | | AVERAGE | nc | 28800 | 488 | 0.50 | 169 | 0.69 | nc | 38200 | 0.12 | 4.0 | 107 | 2.7 | 210000 | nc | 4840 |
| | | | | | | STANDARD DEVIATION | nc | 6340 | 510 | 0.73 | 102 | 0.21 | nc | 12398 | 0.029 | 0.80 | 10 | 1.6 | 36742 | nc | 3033 |
| | | | | | | 75TH PERCENTILE | nc | 35000 | 850 | 0.26 | 260 | 0.83 | nc | 48000 | 0.13 | 4.2 | 110 | 3.2 | 210000 | nc | 7300 |
| M10-972A-04 | 2011 | 156 | 165 | Mafic Volcanic | Wolf | OP/FW | - | 46000 | **6.6** | **0.13** | 50 | 0.25 | < 0.09 | **76000** | 0.10 | **43** | **180** | **110** | **81000** | < 0.1 | 2400 |
| M10-986-02 | 2011 | 99 | 107 | Mafic Volcanic | Wolf | OP/FW | - | 49000 | **13** | **0.12** | 12 | 0.25 | < 0.09 | **79000** | 0.14 | **42** | **200** | **110** | **84000** | < 0.1 | 1700 |
| M10-993-04 | 2011 | 157.5 | 166 | Mafic Volcanic | Wolf | OP/FW | - | 44000 | **5.6** | **0.040** | 17 | 0.24 | < 0.09 | **80000** | 0.090 | **39** | **210** | **97** | **81000** | < 0.1 | 1100 |
| M96-16-01 | 2011 | 22 | 29.5 | Mafic Volcanic | Wolf | OP/HW | - | 76000 | **30** | **0.060** | 120 | 0.25 | < 0.09 | **81000** | **0.17** | **47** | **160** | **140** | **88000** | < 0.1 | 14000 |
| M96-61-01 | 2011 | 11 | 20 | Mafic Volcanic | Wolf | OP/HW | - | 35000 | **38** | **0.040** | 140 | 0.42 | **0.66** | **73000** | **0.87** | **47** | **330** | **250** | **82000** | < 0.1 | 5500 |
| M96-61-02 | 2011 | 34 | 43 | Mafic Volcanic | Wolf | OP/HW | - | 42000 | **20** | **0.050** | 99 | 0.51 | < 0.09 | **75000** | **0.21** | **35** | **160** | **110** | **81000** | < 0.1 | 8000 |
| M98-238-01 | 2011 | 19 | 28 | Mafic Volcanic | Wolf | OP/HW | - | 75000 | **44** | **0.040** | 410 | 0.75 | < 0.09 | 22000 | **0.27** | **28** | **110** | **62** | **64000** | < 0.1 | 14000 |
| M98-238-02 | 2011 | 49 | 57 | Mafic Volcanic | Wolf | OP/HW | - | 73000 | **7.4** | **0.050** | 190 | 0.48 | **0.11** | **44000** | **0.18** | **30** | **130** | **91** | **80000** | < 0.1 | 6100 |
| M98-329-01 | 2011 | 77.5 | 86 | Mafic Volcanic | Wolf | OP/HW | - | 45000 | **270** | **0.060** | 110 | 0.55 | < 0.09 | **80000** | **0.50** | **45** | **530** | **89** | **78000** | < 0.1 | 5500 |
| M98-337-01 | 2011 | 14 | 22 | Mafic Volcanic | Wolf | OP/HW | - | 42000 | **16** | **0.050** | 89 | 0.50 | < 0.09 | **81000** | **0.18** | **42** | **410** | **130** | **74000** | < 0.1 | 12000 |
| | | | | | | MINIMUM | nc | 35000 | 5.6 | 0.040 | 12 | 0.24 | <0.09 | 22000 | 0.090 | 28 | 110 | 62 | 64000 | <0.1 | 1100 |
| | | | | | | MAXIMUM | nc | 76000 | 270 | 0.13 | 410 | 0.75 | 0.66 | 81000 | 0.87 | 47 | 530 | 250 | 88000 | <0.1 | 14000 |
| | | | | | | MEDIAN | nc | 45500 | 18 | 0.050 | 105 | 0.45 | nc | 77500 | 0.18 | 42 | 190 | 110 | 81000 | nc | 5800 |
| | | | | | | AVERAGE | nc | 52700 | 45 | 0.064 | 124 | 0.42 | nc | 69100 | 0.27 | 40 | 242 | 119 | 79300 | nc | 7030 |
| | | | | | | STANDARD DEVIATION | nc | 15592 | 80 | 0.033 | 114 | 0.17 | nc | 19902 | 0.24 | 6.7 | 137 | 51 | 6482 | nc | 4869 |
| | | | | | | 75TH PERCENTILE | nc | 67000 | 36 | 0.060 | 135 | 0.51 | nc | 80000 | 0.26 | 45 | 300 | 125 | 81750 | nc | 11000 |
| M10-976-04 | 2011 | 138 | 144 | Ore/IF | Wolf | OP/HW | - | 34000 | **1500** | **11** | 210 | 0.76 | < 0.09 | 32000 | **0.16** | 4.6 | 93 | 5.2 | **200000** | < 0.1 | 5200 |
| M10-977-02 | 2011 | 54.5 | 63 | Ore/IF | Wolf | OP/HW | - | 35000 | **3500** | **0.29** | 280 | 0.88 | **0.11** | 31000 | **0.17** | 5.1 | 100 | 4.6 | **180000** | < 0.1 | 12000 |
| M96-61-03 | 2011 | 104 | 112 | Ore/IF | Wolf | OP/FW | - | 26000 | **340** | **0.060** | 32 | 0.40 | **0.10** | 27000 | **1.8** | 23 | **120** | **220** | **250000** | < 0.1 | 900 |
| | | | | | | MINIMUM | nc | 26000 | 340 | 0.060 | 32 | 0.40 | <0.09 | 27000 | 0.16 | 4.6 | 93 | 4.6 | 180000 | <0.1 | 900 |
| | | | | | | MAXIMUM | nc | 35000 | 3500 | 11 | 280 | 0.88 | 0.11 | 32000 | 1.8 | 23 | 120 | 220 | 250000 | <0.1 | 12000 |
| | | | | | | MEDIAN | nc | 34000 | 1500 | 0.29 | 210 | 0.76 | 0.10 | 31000 | 0.17 | 5.1 | 100 | 5.2 | 200000 | nc | 5200 |
| | | | | | | AVERAGE | nc | 31667 | 1780 | 3.8 | 174 | 0.68 | 0.100 | 30000 | 0.71 | 11 | 104 | 77 | 210000 | nc | 6033 |
| | | | | | | STANDARD DEVIATION | nc | 4933 | 1598 | 6.3 | 128 | 0.25 | 0.010 | 2646 | 0.94 | 10 | 14 | 124 | 36056 | nc | 5597 |
| | | | | | | 75TH PERCENTILE | nc | 34500 | 2500 | 5.6 | 245 | 0.82 | 0.11 | 31500 | 0.99 | 14 | 110 | 113 | 225000 | nc | 8600 |

Notes:
[1] Price (1997)
nc - not calculated

# Appendix B.2: Whole Rock Analysis and ICP Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| | | | | | | Typical Crustal Abundance (ug/g) x5 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| M10-968-01 | 2011 | 29 | 37 | Greywacke/Siltstone | Wolf | OP/HW | **37** | 16000 | 280 | **1.6** | 19000 | 70 | 9.6 | **2.2** | < 0.7 | **2.5** | 240 | 1490 | 0.45 | 1.6 | 96 | 8.1 | **89** |
| M10-968-02 | 2011 | 75 | 83 | Greywacke/Siltstone | Wolf | OP/HW | **37** | 16000 | 270 | **1.3** | 18000 | 70 | 9.3 | **1.2** | < 0.7 | 1.9 | 250 | 1300 | 0.45 | 1.5 | 92 | 6.7 | **91** |
| M10-968-03 | 2011 | 130.5 | 139 | Greywacke/Siltstone | Wolf | OP/HW | **34** | 14000 | 190 | **1.6** | 18000 | 61 | 5.6 | **1.2** | < 0.7 | 1.9 | 170 | 3210 | 0.43 | 1.6 | 88 | 6.3 | 63 |
| M10-972A-01 | 2011 | 36 | 44.5 | Greywacke/Siltstone | Wolf | OP/HW | **26** | 13000 | 260 | 1.1 | 23000 | 53 | 8.8 | < 0.8 | **0.80** | 1.5 | 300 | 1910 | 0.43 | 1.5 | 68 | 6.8 | **79** |
| M10-972A-02 | 2011 | 78.5 | 87 | Greywacke/Siltstone | Wolf | OP/HW | **31** | 13000 | 260 | **1.3** | 22000 | 57 | 13 | < 0.8 | < 0.7 | 1.1 | 270 | 1300 | 0.40 | 1.7 | 74 | 6.4 | **81** |
| M10-976-01 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | **30** | 12000 | 320 | 1.0 | 23000 | 53 | **19** | < 0.8 | < 0.7 | 0.90 | 280 | 1300 | 0.36 | 1.7 | 70 | 8.1 | **76** |
| M10-976-02 | 2011 | 96 | 105 | Greywacke/Siltstone | Wolf | OP/HW | **42** | 16000 | 210 | **1.4** | 14000 | 62 | 6.7 | < 0.8 | < 0.7 | 1.2 | 180 | 2660 | 0.51 | 1.6 | 93 | 6.3 | **72** |
| M10-977-01 | 2011 | 24 | 33 | Greywacke/Siltstone | Wolf | OP/HW | **36** | 14000 | 280 | 1.2 | 20000 | 59 | 11 | < 0.8 | < 0.7 | 1.0 | 220 | 1550 | 0.40 | 1.5 | 81 | 7.7 | 67 |
| M10-993-01 | 2011 | 25.5 | 34 | Greywacke/Siltstone | Wolf | OP/HW | **35** | 15000 | 280 | 1.1 | 23000 | 58 | 8.7 | < 0.8 | < 0.7 | 1.0 | 280 | 1270 | 0.38 | 1.5 | 78 | 7.1 | **85** |
| M10-993-02 | 2011 | 51 | 60 | Greywacke/Siltstone | Wolf | OP/HW | **35** | 14000 | 300 | 1.1 | 20000 | 61 | 10 | < 0.8 | < 0.7 | 1.1 | 250 | 1340 | 0.44 | 1.5 | 86 | 7.3 | **79** |
| M10-993-03 | 2011 | 84.5 | 93 | Greywacke/Siltstone | Wolf | OP/HW | **35** | 15000 | 240 | **1.4** | 17000 | 59 | 5.5 | < 0.8 | < 0.7 | 1.3 | 180 | 3200 | 0.44 | 1.3 | 92 | 6.3 | 68 |
| M98-234-01 | 2011 | 11 | 23 | Greywacke/Siltstone | Wolf | OP/HW | **33** | 15000 | 280 | **1.4** | 14000 | 60 | 13 | < 0.8 | < 0.7 | 1.0 | 200 | 3200 | 0.59 | 1.3 | 100 | 5.5 | **79** |
| M98-234-02 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | **31** | 14000 | 380 | 1.2 | 18000 | 51 | 13 | < 0.8 | < 0.7 | 0.70 | 230 | 2500 | 0.41 | 1.2 | 84 | 6.6 | **72** |
| M98-284-01 | 2011 | 91 | 100 | Greywacke/Siltstone | Wolf | OP/HW | **45** | 18000 | 420 | 1.1 | 12000 | 69 | 6.7 | < 0.8 | < 0.7 | 1.7 | 190 | 2800 | 0.33 | 1.3 | 110 | 6.8 | **87** |
| M98-286-01 | 2011 | 48 | 57.5 | Greywacke/Siltstone | Wolf | OP/HW | **43** | 19000 | 380 | **1.6** | 13000 | 76 | 11 | < 0.8 | < 0.7 | 0.60 | 230 | 1200 | 0.58 | 1.4 | **130** | 7.3 | **110** |
| M98-331-01 | 2011 | 19.5 | 28 | Greywacke/Siltstone | Wolf | OP/HW | **35** | 16000 | 350 | **1.7** | 17000 | 62 | 7.2 | < 0.8 | < 0.7 | 0.70 | 230 | 1300 | 0.48 | 1.3 | 100 | 7.2 | **80** |
| M98-333-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Wolf | OP/HW | **38** | 18000 | 340 | **1.5** | 18000 | 57 | **140** | < 0.8 | < 0.7 | 0.50 | 220 | 1000 | 0.41 | 1.4 | 91 | 6.7 | **99** |
| | | | | | | MINIMUM | 26 | 12000 | 190 | 1.0 | 12000 | 51 | 5.5 | <0.8 | <0.7 | 0.50 | 170 | 1000 | 0.33 | 1.2 | 68 | 5.5 | 63 |
| | | | | | | MAXIMUM | 45 | 19000 | 420 | 1.7 | 23000 | 76 | 140 | 2.2 | 0.80 | 2.5 | 300 | 3210 | 0.59 | 1.7 | 130 | 8.1 | 110 |
| | | | | | | MEDIAN | 35 | 15000 | 280 | 1.3 | 18000 | 60 | 9.6 | 0.80 | nc | 1.1 | 230 | 1490 | 0.43 | 1.5 | 91 | 6.8 | 79 |
| | | | | | | AVERAGE | 35 | 15176 | 296 | 1.3 | 18176 | 61 | 18 | 0.93 | nc | 1.2 | 231 | 1914 | 0.44 | 1.5 | 90 | 6.9 | 81 |
| | | | | | | STANDARD DEVIATION | 4.8 | 1912 | 62 | 0.22 | 3486 | 6.8 | 32 | 0.35 | nc | 0.54 | 38 | 813 | 0.069 | 0.15 | 15 | 0.68 | 12 |
| | | | | | | 75TH PERCENTILE | 37 | 16000 | 340 | 1.5 | 20000 | 62 | 13 | 0.80 | nc | 1.5 | 250 | 2660 | 0.45 | 1.6 | 96 | 7.3 | 87 |
| M10-970-01 | 2011 | 62 | 70.5 | Iron Formation | Wolf | OP/HW | 6.0 | 6000 | 390 | **2.1** | 310 | 10 | 5.1 | **1.0** | < 0.7 | 1.4 | 220 | 650 | 0.060 | 0.58 | 15 | 6.5 | 33 |
| M10-972A-03 | 2011 | 113 | 122 | Iron Formation | Wolf | OP/HW | 8.0 | 6300 | 390 | 0.70 | 300 | 10 | 3.1 | < 0.8 | < 0.7 | 0.80 | 150 | 700 | 0.13 | 0.52 | 14 | 5.1 | 35 |
| M10-976-03 | 2011 | 126 | 135 | Iron Formation | Wolf | OP/HW | 13 | 6500 | 590 | 1.0 | 2100 | 12 | **17** | < 0.8 | < 0.7 | 0.50 | 230 | 790 | 0.22 | 1.6 | 18 | 6.4 | 37 |
| M10-986-01 | 2011 | 51 | 61 | Iron Formation | Wolf | OP/HW | 16 | 7300 | 460 | **3.1** | 1100 | 12 | 7.2 | < 0.8 | < 0.7 | < 0.5 | 190 | 1100 | 0.21 | 0.57 | 23 | 5.5 | 63 |
| M98-284-02 | 2011 | 121 | 129.5 | Iron Formation | Wolf | OP/HW | 16 | 10000 | 440 | 1.1 | 650 | 16 | 4.8 | < 0.8 | < 0.7 | < 0.5 | 130 | 1200 | 0.030 | 0.84 | 43 | 6.3 | 56 |
| | | | | | | MINIMUM | 6.0 | 6000 | 390 | 0.70 | 300 | 10 | 3.1 | <0.8 | <0.7 | < 0.5 | 130 | 650 | 0.030 | 0.52 | 14 | 5.1 | 33 |
| | | | | | | MAXIMUM | 16 | 10000 | 590 | 3.1 | 2100 | 16 | 17 | 1.0 | <0.7 | 1.4 | 230 | 1200 | 0.22 | 1.6 | 43 | 6.5 | 63 |
| | | | | | | MEDIAN | 13 | 6500 | 440 | 1.1 | 650 | 12 | 5.1 | nc | nc | 0.50 | 190 | 790 | 0.13 | 0.58 | 18 | 6.3 | 37 |
| | | | | | | AVERAGE | 12 | 7220 | 454 | 1.6 | 892 | 12 | 7.4 | nc | nc | 0.74 | 184 | 888 | 0.13 | 0.82 | 23 | 6.0 | 45 |
| | | | | | | STANDARD DEVIATION | 4.6 | 1627 | 82 | 0.99 | 750 | 2.4 | 5.5 | nc | nc | 0.39 | 43 | 247 | 0.086 | 0.45 | 12 | 0.62 | 14 |
| | | | | | | 75TH PERCENTILE | 16 | 7300 | 460 | 2.1 | 1100 | 12 | 7.2 | nc | nc | 0.80 | 220 | 1100 | 0.21 | 0.84 | 23 | 6.4 | 56 |
| M10-972A-04 | 2011 | 156 | 165 | Mafic Volcanic | Wolf | OP/FW | **65** | **28000** | **1200** | 0.10 | 12000 | **120** | 2.4 | < 0.8 | < 0.7 | 1.0 | 89 | 1550 | 0.070 | 0.066 | **190** | 6.4 | **79** |
| M10-986-02 | 2011 | 99 | 107 | Mafic Volcanic | Wolf | OP/FW | **72** | 21000 | **1300** | 0.10 | 14000 | **110** | 3.5 | < 0.8 | < 0.7 | 0.90 | 120 | 2480 | 0.050 | 0.073 | **210** | 10 | **95** |
| M10-993-04 | 2011 | 157.5 | 166 | Mafic Volcanic | Wolf | OP/FW | **52** | **30000** | **1200** | 0.20 | 11000 | **97** | 2.0 | **1.3** | < 0.7 | < 0.5 | 120 | 2800 | 0.020 | 0.089 | **200** | 7.4 | **72** |
| M96-16-01 | 2011 | 22 | 29.5 | Mafic Volcanic | Wolf | OP/HW | 19 | **26000** | **1400** | 0.20 | 8700 | 84 | 2.9 | **0.90** | < 0.7 | < 0.5 | 110 | 4900 | 0.62 | 0.10 | **190** | 12 | **95** |
| M96-61-01 | 2011 | 11 | 20 | Mafic Volcanic | Wolf | OP/HW | **29** | **30000** | **1200** | 0.40 | 10000 | **110** | **59** | < 0.8 | **1.0** | 1.3 | 95 | 3700 | 0.44 | 0.19 | **180** | 5.8 | **250** |
| M96-61-02 | 2011 | 34 | 43 | Mafic Volcanic | Wolf | OP/HW | **24** | **27000** | **1700** | 0.40 | 13000 | 56 | 5.8 | < 0.8 | < 0.7 | 0.80 | 100 | 4900 | 0.75 | 0.36 | **210** | 7.0 | **120** |
| M98-238-01 | 2011 | 19 | 28 | Mafic Volcanic | Wolf | OP/HW | **37** | 20000 | 570 | 1.0 | 18000 | 48 | 5.3 | < 0.8 | < 0.7 | 0.60 | 210 | 4300 | 0.26 | 0.95 | **160** | 8.7 | **95** |
| M98-238-02 | 2011 | 49 | 57 | Mafic Volcanic | Wolf | OP/HW | **28** | **27000** | 810 | 0.60 | 22000 | 47 | 6.2 | **1.1** | < 0.7 | 0.90 | 230 | **5800** | 0.15 | 0.67 | **180** | 13 | **85** |
| M98-329-01 | 2011 | 77.5 | 86 | Mafic Volcanic | Wolf | OP/HW | **26** | **38000** | **1200** | 0.30 | 11000 | **150** | 6.4 | < 0.8 | < 0.7 | 0.70 | 130 | 4200 | 0.26 | 0.26 | **160** | 6.3 | **170** |
| M98-337-01 | 2011 | 14 | 22 | Mafic Volcanic | Wolf | OP/HW | **27** | **33000** | **1200** | 0.30 | 13000 | **110** | 5.7 | < 0.8 | < 0.7 | < 0.5 | 100 | 5200 | **1.3** | 0.31 | **180** | 8.4 | **88** |
| | | | | | | MINIMUM | 19 | 20000 | 570 | 0.10 | 8700 | 47 | 2.0 | <0.8 | <0.7 | <0.5 | 89 | 1550 | 0.020 | 0.066 | 160 | 5.8 | 72 |
| | | | | | | MAXIMUM | 72 | 38000 | 1700 | 1.0 | 22000 | 150 | 59 | 1.3 | 1.0 | 1.3 | 230 | 5800 | 1.3 | 0.95 | 210 | 13 | 250 |
| | | | | | | MEDIAN | 29 | 27500 | 1200 | 0.30 | 12500 | 104 | 5.5 | 0.80 | nc | 0.75 | 115 | 4250 | 0.26 | 0.23 | 185 | 7.9 | 95 |
| | | | | | | AVERAGE | 38 | 28000 | 1178 | 0.36 | 13270 | 93 | 9.9 | 0.89 | nc | 0.77 | 130 | 3983 | 0.39 | 0.31 | 186 | 8.5 | 115 |
| | | | | | | STANDARD DEVIATION | 19 | 5292 | 306 | 0.27 | 3983 | 34 | 17 | 0.17 | nc | 0.26 | 49 | 1345 | 0.40 | 0.29 | 18 | 2.5 | 55 |
| | | | | | | 75TH PERCENTILE | 48 | 30000 | 1275 | 0.40 | 13750 | 110 | 6.1 | 0.88 | nc | 0.90 | 128 | 4900 | 0.58 | 0.35 | 198 | 9.7 | 114 |
| M10-976-04 | 2011 | 138 | 144 | Ore/IF | Wolf | OP/HW | 13 | 8200 | 600 | **1.4** | 440 | 11 | 8.7 | < 0.8 | < 0.7 | < 0.5 | 150 | 930 | 0.13 | 0.79 | 19 | 5.3 | 43 |
| M10-977-02 | 2011 | 54.5 | 63 | Ore/IF | Wolf | OP/HW | **23** | 7400 | 390 | 0.80 | 2600 | 14 | **19** | < 0.8 | < 0.7 | < 0.5 | 130 | 1090 | 0.37 | 0.82 | 22 | 5.4 | 52 |
| M96-61-03 | 2011 | 104 | 112 | Ore/IF | Wolf | OP/FW | 5.0 | 14000 | **2000** | **2.1** | 510 | 31 | 6.3 | < 0.8 | < 0.7 | 1.7 | 38 | 1500 | 0.050 | 0.66 | 55 | 3.9 | **920** |
| | | | | | | MINIMUM | 5.0 | 7400 | 390 | 0.80 | 440 | 11 | 6.3 | <0.8 | <0.7 | <0.5 | 38 | 930 | 0.050 | 0.66 | 19 | 3.9 | 43 |
| | | | | | | MAXIMUM | 23 | 14000 | 2000 | 2.1 | 2600 | 31 | 19 | <0.8 | <0.7 | 1.7 | 150 | 1500 | 0.37 | 0.82 | 55 | 5.4 | 920 |
| | | | | | | MEDIAN | 13 | 8200 | 600 | 1.4 | 510 | 14 | 8.7 | nc | nc | nc | 130 | 1090 | 0.13 | 0.79 | 22 | 5.3 | 52 |
| | | | | | | AVERAGE | 14 | 9867 | 997 | 1.4 | 1183 | 19 | 11 | nc | nc | nc | 106 | 1173 | 0.18 | 0.76 | 32 | 4.9 | 338 |
| | | | | | | STANDARD DEVIATION | 9.0 | 3602 | 875 | 0.65 | 1227 | 11 | 6.7 | nc | nc | nc | 60 | 294 | 0.17 | 0.085 | 20 | 0.84 | 504 |
| | | | | | | 75TH PERCENTILE | 18 | 11100 | 1300 | 1.8 | 1555 | 23 | 14 | nc | nc | nc | 140 | 1295 | 0.25 | 0.81 | 39 | 5.4 | 486 |

Notes:
[1] Price (1997)
nc - not calculated

# Appendix B.2: Whole Rock Analysis and ICP Results - Operations PAD Samples
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | | | | | | | | | | | | | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | | | | | | | | | | | | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 |
| Sample ID | Year (analysis) | Rock Type | Deposit | Location | Grain Size | $SiO_2$ | $Al_2O_3$ | $Fe_2O_3$ | MgO | CaO | $Na_2O$ | $K_2O$ | $TiO_2$ | $P_2O_5$ | MnO | $Cr_2O_3$ | $V_2O_5$ | LOI | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr |
| | | | | | | % | % | % | % | % | % | % | % | % | % | % | % | % | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| TP-PAD-11-06 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 65 | 15 | 5.4 | 2.1 | 2.0 | 3.6 | 1.9 | 0.53 | 0.12 | 0.045 | 0.040 | 0.010 | 3.9 | 67000 | **88** | 0.20 | **630** | 0.98 | **0.22** | 12000 | **0.26** | 15 | **160** |
| TP-PAD-11-04 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 64 | 15 | 5.7 | 2.4 | 2.2 | 3.0 | 2.1 | 0.57 | 0.11 | 0.055 | 0.030 | 0.020 | 4.2 | 69000 | **74** | 0.12 | **630** | 0.95 | **0.15** | 14000 | **0.29** | 17 | **180** |
| TP-PAD-11-03 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 58 | 15 | 8.6 | 3.8 | 5.0 | 2.7 | 1.6 | 0.78 | 0.12 | 0.11 | 0.040 | 0.030 | 3.8 | 69000 | **32** | 0.13 | **1100** | 0.75 | **0.11** | 32000 | **0.24** | **28** | **150** |
| TP-PAD-11-01 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 65 | 15 | 5.7 | 2.4 | 2.3 | 3.2 | 2.0 | 0.57 | 0.11 | 0.055 | 0.040 | 0.020 | 4.2 | 67000 | **42** | 0.25 | **710** | 0.86 | **0.19** | 14000 | **0.32** | 18 | **200** |
| TP-PAD-11-02 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 61 | 17 | 5.9 | 2.5 | 2.3 | 2.9 | 2.6 | 0.64 | 0.13 | 0.055 | 0.040 | 0.020 | 4.8 | 82000 | **100** | 0.11 | **780** | 1.0 | **0.17** | 16000 | **0.29** | 20 | **220** |
| TP-PAD-11-05 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 60 | 15 | 7.5 | 3.0 | 3.2 | 3.2 | 1.8 | 0.70 | 0.12 | 0.085 | 0.030 | 0.030 | 4.3 | 72000 | **45** | 0.13 | **750** | 0.79 | **0.1** | 21000 | **0.27** | 24 | **150** |
| TP-PAD-11-09 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 60 | 16 | 6.8 | 2.9 | 3.3 | 2.8 | 2.2 | 0.66 | 0.11 | 0.075 | 0.040 | 0.030 | 4.7 | 76000 | **630** | 0.11 | **570** | 0.87 | **0.14** | 22000 | **0.24** | 24 | **170** |
| TP-PAD-11-12 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 64 | 16 | 5.6 | 2.4 | 1.8 | 2.9 | 2.3 | 0.59 | 0.11 | 0.045 | 0.040 | 0.020 | 4.0 | 67000 | **76** | 0.09 | **720** | 0.94 | **0.16** | 11000 | **0.26** | 17 | **170** |
| TP-PAD-11-07 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 60 | 18 | 6.3 | 2.8 | 2.0 | 2.3 | 2.9 | 0.68 | 0.12 | 0.055 | 0.040 | 0.020 | 4.4 | **88000** | **68** | 0.09 | **660** | 1.1 | **0.15** | 14000 | **0.31** | 20 | **180** |
| TP-PAD-11-08 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 60 | 16 | 8.9 | 2.7 | 1.6 | 2.8 | 2.2 | 0.61 | 0.14 | 0.045 | 0.030 | 0.020 | 5.0 | 74000 | **90** | 0.10 | **720** | 0.97 | **0.09** | 10000 | **0.27** | 18 | **150** |
| TP-PAD-11-10 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 61 | 13 | 10.3 | 2.7 | 3.7 | 2.1 | 1.6 | 0.56 | 0.16 | 0.095 | 0.020 | 0.030 | 5.1 | 59000 | **470** | 0.15 | **490** | 0.7 | **0.13** | 24000 | **0.29** | 19 | **140** |
| TP-PAD-11-11 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 61 | 16 | 7.3 | 3.1 | 2.5 | 3.7 | 1.5 | 0.70 | 0.11 | 0.075 | 0.030 | 0.020 | 3.7 | 78000 | **33** | 0.09 | **460** | 0.74 | < 0.09 | 17000 | **0.24** | 22 | **150** |
| TP-PAD-11 COMPOSITE | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 61 | 16 | 7.2 | 2.9 | 3.0 | 2.8 | 2.1 | 0.65 | 0.11 | 0.065 | 0.040 | 0.020 | 4.4 | 76000 | **160** | 0.10 | **670** | 0.93 | < 0.09 | 20000 | **0.29** | 21 | **170** |
| | | | | | MINIMUM | 58 | 13 | 5.4 | 2.1 | 1.6 | 2.1 | 1.5 | 0.53 | 0.11 | 0.045 | 0.020 | 0.010 | 3.7 | 59000 | 32 | 0.09 | 460 | 0.7 | < 0.09 | 10000 | 0.24 | 15 | 140 |
| | | | | | MAXIMUM | 65 | 18 | 10 | 3.8 | 5.0 | 3.7 | 2.9 | 0.78 | 0.16 | 0.11 | 0.040 | 0.030 | 5.1 | 88000 | 630 | 0.25 | 1100 | 1.1 | 0.22 | 32000 | 0.32 | 28 | 220 |
| | | | | | MEDIAN | 61 | 16 | 6.8 | 2.7 | 2.3 | 2.9 | 2.1 | 0.64 | 0.12 | 0.055 | 0.040 | 0.020 | 4.3 | 72000 | 76 | 0.11 | 670 | 0.93 | 0.14 | 16000 | 0.27 | 20 | 170 |
| | | | | | AVERAGE | 62 | 16 | 7.0 | 2.7 | 2.7 | 2.9 | 2.1 | 0.634 | 0.121 | 0.062 | 0.035 | 0.022 | 4.3 | 72615 | 147 | 0.13 | 684 | 0.89 | 0.14 | 17462 | 0.27 | 20 | 168 |
| | | | | | STANDARD DEVIATION | 2 | 1 | 1.5 | 0.4 | 0.9 | 0.4 | 0.4 | 0.0751 | 0.0155 | 0.022 | 0.007 | 0.006 | 0.44 | 7556 | 185 | 0.05 | 157 | 0.12 | 0.041 | 6186 | 0.03 | 3.6 | 23 |
| | | | | | 75TH PERCENTILE | 64 | 16 | 7.5 | 2.9 | 3.2 | 3.2 | 2.2 | 0.68 | 0.12 | 0.075 | 0.040 | 0.030 | 4.7 | 76000 | 100 | 0.13 | 720 | 0.97 | 0.16 | 21000 | 0.29 | 22 | 180 |
| TP-PAD-11 COMPOSITE -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 61 | 16 | 7.0 | 2.7 | 2.7 | 3.0 | 2.2 | 0.66 | 0.12 | 0.055 | 0.030 | 0.020 | 4.2 | 74000 | **160** | - | **600** | 0.89 | 0.16 | 18000 | **0.25** | 19 | **120** |
| TP-PAD-11-02 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 60 | 17 | 6.2 | 2.6 | 2.2 | 2.9 | 2.7 | 0.66 | 0.13 | 0.055 | 0.020 | 0.020 | 4.4 | **84000** | **94** | - | **720** | 1.1 | 0.14 | 15000 | **0.27** | 19 | **140** |
| TP-PAD-11-03 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 58 | 15 | 8.1 | 3.4 | 4.8 | 2.8 | 1.8 | 0.76 | 0.12 | 0.095 | 0.020 | 0.040 | 4.0 | 72000 | **33** | - | **820** | 0.8 | 0.14 | 33000 | **0.25** | **26** | **120** |
| TP-PAD-11-06 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 64 | 16 | 5.9 | 2.2 | 2.1 | 3.5 | 2.1 | 0.55 | 0.12 | 0.045 | 0.030 | 0.020 | 3.9 | 76000 | **81** | - | **580** | 1.0 | **0.11** | 14000 | **0.25** | 16 | **120** |
| TP-PAD-11-08 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 60 | 16 | 8.2 | 2.8 | 1.7 | 2.9 | 2.3 | 0.63 | 0.15 | 0.055 | 0.020 | 0.030 | 4.5 | 63000 | **100** | - | **530** | 0.9 | < 0.09 | 9300 | **0.20** | 15 | **110** |
| TP-PAD-11-10 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 61 | 13 | 9.5 | 2.6 | 3.6 | 2.2 | 1.7 | 0.59 | 0.16 | 0.095 | 0.020 | 0.030 | 5.1 | 63000 | **400** | - | **470** | 0.76 | 0.11 | 25000 | **0.27** | 19 | **120** |
| TP-PAD-11-12 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 64 | 16 | 5.7 | 2.3 | 1.8 | 2.9 | 2.3 | 0.60 | 0.11 | 0.045 | 0.020 | 0.010 | 3.7 | 71000 | **77** | - | **590** | 0.9 | < 0.09 | 12000 | **0.23** | 16 | **120** |
| | | | | | MINIMUM | 58 | 13 | 5.7 | 2.2 | 1.7 | 2.2 | 1.7 | 0.55 | 0.11 | 0.045 | 0.020 | 0.010 | 3.7 | 63000 | 33 | nc | 470 | 0.76 | <0.09 | 9300 | 0.20 | 15 | 110 |
| | | | | | MAXIMUM | 64 | 17 | 9.5 | 3.4 | 4.8 | 3.5 | 2.7 | 0.76 | 0.16 | 0.095 | 0.030 | 0.040 | 5.1 | 84000 | 400 | nc | 820 | 1.1 | 0.16 | 33000 | 0.27 | 26 | 140 |
| | | | | | MEDIAN | 61 | 16 | 7.0 | 2.6 | 2.2 | 2.9 | 2.2 | 0.63 | 0.12 | 0.055 | 0.020 | 0.020 | 4.2 | 72000 | 94 | nc | 590 | 0.9 | 0.11 | 15000 | 0.25 | 19 | 120 |
| | | | | | AVERAGE | 61 | 16 | 7.2 | 2.7 | 2.7 | 2.9 | 2.1 | 0.64 | 0.13 | 0.059 | 0.023 | 0.024 | 4.3 | 71857 | 135 | nc | 616 | 0.91 | 0.12 | 18043 | 0.25 | 19 | 121 |
| | | | | | STANDARD DEVIATION | 2 | 1 | 1.4 | 0.4 | 1.1 | 0.4 | 0.3 | 0.068 | 0.018 | 0.022 | 0.005 | 0.010 | 0.47 | 7381 | 123 | nc | 118 | 0.11 | 0.027 | 8273 | 0.02 | 3.7 | 9.0 |
| | | | | | 75TH PERCENTILE | 63 | 16 | 8.2 | 2.8 | 3.2 | 2.9 | 2.3 | 0.66 | 0.14 | 0.075 | 0.025 | 0.030 | 4.4 | 75000 | 130 | nc | 660 | 0.95 | 0.14 | 21500 | 0.26 | 19 | 120 |

Notes:
[1] Price (1997)
nc - not calculated
- not analyzed

# Appendix B.2: Whole Rock Analysis and ICP Results - Operations PAD Samples
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | 60 | 56300 | 0.085 | 20850 | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Typical Crustal Abundance (ug/g) (Price, 1997) | | | | | | 60 | 56300 | 0.085 | 20850 | 20 | 23300 | 950 | 1.2 | 23550 | 84 | 14 | 0.20 | 0.05 | 2.3 | 370 | 5650 | 0.85 | 2.7 | 120 | 33 | 70 |
| Typical Crustal Abundance (ug/g) x5 | | | | | | 300 | 281500 | 0.425 | 104250 | 100 | 116500 | 4750 | 6.0 | 117750 | 420 | 70 | 1.00 | 0.25 | 11.5 | 1850 | 28250 | 4.25 | 13.5 | 600 | 165 | 350 |
| Sample ID | Year (analysis) | Rock Type | Deposit | Location | Grain Size | Cu | Fe | Hg | K | Li | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| TP-PAD-11-06 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 28 | 33000 | < 0.1 | 15000 | **27** | 10000 | 290 | **1.4** | 21000 | 50 | **22** | < 0.8 | < 0.7 | 0.70 | 320 | 1400 | 0.31 | 1.5 | 74 | 6.4 | 56 |
| TP-PAD-11-04 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 37 | 37000 | < 0.1 | 17000 | **29** | 12000 | 370 | **2.3** | 18000 | 57 | **17** | < 0.8 | < 0.7 | < 0.5 | 290 | 1900 | 0.34 | 1.6 | 84 | 6.5 | 66 |
| TP-PAD-11-03 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 53 | 55000 | < 0.1 | 13000 | **36** | 20000 | 630 | 0.90 | 17000 | 57 | **15** | < 0.8 | < 0.7 | < 0.5 | 370 | 2900 | 0.31 | 1.0 | **140** | 11 | **76** |
| TP-PAD-11-01 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 44 | 36000 | < 0.1 | 15000 | **26** | 12000 | 320 | **2.3** | 19000 | 53 | **17** | < 0.8 | < 0.7 | < 0.5 | 330 | 2300 | 0.33 | 1.8 | 78 | 7.0 | 68 |
| TP-PAD-11-02 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 46 | 40000 | < 0.1 | **22000** | **33** | 14000 | 350 | **1.6** | 19000 | 61 | **19** | < 0.8 | < 0.7 | 0.5 | 340 | 1800 | 0.43 | 1.7 | 94 | 7.4 | **79** |
| TP-PAD-11-05 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 42 | 50000 | < 0.1 | 15000 | **35** | 17000 | 490 | **1.8** | 21000 | 56 | 11 | < 0.8 | < 0.7 | 0.7 | 280 | 3100 | 0.36 | 1.3 | **130** | 10 | **75** |
| TP-PAD-11-09 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 58 | 47000 | < 0.1 | 19000 | **34** | 16000 | 470 | 1.1 | 18000 | 59 | 11 | < 0.8 | < 0.7 | < 0.5 | 300 | 2900 | 0.42 | 1.3 | 120 | 8.5 | **77** |
| TP-PAD-11-12 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 35 | 33000 | < 0.1 | 17000 | **30** | 11000 | 320 | **2.2** | 17000 | 57 | 14 | < 0.8 | < 0.7 | 0.5 | 320 | 1500 | 0.37 | 1.6 | 88 | 7.1 | 67 |
| TP-PAD-11-07 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 55 | 43000 | < 0.1 | **24000** | **35** | 15000 | 340 | **1.5** | 15000 | 65 | 13 | < 0.8 | < 0.7 | < 0.5 | 270 | 1900 | 0.43 | 1.7 | 110 | 7.4 | **84** |
| TP-PAD-11-08 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 29 | **58000** | < 0.1 | 18000 | **34** | 14000 | 330 | **2.2** | 17000 | 61 | 11 | < 0.8 | < 0.7 | 0.60 | 260 | 2000 | 0.34 | 1.5 | 93 | 7.3 | **74** |
| TP-PAD-11-10 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 32 | **69000** | < 0.1 | 13000 | **28** | 14000 | 650 | 1.1 | 13000 | 47 | **22** | < 0.8 | < 0.7 | < 0.5 | 280 | 2200 | 0.26 | 1.1 | 110 | 9.6 | **76** |
| TP-PAD-11-11 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 47 | 50000 | < 0.1 | 13000 | **31** | 17000 | 440 | **1.5** | **24000** | 58 | 12 | < 0.8 | < 0.7 | < 0.5 | 270 | 3200 | 0.28 | 1.3 | **130** | 9.5 | **79** |
| TP-PAD-11 COMPOSITE | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 40 | 49000 | < 0.1 | 17000 | **34** | 16000 | 450 | **1.9** | 18000 | 58 | 14 | < 0.8 | < 0.7 | < 0.5 | 300 | 2400 | 0.34 | 1.4 | 110 | 8.4 | **79** |
| | | | | | MINIMUM | 28 | 33000 | < 0.1 | 13000 | 26 | 10000 | 290 | 0.90 | 13000 | 47 | 11 | <0.8 | <0.7 | < 0.5 | 260 | 1400 | 0.26 | 1.0 | 74 | 6.4 | 56 |
| | | | | | MAXIMUM | 58 | 69000 | < 0.1 | 24000 | 36 | 20000 | 650 | 2.3 | 24000 | 65 | 22 | <0.8 | <0.7 | 0.70 | 370 | 3200 | 0.43 | 1.8 | 140 | 11 | 84 |
| | | | | | MEDIAN | 42 | 47000 | nc | 17000 | 33 | 14000 | 370 | 1.6 | 18000 | 57 | 14 | nc | nc | 0.50 | 300 | 2200 | 0.34 | 1.5 | 110 | 7.4 | 76 |
| | | | | | AVERAGE | 42 | 46154 | nc | 16769 | 32 | 14462 | 419 | 1.7 | 18231 | 57 | 15 | nc | nc | 0.54 | 302 | 2269 | 0.35 | 1.4 | 105 | 8.2 | 74 |
| | | | | | STANDARD DEVIATION | 10 | 10645 | nc | 3395 | 3 | 2787 | 117 | 0.48 | 2774 | 5 | 4 | nc | nc | 0.077 | 32 | 598 | 0.05 | 0.2 | 21 | 1.5 | 7 |
| | | | | | 75TH PERCENTILE | 47 | 50000 | nc | 18000 | 34 | 16000 | 470 | 2.2 | 19000 | 59 | 17 | nc | nc | 0.50 | 320 | 2900 | 0.37 | 1.6 | 120 | 9.5 | 79 |
| TP-PAD-11 COMPOSITE -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 55 | 46000 | < 0.1 | 20000 | **32** | 15000 | 400 | **1.9** | 18000 | 54 | **19** | < 0.8 | < 0.7 | 1.0 | 290 | 2400 | 0.38 | 1.4 | 100 | - | **95** |
| TP-PAD-11-02 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 47 | 42000 | < 0.1 | **26000** | **35** | 15000 | 330 | **1.7** | 19000 | 58 | **27** | < 0.8 | < 0.7 | 1.0 | 340 | 1900 | 0.48 | 1.7 | 100 | - | **89** |
| TP-PAD-11-03 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | **68** | 55000 | < 0.1 | 17000 | **35** | 19000 | 590 | **1.6** | 17000 | 53 | **23** | < 0.8 | < 0.7 | 0.90 | 340 | 3000 | 0.32 | 1.1 | **130** | - | **81** |
| TP-PAD-11-06 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 39 | 40000 | < 0.1 | 20000 | **28** | 12000 | 300 | **1.6** | 22000 | 49 | **19** | < 0.8 | < 0.7 | 0.90 | 310 | 1800 | 0.35 | 1.4 | 82 | - | **72** |
| TP-PAD-11-08 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 33 | 45000 | < 0.1 | 17000 | **30** | 13000 | 270 | **1.6** | 14000 | 49 | 10 | < 0.8 | < 0.7 | < 0.5 | 210 | 1800 | 0.30 | 1.2 | 83 | - | **73** |
| TP-PAD-11-10 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 41 | **64000** | < 0.1 | 16000 | **29** | 15000 | 580 | **1.5** | 14000 | 46 | **33** | < 0.8 | < 0.7 | 0.7 | 280 | 2400 | 0.29 | 1.2 | 100 | - | **81** |
| TP-PAD-11-12 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 39 | 36000 | < 0.1 | 20000 | **29** | 12000 | 280 | **1.7** | 17000 | 50 | 14 | < 0.8 | < 0.7 | < 0.5 | 280 | 1600 | 0.36 | 1.4 | 86 | - | **75** |
| | | | | | MINIMUM | 33 | 36000 | <0.1 | 16000 | 28 | 12000 | 270 | 1.5 | 14000 | 46 | 10 | <0.8 | < 0.7 | <0.5 | 210 | 1600 | 0.29 | 1.1 | 82 | nc | 72 |
| | | | | | MAXIMUM | 68 | 64000 | <0.1 | 26000 | 35 | 19000 | 590 | 1.9 | 22000 | 58 | 33 | <0.8 | <0.7 | 1.0 | 340 | 3000 | 0.48 | 1.7 | 130 | nc | 95 |
| | | | | | MEDIAN | 41 | 45000 | nc | 20000 | 30 | 15000 | 330 | 1.6 | 17000 | 50 | 19 | nc | nc | 0.90 | 290 | 1900 | 0.35 | 1.4 | 100 | nc | 81 |
| | | | | | AVERAGE | 46 | 46857 | nc | 19429 | 31 | 14429 | 393 | 1.7 | 17286 | 51 | 21 | nc | nc | 0.79 | 293 | 2129 | 0.35 | 1.3 | 97 | nc | 81 |
| | | | | | STANDARD DEVIATION | 12 | 9599 | nc | 3359 | 3 | 2440 | 138 | 0.13 | 2812 | 4 | 8 | nc | nc | 0.22 | 45 | 492 | 0.06 | 0.2 | 17 | nc | 9 |
| | | | | | 75TH PERCENTILE | 51 | 50500 | nc | 20000 | 34 | 15000 | 490 | 1.7 | 18500 | 54 | 25 | nc | nc | 0.95 | 325 | 2400 | 0.37 | 1.4 | 100 | nc | 85 |

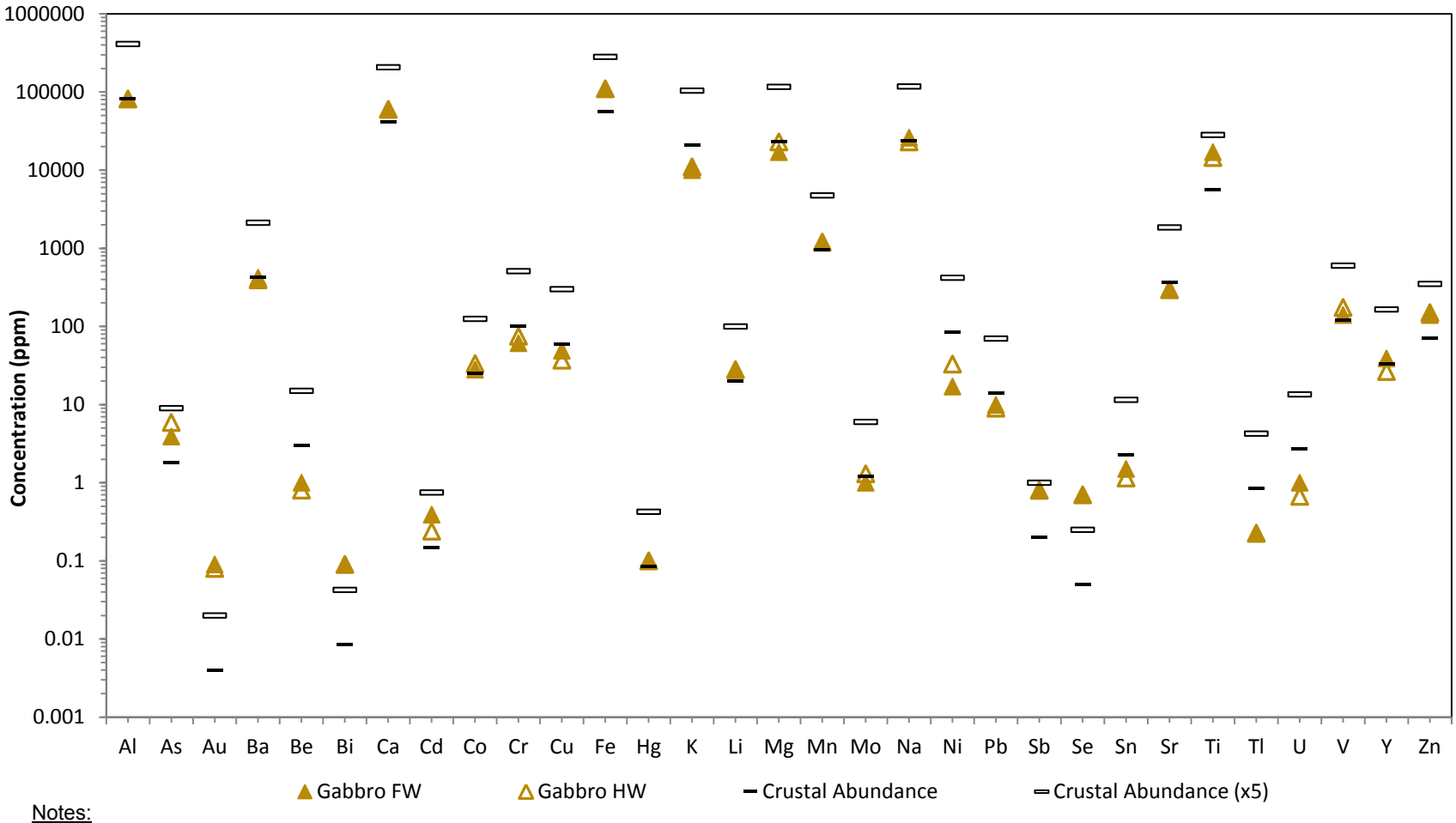
Notes:
[1] Price (1997)
nc - not calculated
- not analyzed

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Crustal Abundance (ug/g) (Price, 1997)[1]** | | | | | | | | | | | | | | | | | **82300** | **1.8** | **425** | **3.0** | **0.01** | **41500** | **0.15** | **25** |
| **Typical Crustal Abundance (ug/g) x5** | | | | | | | | | | | | | | | | | **411500** | **9.0** | **2125** | **15** | **0.04** | **207500** | **0.75** | **125** |
| **Sample ID** | **Deposit** | **Lithology** | **Location** | **Test Before or After Kinetics** | **SiO2 %** | **Al2O3 %** | **Fe2O3 %** | **MgO %** | **CaO %** | **Na2O %** | **K2O %** | **TiO2 %** | **P2O5 %** | **MnO %** | **Cr2O3 %** | **V2O5 %** | **LOI %** | **Sum %** | **Al µg/g** | **As µg/g** | **Ba µg/g** | **Be µg/g** | **Bi µg/g** | **Ca µg/g** | **Cd µg/g** | **Co µg/g** |
| Column 1: Tiri GW OP E | Tiriganiaq | GW | Open Pit | After | 62 | 15 | 7.1 | 2.1 | 2.7 | 3.0 | 2.0 | 0.50 | 0.11 | 0.030 | 0.010 | < 0.01 | 4.7 | 99 | 75000 | **330** | **740** | 1.0 | **0.19** | 18000 | **0.22** | 14 |
| Column 2: Tiri GW OP W | Tiriganiaq | GW | Open Pit | After | 62 | 15 | 6.1 | 2.3 | 2.7 | 3.0 | 2.0 | 0.57 | 0.13 | 0.050 | 0.020 | 0.020 | 4.5 | 99 | 75000 | **220** | **650** | 0.96 | **0.14** | 18000 | **0.21** | 16 |
| Column 3: Tiri GW UG (All) | Tiriganiaq | GW | Underground | After | 59 | 16 | 7.8 | 3.2 | 3.1 | 2.6 | 2.3 | 0.66 | 0.12 | 0.050 | 0.030 | 0.020 | 6.4 | 100 | 77000 | **74** | **680** | 1.1 | **0.14** | 20000 | **0.23** | 20 |
| Column 6: Disc GW (OP) | Discovery | GW | Open Pit | After | 64 | 17 | 6.8 | 2.5 | 2.2 | 3.5 | 2.4 | 0.59 | 0.13 | 0.040 | 0.020 | 0.020 | 2.0 | 100 | 80000 | **51** | **590** | 0.97 | **0.15** | 14000 | **0.24** | 16 |
| | | | | MINIMUM | 59 | 15 | 6.1 | 2.1 | 2.2 | 2.6 | 2.0 | 0.50 | 0.11 | 0.030 | 0.010 | < 0.01 | 2.0 | 99 | 75000 | 51 | 590 | 0.96 | 0.14 | 14000 | 0.21 | 14 |
| | | | | MAXIMUM | 64 | 17 | 7.8 | 3.2 | 3.1 | 3.5 | 2.4 | 0.66 | 0.13 | 0.050 | 0.030 | 0.020 | 6.4 | 100 | 80000 | 330 | 740 | 1.1 | 0.19 | 20000 | 0.24 | 20 |
| | | | | MEDIAN | 62 | 15 | 7.0 | 2.4 | 2.7 | 3.0 | 2.2 | 0.58 | 0.13 | 0.045 | 0.020 | 0.020 | 4.6 | 100 | 76000 | 147 | 665 | 0.99 | 0.15 | 18000 | 0.23 | 16 |
| | | | | AVERAGE | 62 | 16 | 7.0 | 2.5 | 2.7 | 3.0 | 2.2 | 0.58 | 0.12 | 0.043 | 0.020 | 0.020 | 4.4 | 100 | 76750 | 169 | 665 | 1.0 | 0.16 | 17500 | 0.23 | 17 |
| | | | | STANDARD DEVIATION | 2.2 | 0.77 | 0.69 | 0.46 | 0.36 | 0.38 | 0.17 | 0.066 | 0.0096 | 0.0096 | 0.0082 | 0.0 | 1.8 | 0.61 | 2363 | 131 | 62 | 0.064 | 0.024 | 2517 | 0.013 | 2.5 |
| | | | | 75TH PERCENTILE | 63 | 16 | 7.3 | 2.7 | 2.8 | 3.1 | 2.3 | 0.61 | 0.13 | 0.050 | 0.023 | 0.020 | 5.1 | 100 | 77750 | 248 | 695 | 1.0 | 0.16 | 18500 | 0.23 | 17 |
| Column 4: Tiri MV UG (All) | Tiriganiaq | MV | Underground | After | 42 | 13 | 11 | 4.7 | 12 | 2.2 | 0.56 | 0.75 | 0.060 | 0.23 | 0.020 | 0.050 | 13 | 100 | 56000 | **35** | 260 | 0.37 | < 0.09 | **87000** | **0.16** | **41** |
| Column 5: F-Zone MV (OP) | F-Zone | MV | Open Pit | After | 46 | 14 | 11 | 5.6 | 10 | 2.3 | 0.50 | 0.89 | 0.090 | 0.20 | 0.040 | 0.040 | 8.4 | 99 | 63000 | **28** | 150 | 0.32 | < 0.09 | **66000** | **0.20** | **39** |
| C-8 Wesmeg | Wesmeg | MV | | Before | 44 | 12 | 12 | 6.6 | 10 | 2.2 | 0.50 | 1.0 | 0.090 | 0.21 | 0.050 | 0.050 | 11 | 100 | 56000 | **49** | 97 | 0.41 | < 0.09 | **65000** | **0.24** | **42** |
| | | | | MINIMUM | 42 | 12 | 11 | 4.7 | 10 | 2.2 | 0.50 | 0.75 | 0.060 | 0.20 | 0.020 | 0.040 | 8.4 | 99 | 56000 | 28 | 97 | 0.32 | < 0.09 | 65000 | 0.16 | 39 |
| | | | | MAXIMUM | 46 | 14 | 12 | 6.6 | 12 | 2.3 | 0.56 | 1.0 | 0.090 | 0.23 | 0.050 | 0.050 | 13 | 100 | 63000 | 49 | 260 | 0.41 | < 0.09 | 87000 | 0.24 | 42 |
| | | | | MEDIAN | 44 | 13 | 11 | 5.6 | 10 | 2.2 | 0.50 | 0.89 | 0.090 | 0.21 | 0.040 | 0.050 | 11 | 100 | 56000 | 35 | 150 | 0.37 | nc | 66000 | 0.20 | 41 |
| | | | | AVERAGE | 44 | 13 | 11 | 5.6 | 11 | 2.2 | 0.52 | 0.88 | 0.080 | 0.21 | 0.037 | 0.047 | 11 | 100 | 58333 | 37 | 169 | 0.37 | nc | 72667 | 0.20 | 41 |
| | | | | STANDARD DEVIATION | 2.0 | 0.86 | 0.65 | 0.97 | 1.3 | 0.055 | 0.035 | 0.13 | 0.017 | 0.015 | 0.015 | 0.0058 | 2.5 | 0.45 | 4041 | 11 | 83 | 0.045 | nc | 12423 | 0.040 | 1.5 |
| | | | | 75TH PERCENTILE | 45 | 13 | 12 | 6.1 | 11 | 2.3 | 0.53 | 0.95 | 0.090 | 0.22 | 0.045 | 0.050 | 12 | 100 | 59500 | 42 | 205 | 0.39 | nc | 76500 | 0.22 | 42 |
| C-7 Pump | Pump | 14% IF, 86% MV | | Before | 46 | 12 | 12 | 5.3 | 9.8 | 1.9 | 0.46 | 0.73 | 0.10 | 0.22 | 0.030 | 0.040 | 9.8 | 99 | 54000 | **28** | 80 | 0.35 | < 0.09 | **62000** | **0.30** | **34** |
| C-9 Wolf | Wolf | 25%MV, 13%IF, 62%GW | | Before | 57 | 15 | 9.3 | 3.2 | 4.4 | 2.4 | 1.7 | 0.62 | 0.11 | 0.090 | 0.030 | 0.020 | 6.0 | 100 | 66000 | **83** | 420 | 0.77 | < 0.09 | 28000 | **0.32** | 20 |

1-Price (1997)

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Crustal Abundance (ug/g) (Price, 1997)[1]** | | | | | **102** | **60** | **56300** | **0.09** | **20850** | **20** | **23300** | **950** | **1.2** | **23550** | **84** | **14** | **0.20** | **0.05** | **2.3** | **370** | **5650** | **0.85** | **2.7** | **120** | **33** | **70** |
| **Typical Crustal Abundance (ug/g) x5** | | | | | **510** | **300** | **281500** | **0.43** | **104250** | **100** | **116500** | **4750** | **6.0** | **117750** | **420** | **70** | **1.0** | **0.25** | **11.5** | **1850** | **28250** | **4.25** | **13.5** | **600** | **165** | **350** |
| **Sample ID** | **Deposit** | **Lithology** | **Location** | **Test Before or After Kinetics** | **Cr µg/g** | **Cu µg/g** | **Fe µg/g** | **Hg µg/g** | **K µg/g** | **Li µg/g** | **Mg µg/g** | **Mn µg/g** | **Mo µg/g** | **Na µg/g** | **Ni µg/g** | **Pb µg/g** | **Sb µg/g** | **Se µg/g** | **Sn µg/g** | **Sr µg/g** | **Ti µg/g** | **Tl µg/g** | **U µg/g** | **V µg/g** | **Y µg/g** | **Zn µg/g** |
| Column 1: Tiri GW OP E | Tiriganiaq | GW | Open Pit | After | 100 | 35 | 49000 | < 0.1 | 20000 | **32** | 12000 | 340 | **1.9** | 20000 | 47 | **16** | < 0.8 | < 0.7 | 0.80 | 280 | 2000 | 0.40 | 1.3 | 76 | 5.8 | 68 |
| Column 2: Tiri GW OP W | Tiriganiaq | GW | Open Pit | After | **110** | 38 | 41000 | < 0.1 | 20000 | **32** | 13000 | 360 | 1.0 | 19000 | 55 | **15** | < 0.8 | < 0.7 | 0.60 | 280 | 1800 | 0.38 | 1.5 | 85 | 6.6 | 67 |
| Column 3: Tiri GW UG (All) | Tiriganiaq | GW | Underground | After | **140** | 38 | 53000 | < 0.1 | **21000** | **33** | 17000 | 420 | **1.4** | 17000 | 67 | **18** | < 0.8 | < 0.7 | 1.0 | 260 | 3400 | 0.41 | 1.4 | 110 | 7.4 | **73** |
| Column 6: Disc GW (OP) | Discovery | GW | Open Pit | After | **110** | 31 | 45000 | < 0.1 | **21000** | **37** | 13000 | 420 | **1.3** | 22000 | 56 | 9.8 | < 0.8 | < 0.7 | 0.90 | 270 | 3500 | 0.37 | 1.6 | 91 | 8.0 | 68 |
| | | | | MINIMUM | 100 | 31 | 41000 | < 0.1 | 20000 | 32 | 12000 | 340 | 1.0 | 17000 | 47 | 9.8 | < 0.8 | < 0.7 | 0.60 | 260 | 1800 | 0.37 | 1.3 | 76 | 5.8 | 67 |
| | | | | MAXIMUM | 140 | 38 | 53000 | < 0.1 | 21000 | 37 | 17000 | 420 | 1.9 | 22000 | 67 | 18 | < 0.8 | < 0.7 | 1.0 | 280 | 3500 | 0.41 | 1.6 | 110 | 8.0 | 73 |
| | | | | MEDIAN | 110 | 37 | 47000 | nc | 20500 | 33 | 13000 | 390 | 1.4 | 19500 | 56 | 16 | nc | nc | 0.85 | 275 | 2700 | 0.39 | 1.5 | 88 | 7.0 | 68 |
| | | | | AVERAGE | 115 | 36 | 47000 | nc | 20500 | 34 | 13750 | 385 | 1.4 | 19500 | 56 | 15 | nc | nc | 0.83 | 273 | 2675 | 0.39 | 1.5 | 91 | 7.0 | 69 |
| | | | | STANDARD DEVIATION | 17 | 3.3 | 5164 | nc | 577 | 2.4 | 2217 | 41 | 0.37 | 2082 | 8.2 | 3.5 | nc | nc | 0.17 | 9.6 | 900 | 0.018 | 0.13 | 14 | 0.96 | 2.7 |
| | | | | 75TH PERCENTILE | 118 | 38 | 50000 | nc | 21000 | 34 | 14000 | 420 | 1.5 | 20500 | 59 | 17 | nc | nc | 0.93 | 280 | 3425 | 0.40 | 1.5 | 96 | 7.6 | 69 |
| Column 4: Tiri MV UG (All) | Tiriganiaq | MV | Underground | After | **170** | **100** | **70000** | < 0.1 | 6100 | **43** | 20000 | **1500** | 0.60 | 13000 | **110** | **22** | < 0.8 | < 0.7 | < 0.5 | 140 | 3300 | 0.21 | 0.17 | **180** | 8.2 | **76** |
| Column 5: F-Zone MV (OP) | F-Zone | MV | Open Pit | After | **160** | **84** | **78000** | < 0.1 | 4700 | **34** | **29000** | **1200** | 0.40 | 13000 | **87** | 4.3 | < 0.8 | < 0.7 | 0.80 | 120 | 5300 | 0.20 | 0.34 | **190** | 12 | **110** |
| C-8 Wesmeg | Wesmeg | MV | | Before | **260** | **99** | **78000** | < 0.1 | 4400 | **34** | **33000** | **1200** | 0.40 | 13000 | **110** | 3.1 | **1.2** | < 0.7 | 0.80 | 110 | 5400 | 0.14 | 0.20 | **190** | 12 | **110** |
| | | | | MINIMUM | 160 | 84 | 70000 | < 0.1 | 4400 | 34 | 20000 | 1200 | 0.40 | 13000 | 87 | 3.1 | < 0.8 | < 0.7 | 0.80 | 110 | 3300 | 0.14 | 0.17 | 180 | 8.2 | 76 |
| | | | | MAXIMUM | 260 | 100 | 78000 | < 0.1 | 6100 | 43 | 33000 | 1500 | 0.60 | 13000 | 110 | 22 | 1.2 | < 0.7 | 0.80 | 140 | 5400 | 0.21 | 0.34 | 190 | 12 | 110 |
| | | | | MEDIAN | 170 | 99 | 78000 | nc | 4700 | 34 | 29000 | 1200 | 0.40 | 13000 | 110 | 4.3 | nc | nc | 0.80 | 120 | 5300 | 0.20 | 0.20 | 190 | 12 | 110 |
| | | | | AVERAGE | 197 | 94 | 75333 | nc | 5067 | 37 | 27333 | 1300 | 0.47 | 13000 | 102 | 9.8 | nc | nc | 0.80 | 123 | 4667 | 0.18 | 0.24 | 187 | 11 | 99 |
| | | | | STANDARD DEVIATION | 55 | 9.0 | 4619 | nc | 907 | 5.2 | 6658 | 173 | 0.12 | 0.0 | 13 | 11 | nc | nc | 0.0 | 15 | 1185 | 0.038 | 0.091 | 5.8 | 2.2 | 20 |
| | | | | 75TH PERCENTILE | 215 | 100 | 78000 | nc | 5400 | 39 | 31000 | 1350 | 0.50 | 13000 | 110 | 13 | nc | nc | 0.80 | 130 | 5350 | 0.21 | 0.27 | 190 | 12 | 110 |
| C-7 Pump | Pump | 14% IF, 86% MV | | Before | **160** | **100** | **80000** | < 0.1 | 4000 | **34** | **27000** | **1200** | 0.60 | 11000 | 77 | 6.9 | **1.3** | < 0.7 | 1.3 | 87 | 4000 | 0.16 | 0.21 | **160** | 11 | **140** |
| C-9 Wolf | Wolf | 25%MV, 13%IF, 62%GW | | Before | **150** | 53 | **61000** | < 0.1 | 15000 | **37** | 17000 | 570 | 1.0 | 15000 | 60 | 8.4 | **0.90** | < 0.7 | < 0.5 | 220 | 1900 | 0.34 | 1.1 | 100 | 7.6 | **86** |

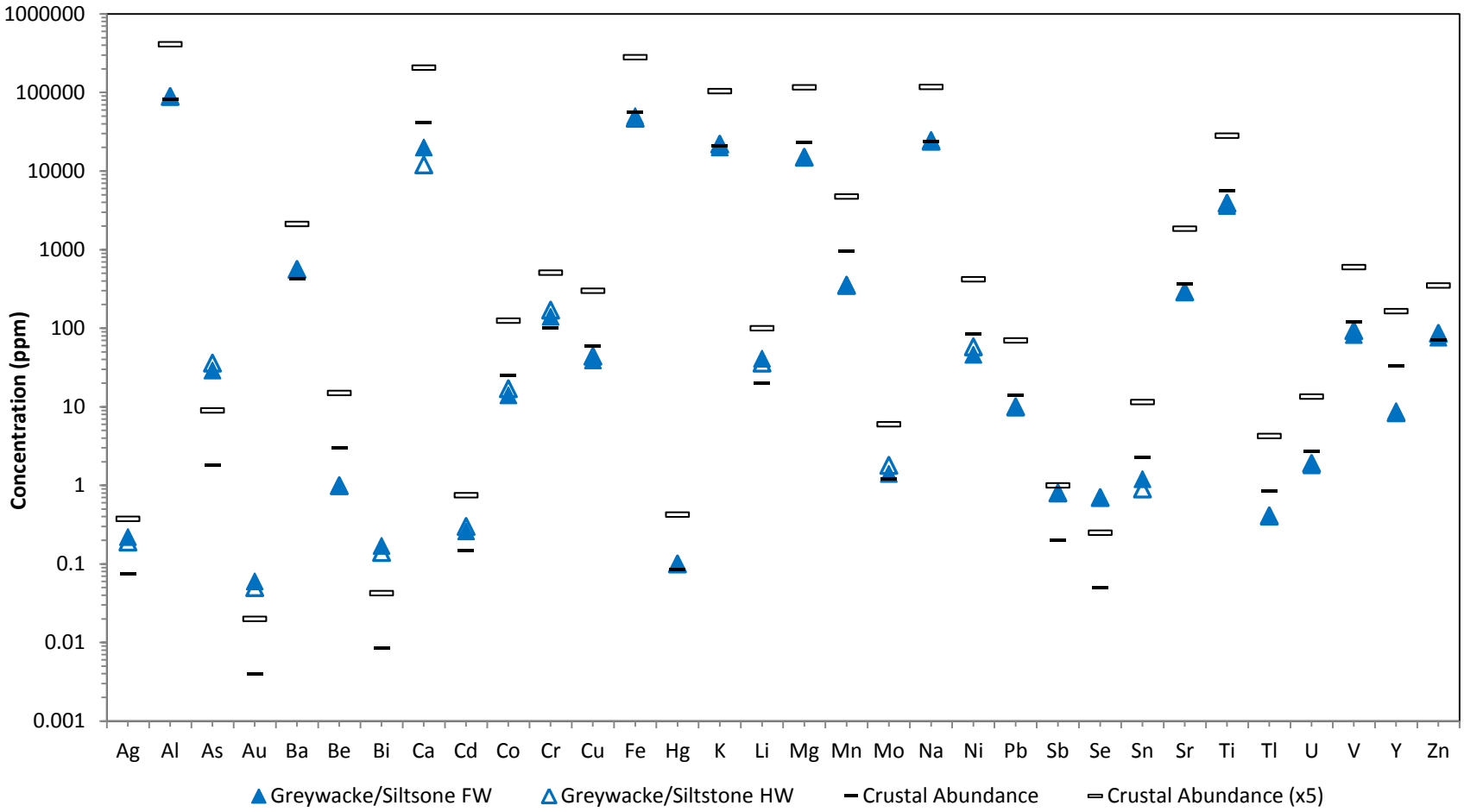
1-Price (1997)




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Gabbro - Discovery Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-1** |

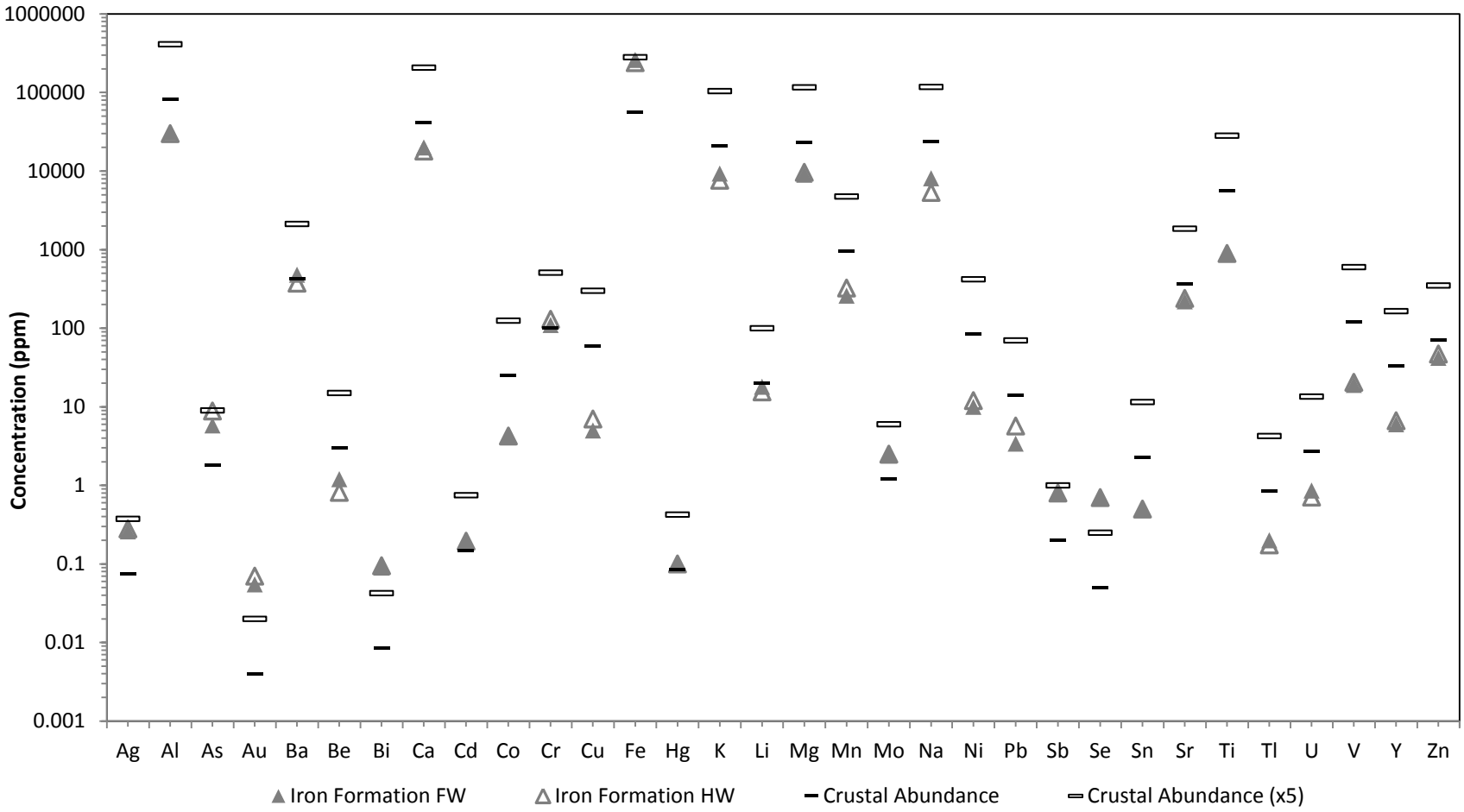
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AEM_static_FIGURES CHEM_30Aug2012.xlsx




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Greywacke/Siltstone - Discovery Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-2** |

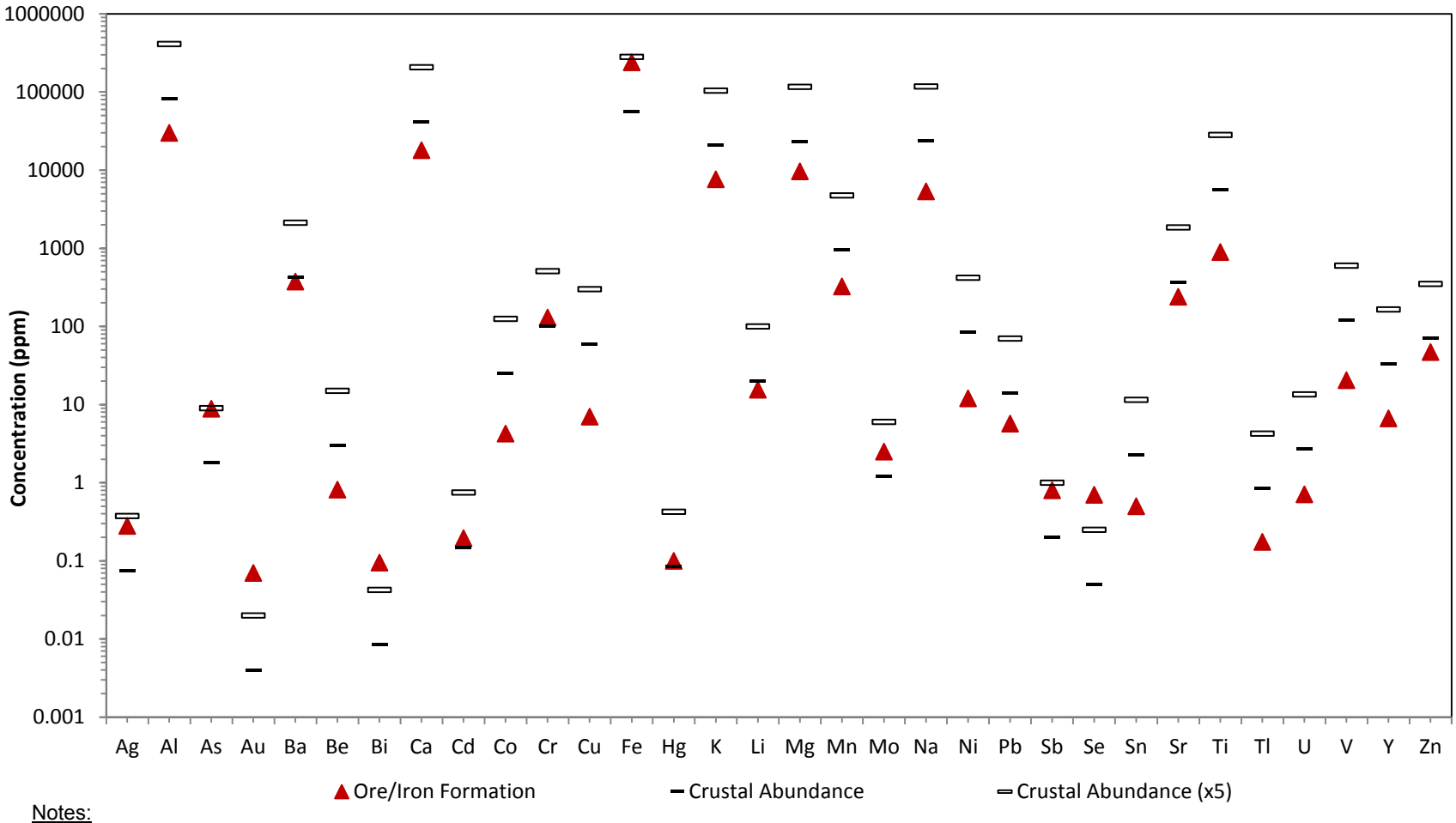
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AEM_static_FIGURES CHEM_30Aug2012.xlsx




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Iron Formation - Discovery Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-3** |

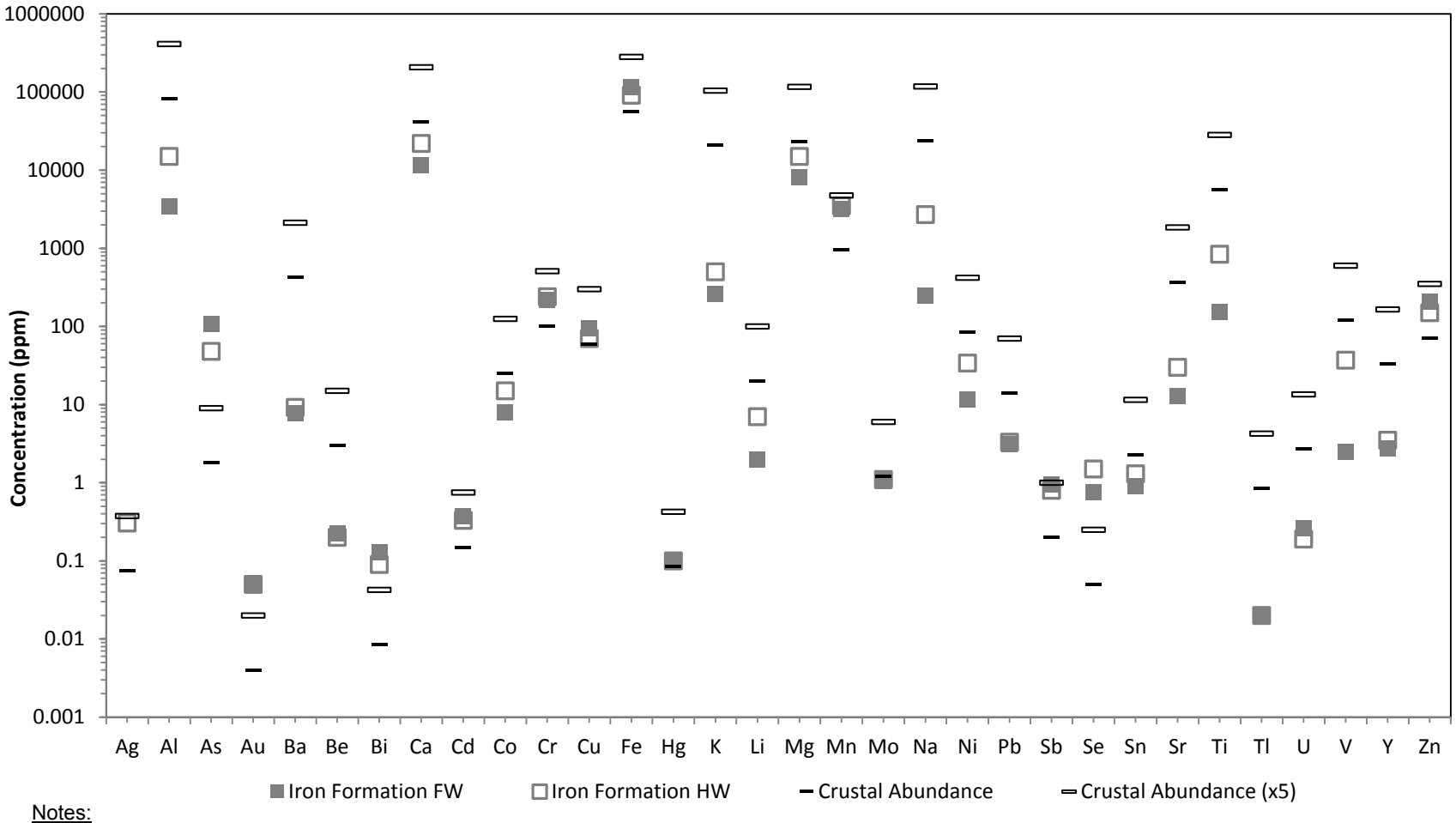
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content Ore/Iron Formation - Discovery Deposit** | | | |
| **Meliadine Gold Project Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-4** |

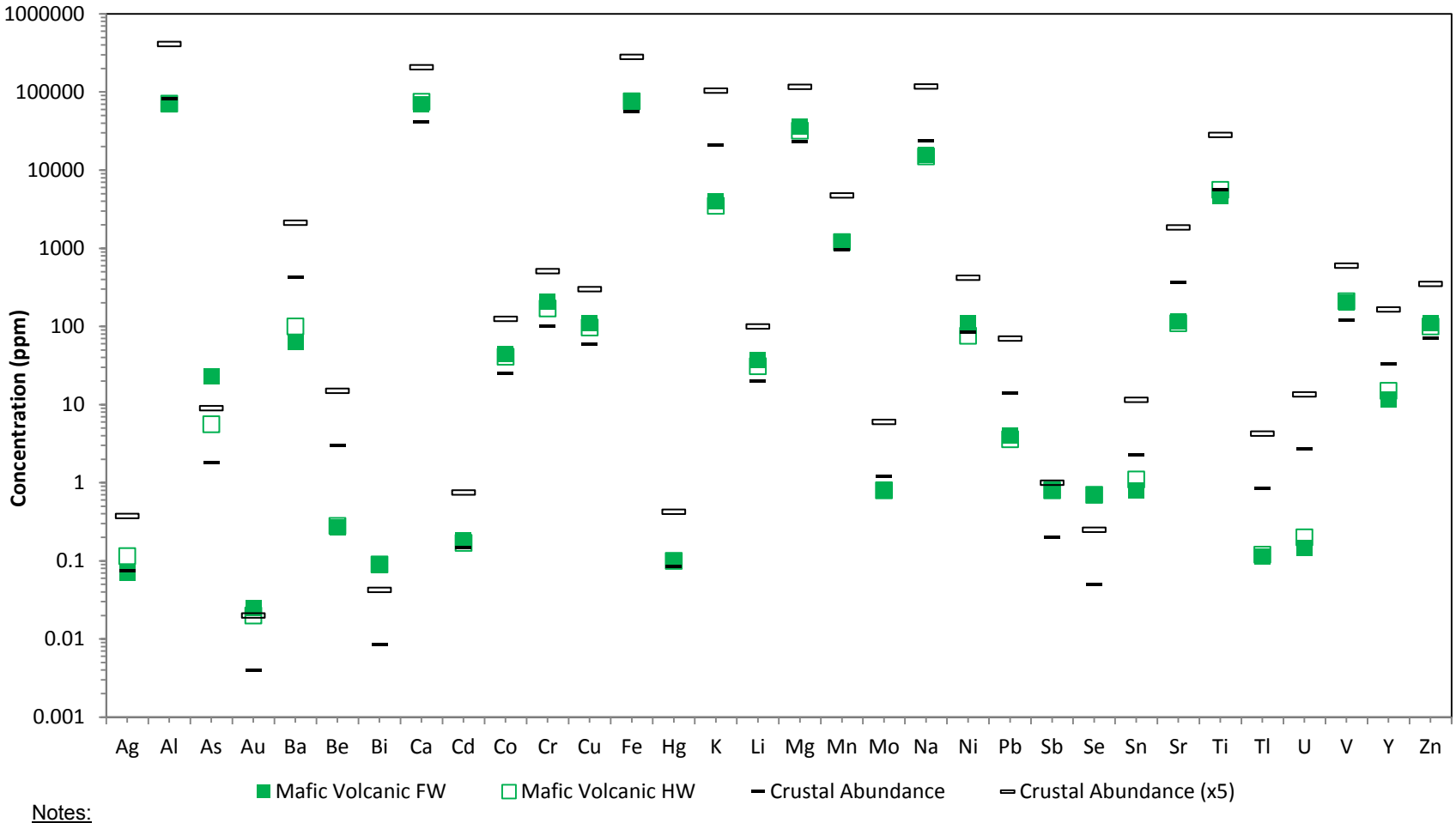
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Iron Formation - F Zone Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-5** |

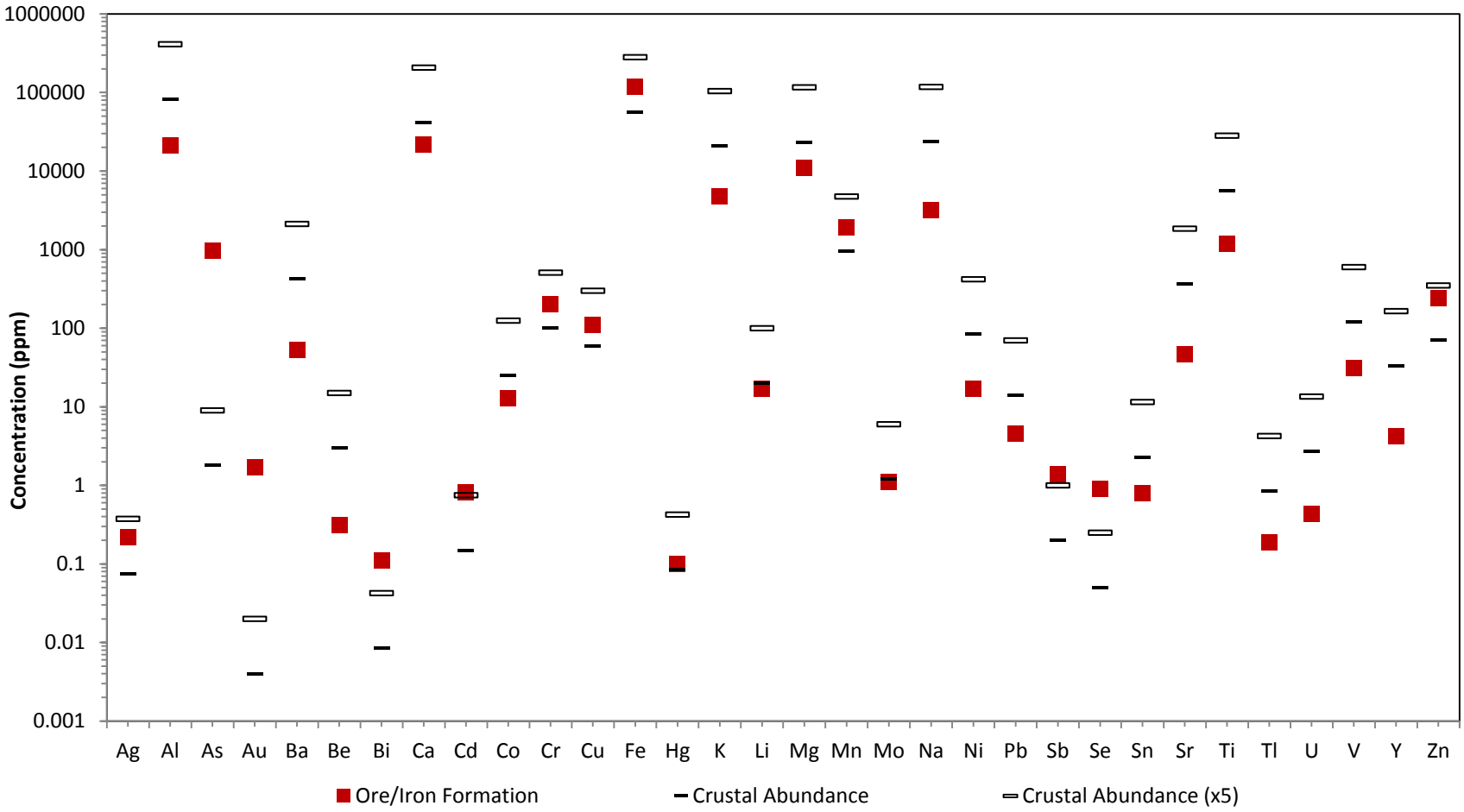
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

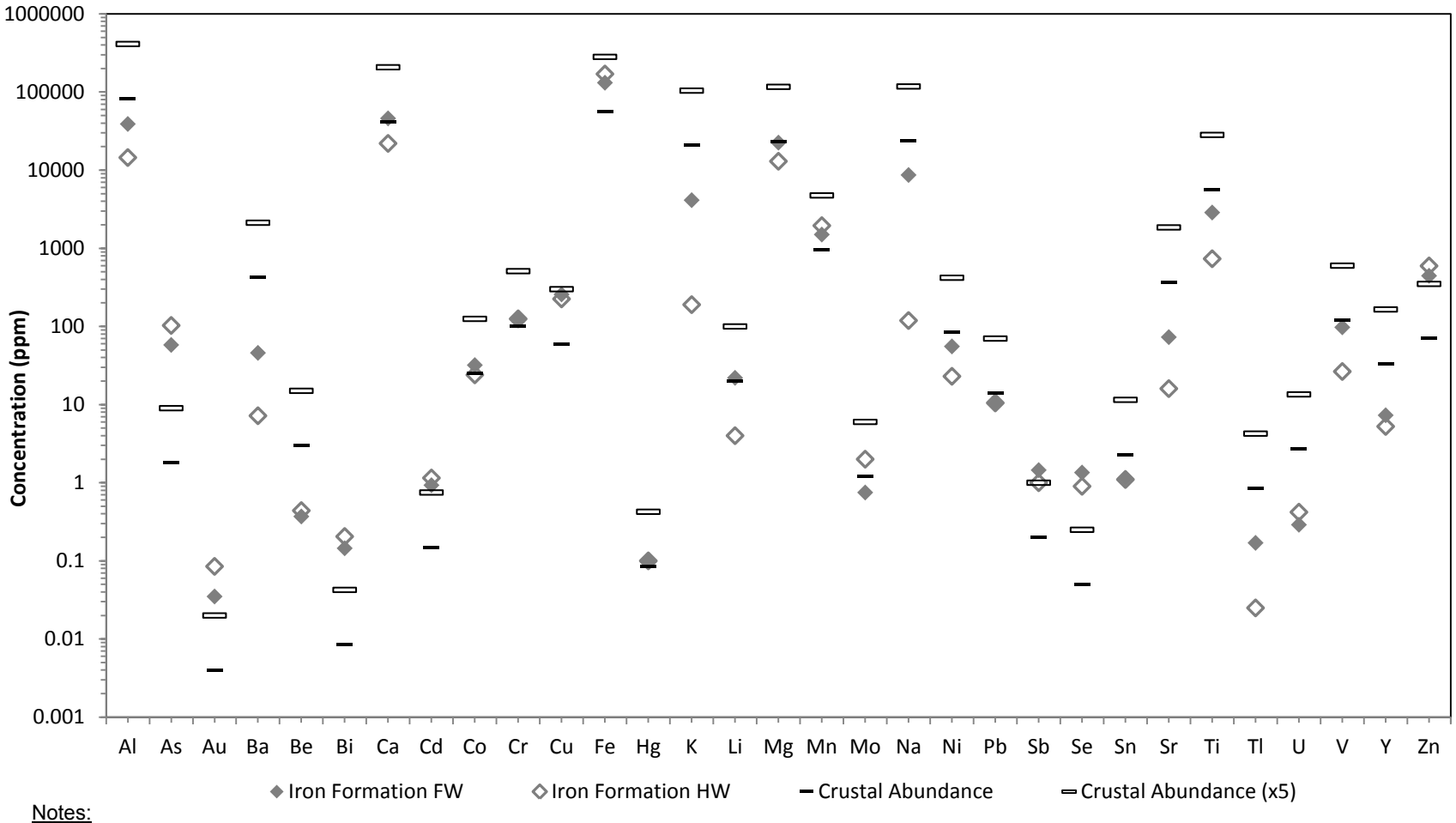
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| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Mafic Volcanic - F Zone Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-6** |

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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

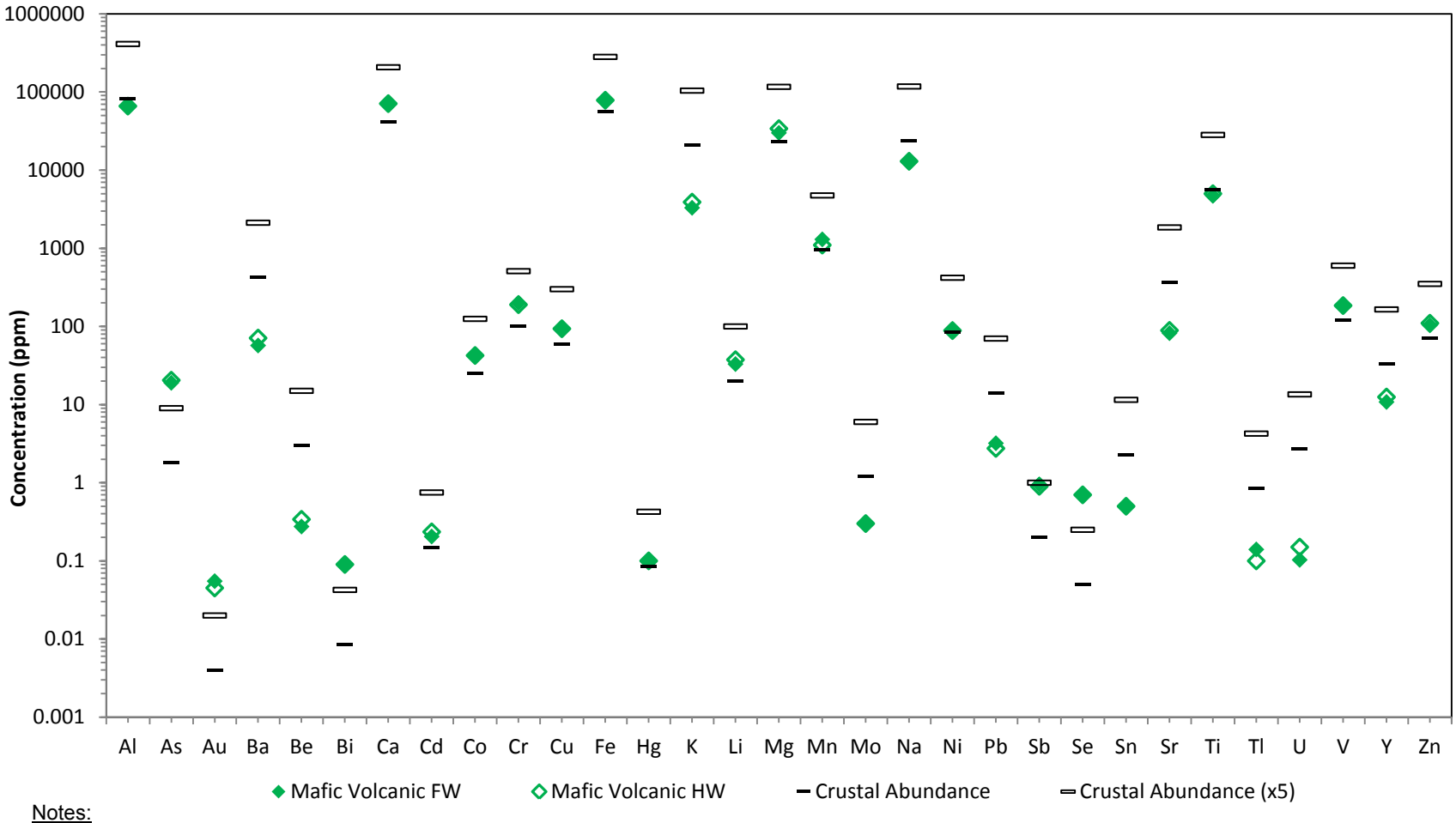
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| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Ore/Iron Formation - F Zone Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-7** |




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

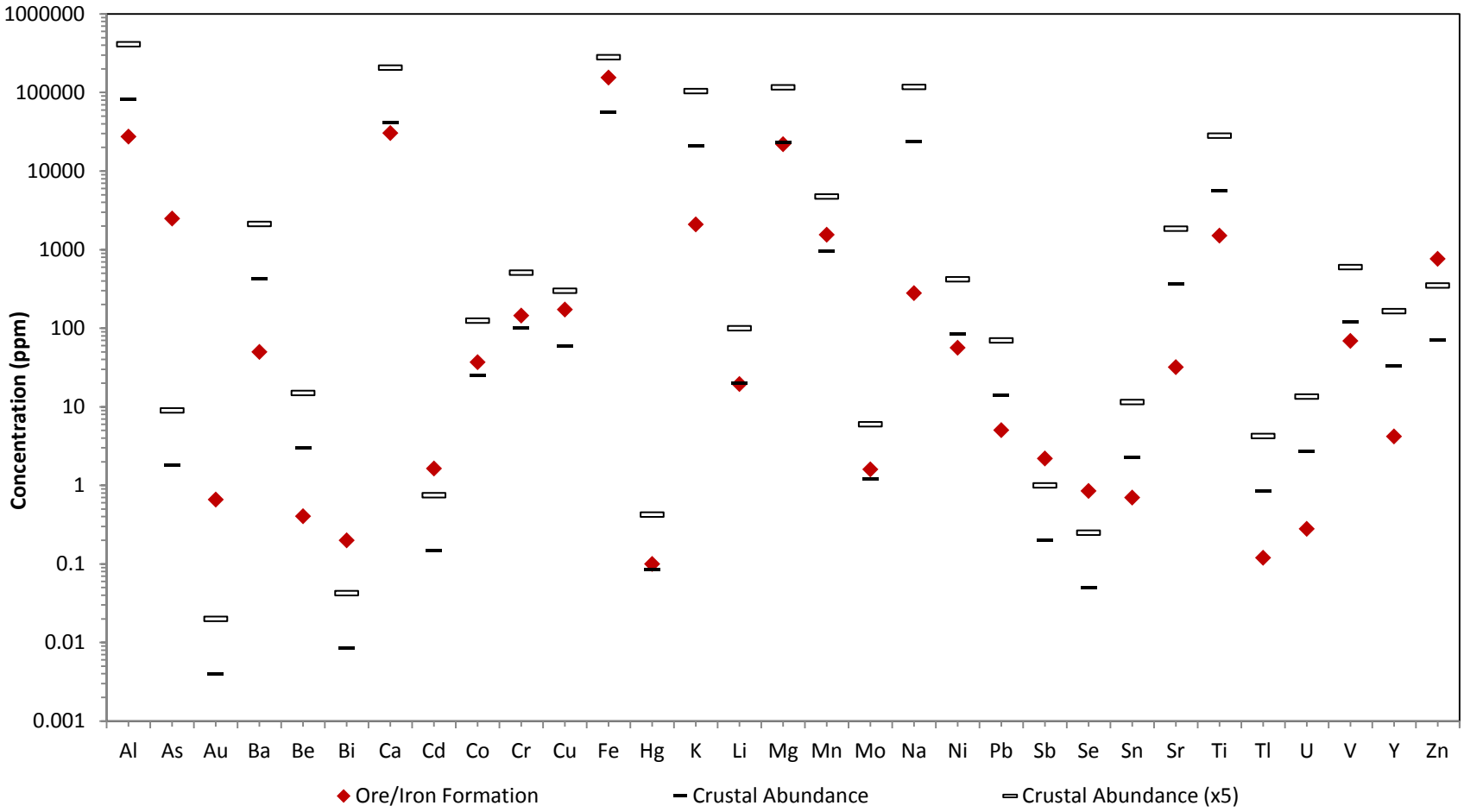
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| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Iron Formation - Pump Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-8** |

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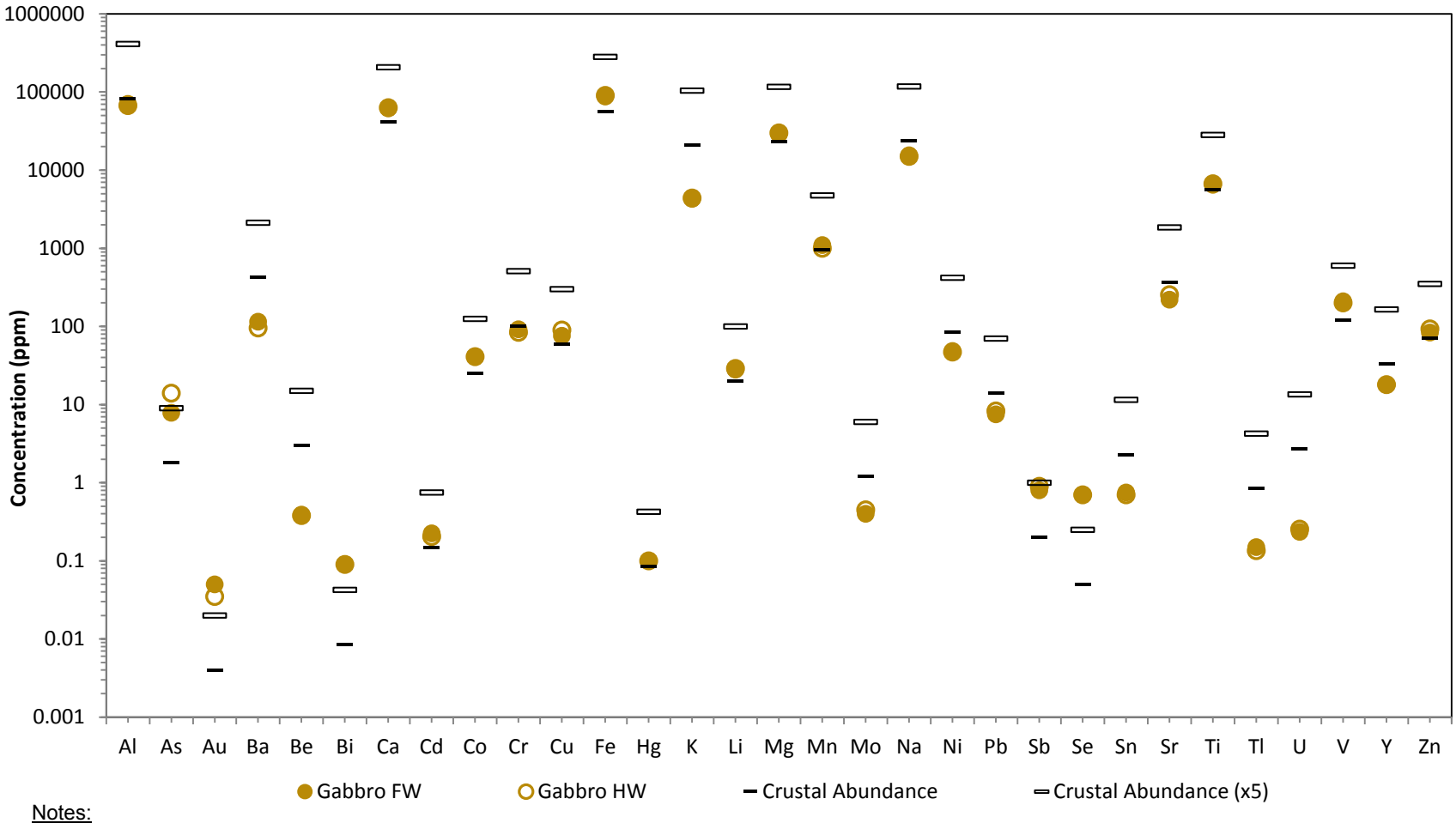

Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Mafic Volcanic - Pump Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-9** |




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

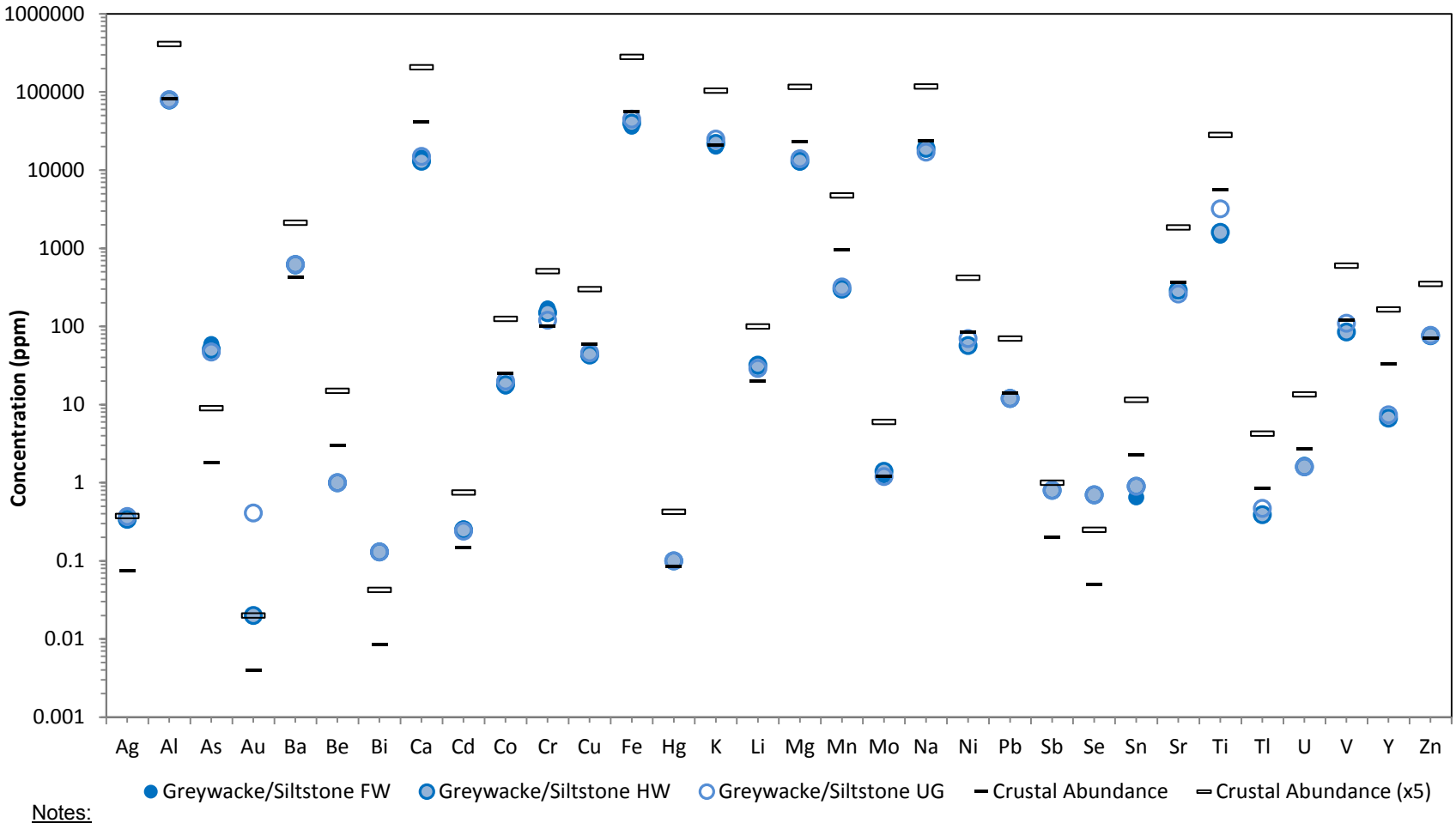
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| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Ore/Iron Formation - Pump Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-10** |




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Gabbro - Tiriganiaq Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-11** |

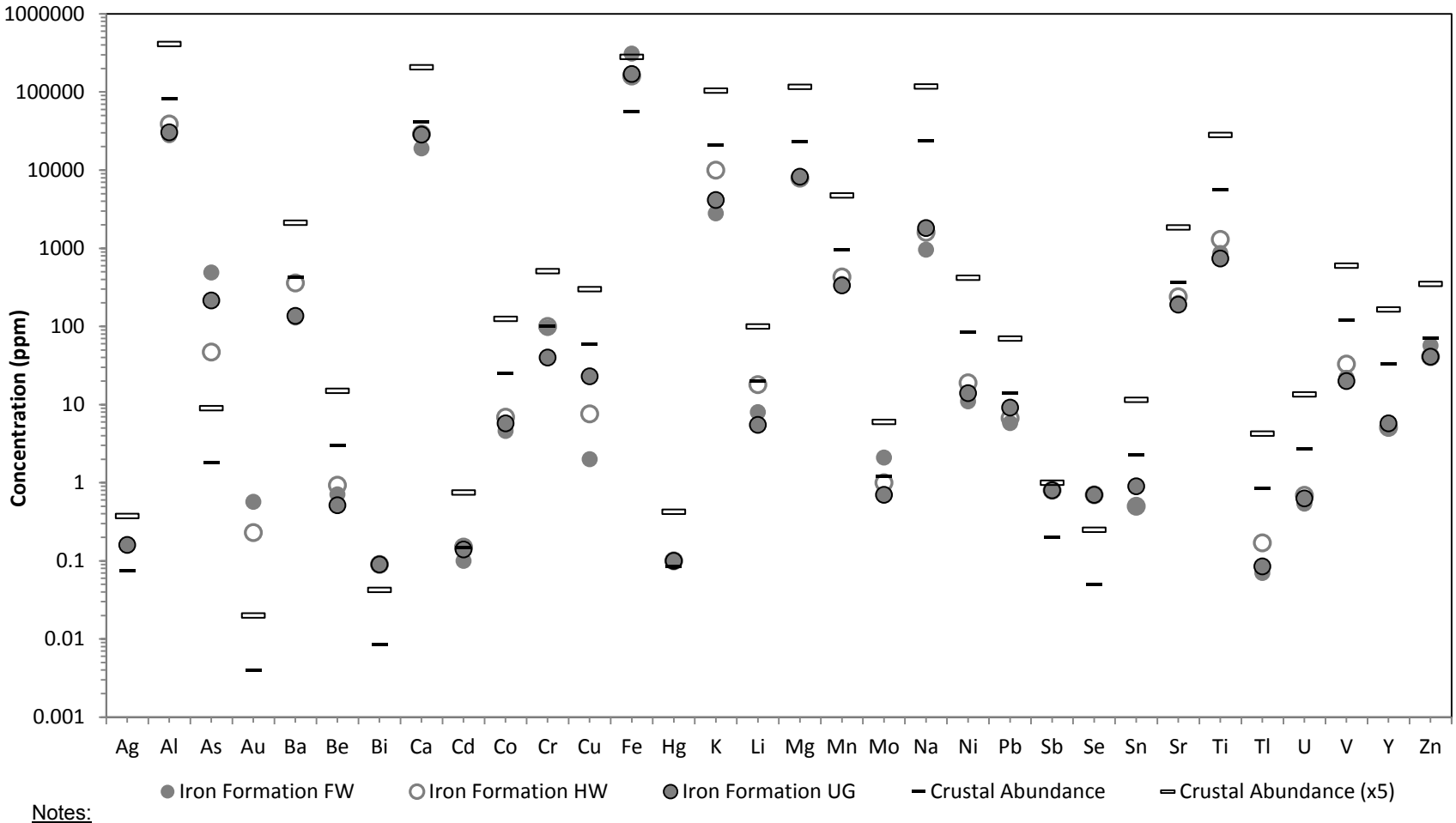
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

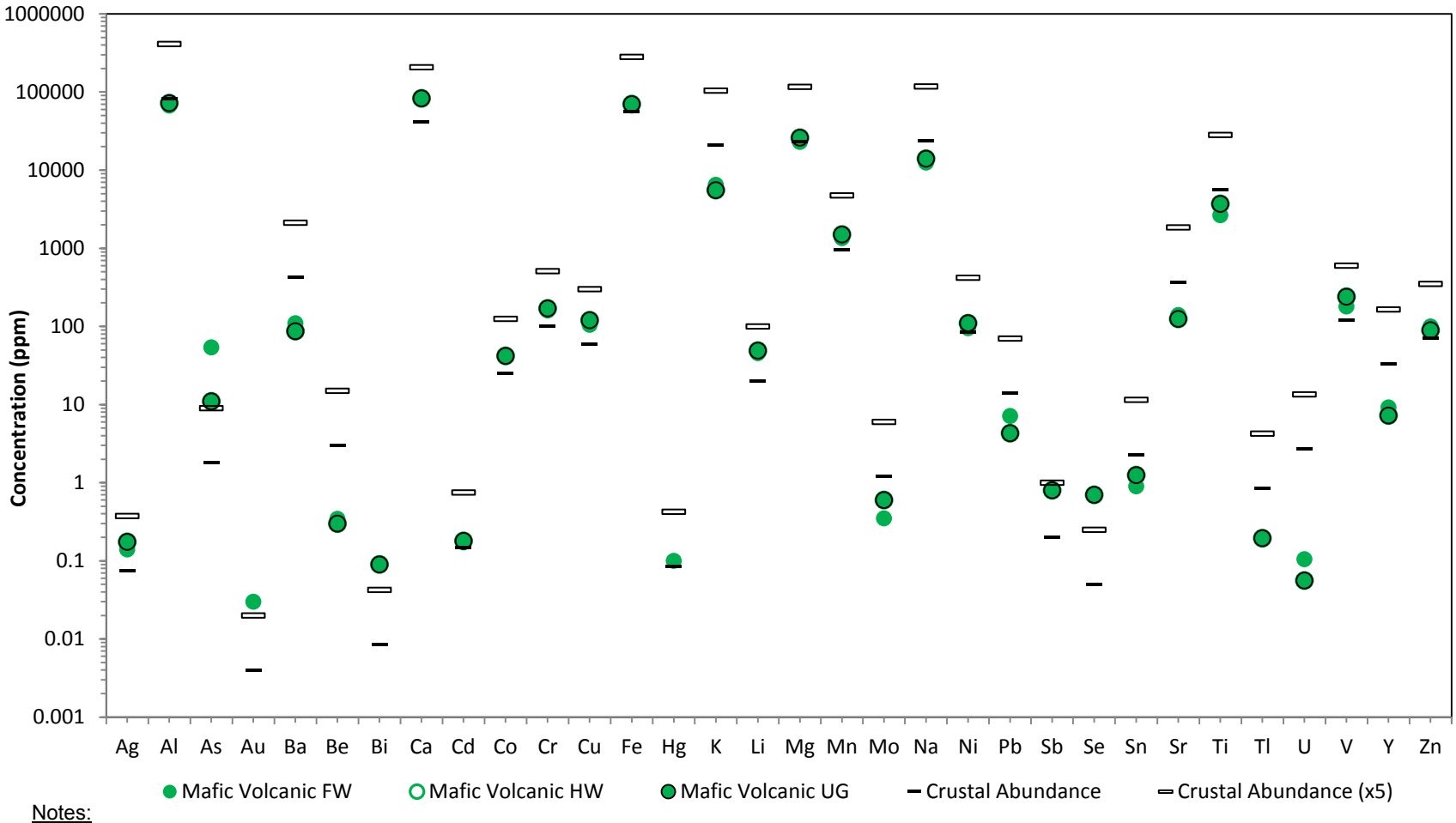
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content Greywacke/Siltstone - Tiriganiaq Deposit** | | | |
| **Meliadine Gold Project Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-12** |

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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

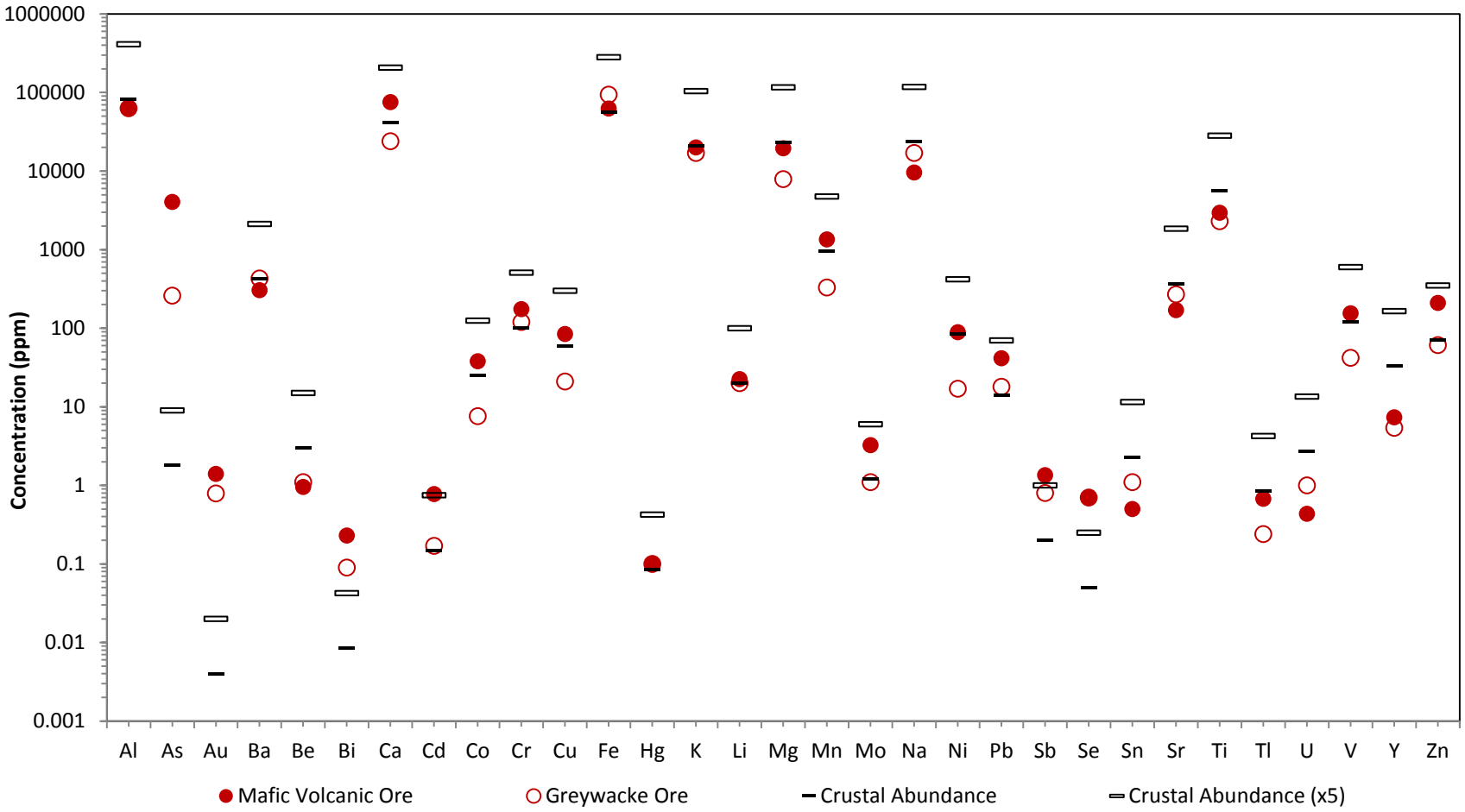
| | | | | | |
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| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Iron Formation - Tiriganiaq Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-13** |




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Trace Element Content<br>Mafic Volcanic - Tiriganiaq Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.2-14 |

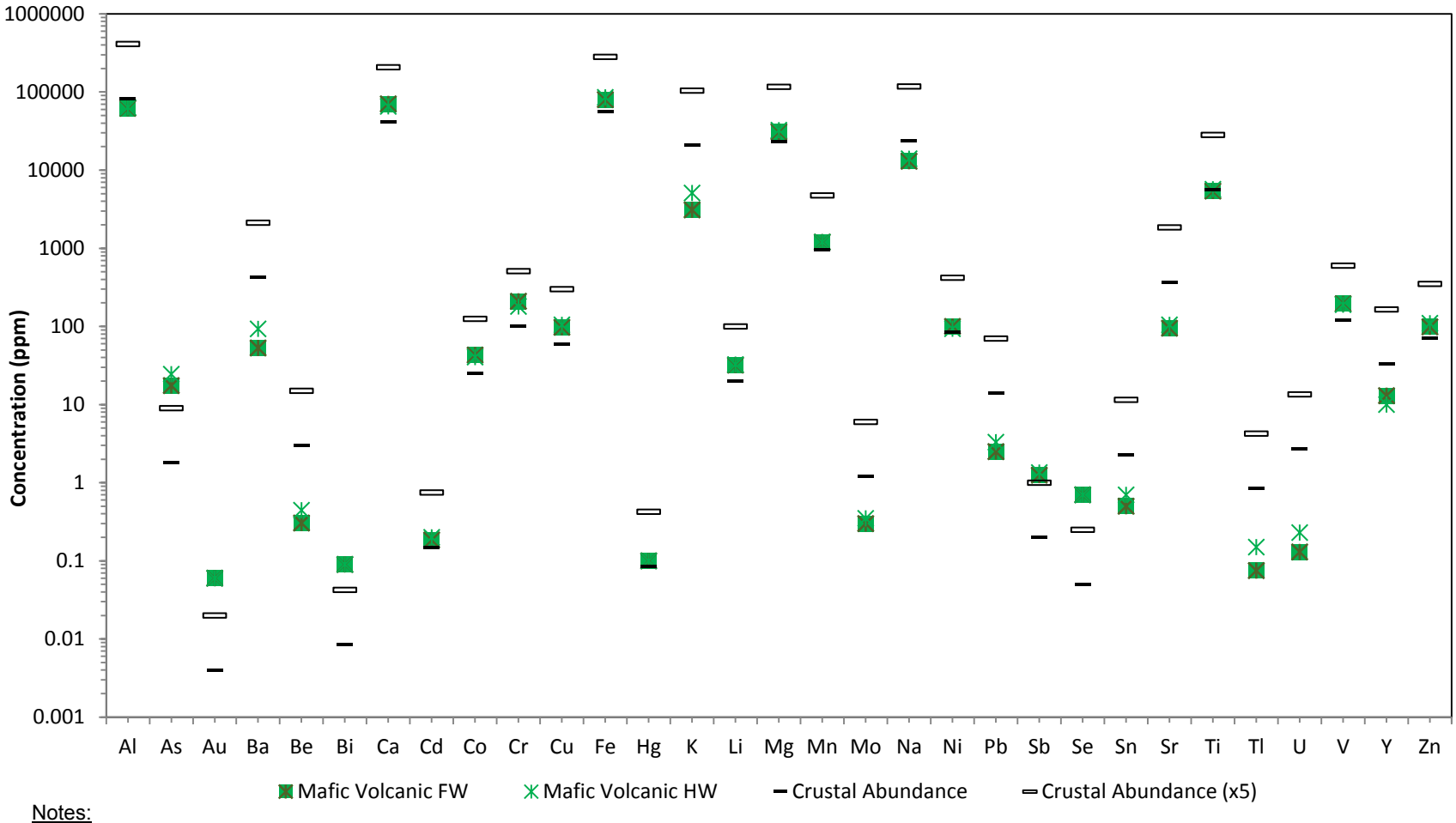
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content**<br>**Mafic Volcanic Ore and Greywacke Ore - Tiriganiaq Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | **B.2-15** |

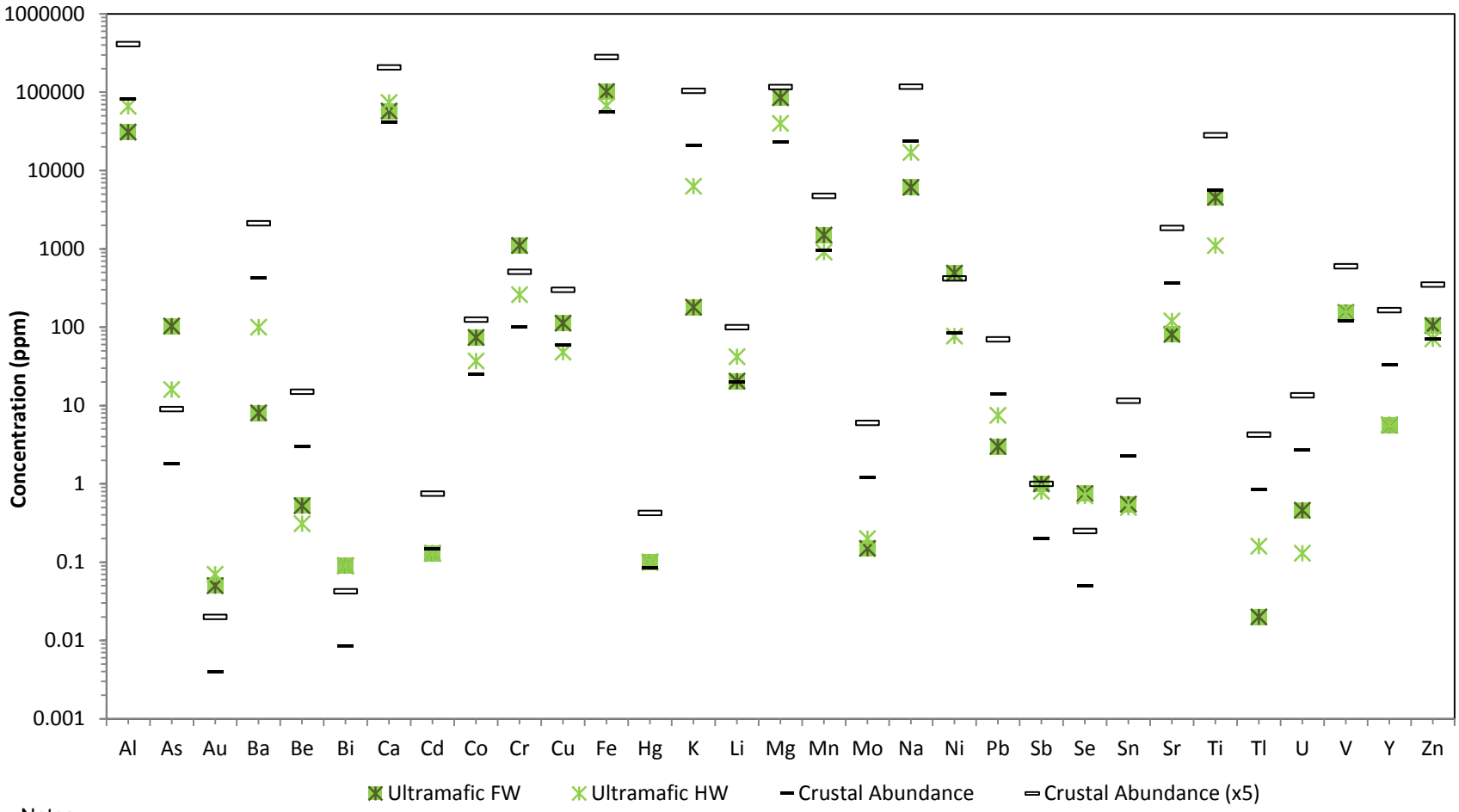
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Mafic Volcanic - Wesmeg Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-16** |

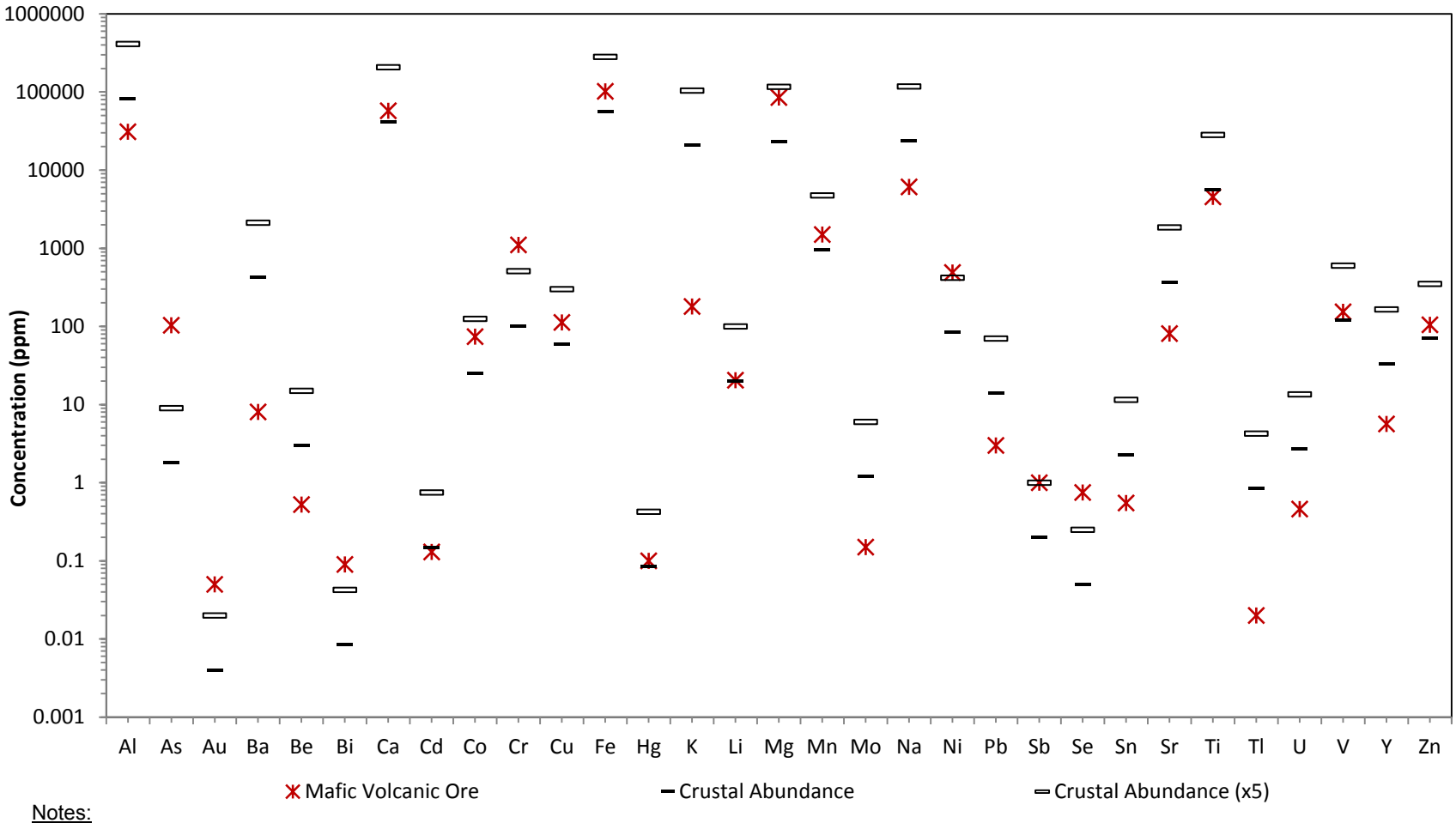
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AEM_static_FIGURES CHEM_30Aug2012.xlsx




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Ultramafic - Wesmeg Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-17** |

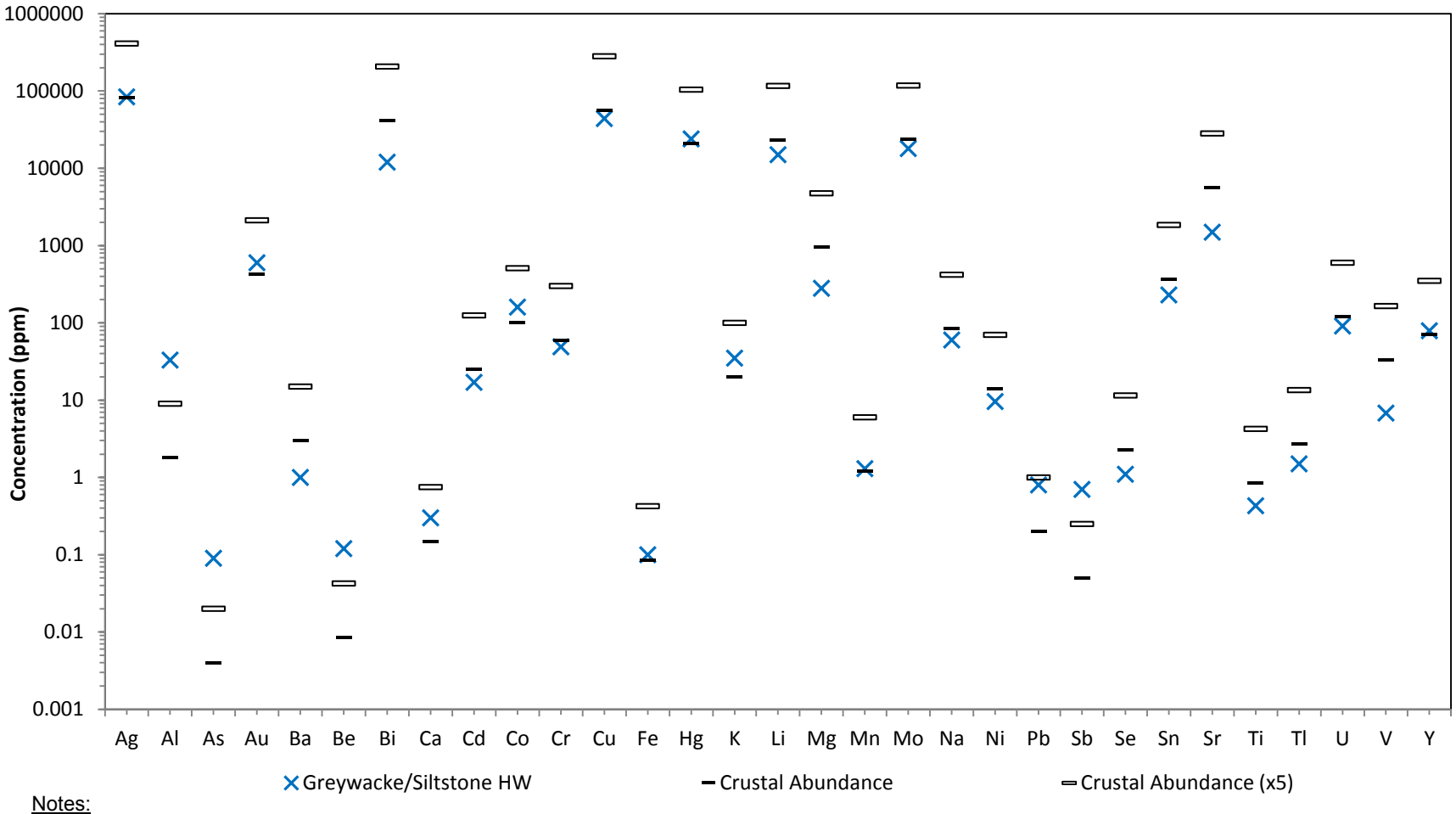
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AEM_static_FIGURES CHEM_30Aug2012.xlsx




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Trace Element Content<br>Mafic Volcanic Ore - Wesmeg Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.2-18 |

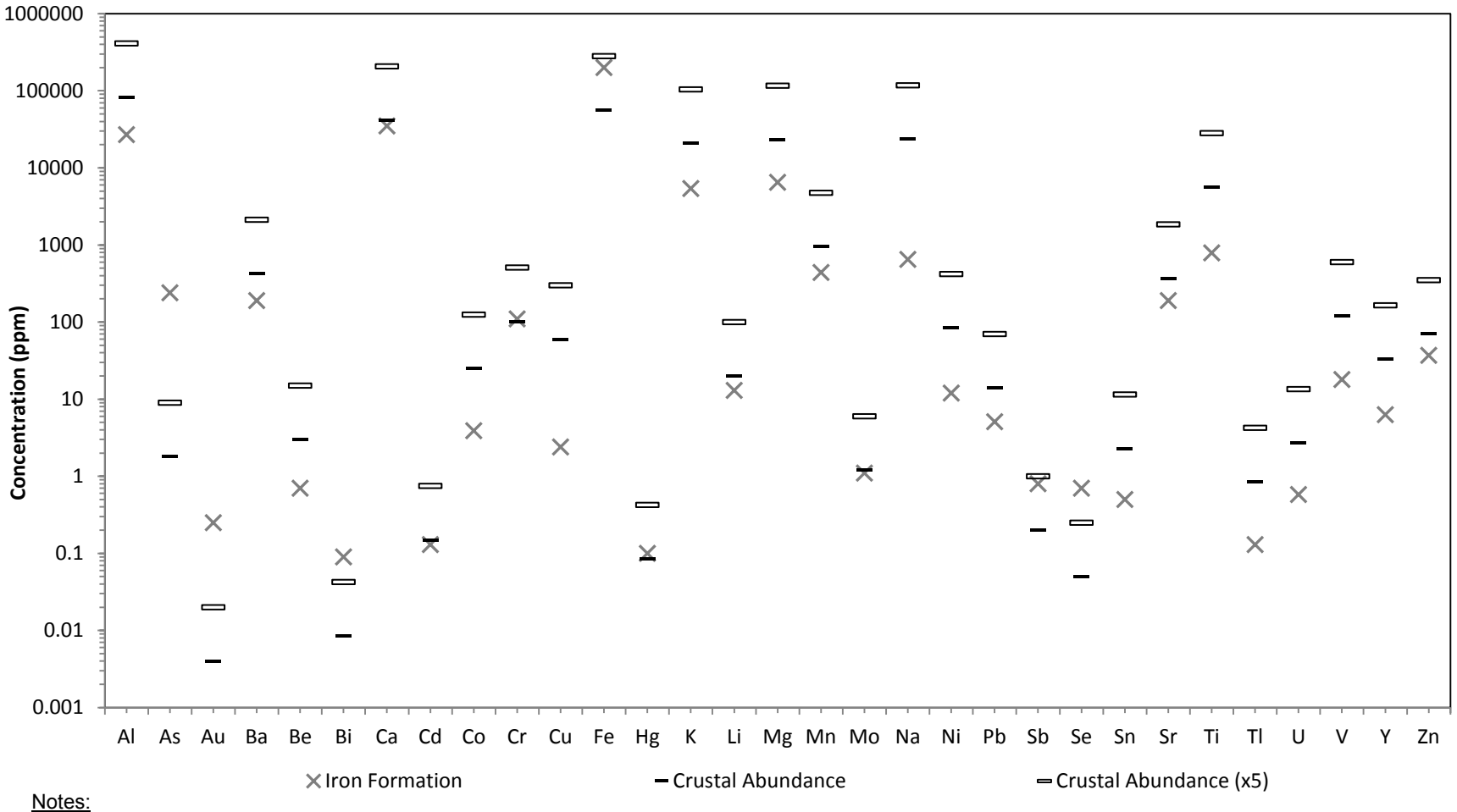
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock and Ore Static Testing | Trace Element Content<br>Greywacke/Siltstone - Wolf Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date: Aug-12 | Project N°: 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure: B.2-19 |

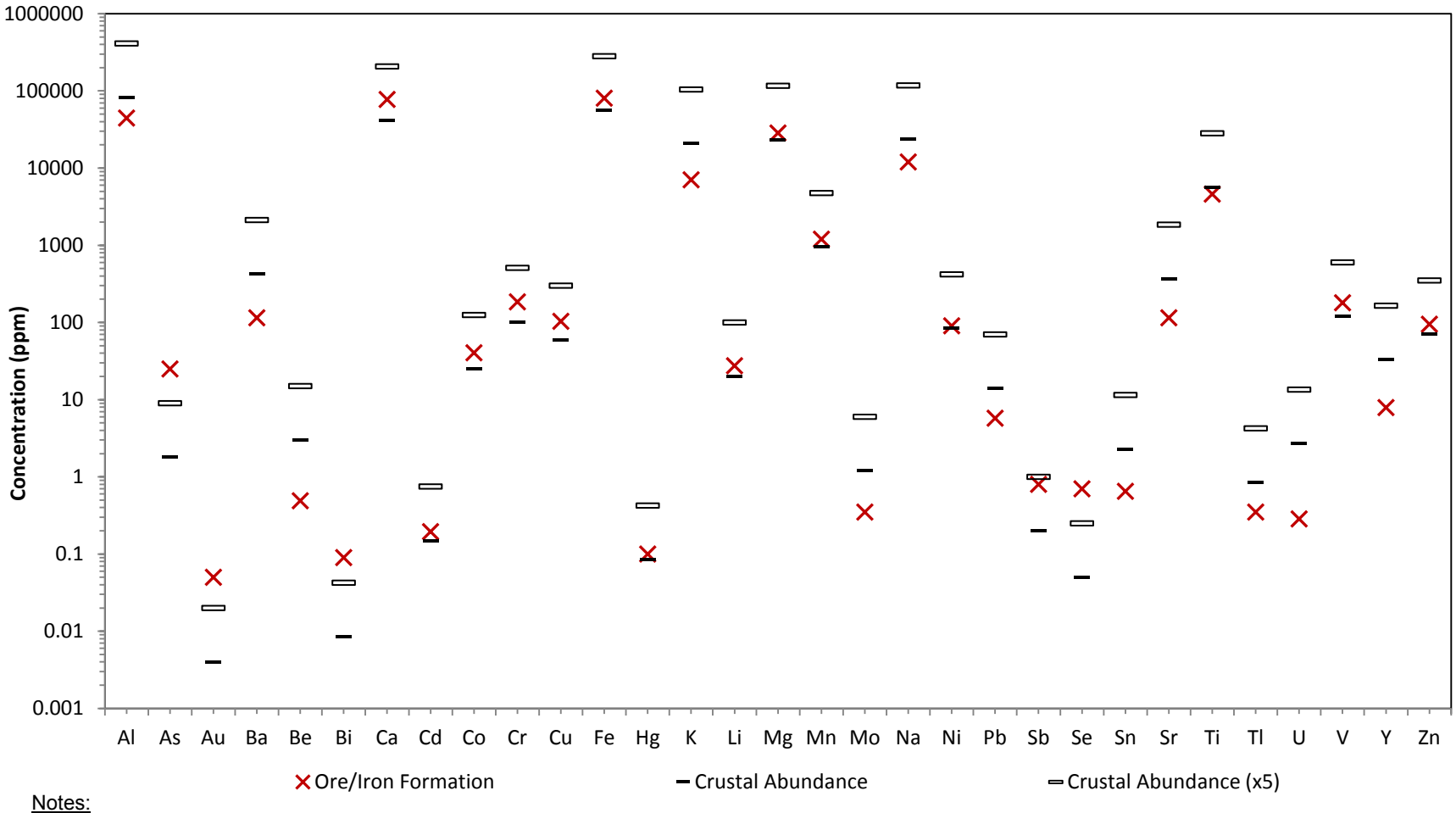
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Iron Formation - Wolf Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-20** |

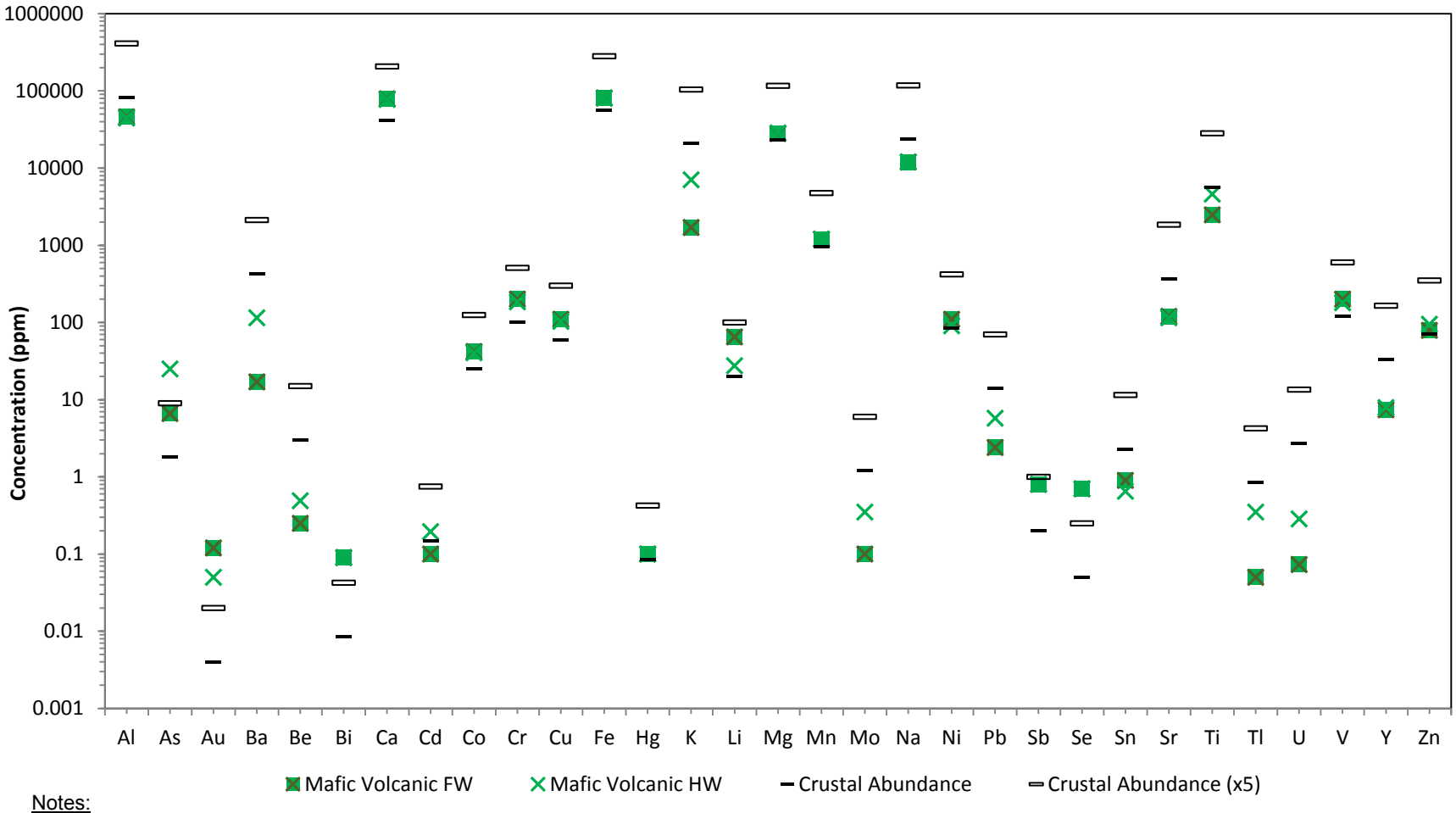
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Ore/Iron Formation - Wolf Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-21** |

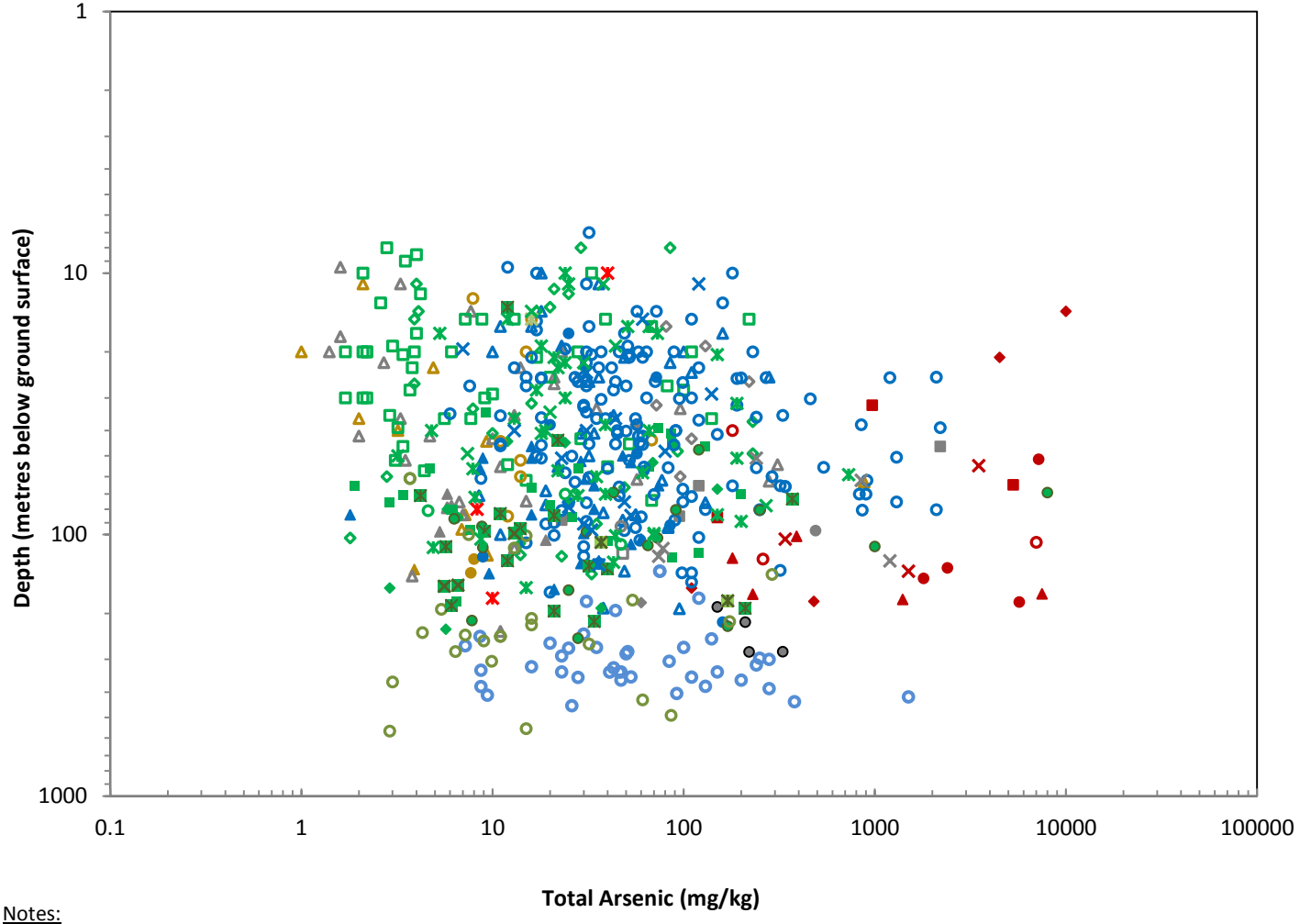
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>Mafic Volcanic - Wolf Deposit** | | | |
| **Meliadine Gold Project<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-22** |

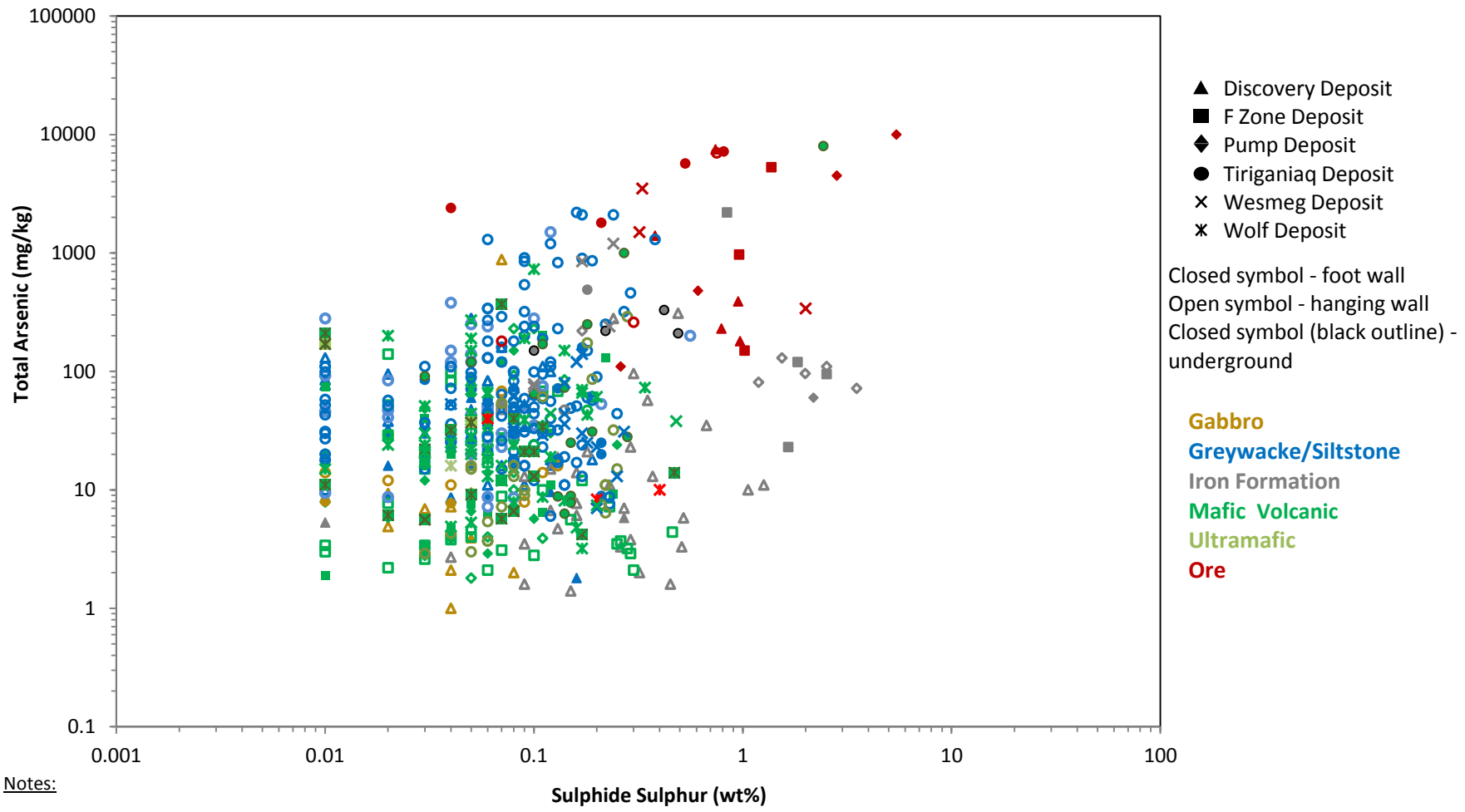
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Notes:

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Arsenic versus Depth (metres below ground surface)** | | | |
| | | **All Deposits** | | | |
| **Meliadine Gold Project** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| **Agnico Eagle Mines Ltd.** | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.2-23** |

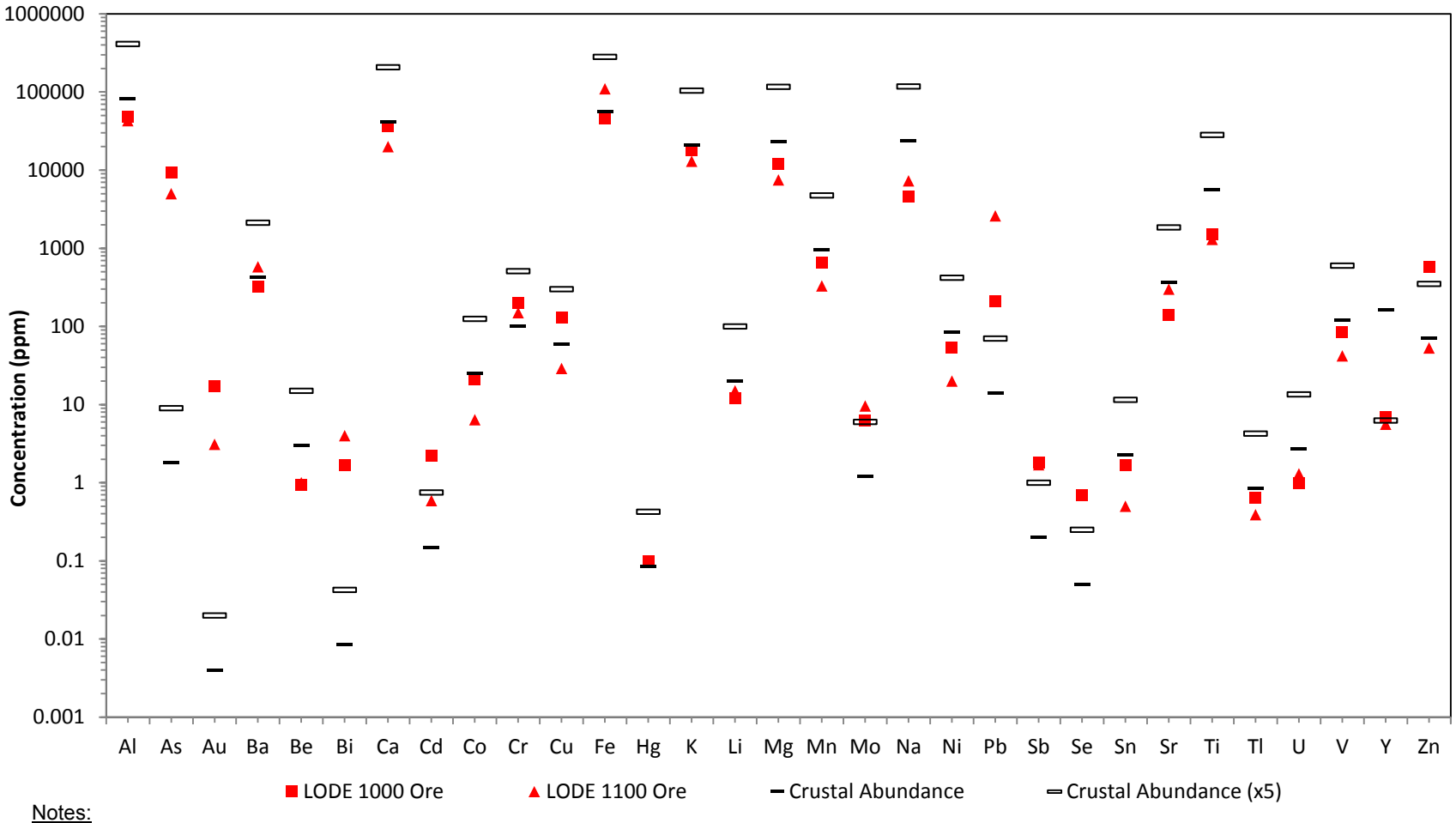
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Notes:

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur versus Total Arsenic<br>All Deposits | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date: Aug-12 | Project N°: 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure: B.2-24 |

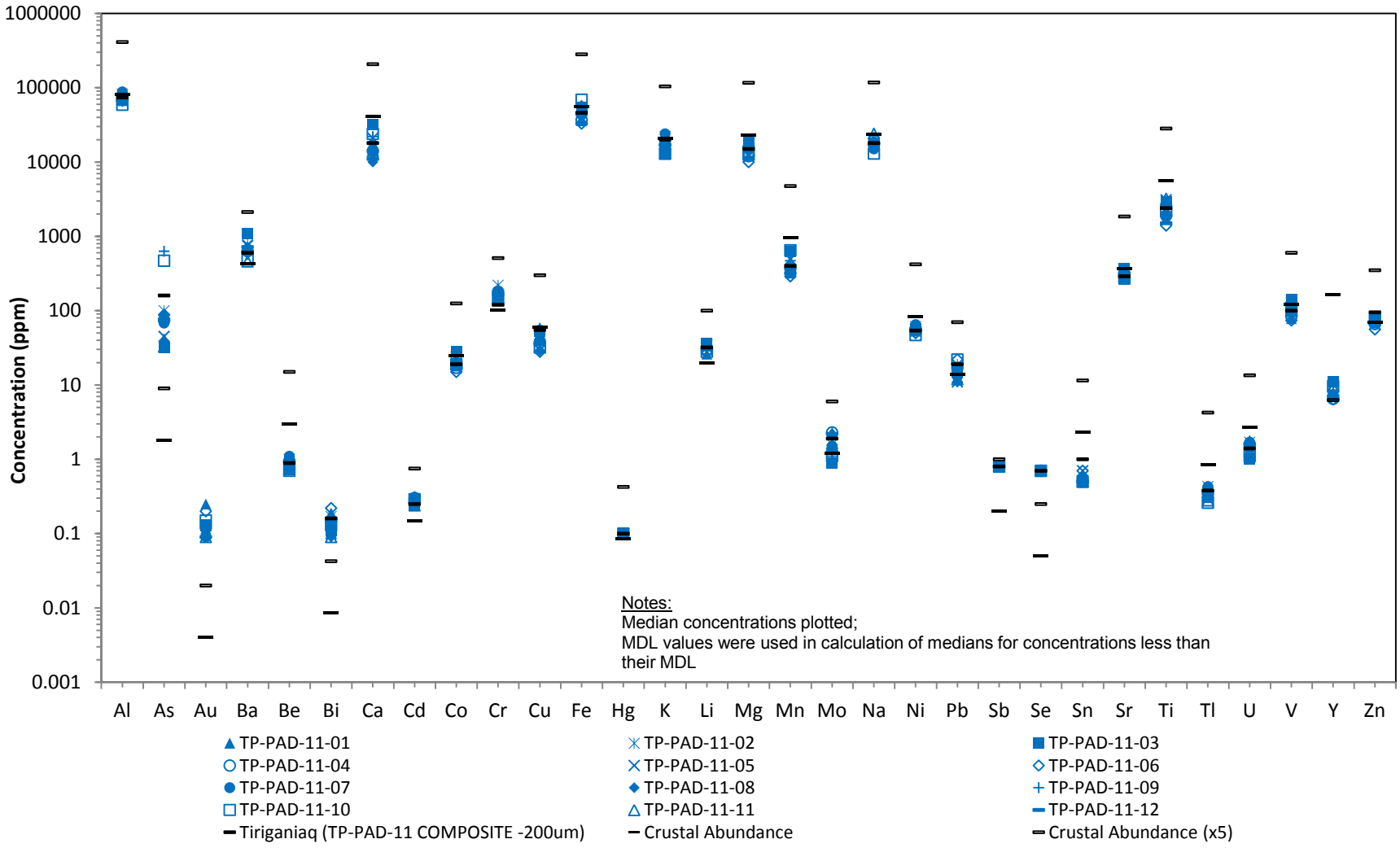
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

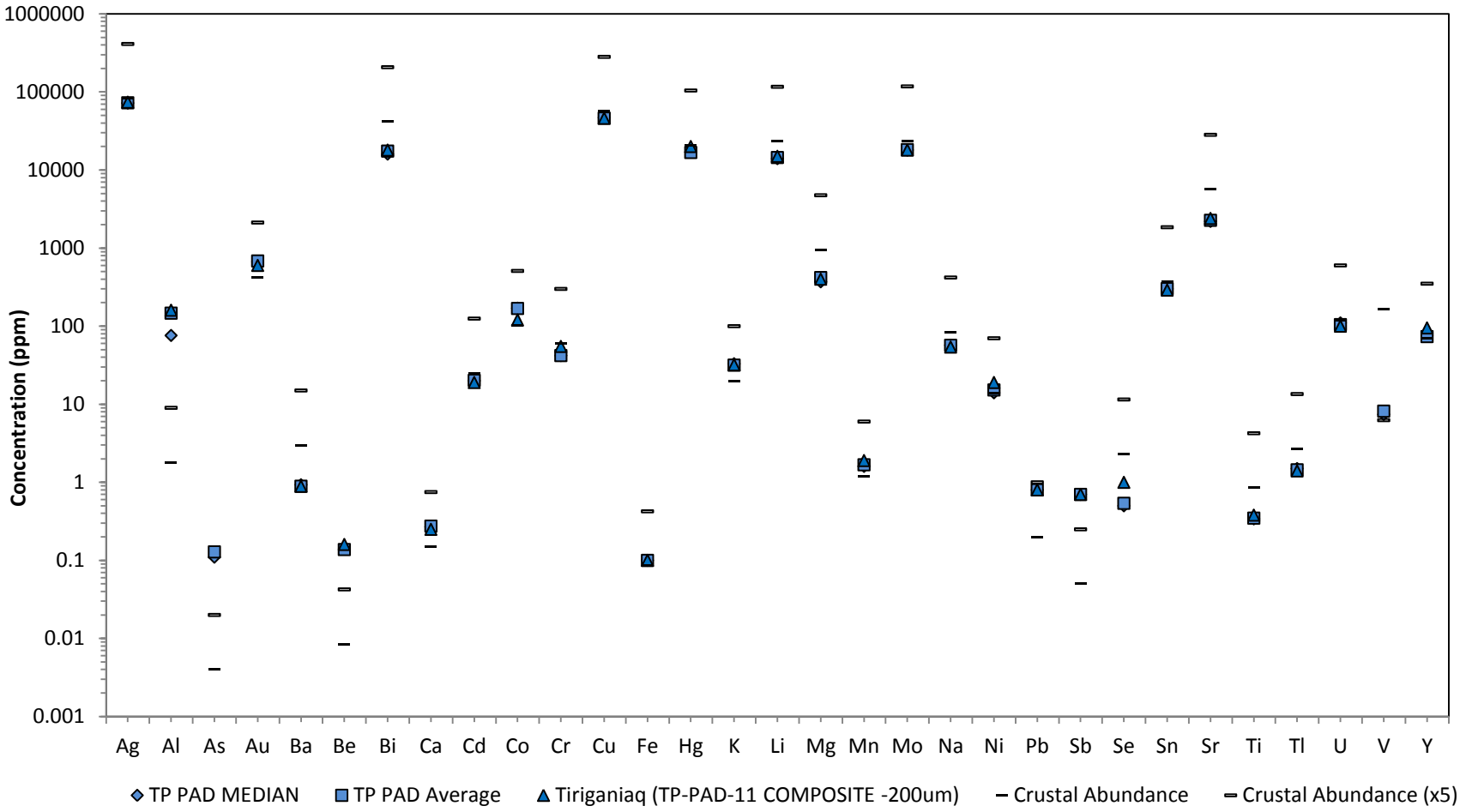
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content<br>LODE Samples - Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **B.2-25** |

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| | | | |
|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content**<br>**Greywacke/Siltstone from PAD - Tiriganiaq Deposit** | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared: DH/AJS | Date: Aug-12 | Project N°: 11-1428-0011 |
| | Checked: JMC | | |
| | Reviewed: VJB | | Figure: **B.2-26** |

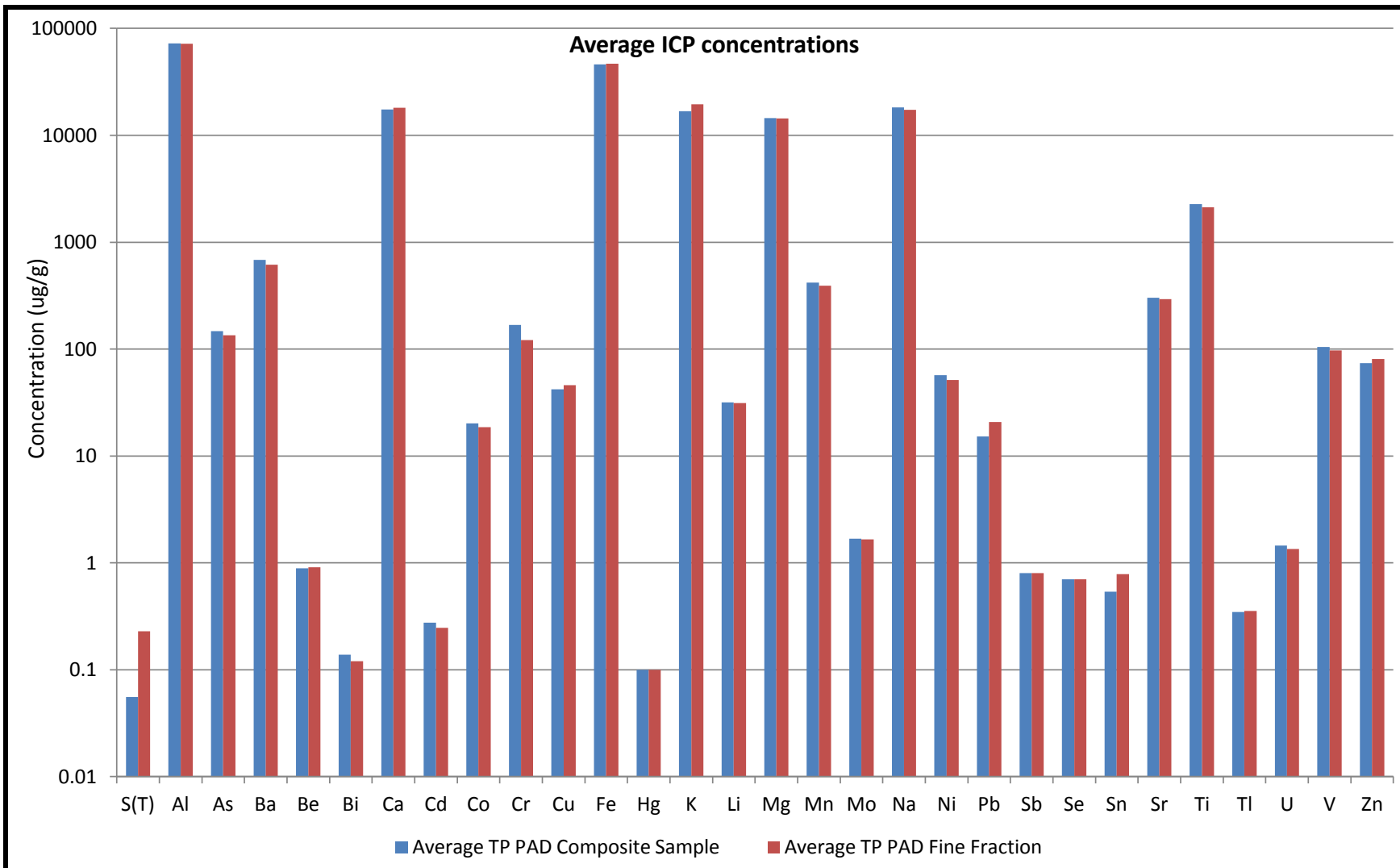
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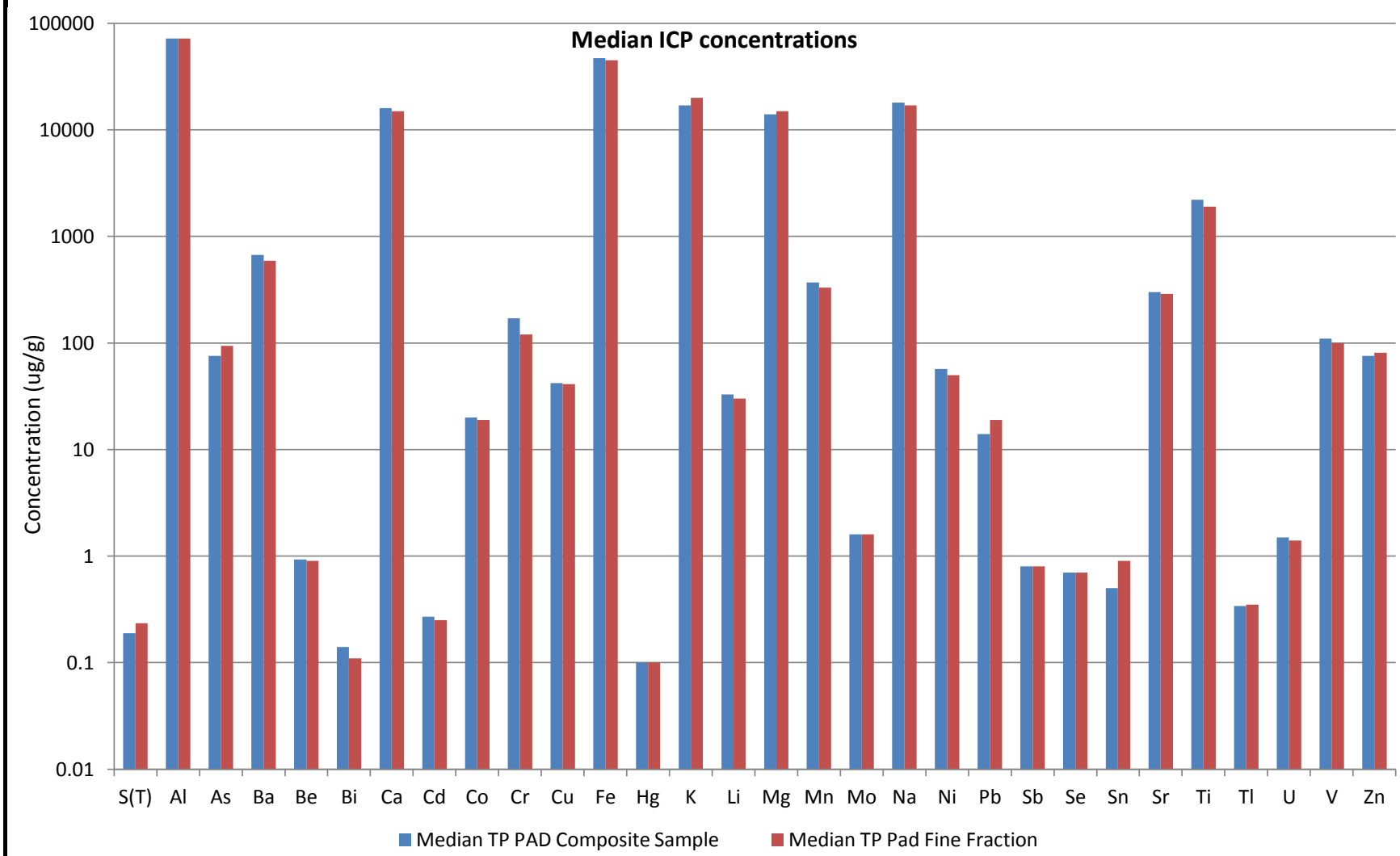



Notes:
MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Trace Element Content**<br>**Composite and Average PAD - Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **B.2-27** |

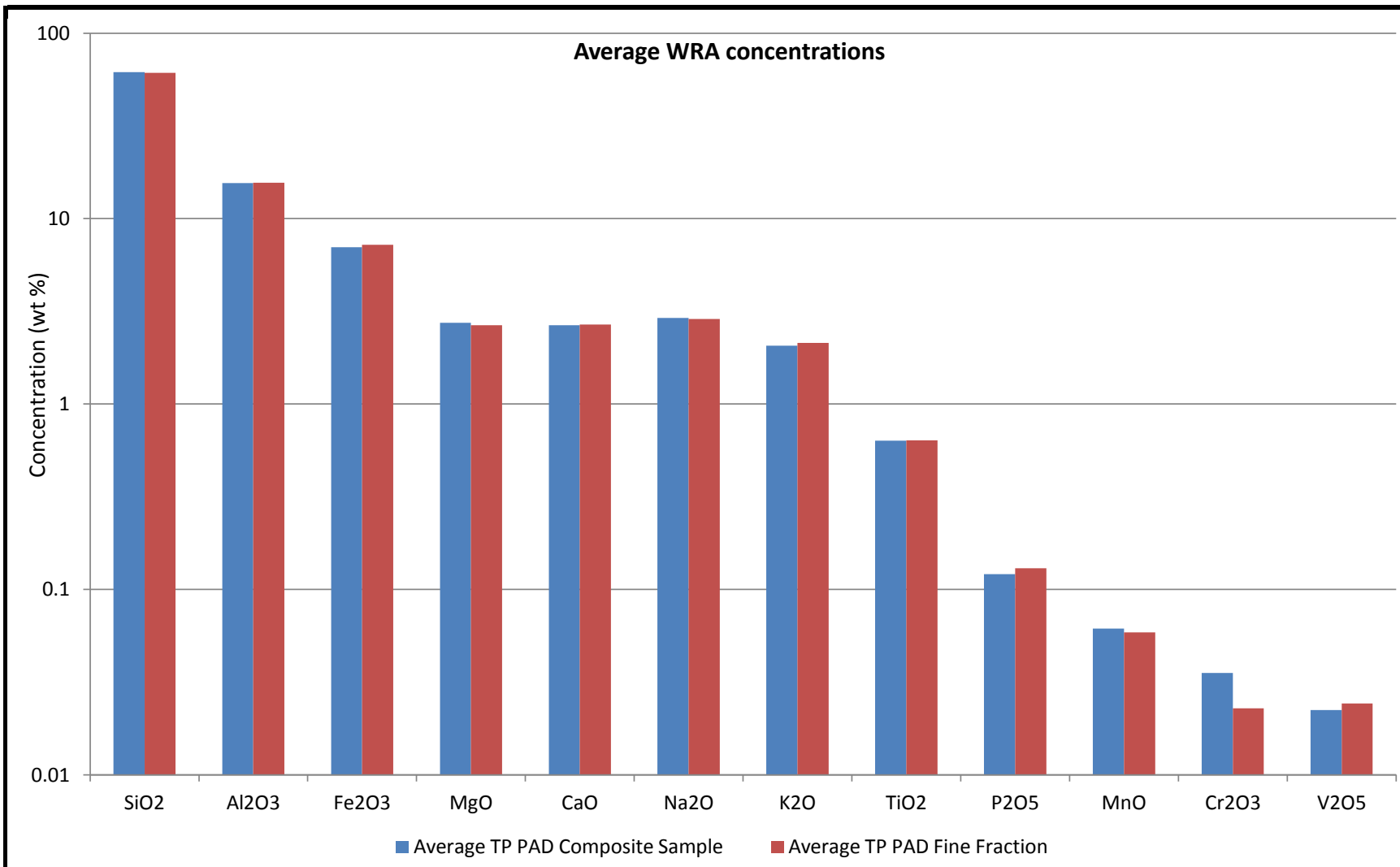
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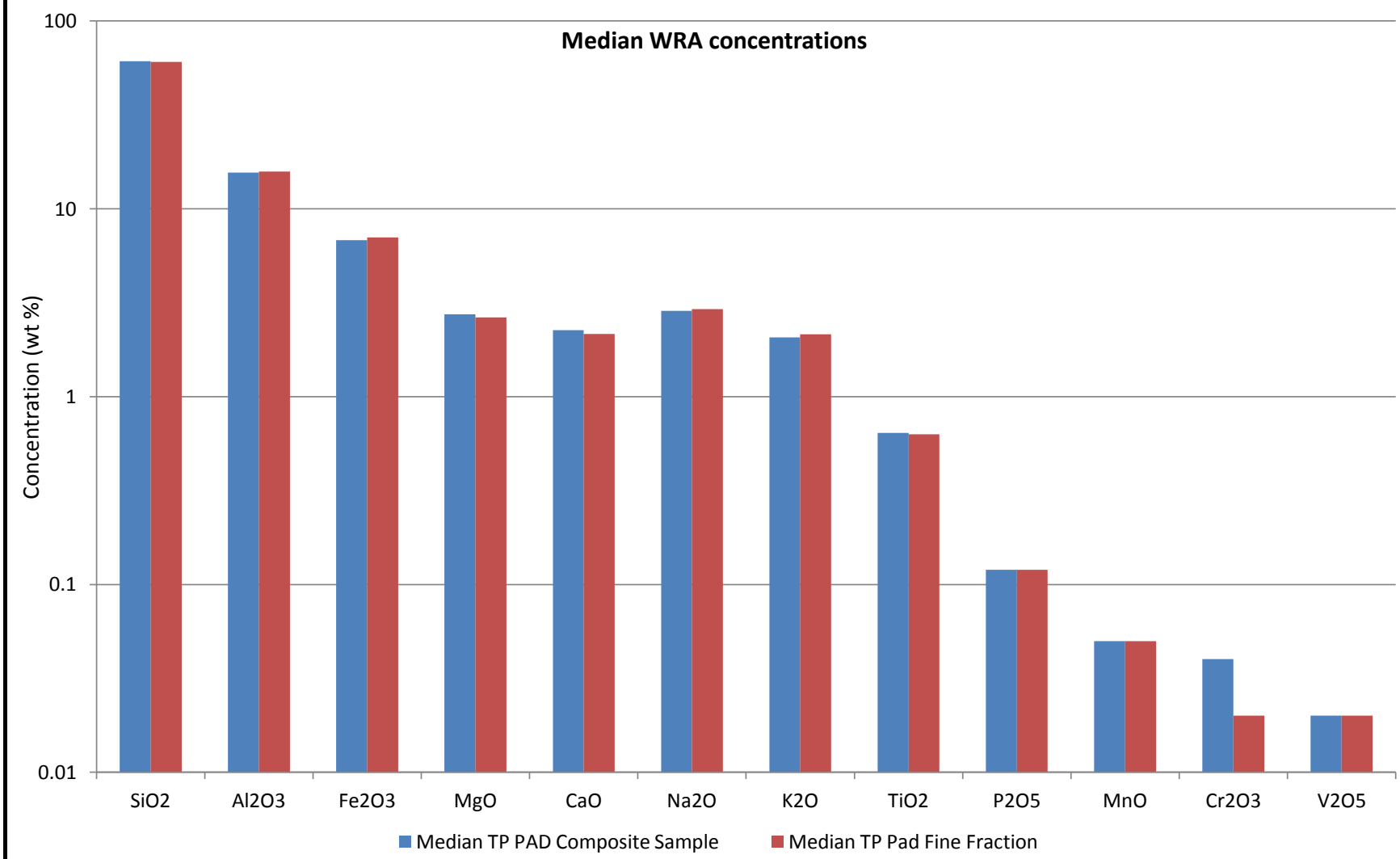



| | | | | |
|---|---|---|---|---|
| Golder Associates | **Tiriganiaq Operations Pad (Waste Rock) Static Testing** | **Comparison of waste rock ICP Results Tiriganiaq Deposit - Operations PAD** | | |
| **Meliadine Property, Nunavut Agnico Eagle Mines Ltd.** | Prepared LMC | Date Aug-12 | Project N° | 11-1428-0011 |
| | Checked AJS | | | |
| | Reviewed VJB | | Figure | **B.2-28** |

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| | | | |
|---|---|---|---|
| Golder Associates | **Tiriganiaq Operations Pad (Waste Rock) Static Testing** | **Comparison of waste rock WRA Results Tiriganiaq Deposit - Operations PAD** | |
| **Meliadine Property, Nunavut Agnico Eagle Mines Ltd.** | Prepared LMC | Date Aug-12 | Project N° 11-1428-0011 |
| | Checked AJS | | |
| | Reviewed VJB | | Figure **B.2-29** |

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# B.3 ARD Potential (ABA) Analytical Results: Tables and Figures

**Appendix B.3: Acid Base Accounting Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| ML08-226-01 | 2011 | 23 | 32 | Gabbro | Discovery | OP/HW | 9.9 | | 0.0080 | 0.022 | 0.36 | 0.36 | 15 | 0.079 | 0.060 | 0.020 | 2.5 | 12 | -2.1 | 5.9 | 0.15 | uncertain |
| ML08-229-02 | 2011 | 95.5 | 104.5 | Gabbro | Discovery | OP/HW | 9.8 | | 0.056 | 0.18 | 2.9 | 2.9 | 16 | 0.12 | 0.080 | 0.030 | 3.7 | 13 | -0.76 | 4.5 | 0.79 | uncertain |
| ML08-241-03 | 2011 | 84 | 93 | Gabbro | Discovery | OP/HW | 9.8 | | 0.51 | 2.1 | 35 | 35 | 52 | 0.14 | 0.10 | 0.040 | 4.3 | 47 | 31 | 12 | 8.1 | non PAG |
| ML08-243-02 | 2011 | 136 | 144.5 | Gabbro | Discovery | OP/FW | 9.7 | | 0.31 | 1.2 | 20 | 20 | 36 | 0.13 | 0.080 | 0.050 | 4.1 | 31 | 15 | 8.6 | 4.8 | non PAG |
| ML08-245-01 | 2011 | 44 | 53 | Gabbro | Discovery | OP/HW | 9.9 | | 0.063 | 0.17 | 2.8 | 2.8 | 16 | 0.076 | 0.060 | 0.020 | 2.4 | 14 | 0.45 | 6.7 | 1.2 | uncertain |
| ML09-259-01 | 2011 | 11 | 20 | Gabbro | Discovery | OP/HW | 10 | | 0.030 | 0.058 | 0.95 | 0.95 | 15 | 0.11 | 0.060 | 0.040 | 3.3 | 11 | -2.3 | 4.4 | 0.29 | uncertain |
| ML95-104-01 | 2011 | 20 | 29 | Gabbro | Discovery | OP/HW | 9.9 | | 0.14 | 0.45 | 7.3 | 7.3 | 24 | 0.15 | 0.11 | 0.040 | 4.8 | 19 | 2.5 | 5.0 | 1.5 | uncertain |
| ML95-105-02 | 2011 | 63 | 73 | Gabbro | Discovery | OP/HW | 9.5 | | 0.81 | 3.6 | 58 | 58 | 71 | 0.22 | 0.15 | 0.070 | 6.9 | 64 | 51 | 10 | 8.4 | non PAG |
| ML95-117-02 | 2011 | 40 | 48.5 | Gabbro | Discovery | OP/HW | 9.9 | | 0.14 | 0.52 | 8.5 | 8.5 | 24 | 0.079 | 0.050 | 0.030 | 2.5 | 21 | 6.0 | 9.6 | 3.4 | non PAG |
| ML95-88-02 | 2011 | 36 | 43 | Gabbro | Discovery | OP/HW | 9.8 | | 0.42 | 1.8 | 29 | 29 | 39 | 0.15 | 0.070 | 0.080 | 4.7 | 34 | 25 | 8.2 | 6.2 | non PAG |
| ML97-186-02 | 2011 | 120 | 129 | Gabbro | Discovery | OP/HW | 9.7 | | 0.18 | 0.73 | 12 | 12 | 26 | 0.11 | 0.050 | 0.050 | 3.3 | 23 | 8.6 | 8.0 | 3.6 | non PAG |
| ***BULK ARD - DISCOVERY Gabbro*** | | | | | | | | | - | | | **177** | **333** | | - | | **42** | **290** | **134** | **7.8** | **4.2** | **non PAG** |
| MINIMUM | | | | | | | 9.5 | nc | 0.0080 | 0.022 | 0.36 | 0.36 | 15 | 0.076 | 0.050 | 0.020 | 2.4 | 11 | -2.3 | 4.4 | 0.15 | |
| MAXIMUM | | | | | | | 10 | nc | 0.81 | 3.6 | 58 | 58 | 71 | 0.22 | 0.15 | 0.080 | 6.9 | 64 | 51 | 12 | 8.4 | |
| MEDIAN | | | | | | | 9.8 | nc | 0.14 | 0.52 | 8.5 | 8.5 | 24 | 0.12 | 0.070 | 0.040 | 3.7 | 21 | 6.0 | 8.0 | 3.4 | |
| AVERAGE | | | | | | | 9.8 | nc | 0.24 | 0.98 | 16 | 16 | 30 | 0.12 | 0.079 | 0.043 | 3.9 | 26 | 12 | 7.6 | 3.5 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.24 | 1.1 | 17 | 17 | 17 | 0.041 | 0.029 | 0.018 | 1.3 | 16 | 16 | 2.4 | 2.9 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.42 | 1.8 | 29 | 29 | 39 | 0.15 | 0.10 | 0.050 | 4.7 | 34 | 25 | 9.6 | 6.2 | |
| DS09GT-10-01 | 2011 | 14 | 19 | Greywacke/Siltstone | Discovery | OP/HW | 9.6 | | 0.11 | 0.32 | 5.2 | 1.3 | 13 | 0.28 | 0.090 | 0.19 | 8.8 | 4.7 | -3.6 | 1.5 | 0.15 | uncertain |
| ML00-221-01 | 2009 | 25 | 30 | Greywacke/Siltstone | Discovery | OP/HW | 9.9 | | 0.043 | 0.10 | 1.7 | 0.42 | 9.2 | 0.092 | 0.040 | 0.050 | 2.9 | 6.3 | -1.2 | 3.2 | 0.14 | uncertain |
| ML00-221-02 | 2009 | 61 | 66 | Greywacke/Siltstone | Discovery | OP/HW | 9.9 | | 0.047 | 0.14 | 2.3 | 0.57 | 10 | 0.13 | 0.050 | 0.080 | 4.1 | 5.9 | -1.9 | 2.4 | 0.14 | uncertain |
| ML00-221-03 | 2009 | 88 | 93 | Greywacke/Siltstone | Discovery | OP/HW | 9.8 | | 0.071 | 0.21 | 3.5 | 0.87 | 8.0 | 0.10 | 0.030 | 0.070 | 3.1 | 4.9 | 0.37 | 2.6 | 0.28 | uncertain |
| ML00-221-04 | 2009 | 162 | 168 | Greywacke/Siltstone | Discovery | OP/FW | 9.5 | 4.9 | 0.098 | 0.28 | 4.6 | 1.1 | 9.7 | 0.14 | 0.040 | 0.10 | 4.3 | 5.4 | 0.26 | 2.2 | 0.27 | uncertain |
| ML08-225-02 | 2011 | 104 | 115 | Greywacke/Siltstone | Discovery | OP/FW | 9.5 | | 0.054 | 0.16 | 2.6 | 0.64 | 8.9 | 0.12 | 0.070 | 0.050 | 3.7 | 5.2 | -1.1 | 2.4 | 0.17 | uncertain |
| ML08-226-05 | 2011 | 192 | 200 | Greywacke/Siltstone | Discovery | OP/HW | 9.4 | | 0.16 | 0.55 | 9.1 | 2.3 | 14 | 0.10 | 0.090 | 0.020 | 3.2 | 11 | 5.8 | 4.3 | 0.70 | uncertain |
| ML08-229-04 | 2011 | 191 | 200 | Greywacke/Siltstone | Discovery | OP/HW | 9.4 | | 0.14 | 0.45 | 7.4 | 1.9 | 13 | 0.40 | 0.34 | 0.060 | 12 | 0.32 | -5.0 | 1.0 | 0.15 | uncertain |
| ML08-230-01 | 2011 | 25 | 33 | Greywacke/Siltstone | Discovery | OP/HW | 9.4 | | 0.25 | 0.99 | 16 | 4.0 | 20 | 0.13 | 0.10 | 0.030 | 4.2 | 16 | 12 | 4.8 | 0.97 | uncertain |
| ML08-232-01 | 2011 | 62 | 70 | Greywacke/Siltstone | Discovery | OP/HW | 9.6 | | 0.021 | 0.076 | 1.2 | 1.2 | 8.1 | 0.15 | 0.15 | < 0.01 | 4.6 | 3.5 | -3.4 | 1.8 | 0.27 | uncertain |
| ML08-233-01 | 2011 | 20 | 28 | Greywacke/Siltstone | Discovery | OP/HW | 9.7 | | 0.13 | 0.39 | 6.4 | 1.6 | 17 | 0.071 | 0.070 | < 0.01 | 2.2 | 15 | 4.2 | 7.6 | 0.72 | uncertain |
| ML08-236-2 | 2009 | 41 | 49 | Greywacke/Siltstone | Discovery | OP/HW-interore | 9.7 | 7.8 | 0.095 | 0.38 | 6.1 | 1.5 | 13 | 0.18 | 0.090 | 0.080 | 5.5 | 7.5 | 0.65 | 2.4 | 0.28 | uncertain |
| ML08-236-3 | 2009 | 65 | 75 | Greywacke/Siltstone | Discovery | OP/FW | 9.5 | 7.5 | 0.12 | 0.43 | 7.1 | 1.8 | 14 | 0.18 | 0.070 | 0.11 | 5.7 | 8.3 | 1.4 | 2.4 | 0.31 | uncertain |
| ML08-238-03 | 2009 | 99 | 104 | Greywacke/Siltstone | Discovery | inter ore | 10 | | 0.071 | 0.23 | 3.7 | 0.93 | 14 | 0.069 | 0.040 | 0.030 | 2.2 | 12 | 1.6 | 6.5 | 0.43 | uncertain |
| ML08-238-04 | 2009 | 126 | 132.5 | Greywacke/Siltstone | Discovery | OP/FW | 9.6 | | 0.048 | 0.14 | 2.3 | 0.58 | 9.7 | 0.11 | 0.050 | 0.060 | 3.3 | 6.4 | -0.96 | 3.0 | 0.18 | uncertain |
| ML08-240-01 | 2011 | 77 | 85 | Greywacke/Siltstone | Discovery | OP/HW | 9.9 | | 0.13 | 0.50 | 8.2 | 2.0 | 16 | 0.067 | 0.060 | 0.010 | 2.1 | 14 | 6.1 | 7.7 | 0.98 | uncertain |
| ML08-241-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Discovery | OP/HW | 9.7 | | 0.14 | 0.49 | 8.1 | 2.0 | 16 | 0.13 | 0.11 | 0.020 | 4.0 | 12 | 4.0 | 4.0 | 0.50 | uncertain |
| ML08-245-02 | 2011 | 82.5 | 91 | Greywacke/Siltstone | Discovery | OP/HW | 9.8 | | 0.050 | 0.13 | 2.2 | 0.55 | 8.7 | 0.10 | 0.080 | 0.020 | 3.2 | 5.5 | -1.0 | 2.7 | 0.17 | uncertain |
| ML09-254-02 | 2011 | 100 | 108 | Greywacke/Siltstone | Discovery | OP/HW | 9.5 | | 0.27 | 1.1 | 18 | 4.5 | 23 | 0.073 | 0.020 | 0.060 | 2.3 | 21 | 16 | 10 | 2.0 | uncertain |
| ML09-256-01 | 2011 | 52.5 | 61 | Greywacke/Siltstone | Discovery | OP/FW | 9.2 | | 0.21 | 0.78 | 13 | 3.2 | 18 | 0.19 | 0.17 | 0.020 | 5.9 | 12 | 6.7 | 3.0 | 0.53 | uncertain |
| ML90-03-01 | 2009 | 17 | 24 | Greywacke/Siltstone | Discovery | OP/HW | 9.8 | | 0.046 | 0.13 | 2.1 | 0.52 | 9.3 | 0.087 | 0.020 | 0.070 | 2.7 | 6.6 | -0.63 | 3.4 | 0.19 | uncertain |
| ML90-03-02 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | 9.8 | | 0.12 | 0.45 | 7.3 | 1.8 | 13 | 0.064 | 0.020 | 0.050 | 2.0 | 11 | 5.3 | 6.5 | 0.91 | uncertain |
| ML90-04-01 | 2009 | 10 | 15 | Greywacke/Siltstone | Discovery | OP/HW | 9.8 | 6.5 | 0.074 | 0.22 | 3.6 | 0.89 | 12 | 0.17 | 0.060 | 0.12 | 5.4 | 6.6 | -1.8 | 2.2 | 0.17 | uncertain |
| ML90-04-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Discovery | OP/HW | 9.7 | | 0.041 | 0.13 | 2.1 | 0.52 | 9.0 | 0.11 | 0.040 | 0.060 | 3.3 | 5.7 | -1.2 | 2.7 | 0.16 | uncertain |
| ML90-04-03 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | 9.8 | | 0.12 | 0.41 | 6.6 | 1.7 | 17 | 0.19 | 0.070 | 0.12 | 5.8 | 11 | 0.81 | 2.9 | 0.28 | uncertain |
| ML90-07-01 | 2009 | 46 | 51 | Greywacke/Siltstone | Discovery | OP/FW | 10 | | 0.044 | 0.15 | 2.5 | 0.62 | 14 | 0.045 | 0.030 | 0.020 | 1.4 | 13 | 1.1 | 10.0 | 0.44 | uncertain |
| ML90-08-01 | 2009 | 16 | 21 | Greywacke/Siltstone | Discovery | OP/HW | 10.0 | | 0.16 | 0.40 | 6.6 | 1.7 | 9.4 | 0.12 | 0.050 | 0.070 | 3.8 | 5.6 | 2.8 | 2.4 | 0.43 | uncertain |
| ML90-08-02 | 2009 | 53 | 58 | Greywacke/Siltstone | Discovery | OP/FW | 10 | | 0.18 | 0.67 | 11 | 2.7 | 22 | 0.13 | 0.060 | 0.070 | 4.1 | 18 | 6.8 | 5.4 | 0.67 | uncertain |
| ML90-09-2 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | 9.9 | 9.9 | 0.21 | 0.88 | 14 | 3.6 | 24 | 0.15 | 0.090 | 0.060 | 4.5 | 19 | 9.8 | 5.3 | 0.79 | uncertain |
| ML90-10-1 | 2009 | 11 | 18 | Greywacke/Siltstone | Discovery | OP/HW | 9.9 | 7.3 | 0.079 | 0.25 | 4.0 | 1.0 | 11 | 0.12 | 0.060 | 0.050 | 3.6 | 7.4 | 0.38 | 3.0 | 0.28 | uncertain |
| ML90-10-3 | 2009 | 56 | 64 | Greywacke/Siltstone | Discovery | OP/FW | 10.0 | 7.5 | 0.037 | 0.11 | 1.7 | 0.44 | 9.8 | 0.038 | 0.010 | 0.020 | 1.2 | 8.6 | 0.56 | 8.3 | 0.37 | uncertain |
| ML90-12-01 | 2009 | 24 | 29 | Greywacke/Siltstone | Discovery | OP/HW | 9.9 | 6.4 | 0.063 | 0.16 | 2.7 | 0.67 | 9.2 | 0.15 | 0.050 | 0.11 | 4.8 | 4.4 | -2.1 | 1.9 | 0.14 | uncertain |
| ML90-12-02 | 2009 | 80 | 84 | Greywacke/Siltstone | Discovery | OP/FW | 9.7 | | 0.14 | 0.49 | 8.0 | 2.0 | 17 | 0.14 | 0.050 | 0.090 | 4.4 | 13 | 3.7 | 3.9 | 0.46 | uncertain |
| ML90-14-2 | 2009 | 129 | 137 | Greywacke/Siltstone | Discovery | OP/FW | 9.6 | 7.1 | 0.11 | 0.40 | 6.5 | 6.5 | 12 | 0.15 | 0.060 | 0.080 | 4.5 | 7.5 | 1.9 | 2.6 | 1.4 | uncertain |
| ML92-061-01 | 2009 | 21 | 26 | Greywacke/Siltstone | Discovery | OP/HW | 9.7 | 4.5 | 0.055 | 0.19 | 3.1 | 3.1 | 7.3 | 0.12 | 0.050 | 0.080 | 3.9 | 3.4 | -0.74 | 1.9 | 0.81 | uncertain |
| ML92-061-02 | 2009 | 50 | 56 | Greywacke/Siltstone | Discovery | OP/HW | 9.6 | | 0.050 | 0.15 | 2.4 | 0.60 | 8.5 | 0.097 | 0.030 | 0.060 | 3.0 | 5.5 | -0.61 | 2.8 | 0.20 | uncertain |
| ML92-061-04 | 2009 | 109 | 114 | Greywacke/Siltstone | Discovery | OP/FW | 9.8 | | 0.14 | 0.47 | 7.7 | 1.9 | 16 | 0.14 | 0.050 | 0.090 | 4.4 | 12 | 3.3 | 3.6 | 0.44 | uncertain |
| ML92-062-03 | 2009 | 50 | 55 | Greywacke/Siltstone | Discovery | OP/FW | 10 | | 0.12 | 0.47 | 7.6 | 1.9 | 15 | 0.093 | 0.040 | 0.050 | 2.9 | 12 | 4.7 | 5.2 | 0.66 | uncertain |
| ML95-105-03 | 2011 | 94 | 103 | Greywacke/Siltstone | Discovery | OP/HW | 9.5 | | 0.076 | 0.15 | 2.5 | 0.63 | 11 | 0.25 | 0.19 | 0.060 | 7.9 | 2.7 | -5.4 | 1.3 | 0.079 | uncertain |
| ML95-105-04 | 2011 | 138 | 147 | Greywacke/Siltstone | Discovery | OP/HW | 10.0 | | 0.19 | 0.80 | 13 | 3.3 | 27 | 0.033 | 0.030 | < 0.01 | 1.0 | 26 | 12 | 26 | 3.2 | non PAG |
| ML95-107-03 | 2011 | 75.5 | 84.5 | Greywacke/Siltstone | Discovery | OP/HW | 9.7 | | 0.053 | 0.17 | 2.8 | 0.71 | 9.9 | 0.13 | 0.13 | < 0.01 | 3.9 | 6.0 | -1.1 | 2.5 | 0.18 | uncertain |
| ML95-113-01 | 2011 | 19 | 27.5 | Greywacke/Siltstone | Discovery | OP/HW | 9.3 | | 0.074 | 0.26 | 4.3 | 1.1 | 8.7 | 0.13 | 0.090 | 0.040 | 4.2 | 4.5 | 0.13 | 2.1 | 0.26 | uncertain |
| ML95-113-02 | 2011 | 71 | 79 | Greywacke/Siltstone | Discovery | OP/HW | 9.7 | | 0.20 | 0.81 | 13 | 3.3 | 22 | 0.092 | 0.050 | 0.040 | 2.9 | 19 | 10 | 7.5 | 1.1 | uncertain |
| ML95-120-01 | 2011 | 93 | 102 | Greywacke/Siltstone | Discovery | OP/HW | 9.5 | | 0.048 | 0.15 | 2.5 | 0.61 | 10 | 0.14 | 0.080 | 0.060 | 4.4 | 5.6 | -2.0 | 2.3 | 0.14 | uncertain |
| ML95-82-02 | 2011 | 68 | 74 | Greywacke/Siltstone | Discovery | OP/HW | 9.6 | | 0.16 | 0.62 | 10 | 2.5 | 19 | 0.074 | 0.050 | 0.030 | 2.3 | 17 | 7.9 | 8.3 | 1.1 | uncertain |
| ML95-82-1 | 2009 | 20 | 30 | Greywacke/Siltstone | Discovery | OP/HW | 9.3 | 3.3 | 0.031 | 0.089 | 1.5 | 1.5 | 7.4 | 0.25 | 0.12 | 0.12 | 7.7 | -0.29 | -6.2 | 0.96 | 0.19 | PAG |

# Appendix B.3: Acid Base Accounting Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| ML95-82-3 | 2009 | 65 | 74 | Greywacke/Siltstone | Discovery | OP/FW | 9.8 | 10 | 0.21 | 0.88 | 14 | 3.6 | 23 | 0.14 | 0.060 | 0.080 | 4.3 | 19 | 10 | 5.3 | 0.84 | uncertain |
| ML95-83-02 | 2011 | 84 | 92 | Greywacke/Siltstone | Discovery | OP/HW | 9.8 | | 0.032 | 0.087 | 1.4 | 0.36 | 11 | 0.14 | 0.060 | 0.070 | 4.3 | 6.5 | -2.9 | 2.5 | 0.082 | uncertain |
| ML95-85-01 | 2011 | 141 | 150 | Greywacke/Siltstone | Discovery | OP/FW | 9.9 | | 0.080 | 0.21 | 3.5 | 0.87 | 15 | 0.26 | 0.14 | 0.12 | 8.3 | 7.2 | -4.8 | 1.9 | 0.11 | uncertain |
| ML95-88-01 | 2011 | 16 | 24.5 | Greywacke/Siltstone | Discovery | OP/HW | 9.3 | | 0.055 | 0.19 | 3.0 | 0.76 | 10 | 0.17 | 0.080 | 0.090 | 5.2 | 5.2 | -2.1 | 2.0 | 0.15 | uncertain |
| ML95-93-01 | 2009 | 22 | 26 | Greywacke/Siltstone | Discovery | OP/HW | 9.8 | | 0.11 | 0.28 | 4.5 | 1.1 | 8.8 | 0.0090 | < 0.01 | < 0.01 | 0.28 | 8.5 | 4.2 | 31 | 4.0 | non PAG |
| ML95-93-02 | 2009 | 41 | 46 | Greywacke/Siltstone | Discovery | OP/HW | 9.9 | 4.1 | 0.068 | 0.23 | 3.8 | 0.96 | 8.4 | 0.14 | 0.030 | 0.10 | 4.3 | 4.2 | -0.43 | 2.0 | 0.22 | uncertain |
| ML95-93-04 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | 10.0 | | 0.20 | 0.81 | 13 | 3.3 | 29 | 0.21 | 0.050 | 0.16 | 6.4 | 23 | 6.8 | 4.5 | 0.51 | uncertain |
| ML95-95-02 | 2011 | 55 | 64 | Greywacke/Siltstone | Discovery | OP/HW | 9.7 | | 0.027 | 0.087 | 1.4 | 0.36 | 10 | 0.096 | 0.070 | 0.030 | 3.0 | 7.0 | -1.6 | 3.3 | 0.12 | uncertain |
| ***BULK ARD - DISCOVERY Greywacke/Siltstone*** | | | | | | | | | - | | | **90** | **729** | | - | | **224** | **506** | **-134** | **3.3** | **0.40** | **uncertain** |
| MINIMUM | | | | | | | 9.2 | 3.3 | 0.021 | 0.076 | 1.2 | 0.36 | 7.3 | 0.0090 | < 0.01 | < 0.01 | 0.28 | -0.29 | -6.2 | 0.96 | 0.079 | |
| MAXIMUM | | | | | | | 10 | 10 | 0.27 | 1.1 | 18 | 6.5 | 29 | 0.40 | 0.34 | 0.19 | 12 | 26 | 16 | 31 | 4.0 | |
| MEDIAN | | | | | | | 9.7 | 7.1 | 0.088 | 0.27 | 4.4 | 1.2 | 12 | 0.13 | 0.060 | 0.060 | 4.0 | 7.3 | 0.47 | 2.9 | 0.28 | |
| AVERAGE | | | | | | | 9.7 | 4.3 | 0.10 | 0.37 | 6.0 | 1.7 | 14 | 0.13 | 0.071 | 0.063 | 4.1 | 9.4 | 1.8 | 4.7 | 0.56 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.062 | 0.26 | 4.3 | 1.3 | 5.3 | 0.066 | 0.053 | 0.039 | 2.1 | 5.7 | 4.8 | 5.2 | 0.71 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.14 | 0.49 | 8.0 | 2.2 | 16 | 0.15 | 0.090 | 0.083 | 4.6 | 12 | 4.9 | 5.3 | 0.71 | |
| ML08-225-01 | 2011 | 70 | 79 | Iron Formation | Discovery | OP/FW | 9.5 | | 0.13 | 0.30 | 4.9 | 4.9 | 22 | 0.44 | 0.18 | 0.27 | 14 | 7.7 | -8.9 | 1.6 | 0.36 | uncertain |
| ML08-226-02 | 2011 | 36 | 45 | Iron Formation | Discovery | OP/HW | 9.1 | | 0.065 | 0.13 | 2.0 | 2.0 | 15 | 0.66 | 0.16 | 0.51 | 21 | -6.3 | -19 | 0.70 | 0.098 | PAG |
| ML08-226-03 | 2011 | 144 | 153 | Iron Formation | Discovery | OP/HW | 9.0 | | 0.17 | 0.40 | 6.5 | 6.5 | 22 | 0.48 | 0.19 | 0.29 | 15 | 6.8 | -8.5 | 1.5 | 0.43 | uncertain |
| ML08-228-01 | 2011 | 26.5 | 35 | Iron Formation | Discovery | OP/HW | 9.7 | | 0.40 | 1.2 | 20 | 20 | 36 | 0.15 | 0.10 | 0.050 | 4.8 | 31 | 15 | 7.6 | 4.2 | non PAG |
| ML08-228-02 | 2011 | 79 | 87.5 | Iron Formation | Discovery | OP/HW | 8.7 | | 0.064 | 0.10 | 1.6 | 1.6 | 11 | 0.82 | 0.30 | 0.52 | 26 | -14 | -24 | 0.44 | 0.064 | PAG |
| ML08-229-01 | 2011 | 52 | 61 | Iron Formation | Discovery | OP/HW | 9.5 | | 0.45 | 1.5 | 24 | 24 | 39 | 0.17 | 0.080 | 0.090 | 5.3 | 34 | 19 | 7.3 | 4.6 | non PAG |
| ML08-229-03 | 2011 | 113 | 122 | Iron Formation | Discovery | OP/HW | 8.8 | | 0.23 | 0.58 | 9.5 | 9.5 | 21 | 0.75 | 0.39 | 0.37 | 24 | -3.1 | -14 | 0.87 | 0.40 | PAG |
| ML08-229-05 | 2011 | 234.5 | 243 | Iron Formation | Discovery | OP/HW | 9.0 | | 0.45 | 1.5 | 24 | 24 | 35 | 0.43 | 0.20 | 0.23 | 13 | 22 | 11 | 2.6 | 1.8 | uncertain |
| ML08-233-02 | 2011 | 74.5 | 83 | Iron Formation | Discovery | OP/HW | 9.4 | | 0.18 | 0.57 | 9.4 | 9.4 | 24 | 0.23 | 0.11 | 0.12 | 7.1 | 17 | 2.2 | 3.4 | 1.3 | uncertain |
| ML08-236-1 | 2009 | 23 | 27 | Iron Formation | Discovery | OP/HW | 9.7 | 10 | 0.43 | 1.7 | 28 | 28 | 33 | 0.25 | 0.090 | 0.16 | 7.7 | 25 | 21 | 4.3 | 3.7 | non PAG |
| ML08-241-02 | 2011 | 42 | 51 | Iron Formation | Discovery | OP/HW | 8.9 | | 0.45 | 1.5 | 25 | 25 | 35 | 0.22 | 0.090 | 0.13 | 6.8 | 28 | 18 | 5.1 | 3.7 | non PAG |
| ML08-243-01 | 2011 | 97.5 | 106 | Iron Formation | Discovery | OP/FW | 9.4 | | 0.53 | 2.1 | 34 | 34 | 44 | 0.12 | 0.12 | < 0.01 | 3.7 | 40 | 30 | 12 | 9.2 | non PAG |
| ML09-254-01 | 2011 | 84 | 93 | Iron Formation | Discovery | OP/HW | 8.8 | | 0.31 | 0.86 | 14 | 14 | 21 | 0.67 | 0.39 | 0.27 | 21 | 0.59 | -6.8 | 1.0 | 0.67 | uncertain |
| ML90-09-1 | 2009 | 33 | 40 | Iron Formation | Discovery | OP/HW | 8.8 | 9.8 | 0.30 | 0.97 | 16 | 16 | 29 | 0.43 | 0.12 | 0.30 | 13 | 16 | 2.5 | 2.2 | 1.2 | uncertain |
| ML90-10-2 | 2009 | 33 | 41 | Iron Formation | Discovery | OP/HW | 9.0 | 10 | 0.59 | 1.8 | 30 | 30 | 48 | 0.91 | 0.23 | 0.67 | 28 | 20 | 1.2 | 1.7 | 1.0 | uncertain |
| ML92-053-1 | 2009 | 105 | 112 | Iron Formation | Discovery | OP/FW | 8.9 | 11 | 0.39 | 1.6 | 25 | 25 | 37 | 0.19 | 0.060 | 0.13 | 5.9 | 31 | 20 | 6.3 | 4.3 | non PAG |
| ML92-060-1 | 2009 | 42 | 49 | Iron Formation | Discovery | OP/HW | 9.0 | 9.3 | 0.24 | 0.81 | 13 | 13 | 27 | 0.42 | 0.11 | 0.32 | 13 | 14 | -0.010 | 2.0 | 1.00 | uncertain |
| ML92-061-03 | 2009 | 75 | 81 | Iron Formation | Discovery | OP/HW | 9.6 | | 0.37 | 1.5 | 24 | 24 | 40 | 0.13 | 0.020 | 0.12 | 4.2 | 36 | 20 | 9.6 | 5.8 | non PAG |
| ML92062-01 | 2011 | 17.5 | 26 | Iron Formation | Discovery | OP/HW | 9.1 | | 0.46 | 1.6 | 26 | 26 | 38 | 0.26 | 0.17 | 0.090 | 8.0 | 30 | 18 | 4.8 | 3.3 | non PAG |
| ML92-062-01 | 2009 | 20 | 25 | Iron Formation | Discovery | OP/HW | 9.3 | | 0.21 | 0.78 | 13 | 13 | 22 | 0.19 | 0.040 | 0.15 | 5.9 | 16 | 6.8 | 3.7 | 2.1 | non PAG |
| ML92-062-02 | 2009 | 35 | 39.5 | Iron Formation | Discovery | OP/HW | 9.9 | | 0.11 | 0.43 | 6.9 | 6.9 | -1.7 | 0.12 | 0.020 | 0.090 | 3.7 | -5.4 | 3.3 | -0.46 | 1.9 | uncertain |
| ML95-105-01 | 2011 | 25 | 34 | Iron Formation | Discovery | OP/HW | 8.8 | | 0.39 | 1.2 | 20 | 20 | 31 | 0.30 | 0.12 | 0.18 | 9.4 | 21 | 11 | 3.3 | 2.1 | non PAG |
| ML95-107-01 | 2011 | 11 | 18 | Iron Formation | Discovery | OP/HW | 9.6 | | 0.69 | 2.4 | 40 | 40 | 32 | 0.39 | 0.14 | 0.26 | 12 | 20 | 28 | 2.6 | 3.2 | non PAG |
| ML95-107-02 | 2011 | 62.5 | 71 | Iron Formation | Discovery | OP/HW | 9.2 | | 0.70 | 2.5 | 41 | 41 | 51 | 0.42 | 0.18 | 0.24 | 13 | 38 | 28 | 3.9 | 3.1 | non PAG |
| ML95-117-01 | 2011 | 14 | 23 | Iron Formation | Discovery | OP/HW | 9.0 | | 0.37 | 1.2 | 19 | 19 | 29 | 0.28 | 0.12 | 0.16 | 8.7 | 20 | 11 | 3.4 | 2.2 | non PAG |
| ML95-117-03 | 2011 | 61.5 | 71.5 | Iron Formation | Discovery | OP/HW | 9.0 | | 0.11 | 0.29 | 4.7 | 4.7 | 14 | 0.75 | 0.40 | 0.35 | 24 | -9.6 | -19 | 0.59 | 0.20 | PAG |
| ML95-82-01 | 2011 | 54 | 61.5 | Iron Formation | Discovery | OP/HW | 8.8 | | 0.26 | 0.71 | 12 | 12 | 22 | 0.78 | 0.29 | 0.49 | 24 | -2.5 | -13 | 0.90 | 0.48 | PAG |
| ML95-82-2 | 2009 | 43 | 46 | Iron Formation | Discovery | OP/HW | 8.7 | 2.9 | 0.33 | 1.1 | 18 | 18 | 27 | 1.3 | 0.20 | 1.1 | 39 | -12 | -21 | 0.69 | 0.46 | PAG |
| ML95-83-01 | 2011 | 22 | 31 | Iron Formation | Discovery | OP/HW | 9.2 | | 0.19 | 0.87 | 14 | 14 | 8.9 | 0.13 | 0.080 | 0.040 | 3.9 | 5.0 | 10 | 2.3 | 3.6 | non PAG |
| ML95-93-03 | 2009 | 55 | 60 | Iron Formation | Discovery | OP/HW | 8.7 | 10 | 0.74 | 2.1 | 35 | 35 | 53 | 1.3 | < 0.01 | 1.3 | 39 | 14 | -4.4 | 1.3 | 0.89 | uncertain |
| ML95-95-01 | 2011 | 20 | 29 | Iron Formation | Discovery | OP/HW | 9.0 | | 0.48 | 1.6 | 26 | 26 | 44 | 0.37 | 0.090 | 0.29 | 12 | 33 | 15 | 3.8 | 2.3 | non PAG |
| ML95-98-01 | 2011 | 9.5 | 17.5 | Iron Formation | Discovery | OP/HW | 9.1 | | 0.16 | 0.34 | 5.5 | 5.5 | 23 | 0.60 | 0.15 | 0.45 | 19 | 4.2 | -13 | 1.2 | 0.29 | uncertain |
| ML97-186-01 | 2011 | 78 | 86 | Iron Formation | Discovery | OP/HW | 9.0 | | 0.41 | 1.6 | 27 | 27 | 37 | 0.24 | 0.070 | 0.16 | 7.3 | 29 | 19 | 5.0 | 3.6 | non PAG |
| ***BULK ARD - DISCOVERY Iron formation*** | | | | | | | | | - | | | **620** | **967** | | - | | **463** | **504** | **158** | **2.1** | **1.3** | **uncertain** |
| MINIMUM | | | | | | | 8.7 | 2.9 | 0.064 | 0.10 | 1.6 | 1.6 | -1.7 | 0.12 | <0.01 | <0.01 | 3.7 | -14 | -24 | -0.46 | 0.064 | |
| MAXIMUM | | | | | | | 9.9 | 11 | 0.74 | 2.5 | 41 | 41 | 53 | 1.3 | 0.40 | 1.3 | 39 | 40 | 30 | 12 | 9.2 | |
| MEDIAN | | | | | | | 9.0 | 10 | 0.37 | 1.2 | 19 | 19 | 29 | 0.39 | 0.12 | 0.24 | 12 | 17 | 6.8 | 2.6 | 1.9 | |
| AVERAGE | | | | | | | 9.0 | 3.7 | 0.34 | 1.2 | 19 | 19 | 29 | 0.45 | 0.15 | 0.30 | 14 | 15 | 4.8 | 3.2 | 2.2 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.18 | 0.65 | 11 | 11 | 12 | 0.31 | 0.10 | 0.27 | 9.6 | 15 | 15 | 2.7 | 2.0 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.45 | 1.6 | 26 | 26 | 38 | 0.67 | 0.20 | 0.36 | 21 | 30 | 19 | 4.5 | 3.6 | |
| ML00-224-01 | 2011 | 101.5 | 110 | Ore/IF | Discovery | OP/HW | 8.6 | | 0.47 | 1.3 | 21 | 21 | 27 | 1.0 | 0.080 | 0.95 | 32 | -5.5 | -11 | 0.83 | 0.64 | PAG |
| ML08-225-03 | 2011 | 169 | 178 | Ore/IF | Discovery | OP/FW | 8.5 | | 0.53 | 1.3 | 22 | 22 | 34 | 1.2 | 0.44 | 0.79 | 38 | -4.5 | -17 | 0.88 | 0.57 | PAG |
| ML08-226-04 | 2011 | 168.5 | 174.5 | Ore/IF | Discovery | OP/HW | 8.3 | | 0.043 | 0.11 | 1.7 | 1.7 | 9.1 | 1.4 | 0.69 | 0.74 | 45 | -36 | -43 | 0.20 | 0.039 | PAG |
| ML95-104-02 | 2011 | 177 | 187 | Ore/IF | Discovery | OP/FW | 8.5 | | 0.16 | 0.26 | 4.2 | 4.2 | 12 | 0.57 | 0.19 | 0.38 | 18 | -6.4 | -14 | 0.64 | 0.23 | PAG |
| ML95-84-01 | 2011 | 123 | 131 | Ore/IF | Discovery | OP/FW | 8.7 | | 0.28 | 0.87 | 14 | 14 | 21 | 1.1 | 0.13 | 0.97 | 34 | -13 | -20 | 0.61 | 0.41 | PAG |
| ***BULK ARD - DISCOVERY ORE (Iron formation)*** | | | | | | | | | - | | | **63** | **102** | | - | | **168** | **-66** | **-105** | **0.61** | **0.37** | **PAG** |
| MINIMUM | | | | | | | 8.3 | nc | 0.043 | 0.11 | 1.7 | 1.7 | 9.1 | 0.57 | 0.080 | 0.38 | 18 | -36 | -43 | 0.20 | 0.039 | |
| MAXIMUM | | | | | | | 8.7 | nc | 0.53 | 1.3 | 22 | 22 | 34 | 1.4 | 0.69 | 0.97 | 45 | -4.5 | -11 | 0.88 | 0.64 | |
| MEDIAN | | | | | | | 8.5 | nc | 0.28 | 0.87 | 14 | 14 | 21 | 1.1 | 0.19 | 0.79 | 34 | -6.4 | -17 | 0.64 | 0.41 | |
| AVERAGE | | | | | | | 8.5 | nc | 0.29 | 0.77 | 13 | 13 | 20 | 1.1 | 0.31 | 0.77 | 34 | -13 | -21 | 0.63 | 0.38 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.18 | 0.51 | 8.3 | 8.3 | 9.3 | 0.29 | 0.23 | 0.21 | 9.0 | 12 | 11 | 0.24 | 0.22 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.50 | 1.3 | 21 | 21 | 30 | 1.3 | 0.57 | 0.96 | 42 | -5.0 | -13 | 0.86 | 0.61 | |

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M08-743-03 | 2009 | 46 | 48 | Iron Formation | F Zone | OP-ore zone | 8.6 | | 1.2 | 3.0 | 49 | 22 | 75 | 2.2 | 1.1 | 1.1 | 69 | 6.1 | -20 | 1.1 | 0.32 | uncertain |
| M08-748-03 | 2009 | 85 | 95 | Iron Formation | F Zone | OP-ore zone | 9.0 | | 2.1 | 9.3 | 152 | 68 | 171 | 0.057 | 0.030 | 0.030 | 1.8 | 169 | 150 | 96 | 38 | non PAG |
| M09-802-02 | 2011 | 65 | 73 | Iron Formation | F Zone | OP/FW | 8.4 | | 0.58 | 0.98 | 16 | 9.6 | 31 | 2.6 | 0.74 | 1.8 | 81 | -50 | -65 | 0.38 | 0.12 | PAG |
| M09-803-01 | 2011 | 85 | 90 | Iron Formation | F Zone | OP/FW | 8.5 | | 1.5 | 3.4 | 55 | 25 | 67 | 2.8 | 0.25 | 2.5 | 86 | -19 | -31 | 0.78 | 0.28 | PAG |
| M10-935-02 | 2011 | 46 | 56 | Iron Formation | F Zone | OP/FW | 8.6 | | 0.97 | 2.1 | 34 | 14 | 34 | 1.3 | 0.49 | 0.84 | 42 | -7.8 | -7.9 | 0.81 | 0.33 | PAG |
| M98-248-01 | 2011 | 88 | 97 | Iron Formation | F Zone | OP/FW | 8.5 | | 1.6 | 1.6 | 27 | 8.8 | 53 | 3.2 | 1.5 | 1.7 | 100 | -47 | -73 | 0.53 | 0.088 | PAG |
| W94-111-01 | 2011 | 118 | 127 | Iron Formation | F Zone | OP/HW | 8.5 | | 2.6 | 3.7 | 61 | 27 | 70 | 1.0 | 0.94 | 0.070 | 32 | 39 | 29 | 2.2 | 0.86 | uncertain |
| ***BULK ARD - F ZONE Iron formation*** | | | | | | | | | - | | | **174** | **502** | | - | | **411** | **91** | **-237** | **1.2** | **0.42** | **uncertain** |
| | | | | | | MINIMUM | 8.4 | nc | 0.58 | 0.98 | 16 | 8.8 | 31 | 0.057 | 0.030 | 0.030 | 1.8 | -50 | -73 | 0.38 | 0.088 | |
| | | | | | | MAXIMUM | 9.0 | nc | 2.6 | 9.3 | 152 | 68 | 171 | 3.2 | 1.5 | 2.5 | 100 | 169 | 150 | 96 | 38 | |
| | | | | | | MEDIAN | 8.5 | nc | 1.5 | 3.0 | 49 | 22 | 67 | 2.2 | 0.74 | 1.1 | 69 | -7.8 | -20 | 0.81 | 0.32 | |
| | | | | | | AVERAGE | 8.5 | nc | 1.5 | 3.4 | 56 | 25 | 72 | 1.9 | 0.72 | 1.2 | 59 | 13 | -2.4 | 15 | 5.7 | |
| | | | | | | STANDARD DEVIATION | nc | nc | 0.63 | 2.6 | 42 | 19 | 44 | 1.0 | 0.48 | 0.85 | 32 | 70 | 70 | 33 | 13 | |
| | | | | | | 75TH PERCENTILE | nc | nc | 2.1 | 3.7 | 61 | 27 | 75 | 2.8 | 1.1 | 1.8 | 86 | 39 | 29 | 2.2 | 0.86 | |
| M08-729-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | 9.1 | | 1.8 | 8.0 | 130 | 125 | 154 | 0.28 | 0.050 | 0.23 | 8.7 | 145 | 122 | 18 | 14 | non PAG |
| M08-729-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | 8.9 | | 1.9 | 8.6 | 140 | 135 | 159 | 0.047 | 0.020 | 0.020 | 1.5 | 158 | 139 | 108 | 92 | non PAG |
| M08-729-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/HW | 9.2 | | 2.2 | 10 | 167 | 160 | 186 | 0.086 | 0.020 | 0.060 | 2.7 | 183 | 164 | 69 | 60 | non PAG |
| M08-729-04 | 2009 | 74 | 79 | Mafic Volcanic | F Zone | OP/HW | 9.3 | | 1.6 | 7.1 | 116 | 112 | 128 | 0.19 | 0.060 | 0.13 | 5.9 | 122 | 110 | 22 | 19 | non PAG |
| M08-729-06 | 2009 | 117 | 122 | Mafic Volcanic | F Zone | OP/FW | 9.1 | | 2.4 | 11 | 178 | 171 | 188 | 0.078 | 0.010 | 0.070 | 2.4 | 186 | 176 | 77 | 70 | non PAG |
| M08-733-01 | 2011 | 62 | 71 | Mafic Volcanic | F Zone | OP/HW | 8.9 | | 2.2 | 11 | 172 | 165 | 172 | 0.10 | 0.070 | 0.030 | 3.2 | 169 | 168 | 53 | 51 | non PAG |
| M08-733-02 | 2011 | 180 | 189 | Mafic Volcanic | F Zone | OP/FW | 9.0 | | 2.2 | 10 | 163 | 157 | 170 | 0.24 | 0.13 | 0.11 | 7.4 | 163 | 156 | 23 | 21 | non PAG |
| M08-734-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | 9.3 | | 1.5 | 7.3 | 120 | 115 | 130 | 0.11 | 0.040 | 0.070 | 3.3 | 127 | 117 | 39 | 35 | non PAG |
| M08-734-02 | 2009 | 28 | 32 | Mafic Volcanic | F Zone | OP/HW | 8.9 | | 2.1 | 9.5 | 156 | 150 | 176 | 0.33 | 0.080 | 0.26 | 10 | 166 | 145 | 17 | 14 | non PAG |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | 9.1 | | 2.1 | 9.6 | 157 | 157 | 176 | 0.26 | 0.090 | 0.17 | 8.2 | 168 | 148 | 22 | 19 | non PAG |
| M08-734-04 | 2009 | 41 | 45 | Mafic Volcanic | F Zone | OP/FW | 9.1 | | 3.2 | 15 | 242 | 233 | 226 | 0.088 | 0.040 | 0.050 | 2.8 | 223 | 239 | 82 | 85 | non PAG |
| M08-735-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 9.4 | | 1.5 | 6.9 | 112 | 108 | 124 | 0.11 | 0.050 | 0.060 | 3.3 | 121 | 109 | 37 | 33 | non PAG |
| M08-735-02 | 2009 | 70 | 75 | Mafic Volcanic | F Zone | OP/FW | 9.2 | | 2.7 | 13 | 209 | 201 | 212 | 0.18 | 0.070 | 0.11 | 5.6 | 206 | 204 | 38 | 36 | non PAG |
| M08-735-03 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | 9.1 | | 2.2 | 11 | 175 | 168 | 189 | 0.12 | 0.050 | 0.070 | 3.9 | 185 | 171 | 49 | 43 | non PAG |
| M08-740-01 | 2009 | 16 | 21 | Mafic Volcanic | F Zone | OP/HW | 9.0 | | 2.2 | 9.5 | 156 | 150 | 180 | 0.18 | 0.060 | 0.11 | 5.5 | 175 | 150 | 33 | 27 | non PAG |
| M08-740-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | 9.2 | | 2.4 | 11 | 177 | 170 | 180 | 0.086 | 0.070 | 0.020 | 2.7 | 177 | 174 | 67 | 63 | non PAG |
| M08-740-03 | 2009 | 52 | 56 | Mafic Volcanic | F Zone | OP/HW | 9.4 | | 0.98 | 4.4 | 72 | 69 | 86 | 0.10 | 0.030 | 0.070 | 3.2 | 83 | 69 | 27 | 22 | non PAG |
| M08-740-04 | 2009 | 106 | 111 | Mafic Volcanic | F Zone | OP/FW | 9.4 | | 2.8 | 13 | 214 | 206 | 221 | 0.065 | 0.040 | 0.030 | 2.0 | 219 | 212 | 109 | 101 | non PAG |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | 9.3 | | 2.5 | 12 | 188 | 188 | 222 | 0.10 | 0.050 | 0.050 | 3.1 | 219 | 185 | 71 | 60 | non PAG |
| M08-742-01 | 2009 | 8.5 | 14.5 | Mafic Volcanic | F Zone | OP/HW | 9.5 | | 1.0 | 4.7 | 77 | 74 | 93 | 0.13 | 0.080 | 0.050 | 4.1 | 89 | 73 | 23 | 18 | non PAG |
| M08-742-02 | 2009 | 29 | 35 | Mafic Volcanic | F Zone | OP/HW | 9.1 | | 1.5 | 6.9 | 113 | 109 | 130 | 0.21 | 0.10 | 0.11 | 6.5 | 124 | 107 | 20 | 17 | non PAG |
| M08-742-03 | 2009 | 43 | 47 | Mafic Volcanic | F Zone | OP/HW | 8.9 | | 2.3 | 11 | 178 | 171 | 181 | 0.051 | 0.030 | 0.020 | 1.6 | 179 | 177 | 114 | 108 | non PAG |
| M08-742-04 | 2009 | 77 | 83 | Mafic Volcanic | F Zone | OP/FW | 9.0 | | 2.4 | 12 | 188 | 181 | 198 | 0.086 | 0.040 | 0.040 | 2.7 | 195 | 185 | 74 | 67 | non PAG |
| M08-742-06 | 2009 | 96 | 102 | Mafic Volcanic | F Zone | OP/FW | 9.4 | | 1.1 | 5.1 | 83 | 80 | 92 | 0.082 | 0.030 | 0.050 | 2.6 | 90 | 80 | 36 | 31 | non PAG |
| M08-743-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | 9.6 | | 0.62 | 2.8 | 46 | 44 | 57 | 0.10 | 0.040 | 0.060 | 3.2 | 54 | 43 | 18 | 14 | non PAG |
| M08-743-02 | 2009 | 39 | 44 | Mafic Volcanic | F Zone | OP/FW | 9.2 | | 1.9 | 9.0 | 147 | 142 | 152 | 0.033 | 0.020 | < 0.01 | 1.0 | 151 | 146 | 147 | 137 | non PAG |
| M08-743-04 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | 9.7 | | 0.28 | 1.2 | 20 | 19 | 30 | 0.070 | 0.030 | 0.040 | 2.2 | 28 | 18 | 14 | 8.8 | non PAG |
| M08-747-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 9.0 | | 2.3 | 10 | 170 | 164 | 185 | 0.44 | 0.13 | 0.30 | 14 | 171 | 156 | 14 | 12 | non PAG |
| M08-747-02 | 2009 | 39 | 45 | Mafic Volcanic | F Zone | OP/HW | 9.5 | | 0.71 | 2.9 | 48 | 46 | 62 | 0.53 | 0.26 | 0.28 | 17 | 46 | 31 | 3.7 | 2.8 | non PAG |
| M08-747-03 | 2009 | 65 | 70 | Mafic Volcanic | F Zone | OP/FW | 8.9 | | 2.3 | 10 | 165 | 159 | 188 | 0.034 | 0.020 | 0.010 | 1.1 | 187 | 164 | 177 | 150 | non PAG |
| M08-747-04 | 2009 | 83 | 88 | Mafic Volcanic | F Zone | OP/FW | 9.3 | | 0.85 | 3.7 | 61 | 59 | 73 | 0.17 | 0.050 | 0.12 | 5.3 | 68 | 56 | 14 | 11 | non PAG |
| M08-748-01 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | 9.6 | | 0.68 | 2.9 | 48 | 46 | 68 | 0.21 | 0.060 | 0.15 | 6.6 | 61 | 41 | 10 | 7.0 | non PAG |
| M08-748-02 | 2009 | 57 | 62 | Mafic Volcanic | F Zone | OP/HW | 9.3 | | 2.3 | 9.9 | 162 | 156 | 195 | 0.57 | 0.12 | 0.46 | 18 | 177 | 144 | 11 | 8.7 | non PAG |
| M08-750-01 | 2009 | 8 | 14 | Mafic Volcanic | F Zone | OP/HW | 9.4 | | 2.5 | 13 | 204 | 197 | 226 | 0.16 | 0.060 | 0.10 | 4.8 | 221 | 199 | 47 | 41 | non PAG |
| M08-750-02 | 2009 | 28 | 33 | Mafic Volcanic | F Zone | OP/HW | 8.9 | | 2.3 | 11 | 181 | 175 | 168 | 0.070 | 0.030 | 0.040 | 2.2 | 166 | 179 | 77 | 80 | non PAG |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | 9.1 | | 1.5 | 7.2 | 117 | 100 | 134 | 0.12 | 0.060 | 0.050 | 3.7 | 130 | 114 | 36 | 27 | non PAG |
| M08-752-01 | 2009 | 9 | 14 | Mafic Volcanic | F Zone | OP/HW | 9.3 | | 1.8 | 7.8 | 127 | 122 | 147 | 0.57 | 0.31 | 0.25 | 18 | 129 | 109 | 8.3 | 6.9 | non PAG |
| M08-752-02 | 2009 | 23 | 27 | Mafic Volcanic | F Zone | OP/HW | 10 | | 0.14 | 0.49 | 8.1 | 7.8 | 20 | 0.11 | 0.070 | 0.040 | 3.5 | 16 | 4.6 | 5.7 | 2.2 | non PAG |
| M08-752-03 | 2009 | 45 | 51 | Mafic Volcanic | F Zone | OP/FW | 9.4 | | 2.1 | 9.5 | 155 | 149 | 163 | 0.074 | 0.040 | 0.030 | 2.3 | 161 | 153 | 70 | 64 | non PAG |
| M08-752-04 | 2009 | 75 | 80 | Mafic Volcanic | F Zone | OP/FW | 9.2 | | 2.0 | 8.9 | 146 | 141 | 172 | 0.053 | 0.020 | 0.030 | 1.7 | 170 | 144 | 104 | 85 | non PAG |
| M08-755-01 | 2009 | 19 | 24 | Mafic Volcanic | F Zone | OP/HW | 9.2 | | 1.3 | 5.7 | 93 | 89 | 113 | 0.016 | 0.020 | < 0.01 | 0.50 | 113 | 92 | 226 | 178 | non PAG |
| M08-755-02 | 2009 | 30 | 37 | Mafic Volcanic | F Zone | OP/HW | 9.4 | | 1.4 | 6.5 | 106 | 102 | 123 | 0.042 | 0.030 | 0.020 | 1.3 | 122 | 105 | 94 | 78 | non PAG |
| M08-755-03 | 2009 | 66 | 71 | Mafic Volcanic | F Zone | OP/FW | 9.1 | | 1.6 | 7.1 | 116 | 111 | 127 | 0.039 | 0.010 | 0.030 | 1.2 | 126 | 115 | 104 | 91 | non PAG |
| M09-802-01 | 2011 | 35 | 44 | Mafic Volcanic | F Zone | OP/HW | 8.9 | | 2.5 | 11 | 180 | 173 | 193 | 0.46 | 0.17 | 0.29 | 14 | 179 | 165 | 13 | 12 | non PAG |
| M09-817-02 | 2011 | 45 | 53 | Mafic Volcanic | F Zone | OP/HW | 9.0 | | 2.6 | 13 | 211 | 203 | 194 | 0.093 | 0.070 | 0.020 | 2.9 | 191 | 208 | 67 | 70 | non PAG |
| M09-859-01 | 2011 | 46 | 54.5 | Mafic Volcanic | F Zone | OP/FW | 8.9 | | 3.2 | 14 | 232 | 232 | 211 | 0.43 | 0.22 | 0.22 | 14 | 197 | 219 | 16 | 17 | non PAG |
| M10-933-01 | 2011 | 34 | 42 | Mafic Volcanic | F Zone | OP/FW | 9.0 | | 2.0 | 8.7 | 141 | 136 | 150 | 0.46 | 0.22 | 0.24 | 15 | 136 | 127 | 10 | 9.4 | non PAG |
| M10-935-01 | 2011 | 20.5 | 29 | Mafic Volcanic | F Zone | OP/HW | 9.5 | | 0.34 | 1.2 | 20 | 19 | 28 | 0.059 | 0.040 | 0.010 | 1.8 | 26 | 18 | 15 | 10 | non PAG |
| M96-28-01 | 2011 | 27 | 38 | Mafic Volcanic | F Zone | OP/HW | 9.0 | | 2.3 | 11 | 173 | 167 | 173 | 0.14 | 0.10 | 0.040 | 4.4 | 169 | 169 | 40 | 38 | non PAG |
| M97-159-01 | 2011 | 21 | 31 | Mafic Volcanic | F Zone | OP/HW | 9.0 | | 2.2 | 11 | 178 | 171 | 170 | 0.13 | 0.070 | 0.060 | 3.9 | 166 | 174 | 44 | 44 | non PAG |

**Appendix B.3: Acid Base Accounting Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M97-159-02 | 2011 | 86 | 93 | Mafic Volcanic | F Zone | OP/FW | 9.0 | | 2.2 | 10.0 | 163 | 157 | 175 | 0.18 | 0.13 | 0.050 | 5.6 | 169 | 158 | 31 | 28 | non PAG |
| M98-275-01 | 2011 | 25 | 33 | Mafic Volcanic | F Zone | OP/HW | 8.9 | | 2.4 | 11 | 177 | 170 | 185 | 0.081 | 0.050 | 0.030 | 2.5 | 182 | 174 | 73 | 67 | non PAG |
| M98-275-02 | 2011 | 80 | 89.5 | Mafic Volcanic | F Zone | OP/FW | 8.8 | | 2.2 | 9.5 | 155 | 149 | 158 | 0.11 | 0.060 | 0.060 | 3.5 | 154 | 151 | 45 | 42 | non PAG |
| W94-76-01 | 2011 | 13 | 22 | Mafic Volcanic | F Zone | OP/HW | 9.2 | | 1.3 | 6.0 | 98 | 94 | 99 | 0.060 | 0.030 | 0.030 | 1.9 | 97 | 96 | 53 | 50 | non PAG |
| W94-76-02 | 2011 | 70.5 | 77 | Mafic Volcanic | F Zone | OP/FW | 9.1 | | 0.89 | 3.5 | 57 | 55 | 67 | 0.10 | 0.080 | 0.030 | 3.3 | 64 | 54 | 21 | 17 | non PAG |
| W94-82-01 | 2011 | 46 | 55 | Mafic Volcanic | F Zone | OP/HW | 9.0 | | 1.1 | 4.3 | 71 | 68 | 80 | 0.11 | 0.080 | 0.030 | 3.4 | 77 | 67 | 24 | 20 | non PAG |
| ***BULK ARD - F ZONE Mafic Volcanic*** | | | | | | | | | - | | | **7380** | **8261** | | - | | **290** | **7972** | **7090** | **29** | **25** | **non PAG** |
| MINIMUM | | | | | | | 8.8 | nc | 0.14 | 0.49 | 8.1 | 7.8 | 20 | 0.016 | 0.010 | < 0.01 | 0.31 | 16 | 4.6 | 3.7 | 2.2 | |
| MAXIMUM | | | | | | | 10 | nc | 3.2 | 15 | 242 | 233 | 226 | 0.57 | 0.31 | 0.46 | 18 | 223 | 239 | 226 | 178 | |
| MEDIAN | | | | | | | 9.1 | nc | 2.1 | 9.5 | 155 | 149 | 166 | 0.11 | 0.055 | 0.050 | 2.8 | 162 | 146 | 38 | 34 | |
| AVERAGE | | | | | | | 9.1 | nc | 1.8 | 8.4 | 137 | 132 | 148 | 0.16 | 0.072 | 0.092 | 4.1 | 142 | 132 | 51 | 45 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.71 | 3.4 | 55 | 54 | 53 | 0.14 | 0.061 | 0.094 | 4.4 | 53 | 55 | 44 | 39 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 2.3 | 11 | 177 | 170 | 186 | 0.19 | 0.080 | 0.11 | 5.3 | 179 | 173 | 73 | 67 | |
| M09-809-01 | 2011 | 64.5 | 73.8 | Ore/IF | F Zone | OP/HW | 8.4 | | 1.5 | 5.9 | 96 | 96 | 101 | 1.9 | 0.51 | 1.4 | 59 | 42 | 38 | 1.7 | 1.6 | uncertain |
| M09-817-01 | 2011 | 32 | 40 | Ore/IF | F Zone | OP/HW | 8.8 | | 1.1 | 2.6 | 43 | 43 | 63 | 1.4 | 0.44 | 0.96 | 44 | 20 | -0.76 | 1.4 | 0.98 | uncertain |
| M08-742-05 | 2009 | 86 | 90 | Quartz Vein | F Zone | OP/FW-ore zone | 8.6 | | 0.97 | 2.1 | 34 | 34 | 58 | 2.2 | 1.2 | 1.0 | 68 | -10 | -33 | 0.85 | 0.51 | PAG |
| ***BULK ARD - F ZONE ORE (Iron formation + quartz vein)*** | | | | | | | | | - | | | **174** | **222** | | - | | **170** | **52** | **3.4** | **1.3** | **1.0** | **uncertain** |
| MINIMUM | | | | | | | 8.4 | nc | 0.97 | 2.1 | 34 | 34 | 58 | 1.4 | 0.44 | 0.96 | 44 | -10 | -33 | 0.85 | 0.51 | |
| MAXIMUM | | | | | | | 8.8 | nc | 1.5 | 5.9 | 96 | 96 | 101 | 2.2 | 1.2 | 1.4 | 68 | 42 | 38 | 1.7 | 1.6 | |
| MEDIAN | | | | | | | 8.6 | nc | 1.1 | 2.6 | 43 | 43 | 63 | 1.9 | 0.51 | 1.0 | 59 | 20 | -0.76 | 1.4 | 0.98 | |
| AVERAGE | | | | | | | 8.6 | nc | 1.2 | 3.5 | 58 | 58 | 74 | 1.8 | 0.70 | 1.1 | 57 | 17 | 1.1 | 1.3 | 1.0 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.22 | 1.7 | 27 | 27 | 19 | 0.32 | 0.32 | 0.18 | 9.9 | 21 | 29 | 0.36 | 0.46 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 1.5 | 5.9 | 96 | 96 | 101 | 2.2 | 1.2 | 1.4 | 68 | 42 | 38 | 1.7 | 1.6 | |
| M97-124-03 | 2011 | 182 | 190 | Iron Formation | Pump | OP/FW | 8.3 | | 3.3 | 6.9 | 113 | 22 | 94 | 2.7 | 0.50 | 2.2 | 84 | 11 | 30 | 1.1 | 0.26 | uncertain |
| M97-154-01 | 2011 | 38 | 47 | Iron Formation | Pump | OP/FW | 9.0 | | 2.7 | 12 | 203 | 39 | 192 | 0.074 | < 0.01 | 0.070 | 2.3 | 190 | 200 | 83 | 17 | non PAG |
| W94-49-02 | 2011 | 32 | 40 | Iron Formation | Pump | OP/HW | 8.0 | | 3.6 | 4.2 | 69 | 13 | 15 | 4.1 | 0.60 | 3.5 | 128 | -114 | -59 | 0.11 | 0.10 | PAG |
| W94-55-01 | 2011 | 16 | 23 | Iron Formation | Pump | OP/HW | 8.0 | | 3.6 | 11 | 173 | 33 | 152 | 1.5 | 0.28 | 1.2 | 46 | 106 | 127 | 3.3 | 0.72 | uncertain |
| W94-57-02 | 2011 | 26 | 36 | Iron Formation | Pump | OP/HW | 8.3 | | 1.7 | 4.1 | 67 | 13 | 76 | 1.6 | 1.4 | 0.17 | 49 | 27 | 17 | 1.5 | 0.26 | uncertain |
| W94-57-03 | 2011 | 43 | 50 | Iron Formation | Pump | OP/HW | 8.3 | | 3.8 | 8.8 | 144 | 27 | 114 | 2.9 | 0.37 | 2.5 | 91 | 23 | 53 | 1.3 | 0.30 | uncertain |
| W94-61-01 | 2011 | 19 | 29 | Iron Formation | Pump | OP/HW | 7.8 | | 4.3 | 4.5 | 74 | 8.8 | 42 | 1.7 | 0.11 | 1.5 | 52 | -9.2 | 22 | 0.82 | 0.17 | PAG |
| W94-73-02 | 2011 | 60 | 69 | Iron Formation | Pump | OP/HW | 8.2 | | 3.7 | 4.5 | 73 | 19 | 79 | 2.3 | 0.27 | 2.0 | 71 | 8.0 | 2.3 | 1.1 | 0.27 | uncertain |
| ***BULK ARD - PUMP Iron formation*** | | | | | | | | | - | | | **174** | **764** | | - | | **523** | **241** | **-348** | **1.5** | **0.33** | **uncertain** |
| MINIMUM | | | | | | | 7.8 | nc | 1.7 | 4.1 | 67 | 8.8 | 15 | 0.074 | <0.01 | 0.070 | 2.3 | -114 | -59 | 0.11 | 0.10 | |
| MAXIMUM | | | | | | | 9.0 | nc | 4.3 | 12 | 203 | 39 | 192 | 4.1 | 1.4 | 3.5 | 128 | 190 | 200 | 83 | 17 | |
| MEDIAN | | | | | | | 8.2 | nc | 3.6 | 5.7 | 94 | 20 | 86 | 2.0 | 0.33 | 1.8 | 61 | 17 | 26 | 1.2 | 0.26 | |
| AVERAGE | | | | | | | 8.1 | nc | 3.3 | 7.0 | 114 | 22 | 96 | 2.1 | 0.44 | 1.6 | 65 | 30 | 49 | 12 | 2.3 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.74 | 3.0 | 50 | 9.8 | 53 | 1.1 | 0.41 | 1.1 | 35 | 82 | 75 | 27 | 5.4 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 3.8 | 10 | 166 | 32 | 143 | 2.8 | 0.58 | 2.4 | 89 | 86 | 109 | 2.9 | 0.61 | |
| M96-58-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Pump | OP/HW | 9.0 | | 1.4 | 6.6 | 108 | 108 | 110 | 0.14 | 0.060 | 0.080 | 4.3 | 106 | 103 | 26 | 25 | non PAG |
| M96-58-02 | 2011 | 49 | 58 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 1.7 | 7.6 | 125 | 125 | 131 | 0.16 | 0.050 | 0.10 | 4.9 | 126 | 120 | 27 | 25 | non PAG |
| M96-58-03 | 2011 | 75.5 | 84.5 | Mafic Volcanic | Pump | OP/FW | 8.8 | | 1.8 | 8.6 | 140 | 140 | 144 | 0.10 | 0.020 | 0.080 | 3.1 | 141 | 137 | 46 | 45 | non PAG |
| M97-120-01 | 2011 | 11.5 | 21 | Mafic Volcanic | Pump | OP/HW | 9.0 | | 3.3 | 15 | 250 | 250 | 229 | 0.047 | < 0.01 | 0.040 | 1.5 | 228 | 249 | 156 | 170 | non PAG |
| M97-120-02 | 2011 | 44.5 | 53 | Mafic Volcanic | Pump | OP/FW | 8.9 | | 2.3 | 10 | 168 | 168 | 169 | 0.37 | 0.12 | 0.25 | 11 | 158 | 157 | 15 | 15 | non PAG |
| M97-122-01 | 2011 | 26.5 | 36.5 | Mafic Volcanic | Pump | OP/HW | 9.2 | | 0.59 | 2.6 | 42 | 42 | 52 | 0.14 | 0.030 | 0.11 | 4.3 | 47 | 38 | 12 | 9.9 | non PAG |
| M97-122-02 | 2011 | 103 | 112 | Mafic Volcanic | Pump | OP/HW | 9.2 | | 2.1 | 9.9 | 162 | 162 | 160 | 0.050 | < 0.01 | 0.050 | 1.6 | 158 | 160 | 102 | 104 | non PAG |
| M97-122-05 | 2011 | 230 | 239 | Mafic Volcanic | Pump | OP/FW | 9.0 | | 2.2 | 10 | 167 | 167 | 161 | 0.13 | 0.030 | 0.10 | 3.9 | 157 | 163 | 41 | 43 | non PAG |
| M97-123-01 | 2011 | 13.5 | 22.5 | Mafic Volcanic | Pump | OP/HW | 9.2 | | 1.9 | 9.1 | 149 | 149 | 144 | 0.010 | 0.010 | < 0.01 | 0.31 | 144 | 149 | 461 | 476 | non PAG |
| M97-123-02 | 2011 | 60 | 70 | Mafic Volcanic | Pump | OP/HW | 9.4 | | 2.2 | 11 | 172 | 172 | 170 | 0.026 | < 0.01 | 0.030 | 0.81 | 169 | 171 | 209 | 211 | non PAG |
| M97-123-03 | 2011 | 91 | 98 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 3.1 | 15 | 237 | 237 | 231 | 0.19 | 0.080 | 0.11 | 5.8 | 225 | 231 | 40 | 41 | non PAG |
| M97-123-04 | 2011 | 121 | 130 | Mafic Volcanic | Pump | OP/HW | 9.0 | | 2.5 | 12 | 191 | 191 | 174 | 0.072 | 0.040 | 0.030 | 2.3 | 172 | 189 | 77 | 85 | non PAG |
| M97-124-01 | 2011 | 119.5 | 128 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 2.1 | 9.4 | 154 | 154 | 155 | 0.14 | 0.060 | 0.080 | 4.4 | 151 | 149 | 35 | 35 | non PAG |
| M97-124-02 | 2011 | 141.5 | 150.5 | Mafic Volcanic | Pump | OP/HW | 8.8 | | 0.75 | 3.2 | 53 | 53 | 64 | 0.092 | 0.030 | 0.060 | 2.9 | 61 | 50 | 22 | 18 | non PAG |
| M97-124-04 | 2011 | 191 | 200 | Mafic Volcanic | Pump | OP/FW | 8.7 | | 1.9 | 8.5 | 139 | 139 | 142 | 0.082 | 0.020 | 0.060 | 2.6 | 139 | 136 | 55 | 54 | non PAG |
| M97-153-01 | 2011 | 37 | 46 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 2.7 | 12 | 195 | 195 | 197 | 0.38 | 0.30 | 0.080 | 12 | 185 | 183 | 17 | 16 | non PAG |
| M97-153-02 | 2011 | 67 | 76 | Mafic Volcanic | Pump | OP/FW | 8.9 | | 3.0 | 14 | 229 | 229 | 214 | 0.15 | 0.070 | 0.080 | 4.7 | 209 | 224 | 45 | 48 | non PAG |
| M98-181-01 | 2011 | 11 | 18.5 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 2.3 | 11 | 177 | 177 | 180 | 0.072 | 0.020 | 0.060 | 2.3 | 178 | 174 | 80 | 78 | non PAG |
| M98-181-02 | 2011 | 80 | 89 | Mafic Volcanic | Pump | OP/FW | 9.1 | | 2.6 | 12 | 195 | 195 | 184 | 0.032 | 0.010 | 0.020 | 1.0 | 183 | 194 | 184 | 195 | non PAG |
| M98-184-01 | 2011 | 14 | 22 | Mafic Volcanic | Pump | OP/HW | 9.0 | | 2.1 | 9.7 | 159 | 159 | 158 | 0.041 | < 0.01 | 0.040 | 1.3 | 157 | 157 | 123 | 124 | non PAG |
| M98-184-02 | 2011 | 66 | 74.5 | Mafic Volcanic | Pump | OP/HW | 9.0 | | 3.7 | 17 | 281 | 281 | 244 | 0.041 | < 0.01 | 0.030 | 1.3 | 243 | 280 | 190 | 219 | non PAG |
| M98-185-01 | 2011 | 53 | 61.5 | Mafic Volcanic | Pump | OP/FW | 8.9 | | 2.4 | 11 | 180 | 180 | 179 | 0.084 | 0.030 | 0.060 | 2.6 | 176 | 177 | 68 | 68 | non PAG |
| M98-185-02 | 2011 | 108 | 116.5 | Mafic Volcanic | Pump | OP/FW | 8.9 | | 1.6 | 7.3 | 119 | 119 | 122 | 0.073 | 0.010 | 0.060 | 2.3 | 120 | 116 | 53 | 52 | non PAG |
| M98-185-03 | 2011 | 160 | 168.5 | Mafic Volcanic | Pump | OP/FW | 8.9 | | 1.4 | 5.8 | 94 | 94 | 108 | 0.080 | 0.020 | 0.060 | 2.5 | 106 | 92 | 43 | 38 | non PAG |

**Appendix B.3: Acid Base Accounting Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| W94-49-01 | 2011 | 15 | 24 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 1.4 | 6.5 | 107 | 107 | 115 | 0.050 | < 0.01 | 0.040 | 1.6 | 113 | 105 | 74 | 68 | non PAG |
| W94-49-03 | 2011 | 41 | 51 | Mafic Volcanic | Pump | OP/HW | 8.7 | | 1.9 | 8.7 | 142 | 142 | 141 | 0.098 | 0.010 | 0.080 | 3.1 | 138 | 138 | 46 | 46 | non PAG |
| W94-53-01 | 2011 | 23 | 32 | Mafic Volcanic | Pump | OP/FW | 9.4 | | 0.67 | 2.6 | 42 | 42 | 46 | 0.20 | 0.080 | 0.12 | 6.3 | 40 | 36 | 7.4 | 6.7 | non PAG |
| W94-55-02 | 2011 | 69.5 | 74 | Mafic Volcanic | Pump | OP/HW | 8.6 | | 2.5 | 11 | 185 | 185 | 185 | 0.071 | < 0.01 | 0.070 | 2.2 | 183 | 182 | 83 | 83 | non PAG |
| W94-57-01 | 2011 | 8 | 16 | Mafic Volcanic | Pump | OP/HW | 8.8 | | 3.0 | 13 | 217 | 217 | 204 | 0.25 | 0.11 | 0.14 | 7.8 | 196 | 210 | 26 | 28 | non PAG |
| W94-59-01 | 2011 | 12 | 21 | Mafic Volcanic | Pump | OP/HW | 9.0 | | 1.0 | 4.4 | 72 | 72 | 76 | 0.11 | 0.070 | 0.040 | 3.4 | 72 | 69 | 22 | 21 | non PAG |
| W94-61-02 | 2011 | 44 | 53 | Mafic Volcanic | Pump | OP/FW | 9.0 | | 0.94 | 3.8 | 62 | 62 | 70 | 0.087 | 0.060 | 0.030 | 2.7 | 67 | 60 | 26 | 23 | non PAG |
| W94-65-03 | 2011 | 48 | 57 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 1.2 | 5.2 | 85 | 85 | 89 | 0.13 | 0.040 | 0.080 | 3.9 | 85 | 81 | 23 | 22 | non PAG |
| W94-70-01 | 2011 | 8 | 18 | Mafic Volcanic | Pump | OP/HW | 8.9 | | 1.5 | 6.9 | 112 | 112 | 116 | 0.059 | 0.040 | 0.020 | 1.8 | 114 | 110 | 63 | 61 | non PAG |
| W94-70-02 | 2011 | 33 | 42 | Mafic Volcanic | Pump | OP/HW | 8.8 | | 2.1 | 10 | 163 | 163 | 164 | 0.039 | 0.030 | 0.010 | 1.2 | 163 | 162 | 135 | 134 | non PAG |
| W94-73-01 | 2011 | 14 | 23 | Mafic Volcanic | Pump | OP/HW | 8.8 | | 1.9 | 9.0 | 147 | 147 | 146 | 0.076 | 0.050 | 0.030 | 2.4 | 144 | 145 | 61 | 62 | non PAG |
| W94-73-03 | 2011 | 86 | 95 | Mafic Volcanic | Pump | OP/FW | 8.8 | | 2.4 | 11 | 183 | 183 | 181 | 0.087 | 0.040 | 0.050 | 2.7 | 178 | 180 | 67 | 67 | non PAG |
| ***BULK ARD - PUMP Mafic Volcanic*** | | | | | | | | | - | | | **5401** | **5354** | | - | | **123** | **5231** | **5278** | **44** | **44** | **non PAG** |
| MINIMUM | | | | | | | 8.6 | nc | 0.59 | 2.6 | 42 | 42 | 46 | 0.010 | < 0.01 | < 0.01 | 0.31 | 40 | 36 | 7.4 | 6.7 | |
| MAXIMUM | | | | | | | 9.4 | nc | 3.7 | 17 | 281 | 281 | 244 | 0.38 | 0.30 | 0.25 | 12 | 243 | 280 | 461 | 476 | |
| MEDIAN | | | | | | | 8.9 | nc | 2.1 | 9.6 | 156 | 156 | 157 | 0.086 | 0.030 | 0.060 | 2.7 | 154 | 153 | 50 | 50 | |
| AVERAGE | | | | | | | 8.9 | nc | 2.0 | 9.2 | 150 | 150 | 149 | 0.11 | 0.045 | 0.066 | 3.4 | 145 | 147 | 77 | 78 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.74 | 3.5 | 57 | 57 | 50 | 0.082 | 0.052 | 0.044 | 2.6 | 50 | 57 | 83 | 87 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 2.5 | 11 | 184 | 184 | 181 | 0.14 | 0.060 | 0.080 | 4.3 | 178 | 182 | 83 | 85 | |
| M97-122-03 | 2011 | 160 | 169 | Ore/IF | Pump | OP/FW | 9.0 | | 3.1 | 13 | 211 | 211 | 184 | 0.28 | 0.010 | 0.26 | 8.7 | 175 | 202 | 21 | 24 | non PAG |
| M97-122-04 | 2011 | 180 | 190 | Ore/IF | Pump | OP/FW | 8.7 | | 1.8 | 6.1 | 100 | 100 | 102 | 0.72 | 0.11 | 0.61 | 22 | 80 | 78 | 4.5 | 4.5 | non PAG |
| W94-65-01 | 2011 | 14 | 20 | Ore/IF | Pump | OP/HW | 8.1 | | 1.5 | 3.5 | 57 | 57 | 51 | 5.7 | 0.25 | 5.4 | 178 | -127 | -121 | 0.28 | 0.32 | PAG |
| W94-65-02 | 2011 | 21 | 26 | Ore/IF | Pump | OP/HW | 8.3 | | 2.8 | 7.8 | 127 | 127 | 127 | 3.2 | 0.34 | 2.8 | 99 | 28 | 28 | 1.3 | 1.3 | uncertain |
| ***BULK ARD - PUMP ORE (Iron Formation)*** | | | | | | | | | - | | | **495** | **464** | | - | | **308** | **156** | **187** | **1.5** | **1.6** | **uncertain** |
| MINIMUM | | | | | | | 8.1 | nc | 1.5 | 3.5 | 57 | 57 | 51 | 0.28 | 0.010 | 0.26 | 8.7 | -127 | -121 | 0.28 | 0.32 | |
| MAXIMUM | | | | | | | 9.0 | nc | 3.1 | 13 | 211 | 211 | 184 | 5.7 | 0.34 | 5.4 | 178 | 175 | 202 | 21 | 24 | |
| MEDIAN | | | | | | | 8.5 | nc | 2.3 | 7.0 | 114 | 114 | 115 | 1.9 | 0.18 | 1.7 | 61 | 54 | 53 | 2.9 | 2.9 | |
| AVERAGE | | | | | | | 8.4 | nc | 2.3 | 7.6 | 124 | 124 | 116 | 2.5 | 0.18 | 2.3 | 77 | 39 | 47 | 6.8 | 7.6 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.66 | 3.4 | 56 | 56 | 48 | 2.2 | 0.13 | 2.1 | 68 | 110 | 116 | 8.5 | 9.8 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 3.0 | 12 | 190 | 190 | 170 | 5.1 | 0.32 | 4.8 | 158 | 151 | 171 | 17 | 19 | |
| M05-561-02_2011 | 2011 | 43.5 | 52.5 | Gabbro | Tiriganiaq | OP/HW | 9.3 | | 0.89 | 4.0 | 66 | 66 | 76 | 0.097 | 0.030 | 0.070 | 3.0 | 73 | 63 | 25 | 22 | non PAG |
| M06-592-02 | 2011 | 60 | 69 | Gabbro | Tiriganiaq | OP/HW | 9.2 | | 0.81 | 3.6 | 59 | 59 | 67 | 0.12 | 0.12 | < 0.01 | 3.7 | 64 | 56 | 18 | 16 | non PAG |
| M06-592-03 | 2011 | 124 | 132.5 | Gabbro | Tiriganiaq | OP/FW | 9.5 | | 0.19 | 0.77 | 13 | 13 | 23 | 0.091 | 0.080 | 0.010 | 2.8 | 21 | 9.8 | 8.2 | 4.4 | non PAG |
| M06-593-02 | 2011 | 140 | 148 | Gabbro | Tiriganiaq | OP/FW | 9.4 | | 0.24 | 1.0 | 17 | 17 | 29 | 0.088 | 0.050 | 0.040 | 2.8 | 26 | 14 | 11 | 6.2 | non PAG |
| M96-44-01 | 2011 | 15 | 22 | Gabbro | Tiriganiaq | OP/HW | 9.4 | | 0.44 | 1.9 | 30 | 30 | 41 | 0.30 | 0.18 | 0.13 | 9.5 | 32 | 21 | 4.4 | 3.2 | non PAG |
| M97-135-02 | 2011 | 85 | 92 | Gabbro | Tiriganiaq | OP/HW | 9.4 | | 0.26 | 1.1 | 18 | 18 | 29 | 0.13 | 0.11 | 0.020 | 3.9 | 25 | 14 | 7.4 | 4.6 | non PAG |
| M97-149-01 | 2011 | 12.5 | 21 | Gabbro | Tiriganiaq | OP/HW | 9.5 | | 0.45 | 1.9 | 32 | 32 | 41 | 0.20 | 0.11 | 0.090 | 6.2 | 35 | 25 | 6.6 | 5.1 | non PAG |
| M98-201-02 | 2011 | 44 | 52 | Gabbro | Tiriganiaq | OP/HW | 9.4 | | 0.47 | 2.0 | 33 | 33 | 43 | 0.11 | 0.070 | 0.040 | 3.4 | 40 | 30 | 13 | 9.9 | non PAG |
| M99-309-01 | 2011 | 20 | 28 | Gabbro | Tiriganiaq | OP/HW | 9.1 | | 1.2 | 5.4 | 88 | 88 | 91 | 0.23 | 0.15 | 0.070 | 7.0 | 84 | 81 | 13 | 13 | non PAG |
| M99-336B-02 | 2011 | 52 | 62 | Gabbro | Tiriganiaq | OP/HW | 9.5 | | 0.90 | 3.8 | 62 | 62 | 74 | 0.22 | 0.11 | 0.11 | 6.8 | 67 | 55 | 11 | 9.0 | non PAG |
| ***BULK ARD - TIRIGANIAQ Gabbro*** | | | | | | | | | - | | | **418** | **515** | | - | | **49** | **466** | **369** | **10** | **8.5** | **non PAG** |
| MINIMUM | | | | | | | 9.1 | nc | 0.19 | 0.77 | 13 | 13 | 23 | 0.088 | 0.030 | < 0.01 | 2.8 | 21 | 9.8 | 4.4 | 3.2 | |
| MAXIMUM | | | | | | | 9.5 | nc | 1.2 | 5.4 | 88 | 88 | 91 | 0.30 | 0.18 | 0.13 | 9.5 | 84 | 81 | 25 | 22 | |
| MEDIAN | | | | | | | 9.4 | nc | 0.46 | 2.0 | 32 | 32 | 42 | 0.12 | 0.11 | 0.055 | 3.8 | 37 | 28 | 11 | 7.6 | |
| AVERAGE | | | | | | | 9.3 | nc | 0.58 | 2.6 | 42 | 42 | 52 | 0.16 | 0.10 | 0.059 | 4.9 | 47 | 37 | 12 | 9.3 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.32 | 1.5 | 24 | 24 | 22 | 0.070 | 0.043 | 0.040 | 2.2 | 22 | 23 | 5.8 | 5.7 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.89 | 3.8 | 63 | 63 | 75 | 0.22 | 0.13 | 0.095 | 6.9 | 69 | 57 | 14 | 13 | |
| GT08-01-01 | 2008 | 50.2 | 54.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.65 | 2.3 | 38 | 29 | 42 | 0.15 | 0.060 | 0.080 | 4.6 | 38 | 33 | 9.2 | 6.4 | non PAG |
| GT08-01-02 | 2008 | 25.16 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 0.61 | 2.3 | 37 | 29 | 38 | 0.20 | 0.11 | 0.090 | 6.4 | 31 | 31 | 5.9 | 4.5 | non PAG |
| GT08-02-01_2008 | 2008 | 65.07 | 69.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 0.96 | 3.8 | 63 | 48 | 65 | 0.17 | 0.090 | 0.080 | 5.3 | 59 | 57 | 12 | 9.0 | non PAG |
| M00-474-02 | 2008 | 80.3 | 84.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 3.9 | 18 | 301 | 231 | 392 | 0.40 | 0.16 | 0.24 | 12 | 380 | 288 | 32 | 19 | non PAG |
| M00-474-04 | 2008 | 45.42 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 1.0 | 4.4 | 73 | 56 | 75 | 0.087 | 0.040 | 0.050 | 2.7 | 72 | 70 | 27 | 20 | non PAG |
| M00-474-05 | 2008 | 20.53 | 24.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 0.58 | 2.1 | 34 | 26 | 42 | 0.26 | 0.090 | 0.16 | 8.0 | 34 | 26 | 5.2 | 3.3 | non PAG |
| M00-479-01 | 2009 | 30 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.029 | 0.020 | 0.010 | 0.91 | | | | | |
| M03-496-01 | 2008 | 360.07 | 370.13 | Greywacke/Siltstone | Tiriganiaq | UG | 8.7 | | 1.8 | 3.9 | 64 | 49 | 66 | 0.82 | 0.25 | 0.56 | 26 | 41 | 39 | 2.6 | 1.9 | uncertain |
| M03-498-01 | 2009 | 315 | 320 | Greywacke/Siltstone | Tiriganiaq | UG | 9.0 | | 1.1 | 4.6 | 76 | 58 | 78 | 0.20 | 0.14 | 0.060 | 6.3 | 72 | 69 | 12 | 9.2 | non PAG |
| M03-499-02 | 2009 | 270 | 275 | Greywacke/Siltstone | Tiriganiaq | UG | 8.7 | | 0.88 | 3.6 | 58 | 45 | 61 | 0.21 | 0.11 | 0.10 | 6.5 | 55 | 52 | 9.4 | 6.9 | non PAG |
| M03-508-01 | 2011 | 44.5 | 53 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.62 | 2.6 | 42 | 42 | 44 | 0.18 | 0.070 | 0.11 | 5.7 | 38 | 36 | 7.6 | 7.4 | non PAG |
| M03-513-01 | 2008 | 19.5 | 24.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.85 | 3.4 | 56 | 43 | 55 | 0.19 | 0.090 | 0.10 | 6.0 | 49 | 50 | 9.2 | 7.2 | non PAG |
| M04-520-01 | 2009 | 405 | 410 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.63 | 2.6 | 42 | 32 | 44 | 0.027 | 0.020 | < 0.01 | 0.84 | 43 | 41 | 53 | 38 | non PAG |
| M04-520-02 | 2009 | 411 | 416 | Greywacke/Siltstone | Tiriganiaq | UG | 9.4 | | 1.5 | 6.9 | 113 | 87 | 133 | 0.056 | 0.050 | < 0.01 | 1.8 | 131 | 111 | 76 | 49 | non PAG |
| M04-527-01 | 2008 | 270 | 279.9 | Greywacke/Siltstone | Tiriganiaq | UG | 9.2 | | 0.61 | 2.2 | 36 | 27 | 45 | 0.24 | 0.16 | 0.080 | 7.4 | 38 | 28 | 6.1 | 3.7 | non PAG |
| M04-533-01 | 2008 | 380.18 | 389.64 | Greywacke/Siltstone | Tiriganiaq | UG | 9.4 | 11 | 1.1 | 4.8 | 79 | 57 | 76 | 0.18 | 0.11 | 0.060 | 5.6 | 70 | 74 | 14 | 10 | non PAG |
| M04-533-02 | 2008 | 296.9 | 307.24 | Greywacke/Siltstone | Tiriganiaq | UG | 9.0 | | 0.54 | 2.3 | 38 | 29 | 43 | 0.17 | 0.12 | 0.050 | 5.4 | 38 | 33 | 8.0 | 5.4 | non PAG |
| M05-559A-02 | 2008 | 180 | 189.99 | Greywacke/Siltstone | Tiriganiaq | UG | 9.4 | | 0.44 | 1.7 | 28 | 21 | 37 | 0.14 | 0.090 | 0.050 | 4.3 | 32 | 24 | 8.5 | 5.0 | non PAG |

**Appendix B.3: Acid Base Accounting Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M05-571A-01 | 2008 | 435.4 | 444.96 | Greywacke/Siltstone | Tiriganiaq | UG | 9.3 | | 0.80 | 3.1 | 51 | 39 | 54 | 0.087 | 0.050 | 0.040 | 2.7 | 51 | 48 | 20 | 14 | non PAG |
| M05-571A-02 | 2008 | 335.3 | 344.4 | Greywacke/Siltstone | Tiriganiaq | UG | 9.3 | | 0.54 | 2.2 | 36 | 27 | 30 | 0.033 | 0.030 | < 0.01 | 1.0 | 29 | 35 | 29 | 27 | non PAG |
| M06-577-01 | 2011 | 7 | 15.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.58 | 2.2 | 36 | 27 | 38 | 0.20 | 0.090 | 0.12 | 6.3 | 32 | 29 | 6.0 | 4.3 | non PAG |
| M06-577-02 | 2011 | 71 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.64 | 2.6 | 43 | 33 | 43 | 0.22 | 0.14 | 0.080 | 6.9 | 36 | 36 | 6.2 | 4.8 | non PAG |
| M06-577-03 | 2011 | 105 | 114 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.67 | 2.5 | 41 | 31 | 44 | 0.21 | 0.12 | 0.090 | 6.7 | 38 | 34 | 6.6 | 4.7 | non PAG |
| M06-591-01 | 2011 | 20.5 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 0.59 | 2.1 | 35 | 27 | 38 | 0.23 | 0.13 | 0.10 | 7.3 | 31 | 27 | 5.3 | 3.7 | non PAG |
| M06-592-01 | 2011 | 26 | 34.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.52 | 2.1 | 34 | 26 | 36 | 0.15 | 0.14 | 0.010 | 4.7 | 31 | 29 | 7.7 | 5.6 | non PAG |
| M06-593-01 | 2011 | 27 | 36 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.72 | 2.7 | 44 | 34 | 49 | 0.33 | 0.10 | 0.23 | 10 | 38 | 34 | 4.7 | 3.3 | non PAG |
| M06-601A-01 | 2009 | 266 | 270 | Greywacke/Siltstone | Tiriganiaq | UG | 8.8 | | 1.6 | 7.8 | 127 | 97 | 142 | 0.11 | 0.050 | 0.060 | 3.4 | 139 | 123 | 41 | 28 | non PAG |
| M06-604-01 | 2008 | 335.56 | 344.42 | Greywacke/Siltstone | Tiriganiaq | UG | 9.2 | | 0.38 | 1.5 | 24 | 18 | 20 | 0.070 | 0.050 | 0.020 | 2.2 | 18 | 22 | 9.1 | 8.3 | non PAG |
| M06-604-02 | 2008 | 285.56 | 294.76 | Greywacke/Siltstone | Tiriganiaq | UG | 9.1 | | 0.91 | 3.9 | 64 | 49 | 60 | 0.17 | 0.11 | 0.060 | 5.4 | 55 | 58 | 11 | 9.0 | non PAG |
| M06-604-03 | 2008 | 245 | 255 | Greywacke/Siltstone | Tiriganiaq | UG | 9.3 | | 0.79 | 3.1 | 51 | 39 | 56 | 0.32 | 0.24 | 0.080 | 10 | 46 | 41 | 5.5 | 3.9 | non PAG |
| M06-607-01 | 2009 | 175 | 180 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.49 | 2.0 | 33 | 26 | 35 | 0.076 | 0.030 | 0.040 | 2.4 | 32 | 31 | 15 | 11 | non PAG |
| M06-608-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.56 | 2.1 | 35 | 27 | 40 | 0.23 | 0.20 | 0.030 | 7.0 | 32 | 28 | 5.6 | 3.8 | non PAG |
| M06-608-02 | 2011 | 75.5 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.58 | 2.3 | 37 | 28 | 41 | 0.16 | 0.16 | < 0.01 | 4.8 | 36 | 32 | 8.4 | 5.9 | non PAG |
| M06-611-01 | 2011 | 28 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.54 | 2.2 | 35 | 27 | 37 | 0.15 | 0.14 | 0.010 | 4.7 | 32 | 31 | 7.9 | 5.8 | non PAG |
| M06-611-02 | 2011 | 121 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.65 | 2.5 | 40 | 31 | 43 | 0.17 | 0.17 | < 0.01 | 5.4 | 37 | 35 | 7.9 | 5.7 | non PAG |
| M06-621-01 | 2009 | 240 | 245 | Greywacke/Siltstone | Tiriganiaq | UG | 8.7 | | 0.56 | 2.2 | 37 | 28 | 40 | 0.15 | 0.080 | 0.070 | 4.7 | 35 | 32 | 8.4 | 6.0 | non PAG |
| M06-623-01 | 2011 | 63 | 72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.81 | 3.3 | 53 | 41 | 51 | 0.046 | 0.050 | < 0.01 | 1.4 | 49 | 52 | 35 | 29 | non PAG |
| M06-625-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.76 | 3.0 | 50 | 35 | 48 | 0.16 | 0.16 | < 0.01 | 5.1 | 43 | 45 | 9.6 | 6.9 | non PAG |
| M06-625-02 | 2011 | 49 | 57 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.4 | | 0.47 | 1.6 | 26 | 20 | 34 | 0.15 | 0.10 | 0.060 | 4.8 | 29 | 21 | 7.0 | 4.1 | non PAG |
| M06-628-01 | 2009 | 38 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.27 | 0.080 | 0.19 | 8.5 | | | | | |
| M06-631-01 | 2011 | 17 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 0.72 | 2.5 | 40 | 31 | 41 | 0.24 | 0.090 | 0.15 | 7.6 | 34 | 33 | 5.4 | 4.1 | non PAG |
| M07-645-01 | 2008 | 250.36 | 259.97 | Greywacke/Siltstone | Tiriganiaq | UG | 9.2 | | 0.54 | 2.1 | 35 | 27 | 36 | 0.16 | 0.12 | 0.050 | 5.1 | 31 | 30 | 7.1 | 5.2 | non PAG |
| M07-649-01_2009 | 2009 | 300 | 305 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.89 | 3.7 | 61 | 47 | 60 | 0.18 | 0.080 | 0.10 | 5.6 | 54 | 56 | 11 | 8.4 | non PAG |
| M07-660-01_2008 | 2008 | 80.84 | 84.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.9 | | 1.1 | 4.7 | 76 | 59 | 75 | 0.24 | 0.13 | 0.11 | 7.6 | 68 | 69 | 9.9 | 7.7 | non PAG |
| M07-660-02_2008 | 2008 | 55.86 | 59.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 0.51 | 2.1 | 34 | 26 | 41 | 0.18 | 0.060 | 0.12 | 5.7 | 35 | 28 | 7.1 | 4.5 | non PAG |
| M07-663-01 | 2008 | 417.35 | 426.56 | Greywacke/Siltstone | Tiriganiaq | UG | 9.2 | | 0.61 | 2.3 | 38 | 28 | 36 | 0.31 | 0.19 | 0.12 | 9.8 | 26 | 28 | 3.7 | 2.9 | non PAG |
| M07-663-02 | 2008 | 350.7 | 357.24 | Greywacke/Siltstone | Tiriganiaq | UG | 9.1 | | 0.68 | 2.9 | 47 | 36 | 44 | 0.11 | 0.070 | 0.040 | 3.4 | 40 | 43 | 13 | 10 | non PAG |
| M07-663-03 | 2008 | 280.15 | 289.09 | Greywacke/Siltstone | Tiriganiaq | UG | 9.1 | | 0.87 | 3.5 | 58 | 44 | 60 | 0.21 | 0.14 | 0.060 | 6.4 | 54 | 51 | 9.3 | 6.9 | non PAG |
| M07-672B-01 | 2009 | 323 | 328 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.44 | 1.7 | 27 | 21 | 29 | 0.092 | 0.040 | 0.050 | 2.9 | 26 | 24 | 10 | 7.2 | non PAG |
| M07-674-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.80 | 3.1 | 51 | 39 | 52 | 0.23 | 0.13 | 0.10 | 7.3 | 44 | 43 | 7.1 | 5.3 | non PAG |
| M07-678-02 | 2008 | 35.55 | 39.74 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 1.3 | 5.7 | 93 | 72 | 87 | 0.17 | 0.070 | 0.10 | 5.2 | 82 | 88 | 17 | 14 | non PAG |
| M07-678-03 | 2008 | 25.1 | 29.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 0.74 | 3.2 | 53 | 41 | 46 | 0.20 | 0.080 | 0.12 | 6.3 | 40 | 47 | 7.4 | 6.5 | non PAG |
| M07-685-01 | 2009 | 260 | 265 | Greywacke/Siltstone | Tiriganiaq | UG | 9.2 | | 0.53 | 2.0 | 33 | 26 | 41 | 0.21 | 0.16 | 0.050 | 6.5 | 35 | 27 | 6.3 | 3.9 | non PAG |
| M07-685-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 8.7 | | 0.54 | 2.1 | 34 | 26 | 37 | 0.17 | 0.13 | 0.040 | 5.3 | 32 | 29 | 7.1 | 5.0 | non PAG |
| M07-689-01 | 2011 | 11 | 21 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.35 | 1.2 | 20 | 15 | 25 | 0.19 | 0.14 | 0.050 | 6.0 | 19 | 14 | 4.1 | 2.6 | non PAG |
| M07-689-02 | 2011 | 42 | 52 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.48 | 1.5 | 24 | 19 | 30 | 0.14 | 0.14 | < 0.01 | 4.4 | 25 | 20 | 6.7 | 4.2 | non PAG |
| M07-689-03 | 2011 | 88 | 97 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 1.5 | 4.4 | 71 | 55 | 62 | 0.66 | 0.46 | 0.20 | 21 | 42 | 51 | 3.0 | 2.6 | non PAG |
| M07-691-01 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 8.7 | | 0.37 | 1.5 | 24 | 18 | 30 | 0.14 | 0.080 | 0.060 | 4.4 | 25 | 19 | 6.7 | 4.2 | non PAG |
| M07-704-01 | 2008 | 41.38 | 45.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.98 | 4.2 | 68 | 52 | 65 | 0.22 | 0.040 | 0.18 | 6.9 | 58 | 61 | 9.4 | 7.6 | non PAG |
| M07-704-02 | 2008 | 25.09 | 25.28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.60 | 2.5 | 41 | 31 | 41 | 0.18 | 0.12 | 0.060 | 5.5 | 35 | 35 | 7.4 | 5.6 | non PAG |
| M07-705-01 | 2008 | 45.76 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.72 | 2.9 | 48 | 37 | 50 | 0.32 | 0.18 | 0.14 | 10 | 40 | 38 | 5.0 | 3.7 | non PAG |
| M07-710-02 | 2008 | 26 | 29.71 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 1.1 | 4.8 | 78 | 60 | 82 | 0.061 | 0.010 | 0.050 | 1.9 | 80 | 77 | 43 | 32 | non PAG |
| M07-711-01 | 2008 | 25.3 | 29.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.8 | | 1.0 | 4.4 | 72 | 55 | 74 | 0.20 | 0.080 | 0.11 | 6.1 | 67 | 66 | 12 | 9.0 | non PAG |
| M07-713-01 | 2008 | 80.2 | 85.51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 1.0 | 4.1 | 68 | 52 | 62 | 0.15 | 0.090 | 0.060 | 4.6 | 58 | 63 | 13 | 11 | non PAG |
| M07-713-02 | 2008 | 45.23 | 49.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 0.49 | 1.9 | 31 | 24 | 36 | 0.31 | 0.19 | 0.11 | 9.5 | 26 | 21 | 3.7 | 2.5 | non PAG |
| M07-719-01 | 2009 | 351.45 | 359.9 | Greywacke/Siltstone | Tiriganiaq | UG | 9.2 | | 1.0 | 4.4 | 71 | 55 | 70 | 0.23 | 0.14 | 0.080 | 7.1 | 63 | 64 | 10.0 | 7.7 | non PAG |
| M08-721-01 | 2009 | 381 | 384 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 3.3 | 16 | 262 | 201 | 247 | 0.061 | 0.040 | 0.020 | 1.9 | 245 | 260 | 130 | 105 | non PAG |
| M08-721-02 | 2009 | 388 | 393 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.76 | 3.3 | 54 | 42 | 56 | 0.10 | 0.090 | < 0.01 | 3.2 | 53 | 51 | 17 | 13 | non PAG |
| M08-731W1-01 | 2009 | 330 | 335 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.83 | 3.8 | 61 | 47 | 72 | 0.12 | 0.050 | 0.060 | 3.7 | 68 | 58 | 20 | 13 | non PAG |
| M08-731W1-02 | 2009 | 350 | 355 | Greywacke/Siltstone | Tiriganiaq | UG | 9.1 | | 1.0 | 4.3 | 71 | 54 | 74 | 0.25 | < 0.01 | 0.21 | 7.7 | 67 | 63 | 9.7 | 7.1 | non PAG |
| M08-754-01 | 2009 | 360 | 365 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.54 | 2.1 | 35 | 27 | 41 | 0.060 | 0.040 | 0.020 | 1.9 | 40 | 33 | 22 | 14 | non PAG |
| M08-761-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.60 | 2.2 | 36 | 27 | 40 | 0.28 | 0.10 | 0.19 | 8.9 | 31 | 27 | 4.5 | 3.1 | non PAG |
| M08-761-02 | 2011 | 91 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.67 | 2.7 | 44 | 33 | 44 | 0.21 | 0.070 | 0.14 | 6.5 | 38 | 37 | 6.8 | 5.2 | non PAG |
| M08-763-01 | 2011 | 55.5 | 64 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.97 | 4.1 | 67 | 51 | 62 | 0.20 | 0.11 | 0.090 | 6.3 | 55 | 61 | 9.7 | 8.1 | non PAG |
| M08-765-01 | 2011 | 25 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.3 | | 0.73 | 2.9 | 48 | 37 | 48 | 0.21 | 0.070 | 0.13 | 6.4 | 41 | 41 | 7.4 | 5.7 | non PAG |
| M08-769-01 | 2009 | 451 | 456 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | | 1.2 | 5.3 | 86 | 66 | 89 | 0.11 | 0.070 | 0.040 | 3.4 | 86 | 83 | 26 | 19 | non PAG |
| M08-783-01 | 2011 | 38 | 47 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.66 | 2.9 | 47 | 36 | 42 | 0.16 | 0.070 | 0.090 | 5.1 | 37 | 42 | 8.3 | 7.1 | non PAG |
| M09-823-01 | 2009 | 320 | 325 | Greywacke/Siltstone | Tiriganiaq | UG | 9.3 | | 0.14 | 0.55 | 8.9 | 6.8 | 22 | 0.14 | 0.050 | 0.090 | 4.3 | 18 | 4.6 | 5.1 | 1.6 | uncertain |
| M09-823-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 8.8 | | 0.41 | 1.6 | 27 | 21 | 35 | 0.15 | 0.090 | 0.060 | 4.8 | 30 | 22 | 7.3 | 4.3 | non PAG |
| M10-879-01 | 2011 | 38 | 46.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.6 | | 0.73 | 2.9 | 47 | 36 | 48 | 0.28 | 0.080 | 0.21 | 8.9 | 40 | 38 | 5.5 | 4.1 | non PAG |
| M10-887-01 | 2011 | 17 | 24.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.5 | | 0.82 | 3.3 | 53 | 41 | 51 | 0.31 | 0.090 | 0.21 | 9.6 | 42 | 44 | 5.4 | 4.3 | non PAG |
| M10-892-01 | 2011 | 23 | 31.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.71 | 2.4 | 40 | 30 | 47 | 0.15 | 0.080 | 0.070 | 4.6 | 42 | 35 | 10 | 6.6 | non PAG |
| M10-999-01 | 2011 | 13 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.66 | 2.8 | 46 | 35 | 39 | 0.14 | 0.080 | 0.070 | 4.5 | 35 | 41 | 8.8 | 7.8 | non PAG |

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M10-999-02 | 2011 | 121.5 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.4 | | 0.60 | 2.7 | 44 | 34 | 48 | 0.37 | 0.16 | 0.21 | 12 | 37 | 32 | 4.2 | 2.9 | non PAG |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.46 | 1.9 | 30 | 23 | 30 | 0.20 | 0.16 | 0.040 | 6.2 | 24 | 24 | 4.8 | 3.8 | non PAG |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.46 | 1.9 | 30 | 23 | 30 | 0.20 | 0.16 | 0.040 | 6.2 | 24 | 24 | 4.8 | 3.8 | non PAG |
| M95-17-02 | 2008 | 30.39 | 34.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.46 | 1.7 | 28 | 22 | 32 | 0.20 | 0.16 | 0.030 | 6.1 | 26 | 22 | 5.3 | 3.6 | non PAG |
| M95-25-01 | 2011 | 9.5 | 18 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.78 | 3.0 | 50 | 38 | 50 | 0.17 | 0.070 | 0.10 | 5.3 | 44 | 44 | 9.4 | 7.3 | non PAG |
| M95-25-02 | 2011 | 34.5 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.91 | 3.8 | 63 | 48 | 62 | 0.28 | 0.16 | 0.12 | 8.8 | 53 | 54 | 7.0 | 5.5 | non PAG |
| M96-03-01 | 2011 | 10 | 19 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.70 | 2.8 | 46 | 35 | 44 | 0.17 | 0.12 | 0.060 | 5.4 | 38 | 41 | 8.1 | 6.6 | non PAG |
| M96-03-02 | 2011 | 45 | 53.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.77 | 3.1 | 51 | 39 | 51 | 0.26 | 0.12 | 0.14 | 8.2 | 43 | 43 | 6.2 | 4.8 | non PAG |
| M96-19-01 | 2011 | 20 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.81 | 3.2 | 52 | 40 | 53 | 0.27 | 0.14 | 0.13 | 8.3 | 44 | 43 | 6.3 | 4.8 | non PAG |
| M96-19-02 | 2011 | 71.5 | 79 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.63 | 2.4 | 40 | 31 | 42 | 0.18 | 0.14 | 0.040 | 5.7 | 36 | 34 | 7.4 | 5.4 | non PAG |
| M96-37-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.70 | 2.9 | 48 | 37 | 51 | 0.23 | 0.14 | 0.090 | 7.3 | 44 | 41 | 7.0 | 5.1 | non PAG |
| M96-37-02 | 2011 | 85.5 | 94 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.73 | 2.7 | 44 | 34 | 48 | 0.30 | 0.12 | 0.18 | 9.3 | 39 | 35 | 5.2 | 3.6 | non PAG |
| M96-37-03 | 2011 | 129 | 138 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.46 | 1.6 | 26 | 20 | 34 | 0.26 | 0.21 | 0.040 | 8.0 | 26 | 18 | 4.2 | 2.5 | non PAG |
| M96-40-01 | 2011 | 14 | 23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.51 | 2.0 | 33 | 25 | 37 | 0.11 | 0.060 | 0.040 | 3.3 | 33 | 30 | 11 | 7.6 | non PAG |
| M96-40-02 | 2011 | 62 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.55 | 2.3 | 38 | 29 | 37 | 0.26 | 0.17 | 0.090 | 8.2 | 29 | 30 | 4.5 | 3.5 | non PAG |
| M96-4-01 | 2011 | 10 | 20 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.92 | 3.5 | 58 | 44 | 58 | 0.31 | 0.15 | 0.16 | 9.6 | 48 | 48 | 6.0 | 4.6 | non PAG |
| M96-54-01 | 2011 | 19 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.83 | 3.3 | 54 | 41 | 53 | 0.18 | 0.17 | 0.020 | 5.7 | 47 | 48 | 9.2 | 7.2 | non PAG |
| M96-54-02 | 2011 | 57 | 66 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.5 | | 0.84 | 3.5 | 57 | 44 | 55 | 0.25 | 0.15 | 0.10 | 7.8 | 48 | 50 | 7.1 | 5.7 | non PAG |
| M96-65-01 | 2011 | 36 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.76 | 3.1 | 50 | 38 | 48 | 0.19 | 0.11 | 0.080 | 5.8 | 42 | 44 | 8.3 | 6.6 | non PAG |
| M96-7-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.56 | 2.0 | 33 | 25 | 32 | 0.014 | 0.010 | < 0.01 | 0.44 | 32 | 33 | 74 | 58 | non PAG |
| M96-7-02 | 2011 | 42 | 51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.83 | 3.2 | 52 | 40 | 52 | 0.37 | 0.18 | 0.19 | 12 | 40 | 41 | 4.4 | 3.5 | non PAG |
| M96-77-01 | 2011 | 41 | 49.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.55 | 2.2 | 37 | 28 | 38 | 0.17 | 0.11 | 0.060 | 5.2 | 33 | 31 | 7.3 | 5.4 | non PAG |
| M96-77-02 | 2011 | 140 | 149 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.72 | 2.8 | 46 | 36 | 47 | 0.34 | 0.30 | 0.050 | 11 | 37 | 36 | 4.4 | 3.3 | non PAG |
| M97-121-01 | 2011 | 23 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.64 | 2.4 | 40 | 30 | 41 | 0.21 | 0.030 | 0.17 | 6.5 | 35 | 33 | 6.4 | 4.7 | non PAG |
| M97-135-03 | 2011 | 111 | 120 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.66 | 2.6 | 42 | 33 | 43 | 0.27 | 0.16 | 0.11 | 8.4 | 34 | 34 | 5.1 | 3.9 | non PAG |
| M97-149-02 | 2011 | 107.5 | 116 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.59 | 2.3 | 37 | 28 | 43 | 0.27 | 0.20 | 0.070 | 8.3 | 34 | 29 | 5.1 | 3.4 | non PAG |
| M97-94A-01 | 2011 | 75 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.82 | 3.2 | 53 | 41 | 52 | 0.17 | 0.17 | < 0.01 | 5.3 | 47 | 48 | 9.9 | 7.7 | non PAG |
| M97-94A-02 | 2011 | 137 | 146 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.60 | 2.3 | 37 | 28 | 38 | 0.22 | 0.13 | 0.090 | 6.7 | 31 | 30 | 5.6 | 4.2 | non PAG |
| M97-95-01 | 2011 | 51 | 59.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.67 | 2.8 | 45 | 35 | 47 | 0.20 | 0.12 | 0.080 | 6.3 | 40 | 39 | 7.3 | 5.5 | non PAG |
| M97-95-02 | 2011 | 102.5 | 111 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.83 | 3.1 | 50 | 35 | 49 | 0.26 | 0.19 | 0.070 | 8.2 | 41 | 42 | 6.0 | 4.3 | non PAG |
| M98-194-01 | 2008 | 70 | 74.63 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.9 | 10 | 1.2 | 5.0 | 82 | 60 | 75 | 0.23 | 0.11 | 0.13 | 7.3 | 68 | 75 | 10 | 8.2 | non PAG |
| M98-194-02 | 2008 | 55.45 | 58.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.9 | | 0.99 | 4.1 | 67 | 52 | 66 | 0.15 | 0.070 | 0.080 | 4.8 | 61 | 62 | 14 | 11 | non PAG |
| M98-194-03 | 2008 | 26.2 | 29.38 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.50 | 1.9 | 31 | 24 | 35 | 0.21 | 0.11 | 0.10 | 6.7 | 28 | 24 | 5.2 | 3.6 | non PAG |
| M98-194-04 | 2009 | 34 | 39 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.18 | 0.090 | 0.090 | 5.7 | | | | | |
| M98-201-01 | 2011 | 16 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.30 | 1.1 | 18 | 14 | 25 | 0.28 | 0.16 | 0.12 | 8.7 | 16 | 9.3 | 2.8 | 1.6 | uncertain |
| M98-201-03 | 2011 | 90 | 98 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.82 | 3.4 | 56 | 43 | 54 | 0.18 | 0.11 | 0.080 | 5.7 | 48 | 50 | 9.4 | 7.5 | non PAG |
| M98-201-04 | 2011 | 166 | 175 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.64 | 2.5 | 41 | 32 | 43 | 0.16 | 0.15 | 0.010 | 4.9 | 38 | 36 | 8.8 | 6.4 | non PAG |
| M98-208-01 | 2011 | 58 | 67 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.51 | 2.0 | 33 | 26 | 38 | 0.28 | 0.11 | 0.17 | 8.8 | 29 | 25 | 4.3 | 2.9 | non PAG |
| M98-209-01 | 2011 | 14 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.50 | 1.9 | 31 | 24 | 32 | 0.17 | 0.14 | 0.020 | 5.2 | 27 | 26 | 6.2 | 4.7 | non PAG |
| M98-257-01 | 2009 | 291 | 296 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.59 | 2.3 | 38 | 29 | 45 | 0.18 | 0.11 | 0.070 | 5.6 | 39 | 32 | 7.9 | 5.2 | non PAG |
| M98-265-01 | 2011 | 67 | 76 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.73 | 2.9 | 47 | 36 | 47 | 0.16 | 0.080 | 0.080 | 5.1 | 42 | 41 | 9.2 | 7.0 | non PAG |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.76 | 3.1 | 51 | 39 | 55 | 0.16 | 0.050 | 0.11 | 5.1 | 50 | 46 | 11 | 7.7 | non PAG |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | | 0.76 | 3.1 | 51 | 39 | 55 | 0.16 | 0.050 | 0.11 | 5.1 | 50 | 46 | 11 | 7.7 | non PAG |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.9 | | 0.94 | 3.9 | 64 | 49 | 62 | 0.10 | 0.040 | 0.060 | 3.2 | 58 | 61 | 19 | 16 | non PAG |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.9 | | 0.94 | 3.9 | 64 | 49 | 62 | 0.10 | 0.040 | 0.060 | 3.2 | 58 | 61 | 19 | 16 | non PAG |
| M98-269-02 | 2008 | 45.5 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 0.73 | 3.3 | 54 | 42 | 56 | 0.065 | 0.060 | < 0.01 | 2.0 | 54 | 52 | 27 | 21 | non PAG |
| M98-269-03 | 2008 | 20 | 24.24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.64 | 2.7 | 44 | 33 | 48 | 0.25 | 0.16 | 0.090 | 7.8 | 40 | 36 | 6.2 | 4.3 | non PAG |
| M98-270-01 | 2011 | 92 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.5 | | 0.59 | 2.3 | 38 | 29 | 40 | 0.21 | 0.18 | 0.030 | 6.6 | 34 | 31 | 6.1 | 4.4 | non PAG |
| M98-297-02 | 2008 | 75.8 | 79.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.64 | 2.8 | 46 | 35 | 48 | 0.050 | < 0.01 | 0.040 | 1.6 | 46 | 44 | 31 | 22 | non PAG |
| M98-297-04 | 2008 | 25.04 | 28.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 0.41 | 1.6 | 26 | 20 | 30 | 0.23 | 0.18 | 0.050 | 7.3 | 23 | 19 | 4.2 | 2.7 | non PAG |
| M98-298-01 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.18 | 0.050 | 0.13 | 5.6 | | | | | |
| M98-313-01 | 2008 | 305 | 315 | Greywacke/Siltstone | Tiriganiaq | UG | 9.1 | | 0.72 | 3.1 | 50 | 39 | 47 | 0.098 | 0.070 | 0.020 | 3.1 | 44 | 47 | 15 | 13 | non PAG |
| M98-313-02 | 2008 | 271.73 | 280 | Greywacke/Siltstone | Tiriganiaq | UG | 9.4 | | 0.36 | 1.3 | 21 | 16 | 26 | 0.17 | 0.12 | 0.050 | 5.3 | 21 | 16 | 4.9 | 3.1 | non PAG |
| M98-316-01_2008 | 2008 | 25 | 29.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 1.0 | 4.4 | 72 | 55 | 68 | 0.39 | 0.22 | 0.17 | 12 | 56 | 60 | 5.5 | 4.5 | non PAG |
| M98-317-01 | 2011 | 61 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 1.1 | 4.3 | 70 | 53 | 67 | 0.32 | 0.090 | 0.23 | 10 | 57 | 60 | 6.7 | 5.3 | non PAG |
| M99-309-02 | 2011 | 36.5 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.69 | 2.6 | 43 | 33 | 45 | 0.14 | 0.020 | 0.12 | 4.5 | 41 | 39 | 10 | 7.4 | non PAG |
| M99-327-01 | 2008 | 195.04 | 205.17 | Greywacke/Siltstone | Tiriganiaq | UG | 9.2 | | 0.87 | 3.5 | 57 | 44 | 56 | 0.31 | 0.22 | 0.090 | 9.7 | 46 | 47 | 5.8 | 4.5 | non PAG |
| M99-336B-01 | 2011 | 16.5 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 1.0 | 4.4 | 71 | 55 | 69 | 0.16 | 0.030 | 0.13 | 5.0 | 64 | 66 | 14 | 11 | non PAG |
| M99-336B-03 | 2011 | 140 | 148 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.79 | 3.1 | 50 | 38 | 51 | 0.19 | 0.070 | 0.12 | 6.1 | 44 | 44 | 8.3 | 6.3 | non PAG |
| M99-339-01 | 2008 | 55.3 | 59.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.85 | 3.3 | 54 | 42 | 104 | 0.19 | 0.10 | 0.090 | 6.0 | 98 | 48 | 17 | 6.9 | non PAG |
| M99-340-03 | 2008 | 26 | 29.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.46 | 1.7 | 28 | 22 | 33 | 0.21 | 0.15 | 0.060 | 6.5 | 27 | 22 | 5.1 | 3.4 | non PAG |
| M99-341-02 | 2008 | 30.25 | 34.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 1.1 | 4.6 | 76 | 58 | 75 | 0.39 | 0.10 | 0.29 | 12 | 63 | 63 | 6.2 | 4.8 | non PAG |

**Appendix B.3: Acid Base Accounting Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M99-341-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.15 | 0.080 | 0.070 | 4.7 | | | | | |
| M99-345-01_2008 | 2008 | 80.6 | 84.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 1.1 | 4.7 | 77 | 59 | 71 | 0.34 | 0.15 | 0.19 | 11 | 61 | 66 | 6.7 | 5.6 | non PAG |
| M99-345-01_2009 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.27 | 0.030 | 0.25 | 8.5 | | | | | |
| M99-346-02_2008 | 2008 | 70.23 | 74.93 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.6 | | 0.49 | 1.9 | 30 | 23 | 32 | 0.23 | 0.15 | 0.080 | 7.3 | 24 | 23 | 4.3 | 3.2 | non PAG |
| M99-347-01 | 2011 | 60 | 68 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 0.78 | 3.1 | 51 | 39 | 49 | 0.20 | 0.14 | 0.070 | 6.3 | 43 | 44 | 7.8 | 6.1 | non PAG |
| M99-347-02 | 2011 | 94 | 102.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.84 | 3.1 | 51 | 39 | 55 | 0.23 | 0.11 | 0.12 | 7.3 | 48 | 44 | 7.6 | 5.4 | non PAG |
| M99-349-01 | 2008 | 65 | 69.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.92 | 3.2 | 53 | 41 | 58 | 0.66 | 0.38 | 0.27 | 21 | 38 | 32 | 2.8 | 2.0 | uncertain |
| M99-349-02 | 2008 | 40.2 | 44.87 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.1 | | 1.4 | 5.5 | 90 | 69 | 86 | 0.11 | 0.030 | 0.080 | 3.5 | 83 | 87 | 24 | 20 | non PAG |
| M99-350-02 | 2008 | 50.07 | 54.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.54 | 2.1 | 34 | 26 | 31 | 0.19 | 0.12 | 0.070 | 5.8 | 25 | 28 | 5.3 | 4.5 | non PAG |
| M99-386-01 | 2009 | 39 | 44 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.27 | 0.11 | 0.16 | 8.5 | | | | | |
| M99-403-01 | 2008 | 75 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.0 | | 3.3 | 16 | 257 | 197 | 242 | 0.55 | 0.18 | 0.38 | 17 | 225 | 239 | 14 | 11 | non PAG |
| M99-403-02 | 2008 | 70 | 74.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 1.0 | 4.2 | 69 | 53 | 64 | 0.21 | 0.040 | 0.17 | 6.4 | 57 | 63 | 9.9 | 8.2 | non PAG |
| M99-403-03 | 2008 | 50.6 | 54.35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | 11 | 0.83 | 3.6 | 58 | 44 | 49 | 0.13 | 0.060 | 0.060 | 3.9 | 45 | 54 | 12 | 11 | non PAG |
| M99-403-04 | 2008 | 25.33 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.70 | 2.8 | 46 | 35 | 49 | 0.23 | 0.10 | 0.13 | 7.3 | 41 | 39 | 6.7 | 4.8 | non PAG |
| M99-403-05 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.20 | 0.070 | 0.13 | 6.3 | | | | | |
| M99-404-01 | 2008 | 100.6 | 104.95 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.87 | 3.8 | 61 | 47 | 60 | 0.095 | 0.040 | 0.060 | 3.0 | 57 | 58 | 20 | 16 | non PAG |
| M99-404-02 | 2008 | 80.28 | 84.23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.73 | 2.9 | 47 | 36 | 49 | 0.29 | 0.070 | 0.22 | 9.1 | 39 | 38 | 5.3 | 4.0 | non PAG |
| M99-404-04 | 2008 | 30.19 | 34.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | 11 | 0.52 | 2.1 | 35 | 27 | 37 | 0.20 | 0.080 | 0.11 | 6.2 | 31 | 29 | 6.0 | 4.3 | non PAG |
| M99-404-06 | 2009 | 23 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | | | | | | | | 0.097 | 0.050 | 0.050 | 3.0 | | | | | |
| M99-409-01 | 2011 | 25 | 33.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.2 | | 0.52 | 1.9 | 30 | 23 | 37 | 0.19 | 0.14 | 0.040 | 5.8 | 31 | 24 | 6.4 | 4.0 | non PAG |
| M99-409-02 | 2011 | 89 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.73 | 2.8 | 45 | 35 | 48 | 0.15 | 0.070 | 0.080 | 4.6 | 44 | 40 | 10 | 7.5 | non PAG |
| M99-409-03 | 2011 | 152 | 161 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.50 | 1.8 | 29 | 22 | 34 | 0.12 | 0.10 | 0.030 | 3.9 | 30 | 25 | 8.9 | 5.8 | non PAG |
| M99-409-04 | 2011 | 216 | 224 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 9.0 | | 1.0 | 4.2 | 69 | 53 | 66 | 0.33 | 0.16 | 0.17 | 10 | 56 | 59 | 6.4 | 5.2 | non PAG |
| M99-410-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.59 | 2.1 | 34 | 26 | 41 | 0.18 | 0.080 | 0.10 | 5.7 | 35 | 28 | 7.2 | 4.6 | non PAG |
| M99-410-02 | 2011 | 52 | 61 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.4 | | 0.59 | 2.0 | 33 | 26 | 40 | 0.18 | 0.15 | 0.040 | 5.8 | 34 | 28 | 7.0 | 4.5 | non PAG |
| M99-436-01 | 2011 | 32.5 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.5 | | 0.60 | 2.3 | 37 | 29 | 41 | 0.18 | 0.10 | 0.080 | 5.7 | 35 | 32 | 7.2 | 5.1 | non PAG |
| M99-436-02 | 2011 | 96.5 | 105 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 9.3 | | 0.57 | 1.9 | 31 | 24 | 39 | 0.16 | 0.070 | 0.090 | 4.8 | 34 | 27 | 8.0 | 5.0 | non PAG |
| ***BULK ARD - TIRIGANIAQ Greywacke/siltstone*** | | | | | | | | | - | | | **6516** | **8854** | | - | | **1048** | **7806** | **5468** | **8.4** | **6.2** | **non PAG** |
| MINIMUM | | | | | | | 8.2 | 10 | 0.14 | 0.55 | 8.9 | 6.8 | 20 | 0.014 | < 0.01 | < 0.01 | 0.31 | 16 | 4.6 | 2.6 | 1.6 | |
| MAXIMUM | | | | | | | 9.6 | 11 | 3.9 | 18 | 301 | 231 | 392 | 0.82 | 0.46 | 0.56 | 26 | 380 | 288 | 130 | 105 | |
| MEDIAN | | | | | | | 9.3 | 11 | 0.71 | 2.8 | 46 | 35 | 47 | 0.19 | 0.11 | 0.080 | 5.7 | 40 | 39 | 7.4 | 5.5 | |
| AVERAGE | | | | | | | 9.1 | 11 | 0.79 | 3.2 | 52 | 40 | 54 | 0.20 | 0.11 | 0.094 | 5.7 | 48 | 46 | 11 | 8.5 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.45 | 2.1 | 35 | 27 | 38 | 0.11 | 0.063 | 0.073 | 3.7 | 38 | 35 | 14 | 11 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.87 | 3.5 | 58 | 44 | 60 | 0.24 | 0.15 | 0.12 | 7.3 | 53 | 51 | 10 | 7.8 | |
| TP-PAD-11-06 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.1 | - | 0.62 | 2.1 | 35 | 35 | 45 | 0.24 | 0.070 | 0.16 | 7.4 | 38 | 27 | 6.1 | 4.7 | non PAG |
| TP-PAD-11-04 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.1 | - | 0.70 | 2.5 | 40 | 40 | 52 | 0.23 | 0.040 | 0.19 | 7.3 | 45 | 33 | 7.1 | 5.6 | non PAG |
| TP-PAD-11-03 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.3 | - | 0.52 | 1.9 | 31 | 31 | 46 | 0.17 | 0.080 | 0.10 | 5.4 | 40 | 26 | 8.5 | 5.8 | non PAG |
| TP-PAD-11-01 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.1 | - | 0.72 | 2.3 | 38 | 38 | 52 | 0.31 | 0.050 | 0.26 | 9.8 | 42 | 28 | 5.3 | 3.9 | non PAG |
| TP-PAD-11-02 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 8.4 | - | 0.72 | 2.0 | 32 | 32 | 53 | 0.22 | 0.060 | 0.16 | 7.0 | 46 | 25 | 7.6 | 4.6 | non PAG |
| TP-PAD-11-05 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.3 | - | 0.69 | 2.6 | 42 | 42 | 59 | 0.18 | 0.060 | 0.13 | 5.7 | 54 | 37 | 10 | 7.4 | non PAG |
| TP-PAD-11-09 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.3 | - | 0.82 | 3.1 | 50 | 50 | 65 | 0.24 | 0.040 | 0.20 | 7.5 | 57 | 43 | 8.7 | 6.7 | non PAG |
| TP-PAD-11-12 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.2 | - | 0.53 | 1.8 | 29 | 29 | 41 | 0.18 | 0.050 | 0.13 | 5.6 | 35 | 23 | 7.3 | 5.1 | non PAG |
| TP-PAD-11-07 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.0 | - | 0.53 | 1.9 | 31 | 31 | 41 | 0.19 | 0.060 | 0.13 | 5.9 | 35 | 25 | 6.9 | 5.3 | non PAG |
| TP-PAD-11-08 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.1 | - | 0.88 | 1.4 | 22 | 22 | 36 | 0.17 | 0.040 | 0.13 | 5.4 | 30 | 17 | 6.6 | 4.1 | non PAG |
| TP-PAD-11-10 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 8.9 | - | 1.1 | 3.9 | 64 | 64 | 74 | 0.19 | 0.050 | 0.14 | 6.0 | 68 | 58 | 12 | 11 | non PAG |
| TP-PAD-11-11 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.3 | - | 0.43 | 1.5 | 25 | 25 | 39 | 0.13 | 0.060 | 0.080 | 4.2 | 35 | 21 | 9.3 | 6.0 | non PAG |
| TP-PAD-11 COMPOSITE | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 9.1 | - | 0.71 | 2.5 | 40 | 40 | 54 | 0.18 | 0.060 | 0.12 | 5.6 | 48 | 35 | 9.6 | 7.1 | non PAG |
| ***BULK ARD - TIRIGANIAQ PAD (Greywacke)*** | | | | | | | | | - | | | **481** | **657** | | - | | **83** | **574** | **398** | **7.9** | **5.8** | **non PAG** |
| MINIMUM | | | | | | | 8.4 | nc | 0.43 | 1.4 | 22 | 22 | 36 | 0.13 | 0.040 | 0.080 | 4.2 | 30 | 17 | 5.3 | 3.9 | |
| MAXIMUM | | | | | | | 9.3 | nc | 1.1 | 3.9 | 64 | 64 | 74 | 0.31 | 0.080 | 0.26 | 9.8 | 68 | 58 | 12 | 11 | |
| MEDIAN | | | | | | | 9.1 | nc | 0.70 | 2.1 | 35 | 35 | 52 | 0.19 | 0.060 | 0.13 | 5.9 | 42 | 27 | 7.6 | 5.6 | |
| AVERAGE | | | | | | | 9.0 | nc | 0.69 | 2.3 | 37 | 37 | 51 | 0.20 | 0.055 | 0.15 | 6.4 | 44 | 31 | 8.1 | 5.9 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.17 | 0.66 | 11 | 11 | 10 | 0.043 | 0.012 | 0.045 | 1.4 | 10 | 10 | 1.9 | 1.7 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.77 | 2.5 | 41 | 41 | 57 | 0.23 | 0.060 | 0.18 | 7.3 | 51 | 36 | 9.5 | 6.9 | |
| M03-496-02 | 2008 | 280.75 | 289.72 | Iron Formation | Tiriganiaq | UG | 8.6 | | 1.5 | 5.3 | 87 | 87 | 86 | 0.34 | 0.12 | 0.22 | 11 | 75 | 77 | 8.1 | 8.2 | non PAG |
| M03-508-02 | 2011 | 93 | 101 | Iron Formation | Tiriganiaq | OP/HW | 8.7 | | 1.6 | 6.6 | 108 | 108 | 80 | 0.16 | 0.030 | 0.14 | 5.1 | 75 | 103 | 16 | 21 | non PAG |
| M04-526-01 | 2008 | 216 | 225.05 | Iron Formation | Tiriganiaq | UG | 8.4 | 11 | 1.8 | 7.4 | 121 | 119 | 115 | 0.78 | 0.29 | 0.49 | 25 | 91 | 96 | 4.7 | 4.9 | non PAG |
| M07-649-01_2008 | 2008 | 280.3 | 289.65 | Iron Formation | Tiriganiaq | UG | 8.3 | | 3.2 | 4.8 | 79 | 78 | 80 | 0.85 | 0.42 | 0.42 | 26 | 53 | 53 | 3.0 | 3.0 | non PAG |
| M96-74-01 | 2011 | 96.5 | 103.5 | Iron Formation | Tiriganiaq | OP/FW | 8.6 | | 0.95 | 3.8 | 63 | 63 | 48 | 0.26 | 0.080 | 0.18 | 8.2 | 40 | 54 | 5.8 | 7.7 | non PAG |
| M99-280-01 | 2008 | 189 | 197.25 | Iron Formation | Tiriganiaq | UG | 8.8 | | 0.97 | 3.8 | 62 | 61 | 49 | 0.21 | 0.11 | 0.10 | 6.7 | 42 | 55 | 7.3 | 9.2 | non PAG |
| ***BULK ARD - TIRIGANIAQ Iron formation*** | | | | | | | | | - | | | **516** | **457** | | - | | **81** | **376** | **434** | **5.6** | **6.3** | **non PAG** |
| MINIMUM | | | | | | | 8.3 | 11 | 0.95 | 3.8 | 62 | 61 | 48 | 0.16 | 0.030 | 0.10 | 5.1 | 40 | 53 | 3.0 | 3.0 | |
| MAXIMUM | | | | | | | 8.8 | 11 | 3.2 | 7.4 | 121 | 119 | 115 | 0.85 | 0.42 | 0.49 | 26 | 91 | 103 | 16 | 21 | |
| MEDIAN | | | | | | | 8.6 | nc | 1.5 | 5.1 | 83 | 82 | 80 | 0.30 | 0.12 | 0.20 | 9.4 | 64 | 66 | 6.6 | 7.9 | |
| AVERAGE | | | | | | | 8.5 | nc | 1.7 | 5.3 | 87 | 86 | 76 | 0.43 | 0.18 | 0.26 | 14 | 63 | 73 | 7.4 | 9.0 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.74 | 1.3 | 22 | 22 | 23 | 0.27 | 0.14 | 0.15 | 8.6 | 19 | 21 | 4.0 | 5.8 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 2.2 | 6.8 | 111 | 111 | 93 | 0.80 | 0.32 | 0.44 | 25 | 79 | 98 | 10.0 | 12 | |

**Appendix B.3: Acid Base Accounting Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| GT08-02-01_2009 | 2009 | 112 | 118 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.7 | | 2.2 | 10 | 168 | 134 | 180 | 0.19 | 0.050 | 0.15 | 6.0 | 174 | 162 | 30 | 22 | non PAG |
| GT08-04-01_2008 | 2008 | 97.41 | 102.29 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.9 | | 2.5 | 12 | 198 | 157 | 202 | 0.36 | 0.17 | 0.19 | 11 | 191 | 186 | 18 | 14 | non PAG |
| GT08-04-01_2009 | 2009 | 112.5 | 118.5 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 1.8 | 8.6 | 141 | 112 | 148 | 0.11 | 0.030 | 0.080 | 3.4 | 145 | 137 | 43 | 33 | non PAG |
| GT08-04-02 | 2008 | 80.38 | 84.3 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.0 | 11 | 3.9 | 19 | 315 | 250 | 289 | 0.049 | 0.020 | 0.030 | 1.5 | 287 | 314 | 189 | 163 | non PAG |
| GT08-04-03 | 2008 | 69.07 | 72.93 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.4 | | 4.1 | 18 | 294 | 234 | 281 | 3.2 | 0.80 | 2.4 | 101 | 180 | 193 | 2.8 | 2.3 | non PAG |
| M00-474-01 | 2008 | 110 | 114.46 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.0 | | 3.1 | 15 | 248 | 198 | 251 | 0.12 | 0.020 | 0.10 | 3.8 | 247 | 245 | 65 | 51 | non PAG |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | 8.7 | 12 | 3.4 | 16 | 265 | 217 | 252 | 0.25 | 0.070 | 0.19 | 7.9 | 244 | 257 | 32 | 27 | non PAG |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | 8.7 | | 2.3 | 11 | 172 | 137 | 182 | 0.099 | 0.040 | 0.060 | 3.1 | 179 | 169 | 59 | 44 | non PAG |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | 8.7 | | 2.3 | 11 | 172 | 137 | 182 | 0.099 | 0.040 | 0.060 | 3.1 | 179 | 169 | 59 | 44 | non PAG |
| M05-561-02_2009 | 2009 | 101 | 106 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 3.4 | 15 | 247 | 196 | 254 | 0.074 | 0.030 | 0.050 | 2.3 | 252 | 245 | 110 | 85 | non PAG |
| M05-561-03 | 2009 | 178 | 183 | Mafic Volcanic | Tiriganiaq | UG | 8.6 | | 2.8 | 13 | 209 | 166 | 201 | 0.12 | 0.050 | 0.070 | 3.8 | 197 | 205 | 53 | 44 | non PAG |
| M05-564-01 | 2009 | 366 | 372 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 2.3 | 11 | 183 | 146 | 187 | 0.064 | 0.010 | 0.050 | 2.0 | 185 | 181 | 94 | 73 | non PAG |
| M06-591-03 | 2011 | 70 | 78.5 | Mafic Volcanic | Tiriganiaq | OP/HW | 8.8 | | 3.1 | 15 | 242 | 192 | 232 | 0.41 | 0.31 | 0.10 | 13 | 219 | 229 | 18 | 15 | non PAG |
| M06-623-02 | 2011 | 81 | 87 | Mafic Volcanic | Tiriganiaq | OP/HW | 8.9 | | 3.4 | 17 | 271 | 216 | 253 | 0.15 | 0.10 | 0.050 | 4.7 | 248 | 267 | 54 | 46 | non PAG |
| M07-678-01 | 2008 | 47.37 | 51.82 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.8 | | 3.5 | 17 | 270 | 215 | 245 | 0.10 | 0.050 | 0.050 | 3.2 | 242 | 267 | 78 | 68 | non PAG |
| M08-783-02 | 2011 | 163 | 172 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.1 | | 4.2 | 20 | 327 | 260 | 293 | 0.23 | 0.080 | 0.15 | 7.3 | 286 | 320 | 40 | 36 | non PAG |
| M95-25-04 | 2011 | 69 | 77.5 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.0 | | 3.8 | 19 | 302 | 241 | 274 | 0.11 | 0.050 | 0.060 | 3.5 | 271 | 299 | 79 | 69 | non PAG |
| M96-03-03 | 2011 | 87 | 96 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.0 | | 2.9 | 14 | 224 | 178 | 218 | 0.23 | 0.090 | 0.14 | 7.2 | 211 | 217 | 30 | 25 | non PAG |
| M97-110-01 | 2009 | 262 | 268 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 3.1 | 14 | 226 | 179 | 230 | 0.50 | 0.27 | 0.24 | 16 | 214 | 210 | 15 | 11 | non PAG |
| M97-130-01 | 2009 | 242 | 246 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 2.7 | 13 | 206 | 164 | 219 | 0.15 | 0.090 | 0.070 | 4.8 | 214 | 201 | 46 | 34 | non PAG |
| M97-130-02 | 2009 | 280 | 288 | Mafic Volcanic | Tiriganiaq | UG | 8.8 | | 3.6 | 16 | 253 | 202 | 260 | 0.51 | 0.29 | 0.22 | 16 | 244 | 237 | 16 | 13 | non PAG |
| M97-133-01 | 2009 | 255 | 261 | Mafic Volcanic | Tiriganiaq | UG | 8.8 | | 3.2 | 15 | 237 | 189 | 248 | 0.19 | 0.090 | 0.090 | 5.8 | 242 | 231 | 43 | 32 | non PAG |
| M97-134-01 | 2009 | 305 | 309.5 | Mafic Volcanic | Tiriganiaq | UG | 8.7 | | 2.9 | 14 | 226 | 179 | 231 | 0.18 | 0.090 | 0.090 | 5.6 | 225 | 220 | 42 | 32 | non PAG |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | 9.0 | | 3.6 | 16 | 263 | 209 | 239 | 0.37 | 0.15 | 0.22 | 12 | 227 | 252 | 21 | 18 | non PAG |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | 9.0 | | 3.6 | 16 | 263 | 209 | 239 | 0.37 | 0.15 | 0.22 | 12 | 227 | 252 | 21 | 18 | non PAG |
| M97-136-01 | 2009 | 215 | 220 | Mafic Volcanic | Tiriganiaq | UG | 8.8 | | 3.5 | 15 | 250 | 199 | 262 | 0.34 | 0.16 | 0.18 | 11 | 251 | 239 | 25 | 19 | non PAG |
| M97-137-01 | 2009 | 237 | 242 | Mafic Volcanic | Tiriganiaq | UG | 8.8 | | 3.3 | 15 | 247 | 196 | 258 | 0.11 | 0.060 | 0.040 | 3.3 | 255 | 244 | 79 | 60 | non PAG |
| M97-138-01 | 2009 | 221.5 | 227.5 | Mafic Volcanic | Tiriganiaq | UG | 8.7 | | 2.7 | 13 | 212 | 169 | 216 | 0.098 | 0.050 | 0.050 | 3.1 | 213 | 209 | 71 | 55 | non PAG |
| M97-139-01 | 2009 | 142 | 149 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 4.7 | 22 | 351 | 251 | 321 | 0.44 | 0.16 | 0.28 | 14 | 307 | 338 | 23 | 18 | non PAG |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | 8.8 | 11 | 3.4 | 16 | 258 | 185 | 244 | 0.32 | 0.080 | 0.25 | 10 | 234 | 248 | 24 | 18 | non PAG |
| M97-143-01 | 2009 | 564 | 570 | Mafic Volcanic | Tiriganiaq | UG | 8.7 | | 2.8 | 13 | 211 | 168 | 218 | 0.076 | 0.040 | 0.030 | 2.4 | 216 | 208 | 92 | 71 | non PAG |
| M97-92-01 | 2009 | 209 | 215 | Mafic Volcanic | Tiriganiaq | UG | 8.8 | | 2.8 | 14 | 222 | 177 | 224 | 0.13 | 0.050 | 0.080 | 3.9 | 220 | 218 | 57 | 45 | non PAG |
| M97-93-01 | 2009 | 428.5 | 434.5 | Mafic Volcanic | Tiriganiaq | UG | 8.6 | | 2.6 | 12 | 196 | 156 | 195 | 0.16 | 0.050 | 0.11 | 4.8 | 190 | 191 | 40 | 32 | non PAG |
| M97-95-03 | 2011 | 213 | 222 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.8 | | 3.0 | 14 | 235 | 187 | 225 | 0.23 | 0.080 | 0.15 | 7.1 | 218 | 228 | 32 | 26 | non PAG |
| M98-297-01 | 2008 | 111 | 114 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.8 | | 3.9 | 19 | 309 | 246 | 360 | 0.46 | 0.19 | 0.27 | 14 | 346 | 295 | 25 | 17 | non PAG |
| M98-316-01_2009 | 2009 | 93 | 99 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.7 | | 1.9 | 9.4 | 154 | 123 | 160 | 0.23 | 0.090 | 0.13 | 7.1 | 153 | 147 | 23 | 17 | non PAG |
| M98-318-01 | 2009 | 100 | 105 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 3.4 | 15 | 247 | 196 | 261 | 0.39 | 0.18 | 0.21 | 12 | 249 | 235 | 21 | 16 | non PAG |
| M99-336B-04 | 2011 | 249 | 258 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.0 | | 3.0 | 14 | 226 | 179 | 226 | 0.35 | 0.070 | 0.28 | 11 | 215 | 215 | 21 | 16 | non PAG |
| M99-340-01 | 2008 | 103 | 107.78 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.0 | | 3.5 | 16 | 262 | 208 | 198 | 0.33 | 0.19 | 0.14 | 10 | 188 | 251 | 19 | 20 | non PAG |
| M99-341-01 | 2008 | 80.6 | 84.4 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.0 | 11 | 4.0 | 18 | 297 | 229 | 282 | 0.55 | 0.36 | 0.18 | 17 | 265 | 280 | 17 | 13 | non PAG |
| M99-345-01 | 2011 | 109 | 117 | Mafic Volcanic | Tiriganiaq | OP/HW | 9.2 | | 3.4 | 16 | 262 | 208 | 231 | 0.25 | 0.070 | 0.18 | 7.7 | 223 | 254 | 30 | 27 | non PAG |
| M99-348-01 | 2009 | 193 | 198 | Mafic Volcanic | Tiriganiaq | UG | 8.9 | | 3.2 | 14 | 234 | 186 | 244 | 0.17 | 0.11 | 0.060 | 5.2 | 239 | 229 | 47 | 36 | non PAG |
| M99-409-05 | 2011 | 224 | 234 | Mafic Volcanic | Tiriganiaq | OP/FW | 9.1 | | 2.4 | 11 | 180 | 173 | 174 | 0.28 | 0.18 | 0.11 | 8.9 | 165 | 171 | 20 | 19 | non PAG |
| ***BULK ARD - TIRIGANIAQ Mafic volcanic*** | | | | | | | | | - | | | **8152** | **10089** | | - | | **412** | **9677** | **7740** | **25** | **20** | **non PAG** |
| MINIMUM | | | | | | | 8.4 | 11 | 1.8 | 8.6 | 141 | 112 | 148 | 0.049 | 0.010 | 0.030 | 1.5 | 145 | 137 | 2.8 | 2.3 | |
| MAXIMUM | | | | | | | 9.2 | 12 | 4.7 | 22 | 351 | 260 | 360 | 3.2 | 0.80 | 2.4 | 101 | 346 | 338 | 189 | 163 | |
| MEDIAN | | | | | | | 8.9 | 11 | 3.2 | 15 | 242 | 189 | 232 | 0.23 | 0.080 | 0.11 | 7.1 | 223 | 229 | 32 | 27 | |
| AVERAGE | | | | | | | 8.8 | 11 | 3.1 | 15 | 239 | 190 | 235 | 0.31 | 0.12 | 0.18 | 9.6 | 225 | 229 | 45 | 36 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.62 | 2.8 | 47 | 35 | 41 | 0.47 | 0.13 | 0.35 | 15 | 40 | 45 | 33 | 28 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 3.5 | 16 | 263 | 209 | 258 | 0.36 | 0.16 | 0.19 | 11 | 248 | 252 | 59 | 45 | |
| M06-591-02 | 2011 | 40 | 50 | Ore/GW | Tiriganiaq | OP/HW | 9.0 | | 1.1 | 3.9 | 63 | 63 | 62 | 0.15 | 0.080 | 0.070 | 4.5 | 58 | 59 | 14 | 14 | non PAG |
| M06-629-01 | 2011 | 107 | 115 | Ore/GW | Tiriganiaq | OP/HW | 8.8 | | 2.3 | 10 | 163 | 163 | 143 | 1.1 | 0.33 | 0.75 | 34 | 109 | 130 | 4.2 | 4.8 | non PAG |
| M99-417-01 | 2011 | 124 | 136 | Ore/GW | Tiriganiaq | OP/HW | 9.1 | | 1.4 | 4.9 | 80 | 80 | 80 | 0.49 | 0.20 | 0.30 | 15 | 65 | 65 | 5.2 | 5.2 | non PAG |
| ***BULK ARD - TIRIGANIAQ ORE (Greywacke)*** | | | | | | | | | - | | | **307** | **285** | | - | | **54** | **232** | **253** | **5.3** | **5.7** | **non PAG** |
| MINIMUM | | | | | | | 8.8 | nc | 1.1 | 3.9 | 63 | 63 | 62 | 0.15 | 0.080 | 0.070 | 4.5 | 58 | 59 | 4.2 | 4.8 | |
| MAXIMUM | | | | | | | 9.1 | nc | 2.3 | 10 | 163 | 163 | 143 | 1.1 | 0.33 | 0.75 | 34 | 109 | 130 | 14 | 14 | |
| MEDIAN | | | | | | | 9.0 | nc | 1.4 | 4.9 | 80 | 80 | 80 | 0.49 | 0.20 | 0.30 | 15 | 65 | 65 | 5.2 | 5.2 | |
| AVERAGE | | | | | | | 8.9 | nc | 1.6 | 6.3 | 102 | 102 | 95 | 0.57 | 0.20 | 0.37 | 18 | 77 | 84 | 7.7 | 8.0 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.52 | 2.7 | 44 | 44 | 35 | 0.39 | 0.10 | 0.28 | 12 | 23 | 32 | 4.3 | 4.2 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 2.3 | 10 | 163 | 163 | 143 | 1.1 | 0.33 | 0.75 | 34 | 109 | 130 | 14 | 14 | |

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M00-473-01 | 2011 | 134 | 142 | Ore/MV | Tiriganiaq | OP/FW | 8.8 | | 4.2 | 19 | 306 | 306 | 273 | 0.98 | 0.94 | 0.040 | 31 | 242 | 275 | 8.9 | 10 | non PAG |
| M00-483-01 | 2011 | 147 | 156 | Ore/MV | Tiriganiaq | OP/FW | 9.0 | | 4.6 | 20 | 329 | 329 | 286 | 0.48 | 0.27 | 0.21 | 15 | 271 | 314 | 19 | 22 | non PAG |
| M00-490-01 | 2011 | 181 | 189 | Ore/MV | Tiriganiaq | OP/FW | 9.0 | | 4.1 | 18 | 289 | 289 | 238 | 0.74 | 0.21 | 0.53 | 23 | 215 | 266 | 10 | 13 | non PAG |
| M95-25-03 | 2011 | 51.5 | 60 | Ore/MV | Tiriganiaq | OP/HW | 9.0 | | 1.7 | 7.8 | 127 | 127 | 106 | 1.2 | 0.37 | 0.81 | 37 | 69 | 90 | 2.9 | 3.5 | non PAG |
| ***BULK ARD - TRIIGANIAQ ORE (Mafic volcanic)*** | | | | | | | | | - | | | **1051** | **903** | | - | | **105** | **798** | **946** | **8.6** | **10** | **non PAG** |
| MINIMUM | | | | | | | 8.8 | nc | 1.7 | 7.8 | 127 | 127 | 106 | 0.48 | 0.21 | 0.040 | 15 | 69 | 90 | 2.9 | 3.5 | |
| MAXIMUM | | | | | | | 9.0 | nc | 4.6 | 20 | 329 | 329 | 286 | 1.2 | 0.94 | 0.81 | 37 | 271 | 314 | 19 | 22 | |
| MEDIAN | | | | | | | 9.0 | nc | 4.1 | 18 | 297 | 297 | 256 | 0.86 | 0.32 | 0.37 | 27 | 229 | 271 | 9.6 | 11 | |
| AVERAGE | | | | | | | 8.9 | nc | 3.6 | 16 | 263 | 263 | 226 | 0.84 | 0.45 | 0.40 | 26 | 200 | 236 | 10 | 12 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 1.1 | 4.9 | 80 | 80 | 71 | 0.26 | 0.29 | 0.30 | 8.1 | 78 | 86 | 5.8 | 6.7 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 4.5 | 20 | 323 | 323 | 283 | 1.1 | 0.80 | 0.74 | 35 | 264 | 304 | 17 | 20 | |
| LODE 1000 ORE | 2011 | - | - | LODE 1000 Ore | Tiriganiaq | PAD | 8.6 | - | 2.2 | 7.7 | 127 | 127 | 121 | 1.1 | 0.040 | 1.1 | 34 | 87 | 92 | 3.6 | 3.7 | non PAG |
| LODE 1100 ORE | 2011 | - | - | LODE 1100 Ore | Tiriganiaq | PAD | 8.8 | - | 1.4 | 3.9 | 64 | 64 | 72 | 1.7 | 0.030 | 1.7 | 54 | 18 | 9.8 | 1.3 | 1.2 | uncertain |
| | | | | | | | | | | | | | | | | | | | | | | |
| M04-519-01 | 2011 | 40 | 48 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 4.2 | 19 | 312 | 285 | 279 | 0.24 | 0.080 | 0.16 | 7.3 | 272 | 305 | 38 | 39 | non PAG |
| M04-519-02 | 2011 | 70 | 79 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 3.6 | 17 | 276 | 252 | 242 | 0.12 | 0.030 | 0.090 | 3.8 | 238 | 272 | 63 | 66 | non PAG |
| M04-519-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 4.4 | 20 | 330 | 302 | 302 | 0.20 | 0.040 | 0.17 | 6.3 | 296 | 324 | 48 | 48 | non PAG |
| M04-519-04 | 2011 | 127.5 | 136.5 | Mafic Volcanic | Wesmeg | OP/HW | 8.8 | | 2.4 | 11 | 177 | 161 | 170 | 0.24 | 0.060 | 0.18 | 7.4 | 163 | 169 | 23 | 22 | non PAG |
| M10-981-01 | 2011 | 17 | 27 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 2.2 | 10.0 | 163 | 149 | 162 | 0.11 | 0.060 | 0.050 | 3.5 | 158 | 159 | 46 | 42 | non PAG |
| M10-981-02 | 2011 | 50 | 59 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 2.4 | 11 | 183 | 167 | 170 | 0.25 | 0.070 | 0.17 | 7.8 | 162 | 175 | 22 | 22 | non PAG |
| M10-981-03 | 2011 | 84.5 | 93 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 2.4 | 11 | 180 | 162 | 168 | 0.18 | 0.070 | 0.10 | 5.5 | 162 | 174 | 30 | 29 | non PAG |
| M10-981-04 | 2011 | 111 | 120 | Mafic Volcanic | Wesmeg | OP/FW | 9.1 | | 2.2 | 11 | 175 | 160 | 173 | 0.12 | 0.050 | 0.070 | 3.7 | 169 | 171 | 47 | 43 | non PAG |
| M10-985-01 | 2011 | 23 | 32 | Mafic Volcanic | Wesmeg | OP/HW | 9.3 | | 0.58 | 2.2 | 36 | 30 | 41 | 0.18 | 0.14 | 0.050 | 5.8 | 36 | 30 | 7.2 | 5.1 | non PAG |
| M10-985-02 | 2011 | 57 | 65 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 0.78 | 3.0 | 49 | 45 | 55 | 0.095 | 0.040 | 0.060 | 3.0 | 52 | 46 | 18 | 15 | non PAG |
| M10-987-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Wesmeg | OP/HW | 8.8 | | 3.7 | 18 | 289 | 264 | 253 | 0.14 | 0.050 | 0.090 | 4.3 | 249 | 285 | 59 | 61 | non PAG |
| M10-987-02 | 2011 | 84 | 93 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 3.2 | 15 | 242 | 221 | 212 | 0.20 | 0.060 | 0.14 | 6.2 | 206 | 236 | 34 | 36 | non PAG |
| M10-987-04 | 2011 | 215 | 223 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 1.9 | 8.8 | 144 | 139 | 138 | 0.14 | 0.030 | 0.11 | 4.4 | 134 | 139 | 31 | 32 | non PAG |
| M10-988-01 | 2011 | 22 | 30 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 2.0 | 9.7 | 158 | 145 | 152 | 0.10 | 0.070 | 0.030 | 3.2 | 149 | 155 | 48 | 45 | non PAG |
| M10-988-02 | 2011 | 60 | 68 | Mafic Volcanic | Wesmeg | OP/HW | 8.8 | | 2.5 | 12 | 199 | 182 | 190 | 0.063 | 0.020 | 0.050 | 2.0 | 188 | 197 | 97 | 93 | non PAG |
| M10-988-03 | 2011 | 159.5 | 168 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 1.0 | 4.8 | 78 | 71 | 78 | 0.076 | 0.080 | < 0.01 | 2.4 | 76 | 75 | 33 | 30 | non PAG |
| M10-992-01 | 2011 | 13.5 | 22 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 1.6 | 7.8 | 127 | 116 | 126 | 0.11 | 0.040 | 0.070 | 3.4 | 123 | 124 | 37 | 34 | non PAG |
| M10-992-02 | 2011 | 43.5 | 52.5 | Mafic Volcanic | Wesmeg | OP/FW | 9.1 | | 2.5 | 12 | 191 | 175 | 180 | 0.10 | 0.070 | 0.030 | 3.2 | 177 | 188 | 57 | 55 | non PAG |
| M10-992-03 | 2011 | 83 | 92 | Mafic Volcanic | Wesmeg | OP/FW | 9.2 | | 3.3 | 16 | 265 | 242 | 222 | 0.031 | 0.030 | < 0.01 | 0.97 | 221 | 264 | 229 | 250 | non PAG |
| M10-992-05 | 2011 | 135 | 144 | Mafic Volcanic | Wesmeg | OP/FW | 9.1 | | 2.5 | 12 | 191 | 175 | 176 | 0.12 | 0.040 | 0.080 | 3.6 | 172 | 188 | 49 | 48 | non PAG |
| M10-994-01 | 2011 | 28 | 36.5 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 2.6 | 13 | 208 | 190 | 193 | 0.063 | 0.030 | 0.030 | 2.0 | 191 | 206 | 98 | 96 | non PAG |
| M10-994-02 | 2011 | 58 | 67 | Mafic Volcanic | Wesmeg | OP/HW | 9.4 | | 2.3 | 11 | 175 | 160 | 168 | 0.27 | 0.070 | 0.20 | 8.4 | 160 | 167 | 20 | 19 | non PAG |
| M10-994-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 3.0 | 14 | 222 | 203 | 204 | 0.094 | 0.050 | 0.050 | 2.9 | 201 | 219 | 69 | 69 | non PAG |
| M10-994-04 | 2011 | 131.5 | 140 | Mafic Volcanic | Wesmeg | OP/FW | 9.3 | | 0.70 | 3.1 | 51 | 51 | 62 | 0.076 | 0.040 | 0.040 | 2.4 | 60 | 49 | 26 | 22 | non PAG |
| M10-998-01 | 2011 | 10 | 19 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 1.3 | 6.0 | 99 | 90 | 102 | 0.11 | 0.030 | 0.080 | 3.6 | 98 | 95 | 29 | 25 | non PAG |
| M10-998-02 | 2011 | 36 | 45 | Mafic Volcanic | Wesmeg | OP/HW | 9.4 | | 1.7 | 8.3 | 135 | 123 | 140 | 0.095 | 0.040 | 0.060 | 3.0 | 137 | 132 | 47 | 42 | non PAG |
| M10-998-03 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/HW | 9.2 | | 2.4 | 12 | 190 | 173 | 171 | 0.091 | 0.040 | 0.050 | 2.8 | 168 | 187 | 60 | 61 | non PAG |
| M10-998-04 | 2011 | 97 | 106 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 2.6 | 12 | 199 | 182 | 183 | 0.083 | 0.040 | 0.050 | 2.6 | 180 | 197 | 71 | 70 | non PAG |
| M10-998-05 | 2011 | 191 | 200 | Mafic Volcanic | Wesmeg | OP/FW | 9.0 | | 4.6 | 22 | 361 | 330 | 314 | 0.015 | 0.010 | < 0.01 | 0.47 | 314 | 361 | 670 | 704 | non PAG |
| M11-1042-01 | 2011 | 16 | 24.5 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 3.1 | 15 | 250 | 228 | 214 | 0.068 | < 0.01 | 0.060 | 2.1 | 212 | 248 | 101 | 107 | non PAG |
| M11-1042-02 | 2011 | 59 | 68 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 2.6 | 11 | 181 | 166 | 162 | 0.12 | 0.020 | 0.10 | 3.8 | 158 | 178 | 42 | 43 | non PAG |
| M11-1042-03 | 2011 | 99 | 107 | Mafic Volcanic | Wesmeg | OP/HW | 9.3 | | 3.0 | 13 | 208 | 190 | 190 | 0.081 | 0.030 | 0.050 | 2.5 | 187 | 205 | 75 | 75 | non PAG |
| M11-1051-01 | 2011 | 51 | 59 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 3.7 | 17 | 280 | 255 | 244 | 0.061 | 0.010 | 0.050 | 1.9 | 242 | 278 | 128 | 134 | non PAG |
| M11-1051-02 | 2011 | 89 | 99.5 | Mafic Volcanic | Wesmeg | OP/HW | 9.2 | | 2.6 | 9.6 | 156 | 143 | 154 | 0.061 | 0.040 | 0.020 | 1.9 | 152 | 154 | 81 | 75 | non PAG |
| M11-1099-01 | 2011 | 17 | 25 | Mafic Volcanic | Wesmeg | OP/HW | 8.6 | | 2.7 | 12 | 193 | 176 | 177 | 0.41 | 0.070 | 0.34 | 13 | 164 | 180 | 14 | 14 | non PAG |
| M11-1099-02 | 2011 | 38 | 46 | Mafic Volcanic | Wesmeg | OP/HW | 9.2 | | 1.8 | 8.4 | 137 | 125 | 142 | 0.098 | 0.050 | 0.050 | 3.1 | 139 | 134 | 46 | 41 | non PAG |
| M11-1099-03 | 2011 | 72 | 80 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 1.9 | 8.5 | 139 | 127 | 146 | 0.24 | 0.10 | 0.14 | 7.6 | 138 | 131 | 19 | 17 | non PAG |
| M95-11-01 | 2011 | 40 | 47 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 2.9 | 14 | 227 | 207 | 214 | 0.20 | 0.080 | 0.12 | 6.3 | 208 | 221 | 34 | 33 | non PAG |
| M95-12-01 | 2011 | 41 | 50 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 2.2 | 11 | 173 | 158 | 174 | 0.078 | 0.020 | 0.060 | 2.4 | 172 | 171 | 71 | 65 | non PAG |
| M95-22-01 | 2011 | 11 | 20 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 3.2 | 15 | 248 | 227 | 226 | 0.081 | 0.040 | 0.040 | 2.5 | 223 | 246 | 89 | 90 | non PAG |
| M95-22-02 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/FW | 9.1 | | 2.0 | 9.4 | 154 | 140 | 158 | 0.21 | 0.040 | 0.17 | 6.7 | 151 | 147 | 24 | 21 | non PAG |
| M96-50-01 | 2011 | 30 | 40 | Mafic Volcanic | Wesmeg | OP/HW | 9.3 | | 1.3 | 6.0 | 97 | 89 | 101 | 0.084 | 0.070 | 0.020 | 2.6 | 98 | 95 | 38 | 34 | non PAG |
| M96-51-02 | 2011 | 40 | 50 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 2.8 | 12 | 203 | 185 | 182 | 0.26 | 0.090 | 0.17 | 8.1 | 174 | 195 | 22 | 23 | non PAG |
| M96-51-03 | 2011 | 73 | 82 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 2.9 | 14 | 221 | 202 | 202 | 0.11 | 0.040 | 0.070 | 3.3 | 199 | 217 | 62 | 61 | non PAG |
| M97-111-01 | 2011 | 21 | 30 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 2.9 | 14 | 227 | 207 | 212 | 0.14 | 0.11 | 0.030 | 4.3 | 208 | 223 | 49 | 48 | non PAG |
| M97-111-02 | 2011 | 95 | 104 | Mafic Volcanic | Wesmeg | OP/FW | 9.0 | | 3.2 | 15 | 247 | 225 | 222 | 0.51 | 0.040 | 0.47 | 16 | 206 | 231 | 14 | 14 | non PAG |

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M97-111-03 | 2011 | 126 | 133 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 2.4 | 11 | 186 | 170 | 174 | 0.095 | 0.020 | 0.070 | 3.0 | 171 | 183 | 59 | 57 | non PAG |
| M97-111-04 | 2011 | 186.5 | 195 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 1.8 | 8.7 | 142 | 129 | 141 | 0.054 | 0.030 | 0.020 | 1.7 | 139 | 140 | 84 | 77 | non PAG |
| M97-176-01 | 2011 | 19 | 27.5 | Mafic Volcanic | Wesmeg | OP/HW | 8.8 | | 2.9 | 14 | 226 | 206 | 210 | 0.11 | 0.050 | 0.060 | 3.4 | 207 | 222 | 61 | 60 | non PAG |
| M97-176-02 | 2011 | 112 | 121 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 1.8 | 8.7 | 142 | 129 | 142 | 0.070 | 0.030 | 0.040 | 2.2 | 140 | 140 | 65 | 59 | non PAG |
| M97-176-03 | 2011 | 196 | 205.5 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | | 2.5 | 12 | 191 | 175 | 194 | 0.13 | 0.050 | 0.090 | 4.2 | 190 | 187 | 47 | 42 | non PAG |
| M98-222-01 | 2011 | 16 | 22 | Mafic Volcanic | Wesmeg | OP/HW | 9.0 | | 3.1 | 14 | 232 | 202 | 155 | 0.059 | 0.030 | 0.030 | 1.8 | 153 | 230 | 84 | 110 | non PAG |
| M98-222-02 | 2011 | 56 | 65 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 2.5 | 11 | 186 | 170 | 189 | 0.10 | 0.030 | 0.080 | 3.3 | 186 | 183 | 58 | 52 | non PAG |
| M98-222-03 | 2011 | 104 | 113.5 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 2.3 | 11 | 175 | 160 | 165 | 0.17 | 0.050 | 0.11 | 5.2 | 160 | 170 | 32 | 31 | non PAG |
| M98-223-01 | 2011 | 20.5 | 29 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | | 2.3 | 11 | 175 | 160 | 177 | 0.063 | 0.010 | 0.050 | 2.0 | 175 | 173 | 90 | 81 | non PAG |
| W94-48-01 | 2011 | 15 | 20 | Mafic Volcanic | Wesmeg | OP/HW | 9.1 | | 0.77 | 3.6 | 58 | 53 | 65 | 0.097 | 0.030 | 0.070 | 3.0 | 62 | 55 | 21 | 18 | non PAG |
| ***BULK ARD - WESMEG Mafic volcanic*** | | | | | | | | | - | | | **9548** | **9758** | | - | | **233** | **9525** | **9314** | **42** | **41** | **non PAG** |
| MINIMUM | | | | | | | 8.6 | nc | 0.58 | 2.2 | 36 | 30 | 41 | 0.015 | < 0.01 | <0.01 | 0.47 | 36 | 30 | 7.2 | 5.1 | |
| MAXIMUM | | | | | | | 9.4 | nc | 4.6 | 22 | 361 | 330 | 314 | 0.51 | 0.14 | 0.47 | 16 | 314 | 361 | 670 | 704 | |
| MEDIAN | | | | | | | 9.0 | nc | 2.5 | 11 | 186 | 170 | 174 | 0.10 | 0.040 | 0.060 | 3.3 | 170 | 182 | 47 | 44 | |
| AVERAGE | | | | | | | 9.0 | nc | 2.5 | 11 | 187 | 170 | 174 | 0.13 | 0.048 | 0.087 | 4.2 | 170 | 183 | 65 | 64 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.87 | 4.1 | 67 | 61 | 55 | 0.088 | 0.026 | 0.079 | 2.7 | 54 | 67 | 89 | 94 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 3.0 | 14 | 227 | 205 | 209 | 0.17 | 0.068 | 0.11 | 5.4 | 205 | 222 | 70 | 68 | |
| M10-987-03 | 2011 | 179 | 188 | Ultramafic | Wesmeg | OP/FW | 9.2 | | 3.7 | 9.9 | 162 | 156 | 137 | 0.053 | 0.040 | 0.010 | 1.7 | 135 | 161 | 83 | 94 | non PAG |
| M10-992-04 | 2011 | 107 | 113 | Ultramafic | Wesmeg | OP/FW | 9.0 | | 2.8 | 14 | 224 | 214 | 209 | 0.073 | 0.020 | 0.050 | 2.3 | 207 | 222 | 92 | 94 | non PAG |
| M10-994-05 | 2011 | 15 | 24 | Ultramafic | Wesmeg | OP/HW | 9.1 | | 3.4 | 17 | 273 | 261 | 238 | 0.066 | 0.030 | 0.040 | 2.1 | 236 | 271 | 115 | 127 | non PAG |
| ***BULK ARD - WESMEG Ultramafic*** | | | | | | | | | - | | | **631** | **584** | | - | | **6.0** | **578** | **625** | **97** | **105** | **non PAG** |
| MINIMUM | | | | | | | 9.0 | nc | 2.8 | 9.9 | 162 | 156 | 137 | 0.053 | 0.020 | 0.010 | 1.7 | 135 | 161 | 83 | 94 | |
| MAXIMUM | | | | | | | 9.2 | nc | 3.7 | 17 | 273 | 261 | 238 | 0.073 | 0.040 | 0.050 | 2.3 | 236 | 271 | 115 | 127 | |
| MEDIAN | | | | | | | 9.1 | nc | 3.4 | 14 | 224 | 214 | 209 | 0.066 | 0.030 | 0.040 | 2.1 | 207 | 222 | 92 | 94 | |
| AVERAGE | | | | | | | 9.1 | nc | 3.3 | 13 | 220 | 210 | 195 | 0.064 | 0.030 | 0.033 | 2.0 | 193 | 218 | 97 | 105 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.37 | 2.8 | 45 | 43 | 42 | 0.0083 | 0.0082 | 0.017 | 0.26 | 42 | 45 | 14 | 15 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 3.7 | 17 | 273 | 261 | 238 | 0.073 | 0.040 | 0.050 | 2.3 | 236 | 271 | 115 | 127 | |
| M96-51-01 | 2011 | 10 | 20 | Ore/MV | Wesmeg | OP/HW | 9.1 | | 4.4 | 21 | 340 | 340 | 297 | 0.13 | 0.070 | 0.060 | 4.2 | 293 | 336 | 71 | 82 | non PAG |
| M98-223-02 | 2011 | 80 | 90 | Ore/MV | Wesmeg | OP/HW | 8.9 | | 3.6 | 16 | 268 | 268 | 231 | 0.27 | 0.070 | 0.20 | 8.3 | 223 | 260 | 28 | 32 | non PAG |
| M98-223-03 | 2011 | 175 | 180 | Ore/MV | Wesmeg | OP/FW | 8.8 | | 2.6 | 11 | 180 | 180 | 168 | 0.45 | 0.040 | 0.40 | 14 | 154 | 166 | 12 | 13 | non PAG |
| ***BULK ARD - WESMEG ORE (Mafic volcanic)*** | | | | | | | | | - | | | **788** | **696** | | - | | **26** | **670** | **761** | **26** | **30** | **non PAG** |
| MINIMUM | | | | | | | 8.8 | nc | 2.6 | 11 | 180 | 180 | 168 | 0.13 | 0.040 | 0.060 | 4.2 | 154 | 166 | 12 | 13 | |
| MAXIMUM | | | | | | | 9.1 | nc | 4.4 | 21 | 340 | 340 | 297 | 0.45 | 0.070 | 0.40 | 14 | 293 | 336 | 71 | 82 | |
| MEDIAN | | | | | | | 8.9 | nc | 3.6 | 16 | 268 | 268 | 231 | 0.27 | 0.070 | 0.20 | 8.3 | 223 | 260 | 28 | 32 | |
| AVERAGE | | | | | | | 8.9 | nc | 3.6 | 16 | 263 | 263 | 232 | 0.28 | 0.060 | 0.22 | 8.8 | 223 | 254 | 37 | 42 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.74 | 4.0 | 66 | 66 | 53 | 0.13 | 0.014 | 0.14 | 4.0 | 57 | 70 | 25 | 29 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 4.4 | 21 | 340 | 340 | 297 | 0.45 | 0.070 | 0.40 | 14 | 293 | 336 | 71 | 82 | |
| M10-968-01 | 2011 | 29 | 37 | Greywacke/Siltstone | Wolf | OP/HW | 9.4 | | 0.29 | 1.2 | 19 | 16 | 28 | 0.22 | 0.050 | 0.17 | 6.7 | 21 | 13 | 4.1 | 2.4 | non PAG |
| M10-968-02 | 2011 | 75 | 83 | Greywacke/Siltstone | Wolf | OP/HW | 9.3 | | 0.41 | 1.5 | 24 | 19 | 33 | 0.17 | 0.12 | 0.060 | 5.4 | 27 | 19 | 6.1 | 3.5 | non PAG |
| M10-968-03 | 2011 | 130.5 | 139 | Greywacke/Siltstone | Wolf | OP/HW | 9.3 | | 0.38 | 1.4 | 24 | 20 | 33 | 0.20 | 0.070 | 0.14 | 6.4 | 26 | 17 | 5.1 | 3.1 | non PAG |
| M10-972A-01 | 2011 | 36 | 44.5 | Greywacke/Siltstone | Wolf | OP/HW | 9.4 | | 0.66 | 2.4 | 39 | 33 | 46 | 0.20 | 0.060 | 0.14 | 6.2 | 40 | 33 | 7.4 | 5.3 | non PAG |
| M10-972A-02 | 2011 | 78.5 | 87 | Greywacke/Siltstone | Wolf | OP/HW | 9.3 | | 0.47 | 1.8 | 29 | 24 | 36 | 0.26 | 0.080 | 0.18 | 8.2 | 28 | 21 | 4.4 | 3.0 | non PAG |
| M10-976-01 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | 9.6 | | 0.61 | 2.5 | 41 | 34 | 46 | 0.30 | 0.040 | 0.25 | 9.3 | 37 | 31 | 5.0 | 3.7 | non PAG |
| M10-976-02 | 2011 | 96 | 105 | Greywacke/Siltstone | Wolf | OP/HW | 9.4 | | 0.29 | 1.0 | 17 | 15 | 25 | 0.16 | 0.080 | 0.080 | 4.9 | 20 | 12 | 5.2 | 3.2 | non PAG |
| M10-977-01 | 2011 | 24 | 33 | Greywacke/Siltstone | Wolf | OP/HW | 9.5 | | 0.32 | 1.3 | 20 | 17 | 28 | 0.17 | 0.090 | 0.080 | 5.3 | 22 | 15 | 5.2 | 3.2 | non PAG |
| M10-993-01 | 2011 | 25.5 | 34 | Greywacke/Siltstone | Wolf | OP/HW | 9.6 | | 0.51 | 1.7 | 28 | 24 | 35 | 0.17 | 0.070 | 0.11 | 5.4 | 30 | 23 | 6.6 | 4.5 | non PAG |
| M10-993-02 | 2011 | 51 | 60 | Greywacke/Siltstone | Wolf | OP/HW | 9.5 | | 0.55 | 2.0 | 33 | 28 | 39 | 0.26 | 0.070 | 0.20 | 8.2 | 31 | 25 | 4.8 | 3.4 | non PAG |
| M10-993-03 | 2011 | 84.5 | 93 | Greywacke/Siltstone | Wolf | OP/HW | 9.4 | | 0.62 | 2.4 | 39 | 32 | 42 | 0.15 | 0.12 | 0.040 | 4.8 | 38 | 34 | 8.9 | 6.8 | non PAG |
| M98-234-01 | 2011 | 11 | 23 | Greywacke/Siltstone | Wolf | OP/HW | 9.4 | | 0.57 | 2.1 | 34 | 28 | 38 | 0.19 | 0.030 | 0.16 | 5.9 | 32 | 28 | 6.4 | 4.8 | non PAG |
| M98-234-02 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | 9.2 | | 0.69 | 2.5 | 42 | 35 | 47 | 0.34 | 0.070 | 0.27 | 11 | 36 | 31 | 4.5 | 3.3 | non PAG |
| M98-284-01 | 2011 | 91 | 100 | Greywacke/Siltstone | Wolf | OP/HW | 9.1 | | 0.75 | 3.1 | 51 | 43 | 57 | 0.35 | 0.18 | 0.17 | 11 | 46 | 40 | 5.2 | 3.9 | non PAG |
| M98-286-01 | 2011 | 48 | 57.5 | Greywacke/Siltstone | Wolf | OP/HW | 9.2 | | 0.59 | 2.2 | 36 | 31 | 41 | 0.32 | 0.18 | 0.14 | 10 | 31 | 26 | 4.1 | 3.0 | non PAG |
| M98-331-01 | 2011 | 19.5 | 28 | Greywacke/Siltstone | Wolf | OP/HW | 9.4 | | 0.55 | 2.3 | 37 | 31 | 40 | 0.34 | 0.14 | 0.20 | 11 | 29 | 26 | 3.8 | 2.9 | non PAG |
| M98-333-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Wolf | OP/HW | 9.0 | | 0.58 | 2.2 | 36 | 30 | 39 | 0.23 | 0.15 | 0.080 | 7.3 | 32 | 29 | 5.3 | 4.2 | non PAG |
| ***BULK ARD - WOLF Greywacke/Siltstone*** | | | | | | | | | - | | | **461** | **652** | | - | | **126** | **526** | **335** | **5.2** | **3.7** | **non PAG** |
| MINIMUM | | | | | | | 9.0 | nc | 0.29 | 1.0 | 17 | 15 | 25 | 0.15 | 0.030 | 0.040 | 4.8 | 20 | 12 | 3.8 | 2.4 | |
| MAXIMUM | | | | | | | 9.6 | nc | 0.75 | 3.1 | 51 | 43 | 57 | 0.35 | 0.18 | 0.27 | 11 | 46 | 40 | 8.9 | 6.8 | |
| MEDIAN | | | | | | | 9.4 | nc | 0.55 | 2.1 | 34 | 28 | 39 | 0.22 | 0.080 | 0.14 | 6.7 | 31 | 26 | 5.2 | 3.4 | |
| AVERAGE | | | | | | | 9.3 | nc | 0.52 | 2.0 | 32 | 27 | 38 | 0.24 | 0.094 | 0.15 | 7.4 | 31 | 25 | 5.4 | 3.8 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.14 | 0.55 | 9.0 | 7.5 | 7.8 | 0.067 | 0.045 | 0.063 | 2.1 | 6.6 | 7.7 | 1.3 | 1.0 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 0.61 | 2.4 | 39 | 33 | 44 | 0.31 | 0.13 | 0.19 | 9.6 | 37 | 31 | 6.2 | 4.3 | |

**Appendix B.3: Acid Base Accounting Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | NAG pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | | % | | t CaCO3/ 1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| M10-970-01 | 2011 | 62 | 70.5 | Iron Formation | Wolf | OP/HW | 8.3 | | 2.4 | 10.0 | 163 | 163 | 148 | 0.24 | 0.070 | 0.17 | 7.4 | 141 | 155 | 20 | 22 | non PAG |
| M10-972A-03 | 2011 | 113 | 122 | Iron Formation | Wolf | OP/HW | 8.5 | | 1.7 | 6.5 | 106 | 106 | 79 | 0.19 | 0.090 | 0.10 | 6.0 | 73 | 100 | 13 | 18 | non PAG |
| M10-976-03 | 2011 | 126 | 135 | Iron Formation | Wolf | OP/HW | 8.7 | | 2.5 | 11 | 173 | 173 | 140 | 0.32 | 0.090 | 0.24 | 10 | 130 | 163 | 14 | 17 | non PAG |
| M10-986-01 | 2011 | 51 | 61 | Iron Formation | Wolf | OP/HW | 8.6 | | 1.9 | 7.2 | 118 | 118 | 101 | 0.33 | 0.11 | 0.23 | 10 | 91 | 108 | 9.7 | 11 | non PAG |
| M98-284-02 | 2011 | 121 | 129.5 | Iron Formation | Wolf | OP/HW | 8.5 | | 1.3 | 5.0 | 82 | 82 | 62 | 0.24 | 0.14 | 0.10 | 7.5 | 55 | 75 | 8.3 | 11 | non PAG |
| ***BULK ARD - WOLF Iron formation*** | | | | | | | | | - | | | **642** | **531** | | - | | **41** | **489** | **601** | **13** | **15** | **non PAG** |
| MINIMUM | | | | | | | 8.3 | nc | 1.3 | 5.0 | 82 | 82 | 62 | 0.19 | 0.070 | 0.10 | 6.0 | 55 | 75 | 8.3 | 11 | |
| MAXIMUM | | | | | | | 8.7 | nc | 2.5 | 11 | 173 | 173 | 148 | 0.33 | 0.14 | 0.24 | 10 | 141 | 163 | 20 | 22 | |
| MEDIAN | | | | | | | 8.5 | nc | 1.9 | 7.2 | 118 | 118 | 101 | 0.24 | 0.090 | 0.17 | 7.5 | 91 | 108 | 13 | 17 | |
| AVERAGE | | | | | | | 8.5 | nc | 1.9 | 7.9 | 128 | 128 | 106 | 0.27 | 0.10 | 0.17 | 8.3 | 98 | 120 | 13 | 16 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.45 | 2.1 | 34 | 34 | 33 | 0.054 | 0.024 | 0.060 | 1.7 | 33 | 34 | 4.0 | 4.1 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 2.4 | 10 | 168 | 168 | 144 | 0.33 | 0.13 | 0.24 | 10 | 135 | 159 | 17 | 20 | |
| M10-972A-04 | 2011 | 156 | 165 | Mafic Volcanic | Wolf | OP/FW | 9.0 | | 3.0 | 14 | 234 | 234 | 210 | 0.14 | 0.060 | 0.080 | 4.5 | 206 | 229 | 47 | 52 | non PAG |
| M10-986-02 | 2011 | 99 | 107 | Mafic Volcanic | Wolf | OP/FW | 9.2 | | 3.0 | 12 | 203 | 203 | 188 | 0.15 | 0.050 | 0.10 | 4.6 | 183 | 198 | 41 | 44 | non PAG |
| M10-993-04 | 2011 | 157.5 | 166 | Mafic Volcanic | Wolf | OP/FW | 8.8 | | 2.4 | 11 | 178 | 178 | 171 | 0.056 | 0.030 | 0.030 | 1.8 | 169 | 176 | 98 | 102 | non PAG |
| M96-16-01 | 2011 | 22 | 29.5 | Mafic Volcanic | Wolf | OP/HW | 9.1 | | 1.6 | 7.6 | 124 | 124 | 120 | 0.087 | 0.060 | 0.030 | 2.7 | 117 | 121 | 44 | 46 | non PAG |
| M96-61-01 | 2011 | 11 | 20 | Mafic Volcanic | Wolf | OP/HW | 8.9 | | 2.6 | 12 | 190 | 190 | 197 | 0.66 | 0.17 | 0.48 | 20 | 177 | 169 | 9.6 | 9.3 | non PAG |
| M96-61-02 | 2011 | 34 | 43 | Mafic Volcanic | Wolf | OP/HW | 9.1 | | 2.7 | 12 | 201 | 201 | 208 | 0.14 | 0.10 | 0.050 | 4.5 | 204 | 197 | 47 | 45 | non PAG |
| M98-238-01 | 2011 | 19 | 28 | Mafic Volcanic | Wolf | OP/HW | 8.8 | | 0.73 | 3.1 | 51 | 51 | 56 | 0.21 | 0.090 | 0.12 | 6.6 | 49 | 44 | 8.4 | 7.6 | non PAG |
| M98-238-02 | 2011 | 49 | 57 | Mafic Volcanic | Wolf | OP/HW | 9.4 | | 0.40 | 1.8 | 29 | 29 | 38 | 0.30 | 0.10 | 0.20 | 9.4 | 29 | 19 | 4.1 | 3.0 | non PAG |
| M98-329-01 | 2011 | 77.5 | 86 | Mafic Volcanic | Wolf | OP/HW | 9.0 | | 4.0 | 19 | 309 | 309 | 284 | 0.13 | 0.080 | 0.050 | 4.0 | 280 | 305 | 70 | 77 | non PAG |
| M98-337-01 | 2011 | 14 | 22 | Mafic Volcanic | Wolf | OP/HW | 9.3 | | 2.8 | 13 | 217 | 217 | 226 | 0.13 | 0.070 | 0.070 | 4.1 | 222 | 213 | 55 | 53 | non PAG |
| ***BULK ARD - WOLF Mafic volcanic*** | | | | | | | | | - | | | **1735** | **1698** | | - | | **63** | **1636** | **1672** | **27** | **28** | **non PAG** |
| MINIMUM | | | | | | | 8.8 | nc | 0.40 | 1.8 | 29 | 29 | 38 | 0.056 | 0.030 | 0.030 | 1.8 | 29 | 19 | 4.1 | 3.0 | |
| MAXIMUM | | | | | | | 9.4 | nc | 4.0 | 19 | 309 | 309 | 284 | 0.66 | 0.17 | 0.48 | 20 | 280 | 305 | 98 | 102 | |
| MEDIAN | | | | | | | 9.1 | nc | 2.6 | 12 | 195 | 195 | 193 | 0.14 | 0.075 | 0.075 | 4.5 | 180 | 186 | 45 | 45 | |
| AVERAGE | | | | | | | 9.0 | nc | 2.3 | 11 | 173 | 173 | 170 | 0.20 | 0.081 | 0.12 | 6.3 | 164 | 167 | 42 | 44 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 1.0 | 4.9 | 80 | 80 | 73 | 0.16 | 0.036 | 0.13 | 5.1 | 74 | 81 | 28 | 30 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 3.0 | 14 | 221 | 221 | 214 | 0.23 | 0.10 | 0.14 | 7.3 | 210 | 217 | 59 | 59 | |
| M10-976-04 | 2011 | 138 | 144 | Ore/IF | Wolf | OP/HW | 8.5 | | 1.9 | 7.8 | 127 | 127 | 102 | 0.35 | 0.030 | 0.32 | 11 | 91 | 116 | 9.3 | 12 | non PAG |
| M10-977-02 | 2011 | 54.5 | 63 | Ore/IF | Wolf | OP/HW | 8.9 | | 1.9 | 7.4 | 122 | 122 | 98 | 0.36 | 0.030 | 0.33 | 11 | 87 | 110 | 8.8 | 11 | non PAG |
| M96-61-03 | 2011 | 104 | 112 | Ore/IF | Wolf | OP/FW | 8.3 | | 2.5 | 4.5 | 73 | 73 | 96 | 2.3 | 0.31 | 2.0 | 73 | 24 | 0.89 | 1.3 | 1.0 | uncertain |
| ***BULK ARD - WOLF ORE (Iron formation)*** | | | | | | | | | - | | | **322** | **296** | | - | | **95** | **201** | **227** | **3.1** | **3.4** | **non PAG** |
| MINIMUM | | | | | | | 8.3 | nc | 1.9 | 4.5 | 73 | 73 | 96 | 0.35 | 0.030 | 0.32 | 11 | 24 | 0.89 | 1.3 | 1.0 | |
| MAXIMUM | | | | | | | 8.9 | nc | 2.5 | 7.8 | 127 | 127 | 102 | 2.3 | 0.31 | 2.0 | 73 | 91 | 116 | 9.3 | 12 | |
| MEDIAN | | | | | | | 8.5 | nc | 1.9 | 7.4 | 122 | 122 | 98 | 0.36 | 0.030 | 0.33 | 11 | 87 | 110 | 8.8 | 11 | |
| AVERAGE | | | | | | | 8.5 | nc | 2.1 | 6.6 | 107 | 107 | 99 | 1.0 | 0.12 | 0.88 | 32 | 67 | 76 | 6.5 | 7.8 | |
| STANDARD DEVIATION | | | | | | | nc | nc | 0.28 | 1.5 | 24 | 24 | 2.5 | 0.93 | 0.13 | 0.79 | 29 | 31 | 53 | 3.6 | 4.8 | |
| 75TH PERCENTILE | | | | | | | nc | nc | 2.5 | 7.8 | 127 | 127 | 102 | 2.3 | 0.31 | 2.0 | 73 | 91 | 116 | 9.3 | 12 | |

Notes:

S(T)=total sulphur; S(SO4)=sulphate sulphur; S(S2-)=sulphide sulphur; TC = Total Carbon; TIC=total inorganic carbon

CaNP = carbonate neutralization potential (based on $CO_3$ content); NP = neutralization potential; AP = acid potential

ARD = Acid Rock Drainage; NPR = Net Potential Ratio (NP/AP); Net NP = Net Neutralisation Potential (NP-AP); PAG = Potentially Acid Generating

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR and NPR (i.e. where different ARD potentials are defined the unit is considered uncertain).

Bulk ARD = Sum NP/Sum AP

# Appendix B.3: Acid Base Accounting Results - Operations PAD Samples
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Rock Type | Deposit | Location | Grain Size | Paste pH | TC | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | units | % | | t CaCO3/1000t | | | % | | | t CaCO3/1000t | | | ratio | | |
| TP-PAD-11-06 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.1 | 0.62 | 2.1 | 35 | 35 | 45 | 0.24 | 0.070 | 0.16 | 7.4 | 38 | 27 | 6.1 | 4.7 | non PAG |
| TP-PAD-11-04 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.1 | 0.70 | 2.5 | 40 | 40 | 52 | 0.23 | 0.040 | 0.19 | 7.3 | 45 | 33 | 7.1 | 5.6 | non PAG |
| TP-PAD-11-03 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.3 | 0.52 | 1.9 | 31 | 31 | 46 | 0.17 | 0.080 | 0.10 | 5.4 | 40 | 26 | 8.5 | 5.8 | non PAG |
| TP-PAD-11-01 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.1 | 0.72 | 2.3 | 38 | 38 | 52 | 0.31 | 0.050 | 0.26 | 9.8 | 42 | 28 | 5.3 | 3.9 | non PAG |
| TP-PAD-11-02 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 8.4 | 0.72 | 2.0 | 32 | 32 | 53 | 0.22 | 0.060 | 0.16 | 7.0 | 46 | 25 | 7.6 | 4.6 | non PAG |
| TP-PAD-11-05 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.3 | 0.69 | 2.6 | 42 | 42 | 59 | 0.18 | 0.060 | 0.13 | 5.7 | 54 | 37 | 10 | 7.4 | non PAG |
| TP-PAD-11-09 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.3 | 0.82 | 3.1 | 50 | 50 | 65 | 0.24 | 0.040 | 0.20 | 7.5 | 57 | 43 | 8.7 | 6.7 | non PAG |
| TP-PAD-11-12 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.2 | 0.53 | 1.8 | 29 | 29 | 41 | 0.18 | 0.050 | 0.13 | 5.6 | 35 | 23 | 7.3 | 5.1 | non PAG |
| TP-PAD-11-07 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.0 | 0.53 | 1.9 | 31 | 31 | 41 | 0.19 | 0.060 | 0.13 | 5.9 | 35 | 25 | 6.9 | 5.3 | non PAG |
| TP-PAD-11-08 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.1 | 0.88 | 1.4 | 22 | 22 | 36 | 0.17 | 0.040 | 0.13 | 5.4 | 30 | 17 | 6.6 | 4.1 | non PAG |
| TP-PAD-11-10 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 8.9 | 1.1 | 3.9 | 64 | 64 | 74 | 0.19 | 0.050 | 0.14 | 6.0 | 68 | 58 | 12 | 11 | non PAG |
| TP-PAD-11-11 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.3 | 0.43 | 1.5 | 25 | 25 | 39 | 0.13 | 0.060 | 0.080 | 4.2 | 35 | 21 | 9.3 | 6.0 | non PAG |
| TP-PAD-11 COMPOSITE | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 9.1 | 0.71 | 2.5 | 40 | 54 | 0.18 | 0.060 | 0.12 | 5.6 | 48 | 35 | 9.6 | 7.1 | non PAG | |
| ***BULK ARD - TIRIGANIAQ PAD (fine to coarse)*** | | | | | | | - | | | **481** | **657** | | - | | **83** | **574** | **398** | **7.9** | **5.8** | **non PAG** |
| MINIMUM | | | | | | 8.4 | 0.43 | 1.4 | 22 | 22 | 36 | 0.13 | 0.040 | 0.080 | 4.2 | 30 | 17 | 5.3 | 3.9 | |
| MAXIMUM | | | | | | 9.3 | 1.1 | 3.9 | 64 | 64 | 74 | 0.31 | 0.080 | 0.26 | 9.8 | 68 | 58 | 12 | 11 | |
| MEDIAN | | | | | | 9.1 | 0.70 | 2.1 | 35 | 35 | 52 | 0.19 | 0.060 | 0.13 | 5.9 | 42 | 27 | 7.6 | 5.6 | |
| AVERAGE | | | | | | 9.0 | 0.69 | 2.3 | 37 | 37 | 51 | 0.20 | 0.055 | 0.15 | 6.4 | 44 | 31 | 8.1 | 5.9 | |
| STANDARD DEVIATION | | | | | | nc | 0.17 | 0.66 | 11 | 11 | 10 | 0.043 | 0.012 | 0.045 | 1.4 | 10 | 10 | 1.9 | 1.7 | |
| 75TH PERCENTILE | | | | | | nc | 0.77 | 2.5 | 41 | 41 | 57 | 0.23 | 0.060 | 0.18 | 7.3 | 51 | 36 | 9.5 | 6.9 | |
| TP-PAD-11 COMPOSITE -200um | 0 | Greywacke/Siltstone | Tiriganiaq | PAD fines | fine < 200 um | 8.2 | 0.47 | 1.7 | 27 | 27 | 34 | 0.17 | 0.050 | 0.070 | 5.4 | 29 | 22 | 6.3 | 5.0 | non PAG |
| TP-PAD-11-02 -200um | 0 | Greywacke/Siltstone | Tiriganiaq | PAD fines | fine < 200 um | 8.2 | 0.61 | 1.8 | 30 | 30 | 48 | 0.24 | 0.090 | 0.14 | 7.4 | 41 | 23 | 6.5 | 4.1 | non PAG |
| TP-PAD-11-03 -200um | 0 | Greywacke/Siltstone | Tiriganiaq | PAD fines | fine < 200 um | 9.1 | 0.58 | 2.3 | 37 | 37 | 52 | 0.23 | 0.050 | 0.18 | 7.3 | 45 | 30 | 7.2 | 5.1 | non PAG |
| TP-PAD-11-06 -200um | 0 | Greywacke/Siltstone | Tiriganiaq | PAD fines | fine < 200 um | 9.1 | 0.58 | 2.2 | 36 | 36 | 45 | 0.28 | 0.15 | 0.12 | 8.6 | 36 | 28 | 5.2 | 4.2 | non PAG |
| TP-PAD-11-08 -200um | 0 | Greywacke/Siltstone | Tiriganiaq | PAD fines | fine < 200 um | 8.9 | 0.70 | 1.7 | 27 | 27 | 34 | 0.17 | 0.11 | 0.070 | 5.4 | 29 | 22 | 6.3 | 5.0 | non PAG |
| TP-PAD-11-10 -200um | 0 | Greywacke/Siltstone | Tiriganiaq | PAD fines | fine < 200 um | 8.7 | 0.99 | 4.0 | 65 | 65 | 69 | 0.21 | 0.080 | 0.13 | 6.6 | 63 | 59 | 11 | 10.0 | non PAG |
| TP-PAD-11-12 -200um | 0 | Greywacke/Siltstone | Tiriganiaq | PAD fines | fine < 200 um | 9.2 | 0.47 | 1.9 | 30 | 30 | 39 | 0.22 | 0.11 | 0.10 | 6.8 | 32 | 24 | 5.7 | 4.5 | non PAG |
| ***BULK ARD - TIRIGANIAQ (fine < 200 um)*** | | | | | | | - | | | **254** | **322** | | - | | **48** | **274** | **206** | **6.8** | **5.3** | **non PAG** |
| MINIMUM | | | | | | 8.2 | 0.47 | 1.7 | 27 | 27 | 34 | 0.17 | 0.050 | 0.070 | 5.4 | 29 | 22 | 5.2 | 4.1 | |
| MAXIMUM | | | | | | 9.2 | 0.99 | 4.0 | 65 | 65 | 69 | 0.28 | 0.15 | 0.18 | 8.6 | 63 | 59 | 11 | 10.0 | |
| MEDIAN | | | | | | 9.0 | 0.59 | 2.0 | 33 | 33 | 47 | 0.23 | 0.10 | 0.13 | 7.0 | 39 | 26 | 6.4 | 4.7 | |
| AVERAGE | | | | | | 8.7 | 0.65 | 2.3 | 38 | 38 | 48 | 0.22 | 0.098 | 0.12 | 7.0 | 41 | 31 | 6.9 | 5.5 | |
| STANDARD DEVIATION | | | | | | nc | 0.17 | 0.79 | 13 | 13 | 11 | 0.031 | 0.031 | 0.034 | 0.95 | 11 | 13 | 1.7 | 2.0 | |
| 75TH PERCENTILE | | | | | | nc | 0.77 | 2.7 | 44 | 44 | 57 | 0.25 | 0.12 | 0.15 | 7.7 | 50 | 37 | 8.0 | 6.3 | |

Notes:

S(T)=total sulphur; S(SO4)=sulphate sulphur; S(S2-)=sulphide sulphur; TC = Total Carbon; CO3= Carbonate

CaNP = carbonate neutralization potential (based on $CO_3$ content); NP = neutralization potential; AP = acid potential

ARD = Acid Rock Drainage; NPR = Net Potential Ratio (NP/AP); Net NP = Net Neutralisation Potential (NP-AP); PAG = Potentially Acid Generating

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR and NPR (i.e. where different ARD potentials are defined the unit is considered uncertain).

Bulk ARD = Sum NP/Sum AP

| Sample ID | Deposit | Lithology | Location | Test Before or After Kinetics | Paste pH | C | $CO_3$ | CaNP | CaNP-adj | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD Potential[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | units | % | % | t CaCO3/1000t | | | % | % | % | t CaCO3/1000t | | | ratio | | |
| Column 1: Tiri GW OP E | Tiriganiaq | GW | Open Pit | After | 9.1 | 0.84 | 3.6 | 58 | 45 | 56 | 0.21 | 0.030 | 0.17 | 5.3 | 51 | 38 | 8.7 | 6.9 | non PAG |
| Column 2: Tiri GW OP W | Tiriganiaq | GW | Open Pit | After | 9.1 | 0.73 | 3.2 | 52 | 40 | 51 | 0.26 | 0.050 | 0.21 | 6.6 | 44 | 31 | 6.3 | 4.9 | non PAG |
| Column 3: Tiri GW UG (All) | Tiriganiaq | GW | Underground | After | 9.3 | 0.77 | 3.3 | 54 | 41 | 52 | 0.19 | 0.030 | 0.16 | 5.0 | 47 | 36 | 8.9 | 7.0 | non PAG |
| Column 6: Disc GW (OP) | Discovery | GW | Open Pit | After | 9.5 | 0.13 | 0.43 | 7.0 | 1.8 | 15 | 0.20 | 0.070 | 0.13 | 4.1 | 11 | -4.3 | 2.5 | 0.29 | uncertain |
| | | | | ***BULK ARD*** | - | | | | 127 | 174 | - | | | 21 | 153 | 106 | 8.3 | 6.1 | non PAG |
| | | | | MINIMUM | 9.1 | 0.13 | 0.43 | 7.0 | 1.8 | 15 | 0.19 | 0.030 | 0.13 | 4.1 | 11 | -4.3 | 2.5 | 0.29 | |
| | | | | MAXIMUM | 9.5 | 0.84 | 3.6 | 58 | 45 | 56 | 0.26 | 0.070 | 0.21 | 6.6 | 51 | 38 | 8.9 | 7.0 | |
| | | | | MEDIAN | 9.2 | 0.75 | 3.2 | 53 | 41 | 52 | 0.20 | 0.040 | 0.17 | 5.2 | 46 | 34 | 7.5 | 5.9 | |
| | | | | AVERAGE | 9.3 | 0.62 | 2.6 | 43 | 32 | 44 | 0.21 | 0.045 | 0.17 | 5.2 | 38 | 25 | 6.6 | 4.8 | |
| | | | | STANDARD DEVIATION | 0.22 | 0.33 | 1.5 | 24 | 20 | 19 | 0.033 | 0.019 | 0.033 | 1.0 | 18 | 20 | 3.0 | 3.2 | |
| | | | | 75TH PERCENTILE | 9.4 | 0.79 | 3.4 | 55 | 42 | 53 | 0.22 | 0.055 | 0.18 | 5.6 | 48 | 36 | 8.7 | 7.0 | |
| Column 4: Tiri MV UG (All) | Tiriganiaq | MV | Underground | After | 9.0 | 2.9 | 14 | 229 | 182 | 221 | 0.21 | 0.060 | 0.14 | 4.4 | 216 | 176 | 34 | 28 | non PAG |
| Column 5: F-Zone MV (OP) | F-Zone | MV | Open Pit | After | 9.1 | 1.7 | 7.9 | 130 | 125 | 136 | 0.29 | 0.070 | 0.22 | 6.9 | 129 | 116 | 15 | 14 | non PAG |
| C-8 Wesmeg | Wesmeg | MV | | Before | 8.9 | 2.4 | 11 | 173 | 158 | 192 | 0.12 | 0.040 | 0.080 | 2.5 | 190 | 154 | 50 | 41 | non PAG |
| | | | | ***BULK ARD*** | - | | | | 465 | 549 | - | | | 14 | 535 | 451 | 40 | 34 | non PAG |
| | | | | MINIMUM | 8.9 | 1.7 | 7.9 | 130 | 125 | 136 | 0.12 | 0.040 | 0.080 | 2.5 | 129 | 116 | 15 | 14 | |
| | | | | MAXIMUM | 9.1 | 2.9 | 14 | 229 | 182 | 221 | 0.29 | 0.070 | 0.22 | 6.9 | 216 | 176 | 50 | 41 | |
| | | | | MEDIAN | 9.0 | 2.4 | 11 | 173 | 158 | 192 | 0.21 | 0.060 | 0.14 | 4.4 | 190 | 154 | 34 | 28 | |
| | | | | AVERAGE | 9.0 | 2.3 | 11 | 177 | 155 | 183 | 0.21 | 0.057 | 0.15 | 4.6 | 178 | 148 | 33 | 27 | |
| | | | | STANDARD DEVIATION | 0.060 | 0.60 | 3.0 | 50 | 29 | 43 | 0.085 | 0.015 | 0.070 | 2.2 | 45 | 30 | 17 | 14 | |
| | | | | 75TH PERCENTILE | 9.0 | 2.6 | 12 | 201 | 170 | 207 | 0.25 | 0.065 | 0.18 | 5.6 | 203 | 165 | 42 | 34 | |
| C-7 Pump | Pump | 14% IF, 86% MV | | Before | 8.8 | 2.2 | 8.9 | 145 | 129 | 164 | 0.37 | 0.14 | 0.24 | 7.5 | 157 | 117 | 14 | 11 | non PAG |
| C-9 Wolf | Wolf | 25%MV, 13%IF, 62%GW | | Before | 9.0 | 1.0 | 4.3 | 71 | 64 | 79 | 0.17 | 0.080 | 0.080 | 2.5 | 76 | 59 | 15 | 12 | non PAG |

Notes:

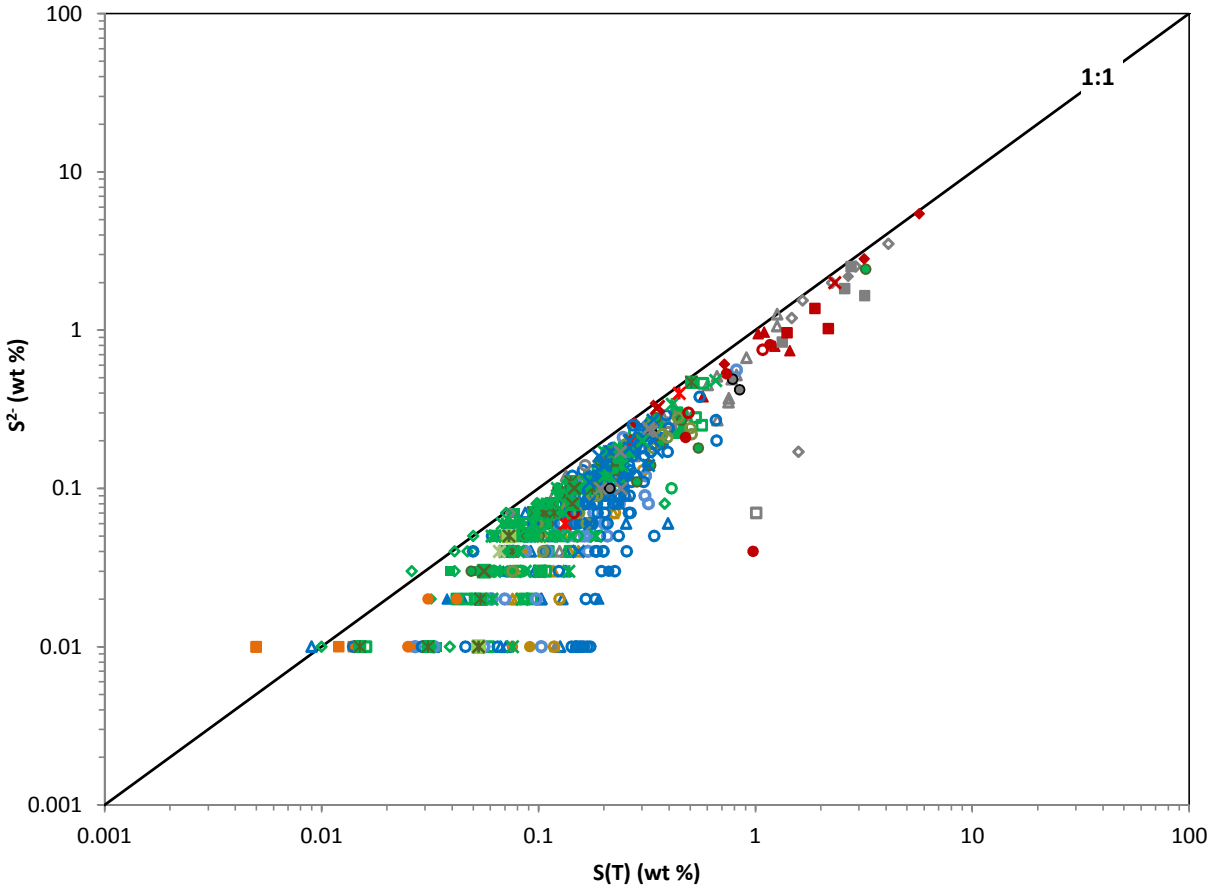
S(T)=total sulphur; S(SO4)=sulphate sulphur; S(S2-)=sulphide sulphur; C = Total Carbon; CO3= Carbonate

CaNP = carbonate neutralization potential (based on $CO_3$ content); NP = neutralization potential; AP = acid potential

ARD = Acid Rock Drainage; NPR = Net Potential Ratio (NP/AP); Net NP = Net Neutralisation Potential (NP-AP); PAG = Potentially Acid Generating

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR and NPR (i.e. where different ARD potentials are defined the unit is considered uncertain).

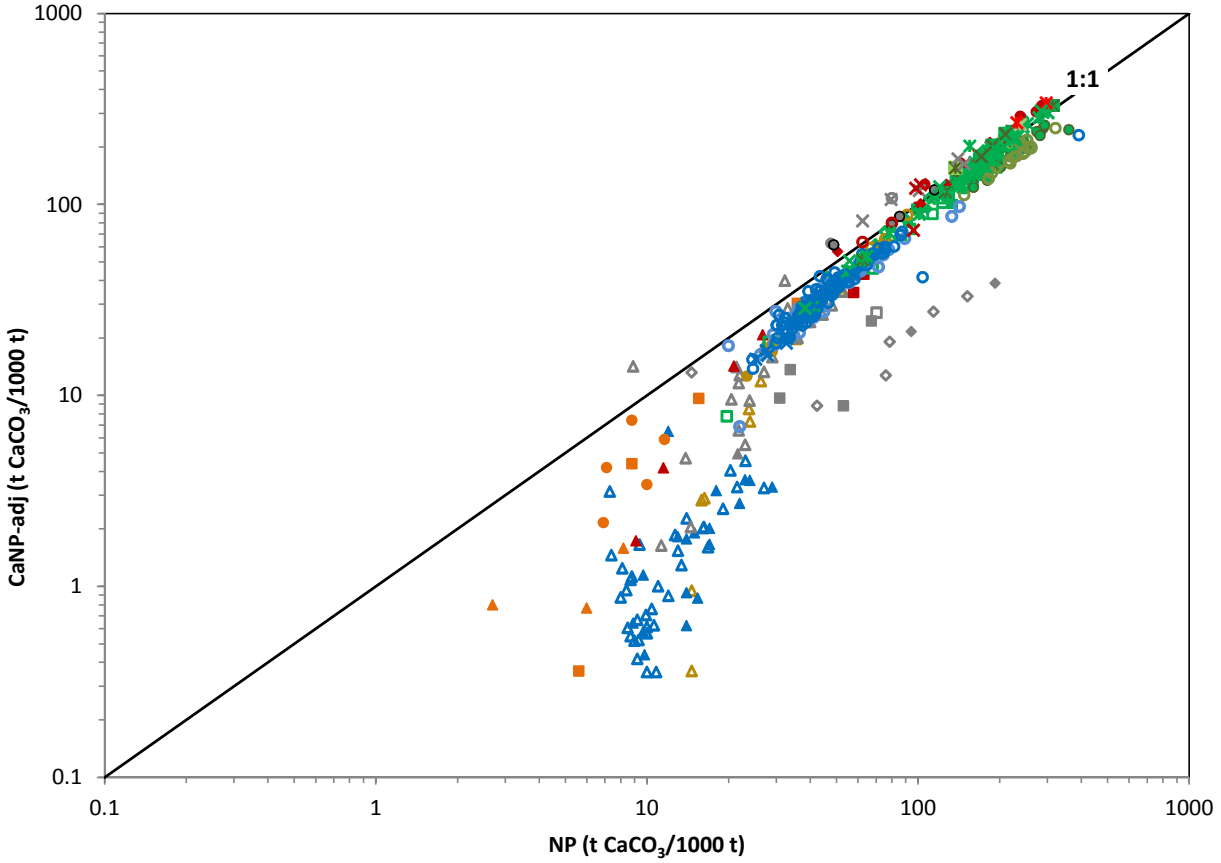
Bulk ARD = Sum NP/Sum AP




Note:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)

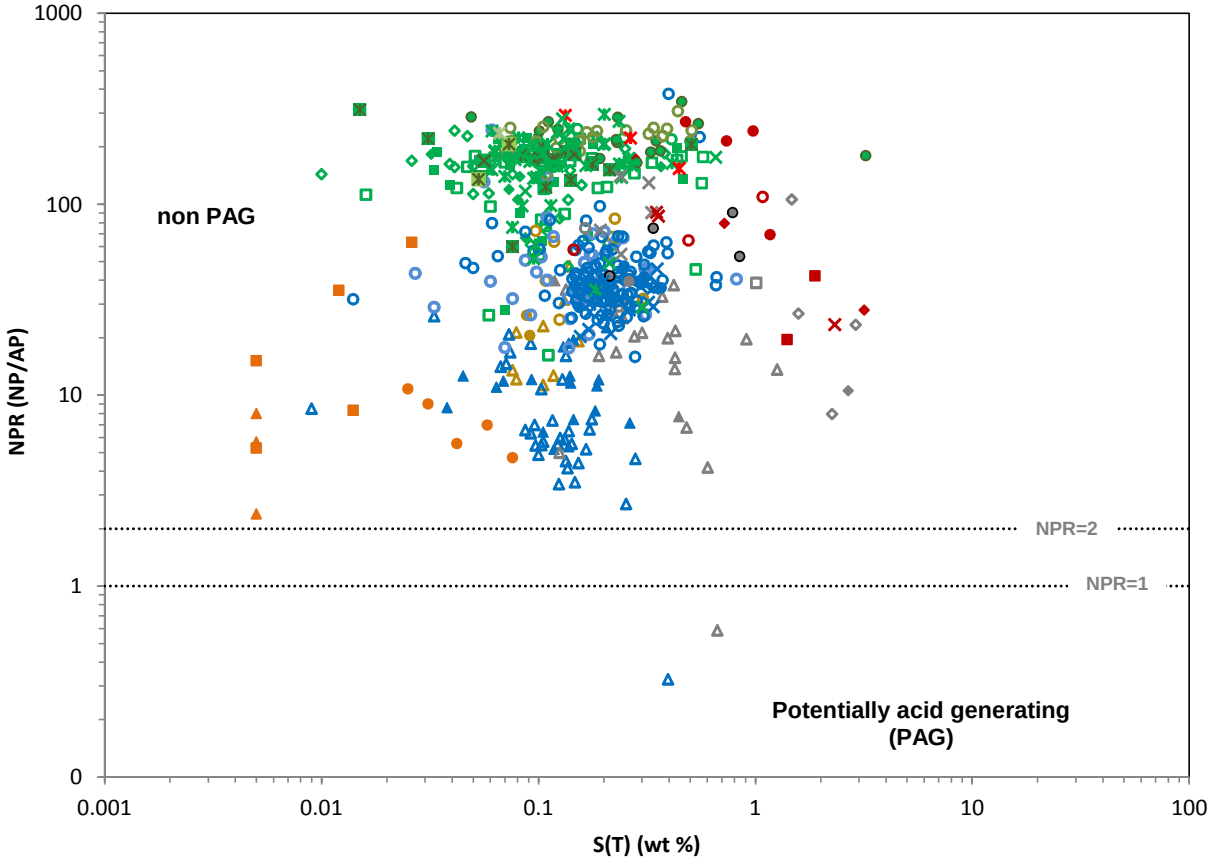
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$) | | | |
| | | ALL DEPOSITS | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared DH | Date Mar-14 | Project N° | 13-1428-0007 |
| | | Checked AJS | | | |
| | | Reviewed VJB | | Figure | B.3-1 |

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AEM_static_FIGURES ABA WR-Ore_4April2014.xlsx




| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Neutralization Potential (NP) versus Adjusted Carbonate NP (CaNP-adj) | | | |
| | | ALL DEPOSITS | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared DH | Date Mar-14 | Project N° 13-1428-0007 | |
| | | Checked AJS | | | |
| | | Reviewed VJB | | Figure B.3-2 | |

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AEM_static_FIGURES ABA WR-Ore_4April2014.xlsx




- ▲ Discovery Deposit
- ■ F Zone Deposit
- ◆ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

Closed symbol - foot wall
Open symbol - hanging wall
Closed symbol (black outline) - underground

**Gabbro**
**Greywacke/Siltstone**
**Iron Formation**
**Mafic Volcanic**
**Ultramafic**
**Ore**

Golder Associates

**Waste Rock Static Testing**

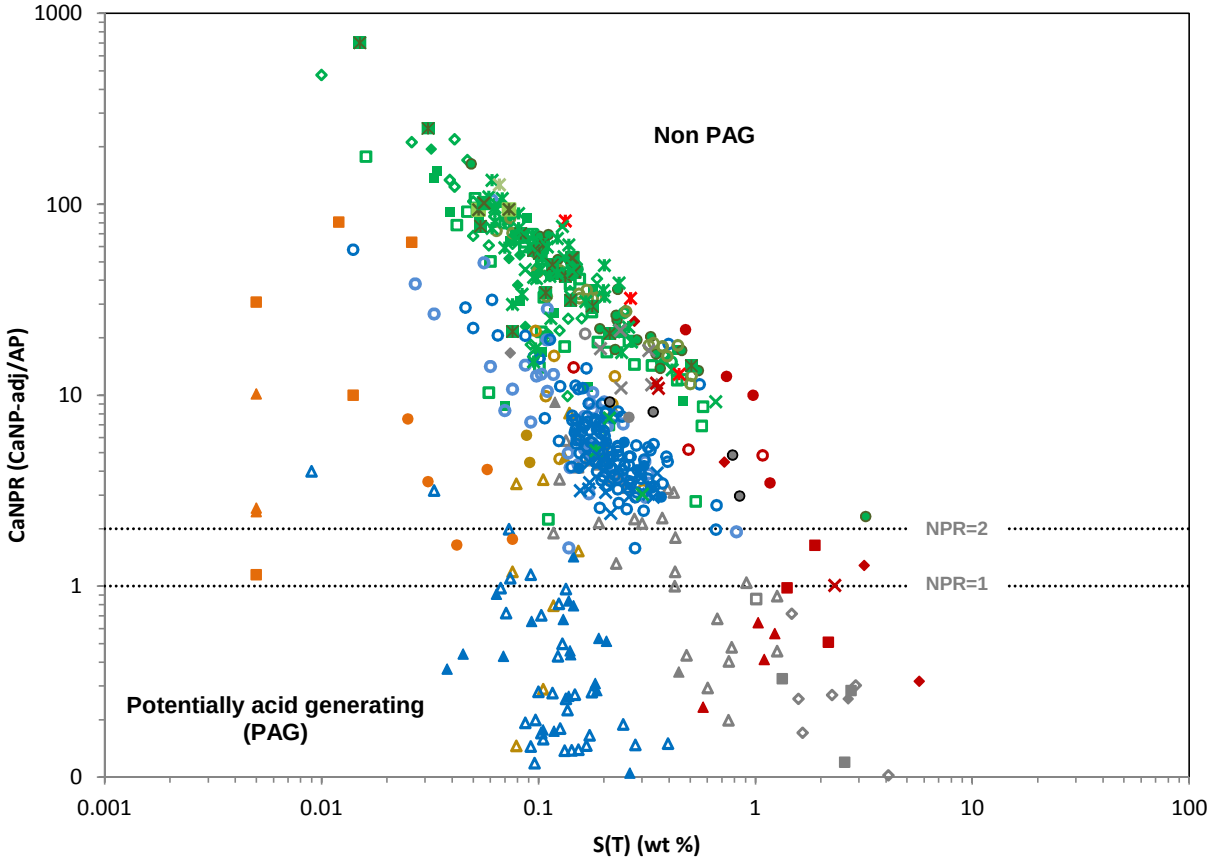
**Total Sulphur (S(T)) versus Net Potential Ratio (NPR)**

**ALL DEPOSITS**

**Meliadine Gold Project**
**Agnico Eagle Mines Ltd.**

| | | | | | |
|---|---|---|---|---|---|
| Prepared | DH | Date | Mar-14 | Project N° | 13-1428-0007 |
| Checked | AJS | | | | |
| Reviewed | VJB | | | Figure | **B.3-3** |

N:\Active\2013\0_Mining\13-1428-0007 (5000-5200) AEM_Meliadine IR responses\FEIS_Comment address\geochemistry files\waste rock\
AEM_static_FIGURES ABA WR-Ore_4April2014.xlsx



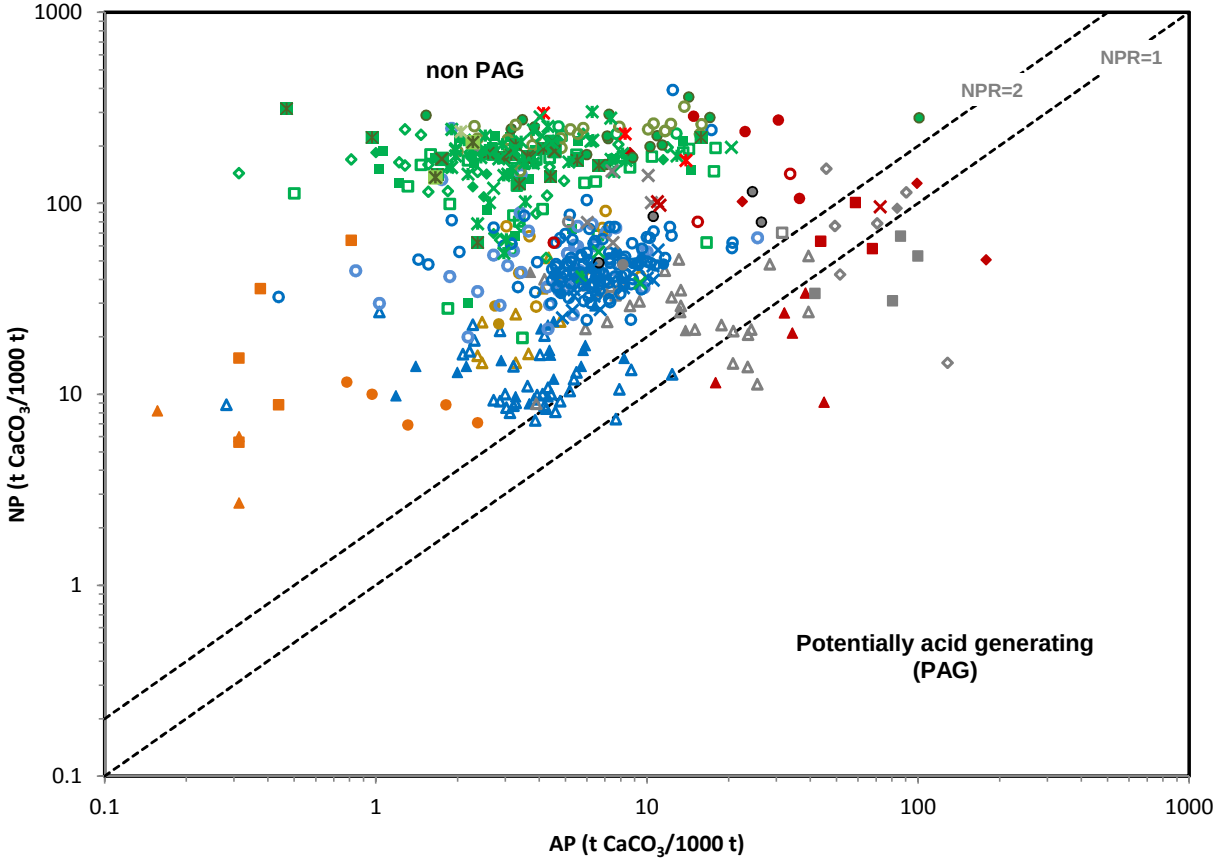

▲ Discovery Deposit
■ F Zone Deposit
◆ Pump Deposit
● Tiriganiaq Deposit
× Wesmeg Deposit
✱ Wolf Deposit

Closed symbol - foot wall
Open symbol - hanging wall
Closed symbol (black outline) - underground

Gabbro
Greywacke/Siltstone
Iron Formation
Mafic Volcanic
Ultramafic
Ore

| | | | |
|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Total Sulphur (S(T)) versus Carbonate Net Potential Ratio (CaNPR) | |
| | | ALL DEPOSITS | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | Prepared DH | Date Mar-14 | Project N° 13-1428-0007 |
| | Checked AJS | | |
| | Reviewed VJB | | Figure B.3-4 |

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AEM_static_FIGURES ABA WR-Ore_4April2014.xlsx




▲ Discovery Deposit
■ F Zone Deposit
◆ Pump Deposit
● Tiriganiaq Deposit
× Wesmeg Deposit
✱ Wolf Deposit

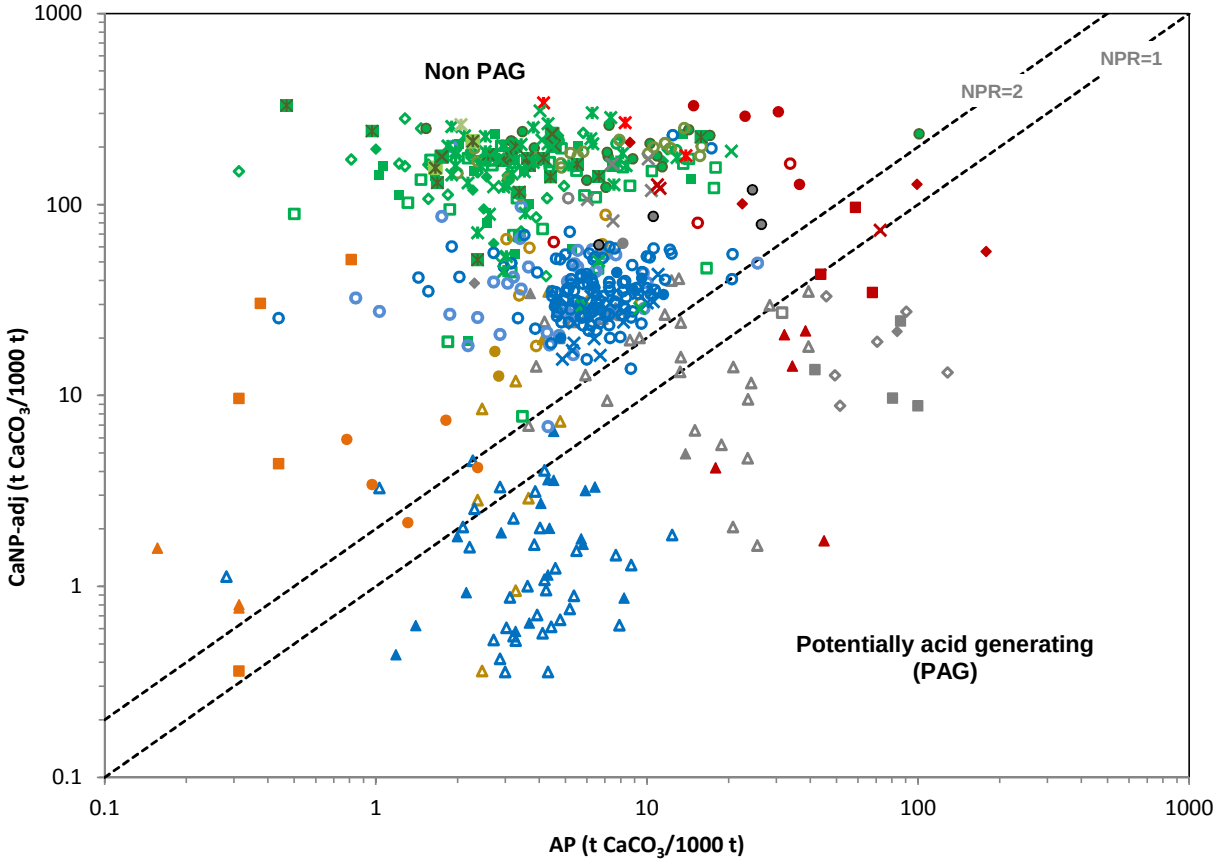
Closed symbol - foot wall
Open symbol - hanging wall
Closed symbol (black outline) - underground

**Gabbro**
**Greywacke/Siltstone**
**Iron Formation**
**Mafic Volcanic**
**Ultramafic**
**Ore**

Notes:
Negative NP values plotted as 0.1 t CaCO3/1000 t

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Acid Potential (AP) versus Neutralization Potential (NP) | | | |
| | | ALL DEPOSITS | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared DH | Date Mar-14 | Project N° 13-1428-0007 | |
| | | Checked AJS | | | |
| | | Reviewed VJB | | Figure B.3-5 | |

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AEM_static_FIGURES ABA WR-Ore_4April2014.xlsx




▲ Discovery Deposit
■ F Zone Deposit
◆ Pump Deposit
● Tiriganiaq Deposit
× Wesmeg Deposit
✱ Wolf Deposit

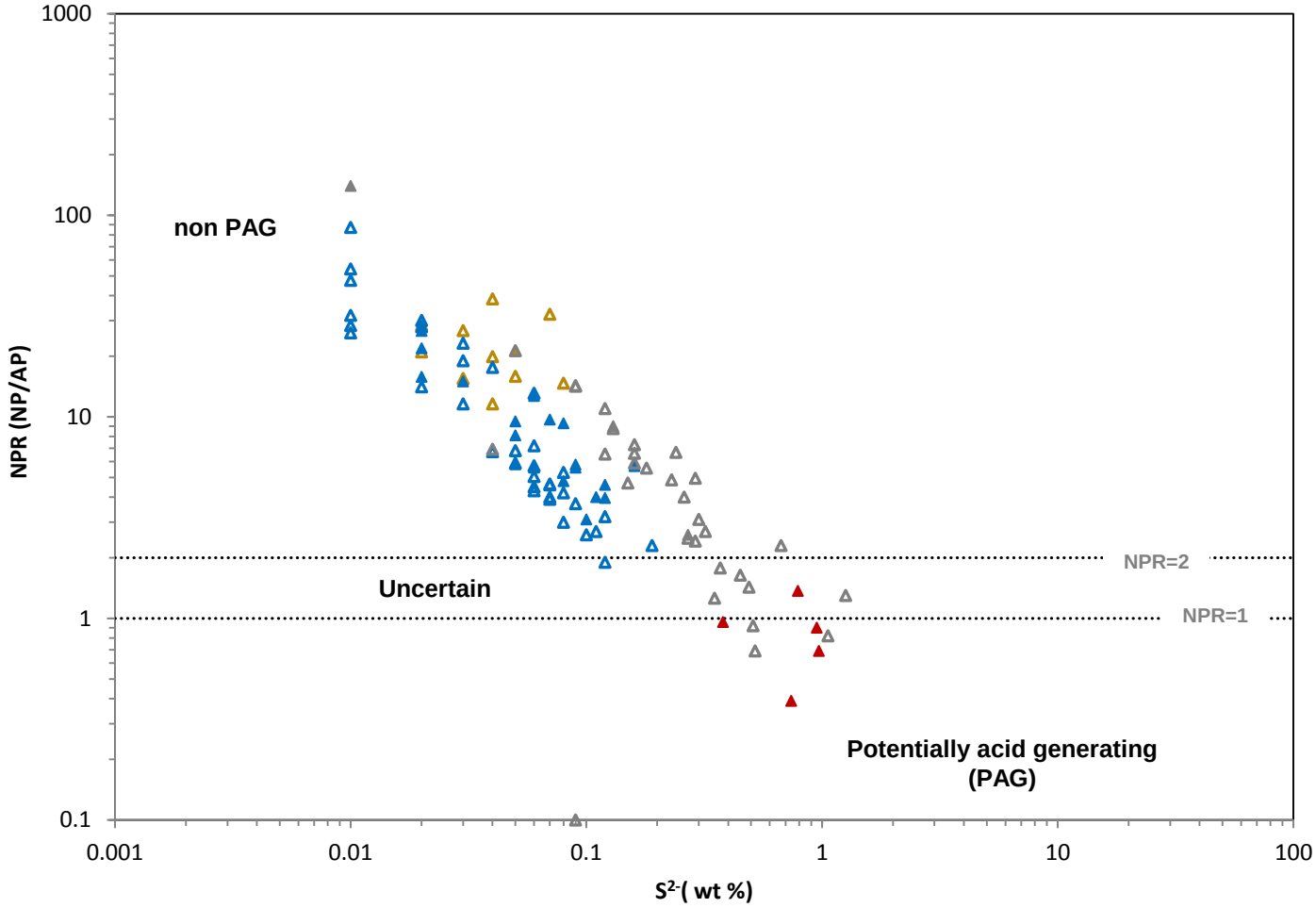
Closed symbol - foot wall
Open symbol - hanging wall
Closed symbol (black outline) - underground

**Gabbro**
**Greywacke/Siltstone**
**Iron Formation**
**Mafic Volcanic**
**Ultramafic**
**Ore**

Notes:
Negative CaNP-adj values plotted as 0.1 t CaCO3/1000 t

| | | | | |
|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Acid Potential (AP) versus Adjusted Carbonate NP (CaNP-adj) | | |
| | | ALL DEPOSITS | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | Prepared DH | Date Mar-14 | Project N° 13-1428-0007 | |
| | Checked AJS | | | |
| | Reviewed VJB | | Figure B.3-6 | |

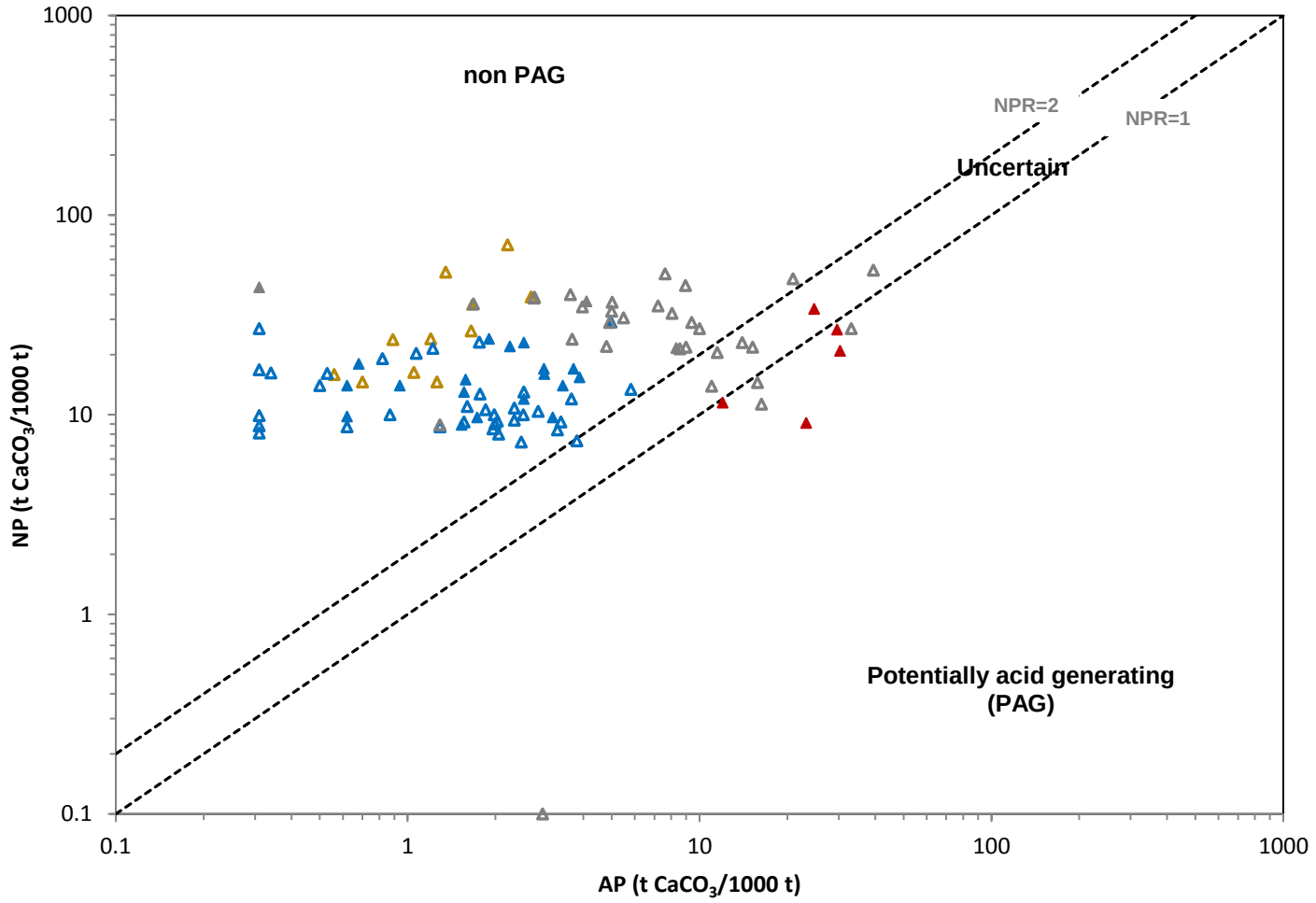
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AEM_static_FIGURES ABA WR-Ore_4April2014.xlsx




Notes:
FW = foot wall
HW = hanging wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur ($S^{2-}$) versus Net Potential Ratio (NPR)<br>Discovery Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.3-7 |

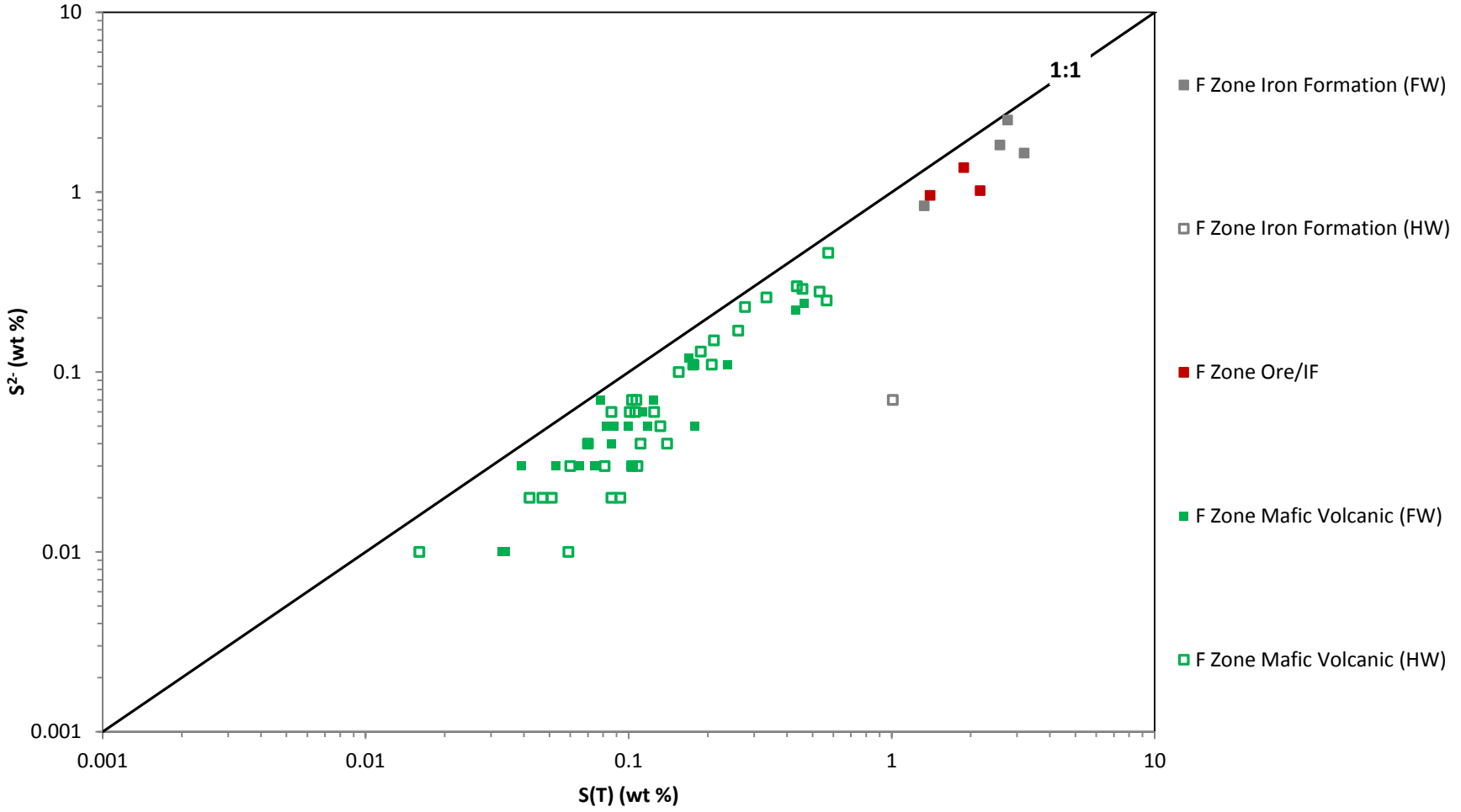
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AEM_static_FIGURES ABA_31Aug2012.xlsx




Notes:
FW = foot wall, HW = hanging wall
Negative NP values plotted as 0.1 t CaCO3/1000 t

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Acid Potential (AP) versus Neutralization Potential (NP) Discovery Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.3-8 |

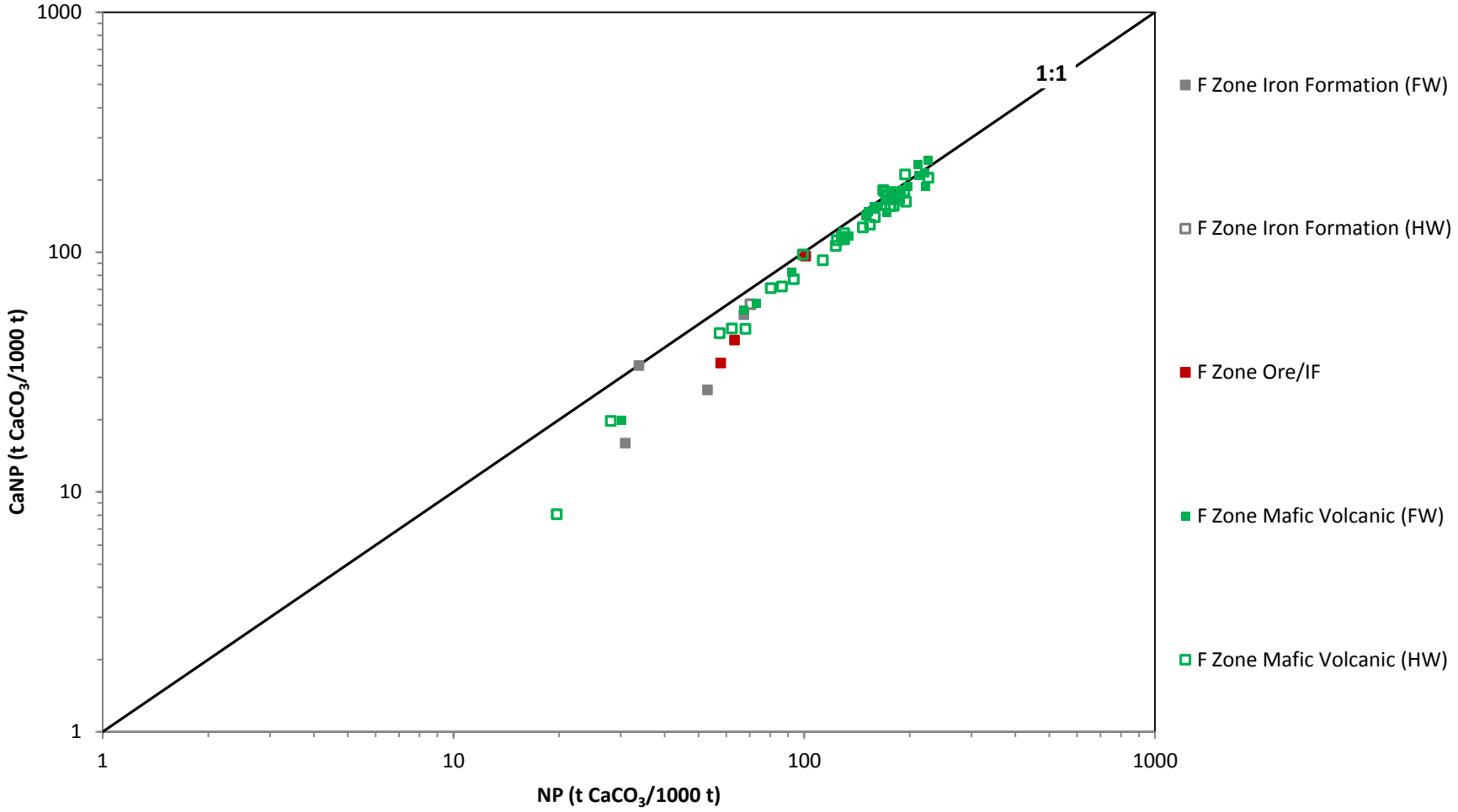
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AEM_static_FIGURES ABA_31Aug2012.xlsx




Notes:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)
FW = foot wall, HW = hanging wall

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|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$)**<br>**F- Zone Deposit** | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | Prepared DH | Date Sep-12 | Project N° 11-1428-0011 | |
| | Checked AJS | | | |
| | Reviewed VJB | | Figure **B.3-9** | |

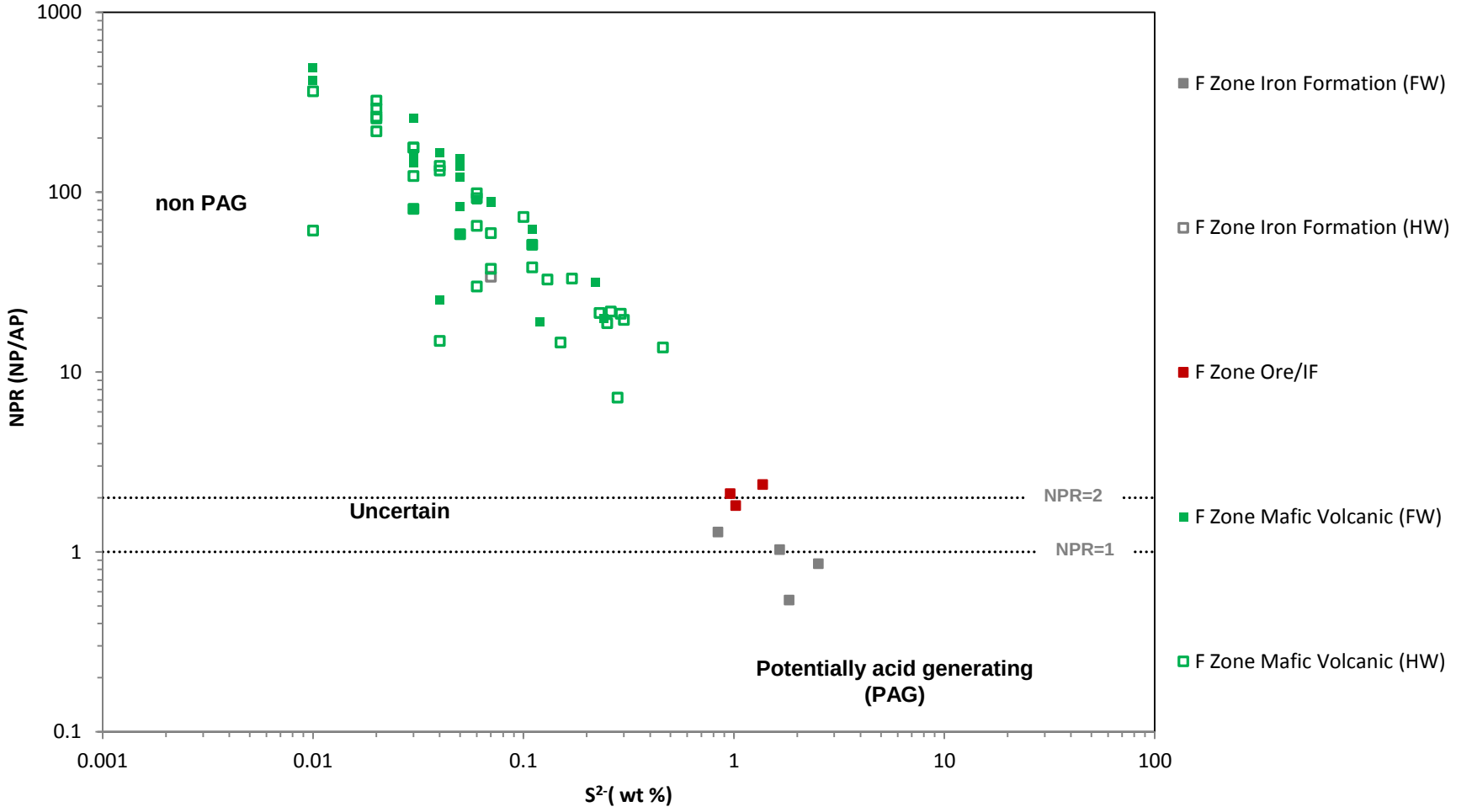
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AEM_static_FIGURES ABA_31Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall

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| Golder Associates | **Waste Rock Static Testing** | **Neutralization Potential (NP) versus Carbonate NP (CaNP)**<br>**F- Zone Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date Sep-12 | Project N° 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure **B.3-10** |

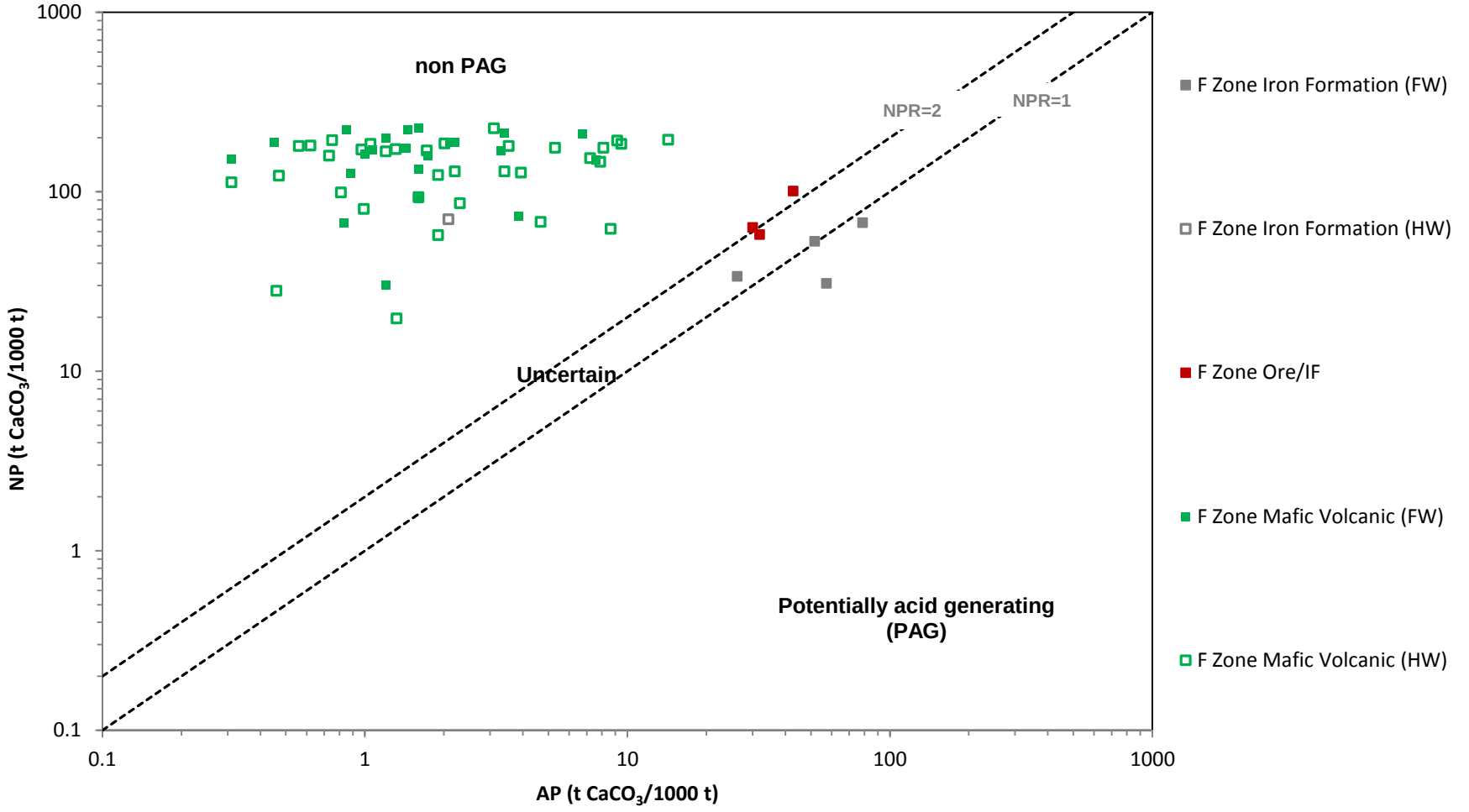
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Notes:
FW = foot wall
HW = hanging wall

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|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur ($S^{2-}$) versus Net Potential Ratio (NPR)<br>F- Zone Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure B.3-11 |

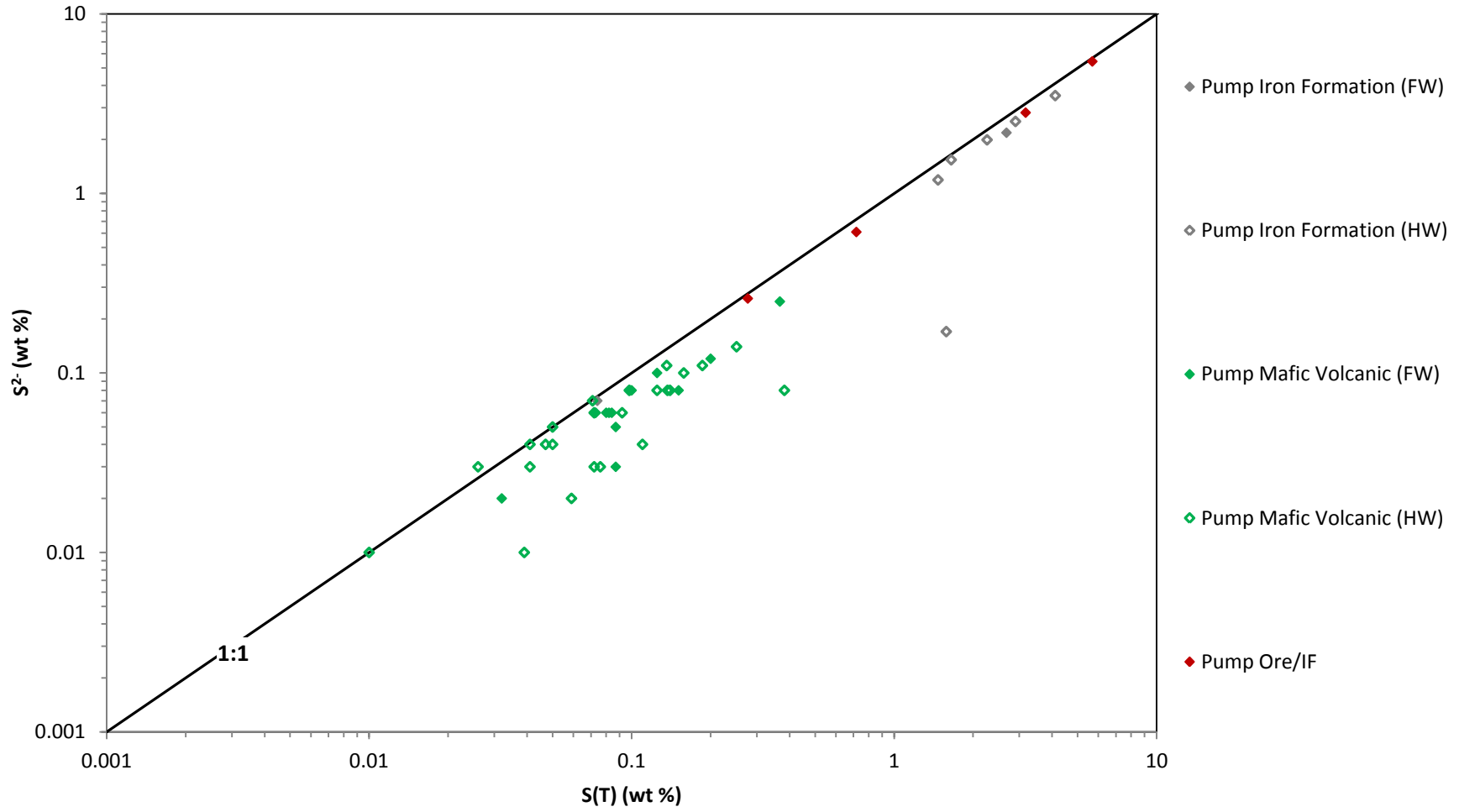
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AEM_static_FIGURES ABA_31Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall

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| Golder Associates | Waste Rock Static Testing | Acid Potential (AP) versus Neutralization Potential (NP) F- Zone Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.3-12 |

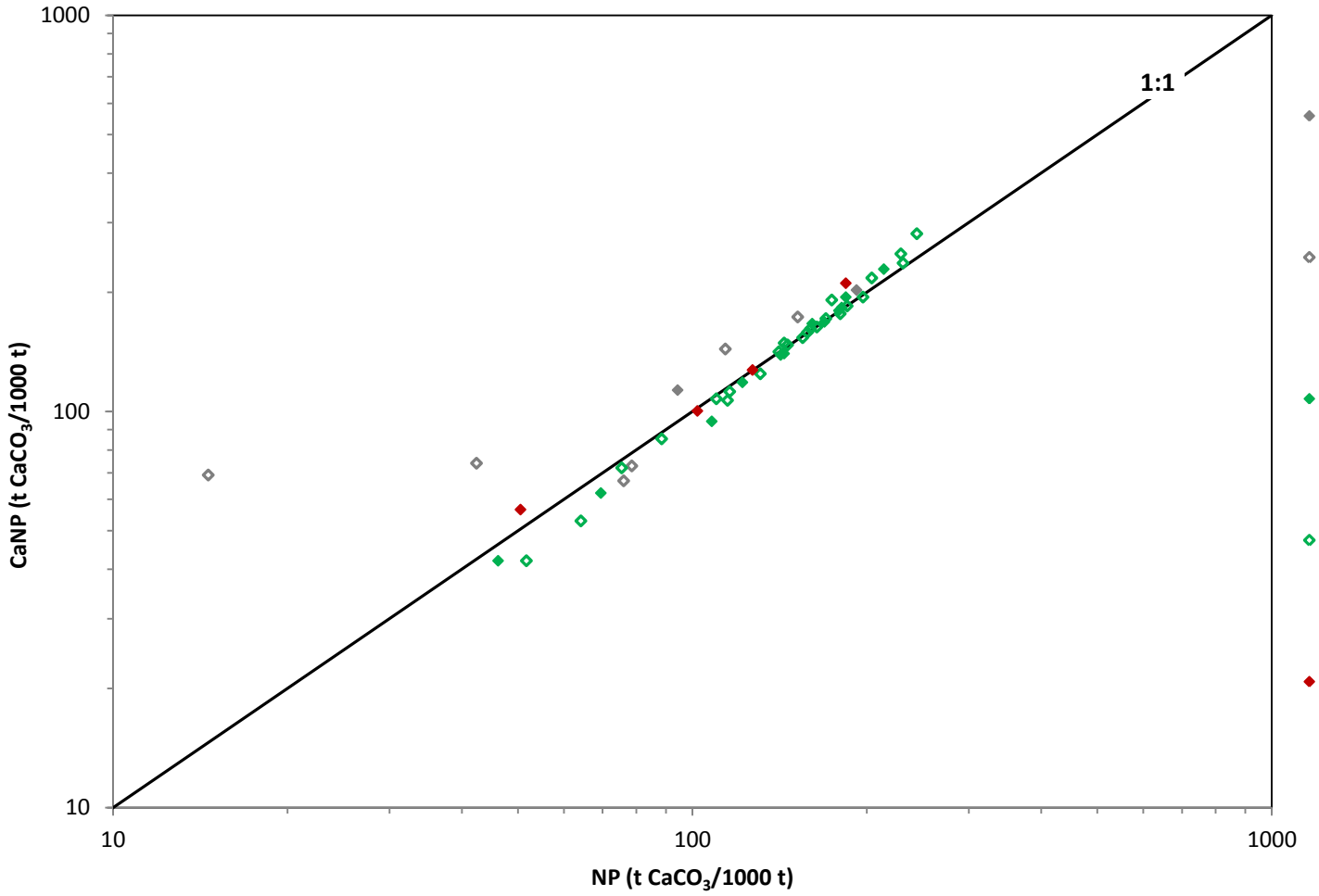
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Notes:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)
FW = foot wall, HW = hanging wall

| | | | | |
|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$)** **Pump Deposit** | | |
| **Meliadine Gold Project** **Agnico Eagle Mines Ltd.** | Prepared DH | Date Sep-12 | Project N° | 11-1428-0011 |
| | Checked AJS | | | |
| | Reviewed VJB | | Figure | **B.3-13** |

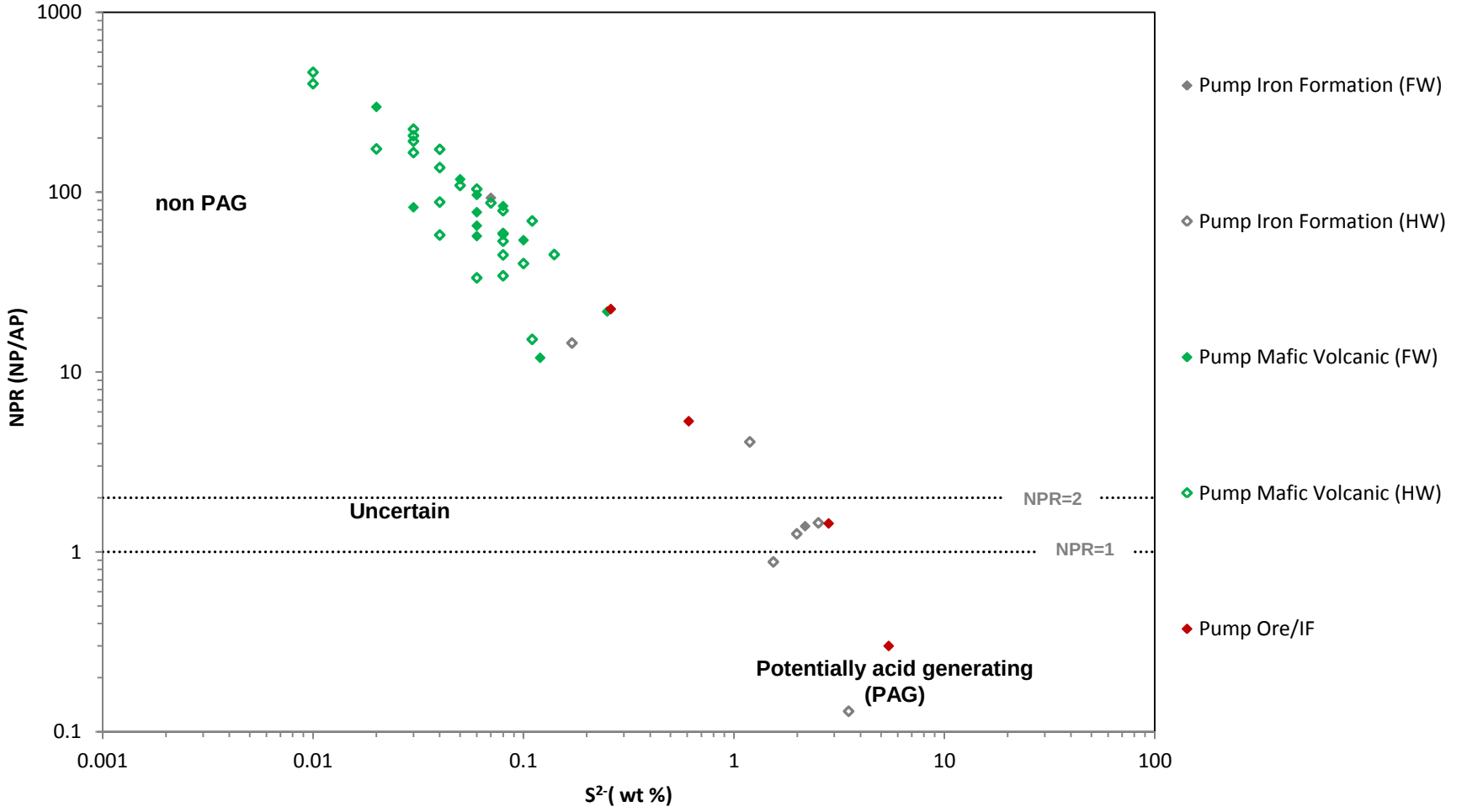
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AEM_static_FIGURES ABA_31Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall

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| Golder Associates | **Waste Rock Static Testing** | **Neutralization Potential (NP) versus Carbonate NP (CaNP)**<br>**Pump Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.3-14** |

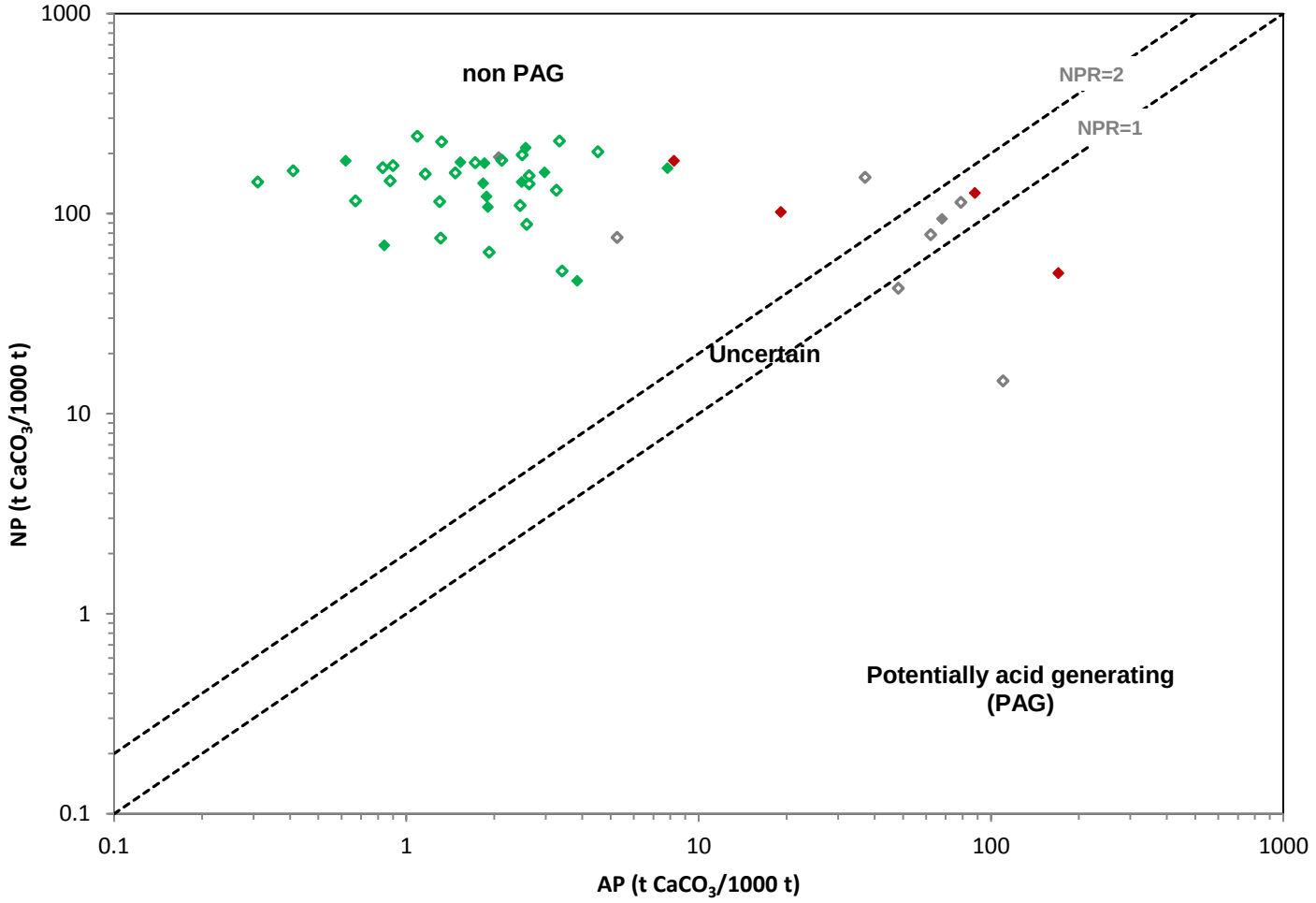
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Notes:
FW = foot wall
HW = hanging wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur ($S^{2-}$) versus Net Potential Ratio (NPR)<br>Pump Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.3-15 |

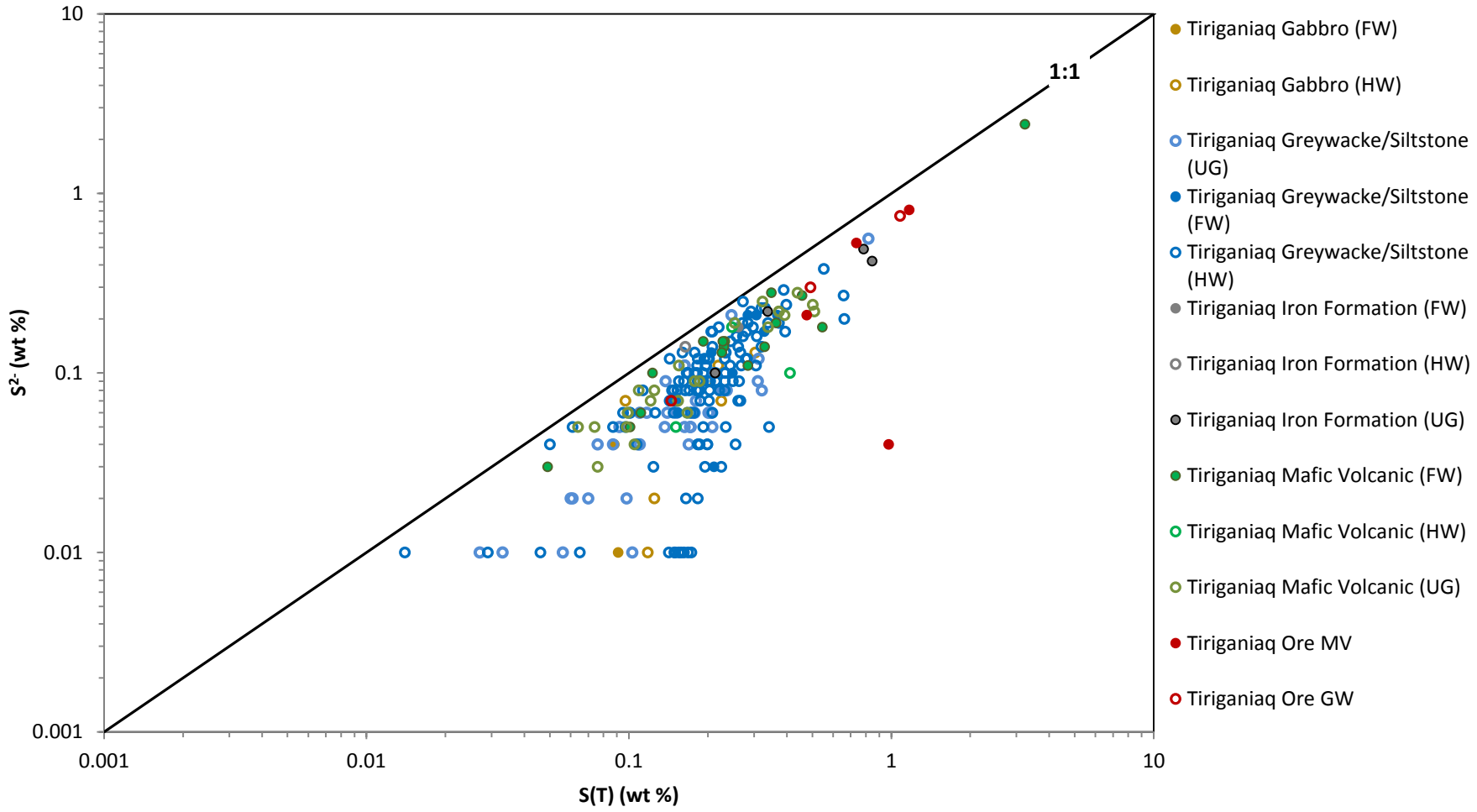
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Notes:
FW = foot wall
HW = hanging wall

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| Golder Associates | Waste Rock Static Testing | Acid Potential (AP) versus Neutralization Potential (NP) Pump Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.3-16 |

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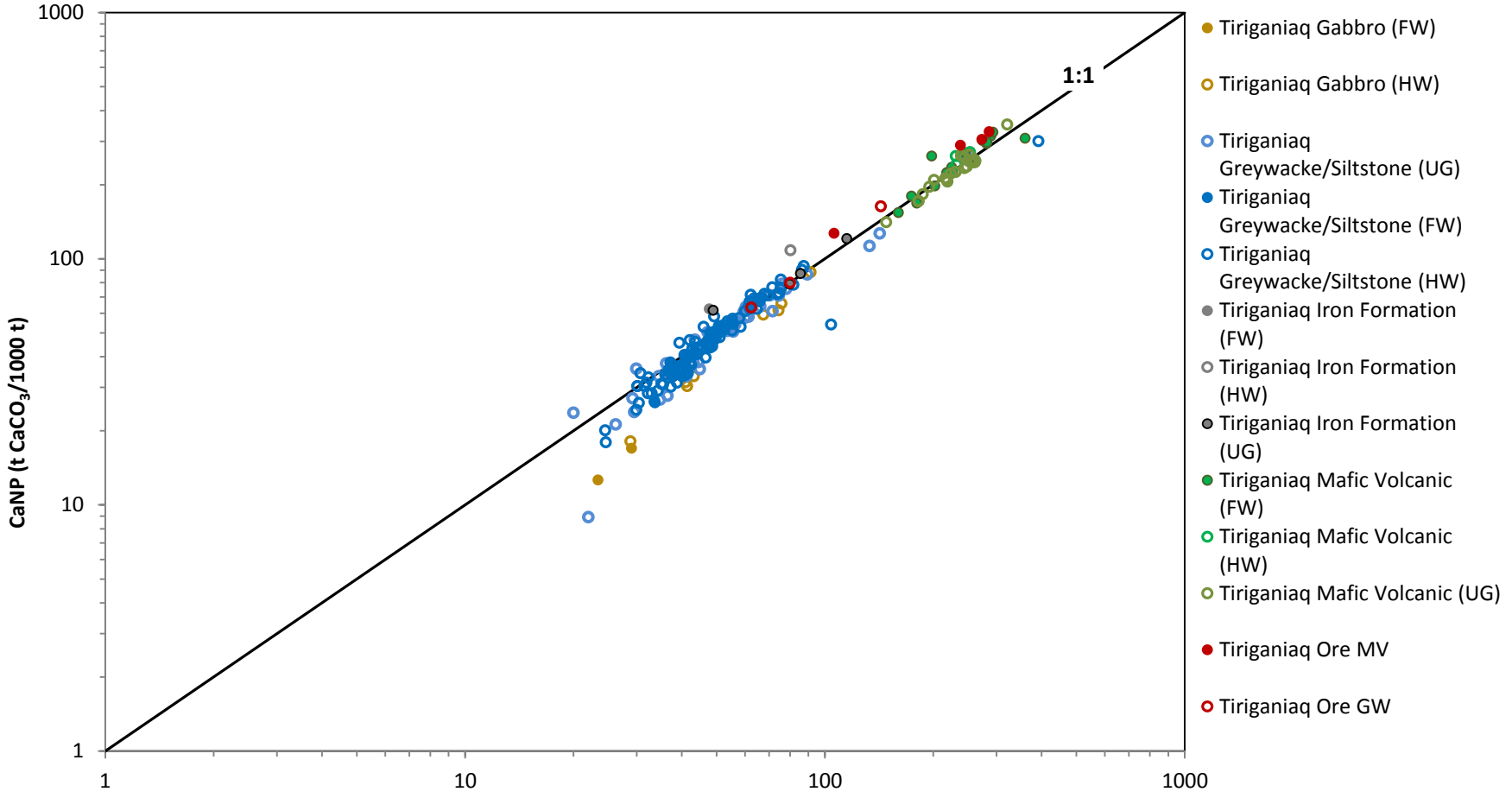

Notes:

$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)

FW = foot wall, HW = hanging wall, UG = underground

| | | | | |
|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$)** **Tiriganiaq Deposit** | | |
| **Meliadine Gold Project** **Agnico Eagle Mines Ltd.** | Prepared: DH | Date: Sep-12 | Project N°: 11-1428-0011 | |
| | Checked: AJS | | | |
| | Reviewed: VJB | | Figure: **B.3-17** | |

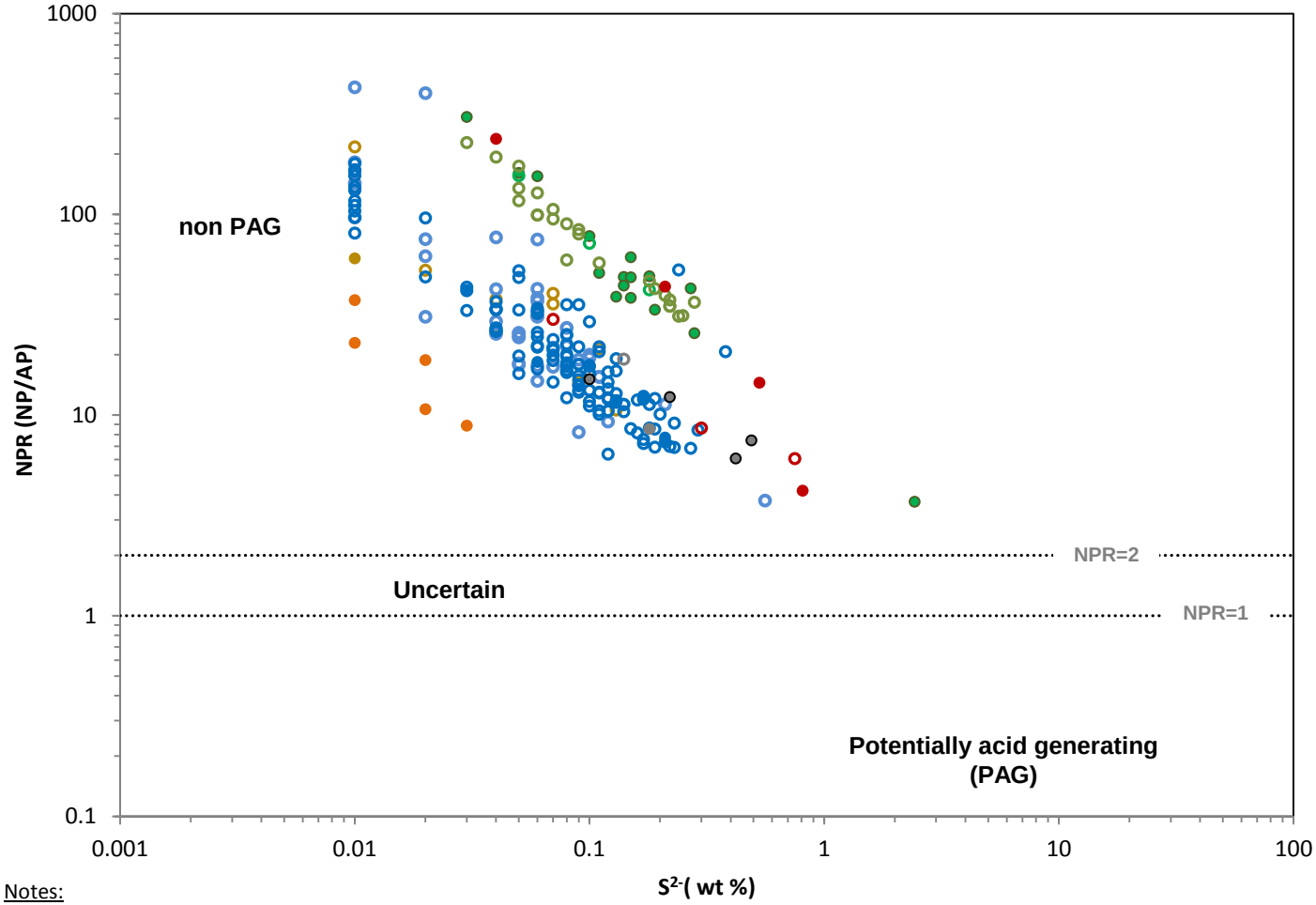
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Notes:
FW = foot wall
HW = hanging wall
UG = underground

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Neutralization Potential (NP) versus Carbonate NP (CaNP)<br>Tiriganiaq Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date: Sep-12 | Project N°: 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure: B.3-18 |

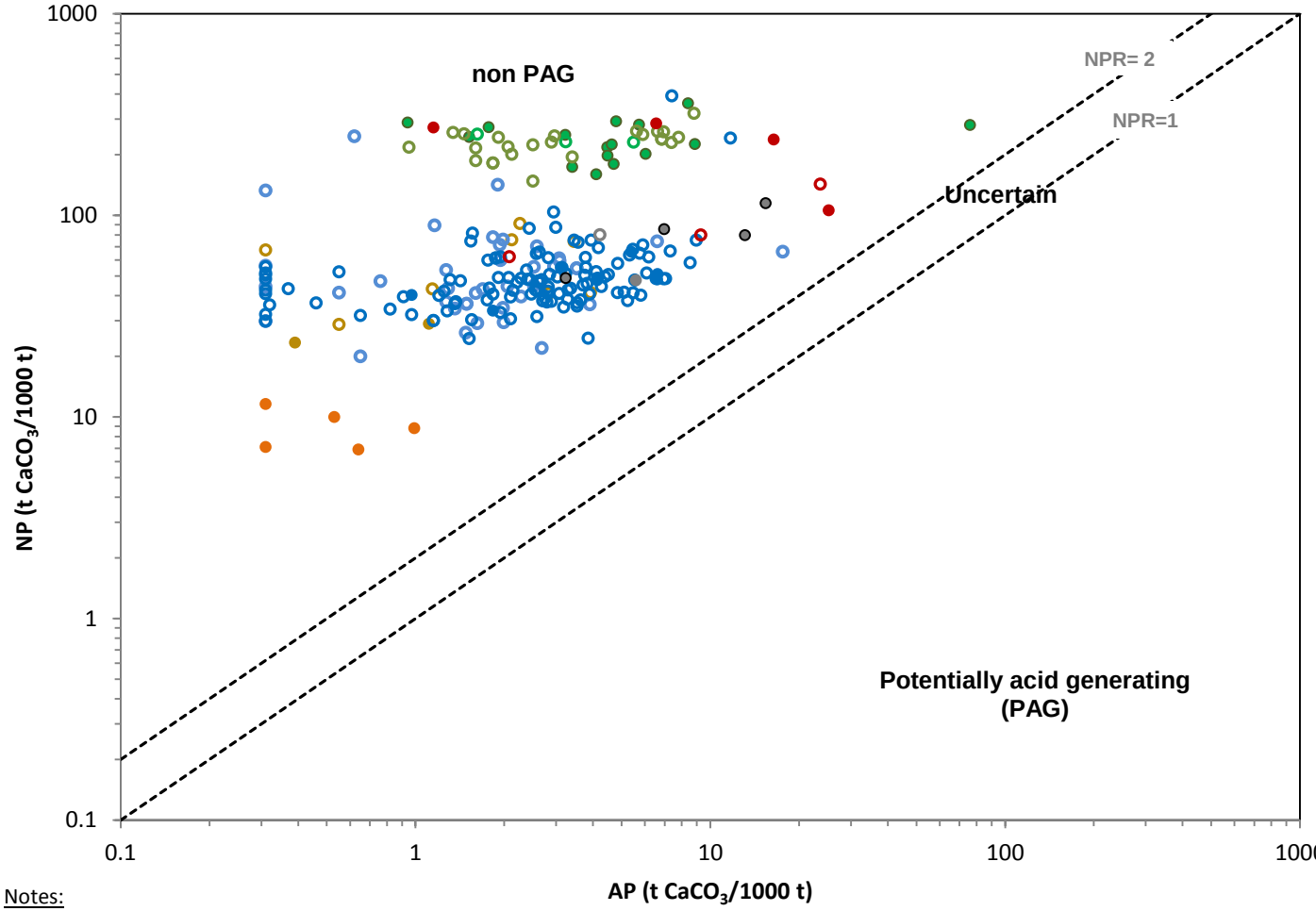
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Notes:
FW = foot wall
HW = hanging wall
UG = underground

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|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Sulphide Sulphur ($S^{2-}$) versus Net Potential Ratio (NPR)**<br>**Tiriganiaq Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | **B.3-19** |

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Notes:
FW = foot wall
HW = hanging wall
UG = underground

Golder Associates

**Waste Rock Static Testing**

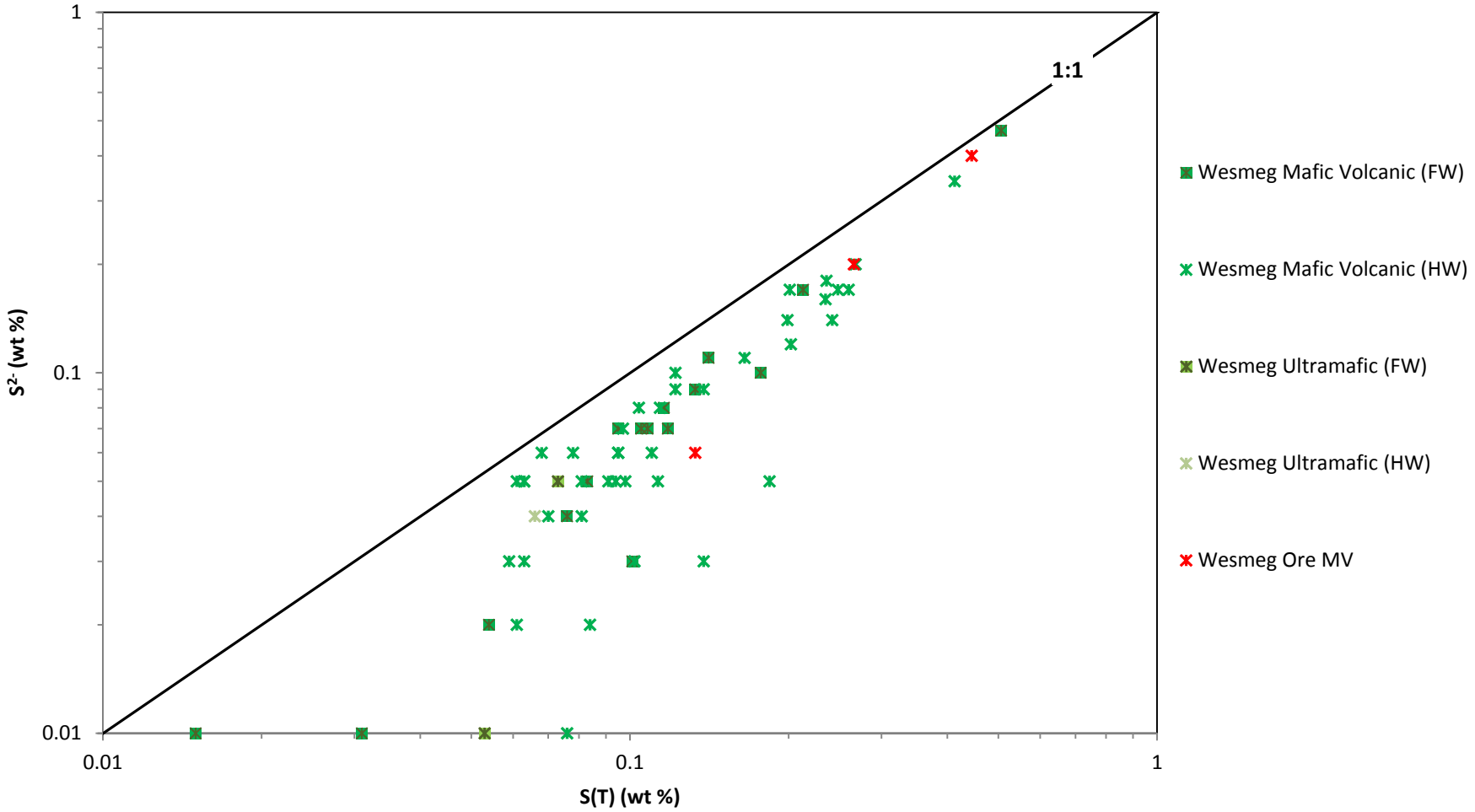
**Acid Potential (AP) versus Neutralization Potential (NP)**

**Tiriganiaq Deposit**

**Meliadine Gold Project**
**Agnico Eagle Mines Ltd.**

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|---|---|---|---|---|---|
| Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | AJS | | | | |
| Reviewed | VJB | | | Figure | B.3-20 |

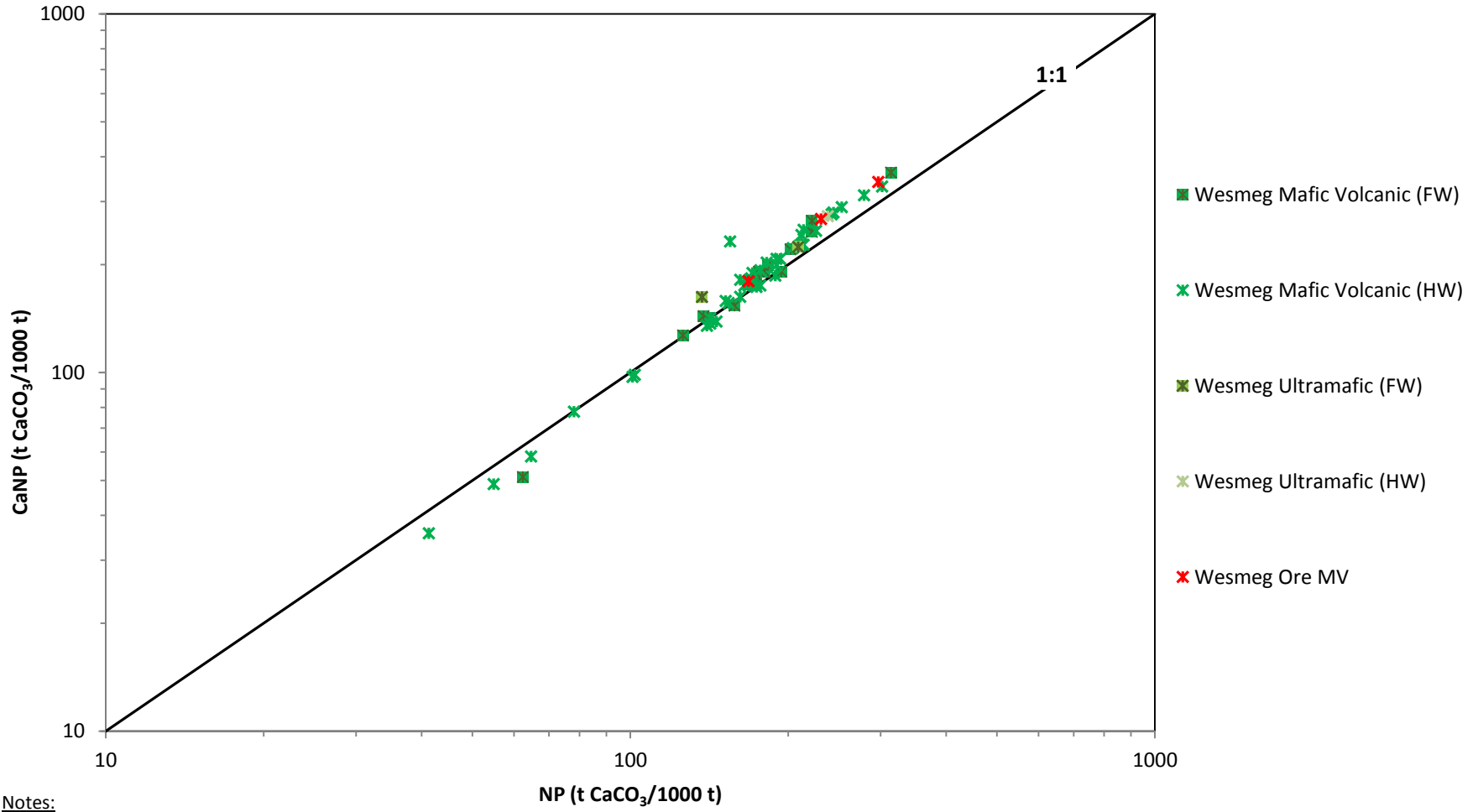
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AEM_static_FIGURES ABA_31Aug2012.xlsx




Notes:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)
FW = foot wall, HW = hanging wall, MV = mafic volcanic

| | | | | |
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| Golder Associates | **Waste Rock Static Testing** | **Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$)**<br>**Wesmeg Deposit** | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | Prepared: DH | Date: Sep-12 | Project N°: 11-1428-0011 | |
| | Checked: AJS | | | |
| | Reviewed: VJB | | Figure: **B.3-21** | |

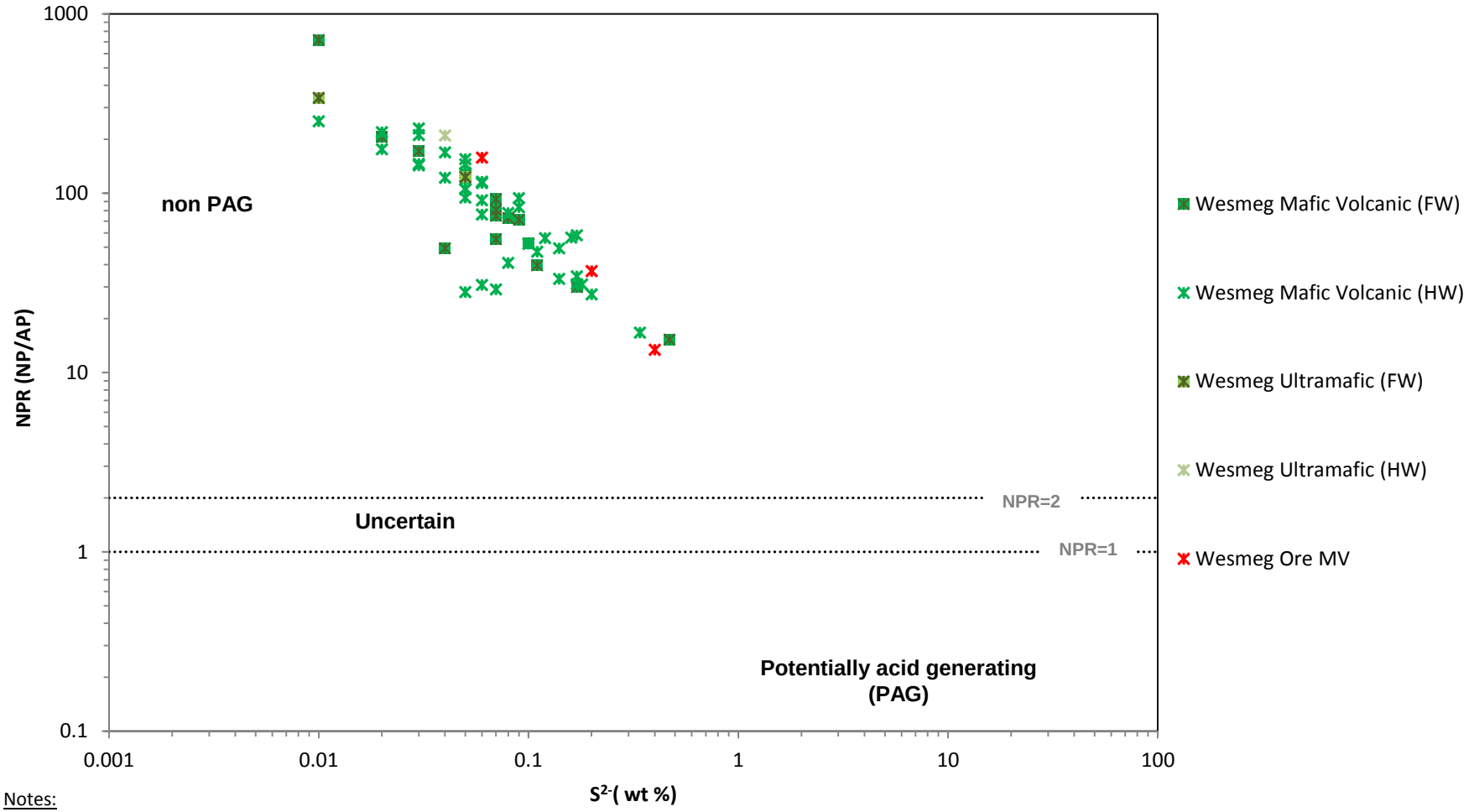
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Notes:
FW = foot wall
HW = hanging wall
MV = mafic volcanic

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| Golder Associates | **Waste Rock Static Testing** | **Neutralization Potential (NP) versus Carbonate NP (CaNP)**<br>**Wesmeg Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date Sep-12 | Project N° 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure **B.3-22** |

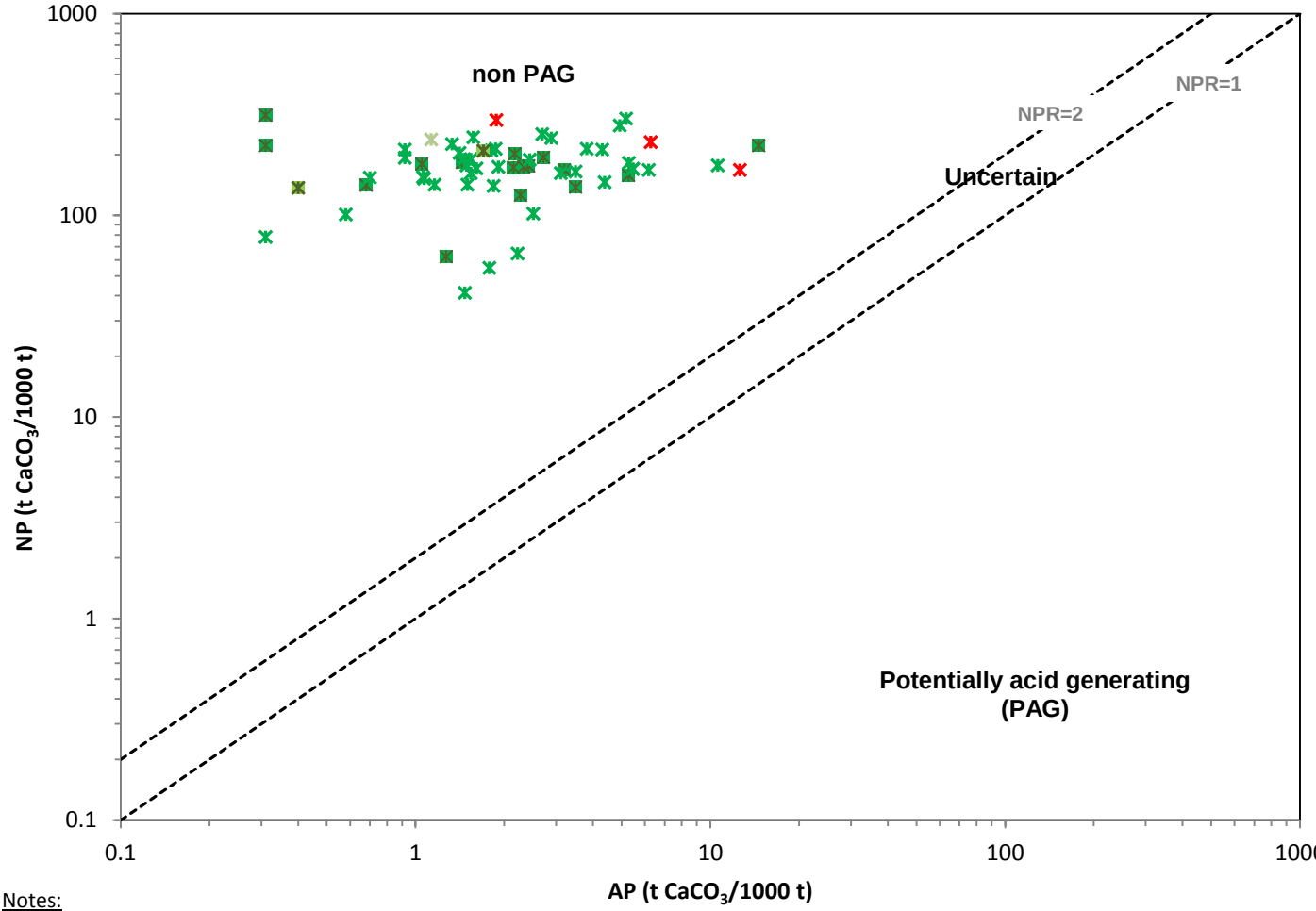
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Notes:
FW = foot wall
HW = hanging wall
MV = mafic volcanic

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| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur ($S^{2-}$) versus Net Potential Ratio (NPR)<br>Wesmeg Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date Sep-12 | Project N° 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure B.3-23 |

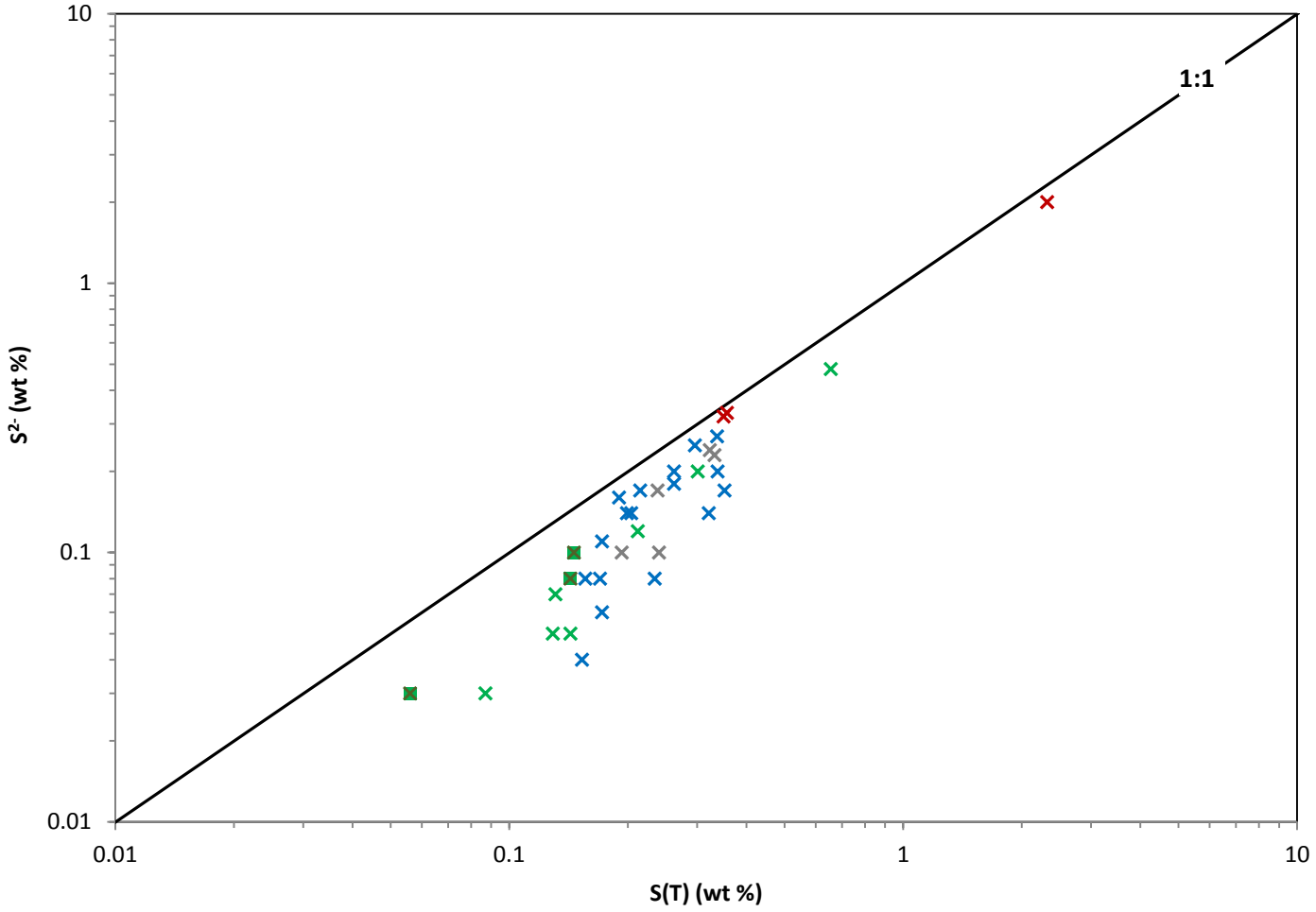
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Notes:
FW = foot wall
HW = hanging wall
MV = mafic volcanic

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| Golder Associates | Waste Rock Static Testing | Acid Potential (AP) versus Neutralization Potential (NP)<br>Wesmeg Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date Sep-12 | Project N° 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure B.3-24 |

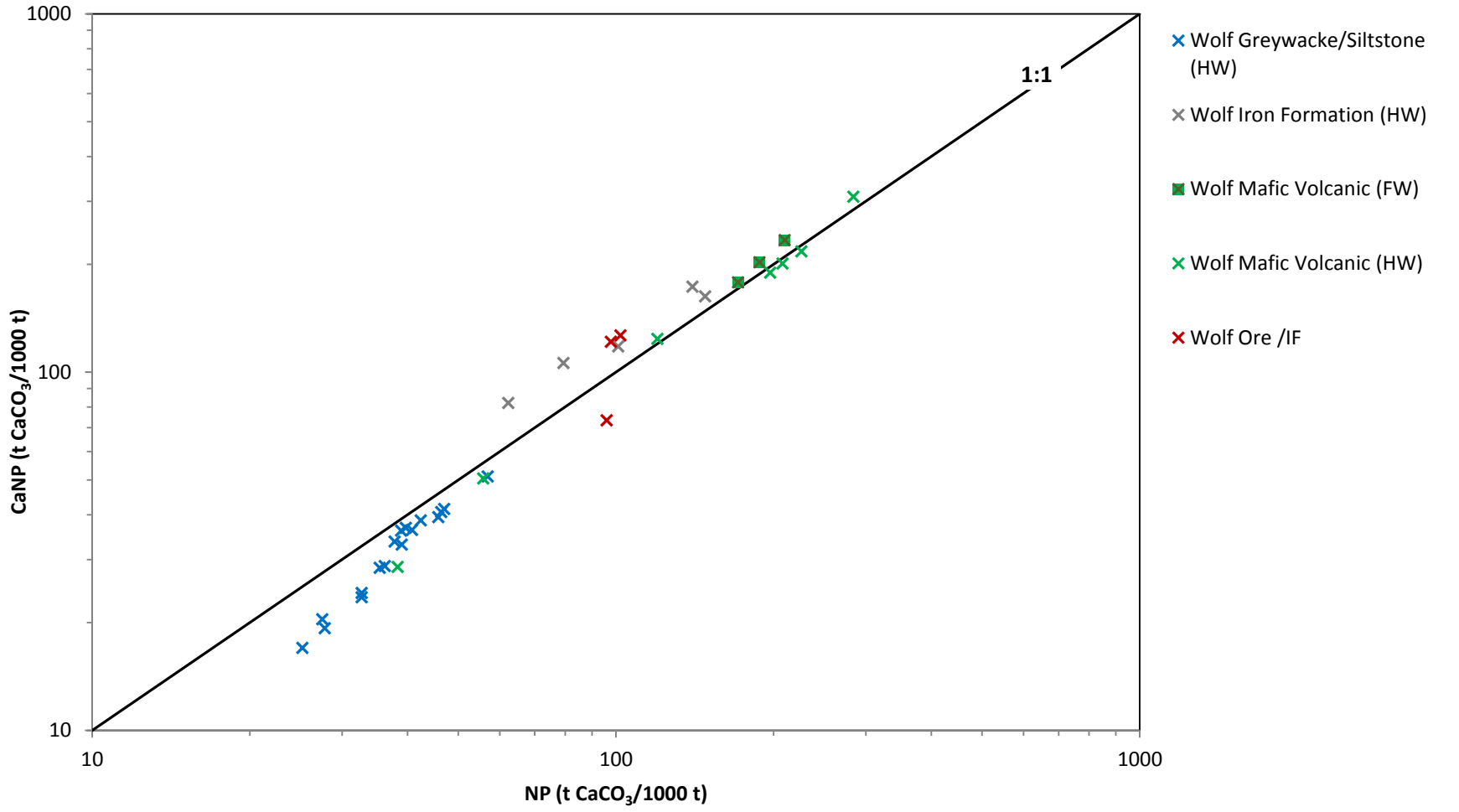
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Note:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)

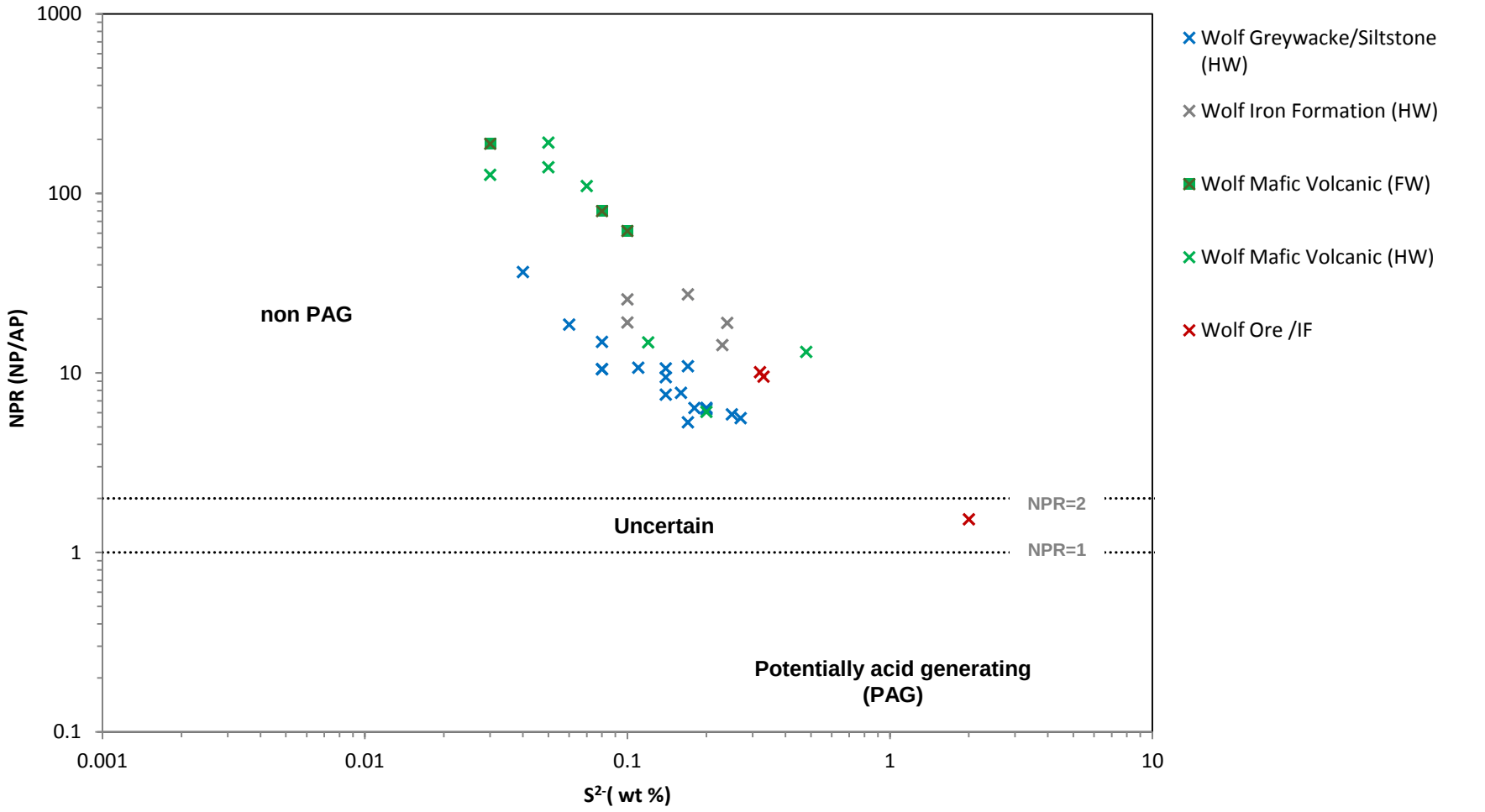
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| Golder Associates | **Waste Rock Static Testing** | **Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$)** **Wolf Deposit** | | |
| **Meliadine Gold Project** **Agnico Eagle Mines Ltd.** | Prepared DH | Date Sep-12 | Project N° | 11-1428-0011 |
| | Checked AJS | | | |
| | Reviewed VJB | | Figure | **B.3-25** |

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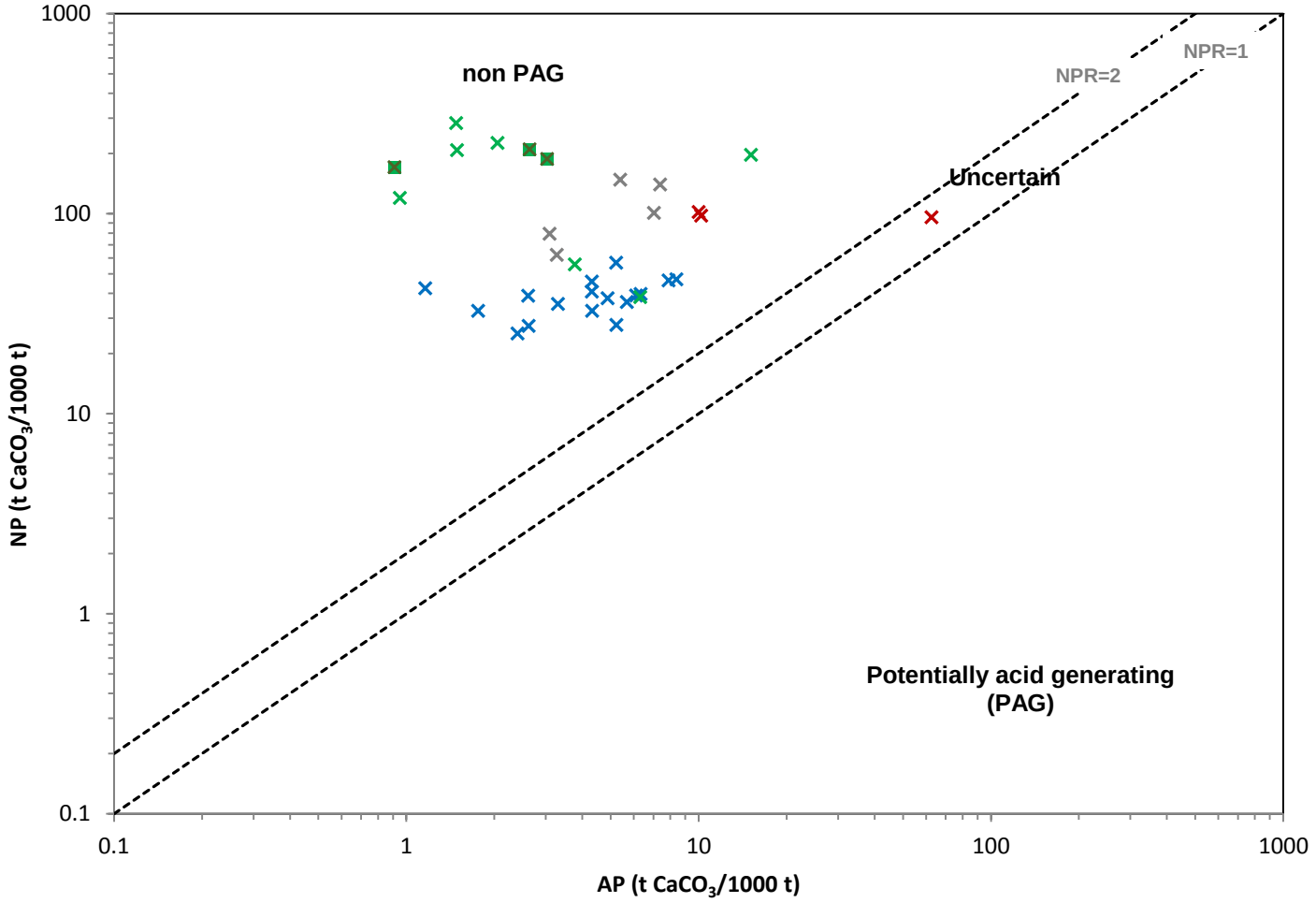

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| Golder Associates | Waste Rock Static Testing | Neutralization Potential (NP) versus Carbonate NP (CaNP)<br>Wolf Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date: Sep-12 | Project N°: 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure: B.3-26 |

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| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur ($S^{2-}$) versus Net Potential Ratio (NPR) Wolf Deposit | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | B.3-27 |

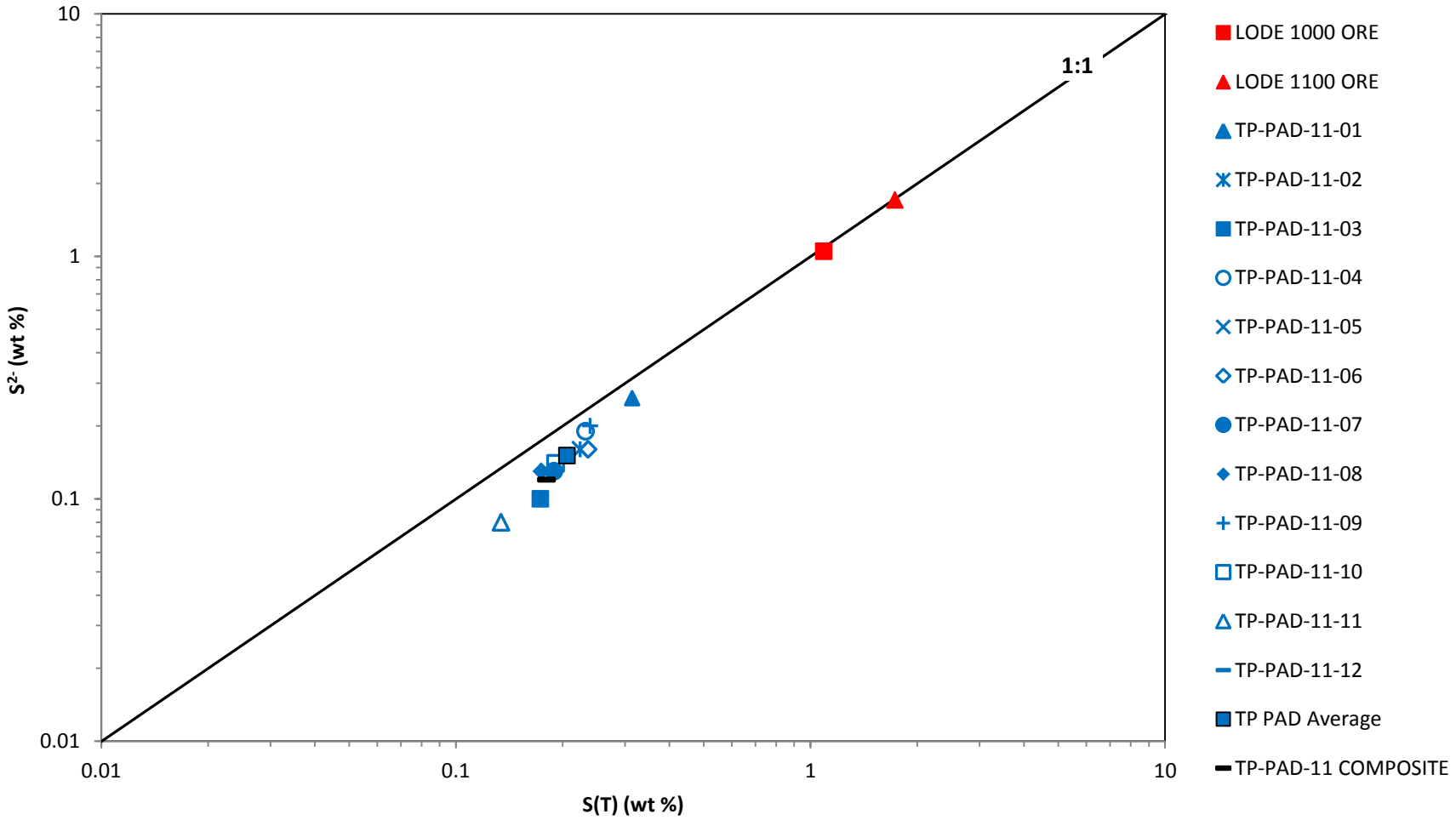
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Note:
$S^{2-}$ values less than method detection plotted as detection limit, resulting in AP values equal to 0.31

| | | | | | |
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| Golder Associates | **Waste Rock Static Testing** | **Acid Potential (AP) versus Neutralization Potential (NP)**<br>**Wolf Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.3-28** |

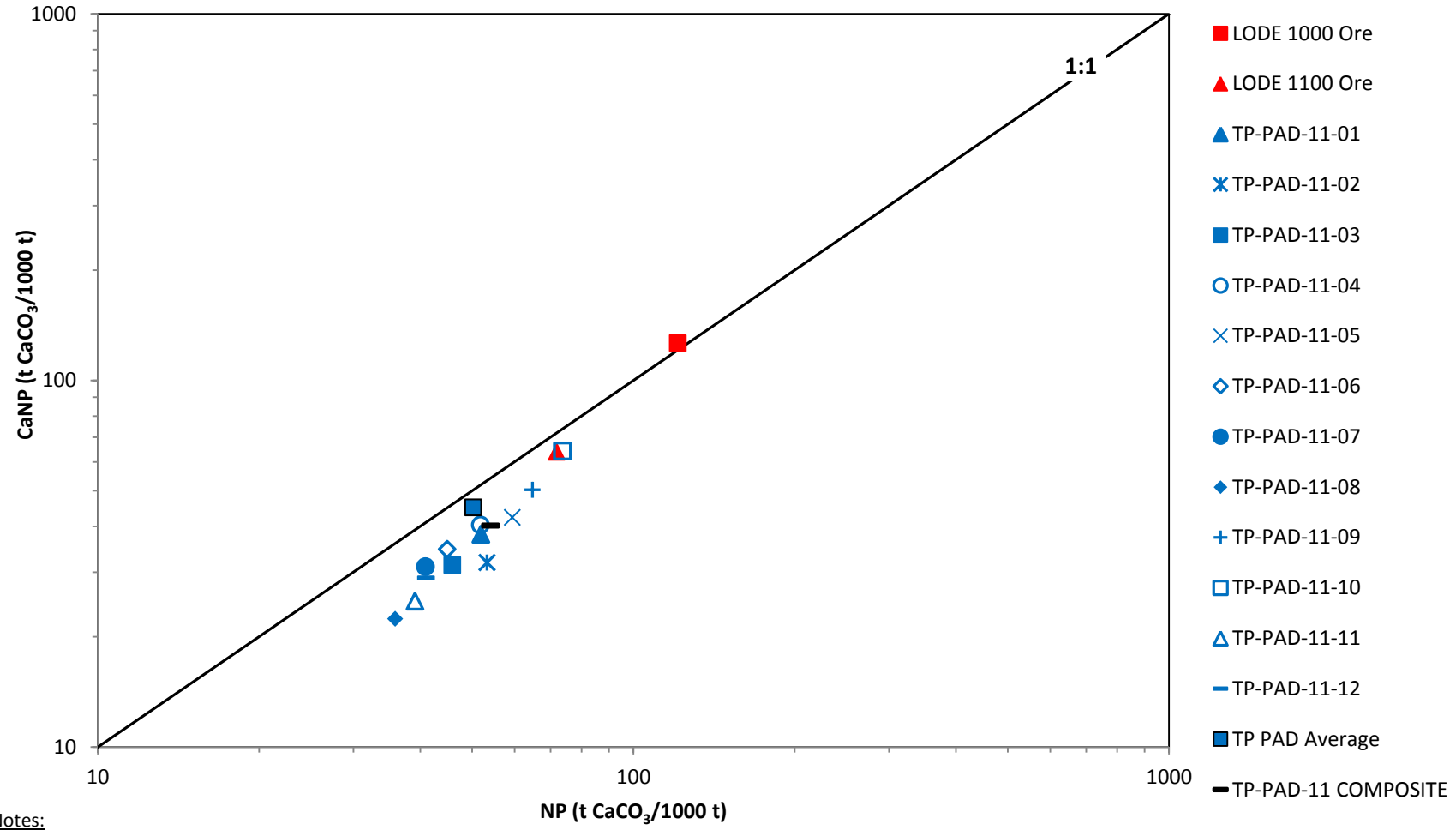
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AEM_static_FIGURES ABA_31Aug2012.xlsx




Notes:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$)**<br>**Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH/AJS | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | **B.3-29** |

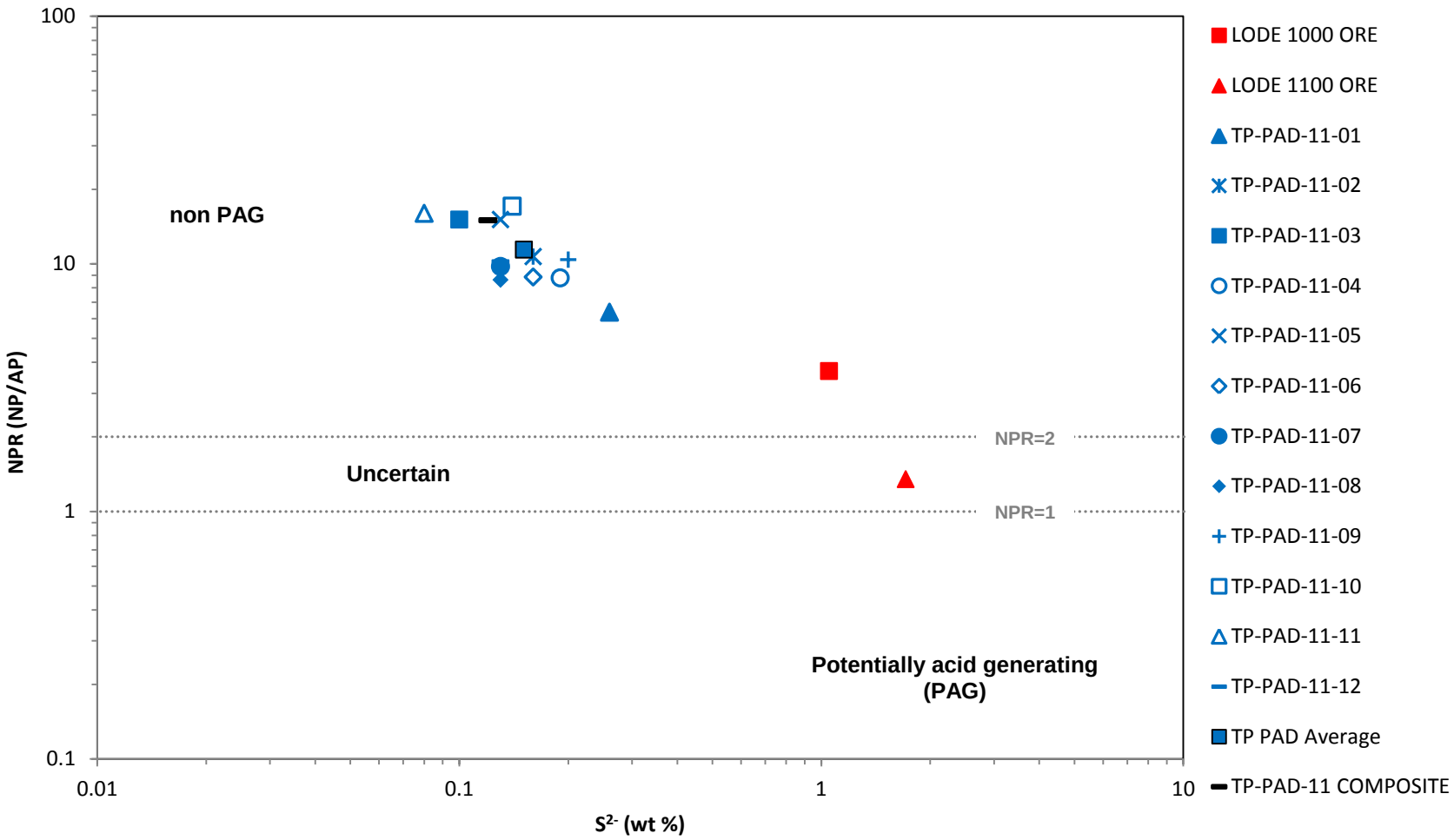
N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\PAD FIGS\
AEM_static_PAD_FIGURES_30Aug2012.xlsx




Notes:
Composite -
T P - Test pit

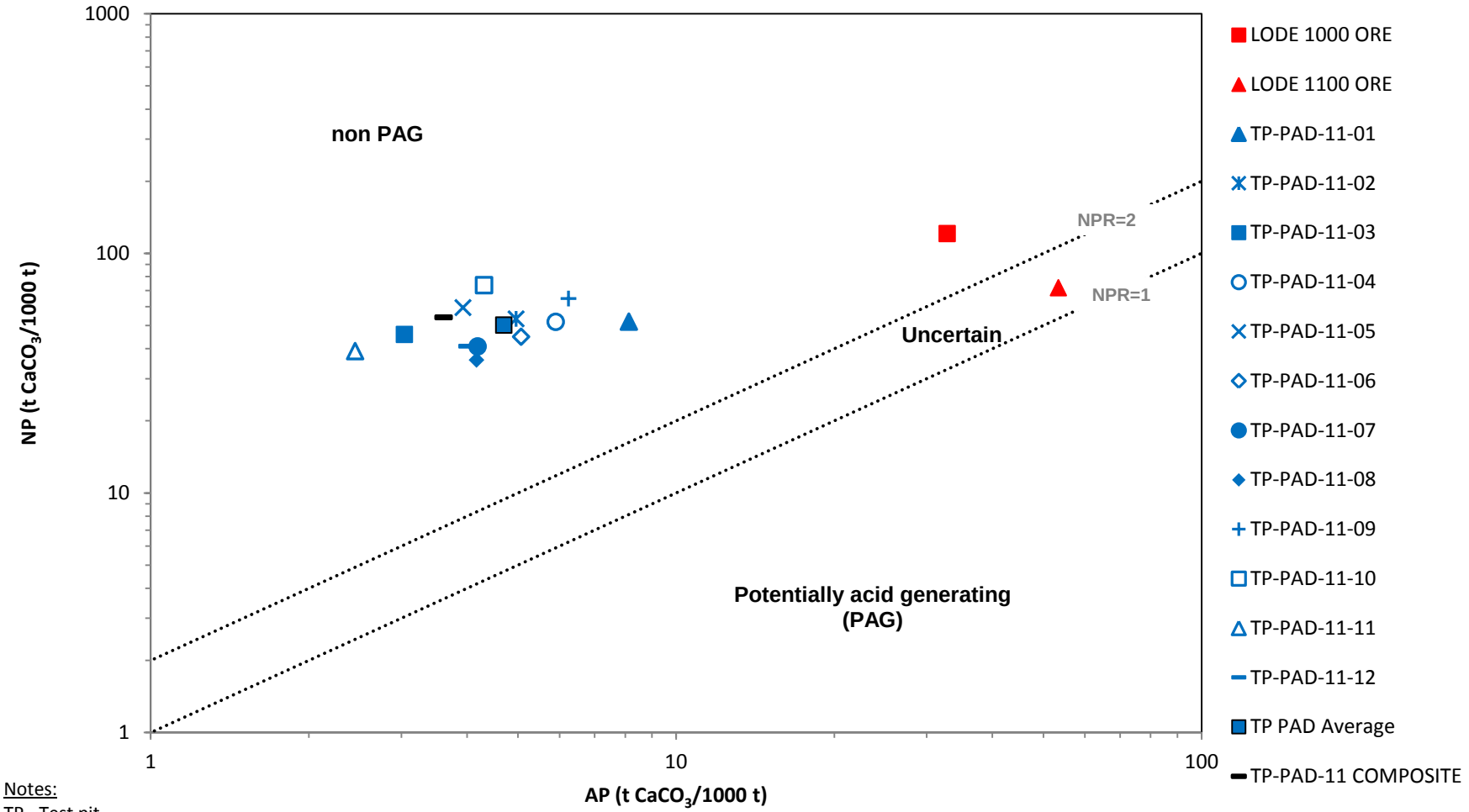
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Neutralization Potential (NP) versus Carbonate NP (CaNP)**<br>**Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **B.3-30** |

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AEM_static_PAD_FIGURES_30Aug2012.xlsx




| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur ($S^{2-}$) versus Net Potential Ratio (NPR)<br>Tiriganiaq Deposit | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared DH/AJS | Date Sep-12 | Project N° 11-1428-0011 | |
| | | Checked JMC | | | |
| | | Reviewed VJB | | Figure B.3-31 | |

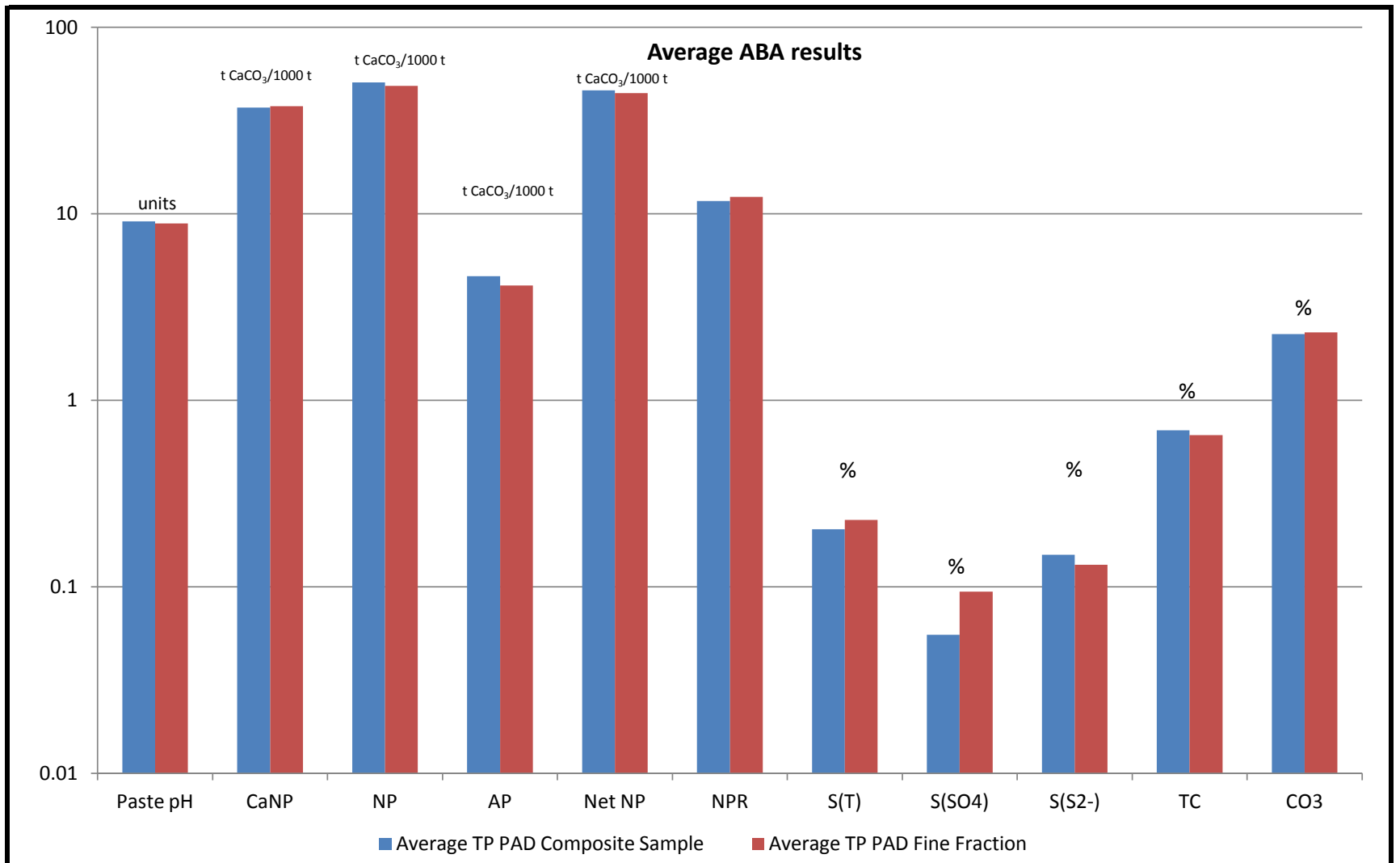
N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\PAD FIGS\AEM_static_PAD_FIGURES_30Aug2012.xlsx

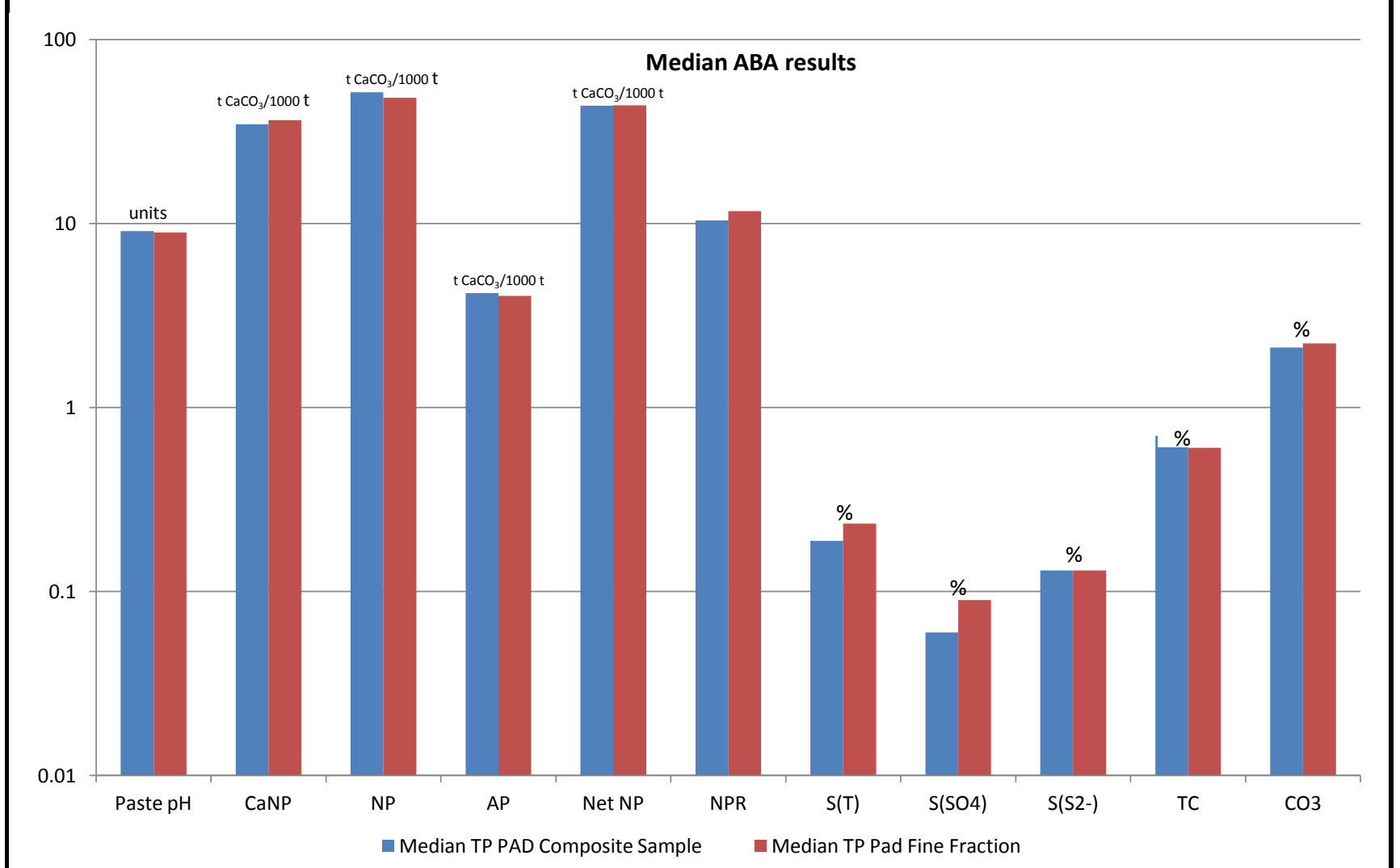



Notes:
TP - Test pit
Negative NP values plotted as 0.1 t CaCO3/1000 t

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Acid Potential (AP) versus Neutralization Potential (NP)** **Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunavut** **Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **B.3-32** |

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AEM_static_PAD_FIGURES_30Aug2012.xlsx




| | | | |
|---|---|---|---|
| Golder Associates | **Tiriganiaq Operations Pad (Waste Rock) Static Testing** | **Comparison of waste rock ABA Results Tiriganiaq Deposit - Operations PAD** | |
| **Meliadine Property, Nunavut Agnico Eagle Mines Ltd.** | Prepared LMC | Date Sep-12 | Project N° 11-1428-0011 |
| | Checked AJS | | |
| | Reviewed VJB | | Figure **B.3-33** |

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AEM_static_PAD_FIGURES_30Aug2012.xlsx

# B.4 Short Term Metal Leach Test Results: Tables and Figures

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| ML08-226-01 | 2011 | 23 | 32 | Gabbro | Discovery | OP/HW | 9.2 | 83 | - | 1.0 | 1.1 | < 0.0001 | 0.000080 | 2.0 | 0.0084 | 0.0076 | < 0.00002 | < 0.00001 | 1.9 | < 0.000003 | 0.00042 | 0.00050 | 0.00060 |
| ML08-229-02 | 2011 | 95.5 | 104.5 | Gabbro | Discovery | OP/HW | 8.1 | 83 | - | 0.40 | 1.1 | < 0.0001 | 0.000010 | 1.7 | 0.0075 | 0.0049 | < 0.00002 | < 0.00001 | 3.0 | < 0.000003 | 0.00018 | < 0.0005 | < 0.0005 |
| ML08-241-03 | 2011 | 84 | 93 | Gabbro | Discovery | OP/HW | 9.1 | 122 | - | 1.3 | 3.1 | < 0.0001 | < 0.00001 | 1.4 | 0.019 | 0.012 | < 0.00002 | < 0.00001 | 2.4 | < 0.000003 | 0.00015 | < 0.0005 | < 0.0005 |
| ML08-243-02 | 2011 | 136 | 144.5 | Gabbro | Discovery | OP/FW | 8.9 | 85 | - | 0.90 | 2.1 | < 0.0001 | < 0.00001 | 1.3 | 0.0057 | 0.0059 | < 0.00002 | < 0.00001 | 4.3 | < 0.000003 | 0.000025 | < 0.0005 | < 0.0005 |
| ML08-245-01 | 2011 | 44 | 53 | Gabbro | Discovery | OP/HW | 8.7 | 93 | - | 0.80 | 2.1 | < 0.0001 | < 0.00001 | 1.8 | 0.0091 | 0.0080 | < 0.00002 | < 0.00001 | 2.4 | < 0.000003 | 0.00031 | < 0.0005 | < 0.0005 |
| ML09-259-01 | 2011 | 11 | 20 | Gabbro | Discovery | OP/HW | 7.9 | 84 | - | 1.7 | 1.2 | < 0.0001 | < 0.00001 | 2.1 | 0.0048 | 0.0064 | < 0.00002 | < 0.00001 | 2.9 | < 0.000003 | 0.00051 | 0.00070 | 0.00050 |
| ML95-104-01 | 2011 | 20 | 29 | Gabbro | Discovery | OP/HW | 8.3 | 85 | - | 0.50 | 1.3 | < 0.0001 | 0.000020 | 1.4 | 0.0033 | 0.0051 | < 0.00002 | < 0.00001 | 4.2 | < 0.000003 | 0.00026 | < 0.0005 | 0.0010 |
| ML95-105-02 | 2011 | 63 | 73 | Gabbro | Discovery | OP/HW | 8.0 | 107 | - | 0.70 | 3.9 | < 0.0001 | < 0.00001 | 1.0 | 0.50 | 0.0065 | < 0.00002 | < 0.00001 | 4.0 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| ML95-117-02 | 2011 | 40 | 48.5 | Gabbro | Discovery | OP/HW | 8.1 | 82 | - | 0.40 | 0.60 | < 0.0001 | < 0.00001 | 1.4 | 0.0071 | 0.0049 | < 0.00002 | < 0.00001 | 3.5 | < 0.000003 | 0.00017 | < 0.0005 | < 0.0005 |
| ML95-88-02 | 2011 | 36 | 43 | Gabbro | Discovery | OP/HW | 9.1 | 73 | - | 0.80 | 1.5 | < 0.0001 | < 0.00001 | 0.59 | 0.0053 | 0.0061 | < 0.00002 | < 0.00001 | 3.6 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| ML97-186-02 | 2011 | 120 | 129 | Gabbro | Discovery | OP/HW | 8.0 | 98 | - | 0.50 | 3.6 | < 0.0001 | < 0.00001 | 1.3 | 0.0078 | 0.0065 | < 0.00002 | < 0.00001 | 4.2 | 0.000044 | 0.00020 | < 0.0005 | 0.00060 |
| | | | | | | MINIMUM | 7.9 | 73 | nc | 0.40 | 0.60 | <0.0001 | < 0.00001 | 0.59 | 0.0033 | 0.0049 | <0.00002 | <0.00001 | 1.9 | <0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| | | | | | | MAXIMUM | 9.2 | 122 | nc | 1.7 | 3.9 | <0.0001 | 0.000080 | 2.1 | 0.50 | 0.012 | <0.00002 | <0.00001 | 4.3 | 0.000044 | 0.00051 | 0.00070 | 0.0010 |
| | | | | | | MEDIAN | 8.3 | 85 | nc | 0.80 | 1.5 | nc | 0.000010 | 1.4 | 0.0075 | 0.0064 | nc | nc | 3.5 | nc | 0.00018 | nc | 0.00050 |
| | | | | | | AVERAGE | 8.5 | 90 | nc | 0.82 | 2.0 | nc | 0.000017 | 1.4 | 0.052 | 0.0067 | nc | nc | 3.3 | nc | 0.00021 | nc | 0.00056 |
| | | | | | | STANDARD DEVIATION | 0.51 | 14 | nc | 0.40 | 1.1 | nc | 0.000021 | 0.42 | 0.15 | 0.0019 | nc | nc | 0.83 | nc | 0.00016 | nc | 0.00015 |
| | | | | | | 75TH PERCENTILE | 9.0 | 96 | nc | 0.95 | 2.6 | nc | 0.000010 | 1.7 | 0.0088 | 0.0071 | nc | nc | 4.1 | nc | 0.00029 | nc | 0.00055 |
| DS09GT-10-01 | 2011 | 14 | 19 | Greywacke/Siltstone | Discovery | OP/HW | 7.9 | 95 | - | 2.6 | 2.1 | < 0.0001 | < 0.00001 | 1.2 | 0.15 | 0.011 | < 0.00002 | < 0.00001 | 3.5 | 0.0000040 | 0.000093 | 0.00060 | < 0.0005 |
| ML00-221-01 | 2009 | 25 | 30 | Greywacke/Siltstone | Discovery | OP/HW | 9.1 | 88 | 43 | 2.2 | 1.9 | < 0.0001 | 0.000020 | 2.0 | 0.35 | 0.034 | < 0.00002 | 0.000010 | 2.4 | < 0.000003 | 0.00028 | 0.0018 | < 0.0005 |
| ML00-221-02 | 2009 | 61 | 66 | Greywacke/Siltstone | Discovery | OP/HW | 8.9 | 79 | 34 | 1.6 | 3.1 | < 0.0001 | 0.000020 | 1.5 | 0.060 | 0.026 | < 0.00002 | 0.000020 | 3.4 | < 0.000003 | 0.00026 | 0.0017 | 0.00060 |
| ML00-221-03 | 2009 | 88 | 93 | Greywacke/Siltstone | Discovery | OP/HW | 8.5 | 86 | 38 | 2.0 | 3.6 | < 0.0001 | 0.000020 | 1.9 | 0.060 | 0.032 | < 0.00002 | 0.000020 | 3.1 | 0.0000030 | 0.00032 | 0.0022 | < 0.0005 |
| ML00-221-04 | 2009 | 162 | 168 | Greywacke/Siltstone | Discovery | OP/FW | 8.2 | 84 | 37 | 2.2 | 1.8 | < 0.0001 | 0.000010 | 1.9 | 0.027 | 0.032 | < 0.00002 | 0.000010 | 3.9 | < 0.000003 | 0.00022 | 0.0015 | < 0.0005 |
| ML08-225-02 | 2011 | 104 | 115 | Greywacke/Siltstone | Discovery | OP/FW | 7.9 | 92 | - | 1.4 | 3.7 | < 0.0001 | < 0.00001 | 1.4 | 0.093 | 0.011 | < 0.00002 | < 0.00001 | 2.7 | 0.000011 | 0.000099 | 0.00060 | < 0.0005 |
| ML08-226-05 | 2011 | 192 | 200 | Greywacke/Siltstone | Discovery | OP/HW | 8.0 | 79 | - | 1.2 | 0.90 | < 0.0001 | < 0.00001 | 1.5 | 0.12 | 0.011 | < 0.00002 | < 0.00001 | 3.7 | 0.0000070 | 0.000076 | 0.00050 | < 0.0005 |
| ML08-229-04 | 2011 | 191 | 200 | Greywacke/Siltstone | Discovery | OP/HW | 8.0 | 91 | - | 1.3 | 2.1 | < 0.0001 | < 0.00001 | 1.7 | 0.031 | 0.011 | < 0.00002 | 0.000010 | 4.3 | 0.0000090 | 0.00012 | 0.00060 | 0.00060 |
| ML08-230-01 | 2011 | 25 | 33 | Greywacke/Siltstone | Discovery | OP/HW | 8.3 | 149 | - | 3.8 | 8.5 | < 0.0001 | < 0.00001 | 1.4 | 0.12 | 0.031 | < 0.00002 | < 0.00001 | 3.1 | 0.000025 | 0.00012 | 0.00060 | < 0.0005 |
| ML08-232-01 | 2011 | 62 | 70 | Greywacke/Siltstone | Discovery | OP/HW | 8.0 | 73 | - | 1.3 | 1.4 | < 0.0001 | < 0.00001 | 2.2 | 0.13 | 0.014 | < 0.00002 | < 0.00001 | 1.6 | 0.000016 | 0.00022 | 0.0011 | < 0.0005 |
| ML08-233-01 | 2011 | 20 | 28 | Greywacke/Siltstone | Discovery | OP/HW | 7.8 | 93 | - | 1.5 | 1.3 | < 0.0001 | < 0.00001 | 1.2 | 0.022 | 0.014 | < 0.00002 | < 0.00001 | 3.1 | < 0.000003 | 0.000068 | < 0.0005 | < 0.0005 |
| ML08-236-2 | 2009 | 41 | 49 | Greywacke/Siltstone | Discovery | OP/HW-interore | 8.3 | 102 | 39 | 4.1 | 2.5 | < 0.0001 | 0.000020 | 1.6 | 0.049 | 0.024 | < 0.00002 | 0.000020 | 2.9 | 0.0000040 | 0.00012 | 0.00060 | < 0.0005 |
| ML08-236-3 | 2009 | 65 | 75 | Greywacke/Siltstone | Discovery | OP/FW | 8.5 | 119 | 43 | 6.9 | 2.9 | < 0.0001 | 0.000020 | 1.4 | 0.033 | 0.029 | < 0.00002 | < 0.00001 | 3.9 | < 0.000003 | 0.000063 | 0.00050 | < 0.0005 |
| ML08-238-03 | 2009 | 99 | 104 | Greywacke/Siltstone | Discovery | inter ore | 9.3 | 81 | 38 | 3.2 | 0.80 | < 0.0001 | 0.000020 | 1.9 | 0.14 | 0.021 | < 0.00002 | 0.000010 | 2.7 | < 0.000003 | 0.00027 | 0.0014 | < 0.0005 |
| ML08-238-04 | 2009 | 126 | 132.5 | Greywacke/Siltstone | Discovery | OP/FW | 8.7 | 111 | 41 | 8.4 | 2.7 | < 0.0001 | 0.000020 | 2.0 | 0.064 | 0.044 | < 0.00002 | 0.000010 | 2.8 | < 0.000003 | 0.00030 | 0.0019 | < 0.0005 |
| ML08-240-01 | 2011 | 77 | 85 | Greywacke/Siltstone | Discovery | OP/HW | 8.1 | 94 | - | 1.3 | 1.3 | < 0.0001 | < 0.00001 | 1.6 | 0.047 | 0.0092 | < 0.00002 | < 0.00001 | 2.6 | < 0.000003 | 0.00011 | 0.00060 | < 0.0005 |
| ML08-241-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Discovery | OP/HW | 8.0 | 104 | - | 1.9 | 2.1 | < 0.0001 | < 0.00001 | 1.5 | 0.040 | 0.012 | < 0.00002 | < 0.00001 | 3.5 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 |
| ML08-245-02 | 2011 | 82.5 | 91 | Greywacke/Siltstone | Discovery | OP/HW | 7.9 | 80 | - | 0.70 | 1.3 | < 0.0001 | < 0.00001 | 2.0 | 0.073 | 0.0083 | < 0.00002 | 0.000010 | 2.5 | 0.0000040 | 0.00028 | 0.0018 | < 0.0005 |
| ML09-254-02 | 2011 | 100 | 108 | Greywacke/Siltstone | Discovery | OP/HW | 7.9 | 101 | - | 2.2 | 2.0 | < 0.0001 | < 0.00001 | 1.2 | 0.055 | 0.014 | < 0.00002 | < 0.00001 | 3.4 | < 0.000003 | 0.000088 | < 0.0005 | < 0.0005 |
| ML09-256-01 | 2011 | 52.5 | 61 | Greywacke/Siltstone | Discovery | OP/FW | 7.9 | 135 | - | 4.8 | 7.7 | < 0.0001 | 0.000010 | 1.2 | 0.043 | 0.018 | < 0.00002 | 0.000020 | 4.5 | 0.0000060 | 0.00020 | 0.0014 | < 0.0005 |
| ML90-03-01 | 2009 | 17 | 24 | Greywacke/Siltstone | Discovery | OP/HW | 8.8 | 84 | 41 | 0.90 | 2.5 | < 0.0001 | 0.000030 | 2.1 | 0.12 | 0.046 | < 0.00002 | 0.000030 | 2.8 | 0.0000030 | 0.00034 | 0.0023 | 0.00080 |
| ML90-03-02 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | 9.0 | 84 | 42 | 1.3 | 1.3 | < 0.0001 | 0.000010 | 1.7 | 0.058 | 0.032 | < 0.00002 | < 0.00001 | 3.7 | < 0.000003 | 0.00016 | 0.00080 | < 0.0005 |
| ML90-04-01 | 2009 | 10 | 15 | Greywacke/Siltstone | Discovery | OP/HW | 8.4 | 85 | 35 | 0.80 | 6.2 | < 0.0001 | 0.000030 | 1.7 | 0.047 | 0.030 | < 0.00002 | 0.000030 | 4.4 | 0.0000060 | 0.00038 | 0.0020 | < 0.0005 |
| ML90-04-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Discovery | OP/HW | 8.5 | 70 | 34 | 0.80 | 3.0 | < 0.0001 | 0.000040 | 1.7 | 0.057 | 0.028 | 0.000080 | 0.000050 | 3.4 | 0.000013 | 0.00032 | 0.0021 | < 0.0005 |
| ML90-04-03 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | 9.0 | 94 | 45 | 1.4 | 4.1 | < 0.0001 | 0.000020 | 1.3 | 0.025 | 0.038 | < 0.00002 | 0.000010 | 3.7 | < 0.000003 | 0.00019 | 0.0010 | < 0.0005 |
| ML90-07-01 | 2009 | 46 | 51 | Greywacke/Siltstone | Discovery | OP/FW | 9.2 | 73 | 36 | 0.70 | 0.70 | < 0.0001 | 0.000020 | 1.4 | 0.048 | 0.045 | < 0.00002 | < 0.00001 | 2.5 | < 0.000003 | 0.00012 | < 0.0005 | < 0.0005 |
| ML90-08-01 | 2009 | 16 | 21 | Greywacke/Siltstone | Discovery | OP/HW | 8.8 | 70 | 31 | 1.2 | 2.8 | < 0.0001 | 0.000010 | 1.2 | 0.019 | 0.023 | < 0.00002 | < 0.00001 | 3.2 | < 0.000003 | 0.00011 | 0.00070 | < 0.0005 |
| ML90-08-02 | 2009 | 53 | 58 | Greywacke/Siltstone | Discovery | OP/FW | 9.3 | 78 | 40 | 0.90 | 1.7 | < 0.0001 | 0.000010 | 1.5 | 0.087 | 0.023 | < 0.00002 | < 0.00001 | 3.7 | < 0.000003 | 0.00012 | < 0.0005 | < 0.0005 |
| ML90-09-2 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | 8.8 | 97 | 44 | 1.0 | 1.7 | < 0.0001 | 0.000030 | 1.2 | 0.023 | 0.020 | < 0.00002 | 0.000010 | 3.6 | 0.0000090 | 0.000085 | < 0.0005 | < 0.0005 |
| ML90-10-1 | 2009 | 11 | 18 | Greywacke/Siltstone | Discovery | OP/HW | 7.9 | 95 | 40 | 0.70 | 3.5 | < 0.0001 | 0.000020 | 0.97 | 0.16 | 0.032 | < 0.00002 | 0.00017 | 4.2 | 0.0000050 | 0.00015 | 0.00050 | < 0.0005 |
| ML90-10-3 | 2009 | 56 | 64 | Greywacke/Siltstone | Discovery | OP/FW | 8.5 | 85 | 40 | 0.60 | 1.0 | < 0.0001 | 0.000060 | 1.6 | 0.024 | 0.019 | 0.000030 | 0.000040 | 2.5 | 0.000031 | 0.00014 | < 0.0005 | < 0.0005 |
| ML90-12-01 | 2009 | 24 | 29 | Greywacke/Siltstone | Discovery | OP/HW | 9.0 | 76 | 37 | 0.90 | 1.8 | < 0.0001 | 0.000020 | 1.8 | 0.24 | 0.028 | < 0.00002 | < 0.00001 | 3.3 | < 0.000003 | 0.00020 | 0.0012 | < 0.0005 |
| ML90-12-02 | 2009 | 80 | 84 | Greywacke/Siltstone | Discovery | OP/FW | 8.6 | 70 | 35 | 1.0 | 1.4 | < 0.0001 | 0.000020 | 1.5 | 0.038 | 0.021 | < 0.00002 | 0.000010 | 4.1 | < 0.000003 | 0.00011 | < 0.0005 | < 0.0005 |
| ML90-14-2 | 2009 | 129 | 137 | Greywacke/Siltstone | Discovery | OP/FW | 8.2 | 87 | 34 | 0.50 | 3.5 | < 0.0001 | 0.000020 | 1.4 | 0.060 | 0.019 | < 0.00002 | 0.000010 | 4.1 | < 0.000003 | 0.00015 | 0.00060 | < 0.0005 |
| ML92-061-01 | 2009 | 21 | 26 | Greywacke/Siltstone | Discovery | OP/HW | 8.6 | 79 | 36 | 0.70 | 3.1 | < 0.0001 | 0.000020 | 1.8 | 0.076 | 0.028 | < 0.00002 | 0.000020 | 3.4 | 0.0000050 | 0.00039 | 0.0023 | 0.00070 |
| ML92-061-02 | 2009 | 50 | 56 | Greywacke/Siltstone | Discovery | OP/HW | 8.1 | 80 | 33 | 0.90 | 5.5 | < 0.0001 | 0.000020 | 1.6 | 0.029 | 0.027 | < 0.00002 | 0.000020 | 4.0 | < 0.000003 | 0.00025 | 0.0018 | < 0.0005 |
| ML92-061-04 | 2009 | 109 | 114 | Greywacke/Siltstone | Discovery | OP/FW | 8.9 | 74 | 38 | 0.60 | 1.1 | < 0.0001 | 0.000030 | 1.7 | 0.082 | 0.021 | 0.000030 | 0.000020 | 3.4 | < 0.000003 | 0.00025 | 0.0012 | < 0.0005 |
| ML92-062-03 | 2009 | 50 | 55 | Greywacke/Siltstone | Discovery | OP/FW | 9.2 | 85 | 42 | 0.90 | 1.2 | < 0.0001 | 0.000030 | 1.9 | 0.044 | 0.025 | < 0.00002 | 0.000010 | 2.8 | < 0.000003 | 0.00025 | 0.0011 | < 0.0005 |
| ML95-105-03 | 2011 | 94 | 103 | Greywacke/Siltstone | Discovery | OP/HW | 7.8 | 100 | - | 0.80 | 6.0 | < 0.0001 | 0.000010 | 1.4 | 0.061 | 0.0099 | < 0.00002 | < 0.00001 | 4.5 | 0.0000040 | 0.00017 | 0.0011 | 0.015 |
| ML95-105-04 | 2011 | 138 | 147 | Greywacke/Siltstone | Discovery | OP/HW | 8.8 | 89 | - | 0.30 | 0.60 | < 0.0001 | < 0.00001 | 1.9 | 0.12 | 0.0052 | < 0.00002 | < 0.00001 | 2.3 | 0.0000040 | 0.00021 | 0.00090 | < 0.0005 |
| ML95-107-03 | 2011 | 75.5 | 84.5 | Greywacke/Siltstone | Discovery | OP/HW | 7.8 | 92 | - | 0.70 | 4.6 | < 0.0001 | < 0.00001 | 1.5 | 0.11 | 0.0093 | < 0.00002 | < 0.00001 | 3.1 | 0.0000040 | 0.00014 | 0.00090 | < 0.0005 |
| ML95-113-01 | 2011 | 19 | 27.5 | Greywacke/Siltstone | Discovery | OP/HW | 7.7 | 100 | - | 0.50 | 10 | < 0.0001 | < 0.00001 | 1.1 | 0.047 | 0.011 | < 0.00002 | < 0.00001 | 5.5 | < 0.000003 | 0.000085 | 0.00060 | < 0.0005 |
| ML95-113-02 | 2011 | 71 | 79 | Greywacke/Siltstone | Discovery | OP/HW | 8.0 | 97 | - | 1.0 | 1.5 | < 0.0001 | < 0.00001 | 1.3 | 0.019 | 0.0094 | < 0.00002 | < 0.00001 | 3.5 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 |
| ML95-120-01 | 2011 | 93 | 102 | Greywacke/Siltstone | Discovery | OP/HW | 7.7 | 83 | - | 0.80 | 7.1 | < 0.0001 | < 0.00001 | 1.2 | 0.079 | 0.0093 | < 0.00002 | < 0.00001 | 4.5 | < 0.000003 | 0.000095 | 0.00080 | < 0.0005 |
| ML95-82-02 | 2011 | 68 | 74 | Greywacke/Siltstone | Discovery | OP/HW | 8.1 | 94 | - | 1.2 | 3.2 | < 0.0001 | < 0.00001 | 1.1 | 0.034 | 0.011 | < 0.00002 | < 0.00001 | 2.9 | < 0.000003 | 0.00010 | 0.00060 | 0.0034 |
| ML95-82-1 | 2009 | 20 | 30 | Greywacke/Siltstone | Discovery | OP/HW | 7.9 | 86 | 36 | 0.50 | 4.6 | < 0.0001 | 0.000020 | 1.4 | 0.12 | 0.023 | < 0.00002 | 0.000010 | 3.5 | 0.0000030 | 0.00017 | 0.0010 | < 0.0005 |
| ML95-82-3 | 2009 | 65 | 74 | Greywacke/Siltstone | Discovery | OP/FW | 8.8 | 89 | 41 | 0.60 | 1.6 | < 0.0001 | 0.000070 | 1.2 | 0.16 | 0.021 | < 0.00002 | 0.000030 | 3.3 | 0.000041 | 0.00011 | < 0.0005 | 0.00060 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| ML08-226-01 | 2011 | 23 | 32 | Gabbro | Discovery | OP/HW | 1.2 | 12 | 0.013 | 0.46 | 0.0070 | 0.00021 | 9.4 | 0.00070 | 0.00025 | 0.0013 | < 0.001 | < 0.00001 | 0.0067 | 0.042 | < 0.00002 | 0.00014 | 0.023 | 0.036 | 0.00012 | 0.0020 |
| ML08-229-02 | 2011 | 95.5 | 104.5 | Gabbro | Discovery | OP/HW | 0.69 | 10 | 0.015 | 0.31 | 0.0038 | 0.00011 | 9.3 | 0.00030 | 0.00024 | 0.0015 | < 0.001 | < 0.00001 | 0.0095 | 0.022 | < 0.00002 | 0.00013 | 0.021 | 0.00093 | 0.000072 | < 0.001 |
| ML08-241-03 | 2011 | 84 | 93 | Gabbro | Discovery | OP/HW | 0.41 | 17 | 0.020 | 0.27 | 0.0032 | 0.00041 | 12 | 0.00040 | 0.00016 | 0.00060 | < 0.001 | < 0.00001 | 0.015 | 0.024 | < 0.00002 | 0.00039 | 0.024 | 0.0015 | 0.00027 | < 0.001 |
| ML08-243-02 | 2011 | 136 | 144.5 | Gabbro | Discovery | OP/FW | 0.038 | 9.9 | 0.014 | 0.25 | 0.00051 | 0.00015 | 7.6 | 0.00020 | 0.000030 | 0.00060 | < 0.001 | < 0.00001 | 0.019 | 0.0026 | < 0.00002 | 0.00019 | 0.015 | 0.0019 | 0.000018 | 0.0010 |
| ML08-245-01 | 2011 | 44 | 53 | Gabbro | Discovery | OP/HW | 0.86 | 11 | 0.012 | 0.39 | 0.0059 | 0.00022 | 12 | 0.00080 | 0.00013 | 0.00080 | < 0.001 | < 0.00001 | 0.0088 | 0.036 | < 0.00002 | 0.00027 | 0.023 | 0.00098 | 0.00021 | 0.0010 |
| ML09-259-01 | 2011 | 11 | 20 | Gabbro | Discovery | OP/HW | 1.3 | 11 | 0.017 | 0.45 | 0.011 | 0.00021 | 9.5 | 0.00070 | 0.00012 | 0.0017 | < 0.001 | < 0.00001 | 0.011 | 0.083 | < 0.00002 | 0.00019 | 0.026 | 0.0012 | 0.00023 | 0.0020 |
| ML95-104-01 | 2011 | 20 | 29 | Gabbro | Discovery | OP/HW | 0.58 | 14 | 0.025 | 0.35 | 0.0059 | 0.00022 | 6.1 | 0.00040 | 0.00025 | 0.0016 | < 0.001 | 0.000060 | 0.016 | 0.044 | < 0.00002 | 0.00019 | 0.016 | 0.0013 | 0.00016 | 0.0030 |
| ML95-105-02 | 2011 | 63 | 73 | Gabbro | Discovery | OP/HW | 0.019 | 17 | 0.021 | 0.35 | 0.00067 | 0.00032 | 5.4 | 0.00020 | 0.000080 | 0.00080 | < 0.001 | < 0.00001 | 0.024 | 0.0012 | < 0.00002 | 0.00042 | 0.017 | 0.0012 | 0.000028 | < 0.001 |
| ML95-117-02 | 2011 | 40 | 48.5 | Gabbro | Discovery | OP/HW | 0.38 | 12 | 0.0070 | 0.30 | 0.0041 | 0.00016 | 7.2 | 0.00030 | 0.00011 | 0.00070 | < 0.001 | < 0.00001 | 0.013 | 0.025 | < 0.00002 | 0.00015 | 0.020 | 0.0013 | 0.000089 | 0.0010 |
| ML95-88-02 | 2011 | 36 | 43 | Gabbro | Discovery | OP/HW | 0.023 | 7.7 | 0.0070 | 0.35 | 0.00051 | 0.00024 | 9.0 | < 0.0001 | 0.00012 | 0.00080 | < 0.001 | < 0.00001 | 0.015 | 0.0012 | < 0.00002 | 0.00014 | 0.015 | 0.00056 | 0.000012 | < 0.001 |
| ML97-186-02 | 2011 | 120 | 129 | Gabbro | Discovery | OP/HW | 0.56 | 12 | 0.013 | 0.40 | 0.0055 | 0.00024 | 9.4 | 0.00050 | 0.00020 | 0.0011 | < 0.001 | 0.000010 | 0.022 | 0.034 | < 0.00002 | 0.00032 | 0.019 | 0.00084 | 0.00016 | 0.0010 |
| | | | | | | MINIMUM | 0.019 | 7.7 | 0.0070 | 0.25 | 0.00051 | 0.00011 | 5.4 | <0.0001 | 0.000030 | 0.00060 | <0.001 | < 0.00001 | 0.0067 | 0.0012 | <0.00002 | 0.00013 | 0.015 | 0.00056 | 0.000012 | < 0.001 |
| | | | | | | MAXIMUM | 1.3 | 17 | 0.025 | 0.46 | 0.011 | 0.00041 | 12 | 0.00080 | 0.00025 | 0.0017 | <0.001 | 0.000060 | 0.024 | 0.083 | <0.00002 | 0.00042 | 0.026 | 0.036 | 0.00027 | 0.0030 |
| | | | | | | MEDIAN | 0.56 | 12 | 0.014 | 0.35 | 0.0041 | 0.00022 | 9.3 | 0.00040 | 0.00013 | 0.00080 | nc | nc | 0.015 | 0.025 | nc | 0.00019 | 0.020 | 0.0012 | 0.00012 | 0.0010 |
| | | | | | | AVERAGE | 0.56 | 12 | 0.015 | 0.35 | 0.0044 | 0.00023 | 8.8 | 0.00042 | 0.00015 | 0.0010 | nc | nc | 0.014 | 0.029 | nc | 0.00023 | 0.020 | 0.0043 | 0.00012 | 0.0014 |
| | | | | | | STANDARD DEVIATION | 0.45 | 2.9 | 0.0056 | 0.070 | 0.0032 | 0.000082 | 2.1 | 0.00023 | 0.000073 | 0.00041 | nc | nc | 0.0056 | 0.024 | nc | 0.00010 | 0.0039 | 0.010 | 0.000088 | 0.00067 |
| | | | | | | 75TH PERCENTILE | 0.77 | 13 | 0.019 | 0.40 | 0.0059 | 0.00024 | 9.4 | 0.00060 | 0.00022 | 0.0014 | nc | nc | 0.017 | 0.039 | nc | 0.00029 | 0.023 | 0.0014 | 0.00018 | 0.0015 |
| DS09GT-10-01 | 2011 | 14 | 19 | Greywacke/Siltstone | Discovery | OP/HW | 0.14 | 9.4 | 0.0010 | 0.45 | 0.0014 | 0.00059 | 11 | 0.00080 | 0.00025 | 0.0012 | < 0.001 | < 0.00001 | 0.014 | 0.0056 | < 0.00002 | 0.00062 | 0.011 | 0.00044 | 0.000044 | < 0.001 |
| ML00-221-01 | 2009 | 25 | 30 | Greywacke/Siltstone | Discovery | OP/HW | 0.48 | 11 | 0.0010 | 0.44 | 0.0046 | 0.00043 | 11 | 0.0010 | 0.00023 | 0.00080 | < 0.001 | 0.000070 | 0.012 | 0.023 | < 0.00002 | 0.00021 | 0.015 | 0.00088 | 0.00018 | 0.0020 |
| ML00-221-02 | 2009 | 61 | 66 | Greywacke/Siltstone | Discovery | OP/HW | 0.34 | 8.7 | 0.0020 | 0.49 | 0.0037 | 0.00047 | 8.0 | 0.0015 | 0.00031 | 0.00080 | < 0.001 | 0.000090 | 0.017 | 0.019 | < 0.00002 | 0.00044 | 0.012 | 0.00080 | 0.00019 | 0.0020 |
| ML00-221-03 | 2009 | 88 | 93 | Greywacke/Siltstone | Discovery | OP/HW | 0.44 | 11 | 0.0020 | 0.54 | 0.0037 | 0.00069 | 8.2 | 0.0013 | 0.00031 | 0.00080 | < 0.001 | 0.00011 | 0.015 | 0.029 | < 0.00002 | 0.00031 | 0.014 | 0.0014 | 0.00026 | 0.0020 |
| ML00-221-04 | 2009 | 162 | 168 | Greywacke/Siltstone | Discovery | OP/FW | 0.42 | 9.8 | < 0.001 | 0.52 | 0.0025 | 0.00048 | 7.9 | 0.00080 | 0.00023 | 0.00090 | < 0.001 | 0.00010 | 0.017 | 0.020 | < 0.00002 | 0.00013 | 0.0089 | 0.00075 | 0.00015 | 0.0020 |
| ML08-225-02 | 2011 | 104 | 115 | Greywacke/Siltstone | Discovery | OP/FW | 0.18 | 13 | < 0.001 | 0.40 | 0.0013 | 0.00029 | 6.9 | 0.00050 | 0.00019 | 0.00080 | < 0.001 | < 0.00001 | 0.013 | 0.0079 | < 0.00002 | 0.00024 | 0.010 | 0.0013 | 0.000079 | < 0.001 |
| ML08-226-05 | 2011 | 192 | 200 | Greywacke/Siltstone | Discovery | OP/HW | 0.16 | 13 | < 0.001 | 0.39 | 0.0012 | 0.00044 | 6.8 | 0.00040 | 0.00012 | 0.00080 | < 0.001 | < 0.00001 | 0.015 | 0.0061 | < 0.00002 | 0.00012 | 0.0094 | 0.0038 | 0.000050 | < 0.001 |
| ML08-229-04 | 2011 | 191 | 200 | Greywacke/Siltstone | Discovery | OP/HW | 0.39 | 12 | < 0.001 | 0.58 | 0.0022 | 0.00034 | 6.5 | 0.00050 | 0.00048 | 0.00080 | < 0.001 | < 0.00001 | 0.021 | 0.0072 | < 0.00002 | 0.00013 | 0.0061 | 0.00088 | 0.000087 | 0.0010 |
| ML08-230-01 | 2011 | 25 | 33 | Greywacke/Siltstone | Discovery | OP/HW | 0.24 | 13 | < 0.001 | 0.52 | 0.0018 | 0.0026 | 22 | 0.00070 | 0.00025 | 0.0010 | < 0.001 | < 0.00001 | 0.014 | 0.0063 | < 0.00002 | 0.00022 | 0.0089 | 0.00092 | 0.00014 | < 0.001 |
| ML08-232-01 | 2011 | 62 | 70 | Greywacke/Siltstone | Discovery | OP/HW | 0.46 | 12 | 0.0010 | 0.41 | 0.0024 | 0.00039 | 7.4 | 0.00080 | 0.00029 | 0.00060 | < 0.001 | < 0.00001 | 0.0090 | 0.012 | < 0.00002 | 0.00044 | 0.012 | 0.00067 | 0.00018 | 0.0010 |
| ML08-233-01 | 2011 | 20 | 28 | Greywacke/Siltstone | Discovery | OP/HW | 0.17 | 13 | 0.0010 | 0.31 | 0.0015 | 0.00032 | 7.2 | 0.00020 | 0.000060 | 0.00060 | < 0.001 | < 0.00001 | 0.011 | 0.0090 | < 0.00002 | 0.00055 | 0.012 | 0.00093 | 0.00011 | < 0.001 |
| ML08-236-2 | 2009 | 41 | 49 | Greywacke/Siltstone | Discovery | OP/HW-interore | 0.29 | 13 | 0.0020 | 0.30 | 0.0024 | 0.00026 | 9.8 | 0.00040 | 0.00014 | 0.00060 | < 0.001 | 0.000070 | 0.012 | 0.016 | < 0.00002 | 0.00050 | 0.011 | 0.0013 | 0.00016 | 0.0020 |
| ML08-236-3 | 2009 | 65 | 75 | Greywacke/Siltstone | Discovery | OP/FW | 0.16 | 9.7 | < 0.001 | 0.40 | 0.0012 | 0.00058 | 13 | 0.00020 | 0.00014 | 0.00070 | < 0.001 | < 0.00001 | 0.016 | 0.0090 | < 0.00002 | 0.00015 | 0.0084 | 0.0045 | 0.000065 | < 0.001 |
| ML08-238-03 | 2009 | 99 | 104 | Greywacke/Siltstone | Discovery | inter ore | 0.78 | 10 | 0.0050 | 0.38 | 0.0069 | 0.00018 | 8.6 | 0.00080 | 0.00021 | 0.00080 | < 0.001 | 0.000030 | 0.016 | 0.038 | < 0.00002 | 0.00063 | 0.011 | 0.0010 | 0.00027 | 0.0020 |
| ML08-238-04 | 2009 | 126 | 132.5 | Greywacke/Siltstone | Discovery | OP/FW | 0.63 | 10 | 0.0010 | 0.49 | 0.0040 | 0.00073 | 14 | 0.0010 | 0.00025 | 0.00070 | < 0.001 | 0.000050 | 0.017 | 0.026 | < 0.00002 | 0.00023 | 0.014 | 0.00083 | 0.00019 | 0.0020 |
| ML08-240-01 | 2011 | 77 | 85 | Greywacke/Siltstone | Discovery | OP/HW | 0.29 | 14 | 0.0020 | 0.27 | 0.0023 | 0.00031 | 8.5 | 0.00050 | 0.00021 | 0.00050 | < 0.001 | < 0.00001 | 0.013 | 0.014 | < 0.00002 | 0.00049 | 0.014 | 0.0028 | 0.00013 | 0.0010 |
| ML08-241-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Discovery | OP/HW | 0.20 | 14 | 0.0010 | 0.33 | 0.0012 | 0.0017 | 9.7 | 0.00030 | 0.000060 | 0.00070 | < 0.001 | < 0.00001 | 0.017 | 0.0065 | < 0.00002 | 0.00044 | 0.0073 | 0.0010 | 0.000050 | < 0.001 |
| ML08-245-02 | 2011 | 82.5 | 91 | Greywacke/Siltstone | Discovery | OP/HW | 0.55 | 13 | 0.0020 | 0.49 | 0.0043 | 0.00087 | 7.0 | 0.0016 | 0.00045 | 0.00060 | < 0.001 | < 0.00001 | 0.012 | 0.023 | < 0.00002 | 0.00071 | 0.013 | 0.00061 | 0.00020 | 0.0020 |
| ML09-254-02 | 2011 | 100 | 108 | Greywacke/Siltstone | Discovery | OP/HW | 0.23 | 10 | < 0.001 | 0.38 | 0.0017 | 0.00082 | 12 | 0.00060 | 0.00010 | 0.00060 | < 0.001 | < 0.00001 | 0.018 | 0.011 | < 0.00002 | 0.00055 | 0.014 | 0.00064 | 0.000089 | < 0.001 |
| ML09-256-01 | 2011 | 52.5 | 61 | Greywacke/Siltstone | Discovery | OP/FW | 0.31 | 13 | 0.0020 | 0.92 | 0.0030 | 0.0010 | 14 | 0.0015 | 0.00021 | 0.0010 | < 0.001 | < 0.00001 | 0.020 | 0.019 | < 0.00002 | 0.00025 | 0.0070 | 0.0028 | 0.00025 | 0.0010 |
| ML90-03-01 | 2009 | 17 | 24 | Greywacke/Siltstone | Discovery | OP/HW | 0.60 | 14 | 0.0020 | 0.59 | 0.0046 | 0.00086 | 7.0 | 0.0015 | 0.00027 | 0.0012 | < 0.001 | 0.000090 | 0.013 | 0.029 | < 0.00002 | 0.00034 | 0.014 | 0.00081 | 0.00031 | 0.0020 |
| ML90-03-02 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | 0.53 | 11 | 0.0010 | 0.47 | 0.0039 | 0.00095 | 8.1 | 0.00060 | 0.00014 | 0.0010 | < 0.001 | 0.000030 | 0.015 | 0.017 | < 0.00002 | 0.00017 | 0.0094 | 0.00048 | 0.00012 | 0.0010 |
| ML90-04-01 | 2009 | 10 | 15 | Greywacke/Siltstone | Discovery | OP/HW | 0.47 | 11 | 0.0030 | 0.64 | 0.0048 | 0.00036 | 6.7 | 0.0015 | 0.00043 | 0.00090 | < 0.001 | 0.000060 | 0.017 | 0.021 | < 0.00002 | 0.00040 | 0.012 | 0.00046 | 0.00020 | 0.0020 |
| ML90-04-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Discovery | OP/HW | 0.38 | 7.0 | 0.0010 | 0.50 | 0.0038 | 0.00021 | 7.3 | 0.0011 | 0.00023 | 0.00080 | < 0.001 | 0.000060 | 0.014 | 0.026 | < 0.00002 | 0.00035 | 0.013 | 0.00053 | 0.00019 | 0.0020 |
| ML90-04-03 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | 0.48 | 11 | 0.0010 | 0.51 | 0.0032 | 0.00033 | 10 | 0.00080 | 0.00013 | 0.00080 | < 0.001 | 0.000040 | 0.020 | 0.021 | < 0.00002 | 0.00016 | 0.015 | 0.00057 | 0.00013 | 0.0010 |
| ML90-07-01 | 2009 | 46 | 51 | Greywacke/Siltstone | Discovery | OP/FW | 0.22 | 10 | 0.0030 | 0.24 | 0.0022 | 0.00014 | 6.5 | 0.00040 | 0.000050 | 0.00050 | < 0.001 | 0.000020 | 0.014 | 0.012 | < 0.00002 | 0.00043 | 0.011 | 0.0011 | 0.00015 | < 0.001 |
| ML90-08-01 | 2009 | 16 | 21 | Greywacke/Siltstone | Discovery | OP/HW | 0.15 | 6.7 | 0.0030 | 0.36 | 0.0015 | 0.00018 | 7.7 | 0.00040 | 0.00010 | 0.00060 | < 0.001 | 0.000040 | 0.016 | 0.0086 | < 0.00002 | 0.00033 | 0.011 | 0.00053 | 0.000058 | < 0.001 |
| ML90-08-02 | 2009 | 53 | 58 | Greywacke/Siltstone | Discovery | OP/FW | 0.20 | 11 | 0.0020 | 0.28 | 0.0022 | 0.00015 | 6.8 | 0.00060 | 0.000060 | 0.00060 | < 0.001 | 0.000040 | 0.014 | 0.012 | < 0.00002 | 0.00045 | 0.012 | 0.00068 | 0.000085 | < 0.001 |
| ML90-09-2 | 2009 | 51 | 56 | Greywacke/Siltstone | Discovery | OP/FW | 0.16 | 12 | 0.0030 | 0.28 | 0.0016 | 0.0013 | 8.7 | 0.00030 | 0.00010 | 0.00070 | < 0.001 | 0.000070 | 0.018 | 0.010 | < 0.00002 | 0.0013 | 0.015 | 0.00079 | 0.00025 | 0.0010 |
| ML90-10-1 | 2009 | 11 | 18 | Greywacke/Siltstone | Discovery | OP/HW | 0.16 | 10 | 0.0020 | 0.58 | 0.0015 | 0.0048 | 8.0 | 0.00070 | 0.00012 | 0.00080 | < 0.001 | 0.000060 | 0.021 | 0.0098 | < 0.00002 | 0.0012 | 0.0087 | 0.0015 | 0.00025 | < 0.001 |
| ML90-10-3 | 2009 | 56 | 64 | Greywacke/Siltstone | Discovery | OP/FW | 0.31 | 14 | 0.0010 | 0.28 | 0.0024 | 0.00042 | 6.1 | 0.00040 | 0.00014 | 0.00070 | < 0.001 | 0.000090 | 0.012 | 0.017 | 0.000040 | 0.00050 | 0.010 | 0.00084 | 0.00020 | 0.0010 |
| ML90-12-01 | 2009 | 24 | 29 | Greywacke/Siltstone | Discovery | OP/HW | 0.33 | 10.0 | 0.0030 | 0.41 | 0.0026 | 0.0014 | 7.3 | 0.00080 | 0.00011 | 0.00070 | < 0.001 | 0.000060 | 0.015 | 0.015 | < 0.00002 | 0.00068 | 0.013 | 0.00060 | 0.00024 | 0.0010 |
| ML90-12-02 | 2009 | 80 | 84 | Greywacke/Siltstone | Discovery | OP/FW | 0.36 | 7.7 | 0.0010 | 0.38 | 0.0028 | 0.00023 | 6.2 | 0.00040 | 0.000080 | 0.00060 | < 0.001 | 0.000020 | 0.017 | 0.011 | < 0.00002 | 0.00020 | 0.0076 | 0.00042 | 0.000089 | 0.0010 |
| ML90-14-2 | 2009 | 129 | 137 | Greywacke/Siltstone | Discovery | OP/FW | 0.29 | 10.0 | 0.0010 | 0.44 | 0.0022 | 0.00039 | 6.6 | 0.00050 | 0.00010 | 0.00050 | < 0.001 | 0.000090 | 0.019 | 0.017 | < 0.00002 | 0.00029 | 0.0087 | 0.00072 | 0.00013 | < 0.001 |
| ML92-061-01 | 2009 | 21 | 26 | Greywacke/Siltstone | Discovery | OP/HW | 0.55 | 11 | 0.0020 | 0.63 | 0.0049 | 0.00047 | 6.6 | 0.0015 | 0.00021 | 0.00060 | < 0.001 | 0.000050 | 0.016 | 0.029 | < 0.00002 | 0.00027 | 0.011 | 0.0013 | 0.00034 | 0.0030 |
| ML92-061-02 | 2009 | 50 | 56 | Greywacke/Siltstone | Discovery | OP/HW | 0.35 | 10.0 | 0.0010 | 0.61 | 0.0033 | 0.00036 | 5.9 | 0.0012 | 0.00016 | 0.00080 | < 0.001 | 0.000050 | 0.017 | 0.021 | < 0.00002 | 0.00018 | 0.011 | 0.00088 | 0.00015 | 0.0020 |
| ML92-061-04 | 2009 | 109 | 114 | Greywacke/Siltstone | Discovery | OP/FW | 0.50 | 9.2 | 0.0020 | 0.39 | 0.0039 | 0.00023 | 7.0 | 0.00070 | 0.00014 | 0.00060 | < 0.001 | 0.000060 | 0.013 | 0.027 | < 0.00002 | 0.00025 | 0.013 | 0.00053 | 0.00015 | 0.0020 |
| ML92-062-03 | 2009 | 50 | 55 | Greywacke/Siltstone | Discovery | OP/FW | 0.69 | 11 | 0.0030 | 0.40 | 0.0061 | 0.00050 | 8.4 | 0.00070 | 0.00022 | 0.00060 | < 0.001 | 0.000030 | 0.012 | 0.034 | < 0.00002 | 0.00038 | 0.014 | 0.00054 | 0.00025 | 0.0020 |
| ML95-105-03 | 2011 | 94 | 103 | Greywacke/Siltstone | Discovery | OP/HW | 0.30 | 14 | 0.0010 | 0.73 | 0.0024 | 0.0043 | 6.8 | 0.0011 | 0.0038 | 0.00070 | < 0.001 | 0.00078 | 0.024 | 0.018 | < 0.00002 | 0.00083 | 0.0096 | 0.00082 | 0.00023 | 0.015 |
| ML95-105-04 | 2011 | 138 | 147 | Greywacke/Siltstone | Discovery | OP/HW | 0.55 | 17 | 0.017 | 0.31 | 0.0049 | 0.00029 | 10 | 0.00070 | 0.00027 | 0.00060 | < 0.001 | 0.000020 | 0.013 | 0.025 | < 0.00002 | 0.00053 | 0.015 | 0.0021 | 0.00028 | 0.0020 |
| ML95-107-03 | 2011 | 75.5 | 84.5 | Greywacke/Siltstone | Discovery | OP/HW | 0.26 | 14 | 0.0010 | 0.52 | 0.0021 | 0.0014 | 6.4 | 0.00090 | 0.00021 | 0.00090 | < 0.001 | < 0.00001 | 0.017 | 0.013 | < 0.00002 | 0.00042 | 0.0096 | 0.00097 | 0.00024 | 0.0010 |
| ML95-113-01 | 2011 | 19 | 27.5 | Greywacke/Siltstone | Discovery | OP/HW | 0.13 | 12 | 0.0010 | 0.80 | 0.0014 | 0.0013 | 5.7 | 0.00090 | 0.00019 | 0.0010 | < 0.001 | 0.000030 | 0.020 | 0.0075 | < 0.00002 | 0.00025 | 0.0061 | 0.00061 | 0.00014 | 0.0010 |
| ML95-113-02 | 2011 | 71 | 79 | Greywacke/Siltstone | Discovery | OP/HW | 0.14 | 15 | 0.0020 | 0.32 | 0.0012 | 0.00030 | 6.1 | 0.00030 | 0.00012 | 0.00060 | < 0.001 | < 0.00001 | 0.016 | 0.0079 | < 0.00002 | 0.00056 | 0.011 | 0.00095 | 0.000090 | < 0.001 |
| ML95-120-01 | 2011 | 93 | 102 | Greywacke/Siltstone | Discovery | OP/HW | 0.16 | 12 | < 0.001 | 0.59 | 0.0013 | 0.00070 | 6.4 | 0.00070 | 0.00010 | 0.00060 | < 0.001 | < 0.00001 | 0.016 | 0.0096 | < 0.00002 | 0.00017 | 0.0080 | 0.0018 | 0.00012 | < 0.001 |
| ML95-82-02 | 2011 | 68 | 74 | Greywacke/Siltstone | Discovery | OP/HW | 0.32 | 13 | 0.0010 | 0.39 | 0.0025 | 0.00047 | 11 | 0.00050 | 0.0011 | 0.00060 | < 0.001 | 0.00019 | 0.015 | 0.016 | < 0.00002 | 0.00034 | 0.015 | 0.00044 | 0.00015 | 0.0030 |
| ML95-82-1 | 2009 | 20 | 30 | Greywacke/Siltstone | Discovery | OP/HW | 0.23 | 12 | < 0.001 | 0.52 | 0.0020 | 0.00065 | 6.6 | 0.00070 | 0.00027 | 0.00090 | < 0.001 | 0.000040 | 0.015 | 0.015 | < 0.00002 | 0.00054 | 0.011 | 0.00081 | 0.00018 | 0.0020 |
| ML95-82-3 | 2009 | 65 | 74 | Greywacke/Siltstone | Discovery | OP/FW | 0.23 | 11 | < 0.001 | 0.29 | 0.0021 | 0.00032 | 8.0 | 0.00030 | 0.00013 | 0.0022 | < 0.001 | 0.000040 | 0.015 | 0.013 | < 0.00002 | 0.0012 | 0.013 | 0.00068 | 0.00012 | 0.0010 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
| ML95-83-02 | 2011 | 84 | 92 | Greywacke/Siltstone | Discovery | OP/HW | 7.7 | 97 | - | 0.50 | 4.9 | < 0.0001 | 0.000010 | 1.4 | 0.11 | 0.0046 | < 0.00002 | < 0.00001 | 3.0 | 0.0000030 | 0.00016 | 0.00070 | < 0.0005 |
| ML95-85-01 | 2011 | 141 | 150 | Greywacke/Siltstone | Discovery | OP/FW | 7.9 | 90 | - | 0.40 | 1.5 | < 0.0001 | 0.000030 | 1.5 | 0.028 | 0.0041 | < 0.00002 | 0.000010 | 3.0 | < 0.000003 | 0.00011 | 0.00060 | < 0.0005 |
| ML95-88-01 | 2011 | 16 | 24.5 | Greywacke/Siltstone | Discovery | OP/HW | 7.7 | 91 | - | 0.80 | 8.5 | < 0.0001 | 0.000030 | 1.3 | 0.012 | 0.012 | < 0.00002 | < 0.00001 | 4.0 | < 0.000003 | 0.00012 | 0.00080 | < 0.0005 |
| ML95-93-01 | 2009 | 22 | 26 | Greywacke/Siltstone | Discovery | OP/HW | 8.3 | 84 | 41 | 2.8 | 1.3 | < 0.0001 | 0.000040 | 2.0 | 0.18 | 0.13 | < 0.00002 | 0.000020 | 2.5 | 0.0000060 | 0.00065 | 0.0030 | 0.00080 |
| ML95-93-02 | 2009 | 41 | 46 | Greywacke/Siltstone | Discovery | OP/HW | 8.8 | 77 | 37 | 0.90 | 1.3 | < 0.0001 | 0.000020 | 1.7 | 0.070 | 0.048 | < 0.00002 | 0.000020 | 2.9 | < 0.000003 | 0.00019 | 0.0012 | < 0.0005 |
| ML95-93-04 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | 9.1 | 93 | 40 | 0.80 | 2.2 | < 0.0001 | 0.000030 | 1.4 | 0.0038 | 0.021 | < 0.00002 | < 0.00001 | 3.7 | < 0.000003 | 0.00017 | 0.00070 | < 0.0005 |
| ML95-95-02 | 2011 | 55 | 64 | Greywacke/Siltstone | Discovery | OP/HW | 7.8 | 86 | - | 0.60 | 1.5 | < 0.0001 | 0.000010 | 1.7 | 0.060 | 0.012 | < 0.00002 | < 0.00001 | 2.4 | 0.000085 | 0.00020 | 0.0012 | < 0.0005 |
| | | | | | | MINIMUM | 7.7 | 70 | 31 | 0.30 | 0.60 | <0.0001 | < 0.00001 | 0.97 | 0.0038 | 0.0041 | <0.00002 | < 0.00001 | 1.6 | < 0.000003 | 0.000060 | < 0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 9.3 | 149 | 45 | 8.4 | 10 | <0.0001 | 0.000070 | 2.2 | 0.35 | 0.13 | 0.000080 | 0.00017 | 5.5 | 0.000085 | 0.00065 | 0.0030 | 0.015 |
| | | | | | | MEDIAN | 8.3 | 88 | 38 | 0.95 | 2.1 | nc | 0.000020 | 1.5 | 0.060 | 0.021 | 0.000020 | 0.000010 | 3.4 | 0.0000030 | 0.00015 | 0.00080 | 0.00050 |
| | | | | | | AVERAGE | 8.4 | 90 | 38 | 1.5 | 3.0 | nc | 0.000019 | 1.6 | 0.077 | 0.023 | 0.000021 | 0.000017 | 3.3 | 0.0000074 | 0.00018 | 0.0010 | 0.00085 |
| | | | | | | STANDARD DEVIATION | 0.50 | 15 | 3.5 | 1.5 | 2.2 | nc | 0.000012 | 0.29 | 0.061 | 0.019 | 0.0000083 | 0.000023 | 0.71 | 0.000013 | 0.00011 | 0.00062 | 0.0020 |
| | | | | | | 75TH PERCENTILE | 8.8 | 95 | 41 | 1.6 | 3.6 | nc | 0.000020 | 1.7 | 0.11 | 0.029 | 0.000020 | 0.000020 | 3.7 | 0.0000050 | 0.00024 | 0.0014 | 0.00050 |
| ML08-225-01 | 2011 | 70 | 79 | Iron Formation | Discovery | OP/FW | 8.3 | 94 | - | 1.0 | 1.0 | < 0.0001 | < 0.00001 | 0.82 | 0.020 | 0.0086 | < 0.00002 | < 0.00001 | 3.7 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| ML08-226-02 | 2011 | 36 | 45 | Iron Formation | Discovery | OP/HW | 7.7 | 101 | - | 0.70 | 2.9 | < 0.0001 | < 0.00001 | 0.47 | 0.0032 | 0.0049 | < 0.00002 | 0.000010 | 5.6 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 |
| ML08-226-03 | 2011 | 144 | 153 | Iron Formation | Discovery | OP/HW | 7.8 | 97 | - | 0.70 | 1.1 | < 0.0001 | < 0.00001 | 0.52 | 0.0026 | 0.0068 | < 0.00002 | < 0.00001 | 4.5 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| ML08-228-01 | 2011 | 26.5 | 35 | Iron Formation | Discovery | OP/HW | 8.3 | 104 | - | 0.40 | 0.60 | < 0.0001 | < 0.00001 | 0.55 | 0.011 | 0.0055 | < 0.00002 | < 0.00001 | 4.8 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| ML08-228-02 | 2011 | 79 | 87.5 | Iron Formation | Discovery | OP/HW | 7.5 | 89 | - | 0.70 | 2.6 | < 0.0001 | 0.000040 | 0.20 | 0.00080 | 0.0057 | < 0.00002 | 0.000030 | 7.6 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| ML08-229-01 | 2011 | 52 | 61 | Iron Formation | Discovery | OP/HW | 7.8 | 110 | - | 0.70 | 0.60 | < 0.0001 | 0.000030 | 0.21 | 0.0018 | 0.0033 | < 0.00002 | < 0.00001 | 4.3 | < 0.000003 | 0.0000090 | < 0.0005 | < 0.0005 |
| ML08-229-03 | 2011 | 113 | 122 | Iron Formation | Discovery | OP/HW | 7.7 | 125 | - | 1.9 | 4.6 | < 0.0001 | < 0.00001 | 0.69 | 0.0021 | 0.013 | < 0.00002 | < 0.00001 | 9.7 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| ML08-229-05 | 2011 | 234.5 | 243 | Iron Formation | Discovery | OP/HW | 8.2 | 82 | - | 0.50 | 0.90 | < 0.0001 | < 0.00001 | 0.34 | 0.019 | 0.0075 | < 0.00002 | < 0.00001 | 5.6 | < 0.000003 | 0.0000070 | < 0.0005 | < 0.0005 |
| ML08-233-02 | 2011 | 74.5 | 83 | Iron Formation | Discovery | OP/HW | 8.2 | 106 | - | 1.3 | 2.9 | < 0.0001 | < 0.00001 | 0.49 | 0.011 | 0.0073 | < 0.00002 | < 0.00001 | 3.8 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| ML08-236-1 | 2009 | 23 | 27 | Iron Formation | Discovery | OP/HW | 8.6 | 101 | 44 | 1.9 | 0.60 | < 0.0001 | 0.000040 | 1.0 | 0.012 | 0.021 | 0.000040 | 0.000050 | 3.8 | 0.000033 | 0.000064 | < 0.0005 | < 0.0005 |
| ML08-241-02 | 2011 | 42 | 51 | Iron Formation | Discovery | OP/HW | 8.1 | 112 | - | 2.6 | 2.1 | < 0.0001 | < 0.00001 | 0.83 | 0.0015 | 0.0085 | < 0.00002 | < 0.00001 | 6.9 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| ML08-243-01 | 2011 | 97.5 | 106 | Iron Formation | Discovery | OP/FW | 8.5 | 112 | - | 2.1 | 1.4 | < 0.0001 | < 0.00001 | 0.63 | 0.0021 | 0.012 | < 0.00002 | < 0.00001 | 3.9 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| ML09-254-01 | 2011 | 84 | 93 | Iron Formation | Discovery | OP/HW | 7.7 | 142 | - | 2.6 | 5.0 | < 0.0001 | 0.000010 | 0.55 | 0.0064 | 0.0099 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000054 | < 0.0005 | < 0.0005 |
| ML90-09-1 | 2009 | 33 | 40 | Iron Formation | Discovery | OP/HW | 7.8 | 98 | 41 | 0.70 | 1.0 | < 0.0001 | 0.000040 | 0.43 | 0.021 | 0.019 | 0.000030 | 0.000030 | 8.4 | 0.000021 | 0.000060 | < 0.0005 | < 0.0005 |
| ML90-10-2 | 2009 | 33 | 41 | Iron Formation | Discovery | OP/HW | 7.9 | 122 | 45 | 1.0 | 3.4 | < 0.0001 | 0.00025 | 0.56 | 0.0059 | 0.023 | 0.00022 | 0.00025 | 9.6 | 0.00023 | 0.00024 | < 0.0005 | < 0.0005 |
| ML92-053-1 | 2009 | 105 | 112 | Iron Formation | Discovery | OP/FW | 7.9 | 87 | 39 | 0.90 | 0.90 | < 0.0001 | < 0.00001 | 0.46 | 0.0047 | 0.017 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| ML92-060-1 | 2009 | 42 | 49 | Iron Formation | Discovery | OP/HW | 7.8 | 155 | 47 | 1.6 | 4.6 | < 0.0001 | 0.000030 | 0.14 | 0.00090 | 0.016 | < 0.00002 | < 0.00001 | 9.2 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 |
| ML92-061-03 | 2009 | 75 | 81 | Iron Formation | Discovery | OP/HW | 9.1 | 89 | 43 | 0.50 | 0.60 | < 0.0001 | 0.000030 | 0.38 | 0.0044 | 0.021 | < 0.00002 | 0.000020 | 4.5 | 0.0000030 | 0.000037 | < 0.0005 | < 0.0005 |
| ML92062-01 | 2011 | 17.5 | 26 | Iron Formation | Discovery | OP/HW | 7.8 | 102 | - | 1.2 | 2.0 | < 0.0001 | 0.000020 | 0.38 | 0.0033 | 0.0077 | < 0.00002 | < 0.00001 | 5.6 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| ML92-062-01 | 2009 | 20 | 25 | Iron Formation | Discovery | OP/HW | 8.2 | 86 | 36 | 1.7 | 2.2 | < 0.0001 | 0.000030 | 0.16 | 0.0013 | 0.040 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000042 | < 0.0005 | < 0.0005 |
| ML92-062-02 | 2009 | 35 | 39.5 | Iron Formation | Discovery | OP/HW | 9.0 | 85 | 41 | 1.2 | 0.80 | < 0.0001 | 0.000020 | 1.9 | 0.0090 | 0.025 | < 0.00002 | 0.000010 | 2.5 | < 0.000003 | 0.00013 | < 0.0005 | < 0.0005 |
| ML95-105-01 | 2011 | 25 | 34 | Iron Formation | Discovery | OP/HW | 7.7 | 130 | - | 1.1 | 4.0 | < 0.0001 | 0.000030 | 0.54 | 0.0016 | 0.0051 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 |
| ML95-107-01 | 2011 | 11 | 18 | Iron Formation | Discovery | OP/HW | 7.9 | 97 | - | 0.60 | 1.6 | < 0.0001 | < 0.00001 | 0.67 | 0.0034 | 0.0068 | < 0.00002 | < 0.00001 | 4.6 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 |
| ML95-107-02 | 2011 | 62.5 | 71 | Iron Formation | Discovery | OP/HW | 7.9 | 140 | - | 1.2 | 6.2 | < 0.0001 | < 0.00001 | 0.55 | 0.030 | 0.0073 | < 0.00002 | < 0.00001 | 8.3 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| ML95-117-01 | 2011 | 14 | 23 | Iron Formation | Discovery | OP/HW | 7.8 | 112 | - | 0.70 | 3.8 | < 0.0001 | < 0.00001 | 0.44 | 0.0035 | 0.0089 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| ML95-117-03 | 2011 | 61.5 | 71.5 | Iron Formation | Discovery | OP/HW | 7.6 | 78 | - | 1.0 | 2.6 | < 0.0001 | < 0.00001 | 0.63 | 0.017 | 0.0068 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| ML95-82-01 | 2011 | 54 | 61.5 | Iron Formation | Discovery | OP/HW | 7.7 | 108 | - | 0.60 | 2.7 | < 0.0001 | < 0.00001 | 0.71 | 0.012 | 0.0068 | < 0.00002 | < 0.00001 | 7.6 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| ML95-82-2 | 2009 | 43 | 46 | Iron Formation | Discovery | OP/HW | 7.7 | 140 | 46 | 0.60 | 3.5 | < 0.0001 | 0.000030 | 0.060 | 0.0025 | 0.016 | 0.000030 | 0.000030 | 12 | 0.000028 | 0.000069 | < 0.0005 | < 0.0005 |
| ML95-83-01 | 2011 | 22 | 31 | Iron Formation | Discovery | OP/HW | 7.5 | 58 | - | 0.50 | 0.70 | < 0.0001 | < 0.00001 | 1.4 | 0.0045 | 0.0083 | < 0.00002 | < 0.00001 | 1.0 | < 0.000003 | 0.000095 | < 0.0005 | < 0.0005 |
| ML95-93-03 | 2009 | 55 | 60 | Iron Formation | Discovery | OP/HW | 7.8 | 115 | 43 | 1.2 | 2.1 | < 0.0001 | 0.000030 | 0.22 | 0.0014 | 0.021 | < 0.00002 | < 0.00001 | 13 | 0.0000030 | 0.000055 | < 0.0005 | < 0.0005 |
| ML95-95-01 | 2011 | 20 | 29 | Iron Formation | Discovery | OP/HW | 7.9 | 91 | - | 0.60 | 1.1 | < 0.0001 | < 0.00001 | 0.95 | 0.026 | 0.0072 | < 0.00002 | < 0.00001 | 4.7 | < 0.000003 | 0.000023 | < 0.0005 | 0.00060 |
| ML95-98-01 | 2011 | 9.5 | 17.5 | Iron Formation | Discovery | OP/HW | 7.7 | 130 | - | 0.80 | 6.3 | < 0.0001 | < 0.00001 | 0.45 | 0.0020 | 0.0083 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 |
| ML97-186-01 | 2011 | 78 | 86 | Iron Formation | Discovery | OP/HW | 7.9 | 135 | - | 1.2 | 11 | < 0.0001 | 0.000010 | 0.49 | 0.0063 | 0.0089 | < 0.00002 | < 0.00001 | 5.8 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.5 | 58 | 36 | 0.40 | 0.60 | <0.0001 | < 0.00001 | 0.060 | 0.00080 | 0.0033 | <0.00002 | < 0.00001 | 1.0 | < 0.000003 | 0.0000070 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 9.1 | 155 | 47 | 2.6 | 11 | <0.0001 | 0.00025 | 1.9 | 0.030 | 0.040 | 0.00022 | 0.00025 | 13 | 0.00023 | 0.00024 | <0.0005 | 0.00060 |
| | | | | | | MEDIAN | 7.8 | 104 | 43 | 1.0 | 2.1 | nc | 0.000010 | 0.52 | 0.0044 | 0.0085 | 0.000020 | 0.000010 | 6.9 | 0.0000030 | 0.000031 | nc | nc |
| | | | | | | AVERAGE | 8.0 | 107 | 43 | 1.1 | 2.6 | nc | 0.000025 | 0.57 | 0.0076 | 0.012 | 0.000027 | 0.000021 | 6.6 | 0.000012 | 0.000042 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.38 | 22 | 3.3 | 0.59 | 2.2 | nc | 0.000042 | 0.36 | 0.0078 | 0.0077 | 0.000035 | 0.000042 | 2.6 | 0.000040 | 0.000044 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.2 | 122 | 45 | 1.2 | 3.5 | nc | 0.000030 | 0.67 | 0.011 | 0.016 | 0.000020 | 0.000010 | 8.2 | 0.0000030 | 0.000044 | nc | nc |
| ML00-224-01 | 2011 | 101.5 | 110 | Ore/IF | Discovery | OP/HW | 7.9 | 115 | - | 1.2 | 3.6 | < 0.0001 | < 0.00001 | 0.34 | 0.032 | 0.0088 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| ML08-225-03 | 2011 | 169 | 178 | Ore/IF | Discovery | OP/FW | 7.8 | 120 | - | 1.5 | 3.3 | < 0.0001 | < 0.00001 | 0.37 | 0.018 | 0.0091 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| ML08-226-04 | 2011 | 168.5 | 174.5 | Ore/IF | Discovery | OP/HW | 7.6 | 106 | - | 1.6 | 3.0 | < 0.0001 | < 0.00001 | 0.44 | **0.79** | 0.0096 | < 0.00002 | 0.000040 | 4.8 | 0.0000050 | 0.000024 | < 0.0005 | < 0.0005 |
| ML95-104-02 | 2011 | 177 | 187 | Ore/IF | Discovery | OP/FW | 7.7 | 178 | - | 1.6 | 15 | < 0.0001 | 0.000010 | 0.18 | 0.069 | 0.0078 | < 0.00002 | 0.000010 | 18 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| ML95-84-01 | 2011 | 123 | 131 | Ore/IF | Discovery | OP/FW | 7.7 | 134 | - | 1.2 | 4.2 | < 0.0001 | 0.000050 | 0.34 | 0.023 | 0.0089 | < 0.00002 | 0.000030 | 11 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.6 | 106 | nc | 1.2 | 3.0 | <0.0001 | < 0.00001 | 0.18 | 0.018 | 0.0078 | <0.00002 | < 0.00001 | 4.8 | <0.000003 | 0.000016 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 7.9 | 178 | nc | 1.6 | 15 | <0.0001 | 0.000050 | 0.44 | 0.79 | 0.0096 | <0.00002 | 0.000040 | 18 | 0.0000050 | 0.000027 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 7.7 | 120 | nc | 1.5 | 3.6 | nc | nc | 0.34 | 0.032 | 0.0089 | nc | 0.000010 | 12 | nc | 0.000022 | nc | nc |
| | | | | | | AVERAGE | 7.7 | 131 | nc | 1.4 | 5.8 | nc | nc | 0.33 | 0.19 | 0.0088 | nc | 0.000020 | 12 | nc | 0.000021 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.11 | 28 | nc | 0.20 | 5.2 | nc | nc | 0.095 | 0.34 | 0.00066 | nc | 0.000014 | 4.7 | nc | 0.0000047 | nc | nc |
| | | | | | | 75TH PERCENTILE | 7.8 | 134 | nc | 1.6 | 4.2 | nc | nc | 0.37 | 0.069 | 0.0091 | nc | 0.000030 | 14 | nc | 0.000024 | nc | nc |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| ML95-83-02 | 2011 | 84 | 92 | Greywacke/Siltstone | Discovery | OP/HW | 0.43 | 17 | 0.0040 | 0.44 | 0.0029 | 0.0033 | 5.8 | 0.00070 | 0.00023 | 0.00060 | < 0.001 | < 0.00001 | 0.013 | 0.022 | < 0.00002 | 0.00066 | 0.011 | 0.00048 | 0.00040 | 0.0010 |
| ML95-85-01 | 2011 | 141 | 150 | Greywacke/Siltstone | Discovery | OP/FW | 0.31 | 16 | 0.0040 | 0.31 | 0.0027 | 0.00028 | 5.6 | 0.00060 | 0.00021 | 0.00060 | < 0.001 | 0.000090 | 0.013 | 0.016 | < 0.00002 | 0.00089 | 0.012 | 0.00076 | 0.00025 | 0.0030 |
| ML95-88-01 | 2011 | 16 | 24.5 | Greywacke/Siltstone | Discovery | OP/HW | 0.16 | 14 | 0.0020 | 0.62 | 0.0014 | 0.00045 | 6.8 | 0.00080 | 0.00024 | 0.00090 | < 0.001 | < 0.00001 | 0.013 | 0.0093 | < 0.00002 | 0.00021 | 0.0072 | 0.0017 | 0.00011 | < 0.001 |
| ML95-93-01 | 2009 | 22 | 26 | Greywacke/Siltstone | Discovery | OP/HW | 0.78 | 10 | 0.0020 | 0.59 | 0.0053 | 0.00064 | 10 | 0.0019 | 0.00045 | 0.0012 | < 0.001 | 0.00011 | 0.013 | 0.027 | < 0.00002 | 0.00023 | 0.012 | 0.018 | 0.00040 | 0.0050 |
| ML95-93-02 | 2009 | 41 | 46 | Greywacke/Siltstone | Discovery | OP/HW | 0.31 | 11 | 0.0010 | 0.38 | 0.0023 | 0.00042 | 6.7 | 0.00050 | 0.00015 | 0.00090 | < 0.001 | 0.000060 | 0.014 | 0.014 | < 0.00002 | 0.00023 | 0.012 | 0.0017 | 0.00014 | 0.0020 |
| ML95-93-04 | 2009 | 84 | 89 | Greywacke/Siltstone | Discovery | OP/FW | 0.41 | 11 | 0.0030 | 0.35 | 0.0034 | 0.00021 | 9.0 | 0.00040 | 0.00017 | 0.00070 | < 0.001 | 0.000080 | 0.020 | 0.017 | < 0.00002 | 0.0012 | 0.010 | 0.0017 | 0.00022 | 0.0020 |
| ML95-95-02 | 2011 | 55 | 64 | Greywacke/Siltstone | Discovery | OP/HW | 0.49 | 14 | 0.0020 | 0.36 | 0.0037 | 0.00028 | 6.0 | 0.00070 | 0.00036 | 0.00060 | < 0.001 | 0.000040 | 0.012 | 0.023 | < 0.00002 | 0.00039 | 0.014 | 0.0010 | 0.00031 | 0.0020 |
| | | | | | | MINIMUM | 0.13 | 6.7 | < 0.001 | 0.24 | 0.0012 | 0.00014 | 5.6 | 0.00020 | 0.000050 | 0.00050 | <0.001 | <0.00001 | 0.0090 | 0.0056 | <0.00002 | 0.00012 | 0.0061 | 0.00042 | 0.000044 | < 0.001 |
| | | | | | | MAXIMUM | 0.78 | 17 | 0.017 | 0.92 | 0.0069 | 0.0048 | 22 | 0.0019 | 0.0038 | 0.0022 | <0.001 | 0.00078 | 0.024 | 0.038 | 0.000040 | 0.0013 | 0.015 | 0.018 | 0.00040 | 0.015 |
| | | | | | | MEDIAN | 0.31 | 11 | 0.0010 | 0.42 | 0.0024 | 0.00045 | 7.3 | 0.00070 | 0.00021 | 0.00070 | nc | 0.000040 | 0.015 | 0.016 | nc | 0.00038 | 0.011 | 0.00084 | 0.00015 | 0.0010 |
| | | | | | | AVERAGE | 0.35 | 12 | 0.0020 | 0.45 | 0.0028 | 0.00078 | 8.3 | 0.00076 | 0.00028 | 0.00078 | nc | 0.000058 | 0.015 | 0.017 | nc | 0.00044 | 0.011 | 0.0014 | 0.00018 | 0.0018 |
| | | | | | | STANDARD DEVIATION | 0.17 | 2.1 | 0.0023 | 0.14 | 0.0014 | 0.00094 | 2.8 | 0.00040 | 0.00052 | 0.00026 | nc | 0.00011 | 0.0030 | 0.0078 | nc | 0.00029 | 0.0024 | 0.0024 | 0.000085 | 0.0020 |
| | | | | | | 75TH PERCENTILE | 0.47 | 13 | 0.0020 | 0.52 | 0.0037 | 0.00080 | 8.9 | 0.00090 | 0.00025 | 0.00088 | nc | 0.000068 | 0.017 | 0.021 | nc | 0.00055 | 0.013 | 0.0013 | 0.00024 | 0.0020 |
| ML08-225-01 | 2011 | 70 | 79 | Iron Formation | Discovery | OP/FW | 0.32 | 16 | 0.0070 | 0.39 | 0.0014 | 0.00025 | 5.3 | < 0.0001 | 0.00014 | 0.0014 | < 0.001 | < 0.00001 | 0.021 | 0.0044 | < 0.00002 | 0.00072 | 0.0018 | 0.00087 | 0.000042 | < 0.001 |
| ML08-226-02 | 2011 | 36 | 45 | Iron Formation | Discovery | OP/HW | 0.82 | 14 | 0.0060 | 0.91 | 0.0033 | 0.00010 | 4.0 | 0.00020 | 0.00020 | 0.0014 | < 0.001 | 0.000030 | 0.024 | 0.0084 | < 0.00002 | 0.00014 | 0.00070 | 0.0048 | 0.000090 | < 0.001 |
| ML08-226-03 | 2011 | 144 | 153 | Iron Formation | Discovery | OP/HW | 0.68 | 17 | 0.0050 | 0.46 | 0.0012 | 0.00010 | 3.0 | 0.00010 | 0.00011 | 0.00050 | < 0.001 | < 0.00001 | 0.050 | 0.0035 | < 0.00002 | 0.000068 | 0.00046 | 0.013 | 0.000034 | < 0.001 |
| ML08-228-01 | 2011 | 26.5 | 35 | Iron Formation | Discovery | OP/HW | 0.15 | 20 | 0.0090 | 0.73 | 0.00097 | 0.00020 | 4.3 | < 0.0001 | 0.00013 | 0.00090 | < 0.001 | < 0.00001 | 0.025 | 0.0034 | < 0.00002 | 0.00021 | 0.0011 | 0.0030 | 0.000032 | < 0.001 |
| ML08-228-02 | 2011 | 79 | 87.5 | Iron Formation | Discovery | OP/HW | 0.72 | 12 | 0.0090 | 0.98 | 0.0022 | 0.000090 | 2.2 | < 0.0001 | 0.00011 | 0.0012 | < 0.001 | < 0.00001 | 0.036 | 0.0019 | < 0.00002 | 0.00017 | 0.00013 | 0.00085 | 0.000040 | < 0.001 |
| ML08-229-01 | 2011 | 52 | 61 | Iron Formation | Discovery | OP/HW | 0.047 | 18 | 0.010 | 0.80 | 0.00047 | 0.000070 | 6.3 | < 0.0001 | 0.00011 | 0.00080 | < 0.001 | 0.000010 | 0.057 | 0.00050 | < 0.00002 | 0.000079 | 0.00033 | 0.00055 | 0.0000050 | < 0.001 |
| ML08-229-03 | 2011 | 113 | 122 | Iron Formation | Discovery | OP/HW | 0.028 | 15 | 0.0020 | 0.88 | 0.00061 | 0.00026 | 5.1 | < 0.0001 | 0.000090 | 0.00090 | < 0.001 | < 0.00001 | 0.061 | 0.00080 | < 0.00002 | 0.000081 | 0.00030 | 0.00077 | 0.0000070 | < 0.001 |
| ML08-229-05 | 2011 | 234.5 | 243 | Iron Formation | Discovery | OP/HW | 0.026 | 11 | 0.0030 | 0.55 | 0.00019 | 0.00011 | 2.1 | < 0.0001 | 0.000070 | 0.00050 | < 0.001 | < 0.00001 | 0.13 | 0.00030 | < 0.00002 | 0.000024 | 0.00050 | 0.00077 | 0.0000040 | < 0.001 |
| ML08-233-02 | 2011 | 74.5 | 83 | Iron Formation | Discovery | OP/HW | 0.21 | 15 | 0.024 | 0.36 | 0.00066 | 0.00012 | 6.8 | 0.00010 | 0.00011 | 0.00050 | < 0.001 | < 0.00001 | 0.044 | 0.0019 | < 0.00002 | 0.00023 | 0.0011 | 0.0029 | 0.000021 | 0.0010 |
| ML08-236-1 | 2009 | 23 | 27 | Iron Formation | Discovery | OP/HW | 0.17 | 16 | 0.0030 | 0.29 | 0.0010 | 0.00036 | 6.7 | < 0.0001 | 0.000090 | 0.00080 | < 0.001 | 0.000040 | 0.033 | 0.0026 | 0.000040 | 0.0010 | 0.0021 | 0.0016 | 0.000073 | 0.0030 |
| ML08-241-02 | 2011 | 42 | 51 | Iron Formation | Discovery | OP/HW | 0.0070 | 17 | 0.0010 | 0.64 | 0.00049 | 0.00023 | 4.5 | < 0.0001 | 0.000020 | 0.00050 | < 0.001 | < 0.00001 | 0.19 | 0.00030 | < 0.00002 | 0.000053 | 0.00032 | 0.0019 | 0.0000030 | < 0.001 |
| ML08-243-01 | 2011 | 97.5 | 106 | Iron Formation | Discovery | OP/FW | 0.036 | 13 | 0.0020 | 0.46 | 0.00028 | 0.00022 | 13 | < 0.0001 | < 0.00002 | 0.00080 | < 0.001 | < 0.00001 | 0.093 | 0.00040 | < 0.00002 | 0.000072 | 0.00082 | 0.00098 | 0.000018 | < 0.001 |
| ML09-254-01 | 2011 | 84 | 93 | Iron Formation | Discovery | OP/HW | 0.41 | 15 | 0.0050 | 0.76 | 0.0016 | 0.00034 | 7.5 | 0.00040 | 0.000070 | 0.00050 | < 0.001 | < 0.00001 | 0.068 | 0.0054 | < 0.00002 | 0.00051 | 0.00089 | 0.00043 | 0.000062 | < 0.001 |
| ML90-09-1 | 2009 | 33 | 40 | Iron Formation | Discovery | OP/HW | 0.10 | 12 | < 0.001 | 0.64 | 0.00064 | 0.00031 | 1.8 | < 0.0001 | 0.000030 | 0.00060 | < 0.001 | 0.000020 | 0.13 | 0.00050 | 0.000020 | 0.000062 | 0.00030 | 0.00066 | 0.000027 | 0.0010 |
| ML90-10-2 | 2009 | 33 | 41 | Iron Formation | Discovery | OP/HW | 0.010 | 14 | 0.0030 | 0.79 | 0.00096 | 0.00049 | 4.2 | 0.00030 | 0.00021 | 0.00050 | < 0.001 | 0.000020 | 0.090 | 0.00030 | 0.00022 | 0.00052 | 0.00076 | 0.0012 | 0.00021 | 0.0010 |
| ML92-053-1 | 2009 | 105 | 112 | Iron Formation | Discovery | OP/FW | 0.040 | 9.5 | < 0.001 | 0.77 | 0.00033 | 0.00021 | 1.7 | < 0.0001 | 0.000050 | 0.00070 | < 0.001 | 0.000020 | 0.13 | 0.00020 | < 0.00002 | 0.000033 | 0.00029 | 0.00079 | 0.0000070 | 0.0030 |
| ML92-060-1 | 2009 | 42 | 49 | Iron Formation | Discovery | OP/HW | 0.36 | 21 | 0.0020 | 1.2 | 0.0014 | 0.00023 | 5.4 | < 0.0001 | 0.000030 | 0.00070 | < 0.001 | 0.000050 | 0.11 | 0.0010 | < 0.00002 | 0.000085 | 0.00023 | 0.00068 | 0.000020 | 0.0020 |
| ML92-061-03 | 2009 | 75 | 81 | Iron Formation | Discovery | OP/HW | 0.23 | 13 | 0.0040 | 0.45 | 0.00077 | 0.000090 | 5.7 | < 0.0001 | 0.000040 | 0.00060 | < 0.001 | 0.000060 | 0.064 | 0.0013 | 0.000030 | 0.00019 | 0.00064 | 0.00071 | 0.000023 | 0.0010 |
| ML92062-01 | 2011 | 17.5 | 26 | Iron Formation | Discovery | OP/HW | 0.12 | 17 | 0.0040 | 0.50 | 0.00048 | 0.00024 | 3.4 | 0.00010 | 0.00011 | 0.00060 | < 0.001 | 0.000010 | 0.087 | 0.0011 | < 0.00002 | 0.00017 | 0.0010 | 0.0013 | 0.000019 | 0.0010 |
| ML92-062-01 | 2009 | 20 | 25 | Iron Formation | Discovery | OP/HW | 0.41 | 6.0 | 0.0020 | 1.1 | 0.0017 | 0.00018 | 5.3 | 0.00010 | 0.000030 | 0.00060 | < 0.001 | 0.000010 | 0.092 | 0.0013 | < 0.00002 | 0.00011 | 0.00036 | 0.00074 | 0.000026 | 0.0010 |
| ML92-062-02 | 2009 | 35 | 39.5 | Iron Formation | Discovery | OP/HW | 1.1 | 17 | 0.0070 | 0.35 | 0.0023 | 0.00017 | 4.6 | 0.00030 | 0.00064 | 0.00060 | < 0.001 | 0.000070 | 0.032 | 0.020 | < 0.00002 | 0.00019 | 0.0029 | 0.00050 | 0.00013 | 0.0010 |
| ML95-105-01 | 2011 | 25 | 34 | Iron Formation | Discovery | OP/HW | 0.033 | 20 | 0.0020 | 0.92 | 0.00047 | 0.00016 | 2.4 | < 0.0001 | 0.000070 | 0.00070 | < 0.001 | < 0.00001 | 0.11 | 0.00030 | < 0.00002 | 0.000024 | 0.000070 | 0.0060 | 0.0000060 | < 0.001 |
| ML95-107-01 | 2011 | 11 | 18 | Iron Formation | Discovery | OP/HW | 0.44 | 20 | 0.013 | 0.63 | 0.0020 | 0.00021 | 2.2 | 0.00030 | 0.00024 | 0.0011 | < 0.001 | 0.000050 | 0.032 | 0.0078 | < 0.00002 | 0.00028 | 0.0012 | 0.00077 | 0.000067 | 0.0040 |
| ML95-107-02 | 2011 | 62.5 | 71 | Iron Formation | Discovery | OP/HW | 0.0070 | 19 | 0.0050 | 1.2 | 0.00089 | 0.00057 | 3.8 | 0.00020 | 0.000030 | 0.00070 | < 0.001 | 0.00011 | 0.11 | 0.00030 | < 0.00002 | 0.000092 | 0.00037 | 0.0020 | 0.0000050 | 0.0010 |
| ML95-117-01 | 2011 | 14 | 23 | Iron Formation | Discovery | OP/HW | 0.025 | 14 | 0.0020 | 0.81 | 0.00053 | 0.00019 | 2.7 | < 0.0001 | 0.000070 | 0.00060 | < 0.001 | < 0.00001 | 0.073 | 0.00040 | < 0.00002 | 0.000091 | 0.00031 | 0.0012 | 0.0000030 | < 0.001 |
| ML95-117-03 | 2011 | 61.5 | 71.5 | Iron Formation | Discovery | OP/HW | 0.24 | 8.3 | < 0.001 | 0.75 | 0.0010 | 0.00041 | 3.2 | 0.00030 | 0.00013 | 0.00050 | < 0.001 | < 0.00001 | 0.061 | 0.0030 | < 0.00002 | 0.000097 | 0.00087 | 0.0018 | 0.000046 | < 0.001 |
| ML95-82-01 | 2011 | 54 | 61.5 | Iron Formation | Discovery | OP/HW | 0.10 | 15 | 0.0010 | 0.62 | 0.00042 | 0.00026 | 2.9 | < 0.0001 | 0.000040 | 0.00050 | < 0.001 | < 0.00001 | 0.083 | 0.00080 | < 0.00002 | 0.000053 | 0.00033 | 0.00075 | 0.000012 | < 0.001 |
| ML95-82-2 | 2009 | 43 | 46 | Iron Formation | Discovery | OP/HW | 0.13 | 18 | 0.010 | 0.97 | 0.0011 | 0.00022 | 1.5 | 0.00010 | 0.000050 | 0.00060 | < 0.001 | 0.000030 | 0.14 | 0.00050 | 0.000030 | 0.00033 | 0.00023 | 0.00074 | 0.000035 | < 0.001 |
| ML95-83-01 | 2011 | 22 | 31 | Iron Formation | Discovery | OP/HW | 1.2 | 16 | 0.0090 | 0.31 | 0.0033 | 0.00027 | 2.3 | 0.00030 | 0.00029 | 0.00040 | < 0.001 | < 0.00001 | 0.0051 | 0.022 | < 0.00002 | 0.00032 | 0.0021 | 0.00054 | 0.00026 | 0.0010 |
| ML95-93-03 | 2009 | 55 | 60 | Iron Formation | Discovery | OP/HW | 0.020 | 11 | 0.0030 | 0.85 | 0.00068 | 0.00011 | 1.8 | 0.00020 | < 0.00002 | 0.00070 | < 0.001 | 0.000030 | 0.11 | 0.00020 | < 0.00002 | 0.000061 | 0.00010 | 0.0011 | 0.0000030 | 0.0020 |
| ML95-95-01 | 2011 | 20 | 29 | Iron Formation | Discovery | OP/HW | 0.19 | 20 | 0.0050 | 0.36 | 0.00088 | 0.00033 | 2.2 | 0.00010 | 0.00023 | 0.00050 | < 0.001 | 0.000040 | 0.038 | 0.0025 | < 0.00002 | 0.00030 | 0.0016 | 0.0012 | 0.000037 | 0.0020 |
| ML95-98-01 | 2011 | 9.5 | 17.5 | Iron Formation | Discovery | OP/HW | 0.47 | 20 | 0.013 | 0.96 | 0.0025 | 0.00020 | 4.1 | 0.00010 | 0.00017 | 0.0014 | < 0.001 | < 0.00001 | 0.038 | 0.0057 | < 0.00002 | 0.00030 | 0.00043 | 0.0016 | 0.000085 | < 0.001 |
| ML97-186-01 | 2011 | 78 | 86 | Iron Formation | Discovery | OP/HW | 0.35 | 14 | 0.0030 | 0.90 | 0.0014 | 0.00066 | 18 | 0.00030 | 0.00023 | 0.00080 | < 0.001 | < 0.00001 | 0.090 | 0.0040 | < 0.00002 | 0.00070 | 0.0013 | 0.00054 | 0.00088 | 0.0020 |
| | | | | | | MINIMUM | 0.0070 | 6.0 | < 0.001 | 0.29 | 0.00019 | 0.000070 | 1.5 | < 0.0001 | < 0.00002 | 0.00040 | <0.001 | < 0.00001 | 0.0051 | 0.00020 | <0.00002 | 0.000024 | 0.000070 | 0.00043 | 0.0000030 | < 0.001 |
| | | | | | | MAXIMUM | 1.2 | 21 | 0.024 | 1.2 | 0.0033 | 0.00066 | 18 | 0.00040 | 0.00064 | 0.0014 | <0.001 | 0.00011 | 0.19 | 0.022 | 0.00022 | 0.0010 | 0.0029 | 0.013 | 0.00088 | 0.0040 |
| | | | | | | MEDIAN | 0.17 | 15 | 0.0040 | 0.75 | 0.00096 | 0.00022 | 4.0 | 0.00010 | 0.000090 | 0.00060 | nc | 0.000010 | 0.068 | 0.0013 | 0.000020 | 0.00014 | 0.00050 | 0.00087 | 0.000027 | 0.0010 |
| | | | | | | AVERAGE | 0.28 | 15 | 0.0054 | 0.70 | 0.0012 | 0.00024 | 4.5 | 0.00015 | 0.00012 | 0.00073 | nc | 0.000023 | 0.074 | 0.0032 | 0.000027 | 0.00022 | 0.00079 | 0.0017 | 0.000070 | 0.0013 |
| | | | | | | STANDARD DEVIATION | 0.31 | 3.6 | 0.0048 | 0.25 | 0.00082 | 0.00014 | 3.3 | 0.000090 | 0.00012 | 0.00028 | nc | 0.000023 | 0.042 | 0.0050 | 0.000035 | 0.00023 | 0.00067 | 0.0024 | 0.00016 | 0.00074 |
| | | | | | | 75TH PERCENTILE | 0.41 | 18 | 0.0070 | 0.90 | 0.0014 | 0.00027 | 5.3 | 0.00020 | 0.00014 | 0.00080 | nc | 0.000030 | 0.11 | 0.0035 | 0.000020 | 0.00030 | 0.0011 | 0.0016 | 0.000062 | 0.0010 |
| ML00-224-01 | 2011 | 101.5 | 110 | Ore/IF | Discovery | OP/HW | 0.032 | 11 | 0.0010 | 1.3 | 0.00054 | 0.00016 | 2.3 | < 0.0001 | 0.000070 | 0.00050 | < 0.001 | < 0.00001 | 0.14 | 0.00030 | < 0.00002 | 0.000050 | 0.00017 | 0.0014 | 0.0000060 | < 0.001 |
| ML08-225-03 | 2011 | 169 | 178 | Ore/IF | Discovery | OP/FW | 0.016 | 13 | 0.0020 | 0.98 | 0.00053 | 0.00015 | 2.8 | < 0.0001 | 0.000080 | 0.00050 | < 0.001 | < 0.00001 | 0.12 | 0.00030 | < 0.00002 | 0.000036 | 0.00017 | 0.0013 | 0.0000030 | < 0.001 |
| ML08-226-04 | 2011 | 168.5 | 174.5 | Ore/IF | Discovery | OP/HW | 0.81 | 18 | 0.0030 | 0.71 | 0.0015 | 0.00033 | 2.5 | < 0.0001 | 0.00015 | 0.0010 | < 0.001 | < 0.00001 | 0.035 | 0.0040 | < 0.00002 | 0.000058 | 0.00027 | 0.0042 | 0.000042 | < 0.001 |
| ML95-104-02 | 2011 | 177 | 187 | Ore/IF | Discovery | OP/FW | 0.066 | 16 | 0.0050 | 1.7 | 0.0012 | 0.00033 | 2.9 | 0.00010 | 0.00012 | 0.00060 | < 0.001 | 0.000010 | 0.24 | 0.00080 | < 0.00002 | 0.00016 | 0.00016 | 0.00062 | 0.0000080 | < 0.001 |
| ML95-84-01 | 2011 | 123 | 131 | Ore/IF | Discovery | OP/FW | 0.068 | 15 | 0.0030 | 0.97 | 0.00056 | 0.00033 | 3.6 | < 0.0001 | 0.00017 | 0.00070 | < 0.001 | < 0.00001 | 0.12 | 0.00040 | 0.000030 | 0.000055 | 0.00013 | 0.00046 | 0.0000090 | < 0.001 |
| | | | | | | MINIMUM | 0.016 | 11 | 0.0010 | 0.71 | 0.00053 | 0.00015 | 2.3 | < 0.0001 | 0.000070 | 0.00050 | <0.001 | < 0.00001 | 0.035 | 0.00030 | <0.00002 | 0.000036 | 0.00013 | 0.00046 | 0.0000030 | <0.001 |
| | | | | | | MAXIMUM | 0.81 | 18 | 0.0050 | 1.7 | 0.0015 | 0.00033 | 3.6 | 0.00010 | 0.00017 | 0.0010 | <0.001 | 0.000010 | 0.24 | 0.0040 | 0.000030 | 0.00016 | 0.00027 | 0.0042 | 0.000042 | <0.001 |
| | | | | | | MEDIAN | 0.066 | 15 | 0.0030 | 0.98 | 0.00056 | 0.00033 | 2.8 | nc | 0.00012 | 0.00060 | nc | nc | 0.12 | 0.00040 | nc | 0.000055 | 0.00017 | 0.0013 | 0.0000080 | nc |
| | | | | | | AVERAGE | 0.20 | 14 | 0.0028 | 1.1 | 0.00087 | 0.00026 | 2.8 | nc | 0.00012 | 0.00066 | nc | nc | 0.13 | 0.0012 | nc | 0.000071 | 0.00018 | 0.0016 | 0.000014 | nc |
| | | | | | | STANDARD DEVIATION | 0.34 | 2.8 | 0.0015 | 0.37 | 0.00047 | 0.000096 | 0.49 | nc | 0.000043 | 0.00021 | nc | nc | 0.072 | 0.0016 | nc | 0.000048 | 0.000053 | 0.0015 | 0.000016 | nc |
| | | | | | | 75TH PERCENTILE | 0.068 | 16 | 0.0030 | 1.3 | 0.0012 | 0.00033 | 2.9 | nc | 0.00015 | 0.00070 | nc | nc | 0.14 | 0.00080 | nc | 0.000058 | 0.00017 | 0.0014 | 0.0000090 | nc |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M08-743-03 | 2009 | 46 | 48 | Iron Formation | F Zone | OP-ore zone | 8.1 | 237 | 85 | 8.7 | 4.5 | < 0.0001 | 0.000080 | 0.15 | 0.0070 | 0.019 | < 0.00002 | < 0.00001 | 24 | 0.00015 | 0.00021 | < 0.0005 | < 0.0005 |
| M08-748-03 | 2009 | 85 | 95 | Iron Formation | F Zone | OP-ore zone | 7.9 | 66 | 30 | 2.5 | 1.0 | < 0.0001 | 0.000020 | 0.66 | 0.0018 | 0.020 | < 0.00002 | < 0.00001 | 5.5 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 |
| M09-802-02 | 2011 | 65 | 73 | Iron Formation | F Zone | OP/FW | 8.0 | 197 | - | 2.2 | 5.4 | < 0.0001 | < 0.00001 | 0.030 | 0.0026 | 0.015 | < 0.00002 | < 0.00001 | 28 | < 0.000003 | 0.00023 | < 0.0005 | < 0.0005 |
| M09-803-01 | 2011 | 85 | 90 | Iron Formation | F Zone | OP/FW | 8.0 | 194 | - | 2.2 | 2.2 | < 0.0001 | < 0.00001 | 0.040 | 0.0014 | 0.024 | < 0.00002 | < 0.00001 | 26 | < 0.000003 | 0.000091 | < 0.0005 | < 0.0005 |
| M10-935-02 | 2011 | 46 | 56 | Iron Formation | F Zone | OP/FW | 8.0 | 159 | - | 2.4 | 5.2 | < 0.0001 | < 0.00001 | < 0.01 | 0.082 | 0.023 | < 0.00002 | < 0.00001 | 19 | < 0.000003 | 0.00014 | < 0.0005 | < 0.0005 |
| M98-248-01 | 2011 | 88 | 97 | Iron Formation | F Zone | OP/FW | 7.9 | 150 | - | 0.80 | 5.0 | < 0.0001 | < 0.00001 | < 0.01 | 0.00040 | 0.0075 | < 0.00002 | 0.000020 | 22 | < 0.000003 | 0.000093 | < 0.0005 | < 0.0005 |
| W94-111-01 | 2011 | 118 | 127 | Iron Formation | F Zone | OP/HW | 8.0 | 201 | - | 0.90 | 3.4 | < 0.0001 | < 0.00001 | < 0.01 | 0.0011 | 0.012 | < 0.00002 | < 0.00001 | 23 | < 0.000003 | 0.000055 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.9 | 66 | 30 | 0.80 | 1.0 | <0.0001 | <0.00001 | <0.01 | 0.00040 | 0.0075 | <0.00002 | <0.00001 | 5.5 | <0.000003 | 0.000030 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.1 | 237 | 85 | 8.7 | 5.4 | <0.0001 | 0.000080 | 0.66 | 0.082 | 0.024 | <0.00002 | 0.000020 | 28 | 0.00015 | 0.00023 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.0 | 194 | 58 | 2.2 | 4.5 | nc | nc | 0.030 | 0.0018 | 0.019 | nc | nc | 23 | nc | 0.000093 | nc | nc |
| | | | | | | AVERAGE | 8.0 | 172 | 58 | 2.8 | 3.8 | nc | nc | 0.13 | 0.014 | 0.017 | nc | nc | 21 | nc | 0.00012 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.072 | 55 | 39 | 2.7 | 1.7 | nc | nc | 0.24 | 0.030 | 0.0058 | nc | nc | 7.4 | nc | 0.000076 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.0 | 199 | 71 | 2.5 | 5.1 | nc | nc | 0.095 | 0.0048 | 0.021 | nc | nc | 25 | nc | 0.00018 | nc | nc |
| GT09-07-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 8.2 | 105 | 32 | 12 | 1.8 | < 0.0001 | < 0.00001 | 0.89 | 0.00070 | 0.041 | < 0.00002 | < 0.00001 | 5.5 | < 0.000003 | 0.0000060 | < 0.0005 | < 0.0005 |
| GT09-07-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 106 | 38 | 8.0 | 1.2 | < 0.0001 | < 0.00001 | 0.87 | 0.0016 | 0.0098 | < 0.00002 | < 0.00001 | 6.3 | < 0.000003 | 0.0000070 | < 0.0005 | < 0.0005 |
| M08-729-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | 8.2 | 99 | 37 | 6.0 | 2.3 | < 0.0001 | 0.000010 | 0.87 | 0.0024 | 0.016 | < 0.00002 | 0.000010 | 4.5 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M08-729-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | 8.0 | 90 | 32 | 7.7 | 1.5 | < 0.0001 | < 0.00001 | 0.83 | 0.0026 | 0.018 | < 0.00002 | < 0.00001 | 5.0 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M08-729-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/HW | 8.2 | 111 | 43 | 6.0 | 3.4 | < 0.0001 | < 0.00001 | 1.1 | 0.0098 | 0.024 | < 0.00002 | < 0.00001 | 4.5 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| M08-729-04 | 2009 | 74 | 79 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 100 | 47 | 2.5 | 1.3 | < 0.0001 | 0.000040 | 0.75 | 0.062 | 0.019 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 |
| M08-729-06 | 2009 | 117 | 122 | Mafic Volcanic | F Zone | OP/FW | 8.0 | 107 | 53 | 2.2 | 0.80 | < 0.0001 | 0.000020 | 0.50 | 0.041 | 0.0094 | < 0.00002 | < 0.00001 | 7.4 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 |
| M08-733-01 | 2011 | 62 | 71 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 103 | - | 3.7 | 3.2 | < 0.0001 | < 0.00001 | 1.0 | 0.0061 | 0.020 | < 0.00002 | < 0.00001 | 5.2 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M08-733-02 | 2011 | 180 | 189 | Mafic Volcanic | F Zone | OP/FW | 8.3 | 88 | - | 1.5 | 1.6 | < 0.0001 | < 0.00001 | 0.84 | 0.0025 | 0.0060 | < 0.00002 | < 0.00001 | 5.1 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M08-734-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 100 | 45 | 4.5 | 2.0 | < 0.0001 | 0.000070 | 1.1 | 0.012 | 0.019 | < 0.00002 | 0.000040 | 3.9 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M08-734-02 | 2009 | 28 | 32 | Mafic Volcanic | F Zone | OP/HW | 8.0 | 109 | 45 | 6.3 | 1.8 | < 0.0001 | 0.000020 | 1.0 | 0.0010 | 0.013 | < 0.00002 | 0.000030 | 6.7 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 133 | 46 | 5.0 | 8.6 | < 0.0001 | 0.000030 | 0.75 | 0.013 | 0.015 | < 0.00002 | 0.000010 | 7.1 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M08-734-04 | 2009 | 41 | 45 | Mafic Volcanic | F Zone | OP/FW | 8.3 | 166 | 84 | 4.0 | 1.0 | < 0.0001 | 0.000010 | 0.41 | 0.023 | 0.020 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 |
| M08-735-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 8.7 | 138 | 60 | 6.4 | 3.2 | < 0.0001 | 0.000010 | 1.5 | 0.019 | 0.037 | < 0.00002 | < 0.00001 | 3.0 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M08-735-02 | 2009 | 70 | 75 | Mafic Volcanic | F Zone | OP/FW | 8.3 | 154 | 77 | 2.9 | 0.90 | < 0.0001 | < 0.00001 | 0.55 | 0.059 | 0.017 | < 0.00002 | < 0.00001 | 7.0 | < 0.000003 | 0.000047 | < 0.0005 | < 0.0005 |
| M08-735-03 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | 8.2 | 120 | 44 | 9.7 | 2.3 | < 0.0001 | < 0.00001 | 0.97 | 0.010 | 0.016 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M08-740-01 | 2009 | 16 | 21 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 115 | 40 | 10 | 1.8 | < 0.0001 | 0.00014 | 1.1 | 0.022 | 0.024 | < 0.00002 | < 0.00001 | 6.2 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 |
| M08-740-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | 8.0 | 119 | 54 | 5.9 | 0.90 | < 0.0001 | 0.000020 | 0.53 | 0.072 | 0.018 | < 0.00002 | < 0.00001 | 6.6 | < 0.000003 | 0.000053 | < 0.0005 | < 0.0005 |
| M08-740-03 | 2009 | 52 | 56 | Mafic Volcanic | F Zone | OP/HW | 8.7 | 80 | 32 | 5.2 | 1.7 | < 0.0001 | < 0.00001 | 0.72 | 0.0025 | 0.014 | < 0.00002 | < 0.00001 | 3.8 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M08-740-04 | 2009 | 106 | 111 | Mafic Volcanic | F Zone | OP/FW | 8.1 | 126 | 57 | 5.3 | 0.90 | < 0.0001 | 0.000010 | 0.47 | 0.017 | 0.0081 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000053 | < 0.0005 | < 0.0005 |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | 8.5 | 116 | 42 | 7.8 | 2.5 | < 0.0001 | 0.000020 | 0.85 | 0.037 | 0.017 | < 0.00002 | < 0.00001 | 3.6 | < 0.000003 | 0.000025 | < 0.0005 | < 0.0005 |
| M08-742-01 | 2009 | 8.5 | 14.5 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 109 | 41 | 7.4 | 3.4 | < 0.0001 | < 0.00001 | 1.1 | 0.0022 | 0.018 | < 0.00002 | < 0.00001 | 4.4 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M08-742-02 | 2009 | 29 | 35 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 112 | 44 | 7.4 | 1.5 | < 0.0001 | < 0.00001 | 0.99 | 0.0014 | 0.014 | < 0.00002 | < 0.00001 | 5.6 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M08-742-03 | 2009 | 43 | 47 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 138 | 65 | 5.0 | 1.6 | < 0.0001 | 0.000010 | 0.51 | 0.0052 | 0.013 | < 0.00002 | < 0.00001 | 7.6 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M08-742-04 | 2009 | 77 | 83 | Mafic Volcanic | F Zone | OP/HW | 8.2 | 136 | 61 | 7.1 | 1.2 | < 0.0001 | < 0.00001 | 0.61 | 0.0023 | 0.018 | < 0.00002 | < 0.00001 | 6.0 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 |
| M08-742-06 | 2009 | 96 | 102 | Mafic Volcanic | F Zone | OP/FW | 8.7 | 85 | 40 | 3.7 | 1.1 | < 0.0001 | < 0.00001 | 0.67 | 0.0026 | 0.016 | < 0.00002 | < 0.00001 | 3.3 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M08-743-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | 9.1 | 108 | 43 | 6.5 | 2.6 | < 0.0001 | < 0.00001 | 0.87 | 0.0038 | 0.018 | < 0.00002 | < 0.00001 | 3.2 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 |
| M08-743-02 | 2009 | 39 | 44 | Mafic Volcanic | F Zone | OP/FW | 8.2 | 115 | 50 | 5.6 | 1.1 | < 0.0001 | < 0.00001 | 0.67 | 0.021 | 0.018 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M08-743-04 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | 9.2 | 106 | 49 | 3.9 | 1.1 | < 0.0001 | < 0.00001 | 0.90 | 0.018 | 0.032 | < 0.00002 | < 0.00001 | 2.7 | < 0.000003 | 0.000055 | < 0.0005 | < 0.0005 |
| M08-747-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 8.0 | 110 | 34 | 7.1 | 3.3 | < 0.0001 | < 0.00001 | 0.79 | 0.00070 | 0.0093 | < 0.00002 | < 0.00001 | 7.9 | < 0.000003 | 0.000055 | < 0.0005 | < 0.0005 |
| M08-747-02 | 2009 | 39 | 45 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 93 | 30 | 3.8 | 2.8 | < 0.0001 | 0.000070 | 0.44 | 0.0022 | 0.010 | < 0.00002 | 0.000010 | 5.6 | 0.0000040 | 0.000034 | < 0.0005 | < 0.0005 |
| M08-747-03 | 2009 | 65 | 70 | Mafic Volcanic | F Zone | OP/FW | 8.1 | 75 | 35 | 3.9 | 0.70 | < 0.0001 | 0.000010 | 0.63 | 0.00070 | 0.0066 | < 0.00002 | < 0.00001 | 5.5 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M08-747-04 | 2009 | 83 | 88 | Mafic Volcanic | F Zone | OP/FW | 8.7 | 80 | 37 | 2.0 | 1.1 | < 0.0001 | 0.000050 | 0.78 | 0.0046 | 0.011 | < 0.00002 | < 0.00001 | 3.2 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| M08-748-01 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | 8.7 | 104 | 40 | 5.6 | 2.0 | < 0.0001 | < 0.00001 | 0.99 | 0.0031 | 0.024 | < 0.00002 | < 0.00001 | 3.0 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M08-748-02 | 2009 | 57 | 62 | Mafic Volcanic | F Zone | OP/HW | 7.7 | 124 | 38 | 5.7 | 3.7 | < 0.0001 | < 0.00001 | 0.73 | 0.00070 | 0.011 | < 0.00002 | < 0.00001 | 6.5 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M08-750-01 | 2009 | 8 | 14 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 100 | 46 | 4.0 | 1.6 | < 0.0001 | < 0.00001 | 0.86 | 0.0013 | 0.0085 | < 0.00002 | < 0.00001 | 5.0 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M08-750-02 | 2009 | 28 | 33 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 177 | 82 | 7.5 | 1.0 | < 0.0001 | 0.000090 | 0.49 | 0.016 | 0.021 | 0.000040 | 0.000040 | 11 | 0.000026 | 0.000070 | < 0.0005 | < 0.0005 |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | 8.1 | 107 | 48 | 3.8 | 1.2 | < 0.0001 | 0.000080 | 1.1 | 0.0097 | 0.031 | 0.000090 | 0.00011 | 5.9 | 0.000043 | 0.000082 | < 0.0005 | < 0.0005 |
| M08-752-01 | 2009 | 9 | 14 | Mafic Volcanic | F Zone | OP/HW | 8.2 | 134 | 33 | 12 | 5.2 | < 0.0001 | < 0.00001 | 0.55 | 0.0073 | 0.013 | < 0.00002 | < 0.00001 | 5.3 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| M08-752-02 | 2009 | 23 | 27 | Mafic Volcanic | F Zone | OP/HW | 8.5 | 100 | 41 | 2.5 | 5.7 | < 0.0001 | 0.000010 | 0.64 | 0.0053 | 0.25 | < 0.00002 | < 0.00001 | 3.3 | < 0.000003 | 0.00032 | 0.0010 | 0.00050 |
| M08-752-03 | 2009 | 45 | 51 | Mafic Volcanic | F Zone | OP/FW | 8.0 | 118 | 54 | 5.2 | 0.80 | < 0.0001 | < 0.00001 | 0.49 | 0.025 | 0.016 | < 0.00002 | < 0.00001 | 6.9 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 |
| M08-752-04 | 2009 | 75 | 80 | Mafic Volcanic | F Zone | OP/FW | 7.9 | 82 | 36 | 3.9 | 1.2 | < 0.0001 | < 0.00001 | 0.93 | 0.00070 | 0.010 | < 0.00002 | < 0.00001 | 4.8 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| M08-755-01 | 2009 | 19 | 24 | Mafic Volcanic | F Zone | OP/HW | 8.8 | 77 | 32 | 4.1 | 1.2 | < 0.0001 | 0.000020 | 0.83 | 0.0043 | 0.0075 | < 0.00002 | < 0.00001 | 3.9 | 0.0000030 | 0.000035 | < 0.0005 | < 0.0005 |
| M08-755-02 | 2009 | 30 | 37 | Mafic Volcanic | F Zone | OP/HW | 8.5 | 88 | 36 | 4.6 | 1.8 | < 0.0001 | < 0.00001 | 0.87 | 0.0017 | 0.012 | < 0.00002 | < 0.00001 | 3.6 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M08-755-03 | 2009 | 66 | 71 | Mafic Volcanic | F Zone | OP/FW | 8.3 | 72 | 35 | 2.9 | 1.0 | < 0.0001 | 0.000020 | 0.61 | 0.0040 | 0.024 | < 0.00002 | < 0.00001 | 4.4 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| M09-798-01 | 2009 | 12 | 17 | Mafic Volcanic | F Zone | OP/HW | 9.4 | 118 | 37 | 9.0 | 1.8 | < 0.0001 | < 0.00001 | 1.2 | 0.0075 | 0.018 | < 0.00002 | < 0.00001 | 3.6 | < 0.000003 | 0.00014 | < 0.0005 | < 0.0005 |
| M09-798-02 | 2009 | 17 | 22 | Mafic Volcanic | F Zone | OP/HW | 9.2 | 96 | 38 | 4.5 | 1.3 | < 0.0001 | < 0.00001 | 1.0 | 0.0076 | 0.026 | < 0.00002 | < 0.00001 | 3.4 | < 0.000003 | 0.00011 | < 0.0005 | < 0.0005 |
| M09-802-01 | 2011 | 35 | 44 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 87 | - | 2.2 | 1.8 | < 0.0001 | < 0.00001 | 0.68 | 0.00090 | 0.0077 | < 0.00002 | < 0.00001 | 6.3 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M09-816-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 8.7 | 84 | 29 | 8.2 | 1.8 | < 0.0001 | < 0.00001 | 0.71 | 0.0010 | 0.010 | < 0.00002 | < 0.00001 | 5.7 | 0.000014 | 0.000030 | < 0.0005 | < 0.0005 |
| M09-816-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | 9.2 | 85 | 29 | 5.3 | 2.8 | < 0.0001 | < 0.00001 | 0.62 | 0.0013 | 0.022 | < 0.00002 | < 0.00001 | 4.8 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M09-817-02 | 2011 | 45 | 53 | Mafic Volcanic | F Zone | OP/HW | 8.0 | 100 | - | 1.5 | 0.60 | < 0.0001 | < 0.00001 | 0.42 | 0.0096 | 0.0072 | < 0.00002 | < 0.00001 | 8.0 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M08-743-03 | 2009 | 46 | 48 | Iron Formation | F Zone | OP-ore zone | < 0.01 | 8.9 | 0.0040 | 7.3 | 0.099 | 0.00059 | 7.0 | 0.00090 | 0.000080 | 0.0032 | < 0.001 | 0.000030 | 0.040 | 0.00020 | < 0.00002 | 0.000085 | 0.00011 | 0.00037 | 0.0000020 | < 0.001 |
| M08-748-03 | 2009 | 85 | 95 | Iron Formation | F Zone | OP-ore zone | < 0.01 | 1.5 | < 0.001 | 0.69 | 0.00053 | 0.000050 | 6.7 | 0.00010 | < 0.00002 | 0.0036 | < 0.001 | < 0.00001 | 0.021 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0036 | 0.00083 | < 0.000001 | < 0.001 |
| M09-802-02 | 2011 | 65 | 73 | Iron Formation | F Zone | OP/FW | 0.0030 | 1.5 | 0.0010 | 5.9 | 0.25 | 0.00010 | 1.7 | 0.00060 | 0.000060 | 0.0055 | < 0.001 | 0.000030 | 0.034 | 0.00030 | < 0.00002 | 0.000079 | 0.000030 | 0.00041 | 0.0000020 | 0.0020 |
| M09-803-01 | 2011 | 85 | 90 | Iron Formation | F Zone | OP/FW | 0.0050 | 1.6 | < 0.001 | 7.6 | 0.092 | 0.00014 | 1.2 | 0.00020 | < 0.00002 | 0.0018 | < 0.001 | < 0.00001 | 0.036 | 0.00030 | < 0.00002 | 0.000050 | < 0.00003 | 0.0016 | 0.0000020 | < 0.001 |
| M10-935-02 | 2011 | 46 | 56 | Iron Formation | F Zone | OP/FW | 0.026 | 2.5 | < 0.001 | 4.3 | 0.11 | 0.00043 | 5.0 | 0.00030 | < 0.00002 | 0.0026 | < 0.001 | < 0.00001 | 0.048 | 0.00040 | < 0.00002 | 0.0011 | 0.00021 | 0.0017 | 0.0000020 | < 0.001 |
| M98-248-01 | 2011 | 88 | 97 | Iron Formation | F Zone | OP/FW | 0.016 | 4.1 | 0.0030 | 6.3 | 0.29 | 0.00011 | 0.74 | 0.00040 | 0.00010 | 0.0016 | < 0.001 | < 0.00001 | 0.024 | 0.00030 | < 0.00002 | 0.000071 | < 0.00003 | 0.00064 | 0.0000030 | < 0.001 |
| W94-111-01 | 2011 | 118 | 127 | Iron Formation | F Zone | OP/HW | 0.0080 | 2.4 | 0.0010 | 9.2 | 0.17 | 0.00011 | 0.46 | 0.00020 | 0.00012 | 0.0018 | < 0.001 | < 0.00001 | 0.030 | 0.00020 | < 0.00002 | 0.00010 | 0.000030 | 0.00021 | 0.0000030 | < 0.001 |
| | | | | | | MINIMUM | < 0.01 | 1.5 | < 0.001 | 0.69 | 0.00053 | 0.000050 | 0.46 | 0.00010 | <0.00002 | 0.0016 | <0.001 | <0.00001 | 0.021 | <0.0001 | <0.00002 | 0.0000010 | < 0.00003 | 0.00021 | <0.000001 | <0.001 |
| | | | | | | MAXIMUM | 0.026 | 8.9 | 0.0040 | 9.2 | 0.29 | 0.00059 | 7.0 | 0.00090 | 0.00012 | 0.0055 | <0.001 | 0.000030 | 0.048 | 0.00040 | <0.00002 | 0.0011 | 0.0036 | 0.0017 | 0.0000030 | 0.0020 |
| | | | | | | MEDIAN | 0.010 | 2.4 | 0.0010 | 6.3 | 0.11 | 0.00011 | 1.7 | 0.00030 | 0.000060 | 0.0026 | nc | nc | 0.034 | 0.00030 | nc | 0.000079 | 0.000030 | 0.00064 | 0.0000020 | nc |
| | | | | | | AVERAGE | 0.011 | 3.2 | 0.0017 | 5.9 | 0.14 | 0.00022 | 3.3 | 0.00039 | 0.000060 | 0.0029 | nc | nc | 0.033 | 0.00026 | nc | 0.00022 | 0.00057 | 0.00082 | 0.0000021 | nc |
| | | | | | | STANDARD DEVIATION | 0.0078 | 2.7 | 0.0013 | 2.8 | 0.099 | 0.00021 | 2.9 | 0.00028 | 0.000042 | 0.0014 | nc | nc | 0.0093 | 0.000098 | nc | 0.00040 | 0.0013 | 0.00060 | ########## | nc |
| | | | | | | 75TH PERCENTILE | 0.013 | 3.3 | 0.0020 | 7.5 | 0.21 | 0.00029 | 5.8 | 0.00050 | 0.000090 | 0.0034 | nc | nc | 0.038 | 0.00030 | nc | 0.000093 | 0.00016 | 0.0012 | 0.0000025 | nc |
| GT09-07-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 3.9 | < 0.001 | 0.82 | 0.00049 | 0.00013 | 13 | < 0.0001 | < 0.00002 | 0.0011 | < 0.001 | < 0.00001 | 0.018 | 0.00020 | < 0.00002 | 0.0000010 | 0.0039 | 0.00096 | < 0.000001 | < 0.001 |
| GT09-07-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 9.1 | < 0.001 | 0.99 | 0.0011 | 0.00015 | 9.8 | 0.00020 | < 0.00002 | 0.0017 | < 0.001 | < 0.00001 | 0.022 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0015 | 0.0013 | 0.0000010 | < 0.001 |
| M08-729-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 8.5 | < 0.001 | 0.47 | 0.00044 | 0.00032 | 10 | < 0.0001 | < 0.00002 | 0.0031 | < 0.001 | < 0.00001 | 0.015 | 0.00020 | < 0.00002 | 0.0000030 | 0.0054 | 0.0012 | 0.0000010 | < 0.001 |
| M08-729-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 4.9 | < 0.001 | 0.52 | 0.00038 | 0.000070 | 9.6 | < 0.0001 | < 0.00002 | 0.0018 | < 0.001 | < 0.00001 | 0.014 | 0.00010 | < 0.00002 | < 0.000001 | 0.0040 | 0.0016 | < 0.000001 | < 0.001 |
| M08-729-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 8.7 | < 0.001 | 0.50 | 0.00071 | 0.00032 | 13 | < 0.0001 | < 0.00002 | 0.0020 | < 0.001 | 0.000020 | 0.011 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0034 | 0.0010 | < 0.000001 | < 0.001 |
| M08-729-04 | 2009 | 74 | 79 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 6.3 | 0.0020 | 1.4 | 0.0015 | 0.000090 | 9.8 | 0.0012 | < 0.00002 | 0.0027 | < 0.001 | < 0.00001 | 0.016 | 0.00020 | < 0.00002 | 0.000011 | 0.0063 | 0.00095 | 0.0000010 | < 0.001 |
| M08-729-06 | 2009 | 117 | 122 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 8.5 | 0.0010 | 2.3 | 0.00090 | 0.00015 | 7.4 | 0.0010 | < 0.00002 | 0.0035 | < 0.001 | < 0.00001 | 0.031 | < 0.0001 | < 0.00002 | 0.0000030 | 0.0014 | 0.0013 | 0.0000060 | < 0.001 |
| M08-733-01 | 2011 | 62 | 71 | Mafic Volcanic | F Zone | OP/HW | < 0.002 | 6.4 | < 0.001 | 0.61 | 0.0012 | 0.00032 | 12 | 0.00010 | < 0.00002 | 0.0017 | < 0.001 | < 0.00001 | 0.014 | 0.00010 | < 0.00002 | 0.000045 | 0.0029 | 0.00090 | < 0.000001 | < 0.001 |
| M08-733-02 | 2011 | 180 | 189 | Mafic Volcanic | F Zone | OP/FW | 0.0020 | 8.3 | < 0.001 | 0.63 | 0.00079 | 0.00012 | 5.9 | < 0.0001 | < 0.00002 | 0.0022 | < 0.001 | < 0.00001 | 0.015 | 0.00030 | < 0.00002 | < 0.000001 | 0.0036 | 0.00089 | 0.0000020 | < 0.001 |
| M08-734-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 4.6 | < 0.001 | 0.48 | 0.00031 | 0.00028 | 14 | < 0.0001 | 0.000060 | 0.0027 | < 0.001 | 0.000030 | 0.012 | 0.00010 | 0.000020 | 0.000023 | 0.0074 | 0.00092 | 0.0000030 | < 0.001 |
| M08-734-02 | 2009 | 28 | 32 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 7.5 | < 0.001 | 0.99 | 0.00075 | 0.00018 | 10 | < 0.0001 | 0.000080 | 0.0017 | < 0.001 | 0.000030 | 0.016 | < 0.0001 | < 0.00002 | 0.000017 | 0.0011 | 0.0010 | 0.0000030 | < 0.001 |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 7.7 | < 0.001 | 1.1 | 0.00079 | 0.00046 | 14 | 0.00010 | 0.000050 | 0.0045 | < 0.001 | < 0.00001 | 0.027 | < 0.0001 | < 0.00002 | 0.000013 | 0.0019 | 0.0027 | 0.0000020 | < 0.001 |
| M08-734-04 | 2009 | 41 | 45 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 7.9 | < 0.001 | 5.9 | 0.00069 | 0.00023 | 12 | 0.00020 | 0.000080 | 0.0018 | < 0.001 | < 0.00001 | 0.019 | < 0.0001 | < 0.00002 | 0.000084 | 0.00074 | 0.0021 | 0.0000010 | < 0.001 |
| M08-735-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 8.9 | < 0.001 | 0.37 | 0.00039 | 0.00030 | 20 | < 0.0001 | 0.00014 | 0.0033 | < 0.001 | < 0.00001 | 0.013 | 0.00010 | < 0.00002 | 0.000014 | 0.011 | 0.0014 | 0.0000040 | < 0.001 |
| M08-735-02 | 2009 | 70 | 75 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 17 | 0.0020 | 3.0 | 0.0012 | 0.00011 | 12 | 0.00030 | 0.00023 | 0.0032 | < 0.001 | 0.000010 | 0.023 | < 0.0001 | < 0.00002 | 0.0000050 | 0.0015 | 0.0021 | 0.0000020 | < 0.001 |
| M08-735-03 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 6.6 | < 0.001 | 0.81 | 0.00066 | 0.00022 | 13 | < 0.0001 | 0.00022 | 0.0024 | < 0.001 | 0.000030 | 0.022 | 0.00020 | < 0.00002 | 0.0000060 | 0.0026 | 0.0015 | 0.0000030 | < 0.001 |
| M08-740-01 | 2009 | 16 | 21 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 5.2 | < 0.001 | 0.68 | 0.0013 | 0.000070 | 13 | 0.00020 | < 0.00002 | 0.0014 | < 0.001 | < 0.00001 | 0.016 | < 0.0001 | < 0.00002 | 0.0000080 | 0.0019 | 0.0015 | 0.0000050 | < 0.001 |
| M08-740-02 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 3.7 | < 0.001 | 2.7 | 0.00047 | 0.000060 | 12 | 0.00030 | < 0.00002 | 0.0016 | < 0.001 | < 0.00001 | 0.023 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0017 | 0.00062 | < 0.000001 | < 0.001 |
| M08-740-03 | 2009 | 52 | 56 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 3.1 | < 0.001 | 0.40 | 0.00026 | 0.000050 | 10 | < 0.0001 | < 0.00002 | 0.0019 | < 0.001 | < 0.00001 | 0.012 | 0.00030 | < 0.00002 | 0.0000060 | 0.017 | 0.0010 | < 0.000001 | < 0.001 |
| M08-740-04 | 2009 | 106 | 111 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 11 | < 0.001 | 2.8 | 0.0012 | 0.00012 | 9.0 | 0.00060 | < 0.00002 | 0.0033 | < 0.001 | < 0.00001 | 0.030 | < 0.0001 | < 0.00002 | 0.0000080 | 0.0011 | 0.0011 | < 0.000001 | < 0.001 |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 10 | < 0.001 | 0.43 | 0.00052 | 0.00025 | 14 | 0.00020 | < 0.00002 | 0.0020 | < 0.001 | < 0.00001 | 0.016 | < 0.0001 | < 0.00002 | 0.0000060 | 0.0050 | 0.00083 | 0.0000080 | < 0.001 |
| M08-742-01 | 2009 | 8.5 | 14.5 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 7.4 | < 0.001 | 0.48 | 0.00035 | 0.00013 | 13 | < 0.0001 | 0.00018 | 0.0024 | < 0.001 | < 0.00001 | 0.016 | 0.00040 | < 0.00002 | 0.000050 | 0.011 | 0.0020 | 0.0000020 | < 0.001 |
| M08-742-02 | 2009 | 29 | 35 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 9.3 | < 0.001 | 0.81 | 0.00046 | 0.000090 | 12 | < 0.0001 | 0.00014 | 0.0026 | < 0.001 | < 0.00001 | 0.014 | 0.00020 | < 0.00002 | 0.0000020 | 0.0025 | 0.00065 | 0.0000020 | < 0.001 |
| M08-742-03 | 2009 | 43 | 47 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 8.0 | 0.0010 | 3.1 | 0.00085 | 0.00013 | 12 | < 0.0001 | 0.00012 | 0.0075 | < 0.001 | 0.000010 | 0.026 | < 0.0001 | < 0.00002 | 0.0000030 | 0.0011 | 0.0012 | 0.0000020 | < 0.001 |
| M08-742-04 | 2009 | 77 | 83 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 9.7 | 0.0010 | 2.0 | 0.00059 | 0.00014 | 14 | < 0.0001 | 0.00010 | 0.0024 | < 0.001 | 0.000010 | 0.023 | < 0.0001 | < 0.00002 | 0.0000020 | 0.0011 | 0.0027 | 0.0000020 | < 0.001 |
| M08-742-06 | 2009 | 96 | 102 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 0.98 | < 0.001 | 0.45 | 0.00090 | 0.000060 | 13 | < 0.0001 | 0.000080 | 0.0039 | < 0.001 | 0.000010 | 0.010 | 0.00010 | < 0.00002 | 0.0000050 | 0.013 | 0.0015 | 0.0000030 | < 0.001 |
| M08-743-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | 0.010 | 4.9 | < 0.001 | 0.33 | 0.00038 | 0.00017 | 15 | < 0.0001 | 0.000080 | 0.0032 | < 0.001 | 0.00038 | 0.0093 | 0.00050 | < 0.00002 | 0.000023 | 0.021 | 0.0018 | 0.0000030 | < 0.001 |
| M08-743-02 | 2009 | 39 | 44 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 8.1 | 0.0010 | 1.5 | 0.00070 | 0.000070 | 12 | < 0.0001 | 0.000080 | 0.0039 | < 0.001 | < 0.00001 | 0.015 | < 0.0001 | < 0.00002 | 0.0000020 | 0.0035 | 0.0011 | 0.0000020 | < 0.001 |
| M08-743-04 | 2009 | 56 | 62 | Mafic Volcanic | F Zone | OP/FW | 0.080 | 3.8 | < 0.001 | 0.28 | 0.0017 | 0.00018 | 17 | 0.00020 | 0.000090 | 0.0058 | < 0.001 | 0.000020 | 0.0068 | 0.0021 | < 0.00002 | 0.000033 | 0.036 | 0.0013 | 0.000010 | < 0.001 |
| M08-747-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 4.9 | < 0.001 | 0.97 | 0.0028 | 0.000070 | 9.5 | 0.00020 | < 0.00002 | 0.0014 | < 0.001 | < 0.00001 | 0.025 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0020 | 0.00057 | < 0.000001 | < 0.001 |
| M08-747-02 | 2009 | 39 | 45 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 4.3 | < 0.001 | 0.79 | 0.00061 | 0.000050 | 9.4 | < 0.0001 | < 0.00002 | 0.0022 | < 0.001 | < 0.00001 | 0.017 | 0.00030 | < 0.00002 | 0.000013 | 0.011 | 0.0013 | 0.0000070 | < 0.001 |
| M08-747-03 | 2009 | 65 | 70 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 4.4 | < 0.001 | 0.72 | 0.00032 | 0.000030 | 6.9 | < 0.0001 | < 0.00002 | 0.0036 | < 0.001 | 0.000030 | 0.023 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0018 | 0.00095 | 0.0000010 | < 0.001 |
| M08-747-04 | 2009 | 83 | 88 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 0.88 | < 0.001 | 0.34 | 0.00026 | 0.000040 | 13 | < 0.0001 | < 0.00002 | 0.0044 | < 0.001 | < 0.00001 | 0.0082 | 0.00040 | < 0.00002 | 0.0000020 | 0.012 | 0.0015 | < 0.000001 | < 0.001 |
| M08-748-01 | 2009 | 36 | 41 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 8.2 | < 0.001 | 0.28 | 0.00025 | 0.00012 | 13 | < 0.0001 | < 0.00002 | 0.0033 | < 0.001 | 0.000030 | 0.024 | 0.00030 | < 0.00002 | 0.000014 | 0.014 | 0.00082 | 0.0000010 | < 0.001 |
| M08-748-02 | 2009 | 57 | 62 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 11 | < 0.001 | 0.90 | 0.0010 | 0.000060 | 9.7 | 0.00010 | < 0.00002 | 0.0017 | < 0.001 | < 0.00001 | 0.030 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0011 | 0.00089 | < 0.000001 | < 0.001 |
| M08-750-01 | 2009 | 8 | 14 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 12 | < 0.001 | 0.71 | 0.00068 | 0.000090 | 7.6 | < 0.0001 | 0.000080 | 0.0015 | < 0.001 | 0.000030 | 0.040 | < 0.0001 | < 0.00002 | 0.0000020 | 0.0036 | 0.0019 | 0.0000020 | < 0.001 |
| M08-750-02 | 2009 | 28 | 33 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 13 | 0.0010 | 4.8 | 0.0019 | 0.00039 | 12 | 0.00020 | 0.000070 | 0.0025 | < 0.001 | 0.000020 | 0.044 | < 0.0001 | 0.000060 | 0.000035 | 0.00058 | 0.0014 | 0.000026 | < 0.001 |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 12 | 0.0010 | 0.79 | 0.00075 | 0.00032 | 8.6 | < 0.0001 | 0.00014 | 0.0021 | < 0.001 | < 0.00001 | 0.036 | < 0.0001 | 0.000080 | 0.00010 | 0.0022 | 0.0041 | 0.000043 | < 0.001 |
| M08-752-01 | 2009 | 9 | 14 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 4.6 | < 0.001 | 0.79 | 0.00067 | 0.00020 | 17 | 0.00010 | 0.000020 | 0.0026 | < 0.001 | < 0.00001 | 0.020 | < 0.0001 | < 0.00002 | 0.0000080 | 0.0072 | 0.0014 | < 0.000001 | < 0.001 |
| M08-752-02 | 2009 | 23 | 27 | Mafic Volcanic | F Zone | OP/HW | 0.70 | 5.4 | 0.0040 | 0.44 | 0.0061 | 0.00016 | 15 | 0.00050 | 0.00011 | 0.0037 | < 0.001 | 0.000030 | 0.029 | 0.022 | < 0.00002 | 0.00020 | 0.029 | 0.0010 | 0.00011 | 0.0050 |
| M08-752-03 | 2009 | 45 | 51 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 9.1 | < 0.001 | 2.5 | 0.00083 | 0.00012 | 10.0 | 0.00020 | < 0.00002 | 0.0015 | < 0.001 | < 0.00001 | 0.029 | 0.00020 | < 0.00002 | 0.0000040 | 0.0014 | 0.0032 | 0.0000010 | < 0.001 |
| M08-752-04 | 2009 | 75 | 80 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 7.8 | < 0.001 | 0.53 | 0.00062 | 0.000040 | 7.5 | < 0.0001 | < 0.00002 | 0.0017 | < 0.001 | < 0.00001 | 0.012 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0034 | 0.0027 | < 0.000001 | < 0.001 |
| M08-755-01 | 2009 | 19 | 24 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 5.9 | < 0.001 | 0.35 | 0.00037 | 0.00010 | 8.6 | < 0.0001 | < 0.00002 | 0.0016 | < 0.001 | < 0.00001 | 0.0080 | 0.00040 | < 0.00002 | 0.000011 | 0.017 | 0.0022 | < 0.000001 | < 0.001 |
| M08-755-02 | 2009 | 30 | 37 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 8.2 | < 0.001 | 0.38 | 0.00045 | 0.00014 | 9.8 | < 0.0001 | 0.000030 | 0.0016 | < 0.001 | < 0.00001 | 0.011 | 0.00030 | < 0.00002 | 0.0000030 | 0.0084 | 0.0010 | < 0.000001 | < 0.001 |
| M08-755-03 | 2009 | 66 | 71 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 1.4 | < 0.001 | 0.61 | 0.00022 | 0.000080 | 9.9 | < 0.0001 | < 0.00002 | 0.0033 | < 0.001 | < 0.00001 | 0.018 | < 0.0001 | < 0.00002 | 0.0000020 | 0.0058 | 0.0011 | 0.0000010 | < 0.001 |
| M09-798-01 | 2009 | 12 | 17 | Mafic Volcanic | F Zone | OP/HW | 0.25 | 10 | 0.0080 | 0.36 | 0.0033 | 0.00033 | 14 | 0.00040 | 0.000060 | 0.0029 | < 0.001 | < 0.00001 | 0.017 | 0.011 | < 0.00002 | 0.00014 | 0.020 | 0.0011 | 0.000038 | < 0.001 |
| M09-798-02 | 2009 | 17 | 22 | Mafic Volcanic | F Zone | OP/HW | 0.16 | 8.3 | 0.0020 | 0.35 | 0.0024 | 0.00018 | 12 | 0.00030 | 0.000050 | 0.0038 | < 0.001 | 0.000080 | 0.013 | 0.0061 | < 0.00002 | 0.000047 | 0.019 | 0.0010 | 0.000020 | < 0.001 |
| M09-802-01 | 2011 | 35 | 44 | Mafic Volcanic | F Zone | OP/HW | < 0.002 | 7.7 | < 0.001 | 0.88 | 0.00080 | 0.000070 | 5.9 | < 0.0001 | < 0.00002 | 0.0023 | < 0.001 | < 0.00001 | 0.028 | 0.00010 | < 0.00002 | 0.0000080 | 0.0020 | 0.0023 | 0.0000010 | < 0.001 |
| M09-816-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 1.3 | < 0.001 | 0.86 | 0.00079 | 0.00013 | 9.7 | 0.00020 | 0.000050 | 0.0011 | < 0.001 | < 0.00001 | 0.016 | 0.00020 | < 0.00002 | 0.000019 | 0.0064 | 0.0037 | 0.000017 | < 0.001 |
| M09-816-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 4.5 | < 0.001 | 0.65 | 0.00085 | 0.00030 | 9.5 | 0.00010 | 0.000060 | 0.0010 | < 0.001 | < 0.00001 | 0.073 | 0.00030 | < 0.00002 | 0.0000080 | 0.012 | 0.0014 | 0.0000080 | < 0.001 |
| M09-817-02 | 2011 | 45 | 53 | Mafic Volcanic | F Zone | OP/HW | < 0.002 | 7.0 | < 0.001 | 2.9 | 0.0010 | 0.000060 | 4.4 | 0.00010 | < 0.00002 | 0.0033 | < 0.001 | < 0.00001 | 0.029 | 0.00010 | < 0.00002 | < 0.000001 | 0.00069 | 0.0013 | 0.0000020 | < 0.001 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M09-855-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 268 | 59 | 23 | 10 | < 0.0001 | 0.000050 | 0.40 | 0.0049 | 0.022 | < 0.00002 | 0.000030 | 18 | 0.000011 | 0.000080 | < 0.0005 | < 0.0005 |
| M09-855-02 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 8.5 | 194 | 77 | 13 | 2.5 | < 0.0001 | < 0.00001 | 0.37 | 0.019 | 0.013 | < 0.00002 | < 0.00001 | 12 | 0.0000060 | 0.000061 | < 0.0005 | < 0.0005 |
| M09-857-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 8.7 | 174 | 42 | 20 | 4.6 | < 0.0001 | < 0.00001 | 0.80 | 0.010 | 0.024 | < 0.00002 | < 0.00001 | 4.5 | 0.0000080 | 0.000031 | < 0.0005 | < 0.0005 |
| M09-858-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | 9.5 | 85 | 34 | 4.4 | 1.5 | < 0.0001 | < 0.00001 | 0.65 | 0.0012 | 0.088 | < 0.00002 | < 0.00001 | 3.9 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 |
| M09-858-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | 9.5 | 87 | 32 | 6.8 | 1.4 | < 0.0001 | < 0.00001 | 0.70 | 0.0012 | 0.014 | < 0.00002 | < 0.00001 | 4.2 | 0.0000030 | 0.000027 | < 0.0005 | < 0.0005 |
| M09-859-01 | 2011 | 46 | 54.5 | Mafic Volcanic | F Zone | OP/FW | 8.2 | 153 | - | 2.9 | 1.4 | < 0.0001 | 0.000020 | 0.37 | 0.012 | 0.011 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.00013 | < 0.0005 | < 0.0005 |
| M09-862-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 112 | 40 | 8.6 | 1.0 | < 0.0001 | < 0.00001 | 0.67 | 0.00050 | 0.010 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 |
| M09-866-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | 8.4 | 199 | 61 | 17 | 3.1 | < 0.0001 | < 0.00001 | 0.65 | 0.0011 | 0.025 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 |
| M09-866-02 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | 8.4 | 158 | 66 | 10 | 1.3 | < 0.0001 | < 0.00001 | 0.53 | 0.0065 | 0.017 | < 0.00002 | < 0.00001 | 9.9 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M10-933-01 | 2011 | 34 | 42 | Mafic Volcanic | F Zone | OP/FW | 8.4 | 96 | - | 3.2 | 2.4 | < 0.0001 | 0.000010 | 0.74 | 0.0050 | 0.014 | < 0.00002 | < 0.00001 | 4.3 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| M10-935-01 | 2011 | 20.5 | 29 | Mafic Volcanic | F Zone | OP/HW | 9.1 | 79 | - | 2.4 | 1.1 | < 0.0001 | < 0.00001 | 0.63 | 0.0060 | 0.011 | < 0.00002 | < 0.00001 | 3.8 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M96-28-01 | 2011 | 27 | 38 | Mafic Volcanic | F Zone | OP/HW | 8.3 | 96 | - | 1.1 | 3.2 | < 0.0001 | < 0.00001 | 0.98 | 0.034 | 0.0093 | < 0.00002 | < 0.00001 | 6.5 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 |
| M97-159-01 | 2011 | 21 | 31 | Mafic Volcanic | F Zone | OP/HW | 8.1 | 91 | - | 1.0 | 5.3 | < 0.0001 | 0.000080 | 0.88 | 0.0049 | 0.0076 | < 0.00002 | < 0.00001 | 6.1 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M97-159-02 | 2011 | 86 | 93 | Mafic Volcanic | F Zone | OP/FW | 8.1 | 95 | - | 0.60 | 5.9 | < 0.0001 | 0.000020 | 0.90 | 0.0029 | 0.0048 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M98-275-01 | 2011 | 25 | 33 | Mafic Volcanic | F Zone | OP/HW | 8.2 | 77 | - | 0.70 | 2.3 | < 0.0001 | < 0.00001 | 0.79 | 0.0038 | 0.0049 | < 0.00002 | < 0.00001 | 6.7 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 |
| M98-275-02 | 2011 | 80 | 89.5 | Mafic Volcanic | F Zone | OP/FW | 8.1 | 74 | - | 1.2 | 2.1 | < 0.0001 | < 0.00001 | 0.82 | 0.0012 | 0.0057 | < 0.00002 | < 0.00001 | 7.0 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 |
| W94-76-01 | 2011 | 13 | 22 | Mafic Volcanic | F Zone | OP/HW | 9.0 | 65 | - | 0.70 | 1.4 | < 0.0001 | < 0.00001 | 0.59 | 0.0019 | 0.0074 | < 0.00002 | < 0.00001 | 4.7 | < 0.000003 | 0.0000080 | < 0.0005 | 0.0048 |
| W94-76-02 | 2011 | 70.5 | 77 | Mafic Volcanic | F Zone | OP/FW | 8.2 | 92 | - | 0.80 | 8.5 | < 0.0001 | < 0.00001 | 0.57 | 0.0027 | 0.010 | < 0.00002 | < 0.00001 | 4.9 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| W94-82-01 | 2011 | 46 | 55 | Mafic Volcanic | F Zone | OP/HW | 8.9 | 56 | - | 1.4 | 1.2 | < 0.0001 | < 0.00001 | 0.77 | 0.0020 | 0.0086 | < 0.00002 | < 0.00001 | 5.2 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.7 | 56 | 29 | 0.60 | 0.60 | <0.0001 | < 0.00001 | 0.37 | 0.00050 | 0.0048 | <0.00002 | < 0.00001 | 2.7 | < 0.000003 | 0.0000060 | <0.0005 | < 0.0005 |
| | | | | | | MAXIMUM | 9.5 | 268 | 84 | 23 | 10 | <0.0001 | 0.00014 | 1.5 | 0.072 | 0.25 | 0.000090 | 0.00011 | 18 | 0.000043 | 0.00032 | 0.0010 | 0.0048 |
| | | | | | | MEDIAN | 8.3 | 104 | 42 | 5.0 | 1.7 | nc | 0.000010 | 0.75 | 0.0043 | 0.015 | 0.000020 | 0.000010 | 5.5 | 0.0000030 | 0.000023 | nc | 0.00050 |
| | | | | | | AVERAGE | 8.4 | 110 | 45 | 5.7 | 2.3 | nc | 0.000020 | 0.76 | 0.010 | 0.021 | 0.000021 | 0.000013 | 5.9 | 0.0000043 | 0.000037 | nc | 0.00056 |
| | | | | | | STANDARD DEVIATION | 0.42 | 35 | 14 | 4.2 | 1.9 | nc | 0.000024 | 0.22 | 0.015 | 0.031 | 0.0000086 | 0.000013 | 2.5 | 0.0000056 | 0.000042 | nc | 0.00051 |
| | | | | | | 75TH PERCENTILE | 8.7 | 119 | 51 | 7.3 | 2.7 | nc | 0.000015 | 0.89 | 0.011 | 0.020 | 0.000020 | 0.000010 | 6.8 | 0.0000030 | 0.000038 | nc | 0.00050 |
| M09-809-01 | 2011 | 64.5 | 73.8 | Ore/IF | F Zone | OP/HW | 8.1 | 170 | - | 2.2 | 1.8 | < 0.0001 | < 0.00001 | 0.41 | 0.23 | 0.016 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.000051 | < 0.0005 | < 0.0005 |
| M09-817-01 | 2011 | 32 | 40 | Ore/IF | F Zone | OP/HW | 8.1 | 150 | - | 2.1 | 2.1 | < 0.0001 | < 0.00001 | 0.13 | 0.21 | 0.013 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000088 | < 0.0005 | < 0.0005 |
| M08-742-05 | 2009 | 86 | 90 | Quartz Vein | F Zone | OP/FW-ore zone | 8.1 | 219 | 81 | 3.7 | 5.8 | < 0.0001 | 0.000020 | 0.070 | 0.00060 | 0.015 | < 0.00002 | < 0.00001 | 26 | < 0.000003 | 0.000093 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 8.1 | 150 | 81 | 2.1 | 1.8 | <0.0001 | <0.00001 | 0.070 | 0.00060 | 0.013 | <0.00002 | <0.00001 | 12 | <0.000003 | 0.000051 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.1 | 219 | 81 | 3.7 | 5.8 | <0.0001 | 0.000020 | 0.41 | 0.23 | 0.016 | <0.00002 | <0.00001 | 26 | <0.000003 | 0.000093 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.1 | 170 | nc | 2.2 | 2.1 | nc | nc | 0.13 | 0.21 | 0.015 | nc | nc | 18 | nc | 0.000088 | nc | nc |
| | | | | | | AVERAGE | 8.1 | 180 | nc | 2.7 | 3.2 | nc | nc | 0.20 | 0.15 | 0.015 | nc | nc | 19 | nc | 0.000077 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.015 | 36 | nc | 0.90 | 2.2 | nc | nc | 0.18 | 0.13 | 0.0017 | nc | nc | 6.7 | nc | 0.000023 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.1 | 195 | nc | 3.0 | 4.0 | nc | nc | 0.27 | 0.22 | 0.015 | nc | nc | 22 | nc | 0.000091 | nc | nc |
| M97-124-03 | 2011 | 182 | 190 | Iron Formation | Pump | OP/FW | 8.1 | 238 | - | 2.8 | 3.7 | < 0.0001 | < 0.00001 | 0.050 | 0.0014 | 0.033 | < 0.00002 | < 0.00001 | 38 | < 0.000003 | 0.00010 | < 0.0005 | < 0.0005 |
| M97-154-01 | 2011 | 38 | 47 | Iron Formation | Pump | OP/FW | 8.2 | 120 | - | 1.8 | 1.7 | < 0.0001 | < 0.00001 | 0.48 | 0.018 | 0.013 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| W94-49-02 | 2011 | 32 | 40 | Iron Formation | Pump | OP/HW | 7.5 | 208 | - | 8.4 | 9.2 | < 0.0001 | < 0.00001 | < 0.01 | 0.0012 | 0.039 | < 0.00002 | 0.000020 | 22 | < 0.000003 | 0.0014 | < 0.0005 | < 0.0005 |
| W94-55-01 | 2011 | 16 | 23 | Iron Formation | Pump | OP/HW | 8.1 | 202 | - | 2.2 | 2.1 | < 0.0001 | < 0.00001 | 0.10 | 0.0018 | 0.016 | < 0.00002 | < 0.00001 | 24 | < 0.000003 | 0.000070 | < 0.0005 | < 0.0005 |
| W94-57-02 | 2011 | 26 | 36 | Iron Formation | Pump | OP/HW | 8.0 | 203 | - | 2.7 | 4.4 | < 0.0001 | < 0.00001 | 0.13 | 0.0041 | 0.019 | < 0.00002 | < 0.00001 | 29 | < 0.000003 | 0.000080 | < 0.0005 | < 0.0005 |
| W94-57-03 | 2011 | 43 | 50 | Iron Formation | Pump | OP/HW | 8.0 | 297 | - | 5.0 | 8.4 | < 0.0001 | < 0.00001 | 0.050 | 0.0012 | 0.024 | < 0.00002 | < 0.00001 | 40 | < 0.000003 | 0.00014 | < 0.0005 | < 0.0005 |
| W94-61-01 | 2011 | 19 | 29 | Iron Formation | Pump | OP/HW | 7.9 | 357 | - | 4.5 | 30 | < 0.0001 | < 0.00001 | < 0.01 | 0.0033 | 0.013 | < 0.00002 | < 0.00001 | 48 | 0.000012 | 0.00058 | < 0.0005 | < 0.0005 |
| W94-73-02 | 2011 | 60 | 69 | Iron Formation | Pump | OP/HW | 8.0 | 278 | - | 1.3 | 6.9 | < 0.0001 | < 0.00001 | 0.020 | 0.0012 | 0.0086 | < 0.00002 | 0.000020 | 41 | < 0.000003 | 0.00014 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.5 | 120 | nc | 1.3 | 1.7 | <0.0001 | <0.00001 | <0.01 | 0.0012 | 0.0086 | <0.00002 | <0.00001 | 7.3 | <0.000003 | 0.000028 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.2 | 357 | nc | 8.4 | 30 | <0.0001 | <0.00001 | 0.48 | 0.018 | 0.039 | <0.00002 | 0.000020 | 48 | 0.000012 | 0.0014 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.0 | 223 | nc | 2.8 | 5.7 | nc | nc | 0.050 | 0.0016 | 0.017 | nc | nc | 34 | nc | 0.00012 | nc | nc |
| | | | | | | AVERAGE | 8.0 | 238 | nc | 3.6 | 8.3 | nc | nc | 0.11 | 0.0040 | 0.021 | nc | nc | 31 | nc | 0.00032 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.23 | 72 | nc | 2.3 | 9.2 | nc | nc | 0.16 | 0.0058 | 0.011 | nc | nc | 13 | nc | 0.00046 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.1 | 283 | nc | 4.6 | 8.6 | nc | nc | 0.11 | 0.0035 | 0.027 | nc | nc | 40 | nc | 0.00025 | nc | nc |
| M96-58-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Pump | OP/HW | 8.3 | 90 | - | 1.1 | 4.2 | < 0.0001 | < 0.00001 | 0.85 | 0.0028 | 0.012 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| M96-58-02 | 2011 | 49 | 58 | Mafic Volcanic | Pump | OP/HW | 8.3 | 78 | - | 1.0 | 1.4 | < 0.0001 | < 0.00001 | 0.88 | 0.0088 | 0.016 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 |
| M96-58-03 | 2011 | 75.5 | 84.5 | Mafic Volcanic | Pump | OP/FW | 8.0 | 68 | - | 0.80 | 5.8 | < 0.0001 | < 0.00001 | 0.82 | 0.0088 | 0.012 | < 0.00002 | < 0.00001 | 8.6 | < 0.000003 | 0.000023 | < 0.0005 | 0.00070 |
| M97-120-01 | 2011 | 11.5 | 21 | Mafic Volcanic | Pump | OP/HW | 8.4 | 117 | - | 2.4 | 1.6 | < 0.0001 | < 0.00001 | 0.51 | 0.0052 | 0.026 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M97-120-02 | 2011 | 44.5 | 53 | Mafic Volcanic | Pump | OP/FW | 8.4 | 70 | - | 0.50 | 1.6 | < 0.0001 | 0.000050 | 0.60 | 0.0099 | 0.012 | < 0.00002 | < 0.00001 | 6.2 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| M97-122-01 | 2011 | 26.5 | 36.5 | Mafic Volcanic | Pump | OP/HW | 9.4 | 59 | - | 0.50 | 0.60 | < 0.0001 | 0.000020 | 0.68 | 0.0031 | 0.016 | < 0.00002 | < 0.00001 | 3.9 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M97-122-02 | 2011 | 103 | 112 | Mafic Volcanic | Pump | OP/HW | 8.4 | 73 | - | 0.90 | 1.7 | < 0.0001 | < 0.00001 | 1.1 | 0.0067 | 0.018 | < 0.00002 | < 0.00001 | 4.8 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| M97-122-05 | 2011 | 230 | 239 | Mafic Volcanic | Pump | OP/FW | 8.1 | 87 | - | 0.40 | 1.4 | < 0.0001 | < 0.00001 | 0.67 | 0.0010 | 0.0041 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M97-123-01 | 2011 | 13.5 | 22.5 | Mafic Volcanic | Pump | OP/HW | 8.7 | 73 | - | 1.2 | 1.5 | < 0.0001 | < 0.00001 | 1.0 | 0.027 | 0.027 | < 0.00002 | < 0.00001 | 5.7 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| M97-123-02 | 2011 | 60 | 70 | Mafic Volcanic | Pump | OP/HW | 9.0 | 83 | - | 1.4 | 1.5 | < 0.0001 | < 0.00001 | 1.1 | 0.0094 | 0.022 | < 0.00002 | < 0.00001 | 4.1 | < 0.000003 | 0.000010 | < 0.0005 | < 0.0005 |
| M97-123-03 | 2011 | 91 | 98 | Mafic Volcanic | Pump | OP/HW | 8.2 | 87 | - | 1.1 | 1.2 | < 0.0001 | < 0.00001 | 0.59 | 0.013 | 0.011 | < 0.00002 | < 0.00001 | 8.8 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M97-123-04 | 2011 | 121 | 130 | Mafic Volcanic | Pump | OP/HW | 8.2 | 107 | - | 0.40 | 0.70 | < 0.0001 | < 0.00001 | 0.43 | 0.0035 | 0.0052 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M97-124-01 | 2011 | 119.5 | 128 | Mafic Volcanic | Pump | OP/HW | 8.0 | 101 | - | 1.2 | 2.0 | < 0.0001 | < 0.00001 | 0.69 | 0.0048 | 0.013 | < 0.00002 | < 0.00001 | 8.3 | < 0.000003 | 0.000021 | < 0.0005 | 0.0012 |
| M97-124-02 | 2011 | 141.5 | 150.5 | Mafic Volcanic | Pump | OP/HW | 8.2 | 68 | - | 0.50 | 1.1 | < 0.0001 | < 0.00001 | 1.1 | 0.0042 | 0.0089 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M97-124-04 | 2011 | 191 | 200 | Mafic Volcanic | Pump | OP/FW | 8.3 | 76 | - | 1.4 | 0.40 | < 0.0001 | < 0.00001 | 0.98 | 0.0039 | 0.014 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M97-153-01 | 2011 | 37 | 46 | Mafic Volcanic | Pump | OP/HW | 8.1 | 120 | - | 2.7 | 3.0 | < 0.0001 | < 0.00001 | 0.42 | 0.095 | 0.013 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M09-855-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 13 | 0.0020 | 5.1 | 0.012 | 0.00028 | 20 | 0.00060 | 0.000050 | 0.00090 | < 0.001 | < 0.00001 | 0.065 | < 0.0001 | < 0.00002 | 0.000022 | 0.00011 | 0.0014 | 0.000019 | < 0.001 |
| M09-855-02 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 5.5 | 0.0020 | 8.3 | 0.0029 | 0.00022 | 13 | 0.00060 | 0.000030 | 0.0024 | < 0.001 | < 0.00001 | 0.035 | < 0.0001 | < 0.00002 | 0.000025 | 0.00045 | 0.0017 | 0.000011 | < 0.001 |
| M09-857-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 11 | < 0.001 | 0.72 | 0.00047 | 0.00041 | 23 | 0.00030 | 0.000050 | 0.0012 | < 0.001 | < 0.00001 | 0.019 | 0.00020 | < 0.00002 | 0.000022 | 0.0036 | 0.0015 | 0.000017 | < 0.001 |
| M09-858-01 | 2009 | 20 | 25 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 1.5 | < 0.001 | 0.62 | 0.00049 | 0.00031 | 12 | 0.00010 | 0.000040 | 0.0013 | < 0.001 | < 0.00001 | 0.013 | 0.00040 | < 0.00002 | 0.0000090 | 0.020 | 0.0011 | 0.000010 | < 0.001 |
| M09-858-02 | 2009 | 30 | 35 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 1.6 | < 0.001 | 0.58 | 0.00028 | 0.000080 | 13 | 0.00020 | 0.000040 | 0.0012 | < 0.001 | < 0.00001 | 0.016 | 0.00030 | < 0.00002 | 0.000011 | 0.016 | 0.00070 | 0.000015 | < 0.001 |
| M09-859-01 | 2011 | 46 | 54.5 | Mafic Volcanic | F Zone | OP/FW | < 0.002 | 4.8 | 0.0010 | 6.7 | 0.0032 | 0.00031 | 9.0 | 0.00070 | < 0.00002 | 0.0021 | < 0.001 | < 0.00001 | 0.031 | 0.00010 | < 0.00002 | 0.0000030 | 0.00033 | 0.0024 | 0.0000010 | < 0.001 |
| M09-862-01 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 6.3 | < 0.001 | 1.7 | 0.00078 | 0.00013 | 10 | 0.00010 | 0.000020 | 0.0012 | < 0.001 | < 0.00001 | 0.030 | < 0.0001 | < 0.00002 | 0.0000050 | 0.00090 | 0.0011 | 0.0000020 | < 0.001 |
| M09-866-01 | 2009 | 10 | 15 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 13 | < 0.001 | 2.6 | 0.0038 | 0.00050 | 19 | 0.00020 | < 0.00002 | 0.0012 | < 0.001 | 0.000020 | 0.022 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00021 | 0.00076 | < 0.000001 | < 0.001 |
| M09-866-02 | 2009 | 15 | 20 | Mafic Volcanic | F Zone | OP/HW | < 0.01 | 7.7 | 0.0010 | 5.2 | 0.0028 | 0.00019 | 13 | 0.00030 | < 0.00002 | 0.0028 | < 0.001 | < 0.00001 | 0.021 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00045 | 0.0011 | < 0.000001 | < 0.001 |
| M10-933-01 | 2011 | 34 | 42 | Mafic Volcanic | F Zone | OP/FW | 0.0020 | 5.3 | < 0.001 | 0.60 | 0.00053 | 0.00016 | 12 | < 0.0001 | < 0.00002 | 0.0020 | < 0.001 | < 0.00001 | 0.018 | 0.00030 | < 0.00002 | 0.0000060 | 0.0070 | 0.0011 | < 0.000001 | < 0.001 |
| M10-935-01 | 2011 | 20.5 | 29 | Mafic Volcanic | F Zone | OP/HW | 0.025 | 1.0 | < 0.001 | 0.51 | 0.00047 | 0.00013 | 12 | < 0.0001 | < 0.00002 | 0.0023 | < 0.001 | < 0.00001 | 0.0090 | 0.0011 | < 0.00002 | 0.000010 | 0.027 | 0.00068 | 0.0000050 | < 0.001 |
| M96-28-01 | 2011 | 27 | 38 | Mafic Volcanic | F Zone | OP/HW | < 0.002 | 8.6 | < 0.001 | 0.84 | 0.0023 | 0.00015 | 7.7 | 0.00010 | < 0.00002 | 0.0018 | < 0.001 | < 0.00001 | 0.019 | 0.00010 | < 0.00002 | 0.000021 | 0.0029 | 0.00099 | 0.0000020 | < 0.001 |
| M97-159-01 | 2011 | 21 | 31 | Mafic Volcanic | F Zone | OP/HW | 0.030 | 8.7 | < 0.001 | 0.79 | 0.0010 | 0.00018 | 5.9 | < 0.0001 | 0.000080 | 0.0018 | < 0.001 | < 0.00001 | 0.017 | 0.00010 | 0.000020 | 0.000023 | 0.0026 | 0.00071 | 0.0000030 | < 0.001 |
| M97-159-02 | 2011 | 86 | 93 | Mafic Volcanic | F Zone | OP/FW | 0.0070 | 9.5 | < 0.001 | 0.94 | 0.0015 | 0.00012 | 4.6 | < 0.0001 | 0.000080 | 0.0016 | < 0.001 | < 0.00001 | 0.019 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0021 | 0.0018 | 0.0000040 | < 0.001 |
| M98-275-01 | 2011 | 25 | 33 | Mafic Volcanic | F Zone | OP/HW | < 0.002 | 5.4 | < 0.001 | 0.89 | 0.0023 | 0.00011 | 3.7 | < 0.0001 | 0.000040 | 0.0022 | < 0.001 | < 0.00001 | 0.020 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0022 | 0.00084 | 0.0000030 | < 0.001 |
| M98-275-02 | 2011 | 80 | 89.5 | Mafic Volcanic | F Zone | OP/FW | < 0.002 | 5.2 | < 0.001 | 0.90 | 0.0015 | 0.000070 | 4.0 | < 0.0001 | 0.000070 | 0.0022 | < 0.001 | < 0.00001 | 0.017 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0025 | 0.00059 | 0.0000010 | < 0.001 |
| W94-76-01 | 2011 | 13 | 22 | Mafic Volcanic | F Zone | OP/HW | 0.0040 | 3.2 | < 0.001 | 0.63 | 0.0012 | 0.00014 | 6.7 | < 0.0001 | 0.0012 | 0.0027 | < 0.001 | 0.00020 | 0.011 | 0.00010 | < 0.00002 | 0.000011 | 0.011 | 0.00096 | 0.0000020 | 0.0040 |
| W94-76-02 | 2011 | 70.5 | 77 | Mafic Volcanic | F Zone | OP/FW | 0.0070 | 1.5 | < 0.001 | 0.69 | 0.00050 | 0.00026 | 14 | 0.00010 | 0.000080 | 0.0033 | < 0.001 | < 0.00001 | 0.010 | 0.00050 | < 0.00002 | 0.00012 | 0.011 | 0.00068 | 0.0000040 | < 0.001 |
| W94-82-01 | 2011 | 46 | 55 | Mafic Volcanic | F Zone | OP/HW | 0.0080 | 0.27 | < 0.001 | 0.61 | 0.00059 | 0.000070 | 6.4 | 0.00010 | 0.000050 | 0.0039 | < 0.001 | < 0.00001 | 0.0077 | 0.00030 | < 0.00002 | 0.0000030 | 0.013 | 0.00042 | 0.0000010 | < 0.001 |
| | | | | | | MINIMUM | < 0.002 | 0.27 | < 0.001 | 0.28 | 0.00022 | 0.000030 | 3.7 | < 0.0001 | < 0.00002 | 0.00090 | <0.001 | < 0.00001 | 0.0068 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00011 | 0.00042 | < 0.000001 | <0.001 |
| | | | | | | MAXIMUM | 0.70 | 17 | 0.0080 | 8.3 | 0.012 | 0.00050 | 23 | 0.0012 | 0.0012 | 0.0075 | <0.001 | 0.00038 | 0.073 | 0.022 | 0.000080 | 0.00020 | 0.036 | 0.0041 | 0.00011 | 0.0050 |
| | | | | | | MEDIAN | 0.010 | 7.0 | 0.0010 | 0.79 | 0.00075 | 0.00014 | 12 | 0.00010 | 0.000030 | 0.0022 | nc | 0.000010 | 0.018 | 0.00010 | 0.000020 | 0.0000060 | 0.0035 | 0.0011 | 0.0000020 | nc |
| | | | | | | AVERAGE | 0.025 | 6.7 | 0.0012 | 1.4 | 0.0012 | 0.00017 | 11 | 0.00020 | 0.000069 | 0.0024 | nc | 0.000021 | 0.021 | 0.00076 | 0.000021 | 0.000018 | 0.0070 | 0.0014 | 0.0000067 | nc |
| | | | | | | STANDARD DEVIATION | 0.088 | 3.5 | 0.00092 | 1.6 | 0.0016 | 0.00011 | 3.8 | 0.00021 | 0.00015 | 0.0012 | nc | 0.000050 | 0.012 | 0.0030 | 0.0000085 | 0.000035 | 0.0077 | 0.00071 | 0.000015 | nc |
| | | | | | | 75TH PERCENTILE | 0.010 | 8.7 | 0.0010 | 1.3 | 0.0012 | 0.00024 | 13 | 0.00020 | 0.000080 | 0.0032 | nc | 0.000010 | 0.024 | 0.00030 | 0.000020 | 0.000018 | 0.011 | 0.0015 | 0.0000050 | nc |
| M09-809-01 | 2011 | 64.5 | 73.8 | Ore/IF | F Zone | OP/HW | < 0.002 | 15 | 0.0020 | 2.9 | 0.0081 | 0.00015 | 2.1 | < 0.0001 | 0.000040 | 0.0021 | < 0.001 | < 0.00001 | 0.049 | < 0.0001 | < 0.00002 | 0.0000050 | 0.000080 | 0.0011 | 0.0000010 | < 0.001 |
| M09-817-01 | 2011 | 32 | 40 | Ore/IF | F Zone | OP/HW | 0.0080 | 13 | 0.0060 | 3.7 | 0.020 | 0.00014 | 4.4 | 0.00040 | < 0.00002 | 0.0037 | < 0.001 | < 0.00001 | 0.022 | 0.00040 | < 0.00002 | 0.000025 | 0.00054 | 0.00094 | 0.0000020 | < 0.001 |
| M08-742-05 | 2009 | 86 | 90 | Quartz Vein | F Zone | OP/FW-ore zone | < 0.01 | 3.2 | 0.0030 | 7.9 | 0.12 | 0.00012 | 4.5 | 0.00030 | 0.000090 | 0.0015 | < 0.001 | < 0.00001 | 0.041 | 0.00020 | < 0.00002 | 0.00017 | 0.000060 | 0.00045 | 0.0000020 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 3.2 | 0.0020 | 2.9 | 0.0081 | 0.00012 | 2.1 | <0.0001 | <0.00002 | 0.0015 | <0.001 | <0.00001 | 0.022 | <0.0001 | <0.00002 | 0.0000050 | 0.000060 | 0.00045 | 0.0000010 | <0.001 |
| | | | | | | MAXIMUM | <0.01 | 15 | 0.0060 | 7.9 | 0.12 | 0.00015 | 4.5 | 0.00040 | 0.000090 | 0.0037 | <0.001 | <0.00001 | 0.049 | 0.00040 | <0.00002 | 0.00017 | 0.00054 | 0.0011 | 0.0000020 | <0.001 |
| | | | | | | MEDIAN | nc | 13 | 0.0030 | 3.7 | 0.020 | 0.00014 | 4.4 | nc | nc | 0.0021 | nc | nc | 0.041 | nc | nc | 0.000025 | 0.000080 | 0.00094 | 0.0000020 | nc |
| | | | | | | AVERAGE | nc | 10 | 0.0037 | 4.8 | 0.050 | 0.00014 | 3.7 | nc | nc | 0.0024 | nc | nc | 0.037 | nc | nc | 0.000065 | 0.00023 | 0.00083 | 0.0000017 | nc |
| | | | | | | STANDARD DEVIATION | nc | 6.3 | 0.0021 | 2.7 | 0.062 | 0.000015 | 1.4 | nc | nc | 0.0011 | nc | nc | 0.014 | nc | nc | 0.000087 | 0.00027 | 0.00033 | ######### | nc |
| | | | | | | 75TH PERCENTILE | nc | 14 | 0.0045 | 5.8 | 0.071 | 0.00015 | 4.5 | nc | nc | 0.0029 | nc | nc | 0.045 | nc | nc | 0.000095 | 0.00031 | 0.0010 | 0.0000020 | nc |
| M97-124-03 | 2011 | 182 | 190 | Iron Formation | Pump | OP/FW | < 0.002 | 1.5 | < 0.001 | 11 | 0.038 | 0.00053 | 0.68 | 0.00020 | 0.000070 | 0.0013 | < 0.001 | < 0.00001 | 0.028 | 0.00010 | < 0.00002 | 0.0000070 | < 0.00003 | 0.00022 | 0.0000030 | < 0.001 |
| M97-154-01 | 2011 | 38 | 47 | Iron Formation | Pump | OP/FW | < 0.002 | 13 | 0.0010 | 2.6 | 0.0010 | 0.00020 | 7.1 | 0.00010 | 0.00010 | 0.0029 | < 0.001 | < 0.00001 | 0.027 | < 0.0001 | < 0.00002 | 0.0000030 | 0.00093 | 0.0019 | 0.0000020 | < 0.001 |
| W94-49-02 | 2011 | 32 | 40 | Iron Formation | Pump | OP/HW | 0.039 | 4.4 | < 0.001 | 10 | 0.47 | 0.000050 | 0.31 | 0.0041 | 0.000090 | 0.00030 | < 0.001 | 0.000020 | 0.028 | 0.00020 | < 0.00002 | 0.0000070 | < 0.00003 | 0.000090 | 0.0000040 | 0.0020 |
| W94-55-01 | 2011 | 16 | 23 | Iron Formation | Pump | OP/HW | < 0.002 | 1.2 | < 0.001 | 8.9 | 0.011 | 0.00016 | 0.44 | 0.00090 | 0.00010 | 0.0014 | < 0.001 | 0.000010 | 0.019 | 0.00010 | < 0.00002 | 0.0000040 | < 0.00003 | 0.00022 | 0.0000010 | < 0.001 |
| W94-57-02 | 2011 | 26 | 36 | Iron Formation | Pump | OP/HW | < 0.002 | 1.0 | < 0.001 | 7.1 | 0.021 | 0.00036 | 0.51 | 0.0010 | 0.000090 | 0.00070 | < 0.001 | 0.000010 | 0.029 | 0.00010 | < 0.00002 | 0.000015 | < 0.00003 | 0.00020 | 0.0000020 | < 0.001 |
| W94-57-03 | 2011 | 43 | 50 | Iron Formation | Pump | OP/HW | < 0.002 | 0.79 | < 0.001 | 12 | 0.068 | 0.00058 | 0.37 | 0.0016 | 0.000070 | 0.0010 | < 0.001 | 0.000020 | 0.036 | 0.00010 | < 0.00002 | 0.000077 | < 0.00003 | 0.000060 | 0.0000030 | < 0.001 |
| W94-61-01 | 2011 | 19 | 29 | Iron Formation | Pump | OP/HW | < 0.002 | 0.40 | < 0.001 | 14 | 0.66 | 0.00015 | 0.22 | 0.0028 | 0.000070 | 0.00030 | < 0.001 | 0.000010 | 0.031 | 0.00020 | < 0.00002 | 0.000037 | < 0.00003 | < 0.00003 | 0.0000020 | < 0.001 |
| W94-73-02 | 2011 | 60 | 69 | Iron Formation | Pump | OP/HW | < 0.002 | 0.35 | < 0.001 | 12 | 0.083 | 0.00055 | 0.33 | 0.0014 | 0.000050 | 0.00040 | < 0.001 | 0.000010 | 0.027 | 0.00010 | < 0.00002 | 0.000039 | < 0.00003 | 0.000050 | 0.0000020 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 0.35 | < 0.001 | 2.6 | 0.0010 | 0.000050 | 0.22 | 0.00010 | 0.000050 | 0.00030 | <0.001 | < 0.00001 | 0.019 | < 0.0001 | < 0.00002 | 0.0000030 | <0.00003 | <0.00003 | 0.0000010 | <0.001 |
| | | | | | | MAXIMUM | 0.039 | 13 | 0.0010 | 14 | 0.66 | 0.00058 | 7.1 | 0.0041 | 0.00010 | 0.0029 | <0.001 | 0.000020 | 0.036 | 0.00020 | <0.00002 | 0.000077 | 0.00093 | 0.0019 | 0.0000040 | 0.0020 |
| | | | | | | MEDIAN | nc | 1.1 | nc | 10 | 0.053 | 0.00028 | 0.41 | 0.0012 | 0.000080 | 0.00085 | nc | 0.000010 | 0.028 | 0.00010 | nc | 0.000011 | nc | 0.00015 | 0.0000020 | nc |
| | | | | | | AVERAGE | nc | 2.8 | nc | 9.6 | 0.17 | 0.00032 | 1.2 | 0.0015 | 0.000080 | 0.0010 | nc | 0.000013 | 0.028 | 0.00013 | nc | 0.000024 | nc | 0.00035 | 0.0000024 | nc |
| | | | | | | STANDARD DEVIATION | nc | 4.2 | nc | 3.5 | 0.25 | 0.00021 | 2.4 | 0.0013 | 0.000018 | 0.00087 | nc | 0.0000046 | 0.0046 | 0.000046 | nc | 0.000026 | nc | 0.00065 | ######### | nc |
| | | | | | | 75TH PERCENTILE | nc | 2.2 | nc | 12 | 0.18 | 0.00054 | 0.55 | 0.0019 | 0.000093 | 0.0013 | nc | 0.000013 | 0.029 | 0.00013 | nc | 0.000038 | nc | 0.00022 | 0.0000030 | nc |
| M96-58-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 7.2 | < 0.001 | 1.0 | 0.0013 | 0.00019 | 5.9 | < 0.0001 | 0.000050 | 0.0036 | < 0.001 | < 0.00001 | 0.015 | 0.00020 | < 0.00002 | < 0.000001 | 0.0022 | 0.00090 | 0.0000010 | < 0.001 |
| M96-58-02 | 2011 | 49 | 58 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 6.5 | < 0.001 | 0.84 | 0.00040 | 0.00011 | 6.6 | 0.00010 | 0.000070 | 0.0028 | < 0.001 | < 0.00001 | 0.014 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0021 | 0.0011 | 0.0000010 | < 0.001 |
| M96-58-03 | 2011 | 75.5 | 84.5 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 5.6 | < 0.001 | 1.1 | 0.0013 | 0.00011 | 3.5 | < 0.0001 | 0.00024 | 0.0034 | < 0.001 | 0.000010 | 0.018 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0018 | 0.00076 | 0.0000020 | < 0.001 |
| M97-120-01 | 2011 | 11.5 | 21 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 5.7 | < 0.001 | 2.8 | 0.00090 | 0.00018 | 16 | 0.00010 | 0.000070 | 0.0035 | < 0.001 | < 0.00001 | 0.016 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00094 | 0.0017 | 0.0000010 | < 0.001 |
| M97-120-02 | 2011 | 44.5 | 53 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 4.8 | < 0.001 | 1.1 | 0.00065 | 0.00022 | 7.7 | 0.00020 | 0.000020 | 0.0035 | < 0.001 | < 0.00001 | 0.017 | < 0.0001 | < 0.00002 | 0.0000020 | 0.0033 | 0.0017 | 0.0000020 | < 0.001 |
| M97-122-01 | 2011 | 26.5 | 36.5 | Mafic Volcanic | Pump | OP/HW | 0.012 | 0.79 | < 0.001 | 0.41 | 0.00027 | 0.00018 | 10 | < 0.0001 | 0.000060 | 0.0040 | < 0.001 | < 0.00001 | 0.0064 | 0.00040 | < 0.00002 | 0.0000080 | 0.019 | 0.00042 | 0.0000010 | < 0.001 |
| M97-122-02 | 2011 | 103 | 112 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 6.1 | < 0.001 | 0.52 | 0.00094 | 0.00025 | 5.2 | < 0.0001 | 0.000070 | 0.0038 | < 0.001 | < 0.00001 | 0.0095 | < 0.0001 | < 0.00002 | 0.000014 | 0.0047 | 0.00051 | 0.0000020 | < 0.001 |
| M97-122-05 | 2011 | 230 | 239 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 6.3 | < 0.001 | 1.8 | 0.0015 | 0.000080 | 5.5 | < 0.0001 | 0.000050 | 0.0032 | < 0.001 | < 0.00001 | 0.020 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0012 | 0.0022 | 0.0000020 | < 0.001 |
| M97-123-01 | 2011 | 13.5 | 22.5 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 7.9 | < 0.001 | 0.74 | 0.0011 | 0.00077 | 7.3 | < 0.0001 | 0.000070 | 0.0027 | < 0.001 | < 0.00001 | 0.013 | < 0.0001 | < 0.00002 | 0.000023 | 0.0032 | 0.00046 | 0.0000020 | < 0.001 |
| M97-123-02 | 2011 | 60 | 70 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 8.9 | < 0.001 | 0.44 | 0.00053 | 0.00071 | 8.9 | < 0.0001 | 0.00015 | 0.0017 | < 0.001 | < 0.00001 | 0.010 | < 0.0001 | < 0.00002 | 0.000010 | 0.0046 | 0.00047 | 0.0000010 | < 0.001 |
| M97-123-03 | 2011 | 91 | 98 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 4.7 | < 0.001 | 2.0 | 0.0017 | 0.00016 | 4.6 | < 0.0001 | 0.000080 | 0.0020 | < 0.001 | < 0.00001 | 0.023 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00084 | 0.00057 | 0.0000010 | < 0.001 |
| M97-123-04 | 2011 | 121 | 130 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 8.4 | 0.0010 | 3.9 | 0.0012 | 0.00010 | 4.1 | < 0.0001 | 0.000050 | 0.0036 | < 0.001 | < 0.00001 | 0.030 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00066 | 0.0018 | 0.0000020 | 0.0010 |
| M97-124-01 | 2011 | 119.5 | 128 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 7.5 | < 0.001 | 1.4 | 0.0016 | 0.00041 | 6.7 | < 0.0001 | 0.00026 | 0.0038 | < 0.001 | 0.00018 | 0.017 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0012 | 0.00087 | 0.0000030 | 0.0010 |
| M97-124-02 | 2011 | 141.5 | 150.5 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 4.1 | < 0.001 | 0.89 | 0.00025 | 0.00016 | 3.1 | < 0.0001 | 0.000070 | 0.0026 | < 0.001 | < 0.00001 | 0.011 | < 0.0001 | < 0.00002 | 0.000015 | 0.0011 | 0.00094 | 0.0000030 | < 0.001 |
| M97-124-04 | 2011 | 191 | 200 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 7.6 | < 0.001 | 1.0 | 0.00064 | 0.00011 | 3.4 | < 0.0001 | 0.000070 | 0.0018 | < 0.001 | 0.000010 | 0.017 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00087 | 0.00095 | 0.0000020 | < 0.001 |
| M97-153-01 | 2011 | 37 | 46 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 12 | < 0.001 | 2.8 | 0.0011 | 0.00017 | 7.3 | 0.00040 | 0.00010 | 0.0029 | < 0.001 | < 0.00001 | 0.025 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0013 | 0.0015 | 0.0000020 | 0.0010 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M97-153-02 | 2011 | 67 | 76 | Mafic Volcanic | Pump | OP/FW | 8.2 | 70 | - | 1.9 | 1.2 | < 0.0001 | < 0.00001 | 0.54 | 0.026 | 0.019 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 |
| M98-181-01 | 2011 | 11 | 18.5 | Mafic Volcanic | Pump | OP/HW | 8.5 | 69 | - | 0.40 | 0.80 | < 0.0001 | < 0.00001 | 0.83 | 0.0015 | 0.0095 | < 0.00002 | < 0.00001 | 5.7 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 |
| M98-181-02 | 2011 | 80 | 89 | Mafic Volcanic | Pump | OP/FW | 8.2 | 82 | - | 1.2 | 0.40 | < 0.0001 | < 0.00001 | 0.55 | 0.00050 | 0.010 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M98-184-01 | 2011 | 14 | 22 | Mafic Volcanic | Pump | OP/HW | 9.2 | 92 | - | 0.60 | 1.3 | < 0.0001 | < 0.00001 | 0.99 | 0.011 | 0.027 | < 0.00002 | < 0.00001 | 2.9 | < 0.000003 | 0.000010 | < 0.0005 | < 0.0005 |
| M98-184-02 | 2011 | 66 | 74.5 | Mafic Volcanic | Pump | OP/HW | 7.9 | 87 | - | 0.60 | 0.50 | < 0.0001 | 0.000090 | 0.39 | 0.011 | 0.0040 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000057 | < 0.0005 | < 0.0005 |
| M98-185-01 | 2011 | 53 | 61.5 | Mafic Volcanic | Pump | OP/FW | 7.4 | 143 | - | 2.1 | 17 | < 0.0001 | 0.000070 | 0.74 | 0.018 | 0.028 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 |
| M98-185-02 | 2011 | 108 | 116.5 | Mafic Volcanic | Pump | OP/FW | 7.8 | 75 | - | 0.90 | 1.8 | < 0.0001 | 0.000020 | 1.0 | 0.0039 | 0.011 | < 0.00002 | < 0.00001 | 4.7 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 |
| M98-185-03 | 2011 | 160 | 168.5 | Mafic Volcanic | Pump | OP/FW | 8.2 | 73 | - | 0.60 | 2.3 | < 0.0001 | 0.000010 | 0.63 | 0.0021 | 0.015 | < 0.00002 | < 0.00001 | 4.3 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 |
| W94-49-01 | 2011 | 15 | 24 | Mafic Volcanic | Pump | OP/HW | 7.6 | 73 | - | 1.3 | 2.2 | < 0.0001 | < 0.00001 | 0.77 | 0.0020 | 0.012 | < 0.00002 | < 0.00001 | 5.6 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| W94-49-03 | 2011 | 41 | 51 | Mafic Volcanic | Pump | OP/HW | 7.7 | 73 | - | 0.70 | 1.0 | < 0.0001 | < 0.00001 | 0.62 | 0.0010 | 0.011 | < 0.00002 | < 0.00001 | 7.6 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| W94-53-01 | 2011 | 23 | 32 | Mafic Volcanic | Pump | OP/FW | 8.5 | 94 | - | 0.40 | 1.7 | < 0.0001 | < 0.00001 | 1.0 | 0.028 | 0.014 | < 0.00002 | < 0.00001 | 7.8 | 0.0000080 | 0.000033 | < 0.0005 | < 0.0005 |
| W94-55-02 | 2011 | 69.5 | 74 | Mafic Volcanic | Pump | OP/HW | 8.0 | 91 | - | 0.90 | 3.0 | < 0.0001 | < 0.00001 | 0.83 | 0.0032 | 0.011 | < 0.00002 | < 0.00001 | 9.2 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| W94-57-01 | 2011 | 8 | 16 | Mafic Volcanic | Pump | OP/HW | 7.7 | 133 | - | 0.90 | 2.3 | < 0.0001 | < 0.00001 | 0.39 | 0.028 | 0.013 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000063 | < 0.0005 | < 0.0005 |
| W94-59-01 | 2011 | 12 | 21 | Mafic Volcanic | Pump | OP/HW | 8.1 | 76 | - | 0.90 | 1.0 | < 0.0001 | < 0.00001 | 0.67 | 0.0086 | 0.015 | < 0.00002 | < 0.00001 | 3.6 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 |
| W94-61-02 | 2011 | 44 | 53 | Mafic Volcanic | Pump | OP/FW | 8.1 | 75 | - | 1.0 | 1.5 | < 0.0001 | < 0.00001 | 0.55 | 0.0041 | 0.017 | < 0.00002 | < 0.00001 | 4.0 | < 0.000003 | 0.000017 | < 0.0005 | 0.0010 |
| W94-65-03 | 2011 | 48 | 57 | Mafic Volcanic | Pump | OP/HW | 7.9 | 69 | - | 0.70 | 2.6 | < 0.0001 | < 0.00001 | 0.59 | 0.0068 | 0.039 | < 0.00002 | < 0.00001 | 5.7 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| W94-70-01 | 2011 | 8 | 18 | Mafic Volcanic | Pump | OP/HW | 7.9 | 75 | - | 0.70 | 2.2 | < 0.0001 | < 0.00001 | 0.53 | 0.0057 | 0.018 | < 0.00002 | < 0.00001 | 5.2 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| W94-70-02 | 2011 | 33 | 42 | Mafic Volcanic | Pump | OP/HW | 7.8 | 65 | - | 0.70 | 0.50 | < 0.0001 | 0.000030 | 0.73 | 0.00080 | 0.012 | < 0.00002 | < 0.00001 | 6.9 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| W94-73-01 | 2011 | 14 | 23 | Mafic Volcanic | Pump | OP/HW | 7.8 | 64 | - | 0.70 | 1.4 | < 0.0001 | 0.000030 | 0.63 | 0.0038 | 0.0099 | < 0.00002 | < 0.00001 | 6.4 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 |
| W94-73-03 | 2011 | 86 | 95 | Mafic Volcanic | Pump | OP/FW | 8.1 | 87 | - | 1.4 | 1.8 | < 0.0001 | < 0.00001 | 1.1 | 0.00080 | 0.0033 | < 0.00002 | < 0.00001 | 8.4 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.4 | 59 | nc | 0.40 | 0.40 | <0.0001 | < 0.00001 | 0.39 | 0.00050 | 0.0033 | <0.00002 | <0.00001 | 2.9 | <0.000003 | 0.000010 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 9.4 | 143 | nc | 2.7 | 17 | <0.0001 | 0.000090 | 1.1 | 0.095 | 0.039 | <0.00002 | <0.00001 | 12 | 0.0000080 | 0.000063 | <0.0005 | 0.0012 |
| | | | | | | MEDIAN | 8.1 | 76 | nc | 0.90 | 1.5 | nc | 0.000010 | 0.69 | 0.0050 | 0.013 | nc | nc | 7.2 | nc | 0.000018 | nc | 0.00050 |
| | | | | | | AVERAGE | 8.2 | 84 | nc | 1.0 | 2.1 | nc | 0.000017 | 0.74 | 0.010 | 0.015 | nc | nc | 6.9 | nc | 0.000022 | nc | 0.00054 |
| | | | | | | STANDARD DEVIATION | 0.42 | 19 | nc | 0.56 | 2.8 | nc | 0.000018 | 0.22 | 0.016 | 0.0074 | nc | nc | 2.1 | nc | 0.000011 | nc | 0.00014 |
| | | | | | | 75TH PERCENTILE | 8.3 | 90 | nc | 1.2 | 2.2 | nc | 0.000010 | 0.91 | 0.010 | 0.017 | nc | nc | 8.2 | nc | 0.000023 | nc | 0.00050 |
| M97-122-03 | 2011 | 160 | 169 | Ore/IF | Pump | OP/FW | 8.4 | 151 | - | 1.2 | 1.6 | < 0.0001 | < 0.00001 | 0.44 | 0.024 | 0.012 | < 0.00002 | < 0.00001 | 15 | < 0.000003 | 0.000082 | < 0.0005 | < 0.0005 |
| M97-122-04 | 2011 | 180 | 190 | Ore/IF | Pump | OP/FW | 8.2 | 143 | - | 0.90 | 2.1 | < 0.0001 | < 0.00001 | 0.25 | 0.026 | 0.016 | < 0.00002 | < 0.00001 | 22 | < 0.000003 | 0.000050 | < 0.0005 | < 0.0005 |
| W94-65-01 | 2011 | 14 | 20 | Ore/IF | Pump | OP/HW | 7.9 | 309 | - | 3.6 | 17 | < 0.0001 | < 0.00001 | 0.010 | 0.18 | 0.021 | < 0.00002 | < 0.00001 | 44 | < 0.000003 | 0.00054 | < 0.0005 | < 0.0005 |
| W94-65-02 | 2011 | 21 | 26 | Ore/IF | Pump | OP/HW | 8.2 | 288 | - | 2.8 | 11 | < 0.0001 | < 0.00001 | 0.040 | 0.14 | 0.020 | < 0.00002 | < 0.00001 | 47 | < 0.000003 | 0.00028 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.9 | 143 | nc | 0.90 | 1.6 | <0.0001 | <0.00001 | 0.010 | 0.024 | 0.012 | <0.00002 | <0.00001 | 15 | <0.000003 | 0.000050 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.4 | 309 | nc | 3.6 | 17 | <0.0001 | <0.00001 | 0.44 | 0.18 | 0.021 | <0.00002 | <0.00001 | 47 | <0.000003 | 0.00054 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.2 | 220 | nc | 2.0 | 6.6 | nc | nc | 0.15 | 0.081 | 0.018 | nc | nc | 33 | nc | 0.00018 | nc | nc |
| | | | | | | AVERAGE | 8.2 | 223 | nc | 2.1 | 7.9 | nc | nc | 0.19 | 0.092 | 0.017 | nc | nc | 32 | nc | 0.00024 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.22 | 88 | nc | 1.3 | 7.4 | nc | nc | 0.20 | 0.080 | 0.0041 | nc | nc | 16 | nc | 0.00023 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.3 | 293 | nc | 3.0 | 13 | nc | nc | 0.30 | 0.15 | 0.020 | nc | nc | 45 | nc | 0.00035 | nc | nc |
| M05-561-02_2011 | 2011 | 43.5 | 52.5 | Gabbro | Tiriganiaq | OP/HW | 8.2 | 94 | - | 0.80 | 1.7 | < 0.0001 | < 0.00001 | 1.2 | 0.021 | 0.011 | < 0.00002 | < 0.00001 | 4.4 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 |
| M06-592-02 | 2011 | 60 | 69 | Gabbro | Tiriganiaq | OP/HW | 8.6 | 68 | - | 0.60 | 0.70 | < 0.0001 | < 0.00001 | 0.77 | 0.0031 | 0.0053 | < 0.00002 | < 0.00001 | 4.3 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| M06-592-03 | 2011 | 124 | 132.5 | Gabbro | Tiriganiaq | OP/FW | 8.1 | 76 | - | 1.0 | 1.3 | < 0.0001 | < 0.00001 | 0.90 | 0.0054 | 0.0077 | < 0.00002 | < 0.00001 | 4.8 | < 0.000003 | 0.000062 | < 0.0005 | < 0.0005 |
| M06-593-02 | 2011 | 140 | 148 | Gabbro | Tiriganiaq | OP/FW | 9.0 | 74 | - | 0.80 | 1.8 | < 0.0001 | < 0.00001 | 0.72 | 0.0033 | 0.0078 | < 0.00002 | < 0.00001 | 4.4 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 |
| M96-44-01 | 2011 | 15 | 22 | Gabbro | Tiriganiaq | OP/HW | 8.2 | 84 | - | 1.0 | 2.3 | < 0.0001 | < 0.00001 | 0.63 | 0.0063 | 0.0069 | < 0.00002 | < 0.00001 | 4.3 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 |
| M97-135-02 | 2011 | 85 | 92 | Gabbro | Tiriganiaq | OP/HW | 9.3 | 80 | - | 0.80 | 2.1 | < 0.0001 | < 0.00001 | 0.66 | 0.011 | 0.0083 | < 0.00002 | < 0.00001 | 4.1 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 |
| M97-149-01 | 2011 | 12.5 | 21 | Gabbro | Tiriganiaq | OP/HW | 9.5 | 88 | - | 0.90 | 1.5 | < 0.0001 | < 0.00001 | 0.80 | 0.0049 | 0.0090 | < 0.00002 | < 0.00001 | 3.4 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M98-201-02 | 2011 | 44 | 52 | Gabbro | Tiriganiaq | OP/HW | 8.3 | 85 | - | 0.90 | 3.0 | < 0.0001 | < 0.00001 | 0.75 | 0.0067 | 0.012 | < 0.00002 | < 0.00001 | 5.2 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M99-309-01 | 2011 | 20 | 28 | Gabbro | Tiriganiaq | OP/HW | 7.9 | 76 | - | 0.40 | 1.8 | < 0.0001 | < 0.00001 | 0.83 | 0.0027 | 0.0080 | < 0.00002 | < 0.00001 | 5.7 | < 0.000003 | 0.000010 | < 0.0005 | < 0.0005 |
| M99-336B-02 | 2011 | 52 | 62 | Gabbro | Tiriganiaq | OP/HW | 8.6 | 83 | - | 0.80 | 1.7 | < 0.0001 | < 0.00001 | 0.64 | 0.0043 | 0.0082 | < 0.00002 | < 0.00001 | 3.3 | < 0.000003 | 0.0000060 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.9 | 68 | nc | 0.40 | 0.70 | <0.0001 | <0.00001 | 0.63 | 0.0027 | 0.0053 | <0.00002 | <0.00001 | 3.3 | <0.000003 | 0.0000060 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 9.5 | 94 | nc | 1.0 | 3.0 | <0.0001 | <0.00001 | 1.2 | 0.021 | 0.012 | <0.00002 | <0.00001 | 5.7 | <0.000003 | 0.000062 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.4 | 82 | nc | 0.80 | 1.8 | nc | nc | 0.76 | 0.0052 | 0.0081 | nc | nc | 4.3 | nc | 0.000022 | nc | nc |
| | | | | | | AVERAGE | 8.5 | 81 | nc | 0.80 | 1.8 | nc | nc | 0.79 | 0.0069 | 0.0084 | nc | nc | 4.4 | nc | 0.000025 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.54 | 7.6 | nc | 0.18 | 0.61 | nc | nc | 0.15 | 0.0056 | 0.0018 | nc | nc | 0.71 | nc | 0.000017 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.9 | 85 | nc | 0.90 | 2.0 | nc | nc | 0.82 | 0.0066 | 0.0088 | nc | nc | 4.7 | nc | 0.000028 | nc | nc |
| GT08-01-01 | 2008 | 50.2 | 54.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GT08-01-02 | 2008 | 25.16 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 201 | 48 | 33 | 4.6 | < 0.0001 | 0.000080 | 0.54 | 0.083 | 0.10 | 0.000080 | 0.000070 | 11 | 0.000067 | 0.00017 | < 0.0005 | < 0.0005 |
| GT08-02-01_2008 | 2008 | 65.07 | 69.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 184 | 57 | 20 | 5.2 | < 0.0001 | 0.000050 | 0.56 | 0.021 | 0.097 | 0.000060 | 0.000050 | 10 | 0.000042 | 0.000092 | < 0.0005 | < 0.0005 |
| M00-474-02 | 2008 | 80.3 | 84.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M00-474-04 | 2008 | 45.42 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 88 | 39 | 1.1 | 2.0 | < 0.0001 | < 0.00001 | 0.71 | 0.0092 | 0.080 | < 0.00002 | < 0.00001 | 9.9 | 0.0000060 | 0.000039 | < 0.0005 | < 0.0005 |
| M00-474-05 | 2008 | 20.53 | 24.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 99 | 39 | 0.80 | 7.2 | < 0.0001 | < 0.00001 | 1.2 | 0.067 | 0.0066 | < 0.00002 | < 0.00001 | 9.7 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 |
| M00-476-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 90 | 44 | 1.4 | 2.1 | < 0.0001 | 0.000050 | 1.0 | 0.059 | 0.029 | < 0.00002 | < 0.00001 | 6.6 | 0.000014 | 0.000044 | < 0.0005 | < 0.0005 |
| M00-476-02 | 2009 | 23 | 28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 93 | 46 | 1.8 | 3.2 | < 0.0001 | 0.000010 | 0.91 | 0.057 | 0.028 | < 0.00002 | < 0.00001 | 7.4 | < 0.000003 | 0.000078 | < 0.0005 | < 0.0005 |
| M00-479-01 | 2009 | 30 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 97 | 43 | 0.80 | 4.8 | < 0.0001 | < 0.00001 | 0.69 | 0.027 | 0.023 | < 0.00002 | < 0.00001 | 9.2 | < 0.000003 | 0.000099 | < 0.0005 | 0.00050 |
| M00-479-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 99 | 46 | 1.0 | 4.3 | < 0.0001 | < 0.00001 | 0.84 | 0.064 | 0.027 | < 0.00002 | < 0.00001 | 8.8 | 0.000012 | 0.000046 | < 0.0005 | < 0.0005 |
| M03-496-01 | 2008 | 360.07 | 370.13 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M03-498-01 | 2009 | 315 | 320 | Greywacke/Siltstone | Tiriganiaq | UG | 8.6 | 95 | 54 | 0.60 | 0.50 | < 0.0001 | < 0.00001 | 0.98 | 0.048 | 0.019 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M97-153-02 | 2011 | 67 | 76 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 8.5 | < 0.001 | 2.5 | 0.0014 | 0.00018 | 5.0 | 0.00020 | 0.000050 | 0.0034 | < 0.001 | < 0.00001 | 0.019 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0013 | 0.0019 | 0.0000010 | < 0.001 |
| M98-181-01 | 2011 | 11 | 18.5 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 8.0 | < 0.001 | 0.69 | 0.00052 | 0.00011 | 3.5 | < 0.0001 | 0.000070 | 0.0019 | < 0.001 | < 0.00001 | 0.020 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0020 | 0.0022 | 0.0000010 | 0.0010 |
| M98-181-02 | 2011 | 80 | 89 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 2.7 | < 0.001 | 2.8 | 0.0016 | 0.000060 | 4.6 | < 0.0001 | 0.000080 | 0.0021 | < 0.001 | < 0.00001 | 0.018 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00065 | 0.00051 | 0.0000020 | < 0.001 |
| M98-184-01 | 2011 | 14 | 22 | Mafic Volcanic | Pump | OP/HW | 0.0020 | 8.8 | < 0.001 | 0.34 | 0.00035 | 0.00013 | 13 | < 0.0001 | 0.00010 | 0.0014 | < 0.001 | < 0.00001 | 0.0075 | 0.00030 | < 0.00002 | 0.0000070 | 0.0065 | 0.00063 | 0.0000010 | < 0.001 |
| M98-184-02 | 2011 | 66 | 74.5 | Mafic Volcanic | Pump | OP/HW | 0.0030 | 5.4 | 0.0020 | 6.5 | 0.0016 | 0.00015 | 5.8 | 0.00060 | 0.000070 | 0.0024 | < 0.001 | 0.000020 | 0.020 | < 0.0001 | 0.000030 | 0.0000050 | 0.0011 | 0.0012 | 0.0000010 | < 0.001 |
| M98-185-01 | 2011 | 53 | 61.5 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 8.9 | < 0.001 | 1.1 | 0.0013 | 0.00031 | 14 | 0.00030 | 0.00011 | 0.0022 | < 0.001 | 0.000020 | 0.016 | 0.00010 | 0.000030 | 0.000012 | 0.0015 | 0.0027 | 0.0000020 | < 0.001 |
| M98-185-02 | 2011 | 108 | 116.5 | Mafic Volcanic | Pump | OP/FW | 0.0040 | 5.9 | < 0.001 | 0.51 | 0.00035 | 0.00017 | 6.9 | 0.00020 | 0.00010 | 0.0024 | < 0.001 | 0.000020 | 0.0099 | 0.00020 | < 0.00002 | 0.000016 | 0.0036 | 0.00075 | 0.0000010 | < 0.001 |
| M98-185-03 | 2011 | 160 | 168.5 | Mafic Volcanic | Pump | OP/FW | 0.0060 | 2.4 | < 0.001 | 0.55 | 0.00045 | 0.00013 | 8.6 | 0.00020 | 0.000080 | 0.0032 | < 0.001 | 0.000020 | 0.012 | 0.00030 | < 0.00002 | 0.0000050 | 0.0063 | 0.00059 | 0.0000010 | < 0.001 |
| W94-49-01 | 2011 | 15 | 24 | Mafic Volcanic | Pump | OP/HW | 0.0020 | 6.4 | < 0.001 | 0.65 | 0.00021 | 0.00042 | 5.3 | 0.00030 | 0.000070 | 0.0042 | < 0.001 | 0.000020 | 0.015 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0034 | 0.0030 | 0.0000020 | < 0.001 |
| W94-49-03 | 2011 | 41 | 51 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 4.4 | < 0.001 | 1.2 | 0.0027 | 0.00016 | 2.7 | 0.00030 | 0.00010 | 0.0032 | < 0.001 | 0.000020 | 0.032 | < 0.0001 | < 0.00002 | 0.0000040 | 0.00071 | 0.0013 | 0.0000010 | < 0.001 |
| W94-53-01 | 2011 | 23 | 32 | Mafic Volcanic | Pump | OP/FW | 0.014 | 11 | < 0.001 | 1.2 | 0.00073 | 0.00054 | 3.9 | 0.00040 | 0.00013 | 0.0061 | < 0.001 | 0.000030 | 0.025 | 0.00030 | < 0.00002 | 0.000069 | 0.0023 | 0.00052 | 0.000011 | < 0.001 |
| W94-55-02 | 2011 | 69.5 | 74 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 7.9 | < 0.001 | 1.3 | 0.0010 | 0.00012 | 2.4 | 0.00030 | 0.000090 | 0.0030 | < 0.001 | 0.000020 | 0.018 | 0.00010 | < 0.00002 | 0.0000020 | 0.00084 | 0.00096 | 0.0000010 | < 0.001 |
| W94-57-01 | 2011 | 8 | 16 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 11 | 0.0010 | 5.0 | 0.0019 | 0.00026 | 2.4 | 0.0012 | 0.00013 | 0.0066 | < 0.001 | 0.000020 | 0.027 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00036 | 0.0012 | 0.0000010 | 0.0010 |
| W94-59-01 | 2011 | 12 | 21 | Mafic Volcanic | Pump | OP/HW | 0.0070 | 2.5 | < 0.001 | 0.50 | 0.00064 | 0.00020 | 10 | 0.00020 | 0.000060 | 0.0050 | < 0.001 | 0.000010 | 0.0071 | 0.00050 | < 0.00002 | 0.0000010 | 0.0074 | 0.00073 | 0.0000030 | < 0.001 |
| W94-61-02 | 2011 | 44 | 53 | Mafic Volcanic | Pump | OP/FW | 0.0060 | 5.5 | < 0.001 | 0.61 | 0.0037 | 0.00016 | 7.3 | 0.00020 | 0.00030 | 0.0053 | < 0.001 | 0.000030 | 0.0083 | 0.00030 | < 0.00002 | 0.0000030 | 0.0043 | 0.00076 | 0.0000010 | 0.0010 |
| W94-65-03 | 2011 | 48 | 57 | Mafic Volcanic | Pump | OP/HW | 0.0060 | 2.3 | < 0.001 | 0.88 | 0.0014 | 0.00017 | 6.8 | 0.0020 | 0.00076 | 0.0027 | < 0.001 | 0.000010 | 0.012 | 0.00040 | < 0.00002 | 0.0000080 | 0.0046 | 0.00054 | 0.0000010 | 0.0060 |
| W94-70-01 | 2011 | 8 | 18 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 4.1 | < 0.001 | 0.82 | 0.00063 | 0.00024 | 5.8 | 0.00020 | 0.000090 | 0.0038 | < 0.001 | 0.000010 | 0.013 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0036 | 0.00084 | < 0.000001 | < 0.001 |
| W94-70-02 | 2011 | 33 | 42 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 2.5 | < 0.001 | 0.95 | 0.00040 | 0.000080 | 4.0 | 0.00020 | 0.000050 | 0.0035 | < 0.001 | 0.000010 | 0.019 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0013 | 0.00090 | 0.0000010 | < 0.001 |
| W94-73-01 | 2011 | 14 | 23 | Mafic Volcanic | Pump | OP/HW | < 0.002 | 1.7 | < 0.001 | 0.84 | 0.00075 | 0.000080 | 5.2 | 0.00020 | 0.000070 | 0.0035 | < 0.001 | 0.000010 | 0.017 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0050 | 0.00049 | < 0.000001 | 0.0010 |
| W94-73-03 | 2011 | 86 | 95 | Mafic Volcanic | Pump | OP/FW | < 0.002 | 6.5 | < 0.001 | 1.0 | 0.0023 | 0.00010 | 3.5 | 0.00030 | 0.000060 | 0.0022 | < 0.001 | 0.000020 | 0.012 | < 0.0001 | < 0.00002 | 0.0000020 | 0.00084 | 0.00095 | 0.0000010 | < 0.001 |
| | | | | | | MINIMUM | < 0.002 | 0.79 | < 0.001 | 0.34 | 0.00021 | 0.000060 | 2.4 | < 0.0001 | 0.000020 | 0.0014 | <0.001 | < 0.00001 | 0.0064 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00036 | 0.00042 | < 0.000001 | < 0.001 |
| | | | | | | MAXIMUM | 0.014 | 12 | 0.0020 | 6.5 | 0.0037 | 0.00077 | 16 | 0.0020 | 0.00076 | 0.0066 | <0.001 | 0.00018 | 0.032 | 0.00050 | 0.000030 | 0.000069 | 0.019 | 0.0030 | 0.000011 | 0.0060 |
| | | | | | | MEDIAN | 0.0020 | 6.2 | 0.0010 | 1.0 | 0.00098 | 0.00017 | 5.6 | 0.00020 | 0.000070 | 0.0032 | nc | 0.000010 | 0.016 | 0.00010 | 0.000020 | 0.0000010 | 0.0019 | 0.00090 | 0.0000010 | 0.0010 |
| | | | | | | AVERAGE | 0.0032 | 6.1 | 0.0010 | 1.5 | 0.0011 | 0.00021 | 6.3 | 0.00027 | 0.00011 | 0.0033 | nc | 0.000018 | 0.016 | 0.00016 | 0.000021 | 0.0000062 | 0.0030 | 0.0011 | 0.0000018 | 0.0011 |
| | | | | | | STANDARD DEVIATION | 0.0028 | 2.7 | 0.00017 | 1.3 | 0.00074 | 0.00016 | 3.2 | 0.00036 | 0.00013 | 0.0012 | nc | 0.000028 | 0.0062 | 0.00011 | 0.0000023 | 0.000012 | 0.0033 | 0.00065 | 0.0000017 | 0.00083 |
| | | | | | | 75TH PERCENTILE | 0.0020 | 7.9 | 0.0010 | 1.5 | 0.0014 | 0.00023 | 7.3 | 0.00030 | 0.00010 | 0.0037 | nc | 0.000020 | 0.019 | 0.00013 | 0.000020 | 0.0000073 | 0.0038 | 0.0014 | 0.0000020 | 0.0010 |
| M97-122-03 | 2011 | 160 | 169 | Ore/IF | Pump | OP/FW | < 0.002 | 5.1 | 0.0030 | 7.7 | 0.0030 | 0.00012 | 4.7 | 0.00040 | 0.000070 | 0.0060 | < 0.001 | < 0.00001 | 0.023 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00047 | 0.0053 | 0.0000020 | < 0.001 |
| M97-122-04 | 2011 | 180 | 190 | Ore/IF | Pump | OP/FW | < 0.002 | 4.0 | < 0.001 | 8.5 | 0.0023 | 0.00031 | 0.54 | < 0.0001 | 0.00010 | 0.0027 | < 0.001 | < 0.00001 | 0.019 | < 0.0001 | < 0.00002 | 0.0000010 | 0.00013 | 0.0015 | 0.0000020 | < 0.001 |
| W94-65-01 | 2011 | 14 | 20 | Ore/IF | Pump | OP/HW | 0.0050 | 1.2 | < 0.001 | 12 | 0.27 | 0.00046 | 0.44 | 0.0025 | 0.000080 | 0.0013 | < 0.001 | 0.000010 | 0.039 | 0.00020 | < 0.00002 | 0.000076 | < 0.00003 | < 0.00003 | 0.0000020 | 0.0010 |
| W94-65-02 | 2011 | 21 | 26 | Ore/IF | Pump | OP/HW | < 0.002 | 1.7 | 0.0010 | 12 | 0.12 | 0.00053 | 0.55 | 0.0021 | 0.000060 | 0.0020 | < 0.001 | 0.000010 | 0.069 | 0.00020 | < 0.00002 | 0.000079 | < 0.00003 | 0.000080 | 0.0000030 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 1.2 | < 0.001 | 7.7 | 0.0023 | 0.00012 | 0.44 | <0.0001 | 0.000060 | 0.0013 | <0.001 | < 0.00001 | 0.019 | <0.0001 | <0.00002 | < 0.000001 | <0.00003 | <0.00003 | 0.0000020 | < 0.001 |
| | | | | | | MAXIMUM | 0.0050 | 5.1 | 0.0030 | 12 | 0.27 | 0.00053 | 4.7 | 0.0025 | 0.00010 | 0.0060 | <0.001 | 0.000010 | 0.069 | 0.00020 | <0.00002 | 0.000079 | 0.00047 | 0.0053 | 0.0000030 | 0.0010 |
| | | | | | | MEDIAN | nc | 2.9 | nc | 10 | 0.062 | 0.00039 | 0.55 | 0.0013 | 0.000075 | 0.0024 | nc | nc | 0.031 | nc | nc | 0.000039 | nc | 0.00081 | 0.0000020 | nc |
| | | | | | | AVERAGE | nc | 3.0 | nc | 10.0 | 0.099 | 0.00036 | 1.6 | 0.0013 | 0.000078 | 0.0030 | nc | nc | 0.037 | nc | nc | 0.000039 | nc | 0.0017 | 0.0000023 | nc |
| | | | | | | STANDARD DEVIATION | nc | 1.9 | nc | 2.2 | 0.13 | 0.00018 | 2.1 | 0.0012 | 0.000017 | 0.0021 | nc | nc | 0.023 | nc | nc | 0.000044 | nc | 0.0025 | 0.0000005 | nc |
| | | | | | | 75TH PERCENTILE | nc | 4.3 | nc | 12 | 0.16 | 0.00048 | 1.6 | 0.0022 | 0.000085 | 0.0035 | nc | nc | 0.046 | nc | nc | 0.000077 | nc | 0.0025 | 0.0000023 | nc |
| M05-561-02_2011 | 2011 | 43.5 | 52.5 | Gabbro | Tiriganiaq | OP/HW | 0.0040 | 16 | < 0.001 | 0.46 | 0.00035 | 0.00056 | 5.1 | 0.00020 | 0.000080 | 0.0045 | < 0.001 | < 0.00001 | 0.023 | 0.00040 | < 0.00002 | 0.000016 | 0.0034 | 0.0049 | < 0.000001 | 0.0010 |
| M06-592-02 | 2011 | 60 | 69 | Gabbro | Tiriganiaq | OP/HW | 0.018 | 5.6 | < 0.001 | 0.43 | 0.00037 | 0.00013 | 6.5 | 0.00020 | 0.000090 | 0.0046 | < 0.001 | < 0.00001 | 0.028 | 0.00050 | < 0.00002 | 0.0000050 | 0.015 | 0.0014 | 0.0000030 | 0.0010 |
| M06-592-03 | 2011 | 124 | 132.5 | Gabbro | Tiriganiaq | OP/FW | 0.24 | 8.6 | < 0.001 | 0.43 | 0.0016 | 0.00010 | 7.4 | 0.00030 | 0.000090 | 0.0030 | < 0.001 | 0.000030 | 0.013 | 0.0071 | < 0.00002 | 0.000025 | 0.022 | 0.0017 | 0.000012 | 0.0020 |
| M06-593-02 | 2011 | 140 | 148 | Gabbro | Tiriganiaq | OP/FW | 0.065 | 8.3 | < 0.001 | 0.42 | 0.00093 | 0.00018 | 5.9 | 0.00020 | 0.000090 | 0.0027 | < 0.001 | < 0.00001 | 0.013 | 0.0028 | < 0.00002 | 0.000032 | 0.018 | 0.0016 | 0.0000080 | < 0.001 |
| M96-44-01 | 2011 | 15 | 22 | Gabbro | Tiriganiaq | OP/HW | 0.043 | 12 | < 0.001 | 0.42 | 0.00064 | 0.00016 | 6.4 | < 0.0001 | 0.000070 | 0.0028 | < 0.001 | < 0.00001 | 0.013 | 0.0020 | < 0.00002 | 0.000011 | 0.016 | 0.0016 | 0.0000050 | < 0.001 |
| M97-135-02 | 2011 | 85 | 92 | Gabbro | Tiriganiaq | OP/HW | 0.050 | 9.2 | < 0.001 | 0.40 | 0.00071 | 0.00055 | 7.6 | < 0.0001 | 0.000090 | 0.0039 | < 0.001 | 0.000080 | 0.014 | 0.0021 | < 0.00002 | 0.000024 | 0.020 | 0.0016 | 0.0000070 | < 0.001 |
| M97-149-01 | 2011 | 12.5 | 21 | Gabbro | Tiriganiaq | OP/HW | 0.029 | 9.2 | < 0.001 | 0.31 | 0.00044 | 0.00038 | 10 | 0.00020 | 0.000090 | 0.0046 | < 0.001 | < 0.00001 | 0.012 | 0.0015 | < 0.00002 | 0.000011 | 0.018 | 0.0020 | 0.0000030 | < 0.001 |
| M98-201-02 | 2011 | 44 | 52 | Gabbro | Tiriganiaq | OP/HW | 0.013 | 11 | < 0.001 | 0.50 | 0.00034 | 0.00028 | 5.1 | < 0.0001 | 0.000080 | 0.0041 | < 0.001 | < 0.00001 | 0.019 | 0.00070 | < 0.00002 | 0.000028 | 0.014 | 0.0019 | 0.0000020 | < 0.001 |
| M99-309-01 | 2011 | 20 | 28 | Gabbro | Tiriganiaq | OP/HW | 0.0040 | 4.6 | < 0.001 | 0.63 | 0.00050 | 0.00040 | 6.9 | < 0.0001 | 0.000070 | 0.0029 | < 0.001 | < 0.00001 | 0.034 | 0.00020 | < 0.00002 | 0.0000010 | 0.0047 | 0.0018 | 0.0000010 | < 0.001 |
| M99-336B-02 | 2011 | 52 | 62 | Gabbro | Tiriganiaq | OP/HW | 0.0060 | 11 | < 0.001 | 0.34 | 0.00031 | 0.00013 | 6.4 | < 0.0001 | 0.00011 | 0.0036 | < 0.001 | < 0.00001 | 0.017 | 0.00030 | < 0.00002 | 0.0000020 | 0.014 | 0.0021 | 0.0000010 | < 0.001 |
| | | | | | | MINIMUM | 0.0040 | 4.6 | <0.001 | 0.31 | 0.00031 | 0.00010 | 5.1 | <0.0001 | 0.000070 | 0.0027 | <0.001 | <0.00001 | 0.012 | 0.00020 | <0.00002 | 0.0000010 | 0.0034 | 0.0014 | < 0.000001 | < 0.001 |
| | | | | | | MAXIMUM | 0.24 | 16 | <0.001 | 0.63 | 0.0016 | 0.00056 | 10 | 0.00030 | 0.00011 | 0.0046 | <0.001 | 0.000080 | 0.034 | 0.0071 | <0.00002 | 0.0000032 | 0.022 | 0.0049 | 0.000012 | 0.0020 |
| | | | | | | MEDIAN | 0.024 | 9.2 | nc | 0.43 | 0.00047 | 0.00023 | 6.5 | 0.00015 | 0.000090 | 0.0038 | nc | nc | 0.016 | 0.0011 | nc | 0.0000014 | 0.015 | 0.0017 | 0.0000030 | 0.0010 |
| | | | | | | AVERAGE | 0.047 | 9.5 | nc | 0.43 | 0.00062 | 0.00029 | 6.7 | 0.00016 | 0.000086 | 0.0037 | nc | nc | 0.019 | 0.0018 | nc | 0.0000016 | 0.014 | 0.0021 | 0.0000043 | 0.0011 |
| | | | | | | STANDARD DEVIATION | 0.070 | 3.2 | nc | 0.089 | 0.00040 | 0.00018 | 1.5 | 0.0000070 | 0.000012 | 0.00077 | nc | nc | 0.0075 | 0.0021 | nc | 0.0000011 | 0.0061 | 0.0010 | 0.0000037 | 0.00032 |
| | | | | | | 75TH PERCENTILE | 0.048 | 11 | nc | 0.45 | 0.00069 | 0.00040 | 7.3 | 0.00020 | 0.000090 | 0.0044 | nc | nc | 0.022 | 0.0021 | nc | 0.0000025 | 0.018 | 0.0020 | 0.0000065 | 0.0010 |
| GT08-01-01 | 2008 | 50.2 | 54.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GT08-01-02 | 2008 | 25.16 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 11 | 0.0030 | 3.2 | 0.0020 | 0.00060 | 19 | 0.0012 | 0.000090 | 0.0029 | < 0.001 | 0.000060 | 0.071 | 0.00060 | 0.000070 | 0.00023 | 0.0024 | 0.0076 | 0.000077 | 0.0070 |
| GT08-02-01_2008 | 2008 | 65.07 | 69.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 11 | 0.0020 | 2.7 | 0.0020 | 0.00072 | 17 | 0.00060 | 0.00011 | 0.00090 | < 0.001 | 0.00011 | 0.053 | 0.00040 | 0.000050 | 0.00012 | 0.00058 | 0.00090 | 0.000056 | 0.0080 |
| M00-474-02 | 2008 | 80.3 | 84.82 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M00-474-04 | 2008 | 45.42 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 6.2 | < 0.001 | 1.2 | 0.0015 | 0.00038 | 5.9 | 0.00030 | 0.000030 | 0.0014 | < 0.001 | 0.000060 | 0.10 | 0.00030 | < 0.00002 | 0.000059 | 0.00031 | 0.00059 | 0.000014 | 0.0090 |
| M00-474-05 | 2008 | 20.53 | 24.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 11 | < 0.001 | 1.2 | 0.00097 | 0.00060 | 3.6 | 0.00060 | 0.000040 | 0.0035 | < 0.001 | < 0.00001 | 0.042 | 0.00040 | < 0.00002 | 0.00019 | 0.0024 | 0.00052 | 0.000010 | < 0.001 |
| M00-476-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.040 | 9.0 | 0.0010 | 1.1 | 0.00073 | 0.00085 | 5.7 | 0.00020 | 0.000080 | 0.0053 | < 0.001 | 0.000010 | 0.027 | 0.0015 | < 0.00002 | 0.000071 | 0.0035 | 0.00034 | 0.000038 | 0.0010 |
| M00-476-02 | 2009 | 23 | 28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.030 | 9.1 | < 0.001 | 1.5 | 0.00064 | 0.00070 | 5.9 | 0.00020 | 0.000060 | 0.0043 | < 0.001 | < 0.00001 | 0.027 | 0.00090 | < 0.00002 | 0.00010 | 0.0026 | 0.00044 | 0.000054 | 0.0010 |
| M00-479-01 | 2009 | 30 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.070 | 6.2 | < 0.001 | 1.7 | 0.0023 | 0.0010 | 4.5 | 0.00030 | 0.00016 | 0.0012 | < 0.001 | < 0.00001 | 0.037 | 0.0021 | < 0.00002 | 0.000053 | 0.0011 | 0.0013 | 0.000043 | 0.0010 |
| M00-479-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 10 | < 0.001 | 1.7 | 0.00096 | 0.0011 | 4.7 | 0.00030 | 0.000070 | 0.0045 | < 0.001 | < 0.00001 | 0.037 | 0.00060 | < 0.00002 | 0.00013 | 0.0021 | 0.00051 | 0.000031 | 0.0010 |
| M03-496-01 | 2008 | 360.07 | 370.13 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M03-498-01 | 2009 | 315 | 320 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 9.6 | 0.0010 | 1.6 | 0.0010 | 0.00010 | 5.6 | < 0.0001 | < 0.00002 | 0.0030 | < 0.001 | < 0.00001 | 0.055 | 0.00020 | < 0.00002 | 0.00011 | 0.0016 | 0.00067 | 0.0000080 | 0.0010 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M03-499-02 | 2009 | 270 | 275 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 99 | 54 | 1.4 | 0.60 | < 0.0001 | < 0.00001 | 0.94 | 0.018 | 0.022 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.000057 | < 0.0005 | < 0.0005 |
| M03-508-01 | 2011 | 44.5 | 53 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 76 | - | 0.40 | 1.6 | < 0.0001 | < 0.00001 | 0.94 | 0.041 | 0.0075 | < 0.00002 | < 0.00001 | 7.0 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M03-513-01 | 2008 | 19.5 | 24.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M04-520-01 | 2009 | 405 | 410 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 98 | 50 | 0.80 | 0.50 | < 0.0001 | < 0.00001 | 1.2 | 0.100 | 0.043 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.000063 | < 0.0005 | < 0.0005 |
| M04-520-02 | 2009 | 411 | 416 | Greywacke/Siltstone | Tiriganiaq | UG | 9.1 | 85 | 39 | 0.70 | 0.50 | < 0.0001 | < 0.00001 | 0.43 | 0.0030 | 0.016 | < 0.00002 | < 0.00001 | 3.5 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| M04-527-01 | 2008 | 270 | 279.9 | Greywacke/Siltstone | Tiriganiaq | UG | 8.0 | 113 | 48 | 1.2 | 4.9 | < 0.0001 | < 0.00001 | 0.25 | 0.074 | 0.19 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000071 | < 0.0005 | < 0.0005 |
| M04-533-01 | 2008 | 380.18 | 389.64 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 124 | 59 | 1.0 | 3.0 | < 0.0001 | < 0.00001 | 0.46 | 0.043 | 0.14 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000072 | < 0.0005 | < 0.0005 |
| M04-533-02 | 2008 | 296.9 | 307.24 | Greywacke/Siltstone | Tiriganiaq | UG | 8.1 | 93 | 42 | 1.3 | 3.6 | < 0.0001 | < 0.00001 | 0.81 | 0.14 | 0.15 | < 0.00002 | < 0.00001 | 5.8 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 |
| M05-559A-02 | 2008 | 180 | 189.99 | Greywacke/Siltstone | Tiriganiaq | UG | 8.0 | 101 | 45 | 0.90 | 3.3 | < 0.0001 | < 0.00001 | 0.81 | 0.022 | 0.14 | < 0.00002 | < 0.00001 | 6.6 | 0.0000060 | 0.000055 | < 0.0005 | < 0.0005 |
| M05-571A-01 | 2008 | 435.4 | 444.96 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M05-571A-02 | 2008 | 335.3 | 344.4 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 120 | 54 | 0.90 | 4.6 | < 0.0001 | < 0.00001 | 0.36 | 0.031 | 0.20 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000065 | 0.00050 | < 0.0005 |
| M06-577-01 | 2011 | 7 | 15.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 138 | - | 0.60 | 2.0 | < 0.0001 | < 0.00001 | 0.96 | 0.024 | 0.012 | < 0.00002 | < 0.00001 | 8.6 | 0.0000040 | 0.000034 | < 0.0005 | < 0.0005 |
| M06-577-02 | 2011 | 71 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 114 | - | 1.3 | 4.4 | < 0.0001 | < 0.00001 | 0.98 | 0.017 | 0.013 | < 0.00002 | < 0.00001 | 8.7 | 0.000017 | 0.000031 | < 0.0005 | < 0.0005 |
| M06-577-03 | 2011 | 105 | 114 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 127 | - | 1.2 | 5.9 | < 0.0001 | < 0.00001 | 0.75 | 0.029 | 0.020 | < 0.00002 | < 0.00001 | 9.1 | 0.0000090 | 0.000041 | < 0.0005 | < 0.0005 |
| M06-591-01 | 2011 | 20.5 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 120 | - | 1.1 | 5.7 | < 0.0001 | < 0.00001 | 0.77 | 0.038 | 0.012 | < 0.00002 | < 0.00001 | 9.6 | 0.0000080 | 0.000044 | < 0.0005 | < 0.0005 |
| M06-592-01 | 2011 | 26 | 34.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 97 | - | 1.5 | 1.4 | < 0.0001 | < 0.00001 | 1.1 | 0.049 | 0.012 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 |
| M06-593-01 | 2011 | 27 | 36 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.6 | 89 | - | 0.40 | 1.6 | < 0.0001 | < 0.00001 | 0.74 | 0.0084 | 0.0054 | < 0.00002 | 0.000020 | 8.0 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 |
| M06-601A-01 | 2009 | 266 | 270 | Greywacke/Siltstone | Tiriganiaq | UG | 8.3 | 80 | 37 | 0.80 | 0.60 | < 0.0001 | 0.000030 | 0.81 | 0.0014 | 0.023 | < 0.00002 | < 0.00001 | 5.6 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M06-604-01 | 2008 | 335.56 | 344.42 | Greywacke/Siltstone | Tiriganiaq | UG | 8.1 | 113 | 48 | 1.8 | 6.3 | 0.00010 | < 0.00001 | 0.27 | 0.029 | 0.26 | < 0.00002 | < 0.00001 | 7.0 | < 0.000003 | 0.000071 | 0.00070 | < 0.0005 |
| M06-604-02 | 2008 | 285.56 | 294.76 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 118 | 55 | 1.3 | 3.6 | < 0.0001 | < 0.00001 | 0.47 | 0.0084 | 0.17 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M06-604-03 | 2008 | 245 | 255 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M06-607-01 | 2009 | 175 | 180 | Greywacke/Siltstone | Tiriganiaq | UG | 8.4 | 89 | 47 | 1.8 | 0.70 | < 0.0001 | < 0.00001 | 1.1 | 0.037 | 0.029 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 |
| M06-608-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 89 | - | 0.40 | 2.7 | < 0.0001 | < 0.00001 | 0.99 | 0.018 | 0.0076 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M06-608-02 | 2011 | 75.5 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 6.1 | 1.0 | - | 0.80 | 2.1 | < 0.0001 | < 0.00001 | 0.93 | 0.024 | 0.0086 | < 0.00002 | < 0.00001 | 7.0 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M06-611-01 | 2011 | 28 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.6 | 97 | - | 0.70 | 2.6 | < 0.0001 | < 0.00001 | 0.90 | 0.062 | 0.0074 | < 0.00002 | < 0.00001 | 8.0 | < 0.000003 | 0.000053 | < 0.0005 | < 0.0005 |
| M06-611-02 | 2011 | 121 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 102 | - | 1.0 | 3.3 | < 0.0001 | < 0.00001 | 0.98 | 0.080 | 0.011 | < 0.00002 | < 0.00001 | 8.0 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M06-621-01 | 2009 | 240 | 245 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 104 | 51 | 1.2 | 1.2 | < 0.0001 | < 0.00001 | 1.0 | 0.014 | 0.026 | < 0.00002 | < 0.00001 | 7.1 | 0.0000040 | 0.000028 | < 0.0005 | < 0.0005 |
| M06-623-01 | 2011 | 63 | 72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 97 | - | 1.1 | 2.0 | < 0.0001 | < 0.00001 | 1.1 | 0.088 | 0.014 | < 0.00002 | < 0.00001 | 8.5 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 |
| M06-625-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 107 | - | 1.3 | 1.6 | < 0.0001 | < 0.00001 | 0.93 | 0.069 | 0.010 | < 0.00002 | < 0.00001 | 8.5 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M06-625-02 | 2011 | 49 | 57 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 8.4 | 92 | - | 1.3 | 1.3 | < 0.0001 | < 0.00001 | 0.78 | 0.048 | 0.011 | < 0.00002 | < 0.00001 | 6.3 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| M06-628-01 | 2009 | 38 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 100 | 46 | 3.4 | 2.9 | < 0.0001 | < 0.00001 | 0.99 | 0.029 | 0.023 | < 0.00002 | < 0.00001 | 7.6 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 |
| M06-628-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 114 | 50 | 3.5 | 3.0 | < 0.0001 | < 0.00001 | 0.89 | 0.017 | 0.030 | < 0.00002 | < 0.00001 | 9.4 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 |
| M06-631-01 | 2011 | 17 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 123 | - | 1.1 | 7.3 | < 0.0001 | < 0.00001 | 0.64 | 0.039 | 0.018 | < 0.00002 | < 0.00001 | 8.3 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 |
| M07-645-01 | 2008 | 250.36 | 259.97 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 110 | 50 | 1.8 | 5.3 | < 0.0001 | < 0.00001 | 0.37 | 0.026 | 0.22 | < 0.00002 | < 0.00001 | 7.0 | 0.0000030 | 0.000071 | < 0.0005 | < 0.0005 |
| M07-649-01_2009 | 2009 | 300 | 305 | Greywacke/Siltstone | Tiriganiaq | UG | 8.4 | 101 | 55 | 1.1 | 0.60 | < 0.0001 | < 0.00001 | 0.81 | 0.033 | 0.025 | < 0.00002 | < 0.00001 | 8.5 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M07-660-01_2008 | 2008 | 80.84 | 84.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-660-01_2009 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 103 | 45 | 3.7 | 2.1 | < 0.0001 | < 0.00001 | 1.0 | 0.022 | 0.026 | < 0.00002 | < 0.00001 | 7.0 | 0.0000090 | 0.000039 | < 0.0005 | < 0.0005 |
| M07-660-02_2008 | 2008 | 55.86 | 59.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 118 | 56 | 1.5 | 2.0 | < 0.0001 | < 0.00001 | 1.3 | 0.0082 | 0.012 | < 0.00002 | < 0.00001 | 7.9 | 0.0000030 | 0.000040 | < 0.0005 | < 0.0005 |
| M07-660-02_2009 | 2009 | 22 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 104 | 45 | 3.7 | 2.0 | < 0.0001 | < 0.00001 | 0.99 | 0.020 | 0.029 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M07-663-01 | 2008 | 417.35 | 426.56 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 113 | 52 | 1.6 | 3.4 | < 0.0001 | < 0.00001 | 0.45 | 0.11 | 0.17 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.00015 | < 0.0005 | < 0.0005 |
| M07-663-02 | 2008 | 350.7 | 357.24 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 140 | 51 | 9.0 | 5.6 | < 0.0001 | < 0.00001 | 0.45 | 0.026 | 0.15 | < 0.00002 | < 0.00001 | 8.8 | < 0.000003 | 0.00014 | < 0.0005 | < 0.0005 |
| M07-663-03 | 2008 | 280.15 | 289.09 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 108 | 50 | 2.4 | 2.3 | < 0.0001 | < 0.00001 | 0.62 | 0.0092 | 0.090 | < 0.00002 | < 0.00001 | 8.4 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 |
| M07-672B-01 | 2009 | 323 | 328 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 103 | 50 | 2.3 | 1.0 | < 0.0001 | < 0.00001 | 1.0 | 0.024 | 0.025 | < 0.00002 | < 0.00001 | 6.8 | < 0.000003 | 0.000042 | < 0.0005 | < 0.0005 |
| M07-674-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 98 | - | 0.70 | 1.3 | < 0.0001 | < 0.00001 | 0.88 | 0.038 | 0.0087 | < 0.00002 | < 0.00001 | 8.7 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M07-678-02 | 2008 | 35.55 | 39.74 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-678-03 | 2008 | 25.1 | 29.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-685-01 | 2009 | 260 | 265 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 99 | 49 | 1.2 | 1.7 | < 0.0001 | < 0.00001 | 0.91 | 0.012 | 0.025 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 |
| M07-685-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 8.1 | 106 | 49 | 1.8 | 3.5 | < 0.0001 | < 0.00001 | 0.89 | 0.023 | 0.028 | < 0.00002 | < 0.00001 | 7.1 | 0.000017 | 0.00012 | < 0.0005 | < 0.0005 |
| M07-689-01 | 2011 | 11 | 21 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 93 | - | 2.4 | 2.0 | < 0.0001 | < 0.00001 | 1.1 | 0.047 | 0.012 | < 0.00002 | < 0.00001 | 5.5 | < 0.000003 | 0.000042 | < 0.0005 | < 0.0005 |
| M07-689-02 | 2011 | 42 | 52 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 89 | - | 2.4 | 1.1 | < 0.0001 | < 0.00001 | 1.7 | 0.050 | 0.013 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000026 | < 0.0005 | 0.00050 |
| M07-689-03 | 2011 | 88 | 97 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 134 | - | 3.6 | 2.3 | < 0.0001 | < 0.00001 | 0.59 | 0.012 | 0.015 | < 0.00002 | < 0.00001 | 9.0 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M07-691-01 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 94 | 48 | 1.6 | 0.80 | < 0.0001 | < 0.00001 | 0.94 | 0.020 | 0.027 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 |
| M07-704-01 | 2008 | 41.38 | 45.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 140 | 50 | 5.9 | 5.4 | < 0.0001 | 0.000010 | 0.87 | 0.12 | 0.089 | < 0.00002 | < 0.00001 | 8.4 | 0.0000080 | 0.000052 | < 0.0005 | < 0.0005 |
| M07-704-02 | 2008 | 25.09 | 25.28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 132 | 51 | 7.5 | 4.4 | < 0.0001 | < 0.00001 | 0.76 | 0.14 | 0.098 | < 0.00002 | < 0.00001 | 7.6 | 0.0000030 | 0.000065 | < 0.0005 | < 0.0005 |
| M07-705-01 | 2008 | 45.76 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-710-02 | 2008 | 26 | 29.71 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 110 | 51 | 3.4 | 2.4 | < 0.0001 | 0.000020 | 0.74 | 0.0067 | 0.074 | 0.000030 | 0.000020 | 12 | 0.000016 | 0.000053 | < 0.0005 | < 0.0005 |
| M07-711-01 | 2008 | 25.3 | 29.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-713-01 | 2008 | 80.2 | 85.51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 120 | 58 | 2.9 | 1.2 | < 0.0001 | < 0.00001 | 0.87 | 0.020 | 0.010 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000042 | < 0.0005 | < 0.0005 |
| M07-713-02 | 2008 | 45.23 | 49.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 93 | 42 | 3.4 | 1.2 | < 0.0001 | < 0.00001 | 1.2 | 0.0093 | 0.012 | < 0.00002 | < 0.00001 | 7.1 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 |
| M07-713-03 | 2008 | 15.26 | 19.48 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 99 | 44 | 3.4 | 2.5 | < 0.0001 | < 0.00001 | 1.6 | 0.033 | 0.026 | < 0.00002 | < 0.00001 | 6.8 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 |
| M07-719-01 | 2009 | 351.45 | 359.9 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M08-721-01 | 2009 | 381 | 384 | Greywacke/Siltstone | Tiriganiaq | UG | 8.3 | 131 | 68 | 2.8 | 0.50 | < 0.0001 | < 0.00001 | 0.19 | 0.00060 | 0.016 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M08-721-02 | 2009 | 388 | 393 | Greywacke/Siltstone | Tiriganiaq | UG | 8.3 | 112 | 55 | 2.0 | 0.40 | < 0.0001 | < 0.00001 | 1.1 | 0.11 | 0.027 | < 0.00002 | < 0.00001 | 8.9 | 0.0000070 | 0.000043 | < 0.0005 | < 0.0005 |
| M08-731W1-01 | 2009 | 330 | 335 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 69 | 31 | 2.1 | 0.70 | < 0.0001 | < 0.00001 | 0.97 | 0.0013 | 0.035 | < 0.00002 | < 0.00001 | 6.0 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M03-499-02 | 2009 | 270 | 275 | Greywacke/Siltstone | Tiriganiaq | UG | 0.010 | 11 | 0.0010 | 2.0 | 0.00094 | 0.00032 | 4.4 | < 0.0001 | 0.000060 | 0.0047 | < 0.001 | < 0.00001 | 0.041 | 0.00090 | < 0.00002 | 0.000071 | 0.0019 | 0.0015 | 0.000015 | 0.0010 |
| M03-508-01 | 2011 | 44.5 | 53 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0040 | 7.6 | < 0.001 | 1.1 | 0.00077 | 0.00040 | 5.6 | 0.00030 | 0.000020 | 0.0049 | < 0.001 | < 0.00001 | 0.029 | < 0.0001 | < 0.00002 | 0.00015 | 0.0041 | 0.00023 | 0.0000040 | < 0.001 |
| M03-513-01 | 2008 | 19.5 | 24.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M04-520-01 | 2009 | 405 | 410 | Greywacke/Siltstone | Tiriganiaq | UG | 0.020 | 10 | 0.0010 | 1.6 | 0.00074 | 0.00050 | 4.9 | < 0.0001 | 0.000020 | 0.0041 | < 0.001 | < 0.00001 | 0.030 | 0.0013 | < 0.00002 | 0.000043 | 0.0030 | 0.0011 | 0.000013 | < 0.001 |
| M04-520-02 | 2009 | 411 | 416 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 16 | < 0.001 | 0.46 | 0.00017 | 0.00013 | 4.3 | < 0.0001 | 0.000020 | 0.0036 | < 0.001 | < 0.00001 | 0.070 | < 0.0001 | < 0.00002 | 0.0000070 | 0.0062 | 0.0011 | 0.0000030 | < 0.001 |
| M04-527-01 | 2008 | 270 | 279.9 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 5.0 | 0.0010 | 1.8 | 0.0024 | 0.00045 | 10 | 0.00030 | 0.000030 | 0.0033 | < 0.001 | 0.000050 | 0.052 | 0.00030 | < 0.00002 | 0.00016 | 0.0035 | 0.00056 | 0.000015 | 0.0030 |
| M04-533-01 | 2008 | 380.18 | 389.64 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 14 | 0.0020 | 2.0 | 0.00096 | 0.00039 | 7.2 | 0.00030 | 0.000080 | 0.0027 | < 0.001 | 0.000070 | 0.13 | 0.00020 | < 0.00002 | 0.000072 | 0.0023 | 0.0019 | 0.000015 | 0.0060 |
| M04-533-02 | 2008 | 296.9 | 307.24 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 8.6 | < 0.001 | 0.59 | 0.00076 | 0.00058 | 8.4 | 0.00020 | 0.000020 | 0.0054 | < 0.001 | 0.000040 | 0.037 | 0.00060 | < 0.00002 | 0.00013 | 0.0067 | 0.00078 | 0.000018 | 0.0040 |
| M05-559A-02 | 2008 | 180 | 189.99 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 7.9 | 0.0010 | 1.0 | 0.00097 | 0.00043 | 8.0 | 0.00020 | 0.000040 | 0.0041 | < 0.001 | 0.000080 | 0.047 | 0.00020 | < 0.00002 | 0.000074 | 0.0039 | 0.00071 | 0.000012 | 0.0050 |
| M05-571A-01 | 2008 | 435.4 | 444.96 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M05-571A-02 | 2008 | 335.3 | 344.4 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 7.4 | 0.0010 | 1.9 | 0.00060 | 0.00089 | 8.9 | 0.00040 | 0.000020 | 0.0037 | < 0.001 | 0.000040 | 0.050 | 0.00040 | < 0.00002 | 0.000053 | 0.0014 | 0.00094 | 0.000024 | 0.0060 |
| M06-577-01 | 2011 | 7 | 15.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 9.7 | < 0.001 | 1.7 | 0.00072 | 0.00030 | 5.1 | 0.00050 | 0.00010 | 0.0037 | < 0.001 | < 0.00001 | 0.029 | 0.00040 | < 0.00002 | 0.00014 | 0.0026 | 0.00059 | 0.000010 | 0.0010 |
| M06-577-02 | 2011 | 71 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 11 | < 0.001 | 1.8 | 0.00060 | 0.00048 | 6.1 | 0.00040 | 0.000070 | 0.0057 | < 0.001 | < 0.00001 | 0.036 | 0.00020 | < 0.00002 | 0.000072 | 0.0021 | 0.00049 | 0.000010 | < 0.001 |
| M06-577-03 | 2011 | 105 | 114 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0050 | 11 | < 0.001 | 2.5 | 0.00090 | 0.00075 | 4.8 | 0.00060 | 0.000080 | 0.0045 | < 0.001 | < 0.00001 | 0.029 | 0.00050 | < 0.00002 | 0.000056 | 0.0016 | 0.00052 | 0.0000050 | < 0.001 |
| M06-591-01 | 2011 | 20.5 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0090 | 11 | < 0.001 | 2.2 | 0.00087 | 0.00073 | 5.7 | 0.00070 | 0.000070 | 0.0046 | < 0.001 | < 0.00001 | 0.032 | 0.00060 | < 0.00002 | 0.000081 | 0.0016 | 0.00074 | 0.000010 | < 0.001 |
| M06-592-01 | 2011 | 26 | 34.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.019 | 11 | < 0.001 | 1.2 | 0.00060 | 0.00071 | 5.0 | 0.00040 | 0.000090 | 0.0052 | < 0.001 | < 0.00001 | 0.025 | 0.00030 | < 0.00002 | 0.000072 | 0.0029 | 0.00034 | 0.000017 | < 0.001 |
| M06-593-01 | 2011 | 27 | 36 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0060 | 5.1 | < 0.001 | 1.6 | 0.00067 | 0.00028 | 6.8 | 0.00020 | 0.00010 | 0.0030 | < 0.001 | 0.000010 | 0.040 | 0.00030 | 0.000030 | 0.00034 | 0.0040 | 0.00026 | 0.0000070 | < 0.001 |
| M06-601A-01 | 2009 | 266 | 270 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 6.9 | < 0.001 | 0.77 | 0.00062 | 0.000070 | 6.1 | < 0.0001 | 0.000020 | 0.0027 | < 0.001 | < 0.00001 | 0.076 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0024 | 0.0015 | 0.0000040 | 0.0010 |
| M06-604-01 | 2008 | 335.56 | 344.42 | Greywacke/Siltstone | Tiriganiaq | UG | 0.010 | 6.1 | 0.0010 | 1.3 | 0.00050 | 0.00094 | 12 | 0.00030 | 0.000080 | 0.0044 | < 0.001 | 0.000060 | 0.054 | 0.00070 | < 0.00002 | 0.000069 | 0.0023 | 0.00091 | 0.000029 | 0.0030 |
| M06-604-02 | 2008 | 285.56 | 294.76 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 7.2 | < 0.001 | 1.6 | 0.00075 | 0.00020 | 8.0 | 0.00010 | 0.000030 | 0.0035 | < 0.001 | 0.000050 | 0.069 | 0.00010 | < 0.00002 | 0.000023 | 0.00037 | 0.00070 | 0.000012 | 0.019 |
| M06-604-03 | 2008 | 245 | 255 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M06-607-01 | 2009 | 175 | 180 | Greywacke/Siltstone | Tiriganiaq | UG | 0.020 | 9.9 | 0.0010 | 1.4 | 0.00049 | 0.00052 | 5.1 | < 0.0001 | 0.000060 | 0.0041 | < 0.001 | < 0.00001 | 0.028 | 0.0013 | < 0.00002 | 0.000036 | 0.0019 | 0.00084 | 0.000034 | < 0.001 |
| M06-608-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.013 | 8.5 | < 0.001 | 1.2 | 0.00065 | 0.00030 | 5.3 | 0.00030 | 0.00017 | 0.0035 | < 0.001 | < 0.00001 | 0.029 | 0.00020 | < 0.00002 | 0.000092 | 0.0035 | 0.00039 | 0.0000090 | < 0.001 |
| M06-608-02 | 2011 | 75.5 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.011 | 9.3 | < 0.001 | 1.3 | 0.00067 | 0.00025 | 5.2 | 0.00020 | 0.000090 | 0.0039 | < 0.001 | < 0.00001 | 0.025 | 0.00040 | < 0.00002 | 0.000085 | 0.0031 | 0.00037 | 0.000021 | < 0.001 |
| M06-611-01 | 2011 | 28 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.015 | 8.7 | < 0.001 | 1.6 | 0.00065 | 0.00035 | 6.1 | 0.00030 | 0.000090 | 0.0029 | < 0.001 | < 0.00001 | 0.030 | 0.00060 | < 0.00002 | 0.00018 | 0.0036 | 0.00050 | 0.000031 | < 0.001 |
| M06-611-02 | 2011 | 121 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0070 | 11 | < 0.001 | 1.5 | 0.00058 | 0.00064 | 5.2 | 0.00020 | 0.000060 | 0.0043 | < 0.001 | < 0.00001 | 0.030 | 0.00020 | < 0.00002 | 0.00011 | 0.0033 | 0.0013 | 0.000011 | < 0.001 |
| M06-621-01 | 2009 | 240 | 245 | Greywacke/Siltstone | Tiriganiaq | UG | 0.010 | 10 | 0.0010 | 1.6 | 0.00059 | 0.00043 | 6.3 | < 0.0001 | 0.000030 | 0.0059 | < 0.001 | < 0.00001 | 0.030 | 0.0010 | < 0.00002 | 0.000080 | 0.0028 | 0.00076 | 0.000017 | 0.0010 |
| M06-623-01 | 2011 | 63 | 72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.015 | 11 | < 0.001 | 1.3 | 0.00050 | 0.00056 | 5.4 | 0.00030 | 0.000090 | 0.0027 | < 0.001 | < 0.00001 | 0.036 | 0.00040 | < 0.00002 | 0.00016 | 0.0023 | 0.0014 | 0.0000090 | < 0.001 |
| M06-625-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0050 | 11 | < 0.001 | 1.9 | 0.00068 | 0.00048 | 6.1 | 0.00020 | 0.000090 | 0.0029 | < 0.001 | < 0.00001 | 0.030 | 0.00020 | < 0.00002 | 0.00017 | 0.0030 | 0.00048 | 0.000013 | < 0.001 |
| M06-625-02 | 2011 | 49 | 57 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.012 | 9.3 | < 0.001 | 1.7 | 0.00065 | 0.00044 | 5.7 | 0.00020 | 0.000090 | 0.0025 | < 0.001 | < 0.00001 | 0.029 | 0.00050 | < 0.00002 | 0.000044 | 0.0025 | 0.0011 | 0.000014 | < 0.001 |
| M06-628-01 | 2009 | 38 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 10 | 0.0010 | 1.3 | 0.00076 | 0.00092 | 6.6 | < 0.0001 | 0.000050 | 0.0057 | < 0.001 | < 0.00001 | 0.042 | 0.00090 | < 0.00002 | 0.000062 | 0.0021 | 0.00095 | 0.000020 | < 0.001 |
| M06-628-02 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 10.0 | 0.0010 | 1.9 | 0.0014 | 0.00046 | 5.8 | < 0.0001 | 0.000020 | 0.0044 | < 0.001 | < 0.00001 | 0.067 | 0.00040 | < 0.00002 | 0.000058 | 0.0015 | 0.00067 | 0.000012 | 0.0010 |
| M06-631-01 | 2011 | 17 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0040 | 9.9 | < 0.001 | 2.0 | 0.00074 | 0.0011 | 5.3 | 0.00030 | 0.000060 | 0.0038 | < 0.001 | < 0.00001 | 0.027 | 0.00030 | < 0.00002 | 0.000050 | 0.0013 | 0.0012 | 0.0000090 | < 0.001 |
| M07-645-01 | 2008 | 250.36 | 259.97 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 7.4 | < 0.001 | 1.4 | 0.00055 | 0.00050 | 11 | 0.00040 | 0.000040 | 0.0055 | < 0.001 | 0.000050 | 0.055 | 0.00040 | < 0.00002 | 0.000078 | 0.0024 | 0.00066 | 0.000029 | 0.0030 |
| M07-649-01_2009 | 2009 | 300 | 305 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 11 | < 0.001 | 2.0 | 0.00060 | 0.00030 | 4.6 | < 0.0001 | < 0.00002 | 0.0025 | < 0.001 | < 0.00001 | 0.032 | 0.00060 | < 0.00002 | 0.000019 | 0.0013 | 0.00090 | 0.000011 | 0.0010 |
| M07-660-01_2008 | 2008 | 80.84 | 84.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-660-01_2009 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.030 | 9.6 | < 0.001 | 1.2 | 0.00069 | 0.00049 | 8.1 | < 0.0001 | 0.000040 | 0.0040 | < 0.001 | < 0.00001 | 0.034 | 0.0014 | < 0.00002 | 0.00012 | 0.0033 | 0.00025 | 0.000040 | 0.0010 |
| M07-660-02_2008 | 2008 | 55.86 | 59.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 9.4 | < 0.001 | 0.81 | 0.00052 | 0.00050 | 3.4 | 0.00030 | < 0.00002 | 0.0046 | < 0.001 | 0.000030 | 0.039 | 0.00020 | < 0.00002 | 0.00013 | 0.0017 | 0.00066 | 0.0000070 | < 0.001 |
| M07-660-02_2009 | 2009 | 22 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.030 | 9.1 | < 0.001 | 1.3 | 0.00087 | 0.00046 | 8.1 | 0.00010 | 0.000050 | 0.0050 | < 0.001 | < 0.00001 | 0.034 | 0.00080 | < 0.00002 | 0.000071 | 0.0027 | 0.00033 | 0.000035 | < 0.001 |
| M07-663-01 | 2008 | 417.35 | 426.56 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 8.5 | 0.0010 | 1.5 | 0.00081 | 0.00057 | 8.5 | 0.00090 | 0.000070 | 0.0043 | < 0.001 | 0.000050 | 0.053 | 0.00030 | < 0.00002 | 0.000056 | 0.0020 | 0.0012 | 0.000020 | 0.0070 |
| M07-663-02 | 2008 | 350.7 | 357.24 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 10 | 0.0010 | 2.2 | 0.00079 | 0.00060 | 12 | 0.0010 | 0.000050 | 0.0029 | < 0.001 | 0.000070 | 0.059 | 0.00030 | < 0.00002 | 0.000051 | 0.0014 | 0.0019 | 0.000014 | 0.0080 |
| M07-663-03 | 2008 | 280.15 | 289.09 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 7.7 | 0.0010 | 2.1 | 0.00099 | 0.00044 | 6.9 | 0.00040 | 0.000060 | 0.0036 | < 0.001 | 0.000040 | 0.043 | 0.00020 | < 0.00002 | 0.000039 | 0.0016 | 0.00081 | 0.000011 | 0.0070 |
| M07-672B-01 | 2009 | 323 | 328 | Greywacke/Siltstone | Tiriganiaq | UG | 0.030 | 12 | < 0.001 | 1.4 | 0.00064 | 0.00085 | 5.8 | < 0.0001 | 0.000040 | 0.0048 | < 0.001 | < 0.00001 | 0.022 | 0.0020 | < 0.00002 | 0.000030 | 0.0019 | 0.0011 | 0.000027 | < 0.001 |
| M07-674-01 | 2011 | 27 | 35.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0030 | 9.7 | < 0.001 | 2.0 | 0.00080 | 0.00039 | 6.0 | 0.00030 | 0.000070 | 0.0048 | < 0.001 | 0.000030 | 0.036 | < 0.0001 | < 0.00002 | 0.000062 | 0.0023 | 0.00063 | 0.0000070 | < 0.001 |
| M07-678-02 | 2008 | 35.55 | 39.74 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-678-03 | 2008 | 25.1 | 29.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-685-01 | 2009 | 260 | 265 | Greywacke/Siltstone | Tiriganiaq | UG | 0.010 | 8.8 | 0.0010 | 1.6 | 0.00060 | 0.00027 | 7.0 | < 0.0001 | 0.000030 | 0.0047 | < 0.001 | < 0.00001 | 0.028 | 0.00080 | < 0.00002 | 0.00017 | 0.0032 | 0.00061 | 0.000023 | < 0.001 |
| M07-685-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 0.020 | 11 | < 0.001 | 1.7 | 0.00066 | 0.00060 | 6.2 | 0.00050 | 0.000070 | 0.0055 | < 0.001 | < 0.00001 | 0.026 | 0.0015 | < 0.00002 | 0.000045 | 0.0021 | 0.00094 | 0.000035 | 0.0010 |
| M07-689-01 | 2011 | 11 | 21 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.079 | 8.7 | < 0.001 | 0.74 | 0.0011 | 0.00070 | 5.8 | 0.00030 | 0.00014 | 0.0040 | < 0.001 | < 0.00001 | 0.020 | 0.00090 | < 0.00002 | 0.000098 | 0.0044 | 0.00035 | 0.000025 | < 0.001 |
| M07-689-02 | 2011 | 42 | 52 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.023 | 13 | < 0.001 | 0.50 | 0.00035 | 0.00058 | 5.9 | 0.00020 | 0.00011 | 0.0041 | < 0.001 | < 0.00001 | 0.021 | 0.00060 | < 0.00002 | 0.000089 | 0.0058 | 0.00040 | 0.000015 | < 0.001 |
| M07-689-03 | 2011 | 88 | 97 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0060 | 11 | 0.0010 | 2.6 | 0.00057 | 0.00073 | 6.2 | 0.00020 | 0.000030 | 0.0041 | < 0.001 | < 0.00001 | 0.046 | 0.00020 | < 0.00002 | 0.00025 | 0.00095 | 0.00070 | 0.000011 | < 0.001 |
| M07-691-01 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 0.040 | 10 | < 0.001 | 1.6 | 0.00075 | 0.00047 | 6.4 | < 0.0001 | 0.000090 | 0.0048 | < 0.001 | < 0.00001 | 0.023 | 0.0031 | < 0.00002 | 0.000042 | 0.0024 | 0.00072 | 0.000064 | < 0.001 |
| M07-704-01 | 2008 | 41.38 | 45.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 11 | 0.0020 | 1.5 | 0.0020 | 0.0029 | 10.0 | 0.00080 | 0.000050 | 0.0042 | < 0.001 | 0.000070 | 0.049 | 0.00040 | < 0.00002 | 0.00016 | 0.0022 | 0.00064 | 0.000023 | 0.0060 |
| M07-704-02 | 2008 | 25.09 | 25.28 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 11 | 0.0020 | 2.1 | 0.0011 | 0.00098 | 11 | 0.00060 | 0.000030 | 0.0044 | < 0.001 | 0.000030 | 0.041 | 0.00070 | < 0.00002 | 0.00015 | 0.0026 | 0.00069 | 0.000022 | 0.0060 |
| M07-705-01 | 2008 | 45.76 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-710-02 | 2008 | 26 | 29.71 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 7.3 | < 0.001 | 1.3 | 0.0017 | 0.00041 | 5.9 | 0.00030 | 0.000090 | 0.0017 | < 0.001 | 0.00013 | 0.16 | 0.00010 | < 0.00002 | 0.000074 | 0.00020 | 0.00067 | 0.000028 | 0.010 |
| M07-711-01 | 2008 | 25.3 | 29.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M07-713-01 | 2008 | 80.2 | 85.51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 11 | 0.0010 | 2.4 | 0.0011 | 0.00035 | 5.3 | 0.00040 | 0.000040 | 0.0019 | < 0.001 | 0.000030 | 0.044 | 0.00020 | < 0.00002 | 0.00024 | 0.00052 | 0.00080 | 0.0000070 | < 0.001 |
| M07-713-02 | 2008 | 45.23 | 49.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 11 | < 0.001 | 1.4 | 0.00050 | 0.00050 | 4.7 | 0.00020 | 0.00076 | 0.0044 | < 0.001 | 0.000030 | 0.028 | 0.00050 | < 0.00002 | 0.00011 | 0.0017 | 0.00050 | 0.0000090 | < 0.001 |
| M07-713-03 | 2008 | 15.26 | 19.48 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 9.1 | 0.0010 | 0.97 | 0.00072 | 0.00059 | 7.6 | < 0.0001 | 0.000050 | 0.0020 | < 0.001 | < 0.00001 | 0.038 | 0.00090 | < 0.00002 | 0.00013 | 0.0034 | 0.00047 | 0.000036 | < 0.001 |
| M07-719-01 | 2009 | 351.45 | 359.9 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M08-721-01 | 2009 | 381 | 384 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 1.0 | < 0.001 | 8.3 | 0.00083 | 0.00010 | 4.4 | < 0.0001 | 0.000020 | 0.0026 | < 0.001 | < 0.00001 | 0.12 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00065 | 0.00038 | 0.0000040 | 0.0010 |
| M08-721-02 | 2009 | 388 | 393 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 11 | < 0.001 | 2.2 | 0.00062 | 0.00042 | 6.2 | < 0.0001 | 0.00046 | 0.0074 | < 0.001 | < 0.00001 | 0.038 | 0.00050 | < 0.00002 | 0.000060 | 0.0025 | 0.0047 | 0.000016 | 0.0010 |
| M08-731W1-01 | 2009 | 330 | 335 | Greywacke/Siltstone | Tiriganiaq | UG | 0.040 | 3.9 | < 0.001 | 0.75 | 0.00084 | 0.00015 | 6.5 | < 0.0001 | 0.000030 | 0.0029 | < 0.001 | < 0.00001 | 0.061 | 0.0012 | < 0.00002 | 0.0000010 | 0.0062 | 0.0030 | 0.0000050 | 0.0010 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M08-731W1-02 | 2009 | 350 | 355 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 111 | 54 | 1.6 | 0.90 | < 0.0001 | < 0.00001 | 1.2 | 0.018 | 0.023 | < 0.00002 | < 0.00001 | 8.7 | 0.0000030 | 0.000030 | < 0.0005 | < 0.0005 |
| M08-754-01 | 2009 | 360 | 365 | Greywacke/Siltstone | Tiriganiaq | UG | 8.1 | 96 | 49 | 1.1 | 0.50 | < 0.0001 | < 0.00001 | 1.3 | 0.047 | 0.034 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M08-761-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 104 | - | 1.1 | 2.3 | < 0.0001 | < 0.00001 | 0.82 | 0.057 | 0.0097 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M08-761-02 | 2011 | 91 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.6 | 98 | - | 1.1 | 2.8 | < 0.0001 | < 0.00001 | 0.92 | 0.047 | 0.0081 | < 0.00002 | < 0.00001 | 7.6 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M08-763-01 | 2011 | 55.5 | 64 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.5 | 114 | - | 1.2 | 1.7 | < 0.0001 | < 0.00001 | 0.89 | 0.092 | 0.0089 | < 0.00002 | < 0.00001 | 9.3 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 |
| M08-765-01 | 2011 | 25 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 8.0 | 102 | - | 2.2 | 2.1 | < 0.0001 | < 0.00001 | 0.81 | 0.085 | 0.0088 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 |
| M08-769-01 | 2009 | 451 | 456 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 112 | 59 | 1.1 | 1.2 | < 0.0001 | < 0.00001 | 0.89 | 0.0047 | 0.016 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000049 | < 0.0005 | < 0.0005 |
| M08-783-01 | 2011 | 38 | 47 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 110 | - | 3.2 | 0.90 | < 0.0001 | 0.000070 | 0.91 | 0.28 | 0.012 | < 0.00002 | 0.000010 | 7.9 | 0.0000030 | 0.000041 | < 0.0005 | < 0.0005 |
| M09-823-01 | 2009 | 320 | 325 | Greywacke/Siltstone | Tiriganiaq | UG | 8.3 | 88 | 8.0 | 1.9 | 0.60 | < 0.0001 | < 0.00001 | 1.1 | 0.0062 | 0.025 | < 0.00002 | < 0.00001 | 3.5 | < 0.000003 | 0.00016 | < 0.0005 | < 0.0005 |
| M09-823-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 99 | 45 | 3.8 | 0.70 | < 0.0001 | < 0.00001 | 1.1 | 0.017 | 0.021 | < 0.00002 | < 0.00001 | 6.0 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M10-879-01 | 2011 | 38 | 46.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 8.3 | 101 | - | 1.0 | 1.8 | < 0.0001 | 0.000020 | 0.78 | 0.046 | 0.0076 | < 0.00002 | < 0.00001 | 6.7 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M10-887-01 | 2011 | 17 | 24.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 8.1 | 115 | - | 1.9 | 1.6 | < 0.0001 | 0.000010 | 0.79 | 0.039 | 0.014 | < 0.00002 | < 0.00001 | 7.9 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 |
| M10-892-01 | 2011 | 23 | 31.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 128 | - | 3.8 | 3.8 | < 0.0001 | 0.000090 | 0.81 | 0.089 | 0.016 | < 0.00002 | < 0.00001 | 7.6 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M10-999-01 | 2011 | 13 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 29 | - | 2.4 | 0.90 | < 0.0001 | 0.000020 | 0.93 | 0.072 | 0.021 | < 0.00002 | < 0.00001 | 6.0 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M10-999-02 | 2011 | 121.5 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 7.9 | 112 | - | 3.8 | 2.4 | < 0.0001 | 0.000010 | 0.92 | 0.013 | 0.015 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 104 | 45 | 0.80 | 4.2 | < 0.0001 | < 0.00001 | 0.83 | 0.019 | 0.17 | < 0.00002 | < 0.00001 | 8.5 | < 0.000003 | 0.000050 | < 0.0005 | < 0.0005 |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 104 | 45 | 0.80 | 4.2 | < 0.0001 | < 0.00001 | 0.83 | 0.019 | 0.17 | < 0.00002 | < 0.00001 | 8.5 | < 0.000003 | 0.000050 | < 0.0005 | < 0.0005 |
| M95-17-02 | 2008 | 30.39 | 34.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 101 | 44 | 0.60 | 5.7 | < 0.0001 | < 0.00001 | 0.60 | 0.032 | 0.17 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000057 | < 0.0005 | < 0.0005 |
| M95-25-01 | 2011 | 9.5 | 18 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 47 | - | 0.70 | 1.6 | < 0.0001 | < 0.00001 | 0.95 | 0.013 | 0.0090 | < 0.00002 | < 0.00001 | 8.6 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 |
| M95-25-02 | 2011 | 34.5 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 85 | - | 1.0 | 1.8 | < 0.0001 | < 0.00001 | 0.89 | 0.010 | 0.0083 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M96-03-01 | 2011 | 10 | 19 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 97 | - | 0.40 | 1.3 | < 0.0001 | < 0.00001 | 0.91 | 0.061 | 0.0099 | < 0.00002 | < 0.00001 | 8.8 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M96-03-02 | 2011 | 45 | 53.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 104 | - | 0.20 | 7.3 | < 0.0001 | < 0.00001 | 0.88 | 0.014 | 0.0072 | < 0.00002 | < 0.00001 | 8.7 | < 0.000003 | 0.000024 | < 0.0005 | 0.00060 |
| M96-19-01 | 2011 | 20 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 106 | - | 0.60 | 2.4 | < 0.0001 | < 0.00001 | 0.73 | 0.12 | 0.0093 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000050 | < 0.0005 | 0.00090 |
| M96-19-02 | 2011 | 71.5 | 79 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 105 | - | 0.50 | 6.2 | < 0.0001 | < 0.00001 | 0.85 | 0.13 | 0.0086 | < 0.00002 | < 0.00001 | 9.2 | < 0.000003 | 0.000041 | < 0.0005 | 0.00050 |
| M96-37-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 88 | - | 0.60 | 3.5 | < 0.0001 | < 0.00001 | 1.1 | 0.016 | 0.0090 | < 0.00002 | < 0.00001 | 7.9 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M96-37-02 | 2011 | 85.5 | 94 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 112 | - | 0.50 | 6.0 | < 0.0001 | < 0.00001 | 0.73 | 0.058 | 0.0072 | < 0.00002 | < 0.00001 | 9.0 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M96-37-03 | 2011 | 129 | 138 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 112 | - | 0.40 | 11 | < 0.0001 | < 0.00001 | 0.84 | 0.031 | 0.0067 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 |
| M96-40-01 | 2011 | 14 | 23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 96 | - | 0.30 | 1.0 | < 0.0001 | < 0.00001 | 1.0 | 0.38 | 0.018 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 |
| M96-40-02 | 2011 | 62 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.6 | 91 | - | 0.30 | 1.1 | < 0.0001 | < 0.00001 | 0.95 | 0.088 | 0.010 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 |
| M96-4-01 | 2011 | 10 | 20 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 114 | - | 0.70 | 4.9 | < 0.0001 | < 0.00001 | 0.84 | 0.019 | 0.0083 | < 0.00002 | < 0.00001 | 9.8 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| M96-54-01 | 2011 | 19 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 108 | - | 0.40 | 2.3 | < 0.0001 | 0.000050 | 0.86 | 0.055 | 0.0072 | < 0.00002 | < 0.00001 | 9.3 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 |
| M96-54-02 | 2011 | 57 | 66 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 8.1 | 104 | - | 0.50 | 1.8 | < 0.0001 | 0.000020 | 0.96 | 0.041 | 0.0088 | < 0.00002 | < 0.00001 | 8.6 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| M96-65-01 | 2011 | 36 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 103 | - | 0.70 | 2.2 | < 0.0001 | 0.000010 | 0.83 | 0.080 | 0.0090 | < 0.00002 | < 0.00001 | 8.8 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| M96-7-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 103 | - | 0.60 | 1.2 | < 0.0001 | < 0.00001 | 0.75 | 0.091 | 0.012 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 |
| M96-7-02 | 2011 | 42 | 51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 109 | - | 0.90 | 2.5 | < 0.0001 | < 0.00001 | 0.78 | 0.070 | 0.0097 | < 0.00002 | < 0.00001 | 8.9 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M96-77-01 | 2011 | 41 | 49.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 105 | - | 0.50 | 6.1 | < 0.0001 | < 0.00001 | 0.87 | 0.081 | 0.015 | < 0.00002 | < 0.00001 | 8.7 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 |
| M96-77-02 | 2011 | 140 | 149 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 116 | - | 0.70 | 2.0 | < 0.0001 | < 0.00001 | 0.85 | 0.045 | 0.0093 | < 0.00002 | < 0.00001 | 9.2 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M97-121-01 | 2011 | 23 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.6 | 94 | - | 0.40 | 2.1 | < 0.0001 | 0.000050 | 0.99 | 0.015 | 0.0080 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M97-135-03 | 2011 | 111 | 120 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 95 | - | 0.40 | 4.6 | < 0.0001 | < 0.00001 | 0.92 | 0.069 | 0.0070 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 |
| M97-149-02 | 2011 | 107.5 | 116 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 86 | - | 0.50 | 2.5 | < 0.0001 | < 0.00001 | 1.1 | 0.016 | 0.0077 | < 0.00002 | < 0.00001 | 6.2 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 |
| M97-94A-01 | 2011 | 75 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 104 | - | 1.1 | 2.7 | < 0.0001 | < 0.00001 | 0.77 | 0.064 | 0.012 | < 0.00002 | < 0.00001 | 8.4 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 |
| M97-94A-02 | 2011 | 137 | 146 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 98 | - | 0.40 | 1.8 | < 0.0001 | < 0.00001 | 0.91 | 0.077 | 0.0080 | < 0.00002 | < 0.00001 | 8.3 | < 0.000003 | 0.000050 | < 0.0005 | 0.00060 |
| M97-95-01 | 2011 | 51 | 59.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.6 | 89 | - | 0.50 | 2.1 | < 0.0001 | < 0.00001 | 0.90 | 0.019 | 0.0095 | < 0.00002 | < 0.00001 | 6.7 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| M97-95-02 | 2011 | 102.5 | 111 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 107 | - | 0.40 | 1.1 | < 0.0001 | < 0.00001 | 1.0 | 0.035 | 0.0089 | < 0.00002 | < 0.00001 | 8.6 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M98-194-01 | 2008 | 70 | 74.63 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 109 | 54 | 1.2 | 3.2 | < 0.0001 | < 0.00001 | 0.95 | 0.070 | 0.010 | < 0.00002 | < 0.00001 | 13 | 0.0000040 | 0.000067 | < 0.0005 | < 0.0005 |
| M98-194-02 | 2008 | 55.45 | 58.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 104 | 51 | 1.3 | 1.6 | < 0.0001 | < 0.00001 | 0.81 | 0.011 | 0.0091 | < 0.00002 | < 0.00001 | 13 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 |
| M98-194-03 | 2008 | 26.2 | 29.38 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.5 | 149 | 79 | 1.1 | 3.2 | < 0.0001 | < 0.00001 | 1.1 | 0.15 | 0.011 | < 0.00002 | < 0.00001 | 8.7 | < 0.000003 | 0.000047 | < 0.0005 | < 0.0005 |
| M98-194-04 | 2009 | 34 | 39 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 104 | 52 | 1.6 | 2.5 | < 0.0001 | < 0.00001 | 0.88 | 0.043 | 0.038 | < 0.00002 | < 0.00001 | 8.8 | < 0.000003 | 0.000052 | < 0.0005 | 0.00060 |
| M98-201-01 | 2011 | 16 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 88 | - | 0.80 | 2.2 | < 0.0001 | < 0.00001 | 1.0 | 0.044 | 0.034 | < 0.00002 | < 0.00001 | 6.6 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 |
| M98-201-03 | 2011 | 90 | 98 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 137 | - | 1.2 | 20 | < 0.0001 | < 0.00001 | 0.65 | 0.017 | 0.011 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000054 | < 0.0005 | < 0.0005 |
| M98-201-04 | 2011 | 166 | 175 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 82 | - | 0.40 | 1.0 | < 0.0001 | < 0.00001 | 1.0 | 0.035 | 0.010 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M98-208-01 | 2011 | 58 | 67 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 89 | - | 0.60 | 2.3 | < 0.0001 | < 0.00001 | 0.98 | 0.026 | 0.022 | < 0.00002 | < 0.00001 | 7.0 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| M98-209-01 | 2011 | 14 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 98 | - | 1.0 | 3.0 | < 0.0001 | < 0.00001 | 1.2 | 0.037 | 0.014 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M98-257-01 | 2009 | 291 | 296 | Greywacke/Siltstone | Tiriganiaq | UG | 8.4 | 99 | 51 | 0.60 | 0.60 | < 0.0001 | 0.000010 | 1.0 | 0.013 | 0.016 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| M98-265-01 | 2011 | 67 | 76 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.8 | 92 | - | 0.80 | 3.4 | < 0.0001 | < 0.00001 | 0.73 | 0.068 | 0.0087 | < 0.00002 | < 0.00001 | 8.9 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 112 | 55 | 1.0 | 1.4 | < 0.0001 | < 0.00001 | 0.98 | 0.026 | 0.028 | < 0.00002 | < 0.00001 | 8.0 | 0.0000090 | 0.000047 | < 0.0005 | < 0.0005 |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 112 | 55 | 1.0 | 1.4 | < 0.0001 | < 0.00001 | 0.98 | 0.026 | 0.028 | < 0.00002 | < 0.00001 | 8.0 | 0.0000090 | 0.000047 | < 0.0005 | < 0.0005 |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-269-02 | 2008 | 45.5 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-269-03 | 2008 | 20 | 24.24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 90 | 38 | 0.60 | 5.0 | < 0.0001 | < 0.00001 | 1.3 | 0.011 | 0.0069 | < 0.00002 | < 0.00001 | 8.4 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 |
| M98-270-01 | 2011 | 92 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 8.1 | 82 | - | 0.50 | 2.1 | < 0.0001 | < 0.00001 | 0.89 | 0.048 | 0.0074 | < 0.00002 | < 0.00001 | 6.7 | < 0.000003 | 0.000025 | < 0.0005 | < 0.0005 |
| M98-297-02 | 2008 | 75.8 | 79.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-297-03 | 2008 | 55.16 | 59.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 98 | 45 | 0.80 | 3.2 | < 0.0001 | < 0.00001 | 1.1 | 0.033 | 0.019 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M08-731W1-02 | 2009 | 350 | 355 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 11 | < 0.001 | 2.4 | 0.00073 | 0.00024 | 6.8 | < 0.0001 | 0.000020 | 0.0061 | < 0.001 | < 0.00001 | 0.040 | 0.00050 | < 0.00002 | 0.000063 | 0.0022 | 0.00091 | 0.000020 | 0.0010 |
| M08-754-01 | 2009 | 360 | 365 | Greywacke/Siltstone | Tiriganiaq | UG | 0.020 | 10 | < 0.001 | 1.5 | 0.00030 | 0.00033 | 6.4 | < 0.0001 | 0.000050 | 0.0079 | < 0.001 | < 0.00001 | 0.036 | 0.00070 | < 0.00002 | 0.000037 | 0.0029 | 0.0010 | 0.000021 | < 0.001 |
| M08-761-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0070 | 8.9 | < 0.001 | 1.8 | 0.00055 | 0.00032 | 7.5 | 0.00080 | 0.000070 | 0.0039 | < 0.001 | < 0.00001 | 0.028 | 0.00010 | < 0.00002 | 0.00019 | 0.0034 | 0.00045 | 0.000014 | < 0.001 |
| M08-761-02 | 2011 | 91 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 11 | < 0.001 | 1.6 | 0.00061 | 0.00024 | 6.3 | 0.00020 | 0.000080 | 0.0038 | < 0.001 | < 0.00001 | 0.029 | 0.00040 | < 0.00002 | 0.00020 | 0.0040 | 0.00034 | 0.000011 | < 0.001 |
| M08-763-01 | 2011 | 55.5 | 64 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0040 | 12 | < 0.001 | 2.4 | 0.00076 | 0.00037 | 5.3 | 0.00040 | 0.00013 | 0.0043 | < 0.001 | 0.000020 | 0.041 | 0.00030 | < 0.00002 | 0.00016 | 0.0026 | 0.0010 | 0.0000050 | < 0.001 |
| M08-765-01 | 2011 | 25 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.0070 | 8.4 | < 0.001 | 1.6 | 0.00083 | 0.00034 | 7.1 | 0.00080 | 0.000070 | 0.0032 | < 0.001 | < 0.00001 | 0.031 | 0.00030 | < 0.00002 | 0.00024 | 0.0041 | 0.00050 | 0.0000070 | < 0.001 |
| M08-769-01 | 2009 | 451 | 456 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 9.0 | 0.0010 | 2.0 | 0.0011 | 0.00012 | 6.2 | < 0.0001 | 0.000020 | 0.0016 | < 0.001 | < 0.00001 | 0.20 | < 0.0001 | < 0.00002 | 0.000014 | 0.00026 | 0.00045 | 0.0000050 | 0.0020 |
| M08-783-01 | 2011 | 38 | 47 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0040 | 11 | < 0.001 | 1.7 | 0.00068 | 0.00055 | 5.5 | 0.00020 | 0.000020 | 0.0034 | < 0.001 | < 0.00001 | 0.032 | 0.00030 | 0.000030 | 0.000056 | 0.0027 | 0.00030 | 0.0000070 | < 0.001 |
| M09-823-01 | 2009 | 320 | 325 | Greywacke/Siltstone | Tiriganiaq | UG | 0.47 | 10 | 0.0030 | 0.44 | 0.0046 | 0.00018 | 11 | 0.00010 | 0.00010 | 0.0044 | < 0.001 | < 0.00001 | 0.017 | 0.017 | < 0.00002 | 0.000020 | 0.028 | 0.0026 | 0.000037 | < 0.001 |
| M09-823-02 | 2009 | 335 | 340 | Greywacke/Siltstone | Tiriganiaq | UG | 0.030 | 9.7 | < 0.001 | 1.0 | 0.00051 | 0.00042 | 7.2 | < 0.0001 | 0.000040 | 0.0051 | < 0.001 | < 0.00001 | 0.025 | 0.0013 | < 0.00002 | 0.00012 | 0.0043 | 0.00099 | 0.000027 | < 0.001 |
| M10-879-01 | 2011 | 38 | 46.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.0070 | 7.7 | < 0.001 | 1.3 | 0.0011 | 0.00031 | 6.5 | 0.00020 | 0.000030 | 0.0027 | < 0.001 | < 0.00001 | 0.030 | 0.00050 | < 0.00002 | 0.00028 | 0.0036 | 0.00037 | 0.000015 | < 0.001 |
| M10-887-01 | 2011 | 17 | 24.5 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.012 | 11 | < 0.001 | 2.1 | 0.0012 | 0.00048 | 6.6 | 0.00030 | < 0.00002 | 0.0060 | < 0.001 | < 0.00001 | 0.026 | 0.00090 | < 0.00002 | 0.00028 | 0.0029 | 0.00054 | 0.000028 | < 0.001 |
| M10-892-01 | 2011 | 23 | 31.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.016 | 9.8 | < 0.001 | 1.6 | 0.00075 | 0.00080 | 13 | 0.00040 | 0.00012 | 0.0036 | < 0.001 | < 0.00001 | 0.027 | 0.00040 | 0.000030 | 0.00012 | 0.0030 | 0.00041 | 0.000019 | < 0.001 |
| M10-999-01 | 2011 | 13 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.019 | 9.6 | < 0.001 | 1.2 | 0.00054 | 0.00059 | 7.3 | 0.00030 | 0.00010 | 0.0030 | < 0.001 | < 0.00001 | 0.023 | 0.00040 | < 0.00002 | 0.000037 | 0.0028 | 0.0013 | 0.000017 | < 0.001 |
| M10-999-02 | 2011 | 121.5 | 130 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.010 | 9.3 | < 0.001 | 1.4 | 0.00085 | 0.00053 | 9.6 | 0.00020 | 0.00037 | 0.0034 | < 0.001 | < 0.00001 | 0.029 | 0.00030 | < 0.00002 | 0.000090 | 0.0032 | 0.00046 | 0.0000090 | < 0.001 |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 7.1 | 0.0010 | 1.0 | 0.00098 | 0.00061 | 6.6 | 0.00040 | 0.000020 | 0.0034 | < 0.001 | 0.000090 | 0.052 | 0.00050 | < 0.00002 | 0.000099 | 0.0018 | 0.0011 | 0.000014 | 0.0070 |
| M95-17-01 | 2008 | 60.5 | 65.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 7.1 | 0.0010 | 1.0 | 0.00098 | 0.00061 | 6.6 | 0.00040 | 0.000020 | 0.0034 | < 0.001 | 0.000090 | 0.052 | 0.00050 | < 0.00002 | 0.000099 | 0.0018 | 0.0011 | 0.000014 | 0.0070 |
| M95-17-02 | 2008 | 30.39 | 34.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 6.6 | 0.0020 | 1.2 | 0.0012 | 0.00059 | 7.4 | 0.00040 | 0.000040 | 0.0040 | < 0.001 | 0.000040 | 0.050 | 0.00020 | < 0.00002 | 0.00017 | 0.0036 | 0.0068 | 0.000020 | 0.0070 |
| M95-25-01 | 2011 | 9.5 | 18 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0090 | 9.8 | < 0.001 | 1.9 | 0.00071 | 0.00048 | 5.9 | < 0.0001 | 0.00010 | 0.0027 | < 0.001 | < 0.00001 | 0.034 | 0.00020 | < 0.00002 | 0.00019 | 0.0031 | 0.00028 | 0.000019 | < 0.001 |
| M95-25-02 | 2011 | 34.5 | 43 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0090 | 7.9 | < 0.001 | 1.2 | 0.00092 | 0.00037 | 6.7 | < 0.0001 | 0.00011 | 0.0013 | < 0.001 | < 0.00001 | 0.033 | 0.00040 | < 0.00002 | 0.00025 | 0.0038 | 0.00021 | 0.0000090 | < 0.001 |
| M96-03-01 | 2011 | 10 | 19 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 11 | < 0.001 | 2.0 | 0.00066 | 0.00043 | 5.0 | 0.00020 | 0.00013 | 0.0038 | < 0.001 | < 0.00001 | 0.027 | 0.00020 | < 0.00002 | 0.000045 | 0.0022 | 0.00069 | 0.000021 | < 0.001 |
| M96-03-02 | 2011 | 45 | 53.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.011 | 9.7 | < 0.001 | 1.7 | 0.00088 | 0.00025 | 6.4 | < 0.0001 | 0.00021 | 0.0026 | < 0.001 | < 0.00001 | 0.14 | 0.00060 | < 0.00002 | 0.00043 | 0.0035 | 0.00027 | 0.000017 | < 0.001 |
| M96-19-01 | 2011 | 20 | 29 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.012 | 8.1 | < 0.001 | 1.9 | 0.00095 | 0.00043 | 5.5 | 0.00050 | 0.00012 | 0.0027 | < 0.001 | 0.000080 | 0.026 | 0.00030 | < 0.00002 | 0.00025 | 0.0035 | 0.00074 | 0.000019 | < 0.001 |
| M96-19-02 | 2011 | 71.5 | 79 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.018 | 9.4 | < 0.001 | 1.7 | 0.0010 | 0.00095 | 5.5 | 0.00060 | 0.00022 | 0.0023 | < 0.001 | < 0.00001 | 0.042 | 0.00080 | < 0.00002 | 0.00014 | 0.0028 | 0.00042 | 0.000014 | < 0.001 |
| M96-37-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 9.7 | < 0.001 | 0.80 | 0.00080 | 0.00048 | 4.5 | 0.00040 | 0.000090 | 0.0041 | < 0.001 | < 0.00001 | 0.041 | 0.00030 | < 0.00002 | 0.00011 | 0.0038 | 0.0014 | 0.0000040 | < 0.001 |
| M96-37-02 | 2011 | 85.5 | 94 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0070 | 8.5 | < 0.001 | 2.0 | 0.0010 | 0.00056 | 5.3 | 0.00040 | 0.00010 | 0.0029 | < 0.001 | < 0.00001 | 0.039 | 0.00030 | < 0.00002 | 0.00023 | 0.0029 | 0.0021 | 0.0000080 | < 0.001 |
| M96-37-03 | 2011 | 129 | 138 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.011 | 8.6 | < 0.001 | 1.7 | 0.00099 | 0.00066 | 5.4 | 0.00040 | 0.00010 | 0.0037 | < 0.001 | < 0.00001 | 0.040 | 0.00030 | < 0.00002 | 0.00012 | 0.0025 | 0.00055 | 0.0000080 | < 0.001 |
| M96-40-01 | 2011 | 14 | 23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.015 | 11 | < 0.001 | 1.4 | 0.00058 | 0.00061 | 4.4 | 0.00030 | 0.00011 | 0.0056 | < 0.001 | < 0.00001 | 0.029 | 0.00030 | < 0.00002 | 0.000091 | 0.0039 | 0.00035 | 0.000028 | < 0.001 |
| M96-40-02 | 2011 | 62 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.012 | 9.7 | < 0.001 | 1.3 | 0.00043 | 0.00061 | 4.7 | 0.00040 | 0.000040 | 0.0037 | < 0.001 | < 0.00001 | 0.025 | 0.00040 | < 0.00002 | 0.000056 | 0.0033 | 0.00039 | 0.0000070 | < 0.001 |
| M96-4-01 | 2011 | 10 | 20 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 9.5 | 0.0010 | 2.3 | 0.0015 | 0.00071 | 6.0 | 0.00040 | 0.000070 | 0.0024 | < 0.001 | < 0.00001 | 0.039 | 0.00030 | < 0.00002 | 0.00034 | 0.0029 | 0.0042 | 0.000011 | < 0.001 |
| M96-54-01 | 2011 | 19 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0090 | 9.7 | < 0.001 | 2.2 | 0.0010 | 0.00061 | 5.6 | 0.00040 | 0.000070 | 0.0029 | < 0.001 | < 0.00001 | 0.032 | 0.00030 | < 0.00002 | 0.00017 | 0.0026 | 0.00041 | 0.000011 | < 0.001 |
| M96-54-02 | 2011 | 57 | 66 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.0050 | 12 | < 0.001 | 1.9 | 0.00099 | 0.00051 | 5.3 | 0.00030 | 0.000080 | 0.0034 | < 0.001 | < 0.00001 | 0.028 | < 0.0001 | < 0.00002 | 0.00014 | 0.0030 | 0.00030 | 0.000015 | < 0.001 |
| M96-65-01 | 2011 | 36 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0070 | 9.2 | < 0.001 | 1.9 | 0.00080 | 0.00043 | 5.4 | 0.00030 | 0.00010 | 0.0023 | < 0.001 | < 0.00001 | 0.028 | 0.00020 | < 0.00002 | 0.00017 | 0.0032 | 0.00029 | 0.0000080 | < 0.001 |
| M96-7-01 | 2011 | 21 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 10 | < 0.001 | 1.9 | 0.00051 | 0.00088 | 4.8 | 0.00020 | 0.000090 | 0.0027 | < 0.001 | < 0.00001 | 0.025 | 0.00010 | < 0.00002 | 0.000040 | 0.0020 | 0.00029 | 0.000010 | < 0.001 |
| M96-7-02 | 2011 | 42 | 51 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0040 | 11 | < 0.001 | 2.3 | 0.0011 | 0.00069 | 5.9 | 0.00020 | 0.00013 | 0.0088 | < 0.001 | < 0.00001 | 0.037 | 0.00020 | < 0.00002 | 0.00013 | 0.0029 | 0.00022 | 0.0000090 | < 0.001 |
| M96-77-01 | 2011 | 41 | 49.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 9.8 | < 0.001 | 1.4 | 0.00081 | 0.00068 | 4.6 | 0.00040 | 0.00011 | 0.0043 | < 0.001 | < 0.00001 | 0.033 | 0.00030 | < 0.00002 | 0.000072 | 0.0028 | 0.00054 | 0.000014 | < 0.001 |
| M96-77-02 | 2011 | 140 | 149 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 11 | < 0.001 | 2.3 | 0.00092 | 0.00071 | 5.5 | 0.00020 | 0.00025 | 0.0061 | < 0.001 | < 0.00001 | 0.036 | 0.00050 | < 0.00002 | 0.000084 | 0.0019 | 0.00061 | 0.000012 | < 0.001 |
| M97-121-01 | 2011 | 23 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.015 | 9.8 | < 0.001 | 1.5 | 0.00066 | 0.00036 | 5.3 | 0.00040 | 0.00011 | 0.0038 | < 0.001 | 0.000020 | 0.027 | 0.00080 | < 0.00002 | 0.00040 | 0.0043 | 0.00063 | 0.000019 | < 0.001 |
| M97-135-03 | 2011 | 111 | 120 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.016 | 9.0 | < 0.001 | 1.7 | 0.00075 | 0.00033 | 5.8 | 0.00040 | 0.000080 | 0.0032 | < 0.001 | < 0.00001 | 0.029 | 0.00040 | < 0.00002 | 0.00020 | 0.0042 | 0.00061 | 0.000011 | < 0.001 |
| M97-149-02 | 2011 | 107.5 | 116 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0060 | 7.6 | < 0.001 | 0.74 | 0.00070 | 0.00040 | 5.6 | 0.00010 | 0.000090 | 0.0039 | < 0.001 | < 0.00001 | 0.028 | 0.00020 | < 0.00002 | 0.00022 | 0.0047 | 0.00045 | 0.0000080 | < 0.001 |
| M97-94A-01 | 2011 | 75 | 84 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 11 | < 0.001 | 2.2 | 0.00075 | 0.00048 | 6.1 | 0.00030 | 0.000080 | 0.0035 | < 0.001 | < 0.00001 | 0.030 | 0.00020 | < 0.00002 | 0.00014 | 0.0031 | 0.00054 | 0.000014 | < 0.001 |
| M97-94A-02 | 2011 | 137 | 146 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.023 | 10 | < 0.001 | 1.9 | 0.00069 | 0.00042 | 4.7 | 0.00050 | 0.00016 | 0.0035 | < 0.001 | 0.000010 | 0.027 | 0.0010 | < 0.00002 | 0.00015 | 0.0028 | 0.00084 | 0.000012 | < 0.001 |
| M97-95-01 | 2011 | 51 | 59.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0060 | 7.8 | < 0.001 | 0.94 | 0.00073 | 0.00028 | 5.3 | 0.00010 | 0.000060 | 0.0039 | < 0.001 | < 0.00001 | 0.027 | 0.00020 | < 0.00002 | 0.00012 | 0.0037 | 0.00027 | 0.0000090 | < 0.001 |
| M97-95-02 | 2011 | 102.5 | 111 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0090 | 13 | < 0.001 | 1.9 | 0.00073 | 0.00054 | 5.0 | 0.00020 | 0.00010 | 0.0046 | < 0.001 | 0.000060 | 0.032 | 0.00060 | < 0.00002 | 0.00016 | 0.0027 | 0.00056 | 0.000019 | 0.0050 |
| M98-194-01 | 2008 | 70 | 74.63 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 9.7 | 0.0020 | 2.4 | 0.0019 | 0.00059 | 3.8 | 0.00050 | 0.000040 | 0.0013 | < 0.001 | 0.000040 | 0.057 | 0.00010 | < 0.00002 | 0.00040 | 0.00092 | 0.0011 | 0.0000070 | < 0.001 |
| M98-194-02 | 2008 | 55.45 | 58.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 8.2 | 0.0010 | 1.9 | 0.0018 | 0.00043 | 3.5 | 0.00030 | 0.000060 | 0.0012 | < 0.001 | 0.000030 | 0.080 | 0.00010 | < 0.00002 | 0.00024 | 0.00033 | 0.00073 | 0.0000050 | < 0.001 |
| M98-194-03 | 2008 | 26.2 | 29.38 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 11 | < 0.001 | 1.5 | 0.00069 | 0.0014 | 3.2 | 0.0013 | 0.000040 | 0.0063 | < 0.001 | 0.00030 | 0.052 | < 0.0001 | < 0.00002 | 0.00029 | 0.0026 | 0.00097 | 0.0000070 | < 0.001 |
| M98-194-04 | 2009 | 34 | 39 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 9.9 | 0.0010 | 2.0 | 0.0011 | 0.00045 | 6.5 | 0.00020 | 0.000040 | 0.0045 | < 0.001 | < 0.00001 | 0.039 | 0.0013 | < 0.00002 | 0.00016 | 0.0028 | 0.00058 | 0.000031 | 0.0010 |
| M98-201-01 | 2011 | 16 | 24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.025 | 8.6 | < 0.001 | 0.74 | 0.00046 | 0.00063 | 5.1 | 0.00030 | 0.000090 | 0.0067 | < 0.001 | < 0.00001 | 0.024 | 0.00050 | < 0.00002 | 0.00015 | 0.0048 | 0.00040 | 0.000031 | < 0.001 |
| M98-201-03 | 2011 | 90 | 98 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0030 | 8.8 | < 0.001 | 2.4 | 0.0014 | 0.00058 | 6.0 | 0.00050 | 0.000090 | 0.0031 | < 0.001 | < 0.00001 | 0.049 | 0.00020 | < 0.00002 | 0.00012 | 0.0017 | 0.00041 | 0.0000090 | < 0.001 |
| M98-201-04 | 2011 | 166 | 175 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.015 | 9.3 | < 0.001 | 1.1 | 0.00057 | 0.00030 | 5.2 | 0.00030 | 0.00013 | 0.0037 | < 0.001 | < 0.00001 | 0.026 | 0.00060 | < 0.00002 | 0.00018 | 0.0044 | 0.00037 | 0.0000090 | < 0.001 |
| M98-208-01 | 2011 | 58 | 67 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0070 | 8.6 | < 0.001 | 0.74 | 0.00066 | 0.00046 | 5.6 | < 0.0001 | 0.000080 | 0.0031 | < 0.001 | < 0.00001 | 0.026 | 0.00020 | < 0.00002 | 0.00016 | 0.0048 | 0.00029 | 0.000013 | < 0.001 |
| M98-209-01 | 2011 | 14 | 22 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.017 | 12 | < 0.001 | 1.0 | 0.00053 | 0.00082 | 4.3 | 0.00010 | 0.00012 | 0.0055 | < 0.001 | < 0.00001 | 0.024 | 0.00030 | < 0.00002 | 0.000055 | 0.0033 | 0.00031 | 0.000017 | < 0.001 |
| M98-257-01 | 2009 | 291 | 296 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 9.6 | < 0.001 | 1.8 | 0.00097 | 0.00036 | 5.1 | < 0.0001 | 0.000040 | 0.0043 | < 0.001 | < 0.00001 | 0.031 | 0.00030 | < 0.00002 | 0.000057 | 0.0020 | 0.00056 | 0.0000090 | 0.0010 |
| M98-265-01 | 2011 | 67 | 76 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0070 | 8.4 | < 0.001 | 2.1 | 0.00092 | 0.00053 | 5.7 | 0.00040 | 0.00017 | 0.0040 | < 0.001 | < 0.00001 | 0.035 | 0.00010 | < 0.00002 | 0.00012 | 0.0027 | 0.00025 | 0.000011 | < 0.001 |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | 0.010 | 12 | < 0.001 | 1.9 | 0.00072 | 0.00037 | 4.4 | < 0.0001 | 0.000080 | 0.0044 | < 0.001 | 0.000020 | 0.033 | 0.00060 | < 0.00002 | 0.000054 | 0.0020 | 0.00036 | 0.000027 | 0.0010 |
| M98-266-01 | 2009 | 138 | 143 | Greywacke/Siltstone | Tiriganiaq | UG | 0.010 | 12 | < 0.001 | 1.9 | 0.00072 | 0.00037 | 4.4 | < 0.0001 | 0.000080 | 0.0044 | < 0.001 | 0.000020 | 0.033 | 0.00060 | < 0.00002 | 0.000054 | 0.0020 | 0.00036 | 0.000027 | 0.0010 |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-269-01 | 2008 | 65.5 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-269-02 | 2008 | 45.5 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-269-03 | 2008 | 20 | 24.24 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 9.3 | < 0.001 | 1.0 | 0.00053 | 0.00046 | 3.8 | 0.00040 | 0.000020 | 0.0030 | < 0.001 | 0.000010 | 0.040 | 0.00060 | < 0.00002 | 0.000071 | 0.0026 | 0.00048 | 0.0000060 | < 0.001 |
| M98-270-01 | 2011 | 92 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.0090 | 8.6 | < 0.001 | 1.1 | 0.00066 | 0.00031 | 5.1 | 0.00020 | 0.000070 | 0.0040 | < 0.001 | < 0.00001 | 0.023 | 0.00020 | < 0.00002 | 0.00015 | 0.0040 | 0.00024 | 0.0000070 | < 0.001 |
| M98-297-02 | 2008 | 75.8 | 79.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-297-03 | 2008 | 55.16 | 59.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 11 | 0.0010 | 1.2 | 0.00064 | 0.00052 | 4.6 | < 0.0001 | 0.000030 | 0.0048 | < 0.001 | < 0.00001 | 0.035 | 0.0011 | < 0.00002 | 0.000066 | 0.0022 | 0.00039 | 0.000027 | < 0.001 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M98-297-04 | 2008 | 25.04 | 28.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 103 | 35 | 0.60 | 12 | < 0.0001 | < 0.00001 | 1.2 | 0.012 | 0.0085 | < 0.00002 | < 0.00001 | 9.7 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M98-298-01 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 84 | 42 | 0.80 | 1.0 | < 0.0001 | 0.000010 | 1.3 | 0.022 | 0.022 | < 0.00002 | < 0.00001 | 6.1 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 |
| M98-298-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 99 | 47 | 1.2 | 2.0 | < 0.0001 | < 0.00001 | 1.0 | 0.052 | 0.018 | < 0.00002 | < 0.00001 | 8.3 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 |
| M98-298-03 | 2009 | 25 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 85 | 40 | 1.1 | 1.4 | < 0.0001 | 0.000010 | 1.1 | 0.014 | 0.019 | < 0.00002 | < 0.00001 | 6.7 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M98-313-01 | 2008 | 305 | 315 | Greywacke/Siltstone | Tiriganiaq | UG | 8.2 | 107 | 51 | 0.50 | 3.1 | < 0.0001 | < 0.00001 | 0.54 | 0.036 | 0.13 | < 0.00002 | < 0.00001 | 8.4 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 |
| M98-313-02 | 2008 | 271.73 | 280 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-316-01_2008 | 2008 | 25 | 29.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-317-01 | 2011 | 61 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 120 | - | 1.0 | 1.8 | < 0.0001 | < 0.00001 | 0.57 | 0.0022 | 0.0070 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 |
| M99-309-02 | 2011 | 36.5 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 37 | - | 0.60 | 1.9 | < 0.0001 | < 0.00001 | 0.93 | 0.060 | 0.0092 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M99-327-01 | 2008 | 195.04 | 205.17 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-336B-01 | 2011 | 16.5 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 103 | - | 0.60 | 8.2 | < 0.0001 | < 0.00001 | 0.80 | 0.027 | 0.015 | < 0.00002 | < 0.00001 | 9.4 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| M99-336B-03 | 2011 | 140 | 148 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 107 | - | 0.50 | 2.0 | < 0.0001 | < 0.00001 | 1.1 | 0.066 | 0.0094 | < 0.00002 | < 0.00001 | 8.4 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M99-339-01 | 2008 | 55.3 | 59.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 124 | 61 | 1.3 | 2.2 | < 0.0001 | < 0.00001 | 0.58 | 0.028 | 0.089 | < 0.00002 | < 0.00001 | 13 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 |
| M99-340-03 | 2008 | 26 | 29.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 92 | 43 | 0.40 | 3.1 | < 0.0001 | < 0.00001 | 0.88 | 0.22 | 0.092 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000052 | < 0.0005 | < 0.0005 |
| M99-341-02 | 2008 | 30.25 | 34.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 116 | 53 | 0.60 | 3.6 | < 0.0001 | < 0.00001 | 0.64 | 0.17 | 0.085 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000065 | < 0.0005 | < 0.0005 |
| M99-341-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 88 | 39 | 1.4 | 3.2 | < 0.0001 | 0.000020 | 0.96 | 0.22 | 0.021 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.00033 | < 0.0005 | < 0.0005 |
| M99-345-01_2008 | 2008 | 80.6 | 84.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 86 | 38 | 1.3 | 4.8 | < 0.0001 | 0.000030 | 0.88 | 0.060 | 0.021 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M99-345-01_2009 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 86 | 38 | 1.3 | 4.8 | < 0.0001 | 0.000030 | 0.88 | 0.060 | 0.021 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M99-345-02 | 2008 | 35.7 | 39.72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 87 | 39 | 1.8 | 1.4 | < 0.0001 | 0.000030 | 0.92 | 0.035 | 0.022 | < 0.00002 | < 0.00001 | 6.7 | 0.000030 | 0.000039 | < 0.0005 | < 0.0005 |
| M99-345-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 108 | 46 | 1.6 | 6.0 | < 0.0001 | 0.000020 | 0.80 | 0.026 | 0.026 | < 0.00002 | < 0.00001 | 10 | 0.0000030 | 0.000049 | < 0.0005 | < 0.0005 |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 107 | 48 | 1.1 | 3.5 | < 0.0001 | 0.000010 | 0.76 | 0.035 | 0.025 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 107 | 48 | 1.1 | 3.5 | < 0.0001 | 0.000010 | 0.76 | 0.035 | 0.025 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 |
| M99-346-02_2008 | 2008 | 70.23 | 74.93 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 109 | 49 | 0.80 | 5.0 | < 0.0001 | < 0.00001 | 0.45 | 0.032 | 0.22 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000078 | 0.00050 | 0.00090 |
| M99-346-02_2009 | 2009 | 30 | 35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 98 | 47 | 1.1 | 1.3 | < 0.0001 | 0.000020 | 0.93 | 0.085 | 0.018 | < 0.00002 | < 0.00001 | 8.0 | < 0.000003 | 0.00011 | < 0.0005 | < 0.0005 |
| M99-346-03 | 2008 | 35.1 | 39.58 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 88 | 45 | 0.80 | 0.90 | < 0.0001 | 0.000020 | 0.88 | 0.012 | 0.019 | < 0.00002 | < 0.00001 | 6.9 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M99-347-01 | 2011 | 60 | 68 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 118 | - | 0.50 | 9.2 | < 0.0001 | < 0.00001 | 0.71 | 0.14 | 0.0086 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000052 | < 0.0005 | < 0.0005 |
| M99-347-02 | 2011 | 94 | 102.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 98 | - | 0.60 | 1.4 | < 0.0001 | < 0.00001 | 0.93 | 0.029 | 0.0072 | < 0.00002 | < 0.00001 | 9.0 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 |
| M99-349-01 | 2008 | 65 | 69.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 146 | 61 | 1.0 | 5.2 | < 0.0001 | 0.000010 | 0.50 | 0.017 | 0.087 | < 0.00002 | 0.000010 | 15 | 0.000012 | 0.000053 | < 0.0005 | < 0.0005 |
| M99-349-02 | 2008 | 40.2 | 44.87 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 145 | 68 | 1.7 | 4.2 | < 0.0001 | < 0.00001 | 0.47 | 0.0037 | 0.092 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 |
| M99-350-02 | 2008 | 50.07 | 54.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 100 | 45 | 1.0 | 3.1 | < 0.0001 | < 0.00001 | 1.3 | 0.0093 | 0.0086 | < 0.00002 | < 0.00001 | 8.0 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 |
| M99-350-03 | 2008 | 25.15 | 27.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 88 | 47 | 1.0 | 1.7 | < 0.0001 | < 0.00001 | 2.3 | 0.011 | 0.026 | < 0.00002 | < 0.00001 | 7.8 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M99-385-01 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 96 | 44 | 1.4 | 2.8 | < 0.0001 | 0.000010 | 0.85 | 0.041 | 0.023 | < 0.00002 | < 0.00001 | 7.1 | < 0.000003 | 0.000051 | < 0.0005 | < 0.0005 |
| M99-386-01 | 2009 | 39 | 44 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 105 | 47 | 2.8 | 3.5 | < 0.0001 | 0.000060 | 0.64 | **0.65** | 0.026 | < 0.00002 | 0.000020 | 8.6 | 0.000052 | 0.000080 | < 0.0005 | < 0.0005 |
| M99-386-02 | 2009 | 27 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 80 | 41 | 1.5 | 1.4 | < 0.0001 | 0.000040 | 0.93 | 0.047 | 0.022 | < 0.00002 | < 0.00001 | 6.8 | 0.0000030 | 0.000045 | < 0.0005 | < 0.0005 |
| M99-403-01 | 2008 | 75 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-403-02 | 2008 | 70 | 74.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 116 | 56 | 1.4 | 2.6 | < 0.0001 | 0.00016 | 0.57 | 0.071 | 0.074 | 0.00016 | 0.00014 | 11 | 0.00014 | 0.00018 | < 0.0005 | < 0.0005 |
| M99-403-03 | 2008 | 50.6 | 54.35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 118 | 55 | 1.2 | 1.8 | < 0.0001 | 0.000040 | 0.68 | 0.051 | 0.086 | 0.000060 | 0.000040 | 11 | 0.000041 | 0.000072 | < 0.0005 | < 0.0005 |
| M99-403-04 | 2008 | 25.33 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-403-05 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.1 | 99 | 43 | 1.4 | 4.6 | < 0.0001 | 0.000010 | 0.76 | 0.022 | 0.018 | < 0.00002 | < 0.00001 | 7.7 | 0.000012 | 0.000031 | < 0.0005 | < 0.0005 |
| M99-404-01 | 2008 | 100.6 | 104.95 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-404-02 | 2008 | 80.28 | 84.23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-404-03 | 2008 | 65.72 | 69.34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 85 | 53 | 0.60 | 1.8 | < 0.0001 | < 0.00001 | 1.2 | 0.031 | 0.020 | < 0.00002 | < 0.00001 | 7.1 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 |
| M99-404-04 | 2008 | 30.19 | 34.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 92 | 42 | 0.70 | 3.8 | < 0.0001 | 0.000040 | 0.94 | 0.033 | 0.080 | 0.000050 | 0.000040 | 8.2 | 0.000032 | 0.000083 | < 0.0005 | < 0.0005 |
| M99-404-05 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 99 | 44 | 1.2 | 3.5 | < 0.0001 | < 0.00001 | 1.1 | 0.011 | 0.024 | < 0.00002 | < 0.00001 | 8.2 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 |
| M99-404-06 | 2009 | 23 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 96 | 46 | 0.90 | 1.7 | < 0.0001 | < 0.00001 | 0.80 | 0.086 | 0.023 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000047 | < 0.0005 | < 0.0005 |
| M99-409-01 | 2011 | 25 | 33.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.7 | 105 | - | 0.60 | 7.0 | < 0.0001 | < 0.00001 | 0.75 | 0.064 | 0.0090 | < 0.00002 | < 0.00001 | 8.3 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 |
| M99-409-02 | 2011 | 89 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.0 | 107 | - | 0.80 | 3.6 | < 0.0001 | < 0.00001 | 0.63 | 0.071 | 0.011 | < 0.00002 | < 0.00001 | 7.4 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 |
| M99-409-03 | 2011 | 152 | 161 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 96 | - | 0.40 | 1.4 | < 0.0001 | < 0.00001 | 1.0 | 0.058 | 0.0086 | < 0.00002 | < 0.00001 | 7.1 | < 0.000003 | 0.000058 | < 0.0005 | < 0.0005 |
| M99-409-04 | 2011 | 216 | 224 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 8.2 | 113 | - | 1.0 | 2.3 | < 0.0001 | < 0.00001 | 0.87 | 0.023 | 0.014 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 |
| M99-410-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 106 | - | 0.50 | 7.5 | < 0.0001 | < 0.00001 | 0.92 | 0.029 | 0.0091 | < 0.00002 | < 0.00001 | 9.0 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 |
| M99-410-02 | 2011 | 52 | 61 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 7.9 | 102 | - | 0.50 | 3.5 | < 0.0001 | < 0.00001 | 0.92 | 0.049 | 0.016 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 |
| M99-418-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.4 | 104 | 48 | 1.0 | 2.9 | < 0.0001 | < 0.00001 | 0.94 | 0.074 | 0.024 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000052 | < 0.0005 | < 0.0005 |
| M99-436-01 | 2011 | 32.5 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.3 | 99 | - | 0.40 | 1.9 | < 0.0001 | < 0.00001 | 0.79 | 0.043 | 0.0066 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 |
| M99-436-02 | 2011 | 96.5 | 105 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 8.2 | 108 | - | 0.70 | 5.4 | < 0.0001 | < 0.00001 | 0.80 | 0.070 | 0.0093 | < 0.00002 | < 0.00001 | 9.3 | < 0.000003 | 0.000049 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 6.1 | 1.0 | 8.0 | 0.20 | 0.40 | < 0.0001 | < 0.00001 | 0.19 | 0.00060 | 0.0054 | <0.00002 | < 0.00001 | 3.5 | 0.0000030 | 0.000015 | < 0.0005 | < 0.0005 |
| | | | | | | MAXIMUM | 9.1 | 201 | 79 | 33 | 20 | < 0.0001 | 0.00016 | 2.3 | 0.65 | 0.26 | 0.00016 | 0.00014 | 15 | 0.00014 | 0.00033 | 0.00070 | 0.00090 |
| | | | | | | MEDIAN | 8.2 | 103 | 48 | 1.0 | 2.3 | nc | 0.000010 | 0.89 | 0.035 | 0.018 | 0.000020 | 0.000010 | 8.0 | 0.0000030 | 0.000040 | 0.00050 | 0.00050 |
| | | | | | | AVERAGE | 8.1 | 103 | 48 | 1.6 | 3.0 | nc | 0.000015 | 0.88 | 0.052 | 0.036 | 0.000022 | 0.000012 | 8.3 | 0.0000060 | 0.000048 | 0.00050 | 0.00051 |
| | | | | | | STANDARD DEVIATION | 0.26 | 21 | 8.4 | 3.0 | 2.4 | nc | 0.000017 | 0.25 | 0.067 | 0.050 | 0.000013 | 0.000012 | 1.7 | 0.000013 | 0.000033 | 0.000015 | 0.000045 |
| | | | | | | 75TH PERCENTILE | 8.3 | 112 | 53 | 1.5 | 3.7 | nc | 0.000010 | 0.99 | 0.064 | 0.028 | 0.000020 | 0.000010 | 8.8 | 0.0000030 | 0.000051 | 0.00050 | 0.00050 |
| TP-PAD-11-06 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.9 | 104 | - | 2.2 | 5.4 | < 0.0001 | < 0.00001 | 0.88 | 0.034 | 0.0083 | < 0.00002 | < 0.00001 | 9.2 | 0.0000030 | 0.000078 | < 0.0005 | < 0.0005 |
| TP-PAD-11-04 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 8.0 | 99 | - | 0.70 | 2.5 | < 0.0001 | < 0.00001 | 0.91 | 0.038 | 0.0096 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.000069 | < 0.0005 | < 0.0005 |
| TP-PAD-11-03 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.8 | 107 | - | 8.6 | 4.1 | < 0.0001 | < 0.00001 | 0.81 | 0.014 | 0.018 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000061 | < 0.0005 | < 0.0005 |
| TP-PAD-11-01 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.8 | 104 | - | 5.1 | 4.4 | < 0.0001 | < 0.00001 | 0.74 | 0.026 | 0.0092 | < 0.00002 | < 0.00001 | 9.2 | 0.0000060 | 0.000075 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M98-297-04 | 2008 | 25.04 | 28.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 9.9 | 0.0010 | 1.1 | 0.00059 | 0.00094 | 3.8 | 0.00040 | 0.000030 | 0.0027 | < 0.001 | < 0.00001 | 0.039 | 0.00040 | < 0.00002 | 0.000044 | 0.0025 | 0.00037 | 0.0000060 | < 0.001 |
| M98-298-01 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.050 | 8.7 | < 0.001 | 0.80 | 0.00062 | 0.00031 | 5.3 | 0.00020 | 0.000060 | 0.0039 | < 0.001 | < 0.00001 | 0.025 | 0.0022 | < 0.00002 | 0.000067 | 0.0038 | 0.00019 | 0.000046 | < 0.001 |
| M98-298-02 | 2009 | 35 | 40 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 9.2 | 0.0010 | 1.6 | 0.0010 | 0.00040 | 4.5 | 0.00020 | 0.000020 | 0.0039 | < 0.001 | < 0.00001 | 0.043 | 0.00040 | < 0.00002 | 0.000092 | 0.0021 | 0.00044 | 0.000012 | 0.0010 |
| M98-298-03 | 2009 | 25 | 30 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.030 | 7.1 | 0.0010 | 0.81 | 0.0013 | 0.00031 | 5.8 | 0.00020 | 0.000060 | 0.0034 | < 0.001 | < 0.00001 | 0.031 | 0.00090 | < 0.00002 | 0.00018 | 0.0045 | 0.00033 | 0.000045 | < 0.001 |
| M98-313-01 | 2008 | 305 | 315 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 7.3 | < 0.001 | 1.6 | 0.00057 | 0.00027 | 7.6 | 0.00030 | 0.000070 | 0.0030 | < 0.001 | 0.000070 | 0.049 | 0.00020 | < 0.00002 | 0.000095 | 0.0026 | 0.00079 | 0.000016 | 0.0060 |
| M98-313-02 | 2008 | 271.73 | 280 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-316-01_2008 | 2008 | 25 | 29.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-317-01 | 2011 | 61 | 70 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0030 | 8.7 | < 0.001 | 3.0 | 0.0014 | 0.00021 | 4.8 | < 0.0001 | 0.000060 | 0.00070 | < 0.001 | < 0.00001 | 0.074 | < 0.0001 | < 0.00002 | 0.000015 | 0.00017 | 0.00037 | 0.0000020 | < 0.001 |
| M99-309-02 | 2011 | 36.5 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0070 | 9.4 | < 0.001 | 1.3 | 0.00077 | 0.00042 | 5.5 | 0.00020 | 0.00010 | 0.0060 | < 0.001 | < 0.00001 | 0.026 | 0.00030 | < 0.00002 | 0.000098 | 0.0038 | 0.00028 | 0.0000070 | < 0.001 |
| M99-327-01 | 2008 | 195.04 | 205.17 | Greywacke/Siltstone | Tiriganiaq | UG | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-336B-01 | 2011 | 16.5 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.002 | 10 | < 0.001 | 2.1 | 0.00080 | 0.00054 | 5.2 | 0.00030 | 0.000030 | 0.0039 | < 0.001 | < 0.00001 | 0.044 | < 0.0001 | < 0.00002 | 0.00010 | 0.0024 | 0.00027 | 0.0000090 | < 0.001 |
| M99-336B-03 | 2011 | 140 | 148 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.014 | 12 | < 0.001 | 1.8 | 0.00073 | 0.00033 | 5.3 | 0.00010 | 0.000070 | 0.0044 | < 0.001 | < 0.00001 | 0.034 | 0.00070 | < 0.00002 | 0.00020 | 0.0038 | 0.00053 | 0.000018 | < 0.001 |
| M99-339-01 | 2008 | 55.3 | 59.4 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 7.4 | 0.0020 | 2.6 | 0.0013 | 0.00058 | 5.5 | 0.00030 | 0.000050 | 0.0016 | < 0.001 | 0.000030 | 0.053 | 0.00020 | < 0.00002 | 0.000052 | 0.00036 | 0.00079 | 0.000017 | 0.011 |
| M99-340-03 | 2008 | 26 | 29.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 7.6 | 0.0020 | 1.1 | 0.0011 | 0.00087 | 5.4 | 0.00080 | 0.000030 | 0.0049 | < 0.001 | 0.000040 | 0.042 | 0.00060 | < 0.00002 | 0.00050 | 0.0045 | 0.00046 | 0.000025 | 0.0050 |
| M99-341-02 | 2008 | 30.25 | 34.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 7.7 | 0.0020 | 2.5 | 0.0019 | 0.00047 | 6.0 | 0.00080 | 0.000040 | 0.0041 | < 0.001 | 0.000040 | 0.048 | 0.00010 | < 0.00002 | 0.00088 | 0.0033 | 0.00068 | 0.0000090 | 0.0060 |
| M99-341-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.030 | 9.1 | < 0.001 | 0.75 | 0.00048 | 0.0016 | 4.5 | 0.00060 | 0.000060 | 0.0060 | < 0.001 | < 0.00001 | 0.031 | 0.0014 | < 0.00002 | 0.00012 | 0.0029 | 0.00075 | 0.000042 | 0.0010 |
| M99-345-01_2008 | 2008 | 80.6 | 84.8 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 7.1 | < 0.001 | 0.85 | 0.0025 | 0.00071 | 5.3 | 0.00030 | 0.000040 | 0.0031 | < 0.001 | < 0.00001 | 0.037 | 0.0010 | < 0.00002 | 0.00014 | 0.0037 | 0.00039 | 0.000024 | < 0.001 |
| M99-345-01_2009 | 2009 | 45 | 50 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 7.1 | < 0.001 | 0.85 | 0.0025 | 0.00071 | 5.3 | 0.00030 | 0.000040 | 0.0031 | < 0.001 | < 0.00001 | 0.037 | 0.0010 | < 0.00002 | 0.00014 | 0.0037 | 0.00039 | 0.000024 | < 0.001 |
| M99-345-02 | 2008 | 35.7 | 39.72 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 8.5 | < 0.001 | 0.89 | 0.00085 | 0.00062 | 5.5 | 0.00010 | 0.000050 | 0.0022 | < 0.001 | < 0.00001 | 0.031 | 0.00080 | < 0.00002 | 0.00012 | 0.0036 | 0.00055 | 0.000060 | < 0.001 |
| M99-345-03 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 7.8 | 0.0010 | 1.4 | 0.0017 | 0.00087 | 4.9 | 0.00050 | 0.000030 | 0.0040 | < 0.001 | < 0.00001 | 0.058 | 0.00030 | < 0.00002 | 0.000081 | 0.0013 | 0.00044 | 0.0000080 | 0.0020 |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 10 | 0.0010 | 2.1 | 0.0017 | 0.00084 | 5.1 | 0.00050 | 0.000050 | 0.0051 | < 0.001 | < 0.00001 | 0.030 | 0.0016 | < 0.00002 | 0.000059 | 0.0019 | 0.00046 | 0.000034 | 0.0010 |
| M99-346-01 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 10 | 0.0010 | 2.1 | 0.0017 | 0.00084 | 5.1 | 0.00050 | 0.000050 | 0.0051 | < 0.001 | < 0.00001 | 0.030 | 0.0016 | < 0.00002 | 0.000059 | 0.0019 | 0.00046 | 0.000034 | 0.0010 |
| M99-346-02_2008 | 2008 | 70.23 | 74.93 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 7.8 | 0.0020 | 1.4 | 0.0012 | 0.00049 | 8.1 | 0.00050 | 0.000060 | 0.0053 | < 0.001 | 0.00035 | 0.049 | 0.00080 | < 0.00002 | 0.00014 | 0.0029 | 0.00044 | 0.000029 | 0.011 |
| M99-346-02_2009 | 2009 | 30 | 35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 7.9 | < 0.001 | 1.5 | 0.00082 | 0.00054 | 5.7 | 0.00060 | 0.000060 | 0.0035 | < 0.001 | < 0.00001 | 0.035 | 0.0010 | < 0.00002 | 0.00030 | 0.0039 | 0.00049 | 0.000048 | 0.0010 |
| M99-346-03 | 2008 | 35.1 | 39.58 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 7.4 | 0.0010 | 1.2 | 0.0020 | 0.00022 | 5.8 | < 0.0001 | 0.000050 | 0.0024 | < 0.001 | < 0.00001 | 0.029 | 0.00080 | < 0.00002 | 0.00021 | 0.0039 | 0.00029 | 0.000030 | 0.0010 |
| M99-347-01 | 2011 | 60 | 68 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0030 | 9.9 | < 0.001 | 2.5 | 0.0012 | 0.0013 | 5.0 | 0.00060 | 0.000060 | 0.0037 | < 0.001 | < 0.00001 | 0.041 | < 0.0001 | < 0.00002 | 0.00021 | 0.0023 | 0.00069 | 0.0000060 | < 0.001 |
| M99-347-02 | 2011 | 94 | 102.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0040 | 9.5 | < 0.001 | 1.9 | 0.00093 | 0.00047 | 5.0 | 0.00030 | 0.000090 | 0.0038 | < 0.001 | < 0.00001 | 0.032 | 0.00010 | < 0.00002 | 0.00014 | 0.0026 | 0.00048 | 0.000010 | < 0.001 |
| M99-349-01 | 2008 | 65 | 69.55 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 8.4 | 0.0020 | 3.0 | 0.0017 | 0.00032 | 5.4 | 0.00020 | 0.000030 | 0.0021 | < 0.001 | 0.000030 | 0.057 | 0.00020 | < 0.00002 | 0.000051 | 0.00025 | 0.0011 | 0.000016 | 0.013 |
| M99-349-02 | 2008 | 40.2 | 44.87 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 10.0 | 0.0020 | 3.2 | 0.0029 | 0.00077 | 5.8 | 0.00030 | < 0.00002 | 0.0024 | < 0.001 | 0.000040 | 0.12 | 0.00030 | < 0.00002 | 0.00015 | 0.00026 | 0.00096 | 0.000017 | 0.013 |
| M99-350-02 | 2008 | 50.07 | 54.7 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.030 | 12 | < 0.001 | 1.5 | 0.00069 | 0.00051 | 3.9 | 0.00040 | 0.000020 | 0.0030 | < 0.001 | 0.000010 | 0.029 | 0.0010 | < 0.00002 | 0.00010 | 0.0026 | 0.00041 | 0.000025 | < 0.001 |
| M99-350-03 | 2008 | 25.15 | 27.92 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 9.7 | 0.0010 | 0.93 | 0.00054 | 0.00042 | 5.1 | < 0.0001 | < 0.00002 | 0.0038 | < 0.001 | < 0.00001 | 0.034 | 0.00040 | < 0.00002 | 0.000090 | 0.0029 | 0.00042 | 0.000020 | < 0.001 |
| M99-385-01 | 2009 | 36 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 9.6 | < 0.001 | 1.3 | 0.0023 | 0.00074 | 5.2 | 0.00030 | 0.000070 | 0.0042 | < 0.001 | 0.000020 | 0.027 | 0.00090 | < 0.00002 | 0.000070 | 0.0024 | 0.00041 | 0.000030 | 0.0010 |
| M99-386-01 | 2009 | 39 | 44 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.040 | 9.6 | 0.0010 | 2.2 | 0.0021 | 0.0012 | 6.0 | 0.00070 | 0.00018 | 0.0032 | < 0.001 | 0.000020 | 0.037 | 0.0026 | < 0.00002 | 0.00018 | 0.0026 | 0.00086 | 0.000036 | 0.0010 |
| M99-386-02 | 2009 | 27 | 32 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.060 | 8.4 | < 0.001 | 1.0 | 0.0018 | 0.00035 | 5.2 | 0.00020 | 0.00013 | 0.0024 | < 0.001 | < 0.00001 | 0.030 | 0.0024 | < 0.00002 | 0.00014 | 0.0031 | 0.00035 | 0.000073 | 0.0010 |
| M99-403-01 | 2008 | 75 | 80 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-403-02 | 2008 | 70 | 74.6 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 7.5 | 0.0010 | 2.5 | 0.0019 | 0.00083 | 6.2 | 0.00060 | 0.00017 | 0.0012 | < 0.001 | 0.000040 | 0.041 | 0.00040 | 0.00014 | 0.00022 | 0.00066 | 0.0011 | 0.00015 | 0.0090 |
| M99-403-03 | 2008 | 50.6 | 54.35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 8.2 | < 0.001 | 2.0 | 0.0014 | 0.00059 | 4.8 | 0.00030 | 0.000050 | 0.0014 | < 0.001 | 0.000060 | 0.068 | 0.00010 | 0.000040 | 0.000070 | 0.00037 | 0.00082 | 0.000050 | 0.010 |
| M99-403-04 | 2008 | 25.33 | 29.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-403-05 | 2009 | 20 | 25 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.010 | 8.9 | < 0.001 | 1.3 | 0.00072 | 0.00047 | 5.7 | 0.00020 | 0.000040 | 0.0032 | < 0.001 | < 0.00001 | 0.037 | 0.00050 | < 0.00002 | 0.000059 | 0.0019 | 0.00043 | 0.000013 | 0.0010 |
| M99-404-01 | 2008 | 100.6 | 104.95 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-404-02 | 2008 | 80.28 | 84.23 | Greywacke/Siltstone | Tiriganiaq | OP/HW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M99-404-03 | 2008 | 65.72 | 69.34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 8.0 | 0.0010 | 1.2 | 0.00078 | 0.00029 | 6.1 | < 0.0001 | 0.000040 | 0.0036 | < 0.001 | < 0.00001 | 0.031 | 0.0014 | < 0.00002 | 0.00013 | 0.0037 | 0.00035 | 0.000028 | < 0.001 |
| M99-404-04 | 2008 | 30.19 | 34.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 8.7 | < 0.001 | 1.3 | 0.0013 | 0.00047 | 5.1 | 0.00060 | 0.000080 | 0.0036 | < 0.001 | 0.000080 | 0.039 | 0.00050 | 0.000030 | 0.00020 | 0.0030 | 0.00035 | 0.000050 | 0.0060 |
| M99-404-05 | 2009 | 40 | 45 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 8.7 | < 0.001 | 1.2 | 0.00054 | 0.00041 | 5.2 | 0.00030 | 0.000040 | 0.0036 | < 0.001 | < 0.00001 | 0.036 | 0.00060 | < 0.00002 | 0.000063 | 0.0020 | 0.00033 | 0.000022 | < 0.001 |
| M99-404-06 | 2009 | 23 | 27 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 8.4 | 0.0010 | 1.7 | 0.0010 | 0.00054 | 5.2 | 0.00030 | < 0.00002 | 0.0036 | < 0.001 | < 0.00001 | 0.029 | 0.00040 | < 0.00002 | 0.000095 | 0.0027 | 0.0013 | 0.000012 | < 0.001 |
| M99-409-01 | 2011 | 25 | 33.5 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0060 | 8.3 | < 0.001 | 1.2 | 0.00090 | 0.00048 | 5.0 | 0.00040 | 0.000070 | 0.0035 | < 0.001 | < 0.00001 | 0.032 | 0.00040 | < 0.00002 | 0.00022 | 0.0036 | 0.00040 | 0.000020 | < 0.001 |
| M99-409-02 | 2011 | 89 | 100 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0050 | 7.8 | < 0.001 | 1.7 | 0.00085 | 0.00055 | 5.9 | 0.00030 | 0.000050 | 0.0024 | < 0.001 | < 0.00001 | 0.028 | 0.00010 | < 0.00002 | 0.00013 | 0.0030 | 0.00054 | 0.000011 | < 0.001 |
| M99-409-03 | 2011 | 152 | 161 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.059 | 9.8 | < 0.001 | 1.7 | 0.0011 | 0.00041 | 5.1 | 0.00030 | 0.000070 | 0.0042 | < 0.001 | < 0.00001 | 0.024 | 0.0014 | < 0.00002 | 0.00017 | 0.0034 | 0.00061 | 0.000035 | < 0.001 |
| M99-409-04 | 2011 | 216 | 224 | Greywacke/Siltstone | Tiriganiaq | OP/FW | 0.0030 | 11 | < 0.001 | 2.0 | 0.00079 | 0.00094 | 3.5 | 0.00020 | < 0.00002 | 0.0014 | < 0.001 | < 0.00001 | 0.037 | 0.00020 | < 0.00002 | 0.000023 | 0.00050 | 0.00068 | 0.0000050 | < 0.001 |
| M99-410-01 | 2011 | 26 | 34 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0040 | 9.8 | < 0.001 | 1.5 | 0.00092 | 0.00076 | 4.6 | 0.00030 | < 0.00002 | 0.0037 | < 0.001 | < 0.00001 | 0.031 | 0.00030 | < 0.00002 | 0.00012 | 0.0027 | 0.00026 | 0.0000080 | < 0.001 |
| M99-410-02 | 2011 | 52 | 61 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0080 | 10 | < 0.001 | 1.5 | 0.00068 | 0.00071 | 4.9 | 0.00030 | 0.000040 | 0.0040 | < 0.001 | < 0.00001 | 0.031 | 0.00040 | < 0.00002 | 0.00014 | 0.0030 | 0.00030 | 0.0000090 | < 0.001 |
| M99-418-01 | 2009 | 32 | 37 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.020 | 11 | < 0.001 | 1.6 | 0.00064 | 0.00073 | 5.4 | 0.00010 | 0.000050 | 0.0043 | < 0.001 | < 0.00001 | 0.036 | 0.0015 | < 0.00002 | 0.000085 | 0.0026 | 0.00025 | 0.000034 | < 0.001 |
| M99-436-01 | 2011 | 32.5 | 41 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.0090 | 8.2 | < 0.001 | 1.7 | 0.00069 | 0.00032 | 6.1 | 0.00020 | 0.00011 | 0.0034 | < 0.001 | < 0.00001 | 0.029 | 0.00060 | < 0.00002 | 0.00015 | 0.0031 | 0.00048 | 0.000039 | < 0.001 |
| M99-436-02 | 2011 | 96.5 | 105 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 0.011 | 9.8 | < 0.001 | 2.0 | 0.00097 | 0.00085 | 4.5 | 0.00050 | 0.000050 | 0.0035 | < 0.001 | < 0.00001 | 0.029 | 0.00090 | < 0.00002 | 0.00013 | 0.0022 | 0.00084 | 0.000014 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 1.0 | < 0.001 | 0.44 | 0.00017 | 0.000070 | 3.2 | < 0.0001 | < 0.00002 | 0.00070 | <0.001 | < 0.00001 | 0.017 | < 0.0001 | <0.00002 | < 0.000001 | 0.00017 | 0.00019 | 0.0000020 | < 0.001 |
| | | | | | | MAXIMUM | 0.47 | 16 | 0.0030 | 8.3 | 0.0046 | 0.0029 | 19 | 0.0013 | 0.00076 | 0.0088 | <0.001 | 0.00035 | 0.20 | 0.017 | 0.00014 | 0.00088 | 0.028 | 0.0076 | 0.00015 | 0.019 |
| | | | | | | MEDIAN | 0.010 | 9.6 | 0.0010 | 1.6 | 0.00080 | 0.00049 | 5.6 | 0.00030 | 0.000060 | 0.0037 | nc | 0.000010 | 0.034 | 0.00040 | 0.000020 | 0.00011 | 0.0027 | 0.00054 | 0.000015 | 0.0010 |
| | | | | | | AVERAGE | 0.017 | 9.3 | 0.0011 | 1.6 | 0.00097 | 0.00055 | 6.0 | 0.00031 | 0.000076 | 0.0038 | nc | 0.000024 | 0.041 | 0.00066 | 0.000022 | 0.00013 | 0.0028 | 0.00078 | 0.000020 | 0.0022 |
| | | | | | | STANDARD DEVIATION | 0.037 | 1.8 | 0.00033 | 0.75 | 0.00055 | 0.00031 | 2.0 | 0.00021 | 0.000077 | 0.0013 | nc | 0.000039 | 0.024 | 0.0013 | 0.000010 | 0.00010 | 0.0023 | 0.00091 | 0.000017 | 0.0029 |
| | | | | | | 75TH PERCENTILE | 0.019 | 11 | 0.0010 | 2.0 | 0.0011 | 0.00069 | 6.3 | 0.00040 | 0.000090 | 0.0044 | nc | 0.000020 | 0.042 | 0.00080 | 0.000020 | 0.00016 | 0.0034 | 0.00084 | 0.000027 | 0.0010 |
| TP-PAD-11-06 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.011 | 7.9 | 0.0020 | 1.7 | 0.00087 | 0.00066 | 4.6 | 0.00020 | 0.000090 | 0.0024 | < 0.001 | < 0.00001 | 0.047 | 0.00040 | < 0.00002 | 0.00010 | 0.0016 | 0.00049 | 0.000018 | < 0.001 |
| TP-PAD-11-04 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0090 | 9.1 | 0.0020 | 1.7 | 0.00094 | 0.00064 | 4.1 | 0.00020 | 0.000060 | 0.0027 | < 0.001 | < 0.00001 | 0.039 | 0.00060 | < 0.00002 | 0.000081 | 0.0023 | 0.00045 | 0.000010 | < 0.001 |
| TP-PAD-11-03 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.011 | 11 | 0.0030 | 1.3 | 0.00063 | 0.00067 | 4.9 | < 0.0001 | 0.000060 | 0.0024 | < 0.001 | < 0.00001 | 0.065 | 0.00070 | < 0.00002 | 0.000029 | 0.0036 | 0.00094 | 0.0000070 | < 0.001 |
| TP-PAD-11-01 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0090 | 7.5 | 0.0030 | 1.7 | 0.00092 | 0.00044 | 4.4 | 0.00010 | 0.00017 | 0.0020 | < 0.001 | < 0.00001 | 0.059 | 0.00050 | < 0.00002 | 0.000088 | 0.0017 | 0.00054 | 0.000012 | < 0.001 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
| TP-PAD-11-02 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.5 | 429 | - | 100 | 4.0 | < 0.0001 | < 0.00001 | 0.47 | 0.017 | 0.021 | < 0.00002 | < 0.00001 | 51 | < 0.000003 | 0.00019 | < 0.0005 | < 0.0005 |
| TP-PAD-11-05 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.9 | 90 | - | 0.60 | 3.2 | < 0.0001 | < 0.00001 | 0.76 | 0.024 | 0.0076 | < 0.00002 | < 0.00001 | 5.5 | 0.0000030 | 0.000077 | < 0.0005 | < 0.0005 |
| TP-PAD-11-09 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.9 | 91 | - | 0.50 | 2.2 | < 0.0001 | < 0.00001 | 0.91 | 0.33 | 0.011 | < 0.00002 | < 0.00001 | 7.2 | 0.0000040 | 0.000055 | < 0.0005 | < 0.0005 |
| TP-PAD-11-12 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 8.0 | 90 | - | 0.80 | 2.1 | < 0.0001 | < 0.00001 | 1.0 | 0.058 | 0.0081 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 |
| TP-PAD-11-07 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.8 | 153 | - | 14 | 12 | < 0.0001 | < 0.00001 | 1.0 | 0.021 | 0.011 | < 0.00002 | < 0.00001 | 14 | 0.000017 | 0.00010 | < 0.0005 | < 0.0005 |
| TP-PAD-11-08 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.8 | 101 | - | 0.70 | 4.8 | < 0.0001 | < 0.00001 | 0.71 | 0.026 | 0.011 | < 0.00002 | < 0.00001 | 9.7 | < 0.000003 | 0.000067 | < 0.0005 | 0.00070 |
| TP-PAD-11-10 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.9 | 116 | - | 3.6 | 3.2 | < 0.0001 | < 0.00001 | 0.71 | 0.041 | 0.010 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000073 | < 0.0005 | < 0.0005 |
| TP-PAD-11-11 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.9 | 82 | - | 0.70 | 1.6 | < 0.0001 | < 0.00001 | 0.92 | 0.027 | 0.0078 | < 0.00002 | < 0.00001 | 5.7 | < 0.000003 | 0.000051 | < 0.0005 | < 0.0005 |
| TP-PAD-11 COMPOSIT | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 7.8 | 120 | - | 11 | 3.5 | < 0.0001 | < 0.00001 | 0.74 | 0.035 | 0.012 | < 0.00002 | < 0.00001 | 10.0 | < 0.000003 | 0.000080 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.5 | 82 | 0 | 0.50 | 1.6 | < 0.0001 | < 0.00001 | 0.47 | 0.014 | 0.0076 | < 0.00002 | < 0.00001 | 5.5 | < 0.000003 | 0.000051 | < 0.0005 | < 0.0005 |
| | | | | | | MAXIMUM | 8.0 | 429 | 0 | 100 | 12 | < 0.0001 | < 0.00001 | 1.0 | 0.33 | 0.021 | < 0.00002 | < 0.00001 | 51 | 0.000017 | 0.00019 | < 0.0005 | 0.00070 |
| | | | | | | MEDIAN | 7.9 | 104 | nc | 2.2 | 3.5 | nc | nc | 0.81 | 0.027 | 0.010 | nc | nc | 9.2 | 0.0000030 | 0.000073 | nc | nc |
| | | | | | | AVERAGE | 7.8 | 130 | nc | 11 | 4.1 | nc | nc | 0.81 | 0.053 | 0.011 | nc | nc | 12 | 0.0000044 | 0.000080 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.13 | 92 | nc | 27 | 2.6 | nc | nc | 0.15 | 0.084 | 0.0040 | nc | nc | 12 | 0.0000039 | 0.000034 | nc | nc |
| | | | | | | 75TH PERCENTILE | 7.9 | 116 | nc | 8.6 | 4.4 | nc | nc | 0.91 | 0.038 | 0.011 | nc | nc | 10.0 | 0.0000030 | 0.000078 | nc | nc |
| M03-496-02 | 2008 | 280.75 | 289.72 | Iron Formation | Tiriganiaq | UG | 8.3 | 134 | 67 | 0.90 | 0.70 | < 0.0001 | < 0.00001 | 0.49 | 0.0032 | 0.0090 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 |
| M03-508-02 | 2011 | 93 | 101 | Iron Formation | Tiriganiaq | OP/HW | 7.9 | 104 | - | 1.5 | 0.70 | < 0.0001 | < 0.00001 | 0.37 | 0.0039 | 0.0067 | < 0.00002 | < 0.00001 | 20 | 0.0000050 | 0.000048 | < 0.0005 | < 0.0005 |
| M04-526-01 | 2008 | 216 | 225.05 | Iron Formation | Tiriganiaq | UG | 8.1 | 117 | 53 | 1.8 | 2.6 | < 0.0001 | 0.00014 | 0.32 | 0.0060 | 0.093 | 0.00014 | 0.00013 | 19 | 0.00013 | 0.00016 | < 0.0005 | < 0.0005 |
| M07-649-01_2008 | 2008 | 280.3 | 289.65 | Iron Formation | Tiriganiaq | UG | 8.4 | 239 | 126 | 1.2 | 2.4 | < 0.0001 | < 0.00001 | 0.010 | 0.0052 | 0.095 | < 0.00002 | < 0.00001 | 41 | < 0.000003 | 0.000064 | < 0.0005 | < 0.0005 |
| M96-74-01 | 2011 | 96.5 | 103.5 | Iron Formation | Tiriganiaq | OP/FW | 8.0 | 92 | - | 2.1 | 0.60 | < 0.0001 | < 0.00001 | 0.85 | 0.030 | 0.022 | < 0.00002 | < 0.00001 | 13 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 |
| M99-280-01 | 2008 | 189 | 197.25 | Iron Formation | Tiriganiaq | UG | 8.0 | 114 | 52 | 1.5 | 2.1 | < 0.0001 | < 0.00001 | 0.45 | 0.0033 | 0.11 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.9 | 92 | 52 | 0.90 | 0.60 | <0.0001 | <0.00001 | 0.010 | 0.0032 | 0.0067 | <0.00002 | <0.00001 | 13 | <0.000003 | 0.000013 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.4 | 239 | 126 | 2.1 | 2.6 | <0.0001 | 0.00014 | 0.85 | 0.030 | 0.11 | 0.00014 | 0.00013 | 41 | 0.00013 | 0.00016 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.1 | 116 | 60 | 1.5 | 1.4 | nc | nc | 0.41 | 0.0046 | 0.057 | nc | nc | 19 | 0.0000030 | 0.000043 | nc | nc |
| | | | | | | AVERAGE | 8.1 | 133 | 75 | 1.5 | 1.5 | nc | nc | 0.42 | 0.0086 | 0.056 | nc | nc | 21 | 0.000025 | 0.000058 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.18 | 54 | 35 | 0.42 | 0.95 | nc | nc | 0.27 | 0.010 | 0.048 | nc | nc | 10 | 0.000052 | 0.000051 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.2 | 130 | 82 | 1.7 | 2.3 | nc | nc | 0.48 | 0.0058 | 0.095 | nc | nc | 19 | 0.0000045 | 0.000060 | nc | nc |
| GT08-02-01_2009 | 2009 | 112 | 118 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.0 | 96 | 46 | 3.5 | 0.90 | < 0.0001 | < 0.00001 | 0.93 | 0.00090 | 0.013 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 |
| GT08-04-01_2008 | 2008 | 97.41 | 102.29 | Mafic Volcanic | Tiriganiaq | OP/FW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GT08-04-01_2009 | 2009 | 112.5 | 118.5 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 74 | 34 | 2.7 | 0.90 | < 0.0001 | 0.000010 | 0.90 | 0.0028 | 0.080 | < 0.00002 | < 0.00001 | 6.7 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| GT08-04-02 | 2008 | 80.38 | 84.3 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.4 | 188 | 78 | 11 | 2.5 | < 0.0001 | 0.000030 | 0.69 | 0.033 | 0.021 | 0.000030 | 0.000020 | 11 | 0.000021 | 0.00011 | < 0.0005 | < 0.0005 |
| GT08-04-03 | 2008 | 69.07 | 72.93 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.3 | 357 | 106 | 23 | 19 | < 0.0001 | 0.000020 | 0.21 | 0.11 | 0.028 | 0.000020 | 0.000020 | 31 | 0.000014 | 0.00016 | < 0.0005 | < 0.0005 |
| M00-474-01 | 2008 | 110 | 114.46 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.2 | 77 | 40 | 0.80 | 0.70 | < 0.0001 | 0.000010 | 1.0 | 0.011 | 0.011 | < 0.00002 | 0.000010 | 9.8 | 0.0000060 | 0.000048 | < 0.0005 | < 0.0005 |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | 8.2 | 155 | 84 | 1.4 | 0.80 | < 0.0001 | 0.000020 | 0.51 | 0.014 | 0.012 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000075 | < 0.0005 | < 0.0005 |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 87 | 44 | 1.4 | 2.2 | < 0.0001 | 0.000020 | 0.70 | 0.00050 | 0.011 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 87 | 44 | 1.4 | 2.2 | < 0.0001 | 0.000020 | 0.70 | 0.00050 | 0.011 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M05-561-02_2009 | 2009 | 101 | 106 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 106 | 60 | 1.3 | 0.80 | < 0.0001 | 0.000050 | 0.54 | 0.0032 | 0.014 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 |
| M05-561-03 | 2009 | 178 | 183 | Mafic Volcanic | Tiriganiaq | UG | 7.9 | 132 | 71 | 1.9 | 1.1 | < 0.0001 | 0.000010 | 0.42 | 0.0041 | 0.0060 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M05-564-01 | 2009 | 366 | 372 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 73 | 39 | 0.80 | 1.1 | < 0.0001 | < 0.00001 | 1.2 | 0.00030 | 0.0033 | < 0.00002 | < 0.00001 | 8.0 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M06-591-03 | 2011 | 70 | 78.5 | Mafic Volcanic | Tiriganiaq | OP/HW | 8.0 | 102 | - | 1.8 | 1.3 | < 0.0001 | < 0.00001 | 0.86 | 0.0078 | 0.011 | < 0.00002 | < 0.00001 | 9.7 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| M06-623-02 | 2011 | 81 | 87 | Mafic Volcanic | Tiriganiaq | OP/HW | 8.1 | 91 | - | 1.0 | 2.0 | < 0.0001 | < 0.00001 | 0.69 | 0.0011 | 0.0077 | < 0.00002 | < 0.00001 | 9.1 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M07-678-01 | 2008 | 47.37 | 51.82 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.2 | 100 | 50 | 2.3 | 0.90 | < 0.0001 | < 0.00001 | 0.51 | 0.021 | 0.010 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.00010 | < 0.0005 | 0.00050 |
| M08-783-02 | 2011 | 163 | 172 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.3 | 132 | - | 1.6 | 1.1 | < 0.0001 | 0.000030 | 0.61 | 0.0028 | 0.013 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 |
| M95-25-04 | 2011 | 69 | 77.5 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.0 | 104 | - | 1.0 | 1.2 | < 0.0001 | < 0.00001 | 0.58 | 0.0033 | 0.011 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M96-03-03 | 2011 | 87 | 96 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.0 | 81 | - | 0.40 | 1.5 | < 0.0001 | < 0.00001 | 1.0 | 0.00070 | 0.0060 | < 0.00002 | < 0.00001 | 9.4 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 |
| M97-110-01 | 2009 | 262 | 268 | Mafic Volcanic | Tiriganiaq | UG | 7.7 | 112 | 57 | 0.40 | 4.2 | < 0.0001 | 0.000020 | 0.68 | 0.0041 | 0.0074 | < 0.00002 | < 0.00001 | 13 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 |
| M97-130-01 | 2009 | 242 | 246 | Mafic Volcanic | Tiriganiaq | UG | 7.8 | 60 | 33 | 0.30 | 1.0 | < 0.0001 | 0.000010 | 1.1 | 0.0012 | 0.0059 | < 0.00002 | < 0.00001 | 7.0 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M97-130-02 | 2009 | 280 | 288 | Mafic Volcanic | Tiriganiaq | UG | 7.9 | 125 | 69 | 0.60 | 0.90 | < 0.0001 | 0.000020 | 0.49 | 0.00080 | 0.0071 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M97-133-01 | 2009 | 255 | 261 | Mafic Volcanic | Tiriganiaq | UG | 7.8 | 84 | 47 | 0.40 | 1.6 | < 0.0001 | 0.000040 | 0.73 | 0.00090 | 0.012 | < 0.00002 | 0.000010 | 12 | 0.000012 | 0.000043 | < 0.0005 | < 0.0005 |
| M97-134-01 | 2009 | 305 | 309.5 | Mafic Volcanic | Tiriganiaq | UG | 7.6 | 107 | 32 | 0.40 | 25 | < 0.0001 | < 0.00001 | 0.85 | 0.00060 | 0.0040 | < 0.00002 | < 0.00001 | 17 | < 0.000003 | 0.000025 | < 0.0005 | < 0.0005 |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 134 | 72 | 0.30 | 1.3 | < 0.0001 | 0.00010 | 0.71 | 0.0017 | 0.0092 | 0.000080 | 0.00010 | 14 | 0.000055 | 0.00012 | < 0.0005 | < 0.0005 |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 134 | 72 | 0.30 | 1.3 | < 0.0001 | 0.00010 | 0.71 | 0.0017 | 0.0092 | 0.000080 | 0.00010 | 14 | 0.000055 | 0.00012 | < 0.0005 | < 0.0005 |
| M97-136-01 | 2009 | 215 | 220 | Mafic Volcanic | Tiriganiaq | UG | 7.8 | 127 | 69 | 0.50 | 1.0 | < 0.0001 | 0.000020 | 0.58 | 0.019 | 0.0061 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000068 | < 0.0005 | < 0.0005 |
| M97-137-01 | 2009 | 237 | 242 | Mafic Volcanic | Tiriganiaq | UG | 7.9 | 86 | 47 | 0.50 | 0.60 | < 0.0001 | 0.000030 | 0.91 | 0.00070 | 0.014 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M97-138-01 | 2009 | 221.5 | 227.5 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 95 | 51 | 0.70 | 0.60 | < 0.0001 | < 0.00001 | 0.82 | 0.0024 | 0.0046 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 |
| M97-139-01 | 2009 | 142 | 149 | Mafic Volcanic | Tiriganiaq | UG | 8.4 | 218 | 117 | 0.80 | 1.0 | < 0.0001 | 0.000020 | 0.50 | 0.071 | 0.012 | < 0.00002 | < 0.00001 | 16 | 0.0000080 | 0.00034 | < 0.0005 | < 0.0005 |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | 8.3 | 164 | 89 | 0.90 | 0.80 | < 0.0001 | < 0.00001 | 0.42 | 0.0014 | 0.0074 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000037 | < 0.0005 | 0.00060 |
| M97-143-01 | 2009 | 564 | 570 | Mafic Volcanic | Tiriganiaq | UG | 7.4 | 103 | 36 | 1.0 | 15 | < 0.0001 | 0.000020 | 0.57 | 0.0012 | 0.0064 | < 0.00002 | < 0.00001 | 13 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M97-92-01 | 2009 | 209 | 215 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 105 | 58 | 0.80 | 0.80 | < 0.0001 | < 0.00001 | 0.67 | 0.0032 | 0.0072 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M97-93-01 | 2009 | 428.5 | 434.5 | Mafic Volcanic | Tiriganiaq | UG | 8.1 | 136 | 75 | 0.80 | 1.0 | < 0.0001 | < 0.00001 | 0.55 | 0.0077 | 0.0045 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000054 | < 0.0005 | < 0.0005 |
| M97-95-03 | 2011 | 213 | 222 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.3 | 78 | - | 0.50 | 1.0 | < 0.0001 | < 0.00001 | 0.75 | 0.0016 | 0.0038 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 |
| M98-297-01 | 2008 | 111 | 114 | Mafic Volcanic | Tiriganiaq | OP/FW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-316-01_2009 | 2009 | 93 | 99 | Mafic Volcanic | Tiriganiaq | OP/FW | 7.9 | 66 | 34 | 0.70 | 1.3 | < 0.0001 | 0.000030 | 0.97 | 0.0012 | 0.0095 | < 0.00002 | 0.000020 | 8.6 | 0.0000080 | 0.000031 | < 0.0005 | < 0.0005 |
| M98-318-01 | 2009 | 100 | 105 | Mafic Volcanic | Tiriganiaq | UG | 8.1 | 111 | 61 | 0.80 | 1.5 | < 0.0001 | 0.000040 | 0.58 | 0.00080 | 0.018 | < 0.00002 | < 0.00001 | 13 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| TP-PAD-11-02 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | < 0.002 | 16 | 0.014 | 5.2 | 0.0035 | 0.00061 | 5.8 | 0.00060 | 0.00014 | 0.0024 | < 0.001 | < 0.00001 | 0.51 | 0.00020 | < 0.00002 | 0.000033 | 0.0013 | 0.00037 | 0.0000040 | < 0.001 |
| TP-PAD-11-05 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0050 | 9.9 | 0.0020 | 0.89 | 0.0013 | 0.00034 | 3.9 | 0.00050 | 0.00011 | 0.0027 | < 0.001 | 0.000020 | 0.030 | 0.00040 | < 0.00002 | 0.000038 | 0.0029 | 0.00077 | 0.0000060 | 0.0010 |
| TP-PAD-11-09 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0070 | 9.8 | 0.0010 | 1.2 | 0.00064 | 0.00039 | 4.5 | 0.00010 | 0.000090 | 0.0024 | < 0.001 | 0.000030 | 0.035 | 0.00030 | < 0.00002 | 0.000045 | 0.0038 | 0.00046 | 0.0000020 | < 0.001 |
| TP-PAD-11-12 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.011 | 8.3 | < 0.001 | 1.3 | 0.00059 | 0.00035 | 4.5 | < 0.0001 | 0.000070 | 0.0028 | < 0.001 | < 0.00001 | 0.030 | 0.00060 | < 0.00002 | 0.000070 | 0.0032 | 0.00037 | 0.0000070 | < 0.001 |
| TP-PAD-11-07 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0030 | 12 | 0.0010 | 1.7 | 0.00065 | 0.00059 | 4.5 | 0.00010 | 0.000060 | 0.0026 | < 0.001 | 0.000030 | 0.049 | 0.00020 | < 0.00002 | 0.000046 | 0.0016 | 0.00060 | 0.0000030 | < 0.001 |
| TP-PAD-11-08 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0070 | 8.1 | 0.0010 | 1.6 | 0.00062 | 0.00088 | 4.0 | 0.00030 | 0.00010 | 0.0020 | < 0.001 | 0.000020 | 0.039 | 0.00030 | < 0.00002 | 0.000037 | 0.00088 | 0.00044 | 0.000012 | < 0.001 |
| TP-PAD-11-10 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0050 | 8.7 | < 0.001 | 2.3 | 0.0013 | 0.00045 | 4.0 | 0.00020 | 0.000050 | 0.0025 | < 0.001 | < 0.00001 | 0.052 | 0.00020 | < 0.00002 | 0.000028 | 0.0011 | 0.00046 | 0.0000030 | < 0.001 |
| TP-PAD-11-11 | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.010 | 8.0 | < 0.001 | 0.89 | 0.00036 | 0.00032 | 5.7 | < 0.0001 | 0.000070 | 0.0025 | < 0.001 | < 0.00001 | 0.023 | 0.00030 | < 0.00002 | 0.000018 | 0.0043 | 0.00065 | 0.0000040 | < 0.001 |
| TP-PAD-11 COMPOSIT | 2011 | - | - | Greywacke/Siltstone | Tiriganiaq | PAD | 0.0040 | 9.9 | 0.0020 | 1.8 | 0.0021 | 0.00055 | 5.2 | 0.00020 | 0.000080 | 0.0032 | < 0.001 | < 0.00001 | 0.057 | 0.00020 | < 0.00002 | 0.000051 | 0.0020 | 0.00051 | 0.0000080 | < 0.001 |
| | | | | | | MINIMUM | < 0.002 | 7.5 | < 0.001 | 0.89 | 0.00036 | 0.00032 | 3.9 | < 0.0001 | 0.000050 | 0.0020 | < 0.001 | < 0.00001 | 0.023 | 0.00020 | < 0.00002 | 0.000018 | 0.00088 | 0.00037 | 0.0000020 | < 0.001 |
| | | | | | | MAXIMUM | 0.011 | 16 | 0.014 | 5.2 | 0.0035 | 0.00088 | 5.8 | 0.00060 | 0.00017 | <0.0032 | < 0.001 | 0.000030 | 0.51 | 0.00070 | < 0.00002 | 0.00010 | 0.0043 | 0.00094 | 0.000018 | 0.0010 |
| | | | | | | MEDIAN | 0.0070 | 9.1 | 0.0020 | 1.7 | 0.00087 | 0.00055 | 4.5 | 0.00020 | 0.000080 | 0.0025 | nc | 0.000010 | 0.047 | 0.00030 | nc | 0.000045 | 0.0020 | 0.00049 | 0.0000070 | nc |
| | | | | | | AVERAGE | 0.0072 | 9.7 | 0.0026 | 1.8 | 0.0011 | 0.00053 | 4.6 | 0.00022 | 0.000088 | 0.0025 | nc | 0.000015 | 0.079 | 0.00038 | nc | 0.000051 | 0.0023 | 0.00054 | 0.0000074 | nc |
| | | | | | | STANDARD DEVIATION | 0.0032 | 2.2 | 0.0035 | 1.1 | 0.00083 | 0.00017 | 0.61 | 0.00016 | 0.000035 | 0.00032 | nc | 0.0000078 | 0.13 | 0.00017 | nc | 0.000026 | 0.0011 | 0.00016 | 0.0000046 | nc |
| | | | | | | 75TH PERCENTILE | 0.010 | 9.9 | 0.0020 | 1.7 | 0.0013 | 0.00064 | 4.9 | 0.00020 | 0.00010 | 0.0027 | nc | 0.000020 | 0.057 | 0.00050 | nc | 0.000070 | 0.0032 | 0.00060 | 0.000010 | nc |
| M03-496-02 | 2008 | 280.75 | 289.72 | Iron Formation | Tiriganiaq | UG | < 0.01 | 7.7 | 0.0010 | 2.7 | 0.0020 | 0.00049 | 1.7 | 0.00020 | < 0.00002 | 0.00064 | < 0.001 | 0.000020 | 0.093 | < 0.0001 | < 0.00002 | 0.0000070 | 0.00010 | 0.00039 | 0.0000060 | < 0.001 |
| M03-508-02 | 2011 | 93 | 101 | Iron Formation | Tiriganiaq | OP/HW | < 0.002 | 8.5 | < 0.001 | 2.8 | 0.0026 | 0.00016 | 0.73 | 0.00060 | 0.00012 | 0.0011 | < 0.001 | 0.000010 | 0.15 | < 0.0001 | < 0.00002 | 0.0000060 | < 0.00003 | 0.00027 | 0.0000010 | 0.0010 |
| M04-526-01 | 2008 | 216 | 225.05 | Iron Formation | Tiriganiaq | UG | < 0.01 | 1.0 | < 0.001 | 1.5 | 0.0020 | 0.00016 | 2.0 | 0.00020 | 0.00014 | 0.00079 | < 0.001 | 0.000060 | 0.27 | < 0.0001 | 0.00013 | 0.00018 | 0.00019 | 0.00031 | 0.00014 | 0.017 |
| M07-649-01_2008 | 2008 | 280.3 | 289.65 | Iron Formation | Tiriganiaq | UG | < 0.01 | 1.5 | < 0.001 | 5.2 | 0.0077 | 0.00011 | 3.0 | 0.00020 | 0.000030 | 0.00046 | < 0.001 | 0.000060 | 0.20 | < 0.0001 | < 0.00002 | 0.000023 | 0.00013 | 0.000040 | 0.000014 | 0.023 |
| M96-74-01 | 2011 | 96.5 | 103.5 | Iron Formation | Tiriganiaq | OP/FW | 0.0060 | 12 | < 0.001 | 0.90 | 0.00044 | 0.00034 | 0.66 | < 0.0001 | 0.000060 | 0.0010 | < 0.001 | < 0.00001 | 0.16 | < 0.0001 | < 0.00002 | 0.0000010 | 0.000080 | 0.00062 | 0.0000020 | < 0.001 |
| M99-280-01 | 2008 | 189 | 197.25 | Iron Formation | Tiriganiaq | UG | < 0.01 | 6.4 | 0.0010 | 1.4 | 0.00070 | 0.00022 | 2.3 | 0.00010 | < 0.00002 | 0.0012 | < 0.001 | 0.000050 | 0.12 | < 0.0001 | < 0.00002 | 0.000025 | 0.00010 | 0.00055 | 0.0000070 | 0.017 |
| | | | | | | MINIMUM | <0.002 | 1.0 | < 0.001 | 0.90 | 0.00044 | 0.00011 | 0.66 | < 0.0001 | <0.00002 | 0.00046 | <0.001 | < 0.00001 | 0.093 | <0.0001 | <0.00002 | 0.0000010 | <0.00003 | 0.000040 | 0.0000010 | < 0.001 |
| | | | | | | MAXIMUM | <0.01 | 12 | 0.0010 | 5.2 | 0.0077 | 0.00049 | 3.0 | 0.00060 | 0.00014 | 0.0012 | <0.001 | 0.000060 | 0.27 | <0.0001 | 0.00013 | 0.00018 | 0.00019 | 0.00062 | 0.00014 | 0.023 |
| | | | | | | MEDIAN | nc | 7.0 | 0.0010 | 2.1 | 0.0020 | 0.00019 | 1.8 | 0.00020 | 0.000045 | 0.00090 | nc | 0.000035 | 0.16 | nc | nc | 0.000015 | 0.00010 | 0.00035 | 0.0000065 | 0.0090 |
| | | | | | | AVERAGE | nc | 6.2 | 0.0010 | 2.4 | 0.0026 | 0.00025 | 1.7 | 0.00023 | 0.000065 | 0.00086 | nc | 0.000035 | 0.17 | nc | nc | 0.000040 | 0.00011 | 0.00036 | 0.0000029 | 0.010 |
| | | | | | | STANDARD DEVIATION | nc | 4.2 | 0 | 1.6 | 0.0027 | 0.00014 | 0.90 | 0.00019 | 0.000053 | 0.00028 | nc | 0.000024 | 0.063 | nc | nc | 0.000067 | 0.000053 | 0.00021 | 0.000056 | 0.010 |
| | | | | | | 75TH PERCENTILE | nc | 8.3 | 0.0010 | 2.8 | 0.0025 | 0.00031 | 2.2 | 0.00020 | 0.00011 | 0.0011 | nc | 0.000058 | 0.19 | nc | nc | 0.000025 | 0.00012 | 0.00051 | 0.000012 | 0.017 |
| GT08-02-01_2009 | 2009 | 112 | 118 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 0.58 | < 0.001 | 1.9 | 0.0024 | 0.000060 | 5.3 | < 0.0001 | 0.000040 | 0.0017 | < 0.001 | < 0.00001 | 0.046 | < 0.0001 | < 0.00002 | 0.0000010 | 0.00065 | 0.00047 | 0.0000010 | < 0.001 |
| GT08-04-01_2008 | 2008 | 97.41 | 102.29 | Mafic Volcanic | Tiriganiaq | OP/FW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| GT08-04-01_2009 | 2009 | 112.5 | 118.5 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 3.0 | < 0.001 | 0.81 | 0.00080 | 0.000060 | 5.4 | < 0.0001 | 0.000040 | 0.0020 | < 0.001 | 0.000020 | 0.025 | < 0.0001 | < 0.00002 | 0.000013 | 0.0016 | 0.0052 | 0.0000020 | < 0.001 |
| GT08-04-02 | 2008 | 80.38 | 84.3 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 4.5 | 0.0040 | 5.8 | 0.0039 | 0.00041 | 17 | 0.0011 | 0.000050 | 0.0026 | < 0.001 | 0.000070 | 0.021 | < 0.0001 | 0.000030 | 0.000039 | 0.00091 | 0.00087 | 0.000024 | < 0.001 |
| GT08-04-03 | 2008 | 69.07 | 72.93 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 8.8 | 0.0050 | 10 | 0.040 | 0.00066 | 18 | 0.0015 | 0.000040 | 0.0040 | < 0.001 | 0.00010 | 0.058 | 0.00050 | < 0.00002 | 0.000084 | 0.00030 | 0.00071 | 0.000015 | < 0.001 |
| M00-474-01 | 2008 | 110 | 114.46 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 2.2 | < 0.001 | 1.5 | 0.0042 | 0.000090 | 3.0 | 0.00050 | 0.000020 | 0.0017 | < 0.001 | 0.00011 | 0.030 | < 0.0001 | < 0.00002 | 0.000021 | 0.00078 | 0.00053 | 0.000011 | < 0.001 |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 7.4 | 0.0020 | 7.0 | 0.0035 | 0.00011 | 4.1 | 0.00040 | 0.000030 | 0.0031 | < 0.001 | < 0.00001 | 0.026 | < 0.0001 | < 0.00002 | 0.0000020 | 0.00050 | 0.0020 | 0.0000010 | < 0.001 |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 4.5 | 0.0020 | 2.2 | 0.0018 | 0.000060 | 4.7 | 0.00010 | < 0.00002 | 0.00060 | < 0.001 | < 0.00001 | 0.051 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00061 | 0.00088 | 0.0000010 | < 0.001 |
| M05-561-01 | 2009 | 61 | 67 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 4.5 | 0.0020 | 2.2 | 0.0018 | 0.000060 | 4.7 | 0.00010 | < 0.00002 | 0.00060 | < 0.001 | < 0.00001 | 0.051 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00061 | 0.00088 | 0.0000010 | < 0.001 |
| M05-561-02_2009 | 2009 | 101 | 106 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 6.2 | 0.0010 | 4.8 | 0.0021 | 0.00014 | 6.3 | 0.00020 | 0.000040 | 0.0015 | < 0.001 | < 0.00001 | 0.022 | < 0.0001 | < 0.00002 | 0.000022 | 0.00051 | 0.00083 | 0.0000030 | < 0.001 |
| M05-561-03 | 2009 | 178 | 183 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 3.0 | 0.0010 | 6.0 | 0.0021 | 0.000080 | 7.3 | 0.00020 | < 0.00002 | 0.0012 | < 0.001 | < 0.00001 | 0.059 | < 0.0001 | < 0.00002 | 0.0000060 | 0.00046 | 0.00072 | 0.0000010 | < 0.001 |
| M05-564-01 | 2009 | 366 | 372 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 1.1 | 0.0020 | 1.1 | 0.0021 | 0.000040 | 5.1 | < 0.0001 | 0.000030 | 0.00070 | < 0.001 | < 0.00001 | 0.018 | < 0.0001 | < 0.00002 | 0.0000030 | 0.0020 | 0.00035 | 0.0000020 | < 0.001 |
| M06-591-03 | 2011 | 70 | 78.5 | Mafic Volcanic | Tiriganiaq | OP/HW | 0.018 | 6.0 | < 0.001 | 1.6 | 0.0023 | 0.00017 | 5.3 | 0.00030 | 0.000050 | 0.0013 | < 0.001 | < 0.00001 | 0.034 | < 0.0001 | < 0.00002 | 0.0000020 | 0.00062 | 0.00043 | 0.0000010 | < 0.001 |
| M06-623-02 | 2011 | 81 | 87 | Mafic Volcanic | Tiriganiaq | OP/HW | < 0.002 | 3.3 | 0.0010 | 1.9 | 0.0020 | 0.00012 | 4.1 | < 0.0001 | 0.000060 | 0.00060 | < 0.001 | < 0.00001 | 0.095 | < 0.0001 | < 0.00002 | 0.0000030 | 0.00057 | 0.00073 | 0.0000010 | < 0.001 |
| M07-678-01 | 2008 | 47.37 | 51.82 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 3.7 | 0.0010 | 7.9 | 0.0018 | 0.00012 | 7.3 | 0.0011 | 0.000030 | 0.0011 | < 0.001 | 0.00018 | 0.035 | 0.00010 | < 0.00002 | 0.000042 | 0.00052 | 0.00035 | 0.0000030 | < 0.001 |
| M08-783-02 | 2011 | 163 | 172 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.002 | 4.3 | 0.0020 | 4.6 | 0.0036 | 0.000090 | 6.9 | < 0.0001 | < 0.00002 | 0.0019 | < 0.001 | < 0.00001 | 0.028 | < 0.0001 | < 0.00002 | 0.0000040 | 0.00036 | 0.00093 | 0.0000010 | < 0.001 |
| M95-25-04 | 2011 | 69 | 77.5 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.002 | 3.0 | 0.0020 | 4.3 | 0.0030 | 0.00018 | 7.6 | < 0.0001 | 0.00013 | 0.0014 | < 0.001 | < 0.00001 | 0.093 | < 0.0001 | < 0.00002 | 0.0000010 | 0.00046 | 0.00028 | 0.0000020 | < 0.001 |
| M96-03-03 | 2011 | 87 | 96 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.002 | 1.6 | 0.0010 | 1.3 | 0.0018 | 0.000090 | 5.0 | < 0.0001 | 0.000080 | 0.00060 | < 0.001 | < 0.00001 | 0.032 | < 0.0001 | < 0.00002 | 0.0000040 | 0.00080 | 0.00028 | 0.0000020 | < 0.001 |
| M97-110-01 | 2009 | 262 | 268 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 8.8 | 0.0020 | 4.4 | 0.0044 | 0.00019 | 4.3 | 0.00030 | 0.000030 | 0.0016 | < 0.001 | 0.000020 | 0.14 | < 0.0001 | < 0.00002 | 0.0000080 | 0.00060 | 0.0011 | 0.0000030 | < 0.001 |
| M97-130-01 | 2009 | 242 | 246 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 1.4 | 0.0010 | 0.82 | 0.0022 | 0.000030 | 6.3 | 0.00010 | < 0.00002 | 0.00090 | < 0.001 | < 0.00001 | 0.012 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0026 | 0.00050 | 0.0000010 | < 0.001 |
| M97-130-02 | 2009 | 280 | 288 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 2.1 | 0.0020 | 7.2 | 0.0023 | 0.000050 | 5.2 | 0.00020 | < 0.00002 | 0.00060 | < 0.001 | < 0.00001 | 0.017 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00047 | 0.00036 | 0.0000010 | < 0.001 |
| M97-133-01 | 2009 | 255 | 261 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 1.6 | 0.0010 | 3.1 | 0.0030 | 0.000050 | 4.1 | 0.00020 | < 0.00002 | 0.00070 | < 0.001 | < 0.00001 | 0.093 | < 0.0001 | < 0.00002 | 0.000019 | 0.00063 | 0.00043 | 0.000014 | < 0.001 |
| M97-134-01 | 2009 | 305 | 309.5 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 1.8 | 0.0020 | 2.4 | 0.0054 | 0.000040 | 3.2 | 0.00020 | < 0.00002 | 0.00040 | < 0.001 | < 0.00001 | 0.070 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00077 | 0.00031 | 0.0000020 | < 0.001 |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | 0.030 | 1.3 | 0.0040 | 4.9 | 0.0081 | 0.00013 | 8.8 | 0.00040 | 0.00012 | 0.0010 | < 0.001 | 0.000020 | 0.017 | 0.00040 | 0.000050 | 0.00018 | 0.00061 | 0.0013 | 0.000064 | 0.0030 |
| M97-135-01 | 2009 | 245 | 250 | Mafic Volcanic | Tiriganiaq | UG | 0.030 | 1.3 | 0.0040 | 4.9 | 0.0081 | 0.00013 | 8.8 | 0.00040 | 0.00012 | 0.0010 | < 0.001 | 0.000020 | 0.017 | 0.00040 | 0.000050 | 0.00018 | 0.00061 | 0.0013 | 0.000064 | 0.0030 |
| M97-136-01 | 2009 | 215 | 220 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 4.0 | 0.0020 | 5.2 | 0.0043 | 0.000050 | 5.3 | 0.00060 | < 0.00002 | 0.0026 | < 0.001 | < 0.00001 | 0.028 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00048 | 0.00049 | 0.0000010 | < 0.001 |
| M97-137-01 | 2009 | 237 | 242 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 2.9 | 0.0020 | 2.1 | 0.0026 | 0.000040 | 4.9 | 0.00020 | < 0.00002 | 0.0012 | < 0.001 | < 0.00001 | 0.017 | < 0.0001 | < 0.00002 | 0.0000040 | 0.00087 | 0.00064 | 0.0000020 | < 0.001 |
| M97-138-01 | 2009 | 221.5 | 227.5 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 2.9 | < 0.001 | 2.4 | 0.0027 | 0.000060 | 3.9 | < 0.0001 | 0.000030 | 0.0012 | < 0.001 | < 0.00001 | 0.026 | < 0.0001 | < 0.00002 | 0.0000020 | 0.00060 | 0.00099 | 0.0000020 | < 0.001 |
| M97-139-01 | 2009 | 142 | 149 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 13 | 0.0010 | 12 | 0.0074 | 0.00013 | 5.5 | 0.0028 | 0.00017 | 0.013 | < 0.001 | < 0.00001 | 0.032 | < 0.0001 | < 0.00002 | 0.000035 | 0.00073 | 0.0018 | 0.0000060 | < 0.001 |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 5.3 | < 0.001 | 8.6 | 0.0019 | 0.000090 | 4.2 | 0.00020 | 0.00016 | 0.0036 | < 0.001 | 0.000090 | 0.025 | 0.00020 | < 0.00002 | 0.0000020 | 0.00047 | 0.00090 | 0.0000050 | 0.0020 |
| M97-143-01 | 2009 | 564 | 570 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 1.4 | 0.0020 | 2.9 | 0.0026 | 0.000050 | 3.0 | 0.00020 | < 0.00002 | 0.0011 | < 0.001 | 0.000040 | 1.2 | < 0.0001 | < 0.00002 | 0.000019 | 0.00056 | 0.00094 | 0.0000040 | < 0.001 |
| M97-92-01 | 2009 | 209 | 215 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 3.5 | < 0.001 | 3.7 | 0.0024 | 0.000080 | 4.2 | < 0.0001 | 0.000030 | 0.00070 | < 0.001 | 0.000010 | 0.039 | < 0.0001 | < 0.00002 | 0.0000090 | 0.00068 | 0.0014 | 0.0000020 | < 0.001 |
| M97-93-01 | 2009 | 428.5 | 434.5 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 3.1 | 0.0030 | 5.7 | 0.0047 | 0.000040 | 5.6 | 0.00020 | 0.000020 | 0.0025 | < 0.001 | < 0.00001 | 0.025 | < 0.0001 | < 0.00002 | 0.0000030 | 0.00056 | 0.0017 | 0.0000020 | < 0.001 |
| M97-95-03 | 2011 | 213 | 222 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.002 | 2.3 | < 0.001 | 1.9 | 0.0026 | 0.000080 | 3.8 | < 0.0001 | 0.000050 | 0.00080 | < 0.001 | < 0.00001 | 0.026 | < 0.0001 | < 0.00002 | 0.0000050 | 0.00078 | 0.0023 | 0.0000020 | < 0.001 |
| M98-297-01 | 2008 | 111 | 114 | Mafic Volcanic | Tiriganiaq | OP/FW | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| M98-316-01_2009 | 2009 | 93 | 99 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 0.56 | < 0.001 | 1.1 | 0.0013 | 0.000040 | 2.8 | < 0.0001 | 0.000050 | 0.0015 | < 0.001 | < 0.00001 | 0.039 | < 0.0001 | < 0.00002 | 0.000013 | 0.0015 | 0.00036 | 0.000011 | < 0.001 |
| M98-318-01 | 2009 | 100 | 105 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 2.7 | 0.0030 | 4.8 | 0.0045 | 0.000090 | 6.8 | 0.00020 | 0.000030 | 0.00090 | < 0.001 | < 0.00001 | 0.030 | < 0.0001 | < 0.00002 | 0.0000050 | 0.00038 | 0.00053 | 0.0000020 | < 0.001 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M99-336B-04 | 2011 | 249 | 258 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.1 | 88 | - | 1.9 | 1.8 | < 0.0001 | < 0.00001 | 0.96 | 0.0037 | 0.015 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| M99-340-01 | 2008 | 103 | 107.78 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.4 | 143 | 77 | 0.50 | 1.2 | < 0.0001 | < 0.00001 | 0.65 | 0.013 | 0.011 | < 0.00002 | < 0.00001 | 13 | < 0.000003 | 0.000059 | < 0.0005 | < 0.0005 |
| M99-341-01 | 2008 | 80.6 | 84.4 | Mafic Volcanic | Tiriganiaq | OP/FW | 8.4 | 160 | 77 | 1.0 | 1.7 | < 0.0001 | < 0.00001 | 0.64 | 0.025 | 0.014 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000088 | < 0.0005 | < 0.0005 |
| M99-345-01 | 2011 | 109 | 117 | Mafic Volcanic | Tiriganiaq | OP/HW | 8.1 | 136 | - | 0.50 | 1.5 | < 0.0001 | < 0.00001 | 0.60 | 0.025 | 0.011 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 |
| M99-348-01 | 2009 | 193 | 198 | Mafic Volcanic | Tiriganiaq | UG | 8.0 | 94 | 54 | 0.30 | 0.60 | < 0.0001 | 0.000010 | 0.85 | 0.00070 | 0.0042 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 |
| M99-409-05 | 2011 | 224 | 234 | Mafic Volcanic | Tiriganiaq | OP/FW | 7.9 | 92 | - | 1.0 | 2.0 | < 0.0001 | < 0.00001 | 0.90 | 0.017 | 0.017 | < 0.00002 | < 0.00001 | 10.0 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.4 | 60 | 32 | 0.30 | 0.60 | <0.0001 | < 0.00001 | 0.21 | 0.00030 | 0.0033 | < 0.00002 | < 0.00001 | 6.7 | <0.000003 | 0.000011 | <0.0005 | < 0.0005 |
| | | | | | | MAXIMUM | 8.4 | 357 | 117 | 23 | 25 | <0.0001 | 0.00010 | 1.2 | 0.11 | 0.080 | 0.000080 | 0.00010 | 31 | 0.000055 | 0.00034 | <0.0005 | 0.00060 |
| | | | | | | MEDIAN | 8.0 | 104 | 58 | 0.80 | 1.2 | nc | 0.000010 | 0.69 | 0.0028 | 0.011 | 0.000020 | 0.000010 | 12 | 0.0000030 | 0.000032 | nc | 0.00050 |
| | | | | | | AVERAGE | 8.0 | 117 | 60 | 1.8 | 2.7 | nc | 0.000021 | 0.71 | 0.010 | 0.012 | 0.000023 | 0.000015 | 12 | 0.0000068 | 0.000053 | nc | 0.00050 |
| | | | | | | STANDARD DEVIATION | 0.21 | 51 | 21 | 3.8 | 5.0 | nc | 0.000021 | 0.20 | 0.021 | 0.012 | 0.000013 | 0.000020 | 3.8 | 0.000012 | 0.000057 | nc | 0.000016 |
| | | | | | | 75TH PERCENTILE | 8.2 | 134 | 73 | 1.4 | 1.7 | nc | 0.000020 | 0.86 | 0.011 | 0.013 | 0.000020 | 0.000010 | 13 | 0.0000030 | 0.000059 | nc | 0.00050 |
| M06-591-02 | 2011 | 40 | 50 | Ore/GW | Tiriganiaq | OP/HW | 8.0 | 130 | - | 1.3 | 1.7 | < 0.0001 | < 0.00001 | 0.60 | 0.0082 | 0.012 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 |
| M06-629-01 | 2011 | 107 | 115 | Ore/GW | Tiriganiaq | OP/HW | 8.1 | 162 | - | 1.4 | 8.7 | < 0.0001 | < 0.00001 | 0.64 | **0.88** | 0.028 | < 0.00002 | < 0.00001 | 17 | < 0.000003 | 0.000080 | < 0.0005 | 0.00080 |
| M99-417-01 | 2011 | 124 | 136 | Ore/GW | Tiriganiaq | OP/HW | 7.9 | 165 | - | 0.80 | 3.4 | < 0.0001 | < 0.00001 | 0.56 | 0.022 | 0.0077 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.000056 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.9 | 130 | nc | 0.80 | 1.7 | <0.0001 | <0.00001 | 0.56 | 0.0082 | 0.0077 | <0.00002 | <0.00001 | 14 | <0.000003 | 0.000035 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.1 | 165 | nc | 1.4 | 8.7 | <0.0001 | <0.00001 | 0.64 | 0.88 | 0.028 | <0.00002 | <0.00001 | 18 | <0.000003 | 0.000080 | <0.0005 | 0.00080 |
| | | | | | | MEDIAN | 8.0 | 162 | nc | 1.3 | 3.4 | nc | nc | 0.60 | 0.022 | 0.012 | nc | nc | 17 | nc | 0.000056 | nc | nc |
| | | | | | | AVERAGE | 8.0 | 152 | nc | 1.2 | 4.6 | nc | nc | 0.60 | 0.30 | 0.016 | nc | nc | 16 | nc | 0.000057 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.056 | 19 | nc | 0.32 | 3.7 | nc | nc | 0.040 | 0.50 | 0.011 | nc | nc | 2.2 | nc | 0.000023 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.0 | 164 | nc | 1.4 | 6.1 | nc | nc | 0.62 | 0.45 | 0.020 | nc | nc | 17 | nc | 0.000068 | nc | nc |
| M00-473-01 | 2011 | 134 | 142 | Ore/MV | Tiriganiaq | OP/FW | 8.1 | 192 | - | 2.8 | 3.2 | < 0.0001 | < 0.00001 | 0.56 | 0.34 | 0.017 | < 0.00002 | < 0.00001 | 16 | < 0.000003 | 0.00012 | < 0.0005 | 0.00050 |
| M00-483-01 | 2011 | 147 | 156 | Ore/MV | Tiriganiaq | OP/FW | 8.0 | 184 | - | 1.9 | 2.3 | < 0.0001 | < 0.00001 | 0.53 | 0.090 | 0.014 | < 0.00002 | < 0.00001 | 15 | < 0.000003 | 0.00016 | < 0.0005 | < 0.0005 |
| M00-490-01 | 2011 | 181 | 189 | Ore/MV | Tiriganiaq | OP/FW | 8.1 | 188 | - | 2.8 | 2.6 | < 0.0001 | < 0.00001 | 0.63 | **0.69** | 0.0095 | < 0.00002 | < 0.00001 | 16 | < 0.000003 | 0.00019 | < 0.0005 | < 0.0005 |
| M95-25-03 | 2011 | 51.5 | 60 | Ore/MV | Tiriganiaq | OP/HW | 8.1 | 184 | - | 2.6 | 4.7 | < 0.0001 | < 0.00001 | 0.62 | 0.39 | 0.023 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 8.0 | 184 | nc | 1.9 | 2.3 | <0.0001 | <0.00001 | 0.53 | 0.090 | 0.0095 | <0.00002 | <0.00001 | 15 | <0.000003 | 0.000046 | <0.0005 | 0.00050 |
| | | | | | | MAXIMUM | 8.1 | 192 | nc | 2.8 | 4.7 | <0.0001 | <0.00001 | 0.63 | 0.69 | 0.023 | <0.00002 | <0.00001 | 18 | <0.000003 | 0.00019 | <0.0005 | 0.00050 |
| | | | | | | MEDIAN | 8.1 | 186 | nc | 2.7 | 2.9 | nc | nc | 0.59 | 0.36 | 0.016 | nc | nc | 16 | nc | 0.00014 | nc | nc |
| | | | | | | AVERAGE | 8.1 | 187 | nc | 2.5 | 3.2 | nc | nc | 0.59 | 0.38 | 0.016 | nc | nc | 16 | nc | 0.00013 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.048 | 3.8 | nc | 0.43 | 1.1 | nc | nc | 0.048 | 0.24 | 0.0055 | nc | nc | 1.3 | nc | 0.000061 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.1 | 189 | nc | 2.8 | 3.6 | nc | nc | 0.62 | 0.46 | 0.019 | nc | nc | 16 | nc | 0.00016 | nc | nc |
| LODE 1000 ORE | 2011 | - | - | LODE 1000 Ore | Tiriganiaq | PAD | 7.8 | 394 | - | 29 | 65 | < 0.0001 | 0.000020 | 0.36 | 0.29 | 0.034 | < 0.00002 | < 0.00001 | 40 | 0.0000060 | 0.00031 | < 0.0005 | 0.00080 |
| | | | | | | | | | | | | | | | | | | | | | | | |
| LODE 1100 ORE | 2011 | - | - | LODE 1100 Ore | Tiriganiaq | PAD | 8.0 | 225 | - | 2.7 | 24 | < 0.0001 | < 0.00001 | 0.29 | 0.21 | 0.011 | < 0.00002 | < 0.00001 | 25 | < 0.000003 | 0.00011 | < 0.0005 | < 0.0005 |
| M04-519-01 | 2011 | 40 | 48 | Mafic Volcanic | Wesmeg | OP/HW | 7.9 | 134 | - | 2.3 | 0.80 | < 0.0001 | < 0.00001 | 0.42 | 0.00090 | 0.013 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M04-519-02 | 2011 | 70 | 79 | Mafic Volcanic | Wesmeg | OP/HW | 8.0 | 124 | - | 0.50 | 0.30 | < 0.0001 | < 0.00001 | 0.43 | 0.0095 | 0.0079 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 |
| M04-519-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | 8.1 | 160 | - | 0.70 | 0.60 | < 0.0001 | < 0.00001 | 0.33 | 0.017 | 0.021 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000082 | < 0.0005 | < 0.0005 |
| M04-519-04 | 2011 | 127.5 | 136.5 | Mafic Volcanic | Wesmeg | OP/HW | 8.0 | 107 | - | 0.70 | 0.90 | < 0.0001 | < 0.00001 | 0.59 | 0.0030 | 0.012 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 |
| M10-981-01 | 2011 | 17 | 27 | Mafic Volcanic | Wesmeg | OP/HW | 7.9 | 106 | - | 4.0 | 2.3 | < 0.0001 | < 0.00001 | 0.60 | 0.0014 | 0.013 | < 0.00002 | < 0.00001 | 6.5 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| M10-981-02 | 2011 | 50 | 59 | Mafic Volcanic | Wesmeg | OP/HW | 7.9 | 101 | - | 2.0 | 1.0 | < 0.0001 | < 0.00001 | 0.60 | 0.00070 | 0.0097 | < 0.00002 | < 0.00001 | 8.7 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M10-981-03 | 2011 | 84.5 | 93 | Mafic Volcanic | Wesmeg | OP/FW | 7.8 | 124 | - | 3.9 | 0.90 | < 0.0001 | < 0.00001 | 0.56 | 0.0050 | 0.011 | < 0.00002 | 0.000020 | 10 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 |
| M10-981-04 | 2011 | 111 | 120 | Mafic Volcanic | Wesmeg | OP/FW | 8.5 | 144 | - | 8.6 | 2.7 | < 0.0001 | < 0.00001 | 1.2 | 0.020 | 0.023 | < 0.00002 | 0.000030 | 2.9 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 |
| M10-985-01 | 2011 | 23 | 32 | Mafic Volcanic | Wesmeg | OP/HW | 8.1 | 128 | - | 5.6 | 7.4 | < 0.0001 | 0.000030 | 0.90 | 0.023 | 0.013 | < 0.00002 | 0.000040 | 8.6 | < 0.000003 | 0.00010 | 0.0023 | 0.0025 |
| M10-985-02 | 2011 | 57 | 65 | Mafic Volcanic | Wesmeg | OP/HW | 8.1 | 94 | - | 3.1 | 0.80 | < 0.0001 | < 0.00001 | 1.1 | 0.015 | 0.012 | < 0.00002 | < 0.00001 | 6.4 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| M10-987-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Wesmeg | OP/HW | 7.9 | 124 | - | 1.8 | 0.70 | < 0.0001 | < 0.00001 | 0.34 | 0.016 | 0.0078 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M10-987-02 | 2011 | 84 | 93 | Mafic Volcanic | Wesmeg | OP/HW | 8.0 | 145 | - | 3.0 | 1.9 | < 0.0001 | < 0.00001 | 0.41 | 0.011 | 0.0095 | < 0.00002 | 0.000010 | 12 | < 0.000003 | 0.000049 | < 0.0005 | < 0.0005 |
| M10-987-04 | 2011 | 215 | 223 | Mafic Volcanic | Wesmeg | OP/FW | 7.9 | 81 | - | 2.6 | 0.80 | < 0.0001 | < 0.00001 | 0.68 | 0.0034 | 0.012 | < 0.00002 | < 0.00001 | 7.1 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| M10-988-01 | 2011 | 22 | 30 | Mafic Volcanic | Wesmeg | OP/HW | 8.0 | 80 | - | 2.6 | 0.90 | < 0.0001 | < 0.00001 | 0.66 | 0.0021 | 0.014 | < 0.00002 | < 0.00001 | 5.8 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 |
| M10-988-02 | 2011 | 60 | 68 | Mafic Volcanic | Wesmeg | OP/HW | 8.2 | 76 | - | 1.7 | 0.80 | < 0.0001 | < 0.00001 | 0.86 | 0.0038 | 0.0071 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| M10-988-03 | 2011 | 159.5 | 168 | Mafic Volcanic | Wesmeg | OP/HW | 8.4 | 63 | - | 2.2 | 1.0 | < 0.0001 | < 0.00001 | 0.73 | 0.0034 | 0.014 | < 0.00002 | < 0.00001 | 4.9 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 |
| M10-992-01 | 2011 | 13.5 | 22 | Mafic Volcanic | Wesmeg | OP/FW | 8.2 | 79 | - | 4.7 | 1.5 | < 0.0001 | < 0.00001 | 0.87 | 0.0028 | 0.013 | < 0.00002 | < 0.00001 | 5.8 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M10-992-02 | 2011 | 43.5 | 52.5 | Mafic Volcanic | Wesmeg | OP/FW | 8.2 | 94 | - | 3.9 | 1.1 | < 0.0001 | < 0.00001 | 0.65 | 0.0028 | 0.011 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| M10-992-03 | 2011 | 83 | 92 | Mafic Volcanic | Wesmeg | OP/FW | 8.2 | 121 | - | 2.1 | 0.30 | < 0.0001 | < 0.00001 | 0.39 | 0.0013 | 0.0096 | < 0.00002 | < 0.00001 | 9.4 | < 0.000003 | 0.000085 | < 0.0005 | < 0.0005 |
| M10-992-05 | 2011 | 135 | 144 | Mafic Volcanic | Wesmeg | OP/FW | 7.9 | 102 | - | 0.80 | 0.70 | < 0.0001 | < 0.00001 | 0.47 | 0.0042 | 0.0071 | < 0.00002 | < 0.00001 | 8.3 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 |
| M10-994-01 | 2011 | 28 | 36.5 | Mafic Volcanic | Wesmeg | OP/HW | 7.9 | 88 | - | 2.4 | 0.60 | < 0.0001 | < 0.00001 | 0.25 | 0.0022 | 0.0078 | < 0.00002 | < 0.00001 | 6.3 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| M10-994-02 | 2011 | 58 | 67 | Mafic Volcanic | Wesmeg | OP/HW | 8.2 | 122 | - | 2.1 | 1.7 | < 0.0001 | < 0.00001 | 0.52 | 0.018 | 0.0083 | < 0.00002 | < 0.00001 | 6.3 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M10-994-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | 8.1 | 113 | - | 1.0 | 0.60 | < 0.0001 | < 0.00001 | 0.56 | 0.016 | 0.0094 | < 0.00002 | < 0.00001 | 9.0 | < 0.000003 | 0.00012 | < 0.0005 | < 0.0005 |
| M10-994-04 | 2011 | 131.5 | 140 | Mafic Volcanic | Wesmeg | OP/FW | 8.9 | 82 | - | 1.7 | 0.70 | < 0.0001 | < 0.00001 | 0.80 | 0.010 | 0.014 | < 0.00002 | < 0.00001 | 3.0 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 |
| M10-998-01 | 2011 | 10 | 19 | Mafic Volcanic | Wesmeg | OP/HW | 8.5 | 70 | - | 3.3 | 1.4 | < 0.0001 | < 0.00001 | 0.83 | 0.0035 | 0.015 | < 0.00002 | < 0.00001 | 5.3 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M10-998-02 | 2011 | 36 | 45 | Mafic Volcanic | Wesmeg | OP/HW | 9.2 | 88 | - | 2.6 | 1.5 | < 0.0001 | < 0.00001 | 0.83 | 0.0030 | 0.015 | < 0.00002 | < 0.00001 | 3.6 | < 0.000003 | 0.0000090 | < 0.0005 | < 0.0005 |
| M10-998-03 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/HW | 7.8 | 97 | - | 1.2 | 0.80 | < 0.0001 | < 0.00001 | 0.59 | 0.0075 | 0.011 | < 0.00002 | < 0.00001 | 6.7 | < 0.000003 | 0.000052 | < 0.0005 | < 0.0005 |
| M10-998-04 | 2011 | 97 | 106 | Mafic Volcanic | Wesmeg | OP/FW | 8.1 | 100 | - | 2.0 | 0.60 | < 0.0001 | < 0.00001 | 0.60 | 0.0022 | 0.0092 | < 0.00002 | 0.000010 | 9.1 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 |
| M10-998-05 | 2011 | 191 | 200 | Mafic Volcanic | Wesmeg | OP/FW | 8.6 | 160 | - | 2.1 | 0.80 | < 0.0001 | < 0.00001 | 0.060 | 0.41 | 0.0083 | < 0.00002 | < 0.00001 | 9.7 | < 0.000003 | 0.00022 | < 0.0005 | < 0.0005 |
| M11-1042-01 | 2011 | 16 | 24.5 | Mafic Volcanic | Wesmeg | OP/HW | 8.3 | 193 | - | 13 | 1.6 | < 0.0001 | < 0.00001 | 0.38 | 0.021 | 0.018 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000051 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M99-336B-04 | 2011 | 249 | 258 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.002 | 2.5 | 0.0010 | 1.3 | 0.0045 | 0.00011 | 5.0 | < 0.0001 | 0.000070 | 0.0031 | < 0.001 | < 0.00001 | 0.037 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0010 | 0.00091 | 0.0000010 | < 0.001 |
| M99-340-01 | 2008 | 103 | 107.78 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 5.8 | 0.0030 | 6.0 | 0.0037 | 0.00015 | 6.1 | 0.00040 | < 0.00002 | 0.0052 | < 0.001 | 0.000030 | 0.028 | < 0.0001 | < 0.00002 | 0.000018 | 0.00060 | 0.00053 | 0.0000080 | < 0.001 |
| M99-341-01 | 2008 | 80.6 | 84.4 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 6.0 | 0.0030 | 6.7 | 0.0035 | 0.00033 | 6.7 | 0.00080 | < 0.00002 | 0.0051 | < 0.001 | 0.000020 | 0.030 | 0.00010 | < 0.00002 | 0.000021 | 0.00066 | 0.00059 | 0.0000030 | < 0.001 |
| M99-345-01 | 2011 | 109 | 117 | Mafic Volcanic | Tiriganiaq | OP/HW | < 0.002 | 5.4 | 0.0030 | 4.8 | 0.0033 | 0.00015 | 8.9 | 0.00040 | 0.000070 | 0.0013 | < 0.001 | < 0.00001 | 0.025 | < 0.0001 | < 0.00002 | 0.0000040 | 0.00081 | 0.00048 | 0.0000010 | < 0.001 |
| M99-348-01 | 2009 | 193 | 198 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 1.9 | 0.0020 | 3.0 | 0.0024 | 0.000030 | 5.7 | 0.00020 | < 0.00002 | 0.00060 | < 0.001 | < 0.00001 | 0.017 | < 0.0001 | < 0.00002 | 0.0000010 | 0.00075 | 0.00015 | 0.0000010 | < 0.001 |
| M99-409-05 | 2011 | 224 | 234 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.002 | 4.3 | 0.0010 | 1.7 | 0.0020 | 0.00019 | 5.4 | < 0.0001 | < 0.00002 | 0.0015 | < 0.001 | < 0.00001 | 0.063 | 0.00010 | < 0.00002 | < 0.000001 | 0.00094 | 0.00023 | 0.0000010 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 0.56 | < 0.001 | 0.81 | 0.00080 | 0.000030 | 2.8 | < 0.0001 | < 0.00002 | 0.00040 | <0.001 | 0.000010 | 0.012 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00030 | 0.00015 | 0.0000010 | <0.001 |
| | | | | | | MAXIMUM | 0.030 | 13 | 0.0050 | 12 | 0.040 | 0.00066 | 18 | 0.0028 | 0.00017 | 0.013 | <0.001 | 0.00018 | 1.2 | 0.00050 | 0.000050 | 0.00018 | 0.0026 | 0.0052 | 0.0000064 | 0.0030 |
| | | | | | | MEDIAN | 0.010 | 3.0 | 0.0020 | 3.7 | 0.0026 | 0.000090 | 5.3 | 0.00020 | 0.000030 | 0.0013 | nc | 0.000010 | 0.030 | 0.00010 | 0.000020 | 0.0000040 | 0.00061 | 0.00071 | 0.0000020 | 0.0010 |
| | | | | | | AVERAGE | 0.0096 | 3.7 | 0.0019 | 4.1 | 0.0041 | 0.00012 | 6.0 | 0.00036 | 0.000046 | 0.0019 | nc | 0.000025 | 0.069 | 0.00013 | 0.000022 | 0.000019 | 0.00075 | 0.00089 | 0.0000067 | 0.0011 |
| | | | | | | STANDARD DEVIATION | 0.0059 | 2.5 | 0.0011 | 2.6 | 0.0060 | 0.00012 | 3.1 | 0.00050 | 0.000039 | 0.0021 | nc | 0.000035 | 0.19 | 0.000090 | 0.0000067 | 0.000040 | 0.00044 | 0.00085 | 0.000014 | 0.00046 |
| | | | | | | 75TH PERCENTILE | 0.010 | 4.5 | 0.0020 | 5.7 | 0.0042 | 0.00013 | 6.7 | 0.00040 | 0.000050 | 0.0020 | nc | 0.000020 | 0.051 | 0.00010 | 0.000020 | 0.000019 | 0.00078 | 0.00094 | 0.0000040 | 0.0010 |
| M06-591-02 | 2011 | 40 | 50 | Ore/GW | Tiriganiaq | OP/HW | 0.0090 | 8.0 | 0.0010 | 2.5 | 0.0020 | 0.00042 | 5.5 | 0.00050 | 0.000060 | 0.0010 | < 0.001 | < 0.00001 | 0.057 | < 0.0001 | < 0.00002 | 0.000064 | 0.000090 | 0.00059 | 0.0000020 | 0.0010 |
| M06-629-01 | 2011 | 107 | 115 | Ore/GW | Tiriganiaq | OP/HW | 0.0030 | 12 | 0.0020 | 4.1 | 0.0031 | 0.0015 | 7.3 | 0.00040 | 0.00021 | 0.0063 | < 0.001 | 0.000050 | 0.042 | < 0.0001 | < 0.00002 | 0.000052 | 0.0017 | 0.00098 | 0.0000020 | < 0.001 |
| M99-417-01 | 2011 | 124 | 136 | Ore/GW | Tiriganiaq | OP/HW | 0.0040 | 13 | 0.0030 | 3.7 | 0.0033 | 0.00017 | 4.7 | < 0.0001 | < 0.00002 | 0.0011 | < 0.001 | < 0.00001 | 0.097 | 0.00020 | < 0.00002 | 0.00023 | 0.00024 | 0.0013 | 0.0000020 | < 0.001 |
| | | | | | | MINIMUM | 0.0030 | 8.0 | 0.0010 | 2.5 | 0.0020 | 0.00017 | 4.7 | <0.0001 | <0.00002 | 0.0010 | <0.001 | <0.00001 | 0.042 | <0.0001 | <0.00002 | 0.000052 | 0.000090 | 0.00059 | 0.0000020 | < 0.001 |
| | | | | | | MAXIMUM | 0.0090 | 13 | 0.0030 | 4.1 | 0.0033 | 0.0015 | 7.3 | 0.00050 | 0.00021 | 0.0063 | <0.001 | 0.000050 | 0.097 | 0.00020 | <0.00002 | 0.00023 | 0.0017 | 0.0013 | 0.0000020 | 0.0010 |
| | | | | | | MEDIAN | 0.0040 | 12 | 0.0020 | 3.7 | 0.0031 | 0.00042 | 5.5 | nc | nc | 0.0011 | nc | nc | 0.057 | nc | nc | 0.000064 | 0.00024 | 0.00098 | 0.0000020 | nc |
| | | | | | | AVERAGE | 0.0053 | 11 | 0.0020 | 3.4 | 0.0028 | 0.00070 | 5.8 | nc | nc | 0.0028 | nc | nc | 0.065 | nc | nc | 0.00012 | 0.00068 | 0.00096 | 0.0000020 | nc |
| | | | | | | STANDARD DEVIATION | 0.0032 | 2.3 | 0.0010 | 0.83 | 0.00072 | 0.00071 | 1.3 | nc | nc | 0.0030 | nc | nc | 0.028 | nc | nc | 0.00010 | 0.00090 | 0.00036 | 0 | nc |
| | | | | | | 75TH PERCENTILE | 0.0065 | 12 | 0.0025 | 3.9 | 0.0032 | 0.00097 | 6.4 | nc | nc | 0.0037 | nc | nc | 0.077 | nc | nc | 0.00015 | 0.00098 | 0.0011 | 0.0000020 | nc |
| M00-473-01 | 2011 | 134 | 142 | Ore/MV | Tiriganiaq | OP/FW | < 0.002 | 9.2 | 0.0040 | 8.1 | 0.0076 | 0.00066 | 8.2 | 0.0011 | 0.000090 | 0.0031 | < 0.001 | 0.000020 | 0.039 | 0.00010 | < 0.00002 | 0.000019 | 0.00091 | 0.00052 | 0.0000020 | < 0.001 |
| M00-483-01 | 2011 | 147 | 156 | Ore/MV | Tiriganiaq | OP/FW | < 0.002 | 12 | 0.0030 | 8.1 | 0.0074 | 0.00029 | 6.2 | 0.0013 | 0.000070 | 0.0013 | < 0.001 | < 0.00001 | 0.037 | 0.00010 | < 0.00002 | 0.000019 | 0.00053 | 0.0011 | 0.0000010 | < 0.001 |
| M00-490-01 | 2011 | 181 | 189 | Ore/MV | Tiriganiaq | OP/FW | < 0.002 | 9.7 | 0.0030 | 8.7 | 0.0071 | 0.00058 | 6.3 | 0.0017 | 0.00010 | 0.0070 | < 0.001 | < 0.00001 | 0.045 | 0.00020 | < 0.00002 | 0.000042 | 0.0014 | 0.00075 | 0.0000010 | < 0.001 |
| M95-25-03 | 2011 | 51.5 | 60 | Ore/MV | Tiriganiaq | OP/HW | 0.0020 | 13 | 0.0010 | 5.0 | 0.0024 | 0.0021 | 4.0 | 0.00050 | 0.00013 | 0.0033 | < 0.001 | < 0.00001 | 0.045 | 0.00020 | < 0.00002 | 0.000047 | 0.00064 | 0.0011 | 0.0000030 | < 0.001 |
| | | | | | | MINIMUM | < 0.002 | 9.2 | 0.0010 | 5.0 | 0.0024 | 0.00029 | 4.0 | 0.00050 | 0.000070 | 0.0013 | <0.001 | <0.00001 | 0.037 | 0.00010 | <0.00002 | 0.000019 | 0.00053 | 0.00052 | 0.0000010 | <0.001 |
| | | | | | | MAXIMUM | 0.0020 | 13 | 0.0040 | 8.7 | 0.0076 | 0.0021 | 8.2 | 0.0017 | 0.00013 | 0.0070 | <0.001 | 0.000020 | 0.045 | 0.00020 | <0.00002 | 0.000047 | 0.0014 | 0.0011 | 0.0000030 | <0.001 |
| | | | | | | MEDIAN | nc | 11 | 0.0030 | 8.1 | 0.0073 | 0.00062 | 6.3 | 0.0012 | 0.000095 | 0.0032 | nc | nc | 0.042 | 0.00015 | nc | 0.000031 | 0.00078 | 0.00091 | 0.0000015 | nc |
| | | | | | | AVERAGE | nc | 11 | 0.0028 | 7.5 | 0.0061 | 0.00091 | 6.2 | 0.0012 | 0.000098 | 0.0037 | nc | nc | 0.042 | 0.00015 | nc | 0.000032 | 0.00087 | 0.00086 | 0.0000018 | nc |
| | | | | | | STANDARD DEVIATION | nc | 1.8 | 0.0013 | 1.7 | 0.0025 | 0.00082 | 1.7 | 0.00050 | 0.000025 | 0.0024 | nc | nc | 0.0040 | 0.000058 | nc | 0.000015 | 0.00039 | 0.00027 | ########## | nc |
| | | | | | | 75TH PERCENTILE | nc | 12 | 0.0033 | 8.3 | 0.0075 | 0.0010 | 6.8 | 0.0014 | 0.00011 | 0.0042 | nc | nc | 0.045 | 0.00020 | nc | 0.000043 | 0.0010 | 0.0011 | 0.0000023 | nc |
| LODE 1000 ORE | 2011 | - | - | LODE 1000 Ore | Tiriganiaq | PAD | 0.0040 | 15 | 0.0060 | 9.4 | 0.017 | 0.0083 | 10 | 0.00060 | 0.00057 | 0.0035 | 0.0040 | 0.000040 | 0.16 | 0.00020 | 0.000020 | 0.00050 | 0.00072 | 0.0022 | 0.0000040 | < 0.001 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LODE 1100 ORE | 2011 | - | - | LODE 1100 Ore | Tiriganiaq | PAD | 0.0040 | 17 | 0.0030 | 4.6 | 0.0054 | 0.0019 | 2.4 | 0.00020 | 0.00014 | 0.0021 | < 0.001 | < 0.00001 | 0.20 | 0.00020 | < 0.00002 | 0.00014 | 0.00012 | 0.0011 | 0.0000030 | < 0.001 |
| M04-519-01 | 2011 | 40 | 48 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 4.1 | 0.0020 | 6.3 | 0.0015 | 0.000080 | 7.3 | 0.00040 | 0.000060 | 0.0011 | < 0.001 | < 0.00001 | 0.021 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00050 | 0.00040 | 0.0000020 | 0.0040 |
| M04-519-02 | 2011 | 70 | 79 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 5.2 | < 0.001 | 5.7 | 0.00054 | 0.000070 | 4.2 | 0.00040 | 0.000040 | 0.0019 | < 0.001 | < 0.00001 | 0.014 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00065 | 0.00056 | 0.0000010 | < 0.001 |
| M04-519-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 5.9 | 0.0010 | 10 | 0.0026 | 0.00034 | 3.2 | 0.0010 | 0.00011 | 0.0046 | < 0.001 | < 0.00001 | 0.036 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00053 | 0.0013 | 0.0000020 | 0.0050 |
| M04-519-04 | 2011 | 127.5 | 136.5 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 6.0 | < 0.001 | 2.8 | 0.0031 | 0.00019 | 3.9 | 0.00040 | 0.000050 | 0.0039 | < 0.001 | < 0.00001 | 0.033 | < 0.0001 | < 0.00002 | 0.0000020 | 0.00073 | 0.0019 | 0.0000020 | < 0.001 |
| M10-981-01 | 2011 | 17 | 27 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 6.4 | < 0.001 | 1.5 | 0.00082 | 0.00071 | 8.3 | 0.00020 | 0.000040 | 0.0018 | < 0.001 | < 0.00001 | 0.038 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0015 | 0.0027 | 0.0000030 | < 0.001 |
| M10-981-02 | 2011 | 50 | 59 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 3.5 | < 0.001 | 2.5 | 0.0010 | 0.00029 | 6.8 | 0.00030 | 0.000050 | 0.0027 | < 0.001 | < 0.00001 | 0.028 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00070 | 0.0013 | 0.0000020 | < 0.001 |
| M10-981-03 | 2011 | 84.5 | 93 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 5.3 | < 0.001 | 3.2 | 0.0025 | 0.00031 | 6.9 | 0.00010 | 0.00010 | 0.0035 | < 0.001 | < 0.00001 | 0.034 | 0.00010 | 0.000030 | 0.000012 | 0.00069 | 0.00080 | 0.0000030 | < 0.001 |
| M10-981-04 | 2011 | 111 | 120 | Mafic Volcanic | Wesmeg | OP/FW | 0.0070 | 6.7 | < 0.001 | 0.34 | 0.00025 | 0.00031 | 24 | 0.00040 | 0.000080 | 0.0024 | < 0.001 | < 0.00001 | 0.013 | 0.00060 | < 0.00002 | 0.0000010 | 0.0054 | 0.00098 | 0.0000030 | < 0.001 |
| M10-985-01 | 2011 | 23 | 32 | Mafic Volcanic | Wesmeg | OP/HW | 0.036 | 8.7 | < 0.001 | 1.5 | 0.0014 | 0.00074 | 8.8 | 0.0025 | 0.00086 | 0.0049 | < 0.001 | 0.00088 | 0.045 | 0.00030 | < 0.00002 | 0.000081 | 0.0022 | 0.00037 | 0.000014 | 0.010 |
| M10-985-02 | 2011 | 57 | 65 | Mafic Volcanic | Wesmeg | OP/HW | 0.0060 | 8.1 | < 0.001 | 0.60 | 0.00041 | 0.00028 | 5.4 | 0.00020 | 0.000060 | 0.0036 | < 0.001 | < 0.00001 | 0.022 | 0.00020 | < 0.00002 | 0.0000090 | 0.0017 | 0.0031 | 0.000010 | < 0.001 |
| M10-987-01 | 2011 | 31.5 | 40 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 2.2 | < 0.001 | 5.8 | 0.0014 | 0.00013 | 3.6 | 0.00010 | 0.000070 | 0.0021 | < 0.001 | < 0.00001 | 0.064 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00039 | 0.0017 | 0.0000010 | < 0.001 |
| M10-987-02 | 2011 | 84 | 93 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 5.1 | 0.0010 | 5.7 | 0.0018 | 0.00011 | 4.9 | 0.00010 | 0.000050 | 0.0015 | < 0.001 | < 0.00001 | 0.043 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00039 | 0.0036 | 0.0000010 | < 0.001 |
| M10-987-04 | 2011 | 215 | 223 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 2.8 | < 0.001 | 1.2 | 0.00074 | 0.00011 | 5.7 | < 0.0001 | 0.000060 | 0.0026 | < 0.001 | < 0.00001 | 0.026 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0014 | 0.0043 | 0.0000010 | < 0.001 |
| M10-988-01 | 2011 | 22 | 30 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 3.3 | < 0.001 | 0.90 | 0.00058 | 0.00010 | 7.2 | < 0.0001 | 0.000050 | 0.0018 | < 0.001 | < 0.00001 | 0.031 | < 0.0001 | 0.000030 | < 0.000001 | 0.0014 | 0.0017 | 0.0000010 | < 0.001 |
| M10-988-02 | 2011 | 60 | 68 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 1.5 | < 0.001 | 0.91 | 0.0013 | 0.000050 | 6.0 | < 0.0001 | 0.000070 | 0.0030 | < 0.001 | < 0.00001 | 0.035 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0014 | 0.0028 | 0.0000020 | < 0.001 |
| M10-988-03 | 2011 | 159.5 | 168 | Mafic Volcanic | Wesmeg | OP/HW | 0.0040 | 1.3 | < 0.001 | 0.55 | 0.00034 | 0.000070 | 6.1 | < 0.0001 | 0.000060 | 0.0048 | < 0.001 | < 0.00001 | 0.013 | 0.00010 | < 0.00002 | < 0.000001 | 0.0069 | 0.0028 | < 0.000001 | < 0.001 |
| M10-992-01 | 2011 | 13.5 | 22 | Mafic Volcanic | Wesmeg | OP/FW | 0.0020 | 1.3 | < 0.001 | 0.60 | 0.00065 | 0.000070 | 7.6 | < 0.0001 | 0.000060 | 0.0025 | < 0.001 | 0.000020 | 0.016 | 0.00020 | < 0.00002 | < 0.000001 | 0.0034 | 0.0024 | < 0.000001 | < 0.001 |
| M10-992-02 | 2011 | 43.5 | 52.5 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 1.2 | < 0.001 | 1.2 | 0.0012 | 0.00020 | 9.6 | < 0.0001 | 0.000080 | 0.0014 | < 0.001 | < 0.00001 | 0.016 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0015 | 0.0035 | < 0.000001 | < 0.001 |
| M10-992-03 | 2011 | 83 | 92 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 2.8 | < 0.001 | 5.1 | 0.00057 | 0.000060 | 6.2 | 0.00030 | 0.000080 | 0.00080 | < 0.001 | < 0.00001 | 0.015 | < 0.0001 | < 0.00002 | 0.0000010 | 0.00045 | 0.0016 | 0.0000020 | < 0.001 |
| M10-992-05 | 2011 | 135 | 144 | Mafic Volcanic | Wesmeg | OP/FW | 0.0030 | 1.5 | < 0.001 | 2.5 | 0.0021 | 0.00011 | 6.0 | < 0.0001 | 0.000080 | 0.0026 | < 0.001 | < 0.00001 | 0.037 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00065 | 0.0013 | 0.0000040 | < 0.001 |
| M10-994-01 | 2011 | 28 | 36.5 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 0.80 | < 0.001 | 2.1 | 0.00065 | 0.000090 | 6.9 | < 0.0001 | 0.000070 | 0.0015 | < 0.001 | < 0.00001 | 0.043 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0011 | 0.0046 | < 0.000001 | < 0.001 |
| M10-994-02 | 2011 | 58 | 67 | Mafic Volcanic | Wesmeg | OP/HW | 0.0020 | 8.7 | < 0.001 | 2.0 | 0.0011 | 0.00031 | 11 | 0.00010 | 0.000040 | 0.0028 | < 0.001 | 0.000010 | 0.034 | 0.00020 | < 0.00002 | 0.0000010 | 0.0014 | 0.0019 | 0.0000020 | < 0.001 |
| M10-994-03 | 2011 | 101 | 110 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 6.4 | < 0.001 | 3.0 | 0.0014 | 0.00012 | 5.6 | 0.0010 | 0.000070 | 0.0025 | < 0.001 | < 0.00001 | 0.021 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00059 | 0.0028 | 0.0000010 | < 0.001 |
| M10-994-04 | 2011 | 131.5 | 140 | Mafic Volcanic | Wesmeg | OP/FW | 0.0060 | 5.3 | < 0.001 | 0.27 | 0.00026 | 0.00017 | 8.3 | 0.00030 | 0.000090 | 0.0044 | < 0.001 | < 0.00001 | 0.0087 | 0.00030 | < 0.00002 | 0.0000030 | 0.011 | 0.0028 | 0.0000050 | < 0.001 |
| M10-998-01 | 2011 | 10 | 19 | Mafic Volcanic | Wesmeg | OP/HW | 0.0030 | 3.6 | < 0.001 | 0.53 | 0.00026 | 0.000070 | 7.4 | < 0.0001 | 0.000040 | 0.0043 | < 0.001 | < 0.00001 | 0.016 | 0.00020 | < 0.00002 | < 0.000001 | 0.0046 | 0.0020 | 0.0000010 | < 0.001 |
| M10-998-02 | 2011 | 36 | 45 | Mafic Volcanic | Wesmeg | OP/HW | 0.0020 | 10 | < 0.001 | 0.38 | 0.00024 | 0.00013 | 7.8 | < 0.0001 | 0.000040 | 0.0030 | < 0.001 | < 0.00001 | 0.028 | 0.00020 | < 0.00002 | < 0.000001 | 0.0048 | 0.0017 | 0.0000020 | < 0.001 |
| M10-998-03 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 7.9 | < 0.001 | 2.0 | 0.0012 | 0.00018 | 7.5 | 0.00020 | 0.000070 | 0.0032 | < 0.001 | < 0.00001 | 0.016 | < 0.0001 | < 0.00002 | 0.0000050 | 0.0014 | 0.0013 | 0.0000040 | < 0.001 |
| M10-998-04 | 2011 | 97 | 106 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 3.3 | < 0.001 | 2.4 | 0.0017 | 0.000080 | 5.2 | 0.00010 | 0.000080 | 0.0023 | < 0.001 | < 0.00001 | 0.024 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00054 | 0.0012 | 0.0000020 | < 0.001 |
| M10-998-05 | 2011 | 191 | 200 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 2.4 | < 0.001 | 11 | 0.00089 | 0.00010 | 4.0 | 0.0032 | 0.000080 | 0.0023 | < 0.001 | < 0.00001 | 0.069 | < 0.0001 | 0.000050 | < 0.000001 | 0.0011 | 0.0044 | 0.0000010 | 0.0010 |
| M11-1042-01 | 2011 | 16 | 24.5 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 7.3 | < 0.001 | 6.2 | 0.0013 | 0.000090 | 15 | 0.00010 | 0.000050 | 0.0016 | < 0.001 | < 0.00001 | 0.025 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00054 | 0.0014 | 0.0000010 | < 0.001 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M11-1042-02 | 2011 | 59 | 68 | Mafic Volcanic | Wesmeg | OP/HW | 8.1 | 205 | - | 12 | 2.2 | < 0.0001 | < 0.00001 | 0.24 | 0.43 | 0.012 | < 0.00002 | 0.000020 | 14 | 0.0000050 | 0.00012 | < 0.0005 | < 0.0005 |
| M11-1042-03 | 2011 | 99 | 107 | Mafic Volcanic | Wesmeg | OP/HW | 8.2 | 144 | - | 9.7 | 1.3 | < 0.0001 | < 0.00001 | 0.040 | 0.050 | 0.012 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000065 | < 0.0005 | < 0.0005 |
| M11-1051-01 | 2011 | 51 | 59 | Mafic Volcanic | Wesmeg | OP/HW | 6.1 | 3.0 | - | 12 | 1.8 | < 0.0001 | < 0.00001 | 0.38 | 0.12 | 0.015 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.00014 | < 0.0005 | < 0.0005 |
| M11-1051-02 | 2011 | 89 | 99.5 | Mafic Volcanic | Wesmeg | OP/HW | 7.8 | 135 | - | 6.9 | 1.7 | < 0.0001 | < 0.00001 | 0.10 | 0.45 | 0.013 | < 0.00002 | 0.000010 | 7.6 | < 0.000003 | 0.00011 | < 0.0005 | < 0.0005 |
| M11-1099-01 | 2011 | 17 | 25 | Mafic Volcanic | Wesmeg | OP/HW | 7.7 | 205 | - | 6.2 | 16 | < 0.0001 | < 0.00001 | 0.31 | 0.0083 | 0.019 | < 0.00002 | 0.000050 | 16 | < 0.000003 | 0.000065 | < 0.0005 | < 0.0005 |
| M11-1099-02 | 2011 | 38 | 46 | Mafic Volcanic | Wesmeg | OP/HW | 7.4 | 92 | - | 3.9 | 1.7 | < 0.0001 | < 0.00001 | 0.82 | 0.0070 | 0.017 | < 0.00002 | < 0.00001 | 4.5 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 |
| M11-1099-03 | 2011 | 72 | 80 | Mafic Volcanic | Wesmeg | OP/HW | 7.8 | 152 | - | 15 | 2.7 | < 0.0001 | < 0.00001 | 0.97 | 0.0029 | 0.025 | < 0.00002 | < 0.00001 | 4.7 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 |
| M95-11-01 | 2011 | 40 | 47 | Mafic Volcanic | Wesmeg | OP/HW | 7.8 | 87 | - | 0.40 | 0.80 | < 0.0001 | < 0.00001 | 0.58 | 0.0025 | 0.0050 | < 0.00002 | < 0.00001 | 8.4 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M95-12-01 | 2011 | 41 | 50 | Mafic Volcanic | Wesmeg | OP/HW | 7.8 | 152 | - | 0.70 | 1.1 | < 0.0001 | < 0.00001 | 0.86 | 0.0055 | 0.0078 | < 0.00002 | < 0.00001 | 6.1 | 0.0000030 | 0.000020 | < 0.0005 | < 0.0005 |
| M95-22-01 | 2011 | 11 | 20 | Mafic Volcanic | Wesmeg | OP/HW | 6.8 | < 1 | - | 1.4 | 1.4 | < 0.0001 | < 0.00001 | 0.50 | 0.0092 | 0.010 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000033 | < 0.0005 | 0.00060 |
| M95-22-02 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/FW | 7.9 | 67 | - | 0.40 | 1.0 | < 0.0001 | < 0.00001 | 0.84 | 0.00090 | 0.0080 | < 0.00002 | < 0.00001 | 6.8 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M96-50-01 | 2011 | 30 | 40 | Mafic Volcanic | Wesmeg | OP/HW | 8.3 | 67 | - | 0.70 | 1.1 | < 0.0001 | < 0.00001 | 0.91 | 0.0079 | 0.011 | < 0.00002 | < 0.00001 | 4.0 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 |
| M96-51-02 | 2011 | 40 | 50 | Mafic Volcanic | Wesmeg | OP/HW | 7.9 | 133 | - | 0.90 | 1.0 | < 0.0001 | 0.000070 | 0.33 | 0.013 | 0.0068 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000056 | < 0.0005 | < 0.0005 |
| M96-51-03 | 2011 | 73 | 82 | Mafic Volcanic | Wesmeg | OP/FW | 8.3 | 100 | - | 0.50 | 0.80 | < 0.0001 | 0.000020 | 0.44 | 0.040 | 0.015 | < 0.00002 | < 0.00001 | 8.6 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 |
| M97-111-01 | 2011 | 21 | 30 | Mafic Volcanic | Wesmeg | OP/HW | 8.2 | 94 | - | 0.50 | 1.9 | < 0.0001 | 0.000010 | 0.59 | 0.0026 | 0.020 | < 0.00002 | < 0.00001 | 9.2 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M97-111-02 | 2011 | 95 | 104 | Mafic Volcanic | Wesmeg | OP/FW | 8.1 | 120 | - | 0.50 | 1.6 | < 0.0001 | 0.000010 | 0.38 | 0.0013 | 0.0070 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M97-111-03 | 2011 | 126 | 133 | Mafic Volcanic | Wesmeg | OP/FW | 8.1 | 83 | - | 0.50 | 0.60 | < 0.0001 | < 0.00001 | 0.36 | 0.0018 | 0.011 | < 0.00002 | < 0.00001 | 9.5 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| M97-111-04 | 2011 | 186.5 | 195 | Mafic Volcanic | Wesmeg | OP/FW | 8.0 | 47 | - | 0.20 | 0.30 | < 0.0001 | < 0.00001 | 0.70 | 0.0014 | 0.0046 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| M97-176-01 | 2011 | 19 | 27.5 | Mafic Volcanic | Wesmeg | OP/HW | 8.6 | 88 | - | 0.40 | 0.70 | < 0.0001 | < 0.00001 | 0.33 | 0.0022 | 0.016 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| M97-176-02 | 2011 | 112 | 121 | Mafic Volcanic | Wesmeg | OP/HW | 8.7 | 72 | - | 0.50 | 2.5 | < 0.0001 | < 0.00001 | 0.94 | 0.0010 | 0.015 | < 0.00002 | < 0.00001 | 5.4 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 |
| M97-176-03 | 2011 | 196 | 205.5 | Mafic Volcanic | Wesmeg | OP/FW | 8.3 | 76 | - | 0.30 | 1.9 | < 0.0001 | < 0.00001 | 0.91 | 0.0026 | 0.013 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 |
| M98-222-01 | 2011 | 16 | 22 | Mafic Volcanic | Wesmeg | OP/HW | 8.6 | 115 | - | 0.60 | 0.80 | < 0.0001 | < 0.00001 | 0.59 | 0.012 | 0.0099 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 |
| M98-222-02 | 2011 | 56 | 65 | Mafic Volcanic | Wesmeg | OP/HW | 8.3 | 77 | - | 0.40 | 1.4 | < 0.0001 | < 0.00001 | 0.88 | 0.0065 | 0.011 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 |
| M98-222-03 | 2011 | 104 | 113.5 | Mafic Volcanic | Wesmeg | OP/HW | 8.2 | 81 | - | 0.50 | 1.2 | < 0.0001 | < 0.00001 | 0.51 | 0.0034 | 0.014 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 |
| M98-223-01 | 2011 | 20.5 | 29 | Mafic Volcanic | Wesmeg | OP/HW | 8.8 | 104 | - | 2.6 | 2.3 | < 0.0001 | < 0.00001 | 0.66 | 0.051 | 0.036 | < 0.00002 | < 0.00001 | 4.2 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| W94-48-01 | 2011 | 15 | 20 | Mafic Volcanic | Wesmeg | OP/HW | 8.9 | 62 | - | 0.50 | 1.4 | < 0.0001 | < 0.00001 | 0.61 | 0.0025 | 0.010 | < 0.00002 | < 0.00001 | 5.7 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 6.1 | <1 | nc | 0.20 | 0.30 | <0.0001 | < 0.00001 | 0.040 | 0.00070 | 0.0046 | <0.00002 | < 0.00001 | 2.9 | < 0.000003 | 0.0000090 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 9.2 | 205 | nc | 15 | 16 | <0.0001 | 0.000070 | 1.2 | 0.45 | 0.036 | <0.00002 | 0.000050 | 16 | 0.0000050 | 0.00022 | 0.0023 | 0.0025 |
| | | | | | | MEDIAN | 8.1 | 100 | nc | 2.0 | 1.1 | nc | 0.000010 | 0.59 | 0.0046 | 0.012 | nc | 0.000010 | 8.0 | 0.0000030 | 0.000025 | nc | 0.00050 |
| | | | | | | AVERAGE | 8.1 | 105 | nc | 3.0 | 1.6 | nc | 0.000012 | 0.59 | 0.033 | 0.012 | nc | 0.000012 | 8.1 | 0.0000030 | 0.000040 | nc | 0.00054 |
| | | | | | | STANDARD DEVIATION | 0.47 | 40 | nc | 3.5 | 2.2 | nc | 0.0000085 | 0.25 | 0.097 | 0.0053 | nc | 0.0000072 | 2.8 | 0.00000027 | 0.000039 | nc | 0.00027 |
| | | | | | | 75TH PERCENTILE | 8.3 | 125 | nc | 3.5 | 1.7 | nc | 0.000010 | 0.82 | 0.016 | 0.014 | nc | 0.000010 | 10 | 0.0000030 | 0.000048 | nc | 0.00050 |
| M10-987-03 | 2011 | 179 | 188 | Ultramafic | Wesmeg | OP/FW | 8.0 | 134 | - | 0.70 | 0.40 | < 0.0001 | < 0.00001 | 0.030 | 0.13 | 0.013 | < 0.00002 | < 0.00001 | 9.2 | < 0.000003 | 0.000097 | < 0.0005 | < 0.0005 |
| M10-992-04 | 2011 | 107 | 113 | Ultramafic | Wesmeg | OP/FW | 7.9 | 81 | - | 1.6 | 0.80 | < 0.0001 | < 0.00001 | 0.42 | 0.0038 | 0.0080 | < 0.00002 | < 0.00001 | 6.6 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M10-994-05 | 2011 | 15 | 24 | Ultramafic | Wesmeg | OP/HW | 8.0 | 140 | - | 3.8 | 1.4 | < 0.0001 | < 0.00001 | 0.39 | 0.0035 | 0.021 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.9 | 81 | nc | 0.70 | 0.40 | <0.0001 | <0.00001 | 0.030 | 0.0035 | 0.0080 | <0.00002 | <0.00001 | 6.6 | <0.000003 | 0.000022 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.0 | 140 | nc | 3.8 | 1.4 | <0.0001 | <0.00001 | 0.42 | 0.13 | 0.021 | <0.00002 | <0.00001 | 9.2 | <0.000003 | 0.000097 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.0 | 134 | nc | 1.6 | 0.80 | nc | nc | 0.39 | 0.0038 | 0.013 | nc | nc | 7.7 | nc | 0.000028 | nc | nc |
| | | | | | | AVERAGE | 7.9 | 118 | nc | 2.0 | 0.87 | nc | nc | 0.28 | 0.047 | 0.014 | nc | nc | 7.8 | nc | 0.000049 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.051 | 32 | nc | 1.6 | 0.50 | nc | nc | 0.22 | 0.075 | 0.0065 | nc | nc | 1.3 | nc | 0.000042 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.0 | 137 | nc | 2.7 | 1.1 | nc | nc | 0.41 | 0.069 | 0.017 | nc | nc | 8.5 | nc | 0.000063 | nc | nc |
| M96-51-01 | 2011 | 10 | 20 | Ore/MV | Wesmeg | OP/HW | 8.5 | 187 | - | 0.80 | 0.80 | < 0.0001 | < 0.00001 | 0.31 | 0.0070 | 0.0071 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 |
| M98-223-02 | 2011 | 80 | 90 | Ore/MV | Wesmeg | OP/HW | 8.4 | 172 | - | 0.80 | 3.6 | < 0.0001 | < 0.00001 | 0.35 | 0.0010 | 0.0062 | < 0.00002 | < 0.00001 | 15 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 |
| M98-223-03 | 2011 | 175 | 180 | Ore/MV | Wesmeg | OP/FW | 8.2 | 150 | - | 0.90 | 3.3 | < 0.0001 | < 0.00001 | 0.36 | 0.00070 | 0.0071 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 8.2 | 150 | nc | 0.80 | 0.80 | <0.0001 | <0.00001 | 0.31 | 0.00070 | 0.0062 | <0.00002 | <0.00001 | 11 | <0.000003 | 0.000034 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.5 | 187 | nc | 0.90 | 3.6 | <0.0001 | <0.00001 | 0.36 | 0.0070 | 0.0071 | <0.00002 | <0.00001 | 18 | <0.000003 | 0.000048 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 8.4 | 172 | nc | 0.80 | 3.3 | nc | nc | 0.35 | 0.0010 | 0.0071 | nc | nc | 15 | nc | 0.000044 | nc | nc |
| | | | | | | AVERAGE | 8.4 | 170 | nc | 0.83 | 2.6 | nc | nc | 0.34 | 0.0029 | 0.0068 | nc | nc | 15 | nc | 0.000042 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.15 | 19 | nc | 0.058 | 1.5 | nc | nc | 0.026 | 0.0036 | 0.00052 | nc | nc | 3.5 | nc | 0.0000072 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.5 | 180 | nc | 0.85 | 3.5 | nc | nc | 0.36 | 0.0040 | 0.0071 | nc | nc | 17 | nc | 0.000046 | nc | nc |
| M10-968-01 | 2011 | 29 | 37 | Greywacke/Siltstone | Wolf | OP/HW | 7.9 | 101 | - | 3.6 | 2.6 | < 0.0001 | 0.000010 | 1.2 | 0.051 | 0.44 | < 0.00002 | 0.000010 | 6.0 | 0.0000080 | 0.00011 | < 0.0005 | < 0.0005 |
| M10-968-02 | 2011 | 75 | 83 | Greywacke/Siltstone | Wolf | OP/HW | 7.8 | 101 | - | 2.2 | 1.4 | < 0.0001 | < 0.00001 | 1.1 | 0.038 | 0.15 | < 0.00002 | < 0.00001 | 6.5 | < 0.000003 | 0.000075 | < 0.0005 | < 0.0005 |
| M10-968-03 | 2011 | 130.5 | 139 | Greywacke/Siltstone | Wolf | OP/HW | 7.7 | 99 | - | 1.5 | 3.0 | < 0.0001 | < 0.00001 | 1.2 | 0.014 | 0.18 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.000083 | < 0.0005 | < 0.0005 |
| M10-972A-01 | 2011 | 36 | 44.5 | Greywacke/Siltstone | Wolf | OP/HW | 7.9 | 111 | - | 2.6 | 1.9 | < 0.0001 | < 0.00001 | 0.73 | 0.068 | 0.058 | < 0.00002 | < 0.00001 | 7.3 | < 0.000003 | 0.00016 | < 0.0005 | < 0.0005 |
| M10-972A-02 | 2011 | 78.5 | 87 | Greywacke/Siltstone | Wolf | OP/HW | 7.8 | 95 | - | 1.7 | 1.5 | < 0.0001 | < 0.00001 | 0.97 | 0.026 | 0.032 | < 0.00002 | < 0.00001 | 6.5 | < 0.000003 | 0.000073 | < 0.0005 | < 0.0005 |
| M10-976-01 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | 7.8 | 104 | - | 4.7 | 2.4 | < 0.0001 | < 0.00001 | 0.81 | 0.015 | 0.029 | < 0.00002 | < 0.00001 | 5.8 | < 0.000003 | 0.000073 | < 0.0005 | < 0.0005 |
| M10-976-02 | 2011 | 96 | 105 | Greywacke/Siltstone | Wolf | OP/HW | 7.8 | 100 | - | 4.1 | 1.6 | < 0.0001 | < 0.00001 | 1.4 | 0.050 | 0.024 | < 0.00002 | < 0.00001 | 5.6 | < 0.000003 | 0.00022 | < 0.0005 | < 0.0005 |
| M10-977-01 | 2011 | 24 | 33 | Greywacke/Siltstone | Wolf | OP/HW | 7.9 | 95 | - | 4.3 | 2.1 | < 0.0001 | 0.000030 | 1.1 | 0.019 | 0.029 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.00014 | 0.0031 | 0.0040 |
| M10-993-01 | 2011 | 25.5 | 34 | Greywacke/Siltstone | Wolf | OP/HW | 8.0 | 103 | - | 3.5 | 2.6 | < 0.0001 | < 0.00001 | 0.87 | 0.036 | 0.034 | < 0.00002 | < 0.00001 | 6.1 | < 0.000003 | 0.00014 | < 0.0005 | < 0.0005 |
| M10-993-02 | 2011 | 51 | 60 | Greywacke/Siltstone | Wolf | OP/HW | 7.9 | 97 | - | 1.4 | 2.3 | < 0.0001 | < 0.00001 | 1.1 | 0.037 | 0.028 | < 0.00002 | < 0.00001 | 6.3 | 0.0000030 | 0.00016 | < 0.0005 | < 0.0005 |
| M10-993-03 | 2011 | 84.5 | 93 | Greywacke/Siltstone | Wolf | OP/HW | 7.7 | 99 | - | 0.70 | 3.0 | < 0.0001 | < 0.00001 | 1.1 | 0.019 | 0.019 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000062 | < 0.0005 | < 0.0005 |
| M98-234-01 | 2011 | 11 | 23 | Greywacke/Siltstone | Wolf | OP/HW | 7.7 | 98 | - | 0.70 | 1.3 | < 0.0001 | < 0.00001 | 0.98 | 0.088 | 0.016 | < 0.00002 | < 0.00001 | 6.8 | < 0.000003 | 0.000055 | < 0.0005 | < 0.0005 |
| M98-234-02 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | 7.7 | 95 | - | 0.50 | 2.1 | < 0.0001 | < 0.00001 | 0.95 | 0.025 | 0.011 | < 0.00002 | < 0.00001 | 7.9 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 |
| M98-284-01 | 2011 | 91 | 100 | Greywacke/Siltstone | Wolf | OP/HW | 7.7 | 95 | - | 0.50 | 3.2 | < 0.0001 | < 0.00001 | 1.1 | 0.016 | 0.013 | < 0.00002 | < 0.00001 | 8.5 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M11-1042-02 | 2011 | 59 | 68 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 10 | < 0.001 | 6.4 | 0.00088 | 0.00077 | 12 | 0.0031 | 0.000060 | 0.0051 | < 0.001 | < 0.00001 | 0.081 | 0.00010 | < 0.00002 | 0.0000060 | 0.0017 | 0.0017 | 0.0000020 | < 0.001 |
| M11-1042-03 | 2011 | 99 | 107 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 5.2 | < 0.001 | 5.7 | 0.00026 | 0.00015 | 13 | 0.00050 | 0.00013 | 0.0022 | < 0.001 | 0.000020 | 0.041 | < 0.0001 | < 0.00002 | 0.0000020 | 0.0018 | 0.0017 | 0.0000010 | < 0.001 |
| M11-1051-01 | 2011 | 51 | 59 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 8.6 | 0.0010 | 6.8 | 0.0012 | 0.00017 | 12 | 0.0011 | 0.00011 | 0.0027 | < 0.001 | 0.000040 | 0.020 | 0.00010 | < 0.00002 | < 0.000001 | 0.0013 | 0.0021 | 0.0000020 | 0.0010 |
| M11-1051-02 | 2011 | 89 | 99.5 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 7.8 | < 0.001 | 5.6 | 0.00056 | 0.00014 | 9.2 | 0.0018 | 0.000060 | 0.0037 | < 0.001 | < 0.00001 | 0.050 | 0.00010 | 0.000020 | < 0.000001 | 0.0018 | 0.0030 | 0.0000010 | 0.0010 |
| M11-1099-01 | 2011 | 17 | 25 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 13 | 0.0010 | 6.5 | 0.0063 | 0.00062 | 6.7 | 0.00020 | 0.00013 | 0.0015 | < 0.001 | 0.000020 | 0.039 | 0.00040 | < 0.00002 | 0.000034 | 0.00024 | 0.0022 | 0.0000010 | 0.0020 |
| M11-1099-02 | 2011 | 38 | 46 | Mafic Volcanic | Wesmeg | OP/HW | 0.0030 | 4.2 | < 0.001 | 0.52 | 0.00059 | 0.00018 | 11 | < 0.0001 | 0.000080 | 0.0028 | < 0.001 | < 0.00001 | 0.018 | 0.00020 | < 0.00002 | 0.00014 | 0.0037 | 0.0046 | 0.0000010 | < 0.001 |
| M11-1099-03 | 2011 | 72 | 80 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 5.1 | < 0.001 | 0.60 | 0.00038 | 0.00015 | 23 | < 0.0001 | 0.000070 | 0.0031 | < 0.001 | < 0.00001 | 0.018 | 0.00010 | < 0.00002 | 0.0000020 | 0.0024 | 0.0021 | 0.0000060 | < 0.001 |
| M95-11-01 | 2011 | 40 | 47 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 1.8 | < 0.001 | 1.7 | 0.0023 | 0.000090 | 3.6 | < 0.0001 | 0.000090 | 0.0037 | < 0.001 | 0.000020 | 0.046 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00069 | 0.0023 | 0.0000020 | < 0.001 |
| M95-12-01 | 2011 | 41 | 50 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 6.5 | < 0.001 | 0.66 | 0.00085 | 0.00017 | 3.9 | < 0.0001 | 0.000050 | 0.0049 | < 0.001 | < 0.00001 | 0.024 | < 0.0001 | < 0.00002 | 0.0000020 | 0.0020 | 0.0036 | 0.0000040 | < 0.001 |
| M95-22-01 | 2011 | 11 | 20 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 4.8 | < 0.001 | 3.4 | 0.0017 | 0.00011 | 3.7 | 0.00020 | 0.00011 | 0.0031 | < 0.001 | < 0.00001 | 0.037 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00053 | 0.0014 | 0.0000010 | < 0.001 |
| M95-22-02 | 2011 | 71 | 80 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 5.3 | < 0.001 | 0.81 | 0.0010 | 0.00012 | 3.5 | < 0.0001 | 0.00013 | 0.0020 | < 0.001 | 0.000050 | 0.028 | < 0.0001 | < 0.00002 | 0.000011 | 0.0017 | 0.0016 | 0.0000020 | 0.0040 |
| M96-50-01 | 2011 | 30 | 40 | Mafic Volcanic | Wesmeg | OP/HW | 0.0030 | 3.7 | < 0.001 | 0.37 | 0.00037 | 0.00010 | 8.3 | < 0.0001 | 0.000080 | 0.0043 | < 0.001 | < 0.00001 | 0.010 | 0.00020 | < 0.00002 | 0.0000020 | 0.012 | 0.0027 | 0.0000010 | < 0.001 |
| M96-51-02 | 2011 | 40 | 50 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 2.0 | < 0.001 | 5.9 | 0.0021 | 0.00018 | 6.0 | 0.00020 | 0.00010 | 0.0067 | < 0.001 | 0.000020 | 0.030 | < 0.0001 | < 0.00002 | 0.0000020 | 0.00086 | 0.0017 | 0.0000030 | 0.0020 |
| M96-51-03 | 2011 | 73 | 82 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 5.2 | < 0.001 | 3.0 | 0.0015 | 0.00011 | 4.0 | 0.00030 | 0.000080 | 0.0047 | < 0.001 | 0.000010 | 0.026 | 0.00010 | < 0.00002 | < 0.000001 | 0.00080 | 0.0013 | 0.0000010 | < 0.001 |
| M97-111-01 | 2011 | 21 | 30 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 3.9 | < 0.001 | 2.5 | 0.0015 | 0.00010 | 5.1 | < 0.0001 | 0.000080 | 0.0024 | < 0.001 | < 0.00001 | 0.024 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00079 | 0.0021 | 0.0000010 | < 0.001 |
| M97-111-02 | 2011 | 95 | 104 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 3.0 | < 0.001 | 4.9 | 0.0011 | 0.00021 | 3.6 | < 0.0001 | 0.000060 | 0.0010 | < 0.001 | < 0.00001 | 0.030 | < 0.0001 | < 0.00002 | 0.000023 | 0.00038 | 0.00045 | 0.0000010 | < 0.001 |
| M97-111-03 | 2011 | 126 | 133 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 2.1 | < 0.001 | 3.1 | 0.0010 | 0.00018 | 2.8 | < 0.0001 | 0.000050 | 0.0027 | < 0.001 | < 0.00001 | 0.054 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00062 | 0.0010 | 0.0000010 | < 0.001 |
| M97-111-04 | 2011 | 186.5 | 195 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 2.4 | < 0.001 | 0.96 | 0.00075 | 0.000070 | 2.7 | < 0.0001 | 0.000070 | 0.0020 | < 0.001 | 0.000020 | 0.026 | < 0.0001 | < 0.00002 | 0.0000070 | 0.0014 | 0.0017 | 0.0000010 | < 0.001 |
| M97-176-01 | 2011 | 19 | 27.5 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 1.7 | < 0.001 | 3.7 | 0.0015 | 0.00011 | 2.7 | < 0.0001 | 0.000070 | 0.0025 | < 0.001 | < 0.00001 | 0.054 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00053 | 0.0013 | 0.0000010 | < 0.001 |
| M97-176-02 | 2011 | 112 | 121 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 8.1 | < 0.001 | 0.57 | 0.00034 | 0.00011 | 4.8 | < 0.0001 | 0.000090 | 0.0039 | < 0.001 | < 0.00001 | 0.016 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0026 | 0.0031 | 0.0000030 | 0.0010 |
| M97-176-03 | 2011 | 196 | 205.5 | Mafic Volcanic | Wesmeg | OP/FW | < 0.002 | 5.8 | < 0.001 | 0.87 | 0.0011 | 0.00015 | 3.1 | < 0.0001 | 0.000070 | 0.0036 | < 0.001 | < 0.00001 | 0.026 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0014 | 0.0030 | 0.0000020 | < 0.001 |
| M98-222-01 | 2011 | 16 | 22 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 6.5 | < 0.001 | 4.1 | 0.0025 | 0.00043 | 3.7 | 0.00040 | 0.000080 | 0.0042 | < 0.001 | 0.000020 | 0.027 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00074 | 0.0016 | 0.0000010 | < 0.001 |
| M98-222-02 | 2011 | 56 | 65 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 5.7 | < 0.001 | 0.96 | 0.00098 | 0.00022 | 5.3 | < 0.0001 | 0.000060 | 0.0027 | < 0.001 | 0.000020 | 0.018 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0016 | 0.00099 | 0.0000010 | 0.0010 |
| M98-222-03 | 2011 | 104 | 113.5 | Mafic Volcanic | Wesmeg | OP/HW | < 0.002 | 5.0 | < 0.001 | 2.0 | 0.00048 | 0.00021 | 8.1 | < 0.0001 | 0.000050 | 0.0037 | < 0.001 | < 0.00001 | 0.027 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0014 | 0.0012 | 0.0000020 | < 0.001 |
| M98-223-01 | 2011 | 20.5 | 29 | Mafic Volcanic | Wesmeg | OP/HW | 0.0020 | 7.3 | < 0.001 | 0.61 | 0.00041 | 0.00025 | 13 | 0.00020 | 0.000090 | 0.0033 | < 0.001 | 0.000020 | 0.015 | < 0.0001 | < 0.00002 | 0.0000030 | 0.0060 | 0.0018 | 0.0000020 | < 0.001 |
| W94-48-01 | 2011 | 15 | 20 | Mafic Volcanic | Wesmeg | OP/HW | 0.0030 | 3.1 | < 0.001 | 0.65 | 0.00028 | 0.00014 | 4.9 | < 0.0001 | 0.000050 | 0.0045 | < 0.001 | < 0.00001 | 0.018 | 0.00040 | < 0.00002 | 0.0000010 | 0.0077 | 0.0026 | 0.0000020 | < 0.001 |
| | | | | | | MINIMUM | < 0.002 | 0.80 | < 0.001 | 0.27 | 0.00024 | 0.000050 | 2.7 | < 0.0001 | 0.000040 | 0.00080 | <0.001 | < 0.00001 | 0.0087 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00024 | 0.00037 | < 0.000001 | < 0.001 |
| | | | | | | MAXIMUM | 0.036 | 13 | 0.0020 | 11 | 0.0063 | 0.00077 | 24 | 0.0032 | 0.00086 | 0.0067 | <0.001 | 0.00088 | 0.081 | 0.00060 | 0.000050 | 0.00014 | 0.012 | 0.0046 | 0.000014 | 0.010 |
| | | | | | | MEDIAN | 0.0020 | 5.1 | 0.0010 | 2.0 | 0.0010 | 0.00014 | 6.1 | 0.00010 | 0.000070 | 0.0028 | nc | 0.000010 | 0.026 | 0.00010 | 0.000020 | 0.0000010 | 0.0014 | 0.0018 | 0.0000020 | 0.0010 |
| | | | | | | AVERAGE | 0.0030 | 4.9 | 0.0010 | 2.9 | 0.0012 | 0.00019 | 7.1 | 0.00039 | 0.000086 | 0.0030 | nc | 0.000028 | 0.030 | 0.00014 | 0.000021 | 0.0000068 | 0.0021 | 0.0021 | 0.0000022 | 0.0014 |
| | | | | | | STANDARD DEVIATION | 0.0046 | 2.7 | 0.00013 | 2.6 | 0.00097 | 0.00017 | 4.3 | 0.00069 | 0.00011 | 0.0012 | nc | 0.00012 | 0.015 | 0.000095 | 0.0000044 | 0.000021 | 0.0025 | 0.0010 | 0.0000022 | 0.0014 |
| | | | | | | 75TH PERCENTILE | 0.0020 | 6.5 | 0.0010 | 5.0 | 0.0015 | 0.00021 | 8.3 | 0.00030 | 0.000080 | 0.0038 | nc | 0.000010 | 0.037 | 0.00010 | 0.000020 | 0.0000020 | 0.0019 | 0.0028 | 0.0000020 | 0.0010 |
| M10-987-03 | 2011 | 179 | 188 | Ultramafic | Wesmeg | OP/FW | < 0.002 | 2.7 | < 0.001 | 7.3 | 0.00022 | 0.000060 | 5.6 | 0.00050 | 0.000050 | 0.0051 | < 0.001 | < 0.00001 | 0.052 | < 0.0001 | 0.000030 | 0.0000060 | 0.0012 | 0.0027 | 0.0000010 | < 0.001 |
| M10-992-04 | 2011 | 107 | 113 | Ultramafic | Wesmeg | OP/FW | < 0.002 | 1.5 | < 0.001 | 1.6 | 0.0011 | 0.000070 | 5.3 | < 0.0001 | 0.000060 | 0.0012 | < 0.001 | < 0.00001 | 0.043 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0011 | 0.0012 | 0.0000020 | < 0.001 |
| M10-994-05 | 2011 | 15 | 24 | Ultramafic | Wesmeg | OP/HW | < 0.002 | 5.0 | < 0.001 | 4.2 | 0.00066 | 0.00012 | 10 | 0.00010 | 0.000060 | 0.0014 | < 0.001 | < 0.00001 | 0.027 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00072 | 0.0012 | 0.0000010 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 1.5 | <0.001 | 1.6 | 0.00022 | 0.000060 | 5.3 | < 0.0001 | 0.000050 | 0.0012 | <0.001 | <0.00001 | 0.027 | <0.0001 | <0.00002 | <0.000001 | 0.00072 | 0.0012 | 0.0000010 | <0.001 |
| | | | | | | MAXIMUM | <0.002 | 5.0 | <0.001 | 7.3 | 0.0011 | 0.00012 | 10 | 0.00050 | 0.000060 | 0.0051 | <0.001 | <0.00001 | 0.052 | <0.0001 | 0.000030 | 0.0000060 | 0.0012 | 0.0027 | 0.0000020 | <0.001 |
| | | | | | | MEDIAN | nc | 2.7 | nc | 4.2 | 0.00066 | 0.000070 | 5.6 | nc | 0.000060 | 0.0014 | nc | nc | 0.043 | nc | nc | nc | 0.0011 | 0.0012 | 0.0000010 | nc |
| | | | | | | AVERAGE | nc | 3.0 | nc | 4.4 | 0.00066 | 0.000083 | 7.0 | nc | 0.000057 | 0.0026 | nc | nc | 0.040 | nc | nc | nc | 0.0010 | 0.0017 | 0.0000013 | nc |
| | | | | | | STANDARD DEVIATION | nc | 1.8 | nc | 2.9 | 0.00045 | 0.000032 | 2.7 | nc | 0.0000058 | 0.0022 | nc | nc | 0.013 | nc | nc | nc | 0.00027 | 0.00087 | ######### | nc |
| | | | | | | 75TH PERCENTILE | nc | 3.8 | nc | 5.7 | 0.00089 | 0.000095 | 7.9 | nc | 0.000060 | 0.0033 | nc | nc | 0.047 | nc | nc | nc | 0.0012 | 0.0020 | 0.0000015 | nc |
| M96-51-01 | 2011 | 10 | 20 | Ore/MV | Wesmeg | OP/HW | < 0.002 | 6.0 | 0.0010 | 7.7 | 0.0012 | 0.00015 | 4.0 | 0.00010 | < 0.00002 | 0.0020 | < 0.001 | < 0.00001 | 0.023 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00071 | 0.0013 | < 0.000001 | 0.0010 |
| M98-223-02 | 2011 | 80 | 90 | Ore/MV | Wesmeg | OP/HW | < 0.002 | 6.5 | < 0.001 | 9.2 | 0.0027 | 0.00023 | 4.5 | 0.00020 | 0.000080 | 0.0054 | < 0.001 | < 0.00001 | 0.041 | < 0.0001 | < 0.00002 | 0.0000080 | 0.00057 | 0.0020 | 0.0000020 | < 0.001 |
| M98-223-03 | 2011 | 175 | 180 | Ore/MV | Wesmeg | OP/FW | < 0.002 | 3.2 | < 0.001 | 6.2 | 0.0030 | 0.00027 | 4.2 | 0.00020 | 0.000080 | 0.0043 | < 0.001 | < 0.00001 | 0.040 | < 0.0001 | < 0.00002 | 0.0000070 | 0.00023 | 0.00098 | 0.0000020 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 3.2 | < 0.001 | 6.2 | 0.0012 | 0.00015 | 4.0 | 0.00010 | <0.00002 | 0.0020 | <0.001 | <0.00001 | 0.023 | <0.0001 | <0.00002 | <0.000001 | 0.00023 | 0.00098 | <0.000001 | < 0.001 |
| | | | | | | MAXIMUM | <0.002 | 6.5 | 0.0010 | 9.2 | 0.0030 | 0.00027 | 4.5 | 0.00020 | 0.000080 | 0.0054 | <0.001 | <0.00001 | 0.041 | <0.0001 | <0.00002 | 0.0000080 | 0.00071 | 0.0020 | 0.0000020 | 0.0010 |
| | | | | | | MEDIAN | nc | 6.0 | nc | 7.7 | 0.0027 | 0.00023 | 4.2 | 0.00020 | nc | 0.0043 | nc | nc | 0.040 | nc | nc | nc | 0.00057 | 0.0013 | nc | nc |
| | | | | | | AVERAGE | nc | 5.2 | nc | 7.7 | 0.0023 | 0.00022 | 4.2 | 0.00017 | nc | 0.0039 | nc | nc | 0.035 | nc | nc | nc | 0.00050 | 0.0014 | nc | nc |
| | | | | | | STANDARD DEVIATION | nc | 1.8 | nc | 1.5 | 0.00097 | 0.000061 | 0.27 | 0.000058 | nc | 0.0017 | nc | nc | 0.010 | nc | nc | nc | 0.00025 | 0.00052 | nc | nc |
| | | | | | | 75TH PERCENTILE | nc | 6.2 | nc | 8.5 | 0.0028 | 0.00025 | 4.4 | 0.00020 | nc | 0.0049 | nc | nc | 0.041 | nc | nc | nc | 0.00064 | 0.0016 | nc | nc |
| M10-968-01 | 2011 | 29 | 37 | Greywacke/Siltstone | Wolf | OP/HW | 0.032 | 8.2 | < 0.001 | 0.58 | 0.00069 | 0.0013 | 9.0 | 0.00070 | 0.00011 | 0.0039 | < 0.001 | < 0.00001 | 0.019 | 0.0011 | 0.000030 | 0.000049 | 0.0048 | 0.0013 | 0.000028 | < 0.001 |
| M10-968-02 | 2011 | 75 | 83 | Greywacke/Siltstone | Wolf | OP/HW | 0.028 | 9.7 | < 0.001 | 1.1 | 0.00061 | 0.0011 | 7.0 | 0.00050 | 0.00013 | 0.0030 | < 0.001 | < 0.00001 | 0.025 | 0.00090 | < 0.00002 | 0.000051 | 0.0035 | 0.00084 | 0.000036 | 0.0010 |
| M10-968-03 | 2011 | 130.5 | 139 | Greywacke/Siltstone | Wolf | OP/HW | 0.033 | 9.6 | < 0.001 | 0.84 | 0.0017 | 0.00091 | 5.7 | 0.00050 | 0.00010 | 0.0035 | < 0.001 | < 0.00001 | 0.022 | 0.0012 | < 0.00002 | 0.000094 | 0.0026 | 0.00089 | 0.000034 | 0.0020 |
| M10-972A-01 | 2011 | 36 | 44.5 | Greywacke/Siltstone | Wolf | OP/HW | 0.016 | 7.7 | 0.0010 | 2.0 | 0.0011 | 0.00052 | 7.7 | 0.00090 | 0.000070 | 0.0031 | < 0.001 | < 0.00001 | 0.028 | 0.00090 | < 0.00002 | 0.00013 | 0.0034 | 0.00047 | 0.000014 | < 0.001 |
| M10-972A-02 | 2011 | 78.5 | 87 | Greywacke/Siltstone | Wolf | OP/HW | 0.033 | 7.7 | < 0.001 | 1.1 | 0.00074 | 0.00048 | 6.9 | 0.00040 | 0.00010 | 0.0030 | < 0.001 | < 0.00001 | 0.024 | 0.0015 | < 0.00002 | 0.00016 | 0.0042 | 0.00030 | 0.000027 | < 0.001 |
| M10-976-01 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | 0.014 | 6.8 | 0.0010 | 0.77 | 0.0027 | 0.00053 | 8.3 | 0.00040 | 0.00034 | 0.0019 | < 0.001 | < 0.00001 | 0.020 | 0.00050 | < 0.00002 | 0.00018 | 0.0048 | 0.00065 | 0.000026 | 0.0020 |
| M10-976-02 | 2011 | 96 | 105 | Greywacke/Siltstone | Wolf | OP/HW | 0.064 | 11 | < 0.001 | 0.68 | 0.00086 | 0.00084 | 7.3 | 0.0012 | 0.00016 | 0.0040 | < 0.001 | < 0.00001 | 0.017 | 0.0035 | < 0.00002 | 0.000077 | 0.0039 | 0.00047 | 0.000057 | < 0.001 |
| M10-977-01 | 2011 | 24 | 33 | Greywacke/Siltstone | Wolf | OP/HW | 0.053 | 7.4 | < 0.001 | 0.53 | 0.0012 | 0.00076 | 8.7 | 0.0023 | 0.0014 | 0.0032 | < 0.001 | 0.0021 | 0.020 | 0.00090 | < 0.00002 | 0.00014 | 0.0054 | 0.00042 | 0.000024 | 0.013 |
| M10-993-01 | 2011 | 25.5 | 34 | Greywacke/Siltstone | Wolf | OP/HW | 0.020 | 7.5 | < 0.001 | 1.1 | 0.00067 | 0.00045 | 9.4 | 0.0010 | 0.00017 | 0.0031 | < 0.001 | < 0.00001 | 0.022 | 0.00060 | < 0.00002 | 0.00011 | 0.0045 | 0.00040 | 0.000044 | < 0.001 |
| M10-993-02 | 2011 | 51 | 60 | Greywacke/Siltstone | Wolf | OP/HW | 0.015 | 9.2 | < 0.001 | 0.94 | 0.00069 | 0.00052 | 7.2 | 0.00090 | 0.00011 | 0.0024 | < 0.001 | < 0.00001 | 0.022 | 0.00060 | < 0.00002 | 0.00010 | 0.0042 | 0.00035 | 0.000025 | 0.0010 |
| M10-993-03 | 2011 | 84.5 | 93 | Greywacke/Siltstone | Wolf | OP/HW | 0.018 | 11 | < 0.001 | 0.92 | 0.0011 | 0.00041 | 5.3 | 0.00060 | 0.000060 | 0.0034 | < 0.001 | < 0.00001 | 0.022 | 0.0010 | < 0.00002 | 0.000091 | 0.0031 | 0.00042 | 0.000021 | < 0.001 |
| M98-234-01 | 2011 | 11 | 23 | Greywacke/Siltstone | Wolf | OP/HW | 0.032 | 12 | < 0.001 | 2.0 | 0.00087 | 0.00040 | 4.0 | 0.00060 | 0.00010 | 0.0020 | < 0.001 | < 0.00001 | 0.019 | 0.0022 | < 0.00002 | 0.000041 | 0.0023 | 0.00061 | 0.000034 | < 0.001 |
| M98-234-02 | 2011 | 40 | 48.5 | Greywacke/Siltstone | Wolf | OP/HW | 0.014 | 9.2 | < 0.001 | 1.2 | 0.0011 | 0.00044 | 4.5 | 0.00060 | 0.000060 | 0.0044 | < 0.001 | < 0.00001 | 0.025 | 0.00070 | < 0.00002 | 0.000076 | 0.0028 | 0.00041 | 0.000019 | 0.0010 |
| M98-284-01 | 2011 | 91 | 100 | Greywacke/Siltstone | Wolf | OP/HW | 0.0050 | 7.6 | < 0.001 | 0.82 | 0.00035 | 0.00035 | 4.2 | 0.00040 | 0.000040 | 0.0031 | < 0.001 | < 0.00001 | 0.027 | 0.00010 | < 0.00002 | 0.000020 | 0.0018 | 0.00041 | 0.0000040 | < 0.001 |

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
| M98-286-01 | 2011 | 48 | 57.5 | Greywacke/Siltstone | Wolf | OP/HW | 8.0 | 96 | - | 0.40 | 1.4 | < 0.0001 | < 0.00001 | 1.3 | 0.036 | 0.013 | < 0.00002 | < 0.00001 | 7.1 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 |
| M98-331-01 | 2011 | 19.5 | 28 | Greywacke/Siltstone | Wolf | OP/HW | 7.8 | 89 | - | 0.70 | 1.3 | < 0.0001 | < 0.00001 | 1.0 | 0.0088 | 0.014 | < 0.00002 | < 0.00001 | 7.2 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 |
| M98-333-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Wolf | OP/HW | 7.7 | 129 | - | 2.1 | 13 | < 0.0001 | < 0.00001 | 0.70 | 0.037 | 0.018 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.7 | 89 | nc | 0.40 | 1.3 | <0.0001 | < 0.00001 | 0.70 | 0.0088 | 0.011 | <0.00002 | < 0.00001 | 5.6 | < 0.000003 | 0.000022 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.0 | 129 | nc | 4.7 | 13 | <0.0001 | 0.000030 | 1.4 | 0.088 | 0.44 | <0.00002 | 0.000010 | 11 | 0.0000080 | 0.00022 | 0.0031 | 0.0040 |
| | | | | | | MEDIAN | 7.8 | 99 | nc | 1.7 | 2.1 | nc | nc | 1.1 | 0.036 | 0.028 | nc | nc | 6.8 | 0.0000030 | 0.000073 | nc | nc |
| | | | | | | AVERAGE | 7.8 | 100 | nc | 2.1 | 2.7 | nc | nc | 1.0 | 0.034 | 0.065 | nc | nc | 7.0 | 0.0000033 | 0.000089 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.10 | 8.8 | nc | 1.5 | 2.7 | nc | nc | 0.18 | 0.021 | 0.11 | nc | nc | 1.3 | 0.0000012 | 0.000056 | nc | nc |
| | | | | | | 75TH PERCENTILE | 7.9 | 101 | nc | 3.5 | 2.6 | nc | nc | 1.1 | 0.038 | 0.034 | nc | nc | 7.3 | 0.0000030 | 0.00014 | nc | nc |
| M10-970-01 | 2011 | 62 | 70.5 | Iron Formation | Wolf | OP/HW | 7.7 | 124 | - | 4.2 | 0.90 | < 0.0001 | < 0.00001 | 0.52 | 0.045 | 0.055 | < 0.00002 | < 0.00001 | 17 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 |
| M10-972A-03 | 2011 | 113 | 122 | Iron Formation | Wolf | OP/HW | 7.7 | 100 | - | 2.7 | 0.80 | < 0.0001 | < 0.00001 | 0.72 | 0.0038 | 0.064 | < 0.00002 | < 0.00001 | 14 | < 0.000003 | 0.000073 | < 0.0005 | < 0.0005 |
| M10-976-03 | 2011 | 126 | 135 | Iron Formation | Wolf | OP/HW | 7.9 | 147 | - | 3.1 | 0.50 | < 0.0001 | < 0.00001 | 0.47 | 0.023 | 0.014 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.000068 | < 0.0005 | < 0.0005 |
| M10-986-01 | 2011 | 51 | 61 | Iron Formation | Wolf | OP/HW | 7.8 | 157 | - | 3.7 | 2.5 | < 0.0001 | < 0.00001 | 0.48 | 0.0059 | 0.023 | < 0.00002 | < 0.00001 | 17 | < 0.000003 | 0.000061 | < 0.0005 | < 0.0005 |
| M98-284-02 | 2011 | 121 | 129.5 | Iron Formation | Wolf | OP/HW | 7.7 | 102 | - | 2.3 | 0.60 | < 0.0001 | < 0.00001 | 0.69 | 0.0013 | 0.016 | < 0.00002 | < 0.00001 | 17 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.7 | 100 | nc | 2.3 | 0.50 | <0.0001 | <0.00001 | 0.47 | 0.0013 | 0.014 | <0.00002 | <0.00001 | 14 | <0.000003 | 0.000031 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 7.9 | 157 | nc | 4.2 | 2.5 | <0.0001 | <0.00001 | 0.72 | 0.045 | 0.064 | <0.00002 | <0.00001 | 18 | <0.000003 | 0.000073 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 7.7 | 124 | nc | 3.1 | 0.80 | nc | nc | 0.52 | 0.0059 | 0.023 | nc | nc | 17 | nc | 0.000061 | nc | nc |
| | | | | | | AVERAGE | 7.8 | 126 | nc | 3.2 | 1.1 | nc | nc | 0.58 | 0.016 | 0.034 | nc | nc | 16 | nc | 0.000059 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.12 | 26 | nc | 0.76 | 0.82 | nc | nc | 0.12 | 0.018 | 0.023 | nc | nc | 1.5 | nc | 0.000016 | nc | nc |
| | | | | | | 75TH PERCENTILE | 7.8 | 147 | nc | 3.7 | 0.90 | nc | nc | 0.69 | 0.023 | 0.055 | nc | nc | 17 | nc | 0.000068 | nc | nc |
| M10-972A-04 | 2011 | 156 | 165 | Mafic Volcanic | Wolf | OP/FW | 7.8 | 89 | - | 1.3 | 0.60 | < 0.0001 | < 0.00001 | 0.65 | 0.00060 | 0.016 | < 0.00002 | < 0.00001 | 8.6 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 |
| M10-986-02 | 2011 | 99 | 107 | Mafic Volcanic | Wolf | OP/FW | 7.9 | 113 | - | 2.8 | 0.90 | < 0.0001 | < 0.00001 | 0.60 | 0.00060 | 0.025 | < 0.00002 | < 0.00001 | 9.8 | < 0.000003 | 0.000054 | < 0.0005 | < 0.0005 |
| M10-993-04 | 2011 | 157.5 | 166 | Mafic Volcanic | Wolf | OP/FW | 7.8 | 76 | - | 3.1 | 0.90 | < 0.0001 | < 0.00001 | 0.64 | 0.0010 | 0.016 | < 0.00002 | < 0.00001 | 6.5 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 |
| M96-16-01 | 2011 | 22 | 29.5 | Mafic Volcanic | Wolf | OP/HW | 8.0 | 82 | - | 0.60 | 1.4 | < 0.0001 | < 0.00001 | 1.2 | 0.013 | 0.020 | < 0.00002 | < 0.00001 | 5.3 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 |
| M96-61-01 | 2011 | 11 | 20 | Mafic Volcanic | Wolf | OP/HW | 7.7 | 112 | - | 2.1 | 4.9 | < 0.0001 | < 0.00001 | 0.61 | 0.0049 | 0.016 | < 0.00002 | < 0.00001 | 9.8 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 |
| M96-61-02 | 2011 | 34 | 43 | Mafic Volcanic | Wolf | OP/HW | 8.0 | 87 | - | 0.40 | 0.90 | < 0.0001 | < 0.00001 | 0.92 | 0.0069 | 0.0083 | < 0.00002 | < 0.00001 | 4.3 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 |
| M98-238-01 | 2011 | 19 | 28 | Mafic Volcanic | Wolf | OP/HW | 7.7 | 126 | - | 0.40 | 15 | < 0.0001 | < 0.00001 | 0.63 | 0.019 | 0.019 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 |
| M98-238-02 | 2011 | 49 | 57 | Mafic Volcanic | Wolf | OP/HW | 7.8 | 70 | - | 0.30 | 1.6 | < 0.0001 | < 0.00001 | 0.60 | 0.0081 | 0.011 | < 0.00002 | < 0.00001 | 5.9 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 |
| M98-329-01 | 2011 | 77.5 | 86 | Mafic Volcanic | Wolf | OP/HW | 7.9 | 136 | - | 0.70 | 1.0 | < 0.0001 | < 0.00001 | 0.27 | 0.37 | 0.0079 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.00010 | < 0.0005 | < 0.0005 |
| M98-337-01 | 2011 | 14 | 22 | Mafic Volcanic | Wolf | OP/HW | 8.0 | 95 | - | 0.50 | 1.0 | < 0.0001 | < 0.00001 | 0.55 | 0.0054 | 0.0086 | < 0.00002 | < 0.00001 | 4.8 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.7 | 70 | nc | 0.30 | 0.60 | <0.0001 | <0.00001 | 0.27 | 0.00060 | 0.0079 | <0.00002 | <0.00001 | 4.3 | <0.000003 | 0.000011 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.0 | 136 | nc | 3.1 | 15 | <0.0001 | <0.00001 | 1.2 | 0.37 | 0.025 | <0.00002 | <0.00001 | 11 | <0.000003 | 0.00010 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 7.9 | 92 | nc | 0.65 | 1.0 | nc | nc | 0.62 | 0.0062 | 0.016 | nc | nc | 7.5 | nc | 0.000038 | nc | nc |
| | | | | | | AVERAGE | 7.9 | 99 | nc | 1.2 | 2.8 | nc | nc | 0.66 | 0.043 | 0.015 | nc | nc | 7.7 | nc | 0.000042 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.11 | 22 | nc | 1.1 | 4.5 | nc | nc | 0.23 | 0.11 | 0.0057 | nc | nc | 2.6 | nc | 0.000028 | nc | nc |
| | | | | | | 75TH PERCENTILE | 7.9 | 113 | nc | 1.9 | 1.6 | nc | nc | 0.65 | 0.011 | 0.018 | nc | nc | 9.8 | nc | 0.000052 | nc | nc |
| M10-976-04 | 2011 | 138 | 144 | Ore/IF | Wolf | OP/HW | 7.9 | 154 | - | 1.7 | 0.30 | < 0.0001 | < 0.00001 | 0.39 | 0.020 | 0.016 | < 0.00002 | < 0.00001 | 19 | < 0.000003 | 0.000069 | < 0.0005 | < 0.0005 |
| M10-977-02 | 2011 | 54.5 | 63 | Ore/IF | Wolf | OP/HW | 7.9 | 189 | - | 4.5 | 2.4 | < 0.0001 | < 0.00001 | 0.43 | 0.11 | 0.025 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.000087 | < 0.0005 | < 0.0005 |
| M96-61-03 | 2011 | 104 | 112 | Ore/IF | Wolf | OP/FW | 8.0 | 233 | - | 1.3 | 3.4 | < 0.0001 | < 0.00001 | 0.12 | 0.0087 | 0.0086 | < 0.00002 | 0.000010 | 34 | < 0.000003 | 0.000097 | < 0.0005 | < 0.0005 |
| | | | | | | MINIMUM | 7.9 | 154 | nc | 1.3 | 0.30 | <0.0001 | <0.00001 | 0.12 | 0.0087 | 0.0086 | <0.00002 | < 0.00001 | 18 | <0.000003 | 0.000069 | <0.0005 | <0.0005 |
| | | | | | | MAXIMUM | 8.0 | 233 | nc | 4.5 | 3.4 | <0.0001 | <0.00001 | 0.43 | 0.11 | 0.025 | <0.00002 | 0.000010 | 34 | <0.000003 | 0.000097 | <0.0005 | <0.0005 |
| | | | | | | MEDIAN | 7.9 | 189 | nc | 1.7 | 2.4 | nc | nc | 0.39 | 0.020 | 0.016 | nc | nc | 19 | nc | 0.000087 | nc | nc |
| | | | | | | AVERAGE | 8.0 | 192 | nc | 2.5 | 2.0 | nc | nc | 0.31 | 0.045 | 0.016 | nc | nc | 24 | nc | 0.000084 | nc | nc |
| | | | | | | STANDARD DEVIATION | 0.049 | 40 | nc | 1.7 | 1.6 | nc | nc | 0.17 | 0.054 | 0.0080 | nc | nc | 8.8 | nc | 0.000014 | nc | nc |
| | | | | | | 75TH PERCENTILE | 8.0 | 211 | nc | 3.1 | 2.9 | nc | nc | 0.41 | 0.063 | 0.020 | nc | nc | 26 | nc | 0.000092 | nc | nc |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# Appendix B.4: Shake Flask Extraction Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M98-286-01 | 2011 | 48 | 57.5 | Greywacke/Siltstone | Wolf | OP/HW | 0.0080 | 12 | < 0.001 | 0.97 | 0.00054 | 0.00057 | 3.7 | 0.00040 | 0.000060 | 0.0034 | < 0.001 | < 0.00001 | 0.025 | 0.00040 | < 0.00002 | 0.000035 | 0.0029 | 0.00038 | 0.0000080 | 0.0020 |
| M98-331-01 | 2011 | 19.5 | 28 | Greywacke/Siltstone | Wolf | OP/HW | 0.0070 | 10 | < 0.001 | 1.0 | 0.00058 | 0.00047 | 4.1 | 0.00030 | 0.000070 | 0.0026 | < 0.001 | < 0.00001 | 0.023 | 0.00020 | < 0.00002 | 0.000080 | 0.0029 | 0.00032 | 0.000011 | < 0.001 |
| M98-333-01 | 2011 | 15 | 24 | Greywacke/Siltstone | Wolf | OP/HW | 0.0030 | 11 | < 0.001 | 2.6 | 0.00090 | 0.0010 | 4.8 | 0.00070 | 0.00021 | 0.0065 | < 0.001 | < 0.00001 | 0.039 | 0.00020 | < 0.00002 | 0.000051 | 0.0015 | 0.00084 | 0.000010 | < 0.001 |
| | | | | | | MINIMUM | 0.0030 | 6.8 | < 0.001 | 0.53 | 0.00035 | 0.00035 | 3.7 | 0.00030 | 0.000040 | 0.0019 | <0.001 | <0.00001 | 0.017 | 0.00010 | <0.00002 | 0.000020 | 0.0015 | 0.00030 | 0.0000040 | < 0.001 |
| | | | | | | MAXIMUM | 0.064 | 12 | 0.0010 | 2.6 | 0.0027 | 0.0013 | 9.4 | 0.0023 | 0.0014 | 0.0065 | <0.001 | 0.0021 | 0.039 | 0.0035 | 0.000030 | 0.00018 | 0.0054 | 0.0013 | 0.000057 | 0.013 |
| | | | | | | MEDIAN | 0.018 | 9.2 | nc | 0.97 | 0.00086 | 0.00052 | 6.9 | 0.00060 | 0.00010 | 0.0031 | nc | nc | 0.022 | 0.00090 | nc | 0.000080 | 0.0034 | 0.00042 | 0.000025 | nc |
| | | | | | | AVERAGE | 0.023 | 9.2 | nc | 1.1 | 0.00097 | 0.00065 | 6.3 | 0.00073 | 0.00020 | 0.0033 | nc | nc | 0.024 | 0.00097 | nc | 0.000088 | 0.0034 | 0.00056 | 0.000025 | nc |
| | | | | | | STANDARD DEVIATION | 0.017 | 1.7 | nc | 0.55 | 0.00055 | 0.00028 | 1.9 | 0.00047 | 0.00033 | 0.0010 | nc | nc | 0.0049 | 0.00083 | nc | 0.000046 | 0.0011 | 0.00026 | 0.000014 | nc |
| | | | | | | 75TH PERCENTILE | 0.032 | 11 | nc | 1.1 | 0.0011 | 0.00084 | 7.7 | 0.00090 | 0.00016 | 0.0035 | nc | nc | 0.025 | 0.0011 | nc | 0.00011 | 0.0042 | 0.00065 | 0.000034 | nc |
| M10-970-01 | 2011 | 62 | 70.5 | Iron Formation | Wolf | OP/HW | 0.0020 | 8.5 | < 0.001 | 1.1 | 0.00085 | 0.00034 | 1.9 | 0.00060 | 0.000040 | 0.00070 | < 0.001 | < 0.00001 | 0.20 | < 0.0001 | < 0.00002 | 0.0000060 | 0.000090 | 0.00047 | 0.0000030 | < 0.001 |
| M10-972A-03 | 2011 | 113 | 122 | Iron Formation | Wolf | OP/HW | < 0.002 | 5.4 | < 0.001 | 1.0 | 0.0018 | 0.00058 | 1.5 | 0.00050 | 0.000040 | 0.00080 | < 0.001 | < 0.00001 | 0.12 | < 0.0001 | < 0.00002 | 0.000016 | 0.00010 | 0.00075 | 0.0000020 | < 0.001 |
| M10-976-03 | 2011 | 126 | 135 | Iron Formation | Wolf | OP/HW | < 0.002 | 10 | 0.0010 | 2.5 | 0.0023 | 0.00025 | 2.4 | 0.00060 | 0.000050 | 0.00090 | < 0.001 | < 0.00001 | 0.17 | < 0.0001 | < 0.00002 | 0.0000040 | 0.000080 | 0.00063 | 0.0000020 | < 0.001 |
| M10-986-01 | 2011 | 51 | 61 | Iron Formation | Wolf | OP/HW | < 0.002 | 15 | 0.0010 | 1.9 | 0.0019 | 0.00062 | 3.1 | 0.00050 | 0.000030 | 0.0010 | < 0.001 | < 0.00001 | 0.15 | < 0.0001 | < 0.00002 | 0.000011 | 0.000080 | 0.00094 | 0.0000020 | < 0.001 |
| M98-284-02 | 2011 | 121 | 129.5 | Iron Formation | Wolf | OP/HW | 0.0090 | 4.2 | < 0.001 | 1.2 | 0.00062 | 0.00023 | 0.52 | 0.00050 | 0.000080 | 0.0011 | < 0.001 | < 0.00001 | 0.13 | < 0.0001 | < 0.00002 | 0.0000020 | 0.000060 | 0.00052 | 0.0000020 | < 0.001 |
| | | | | | | MINIMUM | < 0.002 | 4.2 | < 0.001 | 1.0 | 0.00062 | 0.00023 | 0.52 | 0.00050 | 0.000030 | 0.00070 | <0.001 | <0.00001 | 0.12 | <0.0001 | <0.00002 | 0.0000020 | 0.000060 | 0.00047 | 0.0000020 | <0.001 |
| | | | | | | MAXIMUM | 0.0090 | 15 | 0.0010 | 2.5 | 0.0023 | 0.00062 | 3.1 | 0.00060 | 0.000080 | 0.0011 | <0.001 | <0.00001 | 0.20 | <0.0001 | <0.00002 | 0.000016 | 0.00010 | 0.00094 | 0.0000030 | <0.001 |
| | | | | | | MEDIAN | nc | 8.5 | nc | 1.2 | 0.0018 | 0.00034 | 1.9 | 0.00050 | 0.000040 | 0.00090 | nc | nc | 0.15 | nc | nc | 0.0000060 | 0.000080 | 0.00063 | 0.0000020 | nc |
| | | | | | | AVERAGE | nc | 8.8 | nc | 1.5 | 0.0015 | 0.00040 | 1.9 | 0.00054 | 0.000048 | 0.00090 | nc | nc | 0.15 | nc | nc | 0.0000078 | 0.000082 | 0.00066 | 0.0000022 | nc |
| | | | | | | STANDARD DEVIATION | nc | 4.4 | nc | 0.65 | 0.00072 | 0.00018 | 0.96 | 0.000055 | 0.000019 | 0.00016 | nc | nc | 0.033 | nc | nc | 0.0000057 | 0.000015 | 0.00019 | ######### | nc |
| | | | | | | 75TH PERCENTILE | nc | 10 | nc | 1.9 | 0.0019 | 0.00058 | 2.4 | 0.00060 | 0.000050 | 0.0010 | nc | nc | 0.17 | nc | nc | 0.000011 | 0.000090 | 0.00075 | 0.0000020 | nc |
| M10-972A-04 | 2011 | 156 | 165 | Mafic Volcanic | Wolf | OP/FW | < 0.002 | 1.5 | 0.0010 | 2.3 | 0.00086 | 0.00011 | 5.5 | 0.00030 | 0.000040 | 0.0010 | < 0.001 | < 0.00001 | 0.026 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00066 | 0.00049 | 0.0000010 | < 0.001 |
| M10-986-02 | 2011 | 99 | 107 | Mafic Volcanic | Wolf | OP/FW | 0.0020 | 0.23 | 0.0030 | 3.5 | 0.0024 | 0.00019 | 10 | 0.00030 | 0.000030 | 0.0010 | < 0.001 | < 0.00001 | 0.016 | < 0.0001 | < 0.00002 | 0.0000030 | 0.00057 | 0.00047 | 0.0000020 | < 0.001 |
| M10-993-04 | 2011 | 157.5 | 166 | Mafic Volcanic | Wolf | OP/FW | < 0.002 | 1.0 | < 0.001 | 1.3 | 0.00054 | 0.000090 | 7.5 | 0.00030 | 0.000050 | 0.0013 | < 0.001 | < 0.00001 | 0.020 | < 0.0001 | < 0.00002 | 0.0000010 | 0.0016 | 0.0014 | 0.0000020 | < 0.001 |
| M96-16-01 | 2011 | 22 | 29.5 | Mafic Volcanic | Wolf | OP/HW | 0.0040 | 6.9 | < 0.001 | 0.54 | 0.00087 | 0.00020 | 7.3 | 0.00030 | 0.000050 | 0.0041 | < 0.001 | < 0.00001 | 0.0097 | < 0.0001 | < 0.00002 | 0.0000040 | 0.0051 | 0.0012 | 0.0000020 | < 0.001 |
| M96-61-01 | 2011 | 11 | 20 | Mafic Volcanic | Wolf | OP/HW | < 0.002 | 9.8 | < 0.001 | 1.8 | 0.0011 | 0.00032 | 3.2 | 0.00040 | 0.000070 | 0.0023 | < 0.001 | < 0.00001 | 0.055 | < 0.0001 | < 0.00002 | 0.0000020 | 0.00074 | 0.0012 | 0.0000020 | 0.0020 |
| M96-61-02 | 2011 | 34 | 43 | Mafic Volcanic | Wolf | OP/HW | < 0.002 | 14 | < 0.001 | 0.46 | 0.00045 | 0.00014 | 2.9 | 0.00020 | 0.000050 | 0.0029 | < 0.001 | < 0.00001 | 0.024 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0030 | 0.0032 | 0.0000010 | < 0.001 |
| M98-238-01 | 2011 | 19 | 28 | Mafic Volcanic | Wolf | OP/HW | < 0.002 | 7.4 | < 0.001 | 1.1 | 0.00067 | 0.00082 | 4.2 | 0.00060 | 0.000070 | 0.0028 | < 0.001 | < 0.00001 | 0.039 | 0.00020 | < 0.00002 | 0.000024 | 0.0019 | 0.00076 | 0.0000050 | < 0.001 |
| M98-238-02 | 2011 | 49 | 57 | Mafic Volcanic | Wolf | OP/HW | 0.0080 | 3.3 | < 0.001 | 0.68 | 0.00061 | 0.00023 | 5.4 | 0.00020 | 0.000040 | 0.0026 | < 0.001 | < 0.00001 | 0.028 | 0.00060 | < 0.00002 | 0.000015 | 0.0096 | 0.00078 | 0.0000030 | < 0.001 |
| M98-329-01 | 2011 | 77.5 | 86 | Mafic Volcanic | Wolf | OP/HW | < 0.002 | 5.9 | < 0.001 | 6.9 | 0.0011 | 0.00016 | 3.7 | 0.0038 | 0.000060 | 0.0030 | < 0.001 | < 0.00001 | 0.047 | < 0.0001 | < 0.00002 | < 0.000001 | 0.0015 | 0.0019 | 0.0000010 | 0.0020 |
| M98-337-01 | 2011 | 14 | 22 | Mafic Volcanic | Wolf | OP/HW | < 0.002 | 17 | < 0.001 | 1.1 | 0.00053 | 0.00027 | 3.3 | 0.00020 | 0.000060 | 0.0039 | < 0.001 | < 0.00001 | 0.030 | < 0.0001 | 0.000020 | 0.0000030 | 0.0024 | 0.00094 | 0.0000010 | < 0.001 |
| | | | | | | MINIMUM | < 0.002 | 0.23 | < 0.001 | 0.46 | 0.00045 | 0.000090 | 2.9 | 0.00020 | 0.000030 | 0.0010 | <0.001 | <0.00001 | 0.0097 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00057 | 0.00047 | 0.0000010 | <0.001 |
| | | | | | | MAXIMUM | 0.0080 | 17 | 0.0030 | 6.9 | 0.0024 | 0.00082 | 10 | 0.0038 | 0.000070 | 0.0041 | <0.001 | <0.00001 | 0.055 | 0.00060 | 0.000020 | 0.000024 | 0.0096 | 0.0032 | 0.0000050 | 0.0020 |
| | | | | | | MEDIAN | 0.0020 | 6.4 | nc | 1.2 | 0.00077 | 0.00020 | 4.8 | 0.00030 | 0.000050 | 0.0027 | nc | nc | 0.027 | nc | nc | 0.0000025 | 0.0018 | 0.0010 | 0.0000020 | nc |
| | | | | | | AVERAGE | 0.0028 | 6.7 | nc | 2.0 | 0.00091 | 0.00025 | 5.3 | 0.00066 | 0.000052 | 0.0025 | nc | nc | 0.029 | nc | nc | 0.0000055 | 0.0027 | 0.0012 | 0.0000020 | nc |
| | | | | | | STANDARD DEVIATION | 0.0019 | 5.6 | nc | 2.0 | 0.00057 | 0.00021 | 2.4 | 0.0011 | 0.000013 | 0.0011 | nc | nc | 0.014 | nc | nc | 0.0000077 | 0.0028 | 0.00080 | 0.0000012 | nc |
| | | | | | | 75TH PERCENTILE | 0.0020 | 9.2 | nc | 2.2 | 0.0010 | 0.00026 | 6.9 | 0.00038 | 0.000060 | 0.0030 | nc | nc | 0.036 | nc | nc | 0.0000038 | 0.0028 | 0.0014 | 0.0000020 | nc |
| M10-976-04 | 2011 | 138 | 144 | Ore/IF | Wolf | OP/HW | < 0.002 | 12 | 0.0010 | 2.7 | 0.0034 | 0.00041 | 1.5 | 0.00060 | 0.000060 | 0.00090 | < 0.001 | < 0.00001 | 0.12 | < 0.0001 | < 0.00002 | 0.0000020 | 0.000040 | 0.00052 | 0.0000020 | < 0.001 |
| M10-977-02 | 2011 | 54.5 | 63 | Ore/IF | Wolf | OP/HW | < 0.002 | 20 | 0.0030 | 3.3 | 0.0031 | 0.00055 | 3.0 | 0.00080 | 0.000080 | 0.0012 | < 0.001 | < 0.00001 | 0.11 | < 0.0001 | < 0.00002 | 0.000010 | 0.00012 | 0.0016 | 0.0000030 | 0.0020 |
| M96-61-03 | 2011 | 104 | 112 | Ore/IF | Wolf | OP/FW | < 0.002 | 4.5 | < 0.001 | 8.3 | 0.039 | 0.00031 | 1.3 | 0.0012 | 0.000040 | 0.0011 | < 0.001 | < 0.00001 | 0.063 | < 0.0001 | < 0.00002 | 0.000019 | 0.000050 | 0.00026 | 0.0000020 | < 0.001 |
| | | | | | | MINIMUM | <0.002 | 4.5 | < 0.001 | 2.7 | 0.0031 | 0.00031 | 1.3 | 0.00060 | 0.000040 | 0.00090 | <0.001 | <0.00001 | 0.063 | <0.0001 | <0.00002 | 0.0000020 | 0.000040 | 0.00026 | 0.0000020 | <0.001 |
| | | | | | | MAXIMUM | <0.002 | 20 | 0.0030 | 8.3 | 0.039 | 0.00055 | 3.0 | 0.0012 | 0.000080 | 0.0012 | <0.001 | <0.00001 | 0.12 | <0.0001 | <0.00002 | 0.000019 | 0.00012 | 0.0016 | 0.0000030 | 0.0020 |
| | | | | | | MEDIAN | nc | 12 | nc | 3.3 | 0.0034 | 0.00041 | 1.5 | 0.00080 | 0.000060 | 0.0011 | nc | nc | 0.11 | nc | nc | 0.000010 | 0.000050 | 0.00052 | 0.0000020 | nc |
| | | | | | | AVERAGE | nc | 12 | nc | 4.8 | 0.015 | 0.00042 | 1.9 | 0.00087 | 0.000060 | 0.0011 | nc | nc | 0.096 | nc | nc | 0.000010 | 0.000070 | 0.00078 | 0.0000023 | nc |
| | | | | | | STANDARD DEVIATION | nc | 7.8 | nc | 3.1 | 0.021 | 0.00012 | 0.93 | 0.00031 | 0.000020 | 0.00015 | nc | nc | 0.030 | nc | nc | 0.0000085 | 0.000044 | 0.00069 | ######### | nc |
| | | | | | | 75TH PERCENTILE | nc | 16 | nc | 5.8 | 0.021 | 0.00048 | 2.2 | 0.0010 | 0.000070 | 0.0012 | nc | nc | 0.11 | nc | nc | 0.000015 | 0.000085 | 0.0010 | 0.0000025 | nc |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# Appendix B.4: Shake Flask Extraction Results - Operations
## PAD Samples
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | | 0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Rock Type | Deposit | Location | Grain Size | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] |
| | | | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| TP-PAD-11-06 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.9 | 104 | - | 2.2 | 5.4 | < 0.0001 | < 0.00001 | 0.88 | 0.034 | 0.0083 | < 0.00002 | < 0.00001 | 9.2 | 0.000003 | 0.00008 | < 0.0005 | < 0.0005 |
| TP-PAD-11-04 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 8.0 | 99 | - | 0.70 | 2.5 | < 0.0001 | < 0.00001 | 0.91 | 0.038 | 0.0096 | < 0.00002 | < 0.00001 | 8.1 | < 0.000003 | 0.00007 | < 0.0005 | < 0.0005 |
| TP-PAD-11-03 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.8 | 107 | - | 8.6 | 4.1 | < 0.0001 | < 0.00001 | 0.81 | 0.014 | 0.018 | < 0.00002 | < 0.00001 | 7.7 | < 0.000003 | 0.00006 | < 0.0005 | < 0.0005 |
| TP-PAD-11-01 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.8 | 104 | - | 5.1 | 4.4 | < 0.0001 | < 0.00001 | 0.74 | 0.026 | 0.0092 | < 0.00002 | < 0.00001 | 9.2 | 0.00001 | 0.00008 | < 0.0005 | < 0.0005 |
| TP-PAD-11-02 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.5 | 429 | - | 100 | 4.0 | < 0.0001 | < 0.00001 | 0.47 | 0.017 | 0.021 | < 0.00002 | < 0.00001 | 51 | < 0.000003 | 0.00019 | < 0.0005 | < 0.0005 |
| TP-PAD-11-05 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.9 | 90 | - | 0.60 | 3.2 | < 0.0001 | < 0.00001 | 0.76 | 0.024 | 0.0076 | < 0.00002 | < 0.00001 | 5.5 | 0.000003 | 0.00008 | < 0.0005 | < 0.0005 |
| TP-PAD-11-09 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.9 | 91 | - | 0.50 | 2.2 | < 0.0001 | < 0.00001 | 0.91 | 0.329 | 0.011 | < 0.00002 | < 0.00001 | 7.2 | 0.00000 | 0.00006 | < 0.0005 | < 0.0005 |
| TP-PAD-11-12 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 8.0 | 90 | - | 0.80 | 2.1 | < 0.0001 | < 0.00001 | 1.0 | 0.058 | 0.0081 | < 0.00002 | < 0.00001 | 7.5 | < 0.000003 | 0.00007 | < 0.0005 | < 0.0005 |
| TP-PAD-11-07 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.8 | 153 | - | 14 | 12 | < 0.0001 | < 0.00001 | 1.0 | 0.021 | 0.011 | < 0.00002 | < 0.00001 | 14 | 0.00002 | 0.00010 | < 0.0005 | < 0.0005 |
| TP-PAD-11-08 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.8 | 101 | - | 0.70 | 4.8 | < 0.0001 | < 0.00001 | 0.71 | 0.026 | 0.011 | < 0.00002 | < 0.00001 | 9.7 | < 0.000003 | 0.00007 | < 0.0005 | 0.0007 |
| TP-PAD-11-10 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.9 | 116 | - | 3.6 | 3.2 | < 0.0001 | < 0.00001 | 0.71 | 0.041 | 0.010 | < 0.00002 | < 0.00001 | 11 | < 0.000003 | 0.00007 | < 0.0005 | < 0.0005 |
| TP-PAD-11-11 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.9 | 82 | - | 0.70 | 1.6 | < 0.0001 | < 0.00001 | 0.92 | 0.027 | 0.0078 | < 0.00002 | < 0.00001 | 5.7 | < 0.000003 | 0.00005 | < 0.0005 | < 0.0005 |
| TP-PAD-11 COMPOSITE | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 7.8 | 120 | - | 11 | 3.5 | < 0.0001 | < 0.00001 | 0.74 | 0.035 | 0.012 | < 0.00002 | < 0.00001 | 10 | < 0.000003 | 0.00008 | < 0.0005 | < 0.0005 |
| | | | | | MINIMUM | 7.5 | 82 | - | 0.5 | 1.6 | < 0.0001 | < 0.00001 | 0.47 | 0.014 | 0.008 | < 0.00002 | < 0.00001 | 5.5 | < 0.000003 | 0.00005 | < 0.0005 | < 0.0005 |
| | | | | | MAXIMUM | 8.0 | 429 | - | 100 | 12 | < 0.0001 | < 0.00001 | 1.0 | 0.33 | 0.021 | < 0.00002 | < 0.00001 | 51 | 0.00002 | 0.00019 | < 0.0005 | 0.0007 |
| | | | | | MEDIAN | 7.9 | 104 | nc | 2.2 | 3.5 | nc | nc | 0.81 | 0.027 | 0.010 | nc | nc | 9.2 | 0.000003 | 0.00007 | nc | nc |
| | | | | | AVERAGE | 7.8 | 130 | nc | 11.4 | 4.1 | nc | nc | 0.81 | 0.053 | 0.011 | nc | nc | 12 | 0.000004 | 0.00008 | nc | nc |
| | | | | | STANDARD DEVIATION | nc | 92 | nc | 27 | 2.6 | nc | nc | 0.15 | 0.084 | 0.004 | nc | nc | 12 | 0.000004 | 0.00003 | nc | nc |
| | | | | | 75TH PERCENTILE | nc | 116 | nc | 8.6 | 4.4 | nc | nc | 0.91 | 0.038 | 0.011 | nc | nc | 10 | 0.000003 | 0.00008 | nc | nc |
| TP-PAD-11 COMPOSITE -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 7.8 | 208 | 36 | 24 | 17 | < 0.0001 | - | 0.69 | 0.019 | 0.018 | < 0.00002 | < 0.00001 | 18 | < 0.000003 | 0.00005 | < 0.0005 | 0.0008 |
| TP-PAD-11-02 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 7.5 | 777 | 25 | 210 | 19 | < 0.0001 | - | 0.35 | 0.012 | 0.033 | < 0.00002 | < 0.00001 | 98 | < 0.000003 | 0.00022 | < 0.0005 | 0.0009 |
| TP-PAD-11-03 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 7.8 | 193 | 32 | 17 | 24 | < 0.0001 | - | 0.66 | 0.011 | 0.025 | < 0.00002 | < 0.00001 | 15 | < 0.000003 | 0.00003 | < 0.0005 | < 0.0005 |
| TP-PAD-11-06 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 7.9 | 139 | 42 | 1.8 | 17 | < 0.0001 | - | 0.86 | 0.028 | 0.015 | < 0.00002 | < 0.00001 | 12 | < 0.000003 | 0.00003 | < 0.0005 | 0.0006 |
| TP-PAD-11-08 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 7.7 | 156 | 39 | 1.4 | 28 | < 0.0001 | - | 0.66 | 0.025 | 0.016 | < 0.00002 | < 0.00001 | 15 | < 0.000003 | 0.00006 | < 0.0005 | 0.0010 |
| TP-PAD-11-10 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 7.8 | 188 | 45 | 6.3 | 28 | < 0.0001 | - | 0.70 | 0.021 | 0.014 | < 0.00002 | < 0.00001 | 17 | < 0.000003 | 0.00006 | < 0.0005 | 0.0007 |
| TP-PAD-11-12 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 8.0 | 115 | 41 | 1.8 | 8.1 | < 0.0001 | - | 1.1 | 0.034 | 0.010 | < 0.00002 | < 0.00001 | 9.0 | < 0.000003 | 0.00005 | < 0.0005 | < 0.0005 |
| | | | | | MINIMUM | 7.5 | 115 | 25 | 1.4 | <8.1 | <0.0001 | nc | 0.35 | 0.011 | 0.010 | <0.00002 | <0.00001 | 9.0 | <0.000003 | 0.00003 | <0.0005 | <0.0005 |
| | | | | | MAXIMUM | 8.0 | 777 | 45 | 210 | 28.0 | <0.0001 | nc | 1.1 | 0.034 | 0.033 | <0.00002 | <0.00001 | 98 | <0.000003 | 0.00022 | <0.0005 | 0.0010 |
| | | | | | MEDIAN | 7.8 | 188 | 39 | 6.3 | 19.0 | nc | nc | 0.69 | 0.021 | 0.016 | nc | nc | 15 | nc | 0.00005 | nc | 0.0007 |
| | | | | | AVERAGE | 7.8 | 254 | 37 | 37 | 20.2 | nc | nc | 0.72 | 0.022 | 0.019 | nc | nc | 26 | nc | 0.00007 | nc | 0.0007 |
| | | | | | STANDARD DEVIATION | nc | 233 | 7 | 77 | 7.1 | nc | nc | 0.22 | 0.0085 | 0.0075 | nc | nc | 32 | nc | 0.00007 | nc | 0.0002 |
| | | | | | 75TH PERCENTILE | nc | 201 | 42 | 21 | 26.0 | nc | nc | 0.78 | 0.027 | 0.021 | nc | nc | 18 | nc | 0.00006 | nc | 0.0009 |

Notes:
nc: not calculated
- not analyzed
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminum is pH dependant; assumes pH>6.5.

# Appendix B.4: Shake Flask Extraction Results - Operations
## PAD Samples
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Rock Type | Deposit | Location | Grain Size | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| TP-PAD-11-06 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 7.9 | 0.0020 | 1.7 | 0.0009 | 0.00066 | 4.6 | 0.00020 | 0.00009 | 0.0024 | < 0.001 | < 0.00001 | 0.047 | 0.0004 | < 0.00002 | 0.00010 | 0.0016 | 0.0005 | 0.000018 | < 0.001 |
| TP-PAD-11-04 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 9.1 | 0.0020 | 1.7 | 0.0009 | 0.00064 | 4.1 | 0.00020 | 0.00006 | 0.0027 | < 0.001 | < 0.00001 | 0.039 | 0.0006 | < 0.00002 | 0.00008 | 0.0023 | 0.0005 | 0.000010 | < 0.001 |
| TP-PAD-11-03 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 10.7 | 0.0030 | 1.3 | 0.0006 | 0.00067 | 4.9 | < 0.0001 | 0.00006 | 0.0024 | < 0.001 | < 0.00001 | 0.065 | 0.0007 | < 0.00002 | 0.00003 | 0.0036 | 0.0009 | 0.000007 | < 0.001 |
| TP-PAD-11-01 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 7.5 | 0.0030 | 1.7 | 0.0009 | 0.00044 | 4.4 | 0.00010 | 0.00017 | 0.0020 | < 0.001 | < 0.00001 | 0.059 | 0.0005 | < 0.00002 | 0.00009 | 0.0017 | 0.0005 | 0.000012 | < 0.001 |
| TP-PAD-11-02 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | < 0.002 | 15.5 | 0.014 | 5.2 | 0.0035 | 0.00061 | 5.8 | 0.00060 | 0.00014 | 0.0024 | < 0.001 | < 0.00001 | 0.509 | 0.0002 | < 0.00002 | 0.00003 | 0.0013 | 0.0004 | 0.000004 | < 0.001 |
| TP-PAD-11-05 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 9.9 | 0.0020 | 0.9 | 0.0013 | 0.00034 | 3.9 | 0.00050 | 0.00011 | 0.0027 | < 0.001 | 0.00002 | 0.030 | 0.0004 | < 0.00002 | 0.00004 | 0.0029 | 0.0008 | 0.000006 | 0.0010 |
| TP-PAD-11-09 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 9.8 | 0.0010 | 1.2 | 0.0006 | 0.00039 | 4.5 | 0.00010 | 0.00009 | 0.0024 | < 0.001 | 0.00003 | 0.035 | 0.0003 | < 0.00002 | 0.00005 | 0.0038 | 0.0005 | 0.000002 | < 0.001 |
| TP-PAD-11-12 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 8.3 | < 0.001 | 1.3 | 0.0006 | 0.00035 | 4.5 | < 0.0001 | 0.00007 | 0.0028 | < 0.001 | < 0.00001 | 0.030 | 0.0006 | < 0.00002 | 0.00007 | 0.0032 | 0.0004 | 0.000007 | < 0.001 |
| TP-PAD-11-07 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.003 | 12.0 | 0.0010 | 1.7 | 0.0007 | 0.00059 | 4.5 | 0.00010 | 0.00006 | 0.0026 | < 0.001 | 0.00003 | 0.049 | 0.0002 | < 0.00002 | 0.00005 | 0.0016 | 0.0006 | 0.000003 | < 0.001 |
| TP-PAD-11-08 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 8.1 | 0.0010 | 1.6 | 0.0006 | 0.00088 | 4.0 | 0.00030 | 0.00010 | 0.0020 | < 0.001 | 0.00002 | 0.039 | 0.0003 | < 0.00002 | 0.00004 | 0.0009 | 0.0004 | 0.000012 | < 0.001 |
| TP-PAD-11-10 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 8.7 | < 0.001 | 2.3 | 0.0013 | 0.00045 | 4.0 | 0.00020 | 0.00005 | 0.0025 | < 0.001 | < 0.00001 | 0.052 | 0.0002 | < 0.00002 | 0.00003 | 0.0011 | 0.0005 | 0.000003 | < 0.001 |
| TP-PAD-11-11 | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.01 | 8.0 | < 0.001 | 0.9 | 0.0004 | 0.00032 | 5.7 | < 0.0001 | 0.00007 | 0.0025 | < 0.001 | < 0.00001 | 0.023 | 0.0003 | < 0.00002 | 0.00002 | 0.0043 | 0.0007 | 0.000004 | < 0.001 |
| TP-PAD-11 COMPOSITE | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine to coarse | 0.00 | 9.9 | 0.0020 | 1.8 | 0.0021 | 0.00055 | 5.2 | 0.00020 | 0.00008 | 0.0032 | < 0.001 | < 0.00001 | 0.057 | 0.0002 | < 0.00002 | 0.00005 | 0.0020 | 0.0005 | 0.000008 | < 0.001 |
| | | | | | MINIMUM | < 0.002 | 7.5 | < 0.001 | 0.9 | 0.0004 | 0.00032 | 3.9 | < 0.0001 | 0.00005 | 0.0020 | < 0.001 | < 0.00001 | 0.023 | 0.0002 | < 0.00002 | 0.00002 | 0.0009 | 0.0004 | 0.000002 | < 0.001 |
| | | | | | MAXIMUM | 0.01 | 16 | 0.014 | 5.2 | 0.0035 | 0.00088 | 5.8 | 0.00060 | 0.00017 | <0.0032 | < 0.001 | 0.00003 | 0.509 | 0.0007 | < 0.00002 | 0.00010 | 0.0043 | 0.0009 | 0.000018 | 0.0010 |
| | | | | | MEDIAN | 0.01 | 9.1 | 0.0020 | 1.7 | 0.0009 | 0.00055 | 4.5 | 0.00020 | 0.00008 | 0.0025 | nc | 0.00001 | 0.047 | 0.0003 | nc | 0.00005 | 0.0020 | 0.0005 | 0.000007 | nc |
| | | | | | AVERAGE | 0.01 | 9.7 | 0.0026 | 1.8 | 0.0011 | 0.00053 | 4.6 | 0.00022 | 0.00009 | 0.0025 | nc | 0.00001 | 0.079 | 0.0004 | nc | 0.00005 | 0.0023 | 0.0005 | 0.000007 | nc |
| | | | | | STANDARD DEVIATION | 0.003 | 2.2 | 0.0035 | 1.1 | 0.0008 | 0.00017 | 0.6 | 0.00016 | 0.00003 | 0.0003 | nc | 0.00001 | 0.130 | 0.0002 | nc | 0.00003 | 0.0011 | 0.0002 | 0.000005 | nc |
| | | | | | 75TH PERCENTILE | 0.01 | 9.9 | 0.0020 | 1.7 | 0.0013 | 0.00064 | 4.9 | 0.00020 | 0.00010 | 0.0027 | nc | 0.00002 | 0.057 | 0.0005 | nc | 0.00007 | 0.0032 | 0.0006 | 0.000010 | nc |
| TP-PAD-11 COMPOSITE -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | < 0.003 | 14 | 0.0040 | 3.5 | 0.0015 | 0.0024 | 5.0 | 0.00050 | < 0.00002 | 0.0052 | < 0.001 | < 0.00001 | 0.124 | 0.0002 | < 0.00002 | 0.00008 | 0.0012 | - | - | < 0.001 |
| TP-PAD-11-02 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | < 0.003 | 24 | 0.023 | 9.2 | 0.0096 | 0.0014 | 8.9 | 0.00040 | < 0.00002 | 0.0030 | < 0.001 | < 0.00001 | 1.010 | 0.0004 | < 0.00002 | 0.00021 | 0.0009 | - | - | < 0.001 |
| TP-PAD-11-03 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | < 0.003 | 15 | 0.0070 | 3.2 | 0.0014 | 0.0015 | 6.1 | 0.00030 | < 0.00002 | 0.0032 | < 0.001 | < 0.00001 | 0.146 | 0.0002 | < 0.00002 | 0.00006 | 0.0019 | - | - | < 0.001 |
| TP-PAD-11-06 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 0.004 | 11 | 0.0030 | 2.5 | 0.0009 | 0.0014 | 4.6 | 0.00010 | 0.00003 | 0.0032 | < 0.001 | < 0.00001 | 0.065 | 0.0003 | < 0.00002 | 0.00012 | 0.0014 | - | - | < 0.001 |
| TP-PAD-11-08 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 0.004 | 11 | 0.0020 | 2.9 | 0.0012 | 0.0020 | 3.4 | 0.00090 | 0.00004 | 0.0028 | < 0.001 | < 0.00001 | 0.072 | 0.0003 | < 0.00002 | 0.00014 | 0.0009 | - | - | < 0.001 |
| TP-PAD-11-10 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | < 0.003 | 12 | 0.0020 | 4.1 | 0.0022 | 0.0011 | 5.2 | 0.00040 | < 0.00002 | 0.0035 | < 0.001 | < 0.00001 | 0.084 | 0.0002 | < 0.00002 | 0.000154 | 0.0011 | - | - | < 0.001 |
| TP-PAD-11-12 -200um | 2011 | Greywacke/Siltstone | Tiriganiaq | PAD | fine < 200 um | 0.02 | 12 | 0.0020 | 1.8 | 0.0007 | 0.00098 | 4.2 | < 0.0001 | 0.00007 | 0.0039 | < 0.001 | < 0.00001 | 0.040 | 0.0004 | < 0.00002 | 0.00013 | 0.0026 | - | - | < 0.001 |
| | | | | | MINIMUM | <0.003 | 11 | < 0.001 | 1.8 | 0.0007 | 0.00098 | 3.4 | < 0.0001 | <0.00002 | 0.0028 | <0.001 | < 0.00001 | 0.040 | 0.0002 | <0.00002 | 0.000061 | 0.0009 | nc | nc | < 0.001 |
| | | | | | MAXIMUM | 0.02 | 24 | 0.023 | 9.2 | 0.0096 | 0.0024 | 8.9 | 0.00090 | 0.00007 | 0.0052 | <0.001 | <0.00001 | 1.010 | 0.0004 | <0.00002 | 0.00021 | 0.0026 | nc | nc | <0.001 |
| | | | | | MEDIAN | 0.0030 | 12 | 0.0030 | 3.2 | 0.0014 | 0.0014 | 5.0 | 0.00040 | 0.00002 | 0.0032 | nc | nc | 0.084 | 0.0003 | nc | 0.00013 | 0.0012 | nc | nc | nc |
| | | | | | AVERAGE | 0.0061 | 14 | 0.0061 | 3.9 | 0.0025 | 0.0015 | 5.3 | 0.00039 | 0.00003 | 0.0035 | nc | nc | 0.220 | 0.0003 | nc | 0.00013 | 0.0014 | nc | nc | nc |
| | | | | | STANDARD DEVIATION | 0.0074 | 4 | 0.0076 | 2.4 | 0.0032 | 0.0005 | 1.8 | 0.00027 | 0.00002 | 0.0008 | nc | nc | 0.350 | 0.0001 | nc | 0.00005 | 0.0006 | nc | nc | nc |
| | | | | | 75TH PERCENTILE | 0.0040 | 14 | 0.0055 | 3.8 | 0.0018 | 0.0017 | 5.6 | 0.00045 | 0.00004 | 0.0037 | nc | nc | 0.135 | 0.0004 | nc | 0.00015 | 0.0016 | nc | nc | nc |

Notes:
nc: not calculated
- not analyzed
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminum is pH dependant; assumes pH>6.5.

# B.5 NAG Test Results

# Appendix B.5: Net Acid Generation Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | | | | | | | | | 0.5 | | | | | | | 0.3 |
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | NAG Leach pH | Alkalinity | Acidity | Conductivity | SO4 | Cl | Hg | Ag | Al [4] | As | B | Be | Bi | Ca | Cd [3] | Co | Cr [2] | Cu [3] |
| | | from (m) | to (m) | | | | units | mg/L as CaCO3 | mg/L as CaCO3 | uS/cm | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | 12 | 120 | < 2 | 396 | 42 | 0.30 | < 0.0001 | < 0.00001 | 3.8 | 0.0011 | 0.48 | < 0.00002 | < 0.00001 | 66 | < 0.000003 | 0.00009 | 0.025 | < 0.0005 |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | 11 | 132 | < 2 | 388 | 21 | 0.60 | < 0.0001 | 0.000010 | 4.2 | 0.0021 | 0.73 | < 0.00002 | < 0.00001 | 47 | 0.000003 | 0.00007 | 0.031 | 0.00150 |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | 11 | 127 | < 2 | 347 | 17 | 0.70 | < 0.0001 | 0.000030 | 4.0 | 0.0008 | 0.19 | 0.000030 | 0.000020 | 62 | 0.000017 | 0.00010 | 0.011 | 0.00160 |
| | | | | | | MINIMUM | 11 | 120 | <2 | 347 | 17 | 0.30 | <0.0001 | 0.000010 | 3.8 | 0.0008 | 0.19 | <0.00002 | <0.00001 | 47 | < 0.000003 | 0.00007 | 0.011 | <0.0005 |
| | | | | | | MAXIMUM | 12 | 132 | <2 | 396 | 42 | 0.70 | <0.0001 | 0.000030 | 4.2 | 0.0021 | 0.73 | 0.00003 | 0.000020 | 66 | 0.000017 | 0.00010 | 0.031 | 0.00160 |
| | | | | | | MEDIAN | 11 | 127 | nc | 388 | 21 | 0.60 | nc | nc | 4.0 | 0.0011 | nc | nc | nc | 62 | nc | 0.00009 | 0.025 | nc |
| | | | | | | AVERAGE | 11 | 126 | nc | 377 | 27 | 0.53 | nc | nc | 4.0 | 0.0013 | nc | nc | nc | 58 | nc | 0.00009 | 0.023 | nc |
| | | | | | | STANDARD DEVIATION | nc | 6 | nc | 26 | 13 | 0.21 | nc | nc | 0.2 | 0.0007 | nc | nc | nc | 10 | nc | 0.00001 | 0.010 | nc |
| | | | | | | 75TH PERCENTILE | nc | 130 | nc | 392 | 32 | 0.65 | nc | nc | 4.1 | 0.0016 | nc | nc | nc | 64 | nc | 0.00010 | 0.028 | nc |
| M04-533-01 | 2008 | 380.18 | 389.64 | Greywacke/Siltstone | Tiriganiaq | UG | 11 | 76 | - | 205 | 21 | < 2 | < 0.0001 | < 0.00001 | 1.3 | 0.0044 | 0.82 | < 0.00002 | 0.000010 | 36 | 0.000003 | 0.00002 | 0.027 | < 0.0005 |
| M98-194-01 | 2008 | 70 | 74.63 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 11 | 77 | - | 221 | 32 | < 2 | < 0.0001 | < 0.00001 | 2.0 | 0.0148 | 0.73 | < 0.00002 | 0.000020 | 46 | < 0.000003 | 0.00003 | 0.012 | < 0.0005 |
| M99-403-03 | 2008 | 50.6 | 54.35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 11 | 80 | < 2 | 205 | 24 | 0.20 | < 0.0001 | < 0.00001 | 1.7 | 0.0330 | 0.68 | < 0.00002 | < 0.00001 | 39 | < 0.000003 | 0.00006 | 0.017 | 0.00060 |
| M99-404-04 | 2008 | 30.19 | 34.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | 11 | 83 | < 2 | 249 | 44 | < 0.2 | < 0.0001 | < 0.00001 | 1.1 | 0.0074 | 0.58 | < 0.00002 | < 0.00001 | 49 | 0.000005 | 0.00007 | 0.018 | < 0.0005 |
| | | | | | | MINIMUM | 11 | 76 | <2 | 205 | 21 | 0.20 | <0.0001 | <0.00001 | 1.1 | 0.0044 | 0.58 | <0.00002 | 0.000010 | 36 | < 0.000003 | 0.00002 | 0.012 | <0.0005 |
| | | | | | | MAXIMUM | 11 | 83 | <2 | 249 | 44 | <2 | <0.0001 | <0.00001 | 2.0 | 0.0330 | 0.82 | <0.00002 | 0.000020 | 49 | 0.000005 | 0.00007 | 0.027 | 0.00060 |
| | | | | | | MEDIAN | 11 | 79 | nc | 213 | 28 | nc | nc | nc | 1.5 | 0.0111 | 0.70 | nc | nc | 42 | nc | 0.00004 | 0.017 | nc |
| | | | | | | AVERAGE | 11 | 79 | nc | 220 | 30 | nc | nc | nc | 1.5 | 0.0149 | 0.70 | nc | nc | 42 | nc | 0.00004 | 0.018 | nc |
| | | | | | | STANDARD DEVIATION | nc | 3 | nc | 21 | 10 | nc | nc | nc | 0.4 | 0.0128 | 0.10 | nc | nc | 6 | nc | 0.00002 | 0.006 | nc |
| | | | | | | 75TH PERCENTILE | nc | 81 | nc | 228 | 35 | nc | nc | nc | 1.8 | 0.0194 | 0.75 | nc | nc | 46 | nc | 0.00006 | 0.020 | nc |
| M04-526-01 | 2008 | 216 | 225.05 | Iron Formation | Tiriganiaq | UG | 11 | 125 | - | 489 | 120 | < 2 | < 0.0001 | < 0.00001 | 4.6 | 0.0047 | 0.90 | < 0.00002 | 0.000020 | 107 | < 0.000003 | 0.00006 | 0.002 | 0.00080 |
| GT08-04-02 | 2008 | 80.38 | 84.3 | Mafic Volcanic | Tiriganiaq | OP/FW | 11 | 142 | - | 429 | 5 | < 2 | < 0.0001 | < 0.00001 | 1.7 | 0.0003 | 0.50 | < 0.00002 | 0.000010 | 60 | < 0.000003 | 0.00004 | 0.014 | < 0.0005 |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | 12 | 95 | < 2 | 236 | 19 | 0.30 | < 0.0001 | < 0.00001 | 1.7 | 0.0008 | 0.91 | < 0.00002 | < 0.00001 | 57 | < 0.000003 | 0.00008 | 0.018 | 0.00170 |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | 11 | 93 | < 2 | 235 | 31 | 0.20 | < 0.0001 | < 0.00001 | 1.2 | 0.0004 | 0.89 | < 0.00002 | < 0.00001 | 54 | 0.000003 | 0.00007 | 0.018 | 0.00080 |
| M99-341-01 | 2008 | 80.6 | 84.4 | Mafic Volcanic | Tiriganiaq | OP/FW | 11 | 124 | - | 467 | 64 | < 2 | < 0.0001 | < 0.00001 | 1.7 | 0.0007 | 1.04 | < 0.00002 | 0.000040 | 80 | < 0.000003 | 0.00005 | 0.016 | 0.00070 |
| | | | | | | MINIMUM | 11 | 93 | <2 | 235 | 5 | 0.20 | <0.0001 | <0.00001 | 1.2 | 0.0003 | 0.50 | <0.00002 | < 0.00001 | 54 | < 0.000003 | 0.00004 | 0.014 | <0.0005 |
| | | | | | | MAXIMUM | 12 | 142 | <2 | 467 | 64 | <2 | <0.0001 | <0.00001 | 1.7 | 0.0008 | 1.04 | <0.00002 | 0.000040 | 80 | 0.000003 | 0.00008 | 0.018 | 0.00170 |
| | | | | | | MEDIAN | 11 | 110 | nc | 333 | 25 | nc | nc | nc | 1.7 | 0.0006 | 0.90 | nc | 0.000010 | 59 | nc | 0.00006 | 0.017 | 0.00075 |
| | | | | | | AVERAGE | 11 | 114 | nc | 342 | 30 | nc | nc | nc | 1.5 | 0.0006 | 0.83 | nc | 0.000018 | 63 | nc | 0.00006 | 0.017 | 0.00093 |
| | | | | | | STANDARD DEVIATION | nc | 24 | nc | 124 | 25 | nc | nc | nc | 0.3 | 0.0002 | 0.23 | nc | 0.000015 | 12 | nc | 0.00002 | 0.002 | 0.00053 |
| | | | | | | 75TH PERCENTILE | nc | 129 | nc | 439 | 39 | nc | nc | nc | 1.7 | 0.0007 | 0.94 | nc | 0.000018 | 65 | nc | 0.00007 | 0.018 | 0.00103 |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# Appendix B.5: Net Acid Generation Results - Waste Rock
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Fe | K | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Metal Mine Effluent Regulation (MMER)[1] (mg/L) | | | | | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | | 0.5 |
| M08-734-03 | 2009 | 54 | 60 | Mafic Volcanic | F Zone | OP/HW | 0.01 | 16 | 0.00100 | < 0.003 | 0.00037 | 0.0021 | 4.2 | 0.0012 | 0.00004 | 0.0010 | 0.0020 | 0.00021 | 0.072 | 0.0002 | 0.0003 | 0.000016 | 0.0048 | 0.0010 | 0.000003 | < 0.001 |
| M08-740-05 | 2009 | 122 | 126 | Mafic Volcanic | F Zone | OP/FW | 0.01 | 27 | < 0.001 | < 0.003 | 0.00044 | 0.0016 | 5.1 | 0.0008 | 0.00003 | 0.0005 | 0.0010 | 0.00017 | 0.070 | 0.0001 | 0.0003 | 0.000011 | 0.0096 | 0.0008 | 0.000006 | < 0.001 |
| M08-750-03 | 2009 | 55 | 60 | Mafic Volcanic | F Zone | OP/FW | < 0.01 | 23 | 0.00200 | < 0.003 | 0.00014 | 0.0056 | 3.6 | 0.0010 | 0.00003 | 0.0007 | < 0.001 | 0.00010 | 0.110 | 0.0001 | 0.0002 | 0.000061 | 0.0142 | 0.0021 | 0.000018 | < 0.001 |
| | | | | | | MINIMUM | < 0.01 | 16 | < 0.001 | <0.003 | 0.00014 | 0.00162 | 3.6 | 0.0008 | 0.00003 | 0.0005 | < 0.001 | 0.00010 | 0.070 | 0.0001 | 0.0002 | 0.000011 | 0.0048 | 0.0008 | 0.000003 | <0.001 |
| | | | | | | MAXIMUM | 0.01 | 27 | 0.0020 | <0.003 | 0.00044 | 0.0056 | 5.1 | 0.0012 | 0.00004 | 0.0010 | 0.0020 | 0.00021 | 0.110 | 0.0002 | 0.0003 | 0.000061 | 0.0142 | 0.0021 | 0.000018 | <0.001 |
| | | | | | | MEDIAN | nc | 23 | nc | nc | 0.00037 | 0.0021 | 4.2 | 0.0010 | 0.00003 | 0.0007 | nc | 0.00017 | 0.072 | 0.00010 | 0.00030 | 0.000016 | 0.00956 | 0.00100 | 0.000006 | nc |
| | | | | | | AVERAGE | nc | 22 | nc | nc | 0.000317 | 0.0031 | 4.3 | 0.0010 | 0.00003 | 0.0007 | nc | 0.00016 | 0.084 | 0.00013 | 0.00027 | 0.000029 | 0.00952 | 0.00129 | 0.000009 | nc |
| | | | | | | STANDARD DEVIATION | nc | 6 | nc | nc | 0.000157 | 0.0022 | 0.8 | 0.0002 | 0.00001 | 0.0003 | nc | 0.00006 | 0.023 | 0.00006 | 0.00006 | 0.000028 | 0.00471 | 0.00069 | 0.000008 | nc |
| | | | | | | 75TH PERCENTILE | nc | 25 | nc | nc | 0.000405 | 0.0038 | 4.6 | 0.0011 | 0.000035 | 0.0009 | nc | 0.00019 | 0.091 | 0.00015 | 0.00030 | 0.000039 | 0.01188 | 0.00154 | 0.000012 | nc |
| M04-533-01 | 2008 | 380.18 | 389.64 | Greywacke/Siltstone | Tiriganiaq | UG | < 0.01 | 12.60 | < 0.002 | 0.0060 | 0.00011 | 0.0116 | 2.6 | 0.0003 | 0.00008 | 0.0010 | < 0.001 | 0.00008 | 0.843 | 0.0001 | < 0.0002 | 0.000003 | 0.0095 | 0.0010 | 0.000007 | < 0.001 |
| M98-194-01 | 2008 | 70 | 74.63 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 6.56 | < 0.002 | 0.0040 | 0.00003 | 0.0057 | 5.0 | 0.0004 | < 0.00002 | 0.0007 | < 0.001 | 0.00002 | 0.474 | < 0.0001 | < 0.0002 | 0.000003 | 0.0025 | 0.0006 | 0.000002 | < 0.001 |
| M99-403-03 | 2008 | 50.6 | 54.35 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 5.66 | 0.00200 | < 0.003 | 0.00005 | 0.0063 | 3.6 | 0.0006 | < 0.00002 | 0.0009 | < 0.001 | 0.00006 | 0.372 | 0.0002 | < 0.0002 | 0.000004 | 0.0043 | 0.0006 | 0.000002 | < 0.001 |
| M99-404-04 | 2008 | 30.19 | 34.3 | Greywacke/Siltstone | Tiriganiaq | OP/HW | < 0.01 | 4.70 | < 0.001 | < 0.003 | 0.00011 | 0.0135 | 2.6 | 0.0009 | 0.00003 | 0.0009 | < 0.001 | 0.00007 | 0.276 | 0.0003 | < 0.0002 | 0.000016 | 0.0087 | 0.0005 | 0.000005 | < 0.001 |
| | | | | | | MINIMUM | <0.01 | 4.70 | <0.001 | <0.003 | 0.00003 | 0.0057 | 2.6 | 0.0003 | <0.00002 | 0.0007 | <0.001 | 0.00002 | 0.276 | 0.000 | <0.0002 | 0.000003 | 0.0025 | 0.0005 | 0.000002 | <0.001 |
| | | | | | | MAXIMUM | <0.01 | 12.60 | 0.00200 | 0.0060 | 0.00011 | 0.0135 | 5.0 | 0.0009 | 0.00008 | 0.0010 | <0.001 | 0.00008 | 0.843 | 0.0003 | <0.0002 | 0.000016 | 0.0095 | 0.0010 | 0.000007 | <0.001 |
| | | | | | | MEDIAN | nc | 6.11 | nc | nc | 0.00008 | 0.0089 | 3.1 | 0.0005 | nc | 0.0009 | nc | 0.00007 | 0.423 | 0.0002 | nc | 0.000004 | 0.0065 | 0.0006 | 0.000004 | nc |
| | | | | | | AVERAGE | nc | 7.38 | nc | nc | 0.000075 | 0.0093 | 3.5 | 0.0006 | nc | 0.0009 | nc | 0.00006 | 0.491 | 0.0002 | nc | 0.000007 | 0.0063 | 0.0007 | 0.000004 | nc |
| | | | | | | STANDARD DEVIATION | nc | 3.56 | nc | nc | 4.12E-05 | 0.0039 | 1.1 | 0.0003 | nc | 0.0001 | nc | 0.00003 | 0.248 | 0.0001 | nc | 0.000006 | 0.0034 | 0.0002 | 0.000002 | nc |
| | | | | | | 75TH PERCENTILE | nc | 8.07 | nc | nc | 0.00011 | 0.0121 | 4.0 | 0.0007 | nc | 0.0009 | nc | 0.00007 | 0.566 | 0.0002 | nc | 0.000007 | 0.0089 | 0.0007 | 0.000006 | nc |
| M04-526-01 | 2008 | 216 | 225.05 | Iron Formation | Tiriganiaq | UG | < 0.01 | 0.95 | < 0.002 | < 0.003 | 0.00007 | 0.0040 | 1.0 | 0.0010 | 0.00003 | 0.0003 | 0.0020 | 0.00004 | 0.905 | 0.0003 | < 0.0002 | 0.000003 | 0.0003 | 0.0003 | 0.000003 | < 0.001 |
| GT08-04-02 | 2008 | 80.38 | 84.3 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 2.57 | < 0.002 | 0.0040 | 0.00014 | 0.0016 | 4.2 | 0.0006 | < 0.00002 | 0.0004 | < 0.001 | 0.00006 | 0.071 | < 0.0001 | < 0.0002 | 0.000002 | 0.0019 | 0.0004 | 0.000001 | < 0.001 |
| M05-536A-01 | 2009 | 491 | 497 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 2.76 | 0.00100 | 0.0030 | 0.00023 | 0.0016 | 3.2 | 0.0011 | < 0.00002 | 0.0007 | 0.0010 | 0.00018 | 0.064 | 0.0001 | < 0.0002 | 0.000028 | 0.0017 | 0.0014 | 0.000003 | < 0.001 |
| M97-141-01 | 2009 | 552 | 558 | Mafic Volcanic | Tiriganiaq | UG | < 0.01 | 1.89 | 0.00100 | 0.0040 | 0.00003 | 0.0010 | 3.8 | 0.0010 | 0.00009 | 0.0005 | 0.0020 | 0.00005 | 0.065 | 0.0002 | < 0.0002 | 0.000003 | 0.0025 | 0.0007 | 0.000002 | < 0.001 |
| M99-341-01 | 2008 | 80.6 | 84.4 | Mafic Volcanic | Tiriganiaq | OP/FW | < 0.01 | 3.20 | < 0.002 | 0.0100 | 0.00023 | 0.0060 | 3.7 | 0.0008 | 0.00004 | 0.0004 | 0.0030 | 0.00009 | 0.120 | 0.0002 | < 0.0002 | 0.000004 | 0.0008 | 0.0003 | 0.000001 | < 0.001 |
| | | | | | | MINIMUM | <0.01 | 1.89 | 0.0010 | 0.0030 | 0.00003 | 0.0010 | 3.2 | 0.0006 | < 0.00002 | 0.0004 | < 0.001 | 0.00005 | 0.064 | < 0.0001 | < 0.0002 | 0.000002 | 0.0019 | 0.0004 | 0.000001 | < 0.001 |
| | | | | | | MAXIMUM | <0.01 | 3.20 | <0.002 | 0.0100 | 0.00023 | 0.0060 | 4.2 | 0.0011 | 0.00009 | 0.0007 | 0.0030 | 0.00018 | 0.120 | 0.0002 | <0.0002 | 0.000028 | 0.0025 | 0.0014 | 0.000003 | <0.001 |
| | | | | | | MEDIAN | nc | 2.67 | nc | 0.0040 | 0.000185 | 0.0016 | 3.8 | 0.0009 | nc | 0.0005 | 0.0015 | 0.00008 | 0.068 | 0.00015 | nc | 0.000004 | 0.00178 | 0.00054 | 0.000002 | nc |
| | | | | | | AVERAGE | nc | 2.61 | nc | 0.0053 | 0.000158 | 0.0025 | 3.7 | 0.0009 | nc | 0.0005 | 0.0018 | 0.00010 | 0.080 | 0.00015 | nc | 0.000009 | 0.00170 | 0.00070 | 0.000002 | nc |
| | | | | | | STANDARD DEVIATION | nc | 0.54 | nc | 0.0032 | 0.000095 | 0.0023 | 0.4 | 0.0002 | nc | 0.0001 | 0.0010 | 0.00006 | 0.027 | 0.000058 | nc | 0.000013 | 0.000699 | 0.000529 | 0.000001 | nc |
| | | | | | | 75TH PERCENTILE | nc | 2.87 | nc | 0.0055 | 0.00023 | 0.0027 | 3.9 | 0.0010 | nc | 0.0006 | 0.0023 | 0.00011 | 0.084 | 0.000200 | nc | 0.000010 | 0.002030 | 0.000900 | 0.000002 | nc |

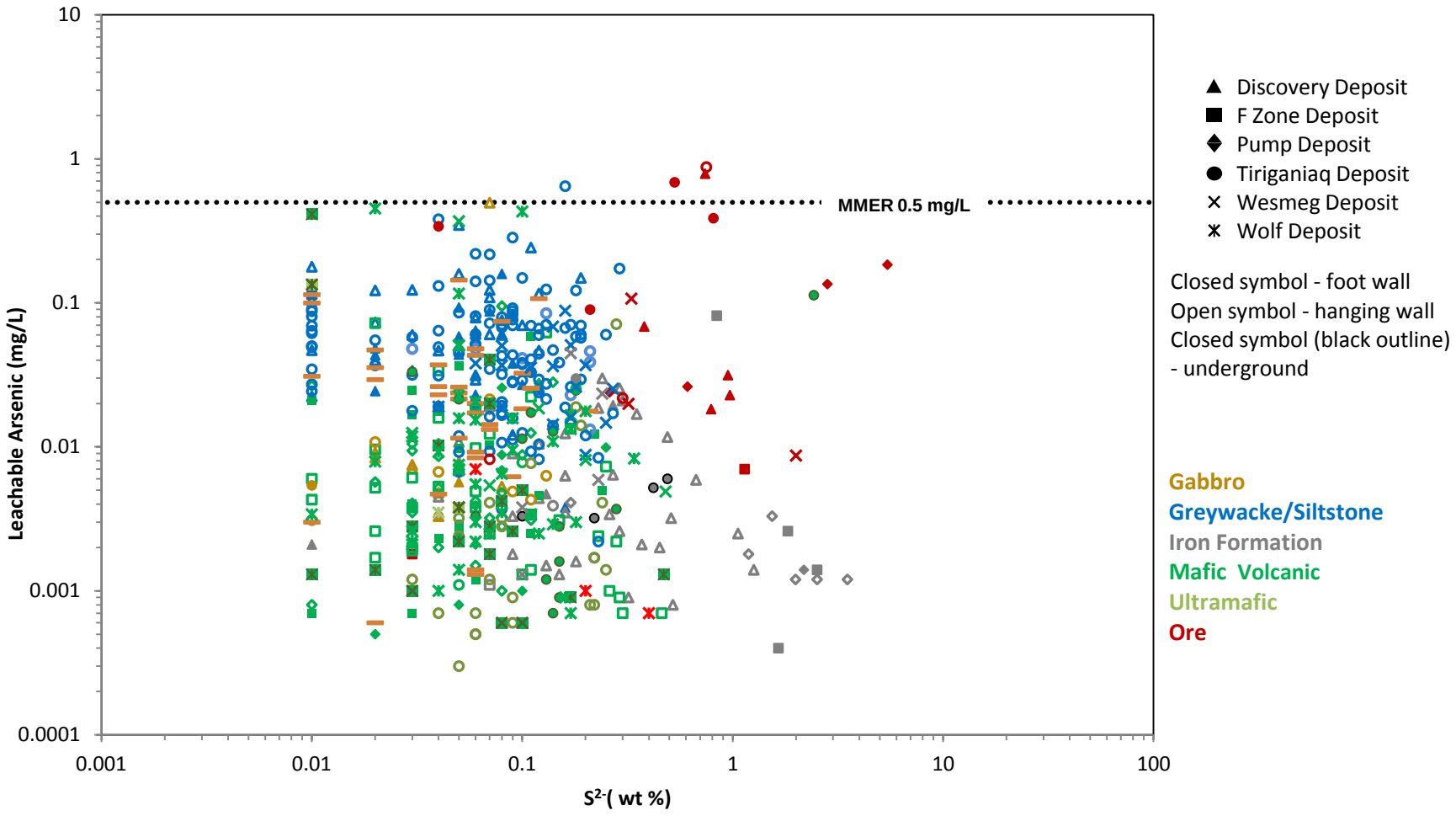
Notes:
nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

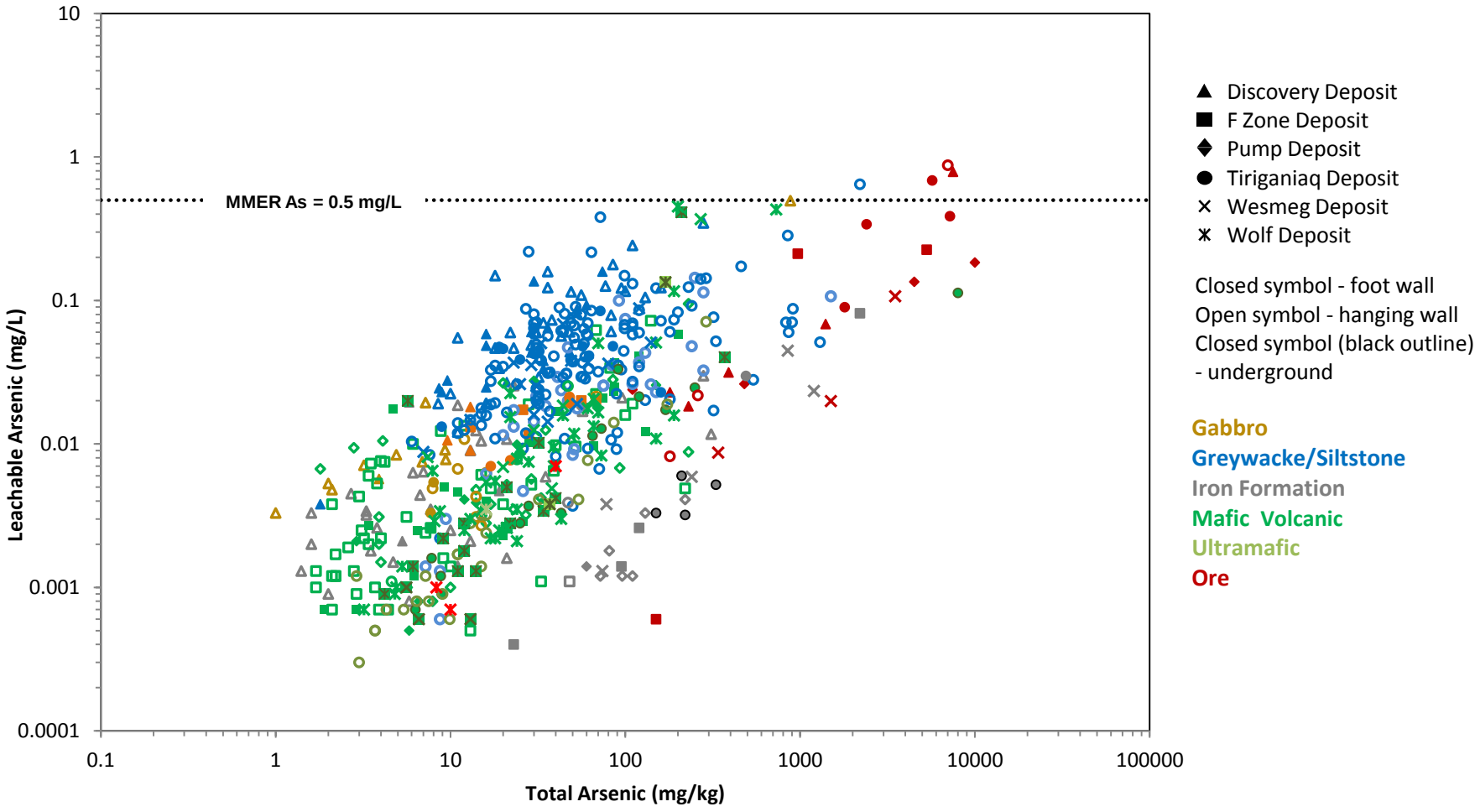
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.




| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Sulphide Sulphur ($S^{2-}$) versus Leachable Arsenic<br>ALL DEPOSITS | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date: Aug-12 | Project N°: 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure: B.4-1 |

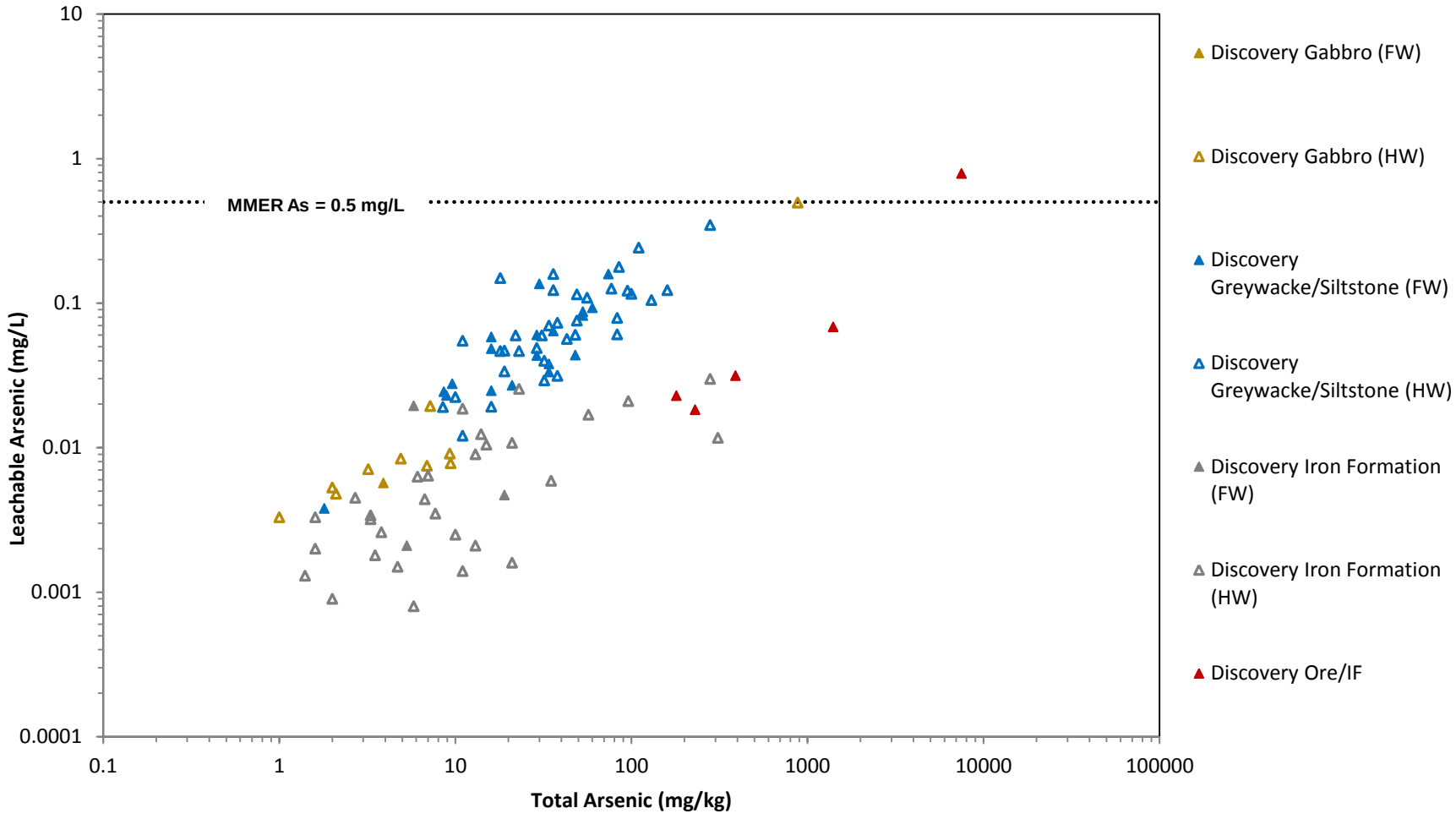
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AEM_static_FIGURES SFE_30Aug2012.xlsx




Notes:

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Waste Rock Static Testing | Total Arsenic versus Leachable Arsenic<br>All Deposits | | | |
| Meliadine Gold Project<br>Agnico Eagle Mines Ltd. | | Prepared | DH | Date | Aug-12 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | |
| | | | | Project N° | 11-1428-0011 |
| | | | | Figure | B.4-2 |

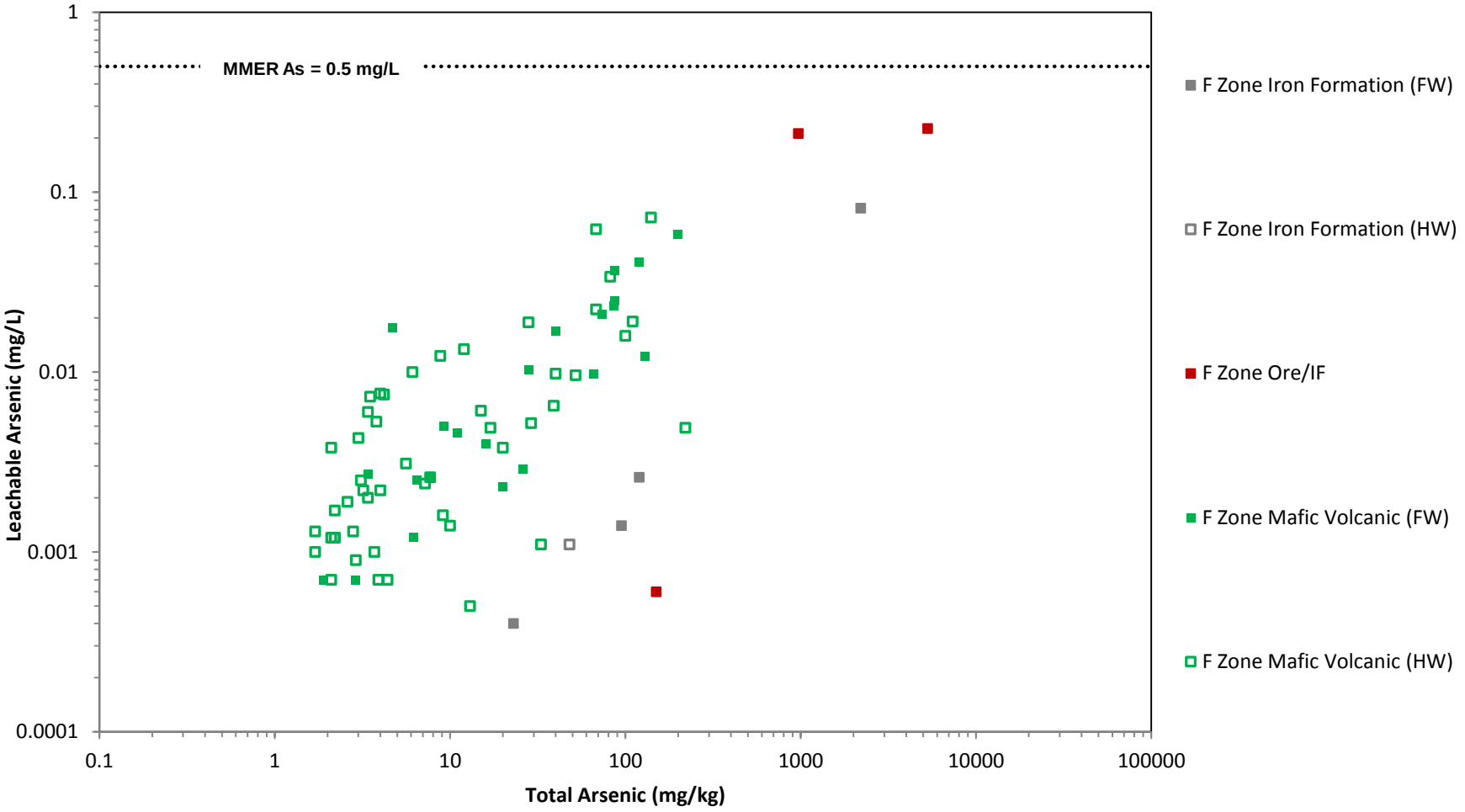
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AEM_static_FIGURES SFE_30Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**Discovery Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date Aug-12 | Project N° 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure **B.4-3** |

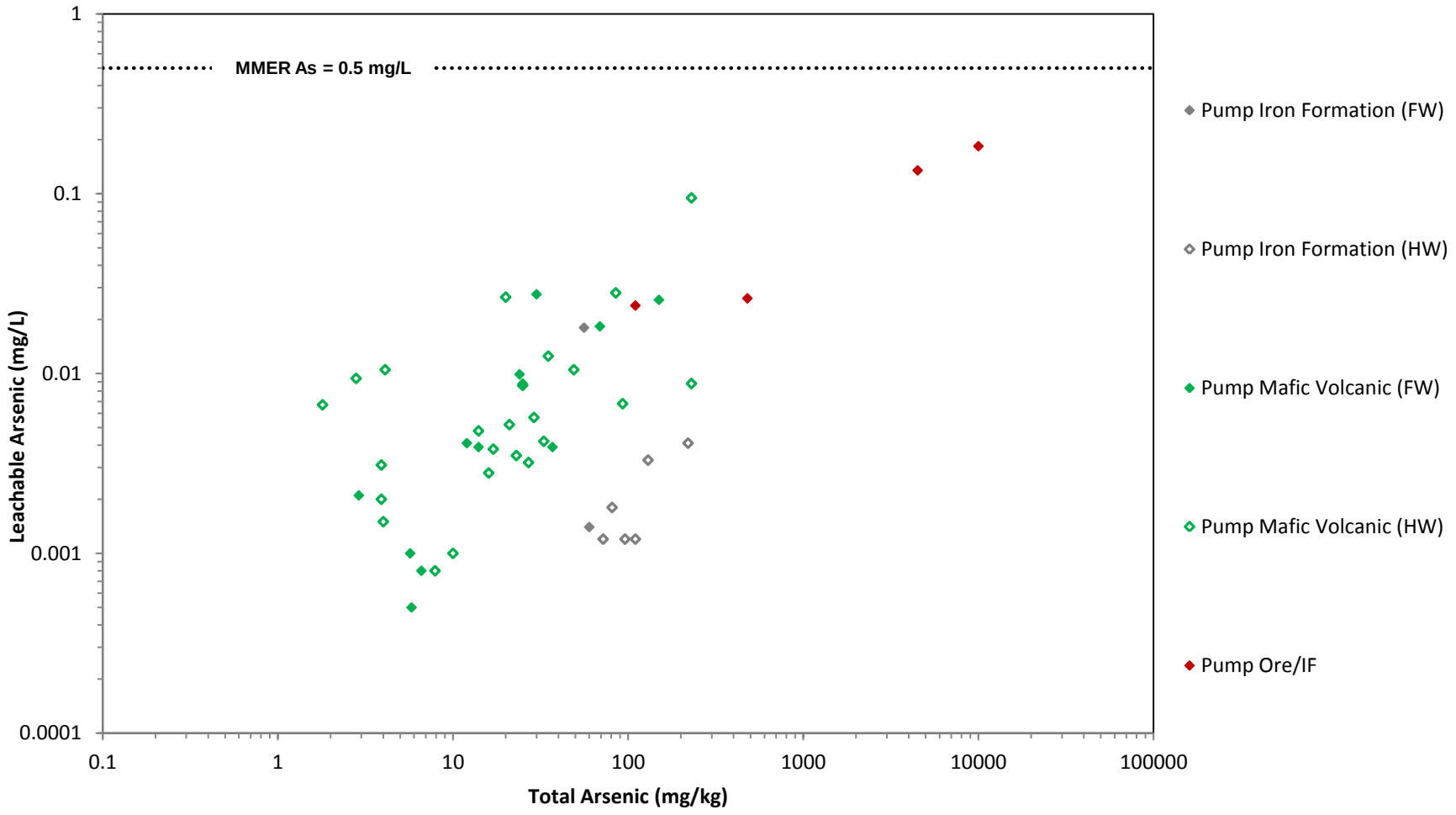
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AEM_static_FIGURES SFE_30Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**F-Zone Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **B.4-4** |

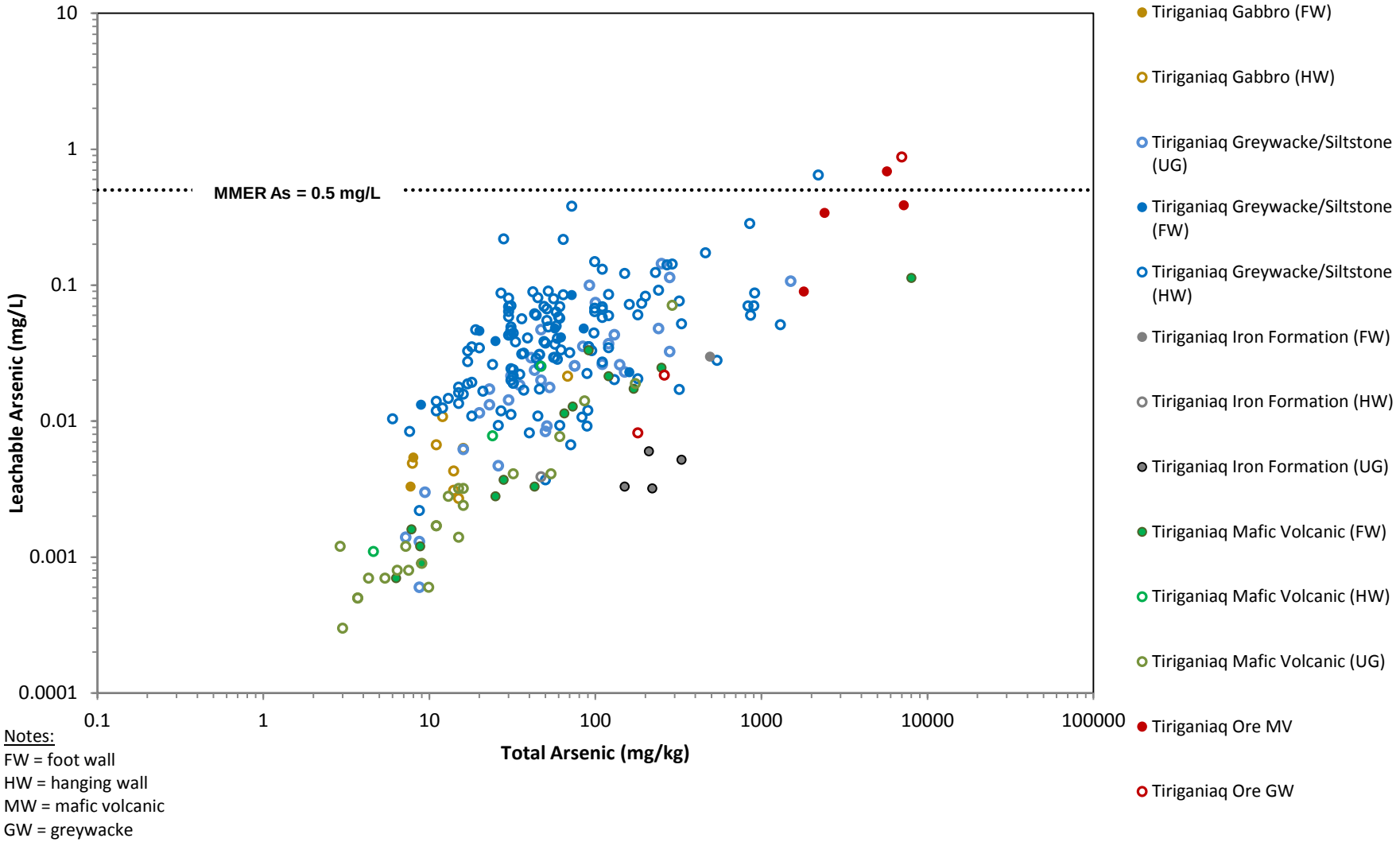
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AEM_static_FIGURES SFE_30Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**Pump Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | **B.4-5** |

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Notes:
FW = foot wall
HW = hanging wall
MW = mafic volcanic
GW = greywacke

Golder Associates

**Waste Rock Static Testing**

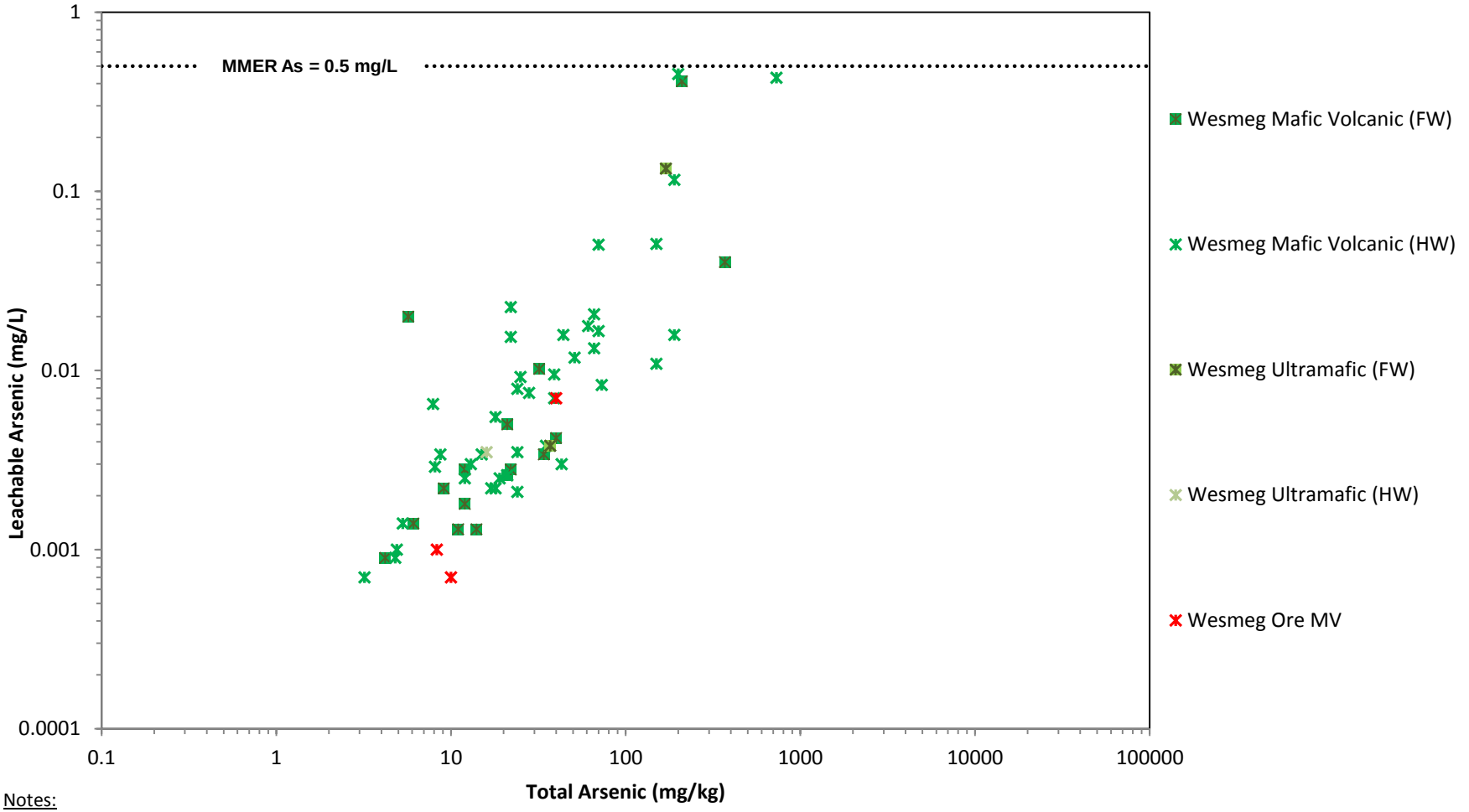
**Total Arsenic versus Leachable Arsenic**

**Tiriganiaq Deposit**

**Meliadine Gold Project**
**Agnico Eagle Mines Ltd.**

| | | | | | |
|---|---|---|---|---|---|
| Prepared | DH | Date | Aug-12 | Project N° | 11-1428-0011 |
| Checked | AJS | | | | |
| Reviewed | VJB | | | Figure | **B.4-6** |

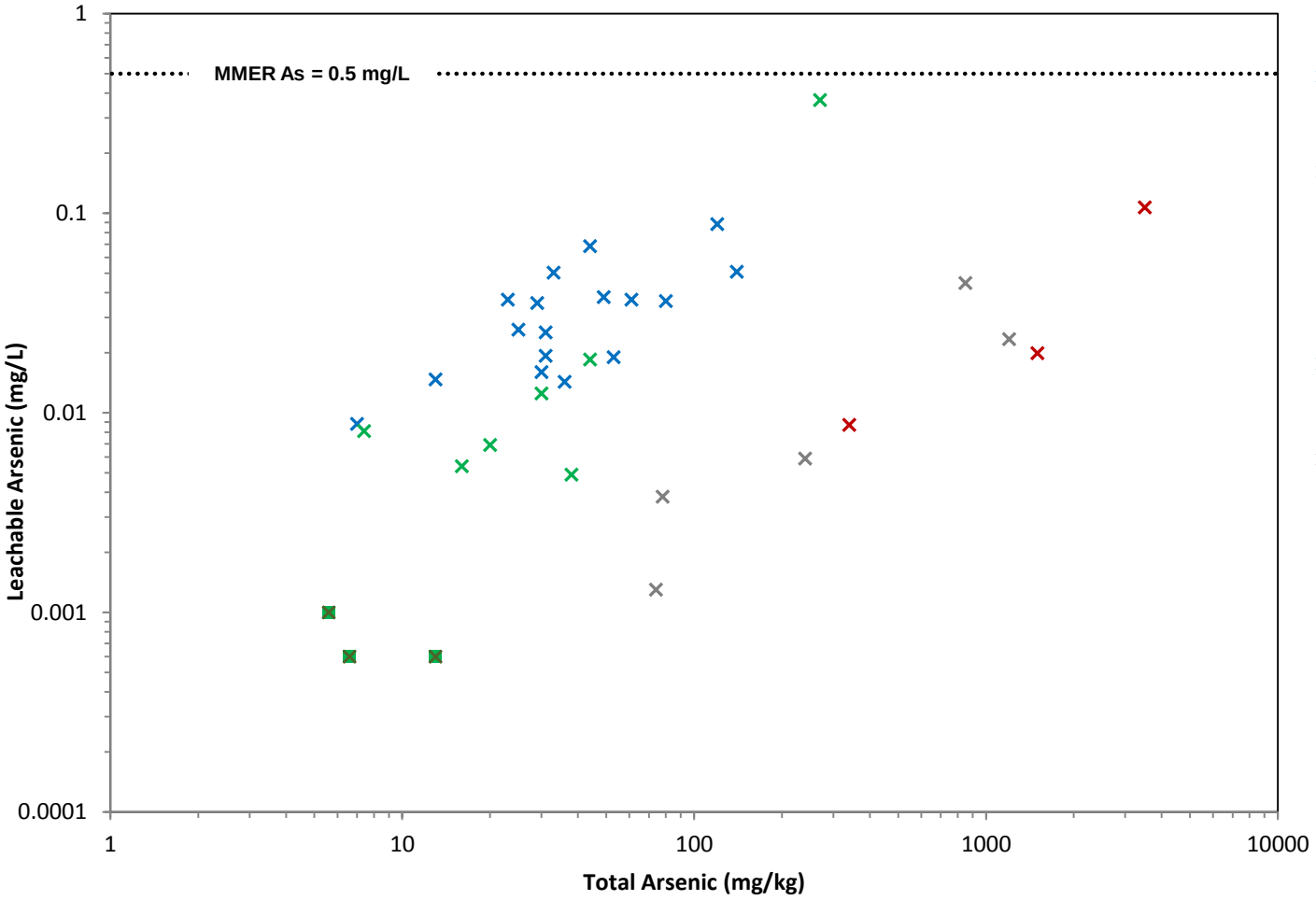
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AEM_static_FIGURES SFE_30Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall
MV = mafic volcanic

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**Wesmeg Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | AJS | | | | |
| | | Reviewed | VJB | | | Figure | **B.4-7** |

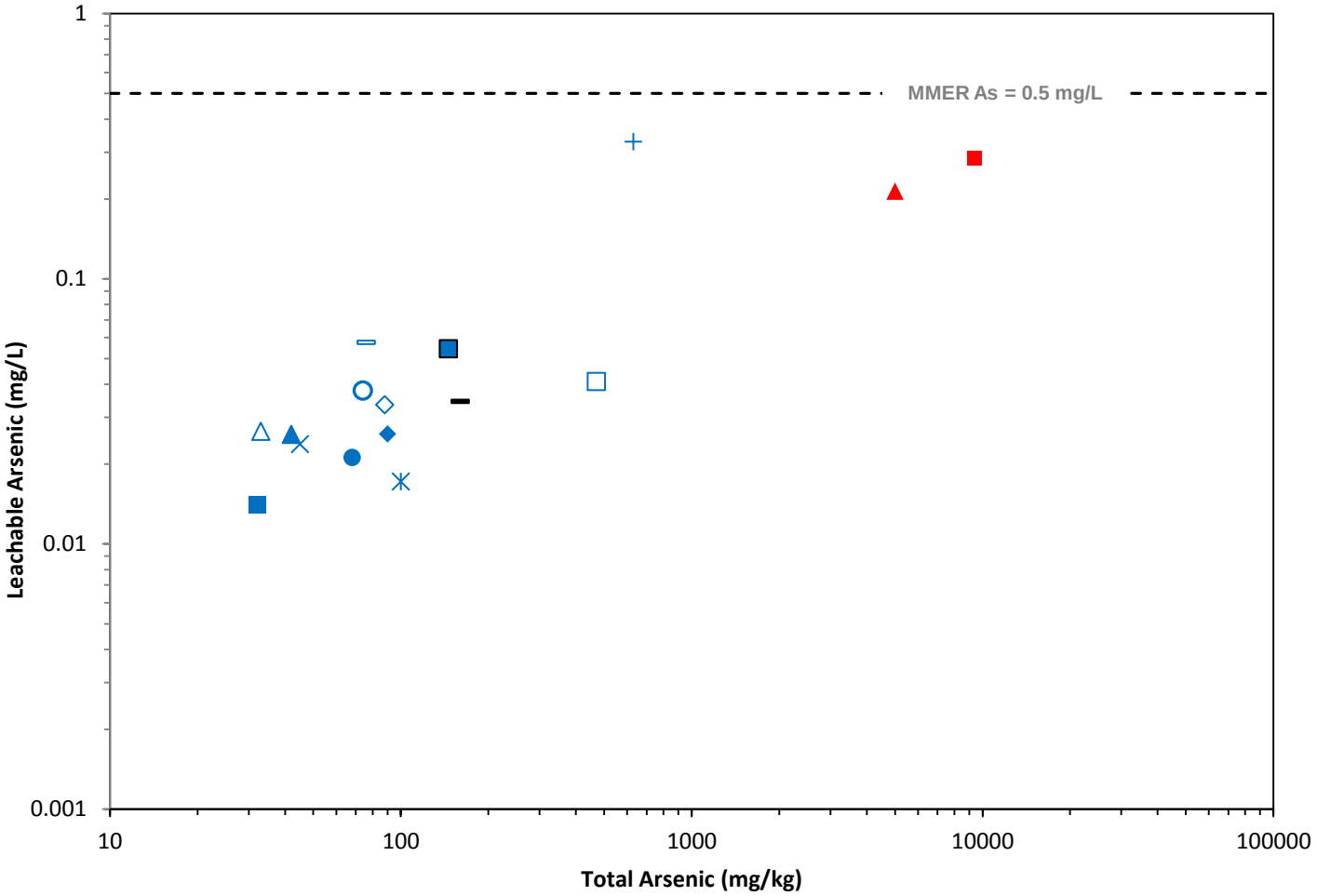
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AEM_static_FIGURES SFE_30Aug2012.xlsx




Notes:
FW = foot wall
HW = hanging wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**Wolf Deposit** | | | |
| **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH | Date Aug-12 | Project N° 11-1428-0011 |
| | | Checked | AJS | | |
| | | Reviewed | VJB | | Figure **B.4-8** |

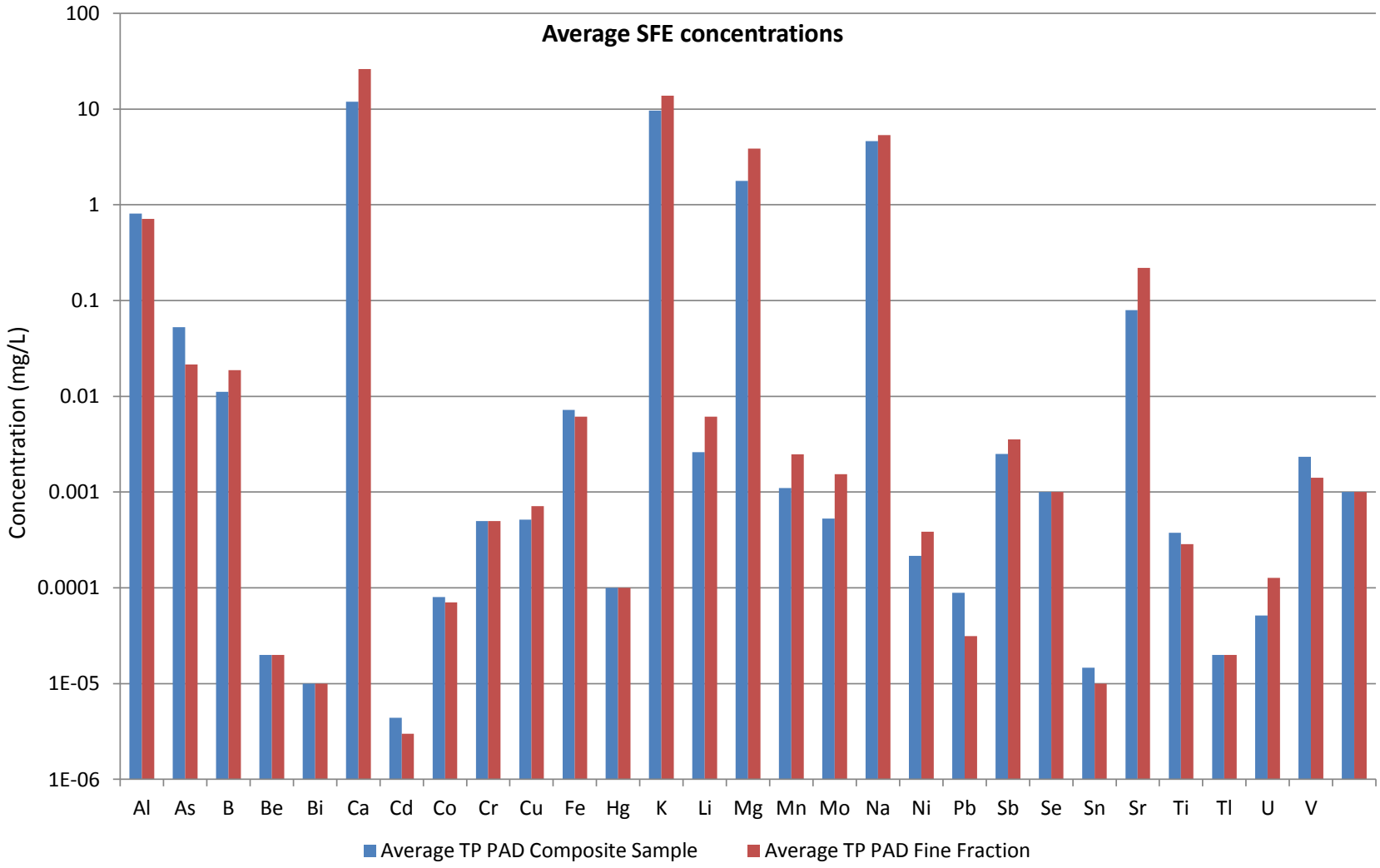
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AEM_static_FIGURES SFE_30Aug2012.xlsx

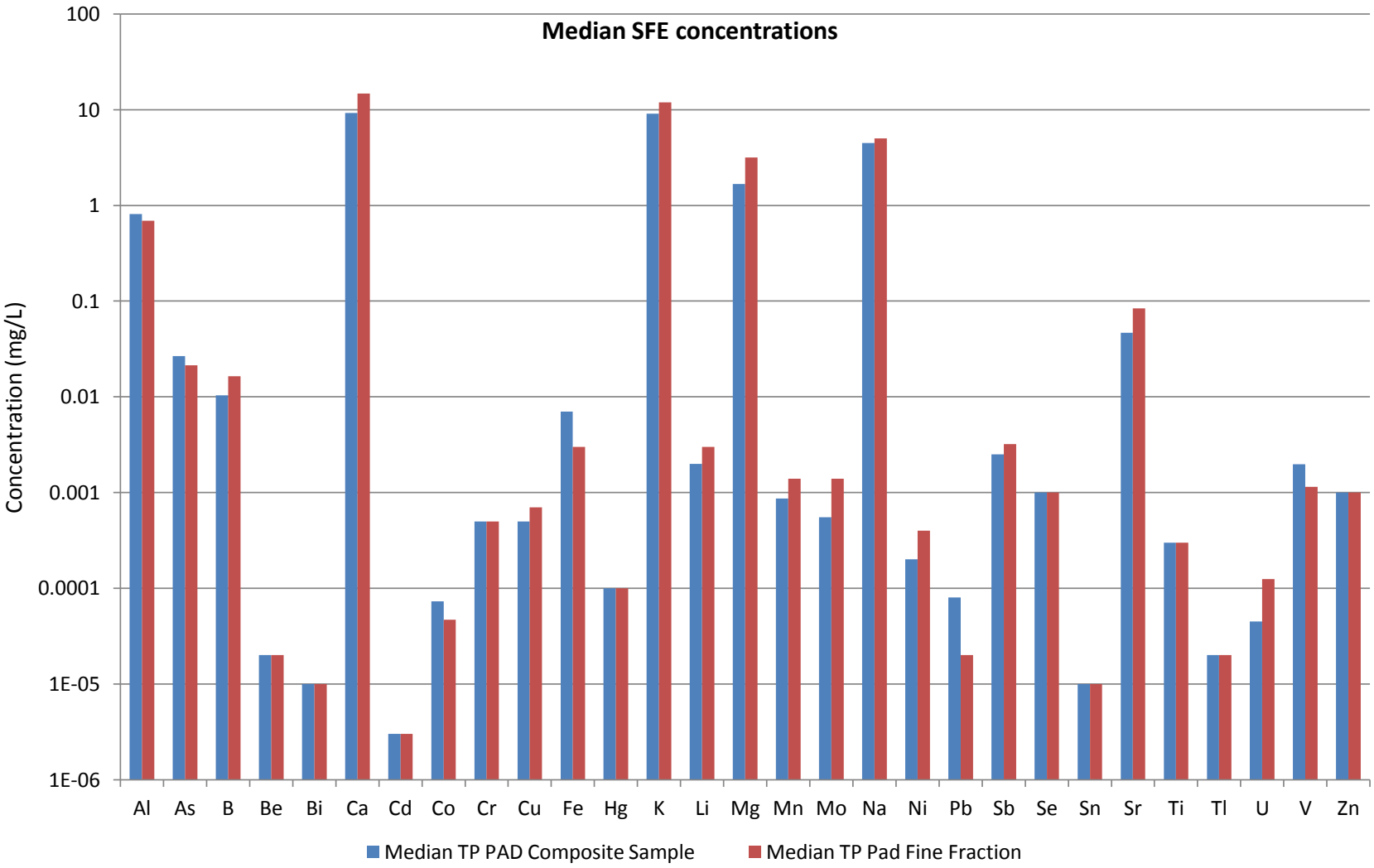



Notes:
FW = foot wall
HW = hanging wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Waste Rock Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**Discovery Deposit** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH/AJS | Date | Sep-12 | Project N° | 11-1428-0011 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | **B.4-9** |

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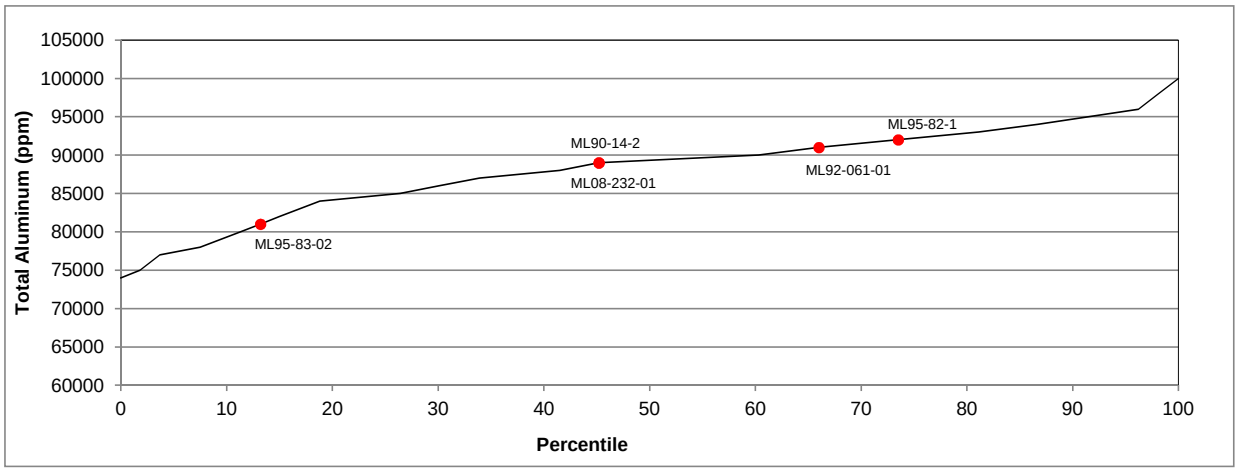


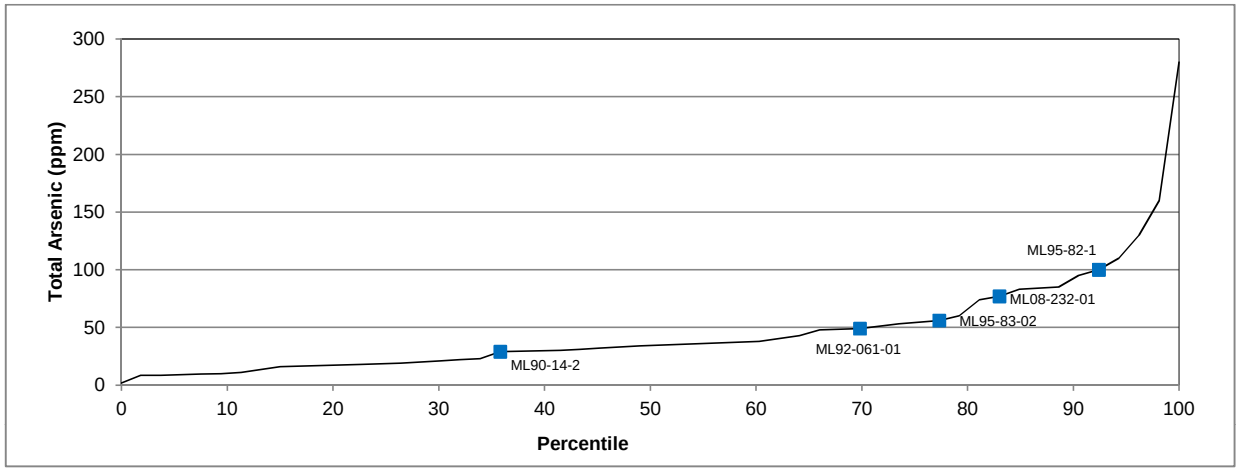



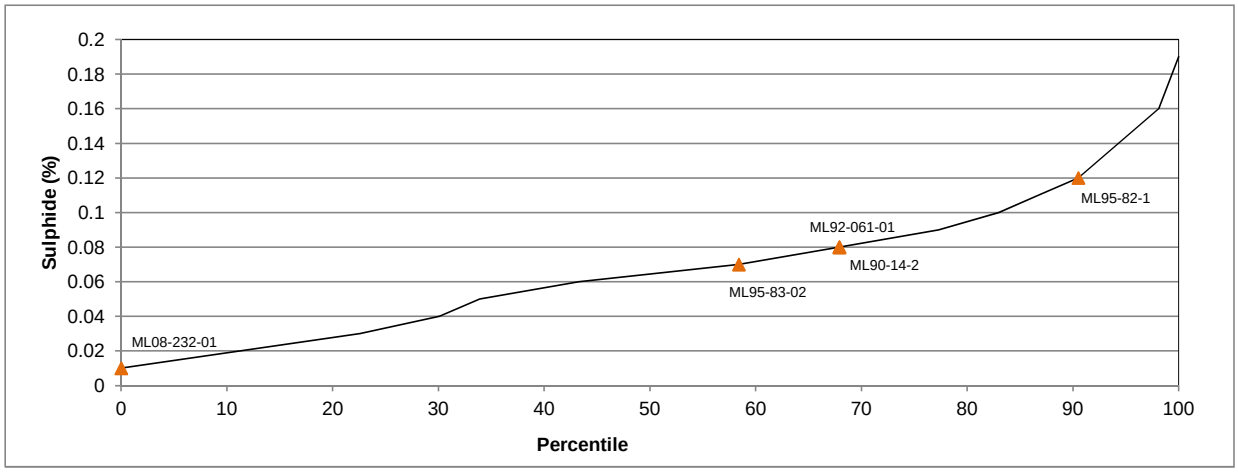

| | | | | |
|---|---|---|---|---|
| Golder Associates | **Tiriganiaq Operations Pad (Waste Rock) Static Testing** | **Comparison of waste rock SFE Results Tiriganiaq Deposit - Operations PAD** | | |
| **Meliadine Property, Nunavut Agnico Eagle Mines Ltd.** | Prepared LMC | Date Aug-12 | Project N° | 11-1428-0011 |
| | Checked AJS | | | |
| | Reviewed VJB | | Figure | **B.4-10** |

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# B.6 Kinetic Test Sample Selection Rationale (Percentile Figures) and Large Column Composition

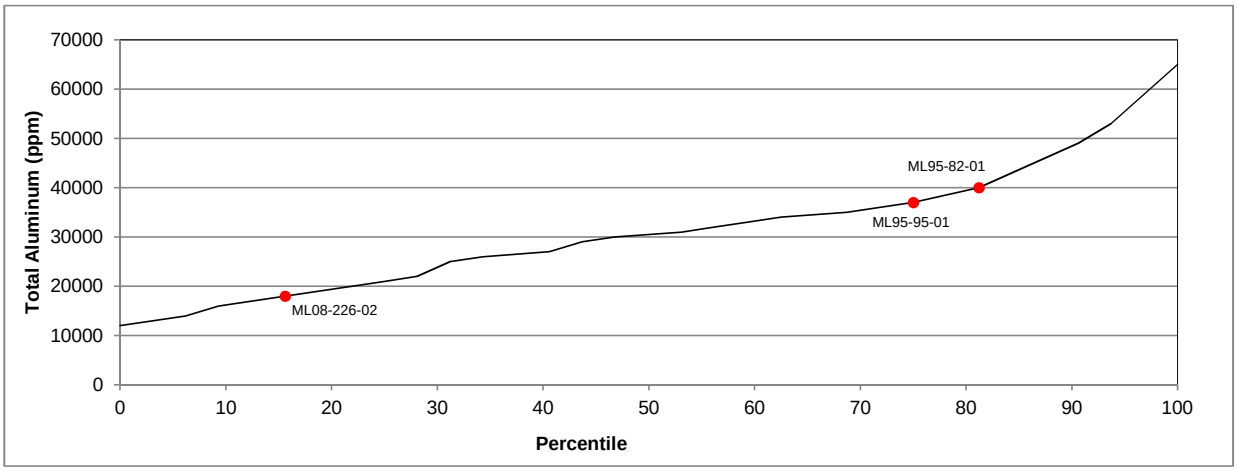


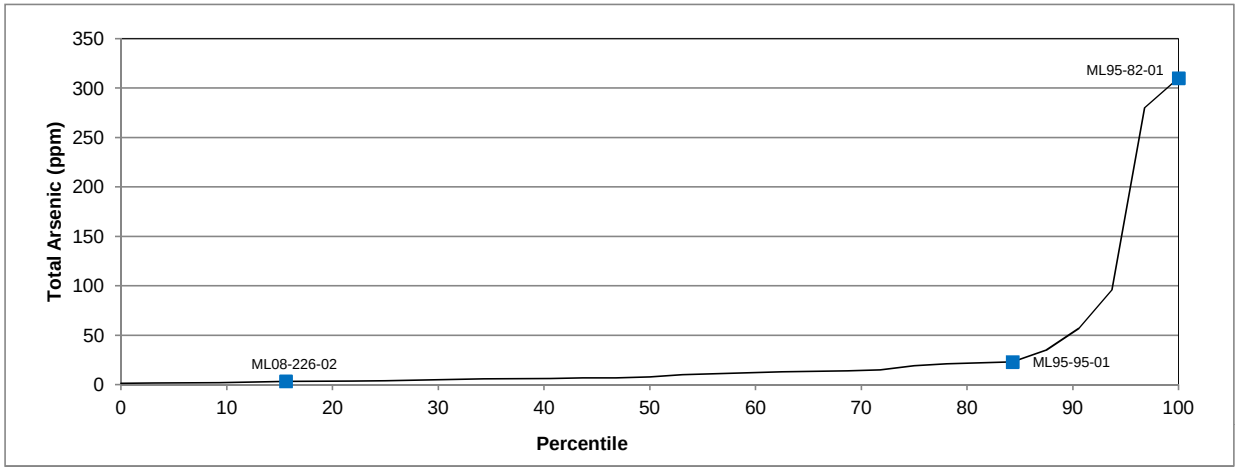



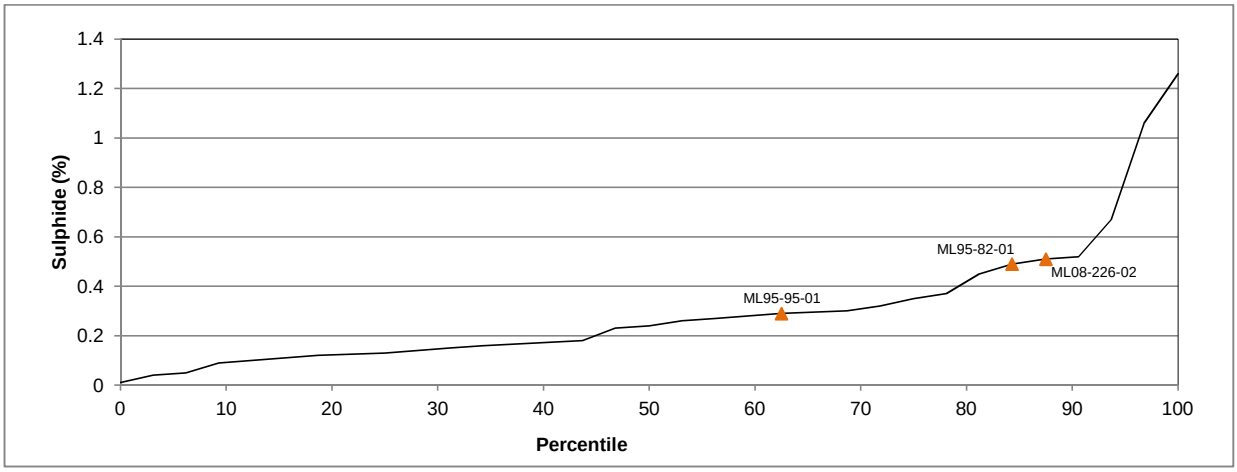




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-1**<br><br>**Percentile Ranking of Sample Concentrations - Discovery Greywacke** | Golder Associates |

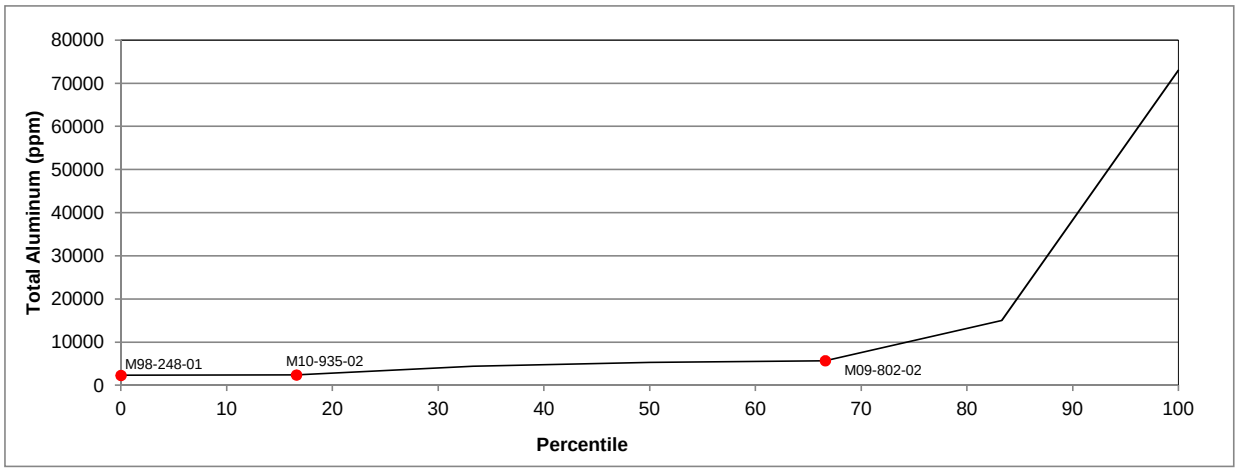


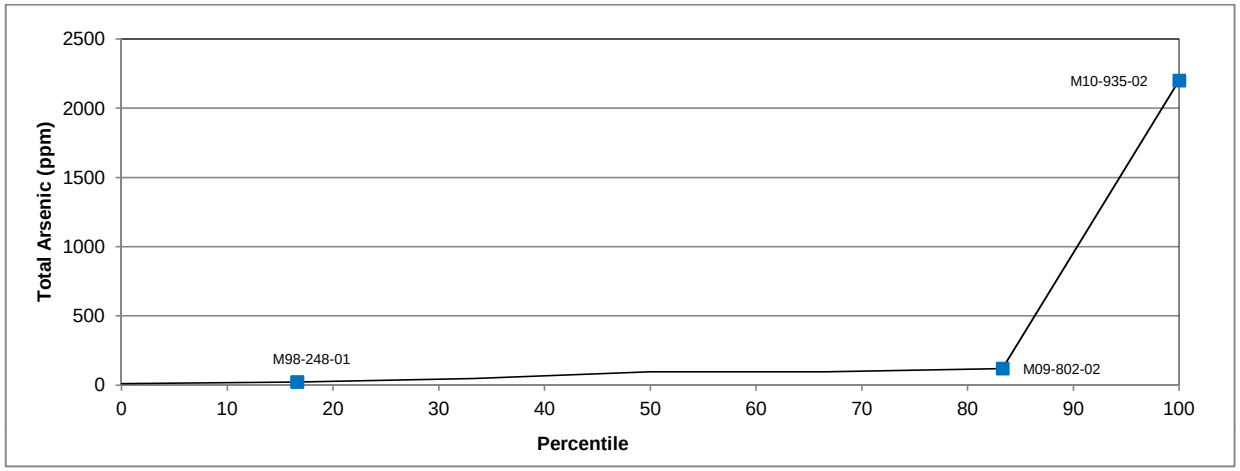



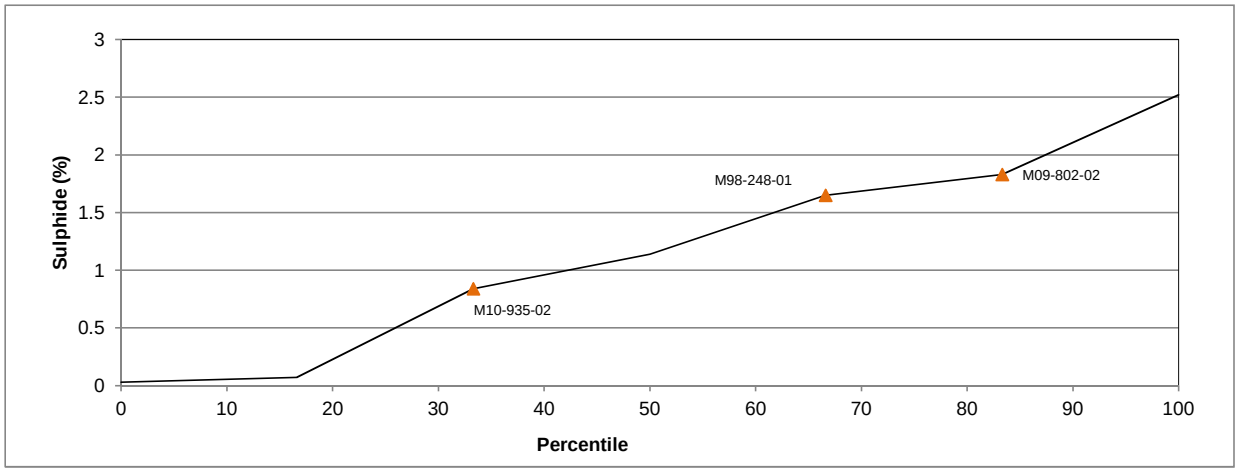




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-2**<br><br>**Percentile Ranking of Sample Concentrations - Discovery Iron Formation** | Golder Associates |

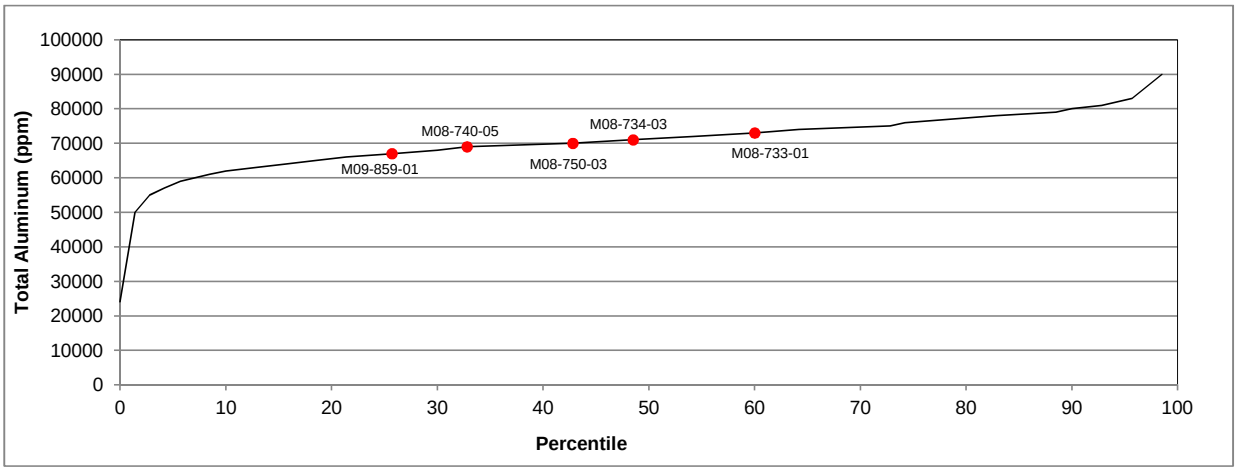


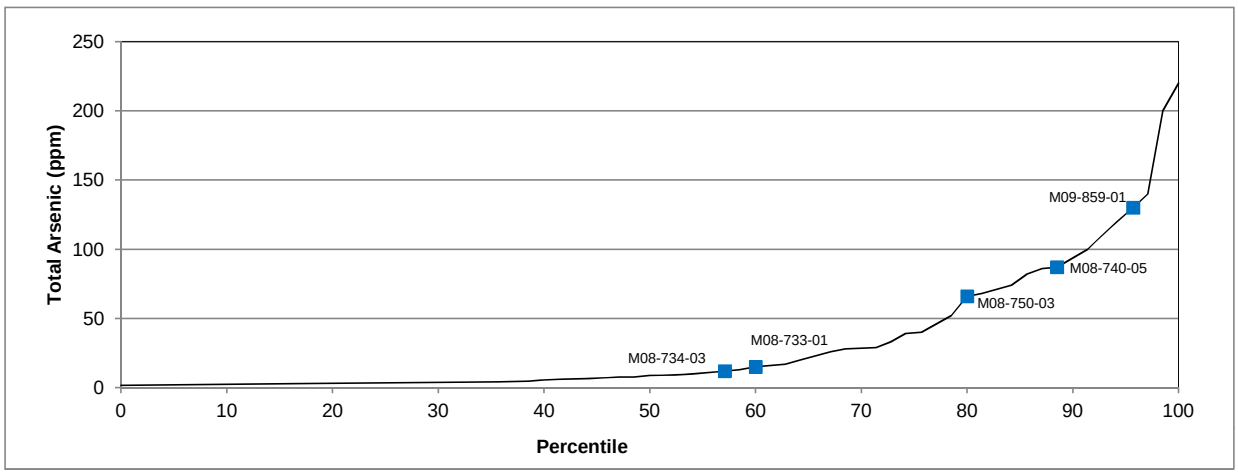



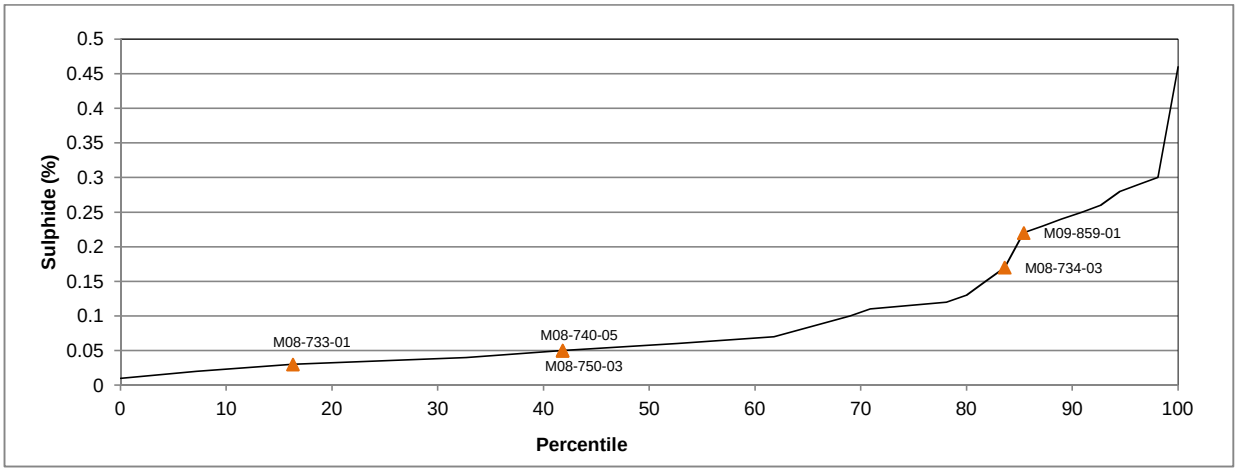




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-3**<br><br>**Percentile Ranking of Sample Concentrations - F Zone Iron Formation** | Golder Associates |

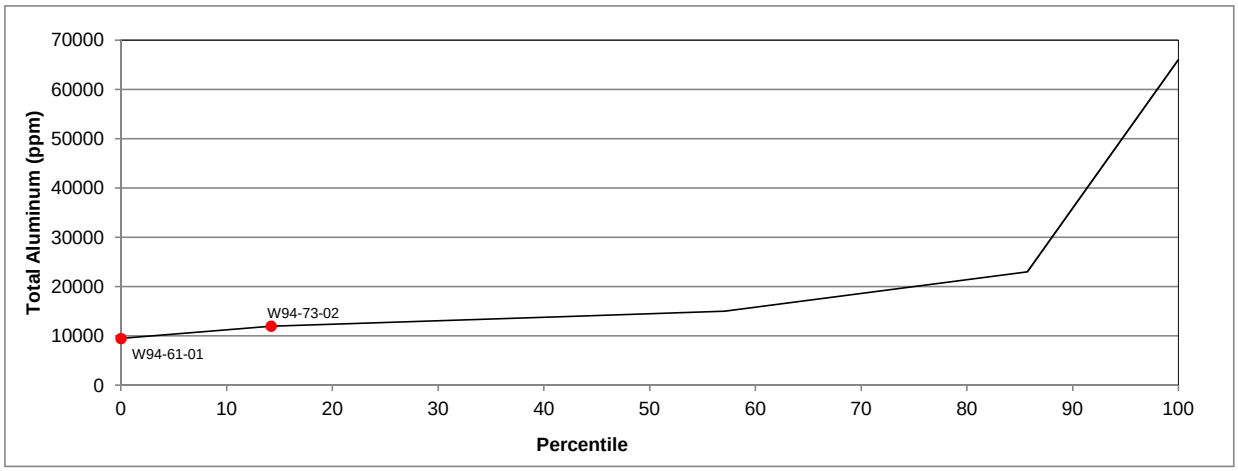


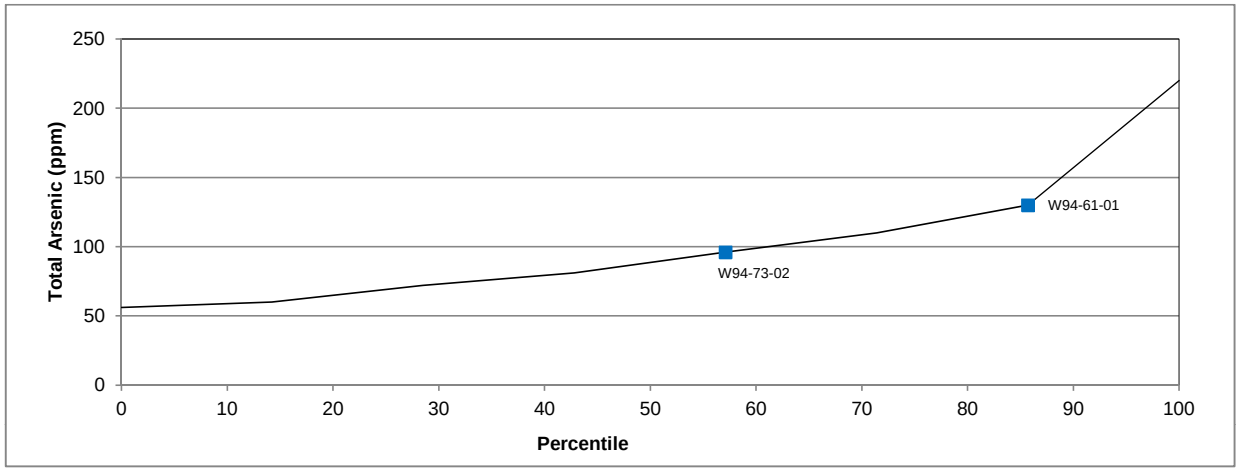



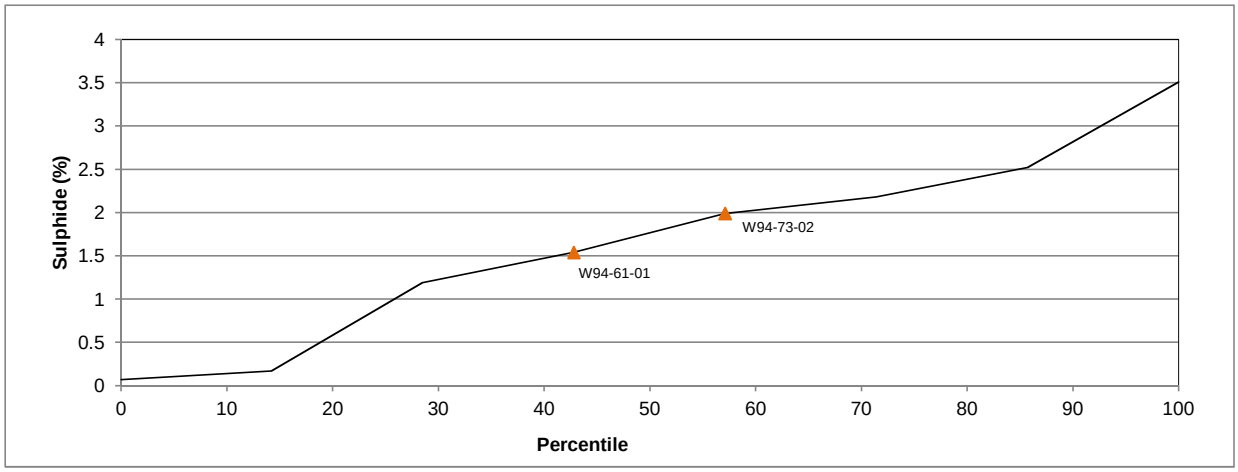




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-4**<br><br>**Percentile Ranking of Sample Concentrations - F Zone Mafic Volcanic** | Golder Associates |




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

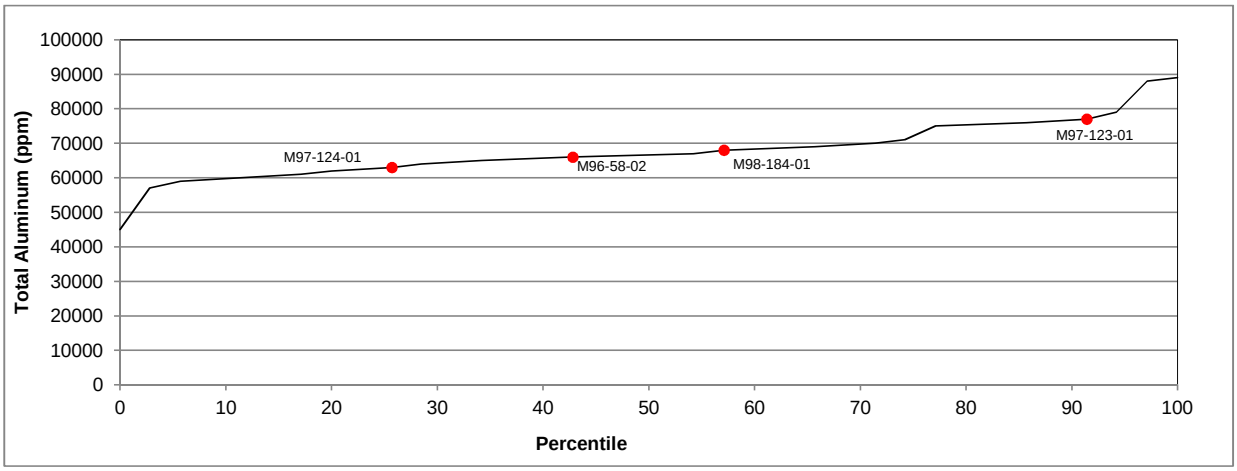
**Agnico-Eagle Mines Ltd.**
**Meliadine Property**
**Nunavut**

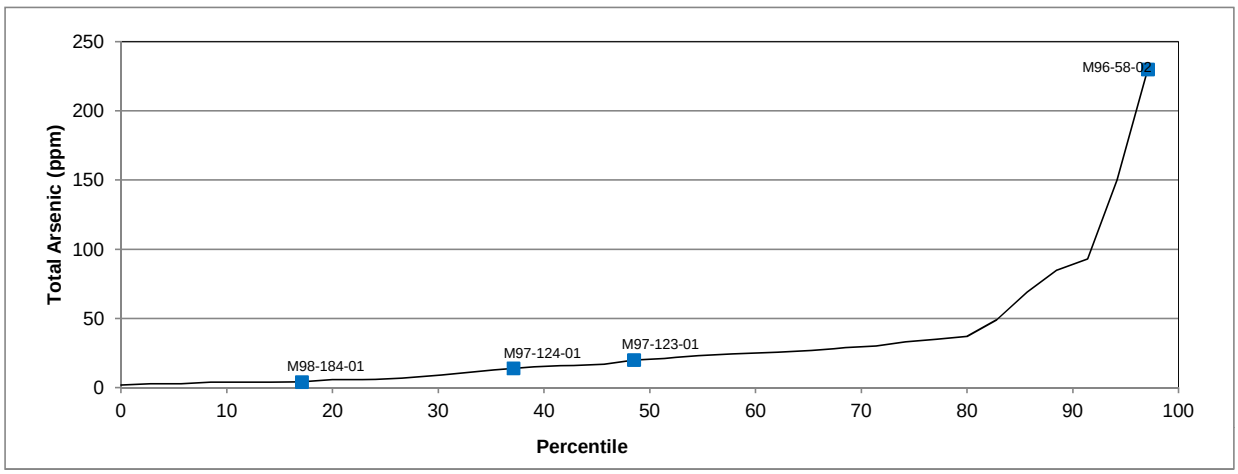
## FIGURE B.6-5

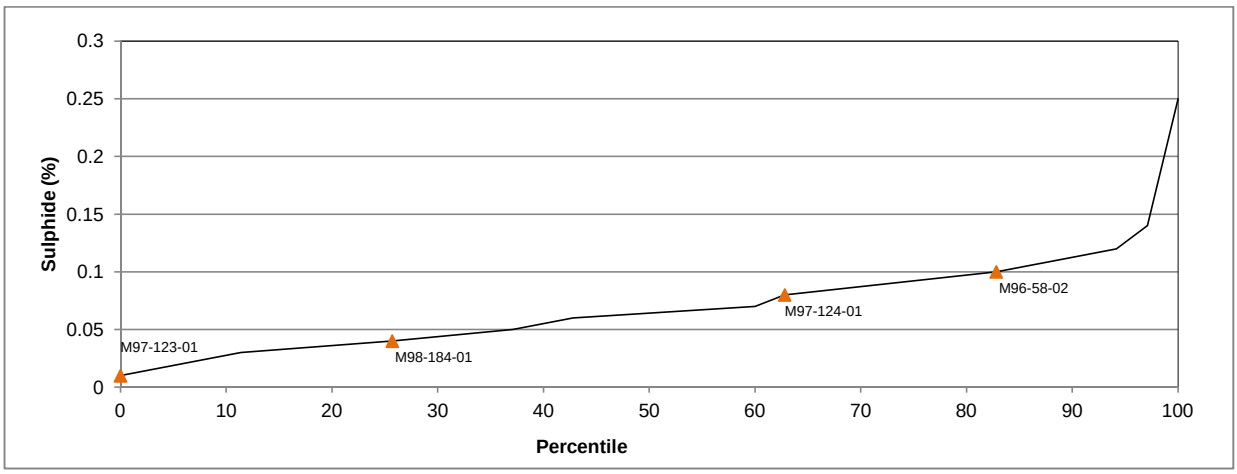
**Percentile Ranking of Sample Concentrations - Pump - Iron Formation**

Golder Associates

Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix figs\AEM Meliadine_all Kinetic_percentile figures_30Aug2012_sg.xlsx

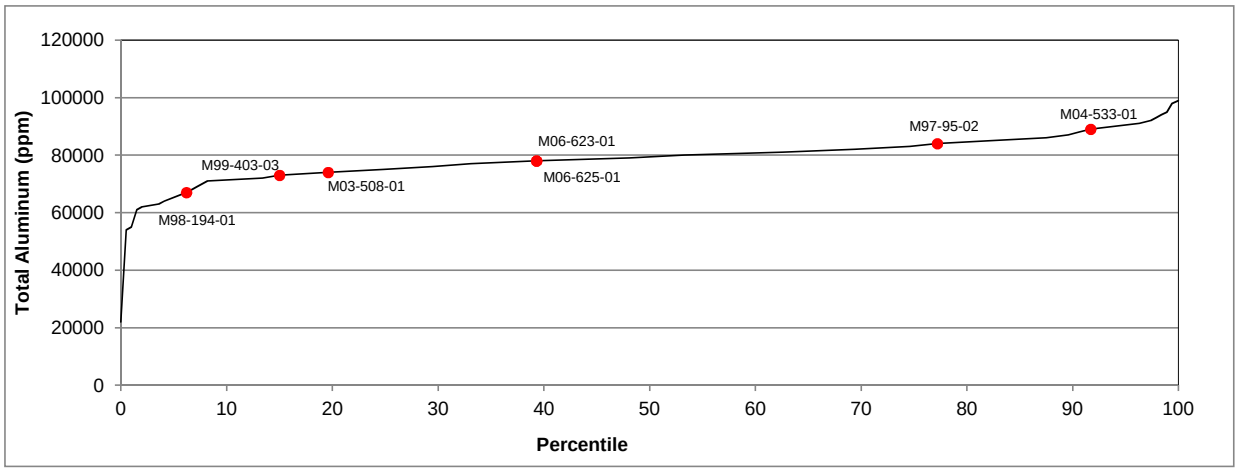


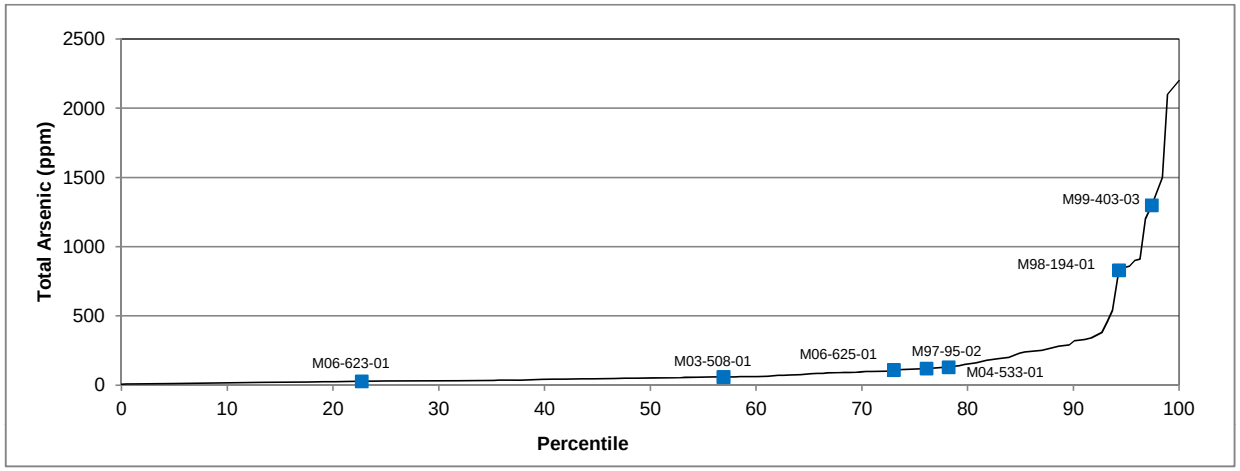



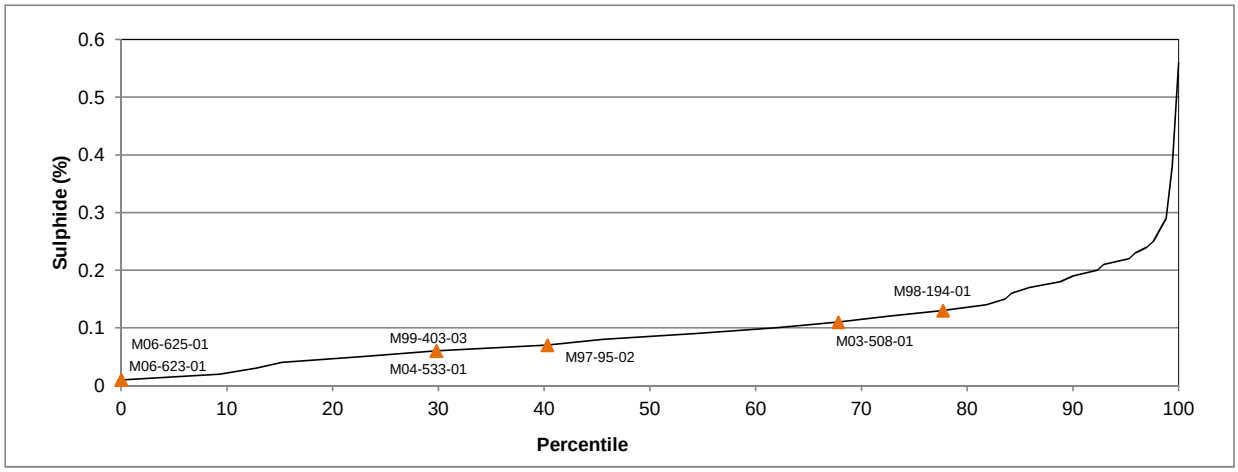




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-6**<br><br>**Percentile Ranking of Sample Concentrations - Pump - Mafic Volcanic** | Golder Associates |



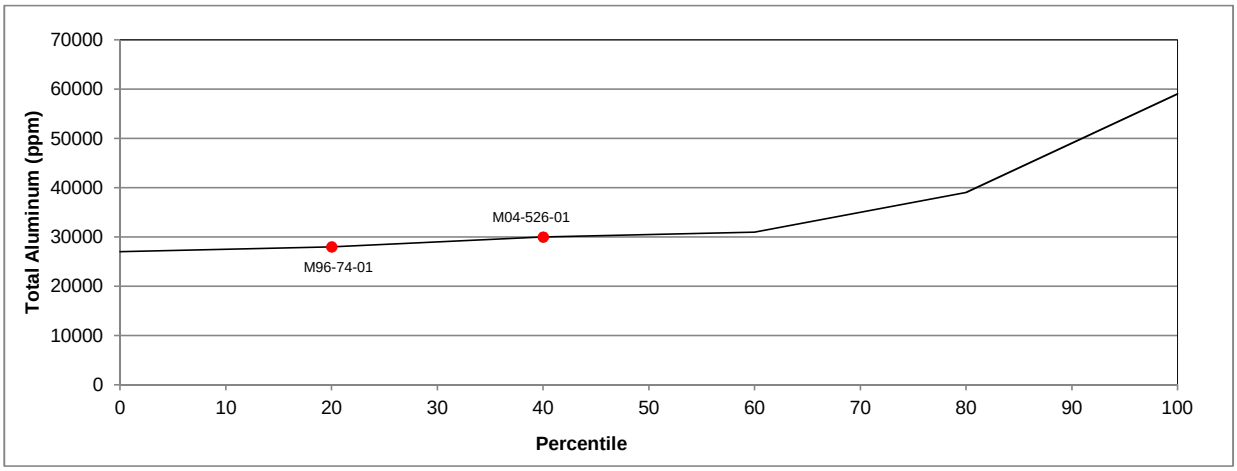



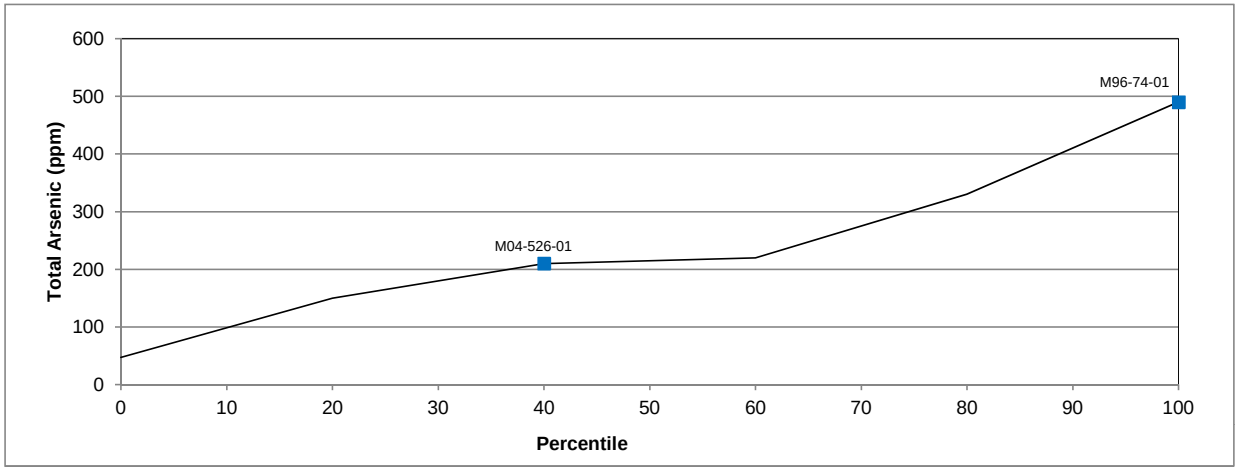



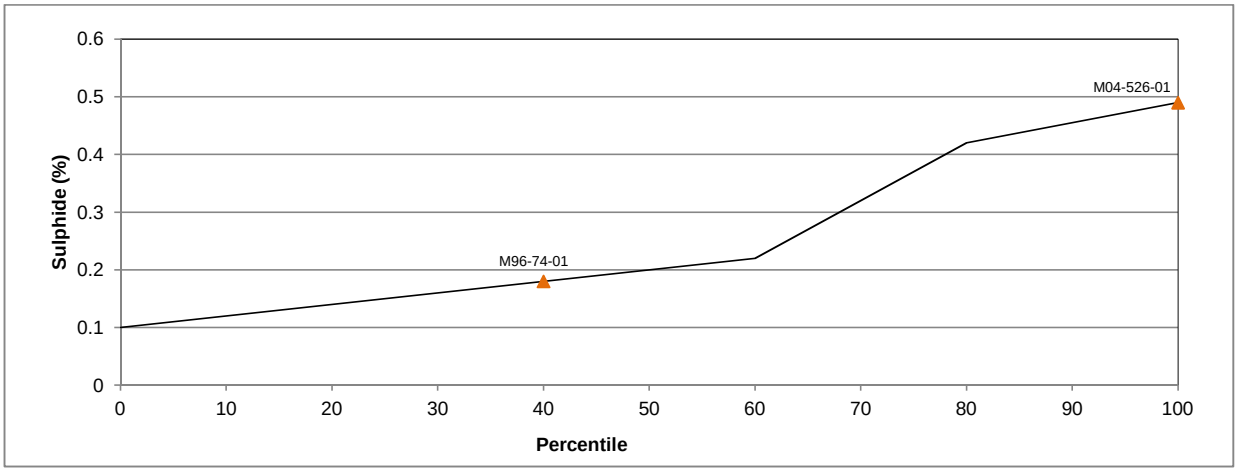

**NOTE:**

1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-7**<br><br>**Percentile Ranking of Sample Concentrations - Tiriganiaq - Greywacke** | Golder Associates |



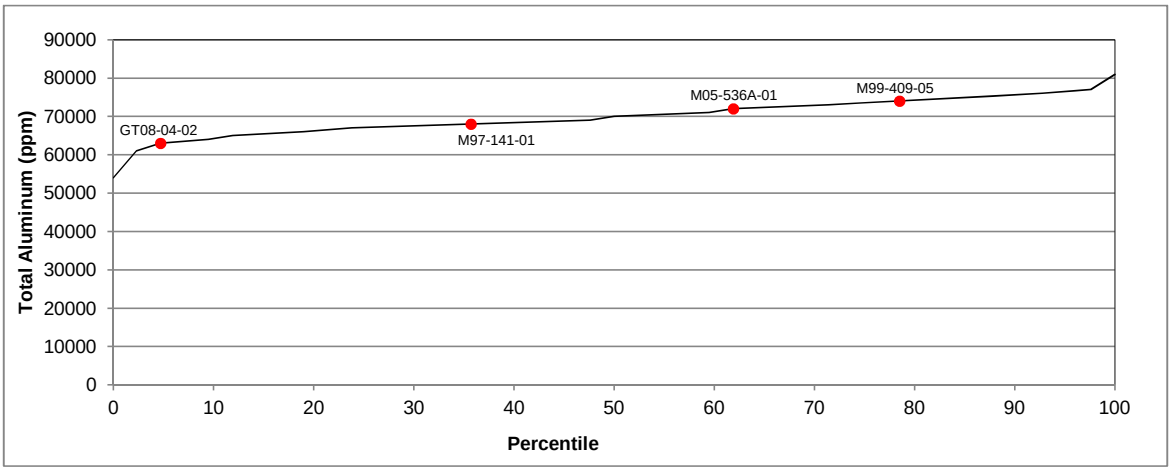

**NOTE:**
1. Markers indicate sample was selected for kinetic testing

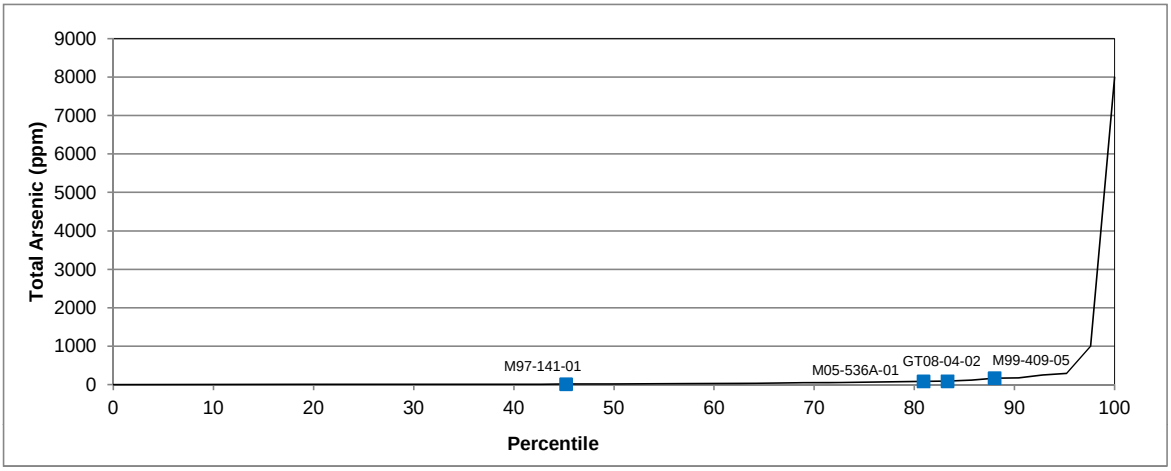
**Agnico-Eagle Mines Ltd.**
**Meliadine Property**
**Nunavut**

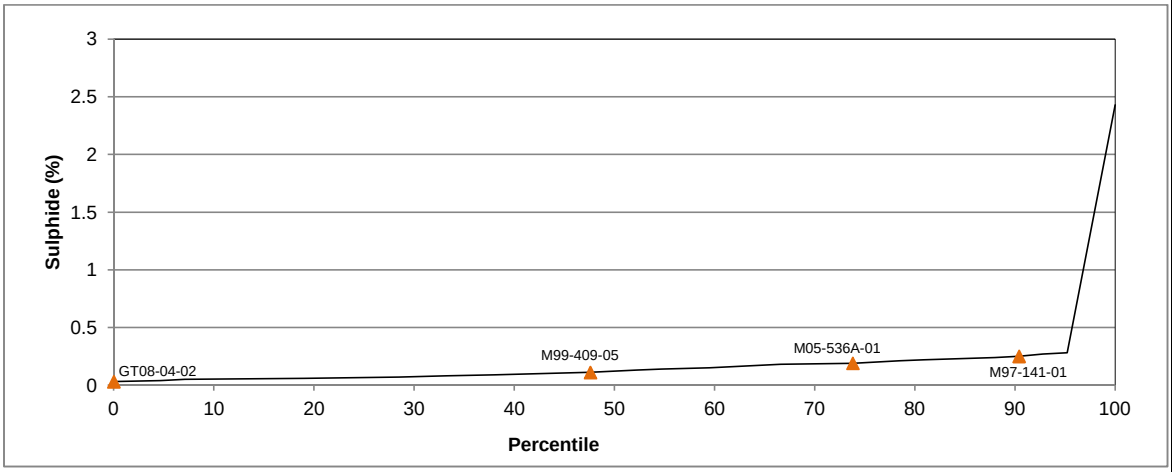
## FIGURE B.6-8

**Percentile Ranking of Sample Concentrations - Tiriganiaq - Iron Formation**

Golder Associates

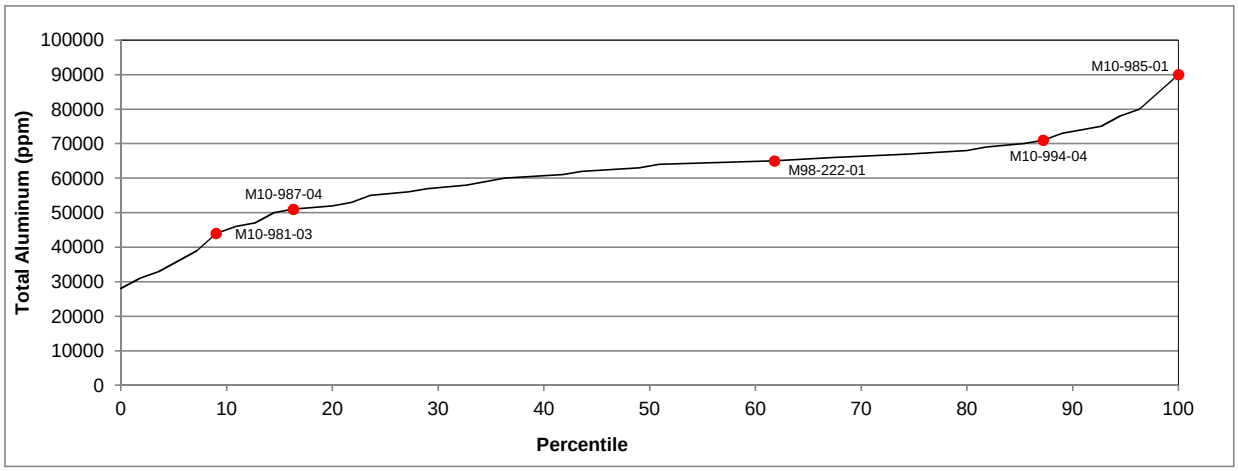


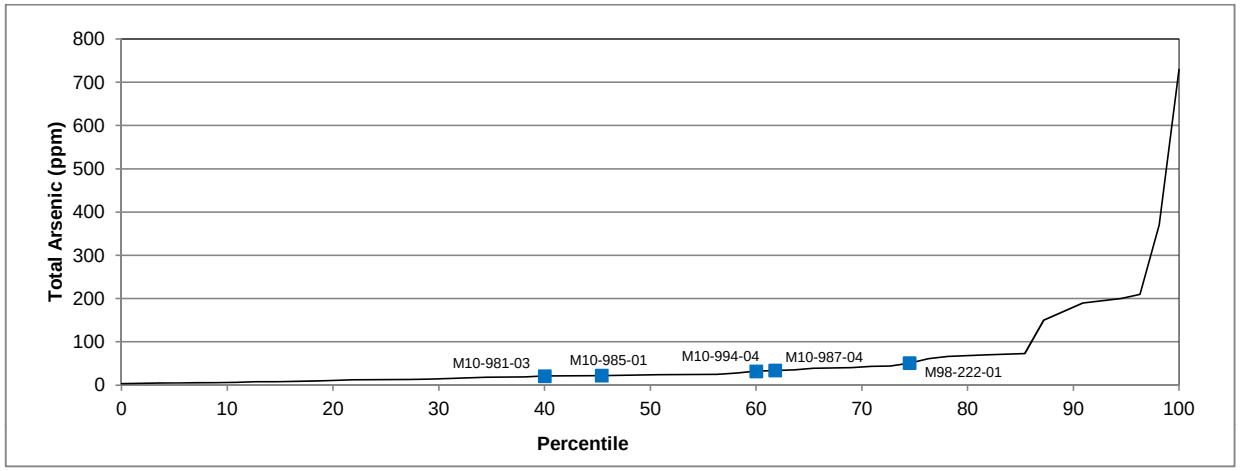



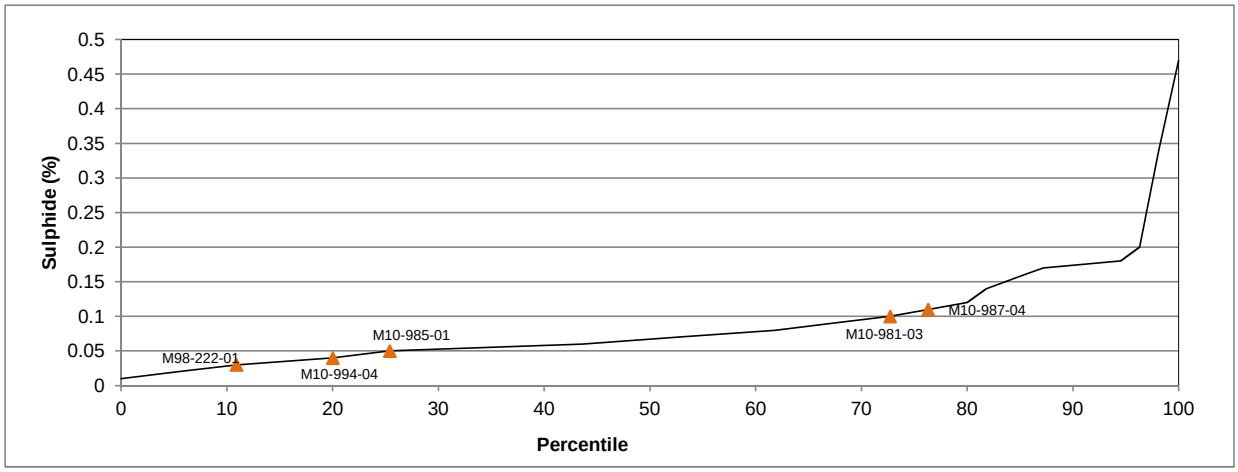




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-9**<br><br>**Percentile Ranking of Sample Concentrations - Tiriganiaq - Mafic Volcanic** | Golder Associates |

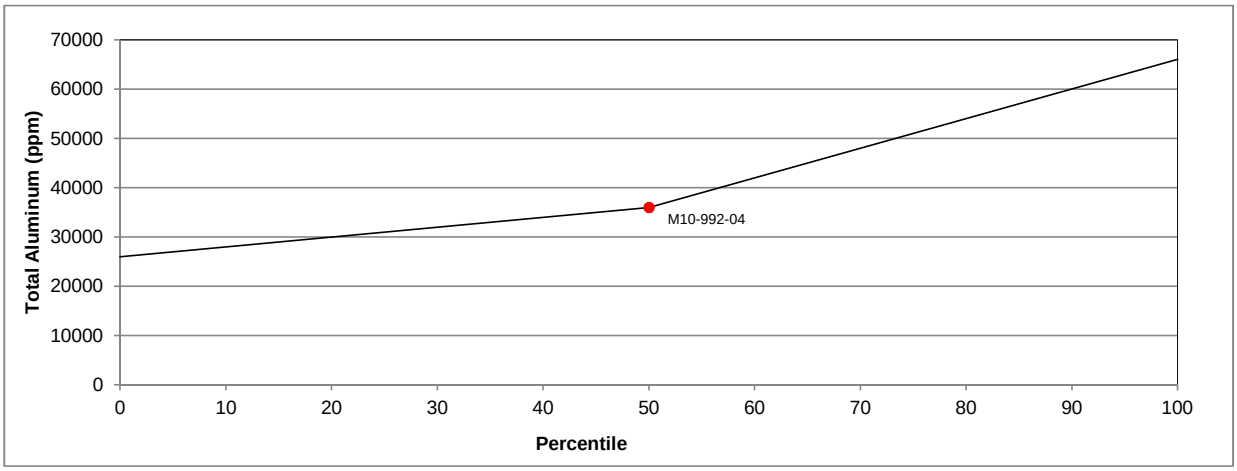


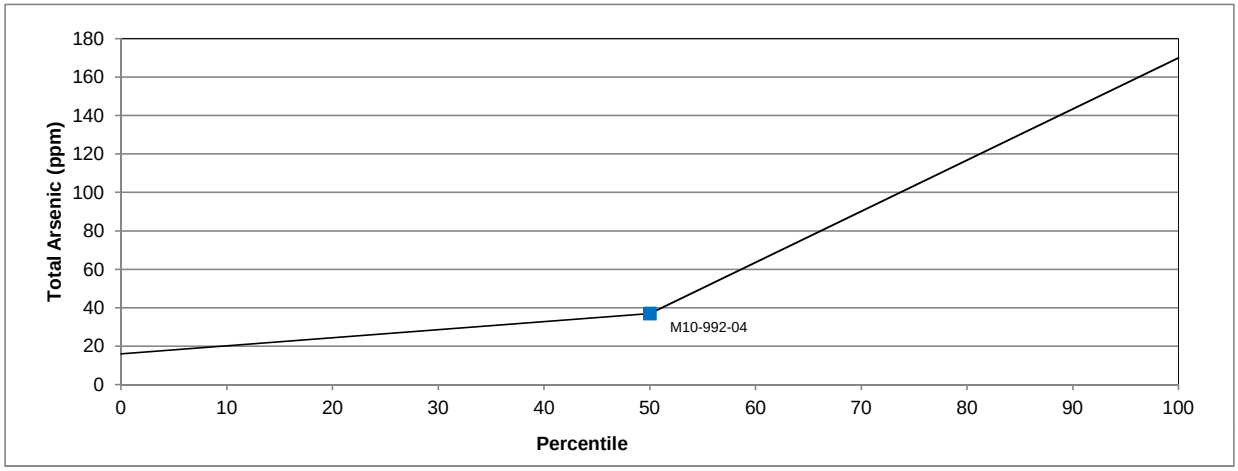



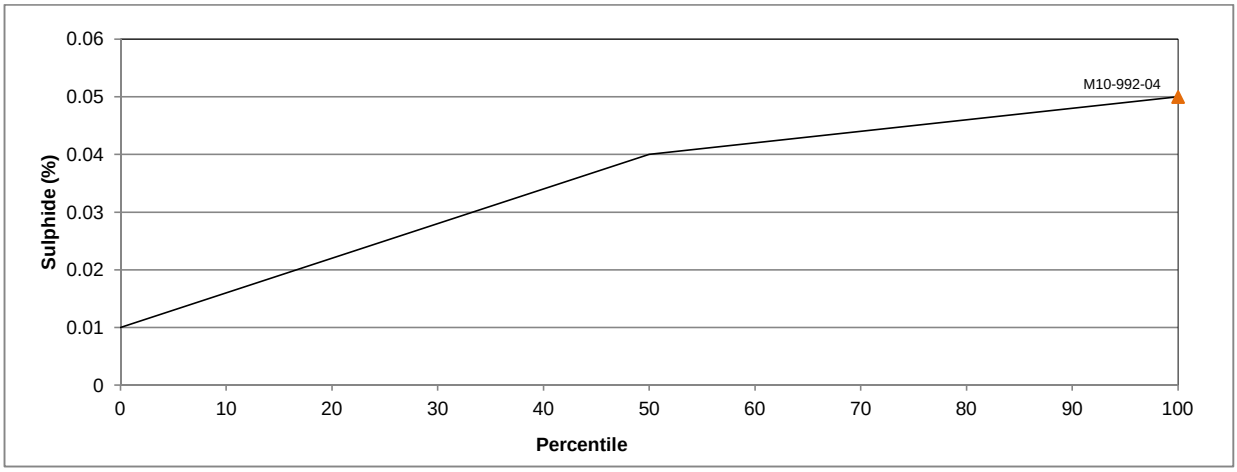




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-10**<br><br>**Percentile Ranking of Sample Concentrations - Wesmeg - Mafic** | Golder Associates |

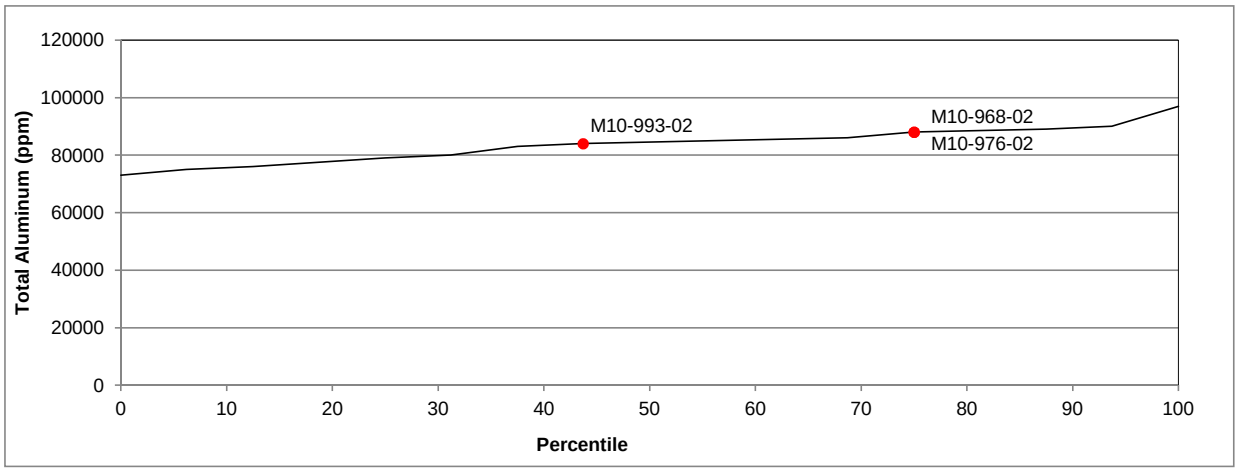


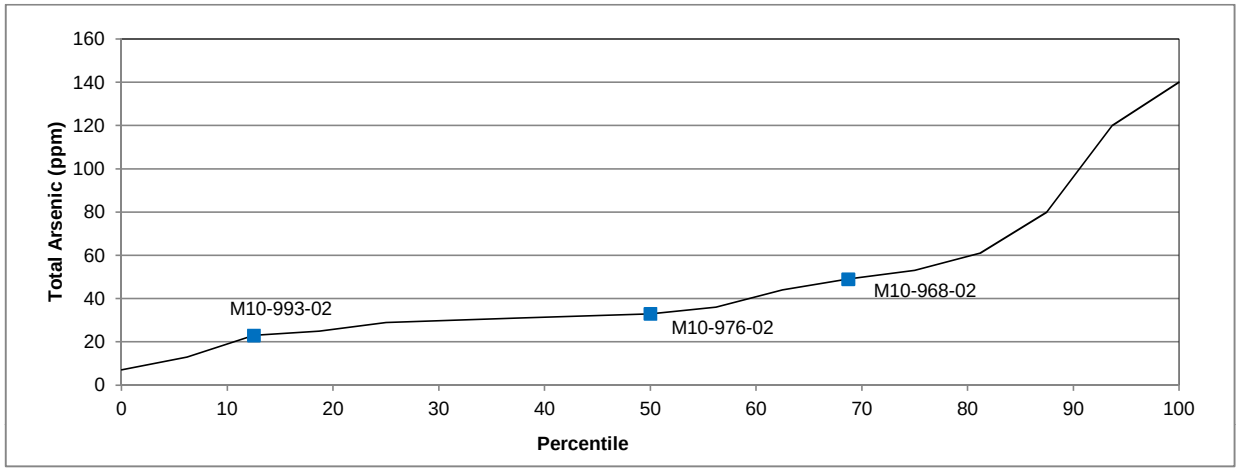



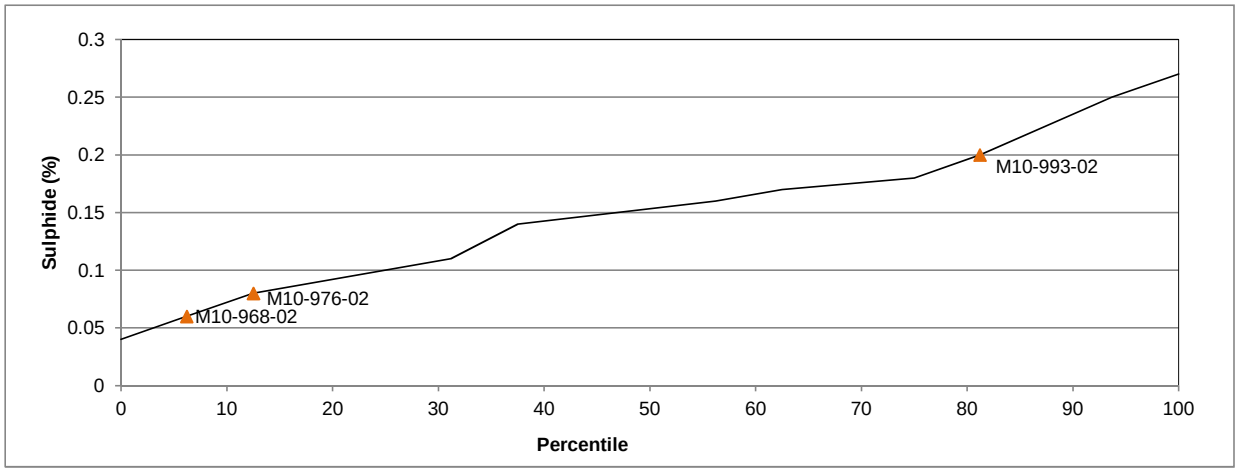




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-11**<br><br>**Percentile Ranking of Sample Concentrations - Wesmeg - Ultramafic** | Golder Associates |

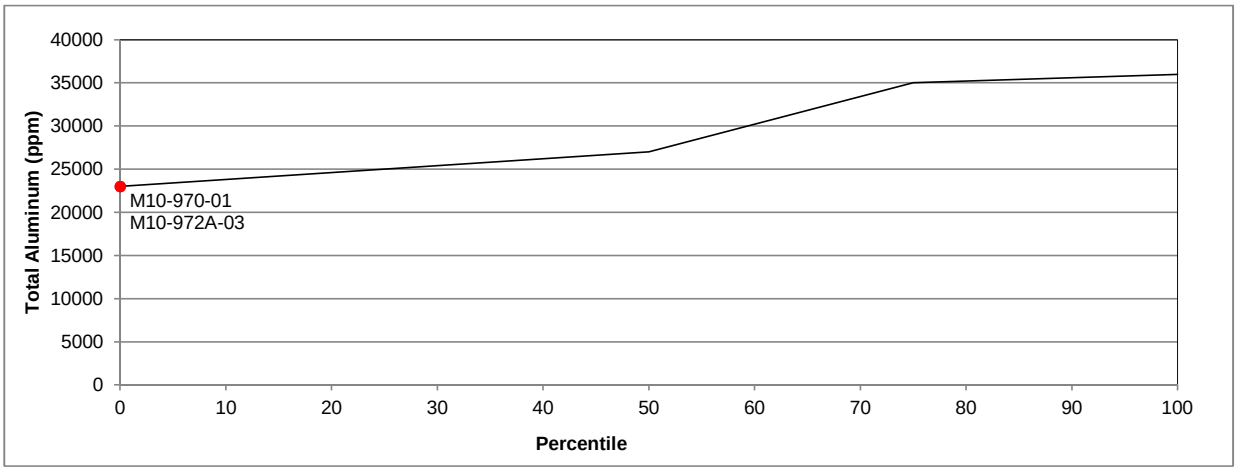


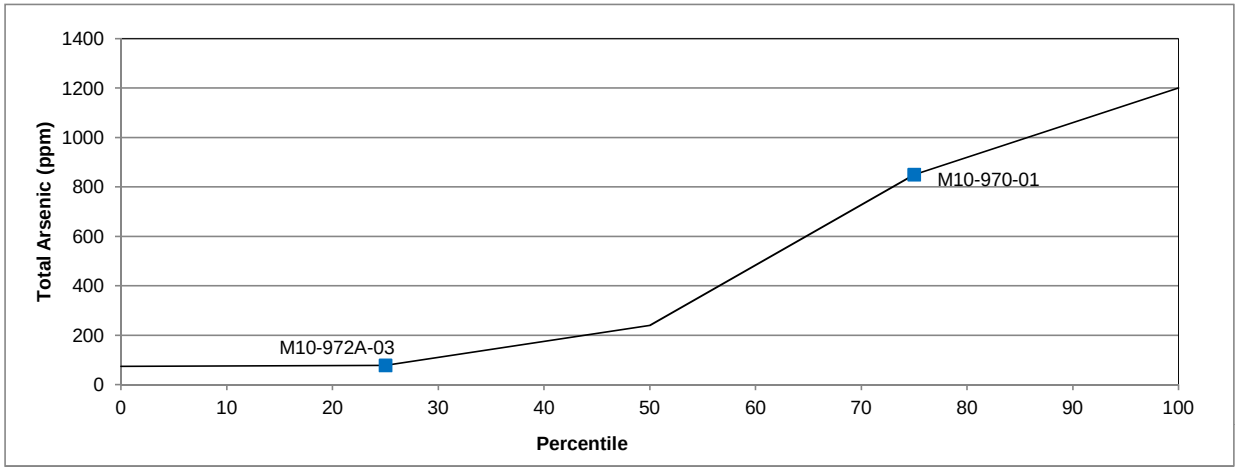



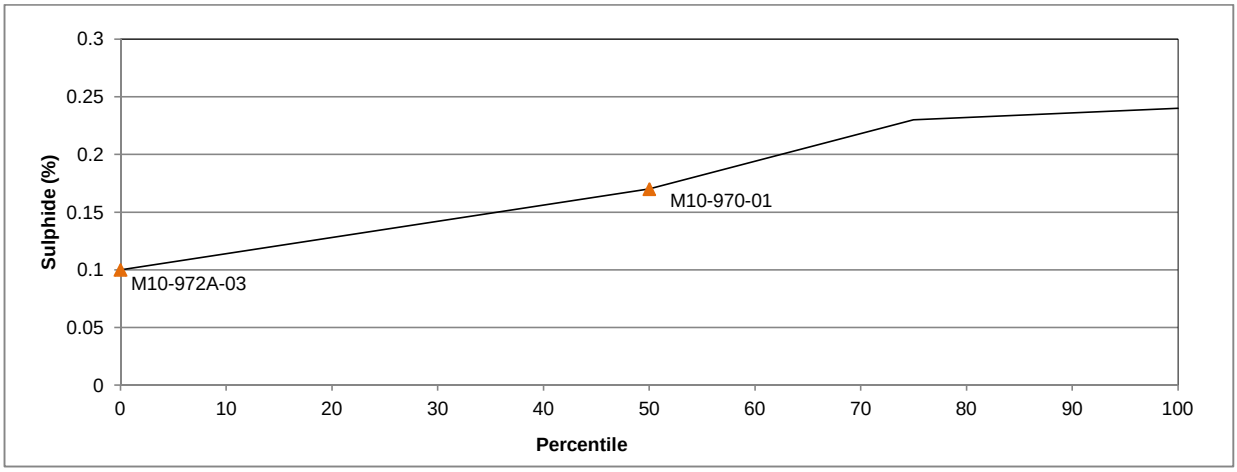




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-12**<br><br>**Percentile Ranking of Sample Concentrations - Wolf - Greywacke** | Golder Associates |



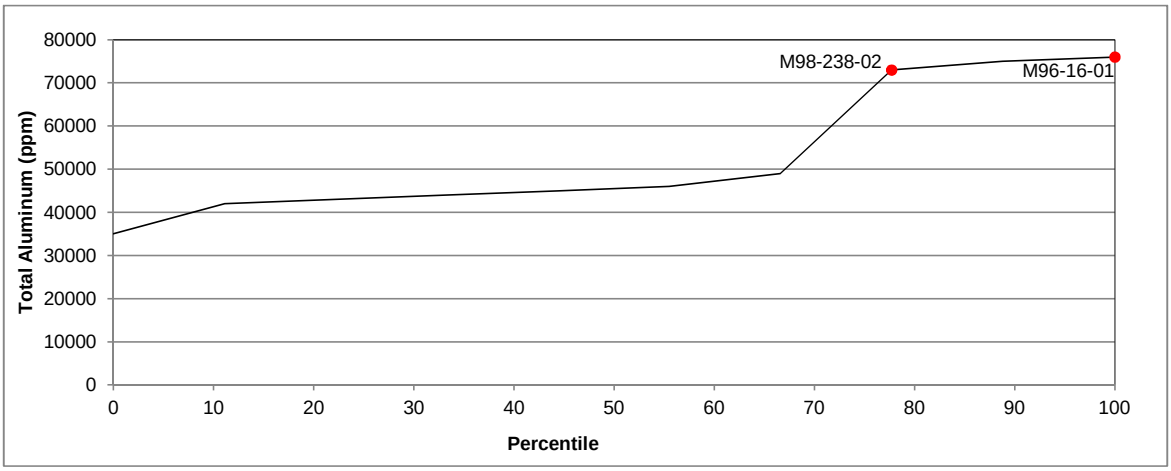



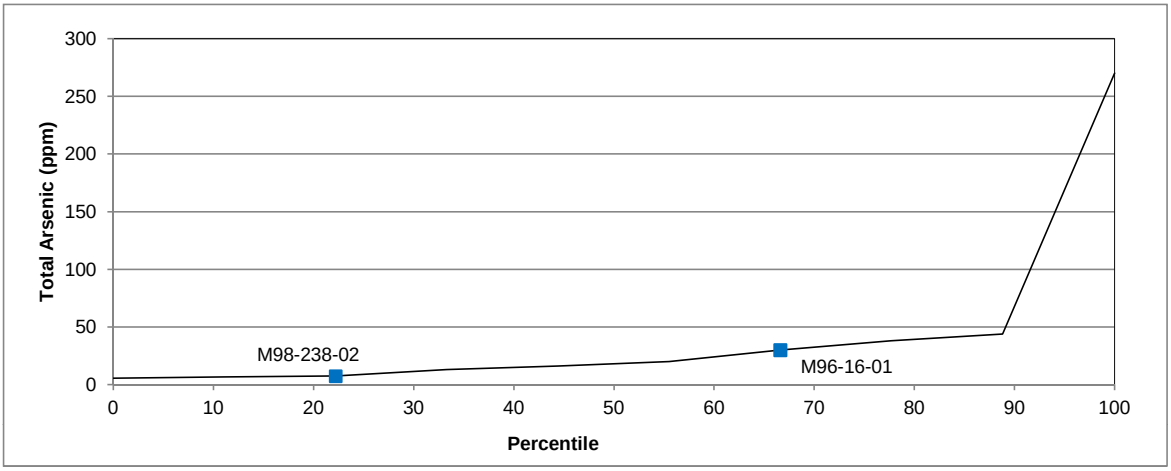



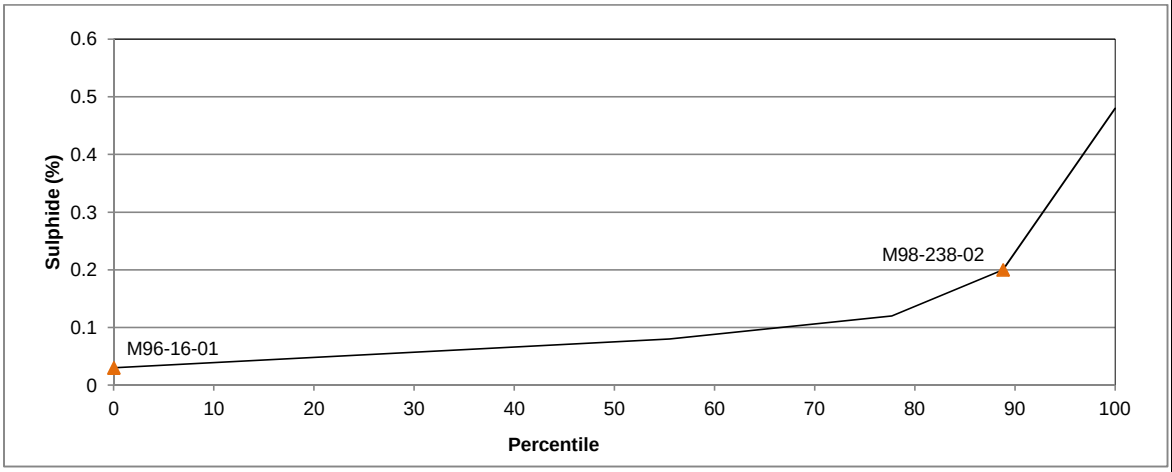

**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-13**<br><br>**Percentile Ranking of Sample Concentrations - Wolf - Iron Formation** | Golder Associates |

Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix figs\AEM Meliadine_all Kinetic_percentile figures_30Aug2012_sg.xlsx




**NOTE:**
1. Markers indicate sample was selected for kinetic testing

| | | |
|---|---|---|
| **Agnico-Eagle Mines Ltd.**<br>**Meliadine Property**<br>**Nunavut** | **FIGURE B.6-14**<br><br>**Percentile Ranking of Sample Concentrations - Wolf - Mafic Volcanic** | Golder Associates |

## Column 1 – 98 kg column.

*Deposit – **Tiriganiaq – Open Pit East**; Rock Type - **Greywacke**; kg/sample = **2.0***

*# of Samples – **49:***

| | | | | | |
|---|---|---|---|---|---|
| M95-17-01 | M98-269-03 | M95-17-02 | M99-349-01 | M98-297-04 | M99-349-02 |
| M99-350-03 | M98-298-01 | M98-298-02 | M98-298-03 | M99-403-05 | M99-404-05 |
| M99-404-06 | M99-403-01 | M99-403-02 | M99-403-03 | M99-403-04 | M99-404-01 |
| M99-404-02 | M99-404-03 | M99-404-04 | M00-474-02 | M00-474-04 | M99-350-02 |
| M07-710-02 | M00-476-01 | M00-476-02 | M00-479-02 | M07-711-01 | M98-297-02 |
| M98-297-03 | M06-628-01 | M06-628-02 | M99-418-01 | M98-194-04 | M07-660-01 |
| M07-660-01 | M07-660-02 | M07-660-02 | M98-194-01 | M98-194-02 | M98-194-03 |
| GT08-02-01 | M07-678-02 | M07-678-03 | M07-713-01 | M07-713-03 | M98-269-01 |
| M98-269-02 | | | | | |

## Column 2 – 48.3 kg column.

*Deposit – **Tiriganiaq – Open Pit West**; Rock Type - **Greywacke**; kg/sample = **2.3***

*# of Samples – **21:***

| | | | | | |
|---|---|---|---|---|---|
| M07-704-01 | M07-704-02 | M03-513-01 | M07-705-01 | GT08-01-02 | M98-316-01 |
| M99-339-01 | M99-340-03 | M99-385-01 | M99-386-01 | M99-386-02 | M99-341-03 |
| M99-345-03 | M99-341-02 | M99-345-01 | M99-345-01 | M99-345-02 | M99-346-01 |
| M99-346-02 | M99-346-02 | M99-346-03 | | | |

## Column 3 – 50 kg column.

*Deposit – **Tiriganiaq - Underground**; Rock Type – **Greywacke**; kg/sample = **1.250***

*# of Samples – **40**:*

| | | | | | |
|---|---|---|---|---|---|
| M04-520-01 | M04-520-02 | M04-527-01 | M04-533-01 | M04-533-02 | M05-559A-02 |
| M07-719-01 | M08-721-01 | M08-721-02 | M08-769-01 | M08-754-01 | M08-731-01 |
| M08-731-02 | M09-823-01 | M09-823-02 | M98-257-01 | M03-496-01 | M07-645-01 |
| M07-649-01 | M07-663-01 | M07-663-02 | M07-663-03 | M98-313-01 | M98-313-02 |
| M99-327-01 | M03-498-01 | M06-601A-01 | M98-266-01 | M03-499-02 | M06-607-01 |
| M07-672B-01 | M07-685-01 | M07-685-02 | M06-621-01 | M07-691-01 | M05-571A-01 |
| M05-571A-02 | M06-604-01 | M06-604-02 | M06-604-03 | | |

## Column 4 – 48.3 kg column.

*Deposit – **Tiriganiaq - Underground**; Rock Type – **Mafic Volcanic**; kg/sample = **2.3***

*# of Samples – **21:***

| | | | | | |
|---|---|---|---|---|---|
| GT08-04-01 | M05-561-01 | M05-561-02 | M05-561-03 | M05-564-01 | M97-92-01 |
| M97-93-01 | M97-110-01 | M97-130-01 | M97-130-02 | M97-133-01 | M97-134-01 |
| M97-135-01 | M97-136-01 | M97-137-01 | M97-138-01 | M97-139-01 | M97-141-01 |
| M97-143-01 | M98-318-01 | M99-348-01 | | | |

## Column 5 – 99 kg column.

*Deposit – **F-Zone – Open Pit**; Rock Type – **Mafic Volcanic**; kg/sample = **1.8***

*# of Samples – **55:***

| | | | | | |
|---|---|---|---|---|---|
| GT09-07-01 | GT09-07-02 | M08-729-01 | M08-729-02 | M08-729-03 | M08-729-04 |
| M08-734-01 | M08-734-02 | M08-734-03 | M08-735-01 | M08-740-01 | M08-740-02 |
| M08-740-03 | M08-742-01 | M08-742-02 | M08-742-03 | M08-743-01 | M08-747-01 |
| M08-747-02 | M08-748-01 | M08-748-02 | M08-750-01 | M08-750-02 | M08-752-01 |
| M08-752-02 | M08-755-01 | M08-755-02 | M09-798-01 | M09-798-02 | M09-816-01 |
| M09-816-02 | M09-855-01 | M09-855-02 | M09-857-01 | M09-858-01 | M09-858-02 |
| M09-862-01 | M09-866-01 | M09-866-02 | M08-729-06 | M08-734-04 | M08-735-02 |
| M08-735-03 | M08-740-04 | M08-740-05 | M08-742-04 | M08-742-06 | M08-743-02 |

| | | | | | |
|---|---|---|---|---|---|
| M08-743-04 | M08-747-03 | M08-747-04 | M08-750-03 | M08-752-03 | M08-752-04 |
| M08-755-03 | | | | | |

## Column 6 – 99 kg column.

*Deposit – **Discovery – Open Pit**; Rock Type – **Greywacke**; kg/sample = **1.8***

*# of Samples – **29:***

| | | | | | |
|---|---|---|---|---|---|
| ML08-236-2 | ML08-238-03 | ML00-221-01 | ML00-221-02 | ML00-221-03 | ML90-03-01 |
| ML90-04-01 | ML90-04-02 | ML90-08-01 | ML90-10-1 | ML90-12-01 | ML92-061-01 |
| ML92-061-02 | ML95-93-01 | ML95-93-02 | ML00-221-04 | ML08-236-3 | ML08-238-04 |
| ML90-03-02 | ML90-04-03 | ML90-07-01 | ML90-08-02 | ML90-09-2 | ML90-10-3 |
| ML90-12-02 | ML92-061-04 | ML92-062-03 | ML95-82-3 | ML95-93-04 | |

## Column 7 – 50 kg column.

*Deposit – **Pump – Open Pit**; Rock Types – **Iron Formation (14%) and Mafic Volcanic (86%)**;*

*kg/sample: IF =0.9 & MV =1.19*

*# of Samples – **46**:*

| | | | | | |
|---|---|---|---|---|---|
| M97-124-03 | M97-154-01 | W94-49-02 | W94-55-01 | W94-57-02 | W94-57-03 |
| W94-61-01 | W94-73-02 | M96-58-01 | M96-58-02 | M96-58-03 | M97-120-01 |
| M97-120-02 | M97-122-01 | M97-122-02 | M97-122-05 | M97-123-01 | M97-123-02 |
| M97-123-03 | M97-123-04 | M97-124-01 | M97-124-02 | M97-124-04 | M97-153-01 |
| M97-153-02 | M98-181-01 | M98-181-02 | M98-184-01 | M98-184-02 | M98-185-01 |
| M98-185-02 | M98-185-03 | W94-49-01 | W94-49-03 | W94-53-01 | W94-55-02 |
| W94-57-01 | W94-59-01 | W94-61-02 | W94-65-03 | W94-70-01 | W94-70-02 |
| W94-73-01 | W94-73-03 | | | | |

## Column 8 – 100 kg column.

*Deposit – **Wesmeg – Open Pit**; Rock Types –**Mafic Volcanic**; kg/sample: IF =2.0*

*# of Samples – **50:***

| | | | | | |
|---|---|---|---|---|---|
| M04-519-01 | M04-519-03 | M04-519-04 | M10-981-01 | M10-981-04 | M10-985-02 |
| M10-987-01 | M10-987-02 | M10-988-01 | M10-988-02 | M10-988-03 | M10-992-01 |
| M10-992-02 | M10-992-03 | M10-992-05 | M10-994-01 | M10-994-02 | M10-994-03 |
| M10-994-04 | M10-998-01 | M10-998-02 | M10-998-03 | M10-998-04 | M10-998-05 |
| M11-1042-01 | M11-1042-02 | M11-1042-03 | M11-1051-01 | M11-1051-02 | M11-1099-01 |
| M11-1099-02 | M11-1099-03 | M95-11-01 | M95-12-01 | M95-22-01 | M95-22-02 |
| M96-50-01 | M96-51-02 | M96-51-03 | M97-111-01 | M97-111-02 | M97-111-03 |
| M97-111-04 | M97-176-01 | M97-176-02 | M98-222-02 | M98-222-03 | M98-223-01 |
| W94-48-01 | | | | | |

## Column 9 – 50 kg column.

*Deposit – **Wolf – Open Pit**; Rock Types –**Iron Formation (13%), Mafic Volcanic (25%) and Greywacke (62%)**; avg kg/sample: **1.56***

*# of Samples – **32**:*

| | | | | | |
|---|---|---|---|---|---|
| M10-972A-04 | M10-986-02 | M10-993-04 | M96-16-01 | M96-61-01 | M96-61-02 |
| M98-238-01 | M98-238-02 | M98-329-01 | M98-337-01 | M10-970-01 | M10-972A-03 |
| M10-976-03 | M10-986-01 | M98-284-02 | M10-968-01 | M10-968-02 | M10-968-03 |
| M10-972A-01 | M10-972A-02 | M10-976-01 | M10-976-02 | M10-977-01 | M10-993-01 |
| M10-993-02 | M10-993-03 | M98-234-01 | M98-234-02 | M98-284-01 | M98-286-01 |
| M98-331-01 | M98-333-01 | | | | |

# B.7 Kinetic Test Results: Tables and Figures

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - W94-61-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 847 | 976 | 985 | 971 | 978 | 995 | 990 | 985 | 992 | 991 | 986 | 980 | 992 | 999 | 986 | 992 | 994 | 987 | 994 | 995 | 988 |
| pH | | units | **6.0-9.5** | 6.8 | 7.1 | 6.7 | 7.0 | 7.4 | 7.2 | 7.3 | 7.3 | 7.2 | 7.1 | 7.2 | 7.2 | 7.1 | 7.3 | 7.0 | 7.2 | 7.2 | 6.6 | 7.1 | 7.1 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 207 | 272 | 229 | 222 | 118 | 106 | 90 | 89 | 115 | 104 | 89 | 80 | 79 | 79 | 101 | 84 | 79 | 102 | 75 | 98 | 77 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 5.0 | 10 | 10 | 8.0 | 10 | 12 | 14 | 12 | 15 | 13 | 54 | 14 | 14 | 14 | 13 | 14 | 13 | 22 | 13 | 23 | 13 |
| Chloride | Cl | mg/L | | 6.2 | 7.1 | 3.7 | 1.7 | | 0.40 | | | 0.20 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | 0.18 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 100 | 130 | 120 | 89 | 55 | 47 | 35 | 36 | 33 | 30 | 32 | 29 | 28 | 28 | 30 | 33 | 32 | 30 | 29 | 28 | 28 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00020 | < 0.0002 | < 0.0002 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.00030 | 0.00040 | 0.00050 | < 0.0002 | | 0.00020 | | | < 0.0002 | | | | < 0.0002 | | | | 0.00020 | | | | < 0.0002 |
| Barium | Ba | mg/L | | 0.0015 | 0.00082 | 0.00067 | 0.00056 | | 0.00040 | | | 0.00029 | | | | 0.00022 | | | | 0.00018 | | | | 0.00018 |
| Boron | B | mg/L | | 0.0047 | 0.012 | 0.011 | 0.0090 | | 0.0079 | | | 0.0046 | | | | 0.0031 | | | | 0.0021 | | | | 0.0037 |
| Cadmium | Cd[3] | mg/L | | 0.000047 | 0.000019 | 0.000013 | 0.0000080 | | 0.0000040 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 35 | 46 | 43 | 33 | 22 | 19 | 15 | 15 | 16 | 15 | 14 | 14 | 14 | 14 | 14 | 15 | 14 | 14 | 13 | 12 | 12 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.0012 | 0.00051 | 0.00044 | 0.00023 | | 0.00014 | | | 0.000084 | | | | 0.000056 | | | | 0.000046 | | | | 0.000031 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.051 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 10 | 15 | 9.6 | 6.1 | | 3.8 | | | 3.3 | | | | 3.0 | | | | 3.2 | | | | 2.9 |
| Manganese | Mn | mg/L | | 0.48 | 0.43 | 0.41 | 0.19 | | 0.095 | | | 0.10 | | | | 0.051 | | | | 0.042 | | | | 0.031 |
| Molbydenum | Mo | mg/L | | 0.000010 | 0.000040 | 0.000030 | 0.000020 | | 0.00031 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0029 | 0.00090 | 0.0010 | 0.0014 | | 0.00090 | | | 0.00040 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.12 | 0.22 | 0.21 | 0.18 | | 0.12 | | | 0.080 | | | | 0.053 | | | | 0.038 | | | | 0.031 |
| Selenium | Se | mg/L | | < 0.001 | 0.0020 | 0.0010 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.29 | 0.46 | 0.31 | 0.20 | | 0.11 | | | 0.080 | | | | 0.050 | | | | 0.030 | | | | 0.030 |
| Strontium | Sr | mg/L | | 0.025 | 0.033 | 0.029 | 0.022 | | 0.012 | | | 0.0096 | | | | 0.0077 | | | | 0.0075 | | | | 0.0065 |
| Tin | Sn | mg/L | | 0.0016 | 0.00099 | 0.00042 | 0.00030 | | 0.00025 | | | 0.00011 | | | | 0.00013 | | | | 0.00010 | | | | 0.000070 |
| Titanium | Ti | mg/L | | 0.0010 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00060 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | 0.00010 |
| Tungsten | W | mg/L | | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.000040 | 0.000032 | 0.000031 | | 0.000026 | | | 0.000023 | | | | 0.000011 | | | | 0.000013 | | | | 0.0000090 |
| Vanadium | V | mg/L | | 0.000030 | 0.000050 | 0.000030 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000080 | 0.0000020 | 0.0000010 | 0.0000020 | | < 0.000001 | | | < 0.000001 | | | | 0.0000020 | | | | < 0.000001 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | 0.0070 | 0.0030 | 0.0030 | 0.0020 | | < 0.001 | | | 0.0010 | | | | 0.0030 | | | | 0.0020 | | | | 0.0010 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - W94-73-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 846 | 990 | 990 | 980 | 982 | 982 | 990 | 988 | 986 | 974 | 994 | 979 | 988 | 990 | 988 | 988 | 997 | 988 | 995 | 992 | 990 |
| pH | | units | **6.0-9.5** | 7.5 | 7.5 | 7.0 | 7.2 | 7.3 | 7.4 | 7.3 | 7.4 | 7.3 | 7.2 | 7.2 | 7.3 | 6.9 | 7.3 | 7.1 | 7.2 | 7.3 | 6.7 | 7.2 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 88 | 106 | 72 | 54 | 52 | 8.0 | 49 | 66 | 64 | 63 | 51 | 48 | 50 | 50 | 61 | 51 | 48 | 62 | 46 | 60 | 48 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 16 | 15 | 13 | 14 | 14 | 14 | 15 | 14 | 14 | 14 | 13 | 14 | 13 | 13 | 14 | 14 | 14 | 13 | 19 | 13 |
| Chloride | Cl | mg/L | | 2.3 | | 0.60 | 0.20 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 30 | 41 | 26 | 19 | 15 | 17 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 13 | 12 | 13 | 13 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | < 0.01 | < 0.01 | 0.020 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | 0.010 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.00030 | 0.00030 | < 0.0002 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.00020 | < 0.0002 | 0.00030 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Barium | Ba | mg/L | | 0.0010 | 0.0011 | 0.00071 | 0.00060 | | 0.00051 | | | 0.00037 | | | | 0.00027 | | | | 0.00021 | | | | 0.00019 |
| Boron | B | mg/L | | 0.0026 | 0.0092 | 0.0063 | 0.0051 | | 0.0046 | | | 0.0021 | | | | 0.0016 | | | | 0.00090 | | | | 0.0029 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 15 | 17 | 12 | 9.9 | 8.8 | 9.4 | 7.9 | 8.4 | 8.1 | 8.5 | 8.1 | 7.7 | 7.9 | 8.2 | 7.7 | 8.3 | 7.8 | 7.8 | 7.4 | 7.3 | 7.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000049 | 0.000058 | 0.000043 | 0.000033 | | 0.000042 | | | 0.0000060 | | | | 0.000025 | | | | 0.000023 | | | | 0.000022 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0010 | < 0.0005 | < 0.0005 | 0.00060 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.010 | < 0.003 | 0.0080 | 0.0050 | | 0.0050 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000080 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 3.3 | 4.7 | 3.3 | 2.7 | | 2.4 | | | 2.1 | | | | 2.2 | | | | 2.3 | | | | 2.2 |
| Manganese | Mn | mg/L | | 0.028 | 0.038 | 0.030 | 0.022 | | 0.022 | | | 0.019 | | | | 0.017 | | | | 0.015 | | | | 0.012 |
| Molbydenum | Mo | mg/L | | 0.00025 | 0.00023 | 0.00021 | 0.00018 | | 0.00037 | | | 0.00010 | | | | 0.000090 | | | | 0.000070 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00050 | < 0.0001 | < 0.0001 | 0.00040 | | 0.00040 | | | 0.00010 | | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.23 | 0.33 | 0.22 | 0.15 | | 0.11 | | | 0.067 | | | | 0.046 | | | | 0.030 | | | | 0.027 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.37 | 0.39 | 0.19 | 0.12 | | 0.070 | | | 0.040 | | | | 0.030 | | | | 0.020 | | | | 0.020 |
| Strontium | Sr | mg/L | | 0.013 | 0.016 | 0.011 | 0.0085 | | 0.0075 | | | 0.0060 | | | | 0.0056 | | | | 0.0055 | | | | 0.0051 |
| Tin | Sn | mg/L | | 0.0016 | 0.00080 | 0.00050 | 0.00030 | | 0.00024 | | | 0.00012 | | | | 0.00013 | | | | 0.00011 | | | | 0.000090 |
| Titanium | Ti | mg/L | | 0.00040 | < 0.0001 | < 0.0001 | 0.00030 | | 0.00030 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000050 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000041 | 0.00028 | 0.00020 | 0.00016 | | 0.00013 | | | 0.000095 | | | | 0.000078 | | | | 0.000070 | | | | 0.000059 |
| Vanadium | V | mg/L | | < 0.00003 | 0.000030 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000040 | 0.0000030 | 0.0000030 | | 0.0000010 | | | < 0.000001 | | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | 0.0010 | 0.0010 | | < 0.001 | | | 0.0010 | | | | 0.0020 | | | | 0.0010 | | | | 0.0020 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M96-58-02 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 841 | 989 | 980 | 996 | 971 | 1000 | 987 | 998 | 990 | 972 | 996 | 980 | 992 | 991 | 993 | 994 | 986 | 990 | 983 | 988 | 992 |
| pH | | units | **6.0-9.5** | 8.4 | 8.5 | 8.2 | 8.4 | 7.9 | 7.9 | 7.7 | 7.9 | 7.6 | 7.8 | 7.5 | 7.6 | 7.5 | 7.6 | 7.4 | 7.5 | 7.6 | 6.7 | 7.5 | 7.4 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 8.0 | 8.0 | 41 | 46 | 6.0 | 32 | 30 | 29 | 35 | 34 | 26 | 32 | 34 | 25 | 31 | 32 | 35 | 33 | 24 | 32 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 24 | 28 | 24 | 23 | 20 | 21 | 16 | 17 | 14 | 15 | 15 | 13 | 14 | 13 | 14 | 14 | 13 | 24 | 14 | 21 | 13 |
| Chloride | Cl | mg/L | | 2.0 | 1.2 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.1 | 5.3 | 2.7 | 2.1 | 1.5 | 1.6 | 1.2 | 1.3 | 1.2 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.4 | 1.3 | 1.2 | 1.3 | 1.2 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.10 | 0.050 | 0.060 | 0.050 | | 0.050 | | | 0.040 | | | | 0.040 | | | | 0.030 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0010 | 0.0023 | 0.0017 | 0.0015 | | 0.0015 | | | 0.0010 | | | | 0.00090 | | | | 0.00080 | | | | 0.00070 |
| Arsenic | As | mg/L | **0.5** | 0.0028 | 0.0050 | 0.0048 | 0.0049 | | 0.0054 | | | 0.0057 | | | | 0.0060 | | | | 0.0073 | | | | 0.0068 |
| Barium | Ba | mg/L | | 0.00081 | 0.0011 | 0.00089 | 0.00095 | | 0.0012 | | | 0.00088 | | | | 0.00099 | | | | 0.00086 | | | | 0.00090 |
| Boron | B | mg/L | | 0.0081 | 0.021 | 0.012 | 0.0098 | | 0.0090 | | | 0.0043 | | | | 0.0027 | | | | 0.0016 | | | | 0.0037 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000040 | | < 0.000003 | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.3 | 4.6 | 4.3 | 4.5 | 4.4 | 4.8 | 4.3 | 4.7 | 4.4 | 4.8 | 4.6 | 4.5 | 4.7 | 4.8 | 4.6 | 4.8 | 4.6 | 4.9 | 4.7 | 4.5 | 4.5 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000014 | 0.000021 | 0.000016 | 0.000018 | | 0.000026 | | | < 0.000002 | | | | 0.000039 | | | | 0.000029 | | | | 0.000043 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00070 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0080 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.000040 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000030 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.42 | 0.56 | 0.52 | 0.53 | | 0.63 | | | 0.59 | | | | 0.58 | | | | 0.57 | | | | 0.51 |
| Manganese | Mn | mg/L | | 0.013 | 0.018 | 0.018 | 0.019 | | 0.020 | | | 0.017 | | | | 0.017 | | | | 0.016 | | | | 0.016 |
| Molbydenum | Mo | mg/L | | 0.00015 | 0.00024 | 0.00012 | 0.000060 | | 0.0012 | | | < 0.00001 | | | | 0.000070 | | | | < 0.00001 | | | | 0.000020 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | < 0.0001 | 0.00020 | | 0.00020 | | | < 0.0001 | | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.1 | 2.6 | 2.1 | 1.9 | | 1.7 | | | 1.4 | | | | 1.1 | | | | 0.86 | | | | 0.72 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 5.6 | 7.6 | 4.2 | 3.0 | | 1.8 | | | 0.66 | | | | 0.26 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.0059 | 0.0069 | 0.0065 | 0.0066 | | 0.0074 | | | 0.0069 | | | | 0.0069 | | | | 0.0067 | | | | 0.0063 |
| Tin | Sn | mg/L | | 0.0017 | 0.00078 | 0.00033 | 0.00030 | | 0.00026 | | | 0.00016 | | | | 0.00015 | | | | 0.00015 | | | | 0.00014 |
| Titanium | Ti | mg/L | | 0.00020 | 0.00010 | 0.00020 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000080 | 0.00029 | 0.00023 | 0.00022 | | 0.00027 | | | 0.000070 | | | | 0.000070 | | | | 0.000040 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.000018 | 0.000017 | 0.000017 | | 0.000018 | | | 0.000016 | | | | 0.000015 | | | | 0.000020 | | | | 0.000018 |
| Vanadium | V | mg/L | | 0.00084 | 0.00088 | 0.00069 | 0.00065 | | 0.00067 | | | 0.00053 | | | | 0.00049 | | | | 0.00046 | | | | 0.00038 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.0000090 | 0.0000090 | 0.0000090 | | 0.0000080 | | | < 0.000001 | | | | 0.0000030 | | | | 0.0000040 | | | | 0.0000040 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-123-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 842 | 990 | 976 | 993 | 982 | 992 | 986 | 986 | 992 | 986 | 990 | 984 | 989 | 989 | 984 | 991 | 994 | 985 | 998 | 991 | 989 |
| pH | | units | **6.0-9.5** | 8.9 | 8.5 | 8.2 | 8.0 | 8.0 | 8.0 | 7.9 | 8.2 | 7.7 | 7.9 | 7.7 | 8.1 | 7.4 | 7.6 | 7.5 | 7.5 | 7.6 | 6.9 | 7.4 | 7.4 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 49 | 50 | 6.0 | 41 | 31 | 31 | 5.0 | 5.0 | 34 | 33 | 28 | 25 | 34 | 25 | 30 | 33 | 24 | 31 | 29 | 29 | 31 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 27 | 30 | 25 | 22 | 21 | 22 | 18 | 17 | 16 | 17 | 14 | 15 | 15 | 15 | 14 | 15 | 14 | 24 | 14 | 17 | 13 |
| Chloride | Cl | mg/L | | 2.4 | 0.90 | < 0.2 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.7 | 2.5 | 1.1 | 0.60 | 0.40 | 0.40 | 0.30 | 0.30 | 0.30 | 0.30 | 0.20 | 0.30 | 0.30 | 0.20 | 0.30 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.060 | 0.070 | 0.050 | | 0.050 | | | 0.050 | | | | 0.050 | | | | 0.040 | | | | 0.050 |
| Antimony | Sb | mg/L | | 0.0014 | 0.0031 | 0.0023 | 0.0018 | | 0.0016 | | | 0.0010 | | | | 0.00090 | | | | 0.00080 | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | 0.025 | 0.031 | 0.029 | 0.027 | | 0.025 | | | 0.026 | | | | 0.025 | | | | 0.027 | | | | 0.023 |
| Barium | Ba | mg/L | | 0.0014 | 0.0026 | 0.0026 | 0.0028 | | 0.0033 | | | 0.0029 | | | | 0.0030 | | | | 0.0028 | | | | 0.0027 |
| Boron | B | mg/L | | 0.014 | 0.028 | 0.016 | 0.011 | | 0.0082 | | | 0.0040 | | | | 0.0026 | | | | 0.0014 | | | | 0.0029 |
| Cadmium | Cd[3] | mg/L | | 0.000010 | < 0.000003 | 0.0000030 | 0.0000040 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.0 | 4.9 | 4.5 | 4.3 | 5.0 | 5.3 | 4.7 | 5.1 | 4.9 | 5.3 | 4.6 | 4.9 | 5.0 | 5.2 | 4.8 | 5.1 | 4.9 | 5.1 | 4.9 | 4.7 | 4.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000022 | 0.000030 | 0.000021 | 0.000024 | | 0.000034 | | | 0.0000090 | | | | 0.000049 | | | | 0.000047 | | | | 0.000051 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00060 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0080 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.00012 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.39 | 0.61 | 0.60 | 0.55 | | 0.61 | | | 0.54 | | | | 0.49 | | | | 0.43 | | | | 0.37 |
| Manganese | Mn | mg/L | | 0.011 | 0.016 | 0.015 | 0.015 | | 0.018 | | | 0.014 | | | | 0.013 | | | | 0.013 | | | | 0.014 |
| Molbydenum | Mo | mg/L | | 0.0012 | 0.0013 | 0.00049 | 0.00022 | | 0.00072 | | | 0.000050 | | | | 0.000060 | | | | 0.000050 | | | | 0.000050 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | 0.00020 | 0.00020 | | 0.00030 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.9 | 3.3 | 2.7 | 2.0 | | 1.6 | | | 1.2 | | | | 0.89 | | | | 0.70 | | | | 0.61 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 5.3 | 5.1 | 2.5 | 1.3 | | 0.63 | | | 0.29 | | | | 0.16 | | | | 0.11 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.0061 | 0.0097 | 0.0097 | 0.0089 | | 0.010 | | | 0.0094 | | | | 0.0091 | | | | 0.0085 | | | | 0.0076 |
| Tin | Sn | mg/L | | 0.0025 | 0.0013 | 0.00063 | 0.00043 | | 0.00036 | | | 0.00018 | | | | 0.00018 | | | | 0.00016 | | | | 0.00019 |
| Titanium | Ti | mg/L | | 0.00030 | < 0.0001 | 0.00010 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000040 | 0.00020 | 0.00016 | 0.00014 | | 0.00015 | | | 0.000070 | | | | 0.000050 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000059 | 0.00021 | 0.00021 | 0.00022 | | 0.00021 | | | 0.00021 | | | | 0.00022 | | | | 0.00020 | | | | 0.00015 |
| Vanadium | V | mg/L | | 0.00035 | 0.00037 | 0.00031 | 0.00029 | | 0.00033 | | | 0.00028 | | | | 0.00025 | | | | 0.00023 | | | | 0.00020 |
| Yttrium | Y | mg/L | | 0.000023 | 0.000010 | 0.000011 | 0.000011 | | 0.0000090 | | | 0.0000020 | | | | 0.0000030 | | | | 0.0000050 | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0010 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-124-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 842 | 959 | 986 | 985 | 989 | 985 | 972 | 983 | 985 | 940 | 986 | 979 | 979 | 988 | 981 | 993 | 988 | 983 | 994 | 986 | 991 |
| pH | | units | **6.0-9.5** | 9.0 | 8.6 | 7.7 | 8.5 | 8.1 | 8.0 | 8.1 | 8.0 | 7.6 | 7.9 | 7.8 | 7.8 | 7.6 | 7.6 | 7.4 | 7.5 | 7.6 | 6.7 | 7.6 | 7.5 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 53 | 58 | 45 | 48 | 58 | 33 | 5.0 | 6.0 | 36 | 36 | 27 | 35 | 30 | 28 | 34 | 43 | 36 | 33 | 26 | 35 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 24 | 23 | 28 | 22 | 21 | 17 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 22 | 13 | 25 | 14 |
| Chloride | Cl | mg/L | | 2.3 | 1.3 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.015 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 6.5 | | 5.3 | 3.5 | 2.5 | 2.7 | 2.2 | 2.3 | 2.2 | 2.4 | 2.3 | 2.4 | 2.4 | 2.4 | 2.6 | 2.8 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.030 | 0.040 | 0.030 | | 0.040 | | | 0.040 | | | | 0.040 | | | | 0.040 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0017 | 0.0039 | 0.0032 | 0.0028 | | 0.0025 | | | 0.0018 | | | | 0.0015 | | | | 0.0013 | | | | 0.0010 |
| Arsenic | As | mg/L | **0.5** | 0.0090 | 0.011 | 0.0087 | 0.0072 | | 0.0078 | | | 0.0068 | | | | 0.0058 | | | | 0.0057 | | | | 0.0042 |
| Barium | Ba | mg/L | | 0.00055 | 0.00058 | 0.00069 | 0.00062 | | 0.00068 | | | 0.00066 | | | | 0.00085 | | | | 0.0010 | | | | 0.0012 |
| Boron | B | mg/L | | 0.0052 | 0.014 | 0.0094 | 0.0072 | | 0.0060 | | | 0.0028 | | | | 0.0017 | | | | 0.00080 | | | | 0.0032 |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.1 | 4.7 | 5.0 | 5.0 | 5.2 | 5.0 | 4.5 | 4.9 | 4.8 | 5.2 | 4.7 | 4.9 | 4.9 | 5.7 | 5.1 | 5.3 | 5.1 | 5.0 | 5.1 | 5.0 | 5.3 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000043 | 0.000057 | 0.000043 | 0.000032 | | 0.000041 | | | 0.000023 | | | | 0.000050 | | | | 0.000056 | | | | 0.000069 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.013 | 0.0030 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.000080 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.55 | 0.79 | 0.82 | 0.77 | | 0.76 | | | 0.71 | | | | 0.68 | | | | 0.69 | | | | 0.63 |
| Manganese | Mn | mg/L | | 0.014 | 0.017 | 0.017 | 0.017 | | 0.015 | | | 0.013 | | | | 0.012 | | | | 0.011 | | | | 0.013 |
| Molbydenum | Mo | mg/L | | 0.00029 | 0.00056 | 0.00030 | 0.00017 | | 0.00052 | | | 0.000050 | | | | 0.000060 | | | | 0.000050 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | 0.00020 | 0.00040 | 0.00030 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.5 | 3.2 | 2.5 | 1.9 | | 1.6 | | | 1.3 | | | | 1.1 | | | | 0.98 | | | | 0.88 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 5.0 | 6.2 | 3.1 | 1.7 | | 0.80 | | | 0.32 | | | | 0.16 | | | | 0.10 | | | | 0.070 |
| Strontium | Sr | mg/L | | 0.0073 | 0.0090 | 0.0093 | 0.0086 | | 0.0083 | | | 0.0076 | | | | 0.0073 | | | | 0.0074 | | | | 0.0068 |
| Tin | Sn | mg/L | | 0.0015 | 0.00071 | 0.00036 | 0.00022 | | 0.00020 | | | 0.00015 | | | | 0.000080 | | | | 0.00012 | | | | 0.00010 |
| Titanium | Ti | mg/L | | 0.00050 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000070 | 0.00019 | 0.00013 | 0.00010 | | 0.00012 | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.0000050 | 0.000058 | 0.000060 | 0.000048 | | 0.000047 | | | 0.000045 | | | | 0.000045 | | | | 0.000053 | | | | 0.000045 |
| Vanadium | V | mg/L | | 0.00053 | 0.00048 | 0.00033 | 0.00030 | | 0.00032 | | | 0.00025 | | | | 0.00021 | | | | 0.00016 | | | | 0.00013 |
| Yttrium | Y | mg/L | | 0.000025 | 0.000027 | 0.000023 | 0.000021 | | 0.000021 | | | 0.000018 | | | | 0.000012 | | | | 0.000010 | | | | 0.000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Large Column Humidity Cell Test Cycle - C-7 Pump (14% IF 86% MV) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 1255 | 4930 | 4816 | 4975 | 4907 | 5020 | 4975 | 4975 | 4884 | 4907 | 4861 | 4839 | 4816 | 4816 | 4952 | 4725 | 4975 | 4703 | 4907 | 4952 | 4839 |
| pH | | units | 6.0-9.5 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.0 | 7.9 | 8.0 | 7.9 | 8.1 | 8.0 | 8.1 | 8.0 | 8.0 | 7.9 | 8.0 | 8.1 | 8.0 | 7.7 | 8.0 |
| Conductivity | | mg/L as CaCO3 | | 453 | 702 | 365 | 339 | 301 | 282 | 254 | 334 | 310 | 288 | 221 | 269 | 201 | 269 | 256 | 256 | 249 | 253 | 234 | 256 | 251 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 263 | 127 | 111 | 113 | 124 | 84 | 83 | 72 | 72 | 68 | 62 | 61 | 71 | 70 | 63 | 63 | 62 | 68 | 58 | 62 | 55 |
| Chloride | Cl | mg/L | | 14 | 21 | 10 | 5.6 | | 4.1 | | | 0.90 | | | | 0.60 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.090 | 0.080 | 0.070 | 0.070 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | |
| Phosphorus | P | mg/L | | 0.12 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 81 | 190 | 130 | 120 | 110 | 100 | 91 | 83 | 83 | 66 | 69 | 71 | 70 | 68 | 63 | 64 | 63 | 63 | 57 | 64 | 63 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.18 | 0.10 | 0.11 | 0.11 | | 0.12 | | | 0.11 | | | | 0.10 | | | | 0.090 | | | | 0.10 |
| Antimony | Sb | mg/L | | 0.0039 | 0.0071 | 0.0064 | 0.0074 | | 0.0047 | | | 0.0039 | | | | 0.0034 | | | | 0.0029 | | | | 0.0027 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0095 | 0.0073 | 0.0070 | | 0.0077 | | | 0.0088 | | | | 0.0086 | | | | 0.0085 | | | | 0.0082 |
| Barium | Ba | mg/L | | 0.0069 | 0.011 | 0.0077 | 0.0071 | | 0.0066 | | | 0.0054 | | | | 0.0052 | | | | 0.0055 | | | | 0.0058 |
| Boron | B | mg/L | | 0.042 | 0.087 | 0.059 | 0.055 | | 0.046 | | | 0.029 | | | | 0.024 | | | | 0.019 | | | | 0.015 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | 0.0000050 | < 0.000003 | | 0.000086 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 20 | 35 | 31 | 34 | 33 | 32 | 30 | 32 | 32 | 31 | 30 | 30 | 29 | 30 | 29 | 30 | 29 | 29 | 29 | 30 | 32 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | 0.00050 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00012 | 0.00027 | 0.00023 | 0.00029 | | 0.00030 | | | 0.00029 | | | | 0.00028 | | | | 0.00030 | | | | 0.00031 |
| Copper | Cu[3] | mg/L | 0.3 | 0.0010 | 0.0011 | 0.00060 | 0.00090 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | 0.00060 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0050 | < 0.003 | < 0.003 | 0.0060 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000020 | 0.000030 | 0.000040 | < 0.00002 | | < 0.00002 | | | 0.000020 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000020 |
| Lithium | Li | mg/L | | < 0.001 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | | 0.0020 | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 7.5 | 17 | 14 | 15 | | 14 | | | 12 | | | | 10 | | | | 9.9 | | | | 10 |
| Manganese | Mn | mg/L | | 0.016 | 0.033 | 0.044 | 0.046 | | 0.041 | | | 0.037 | | | | 0.025 | | | | 0.023 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.0023 | 0.0019 | 0.0011 | 0.00091 | | 0.00065 | | | 0.00049 | | | | 0.00053 | | | | 0.00081 | | | | 0.00039 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0012 | 0.0019 | 0.0014 | 0.00060 | | 0.0013 | | | 0.00070 | | | | 0.00060 | | | | 0.00070 | | | | 0.00060 |
| Potassium | K | mg/L | | 17 | 25 | 16 | 15 | | 12 | | | 9.5 | | | | 7.0 | | | | 6.4 | | | | 6.2 |
| Selenium | Se | mg/L | | 0.0030 | 0.0040 | 0.0020 | 0.0020 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0010 |
| Sodium | Na | mg/L | | 53 | 80 | 47 | 31 | | 18 | | | 8.3 | | | | 3.4 | | | | 2.0 | | | | 1.4 |
| Strontium | Sr | mg/L | | 0.043 | 0.096 | 0.078 | 0.082 | | 0.076 | | | 0.068 | | | | 0.057 | | | | 0.054 | | | | 0.055 |
| Tin | Sn | mg/L | | 0.0022 | 0.0024 | 0.0012 | 0.00056 | | 0.00028 | | | 0.00030 | | | | 0.00020 | | | | 0.00020 | | | | 0.00024 |
| Titanium | Ti | mg/L | | 0.00050 | 0.00020 | 0.00090 | 0.00030 | | 0.00070 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00098 | 0.00034 | 0.0032 | 0.000030 | | 0.00022 | | | < 0.00003 | | | | 0.00011 | | | | 0.000090 | | | | 0.000090 |
| Uranium | U | mg/L | | 0.000053 | 0.00038 | 0.00024 | 0.00027 | | 0.00026 | | | 0.00020 | | | | 0.00041 | | | | 0.00017 | | | | 0.00017 |
| Vanadium | V | mg/L | | 0.00036 | 0.00052 | 0.00043 | 0.00043 | | 0.00052 | | | 0.00044 | | | | 0.00038 | | | | 0.00028 | | | | 0.00025 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.000017 | 0.000012 | 0.000016 | | 0.000010 | | | 0.000012 | | | | 0.000022 | | | | 0.000012 | | | | 0.0000090 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.011 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-981-03 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 821 | 988 | 992 | 990 | 989 | 994 | 986 | 985 | 995 | 989 | 987 | 984 | 986 | 982 | 986 | 992 | 993 | 990 | 990 | 992 | 991 |
| pH | | units | **6.0-9.5** | 8.6 | 7.9 | 8.3 | 8.0 | 8.0 | 8.1 | 7.6 | 7.7 | 8.1 | 7.9 | 7.6 | 7.8 | 7.6 | 7.8 | 7.6 | 7.6 | 7.7 | 7.9 | 7.8 | 7.6 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 7.0 | 51 | 46 | 51 | 39 | 36 | 45 | 40 | 40 | 40 | 29 | 6.0 | 32 | 31 | 38 | 31 | 30 | 37 | 28 | 38 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 28 | 24 | 26 | 23 | 23 | 22 | 20 | 18 | 18 | 20 | 17 | 17 | 17 | 18 | 17 | 21 | 17 | 22 | 16 | 25 | 16 |
| Chloride | Cl | mg/L | | 4.1 | 4.0 | 2.9 | 1.6 | | 0.50 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | 0.014 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 1.6 | 1.6 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.2 | 1.1 | 1.2 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 0.90 | 0.90 | 0.80 | 0.80 | 0.90 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.020 | 0.030 | 0.040 | | 0.040 | | | 0.030 | | | | 0.040 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.0016 | 0.0047 | 0.0045 | 0.0043 | | 0.0038 | | | 0.0027 | | | | 0.0021 | | | | 0.0016 | | | | 0.0012 |
| Arsenic | As | mg/L | **0.5** | 0.0023 | 0.0043 | 0.0046 | 0.0047 | | 0.0047 | | | 0.0038 | | | | 0.0032 | | | | 0.0029 | | | | 0.0022 |
| Barium | Ba | mg/L | | 0.00080 | 0.0011 | 0.0012 | 0.0010 | | 0.0012 | | | 0.0012 | | | | 0.0013 | | | | 0.0015 | | | | 0.0022 |
| Boron | B | mg/L | | 0.0017 | 0.0079 | 0.0060 | 0.0054 | | 0.0040 | | | 0.0018 | | | | 0.0012 | | | | 0.00050 | | | | 0.0062 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.8 | 5.3 | 4.7 | 5.0 | 5.3 | 5.3 | 4.8 | 5.0 | 5.0 | 5.3 | 5.3 | 5.1 | 5.2 | 5.5 | 5.3 | 5.6 | 5.3 | 5.4 | 5.2 | 5.1 | 5.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000014 | 0.000034 | 0.000037 | 0.000036 | | 0.000047 | | | 0.000064 | | | | 0.000054 | | | | 0.000056 | | | | 0.000052 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | 0.0030 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | 0.000070 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.45 | 0.98 | 1.0 | 1.2 | | 1.3 | | | 1.3 | | | | 1.3 | | | | 1.3 | | | | 1.1 |
| Manganese | Mn | mg/L | | 0.019 | 0.029 | 0.028 | 0.026 | | 0.027 | | | 0.025 | | | | 0.022 | | | | 0.022 | | | | 0.019 |
| Molbydenum | Mo | mg/L | | 0.00019 | 0.00034 | 0.00029 | 0.00020 | | 0.00014 | | | 0.000060 | | | | 0.000040 | | | | 0.000030 | | | | 0.000030 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00020 | 0.00040 | 0.00030 | | 0.00040 | | | 0.00020 | | | | 0.00010 | | | | 0.00010 | | | | 0.00020 |
| Potassium | K | mg/L | | 0.94 | 1.2 | 0.94 | 0.86 | | 0.70 | | | 0.54 | | | | 0.46 | | | | 0.38 | | | | 0.33 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 3.8 | 4.5 | 2.8 | 2.1 | | 1.0 | | | 0.41 | | | | 0.18 | | | | 0.10 | | | | 0.070 |
| Strontium | Sr | mg/L | | 0.0088 | 0.013 | 0.012 | 0.013 | | 0.013 | | | 0.011 | | | | 0.011 | | | | 0.011 | | | | 0.0097 |
| Tin | Sn | mg/L | | 0.0010 | 0.0011 | 0.00062 | 0.00044 | | 0.00045 | | | 0.00033 | | | | 0.00025 | | | | 0.0015 | | | | 0.00022 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000050 | 0.00014 | 0.00011 | 0.000090 | | 0.000060 | | | 0.000050 | | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.0000070 | 0.0000080 | | 0.0000080 | | | 0.0000050 | | | | 0.0000070 | | | | 0.00019 | | | | 0.000015 |
| Vanadium | V | mg/L | | 0.00030 | 0.00030 | 0.00022 | 0.00019 | | 0.00018 | | | 0.00017 | | | | 0.00017 | | | | 0.00015 | | | | 0.00017 |
| Yttrium | Y | mg/L | | 0.0000040 | 0.000011 | 0.0000090 | 0.0000080 | | 0.000015 | | | 0.0000030 | | | | 0.0000060 | | | | 0.0000070 | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0020 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-985-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 795 | 995 | 998 | 963 | 1007 | 994 | 997 | 977 | 997 | 975 | 999 | 988 | 984 | 990 | 988 | 998 | 987 | 998 | 990 | 996 | 985 |
| pH | | units | **6.0-9.5** | 8.8 | 7.8 | 7.9 | 8.0 | 7.8 | 7.8 | 7.5 | 7.7 | 7.9 | 8.0 | 7.6 | 7.7 | 7.4 | 7.6 | 7.2 | 7.5 | 7.7 | 7.4 | 7.5 | 7.5 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 106 | 103 | 86 | 67 | 45 | 42 | 38 | 41 | 42 | 52 | 31 | 6.0 | 30 | 31 | 37 | 38 | 30 | 37 | 33 | 37 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 21 | 26 | 25 | 23 | 21 | 20 | 17 | 21 | 15 | 22 | 14 | 13 | 14 | 14 | 14 | 14 | 14 | 25 | 13 | 27 | 14 |
| Chloride | Cl | mg/L | | 10 | 7.1 | 2.6 | 1.0 | | 0.30 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.14 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 23 | 24 | 13 | 7.7 | 6.3 | 5.3 | 4.6 | 4.1 | 3.4 | 4.2 | 3.1 | 2.8 | 3.0 | 2.8 | 2.9 | 2.6 | 2.7 | 2.6 | 2.3 | 2.6 | 2.6 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.070 | 0.11 | 0.090 | | 0.11 | | | 0.090 | | | | 0.080 | | | | 0.11 | | | | 0.080 |
| Antimony | Sb | mg/L | | 0.0016 | 0.0030 | 0.0029 | 0.0023 | | 0.0022 | | | 0.0015 | | | | 0.0013 | | | | 0.0011 | | | | 0.00090 |
| Arsenic | As | mg/L | **0.5** | 0.0067 | 0.010 | 0.012 | 0.012 | | 0.016 | | | 0.021 | | | | 0.025 | | | | 0.032 | | | | 0.032 |
| Barium | Ba | mg/L | | 0.0016 | 0.0021 | 0.0015 | 0.0012 | | 0.0010 | | | 0.00076 | | | | 0.00062 | | | | 0.00060 | | | | 0.00059 |
| Boron | B | mg/L | | 0.0050 | 0.013 | 0.0084 | 0.0056 | | 0.0038 | | | 0.0018 | | | | 0.0013 | | | | 0.00060 | | | | 0.0025 |
| Cadmium | Cd[3] | mg/L | | 0.0000040 | 0.0000050 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 8.4 | 9.5 | 8.3 | 6.7 | 7.2 | 6.7 | 6.4 | 7.1 | 5.8 | 7.5 | 6.2 | 5.4 | 5.4 | 5.8 | 5.5 | 5.5 | 5.8 | 5.7 | 5.1 | 5.5 | 5.5 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00010 | 0.00016 | 0.00012 | 0.00011 | | 0.00017 | | | 0.00015 | | | | 0.00026 | | | | 0.00028 | | | | 0.00030 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | 0.0040 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000040 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 1.8 | 2.4 | 1.9 | 1.4 | | 1.2 | | | 0.97 | | | | 0.91 | | | | 0.92 | | | | 0.81 |
| Manganese | Mn | mg/L | | 0.0076 | 0.011 | 0.012 | 0.012 | | 0.016 | | | 0.017 | | | | 0.017 | | | | 0.019 | | | | 0.018 |
| Molbydenum | Mo | mg/L | | 0.00069 | 0.0011 | 0.00072 | 0.00041 | | 0.00023 | | | 0.00013 | | | | 0.00010 | | | | 0.000090 | | | | 0.000080 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | 0.00040 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0014 | 0.0014 | 0.00090 | 0.00070 | | 0.00060 | | | 0.00030 | | | | 0.00020 | | | | 0.00020 | | | | 0.00010 |
| Potassium | K | mg/L | | 5.2 | 4.5 | 2.8 | 1.6 | | 1.0 | | | 0.64 | | | | 0.41 | | | | 0.31 | | | | 0.24 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 11 | 8.3 | 3.7 | 1.6 | | 0.79 | | | 0.34 | | | | 0.18 | | | | 0.13 | | | | 0.090 |
| Strontium | Sr | mg/L | | 0.048 | 0.060 | 0.049 | 0.036 | | 0.035 | | | 0.029 | | | | 0.027 | | | | 0.028 | | | | 0.026 |
| Tin | Sn | mg/L | | 0.0023 | 0.0011 | 0.00048 | 0.00032 | | 0.00033 | | | 0.00021 | | | | 0.00018 | | | | 0.00026 | | | | 0.00017 |
| Titanium | Ti | mg/L | | 0.00030 | < 0.0001 | 0.00010 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000050 | 0.00015 | 0.00012 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000060 | | | | 0.000030 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000030 | 0.00039 | 0.00027 | 0.00021 | | 0.00021 | | | 0.00025 | | | | 0.00034 | | | | 0.00036 | | | | 0.00031 |
| Vanadium | V | mg/L | | 0.00021 | 0.00016 | 0.00024 | 0.00019 | | 0.00027 | | | 0.00024 | | | | 0.00023 | | | | 0.00024 | | | | 0.00024 |
| Yttrium | Y | mg/L | | 0.000011 | 0.000011 | 0.000016 | 0.0000040 | | 0.0000080 | | | 0.0000010 | | | | 0.0000010 | | | | 0.0000050 | | | | 0.0000030 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-987-04 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 806 | 943 | 991 | 985 | 995 | 990 | 983 | 991 | 991 | 985 | 989 | 987 | 991 | 984 | 988 | 993 | 988 | 995 | 991 | 994 | 983 |
| pH | | units | **6.0-9.5** | 9.1 | 8.3 | 8.2 | 8.4 | 7.9 | 8.1 | 7.6 | 7.6 | 8.5 | 8.1 | 7.9 | 8.0 | 8.4 | 8.0 | 7.5 | 7.6 | 7.5 | 7.5 | 7.7 | 7.5 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 34 | 38 | 36 | 6.0 | 6.0 | 32 | 30 | 39 | 37 | 34 | 32 | 36 | 28 | 28 | 31 | 35 | 24 | 32 | 35 | 29 | 25 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 28 | 20 | 31 | 21 | 22 | 17 | 16 | 17 | 16 | 15 | 16 | 14 | 16 | 15 | 14 | 15 | 14 | 25 | 14 | 25 | 14 |
| Chloride | Cl | mg/L | | 1.7 | 1.8 | 1.3 | 1.1 | | 0.50 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 0.90 | 1.2 | 1.2 | 1.6 | 1.3 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.1 | 1.2 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 0.90 | 0.80 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.020 | 0.030 | 0.040 | | 0.050 | | | 0.030 | | | | 0.030 | | | | 0.030 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0017 | 0.0014 | 0.0014 | | 0.0012 | | | 0.00090 | | | | 0.00070 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | **0.5** | 0.00050 | 0.00080 | 0.00080 | 0.00060 | | 0.00050 | | | 0.00050 | | | | 0.00040 | | | | 0.00050 | | | | 0.00040 |
| Barium | Ba | mg/L | | 0.00074 | 0.00076 | 0.0010 | 0.00093 | | 0.0011 | | | 0.0011 | | | | 0.0011 | | | | 0.0010 | | | | 0.00097 |
| Boron | B | mg/L | | 0.0025 | 0.010 | 0.0067 | 0.0067 | | 0.0046 | | | 0.0028 | | | | 0.0017 | | | | 0.00090 | | | | 0.0018 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.4 | 4.9 | 5.2 | 5.3 | 5.5 | 5.2 | 4.7 | 5.1 | 5.1 | 5.0 | 5.0 | 4.7 | 5.1 | 5.1 | 4.7 | 4.8 | 4.7 | 5.0 | 4.8 | 4.3 | 4.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000011 | 0.000015 | 0.000015 | 0.000017 | | 0.000025 | | | < 0.000002 | | | | 0.000012 | | | | 0.000012 | | | | 0.000014 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | 0.0080 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.32 | 0.70 | 0.79 | 0.97 | | 0.86 | | | 0.88 | | | | 0.77 | | | | 0.77 | | | | 0.69 |
| Manganese | Mn | mg/L | | 0.015 | 0.020 | 0.019 | 0.019 | | 0.023 | | | 0.022 | | | | 0.024 | | | | 0.023 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.000090 | 0.00018 | 0.00013 | 0.00010 | | 0.000080 | | | 0.000030 | | | | 0.000020 | | | | 0.000020 | | | | 0.000020 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | 0.00020 | 0.00020 | | 0.00030 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.50 | 0.74 | 0.64 | 0.63 | | 0.48 | | | 0.43 | | | | 0.33 | | | | 0.28 | | | | 0.25 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.8 | 2.2 | 1.4 | 1.3 | | 0.70 | | | 0.42 | | | | 0.20 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.0075 | 0.0094 | 0.010 | 0.011 | | 0.0091 | | | 0.0086 | | | | 0.0074 | | | | 0.0068 | | | | 0.0062 |
| Tin | Sn | mg/L | | 0.0010 | 0.00098 | 0.00059 | 0.00044 | | 0.00028 | | | 0.00014 | | | | 0.00015 | | | | 0.00012 | | | | 0.00012 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | 0.00030 |
| Tungsten | W | mg/L | | 0.00041 | 0.00062 | 0.00032 | 0.00026 | | 0.00012 | | | 0.00010 | | | | 0.000090 | | | | 0.000070 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000050 | 0.0000060 | 0.0000060 | | 0.000013 | | | 0.0000070 | | | | 0.0000030 | | | | 0.000011 | | | | 0.000011 |
| Vanadium | V | mg/L | | 0.00035 | 0.00037 | 0.00024 | 0.00021 | | 0.00016 | | | 0.00017 | | | | 0.00014 | | | | 0.00011 | | | | 0.00011 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000040 | 0.0000050 | 0.0000050 | | 0.0000040 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000030 | | | | 0.0000080 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-994-04 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 860 | 953 | 968 | 981 | 976 | 977 | 979 | 968 | 994 | 988 | 984 | 992 | 990 | 988 | 980 | 986 | 983 | 982 | 991 | 982 | 984 |
| pH | | units | **6.0-9.5** | 8.9 | 8.2 | 7.9 | 7.8 | 7.6 | 7.7 | 7.4 | 7.5 | 7.7 | 7.6 | 7.4 | 7.4 | 7.3 | 7.3 | 7.1 | 7.4 | 7.6 | 7.5 | 7.3 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 58 | 49 | 36 | 38 | 26 | 25 | 24 | 29 | 32 | 31 | 22 | 29 | 29 | 23 | 25 | 20 | 26 | 25 | 23 | 24 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 26 | 27 | 22 | 17 | 15 | 14 | 13 | 13 | 14 | 13 | 13 | 13 | 13 | 12 | 10 | 11 | 11 | 20 | 10 | 22 | 10 |
| Chloride | Cl | mg/L | | 6.2 | 1.5 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.0 | 1.0 | 0.90 | 1.0 | 0.80 | 0.90 | 0.90 | 0.80 | 0.80 | 0.80 | 0.80 | 0.90 | 0.90 | 0.90 | 0.90 | 1.0 | 0.80 | 0.90 | 0.80 | 0.80 | 0.80 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.070 | 0.060 | 0.070 | | 0.060 | | | 0.060 | | | | 0.060 | | | | 0.050 | | | | 0.050 |
| Antimony | Sb | mg/L | | 0.0060 | 0.0064 | 0.0042 | 0.0032 | | 0.0022 | | | 0.0014 | | | | 0.0011 | | | | 0.00090 | | | | 0.00070 |
| Arsenic | As | mg/L | **0.5** | 0.0061 | 0.0089 | 0.0089 | 0.0090 | | 0.0095 | | | 0.010 | | | | 0.011 | | | | 0.014 | | | | 0.014 |
| Barium | Ba | mg/L | | 0.00092 | 0.0011 | 0.0014 | 0.0017 | | 0.0019 | | | 0.0031 | | | | 0.0032 | | | | 0.0029 | | | | 0.0027 |
| Boron | B | mg/L | | 0.013 | 0.018 | 0.0096 | 0.0067 | | 0.0039 | | | 0.0020 | | | | 0.0014 | | | | 0.00060 | | | | 0.0010 |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.8 | 2.8 | 3.1 | 3.5 | 3.8 | 3.8 | 3.7 | 3.8 | 4.5 | 4.4 | 4.3 | 4.2 | 4.2 | 4.4 | 3.9 | 4.0 | 3.9 | 3.9 | 3.8 | 3.6 | 3.5 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00013 | 0.000083 | 0.000045 | 0.000041 | | 0.000044 | | | 0.000045 | | | | 0.000069 | | | | 0.000069 | | | | 0.000071 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | 0.00090 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0080 | < 0.003 | < 0.003 | 0.0040 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.19 | 0.30 | 0.39 | 0.50 | | 0.49 | | | 0.50 | | | | 0.40 | | | | 0.31 | | | | 0.24 |
| Manganese | Mn | mg/L | | 0.0075 | 0.011 | 0.011 | 0.010 | | 0.010 | | | 0.0096 | | | | 0.0082 | | | | 0.0069 | | | | 0.0059 |
| Molbydenum | Mo | mg/L | | 0.00072 | 0.00033 | 0.00012 | 0.000030 | | 0.000030 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | 0.00050 | 0.00030 | 0.00030 | | 0.00030 | | | 0.00020 | | | | 0.00020 | | | | 0.00010 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.3 | 1.5 | 1.4 | 1.4 | | 1.3 | | | 1.3 | | | | 1.2 | | | | 0.96 | | | | 0.81 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 11 | 9.2 | 4.6 | 2.7 | | 1.0 | | | 0.42 | | | | 0.17 | | | | 0.090 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.0049 | 0.0062 | 0.0077 | 0.0094 | | 0.0098 | | | 0.010 | | | | 0.0091 | | | | 0.0076 | | | | 0.0062 |
| Tin | Sn | mg/L | | 0.0013 | 0.00078 | 0.00038 | 0.00023 | | 0.00020 | | | 0.00013 | | | | 0.00017 | | | | 0.00014 | | | | 0.00010 |
| Titanium | Ti | mg/L | | 0.00040 | 0.00010 | 0.00030 | 0.00020 | | < 0.0001 | | | < 0.0001 | | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.0011 | 0.0014 | 0.00083 | 0.00055 | | 0.00026 | | | 0.00017 | | | | 0.00015 | | | | 0.00012 | | | | 0.000040 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000040 | 0.000018 | 0.0000040 | | 0.0000050 | | | 0.0000020 | | | | < 0.000001 | | | | 0.0000080 | | | | 0.0000040 |
| Vanadium | V | mg/L | | 0.0021 | 0.0016 | 0.0011 | 0.00097 | | 0.00077 | | | 0.00071 | | | | 0.00060 | | | | 0.00059 | | | | 0.00053 |
| Yttrium | Y | mg/L | | 0.0000070 | 0.0000040 | 0.0000030 | 0.0000030 | | 0.0000020 | | | < 0.000001 | | | | 0.0000030 | | | | < 0.000001 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-222-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 823 | 960 | 945 | 970 | 971 | 973 | 974 | 964 | 996 | 985 | 980 | 983 | 986 | 987 | 988 | 990 | 992 | 985 | 987 | 984 | 986 |
| pH | | units | **6.0-9.5** | 8.1 | 8.0 | 7.8 | 7.7 | 7.5 | 7.9 | 7.4 | 7.5 | 7.9 | 7.4 | 7.4 | 7.3 | 7.2 | 6.9 | 7.2 | 7.4 | 7.5 | 7.5 | 7.3 | 7.3 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 40 | 35 | 5.0 | 36 | 26 | 28 | 27 | 33 | 36 | 33 | 25 | 31 | 26 | 31 | 31 | 24 | 39 | 30 | 27 | 26 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 17 | 17 | 15 | 15 | 14 | 15 | 15 | 14 | 16 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 13 | 23 | 11 | 17 | 11 |
| Chloride | Cl | mg/L | | 0.70 | 0.30 | 0.20 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.012 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 | 1.6 | 1.7 | 1.6 | 1.5 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.1 | 1.3 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.020 | 0.030 | 0.030 | | 0.050 | | | 0.020 | | | | 0.020 | | | | 0.020 | | | | 0.010 |
| Antimony | Sb | mg/L | | 0.0019 | 0.0035 | 0.0032 | 0.0030 | | 0.0026 | | | 0.0019 | | | | 0.0014 | | | | 0.0013 | | | | 0.00090 |
| Arsenic | As | mg/L | **0.5** | 0.014 | 0.021 | 0.024 | 0.027 | | 0.032 | | | 0.029 | | | | 0.028 | | | | 0.030 | | | | 0.024 |
| Barium | Ba | mg/L | | 0.00050 | 0.00068 | 0.00057 | 0.00060 | | 0.00059 | | | 0.00054 | | | | 0.00048 | | | | 0.00039 | | | | 0.00035 |
| Boron | B | mg/L | | 0.0017 | 0.0067 | 0.0044 | 0.0040 | | 0.0027 | | | 0.0013 | | | | 0.00080 | | | | 0.00030 | | | | 0.00040 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.0 | 4.9 | 4.1 | 4.4 | 4.5 | 4.6 | 4.6 | 4.4 | 5.0 | 4.8 | 4.7 | 4.4 | 4.6 | 4.9 | 4.7 | 4.6 | 4.6 | 4.7 | 3.8 | 3.7 | 3.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000053 | 0.000086 | 0.000082 | 0.00011 | | 0.00012 | | | 0.00026 | | | | 0.00037 | | | | 0.00038 | | | | 0.00043 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00050 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0060 | 0.0090 | 0.0060 | 0.0080 | | 0.012 | | | 0.0050 | | | | 0.0030 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.63 | 1.0 | 0.97 | 0.97 | | 0.95 | | | 1.0 | | | | 0.90 | | | | 0.89 | | | | 0.74 |
| Manganese | Mn | mg/L | | 0.023 | 0.022 | 0.018 | 0.015 | | 0.014 | | | 0.018 | | | | 0.017 | | | | 0.016 | | | | 0.015 |
| Molbydenum | Mo | mg/L | | 0.00050 | 0.00069 | 0.00048 | 0.00032 | | 0.00018 | | | 0.000080 | | | | 0.000060 | | | | 0.000050 | | | | 0.000040 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00030 | 0.00030 | 0.00040 | | 0.00040 | | | 0.00030 | | | | 0.00040 | | | | 0.00030 | | | | 0.00030 |
| Potassium | K | mg/L | | 1.5 | 1.6 | 1.2 | 0.90 | | 0.65 | | | 0.46 | | | | 0.28 | | | | 0.19 | | | | 0.13 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.2 | 1.0 | 0.58 | 0.40 | | 0.21 | | | 0.13 | | | | 0.080 | | | | 0.040 | | | | 0.030 |
| Strontium | Sr | mg/L | | 0.0086 | 0.011 | 0.0096 | 0.0097 | | 0.0093 | | | 0.0093 | | | | 0.0079 | | | | 0.0073 | | | | 0.0059 |
| Tin | Sn | mg/L | | 0.0017 | 0.00095 | 0.00050 | 0.00038 | | 0.00026 | | | 0.00024 | | | | 0.00019 | | | | 0.00014 | | | | 0.00012 |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00015 | 0.00031 | 0.00023 | 0.00019 | | 0.00012 | | | 0.000070 | | | | 0.000060 | | | | 0.000060 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000038 | 0.00011 | 0.00013 | 0.00014 | | 0.00013 | | | 0.00011 | | | | 0.000090 | | | | 0.000077 | | | | 0.000070 |
| Vanadium | V | mg/L | | 0.00036 | 0.00036 | 0.00034 | 0.00031 | | 0.00030 | | | 0.00025 | | | | 0.00019 | | | | 0.00017 | | | | 0.00014 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.000011 | 0.0000090 | 0.0000080 | | 0.0000050 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000020 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-992-04 (Ultramafic) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 823 | 960 | 945 | 970 | 971 | 973 | 980 | 973 | 1006 | 982 | 989 | 983 | 988 | 987 | 978 | 998 | 997 | 982 | 983 | 998 | 989 |
| pH | | units | **6.0-9.5** | 8.1 | 8.0 | 7.8 | 7.7 | 7.5 | 7.9 | 7.9 | 7.9 | 8.7 | 8.7 | 8.4 | 8.7 | 8.4 | 7.8 | 7.9 | 8.1 | 8.6 | 7.6 | 8.4 | 7.9 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 40 | 35 | 5.0 | 36 | 26 | 28 | 51 | 54 | 47 | 47 | 37 | 7.0 | 39 | 39 | 49 | 34 | 37 | 50 | 34 | 44 | 38 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 17 | 17 | 15 | 15 | 14 | 15 | 26 | 25 | 24 | 26 | 26 | 25 | 24 | 24 | 26 | 24 | 24 | 31 | 23 | 29 | 24 |
| Chloride | Cl | mg/L | | 0.70 | 0.30 | 0.20 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.012 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 | 1.6 | 1.0 | 1.0 | 0.90 | 1.0 | 1.0 | 0.90 | 0.80 | 0.80 | 0.80 | 0.70 | 0.80 | 0.80 | 0.60 | 0.60 | 0.70 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.020 | 0.030 | 0.030 | | 0.050 | | | 0.10 | | | | 0.12 | | | | 0.12 | | | | 0.11 |
| Antimony | Sb | mg/L | | 0.0019 | 0.0035 | 0.0032 | 0.0030 | | 0.0026 | | | 0.00040 | | | | 0.00040 | | | | 0.00040 | | | | 0.00030 |
| Arsenic | As | mg/L | **0.5** | 0.014 | 0.021 | 0.024 | 0.027 | | 0.032 | | | 0.032 | | | | 0.039 | | | | 0.048 | | | | 0.042 |
| Barium | Ba | mg/L | | 0.00050 | 0.00068 | 0.00057 | 0.00060 | | 0.00059 | | | 0.0012 | | | | 0.0012 | | | | 0.0012 | | | | 0.0011 |
| Boron | B | mg/L | | 0.0017 | 0.0067 | 0.0044 | 0.0040 | | 0.0027 | | | 0.00090 | | | | 0.00070 | | | | < 0.0002 | | | | < 0.0002 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.0 | 4.9 | 4.1 | 4.4 | 4.5 | 4.6 | 6.7 | 7.1 | 6.7 | 7.0 | 7.5 | 7.1 | 7.2 | 7.6 | 7.4 | 7.0 | 7.3 | 7.8 | 7.1 | 6.7 | 7.2 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000053 | 0.000086 | 0.000082 | 0.00011 | | 0.00012 | | | 0.000062 | | | | 0.000093 | | | | 0.000088 | | | | 0.000085 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00050 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0060 | 0.0090 | 0.0060 | 0.0080 | | 0.012 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 | | | | 0.000020 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.63 | 1.0 | 0.97 | 0.97 | | 0.95 | | | 1.4 | | | | 1.5 | | | | 1.5 | | | | 1.4 |
| Manganese | Mn | mg/L | | 0.023 | 0.022 | 0.018 | 0.015 | | 0.014 | | | 0.0085 | | | | 0.0082 | | | | 0.0071 | | | | 0.0055 |
| Molbydenum | Mo | mg/L | | 0.00050 | 0.00069 | 0.00048 | 0.00032 | | 0.00018 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00030 | 0.00030 | 0.00040 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.5 | 1.6 | 1.2 | 0.90 | | 0.65 | | | 0.26 | | | | 0.22 | | | | 0.17 | | | | 0.14 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.2 | 1.0 | 0.58 | 0.40 | | 0.21 | | | 0.19 | | | | 0.11 | | | | 0.070 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.0086 | 0.011 | 0.0096 | 0.0097 | | 0.0093 | | | 0.019 | | | | 0.019 | | | | 0.018 | | | | 0.017 |
| Tin | Sn | mg/L | | 0.0017 | 0.00095 | 0.00050 | 0.00038 | | 0.00026 | | | 0.00013 | | | | 0.00012 | | | | 0.000080 | | | | 0.00013 |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00015 | 0.00031 | 0.00023 | 0.00019 | | 0.00012 | | | 0.00042 | | | | 0.00027 | | | | 0.00016 | | | | 0.000040 |
| Uranium | U | mg/L | | 0.000038 | 0.00011 | 0.00013 | 0.00014 | | 0.00013 | | | 0.0000060 | | | | < 0.000001 | | | | 0.0000060 | | | | 0.000027 |
| Vanadium | V | mg/L | | 0.00036 | 0.00036 | 0.00034 | 0.00031 | | 0.00030 | | | 0.0013 | | | | 0.0014 | | | | 0.0014 | | | | 0.0012 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.000011 | 0.0000090 | 0.0000080 | | 0.0000050 | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000030 | | | | 0.0000030 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0010 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Large Column Humidity Cell Test Cycle - C-8 Wesmeg (Mafic Volcaincs) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| Leachate Volume Recovered | | mL | | 2434 | 9805 | 9556 | 9850 | 10009 | 9964 | 9964 | 9964 | 9896 | 9896 | 9896 | 9850 | 9714 | 9714 | 10100 | 9556 | 10077 | 9601 | 9896 | 10077 | 8576 |
| pH | | units | 6.0-9.5 | 8.4 | 8.3 | 8.3 | 8.3 | 8.3 | 8.1 | 8.2 | 8.1 | 8.2 | 8.1 | 8.2 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.3 | 8.1 | 8.2 | 7.9 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 253 | 343 | 232 | 208 | 190 | 171 | 155 | 196 | 179 | 166 | 129 | 154 | 112 | 146 | 144 | 140 | 132 | 140 | 127 | 135 | 130 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 116 | 128 | 100 | 92 | 85 | 84 | 72 | 70 | 66 | 61 | 61 | 55 | 56 | 56 | 51 | 51 | 51 | 49 | 45 | 50 | 45 |
| Chloride | Cl | mg/L | | 38 | 42 | 23 | 14 | | 6.9 | | | 2.1 | | | | 0.40 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.13 | 0.12 | 0.090 | 0.070 | | 0.060 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | |
| Phosphorus | P | mg/L | | 0.090 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 14 | 33 | 27 | 26 | 25 | 24 | 25 | 23 | 23 | 21 | 21 | 20 | 19 | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 16 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.34 | 0.20 | 0.21 | 0.20 | | 0.19 | | | 0.18 | | | | 0.16 | | | | 0.14 | | | | 0.15 |
| Antimony | Sb | mg/L | | 0.0060 | 0.0095 | 0.0088 | 0.010 | | 0.0072 | | | 0.0063 | | | | 0.0059 | | | | 0.0052 | | | | 0.0051 |
| Arsenic | As | mg/L | 0.5 | 0.0093 | 0.052 | 0.048 | 0.054 | | 0.061 | | | 0.066 | | | | 0.073 | | | | 0.080 | | | | 0.086 |
| Barium | Ba | mg/L | | 0.050 | 0.051 | 0.033 | 0.027 | | 0.024 | | | 0.020 | | | | 0.018 | | | | 0.018 | | | | 0.018 |
| Boron | B | mg/L | | 0.039 | 0.077 | 0.050 | 0.045 | | 0.038 | | | 0.025 | | | | 0.020 | | | | 0.015 | | | | 0.011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 10 | 12 | 12 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 13 | 13 | 12 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Chromium | Cr[2] | mg/L | | 0.00060 | 0.00080 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00012 | 0.00025 | 0.00018 | 0.00020 | | 0.00021 | | | 0.00022 | | | | 0.00023 | | | | 0.00027 | | | | 0.00030 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | 0.00050 | < 0.0005 | 0.00090 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | 0.000030 | 0.000030 | 0.000030 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | 0.0010 | < 0.001 | | 0.0010 | | | 0.0010 | | | | 0.0010 | | | | 0.0010 | | | | 0.0010 |
| Magnesium | Mg | mg/L | | 3.9 | 9.0 | 7.9 | 7.9 | | 8.2 | | | 8.0 | | | | 6.5 | | | | 6.1 | | | | 6.0 |
| Manganese | Mn | mg/L | | 0.0056 | 0.0055 | 0.0091 | 0.0082 | | 0.0093 | | | 0.0084 | | | | 0.0077 | | | | 0.0082 | | | | 0.0081 |
| Molbydenum | Mo | mg/L | | 0.0021 | 0.0034 | 0.0019 | 0.0016 | | 0.0011 | | | 0.00071 | | | | 0.00046 | | | | 0.00045 | | | | 0.00030 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0013 | 0.0021 | 0.0014 | 0.00090 | | 0.0013 | | | 0.00070 | | | | 0.00060 | | | | 0.00060 | | | | 0.00040 |
| Potassium | K | mg/L | | 12 | 17 | 12 | 11 | | 8.8 | | | 6.8 | | | | 5.0 | | | | 4.5 | | | | 4.2 |
| Selenium | Se | mg/L | | < 0.001 | 0.0020 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0010 |
| Sodium | Na | mg/L | | 43 | 65 | 41 | 28 | | 18 | | | 8.0 | | | | 3.1 | | | | 1.7 | | | | 1.1 |
| Strontium | Sr | mg/L | | 0.040 | 0.064 | 0.055 | 0.056 | | 0.055 | | | 0.055 | | | | 0.046 | | | | 0.045 | | | | 0.045 |
| Tin | Sn | mg/L | | 0.0023 | 0.00022 | 0.00014 | 0.00010 | | 0.000080 | | | 0.00010 | | | | 0.000060 | | | | 0.000040 | | | | 0.00013 |
| Titanium | Ti | mg/L | | 0.00040 | 0.00020 | 0.00030 | 0.00010 | | 0.00010 | | | < 0.0001 | | | | 0.00020 | | | | 0.00010 | | | | 0.00010 |
| Tungsten | W | mg/L | | 0.0031 | 0.0017 | 0.0056 | 0.00067 | | 0.00086 | | | 0.00057 | | | | 0.00065 | | | | 0.00061 | | | | 0.00044 |
| Uranium | U | mg/L | | 0.000011 | 0.000066 | 0.000057 | 0.000059 | | 0.000079 | | | 0.000081 | | | | 0.00011 | | | | 0.000084 | | | | 0.000081 |
| Vanadium | V | mg/L | | 0.00068 | 0.0014 | 0.0014 | 0.0014 | | 0.0015 | | | 0.0015 | | | | 0.0015 | | | | 0.0014 | | | | 0.0014 |
| Yttrium | Y | mg/L | | 0.0000070 | 0.0000090 | 0.0000070 | 0.0000080 | | 0.000010 | | | 0.0000070 | | | | 0.0000090 | | | | 0.0000050 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-968-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 832 | 954 | 993 | 1001 | 976 | 1000 | 989 | 987 | 989 | 989 | 987 | 986 | 979 | 988 | 986 | 995 | 992 | 989 | 994 | 991 | 991 |
| pH | | units | **6.0-9.5** | 7.6 | 7.5 | 7.4 | 7.4 | 7.4 | 7.4 | 7.2 | 7.3 | 7.2 | 7.3 | 7.0 | 7.1 | 7.0 | 7.2 | 7.0 | 7.2 | 7.2 | 6.6 | 7.1 | 6.5 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 44 | 39 | 43 | 38 | 25 | 33 | 28 | 30 | 27 | 28 | 27 | 25 | 20 | 20 | 25 | 25 | 19 | 24 | 18 | 24 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 13 | 14 | 14 | 14 | 11 | 12 | 10 | 10 | 10 | 11 | 8.0 | 9.0 | 9.0 | 9.0 | 11 | 9.0 | 9.0 | 11 | 8.0 | 11 | 8.0 |
| Chloride | Cl | mg/L | | 3.7 | 2.2 | 1.4 | 0.80 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.0 | 3.4 | 4.0 | 3.8 | 2.9 | 2.8 | 2.5 | 2.4 | 2.2 | 2.4 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.1 | 2.0 | 2.2 | 2.3 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.030 | 0.040 | 0.030 | | 0.030 | | | 0.030 | | | | 0.030 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0012 | 0.0028 | 0.0028 | 0.0027 | | 0.0023 | | | 0.0018 | | | | 0.0016 | | | | 0.0014 | | | | 0.0012 |
| Arsenic | As | mg/L | **0.5** | 0.0060 | 0.019 | 0.024 | 0.031 | | 0.035 | | | 0.040 | | | | 0.040 | | | | 0.046 | | | | 0.038 |
| Barium | Ba | mg/L | | 0.00054 | 0.00060 | 0.00070 | 0.00068 | | 0.00076 | | | 0.00054 | | | | 0.00049 | | | | 0.00042 | | | | 0.00043 |
| Boron | B | mg/L | | 0.075 | 0.13 | 0.092 | 0.074 | | 0.036 | | | 0.018 | | | | 0.0083 | | | | 0.0045 | | | | 0.0041 |
| Cadmium | Cd[3] | mg/L | | 0.000012 | 0.0000070 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.3 | 2.6 | 3.1 | 3.3 | 3.0 | 3.6 | 3.1 | 3.2 | 3.1 | 3.5 | 3.3 | 3.0 | 3.0 | 3.3 | 3.2 | 3.3 | 3.2 | 3.3 | 3.1 | 3.1 | 3.2 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000048 | 0.000075 | 0.00013 | 0.00017 | | 0.00025 | | | 0.00042 | | | | 0.00052 | | | | 0.00062 | | | | 0.00082 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | 0.00080 |
| Iron | Fe | mg/L | | 0.0060 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000020 | 0.000030 | < 0.00002 | < 0.00002 | | 0.00012 | | | < 0.00002 | | | | < 0.00002 | | | | 0.00010 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.38 | 0.60 | 0.77 | 0.84 | | 0.85 | | | 0.76 | | | | 0.69 | | | | 0.71 | | | | 0.67 |
| Manganese | Mn | mg/L | | 0.015 | 0.0082 | 0.0099 | 0.0093 | | 0.012 | | | 0.010 | | | | 0.011 | | | | 0.013 | | | | 0.017 |
| Molbydenum | Mo | mg/L | | 0.00092 | 0.0015 | 0.0012 | 0.00080 | | 0.00036 | | | 0.00018 | | | | 0.00014 | | | | 0.00012 | | | | 0.00010 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00030 | 0.00040 | 0.00050 | | 0.00050 | | | 0.00040 | | | | 0.00030 | | | | 0.00040 | | | | 0.00030 |
| Potassium | K | mg/L | | 2.5 | 2.7 | 2.2 | 1.8 | | 1.2 | | | 0.71 | | | | 0.42 | | | | 0.29 | | | | 0.20 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 4.7 | 4.3 | 2.7 | 1.9 | | 0.82 | | | 0.32 | | | | 0.14 | | | | 0.090 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.014 | 0.015 | 0.018 | 0.019 | | 0.019 | | | 0.016 | | | | 0.014 | | | | 0.015 | | | | 0.014 |
| Tin | Sn | mg/L | | 0.0021 | 0.0010 | 0.00060 | 0.00035 | | 0.00041 | | | 0.00016 | | | | 0.00017 | | | | 0.00014 | | | | 0.00012 |
| Titanium | Ti | mg/L | | 0.00010 | 0.00010 | < 0.0001 | < 0.0001 | | < 0.0001 | | | 0.00030 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00010 | 0.00043 | 0.00032 | 0.00026 | | 0.00013 | | | 0.000080 | | | | 0.000070 | | | | 0.000050 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000013 | 0.000031 | 0.000052 | 0.000078 | | 0.000096 | | | 0.00015 | | | | 0.00016 | | | | 0.00019 | | | | 0.00021 |
| Vanadium | V | mg/L | | 0.00018 | 0.00029 | 0.00017 | 0.00014 | | 0.00014 | | | 0.00017 | | | | 0.00016 | | | | 0.00014 | | | | 0.00014 |
| Yttrium | Y | mg/L | | 0.000019 | 0.0000070 | 0.0000050 | 0.0000040 | | 0.0000030 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000020 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0020 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-976-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 827 | 984 | 990 | 993 | 977 | 988 | 992 | 978 | 1000 | 987 | 977 | 995 | 985 | 987 | 989 | 989 | 988 | 981 | 988 | 966 | 984 |
| pH | | units | **6.0-9.5** | 7.8 | 7.6 | 7.5 | 7.4 | 7.4 | 7.3 | 7.4 | 7.3 | 7.2 | 7.3 | 7.3 | 7.1 | 7.1 | 7.3 | 7.1 | 7.2 | 7.3 | 6.6 | 7.1 | 7.2 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 81 | 7.0 | 41 | 71 | 24 | 29 | 28 | 21 | 26 | 25 | 25 | 25 | 29 | 22 | 22 | 24 | 33 | 23 | 16 | 21 | 19 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 20 | 16 | 16 | 12 | 12 | 11 | 11 | 14 | 10 | 10 | 10 | 10 | 10 | 11 | 9.0 | 9.0 | 14 | 9.0 | 17 | 7.0 |
| Chloride | Cl | mg/L | | 9.8 | 3.5 | 1.3 | 0.50 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.070 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.7 | 2.4 | 1.7 | 1.4 | 1.0 | 0.90 | 0.80 | 0.80 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.60 | 0.60 | 0.60 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.020 | 0.020 | 0.030 | | 0.030 | | | 0.040 | | | | 0.030 | | | | 0.020 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.0023 | 0.0074 | 0.0063 | 0.0057 | | 0.0049 | | | 0.0037 | | | | 0.0032 | | | | 0.0028 | | | | 0.0021 |
| Arsenic | As | mg/L | **0.5** | 0.015 | 0.030 | 0.033 | 0.038 | | 0.043 | | | 0.054 | | | | 0.055 | | | | 0.059 | | | | 0.039 |
| Barium | Ba | mg/L | | 0.00060 | 0.00072 | 0.00069 | 0.00062 | | 0.00063 | | | 0.00054 | | | | 0.00053 | | | | 0.00034 | | | | 0.00029 |
| Boron | B | mg/L | | 0.0088 | 0.022 | 0.013 | 0.0097 | | 0.0057 | | | 0.0031 | | | | 0.0016 | | | | 0.00060 | | | | 0.0013 |
| Cadmium | Cd[3] | mg/L | | 0.0000070 | < 0.000003 | < 0.000003 | 0.0000040 | | 0.0000030 | | | < 0.000003 | | | | 0.00021 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.7 | 3.1 | 3.1 | 3.3 | 3.3 | 3.5 | 3.4 | 3.4 | 3.6 | 3.8 | 3.6 | 3.6 | 3.4 | 3.5 | 3.4 | 3.4 | 3.4 | 3.5 | 3.3 | 3.2 | 3.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00033 | 0.00029 | 0.00019 | 0.00017 | | 0.00020 | | | 0.00023 | | | | 0.00035 | | | | 0.00040 | | | | 0.00050 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | **1.7** | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.012 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00024 | 0.000090 | 0.000030 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.10 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.30 | 0.54 | 0.59 | 0.63 | | 0.61 | | | 0.56 | | | | 0.48 | | | | 0.45 | | | | 0.38 |
| Manganese | Mn | mg/L | | 0.0063 | 0.0078 | 0.0071 | 0.0063 | | 0.0076 | | | 0.0084 | | | | 0.0089 | | | | 0.0096 | | | | 0.0098 |
| Molbydenum | Mo | mg/L | | 0.0012 | 0.0013 | 0.00077 | 0.00045 | | 0.00025 | | | 0.00013 | | | | 0.00010 | | | | 0.000090 | | | | 0.000070 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0024 | 0.0019 | 0.0011 | 0.00080 | | 0.00060 | | | 0.00040 | | | | 0.0016 | | | | 0.00030 | | | | 0.00020 |
| Potassium | K | mg/L | | 4.1 | 3.7 | 2.7 | 2.0 | | 1.1 | | | 0.66 | | | | 0.38 | | | | 0.24 | | | | 0.17 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 8.9 | 5.4 | 2.6 | 1.4 | | 0.47 | | | 0.18 | | | | 0.080 | | | | 0.050 | | | | 0.040 |
| Strontium | Sr | mg/L | | 0.011 | 0.016 | 0.016 | 0.016 | | 0.016 | | | 0.015 | | | | 0.014 | | | | 0.013 | | | | 0.011 |
| Tin | Sn | mg/L | | 0.0010 | 0.0010 | 0.00056 | 0.00035 | | 0.00030 | | | 0.00015 | | | | 0.0025 | | | | 0.00018 | | | | 0.00014 |
| Titanium | Ti | mg/L | | 0.00050 | < 0.0001 | 0.00020 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000080 | 0.00028 | 0.00020 | 0.00018 | | 0.000080 | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.0000040 | 0.000030 | 0.000031 | 0.000046 | | 0.000088 | | | 0.00016 | | | | 0.00022 | | | | 0.00023 | | | | 0.00026 |
| Vanadium | V | mg/L | | 0.00029 | 0.00026 | 0.00019 | 0.00017 | | 0.00017 | | | 0.00021 | | | | 0.00021 | | | | 0.00018 | | | | 0.00014 |
| Yttrium | Y | mg/L | | 0.000037 | 0.000011 | 0.000014 | 0.0000040 | | 0.0000010 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | **1.1** | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-993-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 820 | 976 | 990 | 988 | 986 | 973 | 986 | 985 | 991 | 990 | 988 | 988 | 989 | 987 | 989 | 988 | 987 | 989 | 988 | 989 | 988 |
| pH | | units | **6.0-9.5** | 8.1 | 7.7 | 7.6 | 7.6 | 7.4 | 7.3 | 7.2 | 7.3 | 7.2 | 7.2 | 7.2 | 7.1 | 7.1 | 7.2 | 7.0 | 7.2 | 7.2 | 6.6 | 7.1 | 6.5 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 40 | 39 | 41 | 40 | 23 | 29 | 28 | 22 | 26 | 24 | 24 | 23 | 18 | 22 | 21 | 17 | 24 | 22 | 22 | 21 | 17 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 17 | 15 | 16 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 95 | 9.0 | 9.0 | 11 | 9.0 | 9.0 | 16 | 8.0 | 12 | 9.0 |
| Chloride | Cl | mg/L | | 2.5 | 1.2 | 0.90 | 0.50 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 2.6 | 3.0 | 2.6 | 1.9 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 0.90 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.060 | 0.020 | < 0.01 | 0.030 | | 0.020 | | | 0.020 | | | | 0.020 | | | | 0.020 | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00090 | 0.0016 | 0.0015 | 0.0012 | | 0.0011 | | | 0.00090 | | | | 0.00070 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | **0.5** | 0.011 | 0.020 | 0.021 | 0.023 | | 0.025 | | | 0.031 | | | | 0.030 | | | | 0.035 | | | | 0.028 |
| Barium | Ba | mg/L | | 0.00049 | 0.00066 | 0.00080 | 0.00072 | | 0.00063 | | | 0.00057 | | | | 0.00047 | | | | 0.00039 | | | | 0.00038 |
| Boron | B | mg/L | | 0.0059 | 0.015 | 0.011 | 0.0096 | | 0.0057 | | | 0.0034 | | | | 0.0017 | | | | 0.00070 | | | | 0.0016 |
| Cadmium | Cd[3] | mg/L | | 0.000015 | < 0.000003 | 0.0000040 | 0.0000060 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.1 | 3.5 | 3.3 | 3.6 | 3.1 | 3.1 | 3.2 | 3.2 | 3.2 | 3.1 | 3.1 | 2.9 | 2.9 | 3.1 | 3.0 | 3.0 | 3.0 | 3.2 | 3.1 | 3.0 | 3.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00016 | 0.00014 | 0.00013 | 0.00054 | | 0.00016 | | | 0.00020 | | | | 0.00034 | | | | 0.00036 | | | | 0.00040 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0050 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00010 | 0.000040 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.00061 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.23 | 0.51 | 0.65 | 0.68 | | 0.62 | | | 0.65 | | | | 0.57 | | | | 0.57 | | | | 0.52 |
| Manganese | Mn | mg/L | | 0.014 | 0.020 | 0.017 | 0.018 | | 0.016 | | | 0.015 | | | | 0.014 | | | | 0.015 | | | | 0.016 |
| Molbydenum | Mo | mg/L | | 0.0013 | 0.0020 | 0.0018 | 0.0013 | | 0.00067 | | | 0.00040 | | | | 0.00022 | | | | 0.00016 | | | | 0.00012 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0014 | 0.0010 | 0.00090 | 0.0033 | | 0.00050 | | | 0.00030 | | | | 0.00020 | | | | 0.00020 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.4 | 2.5 | 2.2 | 1.8 | | 1.1 | | | 0.76 | | | | 0.43 | | | | 0.29 | | | | 0.20 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 4.6 | 3.8 | 2.7 | 1.9 | | 0.81 | | | 0.35 | | | | 0.14 | | | | 0.090 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.012 | 0.017 | 0.019 | 0.019 | | 0.016 | | | 0.015 | | | | 0.013 | | | | 0.013 | | | | 0.013 |
| Tin | Sn | mg/L | | 0.0018 | 0.00087 | 0.00051 | 0.00034 | | 0.00029 | | | 0.00014 | | | | 0.00022 | | | | 0.00015 | | | | 0.00015 |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000070 | 0.00026 | 0.00020 | 0.00019 | | 0.000080 | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000012 | 0.000053 | 0.00011 | 0.00013 | | 0.00016 | | | 0.00024 | | | | 0.00034 | | | | 0.00040 | | | | 0.00037 |
| Vanadium | V | mg/L | | 0.00035 | 0.00029 | 0.00022 | 0.00020 | | 0.00022 | | | 0.00022 | | | | 0.00022 | | | | 0.00020 | | | | 0.00019 |
| Yttrium | Y | mg/L | | 0.000022 | 0.0000080 | 0.0000040 | 0.0000040 | | 0.0000030 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | 0.025 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum,
hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-970-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 851 | 980 | 990 | 989 | 992 | 994 | 975 | 1001 | 994 | 972 | 987 | 999 | 986 | 988 | 990 | 993 | 988 | 988 | 1000 | 991 | 990 |
| pH | | units | **6.0-9.5** | 8.5 | 8.0 | 8.6 | 7.4 | 8.1 | 8.0 | 7.9 | 7.7 | 7.7 | 7.6 | 7.6 | 7.5 | 7.5 | 7.4 | 7.3 | 7.5 | 7.5 | 6.8 | 7.4 | 6.7 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 69 | 8.0 | 49 | 35 | 34 | 34 | 5.0 | 32 | 39 | 38 | 37 | 40 | 30 | 30 | 36 | 38 | 38 | 35 | 46 | 36 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 21 | 21 | 21 | 12 | 21 | 20 | 17 | 18 | 16 | 16 | 17 | 16 | 16 | 15 | 17 | 16 | 15 | 24 | 15 | 25 | 14 |
| Chloride | Cl | mg/L | | 9.8 | 4.9 | 1.8 | 0.70 | | 0.20 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.017 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.8 | 3.8 | 2.8 | 2.3 | 1.8 | 1.8 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 | 1.8 | 1.8 | 1.8 | 2.0 | 1.8 | 1.7 | 1.6 | 1.8 | 1.9 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.020 | 0.030 | 0.040 | 0.030 | | 0.040 | | | 0.030 | | | | 0.030 | | | | 0.030 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.00030 | 0.00040 | 0.00030 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | 0.00020 | | | | 0.00020 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0012 | 0.0015 | 0.0016 | 0.0011 | | 0.0012 | | | 0.0012 | | | | 0.0011 | | | | 0.0011 | | | | 0.00090 |
| Barium | Ba | mg/L | | 0.0021 | 0.0029 | 0.0025 | 0.0027 | | 0.0028 | | | 0.0027 | | | | 0.0027 | | | | 0.0026 | | | | 0.0022 |
| Boron | B | mg/L | | 0.083 | 0.12 | 0.064 | 0.043 | | 0.021 | | | 0.011 | | | | 0.0062 | | | | 0.0037 | | | | 0.0033 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 9.0 | 7.9 | 6.4 | 7.0 | 6.7 | 6.7 | 6.0 | 6.5 | 6.2 | 6.3 | 6.9 | 6.5 | 6.2 | 6.4 | 6.3 | 6.3 | 6.2 | 6.4 | 6.0 | 5.8 | 6.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000041 | 0.000030 | 0.000030 | 0.000027 | | 0.000030 | | | < 0.000002 | | | | 0.000016 | | | | 0.000016 | | | | 0.000020 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0030 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.00014 | | | | < 0.00002 | | | | 0.000020 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.81 | 0.80 | 0.59 | 0.59 | | 0.51 | | | 0.44 | | | | 0.43 | | | | 0.43 | | | | 0.40 |
| Manganese | Mn | mg/L | | 0.0039 | 0.0063 | 0.0063 | 0.0071 | | 0.0075 | | | 0.0069 | | | | 0.0069 | | | | 0.0063 | | | | 0.0063 |
| Molbydenum | Mo | mg/L | | 0.00039 | 0.00061 | 0.00039 | 0.00023 | | 0.00019 | | | 0.000090 | | | | 0.000070 | | | | 0.000080 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00010 | 0.00010 | 0.00030 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.4 | 1.6 | 1.1 | 1.0 | | 0.89 | | | 0.80 | | | | 0.71 | | | | 0.60 | | | | 0.50 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 4.2 | 2.7 | 1.1 | 0.62 | | 0.24 | | | 0.10 | | | | 0.050 | | | | 0.030 | | | | 0.020 |
| Strontium | Sr | mg/L | | 0.058 | 0.060 | 0.047 | 0.049 | | 0.045 | | | 0.041 | | | | 0.040 | | | | 0.039 | | | | 0.037 |
| Tin | Sn | mg/L | | 0.0016 | 0.0013 | 0.00067 | 0.00042 | | 0.00031 | | | 0.00016 | | | | 0.00019 | | | | 0.00017 | | | | 0.00017 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000070 | 0.00016 | 0.00012 | 0.000080 | | 0.000040 | | | 0.000030 | | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.00025 | 0.00071 | 0.00075 | 0.00089 | | 0.00093 | | | 0.00084 | | | | 0.00084 | | | | 0.00071 | | | | 0.00058 |
| Vanadium | V | mg/L | | 0.000090 | 0.00011 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000030 | 0.0000030 | 0.0000040 | | 0.0000030 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000020 | | | | 0.0000020 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0020 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-972A-03 (Iron Formation) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 828 | 986 | 1001 | 991 | 986 | 986 | 990 | 986 | 978 | 991 | 995 | 987 | 989 | 989 | 989 | 984 | 994 | 992 | 998 | 992 | 990 |
| pH | | units | **6.0-9.5** | 8.0 | 7.8 | 7.8 | 7.9 | 7.7 | 8.0 | 7.4 | 7.6 | 7.3 | 7.4 | 7.2 | 7.3 | 7.2 | 7.5 | 7.1 | 7.4 | 7.4 | 6.8 | 7.2 | 7.3 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 39 | 51 | 46 | 63 | 26 | 34 | 30 | 33 | 29 | 30 | 29 | 28 | 24 | 22 | 28 | 22 | 21 | 28 | 21 | 27 | 22 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 20 | 17 | 25 | 15 | 14 | 13 | 13 | 12 | 13 | 12 | 12 | 12 | 12 | 13 | 12 | 11 | 13 | 11 | 18 | 11 |
| Chloride | Cl | mg/L | | 3.6 | 4.9 | 1.9 | 0.70 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.0 | 3.2 | 2.4 | 2.0 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 1.2 | 1.1 | 1.1 | 1.2 | 1.1 | 1.2 | 1.3 | 1.1 | 1.1 | 1.1 | 1.2 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | < 0.01 | 0.020 | 0.020 | | 0.020 | | | 0.020 | | | | 0.020 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00030 | 0.00040 | 0.00030 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | 0.00020 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.00050 | 0.00070 | 0.00080 | 0.00060 | | 0.00070 | | | 0.00070 | | | | 0.00060 | | | | 0.00070 | | | | 0.00060 |
| Barium | Ba | mg/L | | 0.00084 | 0.0016 | 0.0013 | 0.0010 | | 0.00098 | | | 0.00085 | | | | 0.00085 | | | | 0.00081 | | | | 0.00083 |
| Boron | B | mg/L | | 0.037 | 0.097 | 0.058 | 0.039 | | 0.017 | | | 0.0081 | | | | 0.0044 | | | | 0.0024 | | | | 0.0026 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.9 | 7.6 | 6.5 | 6.2 | 5.4 | 5.4 | 4.8 | 4.9 | 4.7 | 5.3 | 5.1 | 4.7 | 4.8 | 4.9 | 4.8 | 4.9 | 4.8 | 4.8 | 4.5 | 4.4 | 4.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000054 | 0.000097 | 0.000053 | 0.000042 | | 0.000039 | | | 0.0000090 | | | | 0.000029 | | | | 0.000026 | | | | 0.000028 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | 0.00050 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0060 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000040 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.40 | 0.89 | 0.67 | 0.55 | | 0.42 | | | 0.36 | | | | 0.34 | | | | 0.30 | | | | 0.29 |
| Manganese | Mn | mg/L | | 0.011 | 0.015 | 0.014 | 0.014 | | 0.012 | | | 0.0089 | | | | 0.0082 | | | | 0.0074 | | | | 0.0070 |
| Molbydenum | Mo | mg/L | | 0.00044 | 0.00098 | 0.00061 | 0.00038 | | 0.00022 | | | 0.00011 | | | | 0.00010 | | | | 0.000090 | | | | 0.000080 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00060 | 0.00010 | 0.00030 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.79 | 1.1 | 0.72 | 0.50 | | 0.34 | | | 0.28 | | | | 0.25 | | | | 0.20 | | | | 0.19 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.9 | 2.7 | 1.1 | 0.59 | | 0.21 | | | 0.090 | | | | 0.040 | | | | 0.020 | | | | 0.020 |
| Strontium | Sr | mg/L | | 0.029 | 0.048 | 0.041 | 0.037 | | 0.032 | | | 0.029 | | | | 0.030 | | | | 0.028 | | | | 0.028 |
| Tin | Sn | mg/L | | 0.00076 | 0.00060 | 0.00057 | 0.00048 | | 0.00032 | | | 0.00024 | | | | 0.00035 | | | | 0.00025 | | | | 0.00021 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000040 | 0.00014 | 0.00012 | 0.00013 | | 0.000060 | | | 0.000030 | | | | 0.000050 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000017 | 0.00022 | 0.00023 | 0.00022 | | 0.00021 | | | 0.00021 | | | | 0.00021 | | | | 0.00018 | | | | 0.00018 |
| Vanadium | V | mg/L | | 0.000040 | 0.00012 | 0.000040 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000040 | 0.000011 | 0.0000030 | 0.0000030 | | 0.0000020 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M96-16-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 836 | 985 | 991 | 984 | 977 | 990 | 992 | 987 | 992 | 988 | 988 | 983 | 988 | 990 | 988 | 993 | 989 | 979 | 986 | 989 | 990 |
| pH | | units | 6.0-9.5 | 8.9 | 8.1 | 8.2 | 7.8 | 7.8 | 7.9 | 7.5 | 7.5 | 7.4 | 7.5 | 7.5 | 7.3 | 7.3 | 7.2 | 7.2 | 7.5 | 7.5 | 6.7 | 7.3 | 6.6 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 50 | 53 | 50 | 47 | 28 | 37 | 34 | 25 | 30 | 32 | 24 | 30 | 34 | 31 | 31 | 23 | 23 | 27 | 21 | 29 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 26 | 27 | 23 | 21 | 16 | 15 | 15 | 14 | 12 | 14 | 13 | 12 | 13 | 13 | 14 | 13 | 12 | 19 | 11 | 23 | 12 |
| Chloride | Cl | mg/L | | 1.0 | 0.50 | 0.20 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.8 | 4.6 | 3.1 | 2.4 | 1.9 | 1.7 | 1.6 | 1.7 | 1.7 | 1.6 | 1.6 | 1.7 | 1.6 | 1.5 | 1.6 | 1.5 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.020 | 0.040 | 0.040 | | 0.030 | | | 0.040 | | | | 0.030 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0016 | 0.0052 | 0.0044 | 0.0040 | | 0.0031 | | | 0.0023 | | | | 0.0017 | | | | 0.0013 | | | | 0.0011 |
| Arsenic | As | mg/L | 0.5 | 0.014 | 0.020 | 0.019 | 0.017 | | 0.016 | | | 0.020 | | | | 0.018 | | | | 0.019 | | | | 0.019 |
| Barium | Ba | mg/L | | 0.00083 | 0.0010 | 0.00092 | 0.00094 | | 0.0012 | | | 0.00094 | | | | 0.0010 | | | | 0.0010 | | | | 0.00083 |
| Boron | B | mg/L | | 0.010 | 0.022 | 0.013 | 0.010 | | 0.0059 | | | 0.0031 | | | | 0.0018 | | | | 0.00070 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | 0.000010 | < 0.000003 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.8 | 4.0 | 3.9 | 4.0 | 4.3 | 4.9 | 4.5 | 4.5 | 4.4 | 5.1 | 4.8 | 4.7 | 4.9 | 5.1 | 5.0 | 5.1 | 4.9 | 4.8 | 4.4 | 4.8 | 5.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00012 | 0.000078 | 0.000064 | 0.000098 | | 0.00011 | | | 0.000052 | | | | 0.00011 | | | | 0.00013 | | | | 0.00015 |
| Copper | Cu[3] | mg/L | 0.3 | 0.00080 | 0.00050 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | 0.0043 |
| Iron | Fe | mg/L | | 0.028 | 0.0060 | 0.0040 | < 0.003 | | < 0.003 | | | < 0.003 | | | | 0.0050 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000050 | 0.000030 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.24 | 0.36 | 0.39 | 0.43 | | 0.51 | | | 0.48 | | | | 0.46 | | | | 0.39 | | | | 0.34 |
| Manganese | Mn | mg/L | | 0.019 | 0.025 | 0.025 | 0.024 | | 0.028 | | | 0.017 | | | | 0.018 | | | | 0.016 | | | | 0.013 |
| Molbydenum | Mo | mg/L | | 0.00026 | 0.00033 | 0.00019 | 0.00010 | | 0.000070 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | 0.000010 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00050 | 0.00060 | 0.00040 | 0.00040 | | 0.00040 | | | 0.00020 | | | | 0.00030 | | | | 0.00020 | | | | 0.00020 |
| Potassium | K | mg/L | | 1.5 | 1.7 | 1.4 | 1.1 | | 0.82 | | | 0.55 | | | | 0.36 | | | | 0.23 | | | | 0.18 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 6.6 | 8.7 | 5.0 | 3.0 | | 1.2 | | | 0.39 | | | | 0.15 | | | | 0.070 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.0043 | 0.0062 | 0.0067 | 0.0071 | | 0.0087 | | | 0.0081 | | | | 0.0084 | | | | 0.0077 | | | | 0.0073 |
| Tin | Sn | mg/L | | 0.0025 | 0.00084 | 0.00050 | 0.00037 | | 0.00035 | | | 0.00015 | | | | 0.00023 | | | | 0.00016 | | | | 0.00016 |
| Titanium | Ti | mg/L | | 0.00090 | 0.00030 | 0.00020 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00019 | 0.00055 | 0.00039 | 0.00030 | | 0.00015 | | | 0.00012 | | | | 0.000080 | | | | 0.000050 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000049 | 0.00028 | 0.00022 | 0.00018 | | 0.00017 | | | 0.00015 | | | | 0.00016 | | | | 0.00033 | | | | 0.00014 |
| Vanadium | V | mg/L | | 0.0029 | 0.0022 | 0.0018 | 0.0015 | | 0.0012 | | | 0.0013 | | | | 0.00099 | | | | 0.00088 | | | | 0.00078 |
| Yttrium | Y | mg/L | | 0.000031 | 0.000026 | 0.000019 | 0.000011 | | 0.0000080 | | | < 0.000001 | | | | 0.0000060 | | | | 0.0000040 | | | | 0.0000040 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0020 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-238-02 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 842 | 984 | 995 | 988 | 992 | 1001 | 980 | 991 | 996 | 986 | 986 | 990 | 983 | 989 | 990 | 994 | 994 | 989 | 990 | 992 | 991 |
| pH | | units | 6.0-9.5 | 7.9 | 7.7 | 7.8 | 7.6 | 7.5 | 7.3 | 7.3 | 7.4 | 7.3 | 7.2 | 7.2 | 7.1 | 7.1 | 7.3 | 7.1 | 7.3 | 7.2 | 6.8 | 7.3 | 6.6 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 48 | 6.0 | 39 | 34 | 25 | 33 | 30 | 26 | 32 | 30 | 26 | 28 | 27 | 26 | 26 | 20 | 27 | 25 | 20 | 26 | 20 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 21 | 16 | 14 | 12 | 13 | 11 | 12 | 11 | 11 | 11 | 10 | 9.0 | 10 | 11 | 10 | 9.0 | 14 | 9.0 | 14 | 9.0 |
| Chloride | Cl | mg/L | | 0.60 | 0.40 | < 0.2 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.2 | 4.1 | 2.6 | 2.2 | 2.0 | 2.9 | 3.0 | 3.3 | 3.0 | 2.8 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2.0 | 1.9 | 2.1 | 2.0 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.060 | 0.020 | 0.050 | 0.040 | | 0.040 | | | 0.040 | | | | 0.040 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00060 | 0.0012 | 0.0010 | 0.00090 | | 0.00080 | | | 0.00070 | | | | 0.00060 | | | | 0.00070 | | | | 0.00040 |
| Arsenic | As | mg/L | 0.5 | 0.0030 | 0.0047 | 0.0048 | 0.0044 | | 0.0043 | | | 0.0047 | | | | 0.0036 | | | | 0.0042 | | | | 0.0037 |
| Barium | Ba | mg/L | | 0.0016 | 0.0017 | 0.0015 | 0.0014 | | 0.0015 | | | 0.0014 | | | | 0.0013 | | | | 0.0014 | | | | 0.0013 |
| Boron | B | mg/L | | 0.0096 | 0.027 | 0.016 | 0.012 | | 0.0065 | | | 0.0036 | | | | 0.0018 | | | | 0.00090 | | | | 0.00090 |
| Cadmium | Cd[3] | mg/L | | 0.000015 | < 0.000003 | < 0.000003 | 0.0000080 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.2 | 5.5 | 4.7 | 4.6 | 4.3 | 4.5 | 4.2 | 4.7 | 4.6 | 4.7 | 4.3 | 4.1 | 4.1 | 4.3 | 4.0 | 4.3 | 4.1 | 4.2 | 3.9 | 4.1 | 4.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000049 | 0.000043 | 0.000031 | 0.000030 | | 0.000039 | | | 0.0000020 | | | | 0.000026 | | | | 0.000033 | | | | 0.000030 |
| Copper | Cu[3] | mg/L | 0.3 | 0.0010 | 0.00070 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.017 | 0.0040 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.46 | 0.76 | 0.68 | 0.67 | | 0.58 | | | 0.53 | | | | 0.36 | | | | 0.29 | | | | 0.25 |
| Manganese | Mn | mg/L | | 0.033 | 0.018 | 0.014 | 0.010 | | 0.0080 | | | 0.0045 | | | | 0.0038 | | | | 0.0041 | | | | 0.0042 |
| Molbydenum | Mo | mg/L | | 0.00048 | 0.00084 | 0.00041 | 0.00022 | | 0.00013 | | | 0.000070 | | | | 0.000070 | | | | 0.000080 | | | | 0.000090 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00040 | 0.00020 | 0.00030 | 0.00020 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.3 | 1.6 | 1.2 | 1.0 | | 0.79 | | | 0.75 | | | | 0.56 | | | | 0.45 | | | | 0.39 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 2.4 | 2.5 | 1.3 | 0.82 | | 0.39 | | | 0.22 | | | | 0.12 | | | | 0.090 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.019 | 0.020 | 0.018 | 0.018 | | 0.017 | | | 0.016 | | | | 0.014 | | | | 0.014 | | | | 0.013 |
| Tin | Sn | mg/L | | 0.0026 | 0.0012 | 0.00063 | 0.00046 | | 0.00036 | | | 0.00018 | | | | 0.00018 | | | | 0.00014 | | | | 0.00011 |
| Titanium | Ti | mg/L | | 0.0013 | 0.00030 | 0.00040 | 0.00020 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000090 | 0.00023 | 0.00014 | 0.00010 | | 0.000050 | | | < 0.00003 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000021 | 0.00025 | 0.00022 | 0.00026 | | 0.00034 | | | 0.00039 | | | | 0.00036 | | | | 0.00035 | | | | 0.00031 |
| Vanadium | V | mg/L | | 0.00085 | 0.00092 | 0.00082 | 0.00077 | | 0.00066 | | | 0.00074 | | | | 0.00060 | | | | 0.00058 | | | | 0.00054 |
| Yttrium | Y | mg/L | | 0.000020 | 0.000012 | 0.000010 | 0.0000060 | | 0.0000020 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Large Column Humidity Cell Test Cycle - C-9 Wolf (25% MV, 13% IF, 62% GW) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 1072 | 4928 | 4860 | 4996 | 4883 | 4996 | 4973 | 4951 | 4883 | 4905 | 4883 | 4837 | 4816 | 4816 | 4952 | 4725 | 4975 | 4703 | 4883 | 4928 | 4837 |
| pH | | units | **6.0-9.5** | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.0 | 8.1 | 8.0 | 8.0 | 7.9 | 8.0 | 8.1 | 8.1 | 7.8 | 8.0 |
| Conductivity | | mg/L as CaCO3 | | 243 | 319 | 221 | 202 | 175 | 161 | 146 | 188 | 178 | 171 | 139 | 180 | 201 | 269 | 256 | 256 | 249 | 253 | 176 | 189 | 180 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 134 | 93 | 76 | 68 | 67 | 62 | 58 | 59 | 60 | 54 | 54 | 53 | 71 | 70 | 63 | 63 | 62 | 68 | 50 | 43 | 41 |
| Chloride | Cl | mg/L | | 25 | 28 | 16 | 10 | | 5.2 | | | 1.1 | | | | 0.60 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.22 | 0.19 | 0.14 | 0.13 | | 0.11 | | | 0.090 | | | | < 0.06 | | | | < 0.06 | | | | |
| Phosphorus | P | mg/L | | 0.14 | 0.0090 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 35 | 70 | 50 | 44 | 38 | 33 | 31 | 30 | 31 | 29 | 30 | 34 | 70 | 68 | 63 | 64 | 63 | 63 | 35 | 43 | 39 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.25 | 0.13 | 0.14 | 0.15 | | 0.16 | | | 0.16 | | | | 0.10 | | | | 0.090 | | | | 0.14 |
| Antimony | Sb | mg/L | | 0.029 | 0.055 | 0.036 | 0.036 | | 0.021 | | | 0.015 | | | | 0.0034 | | | | 0.0029 | | | | 0.0084 |
| Arsenic | As | mg/L | **0.5** | 0.012 | 0.031 | 0.036 | 0.042 | | 0.050 | | | 0.059 | | | | 0.0086 | | | | 0.0085 | | | | 0.059 |
| Barium | Ba | mg/L | | 0.0040 | 0.0067 | 0.0051 | 0.0045 | | 0.0042 | | | 0.0040 | | | | 0.0052 | | | | 0.0055 | | | | 0.0047 |
| Boron | B | mg/L | | 0.40 | 0.62 | 0.38 | 0.32 | | 0.22 | | | 0.12 | | | | 0.024 | | | | 0.019 | | | | 0.026 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000050 | 0.0000050 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 13 | 18 | 16 | 16 | 17 | 16 | 16 | 17 | 17 | 17 | 18 | 19 | 29 | 30 | 29 | 30 | 29 | 29 | 21 | 23 | 22 |
| Chromium | Cr[2] | mg/L | | 0.00060 | 0.00060 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00020 | 0.00042 | 0.00031 | 0.00031 | | 0.00030 | | | 0.00034 | | | | 0.00028 | | | | 0.00030 | | | | 0.00063 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00090 | 0.00080 | 0.00080 | 0.0010 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | 0.00060 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.011 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | 0.018 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000060 | 0.00021 | 0.00011 | 0.000050 | | 0.000030 | | | 0.000020 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000060 |
| Lithium | Li | mg/L | | 0.0010 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | | 0.0020 | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 2.6 | 7.1 | 6.2 | 6.1 | | 5.6 | | | 5.4 | | | | 10 | | | | 9.9 | | | | 5.2 |
| Manganese | Mn | mg/L | | 0.0087 | 0.0092 | 0.011 | 0.0098 | | 0.011 | | | 0.012 | | | | 0.025 | | | | 0.023 | | | | 0.019 |
| Molbydenum | Mo | mg/L | | 0.0043 | 0.0080 | 0.0049 | 0.0042 | | 0.0026 | | | 0.0018 | | | | 0.00053 | | | | 0.00081 | | | | 0.0011 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0022 | 0.0039 | 0.0024 | 0.0015 | | 0.0015 | | | 0.0010 | | | | 0.00060 | | | | 0.00070 | | | | 0.00070 |
| Potassium | K | mg/L | | 20 | 27 | 18 | 16 | | 12 | | | 9.7 | | | | 7.0 | | | | 6.4 | | | | 6.6 |
| Selenium | Se | mg/L | | < 0.001 | 0.0020 | 0.0010 | 0.0020 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0020 |
| Sodium | Na | mg/L | | 34 | 43 | 28 | 19 | | 11 | | | 4.8 | | | | 3.4 | | | | 2.0 | | | | 0.82 |
| Strontium | Sr | mg/L | | 0.056 | 0.11 | 0.093 | 0.091 | | 0.087 | | | 0.088 | | | | 0.057 | | | | 0.054 | | | | 0.095 |
| Tin | Sn | mg/L | | 0.0022 | 0.00050 | 0.00032 | 0.00023 | | 0.00018 | | | 0.00017 | | | | 0.00020 | | | | 0.00020 | | | | 0.00015 |
| Titanium | Ti | mg/L | | 0.0011 | 0.00030 | 0.00040 | 0.00020 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | 0.00010 |
| Tungsten | W | mg/L | | 0.0014 | 0.0012 | 0.0054 | 0.00048 | | 0.00066 | | | 0.00030 | | | | 0.00011 | | | | 0.000090 | | | | 0.00022 |
| Uranium | U | mg/L | | 0.00012 | 0.0012 | 0.00089 | 0.00093 | | 0.00092 | | | 0.00095 | | | | 0.00041 | | | | 0.00017 | | | | 0.0017 |
| Vanadium | V | mg/L | | 0.00067 | 0.00085 | 0.00085 | 0.00086 | | 0.00095 | | | 0.00092 | | | | 0.00038 | | | | 0.00028 | | | | 0.00063 |
| Yttrium | Y | mg/L | | 0.000032 | 0.000017 | 0.000012 | 0.000011 | | 0.0000080 | | | 0.0000080 | | | | 0.000022 | | | | 0.000012 | | | | 0.0000080 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | 0.0010 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-409-05 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-95-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M06-625-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M06-623-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M03-508-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M96-74-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | **6.0-9.5** | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | **0.5** | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - LODE1000 (Ore) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.6 | 7.6 | 7.4 | 7.5 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 2298 | 4338 | 3570 | 670 | 200 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 0 | 27 | 4.0 | 3.0 |
| Chloride | Cl | mg/L | | 340 | 700 | 541 | 40 | -20 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.0040 | 0.0070 | 0.021 | 0.052 | 0.098 |
| Sulphate | SO4 | mg/L | | 302 | 492 | 466 | 202 | 149 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.32 | 0.032 | 0.20 | 0.97 | 1.7 |
| Antimony | Sb | mg/L | | 0.0015 | 0.0040 | 0.0019 | 0.0014 | 0.0016 |
| Arsenic | As | mg/L | **0.5** | 0.065 | 0.049 | 0.19 | 0.30 | 0.49 |
| Barium | Ba | mg/L | | 0 | 0.026 | 0.024 | -0.042 | -0.090 |
| Boron | B | mg/L | | 0.070 | 0.16 | 0.10 | 0.037 | 0.046 |
| Cadmium | Cd[3] | mg/L | | 0.00070 | 0.00070 | 0.00090 | 0.00015 | 0.00018 |
| Calcium | Ca | mg/L | | 217 | 437 | 363 | 72 | 40 |
| Chromium | Cr[2] | mg/L | | 0 | 0 | 0 | 0 | 0.00030 |
| Cobalt | Co | mg/L | | 0.0054 | 0.0095 | 0.015 | 0.0038 | 0.0053 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0040 | 0.0020 | 0 | 0.0096 | 0.0096 |
| Iron | Fe | mg/L | | 0.20 | 0 | 0.57 | 3.0 | 3.2 |
| Lead | Pb[3] | mg/L | **0.2** | 0.020 | 0.0051 | 0.020 | 0.093 | 0.098 |
| Lithium | Li | mg/L | | 0.026 | 0.053 | 0.036 | 0.0100 | -0.0040 |
| Magnesium | Mg | mg/L | | 55 | 113 | 129 | 17 | 14 |
| Manganese | Mn | mg/L | | 0.42 | 0.67 | 0.54 | 0.12 | 0.12 |
| Molbydenum | Mo | mg/L | | 0.0090 | 0.027 | 0.018 | 0.0088 | 0.014 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.023 | 0.037 | 0.045 | 0.016 | 0.016 |
| Potassium | K | mg/L | | 38 | 66 | 50 | 14 | 7.7 |
| Selenium | Se | mg/L | | 0.015 | 0.034 | 0.029 | 0.0056 | 0.0022 |
| Sodium | Na | mg/L | | 121 | 231 | 196 | 20 | 4.0 |
| Strontium | Sr | mg/L | | 1.3 | 2.8 | 2.5 | 0.28 | -0.10 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0 | 0 | 0 | 0 | 0.0100 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Uranium | U | mg/L | | 0.0024 | 0.0051 | 0.0035 | 0.00095 | 0.0015 |
| Vanadium | V | mg/L | | 0.0010 | 0.0010 | 0 | 0.0015 | 0.0045 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0.033 | 0.020 | 0.064 | 0.043 | 0.046 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - LODE1100 (Ore) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.7 | 7.8 | 7.8 | 7.6 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 648 | 888 | 1110 | 470 | 100 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 4.0 | 39 | 13 | 6.0 |
| Chloride | Cl | mg/L | | 30 | 30 | 45 | 0 | -50 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.0030 | 0.012 | 0.0020 | 0.69 | 0.053 |
| Sulphate | SO4 | mg/L | | 312 | 402 | 466 | 282 | 139 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.31 | 0.078 | 0.21 | 19 | 1.5 |
| Antimony | Sb | mg/L | | 0.00060 | 0.0010 | 0.00030 | 0.0022 | 0.000070 |
| Arsenic | As | mg/L | **0.5** | 0.039 | 0.017 | 0.031 | **2.9** | 0.15 |
| Barium | Ba | mg/L | | 0 | 0 | 0.022 | 0.16 | -0.065 |
| Boron | B | mg/L | | 0.040 | 0.070 | 0.026 | 0.027 | 0.014 |
| Cadmium | Cd[3] | mg/L | | 0 | 0 | 0 | 0.00012 | 0 |
| Calcium | Ca | mg/L | | 117 | 157 | 173 | 92 | 20 |
| Chromium | Cr[2] | mg/L | | 0 | 0 | 0 | 0.016 | 0 |
| Cobalt | Co | mg/L | | 0.0014 | 0.0015 | 0.0017 | 0.023 | 0.0032 |
| Copper | Cu[3] | mg/L | **0.3** | 0 | 0.0060 | 0 | 0.046 | 0.0022 |
| Iron | Fe | mg/L | | 0.50 | 0 | 0.51 | 72 | 3.8 |
| Lead | Pb[3] | mg/L | **0.2** | 0.014 | 0.0037 | 0.011 | **0.47** | 0.044 |
| Lithium | Li | mg/L | | 0.0030 | 0 | 0.0050 | 0.014 | -0.018 |
| Magnesium | Mg | mg/L | | 21 | 31 | 47 | 25 | 11 |
| Manganese | Mn | mg/L | | 0.11 | 0.17 | 0.20 | 0.48 | 0.092 |
| Molbydenum | Mo | mg/L | | 0.0060 | 0.013 | 0.0059 | 0.015 | 0.0046 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0030 | 0.0050 | 0.0030 | 0.046 | 0.0029 |
| Potassium | K | mg/L | | 10 | 13 | 11 | 11 | 5.7 |
| Selenium | Se | mg/L | | 0 | 0.0020 | 0 | 0 | 0 |
| Sodium | Na | mg/L | | 6.7 | 9.7 | 7.8 | 2.0 | -6.0 |
| Strontium | Sr | mg/L | | 0.96 | 1.5 | 1.4 | 0.88 | 0.20 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0.0020 | 0 | 0 | 0.40 | 0.029 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0.0018 | 0 |
| Uranium | U | mg/L | | 0.0020 | 0.0031 | 0.0017 | 0.0021 | 0.00076 |
| Vanadium | V | mg/L | | 0 | 0 | 0 | 0.019 | 0.0016 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0 | 0 | 0 | 0.091 | 0.0033 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - WR1 (Greywacke - Siltstone) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.8 | 7.8 | 7.7 | 7.6 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 217 | 317 | 52 | 80 | 0 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 0 | 8.0 | 7.0 | 1.0 |
| Chloride | Cl | mg/L | | 50 | 70 | 7.0 | 10 | 10 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.020 | 0.017 | 0.055 | 0.049 | 0.034 |
| Sulphate | SO4 | mg/L | | 23 | 42 | 8.0 | 21 | 15 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 1.5 | 1.1 | 6.6 | 2.2 | 2.4 |
| Antimony | Sb | mg/L | | 0.0025 | 0.0019 | 0.00040 | 0.00090 | 0.00028 |
| Arsenic | As | mg/L | **0.5** | 0.022 | 0.018 | 0.037 | 0.018 | 0.016 |
| Barium | Ba | mg/L | | 0 | 0 | 0.054 | -0.016 | -0.030 |
| Boron | B | mg/L | | 0.010 | 0.020 | 0 | 0.0060 | 0.0050 |
| Cadmium | Cd[3] | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Calcium | Ca | mg/L | | 37 | 57 | 15 | 17 | 10 |
| Chromium | Cr[2] | mg/L | | 0 | 0 | 0.012 | 0.0012 | 0.0025 |
| Cobalt | Co | mg/L | | 0.0057 | 0.0042 | 0.015 | 0.0072 | 0.0064 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0030 | 0.0030 | 0.0080 | 0.0057 | 0.0046 |
| Iron | Fe | mg/L | | 1.6 | 1.1 | 8.0 | 3.3 | 2.7 |
| Lead | Pb[3] | mg/L | **0.2** | 0.011 | 0.0069 | 0.032 | 0.015 | 0.012 |
| Lithium | Li | mg/L | | 0.032 | 0.026 | 0.0070 | 0.0060 | 0.0050 |
| Magnesium | Mg | mg/L | | 4.5 | 5.5 | 4.1 | 2.5 | 2.0 |
| Manganese | Mn | mg/L | | 0.055 | 0.047 | 0.11 | 0.051 | 0.047 |
| Molbydenum | Mo | mg/L | | 0 | 0.0010 | 0.00030 | 0.0012 | 0.00060 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.017 | 0.016 | 0.037 | 0.022 | 0.018 |
| Potassium | K | mg/L | | 6.1 | 5.8 | 2.3 | 1.7 | 1.1 |
| Selenium | Se | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Sodium | Na | mg/L | | 4.7 | 5.7 | 2.1 | 2.0 | 1.0 |
| Strontium | Sr | mg/L | | 0.29 | 0.54 | 0.11 | 0.090 | 0.100 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0.022 | 0.013 | 0.11 | 0.030 | 0.032 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Uranium | U | mg/L | | 0.0012 | 0.0021 | 0.00090 | 0.0016 | 0.0015 |
| Vanadium | V | mg/L | | 0.0010 | 0.0010 | 0.011 | 0.0041 | 0.0038 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0.0050 | 0.0010 | 0.025 | 0.0071 | 0.0069 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - WR2 (Greywacke - Siltstone) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.8 | 7.8 | 7.7 | 7.4 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 260 | 466 | 69 | 110 | 0 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 0 | 8.0 | 5.0 | 0 |
| Chloride | Cl | mg/L | | 70 | 80 | 11 | 10 | 0 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.012 | 0.024 | 0.059 | 0.050 | 0.023 |
| Sulphate | SO4 | mg/L | | 24 | 53 | 10 | 24 | 13 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 1.4 | 3.3 | 2.9 | 2.4 | 2.1 |
| Antimony | Sb | mg/L | | 0.0022 | 0.0027 | 0 | 0.0013 | 0.00037 |
| Arsenic | As | mg/L | **0.5** | 0.019 | 0.034 | 0.016 | 0.021 | 0.016 |
| Barium | Ba | mg/L | | 0 | 0 | 0.026 | -0.017 | -0.037 |
| Boron | B | mg/L | | 0.020 | 0.030 | 0 | 0.010 | 0.0050 |
| Cadmium | Cd[3] | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Calcium | Ca | mg/L | | 37 | 77 | 11 | 19 | 0 |
| Chromium | Cr[2] | mg/L | | 0 | 0.0050 | 0.0020 | 0.0016 | 0.0020 |
| Cobalt | Co | mg/L | | 0.0044 | 0.0089 | 0.0057 | 0.0070 | 0.0057 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0040 | 0.011 | 0.0010 | 0.0074 | 0.0043 |
| Iron | Fe | mg/L | | 1.0 | 5.5 | 3.3 | 3.4 | 2.3 |
| Lead | Pb[3] | mg/L | **0.2** | 0.0076 | 0.016 | 0.014 | 0.015 | 0.011 |
| Lithium | Li | mg/L | | 0.041 | 0.039 | 0.0030 | 0.012 | 0.0020 |
| Magnesium | Mg | mg/L | | 3.5 | 8.5 | 1.9 | 2.4 | 1.0 |
| Manganese | Mn | mg/L | | 0.047 | 0.12 | 0.054 | 0.052 | 0.044 |
| Molbydenum | Mo | mg/L | | 0 | 0.0010 | 0 | 0.0016 | 0.00060 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.013 | 0.030 | 0.016 | 0.020 | 0.015 |
| Potassium | K | mg/L | | 6.2 | 7.4 | 1.4 | 2.4 | 0.70 |
| Selenium | Se | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Sodium | Na | mg/L | | 3.7 | 6.7 | 1.2 | 1.0 | -2.0 |
| Strontium | Sr | mg/L | | 0.40 | 0.76 | 0.083 | 0.15 | 0 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0.022 | 0.060 | 0.057 | 0.030 | 0.030 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Uranium | U | mg/L | | 0.0011 | 0.0026 | 0.00040 | 0.0019 | 0.0016 |
| Vanadium | V | mg/L | | 0.0010 | 0.0060 | 0.0050 | 0.0048 | 0.0044 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | 0.013 | 0.011 | 0.0081 | 0.0059 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M09-859-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-248-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-935-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M09-802-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML08-232-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-95-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

**Appendix B.7: Kinetic Test Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML08-226-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-526-01 (Iron Formation) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 260 | 854 | 864 | 867 | 1001 | 848 | 860 | 865 | 864 | 852 | 914 | 865 | 874 | 878 | 876 | 869 | 881 |
| pH | | units | **6.0-9.5** | 7.5 | 7.6 | 7.7 | 8.6 | 7.1 | 8.3 | 8.2 | 7.7 | 7.2 | 7.4 | 6.8 | 7.4 | 7.5 | 7.4 | 7.7 | 7.4 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 52 | 68 | 39 | 35 | 33 | 35 | 31 | 29 | 31 | 30 | 31 | 30 | 26 | 27 | 24 | 26 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 11 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 11 | 11 | 10 | 10 | 12 | 10 | 9.0 | 9.0 |
| Chloride | Cl | mg/L | | 1.3 | 4.3 | 0.80 | 0.20 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 3.0 | 9.6 | 4.8 | 3.5 | 2.5 | 2.1 | 2.0 | 2.1 | 2.1 | 2.0 | 2.5 | 2.5 | 1.6 | 1.3 | 1.2 | 1.3 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.030 | 0.020 | 0.020 | 0.040 | | 0.040 | | | 0.030 | | | | 0.040 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.00050 | 0.00060 | 0.00050 | | 0.00040 | | | 0.00060 | | | | 0.00020 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0013 | 0.0012 | 0.0012 | 0.0011 | | 0.0011 | | | 0.00090 | | | | 0.00090 | | | | 0.00080 |
| Barium | Ba | mg/L | | 0.0011 | 0.0010 | 0.00050 | 0.00042 | | 0.00047 | | | 0.00028 | | | | 0.00046 | | | | 0.00035 |
| Boron | B | mg/L | | 0.0069 | 0.014 | 0.0085 | 0.0062 | | 0.0037 | | | 0.0022 | | | | 0.00080 | | | | 0.0014 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 9.0 | 8.9 | 5.9 | 5.9 | 5.2 | 5.4 | 5.3 | 5.1 | 4.9 | 4.5 | 5.5 | 5.7 | 4.6 | 4.2 | 4.2 | 4.2 | 4.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000027 | 0.000033 | 0.000020 | 0.000018 | | 0.000014 | | | 0.0000070 | | | | 0.000010 | | | | 0.0000060 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00090 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.000030 | 0.00019 | 0.00028 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.31 | 1.0 | 0.55 | 0.51 | | 0.38 | | | 0.38 | | | | 0.37 | | | | 0.28 |
| Manganese | Mn | mg/L | | 0.0041 | 0.0046 | 0.0046 | 0.0043 | | 0.0048 | | | 0.0042 | | | | 0.0042 | | | | 0.0041 |
| Molbydenum | Mo | mg/L | | 0.00020 | 0.00023 | 0.00015 | 0.00011 | | 0.000060 | | | 0.000060 | | | | 0.000030 | | | | 0.000020 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00020 | < 0.0001 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.46 | 0.68 | 0.34 | 0.27 | | 0.17 | | | 0.12 | | | | 0.070 | | | | 0.040 |
| Sodium | Na | mg/L | | 0.25 | 0.51 | 0.20 | 0.090 | | 0.020 | | | 0.020 | | | | < 0.01 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.067 | 0.10 | 0.058 | 0.056 | | 0.048 | | | 0.043 | | | | 0.037 | | | | 0.030 |
| Tin | Sn | mg/L | | 0.0014 | 0.00078 | 0.00046 | 0.00037 | | 0.00020 | | | 0.00016 | | | | 0.00018 | | | | 0.00016 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.000030 | 0.00012 | 0.000094 | 0.000090 | | 0.000097 | | | 0.000084 | | | | 0.000084 | | | | 0.000065 |
| Vanadium | V | mg/L | | 0.000050 | 0.000050 | 0.000040 | 0.000040 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | 0.0010 | < 0.001 | 0.0020 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-526-01 (Iron Formation) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 878 | 869 | 883 | 881 | 935 | 878 | 871 | 868 | 873 | 873 | 880 | 874 | 880 | 891 | 875 | 877 |
| pH | | units | **6.0-9.5** | 8.0 | 7.4 | 7.8 | 7.4 | 7.8 | 7.7 | 7.5 | 7.6 | 7.4 | 7.5 | 8.2 | 7.8 | 7.7 | 7.7 | 7.7 | 8.2 |
| Conductivity | | mg/L as CaCO3 | | 32 | 27 | 24 | 24 | 27 | 30 | 29 | 26 | 28 | 26 | 30 | 25 | 27 | 33 | 27 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | | 10 | 10 | 9.0 | 12 | 9.0 | 8.0 | 9.0 | 10 | 10 | 10 | 11 | 10 | 10 | 10 | 11 |
| Chloride | Cl | mg/L | | | | | <0.2 | | | | < 0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 3.4 | 1.9 | 1.4 | 1.5 | 2.7 | 3.3 | 1.9 | 2.1 | 2.4 | 2.1 | 2.8 | 2.5 | 2.1 | 3.8 | 2.4 | 2.5 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.040 | | | | 0.040 | | 0.030 | | | | | 0.030 | |
| Antimony | Sb | mg/L | | | | | < 0.0002 | | | | < 0.0002 | | < 0.0002 | | | | | < 0.0002 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.00070 | | | | 0.00070 | | 0.00060 | | | | | 0.00060 | |
| Barium | Ba | mg/L | | | | | 0.00019 | | | | 0.00019 | | 0.00063 | | | | | 0.00013 | |
| Boron | B | mg/L | | | | | 0.00060 | | | | 0.00050 | | 0.00050 | | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.9 | 4.8 | 4.6 | 4.2 | 4.8 | 4.5 | 4.0 | 4.4 | 4.6 | 4.0 | 4.7 | 4.1 | 4.3 | 4.3 | 4.0 | 4.2 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.000010 | | | | 0.0000090 | | 0.000011 | | | | | 0.000007 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | < 0.00002 | | | | < 0.00002 | | < 0.00002 | | | | | 0.00003 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 0.39 | | | | 0.49 | | 0.48 | | | | | 0.53 | |
| Manganese | Mn | mg/L | | | | | 0.0036 | | | | 0.0042 | | 0.0040 | | | | | 0.0032 | |
| Molbydenum | Mo | mg/L | | | | | < 0.00001 | | | | 0.000020 | | 0.000030 | | | | | 0.00001 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Potassium | K | mg/L | | | | | 0.060 | | | | 0.050 | | 0.040 | | | | | 0.040 | |
| Sodium | Na | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Strontium | Sr | mg/L | | | | | 0.034 | | | | 0.036 | | 0.033 | | | | | 0.034 | |
| Tin | Sn | mg/L | | | | | < 0.00001 | | | | 0.00024 | | 0.00013 | | | | | 0.00022 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.000068 | | | | 0.000059 | | 0.000065 | | | | | 0.000054 | |
| Vanadium | V | mg/L | | | | | 0.000040 | | | | < 0.00003 | | < 0.00003 | | | | | < 0.00003 | |
| Zinc | Zn | mg/L | **0.5** | | | | < 0.001 | | | | < 0.001 | | < 0.001 | | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-194-01 (Greywacke) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 793 | 912 | 984 | 935 | 957 | 961 | 964 | 952 | 960 | 872 | 995 | 960 | 964 | 965 | 960 | 961 | 972 |
| pH | | units | **6.0-9.5** | 7.4 | 7.6 | 7.5 | 7.5 | 7.2 | 7.1 | 7.6 | 7.6 | 7.2 | 7.3 | 6.8 | 7.4 | 7.2 | 7.4 | 7.5 | 7.4 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 52 | 73 | 55 | 47 | 42 | 40 | 39 | 33 | 34 | 38 | 36 | 34 | 33 | 35 | 33 | 35 | 35 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 15 | 17 | 15 | 16 | 15 | 21 | 12 | 14 | 15 | 15 | 13 | 14 | 18 | 16 | 13 | 14 |
| Chloride | Cl | mg/L | | 2.4 | 1.9 | 0.70 | 0.30 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 5.6 | 12 | 7.1 | 4.9 | 3.6 | 3.0 | 2.5 | 2.1 | 2.3 | 2.2 | 1.9 | 1.9 | 2.1 | 2.1 | 2.6 | 3.0 | 3.0 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.030 | 0.030 | 0.030 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0015 | 0.0013 | 0.0011 | | 0.00070 | | | 0.00070 | | | | 0.00040 | | | | 0.00030 |
| Arsenic | As | mg/L | **0.5** | 0.0038 | 0.0076 | 0.0069 | 0.0076 | | 0.0060 | | | 0.0058 | | | | 0.0048 | | | | 0.0026 |
| Barium | Ba | mg/L | | 0.0017 | 0.0024 | 0.0025 | 0.0018 | | 0.0014 | | | 0.0013 | | | | 0.0011 | | | | 0.00094 |
| Boron | B | mg/L | | 0.0024 | 0.0067 | 0.0051 | 0.0038 | | 0.0023 | | | 0.0017 | | | | 0.00050 | | | | 0.0024 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.2 | 5.8 | 5.8 | 5.3 | 5.1 | 4.8 | 5.3 | 4.5 | 4.7 | 4.9 | 5.3 | 5.5 | 4.8 | 4.6 | 4.8 | 4.9 | 5.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000075 | 0.00011 | 0.000094 | 0.000073 | | 0.000078 | | | 0.000094 | | | | 0.000091 | | | | 0.00010 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | 0.00070 | < 0.0005 | < 0.0005 | | 0.0010 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.020 | 0.010 | < 0.01 | < 0.01 | | 0.010 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000050 | 0.000020 | 0.000030 | 0.00014 | | 0.000080 | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.84 | 1.6 | 1.3 | 1.2 | | 1.1 | | | 1.0 | | | | 1.0 | | | | 1.1 |
| Manganese | Mn | mg/L | | 0.0057 | 0.0045 | 0.0056 | 0.0044 | | 0.0049 | | | 0.0060 | | | | 0.0064 | | | | 0.0084 |
| Molbydenum | Mo | mg/L | | 0.00034 | 0.00086 | 0.00044 | 0.00030 | | 0.00014 | | | 0.000090 | | | | 0.000080 | | | | 0.000080 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00070 | 0.00080 | 0.00040 | 0.00030 | | < 0.0001 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 3.4 | 3.6 | 2.2 | 1.7 | | 1.1 | | | 0.65 | | | | 0.46 | | | | 0.28 |
| Sodium | Na | mg/L | | 2.3 | 2.9 | 1.5 | 0.91 | | 0.43 | | | 0.20 | | | | 0.13 | | | | 0.090 |
| Strontium | Sr | mg/L | | 0.024 | 0.037 | 0.035 | 0.031 | | 0.026 | | | 0.027 | | | | 0.028 | | | | 0.030 |
| Tin | Sn | mg/L | | 0.0011 | 0.00065 | 0.00042 | 0.00028 | | 0.00031 | | | 0.00019 | | | | 0.00020 | | | | 0.00018 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.00015 | 0.0013 | 0.00095 | 0.00072 | | 0.00044 | | | 0.00028 | | | | 0.00023 | | | | 0.00016 |
| Vanadium | V | mg/L | | 0.000070 | 0.00011 | 0.000090 | 0.00010 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0020 | | | 0.0010 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-194-01 (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 948 | 959 | 967 | 976 | 959 | 972 | 982 | 969 | 987 | 978 | 984 | 956 | 976 | 993 | 980 | 995 |
| pH | | units | **6.0-9.5** | 7.6 | 7.3 | 7.5 | 7.4 | 7.5 | 7.5 | 7.5 | 7.5 | 7.4 | 7.5 | 7.7 | 7.7 | 7.5 | 8.1 | 7.6 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 35 | 38 | 37 | 35 | 31 | 40 | 34 | 39 | 45 | 38 | 39 | 33 | 38 | 48 | 40 | 41 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 14 | 14 | 13 | 22 | 15 | 15 | 15 | 17 | 17 | 16 | 63 | 15 | 23 | 17 | 18 |
| Chloride | Cl | mg/L | | | | | <0.2 | | | | < 0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 3.5 | 3.7 | 3.7 | 3.4 | 3.5 | 3.3 | 2.8 | 2.7 | 2.7 | 2.4 | 2.6 | 3.0 | 2.6 | 2.4 | 2.4 | 2.7 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.040 | | | | 0.030 | | 0.020 | | | | | 0.020 | |
| Antimony | Sb | mg/L | | | | | < 0.0002 | | | | 0.00020 | | 0.00030 | | | | | <0.0002 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.0028 | | | | 0.0021 | | 0.0016 | | | | | 0.0013 | |
| Barium | Ba | mg/L | | | | | 0.0011 | | | | 0.00099 | | 0.00097 | | | | | 0.00091 | |
| Boron | B | mg/L | | | | | 0.00040 | | | | 0.00030 | | 0.00040 | | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | 0.0000060 | |
| Calcium | Ca | mg/L | | 4.7 | 5.5 | 5.6 | 5.2 | 4.9 | 5.2 | 5.2 | 6.0 | 6.4 | 5.7 | 5.3 | 4.8 | 5.0 | 5.7 | 5.5 | 5.6 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.00010 | | | | 0.00013 | | 0.00013 | | | | | 0.00011 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | 0.00050 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | < 0.00002 | | | | < 0.00002 | | 0.000030 | | | | | 0.000030 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 1.2 | | | | 1.3 | | 1.2 | | | | | 1.3 | |
| Manganese | Mn | mg/L | | | | | 0.0067 | | | | 0.0100 | | 0.011 | | | | | 0.0098 | |
| Molbydenum | Mo | mg/L | | | | | 0.000030 | | | | 0.000060 | | 0.000090 | | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | 0.00010 | | | | 0.00020 | | 0.00020 | | | | | 0.00010 | |
| Potassium | K | mg/L | | | | | 0.31 | | | | 0.26 | | 0.23 | | | | | 0.21 | |
| Sodium | Na | mg/L | | | | | 0.090 | | | | 0.080 | | 0.060 | | | | | 0.070 | |
| Strontium | Sr | mg/L | | | | | 0.033 | | | | 0.038 | | 0.036 | | | | | 0.037 | |
| Tin | Sn | mg/L | | | | | < 0.00001 | | | | 0.00032 | | 0.00032 | | | | | 0.00036 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.00013 | | | | 0.00010 | | 0.000098 | | | | | 0.000074 | |
| Vanadium | V | mg/L | | | | | 0.000060 | | | | < 0.00003 | | < 0.00003 | | | | | < 0.00003 | |
| Zinc | Zn | mg/L | **0.5** | | | | < 0.001 | | | | < 0.001 | | 0.0020 | | | | | 0.0010 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-403-03 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 761 | 916 | 954 | 942 | 970 | 977 | 973 | 978 | 986 | 983 | 983 | 980 | 987 | 986 |
| pH | | units | **6.0-9.5** | 7.8 | 7.7 | 7.6 | 7.7 | 7.8 | 7.8 | 8.7 | 7.9 | 8.1 | 7.8 | 7.7 | 7.7 | 7.5 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 52 | 54 | 42 | 41 | 39 | 34 | 35 | 40 | 42 | 37 | 36 | 36 | 36 | 35 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 22 | 21 | 17 | 18 | 17 | 21 | 21 | 21 | 20 | 17 | 17 | 17 | 17 |
| Chloride | Cl | mg/L | | 2.6 | 1.6 | 0.60 | 0.30 | | < 0.2 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 2.2 | 2.4 | 1.6 | 1.2 | 0.90 | 0.80 | 0.70 | 0.60 | 0.70 | 0.60 | 0.70 | 0.60 | 0.60 | 0.70 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.030 | 0.040 | 0.060 | | 0.050 | | | 0.050 | | | | 0.070 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0014 | 0.0011 | 0.00070 | | 0.00070 | | | 0.00050 | | | | 0.00040 | |
| Arsenic | As | mg/L | **0.5** | 0.0036 | 0.0074 | 0.0057 | 0.0061 | | 0.0054 | | | 0.0052 | | | | 0.0050 | |
| Barium | Ba | mg/L | | 0.00074 | 0.00092 | 0.00092 | 0.00083 | | 0.00077 | | | 0.00083 | | | | 0.00063 | |
| Boron | B | mg/L | | 0.0020 | 0.0047 | 0.0033 | 0.0025 | | 0.0021 | | | 0.0014 | | | | 0.00060 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000060 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.0 | 4.3 | 5.4 | 5.1 | 5.3 | 5.4 | 4.9 | 5.6 | 5.1 | 4.9 | 5.1 | 5.0 | 4.8 | 4.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000038 | 0.000038 | 0.000027 | 0.000021 | | 0.000035 | | | 0.000039 | | | | 0.000051 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00070 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000050 | 0.000040 | < 0.00002 | < 0.00002 | | 0.000030 | | | < 0.00002 | | | | 0.000070 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.52 | 1.0 | 1.1 | 1.0 | | 1.0 | | | 0.94 | | | | 0.89 | |
| Manganese | Mn | mg/L | | 0.0036 | 0.0056 | 0.0074 | 0.0059 | | 0.0090 | | | 0.0092 | | | | 0.0090 | |
| Molbydenum | Mo | mg/L | | 0.00077 | 0.0011 | 0.00056 | 0.00043 | | 0.00023 | | | 0.000080 | | | | 0.000070 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00020 | 0.00020 | 0.00020 | | 0.00020 | | | < 0.0001 | | | | 0.00010 | |
| Potassium | K | mg/L | | 4.3 | 3.4 | 2.5 | 1.9 | | 1.3 | | | 0.89 | | | | 0.57 | |
| Sodium | Na | mg/L | | 2.4 | 1.9 | 1.2 | 0.87 | | 0.48 | | | 0.24 | | | | 0.14 | |
| Strontium | Sr | mg/L | | 0.021 | 0.029 | 0.034 | 0.033 | | 0.033 | | | 0.029 | | | | 0.028 | |
| Tin | Sn | mg/L | | 0.013 | 0.0045 | 0.0026 | 0.0014 | | 0.0011 | | | 0.00091 | | | | 0.00072 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000018 | 0.00013 | 0.00015 | 0.00014 | | 0.00015 | | | 0.00015 | | | | 0.00019 | |
| Vanadium | V | mg/L | | 0.00017 | 0.00019 | 0.00014 | 0.00011 | | 0.00011 | | | 0.000090 | | | | 0.000080 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-403-03 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 974 | 968 | 986 | 977 | 983 | 968 | 982 | 988 | 973 | 972 | 961 | 969 | 950 | 955 |
| pH | | units | **6.0-9.5** | 7.5 | 7.6 | 7.8 | 7.6 | 7.6 | 7.7 | 7.7 | 7.6 | 7.9 | 8.0 | 7.6 | 7.6 | 7.5 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 34 | 34 | 41 | 35 | 36 | 35 | 37 | 41 | 42 | 38 | 60 | 61 | 37 | 37 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 15 | 22 | 16 | 16 | 16 | 16 | 20 | 20 | 21 | 23 | 18 | 16 | 16 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 0.80 | 0.90 | 1.1 | 1.2 | 1.2 | 1.1 | 1.3 | 1.4 | 1.6 | 1.4 | 1.5 | 1.1 | 1.1 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.060 | | | | 0.060 | | | | | 0.080 | | |
| Antimony | Sb | mg/L | | | | 0.00040 | | | | 0.00040 | | | | | 0.00030 | | |
| Arsenic | As | mg/L | **0.5** | | 0.0036 | 0.0048 | | | | 0.0039 | | | | | 0.0045 | | |
| Barium | Ba | mg/L | | | | 0.00074 | | | | 0.0012 | | | | | 0.00069 | | |
| Boron | B | mg/L | | | | 0.00070 | | | | 0.00040 | | | | | 0.00040 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 5.0 | 4.8 | 6.4 | 5.0 | 5.5 | 5.4 | 5.6 | 6.1 | 6.4 | 6.2 | 6.3 | 6.0 | 5.4 | 5.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000080 | | | | 0.000070 | | | | | 0.000076 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | < 0.00002 | | | | | 0.0013 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 1.2 | | | | 1.0 | | | | | 1.1 | | |
| Manganese | Mn | mg/L | | | | 0.012 | | | | 0.0093 | | | | | 0.0094 | | |
| Molbydenum | Mo | mg/L | | | | 0.000090 | | | | 0.000080 | | | | | 0.000080 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.58 | | | | 0.44 | | | | | 0.38 | | |
| Sodium | Na | mg/L | | | | 0.11 | | | | 0.090 | | | | | 0.050 | | |
| Strontium | Sr | mg/L | | | | 0.037 | | | | 0.032 | | | | | 0.032 | | |
| Tin | Sn | mg/L | | | | 0.00081 | | | | 0.00077 | | | | | 0.00076 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.00023 | | | | 0.00018 | | | | | 0.00017 | | |
| Vanadium | V | mg/L | | | | 0.000080 | | | | 0.000050 | | | | | 0.000040 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | 0.0010 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-403-03 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 945 | 937 | 951 | 964 | 942 | 907 | 952 | 963 | 983 | 828 | 936 | 943 | 945 |
| pH | | units | **6.0-9.5** | 7.5 | 7.5 | 7.8 | 7.9 | 7.7 | 7.8 | 7.7 | 7.6 | 7.7 | 7.4 | 7.9 | 7.6 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 33 | 31 | 41 | 39 | 34 | 35 | 33 | 37 | 39 | 35 | 43 | 30 | 31 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 14 | 20 | 18 | 15 | 15 | 16 | 17 | 17 | 16 | 20 | 14 | 14 |
| Chloride | Cl | mg/L | | | | <0.2 | | < 0.2 | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 1.0 | 0.90 | 1.2 | 1.1 | 0.90 | 1.0 | 0.90 | 1.1 | 1.1 | 0.90 | 1.4 | 1.0 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.080 | | | | | 0.050 | | | | | 0.070 |
| Antimony | Sb | mg/L | | | | 0.00040 | | | | | 0.00040 | | | | | 0.00020 |
| Arsenic | As | mg/L | **0.5** | | | 0.023 | | | | | 0.0026 | | | | | 0.0018 |
| Barium | Ba | mg/L | | | | 0.00021 | | | | | 0.00044 | | | | | 0.00042 |
| Boron | B | mg/L | | | | < 0.0002 | | | | | 0.00030 | | | | | 0.00090 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.7 | 4.2 | 6.3 | 5.9 | 4.8 | 4.6 | 4.6 | 5.1 | 5.2 | 5.1 | 5.8 | 3.5 | 4.1 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000089 | | | | | 0.000081 | | | | | 0.000065 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | 0.0030 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.1 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 1.1 | | | | | 1.1 | | | | | 0.99 |
| Manganese | Mn | mg/L | | | | 0.012 | | | | | 0.0084 | | | | | 0.0061 |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | | 0.000070 | | | | | 0.000090 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Potassium | K | mg/L | | | | 0.30 | | | | | 0.24 | | | | | 0.18 |
| Sodium | Na | mg/L | | | | 0.060 | | | | | 0.050 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.031 | | | | | 0.032 | | | | | 0.026 |
| Tin | Sn | mg/L | | | | 0.00064 | | | | | 0.0011 | | | | | 0.00035 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.0000070 | | | | | 0.000090 | | | | | 0.000078 |
| Vanadium | V | mg/L | | | | 0.00015 | | | | | 0.000060 | | | | | 0.000040 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.001 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-533-01 (Greywacke) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 833 | 973 | 991 | 992 | 985 | 986 | 990 | 989 | 987 | 981 | 994 | 987 | 988 | 1000 | 966 | 986 | 985 |
| pH | | units | **6.0-9.5** | 7.6 | 7.8 | 7.5 | 7.6 | 7.1 | 7.2 | 7.5 | 7.6 | 7.1 | 7.2 | 6.9 | 7.3 | 7.3 | 7.4 | 7.5 | 7.3 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 38 | 58 | 46 | 40 | 42 | 40 | 33 | 34 | 32 | 32 | 30 | 30 | 28 | 27 | 26 | 27 | 27 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 12 | 21 | 20 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 12 | 12 | 12 | 15 | 12 | 11 | 12 |
| Chloride | Cl | mg/L | | 1.0 | 1.1 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 0.80 | 2.6 | 2.3 | 2.0 | 1.8 | 1.7 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.1 | 1.2 | 1.2 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.050 | 0.050 | 0.050 | | 0.050 | | | 0.040 | | | | 0.060 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.0010 | 0.0044 | 0.0034 | 0.0025 | | 0.0016 | | | 0.0013 | | | | 0.00070 | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | 0.0016 | 0.037 | 0.051 | 0.055 | | 0.053 | | | 0.041 | | | | 0.039 | | | | 0.026 |
| Barium | Ba | mg/L | | 0.0026 | 0.0052 | 0.0053 | 0.0047 | | 0.0042 | | | 0.0039 | | | | 0.0034 | | | | 0.0031 |
| Boron | B | mg/L | | 0.0024 | 0.0094 | 0.0072 | 0.0055 | | 0.0033 | | | 0.0018 | | | | 0.00060 | | | | 0.0017 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.4 | 3.0 | 3.4 | 4.0 | 3.9 | 4.1 | 3.9 | 4.2 | 4.0 | 3.8 | 3.8 | 4.5 | 3.9 | 3.4 | 3.1 | 3.7 | 3.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000041 | 0.00013 | 0.00021 | 0.00026 | | 0.00034 | | | 0.00045 | | | | 0.00036 | | | | 0.00036 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00080 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000090 | 0.000060 | 0.00033 | 0.00032 | | 0.000040 | | | < 0.00002 | | | | 0.000060 | | | | 0.000060 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.40 | 1.2 | 1.3 | 1.3 | | 1.3 | | | 1.1 | | | | 0.99 | | | | 0.95 |
| Manganese | Mn | mg/L | | 0.0045 | 0.0038 | 0.0057 | 0.0065 | | 0.0080 | | | 0.0097 | | | | 0.0087 | | | | 0.0093 |
| Molbydenum | Mo | mg/L | | 0.00039 | 0.0010 | 0.00046 | 0.00026 | | 0.00014 | | | 0.00010 | | | | 0.000090 | | | | 0.000080 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00060 | 0.00060 | 0.00070 | | 0.00050 | | | 0.00050 | | | | 0.00030 | | | | 0.00020 |
| Potassium | K | mg/L | | 4.9 | 6.6 | 4.1 | 3.0 | | 1.9 | | | 1.0 | | | | 0.72 | | | | 0.47 |
| Sodium | Na | mg/L | | 1.7 | 2.5 | 1.2 | 0.66 | | 0.29 | | | 0.12 | | | | 0.070 | | | | 0.050 |
| Strontium | Sr | mg/L | | 0.031 | 0.055 | 0.058 | 0.063 | | 0.061 | | | 0.060 | | | | 0.057 | | | | 0.056 |
| Tin | Sn | mg/L | | 0.0011 | 0.00067 | 0.00056 | 0.00047 | | 0.00043 | | | 0.00045 | | | | 0.00050 | | | | 0.00034 |
| Titanium | Ti | mg/L | | 0.00050 | 0.00010 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.000048 | 0.00037 | 0.00043 | 0.00044 | | 0.00041 | | | 0.00032 | | | | 0.00037 | | | | 0.00026 |
| Vanadium | V | mg/L | | 0.00026 | 0.00042 | 0.00043 | 0.00040 | | 0.00032 | | | 0.00026 | | | | 0.00024 | | | | 0.00016 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0020 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-533-01 (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 992 | 994 | 993 | 988 | 991 | 985 | 992 | 981 | 989 | 989 | 978 | 973 | 969 | 985 | 978 | 993 |
| pH | | units | **6.0-9.5** | 7.5 | 7.3 | 7.5 | 7.4 | 7.5 | 7.4 | 7.4 | 7.5 | 7.3 | 7.4 | 7.6 | 8.3 | 7.5 | 7.6 | 7.7 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 30 | 30 | 27 | 28 | 26 | 30 | 28 | 30 | 28 | 25 | 28 | 28 | 30 | 26 | 31 | 37 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 13 | 12 | 13 | 13 | 13 | 20 | 12 | 13 | 12 | 13 | 11 | 13 | 12 | 14 | 20 |
| Chloride | Cl | mg/L | | | | | <0.2 | | | | < 0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 0.90 | 1.1 | 0.90 | 1.0 | 1.0 | 1.0 | 1.2 | 0.90 | 1.1 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.050 | | | | 0.050 | | 0.030 | | | | | 0.050 | |
| Antimony | Sb | mg/L | | | | | 0.00040 | | | | 0.00050 | | 0.00050 | | | | | 0.00040 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.028 | | | | 0.022 | | 0.015 | | | | | 0.018 | |
| Barium | Ba | mg/L | | | | | 0.0035 | | | | 0.0032 | | 0.0033 | | | | | 0.0033 | |
| Boron | B | mg/L | | | | | 0.00050 | | | | 0.00030 | | 0.00030 | | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | 0.000051 | |
| Calcium | Ca | mg/L | | 3.9 | 4.3 | 4.2 | 3.9 | 3.7 | 3.9 | 3.9 | 4.1 | 4.2 | 3.6 | 3.7 | 3.2 | 4.1 | 3.4 | 4.1 | 4.2 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.00034 | | | | 0.00038 | | 0.00035 | | | | | 0.00031 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | 0.000030 | | | | 0.000030 | | 0.000040 | | | | | 0.000080 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 0.95 | | | | 0.97 | | 0.84 | | | | | 0.98 | |
| Manganese | Mn | mg/L | | | | | 0.010 | | | | 0.013 | | 0.012 | | | | | 0.013 | |
| Molbydenum | Mo | mg/L | | | | | 0.000040 | | | | 0.000070 | | 0.000080 | | | | | 0.000070 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | 0.00030 | | | | 0.00030 | | 0.00020 | | | | | 0.00010 | |
| Potassium | K | mg/L | | | | | 0.48 | | | | 0.40 | | 0.35 | | | | | 0.38 | |
| Sodium | Na | mg/L | | | | | 0.050 | | | | 0.050 | | 0.040 | | | | | 0.040 | |
| Strontium | Sr | mg/L | | | | | 0.060 | | | | 0.064 | | 0.057 | | | | | 0.067 | |
| Tin | Sn | mg/L | | | | | 0.00024 | | | | 0.00047 | | 0.00040 | | | | | 0.00049 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.00024 | | | | 0.00017 | | 0.00014 | | | | | 0.00011 | |
| Vanadium | V | mg/L | | | | | 0.00020 | | | | 0.00012 | | 0.000080 | | | | | 0.00010 | |
| Zinc | Zn | mg/L | **0.5** | | | | 0.0020 | | | | 0.0010 | | 0.0010 | | | | | 0.0020 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - GT08-04-02 (Mafic Volcanic) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 755 | 960 | 991 | 914 | 952 | 886 | 975 | 907 | 954 | 876 | 910 | 897 | 938 | 904 | 915 | 922 | 916 |
| pH | | units | **6.0-9.5** | 8.1 | 8.1 | 8.2 | 8.7 | 8.6 | 8.6 | 8.4 | 8.3 | 7.8 | 8.3 | 7.0 | 7.6 | 7.7 | 7.6 | 8.2 | 7.6 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 112 | 119 | 91 | 26 | 50 | 48 | 47 | 37 | 39 | 41 | 32 | 33 | 30 | 31 | 28 | 29 | 27 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 18 | 28 | 25 | 21 | 16 | 16 | 17 | 13 | 14 | 15 | 14 | 13 | 12 | 16 | 13 | 12 | 12 |
| Chloride | Cl | mg/L | | 17 | 14 | 8.5 | 4.0 | | 1.0 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 3.8 | 5.0 | 6.8 | 5.1 | 4.0 | 3.7 | 3.0 | 2.7 | 2.6 | 3.6 | 1.8 | 1.6 | 1.6 | 1.7 | 1.3 | 1.4 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.060 | 0.050 | 0.050 | 0.070 | | 0.060 | | | 0.050 | | | | 0.13 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0045 | 0.0047 | 0.0035 | | 0.0023 | | | 0.0019 | | | | 0.0012 | | | | 0.00080 |
| Arsenic | As | mg/L | **0.5** | 0.0064 | 0.066 | 0.077 | 0.082 | | 0.076 | | | 0.071 | | | | 0.062 | | | | 0.040 |
| Barium | Ba | mg/L | | 0.0014 | 0.00033 | 0.00029 | 0.00031 | | 0.00023 | | | 0.0011 | | | | 0.00013 | | | | 0.00018 |
| Boron | B | mg/L | | 0.0057 | 0.017 | 0.014 | 0.0093 | | 0.0063 | | | 0.0044 | | | | 0.0019 | | | | 0.0073 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.9 | 4.5 | 4.2 | 4.2 | 3.9 | 4.0 | 4.4 | 4.1 | 3.9 | 3.4 | 3.7 | 4.4 | 3.7 | 3.5 | 3.5 | 3.5 | 3.3 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000042 | 0.00022 | 0.00032 | 0.00019 | | 0.00017 | | | 0.00022 | | | | 0.00021 | | | | 0.00022 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | < 0.0005 | < 0.0005 | < 0.0005 | | 0.00070 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | 0.000040 | 0.000090 | | 0.000060 | | | 0.000030 | | | | 0.000040 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.80 | 2.0 | 2.3 | 2.1 | | 1.7 | | | 1.6 | | | | 1.4 | | | | 1.2 |
| Manganese | Mn | mg/L | | 0.0075 | 0.011 | 0.015 | 0.014 | | 0.015 | | | 0.017 | | | | 0.015 | | | | 0.014 |
| Molbydenum | Mo | mg/L | | 0.00021 | 0.00080 | 0.00047 | 0.00030 | | 0.00016 | | | 0.000080 | | | | 0.00010 | | | | 0.00013 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | 0.0014 | 0.0011 | 0.00060 | | 0.00030 | | | 0.00030 | | | | 0.00030 | | | | 0.00010 |
| Potassium | K | mg/L | | 2.3 | 2.5 | 1.8 | 1.4 | | 0.84 | | | 0.52 | | | | 0.32 | | | | 0.18 |
| Sodium | Na | mg/L | | 14 | 14 | 9.4 | 4.9 | | 1.9 | | | 0.67 | | | | 0.24 | | | | 0.14 |
| Strontium | Sr | mg/L | | 0.0084 | 0.012 | 0.011 | 0.0086 | | 0.0045 | | | 0.0058 | | | | 0.0048 | | | | 0.0044 |
| Tin | Sn | mg/L | | 0.00098 | 0.00064 | 0.00049 | 0.00035 | | 0.00067 | | | 0.00072 | | | | 0.00086 | | | | 0.00074 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.000015 | 0.000019 | 0.000030 | 0.000025 | | 0.000025 | | | 0.000030 | | | | 0.000018 | | | | 0.000028 |
| Vanadium | V | mg/L | | 0.00021 | 0.00038 | 0.00038 | 0.00044 | | 0.00035 | | | 0.00035 | | | | 0.00031 | | | | 0.00017 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - GT08-04-02 (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 906 | 905 | 887 | 900 | 906 | 919 | 915 | 918 | 931 | 920 | 908 | 886 | 888 | 884 | 888 | 918 |
| pH | | units | **6.0-9.5** | 7.8 | 7.9 | 7.7 | 7.9 | 7.4 | 7.9 | 7.7 | 8.2 | 7.4 | 8.1 | 8.8 | 8.4 | 8.4 | 8.0 | 8.2 | 8.6 |
| Conductivity | | mg/L as CaCO3 | | 29 | 31 | 29 | 28 | 27 | 29 | 24 | 28 | 29 | 27 | 29 | 26 | 29 | 31 | 28 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | | 12 | 12 | 12 | 13 | 12 | 13 | 11 | 13 | 12 | 13 | 13 | 13 | 13 | 13 | 13 |
| Chloride | Cl | mg/L | | | | | < 0.2 | | | | <0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.5 | 1.6 | 1.8 | 1.6 | 1.6 | 1.3 | 1.1 | 1.2 | 1.2 | 1.1 | 1.2 | 1.4 | 1.3 | 1.7 | 1.1 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.040 | | | | 0.040 | | 0.040 | | | | | 0.030 | |
| Antimony | Sb | mg/L | | | | | 0.00080 | | | | 0.00070 | | 0.00070 | | | | | 0.00060 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.043 | | | | 0.039 | | 0.033 | | | | | 0.031 | |
| Barium | Ba | mg/L | | | | | 0.00028 | | | | 0.00011 | | 0.000090 | | | | | 0.00040 | |
| Boron | B | mg/L | | | | | 0.0012 | | | | 0.00090 | | 0.00080 | | | | | 0.00050 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 3.4 | 3.7 | 3.6 | 3.5 | 3.4 | 3.4 | 3.5 | 3.6 | 3.9 | 3.4 | 3.4 | 3.1 | 3.2 | 3.7 | 3.3 | 3.4 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.00020 | | | | 0.00028 | | 0.00025 | | | | | 0.00021 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | 0.00050 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | < 0.00002 | | | | < 0.00002 | | 0.000040 | | | | | 0.000060 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 1.4 | | | | 1.3 | | 1.2 | | | | | 1.2 | |
| Manganese | Mn | mg/L | | | | | 0.012 | | | | 0.016 | | 0.014 | | | | | 0.013 | |
| Molbydenum | Mo | mg/L | | | | | < 0.00001 | | | | 0.000030 | | 0.00010 | | | | | 0.000040 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | 0.00020 | | | | 0.00040 | | 0.00020 | | | | | 0.00010 | |
| Potassium | K | mg/L | | | | | 0.20 | | | | 0.14 | | 0.13 | | | | | 0.12 | |
| Sodium | Na | mg/L | | | | | 0.13 | | | | 0.090 | | 0.080 | | | | | 0.070 | |
| Strontium | Sr | mg/L | | | | | 0.0038 | | | | 0.0038 | | 0.0034 | | | | | 0.0033 | |
| Tin | Sn | mg/L | | | | | 0.00067 | | | | 0.00039 | | 0.00041 | | | | | 0.00051 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.000011 | | | | 0.0000080 | | 0.000018 | | | | | 0.000010 | |
| Vanadium | V | mg/L | | | | | 0.00022 | | | | 0.00014 | | 0.00013 | | | | | 0.00014 | |
| Zinc | Zn | mg/L | **0.5** | | | | < 0.001 | | | | < 0.001 | | < 0.001 | | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M05-536A-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 808 | 934 | 909 | 947 | 942 | 938 | 933 | 907 | 901 | 932 | 925 | 910 | 920 | 912 |
| pH | | units | 6.0-9.5 | 7.8 | 8.0 | 7.5 | 8.1 | 8.2 | 8.8 | 9.3 | 8.8 | 8.6 | 8.4 | 8.7 | 8.1 | 8.0 | 8.9 |
| Conductivity | | mg/L as CaCO3 | | 42 | 57 | 41 | 47 | 44 | 36 | 36 | 34 | 33 | 32 | 32 | 32 | 32 | 32 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 23 | 16 | 21 | 21 | 16 | 18 | 15 | 15 | 15 | 13 | 14 | 14 | 13 |
| Chloride | Cl | mg/L | | 0.70 | 0.90 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.0 | 2.2 | 2.5 | 2.7 | 2.4 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 | 2.1 | 2.1 | 1.8 | 1.8 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.050 | 0.060 | 0.060 | | 0.060 | | | 0.050 | | | | 0.040 | |
| Antimony | Sb | mg/L | | 0.00090 | 0.0028 | 0.0020 | 0.0017 | | 0.0013 | | | 0.0010 | | | | 0.00070 | |
| Arsenic | As | mg/L | 0.5 | 0.0011 | 0.013 | 0.016 | 0.019 | | 0.023 | | | 0.026 | | | | 0.028 | |
| Barium | Ba | mg/L | | 0.00086 | 0.00028 | 0.00048 | 0.00043 | | 0.00024 | | | 0.00065 | | | | 0.00012 | |
| Boron | B | mg/L | | 0.0015 | 0.0043 | 0.0025 | 0.0027 | | 0.0014 | | | 0.00090 | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | 0.000042 | < 0.000003 | | 0.000036 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 5.2 | 4.1 | 4.6 | 5.0 | 4.9 | 4.6 | 4.3 | 4.2 | 3.7 | 4.0 | 4.1 | 4.1 | 3.9 | 3.6 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000039 | 0.000064 | 0.00013 | 0.000083 | | 0.00013 | | | 0.000069 | | | | 0.000087 | |
| Copper | Cu[3] | mg/L | 0.3 | 0.00090 | < 0.0005 | 0.00050 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | 0.2 | 0.000070 | < 0.00002 | 0.00033 | < 0.00002 | | 0.000060 | | | < 0.00002 | | | | 0.000070 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.60 | 2.0 | 2.0 | 2.4 | | 1.7 | | | 1.3 | | | | 1.1 | |
| Manganese | Mn | mg/L | | 0.011 | 0.013 | 0.015 | 0.017 | | 0.019 | | | 0.016 | | | | 0.020 | |
| Molbydenum | Mo | mg/L | | 0.000070 | 0.00011 | 0.000040 | 0.000090 | | 0.000020 | | | < 0.00001 | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00030 | 0.00040 | 0.00030 | 0.00030 | | 0.00030 | | | < 0.0001 | | | | 0.00020 | |
| Potassium | K | mg/L | | 1.4 | 1.8 | 1.5 | 1.1 | | 0.61 | | | 0.35 | | | | 0.22 | |
| Sodium | Na | mg/L | | 1.0 | 1.7 | 1.2 | 0.79 | | 0.34 | | | 0.18 | | | | 0.090 | |
| Strontium | Sr | mg/L | | 0.0074 | 0.010 | 0.0091 | 0.011 | | 0.0081 | | | 0.0050 | | | | 0.0047 | |
| Tin | Sn | mg/L | | 0.046 | 0.022 | 0.011 | 0.0060 | | 0.0032 | | | 0.014 | | | | 0.0028 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | < 0.000001 | 0.000010 | 0.000085 | 0.0000080 | | 0.000063 | | | 0.0000060 | | | | 0.0000090 | |
| Vanadium | V | mg/L | | 0.00015 | 0.00041 | 0.00041 | 0.00031 | | 0.00034 | | | 0.00029 | | | | 0.00026 | |
| Zinc | Zn | mg/L | 0.5 | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M05-536A-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 914 | 905 | 913 | 877 | 961 | 903 | 886 | 865 | 875 | 849 | 830 | 900 | 871 | 872 |
| pH | | units | **6.0-9.5** | 8.8 | 8.1 | 8.8 | 8.0 | 8.0 | 8.4 | 7.9 | 7.8 | 7.9 | 9.0 | 8.2 | 8.8 | 7.5 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 30 | 28 | 30 | 28 | 32 | 29 | 28 | 27 | 26 | 25 | 46 | 40 | 27 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 13 | 12 | 13 | 11 | 15 | 13 | 12 | 11 | 25 | 12 | 16 | 12 | 11 | 12 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 1.8 | 1.7 | 1.6 | 1.5 | 1.2 | 1.2 | 1.4 | 1.4 | 1.2 | 1.1 | 1.1 | 0.90 | 1.0 | 0.90 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.040 | | | | 0.050 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.00070 | | | | 0.00060 | | | | | 0.00060 | | |
| Arsenic | As | mg/L | **0.5** | | 0.025 | 0.031 | | | | 0.029 | | | | | 0.027 | | |
| Barium | Ba | mg/L | | | | 0.00045 | | | | 0.00023 | | | | | 0.00027 | | |
| Boron | B | mg/L | | | | 0.00030 | | | | < 0.0002 | | | | | < 0.0002 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 4.0 | 3.5 | 4.2 | 3.5 | 4.6 | 3.9 | 3.8 | 3.4 | 3.4 | 3.6 | 3.8 | 3.7 | 3.3 | 3.5 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000096 | | | | 0.000084 | | | | | 0.000085 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00039 | | | | 0.00039 | | | | | 0.0011 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 1.2 | | | | 1.1 | | | | | 1.1 | | |
| Manganese | Mn | mg/L | | | | 0.017 | | | | 0.018 | | | | | 0.020 | | |
| Molbydenum | Mo | mg/L | | | | 0.000020 | | | | 0.000070 | | | | | 0.000050 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.20 | | | | 0.17 | | | | | 0.12 | | |
| Sodium | Na | mg/L | | | | 0.070 | | | | 0.080 | | | | | 0.030 | | |
| Strontium | Sr | mg/L | | | | 0.0052 | | | | 0.0040 | | | | | 0.0018 | | |
| Tin | Sn | mg/L | | | | 0.0013 | | | | 0.0013 | | | | | 0.0011 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.0000050 | | | | 0.0000010 | | | | | 0.0000090 | | |
| Vanadium | V | mg/L | | | | 0.00027 | | | | 0.00021 | | | | | 0.00020 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M05-536A-01 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 872 | 865 | 883 | 868 | 886 | 862 | 869 | 887 | 878 | 877 | 877 | 872 | 880 |
| pH | | units | **6.0-9.5** | 7.8 | 8.4 | 8.3 | 8.3 | 7.7 | 7.9 | 8.4 | 7.6 | 8.2 | 7.9 | 7.8 | 8.1 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 26 | 25 | 25 | 24 | 24 | 25 | 24 | 24 | 28 | 28 | 27 | 25 | 25 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 11 | 11 | 11 | 11 | 10 | 11 | 11 | 12 | 13 | 11 | 11 | 11 |
| Chloride | Cl | mg/L | | | | <0.2 | | | | | < 0.2 | | | | | |
| Sulphate | SO4 | mg/L | | 0.80 | 0.80 | 0.80 | 0.70 | 0.70 | 0.70 | 0.70 | 0.80 | 1.0 | 1.1 | 0.90 | 0.80 | 0.90 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.030 | | | | | 0.040 | | | | | 0.060 |
| Antimony | Sb | mg/L | | | | 0.00070 | | | | | 0.00060 | | | | | 0.00030 |
| Arsenic | As | mg/L | **0.5** | | | 0.0014 | | | | | 0.020 | | | | | 0.019 |
| Barium | Ba | mg/L | | | | 0.00026 | | | | | 0.000070 | | | | | 0.00026 |
| Boron | B | mg/L | | | | < 0.0002 | | | | | < 0.0002 | | | | | 0.0027 |
| Cadmium | Cd[3] | mg/L | | | | 0.000023 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.2 | 3.2 | 3.3 | 3.0 | 3.0 | 3.2 | 2.9 | 2.9 | 3.6 | 3.5 | 3.0 | 3.0 | 3.0 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000034 | | | | | 0.00011 | | | | | 0.000098 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | 0.015 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.000030 | | | | | < 0.00002 | | | | | 0.000030 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.1 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 1.0 | | | | | 0.92 | | | | | 1.1 |
| Manganese | Mn | mg/L | | | | 0.0055 | | | | | 0.015 | | | | | 0.012 |
| Molbydenum | Mo | mg/L | | | | 0.000060 | | | | | 0.000010 | | | | | 0.000060 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | 0.00010 | | | | | 0.00010 |
| Potassium | K | mg/L | | | | 0.093 | | | | | 0.080 | | | | | 0.078 |
| Sodium | Na | mg/L | | | | 0.050 | | | | | 0.030 | | | | | 0.17 |
| Strontium | Sr | mg/L | | | | 0.0028 | | | | | 0.0013 | | | | | 0.018 |
| Tin | Sn | mg/L | | | | 0.00038 | | | | | 0.00053 | | | | | 0.00055 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.000024 | | | | | 0.0000030 | | | | | 0.000047 |
| Vanadium | V | mg/L | | | | 0.000090 | | | | | 0.00015 | | | | | 0.00016 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.001 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-141-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 781 | 905 | 926 | 916 | 925 | 917 | 931 | 898 | 918 | 940 | 901 | 918 | 909 | 912 |
| pH | | units | **6.0-9.5** | 7.8 | 7.8 | 7.5 | 7.8 | 7.8 | 8.6 | 9.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.6 | 7.5 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 39 | 43 | 37 | 36 | 36 | 27 | 27 | 28 | 28 | 28 | 26 | 26 | 27 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 15 | 15 | 12 | 14 | 12 | 13 | 11 | 12 | 12 | 10 | 10 | 10 | 9.0 |
| Chloride | Cl | mg/L | | 0.80 | 1.0 | 0.60 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.1 | 2.1 | 2.7 | 2.7 | 2.6 | 2.3 | 2.2 | 2.2 | 2.1 | 1.8 | 2.2 | 2.3 | 2.8 | 3.2 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.040 | 0.050 | 0.060 | | 0.060 | | | 0.030 | | | | 0.040 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0024 | 0.0022 | 0.0017 | | 0.0015 | | | 0.0013 | | | | 0.0010 | |
| Arsenic | As | mg/L | **0.5** | 0.00030 | 0.00070 | 0.00070 | 0.00080 | | 0.0013 | | | 0.0013 | | | | 0.0013 | |
| Barium | Ba | mg/L | | 0.00061 | 0.00028 | 0.00028 | 0.00028 | | 0.00029 | | | 0.00042 | | | | 0.00029 | |
| Boron | B | mg/L | | 0.0017 | 0.0029 | 0.0027 | 0.0022 | | 0.0018 | | | 0.0012 | | | | 0.00040 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000070 | < 0.000003 | < 0.000003 | | 0.000020 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.2 | 3.0 | 3.3 | 3.1 | 3.0 | 2.7 | 2.3 | 2.3 | 2.1 | 2.4 | 2.4 | 2.3 | 2.2 | 2.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000070 | 0.000038 | 0.000022 | 0.000015 | | 0.000049 | | | 0.0000090 | | | | 0.000021 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | 0.010 | | 0.020 | | | 0.010 | | | | 0.010 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000060 | < 0.00002 | < 0.00002 | < 0.00002 | | 0.000050 | | | < 0.00002 | | | | 0.000060 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 1.0 | 1.7 | 2.2 | 2.1 | | 1.9 | | | 1.6 | | | | 1.4 | |
| Manganese | Mn | mg/L | | 0.0074 | 0.0081 | 0.0087 | 0.0080 | | 0.0076 | | | 0.0070 | | | | 0.0081 | |
| Molbydenum | Mo | mg/L | | 0.000050 | 0.000090 | 0.000050 | 0.000060 | | 0.000040 | | | < 0.00001 | | | | 0.000030 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | |
| Potassium | K | mg/L | | 0.91 | 1.1 | 1.1 | 0.89 | | 0.57 | | | 0.34 | | | | 0.22 | |
| Sodium | Na | mg/L | | 0.92 | 1.4 | 1.3 | 1.1 | | 0.56 | | | 0.27 | | | | 0.14 | |
| Strontium | Sr | mg/L | | 0.0046 | 0.0046 | 0.0047 | 0.0046 | | 0.0038 | | | 0.0027 | | | | 0.0026 | |
| Tin | Sn | mg/L | | 0.028 | 0.020 | 0.012 | 0.0052 | | 0.0020 | | | 0.0014 | | | | 0.00065 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.0000020 | 0.0000040 | 0.0000060 | 0.0000030 | | 0.000035 | | | < 0.000001 | | | | 0.0000040 | |
| Vanadium | V | mg/L | | 0.00012 | 0.00024 | 0.00020 | 0.00019 | | 0.00021 | | | 0.00016 | | | | 0.00014 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-141-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 912 | 897 | 906 | 892 | 915 | 892 | 892 | 859 | 855 | 855 | 835 | 895 | 848 | 880 |
| pH | | units | **6.0-9.5** | 7.5 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.5 | 7.4 | 7.6 | 8.0 | 7.6 | 7.7 | 7.2 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 27 | 28 | 29 | 31 | 27 | 29 | 30 | 32 | 32 | 29 | 46 | 44 | 29 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 8.0 | 8.0 | 8.0 | 7.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 9.0 | 10 | 8.0 | 8.0 | 9.0 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 4.0 | 4.3 | 5.3 | 5.9 | 4.0 | 5.3 | 5.5 | 6.4 | 6.1 | 5.2 | 4.9 | 3.1 | 4.7 | 3.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.040 | | | | 0.040 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.00090 | | | | 0.00080 | | | | | 0.00080 | | |
| Arsenic | As | mg/L | **0.5** | | 0.0010 | 0.0013 | | | | 0.0015 | | | | | 0.0017 | | |
| Barium | Ba | mg/L | | | | 0.00049 | | | | 0.00027 | | | | | 0.00054 | | |
| Boron | B | mg/L | | | | 0.00040 | | | | 0.00030 | | | | | 0.00030 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 2.4 | 2.3 | 2.8 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.6 | 2.4 | 2.4 | 2.5 | 2.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000020 | | | | 0.000019 | | | | | 0.000023 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00040 | | | | 0.00035 | | | | | 0.00097 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 1.8 | | | | 1.7 | | | | | 1.4 | | |
| Manganese | Mn | mg/L | | | | 0.0080 | | | | 0.0069 | | | | | 0.0075 | | |
| Molbydenum | Mo | mg/L | | | | 0.000040 | | | | 0.000040 | | | | | 0.000040 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.18 | | | | 0.16 | | | | | 0.080 | | |
| Sodium | Na | mg/L | | | | 0.10 | | | | 0.11 | | | | | 0.040 | | |
| Strontium | Sr | mg/L | | | | 0.0032 | | | | 0.0031 | | | | | 0.0013 | | |
| Tin | Sn | mg/L | | | | 0.00058 | | | | 0.00053 | | | | | 0.00061 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | < 0.000001 | | | | < 0.000001 | | | | | 0.0000040 | | |
| Vanadium | V | mg/L | | | | 0.00011 | | | | 0.000090 | | | | | 0.00010 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-141-01 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 872 | 860 | 853 | 861 | 872 | 855 | 858 | 902 | 848 | 886 | 849 | 892 | 890 |
| pH | | units | **6.0-9.5** | 7.5 | 7.4 | 7.6 | 7.6 | 7.4 | 7.5 | 7.6 | 7.3 | 7.4 | 7.4 | 7.6 | 7.5 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 29 | 27 | 27 | 26 | 27 | 27 | 27 | 26 | 34 | 30 | 31 | 27 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 9.0 | 10 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 7.0 | 8.0 | 9.0 | 8.0 | 9.0 |
| Chloride | Cl | mg/L | | | | <0.2 | | < 0.2 | | | < 0.2 | | | | | |
| Sulphate | SO4 | mg/L | | 4.2 | 4.1 | 4.2 | 3.9 | 3.6 | 3.5 | 4.2 | 3.6 | 7.1 | 4.7 | 4.6 | 3.4 | 3.5 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al [4] | mg/L | | | | 0.020 | | | | | 0.040 | | | | | 0.020 |
| Antimony | Sb | mg/L | | | | 0.00030 | | | | | 0.00070 | | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | | | 0.0044 | | | | | 0.0012 | | | | | 0.0011 |
| Barium | Ba | mg/L | | | | 0.00080 | | | | | 0.00014 | | | | | 0.00015 |
| Boron | B | mg/L | | | | < 0.0002 | | | | | 0.00020 | | | | | 0.0013 |
| Cadmium | Cd [3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.5 | 2.2 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2.3 | 2.8 | 2.6 | 2.3 | 2.3 | 2.2 |
| Chromium | Cr [2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000067 | | | | | 0.000025 | | | | | 0.000024 |
| Copper | Cu [3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | 0.00050 |
| Iron | Fe | mg/L | | | | 0.012 | | | | | < 0.002 | | | | | 0.051 |
| Lead | Pb [3] | mg/L | **0.2** | | | 0.000040 | | | | | < 0.00002 | | | | | 0.000030 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.1 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 1.5 | | | | | 1.3 | | | | | 1.4 |
| Manganese | Mn | mg/L | | | | 0.0070 | | | | | 0.0065 | | | | | 0.0071 |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | | 0.000020 | | | | | 0.000050 |
| Nickel | Ni [3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Potassium | K | mg/L | | | | 0.083 | | | | | 0.075 | | | | | 0.057 |
| Sodium | Na | mg/L | | | | 0.060 | | | | | 0.050 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.0021 | | | | | 0.0016 | | | | | 0.0022 |
| Tin | Sn | mg/L | | | | 0.00096 | | | | | 0.00038 | | | | | 0.00047 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00016 | | | | | 0.0000010 | | | | | 0.000040 |
| Vanadium | V | mg/L | | | | 0.000030 | | | | | 0.000070 | | | | | 0.000070 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.001 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-184-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 806 | 978 | 988 | 988 | 989 | 995 | 983 | 983 | 985 | 985 | 989 | 986 | 986 | 989 | 986 | 991 | 995 | 988 | 992 | 993 | 991 |
| pH | | units | 6.0-9.5 | 9.0 | 8.7 | 8.1 | 8.3 | 7.9 | 8.2 | 7.8 | 7.9 | 7.6 | 7.7 | 7.6 | 8.0 | 7.8 | 7.5 | 7.4 | 7.5 | 7.6 | 6.8 | 7.6 | 7.7 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 55 | 9.0 | 51 | 54 | 6.0 | 37 | 31 | 40 | 36 | 35 | 26 | 26 | 27 | 31 | 31 | 32 | 33 | 31 | 22 | 30 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 35 | 36 | 33 | 27 | 25 | 39 | 21 | 20 | 15 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 24 | 13 | 25 | 13 |
| Chloride | Cl | mg/L | | 0.70 | 0.60 | 0.30 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.014 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.6 | 3.0 | 2.1 | 1.6 | 1.1 | 1.0 | 0.70 | 0.70 | 2.2 | 0.60 | 0.50 | 0.50 | 0.50 | 0.50 | 0.40 | 0.50 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.040 | 0.040 | 0.050 | | 0.040 | | | 0.040 | | | | 0.030 | | | | 0.050 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00050 | 0.00090 | 0.00070 | 0.00050 | | 0.00060 | | | 0.0018 | | | | 0.00040 | | | | 0.00050 | | | | 0.00030 |
| Arsenic | As | mg/L | 0.5 | 0.0036 | 0.0067 | 0.0062 | 0.0054 | | 0.0045 | | | 0.0068 | | | | 0.0031 | | | | 0.0031 | | | | 0.0025 |
| Barium | Ba | mg/L | | 0.00068 | 0.0012 | 0.0013 | 0.0013 | | 0.0017 | | | 0.00066 | | | | 0.0019 | | | | 0.0017 | | | | 0.0014 |
| Boron | B | mg/L | | 0.011 | 0.024 | 0.018 | 0.015 | | 0.012 | | | 0.0028 | | | | 0.0044 | | | | 0.0027 | | | | 0.0041 |
| Cadmium | Cd[3] | mg/L | | 0.0000050 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.2 | 3.3 | 3.1 | 3.2 | 3.4 | 3.7 | 3.3 | 3.8 | 4.8 | 4.2 | 3.9 | 4.0 | 4.2 | 4.4 | 4.2 | 4.6 | 4.7 | 4.7 | 4.3 | 4.2 | 4.3 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000012 | 0.000015 | 0.000012 | 0.0000090 | | 0.000017 | | | 0.000023 | | | | 0.000011 | | | | 0.000020 | | | | 0.000014 |
| Copper | Cu[3] | mg/L | 0.3 | 0.00070 | < 0.0005 | < 0.0005 | 0.00070 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.010 | 0.0040 | 0.0030 | 0.0040 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | 0.0090 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.18 | 0.23 | 0.26 | 0.27 | | 0.34 | | | 0.71 | | | | 0.46 | | | | 0.46 | | | | 0.42 |
| Manganese | Mn | mg/L | | 0.0057 | 0.012 | 0.012 | 0.013 | | 0.014 | | | 0.013 | | | | 0.012 | | | | 0.014 | | | | 0.012 |
| Molbydenum | Mo | mg/L | | 0.00022 | 0.00034 | 0.00022 | 0.00012 | | 0.00036 | | | 0.000050 | | | | 0.000020 | | | | 0.000010 | | | | 0.000020 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | < 0.0001 | < 0.0001 | 0.00030 | 0.00010 | | 0.00020 | | | 0.00010 | | | | 0.00050 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.2 | 2.6 | 2.7 | 2.4 | | 2.4 | | | 1.3 | | | | 1.8 | | | | 1.4 | | | | 1.1 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 7.9 | 11 | 8.3 | 6.2 | | 4.1 | | | 0.32 | | | | 0.78 | | | | 0.35 | | | | 0.19 |
| Strontium | Sr | mg/L | | 0.0036 | 0.0044 | 0.0049 | 0.0050 | | 0.0061 | | | 0.0076 | | | | 0.0080 | | | | 0.0081 | | | | 0.0073 |
| Tin | Sn | mg/L | | 0.00081 | 0.00062 | 0.00050 | 0.00024 | | 0.00022 | | | 0.00015 | | | | 0.00014 | | | | 0.00024 | | | | 0.00023 |
| Titanium | Ti | mg/L | | 0.0003 | 0.0003 | 0.0003 | 0.0002 | | 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00006 | 0.00032 | 0.00028 | 0.00025 | | 0.00019 | | | 0.000040 | | | | 0.00010 | | | | 0.000060 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000014 | 0.000078 | 0.000074 | 0.000078 | | 0.000073 | | | 0.000045 | | | | 0.000086 | | | | 0.000092 | | | | 0.000092 |
| Vanadium | V | mg/L | | 0.0012 | 0.0011 | 0.00085 | 0.00074 | | 0.00065 | | | 0.00025 | | | | 0.00041 | | | | 0.00038 | | | | 0.00032 |
| Yttrium | Y | mg/L | | 0.000007 | 0.000015 | 0.000015 | 0.000019 | | 0.000012 | | | 0.000018 | | | | 0.0000050 | | | | 0.0000080 | | | | 0.0000070 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 1 Tiri GW OP E (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 34300 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 |
| Leachate Volume Recovered | | mL | | 1393 | 8951 | 9836 | 9768 | 9632 | 9768 | 9586 | 9518 | 33318 | 10494 | 9268 | 9632 | 9178 | 9360 | 10108 | 9518 |
| pH | | units | **6.0-9.5** | 7.7 | 8.2 | 8.3 | 8.5 | 8.2 | 8.1 | 7.6 | 8.1 | 8.0 | 8.0 | 8.1 | 7.7 | 8.1 | 8.0 | 7.8 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 194 | 529 | 285 | 275 | 268 | 265 | 232 | 227 | 143 | 154 | 141 | 177 | 169 | 186 | 209 | 148 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 31 | 83 | 65 | 64 | 60 | 60 | 63 | 63 | 52 | 51 | 49 | 21 | 47 | 53 | 50 | 48 |
| Chloride | Cl | mg/L | | 7.4 | 25 | 12 | 8.7 | | 5.7 | | | 1.7 | | | | 0.40 | | | |
| Fluoride | F | mg/L | | 0.17 | 0.22 | 0.13 | 0.13 | | 0.10 | | | 0.070 | | | | 0.070 | | | |
| Phosphorus | P | mg/L | | 0.033 | 0.020 | 0.012 | 0.018 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 37 | 150 | 80 | 64 | 57 | 54 | 51 | 48 | 39 | 42 | 33 | 41 | 37 | 42 | 49 | 41 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.34 | 0.15 | 0.22 | 0.18 | | 0.19 | | | 0.18 | | | | 0.14 | | | |
| Antimony | Sb | mg/L | | 0.0010 | 0.0051 | 0.0039 | 0.0036 | | 0.0036 | | | 0.0027 | | | | 0.0025 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0037 | 0.030 | 0.030 | 0.031 | | 0.036 | | | 0.038 | | | | 0.033 | | | |
| Barium | Ba | mg/L | | 0.011 | 0.029 | 0.016 | 0.013 | | 0.012 | | | 0.0086 | | | | 0.0085 | | | |
| Boron | B | mg/L | | 0.0086 | 0.027 | 0.014 | 0.013 | | 0.030 | | | 0.0093 | | | | 0.013 | | | |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 10 | 24 | 20 | 18 | 19 | 19 | 20 | 18 | 16 | 19 | 19 | 22 | 19 | 21 | 23 | 22 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.000056 | 0.00022 | 0.00022 | 0.00020 | | 0.00024 | | | 0.00032 | | | | 0.00043 | | | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | 0.00080 | 0.00060 | < 0.0005 | | 0.0024 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.0030 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | 0.0030 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000020 | < 0.00002 | 0.000020 | 0.000070 | | 0.00043 | | | 0.000060 | | | | 0.000020 | | | |
| Lithium | Li | mg/L | | 0.0010 | 0.0020 | 0.0020 | 0.0010 | | 0.0020 | | | 0.0010 | | | | 0.0010 | | | |
| Magnesium | Mg | mg/L | | 1.6 | 8.7 | 6.8 | 6.1 | | 6.4 | | | 4.9 | | | | 5.3 | | | |
| Manganese | Mn | mg/L | | 0.0090 | 0.0087 | 0.0080 | 0.0100 | | 0.014 | | | 0.013 | | | | 0.016 | | | |
| Molbydenum | Mo | mg/L | | 0.0012 | 0.0063 | 0.0037 | 0.0027 | | 0.0031 | | | 0.0014 | | | | 0.0011 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00050 | 0.0018 | 0.00080 | 0.00070 | | 0.0011 | | | 0.00090 | | | | 0.0012 | | | |
| Potassium | K | mg/L | | 16 | 35 | 24 | 18 | | 15 | | | 9.5 | | | | 7.1 | | | |
| Selenium | Se | mg/L | | < 0.001 | 0.0030 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 16 | 49 | 31 | 21 | | 15 | | | 6.3 | | | | 3.1 | | | |
| Strontium | Sr | mg/L | | 0.060 | 0.19 | 0.14 | 0.13 | | 0.13 | | | 0.095 | | | | 0.11 | | | |
| Tin | Sn | mg/L | | 0.00035 | 0.00010 | 0.000020 | < 0.00001 | | 0.00010 | | | 0.000020 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.0005 | 0.00030 | 0.00090 | 0.00040 | | 0.00060 | | | 0.0011 | | | | 0.00090 | | | |
| Tungsten | W | mg/L | | 0.00010 | 0.0013 | 0.00022 | 0.00018 | | 0.00019 | | | 0.00022 | | | | 0.00013 | | | |
| Uranuium | U | mg/L | | 0.00004 | 0.0017 | 0.00097 | 0.00087 | | 0.00096 | | | 0.00076 | | | | 0.00073 | | | |
| Vanadium | V | mg/L | | 0.00021 | 0.00081 | 0.00044 | 0.00042 | | 0.00043 | | | 0.00034 | | | | 0.00027 | | | |
| Yttrium | Y | mg/L | | 0.0000090 | 0.0000060 | 0.0000050 | 0.0000060 | | 0.0000070 | | | 0.000019 | | | | 0.000012 | | | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0060 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 1 Tiri GW OP E (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 |
| Leachate Volume Recovered | | mL | | 9292 | 9088 | 10131 | 9836 | 9518 | 9677 | 9541 | 9791 | 9700 | 9428 | 9609 | 9224 | 9541 | 9586 | 9677 |
| pH | | units | **6.0-9.5** | 8.0 | 7.8 | 7.9 | 7.9 | 7.9 | 7.8 | 8.0 | 7.8 | 7.9 | 8.0 | 7.9 | 7.9 | 8.0 | 8.0 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 135 | 157 | 188 | 144 | 175 | 176 | 129 | 120 | 163 | 116 | 156 | 118 | 119 | 120 | 127 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 48 | 44 | 48 | 49 | 52 | 45 | 43 | 44 | 44 | 43 | 43 | 44 | 42 | 43 | 45 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.080 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | 0.011 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 39 | 33 | 41 | 43 | 37 | 37 | 34 | 33 | 33 | 29 | 31 | 29 | 31 | 32 | 35 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.13 | | | | 0.13 | | | | 0.11 | | | | | | 0.12 |
| Antimony | Sb | mg/L | | 0.0024 | | | | 0.0017 | | | | 0.0013 | | | | | | 0.0014 |
| Arsenic | As | mg/L | **0.5** | 0.030 | | | | 0.026 | | | | 0.023 | | | | | | 0.020 |
| Barium | Ba | mg/L | | 0.0086 | | | | 0.0078 | | | | 0.0070 | | | | | | 0.0072 |
| Boron | B | mg/L | | 0.0060 | | | | 0.0058 | | | | 0.0039 | | | | | | 0.0039 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | 0.0000080 | | | | 0.000010 | | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 22 | 19 | 23 | 23 | 22 | 22 | 21 | 19 | 20 | 19 | 20 | 19 | 19 | 21 | 22 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00050 | | | | 0.00044 | | | | 0.00049 | | | | | | 0.00058 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | 0.00070 | | | | < 0.0005 | | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | 0.0040 | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000020 | | | | 0.000050 | | | | 0.000020 | | | | | | 0.000060 |
| Lithium | Li | mg/L | | 0.0010 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 5.9 | | | | 5.6 | | | | 5.2 | | | | | | 5.4 |
| Manganese | Mn | mg/L | | 0.018 | | | | 0.014 | | | | 0.011 | | | | | | 0.012 |
| Molbydenum | Mo | mg/L | | 0.0013 | | | | 0.0018 | | | | 0.0018 | | | | | | 0.0023 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | | | | 0.00040 | | | | 0.0012 | | | | | | 0.0012 |
| Potassium | K | mg/L | | 6.0 | | | | 4.6 | | | | 4.0 | | | | | | 3.3 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 2.2 | | | | 1.5 | | | | 0.98 | | | | | | 0.74 |
| Strontium | Sr | mg/L | | 0.12 | | | | 0.12 | | | | 0.11 | | | | | | 0.12 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00080 | | | | 0.0011 | | | | 0.0013 | | | | | | 0.00090 |
| Tungsten | W | mg/L | | 0.000040 | | | | < 0.00003 | | | | 0.000030 | | | | | | < 0.00003 |
| Uranuium | U | mg/L | | 0.00084 | | | | 0.00068 | | | | 0.00065 | | | | | | 0.00079 |
| Vanadium | V | mg/L | | 0.00022 | | | | 0.00019 | | | | 0.00015 | | | | | | 0.00013 |
| Yttrium | Y | mg/L | | 0.000011 | | | | 0.000011 | | | | 0.0000050 | | | | | | 0.0000070 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 2 Tiri GW OP W (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 16900 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 4403 | 4801 | 4756 | 4778 | 4665 | 4710 | 4620 | 4733 | 16331 | 5005 | 4530 | 4688 | 4461 | 4506 | 4846 | 4552 |
| pH | | units | 6.0-9.5 | 7.4 | 8.2 | 8.2 | 8.3 | 8.1 | 8.0 | 8.2 | 8.1 | 7.7 | 7.8 | 8.0 | 7.5 | 8.2 | 7.9 | 7.7 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 406 | 269 | 218 | 241 | 242 | 227 | 211 | 216 | 150 | 137 | 143 | 183 | 169 | 166 | 194 | 141 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 46 | 57 | 59 | 55 | 55 | 54 | 57 | 54 | 46 | 45 | 48 | 49 | 44 | 44 | 48 | 45 |
| Chloride | Cl | mg/L | | 32 | 20 | 13 | 12 | | 9.0 | | | 3.2 | | | | 0.70 | | | |
| Fluoride | F | mg/L | | 0.20 | 0.14 | 0.12 | 0.10 | | 0.060 | | | 0.060 | | | | 0.070 | | | |
| Phosphorus | P | mg/L | | 0.022 | < 0.009 | 0.010 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 85 | 58 | 51 | 48 | 46 | 50 | 50 | 48 | 41 | 22 | 37 | 37 | 35 | 37 | 43 | 38 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.21 | 0.13 | 0.15 | 0.15 | | 0.15 | | | 0.14 | | | | 0.13 | | | |
| Antimony | Sb | mg/L | | 0.0045 | 0.0056 | 0.0059 | 0.0058 | | 0.0058 | | | 0.0042 | | | | 0.0037 | | | |
| Arsenic | As | mg/L | 0.5 | 0.077 | 0.068 | 0.070 | 0.072 | | 0.080 | | | 0.072 | | | | 0.062 | | | |
| Barium | Ba | mg/L | | 0.014 | 0.012 | 0.011 | 0.010 | | 0.0099 | | | 0.0083 | | | | 0.0078 | | | |
| Boron | B | mg/L | | 0.017 | 0.020 | 0.016 | 0.016 | | 0.018 | | | 0.011 | | | | 0.0097 | | | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000030 | 0.000012 | < 0.000003 | | 0.0000050 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 16 | 14 | 17 | 17 | 18 | 18 | 20 | 19 | 18 | 18 | 20 | 20 | 18 | 19 | 21 | 21 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00025 | 0.00022 | 0.00031 | 0.00034 | | 0.00046 | | | 0.00066 | | | | 0.00084 | | | |
| Copper | Cu[3] | mg/L | 0.3 | 0.0045 | 0.0010 | 0.00090 | 0.00070 | | 0.00090 | | | 0.00070 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.0040 | < 0.002 | 0.022 | 0.0090 | | 0.0050 | | | 0.0030 | | | | 0.0040 | | | |
| Lead | Pb[3] | mg/L | 0.2 | 0.000040 | 0.000050 | 0.000020 | 0.000060 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | |
| Lithium | Li | mg/L | | 0.0020 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | |
| Magnesium | Mg | mg/L | | 4.6 | 4.3 | 5.5 | 5.7 | | 5.9 | | | 5.3 | | | | 4.9 | | | |
| Manganese | Mn | mg/L | | 0.012 | 0.011 | 0.016 | 0.015 | | 0.023 | | | 0.024 | | | | 0.028 | | | |
| Molbydenum | Mo | mg/L | | 0.0077 | 0.0055 | 0.0048 | 0.0039 | | 0.0037 | | | 0.0023 | | | | 0.0014 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0021 | 0.0017 | 0.0014 | 0.0014 | | 0.0019 | | | 0.0018 | | | | 0.0010 | | | |
| Potassium | K | mg/L | | 22 | 15 | 16 | 13 | | 11 | | | 7.9 | | | | 5.4 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0020 | 0.0010 | 0.0020 | | 0.0020 | | | 0.0010 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 57 | 27 | 26 | 21 | | 17 | | | 8.7 | | | | 3.7 | | | |
| Strontium | Sr | mg/L | | 0.11 | 0.091 | 0.11 | 0.11 | | 0.11 | | | 0.097 | | | | 0.092 | | | |
| Tin | Sn | mg/L | | 0.00010 | 0.000020 | 0.000030 | < 0.00001 | | 0.000020 | | | < 0.00001 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00060 | 0.00040 | 0.00090 | 0.00080 | | 0.00070 | | | 0.00070 | | | | 0.00080 | | | |
| Tungsten | W | mg/L | | 0.00073 | 0.0011 | 0.00053 | 0.00053 | | 0.00050 | | | 0.00023 | | | | 0.00016 | | | |
| Uranium | U | mg/L | | 0.00075 | 0.0012 | 0.0013 | 0.0016 | | 0.0020 | | | 0.0017 | | | | 0.0015 | | | |
| Vanadium | V | mg/L | | 0.0012 | 0.00084 | 0.00058 | 0.00060 | | 0.00056 | | | 0.00040 | | | | 0.00030 | | | |
| Yttrium | Y | mg/L | | 0.000014 | 0.000010 | 0.0000080 | 0.000015 | | 0.000022 | | | 0.000017 | | | | 0.000014 | | | |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 2 Tiri GW OP W (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 4461 | 4415 | 4960 | 4801 | 4620 | 4688 | 4597 | 4733 | 4642 | 4597 | 4597 | 4597 | 4665 | 4688 | 4620 |
| pH | | units | 6.0-9.5 | 8.0 | 7.8 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 7.6 | 7.8 | 7.9 | 7.7 | 7.9 | 7.9 | 7.9 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 115 | 146 | 178 | 135 | 166 | 164 | 115 | 108 | 148 | 113 | 145 | 121 | 118 | 121 | 120 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 45 | 37 | 43 | 46 | 49 | 42 | 40 | 36 | 38 | 39 | 37 | 39 | 39 | 37 | 48 |
| Chloride | Cl | mg/L | | 0.30 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 37 | 32 | 39 | 41 | 36 | 35 | 32 | 32 | 32 | 31 | 32 | 34 | 35 | 36 | 36 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.11 | | | | 0.080 | | | | 0.090 | | | | | | 0.090 |
| Antimony | Sb | mg/L | | 0.0033 | | | | 0.0022 | | | | 0.0016 | | | | | | 0.0016 |
| Arsenic | As | mg/L | 0.5 | 0.052 | | | | 0.045 | | | | 0.041 | | | | | | 0.033 |
| Barium | Ba | mg/L | | 0.0077 | | | | 0.0071 | | | | 0.0057 | | | | | | 0.0063 |
| Boron | B | mg/L | | 0.0068 | | | | 0.0060 | | | | 0.0040 | | | | | | 0.0039 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | 0.0000080 | | | | 0.000012 | | | | | | 0.0000060 |
| Calcium | Ca | mg/L | | 21 | 18 | 21 | 21 | 21 | 21 | 20 | 18 | 18 | 19 | 19 | 20 | 20 | 22 | 21 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.0010 | | | | 0.00096 | | | | 0.00082 | | | | | | 0.00081 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | | | | 0.00050 | | | | < 0.0005 | | | | | | 0.00070 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | 0.0070 | | | | | | 0.0060 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000030 | | | | 0.000040 | | | | 0.000060 | | | | | | 0.000080 |
| Lithium | Li | mg/L | | 0.0010 | | | | 0.0010 | | | | < 0.001 | | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 5.6 | | | | 5.2 | | | | 4.3 | | | | | | 5.0 |
| Manganese | Mn | mg/L | | 0.032 | | | | 0.026 | | | | 0.017 | | | | | | 0.014 |
| Molbydenum | Mo | mg/L | | 0.0013 | | | | 0.0016 | | | | 0.0017 | | | | | | 0.0033 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0010 | | | | 0.0010 | | | | 0.0017 | | | | | | 0.0020 |
| Potassium | K | mg/L | | 4.6 | | | | 3.3 | | | | 2.5 | | | | | | 2.2 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 2.5 | | | | 1.5 | | | | 0.87 | | | | | | 0.71 |
| Strontium | Sr | mg/L | | 0.10 | | | | 0.097 | | | | 0.078 | | | | | | 0.092 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.0010 | | | | 0.00060 | | | | 0.0019 | | | | | | 0.00070 |
| Tungsten | W | mg/L | | 0.000060 | | | | 0.00024 | | | | < 0.00003 | | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.0017 | | | | 0.0016 | | | | 0.0013 | | | | | | 0.0015 |
| Vanadium | V | mg/L | | 0.00027 | | | | 0.00021 | | | | 0.00016 | | | | | | 0.00013 |
| Yttrium | Y | mg/L | | 0.000013 | | | | 0.0000080 | | | | 0.000024 | | | | | | 0.000024 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 3 Tiri GW UG (All) (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 17500 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 924 | 4846 | 4982 | 4959 | 4846 | 4914 | 4778 | 4823 | 16669 | 5413 | 4542 | 4800 | 4347 | 4392 | 5254 | 4641 |
| pH | | units | **6.0-9.5** | 7.4 | 8.1 | 8.4 | 8.4 | 7.9 | 8.1 | 8.2 | 8.3 | 7.9 | 8.0 | 8.1 | 8.0 | 8.1 | 8.1 | 7.9 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 564 | 392 | 257 | 213 | 212 | 179 | 158 | 160 | 99 | 94 | 97 | 130 | 117 | 117 | 137 | 98 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 79 | 74 | 64 | 59 | 59 | 61 | 58 | 46 | 46 | 46 | 52 | 45 | 49 | 54 | 47 |
| Chloride | Cl | mg/L | | 37 | 24 | 9.8 | 5.6 | | 2.5 | | | 0.30 | | | | < 0.2 | | | |
| Fluoride | F | mg/L | | 0.34 | 0.27 | 0.21 | 0.17 | | 0.14 | | | 0.080 | | | | 0.080 | | | |
| Phosphorus | P | mg/L | | 0.018 | < 0.009 | 0.011 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 100 | 85 | 52 | 36 | 30 | 27 | 24 | 21 | 16 | 13 | 12 | 13 | 11 | 13 | 15 | 13 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.13 | 0.15 | 0.17 | | 0.20 | | | 0.18 | | | | 0.20 | | | |
| Antimony | Sb | mg/L | | 0.0053 | 0.015 | 0.014 | 0.014 | | 0.013 | | | 0.0089 | | | | 0.0072 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0056 | 0.11 | 0.100 | 0.12 | | 0.14 | | | 0.14 | | | | 0.14 | | | |
| Barium | Ba | mg/L | | 0.066 | 0.038 | 0.035 | 0.031 | | 0.028 | | | 0.022 | | | | 0.023 | | | |
| Boron | B | mg/L | | 0.028 | 0.042 | 0.029 | 0.024 | | 0.021 | | | 0.012 | | | | 0.0081 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000011 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 29 | 21 | 16 | 15 | 14 | 14 | 15 | 14 | 12 | 12 | 12 | 14 | 12 | 13 | 14 | 13 |
| Chromium | Cr[2] | mg/L | | 0.00050 | 0.00060 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00082 | 0.00058 | 0.00050 | 0.00049 | | 0.00049 | | | 0.00053 | | | | 0.00060 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0018 | 0.00090 | 0.00070 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | < 0.002 | < 0.002 | 0.017 | < 0.002 | | 0.0040 | | | < 0.002 | | | | 0.0070 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | 0.000050 | 0.000040 | 0.000040 | | 0.000080 | | | 0.000030 | | | | 0.000050 | | | |
| Lithium | Li | mg/L | | 0.0030 | 0.0030 | 0.0030 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | |
| Magnesium | Mg | mg/L | | 7.2 | 9.9 | 7.6 | 6.7 | | 5.9 | | | 4.7 | | | | 4.0 | | | |
| Manganese | Mn | mg/L | | 0.14 | 0.010 | 0.0097 | 0.0096 | | 0.011 | | | 0.0091 | | | | 0.0096 | | | |
| Molbydenum | Mo | mg/L | | 0.0059 | 0.0061 | 0.0038 | 0.0025 | | 0.0019 | | | 0.00093 | | | | 0.00063 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0025 | 0.0033 | 0.0018 | 0.0016 | | 0.0013 | | | 0.00080 | | | | 0.00030 | | | |
| Potassium | K | mg/L | | 40 | 36 | 23 | 17 | | 12 | | | 8.1 | | | | 5.5 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0030 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | 0.0010 | | | |
| Sodium | Na | mg/L | | 52 | 42 | 23 | 14 | | 7.2 | | | 2.9 | | | | 1.2 | | | |
| Strontium | Sr | mg/L | | 0.22 | 0.21 | 0.16 | 0.14 | | 0.13 | | | 0.10 | | | | 0.095 | | | |
| Tin | Sn | mg/L | | 0.0011 | 0.00015 | 0.000070 | < 0.00001 | | 0.000030 | | | 0.000010 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | 0.000020 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00030 | 0.00040 | 0.00050 | 0.00020 | | 0.00030 | | | 0.00040 | | | | 0.00040 | | | |
| Tungsten | W | mg/L | | 0.00080 | 0.0014 | 0.00075 | 0.00064 | | 0.00054 | | | 0.00039 | | | | 0.00027 | | | |
| Uranium | U | mg/L | | 0.00031 | 0.0011 | 0.00075 | 0.00060 | | 0.00058 | | | 0.00040 | | | | 0.00045 | | | |
| Vanadium | V | mg/L | | 0.00014 | 0.0013 | 0.0012 | 0.0011 | | 0.0013 | | | 0.0010 | | | | 0.00091 | | | |
| Yttrium | Y | mg/L | | 0.000013 | 0.000010 | 0.0000090 | 0.000012 | | 0.000010 | | | 0.0000060 | | | | 0.000013 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

**Appendix B.7: Kinetic Test Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 3 Tiri GW UG (All) (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 4619 | 4483 | 5231 | 5004 | 4800 | 4914 | 4732 | 4959 | 4868 | 4778 | 4800 | 4732 | 4800 | 4846 | 4868 |
| pH | | units | **6.0-9.5** | 8.1 | 8.0 | 7.7 | 7.9 | 8.2 | 8.0 | 8.2 | 7.9 | 7.9 | 8.1 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 |
| Conductivity | | mg/L as CaCO3 | | 131 | 104 | 100 | 92 | 116 | 116 | 87 | 81 | 108 | 83 | 107 | 88 | 86 | 88 | 89 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 41 | 48 | 46 | 48 | 45 | 44 | 40 | 42 | 42 | 41 | 42 | 42 | 43 | 43 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.060 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 12 | 11 | 13 | 13 | 12 | 12 | 11 | 12 | 11 | 11 | 11 | 12 | 13 | 13 | 14 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.19 | | | | 0.16 | | | | 0.15 | | | | | | 0.16 |
| Antimony | Sb | mg/L | | 0.0070 | | | | 0.0054 | | | | 0.0043 | | | | | | 0.0040 |
| Arsenic | As | mg/L | **0.5** | 0.14 | | | | 0.13 | | | | 0.12 | | | | | | 0.099 |
| Barium | Ba | mg/L | | 0.023 | | | | 0.023 | | | | 0.020 | | | | | | 0.023 |
| Boron | B | mg/L | | 0.0058 | | | | 0.0049 | | | | 0.0034 | | | | | | 0.0029 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | < 0.000003 | | | | 0.0000040 | | | | | | 0.000012 |
| Calcium | Ca | mg/L | | 13 | 12 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 13 | 13 | 13 | 14 | 14 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00071 | | | | 0.00086 | | | | 0.00086 | | | | | | 0.00099 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | 0.00050 |
| Iron | Fe | mg/L | | 0.0040 | | | | 0.0040 | | | | 0.0050 | | | | | | 0.0060 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000070 | | | | 0.000080 | | | | 0.000060 | | | | | | 0.00012 |
| Lithium | Li | mg/L | | 0.0020 | | | | 0.0020 | | | | 0.0020 | | | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 4.4 | | | | 4.1 | | | | 3.8 | | | | | | 4.0 |
| Manganese | Mn | mg/L | | 0.011 | | | | 0.012 | | | | 0.0095 | | | | | | 0.0098 |
| Molbydenum | Mo | mg/L | | 0.00048 | | | | 0.00059 | | | | 0.00051 | | | | | | 0.00081 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00070 | | | | 0.00030 | | | | 0.00090 | | | | | | 0.00090 |
| Potassium | K | mg/L | | 5.3 | | | | 4.5 | | | | 4.2 | | | | | | 4.0 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.0 | | | | 0.69 | | | | 0.50 | | | | | | 0.44 |
| Strontium | Sr | mg/L | | 0.10 | | | | 0.10 | | | | 0.092 | | | | | | 0.099 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00030 | | | | 0.00050 | | | | 0.00040 | | | | | | 0.00040 |
| Tungsten | W | mg/L | | 0.00020 | | | | 0.00057 | | | | 0.00012 | | | | | | 0.000090 |
| Uranium | U | mg/L | | 0.00058 | | | | 0.00072 | | | | 0.00060 | | | | | | 0.00082 |
| Vanadium | V | mg/L | | 0.00090 | | | | 0.00079 | | | | 0.00059 | | | | | | 0.00056 |
| Yttrium | Y | mg/L | | 0.0000070 | | | | 0.000010 | | | | 0.0000060 | | | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 4 Tiri MV UG (All) (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 16900 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 1714 | 4709 | 4777 | 4754 | 4573 | 4618 | 4505 | 4641 | 16009 | 5163 | 4268 | 4573 | 4210 | 4550 | 4890 | 4346 |
| pH | | units | **6.0-9.5** | 7.6 | 8.2 | 8.4 | 8.5 | 8.4 | 8.2 | 8.1 | 8.3 | 8.1 | 8.0 | 8.2 | 8.2 | 8.3 | 8.2 | 7.9 | 8.3 |
| Conductivity | | mg/L as CaCO3 | | 416 | 357 | 226 | 196 | 176 | 171 | 157 | 156 | 110 | 101 | 105 | 147 | 140 | 154 | 177 | 125 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 72 | 67 | 59 | 54 | 53 | 58 | 56 | 46 | 46 | 48 | 57 | 44 | 51 | 51 | 49 |
| Chloride | Cl | mg/L | | 15 | 14 | 5.1 | 3.2 | | 0.90 | | | < 0.2 | | | | < 0.2 | | | |
| Fluoride | F | mg/L | | 0.11 | 0.10 | 0.10 | 0.080 | | 0.070 | | | < 0.06 | | | | < 0.06 | | | |
| Phosphorus | P | mg/L | | 0.084 | < 0.009 | 0.011 | < 0.009 | | < 0.009 | | | < 0.009 | | | | 0.012 | | | |
| Sulphate | SO4 | mg/L | | 95 | 80 | 52 | 39 | 30 | 29 | 30 | 30 | 26 | 19 | 19 | 25 | 24 | 31 | 34 | 30 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.14 | 0.12 | 0.19 | 0.19 | | 0.20 | | | 0.18 | | | | 0.15 | | | |
| Antimony | Sb | mg/L | | 0.0020 | 0.0054 | 0.0054 | 0.0049 | | 0.0048 | | | 0.0039 | | | | 0.0033 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0049 | 0.022 | 0.026 | 0.028 | | 0.034 | | | 0.038 | | | | 0.032 | | | |
| Barium | Ba | mg/L | | 0.0079 | 0.0048 | 0.0048 | 0.0038 | | 0.0038 | | | 0.0041 | | | | 0.0038 | | | |
| Boron | B | mg/L | | 0.025 | 0.042 | 0.030 | 0.023 | | 0.019 | | | 0.011 | | | | 0.0078 | | | |
| Cadmium | Cd[3] | mg/L | | 0.0000080 | 0.0000050 | 0.0000030 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 21 | 15 | 16 | 14 | 14 | 14 | 16 | 15 | 15 | 13 | 15 | 17 | 15 | 18 | 18 | 18 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00021 | 0.00023 | 0.00021 | 0.00018 | | 0.00021 | | | 0.00031 | | | | 0.00035 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0033 | 0.0014 | 0.0011 | 0.00070 | | 0.00060 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | < 0.002 | < 0.002 | 0.0070 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | 0.000040 | 0.000040 | 0.000040 | | 0.00010 | | | 0.000080 | | | | 0.000090 | | | |
| Lithium | Li | mg/L | | 0.0010 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0010 | | | | 0.0010 | | | |
| Magnesium | Mg | mg/L | | 5.3 | 8.7 | 9.3 | 8.2 | | 7.2 | | | 7.1 | | | | 6.1 | | | |
| Manganese | Mn | mg/L | | 0.052 | 0.012 | 0.012 | 0.011 | | 0.016 | | | 0.011 | | | | 0.013 | | | |
| Molbydenum | Mo | mg/L | | 0.015 | 0.013 | 0.0090 | 0.0054 | | 0.0037 | | | 0.0018 | | | | 0.00085 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0012 | 0.0013 | 0.00050 | 0.00040 | | 0.00060 | | | 0.00060 | | | | 0.00010 | | | |
| Potassium | K | mg/L | | 9.5 | 8.5 | 7.4 | 5.5 | | 3.5 | | | 2.4 | | | | 1.5 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0030 | 0.0010 | 0.0010 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 53 | 37 | 25 | 15 | | 6.7 | | | 2.8 | | | | 1.0 | | | |
| Strontium | Sr | mg/L | | 0.085 | 0.12 | 0.13 | 0.12 | | 0.11 | | | 0.11 | | | | 0.098 | | | |
| Tin | Sn | mg/L | | 0.00053 | 0.00018 | 0.00018 | < 0.00001 | | 0.000020 | | | < 0.00001 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00020 | 0.00020 | 0.00030 | 0.00020 | | 0.00010 | | | 0.00020 | | | | 0.00020 | | | |
| Tungsten | W | mg/L | | 0.00081 | 0.00089 | 0.00062 | 0.00049 | | 0.00042 | | | 0.00031 | | | | 0.00020 | | | |
| Uranium | U | mg/L | | 0.000053 | 0.00012 | 0.000091 | 0.000059 | | 0.000062 | | | 0.00011 | | | | 0.000061 | | | |
| Vanadium | V | mg/L | | 0.00035 | 0.0011 | 0.0011 | 0.0010 | | 0.0011 | | | 0.00079 | | | | 0.00053 | | | |
| Yttrium | Y | mg/L | | 0.000016 | 0.0000070 | 0.0000080 | 0.0000080 | | 0.000010 | | | 0.0000050 | | | | 0.0000040 | | | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | 0.0010 | 0.0020 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 4 Tiri MV UG (All) (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 4369 | 4278 | 4868 | 4754 | 4528 | 4664 | 4528 | 4732 | 4641 | 4573 | 4596 | 4528 | 4596 | 4596 | 4641 |
| pH | | units | 6.0-9.5 | 8.2 | 8.1 | 7.8 | 8.0 | 8.4 | 8.0 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 167 | 142 | 134 | 130 | 159 | 161 | 109 | 103 | 136 | 108 | 129 | 104 | 103 | 102 | 101 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 50 | 52 | 54 | 51 | 53 | 53 | 59 | 48 | 49 | 45 | 49 | 48 | 47 | 48 | 46 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 29 | 27 | 32 | 31 | 29 | 28 | 23 | 22 | 21 | 19 | 19 | 19 | 19 | 19 | 19 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.12 | | | | 0.11 | | | | 0.10 | | | | | | 0.11 |
| Antimony | Sb | mg/L | | 0.0032 | | | | 0.0025 | | | | 0.0018 | | | | | | 0.0018 |
| Arsenic | As | mg/L | 0.5 | 0.027 | | | | 0.025 | | | | 0.021 | | | | | | 0.017 |
| Barium | Ba | mg/L | | 0.0040 | | | | 0.0040 | | | | 0.0032 | | | | | | 0.0033 |
| Boron | B | mg/L | | 0.0054 | | | | 0.0046 | | | | 0.0028 | | | | | | 0.0022 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 18 | 16 | 18 | 19 | 19 | 19 | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 17 | 15 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00046 | | | | 0.00052 | | | | 0.00043 | | | | | | 0.00038 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | 0.00060 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000070 | | | | 0.000070 | | | | 0.000060 | | | | | | 0.000070 |
| Lithium | Li | mg/L | | 0.0010 | | | | 0.0010 | | | | 0.0010 | | | | | | 0.0010 |
| Magnesium | Mg | mg/L | | 7.2 | | | | 7.2 | | | | 5.6 | | | | | | 5.7 |
| Manganese | Mn | mg/L | | 0.018 | | | | 0.018 | | | | 0.013 | | | | | | 0.013 |
| Molbydenum | Mo | mg/L | | 0.00063 | | | | 0.00065 | | | | 0.00047 | | | | | | 0.00053 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00070 | | | | 0.00020 | | | | 0.00090 | | | | | | 0.00080 |
| Potassium | K | mg/L | | 1.4 | | | | 1.2 | | | | 0.92 | | | | | | 0.80 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.84 | | | | 0.62 | | | | 0.45 | | | | | | 0.36 |
| Strontium | Sr | mg/L | | 0.11 | | | | 0.11 | | | | 0.078 | | | | | | 0.076 |
| Tin | Sn | mg/L | | < 0.00001 | | | | 0.000010 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00030 | | | | 0.00030 | | | | 0.00030 | | | | | | 0.00040 |
| Tungsten | W | mg/L | | 0.000090 | | | | 0.00049 | | | | 0.000060 | | | | | | 0.000080 |
| Uranium | U | mg/L | | 0.000074 | | | | 0.00015 | | | | 0.000045 | | | | | | 0.000055 |
| Vanadium | V | mg/L | | 0.00042 | | | | 0.00035 | | | | 0.00024 | | | | | | 0.00023 |
| Yttrium | Y | mg/L | | 0.0000060 | | | | 0.0000070 | | | | 0.0000040 | | | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-750-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 813 | 906 | 932 | 928 | 930 | 926 | 933 | 904 | 920 | 924 | 920 | 917 | 910 | 900 |
| pH | | units | **6.0-9.5** | 7.8 | 8.2 | 7.8 | 8.2 | 8.2 | 8.3 | 9.2 | 8.5 | 8.4 | 8.8 | 8.5 | 8.0 | 8.0 | 8.7 |
| Conductivity | | mg/L as CaCO3 | | 57 | 72 | 51 | 48 | 41 | 34 | 33 | 35 | 35 | 33 | 31 | 32 | 31 | 32 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 17 | 17 | 14 | 15 | 14 | 16 | 14 | 14 | 14 | 12 | 13 | 12 | 13 |
| Chloride | Cl | mg/L | | 4.1 | 7.1 | 3.5 | 1.6 | | 0.50 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 0.80 | 2.6 | 3.2 | 3.0 | 2.8 | 2.7 | 2.6 | 3.0 | 2.6 | 2.0 | 2.6 | 2.6 | 2.5 | 2.3 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.050 | 0.060 | 0.060 | | 0.060 | | | 0.040 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0020 | 0.0016 | 0.0010 | | 0.00090 | | | 0.00090 | | | | 0.0012 | |
| Arsenic | As | mg/L | **0.5** | 0.00070 | 0.0044 | 0.0066 | 0.0071 | | 0.010 | | | 0.014 | | | | 0.024 | |
| Barium | Ba | mg/L | | 0.0039 | 0.0014 | 0.0017 | 0.0016 | | 0.0016 | | | 0.0014 | | | | 0.0011 | |
| Boron | B | mg/L | | 0.14 | 0.11 | 0.057 | 0.032 | | 0.018 | | | 0.0097 | | | | 0.0017 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | 0.0000030 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.6 | 3.6 | 4.3 | 4.3 | 4.2 | 4.3 | 4.0 | 3.8 | 3.8 | 4.0 | 3.8 | 3.7 | 3.6 | 3.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000032 | 0.000032 | 0.000018 | 0.000024 | | 0.000018 | | | 0.000024 | | | | 0.000030 | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | 0.000030 | | | < 0.00002 | | | | 0.000050 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.24 | 0.39 | 0.58 | 0.60 | | 0.62 | | | 0.63 | | | | 0.40 | |
| Manganese | Mn | mg/L | | 0.012 | 0.012 | 0.015 | 0.017 | | 0.019 | | | 0.018 | | | | 0.024 | |
| Molbydenum | Mo | mg/L | | 0.00017 | 0.00066 | 0.00037 | 0.00028 | | 0.00019 | | | 0.000090 | | | | 0.000020 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | 0.00010 | |
| Potassium | K | mg/L | | 2.2 | 2.5 | 2.5 | 2.1 | | 1.7 | | | 1.6 | | | | 1.1 | |
| Sodium | Na | mg/L | | 4.3 | 7.6 | 5.1 | 3.3 | | 1.7 | | | 0.76 | | | | 0.65 | |
| Strontium | Sr | mg/L | | 0.011 | 0.011 | 0.013 | 0.014 | | 0.013 | | | 0.010 | | | | 0.0071 | |
| Tin | Sn | mg/L | | 0.016 | 0.0097 | 0.0037 | 0.0020 | | 0.0010 | | | 0.00093 | | | | 0.00053 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | < 0.000001 | 0.000014 | 0.000015 | 0.000020 | | 0.000026 | | | 0.000017 | | | | 0.0000080 | |
| Vanadium | V | mg/L | | 0.00046 | 0.00069 | 0.00058 | 0.00051 | | 0.00050 | | | 0.00048 | | | | 0.00038 | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-750-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 911 | 909 | 911 | 896 | 948 | 903 | 893 | 874 | 874 | 804 | 873 | 882 | 877 | 878 |
| pH | | units | **6.0-9.5** | 8.7 | 8.5 | 7.8 | 7.9 | 8.1 | 7.8 | 7.8 | 7.7 | 7.8 | 8.6 | 7.5 | 8.6 | 7.5 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 28 | 30 | 29 | 28 | 26 | 27 | 28 | 26 | 28 | 23 | 43 | 41 | 30 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 13 | 11 | 9.0 | 11 | 10 | 10 | 9.0 | 10 | 10 | 12 | 10 | 11 | 11 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 2.1 | 2.2 | 2.2 | 2.5 | 1.5 | 2.5 | 2.7 | 2.3 | 2.4 | 1.3 | 2.5 | 2.2 | 1.7 | 2.0 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | 0.050 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.00060 | | | | 0.00060 | | | | | 0.00060 | | |
| Arsenic | As | mg/L | **0.5** | | 0.015 | 0.020 | | | | 0.022 | | | | | 0.022 | | |
| Barium | Ba | mg/L | | | | 0.0022 | | | | 0.0018 | | | | | 0.0017 | | |
| Boron | B | mg/L | | | | 0.0022 | | | | 0.0012 | | | | | 0.0010 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | 0.000013 | | |
| Calcium | Ca | mg/L | | 3.6 | 3.5 | 4.2 | 3.2 | 3.8 | 3.7 | 3.5 | 3.5 | 3.6 | 3.4 | 3.4 | 3.6 | 3.8 | 3.8 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000040 | | | | 0.000045 | | | | | 0.000059 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00036 | | | | 0.00036 | | | | | 0.000040 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 0.65 | | | | 0.59 | | | | | 0.53 | | |
| Manganese | Mn | mg/L | | | | 0.016 | | | | 0.013 | | | | | 0.015 | | |
| Molbydenum | Mo | mg/L | | | | 0.000070 | | | | 0.000060 | | | | | 0.000070 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 1.4 | | | | 1.3 | | | | | 1.5 | | |
| Sodium | Na | mg/L | | | | 0.23 | | | | 0.19 | | | | | 0.12 | | |
| Strontium | Sr | mg/L | | | | 0.012 | | | | 0.010 | | | | | 0.0075 | | |
| Tin | Sn | mg/L | | | | 0.00031 | | | | 0.00034 | | | | | 0.00031 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.000033 | | | | 0.000040 | | | | | 0.000056 | | |
| Vanadium | V | mg/L | | | | 0.00049 | | | | 0.00044 | | | | | 0.00049 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-750-03 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 875 | 873 | 879 | 880 | 885 | 866 | 881 | 897 | 878 | 889 | 871 | 877 | 880 |
| pH | | units | **6.0-9.5** | 7.9 | 7.6 | 7.8 | 8.0 | 7.6 | 7.7 | 7.7 | 7.6 | 7.7 | 7.9 | 7.7 | 7.7 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 29 | 25 | 25 | 23 | 25 | 25 | 25 | 25 | 28 | 27 | 27 | 27 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 11 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10 | 9.0 | 10 | 9.0 | 9.0 | 9.0 |
| Chloride | Cl | mg/L | | | | <0.2 | | | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 1.9 | 1.9 | 1.7 | 1.2 | 1.6 | 1.9 | 2.2 | 2.3 | 2.6 | 2.2 | 2.2 | 2.2 | 2.1 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | | 0.040 | | | | | 0.060 |
| Antimony | Sb | mg/L | | | | 0.00040 | | | | | 0.00060 | | | | | 0.00040 |
| Arsenic | As | mg/L | **0.5** | | | 0.021 | | | | | 0.020 | | | | | 0.020 |
| Barium | Ba | mg/L | | | | 0.0028 | | | | | 0.0018 | | | | | 0.0020 |
| Boron | B | mg/L | | | | 0.00060 | | | | | 0.00060 | | | | | 0.00080 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | 0.0000030 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.6 | 3.2 | 3.3 | 3.2 | 3.3 | 3.1 | 3.1 | 3.0 | 3.7 | 3.7 | 3.4 | 3.1 | 3.5 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000043 | | | | | 0.000076 | | | | | 0.000054 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.000020 | | | | | 0.000020 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | 0.0010 |
| Magnesium | Mg | mg/L | | | | 0.46 | | | | | 0.38 | | | | | 0.37 |
| Manganese | Mn | mg/L | | | | 0.014 | | | | | 0.014 | | | | | 0.014 |
| Molbydenum | Mo | mg/L | | | | 0.00012 | | | | | 0.00021 | | | | | 0.000030 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Potassium | K | mg/L | | | | 1.3 | | | | | 1.1 | | | | | 1.2 |
| Sodium | Na | mg/L | | | | 0.10 | | | | | 0.070 | | | | | 0.080 |
| Strontium | Sr | mg/L | | | | 0.0085 | | | | | 0.0075 | | | | | 0.0084 |
| Tin | Sn | mg/L | | | | 0.00015 | | | | | 0.00013 | | | | | 0.00022 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.000037 | | | | | 0.000038 | | | | | 0.000051 |
| Vanadium | V | mg/L | | | | 0.00039 | | | | | 0.00041 | | | | | 0.00036 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-740-05 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 806 | 903 | 927 | 948 | 891 | 927 | 910 | 893 | 888 | 912 | 892 | 891 | 906 | 896 |
| pH | | units | **6.0-9.5** | 8.7 | 8.0 | 7.8 | 8.2 | 8.5 | 8.9 | 9.3 | 8.6 | 8.5 | 8.6 | 8.8 | 8.2 | 7.9 | 8.7 |
| Conductivity | | mg/L as CaCO3 | | 92 | 136 | 71 | 61 | 49 | 40 | 37 | 36 | 35 | 33 | 33 | 32 | 31 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 18 | 26 | 23 | 22 | 20 | 20 | 18 | 15 | 15 | 14 | 13 | 13 | 13 | 13 |
| Chloride | Cl | mg/L | | 12 | 19 | 5.7 | 2.2 | | 0.30 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 5.0 | 8.6 | 5.8 | 4.6 | 3.0 | 2.7 | 2.4 | 2.3 | 2.0 | 1.7 | 2.2 | 1.9 | 1.7 | 1.7 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.040 | 0.050 | 0.040 | | 0.050 | | | 0.030 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0027 | 0.0025 | 0.0021 | | 0.0020 | | | 0.0016 | | | | 0.0012 | |
| Arsenic | As | mg/L | **0.5** | 0.0025 | 0.018 | 0.022 | 0.024 | | 0.026 | | | 0.026 | | | | 0.024 | |
| Barium | Ba | mg/L | | 0.0013 | 0.0011 | 0.0010 | 0.0011 | | 0.0012 | | | 0.0011 | | | | 0.0011 | |
| Boron | B | mg/L | | 0.014 | 0.027 | 0.016 | 0.012 | | 0.0072 | | | 0.0038 | | | | 0.0017 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 3.6 | 2.9 | 3.3 | 3.4 | 3.4 | 4.0 | 3.5 | 3.7 | 3.5 | 3.8 | 3.9 | 3.9 | 3.8 | 3.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000035 | 0.000036 | 0.000026 | 0.000029 | | 0.000018 | | | 0.000023 | | | | 0.000030 | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | 0.00060 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | 0.010 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000050 | < 0.00002 | < 0.00002 | < 0.00002 | | 0.000040 | | | < 0.00002 | | | | 0.000050 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.21 | 0.33 | 0.37 | 0.43 | | 0.56 | | | 0.51 | | | | 0.40 | |
| Manganese | Mn | mg/L | | 0.011 | 0.013 | 0.016 | 0.018 | | 0.018 | | | 0.018 | | | | 0.024 | |
| Molbydenum | Mo | mg/L | | 0.00011 | 0.00040 | 0.00019 | 0.00014 | | 0.000060 | | | < 0.00001 | | | | 0.000020 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | 0.00040 | 0.00020 | 0.00010 | | 0.00020 | | | < 0.0001 | | | | 0.00010 | |
| Potassium | K | mg/L | | 2.4 | 2.8 | 2.3 | 2.0 | | 1.9 | | | 1.5 | | | | 1.1 | |
| Sodium | Na | mg/L | | 13 | 20 | 13 | 8.5 | | 4.0 | | | 1.3 | | | | 0.65 | |
| Strontium | Sr | mg/L | | 0.0066 | 0.0069 | 0.0071 | 0.0082 | | 0.0096 | | | 0.0075 | | | | 0.0071 | |
| Tin | Sn | mg/L | | 0.0061 | 0.0052 | 0.0019 | 0.00093 | | 0.00069 | | | 0.00027 | | | | 0.00053 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.0000020 | 0.0000060 | 0.0000030 | 0.0000090 | | 0.000023 | | | < 0.000001 | | | | 0.0000080 | |
| Vanadium | V | mg/L | | 0.00035 | 0.00064 | 0.00064 | 0.00056 | | 0.00053 | | | 0.00045 | | | | 0.00038 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-740-05 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 910 | 912 | 891 | 896 | 955 | 910 | 886 | 878 | 878 | 884 | 876 | 886 | 880 | 879 |
| pH | | units | **6.0-9.5** | 8.5 | 8.5 | 8.7 | 8.2 | 7.9 | 7.8 | 8.0 | 7.7 | 7.8 | 8.4 | 7.7 | 8.1 | 7.4 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 30 | 30 | 29 | 27 | 31 | 28 | 28 | 26 | 27 | 26 | 46 | 49 | 27 | 27 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 12 | 12 | 12 | 10 | 13 | 12 | 11 | 10 | 11 | 11 | 13 | 10 | 10 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 2.0 | 2.2 | 1.7 | 1.8 | 1.8 | 1.6 | 1.9 | 1.6 | 2.0 | 2.4 | 2.4 | 2.2 | 1.6 | 1.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.040 | | | | 0.040 | | | | | 0.020 | | |
| Antimony | Sb | mg/L | | | | 0.0010 | | | | 0.0011 | | | | | 0.00090 | | |
| Arsenic | As | mg/L | **0.5** | | 0.022 | 0.026 | | | | 0.027 | | | | | 0.025 | | |
| Barium | Ba | mg/L | | | | 0.0017 | | | | 0.0012 | | | | | 0.0020 | | |
| Boron | B | mg/L | | | | 0.0014 | | | | 0.00090 | | | | | 0.0011 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | 0.000010 | | |
| Calcium | Ca | mg/L | | 3.9 | 3.9 | 4.5 | 3.5 | 4.6 | 4.1 | 3.7 | 3.7 | 3.8 | 3.8 | 3.9 | 3.9 | 3.9 | 4.0 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000033 | | | | 0.000032 | | | | | 0.000050 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00047 | | | | 0.00041 | | | | | 0.000030 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 0.44 | | | | 0.36 | | | | | 0.35 | | |
| Manganese | Mn | mg/L | | | | 0.020 | | | | 0.018 | | | | | 0.020 | | |
| Molbydenum | Mo | mg/L | | | | 0.000030 | | | | 0.000010 | | | | | 0.000040 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | 0.00010 | | |
| Potassium | K | mg/L | | | | 1.2 | | | | 1.1 | | | | | 1.1 | | |
| Sodium | Na | mg/L | | | | 0.46 | | | | 0.34 | | | | | 0.26 | | |
| Strontium | Sr | mg/L | | | | 0.0082 | | | | 0.0072 | | | | | 0.0067 | | |
| Tin | Sn | mg/L | | | | 0.00021 | | | | 0.00017 | | | | | 0.00018 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.0000080 | | | | 0.0000030 | | | | | 0.000024 | | |
| Vanadium | V | mg/L | | | | 0.00035 | | | | 0.00031 | | | | | 0.00033 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-740-05 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 883 | 886 | 884 | 883 | 882 | 890 | 880 | 890 | 880 | 890 | 881 | 890 | 891 |
| pH | | units | **6.0-9.5** | 7.6 | 7.6 | 7.8 | 8.0 | 7.5 | 7.8 | 7.7 | 7.8 | 7.7 | 8.3 | 7.8 | 7.7 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 28 | 26 | 25 | 24 | 26 | 26 | 26 | 27 | 27 | 29 | 27 | 25 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 12 | 9.0 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 10 | 9.0 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 2.0 | 1.8 | 1.5 | 1.2 | 1.7 | 1.9 | 2.0 | 2.4 | 1.7 | 1.9 | 1.8 | 2.0 | 1.7 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | | 0.050 | | | | | 0.030 |
| Antimony | Sb | mg/L | | | | 0.00070 | | | | | 0.00080 | | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | | | 0.021 | | | | | 0.020 | | | | | 0.019 |
| Barium | Ba | mg/L | | | | 0.0020 | | | | | 0.0013 | | | | | 0.0015 |
| Boron | B | mg/L | | | | 0.00060 | | | | | 0.00070 | | | | | 0.00090 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.9 | 3.5 | 3.6 | 3.6 | 3.7 | 3.6 | 3.4 | 3.4 | 3.7 | 4.0 | 3.6 | 2.9 | 3.7 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000034 | | | | | 0.000045 | | | | | 0.000039 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | 0.00060 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | < 0.00002 | | | | | 0.000030 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.31 | | | | | 0.28 | | | | | 0.27 |
| Manganese | Mn | mg/L | | | | 0.017 | | | | | 0.018 | | | | | 0.017 |
| Molbydenum | Mo | mg/L | | | | 0.000040 | | | | | 0.000060 | | | | | < 0.00001 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | 0.00010 | | | | | 0.00010 |
| Potassium | K | mg/L | | | | 0.99 | | | | | 0.94 | | | | | 1.1 |
| Sodium | Na | mg/L | | | | 0.20 | | | | | 0.18 | | | | | 0.16 |
| Strontium | Sr | mg/L | | | | 0.0066 | | | | | 0.0055 | | | | | 0.0062 |
| Tin | Sn | mg/L | | | | 0.000070 | | | | | 0.000040 | | | | | 0.00014 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.0000060 | | | | | 0.0000080 | | | | | 0.000024 |
| Vanadium | V | mg/L | | | | 0.00026 | | | | | 0.00025 | | | | | 0.00024 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-734-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 763 | 828 | 871 | 906 | 914 | 905 | 917 | 910 | 908 | 927 | 887 | 922 | 970 | 929 |
| pH | | units | **6.0-9.5** | 8.1 | 8.2 | 7.6 | 8.1 | 8.0 | 8.6 | 9.3 | 9.0 | 8.5 | 8.2 | 8.4 | 8.1 | 8.1 | 9.0 |
| Conductivity | | mg/L as CaCO3 | | 82 | 128 | 88 | 59 | 50 | 42 | 39 | 40 | 41 | 37 | 35 | 36 | 39 | 35 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 18 | 15 | 14 | 14 | 14 | 13 | 15 | 13 | 13 | 14 | 12 | 12 | 14 | 13 |
| Chloride | Cl | mg/L | | 5.3 | 9.3 | 4.6 | 1.2 | | 0.30 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 8.9 | 24 | 17 | 9.0 | 7.5 | 7.2 | 5.8 | 5.6 | 5.7 | 4.4 | 4.9 | 4.3 | 3.9 | 3.6 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.030 | 0.050 | 0.040 | | 0.060 | | | 0.030 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00090 | 0.0055 | 0.0049 | 0.0041 | | 0.00090 | | | 0.0029 | | | | 0.0027 | |
| Arsenic | As | mg/L | **0.5** | 0.0063 | 0.021 | 0.017 | 0.013 | | 0.010 | | | 0.0084 | | | | 0.0068 | |
| Barium | Ba | mg/L | | 0.00068 | 0.00063 | 0.00068 | 0.00052 | | 0.0016 | | | 0.00061 | | | | 0.00075 | |
| Boron | B | mg/L | | 0.0084 | 0.016 | 0.013 | 0.0089 | | 0.018 | | | 0.0043 | | | | 0.0026 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | 0.000010 | < 0.000003 | | 0.0000030 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 5.1 | 4.5 | 5.1 | 4.8 | 4.9 | 5.1 | 4.6 | 4.8 | 4.4 | 4.6 | 4.4 | 4.4 | 4.8 | 4.4 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000025 | 0.000029 | 0.000053 | 0.000014 | | 0.000018 | | | 0.0000080 | | | | 0.000012 | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | 0.00070 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | < 0.00002 | 0.00021 | < 0.00002 | | 0.000030 | | | < 0.00002 | | | | 0.000050 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.45 | 0.86 | 0.93 | 0.70 | | 0.62 | | | 0.75 | | | | 0.61 | |
| Manganese | Mn | mg/L | | 0.0062 | 0.011 | 0.015 | 0.016 | | 0.019 | | | 0.018 | | | | 0.020 | |
| Molbydenum | Mo | mg/L | | 0.00015 | 0.00055 | 0.00042 | 0.00027 | | 0.00019 | | | 0.000080 | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00040 | 0.00030 | 0.00020 | | < 0.0001 | | | < 0.0001 | | | | 0.00020 | |
| Potassium | K | mg/L | | 1.9 | 2.1 | 2.2 | 1.4 | | 1.7 | | | 1.0 | | | | 0.83 | |
| Sodium | Na | mg/L | | 9.3 | 15 | 13 | 5.7 | | 1.7 | | | 0.98 | | | | 0.40 | |
| Strontium | Sr | mg/L | | 0.0072 | 0.0095 | 0.0094 | 0.0077 | | 0.013 | | | 0.0070 | | | | 0.0075 | |
| Tin | Sn | mg/L | | 0.022 | 0.012 | 0.0066 | 0.0055 | | 0.0010 | | | 0.0012 | | | | 0.0013 | |
| Titanium | Ti | mg/L | | < 0.0001 | 0.00020 | 0.00020 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | < 0.000001 | 0.000015 | 0.000050 | 0.000016 | | 0.000026 | | | 0.0000070 | | | | 0.000013 | |
| Vanadium | V | mg/L | | 0.00033 | 0.00063 | 0.00061 | 0.00046 | | 0.00050 | | | 0.00033 | | | | 0.00029 | |
| Zinc | Zn | mg/L | **0.5** | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**
nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-734-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 928 | 925 | 904 | 910 | 958 | 914 | 890 | 876 | 872 | 865 | 866 | 890 | 871 | 884 |
| pH | | units | **6.0-9.5** | 8.5 | 8.1 | 8.2 | 8.0 | 7.9 | 8.2 | 7.9 | 7.5 | 7.8 | 8.4 | 7.7 | 7.9 | 7.3 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 33 | 31 | 34 | 34 | 31 | 32 | 32 | 30 | 31 | 31 | 50 | 52 | 31 | 32 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 11 | 12 | 11 | 11 | 11 | 10 | 9.0 | 10 | 11 | 13 | 9.0 | 9.0 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 3.7 | 3.9 | 4.3 | 4.0 | 3.1 | 3.5 | 4.0 | 3.8 | 4.1 | 4.4 | 4.5 | 4.5 | 3.8 | 4.3 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.030 | | | | 0.030 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.0020 | | | | 0.0019 | | | | | 0.0020 | | |
| Arsenic | As | mg/L | **0.5** | | 0.0047 | 0.0063 | | | | 0.0050 | | | | | 0.0058 | | |
| Barium | Ba | mg/L | | | | 0.00063 | | | | 0.0011 | | | | | 0.00083 | | |
| Boron | B | mg/L | | | | 0.0017 | | | | 0.0011 | | | | | 0.0012 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | 0.000010 | | |
| Calcium | Ca | mg/L | | 4.4 | 4.2 | 5.0 | 4.2 | 4.5 | 4.8 | 4.3 | 4.0 | 4.2 | 4.4 | 4.5 | 4.4 | 4.4 | 4.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000013 | | | | 0.000018 | | | | | 0.000017 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00054 | | | | 0.000040 | | | | | 0.00092 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 0.66 | | | | 0.57 | | | | | 0.60 | | |
| Manganese | Mn | mg/L | | | | 0.016 | | | | 0.014 | | | | | 0.014 | | |
| Molbydenum | Mo | mg/L | | | | 0.000060 | | | | 0.00023 | | | | | 0.000050 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | 0.00010 | | |
| Potassium | K | mg/L | | | | 0.96 | | | | 0.93 | | | | | 1.1 | | |
| Sodium | Na | mg/L | | | | 0.30 | | | | 0.22 | | | | | 0.18 | | |
| Strontium | Sr | mg/L | | | | 0.0072 | | | | 0.0065 | | | | | 0.0045 | | |
| Tin | Sn | mg/L | | | | 0.00058 | | | | 0.00083 | | | | | 0.00043 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.000016 | | | | 0.000021 | | | | | 0.000031 | | |
| Vanadium | V | mg/L | | | | 0.00031 | | | | 0.00026 | | | | | 0.00030 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-734-03 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 869 | 875 | 872 | 872 | 880 | 878 | 874 | 906 | 877 | 940 | 879 | 884 | 876 |
| pH | | units | **6.0-9.5** | 7.7 | 7.9 | 8.2 | 8.0 | 7.5 | 7.7 | 7.7 | 7.8 | 7.7 | 8.2 | 7.8 | 7.6 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 32 | 30 | 31 | 28 | 30 | 28 | 32 | 29 | 31 | 30 | 32 | 29 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 9.0 | 10 | 9.0 | 9.0 | 9.0 | 10 | 10 | 9.0 | 11 | 10 | 9.0 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 3.5 | 3.5 | 3.1 | 0.90 | 3.6 | 2.8 | 3.9 | 3.4 | 3.9 | 3.3 | 4.0 | 3.5 | 3.1 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.060 | | | | | 0.040 | | | | | 0.050 |
| Antimony | Sb | mg/L | | | | 0.0016 | | | | | 0.0017 | | | | | 0.0014 |
| Arsenic | As | mg/L | **0.5** | | | 0.0051 | | | | | 0.0043 | | | | | 0.0036 |
| Barium | Ba | mg/L | | | | 0.00081 | | | | | 0.00070 | | | | | 0.00086 |
| Boron | B | mg/L | | | | 0.00070 | | | | | 0.00070 | | | | | 0.00080 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.2 | 3.9 | 4.5 | 4.1 | 4.1 | 3.8 | 4.2 | 3.9 | 4.5 | 4.6 | 4.2 | 3.4 | 4.1 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.0000050 | | | | | 0.0000080 | | | | | 0.0000070 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | < 0.00002 | | | | | 0.000020 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | 0.0010 |
| Magnesium | Mg | mg/L | | | | 0.51 | | | | | 0.41 | | | | | 0.40 |
| Manganese | Mn | mg/L | | | | 0.015 | | | | | 0.015 | | | | | 0.014 |
| Molbydenum | Mo | mg/L | | | | 0.000020 | | | | | 0.000050 | | | | | 0.000020 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | 0.00010 |
| Potassium | K | mg/L | | | | 0.96 | | | | | 0.84 | | | | | 0.95 |
| Sodium | Na | mg/L | | | | 0.12 | | | | | 0.080 | | | | | 0.080 |
| Strontium | Sr | mg/L | | | | 0.0061 | | | | | 0.0045 | | | | | 0.0053 |
| Tin | Sn | mg/L | | | | 0.00023 | | | | | 0.00020 | | | | | 0.00023 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.000010 | | | | | 0.000015 | | | | | 0.000030 |
| Vanadium | V | mg/L | | | | 0.00027 | | | | | 0.00025 | | | | | 0.00024 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 5 F-Zone MV (OP) (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 34700 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 |
| Leachate Volume Recovered | | mL | | 3167 | 9678 | 9973 | 9950 | 9723 | 9859 | 9700 | 9746 | 33524 | 10721 | 9170 | 9791 | 9088 | 9564 | 10245 | 9542 |
| pH | | units | **6.0-9.5** | 7.6 | 8.2 | 8.5 | 8.6 | 8.4 | 8.4 | 8.4 | 8.2 | 8.2 | 8.0 | 8.2 | 8.2 | 8.4 | 8.1 | 8.1 | 8.3 |
| Conductivity | | mg/L as CaCO3 | | 567 | 972 | 485 | 339 | 281 | 270 | 220 | 206 | 121 | 114 | 121 | 149 | 133 | 145 | 154 | 126 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 93 | 90 | 78 | 67 | 67 | 70 | 61 | 50 | 50 | 53 | 49 | 50 | 53 | 52 | 53 |
| Chloride | Cl | mg/L | | 86 | 140 | 59 | 31 | | 10 | | | 1.8 | | | | 0.20 | | | |
| Fluoride | F | mg/L | | 0.14 | 0.26 | 0.18 | 0.16 | | 0.12 | | | 0.070 | | | | 0.080 | | | |
| Phosphorus | P | mg/L | | 0.016 | 0.0090 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 78 | 150 | 93 | 56 | 47 | 44 | 43 | 35 | 25 | 35 | 20 | 22 | 20 | 22 | 24 | 24 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.19 | 0.15 | 0.20 | 0.14 | | 0.18 | | | 0.14 | | | | 0.15 | | | |
| Antimony | Sb | mg/L | | 0.0022 | 0.0053 | 0.0044 | 0.0042 | | 0.0041 | | | 0.0033 | | | | 0.0036 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0046 | 0.037 | 0.031 | 0.032 | | 0.037 | | | 0.034 | | | | 0.037 | | | |
| Barium | Ba | mg/L | | 0.049 | 0.046 | 0.037 | 0.043 | | 0.047 | | | 0.039 | | | | 0.048 | | | |
| Boron | B | mg/L | | 0.049 | 0.12 | 0.082 | 0.064 | | 0.046 | | | 0.025 | | | | 0.019 | | | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 12 | 12 | 12 | 9.1 | 10 | 11 | 12 | 11 | 9.9 | 11 | 12 | 13 | 11 | 12 | 13 | 14 |
| Chromium | Cr[2] | mg/L | | 0.0023 | 0.0017 | 0.00050 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.000073 | 0.00018 | 0.00013 | 0.000098 | | 0.000092 | | | 0.00010 | | | | 0.00011 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00050 | 0.00050 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | < 0.002 | < 0.002 | 0.0070 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | 0.000020 | | 0.000070 | | | < 0.00002 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0020 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | |
| Magnesium | Mg | mg/L | | 3.6 | 7.2 | 6.9 | 4.9 | | 6.0 | | | 4.9 | | | | 5.4 | | | |
| Manganese | Mn | mg/L | | 0.014 | 0.0075 | 0.0069 | 0.0069 | | 0.0088 | | | 0.0073 | | | | 0.0085 | | | |
| Molbydenum | Mo | mg/L | | 0.0019 | 0.0044 | 0.0027 | 0.0016 | | 0.0012 | | | 0.00052 | | | | 0.00040 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00060 | 0.0015 | 0.0010 | 0.00060 | | 0.00060 | | | 0.00060 | | | | < 0.0001 | | | |
| Potassium | K | mg/L | | 15 | 19 | 17 | 11 | | 9.7 | | | 6.2 | | | | 5.5 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0040 | 0.0020 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 97 | 147 | 85 | 49 | | 31 | | | 11 | | | | 4.6 | | | |
| Strontium | Sr | mg/L | | 0.054 | 0.067 | 0.062 | 0.045 | | 0.051 | | | 0.041 | | | | 0.044 | | | |
| Tin | Sn | mg/L | | 0.00056 | 0.00025 | 0.000090 | 0.000040 | | 0.000050 | | | 0.000010 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00010 | 0.00020 | 0.00040 | 0.00020 | | 0.00010 | | | 0.00020 | | | | 0.00020 | | | |
| Tungsten | W | mg/L | | 0.00072 | 0.0014 | 0.00074 | 0.00058 | | 0.00054 | | | 0.00041 | | | | 0.00031 | | | |
| Uranium | U | mg/L | | 0.000023 | 0.00015 | 0.000097 | 0.000059 | | 0.000062 | | | 0.000075 | | | | 0.000039 | | | |
| Vanadium | V | mg/L | | 0.00099 | 0.0037 | 0.0021 | 0.0022 | | 0.0021 | | | 0.0017 | | | | 0.0017 | | | |
| Yttrium | Y | mg/L | | 0.000017 | 0.000014 | 0.0000080 | 0.0000090 | | 0.000011 | | | 0.0000080 | | | | 0.0000090 | | | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | 0.0010 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 5 F-Zone MV (OP) (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 |
| Leachate Volume Recovered | | mL | | 9428 | 9111 | 10245 | 4754 | 9610 | 9746 | 9678 | 9905 | 9837 | 9655 | 9723 | 9610 | 9746 | 9769 | 9791 |
| pH | | units | **6.0-9.5** | 8.2 | 8.1 | 8.2 | 8.0 | 8.3 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 |
| Conductivity | | mg/L as CaCO3 | | 159 | 132 | 146 | 130 | 144 | 146 | 108 | 101 | 140 | 103 | 138 | 142 | 111 | 114 | 115 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 50 | 45 | 49 | 51 | 48 | 48 | 49 | 47 | 46 | 48 | 47 | 50 | 49 | 49 | 50 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.080 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 23 | 20 | 23 | 31 | 23 | 22 | 20 | 21 | 22 | 21 | 21 | 22 | 23 | 24 | 24 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.13 | | | | 0.12 | | | | 0.11 | | | | | | 0.13 |
| Antimony | Sb | mg/L | | 0.0038 | | | | 0.0030 | | | | 0.0026 | | | | | | 0.0029 |
| Arsenic | As | mg/L | **0.5** | 0.041 | | | | 0.041 | | | | 0.041 | | | | | | 0.037 |
| Barium | Ba | mg/L | | 0.047 | | | | 0.043 | | | | 0.041 | | | | | | 0.043 |
| Boron | B | mg/L | | 0.016 | | | | 0.012 | | | | 0.0083 | | | | | | 0.0071 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | | | 0.0000030 |
| Calcium | Ca | mg/L | | 13 | 12 | 13 | 19 | 14 | 14 | 13 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00015 | | | | 0.00017 | | | | 0.00019 | | | | | | 0.00022 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | 0.000020 |
| Lithium | Li | mg/L | | 0.0020 | | | | 0.0030 | | | | 0.0030 | | | | | | 0.0030 |
| Magnesium | Mg | mg/L | | 6.4 | | | | 5.8 | | | | 5.5 | | | | | | 6.0 |
| Manganese | Mn | mg/L | | 0.011 | | | | 0.011 | | | | 0.011 | | | | | | 0.015 |
| Molbydenum | Mo | mg/L | | 0.00026 | | | | 0.00026 | | | | 0.00018 | | | | | | 0.00019 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00050 | | | | 0.00010 | | | | 0.00080 | | | | | | 0.0010 |
| Potassium | K | mg/L | | 5.5 | | | | 4.5 | | | | 4.5 | | | | | | 4.5 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 3.8 | | | | 2.4 | | | | 1.7 | | | | | | 1.4 |
| Strontium | Sr | mg/L | | 0.049 | | | | 0.045 | | | | 0.042 | | | | | | 0.048 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00020 | | | | 0.00020 | | | | 0.00040 | | | | | | 0.00030 |
| Tungsten | W | mg/L | | 0.00027 | | | | 0.00085 | | | | 0.00019 | | | | | | 0.00016 |
| Uranium | U | mg/L | | 0.000059 | | | | 0.000085 | | | | 0.000057 | | | | | | 0.000079 |
| Vanadium | V | mg/L | | 0.0017 | | | | 0.0016 | | | | 0.0013 | | | | | | 0.0012 |
| Yttrium | Y | mg/L | | 0.0000090 | | | | 0.0000090 | | | | 0.0000080 | | | | | | 0.0000090 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML90-14-2 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 841 | 887 | 908 | 826 | 956 | 903 | 879 | 866 | 887 | 868 | 910 | 859 | 932 | 856 |
| pH | | units | **6.0-9.5** | 7.4 | 7.4 | 7.3 | 7.1 | 7.4 | 7.4 | 7.3 | 7.3 | 7.3 | 7.1 | 7.1 | 7.2 | 7.1 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 44 | 57 | 35 | 26 | 29 | 20 | 18 | 21 | 17 | 20 | 18 | 20 | 22 | 16 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 9.0 | 8.0 | 7.0 | 10 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 |
| Chloride | Cl | mg/L | | 1.0 | 0.70 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 6.1 | 13 | 6.1 | 4.2 | 2.8 | 3.0 | 2.5 | 3.7 | 4.7 | 3.0 | 2.6 | 2.8 | 2.7 | 2.4 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.070 | 0.060 | 0.050 | | 0.060 | | | 0.060 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00040 | 0.00040 | 0.00040 | 0.00030 | | < 0.0002 | | | 0.00020 | | | | 0.00020 | |
| Arsenic | As | mg/L | **0.5** | 0.0077 | 0.017 | 0.021 | 0.019 | | 0.027 | | | 0.031 | | | | 0.034 | |
| Barium | Ba | mg/L | | 0.0010 | 0.0014 | 0.00097 | 0.0025 | | 0.00072 | | | 0.00095 | | | | 0.0014 | |
| Boron | B | mg/L | | 0.025 | 0.014 | 0.0079 | 0.0056 | | 0.0025 | | | 0.0026 | | | | 0.0017 | |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 2.0 | 3.3 | 2.1 | 2.0 | 3.0 | 1.8 | 1.7 | 2.0 | 1.8 | 1.9 | 1.9 | 2.2 | 2.5 | 1.9 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.00013 | 0.00011 | 0.000089 | 0.000091 | | 0.00015 | | | 0.00045 | | | | 0.00020 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00060 | 0.00060 | 0.013 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | 0.0024 | |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.002 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00032 | 0.000060 | 0.0011 | 0.00034 | | 0.00041 | | | < 0.00002 | | | | 0.000030 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.1 | |
| Magnesium | Mg | mg/L | | 0.30 | 0.77 | 0.44 | 0.43 | | 0.33 | | | 0.30 | | | | 0.31 | |
| Manganese | Mn | mg/L | | 0.0025 | 0.0030 | 0.0023 | 0.0015 | | 0.0015 | | | 0.0034 | | | | 0.0031 | |
| Molbydenum | Mo | mg/L | | 0.00025 | 0.00049 | 0.00026 | 0.00021 | | 0.00010 | | | 0.00017 | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | 0.00070 | 0.00060 | 0.00030 | | < 0.0001 | | | 0.0013 | | | | 0.00040 | |
| Potassium | K | mg/L | | 2.9 | 4.2 | 2.3 | 1.7 | | 1.4 | | | 1.2 | | | | 1.1 | |
| Sodium | Na | mg/L | | 3.5 | 5.5 | 2.4 | 1.3 | | 0.62 | | | 0.36 | | | | 0.23 | |
| Strontium | Sr | mg/L | | 0.011 | 0.022 | 0.013 | 0.012 | | 0.0098 | | | 0.0097 | | | | 0.012 | |
| Tin | Sn | mg/L | | 0.00063 | 0.00042 | 0.0012 | 0.00047 | | 0.00038 | | | 0.00028 | | | | 0.00015 | |
| Titanium | Ti | mg/L | | 0.0013 | 0.00020 | 0.00030 | 0.00020 | | 0.00010 | | | 0.00040 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000076 | 0.00069 | 0.00056 | 0.00055 | | 0.00042 | | | 0.00032 | | | | 0.00042 | |
| Vanadium | V | mg/L | | 0.00058 | 0.00076 | 0.00078 | 0.00058 | | 0.00068 | | | 0.00067 | | | | 0.00052 | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | 0.0060 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0020 | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML90-14-2 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 926 | 889 | 900 | 892 | 907 | 892 | 894 | 897 | 891 | 899 | 891 | 887 | 890 | 896 |
| pH | | units | **6.0-9.5** | 7.1 | 7.1 | 7.1 | 7.2 | 7.1 | 7.1 | 6.8 | 6.8 | 6.8 | 7.1 | 7.0 | 6.9 | 7.0 | 7.0 |
| Conductivity | | mg/L as CaCO3 | | 19 | 15 | 16 | 17 | 15 | 15 | 14 | 15 | 14 | 17 | 14 | 14 | 15 | 14 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 6.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.4 | 2.2 | 2.3 | 2.3 | 2.2 | 2.4 | 2.2 | 2.3 | 2.2 | 2.4 | 2.2 | 2.0 | | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | 0.030 | | | | | 0.070 | | |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | 0.00030 | | | | | 0.00020 | | |
| Arsenic | As | mg/L | **0.5** | | | 0.033 | | | | 0.036 | | | | | 0.032 | | |
| Barium | Ba | mg/L | | | | 0.0012 | | | | 0.00091 | | | | | 0.00099 | | |
| Boron | B | mg/L | | | | 0.00080 | | | | 0.0011 | | | | | 0.00070 | | |
| Cadmium | Cd[3] | mg/L | | | | 0.000099 | | | | < 0.000003 | | | | | 0.000024 | | |
| Calcium | Ca | mg/L | | 2.4 | 1.7 | 1.8 | 1.8 | 1.8 | 1.5 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | | 1.8 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.00022 | | | | 0.00075 | | | | | 0.00019 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | 0.0040 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.000050 | | | | < 0.00002 | | | | | 0.000040 | | |
| Lithium | Li | mg/L | | | | < 0.001 | | | | 0.0010 | | | | | < 0.001 | | |
| Magnesium | Mg | mg/L | | | | 0.19 | | | | 0.16 | | | | | 0.13 | | |
| Manganese | Mn | mg/L | | | | 0.0021 | | | | 0.0016 | | | | | 0.0016 | | |
| Molbydenum | Mo | mg/L | | | | 0.000010 | | | | 0.000040 | | | | | 0.000080 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00020 | | | | 0.00040 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.90 | | | | 0.81 | | | | | 0.73 | | |
| Sodium | Na | mg/L | | | | 0.14 | | | | 0.10 | | | | | 0.070 | | |
| Strontium | Sr | mg/L | | | | 0.0082 | | | | 0.0074 | | | | | 0.0068 | | |
| Tin | Sn | mg/L | | | | 0.000060 | | | | 0.000040 | | | | | 0.000040 | | |
| Titanium | Ti | mg/L | | | | 0.00020 | | | | 0.00020 | | | | | 0.00030 | | |
| Uranium | U | mg/L | | | | 0.00026 | | | | 0.00017 | | | | | 0.00014 | | |
| Vanadium | V | mg/L | | | | 0.00045 | | | | 0.00038 | | | | | 0.00041 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML90-14-2 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 899 | 904 | 898 | 891 | 910 | 893 | 891 | 889 | 883 | 891 | 896 | 909 | 923 |
| pH | | units | **6.0-9.5** | 7.0 | 7.0 | 6.7 | 6.8 | 6.8 | 6.8 | 6.9 | 6.8 | 6.7 | 6.9 | 7.0 | 6.9 | 6.7 |
| Conductivity | | mg/L as CaCO3 | | 14 | 13 | 13 | 14 | 14 | 13 | 14 | 14 | 15 | 15 | 19 | 14 | 14 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 4.0 | 4.0 | 4.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.1 | 2.1 | 1.7 | 2.4 | 2.3 | 2.0 | 2.2 | 2.0 | 2.5 | 2.4 | 2.3 | 2.4 | 2.3 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | | 0.010 | | | | | 0.030 |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | | 0.00020 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | | | 0.032 | | | | | 0.025 | | | | | 0.025 |
| Barium | Ba | mg/L | | | | 0.0017 | | | | | 0.0011 | | | | | 0.0012 |
| Boron | B | mg/L | | | | 0.00070 | | | | | 0.00090 | | | | | 0.00020 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | 0.00018 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 1.8 | 1.8 | 1.6 | 1.8 | 1.7 | 1.7 | 2.6 | 1.6 | 2.0 | 1.9 | 1.7 | 1.8 | 1.9 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.00019 | | | | | 0.00019 | | | | | 0.00024 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | 0.00070 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.00018 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | 0.0010 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.12 | | | | | 0.11 | | | | | 0.10 |
| Manganese | Mn | mg/L | | | | 0.0016 | | | | | 0.0028 | | | | | 0.0026 |
| Molbydenum | Mo | mg/L | | | | 0.000030 | | | | | 0.000030 | | | | | 0.000020 |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00030 | | | | | 0.00040 | | | | | 0.00030 |
| Potassium | K | mg/L | | | | 0.71 | | | | | 0.64 | | | | | 0.67 |
| Sodium | Na | mg/L | | | | 0.070 | | | | | 0.060 | | | | | 0.060 |
| Strontium | Sr | mg/L | | | | 0.0068 | | | | | 0.0067 | | | | | 0.0072 |
| Tin | Sn | mg/L | | | | < 0.00001 | | | | | 0.000040 | | | | | 0.000070 |
| Titanium | Ti | mg/L | | | | 0.00040 | | | | | 0.00020 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00020 | | | | | 0.00011 | | | | | 0.00013 |
| Vanadium | V | mg/L | | | | 0.00033 | | | | | 0.00027 | | | | | 0.00029 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | 0.0030 | | | | | < 0.002 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML92-061-01 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 775 | 833 | 859 | 887 | 881 | 866 | 843 | 848 | 862 | 845 | 900 | 858 | 896 | 881 |
| pH | | units | **6.0-9.5** | 7.3 | 7.3 | 7.4 | 7.0 | 7.2 | 7.2 | 7.2 | 7.1 | 7.2 | 6.9 | 6.9 | 7.0 | 6.8 | 6.8 |
| Conductivity | | mg/L as CaCO3 | | 43 | 51 | 32 | 24 | 21 | 20 | 24 | 19 | 16 | 20 | 16 | 16 | 17 | 15 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 8.0 | 6.0 | 6.0 | 6.0 | < 2 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| Chloride | Cl | mg/L | | 1.3 | 0.80 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 6.1 | 11 | 6.0 | 4.2 | 3.3 | 3.7 | 4.7 | 4.0 | 3.1 | 4.1 | 2.4 | 3.0 | 2.7 | 2.7 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.060 | 0.050 | 0.030 | | 0.040 | | | 0.030 | | | | 0.020 | |
| Antimony | Sb | mg/L | | 0.00040 | 0.00030 | 0.00040 | 0.00030 | | < 0.0002 | | | 0.00030 | | | | < 0.0002 | |
| Arsenic | As | mg/L | **0.5** | 0.0043 | 0.0080 | 0.0092 | 0.0094 | | 0.016 | | | 0.019 | | | | 0.020 | |
| Barium | Ba | mg/L | | 0.00065 | 0.00071 | 0.00039 | 0.00045 | | 0.00054 | | | 0.00096 | | | | 0.0012 | |
| Boron | B | mg/L | | 0.0047 | 0.0080 | 0.0053 | 0.0054 | | 0.0023 | | | 0.0032 | | | | 0.00080 | |
| Cadmium | Cd[3] | mg/L | | 0.000010 | < 0.000003 | < 0.000003 | < 0.000003 | | 0.0000090 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 1.6 | 2.1 | 1.4 | 1.5 | 1.4 | 1.4 | 1.7 | 1.6 | 1.4 | 1.7 | 1.6 | 1.3 | 1.6 | 1.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.00027 | 0.00017 | 0.00011 | 0.00011 | | 0.00013 | | | 0.00084 | | | | 0.00022 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | 0.00090 | 0.00080 | 0.00050 | | < 0.0005 | | | 0.0012 | | | | 0.00070 | |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.002 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000070 | 0.000050 | < 0.00002 | < 0.00002 | | 0.00038 | | | 0.000030 | | | | 0.000020 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.1 | |
| Magnesium | Mg | mg/L | | 0.40 | 0.85 | 0.51 | 0.52 | | 0.47 | | | 0.40 | | | | 0.33 | |
| Manganese | Mn | mg/L | | 0.0041 | 0.0037 | 0.0030 | 0.0020 | | 0.0021 | | | 0.0052 | | | | 0.0019 | |
| Molbydenum | Mo | mg/L | | 0.00028 | 0.00068 | 0.00044 | 0.00040 | | 0.00033 | | | 0.00037 | | | | 0.00010 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0010 | 0.0010 | 0.00040 | 0.00040 | | < 0.0001 | | | 0.0024 | | | | 0.00040 | |
| Potassium | K | mg/L | | 3.4 | 5.1 | 2.8 | 2.2 | | 1.8 | | | 1.2 | | | | 0.80 | |
| Sodium | Na | mg/L | | 3.3 | 4.1 | 1.7 | 0.96 | | 0.48 | | | 0.20 | | | | 0.12 | |
| Strontium | Sr | mg/L | | 0.0084 | 0.015 | 0.0094 | 0.010 | | 0.0089 | | | 0.0087 | | | | 0.0084 | |
| Tin | Sn | mg/L | | 0.019 | 0.0066 | 0.0031 | 0.0022 | | 0.0010 | | | 0.00057 | | | | 0.00040 | |
| Titanium | Ti | mg/L | | 0.0014 | 0.00040 | 0.00030 | 0.00020 | | 0.00020 | | | 0.00020 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000040 | 0.00026 | 0.00024 | 0.00027 | | 0.00027 | | | 0.00021 | | | | 0.00022 | |
| Vanadium | V | mg/L | | 0.00030 | 0.00034 | 0.00030 | 0.00022 | | 0.00031 | | | 0.00029 | | | | 0.00022 | |
| Zinc | Zn | mg/L | **0.5** | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML92-061-01 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 887 | 891 | 890 | 887 | 883 | 887 | 889 | 879 | 888 | 900 | 887 | 890 | 899 | 890 |
| pH | | units | **6.0-9.5** | 6.8 | 6.9 | 6.8 | 6.9 | 6.8 | 6.9 | 6.7 | 6.5 | 6.6 | 6.9 | 6.8 | 6.7 | 6.8 | 6.7 |
| Conductivity | | mg/L as CaCO3 | | 15 | 14 | 14 | 15 | 15 | 15 | 15 | 15 | 14 | 16 | 14 | 15 | 14 | 14 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.6 | 2.6 | 2.5 | 2.9 | 2.6 | 3.0 | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.6 | 2.6 | 2.8 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.030 | | | | < 0.01 | | | | | 0.030 | | |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | 0.00030 | | | | | 0.00030 | | |
| Arsenic | As | mg/L | **0.5** | | | 0.020 | | | | 0.023 | | | | | 0.022 | | |
| Barium | Ba | mg/L | | | | 0.0014 | | | | 0.00048 | | | | | 0.00061 | | |
| Boron | B | mg/L | | | | 0.00050 | | | | 0.0017 | | | | | 0.00040 | | |
| Cadmium | Cd[3] | mg/L | | | | 0.0000040 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 1.7 | 1.4 | 1.6 | 1.6 | 1.6 | 1.4 | 1.5 | 1.7 | 1.6 | 1.5 | 1.6 | 1.7 | 1.5 | 2.7 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.00027 | | | | 0.0019 | | | | | 0.00032 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | < 0.00002 | | | | | 0.000030 | | |
| Lithium | Li | mg/L | | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |
| Magnesium | Mg | mg/L | | | | 0.24 | | | | 0.24 | | | | | 0.17 | | |
| Manganese | Mn | mg/L | | | | 0.0018 | | | | 0.0018 | | | | | 0.0013 | | |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | 0.00010 | | | | | 0.00022 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00040 | | | | 0.0012 | | | | | 0.00040 | | |
| Potassium | K | mg/L | | | | 0.60 | | | | 0.65 | | | | | 0.60 | | |
| Sodium | Na | mg/L | | | | 0.080 | | | | 0.070 | | | | | 0.040 | | |
| Strontium | Sr | mg/L | | | | 0.0077 | | | | 0.0074 | | | | | 0.0070 | | |
| Tin | Sn | mg/L | | | | 0.00032 | | | | 0.00034 | | | | | 0.00025 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.00021 | | | | 0.00019 | | | | | 0.00020 | | |
| Vanadium | V | mg/L | | | | 0.00019 | | | | 0.00013 | | | | | 0.00021 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML92-061-01 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 900 | 903 | 917 | 901 | 911 | 897 | 902 | 896 | 887 | 895 | 906 | 912 | 938 |
| pH | | units | **6.0-9.5** | 6.8 | 6.9 | 6.6 | 6.7 | 6.7 | 6.9 | 6.6 | 6.6 | 6.7 | 6.7 | 6.9 | 6.8 | 6.7 |
| Conductivity | | mg/L as CaCO3 | | 15 | 16 | 15 | 14 | 14 | 17 | 15 | 14 | 16 | 15 | 20 | 17 | 19 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | 4.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.8 | 2.9 | 2.8 | 2.8 | 3.0 | 2.7 | 2.6 | 2.9 | 3.5 | 3.1 | 3.1 | 3.3 | 3.7 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.020 | | | | | 0.010 | | | | | 0.020 |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | | 0.00030 | | | | | 0.00020 |
| Arsenic | As | mg/L | **0.5** | | | 0.023 | | | | | 0.019 | | | | | 0.022 |
| Barium | Ba | mg/L | | | | 0.00052 | | | | | 0.00046 | | | | | 0.00065 |
| Boron | B | mg/L | | | | 0.00030 | | | | | 0.00070 | | | | | < 0.0002 |
| Cadmium | Cd[3] | mg/L | | | | 0.0000040 | | | | | 0.00046 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 1.9 | 2.1 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 2.3 | 2.2 | 2.0 | 1.9 | 2.2 | 2.5 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.00036 | | | | | 0.00038 | | | | | 0.00052 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | 0.0011 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | 0.024 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.00063 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.16 | | | | | 0.31 | | | | | 0.15 |
| Manganese | Mn | mg/L | | | | 0.0014 | | | | | 0.0039 | | | | | 0.0015 |
| Molbydenum | Mo | mg/L | | | | 0.00012 | | | | | 0.000070 | | | | | 0.000070 |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00070 | | | | | 0.00090 | | | | | 0.0010 |
| Potassium | K | mg/L | | | | 0.57 | | | | | 0.47 | | | | | 0.57 |
| Sodium | Na | mg/L | | | | 0.060 | | | | | 0.040 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.0072 | | | | | 0.0070 | | | | | 0.0086 |
| Tin | Sn | mg/L | | | | 0.00018 | | | | | 0.00017 | | | | | 0.00032 |
| Titanium | Ti | mg/L | | | | 0.00030 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00059 | | | | | 0.00020 | | | | | 0.00022 |
| Vanadium | V | mg/L | | | | 0.00015 | | | | | 0.00013 | | | | | 0.00015 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | 0.0030 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-1 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 775 | 879 | 917 | 891 | 994 | 990 | 985 | 980 | 979 | 974 | 981 | 982 | 905 | 984 |
| pH | | units | **6.0-9.5** | 7.2 | 7.1 | 7.2 | 7.1 | 7.4 | 7.4 | 7.3 | 7.2 | 7.2 | 7.1 | 7.0 | 7.1 | 7.1 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 39 | 49 | 40 | 33 | 36 | 28 | 26 | 25 | 23 | 26 | 21 | 21 | 26 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 7.0 | 6.0 | 7.0 | 9.0 | 12 | 10 | 7.0 | 6.0 | 7.0 | 6.0 | 6.0 | 5.0 | 6.0 | 7.0 |
| Chloride | Cl | mg/L | | 0.80 | 0.40 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 6.8 | 13 | 8.5 | 5.7 | 3.8 | 3.7 | 4.2 | 4.2 | 4.3 | 4.5 | 2.9 | 3.1 | 3.7 | 2.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.060 | 0.050 | 0.040 | 0.030 | | 0.040 | | | 0.030 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00030 | 0.00040 | 0.00040 | 0.00040 | | 0.00020 | | | 0.00030 | | | | 0.00020 | |
| Arsenic | As | mg/L | **0.5** | 0.0056 | 0.010 | 0.014 | 0.016 | | 0.023 | | | 0.025 | | | | 0.033 | |
| Barium | Ba | mg/L | | 0.00063 | 0.00073 | 0.00087 | 0.00069 | | 0.00074 | | | 0.00092 | | | | 0.00066 | |
| Boron | B | mg/L | | 0.0055 | 0.0065 | 0.0060 | 0.0049 | | 0.0022 | | | 0.0019 | | | | 0.00080 | |
| Cadmium | Cd[3] | mg/L | | 0.0000050 | 0.0000030 | < 0.000003 | < 0.000003 | | 0.0000060 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 1.6 | 2.8 | 2.4 | 2.8 | 3.7 | 3.1 | 2.9 | 2.7 | 2.9 | 2.9 | 2.6 | 2.4 | 3.0 | 3.2 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000097 | 0.00015 | 0.00012 | 0.00010 | | 0.00016 | | | 0.00035 | | | | 0.00022 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | 0.00060 | 0.0037 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.002 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00034 | 0.000060 | 0.00030 | 0.00043 | | 0.00052 | | | < 0.00002 | | | | 0.00038 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.1 | |
| Magnesium | Mg | mg/L | | 0.37 | 0.97 | 0.70 | 0.74 | | 0.64 | | | 0.48 | | | | 0.40 | |
| Manganese | Mn | mg/L | | 0.0034 | 0.0040 | 0.0041 | 0.0038 | | 0.0038 | | | 0.0050 | | | | 0.0034 | |
| Molbydenum | Mo | mg/L | | 0.00030 | 0.00080 | 0.00054 | 0.00039 | | 0.00017 | | | 0.00026 | | | | 0.00012 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | 0.00090 | 0.00060 | 0.00050 | | 0.00010 | | | 0.0010 | | | | 0.00030 | |
| Potassium | K | mg/L | | 3.1 | 4.3 | 2.8 | 2.3 | | 1.8 | | | 1.2 | | | | 0.96 | |
| Sodium | Na | mg/L | | 2.6 | 3.2 | 1.8 | 1.0 | | 0.41 | | | 0.21 | | | | 0.14 | |
| Strontium | Sr | mg/L | | 0.0075 | 0.016 | 0.013 | 0.014 | | 0.014 | | | 0.012 | | | | 0.011 | |
| Tin | Sn | mg/L | | 0.010 | 0.0027 | 0.0018 | 0.0020 | | 0.00083 | | | 0.00069 | | | | 0.00040 | |
| Titanium | Ti | mg/L | | 0.0011 | 0.00010 | 0.00010 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000097 | 0.00068 | 0.00074 | 0.00078 | | 0.00085 | | | 0.00075 | | | | 0.00066 | |
| Vanadium | V | mg/L | | 0.00032 | 0.00035 | 0.00039 | 0.00034 | | 0.00046 | | | 0.00040 | | | | 0.00039 | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0020 | | | 0.0010 | | | | 0.0010 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

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[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-1 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 989 | 985 | 894 | 985 | 901 | 985 | 985 | 985 | 990 | 920 | 989 | 984 | 986 | 984 |
| pH | | units | **6.0-9.5** | 7.1 | 7.1 | 7.0 | 7.1 | 7.1 | 7.2 | 6.8 | 6.5 | 6.8 | 7.0 | 7.0 | 7.0 | 7.1 | 7.0 |
| Conductivity | | mg/L as CaCO3 | | 26 | 18 | 16 | 20 | 21 | 21 | 19 | 22 | 20 | 19 | 20 | 20 | 20 | 21 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 8.0 | 5.0 | 4.0 | 6.0 | 5.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 3.2 | 2.3 | 2.5 | 2.9 | 3.3 | 3.0 | 3.0 | 3.0 | 3.0 | 2.9 | 3.0 | 2.8 | 3.0 | 2.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.060 | | | | 0.020 | | | | | 0.020 | | |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | 0.00030 | | | | | 0.00030 | | |
| Arsenic | As | mg/L | **0.5** | | | 0.027 | | | | 0.031 | | | | | 0.028 | | |
| Barium | Ba | mg/L | | | | 0.00051 | | | | 0.00081 | | | | | 0.00073 | | |
| Boron | B | mg/L | | | | 0.00030 | | | | 0.00060 | | | | | 0.00030 | | |
| Cadmium | Cd[3] | mg/L | | | | 0.000011 | | | | < 0.000003 | | | | | 0.0000040 | | |
| Calcium | Ca | mg/L | | 3.8 | 2.4 | 2.0 | 2.6 | 2.7 | 2.4 | 2.4 | 2.7 | 2.7 | 2.3 | 2.7 | 2.7 | 2.6 | 2.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.00023 | | | | 0.00042 | | | | | 0.00028 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.000020 | | | | 0.000080 | | | | | 0.000030 | | |
| Lithium | Li | mg/L | | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |
| Magnesium | Mg | mg/L | | | | 0.21 | | | | 0.21 | | | | | 0.18 | | |
| Manganese | Mn | mg/L | | | | 0.0029 | | | | 0.0045 | | | | | 0.0053 | | |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | 0.000070 | | | | | 0.000080 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00020 | | | | 0.00020 | | | | | 0.00010 | | |
| Potassium | K | mg/L | | | | 0.66 | | | | 0.75 | | | | | 0.67 | | |
| Sodium | Na | mg/L | | | | 0.070 | | | | 0.070 | | | | | 0.040 | | |
| Strontium | Sr | mg/L | | | | 0.0073 | | | | 0.0091 | | | | | 0.0093 | | |
| Tin | Sn | mg/L | | | | 0.00040 | | | | 0.00023 | | | | | 0.00015 | | |
| Titanium | Ti | mg/L | | | | 0.00010 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.00042 | | | | 0.00042 | | | | | 0.00035 | | |
| Vanadium | V | mg/L | | | | 0.00028 | | | | 0.00023 | | | | | 0.00031 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-1 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 990 | 942 | 992 | 974 | 926 | 983 | 981 | 982 | 977 | 984 | 982 | 906 | 982 |
| pH | | units | **6.0-9.5** | 6.9 | 7.1 | 6.9 | 7.0 | 6.8 | 6.9 | 6.9 | 6.9 | 7.2 | 6.9 | 7.0 | 6.9 | 7.0 |
| Conductivity | | mg/L as CaCO3 | | 19 | 20 | 20 | 18 | 18 | 19 | 19 | 17 | 22 | 19 | 22 | 17 | 22 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 5.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 | 6.0 | 5.0 | 4.0 | 4.0 | 6.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.7 | 3.1 | 2.6 | 2.8 | 3.2 | 2.6 | 2.9 | 2.9 | 3.5 | 3.1 | 2.9 | 3.0 | 3.2 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | < 0.01 | | | | | < 0.01 | | | | | 0.010 |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | | 0.00030 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | | | 0.030 | | | | | 0.024 | | | | | 0.029 |
| Barium | Ba | mg/L | | | | 0.00088 | | | | | 0.00079 | | | | | 0.00084 |
| Boron | B | mg/L | | | | 0.00030 | | | | | 0.00070 | | | | | < 0.0002 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | 0.000093 | | | | | 0.0000040 |
| Calcium | Ca | mg/L | | 2.6 | 3.1 | 2.6 | 2.6 | 2.8 | 2.8 | 1.7 | 2.4 | 3.0 | 2.8 | 2.3 | 2.3 | 3.4 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.00032 | | | | | 0.00034 | | | | | 0.00043 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.00010 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.15 | | | | | 0.12 | | | | | 0.15 |
| Manganese | Mn | mg/L | | | | 0.0055 | | | | | 0.0064 | | | | | 0.0084 |
| Molbydenum | Mo | mg/L | | | | 0.000050 | | | | | 0.000040 | | | | | 0.000030 |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00050 | | | | | 0.00050 | | | | | 0.00050 |
| Potassium | K | mg/L | | | | 0.63 | | | | | 0.53 | | | | | 0.61 |
| Sodium | Na | mg/L | | | | 0.050 | | | | | 0.040 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.0088 | | | | | 0.0078 | | | | | 0.011 |
| Tin | Sn | mg/L | | | | 0.00011 | | | | | 0.00012 | | | | | 0.00011 |
| Titanium | Ti | mg/L | | | | 0.00030 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00028 | | | | | 0.00020 | | | | | 0.00033 |
| Vanadium | V | mg/L | | | | 0.00026 | | | | | 0.00019 | | | | | 0.00024 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

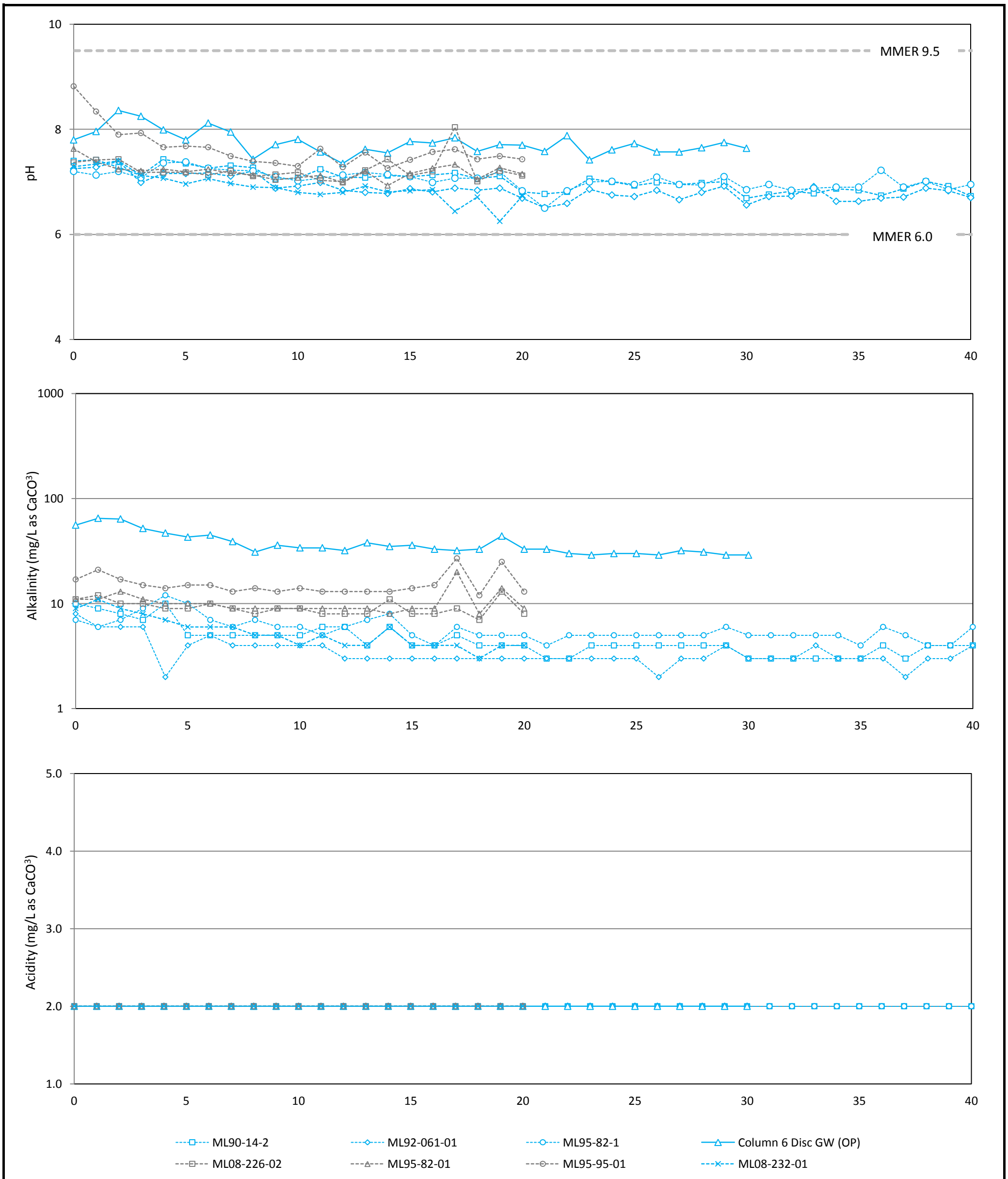
| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 6 Disc GW (OP) (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 23400 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 |
| Leachate Volume Recovered | | mL | | 1981 | 5005 | 5096 | 5073 | 4960 | 5073 | 4937 | 4983 | 22228 | 5822 | 4546 | 4983 | 4574 | 4937 | 5232 | 4733 |
| pH | | units | **6.0-9.5** | 7.8 | 8.0 | 8.4 | 8.3 | 8.0 | 7.8 | 8.1 | 8.0 | 7.4 | 7.7 | 7.8 | 7.6 | 7.4 | 7.6 | 7.6 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 503 | 422 | 270 | 237 | 223 | 238 | 208 | 207 | 95 | 123 | 139 | 200 | 192 | 211 | 219 | 174 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 56 | 65 | 64 | 52 | 47 | 43 | 45 | 39 | 31 | 36 | 34 | 34 | 32 | 38 | 35 | 36 |
| Chloride | Cl | mg/L | | 39 | 32 | 14 | 8.6 | | 2.7 | | | 0.40 | | | | < 0.2 | | | |
| Fluoride | F | mg/L | | 0.77 | 0.72 | 0.69 | 0.56 | | 0.40 | | | 0.26 | | | | 0.31 | | | |
| Phosphorus | P | mg/L | | 0.061 | 0.0090 | 0.012 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 87 | 97 | 63 | 51 | 49 | 60 | 65 | 64 | 47 | 37 | 46 | 58 | 56 | 68 | 70 | 67 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.30 | 0.18 | 0.20 | 0.19 | | 0.18 | | | 0.15 | | | | 0.10 | | | |
| Antimony | Sb | mg/L | | 0.0012 | 0.0020 | 0.0017 | 0.0014 | | 0.0011 | | | 0.00060 | | | | 0.00050 | | | |
| Arsenic | As | mg/L | **0.5** | 0.021 | 0.062 | 0.10 | 0.15 | | 0.19 | | | 0.16 | | | | 0.12 | | | |
| Barium | Ba | mg/L | | 0.025 | 0.023 | 0.022 | 0.019 | | 0.021 | | | 0.016 | | | | 0.027 | | | |
| Boron | B | mg/L | | 0.083 | 0.11 | 0.084 | 0.068 | | 0.045 | | | 0.023 | | | | 0.015 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000090 | 0.000034 | 0.00011 | 0.000032 | | < 0.000003 | | | < 0.000003 | | | | 0.0000090 | | | |
| Calcium | Ca | mg/L | | 11 | 11 | 10 | 11 | 13 | 16 | 20 | 21 | 17 | 19 | 20 | 28 | 25 | 29 | 31 | 31 |
| Chromium | Cr[2] | mg/L | | 0.0081 | 0.0033 | 0.0011 | 0.00070 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00067 | 0.00058 | 0.00041 | 0.00044 | | 0.00058 | | | 0.00055 | | | | 0.00072 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0043 | 0.0030 | 0.0019 | 0.0014 | | 0.0012 | | | 0.00060 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.022 | 0.020 | 0.031 | 0.026 | | 0.013 | | | 0.0070 | | | | 0.0060 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00026 | 0.00017 | 0.00010 | 0.00012 | | 0.000050 | | | 0.000020 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0070 | 0.0080 | 0.0080 | 0.0070 | | 0.0080 | | | 0.0070 | | | | 0.0070 | | | |
| Magnesium | Mg | mg/L | | 2.4 | 3.3 | 3.0 | 3.0 | | 3.9 | | | 3.2 | | | | 3.3 | | | |
| Manganese | Mn | mg/L | | 0.0077 | 0.011 | 0.0099 | 0.0084 | | 0.013 | | | 0.0078 | | | | 0.0055 | | | |
| Molbydenum | Mo | mg/L | | 0.18 | 0.13 | 0.075 | 0.045 | | 0.024 | | | 0.0078 | | | | 0.0054 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0039 | 0.0043 | 0.0028 | 0.0023 | | 0.0025 | | | 0.0016 | | | | 0.0011 | | | |
| Potassium | K | mg/L | | 32 | 25 | 21 | 17 | | 14 | | | 9.0 | | | | 7.6 | | | |
| Selenium | Se | mg/L | | 0.0020 | 0.0030 | 0.0010 | 0.0020 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 76 | 58 | 40 | 27 | | 16 | | | 5.5 | | | | 2.4 | | | |
| Strontium | Sr | mg/L | | 0.073 | 0.078 | 0.071 | 0.072 | | 0.092 | | | 0.079 | | | | 0.10 | | | |
| Tin | Sn | mg/L | | 0.00064 | 0.00018 | 0.000080 | 0.000030 | | 0.000040 | | | 0.000010 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | 0.000020 | < 0.00002 | 0.000030 | 0.000020 | | 0.000020 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.0017 | 0.0024 | 0.0027 | 0.0023 | | 0.0016 | | | 0.0010 | | | | 0.00070 | | | |
| Tungsten | W | mg/L | | 0.0087 | 0.0081 | 0.0056 | 0.0044 | | 0.0023 | | | 0.00075 | | | | 0.00034 | | | |
| Uranium | U | mg/L | | 0.00042 | 0.0047 | 0.0034 | 0.0035 | | 0.0057 | | | 0.0036 | | | | 0.0049 | | | |
| Vanadium | V | mg/L | | 0.0019 | 0.0033 | 0.0033 | 0.0034 | | 0.0029 | | | 0.0021 | | | | 0.0014 | | | |
| Yttrium | Y | mg/L | | 0.000093 | 0.00013 | 0.000091 | 0.000075 | | 0.000058 | | | 0.000032 | | | | 0.000021 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

**Appendix B.7: Kinetic Test Results - Waste Rock**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 6 Disc GW (OP) (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 |
| Leachate Volume Recovered | | mL | | 4733 | 4665 | 5278 | 5164 | 4847 | 4983 | 4915 | 5028 | 5005 | 4937 | 5005 | 4915 | 5005 | 4983 | 5051 |
| pH | | units | 6.0-9.5 | 7.7 | 7.8 | 7.6 | 7.7 | 7.7 | 7.6 | 7.9 | 7.4 | 7.6 | 7.7 | 7.6 | 7.6 | 7.7 | 7.8 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 223 | 197 | 211 | 157 | 187 | 186 | 129 | 120 | 158 | 119 | 151 | 157 | 118 | 116 | 116 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 33 | 32 | 33 | 44 | 33 | 33 | 30 | 29 | 30 | 30 | 29 | 32 | 31 | 29 | 299 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.30 | | | | 0.28 | | | | 0.20 | | | | | | 0.25 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 63 | 60 | 63 | 63 | 53 | 52 | 47 | 44 | 40 | 39 | 38 | 38 | 38 | 38 | 38 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.10 | | | | 0.090 | | | | 0.10 | | | | | | 0.10 |
| Antimony | Sb | mg/L | | 0.00050 | | | | 0.00020 | | | | < 0.0002 | | | | | | 0.00030 |
| Arsenic | As | mg/L | 0.5 | 0.11 | | | | 0.11 | | | | 0.11 | | | | | | 0.10 |
| Barium | Ba | mg/L | | 0.026 | | | | 0.022 | | | | 0.017 | | | | | | 0.019 |
| Boron | B | mg/L | | 0.011 | | | | 0.0085 | | | | 0.0059 | | | | | | 0.0051 |
| Cadmium | Cd[3] | mg/L | | 0.000011 | | | | 0.000010 | | | | 0.0000040 | | | | | | 0.000010 |
| Calcium | Ca | mg/L | | 30 | 29 | 29 | 30 | 27 | 27 | 25 | 24 | 23 | 22 | 23 | 22 | 22 | 24 | 23 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00076 | | | | 0.00065 | | | | 0.00055 | | | | | | 0.00053 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | 0.00050 |
| Iron | Fe | mg/L | | 0.0040 | | | | 0.0040 | | | | 0.0080 | | | | | | 0.0050 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | 0.000040 |
| Lithium | Li | mg/L | | 0.0060 | | | | 0.0050 | | | | 0.0040 | | | | | | 0.0040 |
| Magnesium | Mg | mg/L | | 3.2 | | | | 2.4 | | | | 1.8 | | | | | | 1.5 |
| Manganese | Mn | mg/L | | 0.0042 | | | | 0.0031 | | | | 0.0019 | | | | | | 0.0019 |
| Molbydenum | Mo | mg/L | | 0.0064 | | | | 0.0065 | | | | 0.0054 | | | | | | 0.0050 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0012 | | | | 0.0010 | | | | 0.0018 | | | | | | 0.0017 |
| Potassium | K | mg/L | | 7.1 | | | | 5.7 | | | | 5.3 | | | | | | 4.9 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.9 | | | | 1.2 | | | | 0.90 | | | | | | 0.74 |
| Strontium | Sr | mg/L | | 0.11 | | | | 0.089 | | | | 0.072 | | | | | | 0.071 |
| Tin | Sn | mg/L | | < 0.00001 | | | | 0.000020 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.0010 | | | | 0.00090 | | | | 0.0012 | | | | | | 0.0010 |
| Tungsten | W | mg/L | | 0.00025 | | | | 0.0011 | | | | 0.00019 | | | | | | 0.00019 |
| Uranium | U | mg/L | | 0.0050 | | | | 0.0035 | | | | 0.0027 | | | | | | 0.0027 |
| Vanadium | V | mg/L | | 0.0012 | | | | 0.0012 | | | | 0.00098 | | | | | | 0.0011 |
| Yttrium | Y | mg/L | | 0.000022 | | | | 0.000020 | | | | 0.000017 | | | | | | 0.000020 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

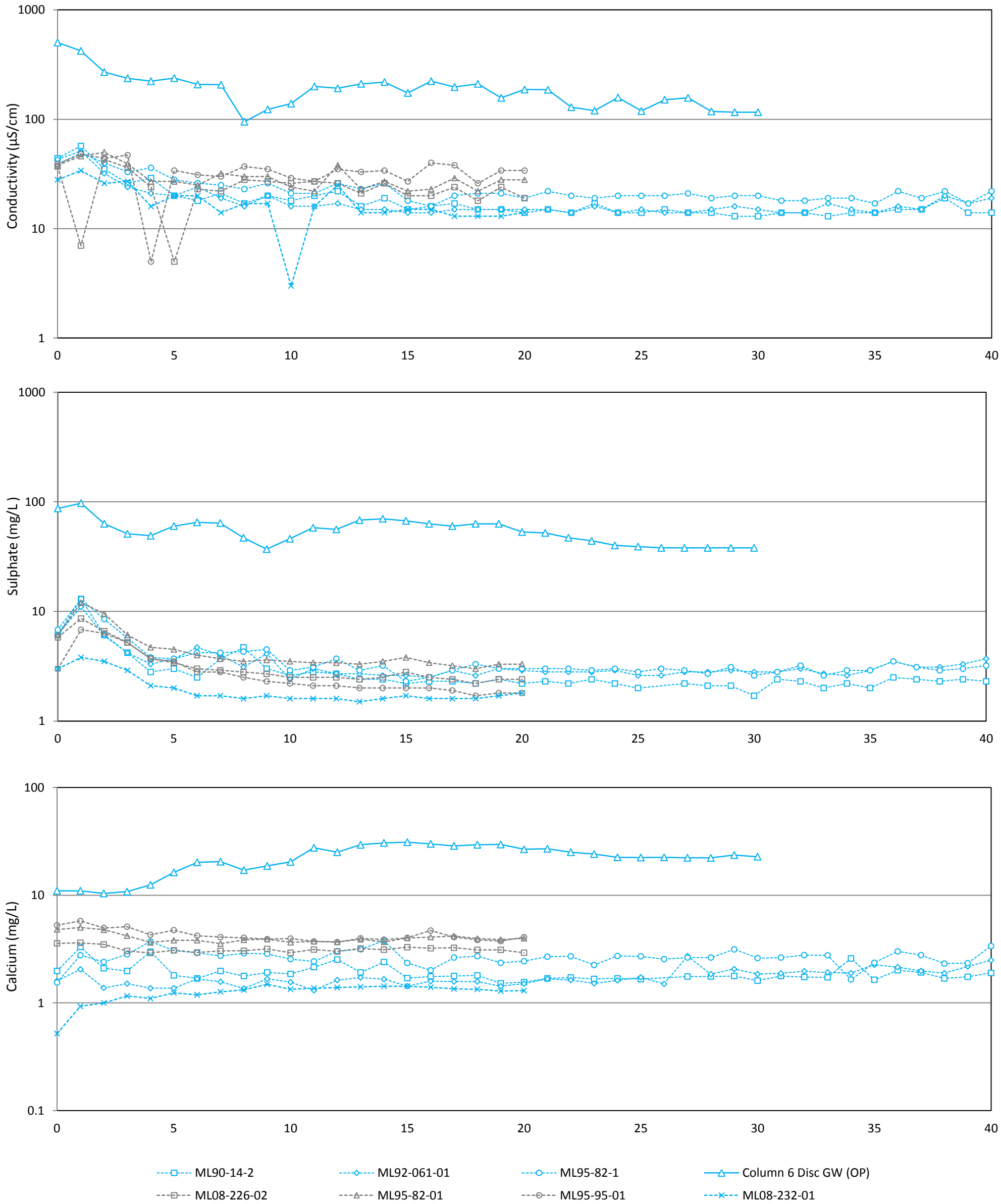
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-1

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Conductivity**
**Sulphate**
**Calcium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

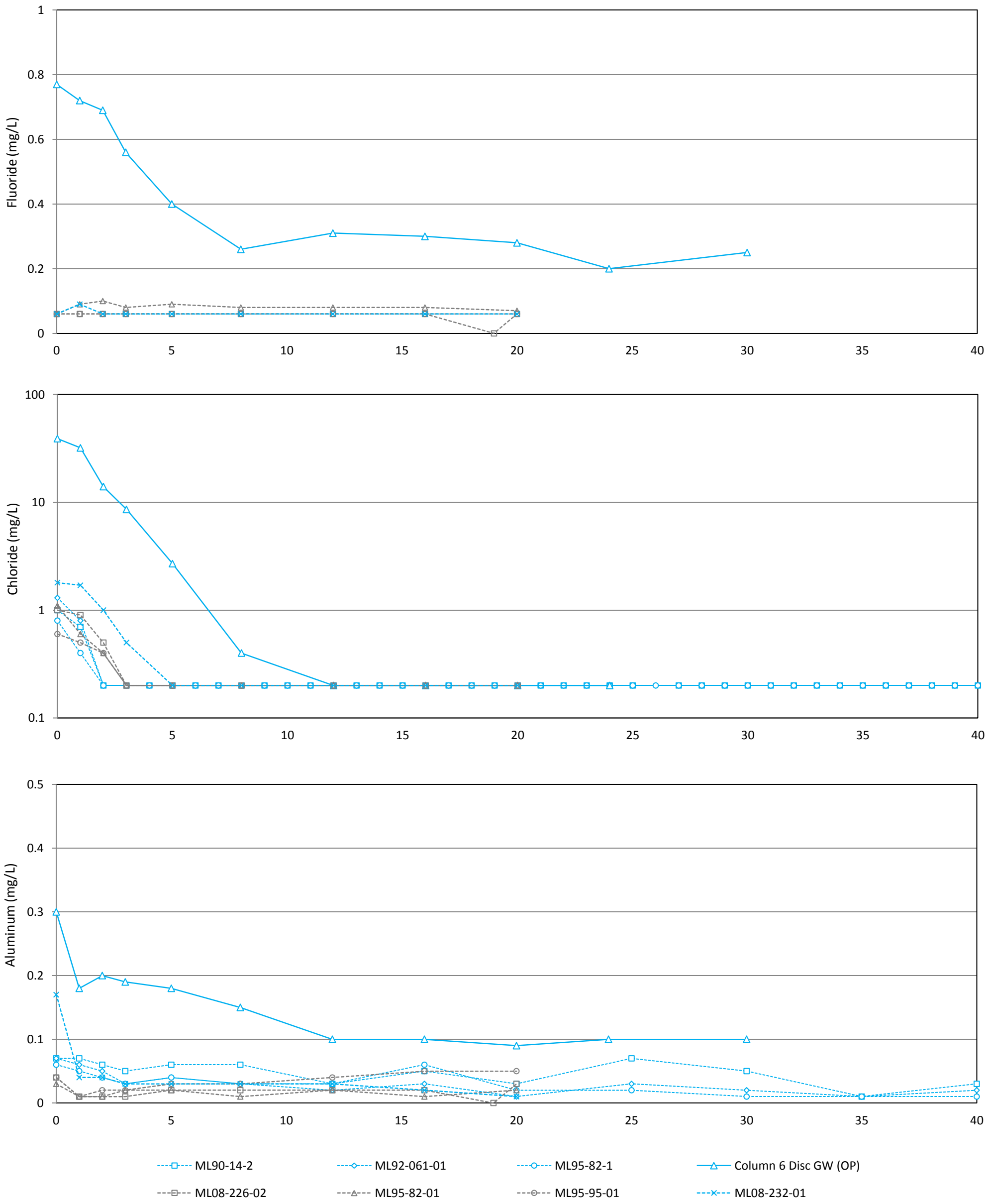
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

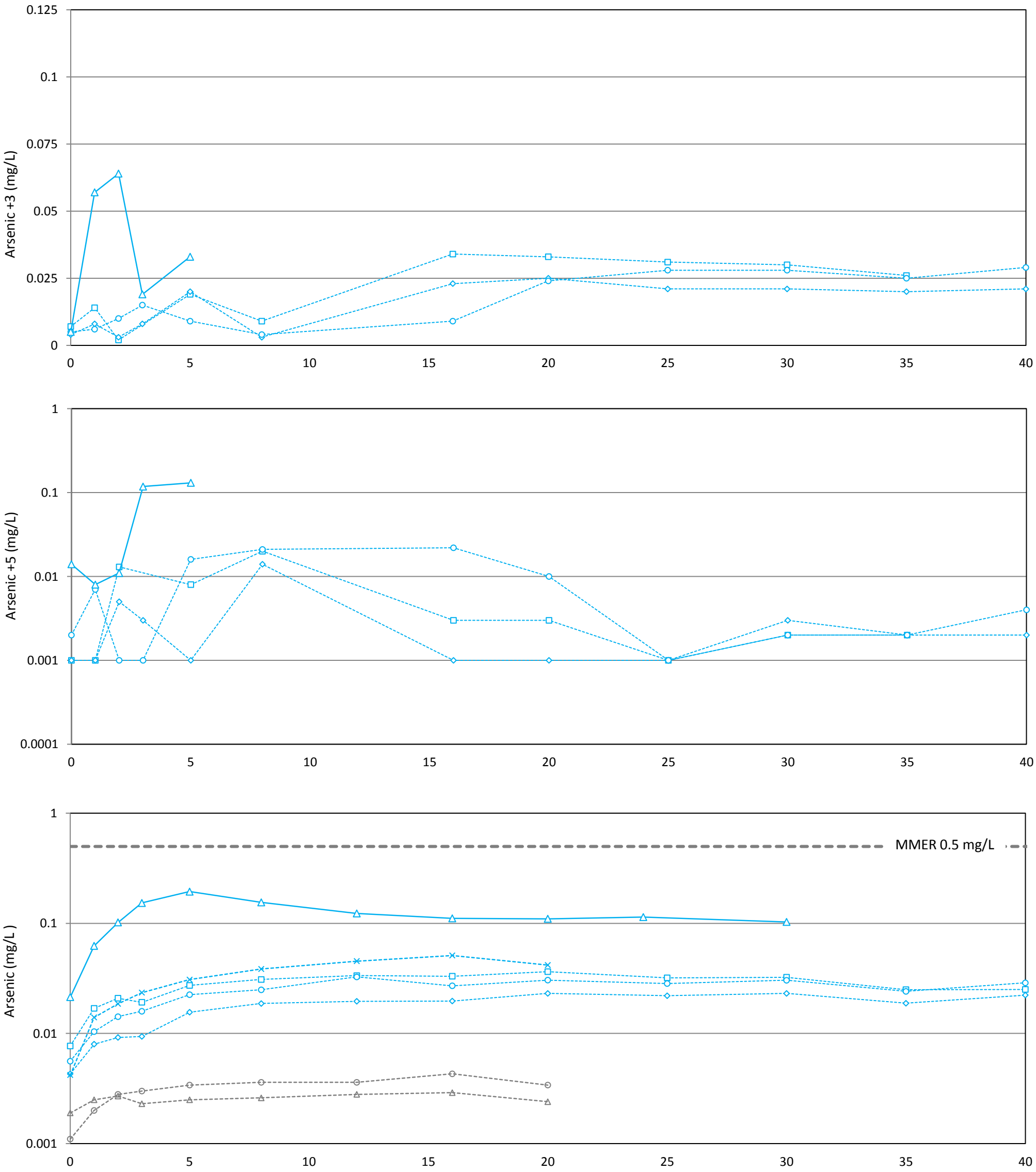
**FIGURE** B.7-2

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Fluoride<br>Chloride<br>Aluminum**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-3 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Arsenic +3**
**Arsenic +5**
**Arsenic**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

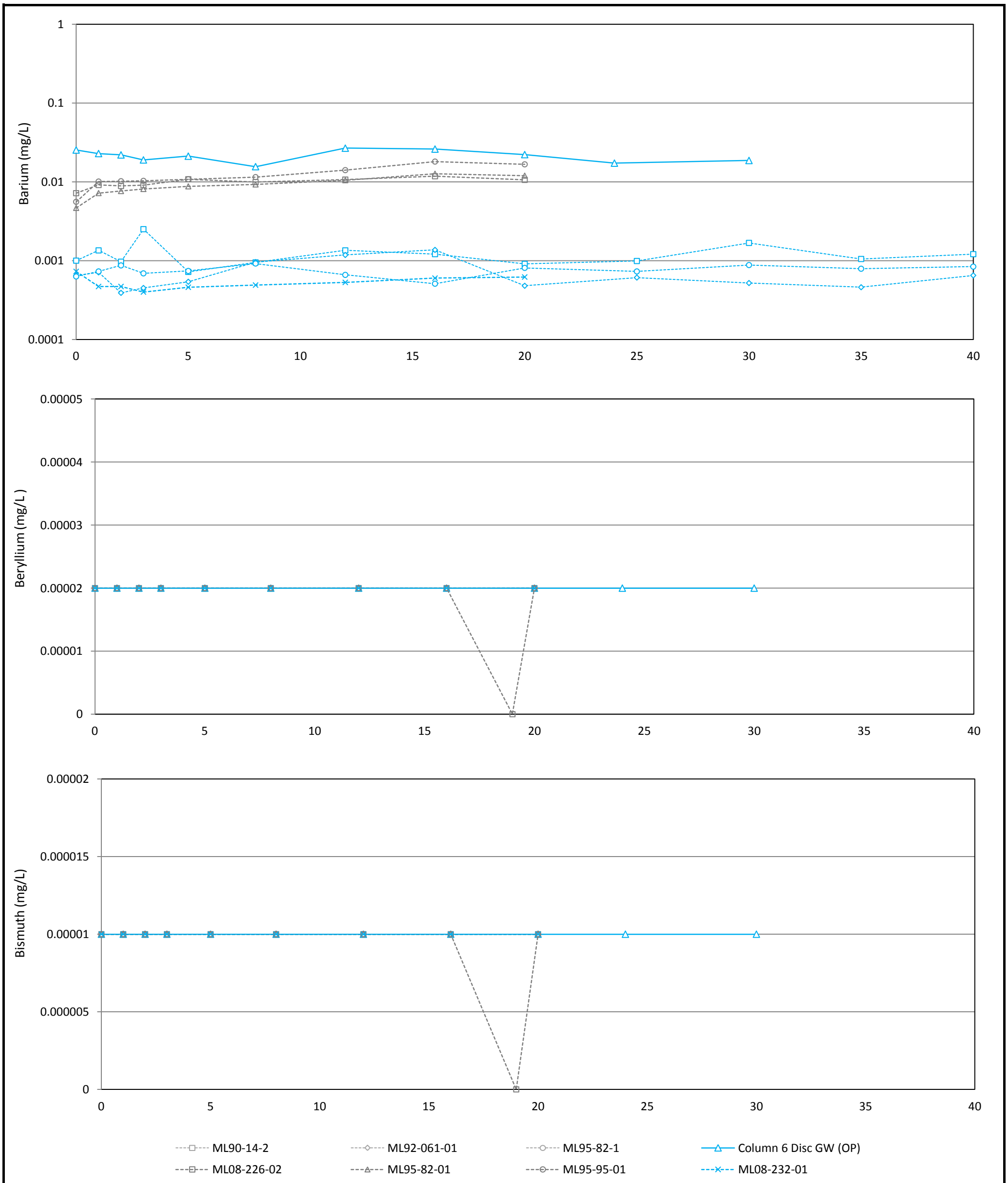
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-4

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Barium**
**Beryllium**
**Bismuth**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

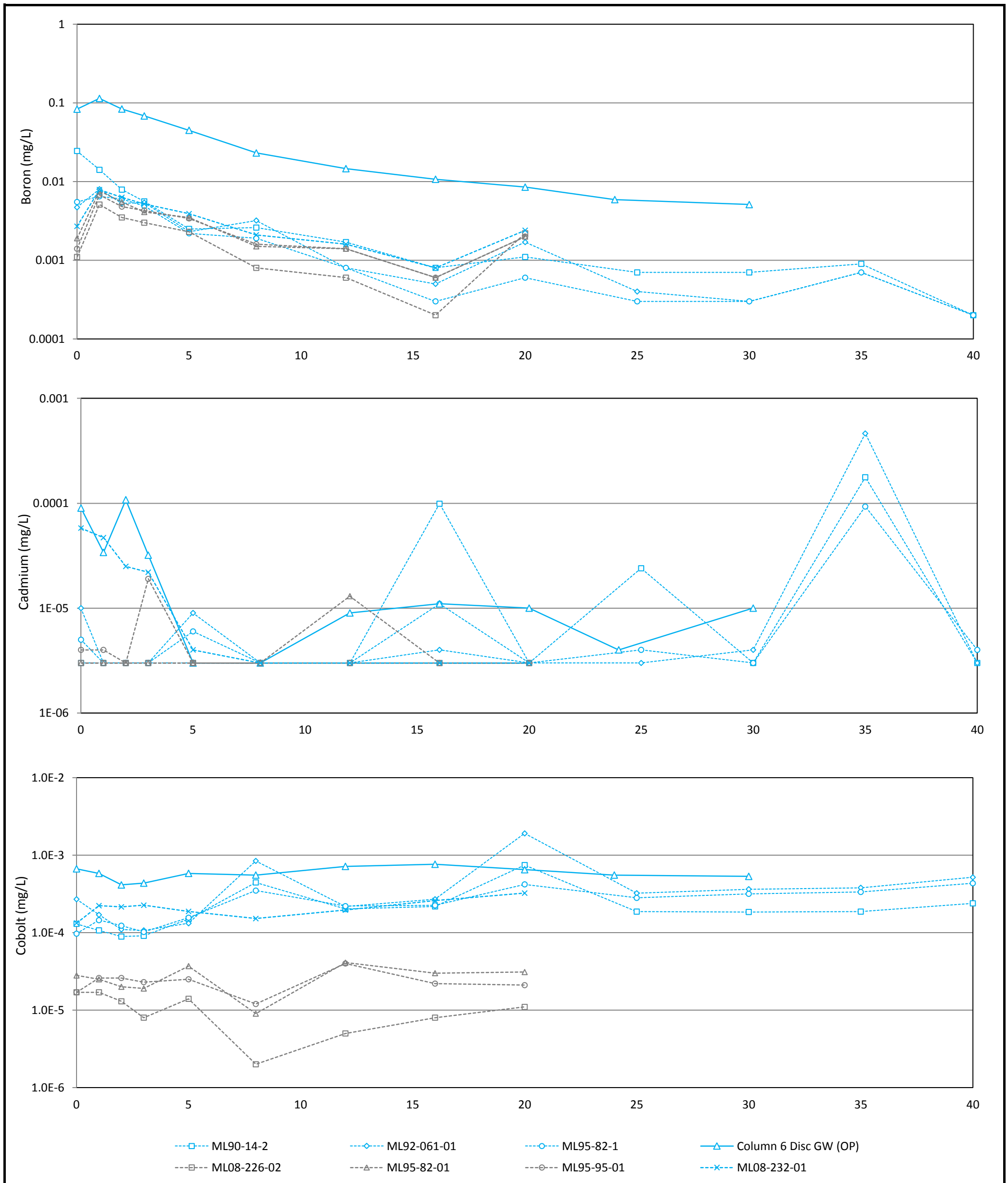
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-5

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Boron**
**Cadmium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

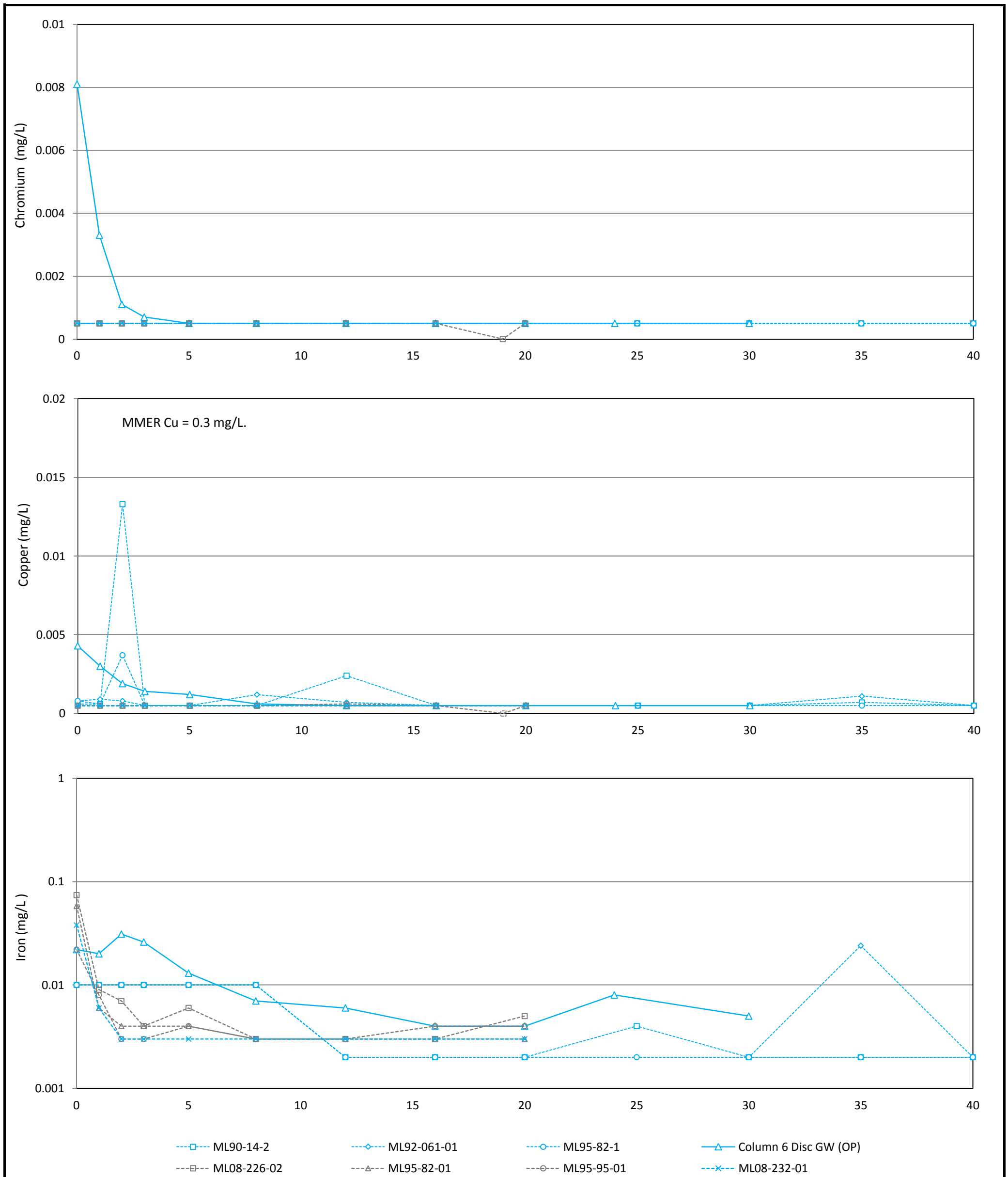
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

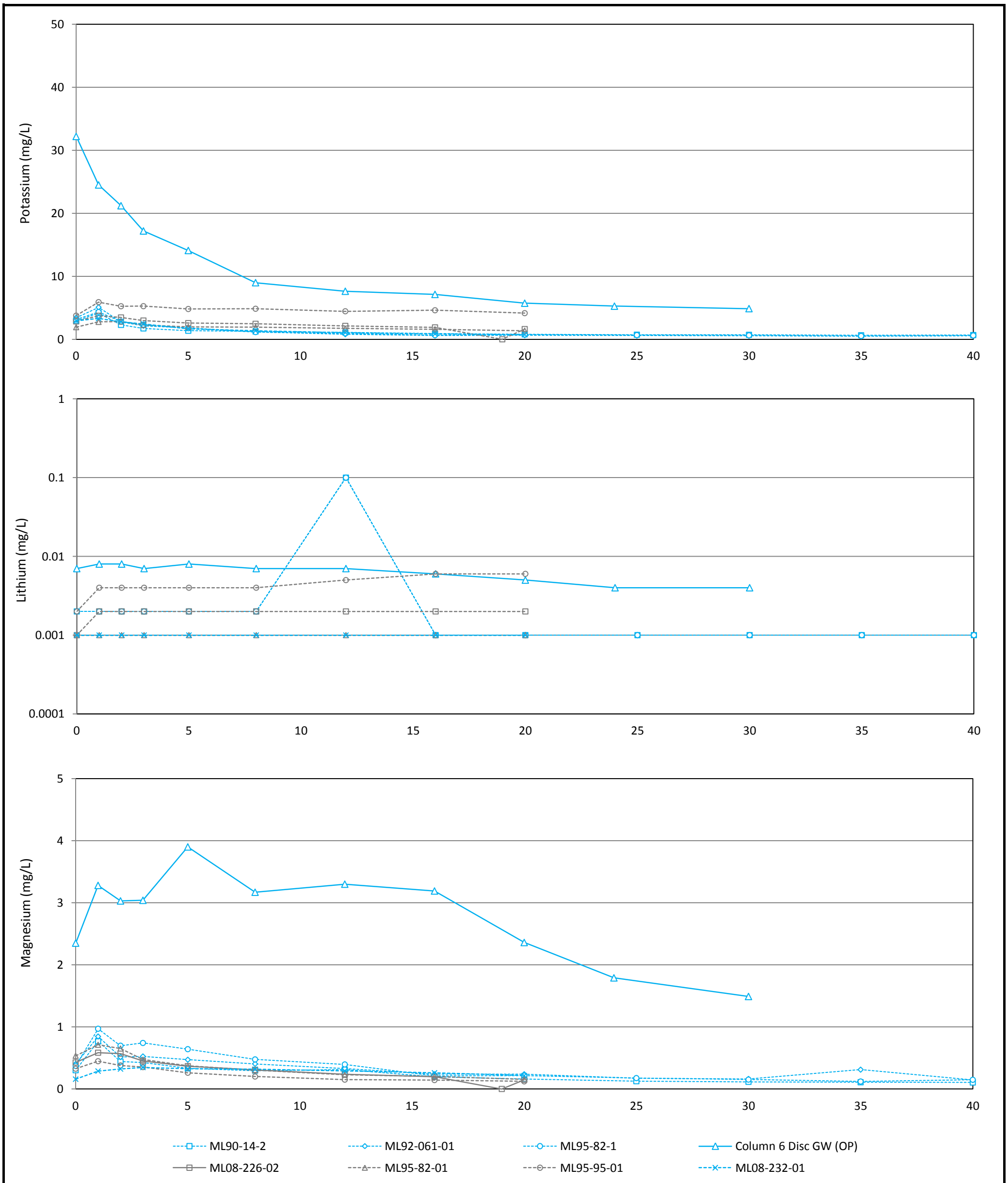
**FIGURE** B.7-6

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Chromium<br>Copper<br>Iron**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-7 |

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AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Potassium**
**Lithium**
**Magnesium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

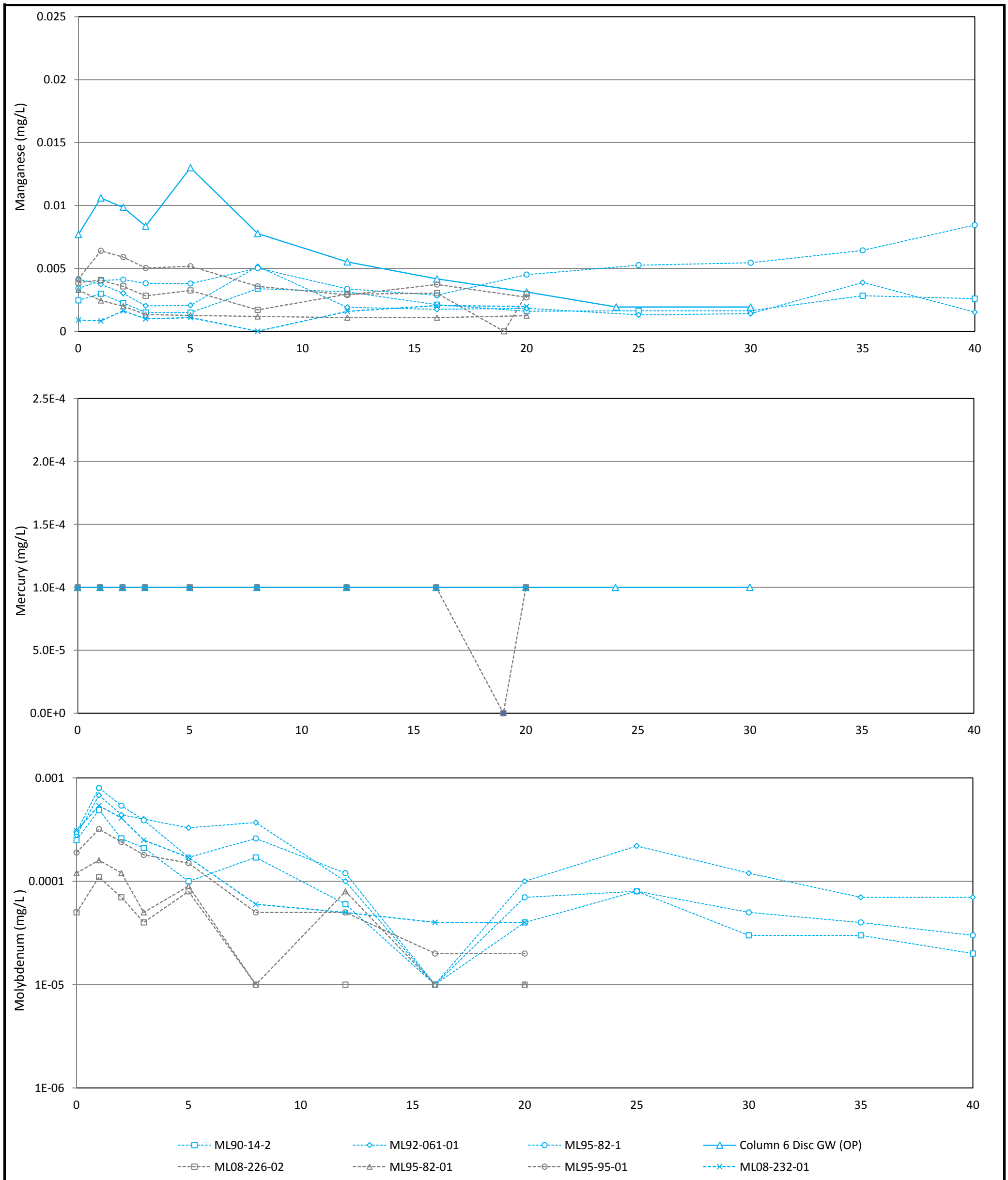
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-8

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

Iron Formation
Greywacke
Mafic Volcanic

Criteria:

MMER (2006)

**Manganese**
**Mercury**
**Molybdenum**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

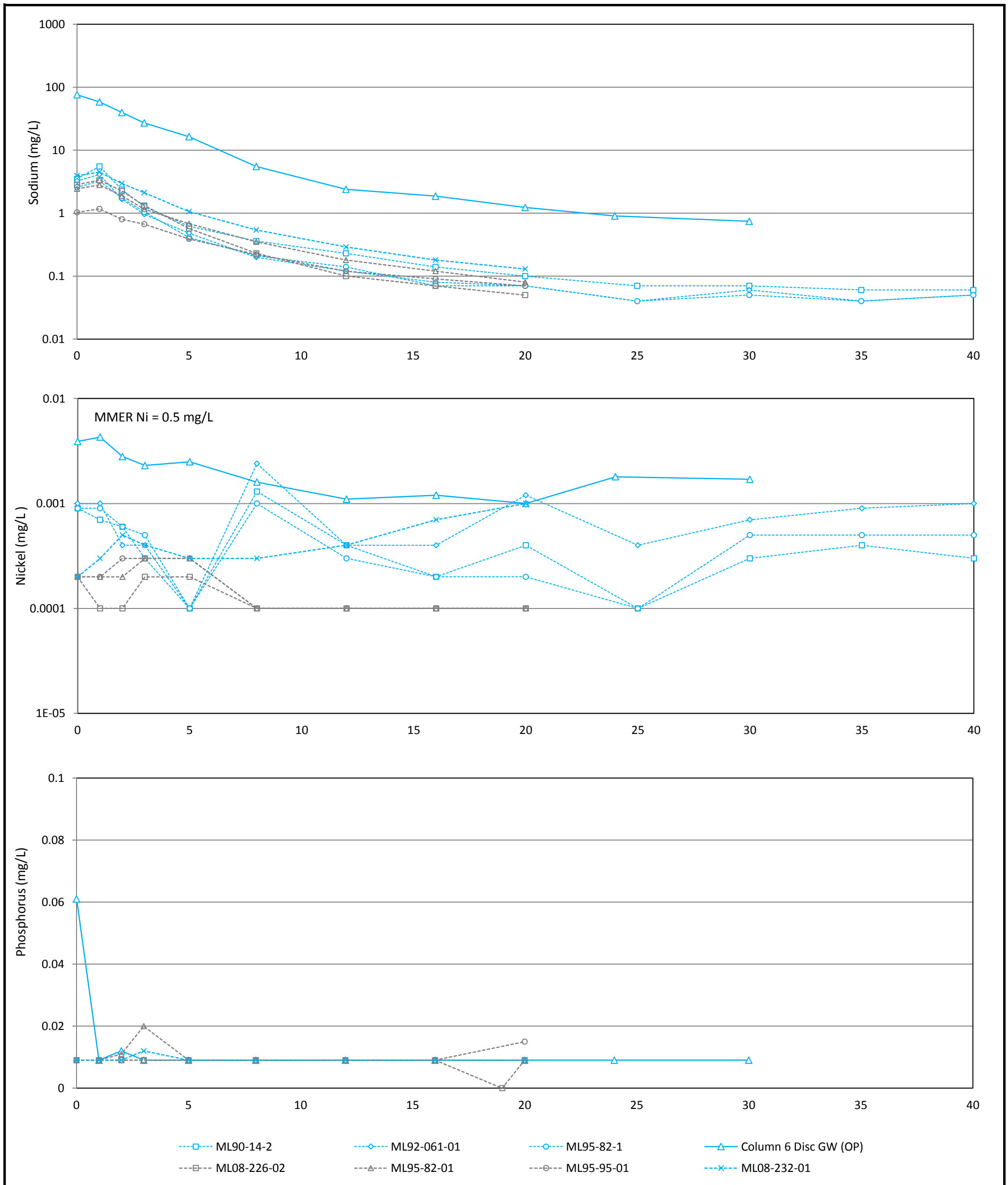
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

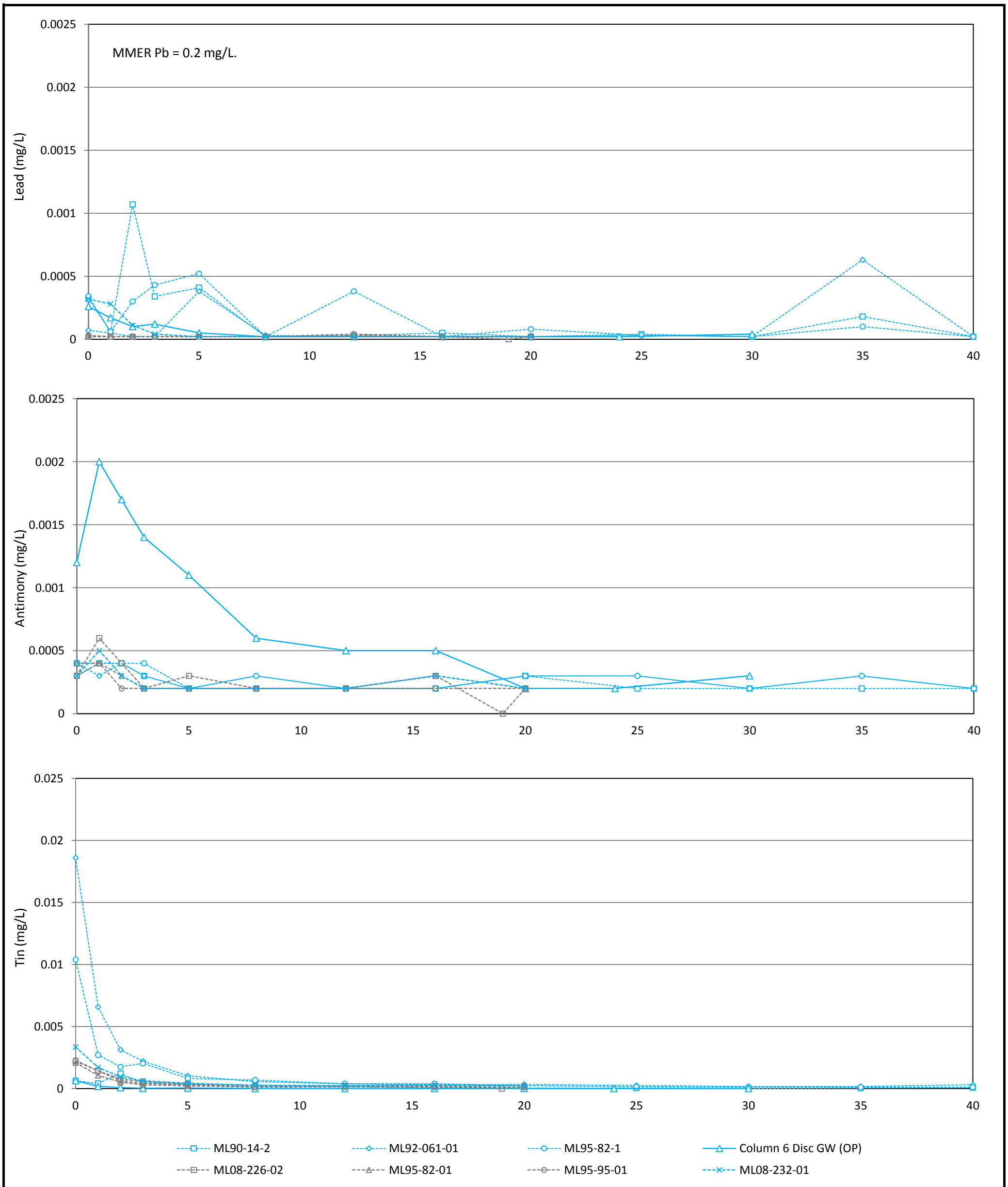
**FIGURE** B.7-9

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AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Sodium<br>Nickel<br>Phosphorus**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-10 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Lead**
**Antimony**
**Tin**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

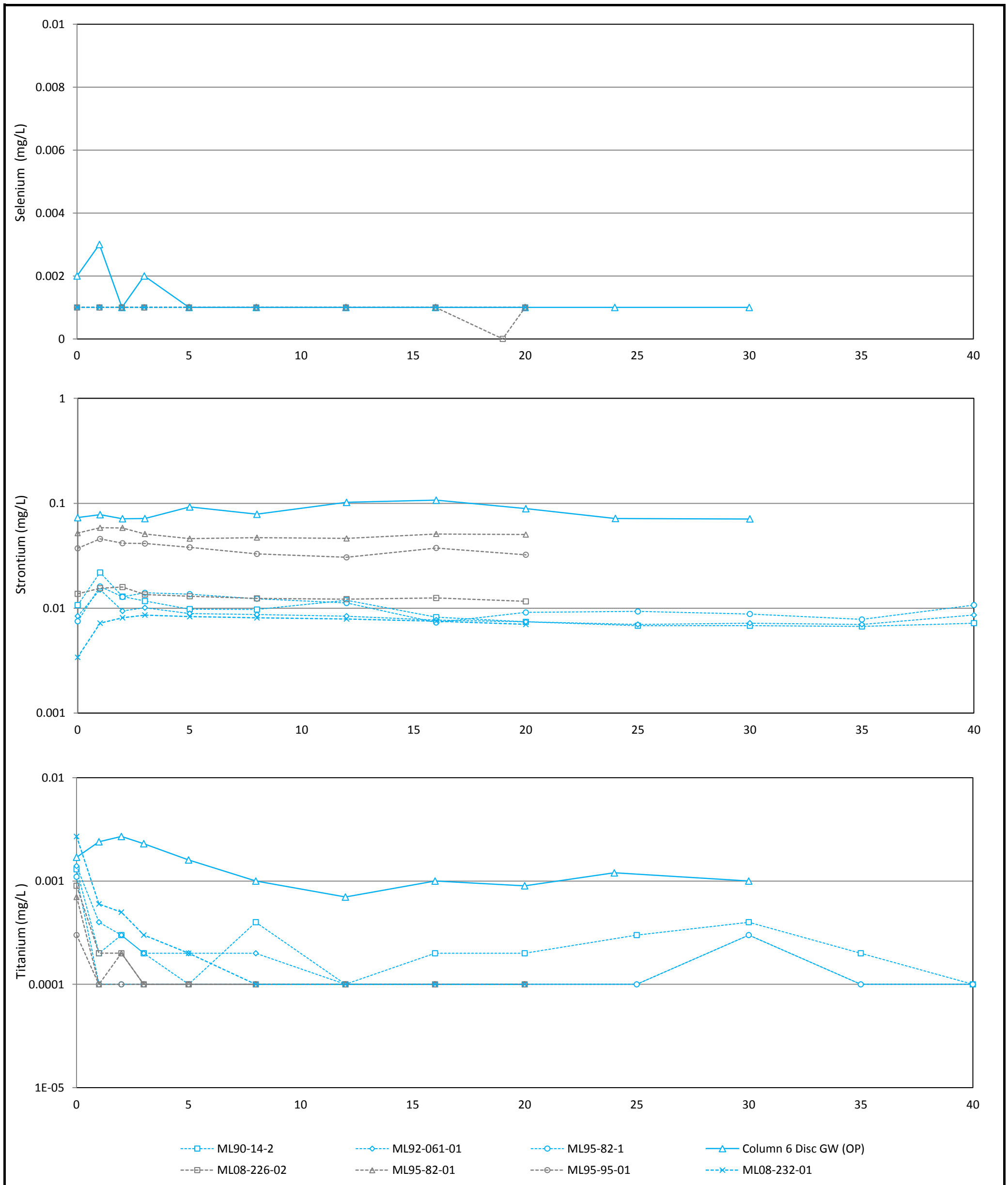
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

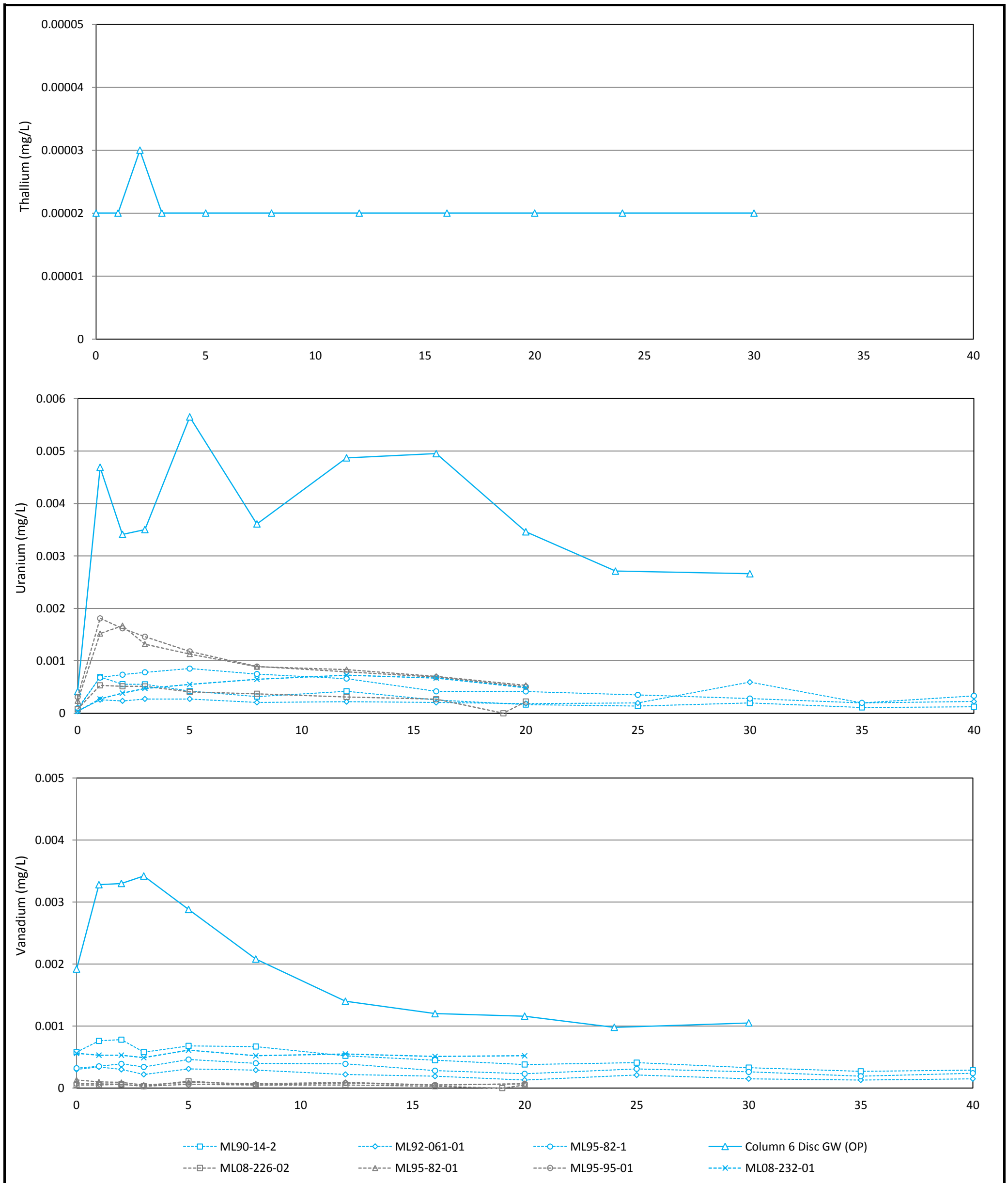
**FIGURE** B.7-11

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Selenium<br>Strontium<br>Titanium**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-12 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Thallium**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

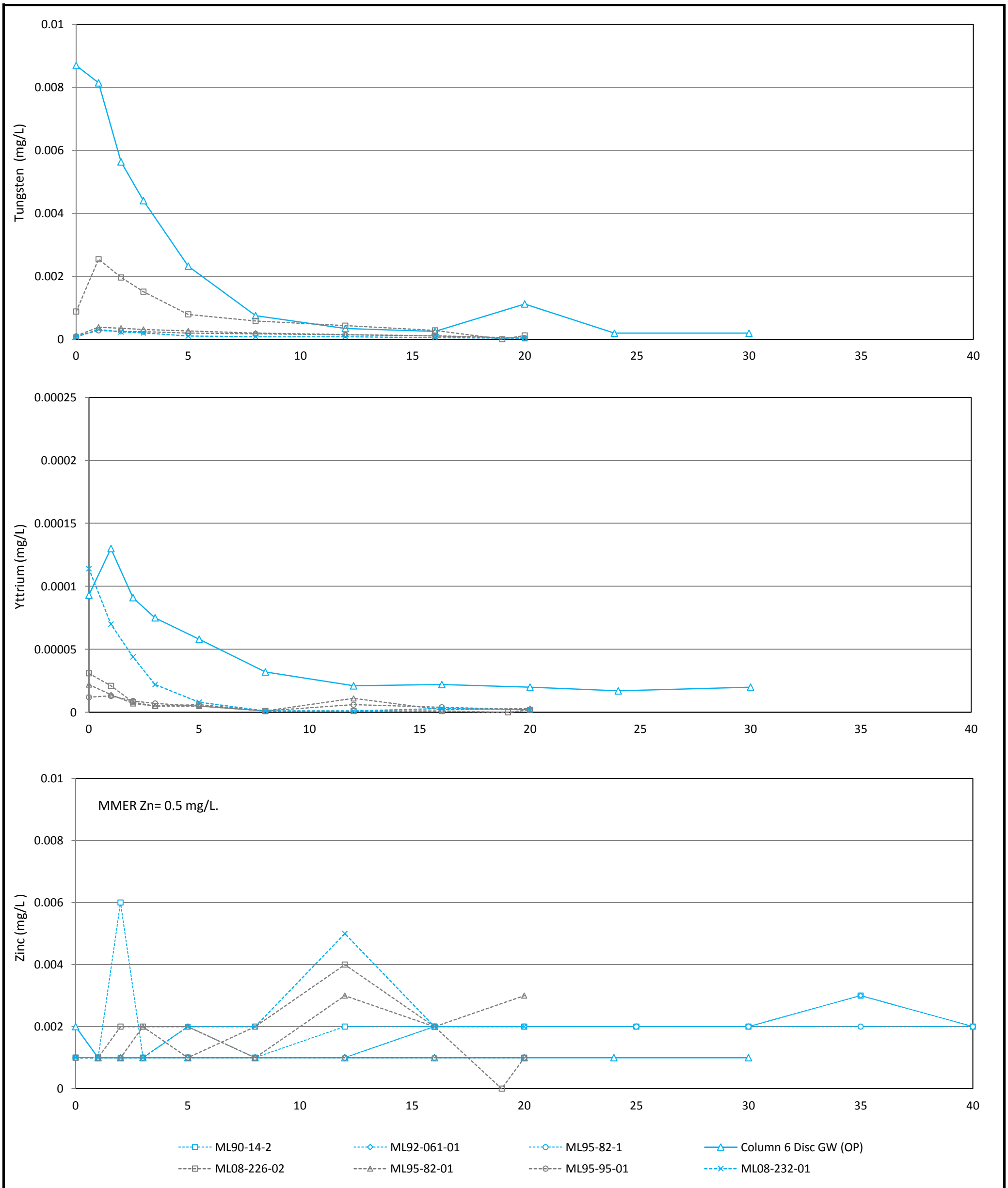
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-13

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Tungsten**<br>**Yttrium**<br>**Zinc** | **Kinetic Test Data**<br>**Discovery Deposit**<br>**Meliadine Property** |

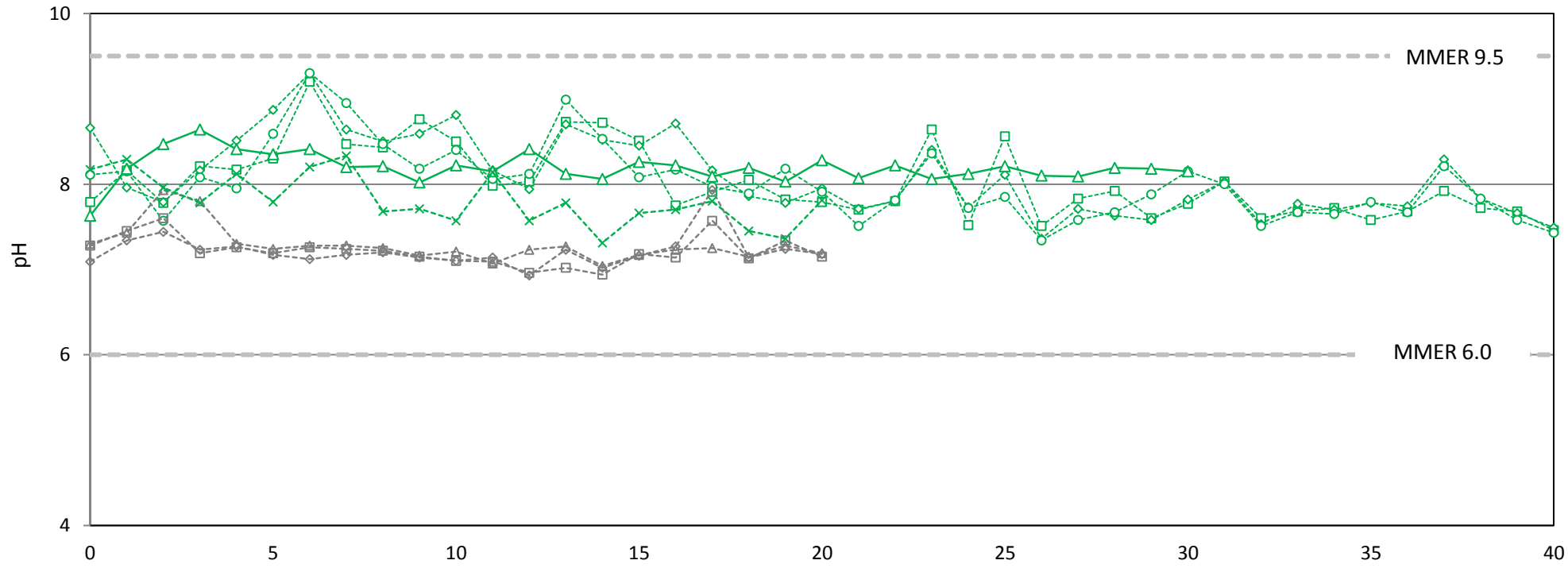
| | | | |
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| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

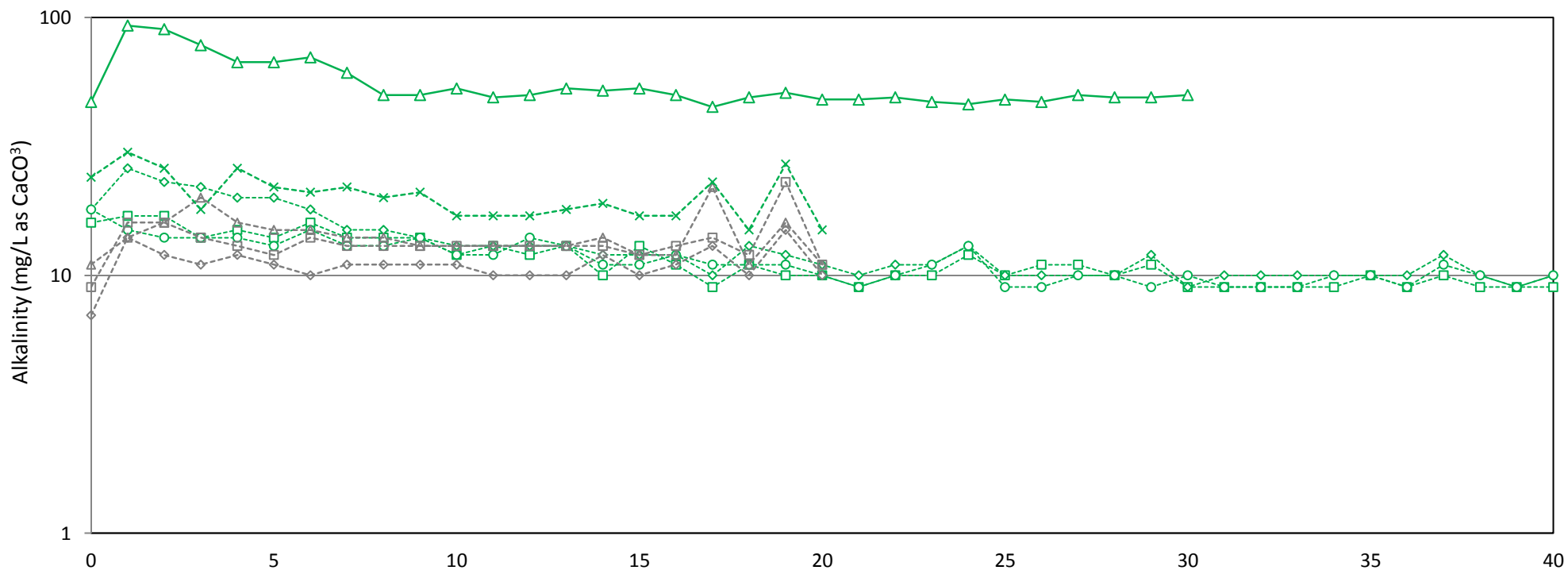
**Agnico-Eagle Mines Ltd.**

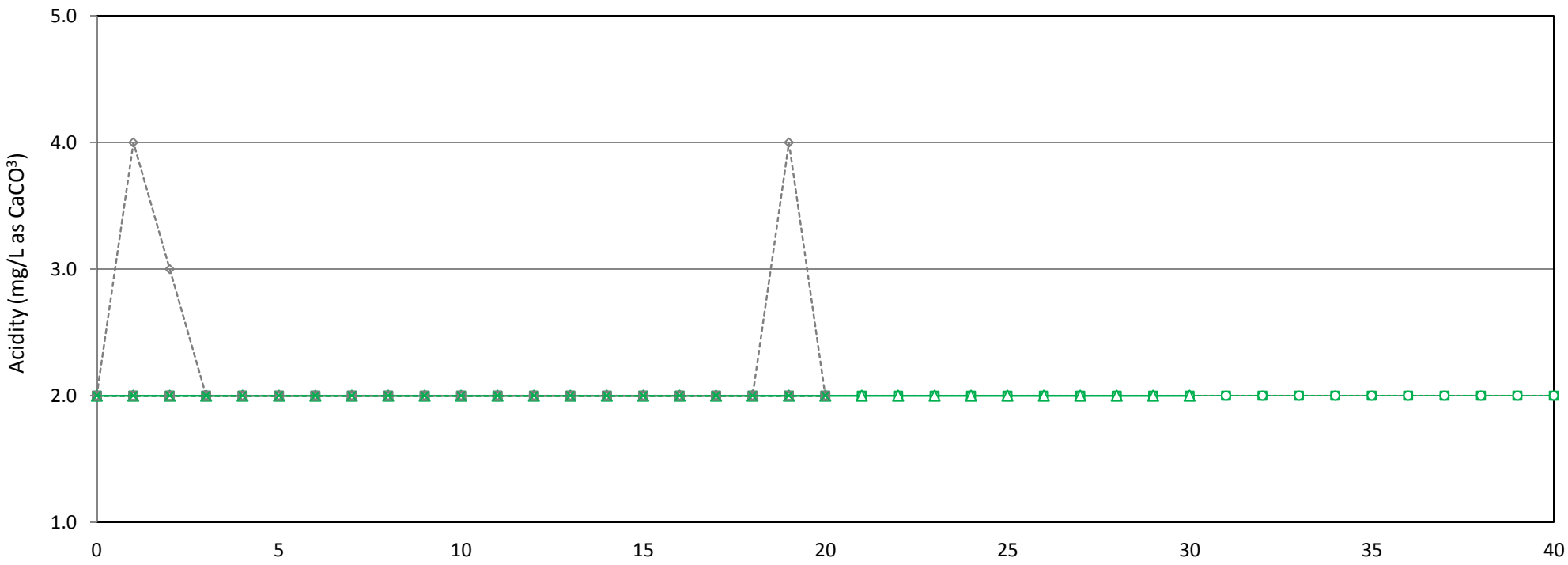
Golder Associates

**FIGURE** B.7-14

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

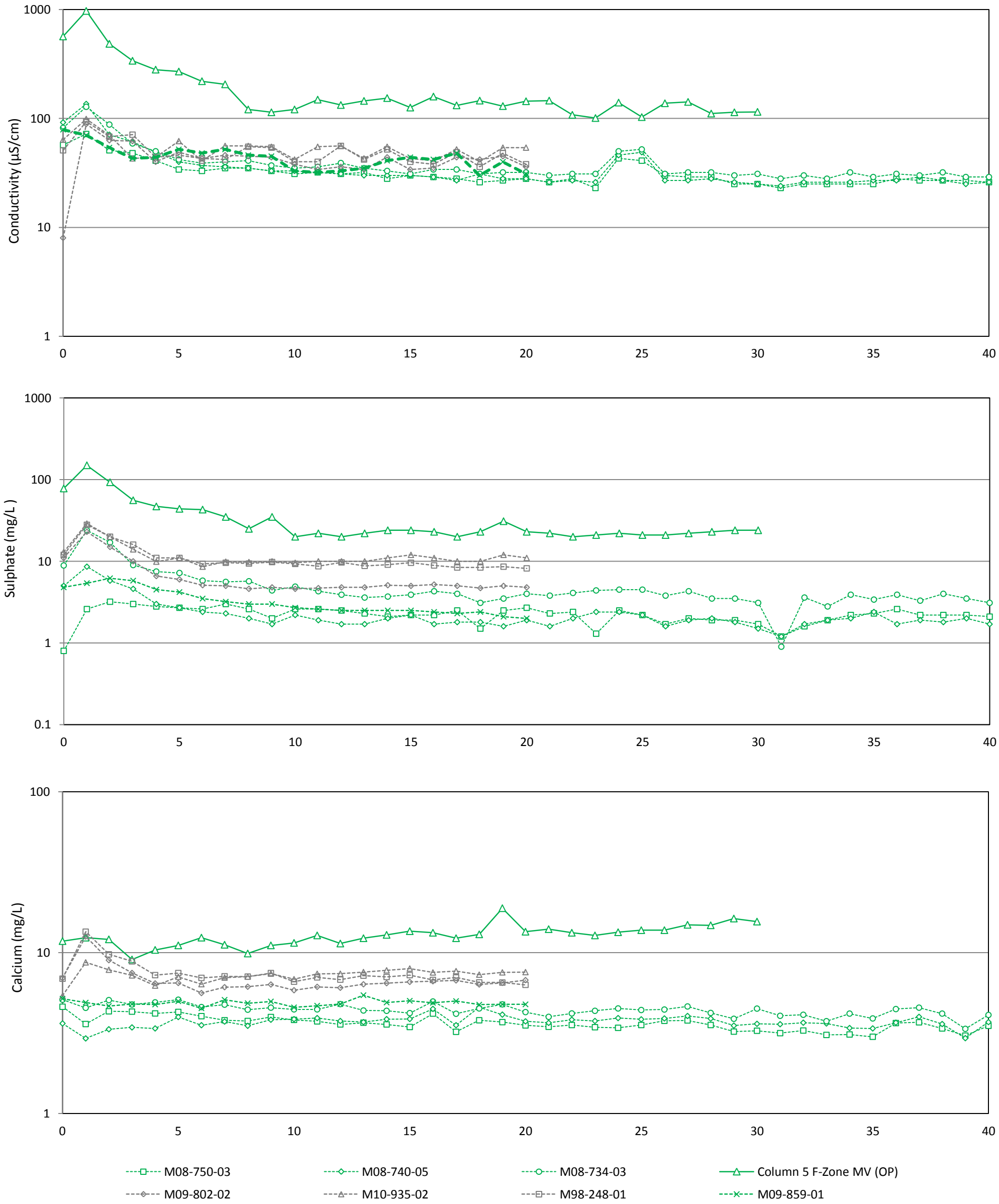
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-15

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Conductivity**
**Sulphate**
**Calcium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

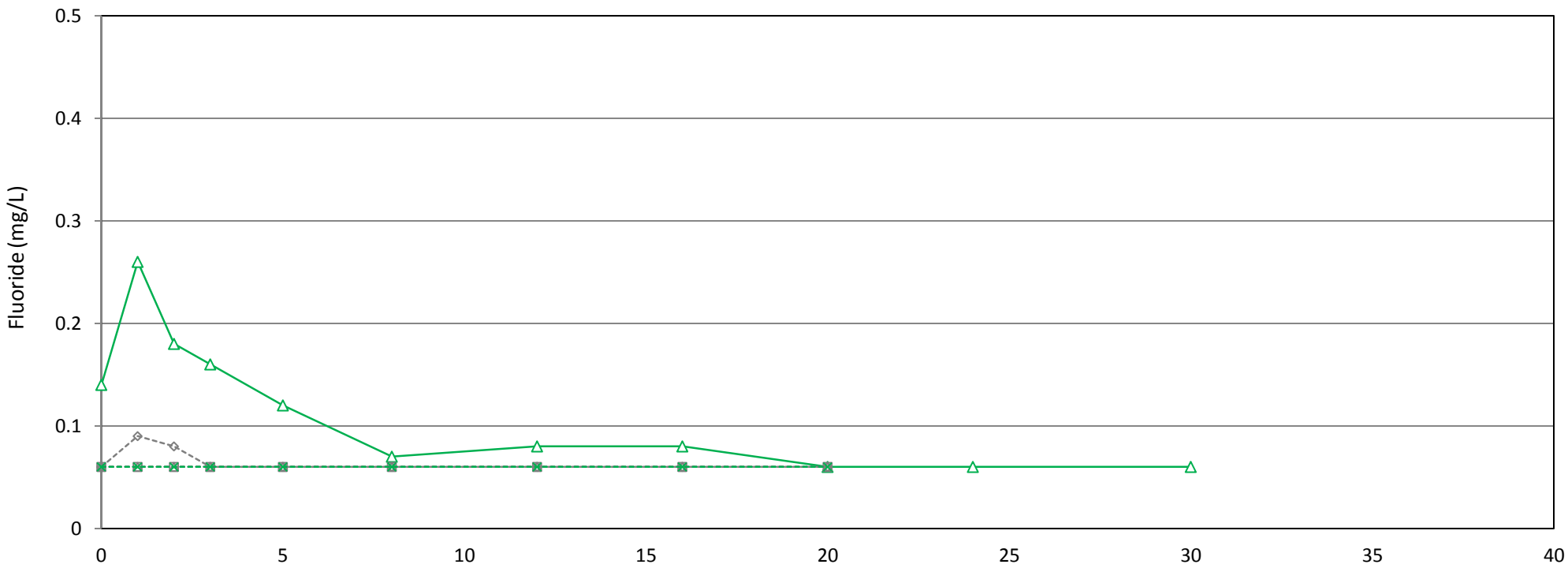
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

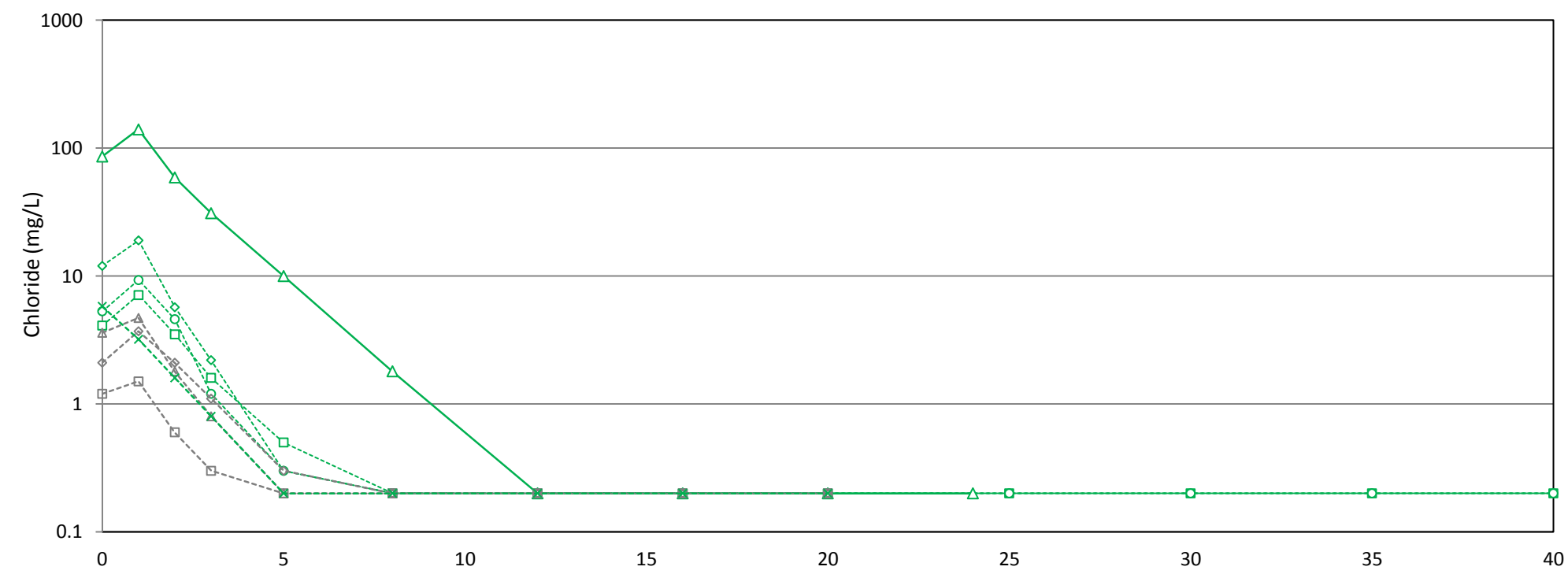
**Agnico-Eagle Mines Ltd.**

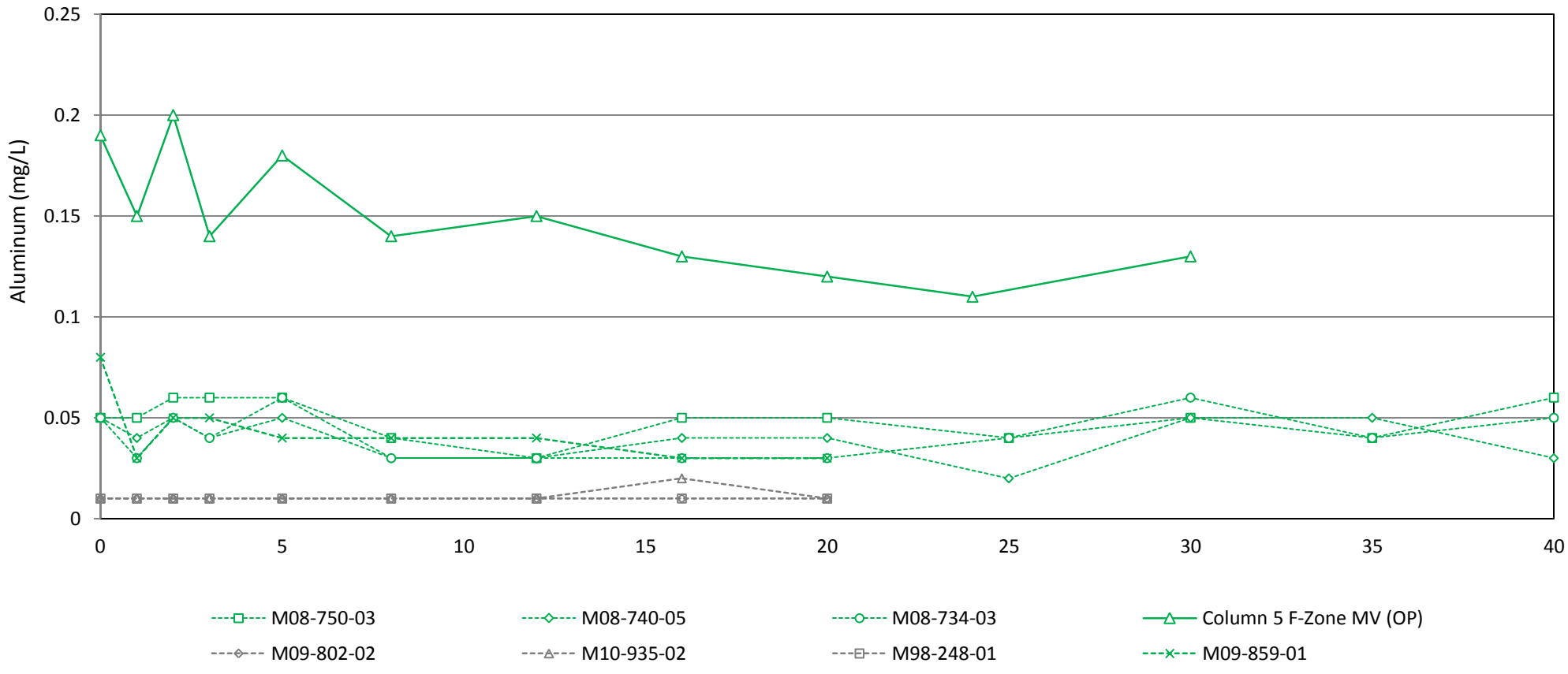
Golder Associates

**FIGURE** B.7-16

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Fluoride**
**Chloride**
**Aluminum**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

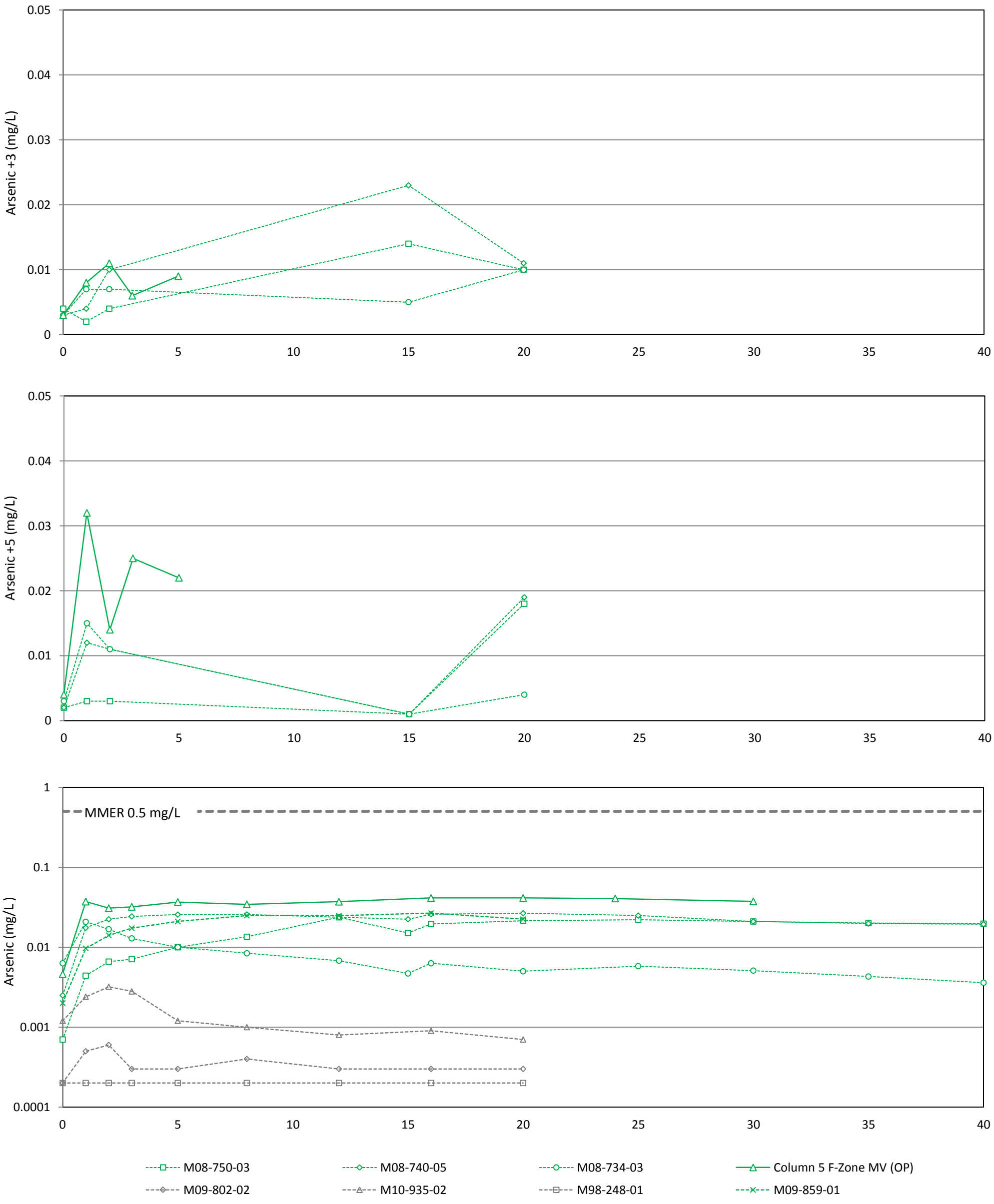
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-17

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Arsenic +3**
**Arsenic +5**
**Arsenic**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

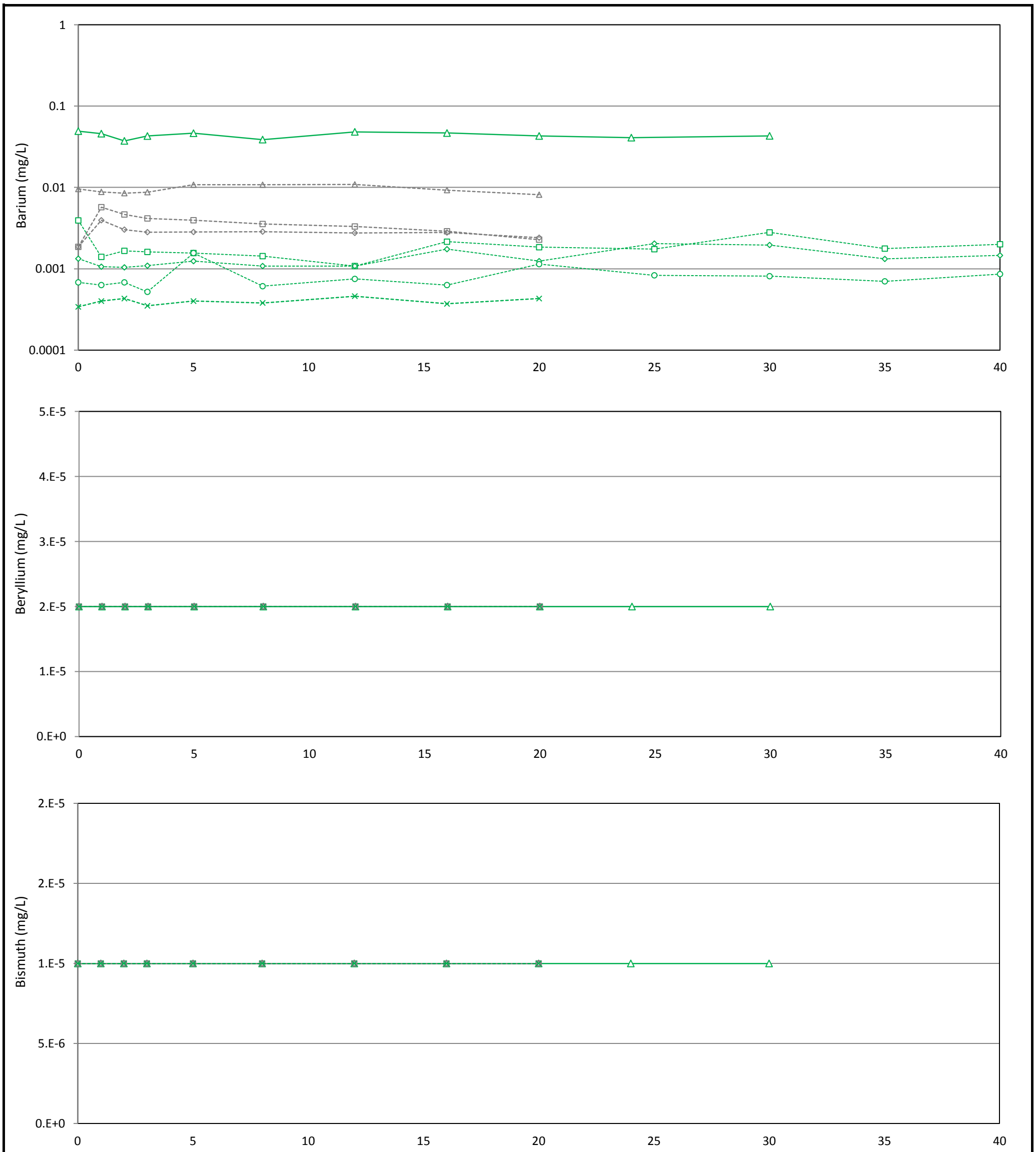
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-18

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Barium**
**Beryllium**
**Bismuth**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

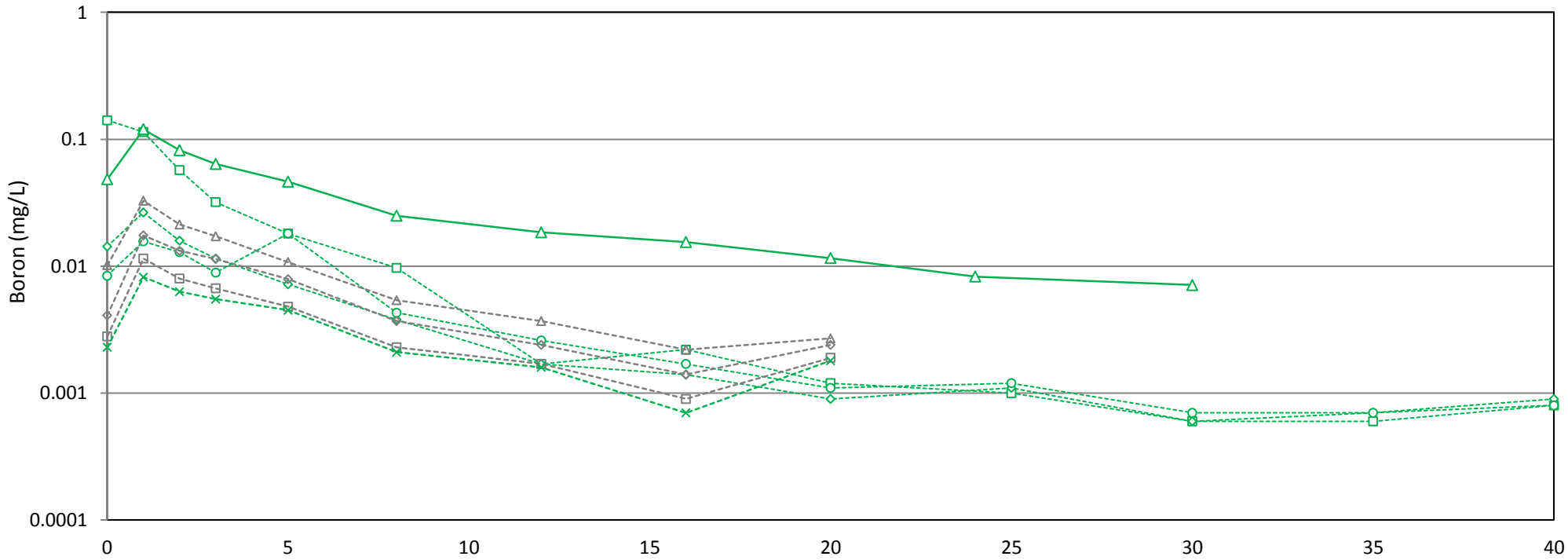
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

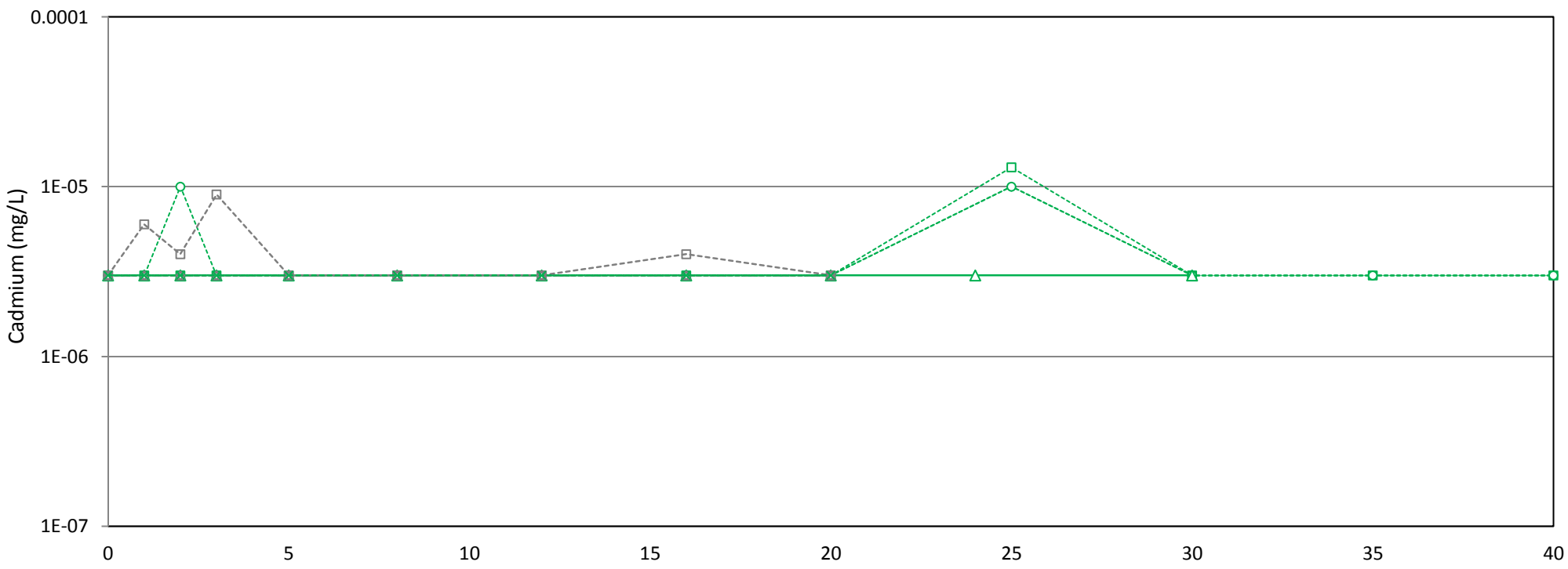
**Agnico-Eagle Mines Ltd.**

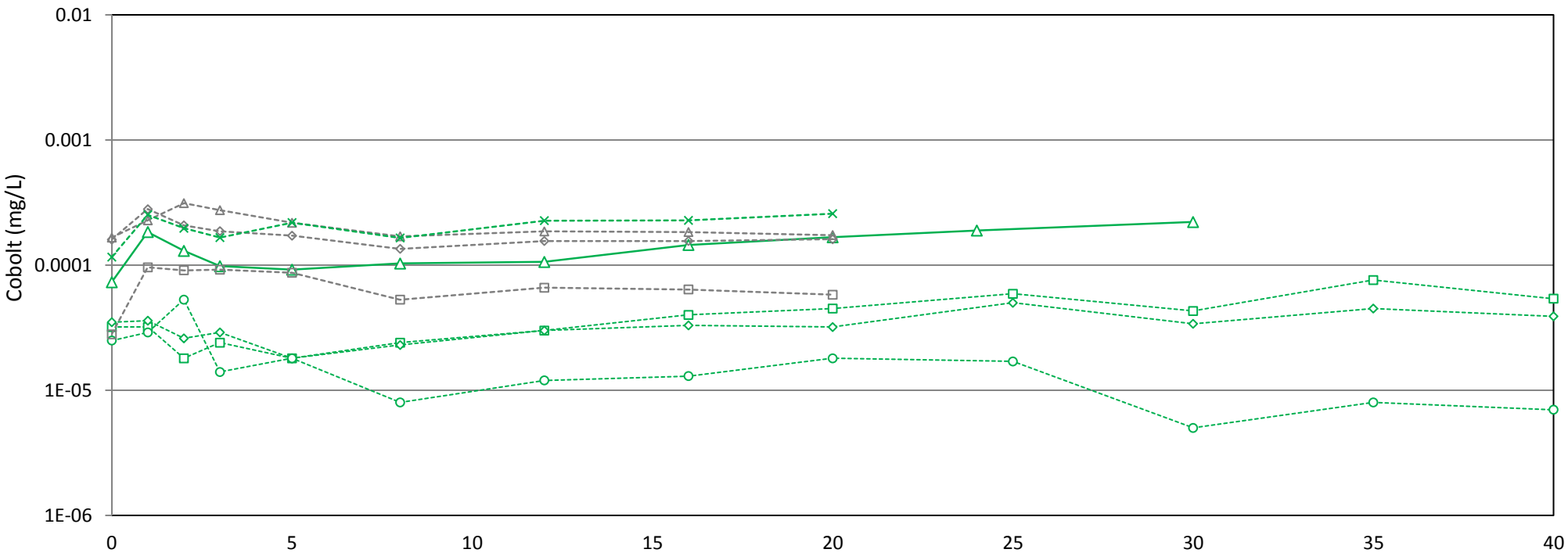
Golder Associates

**FIGURE** B.7-19

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Boron**
**Cadmium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

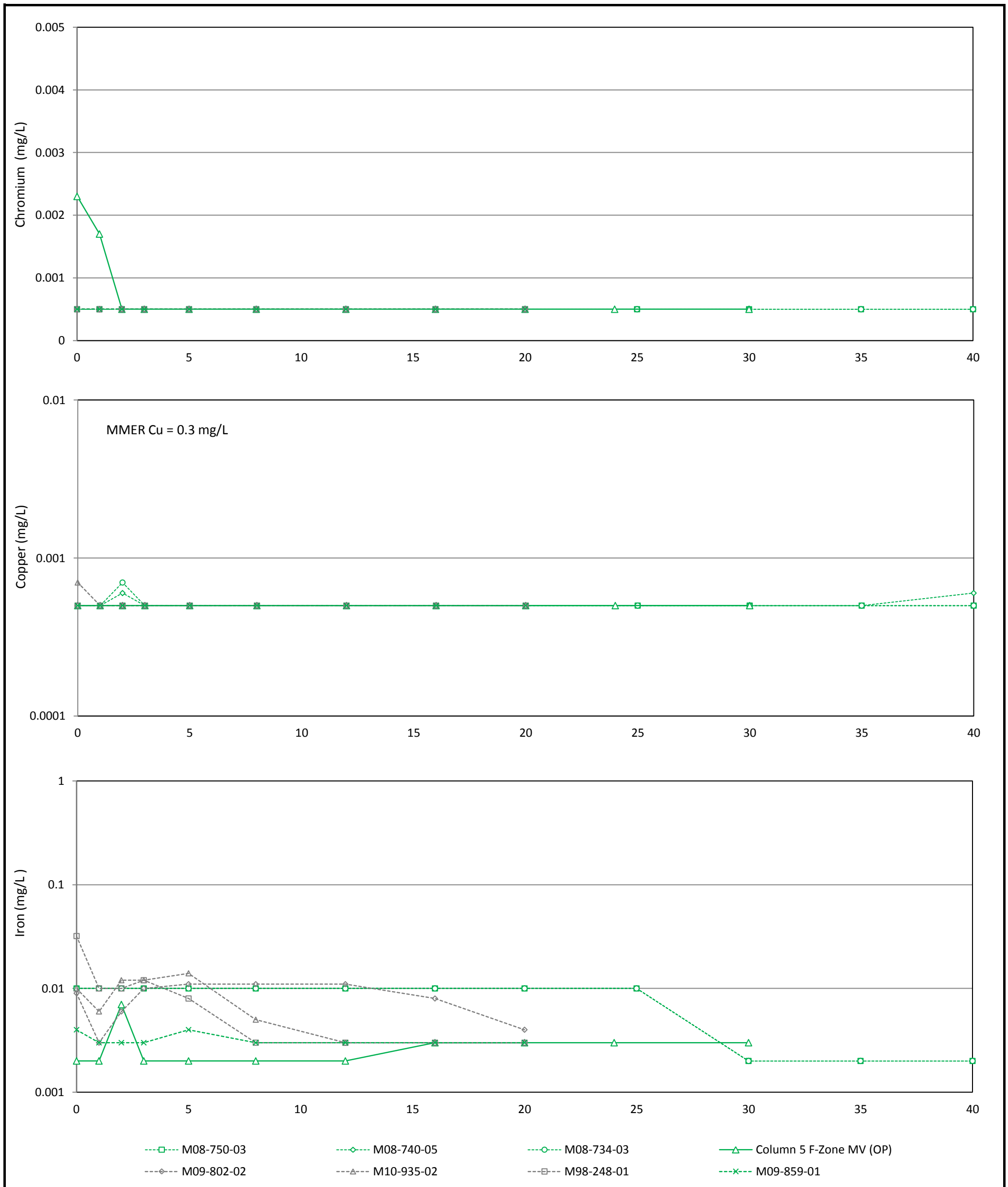
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

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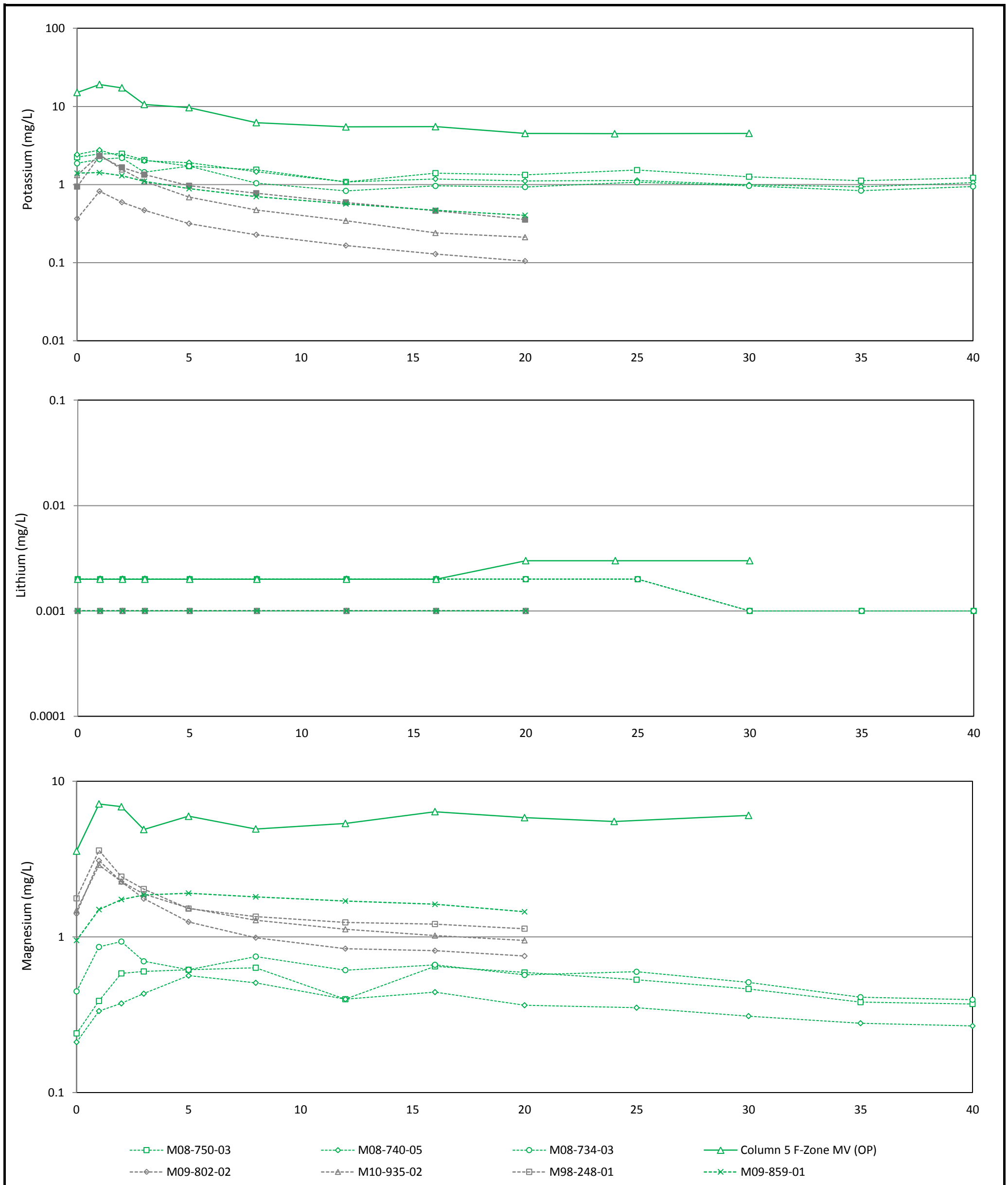
**FIGURE** B.7-20

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Chromium<br>Copper<br>Iron**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>F-Zone Deposit<br>Meliadine Project**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-21 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

Iron Formation

Greywacke

Mafic Volcanic

Criteria:

MMER (2006)

**Potassium**
**Lithium**
**Magnesium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

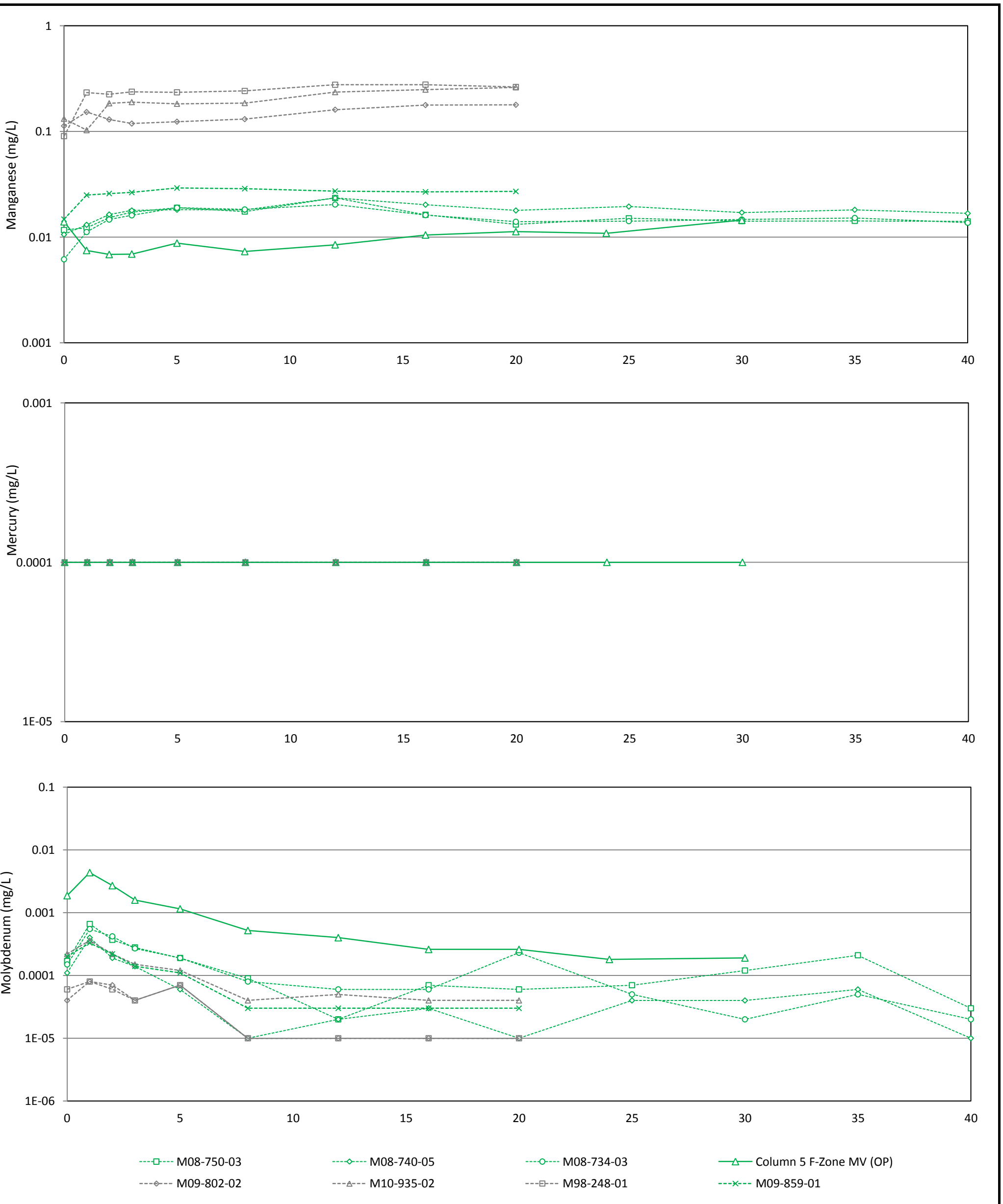
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

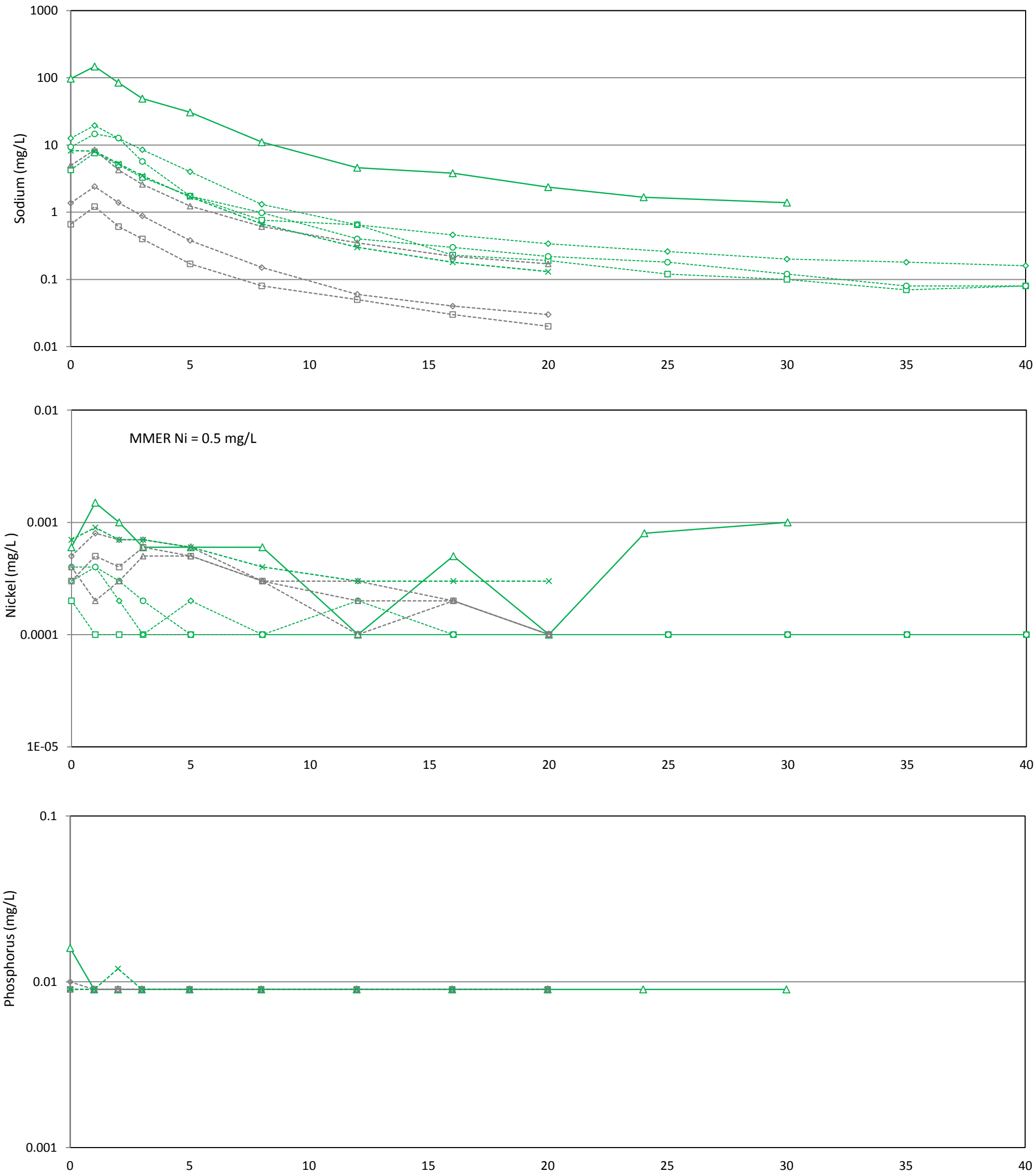
**FIGURE** B.7-22

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Manganese<br>Mercury<br>Molybdenum**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>F-Zone Deposit<br>Meliadine Project**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-23 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Sodium**
**Nickel**
**Phosphorus**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

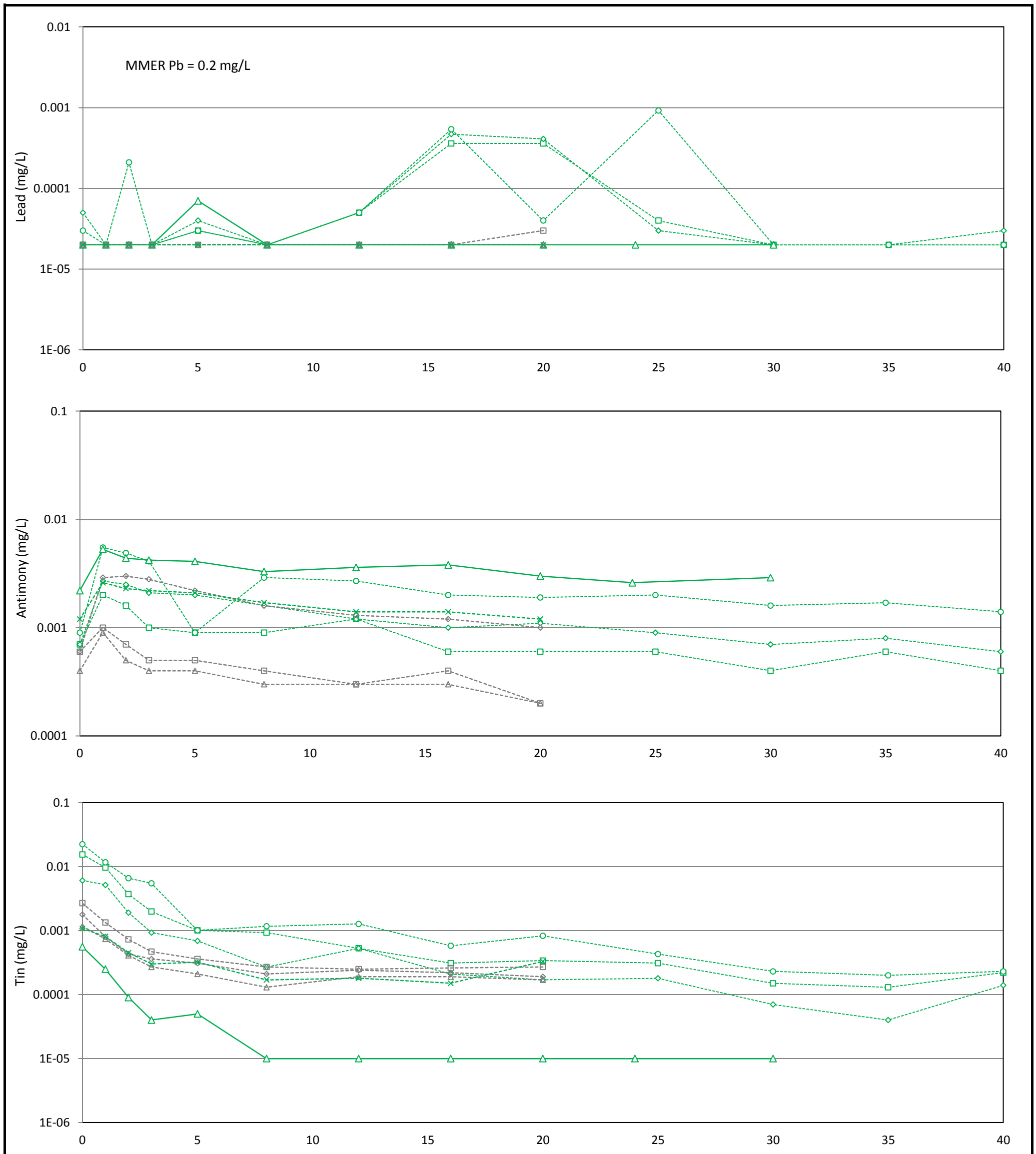
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

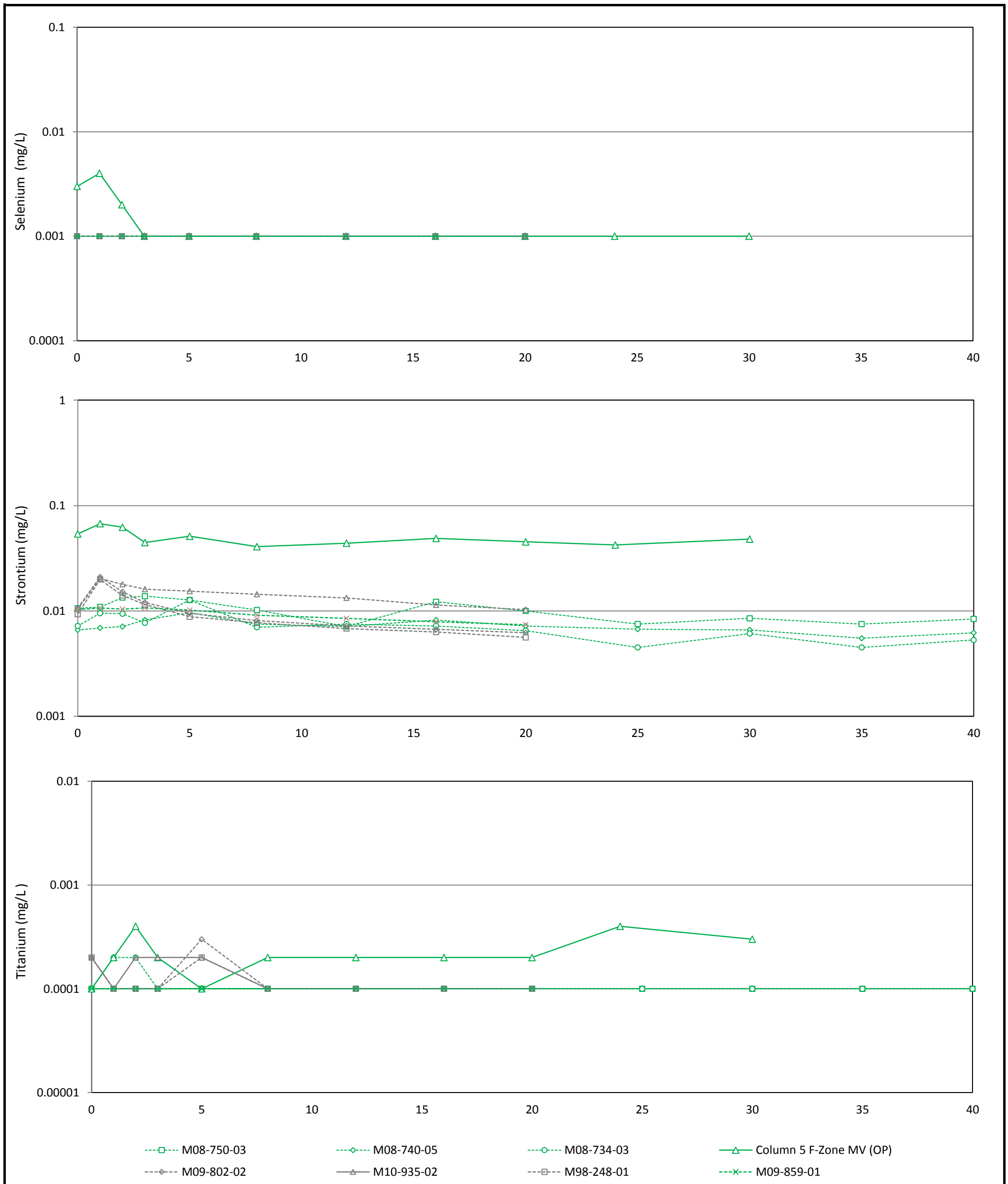
**FIGURE** B.7-24

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Lead**<br>**Antimony**<br>**Tin**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data**<br>**F-Zone Deposit**<br>**Meliadine Project**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-25 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Selenium**
**Strontium**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

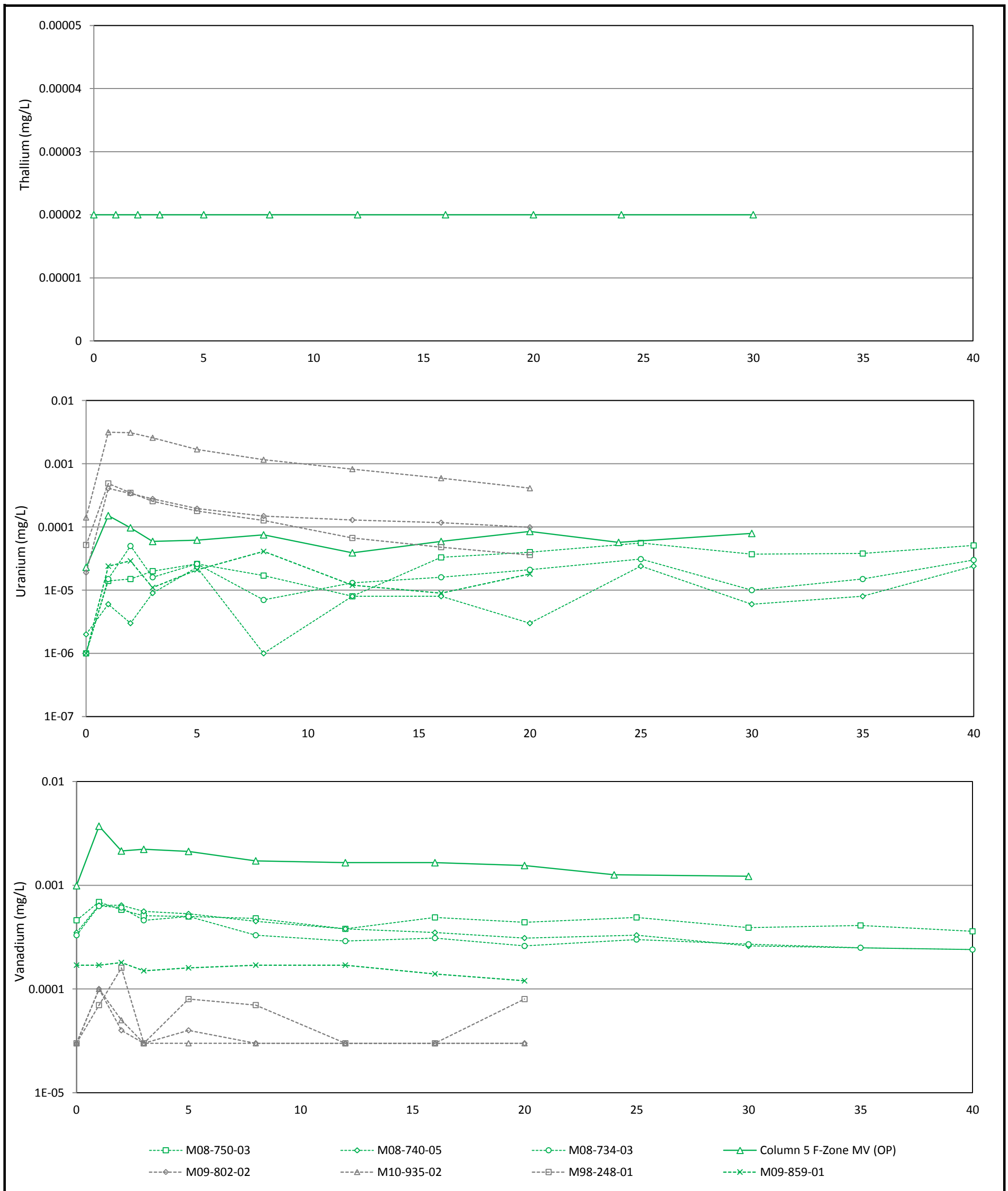
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

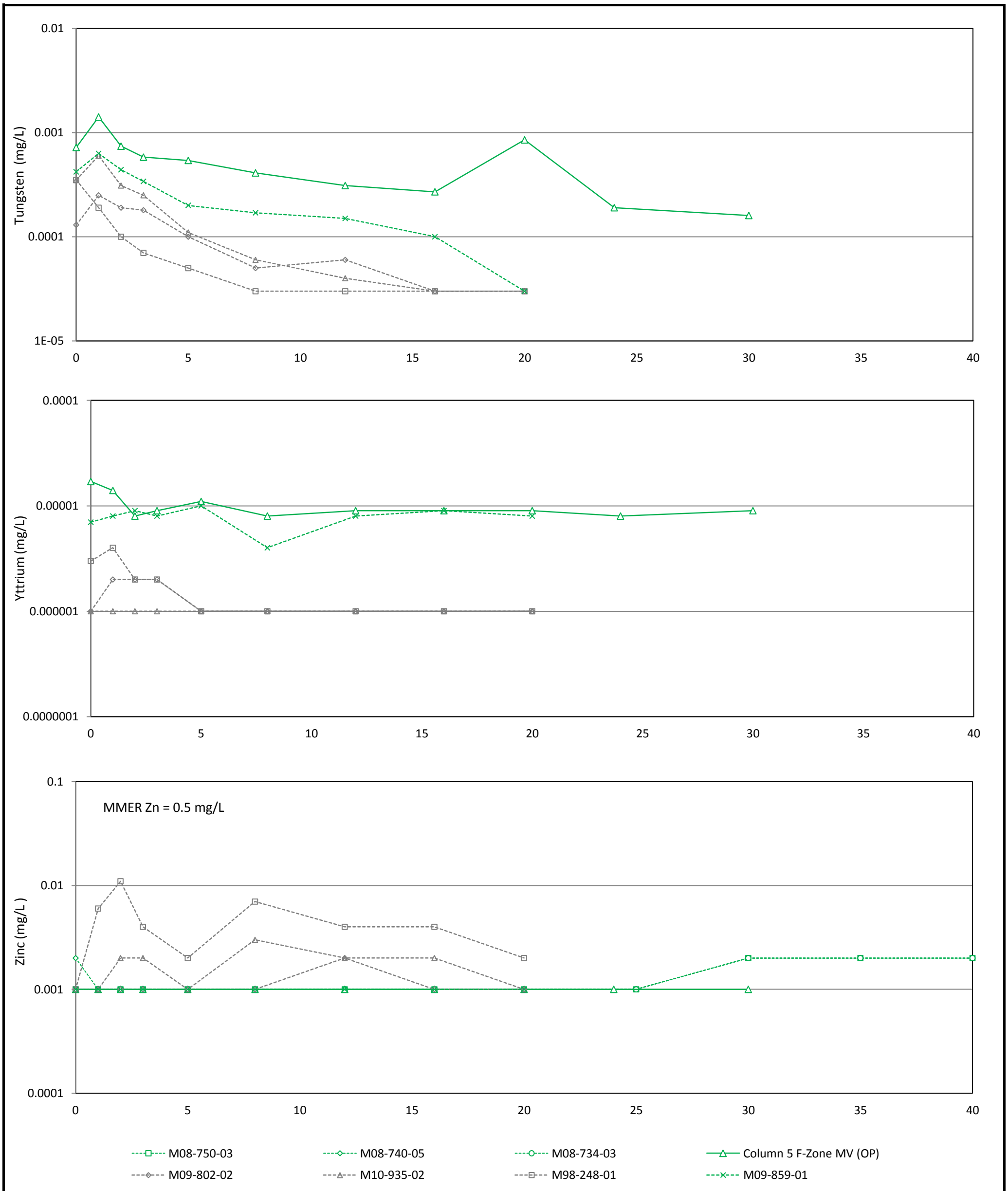
**FIGURE** B.7-26

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Thallium<br>Uranium<br>Vanadium**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>F-Zone Deposit<br>Meliadine Project**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-27 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Tungsten**
**Yttrium**
**Zinc**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

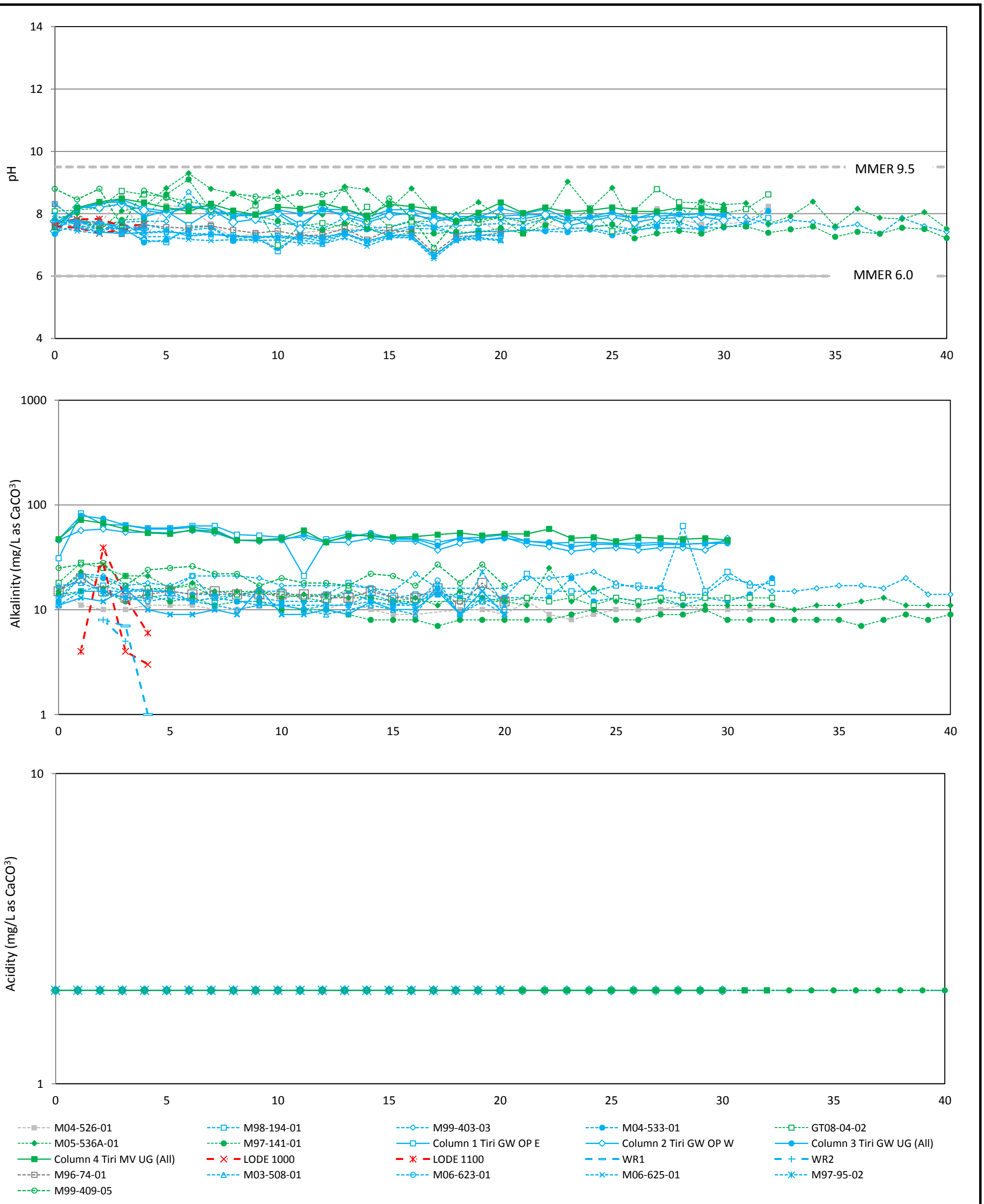
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-28

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

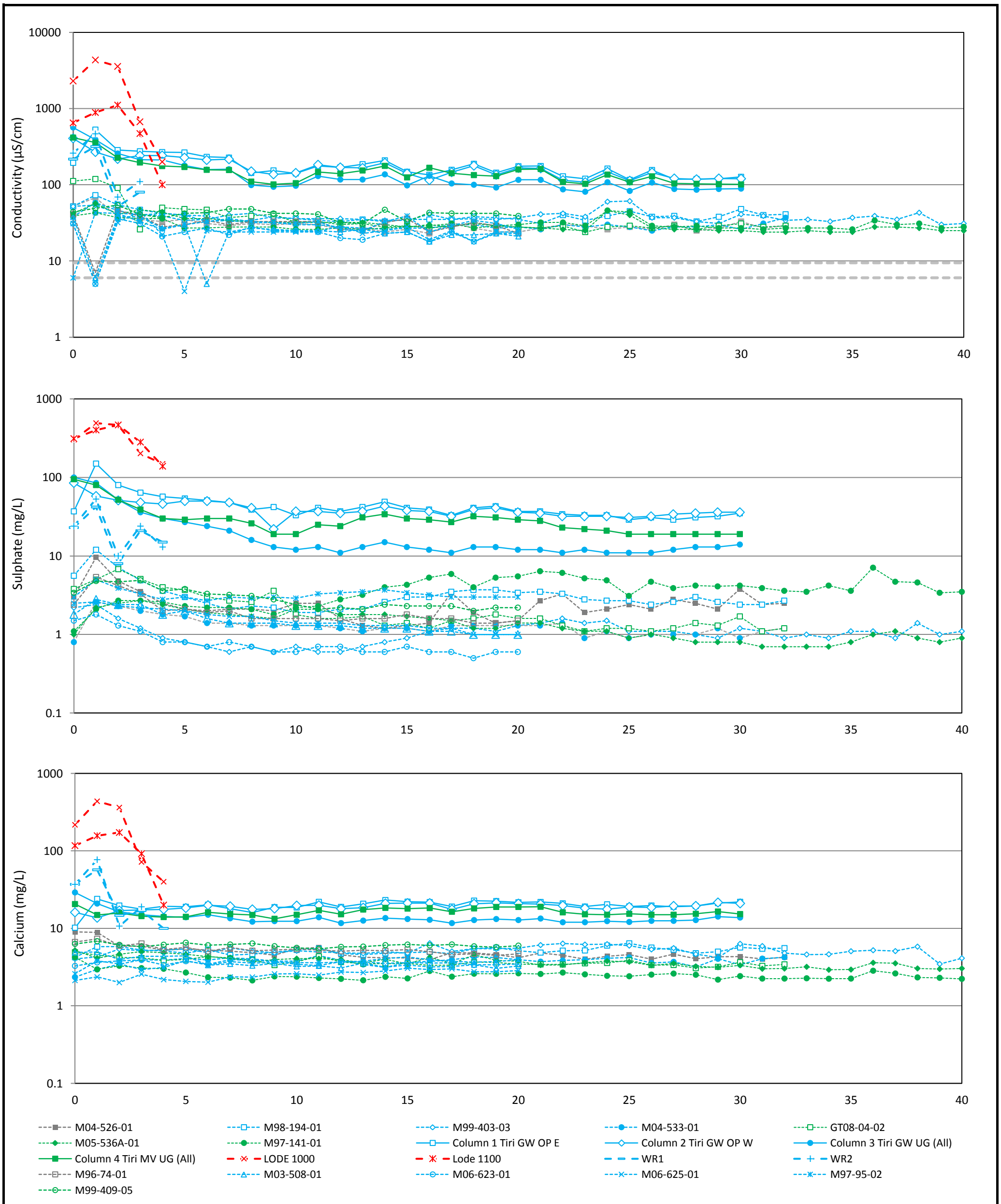
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-29

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx



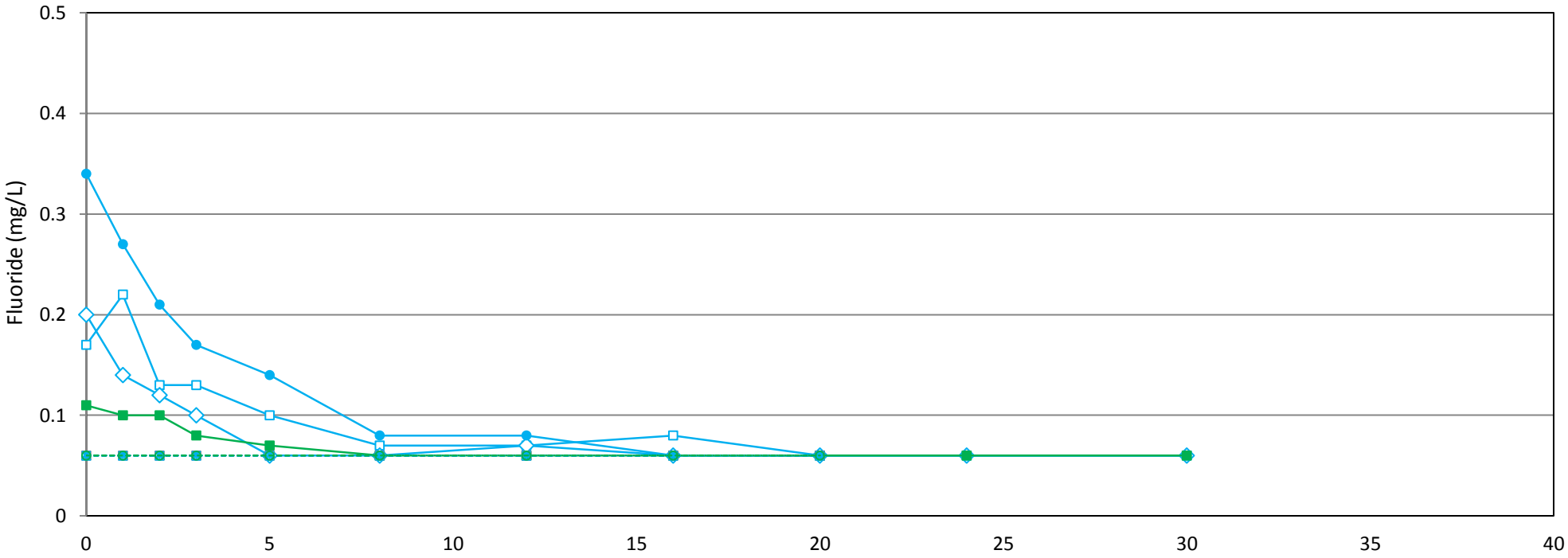

| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>**Criteria:**<br>MMER (2006) | **Conductivity**<br>**Sulphate**<br>**Calcium** | **Kinetic Test Data**<br>**Tiriganiaq Deposit**<br>**Meliadine Property** |

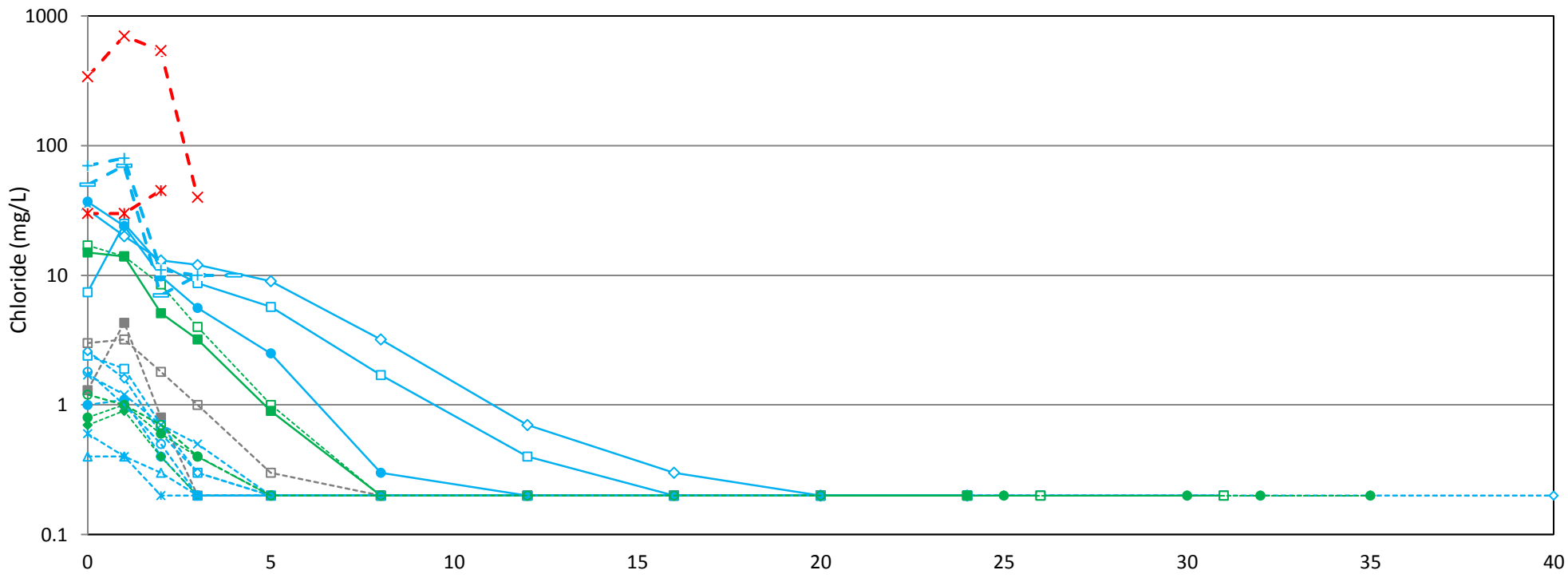
| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

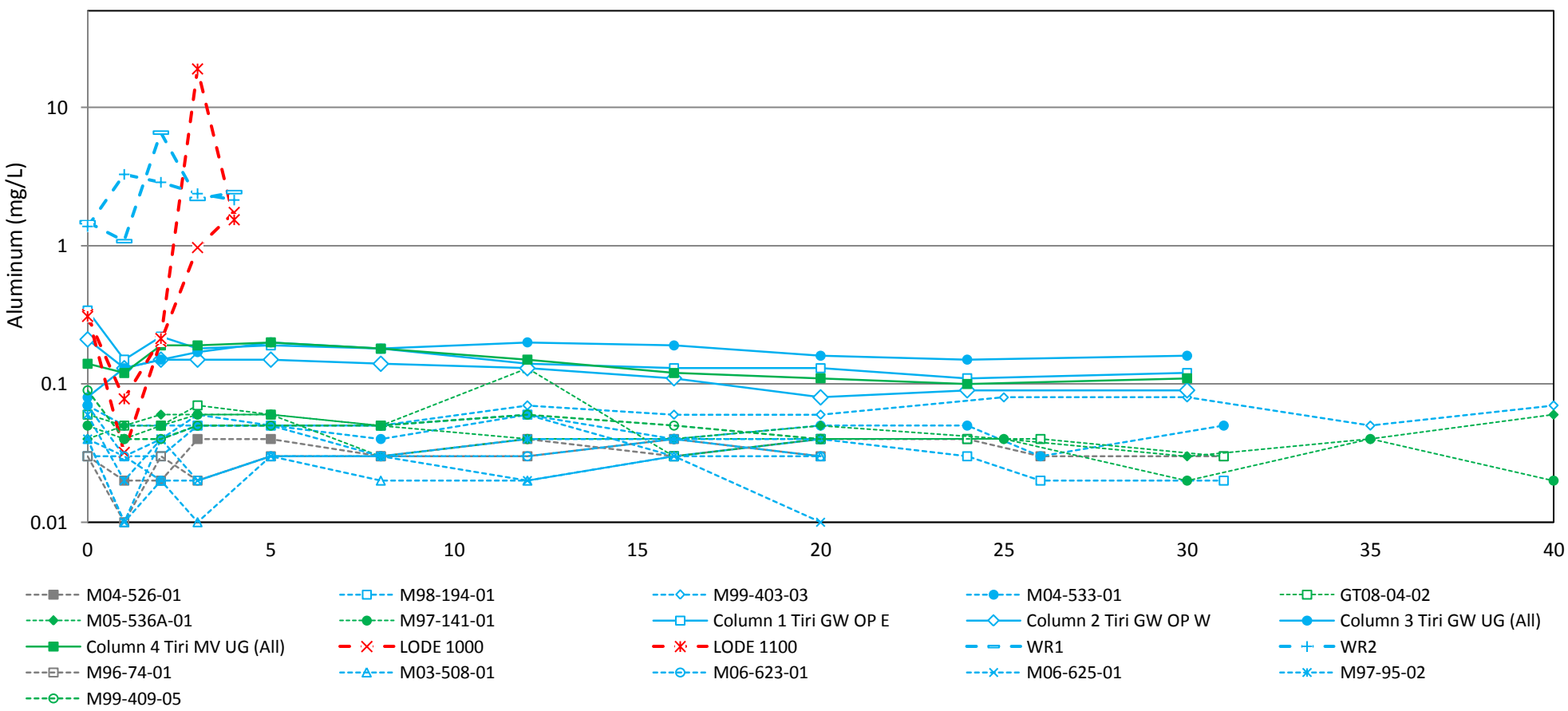
**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-30




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Fluoride**
**Chloride**
**Aluminum**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

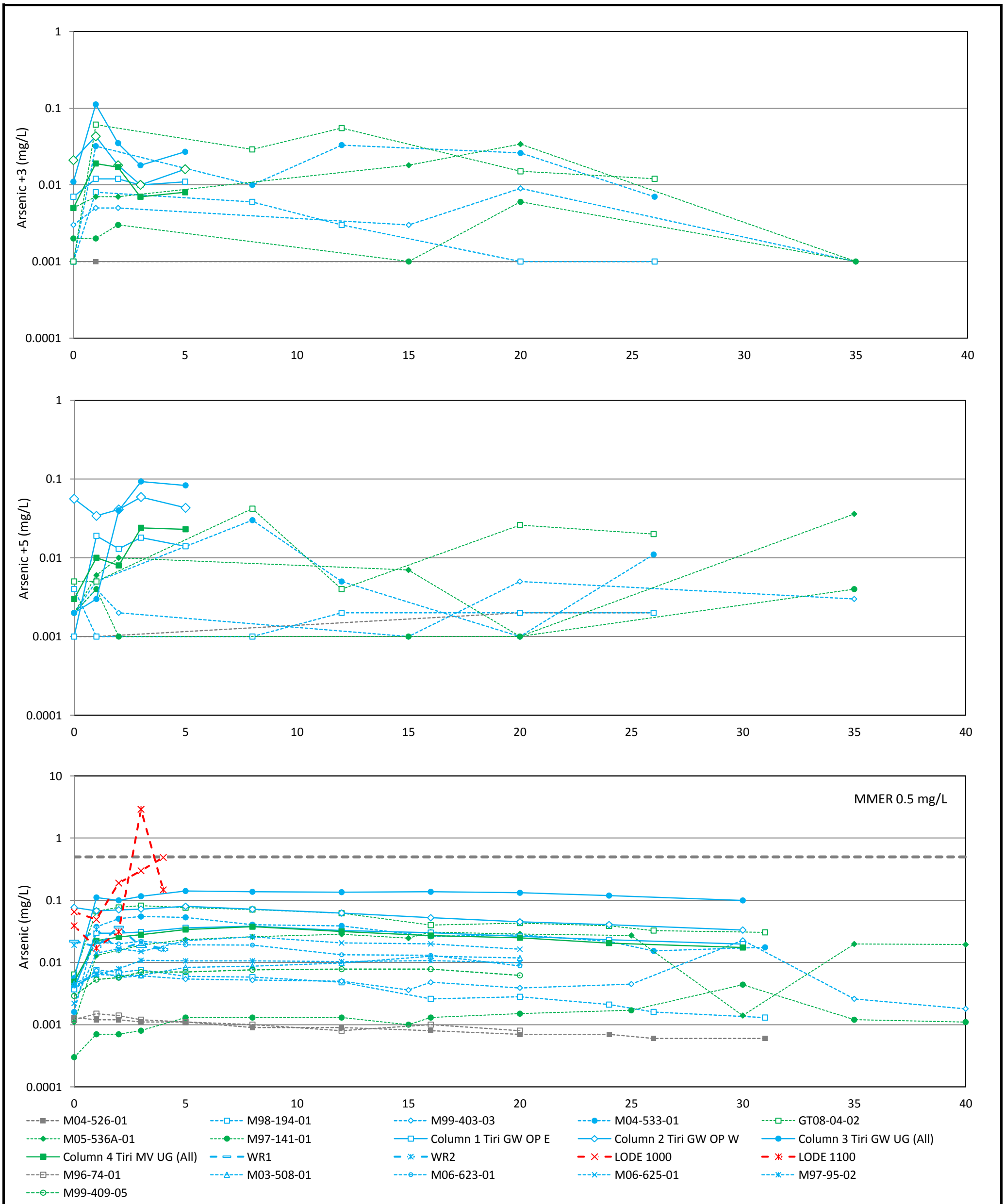
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-31

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Arsenic +3**
**Arsenic +5**
**Arsenic**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

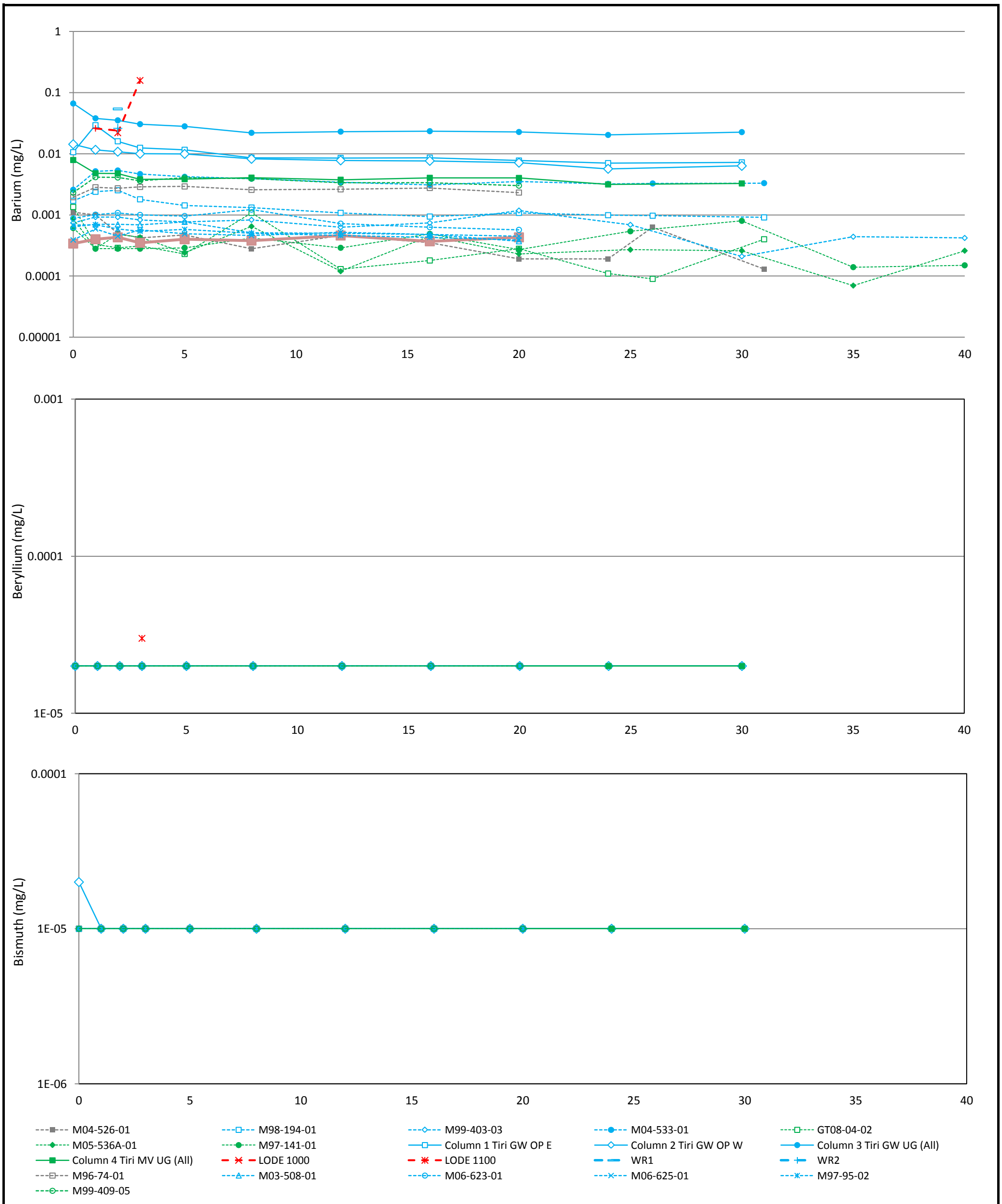
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-32

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>Criteria:<br>MMER (2006) | **Barium**<br>**Beryllium**<br>**Bismuth** | **Kinetic Test Data**<br>**Tiriganiaq Deposit**<br>**Meliadine Property** |

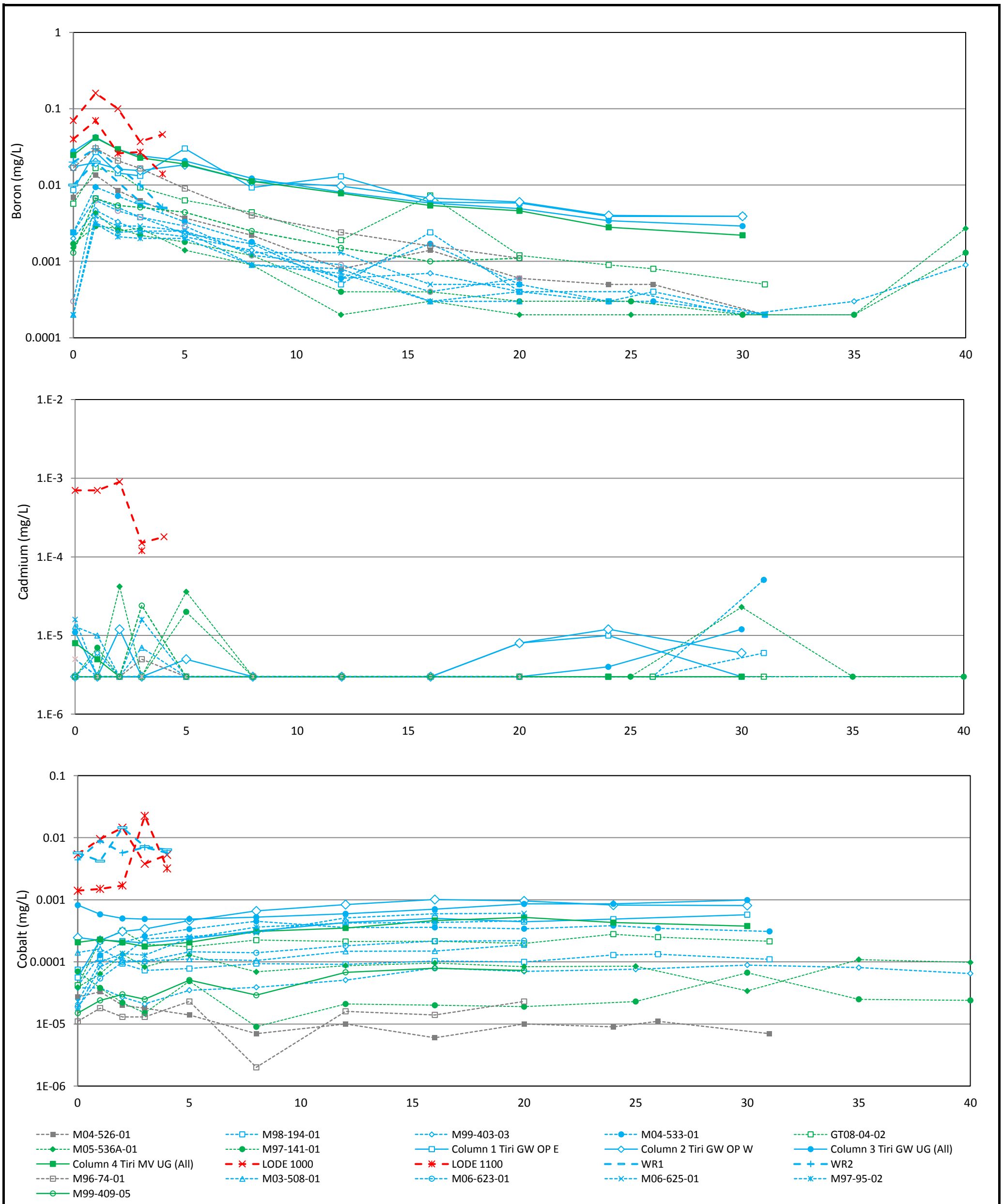
| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Agnico-Eagle Mines Ltd.**

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**FIGURE** B.7-33

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Boron**
**Cadmium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

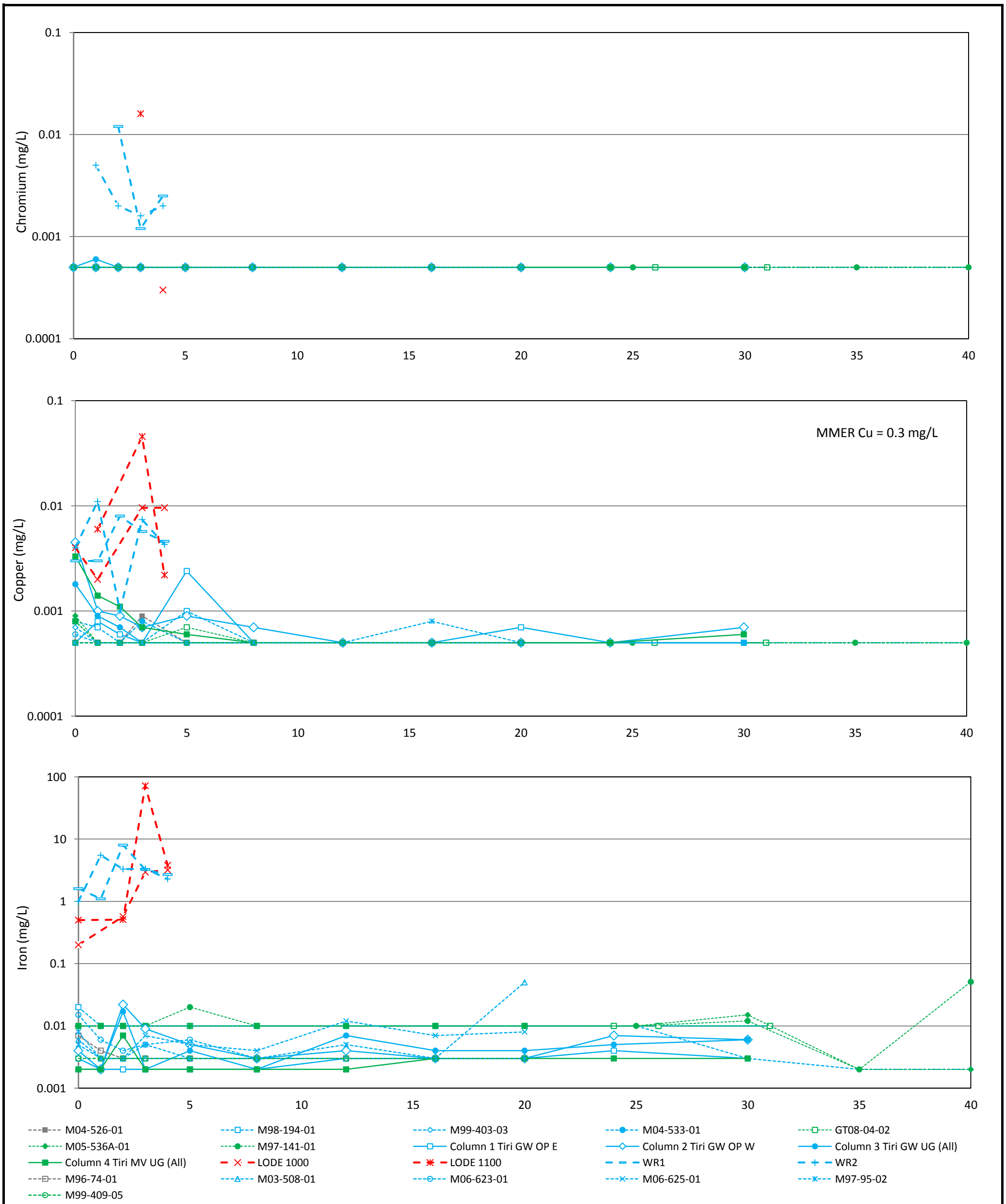
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

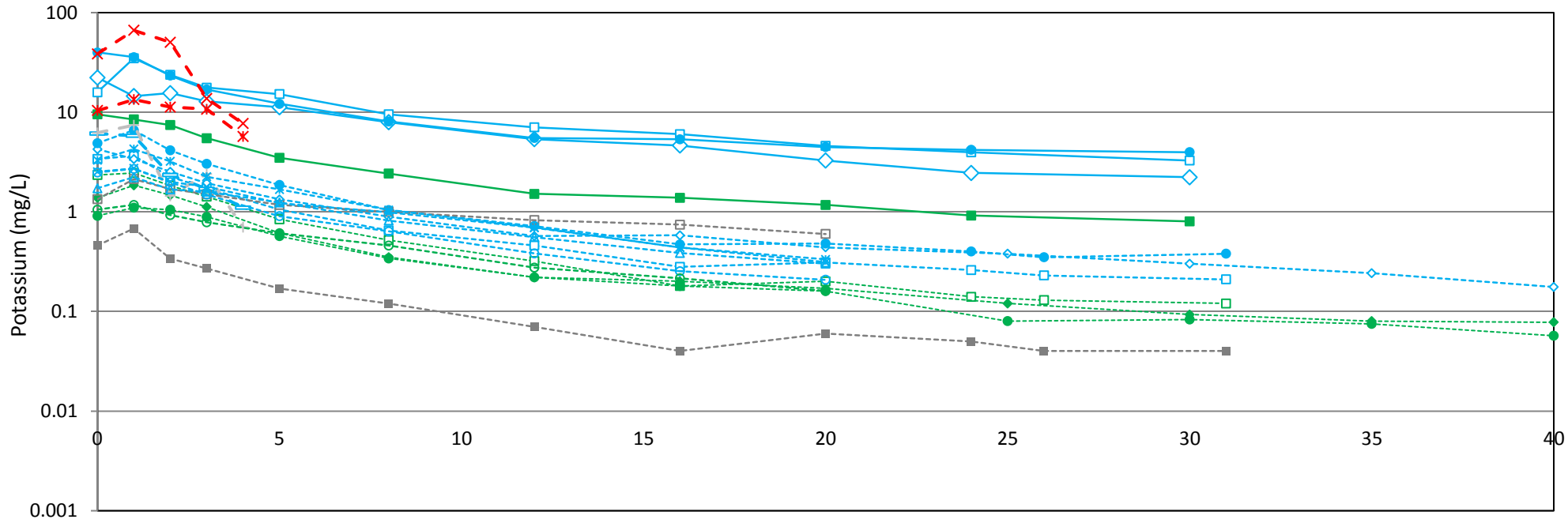
**FIGURE** B.7-34

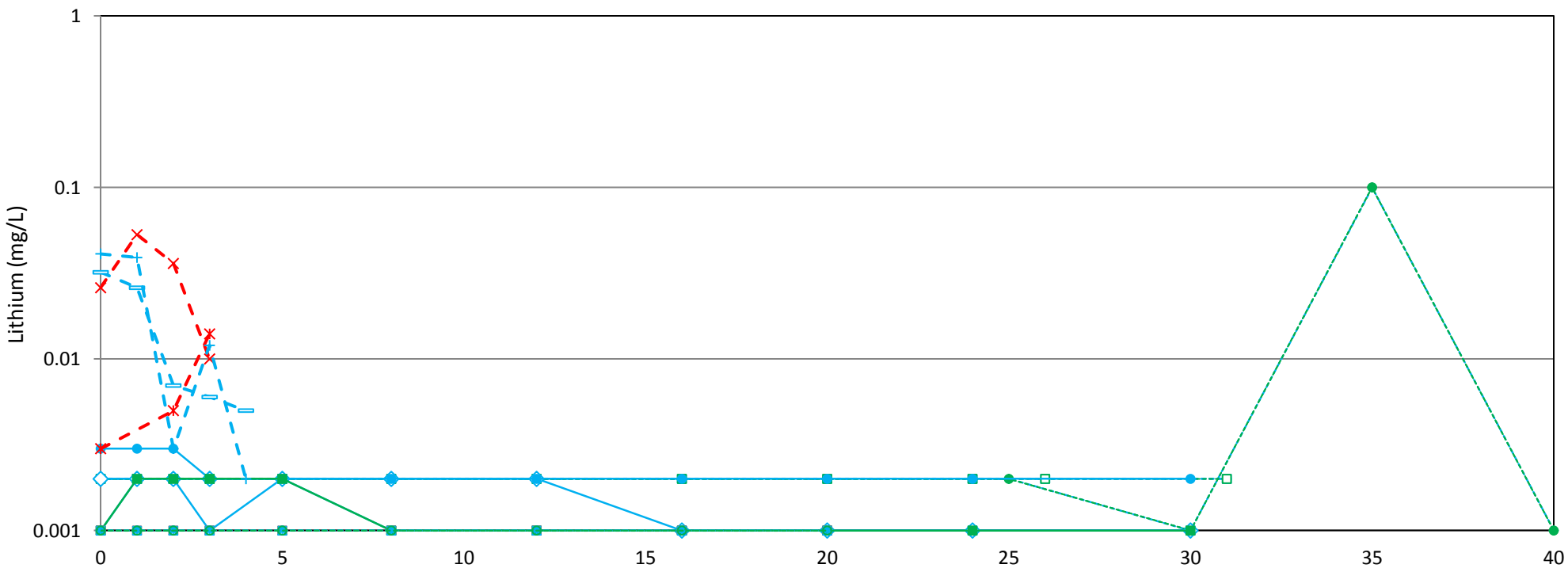
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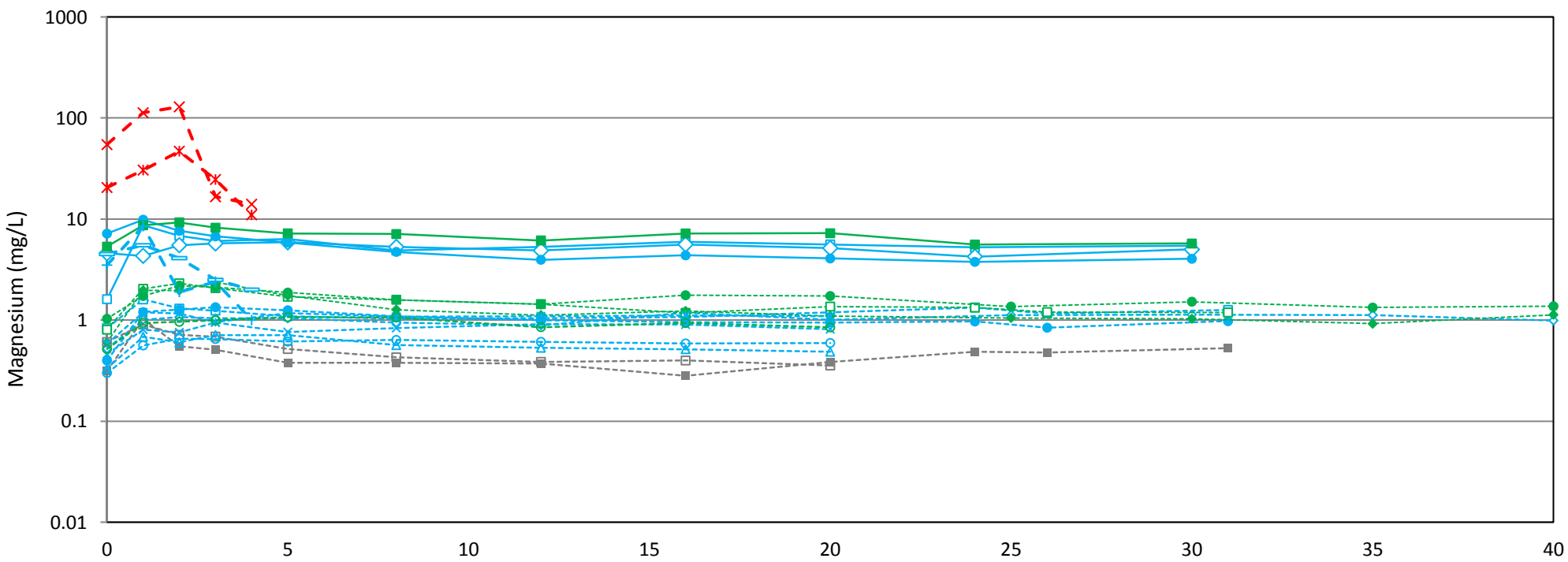



| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>**Criteria:**<br>MMER (2006) | **Chromium**<br>**Copper**<br>**Iron**<br>DRAWN MIB — DATE Sep-12<br>CHECKED AJS — JOB NO 11-1428-0011<br>REVIEWED VJB — PHASE/TASK 6300 | **Kinetic Test Data**<br>**Tiriganiaq Deposit**<br>**Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-35 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Potassium**
**Lithium**
**Magnesium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

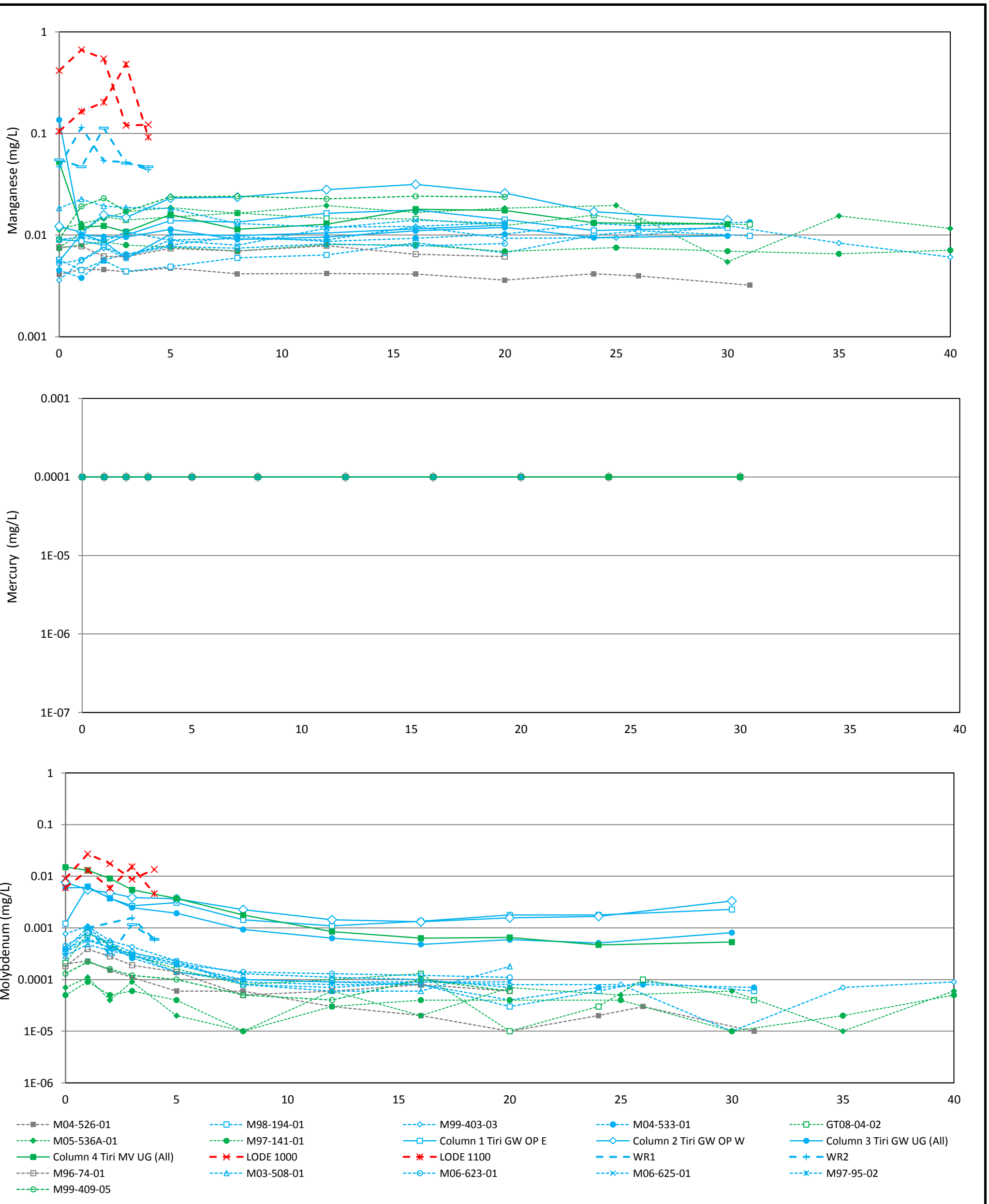
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

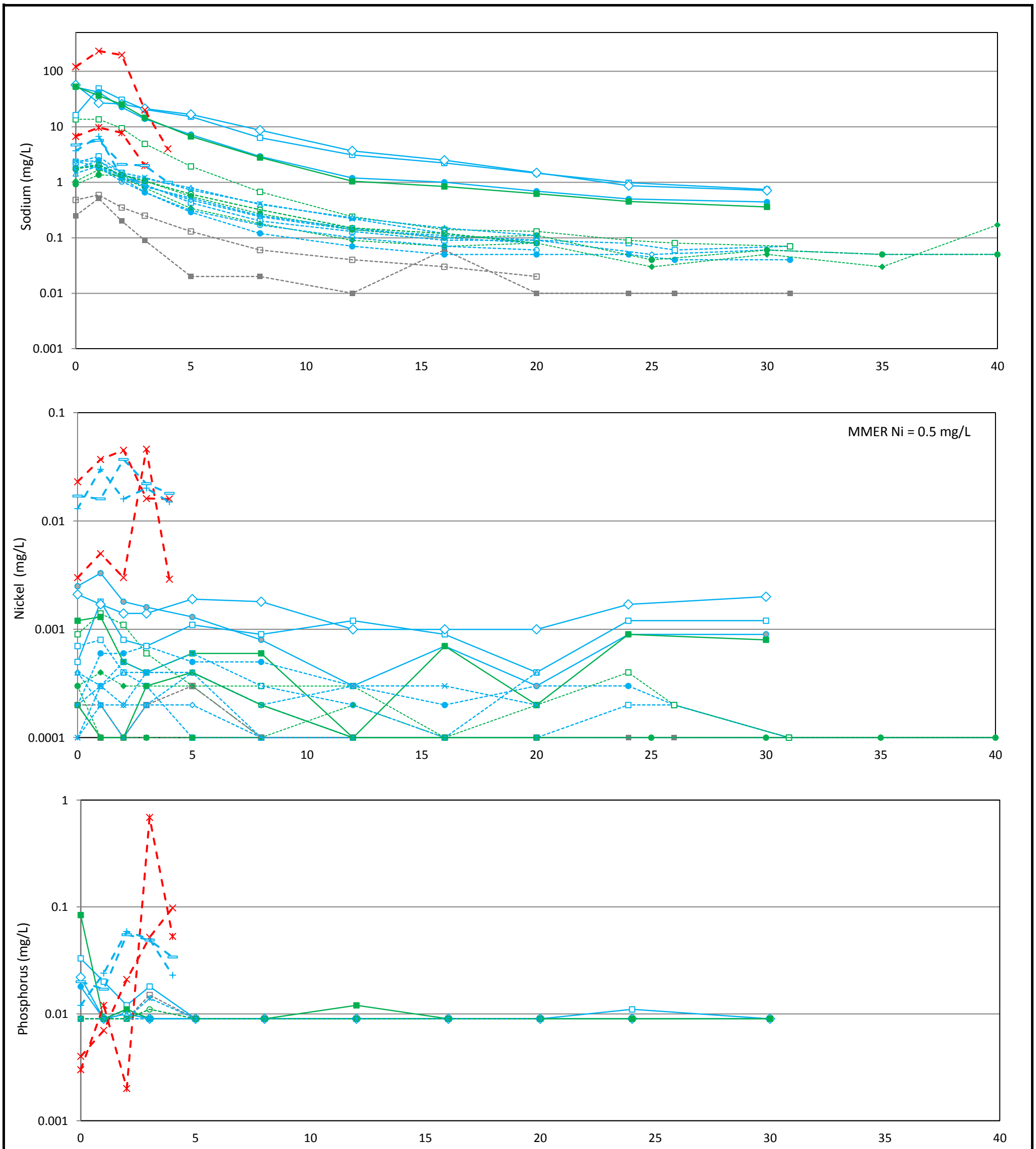
**FIGURE** B.7-36

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AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>Criteria:<br>MMER (2006) | **Manganese<br>Mercury<br>Molybdenum**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>Tiriganiaq Deposit<br>Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-37 |

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AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Sodium**
**Nickel**
**Phosphorus**

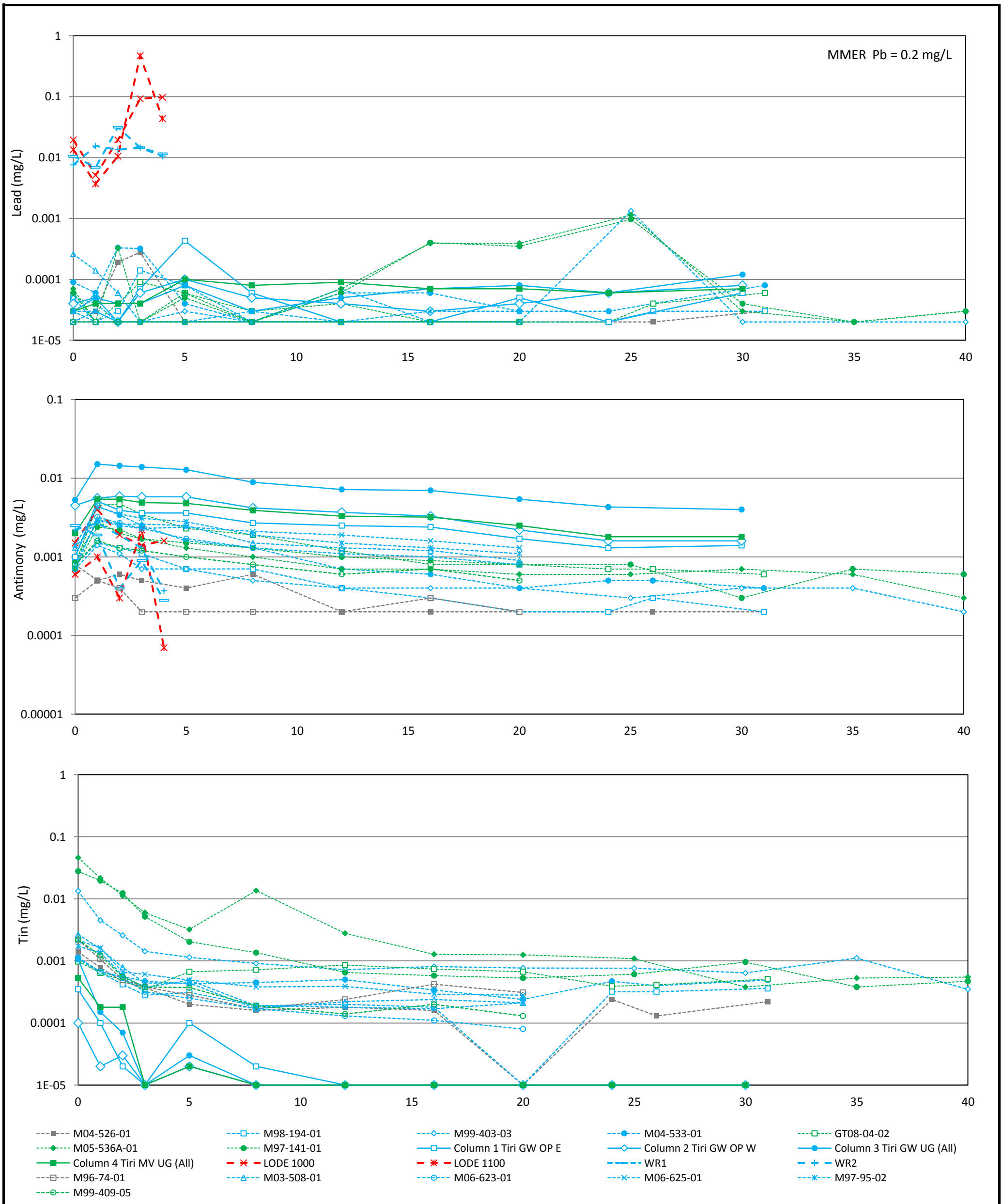
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|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

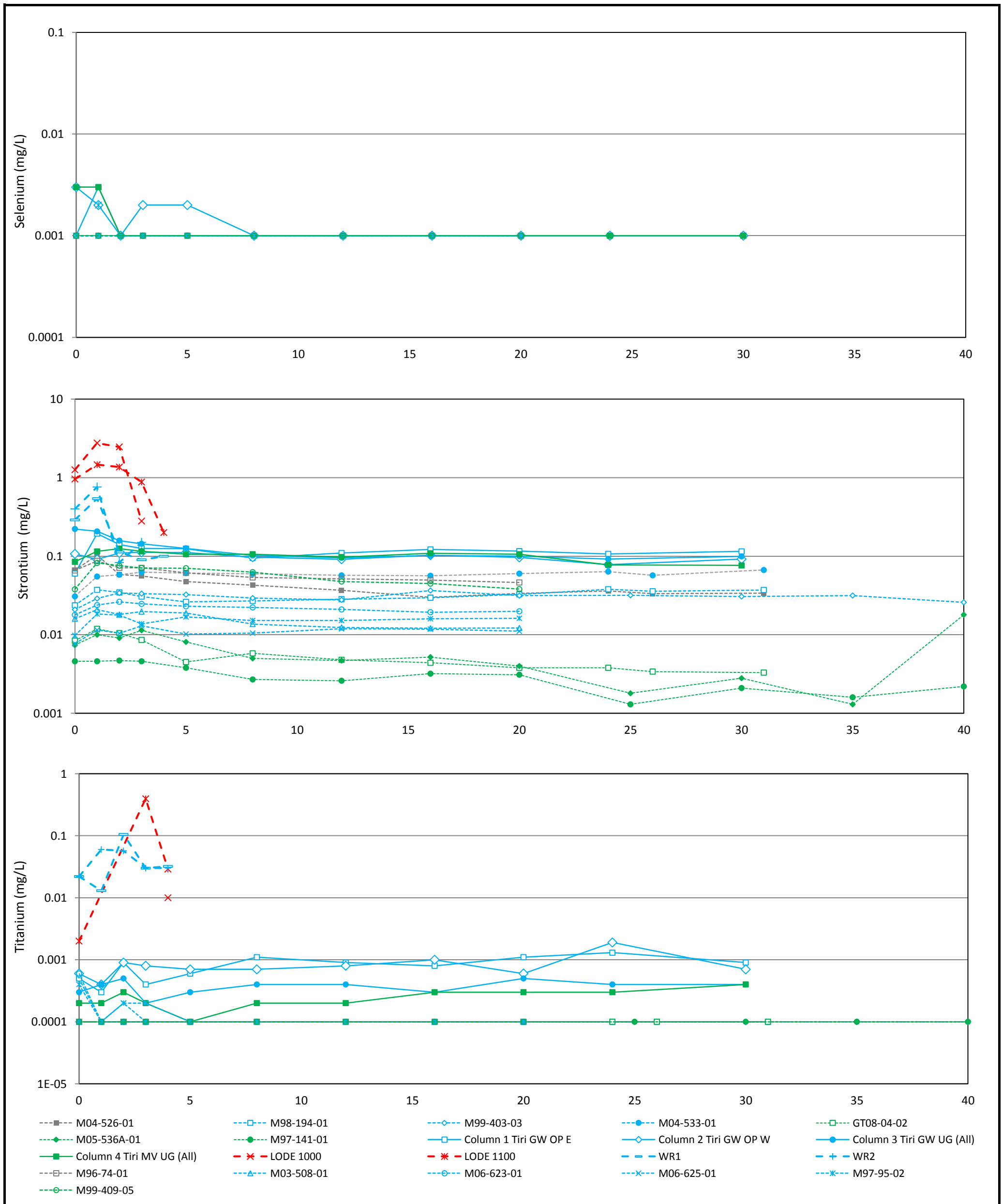
Golder Associates

**FIGURE** B.7-38



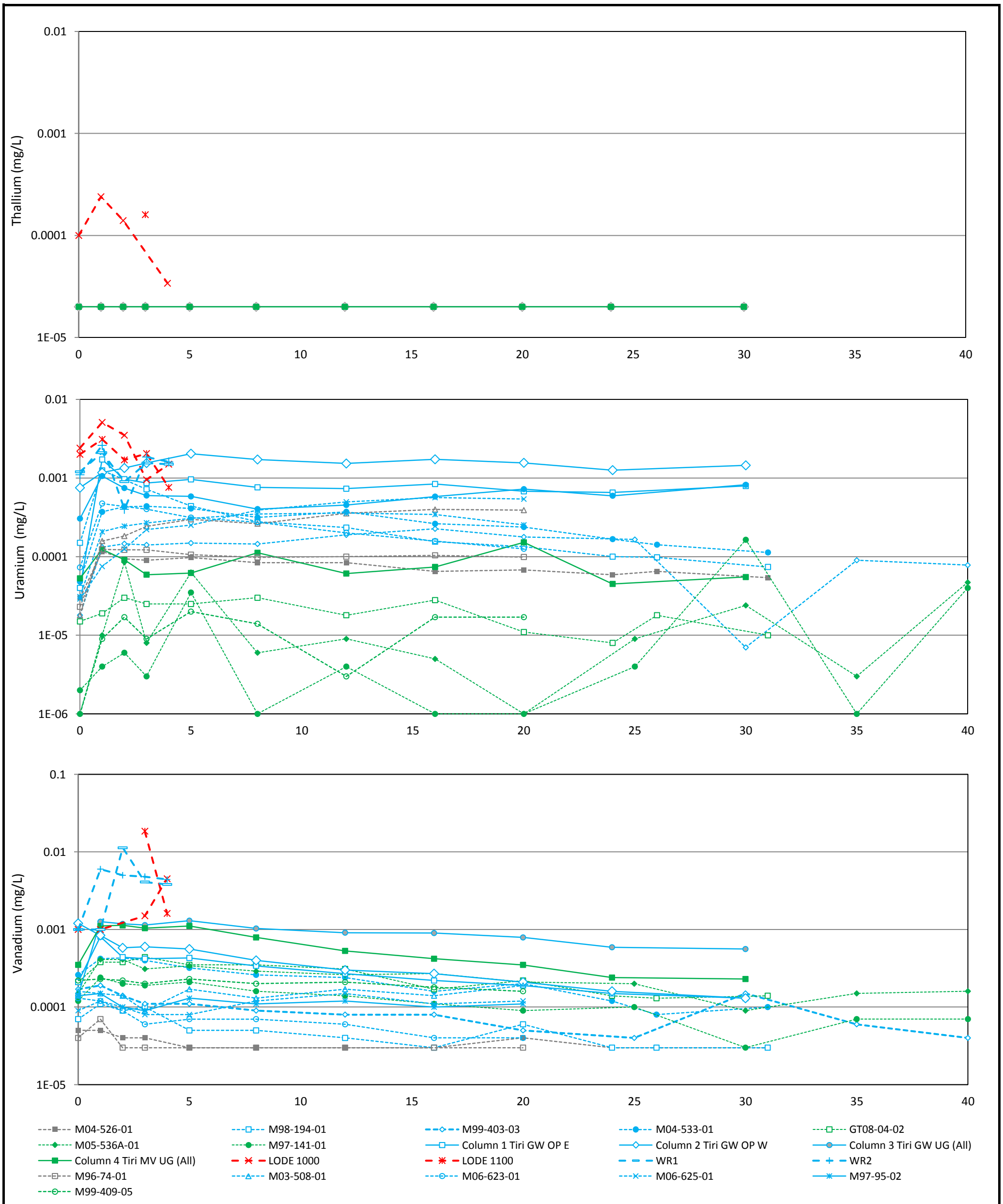

| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>Criteria:<br>MMER (2006) | **Lead<br>Antimony<br>Tin** | **Kinetic Test Data<br>Tiriganiaq Deposit<br>Meliadine Property** |
| | | DRAWN MIB; DATE Sep-12<br>CHECKED AJS; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-39 |

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AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx

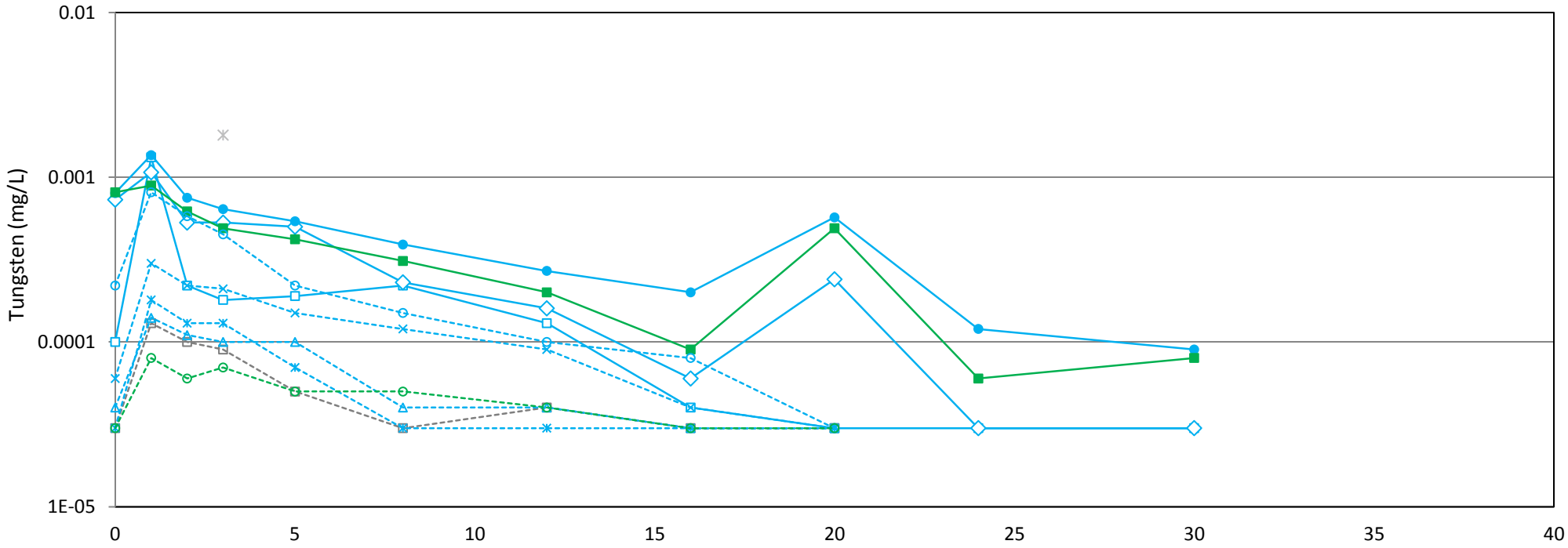


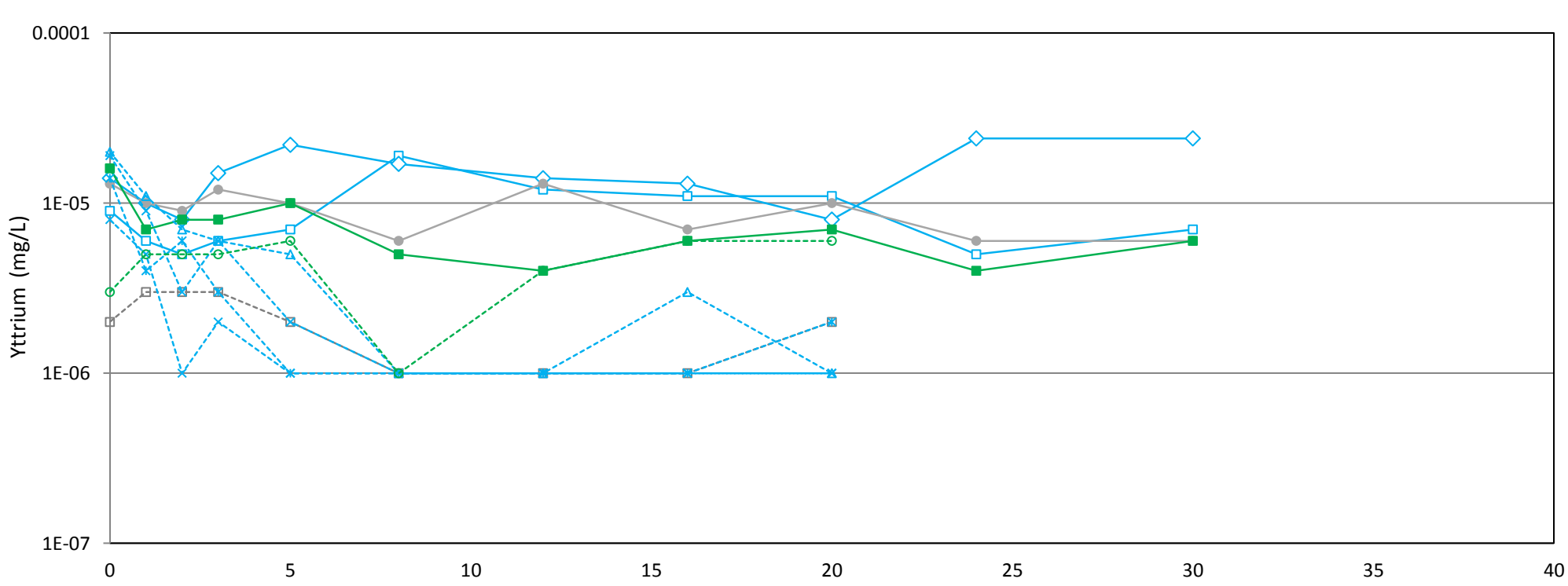

| Notes: | Rock Type: | Selenium<br>Strontium<br>Titanium | Kinetic Test Data<br>Tiriganiaq Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>Criteria:<br>MMER (2006) | DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-40 |

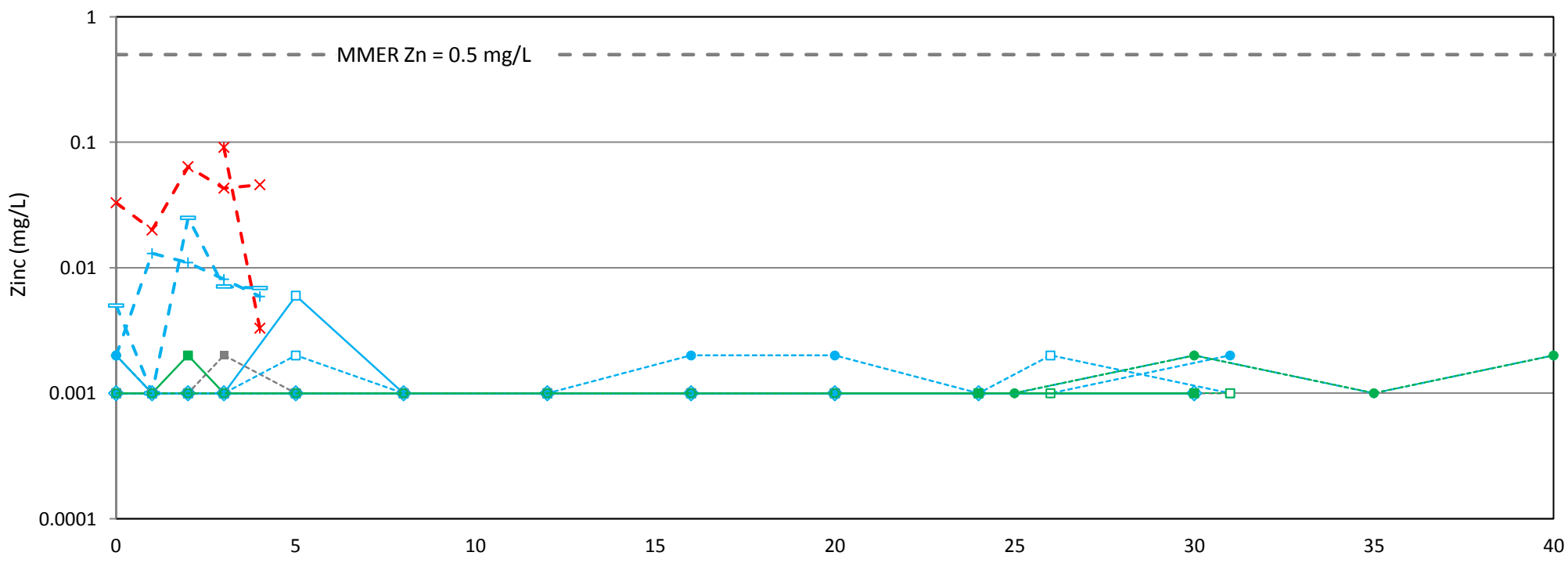
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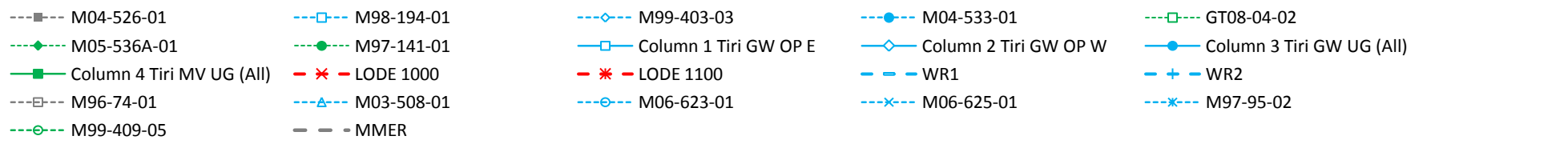



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>Criteria:<br>MMER (2006) | **Thallium<br>Uranium<br>Vanadium**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>Tiriganiaq Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-41 |




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Tungsten**
**Yttrium**
**Zinc**

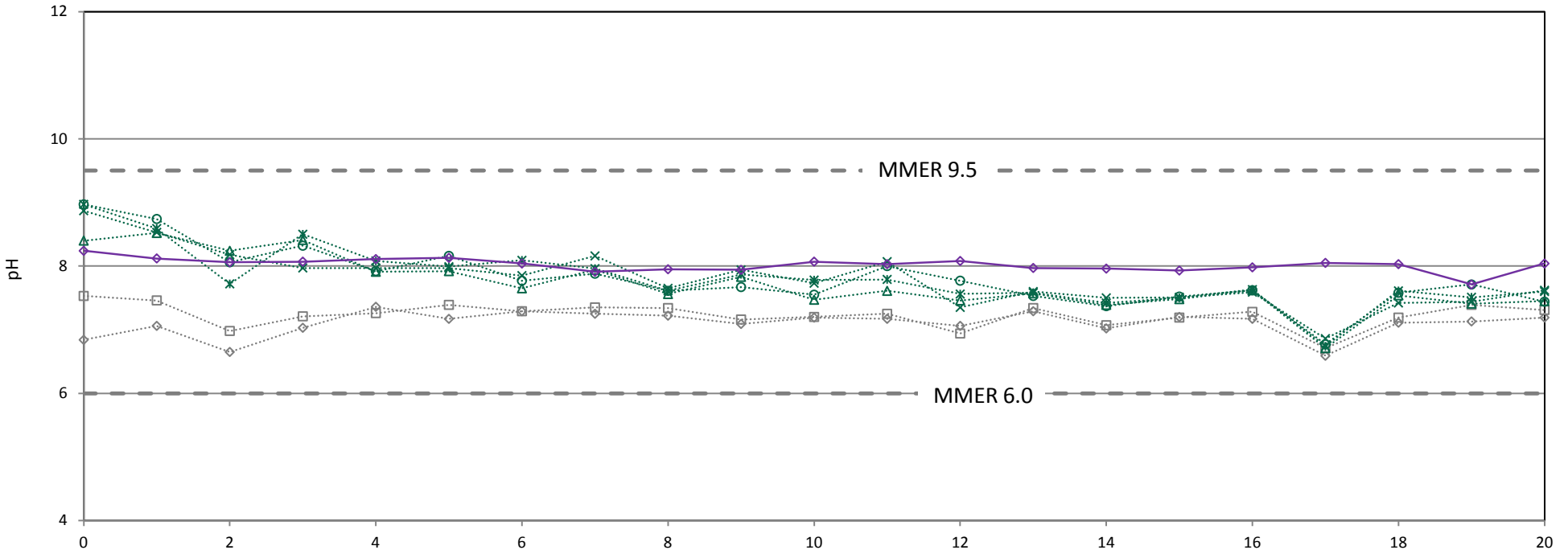
| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

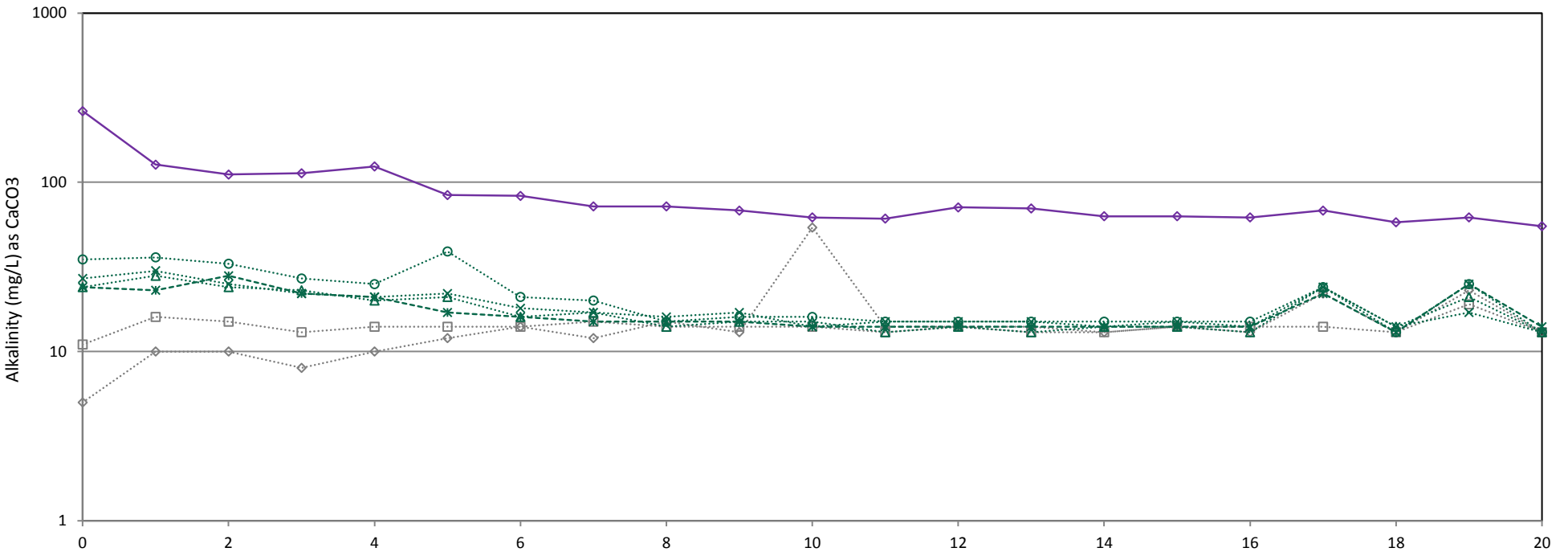
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

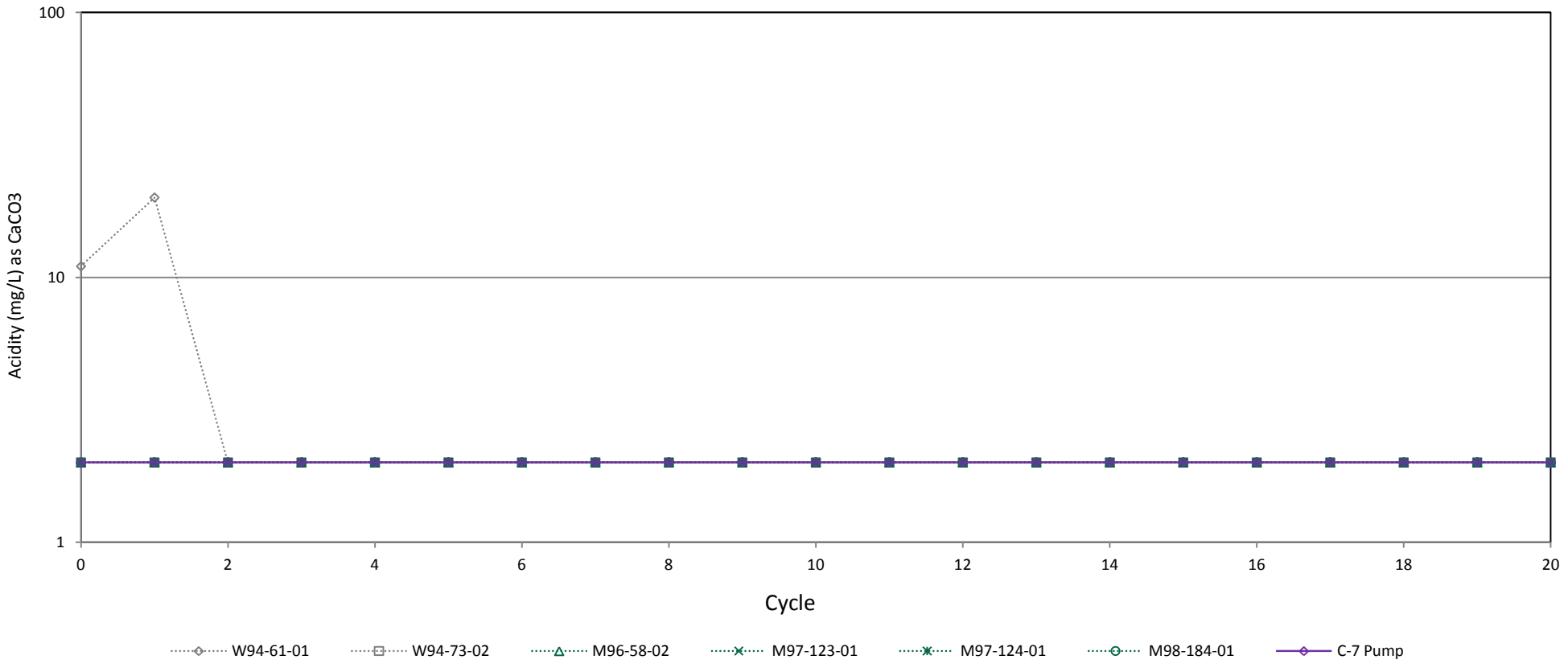
**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-42




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

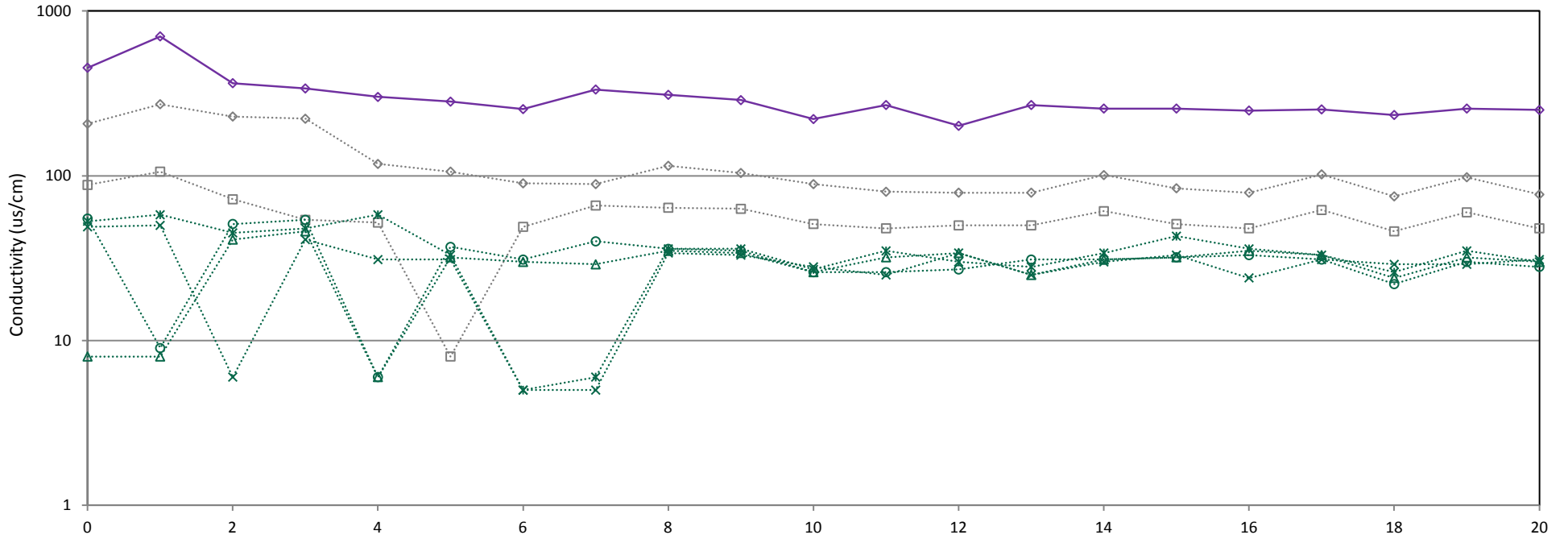
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

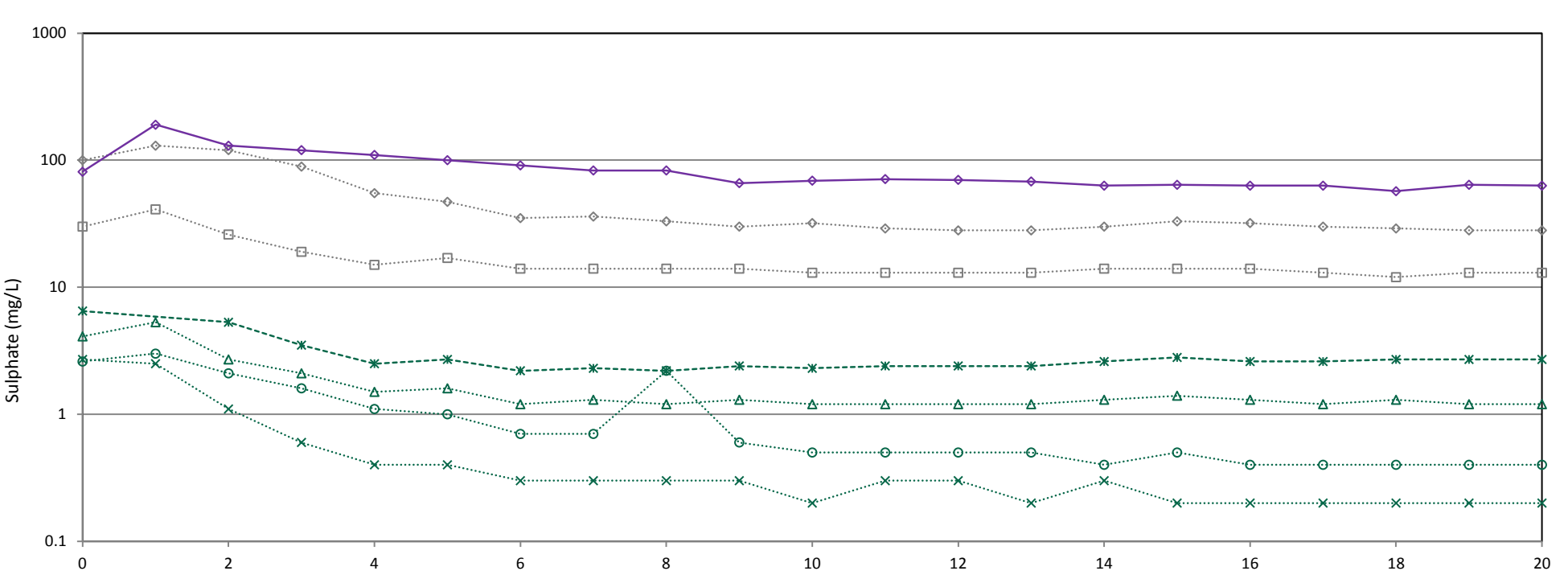
**Agnico-Eagle Mines Ltd.**

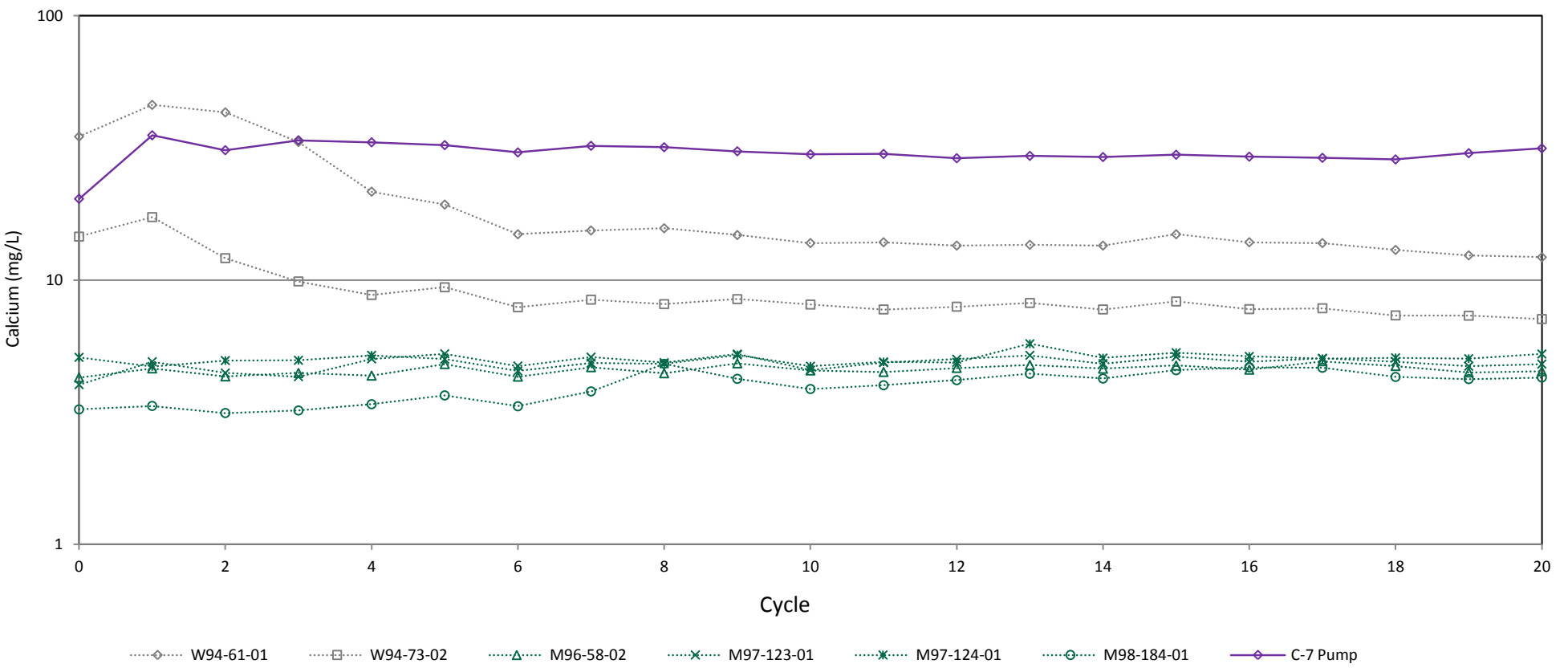
Golder Associates

**FIGURE** B.7-43

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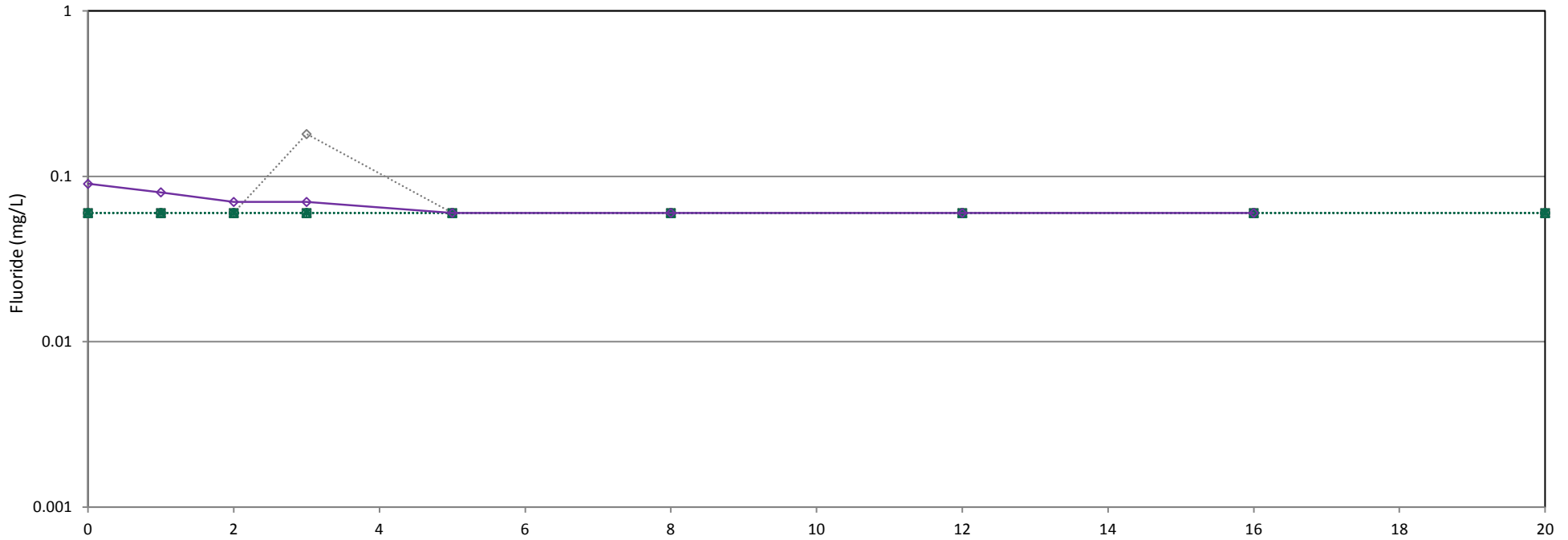


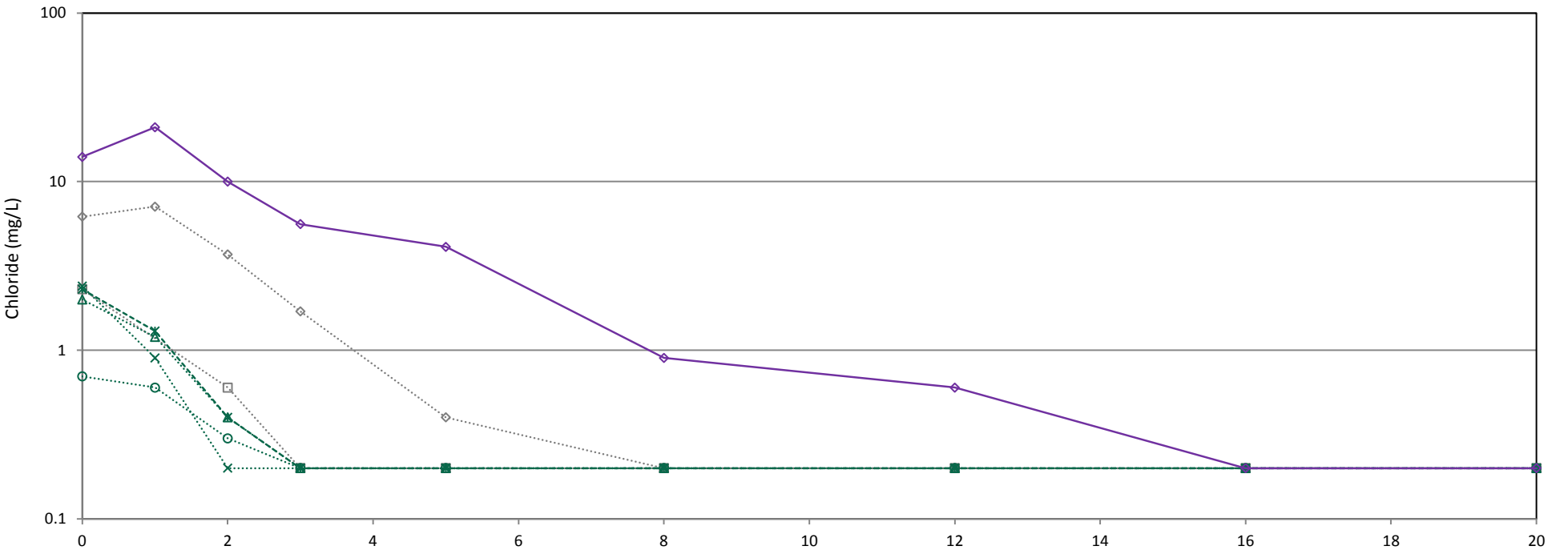



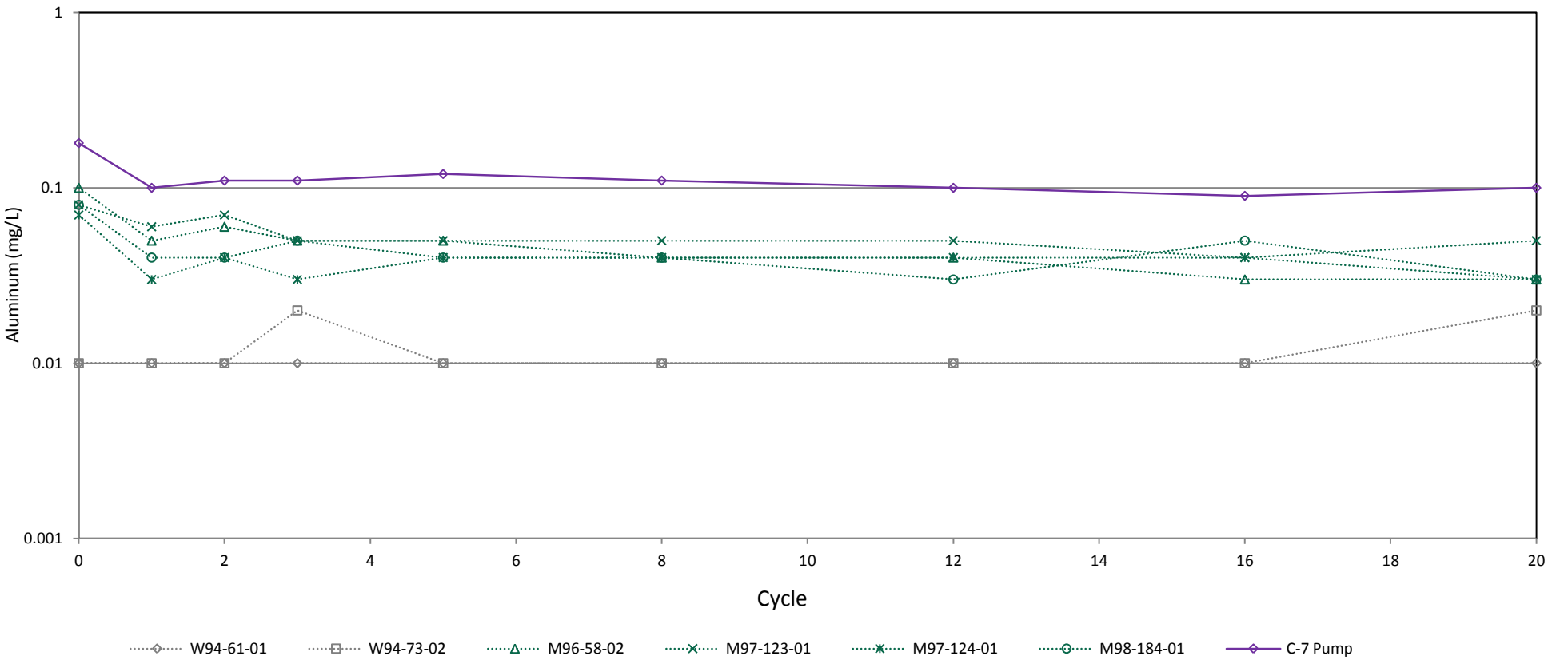




| | | | |
|---|---|---|---|
| **Notes:** | **Rock Type:** | **Conductivity<br>Sulphate<br>Calcium** | **Kinetic Test Data<br>Pump Deposit<br>Meliadine Property** |
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| **Criteria:**<br>MMER (2006) | | | FIGURE B.7-44 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Fluoride**
**Chloride**
**Aluminum**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

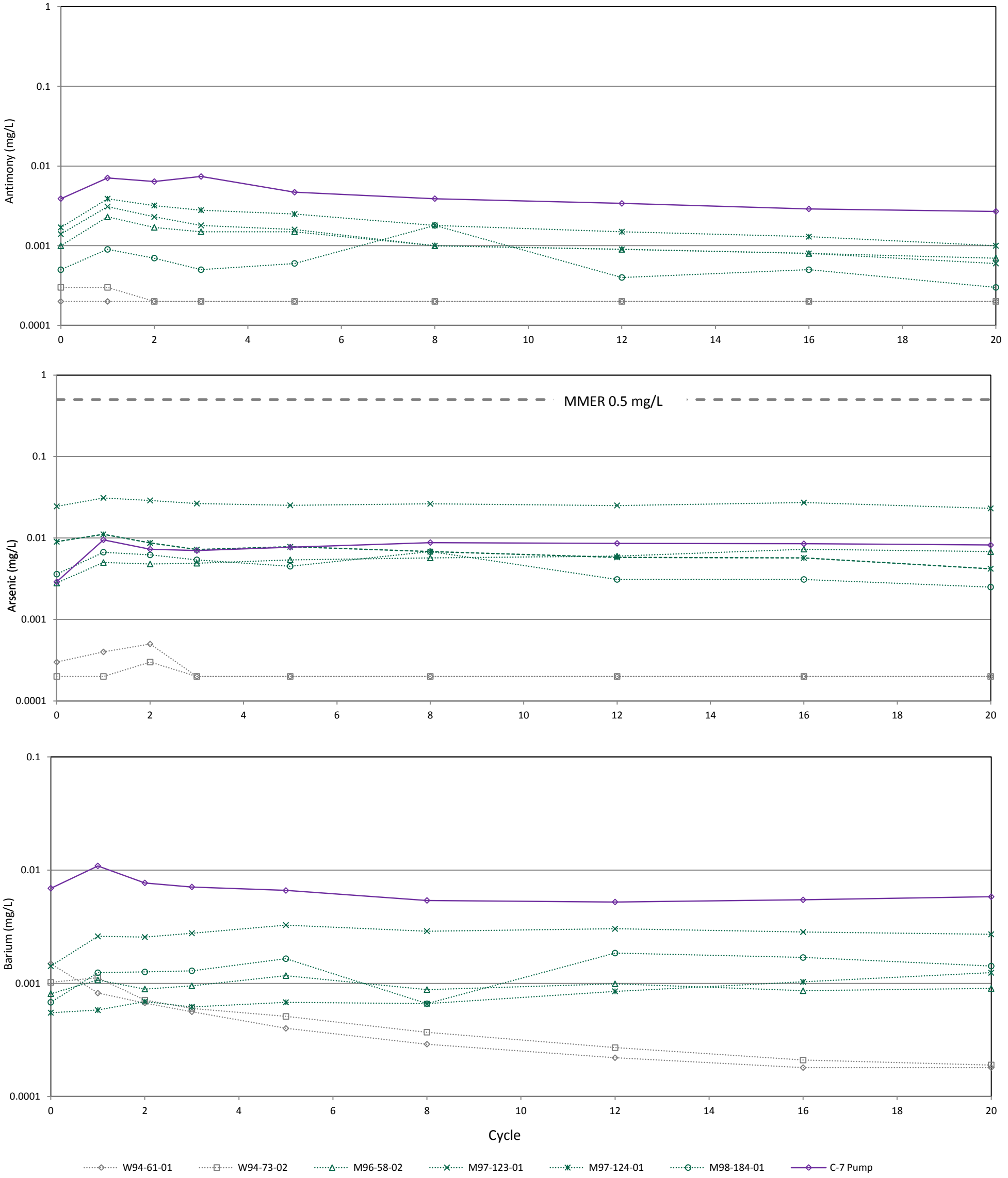
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-45

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Antimony**
**Arsenic**
**Barium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

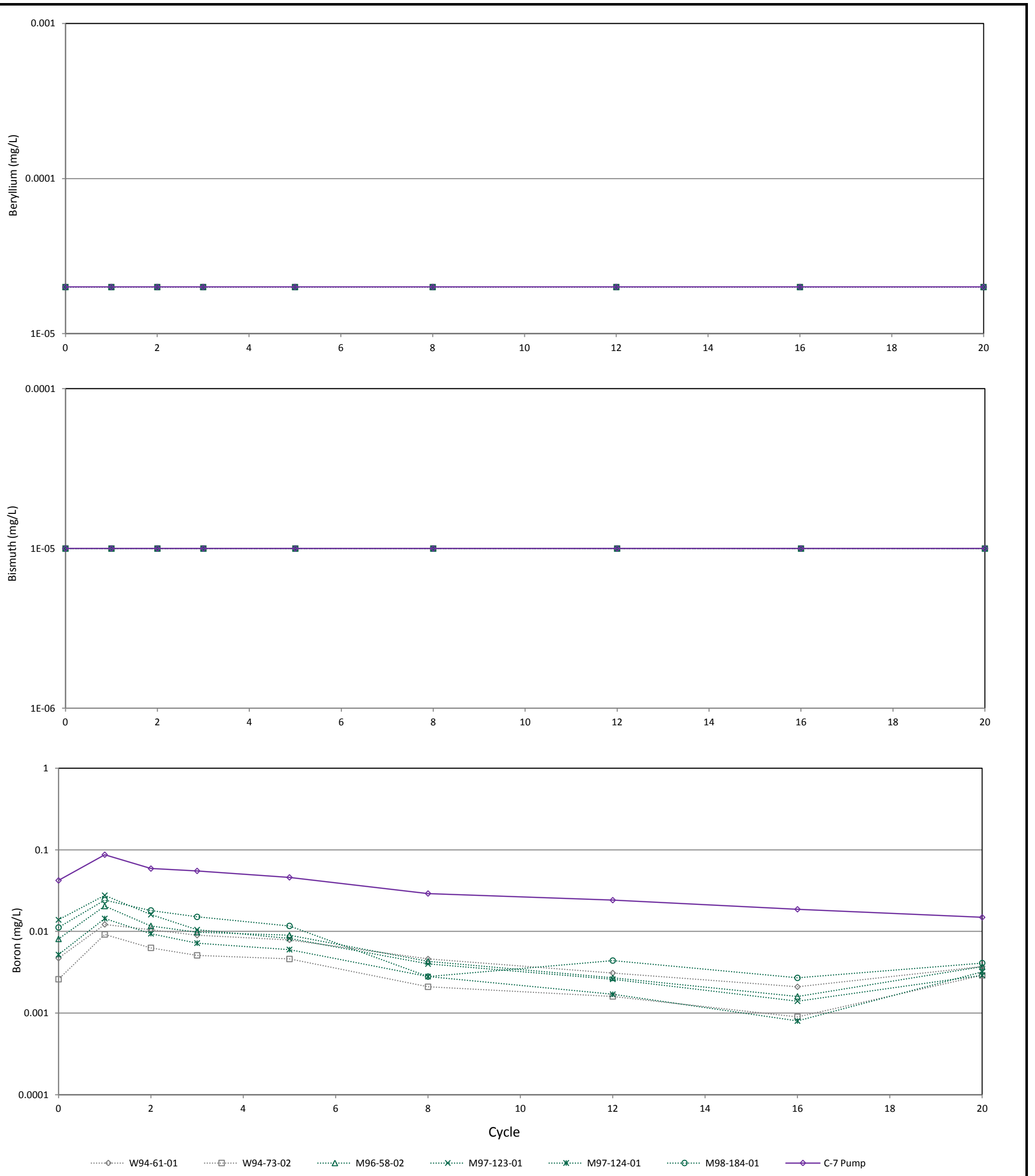
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-46

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Beryllium**
**Bismuth**
**Boron**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

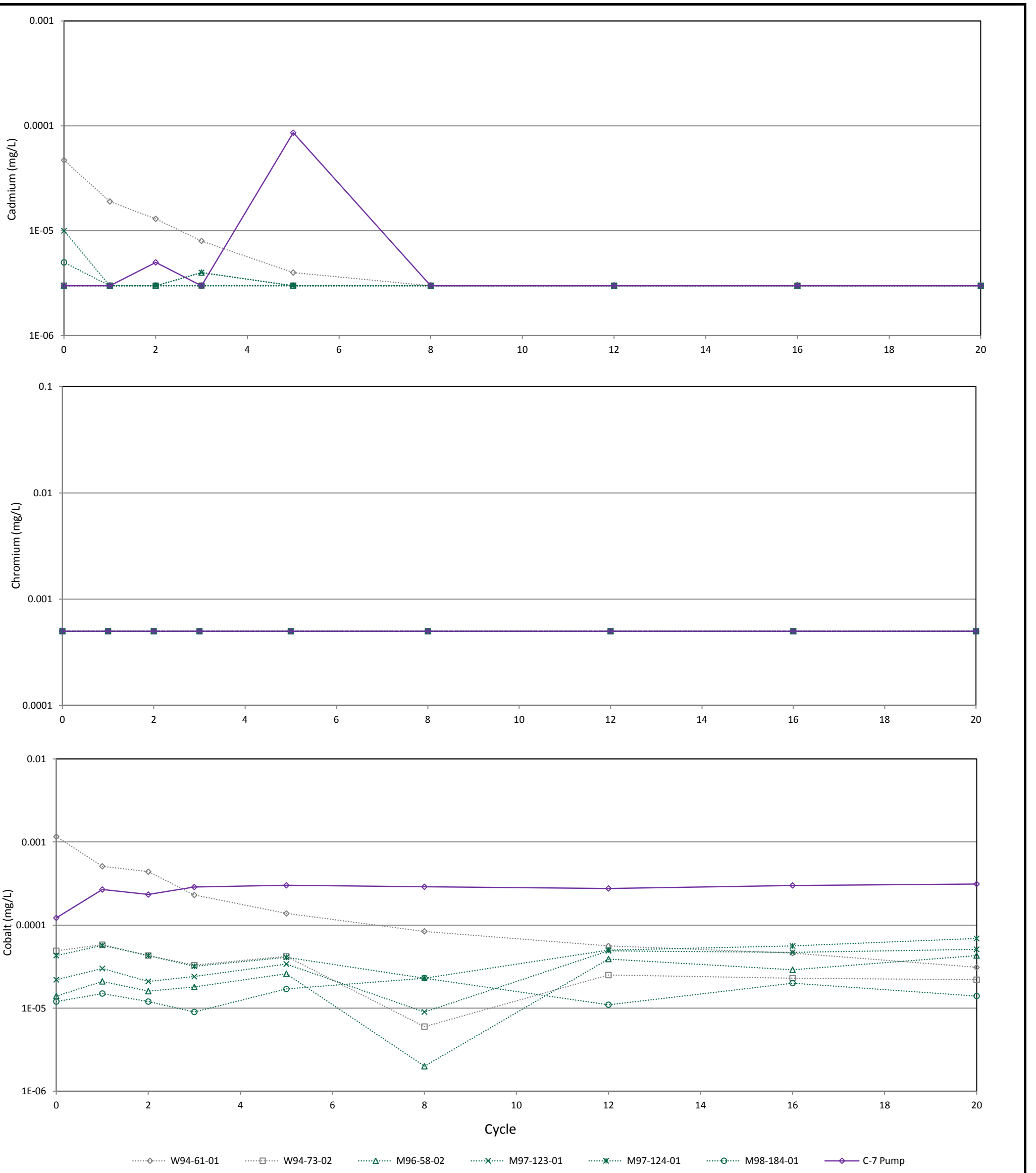
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-47

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

14% IF 86% MV (large column)

**Cadmium**
**Chromium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

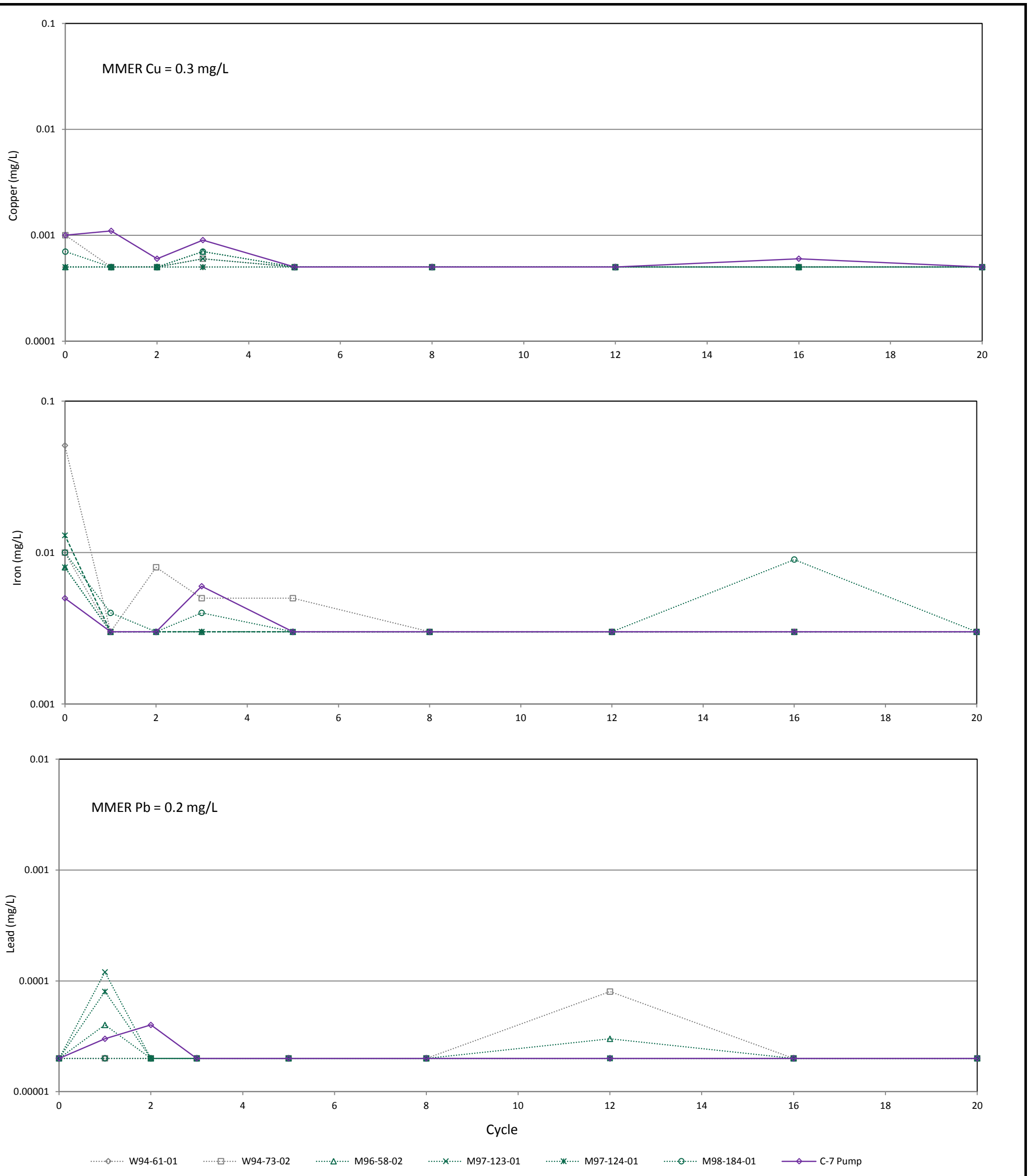
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

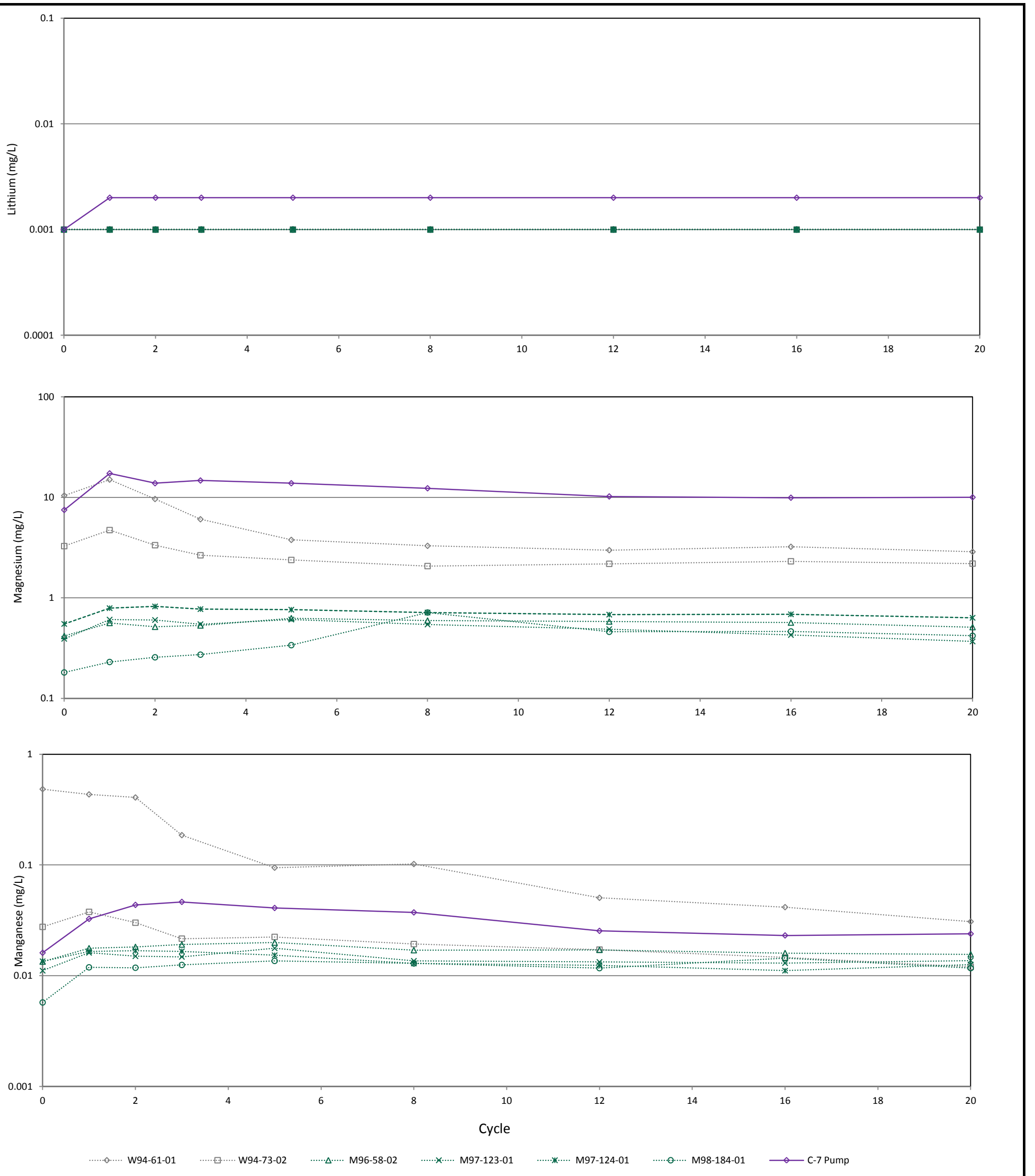
**FIGURE** B.7-48

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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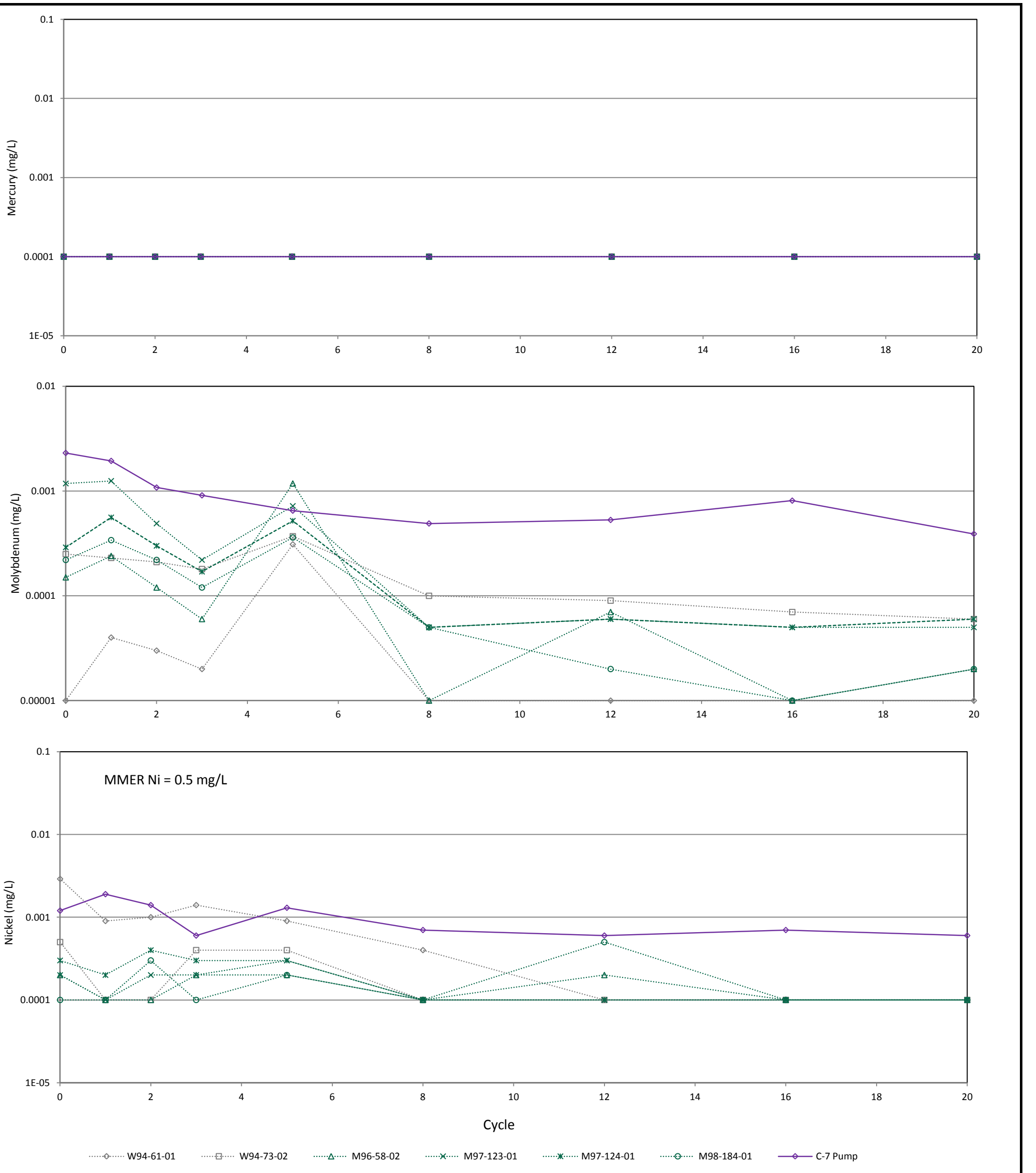

| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Copper**<br>**Iron**<br>**Lead** | **Kinetic Test Data**<br>**Pump Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-49 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Lithium<br>Magnesium<br>Manganese** | **Kinetic Test Data<br>Pump Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| | | | FIGURE B.7-50 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Mercury**
**Molybdenum**
**Nickel**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

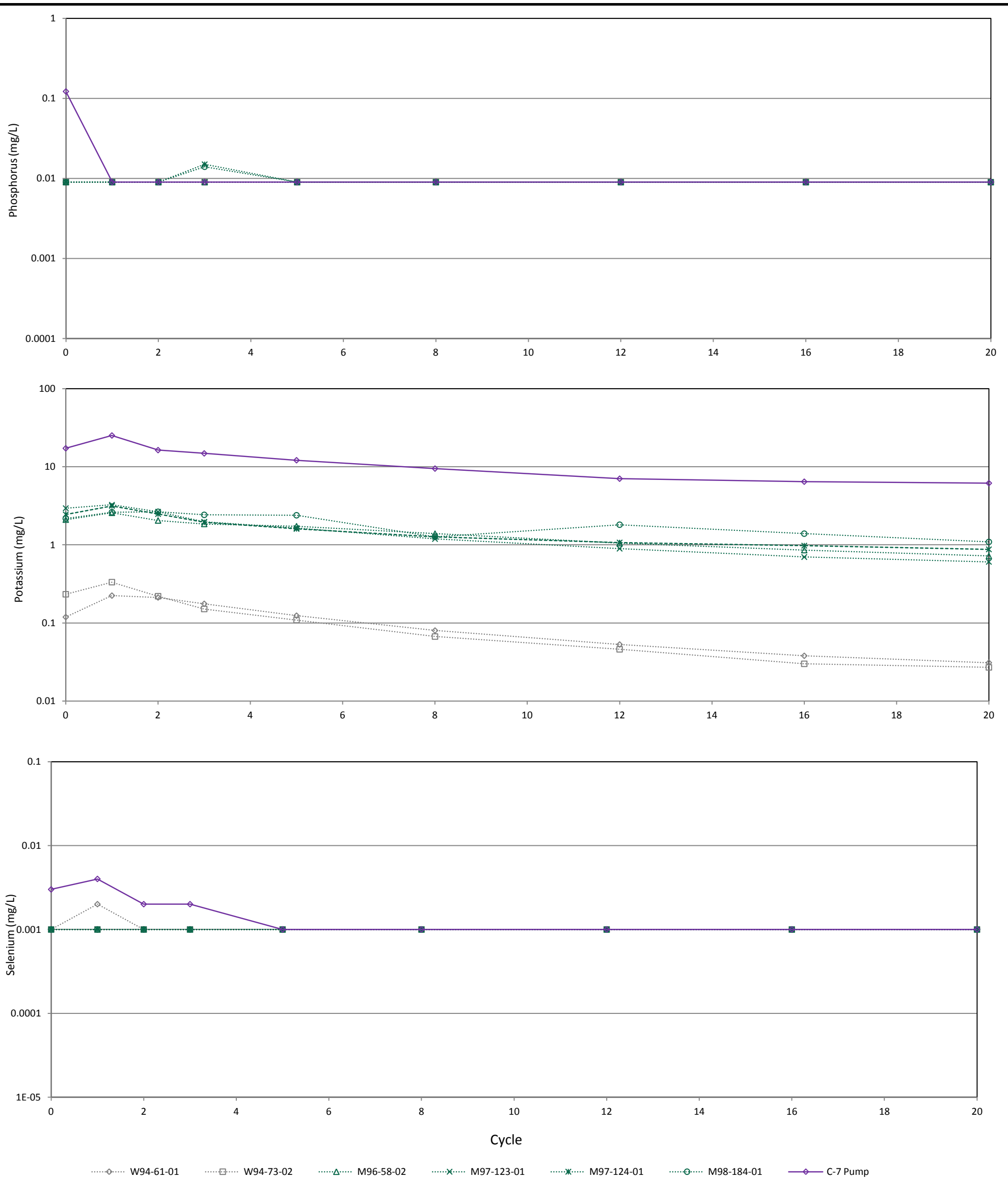
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-51

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Phosphorus**
**Potassium**
**Selenium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

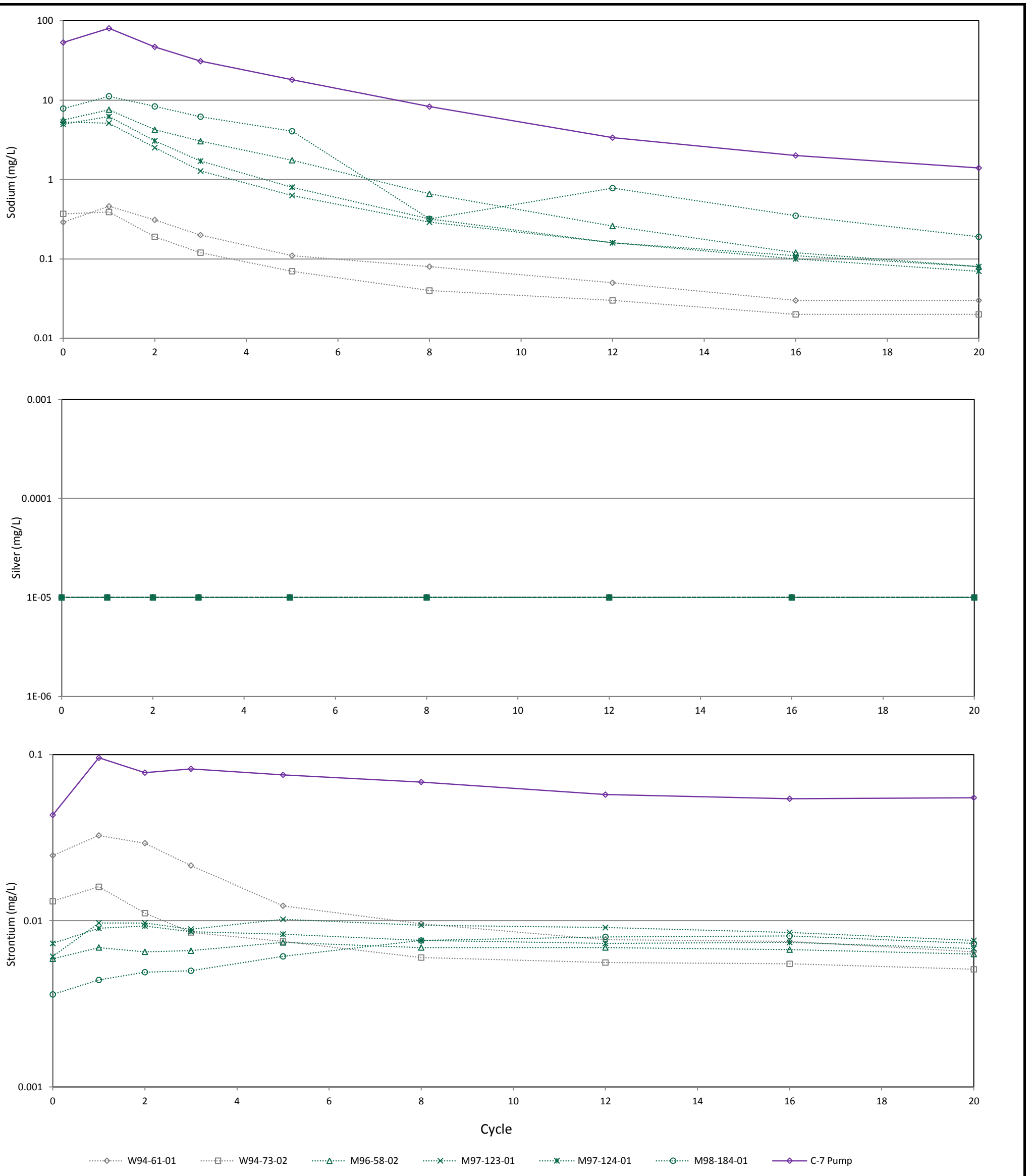
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

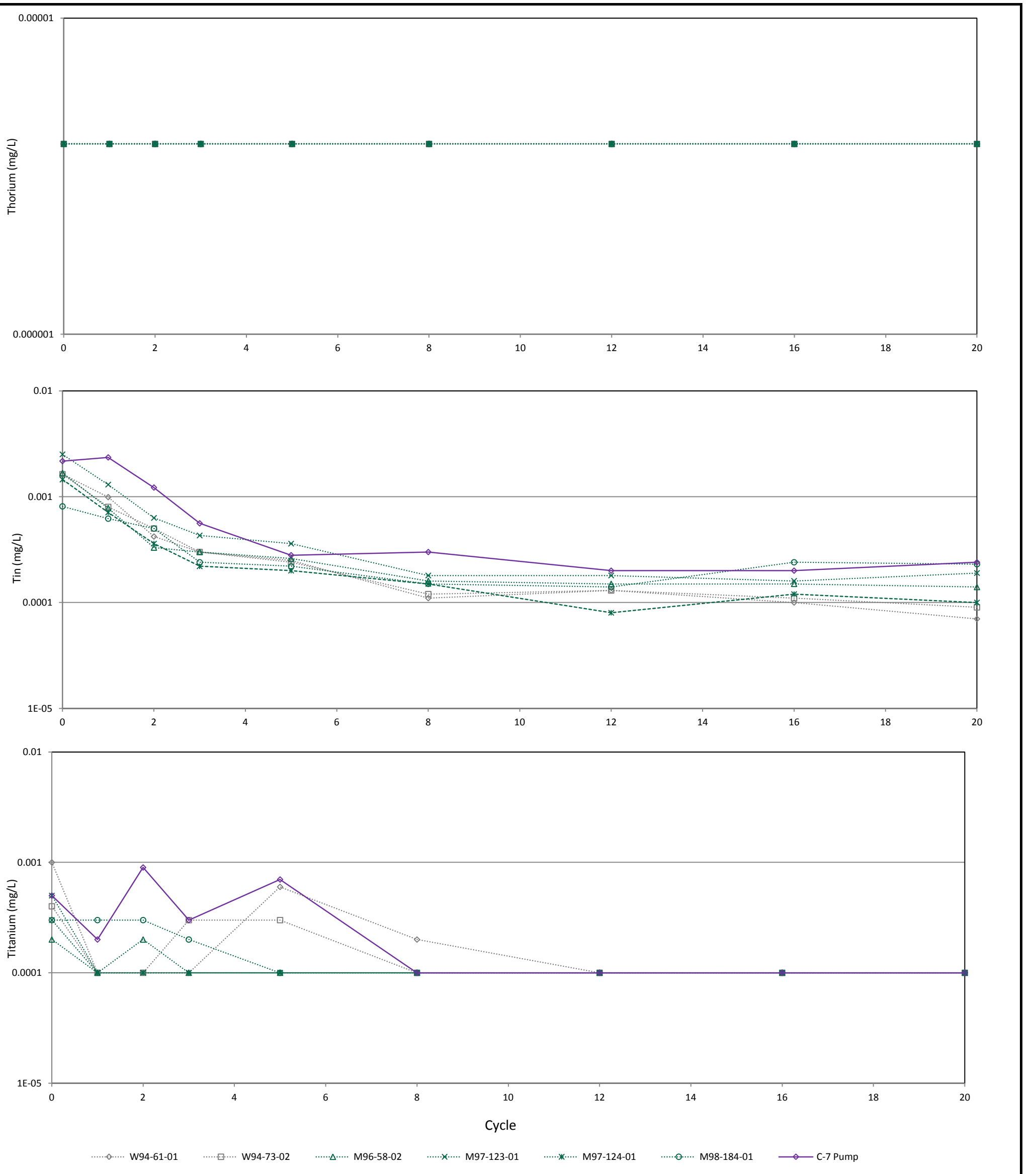
**FIGURE** B.7-52

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Sodium<br>Silver<br>Strontium** | **Kinetic Test Data<br>Pump Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-53 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Thorium**
**Tin**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

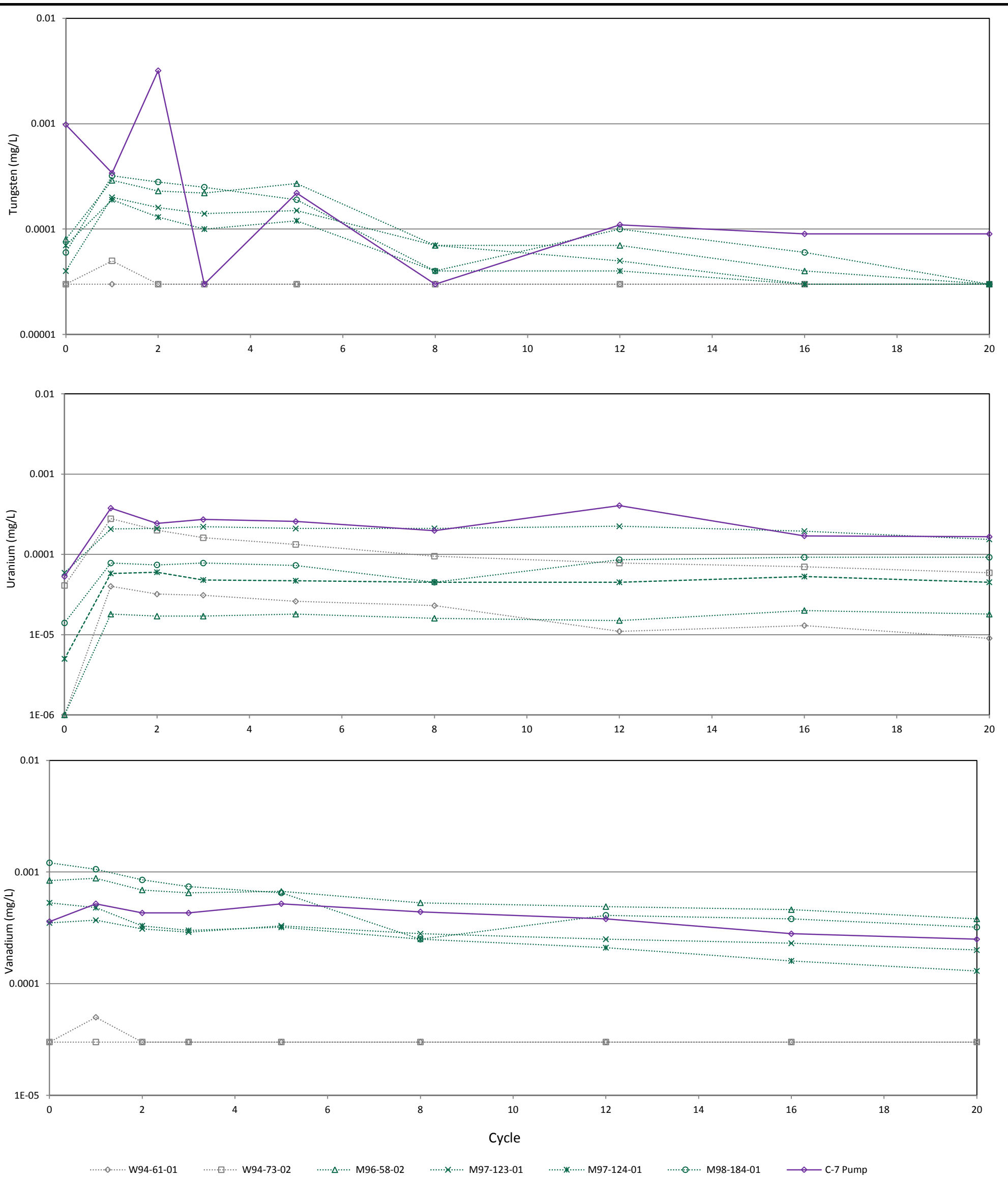
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-54

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Tungsten**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

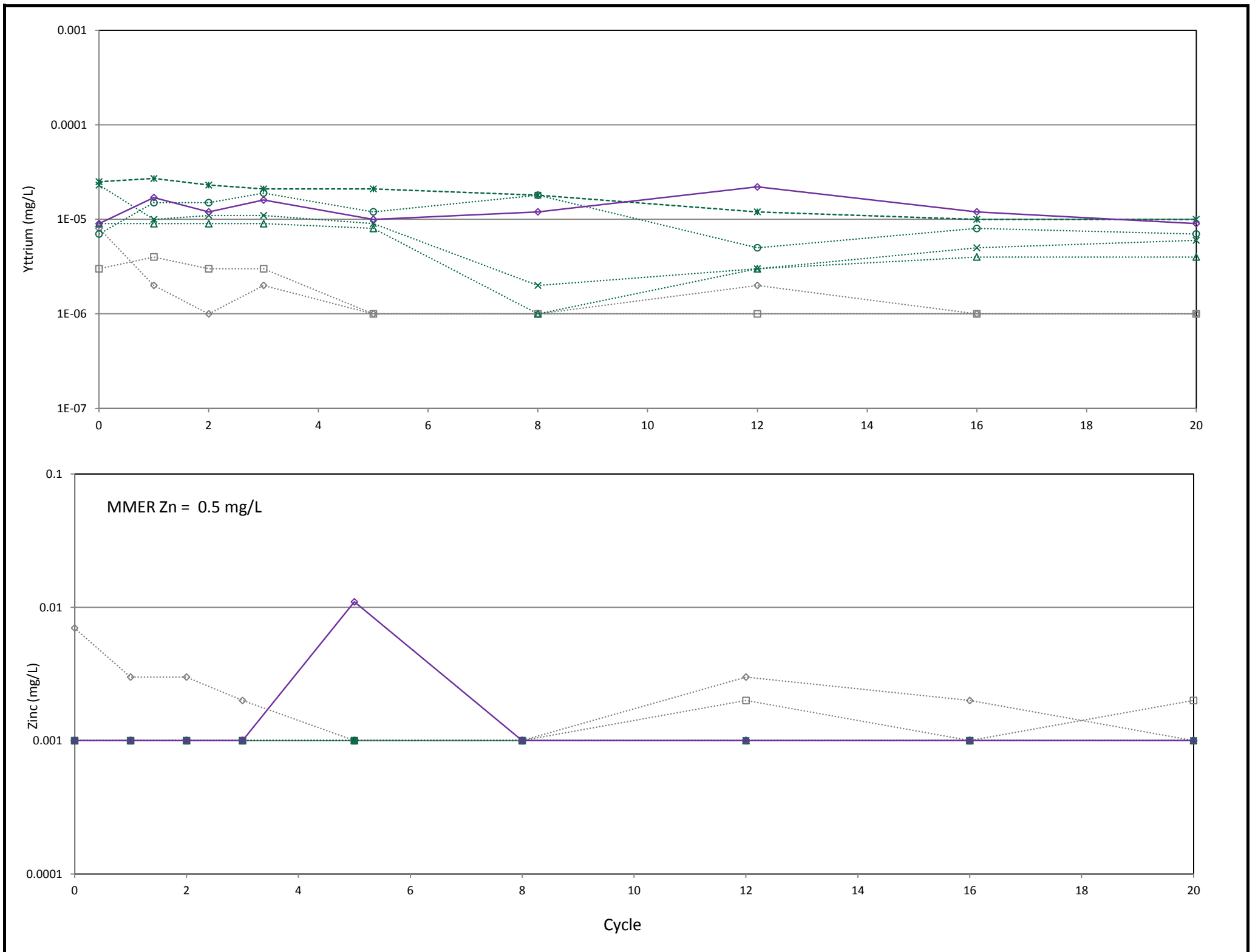
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

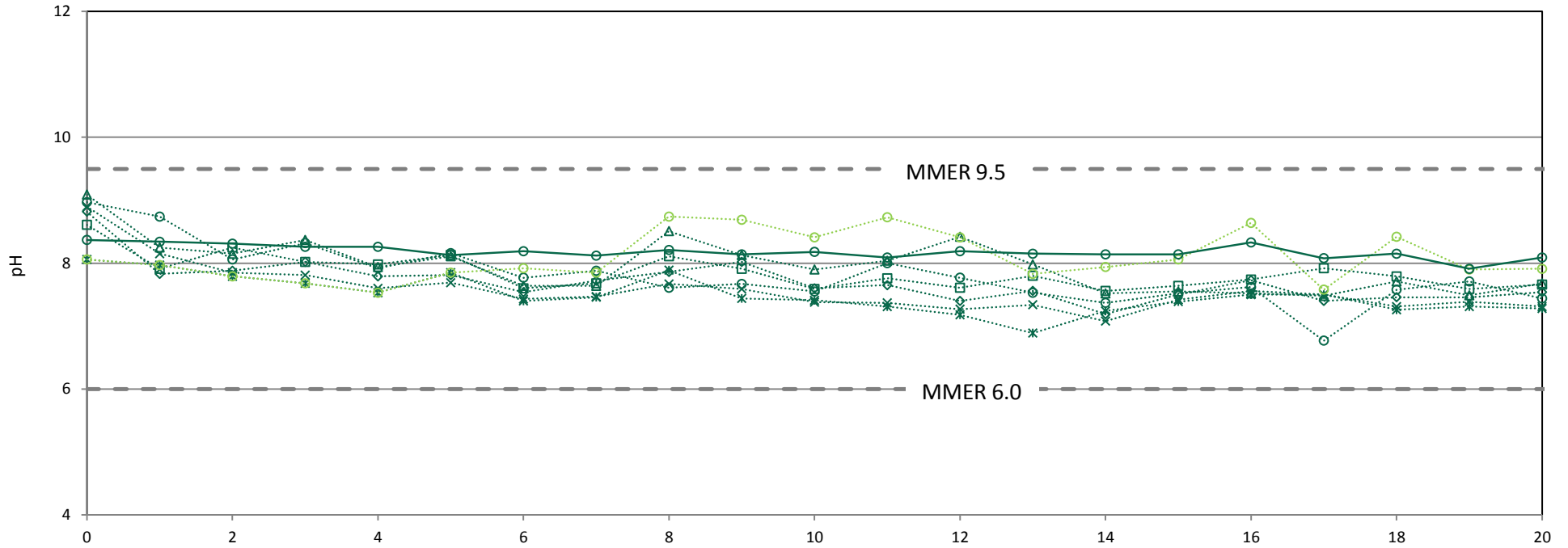
**FIGURE** B.7-55

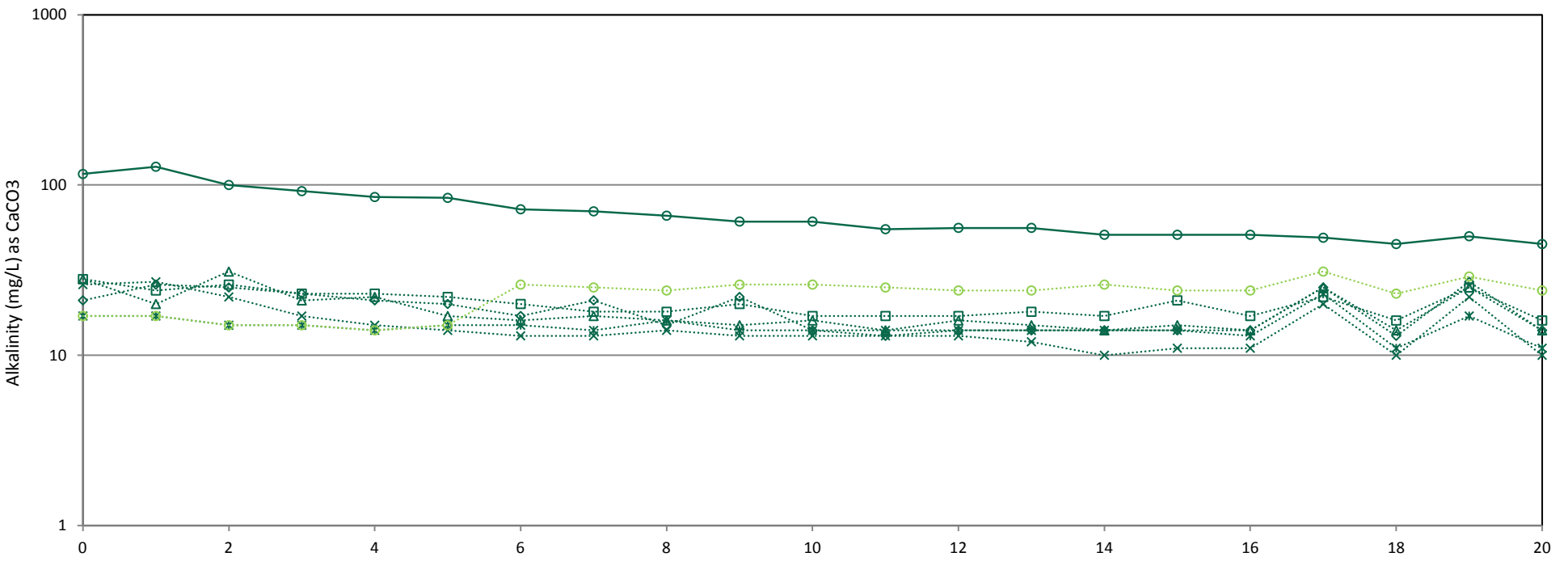
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

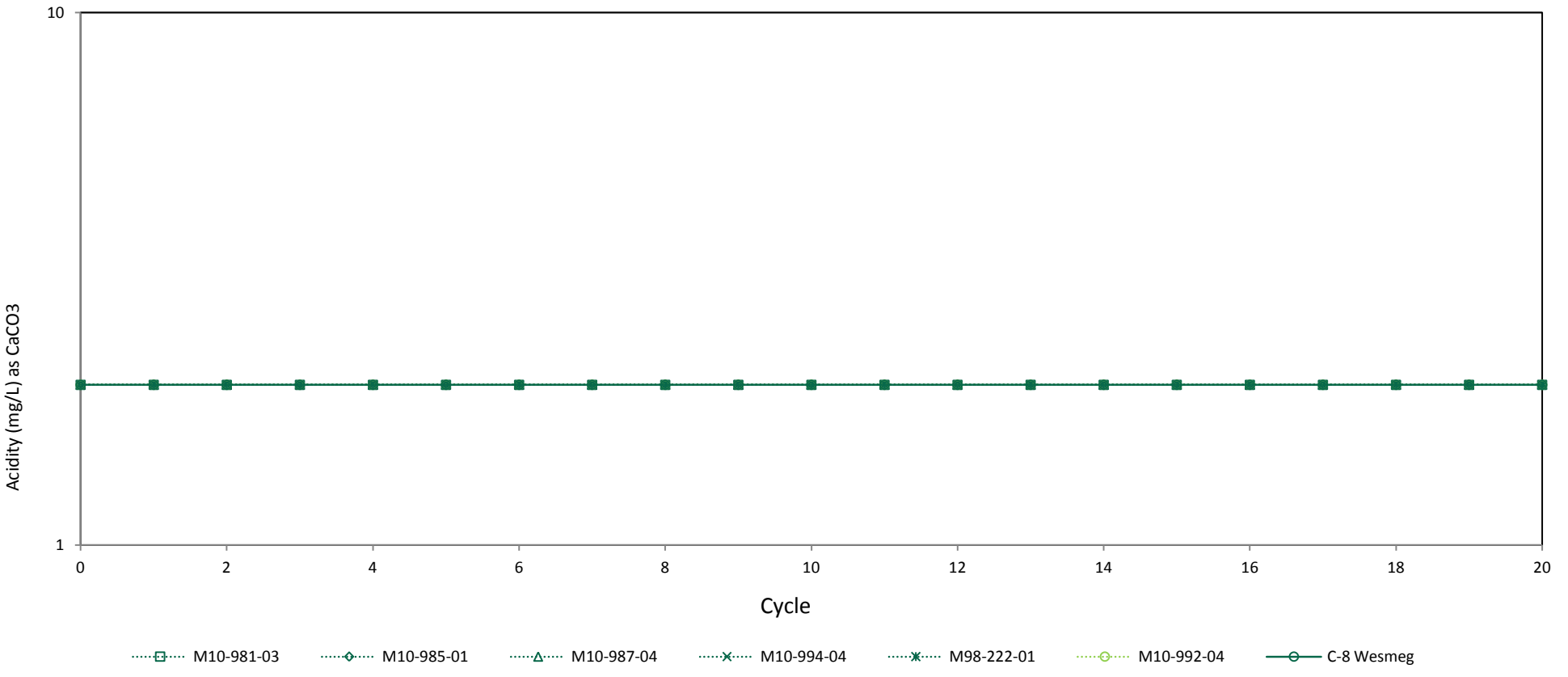



| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Yttrium**<br>**Zinc** | **Kinetic Test Data**<br>**Pump Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-56 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

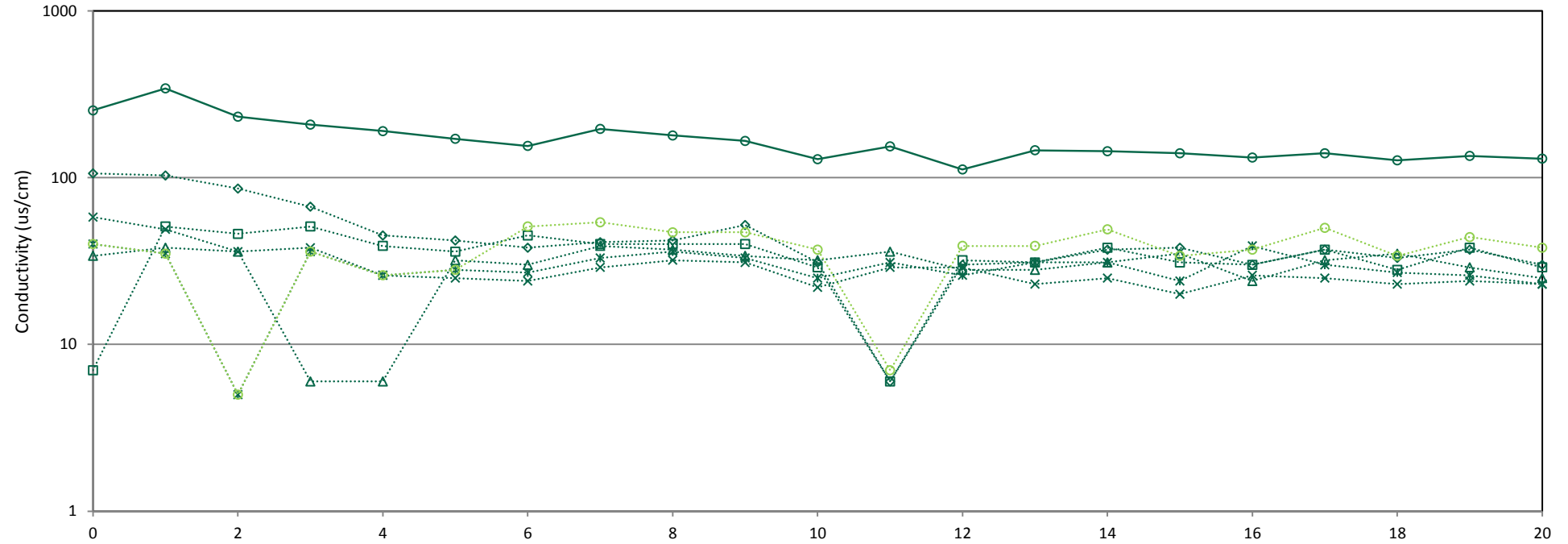
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

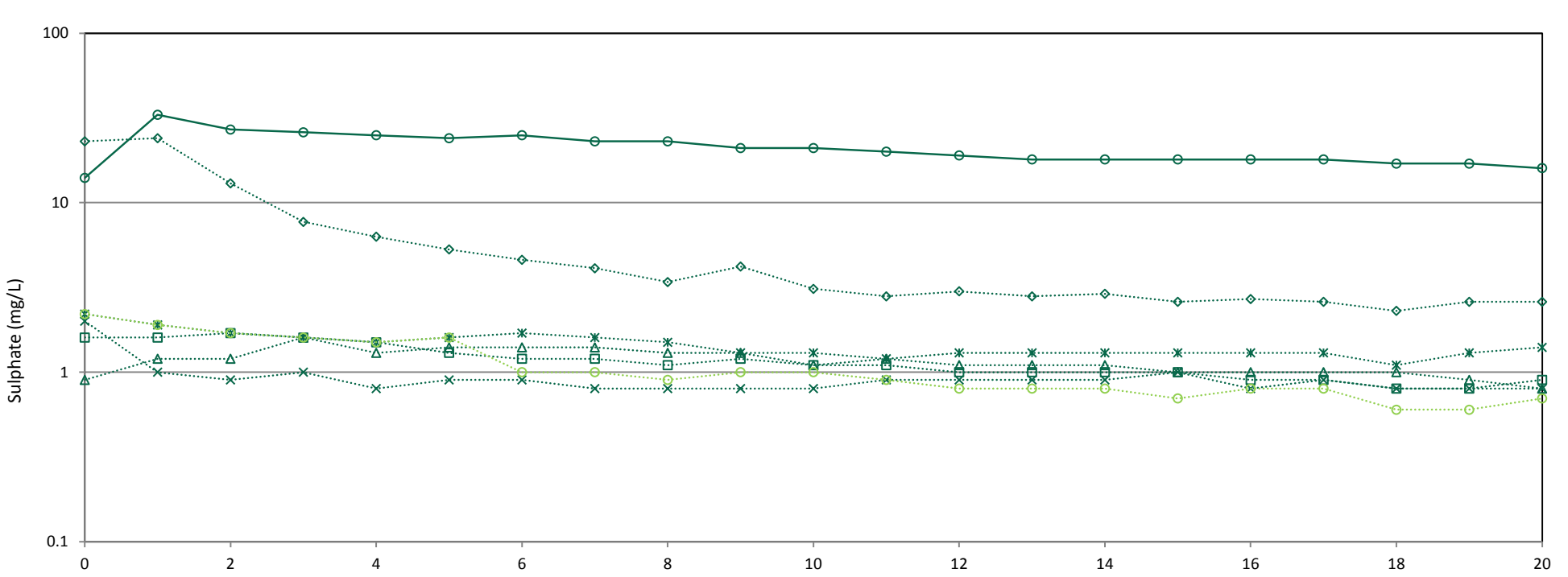
**Agnico-Eagle Mines Ltd.**

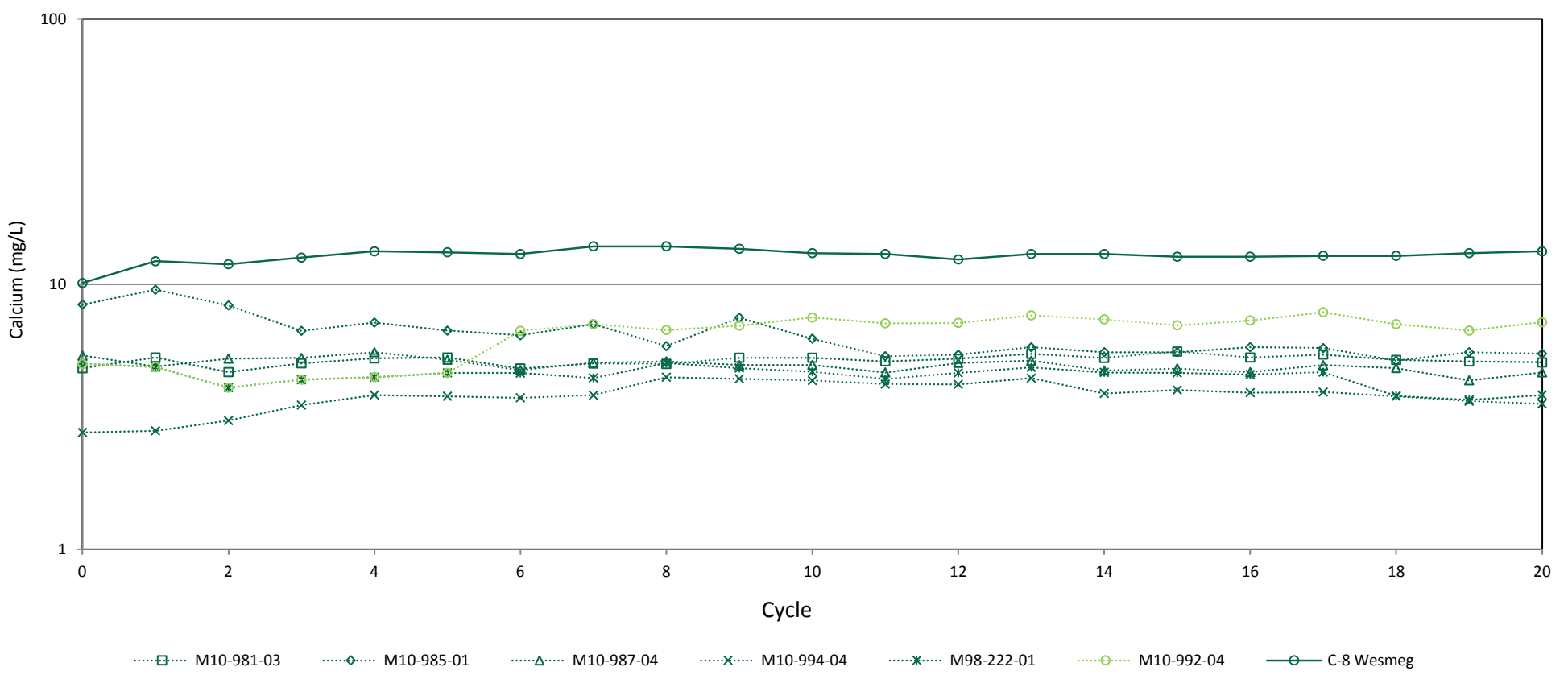
Golder Associates

**FIGURE** B.7-57

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

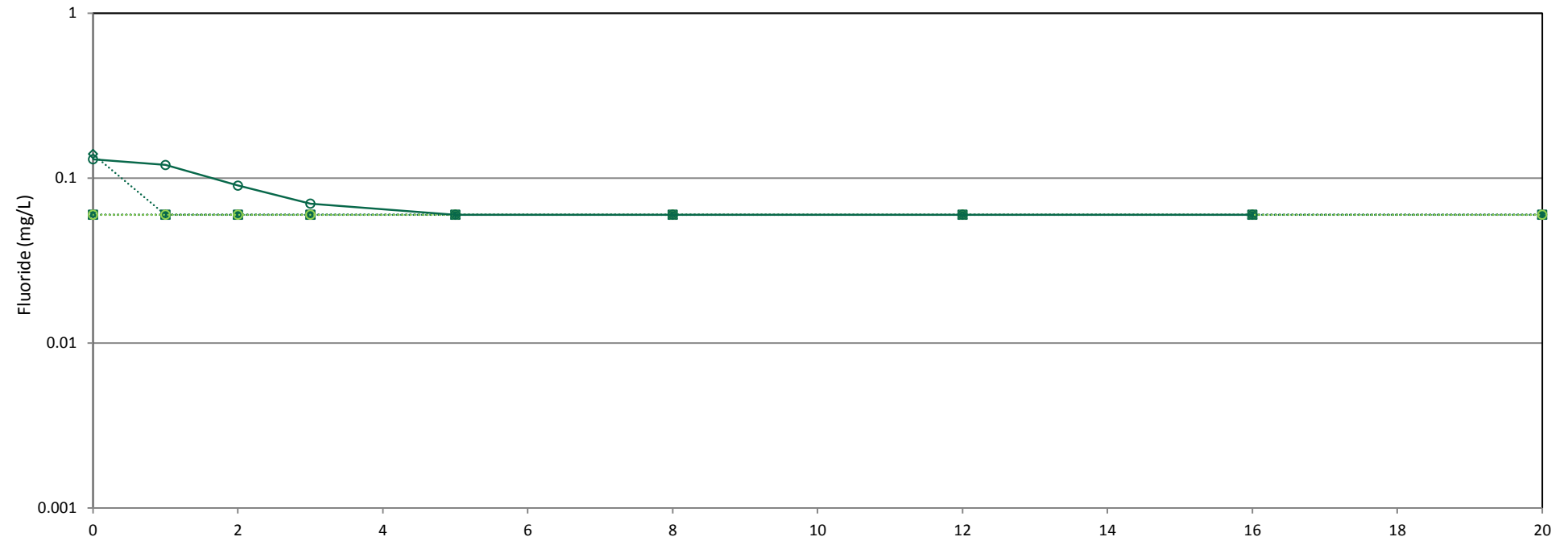


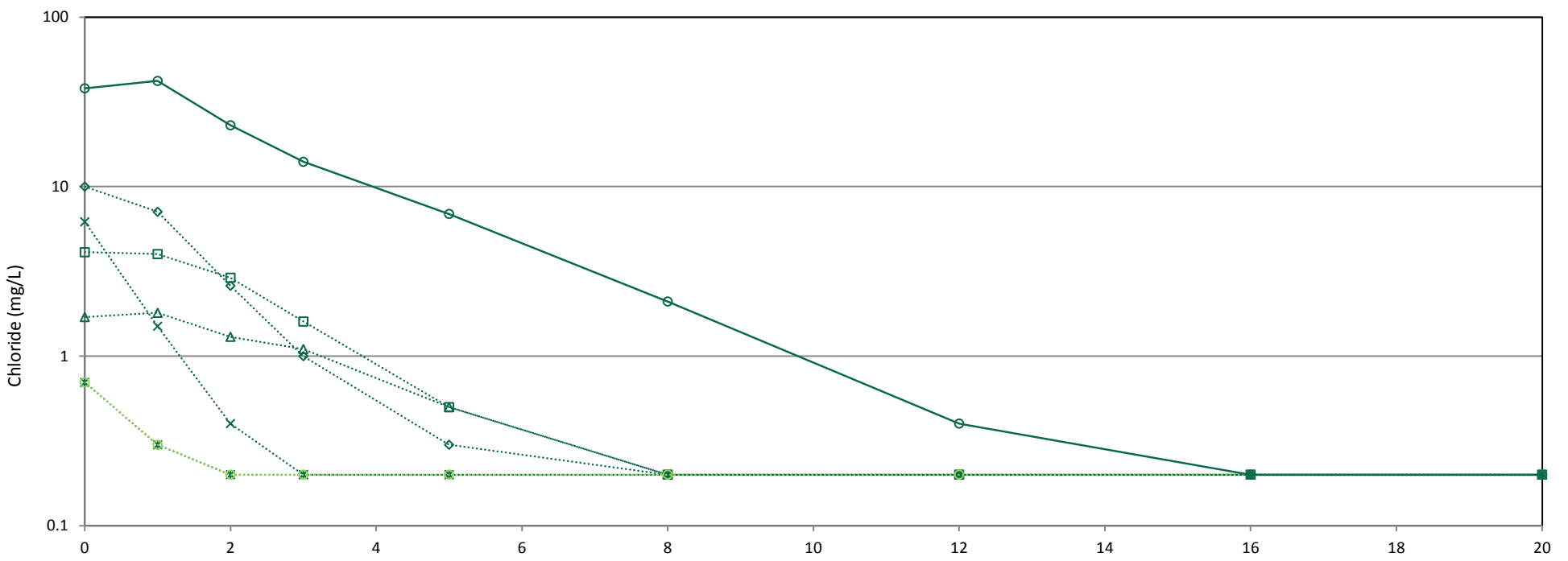



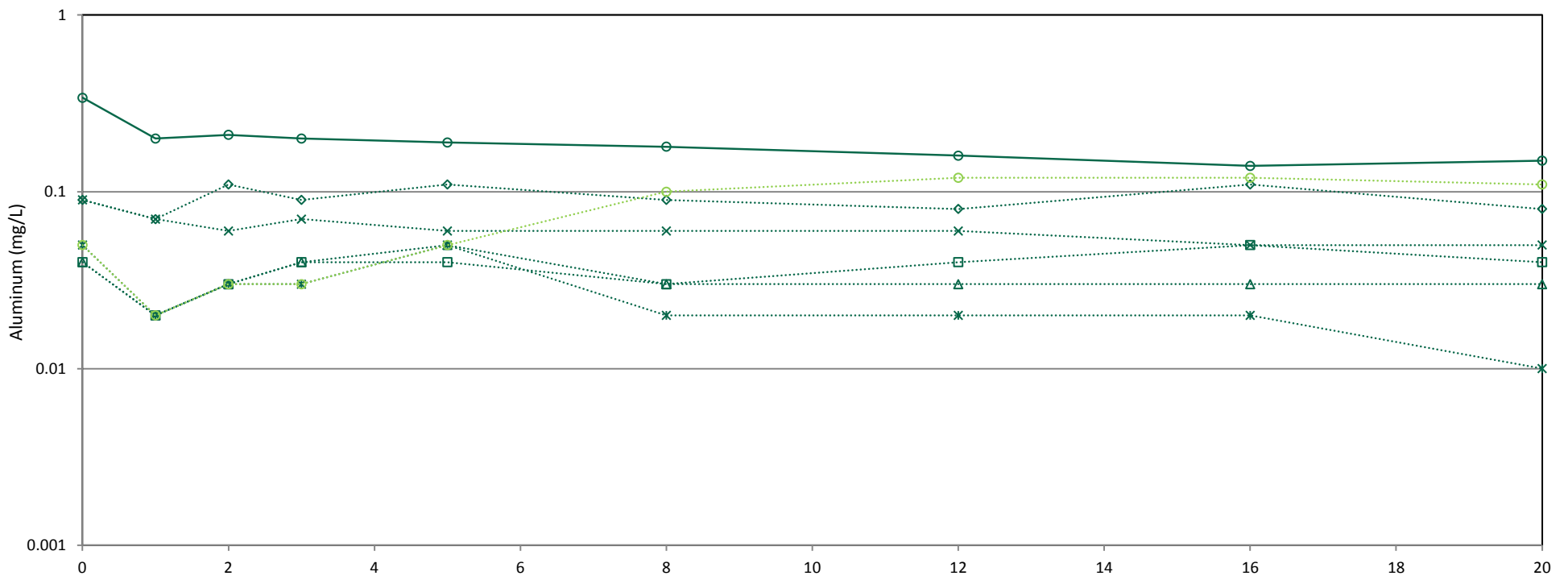




| Notes: | Rock Type: | Conductivity<br>Sulphate<br>Calcium | Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| Criteria:<br>MMER (2006) | | | FIGURE B.7-58 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Fluoride**
**Chloride**
**Aluminum**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

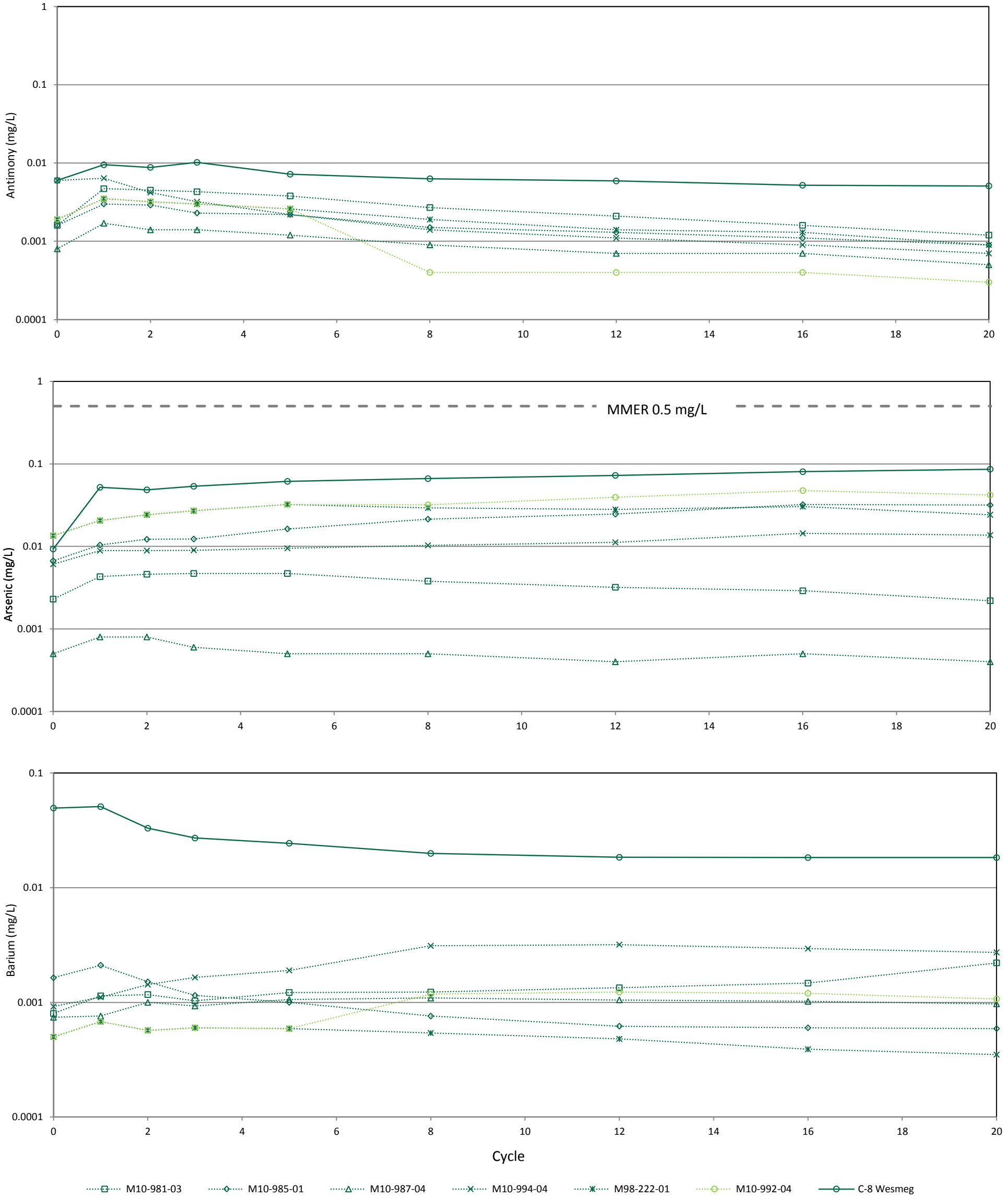
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

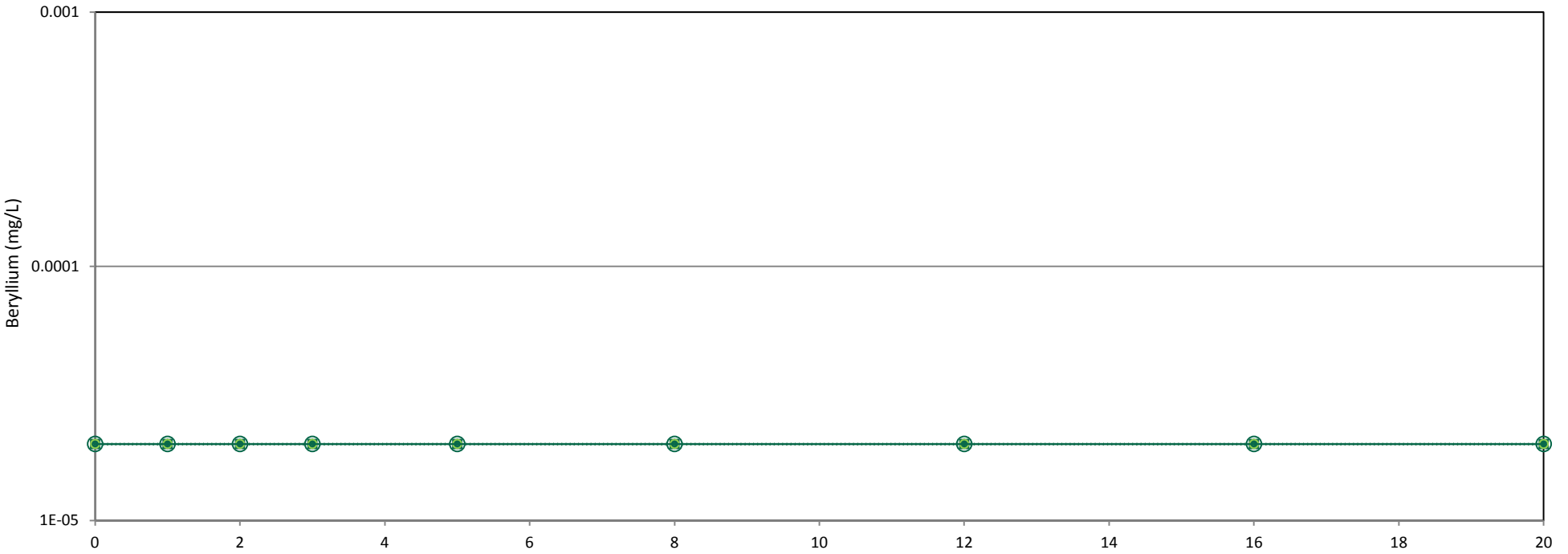
**FIGURE** B.7-59

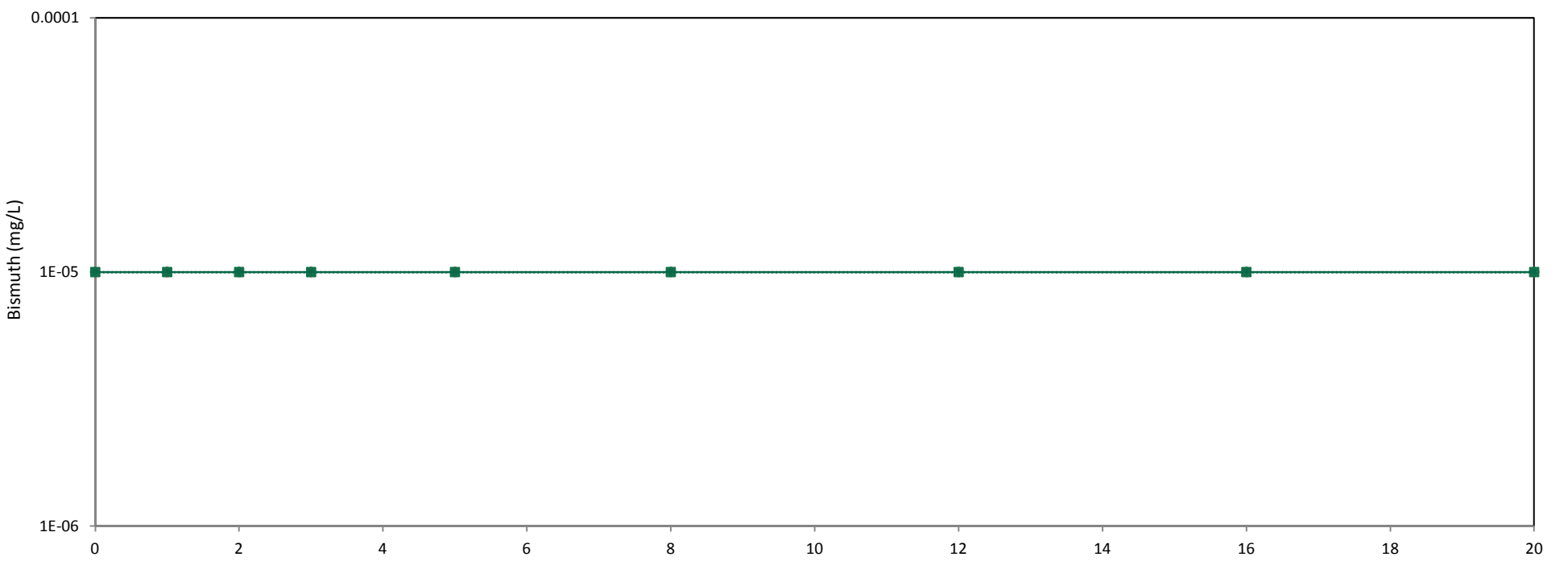
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

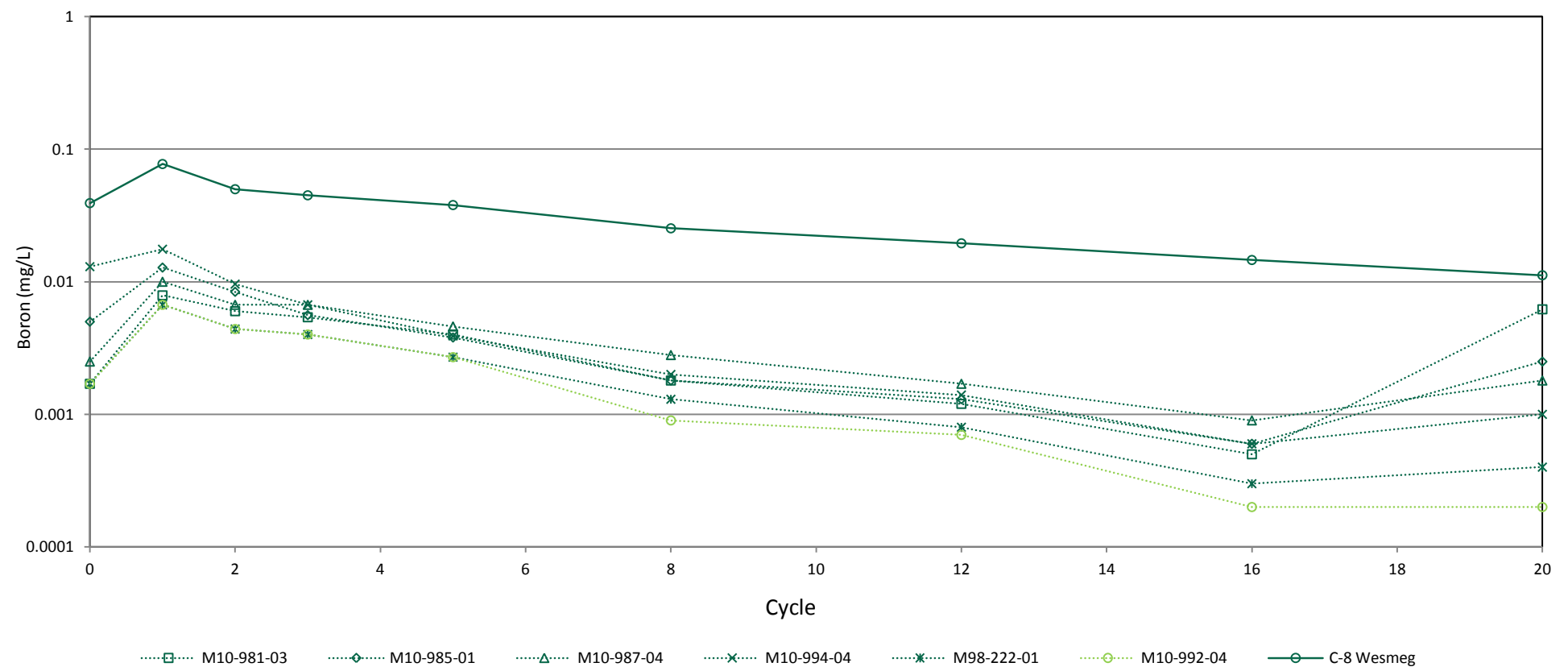



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Antimony<br>Arsenic<br>Barium** | **Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-60 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

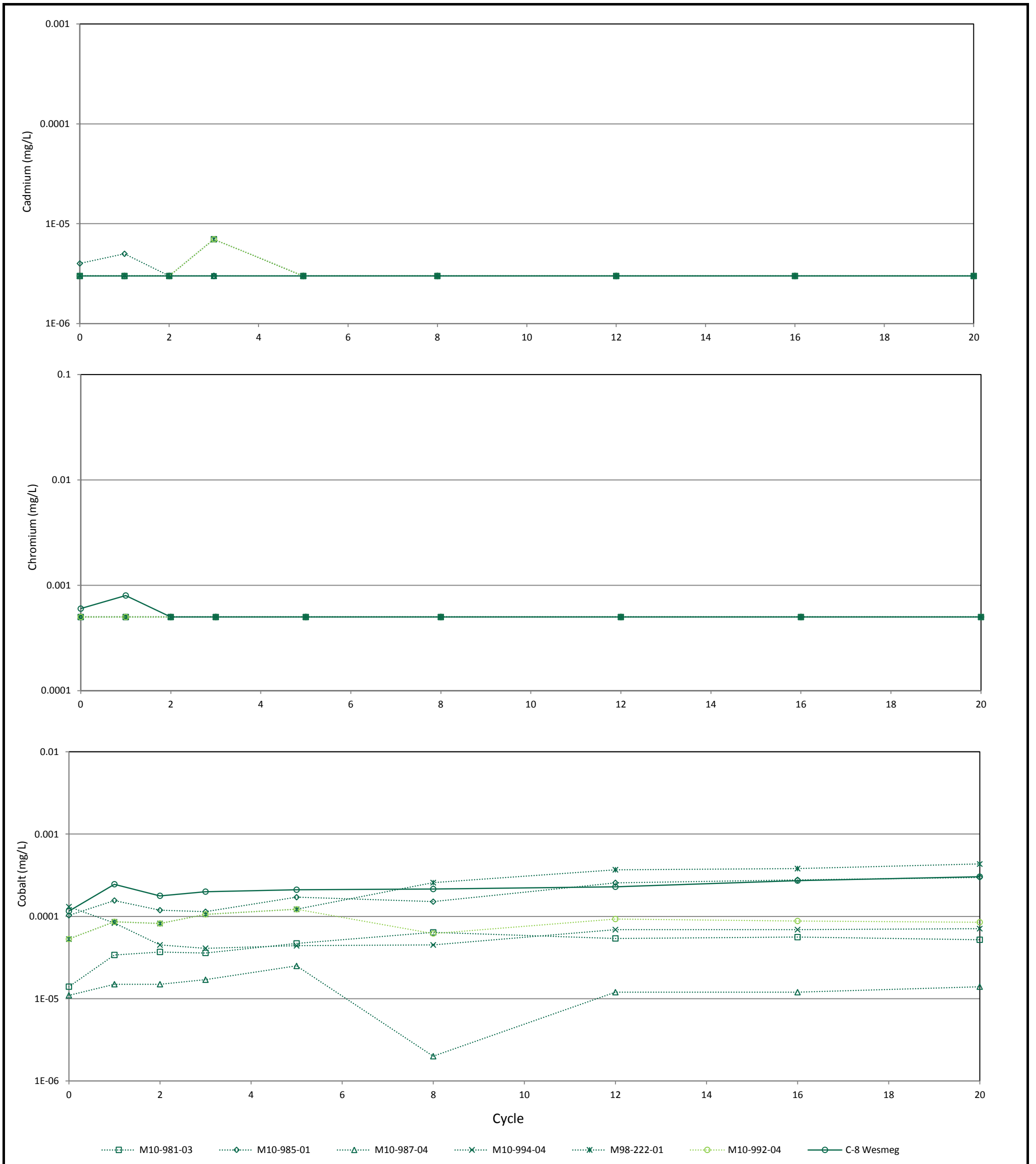



| Notes: | Rock Type: | Beryllium<br>Bismuth<br>Boron | Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| Criteria:<br>MMER (2006) | | | FIGURE B.7-61 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Cadmium**
**Chromium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

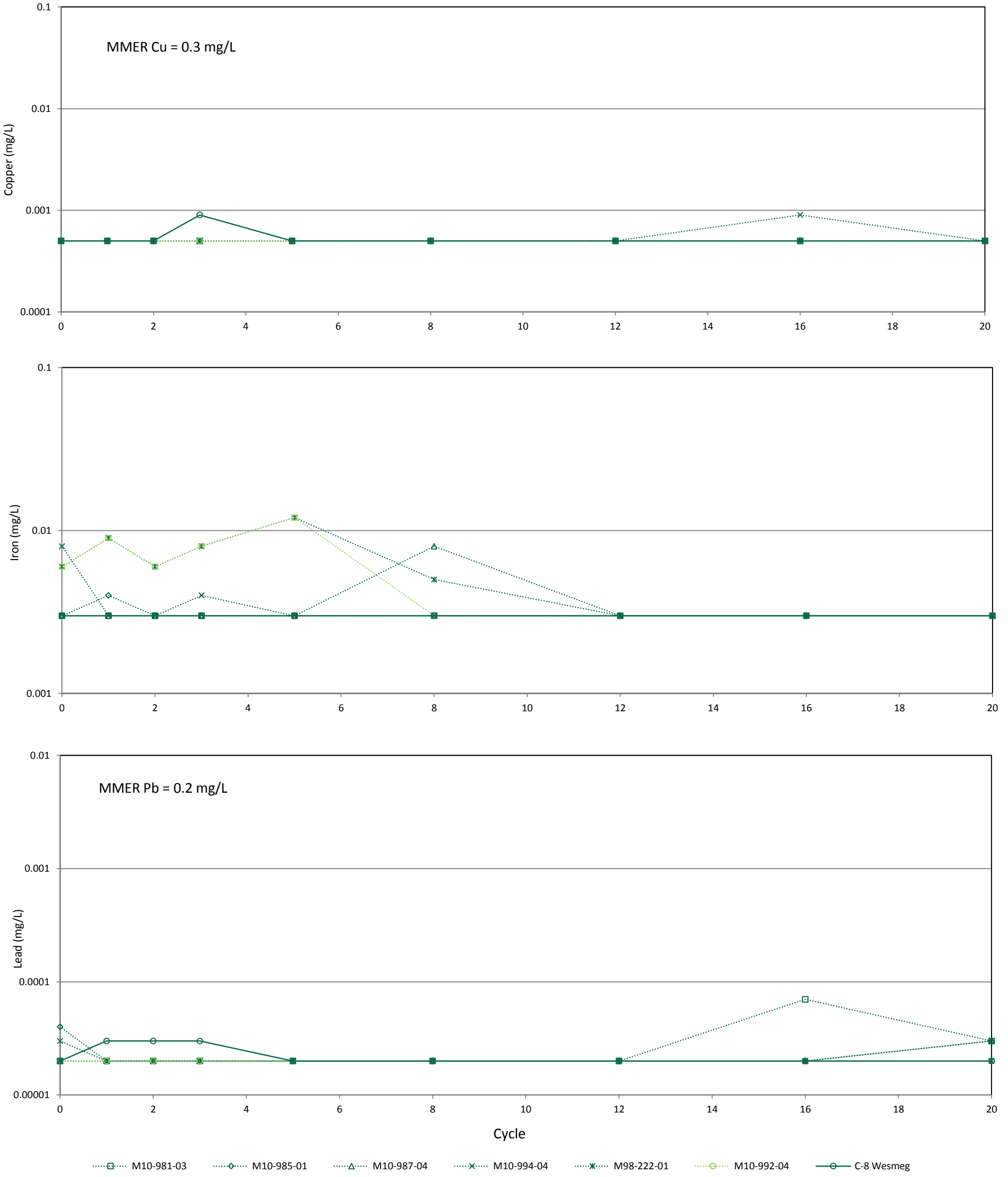
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-62

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Copper**
**Iron**
**Lead**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

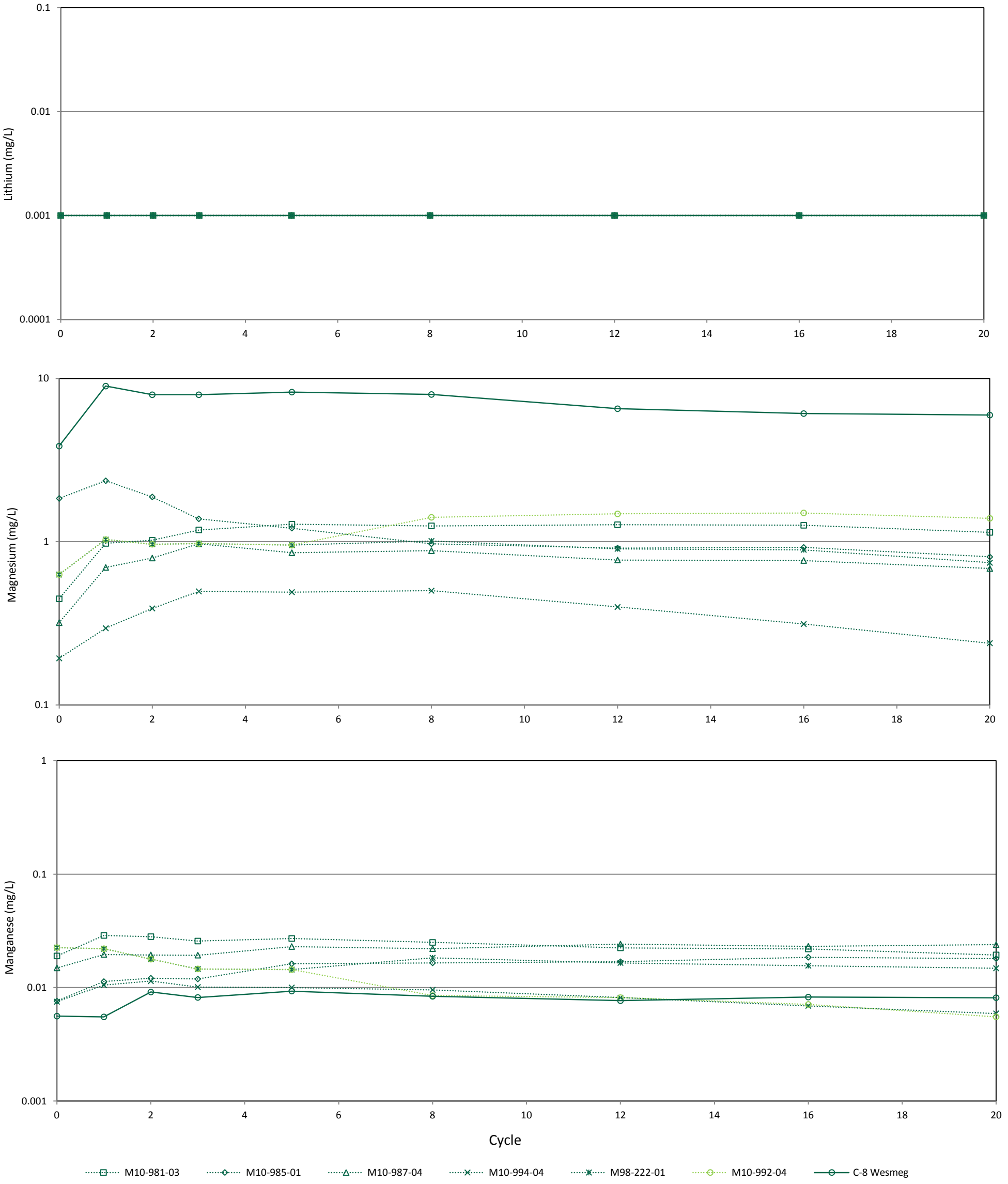
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-63

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Lithium**
**Magnesium**
**Manganese**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

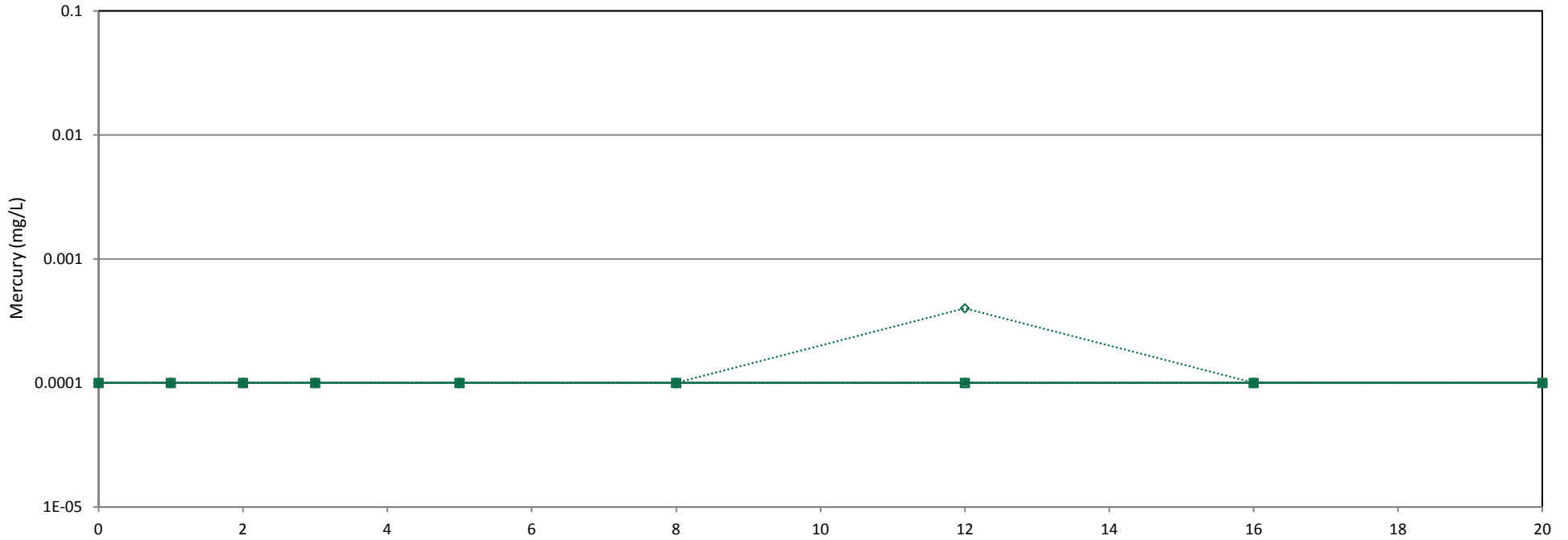
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

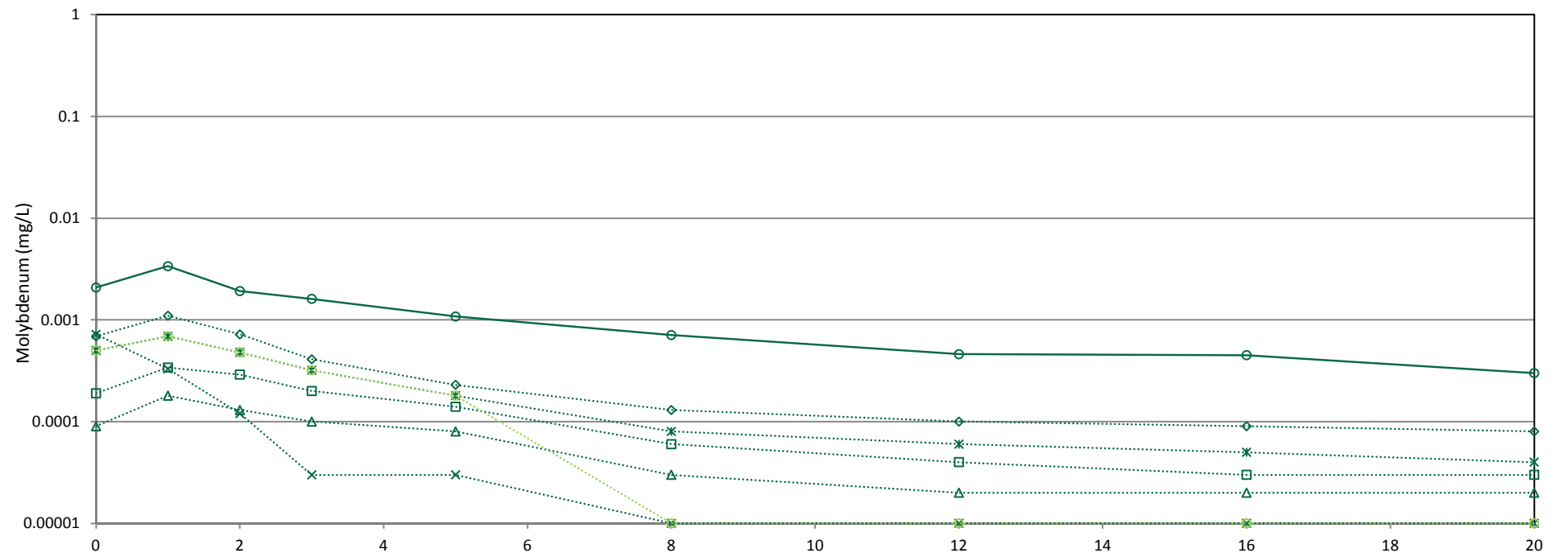
**Agnico-Eagle Mines Ltd.**

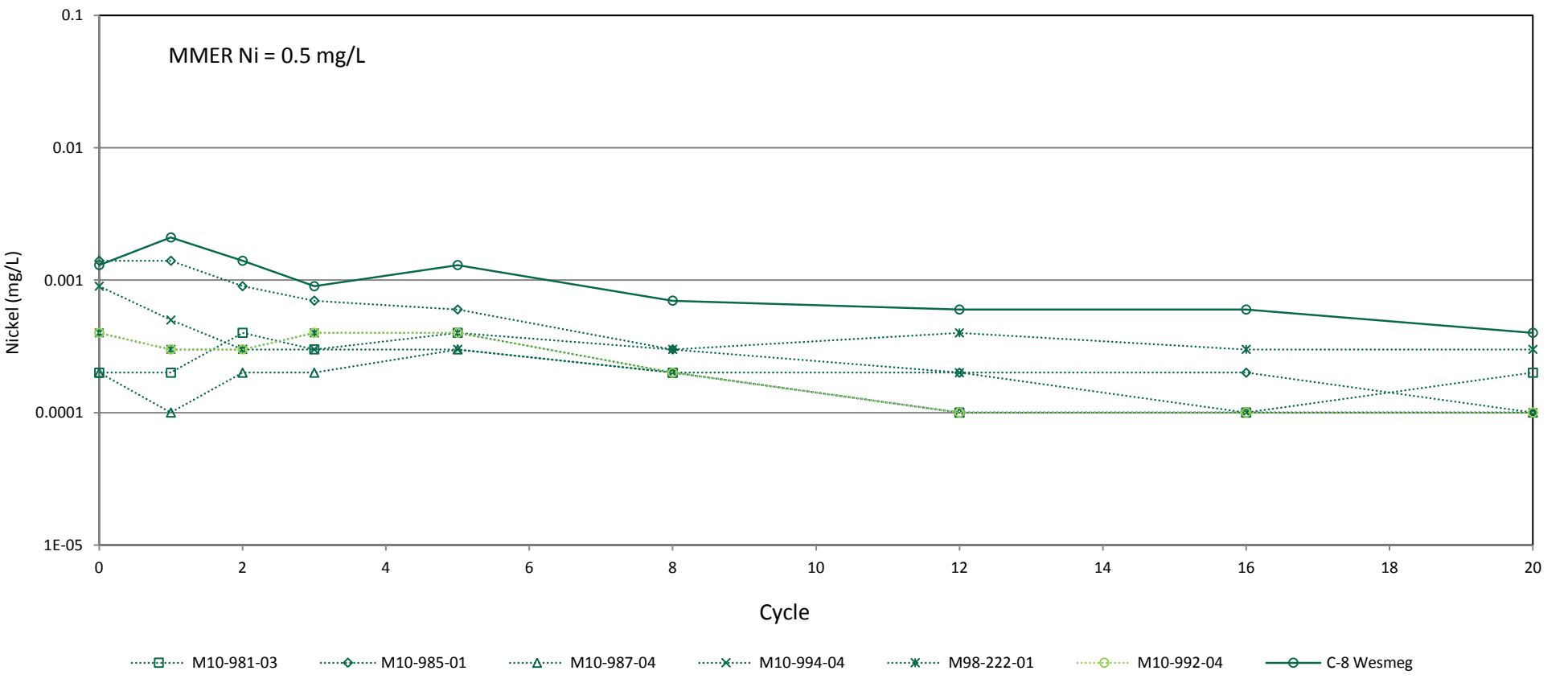
Golder Associates

**FIGURE** B.7-64

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

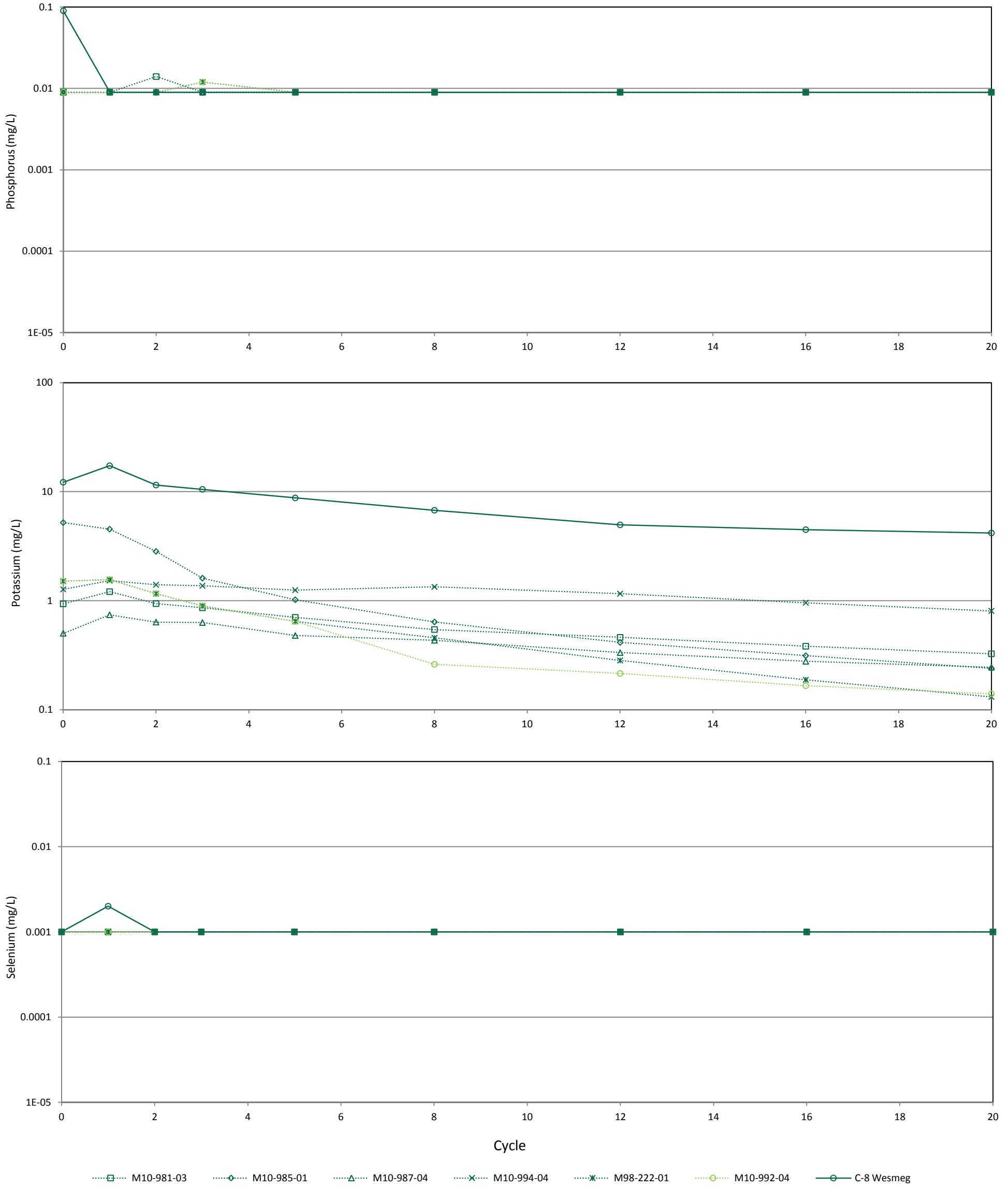



| Notes: | Rock Type: | Mercury<br>Molybdenum<br>Nickel | Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| Criteria:<br>MMER (2006) | | | FIGURE B.7-65 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Phosphorus**
**Potassium**
**Selenium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

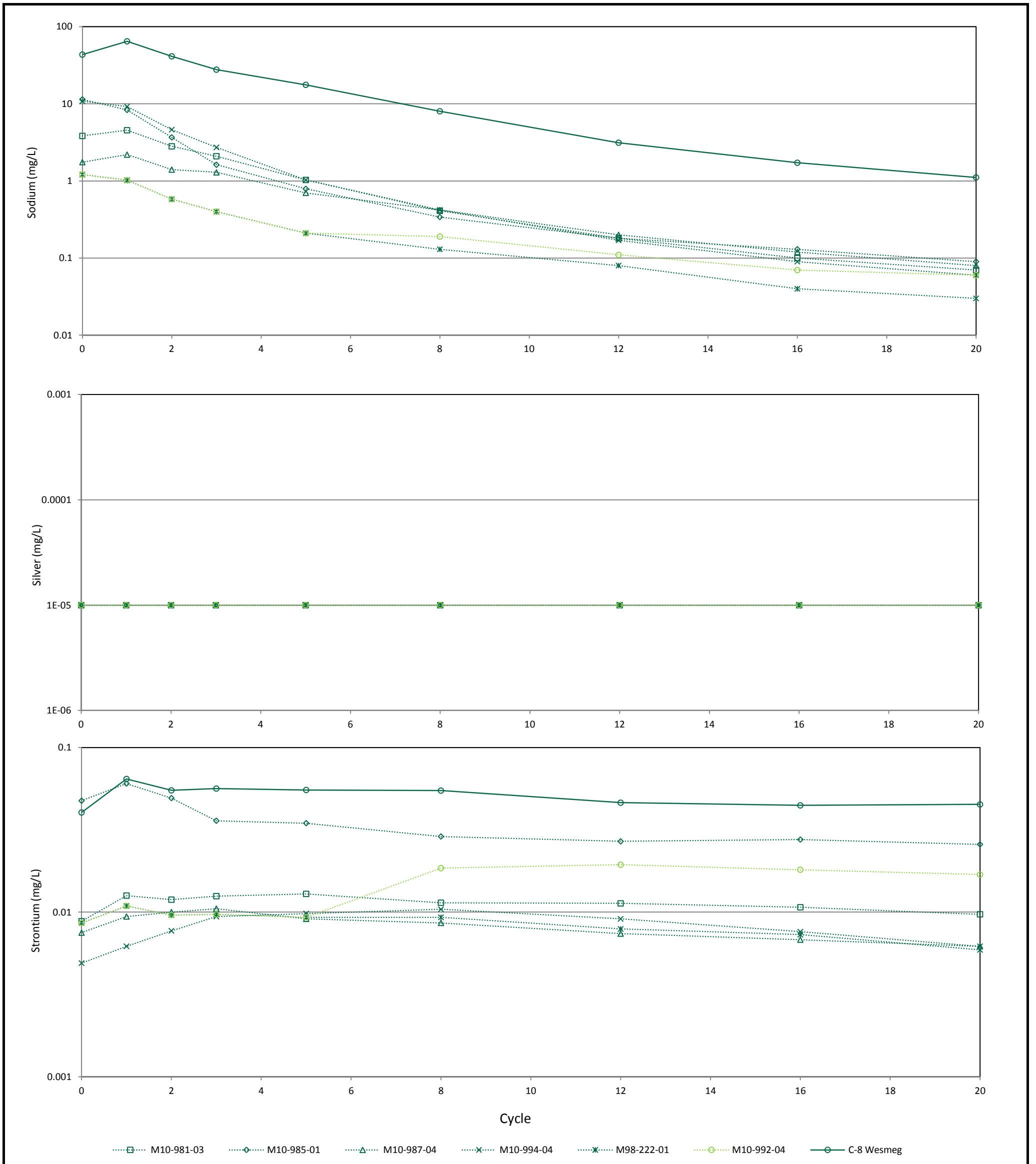
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-66

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Sodium**
**Silver**
**Strontium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

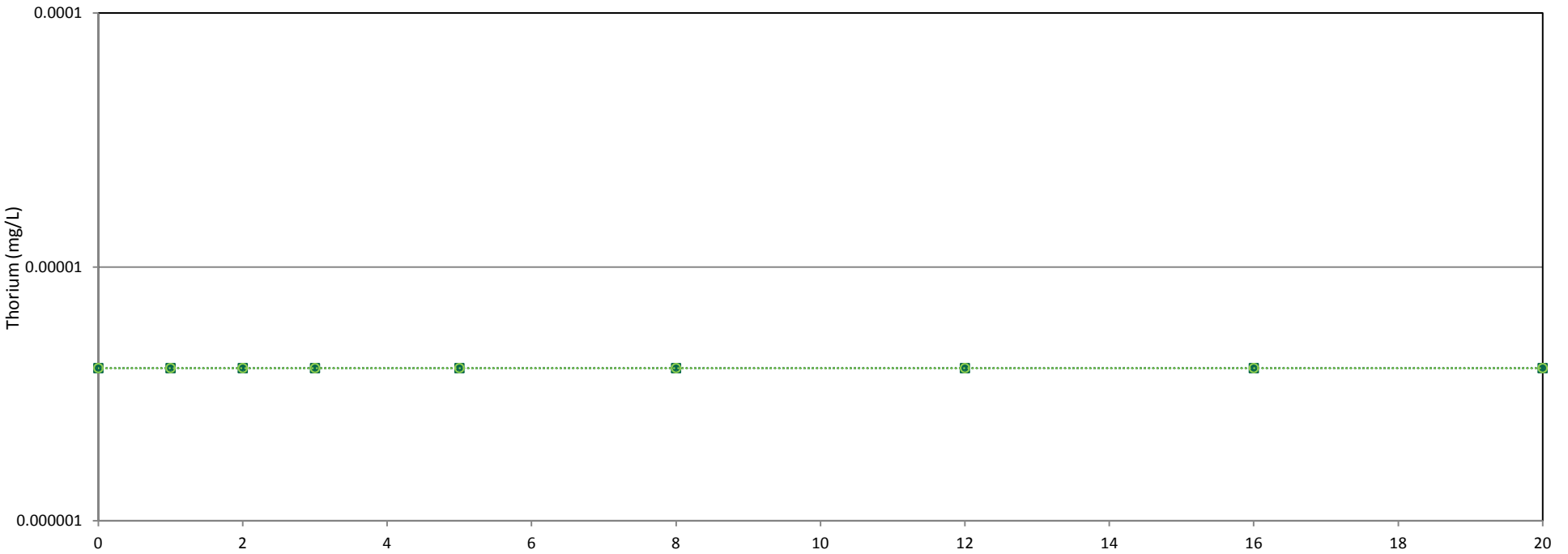
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

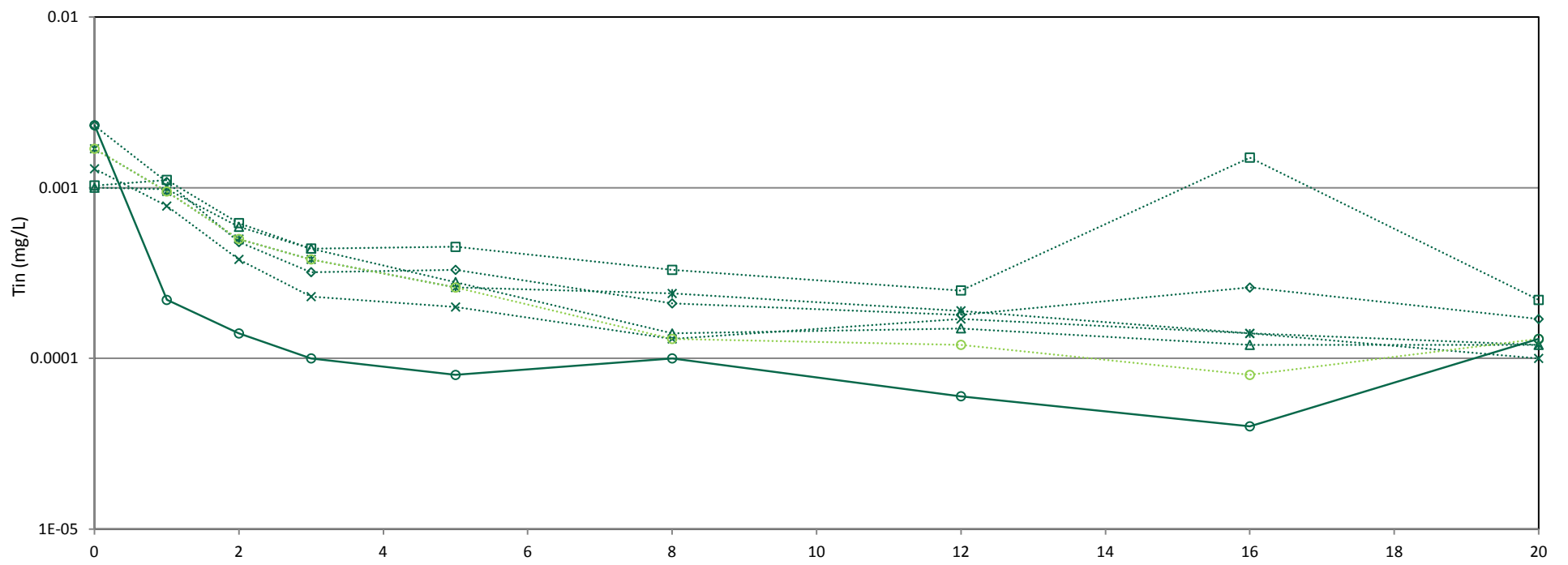
**Agnico-Eagle Mines Ltd.**

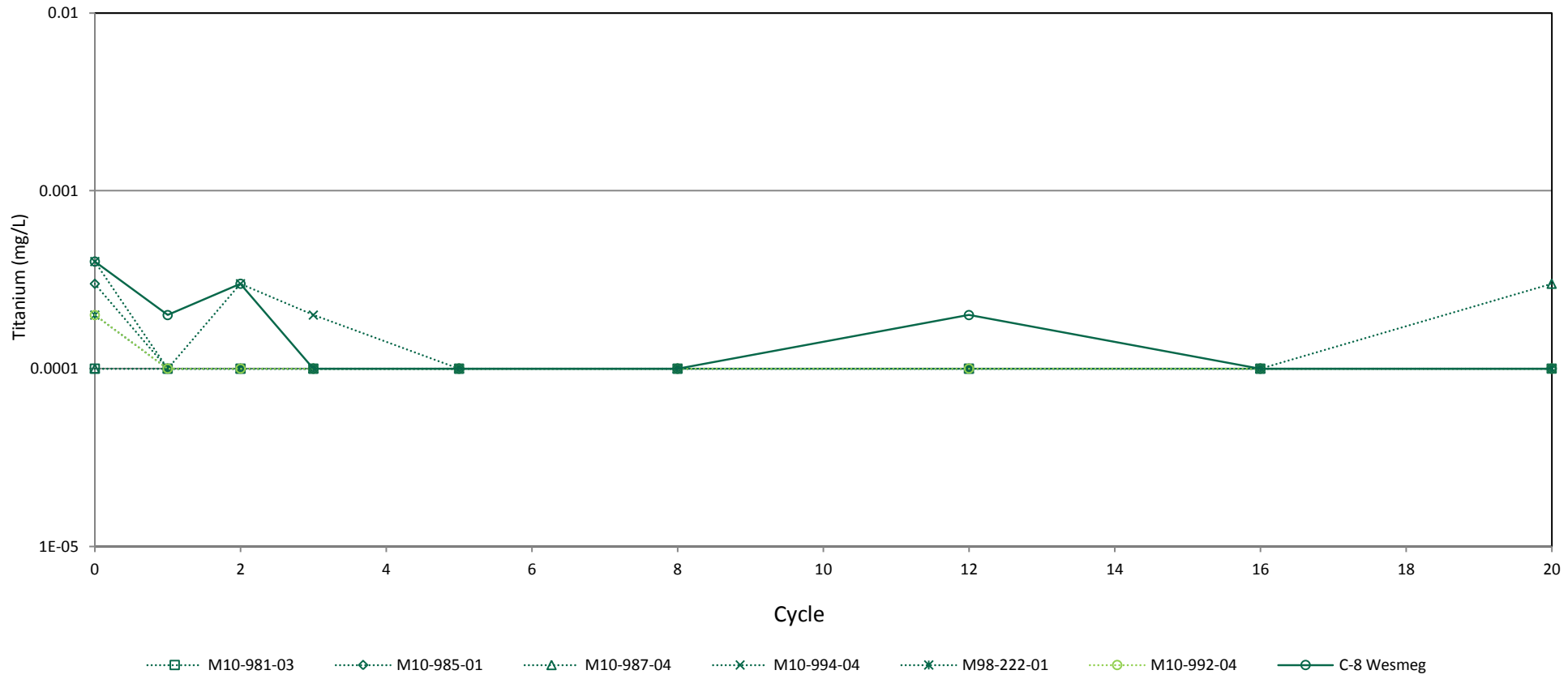
Golder Associates

**FIGURE** B.7-67

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Thorium**
**Tin**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

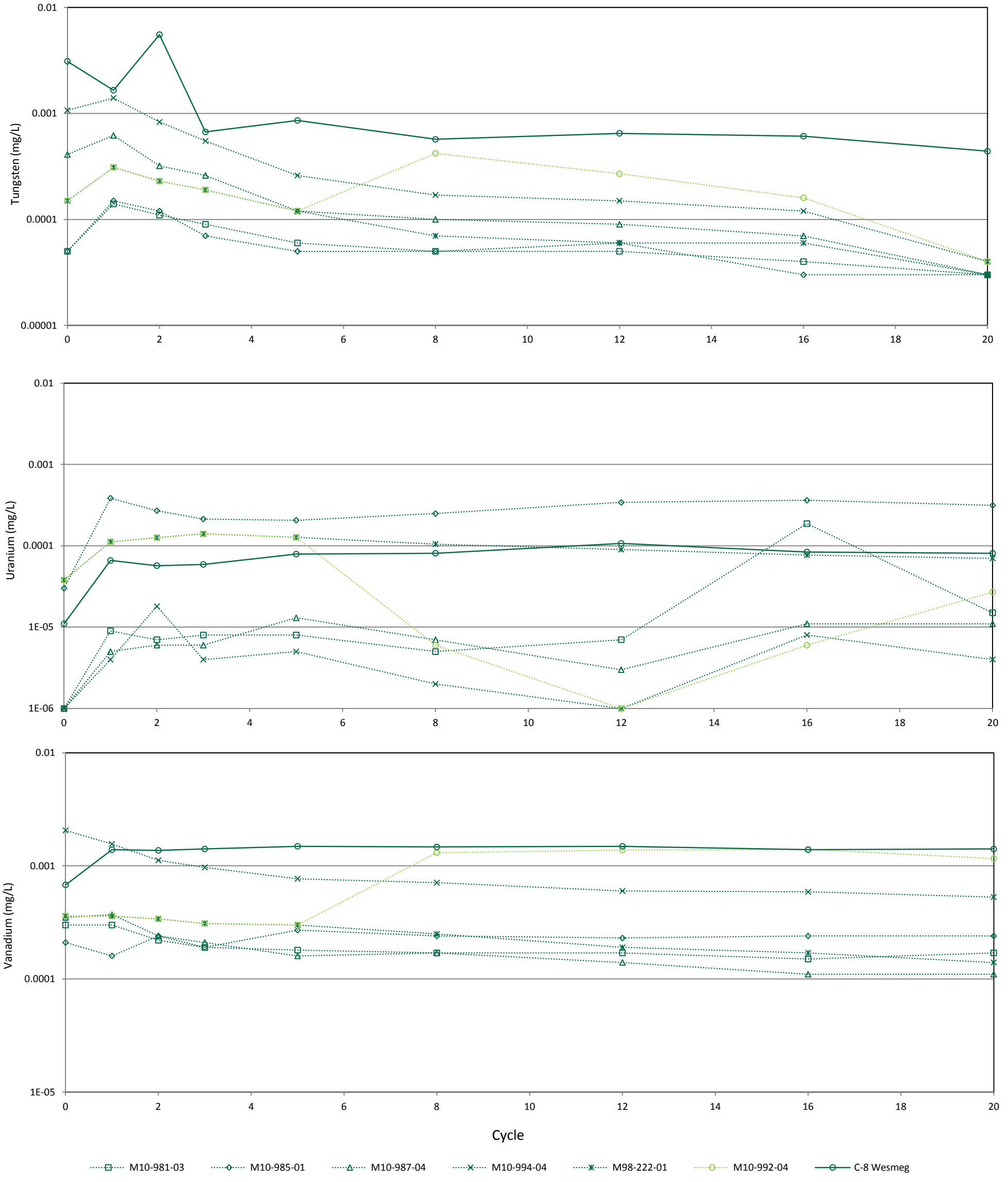
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-68

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Tungsten**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

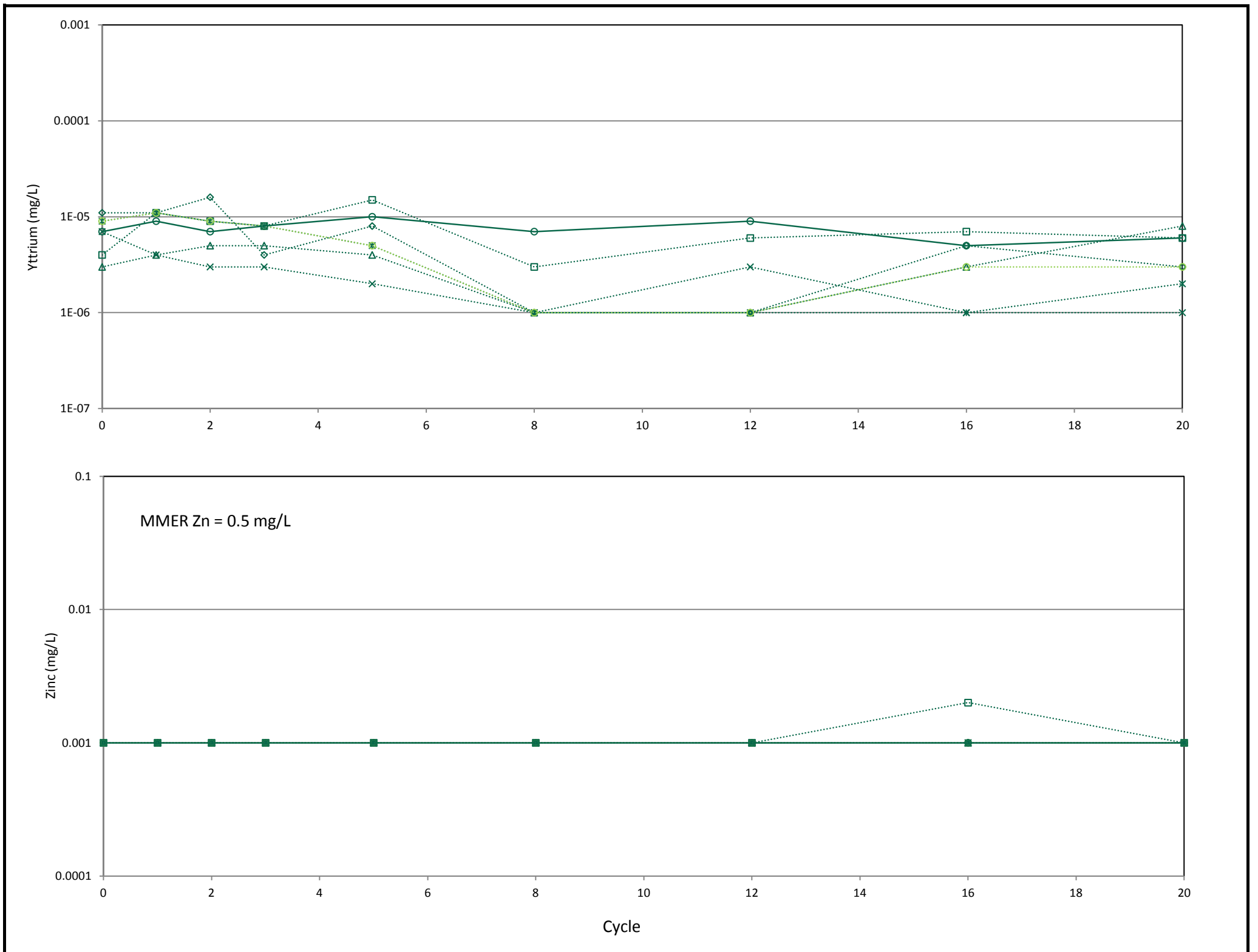
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

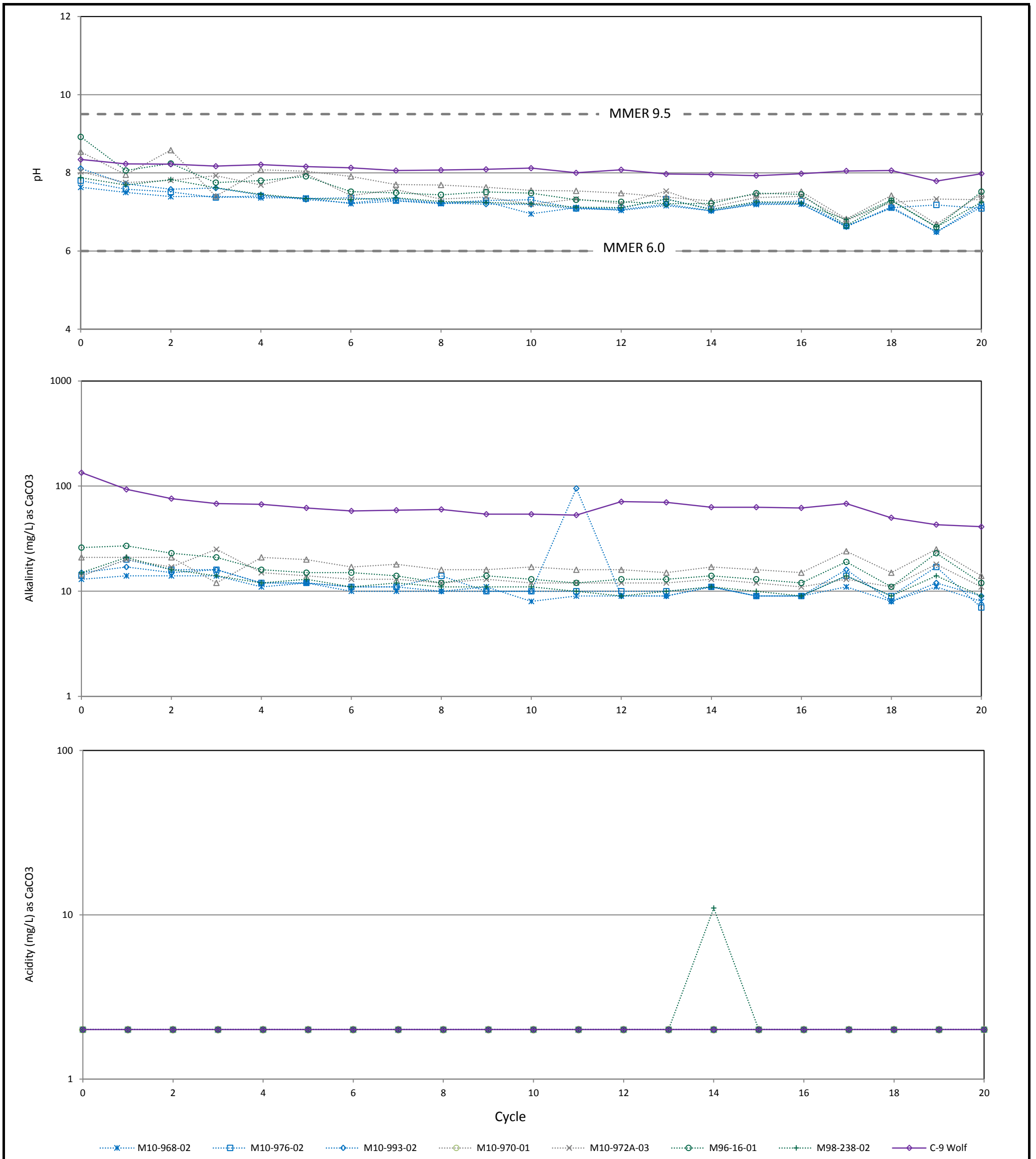
**FIGURE** B.7-69

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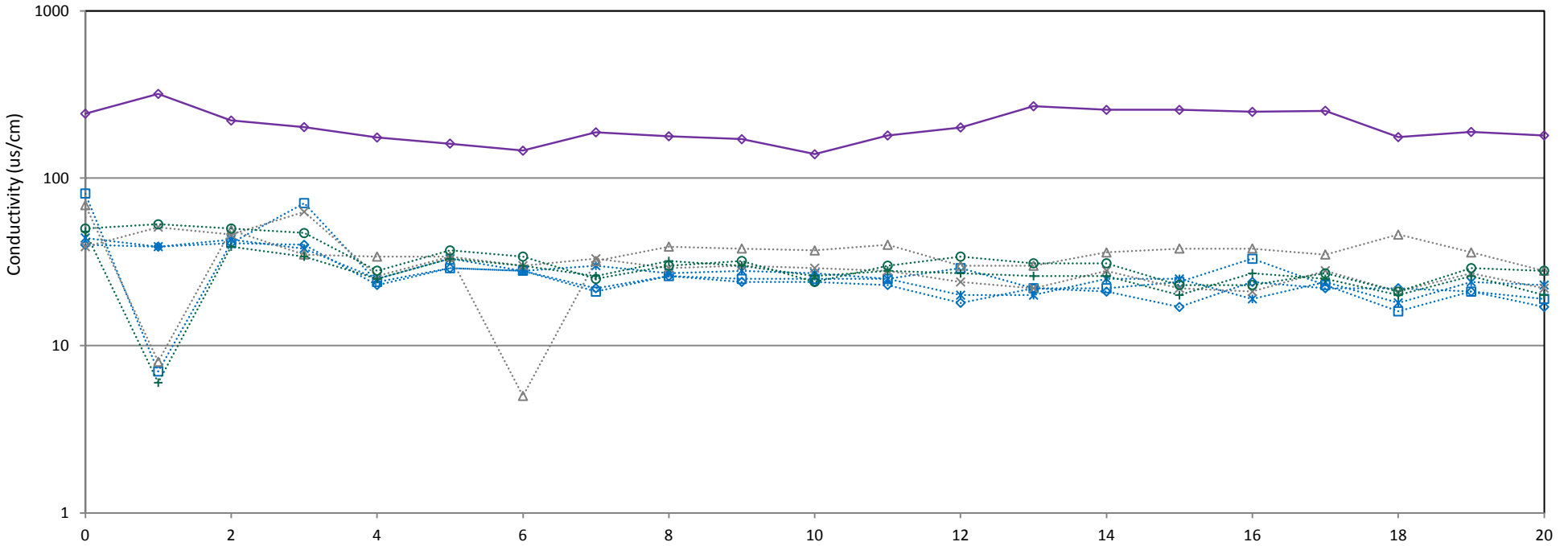

| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Yttrium**<br>**Zinc** | **Kinetic Test Data**<br>**Wesmeg Deposit**<br>**Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-70 |

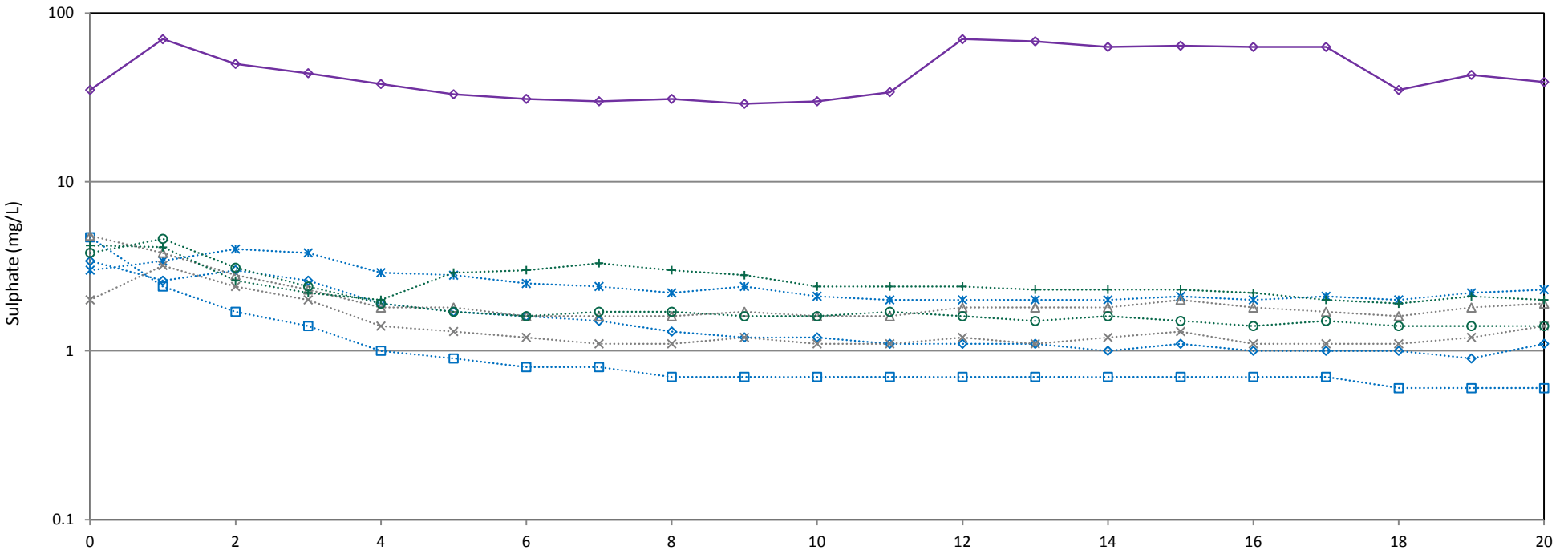
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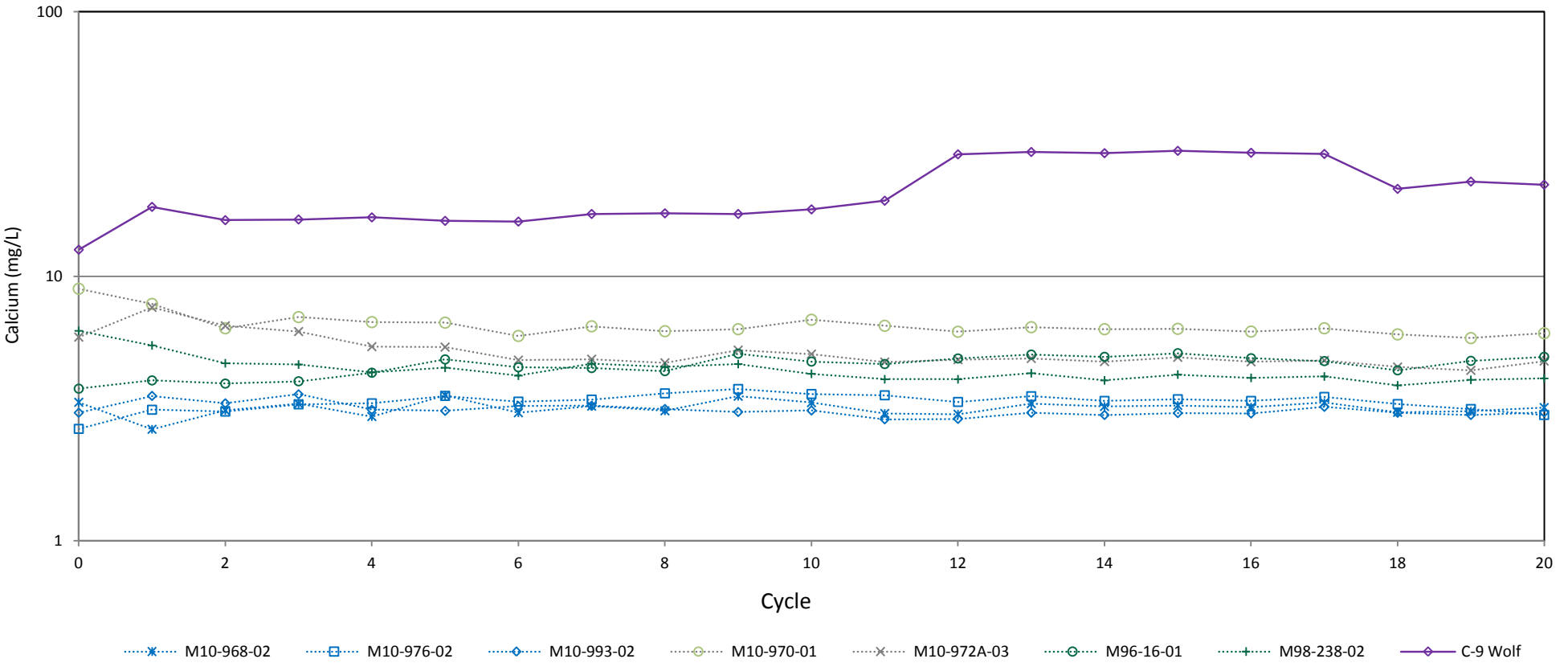



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **pH**<br>**Alkalinity**<br>**Acidity** | **Kinetic Test Data**<br>**Wolf Deposit**<br>**Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-71 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

25% MV, 13% IF, 62% GW (large column)

**Conductivity**
**Sulphate**
**Calcium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

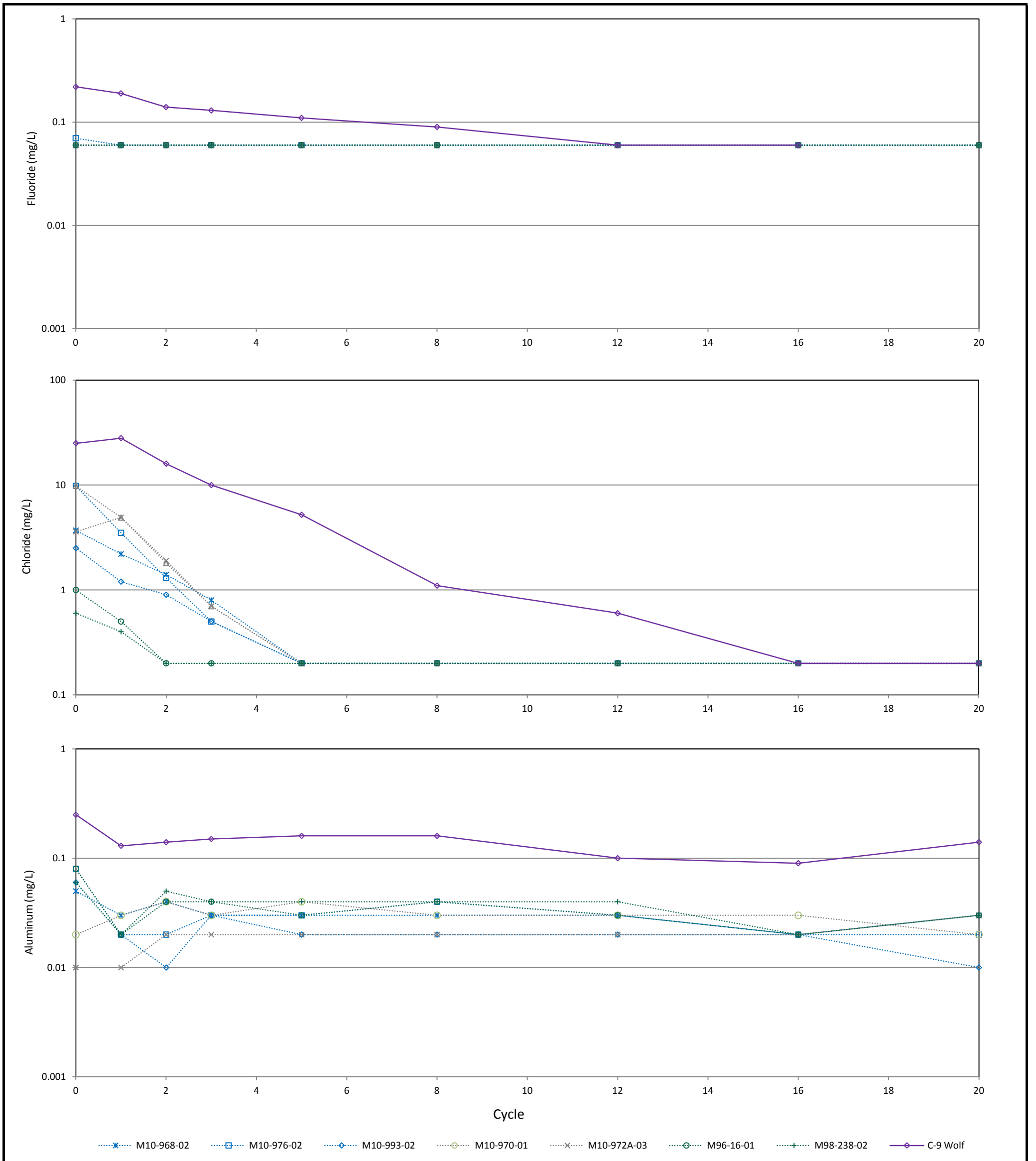
**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

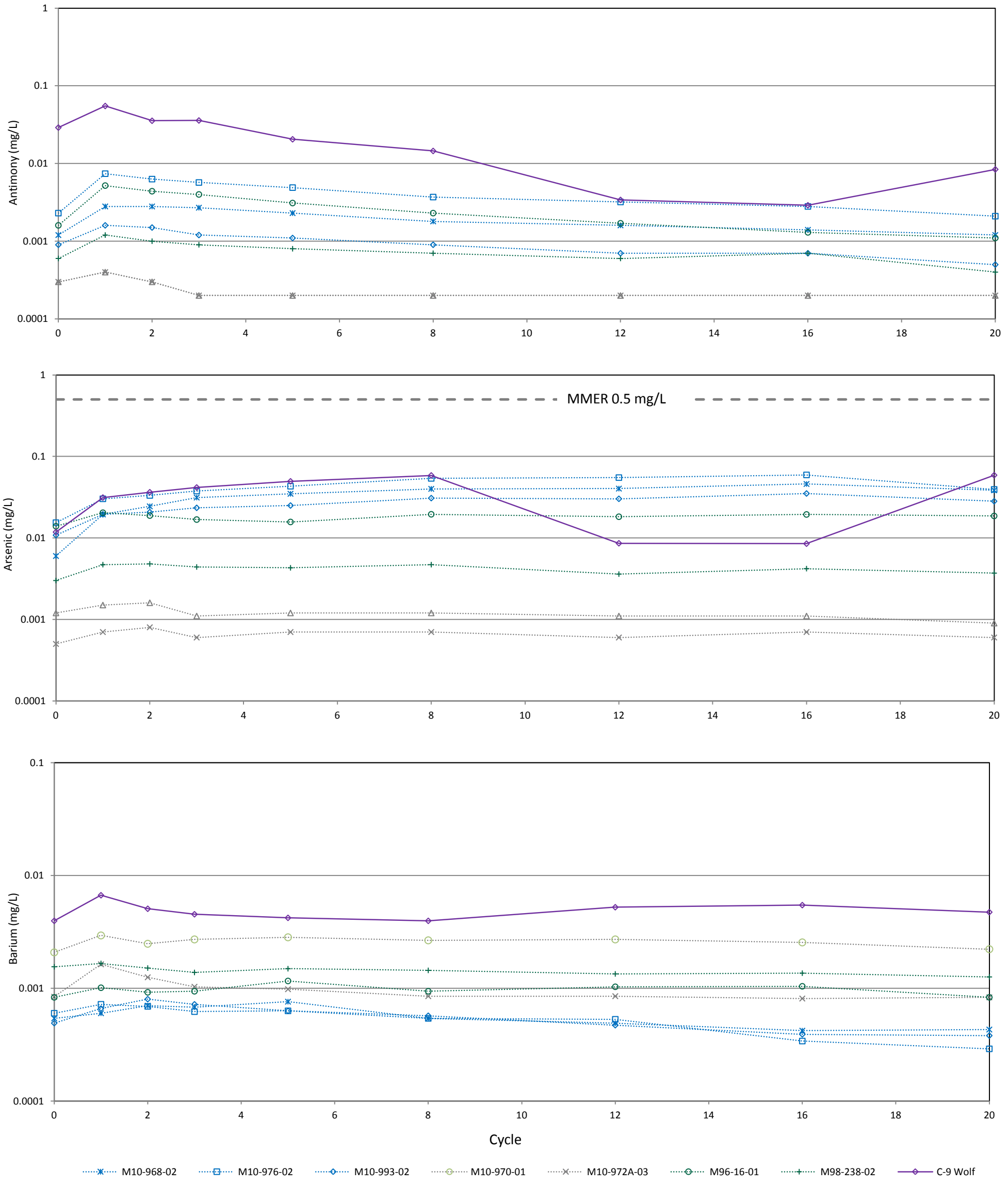
**FIGURE** B.7-72

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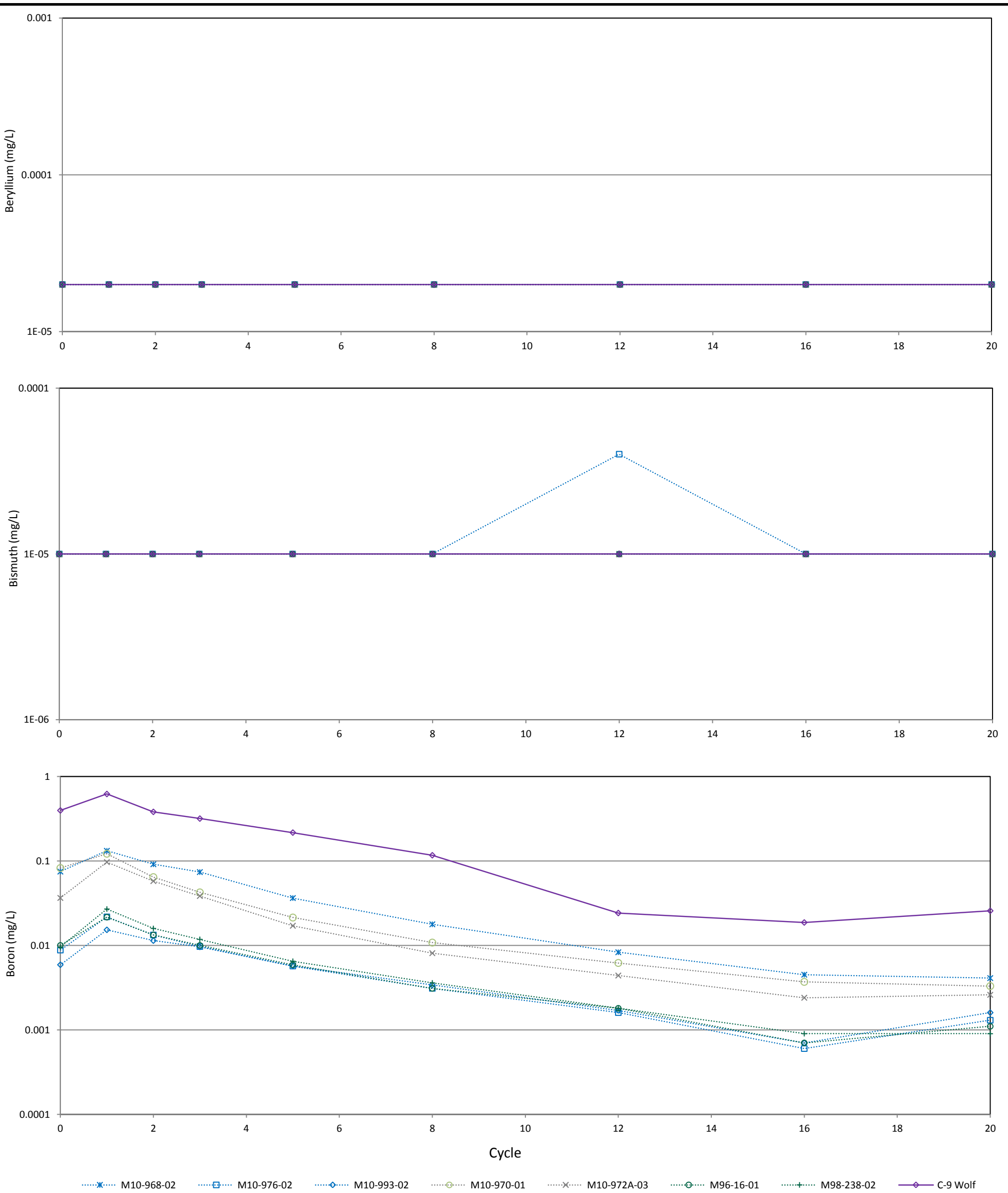

| Notes: | Rock Type: | Fluoride<br>Chloride<br>Aluminum | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-73 |
| Criteria:<br>MMER (2006) | | | |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

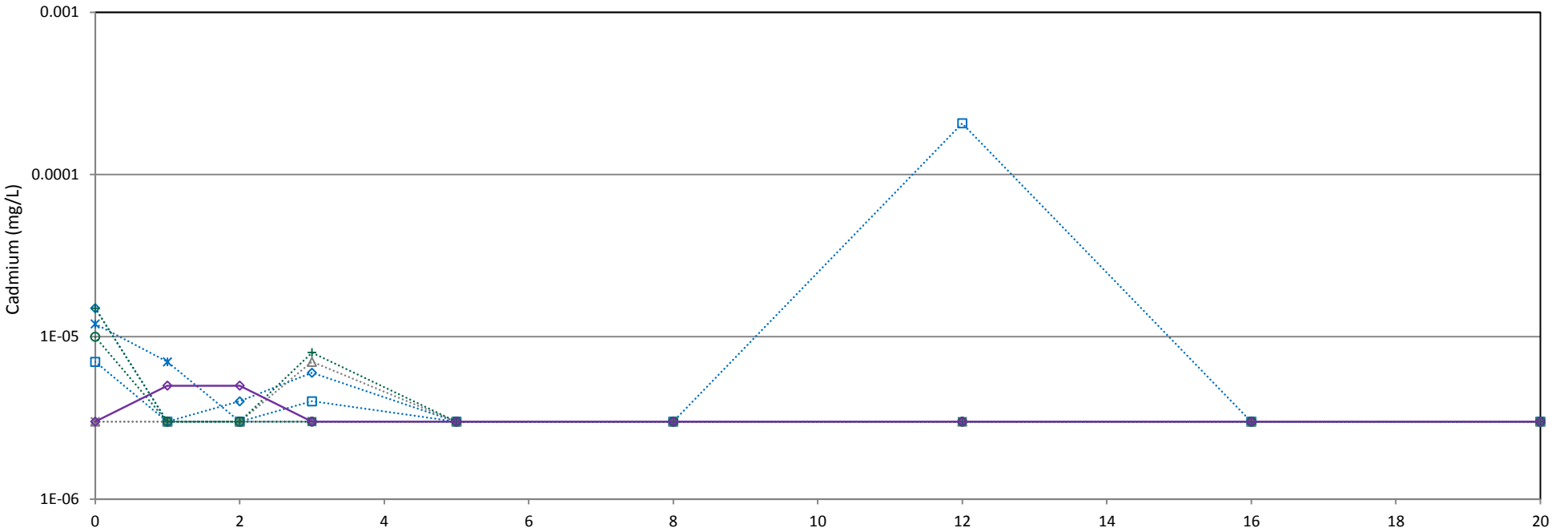


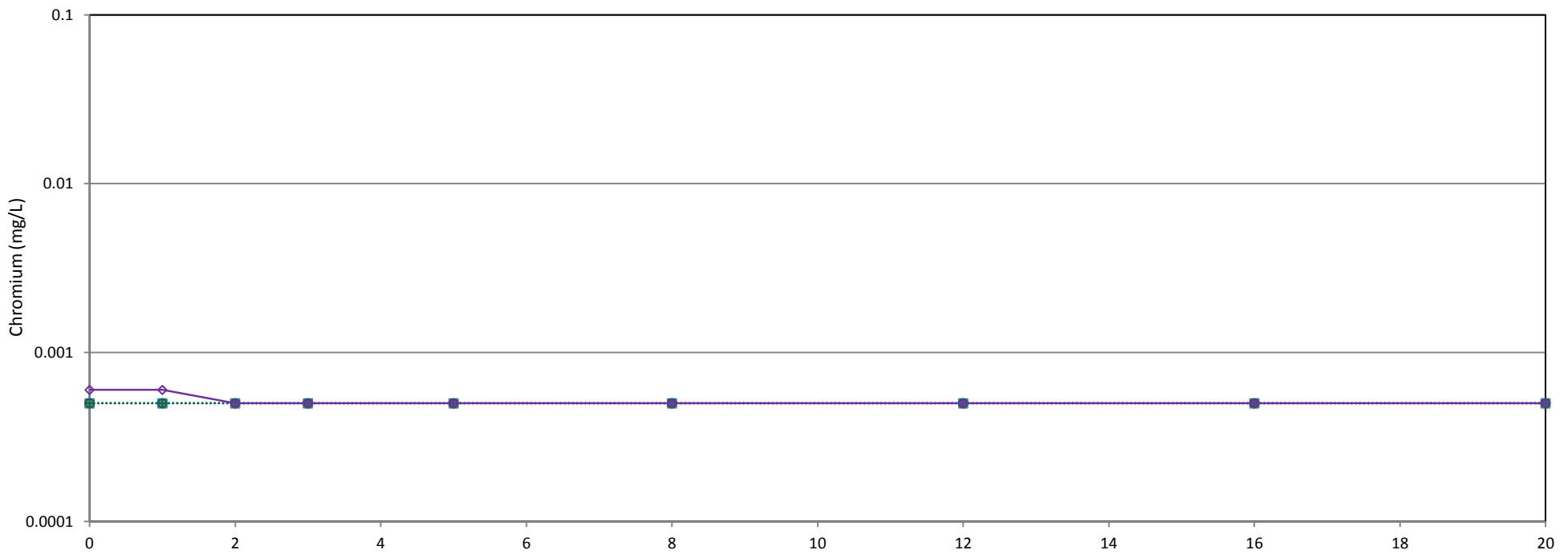

| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Antimony**<br>**Arsenic**<br>**Barium** | **Kinetic Test Data**<br>**Wolf Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-74 |

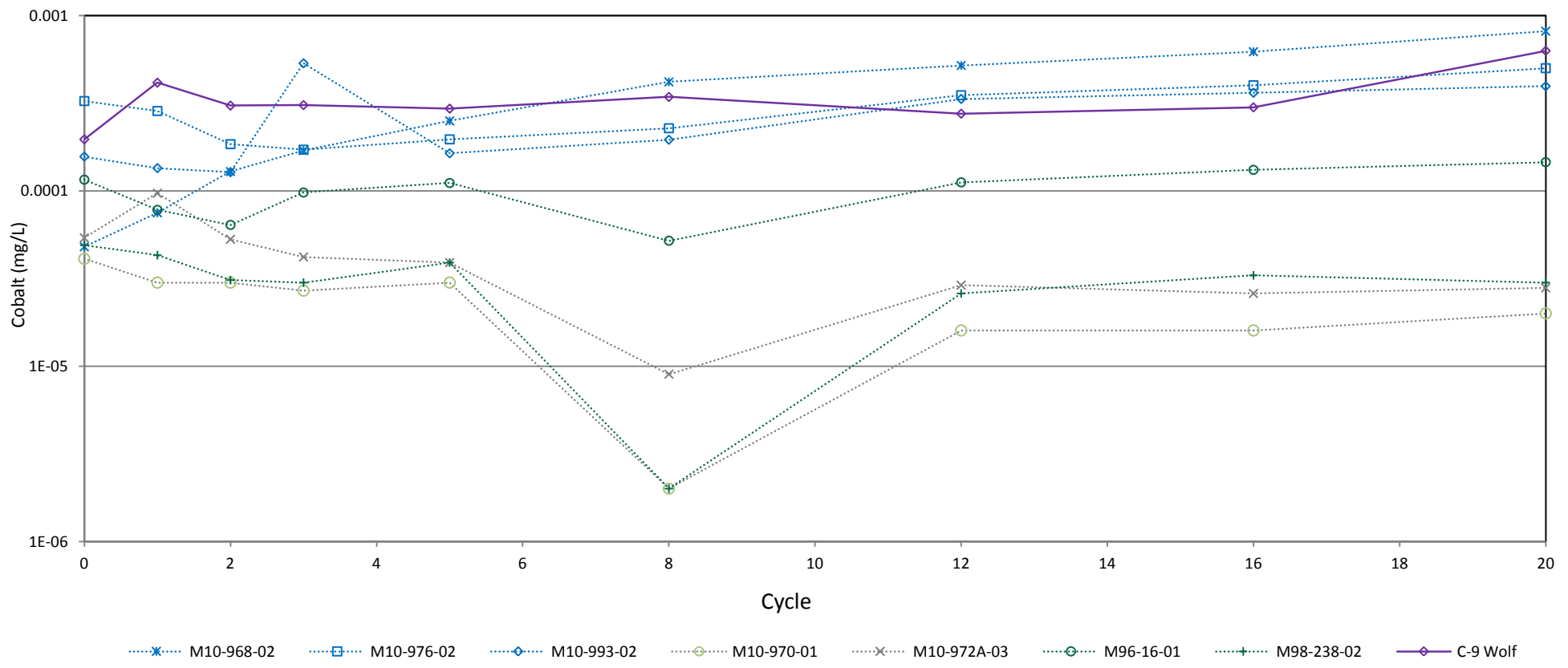
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Beryllium<br>Bismuth<br>Boron**<br>DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-75 |
| Criteria:<br>MMER (2006) | | | |

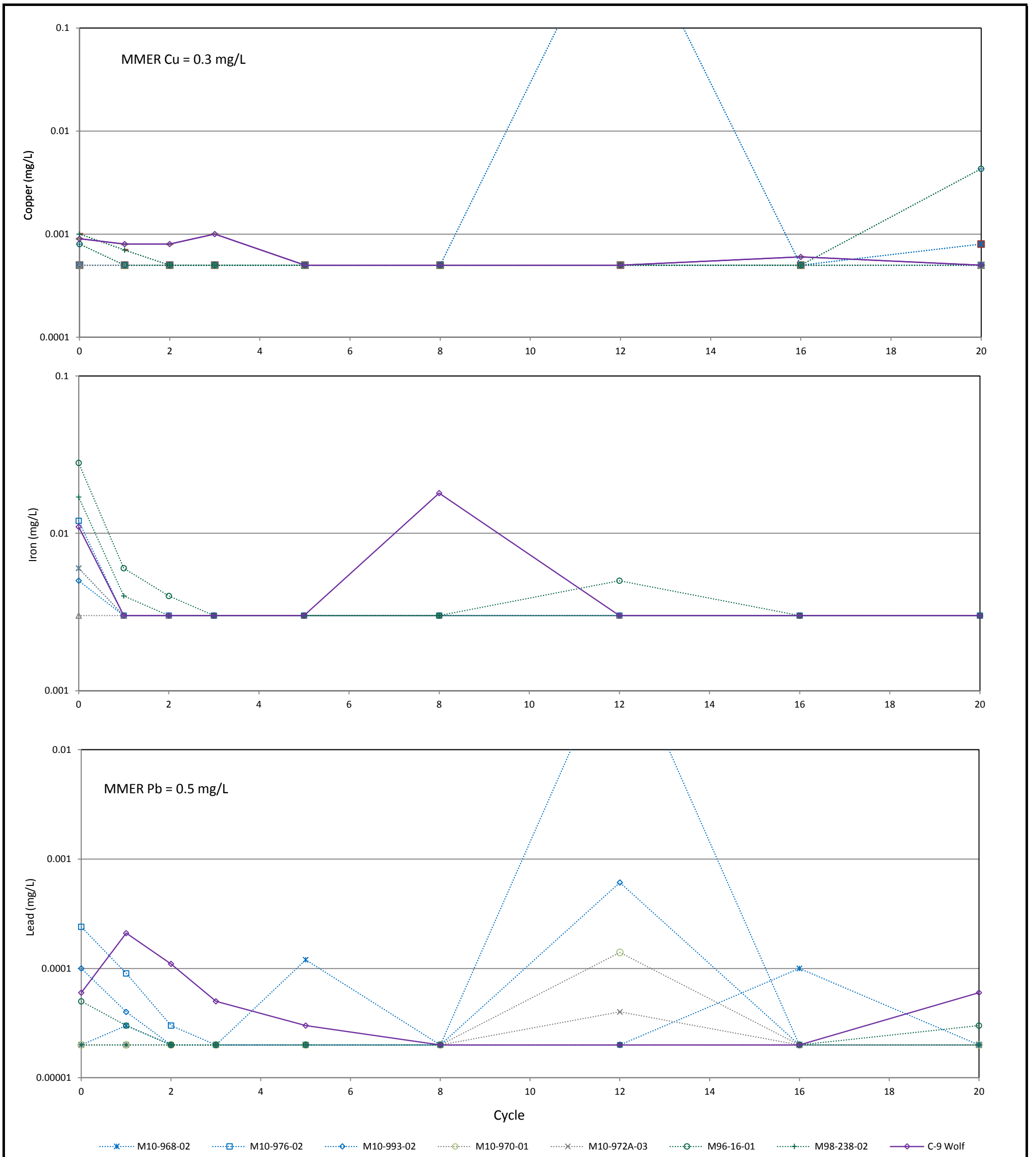


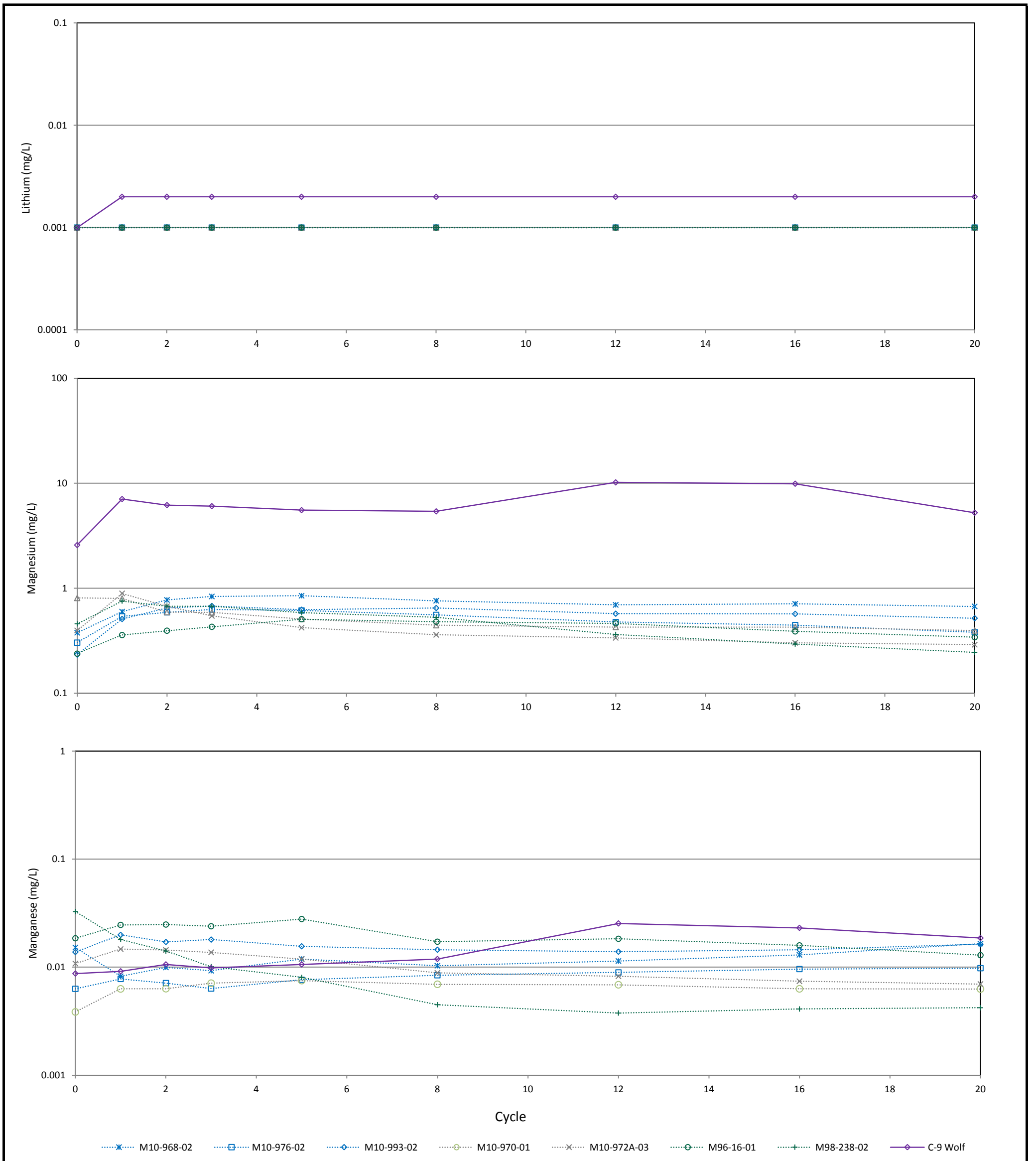

| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Cadmium<br>Chromium<br>Cobalt** | **Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-76 |

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| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Copper**<br>**Iron**<br>**Lead** | **Kinetic Test Data**<br>**Wolf Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-77 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 25% MV, 13% IF, 62% GW (large column)

**Lithium**
**Magnesium**
**Manganese**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

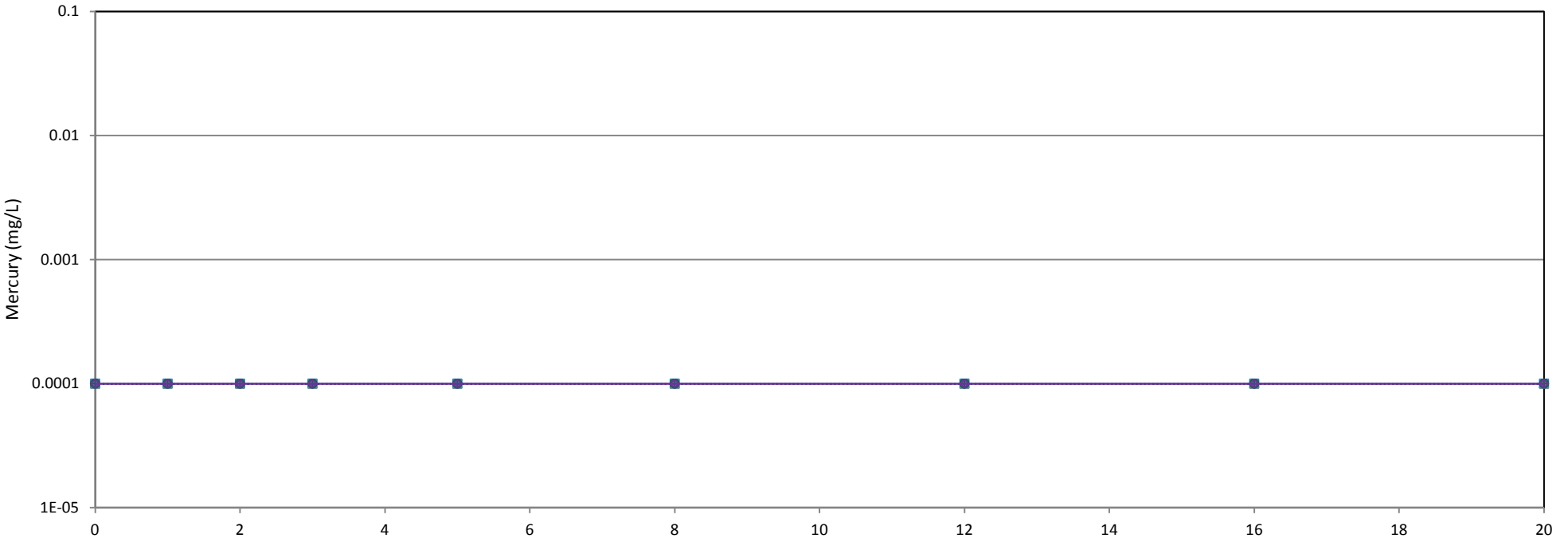
**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

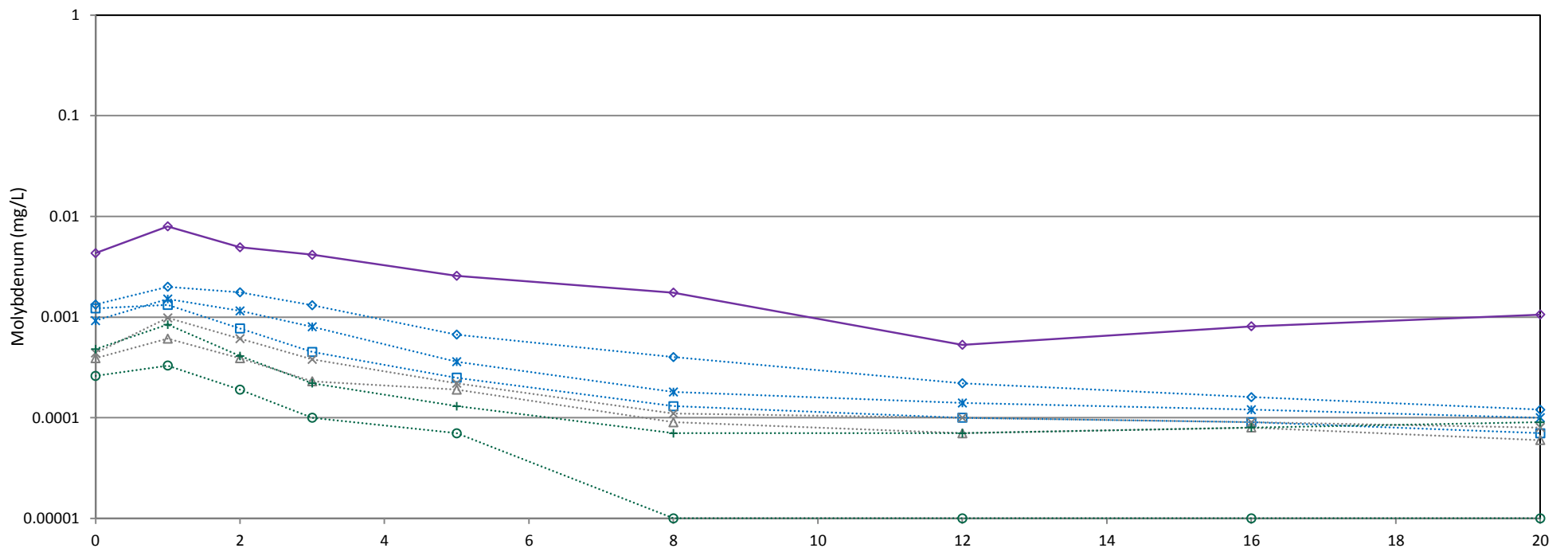
**Agnico-Eagle Mines Ltd.**

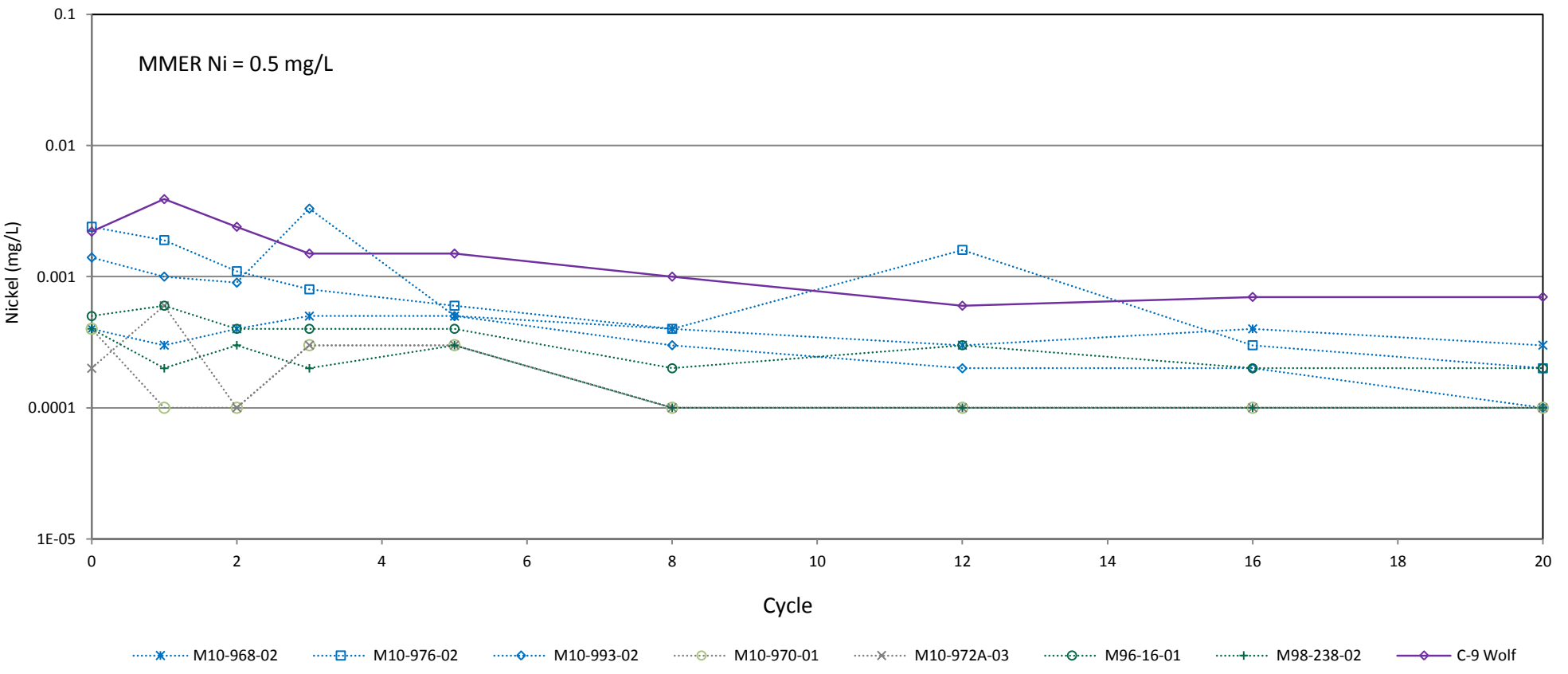
Golder Associates

**FIGURE** B.7-78

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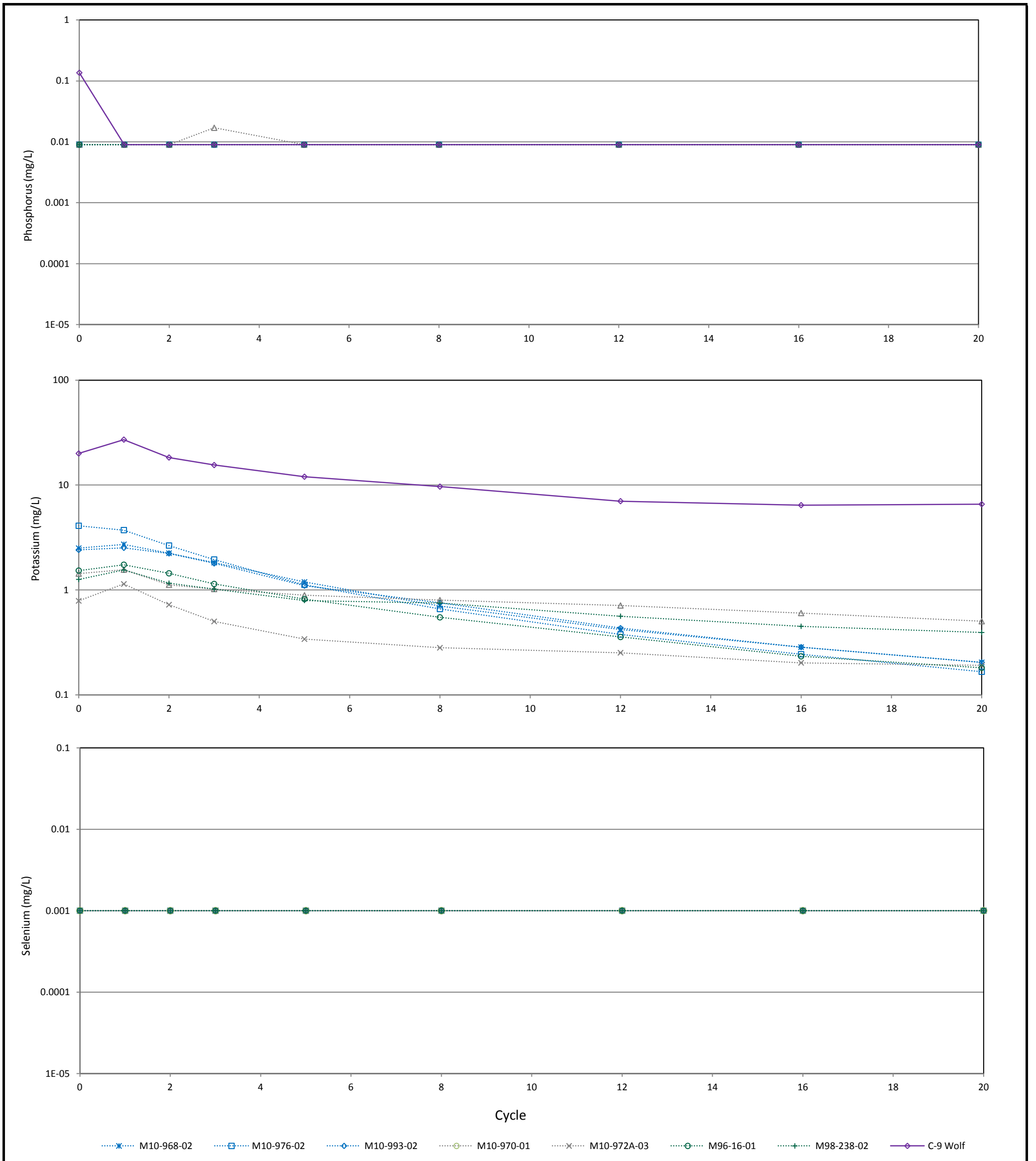



| Notes: | Rock Type: | Mercury<br>Molybdenum<br>Nickel | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| Criteria:<br>MMER (2006) | | | FIGURE B.7-79 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

25% MV, 13% IF, 62% GW (large column)

**Phosphorus**
**Potassium**
**Selenium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

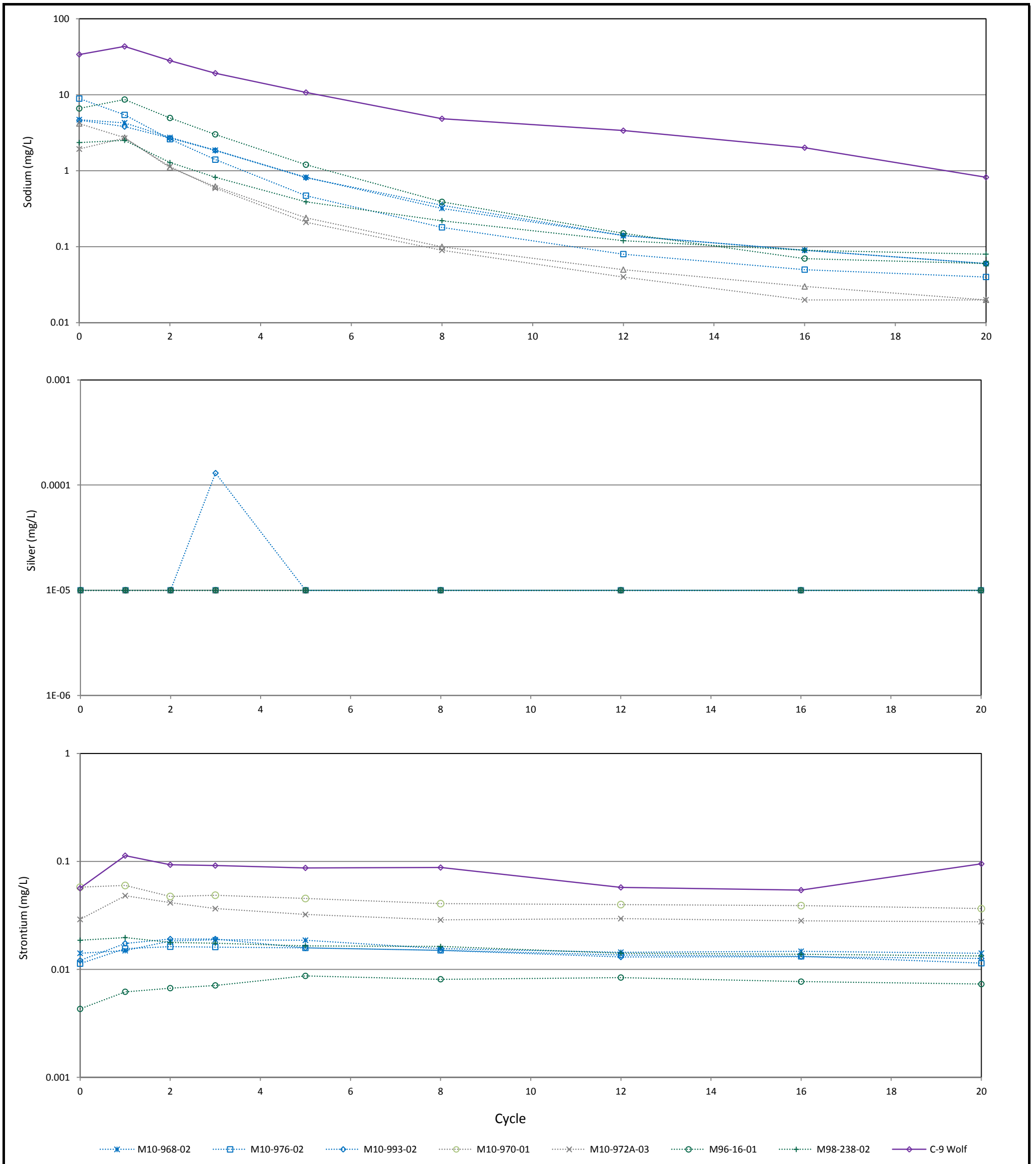
**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

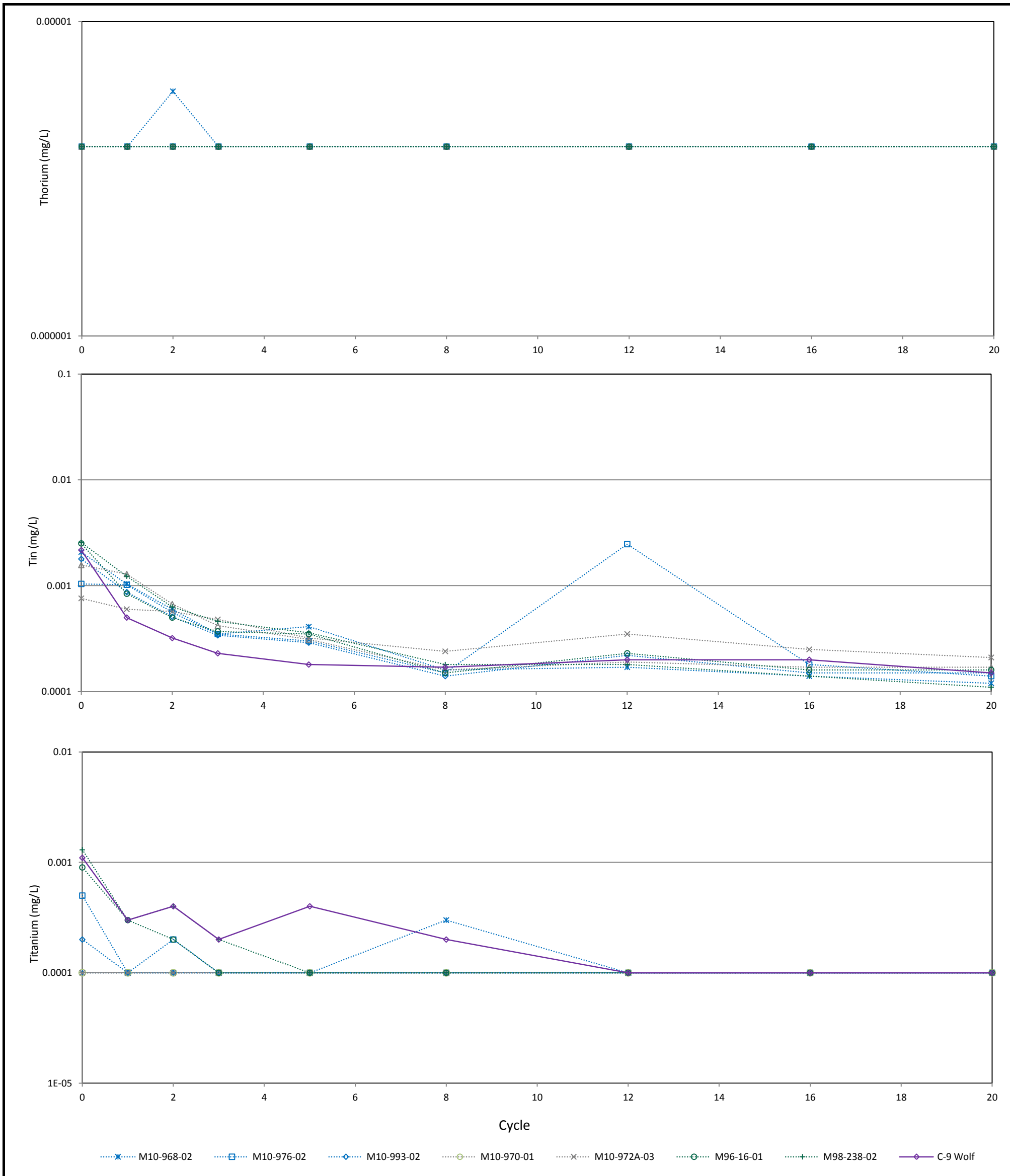
Golder Associates

**FIGURE** B.7-80

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Sodium<br>Silver<br>Strontium**<br>DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-81 |
| **Criteria:**<br>MMER (2006) | | | |




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

25% MV, 13% IF, 62% GW (large column)

**Thorium**
**Tin**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

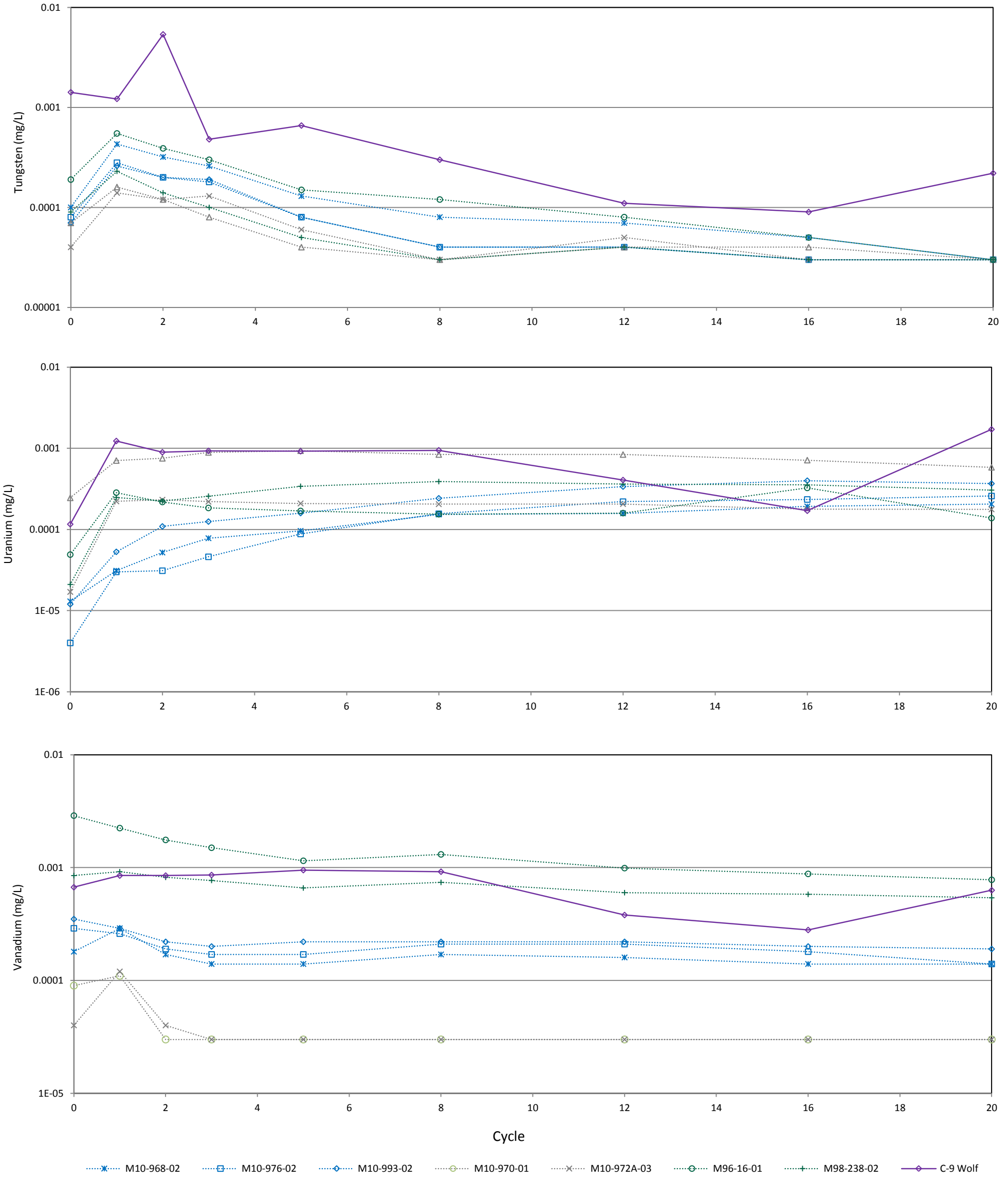
**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

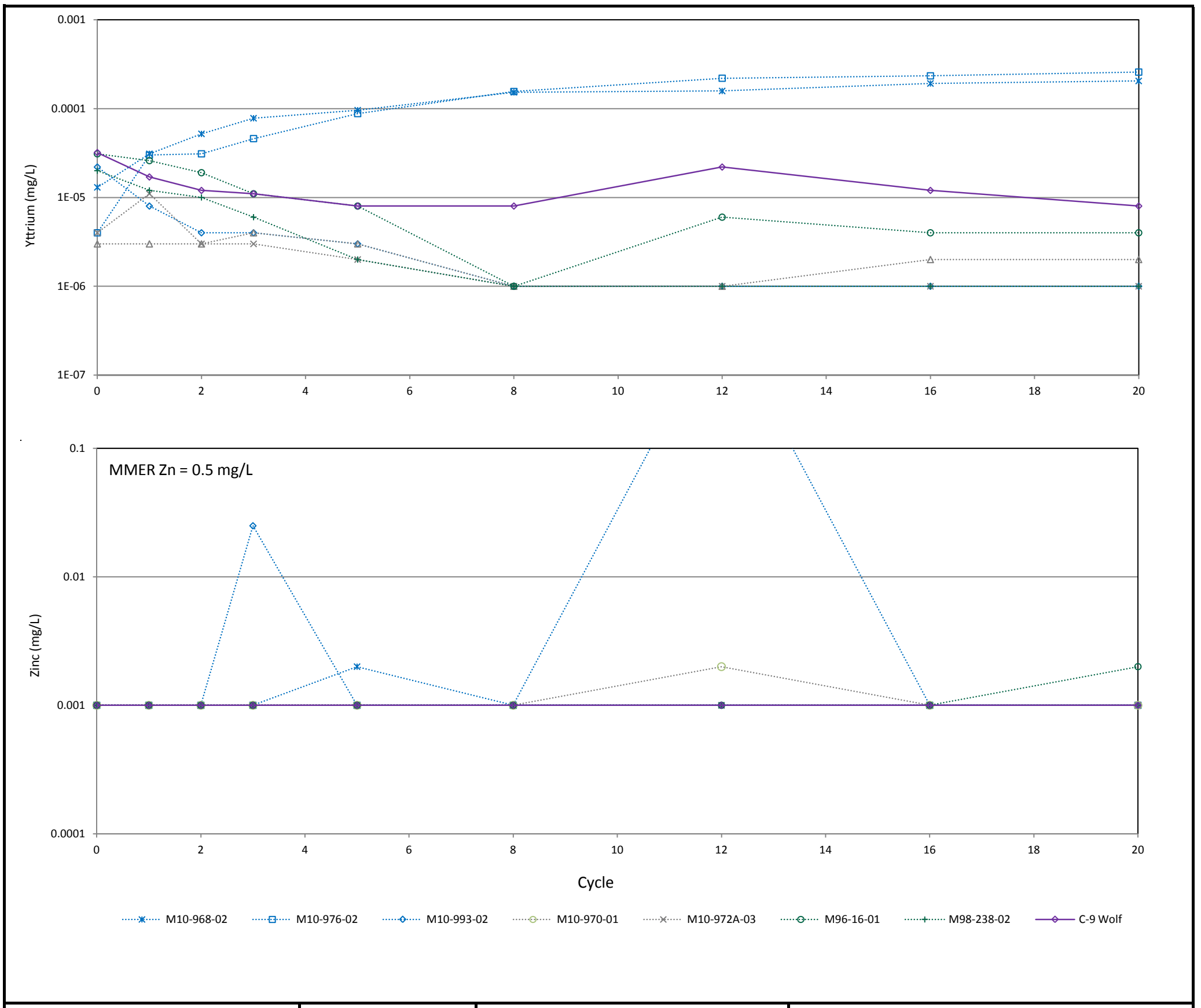
**FIGURE** B.7-82

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Tungsten**<br>**Uranium**<br>**Vanadium** | **Kinetic Test Data**<br>**Wolf Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-83 |

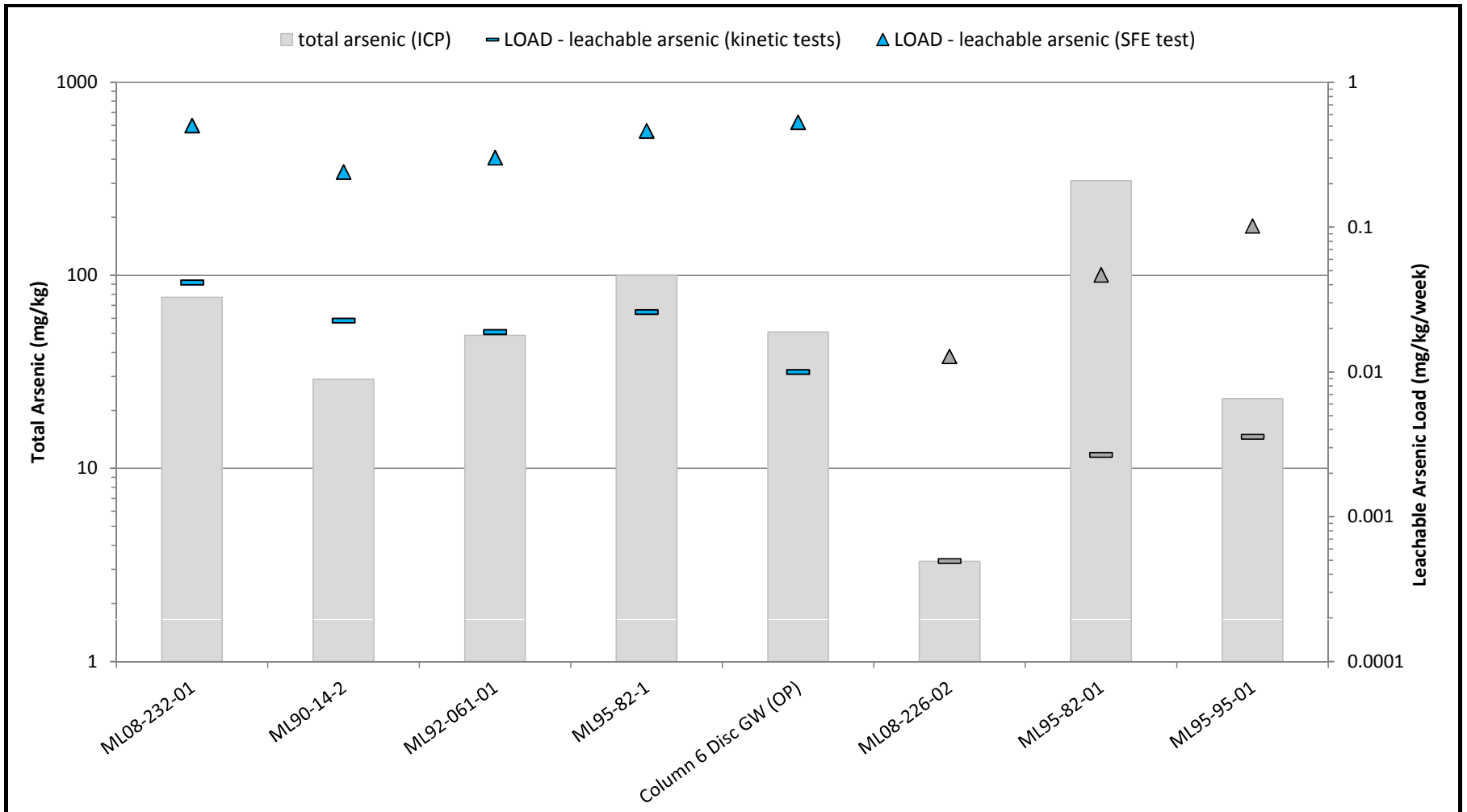
N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




| Notes: | Rock Type: | Yttrium<br>Zinc | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-84 |
| Criteria:<br>MMER (2006) | | | |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

# B.8 Arsenic Leaching Rates: Figures

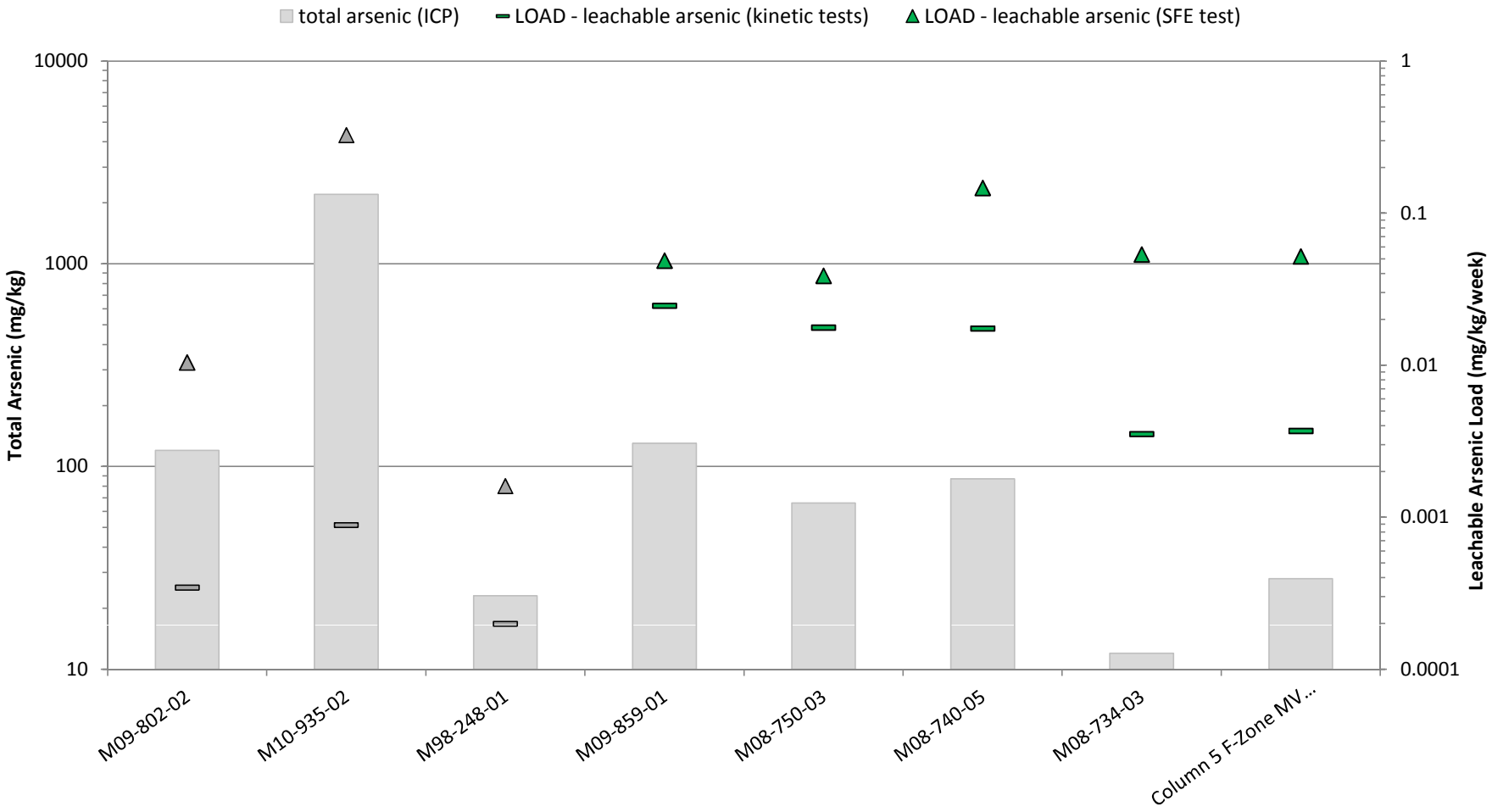



| | | |
|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Discovery Deposit - Greywacke and Iron Formation** |

Notes:

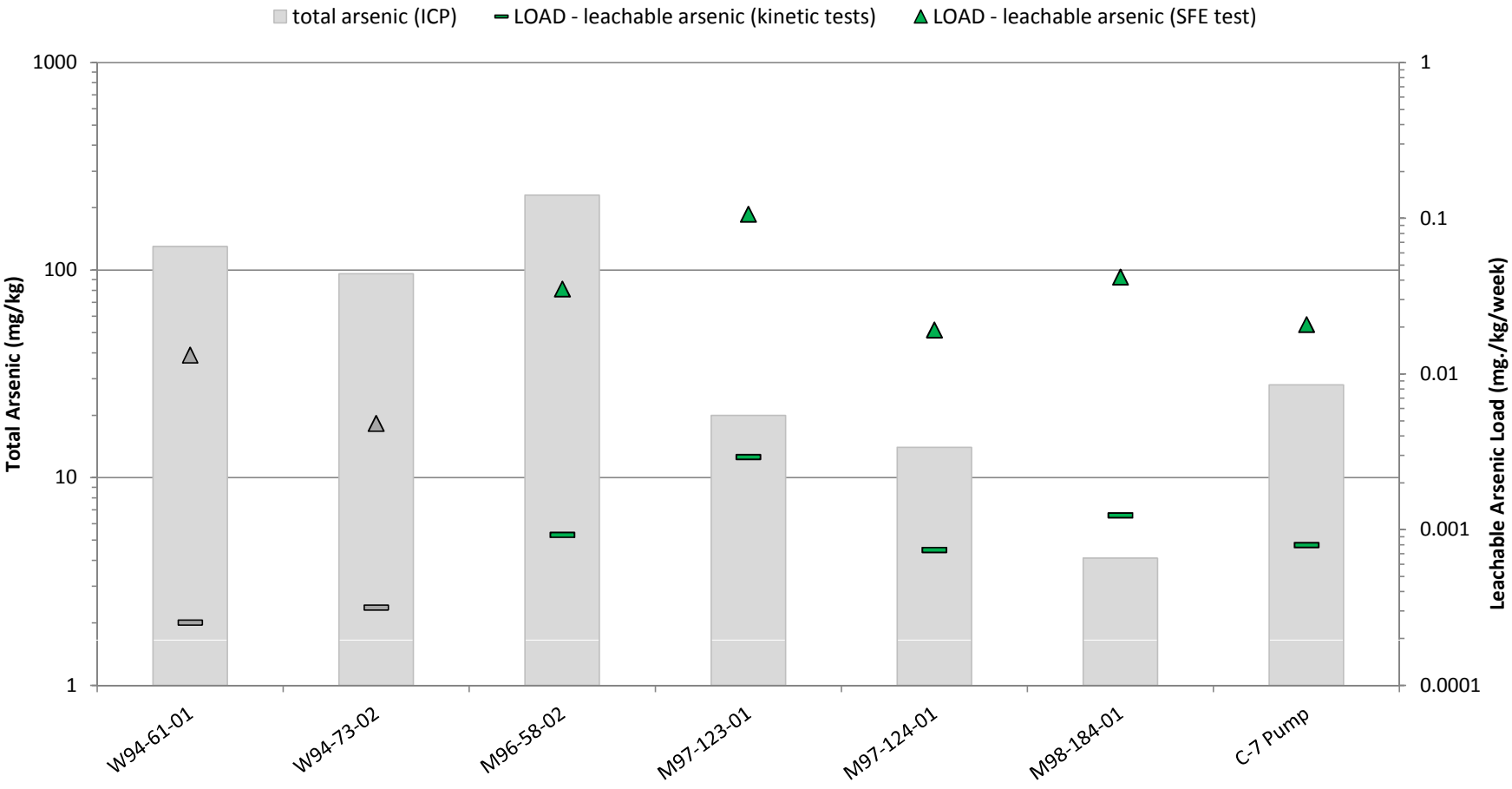
-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles).

| | | | | | |
|---|---|---|---|---|---|
| Prepared | JMC | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | VJB | | | Figure | **B.8-1** |




| | | | | |
|---|---|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**F Zone Deposit - Iron Formation and Mafic Volcanic** | | |
| Notes:<br>-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles). | Prepared | JMC | Date Sep-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | |
| | Reviewed | VJB | | Figure **B.8-2** |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
B.8 AEM_alldatacompiled_stats_6Sept12_arsenic loading graphs.xlsx



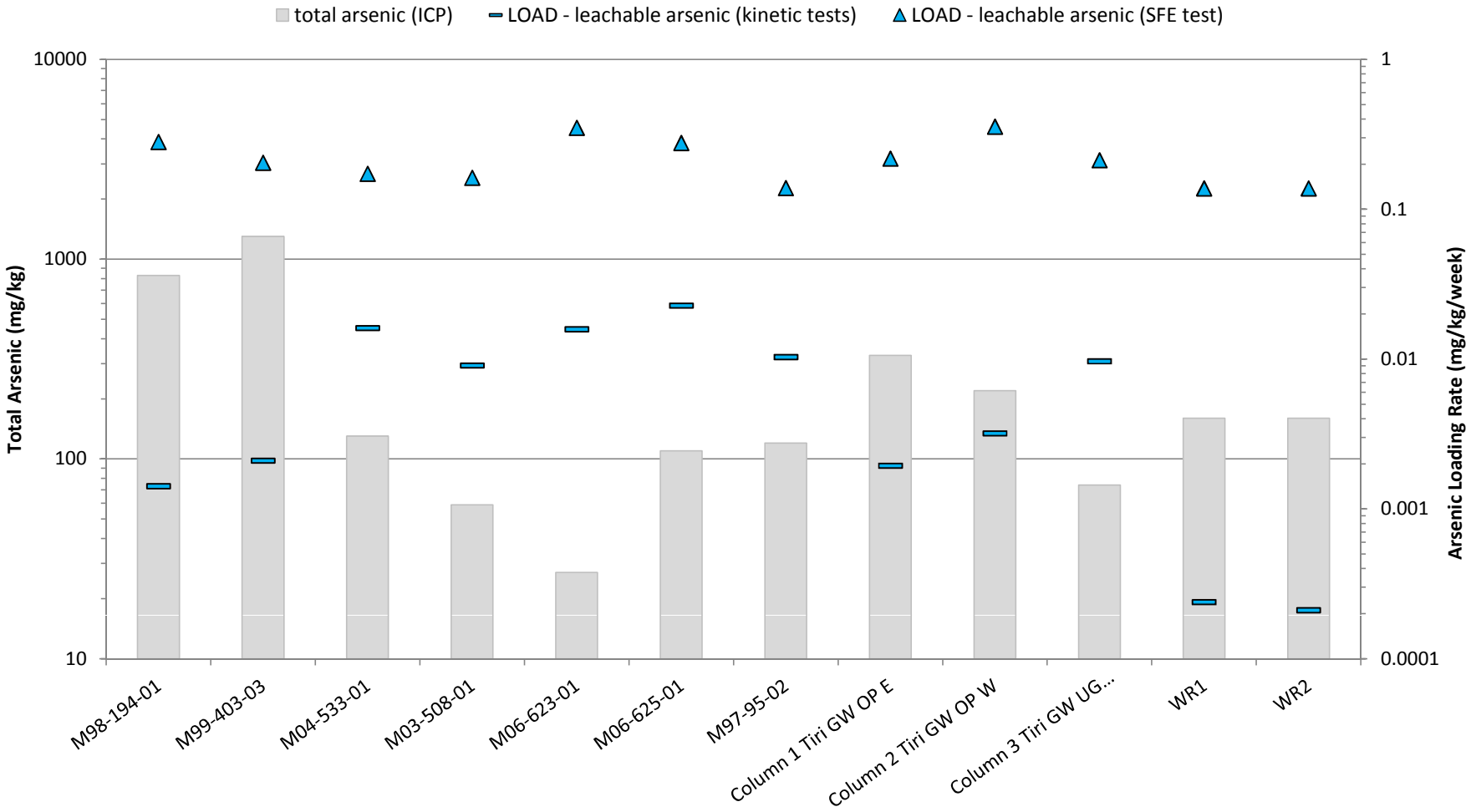

C-7 Pump = large column 86% MV and 14% IF

| | | |
|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Pump Deposit - Iron Formation and Mafic Volcanic** |

Notes:

-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles).

| | | | | | |
|---|---|---|---|---|---|
| Prepared | JMC | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | VJB | | | Figure | **B.8-3** |




| | | | | |
|---|---|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Tiriganiaq Deposit - Greywacke** | | |
| Notes:<br>-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles). | Prepared JMC | Date Sep-12 | Project N° 11-1428-0011 | |
| | Checked JMC | | | |
| | Reviewed VJB | | Figure **B.8-4** | |

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B.8 AEM_alldatacompiled_stats_6Sept12_arsenic loading graphs.xlsx

# B.7 Kinetic Test Results: Tables and Figures

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - W94-61-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 847 | 976 | 985 | 971 | 978 | 995 | 990 | 985 | 992 | 991 | 986 | 980 | 992 | 999 | 986 | 992 | 994 | 987 | 994 | 995 | 988 |
| pH | | units | **6.0-9.5** | 6.8 | 7.1 | 6.7 | 7.0 | 7.4 | 7.2 | 7.3 | 7.3 | 7.2 | 7.1 | 7.2 | 7.2 | 7.1 | 7.3 | 7.0 | 7.2 | 7.2 | 6.6 | 7.1 | 7.1 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 207 | 272 | 229 | 222 | 118 | 106 | 90 | 89 | 115 | 104 | 89 | 80 | 79 | 79 | 101 | 84 | 79 | 102 | 75 | 98 | 77 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 5.0 | 10 | 10 | 8.0 | 10 | 12 | 14 | 12 | 15 | 13 | 54 | 14 | 14 | 14 | 13 | 14 | 13 | 22 | 13 | 23 | 13 |
| Chloride | Cl | mg/L | | 6.2 | 7.1 | 3.7 | 1.7 | | 0.40 | | | 0.20 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | 0.18 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 100 | 130 | 120 | 89 | 55 | 47 | 35 | 36 | 33 | 30 | 32 | 29 | 28 | 28 | 30 | 33 | 32 | 30 | 29 | 28 | 28 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00020 | < 0.0002 | < 0.0002 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.00030 | 0.00040 | 0.00050 | < 0.0002 | | 0.00020 | | | < 0.0002 | | | | < 0.0002 | | | | 0.00020 | | | | < 0.0002 |
| Barium | Ba | mg/L | | 0.0015 | 0.00082 | 0.00067 | 0.00056 | | 0.00040 | | | 0.00029 | | | | 0.00022 | | | | 0.00018 | | | | 0.00018 |
| Boron | B | mg/L | | 0.0047 | 0.012 | 0.011 | 0.0090 | | 0.0079 | | | 0.0046 | | | | 0.0031 | | | | 0.0021 | | | | 0.0037 |
| Cadmium | Cd[3] | mg/L | | 0.000047 | 0.000019 | 0.000013 | 0.0000080 | | 0.0000040 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 35 | 46 | 43 | 33 | 22 | 19 | 15 | 15 | 16 | 15 | 14 | 14 | 14 | 14 | 14 | 15 | 14 | 14 | 13 | 12 | 12 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.0012 | 0.00051 | 0.00044 | 0.00023 | | 0.00014 | | | 0.000084 | | | | 0.000056 | | | | 0.000046 | | | | 0.000031 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.051 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 10 | 15 | 9.6 | 6.1 | | 3.8 | | | 3.3 | | | | 3.0 | | | | 3.2 | | | | 2.9 |
| Manganese | Mn | mg/L | | 0.48 | 0.43 | 0.41 | 0.19 | | 0.095 | | | 0.10 | | | | 0.051 | | | | 0.042 | | | | 0.031 |
| Molbydenum | Mo | mg/L | | 0.000010 | 0.000040 | 0.000030 | 0.000020 | | 0.00031 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0029 | 0.00090 | 0.0010 | 0.0014 | | 0.00090 | | | 0.00040 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.12 | 0.22 | 0.21 | 0.18 | | 0.12 | | | 0.080 | | | | 0.053 | | | | 0.038 | | | | 0.031 |
| Selenium | Se | mg/L | | < 0.001 | 0.0020 | 0.0010 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.29 | 0.46 | 0.31 | 0.20 | | 0.11 | | | 0.080 | | | | 0.050 | | | | 0.030 | | | | 0.030 |
| Strontium | Sr | mg/L | | 0.025 | 0.033 | 0.029 | 0.022 | | 0.012 | | | 0.0096 | | | | 0.0077 | | | | 0.0075 | | | | 0.0065 |
| Tin | Sn | mg/L | | 0.0016 | 0.00099 | 0.00042 | 0.00030 | | 0.00025 | | | 0.00011 | | | | 0.00013 | | | | 0.00010 | | | | 0.000070 |
| Titanium | Ti | mg/L | | 0.0010 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00060 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | 0.00010 |
| Tungsten | W | mg/L | | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.000040 | 0.000032 | 0.000031 | | 0.000026 | | | 0.000023 | | | | 0.000011 | | | | 0.000013 | | | | 0.0000090 |
| Vanadium | V | mg/L | | 0.000030 | 0.000050 | 0.000030 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000080 | 0.0000020 | 0.0000010 | 0.0000020 | | < 0.000001 | | | < 0.000001 | | | | 0.0000020 | | | | < 0.000001 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | 0.0070 | 0.0030 | 0.0030 | 0.0020 | | < 0.001 | | | 0.0010 | | | | 0.0030 | | | | 0.0020 | | | | 0.0010 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - W94-73-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 846 | 990 | 990 | 980 | 982 | 982 | 990 | 988 | 986 | 974 | 994 | 979 | 988 | 990 | 988 | 988 | 997 | 988 | 995 | 992 | 990 |
| pH | | units | **6.0-9.5** | 7.5 | 7.5 | 7.0 | 7.2 | 7.3 | 7.4 | 7.3 | 7.4 | 7.3 | 7.2 | 7.2 | 7.3 | 6.9 | 7.3 | 7.1 | 7.2 | 7.3 | 6.7 | 7.2 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 88 | 106 | 72 | 54 | 52 | 8.0 | 49 | 66 | 64 | 63 | 51 | 48 | 50 | 50 | 61 | 51 | 48 | 62 | 46 | 60 | 48 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 16 | 15 | 13 | 14 | 14 | 14 | 15 | 14 | 14 | 14 | 13 | 14 | 13 | 13 | 14 | 14 | 14 | 13 | 19 | 13 |
| Chloride | Cl | mg/L | | 2.3 | | 0.60 | 0.20 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 30 | 41 | 26 | 19 | 15 | 17 | 14 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 13 | 12 | 13 | 13 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | < 0.01 | < 0.01 | 0.020 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | 0.010 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.00030 | 0.00030 | < 0.0002 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.00020 | < 0.0002 | 0.00030 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Barium | Ba | mg/L | | 0.0010 | 0.0011 | 0.00071 | 0.00060 | | 0.00051 | | | 0.00037 | | | | 0.00027 | | | | 0.00021 | | | | 0.00019 |
| Boron | B | mg/L | | 0.0026 | 0.0092 | 0.0063 | 0.0051 | | 0.0046 | | | 0.0021 | | | | 0.0016 | | | | 0.00090 | | | | 0.0029 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 15 | 17 | 12 | 9.9 | 8.8 | 9.4 | 7.9 | 8.4 | 8.1 | 8.5 | 8.1 | 7.7 | 7.9 | 8.2 | 7.7 | 8.3 | 7.8 | 7.8 | 7.4 | 7.3 | 7.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000049 | 0.000058 | 0.000043 | 0.000033 | | 0.000042 | | | 0.0000060 | | | | 0.000025 | | | | 0.000023 | | | | 0.000022 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0010 | < 0.0005 | < 0.0005 | 0.00060 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.010 | < 0.003 | 0.0080 | 0.0050 | | 0.0050 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000080 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 3.3 | 4.7 | 3.3 | 2.7 | | 2.4 | | | 2.1 | | | | 2.2 | | | | 2.3 | | | | 2.2 |
| Manganese | Mn | mg/L | | 0.028 | 0.038 | 0.030 | 0.022 | | 0.022 | | | 0.019 | | | | 0.017 | | | | 0.015 | | | | 0.012 |
| Molbydenum | Mo | mg/L | | 0.00025 | 0.00023 | 0.00021 | 0.00018 | | 0.00037 | | | 0.00010 | | | | 0.000090 | | | | 0.000070 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00050 | < 0.0001 | < 0.0001 | 0.00040 | | 0.00040 | | | 0.00010 | | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.23 | 0.33 | 0.22 | 0.15 | | 0.11 | | | 0.067 | | | | 0.046 | | | | 0.030 | | | | 0.027 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.37 | 0.39 | 0.19 | 0.12 | | 0.070 | | | 0.040 | | | | 0.030 | | | | 0.020 | | | | 0.020 |
| Strontium | Sr | mg/L | | 0.013 | 0.016 | 0.011 | 0.0085 | | 0.0075 | | | 0.0060 | | | | 0.0056 | | | | 0.0055 | | | | 0.0051 |
| Tin | Sn | mg/L | | 0.0016 | 0.00080 | 0.00050 | 0.00030 | | 0.00024 | | | 0.00012 | | | | 0.00013 | | | | 0.00011 | | | | 0.000090 |
| Titanium | Ti | mg/L | | 0.00040 | < 0.0001 | < 0.0001 | 0.00030 | | 0.00030 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000050 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000041 | 0.00028 | 0.00020 | 0.00016 | | 0.00013 | | | 0.000095 | | | | 0.000078 | | | | 0.000070 | | | | 0.000059 |
| Vanadium | V | mg/L | | < 0.00003 | 0.000030 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000040 | 0.0000030 | 0.0000030 | | 0.0000010 | | | < 0.000001 | | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | 0.0010 | 0.0010 | | < 0.001 | | | 0.0010 | | | | 0.0020 | | | | 0.0010 | | | | 0.0020 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M96-58-02 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 841 | 989 | 980 | 996 | 971 | 1000 | 987 | 998 | 990 | 972 | 996 | 980 | 992 | 991 | 993 | 994 | 986 | 990 | 983 | 988 | 992 |
| pH | | units | **6.0-9.5** | 8.4 | 8.5 | 8.2 | 8.4 | 7.9 | 7.9 | 7.7 | 7.9 | 7.6 | 7.8 | 7.5 | 7.6 | 7.5 | 7.6 | 7.4 | 7.5 | 7.6 | 6.7 | 7.5 | 7.4 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 8.0 | 8.0 | 41 | 46 | 6.0 | 32 | 30 | 29 | 35 | 34 | 26 | 32 | 34 | 25 | 31 | 32 | 35 | 33 | 24 | 32 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 24 | 28 | 24 | 23 | 20 | 21 | 16 | 17 | 14 | 15 | 15 | 13 | 14 | 13 | 14 | 14 | 13 | 24 | 14 | 21 | 13 |
| Chloride | Cl | mg/L | | 2.0 | 1.2 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.1 | 5.3 | 2.7 | 2.1 | 1.5 | 1.6 | 1.2 | 1.3 | 1.2 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.4 | 1.3 | 1.2 | 1.3 | 1.2 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.10 | 0.050 | 0.060 | 0.050 | | 0.050 | | | 0.040 | | | | 0.040 | | | | 0.030 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0010 | 0.0023 | 0.0017 | 0.0015 | | 0.0015 | | | 0.0010 | | | | 0.00090 | | | | 0.00080 | | | | 0.00070 |
| Arsenic | As | mg/L | **0.5** | 0.0028 | 0.0050 | 0.0048 | 0.0049 | | 0.0054 | | | 0.0057 | | | | 0.0060 | | | | 0.0073 | | | | 0.0068 |
| Barium | Ba | mg/L | | 0.00081 | 0.0011 | 0.00089 | 0.00095 | | 0.0012 | | | 0.00088 | | | | 0.00099 | | | | 0.00086 | | | | 0.00090 |
| Boron | B | mg/L | | 0.0081 | 0.021 | 0.012 | 0.0098 | | 0.0090 | | | 0.0043 | | | | 0.0027 | | | | 0.0016 | | | | 0.0037 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000040 | | < 0.000003 | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.3 | 4.6 | 4.3 | 4.5 | 4.4 | 4.8 | 4.3 | 4.7 | 4.4 | 4.8 | 4.6 | 4.5 | 4.7 | 4.8 | 4.6 | 4.8 | 4.6 | 4.9 | 4.7 | 4.5 | 4.5 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000014 | 0.000021 | 0.000016 | 0.000018 | | 0.000026 | | | < 0.000002 | | | | 0.000039 | | | | 0.000029 | | | | 0.000043 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00070 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0080 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.000040 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000030 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.42 | 0.56 | 0.52 | 0.53 | | 0.63 | | | 0.59 | | | | 0.58 | | | | 0.57 | | | | 0.51 |
| Manganese | Mn | mg/L | | 0.013 | 0.018 | 0.018 | 0.019 | | 0.020 | | | 0.017 | | | | 0.017 | | | | 0.016 | | | | 0.016 |
| Molbydenum | Mo | mg/L | | 0.00015 | 0.00024 | 0.00012 | 0.000060 | | 0.0012 | | | < 0.00001 | | | | 0.000070 | | | | < 0.00001 | | | | 0.000020 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | < 0.0001 | 0.00020 | | 0.00020 | | | < 0.0001 | | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.1 | 2.6 | 2.1 | 1.9 | | 1.7 | | | 1.4 | | | | 1.1 | | | | 0.86 | | | | 0.72 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 5.6 | 7.6 | 4.2 | 3.0 | | 1.8 | | | 0.66 | | | | 0.26 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.0059 | 0.0069 | 0.0065 | 0.0066 | | 0.0074 | | | 0.0069 | | | | 0.0069 | | | | 0.0067 | | | | 0.0063 |
| Tin | Sn | mg/L | | 0.0017 | 0.00078 | 0.00033 | 0.00030 | | 0.00026 | | | 0.00016 | | | | 0.00015 | | | | 0.00015 | | | | 0.00014 |
| Titanium | Ti | mg/L | | 0.00020 | 0.00010 | 0.00020 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000080 | 0.00029 | 0.00023 | 0.00022 | | 0.00027 | | | 0.000070 | | | | 0.000070 | | | | 0.000040 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.000018 | 0.000017 | 0.000017 | | 0.000018 | | | 0.000016 | | | | 0.000015 | | | | 0.000020 | | | | 0.000018 |
| Vanadium | V | mg/L | | 0.00084 | 0.00088 | 0.00069 | 0.00065 | | 0.00067 | | | 0.00053 | | | | 0.00049 | | | | 0.00046 | | | | 0.00038 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.0000090 | 0.0000090 | 0.0000090 | | 0.0000080 | | | < 0.000001 | | | | 0.0000030 | | | | 0.0000040 | | | | 0.0000040 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-123-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 842 | 990 | 976 | 993 | 982 | 992 | 986 | 986 | 992 | 986 | 990 | 984 | 989 | 989 | 984 | 991 | 994 | 985 | 998 | 991 | 989 |
| pH | | units | **6.0-9.5** | 8.9 | 8.5 | 8.2 | 8.0 | 8.0 | 8.0 | 7.9 | 8.2 | 7.7 | 7.9 | 7.7 | 8.1 | 7.4 | 7.6 | 7.5 | 7.5 | 7.6 | 6.9 | 7.4 | 7.4 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 49 | 50 | 6.0 | 41 | 31 | 31 | 5.0 | 5.0 | 34 | 33 | 28 | 25 | 34 | 25 | 30 | 33 | 24 | 31 | 29 | 29 | 31 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 27 | 30 | 25 | 22 | 21 | 22 | 18 | 17 | 16 | 17 | 14 | 15 | 15 | 15 | 14 | 15 | 14 | 24 | 14 | 17 | 13 |
| Chloride | Cl | mg/L | | 2.4 | 0.90 | < 0.2 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.7 | 2.5 | 1.1 | 0.60 | 0.40 | 0.40 | 0.30 | 0.30 | 0.30 | 0.30 | 0.20 | 0.30 | 0.30 | 0.20 | 0.30 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.060 | 0.070 | 0.050 | | 0.050 | | | 0.050 | | | | 0.050 | | | | 0.040 | | | | 0.050 |
| Antimony | Sb | mg/L | | 0.0014 | 0.0031 | 0.0023 | 0.0018 | | 0.0016 | | | 0.0010 | | | | 0.00090 | | | | 0.00080 | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | 0.025 | 0.031 | 0.029 | 0.027 | | 0.025 | | | 0.026 | | | | 0.025 | | | | 0.027 | | | | 0.023 |
| Barium | Ba | mg/L | | 0.0014 | 0.0026 | 0.0026 | 0.0028 | | 0.0033 | | | 0.0029 | | | | 0.0030 | | | | 0.0028 | | | | 0.0027 |
| Boron | B | mg/L | | 0.014 | 0.028 | 0.016 | 0.011 | | 0.0082 | | | 0.0040 | | | | 0.0026 | | | | 0.0014 | | | | 0.0029 |
| Cadmium | Cd[3] | mg/L | | 0.000010 | < 0.000003 | 0.0000030 | 0.0000040 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.0 | 4.9 | 4.5 | 4.3 | 5.0 | 5.3 | 4.7 | 5.1 | 4.9 | 5.3 | 4.6 | 4.9 | 5.0 | 5.2 | 4.8 | 5.1 | 4.9 | 5.1 | 4.9 | 4.7 | 4.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000022 | 0.000030 | 0.000021 | 0.000024 | | 0.000034 | | | 0.0000090 | | | | 0.000049 | | | | 0.000047 | | | | 0.000051 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00060 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0080 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.00012 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.39 | 0.61 | 0.60 | 0.55 | | 0.61 | | | 0.54 | | | | 0.49 | | | | 0.43 | | | | 0.37 |
| Manganese | Mn | mg/L | | 0.011 | 0.016 | 0.015 | 0.015 | | 0.018 | | | 0.014 | | | | 0.013 | | | | 0.013 | | | | 0.014 |
| Molbydenum | Mo | mg/L | | 0.0012 | 0.0013 | 0.00049 | 0.00022 | | 0.00072 | | | 0.000050 | | | | 0.000060 | | | | 0.000050 | | | | 0.000050 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | 0.00020 | 0.00020 | | 0.00030 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.9 | 3.3 | 2.7 | 2.0 | | 1.6 | | | 1.2 | | | | 0.89 | | | | 0.70 | | | | 0.61 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 5.3 | 5.1 | 2.5 | 1.3 | | 0.63 | | | 0.29 | | | | 0.16 | | | | 0.11 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.0061 | 0.0097 | 0.0097 | 0.0089 | | 0.010 | | | 0.0094 | | | | 0.0091 | | | | 0.0085 | | | | 0.0076 |
| Tin | Sn | mg/L | | 0.0025 | 0.0013 | 0.00063 | 0.00043 | | 0.00036 | | | 0.00018 | | | | 0.00018 | | | | 0.00016 | | | | 0.00019 |
| Titanium | Ti | mg/L | | 0.00030 | < 0.0001 | 0.00010 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000040 | 0.00020 | 0.00016 | 0.00014 | | 0.00015 | | | 0.000070 | | | | 0.000050 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000059 | 0.00021 | 0.00021 | 0.00022 | | 0.00021 | | | 0.00021 | | | | 0.00022 | | | | 0.00020 | | | | 0.00015 |
| Vanadium | V | mg/L | | 0.00035 | 0.00037 | 0.00031 | 0.00029 | | 0.00033 | | | 0.00028 | | | | 0.00025 | | | | 0.00023 | | | | 0.00020 |
| Yttrium | Y | mg/L | | 0.000023 | 0.000010 | 0.000011 | 0.000011 | | 0.0000090 | | | 0.0000020 | | | | 0.0000030 | | | | 0.0000050 | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0010 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-124-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 842 | 959 | 986 | 985 | 989 | 985 | 972 | 983 | 985 | 940 | 986 | 979 | 979 | 988 | 981 | 993 | 988 | 983 | 994 | 986 | 991 |
| pH | | units | 6.0-9.5 | 9.0 | 8.6 | 7.7 | 8.5 | 8.1 | 8.0 | 8.1 | 8.0 | 7.6 | 7.9 | 7.8 | 7.8 | 7.6 | 7.6 | 7.4 | 7.5 | 7.6 | 6.7 | 7.6 | 7.5 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 53 | 58 | 45 | 48 | 58 | 33 | 5.0 | 6.0 | 36 | 36 | 27 | 35 | 30 | 28 | 34 | 43 | 36 | 33 | 26 | 35 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 24 | 23 | 28 | 22 | 21 | 17 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 22 | 13 | 25 | 14 |
| Chloride | Cl | mg/L | | 2.3 | 1.3 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.015 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 6.5 | | 5.3 | 3.5 | 2.5 | 2.7 | 2.2 | 2.3 | 2.2 | 2.4 | 2.3 | 2.4 | 2.4 | 2.4 | 2.6 | 2.8 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.030 | 0.040 | 0.030 | | 0.040 | | | 0.040 | | | | 0.040 | | | | 0.040 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0017 | 0.0039 | 0.0032 | 0.0028 | | 0.0025 | | | 0.0018 | | | | 0.0015 | | | | 0.0013 | | | | 0.0010 |
| Arsenic | As | mg/L | 0.5 | 0.0090 | 0.011 | 0.0087 | 0.0072 | | 0.0078 | | | 0.0068 | | | | 0.0058 | | | | 0.0057 | | | | 0.0042 |
| Barium | Ba | mg/L | | 0.00055 | 0.00058 | 0.00069 | 0.00062 | | 0.00068 | | | 0.00066 | | | | 0.00085 | | | | 0.0010 | | | | 0.0012 |
| Boron | B | mg/L | | 0.0052 | 0.014 | 0.0094 | 0.0072 | | 0.0060 | | | 0.0028 | | | | 0.0017 | | | | 0.00080 | | | | 0.0032 |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.1 | 4.7 | 5.0 | 5.0 | 5.2 | 5.0 | 4.5 | 4.9 | 4.8 | 5.2 | 4.7 | 4.9 | 4.9 | 5.7 | 5.1 | 5.3 | 5.1 | 5.0 | 5.1 | 5.0 | 5.3 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000043 | 0.000057 | 0.000043 | 0.000032 | | 0.000041 | | | 0.000023 | | | | 0.000050 | | | | 0.000056 | | | | 0.000069 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.013 | 0.0030 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | 0.000080 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.55 | 0.79 | 0.82 | 0.77 | | 0.76 | | | 0.71 | | | | 0.68 | | | | 0.69 | | | | 0.63 |
| Manganese | Mn | mg/L | | 0.014 | 0.017 | 0.017 | 0.017 | | 0.015 | | | 0.013 | | | | 0.012 | | | | 0.011 | | | | 0.013 |
| Molbydenum | Mo | mg/L | | 0.00029 | 0.00056 | 0.00030 | 0.00017 | | 0.00052 | | | 0.000050 | | | | 0.000060 | | | | 0.000050 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00030 | 0.00020 | 0.00040 | 0.00030 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.5 | 3.2 | 2.5 | 1.9 | | 1.6 | | | 1.3 | | | | 1.1 | | | | 0.98 | | | | 0.88 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 5.0 | 6.2 | 3.1 | 1.7 | | 0.80 | | | 0.32 | | | | 0.16 | | | | 0.10 | | | | 0.070 |
| Strontium | Sr | mg/L | | 0.0073 | 0.0090 | 0.0093 | 0.0086 | | 0.0083 | | | 0.0076 | | | | 0.0073 | | | | 0.0074 | | | | 0.0068 |
| Tin | Sn | mg/L | | 0.0015 | 0.00071 | 0.00036 | 0.00022 | | 0.00020 | | | 0.00015 | | | | 0.000080 | | | | 0.00012 | | | | 0.00010 |
| Titanium | Ti | mg/L | | 0.00050 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000070 | 0.00019 | 0.00013 | 0.00010 | | 0.00012 | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.0000050 | 0.000058 | 0.000060 | 0.000048 | | 0.000047 | | | 0.000045 | | | | 0.000045 | | | | 0.000053 | | | | 0.000045 |
| Vanadium | V | mg/L | | 0.00053 | 0.00048 | 0.00033 | 0.00030 | | 0.00032 | | | 0.00025 | | | | 0.00021 | | | | 0.00016 | | | | 0.00013 |
| Yttrium | Y | mg/L | | 0.000025 | 0.000027 | 0.000023 | 0.000021 | | 0.000021 | | | 0.000018 | | | | 0.000012 | | | | 0.000010 | | | | 0.000010 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Large Column Humidity Cell Test Cycle - C-7 Pump (14% IF 86% MV) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 1255 | 4930 | 4816 | 4975 | 4907 | 5020 | 4975 | 4975 | 4884 | 4907 | 4861 | 4839 | 4816 | 4816 | 4952 | 4725 | 4975 | 4703 | 4907 | 4952 | 4839 |
| pH | | units | 6.0-9.5 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.0 | 7.9 | 8.0 | 7.9 | 8.1 | 8.0 | 8.1 | 8.0 | 8.0 | 7.9 | 8.0 | 8.1 | 8.0 | 7.7 | 8.0 |
| Conductivity | | mg/L as CaCO3 | | 453 | 702 | 365 | 339 | 301 | 282 | 254 | 334 | 310 | 288 | 221 | 269 | 201 | 269 | 256 | 256 | 249 | 253 | 234 | 256 | 251 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 263 | 127 | 111 | 113 | 124 | 84 | 83 | 72 | 72 | 68 | 62 | 61 | 71 | 70 | 63 | 63 | 62 | 68 | 58 | 62 | 55 |
| Chloride | Cl | mg/L | | 14 | 21 | 10 | 5.6 | | 4.1 | | | 0.90 | | | | 0.60 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.090 | 0.080 | 0.070 | 0.070 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | |
| Phosphorus | P | mg/L | | 0.12 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 81 | 190 | 130 | 120 | 110 | 100 | 91 | 83 | 83 | 66 | 69 | 71 | 70 | 68 | 63 | 64 | 63 | 63 | 57 | 64 | 63 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.18 | 0.10 | 0.11 | 0.11 | | 0.12 | | | 0.11 | | | | 0.10 | | | | 0.090 | | | | 0.10 |
| Antimony | Sb | mg/L | | 0.0039 | 0.0071 | 0.0064 | 0.0074 | | 0.0047 | | | 0.0039 | | | | 0.0034 | | | | 0.0029 | | | | 0.0027 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0095 | 0.0073 | 0.0070 | | 0.0077 | | | 0.0088 | | | | 0.0086 | | | | 0.0085 | | | | 0.0082 |
| Barium | Ba | mg/L | | 0.0069 | 0.011 | 0.0077 | 0.0071 | | 0.0066 | | | 0.0054 | | | | 0.0052 | | | | 0.0055 | | | | 0.0058 |
| Boron | B | mg/L | | 0.042 | 0.087 | 0.059 | 0.055 | | 0.046 | | | 0.029 | | | | 0.024 | | | | 0.019 | | | | 0.015 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | 0.0000050 | < 0.000003 | | 0.000086 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 20 | 35 | 31 | 34 | 33 | 32 | 30 | 32 | 32 | 31 | 30 | 30 | 29 | 30 | 29 | 30 | 29 | 29 | 29 | 30 | 32 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | 0.00050 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00012 | 0.00027 | 0.00023 | 0.00029 | | 0.00030 | | | 0.00029 | | | | 0.00028 | | | | 0.00030 | | | | 0.00031 |
| Copper | Cu[3] | mg/L | 0.3 | 0.0010 | 0.0011 | 0.00060 | 0.00090 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | 0.00060 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0050 | < 0.003 | < 0.003 | 0.0060 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000020 | 0.000030 | 0.000040 | < 0.00002 | | < 0.00002 | | | 0.000020 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000020 |
| Lithium | Li | mg/L | | < 0.001 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | | 0.0020 | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 7.5 | 17 | 14 | 15 | | 14 | | | 12 | | | | 10 | | | | 9.9 | | | | 10 |
| Manganese | Mn | mg/L | | 0.016 | 0.033 | 0.044 | 0.046 | | 0.041 | | | 0.037 | | | | 0.025 | | | | 0.023 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.0023 | 0.0019 | 0.0011 | 0.00091 | | 0.00065 | | | 0.00049 | | | | 0.00053 | | | | 0.00081 | | | | 0.00039 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0012 | 0.0019 | 0.0014 | 0.00060 | | 0.0013 | | | 0.00070 | | | | 0.00060 | | | | 0.00070 | | | | 0.00060 |
| Potassium | K | mg/L | | 17 | 25 | 16 | 15 | | 12 | | | 9.5 | | | | 7.0 | | | | 6.4 | | | | 6.2 |
| Selenium | Se | mg/L | | 0.0030 | 0.0040 | 0.0020 | 0.0020 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0010 |
| Sodium | Na | mg/L | | 53 | 80 | 47 | 31 | | 18 | | | 8.3 | | | | 3.4 | | | | 2.0 | | | | 1.4 |
| Strontium | Sr | mg/L | | 0.043 | 0.096 | 0.078 | 0.082 | | 0.076 | | | 0.068 | | | | 0.057 | | | | 0.054 | | | | 0.055 |
| Tin | Sn | mg/L | | 0.0022 | 0.0024 | 0.0012 | 0.00056 | | 0.00028 | | | 0.00030 | | | | 0.00020 | | | | 0.00020 | | | | 0.00024 |
| Titanium | Ti | mg/L | | 0.00050 | 0.00020 | 0.00090 | 0.00030 | | 0.00070 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00098 | 0.00034 | 0.0032 | 0.000030 | | 0.00022 | | | < 0.00003 | | | | 0.00011 | | | | 0.000090 | | | | 0.000090 |
| Uranium | U | mg/L | | 0.000053 | 0.00038 | 0.00024 | 0.00027 | | 0.00026 | | | 0.00020 | | | | 0.00041 | | | | 0.00017 | | | | 0.00017 |
| Vanadium | V | mg/L | | 0.00036 | 0.00052 | 0.00043 | 0.00043 | | 0.00052 | | | 0.00044 | | | | 0.00038 | | | | 0.00028 | | | | 0.00025 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.000017 | 0.000012 | 0.000016 | | 0.000010 | | | 0.000012 | | | | 0.000022 | | | | 0.000012 | | | | 0.0000090 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.011 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-981-03 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 821 | 988 | 992 | 990 | 989 | 994 | 986 | 985 | 995 | 989 | 987 | 984 | 986 | 982 | 986 | 992 | 993 | 990 | 990 | 992 | 991 |
| pH | | units | **6.0-9.5** | 8.6 | 7.9 | 8.3 | 8.0 | 8.0 | 8.1 | 7.6 | 7.7 | 8.1 | 7.9 | 7.6 | 7.8 | 7.6 | 7.8 | 7.6 | 7.6 | 7.7 | 7.9 | 7.8 | 7.6 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 7.0 | 51 | 46 | 51 | 39 | 36 | 45 | 40 | 40 | 40 | 29 | 6.0 | 32 | 31 | 38 | 31 | 30 | 37 | 28 | 38 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 28 | 24 | 26 | 23 | 23 | 22 | 20 | 18 | 18 | 20 | 17 | 17 | 17 | 18 | 17 | 21 | 17 | 22 | 16 | 25 | 16 |
| Chloride | Cl | mg/L | | 4.1 | 4.0 | 2.9 | 1.6 | | 0.50 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | 0.014 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 1.6 | 1.6 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.2 | 1.1 | 1.2 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 0.90 | 0.90 | 0.80 | 0.80 | 0.90 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.020 | 0.030 | 0.040 | | 0.040 | | | 0.030 | | | | 0.040 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.0016 | 0.0047 | 0.0045 | 0.0043 | | 0.0038 | | | 0.0027 | | | | 0.0021 | | | | 0.0016 | | | | 0.0012 |
| Arsenic | As | mg/L | **0.5** | 0.0023 | 0.0043 | 0.0046 | 0.0047 | | 0.0047 | | | 0.0038 | | | | 0.0032 | | | | 0.0029 | | | | 0.0022 |
| Barium | Ba | mg/L | | 0.00080 | 0.0011 | 0.0012 | 0.0010 | | 0.0012 | | | 0.0012 | | | | 0.0013 | | | | 0.0015 | | | | 0.0022 |
| Boron | B | mg/L | | 0.0017 | 0.0079 | 0.0060 | 0.0054 | | 0.0040 | | | 0.0018 | | | | 0.0012 | | | | 0.00050 | | | | 0.0062 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.8 | 5.3 | 4.7 | 5.0 | 5.3 | 5.3 | 4.8 | 5.0 | 5.0 | 5.3 | 5.3 | 5.1 | 5.2 | 5.5 | 5.3 | 5.6 | 5.3 | 5.4 | 5.2 | 5.1 | 5.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000014 | 0.000034 | 0.000037 | 0.000036 | | 0.000047 | | | 0.000064 | | | | 0.000054 | | | | 0.000056 | | | | 0.000052 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | 0.0030 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | 0.000070 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.45 | 0.98 | 1.0 | 1.2 | | 1.3 | | | 1.3 | | | | 1.3 | | | | 1.3 | | | | 1.1 |
| Manganese | Mn | mg/L | | 0.019 | 0.029 | 0.028 | 0.026 | | 0.027 | | | 0.025 | | | | 0.022 | | | | 0.022 | | | | 0.019 |
| Molbydenum | Mo | mg/L | | 0.00019 | 0.00034 | 0.00029 | 0.00020 | | 0.00014 | | | 0.000060 | | | | 0.000040 | | | | 0.000030 | | | | 0.000030 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00020 | 0.00040 | 0.00030 | | 0.00040 | | | 0.00020 | | | | 0.00010 | | | | 0.00010 | | | | 0.00020 |
| Potassium | K | mg/L | | 0.94 | 1.2 | 0.94 | 0.86 | | 0.70 | | | 0.54 | | | | 0.46 | | | | 0.38 | | | | 0.33 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 3.8 | 4.5 | 2.8 | 2.1 | | 1.0 | | | 0.41 | | | | 0.18 | | | | 0.10 | | | | 0.070 |
| Strontium | Sr | mg/L | | 0.0088 | 0.013 | 0.012 | 0.013 | | 0.013 | | | 0.011 | | | | 0.011 | | | | 0.011 | | | | 0.0097 |
| Tin | Sn | mg/L | | 0.0010 | 0.0011 | 0.00062 | 0.00044 | | 0.00045 | | | 0.00033 | | | | 0.00025 | | | | 0.0015 | | | | 0.00022 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000050 | 0.00014 | 0.00011 | 0.000090 | | 0.000060 | | | 0.000050 | | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.0000070 | 0.0000080 | | 0.0000080 | | | 0.0000050 | | | | 0.0000070 | | | | 0.00019 | | | | 0.000015 |
| Vanadium | V | mg/L | | 0.00030 | 0.00030 | 0.00022 | 0.00019 | | 0.00018 | | | 0.00017 | | | | 0.00017 | | | | 0.00015 | | | | 0.00017 |
| Yttrium | Y | mg/L | | 0.0000040 | 0.000011 | 0.0000090 | 0.0000080 | | 0.000015 | | | 0.0000030 | | | | 0.0000060 | | | | 0.0000070 | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0020 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-985-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 795 | 995 | 998 | 963 | 1007 | 994 | 997 | 977 | 997 | 975 | 999 | 988 | 984 | 990 | 988 | 998 | 987 | 998 | 990 | 996 | 985 |
| pH | | units | **6.0-9.5** | 8.8 | 7.8 | 7.9 | 8.0 | 7.8 | 7.8 | 7.5 | 7.7 | 7.9 | 8.0 | 7.6 | 7.7 | 7.4 | 7.6 | 7.2 | 7.5 | 7.7 | 7.4 | 7.5 | 7.5 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 106 | 103 | 86 | 67 | 45 | 42 | 38 | 41 | 42 | 52 | 31 | 6.0 | 30 | 31 | 37 | 38 | 30 | 37 | 33 | 37 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 21 | 26 | 25 | 23 | 21 | 20 | 17 | 21 | 15 | 22 | 14 | 13 | 14 | 14 | 14 | 14 | 14 | 25 | 13 | 27 | 14 |
| Chloride | Cl | mg/L | | 10 | 7.1 | 2.6 | 1.0 | | 0.30 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.14 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 23 | 24 | 13 | 7.7 | 6.3 | 5.3 | 4.6 | 4.1 | 3.4 | 4.2 | 3.1 | 2.8 | 3.0 | 2.8 | 2.9 | 2.6 | 2.7 | 2.6 | 2.3 | 2.6 | 2.6 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.070 | 0.11 | 0.090 | | 0.11 | | | 0.090 | | | | 0.080 | | | | 0.11 | | | | 0.080 |
| Antimony | Sb | mg/L | | 0.0016 | 0.0030 | 0.0029 | 0.0023 | | 0.0022 | | | 0.0015 | | | | 0.0013 | | | | 0.0011 | | | | 0.00090 |
| Arsenic | As | mg/L | **0.5** | 0.0067 | 0.010 | 0.012 | 0.012 | | 0.016 | | | 0.021 | | | | 0.025 | | | | 0.032 | | | | 0.032 |
| Barium | Ba | mg/L | | 0.0016 | 0.0021 | 0.0015 | 0.0012 | | 0.0010 | | | 0.00076 | | | | 0.00062 | | | | 0.00060 | | | | 0.00059 |
| Boron | B | mg/L | | 0.0050 | 0.013 | 0.0084 | 0.0056 | | 0.0038 | | | 0.0018 | | | | 0.0013 | | | | 0.00060 | | | | 0.0025 |
| Cadmium | Cd[3] | mg/L | | 0.0000040 | 0.0000050 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 8.4 | 9.5 | 8.3 | 6.7 | 7.2 | 6.7 | 6.4 | 7.1 | 5.8 | 7.5 | 6.2 | 5.4 | 5.4 | 5.8 | 5.5 | 5.5 | 5.8 | 5.7 | 5.1 | 5.5 | 5.5 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00010 | 0.00016 | 0.00012 | 0.00011 | | 0.00017 | | | 0.00015 | | | | 0.00026 | | | | 0.00028 | | | | 0.00030 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | 0.0040 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000040 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 1.8 | 2.4 | 1.9 | 1.4 | | 1.2 | | | 0.97 | | | | 0.91 | | | | 0.92 | | | | 0.81 |
| Manganese | Mn | mg/L | | 0.0076 | 0.011 | 0.012 | 0.012 | | 0.016 | | | 0.017 | | | | 0.017 | | | | 0.019 | | | | 0.018 |
| Molbydenum | Mo | mg/L | | 0.00069 | 0.0011 | 0.00072 | 0.00041 | | 0.00023 | | | 0.00013 | | | | 0.00010 | | | | 0.000090 | | | | 0.000080 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | 0.00040 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0014 | 0.0014 | 0.00090 | 0.00070 | | 0.00060 | | | 0.00030 | | | | 0.00020 | | | | 0.00020 | | | | 0.00010 |
| Potassium | K | mg/L | | 5.2 | 4.5 | 2.8 | 1.6 | | 1.0 | | | 0.64 | | | | 0.41 | | | | 0.31 | | | | 0.24 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 11 | 8.3 | 3.7 | 1.6 | | 0.79 | | | 0.34 | | | | 0.18 | | | | 0.13 | | | | 0.090 |
| Strontium | Sr | mg/L | | 0.048 | 0.060 | 0.049 | 0.036 | | 0.035 | | | 0.029 | | | | 0.027 | | | | 0.028 | | | | 0.026 |
| Tin | Sn | mg/L | | 0.0023 | 0.0011 | 0.00048 | 0.00032 | | 0.00033 | | | 0.00021 | | | | 0.00018 | | | | 0.00026 | | | | 0.00017 |
| Titanium | Ti | mg/L | | 0.00030 | < 0.0001 | 0.00010 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000050 | 0.00015 | 0.00012 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000060 | | | | 0.000030 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000030 | 0.00039 | 0.00027 | 0.00021 | | 0.00021 | | | 0.00025 | | | | 0.00034 | | | | 0.00036 | | | | 0.00031 |
| Vanadium | V | mg/L | | 0.00021 | 0.00016 | 0.00024 | 0.00019 | | 0.00027 | | | 0.00024 | | | | 0.00023 | | | | 0.00024 | | | | 0.00024 |
| Yttrium | Y | mg/L | | 0.000011 | 0.000011 | 0.000016 | 0.0000040 | | 0.0000080 | | | 0.0000010 | | | | 0.0000010 | | | | 0.0000050 | | | | 0.0000030 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-987-04 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 806 | 943 | 991 | 985 | 995 | 990 | 983 | 991 | 991 | 985 | 989 | 987 | 991 | 984 | 988 | 993 | 988 | 995 | 991 | 994 | 983 |
| pH | | units | **6.0-9.5** | 9.1 | 8.3 | 8.2 | 8.4 | 7.9 | 8.1 | 7.6 | 7.6 | 8.5 | 8.1 | 7.9 | 8.0 | 8.4 | 8.0 | 7.5 | 7.6 | 7.5 | 7.5 | 7.7 | 7.5 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 34 | 38 | 36 | 6.0 | 6.0 | 32 | 30 | 39 | 37 | 34 | 32 | 36 | 28 | 28 | 31 | 35 | 24 | 32 | 35 | 29 | 25 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 28 | 20 | 31 | 21 | 22 | 17 | 16 | 17 | 16 | 15 | 16 | 14 | 16 | 15 | 14 | 15 | 14 | 25 | 14 | 25 | 14 |
| Chloride | Cl | mg/L | | 1.7 | 1.8 | 1.3 | 1.1 | | 0.50 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 0.90 | 1.2 | 1.2 | 1.6 | 1.3 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.1 | 1.2 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 0.90 | 0.80 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.020 | 0.030 | 0.040 | | 0.050 | | | 0.030 | | | | 0.030 | | | | 0.030 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0017 | 0.0014 | 0.0014 | | 0.0012 | | | 0.00090 | | | | 0.00070 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | **0.5** | 0.00050 | 0.00080 | 0.00080 | 0.00060 | | 0.00050 | | | 0.00050 | | | | 0.00040 | | | | 0.00050 | | | | 0.00040 |
| Barium | Ba | mg/L | | 0.00074 | 0.00076 | 0.0010 | 0.00093 | | 0.0011 | | | 0.0011 | | | | 0.0011 | | | | 0.0010 | | | | 0.00097 |
| Boron | B | mg/L | | 0.0025 | 0.010 | 0.0067 | 0.0067 | | 0.0046 | | | 0.0028 | | | | 0.0017 | | | | 0.00090 | | | | 0.0018 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.4 | 4.9 | 5.2 | 5.3 | 5.5 | 5.2 | 4.7 | 5.1 | 5.1 | 5.0 | 5.0 | 4.7 | 5.1 | 5.1 | 4.7 | 4.8 | 4.7 | 5.0 | 4.8 | 4.3 | 4.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000011 | 0.000015 | 0.000015 | 0.000017 | | 0.000025 | | | < 0.000002 | | | | 0.000012 | | | | 0.000012 | | | | 0.000014 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | 0.0080 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.32 | 0.70 | 0.79 | 0.97 | | 0.86 | | | 0.88 | | | | 0.77 | | | | 0.77 | | | | 0.69 |
| Manganese | Mn | mg/L | | 0.015 | 0.020 | 0.019 | 0.019 | | 0.023 | | | 0.022 | | | | 0.024 | | | | 0.023 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.000090 | 0.00018 | 0.00013 | 0.00010 | | 0.000080 | | | 0.000030 | | | | 0.000020 | | | | 0.000020 | | | | 0.000020 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | 0.00020 | 0.00020 | | 0.00030 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.50 | 0.74 | 0.64 | 0.63 | | 0.48 | | | 0.43 | | | | 0.33 | | | | 0.28 | | | | 0.25 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.8 | 2.2 | 1.4 | 1.3 | | 0.70 | | | 0.42 | | | | 0.20 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.0075 | 0.0094 | 0.010 | 0.011 | | 0.0091 | | | 0.0086 | | | | 0.0074 | | | | 0.0068 | | | | 0.0062 |
| Tin | Sn | mg/L | | 0.0010 | 0.00098 | 0.00059 | 0.00044 | | 0.00028 | | | 0.00014 | | | | 0.00015 | | | | 0.00012 | | | | 0.00012 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | 0.00030 |
| Tungsten | W | mg/L | | 0.00041 | 0.00062 | 0.00032 | 0.00026 | | 0.00012 | | | 0.00010 | | | | 0.000090 | | | | 0.000070 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000050 | 0.0000060 | 0.0000060 | | 0.000013 | | | 0.0000070 | | | | 0.0000030 | | | | 0.000011 | | | | 0.000011 |
| Vanadium | V | mg/L | | 0.00035 | 0.00037 | 0.00024 | 0.00021 | | 0.00016 | | | 0.00017 | | | | 0.00014 | | | | 0.00011 | | | | 0.00011 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000040 | 0.0000050 | 0.0000050 | | 0.0000040 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000030 | | | | 0.0000080 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-994-04 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 860 | 953 | 968 | 981 | 976 | 977 | 979 | 968 | 994 | 988 | 984 | 992 | 990 | 988 | 980 | 986 | 983 | 982 | 991 | 982 | 984 |
| pH | | units | **6.0-9.5** | 8.9 | 8.2 | 7.9 | 7.8 | 7.6 | 7.7 | 7.4 | 7.5 | 7.7 | 7.6 | 7.4 | 7.4 | 7.3 | 7.3 | 7.1 | 7.4 | 7.6 | 7.5 | 7.3 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 58 | 49 | 36 | 38 | 26 | 25 | 24 | 29 | 32 | 31 | 22 | 29 | 29 | 23 | 25 | 20 | 26 | 25 | 23 | 24 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 26 | 27 | 22 | 17 | 15 | 14 | 13 | 13 | 14 | 13 | 13 | 13 | 13 | 12 | 10 | 11 | 11 | 20 | 10 | 22 | 10 |
| Chloride | Cl | mg/L | | 6.2 | 1.5 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.0 | 1.0 | 0.90 | 1.0 | 0.80 | 0.90 | 0.90 | 0.80 | 0.80 | 0.80 | 0.80 | 0.90 | 0.90 | 0.90 | 0.90 | 1.0 | 0.80 | 0.90 | 0.80 | 0.80 | 0.80 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.070 | 0.060 | 0.070 | | 0.060 | | | 0.060 | | | | 0.060 | | | | 0.050 | | | | 0.050 |
| Antimony | Sb | mg/L | | 0.0060 | 0.0064 | 0.0042 | 0.0032 | | 0.0022 | | | 0.0014 | | | | 0.0011 | | | | 0.00090 | | | | 0.00070 |
| Arsenic | As | mg/L | **0.5** | 0.0061 | 0.0089 | 0.0089 | 0.0090 | | 0.0095 | | | 0.010 | | | | 0.011 | | | | 0.014 | | | | 0.014 |
| Barium | Ba | mg/L | | 0.00092 | 0.0011 | 0.0014 | 0.0017 | | 0.0019 | | | 0.0031 | | | | 0.0032 | | | | 0.0029 | | | | 0.0027 |
| Boron | B | mg/L | | 0.013 | 0.018 | 0.0096 | 0.0067 | | 0.0039 | | | 0.0020 | | | | 0.0014 | | | | 0.00060 | | | | 0.0010 |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.8 | 2.8 | 3.1 | 3.5 | 3.8 | 3.8 | 3.7 | 3.8 | 4.5 | 4.4 | 4.3 | 4.2 | 4.2 | 4.4 | 3.9 | 4.0 | 3.9 | 3.9 | 3.8 | 3.6 | 3.5 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00013 | 0.000083 | 0.000045 | 0.000041 | | 0.000044 | | | 0.000045 | | | | 0.000069 | | | | 0.000069 | | | | 0.000071 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | 0.00090 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0080 | < 0.003 | < 0.003 | 0.0040 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.19 | 0.30 | 0.39 | 0.50 | | 0.49 | | | 0.50 | | | | 0.40 | | | | 0.31 | | | | 0.24 |
| Manganese | Mn | mg/L | | 0.0075 | 0.011 | 0.011 | 0.010 | | 0.010 | | | 0.0096 | | | | 0.0082 | | | | 0.0069 | | | | 0.0059 |
| Molbydenum | Mo | mg/L | | 0.00072 | 0.00033 | 0.00012 | 0.000030 | | 0.000030 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | 0.00050 | 0.00030 | 0.00030 | | 0.00030 | | | 0.00020 | | | | 0.00020 | | | | 0.00010 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.3 | 1.5 | 1.4 | 1.4 | | 1.3 | | | 1.3 | | | | 1.2 | | | | 0.96 | | | | 0.81 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 11 | 9.2 | 4.6 | 2.7 | | 1.0 | | | 0.42 | | | | 0.17 | | | | 0.090 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.0049 | 0.0062 | 0.0077 | 0.0094 | | 0.0098 | | | 0.010 | | | | 0.0091 | | | | 0.0076 | | | | 0.0062 |
| Tin | Sn | mg/L | | 0.0013 | 0.00078 | 0.00038 | 0.00023 | | 0.00020 | | | 0.00013 | | | | 0.00017 | | | | 0.00014 | | | | 0.00010 |
| Titanium | Ti | mg/L | | 0.00040 | 0.00010 | 0.00030 | 0.00020 | | < 0.0001 | | | < 0.0001 | | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.0011 | 0.0014 | 0.00083 | 0.00055 | | 0.00026 | | | 0.00017 | | | | 0.00015 | | | | 0.00012 | | | | 0.000040 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000040 | 0.000018 | 0.0000040 | | 0.0000050 | | | 0.0000020 | | | | < 0.000001 | | | | 0.0000080 | | | | 0.0000040 |
| Vanadium | V | mg/L | | 0.0021 | 0.0016 | 0.0011 | 0.00097 | | 0.00077 | | | 0.00071 | | | | 0.00060 | | | | 0.00059 | | | | 0.00053 |
| Yttrium | Y | mg/L | | 0.0000070 | 0.0000040 | 0.0000030 | 0.0000030 | | 0.0000020 | | | < 0.000001 | | | | 0.0000030 | | | | < 0.000001 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-222-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 823 | 960 | 945 | 970 | 971 | 973 | 974 | 964 | 996 | 985 | 980 | 983 | 986 | 987 | 988 | 990 | 992 | 985 | 987 | 984 | 986 |
| pH | | units | **6.0-9.5** | 8.1 | 8.0 | 7.8 | 7.7 | 7.5 | 7.9 | 7.4 | 7.5 | 7.9 | 7.4 | 7.4 | 7.3 | 7.2 | 6.9 | 7.2 | 7.4 | 7.5 | 7.5 | 7.3 | 7.3 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 40 | 35 | 5.0 | 36 | 26 | 28 | 27 | 33 | 36 | 33 | 25 | 31 | 26 | 31 | 31 | 24 | 39 | 30 | 27 | 26 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 17 | 17 | 15 | 15 | 14 | 15 | 15 | 14 | 16 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 13 | 23 | 11 | 17 | 11 |
| Chloride | Cl | mg/L | | 0.70 | 0.30 | 0.20 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.012 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 | 1.6 | 1.7 | 1.6 | 1.5 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.1 | 1.3 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.020 | 0.030 | 0.030 | | 0.050 | | | 0.020 | | | | 0.020 | | | | 0.020 | | | | 0.010 |
| Antimony | Sb | mg/L | | 0.0019 | 0.0035 | 0.0032 | 0.0030 | | 0.0026 | | | 0.0019 | | | | 0.0014 | | | | 0.0013 | | | | 0.00090 |
| Arsenic | As | mg/L | **0.5** | 0.014 | 0.021 | 0.024 | 0.027 | | 0.032 | | | 0.029 | | | | 0.028 | | | | 0.030 | | | | 0.024 |
| Barium | Ba | mg/L | | 0.00050 | 0.00068 | 0.00057 | 0.00060 | | 0.00059 | | | 0.00054 | | | | 0.00048 | | | | 0.00039 | | | | 0.00035 |
| Boron | B | mg/L | | 0.0017 | 0.0067 | 0.0044 | 0.0040 | | 0.0027 | | | 0.0013 | | | | 0.00080 | | | | 0.00030 | | | | 0.00040 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.0 | 4.9 | 4.1 | 4.4 | 4.5 | 4.6 | 4.6 | 4.4 | 5.0 | 4.8 | 4.7 | 4.4 | 4.6 | 4.9 | 4.7 | 4.6 | 4.6 | 4.7 | 3.8 | 3.7 | 3.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000053 | 0.000086 | 0.000082 | 0.00011 | | 0.00012 | | | 0.00026 | | | | 0.00037 | | | | 0.00038 | | | | 0.00043 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00050 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0060 | 0.0090 | 0.0060 | 0.0080 | | 0.012 | | | 0.0050 | | | | 0.0030 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.63 | 1.0 | 0.97 | 0.97 | | 0.95 | | | 1.0 | | | | 0.90 | | | | 0.89 | | | | 0.74 |
| Manganese | Mn | mg/L | | 0.023 | 0.022 | 0.018 | 0.015 | | 0.014 | | | 0.018 | | | | 0.017 | | | | 0.016 | | | | 0.015 |
| Molbydenum | Mo | mg/L | | 0.00050 | 0.00069 | 0.00048 | 0.00032 | | 0.00018 | | | 0.000080 | | | | 0.000060 | | | | 0.000050 | | | | 0.000040 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00030 | 0.00030 | 0.00040 | | 0.00040 | | | 0.00030 | | | | 0.00040 | | | | 0.00030 | | | | 0.00030 |
| Potassium | K | mg/L | | 1.5 | 1.6 | 1.2 | 0.90 | | 0.65 | | | 0.46 | | | | 0.28 | | | | 0.19 | | | | 0.13 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.2 | 1.0 | 0.58 | 0.40 | | 0.21 | | | 0.13 | | | | 0.080 | | | | 0.040 | | | | 0.030 |
| Strontium | Sr | mg/L | | 0.0086 | 0.011 | 0.0096 | 0.0097 | | 0.0093 | | | 0.0093 | | | | 0.0079 | | | | 0.0073 | | | | 0.0059 |
| Tin | Sn | mg/L | | 0.0017 | 0.00095 | 0.00050 | 0.00038 | | 0.00026 | | | 0.00024 | | | | 0.00019 | | | | 0.00014 | | | | 0.00012 |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00015 | 0.00031 | 0.00023 | 0.00019 | | 0.00012 | | | 0.000070 | | | | 0.000060 | | | | 0.000060 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000038 | 0.00011 | 0.00013 | 0.00014 | | 0.00013 | | | 0.00011 | | | | 0.000090 | | | | 0.000077 | | | | 0.000070 |
| Vanadium | V | mg/L | | 0.00036 | 0.00036 | 0.00034 | 0.00031 | | 0.00030 | | | 0.00025 | | | | 0.00019 | | | | 0.00017 | | | | 0.00014 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.000011 | 0.0000090 | 0.0000080 | | 0.0000050 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000020 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-992-04 (Ultramafic) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 823 | 960 | 945 | 970 | 971 | 973 | 980 | 973 | 1006 | 982 | 989 | 983 | 988 | 987 | 978 | 998 | 997 | 982 | 983 | 998 | 989 |
| pH | | units | **6.0-9.5** | 8.1 | 8.0 | 7.8 | 7.7 | 7.5 | 7.9 | 7.9 | 7.9 | 8.7 | 8.7 | 8.4 | 8.7 | 8.4 | 7.8 | 7.9 | 8.1 | 8.6 | 7.6 | 8.4 | 7.9 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 40 | 35 | 5.0 | 36 | 26 | 28 | 51 | 54 | 47 | 47 | 37 | 7.0 | 39 | 39 | 49 | 34 | 37 | 50 | 34 | 44 | 38 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 17 | 17 | 15 | 15 | 14 | 15 | 26 | 25 | 24 | 26 | 26 | 25 | 24 | 24 | 26 | 24 | 24 | 31 | 23 | 29 | 24 |
| Chloride | Cl | mg/L | | 0.70 | 0.30 | 0.20 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.012 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 | 1.6 | 1.0 | 1.0 | 0.90 | 1.0 | 1.0 | 0.90 | 0.80 | 0.80 | 0.80 | 0.70 | 0.80 | 0.80 | 0.60 | 0.60 | 0.70 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.020 | 0.030 | 0.030 | | 0.050 | | | 0.10 | | | | 0.12 | | | | 0.12 | | | | 0.11 |
| Antimony | Sb | mg/L | | 0.0019 | 0.0035 | 0.0032 | 0.0030 | | 0.0026 | | | 0.00040 | | | | 0.00040 | | | | 0.00040 | | | | 0.00030 |
| Arsenic | As | mg/L | **0.5** | 0.014 | 0.021 | 0.024 | 0.027 | | 0.032 | | | 0.032 | | | | 0.039 | | | | 0.048 | | | | 0.042 |
| Barium | Ba | mg/L | | 0.00050 | 0.00068 | 0.00057 | 0.00060 | | 0.00059 | | | 0.0012 | | | | 0.0012 | | | | 0.0012 | | | | 0.0011 |
| Boron | B | mg/L | | 0.0017 | 0.0067 | 0.0044 | 0.0040 | | 0.0027 | | | 0.00090 | | | | 0.00070 | | | | < 0.0002 | | | | < 0.0002 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.0 | 4.9 | 4.1 | 4.4 | 4.5 | 4.6 | 6.7 | 7.1 | 6.7 | 7.0 | 7.5 | 7.1 | 7.2 | 7.6 | 7.4 | 7.0 | 7.3 | 7.8 | 7.1 | 6.7 | 7.2 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000053 | 0.000086 | 0.000082 | 0.00011 | | 0.00012 | | | 0.000062 | | | | 0.000093 | | | | 0.000088 | | | | 0.000085 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00050 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0060 | 0.0090 | 0.0060 | 0.0080 | | 0.012 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 | | | | 0.000020 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.63 | 1.0 | 0.97 | 0.97 | | 0.95 | | | 1.4 | | | | 1.5 | | | | 1.5 | | | | 1.4 |
| Manganese | Mn | mg/L | | 0.023 | 0.022 | 0.018 | 0.015 | | 0.014 | | | 0.0085 | | | | 0.0082 | | | | 0.0071 | | | | 0.0055 |
| Molbydenum | Mo | mg/L | | 0.00050 | 0.00069 | 0.00048 | 0.00032 | | 0.00018 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00030 | 0.00030 | 0.00040 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.5 | 1.6 | 1.2 | 0.90 | | 0.65 | | | 0.26 | | | | 0.22 | | | | 0.17 | | | | 0.14 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.2 | 1.0 | 0.58 | 0.40 | | 0.21 | | | 0.19 | | | | 0.11 | | | | 0.070 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.0086 | 0.011 | 0.0096 | 0.0097 | | 0.0093 | | | 0.019 | | | | 0.019 | | | | 0.018 | | | | 0.017 |
| Tin | Sn | mg/L | | 0.0017 | 0.00095 | 0.00050 | 0.00038 | | 0.00026 | | | 0.00013 | | | | 0.00012 | | | | 0.000080 | | | | 0.00013 |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00015 | 0.00031 | 0.00023 | 0.00019 | | 0.00012 | | | 0.00042 | | | | 0.00027 | | | | 0.00016 | | | | 0.000040 |
| Uranium | U | mg/L | | 0.000038 | 0.00011 | 0.00013 | 0.00014 | | 0.00013 | | | 0.0000060 | | | | < 0.000001 | | | | 0.0000060 | | | | 0.000027 |
| Vanadium | V | mg/L | | 0.00036 | 0.00036 | 0.00034 | 0.00031 | | 0.00030 | | | 0.0013 | | | | 0.0014 | | | | 0.0014 | | | | 0.0012 |
| Yttrium | Y | mg/L | | 0.0000090 | 0.000011 | 0.0000090 | 0.0000080 | | 0.0000050 | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000030 | | | | 0.0000030 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0010 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Large Column Humidity Cell Test Cycle - C-8 Wesmeg (Mafic Volcaincs) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| Leachate Volume Recovered | | mL | | 2434 | 9805 | 9556 | 9850 | 10009 | 9964 | 9964 | 9964 | 9896 | 9896 | 9896 | 9850 | 9714 | 9714 | 10100 | 9556 | 10077 | 9601 | 9896 | 10077 | 8576 |
| pH | | units | **6.0-9.5** | 8.4 | 8.3 | 8.3 | 8.3 | 8.3 | 8.1 | 8.2 | 8.1 | 8.2 | 8.1 | 8.2 | 8.1 | 8.2 | 8.2 | 8.1 | 8.1 | 8.3 | 8.1 | 8.2 | 7.9 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 253 | 343 | 232 | 208 | 190 | 171 | 155 | 196 | 179 | 166 | 129 | 154 | 112 | 146 | 144 | 140 | 132 | 140 | 127 | 135 | 130 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 116 | 128 | 100 | 92 | 85 | 84 | 72 | 70 | 66 | 61 | 61 | 55 | 56 | 56 | 51 | 51 | 51 | 49 | 45 | 50 | 45 |
| Chloride | Cl | mg/L | | 38 | 42 | 23 | 14 | | 6.9 | | | 2.1 | | | | 0.40 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.13 | 0.12 | 0.090 | 0.070 | | 0.060 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | |
| Phosphorus | P | mg/L | | 0.090 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 14 | 33 | 27 | 26 | 25 | 24 | 25 | 23 | 23 | 21 | 21 | 20 | 19 | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 16 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.34 | 0.20 | 0.21 | 0.20 | | 0.19 | | | 0.18 | | | | 0.16 | | | | 0.14 | | | | 0.15 |
| Antimony | Sb | mg/L | | 0.0060 | 0.0095 | 0.0088 | 0.010 | | 0.0072 | | | 0.0063 | | | | 0.0059 | | | | 0.0052 | | | | 0.0051 |
| Arsenic | As | mg/L | **0.5** | 0.0093 | 0.052 | 0.048 | 0.054 | | 0.061 | | | 0.066 | | | | 0.073 | | | | 0.080 | | | | 0.086 |
| Barium | Ba | mg/L | | 0.050 | 0.051 | 0.033 | 0.027 | | 0.024 | | | 0.020 | | | | 0.018 | | | | 0.018 | | | | 0.018 |
| Boron | B | mg/L | | 0.039 | 0.077 | 0.050 | 0.045 | | 0.038 | | | 0.025 | | | | 0.020 | | | | 0.015 | | | | 0.011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 10 | 12 | 12 | 13 | 13 | 13 | 13 | 14 | 14 | 14 | 13 | 13 | 12 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Chromium | Cr[2] | mg/L | | 0.00060 | 0.00080 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00012 | 0.00025 | 0.00018 | 0.00020 | | 0.00021 | | | 0.00022 | | | | 0.00023 | | | | 0.00027 | | | | 0.00030 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | 0.00050 | < 0.0005 | 0.00090 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.000030 | 0.000030 | 0.000030 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | 0.0010 | < 0.001 | | 0.0010 | | | 0.0010 | | | | 0.0010 | | | | 0.0010 | | | | 0.0010 |
| Magnesium | Mg | mg/L | | 3.9 | 9.0 | 7.9 | 7.9 | | 8.2 | | | 8.0 | | | | 6.5 | | | | 6.1 | | | | 6.0 |
| Manganese | Mn | mg/L | | 0.0056 | 0.0055 | 0.0091 | 0.0082 | | 0.0093 | | | 0.0084 | | | | 0.0077 | | | | 0.0082 | | | | 0.0081 |
| Molbydenum | Mo | mg/L | | 0.0021 | 0.0034 | 0.0019 | 0.0016 | | 0.0011 | | | 0.00071 | | | | 0.00046 | | | | 0.00045 | | | | 0.00030 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0013 | 0.0021 | 0.0014 | 0.00090 | | 0.0013 | | | 0.00070 | | | | 0.00060 | | | | 0.00060 | | | | 0.00040 |
| Potassium | K | mg/L | | 12 | 17 | 12 | 11 | | 8.8 | | | 6.8 | | | | 5.0 | | | | 4.5 | | | | 4.2 |
| Selenium | Se | mg/L | | < 0.001 | 0.0020 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0010 |
| Sodium | Na | mg/L | | 43 | 65 | 41 | 28 | | 18 | | | 8.0 | | | | 3.1 | | | | 1.7 | | | | 1.1 |
| Strontium | Sr | mg/L | | 0.040 | 0.064 | 0.055 | 0.056 | | 0.055 | | | 0.055 | | | | 0.046 | | | | 0.045 | | | | 0.045 |
| Tin | Sn | mg/L | | 0.0023 | 0.00022 | 0.00014 | 0.00010 | | 0.000080 | | | 0.00010 | | | | 0.000060 | | | | 0.000040 | | | | 0.00013 |
| Titanium | Ti | mg/L | | 0.00040 | 0.00020 | 0.00030 | 0.00010 | | 0.00010 | | | < 0.0001 | | | | 0.00020 | | | | 0.00010 | | | | 0.00010 |
| Tungsten | W | mg/L | | 0.0031 | 0.0017 | 0.0056 | 0.00067 | | 0.00086 | | | 0.00057 | | | | 0.00065 | | | | 0.00061 | | | | 0.00044 |
| Uranium | U | mg/L | | 0.000011 | 0.000066 | 0.000057 | 0.000059 | | 0.000079 | | | 0.000081 | | | | 0.00011 | | | | 0.000084 | | | | 0.000081 |
| Vanadium | V | mg/L | | 0.00068 | 0.0014 | 0.0014 | 0.0014 | | 0.0015 | | | 0.0015 | | | | 0.0015 | | | | 0.0014 | | | | 0.0014 |
| Yttrium | Y | mg/L | | 0.0000070 | 0.0000090 | 0.0000070 | 0.0000080 | | 0.000010 | | | 0.0000070 | | | | 0.0000090 | | | | 0.0000050 | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-968-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 832 | 954 | 993 | 1001 | 976 | 1000 | 989 | 987 | 989 | 989 | 987 | 986 | 979 | 988 | 986 | 995 | 992 | 989 | 994 | 991 | 991 |
| pH | | units | **6.0-9.5** | 7.6 | 7.5 | 7.4 | 7.4 | 7.4 | 7.4 | 7.2 | 7.3 | 7.2 | 7.3 | 7.0 | 7.1 | 7.0 | 7.2 | 7.0 | 7.2 | 7.2 | 6.6 | 7.1 | 6.5 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 44 | 39 | 43 | 38 | 25 | 33 | 28 | 30 | 27 | 28 | 27 | 25 | 20 | 20 | 25 | 25 | 19 | 24 | 18 | 24 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 13 | 14 | 14 | 14 | 11 | 12 | 10 | 10 | 10 | 11 | 8.0 | 9.0 | 9.0 | 9.0 | 11 | 9.0 | 9.0 | 11 | 8.0 | 11 | 8.0 |
| Chloride | Cl | mg/L | | 3.7 | 2.2 | 1.4 | 0.80 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.0 | 3.4 | 4.0 | 3.8 | 2.9 | 2.8 | 2.5 | 2.4 | 2.2 | 2.4 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.1 | 2.0 | 2.2 | 2.3 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.030 | 0.040 | 0.030 | | 0.030 | | | 0.030 | | | | 0.030 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0012 | 0.0028 | 0.0028 | 0.0027 | | 0.0023 | | | 0.0018 | | | | 0.0016 | | | | 0.0014 | | | | 0.0012 |
| Arsenic | As | mg/L | **0.5** | 0.0060 | 0.019 | 0.024 | 0.031 | | 0.035 | | | 0.040 | | | | 0.040 | | | | 0.046 | | | | 0.038 |
| Barium | Ba | mg/L | | 0.00054 | 0.00060 | 0.00070 | 0.00068 | | 0.00076 | | | 0.00054 | | | | 0.00049 | | | | 0.00042 | | | | 0.00043 |
| Boron | B | mg/L | | 0.075 | 0.13 | 0.092 | 0.074 | | 0.036 | | | 0.018 | | | | 0.0083 | | | | 0.0045 | | | | 0.0041 |
| Cadmium | Cd[3] | mg/L | | 0.000012 | 0.0000070 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.3 | 2.6 | 3.1 | 3.3 | 3.0 | 3.6 | 3.1 | 3.2 | 3.1 | 3.5 | 3.3 | 3.0 | 3.0 | 3.3 | 3.2 | 3.3 | 3.2 | 3.3 | 3.1 | 3.1 | 3.2 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000048 | 0.000075 | 0.00013 | 0.00017 | | 0.00025 | | | 0.00042 | | | | 0.00052 | | | | 0.00062 | | | | 0.00082 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | 0.00080 |
| Iron | Fe | mg/L | | 0.0060 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000020 | 0.000030 | < 0.00002 | < 0.00002 | | 0.00012 | | | < 0.00002 | | | | < 0.00002 | | | | 0.00010 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.38 | 0.60 | 0.77 | 0.84 | | 0.85 | | | 0.76 | | | | 0.69 | | | | 0.71 | | | | 0.67 |
| Manganese | Mn | mg/L | | 0.015 | 0.0082 | 0.0099 | 0.0093 | | 0.012 | | | 0.010 | | | | 0.011 | | | | 0.013 | | | | 0.017 |
| Molbydenum | Mo | mg/L | | 0.00092 | 0.0015 | 0.0012 | 0.00080 | | 0.00036 | | | 0.00018 | | | | 0.00014 | | | | 0.00012 | | | | 0.00010 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00030 | 0.00040 | 0.00050 | | 0.00050 | | | 0.00040 | | | | 0.00030 | | | | 0.00040 | | | | 0.00030 |
| Potassium | K | mg/L | | 2.5 | 2.7 | 2.2 | 1.8 | | 1.2 | | | 0.71 | | | | 0.42 | | | | 0.29 | | | | 0.20 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 4.7 | 4.3 | 2.7 | 1.9 | | 0.82 | | | 0.32 | | | | 0.14 | | | | 0.090 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.014 | 0.015 | 0.018 | 0.019 | | 0.019 | | | 0.016 | | | | 0.014 | | | | 0.015 | | | | 0.014 |
| Tin | Sn | mg/L | | 0.0021 | 0.0010 | 0.00060 | 0.00035 | | 0.00041 | | | 0.00016 | | | | 0.00017 | | | | 0.00014 | | | | 0.00012 |
| Titanium | Ti | mg/L | | 0.00010 | 0.00010 | < 0.0001 | < 0.0001 | | < 0.0001 | | | 0.00030 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00010 | 0.00043 | 0.00032 | 0.00026 | | 0.00013 | | | 0.000080 | | | | 0.000070 | | | | 0.000050 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000013 | 0.000031 | 0.000052 | 0.000078 | | 0.000096 | | | 0.00015 | | | | 0.00016 | | | | 0.00019 | | | | 0.00021 |
| Vanadium | V | mg/L | | 0.00018 | 0.00029 | 0.00017 | 0.00014 | | 0.00014 | | | 0.00017 | | | | 0.00016 | | | | 0.00014 | | | | 0.00014 |
| Yttrium | Y | mg/L | | 0.000019 | 0.0000070 | 0.0000050 | 0.0000040 | | 0.0000030 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000020 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0020 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-976-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 827 | 984 | 990 | 993 | 977 | 988 | 992 | 978 | 1000 | 987 | 977 | 995 | 985 | 987 | 989 | 989 | 988 | 981 | 988 | 966 | 984 |
| pH | | units | **6.0-9.5** | 7.8 | 7.6 | 7.5 | 7.4 | 7.4 | 7.3 | 7.4 | 7.3 | 7.2 | 7.3 | 7.3 | 7.1 | 7.1 | 7.3 | 7.1 | 7.2 | 7.3 | 6.6 | 7.1 | 7.2 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 81 | 7.0 | 41 | 71 | 24 | 29 | 28 | 21 | 26 | 25 | 25 | 25 | 29 | 22 | 22 | 24 | 33 | 23 | 16 | 21 | 19 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 20 | 16 | 16 | 12 | 12 | 11 | 11 | 14 | 10 | 10 | 10 | 10 | 10 | 11 | 9.0 | 9.0 | 14 | 9.0 | 17 | 7.0 |
| Chloride | Cl | mg/L | | 9.8 | 3.5 | 1.3 | 0.50 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.070 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.7 | 2.4 | 1.7 | 1.4 | 1.0 | 0.90 | 0.80 | 0.80 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.60 | 0.60 | 0.60 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.020 | 0.020 | 0.030 | | 0.030 | | | 0.040 | | | | 0.030 | | | | 0.020 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.0023 | 0.0074 | 0.0063 | 0.0057 | | 0.0049 | | | 0.0037 | | | | 0.0032 | | | | 0.0028 | | | | 0.0021 |
| Arsenic | As | mg/L | **0.5** | 0.015 | 0.030 | 0.033 | 0.038 | | 0.043 | | | 0.054 | | | | 0.055 | | | | 0.059 | | | | 0.039 |
| Barium | Ba | mg/L | | 0.00060 | 0.00072 | 0.00069 | 0.00062 | | 0.00063 | | | 0.00054 | | | | 0.00053 | | | | 0.00034 | | | | 0.00029 |
| Boron | B | mg/L | | 0.0088 | 0.022 | 0.013 | 0.0097 | | 0.0057 | | | 0.0031 | | | | 0.0016 | | | | 0.00060 | | | | 0.0013 |
| Cadmium | Cd[3] | mg/L | | 0.0000070 | < 0.000003 | < 0.000003 | 0.0000040 | | 0.0000030 | | | < 0.000003 | | | | 0.00021 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.7 | 3.1 | 3.1 | 3.3 | 3.3 | 3.5 | 3.4 | 3.4 | 3.6 | 3.8 | 3.6 | 3.6 | 3.4 | 3.5 | 3.4 | 3.4 | 3.4 | 3.5 | 3.3 | 3.2 | 3.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00033 | 0.00029 | 0.00019 | 0.00017 | | 0.00020 | | | 0.00023 | | | | 0.00035 | | | | 0.00040 | | | | 0.00050 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | **1.7** | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.012 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00024 | 0.000090 | 0.000030 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.10 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.30 | 0.54 | 0.59 | 0.63 | | 0.61 | | | 0.56 | | | | 0.48 | | | | 0.45 | | | | 0.38 |
| Manganese | Mn | mg/L | | 0.0063 | 0.0078 | 0.0071 | 0.0063 | | 0.0076 | | | 0.0084 | | | | 0.0089 | | | | 0.0096 | | | | 0.0098 |
| Molbydenum | Mo | mg/L | | 0.0012 | 0.0013 | 0.00077 | 0.00045 | | 0.00025 | | | 0.00013 | | | | 0.00010 | | | | 0.000090 | | | | 0.000070 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0024 | 0.0019 | 0.0011 | 0.00080 | | 0.00060 | | | 0.00040 | | | | 0.0016 | | | | 0.00030 | | | | 0.00020 |
| Potassium | K | mg/L | | 4.1 | 3.7 | 2.7 | 2.0 | | 1.1 | | | 0.66 | | | | 0.38 | | | | 0.24 | | | | 0.17 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 8.9 | 5.4 | 2.6 | 1.4 | | 0.47 | | | 0.18 | | | | 0.080 | | | | 0.050 | | | | 0.040 |
| Strontium | Sr | mg/L | | 0.011 | 0.016 | 0.016 | 0.016 | | 0.016 | | | 0.015 | | | | 0.014 | | | | 0.013 | | | | 0.011 |
| Tin | Sn | mg/L | | 0.0010 | 0.0010 | 0.00056 | 0.00035 | | 0.00030 | | | 0.00015 | | | | 0.0025 | | | | 0.00018 | | | | 0.00014 |
| Titanium | Ti | mg/L | | 0.00050 | < 0.0001 | 0.00020 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000080 | 0.00028 | 0.00020 | 0.00018 | | 0.000080 | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.0000040 | 0.000030 | 0.000031 | 0.000046 | | 0.000088 | | | 0.00016 | | | | 0.00022 | | | | 0.00023 | | | | 0.00026 |
| Vanadium | V | mg/L | | 0.00029 | 0.00026 | 0.00019 | 0.00017 | | 0.00017 | | | 0.00021 | | | | 0.00021 | | | | 0.00018 | | | | 0.00014 |
| Yttrium | Y | mg/L | | 0.000037 | 0.000011 | 0.000014 | 0.0000040 | | 0.0000010 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | **1.1** | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-993-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 820 | 976 | 990 | 988 | 986 | 973 | 986 | 985 | 991 | 990 | 988 | 988 | 989 | 987 | 989 | 988 | 987 | 989 | 988 | 989 | 988 |
| pH | | units | **6.0-9.5** | 8.1 | 7.7 | 7.6 | 7.6 | 7.4 | 7.3 | 7.2 | 7.3 | 7.2 | 7.2 | 7.2 | 7.1 | 7.1 | 7.2 | 7.0 | 7.2 | 7.2 | 6.6 | 7.1 | 6.5 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 40 | 39 | 41 | 40 | 23 | 29 | 28 | 22 | 26 | 24 | 24 | 23 | 18 | 22 | 21 | 17 | 24 | 22 | 22 | 21 | 17 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 17 | 15 | 16 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 95 | 9.0 | 9.0 | 11 | 9.0 | 9.0 | 16 | 8.0 | 12 | 9.0 |
| Chloride | Cl | mg/L | | 2.5 | 1.2 | 0.90 | 0.50 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 2.6 | 3.0 | 2.6 | 1.9 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.0 | 1.1 | 1.0 | 1.0 | 1.0 | 0.90 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.060 | 0.020 | < 0.01 | 0.030 | | 0.020 | | | 0.020 | | | | 0.020 | | | | 0.020 | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00090 | 0.0016 | 0.0015 | 0.0012 | | 0.0011 | | | 0.00090 | | | | 0.00070 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | **0.5** | 0.011 | 0.020 | 0.021 | 0.023 | | 0.025 | | | 0.031 | | | | 0.030 | | | | 0.035 | | | | 0.028 |
| Barium | Ba | mg/L | | 0.00049 | 0.00066 | 0.00080 | 0.00072 | | 0.00063 | | | 0.00057 | | | | 0.00047 | | | | 0.00039 | | | | 0.00038 |
| Boron | B | mg/L | | 0.0059 | 0.015 | 0.011 | 0.0096 | | 0.0057 | | | 0.0034 | | | | 0.0017 | | | | 0.00070 | | | | 0.0016 |
| Cadmium | Cd[3] | mg/L | | 0.000015 | < 0.000003 | 0.0000040 | 0.0000060 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.1 | 3.5 | 3.3 | 3.6 | 3.1 | 3.1 | 3.2 | 3.2 | 3.2 | 3.1 | 3.1 | 2.9 | 2.9 | 3.1 | 3.0 | 3.0 | 3.0 | 3.2 | 3.1 | 3.0 | 3.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00016 | 0.00014 | 0.00013 | 0.00054 | | 0.00016 | | | 0.00020 | | | | 0.00034 | | | | 0.00036 | | | | 0.00040 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0050 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00010 | 0.000040 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.00061 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.23 | 0.51 | 0.65 | 0.68 | | 0.62 | | | 0.65 | | | | 0.57 | | | | 0.57 | | | | 0.52 |
| Manganese | Mn | mg/L | | 0.014 | 0.020 | 0.017 | 0.018 | | 0.016 | | | 0.015 | | | | 0.014 | | | | 0.015 | | | | 0.016 |
| Molbydenum | Mo | mg/L | | 0.0013 | 0.0020 | 0.0018 | 0.0013 | | 0.00067 | | | 0.00040 | | | | 0.00022 | | | | 0.00016 | | | | 0.00012 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0014 | 0.0010 | 0.00090 | 0.0033 | | 0.00050 | | | 0.00030 | | | | 0.00020 | | | | 0.00020 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.4 | 2.5 | 2.2 | 1.8 | | 1.1 | | | 0.76 | | | | 0.43 | | | | 0.29 | | | | 0.20 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 4.6 | 3.8 | 2.7 | 1.9 | | 0.81 | | | 0.35 | | | | 0.14 | | | | 0.090 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.012 | 0.017 | 0.019 | 0.019 | | 0.016 | | | 0.015 | | | | 0.013 | | | | 0.013 | | | | 0.013 |
| Tin | Sn | mg/L | | 0.0018 | 0.00087 | 0.00051 | 0.00034 | | 0.00029 | | | 0.00014 | | | | 0.00022 | | | | 0.00015 | | | | 0.00015 |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000070 | 0.00026 | 0.00020 | 0.00019 | | 0.000080 | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000012 | 0.000053 | 0.00011 | 0.00013 | | 0.00016 | | | 0.00024 | | | | 0.00034 | | | | 0.00040 | | | | 0.00037 |
| Vanadium | V | mg/L | | 0.00035 | 0.00029 | 0.00022 | 0.00020 | | 0.00022 | | | 0.00022 | | | | 0.00022 | | | | 0.00020 | | | | 0.00019 |
| Yttrium | Y | mg/L | | 0.000022 | 0.0000080 | 0.0000040 | 0.0000040 | | 0.0000030 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | 0.025 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum,
hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-970-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 851 | 980 | 990 | 989 | 992 | 994 | 975 | 1001 | 994 | 972 | 987 | 999 | 986 | 988 | 990 | 993 | 988 | 988 | 1000 | 991 | 990 |
| pH | | units | **6.0-9.5** | 8.5 | 8.0 | 8.6 | 7.4 | 8.1 | 8.0 | 7.9 | 7.7 | 7.7 | 7.6 | 7.6 | 7.5 | 7.5 | 7.4 | 7.3 | 7.5 | 7.5 | 6.8 | 7.4 | 6.7 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 69 | 8.0 | 49 | 35 | 34 | 34 | 5.0 | 32 | 39 | 38 | 37 | 40 | 30 | 30 | 36 | 38 | 38 | 35 | 46 | 36 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 21 | 21 | 21 | 12 | 21 | 20 | 17 | 18 | 16 | 16 | 17 | 16 | 16 | 15 | 17 | 16 | 15 | 24 | 15 | 25 | 14 |
| Chloride | Cl | mg/L | | 9.8 | 4.9 | 1.8 | 0.70 | | 0.20 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.017 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.8 | 3.8 | 2.8 | 2.3 | 1.8 | 1.8 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 | 1.6 | 1.8 | 1.8 | 1.8 | 2.0 | 1.8 | 1.7 | 1.6 | 1.8 | 1.9 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.020 | 0.030 | 0.040 | 0.030 | | 0.040 | | | 0.030 | | | | 0.030 | | | | 0.030 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.00030 | 0.00040 | 0.00030 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | 0.00020 | | | | 0.00020 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0012 | 0.0015 | 0.0016 | 0.0011 | | 0.0012 | | | 0.0012 | | | | 0.0011 | | | | 0.0011 | | | | 0.00090 |
| Barium | Ba | mg/L | | 0.0021 | 0.0029 | 0.0025 | 0.0027 | | 0.0028 | | | 0.0027 | | | | 0.0027 | | | | 0.0026 | | | | 0.0022 |
| Boron | B | mg/L | | 0.083 | 0.12 | 0.064 | 0.043 | | 0.021 | | | 0.011 | | | | 0.0062 | | | | 0.0037 | | | | 0.0033 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000070 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 9.0 | 7.9 | 6.4 | 7.0 | 6.7 | 6.7 | 6.0 | 6.5 | 6.2 | 6.3 | 6.9 | 6.5 | 6.2 | 6.4 | 6.3 | 6.3 | 6.2 | 6.4 | 6.0 | 5.8 | 6.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000041 | 0.000030 | 0.000030 | 0.000027 | | 0.000030 | | | < 0.000002 | | | | 0.000016 | | | | 0.000016 | | | | 0.000020 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0030 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.00014 | | | | < 0.00002 | | | | 0.000020 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.81 | 0.80 | 0.59 | 0.59 | | 0.51 | | | 0.44 | | | | 0.43 | | | | 0.43 | | | | 0.40 |
| Manganese | Mn | mg/L | | 0.0039 | 0.0063 | 0.0063 | 0.0071 | | 0.0075 | | | 0.0069 | | | | 0.0069 | | | | 0.0063 | | | | 0.0063 |
| Molbydenum | Mo | mg/L | | 0.00039 | 0.00061 | 0.00039 | 0.00023 | | 0.00019 | | | 0.000090 | | | | 0.000070 | | | | 0.000080 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00010 | 0.00010 | 0.00030 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.4 | 1.6 | 1.1 | 1.0 | | 0.89 | | | 0.80 | | | | 0.71 | | | | 0.60 | | | | 0.50 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 4.2 | 2.7 | 1.1 | 0.62 | | 0.24 | | | 0.10 | | | | 0.050 | | | | 0.030 | | | | 0.020 |
| Strontium | Sr | mg/L | | 0.058 | 0.060 | 0.047 | 0.049 | | 0.045 | | | 0.041 | | | | 0.040 | | | | 0.039 | | | | 0.037 |
| Tin | Sn | mg/L | | 0.0016 | 0.0013 | 0.00067 | 0.00042 | | 0.00031 | | | 0.00016 | | | | 0.00019 | | | | 0.00017 | | | | 0.00017 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000070 | 0.00016 | 0.00012 | 0.000080 | | 0.000040 | | | 0.000030 | | | | 0.000040 | | | | 0.000040 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.00025 | 0.00071 | 0.00075 | 0.00089 | | 0.00093 | | | 0.00084 | | | | 0.00084 | | | | 0.00071 | | | | 0.00058 |
| Vanadium | V | mg/L | | 0.000090 | 0.00011 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000030 | 0.0000030 | 0.0000040 | | 0.0000030 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000020 | | | | 0.0000020 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0020 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-972A-03 (Iron Formation) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 828 | 986 | 1001 | 991 | 986 | 986 | 990 | 986 | 978 | 991 | 995 | 987 | 989 | 989 | 989 | 984 | 994 | 992 | 998 | 992 | 990 |
| pH | | units | **6.0-9.5** | 8.0 | 7.8 | 7.8 | 7.9 | 7.7 | 8.0 | 7.4 | 7.6 | 7.3 | 7.4 | 7.2 | 7.3 | 7.2 | 7.5 | 7.1 | 7.4 | 7.4 | 6.8 | 7.2 | 7.3 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 39 | 51 | 46 | 63 | 26 | 34 | 30 | 33 | 29 | 30 | 29 | 28 | 24 | 22 | 28 | 22 | 21 | 28 | 21 | 27 | 22 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 20 | 17 | 25 | 15 | 14 | 13 | 13 | 12 | 13 | 12 | 12 | 12 | 12 | 13 | 12 | 11 | 13 | 11 | 18 | 11 |
| Chloride | Cl | mg/L | | 3.6 | 4.9 | 1.9 | 0.70 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.0 | 3.2 | 2.4 | 2.0 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 1.2 | 1.1 | 1.1 | 1.2 | 1.1 | 1.2 | 1.3 | 1.1 | 1.1 | 1.1 | 1.2 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | < 0.01 | 0.020 | 0.020 | | 0.020 | | | 0.020 | | | | 0.020 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00030 | 0.00040 | 0.00030 | < 0.0002 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | | 0.00020 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.00050 | 0.00070 | 0.00080 | 0.00060 | | 0.00070 | | | 0.00070 | | | | 0.00060 | | | | 0.00070 | | | | 0.00060 |
| Barium | Ba | mg/L | | 0.00084 | 0.0016 | 0.0013 | 0.0010 | | 0.00098 | | | 0.00085 | | | | 0.00085 | | | | 0.00081 | | | | 0.00083 |
| Boron | B | mg/L | | 0.037 | 0.097 | 0.058 | 0.039 | | 0.017 | | | 0.0081 | | | | 0.0044 | | | | 0.0024 | | | | 0.0026 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 5.9 | 7.6 | 6.5 | 6.2 | 5.4 | 5.4 | 4.8 | 4.9 | 4.7 | 5.3 | 5.1 | 4.7 | 4.8 | 4.9 | 4.8 | 4.9 | 4.8 | 4.8 | 4.5 | 4.4 | 4.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000054 | 0.000097 | 0.000053 | 0.000042 | | 0.000039 | | | 0.0000090 | | | | 0.000029 | | | | 0.000026 | | | | 0.000028 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | 0.00050 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0060 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000040 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.40 | 0.89 | 0.67 | 0.55 | | 0.42 | | | 0.36 | | | | 0.34 | | | | 0.30 | | | | 0.29 |
| Manganese | Mn | mg/L | | 0.011 | 0.015 | 0.014 | 0.014 | | 0.012 | | | 0.0089 | | | | 0.0082 | | | | 0.0074 | | | | 0.0070 |
| Molbydenum | Mo | mg/L | | 0.00044 | 0.00098 | 0.00061 | 0.00038 | | 0.00022 | | | 0.00011 | | | | 0.00010 | | | | 0.000090 | | | | 0.000080 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00060 | 0.00010 | 0.00030 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.79 | 1.1 | 0.72 | 0.50 | | 0.34 | | | 0.28 | | | | 0.25 | | | | 0.20 | | | | 0.19 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.9 | 2.7 | 1.1 | 0.59 | | 0.21 | | | 0.090 | | | | 0.040 | | | | 0.020 | | | | 0.020 |
| Strontium | Sr | mg/L | | 0.029 | 0.048 | 0.041 | 0.037 | | 0.032 | | | 0.029 | | | | 0.030 | | | | 0.028 | | | | 0.028 |
| Tin | Sn | mg/L | | 0.00076 | 0.00060 | 0.00057 | 0.00048 | | 0.00032 | | | 0.00024 | | | | 0.00035 | | | | 0.00025 | | | | 0.00021 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000040 | 0.00014 | 0.00012 | 0.00013 | | 0.000060 | | | 0.000030 | | | | 0.000050 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000017 | 0.00022 | 0.00023 | 0.00022 | | 0.00021 | | | 0.00021 | | | | 0.00021 | | | | 0.00018 | | | | 0.00018 |
| Vanadium | V | mg/L | | 0.000040 | 0.00012 | 0.000040 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.0000040 | 0.000011 | 0.0000030 | 0.0000030 | | 0.0000020 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M96-16-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 836 | 985 | 991 | 984 | 977 | 990 | 992 | 987 | 992 | 988 | 988 | 983 | 988 | 990 | 988 | 993 | 989 | 979 | 986 | 989 | 990 |
| pH | | units | **6.0-9.5** | 8.9 | 8.1 | 8.2 | 7.8 | 7.8 | 7.9 | 7.5 | 7.5 | 7.4 | 7.5 | 7.5 | 7.3 | 7.3 | 7.2 | 7.2 | 7.5 | 7.5 | 6.7 | 7.3 | 6.6 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 50 | 53 | 50 | 47 | 28 | 37 | 34 | 25 | 30 | 32 | 24 | 30 | 34 | 31 | 31 | 23 | 23 | 27 | 21 | 29 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 26 | 27 | 23 | 21 | 16 | 15 | 15 | 14 | 12 | 14 | 13 | 12 | 13 | 13 | 14 | 13 | 12 | 19 | 11 | 23 | 12 |
| Chloride | Cl | mg/L | | 1.0 | 0.50 | 0.20 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.8 | 4.6 | 3.1 | 2.4 | 1.9 | 1.7 | 1.6 | 1.7 | 1.7 | 1.6 | 1.6 | 1.7 | 1.6 | 1.5 | 1.6 | 1.5 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.020 | 0.040 | 0.040 | | 0.030 | | | 0.040 | | | | 0.030 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.0016 | 0.0052 | 0.0044 | 0.0040 | | 0.0031 | | | 0.0023 | | | | 0.0017 | | | | 0.0013 | | | | 0.0011 |
| Arsenic | As | mg/L | **0.5** | 0.014 | 0.020 | 0.019 | 0.017 | | 0.016 | | | 0.020 | | | | 0.018 | | | | 0.019 | | | | 0.019 |
| Barium | Ba | mg/L | | 0.00083 | 0.0010 | 0.00092 | 0.00094 | | 0.0012 | | | 0.00094 | | | | 0.0010 | | | | 0.0010 | | | | 0.00083 |
| Boron | B | mg/L | | 0.010 | 0.022 | 0.013 | 0.010 | | 0.0059 | | | 0.0031 | | | | 0.0018 | | | | 0.00070 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | 0.000010 | < 0.000003 | < 0.000003 | 0.0000030 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.8 | 4.0 | 3.9 | 4.0 | 4.3 | 4.9 | 4.5 | 4.5 | 4.4 | 5.1 | 4.8 | 4.7 | 4.9 | 5.1 | 5.0 | 5.1 | 4.9 | 4.8 | 4.4 | 4.8 | 5.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00012 | 0.000078 | 0.000064 | 0.000098 | | 0.00011 | | | 0.000052 | | | | 0.00011 | | | | 0.00013 | | | | 0.00015 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | 0.00050 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | 0.0043 |
| Iron | Fe | mg/L | | 0.028 | 0.0060 | 0.0040 | < 0.003 | | < 0.003 | | | < 0.003 | | | | 0.0050 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000050 | 0.000030 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.24 | 0.36 | 0.39 | 0.43 | | 0.51 | | | 0.48 | | | | 0.46 | | | | 0.39 | | | | 0.34 |
| Manganese | Mn | mg/L | | 0.019 | 0.025 | 0.025 | 0.024 | | 0.028 | | | 0.017 | | | | 0.018 | | | | 0.016 | | | | 0.013 |
| Molbydenum | Mo | mg/L | | 0.00026 | 0.00033 | 0.00019 | 0.00010 | | 0.000070 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | 0.000010 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00050 | 0.00060 | 0.00040 | 0.00040 | | 0.00040 | | | 0.00020 | | | | 0.00030 | | | | 0.00020 | | | | 0.00020 |
| Potassium | K | mg/L | | 1.5 | 1.7 | 1.4 | 1.1 | | 0.82 | | | 0.55 | | | | 0.36 | | | | 0.23 | | | | 0.18 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 6.6 | 8.7 | 5.0 | 3.0 | | 1.2 | | | 0.39 | | | | 0.15 | | | | 0.070 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.0043 | 0.0062 | 0.0067 | 0.0071 | | 0.0087 | | | 0.0081 | | | | 0.0084 | | | | 0.0077 | | | | 0.0073 |
| Tin | Sn | mg/L | | 0.0025 | 0.00084 | 0.00050 | 0.00037 | | 0.00035 | | | 0.00015 | | | | 0.00023 | | | | 0.00016 | | | | 0.00016 |
| Titanium | Ti | mg/L | | 0.00090 | 0.00030 | 0.00020 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00019 | 0.00055 | 0.00039 | 0.00030 | | 0.00015 | | | 0.00012 | | | | 0.000080 | | | | 0.000050 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000049 | 0.00028 | 0.00022 | 0.00018 | | 0.00017 | | | 0.00015 | | | | 0.00016 | | | | 0.00033 | | | | 0.00014 |
| Vanadium | V | mg/L | | 0.0029 | 0.0022 | 0.0018 | 0.0015 | | 0.0012 | | | 0.0013 | | | | 0.00099 | | | | 0.00088 | | | | 0.00078 |
| Yttrium | Y | mg/L | | 0.000031 | 0.000026 | 0.000019 | 0.000011 | | 0.0000080 | | | < 0.000001 | | | | 0.0000060 | | | | 0.0000040 | | | | 0.0000040 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0020 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-238-02 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 842 | 984 | 995 | 988 | 992 | 1001 | 980 | 991 | 996 | 986 | 986 | 990 | 983 | 989 | 990 | 994 | 994 | 989 | 990 | 992 | 991 |
| pH | | units | 6.0-9.5 | 7.9 | 7.7 | 7.8 | 7.6 | 7.5 | 7.3 | 7.3 | 7.4 | 7.3 | 7.2 | 7.2 | 7.1 | 7.1 | 7.3 | 7.1 | 7.3 | 7.2 | 6.8 | 7.3 | 6.6 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 48 | 6.0 | 39 | 34 | 25 | 33 | 30 | 26 | 32 | 30 | 26 | 28 | 27 | 26 | 26 | 20 | 27 | 25 | 20 | 26 | 20 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 21 | 16 | 14 | 12 | 13 | 11 | 12 | 11 | 11 | 11 | 10 | 9.0 | 10 | 11 | 10 | 9.0 | 14 | 9.0 | 14 | 9.0 |
| Chloride | Cl | mg/L | | 0.60 | 0.40 | < 0.2 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 4.2 | 4.1 | 2.6 | 2.2 | 2.0 | 2.9 | 3.0 | 3.3 | 3.0 | 2.8 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2.0 | 1.9 | 2.1 | 2.0 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.060 | 0.020 | 0.050 | 0.040 | | 0.040 | | | 0.040 | | | | 0.040 | | | | 0.020 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00060 | 0.0012 | 0.0010 | 0.00090 | | 0.00080 | | | 0.00070 | | | | 0.00060 | | | | 0.00070 | | | | 0.00040 |
| Arsenic | As | mg/L | 0.5 | 0.0030 | 0.0047 | 0.0048 | 0.0044 | | 0.0043 | | | 0.0047 | | | | 0.0036 | | | | 0.0042 | | | | 0.0037 |
| Barium | Ba | mg/L | | 0.0016 | 0.0017 | 0.0015 | 0.0014 | | 0.0015 | | | 0.0014 | | | | 0.0013 | | | | 0.0014 | | | | 0.0013 |
| Boron | B | mg/L | | 0.0096 | 0.027 | 0.016 | 0.012 | | 0.0065 | | | 0.0036 | | | | 0.0018 | | | | 0.00090 | | | | 0.00090 |
| Cadmium | Cd[3] | mg/L | | 0.000015 | < 0.000003 | < 0.000003 | 0.0000080 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.2 | 5.5 | 4.7 | 4.6 | 4.3 | 4.5 | 4.2 | 4.7 | 4.6 | 4.7 | 4.3 | 4.1 | 4.1 | 4.3 | 4.0 | 4.3 | 4.1 | 4.2 | 3.9 | 4.1 | 4.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000049 | 0.000043 | 0.000031 | 0.000030 | | 0.000039 | | | 0.0000020 | | | | 0.000026 | | | | 0.000033 | | | | 0.000030 |
| Copper | Cu[3] | mg/L | 0.3 | 0.0010 | 0.00070 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.017 | 0.0040 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.46 | 0.76 | 0.68 | 0.67 | | 0.58 | | | 0.53 | | | | 0.36 | | | | 0.29 | | | | 0.25 |
| Manganese | Mn | mg/L | | 0.033 | 0.018 | 0.014 | 0.010 | | 0.0080 | | | 0.0045 | | | | 0.0038 | | | | 0.0041 | | | | 0.0042 |
| Molbydenum | Mo | mg/L | | 0.00048 | 0.00084 | 0.00041 | 0.00022 | | 0.00013 | | | 0.000070 | | | | 0.000070 | | | | 0.000080 | | | | 0.000090 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00040 | 0.00020 | 0.00030 | 0.00020 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.3 | 1.6 | 1.2 | 1.0 | | 0.79 | | | 0.75 | | | | 0.56 | | | | 0.45 | | | | 0.39 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 2.4 | 2.5 | 1.3 | 0.82 | | 0.39 | | | 0.22 | | | | 0.12 | | | | 0.090 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.019 | 0.020 | 0.018 | 0.018 | | 0.017 | | | 0.016 | | | | 0.014 | | | | 0.014 | | | | 0.013 |
| Tin | Sn | mg/L | | 0.0026 | 0.0012 | 0.00063 | 0.00046 | | 0.00036 | | | 0.00018 | | | | 0.00018 | | | | 0.00014 | | | | 0.00011 |
| Titanium | Ti | mg/L | | 0.0013 | 0.00030 | 0.00040 | 0.00020 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000090 | 0.00023 | 0.00014 | 0.00010 | | 0.000050 | | | < 0.00003 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000021 | 0.00025 | 0.00022 | 0.00026 | | 0.00034 | | | 0.00039 | | | | 0.00036 | | | | 0.00035 | | | | 0.00031 |
| Vanadium | V | mg/L | | 0.00085 | 0.00092 | 0.00082 | 0.00077 | | 0.00066 | | | 0.00074 | | | | 0.00060 | | | | 0.00058 | | | | 0.00054 |
| Yttrium | Y | mg/L | | 0.000020 | 0.000012 | 0.000010 | 0.0000060 | | 0.0000020 | | | < 0.000001 | | | | < 0.000001 | | | | 0.0000010 | | | | 0.0000010 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Large Column Humidity Cell Test Cycle - C-9 Wolf (25% MV, 13% IF, 62% GW) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 1072 | 4928 | 4860 | 4996 | 4883 | 4996 | 4973 | 4951 | 4883 | 4905 | 4883 | 4837 | 4816 | 4816 | 4952 | 4725 | 4975 | 4703 | 4883 | 4928 | 4837 |
| pH | | units | 6.0-9.5 | 8.3 | 8.2 | 8.2 | 8.2 | 8.2 | 8.2 | 8.1 | 8.1 | 8.1 | 8.1 | 8.1 | 8.0 | 8.1 | 8.0 | 8.0 | 7.9 | 8.0 | 8.1 | 8.1 | 7.8 | 8.0 |
| Conductivity | | mg/L as CaCO3 | | 243 | 319 | 221 | 202 | 175 | 161 | 146 | 188 | 178 | 171 | 139 | 180 | 201 | 269 | 256 | 256 | 249 | 253 | 176 | 189 | 180 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 134 | 93 | 76 | 68 | 67 | 62 | 58 | 59 | 60 | 54 | 54 | 53 | 71 | 70 | 63 | 63 | 62 | 68 | 50 | 43 | 41 |
| Chloride | Cl | mg/L | | 25 | 28 | 16 | 10 | | 5.2 | | | 1.1 | | | | 0.60 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | 0.22 | 0.19 | 0.14 | 0.13 | | 0.11 | | | 0.090 | | | | < 0.06 | | | | < 0.06 | | | | |
| Phosphorus | P | mg/L | | 0.14 | 0.0090 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 35 | 70 | 50 | 44 | 38 | 33 | 31 | 30 | 31 | 29 | 30 | 34 | 70 | 68 | 63 | 64 | 63 | 63 | 35 | 43 | 39 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.25 | 0.13 | 0.14 | 0.15 | | 0.16 | | | 0.16 | | | | 0.10 | | | | 0.090 | | | | 0.14 |
| Antimony | Sb | mg/L | | 0.029 | 0.055 | 0.036 | 0.036 | | 0.021 | | | 0.015 | | | | 0.0034 | | | | 0.0029 | | | | 0.0084 |
| Arsenic | As | mg/L | 0.5 | 0.012 | 0.031 | 0.036 | 0.042 | | 0.050 | | | 0.059 | | | | 0.0086 | | | | 0.0085 | | | | 0.059 |
| Barium | Ba | mg/L | | 0.0040 | 0.0067 | 0.0051 | 0.0045 | | 0.0042 | | | 0.0040 | | | | 0.0052 | | | | 0.0055 | | | | 0.0047 |
| Boron | B | mg/L | | 0.40 | 0.62 | 0.38 | 0.32 | | 0.22 | | | 0.12 | | | | 0.024 | | | | 0.019 | | | | 0.026 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000050 | 0.0000050 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 13 | 18 | 16 | 16 | 17 | 16 | 16 | 17 | 17 | 17 | 18 | 19 | 29 | 30 | 29 | 30 | 29 | 29 | 21 | 23 | 22 |
| Chromium | Cr[2] | mg/L | | 0.00060 | 0.00060 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00020 | 0.00042 | 0.00031 | 0.00031 | | 0.00030 | | | 0.00034 | | | | 0.00028 | | | | 0.00030 | | | | 0.00063 |
| Copper | Cu[3] | mg/L | 0.3 | 0.00090 | 0.00080 | 0.00080 | 0.0010 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | 0.00060 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.011 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | 0.018 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000060 | 0.00021 | 0.00011 | 0.000050 | | 0.000030 | | | 0.000020 | | | | < 0.00002 | | | | < 0.00002 | | | | 0.000060 |
| Lithium | Li | mg/L | | 0.0010 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | | 0.0020 | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 2.6 | 7.1 | 6.2 | 6.1 | | 5.6 | | | 5.4 | | | | 10 | | | | 9.9 | | | | 5.2 |
| Manganese | Mn | mg/L | | 0.0087 | 0.0092 | 0.011 | 0.0098 | | 0.011 | | | 0.012 | | | | 0.025 | | | | 0.023 | | | | 0.019 |
| Molbydenum | Mo | mg/L | | 0.0043 | 0.0080 | 0.0049 | 0.0042 | | 0.0026 | | | 0.0018 | | | | 0.00053 | | | | 0.00081 | | | | 0.0011 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0022 | 0.0039 | 0.0024 | 0.0015 | | 0.0015 | | | 0.0010 | | | | 0.00060 | | | | 0.00070 | | | | 0.00070 |
| Potassium | K | mg/L | | 20 | 27 | 18 | 16 | | 12 | | | 9.7 | | | | 7.0 | | | | 6.4 | | | | 6.6 |
| Selenium | Se | mg/L | | < 0.001 | 0.0020 | 0.0010 | 0.0020 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | 0.0020 |
| Sodium | Na | mg/L | | 34 | 43 | 28 | 19 | | 11 | | | 4.8 | | | | 3.4 | | | | 2.0 | | | | 0.82 |
| Strontium | Sr | mg/L | | 0.056 | 0.11 | 0.093 | 0.091 | | 0.087 | | | 0.088 | | | | 0.057 | | | | 0.054 | | | | 0.095 |
| Tin | Sn | mg/L | | 0.0022 | 0.00050 | 0.00032 | 0.00023 | | 0.00018 | | | 0.00017 | | | | 0.00020 | | | | 0.00020 | | | | 0.00015 |
| Titanium | Ti | mg/L | | 0.0011 | 0.00030 | 0.00040 | 0.00020 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | 0.00010 |
| Tungsten | W | mg/L | | 0.0014 | 0.0012 | 0.0054 | 0.00048 | | 0.00066 | | | 0.00030 | | | | 0.00011 | | | | 0.000090 | | | | 0.00022 |
| Uranium | U | mg/L | | 0.00012 | 0.0012 | 0.00089 | 0.00093 | | 0.00092 | | | 0.00095 | | | | 0.00041 | | | | 0.00017 | | | | 0.0017 |
| Vanadium | V | mg/L | | 0.00067 | 0.00085 | 0.00085 | 0.00086 | | 0.00095 | | | 0.00092 | | | | 0.00038 | | | | 0.00028 | | | | 0.00063 |
| Yttrium | Y | mg/L | | 0.000032 | 0.000017 | 0.000012 | 0.000011 | | 0.0000080 | | | 0.0000080 | | | | 0.000022 | | | | 0.000012 | | | | 0.0000080 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | 0.0010 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-409-05 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-95-02 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M06-625-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M06-623-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M03-508-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M96-74-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - LODE1000 (Ore) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.6 | 7.6 | 7.4 | 7.5 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 2298 | 4338 | 3570 | 670 | 200 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 0 | 27 | 4.0 | 3.0 |
| Chloride | Cl | mg/L | | 340 | 700 | 541 | 40 | -20 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.0040 | 0.0070 | 0.021 | 0.052 | 0.098 |
| Sulphate | SO4 | mg/L | | 302 | 492 | 466 | 202 | 149 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.32 | 0.032 | 0.20 | 0.97 | 1.7 |
| Antimony | Sb | mg/L | | 0.0015 | 0.0040 | 0.0019 | 0.0014 | 0.0016 |
| Arsenic | As | mg/L | **0.5** | 0.065 | 0.049 | 0.19 | 0.30 | 0.49 |
| Barium | Ba | mg/L | | 0 | 0.026 | 0.024 | -0.042 | -0.090 |
| Boron | B | mg/L | | 0.070 | 0.16 | 0.10 | 0.037 | 0.046 |
| Cadmium | Cd[3] | mg/L | | 0.00070 | 0.00070 | 0.00090 | 0.00015 | 0.00018 |
| Calcium | Ca | mg/L | | 217 | 437 | 363 | 72 | 40 |
| Chromium | Cr[2] | mg/L | | 0 | 0 | 0 | 0 | 0.00030 |
| Cobalt | Co | mg/L | | 0.0054 | 0.0095 | 0.015 | 0.0038 | 0.0053 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0040 | 0.0020 | 0 | 0.0096 | 0.0096 |
| Iron | Fe | mg/L | | 0.20 | 0 | 0.57 | 3.0 | 3.2 |
| Lead | Pb[3] | mg/L | **0.2** | 0.020 | 0.0051 | 0.020 | 0.093 | 0.098 |
| Lithium | Li | mg/L | | 0.026 | 0.053 | 0.036 | 0.0100 | -0.0040 |
| Magnesium | Mg | mg/L | | 55 | 113 | 129 | 17 | 14 |
| Manganese | Mn | mg/L | | 0.42 | 0.67 | 0.54 | 0.12 | 0.12 |
| Molbydenum | Mo | mg/L | | 0.0090 | 0.027 | 0.018 | 0.0088 | 0.014 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.023 | 0.037 | 0.045 | 0.016 | 0.016 |
| Potassium | K | mg/L | | 38 | 66 | 50 | 14 | 7.7 |
| Selenium | Se | mg/L | | 0.015 | 0.034 | 0.029 | 0.0056 | 0.0022 |
| Sodium | Na | mg/L | | 121 | 231 | 196 | 20 | 4.0 |
| Strontium | Sr | mg/L | | 1.3 | 2.8 | 2.5 | 0.28 | -0.10 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0 | 0 | 0 | 0 | 0.0100 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Uranium | U | mg/L | | 0.0024 | 0.0051 | 0.0035 | 0.00095 | 0.0015 |
| Vanadium | V | mg/L | | 0.0010 | 0.0010 | 0 | 0.0015 | 0.0045 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0.033 | 0.020 | 0.064 | 0.043 | 0.046 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - LODE1100 (Ore) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.7 | 7.8 | 7.8 | 7.6 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 648 | 888 | 1110 | 470 | 100 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 4.0 | 39 | 13 | 6.0 |
| Chloride | Cl | mg/L | | 30 | 30 | 45 | 0 | -50 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.0030 | 0.012 | 0.0020 | 0.69 | 0.053 |
| Sulphate | SO4 | mg/L | | 312 | 402 | 466 | 282 | 139 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.31 | 0.078 | 0.21 | 19 | 1.5 |
| Antimony | Sb | mg/L | | 0.00060 | 0.0010 | 0.00030 | 0.0022 | 0.000070 |
| Arsenic | As | mg/L | **0.5** | 0.039 | 0.017 | 0.031 | **2.9** | 0.15 |
| Barium | Ba | mg/L | | 0 | 0 | 0.022 | 0.16 | -0.065 |
| Boron | B | mg/L | | 0.040 | 0.070 | 0.026 | 0.027 | 0.014 |
| Cadmium | Cd[3] | mg/L | | 0 | 0 | 0 | 0.00012 | 0 |
| Calcium | Ca | mg/L | | 117 | 157 | 173 | 92 | 20 |
| Chromium | Cr[2] | mg/L | | 0 | 0 | 0 | 0.016 | 0 |
| Cobalt | Co | mg/L | | 0.0014 | 0.0015 | 0.0017 | 0.023 | 0.0032 |
| Copper | Cu[3] | mg/L | **0.3** | 0 | 0.0060 | 0 | 0.046 | 0.0022 |
| Iron | Fe | mg/L | | 0.50 | 0 | 0.51 | 72 | 3.8 |
| Lead | Pb[3] | mg/L | **0.2** | 0.014 | 0.0037 | 0.011 | **0.47** | 0.044 |
| Lithium | Li | mg/L | | 0.0030 | 0 | 0.0050 | 0.014 | -0.018 |
| Magnesium | Mg | mg/L | | 21 | 31 | 47 | 25 | 11 |
| Manganese | Mn | mg/L | | 0.11 | 0.17 | 0.20 | 0.48 | 0.092 |
| Molbydenum | Mo | mg/L | | 0.0060 | 0.013 | 0.0059 | 0.015 | 0.0046 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0030 | 0.0050 | 0.0030 | 0.046 | 0.0029 |
| Potassium | K | mg/L | | 10 | 13 | 11 | 11 | 5.7 |
| Selenium | Se | mg/L | | 0 | 0.0020 | 0 | 0 | 0 |
| Sodium | Na | mg/L | | 6.7 | 9.7 | 7.8 | 2.0 | -6.0 |
| Strontium | Sr | mg/L | | 0.96 | 1.5 | 1.4 | 0.88 | 0.20 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0.0020 | 0 | 0 | 0.40 | 0.029 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0.0018 | 0 |
| Uranium | U | mg/L | | 0.0020 | 0.0031 | 0.0017 | 0.0021 | 0.00076 |
| Vanadium | V | mg/L | | 0 | 0 | 0 | 0.019 | 0.0016 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0 | 0 | 0 | 0.091 | 0.0033 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - WR1 (Greywacke - Siltstone) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.8 | 7.8 | 7.7 | 7.6 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 217 | 317 | 52 | 80 | 0 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 0 | 8.0 | 7.0 | 1.0 |
| Chloride | Cl | mg/L | | 50 | 70 | 7.0 | 10 | 10 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.020 | 0.017 | 0.055 | 0.049 | 0.034 |
| Sulphate | SO4 | mg/L | | 23 | 42 | 8.0 | 21 | 15 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 1.5 | 1.1 | 6.6 | 2.2 | 2.4 |
| Antimony | Sb | mg/L | | 0.0025 | 0.0019 | 0.00040 | 0.00090 | 0.00028 |
| Arsenic | As | mg/L | **0.5** | 0.022 | 0.018 | 0.037 | 0.018 | 0.016 |
| Barium | Ba | mg/L | | 0 | 0 | 0.054 | -0.016 | -0.030 |
| Boron | B | mg/L | | 0.010 | 0.020 | 0 | 0.0060 | 0.0050 |
| Cadmium | Cd[3] | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Calcium | Ca | mg/L | | 37 | 57 | 15 | 17 | 10 |
| Chromium | Cr[2] | mg/L | | 0 | 0 | 0.012 | 0.0012 | 0.0025 |
| Cobalt | Co | mg/L | | 0.0057 | 0.0042 | 0.015 | 0.0072 | 0.0064 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0030 | 0.0030 | 0.0080 | 0.0057 | 0.0046 |
| Iron | Fe | mg/L | | 1.6 | 1.1 | 8.0 | 3.3 | 2.7 |
| Lead | Pb[3] | mg/L | **0.2** | 0.011 | 0.0069 | 0.032 | 0.015 | 0.012 |
| Lithium | Li | mg/L | | 0.032 | 0.026 | 0.0070 | 0.0060 | 0.0050 |
| Magnesium | Mg | mg/L | | 4.5 | 5.5 | 4.1 | 2.5 | 2.0 |
| Manganese | Mn | mg/L | | 0.055 | 0.047 | 0.11 | 0.051 | 0.047 |
| Molbydenum | Mo | mg/L | | 0 | 0.0010 | 0.00030 | 0.0012 | 0.00060 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.017 | 0.016 | 0.037 | 0.022 | 0.018 |
| Potassium | K | mg/L | | 6.1 | 5.8 | 2.3 | 1.7 | 1.1 |
| Selenium | Se | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Sodium | Na | mg/L | | 4.7 | 5.7 | 2.1 | 2.0 | 1.0 |
| Strontium | Sr | mg/L | | 0.29 | 0.54 | 0.11 | 0.090 | 0.100 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0.022 | 0.013 | 0.11 | 0.030 | 0.032 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Uranium | U | mg/L | | 0.0012 | 0.0021 | 0.00090 | 0.0016 | 0.0015 |
| Vanadium | V | mg/L | | 0.0010 | 0.0010 | 0.011 | 0.0041 | 0.0038 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0.0050 | 0.0010 | 0.025 | 0.0071 | 0.0069 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Field Cell Test Cycle - WR2 (Greywacke - Siltstone) | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Cycle_0 | Cycle_1 | Cycle_2 | Cycle_3 | Cycle_4 |
| **PHYSICAL TESTS** | | | | | | | | |
| Leachate Volume Added | | mL | | --- | --- | --- | --- | --- |
| Leachate Volume Recovered | | mL | | --- | --- | --- | --- | --- |
| pH | | units | **6.0-9.5** | 7.8 | 7.8 | 7.7 | 7.4 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 260 | 466 | 69 | 110 | 0 |
| **ANIONS & NUTRIENTS** | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 0 | 0 | 8.0 | 5.0 | 0 |
| Chloride | Cl | mg/L | | 70 | 80 | 11 | 10 | 0 |
| Fluoride | F | mg/L | | --- | --- | --- | --- | --- |
| Phosphorus | P | mg/L | | 0.012 | 0.024 | 0.059 | 0.050 | 0.023 |
| Sulphate | SO4 | mg/L | | 24 | 53 | 10 | 24 | 13 |
| **METALS:** | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 1.4 | 3.3 | 2.9 | 2.4 | 2.1 |
| Antimony | Sb | mg/L | | 0.0022 | 0.0027 | 0 | 0.0013 | 0.00037 |
| Arsenic | As | mg/L | **0.5** | 0.019 | 0.034 | 0.016 | 0.021 | 0.016 |
| Barium | Ba | mg/L | | 0 | 0 | 0.026 | -0.017 | -0.037 |
| Boron | B | mg/L | | 0.020 | 0.030 | 0 | 0.010 | 0.0050 |
| Cadmium | Cd[3] | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Calcium | Ca | mg/L | | 37 | 77 | 11 | 19 | 0 |
| Chromium | Cr[2] | mg/L | | 0 | 0.0050 | 0.0020 | 0.0016 | 0.0020 |
| Cobalt | Co | mg/L | | 0.0044 | 0.0089 | 0.0057 | 0.0070 | 0.0057 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0040 | 0.011 | 0.0010 | 0.0074 | 0.0043 |
| Iron | Fe | mg/L | | 1.0 | 5.5 | 3.3 | 3.4 | 2.3 |
| Lead | Pb[3] | mg/L | **0.2** | 0.0076 | 0.016 | 0.014 | 0.015 | 0.011 |
| Lithium | Li | mg/L | | 0.041 | 0.039 | 0.0030 | 0.012 | 0.0020 |
| Magnesium | Mg | mg/L | | 3.5 | 8.5 | 1.9 | 2.4 | 1.0 |
| Manganese | Mn | mg/L | | 0.047 | 0.12 | 0.054 | 0.052 | 0.044 |
| Molbydenum | Mo | mg/L | | 0 | 0.0010 | 0 | 0.0016 | 0.00060 |
| Mercury | Hg | mg/L | | --- | --- | --- | --- | --- |
| Nickel | Ni[3] | mg/L | **0.5** | 0.013 | 0.030 | 0.016 | 0.020 | 0.015 |
| Potassium | K | mg/L | | 6.2 | 7.4 | 1.4 | 2.4 | 0.70 |
| Selenium | Se | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Sodium | Na | mg/L | | 3.7 | 6.7 | 1.2 | 1.0 | -2.0 |
| Strontium | Sr | mg/L | | 0.40 | 0.76 | 0.083 | 0.15 | 0 |
| Tin | Sn | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Titanium | Ti | mg/L | | 0.022 | 0.060 | 0.057 | 0.030 | 0.030 |
| Tungsten | W | mg/L | | 0 | 0 | 0 | 0 | 0 |
| Uranium | U | mg/L | | 0.0011 | 0.0026 | 0.00040 | 0.0019 | 0.0016 |
| Vanadium | V | mg/L | | 0.0010 | 0.0060 | 0.0050 | 0.0048 | 0.0044 |
| Yttrium | Y | mg/L | | --- | --- | --- | --- | --- |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | 0.013 | 0.011 | 0.0081 | 0.0059 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M09-859-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-248-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M10-935-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M09-802-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML08-232-01 (Greywacke/Siltstone) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-95-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-01 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML08-226-02 (Iron Formation) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | | units | 6.0-9.5 | 8.8 | 8.5 | 8.8 | 7.6 | 8.7 | 8.5 | 8.2 | 8.1 | 8.7 | 8.6 | 8.5 | 8.7 | 8.6 | 8.8 | 7.7 | 8.5 | 7.9 | 6.9 | 7.8 | 7.8 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Chloride | Cl | mg/L | | 1.2 | 1.0 | 0.70 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.011 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2.0 | 2.2 | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.040 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.050 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0016 | 0.0013 | 0.0012 | | 0.0010 | | | 0.00080 | | | | 0.00060 | | | | 0.00070 | | | | 0.00050 |
| Arsenic | As | mg/L | 0.5 | 0.0029 | 0.0053 | 0.0057 | 0.0070 | | 0.0070 | | | 0.0076 | | | | 0.0078 | | | | 0.0078 | | | | 0.0062 |
| Barium | Ba | mg/L | | 0.0023 | 0.0041 | 0.0041 | 0.0036 | | 0.0041 | | | 0.0039 | | | | 0.0034 | | | | 0.0034 | | | | 0.0030 |
| Boron | B | mg/L | | 0.0013 | 0.0067 | 0.0054 | 0.0051 | | 0.0044 | | | 0.0025 | | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | 0.0000030 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 6.3 | 6.8 | 6.1 | 5.8 | 6.2 | 6.5 | 6.1 | 6.2 | 6.4 | 5.9 | 5.6 | 5.5 | 5.8 | 5.8 | 6.1 | 6.2 | 6.0 | 6.2 | 5.9 | 5.7 | 6.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000015 | 0.000024 | 0.000030 | 0.000025 | | 0.000051 | | | 0.000029 | | | | 0.000068 | | | | 0.000079 | | | | 0.000073 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | < 0.003 | < 0.003 | < 0.003 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.52 | 0.94 | 0.96 | 0.99 | | 1.1 | | | 1.1 | | | | 0.85 | | | | 0.94 | | | | 0.85 |
| Manganese | Mn | mg/L | | 0.0091 | 0.019 | 0.023 | 0.017 | | 0.024 | | | 0.024 | | | | 0.023 | | | | 0.024 | | | | 0.024 |
| Molbydenum | Mo | mg/L | | 0.00013 | 0.00022 | 0.00016 | 0.00012 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | | 0.00010 | | | | 0.000060 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | 0.00030 | | 0.00040 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.1 | 1.2 | 0.93 | 0.78 | | 0.61 | | | 0.46 | | | | 0.28 | | | | 0.22 | | | | 0.16 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.7 | 2.1 | 1.4 | 1.1 | | 0.61 | | | 0.32 | | | | 0.15 | | | | 0.12 | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.038 | 0.082 | 0.076 | 0.071 | | 0.070 | | | 0.063 | | | | 0.048 | | | | 0.045 | | | | 0.038 |
| Tin | Sn | mg/L | | 0.0022 | 0.0012 | 0.00055 | 0.00038 | | 0.00037 | | | 0.00019 | | | | 0.00014 | | | | 0.00020 | | | | 0.00013 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | 0.000080 | 0.000060 | 0.000070 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | < 0.000001 | 0.0000090 | 0.000017 | 0.0000090 | | 0.000020 | | | 0.000014 | | | | 0.0000030 | | | | 0.000017 | | | | 0.000017 |
| Vanadium | V | mg/L | | 0.00022 | 0.00023 | 0.00022 | 0.00020 | | 0.00023 | | | 0.00020 | | | | 0.00021 | | | | 0.00018 | | | | 0.00016 |
| Yttrium | Y | mg/L | | 0.0000030 | 0.0000050 | 0.0000050 | 0.0000050 | | 0.0000060 | | | < 0.000001 | | | | 0.0000040 | | | | 0.0000060 | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-526-01 (Iron Formation) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 260 | 854 | 864 | 867 | 1001 | 848 | 860 | 865 | 864 | 852 | 914 | 865 | 874 | 878 | 876 | 869 | 881 |
| pH | | units | **6.0-9.5** | 7.5 | 7.6 | 7.7 | 8.6 | 7.1 | 8.3 | 8.2 | 7.7 | 7.2 | 7.4 | 6.8 | 7.4 | 7.5 | 7.4 | 7.7 | 7.4 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 52 | 68 | 39 | 35 | 33 | 35 | 31 | 29 | 31 | 30 | 31 | 30 | 26 | 27 | 24 | 26 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 11 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 11 | 11 | 10 | 10 | 12 | 10 | 9.0 | 9.0 |
| Chloride | Cl | mg/L | | 1.3 | 4.3 | 0.80 | 0.20 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 3.0 | 9.6 | 4.8 | 3.5 | 2.5 | 2.1 | 2.0 | 2.1 | 2.1 | 2.0 | 2.5 | 2.5 | 1.6 | 1.3 | 1.2 | 1.3 | 1.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.030 | 0.020 | 0.020 | 0.040 | | 0.040 | | | 0.030 | | | | 0.040 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.00050 | 0.00060 | 0.00050 | | 0.00040 | | | 0.00060 | | | | 0.00020 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0013 | 0.0012 | 0.0012 | 0.0011 | | 0.0011 | | | 0.00090 | | | | 0.00090 | | | | 0.00080 |
| Barium | Ba | mg/L | | 0.0011 | 0.0010 | 0.00050 | 0.00042 | | 0.00047 | | | 0.00028 | | | | 0.00046 | | | | 0.00035 |
| Boron | B | mg/L | | 0.0069 | 0.014 | 0.0085 | 0.0062 | | 0.0037 | | | 0.0022 | | | | 0.00080 | | | | 0.0014 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 9.0 | 8.9 | 5.9 | 5.9 | 5.2 | 5.4 | 5.3 | 5.1 | 4.9 | 4.5 | 5.5 | 5.7 | 4.6 | 4.2 | 4.2 | 4.2 | 4.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000027 | 0.000033 | 0.000020 | 0.000018 | | 0.000014 | | | 0.0000070 | | | | 0.000010 | | | | 0.0000060 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00090 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | 0.000030 | 0.00019 | 0.00028 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.31 | 1.0 | 0.55 | 0.51 | | 0.38 | | | 0.38 | | | | 0.37 | | | | 0.28 |
| Manganese | Mn | mg/L | | 0.0041 | 0.0046 | 0.0046 | 0.0043 | | 0.0048 | | | 0.0042 | | | | 0.0042 | | | | 0.0041 |
| Molbydenum | Mo | mg/L | | 0.00020 | 0.00023 | 0.00015 | 0.00011 | | 0.000060 | | | 0.000060 | | | | 0.000030 | | | | 0.000020 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00020 | < 0.0001 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.46 | 0.68 | 0.34 | 0.27 | | 0.17 | | | 0.12 | | | | 0.070 | | | | 0.040 |
| Sodium | Na | mg/L | | 0.25 | 0.51 | 0.20 | 0.090 | | 0.020 | | | 0.020 | | | | < 0.01 | | | | 0.060 |
| Strontium | Sr | mg/L | | 0.067 | 0.10 | 0.058 | 0.056 | | 0.048 | | | 0.043 | | | | 0.037 | | | | 0.030 |
| Tin | Sn | mg/L | | 0.0014 | 0.00078 | 0.00046 | 0.00037 | | 0.00020 | | | 0.00016 | | | | 0.00018 | | | | 0.00016 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.000030 | 0.00012 | 0.000094 | 0.000090 | | 0.000097 | | | 0.000084 | | | | 0.000084 | | | | 0.000065 |
| Vanadium | V | mg/L | | 0.000050 | 0.000050 | 0.000040 | 0.000040 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | 0.0010 | < 0.001 | 0.0020 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-526-01 (Iron Formation) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 878 | 869 | 883 | 881 | 935 | 878 | 871 | 868 | 873 | 873 | 880 | 874 | 880 | 891 | 875 | 877 |
| pH | | units | **6.0-9.5** | 8.0 | 7.4 | 7.8 | 7.4 | 7.8 | 7.7 | 7.5 | 7.6 | 7.4 | 7.5 | 8.2 | 7.8 | 7.7 | 7.7 | 7.7 | 8.2 |
| Conductivity | | mg/L as CaCO3 | | 32 | 27 | 24 | 24 | 27 | 30 | 29 | 26 | 28 | 26 | 30 | 25 | 27 | 33 | 27 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | | 10 | 10 | 9.0 | 12 | 9.0 | 8.0 | 9.0 | 10 | 10 | 10 | 11 | 10 | 10 | 10 | 11 |
| Chloride | Cl | mg/L | | | | | <0.2 | | | | < 0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 3.4 | 1.9 | 1.4 | 1.5 | 2.7 | 3.3 | 1.9 | 2.1 | 2.4 | 2.1 | 2.8 | 2.5 | 2.1 | 3.8 | 2.4 | 2.5 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.040 | | | | 0.040 | | 0.030 | | | | | 0.030 | |
| Antimony | Sb | mg/L | | | | | < 0.0002 | | | | < 0.0002 | | < 0.0002 | | | | | < 0.0002 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.00070 | | | | 0.00070 | | 0.00060 | | | | | 0.00060 | |
| Barium | Ba | mg/L | | | | | 0.00019 | | | | 0.00019 | | 0.00063 | | | | | 0.00013 | |
| Boron | B | mg/L | | | | | 0.00060 | | | | 0.00050 | | 0.00050 | | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.9 | 4.8 | 4.6 | 4.2 | 4.8 | 4.5 | 4.0 | 4.4 | 4.6 | 4.0 | 4.7 | 4.1 | 4.3 | 4.3 | 4.0 | 4.2 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.000010 | | | | 0.0000090 | | 0.000011 | | | | | 0.000007 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | < 0.00002 | | | | < 0.00002 | | < 0.00002 | | | | | 0.00003 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 0.39 | | | | 0.49 | | 0.48 | | | | | 0.53 | |
| Manganese | Mn | mg/L | | | | | 0.0036 | | | | 0.0042 | | 0.0040 | | | | | 0.0032 | |
| Molbydenum | Mo | mg/L | | | | | < 0.00001 | | | | 0.000020 | | 0.000030 | | | | | 0.00001 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Potassium | K | mg/L | | | | | 0.060 | | | | 0.050 | | 0.040 | | | | | 0.040 | |
| Sodium | Na | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Strontium | Sr | mg/L | | | | | 0.034 | | | | 0.036 | | 0.033 | | | | | 0.034 | |
| Tin | Sn | mg/L | | | | | < 0.00001 | | | | 0.00024 | | 0.00013 | | | | | 0.00022 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.000068 | | | | 0.000059 | | 0.000065 | | | | | 0.000054 | |
| Vanadium | V | mg/L | | | | | 0.000040 | | | | < 0.00003 | | < 0.00003 | | | | | < 0.00003 | |
| Zinc | Zn | mg/L | **0.5** | | | | < 0.001 | | | | < 0.001 | | < 0.001 | | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-194-01 (Greywacke) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 793 | 912 | 984 | 935 | 957 | 961 | 964 | 952 | 960 | 872 | 995 | 960 | 964 | 965 | 960 | 961 | 972 |
| pH | | units | **6.0-9.5** | 7.4 | 7.6 | 7.5 | 7.5 | 7.2 | 7.1 | 7.6 | 7.6 | 7.2 | 7.3 | 6.8 | 7.4 | 7.2 | 7.4 | 7.5 | 7.4 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 52 | 73 | 55 | 47 | 42 | 40 | 39 | 33 | 34 | 38 | 36 | 34 | 33 | 35 | 33 | 35 | 35 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 15 | 17 | 15 | 16 | 15 | 21 | 12 | 14 | 15 | 15 | 13 | 14 | 18 | 16 | 13 | 14 |
| Chloride | Cl | mg/L | | 2.4 | 1.9 | 0.70 | 0.30 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 5.6 | 12 | 7.1 | 4.9 | 3.6 | 3.0 | 2.5 | 2.1 | 2.3 | 2.2 | 1.9 | 1.9 | 2.1 | 2.1 | 2.6 | 3.0 | 3.0 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.030 | 0.030 | 0.030 | 0.050 | | 0.050 | | | 0.050 | | | | 0.060 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0015 | 0.0013 | 0.0011 | | 0.00070 | | | 0.00070 | | | | 0.00040 | | | | 0.00030 |
| Arsenic | As | mg/L | **0.5** | 0.0038 | 0.0076 | 0.0069 | 0.0076 | | 0.0060 | | | 0.0058 | | | | 0.0048 | | | | 0.0026 |
| Barium | Ba | mg/L | | 0.0017 | 0.0024 | 0.0025 | 0.0018 | | 0.0014 | | | 0.0013 | | | | 0.0011 | | | | 0.00094 |
| Boron | B | mg/L | | 0.0024 | 0.0067 | 0.0051 | 0.0038 | | 0.0023 | | | 0.0017 | | | | 0.00050 | | | | 0.0024 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.2 | 5.8 | 5.8 | 5.3 | 5.1 | 4.8 | 5.3 | 4.5 | 4.7 | 4.9 | 5.3 | 5.5 | 4.8 | 4.6 | 4.8 | 4.9 | 5.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000075 | 0.00011 | 0.000094 | 0.000073 | | 0.000078 | | | 0.000094 | | | | 0.000091 | | | | 0.00010 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | 0.00070 | < 0.0005 | < 0.0005 | | 0.0010 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.020 | 0.010 | < 0.01 | < 0.01 | | 0.010 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000050 | 0.000020 | 0.000030 | 0.00014 | | 0.000080 | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.84 | 1.6 | 1.3 | 1.2 | | 1.1 | | | 1.0 | | | | 1.0 | | | | 1.1 |
| Manganese | Mn | mg/L | | 0.0057 | 0.0045 | 0.0056 | 0.0044 | | 0.0049 | | | 0.0060 | | | | 0.0064 | | | | 0.0084 |
| Molbydenum | Mo | mg/L | | 0.00034 | 0.00086 | 0.00044 | 0.00030 | | 0.00014 | | | 0.000090 | | | | 0.000080 | | | | 0.000080 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00070 | 0.00080 | 0.00040 | 0.00030 | | < 0.0001 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 3.4 | 3.6 | 2.2 | 1.7 | | 1.1 | | | 0.65 | | | | 0.46 | | | | 0.28 |
| Sodium | Na | mg/L | | 2.3 | 2.9 | 1.5 | 0.91 | | 0.43 | | | 0.20 | | | | 0.13 | | | | 0.090 |
| Strontium | Sr | mg/L | | 0.024 | 0.037 | 0.035 | 0.031 | | 0.026 | | | 0.027 | | | | 0.028 | | | | 0.030 |
| Tin | Sn | mg/L | | 0.0011 | 0.00065 | 0.00042 | 0.00028 | | 0.00031 | | | 0.00019 | | | | 0.00020 | | | | 0.00018 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.00015 | 0.0013 | 0.00095 | 0.00072 | | 0.00044 | | | 0.00028 | | | | 0.00023 | | | | 0.00016 |
| Vanadium | V | mg/L | | 0.000070 | 0.00011 | 0.000090 | 0.00010 | | 0.000050 | | | 0.000050 | | | | 0.000040 | | | | < 0.00003 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0020 | | | 0.0010 | | | | 0.0010 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-194-01 (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 948 | 959 | 967 | 976 | 959 | 972 | 982 | 969 | 987 | 978 | 984 | 956 | 976 | 993 | 980 | 995 |
| pH | | units | **6.0-9.5** | 7.6 | 7.3 | 7.5 | 7.4 | 7.5 | 7.5 | 7.5 | 7.5 | 7.4 | 7.5 | 7.7 | 7.7 | 7.5 | 8.1 | 7.6 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 35 | 38 | 37 | 35 | 31 | 40 | 34 | 39 | 45 | 38 | 39 | 33 | 38 | 48 | 40 | 41 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 14 | 14 | 13 | 22 | 15 | 15 | 15 | 17 | 17 | 16 | 63 | 15 | 23 | 17 | 18 |
| Chloride | Cl | mg/L | | | | | <0.2 | | | | < 0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 3.5 | 3.7 | 3.7 | 3.4 | 3.5 | 3.3 | 2.8 | 2.7 | 2.7 | 2.4 | 2.6 | 3.0 | 2.6 | 2.4 | 2.4 | 2.7 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.040 | | | | 0.030 | | 0.020 | | | | | 0.020 | |
| Antimony | Sb | mg/L | | | | | < 0.0002 | | | | 0.00020 | | 0.00030 | | | | | <0.0002 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.0028 | | | | 0.0021 | | 0.0016 | | | | | 0.0013 | |
| Barium | Ba | mg/L | | | | | 0.0011 | | | | 0.00099 | | 0.00097 | | | | | 0.00091 | |
| Boron | B | mg/L | | | | | 0.00040 | | | | 0.00030 | | 0.00040 | | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | 0.0000060 | |
| Calcium | Ca | mg/L | | 4.7 | 5.5 | 5.6 | 5.2 | 4.9 | 5.2 | 5.2 | 6.0 | 6.4 | 5.7 | 5.3 | 4.8 | 5.0 | 5.7 | 5.5 | 5.6 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.00010 | | | | 0.00013 | | 0.00013 | | | | | 0.00011 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | 0.00050 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | < 0.00002 | | | | < 0.00002 | | 0.000030 | | | | | 0.000030 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 1.2 | | | | 1.3 | | 1.2 | | | | | 1.3 | |
| Manganese | Mn | mg/L | | | | | 0.0067 | | | | 0.0100 | | 0.011 | | | | | 0.0098 | |
| Molbydenum | Mo | mg/L | | | | | 0.000030 | | | | 0.000060 | | 0.000090 | | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | 0.00010 | | | | 0.00020 | | 0.00020 | | | | | 0.00010 | |
| Potassium | K | mg/L | | | | | 0.31 | | | | 0.26 | | 0.23 | | | | | 0.21 | |
| Sodium | Na | mg/L | | | | | 0.090 | | | | 0.080 | | 0.060 | | | | | 0.070 | |
| Strontium | Sr | mg/L | | | | | 0.033 | | | | 0.038 | | 0.036 | | | | | 0.037 | |
| Tin | Sn | mg/L | | | | | < 0.00001 | | | | 0.00032 | | 0.00032 | | | | | 0.00036 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.00013 | | | | 0.00010 | | 0.000098 | | | | | 0.000074 | |
| Vanadium | V | mg/L | | | | | 0.000060 | | | | < 0.00003 | | < 0.00003 | | | | | < 0.00003 | |
| Zinc | Zn | mg/L | **0.5** | | | | < 0.001 | | | | < 0.001 | | 0.0020 | | | | | 0.0010 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-403-03 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 761 | 916 | 954 | 942 | 970 | 977 | 973 | 978 | 986 | 983 | 983 | 980 | 987 | 986 |
| pH | | units | **6.0-9.5** | 7.8 | 7.7 | 7.6 | 7.7 | 7.8 | 7.8 | 8.7 | 7.9 | 8.1 | 7.8 | 7.7 | 7.7 | 7.5 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 52 | 54 | 42 | 41 | 39 | 34 | 35 | 40 | 42 | 37 | 36 | 36 | 36 | 35 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 22 | 21 | 17 | 18 | 17 | 21 | 21 | 21 | 20 | 17 | 17 | 17 | 17 |
| Chloride | Cl | mg/L | | 2.6 | 1.6 | 0.60 | 0.30 | | < 0.2 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 2.2 | 2.4 | 1.6 | 1.2 | 0.90 | 0.80 | 0.70 | 0.60 | 0.70 | 0.60 | 0.70 | 0.60 | 0.60 | 0.70 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.030 | 0.040 | 0.060 | | 0.050 | | | 0.050 | | | | 0.070 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0014 | 0.0011 | 0.00070 | | 0.00070 | | | 0.00050 | | | | 0.00040 | |
| Arsenic | As | mg/L | **0.5** | 0.0036 | 0.0074 | 0.0057 | 0.0061 | | 0.0054 | | | 0.0052 | | | | 0.0050 | |
| Barium | Ba | mg/L | | 0.00074 | 0.00092 | 0.00092 | 0.00083 | | 0.00077 | | | 0.00083 | | | | 0.00063 | |
| Boron | B | mg/L | | 0.0020 | 0.0047 | 0.0033 | 0.0025 | | 0.0021 | | | 0.0014 | | | | 0.00060 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000060 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.0 | 4.3 | 5.4 | 5.1 | 5.3 | 5.4 | 4.9 | 5.6 | 5.1 | 4.9 | 5.1 | 5.0 | 4.8 | 4.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000038 | 0.000038 | 0.000027 | 0.000021 | | 0.000035 | | | 0.000039 | | | | 0.000051 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00070 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000050 | 0.000040 | < 0.00002 | < 0.00002 | | 0.000030 | | | < 0.00002 | | | | 0.000070 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.52 | 1.0 | 1.1 | 1.0 | | 1.0 | | | 0.94 | | | | 0.89 | |
| Manganese | Mn | mg/L | | 0.0036 | 0.0056 | 0.0074 | 0.0059 | | 0.0090 | | | 0.0092 | | | | 0.0090 | |
| Molbydenum | Mo | mg/L | | 0.00077 | 0.0011 | 0.00056 | 0.00043 | | 0.00023 | | | 0.000080 | | | | 0.000070 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00020 | 0.00020 | 0.00020 | | 0.00020 | | | < 0.0001 | | | | 0.00010 | |
| Potassium | K | mg/L | | 4.3 | 3.4 | 2.5 | 1.9 | | 1.3 | | | 0.89 | | | | 0.57 | |
| Sodium | Na | mg/L | | 2.4 | 1.9 | 1.2 | 0.87 | | 0.48 | | | 0.24 | | | | 0.14 | |
| Strontium | Sr | mg/L | | 0.021 | 0.029 | 0.034 | 0.033 | | 0.033 | | | 0.029 | | | | 0.028 | |
| Tin | Sn | mg/L | | 0.013 | 0.0045 | 0.0026 | 0.0014 | | 0.0011 | | | 0.00091 | | | | 0.00072 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000018 | 0.00013 | 0.00015 | 0.00014 | | 0.00015 | | | 0.00015 | | | | 0.00019 | |
| Vanadium | V | mg/L | | 0.00017 | 0.00019 | 0.00014 | 0.00011 | | 0.00011 | | | 0.000090 | | | | 0.000080 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-403-03 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 974 | 968 | 986 | 977 | 983 | 968 | 982 | 988 | 973 | 972 | 961 | 969 | 950 | 955 |
| pH | | units | **6.0-9.5** | 7.5 | 7.6 | 7.8 | 7.6 | 7.6 | 7.7 | 7.7 | 7.6 | 7.9 | 8.0 | 7.6 | 7.6 | 7.5 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 34 | 34 | 41 | 35 | 36 | 35 | 37 | 41 | 42 | 38 | 60 | 61 | 37 | 37 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 15 | 22 | 16 | 16 | 16 | 16 | 20 | 20 | 21 | 23 | 18 | 16 | 16 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 0.80 | 0.90 | 1.1 | 1.2 | 1.2 | 1.1 | 1.3 | 1.4 | 1.6 | 1.4 | 1.5 | 1.1 | 1.1 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.060 | | | | 0.060 | | | | | 0.080 | | |
| Antimony | Sb | mg/L | | | | 0.00040 | | | | 0.00040 | | | | | 0.00030 | | |
| Arsenic | As | mg/L | **0.5** | | 0.0036 | 0.0048 | | | | 0.0039 | | | | | 0.0045 | | |
| Barium | Ba | mg/L | | | | 0.00074 | | | | 0.0012 | | | | | 0.00069 | | |
| Boron | B | mg/L | | | | 0.00070 | | | | 0.00040 | | | | | 0.00040 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 5.0 | 4.8 | 6.4 | 5.0 | 5.5 | 5.4 | 5.6 | 6.1 | 6.4 | 6.2 | 6.3 | 6.0 | 5.4 | 5.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000080 | | | | 0.000070 | | | | | 0.000076 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | < 0.00002 | | | | | 0.0013 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 1.2 | | | | 1.0 | | | | | 1.1 | | |
| Manganese | Mn | mg/L | | | | 0.012 | | | | 0.0093 | | | | | 0.0094 | | |
| Molbydenum | Mo | mg/L | | | | 0.000090 | | | | 0.000080 | | | | | 0.000080 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.58 | | | | 0.44 | | | | | 0.38 | | |
| Sodium | Na | mg/L | | | | 0.11 | | | | 0.090 | | | | | 0.050 | | |
| Strontium | Sr | mg/L | | | | 0.037 | | | | 0.032 | | | | | 0.032 | | |
| Tin | Sn | mg/L | | | | 0.00081 | | | | 0.00077 | | | | | 0.00076 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.00023 | | | | 0.00018 | | | | | 0.00017 | | |
| Vanadium | V | mg/L | | | | 0.000080 | | | | 0.000050 | | | | | 0.000040 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | 0.0010 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M99-403-03 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 945 | 937 | 951 | 964 | 942 | 907 | 952 | 963 | 983 | 828 | 936 | 943 | 945 |
| pH | | units | **6.0-9.5** | 7.5 | 7.5 | 7.8 | 7.9 | 7.7 | 7.8 | 7.7 | 7.6 | 7.7 | 7.4 | 7.9 | 7.6 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 33 | 31 | 41 | 39 | 34 | 35 | 33 | 37 | 39 | 35 | 43 | 30 | 31 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 14 | 20 | 18 | 15 | 15 | 16 | 17 | 17 | 16 | 20 | 14 | 14 |
| Chloride | Cl | mg/L | | | | <0.2 | | < 0.2 | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 1.0 | 0.90 | 1.2 | 1.1 | 0.90 | 1.0 | 0.90 | 1.1 | 1.1 | 0.90 | 1.4 | 1.0 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.080 | | | | | 0.050 | | | | | 0.070 |
| Antimony | Sb | mg/L | | | | 0.00040 | | | | | 0.00040 | | | | | 0.00020 |
| Arsenic | As | mg/L | **0.5** | | | 0.023 | | | | | 0.0026 | | | | | 0.0018 |
| Barium | Ba | mg/L | | | | 0.00021 | | | | | 0.00044 | | | | | 0.00042 |
| Boron | B | mg/L | | | | < 0.0002 | | | | | 0.00030 | | | | | 0.00090 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.7 | 4.2 | 6.3 | 5.9 | 4.8 | 4.6 | 4.6 | 5.1 | 5.2 | 5.1 | 5.8 | 3.5 | 4.1 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000089 | | | | | 0.000081 | | | | | 0.000065 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | 0.0030 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.1 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 1.1 | | | | | 1.1 | | | | | 0.99 |
| Manganese | Mn | mg/L | | | | 0.012 | | | | | 0.0084 | | | | | 0.0061 |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | | 0.000070 | | | | | 0.000090 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Potassium | K | mg/L | | | | 0.30 | | | | | 0.24 | | | | | 0.18 |
| Sodium | Na | mg/L | | | | 0.060 | | | | | 0.050 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.031 | | | | | 0.032 | | | | | 0.026 |
| Tin | Sn | mg/L | | | | 0.00064 | | | | | 0.0011 | | | | | 0.00035 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.0000070 | | | | | 0.000090 | | | | | 0.000078 |
| Vanadium | V | mg/L | | | | 0.00015 | | | | | 0.000060 | | | | | 0.000040 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.001 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-533-01 (Greywacke) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 833 | 973 | 991 | 992 | 985 | 986 | 990 | 989 | 987 | 981 | 994 | 987 | 988 | 1000 | 966 | 986 | 985 |
| pH | | units | **6.0-9.5** | 7.6 | 7.8 | 7.5 | 7.6 | 7.1 | 7.2 | 7.5 | 7.6 | 7.1 | 7.2 | 6.9 | 7.3 | 7.3 | 7.4 | 7.5 | 7.3 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 38 | 58 | 46 | 40 | 42 | 40 | 33 | 34 | 32 | 32 | 30 | 30 | 28 | 27 | 26 | 27 | 27 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 12 | 21 | 20 | 16 | 15 | 15 | 14 | 14 | 14 | 13 | 12 | 12 | 12 | 15 | 12 | 11 | 12 |
| Chloride | Cl | mg/L | | 1.0 | 1.1 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 0.80 | 2.6 | 2.3 | 2.0 | 1.8 | 1.7 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.1 | 1.2 | 1.2 | 1.1 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.050 | 0.050 | 0.050 | | 0.050 | | | 0.040 | | | | 0.060 | | | | 0.040 |
| Antimony | Sb | mg/L | | 0.0010 | 0.0044 | 0.0034 | 0.0025 | | 0.0016 | | | 0.0013 | | | | 0.00070 | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | 0.0016 | 0.037 | 0.051 | 0.055 | | 0.053 | | | 0.041 | | | | 0.039 | | | | 0.026 |
| Barium | Ba | mg/L | | 0.0026 | 0.0052 | 0.0053 | 0.0047 | | 0.0042 | | | 0.0039 | | | | 0.0034 | | | | 0.0031 |
| Boron | B | mg/L | | 0.0024 | 0.0094 | 0.0072 | 0.0055 | | 0.0033 | | | 0.0018 | | | | 0.00060 | | | | 0.0017 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.4 | 3.0 | 3.4 | 4.0 | 3.9 | 4.1 | 3.9 | 4.2 | 4.0 | 3.8 | 3.8 | 4.5 | 3.9 | 3.4 | 3.1 | 3.7 | 3.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000041 | 0.00013 | 0.00021 | 0.00026 | | 0.00034 | | | 0.00045 | | | | 0.00036 | | | | 0.00036 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | < 0.0005 | 0.00080 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000090 | 0.000060 | 0.00033 | 0.00032 | | 0.000040 | | | < 0.00002 | | | | 0.000060 | | | | 0.000060 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.40 | 1.2 | 1.3 | 1.3 | | 1.3 | | | 1.1 | | | | 0.99 | | | | 0.95 |
| Manganese | Mn | mg/L | | 0.0045 | 0.0038 | 0.0057 | 0.0065 | | 0.0080 | | | 0.0097 | | | | 0.0087 | | | | 0.0093 |
| Molbydenum | Mo | mg/L | | 0.00039 | 0.0010 | 0.00046 | 0.00026 | | 0.00014 | | | 0.00010 | | | | 0.000090 | | | | 0.000080 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00060 | 0.00060 | 0.00070 | | 0.00050 | | | 0.00050 | | | | 0.00030 | | | | 0.00020 |
| Potassium | K | mg/L | | 4.9 | 6.6 | 4.1 | 3.0 | | 1.9 | | | 1.0 | | | | 0.72 | | | | 0.47 |
| Sodium | Na | mg/L | | 1.7 | 2.5 | 1.2 | 0.66 | | 0.29 | | | 0.12 | | | | 0.070 | | | | 0.050 |
| Strontium | Sr | mg/L | | 0.031 | 0.055 | 0.058 | 0.063 | | 0.061 | | | 0.060 | | | | 0.057 | | | | 0.056 |
| Tin | Sn | mg/L | | 0.0011 | 0.00067 | 0.00056 | 0.00047 | | 0.00043 | | | 0.00045 | | | | 0.00050 | | | | 0.00034 |
| Titanium | Ti | mg/L | | 0.00050 | 0.00010 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.000048 | 0.00037 | 0.00043 | 0.00044 | | 0.00041 | | | 0.00032 | | | | 0.00037 | | | | 0.00026 |
| Vanadium | V | mg/L | | 0.00026 | 0.00042 | 0.00043 | 0.00040 | | 0.00032 | | | 0.00026 | | | | 0.00024 | | | | 0.00016 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0020 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M04-533-01 (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 992 | 994 | 993 | 988 | 991 | 985 | 992 | 981 | 989 | 989 | 978 | 973 | 969 | 985 | 978 | 993 |
| pH | | units | **6.0-9.5** | 7.5 | 7.3 | 7.5 | 7.4 | 7.5 | 7.4 | 7.4 | 7.5 | 7.3 | 7.4 | 7.6 | 8.3 | 7.5 | 7.6 | 7.7 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 30 | 30 | 27 | 28 | 26 | 30 | 28 | 30 | 28 | 25 | 28 | 28 | 30 | 26 | 31 | 37 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 13 | 12 | 13 | 13 | 13 | 20 | 12 | 13 | 12 | 13 | 11 | 13 | 12 | 14 | 20 |
| Chloride | Cl | mg/L | | | | | <0.2 | | | | < 0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.4 | 0.90 | 1.1 | 0.90 | 1.0 | 1.0 | 1.0 | 1.2 | 0.90 | 1.1 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.050 | | | | 0.050 | | 0.030 | | | | | 0.050 | |
| Antimony | Sb | mg/L | | | | | 0.00040 | | | | 0.00050 | | 0.00050 | | | | | 0.00040 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.028 | | | | 0.022 | | 0.015 | | | | | 0.018 | |
| Barium | Ba | mg/L | | | | | 0.0035 | | | | 0.0032 | | 0.0033 | | | | | 0.0033 | |
| Boron | B | mg/L | | | | | 0.00050 | | | | 0.00030 | | 0.00030 | | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | 0.000051 | |
| Calcium | Ca | mg/L | | 3.9 | 4.3 | 4.2 | 3.9 | 3.7 | 3.9 | 3.9 | 4.1 | 4.2 | 3.6 | 3.7 | 3.2 | 4.1 | 3.4 | 4.1 | 4.2 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.00034 | | | | 0.00038 | | 0.00035 | | | | | 0.00031 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | 0.000030 | | | | 0.000030 | | 0.000040 | | | | | 0.000080 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 0.95 | | | | 0.97 | | 0.84 | | | | | 0.98 | |
| Manganese | Mn | mg/L | | | | | 0.010 | | | | 0.013 | | 0.012 | | | | | 0.013 | |
| Molbydenum | Mo | mg/L | | | | | 0.000040 | | | | 0.000070 | | 0.000080 | | | | | 0.000070 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | 0.00030 | | | | 0.00030 | | 0.00020 | | | | | 0.00010 | |
| Potassium | K | mg/L | | | | | 0.48 | | | | 0.40 | | 0.35 | | | | | 0.38 | |
| Sodium | Na | mg/L | | | | | 0.050 | | | | 0.050 | | 0.040 | | | | | 0.040 | |
| Strontium | Sr | mg/L | | | | | 0.060 | | | | 0.064 | | 0.057 | | | | | 0.067 | |
| Tin | Sn | mg/L | | | | | 0.00024 | | | | 0.00047 | | 0.00040 | | | | | 0.00049 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.00024 | | | | 0.00017 | | 0.00014 | | | | | 0.00011 | |
| Vanadium | V | mg/L | | | | | 0.00020 | | | | 0.00012 | | 0.000080 | | | | | 0.00010 | |
| Zinc | Zn | mg/L | **0.5** | | | | 0.0020 | | | | 0.0010 | | 0.0010 | | | | | 0.0020 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - GT08-04-02 (Mafic Volcanic) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 755 | 960 | 991 | 914 | 952 | 886 | 975 | 907 | 954 | 876 | 910 | 897 | 938 | 904 | 915 | 922 | 916 |
| pH | | units | **6.0-9.5** | 8.1 | 8.1 | 8.2 | 8.7 | 8.6 | 8.6 | 8.4 | 8.3 | 7.8 | 8.3 | 7.0 | 7.6 | 7.7 | 7.6 | 8.2 | 7.6 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 112 | 119 | 91 | 26 | 50 | 48 | 47 | 37 | 39 | 41 | 32 | 33 | 30 | 31 | 28 | 29 | 27 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 18 | 28 | 25 | 21 | 16 | 16 | 17 | 13 | 14 | 15 | 14 | 13 | 12 | 16 | 13 | 12 | 12 |
| Chloride | Cl | mg/L | | 17 | 14 | 8.5 | 4.0 | | 1.0 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Sulphate | SO4 | mg/L | | 3.8 | 5.0 | 6.8 | 5.1 | 4.0 | 3.7 | 3.0 | 2.7 | 2.6 | 3.6 | 1.8 | 1.6 | 1.6 | 1.7 | 1.3 | 1.4 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.060 | 0.050 | 0.050 | 0.070 | | 0.060 | | | 0.050 | | | | 0.13 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00080 | 0.0045 | 0.0047 | 0.0035 | | 0.0023 | | | 0.0019 | | | | 0.0012 | | | | 0.00080 |
| Arsenic | As | mg/L | **0.5** | 0.0064 | 0.066 | 0.077 | 0.082 | | 0.076 | | | 0.071 | | | | 0.062 | | | | 0.040 |
| Barium | Ba | mg/L | | 0.0014 | 0.00033 | 0.00029 | 0.00031 | | 0.00023 | | | 0.0011 | | | | 0.00013 | | | | 0.00018 |
| Boron | B | mg/L | | 0.0057 | 0.017 | 0.014 | 0.0093 | | 0.0063 | | | 0.0044 | | | | 0.0019 | | | | 0.0073 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.9 | 4.5 | 4.2 | 4.2 | 3.9 | 4.0 | 4.4 | 4.1 | 3.9 | 3.4 | 3.7 | 4.4 | 3.7 | 3.5 | 3.5 | 3.5 | 3.3 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000042 | 0.00022 | 0.00032 | 0.00019 | | 0.00017 | | | 0.00022 | | | | 0.00021 | | | | 0.00022 |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | < 0.0005 | < 0.0005 | < 0.0005 | | 0.00070 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | 0.000040 | 0.000090 | | 0.000060 | | | 0.000030 | | | | 0.000040 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | | < 0.002 |
| Magnesium | Mg | mg/L | | 0.80 | 2.0 | 2.3 | 2.1 | | 1.7 | | | 1.6 | | | | 1.4 | | | | 1.2 |
| Manganese | Mn | mg/L | | 0.0075 | 0.011 | 0.015 | 0.014 | | 0.015 | | | 0.017 | | | | 0.015 | | | | 0.014 |
| Molbydenum | Mo | mg/L | | 0.00021 | 0.00080 | 0.00047 | 0.00030 | | 0.00016 | | | 0.000080 | | | | 0.00010 | | | | 0.00013 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | 0.0014 | 0.0011 | 0.00060 | | 0.00030 | | | 0.00030 | | | | 0.00030 | | | | 0.00010 |
| Potassium | K | mg/L | | 2.3 | 2.5 | 1.8 | 1.4 | | 0.84 | | | 0.52 | | | | 0.32 | | | | 0.18 |
| Sodium | Na | mg/L | | 14 | 14 | 9.4 | 4.9 | | 1.9 | | | 0.67 | | | | 0.24 | | | | 0.14 |
| Strontium | Sr | mg/L | | 0.0084 | 0.012 | 0.011 | 0.0086 | | 0.0045 | | | 0.0058 | | | | 0.0048 | | | | 0.0044 |
| Tin | Sn | mg/L | | 0.00098 | 0.00064 | 0.00049 | 0.00035 | | 0.00067 | | | 0.00072 | | | | 0.00086 | | | | 0.00074 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Uranium | U | mg/L | | 0.000015 | 0.000019 | 0.000030 | 0.000025 | | 0.000025 | | | 0.000030 | | | | 0.000018 | | | | 0.000028 |
| Vanadium | V | mg/L | | 0.00021 | 0.00038 | 0.00038 | 0.00044 | | 0.00035 | | | 0.00035 | | | | 0.00031 | | | | 0.00017 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - GT08-04-02 (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 906 | 905 | 887 | 900 | 906 | 919 | 915 | 918 | 931 | 920 | 908 | 886 | 888 | 884 | 888 | 918 |
| pH | | units | **6.0-9.5** | 7.8 | 7.9 | 7.7 | 7.9 | 7.4 | 7.9 | 7.7 | 8.2 | 7.4 | 8.1 | 8.8 | 8.4 | 8.4 | 8.0 | 8.2 | 8.6 |
| Conductivity | | mg/L as CaCO3 | | 29 | 31 | 29 | 28 | 27 | 29 | 24 | 28 | 29 | 27 | 29 | 26 | 29 | 31 | 28 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | | 12 | 12 | 12 | 13 | 12 | 13 | 11 | 13 | 12 | 13 | 13 | 13 | 13 | 13 | 13 |
| Chloride | Cl | mg/L | | | | | < 0.2 | | | | <0.2 | | <0.2 | | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.5 | 1.6 | 1.8 | 1.6 | 1.6 | 1.3 | 1.1 | 1.2 | 1.2 | 1.1 | 1.2 | 1.4 | 1.3 | 1.7 | 1.1 | 1.2 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | | 0.040 | | | | 0.040 | | 0.040 | | | | | 0.030 | |
| Antimony | Sb | mg/L | | | | | 0.00080 | | | | 0.00070 | | 0.00070 | | | | | 0.00060 | |
| Arsenic | As | mg/L | **0.5** | | | | 0.043 | | | | 0.039 | | 0.033 | | | | | 0.031 | |
| Barium | Ba | mg/L | | | | | 0.00028 | | | | 0.00011 | | 0.000090 | | | | | 0.00040 | |
| Boron | B | mg/L | | | | | 0.0012 | | | | 0.00090 | | 0.00080 | | | | | 0.00050 | |
| Cadmium | Cd[3] | mg/L | | | | | < 0.000003 | | | | < 0.000003 | | < 0.000003 | | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 3.4 | 3.7 | 3.6 | 3.5 | 3.4 | 3.4 | 3.5 | 3.6 | 3.9 | 3.4 | 3.4 | 3.1 | 3.2 | 3.7 | 3.3 | 3.4 |
| Chromium | Cr[2] | mg/L | | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | | | | 0.00020 | | | | 0.00028 | | 0.00025 | | | | | 0.00021 | |
| Copper | Cu[3] | mg/L | **0.3** | | | | < 0.0005 | | | | < 0.0005 | | < 0.0005 | | | | | 0.00050 | |
| Iron | Fe | mg/L | | | | | < 0.01 | | | | < 0.01 | | < 0.01 | | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | | | | < 0.00002 | | | | < 0.00002 | | 0.000040 | | | | | 0.000060 | |
| Lithium | Li | mg/L | | | | | < 0.002 | | | | < 0.002 | | < 0.002 | | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | | | | 1.4 | | | | 1.3 | | 1.2 | | | | | 1.2 | |
| Manganese | Mn | mg/L | | | | | 0.012 | | | | 0.016 | | 0.014 | | | | | 0.013 | |
| Molbydenum | Mo | mg/L | | | | | < 0.00001 | | | | 0.000030 | | 0.00010 | | | | | 0.000040 | |
| Nickel | Ni[3] | mg/L | **0.5** | | | | 0.00020 | | | | 0.00040 | | 0.00020 | | | | | 0.00010 | |
| Potassium | K | mg/L | | | | | 0.20 | | | | 0.14 | | 0.13 | | | | | 0.12 | |
| Sodium | Na | mg/L | | | | | 0.13 | | | | 0.090 | | 0.080 | | | | | 0.070 | |
| Strontium | Sr | mg/L | | | | | 0.0038 | | | | 0.0038 | | 0.0034 | | | | | 0.0033 | |
| Tin | Sn | mg/L | | | | | 0.00067 | | | | 0.00039 | | 0.00041 | | | | | 0.00051 | |
| Titanium | Ti | mg/L | | | | | < 0.0001 | | | | < 0.0001 | | < 0.0001 | | | | | < 0.0001 | |
| Uranium | U | mg/L | | | | | 0.000011 | | | | 0.0000080 | | 0.000018 | | | | | 0.000010 | |
| Vanadium | V | mg/L | | | | | 0.00022 | | | | 0.00014 | | 0.00013 | | | | | 0.00014 | |
| Zinc | Zn | mg/L | **0.5** | | | | < 0.001 | | | | < 0.001 | | < 0.001 | | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M05-536A-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 808 | 934 | 909 | 947 | 942 | 938 | 933 | 907 | 901 | 932 | 925 | 910 | 920 | 912 |
| pH | | units | 6.0-9.5 | 7.8 | 8.0 | 7.5 | 8.1 | 8.2 | 8.8 | 9.3 | 8.8 | 8.6 | 8.4 | 8.7 | 8.1 | 8.0 | 8.9 |
| Conductivity | | mg/L as CaCO3 | | 42 | 57 | 41 | 47 | 44 | 36 | 36 | 34 | 33 | 32 | 32 | 32 | 32 | 32 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 23 | 16 | 21 | 21 | 16 | 18 | 15 | 15 | 15 | 13 | 14 | 14 | 13 |
| Chloride | Cl | mg/L | | 0.70 | 0.90 | 0.40 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.0 | 2.2 | 2.5 | 2.7 | 2.4 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 | 2.1 | 2.1 | 1.8 | 1.8 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | 0.050 | 0.060 | 0.060 | | 0.060 | | | 0.050 | | | | 0.040 | |
| Antimony | Sb | mg/L | | 0.00090 | 0.0028 | 0.0020 | 0.0017 | | 0.0013 | | | 0.0010 | | | | 0.00070 | |
| Arsenic | As | mg/L | 0.5 | 0.0011 | 0.013 | 0.016 | 0.019 | | 0.023 | | | 0.026 | | | | 0.028 | |
| Barium | Ba | mg/L | | 0.00086 | 0.00028 | 0.00048 | 0.00043 | | 0.00024 | | | 0.00065 | | | | 0.00012 | |
| Boron | B | mg/L | | 0.0015 | 0.0043 | 0.0025 | 0.0027 | | 0.0014 | | | 0.00090 | | | | < 0.0002 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | 0.000042 | < 0.000003 | | 0.000036 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 5.2 | 4.1 | 4.6 | 5.0 | 4.9 | 4.6 | 4.3 | 4.2 | 3.7 | 4.0 | 4.1 | 4.1 | 3.9 | 3.6 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000039 | 0.000064 | 0.00013 | 0.000083 | | 0.00013 | | | 0.000069 | | | | 0.000087 | |
| Copper | Cu[3] | mg/L | 0.3 | 0.00090 | < 0.0005 | 0.00050 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | 0.2 | 0.000070 | < 0.00002 | 0.00033 | < 0.00002 | | 0.000060 | | | < 0.00002 | | | | 0.000070 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.60 | 2.0 | 2.0 | 2.4 | | 1.7 | | | 1.3 | | | | 1.1 | |
| Manganese | Mn | mg/L | | 0.011 | 0.013 | 0.015 | 0.017 | | 0.019 | | | 0.016 | | | | 0.020 | |
| Molbydenum | Mo | mg/L | | 0.000070 | 0.00011 | 0.000040 | 0.000090 | | 0.000020 | | | < 0.00001 | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00030 | 0.00040 | 0.00030 | 0.00030 | | 0.00030 | | | < 0.0001 | | | | 0.00020 | |
| Potassium | K | mg/L | | 1.4 | 1.8 | 1.5 | 1.1 | | 0.61 | | | 0.35 | | | | 0.22 | |
| Sodium | Na | mg/L | | 1.0 | 1.7 | 1.2 | 0.79 | | 0.34 | | | 0.18 | | | | 0.090 | |
| Strontium | Sr | mg/L | | 0.0074 | 0.010 | 0.0091 | 0.011 | | 0.0081 | | | 0.0050 | | | | 0.0047 | |
| Tin | Sn | mg/L | | 0.046 | 0.022 | 0.011 | 0.0060 | | 0.0032 | | | 0.014 | | | | 0.0028 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | < 0.000001 | 0.000010 | 0.000085 | 0.0000080 | | 0.000063 | | | 0.0000060 | | | | 0.0000090 | |
| Vanadium | V | mg/L | | 0.00015 | 0.00041 | 0.00041 | 0.00031 | | 0.00034 | | | 0.00029 | | | | 0.00026 | |
| Zinc | Zn | mg/L | 0.5 | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M05-536A-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 914 | 905 | 913 | 877 | 961 | 903 | 886 | 865 | 875 | 849 | 830 | 900 | 871 | 872 |
| pH | | units | **6.0-9.5** | 8.8 | 8.1 | 8.8 | 8.0 | 8.0 | 8.4 | 7.9 | 7.8 | 7.9 | 9.0 | 8.2 | 8.8 | 7.5 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 30 | 28 | 30 | 28 | 32 | 29 | 28 | 27 | 26 | 25 | 46 | 40 | 27 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 13 | 12 | 13 | 11 | 15 | 13 | 12 | 11 | 25 | 12 | 16 | 12 | 11 | 12 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 1.8 | 1.7 | 1.6 | 1.5 | 1.2 | 1.2 | 1.4 | 1.4 | 1.2 | 1.1 | 1.1 | 0.90 | 1.0 | 0.90 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.040 | | | | 0.050 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.00070 | | | | 0.00060 | | | | | 0.00060 | | |
| Arsenic | As | mg/L | **0.5** | | 0.025 | 0.031 | | | | 0.029 | | | | | 0.027 | | |
| Barium | Ba | mg/L | | | | 0.00045 | | | | 0.00023 | | | | | 0.00027 | | |
| Boron | B | mg/L | | | | 0.00030 | | | | < 0.0002 | | | | | < 0.0002 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 4.0 | 3.5 | 4.2 | 3.5 | 4.6 | 3.9 | 3.8 | 3.4 | 3.4 | 3.6 | 3.8 | 3.7 | 3.3 | 3.5 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000096 | | | | 0.000084 | | | | | 0.000085 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00039 | | | | 0.00039 | | | | | 0.0011 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 1.2 | | | | 1.1 | | | | | 1.1 | | |
| Manganese | Mn | mg/L | | | | 0.017 | | | | 0.018 | | | | | 0.020 | | |
| Molbydenum | Mo | mg/L | | | | 0.000020 | | | | 0.000070 | | | | | 0.000050 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.20 | | | | 0.17 | | | | | 0.12 | | |
| Sodium | Na | mg/L | | | | 0.070 | | | | 0.080 | | | | | 0.030 | | |
| Strontium | Sr | mg/L | | | | 0.0052 | | | | 0.0040 | | | | | 0.0018 | | |
| Tin | Sn | mg/L | | | | 0.0013 | | | | 0.0013 | | | | | 0.0011 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.0000050 | | | | 0.0000010 | | | | | 0.0000090 | | |
| Vanadium | V | mg/L | | | | 0.00027 | | | | 0.00021 | | | | | 0.00020 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M05-536A-01 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 872 | 865 | 883 | 868 | 886 | 862 | 869 | 887 | 878 | 877 | 877 | 872 | 880 |
| pH | | units | **6.0-9.5** | 7.8 | 8.4 | 8.3 | 8.3 | 7.7 | 7.9 | 8.4 | 7.6 | 8.2 | 7.9 | 7.8 | 8.1 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 26 | 25 | 25 | 24 | 24 | 25 | 24 | 24 | 28 | 28 | 27 | 25 | 25 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 11 | 11 | 11 | 11 | 10 | 11 | 11 | 12 | 13 | 11 | 11 | 11 |
| Chloride | Cl | mg/L | | | | <0.2 | | | | | < 0.2 | | | | | |
| Sulphate | SO4 | mg/L | | 0.80 | 0.80 | 0.80 | 0.70 | 0.70 | 0.70 | 0.70 | 0.80 | 1.0 | 1.1 | 0.90 | 0.80 | 0.90 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.030 | | | | | 0.040 | | | | | 0.060 |
| Antimony | Sb | mg/L | | | | 0.00070 | | | | | 0.00060 | | | | | 0.00030 |
| Arsenic | As | mg/L | **0.5** | | | 0.0014 | | | | | 0.020 | | | | | 0.019 |
| Barium | Ba | mg/L | | | | 0.00026 | | | | | 0.000070 | | | | | 0.00026 |
| Boron | B | mg/L | | | | < 0.0002 | | | | | < 0.0002 | | | | | 0.0027 |
| Cadmium | Cd[3] | mg/L | | | | 0.000023 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.2 | 3.2 | 3.3 | 3.0 | 3.0 | 3.2 | 2.9 | 2.9 | 3.6 | 3.5 | 3.0 | 3.0 | 3.0 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000034 | | | | | 0.00011 | | | | | 0.000098 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | 0.015 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.000030 | | | | | < 0.00002 | | | | | 0.000030 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.1 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 1.0 | | | | | 0.92 | | | | | 1.1 |
| Manganese | Mn | mg/L | | | | 0.0055 | | | | | 0.015 | | | | | 0.012 |
| Molbydenum | Mo | mg/L | | | | 0.000060 | | | | | 0.000010 | | | | | 0.000060 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | 0.00010 | | | | | 0.00010 |
| Potassium | K | mg/L | | | | 0.093 | | | | | 0.080 | | | | | 0.078 |
| Sodium | Na | mg/L | | | | 0.050 | | | | | 0.030 | | | | | 0.17 |
| Strontium | Sr | mg/L | | | | 0.0028 | | | | | 0.0013 | | | | | 0.018 |
| Tin | Sn | mg/L | | | | 0.00038 | | | | | 0.00053 | | | | | 0.00055 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.000024 | | | | | 0.0000030 | | | | | 0.000047 |
| Vanadium | V | mg/L | | | | 0.000090 | | | | | 0.00015 | | | | | 0.00016 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.001 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-141-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 781 | 905 | 926 | 916 | 925 | 917 | 931 | 898 | 918 | 940 | 901 | 918 | 909 | 912 |
| pH | | units | **6.0-9.5** | 7.8 | 7.8 | 7.5 | 7.8 | 7.8 | 8.6 | 9.1 | 8.1 | 7.9 | 7.9 | 7.8 | 7.6 | 7.5 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 39 | 43 | 37 | 36 | 36 | 27 | 27 | 28 | 28 | 28 | 26 | 26 | 27 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 15 | 15 | 12 | 14 | 12 | 13 | 11 | 12 | 12 | 10 | 10 | 10 | 9.0 |
| Chloride | Cl | mg/L | | 0.80 | 1.0 | 0.60 | 0.40 | | < 0.2 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 1.1 | 2.1 | 2.7 | 2.7 | 2.6 | 2.3 | 2.2 | 2.2 | 2.1 | 1.8 | 2.2 | 2.3 | 2.8 | 3.2 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.040 | 0.050 | 0.060 | | 0.060 | | | 0.030 | | | | 0.040 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0024 | 0.0022 | 0.0017 | | 0.0015 | | | 0.0013 | | | | 0.0010 | |
| Arsenic | As | mg/L | **0.5** | 0.00030 | 0.00070 | 0.00070 | 0.00080 | | 0.0013 | | | 0.0013 | | | | 0.0013 | |
| Barium | Ba | mg/L | | 0.00061 | 0.00028 | 0.00028 | 0.00028 | | 0.00029 | | | 0.00042 | | | | 0.00029 | |
| Boron | B | mg/L | | 0.0017 | 0.0029 | 0.0027 | 0.0022 | | 0.0018 | | | 0.0012 | | | | 0.00040 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000070 | < 0.000003 | < 0.000003 | | 0.000020 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.2 | 3.0 | 3.3 | 3.1 | 3.0 | 2.7 | 2.3 | 2.3 | 2.1 | 2.4 | 2.4 | 2.3 | 2.2 | 2.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000070 | 0.000038 | 0.000022 | 0.000015 | | 0.000049 | | | 0.0000090 | | | | 0.000021 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | 0.010 | | 0.020 | | | 0.010 | | | | 0.010 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000060 | < 0.00002 | < 0.00002 | < 0.00002 | | 0.000050 | | | < 0.00002 | | | | 0.000060 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 1.0 | 1.7 | 2.2 | 2.1 | | 1.9 | | | 1.6 | | | | 1.4 | |
| Manganese | Mn | mg/L | | 0.0074 | 0.0081 | 0.0087 | 0.0080 | | 0.0076 | | | 0.0070 | | | | 0.0081 | |
| Molbydenum | Mo | mg/L | | 0.000050 | 0.000090 | 0.000050 | 0.000060 | | 0.000040 | | | < 0.00001 | | | | 0.000030 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | |
| Potassium | K | mg/L | | 0.91 | 1.1 | 1.1 | 0.89 | | 0.57 | | | 0.34 | | | | 0.22 | |
| Sodium | Na | mg/L | | 0.92 | 1.4 | 1.3 | 1.1 | | 0.56 | | | 0.27 | | | | 0.14 | |
| Strontium | Sr | mg/L | | 0.0046 | 0.0046 | 0.0047 | 0.0046 | | 0.0038 | | | 0.0027 | | | | 0.0026 | |
| Tin | Sn | mg/L | | 0.028 | 0.020 | 0.012 | 0.0052 | | 0.0020 | | | 0.0014 | | | | 0.00065 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.0000020 | 0.0000040 | 0.0000060 | 0.0000030 | | 0.000035 | | | < 0.000001 | | | | 0.0000040 | |
| Vanadium | V | mg/L | | 0.00012 | 0.00024 | 0.00020 | 0.00019 | | 0.00021 | | | 0.00016 | | | | 0.00014 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-141-01 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 912 | 897 | 906 | 892 | 915 | 892 | 892 | 859 | 855 | 855 | 835 | 895 | 848 | 880 |
| pH | | units | **6.0-9.5** | 7.5 | 7.3 | 7.4 | 7.4 | 7.4 | 7.4 | 7.5 | 7.4 | 7.6 | 8.0 | 7.6 | 7.7 | 7.2 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 27 | 28 | 29 | 31 | 27 | 29 | 30 | 32 | 32 | 29 | 46 | 44 | 29 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 8.0 | 8.0 | 8.0 | 7.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 9.0 | 10 | 8.0 | 8.0 | 9.0 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 4.0 | 4.3 | 5.3 | 5.9 | 4.0 | 5.3 | 5.5 | 6.4 | 6.1 | 5.2 | 4.9 | 3.1 | 4.7 | 3.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.040 | | | | 0.040 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.00090 | | | | 0.00080 | | | | | 0.00080 | | |
| Arsenic | As | mg/L | **0.5** | | 0.0010 | 0.0013 | | | | 0.0015 | | | | | 0.0017 | | |
| Barium | Ba | mg/L | | | | 0.00049 | | | | 0.00027 | | | | | 0.00054 | | |
| Boron | B | mg/L | | | | 0.00040 | | | | 0.00030 | | | | | 0.00030 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 2.4 | 2.3 | 2.8 | 2.4 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.6 | 2.4 | 2.4 | 2.5 | 2.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000020 | | | | 0.000019 | | | | | 0.000023 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00040 | | | | 0.00035 | | | | | 0.00097 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 1.8 | | | | 1.7 | | | | | 1.4 | | |
| Manganese | Mn | mg/L | | | | 0.0080 | | | | 0.0069 | | | | | 0.0075 | | |
| Molbydenum | Mo | mg/L | | | | 0.000040 | | | | 0.000040 | | | | | 0.000040 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.18 | | | | 0.16 | | | | | 0.080 | | |
| Sodium | Na | mg/L | | | | 0.10 | | | | 0.11 | | | | | 0.040 | | |
| Strontium | Sr | mg/L | | | | 0.0032 | | | | 0.0031 | | | | | 0.0013 | | |
| Tin | Sn | mg/L | | | | 0.00058 | | | | 0.00053 | | | | | 0.00061 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | < 0.000001 | | | | < 0.000001 | | | | | 0.0000040 | | |
| Vanadium | V | mg/L | | | | 0.00011 | | | | 0.000090 | | | | | 0.00010 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M97-141-01 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 872 | 860 | 853 | 861 | 872 | 855 | 858 | 902 | 848 | 886 | 849 | 892 | 890 |
| pH | | units | **6.0-9.5** | 7.5 | 7.4 | 7.6 | 7.6 | 7.4 | 7.5 | 7.6 | 7.3 | 7.4 | 7.4 | 7.6 | 7.5 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 29 | 27 | 27 | 26 | 27 | 27 | 27 | 26 | 34 | 30 | 31 | 27 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 9.0 | 10 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 8.0 | 7.0 | 8.0 | 9.0 | 8.0 | 9.0 |
| Chloride | Cl | mg/L | | | | <0.2 | | < 0.2 | | | < 0.2 | | | | | |
| Sulphate | SO4 | mg/L | | 4.2 | 4.1 | 4.2 | 3.9 | 3.6 | 3.5 | 4.2 | 3.6 | 7.1 | 4.7 | 4.6 | 3.4 | 3.5 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al [4] | mg/L | | | | 0.020 | | | | | 0.040 | | | | | 0.020 |
| Antimony | Sb | mg/L | | | | 0.00030 | | | | | 0.00070 | | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | | | 0.0044 | | | | | 0.0012 | | | | | 0.0011 |
| Barium | Ba | mg/L | | | | 0.00080 | | | | | 0.00014 | | | | | 0.00015 |
| Boron | B | mg/L | | | | < 0.0002 | | | | | 0.00020 | | | | | 0.0013 |
| Cadmium | Cd [3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 2.5 | 2.2 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2.3 | 2.8 | 2.6 | 2.3 | 2.3 | 2.2 |
| Chromium | Cr [2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000067 | | | | | 0.000025 | | | | | 0.000024 |
| Copper | Cu [3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | 0.00050 |
| Iron | Fe | mg/L | | | | 0.012 | | | | | < 0.002 | | | | | 0.051 |
| Lead | Pb [3] | mg/L | **0.2** | | | 0.000040 | | | | | < 0.00002 | | | | | 0.000030 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.1 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 1.5 | | | | | 1.3 | | | | | 1.4 |
| Manganese | Mn | mg/L | | | | 0.0070 | | | | | 0.0065 | | | | | 0.0071 |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | | 0.000020 | | | | | 0.000050 |
| Nickel | Ni [3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Potassium | K | mg/L | | | | 0.083 | | | | | 0.075 | | | | | 0.057 |
| Sodium | Na | mg/L | | | | 0.060 | | | | | 0.050 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.0021 | | | | | 0.0016 | | | | | 0.0022 |
| Tin | Sn | mg/L | | | | 0.00096 | | | | | 0.00038 | | | | | 0.00047 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00016 | | | | | 0.0000010 | | | | | 0.000040 |
| Vanadium | V | mg/L | | | | 0.000030 | | | | | 0.000070 | | | | | 0.000070 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.001 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M98-184-01 (Mafic Volcanics) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 806 | 978 | 988 | 988 | 989 | 995 | 983 | 983 | 985 | 985 | 989 | 986 | 986 | 989 | 986 | 991 | 995 | 988 | 992 | 993 | 991 |
| pH | | units | 6.0-9.5 | 9.0 | 8.7 | 8.1 | 8.3 | 7.9 | 8.2 | 7.8 | 7.9 | 7.6 | 7.7 | 7.6 | 8.0 | 7.8 | 7.5 | 7.4 | 7.5 | 7.6 | 6.8 | 7.6 | 7.7 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 55 | 9.0 | 51 | 54 | 6.0 | 37 | 31 | 40 | 36 | 35 | 26 | 26 | 27 | 31 | 31 | 32 | 33 | 31 | 22 | 30 | 28 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 35 | 36 | 33 | 27 | 25 | 39 | 21 | 20 | 15 | 16 | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 24 | 13 | 25 | 13 |
| Chloride | Cl | mg/L | | 0.70 | 0.60 | 0.30 | < 0.2 | | < 0.2 | | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | < 0.2 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | < 0.009 | < 0.009 | 0.014 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 2.6 | 3.0 | 2.1 | 1.6 | 1.1 | 1.0 | 0.70 | 0.70 | 2.2 | 0.60 | 0.50 | 0.50 | 0.50 | 0.50 | 0.40 | 0.50 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.040 | 0.040 | 0.050 | | 0.040 | | | 0.040 | | | | 0.030 | | | | 0.050 | | | | 0.030 |
| Antimony | Sb | mg/L | | 0.00050 | 0.00090 | 0.00070 | 0.00050 | | 0.00060 | | | 0.0018 | | | | 0.00040 | | | | 0.00050 | | | | 0.00030 |
| Arsenic | As | mg/L | 0.5 | 0.0036 | 0.0067 | 0.0062 | 0.0054 | | 0.0045 | | | 0.0068 | | | | 0.0031 | | | | 0.0031 | | | | 0.0025 |
| Barium | Ba | mg/L | | 0.00068 | 0.0012 | 0.0013 | 0.0013 | | 0.0017 | | | 0.00066 | | | | 0.0019 | | | | 0.0017 | | | | 0.0014 |
| Boron | B | mg/L | | 0.011 | 0.024 | 0.018 | 0.015 | | 0.012 | | | 0.0028 | | | | 0.0044 | | | | 0.0027 | | | | 0.0041 |
| Cadmium | Cd[3] | mg/L | | 0.0000050 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.2 | 3.3 | 3.1 | 3.2 | 3.4 | 3.7 | 3.3 | 3.8 | 4.8 | 4.2 | 3.9 | 4.0 | 4.2 | 4.4 | 4.2 | 4.6 | 4.7 | 4.7 | 4.3 | 4.2 | 4.3 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000012 | 0.000015 | 0.000012 | 0.0000090 | | 0.000017 | | | 0.000023 | | | | 0.000011 | | | | 0.000020 | | | | 0.000014 |
| Copper | Cu[3] | mg/L | 0.3 | 0.00070 | < 0.0005 | < 0.0005 | 0.00070 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.010 | 0.0040 | 0.0030 | 0.0040 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | 0.0090 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 0.18 | 0.23 | 0.26 | 0.27 | | 0.34 | | | 0.71 | | | | 0.46 | | | | 0.46 | | | | 0.42 |
| Manganese | Mn | mg/L | | 0.0057 | 0.012 | 0.012 | 0.013 | | 0.014 | | | 0.013 | | | | 0.012 | | | | 0.014 | | | | 0.012 |
| Molbydenum | Mo | mg/L | | 0.00022 | 0.00034 | 0.00022 | 0.00012 | | 0.00036 | | | 0.000050 | | | | 0.000020 | | | | 0.000010 | | | | 0.000020 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | < 0.0001 | < 0.0001 | 0.00030 | 0.00010 | | 0.00020 | | | 0.00010 | | | | 0.00050 | | | | < 0.0001 | | | | < 0.0001 |
| Potassium | K | mg/L | | 2.2 | 2.6 | 2.7 | 2.4 | | 2.4 | | | 1.3 | | | | 1.8 | | | | 1.4 | | | | 1.1 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 7.9 | 11 | 8.3 | 6.2 | | 4.1 | | | 0.32 | | | | 0.78 | | | | 0.35 | | | | 0.19 |
| Strontium | Sr | mg/L | | 0.0036 | 0.0044 | 0.0049 | 0.0050 | | 0.0061 | | | 0.0076 | | | | 0.0080 | | | | 0.0081 | | | | 0.0073 |
| Tin | Sn | mg/L | | 0.00081 | 0.00062 | 0.00050 | 0.00024 | | 0.00022 | | | 0.00015 | | | | 0.00014 | | | | 0.00024 | | | | 0.00023 |
| Titanium | Ti | mg/L | | 0.0003 | 0.0003 | 0.0003 | 0.0002 | | 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00006 | 0.00032 | 0.00028 | 0.00025 | | 0.00019 | | | 0.000040 | | | | 0.00010 | | | | 0.000060 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000014 | 0.000078 | 0.000074 | 0.000078 | | 0.000073 | | | 0.000045 | | | | 0.000086 | | | | 0.000092 | | | | 0.000092 |
| Vanadium | V | mg/L | | 0.0012 | 0.0011 | 0.00085 | 0.00074 | | 0.00065 | | | 0.00025 | | | | 0.00041 | | | | 0.00038 | | | | 0.00032 |
| Yttrium | Y | mg/L | | 0.000007 | 0.000015 | 0.000015 | 0.000019 | | 0.000012 | | | 0.000018 | | | | 0.0000050 | | | | 0.0000080 | | | | 0.0000070 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 1 Tiri GW OP E (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 34300 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 |
| Leachate Volume Recovered | | mL | | 1393 | 8951 | 9836 | 9768 | 9632 | 9768 | 9586 | 9518 | 33318 | 10494 | 9268 | 9632 | 9178 | 9360 | 10108 | 9518 |
| pH | | units | **6.0-9.5** | 7.7 | 8.2 | 8.3 | 8.5 | 8.2 | 8.1 | 7.6 | 8.1 | 8.0 | 8.0 | 8.1 | 7.7 | 8.1 | 8.0 | 7.8 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 194 | 529 | 285 | 275 | 268 | 265 | 232 | 227 | 143 | 154 | 141 | 177 | 169 | 186 | 209 | 148 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 31 | 83 | 65 | 64 | 60 | 60 | 63 | 63 | 52 | 51 | 49 | 21 | 47 | 53 | 50 | 48 |
| Chloride | Cl | mg/L | | 7.4 | 25 | 12 | 8.7 | | 5.7 | | | 1.7 | | | | 0.40 | | | |
| Fluoride | F | mg/L | | 0.17 | 0.22 | 0.13 | 0.13 | | 0.10 | | | 0.070 | | | | 0.070 | | | |
| Phosphorus | P | mg/L | | 0.033 | 0.020 | 0.012 | 0.018 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 37 | 150 | 80 | 64 | 57 | 54 | 51 | 48 | 39 | 42 | 33 | 41 | 37 | 42 | 49 | 41 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.34 | 0.15 | 0.22 | 0.18 | | 0.19 | | | 0.18 | | | | 0.14 | | | |
| Antimony | Sb | mg/L | | 0.0010 | 0.0051 | 0.0039 | 0.0036 | | 0.0036 | | | 0.0027 | | | | 0.0025 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0037 | 0.030 | 0.030 | 0.031 | | 0.036 | | | 0.038 | | | | 0.033 | | | |
| Barium | Ba | mg/L | | 0.011 | 0.029 | 0.016 | 0.013 | | 0.012 | | | 0.0086 | | | | 0.0085 | | | |
| Boron | B | mg/L | | 0.0086 | 0.027 | 0.014 | 0.013 | | 0.030 | | | 0.0093 | | | | 0.013 | | | |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 10 | 24 | 20 | 18 | 19 | 19 | 20 | 18 | 16 | 19 | 19 | 22 | 19 | 21 | 23 | 22 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.000056 | 0.00022 | 0.00022 | 0.00020 | | 0.00024 | | | 0.00032 | | | | 0.00043 | | | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | 0.00080 | 0.00060 | < 0.0005 | | 0.0024 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.0030 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | 0.0030 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000020 | < 0.00002 | 0.000020 | 0.000070 | | 0.00043 | | | 0.000060 | | | | 0.000020 | | | |
| Lithium | Li | mg/L | | 0.0010 | 0.0020 | 0.0020 | 0.0010 | | 0.0020 | | | 0.0010 | | | | 0.0010 | | | |
| Magnesium | Mg | mg/L | | 1.6 | 8.7 | 6.8 | 6.1 | | 6.4 | | | 4.9 | | | | 5.3 | | | |
| Manganese | Mn | mg/L | | 0.0090 | 0.0087 | 0.0080 | 0.0100 | | 0.014 | | | 0.013 | | | | 0.016 | | | |
| Molbydenum | Mo | mg/L | | 0.0012 | 0.0063 | 0.0037 | 0.0027 | | 0.0031 | | | 0.0014 | | | | 0.0011 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00050 | 0.0018 | 0.00080 | 0.00070 | | 0.0011 | | | 0.00090 | | | | 0.0012 | | | |
| Potassium | K | mg/L | | 16 | 35 | 24 | 18 | | 15 | | | 9.5 | | | | 7.1 | | | |
| Selenium | Se | mg/L | | < 0.001 | 0.0030 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 16 | 49 | 31 | 21 | | 15 | | | 6.3 | | | | 3.1 | | | |
| Strontium | Sr | mg/L | | 0.060 | 0.19 | 0.14 | 0.13 | | 0.13 | | | 0.095 | | | | 0.11 | | | |
| Tin | Sn | mg/L | | 0.00035 | 0.00010 | 0.000020 | < 0.00001 | | 0.00010 | | | 0.000020 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.0005 | 0.00030 | 0.00090 | 0.00040 | | 0.00060 | | | 0.0011 | | | | 0.00090 | | | |
| Tungsten | W | mg/L | | 0.00010 | 0.0013 | 0.00022 | 0.00018 | | 0.00019 | | | 0.00022 | | | | 0.00013 | | | |
| Uranuium | U | mg/L | | 0.00004 | 0.0017 | 0.00097 | 0.00087 | | 0.00096 | | | 0.00076 | | | | 0.00073 | | | |
| Vanadium | V | mg/L | | 0.00021 | 0.00081 | 0.00044 | 0.00042 | | 0.00043 | | | 0.00034 | | | | 0.00027 | | | |
| Yttrium | Y | mg/L | | 0.0000090 | 0.0000060 | 0.0000050 | 0.0000060 | | 0.0000070 | | | 0.000019 | | | | 0.000012 | | | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0060 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 1 Tiri GW OP E (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 |
| Leachate Volume Recovered | | mL | | 9292 | 9088 | 10131 | 9836 | 9518 | 9677 | 9541 | 9791 | 9700 | 9428 | 9609 | 9224 | 9541 | 9586 | 9677 |
| pH | | units | **6.0-9.5** | 8.0 | 7.8 | 7.9 | 7.9 | 7.9 | 7.8 | 8.0 | 7.8 | 7.9 | 8.0 | 7.9 | 7.9 | 8.0 | 8.0 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 135 | 157 | 188 | 144 | 175 | 176 | 129 | 120 | 163 | 116 | 156 | 118 | 119 | 120 | 127 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 48 | 44 | 48 | 49 | 52 | 45 | 43 | 44 | 44 | 43 | 43 | 44 | 42 | 43 | 45 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.080 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | 0.011 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 39 | 33 | 41 | 43 | 37 | 37 | 34 | 33 | 33 | 29 | 31 | 29 | 31 | 32 | 35 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.13 | | | | 0.13 | | | | 0.11 | | | | | | 0.12 |
| Antimony | Sb | mg/L | | 0.0024 | | | | 0.0017 | | | | 0.0013 | | | | | | 0.0014 |
| Arsenic | As | mg/L | **0.5** | 0.030 | | | | 0.026 | | | | 0.023 | | | | | | 0.020 |
| Barium | Ba | mg/L | | 0.0086 | | | | 0.0078 | | | | 0.0070 | | | | | | 0.0072 |
| Boron | B | mg/L | | 0.0060 | | | | 0.0058 | | | | 0.0039 | | | | | | 0.0039 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | 0.0000080 | | | | 0.000010 | | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 22 | 19 | 23 | 23 | 22 | 22 | 21 | 19 | 20 | 19 | 20 | 19 | 19 | 21 | 22 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00050 | | | | 0.00044 | | | | 0.00049 | | | | | | 0.00058 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | 0.00070 | | | | < 0.0005 | | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | 0.0040 | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000020 | | | | 0.000050 | | | | 0.000020 | | | | | | 0.000060 |
| Lithium | Li | mg/L | | 0.0010 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 5.9 | | | | 5.6 | | | | 5.2 | | | | | | 5.4 |
| Manganese | Mn | mg/L | | 0.018 | | | | 0.014 | | | | 0.011 | | | | | | 0.012 |
| Molbydenum | Mo | mg/L | | 0.0013 | | | | 0.0018 | | | | 0.0018 | | | | | | 0.0023 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | | | | 0.00040 | | | | 0.0012 | | | | | | 0.0012 |
| Potassium | K | mg/L | | 6.0 | | | | 4.6 | | | | 4.0 | | | | | | 3.3 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 2.2 | | | | 1.5 | | | | 0.98 | | | | | | 0.74 |
| Strontium | Sr | mg/L | | 0.12 | | | | 0.12 | | | | 0.11 | | | | | | 0.12 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | 0.000020 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00080 | | | | 0.0011 | | | | 0.0013 | | | | | | 0.00090 |
| Tungsten | W | mg/L | | 0.000040 | | | | < 0.00003 | | | | 0.000030 | | | | | | < 0.00003 |
| Uranuium | U | mg/L | | 0.00084 | | | | 0.00068 | | | | 0.00065 | | | | | | 0.00079 |
| Vanadium | V | mg/L | | 0.00022 | | | | 0.00019 | | | | 0.00015 | | | | | | 0.00013 |
| Yttrium | Y | mg/L | | 0.000011 | | | | 0.000011 | | | | 0.0000050 | | | | | | 0.0000070 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 2 Tiri GW OP W (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 16900 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 4403 | 4801 | 4756 | 4778 | 4665 | 4710 | 4620 | 4733 | 16331 | 5005 | 4530 | 4688 | 4461 | 4506 | 4846 | 4552 |
| pH | | units | 6.0-9.5 | 7.4 | 8.2 | 8.2 | 8.3 | 8.1 | 8.0 | 8.2 | 8.1 | 7.7 | 7.8 | 8.0 | 7.5 | 8.2 | 7.9 | 7.7 | 7.9 |
| Conductivity | | mg/L as CaCO3 | | 406 | 269 | 218 | 241 | 242 | 227 | 211 | 216 | 150 | 137 | 143 | 183 | 169 | 166 | 194 | 141 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 46 | 57 | 59 | 55 | 55 | 54 | 57 | 54 | 46 | 45 | 48 | 49 | 44 | 44 | 48 | 45 |
| Chloride | Cl | mg/L | | 32 | 20 | 13 | 12 | | 9.0 | | | 3.2 | | | | 0.70 | | | |
| Fluoride | F | mg/L | | 0.20 | 0.14 | 0.12 | 0.10 | | 0.060 | | | 0.060 | | | | 0.070 | | | |
| Phosphorus | P | mg/L | | 0.022 | < 0.009 | 0.010 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 85 | 58 | 51 | 48 | 46 | 50 | 50 | 48 | 41 | 22 | 37 | 37 | 35 | 37 | 43 | 38 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.21 | 0.13 | 0.15 | 0.15 | | 0.15 | | | 0.14 | | | | 0.13 | | | |
| Antimony | Sb | mg/L | | 0.0045 | 0.0056 | 0.0059 | 0.0058 | | 0.0058 | | | 0.0042 | | | | 0.0037 | | | |
| Arsenic | As | mg/L | 0.5 | 0.077 | 0.068 | 0.070 | 0.072 | | 0.080 | | | 0.072 | | | | 0.062 | | | |
| Barium | Ba | mg/L | | 0.014 | 0.012 | 0.011 | 0.010 | | 0.0099 | | | 0.0083 | | | | 0.0078 | | | |
| Boron | B | mg/L | | 0.017 | 0.020 | 0.016 | 0.016 | | 0.018 | | | 0.011 | | | | 0.0097 | | | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.0000030 | 0.000012 | < 0.000003 | | 0.0000050 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 16 | 14 | 17 | 17 | 18 | 18 | 20 | 19 | 18 | 18 | 20 | 20 | 18 | 19 | 21 | 21 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00025 | 0.00022 | 0.00031 | 0.00034 | | 0.00046 | | | 0.00066 | | | | 0.00084 | | | |
| Copper | Cu[3] | mg/L | 0.3 | 0.0045 | 0.0010 | 0.00090 | 0.00070 | | 0.00090 | | | 0.00070 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.0040 | < 0.002 | 0.022 | 0.0090 | | 0.0050 | | | 0.0030 | | | | 0.0040 | | | |
| Lead | Pb[3] | mg/L | 0.2 | 0.000040 | 0.000050 | 0.000020 | 0.000060 | | 0.00010 | | | 0.000050 | | | | 0.000040 | | | |
| Lithium | Li | mg/L | | 0.0020 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | |
| Magnesium | Mg | mg/L | | 4.6 | 4.3 | 5.5 | 5.7 | | 5.9 | | | 5.3 | | | | 4.9 | | | |
| Manganese | Mn | mg/L | | 0.012 | 0.011 | 0.016 | 0.015 | | 0.023 | | | 0.024 | | | | 0.028 | | | |
| Molbydenum | Mo | mg/L | | 0.0077 | 0.0055 | 0.0048 | 0.0039 | | 0.0037 | | | 0.0023 | | | | 0.0014 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0021 | 0.0017 | 0.0014 | 0.0014 | | 0.0019 | | | 0.0018 | | | | 0.0010 | | | |
| Potassium | K | mg/L | | 22 | 15 | 16 | 13 | | 11 | | | 7.9 | | | | 5.4 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0020 | 0.0010 | 0.0020 | | 0.0020 | | | 0.0010 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 57 | 27 | 26 | 21 | | 17 | | | 8.7 | | | | 3.7 | | | |
| Strontium | Sr | mg/L | | 0.11 | 0.091 | 0.11 | 0.11 | | 0.11 | | | 0.097 | | | | 0.092 | | | |
| Tin | Sn | mg/L | | 0.00010 | 0.000020 | 0.000030 | < 0.00001 | | 0.000020 | | | < 0.00001 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00060 | 0.00040 | 0.00090 | 0.00080 | | 0.00070 | | | 0.00070 | | | | 0.00080 | | | |
| Tungsten | W | mg/L | | 0.00073 | 0.0011 | 0.00053 | 0.00053 | | 0.00050 | | | 0.00023 | | | | 0.00016 | | | |
| Uranium | U | mg/L | | 0.00075 | 0.0012 | 0.0013 | 0.0016 | | 0.0020 | | | 0.0017 | | | | 0.0015 | | | |
| Vanadium | V | mg/L | | 0.0012 | 0.00084 | 0.00058 | 0.00060 | | 0.00056 | | | 0.00040 | | | | 0.00030 | | | |
| Yttrium | Y | mg/L | | 0.000014 | 0.000010 | 0.0000080 | 0.000015 | | 0.000022 | | | 0.000017 | | | | 0.000014 | | | |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 2 Tiri GW OP W (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 4461 | 4415 | 4960 | 4801 | 4620 | 4688 | 4597 | 4733 | 4642 | 4597 | 4597 | 4597 | 4665 | 4688 | 4620 |
| pH | | units | 6.0-9.5 | 8.0 | 7.8 | 7.9 | 7.9 | 7.9 | 8.0 | 8.0 | 7.6 | 7.8 | 7.9 | 7.7 | 7.9 | 7.9 | 7.9 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 115 | 146 | 178 | 135 | 166 | 164 | 115 | 108 | 148 | 113 | 145 | 121 | 118 | 121 | 120 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 45 | 37 | 43 | 46 | 49 | 42 | 40 | 36 | 38 | 39 | 37 | 39 | 39 | 37 | 48 |
| Chloride | Cl | mg/L | | 0.30 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 37 | 32 | 39 | 41 | 36 | 35 | 32 | 32 | 32 | 31 | 32 | 34 | 35 | 36 | 36 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.11 | | | | 0.080 | | | | 0.090 | | | | | | 0.090 |
| Antimony | Sb | mg/L | | 0.0033 | | | | 0.0022 | | | | 0.0016 | | | | | | 0.0016 |
| Arsenic | As | mg/L | 0.5 | 0.052 | | | | 0.045 | | | | 0.041 | | | | | | 0.033 |
| Barium | Ba | mg/L | | 0.0077 | | | | 0.0071 | | | | 0.0057 | | | | | | 0.0063 |
| Boron | B | mg/L | | 0.0068 | | | | 0.0060 | | | | 0.0040 | | | | | | 0.0039 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | 0.0000080 | | | | 0.000012 | | | | | | 0.0000060 |
| Calcium | Ca | mg/L | | 21 | 18 | 21 | 21 | 21 | 21 | 20 | 18 | 18 | 19 | 19 | 20 | 20 | 22 | 21 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.0010 | | | | 0.00096 | | | | 0.00082 | | | | | | 0.00081 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | | | | 0.00050 | | | | < 0.0005 | | | | | | 0.00070 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | 0.0070 | | | | | | 0.0060 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000030 | | | | 0.000040 | | | | 0.000060 | | | | | | 0.000080 |
| Lithium | Li | mg/L | | 0.0010 | | | | 0.0010 | | | | < 0.001 | | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 5.6 | | | | 5.2 | | | | 4.3 | | | | | | 5.0 |
| Manganese | Mn | mg/L | | 0.032 | | | | 0.026 | | | | 0.017 | | | | | | 0.014 |
| Molbydenum | Mo | mg/L | | 0.0013 | | | | 0.0016 | | | | 0.0017 | | | | | | 0.0033 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0010 | | | | 0.0010 | | | | 0.0017 | | | | | | 0.0020 |
| Potassium | K | mg/L | | 4.6 | | | | 3.3 | | | | 2.5 | | | | | | 2.2 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 2.5 | | | | 1.5 | | | | 0.87 | | | | | | 0.71 |
| Strontium | Sr | mg/L | | 0.10 | | | | 0.097 | | | | 0.078 | | | | | | 0.092 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.0010 | | | | 0.00060 | | | | 0.0019 | | | | | | 0.00070 |
| Tungsten | W | mg/L | | 0.000060 | | | | 0.00024 | | | | < 0.00003 | | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.0017 | | | | 0.0016 | | | | 0.0013 | | | | | | 0.0015 |
| Vanadium | V | mg/L | | 0.00027 | | | | 0.00021 | | | | 0.00016 | | | | | | 0.00013 |
| Yttrium | Y | mg/L | | 0.000013 | | | | 0.0000080 | | | | 0.000024 | | | | | | 0.000024 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 3 Tiri GW UG (All) (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 17500 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 924 | 4846 | 4982 | 4959 | 4846 | 4914 | 4778 | 4823 | 16669 | 5413 | 4542 | 4800 | 4347 | 4392 | 5254 | 4641 |
| pH | | units | **6.0-9.5** | 7.4 | 8.1 | 8.4 | 8.4 | 7.9 | 8.1 | 8.2 | 8.3 | 7.9 | 8.0 | 8.1 | 8.0 | 8.1 | 8.1 | 7.9 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 564 | 392 | 257 | 213 | 212 | 179 | 158 | 160 | 99 | 94 | 97 | 130 | 117 | 117 | 137 | 98 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 79 | 74 | 64 | 59 | 59 | 61 | 58 | 46 | 46 | 46 | 52 | 45 | 49 | 54 | 47 |
| Chloride | Cl | mg/L | | 37 | 24 | 9.8 | 5.6 | | 2.5 | | | 0.30 | | | | < 0.2 | | | |
| Fluoride | F | mg/L | | 0.34 | 0.27 | 0.21 | 0.17 | | 0.14 | | | 0.080 | | | | 0.080 | | | |
| Phosphorus | P | mg/L | | 0.018 | < 0.009 | 0.011 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 100 | 85 | 52 | 36 | 30 | 27 | 24 | 21 | 16 | 13 | 12 | 13 | 11 | 13 | 15 | 13 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.080 | 0.13 | 0.15 | 0.17 | | 0.20 | | | 0.18 | | | | 0.20 | | | |
| Antimony | Sb | mg/L | | 0.0053 | 0.015 | 0.014 | 0.014 | | 0.013 | | | 0.0089 | | | | 0.0072 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0056 | 0.11 | 0.100 | 0.12 | | 0.14 | | | 0.14 | | | | 0.14 | | | |
| Barium | Ba | mg/L | | 0.066 | 0.038 | 0.035 | 0.031 | | 0.028 | | | 0.022 | | | | 0.023 | | | |
| Boron | B | mg/L | | 0.028 | 0.042 | 0.029 | 0.024 | | 0.021 | | | 0.012 | | | | 0.0081 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000011 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 29 | 21 | 16 | 15 | 14 | 14 | 15 | 14 | 12 | 12 | 12 | 14 | 12 | 13 | 14 | 13 |
| Chromium | Cr[2] | mg/L | | 0.00050 | 0.00060 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00082 | 0.00058 | 0.00050 | 0.00049 | | 0.00049 | | | 0.00053 | | | | 0.00060 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0018 | 0.00090 | 0.00070 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | < 0.002 | < 0.002 | 0.017 | < 0.002 | | 0.0040 | | | < 0.002 | | | | 0.0070 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | 0.000050 | 0.000040 | 0.000040 | | 0.000080 | | | 0.000030 | | | | 0.000050 | | | |
| Lithium | Li | mg/L | | 0.0030 | 0.0030 | 0.0030 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | |
| Magnesium | Mg | mg/L | | 7.2 | 9.9 | 7.6 | 6.7 | | 5.9 | | | 4.7 | | | | 4.0 | | | |
| Manganese | Mn | mg/L | | 0.14 | 0.010 | 0.0097 | 0.0096 | | 0.011 | | | 0.0091 | | | | 0.0096 | | | |
| Molbydenum | Mo | mg/L | | 0.0059 | 0.0061 | 0.0038 | 0.0025 | | 0.0019 | | | 0.00093 | | | | 0.00063 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0025 | 0.0033 | 0.0018 | 0.0016 | | 0.0013 | | | 0.00080 | | | | 0.00030 | | | |
| Potassium | K | mg/L | | 40 | 36 | 23 | 17 | | 12 | | | 8.1 | | | | 5.5 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0030 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | 0.0010 | | | |
| Sodium | Na | mg/L | | 52 | 42 | 23 | 14 | | 7.2 | | | 2.9 | | | | 1.2 | | | |
| Strontium | Sr | mg/L | | 0.22 | 0.21 | 0.16 | 0.14 | | 0.13 | | | 0.10 | | | | 0.095 | | | |
| Tin | Sn | mg/L | | 0.0011 | 0.00015 | 0.000070 | < 0.00001 | | 0.000030 | | | 0.000010 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | 0.000020 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00030 | 0.00040 | 0.00050 | 0.00020 | | 0.00030 | | | 0.00040 | | | | 0.00040 | | | |
| Tungsten | W | mg/L | | 0.00080 | 0.0014 | 0.00075 | 0.00064 | | 0.00054 | | | 0.00039 | | | | 0.00027 | | | |
| Uranium | U | mg/L | | 0.00031 | 0.0011 | 0.00075 | 0.00060 | | 0.00058 | | | 0.00040 | | | | 0.00045 | | | |
| Vanadium | V | mg/L | | 0.00014 | 0.0013 | 0.0012 | 0.0011 | | 0.0013 | | | 0.0010 | | | | 0.00091 | | | |
| Yttrium | Y | mg/L | | 0.000013 | 0.000010 | 0.0000090 | 0.000012 | | 0.000010 | | | 0.0000060 | | | | 0.000013 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 3 Tiri GW UG (All) (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Leachate Volume Recovered | | mL | | 4619 | 4483 | 5231 | 5004 | 4800 | 4914 | 4732 | 4959 | 4868 | 4778 | 4800 | 4732 | 4800 | 4846 | 4868 |
| pH | | units | **6.0-9.5** | 8.1 | 8.0 | 7.7 | 7.9 | 8.2 | 8.0 | 8.2 | 7.9 | 7.9 | 8.1 | 7.9 | 8.0 | 8.0 | 8.0 | 8.0 |
| Conductivity | | mg/L as CaCO3 | | 131 | 104 | 100 | 92 | 116 | 116 | 87 | 81 | 108 | 83 | 107 | 88 | 86 | 88 | 89 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 41 | 48 | 46 | 48 | 45 | 44 | 40 | 42 | 42 | 41 | 42 | 42 | 43 | 43 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.060 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 12 | 11 | 13 | 13 | 12 | 12 | 11 | 12 | 11 | 11 | 11 | 12 | 13 | 13 | 14 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.19 | | | | 0.16 | | | | 0.15 | | | | | | 0.16 |
| Antimony | Sb | mg/L | | 0.0070 | | | | 0.0054 | | | | 0.0043 | | | | | | 0.0040 |
| Arsenic | As | mg/L | **0.5** | 0.14 | | | | 0.13 | | | | 0.12 | | | | | | 0.099 |
| Barium | Ba | mg/L | | 0.023 | | | | 0.023 | | | | 0.020 | | | | | | 0.023 |
| Boron | B | mg/L | | 0.0058 | | | | 0.0049 | | | | 0.0034 | | | | | | 0.0029 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | < 0.000003 | | | | 0.0000040 | | | | | | 0.000012 |
| Calcium | Ca | mg/L | | 13 | 12 | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 13 | 13 | 13 | 14 | 14 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00071 | | | | 0.00086 | | | | 0.00086 | | | | | | 0.00099 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | 0.00050 |
| Iron | Fe | mg/L | | 0.0040 | | | | 0.0040 | | | | 0.0050 | | | | | | 0.0060 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000070 | | | | 0.000080 | | | | 0.000060 | | | | | | 0.00012 |
| Lithium | Li | mg/L | | 0.0020 | | | | 0.0020 | | | | 0.0020 | | | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 4.4 | | | | 4.1 | | | | 3.8 | | | | | | 4.0 |
| Manganese | Mn | mg/L | | 0.011 | | | | 0.012 | | | | 0.0095 | | | | | | 0.0098 |
| Molbydenum | Mo | mg/L | | 0.00048 | | | | 0.00059 | | | | 0.00051 | | | | | | 0.00081 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00070 | | | | 0.00030 | | | | 0.00090 | | | | | | 0.00090 |
| Potassium | K | mg/L | | 5.3 | | | | 4.5 | | | | 4.2 | | | | | | 4.0 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.0 | | | | 0.69 | | | | 0.50 | | | | | | 0.44 |
| Strontium | Sr | mg/L | | 0.10 | | | | 0.10 | | | | 0.092 | | | | | | 0.099 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00030 | | | | 0.00050 | | | | 0.00040 | | | | | | 0.00040 |
| Tungsten | W | mg/L | | 0.00020 | | | | 0.00057 | | | | 0.00012 | | | | | | 0.000090 |
| Uranium | U | mg/L | | 0.00058 | | | | 0.00072 | | | | 0.00060 | | | | | | 0.00082 |
| Vanadium | V | mg/L | | 0.00090 | | | | 0.00079 | | | | 0.00059 | | | | | | 0.00056 |
| Yttrium | Y | mg/L | | 0.0000070 | | | | 0.000010 | | | | 0.0000060 | | | | | | 0.0000060 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 4 Tiri MV UG (All) (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 16900 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 1714 | 4709 | 4777 | 4754 | 4573 | 4618 | 4505 | 4641 | 16009 | 5163 | 4268 | 4573 | 4210 | 4550 | 4890 | 4346 |
| pH | | units | **6.0-9.5** | 7.6 | 8.2 | 8.4 | 8.5 | 8.4 | 8.2 | 8.1 | 8.3 | 8.1 | 8.0 | 8.2 | 8.2 | 8.3 | 8.2 | 7.9 | 8.3 |
| Conductivity | | mg/L as CaCO3 | | 416 | 357 | 226 | 196 | 176 | 171 | 157 | 156 | 110 | 101 | 105 | 147 | 140 | 154 | 177 | 125 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 72 | 67 | 59 | 54 | 53 | 58 | 56 | 46 | 46 | 48 | 57 | 44 | 51 | 51 | 49 |
| Chloride | Cl | mg/L | | 15 | 14 | 5.1 | 3.2 | | 0.90 | | | < 0.2 | | | | < 0.2 | | | |
| Fluoride | F | mg/L | | 0.11 | 0.10 | 0.10 | 0.080 | | 0.070 | | | < 0.06 | | | | < 0.06 | | | |
| Phosphorus | P | mg/L | | 0.084 | < 0.009 | 0.011 | < 0.009 | | < 0.009 | | | < 0.009 | | | | 0.012 | | | |
| Sulphate | SO4 | mg/L | | 95 | 80 | 52 | 39 | 30 | 29 | 30 | 30 | 26 | 19 | 19 | 25 | 24 | 31 | 34 | 30 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.14 | 0.12 | 0.19 | 0.19 | | 0.20 | | | 0.18 | | | | 0.15 | | | |
| Antimony | Sb | mg/L | | 0.0020 | 0.0054 | 0.0054 | 0.0049 | | 0.0048 | | | 0.0039 | | | | 0.0033 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0049 | 0.022 | 0.026 | 0.028 | | 0.034 | | | 0.038 | | | | 0.032 | | | |
| Barium | Ba | mg/L | | 0.0079 | 0.0048 | 0.0048 | 0.0038 | | 0.0038 | | | 0.0041 | | | | 0.0038 | | | |
| Boron | B | mg/L | | 0.025 | 0.042 | 0.030 | 0.023 | | 0.019 | | | 0.011 | | | | 0.0078 | | | |
| Cadmium | Cd[3] | mg/L | | 0.0000080 | 0.0000050 | 0.0000030 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 21 | 15 | 16 | 14 | 14 | 14 | 16 | 15 | 15 | 13 | 15 | 17 | 15 | 18 | 18 | 18 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00021 | 0.00023 | 0.00021 | 0.00018 | | 0.00021 | | | 0.00031 | | | | 0.00035 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0033 | 0.0014 | 0.0011 | 0.00070 | | 0.00060 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | < 0.002 | < 0.002 | 0.0070 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | 0.000040 | 0.000040 | 0.000040 | | 0.00010 | | | 0.000080 | | | | 0.000090 | | | |
| Lithium | Li | mg/L | | 0.0010 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0010 | | | | 0.0010 | | | |
| Magnesium | Mg | mg/L | | 5.3 | 8.7 | 9.3 | 8.2 | | 7.2 | | | 7.1 | | | | 6.1 | | | |
| Manganese | Mn | mg/L | | 0.052 | 0.012 | 0.012 | 0.011 | | 0.016 | | | 0.011 | | | | 0.013 | | | |
| Molbydenum | Mo | mg/L | | 0.015 | 0.013 | 0.0090 | 0.0054 | | 0.0037 | | | 0.0018 | | | | 0.00085 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0012 | 0.0013 | 0.00050 | 0.00040 | | 0.00060 | | | 0.00060 | | | | 0.00010 | | | |
| Potassium | K | mg/L | | 9.5 | 8.5 | 7.4 | 5.5 | | 3.5 | | | 2.4 | | | | 1.5 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0030 | 0.0010 | 0.0010 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 53 | 37 | 25 | 15 | | 6.7 | | | 2.8 | | | | 1.0 | | | |
| Strontium | Sr | mg/L | | 0.085 | 0.12 | 0.13 | 0.12 | | 0.11 | | | 0.11 | | | | 0.098 | | | |
| Tin | Sn | mg/L | | 0.00053 | 0.00018 | 0.00018 | < 0.00001 | | 0.000020 | | | < 0.00001 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00020 | 0.00020 | 0.00030 | 0.00020 | | 0.00010 | | | 0.00020 | | | | 0.00020 | | | |
| Tungsten | W | mg/L | | 0.00081 | 0.00089 | 0.00062 | 0.00049 | | 0.00042 | | | 0.00031 | | | | 0.00020 | | | |
| Uranium | U | mg/L | | 0.000053 | 0.00012 | 0.000091 | 0.000059 | | 0.000062 | | | 0.00011 | | | | 0.000061 | | | |
| Vanadium | V | mg/L | | 0.00035 | 0.0011 | 0.0011 | 0.0010 | | 0.0011 | | | 0.00079 | | | | 0.00053 | | | |
| Yttrium | Y | mg/L | | 0.000016 | 0.0000070 | 0.0000080 | 0.0000080 | | 0.000010 | | | 0.0000050 | | | | 0.0000040 | | | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | 0.0010 | 0.0020 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 4 Tiri MV UG (All) (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Leachate Volume Recovered | | mL | | 4369 | 4278 | 4868 | 4754 | 4528 | 4664 | 4528 | 4732 | 4641 | 4573 | 4596 | 4528 | 4596 | 4596 | 4641 |
| pH | | units | 6.0-9.5 | 8.2 | 8.1 | 7.8 | 8.0 | 8.4 | 8.0 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 | 8.1 |
| Conductivity | | mg/L as CaCO3 | | 167 | 142 | 134 | 130 | 159 | 161 | 109 | 103 | 136 | 108 | 129 | 104 | 103 | 102 | 101 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 50 | 52 | 54 | 51 | 53 | 53 | 59 | 48 | 49 | 45 | 49 | 48 | 47 | 48 | 46 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 29 | 27 | 32 | 31 | 29 | 28 | 23 | 22 | 21 | 19 | 19 | 19 | 19 | 19 | 19 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.12 | | | | 0.11 | | | | 0.10 | | | | | | 0.11 |
| Antimony | Sb | mg/L | | 0.0032 | | | | 0.0025 | | | | 0.0018 | | | | | | 0.0018 |
| Arsenic | As | mg/L | 0.5 | 0.027 | | | | 0.025 | | | | 0.021 | | | | | | 0.017 |
| Barium | Ba | mg/L | | 0.0040 | | | | 0.0040 | | | | 0.0032 | | | | | | 0.0033 |
| Boron | B | mg/L | | 0.0054 | | | | 0.0046 | | | | 0.0028 | | | | | | 0.0022 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 18 | 16 | 18 | 19 | 19 | 19 | 16 | 15 | 15 | 15 | 15 | 15 | 15 | 17 | 15 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00046 | | | | 0.00052 | | | | 0.00043 | | | | | | 0.00038 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | 0.00060 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | 0.000070 | | | | 0.000070 | | | | 0.000060 | | | | | | 0.000070 |
| Lithium | Li | mg/L | | 0.0010 | | | | 0.0010 | | | | 0.0010 | | | | | | 0.0010 |
| Magnesium | Mg | mg/L | | 7.2 | | | | 7.2 | | | | 5.6 | | | | | | 5.7 |
| Manganese | Mn | mg/L | | 0.018 | | | | 0.018 | | | | 0.013 | | | | | | 0.013 |
| Molbydenum | Mo | mg/L | | 0.00063 | | | | 0.00065 | | | | 0.00047 | | | | | | 0.00053 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00070 | | | | 0.00020 | | | | 0.00090 | | | | | | 0.00080 |
| Potassium | K | mg/L | | 1.4 | | | | 1.2 | | | | 0.92 | | | | | | 0.80 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.84 | | | | 0.62 | | | | 0.45 | | | | | | 0.36 |
| Strontium | Sr | mg/L | | 0.11 | | | | 0.11 | | | | 0.078 | | | | | | 0.076 |
| Tin | Sn | mg/L | | < 0.00001 | | | | 0.000010 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00030 | | | | 0.00030 | | | | 0.00030 | | | | | | 0.00040 |
| Tungsten | W | mg/L | | 0.000090 | | | | 0.00049 | | | | 0.000060 | | | | | | 0.000080 |
| Uranium | U | mg/L | | 0.000074 | | | | 0.00015 | | | | 0.000045 | | | | | | 0.000055 |
| Vanadium | V | mg/L | | 0.00042 | | | | 0.00035 | | | | 0.00024 | | | | | | 0.00023 |
| Yttrium | Y | mg/L | | 0.0000060 | | | | 0.0000070 | | | | 0.0000040 | | | | | | 0.0000060 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-750-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 813 | 906 | 932 | 928 | 930 | 926 | 933 | 904 | 920 | 924 | 920 | 917 | 910 | 900 |
| pH | | units | 6.0-9.5 | 7.8 | 8.2 | 7.8 | 8.2 | 8.2 | 8.3 | 9.2 | 8.5 | 8.4 | 8.8 | 8.5 | 8.0 | 8.0 | 8.7 |
| Conductivity | | mg/L as CaCO3 | | 57 | 72 | 51 | 48 | 41 | 34 | 33 | 35 | 35 | 33 | 31 | 32 | 31 | 32 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 17 | 17 | 14 | 15 | 14 | 16 | 14 | 14 | 14 | 12 | 13 | 12 | 13 |
| Chloride | Cl | mg/L | | 4.1 | 7.1 | 3.5 | 1.6 | | 0.50 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 0.80 | 2.6 | 3.2 | 3.0 | 2.8 | 2.7 | 2.6 | 3.0 | 2.6 | 2.0 | 2.6 | 2.6 | 2.5 | 2.3 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.050 | 0.060 | 0.060 | | 0.060 | | | 0.040 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0020 | 0.0016 | 0.0010 | | 0.00090 | | | 0.00090 | | | | 0.0012 | |
| Arsenic | As | mg/L | 0.5 | 0.00070 | 0.0044 | 0.0066 | 0.0071 | | 0.010 | | | 0.014 | | | | 0.024 | |
| Barium | Ba | mg/L | | 0.0039 | 0.0014 | 0.0017 | 0.0016 | | 0.0016 | | | 0.0014 | | | | 0.0011 | |
| Boron | B | mg/L | | 0.14 | 0.11 | 0.057 | 0.032 | | 0.018 | | | 0.0097 | | | | 0.0017 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | 0.0000030 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 4.6 | 3.6 | 4.3 | 4.3 | 4.2 | 4.3 | 4.0 | 3.8 | 3.8 | 4.0 | 3.8 | 3.7 | 3.6 | 3.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000032 | 0.000032 | 0.000018 | 0.000024 | | 0.000018 | | | 0.000024 | | | | 0.000030 | |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | 0.000030 | | | < 0.00002 | | | | 0.000050 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.24 | 0.39 | 0.58 | 0.60 | | 0.62 | | | 0.63 | | | | 0.40 | |
| Manganese | Mn | mg/L | | 0.012 | 0.012 | 0.015 | 0.017 | | 0.019 | | | 0.018 | | | | 0.024 | |
| Molbydenum | Mo | mg/L | | 0.00017 | 0.00066 | 0.00037 | 0.00028 | | 0.00019 | | | 0.000090 | | | | 0.000020 | |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00020 | 0.00010 | 0.00010 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | 0.00010 | |
| Potassium | K | mg/L | | 2.2 | 2.5 | 2.5 | 2.1 | | 1.7 | | | 1.6 | | | | 1.1 | |
| Sodium | Na | mg/L | | 4.3 | 7.6 | 5.1 | 3.3 | | 1.7 | | | 0.76 | | | | 0.65 | |
| Strontium | Sr | mg/L | | 0.011 | 0.011 | 0.013 | 0.014 | | 0.013 | | | 0.010 | | | | 0.0071 | |
| Tin | Sn | mg/L | | 0.016 | 0.0097 | 0.0037 | 0.0020 | | 0.0010 | | | 0.00093 | | | | 0.00053 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | < 0.000001 | 0.000014 | 0.000015 | 0.000020 | | 0.000026 | | | 0.000017 | | | | 0.0000080 | |
| Vanadium | V | mg/L | | 0.00046 | 0.00069 | 0.00058 | 0.00051 | | 0.00050 | | | 0.00048 | | | | 0.00038 | |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-750-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 911 | 909 | 911 | 896 | 948 | 903 | 893 | 874 | 874 | 804 | 873 | 882 | 877 | 878 |
| pH | | units | **6.0-9.5** | 8.7 | 8.5 | 7.8 | 7.9 | 8.1 | 7.8 | 7.8 | 7.7 | 7.8 | 8.6 | 7.5 | 8.6 | 7.5 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 28 | 30 | 29 | 28 | 26 | 27 | 28 | 26 | 28 | 23 | 43 | 41 | 30 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 13 | 11 | 9.0 | 11 | 10 | 10 | 9.0 | 10 | 10 | 12 | 10 | 11 | 11 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 2.1 | 2.2 | 2.2 | 2.5 | 1.5 | 2.5 | 2.7 | 2.3 | 2.4 | 1.3 | 2.5 | 2.2 | 1.7 | 2.0 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | 0.050 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.00060 | | | | 0.00060 | | | | | 0.00060 | | |
| Arsenic | As | mg/L | **0.5** | | 0.015 | 0.020 | | | | 0.022 | | | | | 0.022 | | |
| Barium | Ba | mg/L | | | | 0.0022 | | | | 0.0018 | | | | | 0.0017 | | |
| Boron | B | mg/L | | | | 0.0022 | | | | 0.0012 | | | | | 0.0010 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | 0.000013 | | |
| Calcium | Ca | mg/L | | 3.6 | 3.5 | 4.2 | 3.2 | 3.8 | 3.7 | 3.5 | 3.5 | 3.6 | 3.4 | 3.4 | 3.6 | 3.8 | 3.8 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000040 | | | | 0.000045 | | | | | 0.000059 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00036 | | | | 0.00036 | | | | | 0.000040 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 0.65 | | | | 0.59 | | | | | 0.53 | | |
| Manganese | Mn | mg/L | | | | 0.016 | | | | 0.013 | | | | | 0.015 | | |
| Molbydenum | Mo | mg/L | | | | 0.000070 | | | | 0.000060 | | | | | 0.000070 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 1.4 | | | | 1.3 | | | | | 1.5 | | |
| Sodium | Na | mg/L | | | | 0.23 | | | | 0.19 | | | | | 0.12 | | |
| Strontium | Sr | mg/L | | | | 0.012 | | | | 0.010 | | | | | 0.0075 | | |
| Tin | Sn | mg/L | | | | 0.00031 | | | | 0.00034 | | | | | 0.00031 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.000033 | | | | 0.000040 | | | | | 0.000056 | | |
| Vanadium | V | mg/L | | | | 0.00049 | | | | 0.00044 | | | | | 0.00049 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-750-03 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 875 | 873 | 879 | 880 | 885 | 866 | 881 | 897 | 878 | 889 | 871 | 877 | 880 |
| pH | | units | **6.0-9.5** | 7.9 | 7.6 | 7.8 | 8.0 | 7.6 | 7.7 | 7.7 | 7.6 | 7.7 | 7.9 | 7.7 | 7.7 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 29 | 25 | 25 | 23 | 25 | 25 | 25 | 25 | 28 | 27 | 27 | 27 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 11 | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | 10 | 9.0 | 10 | 9.0 | 9.0 | 9.0 |
| Chloride | Cl | mg/L | | | | <0.2 | | | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 1.9 | 1.9 | 1.7 | 1.2 | 1.6 | 1.9 | 2.2 | 2.3 | 2.6 | 2.2 | 2.2 | 2.2 | 2.1 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | | 0.040 | | | | | 0.060 |
| Antimony | Sb | mg/L | | | | 0.00040 | | | | | 0.00060 | | | | | 0.00040 |
| Arsenic | As | mg/L | **0.5** | | | 0.021 | | | | | 0.020 | | | | | 0.020 |
| Barium | Ba | mg/L | | | | 0.0028 | | | | | 0.0018 | | | | | 0.0020 |
| Boron | B | mg/L | | | | 0.00060 | | | | | 0.00060 | | | | | 0.00080 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | 0.0000030 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.6 | 3.2 | 3.3 | 3.2 | 3.3 | 3.1 | 3.1 | 3.0 | 3.7 | 3.7 | 3.4 | 3.1 | 3.5 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000043 | | | | | 0.000076 | | | | | 0.000054 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.000020 | | | | | 0.000020 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | 0.0010 |
| Magnesium | Mg | mg/L | | | | 0.46 | | | | | 0.38 | | | | | 0.37 |
| Manganese | Mn | mg/L | | | | 0.014 | | | | | 0.014 | | | | | 0.014 |
| Molbydenum | Mo | mg/L | | | | 0.00012 | | | | | 0.00021 | | | | | 0.000030 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Potassium | K | mg/L | | | | 1.3 | | | | | 1.1 | | | | | 1.2 |
| Sodium | Na | mg/L | | | | 0.10 | | | | | 0.070 | | | | | 0.080 |
| Strontium | Sr | mg/L | | | | 0.0085 | | | | | 0.0075 | | | | | 0.0084 |
| Tin | Sn | mg/L | | | | 0.00015 | | | | | 0.00013 | | | | | 0.00022 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.000037 | | | | | 0.000038 | | | | | 0.000051 |
| Vanadium | V | mg/L | | | | 0.00039 | | | | | 0.00041 | | | | | 0.00036 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-740-05 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 806 | 903 | 927 | 948 | 891 | 927 | 910 | 893 | 888 | 912 | 892 | 891 | 906 | 896 |
| pH | | units | **6.0-9.5** | 8.7 | 8.0 | 7.8 | 8.2 | 8.5 | 8.9 | 9.3 | 8.6 | 8.5 | 8.6 | 8.8 | 8.2 | 7.9 | 8.7 |
| Conductivity | | mg/L as CaCO3 | | 92 | 136 | 71 | 61 | 49 | 40 | 37 | 36 | 35 | 33 | 33 | 32 | 31 | 30 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 18 | 26 | 23 | 22 | 20 | 20 | 18 | 15 | 15 | 14 | 13 | 13 | 13 | 13 |
| Chloride | Cl | mg/L | | 12 | 19 | 5.7 | 2.2 | | 0.30 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 5.0 | 8.6 | 5.8 | 4.6 | 3.0 | 2.7 | 2.4 | 2.3 | 2.0 | 1.7 | 2.2 | 1.9 | 1.7 | 1.7 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.040 | 0.050 | 0.040 | | 0.050 | | | 0.030 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00070 | 0.0027 | 0.0025 | 0.0021 | | 0.0020 | | | 0.0016 | | | | 0.0012 | |
| Arsenic | As | mg/L | **0.5** | 0.0025 | 0.018 | 0.022 | 0.024 | | 0.026 | | | 0.026 | | | | 0.024 | |
| Barium | Ba | mg/L | | 0.0013 | 0.0011 | 0.0010 | 0.0011 | | 0.0012 | | | 0.0011 | | | | 0.0011 | |
| Boron | B | mg/L | | 0.014 | 0.027 | 0.016 | 0.012 | | 0.0072 | | | 0.0038 | | | | 0.0017 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 3.6 | 2.9 | 3.3 | 3.4 | 3.4 | 4.0 | 3.5 | 3.7 | 3.5 | 3.8 | 3.9 | 3.9 | 3.8 | 3.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000035 | 0.000036 | 0.000026 | 0.000029 | | 0.000018 | | | 0.000023 | | | | 0.000030 | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | 0.00060 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | 0.010 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000050 | < 0.00002 | < 0.00002 | < 0.00002 | | 0.000040 | | | < 0.00002 | | | | 0.000050 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.21 | 0.33 | 0.37 | 0.43 | | 0.56 | | | 0.51 | | | | 0.40 | |
| Manganese | Mn | mg/L | | 0.011 | 0.013 | 0.016 | 0.018 | | 0.018 | | | 0.018 | | | | 0.024 | |
| Molbydenum | Mo | mg/L | | 0.00011 | 0.00040 | 0.00019 | 0.00014 | | 0.000060 | | | < 0.00001 | | | | 0.000020 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | 0.00040 | 0.00020 | 0.00010 | | 0.00020 | | | < 0.0001 | | | | 0.00010 | |
| Potassium | K | mg/L | | 2.4 | 2.8 | 2.3 | 2.0 | | 1.9 | | | 1.5 | | | | 1.1 | |
| Sodium | Na | mg/L | | 13 | 20 | 13 | 8.5 | | 4.0 | | | 1.3 | | | | 0.65 | |
| Strontium | Sr | mg/L | | 0.0066 | 0.0069 | 0.0071 | 0.0082 | | 0.0096 | | | 0.0075 | | | | 0.0071 | |
| Tin | Sn | mg/L | | 0.0061 | 0.0052 | 0.0019 | 0.00093 | | 0.00069 | | | 0.00027 | | | | 0.00053 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.0000020 | 0.0000060 | 0.0000030 | 0.0000090 | | 0.000023 | | | < 0.000001 | | | | 0.0000080 | |
| Vanadium | V | mg/L | | 0.00035 | 0.00064 | 0.00064 | 0.00056 | | 0.00053 | | | 0.00045 | | | | 0.00038 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-740-05 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 910 | 912 | 891 | 896 | 955 | 910 | 886 | 878 | 878 | 884 | 876 | 886 | 880 | 879 |
| pH | | units | **6.0-9.5** | 8.5 | 8.5 | 8.7 | 8.2 | 7.9 | 7.8 | 8.0 | 7.7 | 7.8 | 8.4 | 7.7 | 8.1 | 7.4 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 30 | 30 | 29 | 27 | 31 | 28 | 28 | 26 | 27 | 26 | 46 | 49 | 27 | 27 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 12 | 12 | 12 | 10 | 13 | 12 | 11 | 10 | 11 | 11 | 13 | 10 | 10 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 2.0 | 2.2 | 1.7 | 1.8 | 1.8 | 1.6 | 1.9 | 1.6 | 2.0 | 2.4 | 2.4 | 2.2 | 1.6 | 1.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.040 | | | | 0.040 | | | | | 0.020 | | |
| Antimony | Sb | mg/L | | | | 0.0010 | | | | 0.0011 | | | | | 0.00090 | | |
| Arsenic | As | mg/L | **0.5** | | 0.022 | 0.026 | | | | 0.027 | | | | | 0.025 | | |
| Barium | Ba | mg/L | | | | 0.0017 | | | | 0.0012 | | | | | 0.0020 | | |
| Boron | B | mg/L | | | | 0.0014 | | | | 0.00090 | | | | | 0.0011 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | 0.000010 | | |
| Calcium | Ca | mg/L | | 3.9 | 3.9 | 4.5 | 3.5 | 4.6 | 4.1 | 3.7 | 3.7 | 3.8 | 3.8 | 3.9 | 3.9 | 3.9 | 4.0 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000033 | | | | 0.000032 | | | | | 0.000050 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00047 | | | | 0.00041 | | | | | 0.000030 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 0.44 | | | | 0.36 | | | | | 0.35 | | |
| Manganese | Mn | mg/L | | | | 0.020 | | | | 0.018 | | | | | 0.020 | | |
| Molbydenum | Mo | mg/L | | | | 0.000030 | | | | 0.000010 | | | | | 0.000040 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | 0.00010 | | |
| Potassium | K | mg/L | | | | 1.2 | | | | 1.1 | | | | | 1.1 | | |
| Sodium | Na | mg/L | | | | 0.46 | | | | 0.34 | | | | | 0.26 | | |
| Strontium | Sr | mg/L | | | | 0.0082 | | | | 0.0072 | | | | | 0.0067 | | |
| Tin | Sn | mg/L | | | | 0.00021 | | | | 0.00017 | | | | | 0.00018 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.0000080 | | | | 0.0000030 | | | | | 0.000024 | | |
| Vanadium | V | mg/L | | | | 0.00035 | | | | 0.00031 | | | | | 0.00033 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-740-05 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 883 | 886 | 884 | 883 | 882 | 890 | 880 | 890 | 880 | 890 | 881 | 890 | 891 |
| pH | | units | **6.0-9.5** | 7.6 | 7.6 | 7.8 | 8.0 | 7.5 | 7.8 | 7.7 | 7.8 | 7.7 | 8.3 | 7.8 | 7.7 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 28 | 26 | 25 | 24 | 26 | 26 | 26 | 27 | 27 | 29 | 27 | 25 | 26 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 12 | 9.0 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 10 | 9.0 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 2.0 | 1.8 | 1.5 | 1.2 | 1.7 | 1.9 | 2.0 | 2.4 | 1.7 | 1.9 | 1.8 | 2.0 | 1.7 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | | 0.050 | | | | | 0.030 |
| Antimony | Sb | mg/L | | | | 0.00070 | | | | | 0.00080 | | | | | 0.00060 |
| Arsenic | As | mg/L | **0.5** | | | 0.021 | | | | | 0.020 | | | | | 0.019 |
| Barium | Ba | mg/L | | | | 0.0020 | | | | | 0.0013 | | | | | 0.0015 |
| Boron | B | mg/L | | | | 0.00060 | | | | | 0.00070 | | | | | 0.00090 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 3.9 | 3.5 | 3.6 | 3.6 | 3.7 | 3.6 | 3.4 | 3.4 | 3.7 | 4.0 | 3.6 | 2.9 | 3.7 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.000034 | | | | | 0.000045 | | | | | 0.000039 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | 0.00060 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | < 0.00002 | | | | | 0.000030 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.31 | | | | | 0.28 | | | | | 0.27 |
| Manganese | Mn | mg/L | | | | 0.017 | | | | | 0.018 | | | | | 0.017 |
| Molbydenum | Mo | mg/L | | | | 0.000040 | | | | | 0.000060 | | | | | < 0.00001 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | 0.00010 | | | | | 0.00010 |
| Potassium | K | mg/L | | | | 0.99 | | | | | 0.94 | | | | | 1.1 |
| Sodium | Na | mg/L | | | | 0.20 | | | | | 0.18 | | | | | 0.16 |
| Strontium | Sr | mg/L | | | | 0.0066 | | | | | 0.0055 | | | | | 0.0062 |
| Tin | Sn | mg/L | | | | 0.000070 | | | | | 0.000040 | | | | | 0.00014 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.0000060 | | | | | 0.0000080 | | | | | 0.000024 |
| Vanadium | V | mg/L | | | | 0.00026 | | | | | 0.00025 | | | | | 0.00024 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-734-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 763 | 828 | 871 | 906 | 914 | 905 | 917 | 910 | 908 | 927 | 887 | 922 | 970 | 929 |
| pH | | units | **6.0-9.5** | 8.1 | 8.2 | 7.6 | 8.1 | 8.0 | 8.6 | 9.3 | 9.0 | 8.5 | 8.2 | 8.4 | 8.1 | 8.1 | 9.0 |
| Conductivity | | mg/L as CaCO3 | | 82 | 128 | 88 | 59 | 50 | 42 | 39 | 40 | 41 | 37 | 35 | 36 | 39 | 35 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 18 | 15 | 14 | 14 | 14 | 13 | 15 | 13 | 13 | 14 | 12 | 12 | 14 | 13 |
| Chloride | Cl | mg/L | | 5.3 | 9.3 | 4.6 | 1.2 | | 0.30 | | | < 0.2 | | | | < 0.2 | |
| Sulphate | SO4 | mg/L | | 8.9 | 24 | 17 | 9.0 | 7.5 | 7.2 | 5.8 | 5.6 | 5.7 | 4.4 | 4.9 | 4.3 | 3.9 | 3.6 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | 0.030 | 0.050 | 0.040 | | 0.060 | | | 0.030 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00090 | 0.0055 | 0.0049 | 0.0041 | | 0.00090 | | | 0.0029 | | | | 0.0027 | |
| Arsenic | As | mg/L | **0.5** | 0.0063 | 0.021 | 0.017 | 0.013 | | 0.010 | | | 0.0084 | | | | 0.0068 | |
| Barium | Ba | mg/L | | 0.00068 | 0.00063 | 0.00068 | 0.00052 | | 0.0016 | | | 0.00061 | | | | 0.00075 | |
| Boron | B | mg/L | | 0.0084 | 0.016 | 0.013 | 0.0089 | | 0.018 | | | 0.0043 | | | | 0.0026 | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | 0.000010 | < 0.000003 | | 0.0000030 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 5.1 | 4.5 | 5.1 | 4.8 | 4.9 | 5.1 | 4.6 | 4.8 | 4.4 | 4.6 | 4.4 | 4.4 | 4.8 | 4.4 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000025 | 0.000029 | 0.000053 | 0.000014 | | 0.000018 | | | 0.0000080 | | | | 0.000012 | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | 0.00070 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000030 | < 0.00002 | 0.00021 | < 0.00002 | | 0.000030 | | | < 0.00002 | | | | 0.000050 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | |
| Magnesium | Mg | mg/L | | 0.45 | 0.86 | 0.93 | 0.70 | | 0.62 | | | 0.75 | | | | 0.61 | |
| Manganese | Mn | mg/L | | 0.0062 | 0.011 | 0.015 | 0.016 | | 0.019 | | | 0.018 | | | | 0.020 | |
| Molbydenum | Mo | mg/L | | 0.00015 | 0.00055 | 0.00042 | 0.00027 | | 0.00019 | | | 0.000080 | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00040 | 0.00040 | 0.00030 | 0.00020 | | < 0.0001 | | | < 0.0001 | | | | 0.00020 | |
| Potassium | K | mg/L | | 1.9 | 2.1 | 2.2 | 1.4 | | 1.7 | | | 1.0 | | | | 0.83 | |
| Sodium | Na | mg/L | | 9.3 | 15 | 13 | 5.7 | | 1.7 | | | 0.98 | | | | 0.40 | |
| Strontium | Sr | mg/L | | 0.0072 | 0.0095 | 0.0094 | 0.0077 | | 0.013 | | | 0.0070 | | | | 0.0075 | |
| Tin | Sn | mg/L | | 0.022 | 0.012 | 0.0066 | 0.0055 | | 0.0010 | | | 0.0012 | | | | 0.0013 | |
| Titanium | Ti | mg/L | | < 0.0001 | 0.00020 | 0.00020 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | < 0.000001 | 0.000015 | 0.000050 | 0.000016 | | 0.000026 | | | 0.0000070 | | | | 0.000013 | |
| Vanadium | V | mg/L | | 0.00033 | 0.00063 | 0.00061 | 0.00046 | | 0.00050 | | | 0.00033 | | | | 0.00029 | |
| Zinc | Zn | mg/L | **0.5** | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**
nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-734-03 (Mafic Volcanic) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 928 | 925 | 904 | 910 | 958 | 914 | 890 | 876 | 872 | 865 | 866 | 890 | 871 | 884 |
| pH | | units | **6.0-9.5** | 8.5 | 8.1 | 8.2 | 8.0 | 7.9 | 8.2 | 7.9 | 7.5 | 7.8 | 8.4 | 7.7 | 7.9 | 7.3 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 33 | 31 | 34 | 34 | 31 | 32 | 32 | 30 | 31 | 31 | 50 | 52 | 31 | 32 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 11 | 12 | 11 | 11 | 11 | 10 | 9.0 | 10 | 11 | 13 | 9.0 | 9.0 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | < 0.2 | | | | | < 0.2 | | |
| Sulphate | SO4 | mg/L | | 3.7 | 3.9 | 4.3 | 4.0 | 3.1 | 3.5 | 4.0 | 3.8 | 4.1 | 4.4 | 4.5 | 4.5 | 3.8 | 4.3 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.030 | | | | 0.030 | | | | | 0.040 | | |
| Antimony | Sb | mg/L | | | | 0.0020 | | | | 0.0019 | | | | | 0.0020 | | |
| Arsenic | As | mg/L | **0.5** | | 0.0047 | 0.0063 | | | | 0.0050 | | | | | 0.0058 | | |
| Barium | Ba | mg/L | | | | 0.00063 | | | | 0.0011 | | | | | 0.00083 | | |
| Boron | B | mg/L | | | | 0.0017 | | | | 0.0011 | | | | | 0.0012 | | |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | < 0.000003 | | | | | 0.000010 | | |
| Calcium | Ca | mg/L | | 4.4 | 4.2 | 5.0 | 4.2 | 4.5 | 4.8 | 4.3 | 4.0 | 4.2 | 4.4 | 4.5 | 4.4 | 4.4 | 4.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.000013 | | | | 0.000018 | | | | | 0.000017 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.00054 | | | | 0.000040 | | | | | 0.00092 | | |
| Lithium | Li | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Magnesium | Mg | mg/L | | | | 0.66 | | | | 0.57 | | | | | 0.60 | | |
| Manganese | Mn | mg/L | | | | 0.016 | | | | 0.014 | | | | | 0.014 | | |
| Molbydenum | Mo | mg/L | | | | 0.000060 | | | | 0.00023 | | | | | 0.000050 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | < 0.0001 | | | | | 0.00010 | | |
| Potassium | K | mg/L | | | | 0.96 | | | | 0.93 | | | | | 1.1 | | |
| Sodium | Na | mg/L | | | | 0.30 | | | | 0.22 | | | | | 0.18 | | |
| Strontium | Sr | mg/L | | | | 0.0072 | | | | 0.0065 | | | | | 0.0045 | | |
| Tin | Sn | mg/L | | | | 0.00058 | | | | 0.00083 | | | | | 0.00043 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.000016 | | | | 0.000021 | | | | | 0.000031 | | |
| Vanadium | V | mg/L | | | | 0.00031 | | | | 0.00026 | | | | | 0.00030 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |

**Notes:**
nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - M08-734-03 (Mafic Volcanic) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 869 | 875 | 872 | 872 | 880 | 878 | 874 | 906 | 877 | 940 | 879 | 884 | 876 |
| pH | | units | **6.0-9.5** | 7.7 | 7.9 | 8.2 | 8.0 | 7.5 | 7.7 | 7.7 | 7.8 | 7.7 | 8.2 | 7.8 | 7.6 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 32 | 30 | 31 | 28 | 30 | 28 | 32 | 29 | 31 | 30 | 32 | 29 | 29 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 9.0 | 10 | 9.0 | 9.0 | 9.0 | 10 | 10 | 9.0 | 11 | 10 | 9.0 | 10 |
| Chloride | Cl | mg/L | | | | < 0.2 | | | | | < 0.2 | | | | | <0.2 |
| Sulphate | SO4 | mg/L | | 3.5 | 3.5 | 3.1 | 0.90 | 3.6 | 2.8 | 3.9 | 3.4 | 3.9 | 3.3 | 4.0 | 3.5 | 3.1 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.060 | | | | | 0.040 | | | | | 0.050 |
| Antimony | Sb | mg/L | | | | 0.0016 | | | | | 0.0017 | | | | | 0.0014 |
| Arsenic | As | mg/L | **0.5** | | | 0.0051 | | | | | 0.0043 | | | | | 0.0036 |
| Barium | Ba | mg/L | | | | 0.00081 | | | | | 0.00070 | | | | | 0.00086 |
| Boron | B | mg/L | | | | 0.00070 | | | | | 0.00070 | | | | | 0.00080 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 4.2 | 3.9 | 4.5 | 4.1 | 4.1 | 3.8 | 4.2 | 3.9 | 4.5 | 4.6 | 4.2 | 3.4 | 4.1 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.0000050 | | | | | 0.0000080 | | | | | 0.0000070 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | < 0.00002 | | | | | 0.000020 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | 0.0010 |
| Magnesium | Mg | mg/L | | | | 0.51 | | | | | 0.41 | | | | | 0.40 |
| Manganese | Mn | mg/L | | | | 0.015 | | | | | 0.015 | | | | | 0.014 |
| Molbydenum | Mo | mg/L | | | | 0.000020 | | | | | 0.000050 | | | | | 0.000020 |
| Nickel | Ni[3] | mg/L | **0.5** | | | < 0.0001 | | | | | < 0.0001 | | | | | 0.00010 |
| Potassium | K | mg/L | | | | 0.96 | | | | | 0.84 | | | | | 0.95 |
| Sodium | Na | mg/L | | | | 0.12 | | | | | 0.080 | | | | | 0.080 |
| Strontium | Sr | mg/L | | | | 0.0061 | | | | | 0.0045 | | | | | 0.0053 |
| Tin | Sn | mg/L | | | | 0.00023 | | | | | 0.00020 | | | | | 0.00023 |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.000010 | | | | | 0.000015 | | | | | 0.000030 |
| Vanadium | V | mg/L | | | | 0.00027 | | | | | 0.00025 | | | | | 0.00024 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**
nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 5 F-Zone MV (OP) (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 34700 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 |
| Leachate Volume Recovered | | mL | | 3167 | 9678 | 9973 | 9950 | 9723 | 9859 | 9700 | 9746 | 33524 | 10721 | 9170 | 9791 | 9088 | 9564 | 10245 | 9542 |
| pH | | units | **6.0-9.5** | 7.6 | 8.2 | 8.5 | 8.6 | 8.4 | 8.4 | 8.4 | 8.2 | 8.2 | 8.0 | 8.2 | 8.2 | 8.4 | 8.1 | 8.1 | 8.3 |
| Conductivity | | mg/L as CaCO3 | | 567 | 972 | 485 | 339 | 281 | 270 | 220 | 206 | 121 | 114 | 121 | 149 | 133 | 145 | 154 | 126 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 47 | 93 | 90 | 78 | 67 | 67 | 70 | 61 | 50 | 50 | 53 | 49 | 50 | 53 | 52 | 53 |
| Chloride | Cl | mg/L | | 86 | 140 | 59 | 31 | | 10 | | | 1.8 | | | | 0.20 | | | |
| Fluoride | F | mg/L | | 0.14 | 0.26 | 0.18 | 0.16 | | 0.12 | | | 0.070 | | | | 0.080 | | | |
| Phosphorus | P | mg/L | | 0.016 | 0.0090 | < 0.009 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 78 | 150 | 93 | 56 | 47 | 44 | 43 | 35 | 25 | 35 | 20 | 22 | 20 | 22 | 24 | 24 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.19 | 0.15 | 0.20 | 0.14 | | 0.18 | | | 0.14 | | | | 0.15 | | | |
| Antimony | Sb | mg/L | | 0.0022 | 0.0053 | 0.0044 | 0.0042 | | 0.0041 | | | 0.0033 | | | | 0.0036 | | | |
| Arsenic | As | mg/L | **0.5** | 0.0046 | 0.037 | 0.031 | 0.032 | | 0.037 | | | 0.034 | | | | 0.037 | | | |
| Barium | Ba | mg/L | | 0.049 | 0.046 | 0.037 | 0.043 | | 0.047 | | | 0.039 | | | | 0.048 | | | |
| Boron | B | mg/L | | 0.049 | 0.12 | 0.082 | 0.064 | | 0.046 | | | 0.025 | | | | 0.019 | | | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 12 | 12 | 12 | 9.1 | 10 | 11 | 12 | 11 | 9.9 | 11 | 12 | 13 | 11 | 12 | 13 | 14 |
| Chromium | Cr[2] | mg/L | | 0.0023 | 0.0017 | 0.00050 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.000073 | 0.00018 | 0.00013 | 0.000098 | | 0.000092 | | | 0.00010 | | | | 0.00011 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00050 | 0.00050 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | < 0.002 | < 0.002 | 0.0070 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.002 | | | |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | < 0.00002 | < 0.00002 | 0.000020 | | 0.000070 | | | < 0.00002 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0020 | 0.0020 | 0.0020 | 0.0020 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | |
| Magnesium | Mg | mg/L | | 3.6 | 7.2 | 6.9 | 4.9 | | 6.0 | | | 4.9 | | | | 5.4 | | | |
| Manganese | Mn | mg/L | | 0.014 | 0.0075 | 0.0069 | 0.0069 | | 0.0088 | | | 0.0073 | | | | 0.0085 | | | |
| Molbydenum | Mo | mg/L | | 0.0019 | 0.0044 | 0.0027 | 0.0016 | | 0.0012 | | | 0.00052 | | | | 0.00040 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00060 | 0.0015 | 0.0010 | 0.00060 | | 0.00060 | | | 0.00060 | | | | < 0.0001 | | | |
| Potassium | K | mg/L | | 15 | 19 | 17 | 11 | | 9.7 | | | 6.2 | | | | 5.5 | | | |
| Selenium | Se | mg/L | | 0.0030 | 0.0040 | 0.0020 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 97 | 147 | 85 | 49 | | 31 | | | 11 | | | | 4.6 | | | |
| Strontium | Sr | mg/L | | 0.054 | 0.067 | 0.062 | 0.045 | | 0.051 | | | 0.041 | | | | 0.044 | | | |
| Tin | Sn | mg/L | | 0.00056 | 0.00025 | 0.000090 | 0.000040 | | 0.000050 | | | 0.000010 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00010 | 0.00020 | 0.00040 | 0.00020 | | 0.00010 | | | 0.00020 | | | | 0.00020 | | | |
| Tungsten | W | mg/L | | 0.00072 | 0.0014 | 0.00074 | 0.00058 | | 0.00054 | | | 0.00041 | | | | 0.00031 | | | |
| Uranium | U | mg/L | | 0.000023 | 0.00015 | 0.000097 | 0.000059 | | 0.000062 | | | 0.000075 | | | | 0.000039 | | | |
| Vanadium | V | mg/L | | 0.00099 | 0.0037 | 0.0021 | 0.0022 | | 0.0021 | | | 0.0017 | | | | 0.0017 | | | |
| Yttrium | Y | mg/L | | 0.000017 | 0.000014 | 0.0000080 | 0.0000090 | | 0.000011 | | | 0.0000080 | | | | 0.0000090 | | | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | < 0.001 | 0.0010 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | Unit | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 5 F-Zone MV (OP) (Mafic Volcanic) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 |
| Leachate Volume Recovered | | mL | | 9428 | 9111 | 10245 | 4754 | 9610 | 9746 | 9678 | 9905 | 9837 | 9655 | 9723 | 9610 | 9746 | 9769 | 9791 |
| pH | | units | 6.0-9.5 | 8.2 | 8.1 | 8.2 | 8.0 | 8.3 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.1 | 8.1 | 8.2 | 8.2 | 8.2 |
| Conductivity | | mg/L as CaCO3 | | 159 | 132 | 146 | 130 | 144 | 146 | 108 | 101 | 140 | 103 | 138 | 142 | 111 | 114 | 115 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 50 | 45 | 49 | 51 | 48 | 48 | 49 | 47 | 46 | 48 | 47 | 50 | 49 | 49 | 50 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.080 | | | | < 0.06 | | | | < 0.06 | | | | | | < 0.06 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 23 | 20 | 23 | 31 | 23 | 22 | 20 | 21 | 22 | 21 | 21 | 22 | 23 | 24 | 24 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.13 | | | | 0.12 | | | | 0.11 | | | | | | 0.13 |
| Antimony | Sb | mg/L | | 0.0038 | | | | 0.0030 | | | | 0.0026 | | | | | | 0.0029 |
| Arsenic | As | mg/L | 0.5 | 0.041 | | | | 0.041 | | | | 0.041 | | | | | | 0.037 |
| Barium | Ba | mg/L | | 0.047 | | | | 0.043 | | | | 0.041 | | | | | | 0.043 |
| Boron | B | mg/L | | 0.016 | | | | 0.012 | | | | 0.0083 | | | | | | 0.0071 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | | | | | | 0.0000030 |
| Calcium | Ca | mg/L | | 13 | 12 | 13 | 19 | 14 | 14 | 13 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00015 | | | | 0.00017 | | | | 0.00019 | | | | | | 0.00022 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | < 0.003 | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | 0.000020 |
| Lithium | Li | mg/L | | 0.0020 | | | | 0.0030 | | | | 0.0030 | | | | | | 0.0030 |
| Magnesium | Mg | mg/L | | 6.4 | | | | 5.8 | | | | 5.5 | | | | | | 6.0 |
| Manganese | Mn | mg/L | | 0.011 | | | | 0.011 | | | | 0.011 | | | | | | 0.015 |
| Molbydenum | Mo | mg/L | | 0.00026 | | | | 0.00026 | | | | 0.00018 | | | | | | 0.00019 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.00050 | | | | 0.00010 | | | | 0.00080 | | | | | | 0.0010 |
| Potassium | K | mg/L | | 5.5 | | | | 4.5 | | | | 4.5 | | | | | | 4.5 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 3.8 | | | | 2.4 | | | | 1.7 | | | | | | 1.4 |
| Strontium | Sr | mg/L | | 0.049 | | | | 0.045 | | | | 0.042 | | | | | | 0.048 |
| Tin | Sn | mg/L | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00020 | | | | 0.00020 | | | | 0.00040 | | | | | | 0.00030 |
| Tungsten | W | mg/L | | 0.00027 | | | | 0.00085 | | | | 0.00019 | | | | | | 0.00016 |
| Uranium | U | mg/L | | 0.000059 | | | | 0.000085 | | | | 0.000057 | | | | | | 0.000079 |
| Vanadium | V | mg/L | | 0.0017 | | | | 0.0016 | | | | 0.0013 | | | | | | 0.0012 |
| Yttrium | Y | mg/L | | 0.0000090 | | | | 0.0000090 | | | | 0.0000080 | | | | | | 0.0000090 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML90-14-2 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 841 | 887 | 908 | 826 | 956 | 903 | 879 | 866 | 887 | 868 | 910 | 859 | 932 | 856 |
| pH | | units | **6.0-9.5** | 7.4 | 7.4 | 7.3 | 7.1 | 7.4 | 7.4 | 7.3 | 7.3 | 7.3 | 7.1 | 7.1 | 7.2 | 7.1 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 44 | 57 | 35 | 26 | 29 | 20 | 18 | 21 | 17 | 20 | 18 | 20 | 22 | 16 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 10 | 9.0 | 8.0 | 7.0 | 10 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 6.0 | 6.0 | 4.0 |
| Chloride | Cl | mg/L | | 1.0 | 0.70 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 6.1 | 13 | 6.1 | 4.2 | 2.8 | 3.0 | 2.5 | 3.7 | 4.7 | 3.0 | 2.6 | 2.8 | 2.7 | 2.4 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.070 | 0.060 | 0.050 | | 0.060 | | | 0.060 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00040 | 0.00040 | 0.00040 | 0.00030 | | < 0.0002 | | | 0.00020 | | | | 0.00020 | |
| Arsenic | As | mg/L | **0.5** | 0.0077 | 0.017 | 0.021 | 0.019 | | 0.027 | | | 0.031 | | | | 0.034 | |
| Barium | Ba | mg/L | | 0.0010 | 0.0014 | 0.00097 | 0.0025 | | 0.00072 | | | 0.00095 | | | | 0.0014 | |
| Boron | B | mg/L | | 0.025 | 0.014 | 0.0079 | 0.0056 | | 0.0025 | | | 0.0026 | | | | 0.0017 | |
| Cadmium | Cd[3] | mg/L | | 0.0000030 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 2.0 | 3.3 | 2.1 | 2.0 | 3.0 | 1.8 | 1.7 | 2.0 | 1.8 | 1.9 | 1.9 | 2.2 | 2.5 | 1.9 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.00013 | 0.00011 | 0.000089 | 0.000091 | | 0.00015 | | | 0.00045 | | | | 0.00020 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00060 | 0.00060 | 0.013 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | 0.0024 | |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.002 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00032 | 0.000060 | 0.0011 | 0.00034 | | 0.00041 | | | < 0.00002 | | | | 0.000030 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.1 | |
| Magnesium | Mg | mg/L | | 0.30 | 0.77 | 0.44 | 0.43 | | 0.33 | | | 0.30 | | | | 0.31 | |
| Manganese | Mn | mg/L | | 0.0025 | 0.0030 | 0.0023 | 0.0015 | | 0.0015 | | | 0.0034 | | | | 0.0031 | |
| Molbydenum | Mo | mg/L | | 0.00025 | 0.00049 | 0.00026 | 0.00021 | | 0.00010 | | | 0.00017 | | | | 0.000060 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | 0.00070 | 0.00060 | 0.00030 | | < 0.0001 | | | 0.0013 | | | | 0.00040 | |
| Potassium | K | mg/L | | 2.9 | 4.2 | 2.3 | 1.7 | | 1.4 | | | 1.2 | | | | 1.1 | |
| Sodium | Na | mg/L | | 3.5 | 5.5 | 2.4 | 1.3 | | 0.62 | | | 0.36 | | | | 0.23 | |
| Strontium | Sr | mg/L | | 0.011 | 0.022 | 0.013 | 0.012 | | 0.0098 | | | 0.0097 | | | | 0.012 | |
| Tin | Sn | mg/L | | 0.00063 | 0.00042 | 0.0012 | 0.00047 | | 0.00038 | | | 0.00028 | | | | 0.00015 | |
| Titanium | Ti | mg/L | | 0.0013 | 0.00020 | 0.00030 | 0.00020 | | 0.00010 | | | 0.00040 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000076 | 0.00069 | 0.00056 | 0.00055 | | 0.00042 | | | 0.00032 | | | | 0.00042 | |
| Vanadium | V | mg/L | | 0.00058 | 0.00076 | 0.00078 | 0.00058 | | 0.00068 | | | 0.00067 | | | | 0.00052 | |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | < 0.001 | 0.0060 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0020 | |

**Notes:**
nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML90-14-2 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 926 | 889 | 900 | 892 | 907 | 892 | 894 | 897 | 891 | 899 | 891 | 887 | 890 | 896 |
| pH | | units | **6.0-9.5** | 7.1 | 7.1 | 7.1 | 7.2 | 7.1 | 7.1 | 6.8 | 6.8 | 6.8 | 7.1 | 7.0 | 6.9 | 7.0 | 7.0 |
| Conductivity | | mg/L as CaCO3 | | 19 | 15 | 16 | 17 | 15 | 15 | 14 | 15 | 14 | 17 | 14 | 14 | 15 | 14 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 6.0 | 4.0 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.4 | 2.2 | 2.3 | 2.3 | 2.2 | 2.4 | 2.2 | 2.3 | 2.2 | 2.4 | 2.2 | 2.0 | | 2.2 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | 0.030 | | | | | 0.070 | | |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | 0.00030 | | | | | 0.00020 | | |
| Arsenic | As | mg/L | **0.5** | | | 0.033 | | | | 0.036 | | | | | 0.032 | | |
| Barium | Ba | mg/L | | | | 0.0012 | | | | 0.00091 | | | | | 0.00099 | | |
| Boron | B | mg/L | | | | 0.00080 | | | | 0.0011 | | | | | 0.00070 | | |
| Cadmium | Cd[3] | mg/L | | | | 0.000099 | | | | < 0.000003 | | | | | 0.000024 | | |
| Calcium | Ca | mg/L | | 2.4 | 1.7 | 1.8 | 1.8 | 1.8 | 1.5 | 1.6 | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | | 1.8 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.00022 | | | | 0.00075 | | | | | 0.00019 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | 0.0040 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.000050 | | | | < 0.00002 | | | | | 0.000040 | | |
| Lithium | Li | mg/L | | | | < 0.001 | | | | 0.0010 | | | | | < 0.001 | | |
| Magnesium | Mg | mg/L | | | | 0.19 | | | | 0.16 | | | | | 0.13 | | |
| Manganese | Mn | mg/L | | | | 0.0021 | | | | 0.0016 | | | | | 0.0016 | | |
| Molbydenum | Mo | mg/L | | | | 0.000010 | | | | 0.000040 | | | | | 0.000080 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00020 | | | | 0.00040 | | | | | < 0.0001 | | |
| Potassium | K | mg/L | | | | 0.90 | | | | 0.81 | | | | | 0.73 | | |
| Sodium | Na | mg/L | | | | 0.14 | | | | 0.10 | | | | | 0.070 | | |
| Strontium | Sr | mg/L | | | | 0.0082 | | | | 0.0074 | | | | | 0.0068 | | |
| Tin | Sn | mg/L | | | | 0.000060 | | | | 0.000040 | | | | | 0.000040 | | |
| Titanium | Ti | mg/L | | | | 0.00020 | | | | 0.00020 | | | | | 0.00030 | | |
| Uranium | U | mg/L | | | | 0.00026 | | | | 0.00017 | | | | | 0.00014 | | |
| Vanadium | V | mg/L | | | | 0.00045 | | | | 0.00038 | | | | | 0.00041 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML90-14-2 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 899 | 904 | 898 | 891 | 910 | 893 | 891 | 889 | 883 | 891 | 896 | 909 | 923 |
| pH | | units | **6.0-9.5** | 7.0 | 7.0 | 6.7 | 6.8 | 6.8 | 6.8 | 6.9 | 6.8 | 6.7 | 6.9 | 7.0 | 6.9 | 6.7 |
| Conductivity | | mg/L as CaCO3 | | 14 | 13 | 13 | 14 | 14 | 13 | 14 | 14 | 15 | 15 | 19 | 14 | 14 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 4.0 | 4.0 | 4.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.1 | 2.1 | 1.7 | 2.4 | 2.3 | 2.0 | 2.2 | 2.0 | 2.5 | 2.4 | 2.3 | 2.4 | 2.3 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.050 | | | | | 0.010 | | | | | 0.030 |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | | 0.00020 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | | | 0.032 | | | | | 0.025 | | | | | 0.025 |
| Barium | Ba | mg/L | | | | 0.0017 | | | | | 0.0011 | | | | | 0.0012 |
| Boron | B | mg/L | | | | 0.00070 | | | | | 0.00090 | | | | | 0.00020 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | 0.00018 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 1.8 | 1.8 | 1.6 | 1.8 | 1.7 | 1.7 | 2.6 | 1.6 | 2.0 | 1.9 | 1.7 | 1.8 | 1.9 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.00019 | | | | | 0.00019 | | | | | 0.00024 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | 0.00070 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.00018 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | 0.0010 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.12 | | | | | 0.11 | | | | | 0.10 |
| Manganese | Mn | mg/L | | | | 0.0016 | | | | | 0.0028 | | | | | 0.0026 |
| Molbydenum | Mo | mg/L | | | | 0.000030 | | | | | 0.000030 | | | | | 0.000020 |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00030 | | | | | 0.00040 | | | | | 0.00030 |
| Potassium | K | mg/L | | | | 0.71 | | | | | 0.64 | | | | | 0.67 |
| Sodium | Na | mg/L | | | | 0.070 | | | | | 0.060 | | | | | 0.060 |
| Strontium | Sr | mg/L | | | | 0.0068 | | | | | 0.0067 | | | | | 0.0072 |
| Tin | Sn | mg/L | | | | < 0.00001 | | | | | 0.000040 | | | | | 0.000070 |
| Titanium | Ti | mg/L | | | | 0.00040 | | | | | 0.00020 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00020 | | | | | 0.00011 | | | | | 0.00013 |
| Vanadium | V | mg/L | | | | 0.00033 | | | | | 0.00027 | | | | | 0.00029 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | 0.0030 | | | | | < 0.002 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML92-061-01 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 775 | 833 | 859 | 887 | 881 | 866 | 843 | 848 | 862 | 845 | 900 | 858 | 896 | 881 |
| pH | | units | **6.0-9.5** | 7.3 | 7.3 | 7.4 | 7.0 | 7.2 | 7.2 | 7.2 | 7.1 | 7.2 | 6.9 | 6.9 | 7.0 | 6.8 | 6.8 |
| Conductivity | | mg/L as CaCO3 | | 43 | 51 | 32 | 24 | 21 | 20 | 24 | 19 | 16 | 20 | 16 | 16 | 17 | 15 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 8.0 | 6.0 | 6.0 | 6.0 | < 2 | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 3.0 | 3.0 |
| Chloride | Cl | mg/L | | 1.3 | 0.80 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 6.1 | 11 | 6.0 | 4.2 | 3.3 | 3.7 | 4.7 | 4.0 | 3.1 | 4.1 | 2.4 | 3.0 | 2.7 | 2.7 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.070 | 0.060 | 0.050 | 0.030 | | 0.040 | | | 0.030 | | | | 0.020 | |
| Antimony | Sb | mg/L | | 0.00040 | 0.00030 | 0.00040 | 0.00030 | | < 0.0002 | | | 0.00030 | | | | < 0.0002 | |
| Arsenic | As | mg/L | **0.5** | 0.0043 | 0.0080 | 0.0092 | 0.0094 | | 0.016 | | | 0.019 | | | | 0.020 | |
| Barium | Ba | mg/L | | 0.00065 | 0.00071 | 0.00039 | 0.00045 | | 0.00054 | | | 0.00096 | | | | 0.0012 | |
| Boron | B | mg/L | | 0.0047 | 0.0080 | 0.0053 | 0.0054 | | 0.0023 | | | 0.0032 | | | | 0.00080 | |
| Cadmium | Cd[3] | mg/L | | 0.000010 | < 0.000003 | < 0.000003 | < 0.000003 | | 0.0000090 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 1.6 | 2.1 | 1.4 | 1.5 | 1.4 | 1.4 | 1.7 | 1.6 | 1.4 | 1.7 | 1.6 | 1.3 | 1.6 | 1.7 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.00027 | 0.00017 | 0.00011 | 0.00011 | | 0.00013 | | | 0.00084 | | | | 0.00022 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00080 | 0.00090 | 0.00080 | 0.00050 | | < 0.0005 | | | 0.0012 | | | | 0.00070 | |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.002 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000070 | 0.000050 | < 0.00002 | < 0.00002 | | 0.00038 | | | 0.000030 | | | | 0.000020 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.1 | |
| Magnesium | Mg | mg/L | | 0.40 | 0.85 | 0.51 | 0.52 | | 0.47 | | | 0.40 | | | | 0.33 | |
| Manganese | Mn | mg/L | | 0.0041 | 0.0037 | 0.0030 | 0.0020 | | 0.0021 | | | 0.0052 | | | | 0.0019 | |
| Molbydenum | Mo | mg/L | | 0.00028 | 0.00068 | 0.00044 | 0.00040 | | 0.00033 | | | 0.00037 | | | | 0.00010 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0010 | 0.0010 | 0.00040 | 0.00040 | | < 0.0001 | | | 0.0024 | | | | 0.00040 | |
| Potassium | K | mg/L | | 3.4 | 5.1 | 2.8 | 2.2 | | 1.8 | | | 1.2 | | | | 0.80 | |
| Sodium | Na | mg/L | | 3.3 | 4.1 | 1.7 | 0.96 | | 0.48 | | | 0.20 | | | | 0.12 | |
| Strontium | Sr | mg/L | | 0.0084 | 0.015 | 0.0094 | 0.010 | | 0.0089 | | | 0.0087 | | | | 0.0084 | |
| Tin | Sn | mg/L | | 0.019 | 0.0066 | 0.0031 | 0.0022 | | 0.0010 | | | 0.00057 | | | | 0.00040 | |
| Titanium | Ti | mg/L | | 0.0014 | 0.00040 | 0.00030 | 0.00020 | | 0.00020 | | | 0.00020 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000040 | 0.00026 | 0.00024 | 0.00027 | | 0.00027 | | | 0.00021 | | | | 0.00022 | |
| Vanadium | V | mg/L | | 0.00030 | 0.00034 | 0.00030 | 0.00022 | | 0.00031 | | | 0.00029 | | | | 0.00022 | |
| Zinc | Zn | mg/L | **0.5** | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML92-061-01 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 887 | 891 | 890 | 887 | 883 | 887 | 889 | 879 | 888 | 900 | 887 | 890 | 899 | 890 |
| pH | | units | **6.0-9.5** | 6.8 | 6.9 | 6.8 | 6.9 | 6.8 | 6.9 | 6.7 | 6.5 | 6.6 | 6.9 | 6.8 | 6.7 | 6.8 | 6.7 |
| Conductivity | | mg/L as CaCO3 | | 15 | 14 | 14 | 15 | 15 | 15 | 15 | 15 | 14 | 16 | 14 | 15 | 14 | 14 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.6 | 2.6 | 2.5 | 2.9 | 2.6 | 3.0 | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.6 | 2.6 | 2.8 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.030 | | | | < 0.01 | | | | | 0.030 | | |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | 0.00030 | | | | | 0.00030 | | |
| Arsenic | As | mg/L | **0.5** | | | 0.020 | | | | 0.023 | | | | | 0.022 | | |
| Barium | Ba | mg/L | | | | 0.0014 | | | | 0.00048 | | | | | 0.00061 | | |
| Boron | B | mg/L | | | | 0.00050 | | | | 0.0017 | | | | | 0.00040 | | |
| Cadmium | Cd[3] | mg/L | | | | 0.0000040 | | | | < 0.000003 | | | | | < 0.000003 | | |
| Calcium | Ca | mg/L | | 1.7 | 1.4 | 1.6 | 1.6 | 1.6 | 1.4 | 1.5 | 1.7 | 1.6 | 1.5 | 1.6 | 1.7 | 1.5 | 2.7 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.00027 | | | | 0.0019 | | | | | 0.00032 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | < 0.00002 | | | | | 0.000030 | | |
| Lithium | Li | mg/L | | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |
| Magnesium | Mg | mg/L | | | | 0.24 | | | | 0.24 | | | | | 0.17 | | |
| Manganese | Mn | mg/L | | | | 0.0018 | | | | 0.0018 | | | | | 0.0013 | | |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | 0.00010 | | | | | 0.00022 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00040 | | | | 0.0012 | | | | | 0.00040 | | |
| Potassium | K | mg/L | | | | 0.60 | | | | 0.65 | | | | | 0.60 | | |
| Sodium | Na | mg/L | | | | 0.080 | | | | 0.070 | | | | | 0.040 | | |
| Strontium | Sr | mg/L | | | | 0.0077 | | | | 0.0074 | | | | | 0.0070 | | |
| Tin | Sn | mg/L | | | | 0.00032 | | | | 0.00034 | | | | | 0.00025 | | |
| Titanium | Ti | mg/L | | | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.00021 | | | | 0.00019 | | | | | 0.00020 | | |
| Vanadium | V | mg/L | | | | 0.00019 | | | | 0.00013 | | | | | 0.00021 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML92-061-01 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 900 | 903 | 917 | 901 | 911 | 897 | 902 | 896 | 887 | 895 | 906 | 912 | 938 |
| pH | | units | **6.0-9.5** | 6.8 | 6.9 | 6.6 | 6.7 | 6.7 | 6.9 | 6.6 | 6.6 | 6.7 | 6.7 | 6.9 | 6.8 | 6.7 |
| Conductivity | | mg/L as CaCO3 | | 15 | 16 | 15 | 14 | 14 | 17 | 15 | 14 | 16 | 15 | 20 | 17 | 19 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | 4.0 | 3.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 | 4.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.8 | 2.9 | 2.8 | 2.8 | 3.0 | 2.7 | 2.6 | 2.9 | 3.5 | 3.1 | 3.1 | 3.3 | 3.7 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.020 | | | | | 0.010 | | | | | 0.020 |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | | 0.00030 | | | | | 0.00020 |
| Arsenic | As | mg/L | **0.5** | | | 0.023 | | | | | 0.019 | | | | | 0.022 |
| Barium | Ba | mg/L | | | | 0.00052 | | | | | 0.00046 | | | | | 0.00065 |
| Boron | B | mg/L | | | | 0.00030 | | | | | 0.00070 | | | | | < 0.0002 |
| Cadmium | Cd[3] | mg/L | | | | 0.0000040 | | | | | 0.00046 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 1.9 | 2.1 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 2.3 | 2.2 | 2.0 | 1.9 | 2.2 | 2.5 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.00036 | | | | | 0.00038 | | | | | 0.00052 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | 0.0011 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | 0.024 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.00063 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.16 | | | | | 0.31 | | | | | 0.15 |
| Manganese | Mn | mg/L | | | | 0.0014 | | | | | 0.0039 | | | | | 0.0015 |
| Molbydenum | Mo | mg/L | | | | 0.00012 | | | | | 0.000070 | | | | | 0.000070 |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00070 | | | | | 0.00090 | | | | | 0.0010 |
| Potassium | K | mg/L | | | | 0.57 | | | | | 0.47 | | | | | 0.57 |
| Sodium | Na | mg/L | | | | 0.060 | | | | | 0.040 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.0072 | | | | | 0.0070 | | | | | 0.0086 |
| Tin | Sn | mg/L | | | | 0.00018 | | | | | 0.00017 | | | | | 0.00032 |
| Titanium | Ti | mg/L | | | | 0.00030 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00059 | | | | | 0.00020 | | | | | 0.00022 |
| Vanadium | V | mg/L | | | | 0.00015 | | | | | 0.00013 | | | | | 0.00015 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | 0.0030 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-1 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 775 | 879 | 917 | 891 | 994 | 990 | 985 | 980 | 979 | 974 | 981 | 982 | 905 | 984 |
| pH | | units | 6.0-9.5 | 7.2 | 7.1 | 7.2 | 7.1 | 7.4 | 7.4 | 7.3 | 7.2 | 7.2 | 7.1 | 7.0 | 7.1 | 7.1 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 39 | 49 | 40 | 33 | 36 | 28 | 26 | 25 | 23 | 26 | 21 | 21 | 26 | 23 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 7.0 | 6.0 | 7.0 | 9.0 | 12 | 10 | 7.0 | 6.0 | 7.0 | 6.0 | 6.0 | 5.0 | 6.0 | 7.0 |
| Chloride | Cl | mg/L | | 0.80 | 0.40 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 6.8 | 13 | 8.5 | 5.7 | 3.8 | 3.7 | 4.2 | 4.2 | 4.3 | 4.5 | 2.9 | 3.1 | 3.7 | 2.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al [4] | mg/L | | 0.060 | 0.050 | 0.040 | 0.030 | | 0.040 | | | 0.030 | | | | 0.030 | |
| Antimony | Sb | mg/L | | 0.00030 | 0.00040 | 0.00040 | 0.00040 | | 0.00020 | | | 0.00030 | | | | 0.00020 | |
| Arsenic | As | mg/L | 0.5 | 0.0056 | 0.010 | 0.014 | 0.016 | | 0.023 | | | 0.025 | | | | 0.033 | |
| Barium | Ba | mg/L | | 0.00063 | 0.00073 | 0.00087 | 0.00069 | | 0.00074 | | | 0.00092 | | | | 0.00066 | |
| Boron | B | mg/L | | 0.0055 | 0.0065 | 0.0060 | 0.0049 | | 0.0022 | | | 0.0019 | | | | 0.00080 | |
| Cadmium | Cd [3] | mg/L | | 0.0000050 | 0.0000030 | < 0.000003 | < 0.000003 | | 0.0000060 | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 1.6 | 2.8 | 2.4 | 2.8 | 3.7 | 3.1 | 2.9 | 2.7 | 2.9 | 2.9 | 2.6 | 2.4 | 3.0 | 3.2 |
| Chromium | Cr [2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000097 | 0.00015 | 0.00012 | 0.00010 | | 0.00016 | | | 0.00035 | | | | 0.00022 | |
| Copper | Cu [3] | mg/L | 0.3 | 0.00080 | 0.00060 | 0.0037 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | 0.010 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.002 | |
| Lead | Pb [3] | mg/L | 0.2 | 0.00034 | 0.000060 | 0.00030 | 0.00043 | | 0.00052 | | | < 0.00002 | | | | 0.00038 | |
| Lithium | Li | mg/L | | < 0.002 | < 0.002 | < 0.002 | < 0.002 | | < 0.002 | | | < 0.002 | | | | < 0.1 | |
| Magnesium | Mg | mg/L | | 0.37 | 0.97 | 0.70 | 0.74 | | 0.64 | | | 0.48 | | | | 0.40 | |
| Manganese | Mn | mg/L | | 0.0034 | 0.0040 | 0.0041 | 0.0038 | | 0.0038 | | | 0.0050 | | | | 0.0034 | |
| Molbydenum | Mo | mg/L | | 0.00030 | 0.00080 | 0.00054 | 0.00039 | | 0.00017 | | | 0.00026 | | | | 0.00012 | |
| Nickel | Ni [3] | mg/L | 0.5 | 0.00090 | 0.00090 | 0.00060 | 0.00050 | | 0.00010 | | | 0.0010 | | | | 0.00030 | |
| Potassium | K | mg/L | | 3.1 | 4.3 | 2.8 | 2.3 | | 1.8 | | | 1.2 | | | | 0.96 | |
| Sodium | Na | mg/L | | 2.6 | 3.2 | 1.8 | 1.0 | | 0.41 | | | 0.21 | | | | 0.14 | |
| Strontium | Sr | mg/L | | 0.0075 | 0.016 | 0.013 | 0.014 | | 0.014 | | | 0.012 | | | | 0.011 | |
| Tin | Sn | mg/L | | 0.010 | 0.0027 | 0.0018 | 0.0020 | | 0.00083 | | | 0.00069 | | | | 0.00040 | |
| Titanium | Ti | mg/L | | 0.0011 | 0.00010 | 0.00010 | 0.00010 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | |
| Uranium | U | mg/L | | 0.000097 | 0.00068 | 0.00074 | 0.00078 | | 0.00085 | | | 0.00075 | | | | 0.00066 | |
| Vanadium | V | mg/L | | 0.00032 | 0.00035 | 0.00039 | 0.00034 | | 0.00046 | | | 0.00040 | | | | 0.00039 | |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | 0.0020 | | | 0.0010 | | | | 0.0010 | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-1 (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 989 | 985 | 894 | 985 | 901 | 985 | 985 | 985 | 990 | 920 | 989 | 984 | 986 | 984 |
| pH | | units | **6.0-9.5** | 7.1 | 7.1 | 7.0 | 7.1 | 7.1 | 7.2 | 6.8 | 6.5 | 6.8 | 7.0 | 7.0 | 7.0 | 7.1 | 7.0 |
| Conductivity | | mg/L as CaCO3 | | 26 | 18 | 16 | 20 | 21 | 21 | 19 | 22 | 20 | 19 | 20 | 20 | 20 | 21 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 8.0 | 5.0 | 4.0 | 6.0 | 5.0 | 5.0 | 5.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 3.2 | 2.3 | 2.5 | 2.9 | 3.3 | 3.0 | 3.0 | 3.0 | 3.0 | 2.9 | 3.0 | 2.8 | 3.0 | 2.9 |
| **METALS:** | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | 0.060 | | | | 0.020 | | | | | 0.020 | | |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | 0.00030 | | | | | 0.00030 | | |
| Arsenic | As | mg/L | **0.5** | | | 0.027 | | | | 0.031 | | | | | 0.028 | | |
| Barium | Ba | mg/L | | | | 0.00051 | | | | 0.00081 | | | | | 0.00073 | | |
| Boron | B | mg/L | | | | 0.00030 | | | | 0.00060 | | | | | 0.00030 | | |
| Cadmium | Cd[3] | mg/L | | | | 0.000011 | | | | < 0.000003 | | | | | 0.0000040 | | |
| Calcium | Ca | mg/L | | 3.8 | 2.4 | 2.0 | 2.6 | 2.7 | 2.4 | 2.4 | 2.7 | 2.7 | 2.3 | 2.7 | 2.7 | 2.6 | 2.6 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Cobalt | Co | mg/L | | | | 0.00023 | | | | 0.00042 | | | | | 0.00028 | | |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | |
| Iron | Fe | mg/L | | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |
| Lead | Pb[3] | mg/L | **0.2** | | | 0.000020 | | | | 0.000080 | | | | | 0.000030 | | |
| Lithium | Li | mg/L | | | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | |
| Magnesium | Mg | mg/L | | | | 0.21 | | | | 0.21 | | | | | 0.18 | | |
| Manganese | Mn | mg/L | | | | 0.0029 | | | | 0.0045 | | | | | 0.0053 | | |
| Molbydenum | Mo | mg/L | | | | < 0.00001 | | | | 0.000070 | | | | | 0.000080 | | |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00020 | | | | 0.00020 | | | | | 0.00010 | | |
| Potassium | K | mg/L | | | | 0.66 | | | | 0.75 | | | | | 0.67 | | |
| Sodium | Na | mg/L | | | | 0.070 | | | | 0.070 | | | | | 0.040 | | |
| Strontium | Sr | mg/L | | | | 0.0073 | | | | 0.0091 | | | | | 0.0093 | | |
| Tin | Sn | mg/L | | | | 0.00040 | | | | 0.00023 | | | | | 0.00015 | | |
| Titanium | Ti | mg/L | | | | 0.00010 | | | | < 0.0001 | | | | | < 0.0001 | | |
| Uranium | U | mg/L | | | | 0.00042 | | | | 0.00042 | | | | | 0.00035 | | |
| Vanadium | V | mg/L | | | | 0.00028 | | | | 0.00023 | | | | | 0.00031 | | |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | < 0.002 | | | | | < 0.002 | | |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - ML95-82-1 (Greywacke) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#28 | Wk#29 | Wk#30 | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 990 | 942 | 992 | 974 | 926 | 983 | 981 | 982 | 977 | 984 | 982 | 906 | 982 |
| pH | | units | **6.0-9.5** | 6.9 | 7.1 | 6.9 | 7.0 | 6.8 | 6.9 | 6.9 | 6.9 | 7.2 | 6.9 | 7.0 | 6.9 | 7.0 |
| Conductivity | | mg/L as CaCO3 | | 19 | 20 | 20 | 18 | 18 | 19 | 19 | 17 | 22 | 19 | 22 | 17 | 22 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 5.0 | 6.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.0 | 6.0 | 5.0 | 4.0 | 4.0 | 6.0 |
| Chloride | Cl | mg/L | | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Sulphate | SO4 | mg/L | | 2.7 | 3.1 | 2.6 | 2.8 | 3.2 | 2.6 | 2.9 | 2.9 | 3.5 | 3.1 | 2.9 | 3.0 | 3.2 |
| **METALS:** | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | | | < 0.01 | | | | | < 0.01 | | | | | 0.010 |
| Antimony | Sb | mg/L | | | | < 0.0002 | | | | | 0.00030 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | | | 0.030 | | | | | 0.024 | | | | | 0.029 |
| Barium | Ba | mg/L | | | | 0.00088 | | | | | 0.00079 | | | | | 0.00084 |
| Boron | B | mg/L | | | | 0.00030 | | | | | 0.00070 | | | | | < 0.0002 |
| Cadmium | Cd[3] | mg/L | | | | < 0.000003 | | | | | 0.000093 | | | | | 0.0000040 |
| Calcium | Ca | mg/L | | 2.6 | 3.1 | 2.6 | 2.6 | 2.8 | 2.8 | 1.7 | 2.4 | 3.0 | 2.8 | 2.3 | 2.3 | 3.4 |
| Chromium | Cr[2] | mg/L | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | | | 0.00032 | | | | | 0.00034 | | | | | 0.00043 |
| Copper | Cu[3] | mg/L | **0.3** | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |
| Lead | Pb[3] | mg/L | **0.2** | | | < 0.00002 | | | | | 0.00010 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | | | 0.15 | | | | | 0.12 | | | | | 0.15 |
| Manganese | Mn | mg/L | | | | 0.0055 | | | | | 0.0064 | | | | | 0.0084 |
| Molbydenum | Mo | mg/L | | | | 0.000050 | | | | | 0.000040 | | | | | 0.000030 |
| Nickel | Ni[3] | mg/L | **0.5** | | | 0.00050 | | | | | 0.00050 | | | | | 0.00050 |
| Potassium | K | mg/L | | | | 0.63 | | | | | 0.53 | | | | | 0.61 |
| Sodium | Na | mg/L | | | | 0.050 | | | | | 0.040 | | | | | 0.050 |
| Strontium | Sr | mg/L | | | | 0.0088 | | | | | 0.0078 | | | | | 0.011 |
| Tin | Sn | mg/L | | | | 0.00011 | | | | | 0.00012 | | | | | 0.00011 |
| Titanium | Ti | mg/L | | | | 0.00030 | | | | | < 0.0001 | | | | | < 0.0001 |
| Uranium | U | mg/L | | | | 0.00028 | | | | | 0.00020 | | | | | 0.00033 |
| Vanadium | V | mg/L | | | | 0.00026 | | | | | 0.00019 | | | | | 0.00024 |
| Zinc | Zn | mg/L | **0.5** | | | < 0.002 | | | | | < 0.002 | | | | | < 0.002 |

**Notes:**

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

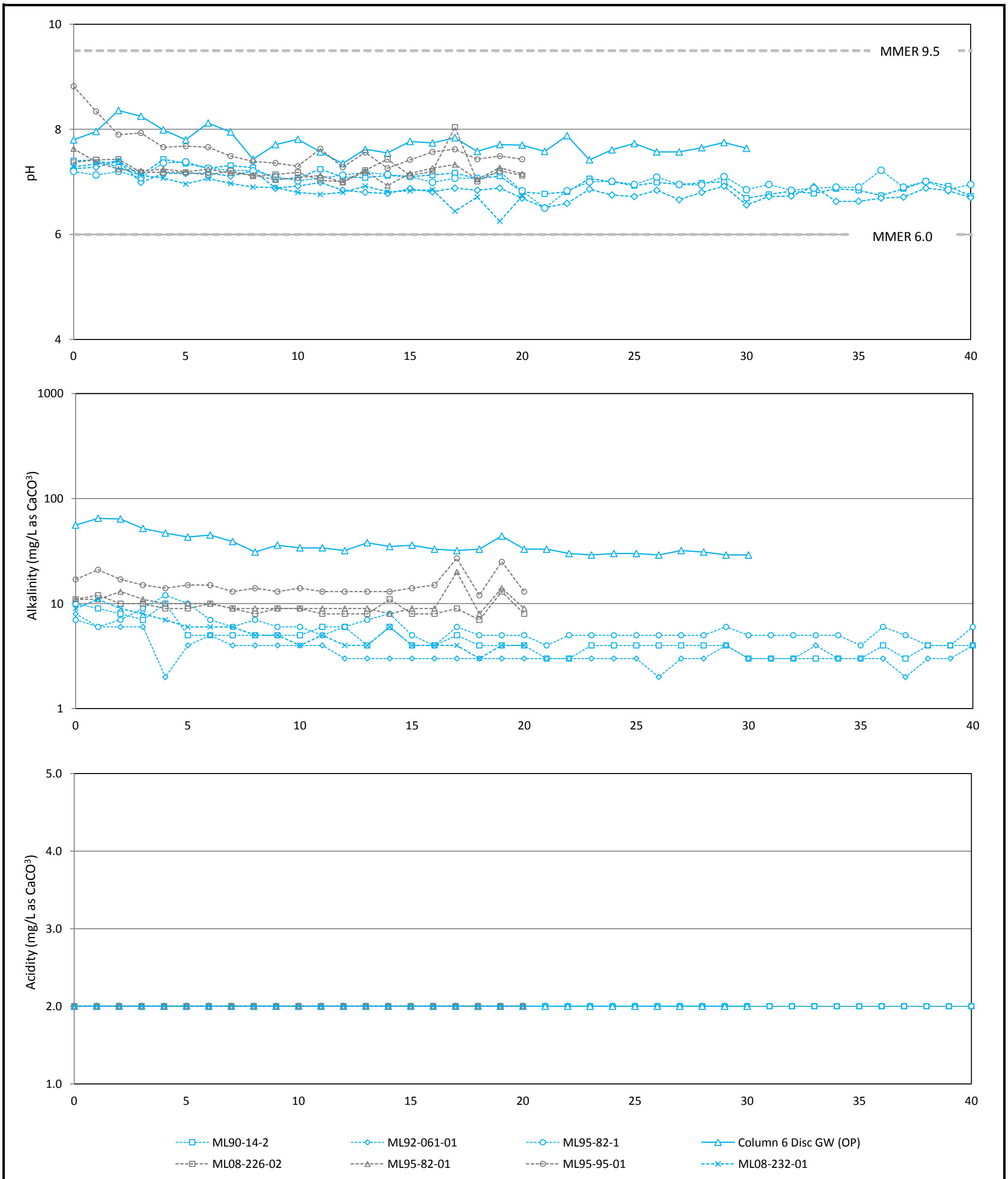
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 6 Disc GW (OP) (Greywacke) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 23400 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 |
| Leachate Volume Recovered | | mL | | 1981 | 5005 | 5096 | 5073 | 4960 | 5073 | 4937 | 4983 | 22228 | 5822 | 4546 | 4983 | 4574 | 4937 | 5232 | 4733 |
| pH | | units | **6.0-9.5** | 7.8 | 8.0 | 8.4 | 8.3 | 8.0 | 7.8 | 8.1 | 8.0 | 7.4 | 7.7 | 7.8 | 7.6 | 7.4 | 7.6 | 7.6 | 7.8 |
| Conductivity | | mg/L as CaCO3 | | 503 | 422 | 270 | 237 | 223 | 238 | 208 | 207 | 95 | 123 | 139 | 200 | 192 | 211 | 219 | 174 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 56 | 65 | 64 | 52 | 47 | 43 | 45 | 39 | 31 | 36 | 34 | 34 | 32 | 38 | 35 | 36 |
| Chloride | Cl | mg/L | | 39 | 32 | 14 | 8.6 | | 2.7 | | | 0.40 | | | | < 0.2 | | | |
| Fluoride | F | mg/L | | 0.77 | 0.72 | 0.69 | 0.56 | | 0.40 | | | 0.26 | | | | 0.31 | | | |
| Phosphorus | P | mg/L | | 0.061 | 0.0090 | 0.012 | < 0.009 | | < 0.009 | | | < 0.009 | | | | < 0.009 | | | |
| Sulphate | SO4 | mg/L | | 87 | 97 | 63 | 51 | 49 | 60 | 65 | 64 | 47 | 37 | 46 | 58 | 56 | 68 | 70 | 67 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.30 | 0.18 | 0.20 | 0.19 | | 0.18 | | | 0.15 | | | | 0.10 | | | |
| Antimony | Sb | mg/L | | 0.0012 | 0.0020 | 0.0017 | 0.0014 | | 0.0011 | | | 0.00060 | | | | 0.00050 | | | |
| Arsenic | As | mg/L | **0.5** | 0.021 | 0.062 | 0.10 | 0.15 | | 0.19 | | | 0.16 | | | | 0.12 | | | |
| Barium | Ba | mg/L | | 0.025 | 0.023 | 0.022 | 0.019 | | 0.021 | | | 0.016 | | | | 0.027 | | | |
| Boron | B | mg/L | | 0.083 | 0.11 | 0.084 | 0.068 | | 0.045 | | | 0.023 | | | | 0.015 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000090 | 0.000034 | 0.00011 | 0.000032 | | < 0.000003 | | | < 0.000003 | | | | 0.0000090 | | | |
| Calcium | Ca | mg/L | | 11 | 11 | 10 | 11 | 13 | 16 | 20 | 21 | 17 | 19 | 20 | 28 | 25 | 29 | 31 | 31 |
| Chromium | Cr[2] | mg/L | | 0.0081 | 0.0033 | 0.0011 | 0.00070 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.00067 | 0.00058 | 0.00041 | 0.00044 | | 0.00058 | | | 0.00055 | | | | 0.00072 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0043 | 0.0030 | 0.0019 | 0.0014 | | 0.0012 | | | 0.00060 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.022 | 0.020 | 0.031 | 0.026 | | 0.013 | | | 0.0070 | | | | 0.0060 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00026 | 0.00017 | 0.00010 | 0.00012 | | 0.000050 | | | 0.000020 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0070 | 0.0080 | 0.0080 | 0.0070 | | 0.0080 | | | 0.0070 | | | | 0.0070 | | | |
| Magnesium | Mg | mg/L | | 2.4 | 3.3 | 3.0 | 3.0 | | 3.9 | | | 3.2 | | | | 3.3 | | | |
| Manganese | Mn | mg/L | | 0.0077 | 0.011 | 0.0099 | 0.0084 | | 0.013 | | | 0.0078 | | | | 0.0055 | | | |
| Molbydenum | Mo | mg/L | | 0.18 | 0.13 | 0.075 | 0.045 | | 0.024 | | | 0.0078 | | | | 0.0054 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0039 | 0.0043 | 0.0028 | 0.0023 | | 0.0025 | | | 0.0016 | | | | 0.0011 | | | |
| Potassium | K | mg/L | | 32 | 25 | 21 | 17 | | 14 | | | 9.0 | | | | 7.6 | | | |
| Selenium | Se | mg/L | | 0.0020 | 0.0030 | 0.0010 | 0.0020 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 76 | 58 | 40 | 27 | | 16 | | | 5.5 | | | | 2.4 | | | |
| Strontium | Sr | mg/L | | 0.073 | 0.078 | 0.071 | 0.072 | | 0.092 | | | 0.079 | | | | 0.10 | | | |
| Tin | Sn | mg/L | | 0.00064 | 0.00018 | 0.000080 | 0.000030 | | 0.000040 | | | 0.000010 | | | | < 0.00001 | | | |
| Thallium | Th | mg/L | | 0.000020 | < 0.00002 | 0.000030 | 0.000020 | | 0.000020 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.0017 | 0.0024 | 0.0027 | 0.0023 | | 0.0016 | | | 0.0010 | | | | 0.00070 | | | |
| Tungsten | W | mg/L | | 0.0087 | 0.0081 | 0.0056 | 0.0044 | | 0.0023 | | | 0.00075 | | | | 0.00034 | | | |
| Uranium | U | mg/L | | 0.00042 | 0.0047 | 0.0034 | 0.0035 | | 0.0057 | | | 0.0036 | | | | 0.0049 | | | |
| Vanadium | V | mg/L | | 0.0019 | 0.0033 | 0.0033 | 0.0034 | | 0.0029 | | | 0.0021 | | | | 0.0014 | | | |
| Yttrium | Y | mg/L | | 0.000093 | 0.00013 | 0.000091 | 0.000075 | | 0.000058 | | | 0.000032 | | | | 0.000021 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | Humidity Cell Test Cycle - Column 6 Disc GW (OP) (Greywacke) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 |
| Leachate Volume Recovered | | mL | | 4733 | 4665 | 5278 | 5164 | 4847 | 4983 | 4915 | 5028 | 5005 | 4937 | 5005 | 4915 | 5005 | 4983 | 5051 |
| pH | | units | 6.0-9.5 | 7.7 | 7.8 | 7.6 | 7.7 | 7.7 | 7.6 | 7.9 | 7.4 | 7.6 | 7.7 | 7.6 | 7.6 | 7.7 | 7.8 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 223 | 197 | 211 | 157 | 187 | 186 | 129 | 120 | 158 | 119 | 151 | 157 | 118 | 116 | 116 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 33 | 32 | 33 | 44 | 33 | 33 | 30 | 29 | 30 | 30 | 29 | 32 | 31 | 29 | 299 |
| Chloride | Cl | mg/L | | < 0.2 | | | | < 0.2 | | | | < 0.2 | | | | | | |
| Fluoride | F | mg/L | | 0.30 | | | | 0.28 | | | | 0.20 | | | | | | 0.25 |
| Phosphorus | P | mg/L | | < 0.009 | | | | < 0.009 | | | | < 0.009 | | | | | | < 0.009 |
| Sulphate | SO4 | mg/L | | 63 | 60 | 63 | 63 | 53 | 52 | 47 | 44 | 40 | 39 | 38 | 38 | 38 | 38 | 38 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.10 | | | | 0.090 | | | | 0.10 | | | | | | 0.10 |
| Antimony | Sb | mg/L | | 0.00050 | | | | 0.00020 | | | | < 0.0002 | | | | | | 0.00030 |
| Arsenic | As | mg/L | 0.5 | 0.11 | | | | 0.11 | | | | 0.11 | | | | | | 0.10 |
| Barium | Ba | mg/L | | 0.026 | | | | 0.022 | | | | 0.017 | | | | | | 0.019 |
| Boron | B | mg/L | | 0.011 | | | | 0.0085 | | | | 0.0059 | | | | | | 0.0051 |
| Cadmium | Cd[3] | mg/L | | 0.000011 | | | | 0.000010 | | | | 0.0000040 | | | | | | 0.000010 |
| Calcium | Ca | mg/L | | 30 | 29 | 29 | 30 | 27 | 27 | 25 | 24 | 23 | 22 | 23 | 22 | 22 | 24 | 23 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00076 | | | | 0.00065 | | | | 0.00055 | | | | | | 0.00053 |
| Copper | Cu[3] | mg/L | 0.3 | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | | | | | | 0.00050 |
| Iron | Fe | mg/L | | 0.0040 | | | | 0.0040 | | | | 0.0080 | | | | | | 0.0050 |
| Lead | Pb[3] | mg/L | 0.2 | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | 0.000040 |
| Lithium | Li | mg/L | | 0.0060 | | | | 0.0050 | | | | 0.0040 | | | | | | 0.0040 |
| Magnesium | Mg | mg/L | | 3.2 | | | | 2.4 | | | | 1.8 | | | | | | 1.5 |
| Manganese | Mn | mg/L | | 0.0042 | | | | 0.0031 | | | | 0.0019 | | | | | | 0.0019 |
| Molbydenum | Mo | mg/L | | 0.0064 | | | | 0.0065 | | | | 0.0054 | | | | | | 0.0050 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | 0.5 | 0.0012 | | | | 0.0010 | | | | 0.0018 | | | | | | 0.0017 |
| Potassium | K | mg/L | | 7.1 | | | | 5.7 | | | | 5.3 | | | | | | 4.9 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 1.9 | | | | 1.2 | | | | 0.90 | | | | | | 0.74 |
| Strontium | Sr | mg/L | | 0.11 | | | | 0.089 | | | | 0.072 | | | | | | 0.071 |
| Tin | Sn | mg/L | | < 0.00001 | | | | 0.000020 | | | | < 0.00001 | | | | | | < 0.00001 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.0010 | | | | 0.00090 | | | | 0.0012 | | | | | | 0.0010 |
| Tungsten | W | mg/L | | 0.00025 | | | | 0.0011 | | | | 0.00019 | | | | | | 0.00019 |
| Uranium | U | mg/L | | 0.0050 | | | | 0.0035 | | | | 0.0027 | | | | | | 0.0027 |
| Vanadium | V | mg/L | | 0.0012 | | | | 0.0012 | | | | 0.00098 | | | | | | 0.0011 |
| Yttrium | Y | mg/L | | 0.000022 | | | | 0.000020 | | | | 0.000017 | | | | | | 0.000020 |
| Zinc | Zn | mg/L | 0.5 | < 0.001 | | | | < 0.001 | | | | < 0.001 | | | | | | < 0.001 |

**Notes:**
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

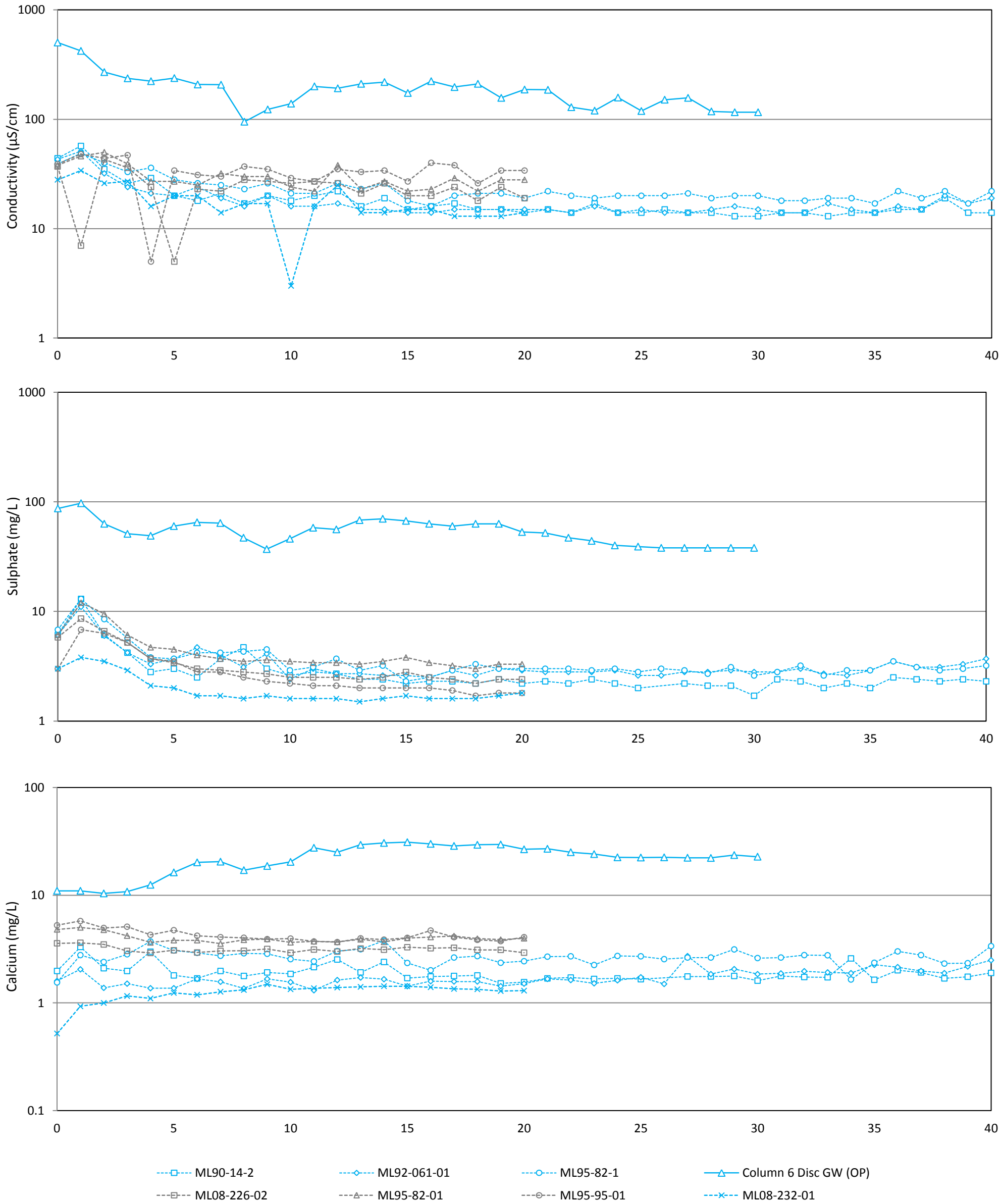
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-1

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Conductivity**
**Sulphate**
**Calcium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

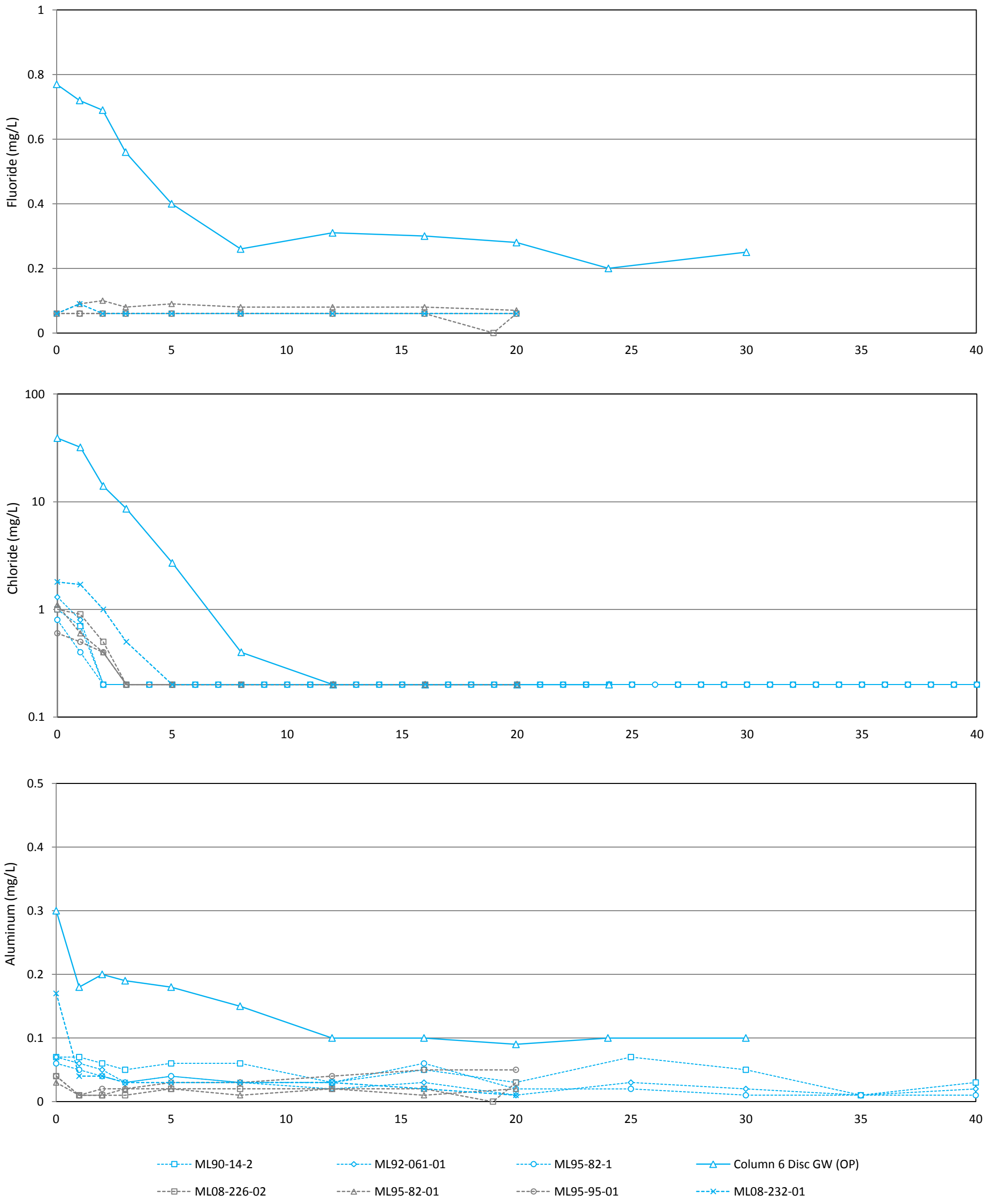
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

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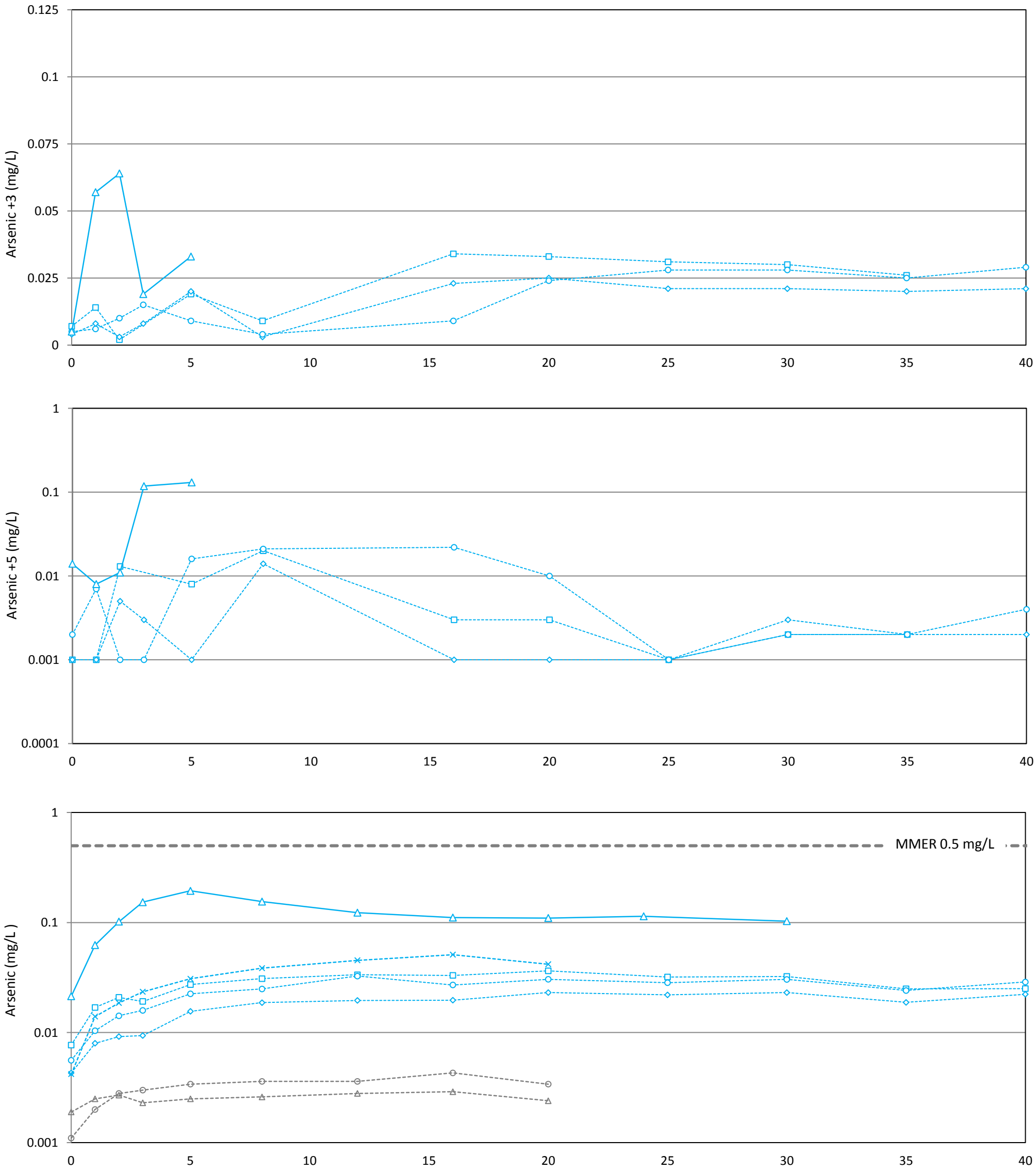
**FIGURE** B.7-2

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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Fluoride<br>Chloride<br>Aluminum**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-3 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Arsenic +3**
**Arsenic +5**
**Arsenic**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

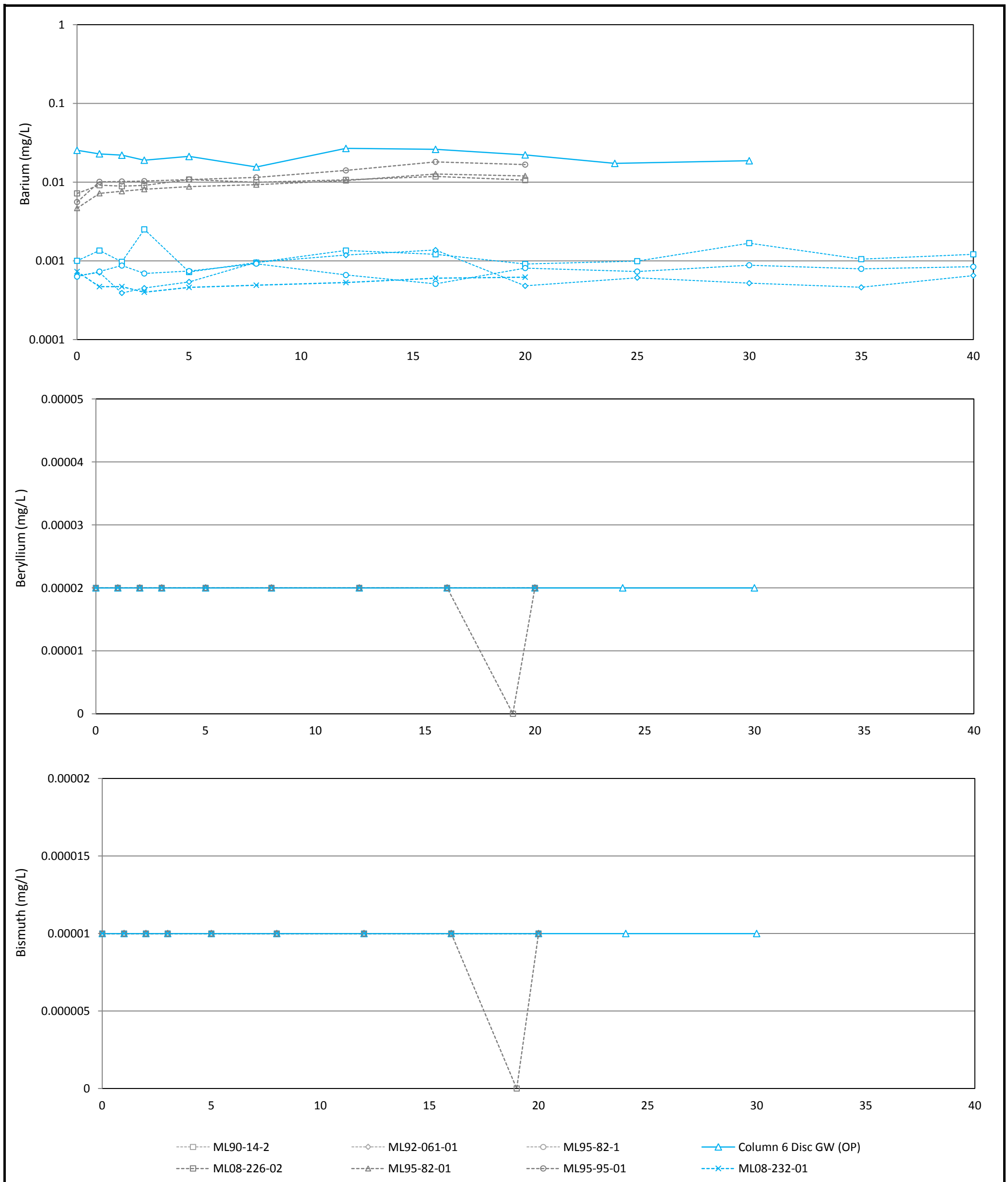
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

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**FIGURE** B.7-4

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Barium**
**Beryllium**
**Bismuth**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

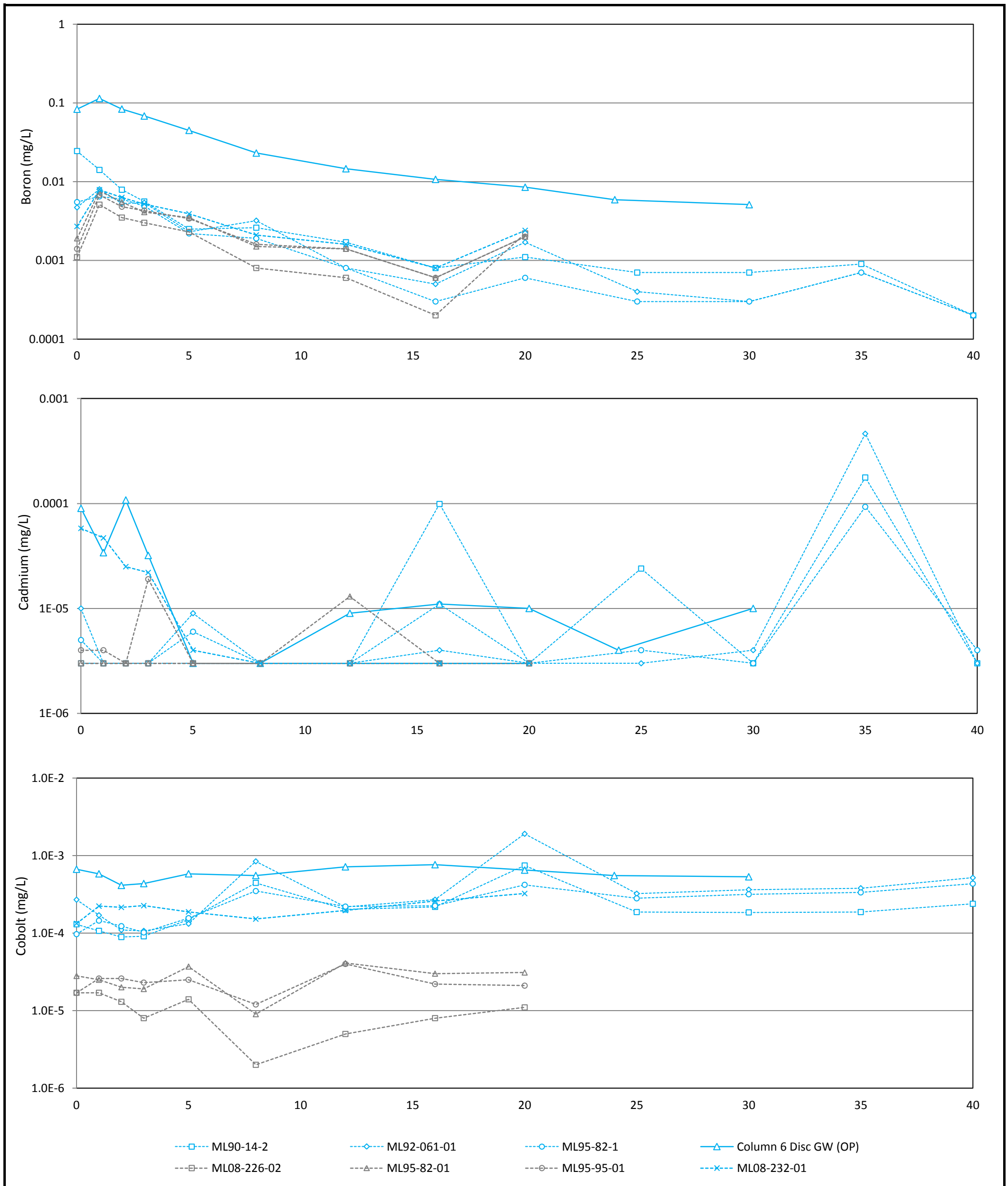
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-5

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Boron**
**Cadmium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

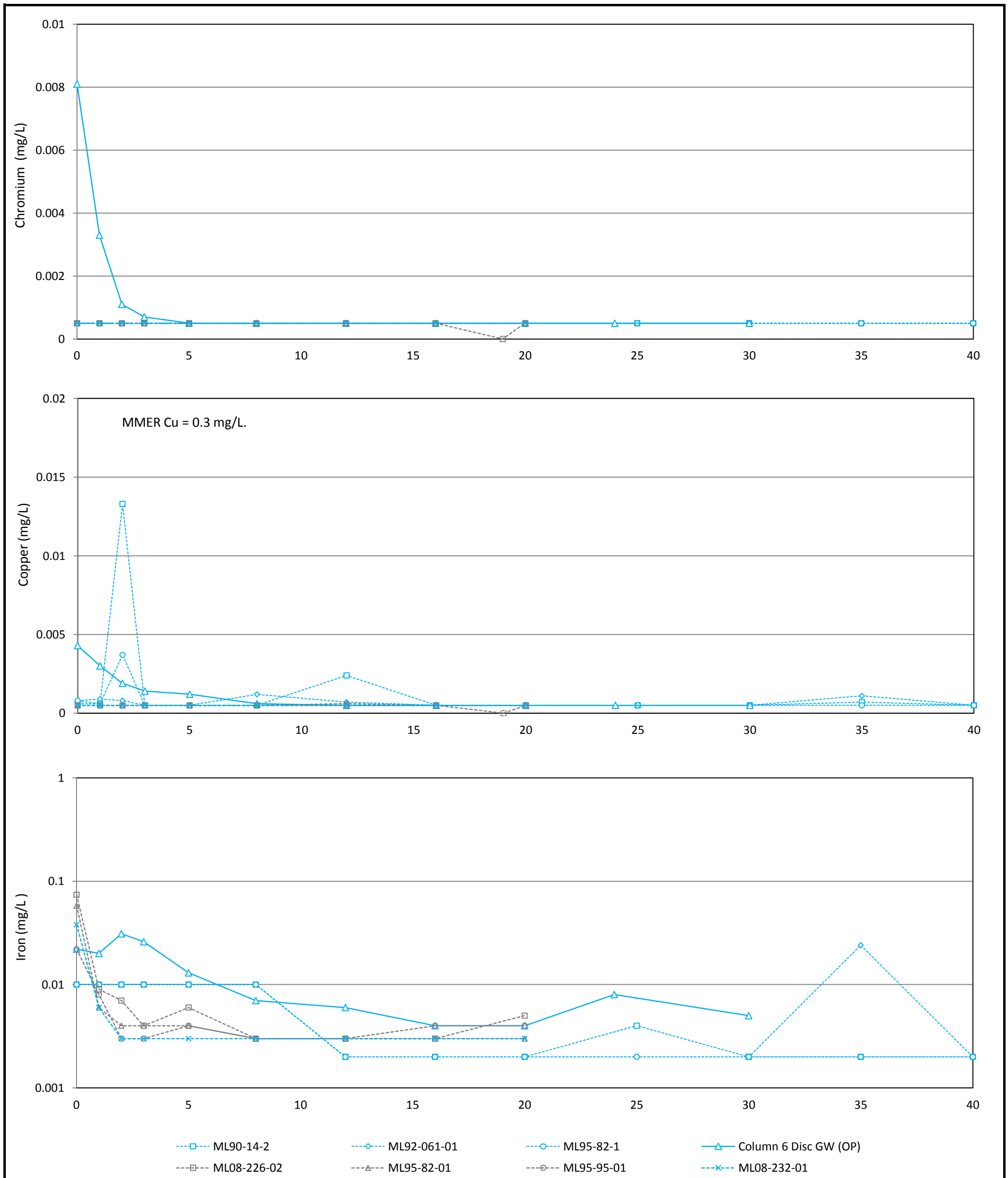
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

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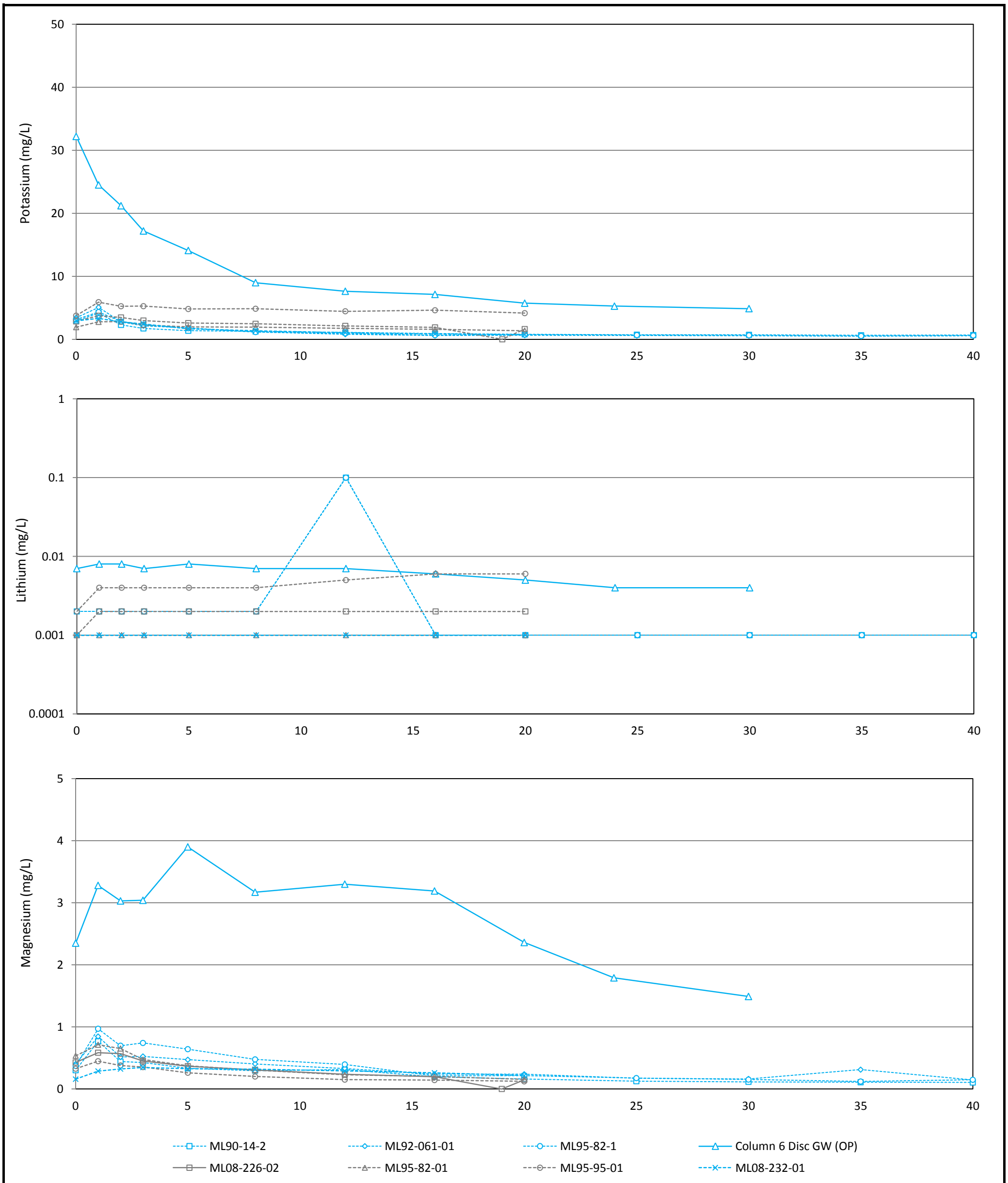
**FIGURE** B.7-6

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Chromium<br>Copper<br>Iron**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-7 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Potassium**
**Lithium**
**Magnesium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

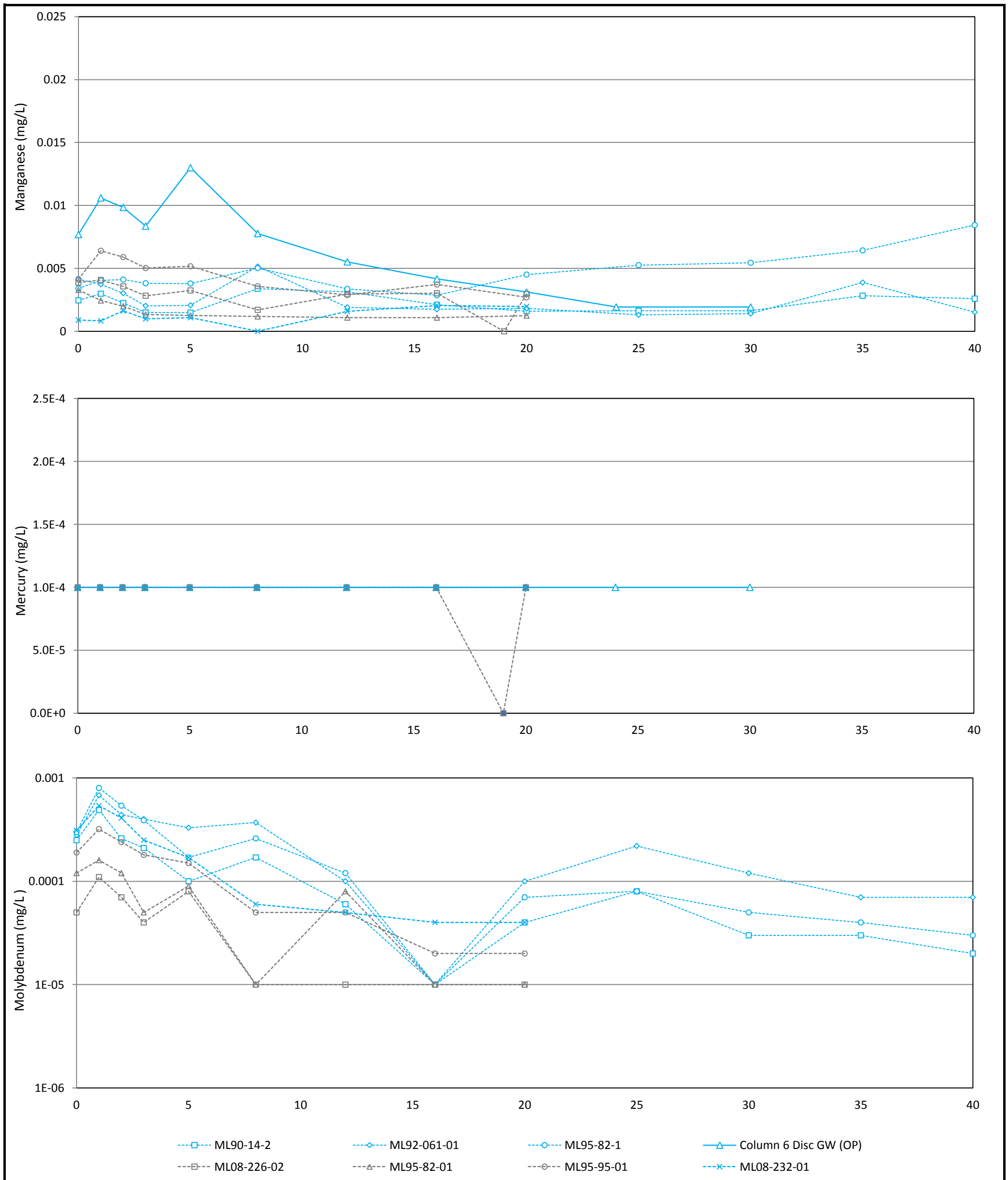
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-8

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Manganese**
**Mercury**
**Molybdenum**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

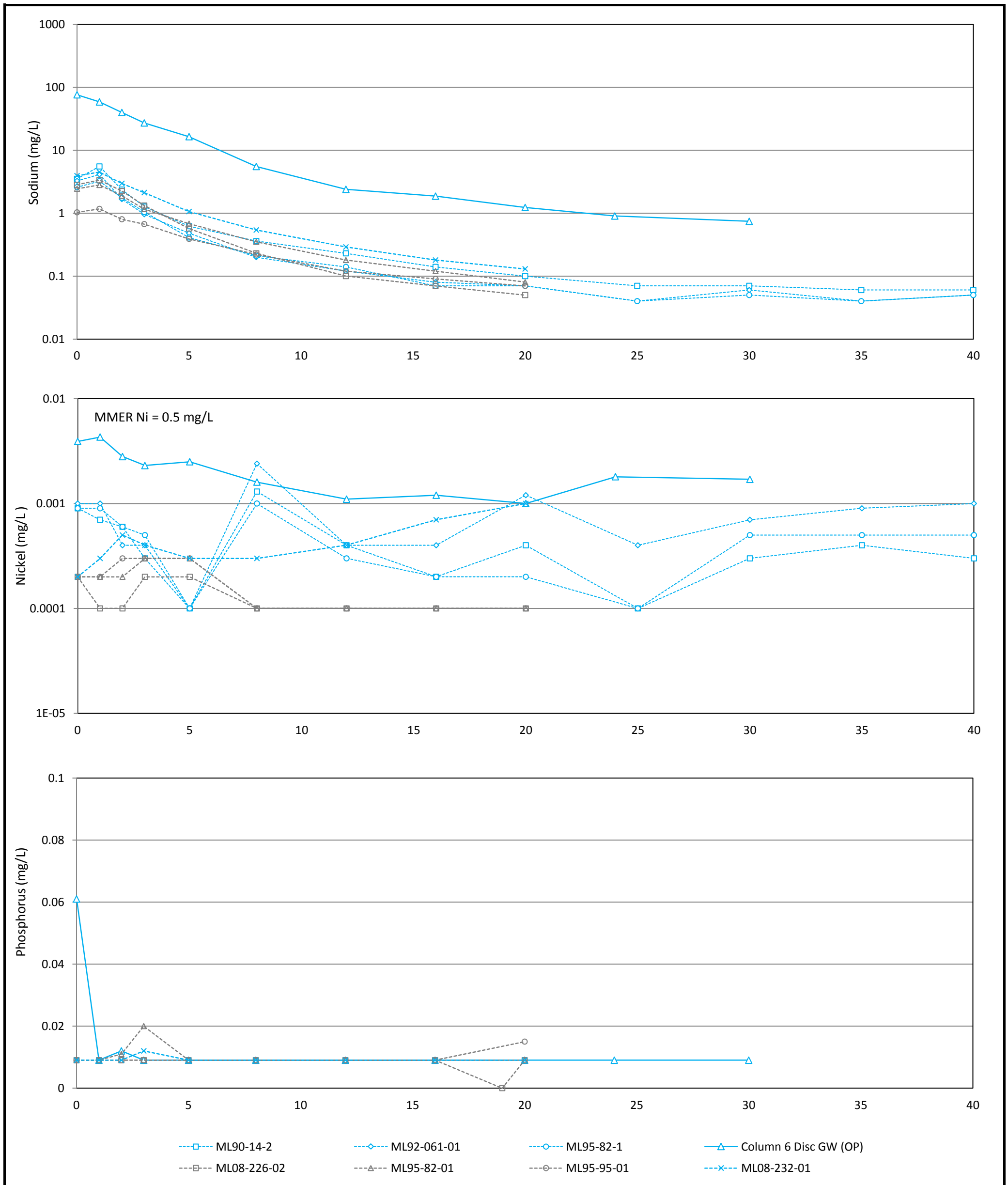
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

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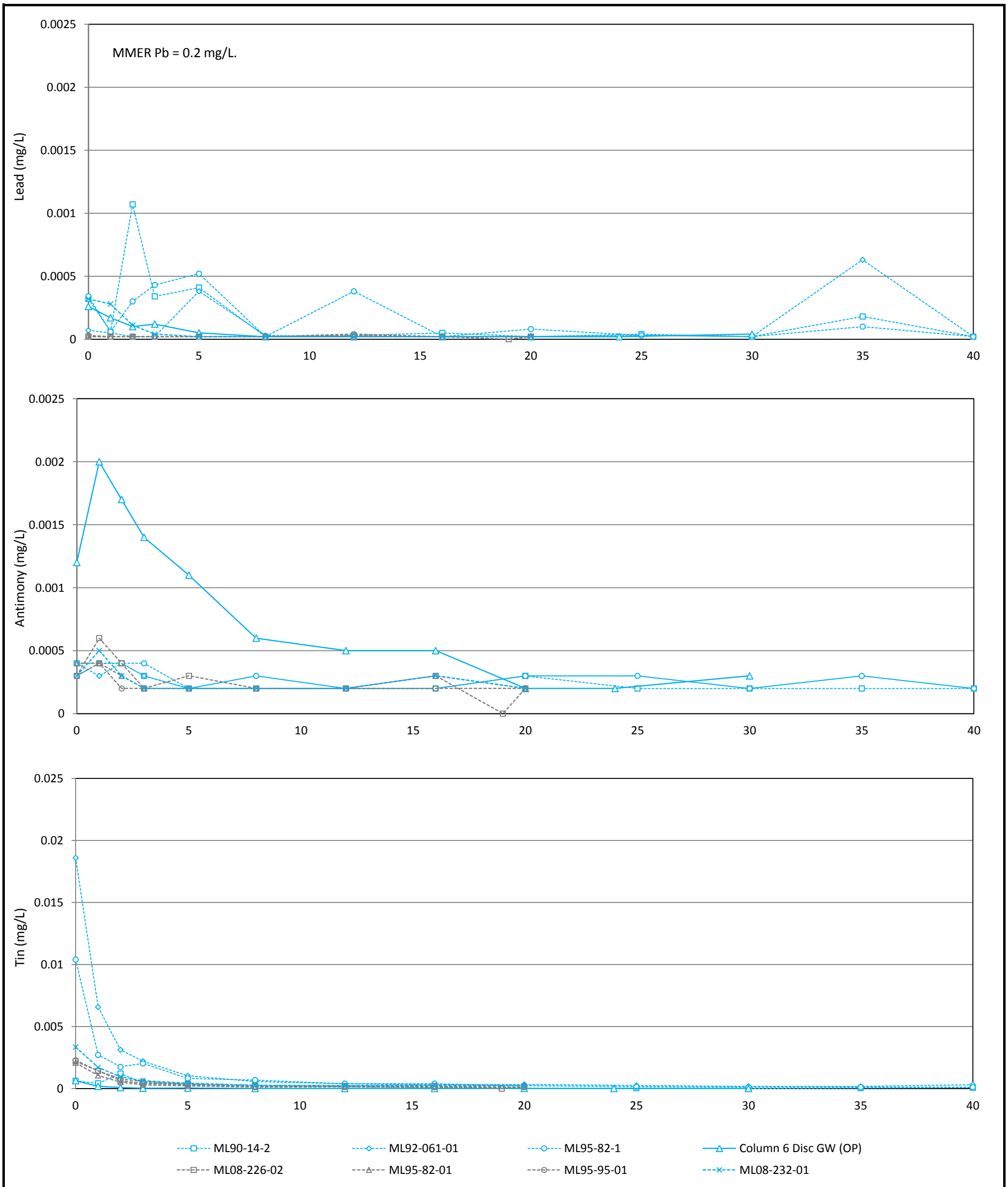
**FIGURE** B.7-9

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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Sodium<br>Nickel<br>Phosphorus**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-10 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Lead**
**Antimony**
**Tin**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

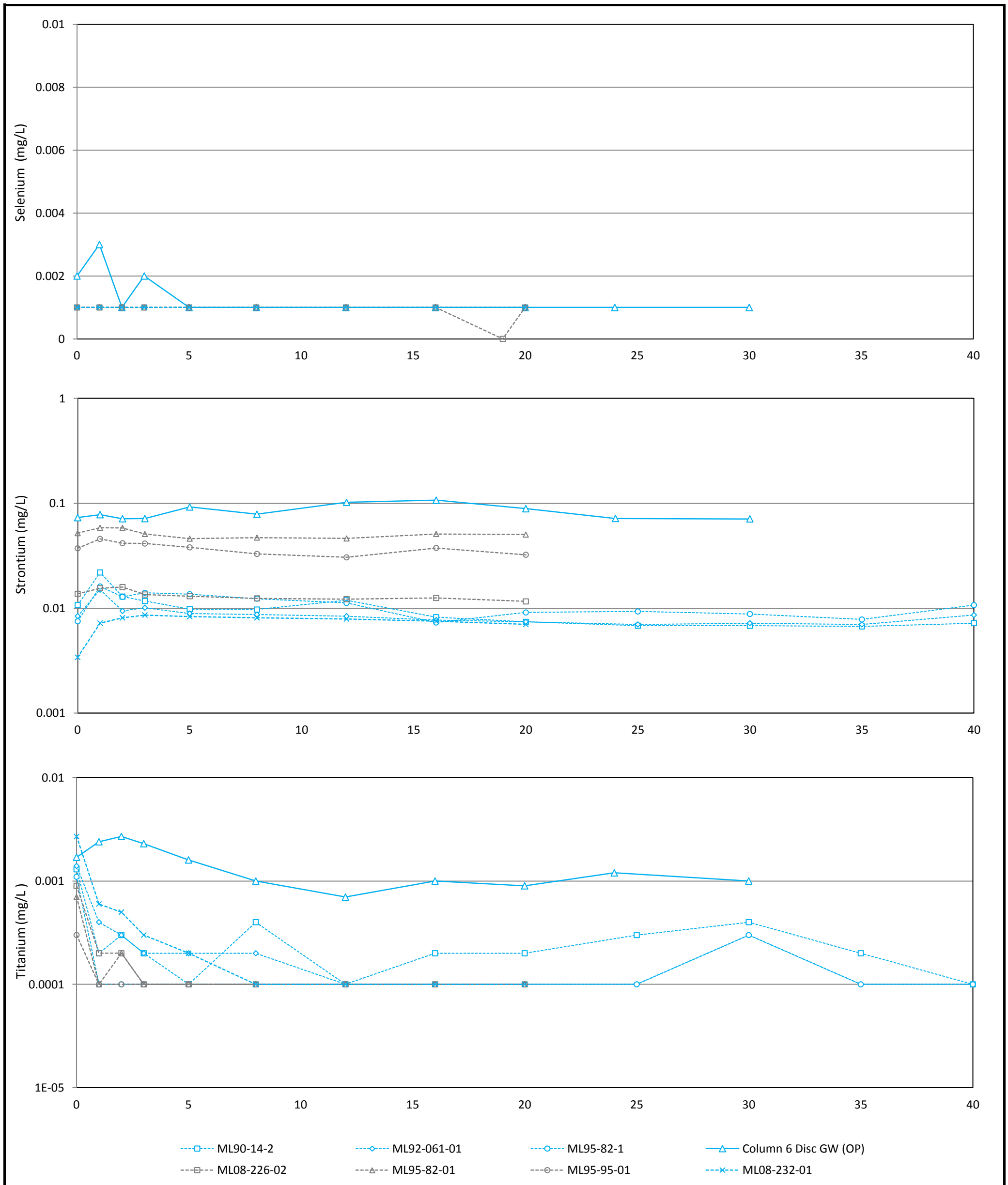
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

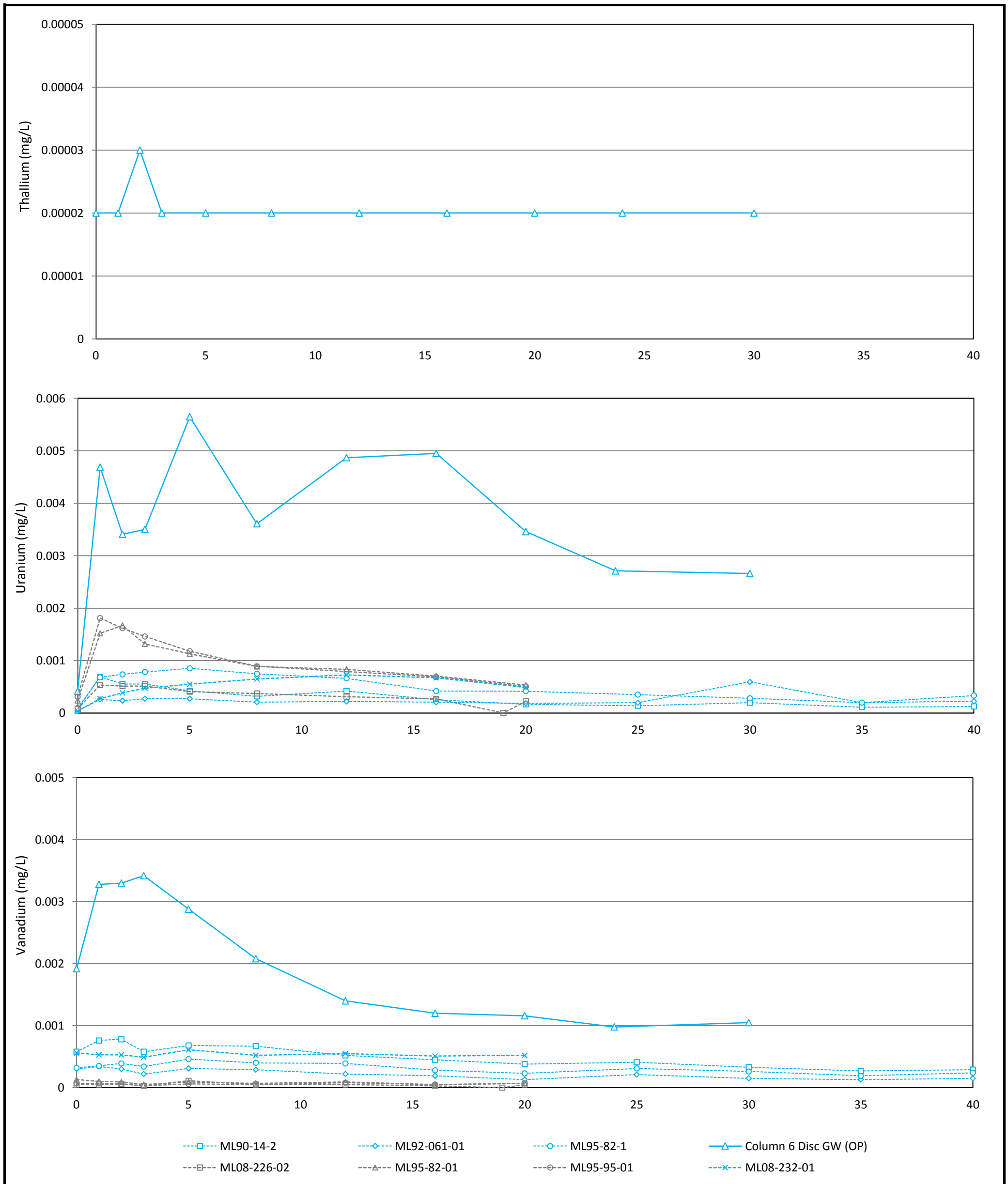
**FIGURE** B.7-11

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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Selenium<br>Strontium<br>Titanium**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>Discovery Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-12 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Thallium**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

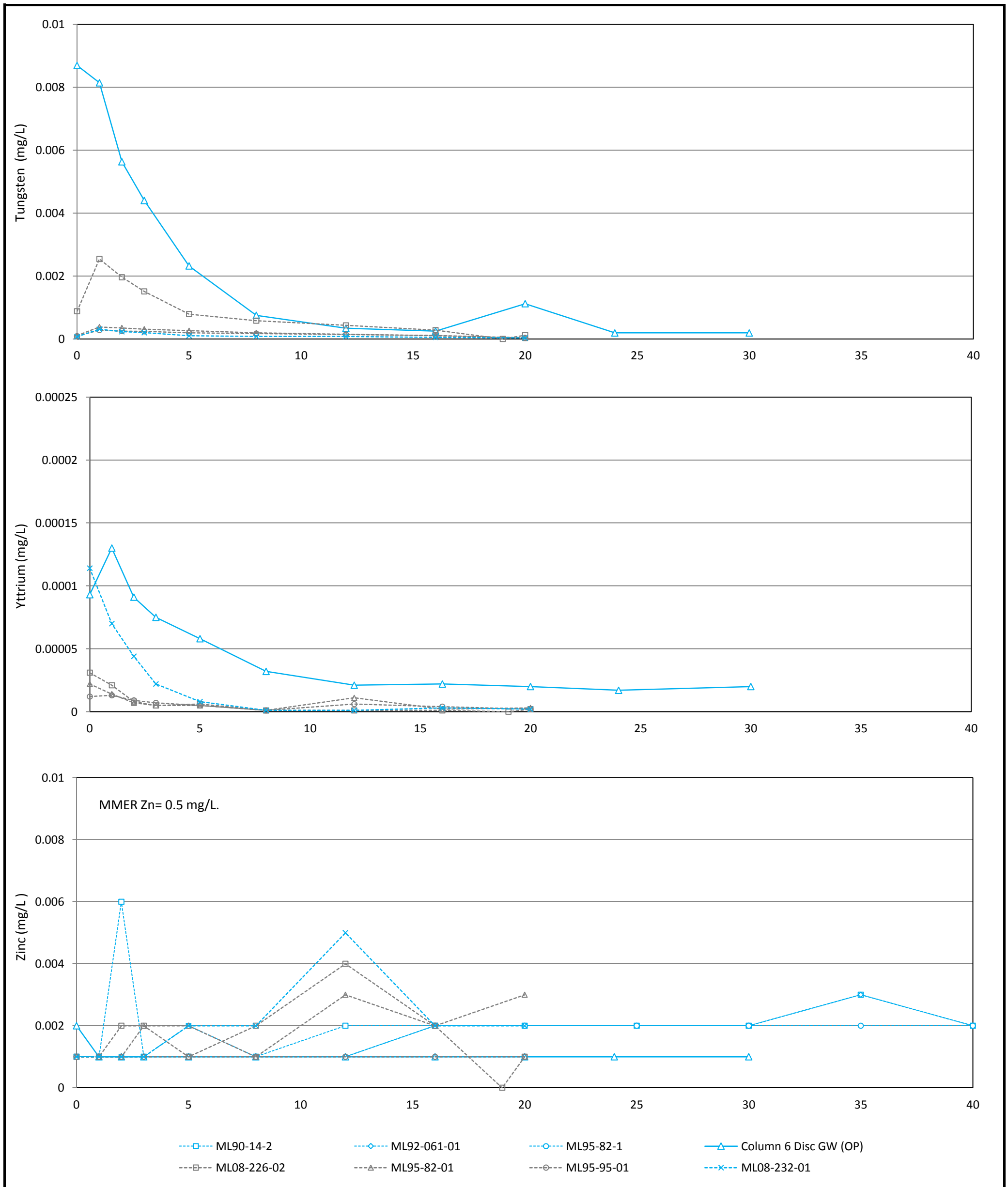
**Kinetic Test Data**
**Discovery Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-13

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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Tungsten**<br>**Yttrium**<br>**Zinc** | **Kinetic Test Data**<br>**Discovery Deposit**<br>**Meliadine Property** |

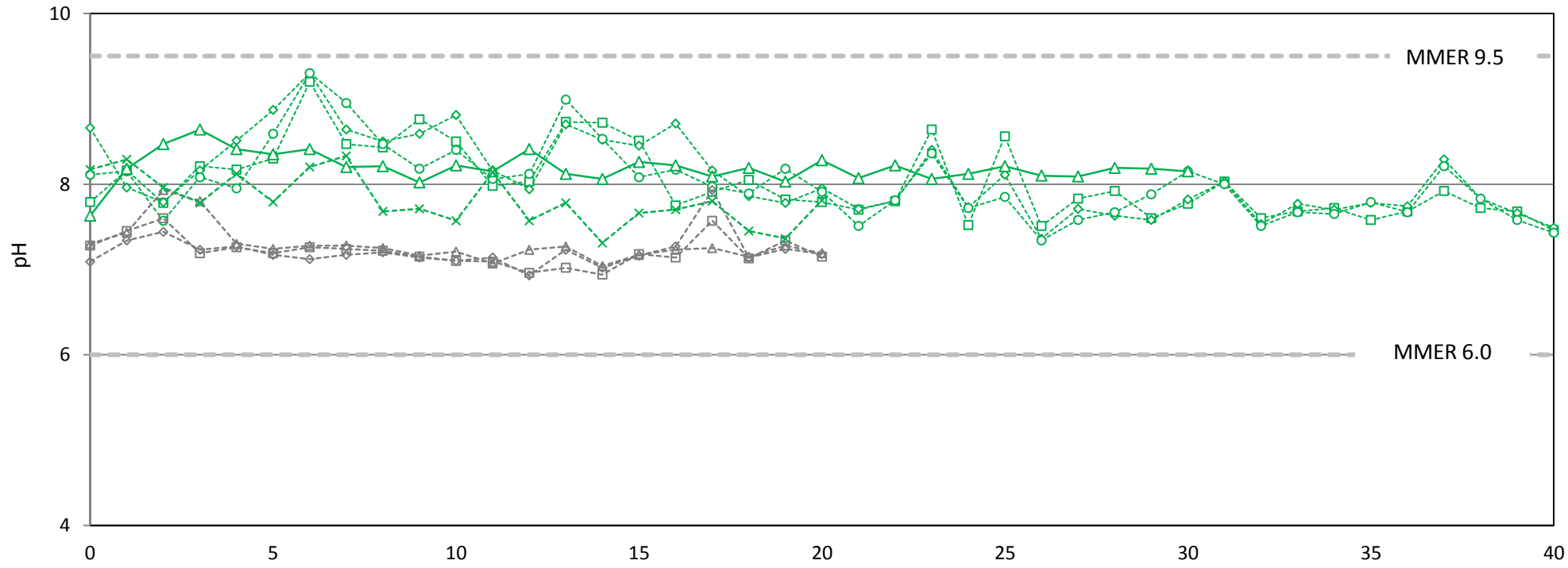
| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

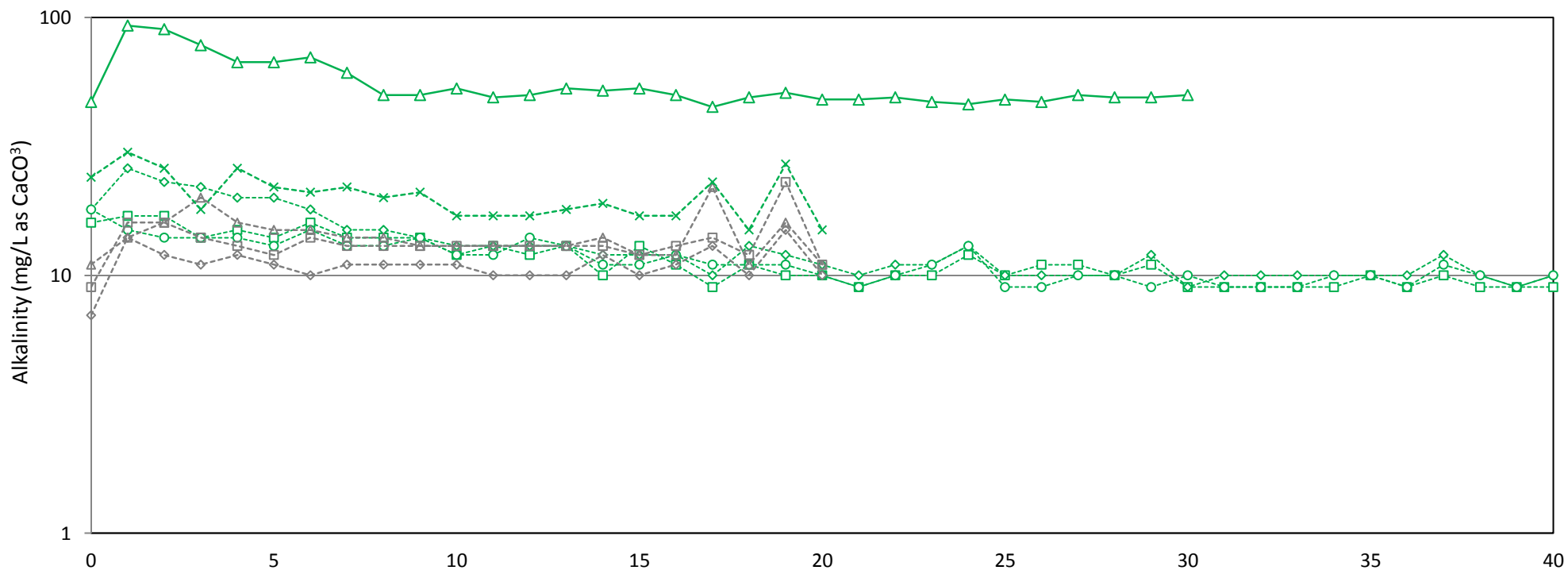
**Agnico-Eagle Mines Ltd.**

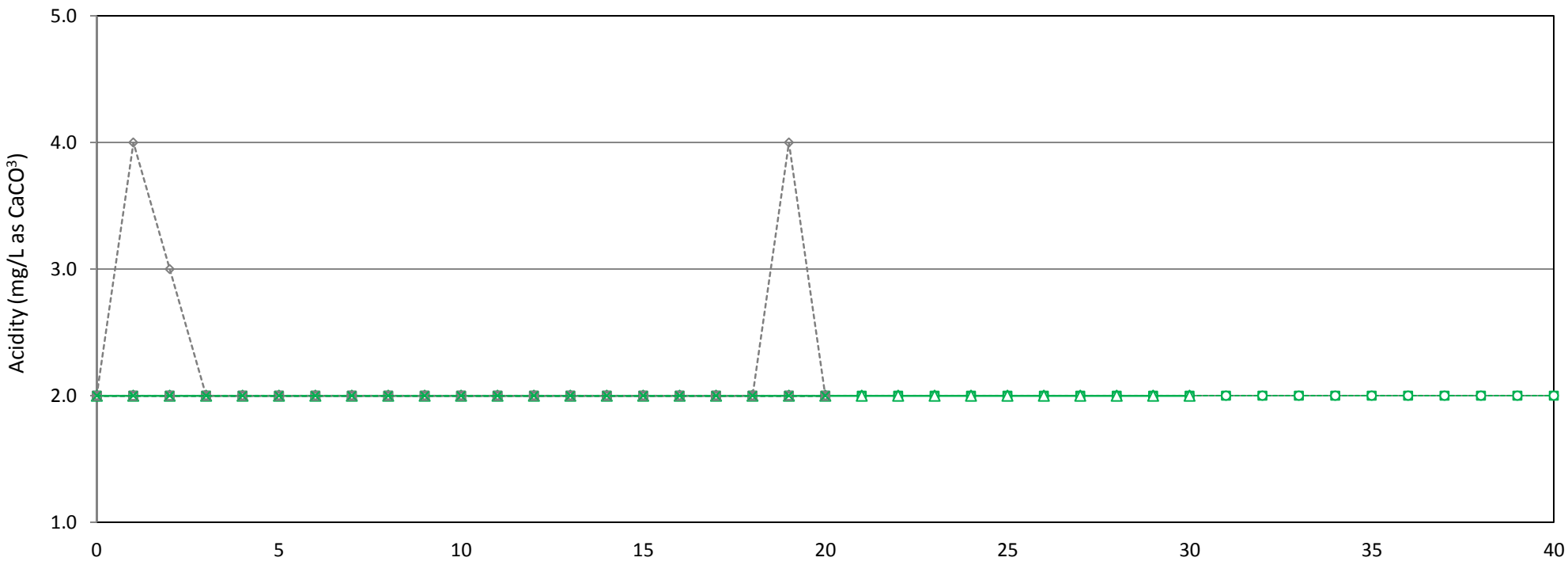
Golder Associates

**FIGURE** B.7-14

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

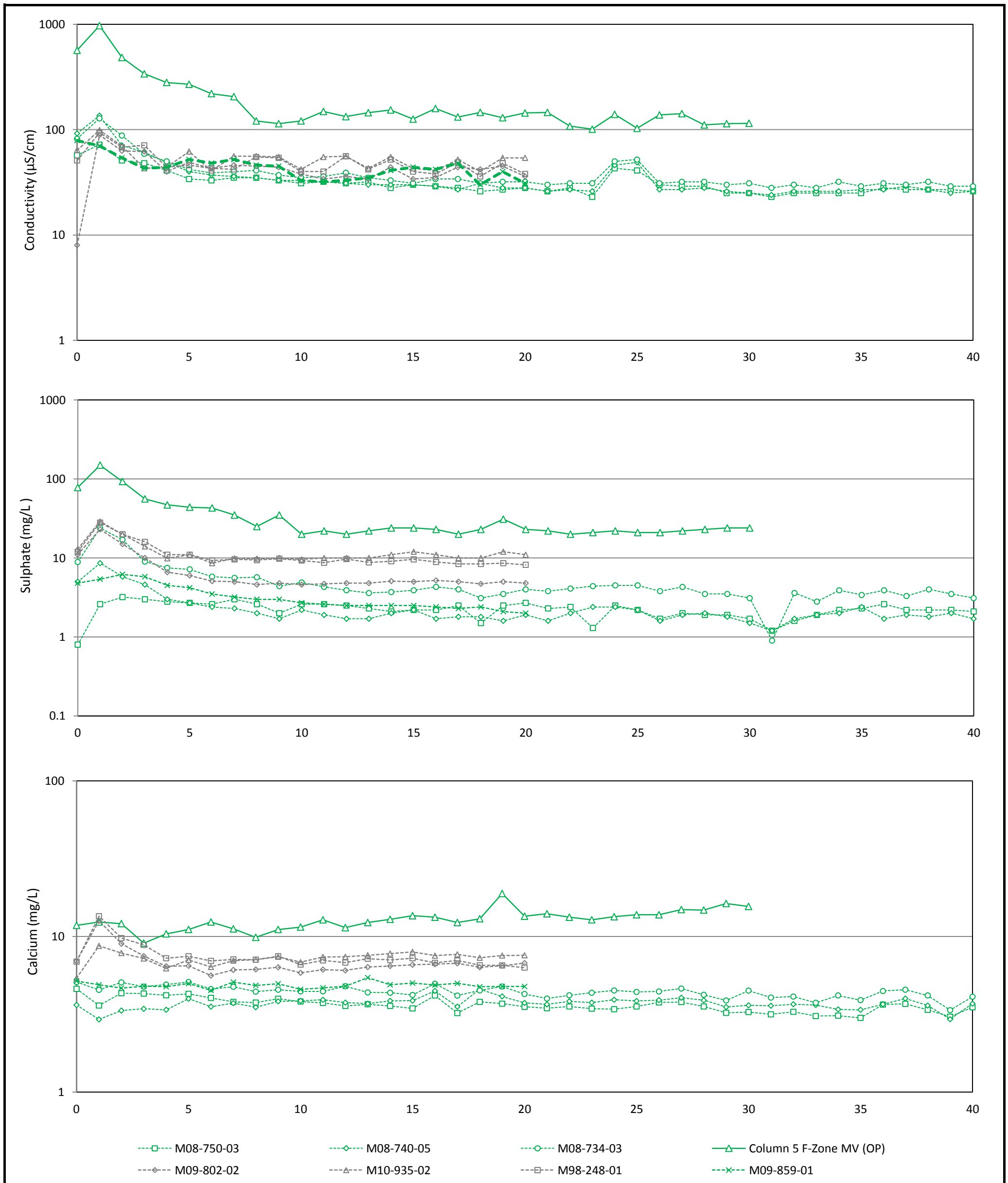
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-15

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Conductivity**
**Sulphate**
**Calcium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

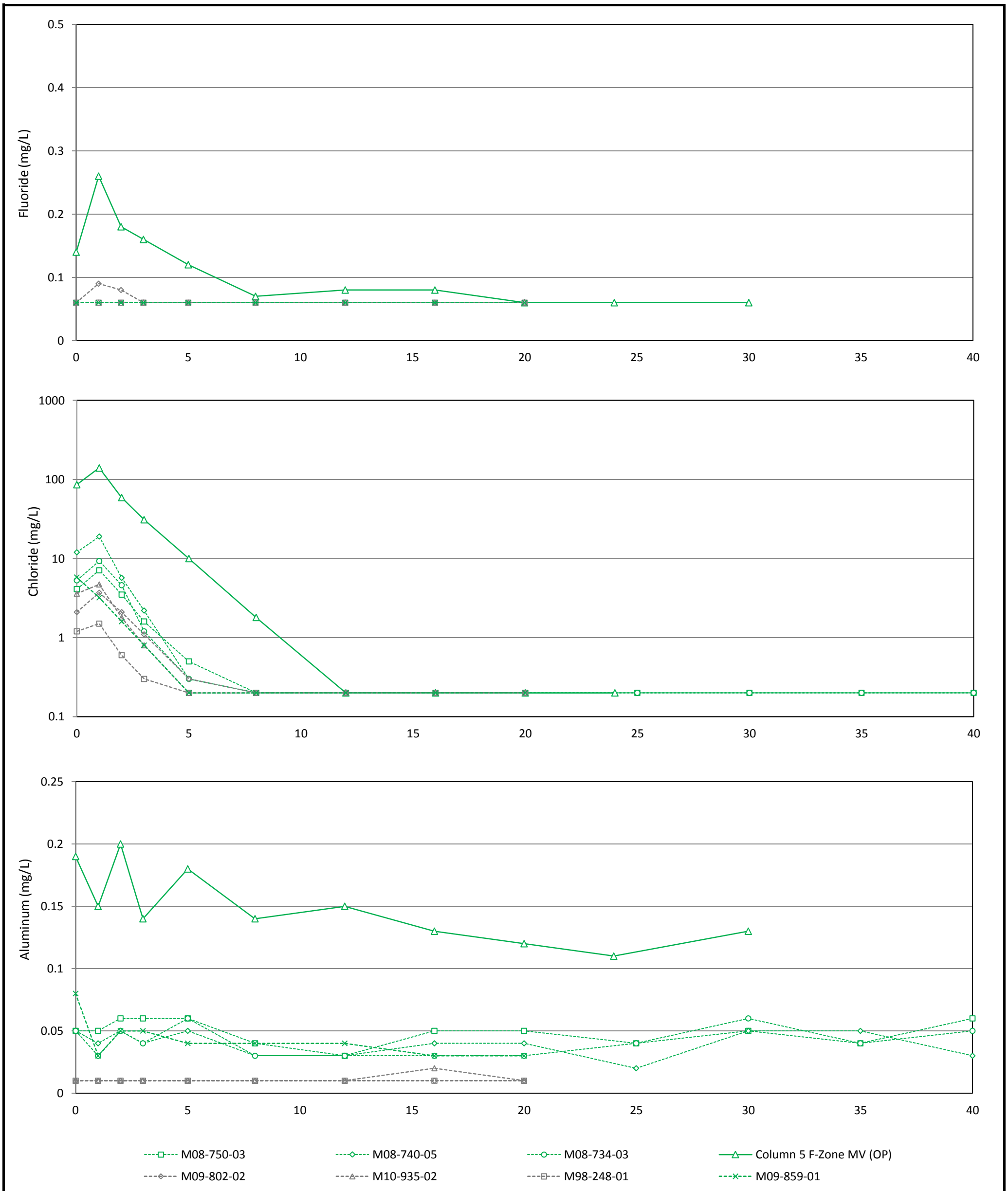
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-16

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Fluoride**
**Chloride**
**Aluminum**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

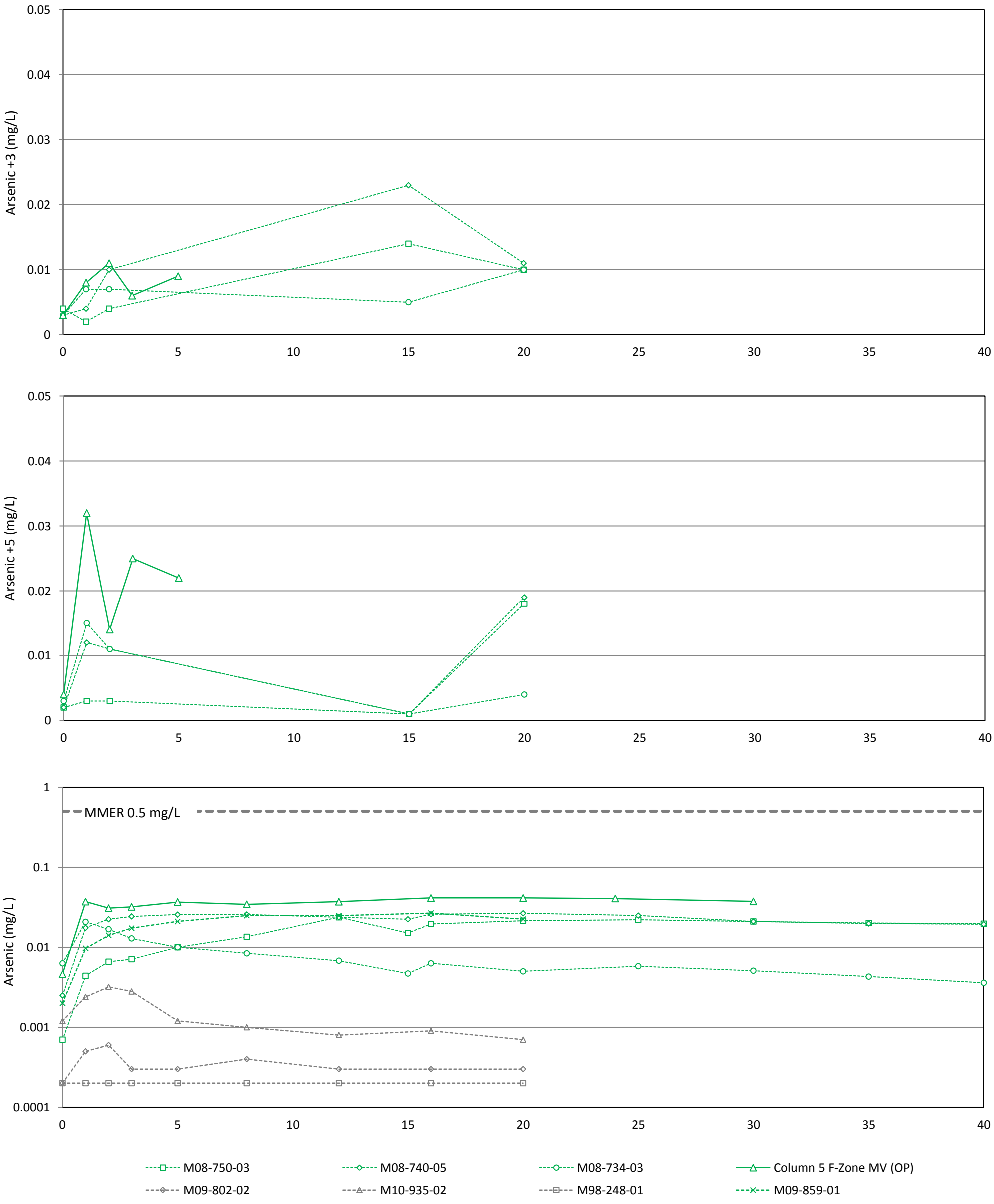
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-17

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Arsenic +3**
**Arsenic +5**
**Arsenic**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

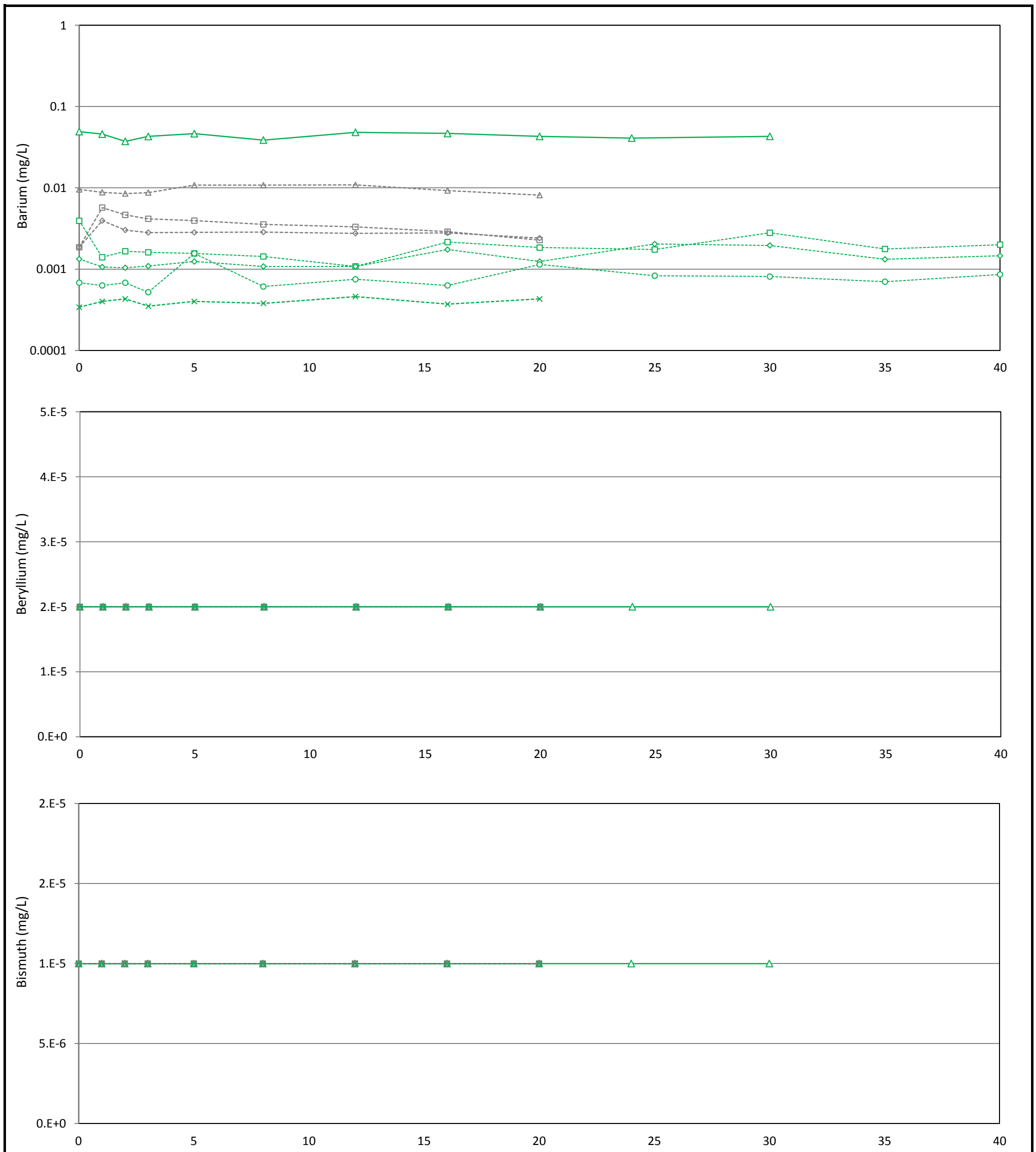
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

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**FIGURE** B.7-18

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Barium**
**Beryllium**
**Bismuth**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

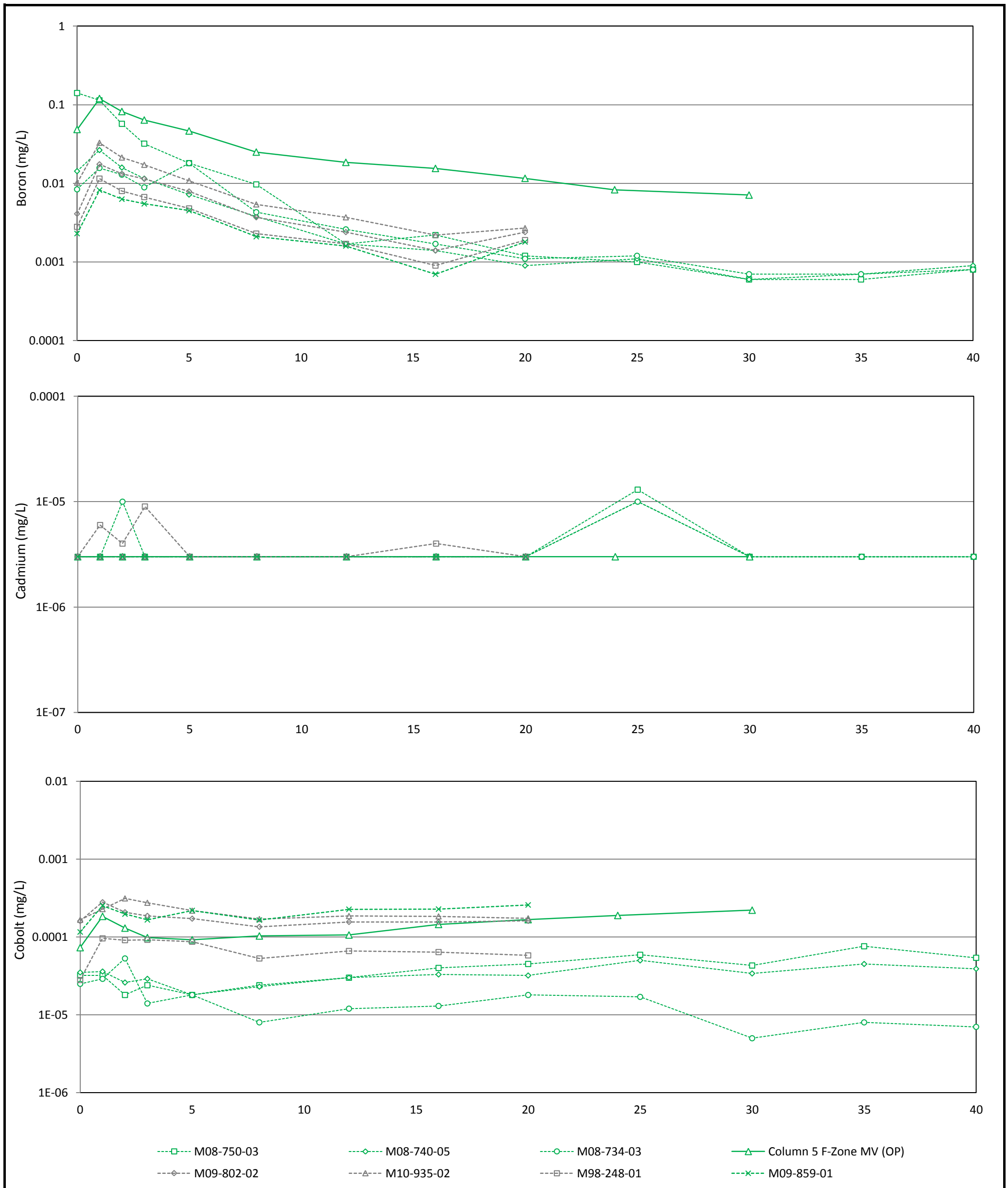
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-19

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Boron**
**Cadmium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

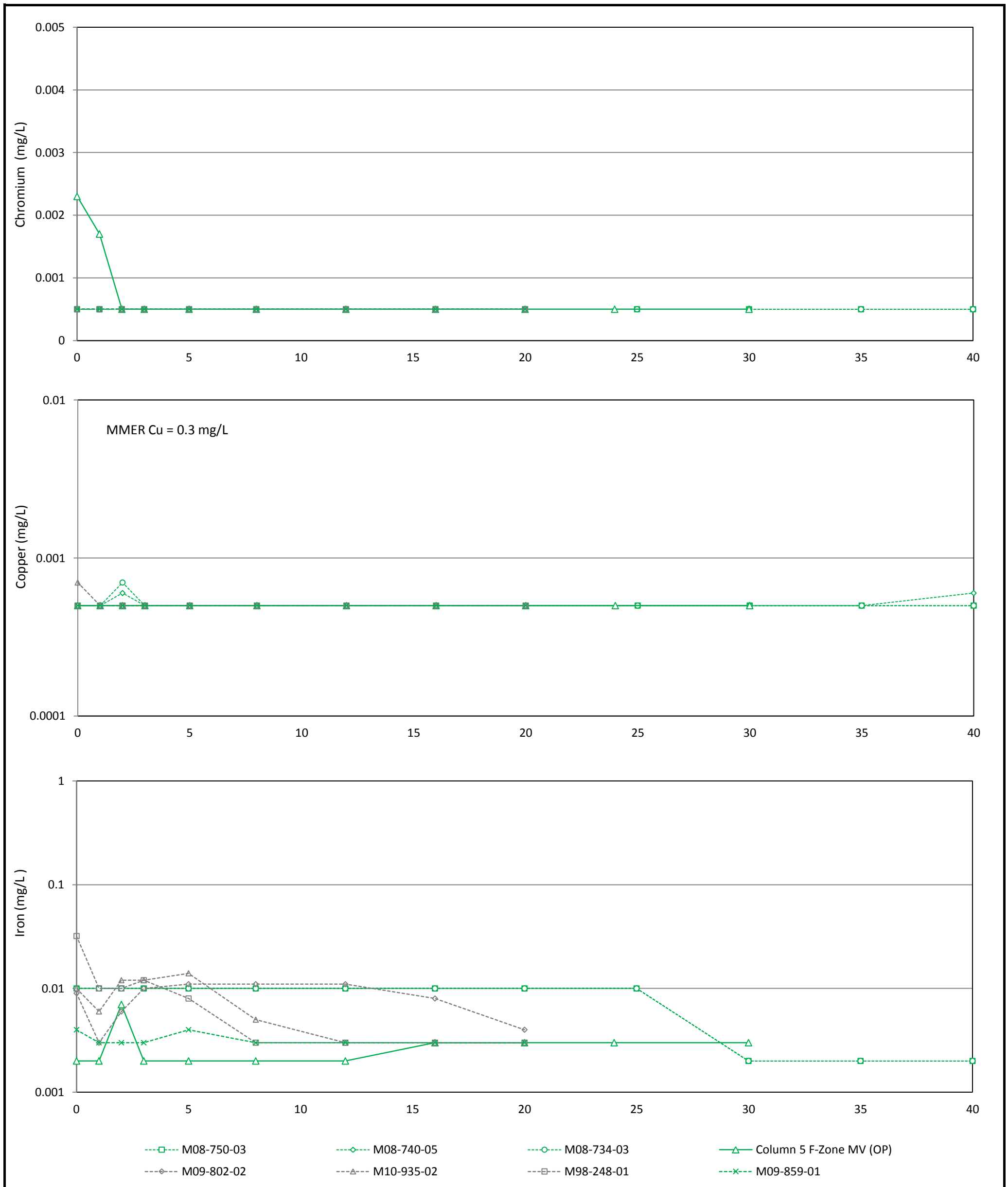
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

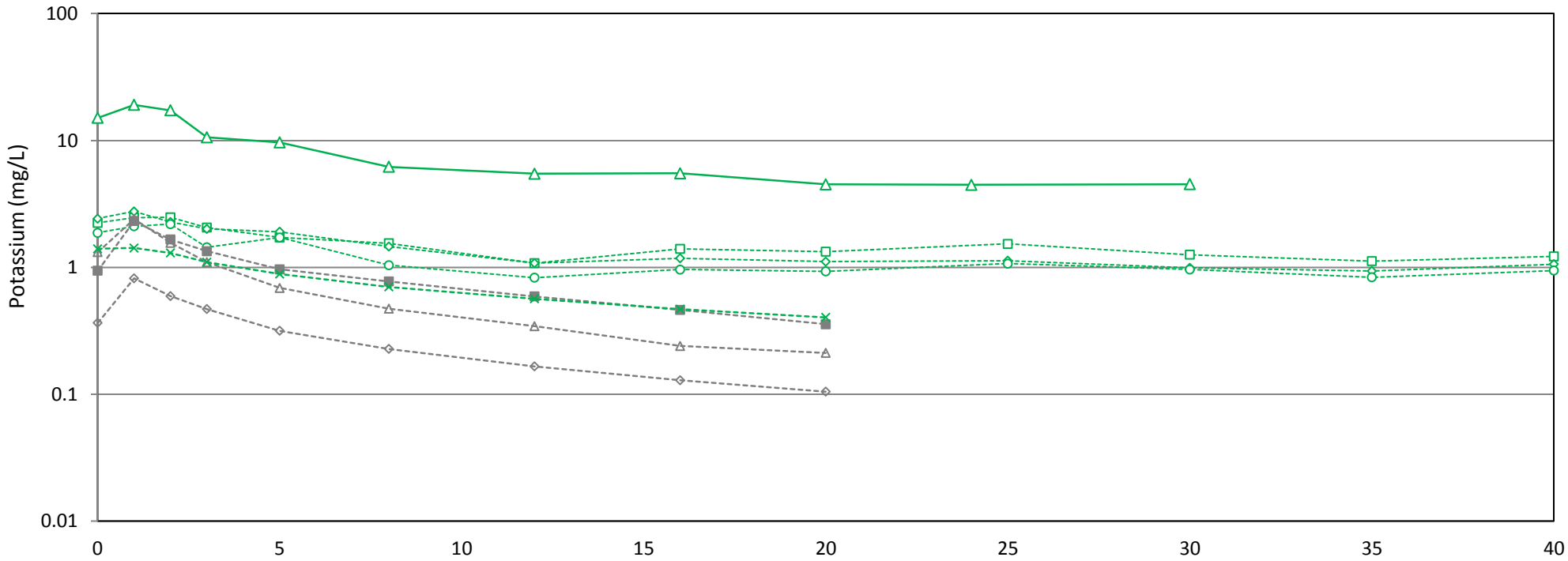
**FIGURE** B.7-20

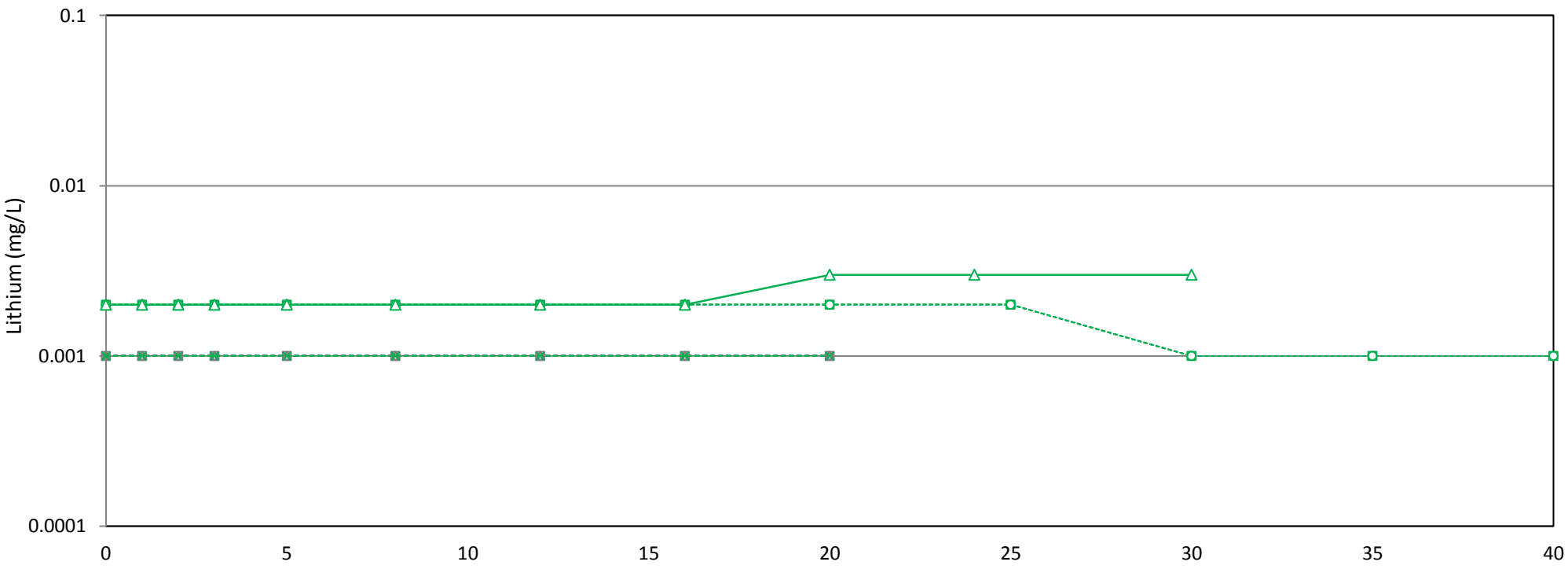
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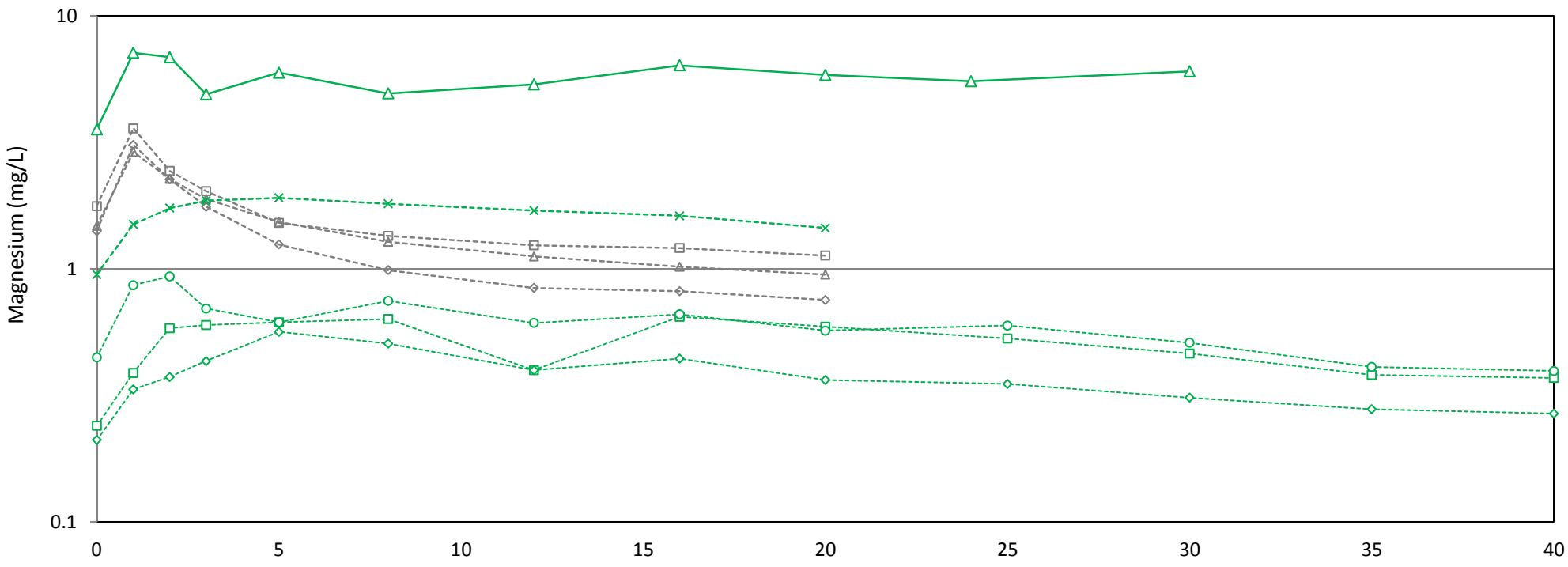



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Chromium<br>Copper<br>Iron**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>F-Zone Deposit<br>Meliadine Project**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-21 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Potassium**
**Lithium**
**Magnesium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

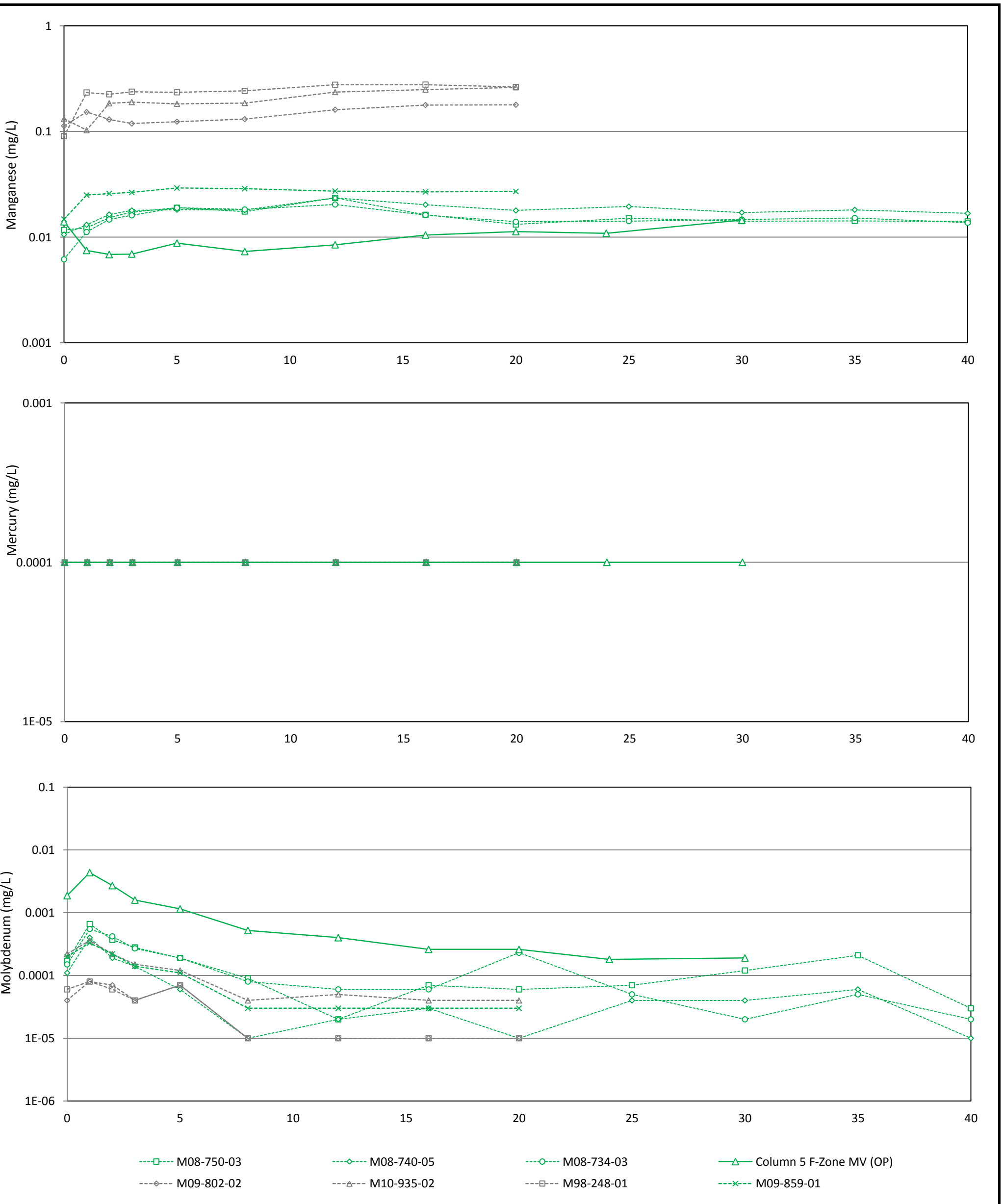
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

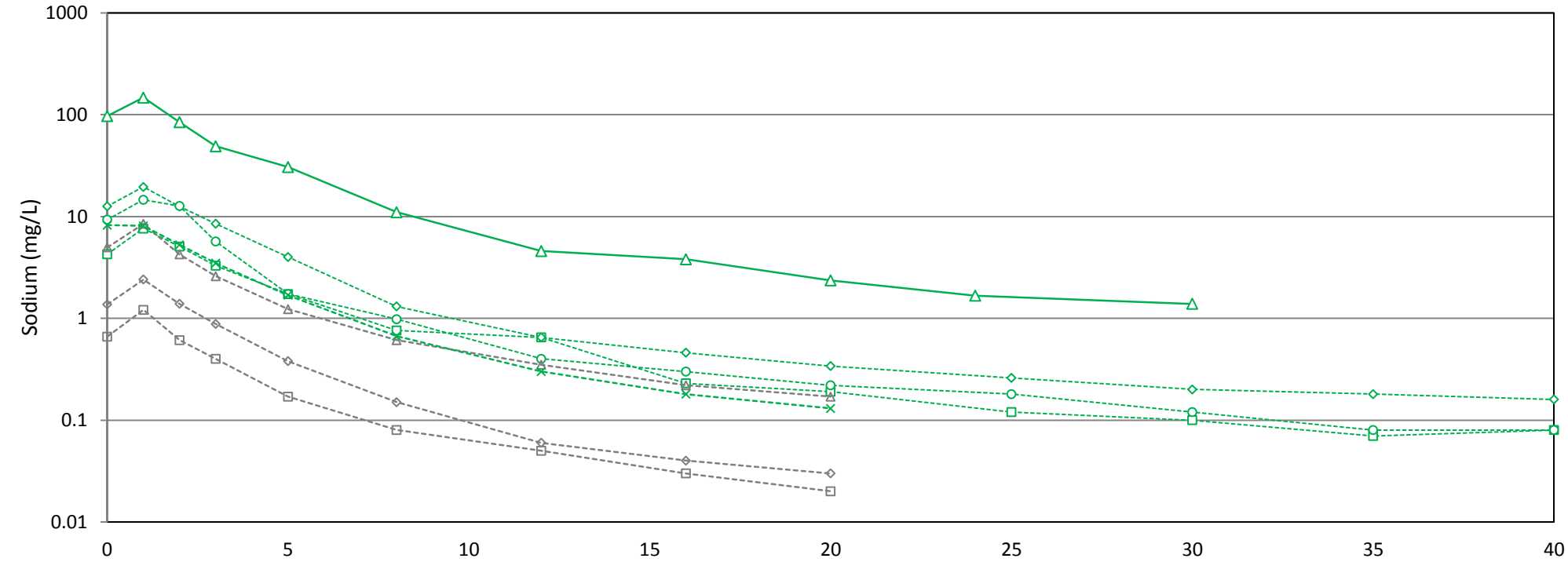
**FIGURE** B.7-22

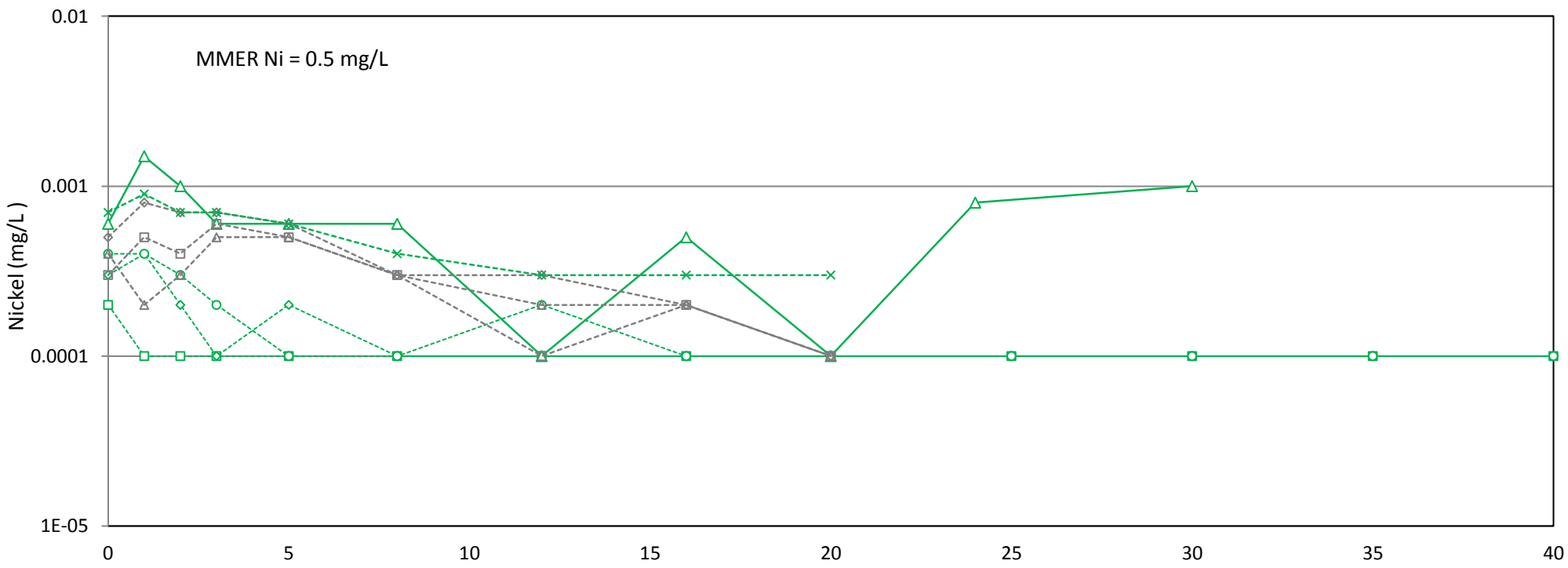
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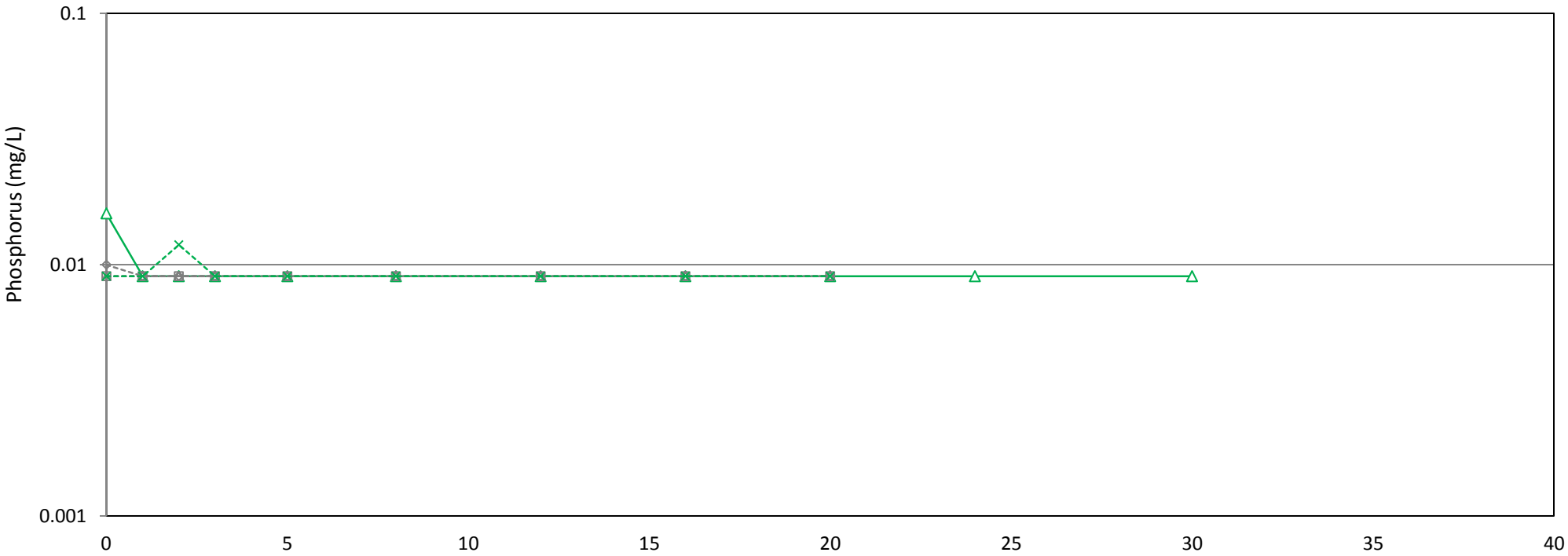



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Manganese<br>Mercury<br>Molybdenum**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>F-Zone Deposit<br>Meliadine Project**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-23 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Sodium**
**Nickel**
**Phosphorus**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

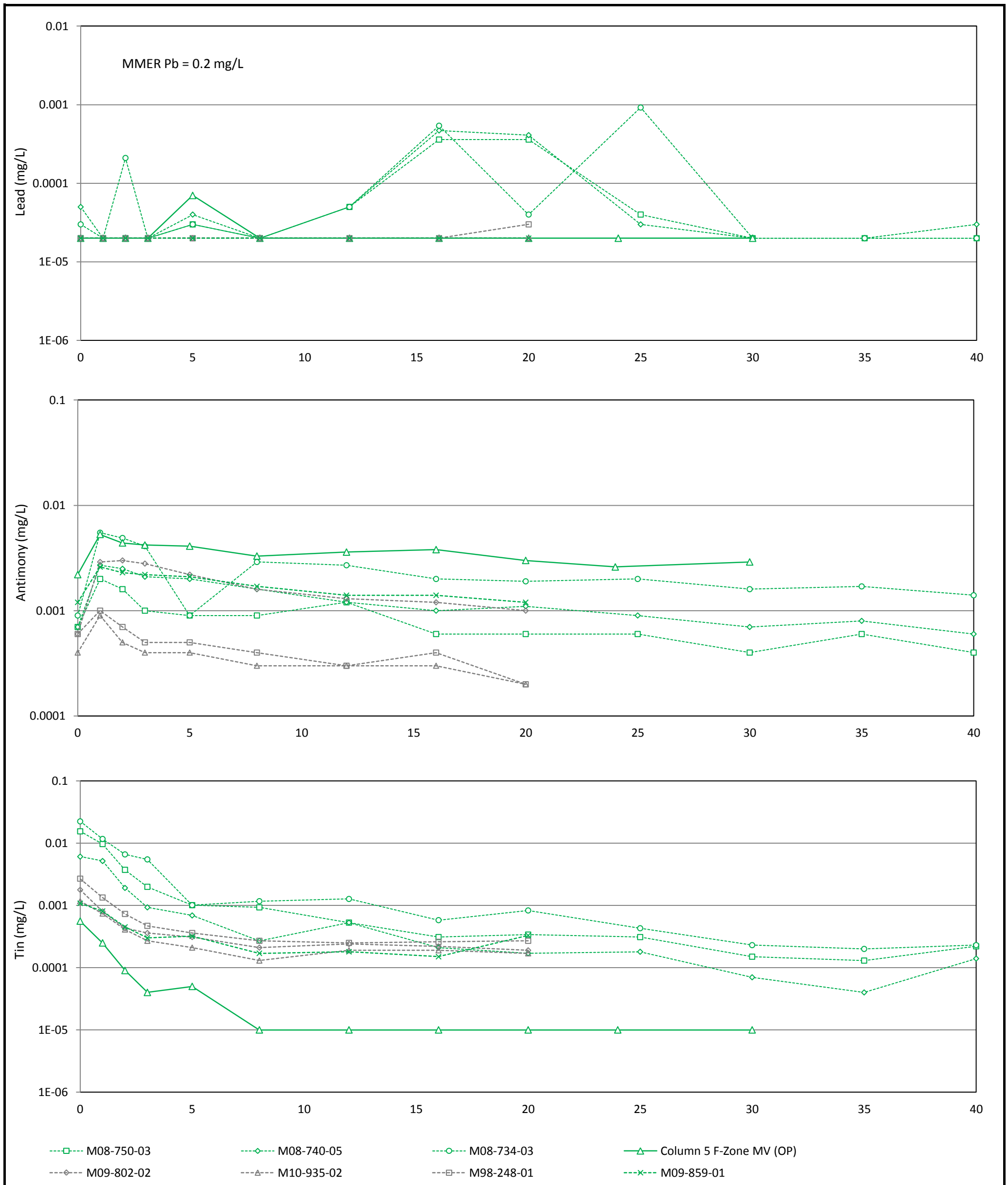
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-24

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic

Criteria:

MMER (2006)

**Lead**
**Antimony**
**Tin**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

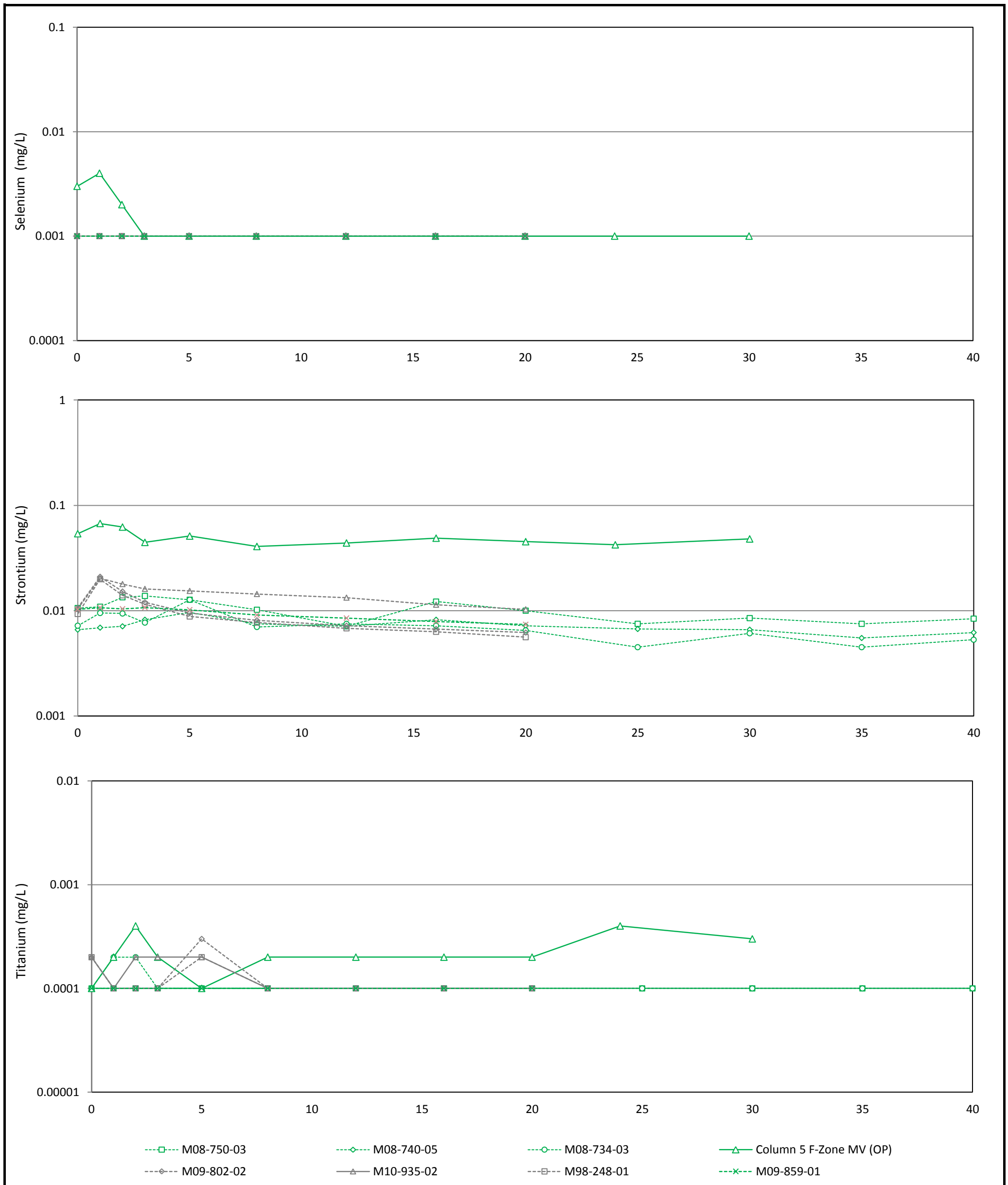
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-25

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

Iron Formation

Greywacke

Mafic Volcanic

Criteria:

MMER (2006)

**Selenium**
**Strontium**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

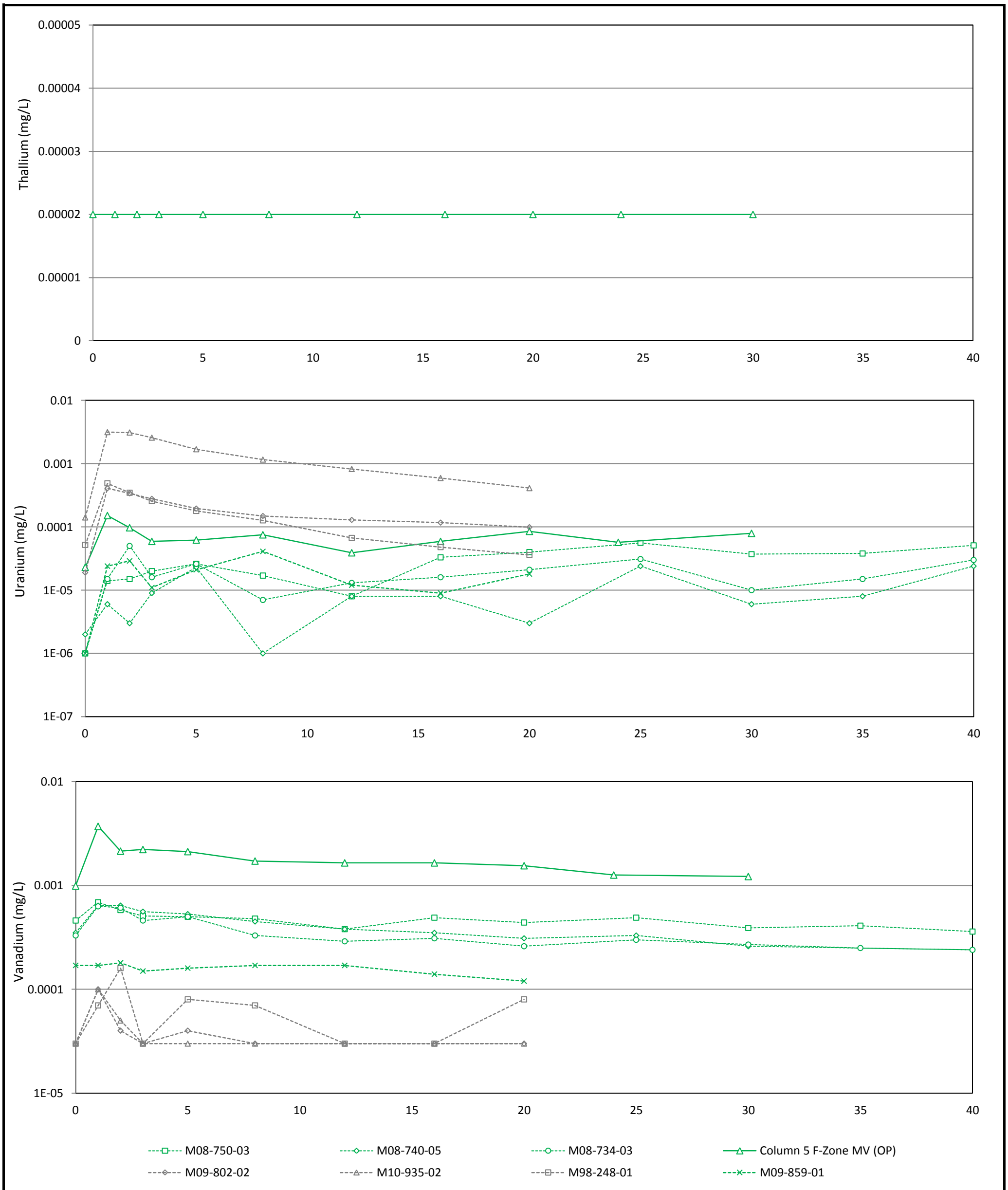
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

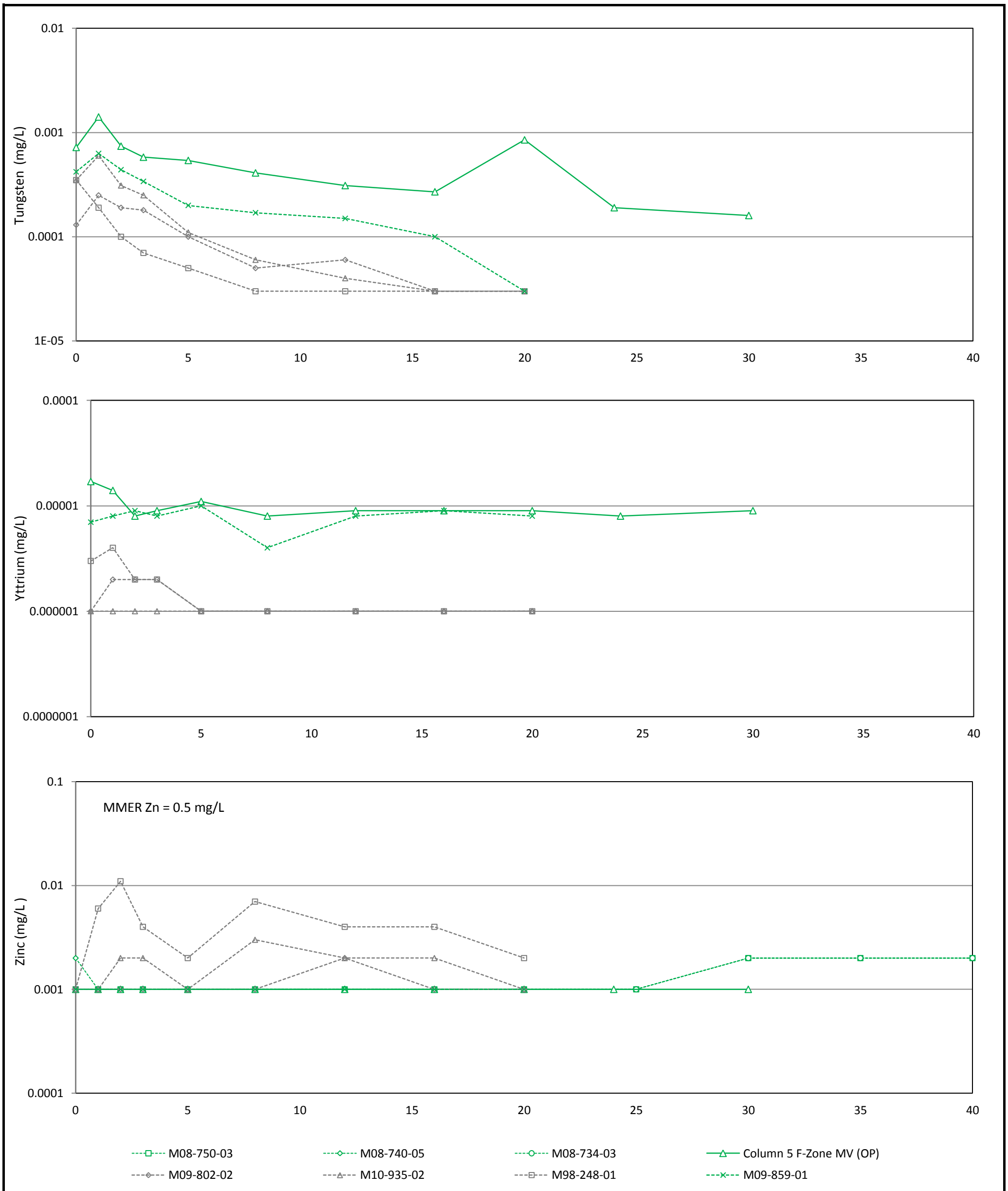
**FIGURE** B.7-26

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Criteria:<br>MMER (2006) | **Thallium<br>Uranium<br>Vanadium**<br>DRAWN MIB DATE Sep-12<br>CHECKED AJS JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | **Kinetic Test Data<br>F-Zone Deposit<br>Meliadine Project**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-27 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Values < MDL are plotted as MDL value

Rock Type:

Iron Formation

Greywacke

Mafic Volcanic

Criteria:

MMER (2006)

**Tungsten**
**Yttrium**
**Zinc**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

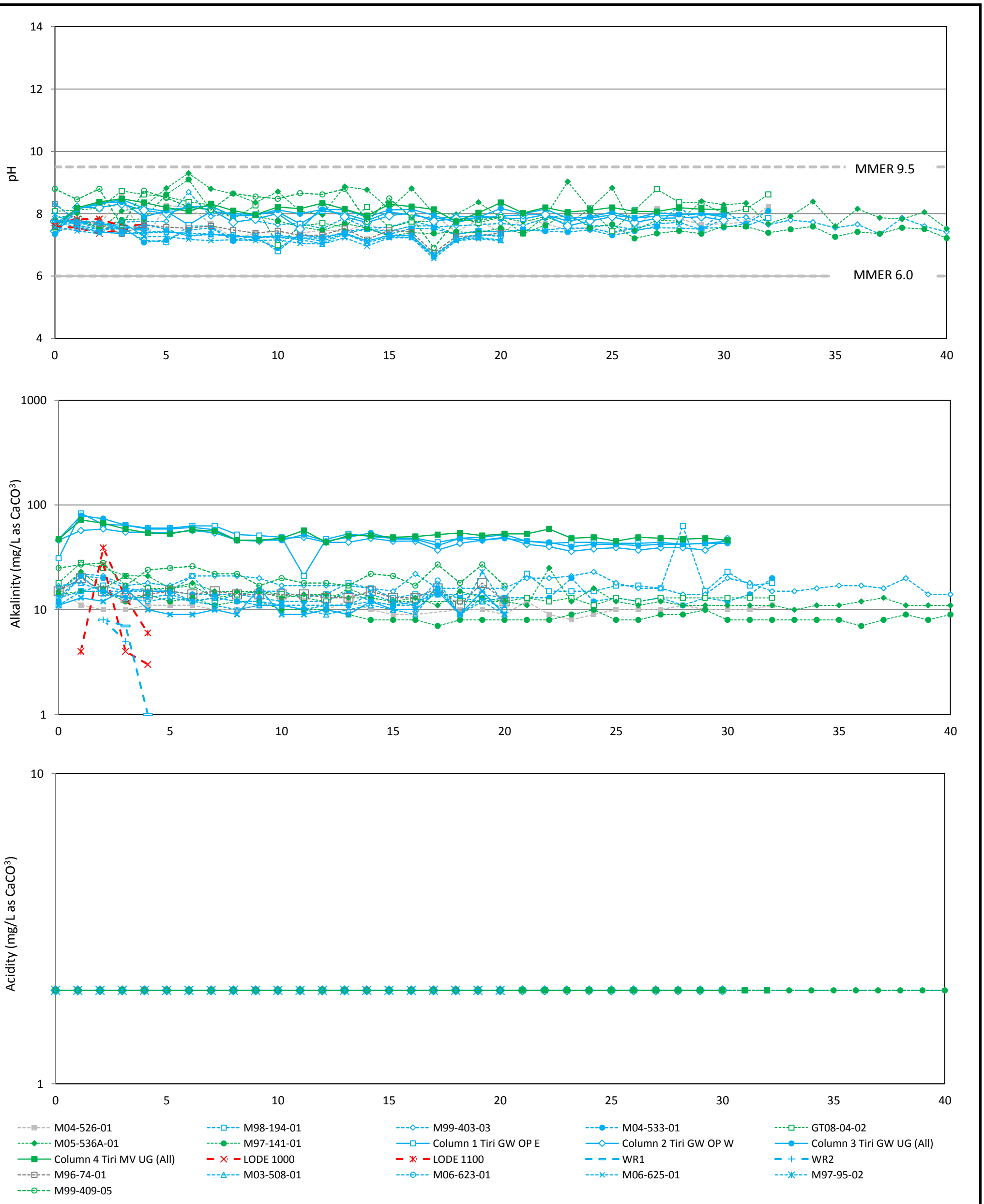
**Kinetic Test Data**
**F-Zone Deposit**
**Meliadine Project**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-28

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

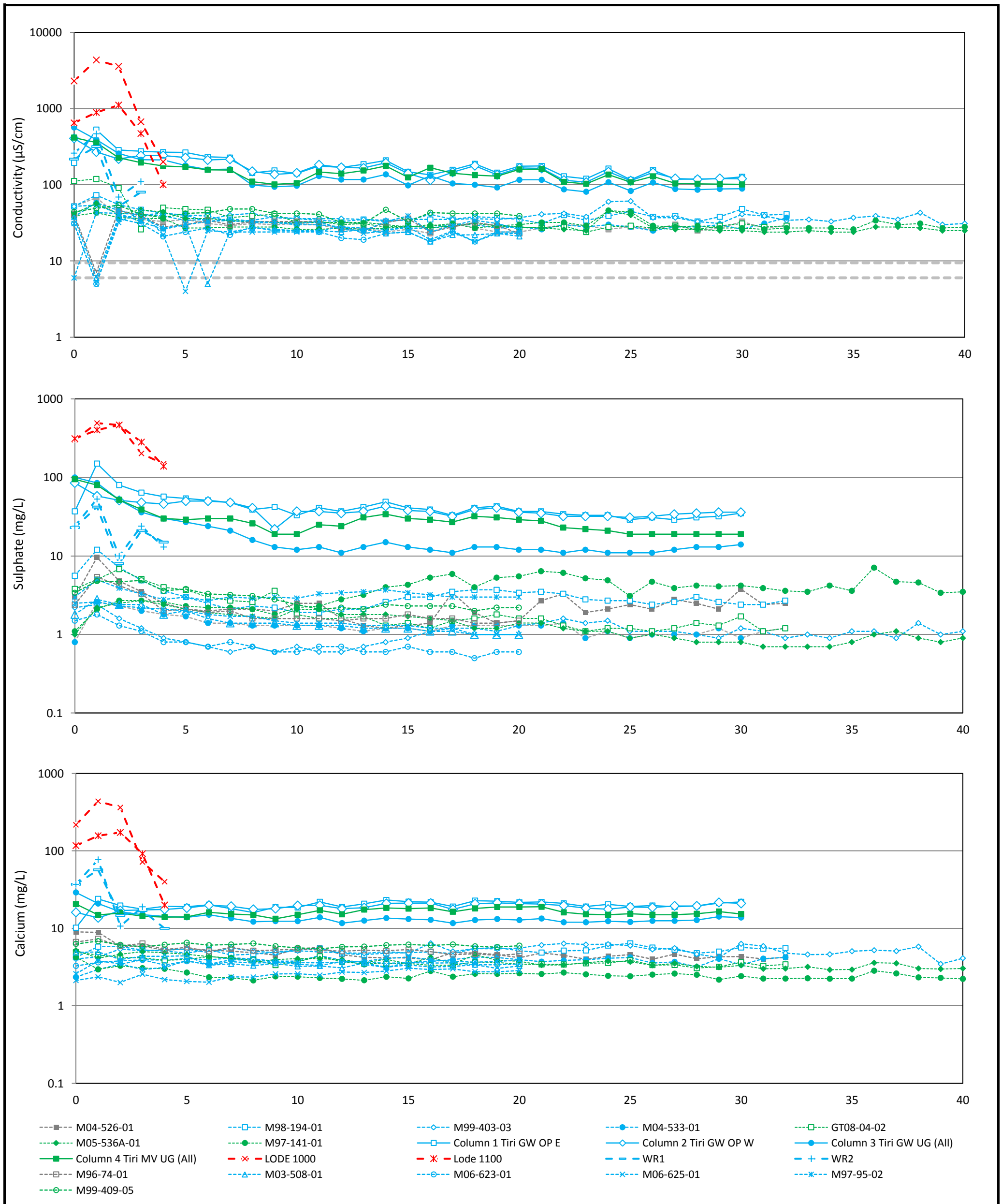
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-29

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Conductivity**
**Sulphate**
**Calcium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

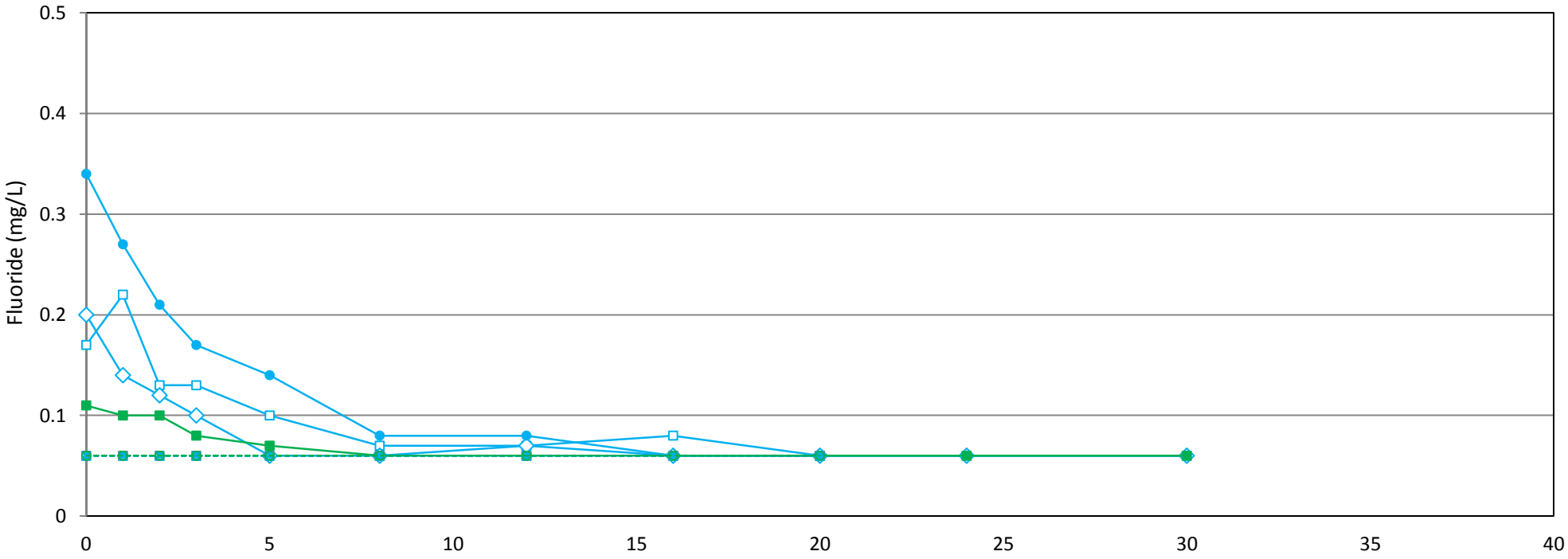
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

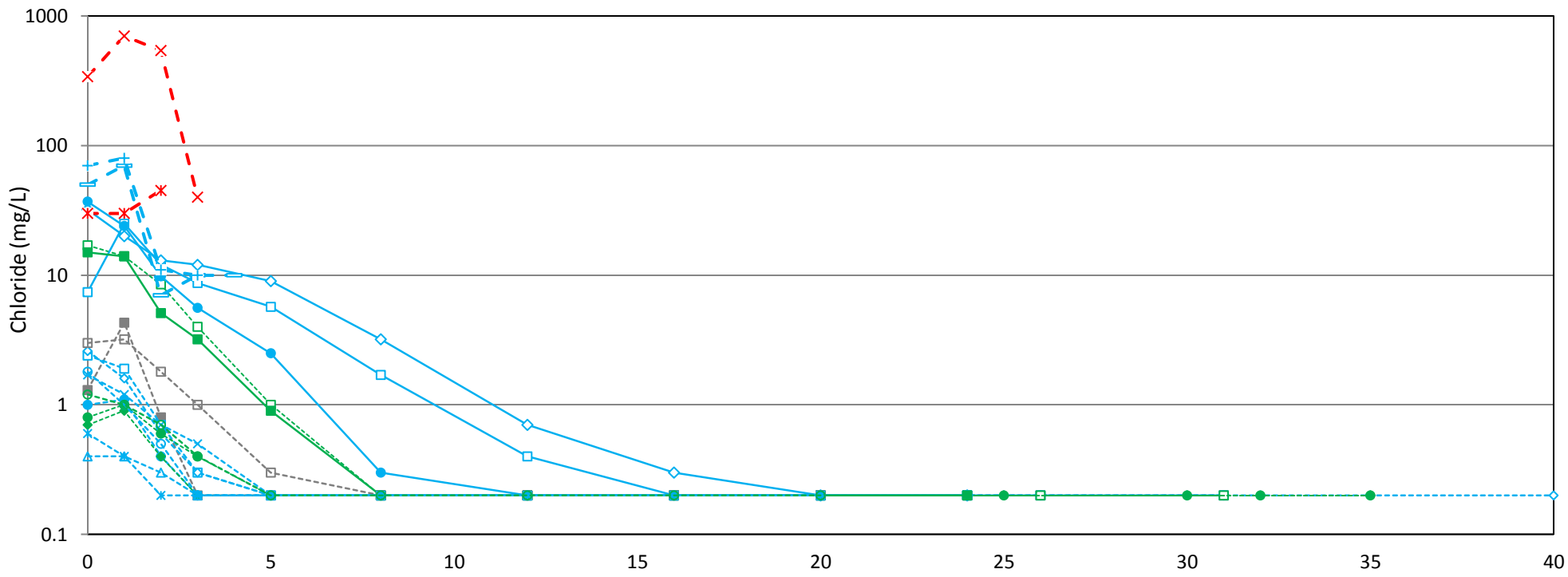
**Agnico-Eagle Mines Ltd.**

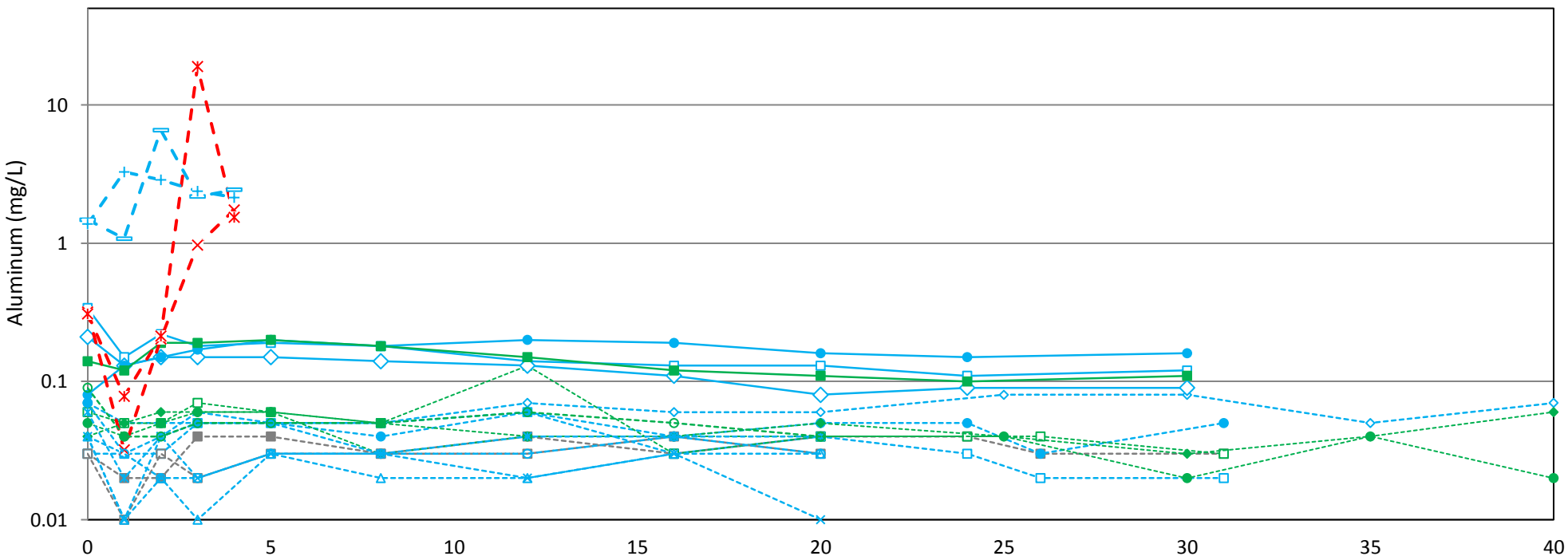
Golder Associates

**FIGURE** B.7-30

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Fluoride**
**Chloride**
**Aluminum**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

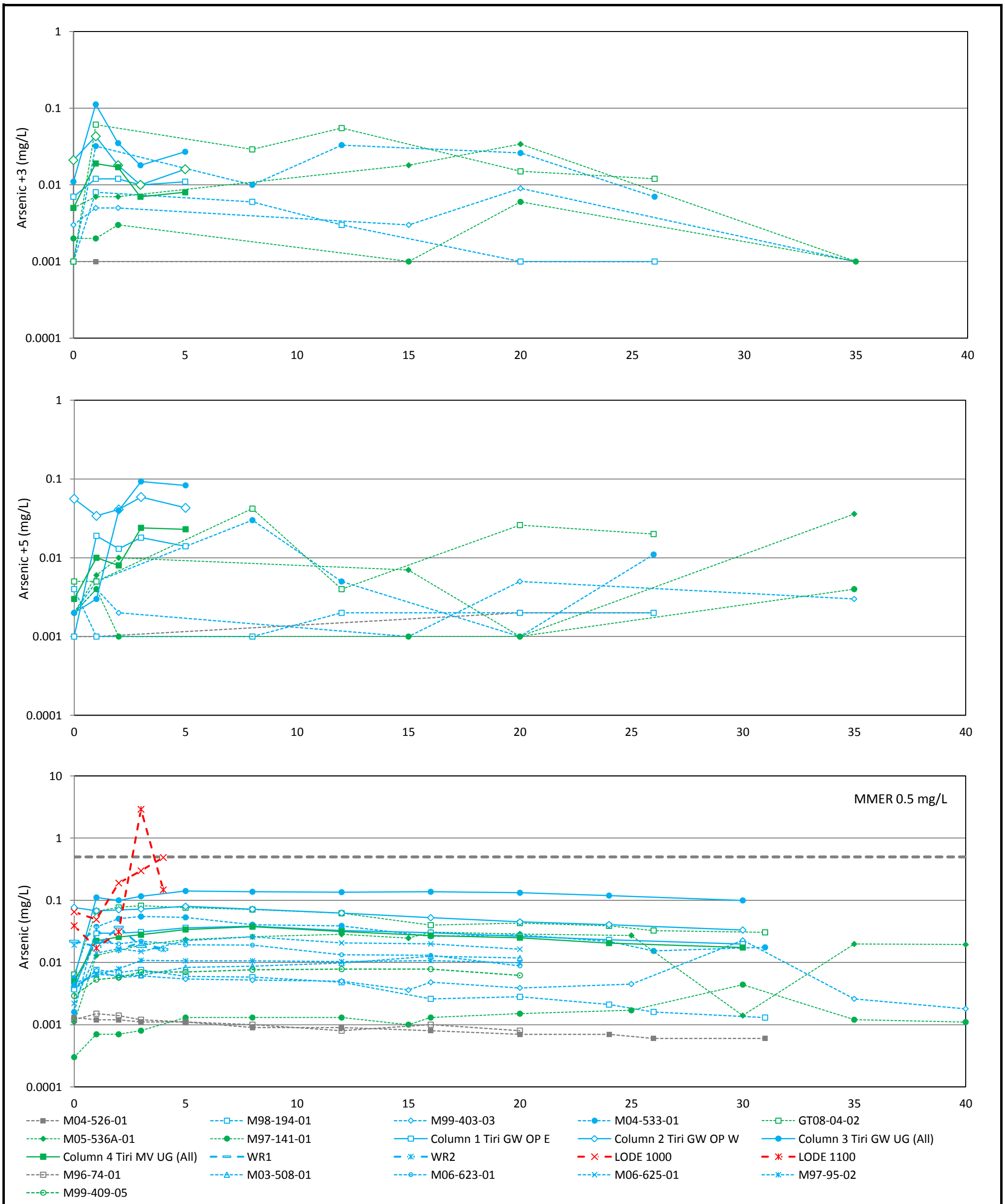
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-31

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Arsenic +3**
**Arsenic +5**
**Arsenic**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

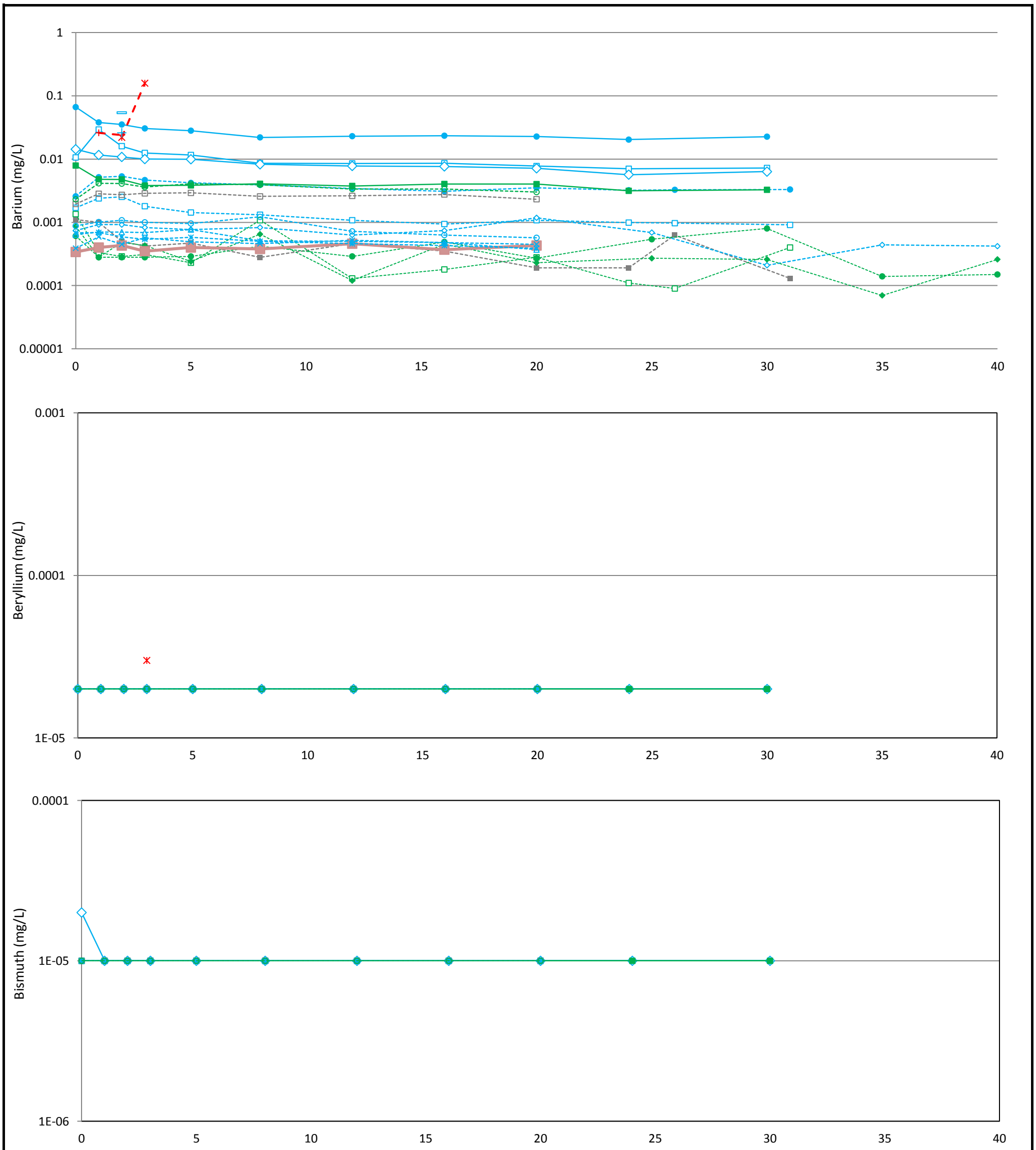
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-32

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Barium**
**Beryllium**
**Bismuth**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

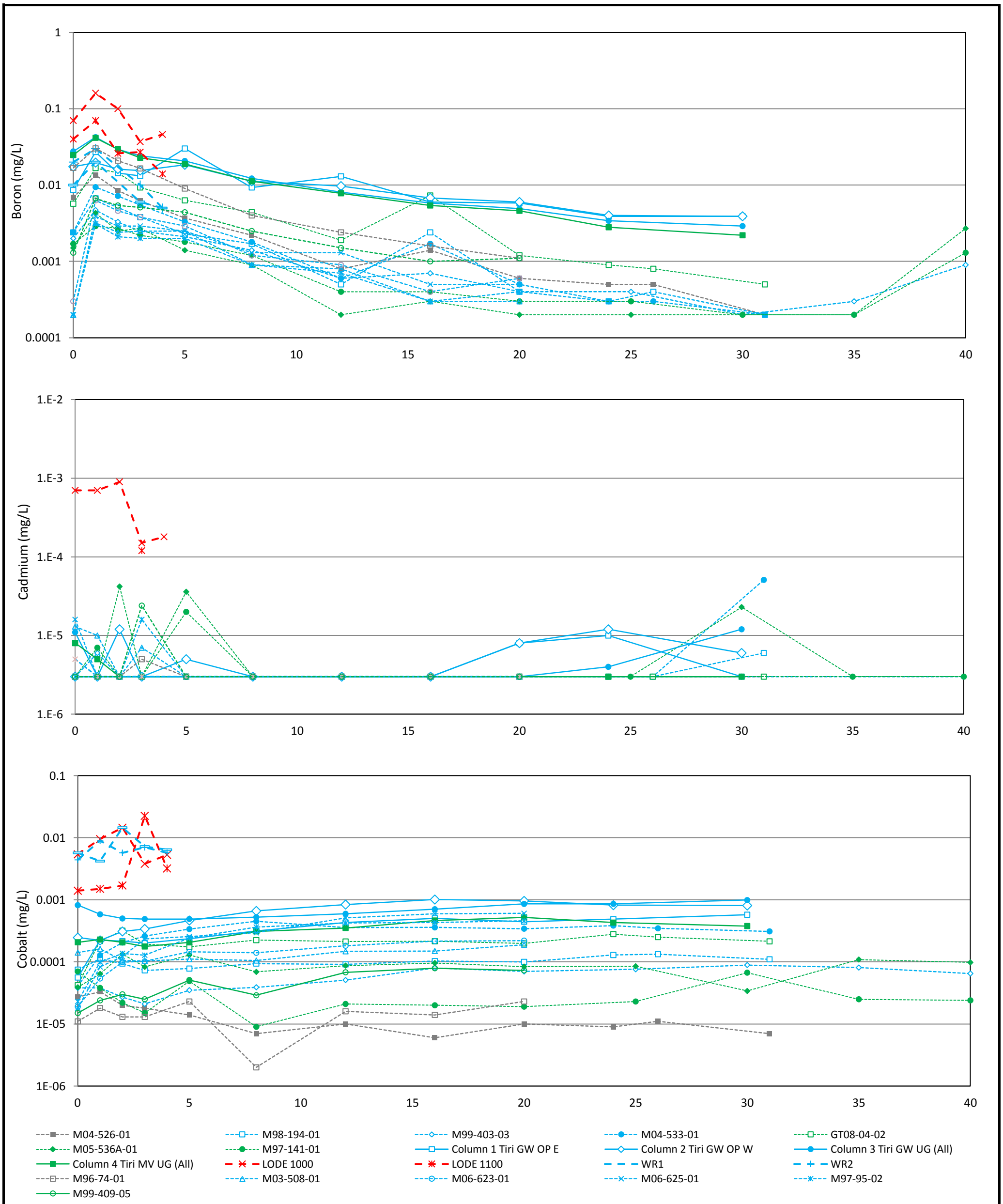
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-33

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Boron**
**Cadmium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

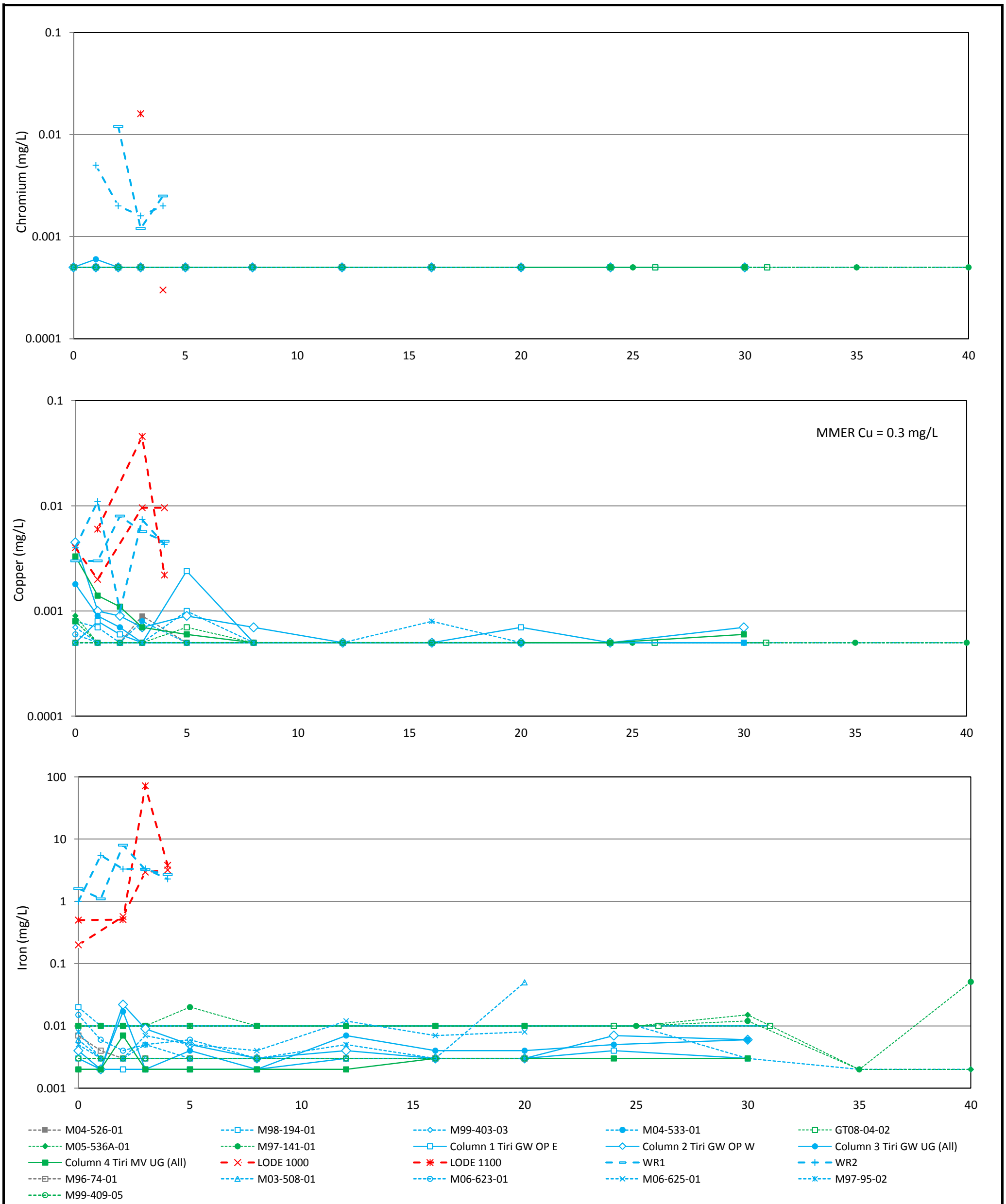
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

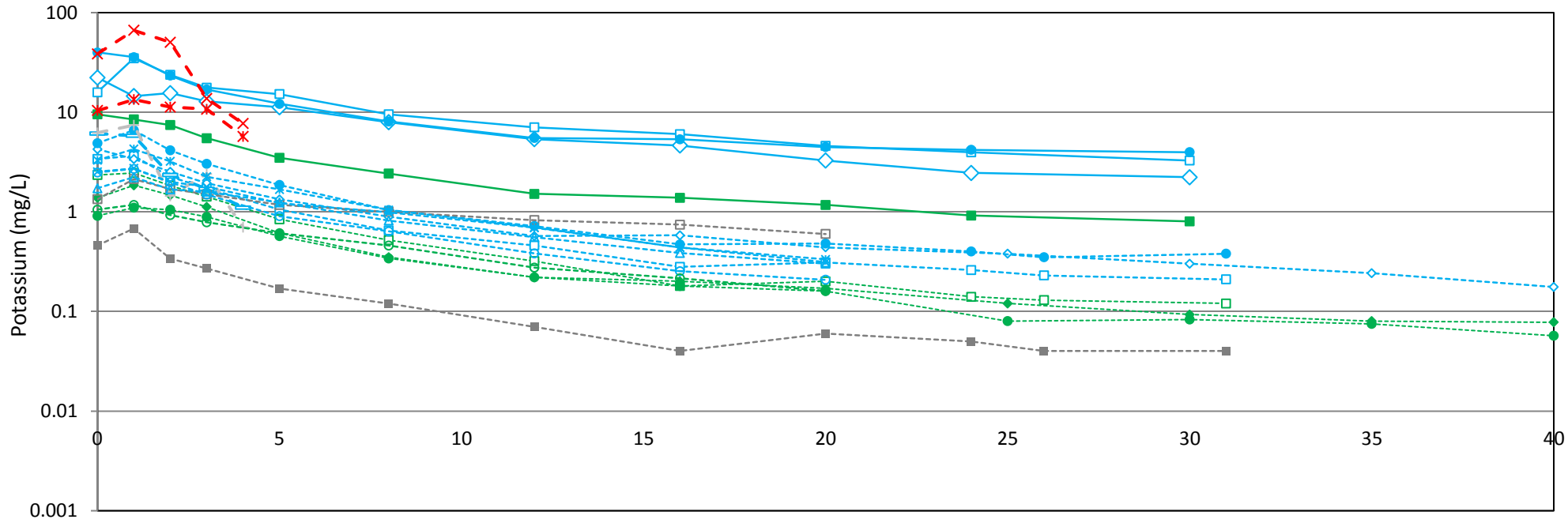
**FIGURE** B.7-34

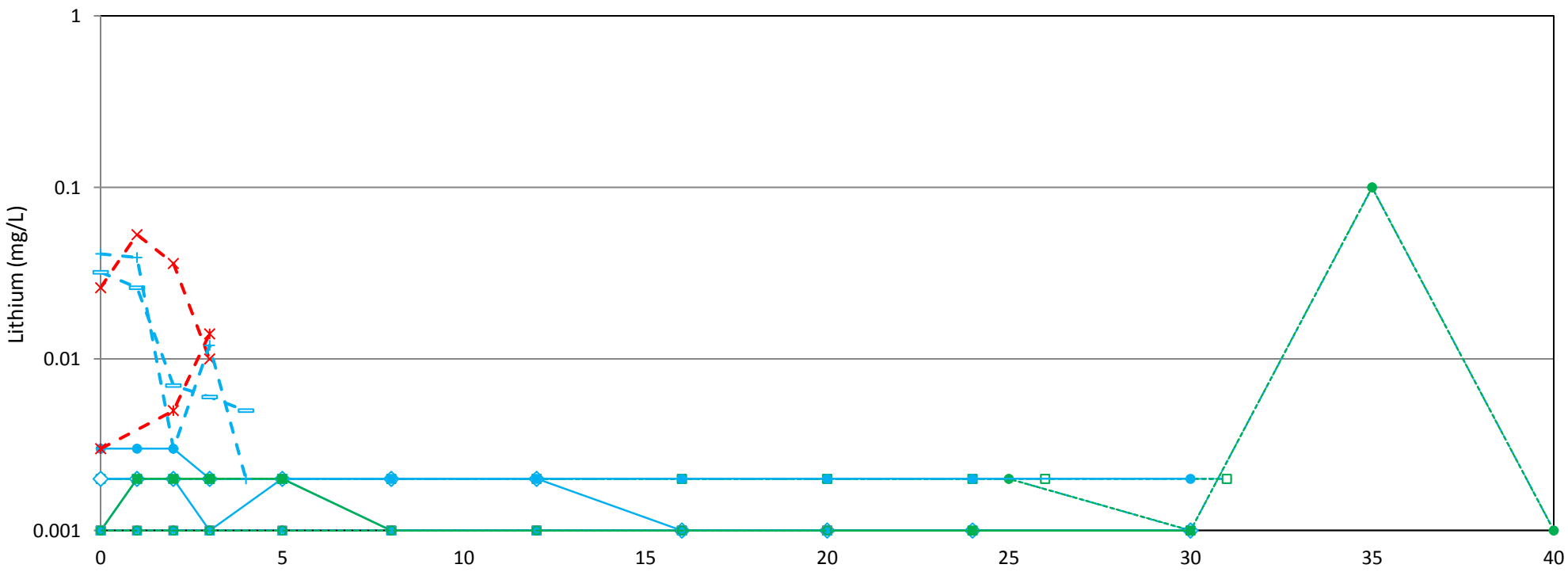
N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx

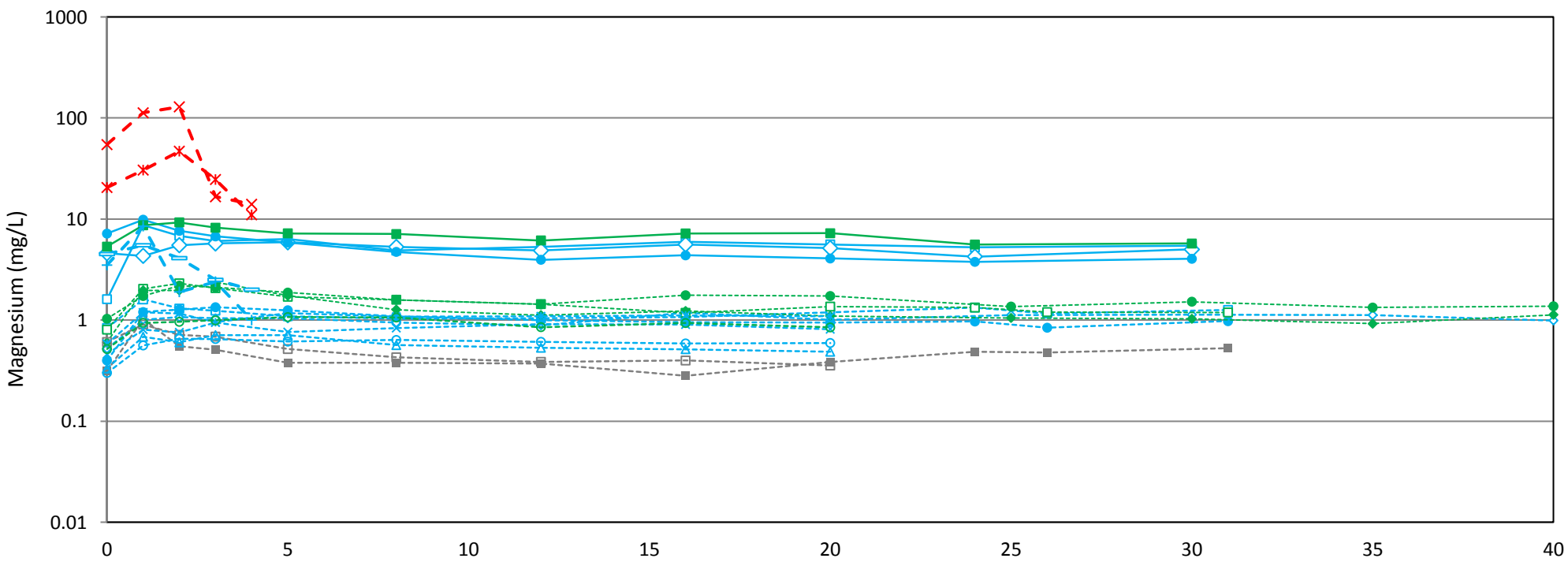



| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>**Criteria:**<br>MMER (2006) | **Chromium**<br>**Copper**<br>**Iron**<br>DRAWN MIB — DATE Sep-12<br>CHECKED AJS — JOB NO 11-1428-0011<br>REVIEWED VJB — PHASE/TASK 6300 | **Kinetic Test Data**<br>**Tiriganiaq Deposit**<br>**Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-35 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Potassium**
**Lithium**
**Magnesium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

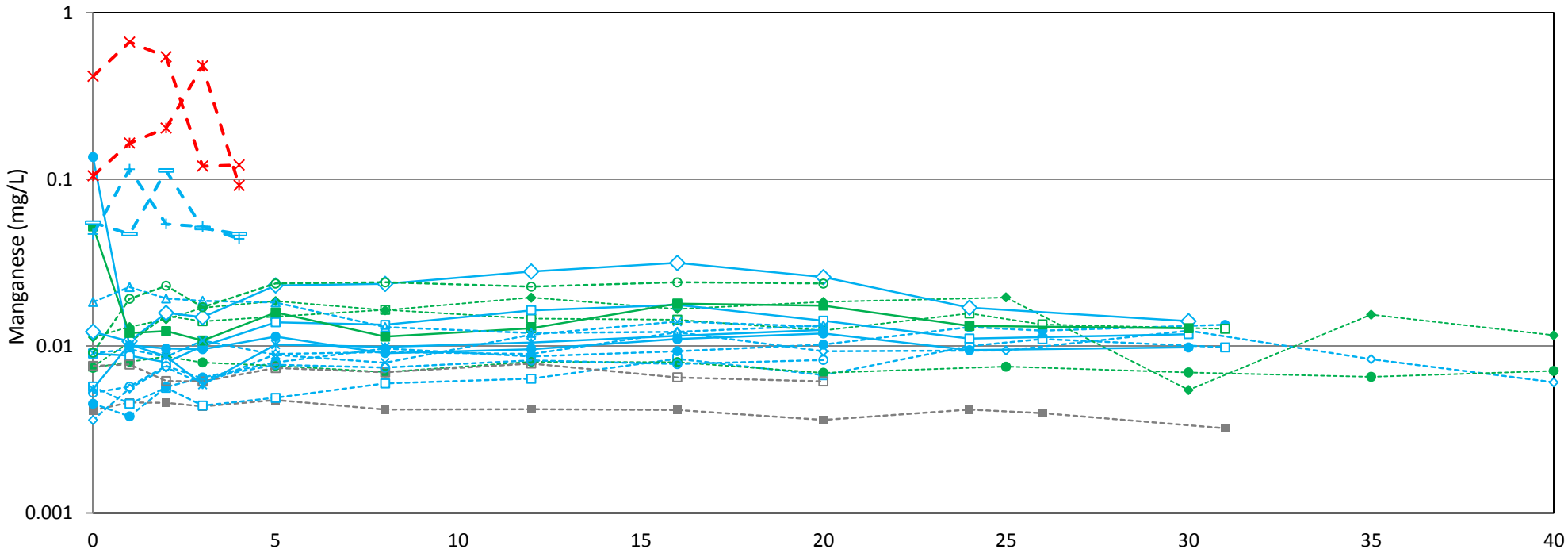
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

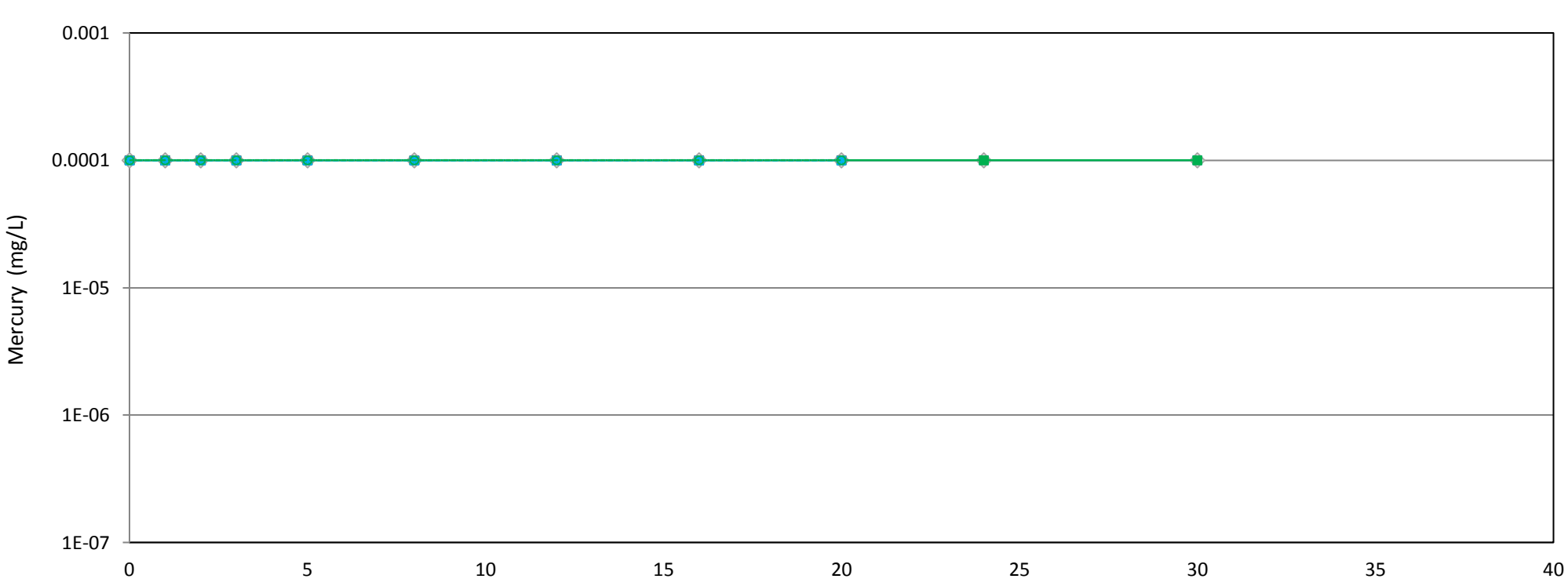
**Agnico-Eagle Mines Ltd.**

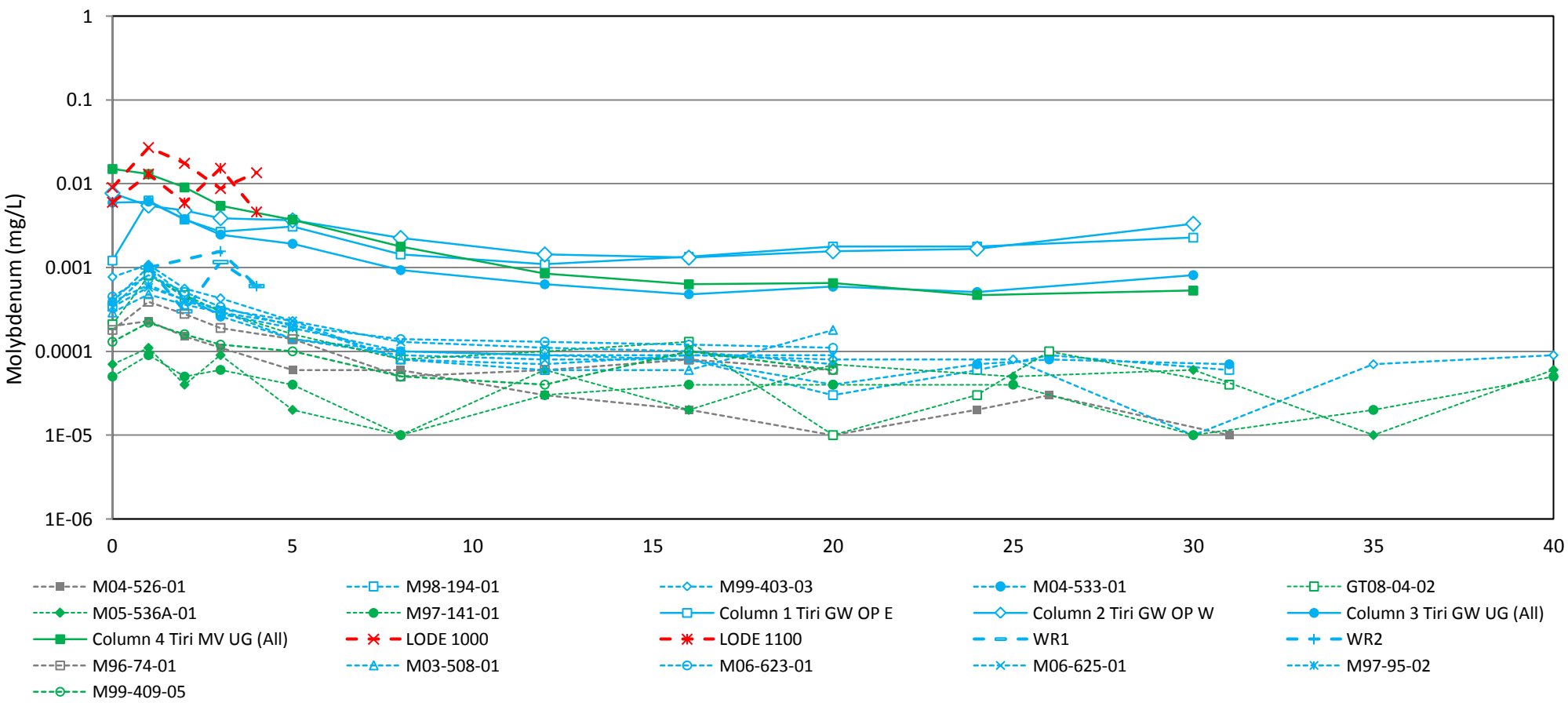
Golder Associates

**FIGURE** B.7-36

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:
- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:
- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:
MMER (2006)

**Manganese**
**Mercury**
**Molybdenum**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

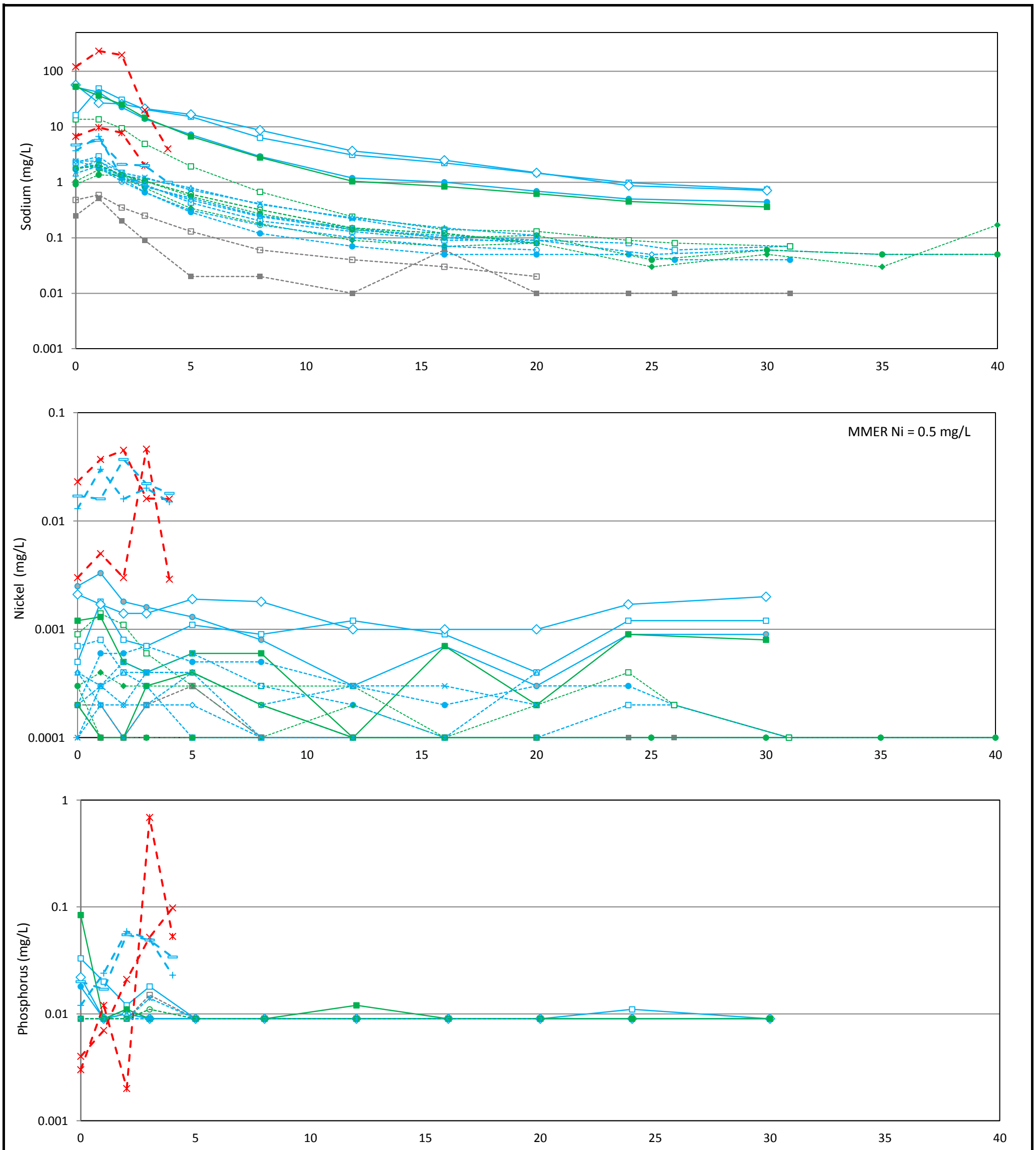
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-37

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Sodium**
**Nickel**
**Phosphorus**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

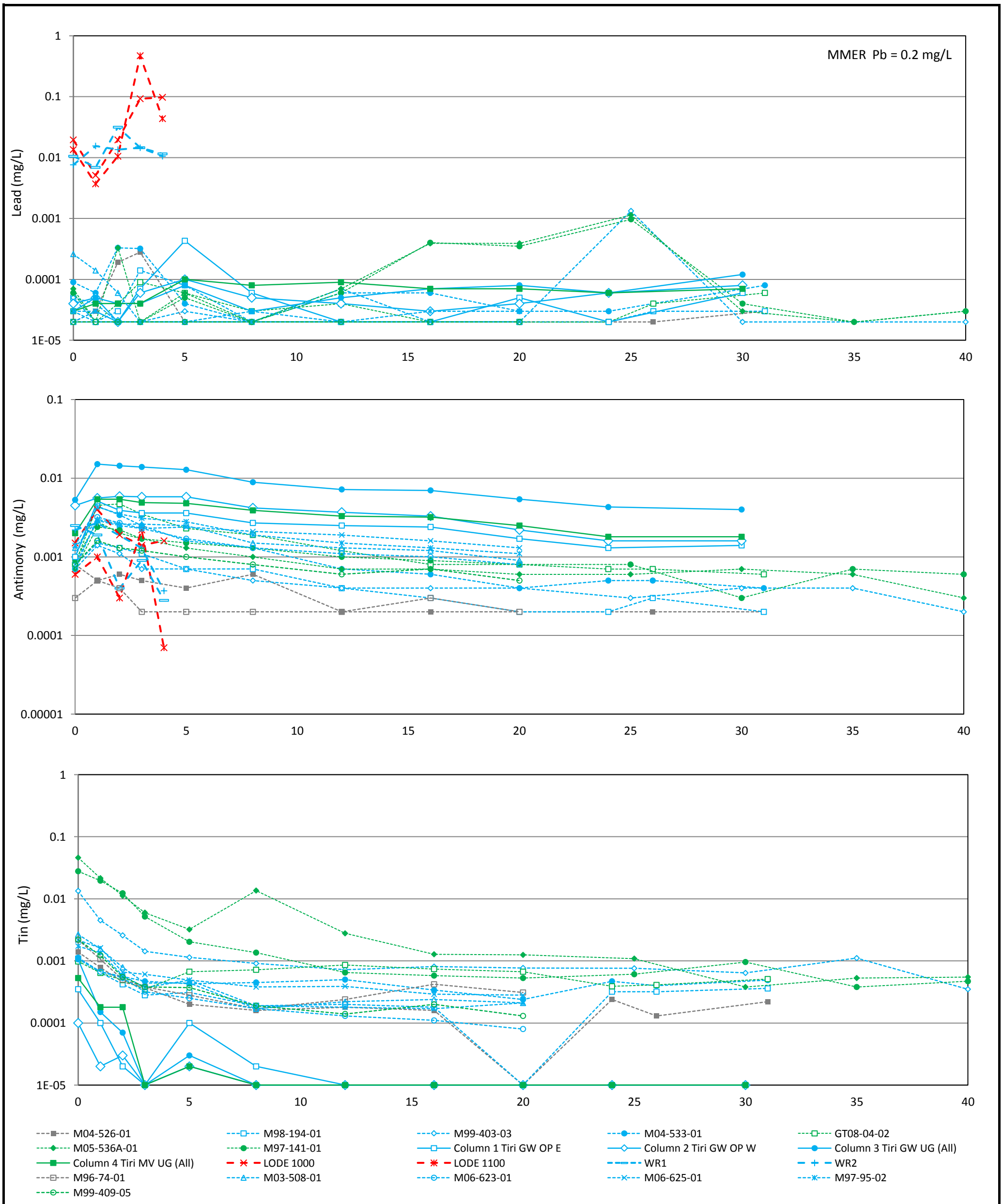
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

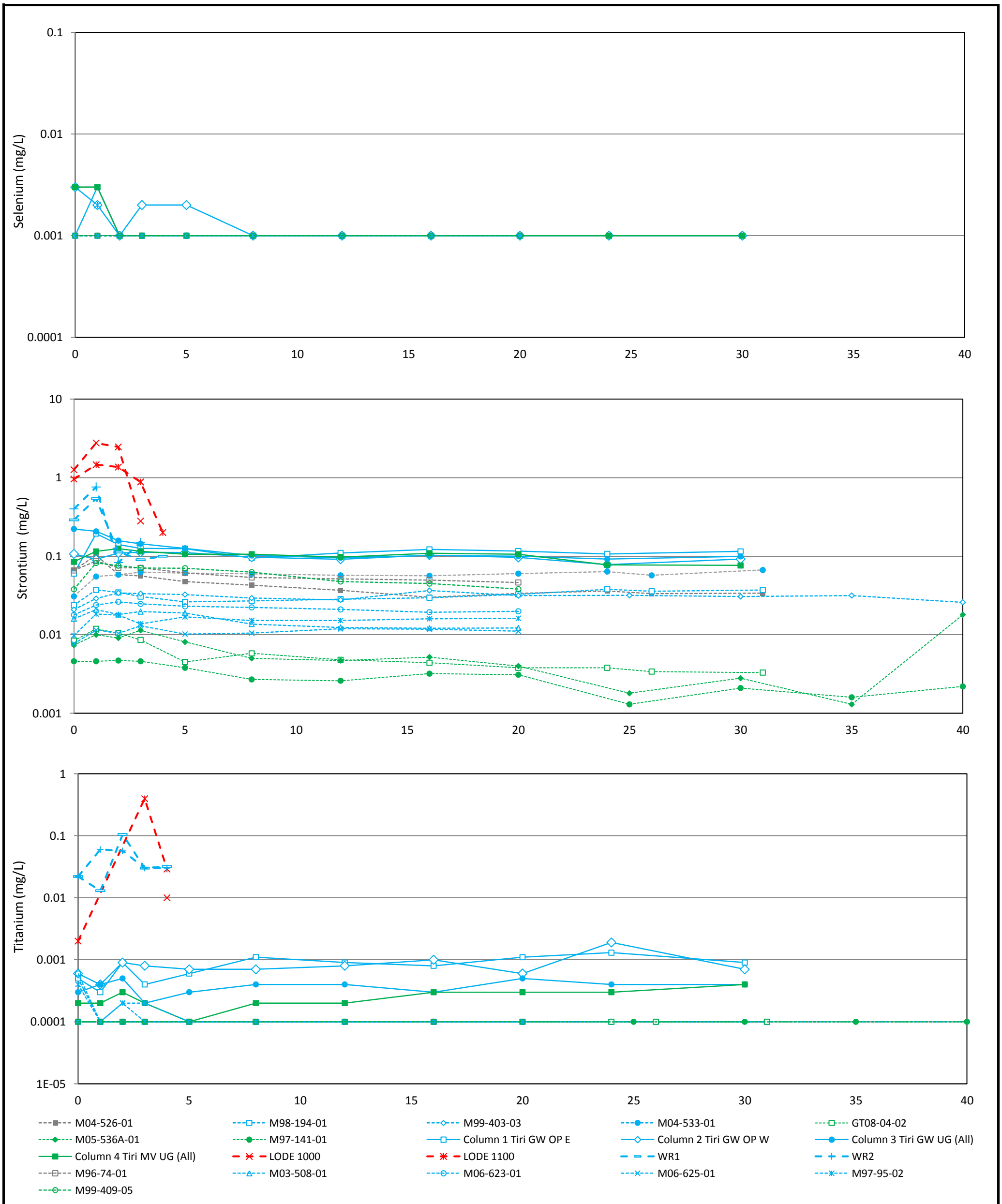
**FIGURE** B.7-38

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests<br>Field Cells<br>Values < MDL are plotted as MDL value | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ore<br>Criteria:<br>MMER (2006) | **Lead<br>Antimony<br>Tin**<br>DRAWN MIB · DATE Sep-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data<br>Tiriganiaq Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-39 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Selenium**
**Strontium**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

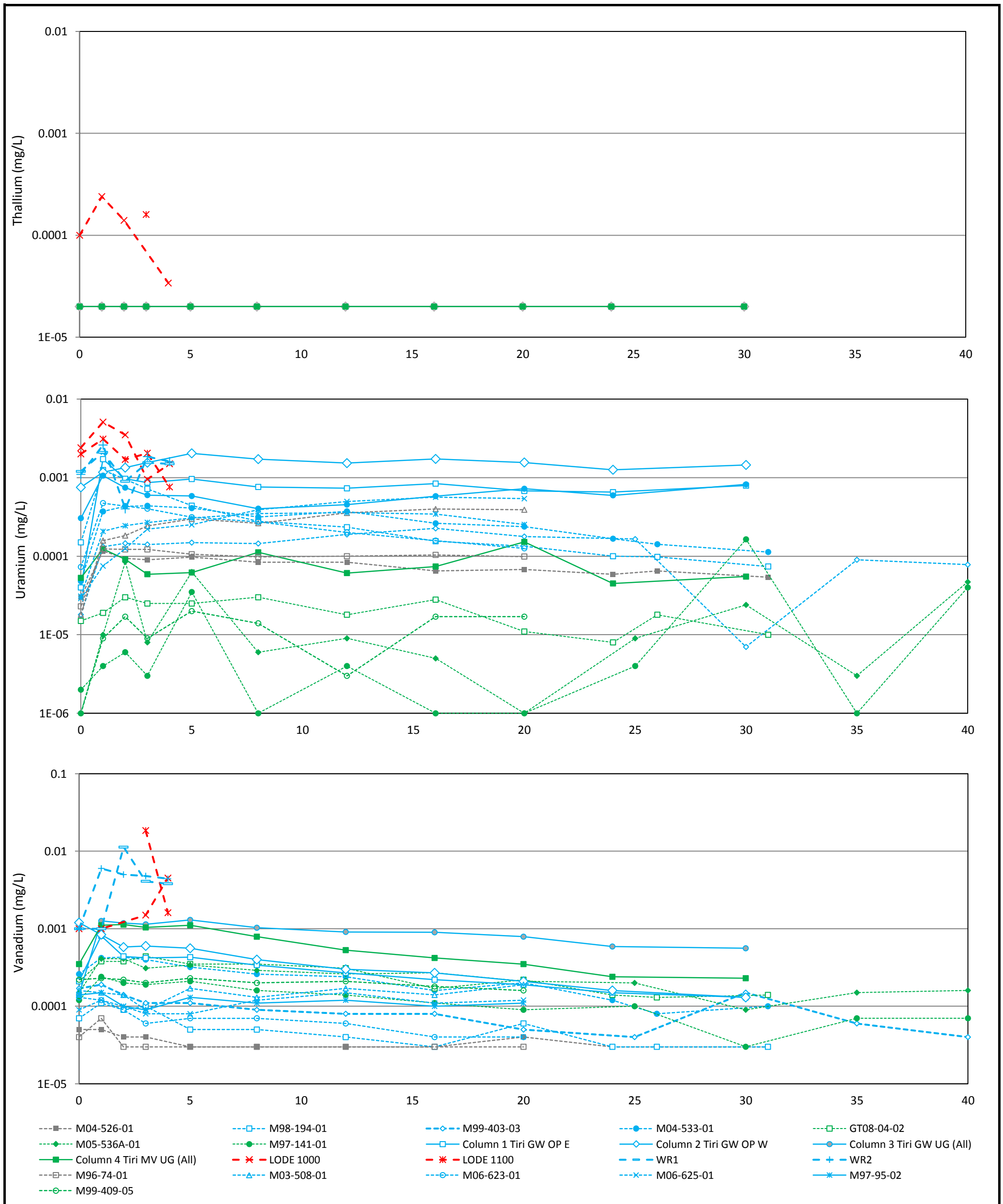
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-40

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests
- Field Cells

Values < MDL are plotted as MDL value

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ore

Criteria:

MMER (2006)

**Thallium**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | MIB | DATE | Sep-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

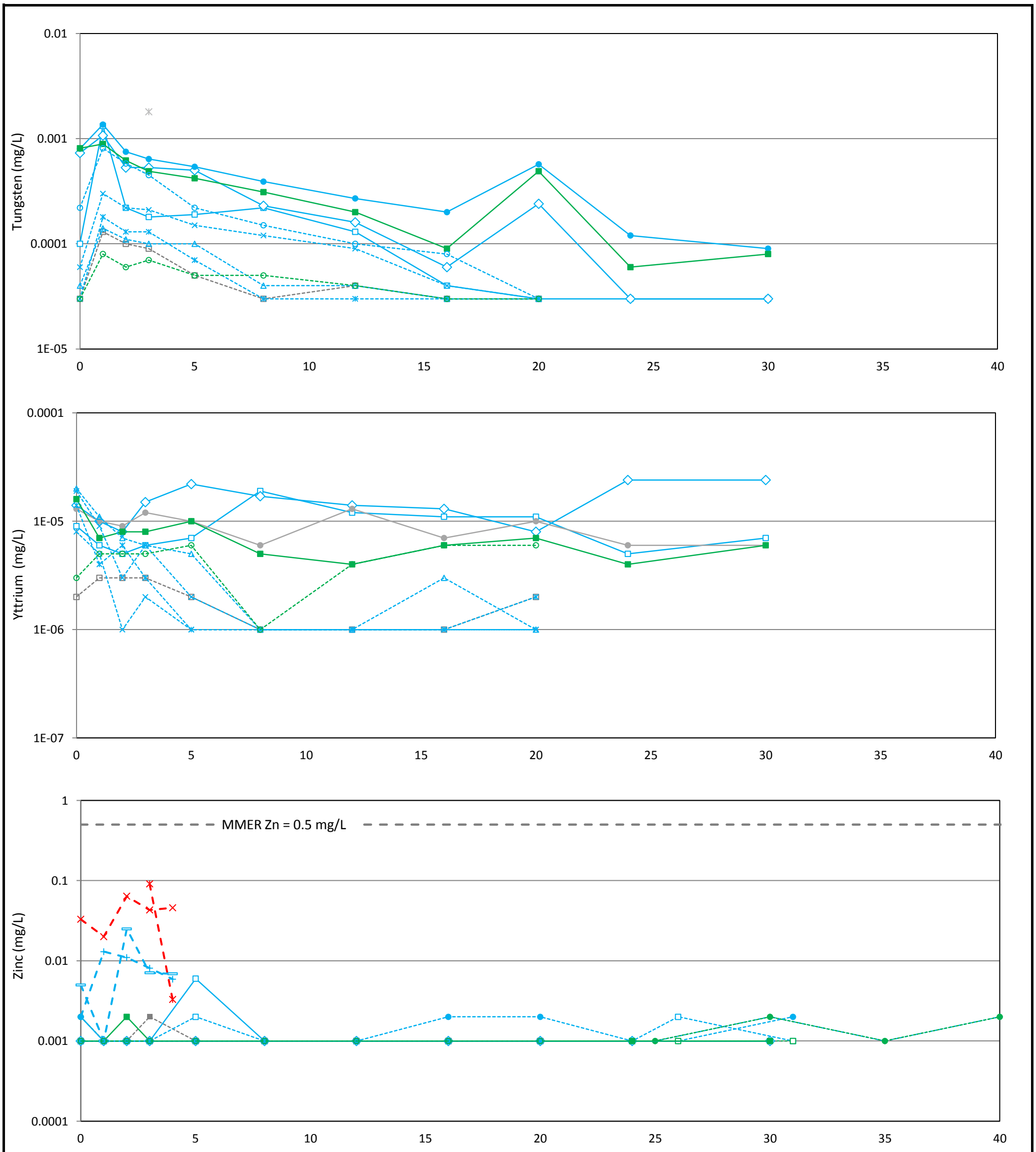
**Kinetic Test Data**
**Tiriganiaq Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

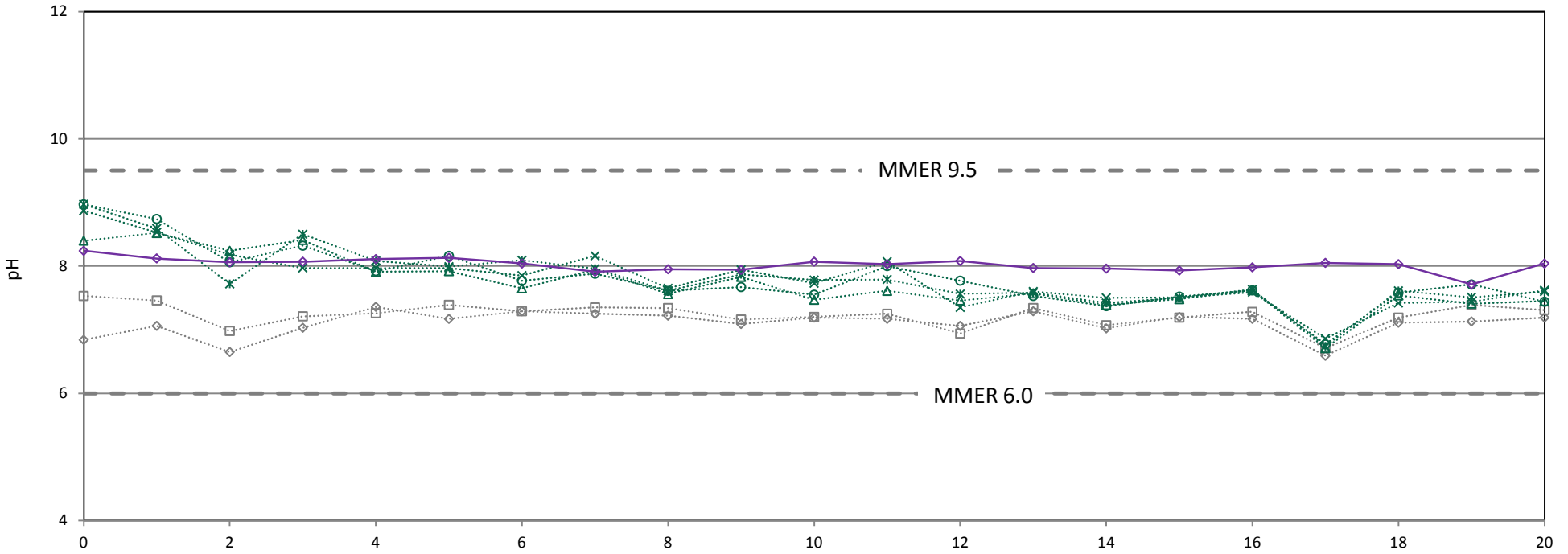
**FIGURE** B.7-41

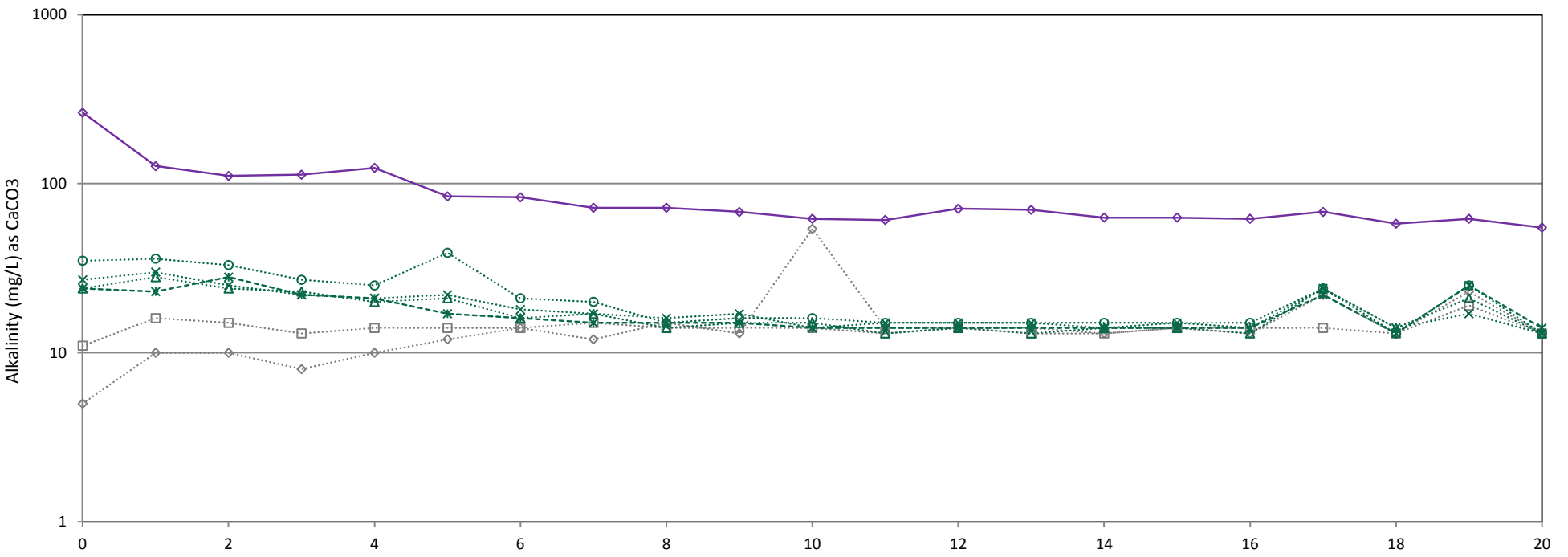
N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx

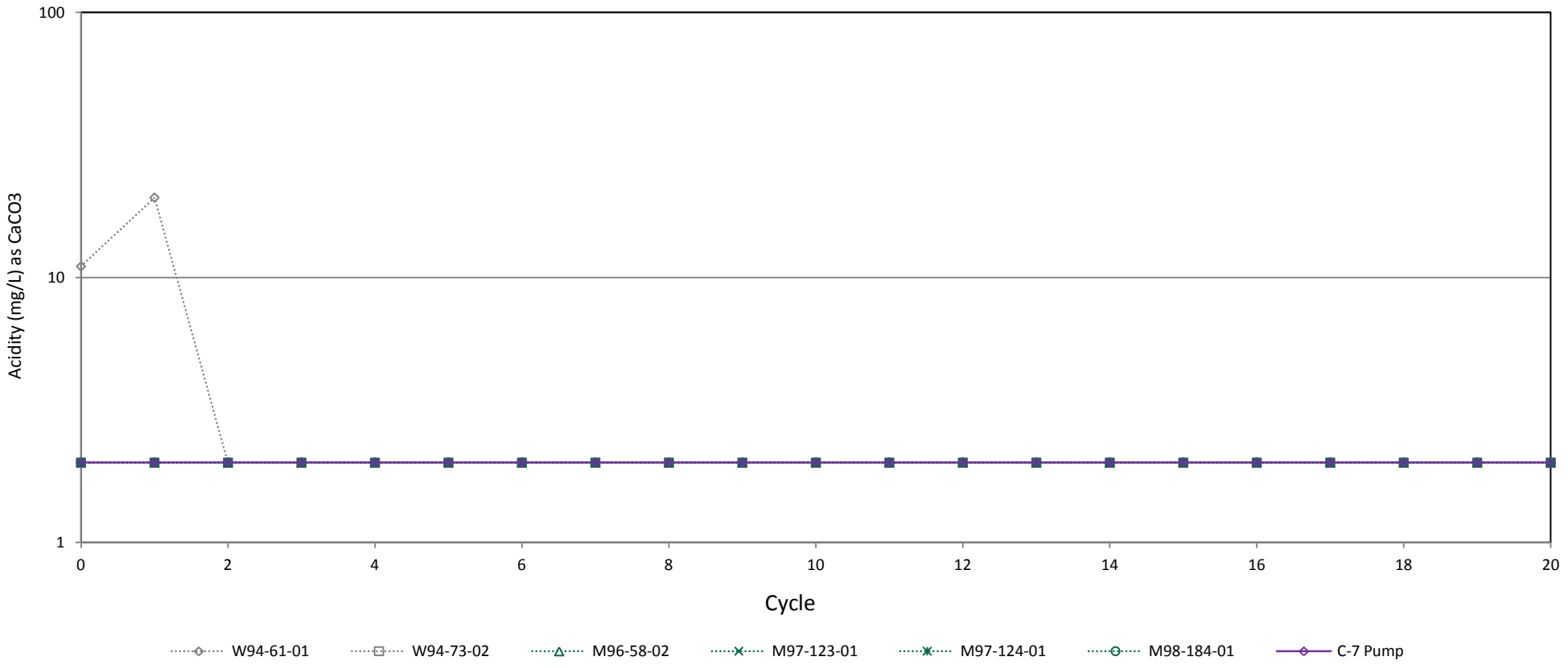



| Notes: | Rock Type: | Tungsten<br>Yttrium<br>Zinc | Kinetic Test Data<br>Tiriganiaq Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit | Iron Formation | DRAWN MIB DATE Sep-12 | Agnico-Eagle Mines Ltd. |
| Underground | Greywacke | CHECKED AJS JOB NO 11-1428-0011 | Golder Associates |
| 1 kg HCT | Mafic Volcanic | REVIEWED VJB PHASE/TASK 6300 | |
| 50-100 kg Column Tests | Ore | | FIGURE B.7-42 |
| Field Cells | Criteria: | | |
| Values < MDL are plotted as MDL value | MMER (2006) | | |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_D-F-T_7Sept2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

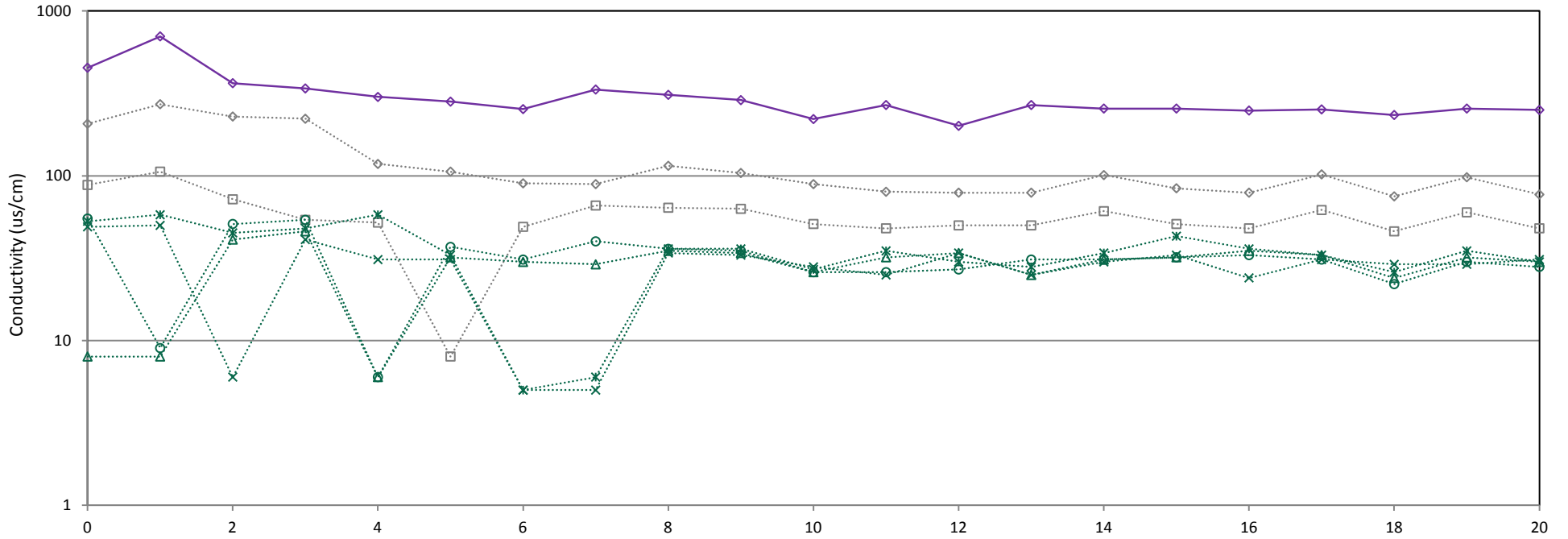
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

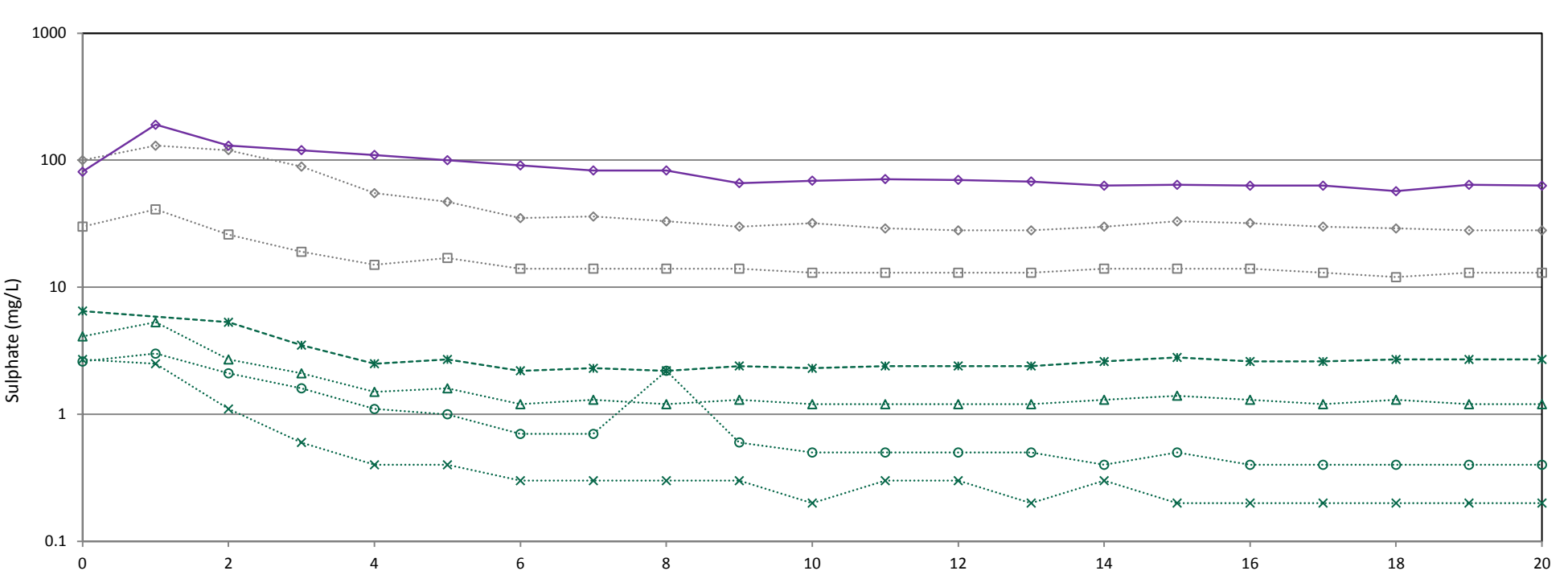
**Agnico-Eagle Mines Ltd.**

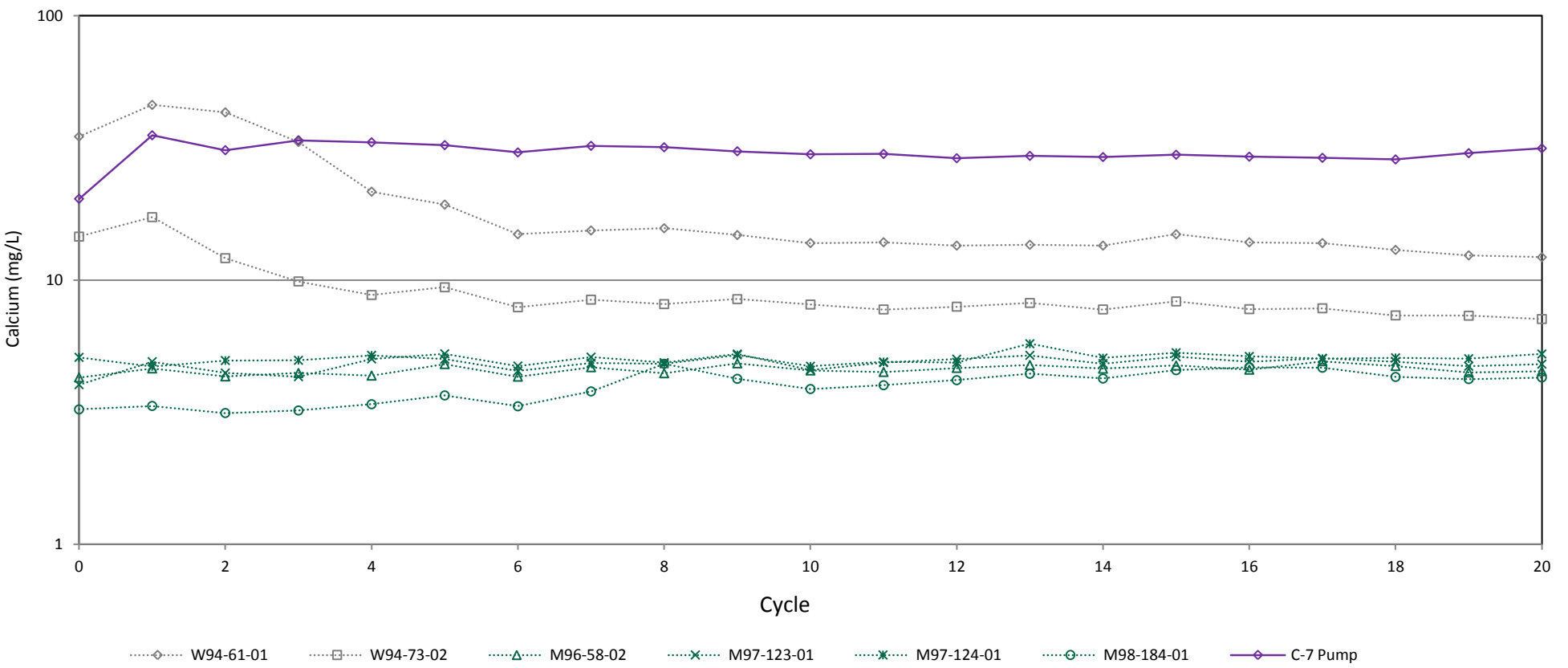
Golder Associates

**FIGURE** B.7-43

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Conductivity**
**Sulphate**
**Calcium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

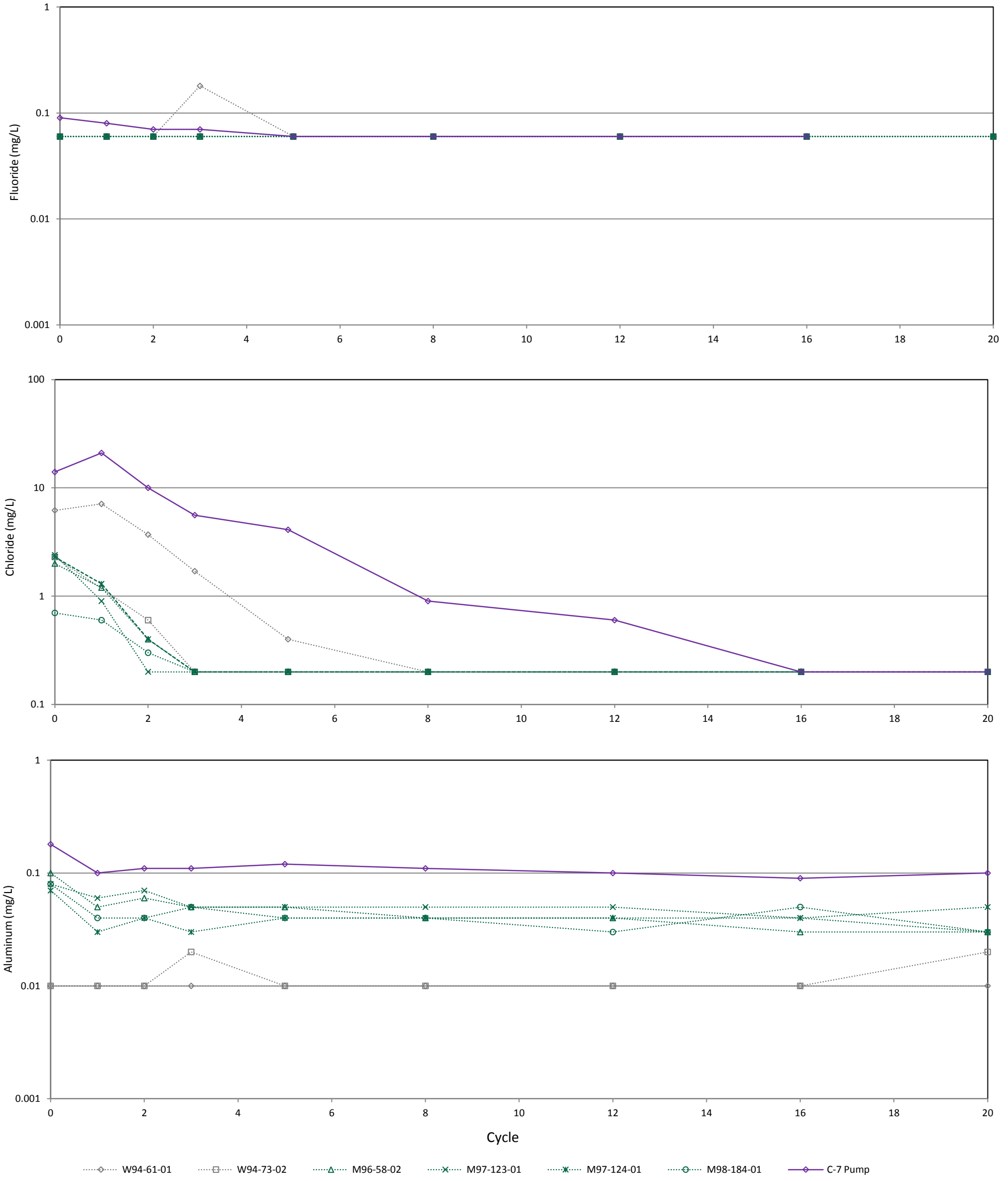
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-44

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Fluoride**
**Chloride**
**Aluminum**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

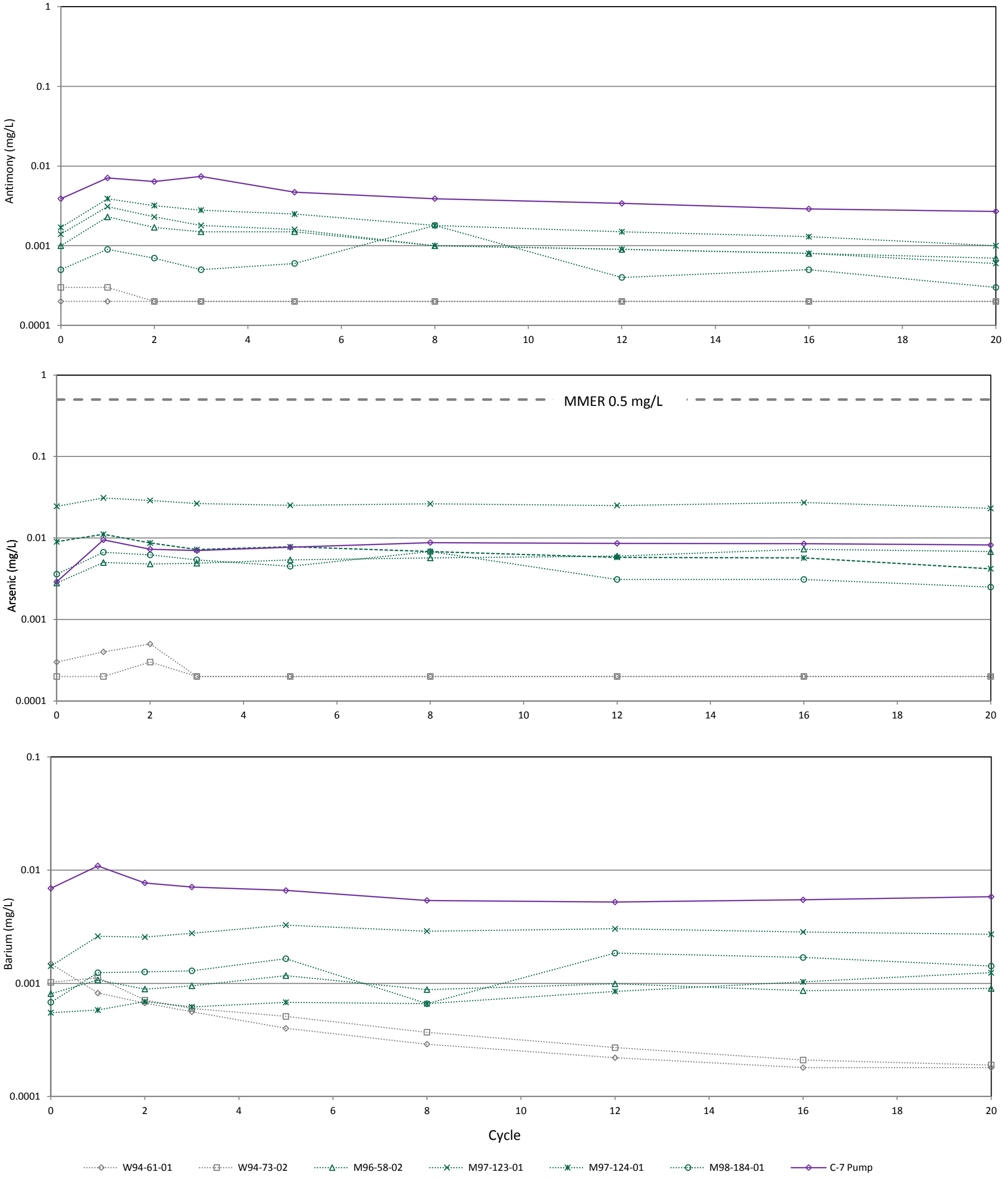
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

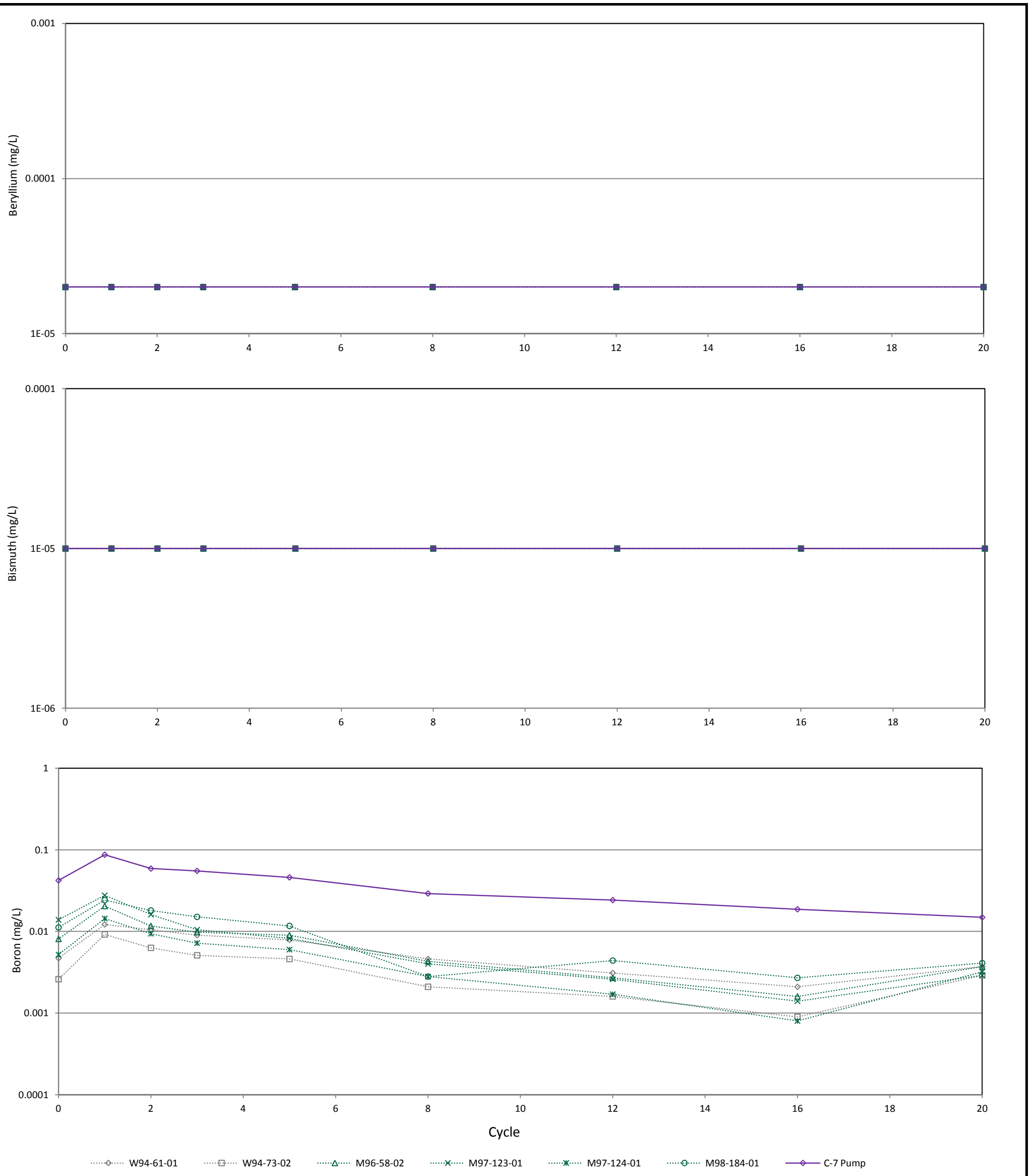
**FIGURE** B.7-45

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Antimony<br>Arsenic<br>Barium** | **Kinetic Test Data<br>Pump Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-46 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Beryllium**
**Bismuth**
**Boron**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

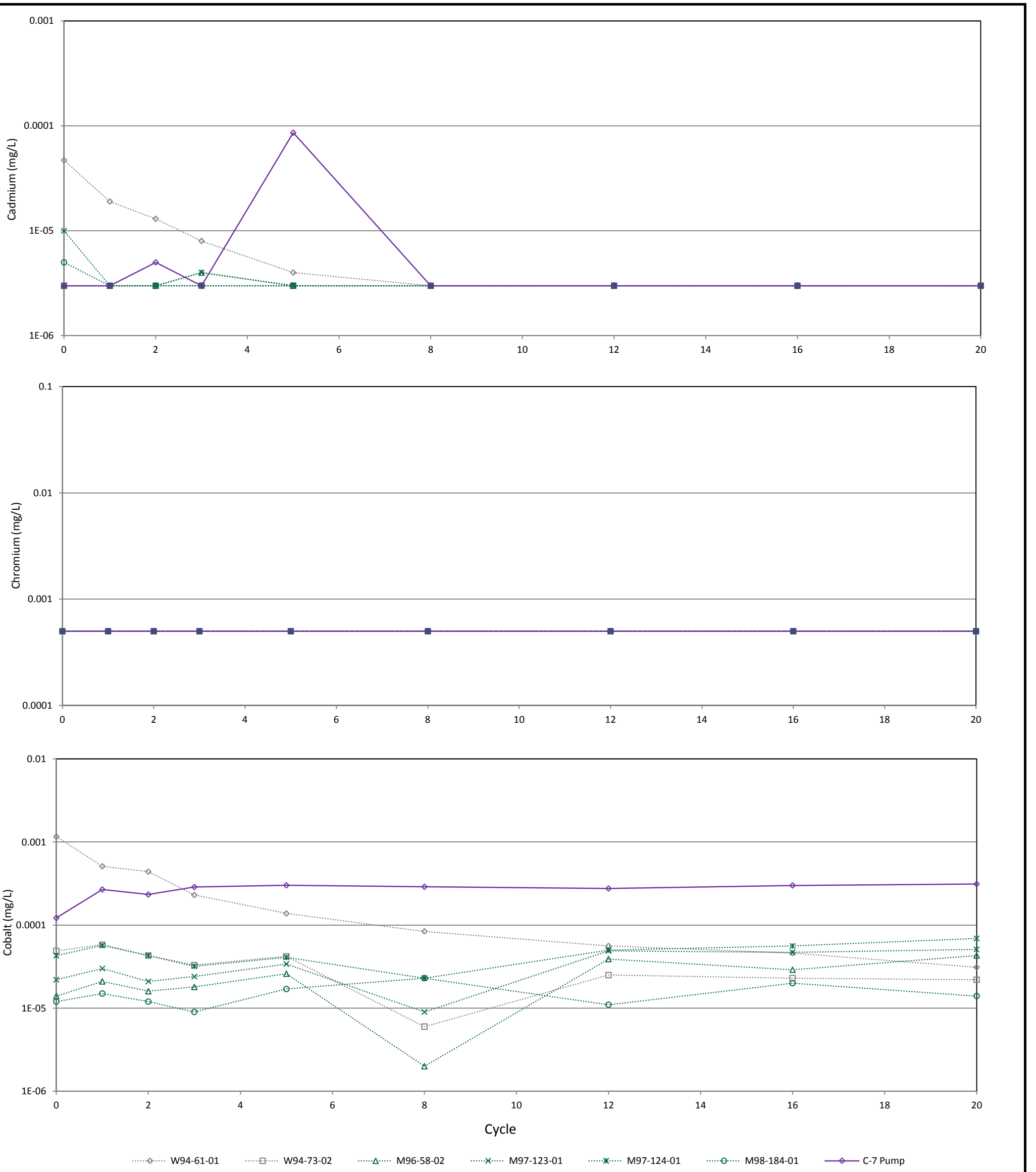
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

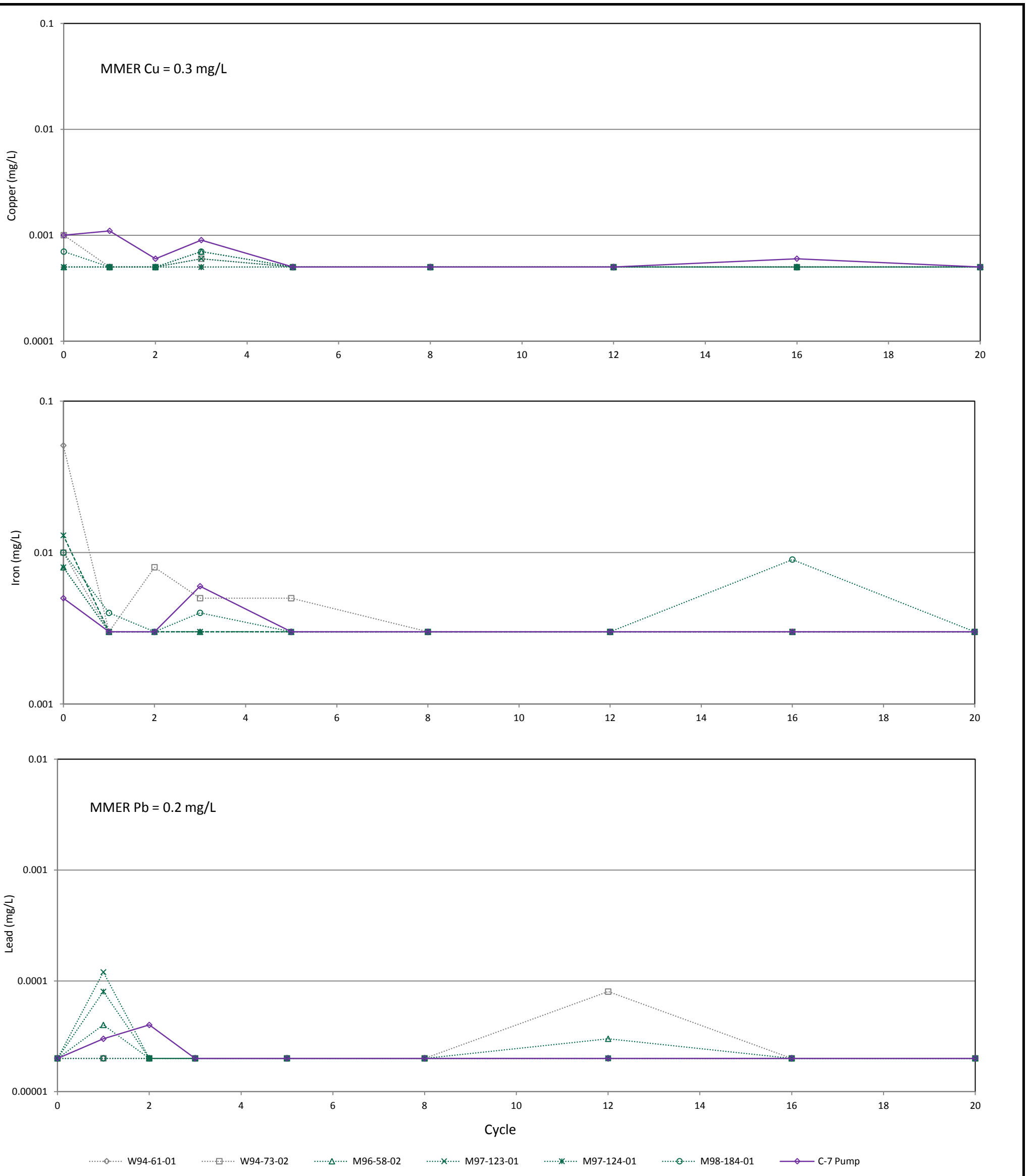
**FIGURE** B.7-47

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx



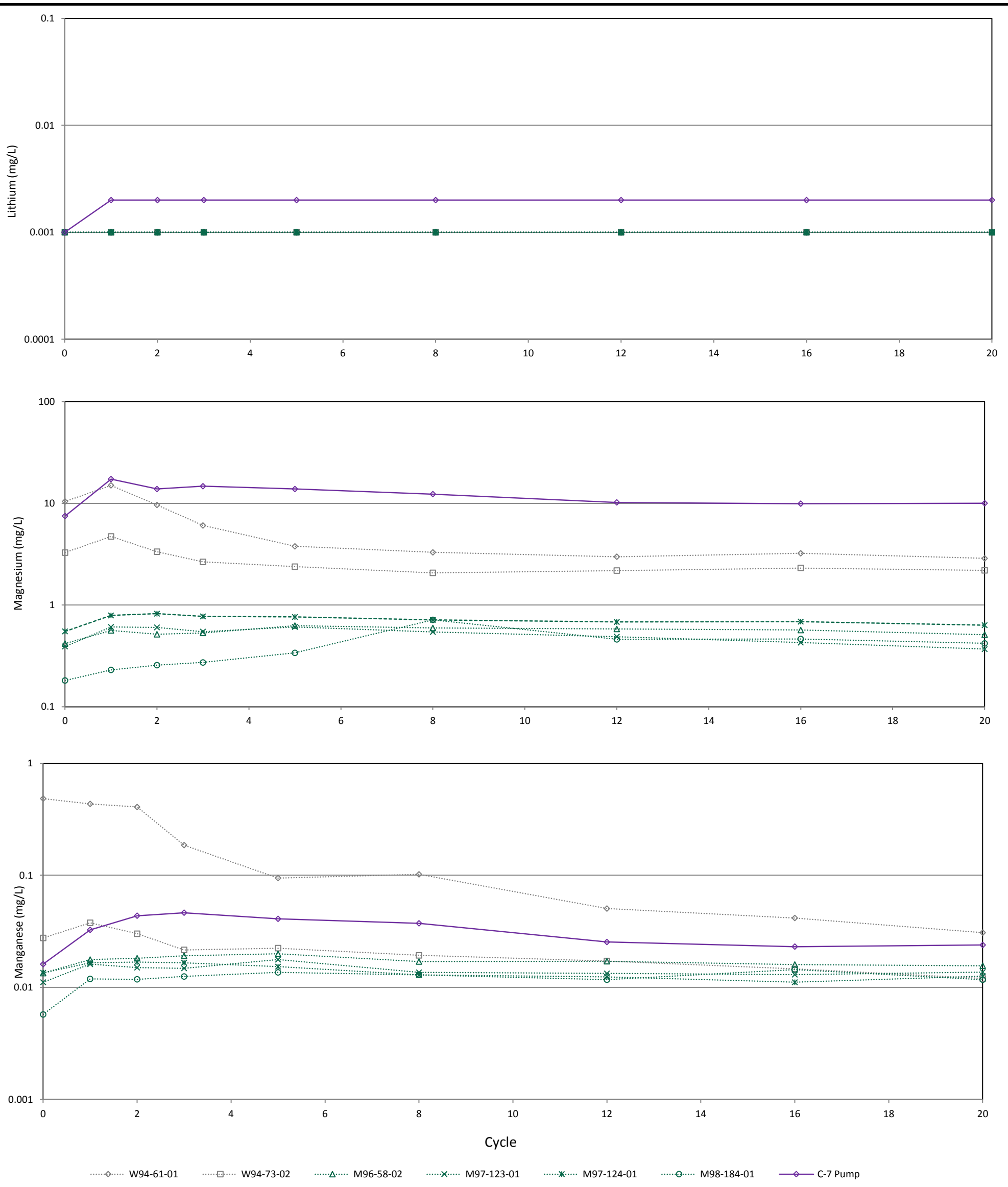

| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Cadmium**<br>**Chromium**<br>**Cobalt** | **Kinetic Test Data**<br>**Pump Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC · DATE Sep-12<br>CHECKED AJS/DH · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-48 |

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| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Copper**<br>**Iron**<br>**Lead** | **Kinetic Test Data**<br>**Pump Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-49 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Lithium**
**Magnesium**
**Manganese**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

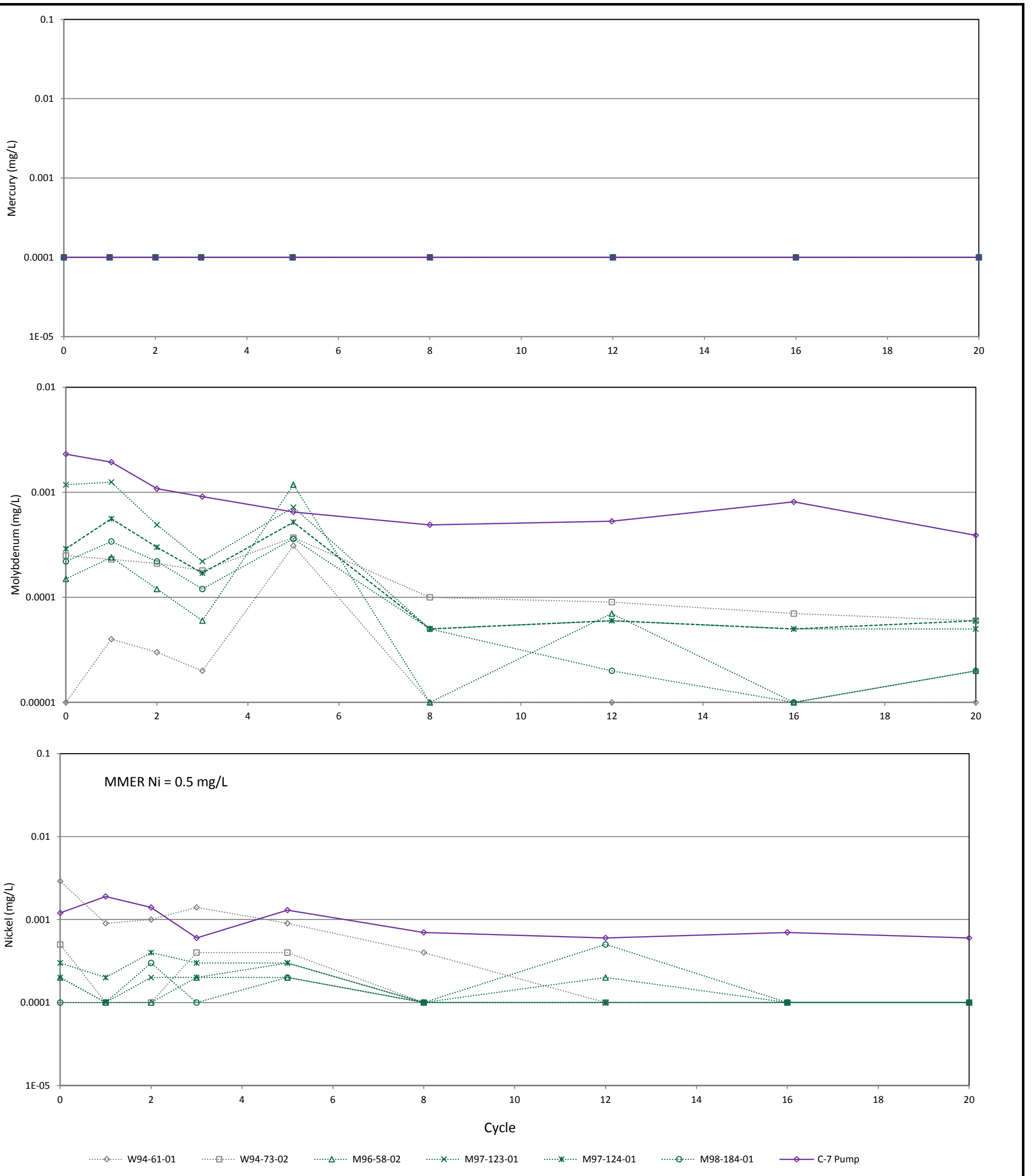
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

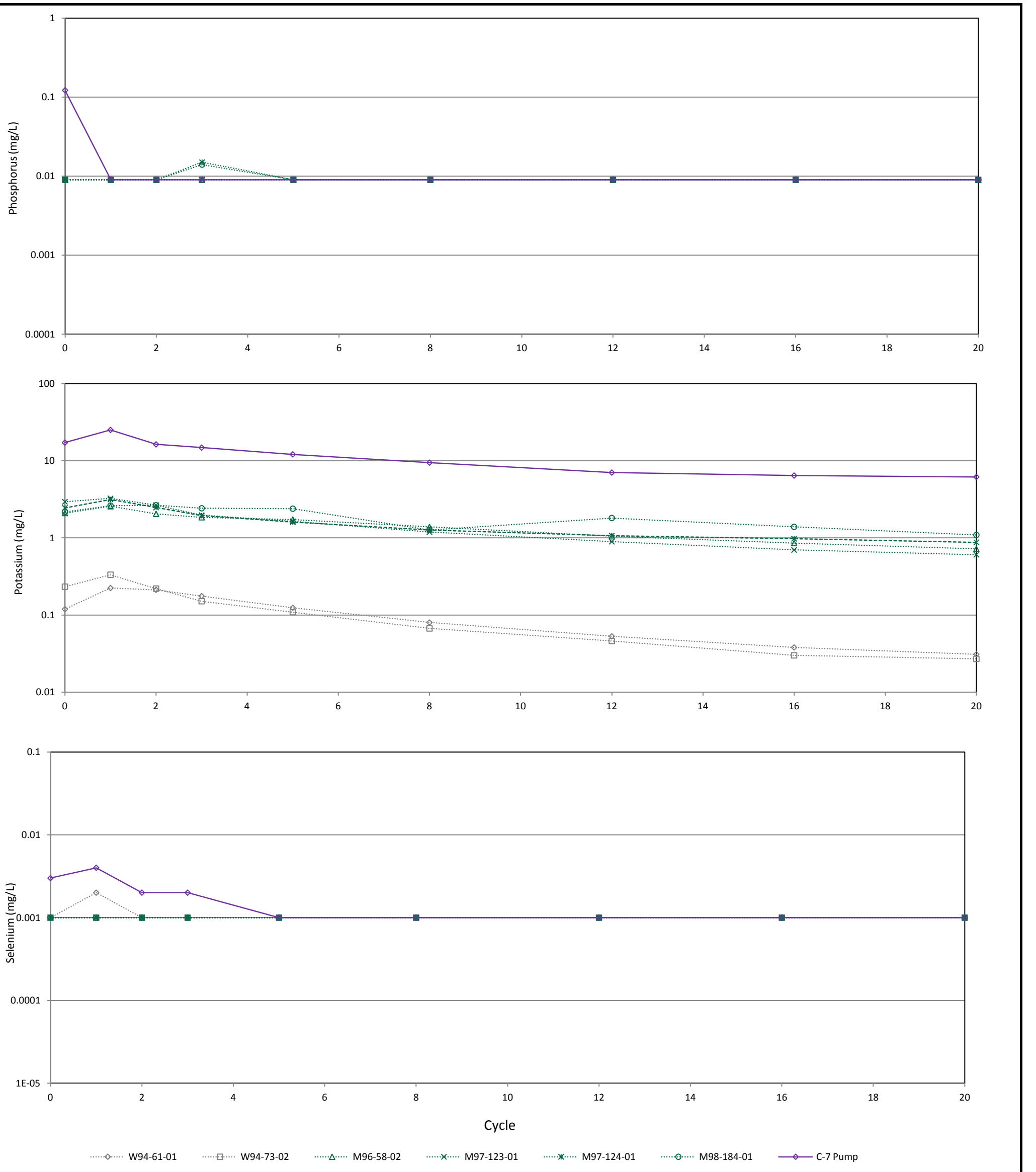
**FIGURE** B.7-50

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx



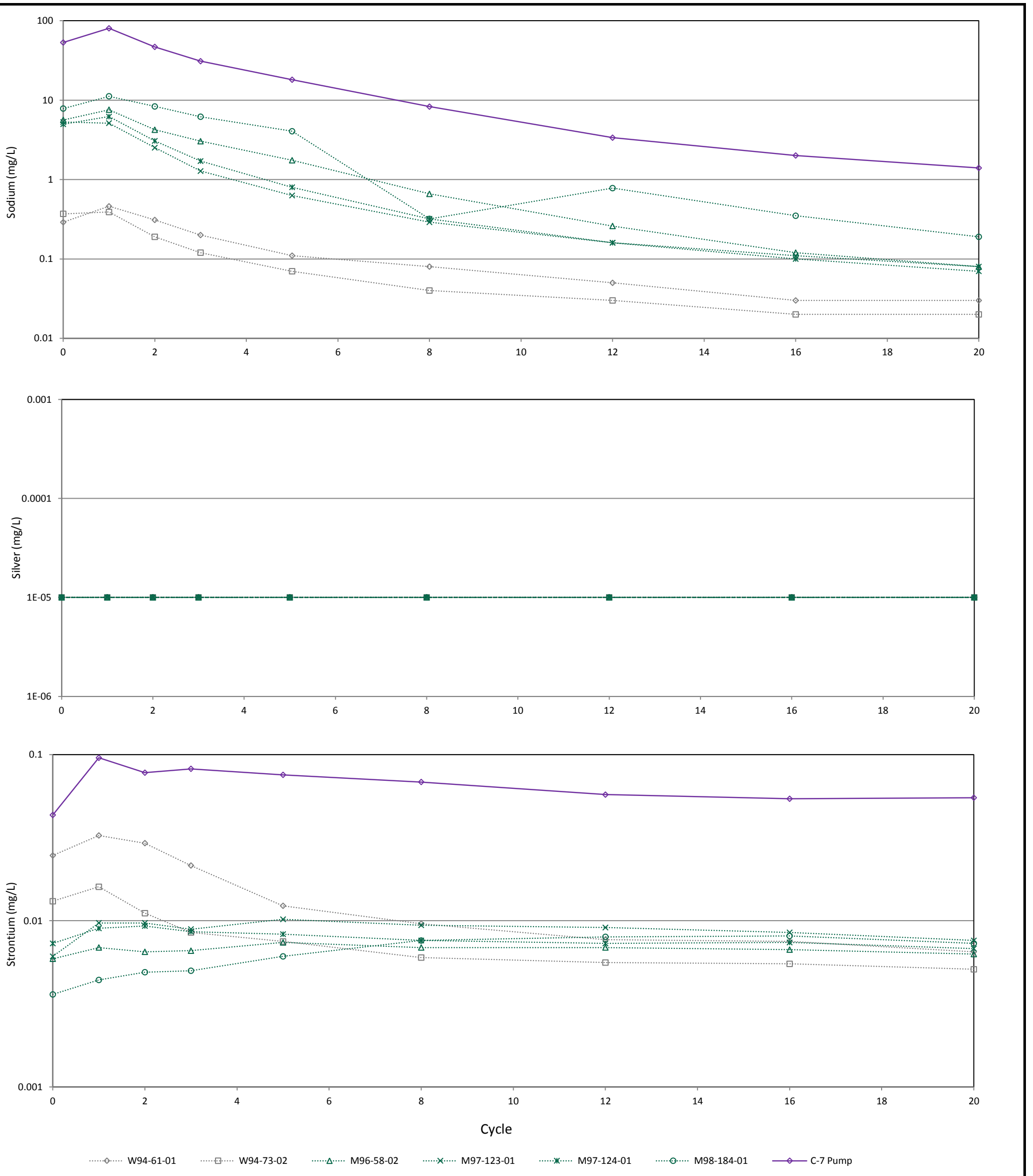

| | | | |
|---|---|---|---|
| Notes: | Rock Type: | **Mercury<br>Molybdenum<br>Nickel** | **Kinetic Test Data<br>Pump Deposit<br>Meliadine Property** |
| Open Pit | Iron Formation | DRAWN LMC / DATE Sep-12 | **Agnico-Eagle Mines Ltd.** |
| Underground | Greywacke | CHECKED AJS/DH / JOB NO 11-1428-0011 | Golder Associates |
| 1 kg HCT | Mafic Volcanic | REVIEWED VJB / PHASE/TASK 6300 | |
| 50-100 kg Column Tests | Ultramafic | | **FIGURE** B.7-51 |
| Criteria: | 14% IF 86% MV (large column) | | |
| MMER (2006) | | | |

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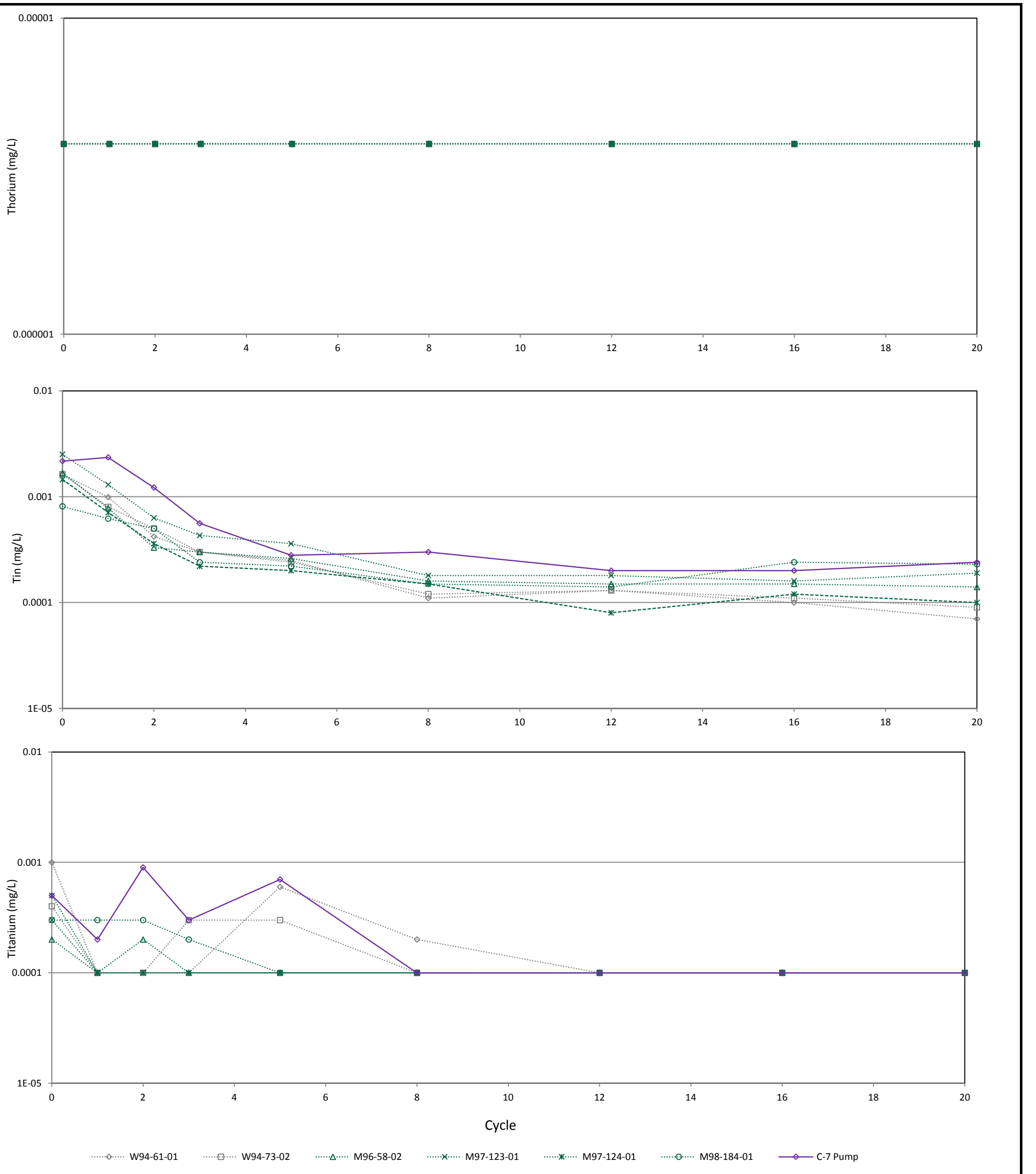

| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Phosphorus<br>Potassium<br>Selenium** | **Kinetic Test Data<br>Pump Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-52 |

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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Sodium<br>Silver<br>Strontium** | **Kinetic Test Data<br>Pump Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-53 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Thorium**
**Tin**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

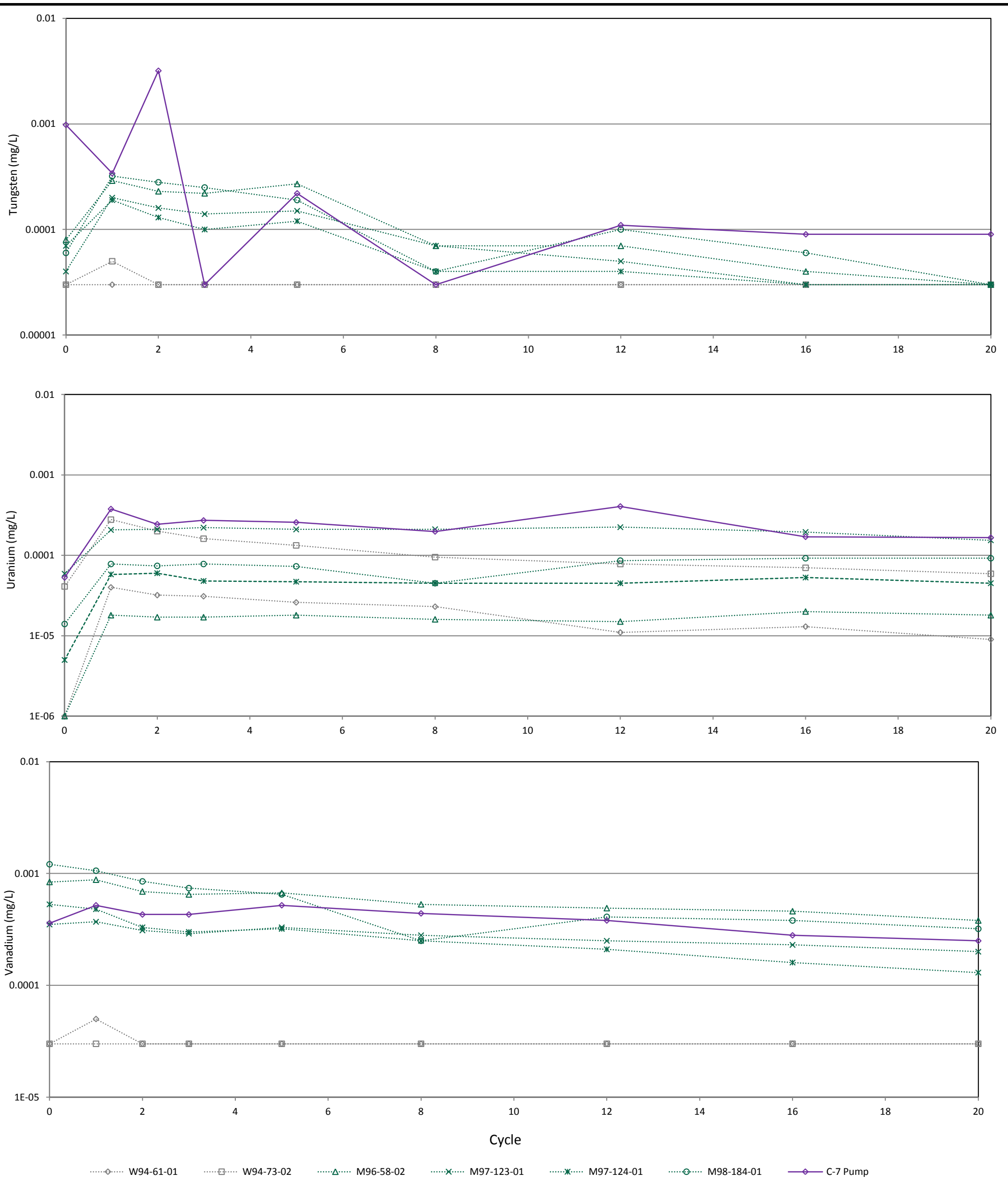
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-54

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 14% IF 86% MV (large column)

**Tungsten**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

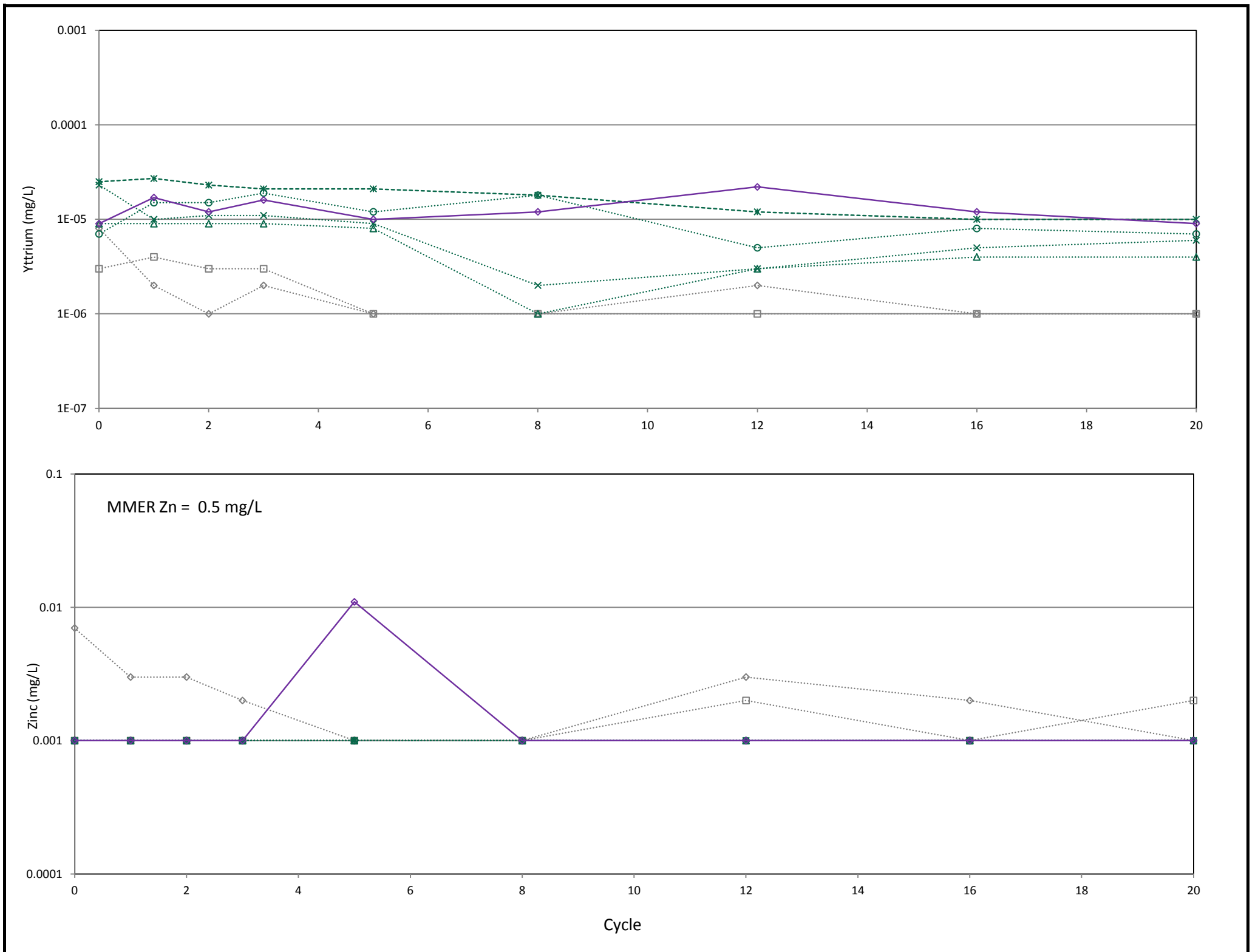
**Kinetic Test Data**
**Pump Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

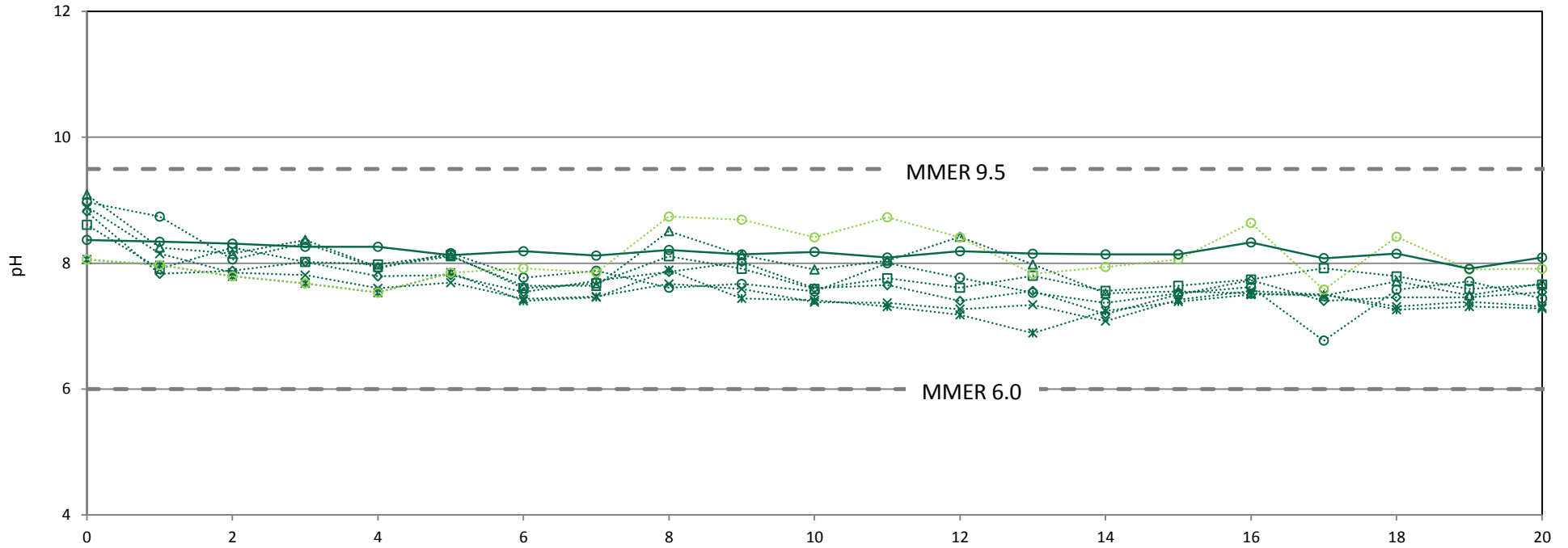
**FIGURE** B.7-55

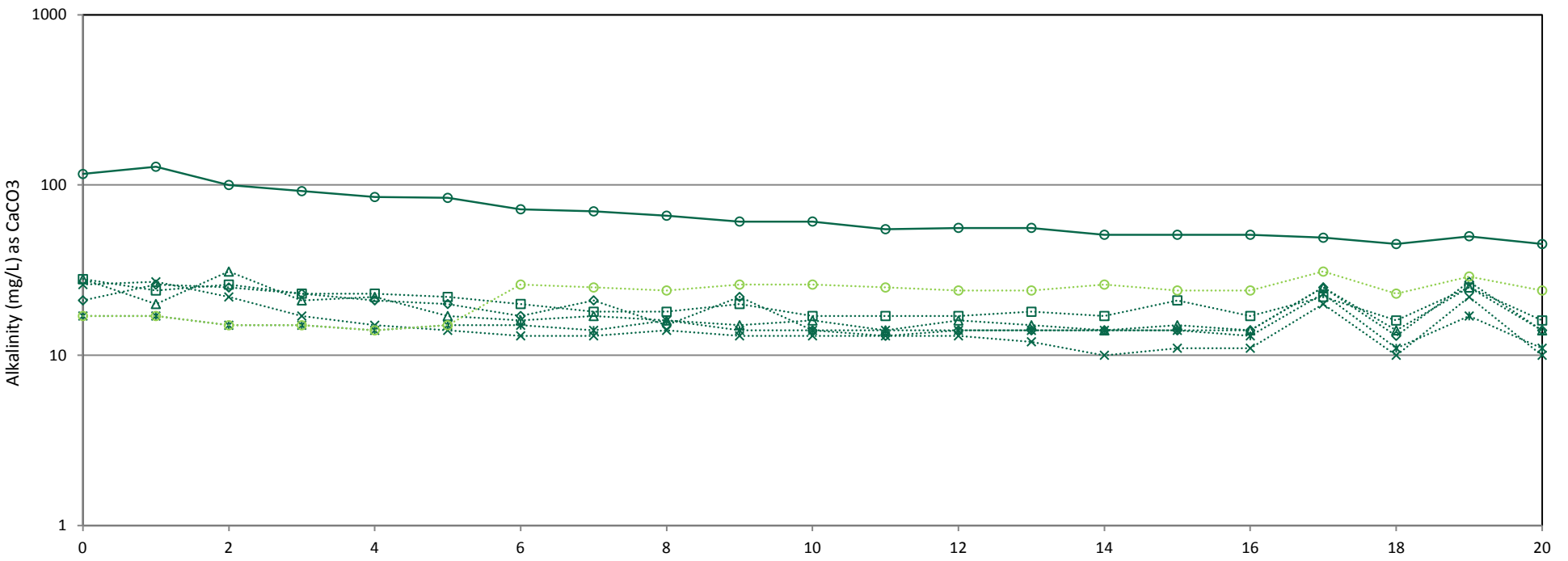
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

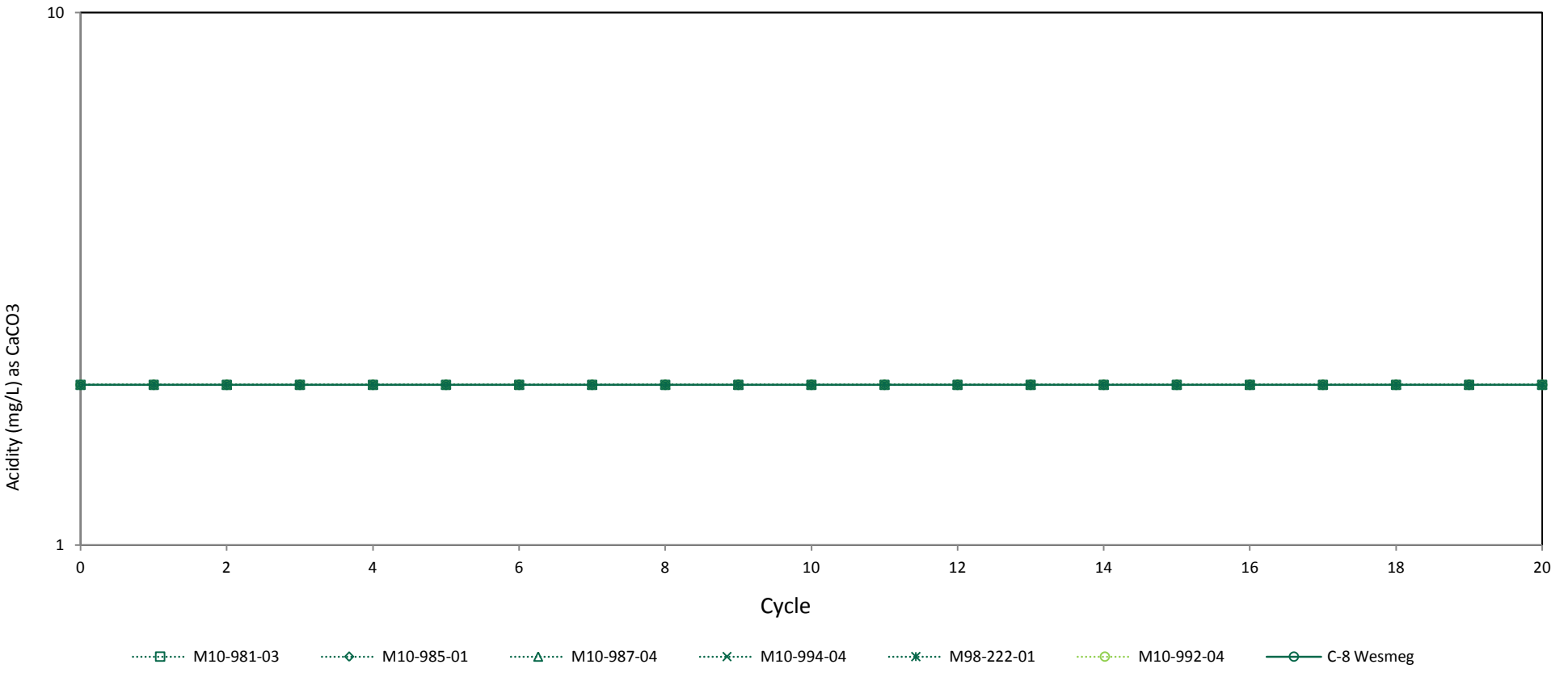



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>14% IF 86% MV (large column) | **Yttrium**<br>**Zinc** | **Kinetic Test Data**<br>**Pump Deposit**<br>**Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-56 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

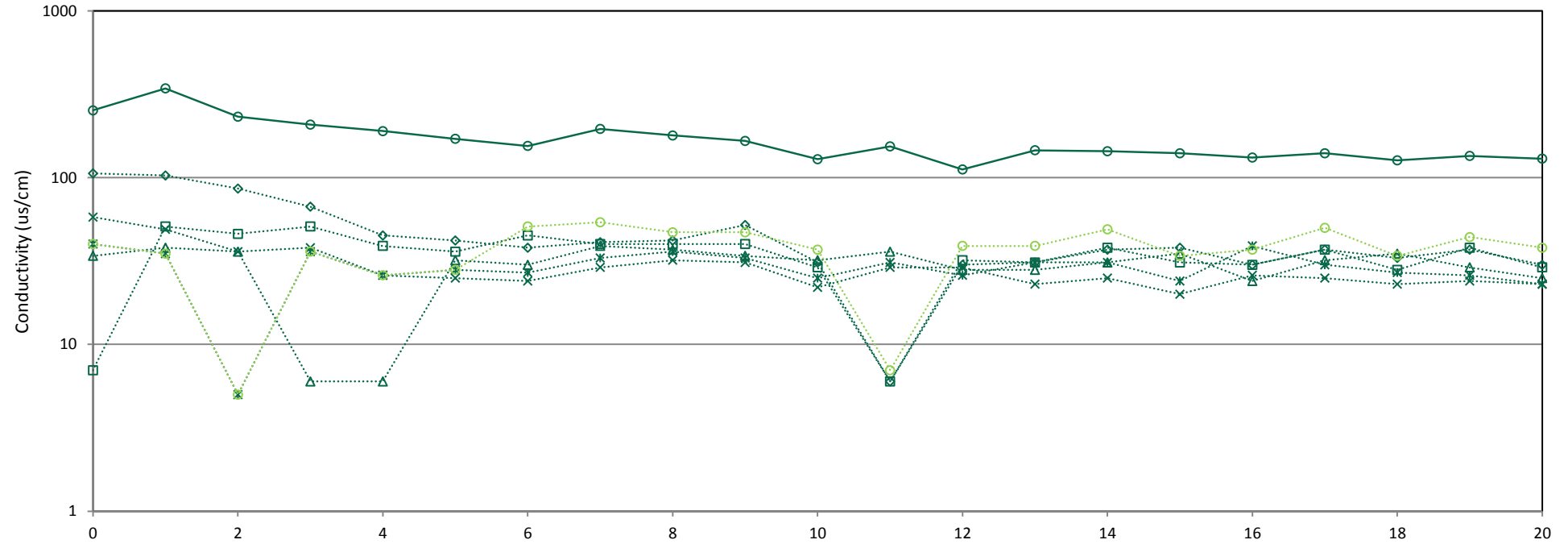
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

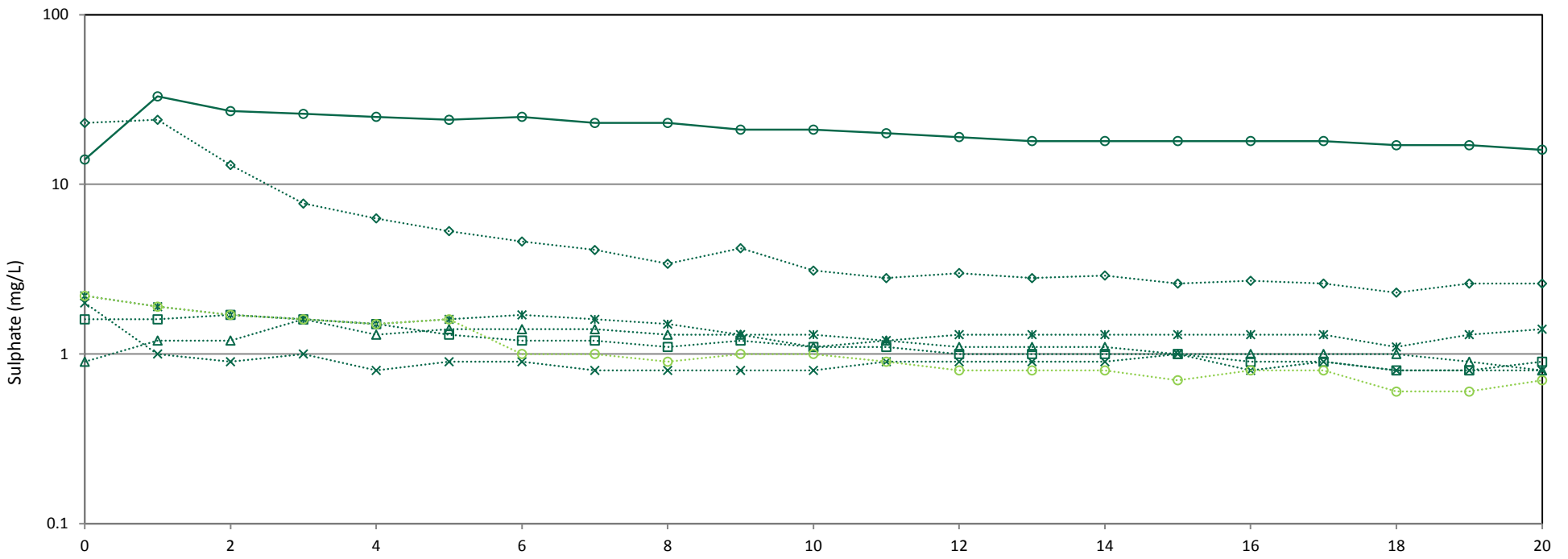
**Agnico-Eagle Mines Ltd.**

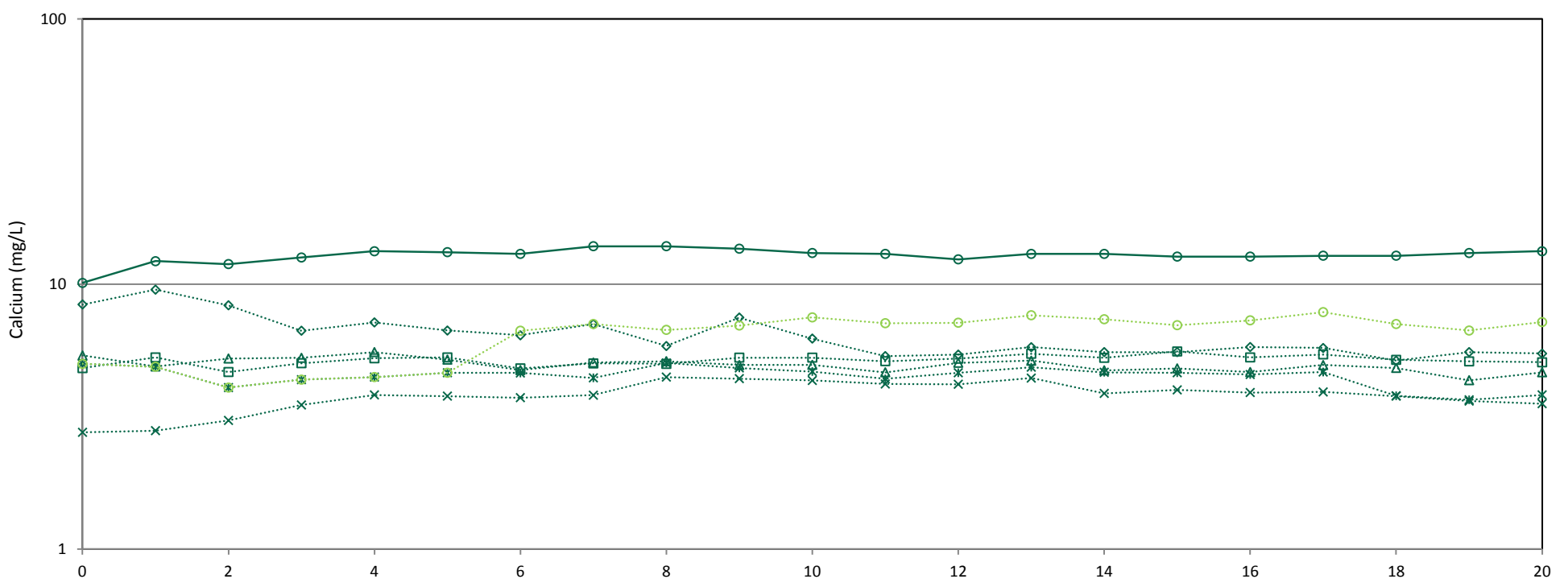
Golder Associates

**FIGURE** B.7-57

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

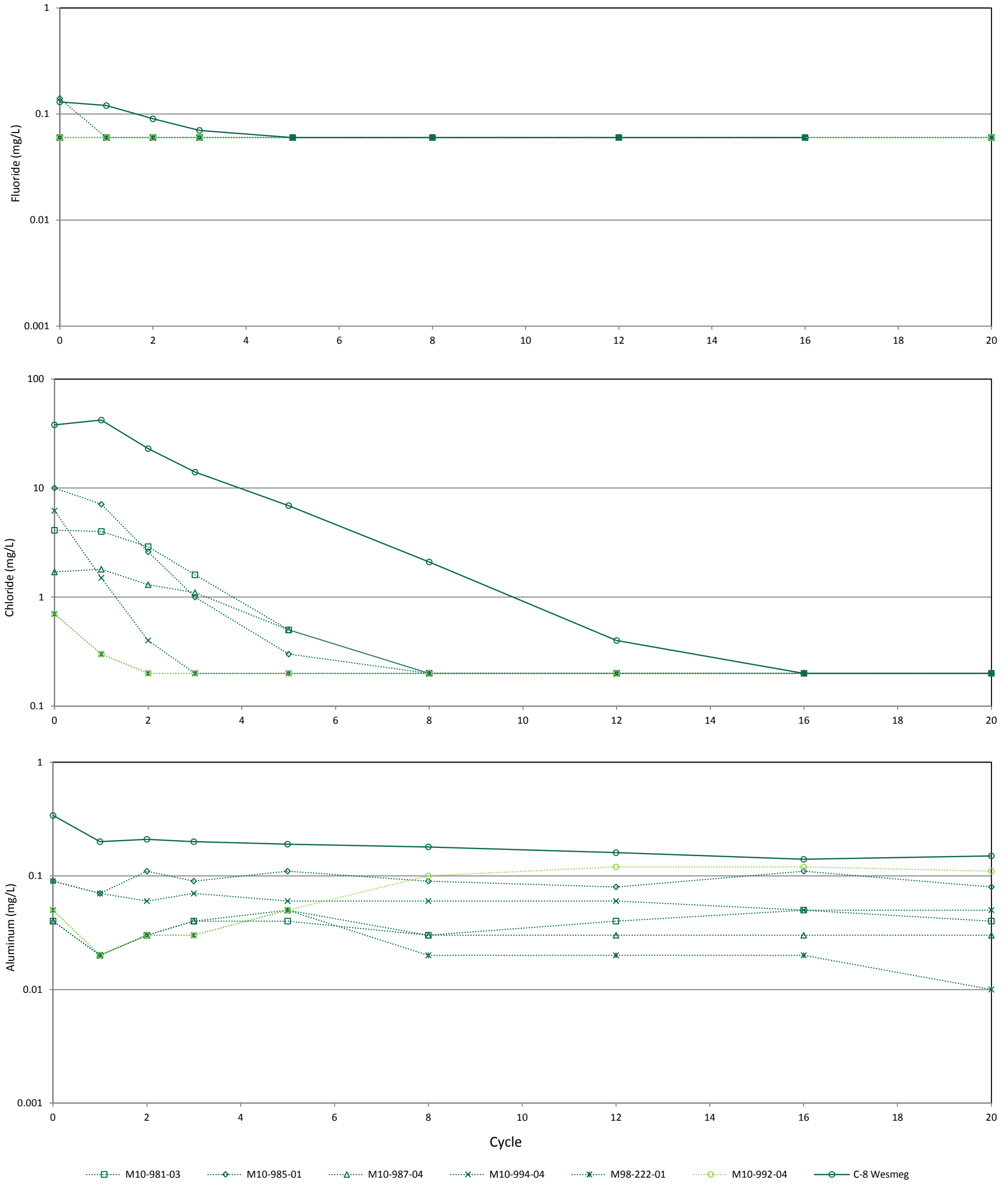


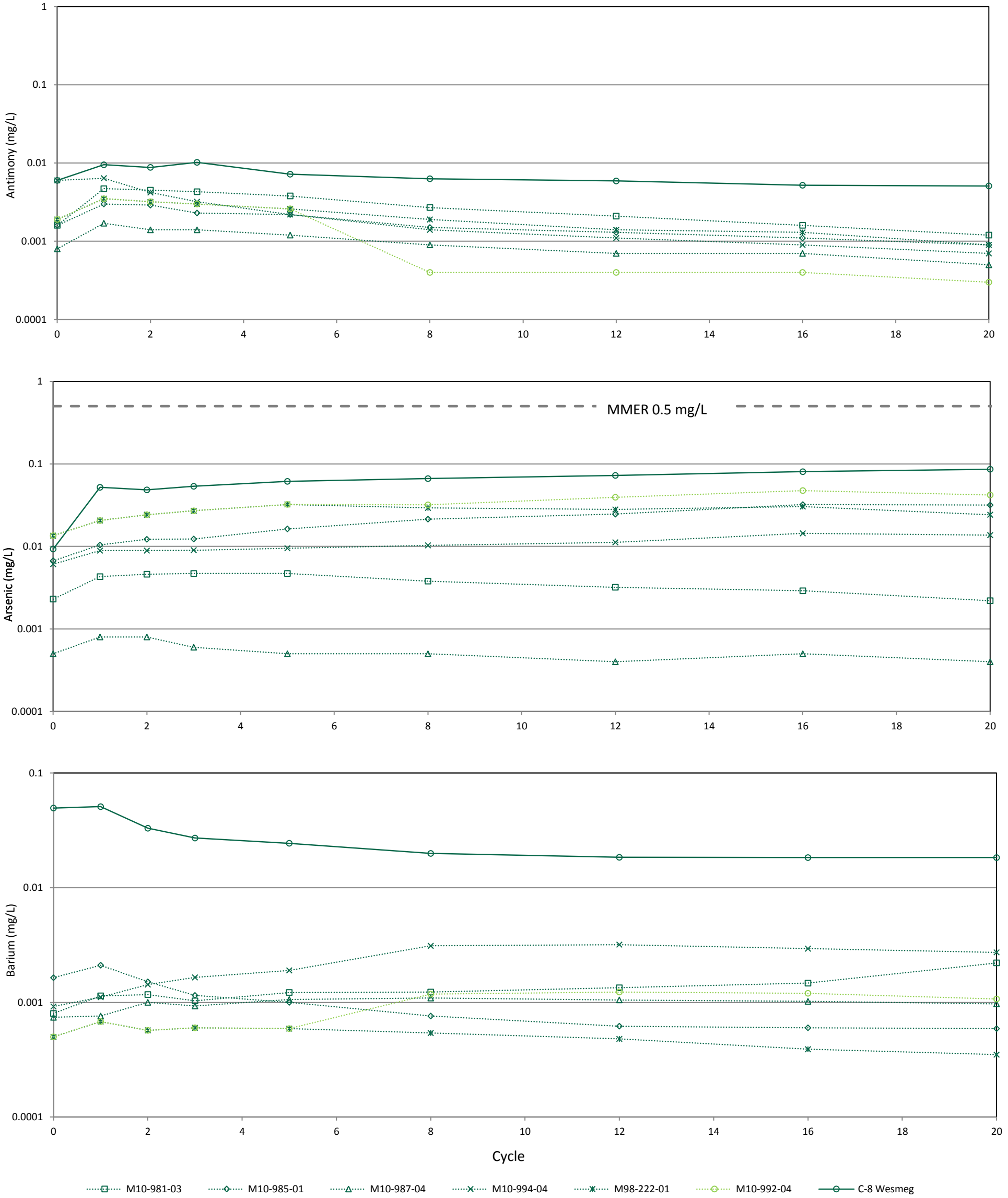

| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Conductivity<br>Sulphate<br>Calcium** | **Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-58 |

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| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Fluoride<br>Chloride<br>Aluminum** | **Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-59 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Antimony**
**Arsenic**
**Barium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

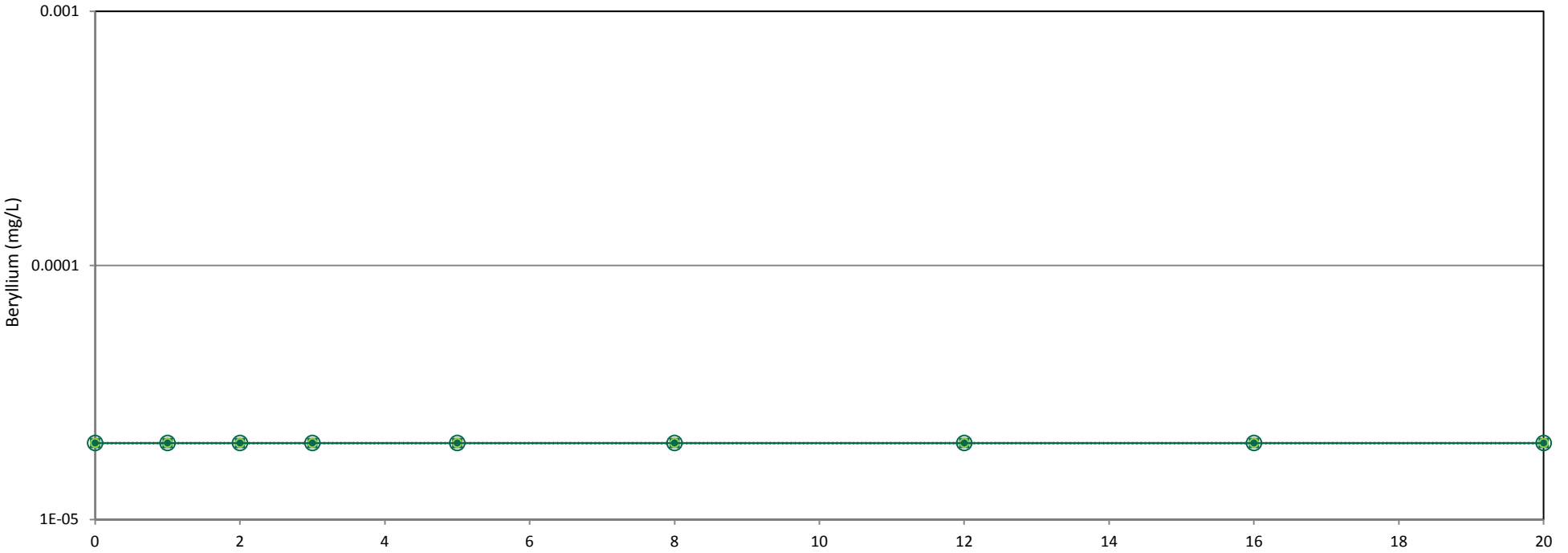
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

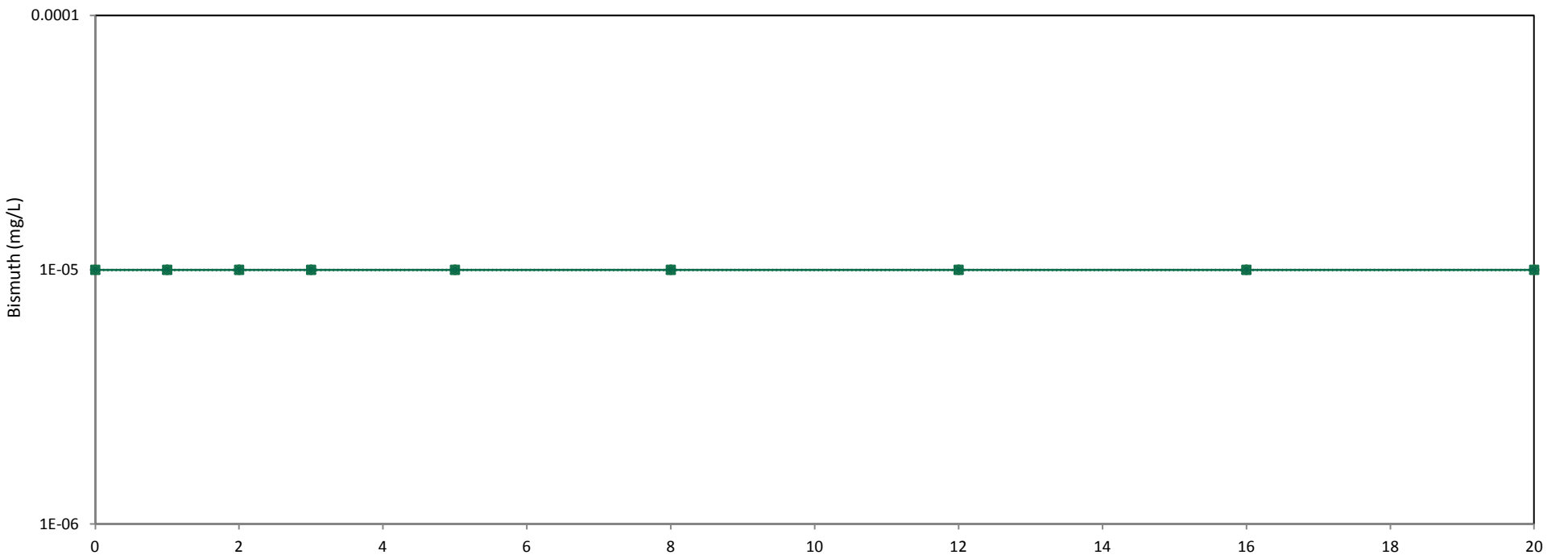
**Agnico-Eagle Mines Ltd.**

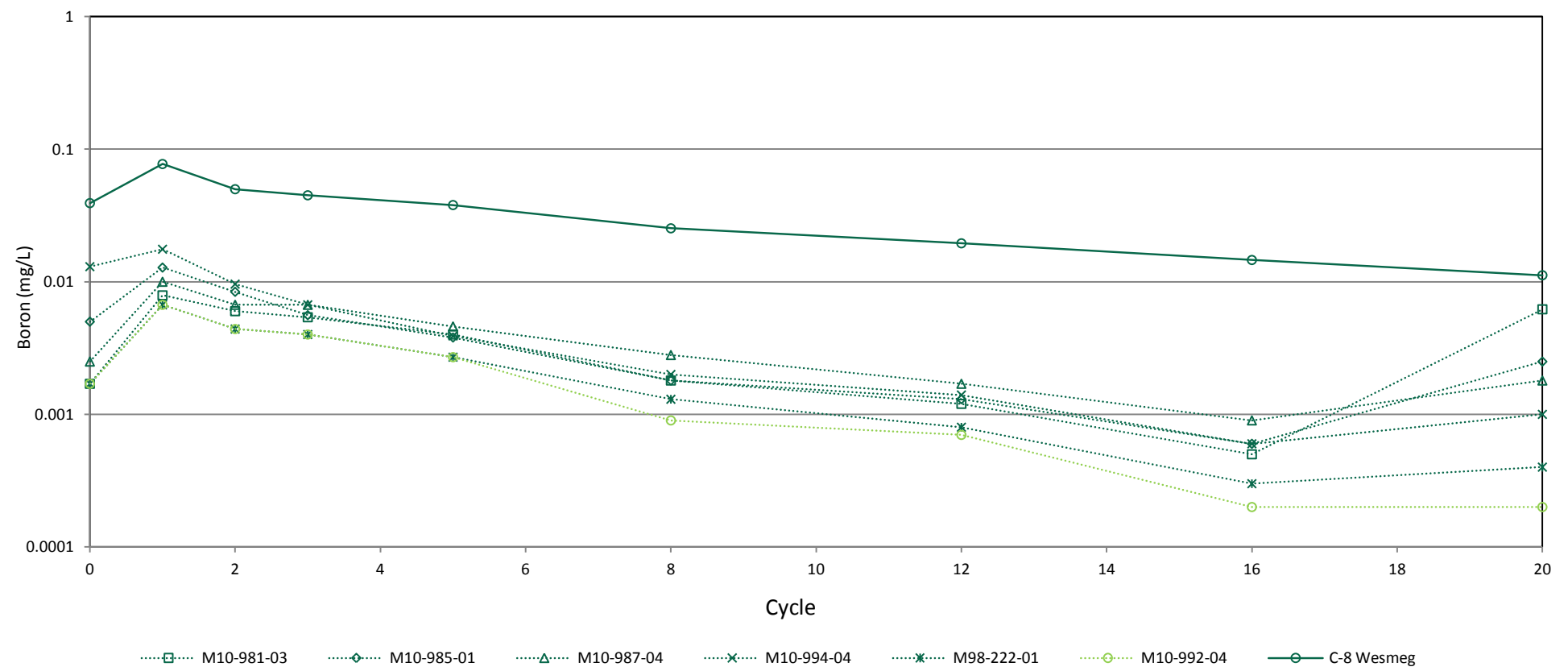
Golder Associates

**FIGURE** B.7-60

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Beryllium**
**Bismuth**
**Boron**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

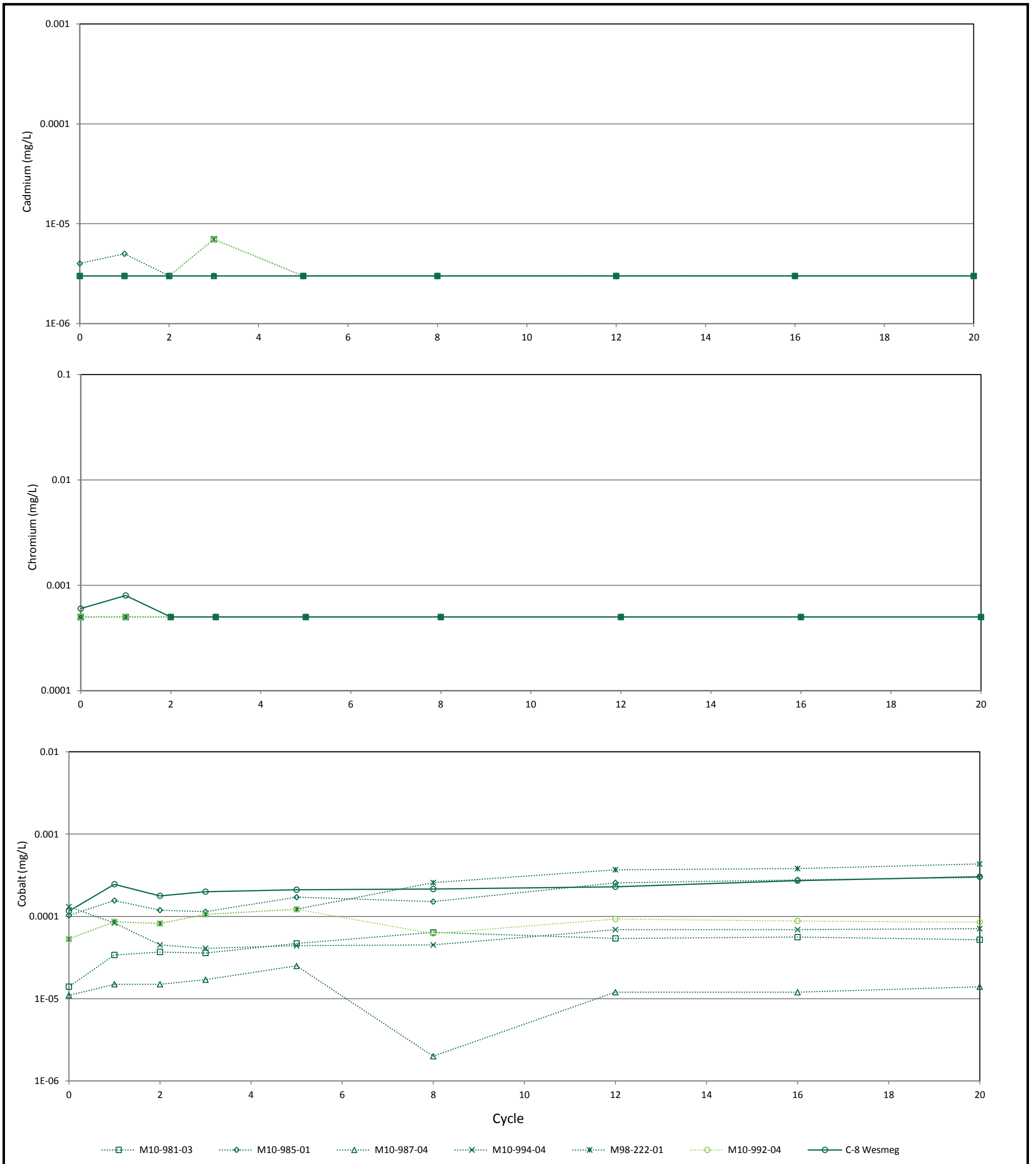
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-61

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Cadmium**
**Chromium**
**Cobalt**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

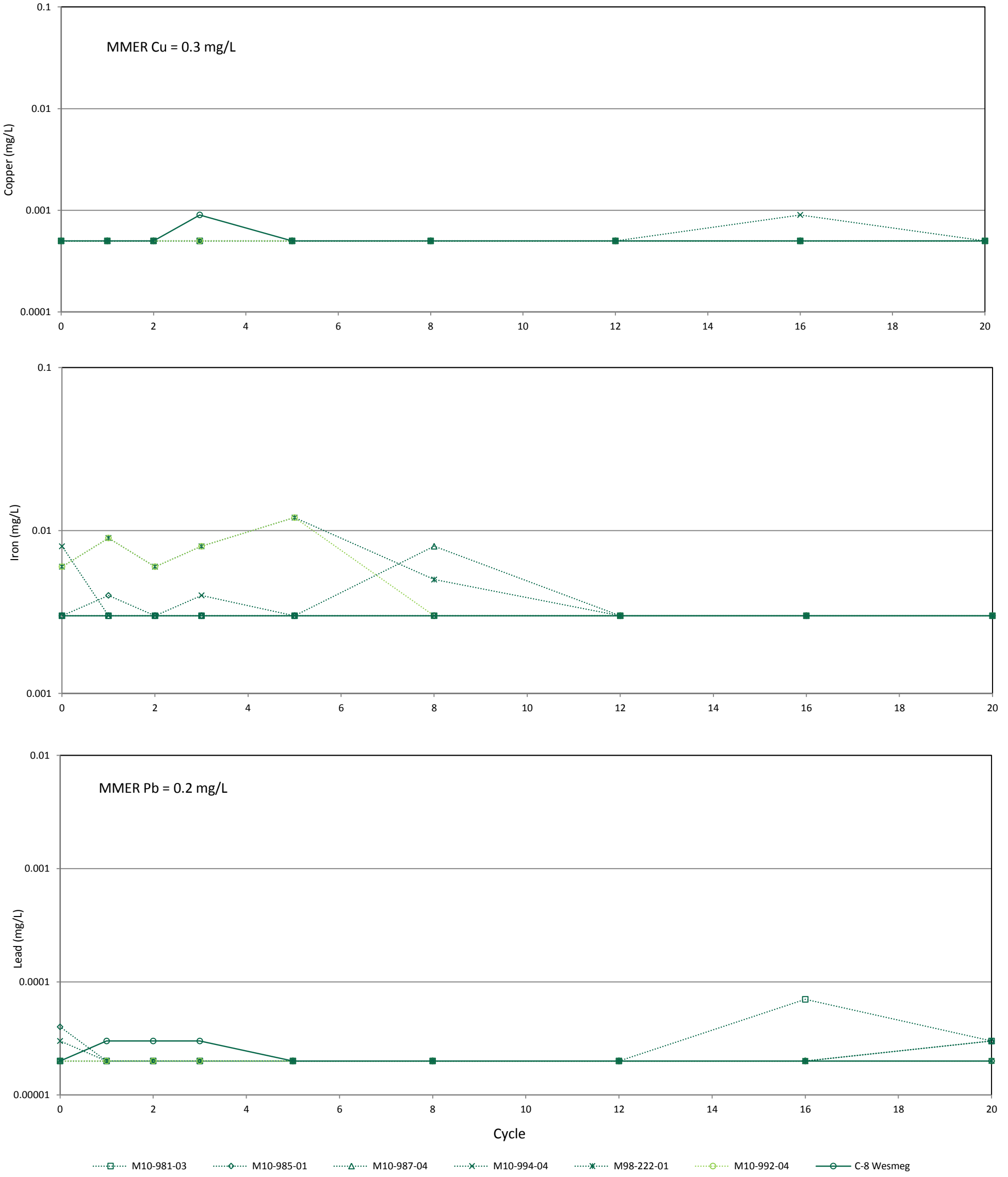
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

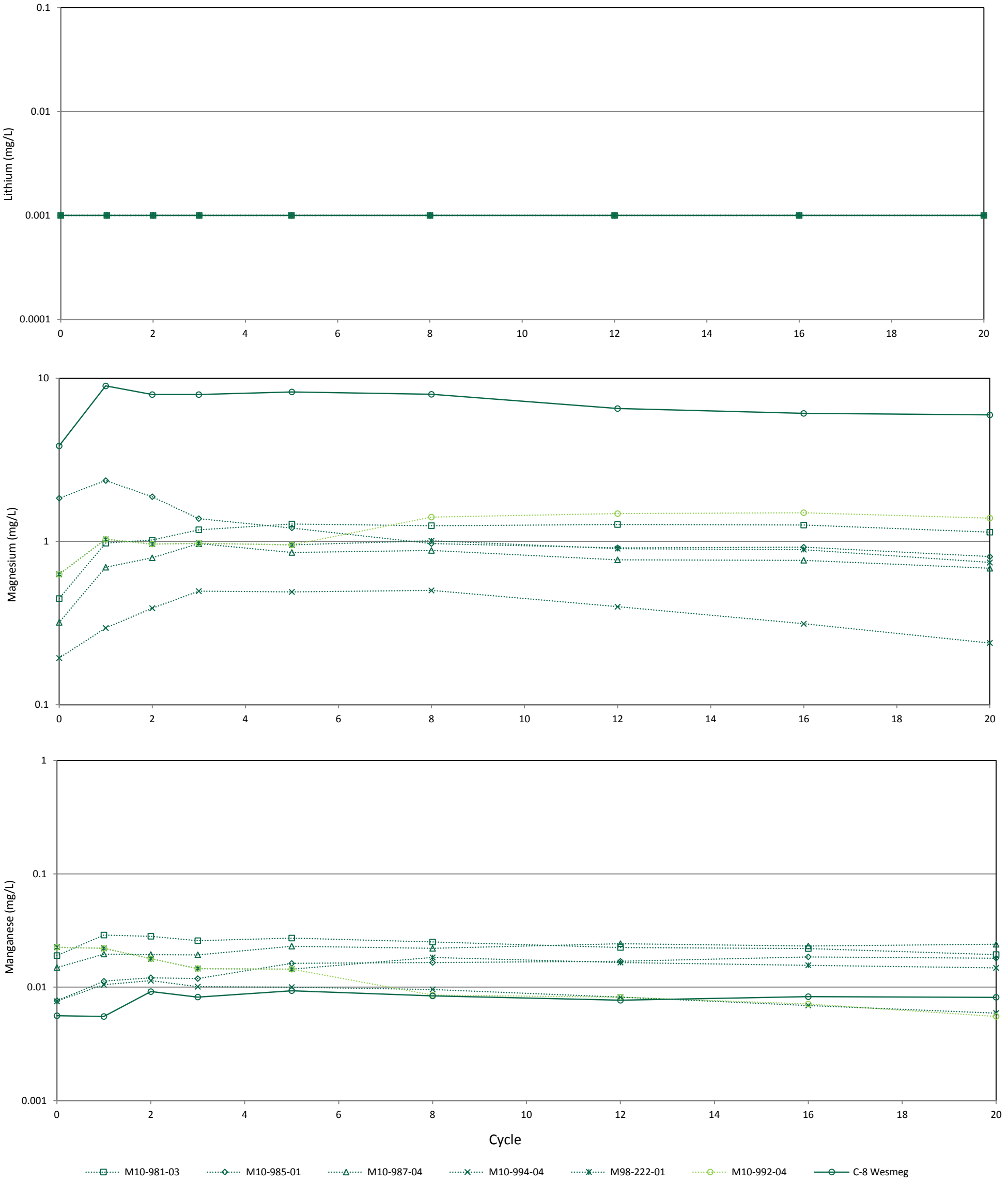
**FIGURE** B.7-62

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| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Copper**<br>**Iron**<br>**Lead** | **Kinetic Test Data**<br>**Wesmeg Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-63 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Lithium**
**Magnesium**
**Manganese**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

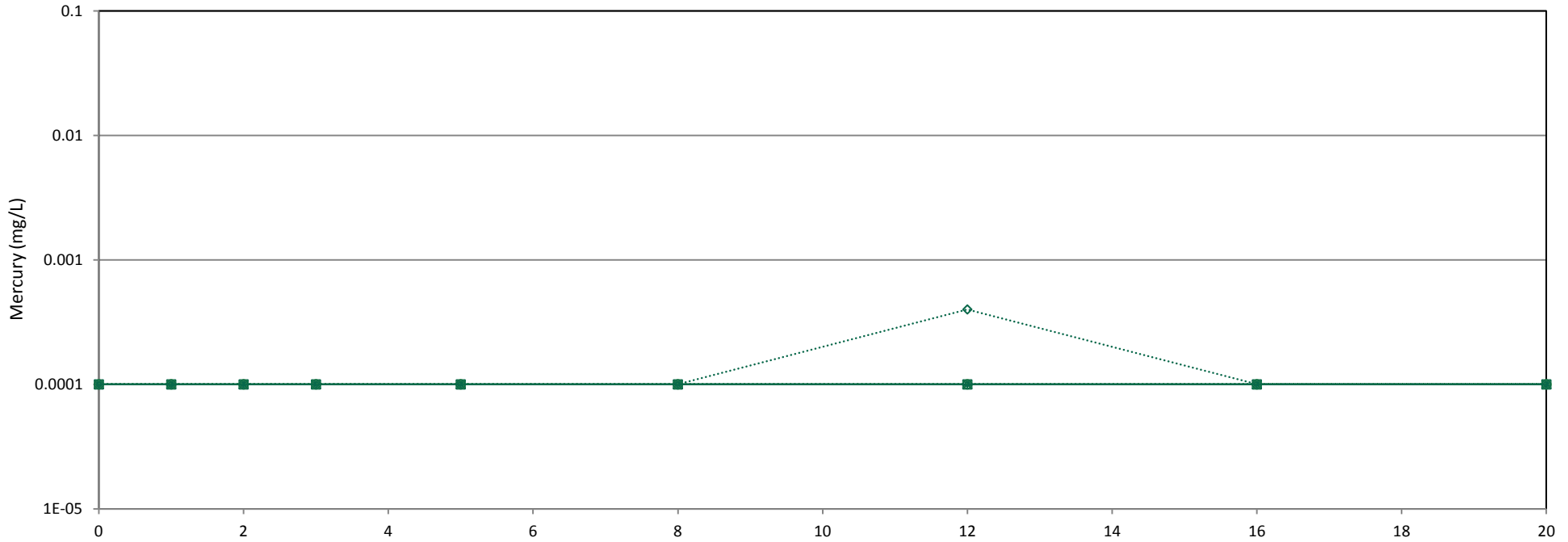
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

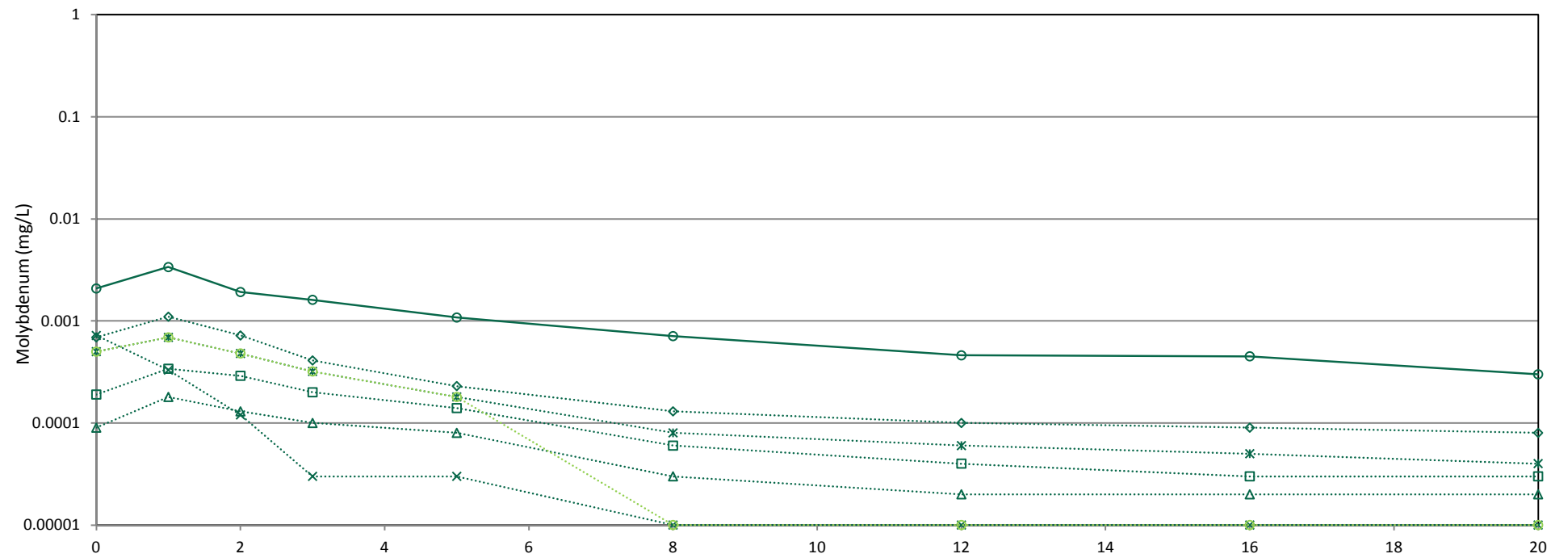
**Agnico-Eagle Mines Ltd.**

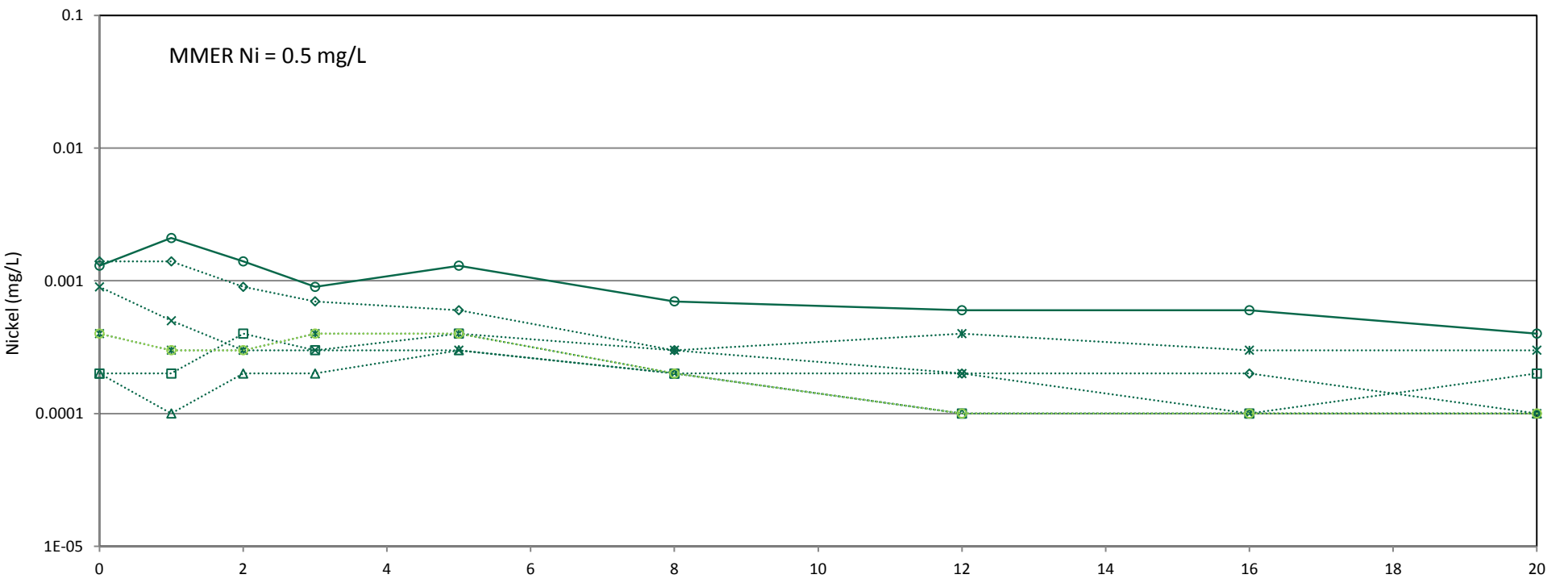
Golder Associates

**FIGURE** B.7-64

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

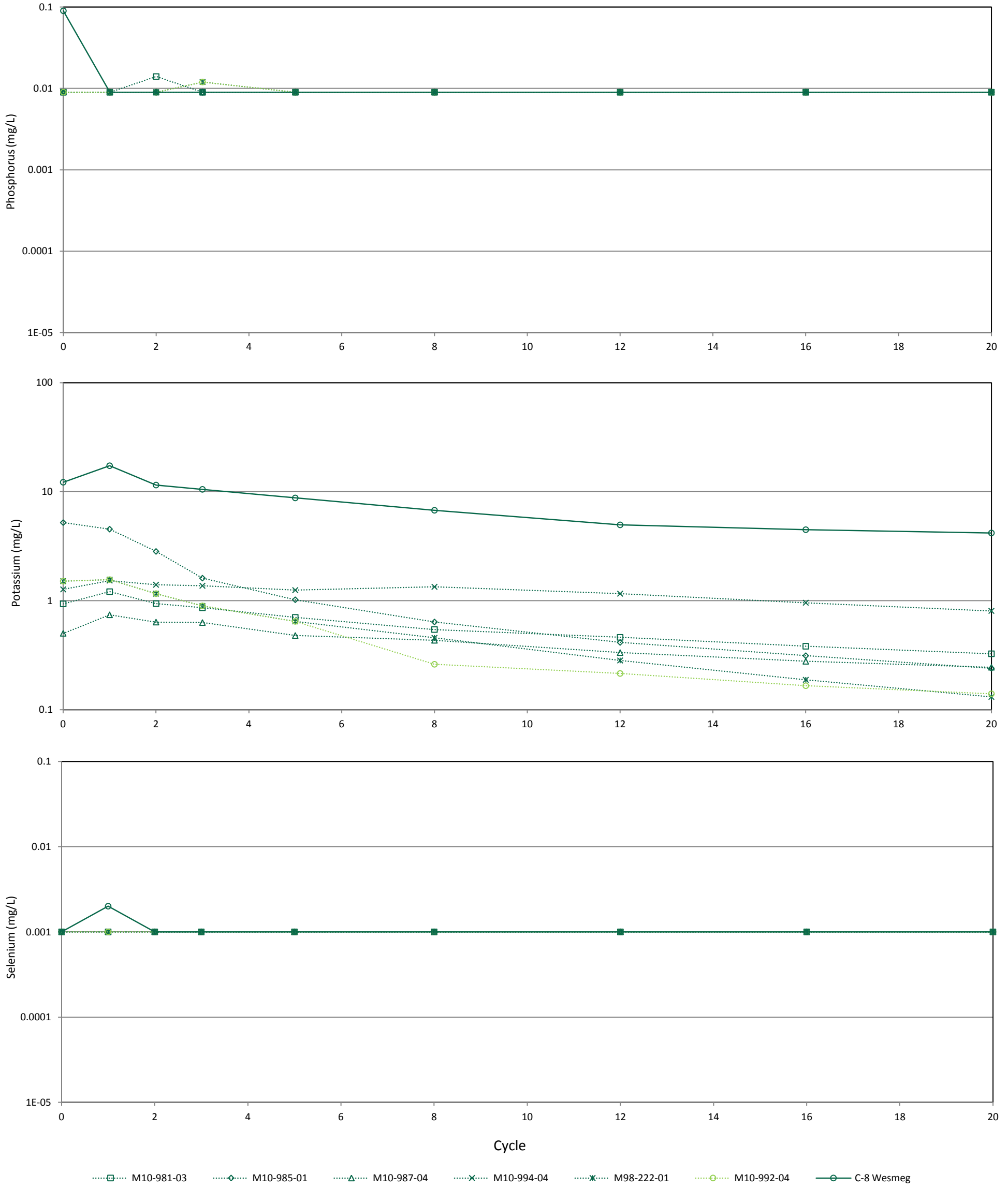



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Mercury<br>Molybdenum<br>Nickel** | **Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-65 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Phosphorus**
**Potassium**
**Selenium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

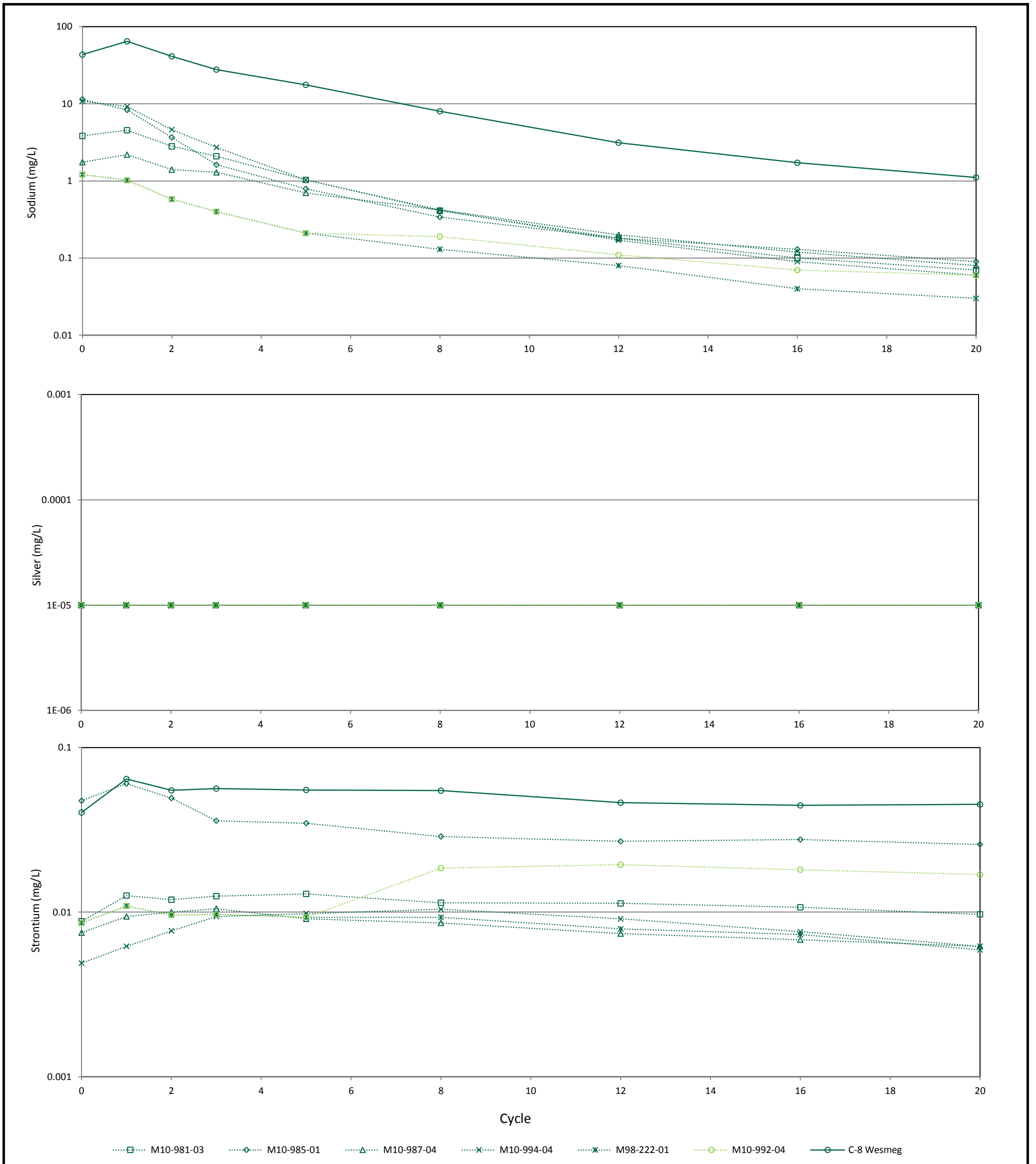
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

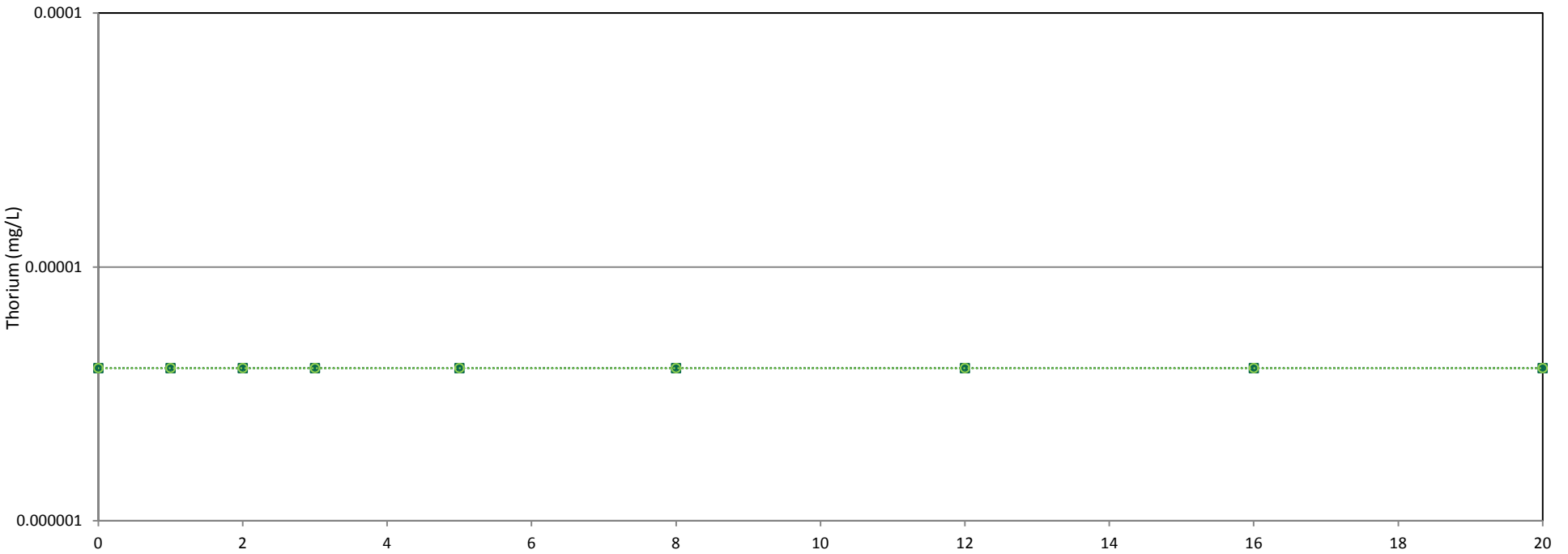
**FIGURE** B.7-66

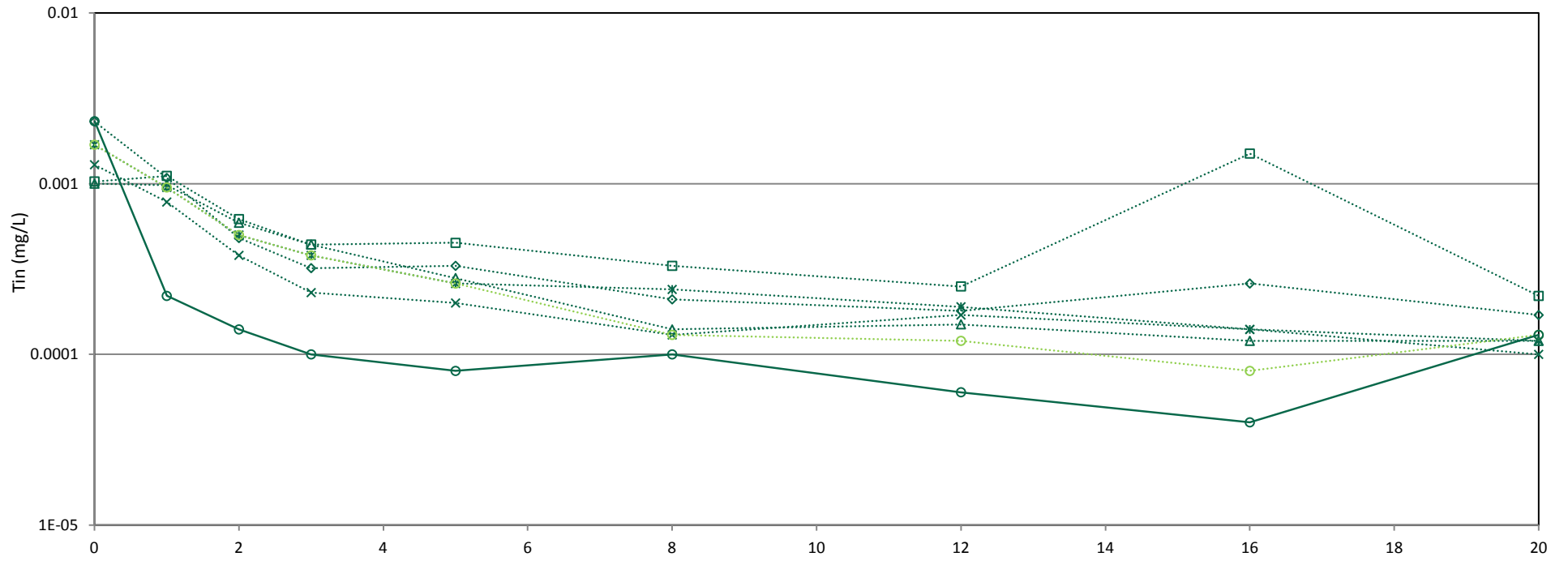
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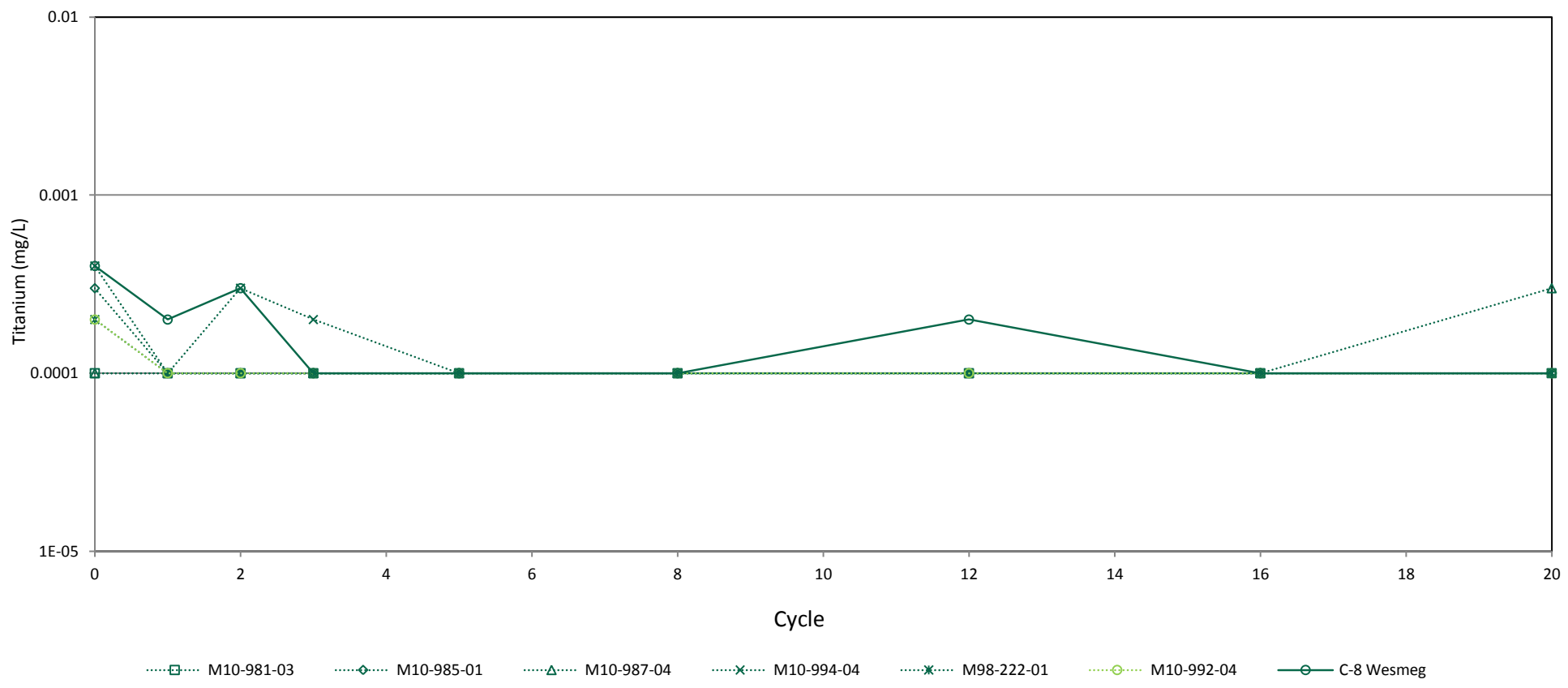



| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Sodium<br>Silver<br>Strontium** | **Kinetic Test Data<br>Wesmeg Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-67 |

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Thorium**
**Tin**
**Titanium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

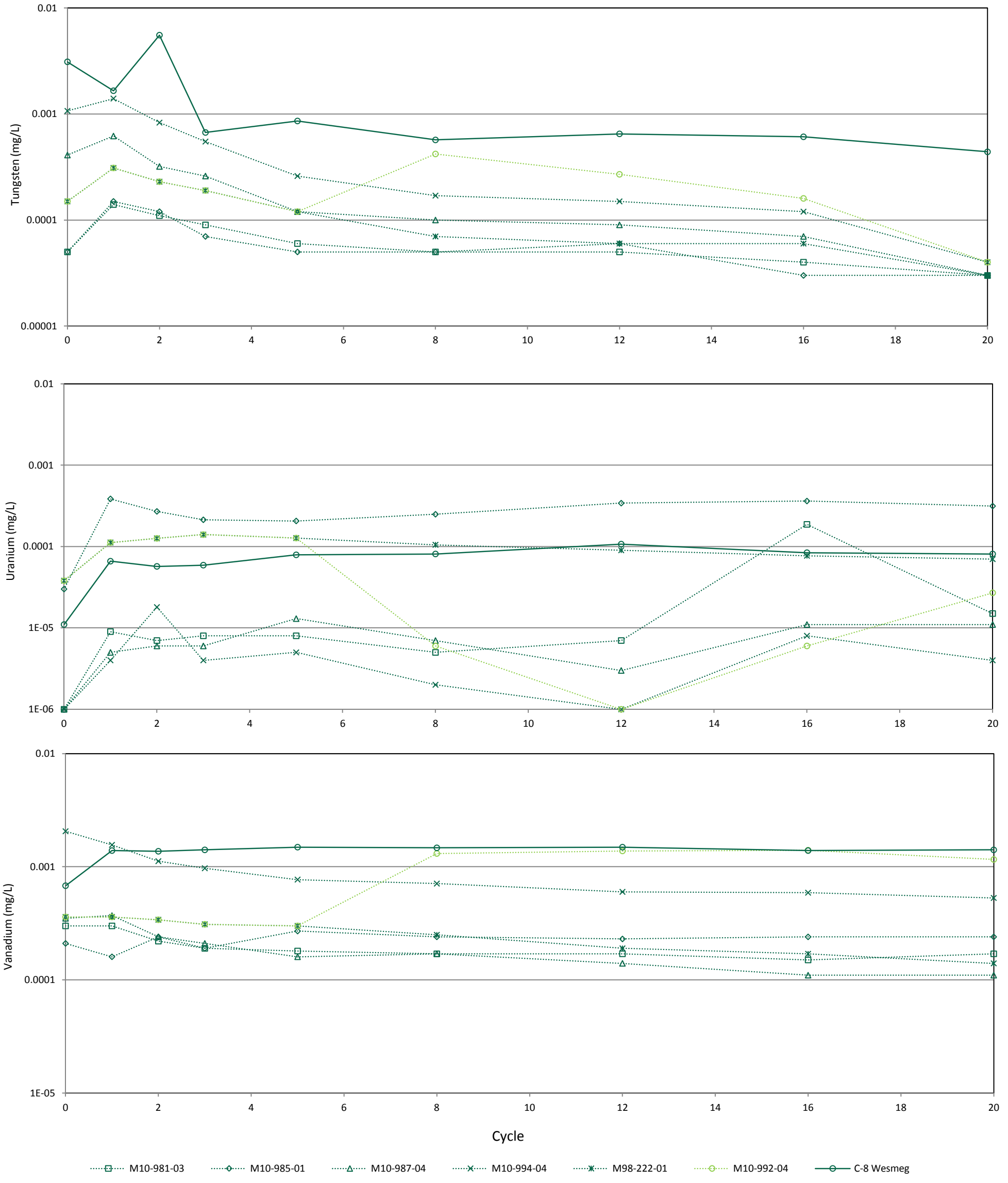
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-68

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Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

**Tungsten**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

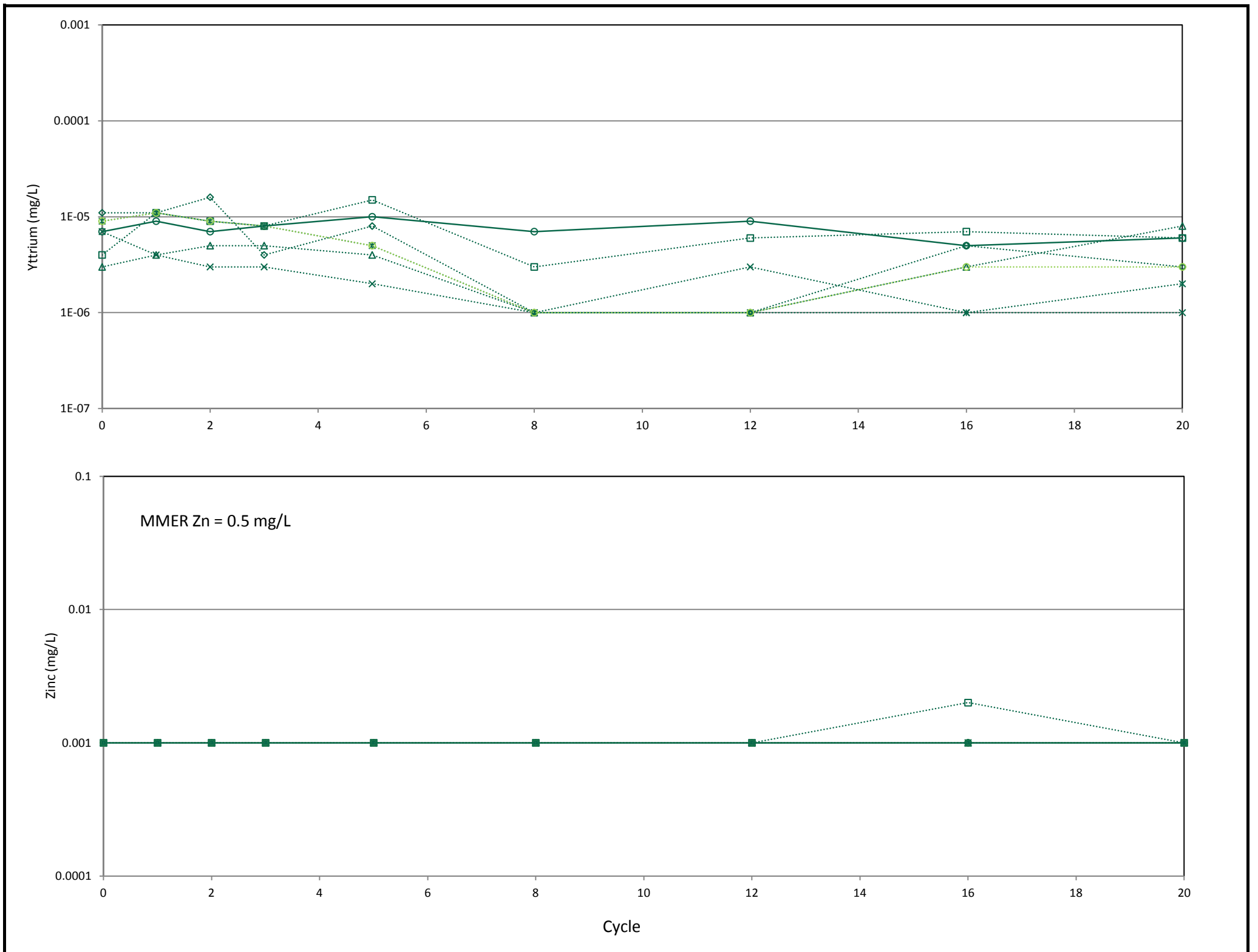
**Kinetic Test Data**
**Wesmeg Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

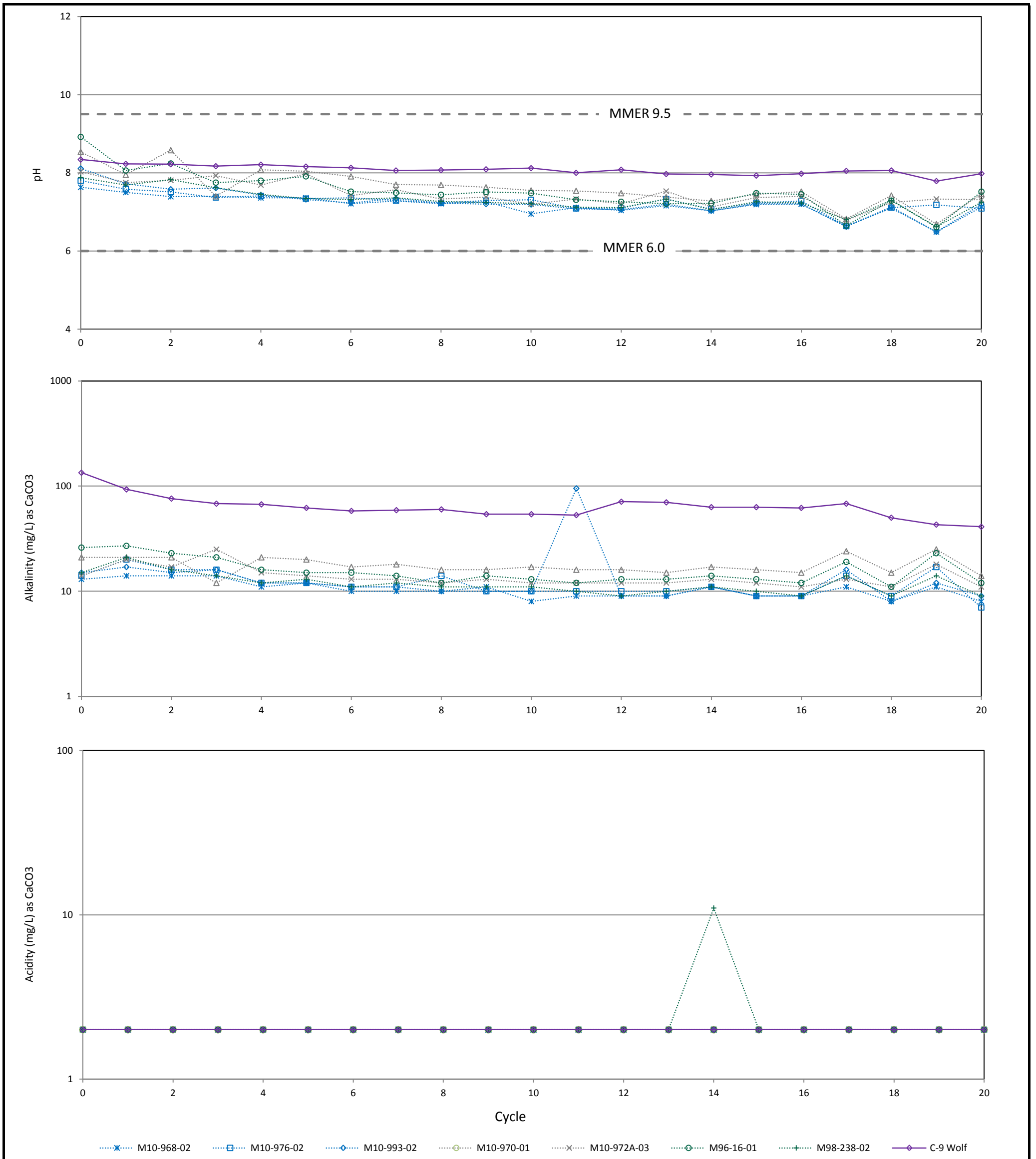
**FIGURE** B.7-69

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| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic | **Yttrium**<br>**Zinc** | **Kinetic Test Data**<br>**Wesmeg Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-70 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic
- 25% MV, 13% IF, 62% GW (large column)

**pH**
**Alkalinity**
**Acidity**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

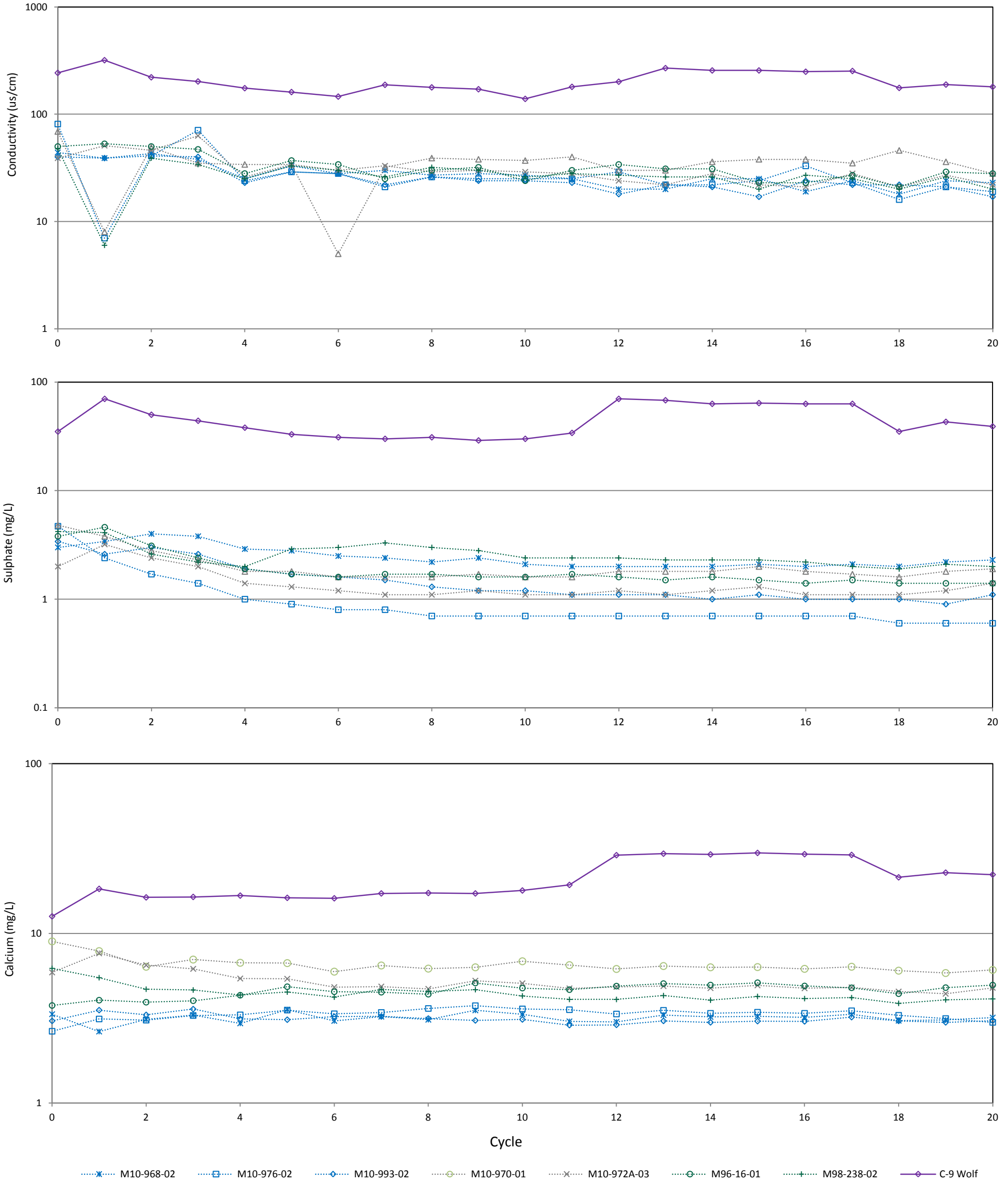
**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-71

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix B - WR Ore Pad\Appendix B - figs\
AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

25% MV, 13% IF, 62% GW (large column)

**Conductivity**
**Sulphate**
**Calcium**

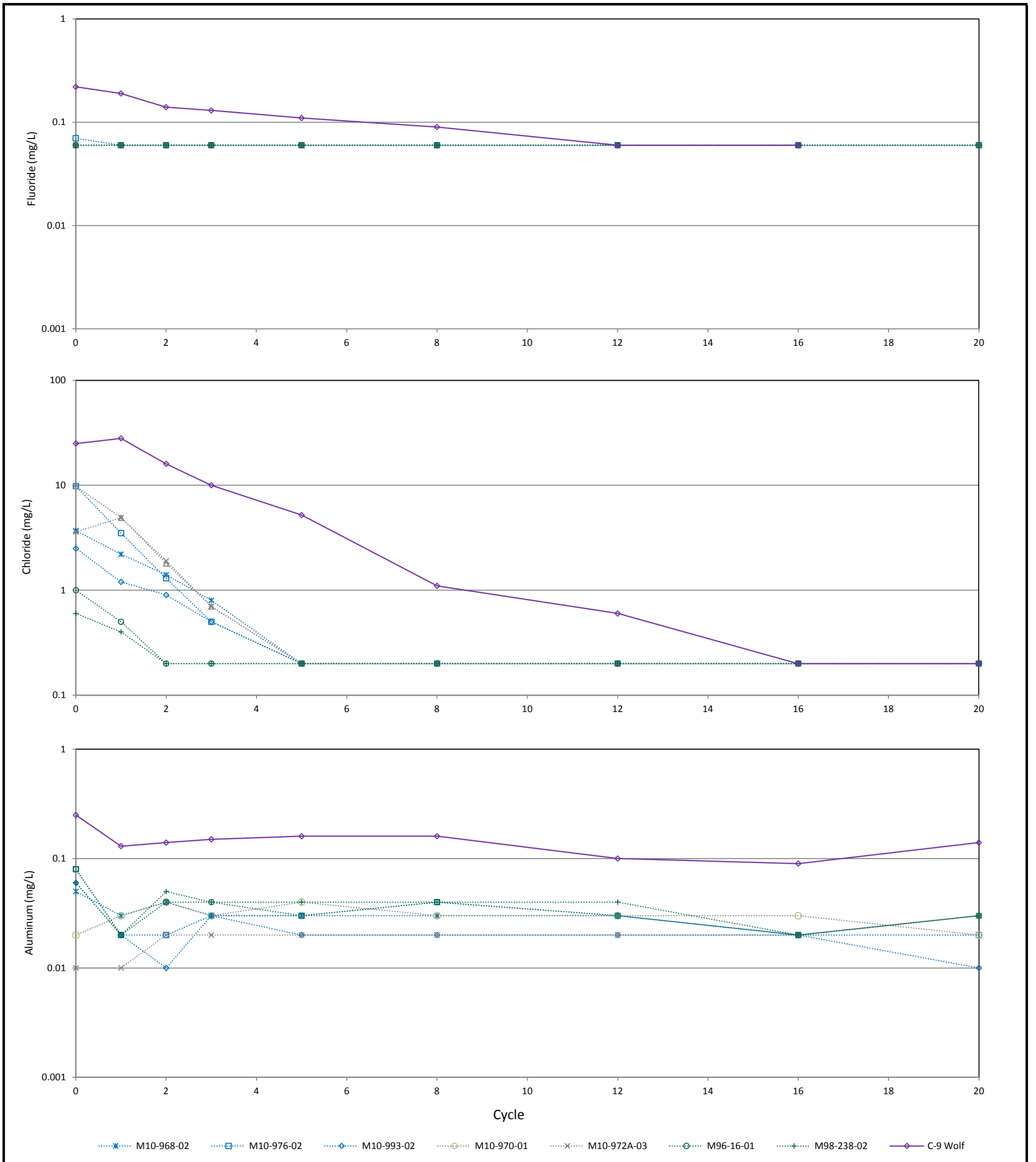
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|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

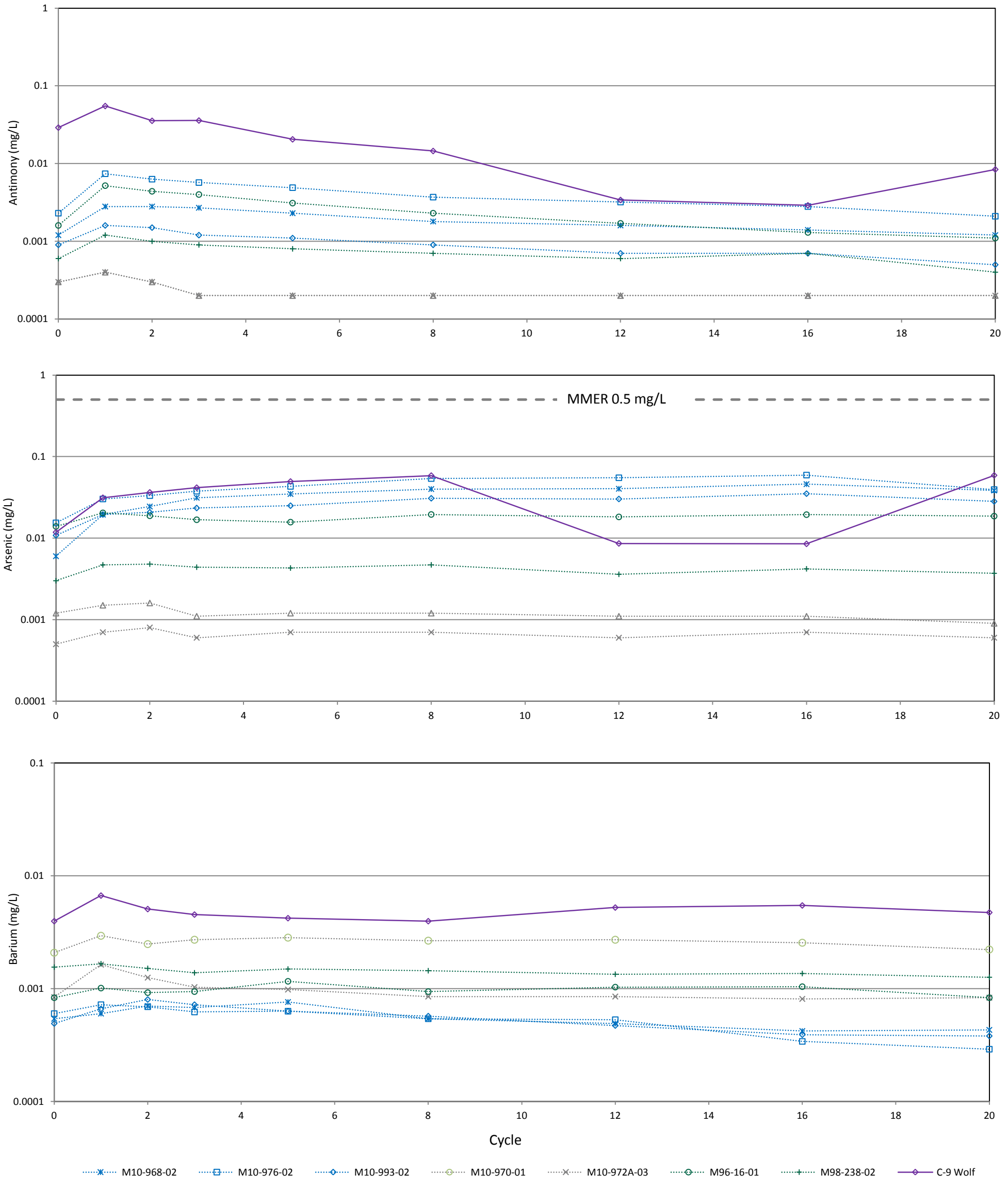
Golder Associates

**FIGURE** B.7-72



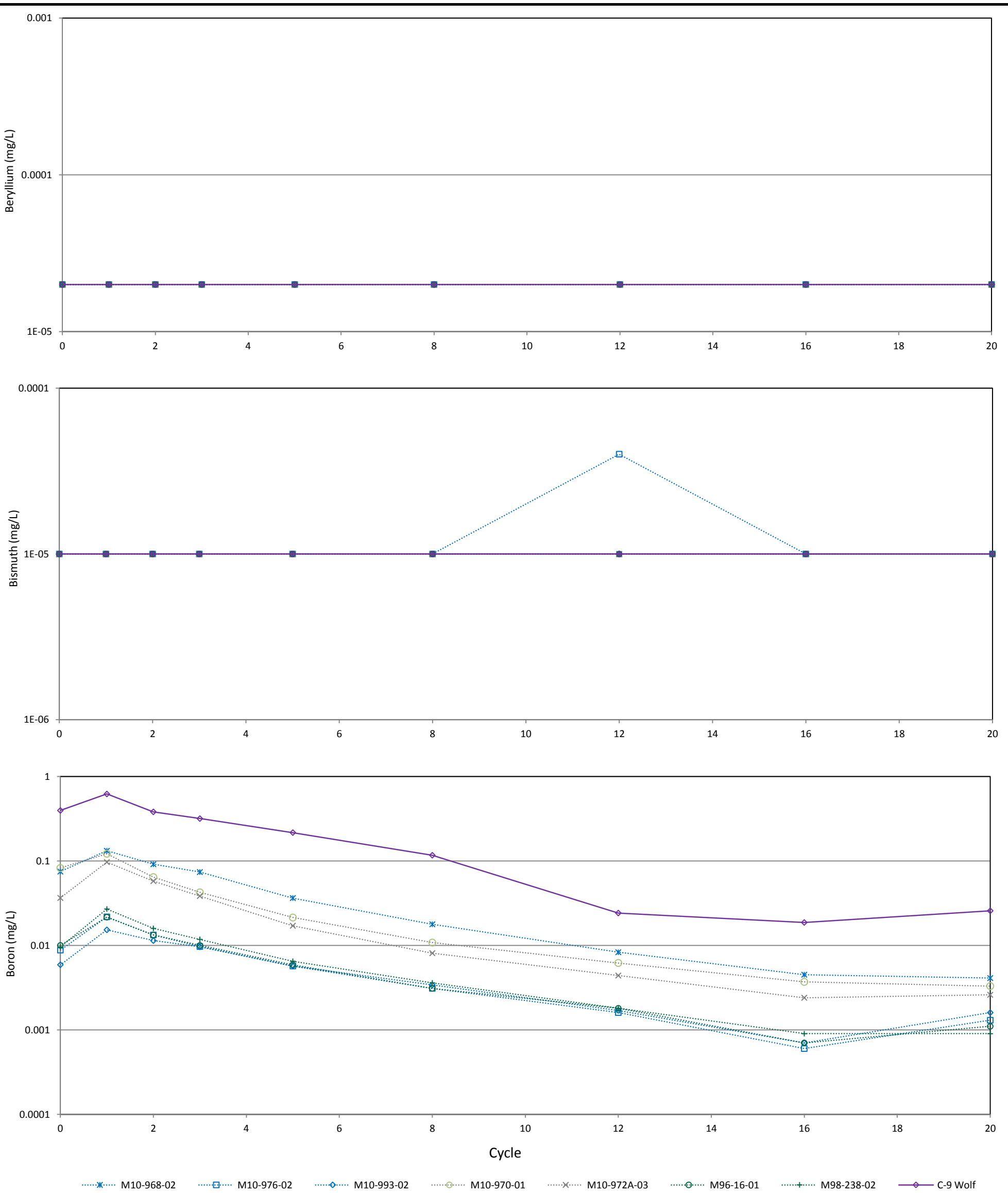

| Notes: | Rock Type: | Fluoride<br>Chloride<br>Aluminum | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| Criteria:<br>MMER (2006) | | | FIGURE B.7-73 |

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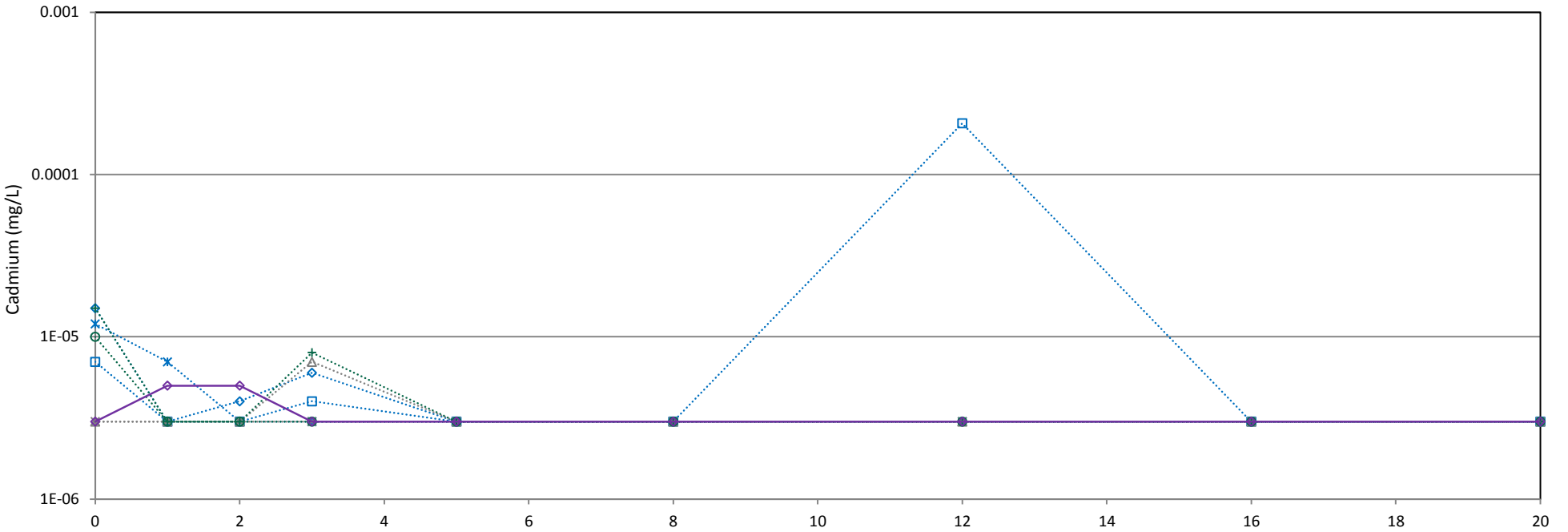


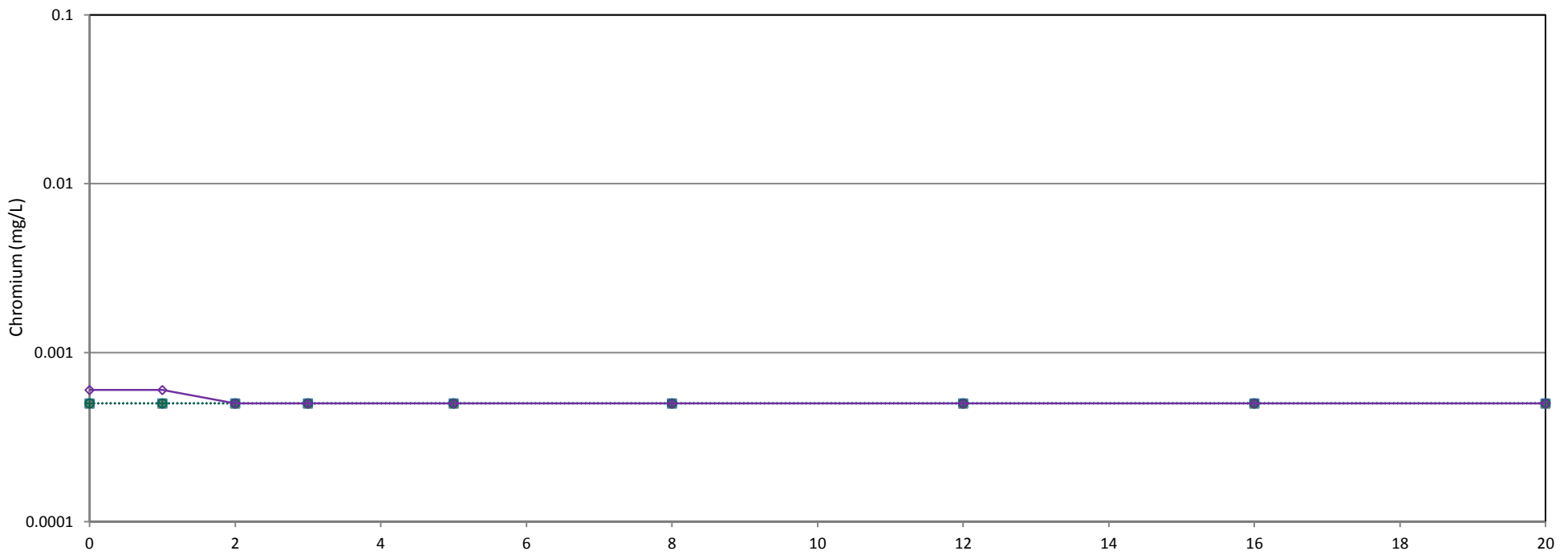

| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Antimony**<br>**Arsenic**<br>**Barium** | **Kinetic Test Data**<br>**Wolf Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-74 |

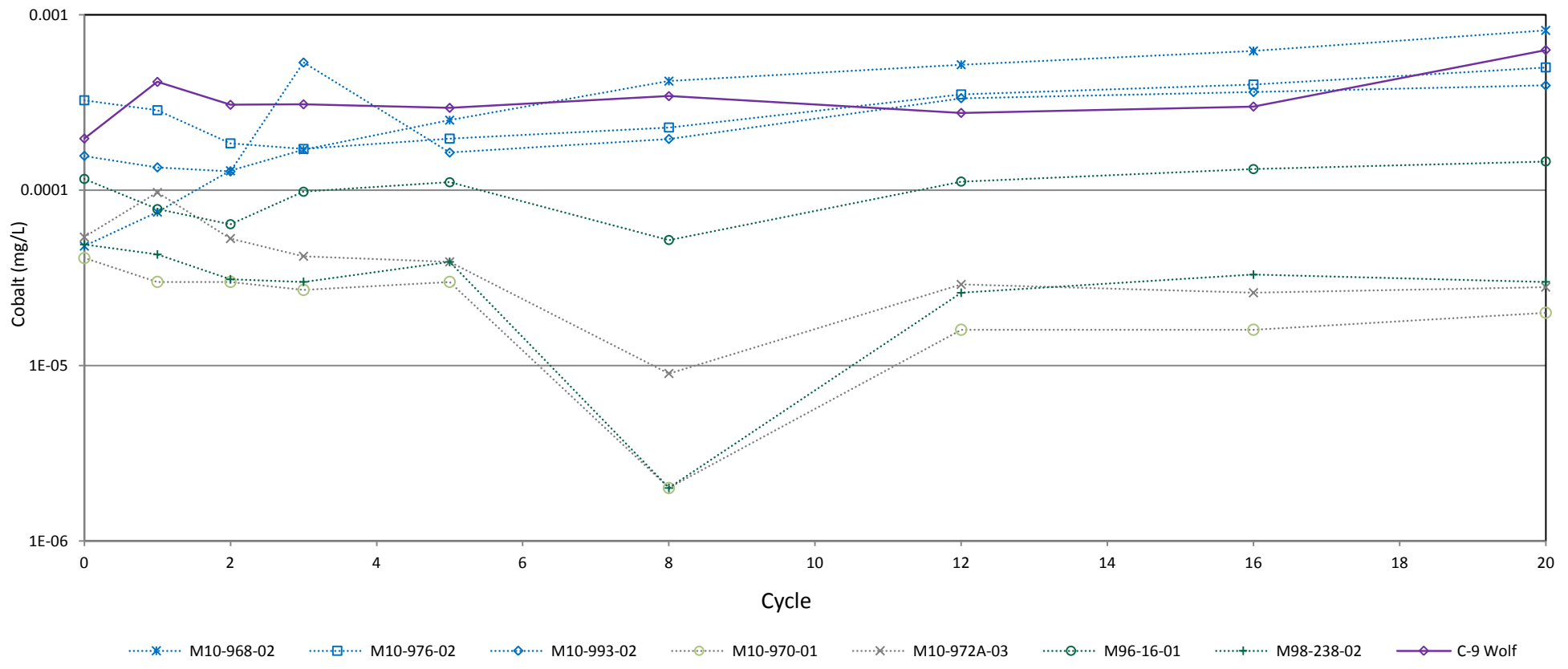
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Beryllium<br>Bismuth<br>Boron** | **Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-75 |

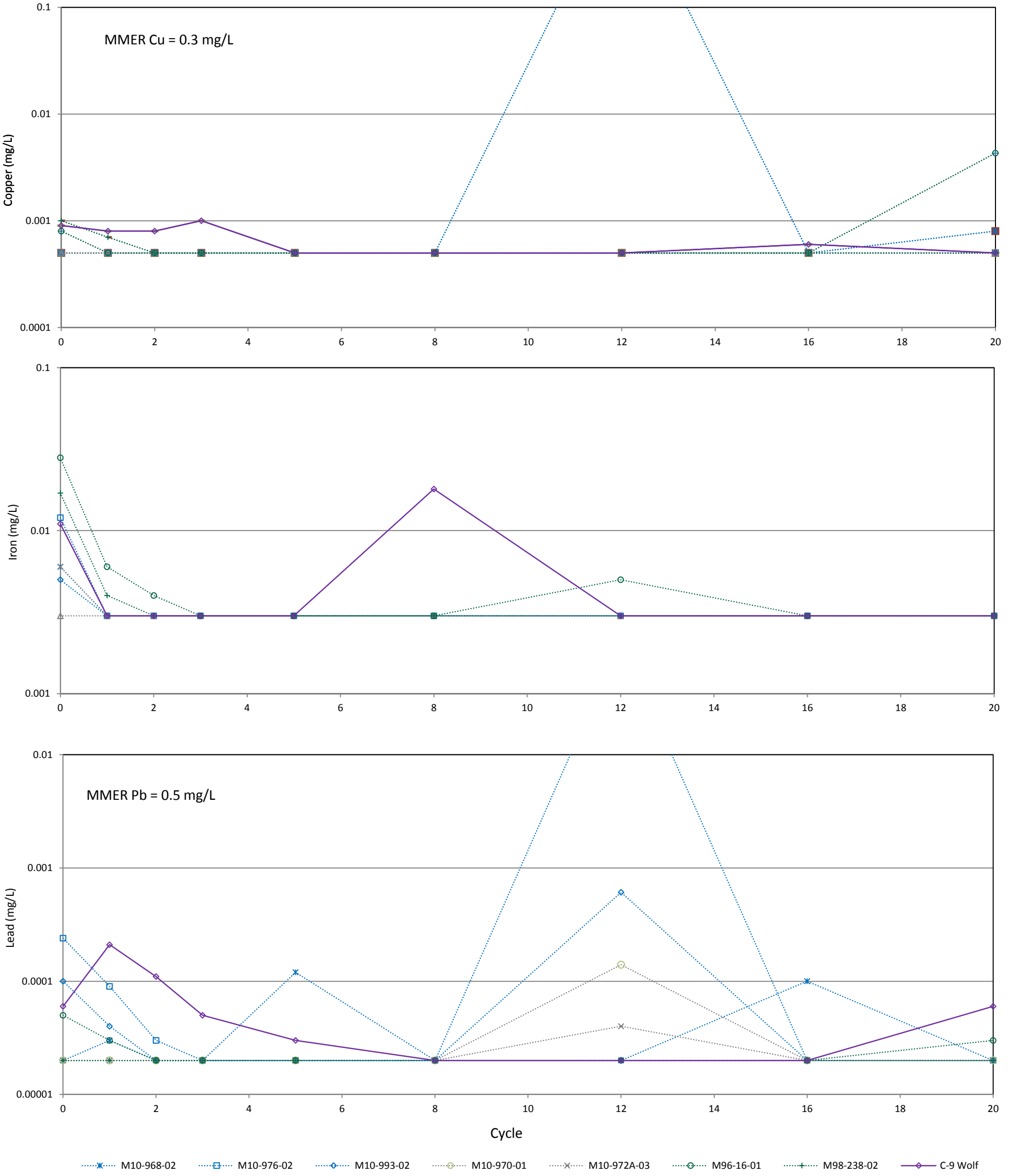


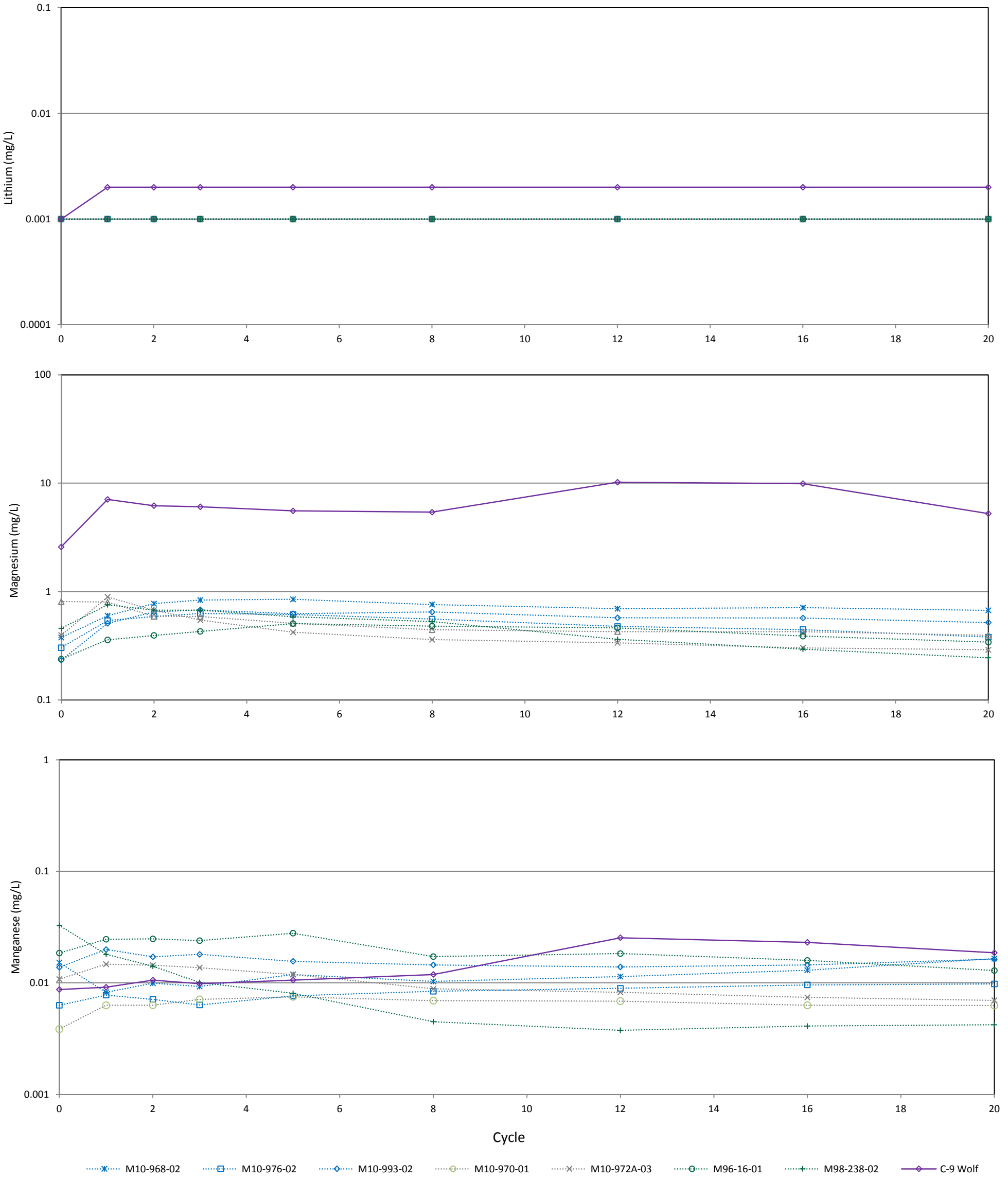

| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Cadmium<br>Chromium<br>Cobalt** | **Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property** |
| Criteria:<br>MMER (2006) | | DRAWN LMC / DATE Sep-12<br>CHECKED AJS/DH / JOB NO 11-1428-0011<br>REVIEWED VJB / PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** B.7-76 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx



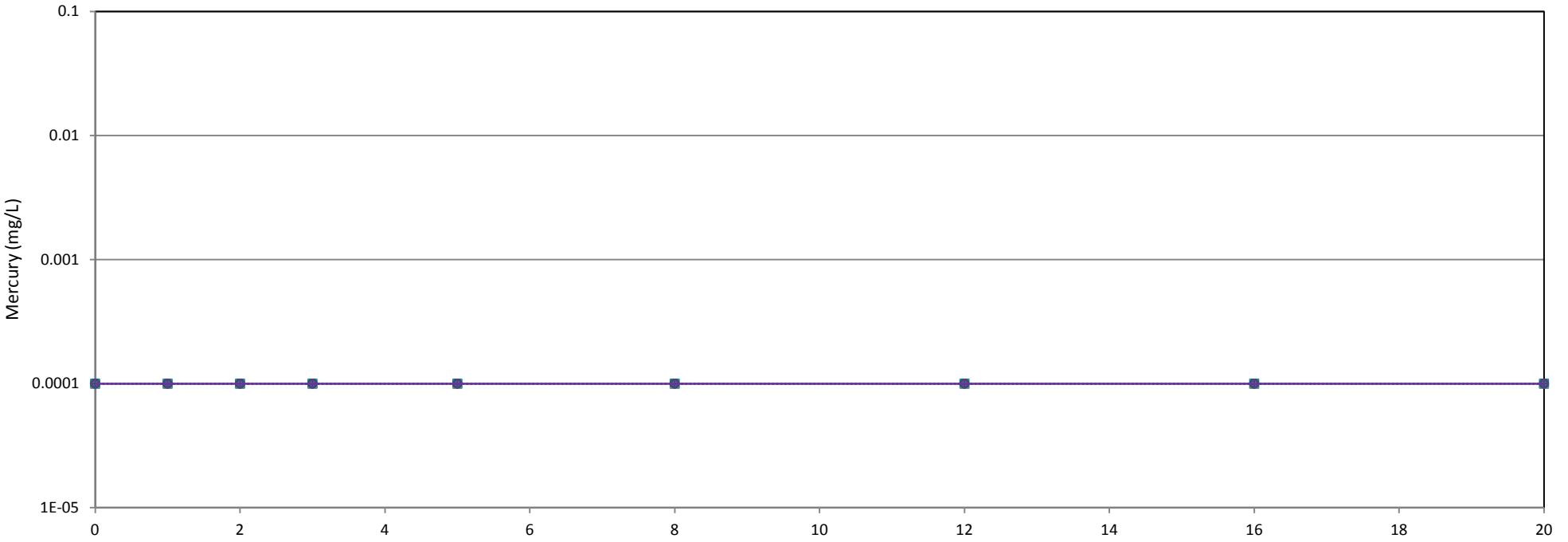

| | | | |
|---|---|---|---|
| Notes:<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Rock Type:<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Copper<br>Iron<br>Lead**<br>DRAWN LMC — DATE Sep-12<br>CHECKED AJS/DH — JOB NO 11-1428-0011<br>REVIEWED VJB — PHASE/TASK 6300 | **Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property**<br>Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-77 |
| Criteria:<br>MMER (2006) | | | |

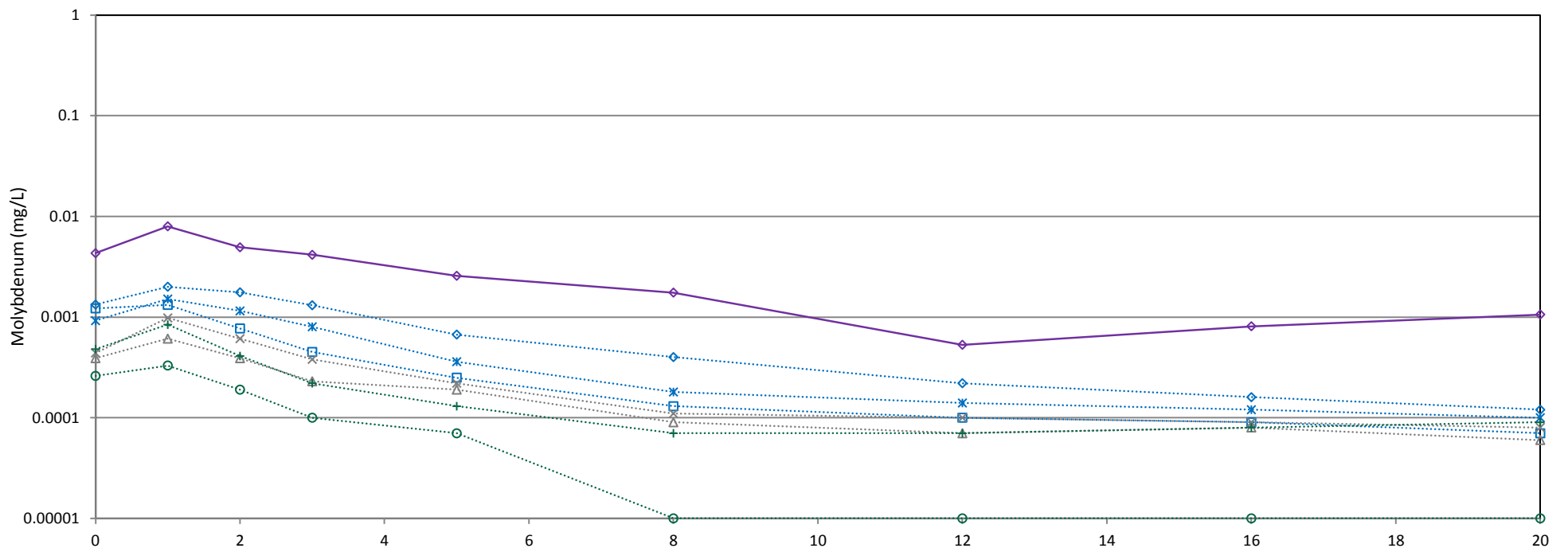
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

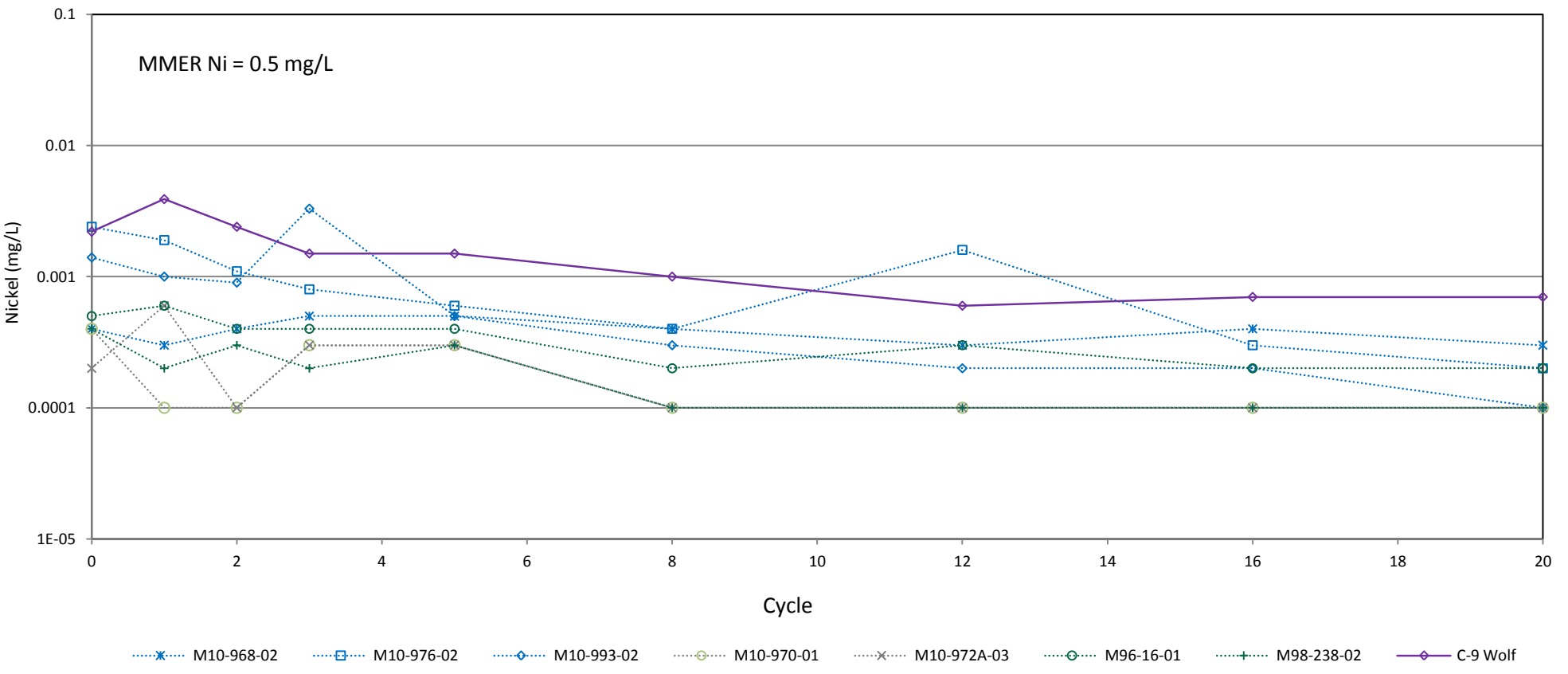



| | | | |
|---|---|---|---|
| **Notes:**<br>Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | **Rock Type:**<br>Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | **Lithium**<br>**Magnesium**<br>**Manganese** | **Kinetic Test Data**<br>**Wolf Deposit**<br>**Meliadine Property** |
| **Criteria:**<br>MMER (2006) | | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | **Agnico-Eagle Mines Ltd.**<br>Golder Associates |
| | | | **FIGURE** B.7-78 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

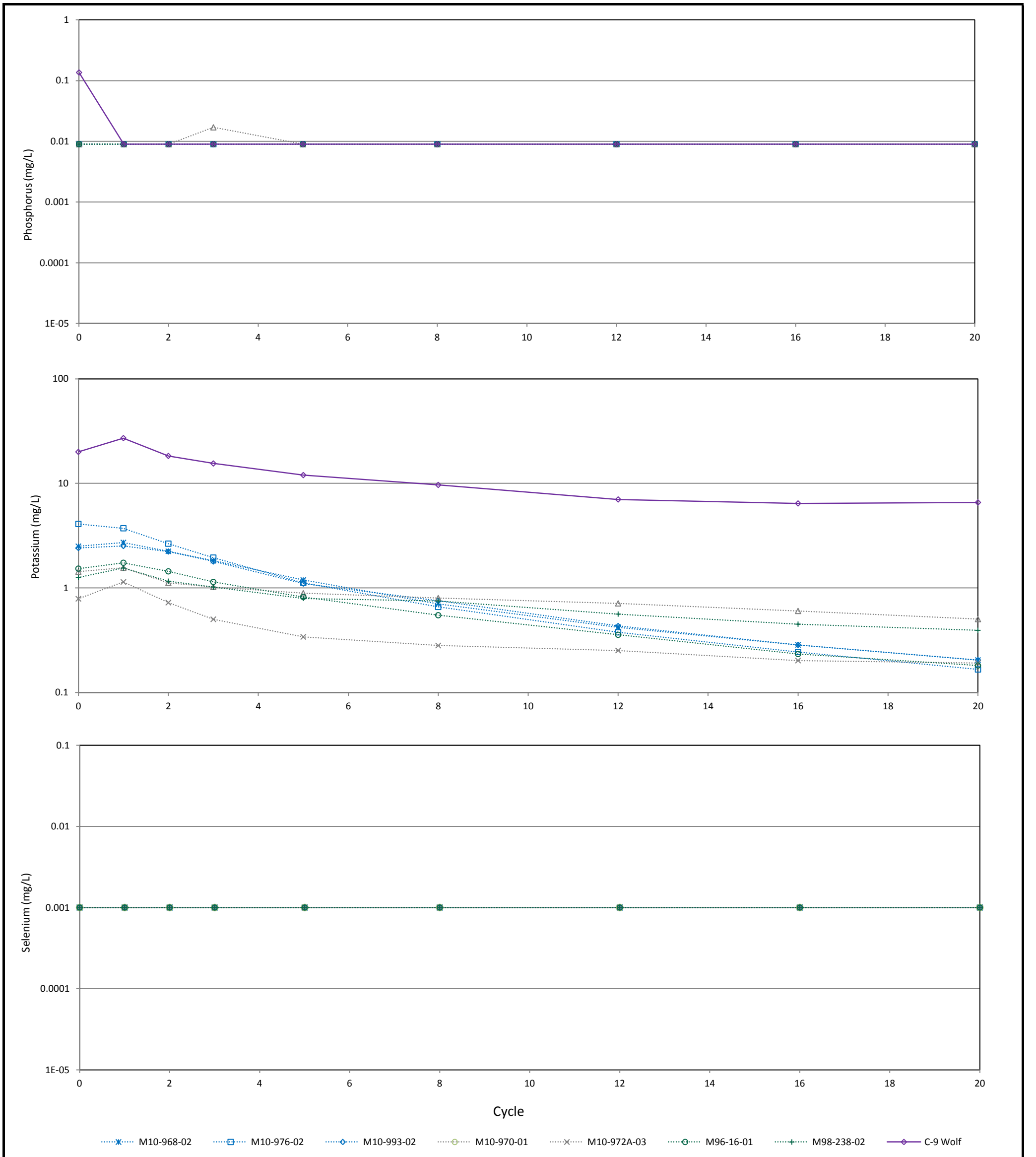



| Notes: | Rock Type: | Mercury<br>Molybdenum<br>Nickel | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| Criteria:<br>MMER (2006) | | | FIGURE B.7-79 |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

25% MV, 13% IF, 62% GW (large column)

**Phosphorus**
**Potassium**
**Selenium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

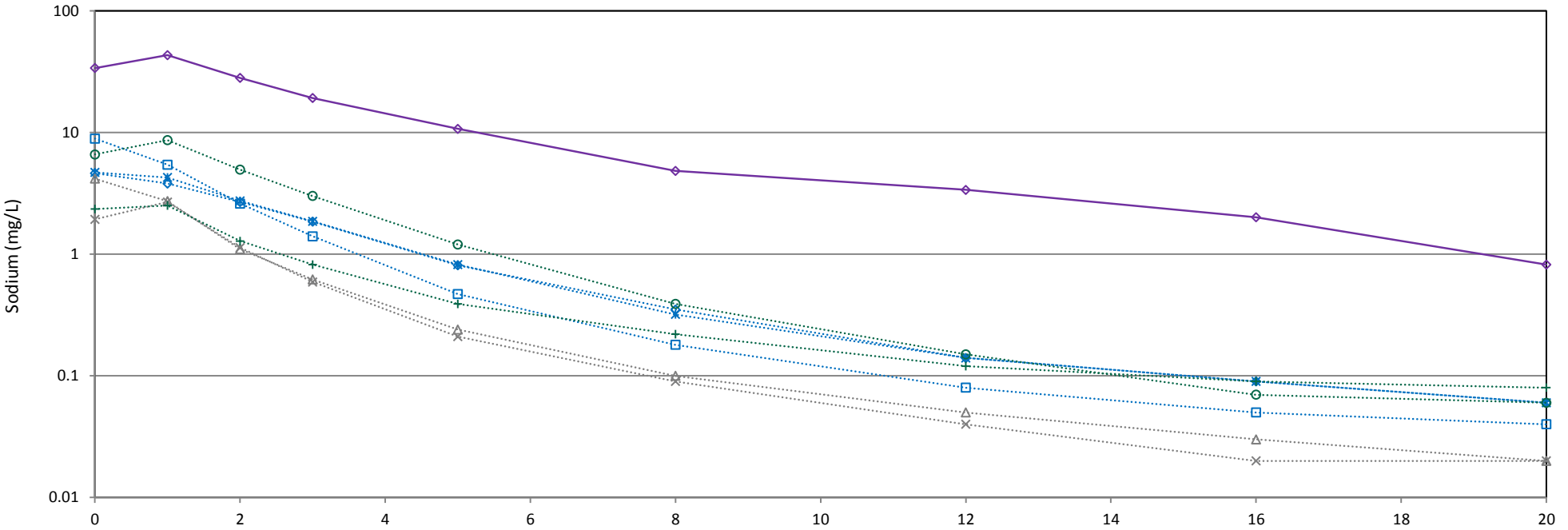
**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

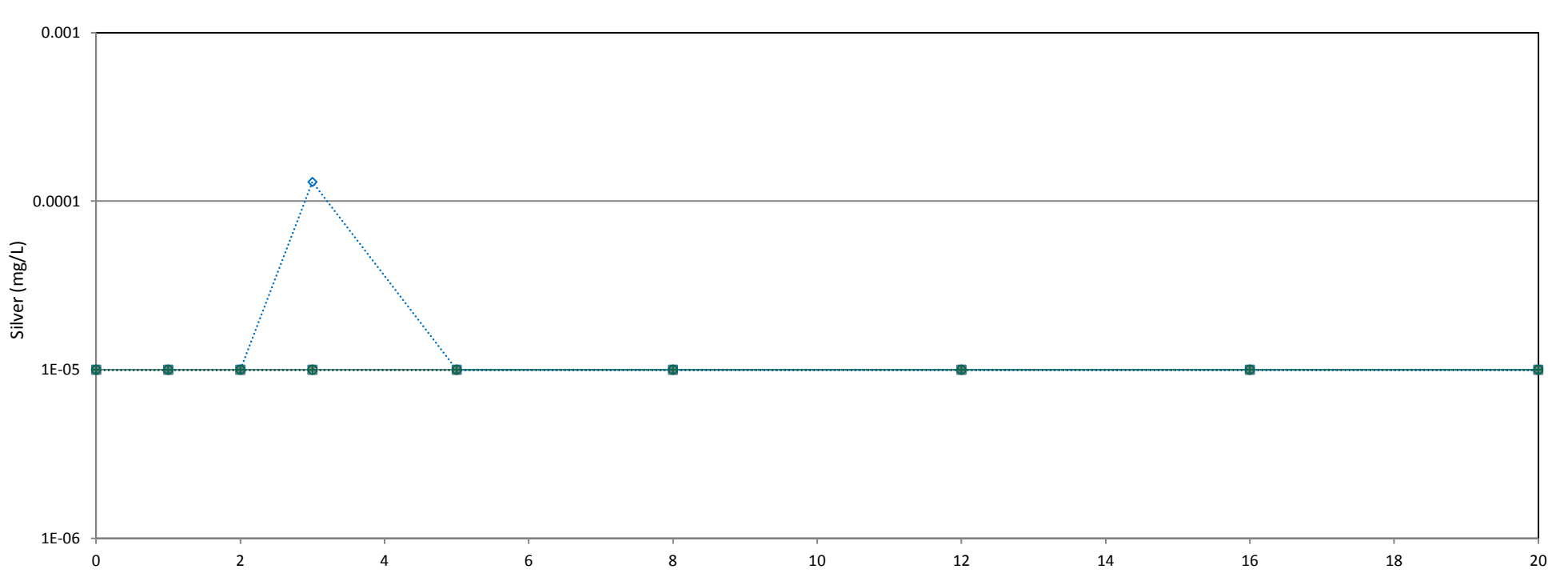
**Agnico-Eagle Mines Ltd.**

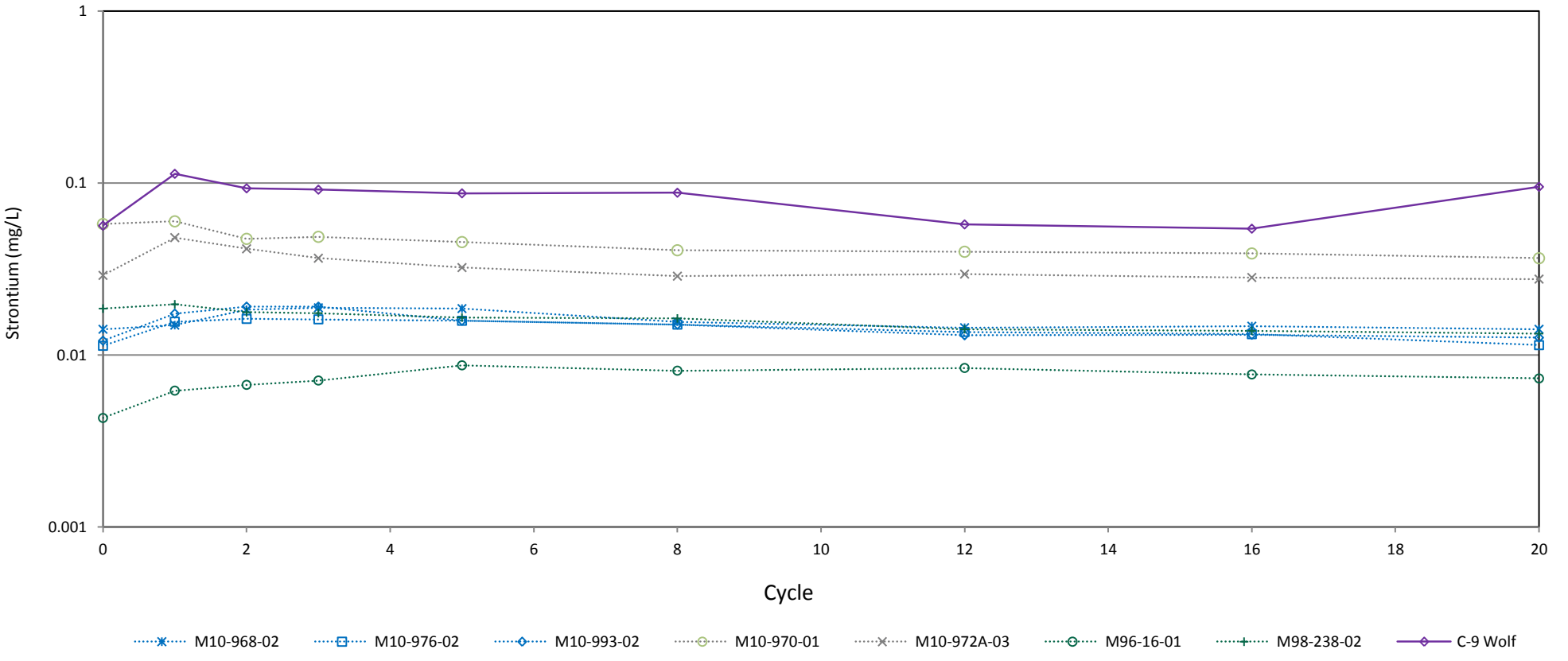
Golder Associates

**FIGURE** B.7-80

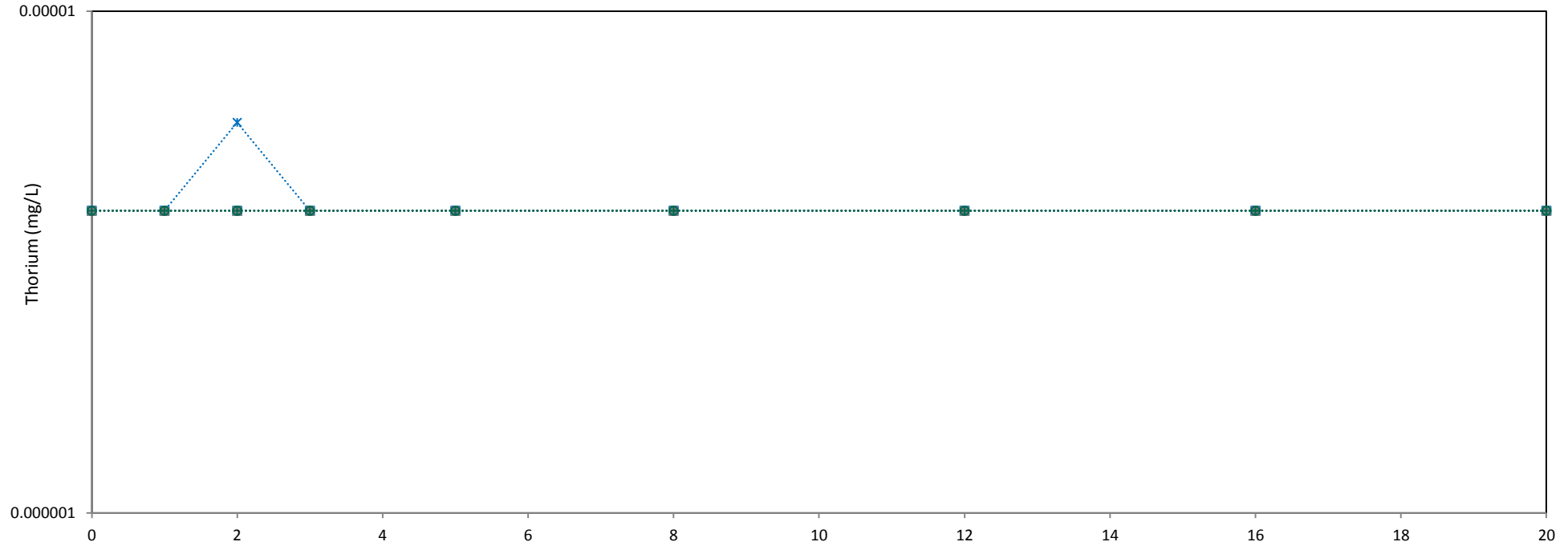
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

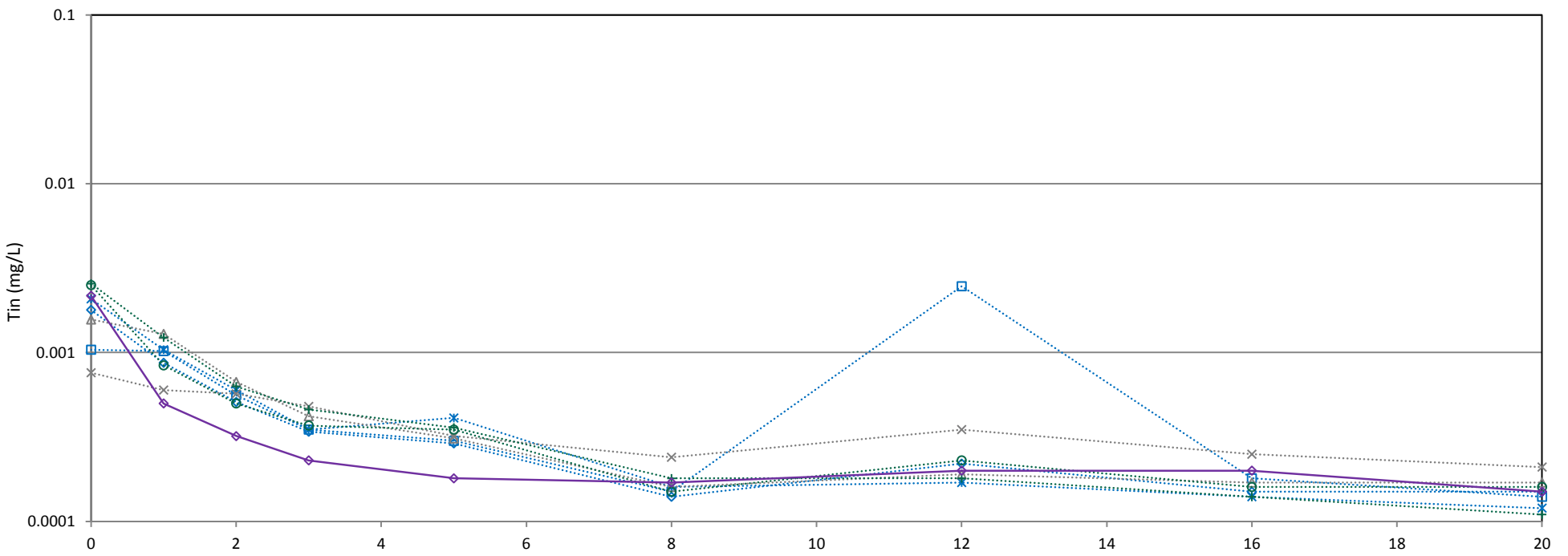


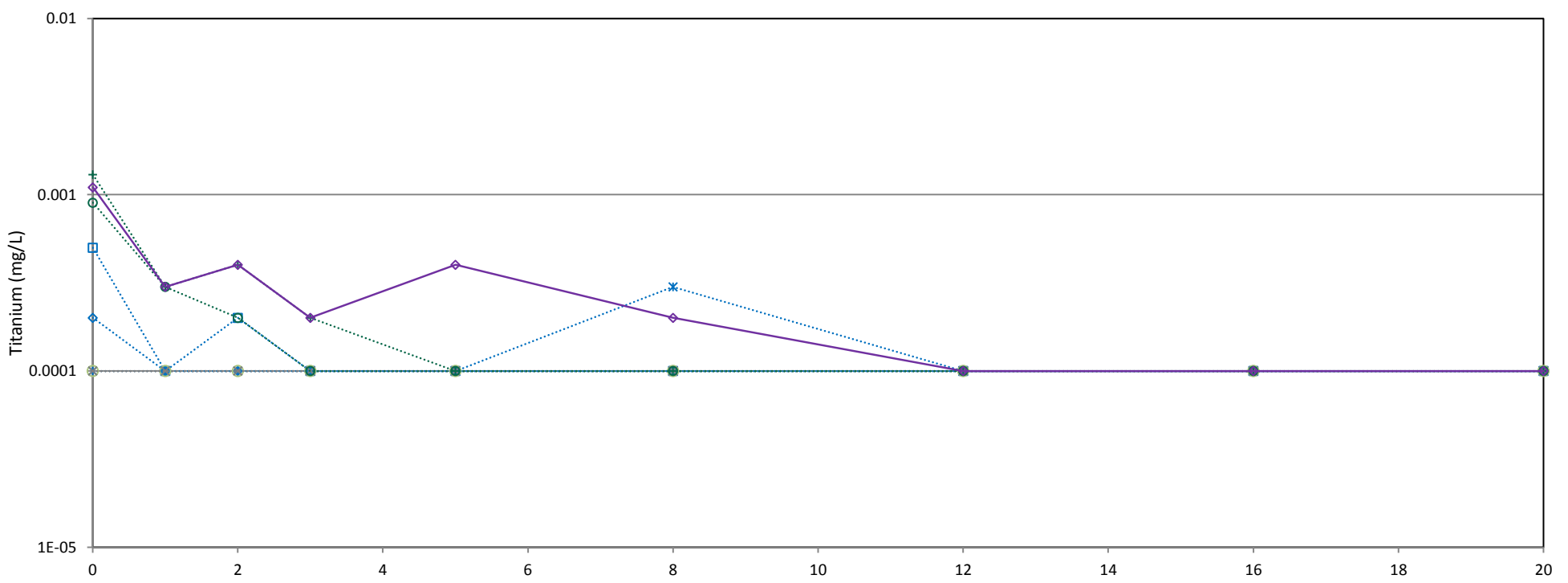




| Notes: | Rock Type: | Sodium<br>Silver<br>Strontium | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates |
| Criteria:<br>MMER (2006) | | | FIGURE B.7-81 |

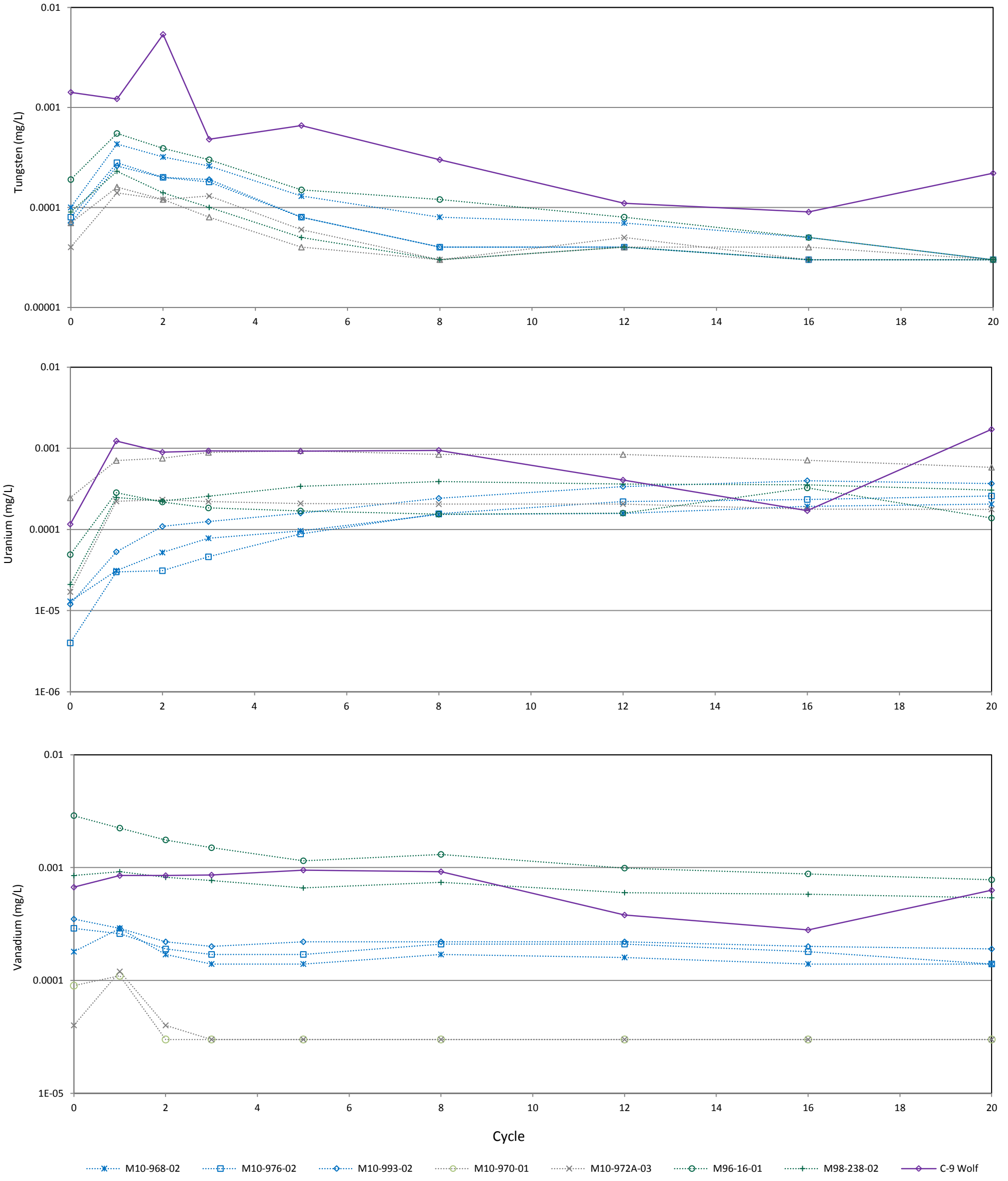



| Notes: | Rock Type: | Thorium<br>Tin<br>Titanium | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC; DATE Sep-12<br>CHECKED AJS/DH; JOB NO 11-1428-0011<br>REVIEWED VJB; PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-82 |
| Criteria:<br>MMER (2006) | | | |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




Notes:

- Open Pit
- Underground
- 1 kg HCT
- 50-100 kg Column Tests

Criteria:

MMER (2006)

Rock Type:

- Iron Formation
- Greywacke
- Mafic Volcanic
- Ultramafic

25% MV, 13% IF, 62% GW (large column)

**Tungsten**
**Uranium**
**Vanadium**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Sep-12 |
| CHECKED | AJS/DH | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

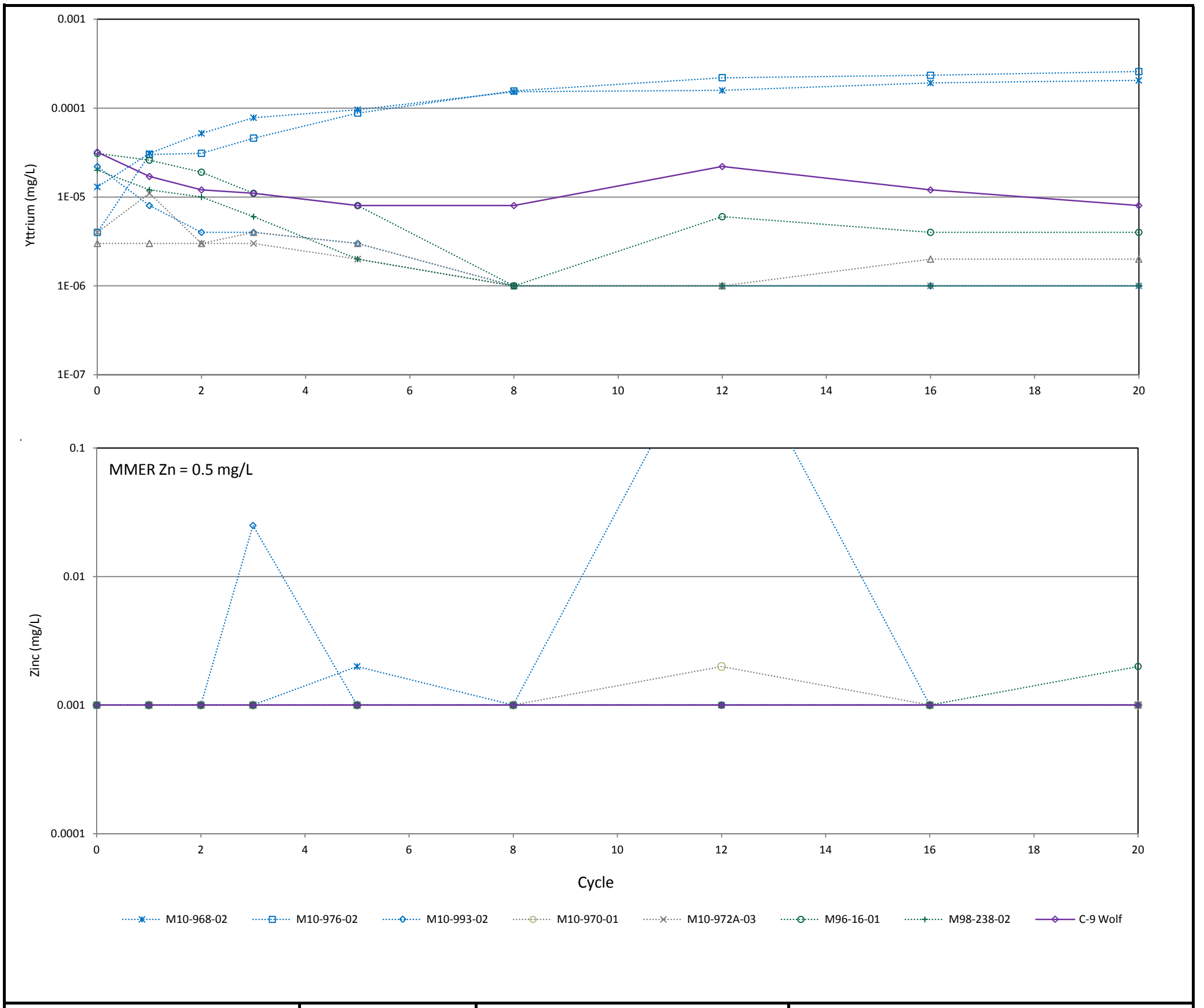
**Kinetic Test Data**
**Wolf Deposit**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** B.7-83

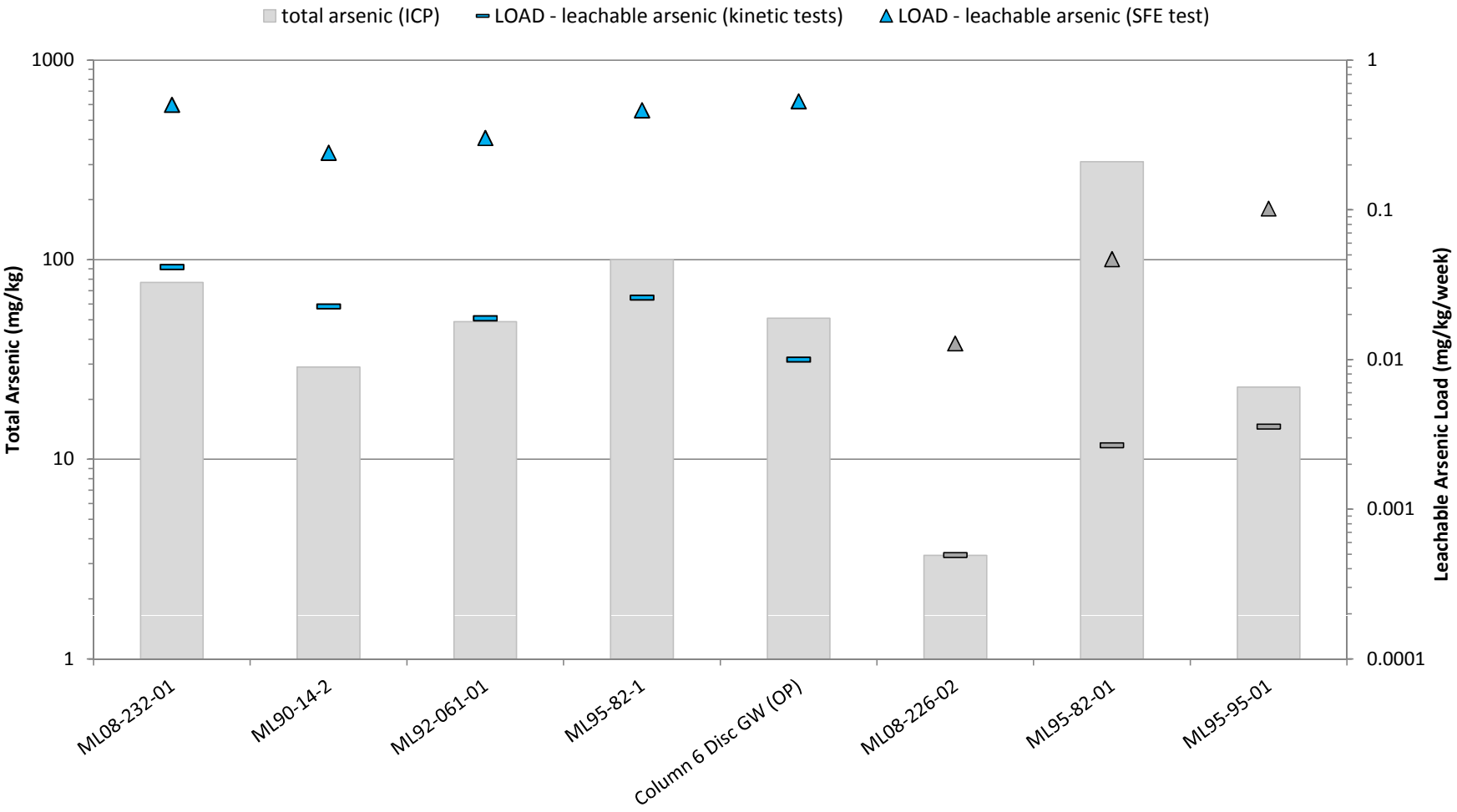
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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx




| Notes: | Rock Type: | Yttrium<br>Zinc | Kinetic Test Data<br>Wolf Deposit<br>Meliadine Property |
|---|---|---|---|
| Open Pit<br>Underground<br>1 kg HCT<br>50-100 kg Column Tests | Iron Formation<br>Greywacke<br>Mafic Volcanic<br>Ultramafic<br>25% MV, 13% IF, 62% GW (large column) | DRAWN LMC DATE Sep-12<br>CHECKED AJS/DH JOB NO 11-1428-0011<br>REVIEWED VJB PHASE/TASK 6300 | Agnico-Eagle Mines Ltd.<br>Golder Associates<br>FIGURE B.7-84 |
| Criteria:<br>MMER (2006) | | | |

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AEM Meliadine_kinetic test figures_P-We-Wo_7Sep2012.xlsx

# B.8 Arsenic Leaching Rates: Figures

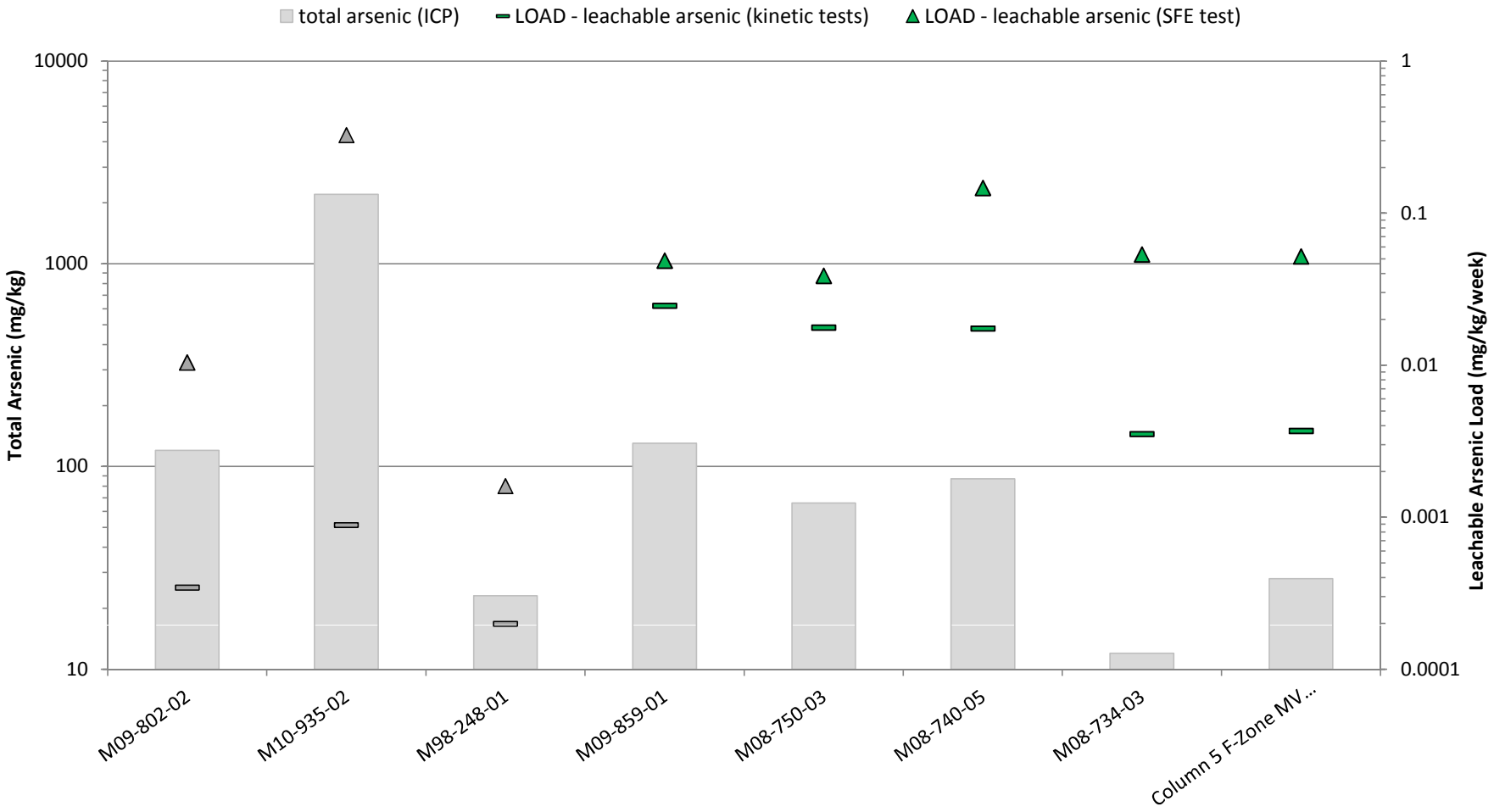



| | | |
|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Discovery Deposit - Greywacke and Iron Formation** |

Notes:

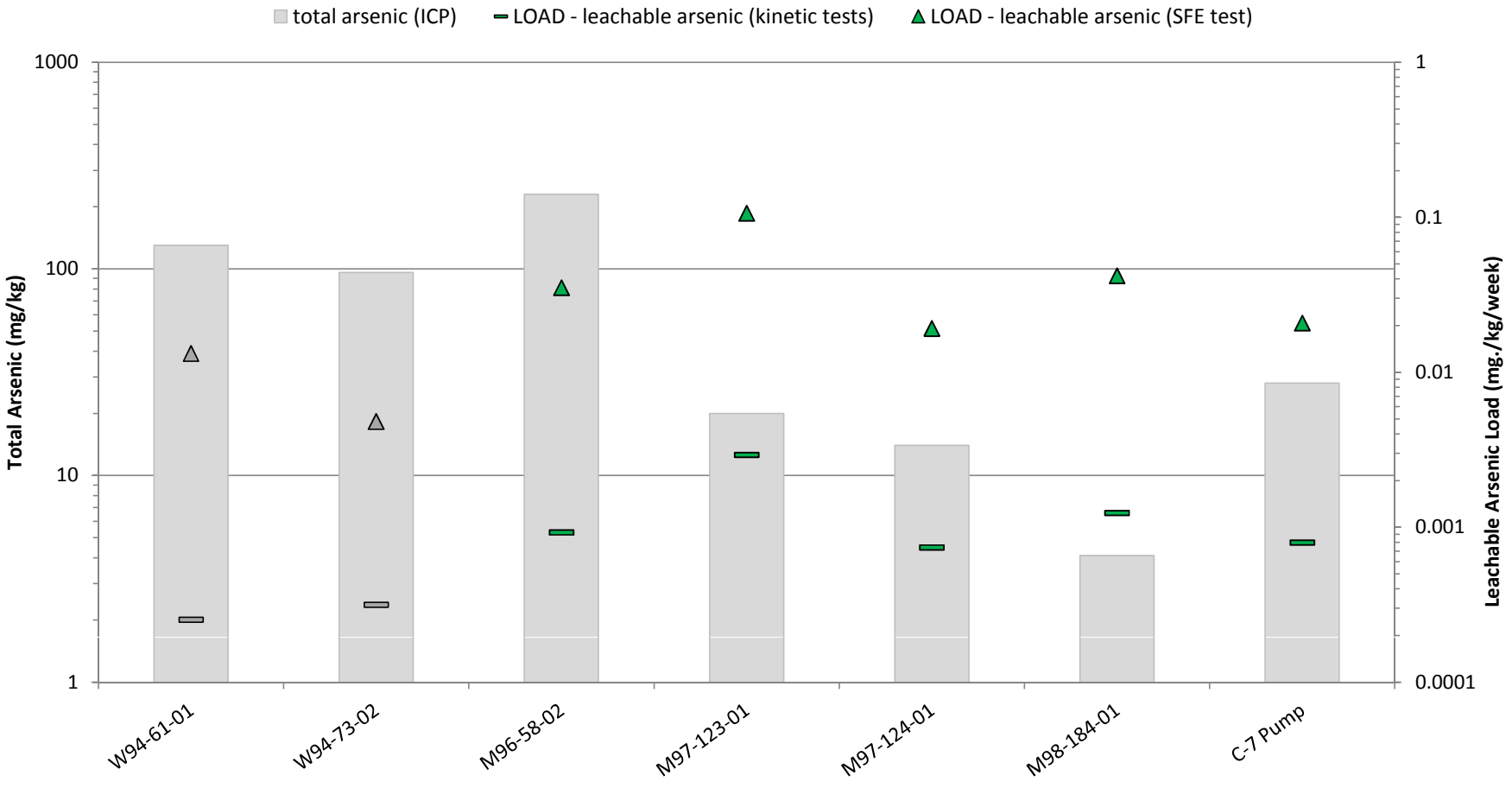
-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles).

| | | | | | |
|---|---|---|---|---|---|
| Prepared | JMC | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | VJB | | | Figure | **B.8-1** |




| | | | | |
|---|---|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**F Zone Deposit - Iron Formation and Mafic Volcanic** | | |
| Notes:<br>-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles). | Prepared | JMC | Date Sep-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | |
| | Reviewed | VJB | | Figure **B.8-2** |

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B.8 AEM_alldatacompiled_stats_6Sept12_arsenic loading graphs.xlsx



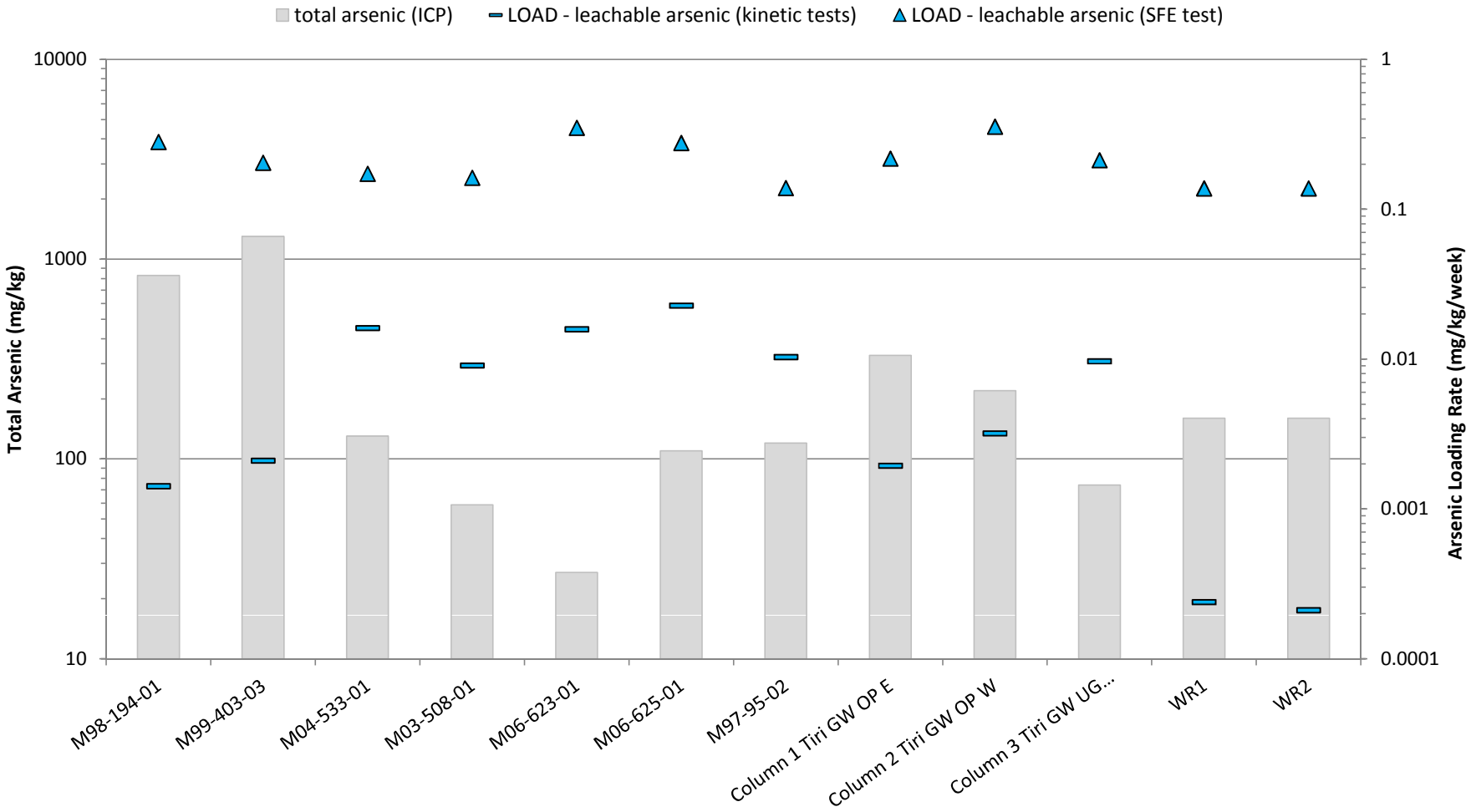

C-7 Pump = large column 86% MV and 14% IF

| | | |
|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Pump Deposit - Iron Formation and Mafic Volcanic** |

Notes:

-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles).

| | | | | | |
|---|---|---|---|---|---|
| Prepared | JMC | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | VJB | | | Figure | **B.8-3** |

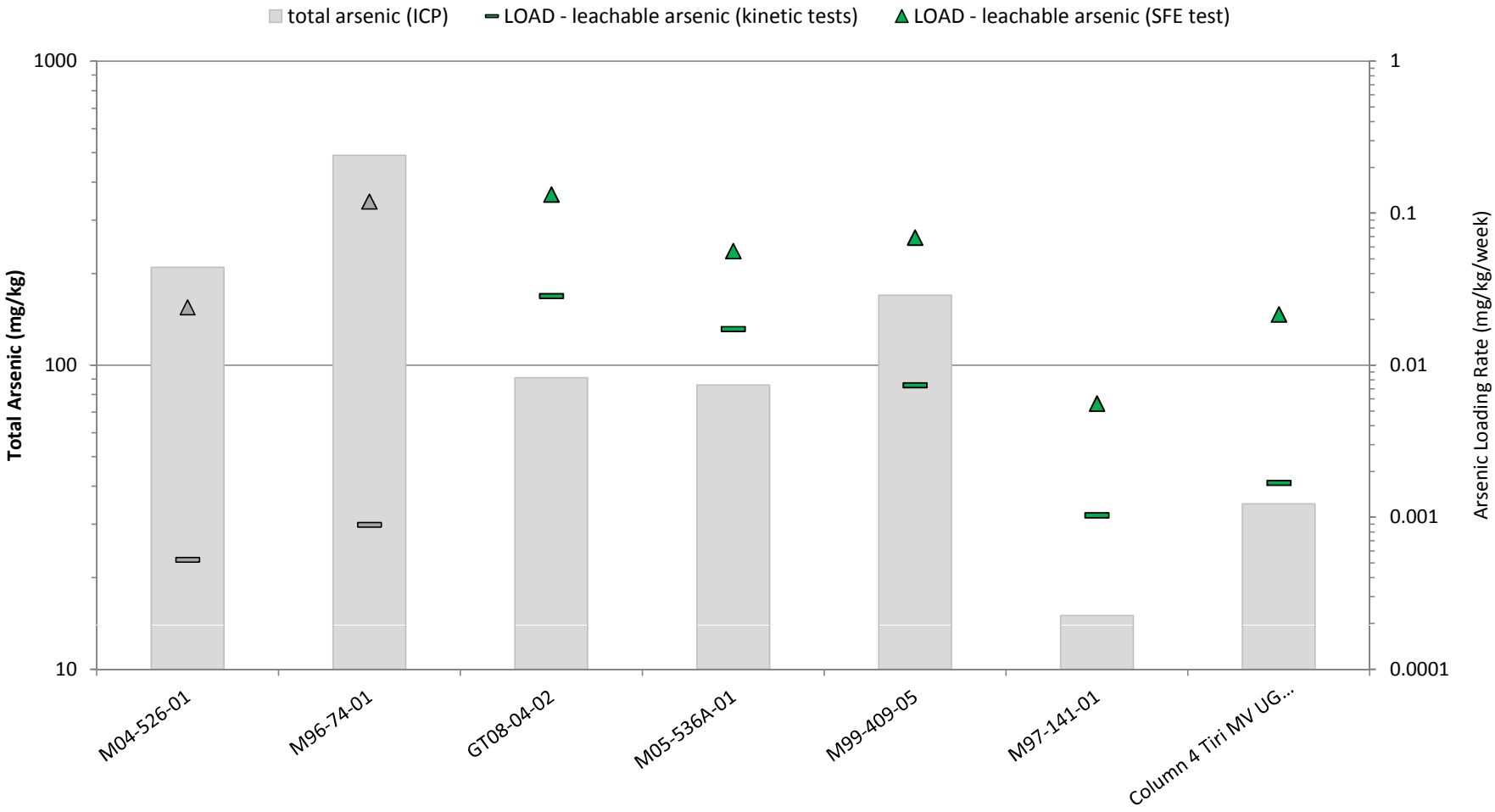



| | | | |
|---|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Tiriganiaq Deposit - Greywacke** | |

Notes:

-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles).

| | | | | | |
|---|---|---|---|---|---|
| Prepared | JMC | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | VJB | | | Figure | **B.8-4** |

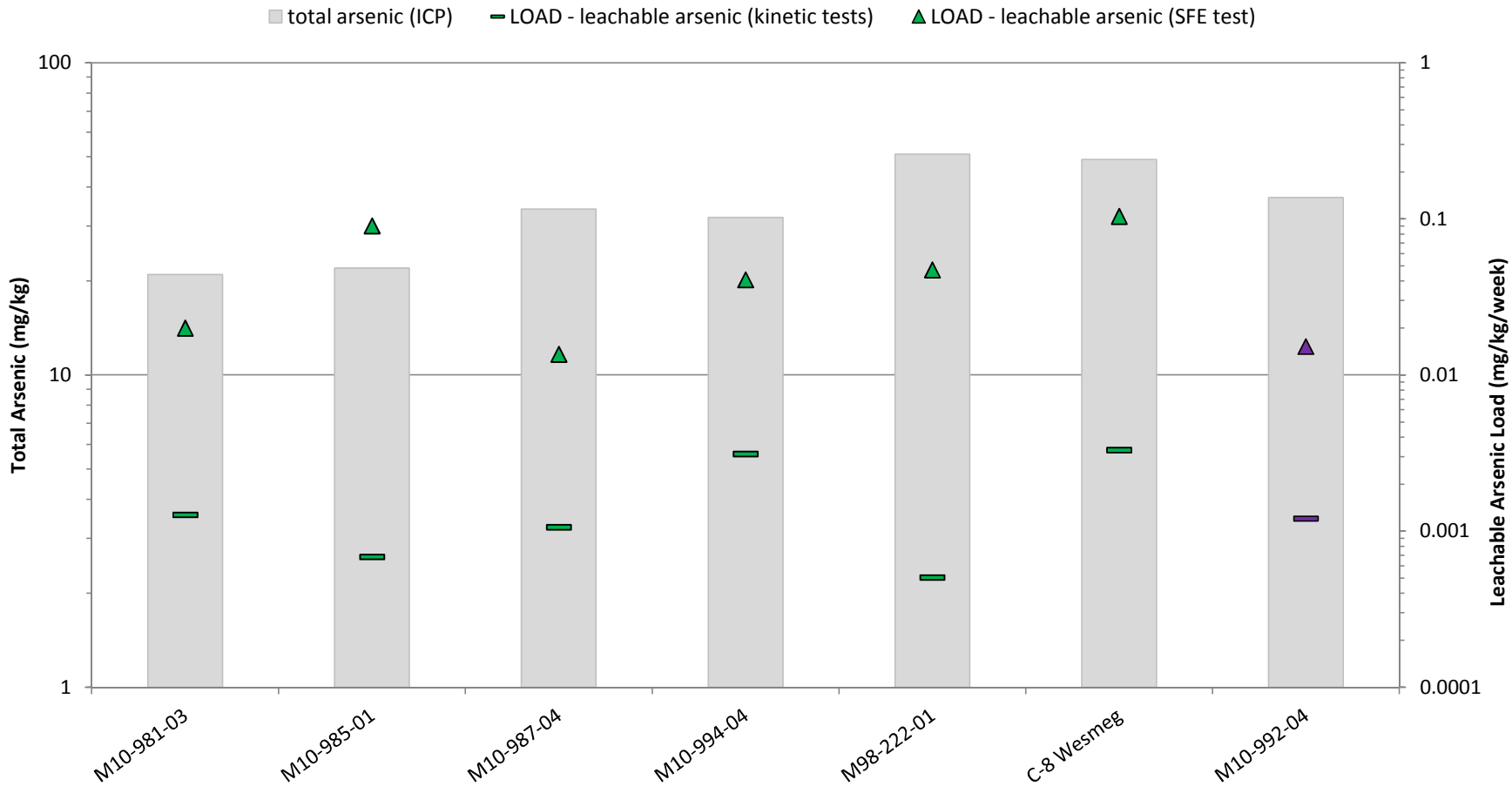



| | | |
|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Tiriganiaq Deposit - Iron Formation and Mafic Volcanic** |

Notes:

-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles).

| | | | | | |
|---|---|---|---|---|---|
| Prepared | JMC | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | VJB | | | Figure | **B.8-5** |




| | | |
|---|---|---|
| Golder Associates | **Meliadine Gold Project**<br>**Agnico Eagle Mines Ltd.** | **Arsenic Loading in Kinetic Test Leachate (HCTs, Large Columns) and Static Test Leachate (SFE)**<br>**Wesmeg Deposit - Mafic Volcanic and Ultramafic** |

Notes:

-average As loading plotted for HCT (last 5-6 cycles), Column Tests (last 5-6 cycles).

| | | | | | |
|---|---|---|---|---|---|
| Prepared | JMC | Date | Sep-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | VJB | | | Figure | **B.8-6** |

# APPENDIX C

## Tabulated Geochemical Results for Tailings

# C.1 Summary of Analytical Program

**Appendix C.1:Summary of Analytical Program - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**



| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE | NAG | HCTs | Process Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | x | x | x | x | x | - | - |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | x | x | x | x | x | - | - |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | x | x | x | x | x | - | - |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | x | x | x | x | x | - | - |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | x | x | x | x | x | - | - |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | x | x | x | x | x | - | - |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | x | x | x | x | x | - | - |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | x | x | x | x | x | - | - |
| | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | x | x | x | x | x | - | x |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | x | x | x | x | x | - | x |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | x | x | x | x | x | - | x |
| | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | x | x | x | x | x | x | x |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | x | x | x | x | x | x | x |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | x | x | x | x | x | x | x |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | x | x | x | x | x | x | x |
| Pump CN7 | 2011 | whole ore | Pump | open pit | x | x | x | x | x | x | x |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | x | x | x | x | x | x | x |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | x | x | x | x | x | x | x |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | x | x | x | x | x | x | x |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | x | x | x | x | x | x | x |

**Notes:**

Whole rock was completed using Borate fusion and XRF methods.

ICP = Metals (including arsenic and selenium) by inductively coupled plasma-mass spectroscopy (ICP-MS), with samples extracted using a strong acid solution.

Mercury by cold vapour atomic absorption spectroscopy (CVAAS), EPA245.1 methodology

ABA = Acid Base Accounting (modified Sobek method(1996)) - paste pH, NP, total sulphur, sulphate, sulphide, total carbon, total inorganic carbon, and carbonate

SFE = Shake Flask Extraction according to Modified ASTM D3987; 4:1 solution to solid ratio, 24 hour shake (2001)

NAG: Net Acid Generation; single addition NAG pH and leachate (AMIRA, 2002)

HCT = Humidity Cell Test

PW = Process Water.  Analysis of cyanide species plus total and dissolved metals.

# C.2 Chemical Composition Results: Tables and Figures

# Appendix C.2: Whole Rock Analysis and ICP Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Typical Crustal Abundance (ug/g) (Price, 1997)[1] | 0.075 | 82300 | 1.8 | 0.004 | 425 | 3 | 0.009 | 41500 | 0.15 | 25 | 102 | 60 | 56300 | 0.085 | 20850 | 20 |
| | | | | Typical Crustal Abundance (ug/g) x5 | 0.375 | 411500 | 9.0 | 0.02 | 2125 | 15 | 0.043 | 207500 | 0.75 | 125 | 510 | 300 | 281500 | 0.425 | 104250 | 100 |
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li |
| | | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | **4.6** | 77000 | **41000** | - | **660** | 1.6 | **6.5** | 30000 | **0.95** | **89** | **510** | **380** | **150000** | < 0.1 | **28000** | **21** |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | **0.17** | 74000 | **150** | - | **560** | 1.4 | **5.9** | 31000 | **0.23** | 5.6 | **170** | 28 | 53000 | < 0.1 | **23000** | 19 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | **8.8** | 17000 | **130000** | - | 190 | 0.53 | **5.0** | 20000 | **0.44** | **30** | **370** | **370** | **310000** | < 0.1 | 5700 | 5.0 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | **0.14** | 33000 | **670** | - | 340 | 0.87 | **2.0** | 29000 | **0.18** | 3.4 | **140** | 16 | **140000** | < 0.1 | 10000 | 13 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | **6.2** | 23000 | **19000** | - | 200 | 0.39 | **6.4** | 14000 | **0.33** | 18 | **570** | **440** | **300000** | **0.1** | 4900 | 9.0 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | **0.28** | 33000 | **25** | - | 220 | 0.47 | **0.16** | 19000 | **0.33** | 2.8 | 97 | **370** | **210000** | < 0.1 | 6500 | 12 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | **2.4** | 13000 | **68000** | - | 21 | 0.21 | **3.0** | 39000 | **1.8** | **72** | **570** | **960** | **270000** | < 0.1 | 1500 | 5.0 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | **0.08** | 17000 | **220** | - | 28 | 0.25 | < 0.09 | 36000 | **0.26** | 3.2 | **240** | 16 | **82000** | < 0.1 | 1900 | 8.0 |
| | | | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | - | 41000 | **5600** | - | **530** | 1.1 | **1.1** | 26000 | **0.55** | 9.6 | **150** | **430** | **110000** | < 0.1 | 13000 | 17 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | - | 34000 | **60000** | - | 260 | 0.65 | **3.2** | 29000 | **0.98** | **33** | 44 | **620** | **300000** | < 0.1 | 9400 | 12 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | - | 34000 | **140** | - | 240 | 0.73 | < 0.09 | 24000 | **0.26** | 2.9 | **130** | **160** | **99000** | - | 7700 | 15 |
| | | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | - | 37000 | **6900** | - | 360 | 0.76 | **0.73** | 26000 | **0.59** | 13 | **150** | **81** | **120000** | < 0.1 | 8800 | 14 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | - | 35000 | **4000** | - | **430** | 0.78 | **1.4** | 20000 | **0.33** | 6.8 | **310** | **100** | **190000** | < 0.1 | 9400 | 19 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | - | 9000 | **8600** | - | 33 | 0.22 | **0.59** | 34000 | **0.54** | 11 | **230** | **190** | **120000** | < 0.1 | 1500 | 4.0 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | - | 7200 | **6800** | - | 15 | 0.13 | **0.11** | 31000 | **0.47** | 11 | **290** | **170** | **120000** | < 0.1 | 770 | 3.0 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | - | 16000 | **8000** | - | 39 | 0.26 | **0.33** | 35000 | **1.1** | 24 | **310** | **280** | **150000** | < 0.1 | 1300 | 9.0 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | - | 48000 | **4900** | - | 384 | 0.98 | **0.62** | 23000 | **0.37** | 8.5 | **270** | **76** | **110000** | < 0.1 | 12000 | 16 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | - | 54000 | **6600** | - | **450** | 1.1 | **0.41** | 27000 | **0.46** | 9 | **230** | **110** | **100000** | < 0.1 | 14000 | 18 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | - | 17000 | **2800** | - | 130 | 0.39 | **0.27** | 27000 | **1.2** | 18 | **240** | **200** | **140000** | < 0.1 | 2900 | 10 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | - | 52000 | **1700** | - | 420 | 1.2 | **0.23** | 31000 | **0.42** | 11 | **270** | **90** | **91000** | < 0.1 | 15000 | 20 |

Notes:

[1] Price (1997)

nc - not calculated

**Appendix C.2: Whole Rock Analysis and ICP Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Typical Crustal Abundance (ug/g) (Price, 1997)[1]** | | | | | **23300** | **950** | **1.2** | **23550** | **84** | **14** | **0.20** | **0.05** | **2.3** | **2.3** | **370** | **5650** | **0.85** | **2.7** | **120** | **33** |
| **Typical Crustal Abundance (ug/g) x5** | | | | | **116500** | **4750** | **6.0** | **117750** | **420** | **70** | **1.00** | **0.25** | **11.5** | **11.5** | **1850** | **28250** | **4.25** | **13.5** | **600** | **165** |
| **Sample ID** | **Year (analysis)** | **Tailings Type** | **Deposit** | **Location** | **Mg** | **Mn** | **Mo** | **Na** | **Ni** | **Pb** | **Sb** | **Se** | **Si** | **Sn** | **Sr** | **Ti** | **Tl** | **U** | **V** | **Y** |
| | | | | | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **%** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** | **µg/g** |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | 15000 | 510 | **60** | 13000 | **380** | **1200** | **14** | **4.0** | **18** | 1.7 | 200 | 3500 | 0.61 | 2.4 | 110 | 9.5 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 15000 | 500 | **4.4** | 18000 | 72 | **15** | < 0.8 | < 1 | **28** | 1.1 | 210 | 3100 | 0.43 | 1.2 | 100 | 6.7 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | 5000 | 380 | **70** | 1100 | **200** | **720** | **42** | < 1 | **8.9** | 0.60 | 140 | 640 | 0.23 | 1.1 | 18 | 5.5 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 8300 | 450 | **7.1** | 3100 | 53 | **23** | **4.2** | < 1 | **29** | 0.60 | 190 | 1000 | 0.30 | 0.75 | 36 | 5.6 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 7300 | 380 | **25** | 1700 | **260** | **17** | **6.7** | **3.0** | **15** | **22** | 170 | 690 | 0.17 | **27** | 17 | 7.0 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 10000 | 400 | **6.1** | 2300 | 40 | 4.7 | < 0.8 | < 1 | **26** | 1.4 | 180 | 940 | 0.15 | **5.7** | 26 | 7.0 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | 15000 | **3100** | **14** | 2100 | **290** | **35** | **31** | **4.6** | **13** | 1.4 | 81 | 400 | 0.11 | 0.38 | 40 | 3.7 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 16000 | **2900** | **5.8** | 3500 | 57 | 3.8 | < 0.8 | < 0.7 | **32** | 1.2 | 80 | 650 | 0.080 | 0.26 | 47 | 3.2 |
| | | | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 9800 | 680 | **8.1** | 5900 | 24 | **330** | **2.1** | < 0.7 | - | 1.2 | 200 | 1400 | 0.39 | 1 | 56 | - |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 9500 | 810 | **21** | 5500 | 63 | **540** | **16** | < 0.7 | - | 0.90 | 160 | 1200 | 0.25 | 1.1 | 38 | - |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 9000 | 760 | **3.4** | 7900 | 12 | 11 | **< 0.8** | < 0.7 | - | 0.80 | 180 | 1300 | 0.22 | 0.73 | 41 | - |
| | | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 11000 | **1200** | **7.1** | 7700 | 30 | **180** | **2.7** | < 0.7 | - | 1.8 | 170 | 1500 | 0.26 | 0.9 | 50 | - |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 9100 | 370 | **7.4** | 3600 | 67 | **15** | **2.1** | < 0.7 | - | **2.5** | 250 | 960 | 0.23 | 1.7 | 24 | - |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 12000 | **3400** | **4.3** | 710 | 70 | 6.4 | **4.1** | **1.4** | - | 1.1 | 72 | 380 | 0.070 | 0.38 | 20 | - |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 11000 | **2700** | **2.9** | 670 | **110** | 5.7 | **3.4** | **1.1** | - | 0.80 | 65 | 300 | 0.030 | 0.35 | 18 | - |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 14000 | **2200** | **2.6** | 1700 | **120** | 8.2 | **3.6** | **1.5** | - | **2.5** | 48 | 820 | 0.10 | 0.33 | 60 | - |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 8800 | 400 | **5.8** | 11000 | 79 | **140** | **1.9** | < 0.7 | - | **2.4** | 200 | 1600 | 0.32 | 1.1 | 47 | - |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 11000 | 490 | **14** | 14000 | 83 | **360** | **2.4** | < 0.7 | - | 1.0 | 270 | 1800 | 0.33 | 1.4 | 63 | - |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 15000 | **2200** | **2.0** | 2400 | 79 | **38** | **1.0** | < 0.7 | - | 1.0 | 53 | 1400 | 0.11 | 0.31 | 55 | - |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 10000 | 620 | **13** | 9000 | **95** | **130** | **1.0** | < 0.7 | - | 1.1 | 190 | 1900 | 0.49 | 1.1 | 61 | - |

Notes:
[1] Price (1997)
nc - not calculated

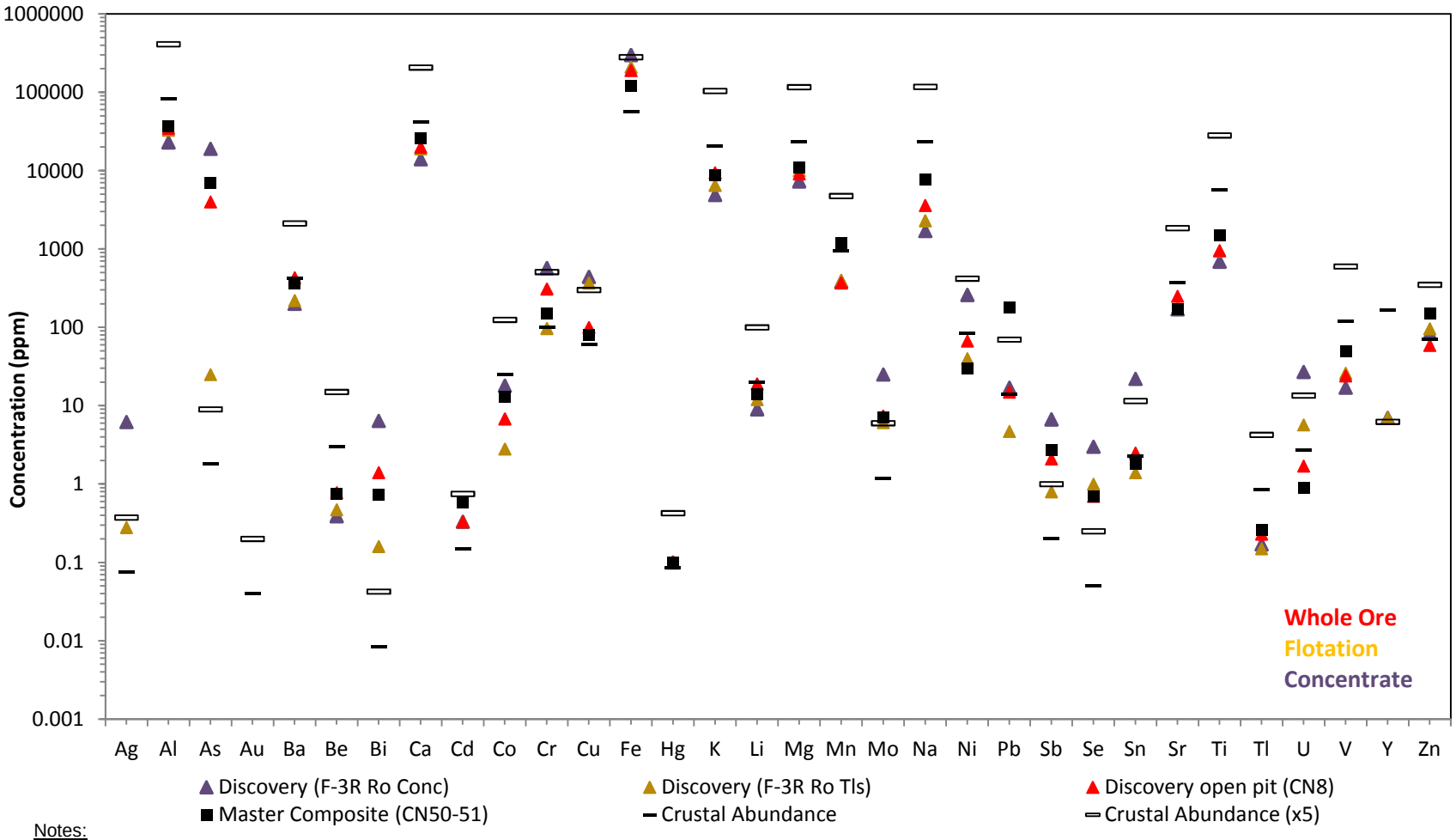
# Appendix C.2: Whole Rock Analysis and ICP Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Zn | SiO2 | Al2O3 | Fe2O3 | MgO | CaO | Na2O | K2O | TiO2 | P2O5 | MnO | Cr2O3 | V2O5 | LOI | Sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | µg/g | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
| Typical Crustal Abundance (ug/g) (Price, 1997)[1] | | | | | 70 | | | | | | | | | | | | | | |
| Typical Crustal Abundance (ug/g) x5 | | | | | 350 | | | | | | | | | | | | | | |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | **140** | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 61 | 59 | 14 | 7.5 | 2.5 | 4.5 | 2.5 | 2.4 | 0.53 | 0.1 | 0.070 | 0.03 | 0.02 | 6.3 | 99 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | 69 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 60 | 59 | 6.3 | 20 | 1.4 | 4.2 | 0.47 | 1.1 | 0.17 | 0.2 | 0.060 | 0.02 | 0.01 | 6.3 | 99 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | **84** | 31 | 4.6 | 48 | 1.8 | 2.0 | 0.19 | 0.49 | 0.11 | 0.22 | 0.050 | 0.08 | < 0.01 | 6.7 | 95 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | **96** | 56 | 6.3 | 31 | 1.8 | 2.7 | 0.32 | 0.67 | 0.15 | 0.21 | 0.050 | 0.01 | < 0.01 | 0.12 | 100 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | **530** | 28 | 2.3 | 40 | 3.1 | 5.4 | 0.18 | 0.15 | 0.07 | 0.03 | 0.41 | 0.09 | < 0.01 | 16 | 96 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | **110** | 68 | 3.3 | 12 | 2.6 | 5.0 | 0.46 | 0.19 | 0.11 | 0.03 | 0.35 | 0.03 | 0.01 | 7.5 | 99 |
| | | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | **130** | 59 | 8.4 | 16 | 1.9 | 3.7 | 0.94 | 1.5 | 0.31 | 0.14 | 0.10 | 0.02 | 0.01 | 5.1 | 97 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | **200** | 33 | 6.0 | 36 | 1.9 | 3.7 | 0.76 | 0.97 | 0.21 | 0.15 | 0.11 | < 0.01 | 0.01 | 14 | < 98 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 62 | 61 | 7.8 | 16 | 1.8 | 3.8 | 1.4 | 0.95 | 0.25 | 0.12 | 0.12 | 0.03 | < 0.01 | 5.6 | 99 |
| | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | **150** | 57 | 7.4 | 18 | 2.1 | 3.8 | 1.3 | 0.99 | 0.26 | 0.12 | 0.16 | 0.02 | 0.01 | 6.5 | 98 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 59 | 55 | 7.1 | 29 | 1.7 | 3.0 | 0.62 | 1.1 | 0.16 | 0.2 | 0.050 | 0.05 | 0.01 | 2.0 | 100 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | **160** | 62 | 1.8 | 18 | 2.4 | 4.8 | 0.14 | 0.16 | 0.07 | 0.05 | 0.45 | 0.03 | < 0.01 | 5.6 | 95 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | **150** | 64 | 1.5 | 18 | 2.1 | 4.5 | 0.090 | 0.090 | 0.05 | 0.04 | 0.40 | 0.05 | < 0.01 | 3.9 | 95 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | **350** | 55 | 3.4 | 23 | 2.8 | 5.2 | 0.27 | 0.15 | 0.15 | 0.08 | 0.32 | 0.05 | < 0.01 | 6.0 | 95 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | **78** | 59 | 10 | 16 | 1.7 | 3.4 | 1.8 | 1.4 | 0.29 | 0.13 | 0.050 | 0.04 | < 0.01 | 5.1 | 98 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | **76** | 57 | 11 | 15 | 2.0 | 3.8 | 2.2 | 1.5 | 0.34 | 0.14 | 0.070 | 0.04 | 0.01 | 5.0 | 98 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | **410** | 56 | 3.5 | 21 | 2.6 | 3.9 | 0.39 | 0.32 | 0.24 | 0.08 | 0.31 | 0.04 | < 0.01 | 9.2 | 97 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | **110** | 62 | 1.8 | 18 | 2.4 | 4.8 | 0.13 | 0.16 | 0.07 | 0.05 | 0.45 | 0.04 | < 0.01 | 6.4 | 96 |

Notes:

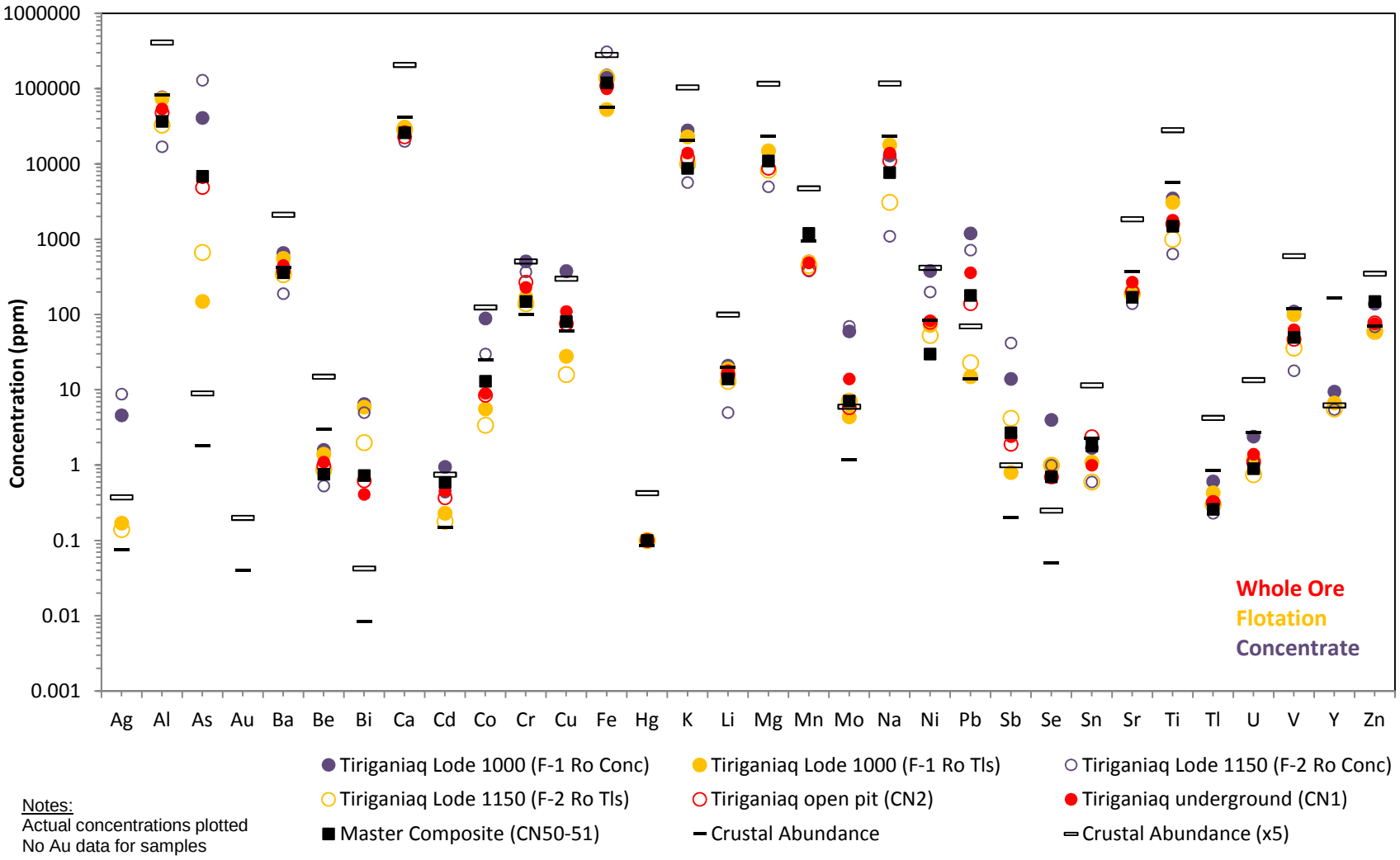
[1] Price (1997)

nc - not calculated




Notes:
Actual concentrations plotted;
No Ag data for sample CN 8, No Y data for F-3 Ro Tls and CN 8.

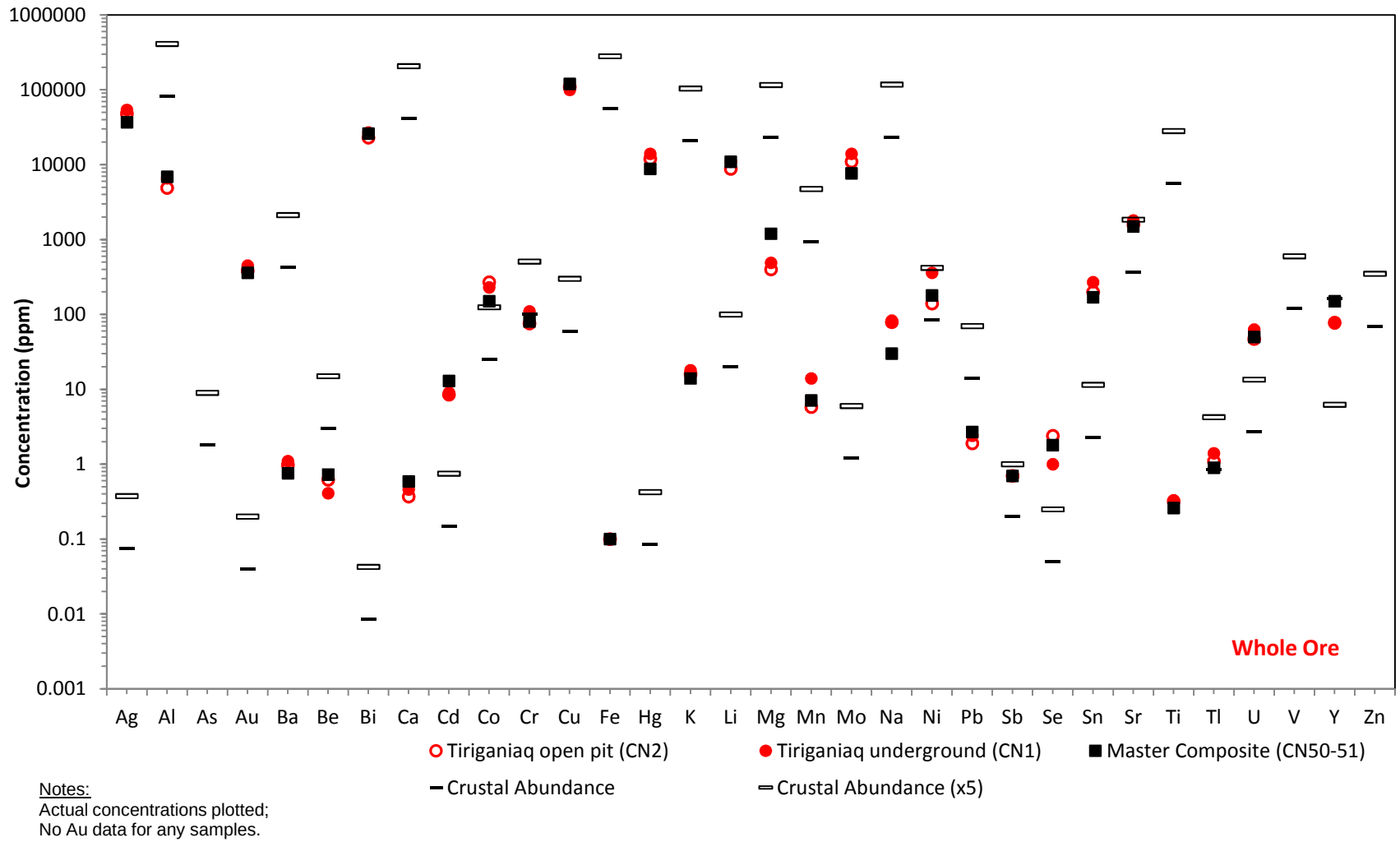
| | | | | |
|---|---|---|---|---|
| Golder Associates | Tailings Static Testing | Trace Element Content<br>Tailings - Discovery Deposit | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | Prepared DH/AJS | Date Aug-12 | Project N° 11-1428-0011 | |
| | Checked JMC | | | |
| | Reviewed VJB | | Figure C.2-1 | |




Notes:
Actual concentrations plotted
No Au data for samples

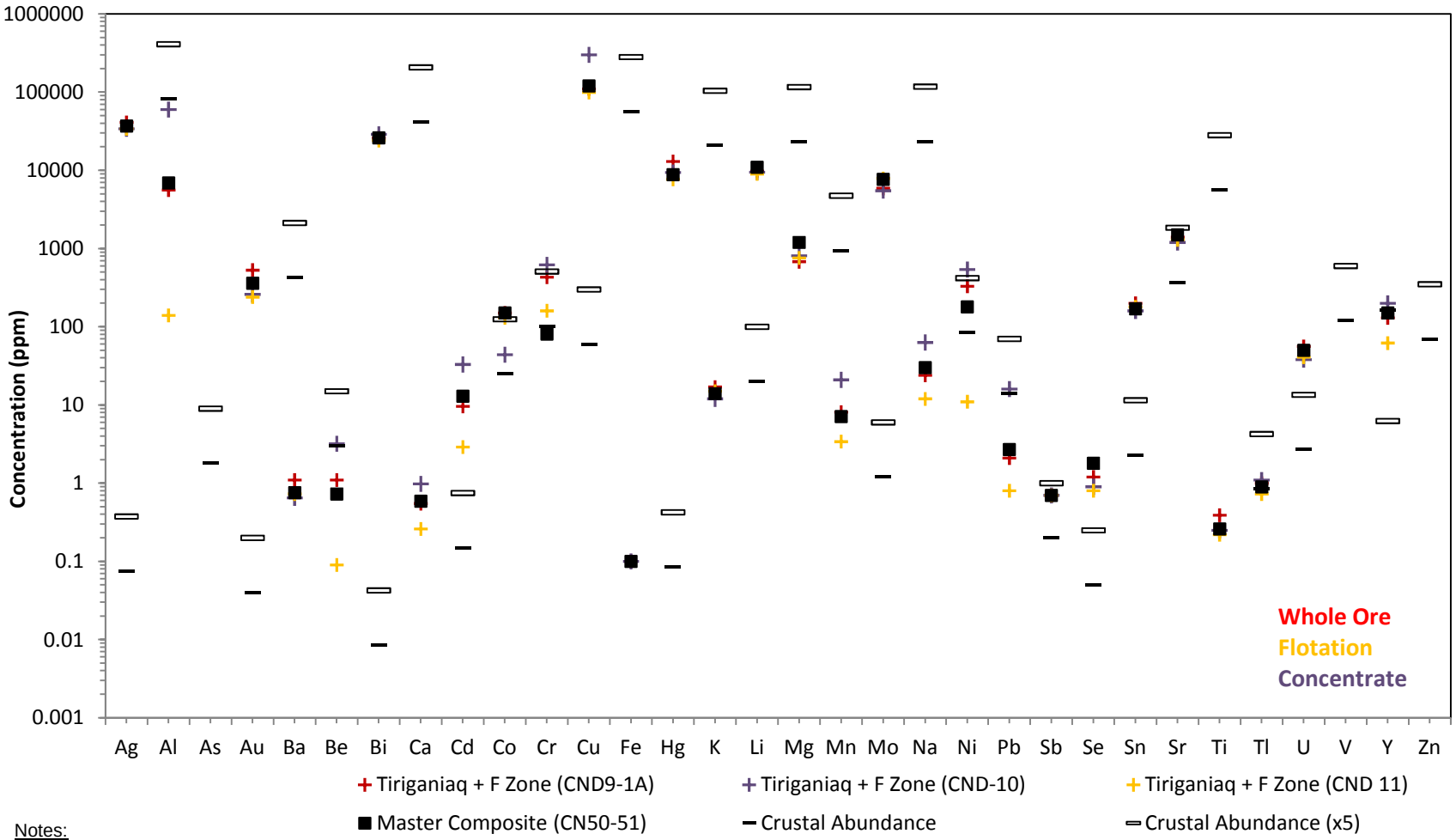
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Trace Element Content<br>Tailings - Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **C.2-2** |

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AEM_tailings_static tables&figures_31Aug2012.xlsx




Notes:
Actual concentrations plotted;
No Au data for any samples.

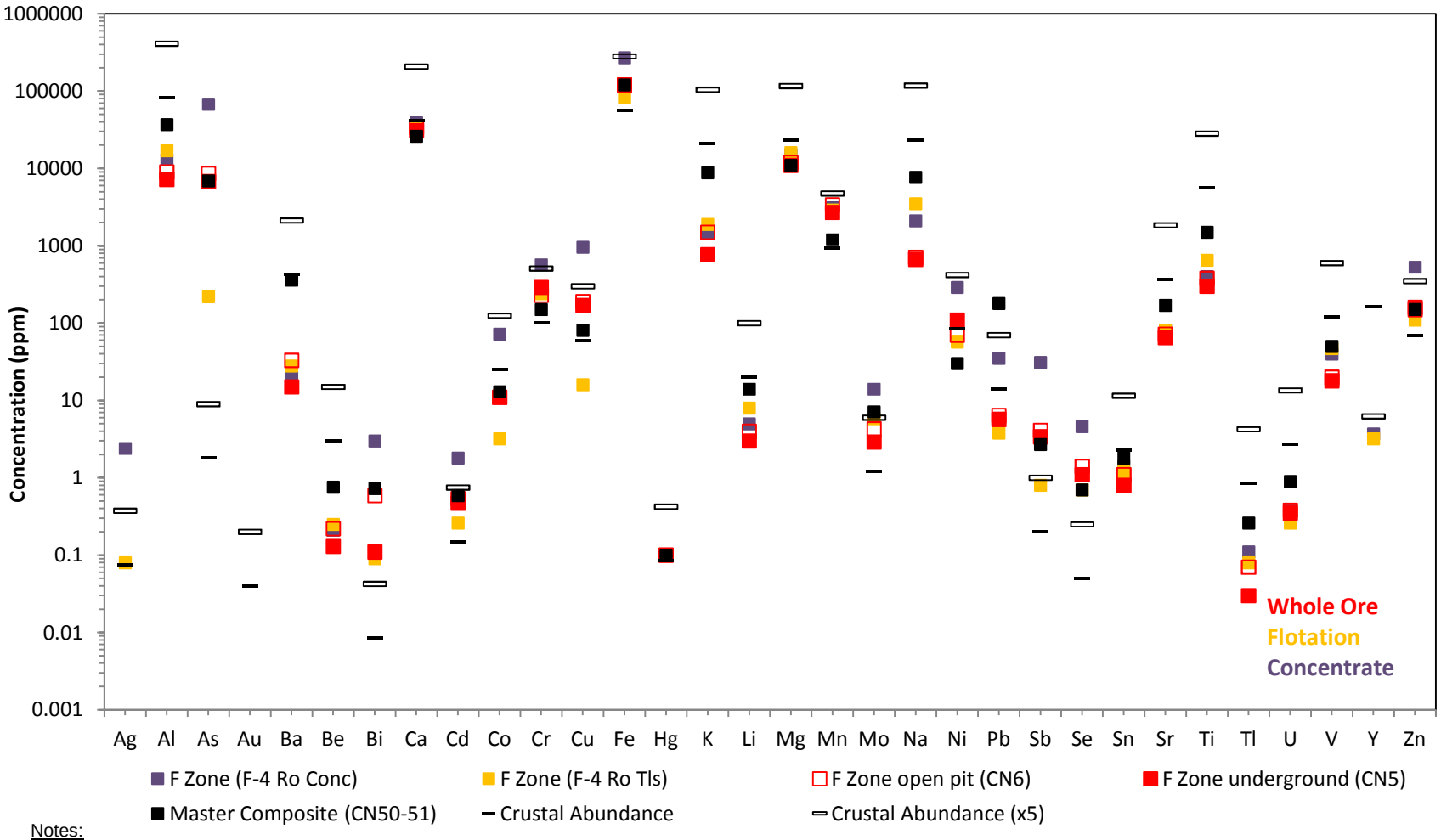
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Trace Element Content**<br>**Whole Ore Tailings - Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH/AJS | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | **C.2-3** |




Notes:
Actual concentrations plotted;
No Au data for any samples.

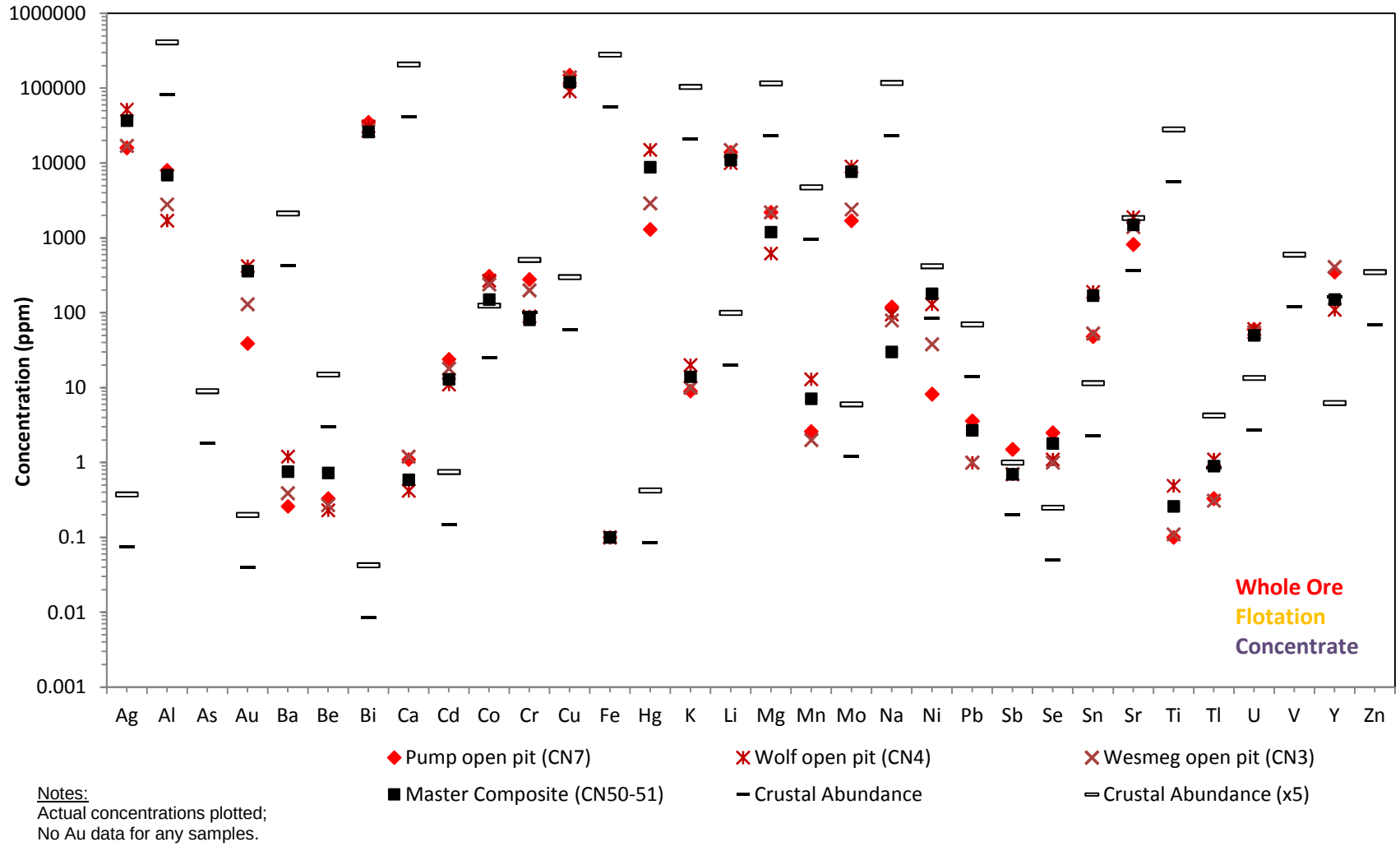
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Trace Element Content**<br>**Mixed Tailings Samples - Tiriganiaq + F-Zone (14%) Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH/AJS | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | **C.2-4** |

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AEM_tailings_static tables&figures_31Aug2012.xlsx



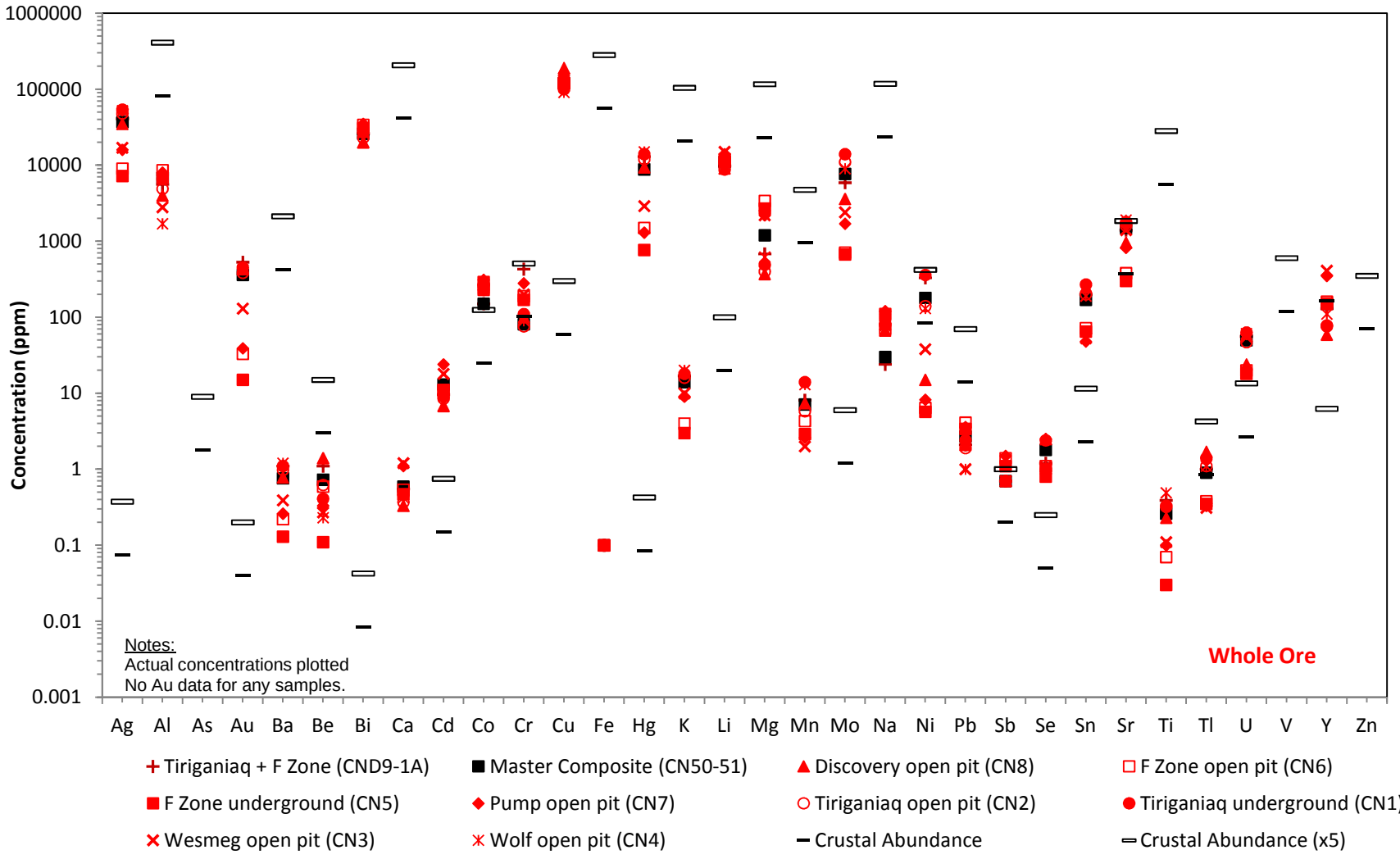

Notes:
Actual concentrations plotted;
No Au data for any sample.

| | | | | |
|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Trace Element Content<br>Tailings - F-Zone Deposit** | | |
| **Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date: Aug-12 | Project N°: 11-1428-0011 |
| | Checked | JMC | | |
| | Reviewed | VJB | | Figure: **C.2-5** |




Notes:
Actual concentrations plotted;
No Au data for any samples.

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Trace Element Content**<br>**Tailings - Pump, Wolf and Wesmeg Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **C.2-6** |




| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Trace Element Content**<br>**Whole Ore Samples - All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **C.2-7** |

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AEM_tailings_static tables&figures_31Aug2012.xlsx

# C.3 ARD Potential (ABA) Results: Tables and Figures

**Appendix C.3: Acid Based Accounting Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**



| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Paste pH | NAG pH | TC | CO3 | CaNP | CaNP-adj. | NP | S(T) | S(SO4) | S(S2-) | AP | Net NP | Net CaNP-adj | NPR | CaNPR-adj | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | units | units | % | % | t CaCO3/1000t | | | % | | | t CaCO3/ 1000t | | | ratio | | |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | 8.1 | 2.5 | 1.5 | 5.9 | 97 | 97 | 102 | 6.5 | 0.070 | 6.4 | 201 | -99 | -104 | 0.51 | 0.48 | PAG |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 8.7 | 9.7 | 1.6 | 7.0 | 114 | 114 | 110 | 0.043 | 0.020 | 0.030 | 0.94 | 109 | 113 | 117 | 122 | non PAG |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | 7.4 | 2.2 | 1.6 | 4.1 | 67 | 67 | 61 | 17 | 0.25 | 17 | 522 | -461 | -455 | 0.12 | 0.13 | PAG |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 8.2 | 9.3 | 2.0 | 5.3 | 87 | 87 | 89 | 0.25 | 0.10 | 0.15 | 4.7 | 84 | 82 | 19 | 18 | non PAG |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 9.5 | 3.0 | 0.21 | 0.18 | 3.0 | 3.0 | 17 | 14 | 2.0 | 12 | 363 | -345 | -360 | 0.048 | 0.0083 | PAG |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 9.6 | 8.0 | 0.10 | 0.15 | 2.4 | 2.4 | 13 | 2.1 | 2.0 | 0.020 | 0.63 | 13 | 1.8 | 21 | 3.8 | PAG |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | 7.9 | 4.1 | 2.3 | 6.5 | 107 | 107 | 140 | 14 | 1.5 | 13 | 391 | -251 | -284 | 0.36 | 0.27 | PAG |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 8.5 | 11 | 2.0 | 8.0 | 130 | 130 | 124 | 0.13 | 0.060 | 0.070 | 2.2 | 122 | 128 | 57 | 59 | non PAG |
| | | | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 8.6 | 9.9 | 1.6 | 5.3 | 86 | 86 | 86 | 1.3 | 0.44 | 0.89 | 28 | 58 | 59 | 3.1 | 3.1 | non PAG |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 8.2 | 3.2 | 1.6 | 4.9 | 81 | 81 | 80 | 11 | 1.6 | 8.9 | 277 | -197 | -197 | 0.29 | 0.29 | PAG |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 8.2 | 11 | 1.5 | 5.1 | 84 | 84 | 85 | 0.27 | 0.22 | 0.040 | 1.3 | 84 | 83 | 68 | 67 | non PAG |
| | | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 8.6 | 9.1 | 1.8 | 4.9 | 80 | 80 | 87 | 1.7 | 0.33 | 1.4 | 44 | 43 | 36 | 2.0 | 1.8 | non PAG |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 8.2 | 2.5 | 0.22 | 0.35 | 5.7 | 4.8 | 24 | 2.0 | 0.33 | 1.6 | 51 | -27 | -46 | 0.47 | 0.093 | PAG |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 8.6 | 8.3 | 2.3 | 6.2 | 102 | 96 | 113 | 2.3 | 0.24 | 2.1 | 64 | 49 | 32 | 1.8 | 1.5 | non PAG |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 8.4 | 8.1 | 1.9 | 6.1 | 100 | 95 | 109 | 3.4 | 0.80 | 2.6 | 81 | 28 | 14 | 1.3 | 1.2 | PAG |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 8.3 | 8.9 | 2.3 | 6.7 | 110 | 105 | 124 | 2.8 | 0.66 | 2.2 | 68 | 57 | 37 | 1.8 | 1.5 | uncertain |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 8.5 | 9.9 | 1.3 | 4.7 | 77 | 70 | 76 | 1.2 | 0.29 | 0.89 | 28 | 48 | 43 | 2.7 | 2.5 | non PAG |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 8.6 | 9.0 | 1.4 | 5.0 | 82 | 74 | 92 | 1.7 | 0.68 | 1.0 | 33 | 60 | 42 | 2.8 | 2.3 | non PAG |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 8.5 | 8.9 | 3.3 | 4.2 | 69 | 58 | 95 | 1.6 | 0.11 | 1.5 | 47 | 48 | 11 | 2.0 | 1.2 | uncertain |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 8.6 | 10 | 1.7 | 5.9 | 96 | 90 | 104 | 0.91 | 0.36 | 0.55 | 17 | 87 | 73 | 6.1 | 5.3 | non PAG |

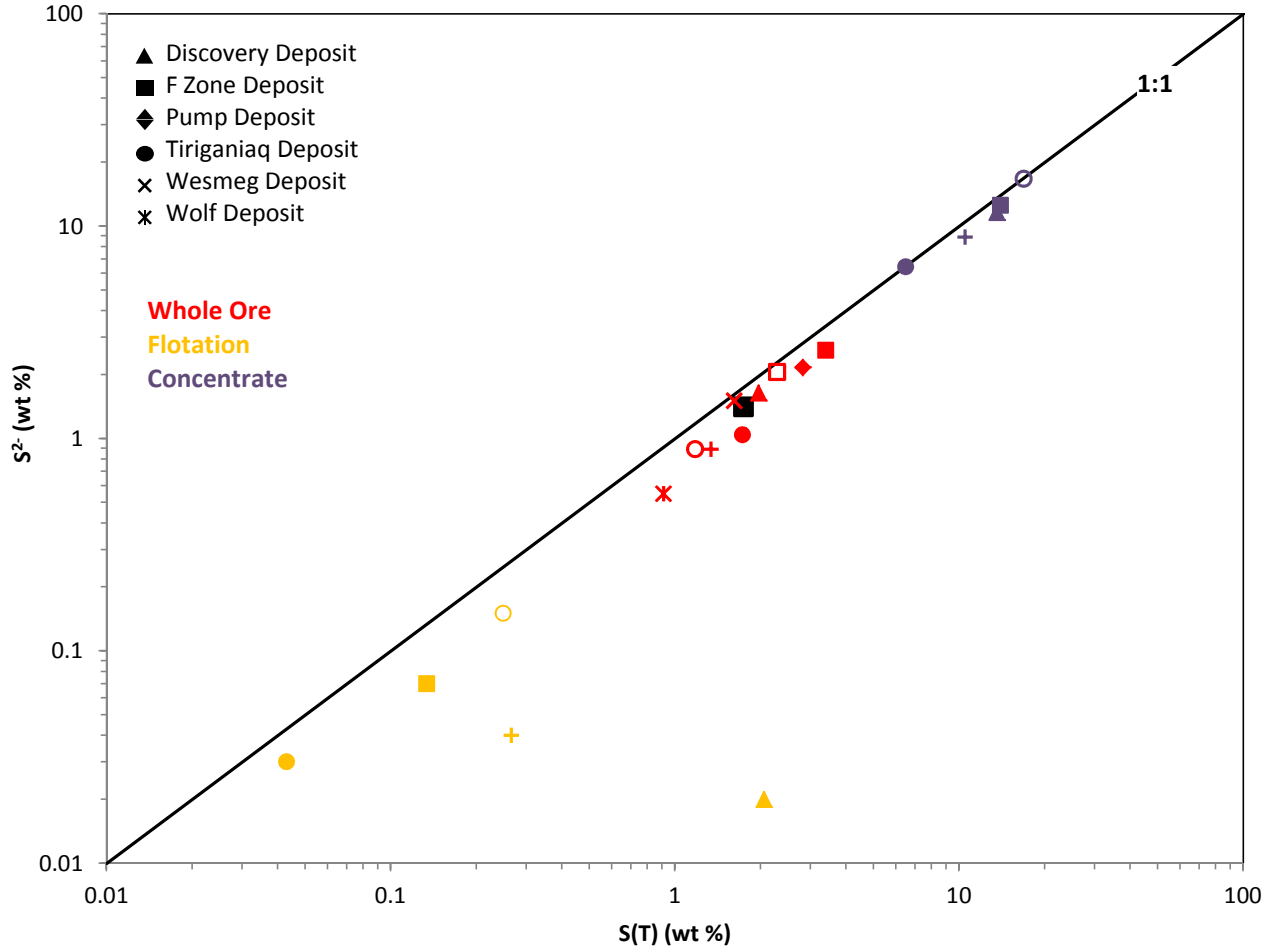
Notes:

S(T)=Total Sulphur; S(SO4)=Sulphate Sulphur; S(S2-)=sulphide sulphur; TC = Total Carbon; TIC=Total Inorganic Carbon

CaNP = Carbonate Neutralization Potential (based on $CO_3$ content); CaNP-adj = Carbonate mineral Neutralisation Potential (based on CO3 content proportion according to average mineralogy); NP = Neutralization Potential; AP = Acid Potential based on total sulphur content

ARD = Acid Rock Drainage; NPR = Net Potential Ratio (NP/AP); CaNPR-adj = (CaNP-adj/AP); Net NP = Net Neutralisation Potential (NP-AP); Net NP-ad = (CaNPadj-AP); PAG = Potentially Acid Generating

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR-adj and NPR (i.e. where different ARD potentials are defined the unit is considered uncertain).

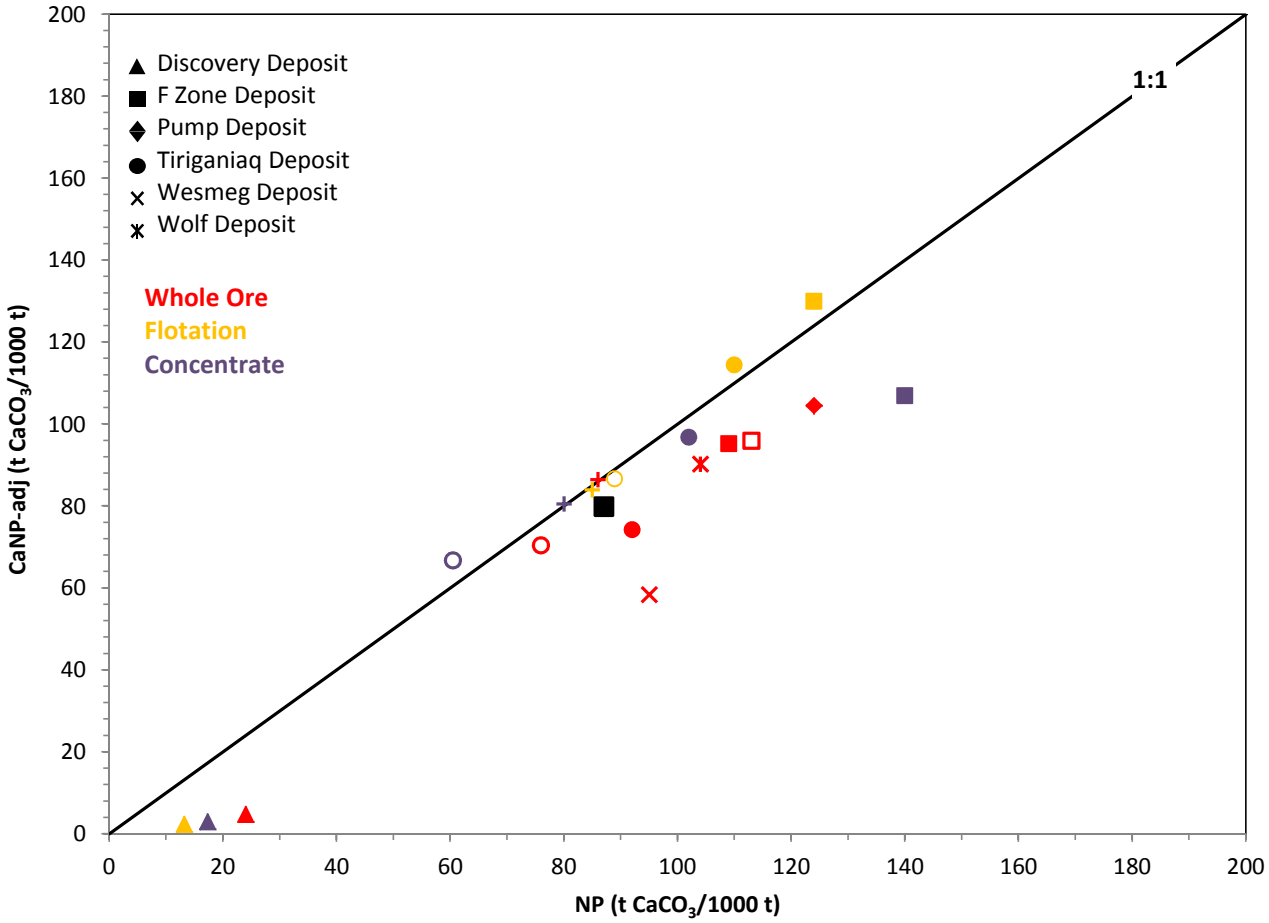



Tiriganiaq + F Zone (CND9-1A)
Tiriganiaq + F Zone (CND-10)
Tiriganiaq + F Zone (CND 11)
Master Composite (CN50-51)
Discovery (F-3R Ro Conc)
Discovery (F-3R Ro Tls)
Discovery open pit (CN8)
F Zone (F-4 Ro Conc)
F Zone (F-4 Ro Tls)
F Zone open pit (CN6)
F Zone underground (CN5)
Pump open pit (CN7)
Tiriganiaq Lode 1000 (F-1 Ro Conc)
Tiriganiaq Lode 1000 (F-1 Ro Tls)
Tiriganiaq Lode 1150 (F-2 Ro Conc)
Tiriganiaq Lode 1150 (F-2 Ro Tls)
Tiriganiaq open pit (CN2)
Tiriganiaq underground (CN1)
Wesmeg open pit (CN3)
Wolf open pit (CN4)

Notes:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with 14% F Zone deposit.

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Tailings Static Testing | Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared DH/AJS | Date Mar-14 | Project N° 13-1428-0007 | |
| | | Checked JMC | | | |
| | | Reviewed VJB | | Figure C.3-1 | |

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AEM_tailings_static tables&figures_4April2014_for FEIS_VJB.xlsx

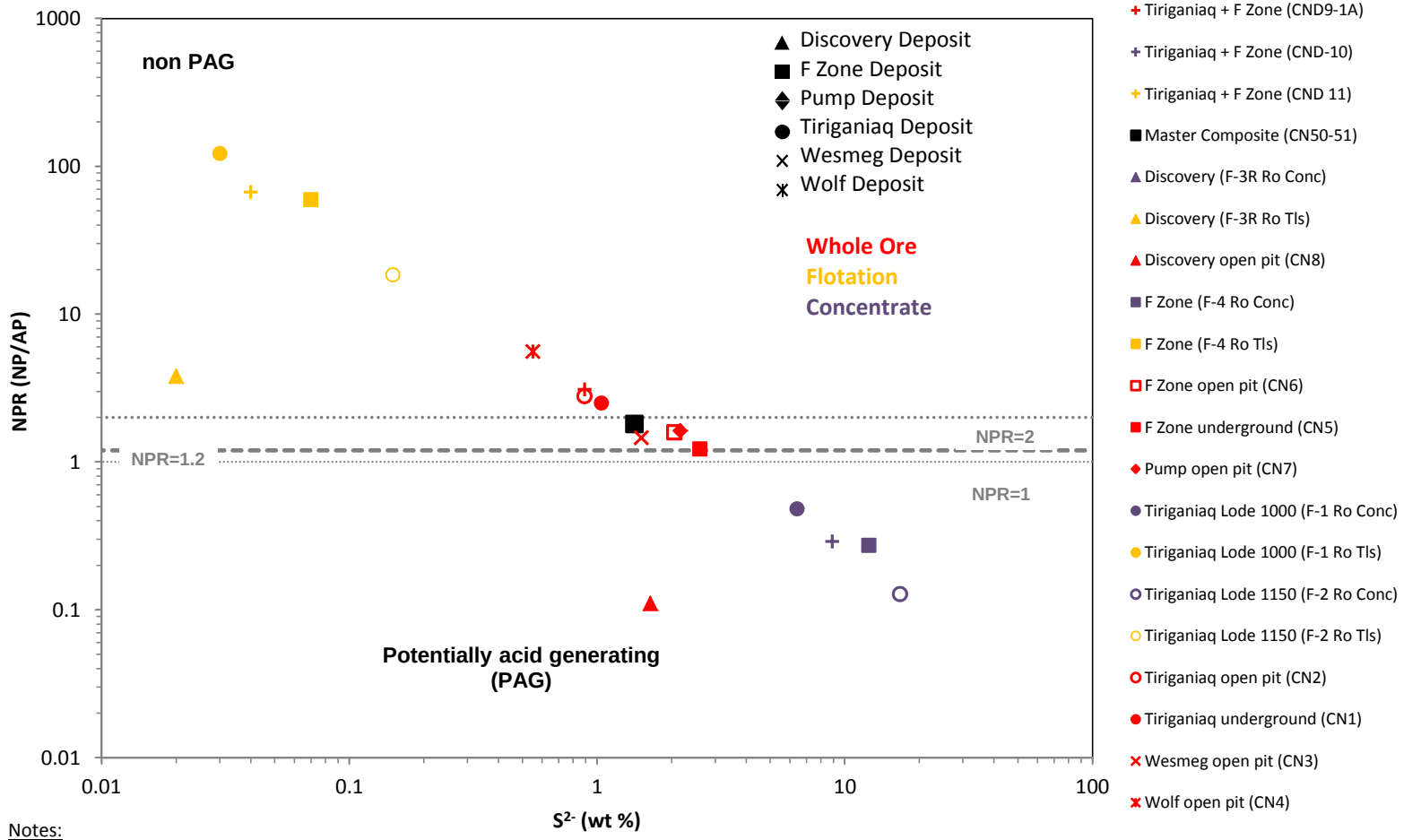



- Tiriganiaq + F Zone (CND9-1A)
- Tiriganiaq + F Zone (CND-10)
- Tiriganiaq + F Zone (CND 11)
- Master Composite (CN50-51)
- Discovery (F-3R Ro Conc)
- Discovery (F-3R Ro Tls)
- Discovery open pit (CN8)
- F Zone (F-4 Ro Conc)
- F Zone (F-4 Ro Tls)
- F Zone open pit (CN6)
- F Zone underground (CN5)
- Pump open pit (CN7)
- Tiriganiaq Lode 1000 (F-1 Ro Conc)
- Tiriganiaq Lode 1000 (F-1 Ro Tls)
- Tiriganiaq Lode 1150 (F-2 Ro Conc)
- Tiriganiaq Lode 1150 (F-2 Ro Tls)
- Tiriganiaq open pit (CN2)
- Tiriganiaq underground (CN1)
- Wesmeg open pit (CN3)
- Wolf open pit (CN4)

Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with 14% F Zone deposit.

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Tailings Static Testing | Neutralization Potential (NP) versus Adjusted Carbonate NP (CaNP-adj) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared | DH/AJS | Date | Mar-14 | Project N° | 13-1428-0007 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | C.3-2 |

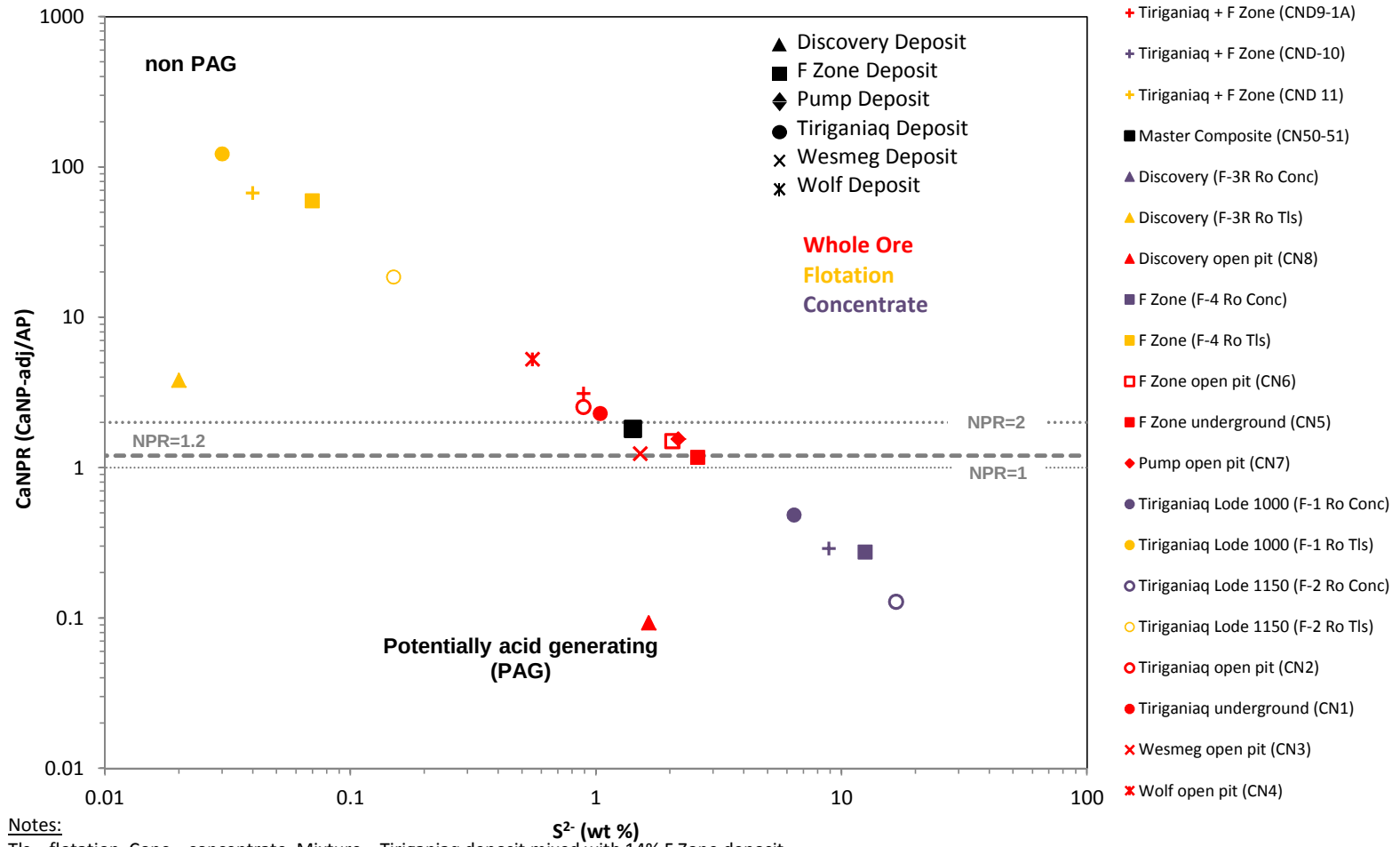
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AEM_tailings_static tables&figures_4April2014_for FEIS_VJB.xlsx




Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with 14% F Zone deposit.
NPR 1.2; INAC Guideline. NPR 1 and NPR 2; MEND guideline.

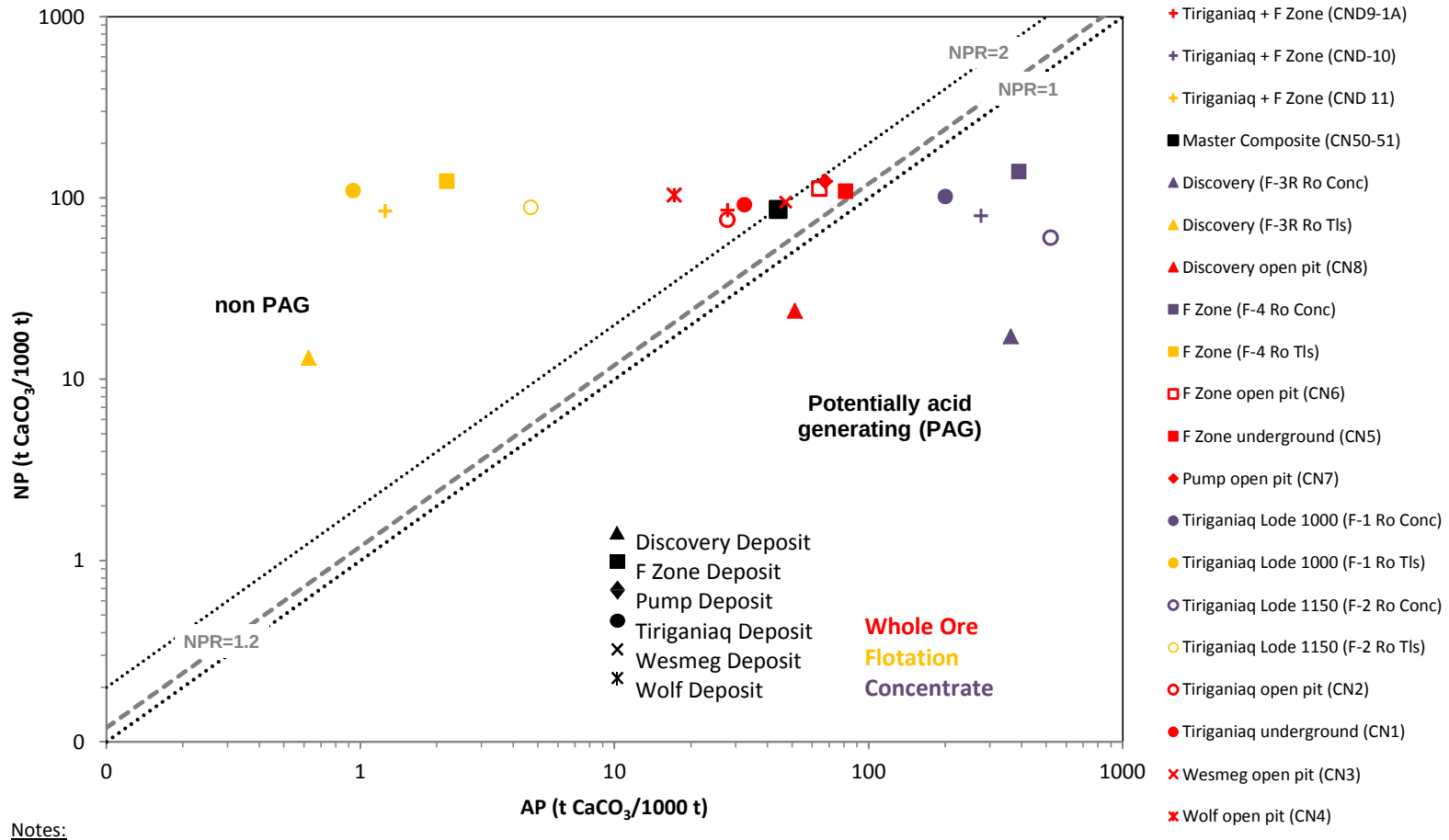
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Tailings Static Testing | Sulphide Sulphur (S2-) versus Net Potential Ratio (NPR) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared DH/AJS | Date Mar-14 | Project N° 13-1428-0007 | |
| | | Checked JMC | | | |
| | | Reviewed VJB | | Figure C.3-3 | |

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Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with 14% F Zone deposit.
NPR 1.2; INAC Guideline. NPR 1 and NPR 2; MEND guideline.

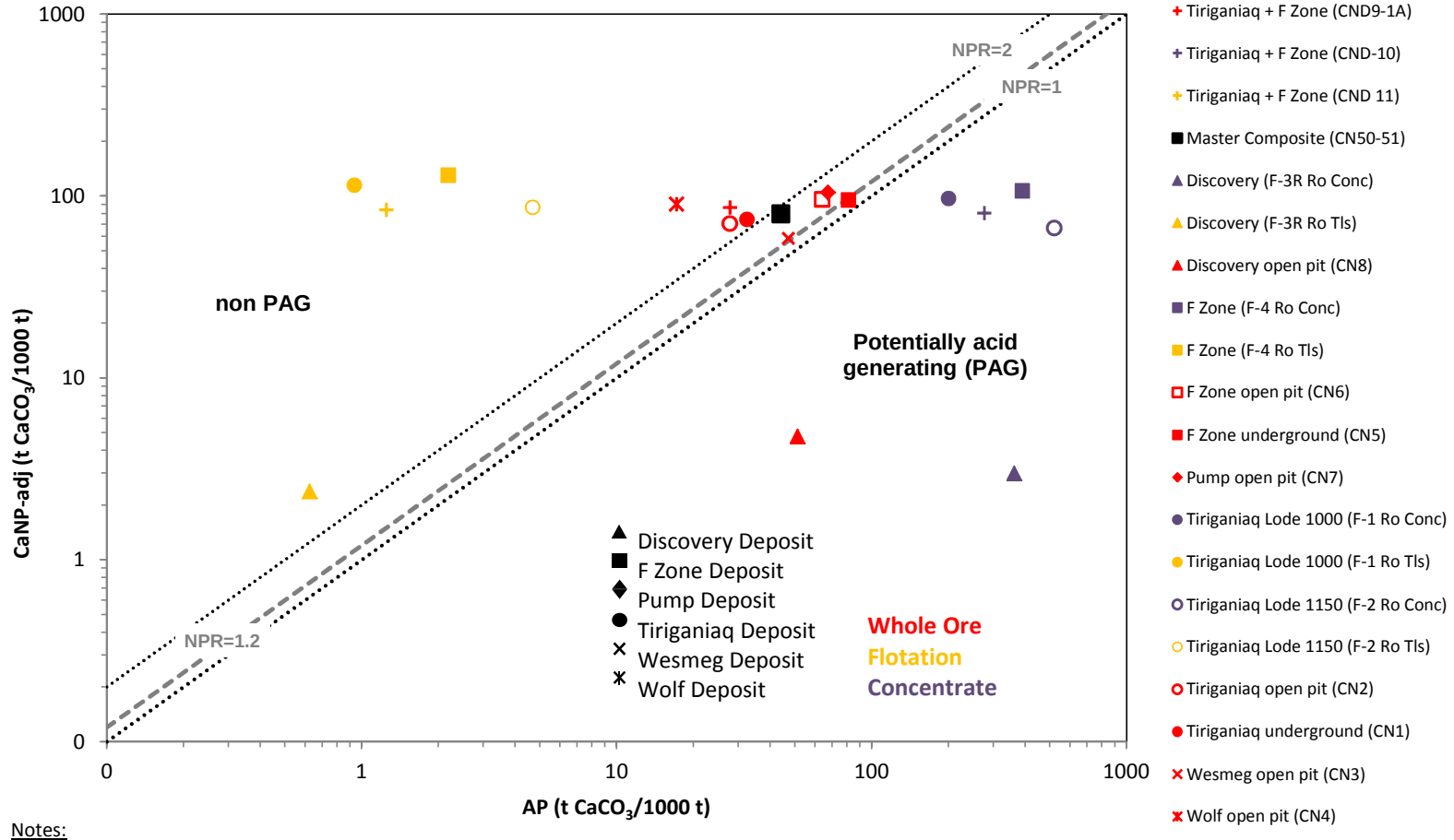
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Tailings Static Testing | Sulphide Sulphur (S2-) versus Carbonate Net Potential Ratio (CaNPR-adj) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared | DH/AJS | Date | Mar-14 | Project N° | 13-1428-0007 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | C.3-4 |




Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with 14% F Zone deposit.
NPR 1.2; INAC Guideline. NPR 1 and NPR 2; MEND guideline

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Tailings Static Testing | Acid Potential (AP) versus Neutralization Potential (NP) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared | DH/AJS | Date | Mar-14 | Project N° | 13-1428-0007 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | C.3-5 |

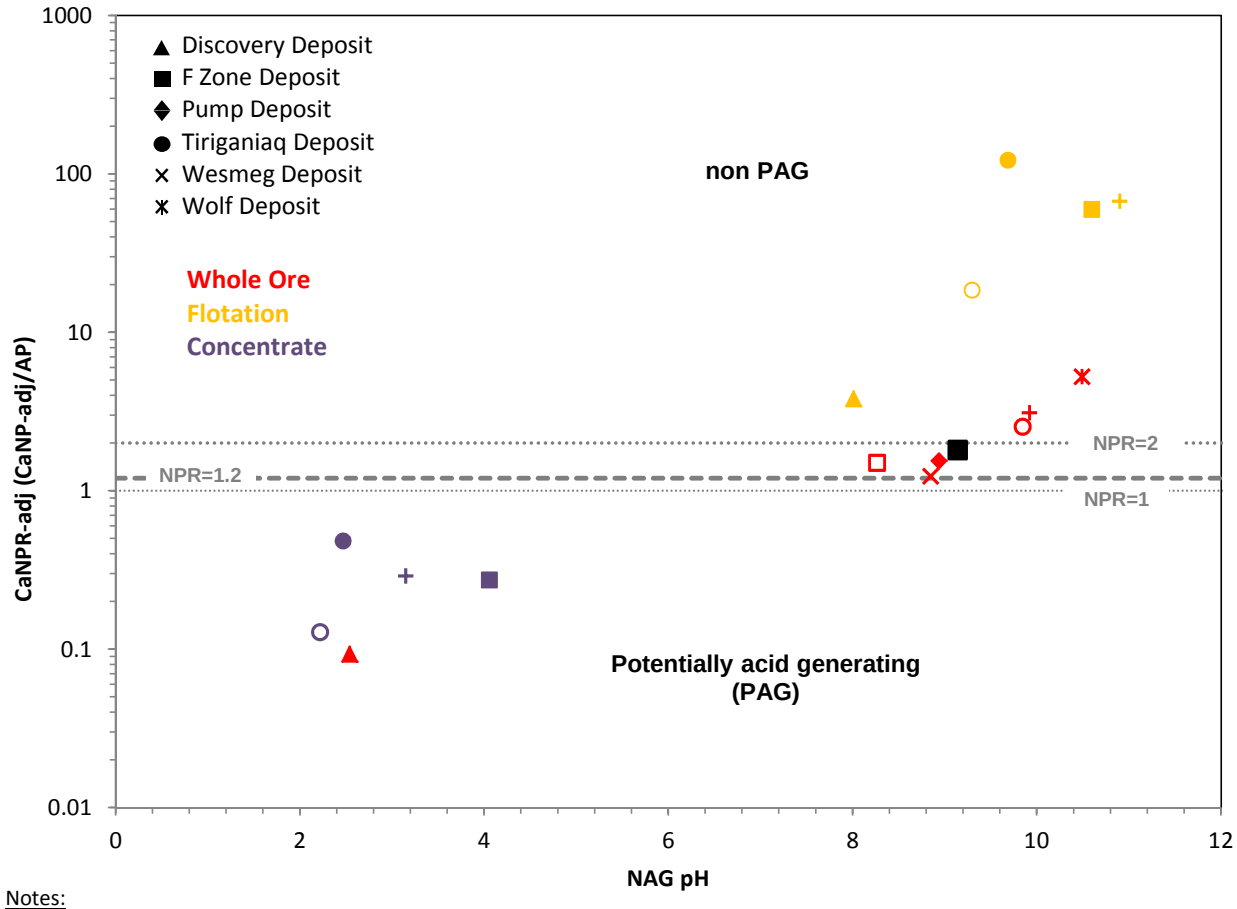
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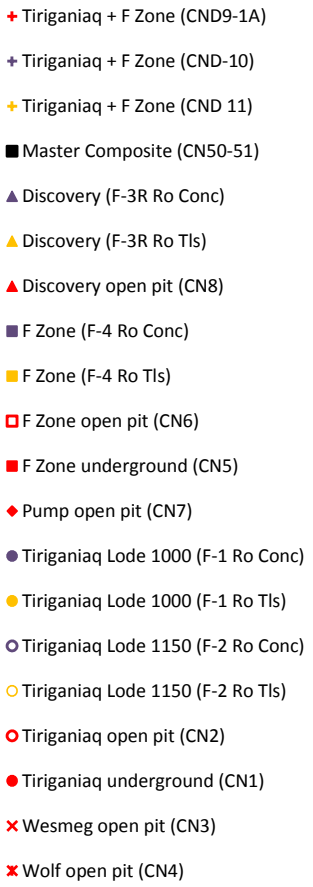



Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with 14% F Zone deposit.
NPR 1.2; INAC Guideline. NPR 1 and NPR 2; MEND guideline

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Tailings Static Testing | Acid Potential (AP) versus Adjusted Carbonate NP (CaNP-adj) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared | DH/AJS | Date | Mar-14 | Project N° | 13-1428-0007 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | C.3-6 |

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AEM_tailings_static tables&figures_4April2014_for FEIS_VJB.xlsx

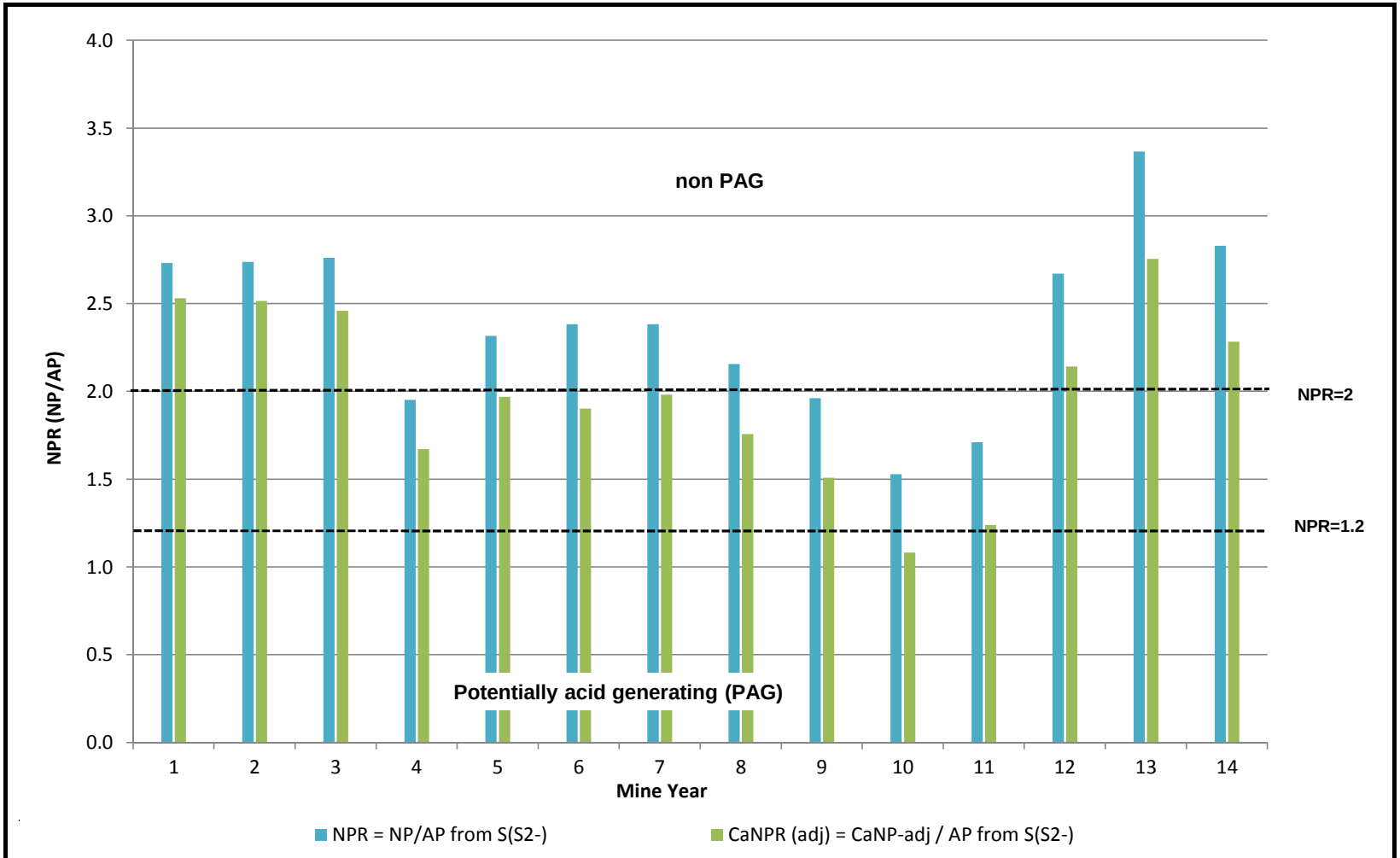



Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with 14% F Zone deposit.
NPR 1.2; INAC Guideline. NPR 1 and NPR 2; MEND guideline.

| | | |
|---|---|---|
| Golder Associates | **Tailings Static Testing** | **NAG pH versus Adjusted Carbonate Net Potential Ratio (CaNPR-adj)** |
| | | **All Deposits** |

| | | | | | |
|---|---|---|---|---|---|
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Mar-14 | Project N° 13-1428-0007 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **C.3-7** |




| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Mine Year versus Net Potential Ratio (NPR)**<br>**All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | AJS | Date | Mar-14 | Project N° 13-1428-0007 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **C.3-8** |

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AEM_tailings_static tables&figures_4April2014_for FEIS_VJB.xlsx

# C.4 Short Term Metal Leach Test Results: Tables and Figures

# Appendix C.4: Shake Flask Extraction Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | CN(T) | CNWAD | CNS | CNO | As+3 | As+5 | Hg | Ag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | 6.0 - 9.5 | | | | | | | | | | | | |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.25 | 0.012 | < 0.0001 | 0.000050 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.020 | 0.063 | < 0.0001 | 0.000010 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 10 | < 0.1 | 1.3 | 0.035 | < 0.0001 | 0.000020 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.48 | 0.050 | < 0.0001 | 0.000020 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.040 | < 0.001 | < 0.0001 | 0.000010 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.0020 | 0.0050 | < 0.0001 | < 0.00001 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.50 | 0.11 | < 0.0001 | < 0.00001 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.018 | 0.040 | < 0.0001 | < 0.00001 |
| | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 8.1 | 300 | 153 | 0.90 | 25 | - | - | - | - | - | - | < 0.0001 | - |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 8.2 | 1040 | 59 | 0.40 | 390 | - | - | - | - | - | - | 0.00030 | - |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 7.6 | 2330 | 32 | < 2 | 1500 | - | - | - | - | - | - | < 0.0001 | - |
| | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 8.1 | 295 | 80 | 0.40 | 110 | - | - | - | - | - | - | < 0.0001 | - |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 7.4 | 809 | 16 | 0.40 | 250 | - | - | - | - | - | - | < 0.0001 | - |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 8.1 | 289 | 101 | 1.0 | 92 | - | - | - | - | - | - | < 0.0001 | - |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 8.0 | 322 | 68 | 0.60 | 51 | - | - | - | - | - | - | < 0.0001 | - |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 7.9 | 387 | 46 | 0.90 | 150 | - | - | - | - | - | - | < 0.0001 | - |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 7.9 | 407 | 38 | < 0.2 | 120 | - | - | - | - | - | - | < 0.0001 | - |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 8.0 | 373 | 71 | 0.80 | 93 | - | - | - | - | - | - | < 0.0001 | - |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 8.2 | 331 | 93 | < 0.2 | 67 | - | - | - | - | - | - | < 0.0001 | - |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 7.8 | 615 | 51 | < 1 | 240 | - | - | - | - | - | - | < 0.0001 | - |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean total concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# Appendix C.4: Shake Flask Extraction Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] | Fe | K | Li | Mg | Mn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | | | 0.5 | | | | | | | | 0.3 | | | | | |
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | 0.030 | 0.32 | 0.018 | < 0.00002 | 0.00004 | 46 | 0.000007 | 0.00014 | < 0.0005 | < 0.0005 | < 0.01 | 9.6 | 0.0040 | 11 | 0.048 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 0.28 | 0.090 | 0.0068 | < 0.00002 | 0.00003 | 12 | 0.000004 | 0.000050 | < 0.0005 | < 0.0005 | < 0.01 | 4.1 | 0.0020 | 3.9 | 0.0047 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | < 0.01 | **1.5** | 0.0059 | < 0.00002 | < 0.00001 | 102 | < 0.000003 | 0.00037 | < 0.0005 | 0.00070 | < 0.01 | 18 | 0.0050 | 13 | 0.090 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 0.060 | **0.60** | 0.0051 | < 0.00002 | < 0.00001 | 47 | < 0.000003 | 0.000063 | < 0.0005 | < 0.0005 | < 0.01 | 21 | 0.0050 | 7.6 | 0.041 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 0.030 | 0.046 | 0.027 | < 0.00002 | 0.00009 | 44 | 0.000006 | 0.000066 | < 0.0005 | 0.00050 | < 0.01 | 30 | 0.012 | 5.0 | 0.064 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 0.13 | 0.0061 | 0.043 | < 0.00002 | 0.00001 | 7.5 | < 0.000003 | 0.000030 | < 0.0005 | 0.0010 | 0.27 | 14 | 0.0060 | 0.73 | 0.0041 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | < 0.01 | **0.62** | 0.021 | < 0.00002 | < 0.00001 | 62 | < 0.000003 | 0.00014 | < 0.0005 | 0.00060 | < 0.01 | 14 | 0.0030 | 20 | 0.23 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 0.090 | 0.058 | 0.0083 | < 0.00002 | < 0.00001 | 21 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 | < 0.01 | 11 | 0.0030 | 8.6 | 0.039 |
| | | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.063 | 0.15 | - | < 0.00002 | 0.00002 | 38 | 0.000009 | 0.0010 | < 0.0005 | 0.018 | 0.011 | 9.3 | 0.0050 | 8.9 | 0.034 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.052 | **2.9** | - | < 0.00002 | 0.00009 | 182 | 0.00001 | 0.0054 | < 0.0005 | 0.049 | 0.18 | 18 | 0.0080 | 14 | 0.041 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.055 | 0.026 | - | < 0.00002 | < 0.00001 | 573 | 0.000014 | 0.0035 | < 0.0005 | 0.012 | 0.020 | 34 | 0.011 | 5.3 | 0.058 |
| | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.090 | 0.25 | - | < 0.00002 | < 0.00001 | 53 | < 0.000003 | 0.0045 | < 0.0005 | < 0.0005 | 0.05 | 13 | 0.0050 | 9.1 | 0.035 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.15 | 0.18 | - | < 0.00002 | 0.00004 | 128 | < 0.000003 | 0.0014 | < 0.0005 | 0.0084 | 0.65 | 46 | 0.023 | 1.5 | 0.0025 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 0.020 | 0.27 | - | < 0.00002 | < 0.00001 | 56 | 0.000006 | 0.0035 | < 0.0005 | 0.0025 | 0.52 | 9.3 | 0.0040 | 13 | 0.10 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.020 | **0.64** | - | < 0.00002 | 0.00004 | 50 | 0.000004 | 0.0027 | < 0.0005 | 0.0022 | 0.38 | 9.6 | 0.0040 | 7.2 | 0.042 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 0.040 | **0.62** | - | < 0.00002 | 0.00005 | 94 | 0.000008 | 0.0040 | < 0.0005 | 0.0096 | 0.23 | 6.4 | 0.0020 | 5.1 | 0.029 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 0.35 | **1.2** | - | < 0.00002 | 0.00002 | 68 | < 0.000003 | 0.0011 | < 0.0005 | 0.0016 | 0.54 | 8.6 | 0.0020 | 2.1 | 0.0044 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.18 | **0.55** | - | < 0.00002 | < 0.00001 | 49 | < 0.000003 | 0.0014 | < 0.0005 | 0.0019 | 0.26 | 16 | 0.0030 | 5.0 | 0.010 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 0.030 | 0.072 | - | < 0.00002 | < 0.00001 | 40 | 0.000003 | 0.0016 | < 0.0005 | 0.0020 | 0.20 | 6.7 | 0.0030 | 12 | 0.073 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 0.15 | 0.055 | - | < 0.00002 | < 0.00001 | 115 | 0.00001 | 0.0014 | < 0.0005 | 0.0022 | 0.19 | 14 | 0.0030 | 6.8 | 0.025 |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean total concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# Appendix C.4: Shake Flask Extraction Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | 0.5 | 0.2 | | | | | | | | | 0.5 |
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Mo | Na | Ni [3] | Pb [3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | 0.0118 | 4.5 | 0.0015 | 0.000090 | 0.0048 | 0.0020 | 0.000060 | 0.23 | 0.00010 | < 0.00002 | 0.00056 | 0.00022 | 0.000006 | 0.0010 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 0.0029 | 1.9 | 0.0001 | 0.000050 | 0.0016 | < 0.001 | 0.000040 | 0.061 | 0.00010 | < 0.00002 | 0.000138 | 0.00030 | 0.000002 | < 0.001 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | 0.0029 | 1.9 | 0.0032 | 0.00014 | 0.0046 | 0.0010 | 0.000090 | 0.503 | < 0.0001 | < 0.00002 | 0.000451 | 0.00014 | 0.000007 | 0.0020 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 0.0036 | 1.3 | 0.00040 | 0.000060 | 0.0026 | < 0.001 | 0.000050 | 0.296 | < 0.0001 | 0.000020 | 0.000467 | 0.00011 | 0.000004 | < 0.001 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 0.0146 | 4.1 | 0.0014 | 0.00015 | 0.00050 | < 0.001 | 0.00014 | 0.27 | 0.00080 | < 0.00002 | 0.11 | 0.00013 | 0.000006 | < 0.001 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 0.0051 | 3.7 | 0.00020 | 0.000070 | 0.00060 | < 0.001 | 0.00018 | 0.052 | 0.0018 | < 0.00002 | 0.017 | 0.00012 | 0.000023 | 0.0020 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | 0.0042 | 4.0 | 0.0018 | 0.000020 | 0.0018 | < 0.001 | 0.000040 | 0.16 | 0.00020 | < 0.00002 | 0.00024 | 0.000080 | 0.000004 | 0.0020 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 0.0020 | 1.8 | 0.00030 | < 0.00002 | 0.0012 | < 0.001 | < 0.00001 | 0.057 | 0.00010 | 0.000020 | 0.00014 | 0.000080 | 0.000001 | < 0.001 |
| | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.0049 | 1.6 | 0.0011 | 0.00036 | 0.0031 | < 0.001 | 0.000050 | 0.19 | 0.00060 | 0.000030 | 0.000305 | 0.000060 | - | < 0.001 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.0023 | 8.9 | 0.0028 | 0.000060 | 0.011 | 0.011 | 0.00019 | 0.32 | 0.00030 | 0.000020 | 0.0011 | 0.00022 | - | 0.0020 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.0045 | 5.0 | < 0.0001 | 0.000050 | 0.00090 | 0.0010 | 0.000040 | 0.69 | 0.00020 | 0.000090 | 0.0013 | 0.000080 | - | 0.0010 |
| | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.0032 | 4.6 | 0.00020 | 0.00010 | 0.0054 | 0.0020 | < 0.00001 | 0.18 | 0.00030 | < 0.00002 | 0.0016 | 0.000100 | - | < 0.001 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.0025 | 4.1 | 0.00020 | < 0.00002 | 0.0012 | < 0.001 | < 0.00001 | 0.19 | 0.00020 | 0.000020 | 0.0011 | 0.00016 | - | 0.0020 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 0.0029 | 3.5 | 0.00050 | < 0.00002 | 0.0043 | < 0.001 | 0.000050 | 0.096 | 0.00020 | < 0.00002 | 0.0019 | 0.000060 | - | < 0.001 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.0032 | 3.1 | 0.00060 | < 0.00002 | 0.0042 | < 0.001 | 0.000020 | 0.068 | 0.00020 | < 0.00002 | 0.000755 | 0.00015 | - | < 0.001 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 0.0068 | 2.6 | 0.00050 | < 0.00002 | 0.0057 | 0.002 | 0.000050 | 0.085 | 0.00020 | < 0.00002 | 0.000619 | 0.00021 | - | < 0.001 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 0.0030 | 2.2 | 0.00040 | 0.000090 | 0.011 | 0.005 | 0.000010 | 0.11 | 0.00020 | < 0.00002 | 0.00060 | 0.00059 | - | < 0.001 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.0040 | 4.4 | 0.00040 | 0.00027 | 0.0065 | 0.002 | 0.000020 | 0.14 | 0.00030 | < 0.00002 | 0.000671 | 0.00024 | - | < 0.001 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 0.0030 | 0.84 | 0.00040 | < 0.00002 | 0.0014 | < 0.001 | < 0.00001 | 0.062 | 0.00010 | < 0.00002 | 0.000629 | 0.000030 | - | 0.0010 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 0.0062 | 2.6 | 0.001 | 0.00012 | 0.0032 | 0.005 | < 0.00001 | 0.19 | 0.00010 | 0.000020 | 0.000835 | 0.000050 | - | < 0.001 |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean total concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# Appendix C.4: Net Acid Generation Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Metal Mine Effluent Regulation (MMER) [1] (mg/L) | 6.0 - 9.5 | | | | | | | | | | | |
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | CN(T) | CNWAD | CNS | CNO | As+3 | As+5 | Hg | Ag |
| | | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.25 | 0.012 | < 0.0001 | 0.000050 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.020 | 0.063 | < 0.0001 | 0.000010 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 10 | < 0.1 | 1.3 | 0.035 | < 0.0001 | 0.000020 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.48 | 0.050 | < 0.0001 | 0.000020 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.040 | < 0.001 | < 0.0001 | 0.000010 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.0020 | 0.0050 | < 0.0001 | < 0.00001 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.50 | 0.11 | < 0.0001 | < 0.00001 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | - | - | - | - | - | < 0.01 | < 0.01 | < 0.2 | < 0.1 | 0.018 | 0.040 | < 0.0001 | < 0.00001 |
| | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 8.1 | 300 | 153 | 0.90 | 25 | - | - | - | - | - | - | < 0.0001 | - |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 8.2 | 1040 | 59 | 0.40 | 390 | - | - | - | - | - | - | 0.00030 | - |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 7.6 | 2330 | 32 | < 2 | 1500 | - | - | - | - | - | - | < 0.0001 | - |
| | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 8.1 | 295 | 80 | 0.40 | 110 | - | - | - | - | - | - | < 0.0001 | - |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 7.4 | 809 | 16 | 0.40 | 250 | - | - | - | - | - | - | < 0.0001 | - |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 8.1 | 289 | 101 | 1.0 | 92 | - | - | - | - | - | - | < 0.0001 | - |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 8.0 | 322 | 68 | 0.60 | 51 | - | - | - | - | - | - | < 0.0001 | - |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 7.9 | 387 | 46 | 0.90 | 150 | - | - | - | - | - | - | < 0.0001 | - |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 7.9 | 407 | 38 | < 0.2 | 120 | - | - | - | - | - | - | < 0.0001 | - |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 8.0 | 373 | 71 | 0.80 | 93 | - | - | - | - | - | - | < 0.0001 | - |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 8.2 | 331 | 93 | < 0.2 | 67 | - | - | - | - | - | - | < 0.0001 | - |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 7.8 | 615 | 51 | < 1 | 240 | - | - | - | - | - | - | < 0.0001 | - |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean total concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

**Appendix C.4: Net Acid Generation Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metal Mine Effluent Regulation (MMER) [1] (mg/L)** | | | | | | **0.5** | | | | | | | | **0.3** | | | | |
| **Sample ID** | **Year (analysis)** | **Tailings Type** | **Deposit** | **Location** | **Al[4]** | **As** | **B** | **Be** | **Bi** | **Ca** | **Cd[3]** | **Co** | **Cr[2]** | **Cu[3]** | **Fe** | **K** | **Li** | **Mg** | **Mn** |
| | | | | | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | 0.030 | 0.32 | 0.018 | < 0.00002 | 0.00004 | 46 | 0.000007 | 0.00014 | < 0.0005 | < 0.0005 | < 0.01 | 9.6 | 0.0040 | 11 | 0.048 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 0.28 | 0.090 | 0.0068 | < 0.00002 | 0.00003 | 12 | 0.000004 | 0.000050 | < 0.0005 | < 0.0005 | < 0.01 | 4.1 | 0.0020 | 3.9 | 0.0047 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | < 0.01 | **1.5** | 0.0059 | < 0.00002 | < 0.00001 | 102 | < 0.000003 | 0.00037 | < 0.0005 | 0.00070 | < 0.01 | 18 | 0.0050 | 13 | 0.090 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 0.060 | **0.60** | 0.0051 | < 0.00002 | < 0.00001 | 47 | < 0.000003 | 0.000063 | < 0.0005 | < 0.0005 | < 0.01 | 21 | 0.0050 | 7.6 | 0.041 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 0.030 | 0.046 | 0.027 | < 0.00002 | 0.00009 | 44 | 0.000006 | 0.000066 | < 0.0005 | 0.00050 | < 0.01 | 30 | 0.012 | 5.0 | 0.064 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 0.13 | 0.0061 | 0.043 | < 0.00002 | 0.00001 | 7.5 | < 0.000003 | 0.000030 | < 0.0005 | 0.0010 | 0.27 | 14 | 0.0060 | 0.73 | 0.0041 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | < 0.01 | **0.62** | 0.021 | < 0.00002 | < 0.00001 | 62 | < 0.000003 | 0.00014 | < 0.0005 | 0.00060 | < 0.01 | 14 | 0.0030 | 20 | 0.23 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 0.090 | 0.058 | 0.0083 | < 0.00002 | < 0.00001 | 21 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 | < 0.01 | 11 | 0.0030 | 8.6 | 0.039 |
| | | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.063 | 0.15 | - | < 0.00002 | 0.00002 | 38 | 0.000009 | 0.0010 | < 0.0005 | 0.018 | 0.011 | 9.3 | 0.0050 | 8.9 | 0.034 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.052 | **2.9** | - | < 0.00002 | 0.00009 | 182 | 0.00001 | 0.0054 | < 0.0005 | 0.049 | 0.18 | 18 | 0.0080 | 14 | 0.041 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.055 | 0.026 | - | < 0.00002 | < 0.00001 | 573 | 0.000014 | 0.0035 | < 0.0005 | 0.012 | 0.020 | 34 | 0.011 | 5.3 | 0.058 |
| | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.090 | 0.25 | - | < 0.00002 | < 0.00001 | 53 | < 0.000003 | 0.0045 | < 0.0005 | < 0.0005 | 0.05 | 13 | 0.0050 | 9.1 | 0.035 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.15 | 0.18 | - | < 0.00002 | 0.00004 | 128 | < 0.000003 | 0.0014 | < 0.0005 | 0.0084 | 0.65 | 46 | 0.023 | 1.5 | 0.0025 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 0.020 | 0.27 | - | < 0.00002 | < 0.00001 | 56 | 0.000006 | 0.0035 | < 0.0005 | 0.0025 | 0.52 | 9.3 | 0.0040 | 13 | 0.10 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.020 | **0.64** | - | < 0.00002 | 0.00004 | 50 | 0.000004 | 0.0027 | < 0.0005 | 0.0022 | 0.38 | 9.6 | 0.0040 | 7.2 | 0.042 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 0.040 | **0.62** | - | < 0.00002 | 0.00005 | 94 | 0.000008 | 0.0040 | < 0.0005 | 0.0096 | 0.23 | 6.4 | 0.0020 | 5.1 | 0.029 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 0.35 | **1.2** | - | < 0.00002 | 0.00002 | 68 | < 0.000003 | 0.0011 | < 0.0005 | 0.0016 | 0.54 | 8.6 | 0.0020 | 2.1 | 0.0044 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.18 | **0.55** | - | < 0.00002 | < 0.00001 | 49 | < 0.000003 | 0.0014 | < 0.0005 | 0.0019 | 0.26 | 16 | 0.0030 | 5.0 | 0.010 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 0.030 | 0.072 | - | < 0.00002 | < 0.00001 | 40 | 0.000003 | 0.0016 | < 0.0005 | 0.0020 | 0.20 | 6.7 | 0.0030 | 12 | 0.073 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 0.15 | 0.055 | - | < 0.00002 | < 0.00001 | 115 | 0.00001 | 0.0014 | < 0.0005 | 0.0022 | 0.19 | 14 | 0.0030 | 6.8 | 0.025 |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean total concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

**Appendix C.4: Net Acid Generation Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Metal Mine Effluent Regulation (MMER) [1] (mg/L)** | | | | | | | **0.5** | **0.2** | | | | | | | | | **0.5** |
| **Sample ID** | **Year (analysis)** | **Tailings Type** | **Deposit** | **Location** | **Mo** | **Na** | **Ni[3]** | **Pb[3]** | **Sb** | **Se** | **Sn** | **Sr** | **Ti** | **Tl** | **U** | **V** | **Y** | **Zn** |
| | | | | | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** | **mg/L** |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | 0.0118 | 4.5 | 0.0015 | 0.000090 | 0.0048 | 0.0020 | 0.000060 | 0.23 | 0.00010 | < 0.00002 | 0.00056 | 0.00022 | 0.000006 | 0.0010 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 0.0029 | 1.9 | 0.0001 | 0.000050 | 0.0016 | < 0.001 | 0.000040 | 0.061 | 0.00010 | < 0.00002 | 0.000138 | 0.00030 | 0.000002 | < 0.001 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | 0.0029 | 1.9 | 0.0032 | 0.00014 | 0.0046 | 0.0010 | 0.000090 | 0.503 | < 0.0001 | < 0.00002 | 0.000451 | 0.00014 | 0.000007 | 0.0020 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 0.0036 | 1.3 | 0.00040 | 0.000060 | 0.0026 | < 0.001 | 0.000050 | 0.296 | < 0.0001 | 0.000020 | 0.000467 | 0.00011 | 0.000004 | < 0.001 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 0.0146 | 4.1 | 0.0014 | 0.00015 | 0.00050 | < 0.001 | 0.00014 | 0.27 | 0.00080 | < 0.00002 | 0.11 | 0.00013 | 0.000006 | < 0.001 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 0.0051 | 3.7 | 0.00020 | 0.000070 | 0.00060 | < 0.001 | 0.00018 | 0.052 | 0.0018 | < 0.00002 | 0.017 | 0.00012 | 0.000023 | 0.0020 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | 0.0042 | 4.0 | 0.0018 | 0.000020 | 0.0018 | < 0.001 | 0.000040 | 0.16 | 0.00020 | < 0.00002 | 0.00024 | 0.000080 | 0.000004 | 0.0020 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 0.0020 | 1.8 | 0.00030 | < 0.00002 | 0.0012 | < 0.001 | < 0.00001 | 0.057 | 0.00010 | 0.000020 | 0.00014 | 0.000080 | 0.000001 | < 0.001 |
| | | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.0049 | 1.6 | 0.0011 | 0.00036 | 0.0031 | < 0.001 | 0.000050 | 0.19 | 0.00060 | 0.000030 | 0.000305 | 0.000060 | - | < 0.001 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.0023 | 8.9 | 0.0028 | 0.000060 | 0.011 | 0.011 | 0.00019 | 0.32 | 0.00030 | 0.000020 | 0.0011 | 0.00022 | - | 0.0020 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.0045 | 5.0 | < 0.0001 | 0.000050 | 0.00090 | 0.0010 | 0.000040 | 0.69 | 0.00020 | 0.000090 | 0.0013 | 0.000080 | - | 0.0010 |
| | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.0032 | 4.6 | 0.00020 | 0.00010 | 0.0054 | 0.0020 | < 0.00001 | 0.18 | 0.00030 | < 0.00002 | 0.0016 | 0.000100 | - | < 0.001 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.0025 | 4.1 | 0.00020 | < 0.00002 | 0.0012 | < 0.001 | < 0.00001 | 0.19 | 0.00020 | 0.000020 | 0.0011 | 0.00016 | - | 0.0020 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 0.0029 | 3.5 | 0.00050 | < 0.00002 | 0.0043 | < 0.001 | 0.000050 | 0.096 | 0.00020 | < 0.00002 | 0.0019 | 0.000060 | - | < 0.001 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.0032 | 3.1 | 0.00060 | < 0.00002 | 0.0042 | < 0.001 | 0.000020 | 0.068 | 0.00020 | < 0.00002 | 0.000755 | 0.00015 | - | < 0.001 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 0.0068 | 2.6 | 0.00050 | < 0.00002 | 0.0057 | 0.002 | 0.000050 | 0.085 | 0.00020 | < 0.00002 | 0.000619 | 0.00021 | - | < 0.001 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 0.0030 | 2.2 | 0.00040 | 0.000090 | 0.011 | 0.005 | 0.000010 | 0.11 | 0.00020 | < 0.00002 | 0.00060 | 0.00059 | - | < 0.001 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.0040 | 4.4 | 0.00040 | 0.00027 | 0.0065 | 0.002 | 0.000020 | 0.14 | 0.00030 | < 0.00002 | 0.000671 | 0.00024 | - | < 0.001 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 0.0030 | 0.84 | 0.00040 | < 0.00002 | 0.0014 | < 0.001 | < 0.00001 | 0.062 | 0.00010 | < 0.00002 | 0.000629 | 0.000030 | - | 0.0010 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 0.0062 | 2.6 | 0.001 | 0.00012 | 0.0032 | 0.005 | < 0.00001 | 0.19 | 0.00010 | 0.000020 | 0.000835 | 0.000050 | - | < 0.001 |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean total concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion. In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# Appendix C.4: Net Acid Generation Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | | | | | | 0.5 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | NAG Leach pH | Alkalinity | Conductivity | SO4 | Cl | Hg | Ag | Al | As | B | Be | Bi |
| | | | | | units | mg/L as CaCO3 | uS/cm | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | - | - | - | - | - | < 0.0001 | 0.00005 | 8.7 | **5.0** | 0.16 | 0.00097 | < 0.00001 |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | - | - | - | - | - | < 0.0001 | < 0.00001 | 0.57 | 0.019 | 1.1 | < 0.00002 | < 0.00001 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | - | - | - | - | - | < 0.0001 | < 0.00001 | 0.19 | **13** | 0.036 | 0.00008 | < 0.00001 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | - | - | - | - | - | < 0.0001 | 0.00003 | 0.34 | 0.12 | 1.0 | 0.00003 | 0.00002 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | - | - | - | - | - | < 0.0001 | < 0.00001 | 3.8 | **3.7** | 0.47 | 0.00038 | 0.0001 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | - | - | - | - | - | < 0.0001 | < 0.00001 | 1.3 | 0.039 | 0.047 | < 0.00002 | < 0.00001 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | - | - | - | - | - | < 0.0001 | < 0.00001 | 0.31 | **1.0** | 0.33 | 0.00016 | < 0.00001 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | - | - | - | - | - | < 0.0001 | < 0.00001 | 0.43 | 0.012 | 1.1 | < 0.00002 | < 0.00001 |
| | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 9.9 | 33 | 360 | 120 | < 2 | < 0.0001 | - | 0.5 | **0.89** | - | < 0.00002 | < 0.00001 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 3.1 | < 2 | 2730 | 1600 | < 2 | 0.0003 | - | 2.0 | **9.8** | - | 0.00073 | < 0.00001 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 11 | 67 | 302 | 63 | 4.8 | < 0.0001 | - | 1.7 | 0.019 | - | < 0.00002 | < 0.00001 |
| | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 9.1 | 17 | 577 | 250 | < 2 | < 0.0001 | - | 0.26 | **0.53** | - | < 0.00002 | < 0.00001 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 2.6 | < 2 | 1830 | 520 | < 2 | < 0.0001 | - | 15 | 0.056 | - | 0.0007 | 0.00002 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 8.6 | 21 | 446 | 260 | 3.9 | < 0.0001 | - | < 0.01 | 0.29 | - | < 0.00002 | 0.00004 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 8.1 | 4 | 1500 | 810 | < 2 | < 0.0001 | - | < 0.01 | 0.2 | - | < 0.00002 | 0.00002 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 8.9 | 13 | 746 | 360 | < 2 | < 0.0001 | - | 0.03 | 0.04 | - | < 0.00002 | < 0.00001 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 9.7 | 23 | 377 | 120 | < 2 | < 0.0001 | - | 0.24 | 0.33 | - | < 0.00002 | < 0.00001 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 9.0 | 13 | 607 | 270 | < 2 | < 0.0001 | - | 0.29 | **4.1** | - | < 0.00002 | 0.00001 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 8.9 | 14 | 566 | 250 | < 2 | < 0.0001 | - | 0.01 | 0.0084 | - | < 0.00002 | < 0.00001 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 10 | < 2 | 2480 | 120 | < 2 | < 0.0001 | - | 1.8 | 0.092 | - | < 0.00002 | < 0.00001 |

Notes:

nc: not calculated

1 -MMER (2006); Criteria for total metal concentrations only.

# Appendix C.4: Net Acid Generation Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | | | 0.3 | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Ca | Cd | Co | Cr | Cu | Fe | K | Li | Mg | Mn | Mo | Na | Ni |
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | 273 | 0.00672 | 0.623 | 0.0236 | **2.2** | 132 | 12 | < 0.002 | 67 | 5.0 | 0.0022 | 2.8 | **1.71** |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 18 | 0.000011 | 0.000027 | 0.0308 | 0.0024 | < 0.01 | 6.4 | < 0.002 | 0.005 | 0.00027 | 0.019 | 3.8 | 0.0003 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | 177 | 0.00148 | 0.0307 | < 0.0005 | 0.0049 | 569 | 16 | < 0.002 | 23 | 2.8 | 0.0042 | 0.57 | 0.12 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 19 | 0.000031 | 0.000076 | < 0.0005 | 0.0006 | 0.04 | 13 | < 0.002 | 0.011 | 0.00069 | 0.034 | 1.5 | 0.0003 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 41 | 0.000371 | 0.00616 | 0.0036 | 0.024 | 881 | 23 | < 0.002 | 8.0 | 1.2 | 0.0029 | 3.6 | 0.049 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 7.4 | 0.000012 | 0.000041 | 0.0189 | 0.0044 | 0.19 | 14 | < 0.002 | 0.065 | 0.00071 | 0.028 | 1.9 | 0.0002 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | 310 | 0.00716 | 0.0536 | < 0.0005 | 0.07 | 283 | 6.3 | < 0.002 | 82 | 27 | 0.00034 | 1.4 | 0.17 |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 32 | < 0.000003 | 0.000021 | 0.0186 | < 0.0005 | < 0.01 | 5.3 | < 0.002 | 0.01 | 0.00015 | 0.0035 | 2.2 | 0.0002 |
| | | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 59 | < 0.000003 | 0.000281 | < 0.0005 | 0.001 | 0.018 | 9.6 | 0.003 | 0.028 | 0.0012 | 0.056 | 1.6 | 0.0008 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 268 | 0.00588 | 0.141 | 0.0006 | 0.1 | 522 | 11 | 0.025 | 41 | 6.3 | 0.00071 | 1.4 | 0.34 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 55 | 0.000006 | 0.000157 | 0.0335 | 0.0014 | 0.005 | 10 | 0.002 | 0.006 | 0.00011 | 0.027 | 2.5 | 0.0018 |
| | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 104 | < 0.000003 | 0.000222 | < 0.0005 | 0.0018 | 0.011 | 10 | 0.005 | 1.4 | 0.0035 | 0.056 | 2.5 | 0.0028 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 75 | 0.00129 | 0.0493 | 0.0115 | **0.94** | 26 | 25 | 0.035 | 7.1 | 0.55 | 0.00009 | 2.8 | 0.090 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 106 | 0.000006 | 0.000174 | < 0.0005 | 0.023 | < 0.002 | 6.0 | 0.004 | 5.8 | 0.018 | 0.0091 | 0.89 | < 0.0001 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 269 | 0.000014 | 0.000706 | 0.0059 | 0.0017 | 0.016 | 4.4 | 0.005 | 44 | 1.1 | 0.0054 | 0.65 | 0.0007 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 147 | < 0.000003 | 0.000347 | < 0.0005 | 0.0043 | < 0.002 | 4.4 | 0.004 | 8.1 | 0.014 | 0.012 | 0.92 | 0.0042 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 64 | 0.00001 | 0.000116 | 0.0081 | 0.0006 | 0.007 | 9.5 | 0.001 | 0.051 | 0.00015 | 0.03 | 3.0 | 0.0015 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 111 | 0.000009 | 0.000211 | 0.0068 | 0.0015 | 0.003 | 10 | 0.007 | 4.3 | 0.0082 | 0.093 | 1.8 | < 0.0001 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 100 | < 0.000003 | 0.000253 | < 0.0005 | 0.044 | 0.004 | 4.5 | 0.005 | 12 | 0.026 | 0.012 | 1.3 | 0.0028 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 66 | 0.000056 | 0.000089 | 0.0233 | 0.0011 | 0.003 | 9.2 | 0.002 | 0.018 | 0.00017 | 0.088 | 3.0 | < 0.0001 |

Notes:

nc: not calculated

1 -MMER (2006); Criteria for total metal concentrations only.

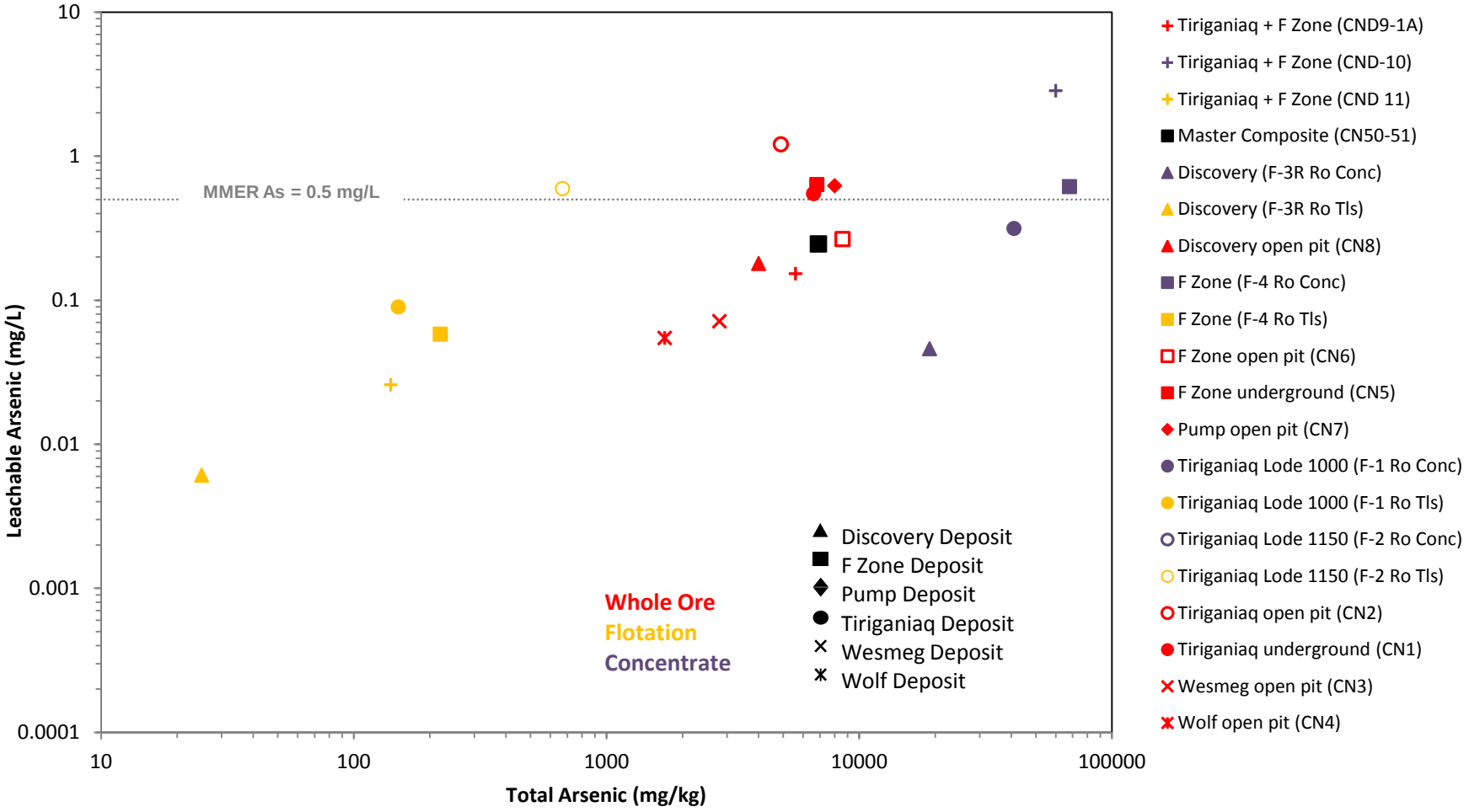
# Appendix C.4: Net Acid Generation Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.

| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| **Metal Mine Effluent Regulation (MMER) [1] (mg/L)** | | | | | 0.2 | | | | | | | | | | | **0.5** |
| F-1 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1000 | - | **0.994** | 0.0007 | 0.057 | 0.00006 | 1.1 | 0.0011 | 0.0004 | 0.0036 | 0.0014 | < 0.00003 | 0.021 | **0.76** |
| F-1 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1000 | - | 0.00003 | 0.0006 | < 0.001 | 0.0001 | 0.19 | < 0.0001 | < 0.0002 | 0.000016 | 0.0014 | 0.0012 | 0.000008 | 0.002 |
| F-2 Ro Conc | 2009 | concentrate | Tiriganiaq Lode 1150 | - | 0.0049 | 0.0015 | 0.08 | < 0.00001 | 0.93 | 0.0003 | < 0.0002 | 0.000044 | 0.00025 | < 0.00003 | 0.004 | 0.23 |
| F-2 Ro Tls | 2009 | flotation | Tiriganiaq Lode 1150 | - | 0.0001 | 0.0005 | < 0.001 | 0.00013 | 0.19 | 0.0002 | < 0.0002 | 0.000022 | 0.001 | 0.001 | 0.000029 | < 0.001 |
| F-3R Ro Conc | 2009 | concentrate | Discovery | - | 0.00025 | 0.0009 | 0.013 | 0.00003 | 0.3 | 0.0015 | < 0.0002 | 0.15 | 0.0035 | 0.00027 | 0.014 | 0.24 |
| F-3R Ro Tls | 2009 | flotation | Discovery | - | 0.0001 | 0.0012 | 0.002 | 0.00029 | 0.025 | 0.0013 | < 0.0002 | 0.00054 | 0.0057 | 0.0023 | 0.000011 | 0.003 |
| F-4 Ro Conc | 2009 | concentrate | F Zone | - | 0.0013 | < 0.0002 | 0.026 | 0.00002 | 0.66 | 0.0005 | < 0.0002 | 0.000069 | 0.00027 | 0.00006 | 0.0075 | **2.8** |
| F-4 Ro Tls | 2009 | flotation | F Zone | - | 0.00004 | 0.0003 | < 0.001 | < 0.00001 | 0.1 | < 0.0001 | < 0.0002 | 0.000004 | 0.0015 | 0.00055 | < 0.000001 | < 0.001 |
| | | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.00028 | 0.0017 | 0.003 | 0.00007 | 0.35 | 0.0009 | 0.00008 | 0.00043 | 0.002 | - | - | 0.001 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.041 | 0.0017 | 0.037 | 0.00018 | 1.2 | 0.0013 | 0.00011 | 0.00075 | 0.0039 | - | - | **1.3** |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | < 0.00002 | 0.0003 | < 0.001 | 0.00015 | 0.36 | 0.0006 | 0.00013 | 0.00001 | 0.0021 | - | - | < 0.001 |
| | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.00003 | 0.0011 | 0.006 | 0.0001 | 0.38 | 0.0006 | 0.00005 | 0.000013 | 0.00027 | - | - | 0.001 |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.015 | 0.0004 | 0.006 | 0.00004 | 0.63 | 0.0065 | 0.00056 | 0.0097 | 0.00025 | - | - | 0.17 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | < 0.00002 | 0.0011 | 0.008 | 0.00002 | 0.17 | 0.0003 | < 0.00002 | 0.000009 | 0.00011 | - | - | < 0.001 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.00025 | 0.0007 | 0.02 | 0.00034 | 0.44 | 0.0006 | 0.00004 | 0.000028 | 0.00009 | - | - | 0.01 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | < 0.00002 | 0.0004 | 0.012 | 0.00008 | 0.13 | 0.0003 | 0.00004 | 0.000005 | < 0.00003 | - | - | 0.002 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 0.00005 | 0.0022 | 0.003 | < 0.00001 | 0.43 | 0.001 | 0.00004 | 0.000075 | 0.0028 | - | - | < 0.001 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.00029 | 0.0039 | 0.006 | 0.00014 | 0.47 | 0.0005 | 0.00006 | 0.00003 | 0.001 | - | - | 0.001 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | < 0.00002 | 0.0002 | 0.008 | < 0.00001 | 0.12 | 0.0002 | 0.00002 | 0.000006 | < 0.00003 | - | - | 0.001 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | < 0.00002 | 0.0009 | 0.004 | 0.00004 | 0.26 | 0.0005 | 0.0001 | 0.000013 | 0.0025 | - | - | < 0.001 |

Notes:

nc: not calculated

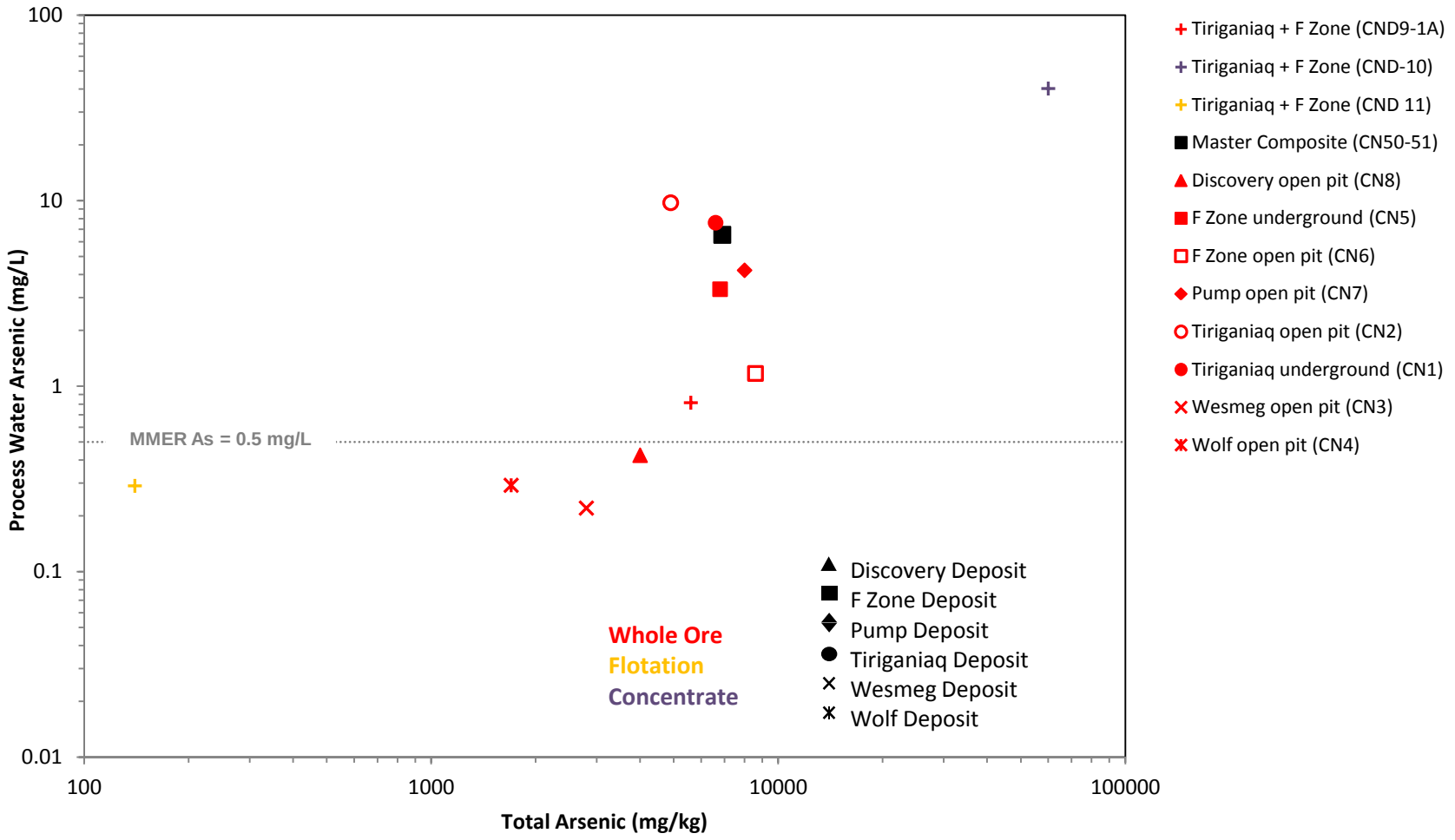
1 -MMER (2006); Criteria for total metal concentrations only.




Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with F Zone deposit (14%)

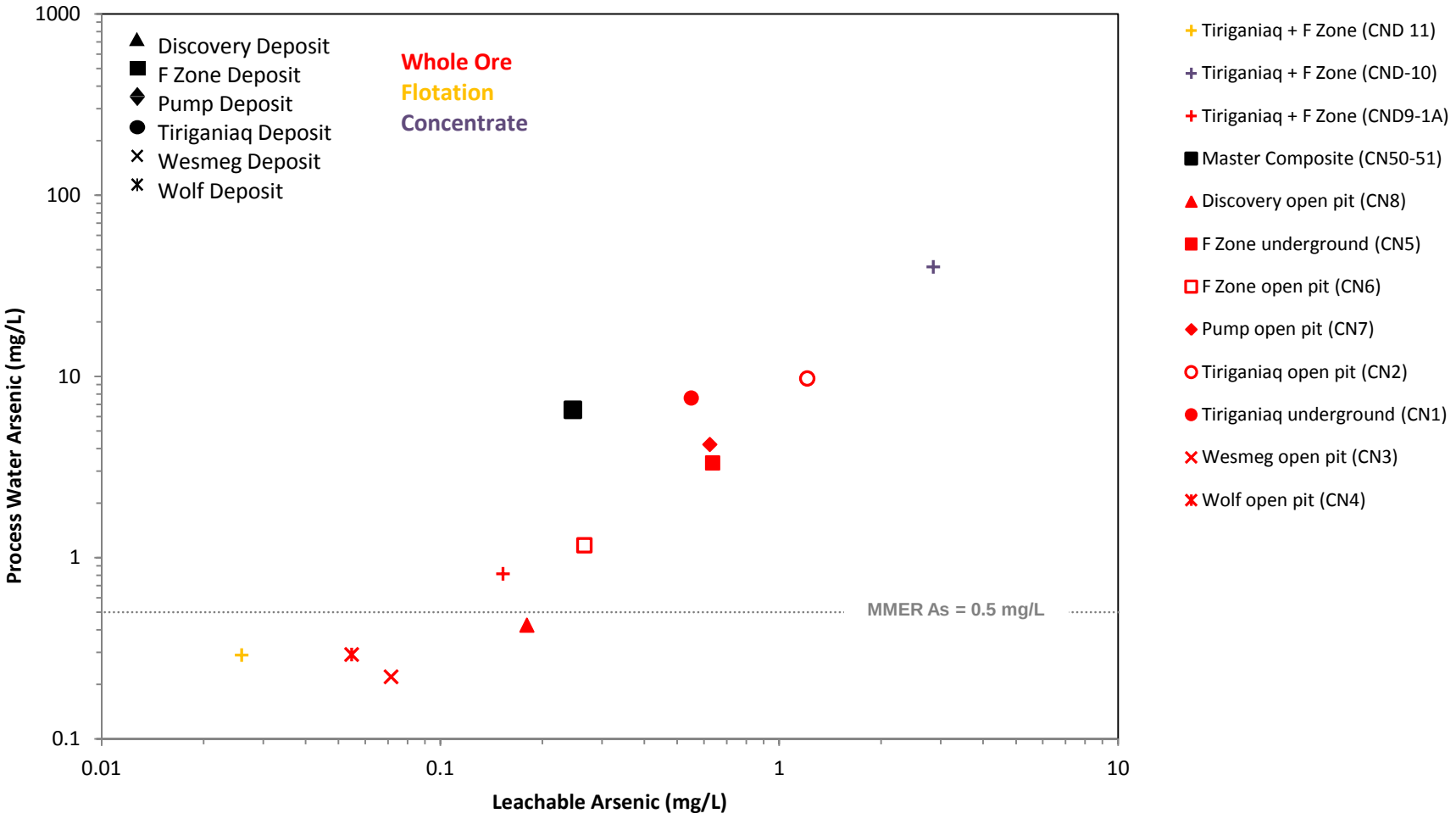
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **C.4-1** |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix C - tailings\
AEM_tailings_static tables&figures_31Aug2012.xlsx



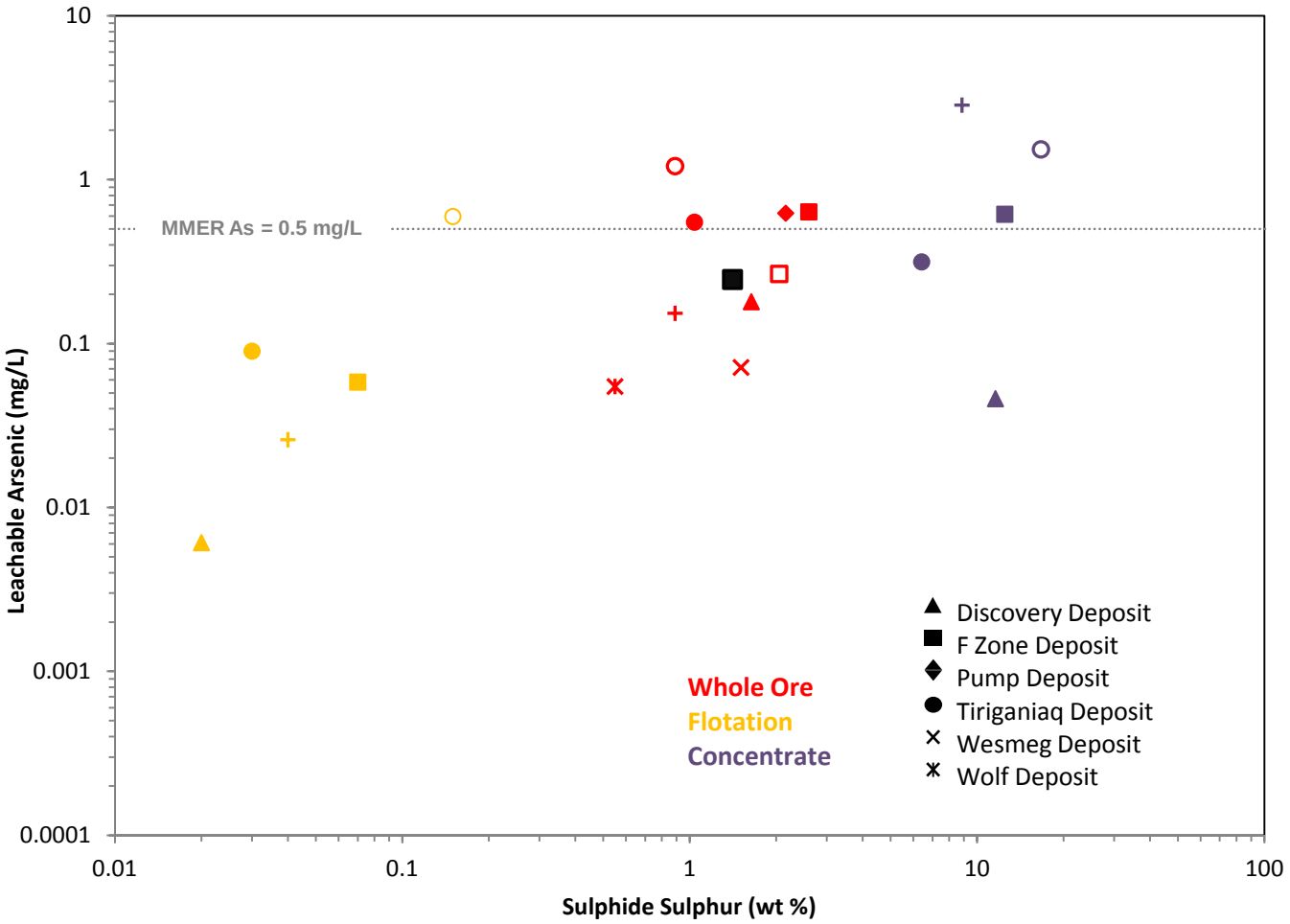

Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with F Zone deposit (14%)

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Total Arsenic versus Process Water Arsenic (dissolved)**<br>**All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH/AJS | Date | Aug-12 | Project N° 11-1428-0011 |
| | Checked | JMC | | | |
| | Reviewed | VJB | | | Figure **C.4-2** |




Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with F Zone deposit (14%)

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Tailings Static Testing** | **Leachable Arsenic versus Process Water Arsenic (dissolved)**<br>**All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | | Prepared | DH/AJS | Date | Aug-12 | Project N° | 11-1428-0011 |
| | | Checked | JMC | | | | |
| | | Reviewed | VJB | | | Figure | **C.4-3** |




+ Tiriganiaq + F Zone (CND9-1A)
+ Tiriganiaq + F Zone (CND-10)
+ Tiriganiaq + F Zone (CND 11)
■ Master Composite (CN50-51)
▲ Discovery (F-3R Ro Conc)
▲ Discovery (F-3R Ro Tls)
▲ Discovery open pit (CN8)
■ F Zone (F-4 Ro Conc)
■ F Zone (F-4 Ro Tls)
□ F Zone open pit (CN6)
■ F Zone underground (CN5)
◆ Pump open pit (CN7)
● Tiriganiaq Lode 1000 (F-1 Ro Conc)
● Tiriganiaq Lode 1000 (F-1 Ro Tls)
○ Tiriganiaq Lode 1150 (F-2 Ro Conc)
○ Tiriganiaq Lode 1150 (F-2 Ro Tls)
○ Tiriganiaq open pit (CN2)
● Tiriganiaq underground (CN1)
× Wesmeg open pit (CN3)
✱ Wolf open pit (CN4)

Notes:
Tls = flotation, Conc = concentrate, Mixture = Tiriganiaq deposit mixed with F Zone deposit (14%)

Golder Associates

**Tailings Static Testing**

**Sulphide Sulphur versus Leachable Arsenic**

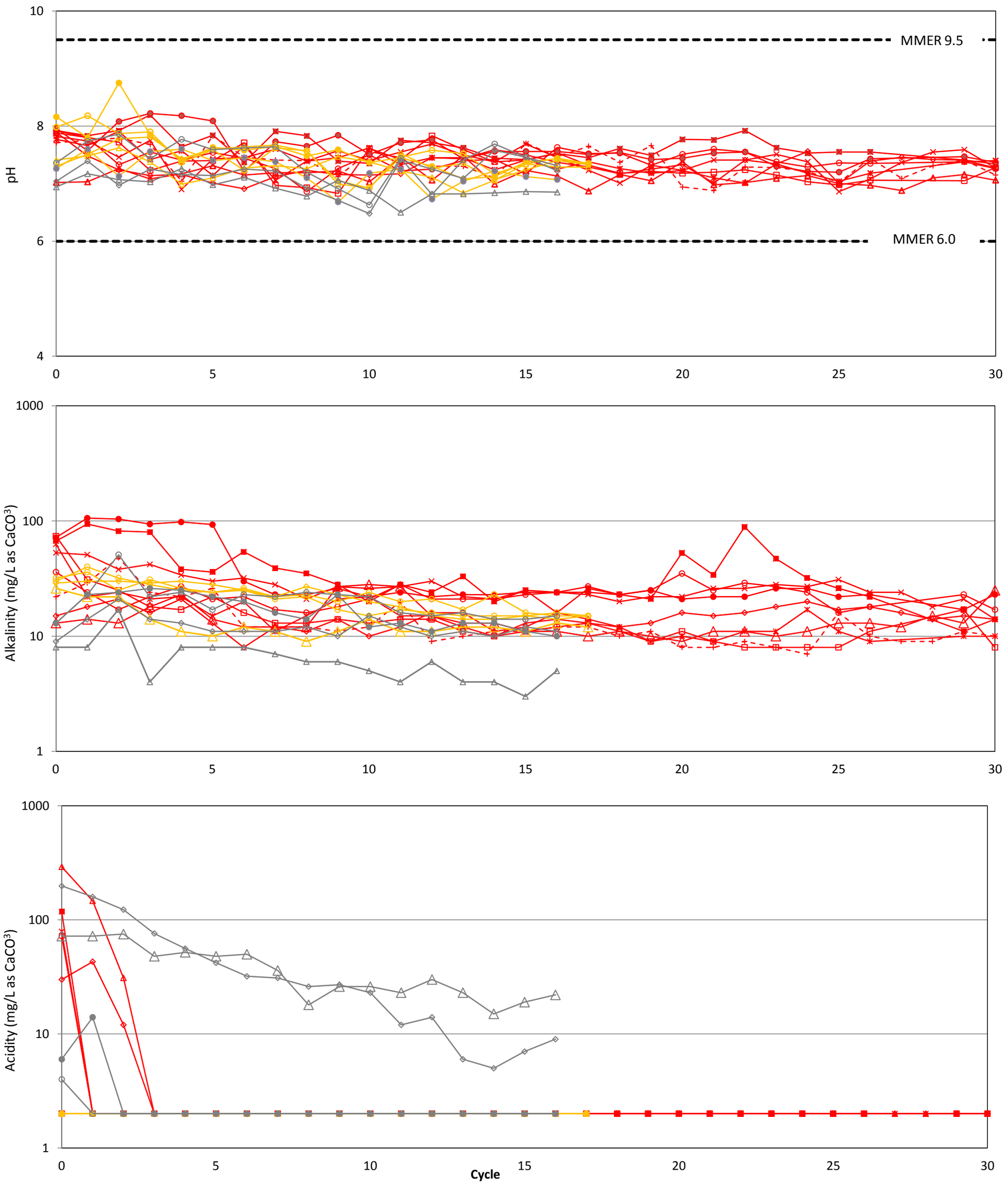
**All Deposits**

**Meliadine Property, Nunavut**
**Agnico Eagle Mines Ltd.**

| | | | | | |
|---|---|---|---|---|---|
| Prepared | DH/AJS | Date | Aug-12 | Project N° | 11-1428-0011 |
| Checked | JMC | | | | |
| Reviewed | | | | Figure | C.4-4 |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix C - tailings\
AEM_tailings_static tables&figures_31Aug2012.xlsx

# C.5 Kinetic Leach Test Results: Tables and Figures




**Deposit:**

- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

**Material Type:**

**Whole Ore**

**Concentrate**

**Flotation**

**Criteria:**

MMER (2006) maxmum monthly mean

**Notes:**

Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

# pH
# Alkalinity
# Acidity

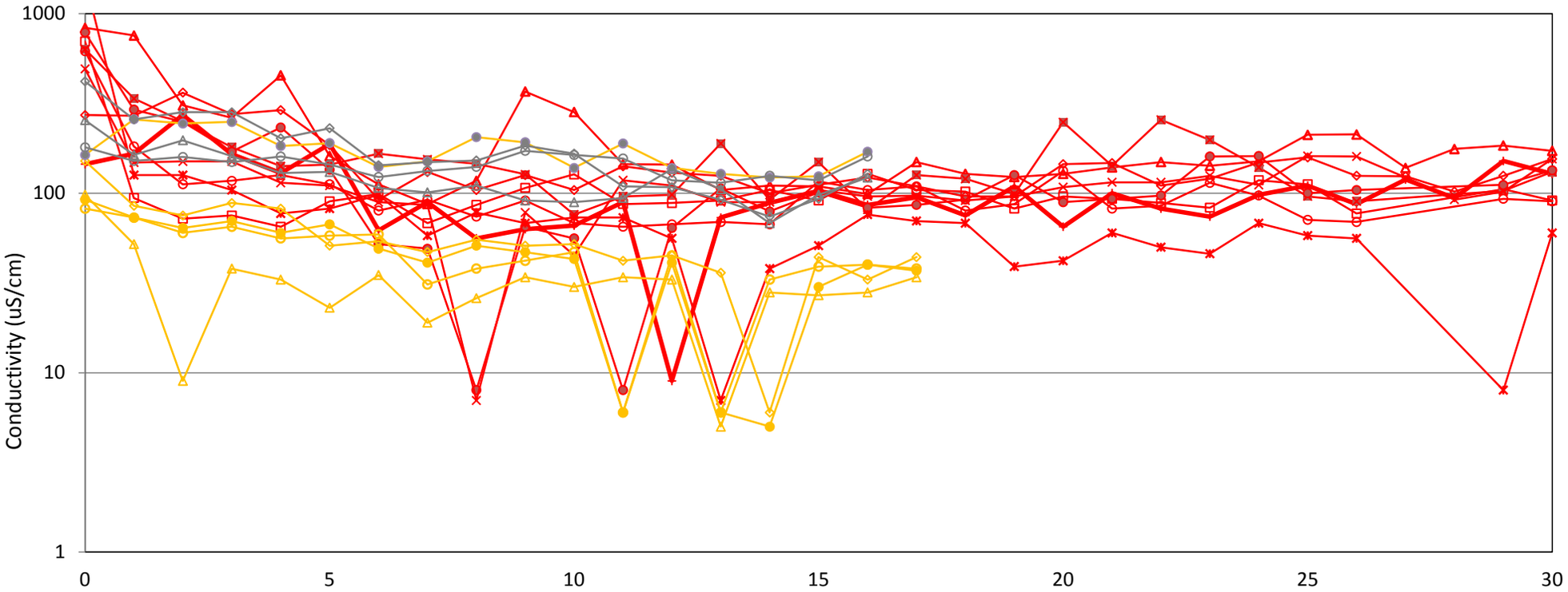
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| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

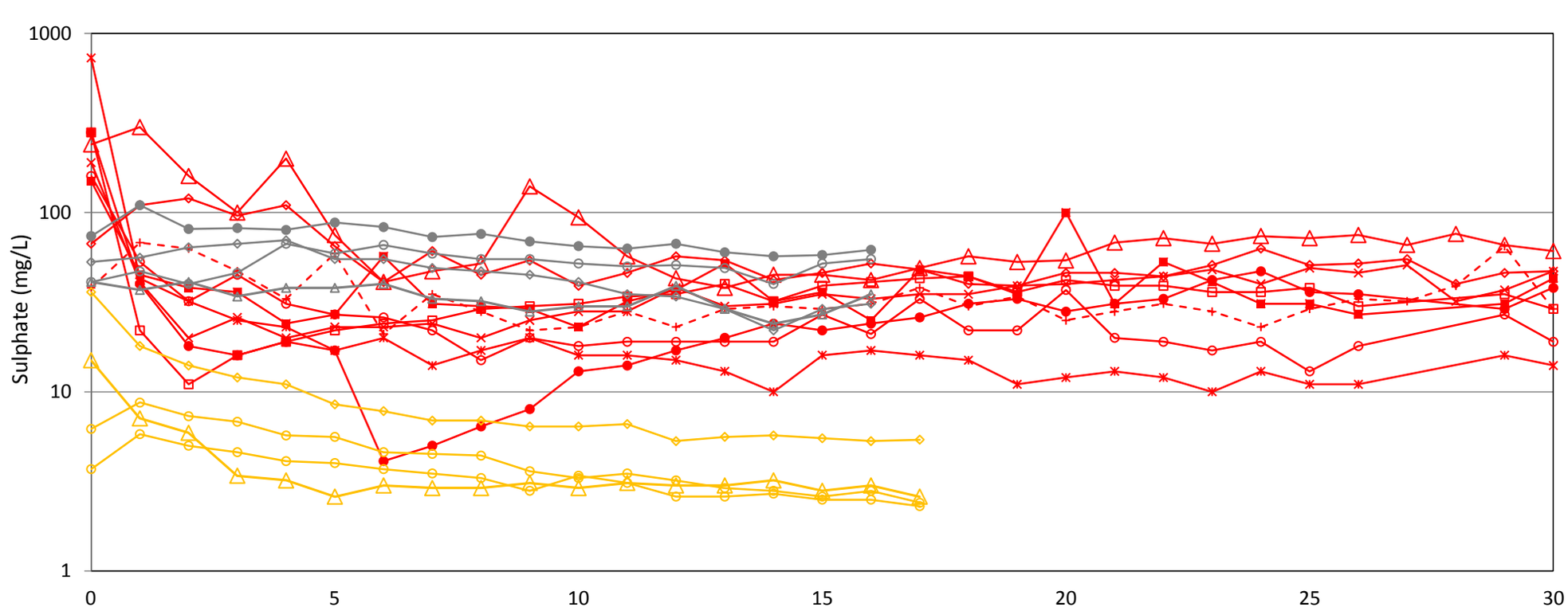
# Kinetic Test Data
# Tailings Samples
# Meliadine Property

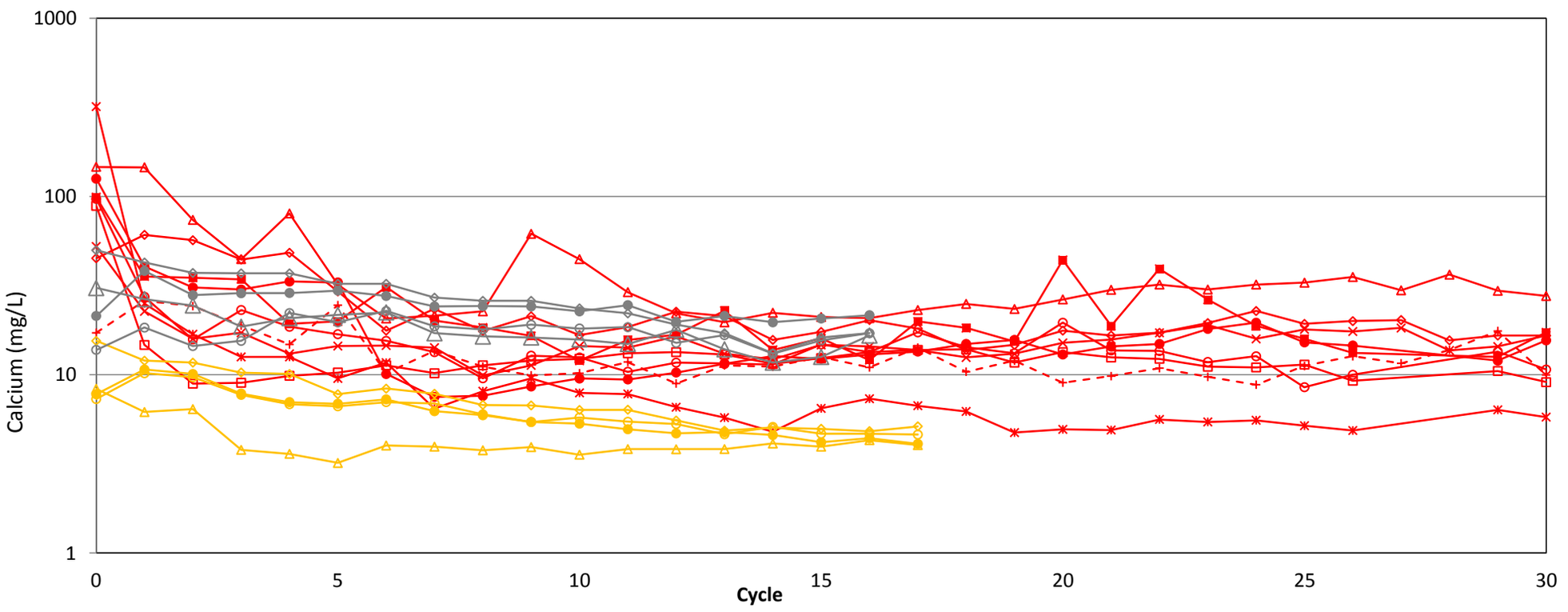
**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** C.5-1




CN50-51 Composite
Discovery CN8 (CND5-7)
F Zone Open Pit CN6 CND residue
F Zone Open Pit CN6 CND residue
Pump CN7
Tiriganiaq Open Pit CN2
Tiriganiaq Underground CN1
Wesmeg Open Pit CN3
Wolf CN4 CND residue
F1 Flot Tailings
F2 Flot Tailings
F7 Ro Tails
F8 Ro Tails
F1 Concentrate (C1-C8 Composite)
F2 Concentrate (C1-C8 Composite)
F7 Ro Con (C1-8 Composite)
F8 Ro Con (C1-10 Composite)

**Deposit:**
- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

**Material Type:**
**Whole Ore**
**Concentrate**
**Flotation**

**Criteria:**
MMER (2006) maxmum monthly mean

**Notes:**
Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Conductivity**
**Sulphate**
**Calcium**

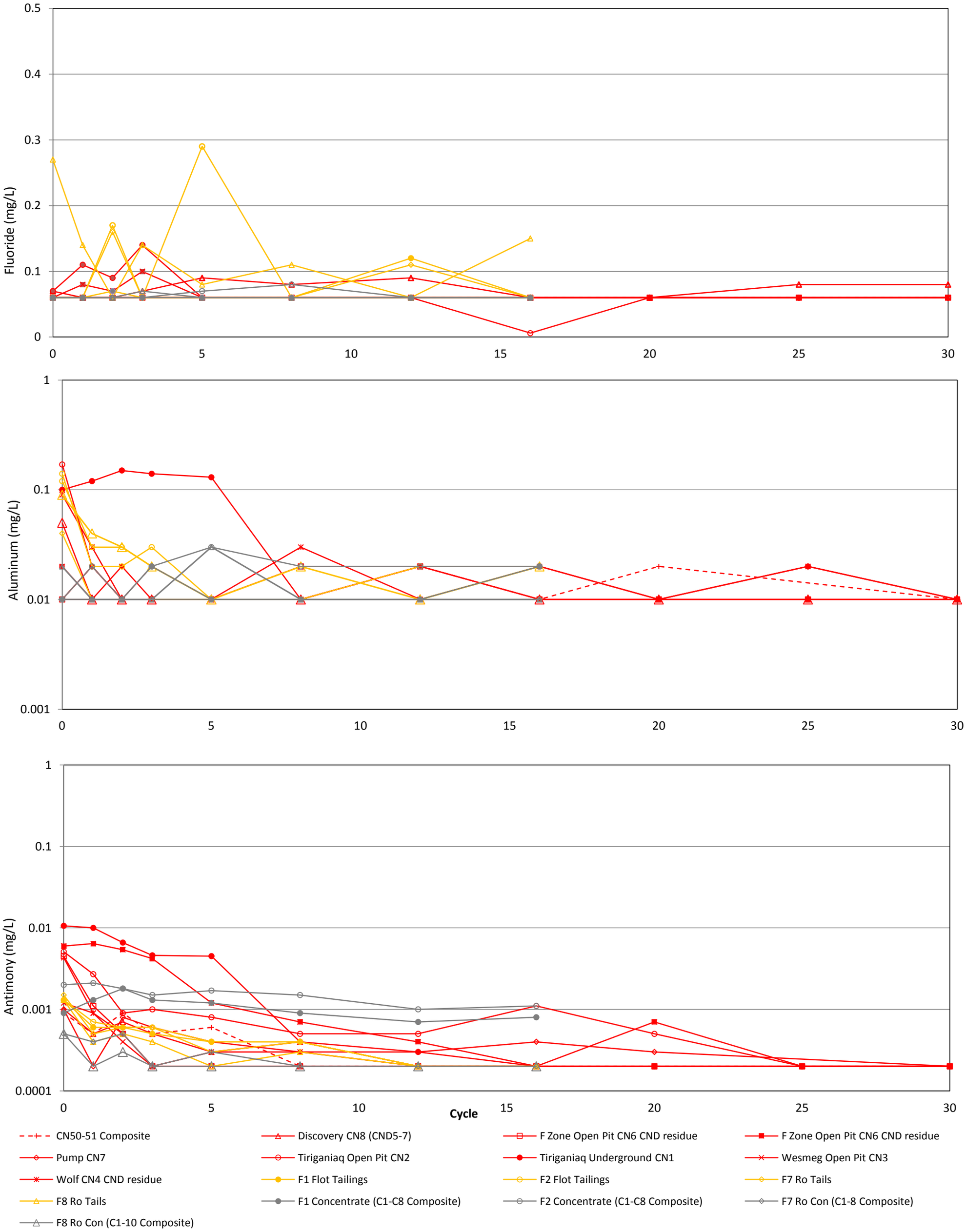
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|---|---|---|---|
| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

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**FIGURE** C.5-2




| | | | |
|---|---|---|---|
| Deposit:<br>▲ Discovery Deposit<br>■ F Zone Deposit<br>♦ Pump Deposit<br>● Tiriganiaq Deposit<br>× Wesmeg Deposit<br>✱ Wolf Deposit | Material Type:<br>**Whole Ore**<br>**Concentrate**<br>**Flotation**<br><br>Criteria:<br>MMER (2006) maxmum monthly mean | Notes:<br>Open symbol = open pit / closed = underground<br><br>Values < MDL are plotted as MDL | **Fluoride**<br>**Aluminum**<br>**Antimony** |

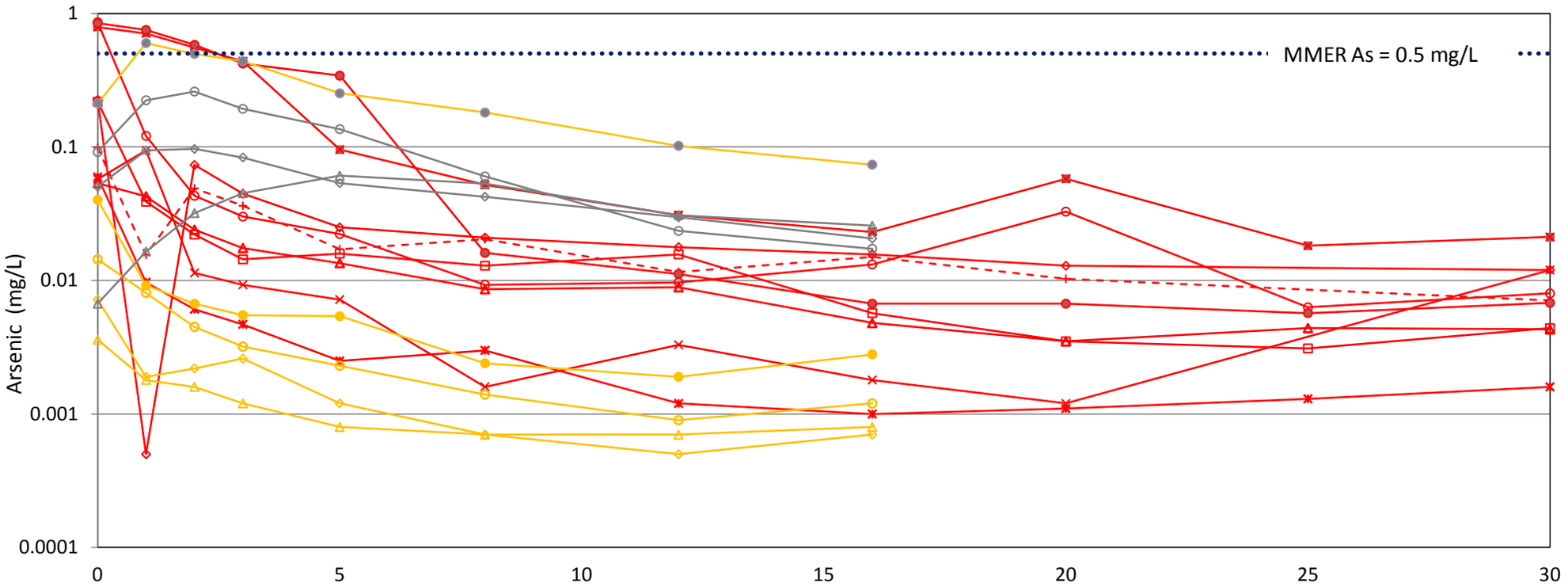
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| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

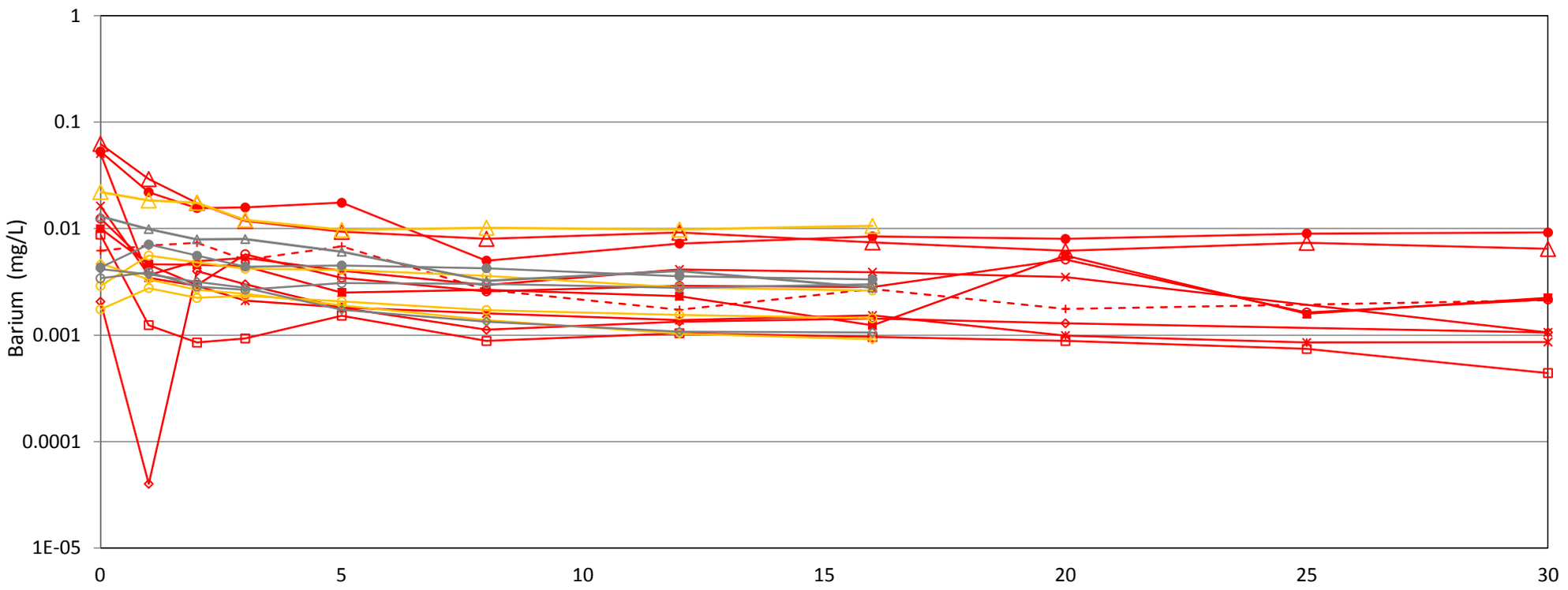
**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

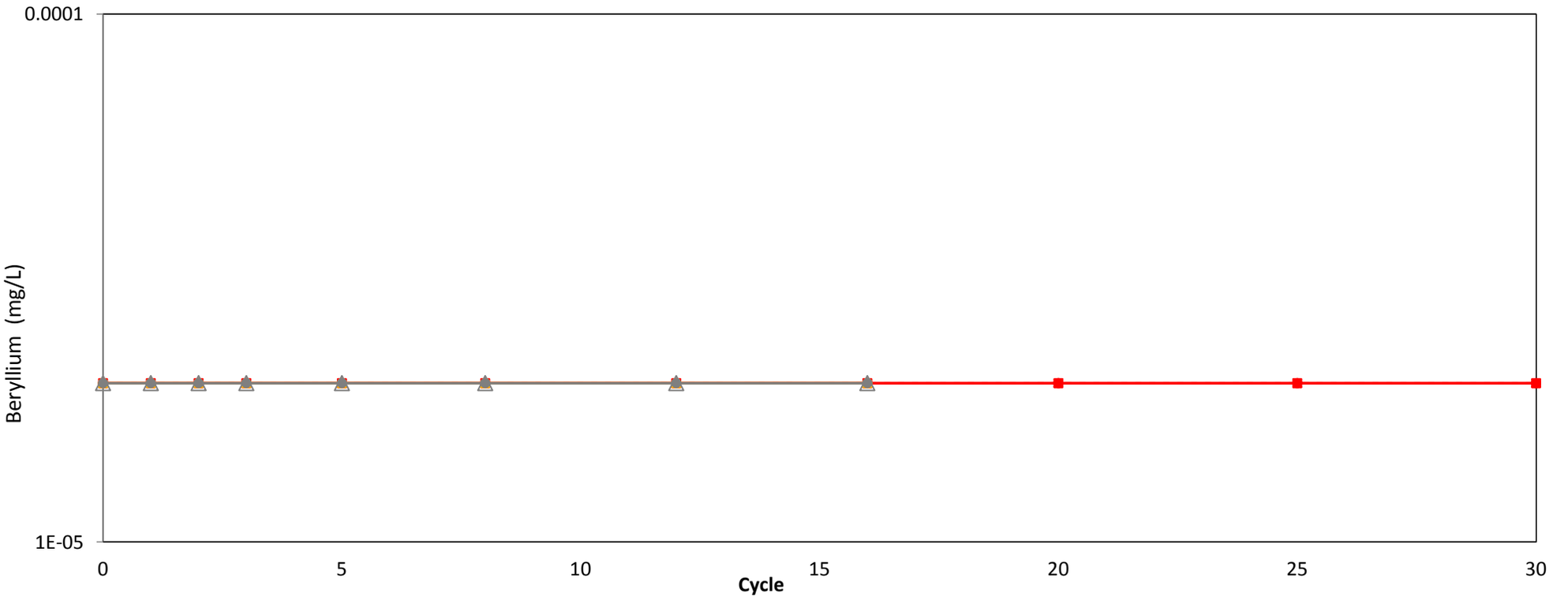
**Agnico-Eagle Mines Ltd.**

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**FIGURE** C.5-3




- CN50-51 Composite
- Discovery CN8 (CND5-7)
- F Zone Open Pit CN6 CND residue
- F Zone Open Pit CN6 CND residue
- Pump CN7
- Tiriganiaq Open Pit CN2
- Tiriganiaq Underground CN1
- Wesmeg Open Pit CN3
- Wolf CN4 CND residue
- F1 Flot Tailings
- F2 Flot Tailings
- F7 Ro Tails
- F8 Ro Tails
- F1 Concentrate (C1-C8 Composite)
- F2 Concentrate (C1-C8 Composite)
- F7 Ro Con (C1-8 Composite)
- F8 Ro Con (C1-10 Composite)

**Deposit:**

- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

**Material Type:**

**Whole Ore**

**Concentrate**

**Flotation**

**Criteria:**

MMER (2006) maxmum monthly mean

**Notes:**

Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Arsenic**
**Barium**
**Beryllium**

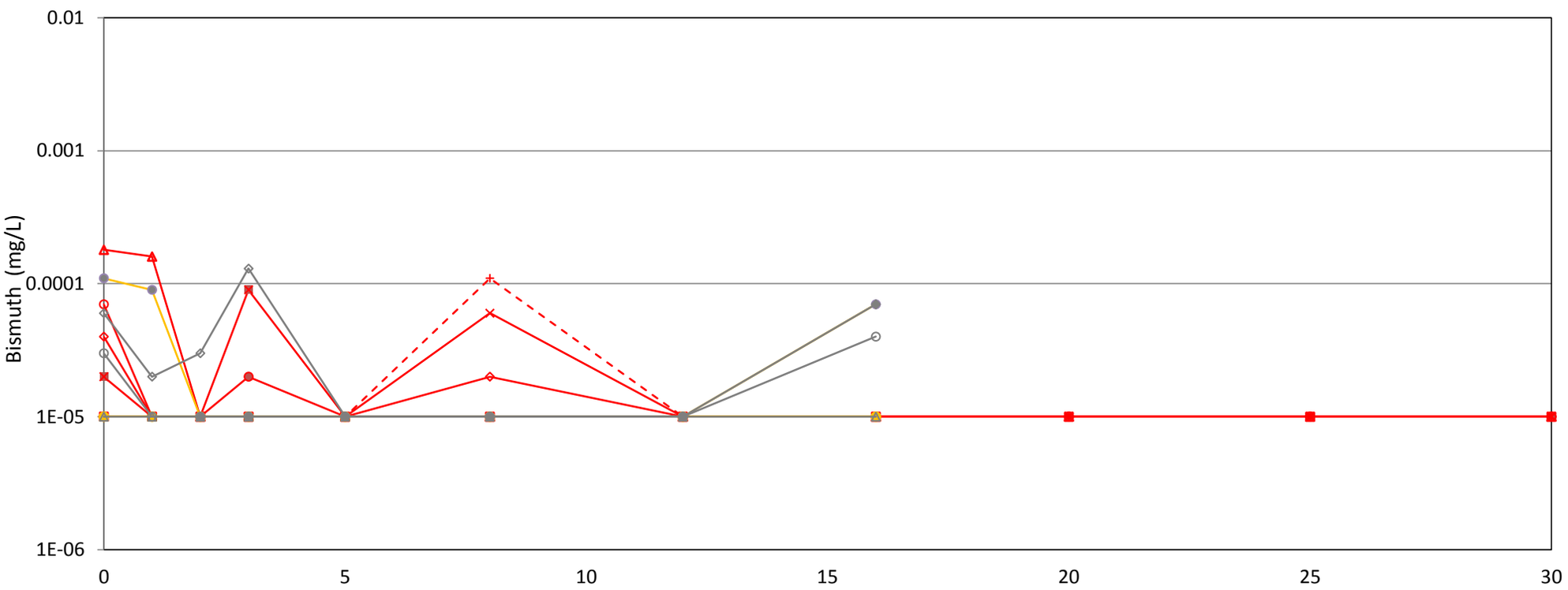
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| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

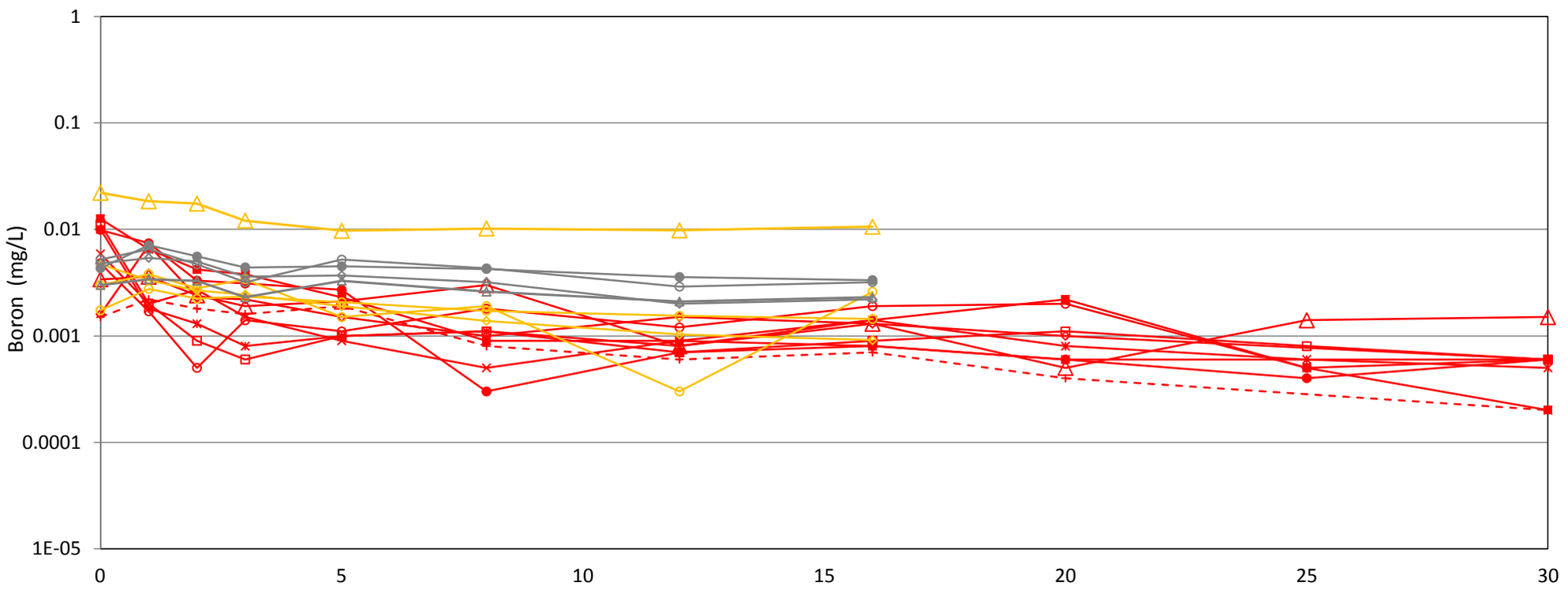
**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

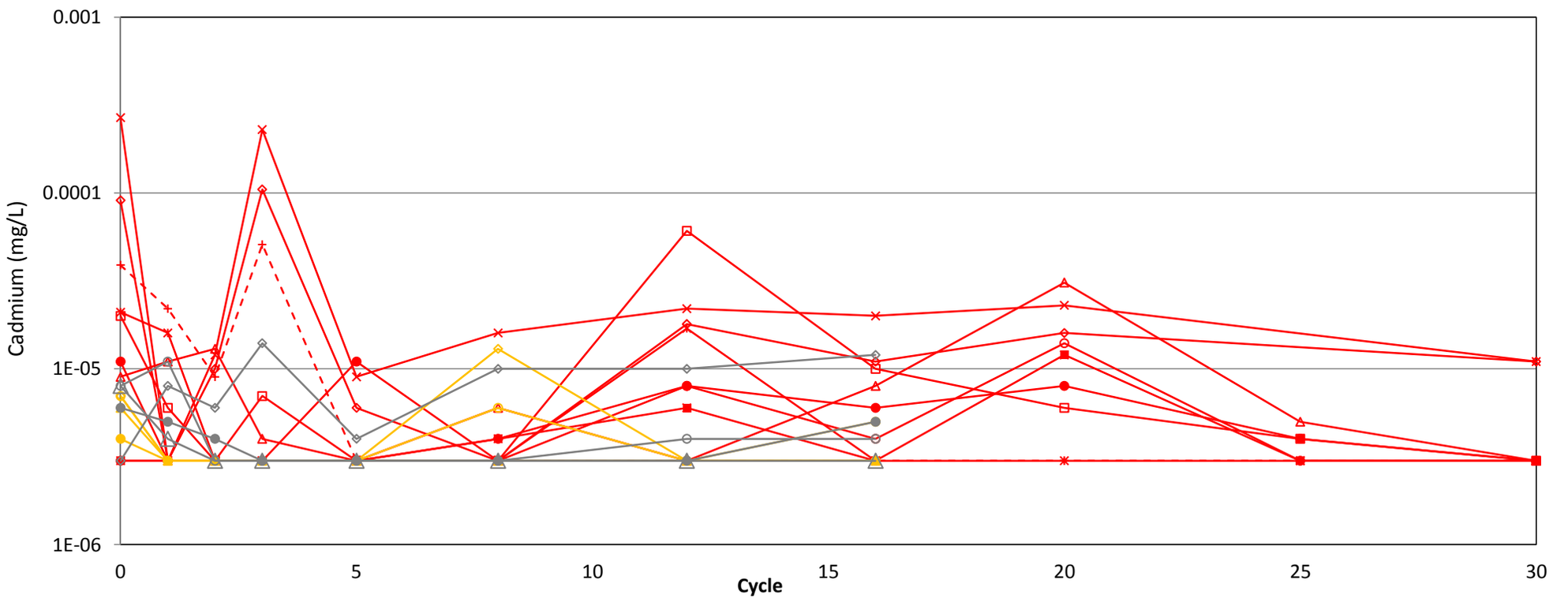
**Agnico-Eagle Mines Ltd.**

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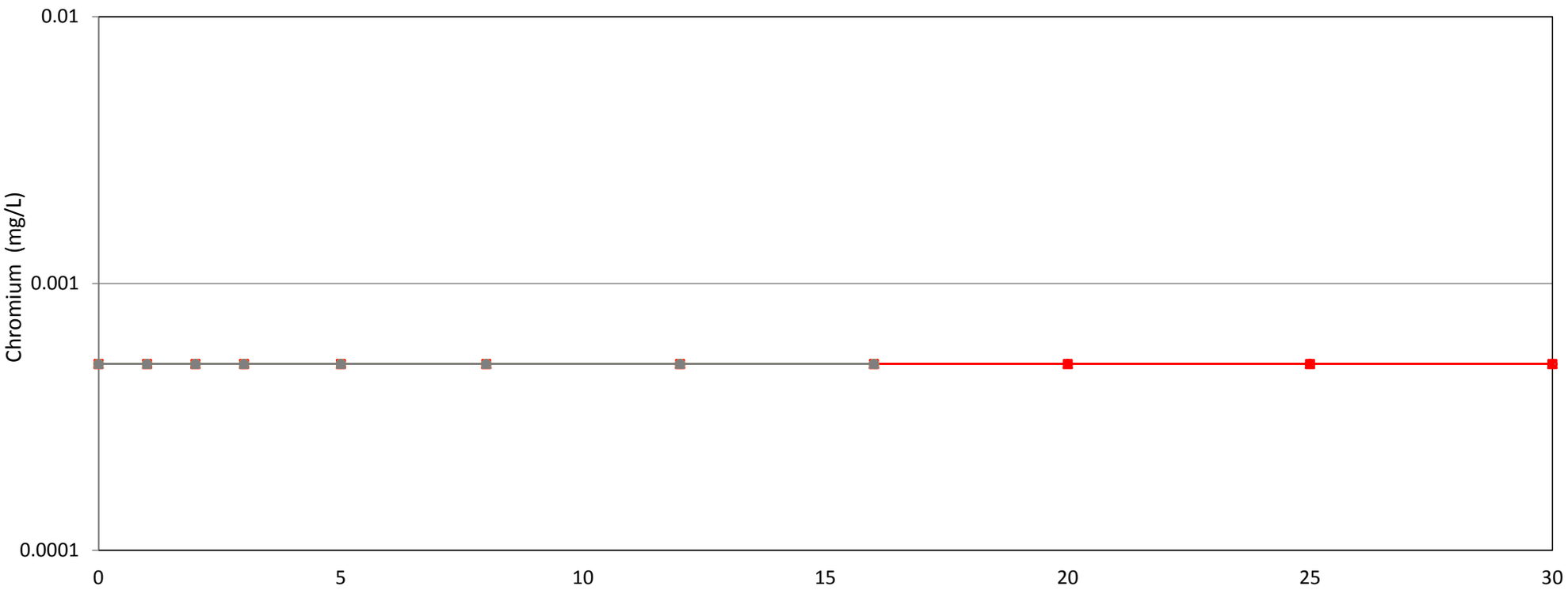
**FIGURE** C.5-4

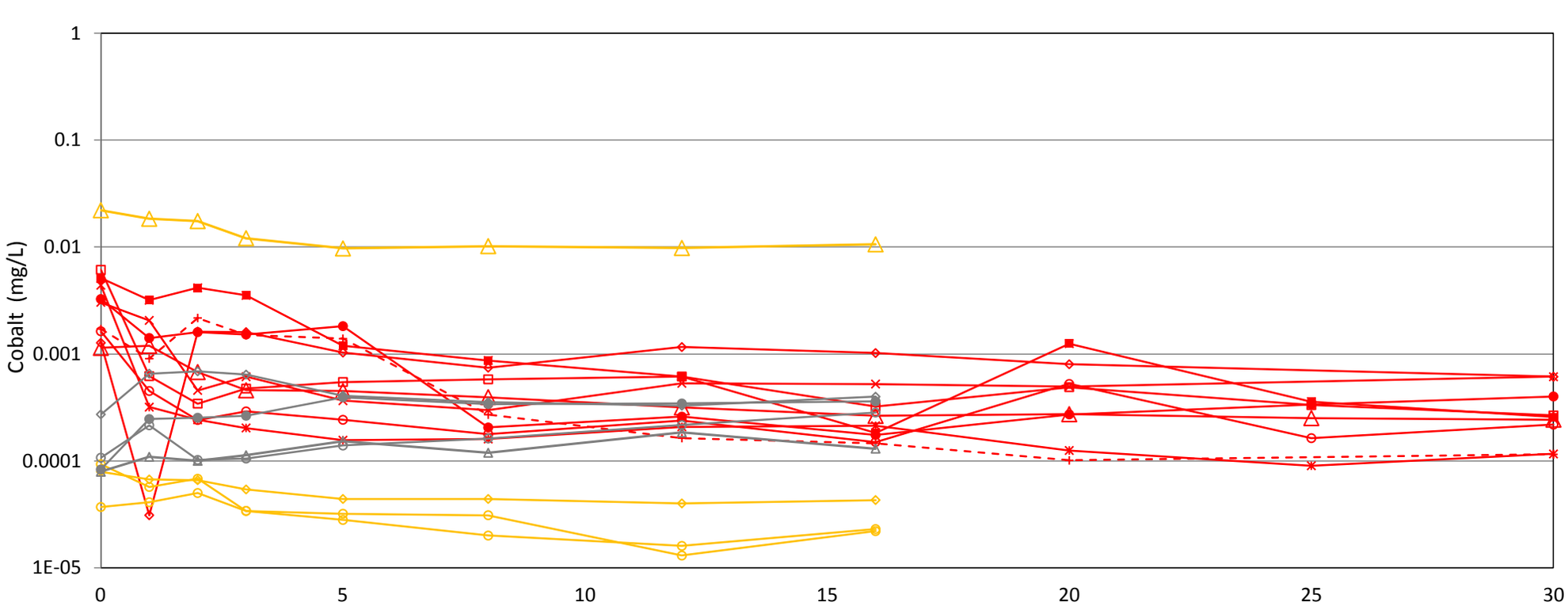


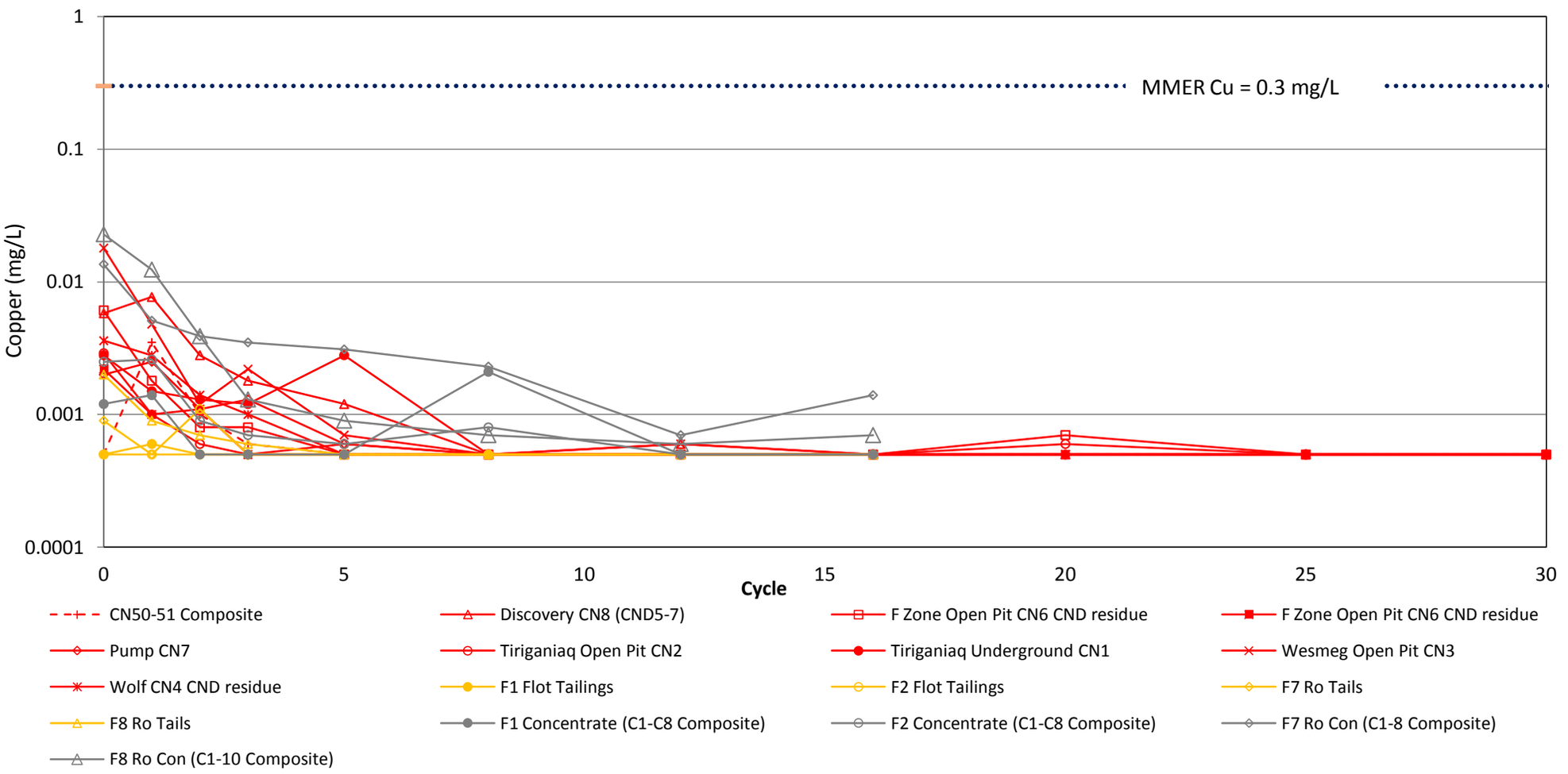




| | | | | |
|---|---|---|---|---|
| **Deposit:**<br>▲ Discovery Deposit<br>■ F Zone Deposit<br>♦ Pump Deposit<br>● Tiriganiaq Deposit<br>× Wesmeg Deposit<br>✱ Wolf Deposit | **Material Type:**<br>**Whole Ore**<br>**Concentrate**<br>**Flotation**<br><br>**Criteria:**<br>MMER (2006) maxmum monthly mean | **Notes:**<br>Open symbol = open pit / closed = underground<br><br>Values < MDL are plotted as MDL | **Bismuth**<br>**Boron**<br>**Cadmium**<br>DRAWN LMC · DATE Aug-12<br>CHECKED AJS · JOB NO 11-1428-0011<br>REVIEWED VJB · PHASE/TASK 6300 | **Kinetic Test Data**<br>**Tailings Samples**<br>**Meliadine Property**<br>**Agnico-Eagle Mines Ltd.**<br>Golder Associates<br>**FIGURE** C.5-5 |




Deposit:
- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

Material Type:
**Whole Ore**
**Concentrate**
**Flotation**

Criteria:
MMER (2006) maxmum monthly mean

Notes:
Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Chromium**
**Cobalt**
**Copper**

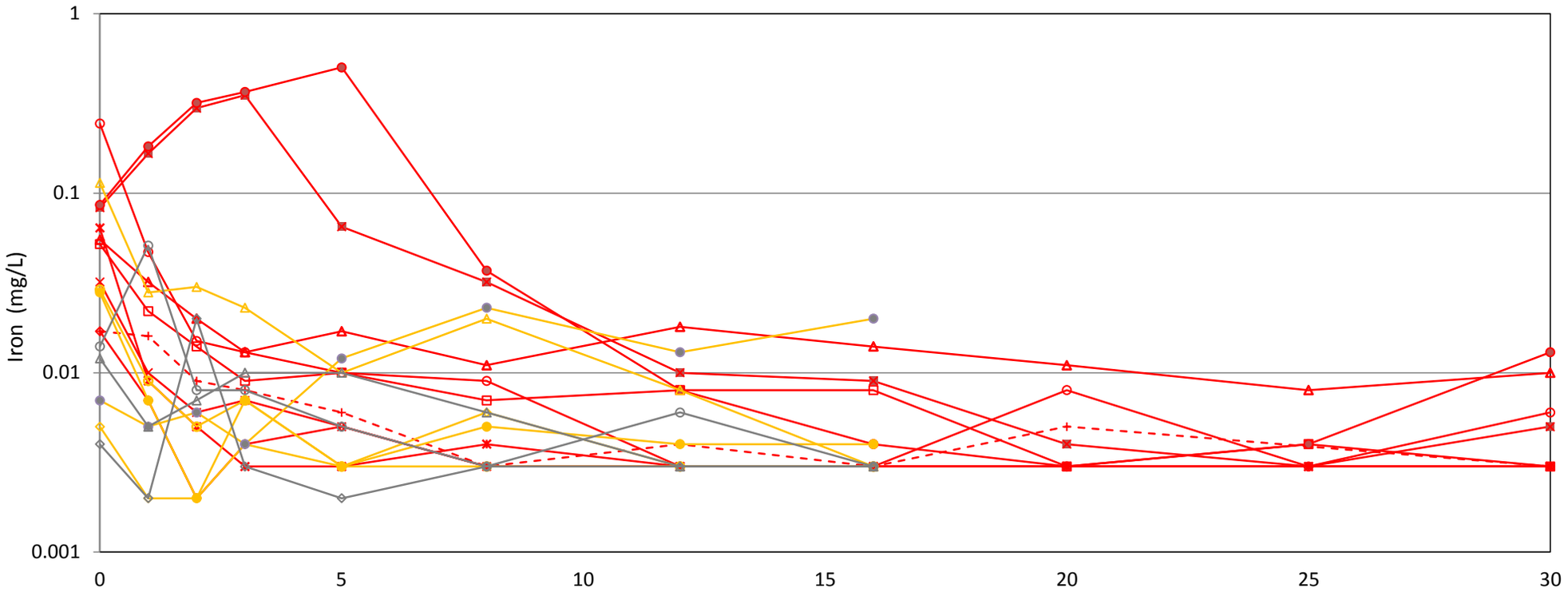
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| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

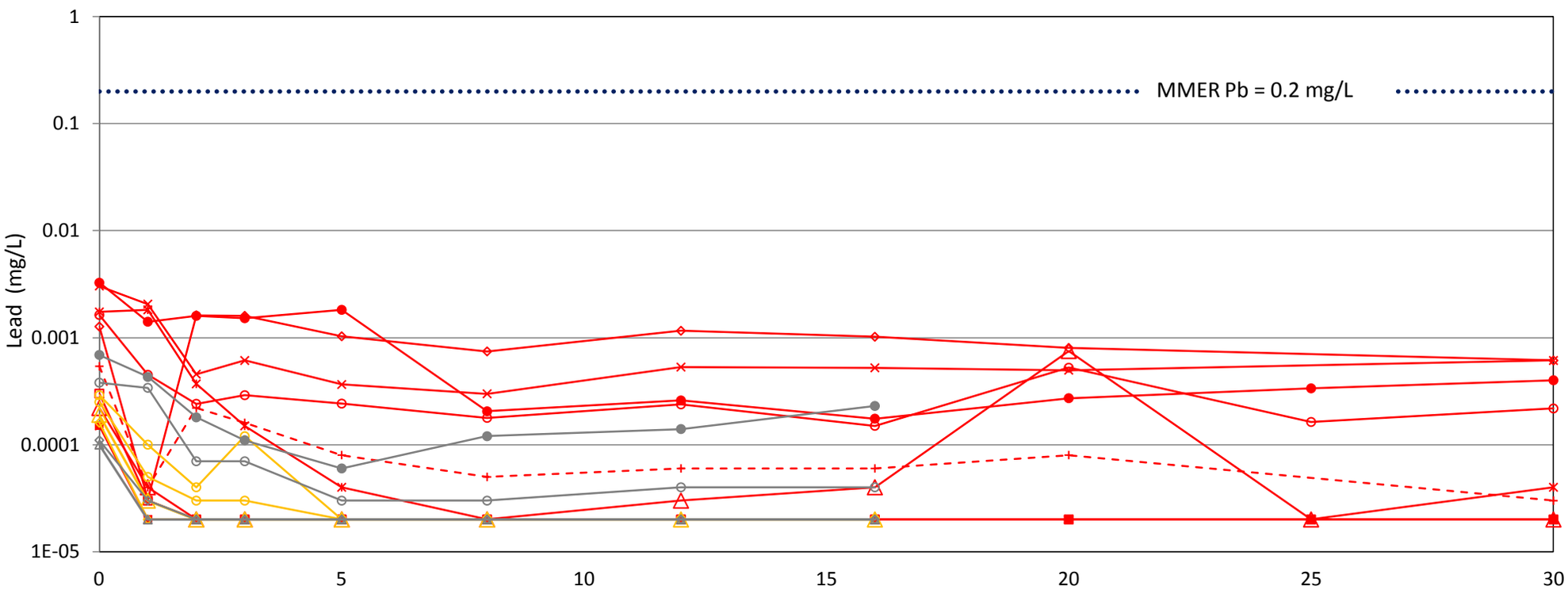
**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

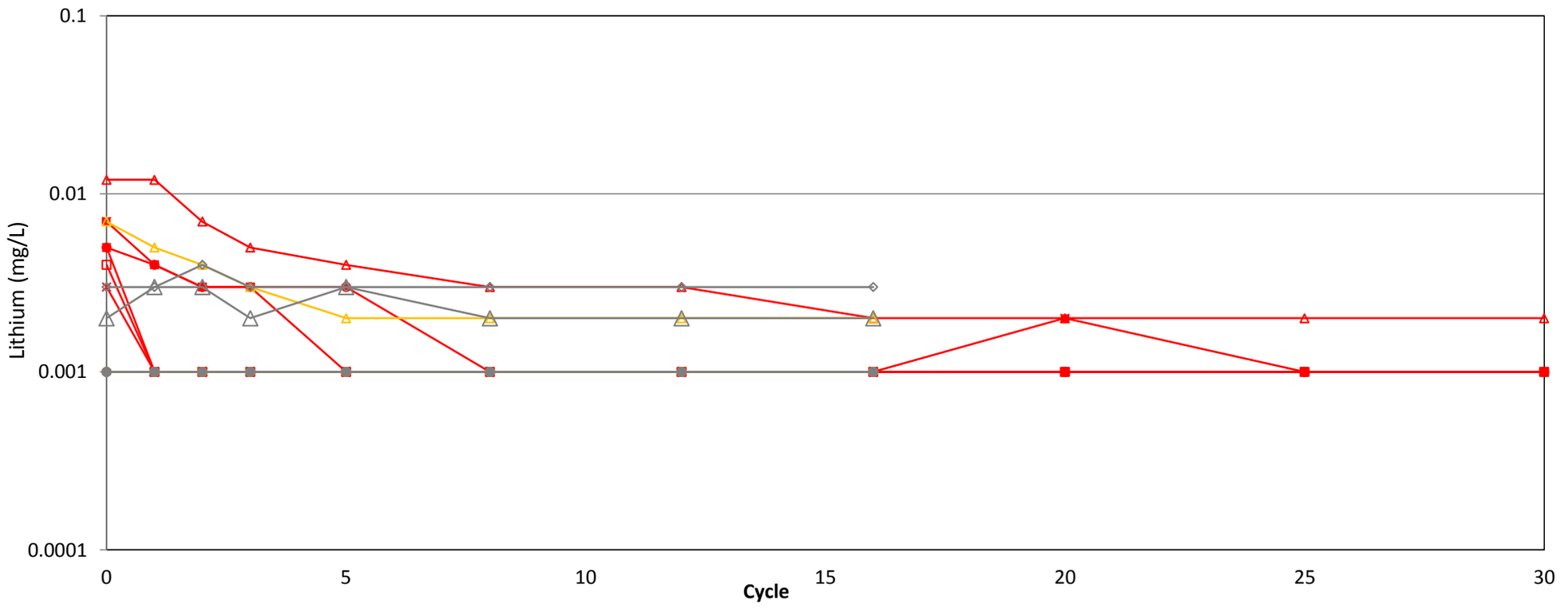
**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** C.5-6




- CN50-51 Composite
- Discovery CN8 (CND5-7)
- F Zone Open Pit CN6 CND residue
- F Zone Open Pit CN6 CND residue
- Pump CN7
- Tiriganiaq Open Pit CN2
- Tiriganiaq Underground CN1
- Wesmeg Open Pit CN3
- Wolf CN4 CND residue
- F1 Flot Tailings
- F2 Flot Tailings
- F7 Ro Tails
- F8 Ro Tails
- F1 Concentrate (C1-C8 Composite)
- F2 Concentrate (C1-C8 Composite)
- F7 Ro Con (C1-8 Composite)
- F8 Ro Con (C1-10 Composite)

**Deposit:**
- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

**Material Type:**
Whole Ore
Concentrate
Flotation

**Criteria:**
MMER (2006) maxmum monthly mean

**Notes:**
Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Iron**
**Lead**
**Lithium**

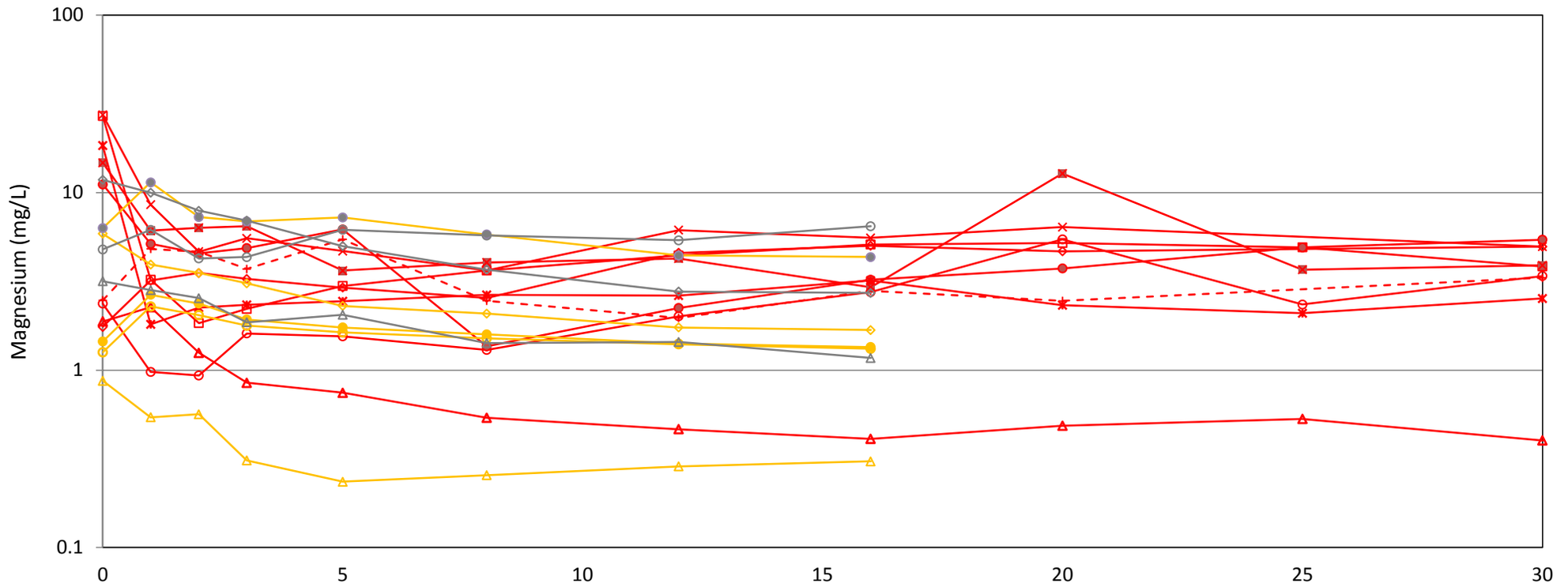
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| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

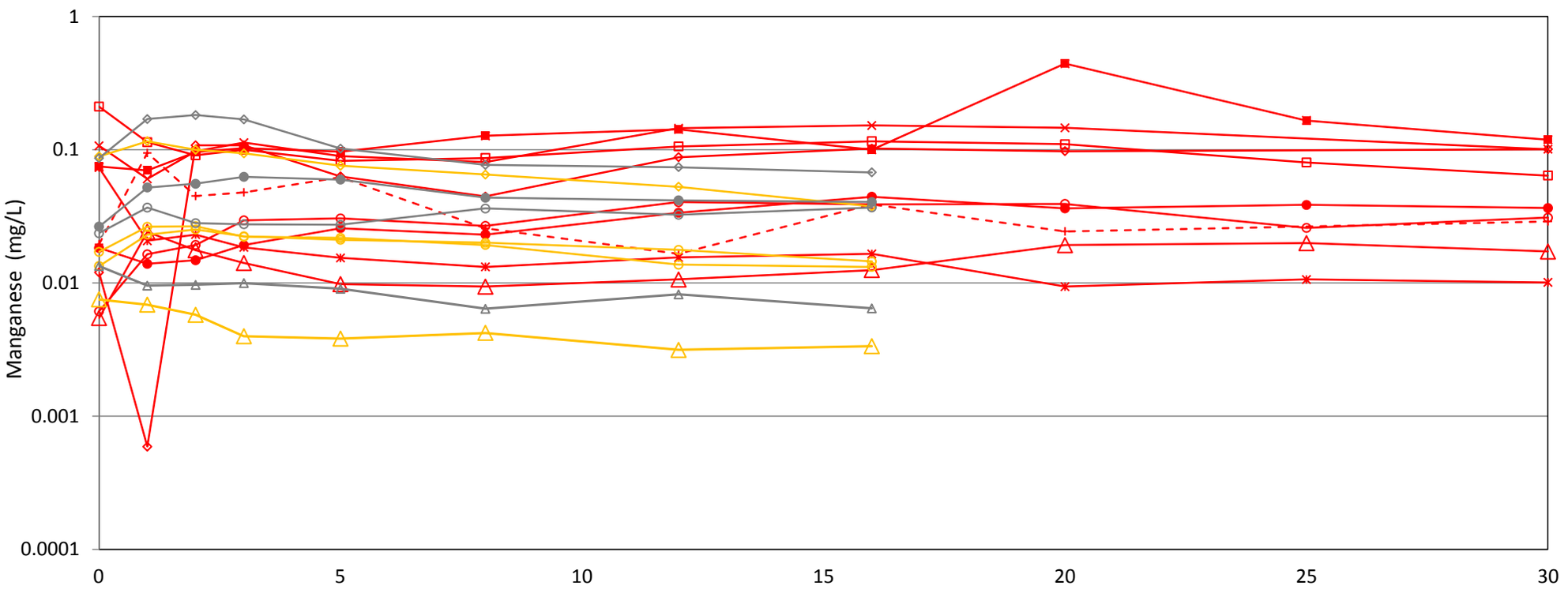
**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

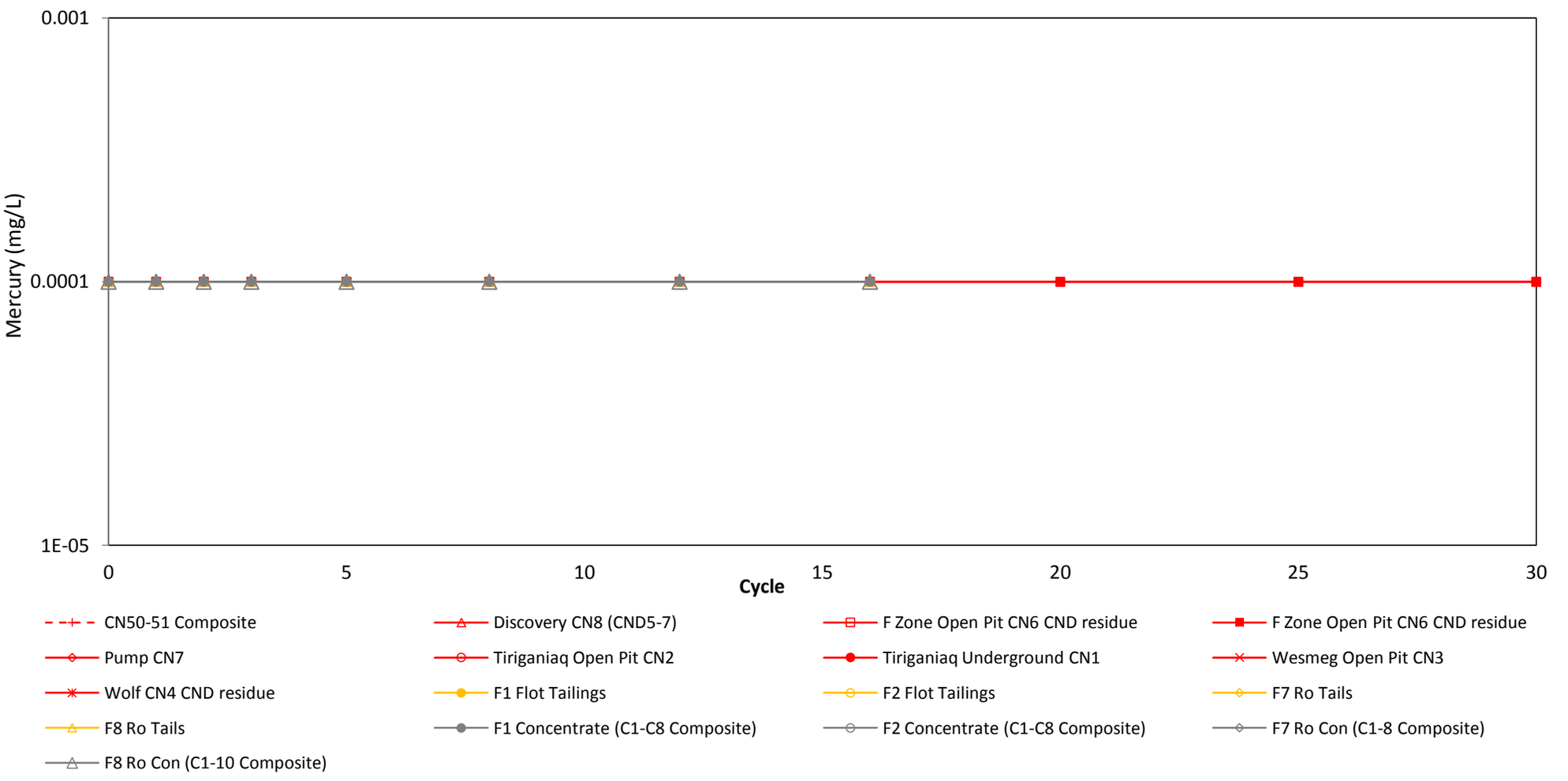
**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** C.5-7




**Deposit:**

- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

**Material Type:**

Whole Ore
Concentrate
Flotation

**Criteria:**

MMER (2006) maxmum monthly mean

**Notes:**

Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

# Magnesium Manganese Mercury

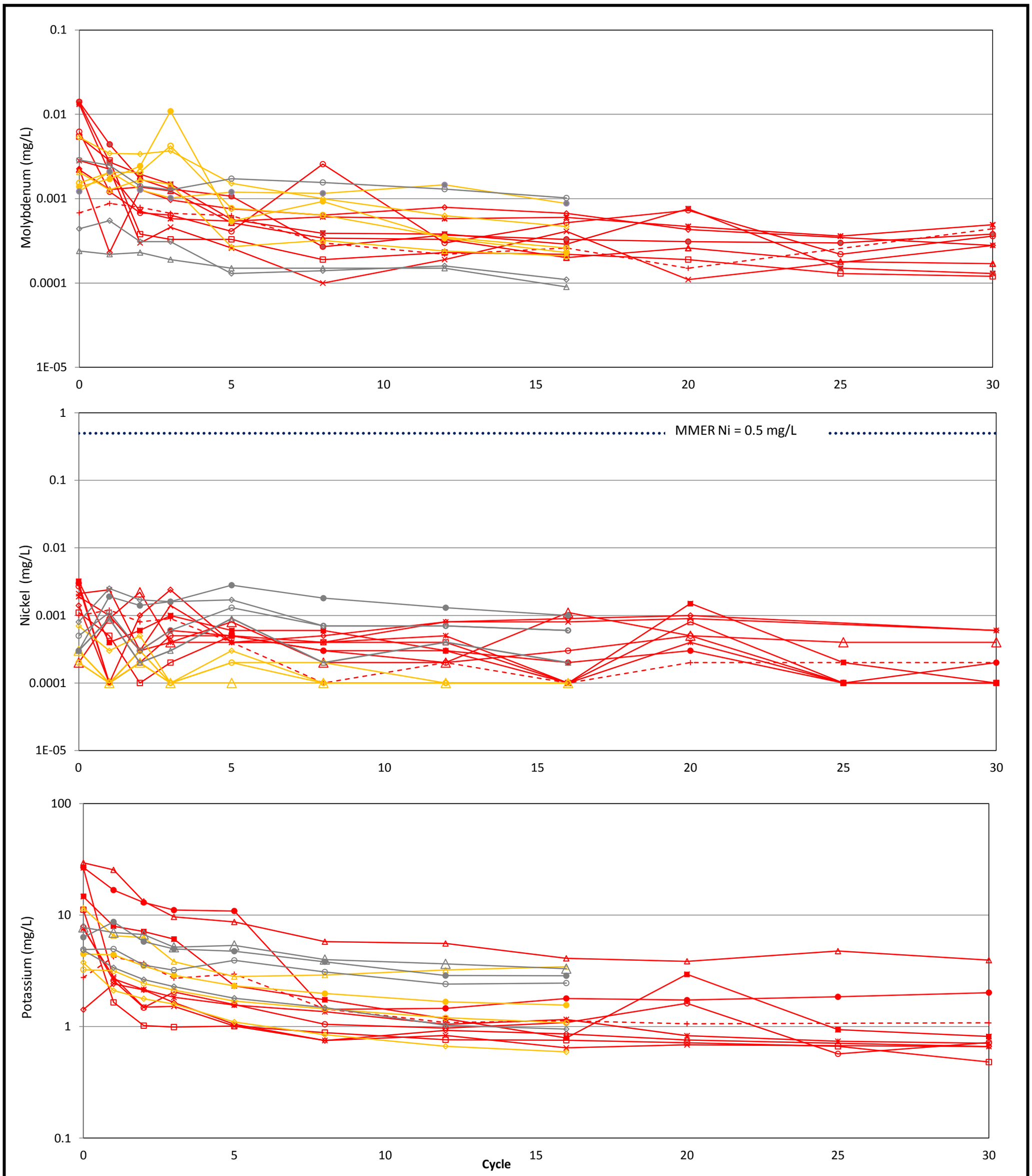
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| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

# Kinetic Test Data Tailings Samples Meliadine Property

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** C.5-8




Deposit:

- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

Material Type:

**Whole Ore**

**Concentrate**

**Flotation**

Criteria:

MMER (2006) maxmum monthly mean

Notes:

Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Molybdenum**
**Nickel**
**Potassium**

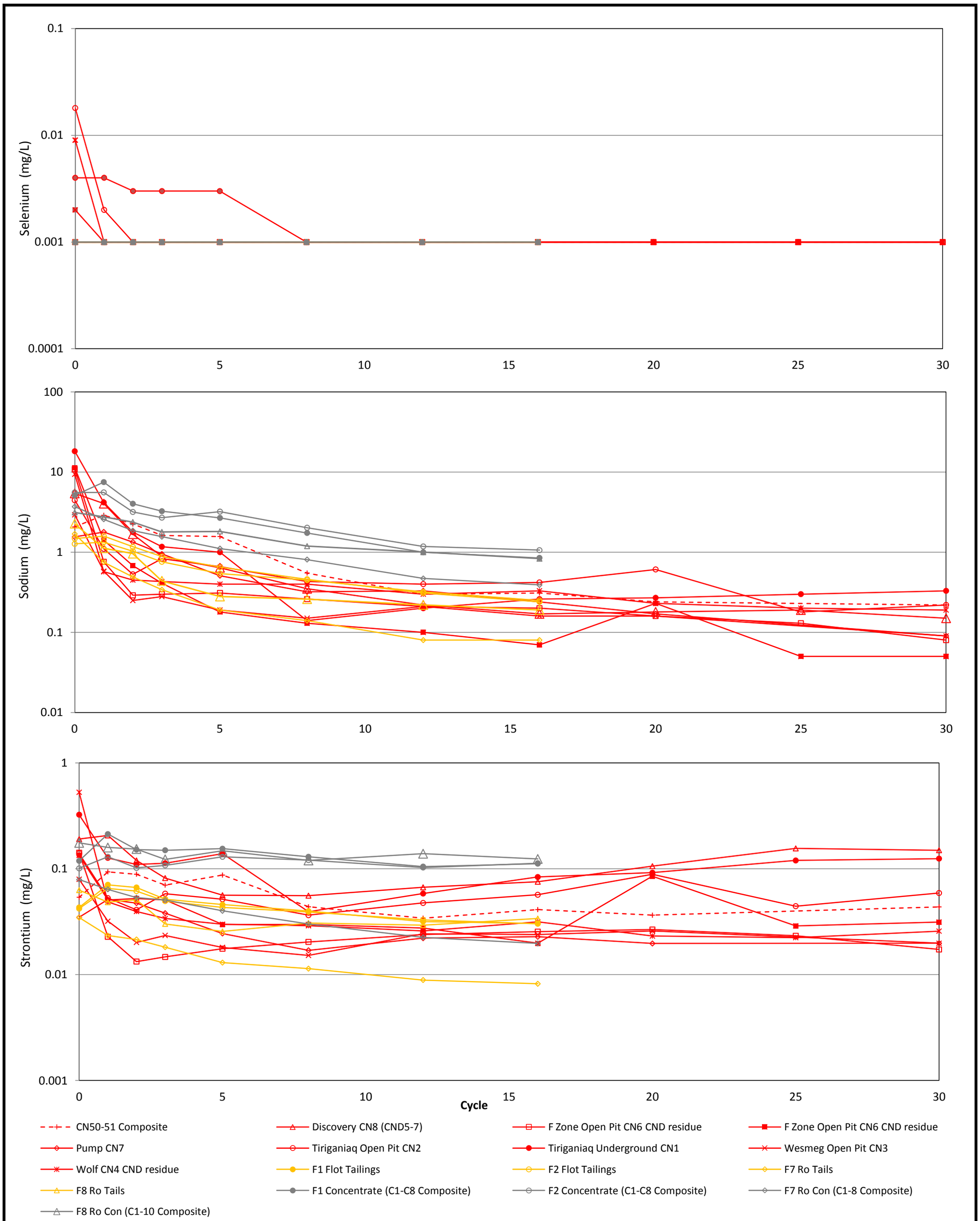
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| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** C.5-9




Deposit:
- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

Material Type:
**Whole Ore**
**Concentrate**
**Flotation**

Criteria:
MMER (2006) maxmum monthly mean

Notes:
Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Selenium**
**Sodium**
**Strontium**

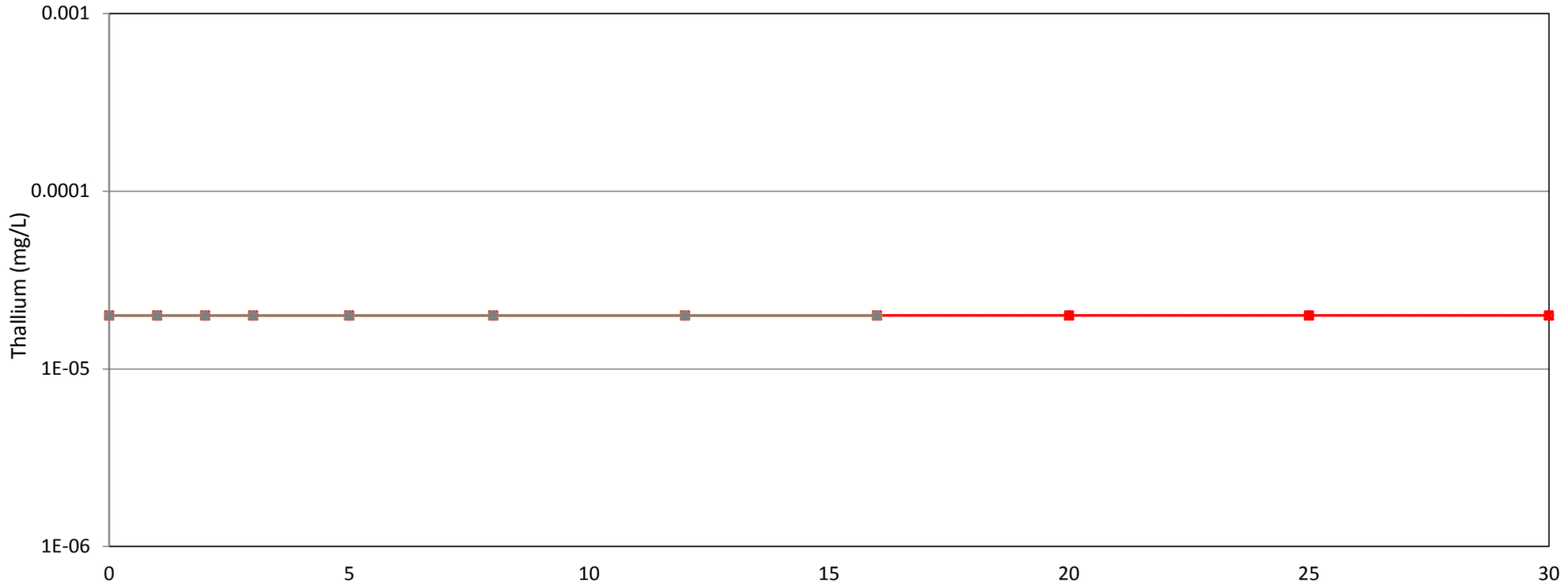
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| CHECKED | AJS | JOB NO | 11-1428-0011 |
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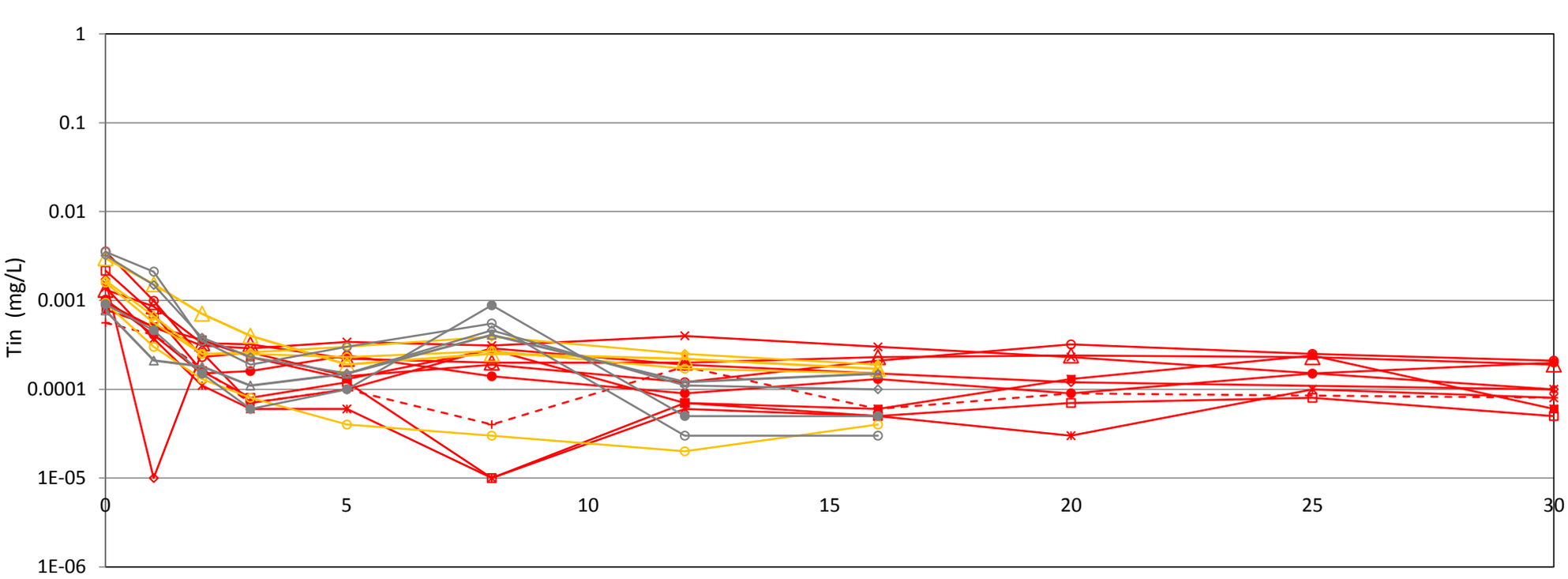
**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

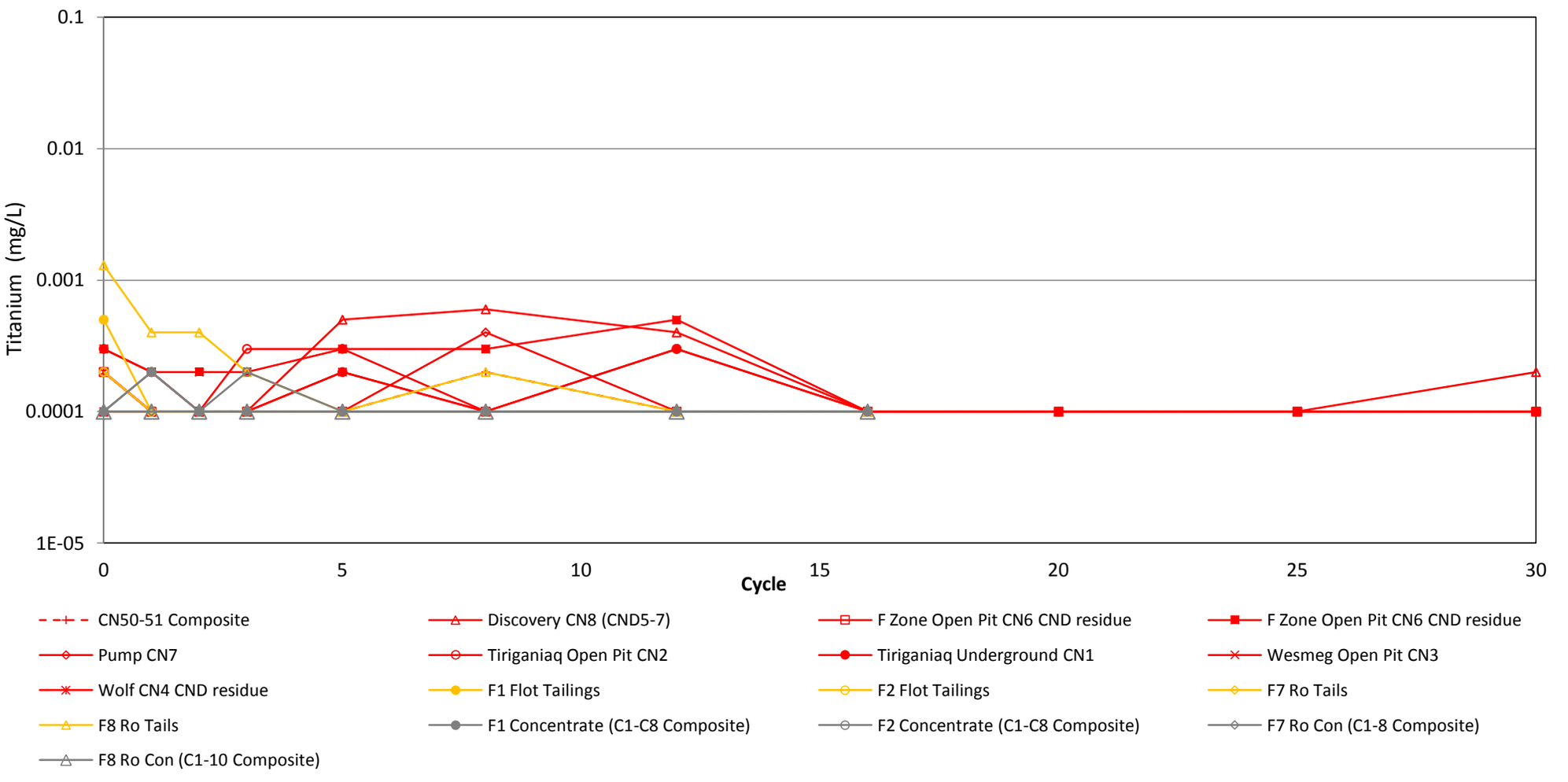
**Agnico-Eagle Mines Ltd.**

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**FIGURE** C.5-10




**Deposit:**

- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

**Material Type:**

**Whole Ore**

**Concentrate**

**Flotation**

**Criteria:**

MMER (2006) maxmum monthly mean

**Notes:**

Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Thallium**
**Tin**
**Titanium**

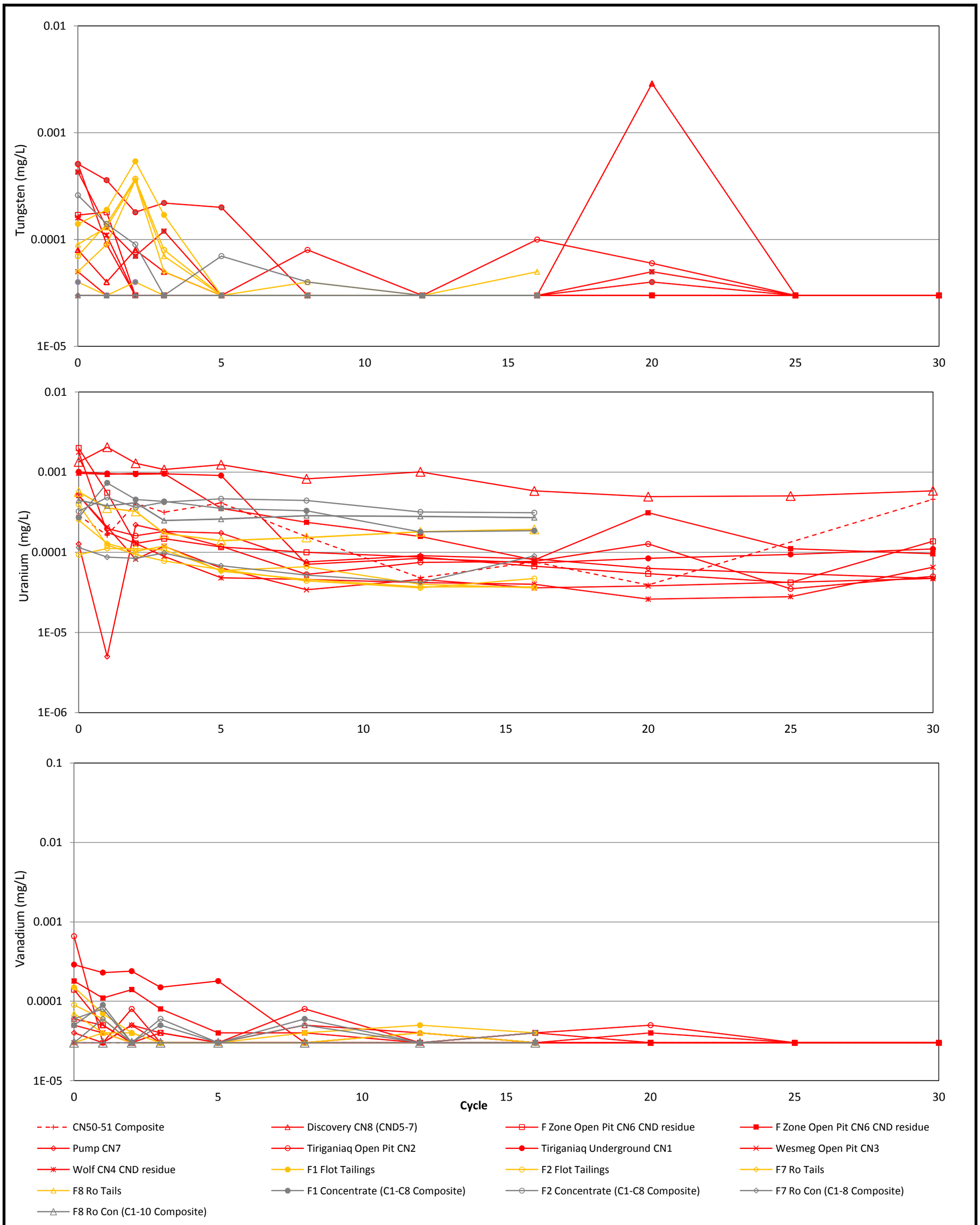
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| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** C.5-11




Deposit:
- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

Material Type:
**Whole Ore**
**Concentrate**
**Flotation**

Criteria:
MMER (2006) maxmum monthly mean

Notes:
Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Tungsten**
**Uranium**
**Vanadium**

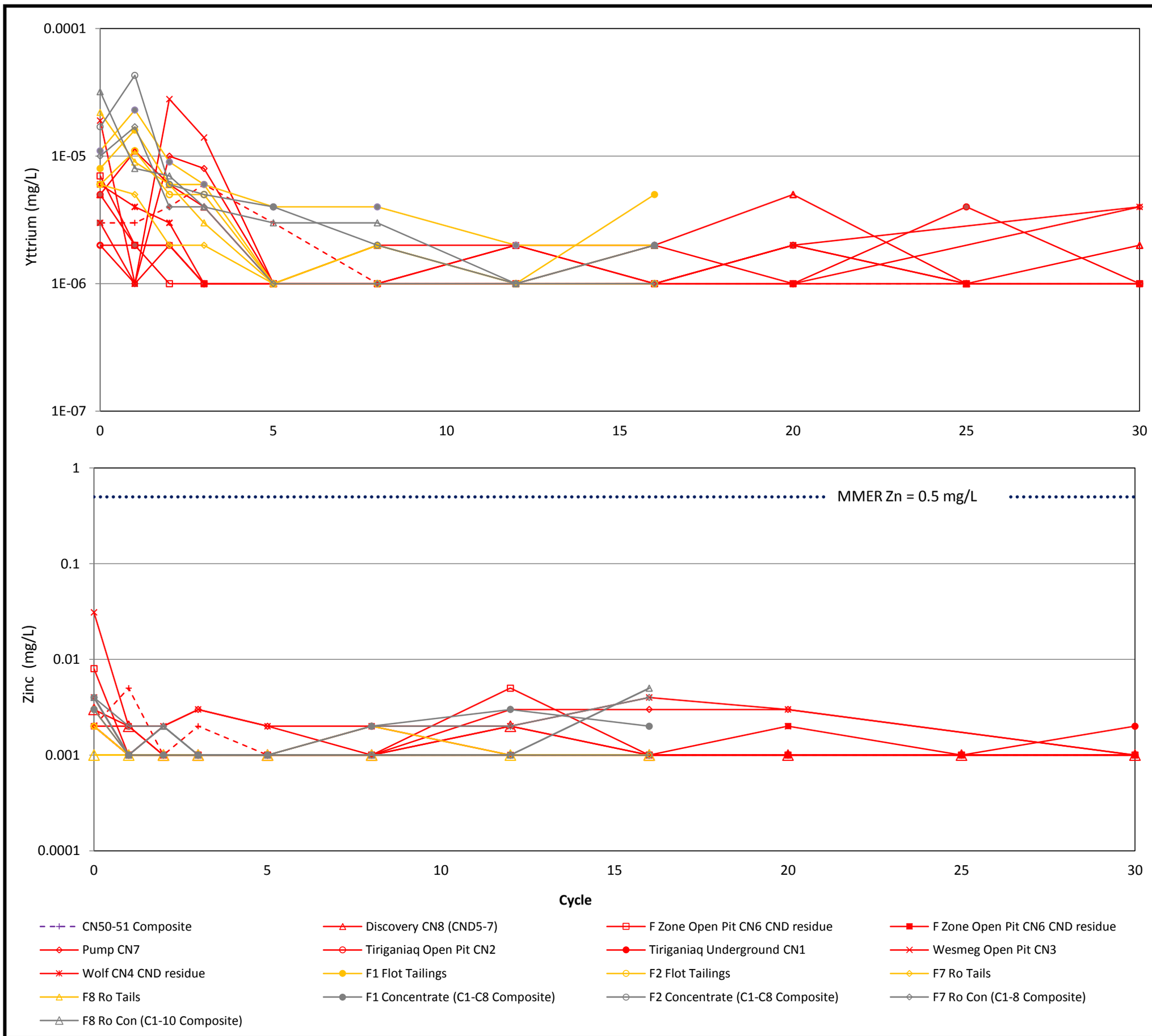
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| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

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**FIGURE** C.5-12




Deposit:
- ▲ Discovery Deposit
- ■ F Zone Deposit
- ♦ Pump Deposit
- ● Tiriganiaq Deposit
- × Wesmeg Deposit
- ✱ Wolf Deposit

Material Type:
**Whole Ore**
**Concentrate**
**Flotation**

Criteria:
MMER (2006) maxmum monthly mean

Notes:
Open symbol = open pit / closed = underground

Values < MDL are plotted as MDL

**Yttrium**
**Zinc**

| | | | |
|---|---|---|---|
| DRAWN | LMC | DATE | Aug-12 |
| CHECKED | AJS | JOB NO | 11-1428-0011 |
| REVIEWED | VJB | PHASE/TASK | 6300 |

**Kinetic Test Data**
**Tailings Samples**
**Meliadine Property**

**Agnico-Eagle Mines Ltd.**

Golder Associates

**FIGURE** C.5-13

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - CN50-51 Composite (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 774 | 993 | 992 | 995 | 967 | 980 | 937 | 927 | 928 | 911 | 893 | 897 | 875 | 899 | 888 | 869 |
| pH | | units | **6.0-9.5** | 7.7 | 7.8 | 7.8 | 7.7 | 7.0 | 7.8 | 7.5 | 7.4 | 7.4 | 7.1 | 7.6 | 7.5 | 7.3 | 7.3 | 7.1 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 145 | 166 | 272 | 165 | 129 | 188 | 62 | 89 | 56 | 63 | 66 | 89 | 9.0 | 73 | 88 | 103 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 22 | 29 | 48 | 24 | 22 | 26 | 12 | 12 | 12 | 11 | 12 | 20 | 9.0 | 10 | 11 | 11 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | <0.06 | | <0.06 | | | <0.06 | | | | <0.06 | | | |
| Sulphate | SO4 | mg/L | | 38 | 68 | 63 | 47 | 33 | 59 | 21 | 35 | 28 | 22 | 23 | 28 | 23 | 29 | 30 | 29 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | 0.020 | < 0.01 | 0.020 | | < 0.01 | | | < 0.01 | | | | 0.020 | | | |
| Antimony | Sb | mg/L | | 0.00090 | 0.00050 | 0.00090 | 0.00050 | | 0.00060 | | | < 0.0002 | | | | 0.00020 | | | |
| Arsenic | As | mg/L | **0.5** | 0.099 | 0.016 | 0.049 | 0.036 | | 0.017 | | | 0.020 | | | | 0.012 | | | |
| Barium | Ba | mg/L | | 0.0062 | 0.0069 | 0.0074 | 0.0051 | | 0.0068 | | | 0.0027 | | | | 0.0017 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | 0.00011 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.0015 | 0.0022 | 0.0018 | 0.0016 | | 0.0019 | | | 0.00080 | | | | 0.00060 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000039 | 0.000022 | 0.000009 | 0.000051 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | |
| Calcium | Ca | mg/L | | 17 | 26 | 24 | 19 | 15 | 25 | 10 | 14 | 11 | 9.9 | 10 | 12 | 8.9 | 11 | 11 | 13 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0017 | 0.00090 | 0.0022 | 0.0015 | | 0.0014 | | | 0.00027 | | | | 0.00016 | | | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | 0.0035 | 0.0010 | 0.00060 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.017 | 0.016 | 0.0090 | 0.0080 | | 0.0060 | | | < 0.003 | | | | 0.0040 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00054 | 0.000040 | 0.00022 | 0.00016 | | 0.000080 | | | 0.000050 | | | | 0.000060 | | | |
| Lithium | Li | mg/L | | < 0.001 | 0.0010 | < 0.001 | < 0.001 | | 0.0010 | | | < 0.001 | | | | < 0.001 | | | |
| Magnesium | Mg | mg/L | | 2.5 | 4.8 | 4.6 | 3.7 | | 5.5 | | | 2.5 | | | | 2.0 | | | |
| Manganese | Mn | mg/L | | 0.020 | 0.095 | 0.045 | 0.048 | | 0.062 | | | 0.026 | | | | 0.017 | | | |
| Molbydenum | Mo | mg/L | | 0.00068 | 0.00088 | 0.00079 | 0.00067 | | 0.00063 | | | 0.00030 | | | | 0.00022 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0010 | 0.0012 | 0.00080 | 0.00090 | | 0.00040 | | | < 0.0001 | | | | 0.00020 | | | |
| Potassium | K | mg/L | | 2.8 | 4.2 | 3.7 | 2.7 | | 3.0 | | | 1.4 | | | | 1.09 | | | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | 0.0010 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 2.1 | 2.9 | 2.3 | 1.6 | | 1.6 | | | 0.55 | | | | 0.30 | | | |
| Strontium | Sr | mg/L | | 0.054 | 0.094 | 0.089 | 0.070 | | 0.087 | | | 0.044 | | | | 0.034 | | | |
| Tin | Sn | mg/L | | 0.00056 | 0.00041 | 0.00017 | 0.000070 | | 0.00010 | | | 0.000040 | | | | 0.00018 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | 0.00020 | | | | < 0.0001 | | | |
| Tungsten | W | mg/L | | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.00029 | 0.00016 | 0.00041 | 0.00032 | | 0.00041 | | | 0.00016 | | | | 0.000048 | | | |
| Vanadium | V | mg/L | | < 0.00003 | < 0.00003 | 0.000030 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Yttrium | Y | mg/L | | 0.000003 | 0.000003 | 0.000004 | 0.000006 | | 0.000003 | | | 0.000001 | | | | 0.000001 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | 0.0050 | < 0.001 | 0.0020 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

**Appendix C.5: Humidity Cell Test Results - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - CN50-51 Composite (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 932 | 902 | 891 | 905 | 892 | 894 | 897 | 908 | 875 | 880 | 869 | 859 | 858 | 904 | 926 |
| pH | | units | **6.0-9.5** | 7.5 | 7.7 | 7.4 | 7.7 | 6.9 | 6.9 | 7.3 | 7.3 | 7.2 | 7.0 | 7.4 | 7.1 | 7.3 | 7.4 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 86 | 95 | 75 | 109 | 65 | 100 | 82 | 74 | 98 | 110 | 87 | 119 | 94 | 151 | 128 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 12 | 12 | 10 | 11 | 8.0 | 8.0 | 9.0 | 8.0 | 7.0 | 16 | 10 | 9.0 | 9.0 | 11 | 10 |
| Fluoride | F | mg/L | | <0.06 | | | | <0.06 | | | | | | | | | | 10.0 |
| Sulphate | SO4 | mg/L | | 31 | 38 | 30 | 34 | 25 | 28 | 31 | 28 | 23 | 29 | 33 | 32 | 39 | 65 | 29 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | | | | 0.020 | | | | | | | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00020 | | | | < 0.0002 | | | | | | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.015 | | | | 0.010 | | | | | | | | | | 0.0071 |
| Barium | Ba | mg/L | | 0.0027 | | | | 0.0018 | | | | | | | | | | 0.0021 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.00070 | | | | 0.00040 | | | | | | | | | | 0.00020 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | < 0.000003 | | | | | | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 11 | 14 | 10 | 12 | 9.0 | 9.8 | 11 | 9.7 | 8.8 | 11 | 13 | 12 | 14 | 18 | < 0.06 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00015 | | | | 0.00010 | | | | | | | | | | 0.00012 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | | | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | 0.0050 | | | | | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000060 | | | | 0.000080 | | | | | | | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | | | | < 0.001 | | | | | | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 2.8 | | | | 2.5 | | | | | | | | | | 3.3 |
| Manganese | Mn | mg/L | | 0.039 | | | | 0.024 | | | | | | | | | | 0.029 |
| Molbydenum | Mo | mg/L | | 0.00026 | | | | 0.00015 | | | | | | | | | | 0.00044 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | < 0.0001 | | | | 0.00020 | | | | | | | | | | 0.00020 |
| Potassium | K | mg/L | | 1.1 | | | | 1.06 | | | | | | | | | | 1.08 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.31 | | | | 0.24 | | | | | | | | | | 0.22 |
| Strontium | Sr | mg/L | | 0.041 | | | | 0.037 | | | | | | | | | | 0.044 |
| Tin | Sn | mg/L | | 0.000060 | | | | 0.000090 | | | | | | | | | | 0.000080 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | | | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000076 | | | | 0.000039 | | | | | | | | | | 0.00046 |
| Vanadium | V | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000001 | | | | 0.000001 | | | | | | | | | | < 0.000001 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | | | | | | | < 0.001 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentra
[2] CEQG Freshwater aquatic life criteria for chromium depends on the
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. M
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH depend

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Discovery CN8 (CND5-7) (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 676 | 983 | 996 | 994 | 995 | 972 | 982 | 978 | 979 | 974 | 987 | 986 | 980 | 977 | 981 | 982 |
| pH | | units | **6.0-9.5** | 7.0 | 7.0 | 7.3 | 7.1 | 7.2 | 7.3 | 7.2 | 7.2 | 7.2 | 7.2 | 7.0 | 7.5 | 7.1 | 7.5 | 7.0 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 832 | 754 | 308 | 263 | 453 | 161 | 112 | 87 | 117 | 368 | 283 | 145 | 144 | 104 | 110 | 109 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 13 | 14 | 13 | 18 | 23 | 14 | 12 | 12 | 12 | 27 | 28 | 27 | 15 | 13 | 13 | 11 |
| Fluoride | F | mg/L | | 0.070 | < 0.06 | < 0.06 | 0.070 | | 0.090 | | | 0.080 | | | | 0.090 | | | |
| Sulphate | SO4 | mg/L | | 240 | 300 | 160 | 100 | 200 | 75 | 41 | 47 | 52 | 140 | 94 | 57 | 43 | 38 | 45 | 45 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.050 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | |
| Antimony | Sb | mg/L | | 0.0010 | 0.00050 | 0.00070 | 0.00050 | | 0.00030 | | | 0.00040 | | | | < 0.0002 | | | |
| Arsenic | As | mg/L | **0.5** | 0.054 | 0.043 | 0.024 | 0.018 | | 0.014 | | | 0.0086 | | | | 0.0089 | | | |
| Barium | Ba | mg/L | | 0.063 | 0.029 | 0.017 | 0.012 | | 0.0093 | | | 0.0080 | | | | 0.0092 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | 0.00018 | 0.00016 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.0034 | 0.0036 | 0.0024 | 0.0019 | | 0.0021 | | | 0.0030 | | | | 0.00080 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000009 | 0.000011 | 0.000013 | 0.000004 | | < 0.000003 | | | 0.000006 | | | | 0.000003 | | | |
| Calcium | Ca | mg/L | | 147 | 146 | 74 | 45 | 80 | 32 | 21 | 22 | 23 | 62 | 45 | 29 | 22 | 20 | 22 | 21 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0011 | 0.0012 | 0.00068 | 0.00046 | | 0.00045 | | | 0.00039 | | | | 0.00032 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0058 | 0.0077 | 0.0028 | 0.0018 | | 0.0012 | | | < 0.0005 | | | | 0.00060 | | | |
| Iron | Fe | mg/L | | 0.055 | 0.032 | 0.020 | 0.013 | | 0.017 | | | 0.011 | | | | 0.018 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00022 | 0.000040 | 0.000020 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | 0.000030 | | | |
| Lithium | Li | mg/L | | 0.012 | 0.012 | 0.0070 | 0.0050 | | 0.0040 | | | 0.0030 | | | | 0.0030 | | | |
| Magnesium | Mg | mg/L | | 1.9 | 2.3 | 1.3 | 0.85 | | 0.75 | | | 0.54 | | | | 0.47 | | | |
| Manganese | Mn | mg/L | | 0.0055 | 0.024 | 0.018 | 0.014 | | 0.0098 | | | 0.0094 | | | | 0.011 | | | |
| Molbydenum | Mo | mg/L | | 0.0022 | 0.0013 | 0.0014 | 0.0012 | | 0.00052 | | | 0.00034 | | | | 0.00033 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00090 | 0.0022 | 0.00040 | | 0.00080 | | | 0.00020 | | | | 0.00020 | | | |
| Potassium | K | mg/L | | 30 | 26 | 13 | 9.7 | | 8.7 | | | 5.8 | | | | 5.6 | | | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 5.4 | 4.0 | 1.7 | 0.88 | | 0.64 | | | 0.35 | | | | 0.22 | | | |
| Strontium | Sr | mg/L | | 0.19 | 0.21 | 0.12 | 0.082 | | 0.056 | | | 0.056 | | | | 0.067 | | | |
| Tin | Sn | mg/L | | 0.0013 | 0.00086 | 0.00033 | 0.00032 | | 0.00022 | | | 0.00020 | | | | 0.00020 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00010 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00050 | | | 0.00060 | | | | 0.00040 | | | |
| Tungsten | W | mg/L | | 0.000080 | 0.000040 | 0.000080 | 0.000050 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.0013 | 0.0021 | 0.0013 | 0.0011 | | 0.0012 | | | 0.00083 | | | | 0.0010 | | | |
| Vanadium | V | mg/L | | 0.000060 | 0.000050 | < 0.00003 | < 0.00003 | | < 0.00003 | | | 0.000050 | | | | 0.000040 | | | |
| Yttrium | Y | mg/L | | 0.000005 | 0.000011 | 0.000006 | 0.000004 | | < 0.000001 | | | 0.000002 | | | | 0.000002 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0030 | 0.0020 | < 0.001 | < 0.001 | | 0.0010 | | | 0.0010 | | | | 0.0020 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Discovery CN8 (CND5-7) (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 986 | 979 | 983 | 986 | 984 | 993 | 990 | 978 | 978 | 990 | 989 | 983 | 986 | 981 | 988 |
| pH | | units | **6.0-9.5** | 7.1 | 6.9 | 7.2 | 7.1 | 7.4 | 7.0 | 7.0 | 7.1 | 7.1 | 7.0 | 7.0 | 6.9 | 7.1 | 7.2 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 99 | 149 | 128 | 123 | 128 | 139 | 149 | 142 | 150 | 211 | 212 | 138 | 176 | 184 | 172 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 11 | 10 | 11 | 10 | 9.0 | 11 | 11 | 10 | 11 | 13 | 13 | 12 | 15 | 13 | 25 |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | | 0.080 | | | | | 0.080 |
| Sulphate | SO4 | mg/L | | 42 | 49 | 57 | 53 | 54 | 68 | 72 | 67 | 74 | 72 | 75 | 66 | 76 | 66 | 61 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | | | | < 0.01 | | | | | 0.010 | | | | | < 0.01 |
| Antimony | Sb | mg/L | | < 0.0002 | | | | 0.00020 | | | | | < 0.0002 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0048 | | | | 0.0035 | | | | | 0.0044 | | | | | 0.0043 |
| Barium | Ba | mg/L | | 0.0074 | | | | 0.0062 | | | | | 0.0074 | | | | | 0.0064 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | < 0.00001 | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.0013 | | | | 0.00050 | | | | | 0.0014 | | | | | 0.0015 |
| Cadmium | Cd[3] | mg/L | | 0.000008 | | | | 0.000031 | | | | | 0.000005 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 21 | 23 | 25 | 23 | 27 | 30 | 32 | 30 | 32 | 33 | 35 | 30 | 37 | 30 | 28 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00026 | | | | 0.00027 | | | | | 0.00025 | | | | | 0.00024 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.014 | | | | 0.011 | | | | | 0.0080 | | | | | 0.010 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000040 | | | | 0.00075 | | | | | < 0.00002 | | | | | 0.000020 |
| Lithium | Li | mg/L | | 0.0020 | | | | 0.0020 | | | | | 0.0020 | | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 0.41 | | | | 0.49 | | | | | 0.53 | | | | | 0.40 |
| Manganese | Mn | mg/L | | 0.013 | | | | 0.019 | | | | | 0.020 | | | | | 0.017 |
| Molbydenum | Mo | mg/L | | 0.00020 | | | | 0.00026 | | | | | 0.00018 | | | | | 0.00017 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0011 | | | | 0.00050 | | | | | 0.00040 | | | | | 0.00040 |
| Potassium | K | mg/L | | 4.1 | | | | 3.9 | | | | | 4.8 | | | | | 4.0 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.17 | | | | 0.18 | | | | | 0.19 | | | | | 0.15 |
| Strontium | Sr | mg/L | | 0.076 | | | | 0.11 | | | | | 0.16 | | | | | 0.15 |
| Tin | Sn | mg/L | | 0.00023 | | | | 0.00024 | | | | | 0.00023 | | | | | 0.00019 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | 0.00020 |
| Tungsten | W | mg/L | | < 0.00003 | | | | 0.0029 | | | | | < 0.00003 | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.00058 | | | | 0.00050 | | | | | 0.00050 | | | | | 0.00059 |
| Vanadium | V | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | < 0.00003 | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000002 | | | | 0.000005 | | | | | < 0.000001 | | | | | 0.000002 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F Zone Open Pit CN6 CND residue (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 731 | 982 | 966 | 968 | 960 | 954 | 979 | 949 | 946 | 957 | 957 | 963 | 956 | 950 | 922 | 950 |
| pH | | units | **6.0-9.5** | 7.9 | 7.8 | 7.7 | 7.2 | 7.4 | 7.4 | 7.7 | 7.0 | 6.9 | 6.8 | 7.6 | 7.4 | 7.8 | 7.6 | 7.4 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 700 | 94 | 72 | 75 | 65 | 90 | 99 | 68 | 86 | 107 | 127 | 87 | 88 | 91 | 104 | 91 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 74 | 31 | 25 | 18 | 17 | 22 | 16 | 13 | 13 | 14 | 13 | 14 | 14 | 11 | 10 | 11 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | |
| Sulphate | SO4 | mg/L | | 280 | 22 | 11 | 16 | 19 | 22 | 24 | 25 | 29 | 30 | 31 | 34 | 35 | 40 | 32 | 39 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | 0.020 | | | | 0.020 | | | |
| Antimony | Sb | mg/L | | 0.0045 | 0.0011 | 0.00050 | < 0.0002 | | 0.00020 | | | 0.00020 | | | | < 0.0002 | | | |
| Arsenic | As | mg/L | **0.5** | 0.22 | 0.039 | 0.022 | 0.014 | | 0.016 | | | 0.013 | | | | 0.016 | | | |
| Barium | Ba | mg/L | | 0.0088 | 0.0012 | 0.00085 | 0.00093 | | 0.0015 | | | 0.00088 | | | | 0.0010 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.011 | 0.0020 | 0.00090 | 0.00060 | | 0.0010 | | | 0.0011 | | | | 0.00070 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000020 | 0.000006 | < 0.000003 | 0.000007 | | < 0.000003 | | | < 0.000003 | | | | 0.000061 | | | |
| Calcium | Ca | mg/L | | 89 | 15 | 8.9 | 9.0 | 9.9 | 10 | 11 | 10 | 11 | 12 | 12 | 13 | 13 | 13 | 12 | 12 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0061 | 0.00062 | 0.00034 | 0.00047 | | 0.00055 | | | 0.00058 | | | | 0.00062 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0061 | 0.0018 | 0.00080 | 0.00080 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.052 | 0.022 | 0.014 | 0.0090 | | 0.010 | | | 0.0070 | | | | 0.0080 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00030 | 0.000030 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0040 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Magnesium | Mg | mg/L | | 27 | 3.2 | 1.8 | 2.2 | | 3.0 | | | 3.6 | | | | 4.4 | | | |
| Manganese | Mn | mg/L | | 0.21 | 0.11 | 0.091 | 0.10 | | 0.083 | | | 0.087 | | | | 0.11 | | | |
| Molbydenum | Mo | mg/L | | 0.0054 | 0.0028 | 0.00038 | 0.00033 | | 0.00033 | | | 0.00019 | | | | 0.00023 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0011 | 0.00050 | < 0.0001 | 0.00020 | | 0.00050 | | | 0.00040 | | | | 0.00040 | | | |
| Potassium | K | mg/L | | 11 | 1.7 | 1.02 | 0.99 | | 1.01 | | | 0.89 | | | | 0.76 | | | |
| Selenium | Se | mg/L | | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 11 | 0.76 | 0.29 | 0.30 | | 0.31 | | | 0.26 | | | | 0.21 | | | |
| Strontium | Sr | mg/L | | 0.14 | 0.023 | 0.013 | 0.015 | | 0.018 | | | 0.020 | | | | 0.024 | | | |
| Tin | Sn | mg/L | | 0.0022 | 0.00071 | 0.00016 | 0.000080 | | 0.00012 | | | < 0.00001 | | | | 0.000070 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | |
| Tungsten | W | mg/L | | 0.00017 | 0.00018 | 0.000030 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.0020 | 0.00055 | 0.00013 | 0.00015 | | 0.00012 | | | 0.00010 | | | | 0.000087 | | | |
| Vanadium | V | mg/L | | 0.00014 | 0.000050 | < 0.00003 | 0.000040 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Yttrium | Y | mg/L | | 0.000007 | 0.000002 | 0.000001 | 0.000001 | | < 0.000001 | | | < 0.000001 | | | | 0.000001 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0080 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0050 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F Zone Open Pit CN6 CND residue (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 957 | 955 | 958 | 935 | 951 | 957 | 947 | 946 | 932 | 924 | 932 | | | 924 | 908 |
| pH | | units | **6.0-9.5** | 7.5 | 7.3 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.2 | 7.0 | 7.0 | 7.1 | | | 7.1 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 128 | 104 | 102 | 82 | 96 | 93 | 88 | 83 | 118 | 112 | 77 | | | 105 | 91 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 12 | 13 | 11 | 9.0 | 11 | 9.0 | 8.0 | 8.0 | 8.0 | 8.0 | 11 | | | 17 | 8.0 |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | | < 0.06 | | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 41 | 43 | 44 | 36 | 42 | 39 | 39 | 36 | 36 | 38 | 30 | | | 35 | 29 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | | | | < 0.01 | | | | | < 0.01 | | | | | < 0.01 |
| Antimony | Sb | mg/L | | < 0.0002 | | | | < 0.0002 | | | | | < 0.0002 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0057 | | | | 0.0035 | | | | | 0.0031 | | | | | 0.0044 |
| Barium | Ba | mg/L | | 0.00096 | | | | 0.00088 | | | | | 0.00074 | | | | | 0.00044 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | < 0.00001 | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.00090 | | | | 0.0011 | | | | | 0.00080 | | | | | 0.00060 |
| Cadmium | Cd[3] | mg/L | | 0.000010 | | | | 0.000006 | | | | | 0.000004 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 13 | 14 | 14 | 12 | 13 | 13 | 12 | 11 | 11 | 11 | 9.3 | | | 11 | 9.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00032 | | | | 0.00049 | | | | | 0.00033 | | | | | 0.00027 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | 0.00070 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0080 | | | | 0.0030 | | | | | 0.0040 | | | | | 0.0030 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 5.1 | | | | 5.2 | | | | | 4.9 | | | | | 3.8 |
| Manganese | Mn | mg/L | | 0.12 | | | | 0.11 | | | | | 0.080 | | | | | 0.064 |
| Molbydenum | Mo | mg/L | | 0.00022 | | | | 0.00019 | | | | | 0.00013 | | | | | 0.00012 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00010 | | | | 0.00080 | | | | | < 0.0001 | | | | | 0.00010 |
| Potassium | K | mg/L | | 0.76 | | | | 0.72 | | | | | 0.67 | | | | | 0.48 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.20 | | | | 0.16 | | | | | 0.13 | | | | | 0.080 |
| Strontium | Sr | mg/L | | 0.026 | | | | 0.027 | | | | | 0.023 | | | | | 0.017 |
| Tin | Sn | mg/L | | 0.000050 | | | | 0.000070 | | | | | 0.000080 | | | | | 0.000050 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | 0.00010 | | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | < 0.00003 | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000067 | | | | 0.000054 | | | | | 0.000042 | | | | | 0.00014 |
| Vanadium | V | mg/L | | 0.000040 | | | | < 0.00003 | | | | | < 0.00003 | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000001 | | | | 0.000001 | | | | | < 0.000001 | | | | | < 0.000001 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F-Zone Underground CN5 (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 710 | 973 | 973 | 927 | 962 | 946 | 922 | 940 | 938 | 951 | 937 | 926 | 940 | 957 | 928 | 949 |
| pH | | units | **6.0-9.5** | 7.9 | 7.8 | 7.9 | 8.2 | 7.6 | 7.8 | 7.4 | 7.9 | 7.8 | 7.4 | 7.4 | 7.8 | 7.7 | 7.6 | 7.4 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 632 | 336 | 251 | 180 | 141 | 144 | 166 | 154 | 146 | 127 | 76 | 96 | 98 | 189 | 92 | 149 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 67 | 94 | 82 | 80 | 38 | 36 | 54 | 39 | 35 | 28 | 20 | 28 | 24 | 33 | 20 | 25 |
| Fluoride | F | mg/L | | 0.060 | 0.080 | 0.070 | 0.10 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | |
| Sulphate | SO4 | mg/L | | 150 | 45 | 38 | 36 | 24 | 27 | 57 | 31 | 30 | 29 | 23 | 32 | 37 | 52 | 32 | 36 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.020 | 0.010 | 0.020 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | |
| Antimony | Sb | mg/L | | 0.0060 | 0.0064 | 0.0054 | 0.0042 | | 0.0012 | | | 0.00070 | | | | 0.00040 | | | |
| Arsenic | As | mg/L | **0.5** | **0.79** | **0.71** | **0.56** | 0.44 | | 0.096 | | | 0.052 | | | | 0.031 | | | |
| Barium | Ba | mg/L | | 0.0100 | 0.0046 | 0.0046 | 0.0044 | | 0.0025 | | | 0.0027 | | | | 0.0023 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | 0.000020 | < 0.00001 | < 0.00001 | 0.000090 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.013 | 0.0065 | 0.0042 | 0.0038 | | 0.0023 | | | 0.00090 | | | | 0.00090 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | 0.000003 | | | 0.000004 | | | | 0.000006 | | | |
| Calcium | Ca | mg/L | | 99 | 36 | 35 | 34 | 19 | 20 | 31 | 20 | 18 | 17 | 12 | 16 | 17 | 23 | 14 | 16 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0051 | 0.0032 | 0.0042 | 0.0035 | | 0.0012 | | | 0.00087 | | | | 0.00061 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0022 | 0.0010 | 0.0011 | 0.00050 | | 0.00050 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.083 | 0.17 | 0.30 | 0.35 | | 0.065 | | | 0.032 | | | | 0.010 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00015 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0070 | 0.0040 | 0.0030 | 0.0030 | | 0.0010 | | | 0.0010 | | | | 0.0010 | | | |
| Magnesium | Mg | mg/L | | 15 | 6.1 | 6.3 | 6.5 | | 3.6 | | | 4.0 | | | | 4.3 | | | |
| Manganese | Mn | mg/L | | 0.075 | 0.070 | 0.096 | 0.10 | | 0.097 | | | 0.13 | | | | 0.14 | | | |
| Molbydenum | Mo | mg/L | | 0.014 | 0.0027 | 0.0020 | 0.0015 | | 0.00057 | | | 0.00039 | | | | 0.00038 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0032 | 0.00040 | 0.00060 | 0.0010 | | 0.00060 | | | 0.00060 | | | | 0.00030 | | | |
| Potassium | K | mg/L | | 15 | 8.0 | 7.1 | 6.1 | | 2.3 | | | 1.7 | | | | 1.2 | | | |
| Selenium | Se | mg/L | | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 11 | 1.4 | 0.68 | 0.41 | | 0.18 | | | 0.13 | | | | 0.10 | | | |
| Strontium | Sr | mg/L | | 0.13 | 0.051 | 0.053 | 0.051 | | 0.030 | | | 0.030 | | | | 0.028 | | | |
| Tin | Sn | mg/L | | 0.00079 | 0.00051 | 0.00036 | 0.00023 | | 0.00013 | | | 0.00028 | | | | 0.000070 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00030 | 0.00020 | 0.00020 | 0.00020 | | 0.00030 | | | 0.00030 | | | | 0.00050 | | | |
| Tungsten | W | mg/L | | 0.00043 | 0.00013 | 0.000070 | 0.00012 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.00097 | 0.00094 | 0.00097 | 0.00096 | | 0.00035 | | | 0.00024 | | | | 0.00016 | | | |
| Vanadium | V | mg/L | | 0.00018 | 0.00011 | 0.00014 | 0.000080 | | 0.000040 | | | 0.000040 | | | | 0.000030 | | | |
| Yttrium | Y | mg/L | | 0.000003 | 0.000001 | 0.000002 | < 0.000001 | | < 0.000001 | | | 0.000001 | | | | 0.000002 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | 0.0010 | 0.0010 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F-Zone Underground CN5 (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 907 | 954 | 955 | 936 | 972 | 947 | 954 | 946 | 924 | 936 | 922 | | | 903 | 893 |
| pH | | units | **6.0-9.5** | 7.5 | 7.5 | 7.6 | 7.5 | 7.8 | 7.8 | 7.9 | 7.6 | 7.5 | 7.6 | 7.6 | | | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 81 | 126 | 120 | 99 | 248 | 142 | 256 | 198 | 139 | 96 | 90 | | | 103 | 131 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 26 | 23 | 21 | 53 | 34 | 89 | 47 | 32 | 26 | 22 | | | 11 | 14 |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | | < 0.06 | | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 25 | 48 | 44 | 35 | 100 | 31 | 53 | 41 | 31 | 31 | 27 | | | 31 | 43 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | | | | < 0.01 | | | | | 0.020 | | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00020 | | | | 0.00070 | | | | | 0.00020 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.023 | | | | 0.058 | | | | | 0.018 | | | | | 0.021 |
| Barium | Ba | mg/L | | 0.0012 | | | | 0.0056 | | | | | 0.0016 | | | | | 0.0022 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | < 0.00001 | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.0014 | | | | 0.0022 | | | | | 0.00050 | | | | | 0.00020 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | | | | 0.000012 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 12 | 20 | 18 | 15 | 44 | 19 | 39 | 26 | 19 | 16 | 13 | | | 13 | 17 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00018 | | | | 0.0013 | | | | | 0.00036 | | | | | 0.00026 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | 0.00050 |
| Iron | Fe | mg/L | | 0.0090 | | | | 0.0040 | | | | | < 0.003 | | | | | 0.0050 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | | | | 0.0020 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 2.9 | | | | 13 | | | | | 3.7 | | | | | 3.9 |
| Manganese | Mn | mg/L | | 0.10 | | | | 0.44 | | | | | 0.17 | | | | | 0.12 |
| Molbydenum | Mo | mg/L | | 0.00029 | | | | 0.00076 | | | | | 0.00015 | | | | | 0.00013 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00010 | | | | 0.0015 | | | | | 0.00020 | | | | | < 0.0001 |
| Potassium | K | mg/L | | 0.79 | | | | 3.0 | | | | | 0.94 | | | | | 0.82 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.070 | | | | 0.23 | | | | | 0.050 | | | | | 0.050 |
| Strontium | Sr | mg/L | | 0.020 | | | | 0.085 | | | | | 0.029 | | | | | 0.031 |
| Tin | Sn | mg/L | | 0.000060 | | | | 0.00013 | | | | | 0.00024 | | | | | 0.000060 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | | | | 0.000050 | | | | | < 0.00003 | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000080 | | | | 0.00031 | | | | | 0.00011 | | | | | 0.000096 |
| Vanadium | V | mg/L | | < 0.00003 | | | | 0.000040 | | | | | < 0.00003 | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | < 0.000001 | | | | 0.000002 | | | | | < 0.000001 | | | | | 0.000001 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | 0.0020 | | | | | < 0.001 | | | | | < 0.001 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Pump CN7 (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 709 | 994 | 959 | 938 | 940 | 938 | 899 | 934 | 920 | 942 | 916 | 896 | 952 | 939 | 930 | 933 |
| pH | | units | **6.0-9.5** | 7.9 | 7.5 | 7.2 | 7.1 | 7.2 | 7.0 | 6.9 | 7.1 | 7.2 | 7.2 | 7.2 | 7.2 | 7.5 | 7.4 | 7.6 | 7.5 |
| Conductivity | | mg/L as CaCO3 | | 272 | 269 | 363 | 275 | 290 | 185 | 92 | 131 | 104 | 126 | 104 | 141 | 130 | 125 | 100 | 111 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 15 | 18 | 21 | 16 | 21 | 13 | 8.0 | 12 | 11 | 14 | 10 | 12 | 16 | 16 | 11 | 12 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | |
| Sulphate | SO4 | mg/L | | 67 | 110 | 120 | 96 | 110 | 65 | 41 | 61 | 45 | 54 | 39 | 46 | 57 | 54 | 42 | 46 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | 0.020 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | 0.020 | | | |
| Antimony | Sb | mg/L | | 0.0010 | < 0.0002 | 0.00080 | 0.00060 | | 0.00040 | | | 0.00030 | | | | 0.00030 | | | |
| Arsenic | As | mg/L | **0.5** | 0.23 | 0.00050 | 0.073 | 0.045 | | 0.025 | | | 0.021 | | | | 0.018 | | | |
| Barium | Ba | mg/L | | 0.0021 | 0.000040 | 0.0040 | 0.0030 | | 0.0018 | | | 0.0011 | | | | 0.0013 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | 0.000040 | 0.000010 | < 0.00001 | < 0.00001 | | < 0.00001 | | | 0.000020 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.0016 | 0.0071 | 0.0023 | 0.0022 | | 0.0015 | | | 0.0010 | | | | 0.0015 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000091 | < 0.000003 | 0.000010 | 0.00011 | | 0.000006 | | | 0.000003 | | | | 0.000018 | | | |
| Calcium | Ca | mg/L | | 45 | 61 | 57 | 44 | 48 | 29 | 18 | 23 | 18 | 21 | 17 | 19 | 23 | 21 | 16 | 17 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0013 | 0.000031 | 0.0016 | 0.0016 | | 0.0010 | | | 0.00074 | | | | 0.0012 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0020 | 0.0025 | 0.0011 | 0.0013 | | 0.00060 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.017 | 0.0070 | < 0.002 | 0.0040 | | 0.0050 | | | < 0.003 | | | | < 0.003 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.000080 | 0.00018 | < 0.00002 | 0.000050 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Magnesium | Mg | mg/L | | 1.8 | 3.2 | 3.5 | 3.3 | | 2.9 | | | 2.6 | | | | 4.6 | | | |
| Manganese | Mn | mg/L | | 0.012 | 0.00059 | 0.11 | 0.11 | | 0.063 | | | 0.045 | | | | 0.088 | | | |
| Molbydenum | Mo | mg/L | | 0.0023 | 0.00023 | 0.0013 | 0.00097 | | 0.00076 | | | 0.00064 | | | | 0.00079 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0014 | < 0.0001 | 0.0010 | 0.0024 | | 0.00040 | | | 0.00050 | | | | 0.00080 | | | |
| Potassium | K | mg/L | | 1.4 | 2.4 | 2.1 | 1.6 | | 1.05 | | | 0.75 | | | | 0.93 | | | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 1.6 | 1.8 | 1.3 | 0.95 | | 0.51 | | | 0.32 | | | | 0.33 | | | |
| Strontium | Sr | mg/L | | 0.035 | 0.051 | 0.048 | 0.038 | | 0.025 | | | 0.017 | | | | 0.022 | | | |
| Tin | Sn | mg/L | | 0.0017 | < 0.00001 | 0.00026 | 0.000070 | | 0.00010 | | | 0.00029 | | | | 0.00019 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | 0.00040 | | | | < 0.0001 | | | |
| Tungsten | W | mg/L | | 0.000030 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.00013 | 0.000005 | 0.00022 | 0.00018 | | 0.00017 | | | 0.000076 | | | | 0.000091 | | | |
| Vanadium | V | mg/L | | 0.000040 | < 0.00003 | 0.000050 | 0.000030 | | < 0.00003 | | | 0.000030 | | | | 0.000040 | | | |
| Yttrium | Y | mg/L | | 0.000002 | < 0.000001 | 0.000010 | 0.000008 | | 0.000001 | | | 0.000001 | | | | 0.000001 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | 0.0020 | 0.0030 | | 0.0020 | | | 0.0010 | | | | 0.0030 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Pump CN7 (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 945 | 935 | 934 | 932 | 946 | 928 | 927 | 940 | 937 | 919 | 904 | 926 | 919 | 950 | 920 |
| pH | | units | **6.0-9.5** | 7.4 | 7.3 | 7.2 | 7.3 | 7.3 | 7.0 | 7.4 | 7.3 | 7.6 | 7.0 | 7.4 | 7.5 | 7.4 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 122 | 109 | 96 | 96 | 145 | 147 | 110 | 120 | 148 | 158 | 125 | 124 | 102 | 125 | 155 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 16 | 14 | 12 | 13 | 16 | 15 | 16 | 18 | 20 | 17 | 18 | 16 | 14 | 15 | 14 |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | | | | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 52 | 48 | 40 | 39 | 46 | 46 | 44 | 51 | 63 | 51 | 52 | 55 | 40 | 46 | 47 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | | | | < 0.01 | | | | | | | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00040 | | | | 0.00030 | | | | | | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.016 | | | | 0.013 | | | | | | | | | | 0.012 |
| Barium | Ba | mg/L | | 0.0014 | | | | 0.0013 | | | | | | | | | | 0.0011 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.0013 | | | | 0.0010 | | | | | | | | | | 0.00060 |
| Cadmium | Cd[3] | mg/L | | 0.000011 | | | | 0.000016 | | | | | | | | | | 0.000011 |
| Calcium | Ca | mg/L | | 20 | 18 | 14 | 15 | 18 | 17 | 17 | 20 | 23 | 19 | 20 | 20 | 16 | 17 | 17 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.0010 | | | | 0.00080 | | | | | | | | | | 0.00061 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | | | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | | | | < 0.001 | | | | | | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 5.0 | | | | 4.7 | | | | | | | | | | 5.0 |
| Manganese | Mn | mg/L | | 0.10 | | | | 0.098 | | | | | | | | | | 0.10 |
| Molbydenum | Mo | mg/L | | 0.00067 | | | | 0.00043 | | | | | | | | | | 0.00028 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00090 | | | | 0.0010 | | | | | | | | | | 0.00060 |
| Potassium | K | mg/L | | 0.86 | | | | 0.76 | | | | | | | | | | 0.66 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.24 | | | | 0.17 | | | | | | | | | | 0.090 |
| Strontium | Sr | mg/L | | 0.023 | | | | 0.020 | | | | | | | | | | 0.020 |
| Tin | Sn | mg/L | | 0.00015 | | | | 0.00012 | | | | | | | | | | 0.00010 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | | | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000083 | | | | 0.000063 | | | | | | | | | | 0.000047 |
| Vanadium | V | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000002 | | | | 0.000001 | | | | | | | | | | 0.000004 |
| Zinc | Zn | mg/L | **0.5** | 0.0030 | | | | 0.0030 | | | | | | | | | | 0.0010 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Tiriganiaq Open Pit CN2 (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 699 | 1001 | 998 | 986 | 997 | 974 | 984 | 970 | 970 | 984 | 984 | 972 | 981 | 989 | 981 | 979 |
| pH | | units | **6.0-9.5** | 7.9 | 7.8 | 7.3 | 7.6 | 7.4 | 7.5 | 7.4 | 7.3 | 6.9 | 7.3 | 7.5 | 7.2 | 7.3 | 7.4 | 7.4 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 617 | 182 | 112 | 117 | 126 | 112 | 80 | 92 | 74 | 91 | 68 | 65 | 67 | 69 | 67 | 116 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 36 | 24 | 17 | 22 | 27 | 21 | 22 | 17 | 16 | 18 | 21 | 28 | 21 | 21 | 21 | 23 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | |
| Sulphate | SO4 | mg/L | | 160 | 53 | 32 | 45 | 31 | 27 | 26 | 22 | 15 | 20 | 18 | 19 | 19 | 19 | 19 | 27 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.17 | 0.020 | < 0.01 | < 0.01 | | 0.010 | | | 0.010 | | | | < 0.01 | | | |
| Antimony | Sb | mg/L | | 0.0051 | 0.0027 | 0.00090 | 0.0010 | | 0.00080 | | | 0.00050 | | | | 0.00050 | | | |
| Arsenic | As | mg/L | **0.5** | **0.86** | 0.12 | 0.043 | 0.030 | | 0.022 | | | 0.0093 | | | | 0.0097 | | | |
| Barium | Ba | mg/L | | 0.012 | 0.0046 | 0.0030 | 0.0058 | | 0.0035 | | | 0.0026 | | | | 0.0029 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | 0.000070 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.0048 | 0.0017 | 0.00050 | 0.0014 | | 0.0011 | | | 0.0018 | | | | 0.0012 | | | |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | | 0.000003 | | | 0.000004 | | | | 0.000008 | | | |
| Calcium | Ca | mg/L | | 97 | 27 | 16 | 23 | 19 | 17 | 16 | 13 | 9.6 | 13 | 13 | 10 | 12 | 12 | 11 | 15 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0016 | 0.00045 | 0.00024 | 0.00029 | | 0.00024 | | | 0.00018 | | | | 0.00024 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0029 | 0.0010 | 0.00060 | < 0.0005 | | 0.00060 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.24 | 0.047 | 0.015 | 0.013 | | 0.010 | | | 0.0090 | | | | < 0.003 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00025 | 0.000070 | 0.00010 | 0.000060 | | 0.000030 | | | 0.000060 | | | | 0.000050 | | | |
| Lithium | Li | mg/L | | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Magnesium | Mg | mg/L | | 2.4 | 0.98 | 0.93 | 1.6 | | 1.6 | | | 1.3 | | | | 2.0 | | | |
| Manganese | Mn | mg/L | | 0.0061 | 0.016 | 0.019 | 0.030 | | 0.031 | | | 0.027 | | | | 0.040 | | | |
| Molbydenum | Mo | mg/L | | 0.0062 | 0.0012 | 0.00068 | 0.00064 | | 0.00041 | | | 0.0026 | | | | 0.00030 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0027 | < 0.0001 | 0.00020 | 0.00050 | | 0.00050 | | | 0.00030 | | | | 0.00020 | | | |
| Potassium | K | mg/L | | 7.8 | 2.6 | 1.5 | 2.1 | | 1.6 | | | 1.05 | | | | 0.97 | | | |
| Selenium | Se | mg/L | | 0.018 | 0.0020 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 4.5 | 1.1 | 0.53 | 0.83 | | 0.66 | | | 0.43 | | | | 0.40 | | | |
| Strontium | Sr | mg/L | | 0.14 | 0.053 | 0.041 | 0.058 | | 0.052 | | | 0.037 | | | | 0.048 | | | |
| Tin | Sn | mg/L | | 0.0036 | 0.00099 | 0.00023 | 0.00026 | | 0.00014 | | | 0.00019 | | | | 0.00012 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | < 0.0001 | 0.00030 | | 0.00030 | | | 0.00010 | | | | 0.00030 | | | |
| Tungsten | W | mg/L | | 0.00051 | 0.000090 | < 0.00003 | < 0.00003 | | < 0.00003 | | | 0.000080 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.00051 | 0.00020 | 0.00016 | 0.00018 | | 0.00012 | | | 0.000053 | | | | 0.000075 | | | |
| Vanadium | V | mg/L | | 0.00066 | < 0.00003 | 0.000080 | < 0.00003 | | < 0.00003 | | | 0.000080 | | | | < 0.00003 | | | |
| Yttrium | Y | mg/L | | 0.000002 | 0.000002 | 0.000002 | < 0.000001 | | < 0.000001 | | | 0.000001 | | | | 0.000001 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Tiriganiaq Open Pit CN2 (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 987 | 983 | 995 | 984 | 979 | 991 | 986 | 984 | 992 | 982 | 984 | | | 962 | 1002 |
| pH | | units | **6.0-9.5** | 7.6 | 7.5 | 7.5 | 7.3 | 7.5 | 7.6 | 7.6 | 7.4 | 7.3 | 7.4 | 7.4 | | | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 104 | 109 | 80 | 87 | 133 | 82 | 85 | 114 | 97 | 71 | 69 | | | 93 | 90 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 24 | 27 | 23 | 25 | 35 | 25 | 29 | 27 | 24 | 16 | 18 | | | 23 | 17 |
| Fluoride | F | mg/L | | <0.006 | | | | < 0.06 | | | | | < 0.06 | | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 21 | 33 | 22 | 22 | 37 | 20 | 19 | 17 | 19 | 13 | 18 | | | 27 | 19 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.020 | | | | < 0.01 | | | | | 0.020 | | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.0011 | | | | 0.00050 | | | | | < 0.0002 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.013 | | | | 0.033 | | | | | 0.0063 | | | | | 0.0080 |
| Barium | Ba | mg/L | | 0.0028 | | | | 0.0051 | | | | | 0.0016 | | | | | 0.0022 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | < 0.00001 | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.0019 | | | | 0.0020 | | | | | 0.00050 | | | | | 0.00060 |
| Cadmium | Cd[3] | mg/L | | 0.000004 | | | | 0.000014 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 13 | 17 | 14 | 13 | 20 | 14 | 14 | 12 | 13 | 8.5 | 10 | | | 14 | 11 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00015 | | | | 0.00052 | | | | | 0.00016 | | | | | 0.00022 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | 0.00060 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0030 | | | | 0.0080 | | | | | < 0.003 | | | | | 0.0060 |
| Lead | Pb[3] | mg/L | **0.2** | 0.000060 | | | | 0.000070 | | | | | < 0.00002 | | | | | 0.000030 |
| Lithium | Li | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 2.8 | | | | 5.5 | | | | | 2.3 | | | | | 3.4 |
| Manganese | Mn | mg/L | | 0.039 | | | | 0.039 | | | | | 0.026 | | | | | 0.031 |
| Molbydenum | Mo | mg/L | | 0.00052 | | | | 0.00073 | | | | | 0.00022 | | | | | 0.00036 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | | | | 0.00050 | | | | | < 0.0001 | | | | | < 0.0001 |
| Potassium | K | mg/L | | 1.09 | | | | 1.6 | | | | | 0.57 | | | | | 0.72 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.42 | | | | 0.61 | | | | | 0.18 | | | | | 0.22 |
| Strontium | Sr | mg/L | | 0.057 | | | | 0.089 | | | | | 0.044 | | | | | 0.059 |
| Tin | Sn | mg/L | | 0.00021 | | | | 0.00032 | | | | | 0.00025 | | | | | 0.00021 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00010 | | | | 0.000060 | | | | | < 0.00003 | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000077 | | | | 0.00013 | | | | | 0.000035 | | | | | 0.000050 |
| Vanadium | V | mg/L | | 0.000040 | | | | 0.000050 | | | | | < 0.00003 | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | < 0.000001 | | | | 0.000002 | | | | | < 0.000001 | | | | | 0.000001 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Tiriganiaq Underground CN1 (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 706 | 994 | 950 | 992 | 999 | 982 | 974 | 986 | 984 | 982 | 988 | 978 | 986 | 991 | 989 | 972 |
| pH | | units | **6.0-9.5** | 8.0 | 7.6 | 8.1 | 8.2 | 8.2 | 8.1 | 7.2 | 7.7 | 7.7 | 7.8 | 7.5 | 7.7 | 7.8 | 7.4 | 7.6 | 7.6 |
| Conductivity | | mg/L as CaCO3 | | 785 | 292 | 250 | 170 | 232 | 135 | 52 | 49 | 8.0 | 65 | 56 | 8.0 | 64 | 106 | 79 | 101 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 72 | 106 | 104 | 94 | 98 | 93 | 30 | 23 | 23 | 26 | 22 | 24 | 22 | 23 | 23 | 24 |
| Fluoride | F | mg/L | | 0.070 | 0.11 | 0.090 | 0.14 | | 0.060 | | | < 0.06 | | | | < 0.06 | | | |
| Sulphate | SO4 | mg/L | | 280 | 40 | 18 | 16 | 19 | 17 | 4.1 | 5.0 | 6.4 | 8.0 | 13 | 14 | 17 | 20 | 24 | 22 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.10 | 0.12 | 0.15 | 0.14 | | 0.13 | | | 0.010 | | | | < 0.01 | | | |
| Antimony | Sb | mg/L | | 0.011 | 0.010 | 0.0066 | 0.0046 | | 0.0045 | | | 0.00040 | | | | 0.00030 | | | |
| Arsenic | As | mg/L | **0.5** | **0.85** | **0.75** | **0.58** | 0.42 | | 0.34 | | | 0.016 | | | | 0.011 | | | |
| Barium | Ba | mg/L | | 0.053 | 0.022 | 0.016 | 0.016 | | 0.018 | | | 0.0050 | | | | 0.0072 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | 0.000020 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.0099 | 0.0074 | 0.0033 | 0.0031 | | 0.0027 | | | 0.00030 | | | | 0.00070 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000011 | < 0.000003 | 0.000003 | < 0.000003 | | 0.000011 | | | < 0.000003 | | | | 0.000008 | | | |
| Calcium | Ca | mg/L | | 126 | 41 | 31 | 30 | 33 | 33 | 10 | 7.5 | 7.6 | 8.6 | 9.5 | 9.4 | 10 | 12 | 13 | 12 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0033 | 0.0014 | 0.0016 | 0.0015 | | 0.0018 | | | 0.00021 | | | | 0.00026 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0028 | 0.0015 | 0.0013 | 0.0012 | | 0.0028 | | | 0.00050 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.086 | 0.18 | 0.32 | 0.37 | | 0.50 | | | 0.037 | | | | 0.0080 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00077 | 0.00052 | 0.00032 | 0.00031 | | 0.00022 | | | 0.00041 | | | | 0.00032 | | | |
| Lithium | Li | mg/L | | 0.0050 | 0.0040 | 0.0030 | 0.0030 | | 0.0030 | | | < 0.001 | | | | < 0.001 | | | |
| Magnesium | Mg | mg/L | | 11 | 5.1 | 4.5 | 4.9 | | 6.2 | | | 1.4 | | | | 2.2 | | | |
| Manganese | Mn | mg/L | | 0.018 | 0.014 | 0.015 | 0.019 | | 0.026 | | | 0.023 | | | | 0.034 | | | |
| Molbydenum | Mo | mg/L | | 0.014 | 0.0044 | 0.0017 | 0.0013 | | 0.0011 | | | 0.00027 | | | | 0.00037 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0030 | 0.00010 | 0.00030 | 0.00060 | | 0.00050 | | | 0.00030 | | | | 0.00030 | | | |
| Potassium | K | mg/L | | 27 | 17 | 13 | 11 | | 11 | | | 1.4 | | | | 1.5 | | | |
| Selenium | Se | mg/L | | 0.0040 | 0.0040 | 0.0030 | 0.0030 | | 0.0030 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 18 | 4.2 | 1.8 | 1.2 | | 1.00 | | | 0.14 | | | | 0.20 | | | |
| Strontium | Sr | mg/L | | 0.33 | 0.13 | 0.11 | 0.11 | | 0.14 | | | 0.039 | | | | 0.058 | | | |
| Tin | Sn | mg/L | | 0.0010 | 0.00041 | 0.00015 | 0.00016 | | 0.00024 | | | 0.00014 | | | | 0.000090 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00030 | 0.00020 | 0.00010 | < 0.0001 | | 0.00020 | | | < 0.0001 | | | | 0.00030 | | | |
| Tungsten | W | mg/L | | 0.00051 | 0.00036 | 0.00018 | 0.00022 | | 0.00020 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.0010 | 0.00096 | 0.00094 | 0.00096 | | 0.00091 | | | 0.000071 | | | | 0.000084 | | | |
| Vanadium | V | mg/L | | 0.00029 | 0.00023 | 0.00024 | 0.00015 | | 0.00018 | | | 0.000030 | | | | < 0.00003 | | | |
| Yttrium | Y | mg/L | | 0.000005 | 0.000002 | 0.000002 | < 0.000001 | | 0.000001 | | | 0.000001 | | | | 0.000002 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | 0.0020 | < 0.001 | < 0.001 | | < 0.001 | | | 0.0020 | | | | < 0.001 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Tiriganiaq Underground CN1 (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 986 | 986 | 982 | 989 | 980 | 980 | 984 | 975 | 985 | 981 | 986 | | | 985 | 988 |
| pH | | units | **6.0-9.5** | 7.6 | 7.5 | 7.5 | 7.4 | 7.4 | 7.5 | 7.6 | 7.3 | 7.2 | 7.2 | 7.4 | | | 7.5 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 83 | 86 | 92 | 126 | 89 | 93 | 97 | 160 | 161 | 100 | 104 | | | 111 | 134 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 24 | 24 | 23 | 25 | 21 | 22 | 22 | 26 | 26 | 22 | 23 | | | 17 | 23 |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | | < 0.06 | | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 24 | 26 | 31 | 33 | 28 | 31 | 33 | 42 | 47 | 36 | 35 | | | 29 | 38 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | | | | < 0.01 | | | | | 0.010 | | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00020 | | | | < 0.0002 | | | | | < 0.0002 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0067 | | | | 0.0067 | | | | | 0.0057 | | | | | 0.0068 |
| Barium | Ba | mg/L | | 0.0085 | | | | 0.0080 | | | | | 0.0090 | | | | | 0.0092 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | < 0.00001 | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.00080 | | | | 0.00060 | | | | | 0.00040 | | | | | 0.00060 |
| Cadmium | Cd[3] | mg/L | | 0.000006 | | | | 0.000008 | | | | | 0.000004 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 13 | 14 | 15 | 16 | 13 | 14 | 15 | 18 | 20 | 15 | 15 | | | 12 | 16 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00018 | | | | 0.00027 | | | | | 0.00034 | | | | | 0.00040 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0040 | | | | 0.0030 | | | | | 0.0040 | | | | | 0.013 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00018 | | | | 0.000090 | | | | | 0.000090 | | | | | 0.000050 |
| Lithium | Li | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 3.2 | | | | 3.7 | | | | | 4.9 | | | | | 5.4 |
| Manganese | Mn | mg/L | | 0.044 | | | | 0.036 | | | | | 0.039 | | | | | 0.037 |
| Molbydenum | Mo | mg/L | | 0.00033 | | | | 0.00031 | | | | | 0.00030 | | | | | 0.00038 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | | | | 0.00030 | | | | | < 0.0001 | | | | | 0.00020 |
| Potassium | K | mg/L | | 1.8 | | | | 1.7 | | | | | 1.9 | | | | | 2.0 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.26 | | | | 0.27 | | | | | 0.30 | | | | | 0.33 |
| Strontium | Sr | mg/L | | 0.084 | | | | 0.092 | | | | | 0.12 | | | | | 0.13 |
| Tin | Sn | mg/L | | 0.00013 | | | | 0.000090 | | | | | 0.00015 | | | | | 0.00020 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | | | | 0.000040 | | | | | < 0.00003 | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000074 | | | | 0.000084 | | | | | 0.000094 | | | | | 0.00011 |
| Vanadium | V | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | < 0.00003 | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | < 0.000001 | | | | 0.000001 | | | | | 0.000004 | | | | | 0.000001 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | 0.0020 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Wesmeg Open Pit CN3 (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 653 | 956 | 950 | 955 | 938 | 934 | 971 | 934 | 921 | 914 | 931 | 933 | 954 | 926 | 926 | 931 |
| pH | | units | **6.0-9.5** | 7.8 | 7.7 | 7.5 | 7.8 | 6.9 | 7.4 | 7.5 | 7.6 | 7.4 | 7.6 | 7.4 | 7.6 | 7.7 | 7.5 | 7.4 | 7.7 |
| Conductivity | | mg/L as CaCO3 | | 492 | 148 | 150 | 150 | 114 | 110 | 89 | 86 | 7.0 | 78 | 45 | 118 | 110 | 89 | 89 | 104 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 53 | 51 | 38 | 42 | 34 | 30 | 32 | 28 | 21 | 27 | 26 | 27 | 30 | 22 | 21 | 25 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | |
| Sulphate | SO4 | mg/L | | 190 | 41 | 20 | 26 | 20 | 23 | 23 | 24 | 20 | 25 | 28 | 28 | 38 | 30 | 31 | 35 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | 0.020 | | | |
| Antimony | Sb | mg/L | | 0.0012 | 0.00090 | 0.00040 | 0.00020 | | < 0.0002 | | | < 0.0002 | | | | < 0.0002 | | | |
| Arsenic | As | mg/L | **0.5** | 0.057 | 0.094 | 0.011 | 0.0093 | | 0.0072 | | | 0.0016 | | | | 0.0033 | | | |
| Barium | Ba | mg/L | | 0.016 | 0.0037 | 0.0049 | 0.0053 | | 0.0040 | | | 0.0030 | | | | 0.0041 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | 0.000010 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | 0.000060 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.0059 | 0.0020 | 0.0027 | 0.0015 | | 0.00090 | | | 0.00050 | | | | 0.00090 | | | |
| Cadmium | Cd[3] | mg/L | | 0.00027 | < 0.000003 | 0.000012 | 0.00023 | | 0.000009 | | | 0.000016 | | | | 0.000022 | | | |
| Calcium | Ca | mg/L | | 53 | 23 | 16 | 17 | 13 | 15 | 15 | 14 | 9.9 | 11 | 15 | 14 | 16 | 13 | 12 | 15 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0030 | 0.0021 | 0.00046 | 0.00061 | | 0.00037 | | | 0.00030 | | | | 0.00053 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.018 | 0.0048 | 0.0012 | 0.0022 | | 0.00070 | | | < 0.0005 | | | | 0.00060 | | | |
| Iron | Fe | mg/L | | 0.032 | 0.010 | 0.0060 | 0.0070 | | 0.0050 | | | < 0.003 | | | | < 0.003 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00065 | < 0.00002 | < 0.00002 | 0.00011 | | 0.000020 | | | < 0.00002 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0030 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Magnesium | Mg | mg/L | | 27 | 8.6 | 4.7 | 5.5 | | 4.7 | | | 3.6 | | | | 6.2 | | | |
| Manganese | Mn | mg/L | | 0.11 | 0.060 | 0.097 | 0.11 | | 0.090 | | | 0.081 | | | | 0.15 | | | |
| Molbydenum | Mo | mg/L | | 0.0028 | 0.0022 | 0.00030 | 0.00046 | | 0.00026 | | | 0.00010 | | | | 0.00019 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0021 | 0.0024 | 0.00030 | 0.0014 | | 0.00040 | | | 0.00040 | | | | 0.00080 | | | |
| Potassium | K | mg/L | | 7.6 | 2.8 | 1.5 | 1.5 | | 1.01 | | | 0.75 | | | | 0.83 | | | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 2.9 | 0.58 | 0.25 | 0.28 | | 0.19 | | | 0.15 | | | | 0.21 | | | |
| Strontium | Sr | mg/L | | 0.080 | 0.032 | 0.020 | 0.024 | | 0.018 | | | 0.015 | | | | 0.024 | | | |
| Tin | Sn | mg/L | | 0.00094 | 0.00050 | 0.00031 | 0.00029 | | 0.00034 | | | 0.00031 | | | | 0.00040 | | | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00020 | | | 0.00010 | | | | < 0.0001 | | | |
| Tungsten | W | mg/L | | 0.000050 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.00051 | 0.00021 | 0.000082 | 0.00012 | | 0.000064 | | | 0.000034 | | | | 0.000046 | | | |
| Vanadium | V | mg/L | | < 0.00003 | < 0.00003 | 0.000050 | 0.000040 | | < 0.00003 | | | 0.000030 | | | | < 0.00003 | | | |
| Yttrium | Y | mg/L | | 0.000019 | 0.000001 | 0.000028 | 0.000014 | | 0.000001 | | | 0.000001 | | | | 0.000001 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.031 | 0.0020 | 0.0020 | 0.0030 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Wesmeg Open Pit CN3 (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 940 | 930 | 927 | 927 | 931 | 929 | 930 | 934 | 931 | 920 | 900 | 918 | 921 | 950 | 920 |
| pH | | units | **6.0-9.5** | 7.5 | 7.2 | 7.0 | 7.3 | 7.2 | 7.4 | 7.4 | 7.5 | 7.4 | 6.9 | 7.1 | 7.4 | 7.6 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 96 | 97 | 91 | 96 | 108 | 115 | 115 | 125 | 111 | 161 | 160 | 122 | 92 | 125 | 155 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 24 | 23 | 20 | 22 | 22 | 26 | 26 | 28 | 27 | 31 | 24 | 24 | 18 | 15 | 14 |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | | | | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 33 | 35 | 35 | 39 | 40 | 42 | 44 | 48 | 40 | 49 | 46 | 51 | 32 | 46 | 47 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.020 | | | | < 0.01 | | | | | | | | | | < 0.01 |
| Antimony | Sb | mg/L | | < 0.0002 | | | | < 0.0002 | | | | | | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0018 | | | | 0.0012 | | | | | | | | | | 0.012 |
| Barium | Ba | mg/L | | 0.0039 | | | | 0.0035 | | | | | | | | | | 0.0011 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.00080 | | | | 0.00060 | | | | | | | | | | 0.00060 |
| Cadmium | Cd[3] | mg/L | | 0.000020 | | | | 0.000023 | | | | | | | | | | 0.000011 |
| Calcium | Ca | mg/L | | 14 | 14 | 13 | 13 | 15 | 16 | 17 | 19 | 16 | 18 | 18 | 18 | 14 | 17 | 17 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00052 | | | | 0.00050 | | | | | | | | | | 0.00061 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | | | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | | | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Lithium | Li | mg/L | | < 0.001 | | | | < 0.001 | | | | | | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 5.6 | | | | 6.4 | | | | | | | | | | 5.0 |
| Manganese | Mn | mg/L | | 0.15 | | | | 0.15 | | | | | | | | | | 0.10 |
| Molbydenum | Mo | mg/L | | 0.00041 | | | | 0.00011 | | | | | | | | | | 0.00028 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00080 | | | | 0.00090 | | | | | | | | | | 0.00060 |
| Potassium | K | mg/L | | 0.64 | | | | 0.69 | | | | | | | | | | 0.66 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.16 | | | | 0.16 | | | | | | | | | | 0.090 |
| Strontium | Sr | mg/L | | 0.024 | | | | 0.026 | | | | | | | | | | 0.020 |
| Tin | Sn | mg/L | | 0.00030 | | | | 0.00023 | | | | | | | | | | 0.00010 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | | | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000036 | | | | 0.000038 | | | | | | | | | | 0.000047 |
| Vanadium | V | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000001 | | | | 0.000002 | | | | | | | | | | 0.000004 |
| Zinc | Zn | mg/L | **0.5** | 0.0040 | | | | 0.0030 | | | | | | | | | | 0.0010 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Wolf CN4 CND residue (Whole ore) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 741 | 993 | 984 | 952 | 972 | 946 | 984 | 943 | 956 | 967 | 957 | 960 | 964 | 951 | 927 | 957 |
| pH | | units | **6.0-9.5** | 7.8 | 7.7 | 7.9 | 7.4 | 7.6 | 7.1 | 7.7 | 7.1 | 7.4 | 7.5 | 7.6 | 7.3 | 7.5 | 7.5 | 7.2 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 1550 | 126 | 126 | 104 | 77 | 82 | 98 | 58 | 78 | 68 | 73 | 73 | 56 | 7.0 | 38 | 51 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 63 | 22 | 24 | 21 | 22 | 15 | 20 | 11 | 15 | 21 | 22 | 15 | 15 | 12 | 10 | 13 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | |
| Sulphate | SO4 | mg/L | | 730 | 43 | 32 | 25 | 23 | 17 | 20 | 14 | 17 | 20 | 16 | 16 | 15 | 13 | 10 | 16 |
| **METALS:** | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.030 | < 0.01 | 0.010 | | 0.010 | | | 0.030 | | | | < 0.01 | | | |
| Antimony | Sb | mg/L | | 0.0043 | 0.00090 | 0.00050 | < 0.0002 | | 0.00030 | | | 0.00030 | | | | < 0.0002 | | | |
| Arsenic | As | mg/L | **0.5** | 0.060 | 0.0097 | 0.0061 | 0.0047 | | 0.0025 | | | 0.0030 | | | | 0.0012 | | | |
| Barium | Ba | mg/L | | 0.051 | 0.0035 | 0.0029 | 0.0021 | | 0.0018 | | | 0.0016 | | | | 0.0014 | | | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | |
| Boron | B | mg/L | | 0.010 | 0.0018 | 0.0013 | 0.00080 | | 0.0010 | | | 0.0011 | | | | 0.00080 | | | |
| Cadmium | Cd[3] | mg/L | | 0.000021 | 0.000016 | 0.000003 | 0.000003 | | < 0.000003 | | | < 0.000003 | | | | 0.000017 | | | |
| Calcium | Ca | mg/L | | 320 | 25 | 17 | 13 | 13 | 9.5 | 12 | 6.5 | 8.1 | 9.6 | 7.9 | 7.8 | 6.6 | 5.8 | 4.8 | 6.5 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Cobalt | Co | mg/L | | 0.0044 | 0.00032 | 0.00024 | 0.00020 | | 0.00016 | | | 0.00016 | | | | 0.00021 | | | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0036 | 0.0028 | 0.0014 | 0.0010 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | |
| Iron | Fe | mg/L | | 0.064 | 0.0090 | 0.0050 | 0.0030 | | < 0.003 | | | 0.0040 | | | | < 0.003 | | | |
| Lead | Pb[3] | mg/L | **0.2** | 0.0017 | 0.0018 | 0.00037 | 0.00015 | | 0.000040 | | | 0.000020 | | | | < 0.00002 | | | |
| Lithium | Li | mg/L | | 0.0050 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Magnesium | Mg | mg/L | | 18 | 1.8 | 2.3 | 2.3 | | 2.4 | | | 2.7 | | | | 2.6 | | | |
| Manganese | Mn | mg/L | | 0.074 | 0.021 | 0.023 | 0.019 | | 0.015 | | | 0.013 | | | | 0.016 | | | |
| Molbydenum | Mo | mg/L | | 0.013 | 0.0020 | 0.00071 | 0.00058 | | 0.00054 | | | 0.00061 | | | | 0.00058 | | | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.0019 | 0.0010 | 0.00030 | 0.00040 | | 0.00040 | | | 0.00040 | | | | 0.00050 | | | |
| Potassium | K | mg/L | | 27 | 2.7 | 2.2 | 1.8 | | 1.6 | | | 1.4 | | | | 1.05 | | | |
| Selenium | Se | mg/L | | 0.0090 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | |
| Sodium | Na | mg/L | | 9.4 | 0.57 | 0.45 | 0.43 | | 0.40 | | | 0.40 | | | | 0.30 | | | |
| Strontium | Sr | mg/L | | 0.53 | 0.049 | 0.040 | 0.034 | | 0.030 | | | 0.029 | | | | 0.026 | | | |
| Tin | Sn | mg/L | | 0.0014 | 0.00037 | 0.00011 | 0.000060 | | 0.000060 | | | < 0.00001 | | | | 0.000060 | | | |
| Thallium | Th | mg/L | | 0.000020 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | |
| Titanium | Ti | mg/L | | 0.00020 | < 0.0001 | < 0.0001 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | |
| Tungsten | W | mg/L | | 0.00016 | 0.00011 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Uranium | U | mg/L | | 0.0018 | 0.00018 | 0.00013 | 0.000089 | | 0.000048 | | | 0.000046 | | | | 0.000042 | | | |
| Vanadium | V | mg/L | | 0.000050 | 0.000040 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | |
| Yttrium | Y | mg/L | | 0.000006 | 0.000004 | 0.000003 | 0.000001 | | < 0.000001 | | | < 0.000001 | | | | 0.000001 | | | |
| Zinc | Zn | mg/L | **0.5** | 0.0040 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | 0.0020 | | | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - Wolf CN4 CND residue (Whole ore) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 963 | 956 | 963 | 947 | 952 | 952 | 957 | 960 | 940 | 931 | 937 | | | 926 | 913 |
| pH | | units | **6.0-9.5** | 7.3 | 7.4 | 7.3 | 7.2 | 7.2 | 7.1 | 7.0 | 7.3 | 7.2 | 7.0 | 7.2 | | | 7.4 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 76 | 70 | 68 | 39 | 42 | 60 | 50 | 46 | 68 | 58 | 56 | | | 8.0 | 60 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 14 | 13 | 12 | 9.0 | 10 | 9.0 | 11 | 11 | 17 | 11 | 9.0 | | | 10 | 10 |
| Fluoride | F | mg/L | | < 0.06 | | | | < 0.06 | | | | | < 0.06 | | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 17 | 16 | 15 | 11 | 12 | 13 | 12 | 10 | 13 | 11 | 11 | | | 16 | 14 |
| **METALS:** | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | | | | < 0.01 | | | | | < 0.01 | | | | | < 0.01 |
| Antimony | Sb | mg/L | | 0.00020 | | | | < 0.0002 | | | | | < 0.0002 | | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0010 | | | | 0.0011 | | | | | 0.0013 | | | | | 0.0016 |
| Barium | Ba | mg/L | | 0.0015 | | | | 0.00099 | | | | | 0.00085 | | | | | 0.00086 |
| Beryllium | Be | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | | | | < 0.00001 | | | | | < 0.00001 | | | | | < 0.00001 |
| Boron | B | mg/L | | 0.0014 | | | | 0.00080 | | | | | 0.00060 | | | | | 0.00050 |
| Cadmium | Cd[3] | mg/L | | 0.000003 | | | | < 0.000003 | | | | | < 0.000003 | | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 7.3 | 6.7 | 6.2 | 4.7 | 4.9 | 4.9 | 5.6 | 5.4 | 5.6 | 5.2 | 4.9 | | | 6.4 | 5.8 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00021 | | | | 0.00013 | | | | | 0.000090 | | | | | 0.00012 |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | | | | < 0.0005 | | | | | < 0.0005 | | | | | < 0.0005 |
| Iron | Fe | mg/L | | < 0.003 | | | | < 0.003 | | | | | < 0.003 | | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | < 0.00002 | | | | < 0.00002 | | | | | 0.000020 | | | | | 0.000040 |
| Lithium | Li | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 3.2 | | | | 2.3 | | | | | 2.1 | | | | | 2.5 |
| Manganese | Mn | mg/L | | 0.017 | | | | 0.0094 | | | | | 0.011 | | | | | 0.010 |
| Molbydenum | Mo | mg/L | | 0.00060 | | | | 0.00047 | | | | | 0.00036 | | | | | 0.00049 |
| Mercury | Hg | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00010 | | | | 0.00040 | | | | | 0.00010 | | | | | 0.00010 |
| Potassium | K | mg/L | | 1.2 | | | | 0.83 | | | | | 0.74 | | | | | 0.71 |
| Selenium | Se | mg/L | | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |
| Sodium | Na | mg/L | | 0.33 | | | | 0.23 | | | | | 0.20 | | | | | 0.19 |
| Strontium | Sr | mg/L | | 0.032 | | | | 0.023 | | | | | 0.022 | | | | | 0.026 |
| Tin | Sn | mg/L | | 0.000050 | | | | 0.000030 | | | | | 0.00010 | | | | | 0.000080 |
| Thallium | Th | mg/L | | < 0.00002 | | | | < 0.00002 | | | | | < 0.00002 | | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | | | | < 0.0001 | | | | | < 0.0001 | | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | | | | < 0.00003 | | | | | < 0.00003 | | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.000040 | | | | 0.000026 | | | | | 0.000028 | | | | | 0.000065 |
| Vanadium | V | mg/L | | 0.000030 | | | | < 0.00003 | | | | | < 0.00003 | | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000001 | | | | 0.000001 | | | | | < 0.000001 | | | | | 0.000001 |
| Zinc | Zn | mg/L | **0.5** | < 0.001 | | | | < 0.001 | | | | | < 0.001 | | | | | < 0.001 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentrat
[2] CEQG Freshwater aquatic life criteria for chromium depends on the v
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Mir
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependar

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F1 Concentrate (C1-C8 Composite) (Concentrate) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 845 | 987 | 977 | 968 | 980 | 961 | 973 | 961 | 955 | 958 | 960 | 961 | 972 | 950 | 934 | 955 | 957 |
| pH | | units | **6.0-9.5** | 7.3 | 7.6 | 7.1 | 7.6 | 7.6 | 7.4 | 7.5 | 7.4 | 7.1 | 6.7 | 7.2 | 7.3 | 6.7 | 7.0 | 7.2 | 7.1 | 7.1 |
| Conductivity | | mg/L as CaCO3 | | 163 | 258 | 244 | 249 | 183 | 190 | 140 | 150 | 205 | 192 | 138 | 189 | 138 | 128 | 122 | 124 | 170 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 13 | 23 | 24 | 26 | 25 | 22 | 20 | 16 | 14 | 23 | 12 | 13 | 11 | 13 | 13 | 11 | 10 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | 0.070 | < 0.06 | | < 0.06 | | | 0.060 | | | | < 0.06 | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 74 | 110 | 81 | 82 | 80 | 88 | 83 | 73 | 76 | 69 | 65 | 63 | 67 | 60 | 57 | 58 | 62 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | < 0.01 | 0.010 | 0.020 | | 0.010 | | | < 0.01 | | | | < 0.01 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.00090 | 0.0013 | 0.0018 | 0.0013 | | 0.0012 | | | 0.00090 | | | | 0.00070 | | | | 0.00080 |
| Arsenic | As | mg/L | **0.5** | 0.21 | **0.60** | 0.50 | 0.44 | | 0.25 | | | 0.18 | | | | 0.10 | | | | 0.074 |
| Barium | Ba | mg/L | | 0.0043 | 0.0071 | 0.0056 | 0.0044 | | 0.0045 | | | 0.0043 | | | | 0.0036 | | | | 0.0033 |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | 0.00011 | 0.000090 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | 0.000070 |
| Boron | B | mg/L | | 0.0041 | 0.0072 | 0.0052 | 0.0037 | | 0.0047 | | | 0.0042 | | | | 0.0025 | | | | 0.0027 |
| Cadmium | Cd[3] | mg/L | | 0.000006 | 0.000005 | 0.000004 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | 0.000003 | | | | 0.000005 |
| Calcium | Ca | mg/L | | 21 | 38 | 28 | 29 | 29 | 30 | 28 | 24 | 24 | 24 | 23 | 25 | 20 | 21 | 20 | 21 | 22 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000083 | 0.00025 | 0.00025 | 0.00026 | | 0.00039 | | | 0.00034 | | | | 0.00034 | | | | 0.00036 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0012 | 0.0014 | 0.00050 | < 0.0005 | | < 0.0005 | | | 0.0021 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.0070 | 0.0050 | 0.0060 | 0.0040 | | 0.012 | | | 0.023 | | | | 0.013 | | | | 0.020 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00069 | 0.00043 | 0.00018 | 0.00011 | | 0.000060 | | | 0.00012 | | | | 0.00014 | | | | 0.00023 |
| Lithium | Li | mg/L | | < 0.001 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 6.3 | 11 | 7.3 | 6.9 | | 7.2 | | | 5.8 | | | | 4.4 | | | | 4.3 |
| Manganese | Mn | mg/L | | 0.027 | 0.052 | 0.056 | 0.063 | | 0.060 | | | 0.044 | | | | 0.042 | | | | 0.041 |
| Molbydenum | Mo | mg/L | | 0.0012 | 0.0021 | 0.0013 | 0.0010 | | 0.0012 | | | 0.0012 | | | | 0.0015 | | | | 0.00088 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | 0.0019 | 0.0014 | 0.0016 | | 0.0028 | | | 0.0018 | | | | 0.0013 | | | | 0.0010 |
| Potassium | K | mg/L | | 6.3 | 8.7 | 5.8 | 5.0 | | 4.8 | | | 3.8 | | | | 2.9 | | | | 2.9 |
| Selenium | Se | mg/L | | < 0.001 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 5.1 | 7.5 | 4.0 | 3.3 | | 2.7 | | | 1.7 | | | | 1.00 | | | | 0.85 |
| Strontium | Sr | mg/L | | 0.12 | 0.21 | 0.15 | 0.15 | | 0.16 | | | 0.13 | | | | 0.11 | | | | 0.11 |
| Tin | Sn | mg/L | | 0.00091 | 0.00046 | 0.00015 | 0.000060 | | 0.00010 | | | 0.00088 | | | | 0.000050 | | | | 0.000050 |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Titanium | Ti | mg/L | | 0.00010 | 0.00020 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.000040 | 0.000030 | 0.000040 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.00027 | 0.00074 | 0.00046 | 0.00043 | | 0.00035 | | | 0.00033 | | | | 0.00018 | | | | 0.00019 |
| Vanadium | V | mg/L | | 0.000050 | 0.000090 | < 0.00003 | 0.000050 | | < 0.00003 | | | 0.000060 | | | | 0.000030 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000011 | 0.000023 | 0.000009 | 0.000006 | | 0.000004 | | | 0.000004 | | | | 0.000002 | | | | 0.000002 |
| Zinc | Zn | mg/L | **0.5** | 0.0030 | 0.0010 | < 0.001 | < 0.001 | | 0.0010 | | | 0.0020 | | | | 0.0030 | | | | 0.0020 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F2 Concentrate (C1-C8 Composite) (Concentrate) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 853 | 990 | 966 | 970 | 988 | 943 | 975 | 959 | 968 | 960 | 952 | 958 | 967 | 959 | 931 | 948 | 958 |
| pH | | units | **6.0-9.5** | 7.4 | 7.7 | 7.9 | 7.4 | 7.8 | 7.6 | 7.6 | 7.6 | 7.2 | 6.9 | 6.6 | 7.4 | 6.8 | 7.4 | 7.7 | 7.5 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 180 | 151 | 159 | 149 | 160 | 144 | 123 | 133 | 140 | 172 | 163 | 156 | 118 | 114 | 125 | 118 | 160 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 13 | 23 | 51 | 22 | 24 | 17 | 23 | 22 | 24 | 23 | 22 | 16 | 15 | 16 | 14 | 14 | 15 |
| Fluoride | F | mg/L | | < 0.06 | 0.060 | < 0.06 | < 0.06 | | 0.070 | | | 0.080 | | | | < 0.06 | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 41 | 47 | 40 | 46 | 67 | 59 | 66 | 59 | 55 | 55 | 52 | 50 | 51 | 49 | 40 | 52 | 55 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.010 | 0.020 | 0.010 | 0.020 | | 0.030 | | | 0.020 | | | | 0.020 | | | | 0.020 |
| Antimony | Sb | mg/L | | 0.0020 | 0.0021 | 0.0018 | 0.0015 | | 0.0017 | | | 0.0015 | | | | 0.0010 | | | | 0.0011 |
| Arsenic | As | mg/L | **0.5** | 0.092 | 0.22 | 0.26 | 0.19 | | 0.14 | | | 0.060 | | | | 0.024 | | | | 0.017 |
| Barium | Ba | mg/L | | 0.0034 | 0.0039 | 0.0029 | 0.0027 | | 0.0031 | | | 0.0030 | | | | 0.0028 | | | | 0.0030 |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | 0.000030 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | 0.000040 |
| Boron | B | mg/L | | 0.0052 | 0.0065 | 0.0047 | 0.0032 | | 0.0052 | | | 0.0043 | | | | 0.0029 | | | | 0.0032 |
| Cadmium | Cd[3] | mg/L | | 0.000008 | 0.000011 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | 0.000004 | | | | 0.000004 |
| Calcium | Ca | mg/L | | 14 | 18 | 15 | 16 | 22 | 20 | 23 | 19 | 18 | 19 | 18 | 19 | 15 | 17 | 13 | 16 | 17 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00011 | 0.00022 | 0.00010 | 0.00011 | | 0.00014 | | | 0.00016 | | | | 0.00022 | | | | 0.00028 |
| Copper | Cu[3] | mg/L | **0.3** | 0.0025 | 0.0026 | 0.00090 | 0.00070 | | 0.00060 | | | 0.00080 | | | | < 0.0005 | | | | < 0.0005 |
| Iron | Fe | mg/L | | 0.014 | 0.051 | 0.0080 | 0.0080 | | 0.0050 | | | < 0.003 | | | | 0.0060 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00038 | 0.00034 | 0.000070 | 0.000070 | | 0.000030 | | | 0.000030 | | | | 0.000040 | | | | 0.000040 |
| Lithium | Li | mg/L | | < 0.001 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Magnesium | Mg | mg/L | | 4.8 | 6.2 | 4.3 | 4.3 | | 6.2 | | | 5.7 | | | | 5.4 | | | | 6.5 |
| Manganese | Mn | mg/L | | 0.024 | 0.037 | 0.028 | 0.028 | | 0.027 | | | 0.036 | | | | 0.033 | | | | 0.037 |
| Molbydenum | Mo | mg/L | | 0.0029 | 0.0025 | 0.0014 | 0.0013 | | 0.0017 | | | 0.0016 | | | | 0.0013 | | | | 0.0010 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00050 | 0.0011 | 0.00030 | 0.00060 | | 0.0013 | | | 0.00070 | | | | 0.00070 | | | | 0.00060 |
| Potassium | K | mg/L | | 4.9 | 5.0 | 3.6 | 3.2 | | 3.9 | | | 3.1 | | | | 2.4 | | | | 2.5 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | 0.0010 |
| Sodium | Na | mg/L | | 5.6 | 5.6 | 3.2 | 2.7 | | 3.2 | | | 2.0 | | | | 1.2 | | | | 1.06 |
| Strontium | Sr | mg/L | | 0.10 | 0.13 | 0.10 | 0.11 | | 0.13 | | | 0.12 | | | | 0.10 | | | | 0.11 |
| Tin | Sn | mg/L | | 0.0035 | 0.0021 | 0.00035 | 0.00019 | | 0.00030 | | | 0.00055 | | | | 0.000030 | | | | 0.000030 |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | 0.00020 | < 0.0001 | 0.00020 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | 0.00026 | 0.00014 | 0.000090 | < 0.00003 | | 0.000070 | | | 0.000040 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.00033 | 0.00048 | 0.00036 | 0.00042 | | 0.00047 | | | 0.00044 | | | | 0.00032 | | | | 0.00031 |
| Vanadium | V | mg/L | | 0.000060 | 0.000080 | < 0.00003 | 0.000060 | | < 0.00003 | | | 0.000050 | | | | < 0.00003 | | | | 0.000040 |
| Yttrium | Y | mg/L | | 0.000017 | 0.000043 | 0.000006 | 0.000005 | | 0.000004 | | | 0.000002 | | | | 0.000001 | | | | 0.000002 |
| Zinc | Zn | mg/L | **0.5** | 0.0040 | 0.0010 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |

Notes:

nc: not calculated

[1] MMER 2006 update. Maximum authorized monthly mean concentration.

[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium

[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness

[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F1 Flot Tailings (Flotation) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 750 | 1000 | 995 | 980 | 983 | 963 | 1003 | 980 | 980 | 988 | 977 | 978 | 980 | 978 | 990 | 981 | 983 | 978 |
| pH | | units | **6.0-9.5** | 8.2 | 7.8 | 8.8 | 7.9 | 7.4 | 7.6 | 7.6 | 7.7 | 7.5 | 7.6 | 7.4 | 7.5 | 7.3 | 7.1 | 7.1 | 7.4 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 92 | 73 | 64 | 70 | 60 | 67 | 49 | 41 | 51 | 47 | 43 | 6.0 | 41 | 6.0 | 5.0 | 30 | 40 | 37 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 32 | 36 | 25 | 31 | 26 | 24 | 25 | 21 | 22 | 17 | 15 | 17 | 16 | 15 | 15 | 15 | 16 | 15 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | 0.12 | | | | < 0.06 | |
| Sulphate | SO4 | mg/L | | 6.2 | 8.7 | 7.3 | 6.8 | 5.7 | 5.6 | 4.6 | 4.5 | 4.4 | 3.6 | 3.3 | 3.5 | 3.2 | 2.9 | 2.8 | 2.6 | 2.8 | 2.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.14 | 0.020 | 0.020 | 0.030 | | < 0.01 | | | 0.010 | | | | < 0.01 | | | | 0.020 | |
| Antimony | Sb | mg/L | | 0.0013 | 0.00060 | 0.00060 | 0.00050 | | 0.00040 | | | 0.00040 | | | | < 0.0002 | | | | 0.00020 | |
| Arsenic | As | mg/L | **0.5** | 0.040 | 0.0092 | 0.0067 | 0.0055 | | 0.0054 | | | 0.0024 | | | | 0.0019 | | | | 0.0028 | |
| Barium | Ba | mg/L | | 0.0029 | 0.0056 | 0.0048 | 0.0042 | | 0.0041 | | | 0.0036 | | | | 0.0028 | | | | 0.0026 | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | |
| Boron | B | mg/L | | 0.0030 | 0.0038 | 0.0028 | 0.0034 | | 0.0015 | | | 0.0019 | | | | 0.00030 | | | | 0.0026 | |
| Cadmium | Cd[3] | mg/L | | 0.000004 | 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 7.8 | 11 | 10 | 7.9 | 7.0 | 6.9 | 7.3 | 6.3 | 5.9 | 5.4 | 5.3 | 5.0 | 4.7 | 4.8 | 4.6 | 4.2 | 4.4 | 4.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000093 | 0.000057 | 0.000068 | 0.000034 | | 0.000032 | | | 0.000031 | | | | 0.000013 | | | | 0.000022 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00050 | 0.00060 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | 0.028 | 0.0070 | 0.0020 | 0.0070 | | < 0.003 | | | 0.0050 | | | | 0.0040 | | | | 0.0040 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00029 | 0.00010 | 0.000040 | 0.00012 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |
| Magnesium | Mg | mg/L | | 1.5 | 2.7 | 2.4 | 1.9 | | 1.7 | | | 1.6 | | | | 1.4 | | | | 1.4 | |
| Manganese | Mn | mg/L | | 0.017 | 0.026 | 0.027 | 0.022 | | 0.022 | | | 0.019 | | | | 0.014 | | | | 0.013 | |
| Molbydenum | Mo | mg/L | | 0.0014 | 0.0017 | 0.0024 | 0.011 | | 0.00054 | | | 0.00093 | | | | 0.00034 | | | | 0.00023 | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | < 0.0001 | 0.00030 | < 0.0001 | | 0.00020 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | |
| Potassium | K | mg/L | | 4.5 | 4.4 | 3.5 | 2.9 | | 2.3 | | | 2.0 | | | | 1.7 | | | | 1.6 | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |
| Sodium | Na | mg/L | | 1.3 | 1.3 | 1.03 | 0.76 | | 0.54 | | | 0.45 | | | | 0.32 | | | | 0.25 | |
| Strontium | Sr | mg/L | | 0.043 | 0.071 | 0.067 | 0.052 | | 0.046 | | | 0.040 | | | | 0.032 | | | | 0.031 | |
| Tin | Sn | mg/L | | 0.00094 | 0.00030 | 0.00013 | 0.000080 | | 0.000040 | | | 0.000030 | | | | 0.000020 | | | | 0.000040 | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Titanium | Ti | mg/L | | 0.00050 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Tungsten | W | mg/L | | 0.00014 | 0.00019 | 0.00054 | 0.00017 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | |
| Uranium | U | mg/L | | 0.00040 | 0.00012 | 0.000094 | 0.000078 | | 0.000061 | | | 0.000044 | | | | 0.000036 | | | | 0.000047 | |
| Vanadium | V | mg/L | | 0.00015 | 0.000070 | 0.000040 | < 0.00003 | | < 0.00003 | | | 0.000040 | | | | 0.000050 | | | | 0.000040 | |
| Yttrium | Y | mg/L | | 0.000008 | 0.000016 | 0.000006 | 0.000006 | | < 0.000001 | | | 0.000002 | | | | < 0.000001 | | | | 0.000005 | |
| Zinc | Zn | mg/L | **0.5** | 0.0030 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F2 Flot Tailings (Flotation) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 755 | 1006 | 999 | 991 | 988 | 982 | 983 | 978 | 989 | 977 | 986 | 979 | 983 | 974 | 980 | 988 | 983 | 982 |
| pH | | units | **6.0-9.5** | 8.0 | 8.2 | 7.9 | 7.9 | 7.4 | 7.6 | 7.2 | 7.6 | 7.6 | 7.0 | 6.9 | 7.5 | 7.6 | 7.5 | 7.2 | 7.3 | 7.4 | 7.4 |
| Conductivity | | mg/L as CaCO3 | | 82 | 73 | 60 | 65 | 56 | 58 | 59 | 31 | 38 | 42 | 47 | 6.0 | 45 | 6.0 | 33 | 39 | 40 | 38 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 30 | 40 | 32 | 28 | 25 | 24 | 26 | 22 | 23 | 20 | 24 | 20 | 21 | 17 | 23 | 16 | 15 | 15 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | 0.17 | < 0.06 | | 0.29 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 | |
| Sulphate | SO4 | mg/L | | 3.7 | 5.8 | 5.0 | 4.6 | 4.1 | 4.0 | 3.7 | 3.5 | 3.3 | 2.8 | 3.4 | 3.1 | 2.6 | 2.6 | 2.7 | 2.5 | 2.5 | 2.3 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.12 | 0.030 | 0.030 | 0.020 | | < 0.01 | | | 0.010 | | | | 0.020 | | | | 0.020 | |
| Antimony | Sb | mg/L | | 0.0013 | 0.00070 | 0.00060 | 0.00060 | | 0.00040 | | | 0.00040 | | | | < 0.0002 | | | | < 0.0002 | |
| Arsenic | As | mg/L | **0.5** | 0.014 | 0.0081 | 0.0045 | 0.0032 | | 0.0023 | | | 0.0014 | | | | 0.00090 | | | | 0.0012 | |
| Barium | Ba | mg/L | | 0.0017 | 0.0028 | 0.0022 | 0.0023 | | 0.0021 | | | 0.0017 | | | | 0.0015 | | | | 0.0014 | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | |
| Boron | B | mg/L | | 0.0032 | 0.0040 | 0.0028 | 0.0025 | | 0.0018 | | | 0.0020 | | | | 0.00050 | | | | 0.0014 | |
| Cadmium | Cd[3] | mg/L | | 0.000007 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | 0.000006 | | | | < 0.000003 | | | | 0.000005 | |
| Calcium | Ca | mg/L | | 7.3 | 10 | 9.7 | 7.7 | 6.8 | 6.7 | 7.0 | 6.9 | 6.0 | 5.4 | 5.8 | 5.5 | 5.3 | 4.6 | 5.1 | 4.7 | 4.7 | 4.6 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000037 | 0.000041 | 0.000050 | 0.000034 | | 0.000028 | | | 0.000020 | | | | 0.000016 | | | | 0.000023 | |
| Copper | Cu[3] | mg/L | **0.3** | < 0.0005 | < 0.0005 | 0.0011 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | 0.029 | 0.0090 | 0.0050 | 0.0070 | | < 0.003 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00025 | 0.000050 | 0.000030 | 0.000030 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Lithium | Li | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |
| Magnesium | Mg | mg/L | | 1.3 | 2.3 | 2.0 | 1.8 | | 1.6 | | | 1.5 | | | | 1.4 | | | | 1.3 | |
| Manganese | Mn | mg/L | | 0.013 | 0.023 | 0.025 | 0.022 | | 0.021 | | | 0.020 | | | | 0.018 | | | | 0.015 | |
| Molbydenum | Mo | mg/L | | 0.0015 | 0.0021 | 0.0021 | 0.0042 | | 0.00077 | | | 0.00064 | | | | 0.00035 | | | | 0.00026 | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00020 | 0.00010 | 0.00030 | < 0.0001 | | 0.00020 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Potassium | K | mg/L | | 3.3 | 3.2 | 2.5 | 2.1 | | 1.7 | | | 1.4 | | | | 1.2 | | | | 1.08 | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |
| Sodium | Na | mg/L | | 1.5 | 1.6 | 1.2 | 0.88 | | 0.65 | | | 0.46 | | | | 0.31 | | | | 0.24 | |
| Strontium | Sr | mg/L | | 0.042 | 0.065 | 0.062 | 0.050 | | 0.043 | | | 0.039 | | | | 0.033 | | | | 0.030 | |
| Tin | Sn | mg/L | | 0.0016 | 0.00056 | 0.00025 | 0.00025 | | 0.00023 | | | 0.00027 | | | | 0.00017 | | | | 0.00015 | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Titanium | Ti | mg/L | | 0.00020 | 0.00010 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Tungsten | W | mg/L | | 0.000070 | 0.00014 | 0.00037 | 0.000080 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | |
| Uranium | U | mg/L | | 0.000093 | 0.00011 | 0.00011 | 0.00011 | | 0.000059 | | | 0.000066 | | | | 0.000040 | | | | 0.000036 | |
| Vanadium | V | mg/L | | 0.000090 | 0.000060 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | 0.000040 | | | | < 0.00003 | |
| Yttrium | Y | mg/L | | 0.000006 | 0.000011 | 0.000005 | 0.000005 | | < 0.000001 | | | 0.000001 | | | | < 0.000001 | | | | 0.000001 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F7 Ro Tails (Flotation) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 753 | 1002 | 993 | 970 | 997 | 988 | 968 | 985 | 982 | 986 | 969 | 988 | 982 | 980 | 987 | 989 | 977 | 989 |
| pH | | units | **6.0-9.5** | 7.3 | 7.5 | 7.8 | 7.8 | 7.4 | 7.6 | 7.6 | 7.7 | 7.6 | 7.1 | 6.9 | 7.5 | 7.3 | 7.4 | 7.1 | 7.2 | 7.4 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 151 | 85 | 75 | 88 | 82 | 51 | 54 | 47 | 55 | 51 | 52 | 42 | 45 | 36 | 6.0 | 44 | 33 | 44 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 29 | 30 | 30 | 29 | 30 | 28 | 25 | 22 | 27 | 23 | 20 | 18 | 15 | 14 | 14 | 15 | 14 | 15 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | 0.16 | < 0.06 | | 0.060 | | | < 0.06 | | | | 0.11 | | | | < 0.06 | |
| Sulphate | SO4 | mg/L | | 36 | 18 | 14 | 12 | 11 | 8.5 | 7.8 | 6.9 | 6.9 | 6.4 | 6.4 | 6.6 | 5.3 | 5.6 | 5.7 | 5.5 | 5.3 | 5.4 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.040 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | < 0.01 | |
| Antimony | Sb | mg/L | | 0.0015 | 0.00050 | 0.00060 | 0.00060 | | 0.00030 | | | 0.00040 | | | | < 0.0002 | | | | < 0.0002 | |
| Arsenic | As | mg/L | **0.5** | 0.0072 | 0.0019 | 0.0022 | 0.0026 | | 0.0012 | | | 0.00070 | | | | 0.00050 | | | | 0.00070 | |
| Barium | Ba | mg/L | | 0.0047 | 0.0033 | 0.0027 | 0.0025 | | 0.0019 | | | 0.0014 | | | | 0.0010 | | | | 0.00091 | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | |
| Boron | B | mg/L | | 0.0076 | 0.0047 | 0.0038 | 0.0032 | | 0.0021 | | | 0.0021 | | | | 0.00020 | | | | 0.0012 | |
| Cadmium | Cd[3] | mg/L | | 0.000007 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | 0.000013 | | | | 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 16 | 12 | 12 | 10 | 10 | 7.8 | 8.4 | 7.8 | 6.8 | 6.7 | 6.4 | 6.4 | 5.5 | 4.9 | 5.1 | 5.0 | 4.8 | 5.1 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000079 | 0.000067 | 0.000066 | 0.000054 | | 0.000044 | | | 0.000044 | | | | 0.000040 | | | | 0.000043 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.00090 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | 0.0050 | < 0.002 | < 0.002 | 0.0040 | | < 0.003 | | | 0.0060 | | | | < 0.003 | | | | < 0.003 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00016 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Lithium | Li | mg/L | | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |
| Magnesium | Mg | mg/L | | 5.9 | 3.9 | 3.5 | 3.1 | | 2.3 | | | 2.1 | | | | 1.7 | | | | 1.7 | |
| Manganese | Mn | mg/L | | 0.089 | 0.12 | 0.10 | 0.094 | | 0.076 | | | 0.065 | | | | 0.053 | | | | 0.038 | |
| Molbydenum | Mo | mg/L | | 0.0054 | 0.0035 | 0.0034 | 0.0037 | | 0.0015 | | | 0.0010 | | | | 0.00063 | | | | 0.00047 | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00070 | 0.00030 | 0.00050 | < 0.0001 | | 0.00030 | | | 0.00010 | | | | < 0.0001 | | | | < 0.0001 | |
| Potassium | K | mg/L | | 3.8 | 2.1 | 1.8 | 1.6 | | 1.1 | | | 0.85 | | | | 0.67 | | | | 0.59 | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |
| Sodium | Na | mg/L | | 1.7 | 0.75 | 0.49 | 0.34 | | 0.19 | | | 0.14 | | | | 0.080 | | | | 0.080 | |
| Strontium | Sr | mg/L | | 0.035 | 0.023 | 0.022 | 0.018 | | 0.013 | | | 0.011 | | | | 0.0089 | | | | 0.0082 | |
| Tin | Sn | mg/L | | 0.0017 | 0.00067 | 0.00025 | 0.00026 | | 0.00030 | | | 0.00039 | | | | 0.00025 | | | | 0.00019 | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Tungsten | W | mg/L | | 0.000050 | 0.000090 | 0.00036 | 0.000050 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 | |
| Uranium | U | mg/L | | 0.00025 | 0.00013 | 0.00010 | 0.00012 | | 0.000058 | | | 0.000046 | | | | 0.000037 | | | | 0.000037 | |
| Vanadium | V | mg/L | | 0.000030 | 0.000040 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | 0.000030 | | | | < 0.00003 | |
| Yttrium | Y | mg/L | | 0.000006 | 0.000005 | 0.000002 | 0.000002 | | < 0.000001 | | | 0.000002 | | | | < 0.000001 | | | | 0.000001 | |
| Zinc | Zn | mg/L | **0.5** | 0.0020 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | 0.0020 | | | | < 0.001 | | | | < 0.001 | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F7 Ro Con (C1-8 Composite) (Concentrate) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 871 | 974 | 974 | 958 | 958 | 954 | 957 | 948 | 948 | 961 | 953 | 958 | 958 | 954 | 916 | 954 | 963 |
| pH | | units | **6.0-9.5** | 7.0 | 7.4 | 7.0 | 7.3 | 7.2 | 7.1 | 7.3 | 7.2 | 6.9 | 6.7 | 6.5 | 7.4 | 7.3 | 7.1 | 7.6 | 7.5 | 7.2 |
| Conductivity | | mg/L as CaCO3 | | 419 | 258 | 282 | 282 | 202 | 230 | 143 | 149 | 152 | 184 | 166 | 109 | 108 | 92 | 74 | 93 | 128 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 9.0 | 14 | 21 | 14 | 13 | 11 | 11 | 11 | 12 | 10 | 15 | 12 | 10 | 11 | 10 | 12 | 11 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | < 0.06 | < 0.06 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 53 | 56 | 64 | 67 | 70 | 55 | 55 | 49 | 47 | 45 | 41 | 35 | 34 | 29 | 22 | 29 | 31 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | < 0.01 | < 0.01 | < 0.01 | < 0.01 | | < 0.01 | | | < 0.01 | | | | < 0.01 | | | | 0.010 |
| Antimony | Sb | mg/L | | 0.00050 | 0.00040 | 0.00050 | < 0.0002 | | 0.00030 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.050 | 0.094 | 0.097 | 0.083 | | 0.054 | | | 0.042 | | | | 0.030 | | | | 0.021 |
| Barium | Ba | mg/L | | 0.0042 | 0.0037 | 0.0032 | 0.0028 | | 0.0017 | | | 0.0013 | | | | 0.0011 | | | | 0.0011 |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | 0.000060 | 0.000020 | 0.000030 | 0.00013 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | 0.000070 |
| Boron | B | mg/L | | 0.0048 | 0.0054 | 0.0050 | 0.0036 | | 0.0037 | | | 0.0032 | | | | 0.0020 | | | | 0.0022 |
| Cadmium | Cd[3] | mg/L | | < 0.000003 | 0.000008 | 0.000006 | 0.000014 | | 0.000004 | | | 0.000010 | | | | 0.000010 | | | | 0.000012 |
| Calcium | Ca | mg/L | | 50 | 43 | 37 | 37 | 37 | 32 | 32 | 27 | 26 | 26 | 24 | 22 | 19 | 17 | 13 | 16 | 17 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.00027 | 0.00065 | 0.00069 | 0.00064 | | 0.00041 | | | 0.00035 | | | | 0.00033 | | | | 0.00040 |
| Copper | Cu[3] | mg/L | **0.3** | 0.014 | 0.0051 | 0.0039 | 0.0035 | | 0.0031 | | | 0.0023 | | | | 0.00070 | | | | 0.0014 |
| Iron | Fe | mg/L | | 0.0040 | < 0.002 | 0.020 | < 0.003 | | 0.0020 | | | < 0.003 | | | | < 0.003 | | | | < 0.003 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00011 | 0.000030 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | 0.0030 | 0.0030 | 0.0040 | 0.0030 | | 0.0030 | | | 0.0030 | | | | 0.0030 | | | | 0.0030 |
| Magnesium | Mg | mg/L | | 12 | 10.0 | 7.9 | 7.0 | | 5.0 | | | 3.7 | | | | 2.8 | | | | 2.7 |
| Manganese | Mn | mg/L | | 0.087 | 0.17 | 0.18 | 0.17 | | 0.10 | | | 0.077 | | | | 0.074 | | | | 0.068 |
| Molbydenum | Mo | mg/L | | 0.00044 | 0.00055 | 0.00031 | 0.00031 | | 0.00013 | | | 0.00014 | | | | 0.00016 | | | | 0.00011 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00080 | 0.0025 | 0.0017 | 0.0016 | | 0.0017 | | | 0.00070 | | | | 0.00070 | | | | 0.00060 |
| Potassium | K | mg/L | | 4.8 | 3.4 | 2.6 | 2.3 | | 1.8 | | | 1.5 | | | | 1.03 | | | | 0.95 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 3.7 | 2.6 | 1.9 | 1.6 | | 1.1 | | | 0.81 | | | | 0.47 | | | | 0.39 |
| Strontium | Sr | mg/L | | 0.079 | 0.064 | 0.053 | 0.051 | | 0.040 | | | 0.030 | | | | 0.023 | | | | 0.020 |
| Tin | Sn | mg/L | | 0.0032 | 0.0015 | 0.00038 | 0.00023 | | 0.00015 | | | 0.00046 | | | | 0.00011 | | | | 0.00010 |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.00012 | 0.000087 | 0.000084 | 0.000098 | | 0.000068 | | | 0.000052 | | | | 0.000042 | | | | 0.000090 |
| Vanadium | V | mg/L | | < 0.00003 | 0.000060 | < 0.00003 | < 0.00003 | | < 0.00003 | | | 0.000030 | | | | < 0.00003 | | | | 0.000030 |
| Yttrium | Y | mg/L | | 0.000010 | 0.000017 | 0.000004 | 0.000004 | | 0.000001 | | | 0.000001 | | | | 0.000001 | | | | 0.000001 |
| Zinc | Zn | mg/L | **0.5** | 0.0040 | 0.0020 | 0.0020 | 0.0010 | | 0.0010 | | | 0.0020 | | | | 0.0020 | | | | 0.0040 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F8 Ro Tails (Flotation) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 858 | 997 | 990 | 984 | 986 | 960 | 981 | 984 | 957 | 997 | 971 | 985 | 973 | 983 | 992 | 972 | 984 | 983 |
| pH | | units | **6.0-9.5** | 7.4 | 7.5 | 7.6 | 7.4 | 7.0 | 7.1 | 7.3 | 7.3 | 7.3 | 7.5 | 7.4 | 7.2 | 7.1 | 6.8 | 7.1 | 7.3 | 7.3 | 7.3 |
| Conductivity | | mg/L as CaCO3 | | 98 | 52 | 9.0 | 38 | 33 | 23 | 35 | 19 | 26 | 34 | 30 | 34 | 33 | 5.0 | 28 | 27 | 28 | 34 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 26 | 22 | 22 | 14 | 11 | 10 | 12 | 11 | 9.0 | 11 | 14 | 11 | 11 | 12 | 12 | 11 | 13 | 12 |
| Fluoride | F | mg/L | | 0.27 | 0.14 | < 0.06 | 0.14 | | 0.080 | | | 0.11 | | | | < 0.06 | | | | 0.15 | |
| Sulphate | SO4 | mg/L | | 15 | 7.1 | 5.9 | 3.4 | 3.2 | 2.6 | 3.0 | 2.9 | 2.9 | 3.1 | 2.9 | 3.1 | 3.0 | 3.0 | 3.2 | 2.8 | 3.0 | 2.6 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.090 | 0.040 | 0.030 | 0.020 | | < 0.01 | | | 0.020 | | | | < 0.01 | | | | 0.020 | |
| Antimony | Sb | mg/L | | 0.0013 | 0.00040 | 0.00050 | 0.00040 | | 0.00020 | | | 0.00030 | | | | < 0.0002 | | | | < 0.0002 | |
| Arsenic | As | mg/L | **0.5** | 0.0036 | 0.0018 | 0.0016 | 0.0012 | | 0.00080 | | | 0.00070 | | | | 0.00070 | | | | 0.00080 | |
| Barium | Ba | mg/L | | 0.022 | 0.018 | 0.018 | 0.012 | | 0.0097 | | | 0.010 | | | | 0.0098 | | | | 0.011 | |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | < 0.00001 | |
| Boron | B | mg/L | | 0.0060 | 0.0036 | 0.0031 | 0.0016 | | 0.0012 | | | 0.0017 | | | | 0.00050 | | | | 0.0016 | |
| Cadmium | Cd[3] | mg/L | | 0.000006 | < 0.000003 | < 0.000003 | < 0.000003 | | < 0.000003 | | | 0.000003 | | | | < 0.000003 | | | | < 0.000003 | |
| Calcium | Ca | mg/L | | 8.4 | 6.2 | 6.4 | 3.8 | 3.6 | 3.2 | 4.0 | 4.0 | 3.8 | 3.9 | 3.6 | 3.8 | 3.8 | 3.8 | 4.1 | 4.0 | 4.3 | 4.0 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Cobalt | Co | mg/L | | 0.000033 | 0.000019 | 0.000037 | 0.000014 | | 0.000006 | | | 0.000014 | | | | 0.000005 | | | | 0.000016 | |
| Copper | Cu[3] | mg/L | **0.3** | 0.0020 | 0.00090 | 0.00070 | 0.00060 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 | |
| Iron | Fe | mg/L | | 0.11 | 0.028 | 0.030 | 0.023 | | 0.010 | | | 0.020 | | | | 0.0080 | | | | < 0.003 | |
| Lead | Pb[3] | mg/L | **0.2** | 0.00019 | 0.000030 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Lithium | Li | mg/L | | 0.0070 | 0.0050 | 0.0040 | 0.0030 | | 0.0020 | | | 0.0020 | | | | 0.0020 | | | | 0.0020 | |
| Magnesium | Mg | mg/L | | 0.87 | 0.54 | 0.56 | 0.31 | | 0.24 | | | 0.26 | | | | 0.29 | | | | 0.31 | |
| Manganese | Mn | mg/L | | 0.0075 | 0.0069 | 0.0058 | 0.0040 | | 0.0038 | | | 0.0042 | | | | 0.0031 | | | | 0.0034 | |
| Molbydenum | Mo | mg/L | | 0.0021 | 0.0013 | 0.0017 | 0.0015 | | 0.00027 | | | 0.00032 | | | | 0.00024 | | | | 0.00021 | |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | < 0.0001 | 0.00020 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 | |
| Potassium | K | mg/L | | 12 | 6.5 | 6.3 | 3.8 | | 2.8 | | | 2.9 | | | | 3.2 | | | | 3.5 | |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |
| Sodium | Na | mg/L | | 2.3 | 1.1 | 0.96 | 0.44 | | 0.28 | | | 0.26 | | | | 0.22 | | | | 0.19 | |
| Strontium | Sr | mg/L | | 0.063 | 0.048 | 0.051 | 0.030 | | 0.026 | | | 0.031 | | | | 0.029 | | | | 0.034 | |
| Tin | Sn | mg/L | | 0.0030 | 0.0015 | 0.00071 | 0.00040 | | 0.00019 | | | 0.00025 | | | | 0.00022 | | | | 0.00017 | |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 | |
| Titanium | Ti | mg/L | | 0.0013 | 0.00040 | 0.00040 | 0.00020 | | < 0.0001 | | | 0.00020 | | | | < 0.0001 | | | | < 0.0001 | |
| Tungsten | W | mg/L | | 0.000090 | 0.00013 | 0.00036 | 0.000070 | | 0.000030 | | | 0.000040 | | | | < 0.00003 | | | | 0.000050 | |
| Uranium | U | mg/L | | 0.00057 | 0.00036 | 0.00032 | 0.00017 | | 0.00014 | | | 0.00015 | | | | 0.00018 | | | | 0.00019 | |
| Vanadium | V | mg/L | | 0.000070 | 0.000040 | 0.000040 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | 0.000040 | | | | 0.000030 | |
| Yttrium | Y | mg/L | | 0.000022 | 0.000009 | 0.000006 | 0.000003 | | < 0.000001 | | | 0.000002 | | | | 0.000001 | | | | 0.000002 | |
| Zinc | Zn | mg/L | **0.5** | 0.0010 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 | |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

| Parameter | | | Metal Mine Effluent Regulation (MMER)[1] (mg/L) | Humidity Cell Test Cycle - F8 Ro Con (C1-10 Composite) (Concentrate) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| **PHYSICAL TESTS** | | | | | | | | | | | | | | | | | | | | |
| Leachate Volume Added | | mL | | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | | mL | | 883 | 946 | 990 | 965 | 974 | 962 | 963 | 967 | 959 | 955 | 967 | 966 | 964 | 961 | 926 | 958 | 979 |
| pH | | units | **6.0-9.5** | 6.9 | 7.2 | 7.1 | 7.0 | 7.3 | 7.0 | 7.1 | 6.9 | 6.8 | 7.1 | 6.9 | 6.5 | 6.8 | 6.8 | 6.8 | 6.9 | 6.9 |
| Conductivity | | mg/L as CaCO3 | | 255 | 163 | 197 | 161 | 129 | 131 | 107 | 101 | 110 | 91 | 89 | 94 | 136 | 105 | 68 | 98 | 122 |
| **ANIONS & NUTRIENTS** | | | | | | | | | | | | | | | | | | | | |
| Alkalinity, Total | as CaCO3 | mg/L | | 8.0 | 8.0 | 17 | 4.0 | 8.0 | 8.0 | 8.0 | 7.0 | 6.0 | 6.0 | 5.0 | 4.0 | 6.0 | 4.0 | 4.0 | 3.0 | 5.0 |
| Fluoride | F | mg/L | | < 0.06 | < 0.06 | 0.060 | 0.070 | | < 0.06 | | | < 0.06 | | | | < 0.06 | | | | < 0.06 |
| Sulphate | SO4 | mg/L | | 41 | 37 | 41 | 34 | 38 | 38 | 40 | 33 | 32 | 28 | 30 | 30 | 39 | 29 | 24 | 27 | 35 |
| **METALS:** | | | | | | | | | | | | | | | | | | | | |
| Aluminum | Al[4] | mg/L | | 0.020 | < 0.01 | < 0.01 | 0.010 | | 0.030 | | | < 0.01 | | | | < 0.01 | | | | 0.010 |
| Antimony | Sb | mg/L | | 0.00050 | 0.00020 | 0.00030 | < 0.0002 | | 0.00020 | | | < 0.0002 | | | | < 0.0002 | | | | < 0.0002 |
| Arsenic | As | mg/L | **0.5** | 0.0067 | 0.017 | 0.032 | 0.045 | | 0.061 | | | 0.053 | | | | 0.031 | | | | 0.026 |
| Barium | Ba | mg/L | | 0.013 | 0.0099 | 0.0079 | 0.0080 | | 0.0061 | | | 0.0032 | | | | 0.0040 | | | | 0.0028 |
| Beryllium | Be | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Bismuth | Bi | mg/L | | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | | < 0.00001 | | | < 0.00001 | | | | < 0.00001 | | | | 0.000010 |
| Boron | B | mg/L | | 0.0030 | 0.0034 | 0.0033 | 0.0023 | | 0.0033 | | | 0.0026 | | | | 0.0021 | | | | 0.0023 |
| Cadmium | Cd[3] | mg/L | | 0.000008 | 0.000004 | < 0.000003 | < 0.000003 | | < 0.000003 | | | < 0.000003 | | | | < 0.000003 | | | | < 0.000003 |
| Calcium | Ca | mg/L | | 31 | 27 | 25 | 19 | 21 | 22 | 22 | 17 | 16 | 16 | 16 | 15 | 18 | 14 | 12 | 13 | 17 |
| Chromium | Cr[2] | mg/L | | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | | < 0.0005 | | | < 0.0005 | | | | < 0.0005 | | | | < 0.0005 |
| Cobalt | Co | mg/L | | 0.000079 | 0.00011 | 0.00010 | 0.00011 | | 0.00015 | | | 0.00012 | | | | 0.00018 | | | | 0.00013 |
| Copper | Cu[3] | mg/L | **0.3** | 0.023 | 0.012 | 0.0039 | 0.0013 | | 0.00090 | | | 0.00070 | | | | 0.00060 | | | | 0.00070 |
| Iron | Fe | mg/L | | 0.012 | 0.0050 | 0.0070 | 0.010 | | 0.010 | | | 0.0060 | | | | < 0.003 | | | | 0.0030 |
| Lead | Pb[3] | mg/L | **0.2** | 0.00010 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Lithium | Li | mg/L | | 0.0020 | 0.0030 | 0.0030 | 0.0020 | | 0.0030 | | | 0.0020 | | | | 0.0020 | | | | 0.0020 |
| Magnesium | Mg | mg/L | | 3.2 | 2.8 | 2.5 | 1.9 | | 2.1 | | | 1.4 | | | | 1.4 | | | | 1.2 |
| Manganese | Mn | mg/L | | 0.013 | 0.0095 | 0.0097 | 0.0100 | | 0.0090 | | | 0.0064 | | | | 0.0082 | | | | 0.0064 |
| Molbydenum | Mo | mg/L | | 0.00024 | 0.00022 | 0.00023 | 0.00019 | | 0.00015 | | | 0.00015 | | | | 0.00015 | | | | 0.000090 |
| Mercury | Hg | mg/L | | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | | < 0.0001 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Nickel | Ni[3] | mg/L | **0.5** | 0.00030 | 0.00090 | 0.00020 | 0.00030 | | 0.00090 | | | 0.00020 | | | | 0.00040 | | | | 0.00020 |
| Potassium | K | mg/L | | 7.8 | 7.0 | 6.7 | 5.2 | | 5.4 | | | 4.0 | | | | 3.7 | | | | 3.3 |
| Selenium | Se | mg/L | | < 0.001 | < 0.001 | < 0.001 | < 0.001 | | < 0.001 | | | < 0.001 | | | | < 0.001 | | | | < 0.001 |
| Sodium | Na | mg/L | | 3.1 | 2.8 | 2.4 | 1.8 | | 1.8 | | | 1.2 | | | | 1.00 | | | | 0.83 |
| Strontium | Sr | mg/L | | 0.18 | 0.16 | 0.15 | 0.12 | | 0.15 | | | 0.12 | | | | 0.14 | | | | 0.12 |
| Tin | Sn | mg/L | | 0.00077 | 0.00021 | 0.00018 | 0.00011 | | 0.00015 | | | 0.00041 | | | | 0.00012 | | | | 0.00015 |
| Thallium | Th | mg/L | | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | | < 0.00002 | | | < 0.00002 | | | | < 0.00002 | | | | < 0.00002 |
| Titanium | Ti | mg/L | | < 0.0001 | 0.00010 | < 0.0001 | < 0.0001 | | 0.00010 | | | < 0.0001 | | | | < 0.0001 | | | | < 0.0001 |
| Tungsten | W | mg/L | | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Uranium | U | mg/L | | 0.00044 | 0.00038 | 0.00041 | 0.00025 | | 0.00026 | | | 0.00029 | | | | 0.00028 | | | | 0.00027 |
| Vanadium | V | mg/L | | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | | < 0.00003 | | | < 0.00003 | | | | < 0.00003 | | | | < 0.00003 |
| Yttrium | Y | mg/L | | 0.000032 | 0.000008 | 0.000007 | 0.000004 | | 0.000003 | | | 0.000003 | | | | 0.000001 | | | | 0.000002 |
| Zinc | Zn | mg/L | **0.5** | 0.0040 | < 0.001 | 0.0020 | 0.0010 | | 0.0010 | | | 0.0010 | | | | 0.0010 | | | | 0.0050 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# C.6 Process Water Results

# Appendix C.6: Process Water Results
## All Deposits - Tailings
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | pH | Conductivity | Alkalinity | TDS | F | Cl | SO4 | NO2 | NO3 | CN(T) | CNWAD | CN(F) | CNO | CNS | Thiosalts (tot) | As+3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | units | µS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | as N mg/L | as N mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | as S2O3 mg/L | mg/L |
| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | 6.5-9.5 | | | | | | | | | | | | | | | |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 7.8 | 5220 | 106 | 4760 | 0.22 | 47 | 2400 | < 0.6 | < 0.5 | 1.6 | 0.06 | 0.06 | 120 | 150 | 21 | 0.087 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 8.4 | 7860 | 153 | 7030 | 0.17 | 190 | 3600 | < 0.6 | 0.33 | 0.36 | 0.18 | 0.18 | 190 | 200 | 29 | 4.6 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 8.3 | 8110 | 131 | 7050 | 0.14 | 32 | 4400 | < 0.6 | < 0.5 | 0.15 | 0.05 | 0.05 | 51 | 23 | - | 0.04 |
| | | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 10.3 | 1340 | 365 | - | - | 7.7 | 45 | < 0.06 | < 0.05 | 273 | 248 | 146 | - | - | 45 | - |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 8.8 | 4340 | 53 | 3260 | 0.29 | 12 | 1600 | < 0.06 | 0.14 | 15 | 0.03 | < 2 | 55 | 190 | 187 | 0.14 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 8.0 | 2970 | 72 | 2160 | 0.07 | 12 | 1100 | < 0.06 | 0.13 | < 0.01 | < 0.01 | < 0.01 | 80 | 160 | 108 | 0.014 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 8.3 | 2690 | 72 | 2680 | < 0.06 | 11 | 1200 | < 0.06 | 0.13 | 17 | 0.14 | 0.14 | 70 | 170 | 192 | 0.18 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 9.2 | 3680 | 60 | 2880 | < 0.06 | 12 | 1200 | < 0.06 | 0.15 | 17 | 1.55 | < 2 | 93 | 130 | 132 | 0.69 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 8.2 | 4470 | 92 | 3710 | 0.09 | 20 | 2200 | < 0.06 | 0.13 | 6.0 | 0.04 | 0.04 | 100 | 58 | 6.6 | 0.46 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 8.2 | 2550 | 98 | 2480 | 0.1 | 13 | 1200 | < 0.06 | 0.12 | 14 | 0.05 | 0.05 | 89 | 100 | --- | 0.38 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 8.3 | 3340 | 105 | 2790 | 0.12 | 14 | 1500 | < 0.06 | 0.15 | 20 | 0.06 | < 2 | 110 | 72 | --- | 0.046 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 8.2 | 4140 | 92 | 3090 | 0.15 | 16 | 2000 | < 0.6 | < 0.5 | < 0.01 | < 0.01 | < 0.01 | 70 | 42 | 107 | 0.17 |

Notes:

nc: not calculated

1 -MMER (2006); Criteria for total metal concentrations only.

MMER criteria compared to dissolved concentrations are for comparative purposes only.

**Appendix C.6: Process Water Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | | 0.5 | 0.5 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | As+5 | Al (tot) | Al (diss) | As (tot) | As (diss) | Ba (tot) | Ba (diss) | Be (tot) | Be (diss) | B (tot) | B (diss) | Bi (tot) | Bi (diss) | Ca (tot) | Ca (diss) | Cd (tot) |
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.55 | 0.11 | 0.05 | **0.83** | **0.81** | 0.17 | 0.14 | < 0.00002 | < 0.00002 | 0.022 | 0.022 | 0.00003 | 0.00002 | 379 | 387 | 0.000035 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 36 | 0.46 | 0.04 | **41** | **40** | 0.066 | 0.063 | < 0.00002 | < 0.00002 | 0.03 | 0.029 | 0.00011 | 0.00002 | 219 | 208 | 0.000104 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.23 | 1.4 | 0.02 | 0.36 | 0.29 | 0.14 | 0.1 | < 0.00002 | < 0.00002 | 0.025 | 0.023 | 0.00002 | < 0.00001 | 237 | 220 | 0.000032 |
| | | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | - | - | 1.5 | - | **6.5** | - | 0.0099 | - | < 0.00002 | - | 0.021 | - | 0.00007 | - | 30.2 | - |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.32 | 0.1 | 0.05 | 0.46 | 0.42 | 0.17 | 0.15 | < 0.0002 | < 0.0002 | 0.03 | 0.026 | < 0.0001 | < 0.0001 | 207 | 169 | < 0.00003 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 1.2 | 0.06 | 0.04 | **1.2** | **1.2** | 0.012 | 0.011 | < 0.0002 | < 0.0002 | 0.03 | 0.027 | < 0.0001 | < 0.0001 | 171 | 167 | 0.00007 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 2.4 | 0.03 | 0.01 | **3.2** | **3.3** | 0.013 | 0.013 | < 0.0002 | < 0.0002 | 0.03 | 0.026 | 0.0015 | 0.0013 | 226 | 222 | 0.00011 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 3.7 | 0.26 | 0.02 | **4.4** | **4.2** | 0.0084 | 0.0056 | < 0.0002 | < 0.0002 | 0.038 | 0.028 | < 0.0001 | < 0.0001 | 166 | 151 | < 0.00003 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 8.8 | 0.18 | 0.12 | **9.3** | **9.7** | 0.097 | 0.086 | < 0.0002 | < 0.0002 | 0.12 | 0.027 | < 0.0001 | < 0.0001 | 344 | 354 | < 0.00003 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 6.0 | 0.2 | 0.13 | **7.3** | **7.6** | 0.07 | 0.071 | < 0.0002 | < 0.0002 | 0.03 | 0.03 | 0.0007 | < 0.0001 | 199 | 202 | 0.0001 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 0.21 | 0.28 | 0.02 | 0.26 | 0.22 | 0.034 | 0.026 | < 0.0002 | < 0.0002 | 0.036 | 0.033 | < 0.0001 | < 0.0001 | 222 | 180 | 0.00021 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 0.14 | 0.16 | 0.14 | 0.31 | 0.29 | 0.054 | 0.051 | < 0.0002 | < 0.0002 | 0.036 | 0.034 | < 0.0001 | < 0.0001 | 209 | 200 | < 0.00003 |

Notes:

nc: not calculated

1 -MMER (2006); Criteria for total metal concentrations only.

MMER criteria compared to dissolved concentrations are for comparative purposes only.

**Appendix C.6: Process Water Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | | | | 0.3 | 0.3 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Cd (diss) | Co (tot) | Co (diss) | Cr (tot) | Cr (diss) | Cu (tot) | Cu (diss) | Fe (tot) | Fe (diss) | K (tot) | K (diss) | Li (tot) | Li (diss) | Mg (tot) | Mg (diss) | Mn (tot) |
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.000004 | 0.034 | 0.033 | 0.0011 | 0.001 | **0.42** | 0.23 | 0.49 | 0.26 | 60 | 60 | 0.007 | 0.006 | 9.5 | 9.6 | 0.067 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.000068 | 0.062 | 0.058 | 0.0032 | 0.0027 | **0.49** | 0.26 | 2.0 | 0.062 | 63 | 58 | 0.006 | 0.005 | 11 | 9.8 | 0.057 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.000009 | 0.0018 | 0.0014 | 0.0017 | < 0.0005 | 0.18 | 0.1 | 5.4 | 0.008 | 97 | 87 | 0.013 | 0.012 | 14 | 12 | 0.12 |
| | | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.0017 | - | 0.079 | - | 0.0015 | - | **5.6** | - | 5.3 | - | 22 | - | < 0.001 | - | 5.7 | - |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | < 0.00003 | 0.05 | 0.051 | < 0.005 | < 0.005 | 0.15 | 0.059 | 6.6 | 5.6 | 76 | 76 | 0.015 | 0.013 | 4.9 | 4.2 | 0.0048 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 0.00007 | 0.13 | 0.12 | < 0.005 | < 0.005 | 0.15 | 0.068 | 8.0 | 7.9 | 39 | 37 | 0.003 | 0.003 | 7.4 | 7.1 | 0.059 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.00011 | 0.097 | 0.098 | < 0.005 | < 0.005 | 0.099 | 0.088 | 9.9 | 9.5 | 48 | 48 | 0.004 | 0.004 | 6.0 | 5.8 | 0.029 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | < 0.00003 | 0.19 | 0.2 | < 0.005 | < 0.005 | **2.0** | 0.11 | 6.7 | 5.2 | 23 | 26 | 0.003 | 0.001 | 3.4 | 3.2 | 0.016 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | < 0.00003 | 0.086 | 0.077 | < 0.005 | < 0.005 | 0.05 | 0.029 | 3.2 | 3.1 | 52 | 53 | < 0.01 | < 0.01 | 5.1 | 5.2 | 0.022 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.00007 | 0.081 | 0.083 | < 0.005 | < 0.005 | 0.088 | 0.09 | 7.2 | 6.8 | 52 | 53 | 0.003 | 0.003 | 3.6 | 3.5 | 0.0098 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | < 0.00003 | 0.11 | 0.11 | < 0.005 | < 0.005 | 0.067 | 0.052 | 10 | 8.1 | 31 | 30 | 0.003 | 0.002 | 16 | 13 | 0.095 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | < 0.00003 | 0.082 | 0.081 | < 0.005 | < 0.005 | 0.095 | 0.061 | 5.9 | 5.6 | 53 | 50 | 0.003 | 0.003 | 11 | 11 | 0.024 |

Notes:

nc: not calculated

1 -MMER (2006); Criteria for total metal concentrations only.

MMER criteria compared to dissolved concentrations are for comparative purposes only.

**Appendix C.6: Process Water Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | | | | 0.5 | 0.5 | 0.2 | 0.2 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Mn (diss) | Mo (tot) | Mo (diss) | Na (tot) | Na (diss) | Ni (tot) | Ni (diss) | Pb (tot) | Pb (diss) | Sb (tot) | Sb (diss) | Se (tot) | Se (diss) | Sn (tot) | Sn (diss) | Sr (tot) |
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.066 | 0.12 | 0.12 | 887 | 906 | 0.0096 | 0.0095 | 0.0026 | 0.00013 | 0.0086 | 0.012 | 0.029 | 0.048 | 0.00022 | 0.00005 | 0.96 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.039 | 0.048 | 0.044 | 2000 | 1900 | 0.0053 | 0.0051 | 0.012 | 0.0017 | 0.042 | 0.041 | 0.035 | 0.033 | 0.0011 | 0.0007 | 0.36 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.075 | 0.038 | 0.035 | 2440 | 2090 | 0.0059 | 0.0046 | 0.00083 | 0.00013 | 0.0044 | 0.0041 | 0.002 | 0.002 | 0.0021 | 0.0017 | 0.29 |
| | | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.0076 | - | 0.045 | - | 269 | - | 0.32 | - | 0.0035 | - | 0.015 | - | 0.013 | - | 0.00033 | - |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.0028 | 0.07 | 0.068 | 924 | 762 | 0.01 | 0.008 | 0.0012 | < 0.0002 | 0.005 | 0.007 | 0.01 | 0.02 | 0.0062 | 0.002 | 0.45 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 0.053 | 0.068 | 0.066 | 544 | 528 | 0.007 | 0.005 | 0.0002 | < 0.0002 | 0.007 | 0.012 | < 0.01 | < 0.01 | < 0.0001 | < 0.0001 | 0.18 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.026 | 0.071 | 0.069 | 620 | 574 | 0.008 | 0.008 | 0.0004 | 0.0003 | 0.009 | 0.024 | < 0.01 | 0.01 | 0.0044 | 0.001 | 0.21 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 0.0026 | 0.083 | 0.084 | 698 | 677 | 0.014 | 0.005 | 0.001 | < 0.0002 | 0.012 | 0.016 | 0.01 | 0.02 | 0.016 | 0.0031 | 0.15 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 0.011 | 0.055 | 0.051 | 811 | 694 | 0.016 | 0.012 | 0.002 | 0.0006 | 0.037 | 0.041 | 0.02 | 0.01 | 0.0026 | 0.001 | 0.53 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.0072 | 0.057 | 0.058 | 586 | 560 | 0.006 | 0.007 | 0.0047 | 0.0009 | 0.015 | 0.032 | 0.01 | 0.01 | 0.0019 | 0.0008 | 0.44 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 0.052 | 0.062 | 0.05 | 707 | 584 | 0.012 | 0.008 | 0.045 | 0.0003 | 0.006 | 0.007 | 0.02 | 0.02 | 0.0013 | 0.0006 | 0.26 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 0.021 | 0.059 | 0.058 | 808 | 877 | 0.012 | 0.012 | 0.0046 | 0.0008 | 0.014 | 0.019 | < 0.01 | < 0.01 | < 0.0001 | < 0.0001 | 0.41 |

Notes:

nc: not calculated

1 -MMER (2006); Criteria for total metal concentrations only.

MMER criteria compared to dissolved concentrations are for comparative purposes only.

**Appendix C.6: Process Water Results**
**All Deposits - Tailings**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**

| Metal Mine Effluent Regulation (MMER) [1] (mg/L) | | | | | | | | | | | | | | | | | 0.5 | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Tailings Type | Deposit | Location | Sr (diss) | Ti (tot) | Ti (diss) | Tl (tot) | Tl (diss) | U (tot) | U (diss) | V (tot) | V (diss) | W (tot) | W (diss) | Y (tot) | Y (diss) | Zn (tot) | Zn (diss) |
| | | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| CND9-1A | 2011 | whole ore | Tir mixed lodes + F Zone (14%) | - | 0.98 | 0.0014 | 0.0005 | < 0.0002 | < 0.0002 | 0.0049 | 0.0048 | 0.00044 | 0.00038 | 0.0076 | 0.0076 | 0.000029 | 0.000007 | 0.008 | 0.005 |
| CND-10 | 2011 | concentrate | Tir mixed lodes + F Zone (14%) | - | 0.34 | 0.0091 | 0.0009 | < 0.0002 | < 0.0002 | 0.003 | 0.0029 | 0.0013 | 0.0013 | 0.011 | 0.011 | 0.00015 | 0.000008 | 0.01 | 0.004 |
| CND 11 | 2011 | flotation | Tir mixed lodes + F Zone (14%) | - | 0.26 | 0.029 | 0.0009 | < 0.0002 | < 0.0002 | 0.0012 | 0.001 | 0.0017 | 0.00024 | 0.0035 | 0.003 | 0.00034 | 0.000024 | 0.007 | < 0.002 |
| | | | | | | | | | | | | | | | | | | | |
| CN50-51 Composite | 2011 | whole ore | master composite | - | 0.091 | - | 0.0017 | - | < 0.0002 | - | 0.00029 | - | 0.006 | - | 0.0059 | - | 0.000006 | - | **0.62** |
| Discovery CN8 (CND5-7) | 2011 | whole ore | Discovery | open pit | 0.35 | 0.001 | < 0.001 | < 0.0002 | < 0.0002 | 0.011 | 0.01 | 0.0004 | < 0.0003 | 0.0043 | 0.004 | 0.00004 | < 0.00001 | 0.003 | < 0.002 |
| F Zone Open Pit CN6 CND residue | 2011 | whole ore | F Zone | open pit | 0.18 | < 0.001 | < 0.001 | < 0.002 | < 0.002 | 0.0023 | 0.0022 | < 0.0003 | < 0.0003 | 0.0044 | 0.0042 | 0.00001 | < 0.00001 | < 0.002 | < 0.002 |
| F-Zone Underground CN5 | 2011 | whole ore | F Zone | underground | 0.21 | < 0.001 | < 0.001 | < 0.002 | < 0.002 | 0.0027 | 0.0025 | < 0.0003 | < 0.0003 | 0.003 | 0.0023 | < 0.00001 | < 0.00001 | 0.002 | < 0.002 |
| Pump CN7 | 2011 | whole ore | Pump | open pit | 0.14 | 0.001 | < 0.001 | < 0.0002 | < 0.0002 | 0.0034 | 0.0032 | 0.001 | 0.0007 | 0.0035 | 0.0027 | 0.00007 | < 0.00001 | 0.002 | < 0.002 |
| Tiriganiaq Open Pit CN2 | 2011 | whole ore | Tiriganiaq | open pit | 0.55 | 0.001 | < 0.001 | < 0.002 | < 0.002 | 0.0034 | 0.0032 | 0.0021 | 0.0019 | 0.02 | 0.0075 | 0.00004 | 0.00001 | < 0.002 | < 0.002 |
| Tiriganiaq Underground CN1 | 2011 | whole ore | Tiriganiaq | underground | 0.43 | < 0.001 | < 0.001 | < 0.002 | < 0.002 | 0.0026 | 0.0026 | 0.0005 | < 0.0003 | 0.0064 | 0.0062 | 0.00004 | < 0.00001 | 0.003 | 0.003 |
| Wesmeg Open Pit CN3 | 2011 | whole ore | Wesmeg | open pit | 0.2 | 0.002 | < 0.001 | < 0.002 | < 0.002 | 0.0033 | 0.003 | 0.0012 | < 0.0003 | 0.0052 | 0.0041 | 0.00005 | < 0.00001 | 0.002 | < 0.002 |
| Wolf CN4 CND residue | 2011 | whole ore | Wolf | open pit | 0.39 | 0.001 | < 0.001 | < 0.002 | < 0.002 | 0.0047 | 0.0045 | 0.0003 | < 0.0003 | 0.0045 | 0.0041 | 0.00002 | < 0.00001 | < 0.002 | 0.002 |

Notes:

nc: not calculated

1 -MMER (2006); Criteria for total metal concentrations only.

MMER criteria compared to dissolved concentrations are for comparative purposes only.

# APPENDIX D

## Tabulated Geochemical Results for Overburden

# D.1 Summary of Analytical Program

**Appendix D.1: Summary of Analytical Program - Overburden**
**Meliadine Property, Nunavut**
**Agnico-Eagle Mines Ltd.**



| Sample Number | Year (analysis) | from (m) | to (m) | Rock Type | Deposit | Location | Whole Rock | Trace Metals | ABA | SFE |
|---|---|---|---|---|---|---|---|---|---|---|
| Disc SS1 | 2009 | 0.0 | 0.38 | Overburden | Discovery | Pit surface | x | x | x | x |
| Disc SS2 | 2009 | 0.0 | 0.33 | Overburden | Discovery | Pit surface | x | x | x | x |
| Disc SS3 | 2009 | 0.0 | 0.28 | Overburden | Discovery | Pit surface | x | x | x | x |
| FZ-SS-10 | 2009 | 0.0 | >0.2 | Overburden | F Zone | Pit surface | x | x | x | x |
| FZ-SS-6 | 2009 | 0.0 | 0.35 | Overburden | F Zone | Pit surface | x | x | x | x |
| FZ-SS-7 | 2009 | 0.0 | 0.36 | Overburden | F Zone | Pit surface | x | x | x | x |
| FZ-SS-8 | 2009 | 0.0 | 0.42 | Overburden | F Zone | Pit surface | x | x | x | x |
| FZ-SS-9 | 2009 | 0.0 | 0.40 | Overburden | F Zone | Pit surface | x | x | x | x |
| TP11-01 SA#1 | 2011 | 0.00 | 0.13 | Overburden | Pump | Pit surface | | | | |
| TP11-01 SA#2 | 2011 | 0.13 | 0.34 | Overburden | Pump | Pit surface | x | x | x | x |
| TP11-01 SA#3 | 2011 | 0.34 | 1.11 | Overburden | Pump | Pit surface | x | x | x | x |
| TP11-02 SA#1 | 2011 | 0.00 | 0.36 | Overburden | Pump | Pit surface | x | x | x | x |
| TP11-02 SA#2 | 2011 | 0.36 | 0.45 | Overburden | Pump | Pit surface | x | x | x | x |
| TP11-03 SA#1 | 2011 | 0.00 | 0.58 | Overburden | Pump | Pit surface | | x | | |
| SS-1 | 2009 | 0.0 | 0.40 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| SS-2 | 2009 | 0.0 | 0.35 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| SS-3 | 2009 | 0.0 | 0.55 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| SS-4 | 2009 | 0.0 | 0.40 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| SS-5 | 2009 | 0.0 | 0.35 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| TP11-04 SA#0 | 2011 | 0.00 | 0.09 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| TP11-04 SA#1 | 2011 | 0.09 | 0.37 | Overburden | Tiriganiaq | Pit surface | | | | |
| TP11-04 SA#2 | 2011 | 0.37 | 1.04 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| TP11-05 SA#1 | 2011 | 0.50 | 1.00 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| TP11-06 SA#1 | 2011 | 0.00 | 0.76 | Overburden | Tiriganiaq | Pit surface | x | x | x | x |
| TP11-07 SA#1 | 2011 | 0.20 | 0.35 | Overburden | Wesmeg | Pit surface | x | x | x | x |
| TP11-07 SA#2 | 2011 | 0.50 | 0.75 | Overburden | Wesmeg | Pit surface | x | x | x | x |
| TP11-08 SA#1 | 2011 | 0.00 | 0.39 | Overburden | Wesmeg | Pit surface | x | x | x | x |
| TP11-08 SA#2 | 2011 | 0.39 | 1.09 | Overburden | Wesmeg | Pit surface | x | x | x | x |
| TP11-09 SA#1 | 2011 | 0.00 | 0.54 | Overburden | Wesmeg | Pit surface | x | x | x | x |
| TP11-09 SA#2 | 2011 | 0.54 | 0.95 | Overburden | Wesmeg | Pit surface | x | x | x | x |
| TP11-10 SA#1 | 2011 | 0.00 | 0.14 | Overburden | Wolf | Pit surface | x | x | x | x |
| TP11-10 SA#2 | 2011 | 0.14 | 0.39 | Overburden | Wolf | Pit surface | x | x | x | x |
| TP11-11 SA#1 | 2011 | 0.00 | 0.46 | Overburden | Wolf | Pit surface | | | x | |
| TP11-12 SA#1 | 2011 | 0.25 | 0.70 | Overburden | Wolf | Pit surface | x | x | x | x |

**Notes:**

Whole rock was completed using Borate fusion and XRF methods.

ICP = Metals (including arsenic and selenium) by inductively coupled plasma-mass spectroscopy (ICP-MS), with samples extracted using a strong acid solution.

Mercury by cold vapour atomic absorption spectroscopy (CVAAS), EPA245.1 methodology

ABA = Acid Base Accounting (modified Sobek method(1996)) - paste pH, NP, total sulphur, sulphate, sulphide, total carbon, total inorganic carbon, and carbonate

SFE = Shake Flask Extraction according to Modified ASTM D3987; 4:1 solution to solid ratio, 24 hour shake (2001)

# D.2 Chemical Composition Results: Tables and Figures

# Appendix D.2: Whole Rock Analysis and ICP Results
## Overburden - All Deposits
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | CEQG Industrial Soil Guideline[1] | | | 12 | | 2000 | | | | 22 | | 87 | 91 | | | | |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Ag | Al | As | Au | Ba | Be | Bi | Ca | Cd | Co | Cr | Cu | Fe | Hg | K | Li |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | ug/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| Disc SS1 | 2009 | 0 | 0.38 | Overburden | Discovery | Pit surface | 0.25 | 77000 | **13** | - | 670 | 1.2 | 0.15 | 17000 | 0.24 | 11 | **180** | 30 | 29000 | - | 20000 | 20 |
| Disc SS2 | 2009 | 0 | 0.33 | Overburden | Discovery | Pit surface | 0.22 | 71000 | 9.6 | - | 630 | 1.1 | 0.12 | 17000 | 0.21 | 9.8 | **160** | 17 | 26000 | - | 19000 | 12 |
| Disc SS3 | 2009 | 0 | 0.28 | Overburden | Discovery | Pit surface | 0.26 | 72000 | **13** | - | 650 | 1.2 | 0.13 | 17000 | 0.20 | 11 | **190** | 33 | 27000 | - | 20000 | 15 |
| | | | | | | MINIMUM | 0.22 | 71000 | 9.6 | nc | 630 | 1.1 | 0.12 | 17000 | 0.20 | 9.8 | 160 | 17 | 26000 | nc | 19000 | 12 |
| | | | | | | MAXIMUM | 0.26 | 77000 | 13 | nc | 670 | 1.2 | 0.15 | 17000 | 0.24 | 11 | 190 | 33 | 29000 | nc | 20000 | 20 |
| | | | | | | MEDIAN | 0.25 | 72000 | 13 | nc | 650 | 1.2 | 0.13 | 17000 | 0.21 | 11 | 180 | 30 | 27000 | nc | 20000 | 15 |
| | | | | | | AVERAGE | 0.243 | 73333 | 12 | nc | 650 | 1.2 | 0.133 | 17000 | 0.22 | 11 | 177 | 27 | 27333 | nc | 19667 | 16 |
| | | | | | | STANDARD DEVIATION | 0.021 | 3215 | 2.0 | nc | 20 | 0.058 | 0.015 | 0 | 0.021 | 0.693 | 15 | 8.5 | 1528 | nc | 577 | 4.0 |
| | | | | | | 75TH PERCENTILE | 0.255 | 74500 | 13 | nc | 660 | 1.2 | 0.14 | 17000 | 0.23 | 11 | 185 | 32 | 28000 | nc | 20000 | 18 |
| FZ-SS-10 | 2009 | 0 | >0.2 | Overburden | F Zone | Pit surface | 0.32 | 62000 | **13** | - | 560 | 0.99 | < 0.09 | 14000 | 0.22 | 14 | **250** | 33 | 32000 | - | 15000 | 17 |
| FZ-SS-6 | 2009 | 0 | 0.35 | Overburden | F Zone | Pit surface | 0.34 | 62000 | **56** | - | 580 | 1.1 | 0.12 | 15000 | 0.29 | 14 | **200** | 34 | 31000 | - | 15000 | 18 |
| FZ-SS-7 | 2009 | 0 | 0.36 | Overburden | F Zone | Pit surface | 0.27 | 67000 | **68** | - | 430 | 0.75 | 0.10 | 33000 | 0.37 | 26 | **240** | 74 | 48000 | - | 11000 | 29 |
| FZ-SS-8 | 2009 | 0 | 0.42 | Overburden | F Zone | Pit surface | 0.29 | 64000 | **26** | - | 560 | 1.0 | 0.10 | 27000 | 0.23 | 14 | **250** | 22 | 33000 | - | 15000 | 20 |
| FZ-SS-9 | 2009 | 0 | 0.4 | Overburden | F Zone | Pit surface | 0.33 | 60000 | **28** | - | 590 | 1.1 | < 0.09 | 19000 | 0.28 | 16 | **250** | 32 | 33000 | - | 15000 | 16 |
| | | | | | | MINIMUM | 0.27 | 60000 | 13 | nc | 430 | 0.75 | <0.09 | 14000 | 0.22 | 14 | 200 | 22 | 31000 | nc | 11000 | 16 |
| | | | | | | MAXIMUM | 0.34 | 67000 | 68 | nc | 590 | 1.1 | 0.12 | 33000 | 0.37 | 26 | 250 | 74 | 48000 | nc | 15000 | 29 |
| | | | | | | MEDIAN | 0.32 | 62000 | 28 | nc | 560 | 1.0 | 0.10 | 19000 | 0.28 | 14 | 250 | 33 | 33000 | nc | 15000 | 18 |
| | | | | | | AVERAGE | 0.31 | 63000 | 38 | nc | 544 | 0.99 | 0.10 | 21600 | 0.28 | 17 | 238 | 39 | 35400 | nc | 14200 | 20 |
| | | | | | | STANDARD DEVIATION | 0.029 | 2646 | 23 | nc | 65 | 0.14 | 0.012 | 8173 | 0.060 | 5.2 | 22 | 20 | 7092 | nc | 1789 | 5.2 |
| | | | | | | 75TH PERCENTILE | 0.33 | 64000 | 56 | nc | 580 | 1.1 | 0.10 | 27000 | 0.29 | 16 | 250 | 34 | 33000 | nc | 15000 | 20 |
| TP11-01 SA#2 | 2011 | 0.13 | 0.34 | Overburden | Pump | Pit Surface | - | 66000 | **18** | 0.12 | 510 | 0.84 | 0.12 | 18000 | 0.19 | 19 | **150** | 43 | 43000 | < 0.1 | 14000 | 23 |
| TP11-01 SA#3 | 2011 | 0.34 | 1.11 | Overburden | Pump | Pit Surface | - | 62000 | **33** | 0.11 | 550 | 1.1 | 0.14 | 25000 | 0.24 | 13 | **88** | 35 | 33000 | < 0.1 | 17000 | 16 |
| TP11-02 SA#1 | 2011 | 0 | 0.36 | Overburden | Pump | Pit Surface | - | 57000 | **39** | 0.090 | 470 | 0.89 | 0.10 | 29000 | 0.20 | 15 | **160** | 31 | 31000 | < 0.1 | 14000 | 14 |
| TP11-02 SA#2 | 2011 | 0.36 | 0.45 | Overburden | Pump | Pit Surface | - | 63000 | **16** | 0.12 | 560 | 1.1 | 0.12 | 28000 | 0.27 | 12 | 81 | 33 | 33000 | < 0.1 | 17000 | 17 |
| TP11-03 SA#1 | 2011 | 0 | 0.58 | Overburden | Pump | Pit Surface | - | 44000 | **74** | 0.060 | 480 | 0.61 | 0.14 | 11000 | 0.38 | 10 | **530** | 83 | 26000 | < 0.1 | 13000 | 11 |
| | | | | | | MINIMUM | nc | 44000 | 16 | 0.060 | 470 | 0.61 | 0.10 | 11000 | 0.19 | 10 | 81 | 31 | 26000 | <0.1 | 13000 | 11 |
| | | | | | | MAXIMUM | nc | 66000 | 74 | 0.12 | 560 | 1.1 | 0.14 | 29000 | 0.38 | 19 | 530 | 83 | 43000 | <0.1 | 17000 | 23 |
| | | | | | | MEDIAN | nc | 62000 | 33 | 0.11 | 510 | 0.89 | nc | 25000 | 0.24 | 13 | 150 | 35 | 33000 | nc | 14000 | 16 |
| | | | | | | AVERAGE | nc | 58400 | 36 | 0.10 | 514 | 0.91 | nc | 22200 | 0.26 | 14 | 202 | 45 | 33200 | nc | 15000 | 16 |
| | | | | | | STANDARD DEVIATION | nc | 8678 | 23 | 0.025 | 40 | 0.20 | nc | 7596 | 0.076 | 3.4 | 187 | 22 | 6181 | nc | 1871 | 4.4 |
| | | | | | | 75TH PERCENTILE | nc | 63000 | 39 | 0.12 | 550 | 1.1 | nc | 28000 | 0.27 | 15 | 160 | 43 | 33000 | nc | 17000 | 17 |
| SS-1 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 0.31 | 71000 | **48** | - | 620 | 1.1 | 0.17 | 15000 | 0.23 | 14 | **210** | 29 | 31000 | - | 18000 | 18 |
| SS-2 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 0.28 | 73000 | **48** | - | 580 | 1.1 | 0.14 | 11000 | 0.22 | 9.2 | **200** | 23 | 32000 | - | 16000 | 22 |
| SS-3 | 2009 | 0 | 0.55 | Overburden | Tiriganiaq | Pit surface | 0.23 | 70000 | **17** | - | 600 | 1.1 | 0.12 | 10000 | 0.18 | 7.8 | **230** | 9.2 | 28000 | - | 18000 | 21 |
| SS-4 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 0.22 | 60000 | **22** | - | 540 | 0.98 | 0.11 | 14000 | 0.17 | 6.7 | **220** | 46 | 25000 | - | 14000 | 14 |
| SS-5 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 0.33 | 79000 | **48** | - | 610 | 1.1 | 0.14 | 15000 | 0.25 | 14 | **270** | 24 | 36000 | - | 17000 | 20 |
| TP11-04 SA#0 | 2011 | 0 | 0.09 | Overburden | Tiriganiaq | Pit Surface | - | 65000 | **25** | 0.080 | 500 | 0.84 | 0.18 | 8800 | 0.29 | 14 | **170** | 28 | 32000 | < 0.1 | 15000 | 25 |
| TP11-04 SA#1 | 2011 | 0.09 | 0.37 | Overburden | Tiriganiaq | Pit Surface | - | 66000 | **53** | 0.080 | 640 | 1.1 | 0.13 | 14000 | 0.21 | 12 | 87 | 20 | 29000 | < 0.1 | 18000 | 19 |
| TP11-04 SA#2 | 2011 | 0.37 | 1.04 | Overburden | Tiriganiaq | Pit Surface | - | 63000 | **23** | 0.080 | 630 | 1.1 | 0.15 | 19000 | 0.25 | 13 | **97** | 25 | 29000 | < 0.1 | 19000 | 18 |
| TP11-05 SA#1 | 2011 | 0.5 | 1 | Overburden | Tiriganiaq | Pit Surface | - | 63000 | 12 | 0.080 | 680 | 1.1 | 0.14 | 15000 | 0.19 | 11 | 68 | 17 | 24000 | < 0.1 | 18000 | 13 |
| TP11-06 SA#1 | 2011 | 0 | 0.76 | Overburden | Tiriganiaq | Pit Surface | - | 60000 | **16** | 0.080 | 600 | 1.1 | 0.14 | 27000 | 0.23 | 9.2 | **92** | 21 | 26000 | < 0.1 | 17000 | 14 |
| | | | | | | MINIMUM | 0.22 | 60000 | 12 | 0.080 | 500 | 0.84 | 0.11 | 8800 | 0.17 | 6.7 | 68 | 9.2 | 24000 | <0.1 | 14000 | 13 |
| | | | | | | MAXIMUM | 0.33 | 79000 | 53 | 0.080 | 680 | 1.1 | 0.18 | 27000 | 0.29 | 14 | 270 | 46 | 36000 | <0.1 | 19000 | 25 |
| | | | | | | MEDIAN | 0.28 | 65500 | 24 | 0.080 | 605 | 1.1 | 0.14 | 14500 | 0.23 | 12 | 185 | 24 | 29000 | nc | 17500 | 19 |
| | | | | | | AVERAGE | 0.27 | 67000 | 31 | 0.080 | 600 | 1.1 | 0.14 | 14880 | 0.22 | 11 | 164 | 24 | 29200 | nc | 17000 | 18 |
| | | | | | | STANDARD DEVIATION | 0.048 | 6146 | 16 | 0 | 51 | 0.087 | 0.021 | 5178 | 0.036 | 2.7 | 72 | 9.5 | 3676 | nc | 1563 | 3.9 |
| | | | | | | 75TH PERCENTILE | 0.31 | 70750 | 48 | 0.080 | 628 | 1.1 | 0.15 | 15000 | 0.25 | 14 | 218 | 27 | 31750 | nc | 18000 | 21 |
| TP11-07 SA#1 | 2011 | 0.2 | 0.35 | Overburden | Wesmeg | Pit Surface | - | 60000 | **40** | 0.080 | 620 | 1.0 | 0.16 | 15000 | 0.21 | 11 | 71 | 26 | 24000 | < 0.1 | 18000 | 12 |
| TP11-07 SA#2 | 2011 | 0.5 | 0.75 | Overburden | Wesmeg | Pit Surface | - | 69000 | **76** | 0.070 | 670 | 1.0 | 0.15 | 14000 | 0.21 | 13 | **120** | 28 | 33000 | < 0.1 | 21000 | 20 |
| TP11-08 SA#1 | 2011 | 0 | 0.39 | Overburden | Wesmeg | Pit Surface | - | 63000 | 3.4 | 0.080 | 650 | 1.1 | 0.16 | 19000 | 0.27 | 9.1 | 79 | 17 | 26000 | < 0.1 | 18000 | 14 |
| TP11-08 SA#2 | 2011 | 0.39 | 1.09 | Overburden | Wesmeg | Pit Surface | - | 61000 | 7.9 | 0.070 | 600 | 1.1 | 0.14 | 17000 | 0.23 | 8.2 | **95** | 17 | 24000 | < 0.1 | 17000 | 14 |
| TP11-09 SA#1 | 2011 | 0 | 0.54 | Overburden | Wesmeg | Pit Surface | - | 61000 | **13** | 0.060 | 520 | 0.94 | 0.13 | 19000 | 0.23 | 9.3 | 84 | 18 | 29000 | < 0.1 | 15000 | 16 |
| TP11-09 SA#2 | 2011 | 0.54 | 0.95 | Overburden | Wesmeg | Pit Surface | - | 62000 | 6.9 | 0.080 | 660 | 1.1 | 0.17 | 33000 | 0.24 | 10 | **95** | 23 | 28000 | < 0.1 | 19000 | 16 |
| | | | | | | MINIMUM | nc | 60000 | 3.4 | 0.060 | 520 | 0.94 | 0.13 | 14000 | 0.21 | 8.2 | 71 | 17 | 24000 | <0.1 | 15000 | 12 |
| | | | | | | MAXIMUM | nc | 69000 | 76 | 0.080 | 670 | 1.1 | 0.17 | 33000 | 0.27 | 13 | 120 | 28 | 33000 | <0.1 | 21000 | 20 |
| | | | | | | MEDIAN | nc | 61500 | 10 | 0.075 | 635 | 1.1 | 0.16 | 18000 | 0.23 | 9.7 | 90 | 21 | 27000 | nc | 18000 | 15 |
| | | | | | | AVERAGE | nc | 62667 | 25 | 0.073 | 620 | 1.0 | 0.15 | 19500 | 0.232 | 10 | 91 | 22 | 27333 | nc | 18000 | 15 |
| | | | | | | STANDARD DEVIATION | nc | 3266 | 28 | 0.0082 | 55 | 0.069 | 0.015 | 6921 | 0.022 | 1.7 | 17 | 4.8 | 3445 | nc | 2000 | 2.7 |
| | | | | | | 75TH PERCENTILE | nc | 62750 | 33 | 0.080 | 658 | 1.1 | 0.16 | 19000 | 0.238 | 11 | 95 | 25 | 28750 | nc | 18750 | 16 |
| TP11-10 SA#1 | 2011 | 0 | 0.14 | Overburden | Wolf | Pit Surface | - | 14000 | **56** | 0.040 | 320 | 0.27 | < 0.09 | 18000 | 0.42 | 29 | 39 | 48 | 43000 | < 0.1 | 4000 | 4.0 |
| TP11-10 SA#2 | 2011 | 0.14 | 0.39 | Overburden | Wolf | Pit Surface | - | 59000 | 8.6 | 0.060 | 550 | 0.96 | 0.14 | 17000 | 0.21 | 9.7 | **95** | 21 | 28000 | < 0.1 | 16000 | 13 |
| TP11-11 SA#1 | 2011 | 0 | 0.46 | Overburden | Wolf | Pit Surface | - | 10000 | 10 | 0.020 | 160 | 0.24 | < 0.09 | 13000 | 0.40 | 4.6 | 22 | 49 | 7600 | < 0.1 | 3100 | 3.0 |
| TP11-12 SA#1 | 2011 | 0.25 | 0.7 | Overburden | Wolf | Pit Surface | - | 61000 | **48** | 0.060 | 500 | 0.93 | 0.13 | 19000 | 0.21 | 14 | **90** | 39 | 45000 | < 0.1 | 15000 | 22 |
| | | | | | | MINIMUM | nc | 10000 | 8.6 | 0.020 | 160 | 0.24 | <0.09 | 13000 | 0.21 | 4.6 | 22 | 21 | 7600 | <0.1 | 3100 | 3.0 |
| | | | | | | MAXIMUM | nc | 61000 | 56 | 0.060 | 550 | 0.96 | 0.14 | 19000 | 0.42 | 29 | 95 | 49 | 45000 | <0.1 | 16000 | 22 |
| | | | | | | MEDIAN | nc | 36500 | 29 | 0.050 | 410 | 0.60 | 0.11 | 17500 | 0.31 | 12 | 65 | 44 | 35500 | nc | 9500 | 8.5 |
| | | | | | | AVERAGE | nc | 36000 | 31 | 0.045 | 383 | 0.60 | 0.11 | 16750 | 0.31 | 14 | 62 | 39 | 30900 | nc | 9525 | 11 |
| | | | | | | STANDARD DEVIATION | nc | 27773 | 25 | 0.019 | 178 | 0.40 | 0.026 | 2630 | 0.12 | 11 | 37 | 13 | 17287 | nc | 6921 | 8.9 |
| | | | | | | 75TH PERCENTILE | nc | 59500 | 50 | 0.060 | 513 | 0.94 | 0.13 | 18250 | 0.41 | 18 | 91 | 48 | 43500 | nc | 15250 | 15 |

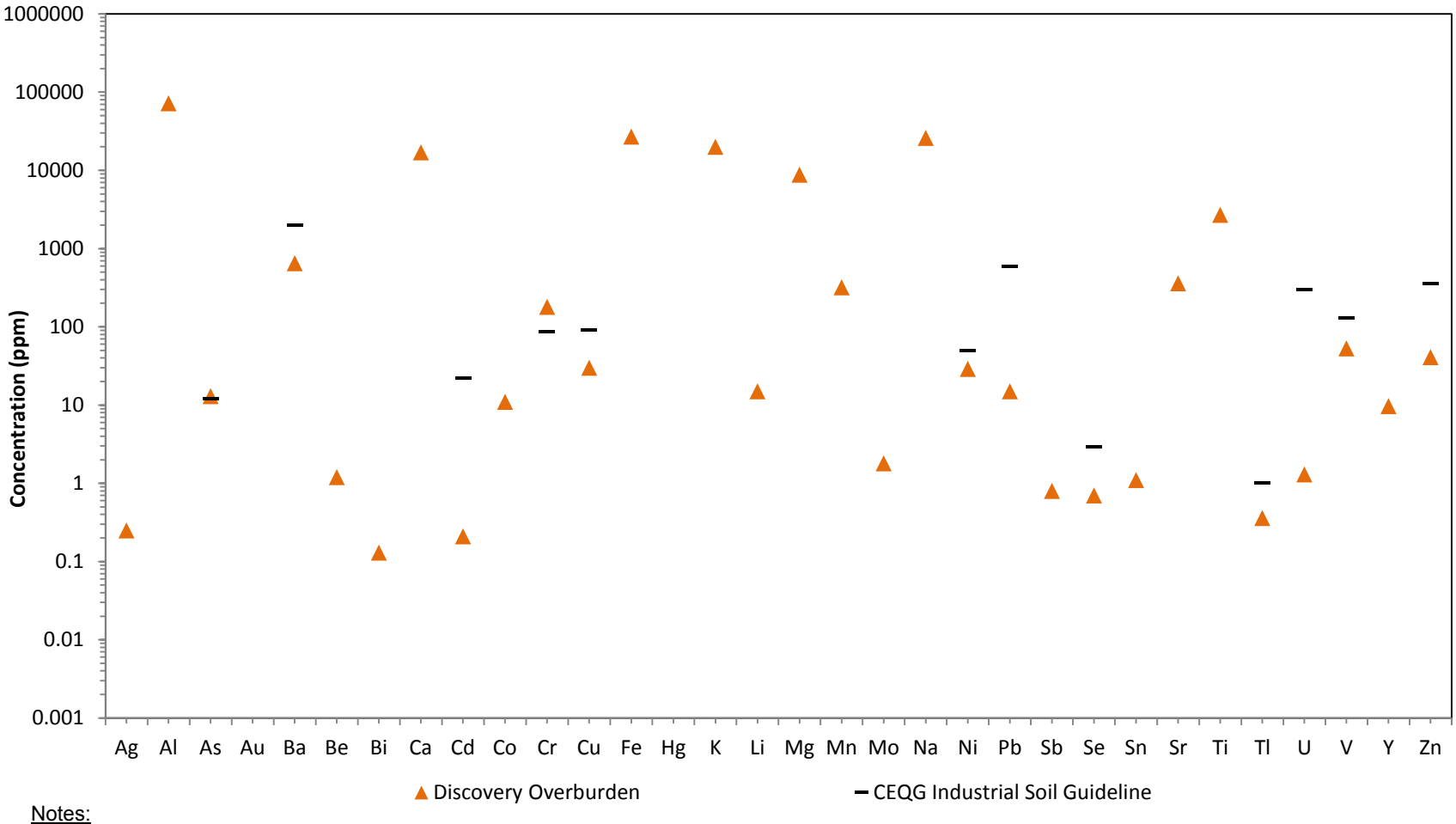
Notes:
[1] Canadian Soil Quality Guidelines (CEQG) for the Protection of Environmental and Human Health, Update 7.0 Summary Tables. September 200
nc - not calculated

# Appendix D.2: Whole Rock Analysis and ICP Results
## Overburden - All Deposits
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CEQG Industrial Soil Guideline[1] | | | | | | | | | | 50 | 600 | | 2.9 | | | | 1.0 | 300 | 130 | | 360 |
| Sample ID | Year (analysis) | Depth Interval | | Rock Type | Deposit | Location | Mg | Mn | Mo | Na | Ni | Pb | Sb | Se | Sn | Sr | Ti | Tl | U | V | Y | Zn |
| | | from (m) | to (m) | | | | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g | µg/g |
| Disc SS1 | 2009 | 0 | 0.38 | Overburden | Discovery | Pit surface | 10000 | 340 | 1.8 | 26000 | 33 | 15 | < 0.8 | < 0.7 | 1.1 | 380 | 2900 | 0.42 | 1.3 | 61 | 10 | 50 |
| Disc SS2 | 2009 | 0 | 0.33 | Overburden | Discovery | Pit surface | 8000 | 300 | 0.70 | 26000 | 24 | 14 | < 0.8 | < 0.7 | 0.80 | 360 | 2500 | 0.34 | 1.2 | 48 | 8.8 | 36 |
| Disc SS3 | 2009 | 0 | 0.28 | Overburden | Discovery | Pit surface | 8800 | 320 | 4.6 | 25000 | 29 | 15 | < 0.8 | < 0.7 | 1.1 | 360 | 2700 | 0.36 | 1.3 | 53 | 9.7 | 41 |
| | | | | | | MINIMUM | 8000 | 300 | 0.70 | 25000 | 24 | 14 | <0.8 | <0.7 | 0.80 | 360 | 2500 | 0.34 | 1.2 | 48 | 8.8 | 36 |
| | | | | | | MAXIMUM | 10000 | 340 | 4.6 | 26000 | 33 | 15 | <0.8 | <0.7 | 1.1 | 380 | 2900 | 0.42 | 1.3 | 61 | 10 | 50 |
| | | | | | | MEDIAN | 8800 | 320 | 1.8 | 26000 | 29 | 15 | nc | nc | 1.1 | 360 | 2700 | 0.36 | 1.3 | 53 | 9.7 | 41 |
| | | | | | | AVERAGE | 8933 | 320 | 2.4 | 25667 | 29 | 15 | nc | nc | 1.0 | 367 | 2700 | 0.37 | 1.3 | 54 | 9.5 | 42 |
| | | | | | | STANDARD DEVIATION | 1007 | 20 | 2.0 | 577 | 4.5 | 0.58 | nc | nc | 0.17 | 12 | 200 | 0.042 | 0.058 | 6.6 | 0.62 | 7.1 |
| | | | | | | 75TH PERCENTILE | 9400 | 330 | 3.2 | 26000 | 31 | 15 | nc | nc | 1.1 | 370 | 2800 | 0.39 | 1.3 | 57 | 9.9 | 46 |
| FZ-SS-10 | 2009 | 0 | >0.2 | Overburden | F Zone | Pit surface | 11000 | 390 | 4.8 | 21000 | 39 | 14 | < 0.8 | < 0.7 | 0.90 | 290 | 2700 | 0.36 | 1.0 | 80 | 10 | 44 |
| FZ-SS-6 | 2009 | 0 | 0.35 | Overburden | F Zone | Pit surface | 9000 | 490 | 3.7 | 21000 | 39 | 16 | < 0.8 | < 0.7 | 1.3 | 310 | 2200 | 0.37 | 1.2 | 77 | 9.2 | 45 |
| FZ-SS-7 | 2009 | 0 | 0.36 | Overburden | F Zone | Pit surface | 18000 | 890 | 3.8 | 19000 | **69** | 12 | < 0.8 | < 0.7 | 0.90 | 250 | 3200 | 0.33 | 0.91 | **140** | 10 | 110 |
| FZ-SS-8 | 2009 | 0 | 0.42 | Overburden | F Zone | Pit surface | 12000 | 570 | 4.8 | 21000 | 38 | 13 | < 0.8 | < 0.7 | 1.3 | 330 | 2600 | 0.36 | 1.2 | 86 | 9.5 | 55 |
| FZ-SS-9 | 2009 | 0 | 0.4 | Overburden | F Zone | Pit surface | 11000 | 630 | 3.8 | 20000 | 40 | 13 | < 0.8 | < 0.7 | 0.80 | 280 | 2700 | 0.38 | 1.0 | 84 | 11 | 45 |
| | | | | | | MINIMUM | 9000 | 390 | 3.7 | 19000 | 38 | 12 | <0.8 | <0.7 | 0.80 | 250 | 2200 | 0.33 | 0.91 | 77 | 9.2 | 44 |
| | | | | | | MAXIMUM | 18000 | 890 | 4.8 | 21000 | 69 | 16 | <0.8 | <0.7 | 1.3 | 330 | 3200 | 0.38 | 1.2 | 140 | 11 | 110 |
| | | | | | | MEDIAN | 11000 | 570 | 3.8 | 21000 | 39 | 13 | nc | nc | 0.90 | 290 | 2700 | 0.36 | 1.0 | 84 | 10 | 45 |
| | | | | | | AVERAGE | 12200 | 594 | 4.2 | 20400 | 45 | 14 | nc | nc | 1.0 | 292 | 2680 | 0.36 | 1.1 | 93 | 9.9 | 60 |
| | | | | | | STANDARD DEVIATION | 3421 | 188 | 0.57 | 894 | 13 | 1.5 | nc | nc | 0.24 | 30 | 356 | 0.019 | 0.13 | 26 | 0.68 | 28 |
| | | | | | | 75TH PERCENTILE | 12000 | 630 | 4.8 | 21000 | 40 | 14 | nc | nc | 1.3 | 310 | 2700 | 0.37 | 1.2 | 86 | 10 | 55 |
| TP11-01 SA#2 | 2011 | 0.13 | 0.34 | Overburden | Pump | Pit Surface | 15000 | 490 | 0.90 | 19000 | 44 | 11 | < 0.8 | 1.1 | 1.0 | 290 | 3700 | 0.35 | 1.3 | 110 | 10 | 57 |
| TP11-01 SA#3 | 2011 | 0.34 | 1.11 | Overburden | Pump | Pit Surface | 12000 | 510 | 0.80 | 19000 | 34 | 12 | < 0.8 | < 0.7 | 1.0 | 310 | 2600 | 0.39 | 1.1 | 80 | 10 | 44 |
| TP11-02 SA#1 | 2011 | 0 | 0.36 | Overburden | Pump | Pit Surface | 12000 | 470 | 1.3 | 19000 | 46 | 11 | < 0.8 | < 0.7 | 1.3 | 310 | 2400 | 0.32 | 0.89 | 74 | 8.8 | 40 |
| TP11-02 SA#2 | 2011 | 0.36 | 0.45 | Overburden | Pump | Pit Surface | 12000 | 400 | 1.2 | 20000 | 32 | 12 | < 0.8 | < 0.7 | 1.1 | 320 | 2700 | 0.38 | 1.3 | 84 | 10 | 47 |
| TP11-03 SA#1 | 2011 | 0 | 0.58 | Overburden | Pump | Pit Surface | 5600 | 280 | 5.0 | 10000 | 35 | 13 | < 0.8 | < 0.7 | 1.0 | 190 | 1000 | 0.43 | 3.6 | 67 | 7.8 | 33 |
| | | | | | | MINIMUM | 5600 | 280 | 0.80 | 10000 | 32 | 11 | <0.8 | < 0.7 | 1.0 | 190 | 1000 | 0.32 | 0.89 | 67 | 7.8 | 33 |
| | | | | | | MAXIMUM | 15000 | 510 | 5.0 | 20000 | 46 | 13 | <0.8 | 1.1 | 1.3 | 320 | 3700 | 0.43 | 3.6 | 110 | 10 | 57 |
| | | | | | | MEDIAN | 12000 | 470 | 1.2 | 19000 | 35 | 12 | nc | nc | 1.0 | 310 | 2600 | nc | 1.3 | 80 | 10 | 44 |
| | | | | | | AVERAGE | 11320 | 430 | 1.8 | 17400 | 38 | 12 | nc | nc | 1.1 | 284 | 2480 | nc | 1.6 | 83 | 9.3 | 44 |
| | | | | | | STANDARD DEVIATION | 3451 | 94 | 1.8 | 4159 | 6.3 | 0.84 | nc | nc | 0.13 | 54 | 968 | nc | 1.1 | 16 | 1.0 | 8.9 |
| | | | | | | 75TH PERCENTILE | 12000 | 490 | 1.3 | 19000 | 44 | 12 | nc | nc | 1.1 | 310 | 2700 | nc | 1.3 | 84 | 10 | 47 |
| SS-1 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 9600 | 450 | 3.3 | 21000 | 37 | 15 | < 0.8 | 1.0 | 1.3 | 310 | 1900 | 0.41 | 1.3 | 82 | 8.6 | 55 |
| SS-2 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 11000 | 370 | 2.4 | 21000 | 33 | 12 | < 0.8 | 1.4 | 2.0 | 290 | 1700 | 0.38 | 1.4 | 91 | 6.9 | 67 |
| SS-3 | 2009 | 0 | 0.55 | Overburden | Tiriganiaq | Pit surface | 9400 | 360 | 3.9 | 22000 | 30 | 12 | < 0.8 | 1.6 | < 0.5 | 300 | 1700 | 0.42 | 1.2 | 67 | 6.7 | 51 |
| SS-4 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 7700 | 270 | 4.1 | 19000 | 28 | 11 | < 0.8 | 1.9 | 1.7 | 300 | 1600 | 0.33 | 1.4 | 58 | 6.9 | 38 |
| SS-5 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 12000 | 490 | 4.6 | 25000 | 35 | 15 | < 0.8 | 0.90 | 1.3 | 350 | 2200 | 0.38 | 1.6 | 85 | 9.7 | 61 |
| TP11-04 SA#0 | 2011 | 0 | 0.09 | Overburden | Tiriganiaq | Pit Surface | 10000 | 390 | 0.90 | 20000 | 42 | 19 | < 0.8 | < 0.7 | 0.80 | 330 | 1100 | 0.32 | 2.1 | 80 | 8.1 | 59 |
| TP11-04 SA#1 | 2011 | 0.09 | 0.37 | Overburden | Tiriganiaq | Pit Surface | 10000 | 400 | 0.80 | 21000 | 30 | 12 | < 0.8 | < 0.7 | 1.0 | 380 | 2300 | 0.35 | 1.3 | 72 | 9.4 | 46 |
| TP11-04 SA#2 | 2011 | 0.37 | 1.04 | Overburden | Tiriganiaq | Pit Surface | 10000 | 390 | 0.80 | 20000 | 37 | 13 | < 0.8 | < 0.7 | 1.6 | 330 | 4200 | 0.40 | 1.3 | 72 | 9.9 | 45 |
| TP11-05 SA#1 | 2011 | 0.5 | 1 | Overburden | Tiriganiaq | Pit Surface | 7400 | 390 | 1.0 | 22000 | 25 | 14 | < 0.8 | < 0.7 | 1.0 | 360 | 2000 | 0.37 | 1.4 | 56 | 8.5 | 34 |
| TP11-06 SA#1 | 2011 | 0 | 0.76 | Overburden | Tiriganiaq | Pit Surface | 8800 | 360 | 1.4 | 20000 | 25 | 13 | < 0.8 | < 0.7 | 1.0 | 380 | 2300 | 0.39 | 1.1 | 63 | 10 | 37 |
| | | | | | | MINIMUM | 7400 | 270 | 0.80 | 19000 | 25 | 11 | <0.8 | <0.7 | <0.5 | 290 | 1100 | 0.32 | 1.1 | 56 | 6.7 | 34 |
| | | | | | | MAXIMUM | 12000 | 490 | 4.6 | 25000 | 42 | 19 | <0.8 | 1.9 | 2.0 | 380 | 4200 | 0.42 | 2.1 | 91 | 10 | 67 |
| | | | | | | MEDIAN | 9800 | 390 | 1.9 | 21000 | 32 | 13 | nc | 0.80 | 1.2 | 330 | 1950 | 0.38 | 1.4 | 72 | 8.6 | 49 |
| | | | | | | AVERAGE | 9590 | 387 | 2.3 | 21100 | 32 | 14 | nc | 1.0 | 1.2 | 333 | 2100 | 0.38 | 1.4 | 73 | 8.5 | 49 |
| | | | | | | STANDARD DEVIATION | 1388 | 58 | 1.5 | 1663 | 5.6 | 2.3 | nc | 0.44 | 0.45 | 33 | 825 | 0.033 | 0.28 | 12 | 1.3 | 11 |
| | | | | | | 75TH PERCENTILE | 10000 | 398 | 3.8 | 21750 | 37 | 15 | nc | 1.3 | 1.5 | 358 | 2275 | 0.40 | 1.4 | 82 | 9.6 | 58 |
| TP11-07 SA#1 | 2011 | 0.2 | 0.35 | Overburden | Wesmeg | Pit Surface | 7200 | 360 | 1.8 | 20000 | 29 | 14 | < 0.8 | < 0.7 | 1.1 | 320 | 3700 | 0.35 | 1.2 | 59 | 9.5 | 35 |
| TP11-07 SA#2 | 2011 | 0.5 | 0.75 | Overburden | Wesmeg | Pit Surface | 11000 | 390 | 1.0 | 19000 | 39 | 13 | < 0.8 | < 0.7 | 0.80 | 310 | 2300 | 0.40 | 1.4 | 82 | 9.5 | 48 |
| TP11-08 SA#1 | 2011 | 0 | 0.39 | Overburden | Wesmeg | Pit Surface | 10000 | 360 | 0.90 | 20000 | 26 | 14 | < 0.8 | < 0.7 | 1.1 | 340 | 2700 | 0.39 | 1.3 | 65 | 11 | 39 |
| TP11-08 SA#2 | 2011 | 0.39 | 1.09 | Overburden | Wesmeg | Pit Surface | 8300 | 320 | 0.90 | 21000 | 22 | 13 | < 0.8 | < 0.7 | 0.90 | 330 | 2300 | 0.38 | 1.3 | 59 | 9.4 | 36 |
| TP11-09 SA#1 | 2011 | 0 | 0.54 | Overburden | Wesmeg | Pit Surface | 10000 | 390 | 0.80 | 20000 | 29 | 14 | < 0.8 | < 0.7 | 0.60 | 330 | 2100 | 0.34 | 1.2 | 71 | 8.7 | 38 |
| TP11-09 SA#2 | 2011 | 0.54 | 0.95 | Overburden | Wesmeg | Pit Surface | 10000 | 400 | 1.2 | 20000 | 28 | 14 | < 0.8 | < 0.7 | 1.0 | 400 | 2600 | 0.42 | 1.4 | 66 | 11 | 42 |
| | | | | | | MINIMUM | 7200 | 320 | 0.80 | 19000 | 22 | 13 | <0.8 | <0.7 | 0.60 | 310 | 2100 | 0.34 | 1.2 | 59 | 8.7 | 35 |
| | | | | | | MAXIMUM | 11000 | 400 | 1.8 | 21000 | 39 | 14 | <0.8 | <0.7 | 1.1 | 400 | 3700 | 0.42 | 1.4 | 82 | 11 | 48 |
| | | | | | | MEDIAN | 10000 | 375 | 0.95 | 20000 | 29 | 14 | nc | nc | 0.95 | 330 | 2450 | nc | 1.3 | 66 | 9.5 | 39 |
| | | | | | | AVERAGE | 9417 | 370 | 1.1 | 20000 | 29 | 14 | nc | nc | 0.92 | 338 | 2617 | nc | 1.3 | 67 | 9.9 | 40 |
| | | | | | | STANDARD DEVIATION | 1392 | 30 | 0.369 | 632 | 5.6 | 0.516 | nc | nc | 0.19 | 32 | 574 | 0.030 | 0.089 | 8.6 | 0.94 | 4.8 |
| | | | | | | 75TH PERCENTILE | 10000 | 390 | 1.2 | 20000 | 29 | 14 | nc | nc | 1.1 | 338 | 2675 | nc | 1.4 | 70 | 11 | 41 |
| TP11-10 SA#1 | 2011 | 0 | 0.14 | Overburden | Wolf | Pit Surface | 2400 | 2400 | 19 | 3800 | 31 | 4.9 | < 0.8 | 2.1 | < 0.5 | 140 | 510 | 0.17 | 2.5 | 36 | 6.1 | 27 |
| TP11-10 SA#2 | 2011 | 0.14 | 0.39 | Overburden | Wolf | Pit Surface | 10000 | 360 | 2.1 | 18000 | 24 | 13 | < 0.8 | 1.0 | 0.60 | 280 | 2300 | 0.35 | 1.7 | 72 | 9.4 | 36 |
| TP11-11 SA#1 | 2011 | 0 | 0.46 | Overburden | Wolf | Pit Surface | 1200 | 130 | 3.8 | 2500 | 25 | 4.7 | < 0.8 | 2.0 | < 0.5 | 100 | 580 | 0.16 | 5.1 | 23 | 3.7 | 12 |
| TP11-12 SA#1 | 2011 | 0.25 | 0.7 | Overburden | Wolf | Pit Surface | 11000 | 440 | 1.8 | 17000 | 40 | 14 | < 0.8 | < 0.7 | 0.70 | 260 | 2000 | 0.33 | 1.1 | 81 | 8.7 | 51 |
| | | | | | | MINIMUM | 1200 | 130 | 1.8 | 2500 | 24 | 4.7 | <0.8 | <0.7 | <0.5 | 100 | 510 | 0.16 | 1.1 | 23 | 3.7 | 12 |
| | | | | | | MAXIMUM | 11000 | 2400 | 19 | 18000 | 40 | 14 | <0.8 | 2.1 | 0.70 | 280 | 2300 | 0.35 | 5.1 | 81 | 9.4 | 51 |
| | | | | | | MEDIAN | 6200 | 400 | 3.0 | 10400 | 28 | 9.0 | nc | 1.5 | nc | 200 | 1290 | 0.25 | 2.1 | 54 | 7.4 | 32 |
| | | | | | | AVERAGE | 6150 | 833 | 6.7 | 10325 | 30 | 9.2 | nc | 1.5 | nc | 195 | 1348 | 0.25 | 2.6 | 53 | 7.0 | 32 |
| | | | | | | STANDARD DEVIATION | 5063 | 1053 | 8.3 | 8312 | 7.3 | 5.0 | nc | 0.70 | nc | 89 | 935 | 0.10 | 1.8 | 28 | 2.6 | 16 |
| | | | | | | 75TH PERCENTILE | 10250 | 930 | 7.6 | 17250 | 33 | 13 | nc | 2.0 | nc | 265 | 2075 | 0.34 | 3.2 | 74 | 8.9 | 40 |

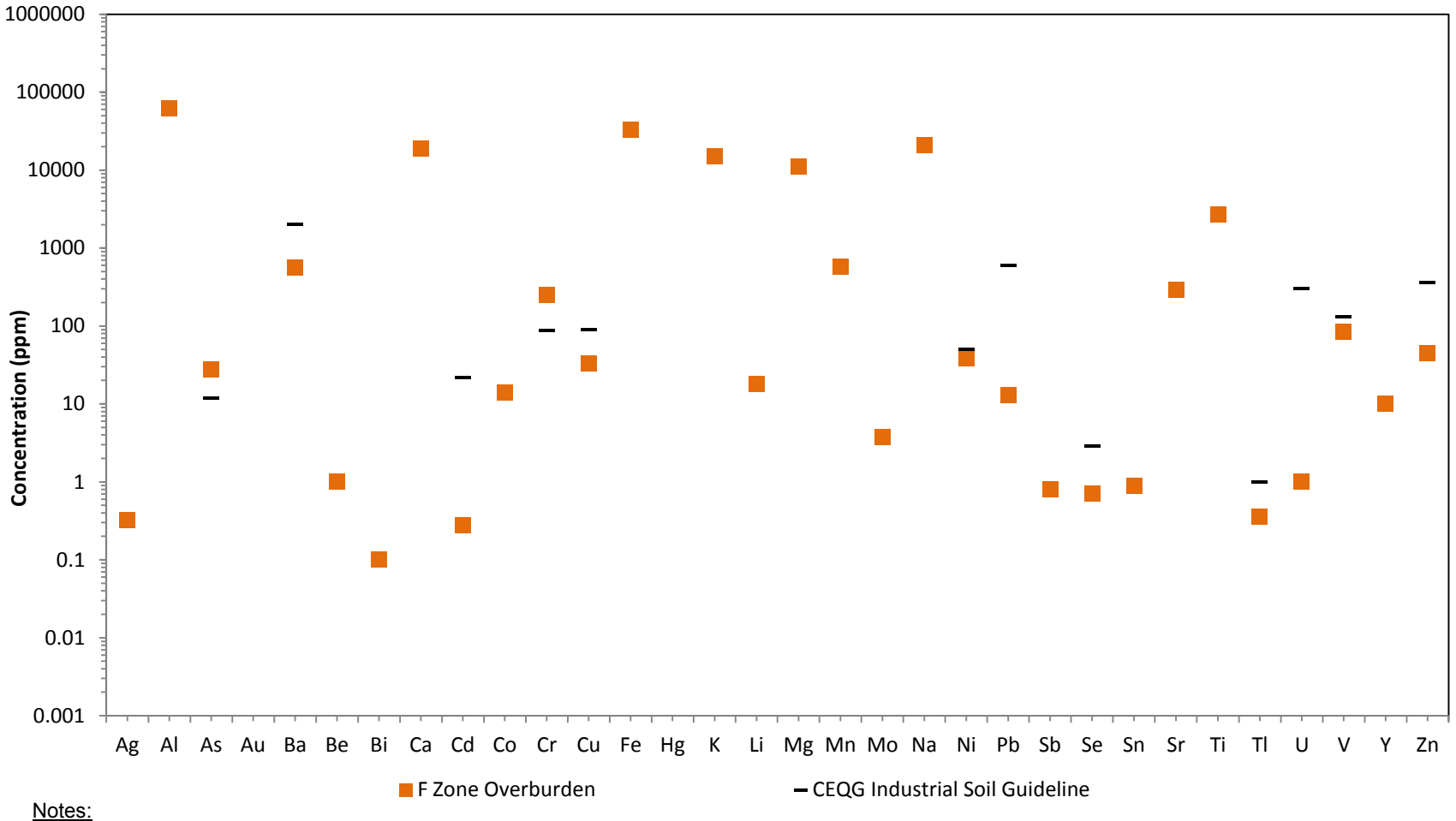
Notes:
[1] Canadian Soil Quality Guidelines (CEQG) for the Protection of Environmental and Human Health, Update 7.0 Summary Tables. Se
nc - not calculated




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Trace Element Content Overburden - Discovery Deposit** | | | |
| **Meliadine Property, Nunvut Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure D.2-1 |

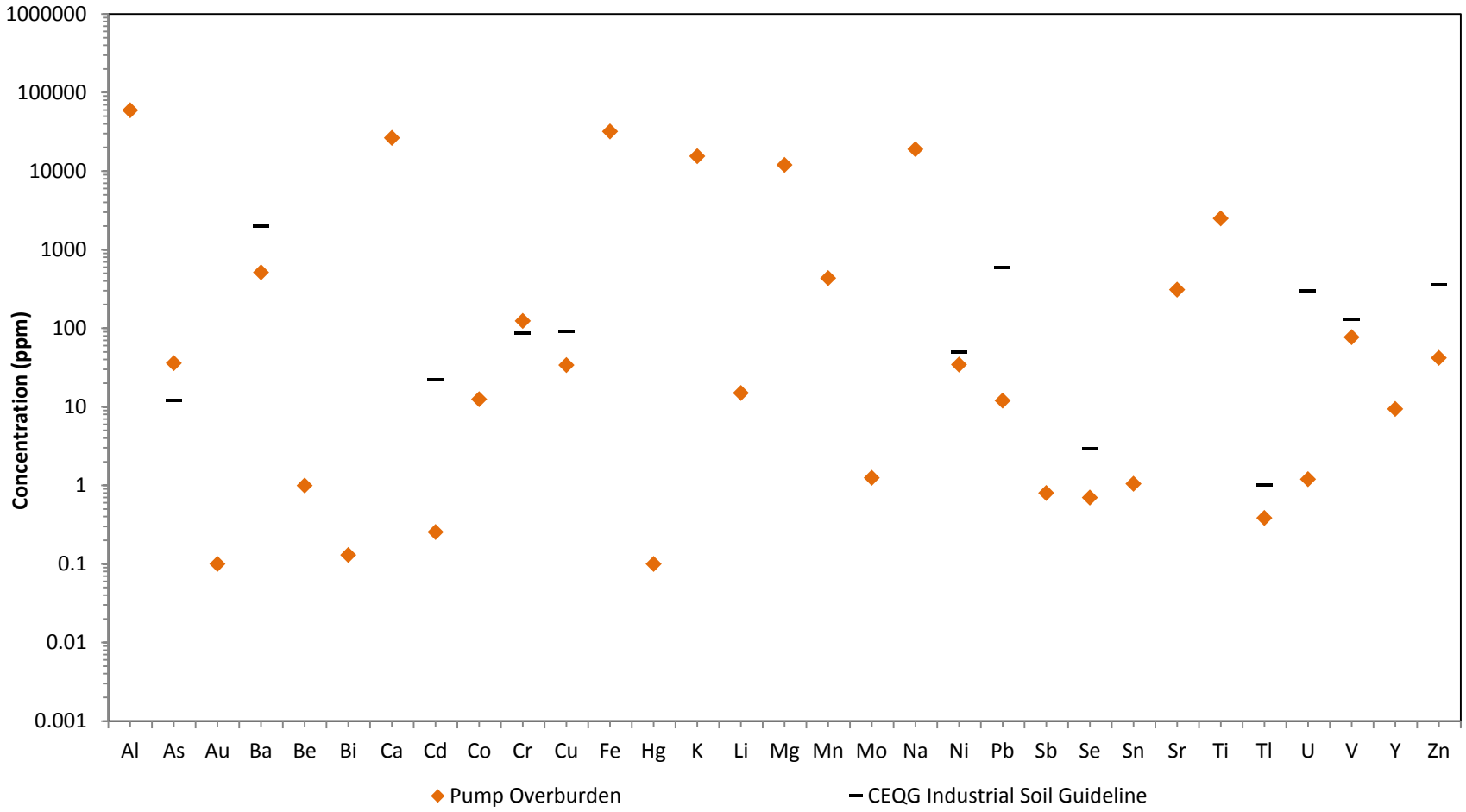
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW - Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Trace Element Content Overburden - F Zone Deposit** | | | |
| **Meliadine Property, Nunvut Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure D.2-2 |

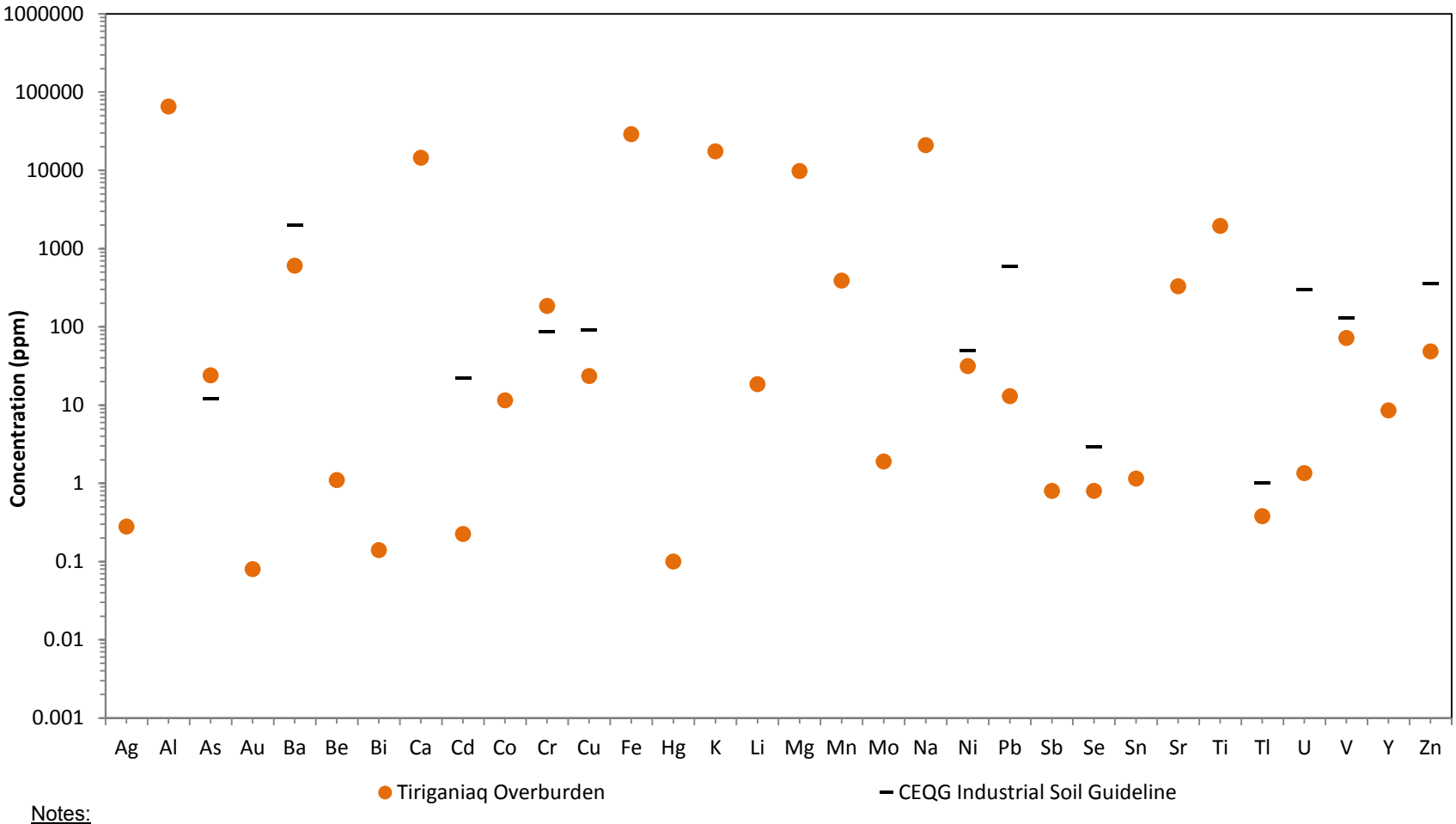
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AEM_OVBN CHEM_FIGURES CHEM_29Aug2012.xlsx




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Trace Element Content<br>Overburden - Pump Deposit** | | | |
| **Meliadine Property, Nunvut<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure D.2-3 |

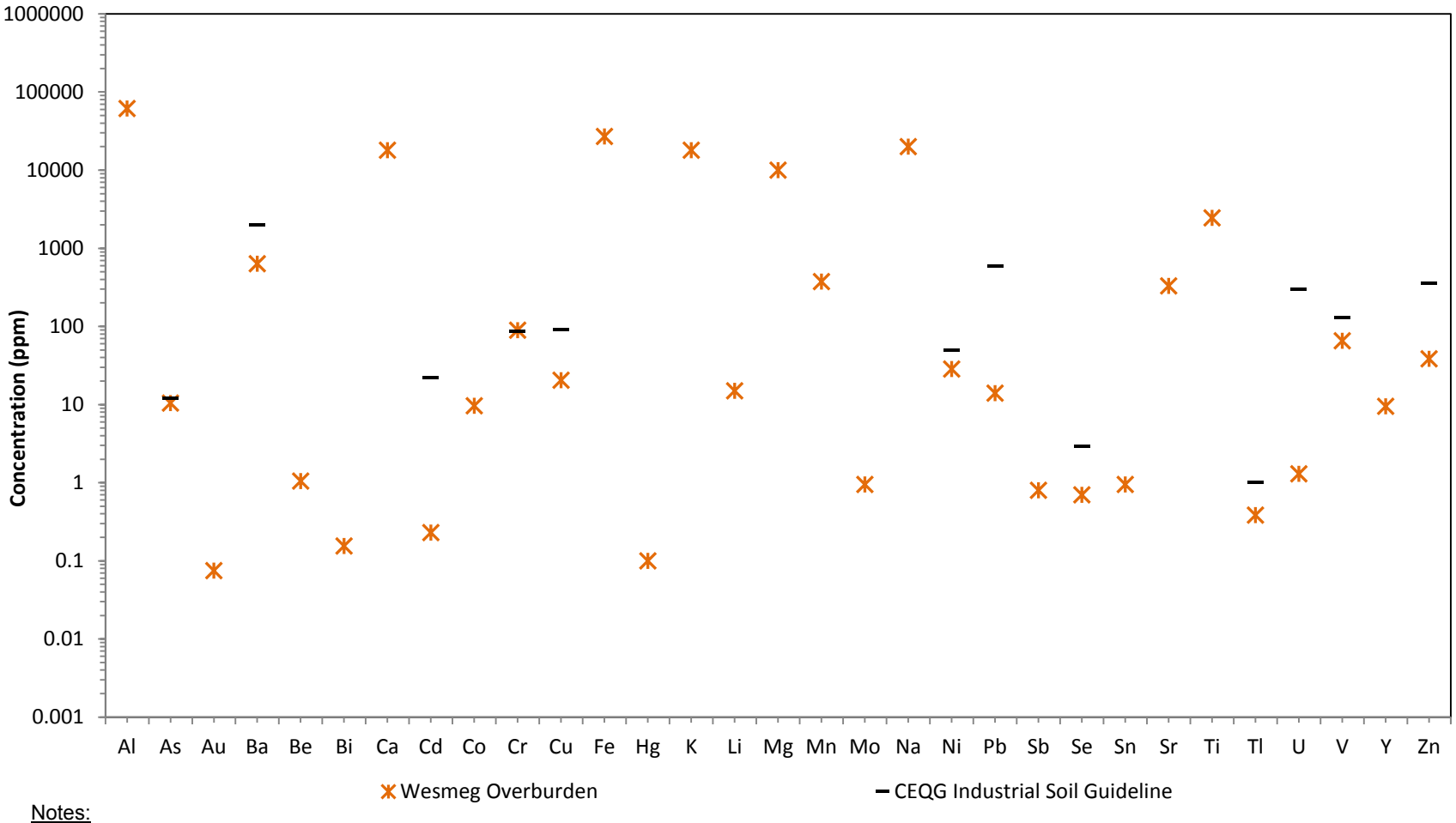
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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

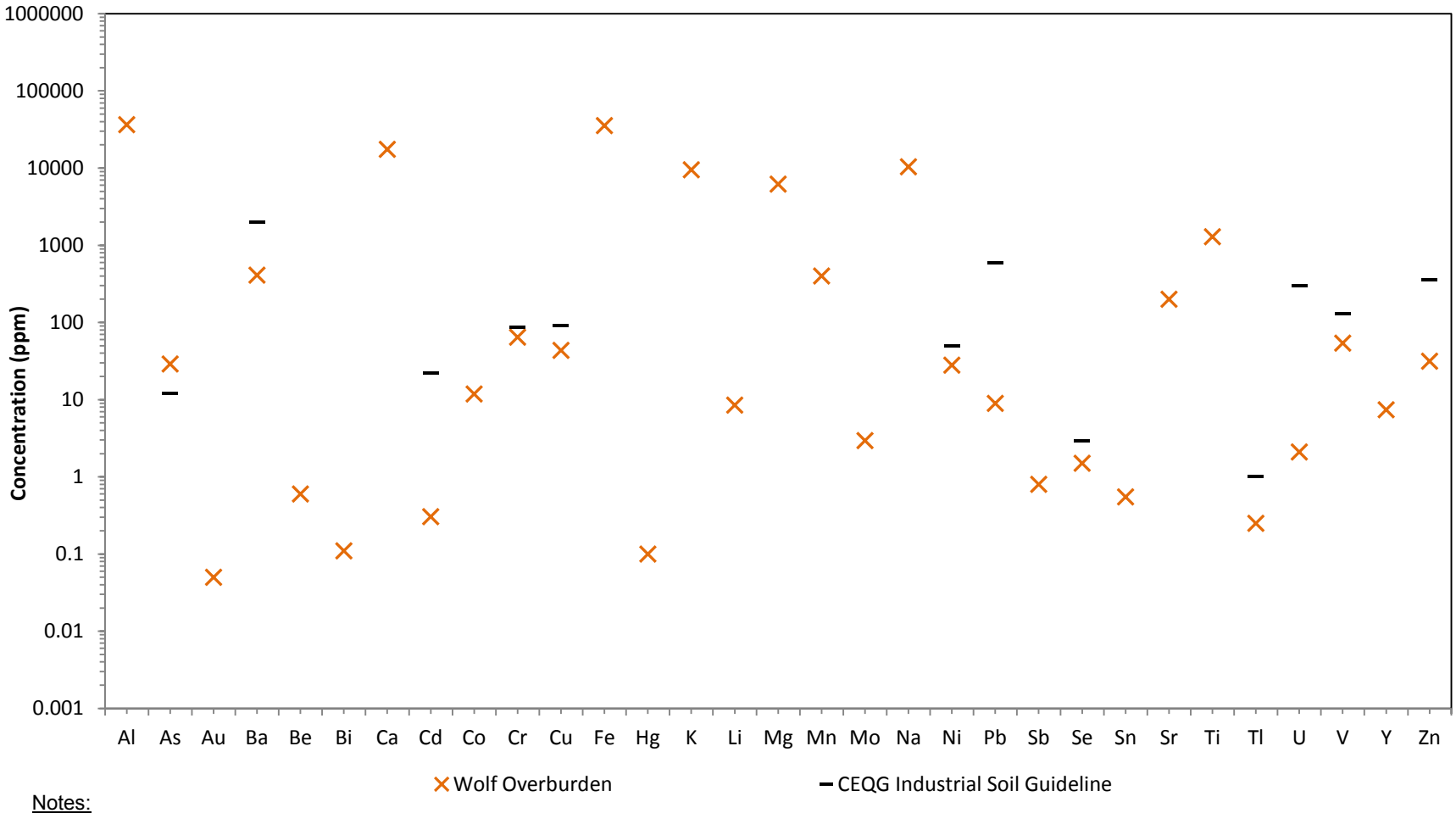
| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Trace Element Content Overburden - Tiriganiaq Deposit** | | | |
| **Meliadine Property, Nunvut Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure D.2-4 |

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Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Trace Element Content<br>Overburden - Wesmeg Deposit** | | | |
| **Meliadine Property, Nunvut<br>Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure D.2-5 |




Notes:
Median concentrations plotted; MDL values were used in calculation of medians for concentrations less than their MDL
HW = Hanging Wall; FW = Foot Wall

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Trace Element Content Overburden - Wolf Deposit** | | | |
| **Meliadine Property, Nunvut Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure D.2-6 |

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# D.3 ARD Potential (ABA) Results: Tables and Figures

# Appendix D.3: Acid Base Accounting Results
## Overburden - All Deposits
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | TC | $CO_3$ | CaNP | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP | NPR | CaNPR | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | % | | t CaCO3/ 1000t | | % | | | t CaCO3/1000t | | | ratio | | |
| Disc SS1 | 2009 | 0 | 0.38 | Overburden | Discovery | Pit surface | 9.1 | 0.090 | 0.097 | 1.6 | 8.2 | 0.0050 | < 0.01 | < 0.01 | 0.16 | 8.0 | 1.4 | 52 | 10 | non PAG |
| Disc SS2 | 2009 | 0 | 0.33 | Overburden | Discovery | Pit surface | 8.3 | 0.14 | 0.047 | 0.77 | 6.0 | < 0.005 | < 0.01 | < 0.01 | 0.31 | 5.7 | 0.46 | 19 | 2.5 | non PAG |
| Disc SS3 | 2009 | 0 | 0.28 | Overburden | Discovery | Pit surface | 8.7 | 0.063 | 0.049 | 0.80 | 2.7 | < 0.005 | < 0.01 | < 0.01 | 0.31 | 2.4 | 0.49 | 8.6 | 2.6 | non PAG |
| | | | | | | ***BULK ARD - DISCOVERY Overburden*** | | - | | **3.2** | **17** | | **-** | | **0.78** | **16** | **2.4** | **22** | **4.0** | **non PAG** |
| | | | | | | MINIMUM | 8.3 | 0.063 | 0.047 | 0.77 | 2.7 | < 0.005 | <0.01 | <0.01 | 0.16 | 2.4 | 0.46 | 8.6 | 2.5 | |
| | | | | | | MAXIMUM | 9.1 | 0.14 | 0.097 | 1.6 | 8.2 | 0.0050 | <0.01 | <0.01 | 0.31 | 8.0 | 1.4 | 52 | 10 | |
| | | | | | | MEDIAN | 8.7 | 0.090 | 0.049 | 0.80 | 6.0 | nc | nc | nc | 0.31 | 5.7 | 0.49 | 19 | 2.6 | |
| | | | | | | AVERAGE | 8.6 | 0.097 | 0.064 | 1.1 | 5.6 | nc | nc | nc | 0.26 | 5.4 | 0.79 | 27 | 5.1 | |
| | | | | | | STANDARD DEVIATION | nc | 0.031 | 0.023 | 0.38 | 2.3 | nc | nc | nc | 0.074 | 2.3 | 0.45 | 19 | 3.6 | |
| | | | | | | 75TH PERCENTILE | nc | 0.14 | 0.097 | 1.6 | 8.2 | nc | nc | nc | 0.31 | 8.0 | 1.4 | 52 | 10 | |
| FZ-SS-10 | 2009 | 0 | >0.2 | Overburden | F Zone | Pit surface | 8.8 | 0.21 | 0.022 | 0.36 | 5.6 | < 0.005 | < 0.005 | < 0.01 | 0.31 | 5.3 | 0.047 | 18 | 1.2 | uncertain |
| FZ-SS-6 | 2009 | 0 | 0.35 | Overburden | F Zone | Pit surface | 8.2 | 0.85 | 0.27 | 4.4 | 8.8 | 0.014 | 0.010 | < 0.01 | 0.44 | 8.4 | 3.9 | 20 | 10 | non PAG |
| FZ-SS-7 | 2009 | 0 | 0.36 | Overburden | F Zone | Pit surface | 8.7 | 0.97 | 3.1 | 51 | 64 | 0.026 | 0.030 | < 0.01 | 0.81 | 63 | 51 | 79 | 63 | non PAG |
| FZ-SS-8 | 2009 | 0 | 0.42 | Overburden | F Zone | Pit surface | 8.5 | 0.80 | 1.9 | 30 | 36 | 0.012 | 0.010 | < 0.01 | 0.38 | 35 | 30 | 95 | 81 | non PAG |
| FZ-SS-9 | 2009 | 0 | 0.4 | Overburden | F Zone | Pit surface | 8.4 | 0.26 | 0.59 | 9.6 | 16 | < 0.005 | < 0.005 | < 0.01 | 0.31 | 15 | 9.3 | 50 | 31 | non PAG |
| | | | | | | ***BULK ARD - F-ZONE Overburden*** | | - | | **96** | **130** | | **-** | | **2.3** | **127** | **94** | **58** | **43** | **non PAG** |
| | | | | | | MINIMUM | 8.2 | 0.21 | 0.022 | 0.36 | 5.6 | <0.005 | <0.005 | <0.01 | 0.31 | 5.3 | 0.047 | 18 | 1.2 | |
| | | | | | | MAXIMUM | 8.8 | 0.97 | 3.1 | 51 | 64 | 0.026 | 0.030 | <0.01 | 0.81 | 63 | 51 | 95 | 81 | |
| | | | | | | MEDIAN | 8.5 | 0.80 | 0.59 | 9.6 | 16 | 0.012 | 0.010 | nc | 0.38 | 15 | 9.3 | 50 | 31 | |
| | | | | | | AVERAGE | 8.5 | 0.62 | 1.2 | 19 | 26 | 0.012 | 0.012 | nc | 0.45 | 25 | 19 | 52 | 37 | |
| | | | | | | STANDARD DEVIATION | nc | 0.32 | 1.2 | 19 | 22 | 0.0077 | 0.0093 | nc | 0.19 | 22 | 19 | 31 | 30 | |
| | | | | | | 75TH PERCENTILE | nc | 0.91 | 2.5 | 41 | 50 | 0.020 | 0.020 | nc | 0.63 | 49 | 40 | 87 | 72 | |
| TP11-01 SA#2 | 2011 | 0.13 | 0.34 | Overburden | Pump | Pit Surface | 8.1 | 0.74 | 0.43 | 7.0 | 14 | 0.046 | 0.020 | 0.020 | 1.4 | 13 | 5.6 | 9.7 | 4.9 | non PAG |
| TP11-01 SA#3 | 2011 | 0.34 | 1.11 | Overburden | Pump | Pit Surface | 8.4 | 0.52 | 1.8 | 30 | 33 | 0.016 | 0.020 | < 0.01 | 0.50 | 33 | 29 | 66 | 60 | non PAG |
| TP11-02 SA#1 | 2011 | 0 | 0.36 | Overburden | Pump | Pit Surface | 8.8 | 0.55 | 2.3 | 38 | 44 | 0.018 | 0.020 | < 0.01 | 0.56 | 43 | 37 | 78 | 67 | non PAG |
| TP11-02 SA#2 | 2011 | 0.36 | 0.45 | Overburden | Pump | Pit Surface | 8.4 | 0.50 | 1.9 | 31 | 37 | 0.024 | 0.020 | < 0.01 | 0.75 | 36 | 30 | 49 | 42 | non PAG |
| | | | | | | ***BULK ARD - PUMP Overburden*** | | - | | **106** | **128** | | **-** | | **3.3** | **125** | **103** | **39** | **33** | **non PAG** |
| | | | | | | MINIMUM | 8.1 | 0.50 | 0.43 | 7.0 | 14 | 0.016 | 0.020 | <0.01 | 0.31 | 13 | 5.6 | 9.7 | 4.9 | |
| | | | | | | MAXIMUM | 8.8 | 0.74 | 2.3 | 38 | 44 | 0.046 | 0.020 | 0.020 | 1.4 | 43 | 37 | 78 | 67 | |
| | | | | | | MEDIAN | 8.4 | 0.54 | 1.9 | 31 | 35 | 0.021 | 0.020 | nc | 0.56 | 34 | 30 | 58 | 51 | |
| | | | | | | AVERAGE | 8.4 | 0.58 | 1.6 | 27 | 32 | 0.026 | 0.020 | nc | 0.71 | 31 | 26 | 51 | 43 | |
| | | | | | | STANDARD DEVIATION | nc | 0.094 | 0.71 | 12 | 11 | 0.012 | 0.0 | nc | 0.39 | 11 | 12 | 26 | 24 | |
| | | | | | | 75TH PERCENTILE | nc | 0.69 | 2.2 | 36 | 42 | 0.041 | 0.020 | nc | 1.1 | 42 | 36 | 75 | 66 | |

# Appendix D.3: Acid Base Accounting Results
## Overburden - All Deposits
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Paste pH | TC | $CO_3$ | CaNP | NP | S(T) | $S(SO_4)$ | $S(S^{2-})$ | AP | Net NP | Net CaNP | NPR | CaNPR | ARD POTENTIAL[1] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | from (m) | to (m) | | | | units | % | | t CaCO3/ 1000t | | % | | | t CaCO3/1000t | | | ratio | | |
| SS-1 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 8.5 | 0.32 | 0.21 | 3.4 | 10 | 0.031 | 0.010 | 0.020 | 0.97 | 9.0 | 2.4 | 10 | 3.5 | non PAG |
| SS-2 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 6.7 | 6.1 | 0.45 | 7.4 | 8.8 | 0.058 | 0.030 | 0.030 | 1.8 | 7.0 | 5.6 | 4.9 | 4.1 | non PAG |
| SS-3 | 2009 | 0 | 0.55 | Overburden | Tiriganiaq | Pit surface | 8.3 | 0.34 | 0.36 | 5.9 | 12 | 0.025 | 0.020 | < 0.01 | 0.78 | 11 | 5.1 | 15 | 7.5 | non PAG |
| SS-4 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 7.0 | 7.9 | 0.26 | 4.2 | 7.1 | 0.076 | 0.080 | < 0.01 | 2.4 | 4.7 | 1.8 | 3.0 | 1.8 | uncertain |
| SS-5 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 8.2 | 0.30 | 0.13 | 2.2 | 6.9 | 0.042 | 0.020 | 0.020 | 1.3 | 5.6 | 0.85 | 5.3 | 1.6 | uncertain |
| TP11-04 SA#0 | 2011 | 0 | 0.09 | Overburden | Tiriganiaq | Pit Surface | 6.6 | 2.5 | 0.45 | 7.4 | 11 | 0.054 | 0.010 | 0.040 | 1.7 | 9.3 | 5.7 | 6.5 | 4.4 | non PAG |
| TP11-04 SA#1 | 2011 | 0.09 | 0.37 | Overburden | Tiriganiaq | Pit Surface | 7.2 | 0.35 | 0.13 | 2.2 | 8.2 | 0.020 | 0.020 | < 0.01 | 0.63 | 7.6 | 1.5 | 13 | 3.5 | non PAG |
| TP11-04 SA#2 | 2011 | 0.37 | 1.04 | Overburden | Tiriganiaq | Pit Surface | 8.1 | 0.24 | 0.64 | 10 | 16 | 0.010 | < 0.01 | < 0.01 | 0.31 | 16 | 10 | 51 | 33 | non PAG |
| TP11-05 SA#1 | 2011 | 0.5 | 1 | Overburden | Tiriganiaq | Pit Surface | 8.4 | 0.069 | 0.046 | 0.75 | 6.7 | < 0.005 | < 0.01 | < 0.01 | 0.31 | 6.4 | 0.44 | 21 | 2.4 | non PAG |
| TP11-06 SA#1 | 2011 | 0 | 0.76 | Overburden | Tiriganiaq | Pit Surface | 8.6 | 0.49 | 1.6 | 26 | 32 | < 0.005 | < 0.01 | < 0.01 | 0.31 | 32 | 26 | 102 | 83 | non PAG |
| ***BULK ARD - TIRIGANIAQ Overburden*** | | | | | | | | - | | **70** | **118** | | **-** | | **11** | **108** | **59** | **11** | **6.6** | **non PAG** |
| MINIMUM | | | | | | | 6.6 | 0.069 | 0.046 | 0.75 | 6.7 | <0.005 | < 0.01 | <0.01 | 0.31 | 4.7 | 0.44 | 3.0 | 1.6 | |
| MAXIMUM | | | | | | | 8.6 | 7.9 | 1.6 | 26 | 32 | 0.076 | 0.080 | 0.040 | 2.4 | 32 | 26 | 102 | 83 | |
| MEDIAN | | | | | | | 8.2 | 0.34 | 0.31 | 5.0 | 9.4 | 0.028 | 0.015 | 0.010 | 0.88 | 8.3 | 3.8 | 12 | 3.8 | |
| AVERAGE | | | | | | | 7.2 | 1.9 | 0.43 | 7.0 | 12 | 0.033 | 0.022 | 0.017 | 1.1 | 11 | 5.9 | 23 | 15 | |
| STANDARD DEVIATION | | | | | | | nc | 2.7 | 0.42 | 6.9 | 7.2 | 0.023 | 0.020 | 0.010 | 0.69 | 7.6 | 7.2 | 30 | 25 | |
| 75TH PERCENTILE | | | | | | | nc | 3.4 | 0.50 | 8.2 | 13 | 0.055 | 0.023 | 0.023 | 1.7 | 12 | 6.8 | 29 | 14 | |
| TP11-07 SA#1 | 2011 | 0.2 | 0.35 | Overburden | Wesmeg | Pit Surface | 7.7 | 0.20 | 0.038 | 0.62 | 6.2 | 0.0070 | < 0.01 | < 0.01 | 0.22 | 6.0 | 0.40 | 28 | 2.8 | non PAG |
| TP11-07 SA#2 | 2011 | 0.5 | 0.75 | Overburden | Wesmeg | Pit Surface | 8.2 | 0.30 | 0.40 | 6.5 | 11 | 0.0090 | < 0.01 | < 0.01 | 0.28 | 11 | 6.3 | 39 | 23 | non PAG |
| TP11-08 SA#1 | 2011 | 0 | 0.39 | Overburden | Wesmeg | Pit Surface | 7.5 | 0.22 | 0.034 | 0.56 | 7.6 | < 0.005 | < 0.01 | < 0.01 | 0.31 | 7.3 | 0.24 | 24 | 1.8 | uncertain |
| TP11-08 SA#2 | 2011 | 0.39 | 1.09 | Overburden | Wesmeg | Pit Surface | 7.6 | 0.61 | 0.030 | 0.49 | 7.0 | 0.0070 | < 0.01 | < 0.01 | 0.22 | 6.8 | 0.27 | 32 | 2.2 | non PAG |
| TP11-09 SA#1 | 2011 | 0 | 0.54 | Overburden | Wesmeg | Pit Surface | 8.1 | 0.71 | 0.88 | 14 | 22 | 0.034 | 0.030 | < 0.01 | 1.1 | 21 | 13 | 21 | 13 | non PAG |
| TP11-09 SA#2 | 2011 | 0.54 | 0.95 | Overburden | Wesmeg | Pit Surface | 8.6 | 0.59 | 2.1 | 34 | 43 | < 0.005 | < 0.01 | < 0.01 | 0.31 | 43 | 33 | 138 | 107 | non PAG |
| ***BULK ARD - WESMEG Overburden*** | | | | | | | | - | | **56** | **97** | | **-** | | **2.4** | **94** | **54** | **40** | **23** | **non PAG** |
| MINIMUM | | | | | | | 7.5 | 0.20 | 0.030 | 0.49 | 6.2 | <0.005 | <0.01 | <0.01 | 0.22 | 6.0 | 0.24 | 21 | 1.8 | |
| MAXIMUM | | | | | | | 8.6 | 0.71 | 2.1 | 34 | 43 | 0.034 | 0.030 | <0.01 | 1.1 | 43 | 33 | 138 | 107 | |
| MEDIAN | | | | | | | 7.9 | 0.44 | 0.22 | 3.6 | 9.3 | 0.0070 | nc | nc | 0.30 | 9.0 | 3.3 | 30 | 8.2 | |
| AVERAGE | | | | | | | 7.8 | 0.44 | 0.57 | 9.3 | 16 | 0.011 | nc | nc | 0.40 | 16 | 8.9 | 47 | 25 | |
| STANDARD DEVIATION | | | | | | | nc | 0.20 | 0.73 | 12 | 13 | 0.010 | nc | nc | 0.30 | 13 | 12 | 41 | 38 | |
| 75TH PERCENTILE | | | | | | | nc | 0.64 | 1.2 | 19 | 27 | 0.015 | nc | nc | 0.50 | 26 | 18 | 64 | 44 | |
| TP11-10 SA#1 | 2011 | 0 | 0.14 | Overburden | Wolf | Pit Surface | 5.5 | 30 | 0.34 | 5.6 | -12 | < 0.005 | < 0.01 | < 0.01 | 0.31 | -12 | 5.3 | -38 | 18 | uncertain |
| TP11-10 SA#2 | 2011 | 0.14 | 0.39 | Overburden | Wolf | Pit Surface | 6.3 | 0.36 | 0.031 | 0.51 | 4.8 | < 0.005 | < 0.01 | < 0.01 | 0.31 | 4.5 | 0.19 | 15 | 1.6 | uncertain |
| TP11-12 SA#1 | 2011 | 0.25 | 0.7 | Overburden | Wolf | Pit Surface | 8.3 | 0.40 | 1.6 | 26 | 31 | 0.024 | 0.020 | < 0.01 | 0.75 | 30 | 25 | 41 | 34 | non PAG |
| ***BULK ARD - WOLF Overburden*** | | | | | | | | - | | **32** | **24** | | **-** | | **1.4** | **22** | **31** | **17** | **23** | **non PAG** |
| MINIMUM | | | | | | | 5.5 | 0.36 | 0.031 | 0.51 | -12 | <0.005 | <0.01 | <0.01 | 0.31 | -12 | 0.19 | -38 | 1.6 | |
| MAXIMUM | | | | | | | 8.3 | 30 | 1.6 | 26 | 31 | 0.024 | 0.020 | <0.01 | 0.75 | 30 | 25 | 41 | 34 | |
| MEDIAN | | | | | | | 6.3 | 0.40 | 0.34 | 5.6 | 4.8 | nc | nc | nc | 0.31 | 4.5 | 5.3 | 15 | 18 | |
| AVERAGE | | | | | | | 5.9 | 10 | 0.65 | 11 | 7.9 | nc | nc | nc | 0.42 | 7.5 | 10 | 6.1 | 18 | |
| STANDARD DEVIATION | | | | | | | nc | 14 | 0.67 | 11 | 18 | nc | nc | nc | 0.19 | 18 | 11 | 33 | 13 | |
| 75TH PERCENTILE | | | | | | | nc | 30 | 1.6 | 26 | 31 | nc | nc | nc | 0.64 | 30 | 25 | 41 | 34 | |

Notes:

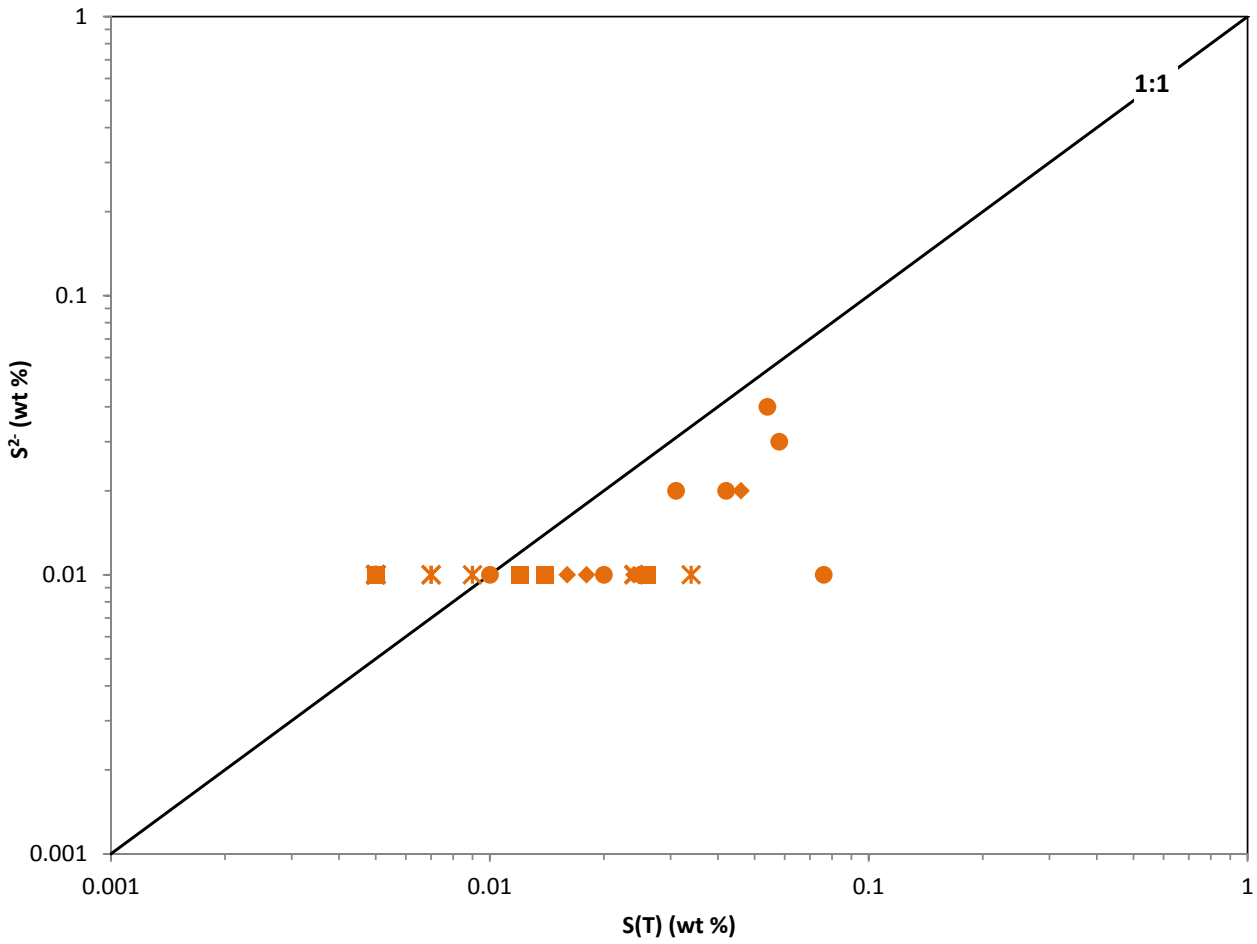
S(T)=total sulphur; S(SO4)=sulphate sulphur; S(S2-)=sulphide sulphur; TC = Total Carbon; TIC=total inorganic carbon

CaNP = carbonate neutralization potential (based on $CO_3$ content); NP = neutralization potential; AP = acid potential

ARD = Acid Rock Drainage; NPR = Net Potential Ratio (NP/AP); Net NP = Net Neutralisation Potential (NP-AP); PAG = Potentially Acid Generating

[1] ARD potential based on INAC (1992) and MEND (2009) using CaNPR and NPR (i.e. where different ARD potentials are defined the unit is considered uncertain).

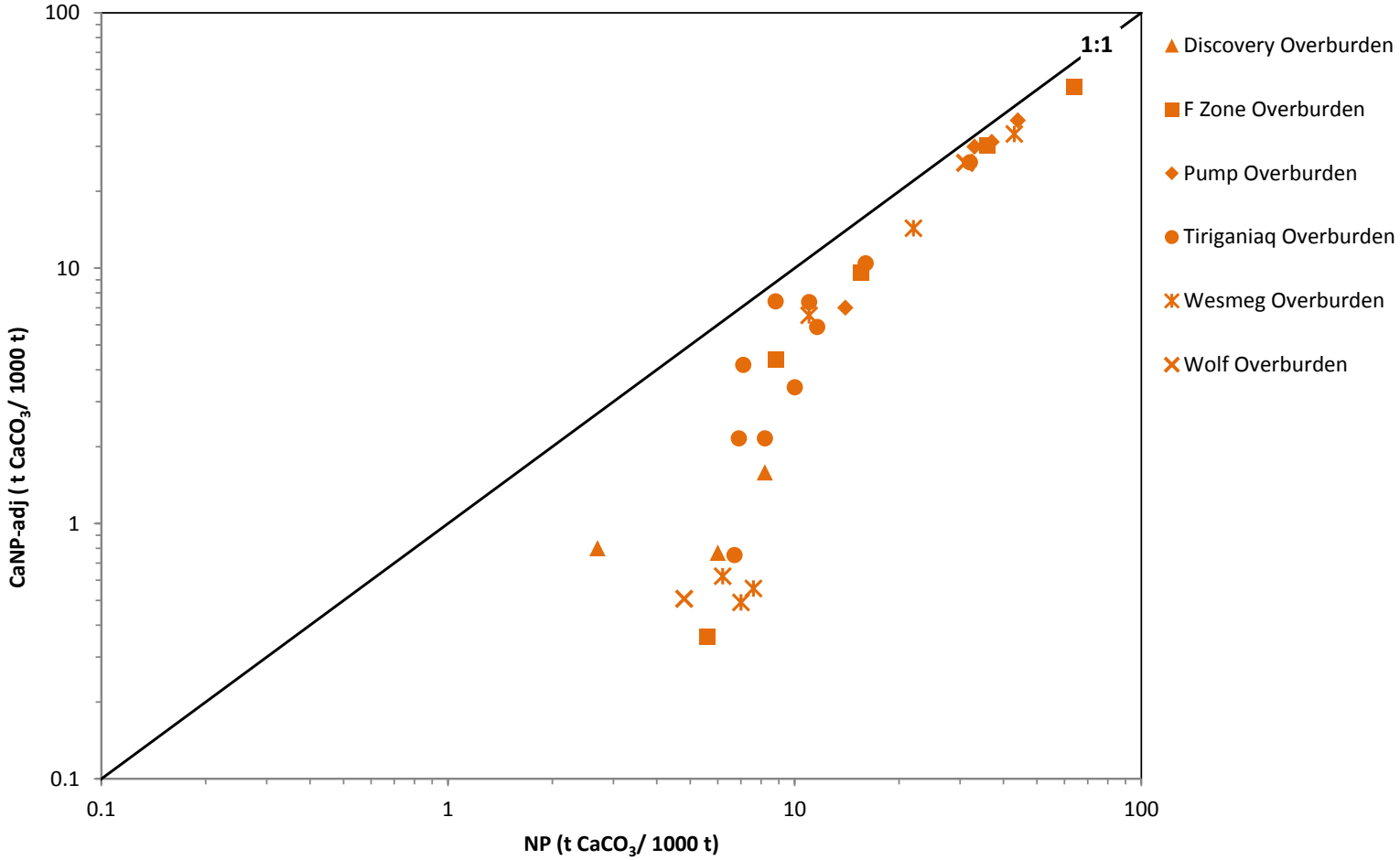
Bulk ARD = Sum NP/Sum AP




Note:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Total Sulphur (S(T)) versus Sulphide Sulphur ($S^{2-}$)** | | | |
| | | **All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | | Prepared DH | Date Mar-14 | Project N° 13-1428-0007 | |
| | | Checked AJS | | | |
| | | Reviewed VJB | | Figure D.3-1 | |

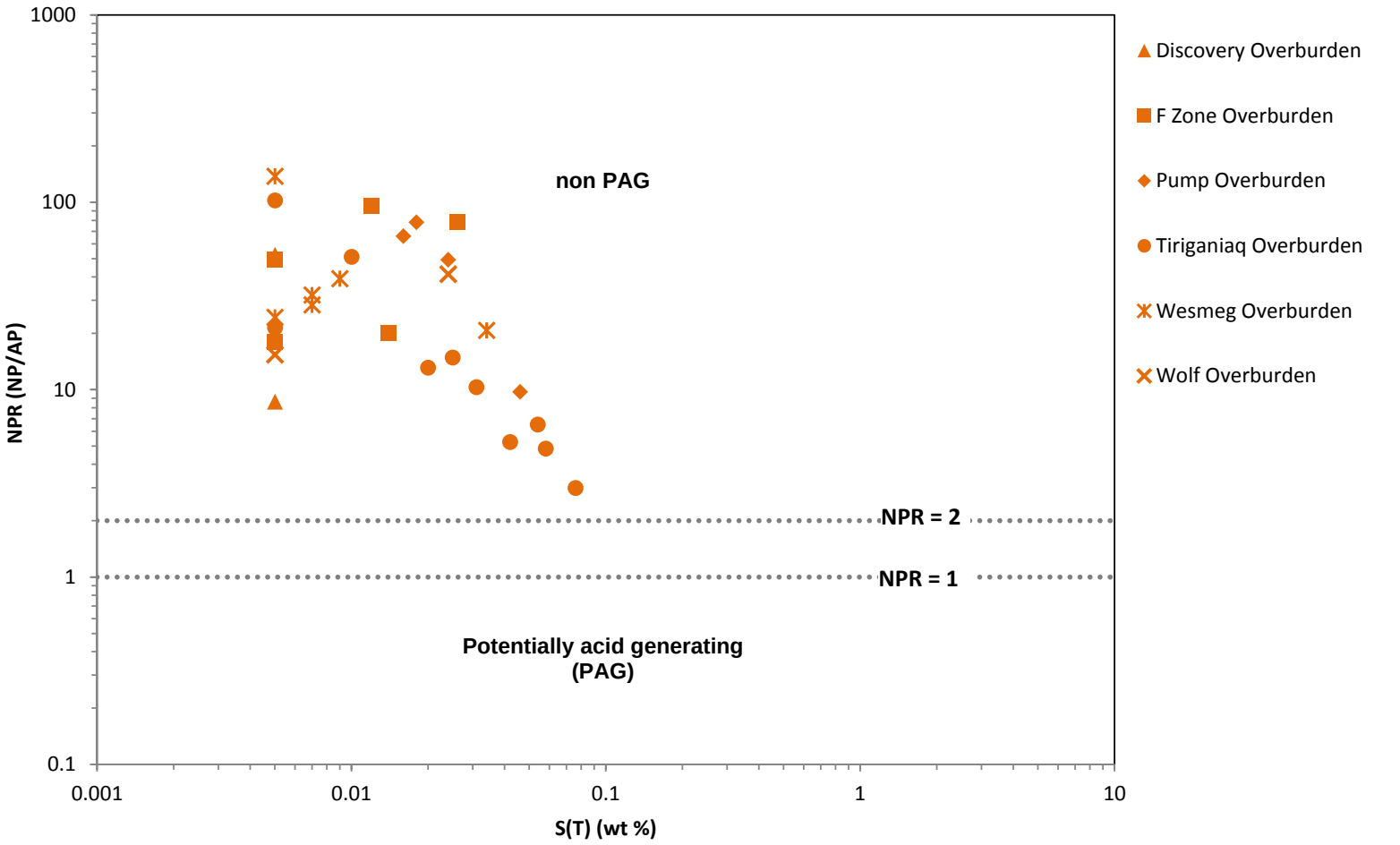
N:\Active\2013\0_Mining\13-1428-0007 (5000-5200) AEM_Meliadine IR responses\FEIS_Comment address\geochemistry files\waste rock\
AEM_static_FIGURES OVBN_4April2014.xlsx




Note:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)
CaNP-adj values less than zero are plotted as 0.1 t $CaCO_3$ / 1000 t

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Neutralization Potential (NP) versus Adjusted Carbonate NP (CaNP-adj)** | | | |
| | | **All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | | Prepared DH | Date Mar-14 | Project N° | 13-1428-0007 |
| | | Checked AJS | | | |
| | | Reviewed VJB | | Figure | D.3-2 |

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AEM_static_FIGURES OVBN_4April2014.xlsx



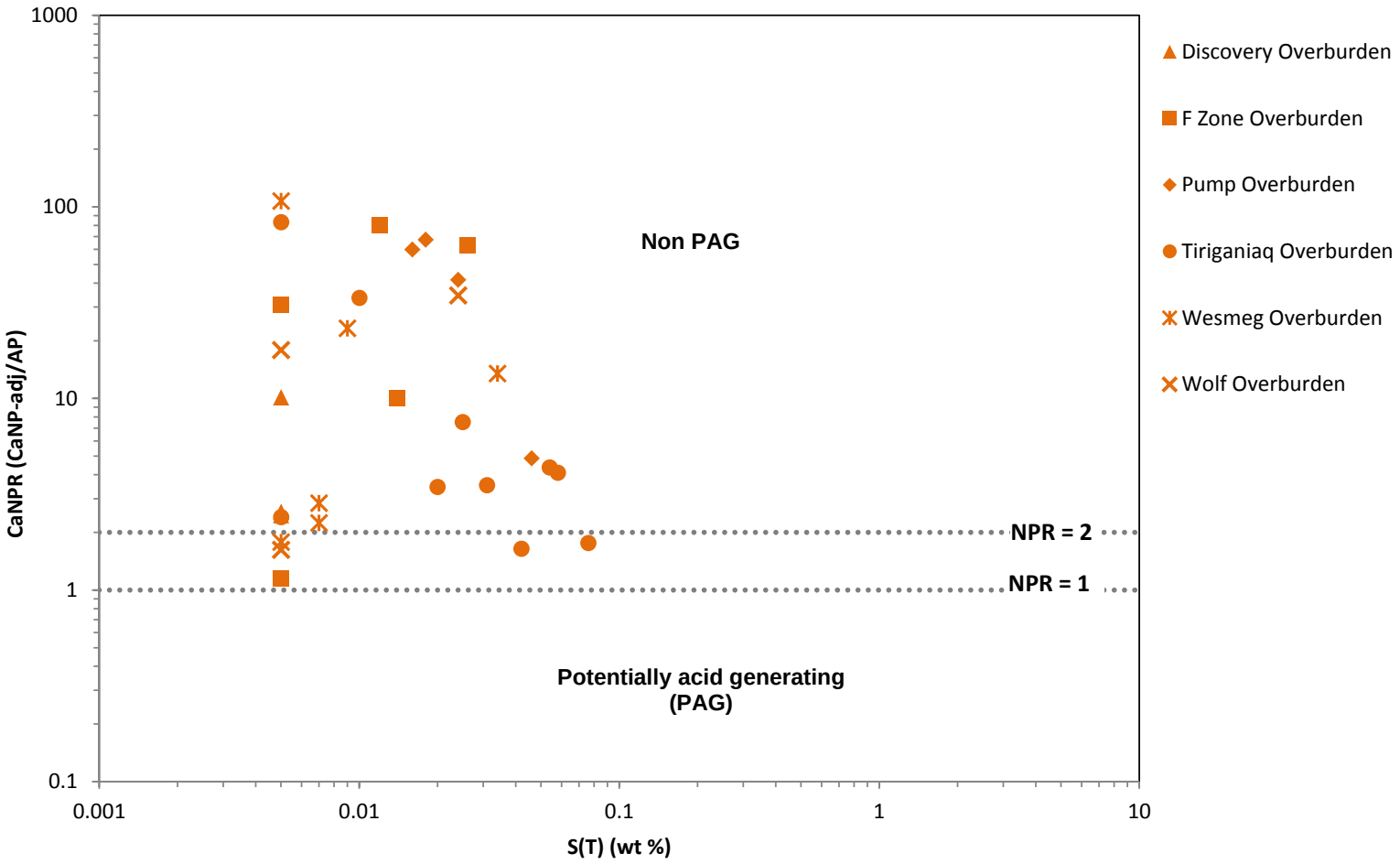

Notes:

$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)

NPR values less than zero are plotted as 0.1

| | | |
|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Total Sulphur (S(T)) versus Net Potential Ratio (NPR)**<br>**All Deposits** |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared: DH; Date: Mar-14; Project N°: 13-1428-0007<br>Checked: AJS<br>Reviewed: VJB; Figure: D.3-3 | |

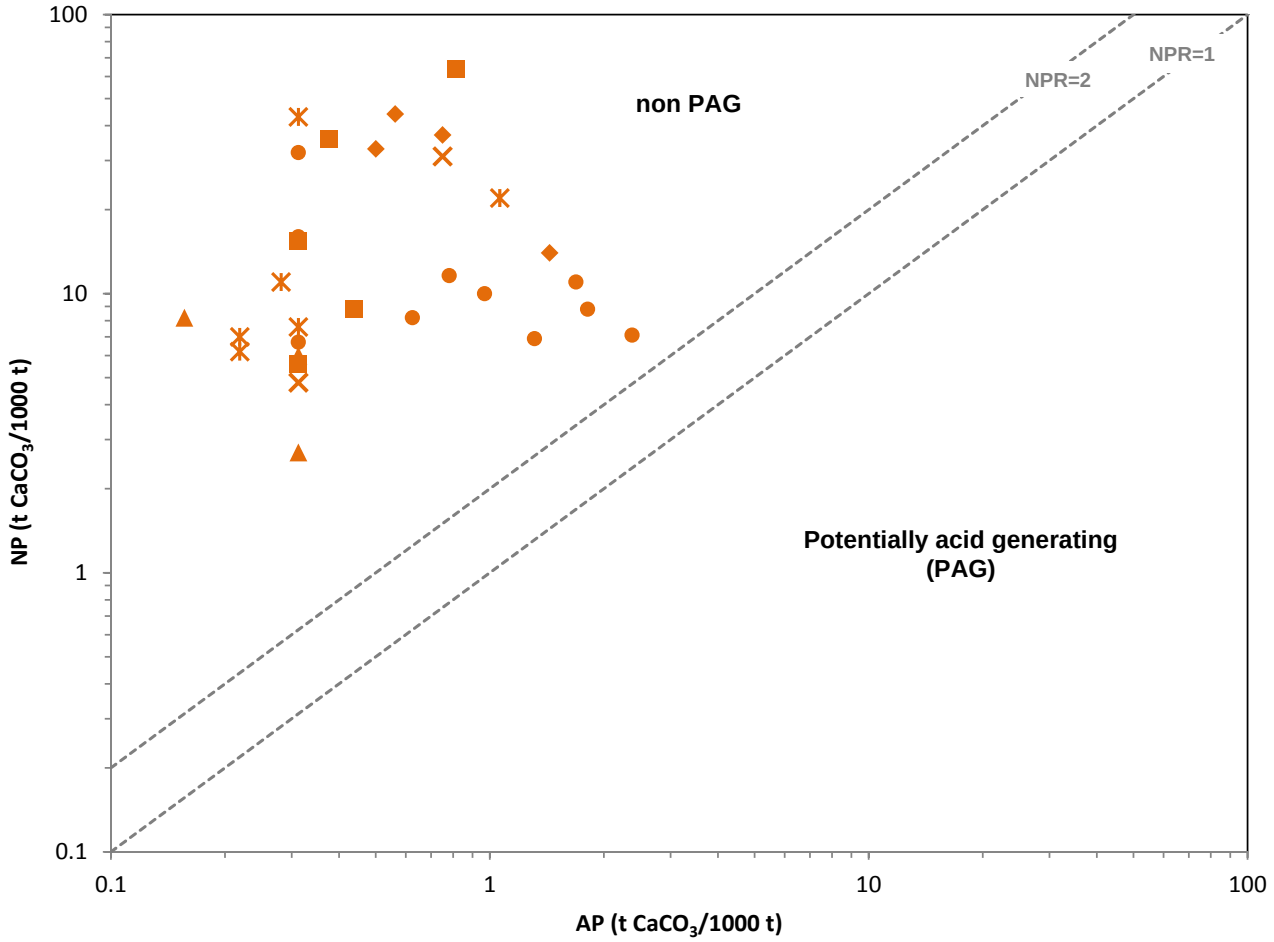
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AEM_static_FIGURES OVBN_4April2014.xlsx




Notes:
$S^{2-}$ values less than method detection limit (MDL) are plotted as MDL values ($S^{2-}$ = 0.01%)
CaNPR values less than zero are plotted as 0.1

| | | |
|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Total Sulphur (S(T)) versus Adjusted Carbonate NPR (CaNPR-adj)** |
| | | **All Deposits** |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared DH / Date Mar-14 / Project N° 13-1428-0007<br>Checked AJS<br>Reviewed VJB / Figure D.3-4 | |

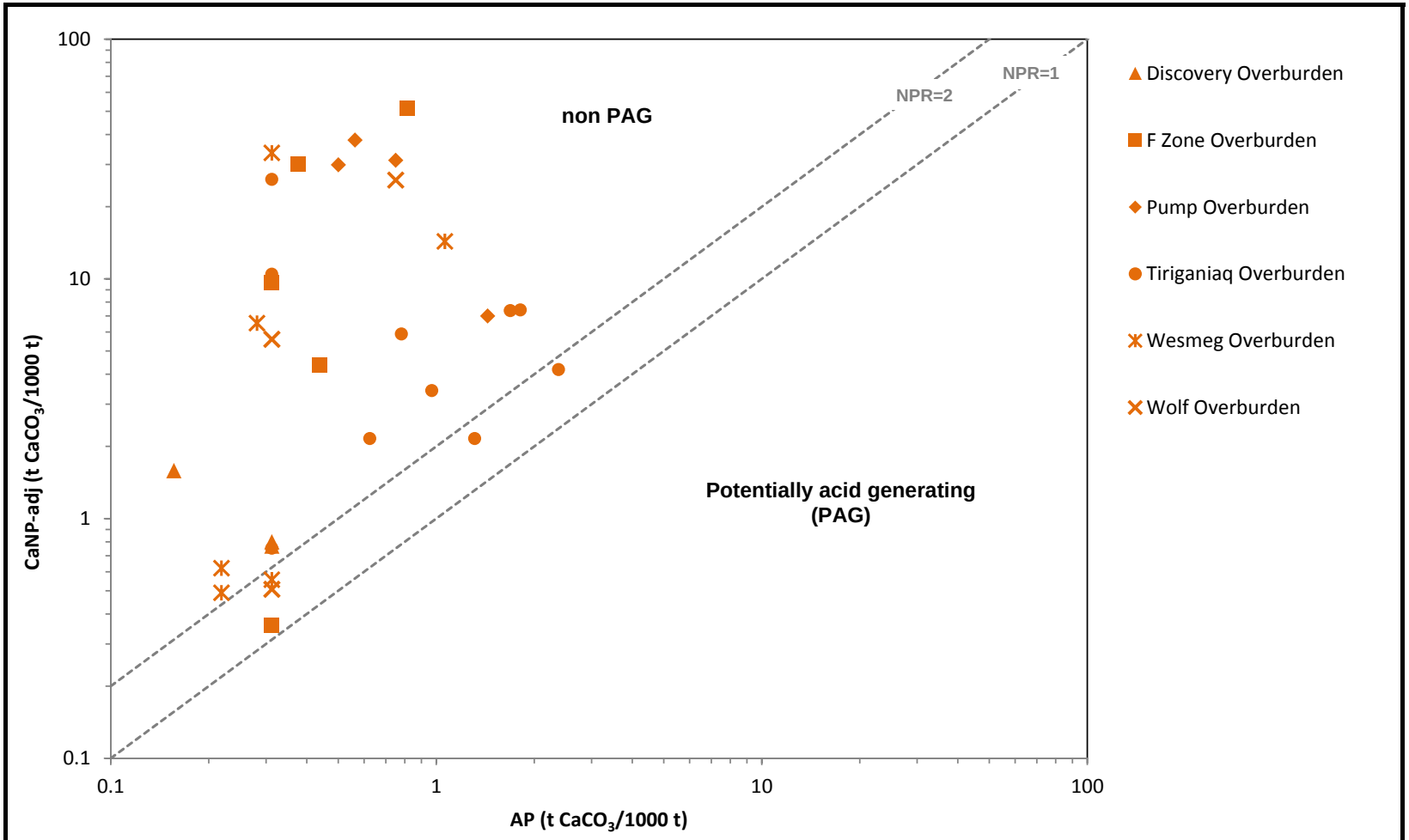
N:\Active\2013\0_Mining\13-1428-0007 (5000-5200) AEM_Meliadine IR responses\FEIS_Comment address\geochemistry files\waste rock\
AEM_static_FIGURES OVBN_4April2014.xlsx




Note:
$S^{2-}$ values less than method detection plotted as detection limit, resulting in AP values equal to 0.31
NP values less than zero are plotted as 0.1 t $CaCO_3$ / 1000 t

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Overburden Static Testing | Acid Potential (AP) versus Neutralization Potential (NP) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared DH | Date Mar-14 | Project N° 13-1428-0007 | |
| | | Checked AJS | | | |
| | | Reviewed VJB | | Figure D.3-5 | |

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AEM_static_FIGURES OVBN_4April2014.xlsx




Note:
$S^{2-}$ values less than method detection plotted as detection limit, resulting in AP values equal to 0.31
CaNP-adj values less than zero are plotted as 0.1 t $CaCO_3$ / 1000 t

| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | Overburden Static Testing | Acid Potential (AP) versus Adjusted Carbonate NP (CaNP-adj) | | | |
| | | All Deposits | | | |
| Meliadine Property, Nunavut<br>Agnico Eagle Mines Ltd. | | Prepared DH | Date Mar-14 | Project N° 13-1428-0007 | |
| | | Checked AJS | | | |
| | | Reviewed VJB | | Figure D.3-6 | |

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AEM_static_FIGURES OVBN_4April2014.xlsx

# D.4 Short Term Metal Leach Test Results: Tables and Figures

# D.4: Shake Flask Extraction Results
## Overburden - All Deposits
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | 6.0 - 9.5 | | | | | | | | 0.5 | | | | | | | 0.3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | pH | Conductivity | Alkalinity | Cl | SO4 | Hg | Ag | Al[4] | As | B | Be | Bi | Ca | Cd[3] | Co | Cr[2] | Cu[3] | Fe | K |
| | | from (m) | to (m) | | | | units | uS/cm | mg/L as CaCO3 | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Disc SS1 | 2009 | 0 | 0.38 | Overburden | Discovery | Pit surface | 7.6 | 64 | 34 | 0.50 | 1.2 | < 0.0001 | 0.00003 | 0.72 | 0.018 | 0.035 | < 0.00002 | 0.00002 | 7.8 | 0.00001 | 0.0020 | 0.0018 | 0.022 | 0.94 | 3.9 |
| Disc SS2 | 2009 | 0 | 0.33 | Overburden | Discovery | Pit surface | 6.7 | 18 | 5.0 | 0.50 | 0.30 | < 0.0001 | 0.00003 | 0.89 | 0.011 | 0.067 | 0.00003 | 0.00005 | 1.1 | 0.00002 | 0.0065 | 0.0032 | 0.023 | 1.5 | 0.9 |
| Disc SS3 | 2009 | 0 | 0.28 | Overburden | Discovery | Pit surface | 6.9 | 22 | 5.0 | 0.50 | 3.0 | < 0.0001 | 0.00002 | 0.76 | 0.009 | 0.057 | < 0.00002 | 0.00003 | 1.0 | 0.00001 | 0.0023 | 0.0020 | 0.014 | 1.4 | 1.6 |
| | | | | | | MINIMUM | 6.7 | 18 | 5.0 | 0.50 | 0.3 | <0.0001 | 0.00002 | 0.72 | 0.009 | 0.035 | <0.00002 | 0.00002 | 1.0 | 0.00001 | 0.0020 | 0.0018 | 0.014 | 0.94 | 0.9 |
| | | | | | | MAXIMUM | 7.6 | 64 | 34 | 0.50 | 3.0 | <0.0001 | 0.00003 | 0.89 | 0.018 | 0.067 | 0.00003 | 0.00005 | 7.8 | 0.00002 | 0.0065 | 0.0032 | 0.023 | 1.5 | 3.9 |
| | | | | | | MEDIAN | 6.9 | 22 | 5.0 | 0.50 | 1.2 | nc | 0.00003 | 0.76 | 0.011 | 0.057 | nc | 0.00003 | 1.1 | 0.00001 | 0.0023 | 0.0020 | 0.022 | 1.4 | 1.6 |
| | | | | | | AVERAGE | 7.1 | 35 | 15 | 0.50 | 1.5 | nc | 0.00003 | 0.79 | 0.013 | 0.053 | nc | 0.00003 | 3.3 | 0.00002 | 0.0036 | 0.0023 | 0.019 | 1.3 | 2.1 |
| | | | | | | STANDARD DEVIATION | 0.5 | 25 | 17 | 0.0 | 1.4 | nc | 0.00001 | 0.09 | 0.005 | 0.017 | nc | 0.00002 | 3.9 | 0.00001 | 0.0025 | 0.0008 | 0.0045 | 0.31 | 1.6 |
| | | | | | | 75TH PERCENTILE | 7.2 | 43 | 20 | 0.50 | 2.1 | nc | 0.00003 | 0.83 | 0.014 | 0.062 | nc | 0.00004 | 4.5 | 0.00002 | 0.0044 | 0.0026 | 0.022 | 1.5 | 2.8 |
| FZ-SS-10 | 2009 | 0 | >0.2 | Overburden | F Zone | Pit surface | 7.4 | 91 | 30 | 0.70 | 14 | < 0.0001 | < 0.00001 | 0.87 | 0.013 | 0.37 | < 0.00002 | 0.00003 | 9.1 | 0.00002 | 0.0028 | 0.0031 | 0.016 | 1.3 | 0.8 |
| FZ-SS-6 | 2009 | 0 | 0.35 | Overburden | F Zone | Pit surface | 7.3 | 64 | 25 | 2.1 | 5.2 | < 0.0001 | 0.00004 | 0.71 | 0.020 | 0.41 | 0.00003 | 0.00002 | 4.6 | 0.00002 | 0.0024 | 0.0025 | 0.013 | 1.6 | 0.9 |
| FZ-SS-7 | 2009 | 0 | 0.36 | Overburden | F Zone | Pit surface | 7.9 | 137 | 66 | 0.60 | 7.6 | < 0.0001 | < 0.00001 | 0.31 | 0.020 | 0.34 | < 0.00002 | < 0.00001 | 17 | 0.00004 | 0.0010 | 0.0015 | 0.016 | 0.93 | 2.1 |
| FZ-SS-8 | 2009 | 0 | 0.42 | Overburden | F Zone | Pit surface | 7.9 | 138 | 61 | 1.9 | 10 | < 0.0001 | < 0.00001 | 0.48 | 0.017 | 0.31 | < 0.00002 | < 0.00001 | 18 | 0.00001 | 0.0006 | 0.0011 | 0.0059 | 0.52 | 2.0 |
| FZ-SS-9 | 2009 | 0 | 0.4 | Overburden | F Zone | Pit surface | 7.7 | 94 | 46 | 0.60 | 4.4 | < 0.0001 | < 0.00001 | 0.77 | 0.012 | 0.32 | < 0.00002 | < 0.00001 | 12 | 0.00001 | 0.0011 | 0.0025 | 0.011 | 1.2 | 0.9 |
| | | | | | | MINIMUM | 7.3 | 64 | 25 | 0.60 | 4.4 | <0.0001 | <0.00001 | 0.31 | 0.012 | 0.31 | <0.00002 | <0.00001 | 4.6 | 0.00001 | 0.0006 | 0.0011 | 0.0059 | 0.52 | 0.8 |
| | | | | | | MAXIMUM | 7.9 | 138 | 66 | 2.1 | 14 | <0.0001 | 0.00004 | 0.87 | 0.020 | 0.41 | 0.00003 | 0.00003 | 18 | 0.00004 | 0.0028 | 0.0031 | 0.016 | 1.6 | 2.1 |
| | | | | | | MEDIAN | 7.7 | 94 | 46 | 0.70 | 7.6 | nc | nc | 0.71 | 0.017 | 0.34 | nc | nc | 12 | 0.00002 | 0.0011 | 0.0025 | 0.013 | 1.2 | 0.9 |
| | | | | | | AVERAGE | 7.6 | 105 | 46 | 1.2 | 8.2 | nc | nc | 0.63 | 0.017 | 0.35 | nc | nc | 12 | 0.00002 | 0.0016 | 0.0021 | 0.012 | 1.1 | 1.3 |
| | | | | | | STANDARD DEVIATION | 0.3 | 32 | 18 | 0.75 | 3.9 | nc | nc | 0.23 | 0.004 | 0.040 | nc | nc | 5.7 | 0.00001 | 0.0010 | 0.0008 | 0.0043 | 0.40 | 0.7 |
| | | | | | | 75TH PERCENTILE | 7.9 | 137 | 61 | 1.9 | 10 | nc | nc | 0.77 | 0.020 | 0.37 | nc | nc | 17 | 0.00002 | 0.0024 | 0.0025 | 0.016 | 1.3 | 2.0 |
| TP11-01 SA#2 | 2011 | 0.13 | 0.34 | Overburden | Pump | Pit Surface | 9.0 | - | - | 0.60 | 15 | < 0.0001 | 0.00003 | 0.39 | 0.019 | 0.081 | < 0.00002 | 0.00001 | 16 | 0.00002 | 0.0009 | 0.0018 | 0.0096 | 0.76 | 3.6 |
| TP11-01 SA#3 | 2011 | 0.34 | 1.11 | Overburden | Pump | Pit Surface | 8.6 | - | - | 0.30 | 4.0 | < 0.0001 | < 0.00001 | 0.23 | 0.029 | 0.086 | < 0.00002 | < 0.00001 | 12 | 0.00001 | 0.0003 | 0.0010 | 0.0044 | 0.33 | 1.8 |
| TP11-02 SA#1 | 2011 | 0 | 0.36 | Overburden | Pump | Pit Surface | 8.8 | - | - | 0.60 | 4.1 | < 0.0001 | < 0.00001 | 0.26 | 0.034 | 0.080 | < 0.00002 | < 0.00001 | 15 | 0.00005 | 0.0010 | 0.0018 | 0.012 | 0.59 | 2.3 |
| TP11-02 SA#2 | 2011 | 0.36 | 0.45 | Overburden | Pump | Pit Surface | 8.7 | - | - | 0.60 | 47 | < 0.0001 | < 0.00001 | 0.21 | 0.012 | 0.088 | < 0.00002 | < 0.00001 | 32 | 0.00002 | 0.0004 | 0.0008 | 0.0049 | 0.27 | 4.6 |
| | | | | | | MINIMUM | 8.6 | nc | nc | 0.30 | 4.0 | <0.0001 | <0.00001 | 0.21 | 0.012 | 0.080 | <0.00002 | < 0.00001 | 12 | 0.00001 | 0.0003 | 0.0008 | 0.0044 | 0.27 | 1.8 |
| | | | | | | MAXIMUM | 9.0 | nc | nc | 0.60 | 47 | <0.0001 | 0.00003 | 0.39 | 0.034 | 0.088 | <0.00002 | 0.00001 | 32 | 0.00005 | 0.0010 | 0.0018 | 0.012 | 0.76 | 4.6 |
| | | | | | | MEDIAN | 8.8 | nc | nc | 0.60 | 9.6 | nc | nc | 0.25 | 0.024 | 0.084 | nc | nc | 16 | 0.00002 | 0.0006 | 0.0014 | 0.0073 | nc | 2.9 |
| | | | | | | AVERAGE | 8.8 | nc | nc | 0.53 | 18 | nc | nc | 0.27 | 0.023 | 0.084 | nc | nc | 19 | 0.00002 | 0.0006 | 0.0014 | 0.0076 | nc | 3.1 |
| | | | | | | STANDARD DEVIATION | 0.1 | nc | nc | 0.15 | 20 | nc | nc | 0.08 | 0.010 | 0.004 | nc | nc | 9 | 0.00002 | 0.0004 | 0.0005 | 0.0035 | nc | 1.3 |
| | | | | | | 75TH PERCENTILE | 8.9 | nc | nc | 0.60 | 23 | nc | nc | 0.29 | 0.030 | 0.087 | nc | nc | 20 | 0.00003 | 0.0009 | 0.0018 | 0.010 | nc | 3.8 |
| SS-1 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 7.1 | 48 | 16 | 0.70 | 6.5 | < 0.0001 | 0.00002 | 0.80 | 0.019 | 0.36 | < 0.00002 | 0.00002 | 1.8 | 0.00001 | 0.0027 | 0.0020 | 0.011 | 1.6 | 0.9 |
| SS-2 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 7.0 | 52 | 15 | 1.0 | 6.9 | < 0.0001 | 0.00010 | 0.71 | 0.021 | 0.97 | < 0.00002 | 0.00005 | 1.3 | 0.00002 | 0.0014 | 0.0028 | 0.0044 | 0.89 | 2.0 |
| SS-3 | 2009 | 0 | 0.55 | Overburden | Tiriganiaq | Pit surface | 7.0 | 37 | 13 | 0.50 | 5.0 | < 0.0001 | 0.00002 | 1.02 | 0.007 | 0.33 | < 0.00002 | 0.00001 | 0.76 | 0.00001 | 0.0012 | 0.0023 | 0.0040 | 1.2 | 1.0 |
| SS-4 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 7.2 | 80 | 31 | 1.4 | 8.8 | < 0.0001 | 0.00001 | 0.23 | 0.008 | 0.63 | < 0.00002 | 0.00002 | 6.9 | 0.00001 | 0.0004 | 0.0010 | 0.012 | 0.63 | 1.6 |
| SS-5 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 6.9 | 54 | 10 | 5.4 | 6.6 | < 0.0001 | 0.00004 | 0.98 | 0.021 | 0.36 | < 0.00002 | 0.00002 | 1.3 | 0.00002 | 0.0037 | 0.0023 | 0.011 | 2.1 | 2.1 |
| TP11-04 SA#0 | 2011 | 0 | 0.09 | Overburden | Tiriganiaq | Pit Surface | 8.0 | - | - | 5.9 | 7.4 | < 0.0001 | 0.00006 | 0.20 | 0.003 | 0.34 | < 0.00002 | 0.00020 | 9.4 | 0.00006 | 0.0029 | 0.0010 | 0.0037 | 0.34 | 6.0 |
| TP11-04 SA#1 | 2011 | 0.09 | 0.37 | Overburden | Tiriganiaq | Pit Surface | 8.3 | - | - | 35 | 3.4 | < 0.0001 | < 0.00001 | 0.21 | 0.015 | 0.12 | < 0.00002 | < 0.00001 | 23 | 0.00005 | 0.0022 | 0.0011 | 0.0038 | 0.27 | 4.5 |
| TP11-04 SA#2 | 2011 | 0.37 | 1.04 | Overburden | Tiriganiaq | Pit Surface | 8.8 | - | - | 2.2 | 10 | < 0.0001 | < 0.00001 | 0.70 | 0.023 | 0.13 | 0.00003 | < 0.00001 | 14 | 0.00002 | 0.0010 | 0.0021 | 0.0088 | 0.70 | 2.0 |
| TP11-05 SA#1 | 2011 | 0.5 | 1 | Overburden | Tiriganiaq | Pit Surface | 9.1 | - | - | 0.20 | 3.2 | < 0.0001 | 0.00002 | 0.62 | 0.020 | 0.11 | 0.00003 | 0.00004 | 4.3 | 0.00003 | 0.0031 | 0.0028 | 0.013 | 0.88 | 1.7 |
| TP11-06 SA#1 | 2011 | 0 | 0.76 | Overburden | Tiriganiaq | Pit Surface | 9.0 | - | - | 0.40 | 1.5 | < 0.0001 | < 0.00001 | 0.37 | 0.016 | 0.12 | 0.00002 | < 0.00001 | 17 | 0.00002 | 0.0005 | 0.0015 | 0.0081 | 0.57 | 1.7 |
| | | | | | | MINIMUM | 6.9 | 37 | 10 | 0.2 | 1.5 | <0.0001 | < 0.00001 | 0.20 | 0.003 | 0.11 | < 0.00002 | < 0.00001 | 0.76 | 0.00001 | 0.0004 | 0.0010 | 0.0037 | 0.27 | 0.9 |
| | | | | | | MAXIMUM | 9.1 | 80 | 31 | 35 | 10 | <0.0001 | 0.00010 | 1.02 | 0.023 | 0.97 | 0.00003 | 0.00020 | 23 | 0.00006 | 0.0037 | 0.0028 | 0.013 | 2.1 | 6.0 |
| | | | | | | MEDIAN | 7.6 | 52 | 15 | 1.2 | 6.6 | nc | 0.00002 | 0.66 | 0.018 | 0.33 | 0.00002 | 0.00002 | 5.6 | 0.00002 | 0.0018 | 0.0021 | 0.0085 | 0.79 | 1.9 |
| | | | | | | AVERAGE | 7.8 | 54 | 17 | 5.3 | 5.9 | nc | 0.00003 | 0.58 | 0.015 | 0.34 | 0.00002 | 0.00004 | 7.9 | 0.00002 | 0.0019 | 0.0019 | 0.0079 | 0.92 | 2.4 |
| | | | | | | STANDARD DEVIATION | nc | 16 | 8.2 | 11 | 2.6 | nc | 0.00003 | 0.31 | 0.007 | 0.27 | 0.00000 | 0.00006 | 7.7 | 0.00002 | 0.0012 | 0.0007 | 0.0036 | 0.57 | 1.6 |
| | | | | | | 75TH PERCENTILE | nc | 54 | 16 | 4.6 | 7.3 | nc | 0.00004 | 0.78 | 0.021 | 0.36 | 0.00002 | 0.00004 | 12.7 | 0.00002 | 0.0028 | 0.0023 | 0.011 | 1.2 | 2.1 |
| TP11-07 SA#1 | 2011 | 0.2 | 0.35 | Overburden | Wesmeg | Pit Surface | 7.7 | - | - | 0.7 | 25 | < 0.0001 | < 0.00001 | 0.31 | 0.030 | 0.093 | < 0.00002 | 0.00001 | 11 | 0.00001 | 0.00073 | 0.0008 | 0.0054 | 0.35 | 2.1 |
| TP11-07 SA#2 | 2011 | 0.5 | 0.75 | Overburden | Wesmeg | Pit Surface | 8.7 | - | - | 1.4 | 18 | < 0.0001 | < 0.00001 | 0.25 | 0.030 | 0.073 | < 0.00002 | < 0.00001 | 18 | 0.00001 | 0.00037 | 0.0007 | 0.0042 | 0.32 | 3.4 |
| TP11-08 SA#1 | 2011 | 0 | 0.39 | Overburden | Wesmeg | Pit Surface | 7.8 | - | - | 0.4 | 6.3 | < 0.0001 | < 0.00001 | 0.39 | 0.004 | 0.17 | 0.00002 | 0.00002 | 0.46 | 0.00001 | 0.00044 | 0.0026 | 0.0054 | 0.51 | 1.1 |
| TP11-08 SA#2 | 2011 | 0.39 | 1.09 | Overburden | Wesmeg | Pit Surface | 8.9 | - | - | 0.6 | 2.2 | < 0.0001 | 0.00002 | 0.46 | 0.005 | 0.14 | 0.00003 | 0.00002 | 1.7 | 0.00001 | 0.00045 | 0.0024 | 0.010 | 0.65 | 1.1 |
| TP11-09 SA#1 | 2011 | 0 | 0.54 | Overburden | Wesmeg | Pit Surface | 8.0 | - | - | 0.8 | 3.4 | < 0.0001 | 0.00002 | 0.48 | 0.007 | 0.067 | < 0.00002 | < 0.00001 | 14 | 0.00001 | 0.00018 | 0.0008 | 0.0062 | 0.23 | 2.1 |
| TP11-09 SA#2 | 2011 | 0.54 | 0.95 | Overburden | Wesmeg | Pit Surface | 8.9 | - | - | 0.4 | 2.8 | < 0.0001 | < 0.00001 | 0.37 | 0.004 | 0.12 | 0.00002 | < 0.00001 | 15 | 0.00001 | 0.00033 | 0.0015 | 0.0079 | 0.42 | 1.8 |
| | | | | | | MINIMUM | 7.7 | nc | nc | 0.4 | 2.2 | <0.0001 | <0.00001 | 0.25 | 0.004 | 0.067 | < 0.00002 | < 0.00001 | 0.46 | 0.00001 | 0.00018 | 0.0007 | 0.0042 | 0.23 | 1.1 |
| | | | | | | MAXIMUM | 8.9 | nc | nc | 1.4 | 25 | <0.0001 | 0.00002 | 0.48 | 0.030 | 0.17 | 0.00003 | 0.00002 | 18 | 0.00001 | 0.00073 | 0.0026 | 0.010 | 0.65 | 3.4 |
| | | | | | | MEDIAN | 8.4 | nc | nc | 0.7 | 4.9 | nc | nc | 0.38 | 0.006 | 0.11 | 0.00002 | 0.00001 | 12 | 0.00001 | 0.00040 | 0.0012 | 0.0058 | 0.38 | 1.9 |
| | | | | | | AVERAGE | 8.3 | nc | nc | 0.7 | 9.6 | nc | nc | 0.38 | 0.013 | 0.11 | 0.00002 | 0.00001 | 9.9 | 0.00001 | 0.00041 | 0.0015 | 0.0065 | 0.41 | 1.9 |
| | | | | | | STANDARD DEVIATION | 0.6 | nc | nc | 0.4 | 9.6 | nc | nc | 0.09 | 0.013 | 0.042 | 0.00000 | 0.00001 | 7.2 | 0.00000 | 0.00018 | 0.0009 | 0.0021 | 0.15 | 0.9 |
| | | | | | | 75TH PERCENTILE | 8.8 | nc | nc | 0.8 | 15 | nc | nc | 0.44 | 0.024 | 0.14 | 0.00002 | 0.00002 | 15 | 0.00001 | 0.00044 | 0.0022 | 0.0075 | 0.49 | 2.1 |
| TP11-10 SA#1 | 2011 | 0 | 0.14 | Overburden | Wolf | Pit Surface | 8.0 | - | - | 100 | 6.4 | < 0.0001 | 0.00002 | 0.17 | 0.020 | 1.6 | < 0.00002 | 0.0024 | 92 | 0.00018 | 0.047 | 0.0068 | 0.016 | 9.3 | 3.8 |
| TP11-10 SA#2 | 2011 | 0.14 | 0.39 | Overburden | Wolf | Pit Surface | 7.7 | - | - | 1.3 | 2.5 | < 0.0001 | 0.00001 | 0.27 | 0.006 | 0.20 | < 0.00002 | 0.00002 | 0.79 | 0.00001 | 0.00046 | 0.0032 | 0.011 | 0.74 | 0.9 |
| TP11-12 SA#1 | 2011 | 0.25 | 0.7 | Overburden | Wolf | Pit Surface | 9.1 | - | - | 0.30 | 2.9 | < 0.0001 | < 0.00001 | 0.38 | 0.040 | 0.071 | < 0.00002 | 0.00002 | 10 | 0.00001 | 0.0012 | 0.0012 | 0.0099 | 0.81 | 3.0 |
| | | | | | | MINIMUM | 7.7 | nc | nc | 0.30 | 2.5 | <0.0001 | < 0.00001 | 0.17 | 0.006 | 0.071 | <0.00002 | 0.00002 | 0.79 | 0.00001 | 0.00046 | 0.0012 | 0.0099 | 0.74 | 0.9 |
| | | | | | | MAXIMUM | 9.1 | nc | nc | 100 | 6.4 | <0.0001 | 0.00002 | 0.38 | 0.040 | 1.6 | <0.00002 | 0.0024 | 92 | 0.00018 | 0.047 | 0.0068 | 0.016 | 9.3 | 3.8 |
| | | | | | | MEDIAN | 8.0 | nc | nc | 1.3 | 2.9 | nc | 0.00001 | 0.27 | 0.020 | 0.20 | nc | 0.00002 | 10 | 0.00001 | 0.0012 | 0.0032 | 0.011 | 0.81 | 3.0 |
| | | | | | | AVERAGE | 8.3 | nc | nc | 34 | 3.9 | nc | 0.00001 | 0.27 | 0.022 | 0.61 | nc | 0.00082 | 34 | 0.00007 | 0.016 | 0.0037 | 0.012 | 3.6 | 2.6 |
| | | | | | | STANDARD DEVIATION | nc | nc | nc | 57 | 2.1 | nc | 0.000006 | 0.11 | 0.017 | 0.83 | nc | 0.0014 | 50 | 0.00010 | 0.027 | 0.0028 | 0.0035 | 4.9 | 1.5 |
| | | | | | | 75TH PERCENTILE | nc | nc | nc | 51 | 4.7 | nc | 0.00002 | 0.33 | 0.030 | 0.88 | nc | 0.0012 | 51 | 0.00010 | 0.024 | 0.0050 | 0.013 | 5.0 | 3.4 |

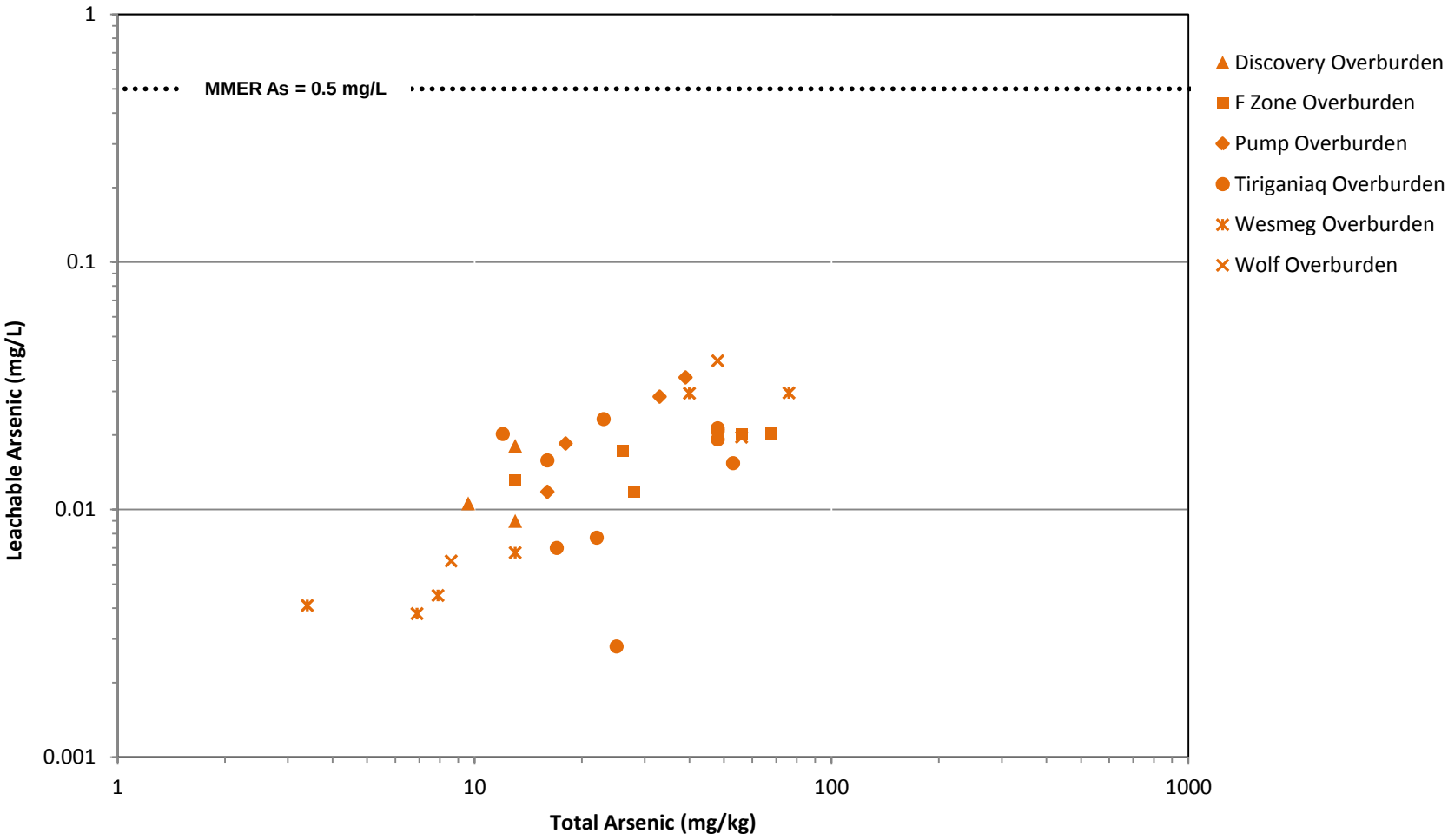
Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.

# D.4: Shake Flask Extraction Results
## Overburden - All Deposits
## Meliadine Property, Nunavut
## Agnico-Eagle Mines Ltd.



| Metal Mine Effluent Regulation (MMER) monthly mean concentration[1] (mg/L) | | | | | | | | | | 0.5 | 0.2 | | | | | | | | | | | 0.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | Year (analysis) | Interval | | Rock Type | Deposit | Location | Li | Mg | Mn | Mo | Na | Ni[3] | Pb[3] | Sb | Se | Sn | Sr | Ti | Tl | U | V | W | Y | Zn |
| | | from (m) | to (m) | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Disc SS1 | 2009 | 0 | 0.38 | Overburden | Discovery | Pit surface | 0.003 | 0.7 | 0.017 | 0.0019 | 3.7 | 0.0099 | 0.0009 | 0.0006 | < 0.001 | 0.00007 | 0.031 | 0.03 | < 0.00002 | 0.0003 | 0.0025 | 0.0002 | 0.00088 | 0.005 |
| Disc SS2 | 2009 | 0 | 0.33 | Overburden | Discovery | Pit surface | 0.001 | 0.4 | 0.057 | 0.0006 | 2.4 | 0.0130 | 0.0013 | 0.0004 | < 0.001 | 0.00004 | 0.006 | 0.04 | 0.00002 | 0.0005 | 0.0028 | 0.0001 | 0.00254 | 0.032 |
| Disc SS3 | 2009 | 0 | 0.28 | Overburden | Discovery | Pit surface | < 0.001 | 0.4 | 0.020 | 0.0009 | 2.4 | 0.0076 | 0.0012 | 0.0004 | < 0.001 | 0.00007 | 0.005 | 0.04 | < 0.00002 | 0.0002 | 0.0025 | < 0.00003 | 0.00111 | 0.007 |
| | | | | | | MINIMUM | < 0.001 | 0.4 | 0.017 | 0.0006 | 2.4 | 0.0076 | 0.0009 | 0.0004 | <0.001 | 0.00004 | 0.005 | 0.03 | <0.00002 | 0.0002 | 0.0025 | <0.00003 | 0.00088 | 0.005 |
| | | | | | | MAXIMUM | 0.003 | 0.7 | 0.057 | 0.0019 | 3.7 | 0.0130 | 0.0013 | 0.0006 | <0.001 | 0.00007 | 0.031 | 0.04 | 0.00002 | 0.0005 | 0.0028 | 0.0002 | 0.00254 | 0.032 |
| | | | | | | MEDIAN | nc | 0.4 | 0.020 | 0.0009 | 2.4 | 0.0099 | 0.0012 | 0.0004 | nc | 0.00007 | 0.006 | 0.04 | nc | 0.0003 | 0.0025 | nc | 0.00111 | 0.007 |
| | | | | | | AVERAGE | nc | 0.5 | 0.031 | 0.0011 | 2.8 | 0.0102 | 0.0011 | 0.0005 | nc | 0.00006 | 0.014 | 0.04 | nc | 0.0003 | 0.0026 | nc | 0.00151 | 0.015 |
| | | | | | | STANDARD DEVIATION | nc | 0.2 | 0.022 | 0.0007 | 0.7 | 0.0027 | 0.0002 | 0.0001 | nc | 0.00002 | 0.014 | 0.01 | nc | 0.0001 | 0.0002 | nc | 0.00090 | 0.015 |
| | | | | | | 75TH PERCENTILE | nc | 0.6 | 0.038 | 0.0014 | 3.0 | 0.0115 | 0.0013 | 0.0005 | nc | 0.00007 | 0.018 | 0.04 | nc | 0.0004 | 0.0027 | nc | 0.00183 | 0.020 |
| FZ-SS-10 | 2009 | 0 | >0.2 | Overburden | F Zone | Pit surface | 0.002 | 1.0 | 0.092 | 0.0014 | 8.0 | 0.0072 | 0.0016 | 0.0013 | < 0.001 | 0.00002 | 0.030 | 0.03 | < 0.00002 | 0.0001 | 0.0044 | 0.0001 | 0.00064 | 0.017 |
| FZ-SS-6 | 2009 | 0 | 0.35 | Overburden | F Zone | Pit surface | 0.002 | 0.9 | 0.048 | 0.0003 | 7.7 | 0.0089 | 0.0022 | 0.0003 | < 0.001 | 0.00008 | 0.036 | 0.02 | 0.00002 | 0.0001 | 0.0019 | < 0.00003 | 0.00064 | 0.038 |
| FZ-SS-7 | 2009 | 0 | 0.36 | Overburden | F Zone | Pit surface | 0.003 | 1.3 | 0.016 | 0.0039 | 9.2 | 0.0046 | 0.0008 | 0.0004 | < 0.001 | 0.00002 | 0.064 | 0.01 | < 0.00002 | 0.0003 | 0.0018 | 0.0001 | 0.00045 | 0.020 |
| FZ-SS-8 | 2009 | 0 | 0.42 | Overburden | F Zone | Pit surface | 0.003 | 1.3 | 0.012 | 0.0031 | 8.5 | 0.0026 | 0.0005 | 0.0007 | < 0.001 | 0.00003 | 0.056 | 0.02 | < 0.00002 | 0.0006 | 0.0023 | 0.0002 | 0.00026 | 0.010 |
| FZ-SS-9 | 2009 | 0 | 0.4 | Overburden | F Zone | Pit surface | 0.002 | 1.0 | 0.033 | 0.0010 | 7.3 | 0.0058 | 0.0006 | 0.0004 | < 0.001 | 0.00002 | 0.034 | 0.03 | 0.00002 | 0.0002 | 0.0026 | 0.0001 | 0.00088 | 0.013 |
| | | | | | | MINIMUM | 0.002 | 0.9 | 0.012 | 0.0003 | 7.3 | 0.0026 | 0.0005 | 0.0003 | <0.001 | 0.00002 | 0.030 | 0.01 | < 0.00002 | < 0.00002 | 0.0018 | <0.00003 | 0.00026 | 0.010 |
| | | | | | | MAXIMUM | 0.003 | 1.3 | 0.092 | 0.0039 | 9.2 | 0.0089 | 0.0022 | 0.0013 | <0.001 | 0.00008 | 0.064 | 0.03 | 0.00002 | 0.0006 | 0.0044 | 0.0002 | 0.00088 | 0.038 |
| | | | | | | MEDIAN | 0.002 | 1.0 | 0.033 | 0.0014 | 8.0 | 0.0058 | 0.0008 | 0.0004 | nc | 0.00002 | 0.036 | 0.02 | nc | 0.0002 | 0.0023 | 0.0001 | 0.00064 | 0.017 |
| | | | | | | AVERAGE | 0.002 | 1.1 | 0.040 | 0.0019 | 8.1 | 0.0058 | 0.0011 | 0.0006 | nc | 0.00003 | 0.044 | 0.02 | nc | 0.0003 | 0.0026 | 0.0001 | 0.00057 | 0.020 |
| | | | | | | STANDARD DEVIATION | 0.001 | 0.2 | 0.032 | 0.0015 | 0.7 | 0.0024 | 0.0007 | 0.0004 | nc | 0.00003 | 0.015 | 0.01 | nc | 0.0002 | 0.0011 | 0.0000 | 0.00023 | 0.011 |
| | | | | | | 75TH PERCENTILE | 0.003 | 1.3 | 0.048 | 0.0031 | 8.5 | 0.0072 | 0.0016 | 0.0007 | nc | 0.00003 | 0.056 | 0.03 | nc | 0.0003 | 0.0026 | 0.0001 | 0.00064 | 0.020 |
| TP11-01 SA#2 | 2011 | 0.13 | 0.34 | Overburden | Pump | Pit Surface | 0.002 | 1.9 | 0.011 | 0.0013 | 18 | 0.0023 | 0.0009 | 0.0007 | < 0.001 | 0.00013 | 0.040 | 0.02 | < 0.00002 | 0.0005 | 0.0036 | 0.0003 | 0.00046 | 0.002 |
| TP11-01 SA#3 | 2011 | 0.34 | 1.11 | Overburden | Pump | Pit Surface | 0.003 | 1.7 | 0.0040 | 0.0054 | 14 | 0.0012 | 0.0003 | 0.0005 | < 0.001 | 0.00005 | 0.028 | 0.02 | < 0.00002 | 0.0005 | 0.0017 | 0.0002 | 0.00016 | 0.001 |
| TP11-02 SA#1 | 2011 | 0 | 0.36 | Overburden | Pump | Pit Surface | 0.002 | 0.9 | 0.012 | 0.0049 | 13 | 0.0054 | 0.0008 | 0.0004 | < 0.001 | 0.00004 | 0.053 | 0.02 | < 0.00002 | 0.0012 | 0.0022 | 0.0001 | 0.00046 | 0.004 |
| TP11-02 SA#2 | 2011 | 0.36 | 0.45 | Overburden | Pump | Pit Surface | 0.003 | 1.2 | 0.0023 | 0.0242 | 14 | 0.0020 | 0.0003 | 0.0011 | 0.001 | 0.00004 | 0.108 | 0.01 | < 0.00002 | 0.0043 | 0.0018 | 0.0001 | 0.00020 | < 0.001 |
| | | | | | | MINIMUM | 0.002 | 0.9 | 0.0023 | 0.0013 | 13 | 0.0012 | 0.0003 | 0.0004 | < 0.001 | < 0.00001 | 0.028 | 0.01 | <0.00002 | 0.0005 | 0.0017 | 0.0001 | 0.00016 | < 0.001 |
| | | | | | | MAXIMUM | 0.003 | 1.9 | 0.012 | 0.0242 | 18 | 0.0054 | 0.0009 | 0.0011 | 0.001 | 0.00013 | 0.108 | 0.02 | <0.00002 | 0.0043 | 0.0036 | 0.0003 | 0.00046 | 0.004 |
| | | | | | | MEDIAN | nc | 1.4 | 0.0074 | 0.0052 | 14 | 0.0022 | 0.0005 | 0.0006 | nc | nc | 0.046 | nc | nc | 0.0009 | 0.0020 | 0.0002 | 0.00033 | 0.002 |
| | | | | | | AVERAGE | nc | 1.4 | 0.0072 | 0.0089 | 14 | 0.0027 | 0.0006 | 0.0007 | nc | nc | 0.057 | nc | nc | 0.0016 | 0.0023 | 0.0002 | 0.00032 | 0.002 |
| | | | | | | STANDARD DEVIATION | nc | 0.5 | 0.0048 | 0.0103 | 2.2 | 0.0018 | 0.0003 | 0.0003 | nc | nc | 0.035 | nc | nc | 0.0018 | 0.0009 | 0.0001 | 0.00016 | 0.001 |
| | | | | | | 75TH PERCENTILE | nc | 1.7 | 0.011 | 0.0101 | 15 | 0.0031 | 0.0008 | 0.0008 | nc | nc | 0.067 | nc | nc | 0.0020 | 0.0025 | 0.0003 | 0.00046 | 0.003 |
| SS-1 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 0.001 | 0.6 | 0.065 | 0.0012 | 8.2 | 0.0095 | 0.0023 | 0.0003 | < 0.001 | 0.00003 | 0.024 | 0.02 | < 0.00002 | 0.0001 | 0.0017 | < 0.00003 | 0.00050 | 0.035 |
| SS-2 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 0.005 | 0.4 | 0.028 | 0.0004 | 11 | 0.0028 | 0.0008 | 0.0004 | < 0.001 | 0.00003 | 0.024 | 0.02 | < 0.00002 | 0.0001 | 0.0020 | 0.0000 | 0.00041 | **0.603** |
| SS-3 | 2009 | 0 | 0.55 | Overburden | Tiriganiaq | Pit surface | 0.001 | 0.4 | 0.043 | 0.0009 | 8.3 | 0.0027 | 0.0011 | 0.0004 | < 0.001 | 0.00002 | 0.018 | 0.02 | < 0.00002 | 0.0001 | 0.0017 | 0.0001 | 0.00037 | 0.041 |
| SS-4 | 2009 | 0 | 0.4 | Overburden | Tiriganiaq | Pit surface | 0.002 | 1.3 | 0.0064 | 0.0021 | 11 | 0.0035 | 0.0004 | 0.0004 | < 0.001 | 0.00003 | 0.049 | 0.01 | < 0.00002 | 0.0002 | 0.0016 | 0.0000 | 0.00026 | 0.152 |
| SS-5 | 2009 | 0 | 0.35 | Overburden | Tiriganiaq | Pit surface | 0.001 | 0.5 | 0.084 | 0.0009 | 8.9 | 0.0097 | 0.0023 | 0.0003 | < 0.001 | 0.00001 | 0.024 | 0.02 | < 0.00002 | 0.0001 | 0.0018 | 0.0001 | 0.00048 | 0.051 |
| TP11-04 SA#0 | 2011 | 0 | 0.09 | Overburden | Tiriganiaq | Pit Surface | 0.008 | 4.6 | 0.13 | 0.0005 | 20 | 0.0050 | 0.0007 | 0.0003 | < 0.001 | 0.00002 | 0.047 | 0.00 | < 0.00002 | 0.0001 | 0.0004 | 0.0001 | 0.00012 | 0.003 |
| TP11-04 SA#1 | 2011 | 0.09 | 0.37 | Overburden | Tiriganiaq | Pit Surface | 0.013 | 2.1 | 0.0097 | 0.0028 | 14 | 0.0026 | 0.0003 | 0.0004 | < 0.001 | 0.00006 | 0.200 | 0.01 | < 0.00002 | 0.0001 | 0.0008 | 0.0002 | 0.00022 | 0.002 |
| TP11-04 SA#2 | 2011 | 0.37 | 1.04 | Overburden | Tiriganiaq | Pit Surface | 0.003 | 1.9 | 0.0095 | 0.0022 | 17 | 0.0047 | 0.0006 | 0.0005 | < 0.001 | 0.00007 | 0.039 | 0.05 | < 0.00002 | 0.0003 | 0.0030 | 0.0002 | 0.00051 | 0.003 |
| TP11-05 SA#1 | 2011 | 0.5 | 1 | Overburden | Tiriganiaq | Pit Surface | 0.003 | 0.7 | 0.073 | 0.0064 | 17 | 0.0066 | 0.0024 | 0.0003 | < 0.001 | 0.00004 | 0.013 | 0.04 | < 0.00002 | 0.0003 | 0.0038 | 0.0002 | 0.00083 | 0.006 |
| TP11-06 SA#1 | 2011 | 0 | 0.76 | Overburden | Tiriganiaq | Pit Surface | 0.003 | 1.1 | 0.0069 | 0.0049 | 13 | 0.0032 | 0.0006 | 0.0004 | < 0.001 | 0.00006 | 0.083 | 0.03 | < 0.00002 | 0.0004 | 0.0039 | 0.0001 | 0.00046 | 0.002 |
| | | | | | | MINIMUM | 0.001 | 0.4 | 0.0064 | 0.0004 | 8.2 | 0.0026 | 0.0003 | 0.0003 | <0.001 | 0.00001 | 0.013 | 0.00 | <0.00002 | 0.0001 | 0.0004 | <0.00003 | 0.00012 | 0.002 |
| | | | | | | MAXIMUM | 0.013 | 4.6 | 0.13 | 0.0064 | 20 | 0.0097 | 0.0024 | 0.0005 | <0.001 | 0.00007 | 0.200 | 0.05 | <0.00002 | 0.0004 | 0.0039 | 0.0002 | 0.00083 | 0.603 |
| | | | | | | MEDIAN | 0.003 | 0.9 | 0.036 | 0.0016 | 12 | 0.0041 | 0.0007 | 0.0004 | nc | 0.00003 | 0.032 | 0.02 | nc | 0.0001 | 0.0018 | 0.0001 | 0.00044 | 0.021 |
| | | | | | | AVERAGE | 0.004 | 1.4 | 0.046 | 0.0022 | 13 | 0.0050 | 0.0011 | 0.0004 | nc | 0.00004 | 0.052 | 0.02 | nc | 0.0002 | 0.0021 | 0.0001 | 0.00042 | 0.090 |
| | | | | | | STANDARD DEVIATION | 0.004 | 1.3 | 0.042 | 0.0020 | 4.2 | 0.0027 | 0.0008 | 0.0001 | nc | 0.00002 | 0.056 | 0.01 | nc | 0.0001 | 0.0012 | 0.0001 | 0.00019 | 0.186 |
| | | | | | | 75TH PERCENTILE | 0.005 | 1.7 | 0.071 | 0.0026 | 16 | 0.0062 | 0.0020 | 0.0004 | nc | 0.00006 | 0.049 | 0.02 | nc | 0.0002 | 0.0028 | 0.0002 | 0.00050 | 0.049 |
| TP11-07 SA#1 | 2011 | 0.2 | 0.35 | Overburden | Wesmeg | Pit Surface | 0.002 | 1.2 | 0.1670 | 0.0092 | 11 | 0.0029 | 0.0005 | 0.0004 | < 0.001 | 0.00004 | 0.048 | 0.01 | < 0.00002 | 0.0004 | 0.0023 | 0.0001 | 0.00013 | 0.002 |
| TP11-07 SA#2 | 2011 | 0.5 | 0.75 | Overburden | Wesmeg | Pit Surface | 0.002 | 1.4 | 0.0054 | 0.0053 | 13 | 0.0027 | 0.0003 | 0.0004 | < 0.001 | 0.00003 | 0.061 | 0.01 | < 0.00002 | 0.0006 | 0.0009 | 0.0002 | 0.00010 | 0.001 |
| TP11-08 SA#1 | 2011 | 0 | 0.39 | Overburden | Wesmeg | Pit Surface | 0.006 | 0.2 | 0.0058 | 0.0004 | 13 | 0.0015 | 0.0006 | 0.0004 | < 0.001 | 0.00005 | 0.002 | 0.05 | < 0.00002 | 0.0001 | 0.0063 | < 0.00003 | 0.00035 | 0.002 |
| TP11-08 SA#2 | 2011 | 0.39 | 1.09 | Overburden | Wesmeg | Pit Surface | 0.001 | 0.3 | 0.0069 | 0.0011 | 13 | 0.0036 | 0.0007 | 0.0004 | < 0.001 | 0.00009 | 0.004 | 0.04 | < 0.00002 | 0.0002 | 0.0034 | 0.0001 | 0.00057 | 0.002 |
| TP11-09 SA#1 | 2011 | 0 | 0.54 | Overburden | Wesmeg | Pit Surface | 0.002 | 0.7 | 0.0042 | 0.0012 | 12 | 0.0022 | 0.0002 | 0.0005 | < 0.001 | 0.00011 | 0.071 | 0.01 | < 0.00002 | 0.0007 | 0.0025 | 0.0001 | 0.00021 | 0.002 |
| TP11-09 SA#2 | 2011 | 0.54 | 0.95 | Overburden | Wesmeg | Pit Surface | 0.004 | 0.8 | 0.0067 | 0.0029 | 13 | 0.0025 | 0.0006 | 0.0003 | < 0.001 | 0.00007 | 0.070 | 0.04 | < 0.00002 | 0.0010 | 0.0027 | 0.0003 | 0.00042 | 0.002 |
| | | | | | | MINIMUM | 0.001 | 0.2 | 0.0042 | 0.0004 | 11 | 0.0015 | 0.0002 | 0.0003 | <0.001 | 0.00003 | 0.002 | 0.01 | <0.00002 | 0.0001 | 0.0009 | <0.00003 | 0.00010 | 0.001 |
| | | | | | | MAXIMUM | 0.006 | 1.4 | 0.17 | 0.0092 | 13 | 0.0036 | 0.0007 | 0.0005 | <0.001 | 0.00011 | 0.071 | 0.05 | <0.00002 | 0.0010 | 0.0063 | 0.0003 | 0.00057 | 0.002 |
| | | | | | | MEDIAN | 0.002 | 0.7 | 0.0062 | 0.0020 | 13 | nc | 0.0005 | 0.0004 | nc | 0.00006 | 0.054 | 0.02 | nc | 0.0005 | 0.0026 | 0.0001 | 0.00028 | 0.002 |
| | | | | | | AVERAGE | 0.003 | 0.8 | 0.0327 | 0.0034 | 12 | nc | 0.0005 | 0.0004 | nc | 0.00007 | 0.042 | 0.02 | nc | 0.0005 | 0.0030 | 0.0001 | 0.00030 | 0.002 |
| | | | | | | STANDARD DEVIATION | 0.002 | 0.5 | 0.0658 | 0.0034 | 0.7 | nc | 0.0002 | 0.0001 | nc | 0.00003 | 0.032 | 0.02 | nc | 0.0003 | 0.0018 | 0.0001 | 0.00018 | 0.000 |
| | | | | | | 75TH PERCENTILE | 0.004 | 1.1 | 0.0069 | 0.0047 | 13 | nc | 0.0006 | 0.0004 | nc | 0.00009 | 0.068 | 0.04 | nc | 0.0007 | 0.0032 | 0.0002 | 0.00040 | 0.002 |
| TP11-10 SA#1 | 2011 | 0 | 0.14 | Overburden | Wolf | Pit Surface | 0.022 | 11 | 9.1 | 0.0477 | 91 | 0.0310 | 0.0012 | 0.0011 | 0.008 | 0.00018 | 0.325 | 0.01 | < 0.00002 | 0.0026 | 0.00920 | 0.0002 | 0.00139 | 0.003 |
| TP11-10 SA#2 | 2011 | 0.14 | 0.39 | Overburden | Wolf | Pit Surface | 0.005 | 0.2 | 0.012 | 0.0017 | 13 | 0.0014 | 0.0007 | 0.0004 | 0.002 | 0.00006 | 0.003 | 0.03 | < 0.00002 | 0.0005 | 0.00599 | 0.00004 | 0.00037 | 0.001 |
| TP11-12 SA#1 | 2011 | 0.25 | 0.7 | Overburden | Wolf | Pit Surface | 0.002 | 0.8 | 0.0093 | 0.0055 | 10 | 0.0054 | 0.0014 | 0.0004 | < 0.001 | 0.00003 | 0.025 | 0.01 | < 0.00002 | 0.0002 | 0.00113 | 0.0003 | 0.00029 | 0.007 |
| | | | | | | MINIMUM | 0.0020 | 0.2 | 0.0093 | 0.0017 | 10 | 0.0014 | 0.0007 | 0.0004 | <0.001 | 0.00003 | 0.003 | 0.01 | <0.00002 | 0.0002 | 0.00113 | 0.00004 | 0.00029 | 0.001 |
| | | | | | | MAXIMUM | 0.022 | 11.1 | 9.1 | 0.0477 | 91 | 0.0310 | 0.0014 | 0.0011 | 0.008 | 0.00018 | 0.325 | 0.03 | <0.00002 | 0.0026 | 0.0092 | 0.0003 | 0.00139 | 0.007 |
| | | | | | | MEDIAN | nc | 0.8 | 0.0117 | 0.0055 | 13 | 0.0054 | 0.0012 | 0.0004 | nc | 0.00006 | 0.025 | 0.01 | nc | 0.0005 | 0.0060 | 0.0002 | 0.00037 | 0.003 |
| | | | | | | AVERAGE | nc | 4.0 | 3.1 | 0.0183 | 38 | 0.0126 | 0.0011 | 0.0006 | nc | 0.00009 | 0.118 | 0.02 | nc | 0.0011 | 0.0054 | 0.0002 | 0.00069 | 0.004 |
| | | | | | | STANDARD DEVIATION | nc | 6.1 | 5.3 | 0.0255 | 46 | 0.0161 | 0.0003 | 0.0004 | nc | 0.00008 | 0.180 | 0.01 | nc | 0.0013 | 0.00406 | 0.0002 | 0.00061 | 0.003 |
| | | | | | | 75TH PERCENTILE | nc | 5.9 | 4.6 | 0.0266 | 52 | 0.0182 | 0.0013 | 0.0008 | nc | 0.00012 | 0.175 | 0.02 | nc | 0.0016 | 0.0076 | 0.0003 | 0.00088 | 0.005 |

Notes:
nc: not calculated
[1] MMER 2006 update. Maximum authorized monthly mean concentration.
[2] CEQG Freshwater aquatic life criteria for chromium depends on the valence of chromium ion.
In the above table, the Cr(VI) criterion of 0.001 mg/L is shown.
[3] CEQG Freshwater Aquatic Life Criteria are hardness dependant. Minimum value stated, for cadminum, hardness value of 50 mg/L assumed (no minimum value provided)
[4] CEQG Freshwater Aquatic Life Criterion for aluminun is pH dependant; assumes pH>6.5.




| | | | | | |
|---|---|---|---|---|---|
| Golder Associates | **Overburden Static Testing** | **Total Arsenic versus Leachable Arsenic**<br>**All Deposits** | | | |
| **Meliadine Property, Nunavut**<br>**Agnico Eagle Mines Ltd.** | Prepared | DH | Date | Sep-12 | Project N° 11-1428-0011 |
| | Checked | AJS | | | |
| | Reviewed | VJB | | | Figure **D.4-1** |

N:\Active\2011\0_Mining\11-1428-0011_Meliadine Engineering Ph6000 geochem\reports\Static-Kinetic\FINAL\appendices\Appendix D - Overburden\AEM_static_FIGURES_Appendix D\
AEM_OVBN_SFE_FIGURES_30Aug2012.xlsx

# APPENDIX E

## Report on Previous Geochemistry Studies (SRK Study)

# APPENDIX 1.

## ACID BASE ACCOUNTING

and

## METALS LEACHING ANALYSES

including

## TEST RESULTS

SRK Consulting
Engineers and Scientists

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Vancouver, B.C. V6E 3X2
Canada

vancouver@srk.com
www.srk.com

**Tel: 604.681.4196**
**Fax: 604.687.5532**

# *Memo*

| | | | |
|---|---|---|---|
| **To:** | Mark Balog | **Date:** | January 26, 2006 |
| **cc:** | | **From:** | Kelly Sexsmith |
| **Subject:** | Tiriganiaq Geochemistry | **Project #:** | 1CC024.00 |

## 1 Introduction

Comaplex Minerals is considering an underground exploration program in support of scoping studies for development of the Tiriganiaq gold deposit in Nunavut. The program would include excavation of an approximately 500 metre decline to gain access to the ore zones. The purpose of the program would be to confirm the continuity and grade of the ore lodes, and to obtain bulk sampling for metallurgical testing. Development of the underground decline will likely require a Class B water licence from the Nunavut Water Board. To support this application, Comaplex has asked SRK to provide an assessment of the potential for acid rock drainage and metal leaching from the waste rock, including recommendations for management of this material, and preliminary estimates of water quality.

Previous geochemical testing of the ore and waste rock was completed in conjunction with metallurgical testing programs completed in 1998 and 2001. The results indicated a mixed potential for acid rock drainage and metal leaching, with most of the hanging wall rock samples classified as non-acid generating, and most of the ore zone samples classified as having an uncertain potential for ARD. Further testing was recommended to improve the geological and spatial coverage of the sampling.

A supplemental testing program was initiated by SRK in November 2005. The first part of the program included acid base accounting to characterize the potential for ARD, and solids metal analyses to characterize the metal content of the samples. A limited number of these samples were selected for short-term leach extraction tests. This memo summarizes the results of the available testing data.

## 2 Geology and Mineralogy

A detailed description of the geological setting, the deposit geology and mineralogy is provided in a 2005 report by Strathcona Mineral Services Ltd. Features relevant to the geochemical assessment are summarized as follows.

The Tiriganiaq deposit is part of the Meliadine West property located approximately 25 km west northwest of Rankin Inlet. Rocks on the Meliadine West property are part of the Archean aged Rankin Inlet Greenstone belt. Gold mineralization at Tiriganiaq is principally hosted by a mesothermal quartz-vein dominated gold system occurring in a strongly sheared package of Archean turbiditic sediments and iron formations. The deposit is comprised of multiple loads of mineralization over a strike length of up to 1.5 km, sub-divided into the Tiriganiaq Main and West Zones. The mineralization is parallel to the dominant shear fabric that strikes east-west, and dips to

the north at an average angle of 60°. All of the rocks in the deposit area have been subjected to low to mid-grade greenschist grade metamorphism.

A typical cross section of the deposit is shown in Figure 1. The stratigraphic sequence is as follows:

- The structural hanging wall is comprised of clastic turbidite sediments of variable grey coloured greywacke-siltstone-mudstone beds from the **Sam Formation**, ranging in thickness from centimetres to decimetres. This unit also contains minor amounts of argillite.

- The Sam Formation overlies a diverse package of iron-rich rocks with interbedded magnetite, chert, chloritic mudstone and greywacke from the **Upper Iron Formation**. The top of this unit is marked by a laterally continuous iron formation. This unit is often mineralized.

- The **Tiriganiaq Formation** is comprised of finely laminated siltstone. It is commonly altered to a yellowish grey colour by sericite alteration, particularly near the contact with the Lower Fault. Graphitic argillite occurs sporadically near the base of this sequence, and is often coincident with the Lower Fault zone, which demarks the contact with the underlying Wesmeg Formation.

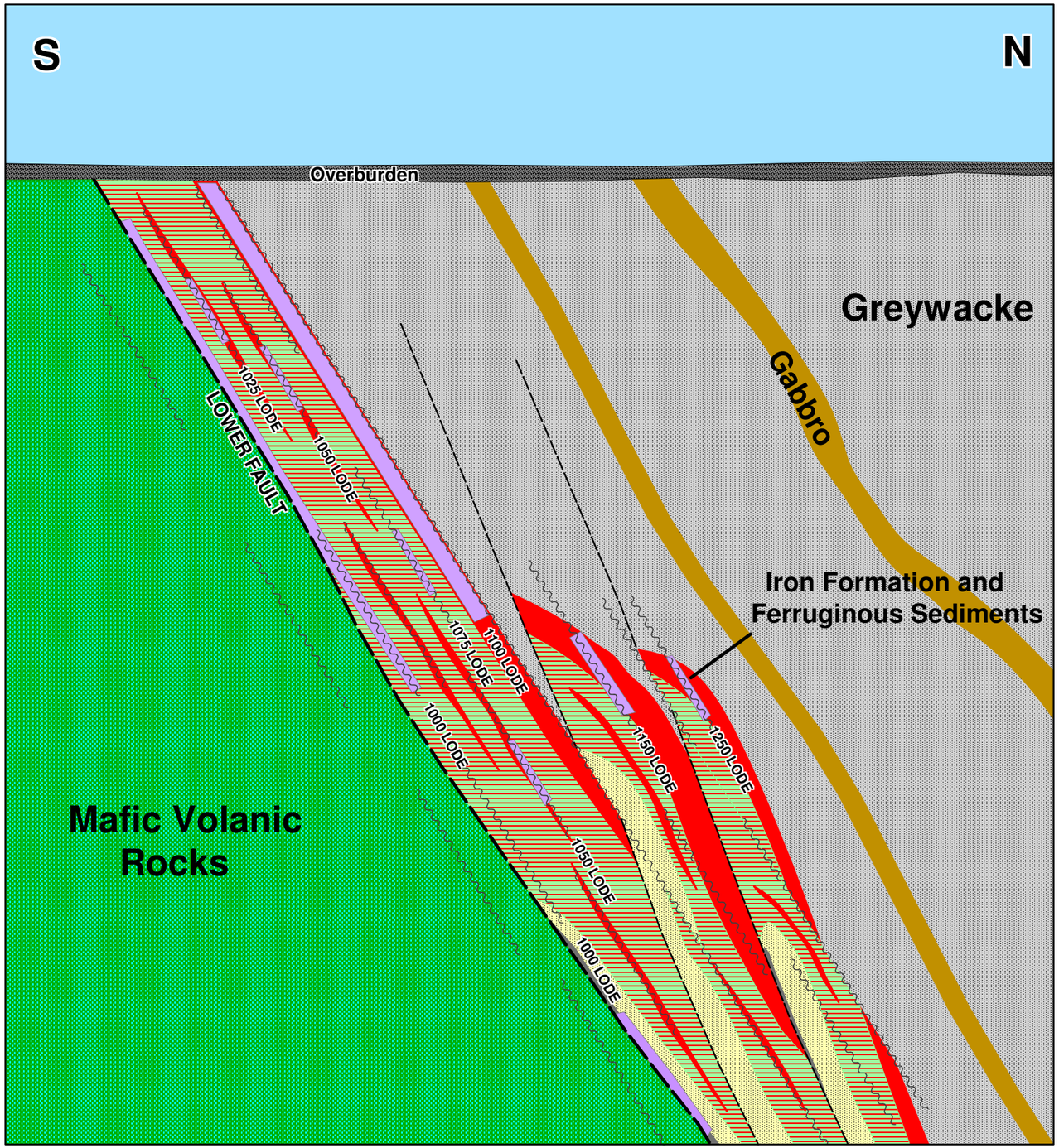
- The **Wesmeg Formation** is comprised mafic volcaniclastics, comprising the structural footwall of the deposit. These rocks are chlorite-rich near the Lower Fault, they can be highly schistose and sericite-carbonate altered.

Tiriganiaq is only one of several known gold occurrences on the property that occur near the faulted contact of sediments and mafic volcanic rocks. The Wolf North deposit located 3.5 km to the west is also associated with this contact, and is geologically analogous to this deposit. Other deposits on the property such as F, Pump, and Wolf Main differ in that they are hosted in lean, chert-rich, magnetite poor iron formations hosted in the Wesmeg Formation.

Gabbro dykes and sills of several ages as well as minor lamprophyre dykes are recognized on the Meliadine West property.

The proposed underground decline will be collared in the Sam Formation, and will ramp towards the ore zones. Therefore, most of the waste rock that will be produced will be from the Sam Formation. The relative proportions of each rock type will need to be defined for the water licence application.

Gold mineralization is directly associated with quart veins varying from thick laminated veins to wispy erratic stringers and stockwork. In general, quartz and quartz-ankerite veins tend to be mineralized, while quartz-calcite veins are commonly barren. Sulphide minerals occur in two main assemblages. The first, often associated with the iron formation and black argillite, includes wispy discontinuous laminations of pyrrhotite, pyrite, and chalcopyrite, typically parallel to the bedding. The second consists of coarse-grained clots of arsenopyrite and pyrrhotite associated with the quartz veining and gold mineralization. Both assemblages host minor local concentrations of galena and lesser amounts of sphalerite. Areas with strong gold mineralization are associated with hydrothermal sericite alteration. Coarse grained aggregates of carbonate often occur in conjunction with the quartz veins.




## Legend

- Proterozoic Gabbro
- Wesmeg Formation: Mafic Volcanic Rocks +/- Gabbro, Cherty Iron Formation, Minor Ultramafic Rocks
- LOWER FAULT
- Tiriganiaq Formation: Siltstone - Argillite Laminated
- Tiriganiaq Formation: Graphitic Argillite (Not visible at this scale)
- Upper Oxide Formation: Iron Formation +/- greywacke, siltstone, argillite
- Upper Oxide Formation: Chloritic Greywacke - Siltstone +/- Iron Formation
- Sam Formation: Greywacke / Siltstone +\- Argillite, Iron Formation
- Lode (Lode Name)
- Lower Fault
- Fault
- Shearing

0 50 100

Meters

Approximate Scale

CLIENT: COMAPLEX MINERALS CORP.

PROJECT: TIRIGANIAQ TECHNICAL REPORT

TITLE: Schematic Geological Cross Section Looking West

APPROVAL: D.A.D. | DATE: March 2005 | PROJECT No.: 336-2

STRATHCONA MINERAL SERVICES LIMITED
TORONTO - CANADA

File: Comaplex Database Files

Figure 7

## 3 Review of Earlier Testing Data

Acid base accounting data is available for ore, waste rock and overburden samples from the Tiriganiaq deposit. The testing was completed by Lakefield Research in conjunction with the metallurgical testing programs. Information on the testing programs was presented in a 1998 submission by WMC International Ltd., and reports by Lakefield Research. The testing programs are summarized as follows:

- 3 samples representing quartz vein type ore (Melmet 2), iron formation type ore (Melmet 3), and a sample representing the complete ore profile (Melmet 1) were tested in April 1997.
- 2 samples representing iron formation ore (Comp 1-3) and quartz vein type ore (Comp 4-5) were tested in January 1998. Metallurgical testing was also completed on these samples, and duplicate samples of the process residues were also produced.
- 18 samples of waste rock were tested in May 1998. These included 3 greywacke, 4 argillite and 2 mixed greywacke and argillite samples from the hanging wall, 3 unmineralized iron formation samples from the ore zone, and 6 volcanic samples from the footwall.
- 7 samples of overburden were collected from surficial material in this area.

Two ore samples from the nearby Wolf North deposit were also characterized in a 2001 metallurgical testing program by Lakefield Research (April 2001), and are relevant due to the similarity between this deposit and Tiriganiaq.

The locations of the samples are provided in Figures 2 and 3.

The results for these samples are provided in Appendix 1.

Ore samples had consistently alkaline paste pH's (8.2 to 8.8), moderately high carbonate concentrations (5.9% to 8.4%), and moderately high neutralization potentials (NP) (79 to 139 kg$CaCO_3$-eq/tonne). The NP and the carbonate content were strongly correlated, suggesting that the NP occurs primarily as carbonate minerals. This is consistent with the mineralogy of the deposit. Sulphur concentrations were also elevated (0.9% to 4.4%), with most of the sulphur occurring as sulphide, resulting in moderately elevated acid potentials (AP). The samples had consistently positive net neutralization potentials, and NP/AP ratios between 1.1 and 6.3, indicating that some samples had an uncertain potential for ARD, while others would likely be non-acid generating. In the absence of kinetic testing data, an NP/AP ratio of less than 3 is typically used as an indication that samples could have potential for acid generation, while samples with NP/AP ratios of less than 1 are considered likely to be acid generating. Three out of the five Tiriganiaq ore samples tested had NP/AP ratios between 1 and 3. The other two Tiriganiaq samples and both of the Wolf North samples had NP/AP ratios of greater than 3.

Waste rock samples also had consistently alkaline paste pH's and moderate to high neutralization potentials. In general, NP's were lower (45 to 118 kg $CaCO_3$ eq/tonne) in the hanging wall rocks than in the volcanic footwall rocks (219 to 296, with one outlier of 44 kg $CaCO_3$ eq/tonne). Sulphur concentrations ranged from 0.01% to 6.81%, with most samples having less than 0.5% sulphur. The sulphur occurred primarily as sulphide. Two of the hanging wall argillite samples had sulphide concentrations of 4.75 and 6.81% respectively and were noted to be from a fault zone and a zone of intense quartz/pyrrhotite veining respectively. These two samples had NP/AP ratios of less than 1, and NNP's of -35 and -95 kg $CaCO_3$ eq/tonne, and were classified as potentially acid generating. The other sixteen samples, including 7 hanging wall samples, 4 iron formation samples, and six volcanic samples had NP/AP ratios of greater than 3. The data indicate that the majority of the waste

rock is likely to be non-acid generating. However isolated zones of acid generating rock are likely to be present. Further testing was recommended to improve the spatial coverage of the sampling.

Overburden samples had negligible sulphur concentrations (0.01 to 0.02%) and low NP's (5 to 11 kg$CaCO_3$ eq/tonne, resulting in NP/AP ratios consistently greater than 10. The results indicate they are likely non-acid generating, but that they have limited excess buffering capacity.

# 4 Supplemental Testing Program

## 4.1 Samples

Samples were selected for testing by Comaplex minerals to represent the stratigraphy that the underground decline is likely to cross. A total of 48 samples were selected from diamond drill core from 1998, 2000 and 2004 drilling programs. The sample intervals were typically 5 metres long. The locations of the samples are shown in Figures 2 and 3. The list of target samples was reviewed by SRK.

A continuous quarter split section of core representing the entire interval selected was provided to the testing laboratory. Samples were sent to Canadian Environmental and Metallurgical Inc. (CEMI) for testing. An SRK geochemist examined the samples on receipt at the lab. The samples were typically competent and hard, and even the oldest samples showed little signs of oxidation and weathering. A rock saw had been used to prepare the quarter splits.

Both carbonate and sulphide minerals were observed in most samples. Calcite was observed in association with quartz veins and was confirmed by vigorous reaction with a 10% solution of hydrochloric acid. Carbonate was also likely present in the fine grained matrix of many samples, also indicated by reaction with hydrochloric acid. Ankerite was observed throughout the matrix of some of the more weathered volcanic samples. Sulphide minerals were typically disseminated or in clots distributed throughout the rock mass. In some samples, there was concentration of the sulphide minerals in the quartz veins. The most abundant sulphide minerals were pyrrhotite, pyrite and arsenopyrite. Lesser amounts of chalcopyrite and galena were found in some samples.

## 4.2 Testing Methods

### 4.2.1 Sample Preparation

Samples were jaw crushed to minus half inch. A representative portion of the samples was split from the jaw crushed material and pulverized for the assay tests. The remaining material was wetted by adding 50 mL of deionized water and the sample bags were loosely sealed to ensure some exchange of oxygen. The samples were stored for approximately 1 month at room temperature to condition them for extraction tests.

### 4.2.2 ABA and Elemental Analyses

All of the samples were submitted for acid base accounting and elemental analyses. The acid base accounting tests were completed using the Modified Sobek method, including analysis of paste pH, sulphur speciation, and inorganic carbon. The samples for elemental analyses were prepared using an aqua regia digestion, and were analyzed by ICP.

W

E

6989000 mN

6988800 mN

6988600 mN

6988400 mN

6988200 mN

539400 mE

539600 mE

539800 mE

540000 mE

540200 mE

540400 mE

540600 mE

540800 mE

## Meliadine ARD Sample Explanation

- SEDS - Hanging Wall Sediments
- IF - Iron Formation
- GABBRO
- ZONE - Composite of multiple drill holes and multiple zones
- 1100 - Principally Iron Formation hosted mineralization
- 1000 - Principally sediment-hosted mineralizaiton
- MV - Footwall Mafic Volcanic Rocks
- MVak - Ankerized Footwall Mafic Volcanic Rocks

0 100 200

Meters

Scale: 1:4,000

GT05-2 32m
ARD-GT2-3A
ARD-GT2-2A
ARD-GT2-1A

GT05-4 30.3m
ARD-GT4-3A
ARD-GT4-1A
ARD-GT4-2A

GT05-5 29m
ARD-GT5-3A
ARD-GT5-2A
ARD-GT5-1A

GT05-6 30m
ARD-GT6-3A
ARD-GT6-1A
ARD-GT6-2A
ARD-GT7-1A
ARD-GT7-2A
ARD-GT7-3A

GT05-7 29m

GT05-8 23.1m
ARD-GT8-1A
ARD-GT8-2A
ARD-GT8-3A

GT05-9 23.1m
ARD-GT9-3A
ARD-GT9-2A
ARD-GT9-1A

GT05-10 23.1m
ARD-GT10-1A
ARD-GT10-2A
ARD-GT10-3A

GT05-11 26.1m
ARD-GT11-3A
ARD-GT11-2A
ARD-GT11-1A

M03-497 360m
ARD-M03-497-1A
ARD-M03-497-2A
ARD-M03-497-3A
ARD-M03-497-4A

M04-518 369m
ARD-M04-518-1A
ARD-M04-518-2A

M95-27 161m
MELMET 1

M95-17 155m
MELMET 3

M96-37 272.82m
MELMET 2

M96-39 260m

M96-41 310.4m

M96-42 281m

M96-43 416m

M96-52 389m

M96-64 473m

M96-66 238m
COMP 1

M96-72 356m

M96-76 335m

M97-91 308m
MELMET 2

M97-94A 266m
COMP 4

M97-136 224m
CR300264
CR300278
CR805652
COMP 5
CR805509
COMP 2
COMP 4
CR805601

M97-137 242m

M97-138 230m
CR300099
CR504368
CR504927
COMP 1
CR504400
MELMET 1

M97-139 155m
CR809563
CR805845
CR806966

M97-140 495m

M97-82 447m
COMP 3

M98-196 119m
ARD-M00-481-1A
ARD-M00-481-2A
ARD-M00-471-1A
ARD-M00-471-2A
ARD-M00-471-3A
ARD-M98-197-1A
ARD-M98-197-2A
ARD-M98-196-1A
ARD-M98-196-2A

M98-197 149m

M98-265 234m

M99-336B 278m

M00-471 173m
CR107023
MELMET 2

M00-481 185m
ARD-M98-265-1A
ARD-M98-265-2A
ARD-M98-265-3A

CR107106
MELMET 3
CR301 750
CR107210

CR809552

CR802930

Trace of Cross Section

# Tiriganiaq ARD Samples Plan

S

N

10150 m el

10050 m el

9950 m el

9850 m el

9750 m el

9650 m el

ARD-M98-265-1A
COMP 1
ARD-M98-265-2A
ARD-M98-265-3A
MELMET 3
CR805845
MELMET 1
ARD-M98-196-1A
ARD-M98-196-2A
ARD-M98-197-1A
ARD-M98-197-2A
CR806966
M98-196
M97-139
M95-17
M95-27
M00-471
M98-197
M00-481
M96-66
M97-94A
M97-137
M97-136
M97-138
M98-265
M97-91
M99-396B
M96-37
M96-41
M96-39
GT05-10
GT05-9
M96-43
M96-76
ARD-GT9-1A
ARD-GT9-2A
ARD-GT9-3A
ARD-M04-518-1A
M04-518
M96-72
M96-52
M03-497
ARD-GT10-1A
ARD-GT10-2A
ARD-GT10-3A
M96-64
GT05-11
M97-82
GT05-5
M97-140
GT05-7
GT05-8
GT05-6
GT05-4
GT05-2
ARD-GT7-1A
ARD-GT7-2A
ARD-GT7-3A
ARD-GT8-1A
ARD-GT8-2A
ARD-GT8-3A
ARD-GT6-1A
ARD-GT6-2A
ARD-GT6-3A
ARD-GT2-1A
ARD-GT2-2A
ARD-GT2-3A
ARD-GT4-1A
ARD-GT4-2A
ARD-GT4-3A
ARD-GT5-1A
ARD-GT5-2A
ARD-GT5-3A
ARD-GT11-1A
ARD-GT11-2A
ARD-GT11-3A
ARD-M03-497-1A
ARD-M03-497-2A
ARD-M03-497-3A
ARD-M03-497-4A
ARD-M04-518-2A
CR805509
COMP 2
COMP 4
COMP 2
ARD-M00-471-1A
ARD-M00-471-2A
ARD-M00-471-3A
ARD-M00-481-1A
ARD-M00-481-2A
CR805601
CR805652
MELMET 3
CR809552
CR107023
COMP 4
MELMET 1
MELMET 2
CR809563
MELMET 2
COMP 5
CR504368
CR301 750
COMP 1
CR300264
CR300278
CR504400
CR107106
MELMET 3
COMP 3
CR802930
CR300099
CR504927
MELMET 2
CR107210

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- MVak - Ankerized Footwall Mafic Volcanic Rocks

6988250 mE

6988350 mE

6988450 mE

6988550 mE

6988650 mE

6988750 mE

6988850 mE

6988950 mE

0 25 50 75 100

Meters

Scale: 1:2,500

# Tiriganiaq ARD Samples Cross Section

### 4.2.3 Leach Extraction Tests

At Comaplex's request, SRK selected three waste rock samples from the December 2005 static testing program for leach extraction testing. The samples included one greywacke sample from the hanging wall sediments, one iron formation sample, and one mafic volcanic sample.

Use of extraction tests on fresh competent drill core is not generally recommended due to the limited surface area available for oxidation prior to testing. However, the conditioning described previously should have allowed some oxidation to occur on the freshly exposed surfaces, thereby improving the validity of the results.

Tests were completed using the shake flask extraction method on the minus ¼ inch jaw crushed and conditioned material. In brief, 250 grams of sample was mixed with 750 mL of ultrapure deionized water and was allowed to equilibrate for 96 hours. The pH and conductivity of the leachate was measured and the leachate was filtered and submitted for alkalinity, sulphate, and a full suite metals by ICP-MS.

## 4.3 Results and Discussion

### 4.3.1 Acid Base Accounting

The acid base accounting results are provided in Appendix 2.

All of the samples tested had slightly alkaline paste pH's and moderate to high amounts of neutralization potential and carbonate. The mafic volcanic rocks tended to have somewhat higher neutralization potential (228 to 289 kg $CaCO_3$ eq/tonne) compared to the sedimentary rocks and gabbro dykes (20.1 to 102 kg $CaCO_3$ eq/tonne) (Figure 4). A single iron formation sample had an NP of 77 kg $CaCO_3$ eq/tonne. The NP was strongly correlated with carbonate content (Figure 5). Carbonate concentrations tended to be somewhat higher than the neutralization potential in the Iron formation and mafic volcanic samples. This is an indication that some of the carbonate was occurring as iron carbonate minerals. Ankerite was noted on the logs for several of these samples, and is the likely source of the iron carbonate. Carbonate minerals were noted in several of the hand samples, particularly in association with the quartz veining. These reacted strongly in 10% hydrochloric acid, indicating that the carbonate mineral was likely calcite.

Sulphur concentrations were typically less than 0.5% and therefore acid potentials were less than 15 kg $CaCO_3$ eq/tonne, although one of the sedimentary samples, two of the volcanic samples and the iron formation sample had higher values. As shown in Figure 4, the majority of the waste rock samples have NP:AP ratios of greater than 3, indicating they have a negligible potential for ARD. Three of the sedimentary samples and the iron formation sample had NP/AP ratios in the range of 1 to 3. In the absence of kinetic testing data, these are considered to be potentially acid generating. Overall, the relatively small proportion of samples with potential for acid generation and the high NP content of all of the samples indicate that seepage from the waste rock pile is likely to remain neutral.

### 4.3.2 Elemental Analyses

Results of the elemental analyses are provided in Appendix 3.

The elemental analyses indicate that arsenic and sulphur concentrations in the waste rock samples are enriched in comparison to typical concentrations in the earth's crust. This is consistent with the presence of arsenopyrite in several of the samples. Other trace elements were less than 2x higher than normal crustal values.

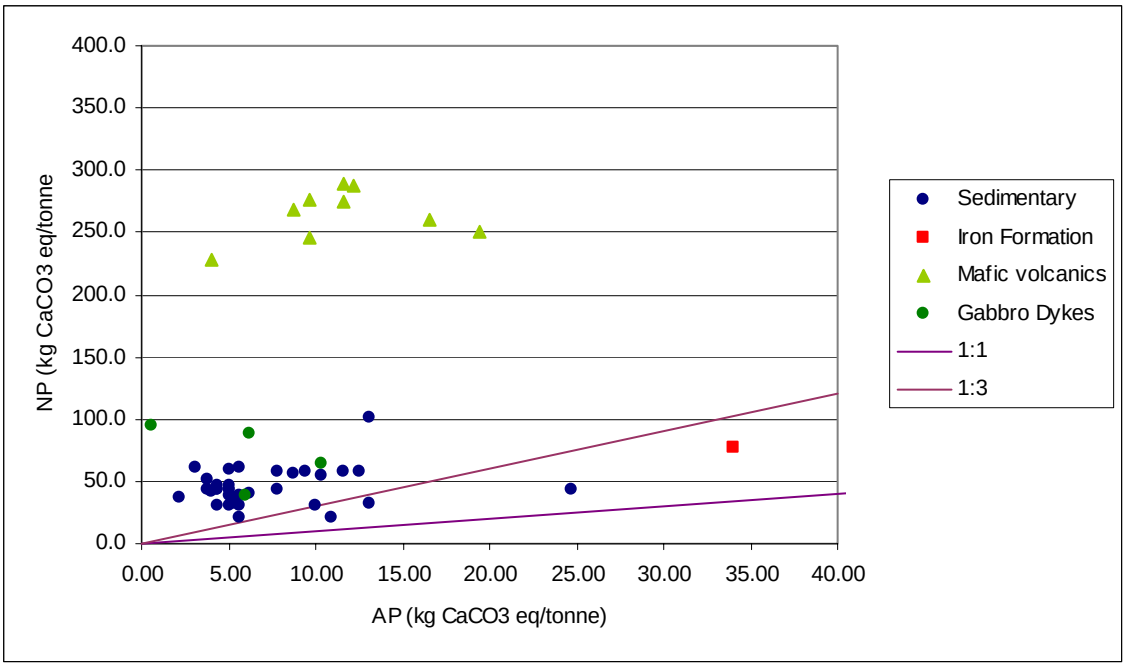



**Figure 4: Acid Base Accounting Results - NP versus AP**

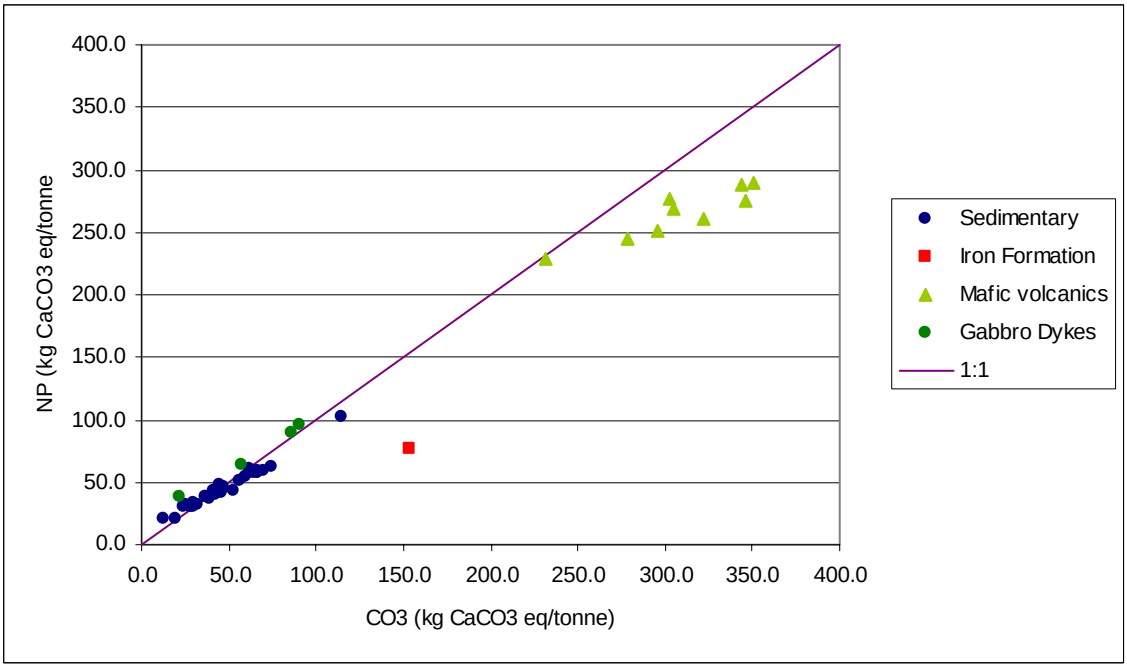



**Figure 5: Carbonate versus Modified Sobek NP**

The elemental analyses do not provide an indication of the solubility or rate of release of these elements from the waste rock. Arsenic and other trace elements such as copper, cobalt, nickel, and zinc may be mobilized as a result of sulphide oxidation. The rate of metal leaching will also be controlled by the rate of oxidation, the amount of waste rock, the grain size distribution of the rock, the iron content of the rock, and the local pH conditions. Because the pH conditions are expected to remain neutral, concentrations are not expected to be excessively high. However, it is possible that concentrations of some trace elements in seepage from the waste pile will exceed CCME guidelines for freshwater aquatic life. Further testing is therefore required to estimate the potential magnitude and rate of metal release from these materials.

### 4.3.3 Leach Extraction Test Results

The results are presented in Appendix 4. The results indicate the leachate had neutral pH's, moderate alkalinities, and relatively low sulphate concentrations (maximum of 21 mg/L was observed in the mafic volcanic sample). Trace element concentrations were generally low in comparison to typical mine waste samples. However, concentrations of aluminum, arsenic, copper and zinc were slightly elevated compared to CCME aquatic life guidelines in the mafic volcanic sample, and concentrations of aluminum and arsenic were slightly elevated compared to CCME aquatic life guidelines in the greywacke sample. Potential for release of trace concentrations of these elements is consistent with the mineralogy and elemental composition of the samples.

The number of samples is too few to determine the potential variability in concentrations within or between each of these rock types. However, once further information on the underground development plans is available, these data could be used in scoping level calculations to provide an initial indication of the potential magnitude of contaminant loading. If those calculations indicate potential for impacts, further testing may be warranted.

## 5 Conclusions and Recommendations

Test results indicate that the majority of the waste rock that would be produced from the proposed exploration decline would be non-acid generating. A few samples (<10%) from the hanging wall of the deposit were classified as acid generating or potentially acid generating. However, they contain significant amounts of neutralization potential. Provided that these isolated intervals of material are well distributed in the waste dump, ARD is unlikely to occur. Monitoring of the blasted rock during excavation of the decline may be required to ensure that any potentially acid generating rock is identified and managed appropriately.

Data from several of the Iron Formation samples had NP/AP ratios in the range of 1 to 3, indicating this material should be classified as potentially acid generating. This material contains sufficient NP that there is likely to be a significant lag time to acid generation. However, to ensure long-term stability of this material, consideration should be given to encapsulating it within the center of the waste rock pile where can be frozen, or to return it to the underground workings where it will eventually become flooded.

The iron formation rock contains iron oxide minerals which may become mobilized as a result of reductive dissolution. Evidence from the Ekati Diamond Mine™ indicates that reductive dissolution of iron can lead to the development of low pH conditions downstream of waste piles as the iron re-precipitates and releases hydrogen ions. Care should be taken to avoid placing this material or any rock that contains significant quantities of iron sulphides directly on organic soils or plant matter.

Elemental analyses indicate there is some potential for release of arsenic and other trace elements from the rock. Aluminum arsenic, copper and iron were slightly soluble in two of three leach extraction tests. The leach extraction results can be used in conjunction with information on the

amount of waste rock, the hydrology, and the expected configuration of the dump to calculate the potential magnitude of contaminant loading from this material.

Depending on the timing of the permit application, it may be worth considering initiating a small number of kinetic tests. These would be useful for future environmental assessment work, and would provide the information needed to estimate water quality from the development waste rock dump. At this stage in the project, one sample from each of the main rock units should be considered.

If you have any questions, please contact the undersigned.

Yours truly,

Kelly Sexsmith, P.Geo
Senior Environmental Geochemist

Appendix 1:  Acid Base Accounting Test Results –
1997, 1998 and 2001 Lakefield Testing Data

## Appendix 1 - Acid Base Accounting Test Results - 1997, 1998 and 2001 Lakefield Testing Data

**Ore and Tailings Samples**

| Sample Type | Sample # | Reference | Head/ Residue | Paste pH s.u. | NP * | CO3 % | CO3-NP * | S % | S(S2-) % | S(SO4) % | AP * | NNP * | NP/AP | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron formation | Melmet 1 | Lakefield, April 1997 | Composite Ore | 8.84 | 103 | 5.9 | 98 | 0.87 | 0.61 | <0.13 | 19 | 84 | 5.4 | |
| | Melmet 2 | Lakefield, April 1997 | Qtz Vein Ore | 8.75 | 139 | 8.35 | 139 | 1.74 | 1.32 | <0.13 | 41 | 97 | 3.4 | |
| | Melmet 3 | Lakefield, April 1997 | Iron Fm Ore | 8.19 | 120 | 5.85 | 98 | 4.38 | 3.34 | <0.13 | 104 | 15 | 1.1 | |
| | Comp 1-3 | Lakefield, Jan 1998 | Iron Fm Ore | 8.24 | 79 | 6 | 100 | 1.96 | 1.95 | <0.13 | 61 | 18 | 1.3 | |
| | Comp 4-5 | Lakefield, Jan 1998 | Qtz Vein Ore | 8.50 | 90 | 6.8 | 113 | 1.35 | 1.31 | <0.13 | 41 | 49 | 2.2 | |
| | Comp 1-3 | Lakefield, Jan 1998 | Tailings** | 7.08 | 64 | 6.5 | 108 | 1.78 | 1.49 | <0.13 | 47 | 17 | 1.4 | |
| | Comp 1-3 | Lakefield, Jan 1998 | Tailings** | 8.18 | 78 | 6.1 | 102 | 1.82 | 1.68 | 0.23 | 53 | 26 | 1.5 | |
| | Comp 4-5 | Lakefield, Jan 1998 | Tailings** | 8.53 | 92 | 6.9 | 115 | 1.42 | 1.32 | <0.13 | 41 | 51 | 2.2 | |
| | Comp 4-5 | Lakefield, Jan 1998 | Tailings** | 8.67 | 90 | 6.7 | 112 | 1.48 | 1.17 | 0.20 | 37 | 53 | 2.5 | |
| | Comp WN | Lakefield, April 2001 | Ore | 8.70 | 110 | 8.2 | 137 | 0.93 | 0.62 | 0.31 | 19 | 91 | 5.7 | |
| | Comp WN | Lakefield, April 2001 | Ore | 8.49 | 111 | 8.35 | 139 | 0.9 | 0.56 | 0.34 | 18 | 94 | 6.3 | |

**Waste Rock**

| Waste Rock | Sample # | Location | | Paste pH | NP | CO3 | CO3-NP | S | S(S2-) | S(SO4) | AP | NNP | NP/AP | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Hole # | From/To | s.u. | * | % | * | % | % | % | * | * | | |
| HW-Greywacke | CR107106 | Mel 96-43 | 1291.75 - 292.76 | 8.51 | 46.6 | 3.96 | 66 | 0.01 | 0.01 | <0.13 | 0.31 | 46.3 | 150.0 | Chlorite |
| | CR802930 | Mel 97-140 | 348.71 - 349.74 | 8.98 | 46.1 | 3.71 | 62 | 0.15 | 0.07 | <0.13 | 2.2 | 43.9 | 21.0 | Sheared, chlorite, sericite |
| | CR805509 | Mel 97-136 | 144.00 - 145.00 | 9.00 | 44.7 | 3.63 | 61 | 0.23 | 0.19 | <0.13 | 5.9 | 38.8 | 7.6 | Trace pyrrhotite |
| HW-Mixed | CR805652 | Mel 97-137 | 189.46 - 190.00 | 8.93 | 57.2 | 4.10 | 68 | 0.10 | 0.08 | <0.13 | 2.5 | 54.7 | 22.9 | Chlorite |
| Greywacke/Argillite | CR805845 | Mel 97-139 | 57.97 - 59.08 | 9.05 | 47.6 | 3.32 | 55 | 0.17 | 0.08 | <0.13 | 2.5 | 45.1 | 19.0 | Chlorite |
| HW-Argillite | CR107023 | Mel 96-42 | 231.00 - 231.98 | 9.10 | 82.3 | 6.55 | 109 | 0.36 | 0.32 | <0.13 | 10 | 72.3 | 8.2 | Sericite, chlorite |
| | CR300099 | Mel 96-52 | 361.00 - 362.00 | 9.04 | 47.7 | 4.34 | 72 | 0.15 | 0.12 | <0.13 | 3.8 | 43.9 | 12.6 | Sheared |
| | CR504400 | Mel 96-41 | 300.95 - 301.20 | 8.09 | 108 | 7.41 | 124 | 4.75 | 4.57 | <0.13 | 143 | -35.0 | 0.8 | Fault zone |
| | CR809552 | Mel 97-91 | 217.43 - 218.18 | 7.83 | 118 | 6.41 | 107 | 6.81 | 6.81 | <0.13 | 213 | -95.0 | 0.6 | 20% quartz veins with po |
| Ore Zone - Iron | CR300264 | Mel 96-72 | 295.78 - 296.91 | 8.64 | 39.4 | 3.83 | 64 | 0.31 | 0.24 | <0.13 | 7.5 | 31.9 | 5.3 | Magnetite, minor pyrite |
| Formation | CR301750 | Mel 96-76 | 248.78 - 249.93 | 8.26 | 92.5 | 7.34 | 122 | 0.74 | 0.62 | <0.13 | 19.4 | 73.1 | 4.8 | Magnetite |
| | CR504368 | Mel 96-41 | 235.00 - 236.00 | 7.82 | 149 | 13.3 | 222 | 1.36 | 1.21 | <0.13 | 37.8 | 111.0 | 3.9 | Magnetite, minor pyrrhotite |
| | CR504369-REP | Mel 96-42 | 235.00 - 236.01 | 7.76 | 149 | 13.5 | 225 | 1.41 | 1.32 | <0.13 | 41.3 | 108.0 | 3.6 | |
| FW-Volcanics | CR107210 | Mel 96-43 | 407.88 - 408.79 | 8.89 | 263 | 18.5 | 308 | 0.56 | 0.38 | <0.13 | 11.9 | 251.0 | 22.1 | Sheared, quartz veins |
| | CR300278 | Mel 96-72 | 329.17 - 330.26 | 8.78 | 43.9 | 3.36 | 56 | 0.30 | 0.22 | <0.13 | 6.9 | 37.0 | 6.4 | Quartz veins, 0.5% pyrite |
| | CR504927 | Mel 96-52 | 381.00 - 382.00 | 8.43 | 219 | 12.8 | 213 | 0.14 | 0.09 | <0.13 | 2.8 | 216.0 | 78.2 | Epidote |
| | CR805601 | Mel 97-136 | 208.00 - 209.00 | 8.83 | 275 | 17.9 | 298 | 0.40 | 0.38 | <0.13 | 11.9 | 263.0 | 23.1 | Trace po, py, aspy, 0.72 g/t Au |
| | CR806966 | Mel 97-139 | 139.79 - 140.79 | 8.50 | 296 | 20 | 333 | 1.35 | 1.13 | <0.13 | 35.3 | 261.0 | 8.4 | Quartz veins, py & po |
| | CR809563 | Mel 97-91 | 253.42 - 253.93 | 8.65 | 289 | 16.6 | 277 | 0.30 | 0.30 | <0.13 | 9.4 | 280.0 | 30.7 | Fucsite |

**Overburden**

| Overburden | Sample # | Location | | Paste pH | NP | CO3 | CO3-NP | S | S(S2-) | S(SO4) | AP | NNP | NP/AP | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Northing UTM83 | Easting UTM83 | s.u. | * | % | * | % | % | % | * | * | | |
| Mud-Boil | CS500156 | 6987097 | 542435 | 8.52 | 7.8 | 3.14 | 52 | 0.02 | 0.02 | <0.13 | 0.63 | 7.2 | 12.4 | Abundant Marine Shells |
| Mud-Boil | CS500184 | 6989009 | 540024 | 8.61 | 10.8 | 0.65 | 11 | 0.01 | 0.01 | <0.13 | 0.31 | 10.5 | 34.8 | |
| Mud-Boil | CS500187 | 6988742 | 539467 | 7.46 | 6.1 | 0.48 | 8 | 0.01 | -0.01 | <0.13 | 0.31 | 6.1 | 19.7 | |
| Mud-Boil | CS500188 | 6988470 | 539487 | 8.55 | 8.6 | 0.49 | 8 | 0.01 | 0.01 | <0.13 | 0.31 | 8.3 | 27.7 | |
| Mud-Boil | CS500189 | 6988190 | 539524 | 8.17 | 5.2 | 0.40 | 7 | 0.01 | -0.01 | <0.13 | 0.31 | 5.2 | 16.8 | |
| Mud-Boil | CS500190 | 6988264 | 539991 | 8.23 | 6.1 | 0.22 | 4 | 0.01 | -0.01 | <0.13 | 0.31 | 6.1 | 19.7 | |
| Mud-Boil | CS500191 | 6987923 | 539969 | 7.92 | 6.0 | 0.61 | 10 | 0.01 | -0.01 | <0.13 | 0.31 | 6.0 | 19.4 | |
| Mud-Boil | CS500191-REP | 6987923 | 539969 | 8.08 | 6.0 | 0.54 | 9 | -0.01 | -0.01 | <0.13 | 0.31 | 6.0 | 19.4 | |

Notes: Sulphide Sulphur method not specified.
AP is calculated from the sulphide sulphur
NP was completed using the Standard Sobek method
* NP, CO3-NP, AP, and NNP are presented in units of kg CaCO3 eq/tonne
** It is noted that tailings will not be produced during development of the exploration decline.

Appendix 2:  Acid Base Accounting Results

## Appendix 2 - 2005 Acid Base Accounting Test Results

| Sample ID | | Hole # | DH DEPTH | | WIDTH | LITHO | | Paste | NP | CO2 | CaCO3 | S(T) | S(SO4) | S(S-2) | AP | Net | NP/AP | Fizz Test |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tag # | | From | To | | Rock Code | Zone | pH | | % | NP | % | % | % | | NP | | |
| ARD-GT2-1A | 415091 | GT05-2 | 10.40 | 15.40 | 5 | Kwa-s | SEDS | 9.5 | 43.3 | 1.86 | 42.3 | 0.14 | <0.01 | 0.14 | 4.38 | 38.9 | 9.9 | moderate |
| ARD-GT2-2A | 415097 | GT05-2 | 15.40 | 20.40 | 5 | Kwa-s | SEDS | 9.4 | 30.5 | 1.19 | 27.0 | 0.32 | <0.01 | 0.32 | 10.00 | 20.5 | 3.1 | moderate |
| ARD-GT4-1A | 415401 | GT05-4 | 13.45 | 18.45 | 5 | Kwa'ser | SEDS | 9.0 | 40.7 | 1.85 | 42.0 | 0.2 | <0.01 | 0.20 | 6.25 | 34.5 | 6.5 | slight |
| ARD-GT4-2A | 415407 | GT05-4 | 18.45 | 23.45 | 5 | Kwa'ser | SEDS | 9.1 | 44.1 | 2.06 | 46.8 | 0.16 | <0.01 | 0.16 | 5.00 | 39.1 | 8.8 | slight |
| ARD-GT4-3A | 415413 | GT05-4 | 23.45 | 28.45 | 5 | Ks | SEDS | 9.1 | 38.8 | 1.63 | 37.0 | 0.16 | <0.01 | 0.16 | 5.00 | 33.8 | 7.8 | slight |
| ARD-GT5-1A | 415419 | GT05-5 | 14.00 | 19.00 | 5 | Kwa-s | SEDS | 9.2 | 59.8 | 2.94 | 66.8 | 0.16 | <0.01 | 0.16 | 5.00 | 54.8 | 12.0 | slight |
| ARD-GT5-2A | 415425 | GT05-5 | 19.00 | 24.00 | 5 | Kwa-s | SEDS | 9.1 | 51.4 | 2.47 | 56.1 | 0.12 | <0.01 | 0.12 | 3.75 | 47.7 | 13.7 | slight |
| ARD-GT5-3A | 415431 | GT05-5 | 24.00 | 29.00 | 5 | Kwa'ser | SEDS | 9.3 | 61.8 | 3.27 | 74.3 | 0.18 | <0.01 | 0.18 | 5.63 | 56.2 | 11.0 | slight |
| ARD-GT6-1A | 415437 | GT05-6 | 6.00 | 11.00 | 5 | Kwa | SEDS | 9.2 | 43.0 | 1.93 | 43.9 | 0.16 | <0.01 | 0.16 | 5.00 | 38.0 | 8.6 | slight |
| ARD-GT6-2A | 415443 | GT05-6 | 11.00 | 16.00 | 5 | Kwa | SEDS | 9.2 | 57.8 | 2.74 | 62.3 | 0.37 | <0.01 | 0.37 | 11.56 | 46.2 | 5.0 | slight |
| ARD-GT6-3A | 415449 | GT05-6 | 16.00 | 21.00 | 5 | Kwa'ser | SEDS | 9.2 | 57.5 | 2.84 | 64.5 | 0.3 | <0.01 | 0.30 | 9.38 | 48.1 | 6.1 | slight |
| ARD-GT7-1A | 415455 | GT05-7 | 4.80 | 8.10 | 3.3 | Ks-wa | SEDS | 8.4 | 37.3 | 1.73 | 39.3 | 0.1 | 0.03 | 0.07 | 2.19 | 35.1 | 17.1 | slight |
| ARD-GT7-2A | 415459 | GT05-7 | 8.65 | 13.35 | 4.7 | Ks-wa | SEDS | 9.5 | 41.3 | 2 | 45.5 | 0.13 | <0.01 | 0.13 | 4.06 | 37.2 | 10.2 | slight |
| ARD-GT7-3A | 415464 | GT05-7 | 13.35 | 18.35 | 5 | Kwa'ser | SEDS | 9.4 | 58.5 | 3.07 | 69.8 | 0.25 | <0.01 | 0.25 | 7.81 | 50.7 | 7.5 | slight |
| ARD-GT8-1A | 415470 | GT05-8 | 6.10 | 11.10 | 5 | Ks | SEDS | 9.1 | 43.7 | 1.97 | 44.8 | 0.15 | 0.01 | 0.14 | 4.38 | 39.3 | 10.0 | slight |
| ARD-GT8-2A | 415476 | GT05-8 | 11.10 | 16.10 | 5 | Kwa | SEDS | 9.3 | 47.3 | 1.96 | 44.5 | 0.14 | <0.01 | 0.14 | 4.38 | 42.9 | 10.8 | slight |
| ARD-GT8-3A | 415482 | GT05-8 | 16.10 | 21.10 | 5 | Kwa | SEDS | 9.6 | 56.9 | 2.93 | 66.6 | 0.28 | <0.01 | 0.28 | 8.75 | 48.2 | 6.5 | slight |
| ARD-GT9-2A | 415494 | GT05-9 | 13.97 | 18.97 | 5 | Kwa-qv | SEDS | 9.5 | 30.9 | 1.06 | 24.1 | 0.18 | <0.01 | 0.18 | 5.63 | 25.3 | 5.5 | slight |
| ARD-GT9-3A | 415500 | GT05-9 | 18.97 | 23.10 | 4.13 | Kwa-s | SEDS | 9.2 | 31.0 | 1.31 | 29.8 | 0.16 | <0.01 | 0.16 | 5.00 | 26.0 | 6.2 | moderate |
| ARD-GT10-1A | 415055 | GT05-10 | 6.00 | 11.00 | 5 | Kwa-s | SEDS | 9.5 | 34.4 | 1.29 | 29.3 | 0.17 | <0.01 | 0.17 | 5.31 | 29.1 | 6.5 | moderate |
| ARD-GT10-2A | 415061 | GT05-10 | 11.00 | 16.00 | 5 | Ks-wa | SEDS | 9.2 | 31.0 | 1.27 | 28.9 | 0.14 | <0.01 | 0.14 | 4.38 | 26.6 | 7.1 | moderate |
| ARD-GT10-3A | 415067 | GT05-10 | 16.00 | 21.00 | 5 | Kwa | SEDS | 9.7 | 38.8 | 1.62 | 36.8 | 0.18 | <0.01 | 0.18 | 5.63 | 33.2 | 6.9 | moderate |
| ARD-GT11-1A | 415073 | GT05-11 | 11.00 | 16.00 | 5 | Kwa | SEDS | 9.3 | 43.5 | 1.97 | 44.8 | 0.14 | 0.02 | 0.12 | 3.75 | 39.8 | 11.6 | strong |
| ARD-GT11-2A | 415079 | GT05-11 | 16.00 | 21.00 | 5 | Kwa-qv | SEDS | 9.7 | 60.8 | 2.72 | 61.8 | 0.1 | <0.01 | 0.10 | 3.13 | 57.7 | 19.5 | strong |
| ARD-GT11-3A | 415085 | GT05-11 | 21.00 | 26.00 | 5 | Kwa-s | SEDS | 9.3 | 46.3 | 2.08 | 47.3 | 0.16 | <0.01 | 0.16 | 5.00 | 41.3 | 9.3 | moderate |
| ARD-M03-497-2A | 451379 | M03-497 | 29.35 | 35.55 | 6.2 | Ks | SEDS | 9.3 | 43.5 | 2.32 | 52.7 | 0.79 | <0.01 | 0.79 | 24.69 | 18.8 | 1.8 | slight |
| ARD-M03-497-3A | 451380 | M03-497 | 35.55 | 40.55 | 5 | Kwa | SEDS | 9.7 | 102.0 | 5.06 | 115.0 | 0.42 | <0.01 | 0.42 | 13.13 | 88.9 | 7.8 | slight |
| ARD-M03-497-4A | 451381 | M03-497 | 40.55 | 45.10 | 4.55 | Kwa-qv | SEDS | 9.6 | 58.4 | 2.9 | 65.9 | 0.4 | <0.01 | 0.40 | 12.50 | 45.9 | 4.7 | slight |
| ARD-M04-518-1A | 339260 | M04-518 | 14.00 | 15.00 | 1 | Kwa-s | SEDS | 9.5 | 20.8 | 0.55 | 12.5 | 0.18 | <0.01 | 0.18 | 5.63 | 15.2 | 3.7 | slight |
| ARD-M04-518-2A | 339264 | M04-518 | 86.00 | 87.00 | 1 | Kwa | SEDS | | 20.1 | 0.85 | 19.3 | 0.35 | <0.01 | 0.35 | 10.94 | 9.2 | 1.8 | slight |
| ARD-M98-265-1A | 451400 | M98-265 | 88.00 | 94.00 | 6 | Kwa | SEDS | 9.2 | 54.3 | 2.64 | 60.0 | 0.33 | <0.01 | 0.33 | 10.31 | 44.0 | 5.3 | moderate |
| ARD-M98-265-2A | 415456 | M98-265 | 97.00 | 102.00 | 5 | Kwa | SEDS | 9.6 | 43.0 | 1.81 | 41.1 | 0.25 | <0.01 | 0.25 | 7.81 | 35.2 | 5.5 | moderate |
| ARD-M98-265-3A | 415462 | M98-265 | 103.00 | 108.00 | 5 | Kwa | SEDS | 9.5 | 32.8 | 1.42 | 32.3 | 0.18 | 0.01 | 0.17 | 5.31 | 27.5 | 6.2 | slight |
| ARD-M99-336B-1A | 451382 | M99-366B | 46.32 | 51.32 | 5 | Kwa | SEDS | 9.6 | 32.0 | 1.09 | 24.8 | 0.43 | 0.01 | 0.42 | 13.13 | 18.9 | 2.4 | slight |
| ARD-M03-497-1A | 451378 | M03-497 | 24.60 | 27.24 | 2.64 | Nimj | IF | 8.7 | 76.5 | 6.76 | 153.6 | 1.09 | <0.01 | 1.09 | 34.06 | 42.4 | 2.2 | moderate |
| ARD-M00-471-1A | 451365 | M00-471 | 144.55 | 151.00 | 6.45 | Mv'ser'ak | MVak | 9.5 | 287.5 | 15.14 | 344.1 | 0.39 | <0.01 | 0.39 | 12.19 | 275.3 | 23.6 | strong |
| ARD-M00-471-2A | 451366 | M00-471 | 151.00 | 156.00 | 5 | Mv'ser'ak | MVak | 9.2 | 245.2 | 12.24 | 278.2 | 0.31 | <0.01 | 0.31 | 9.69 | 235.5 | 25.3 | strong |
| ARD-M00-481-1A | 451363 | M00-481 | 161.52 | 166.52 | 5 | Mv'ser'ak | MVak | 9.4 | 274.7 | 15.23 | 346.1 | 0.37 | <0.01 | 0.37 | 11.56 | 263.1 | 23.8 | strong |
| ARD-M00-481-2A | 451364 | M00-481 | 166.52 | 171.52 | 5 | Mv'ser'ak | MVak | 9.5 | 289.4 | 15.43 | 350.7 | 0.37 | <0.01 | 0.37 | 11.56 | 277.8 | 25.0 | strong |
| ARD-M00-471-3A | 451372 | M00-471 | 156.00 | 161.00 | 5 | Mv'ca'c | MV | 9.0 | 228.2 | 10.18 | 231.4 | 0.13 | <0.01 | 0.13 | 4.06 | 224.1 | 56.2 | strong |
| ARD-M98-196-1A | 451359 | M98-196 | 80.70 | 85.70 | 5 | Mv | MV | 9.3 | 251.3 | 13.03 | 296.1 | 0.62 | <0.01 | 0.62 | 19.38 | 231.9 | 13.0 | strong |
| ARD-M98-196-2A | 451360 | M98-196 | 85.70 | 90.70 | 5 | Mv | MV | 9.0 | 268.5 | 13.39 | 304.3 | 0.28 | <0.01 | 0.28 | 8.75 | 259.8 | 30.7 | strong |
| ARD-M98-197-1A | 451361 | M98-197 | 136.80 | 141.80 | 5 | Mv | MV | 9.1 | 260.3 | 14.19 | 322.5 | 0.53 | <0.01 | 0.53 | 16.56 | 243.7 | 15.7 | strong |
| ARD-M98-197-2A | 451362 | M98-197 | 141.80 | 146.80 | 5 | Mv | MV | 9.4 | 276.3 | 13.32 | 302.7 | 0.31 | <0.01 | 0.31 | 9.69 | 266.6 | 28.5 | strong |
| ARD-GT9-1A | 415488 | GT05-9 | 8.97 | 13.97 | 5 | Mg | GAB | 9.1 | 95.3 | 3.96 | 90.0 | 0.02 | <0.01 | 0.02 | 0.63 | 94.7 | 152.5 | moderate |
| ARD-GT2-3A | 451353 | GT05-2 | 20.40 | 25.40 | 5 | Mg | GAB | 9.4 | 38.5 | 0.94 | 21.4 | 0.19 | <0.01 | 0.19 | 5.94 | 32.6 | 6.5 | strong |
| ARD-M99-336B-2A | 451388 | M99-366B | 51.32 | 56.32 | 5 | Mg'bt | GAB | 9.5 | 89.0 | 3.79 | 86.1 | 0.2 | <0.01 | 0.20 | 6.25 | 82.8 | 14.2 | moderate |
| ARD-M99-336B-3A | 451394 | M99-366B | 56.32 | 61.32 | 5 | Mg'ep | GAB | 9.5 | 63.8 | 2.52 | 57.3 | 0.33 | <0.01 | 0.33 | 10.31 | 53.5 | 6.2 | moderate |

Notes:

AP = Acid potential in tonnes CaCO3 equivalent per 1000 tonnes of material. AP is determined from calculated sulphide sulphur content: S(T) - S(SO4).
NP = Neutralization potential in tonnes CaCO3 equivalent per 1000 tonnes of material.
NET NP = NP - AP
Carbonate NP is calculated from CO2 originating from carbonates and is expressed in kg CaCO3/tonne.

# Appendix 3:  Results for Elemental Analyses

## Appendix 3
## 2005 Elemental Analyses

| Sample ID | LITHO | | Mo | Cu | Pb | Zn | Ag | Ni | Co | Mn | Fe | As | U | Au | Th | Sr | Cd | Sb | Bi | V | Ca | P | La | Cr | Mg | Ba | Ti | B | Al | Na | K | W | Hg | Sc | Tl | S | Ga | Se |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rock Code | Zone | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm | ppb | ppm | ppm | ppm | ppm | ppm | ppm | % | % | ppm | ppm | % | ppm | % | ppm | % | % | % | ppm | ppm | ppm | ppm | % | ppm | ppm |
| ARD-GT2-1A | Kwa-s | SEDS | 2 | 53.2 | 7.6 | 78 | <0.1 | 67.6 | 21.7 | 385 | 3.7 | **46** | 0.7 | 3.8 | 4.4 | 70 | 0.1 | 0.1 | 0.2 | 26 | 1.3 | 0.05 | 25 | 100.6 | 1.41 | 40 | 0.013 | <1 | 2.07 | 0.018 | 0.14 | 0.1 | <0.01 | **2.2** | <0.1 | 0.14 | 6 | <0.5 |
| ARD-GT2-2A | Kwa-s | SEDS | 1.8 | 48.5 | 4 | 58 | <0.1 | 63.9 | 21.7 | 276 | 2.99 | 7.2 | 1 | 9.3 | 4.9 | 45 | 0.1 | 0.2 | 0.1 | 48 | 0.95 | 0.054 | 26 | 153.9 | 1.33 | 81 | 0.06 | 1 | 1.64 | 0.04 | 0.24 | 0.2 | <0.01 | **4.1** | 0.1 | 0.3 | 8 | <0.5 |
| ARD-GT4-1A | Kwa'ser | SEDS | 2.4 | 55 | 6.1 | 94 | <0.1 | 85.1 | 26.6 | 395 | 4.64 | **274.2** | 0.9 | 1.5 | 5.5 | 45 | 0.1 | 0.1 | 0.2 | 34 | 0.96 | 0.061 | 28 | 103.7 | 1.79 | 48 | 0.012 | 1 | 2.53 | 0.024 | 0.16 | <0.1 | <0.01 | **3.2** | <0.1 | 0.2 | 7 | <0.5 |
| ARD-GT4-2A | Kwa'ser | SEDS | 1.8 | 47.2 | 6.8 | 78 | <0.1 | 80.6 | 24.7 | 438 | 4.16 | **214.8** | 0.8 | 2.3 | 5 | 47 | 0.1 | 0.1 | 0.2 | 31 | 1.03 | 0.058 | 25 | 90.5 | 1.64 | 41 | 0.01 | 1 | 2.29 | 0.024 | 0.17 | 0.1 | <0.01 | **2.8** | <0.1 | 0.15 | 7 | <0.5 |
| ARD-GT4-3A | Ks | SEDS | 1.9 | 61.5 | 38.5 | 87 | 0.2 | 89.3 | 26.2 | 417 | 4.33 | **194.4** | 0.9 | 2 | 5.5 | 43 | 0.2 | 0.1 | 0.5 | 34 | 0.9 | 0.057 | 27 | 101 | 1.72 | 43 | 0.007 | 1 | 2.48 | 0.023 | 0.17 | <0.1 | <0.01 | **3.4** | <0.1 | 0.17 | 7 | <0.5 |
| ARD-GT5-1A | Kwa-s | SEDS | 1.8 | 44.8 | 8.2 | 63 | <0.1 | 55.1 | 19.1 | 367 | 2.86 | **43.8** | 0.7 | 2.1 | 4.3 | 87 | 0.1 | 0.1 | 0.2 | 16 | 1.42 | 0.042 | 23 | 94.9 | 1.06 | 44 | 0.007 | 1 | 1.3 | 0.029 | 0.15 | 0.1 | <0.01 | **1.9** | <0.1 | 0.17 | 4 | <0.5 |
| ARD-GT5-2A | Kwa-s | SEDS | 1.9 | 41.6 | 13.5 | 80 | <0.1 | 61.9 | 20.5 | 365 | 3.4 | **197.6** | 0.6 | 19.2 | 4.5 | 75 | 0.1 | 0.1 | 0.2 | 23 | 1.17 | 0.046 | 24 | 97.2 | 1.34 | 52 | 0.003 | <1 | 1.76 | 0.027 | 0.16 | <0.1 | <0.01 | **2.4** | <0.1 | 0.12 | 6 | <0.5 |
| ARD-GT5-3A | Kwa'ser | SEDS | 2 | 44.5 | 11.8 | 57 | <0.1 | 47.1 | 15.9 | 358 | 2.54 | **54.3** | 0.7 | 2.4 | 4.1 | 95 | 0.1 | 0.1 | 0.1 | 13 | 1.53 | 0.039 | 22 | 104 | 0.96 | 47 | 0.006 | <1 | 1.05 | 0.03 | 0.14 | 0.1 | <0.01 | **1.7** | <0.1 | 0.21 | 4 | <0.5 |
| ARD-GT6-1A | Kwa | SEDS | 3 | 54.3 | 5.7 | 100 | <0.1 | 86.3 | 23.7 | 366 | 4.14 | **64.4** | 0.8 | 23.2 | 4.9 | 63 | 0.1 | 0.1 | 0.2 | 34 | 0.96 | 0.052 | 24 | 109 | 1.72 | 53 | 0.003 | 1 | 2.35 | 0.029 | 0.17 | <0.1 | <0.01 | **3.2** | <0.1 | 0.15 | 8 | <0.5 |
| ARD-GT6-2A | Kwa | SEDS | 2.5 | 46.7 | 15.8 | 77 | <0.1 | 54.7 | 20.7 | 311 | 2.79 | **72.4** | 1 | 1.9 | 5.4 | 86 | 0.2 | 0.1 | 0.2 | 17 | 1.29 | 0.047 | 22 | 122.3 | 1.07 | 48 | 0.003 | 1 | 1.26 | 0.032 | 0.14 | <0.1 | <0.01 | **1.9** | <0.1 | 0.39 | 4 | <0.5 |
| ARD-GT6-3A | Kwa'ser | SEDS | 2.1 | 48.7 | 13 | 68 | <0.1 | 51.1 | 18.7 | 333 | 2.89 | **44.6** | 1.1 | 2.4 | 5.4 | 94 | 0.1 | 0.1 | 0.2 | 16 | 1.35 | 0.044 | 21 | 122 | 1.12 | 59 | 0.003 | 1 | 1.28 | 0.031 | 0.15 | <0.1 | <0.01 | **1.9** | <0.1 | 0.31 | 4 | <0.5 |
| ARD-GT7-1A | Ks-wa | SEDS | 2.1 | 38.9 | 6.3 | 81 | <0.1 | 69.6 | 22.1 | 361 | 3.67 | **54.4** | 0.7 | 1.8 | 4.9 | 57 | 0.1 | 0.1 | 0.1 | 23 | 0.87 | 0.051 | 24 | 104.7 | 1.46 | 44 | 0.003 | 1 | 2.05 | 0.025 | 0.14 | <0.1 | 0.01 | **2.3** | <0.1 | 0.08 | 6 | <0.5 |
| ARD-GT7-2A | Ks-wa | SEDS | 1.8 | 39.8 | 5.8 | 95 | <0.1 | 72.6 | 22.8 | 335 | 3.74 | **100.7** | 0.8 | 33.8 | 5.6 | 71 | 0.1 | 0.1 | 0.1 | 27 | 0.98 | 0.051 | 25 | 104.4 | 1.48 | 47 | 0.005 | <1 | 2.07 | 0.026 | 0.15 | <0.1 | <0.01 | **2.6** | <0.1 | 0.13 | 6 | <0.5 |
| ARD-GT7-3A | Kwa'ser | SEDS | 1.8 | 44.3 | 7.5 | 68 | <0.1 | 50.5 | 17.1 | 359 | 2.63 | **92.1** | 0.8 | 2.5 | 5.1 | 94 | 0.1 | 0.1 | 0.2 | 14 | 1.43 | 0.042 | 23 | 100.8 | 0.97 | 51 | 0.009 | <1 | 1.08 | 0.032 | 0.14 | 0.1 | <0.01 | **1.6** | <0.1 | 0.26 | 4 | <0.5 |
| ARD-GT8-1A | Ks | SEDS | 1.9 | 50.6 | 6.4 | 100 | <0.1 | 80.8 | 25.5 | 409 | 4.2 | **51.8** | 0.8 | 2.3 | 5.3 | 66 | 0.1 | 0.1 | 0.2 | 32 | 1 | 0.056 | 27 | 110 | 1.67 | 44 | 0.005 | <1 | 2.36 | 0.026 | 0.16 | 0.1 | <0.01 | **3.1** | <0.1 | 0.15 | 7 | <0.5 |
| ARD-GT8-2A | Kwa | SEDS | 2.1 | 52.6 | 9.2 | 54 | <0.1 | 53.5 | 18.2 | 319 | 2.73 | **35.6** | 0.7 | 3 | 4.7 | 62 | 0.1 | 0.1 | 0.2 | 18 | 1 | 0.041 | 23 | 120.1 | 1.03 | 48 | 0.005 | <1 | 1.4 | 0.03 | 0.18 | 0.1 | <0.01 | **1.9** | <0.1 | 0.18 | 4 | <0.5 |
| ARD-GT8-3A | Kwa | SEDS | 2.4 | 51.3 | 12 | 66 | <0.1 | 53.9 | 19.7 | 384 | 2.74 | **65.2** | 0.8 | 9.7 | 4.9 | 77 | 0.1 | 0.1 | 0.9 | 17 | 1.44 | 0.043 | 24 | 127 | 1 | 40 | 0.007 | 1 | 1.17 | 0.032 | 0.15 | <0.1 | <0.01 | **1.8** | <0.1 | 0.31 | 4 | <0.5 |
| ARD-GT9-2A | Kwa-qv | SEDS | 2.2 | 62 | 4.7 | 82 | <0.1 | 72.9 | 29 | 395 | 4.4 | **49.3** | 0.7 | 2.3 | 4.1 | 33 | 0.1 | 0.1 | 0.1 | 79 | 0.91 | 0.056 | 23 | 127.8 | 1.76 | 51 | 0.028 | 1 | 2.55 | 0.022 | 0.15 | 0.1 | <0.01 | **7.1** | <0.1 | 0.18 | 9 | <0.5 |
| ARD-GT9-3A | Kwa-s | SEDS | 2 | 51.7 | 5 | 85 | <0.1 | 82.3 | 24.2 | 377 | 3.77 | **68.8** | 0.7 | 2.6 | 4.4 | 51 | 0.1 | 0.1 | 0.2 | 29 | 1.16 | 0.052 | 22 | 110 | 1.55 | 37 | 0.011 | 1 | 2.36 | 0.021 | 0.16 | 0.1 | <0.01 | **2.4** | <0.1 | 0.15 | 7 | <0.5 |
| ARD-GT10-1A | Kwa-s | SEDS | 2.2 | 59.7 | 12.3 | 90 | <0.1 | 83.6 | 25.4 | 364 | 3.54 | **46.6** | 0.8 | 1.2 | 4.4 | 54 | 0.1 | 0.1 | 0.4 | 31 | 1.09 | 0.053 | 21 | 123.6 | 1.45 | 41 | 0.012 | <1 | 2.21 | 0.025 | 0.17 | <0.1 | <0.01 | **2.6** | <0.1 | 0.16 | 7 | <0.5 |
| ARD-GT10-2A | Ks-wa | SEDS | 2.1 | 43.7 | 6.8 | 84 | <0.1 | 82.5 | 25.6 | 381 | 3.91 | **122.7** | 0.7 | 2 | 4.6 | 52 | **<0.1** | 0.1 | 0.2 | 32 | 1.05 | 0.052 | 24 | 119.5 | 1.61 | 41 | 0.004 | <1 | 2.42 | 0.021 | 0.16 | 0.1 | <0.01 | **2.6** | <0.1 | 0.12 | 7 | <0.5 |
| ARD-GT10-3A | Kwa | SEDS | 2.1 | 47.5 | 5.2 | 85 | <0.1 | 74.5 | 22.4 | 396 | 3.54 | **29.5** | 0.7 | 5.5 | 4.8 | 64 | 0.1 | 0.1 | 0.1 | 27 | 1.28 | 0.05 | 22 | 114.8 | 1.44 | 51 | 0.004 | <1 | 2.15 | 0.022 | 0.16 | <0.1 | <0.01 | **2.3** | <0.1 | 0.13 | 6 | <0.5 |
| ARD-GT11-1A | Kwa | SEDS | 1.7 | 39.3 | 7.2 | 70 | <0.1 | 54.5 | 17.9 | 330 | 2.78 | **34.1** | 0.5 | 0.9 | 3.6 | 82 | 0.1 | 0.1 | 0.2 | 21 | 1.4 | 0.046 | 23 | 109 | 1.1 | 44 | 0.003 | <1 | 1.63 | 0.028 | 0.13 | 0.1 | <0.01 | **1.9** | <0.1 | 0.12 | 6 | <0.5 |
| ARD-GT11-2A | Kwa-qv | SEDS | 1.8 | 40.6 | 5.4 | 62 | <0.1 | 55.1 | 16.9 | 428 | 2.95 | **59.6** | 0.4 | 1.5 | 3.3 | 90 | 0.2 | 0.1 | 0.1 | 23 | 1.64 | 0.044 | 20 | 113.4 | 1.26 | 44 | 0.003 | 1 | 1.7 | 0.025 | 0.14 | 0.1 | <0.01 | **2.3** | <0.1 | 0.1 | 6 | <0.5 |
| ARD-GT11-3A | Kwa-s | SEDS | 1.7 | 47.6 | 5.7 | 75 | <0.1 | 66.2 | 21.7 | 410 | 3.32 | **71.9** | 0.6 | 3 | 4.4 | 70 | 0.1 | 0.1 | 0.2 | 27 | 1.3 | 0.051 | 25 | 105.7 | 1.35 | 47 | 0.003 | <1 | 1.86 | 0.023 | 0.13 | 0.1 | <0.01 | **2.4** | <0.1 | 0.14 | 6 | <0.5 |
| ARD-M03-497-2A | Ks | SEDS | 1.3 | 68.5 | 10.7 | 86 | <0.1 | 73.1 | 23.5 | 467 | 6.82 | **32.9** | 0.6 | 1.8 | 5.9 | 98 | 0.1 | 0.1 | 0.2 | 45 | 1.42 | 0.079 | 26 | 103.2 | 1.9 | 50 | 0.016 | <1 | 2.97 | 0.012 | 0.08 | 0.1 | <0.01 | **4.5** | <0.1 | **0.66** | 9 | <0.5 |
| ARD-M03-497-3A | Kwa | SEDS | 1.6 | 43.5 | 9.8 | 67 | <0.1 | 46.7 | 18.9 | 488 | 2.86 | 5.7 | 0.8 | 5.7 | 8.1 | 240 | 0.1 | 0.1 | 0.2 | 17 | 2.51 | 0.11 | 37 | 90.6 | 1.41 | 323 | 0.015 | <1 | 1.04 | 0.025 | 0.14 | 0.1 | <0.01 | **2.4** | <0.1 | 0.44 | 3 | <0.5 |
| ARD-M03-497-4A | Kwa-qv | SEDS | 2.5 | 61.6 | 8.3 | 87 | <0.1 | 68.1 | 23.4 | 337 | 3.04 | 9.7 | 0.9 | 5.8 | 6.4 | 121 | 0.1 | 0.1 | 0.2 | 19 | 1.49 | 0.054 | 27 | 127.6 | 1.27 | 132 | 0.007 | <1 | 1.54 | 0.024 | 0.14 | 0.1 | <0.01 | **2.2** | <0.1 | 0.34 | 4 | <0.5 |
| ARD-M03-497-4A | Kwa-s | SEDS | 1.7 | 47.6 | 5.7 | 75 | <0.1 | 66.2 | 21.7 | 410 | 3.32 | **71.9** | 0.6 | 3 | 4.4 | 70 | 0.1 | 0.1 | 0.2 | 27 | 1.3 | 0.051 | 25 | 105.7 | 1.35 | 47 | 0.003 | <1 | 1.86 | 0.023 | 0.13 | 0.1 | <0.01 | **2.4** | <0.1 | 0.14 | 6 | <0.5 |
| ARD-M04-518-1A | Kwa-s | SEDS | 1.9 | 63.8 | 7.2 | 91 | <0.1 | 91 | 27.2 | 332 | 3.75 | 25.3 | 1.2 | 0.8 | 7 | 26 | **<0.1** | 0.2 | 0.2 | 30 | 0.6 | 0.06 | 32 | 85.6 | 1.61 | 45 | 0.017 | <1 | 2.41 | 0.022 | 0.17 | 0.1 | 0.01 | **2.8** | <0.1 | 0.15 | 7 | <0.5 |
| ARD-M04-518-2A | Kwa | SEDS | 2 | 54.2 | 3.5 | 61 | <0.1 | 64.6 | 18.4 | 222 | 2.76 | 8.5 | 0.8 | 3.4 | 5.5 | 30 | 0.1 | 0.1 | 0.2 | 33 | 0.56 | 0.047 | 26 | 135.3 | 1.16 | 58 | 0.028 | <1 | 1.49 | 0.041 | 0.12 | 0.2 | 0.01 | **2.9** | <0.1 | 0.23 | 6 | <0.5 |
| ARD-M98-265-1A | Kwa | SEDS | 1.9 | **91.1** | 14.5 | 77 | 0.2 | 68.5 | 25.3 | 417 | 3.39 | **260.4** | 0.8 | 2.3 | 5.1 | 72 | 0.1 | 0.1 | 0.5 | 24 | 1.47 | 0.046 | 21 | 98.8 | 1.31 | 57 | 0.004 | <1 | 1.76 | 0.023 | 0.15 | 0.1 | <0.01 | **2.6** | <0.1 | 0.3 | 5 | <0.5 |
| ARD-M98-265-2A | Kwa | SEDS | 2.1 | 54.6 | 8.4 | 88 | <0.1 | 73.3 | 21.1 | 403 | 3.35 | **103.9** | 0.8 | 24.3 | 5.2 | 60 | 0.1 | 0.1 | 0.2 | 28 | 1.21 | 0.046 | 20 | 99.2 | 1.3 | 39 | 0.005 | <1 | 1.85 | 0.021 | 0.13 | <0.1 | <0.01 | **2.6** | <0.1 | 0.18 | 6 | <0.5 |
| ARD-M98-265-3A | Kwa | SEDS | 1.6 | 52.9 | 6.4 | 83 | <0.1 | 80.9 | 23.8 | 397 | 3.85 | **39.3** | 0.6 | 1 | 4.7 | 47 | 0.1 | 0.1 | 0.2 | 33 | 1.03 | 0.048 | 19 | 97.8 | 1.49 | 40 | 0.005 | 1 | 2.33 | 0.021 | 0.14 | <0.1 | <0.01 | **3.1** | <0.1 | 0.15 | 6 | <0.5 |
| ARD-M99-336B-1A | Kwa | SEDS | 2.2 | 48.6 | 7.4 | 60 | <0.1 | 60.9 | 21.1 | 254 | 2.62 | **42** | 1 | 4.6 | 5.7 | 57 | 0.1 | 0.2 | 0.2 | 33 | 1.04 | 0.046 | 25 | 133.3 | 1.07 | 84 | 0.035 | <1 | 1.41 | 0.033 | 0.15 | 0.1 | 0.01 | **3.1** | <0.1 | 0.36 | 6 | <0.5 |
| ARD-M03-497-1A | Nimj | IF | 1.7 | 82.7 | 3.8 | 51 | <0.1 | 23.9 | 8.3 | 591 | 14.78 | 7.1 | 0.3 | 17.8 | 2.1 | 119 | 0.1 | 0.1 | 0.2 | 32 | 2.88 | 0.066 | 11 | 73.6 | 0.95 | 8 | 0.014 | <1 | 2.68 | 0.004 | 0.02 | 0.1 | <0.01 | 3.6 | <0.1 | 0.95 | 7 | <0.5 |
| ARD-M00-471-1A | Mv'ser'ak | MVak | 0.6 | 129.3 | 5.1 | 120 | <0.1 | 102.7 | 43.9 | 2281 | 5.64 | **313.1** | **<0.1** | **778.6** | 0.3 | 58 | 0.3 | 0.1 | **<0.1** | 45 | 7.71 | 0.029 | 1 | 81.7 | 2.15 | 17 | 0.003 | <1 | 1.29 | 0.042 | 0.1 | 0.1 | 0.01 | **8.3** | <0.1 | **0.41** | 3 | <0.5 |
| ARD-M00-471-2A | Mv'ser'ak | MVak | 0.7 | 94 | 3.1 | 104 | <0.1 | 95.7 | 42.6 | 1931 | 6.64 | **69.6** | 0.1 | **8.9** | 0.8 | 45 | 0.1 | 0.1 | **0.1** | 132 | 7.94 | 0.026 | 2 | 124.7 | 2.15 | 6 | 0.01 | <1 | 2.79 | 0.029 | 0.05 | 0.1 | <0.01 | **15.2** | <0.1 | **0.31** | 8 | <0.5 |
| ARD-M00-481-1A | Mv'ser'ak | MVak | 0.7 | 84.9 | 7.1 | 125 | <0.1 | 105.3 | 45.3 | 2106 | 6.03 | **540** | 0.1 | **40.3** | 0.5 | 67 | 0.2 | 0.2 | **0.1** | 57 | 7.56 | 0.028 | 1 | 91.4 | 2.29 | 16 | 0.006 | 2 | 1.46 | 0.036 | 0.12 | 0.1 | <0.01 | **9.1** | 0.1 | **0.41** | 4 | <0.5 |
| ARD-M00-481-2A | Mv'ser'ak | MVak | 1.2 | 85.2 | 3.5 | 77 | <0.1 | 103.4 | 45.7 | 1944 | 6.05 | **180.8** | 0.1 | **64.1** | 0.7 | 54 | 0.2 | 0.1 | **0.1** | 57 | 8.11 | 0.026 | 1 | 109.4 | 2.01 | 11 | 0.004 | 1 | 1.52 | 0.046 | 0.1 | 0.1 | <0.01 | **9.2** | <0.1 | **0.37** | 4 | <0.5 |
| ARD-M00-471-3A | Mv'ca'c | MV | 0.4 | 100 | 1.6 | 90 | <0.1 | 100.2 | 46.2 | 1623 | 6.74 | **12.2** | **<0.1** | **13.6** | 0.2 | 47 | 0.2 | 0.1 | **<0.1** | 185 | 8.02 | 0.025 | 1 | 153.5 | 2.5 | 6 | 0.03 | <1 | 3.81 | 0.009 | 0.02 | 0.1 | <0.01 | **17.7** | <0.1 | **0.11** | 11 | <0.5 |
| ARD-M98-196-1A | Mv | MV | 1.1 | 123 | 8.2 | 106 | 0.2 | 103.2 | 52.3 | 1981 | 6.1 | **474.2** | 0.1 | **2367.1** | 0.5 | 66 | 0.1 | 0.1 | **0.1** | 82 | 7.49 | 0.027 | 1 | 123.3 | 2.32 | 18 | 0.004 | <1 | 1.95 | 0.03 | 0.12 | 0.4 | <0.01 | **9.4** | 0.1 | **0.64** | 5 | 0.5 |
| ARD-M98-196-2A | Mv | MV | 0.9 | 100.3 | 4.4 | 123 | 0.1 | 99.6 | 44.1 | 2044 | 5.97 | **707.8** | 0.1 | **68.8** | 0.5 | 51 | 0.4 | 0.1 | **<0.1** | 102 | 8.84 | 0.027 | 2 | 138.1 | 2.13 | 11 | 0.006 | <1 | 2.11 | 0.024 | 0.06 | 0.3 | 0.01 | **10.7** | <0.1 | **0.32** | 6 | <0.5 |
| ARD-M98-197-1A | Mv | MV | 1 | 119.5 | **12.1** | 127 | <0.1 | 96.9 | 43 | 2140 | 5.82 | **2373.9** | 0.1 | **72.6** | 0.5 | 62 | 0.3 | 0.1 | **0.1** | 50 | 7.95 | 0.029 | 1 | 89 | 2.14 | 18 | 0.002 | 1 | 1.49 | 0.034 | 0.15 | 0.2 | <0.01 | **7.3** | 0.1 | **0.54** | 4 | 0.6 |
| ARD-M98-197-2A | Mv | MV | 0.5 | 102.5 | 4.2 | 82 | <0.1 | 91.4 | 48.3 | 2164 | 6.04 | **97.6** | **<0.1** | **69.2** | 0.4 | 57 | 0.2 | 0.1 | **<0.1** | 102 | 8.87 | 0.026 | 1 | 107 | 1.79 | 18 | 0.003 | 1 | 2.1 | 0.024 | 0.08 | <0.1 | <0.01 | **11.2** | <0.1 | **0.37** | 7 | <0.5 |
| ARD-GT9-1A | Mg | GAB | 0.9 | 104.2 | 10.2 | 92 | <0.1 | 35.4 | 45.6 | 1159 | 6.61 | **18.7** | 0.1 | **1.7** | 0.7 | 108 | 0.2 | 0.3 | **0.1** | 201 | 3.77 | 0.058 | 7 | 53.1 | 2.03 | 26 | 0.144 | <1 | 3.07 | 0.038 | 0.1 | 0.2 | <0.01 | **15.6** | 0.1 | **0.12** | 11 | <0.5 |
| ARD-GT2-3A | Mg | GAB | 1 | 138.6 | 1.9 | 65 | <0.1 | 46.4 | 46.2 | 769 | 5.32 | **7.9** | 0.1 | **35.3** | 0.7 | 43 | **<0.1** | 0.3 | **<0.1** | 135 | 1.49 | 0.041 | 3 | 100.6 | 1.91 | 143 | 0.257 | 1 | 2.43 | 0.029 | 0.56 | 0.2 | <0.01 | **6.1** | 0.2 | **0.2** | 6 | <0.5 |
| ARD-M99-336B-2A | Mg'bt | GAB | 0.8 | 80.1 | 4.3 | 87 | <0.1 | 56 | 41.9 | 1184 | 6.83 | **20.7** | 0.2 | **21.5** | 1.6 | 72 | 0.1 | 0.3 | **0.1** | 203 | 3.32 | 0.045 | 6 | 74.9 | 2.63 | 291 | 0.264 | <1 | 3.3 | 0.018 | 0.84 | 0.4 | <0.01 | **10.9** | 0.4 | **0.16** | 11 | <0.5 |
| ARD-M99-336B-3A | Mg'ep | GAB | 0.7 | 97.5 | 2.9 | 65 | <0.1 | 46.8 | 43.7 | 844 | 4.83 | **16.9** | **<0.1** | **4** | 0.6 | 44 | 0.1 | 0.3 | **<0.1** | 115 | 2.67 | 0.039 | 3 | 82 | 1.81 | 56 | 0.183 | <1 | 2.29 | 0.023 | 0.16 | 0.3 | <0.01 | **5.1** | 0.1 | **0.33** | 7 | <0.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Typical Concentrations | Basalt | | 1.5 | 87 | 6 | 105 | 0.11 | 130 | 48 | 1500 | 8.65 | 2 | 1 | 0.004 | 4 | 465 | 0.22 | 0.2 | 0.007 | 250 | 7.6 | 1100 | 15 | 170 | 4.6 | 330 | 13800 | 5 | 7.8 | 1.8 | 0.83 | 0.7 | 0.09 | 0.05 | 0.21 | 0.03 | 17 | 0.05 |
| in the Earth's Crust | Shales | | 2.6 | 45 | 20 | 95 | 0.07 | 68 | 19 | 850 | 4.72 | 13 | 3.7 | 0.00X | 12 | 300 | 0.3 | 1.5 | ND | 130 | 2.21 | 700 | 92 | 90 | 1.5 | 580 | 4600 | 100 | 8 | 0.96 | 2.66 | 1.8 | 0.4 | 0.6 | 1.4 | 0.24 | 19 | 0.6 |
| (from Wedpohl) | Sandstones | | 0.2 | X | 7 | 16 | 0.0X | 2 | 0.3 | X0 | 0.98 | 1 | 0.45 | 0.00X | 1.7 | 20 | 0.0X | 0.0X | ND | 20 | 3.91 | 170 | 30 | 35 | 0.7 | X0 | 1500 | 35 | 2.5 | 0.33 | 1.07 | 1.6 | 0.03 | 0.05 | 0.82 | 0.024 | 12 | 0.05 |

Notes: yellow highlight indicates the values are >2x the average concentrations given for sandstone
bold indicates ths concentrations are >2x the average concentraitons given for shale or basalt

## Appendix 3
## 2005 Elemental Analyses - Comparison of Duplicate Analyses

| Sample ID | LITHO | | Mo | Cu | Pb | Zn | Ag | Ni | Co | Mn | Fe | As | U | Au | Th | Sr | Cd | Sb | Bi | V | Ca | P | La | Cr | Mg | Ba | Ti | B | Al | Na | K | W | Hg | Sc | Tl | S | Ga | Se |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rock Code | Zone | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm | % | ppm | ppm | ppb | ppm | ppm | ppm | ppm | ppm | ppm | % | % | ppm | ppm | % | ppm | % | ppm | % | % | % | ppm | ppm | ppm | ppm | % | ppm | ppm |
| ARD-GT10-2A | Ks-wa | | 2.1 | 43.7 | 6.8 | 84 | <0.1 | 82.5 | 25.6 | 381 | 3.91 | 122.7 | 0.7 | 2 | 4.6 | 52 | <0.1 | 0.1 | 0.2 | 32 | 1.05 | 0.052 | 24 | 119.5 | 1.61 | 41 | 0.004 | <1 | 2.42 | 0.021 | 0.16 | 0.1 | <0.01 | 2.6 | <0.1 | 0.12 | 7 | <0.5 |
| ARD-GT10-2A | Ks-wa | | 1.8 | 44.9 | 5.7 | 83 | <0.1 | 78.8 | 24 | 368 | 3.81 | 105.9 | 0.6 | 1.5 | 4.3 | 47 | 0.1 | 0.1 | 0.2 | 30 | 1.01 | 0.05 | 22 | 114.4 | 1.53 | 40 | 0.004 | 1 | 2.32 | 0.02 | 0.15 | <0.1 | <0.01 | 2.5 | <0.1 | 0.12 | 7 | <0.5 |
| ARD-GT4-1A | Kwa'ser | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARD-GT4-1A | Kwa'ser | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARD-GT7-1A | Ks-wa | | 2.1 | 38.9 | 6.3 | 81 | <0.1 | 69.6 | 22.1 | 361 | 3.67 | 54.4 | 0.7 | 1.8 | 4.9 | 57 | 0.1 | 0.1 | 0.1 | 23 | 0.87 | 0.051 | 24 | 104.7 | 1.46 | 44 | 0.003 | 1 | 2.05 | 0.025 | 0.14 | <0.1 | 0.01 | 2.3 | <0.1 | 0.08 | 6 | <0.5 |
| ARD-GT7-1A | Ks-wa | | 2.1 | 40.5 | 6.4 | 86 | <0.1 | 69.5 | 22 | 365 | 3.71 | 58.1 | 0.7 | 2 | 5.1 | 61 | 0.1 | 0.1 | 0.2 | 25 | 0.89 | 0.053 | 25 | 106.2 | 1.49 | 46 | 0.003 | 1 | 2.07 | 0.025 | 0.15 | 0.1 | <0.01 | 2.4 | <0.1 | 0.07 | 6 | <0.5 |
| ARD-GT9-3A | Kwa-s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARD-GT9-3A | Kwa-s | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARD-M03-497-4A | Kwa-qv | | 2.5 | 61.6 | 8.3 | 87 | <0.1 | 68.1 | 23.4 | 337 | 3.04 | 9.7 | 0.9 | 5.8 | 6.4 | 121 | 0.1 | 0.1 | 0.2 | 19 | 1.49 | 0.054 | 27 | 127.6 | 1.27 | 132 | 0.007 | <1 | 1.54 | 0.024 | 0.14 | 0.1 | <0.01 | 2.2 | <0.1 | 0.34 | 4 | <0.5 |
| ARD-M03-497-4A | Kwa-qv | | 2.2 | 62.3 | 8.3 | 88 | <0.1 | 70.6 | 23.1 | 340 | 3.07 | 9.8 | 0.9 | 8.4 | 6.3 | 126 | 0.1 | 0.1 | 0.2 | 19 | 1.58 | 0.059 | 29 | 126 | 1.3 | 139 | 0.007 | <1 | 1.55 | 0.023 | 0.15 | 0.1 | <0.01 | 2.4 | <0.1 | 0.36 | 5 | <0.5 |
| ARD-M04-518-2A | Kwa | | 2 | 54.2 | 3.5 | 61 | <0.1 | 64.6 | 18.4 | 222 | 2.76 | 8.5 | 0.8 | 3.4 | 5.5 | 30 | 0.1 | 0.1 | 0.2 | 33 | 0.56 | 0.047 | 26 | 135.3 | 1.16 | 58 | 0.028 | <1 | 1.49 | 0.041 | 0.12 | 0.2 | 0.01 | 2.9 | <0.1 | 0.23 | 6 | <0.5 |
| ARD-M04-518-2A | Kwa | | 2.1 | 51.8 | 3.5 | 59 | <0.1 | 62.6 | 18.5 | 221 | 2.69 | 9.5 | 0.8 | 0.7 | 5 | 31 | 0.1 | 0.1 | 0.1 | 32 | 0.55 | 0.043 | 25 | 131.5 | 1.13 | 54 | 0.027 | <1 | 1.44 | 0.043 | 0.11 | 0.2 | <0.01 | 2.6 | <0.1 | 0.23 | 6 | <0.5 |
| ARD-M98-196-1A | Mv | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARD-M98-196-1A | Mv | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARD-M98-197-1A | Mv | | 1 | 119.5 | 12.1 | 127 | <0.1 | 96.9 | 43 | 2140 | 5.82 | 2374 | 0.1 | 72.6 | 0.5 | 62 | 0.3 | 0.1 | 0.1 | 50 | 7.95 | 0.029 | 1 | 89 | 2.14 | 18 | 0.002 | 1 | 1.49 | 0.034 | 0.15 | 0.2 | <0.01 | 7.3 | 0.1 | 0.54 | 4 | 0.6 |
| ARD-M98-197-1A | Mv | | 0.8 | 120.2 | 12.2 | 126 | 0.1 | 97.4 | 42.9 | 2128 | 5.87 | 2400 | 0.1 | 184.4 | 0.5 | 63 | 0.3 | 0.2 | 0.1 | 48 | 8.07 | 0.03 | 1 | 85.3 | 2.17 | 19 | 0.002 | 3 | 1.5 | 0.032 | 0.15 | 0.2 | <0.01 | 7.1 | 0.1 | 0.55 | 4 | <0.5 |
| ARD-M99-336B-1A | Kwa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARD-M99-336B-1A | Kwa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

# Appendix 4:  Shake Flask Extraction Test Results

## Appendix 4: Shake Flask Extraction Test Results

| Sample Name: | | | ARD-M03-497-1A | ARD-M98-196-1A | ARD-M98-265-1A |
|---|---|---|---|---|---|
| Group | | | IF | MV | SEDS |
| **Parameter** | **Method** | **Units** | | | |
| nanopure water volume | | mL | 750 | 750 | 750 |
| Sample Weight | | g | 250 | 250 | 250 |
| pH | meter | | 7.80 | 7.91 | 7.83 |
| Conductivity | meter | uS/cm | 211 | 247 | 170 |
| Acidity (to pH 4.5) | titration | mg CaCO3/L | #N/A | #N/A | #N/A |
| Total Acidity (to pH 8.3) | titration | mg CaCO3/L | 5 | 3.5 | 3.5 |
| Alkalinity | titration | mg CaCO3/L | 90 | 100 | 82 |
| Sulphate | Turbidity | mg/L | 8 | 21 | 4 |
| **Ion Balance** | | | | | |
| Major Anions | #N/A | #N/A | 1.97 | 2.44 | 1.72 |
| Major Cations | #N/A | #N/A | 2.16 | 2.60 | 1.77 |
| Diff. (%) | #N/A | #N/A | 4.7% | 3.2% | 1.4% |
| **Dissolved Metals** | | | | | |
| Hardness CaCO3 | | mg/L | 101 | 116 | 72.6 |
| Aluminum Al | ICP-MS | mg/L | 0.037 | 0.36 | 0.11 |
| Antimony Sb | ICP-MS | mg/L | 0.001 | 0.0024 | 0.0022 |
| Arsenic As | ICP-MS | mg/L | 0.0002 | 0.038 | 0.015 |
| Barium Ba | ICP-MS | mg/L | 0.0037 | 0.005 | 0.003 |
| Beryllium Be | ICP-MS | mg/L | < 0.0002 | < 0.0002 | < 0.0002 |
| Bismuth Bi | ICP-MS | mg/L | < 0.0002 | < 0.0002 | < 0.0002 |
| Boron B | ICP-MS | mg/L | 0.01 | 0.05 | 0.01 |
| Cadmium Cd | ICP-MS | mg/L | < 0.00004 | < 0.00004 | < 0.00004 |
| Calcium Ca | ICP-MS | mg/L | 36 | 33.5 | 22.8 |
| Chromium Cr | ICP-MS | mg/L | < 0.0002 | 0.0002 | < 0.0002 |
| Cobalt Co | ICP-MS | mg/L | < 0.0002 | 0.0005 | < 0.0002 |
| Copper Cu | ICP-MS | mg/L | 0.0005 | 0.075 | 0.0022 |
| Iron Fe | ICP-MS | mg/L | < 0.01 | < 0.01 | < 0.01 |
| Lead Pb | ICP-MS | mg/L | < 0.0002 | 0.0089 | 0.0002 |
| Lithium Li | ICP-MS | mg/L | 0.0008 | 0.0027 | 0.0017 |
| Magnesium Mg | ICP-MS | mg/L | 2.71 | 7.78 | 3.78 |
| Manganese Mn | ICP-MS | mg/L | 0.017 | 0.044 | 0.033 |
| Mercury Hg | CVAA | ug/L | < 0.02 | < 0.02 | < 0.02 |
| Molybdenum Mo | ICP-MS | mg/L | 0.0005 | < 0.0001 | 0.0006 |
| Nickel Ni | ICP-MS | mg/L | 0.0004 | 0.0053 | 0.0016 |
| Phosphorus PO4 | ICP-MS | mg/L | < 0.03 | < 0.03 | < 0.03 |
| Potassium K | ICP-MS | mg/L | 1.12 | 4.9 | 6.65 |
| Selenium Se | ICP-MS | mg/L | < 0.0002 | < 0.0002 | < 0.0002 |
| Silicon SiO2 | ICP-MS | mg/L | 0.67 | 1.1 | 1.32 |
| Silver Ag | ICP-MS | mg/L | < 0.00005 | < 0.00005 | < 0.00005 |
| Sodium Na | ICP-MS | mg/L | 2.6 | 3.66 | 3.52 |
| Strontium Sr | ICP-MS | mg/L | 0.181 | 0.064 | 0.091 |
| Tellurium Te | ICP-MS | mg/L | < 0.0002 | < 0.0002 | < 0.0002 |
| Thallium Tl | ICP-MS | mg/L | < 0.00002 | < 0.00002 | < 0.00002 |
| Thorium Th | ICP-MS | mg/L | < 0.0001 | < 0.0001 | < 0.0001 |
| Tin Sn | ICP-MS | mg/L | < 0.0002 | < 0.0002 | < 0.0002 |
| Titanium Ti | ICP-MS | mg/L | < 0.0002 | 0.0006 | < 0.0002 |
| Uranium U | ICP-MS | mg/L | 0.0001 | < 0.0001 | < 0.0001 |
| Vanadium V | ICP-MS | mg/L | < 0.0002 | 0.0003 | 0.0003 |
| Zinc Zn | ICP-MS | mg/L | < 0.001 | 0.19 | 0.003 |
| Zirconium Zr | ICP-MS | mg/L | < 0.002 | < 0.002 | < 0.002 |

# APPENDIX F

## Doc 184 Ver. 0 issued 29 July 2011:

***Geochemistry Program Site Visit Report: Summary of Sampling and Field Test Construction Activities, Meliadine Project, Nunavut***

# TECHNICAL MEMORANDUM

**DATE** July 29, 2011 **PROJECT No.** 11-1428-0011/6000 Doc 184 Ver. 0

**TO** Josee Noel, Blandine Arsenault, Sylvain Doire, John Witteman
Agnico-Eagle Mines Ltd.

**CC** Dan Walker, Lynn Wilson

**FROM** Albert Stoffers, Jennifer Cole, Valerie Bertrand **EMAIL** jcole@golder.com

**GEOCHEMISTRY PROGRAM SITE VISIT REPORT: SUMMARY OF SAMPLING AND FIELD TEST CONSTRUCTION ACTIVITIES, MELIADINE PROJECT, NUNAVUT**

This technical memorandum summarizes field activities completed during a site visit to the Agnico-Eagle Mines Ltd. (AEM) Meliadine Project by Golder geochemists Jennifer Cole and Albert Stoffers from July 6-17, 2011. A site orientation was provided immediately upon Golder's arrival by on-site AEM staff. The main tasks to be completed during the site visit included:

- Collecting core samples representing waste rock and ore from the Discovery, F-Zone, Pump, Tiriganiaq, Wesmeg, and Wolf deposits for static and kinetic testing;
- Constructing and sampling 4 field barrels, including 2 containing waste rock and 2 containing ore with charge material obtained from the existing operations pad; and,
- Installing and sampling 2 drive point piezometers downstream of the operations pad to replace those installed in 2010 and destroyed during the expansion of the operations pad this past winter. This task was out of the original scope of work for the site visit.

These tasks are described in detail below. The field program was completed to address anticipated requirements for baseline studies in support of the Environmental Impact Statement and of the Tailings and Waste Rock Management Studies, as outlined in our proposal (Golder, 2011).

## 1.0 WASTE ROCK AND ORE SAMPLE COLLECTION

The following information was reviewed prior to the site visit in order to select appropriate sample intervals:

- Geology of the deposits;
- Previous reports on mine waste geochemistry (Golder, 2010);
- Up-to-date tonnage estimates of waste rock per deposit per rock type (10000 tpd Max pits) (*Lithology_proportion_pit 10000tpd.xlsx* dated June 13, 2011, D. Duquette pers. comm.; see attached);



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- Geological sections for each deposit including the 10000 tpd pit outlines provided by AEM; and,
- Down-hole data including depth, rock type and gold assay results.

Sample intervals were selected to achieve a good spatial distribution throughout the deposits, and specifically targeting areas of open pit expansion not previously characterized for the Tiriganiaq, F Zone, and Discovery deposits. Sample proportions were also targeted per deposit and rock type to be consistent with the expected waste rock tonnages to be generated from each deposit per rock type (as per *Lithology_proportion_pit 10000tpd.xlsx* dated June 13, 2011, D. Duquette pers. comm.). This information is included in Attachment A.

Table 1 summarizes the total samples collected from each deposit and Table 2 compares the total estimated tonnage of waste with the proportion of samples from each rock type. A breakdown of samples collected per deposit and per rock type is provided in Attachment B, and a list detailing each sample collected is provided in Attachment C. Photographs of typical rock type intervals are included in Attachment D.

**Table 1: Summary of Samples Collected per Deposit in July 2011**

| Rock Type | | | | Deposit | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Material Type** | **Model Rock Type** | **Model Code** | **Rock Type** | **Discovery** | **F-Zone** | **Pump** | **Tiriganiaq** | **Wesmeg** | **Wolf** |
| **WASTE ROCK** | Gabbro | 777 | Gabbro | 11 | - | - | 10 | - | - |
| | IF | 778 | Iron Formation | 23 | 5 | 8 | 3 | - | 5 |
| | Wesmeg | 779 | Mafic Volcanic | - | 15 | 36 | 12 | 56 | 10 |
| | SAM | 780 | Greywacke / Siltstone | 23 | - | - | 78 | - | 17 |
| | UM | 782 | Ultramafic | - | - | - | - | 3 | - |
| | UO | 781 | Undefined | - | - | - | - | - | - |
| | **TOTAL WASTE** | | | **57** | **20** | **44** | **103** | **59** | **32** |
| **ORE** | Gabbro | 777 | Gabbro | - | - | - | - | - | - |
| | IF | 778 | Iron Formation | 5 | 3 | 4 | - | - | 3 |
| | Wesmeg | 779 | Mafic Volcanic | - | - | - | 4 | 3 | - |
| | SAM | 780 | Greywacke / Siltstone | - | - | - | 3 | - | - |
| | UM | 782 | Ultramafic | - | - | - | - | - | - |
| | UO | 781 | Undefined | - | - | - | - | - | - |
| | **TOTAL ORE** | | | **5** | **3** | **4** | **7** | **3** | **3** |
| **GRAND TOTAL** | | | | **62** | **23** | **48** | **110** | **62** | **35** |

It is understood that the undefined (UO) unit in the waste rock is a stratigraphic unit composed of greywackes and banded iron formation, similar to the Upper Oxide Formation within the Tiriganiaq Formation. It is approximately composed of 80% greywacke and 20% iron formation (S. Patry, pers. comm. June 28, 2011).

**Table 2: Summary of Total Tonnage and Samples Collected in 2008, 2009 and 2011**

| Rock Type | | | | Total Tonnage (All Deposits, 10000 tpd)[1] | | Total Samples Collected (All Deposits) | |
|---|---|---|---|---|---|---|---|
| **Type** | **Model Rock Type** | **Model Code** | **Rock Type** | **Tonnes** | **Proportion** | **Count** | **Proportion** |
| **WASTE ROCK** | Gabbro | 777 | Gabbro | 11,233,453 | 3% | 21 | 7% |
| | IF | 778 | Iron Formation | 22,859,390 | 6% | 44 | 14% |
| | Wesmeg | 779 | Mafic Volcanic | 155,450,855 | 41% | 129 | 41% |
| | SAM | 780 | Greywacke / Siltstone | 99,556,572 | 26% | 118 | 37% |
| | UM | 782 | Ultramafic | 717,915 | 0% | 3 | 1% |
| | UO | 781 | Undefined | 90,935,846 | 24% | 0 | 0% |
| | | | TOTAL WASTE | **380,754,032** | **100%** | **315** | **100%** |
| **ORE** | Gabbro | 777 | Gabbro | 8,749 | 0% | 0 | 0% |
| | IF | 778 | Iron Formation | 6,839,679 | 22% | 15 | 60% |
| | Wesmeg | 779 | Mafic Volcanic | 9,029,704 | 29% | 7 | 28% |
| | SAM | 780 | Greywacke / Siltstone | 1,207,832 | 4% | 3 | 12% |
| | UM | 782 | Ultramafic | 78,499 | 0% | 0 | 0% |
| | UO | 781 | Undefined | 13,859,135 | 45% | 0 | 0% |
| | | | TOTAL ORE | **31,023,598** | **100%** | **25** | **100%** |
| **GRAND TOTAL** | | | | **411,777,629** | **-** | **340** | **-** |

1- *Lithology_proportion_pit 10000tpd.xlsx* dated June 13, 2011, D. Duquette pers. comm.

Each waste rock and ore sample was described in terms of rock type, sulphide and carbonate mineralogy, metamorphism, alteration, and staining associated with sulphide mineral oxidation. Each sample consisted of a composite of 3 to 5 kilograms of core (whole or split) collected from previously drilled (pre-2011) diamond drill core over an interval of 5 to 12 metres. The length of the sample interval was intended to circumvent the effect of mineral clusters, and particularly sulphide minerals, which may not be representative of the bulk rock mass along the targeted interval.

All sampled core was located at the main camp with the exception of Discovery core, which was located at the Discovery camp. A total of 8 Wesmeg sample intervals were selected from 2011 holes to augment those intervals available in older holes and to meet the targeted sample count.

The collected samples have been shipped to SGS Canada Inc. of Lakefield, Ontario for analysis. Samples of waste rock and ore (including field test composites described below) will be subjected to the following suite of static tests aimed at defining and documenting the propensity of the material to generate acid drainage and to leach metals to the receiving environment:

- Major and trace element analysis on solids: whole rock analysis by X-ray fusion and trace element analysis by triple acid digestion followed by ICP-MS analysis;
- Acid generation (ARD) potential using the modified Sobek method of Acid-Base Accounting (ABA) and carbonate neutralisation potential assessment. These analyses include: paste pH, total sulphur and sulphate sulphur, total carbon and carbonate, and bulk neutralization potential;
- Short-term leaching test using the Shake Flask Extraction (SFE) neutral pH water leaching method, with leachate analysis by ICP-MS; and,
- Net Acid Generation (NAG) test pH and leachate on a subset of samples.

## 2.0 FIELD CELL CONSTRUCTION

Field test cells were constructed using 50 gallon drums and crushed rock charge material collected from the operations pad (see Attachment E for photographs). Field cells will serve to assess the effects of mixed rock, wider grain size distribution and field weathering conditions on chemical loading rates from the charge material, and results are used to extrapolate laboratory results to provide more realistic, field-specific chemical loadings to mine contact water.

The four test cells include:

- WR 1 and WR 2: two field cells were constructed using a composite of waste rock material collected from 12 test pits completed in the operations pad to a depth of 1-2 meters using a mechanical shovel. A composite sample was collected from each test pit for static testing and 50 kg (110 pounds) of material was collected from each test pit as charge material for the field cells, resulting in 300 kg of charge material per field cell. Sample collection targeted material from throughout the test pit after scraping off surface material. A composite sample representative of the field cell charge material will be generated for static testing using equal proportions of prepped material from each of the 12 composite samples;

- Lode 1000 ore: collected from a combined high and low grade ore stockpile at 12 discreet locations around the base and top surface of the stockpile using a shovel. A total of 25 kg (55 pounds) was collected from each discreet location to generate a composite, from which one sample was collected for static testing. It is understood that the high and low grade stockpiles were combined into one pile by AEM. The total mass of the composite sample used as charge material in the field test cell was 300 kg; and,
- Lode 1100 ore: collected from the high grade ore stockpile at 12 discreet locations around the base and top surface of the stockpile using a shovel. A total of 25 kg (55 pounds) was collected from each discreet location to generate a composite, from which one sample was collected for static testing. The total mass of the composite sample used as charge material in the field test cell was 300 kg.

A photo documentary of the cell construction is included in Attachment E and the set up is shown on Photograph 1.



*Photograph 1: Final Set up of Field Test Cells Located Southeast of the Portal*

After construction of the field cells, an “initial wash” was completed (Cycle 0) using 5 litres of lake water (termed “leach water”) for each waste rock cell, and 10 litres for each ore cell due to their higher proportion of fine material, and consequent higher water retention. Leach water was collected from the nearby lake in the background of Photo 1 using a clean plastic bucket. Water was added to the cells on 14 July 2011 and allowed to drain into a receptacle prior to sampling on 16 July 2011. A high proportion of fine material in the Lode 1000 test cell had to be removed by extensive washing to avoid creating low permeability barriers in the test cell, which would cause future drainage problems. Cycle 0 water samples were collected and submitted to Maxxam Laboratory in Ottawa for analysis of general chemistry, dissolved metals, and nutrients.

Cycle 1 was conducted by adding 5 L of leach water to the waste rock cells and 8 L of leach water to the ore cells on 16 July 2011 after collection and disposal of Cycle 0 water. The cells were allowed to drain overnight and samples were collected on 17 July 2011. A total of 1.75 L of water was collected for analytical testing per field cell, with the remaining volume of Cycle 1 water recorded for mass loading calculations.

AEM staff geologist (Morgan Hjorth) was instructed on the cell leaching and sampling protocol. Subsequent leaching cycles will be performed and leachate samples will be collected by Golder or AEM staff, depending on availability. A detailed sampling protocol will be provided under separate cover.

Table 3 summarizes the field parameters and observations for Cycle 0 and Cycle 1.

**Table 3: Summary of Field Cell Leachate Observations**

| Sample ID | Cycle | pH | Conductivity | Temperature | Observations |
|---|---|---|---|---|---|
| WR 1 | Cycle 0 | 8.02 | 692 | 18.2 | high suspended solids |
| | Cycle 1 | 7.13 | 768 | 12.0 | leachate remaining[1]= 0.5L |
| WR 2 | Cycle 0 | 8.00 | 733 | 18.8 | high suspended solids |
| | Cycle 1 | 7.50 | 709 | 12.5 | leachate remaining[1]= 0L |
| Lode 1100 | Cycle 0 | 7.91 | 1140 | 18.8 | high suspended solids |
| | Cycle 1 | 7.81 | 1332 | 13.1 | leachate remaining[1]= 4.5L |
| Lode 1000 | Cycle 0 | 7.60 | 2783 | 18.7 | high suspended solids |
| | Cycle 1 | 7.77 | >4000 | 11.5 | leachate remaining[1]= 3.5L |

1- volume of leachate water remaining after collection of 1.75 L for analytical testing

A total of 9 water samples were collected during the site visit, including the following:

- Cycle 0 and Cycle 1 for each test cell (8 samples); and,
- Lake water used for leaching (1 sample).

The samples were stored in a cooler in a fridge until transportation by Golder to Maxxam Laboratory in Ottawa. Water samples are being analyzed for the following parameters:

- General chemistry (pH, conductivity, total alkalinity (as CaCO3), chloride, sulphate);
- Nutrients (ammonia (as nitrogen), nitrate, nitrite, total phosphorus (colorimetric)); and,
- Dissolved metals and total metals (aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, tellurium, thallium, thorium, tin, titanium, tungsten, uranium, vanadium, zinc, zirconium).

## 3.0 DRIVE POINT PIEZOMETER INSTALLATION

Two drive point piezometers were installed in 2010 on the southwest edge of the operations pad and within the primary containment. These piezometers were destroyed when the pad was expanded over the last winter. Approval for installation of 2 additional drive point piezometers on the south side of the road was received while the Golder field staff were on site, but the equipment was not received in time for installation and sample collection. Two locations were staked and GPS coordinates were measured for Golder staff to install and sample the shallow groundwater from these monitors at a later date (Attachment F).

**Table 4: Proposed Drive Point Piezometer Locations**

| Location | Northing | Easting |
|---|---|---|
| DP11-01 | 6988942 | 540009 |
| DP11-02 | 6988967 | 540026 |

Samples will be shipped by Golder staff to Maxxam Laboratory in Ottawa for the same suite of analytical parameters as the other water samples.

## 4.0 CLOSURE

Golder thanks the AEM staff and their subcontractors at Meliadine camp for their welcome and the valuable assistance provided during the site visit.

We trust this report meets your current requirements. Please contact us should you have any questions or comments.

**GOLDER ASSOCIATES LTD.**

ORIGINAL SIGNED

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Attachments: Attachment A: Proportion of Waste Rock Type by Pit, 10000 tpd (as provided by AEM on June 13, 2011)
Attachment B: Summary of Total Samples Collected per Deposit by Rock Type
Attachment C: Geochemical Samples Collected in July 2011
Attachment D: Photographs of Typical Waste Rock and Ore Rock Types
Attachment E: Photographs of Field Cell Set-up, Charge Material and Sampled Water
Attachment F: Photographs of Proposed Drive Point Piezometer Installation Locations

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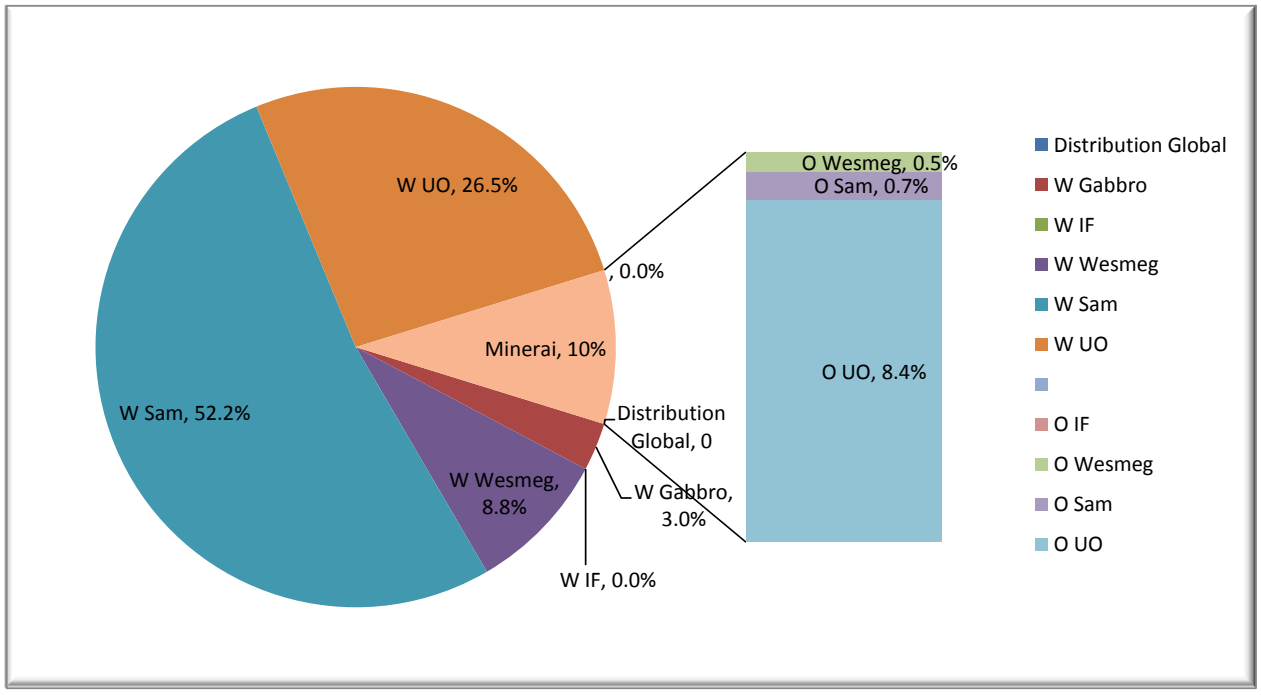
# ATTACHMENT A
## Proportion of Waste Rock Type by Pit, 10000 tpd (as provided by AEM on June 13, 2011)

# Tiriganiag Deposit

Total Pit Daniel Leblanc

| Ore | Waste | |
|---|---|---|
| 85,094,148 | 71,064,624 | 156,158,772 |

| Block Model Final : Pitmod_f_MSO | | | | | | |
|---|---|---|---|---|---|---|
| FLAG_O_W | ROCKTYPE | Tonne | % Waste / Ore | Distribution Global | % Waste vs Ore | % Global (Litho) |
| 0 | Gabbro 777 | 4,654,075 | | 3% | 3% | 3% |
| 0 | IF 778 | - | | 0% | 0% | 0% |
| 0 | Wesmeg 779 | 13,781,944 | | 9% | 10% | 9% |
| 0 | SAM 780 | 81,484,332 | | 52% | 58% | 53% |
| 0 | UO 781 | 41,310,909 | | 26% | 29% | 35% |
| Total Waste | | 141,231,271 | 90% | | 100% | 100% |
| 1 | Wesmeg 779 | 779,912 | | 0% | 5% | |
| 1 | SAM 780 | 1,075,307 | | 1% | 7% | |
| 1 | UO 781 | 13,072,281 | | 8% | 88% | |
| Total Ore | | 14,927,501 | 10% | | 100% | |
| Grand Total | | 156,158,772 | 100% | 100% | | |




| Distribution Global | |
|---|---|
| W Gabbro | 3.0% |
| W IF | 0.0% |
| W Wesmeg | 8.8% |
| W Sam | 52.2% |
| W UO | 26.5% |
| | |
| O IF | 0.0% |
| O Wesmeg | 0.5% |
| O Sam | 0.7% |
| O UO | 8.4% |

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as provided by AEM June 13, 2011

# Wesmeg Deposit

Total Pit Daniel Leblanc

| Ore | Waste | |
|---|---|---|
| 6,125,568.00 | 75,533,828.00 | 81,659,396.00 |

| Block Model Final : Pitmod_f_MSO | | | | | | |
|---|---|---|---|---|---|---|
| FLAG_O_W | ROCKTYPE | Tonne | % Waste / Ore | Distribution Global | % Waste vs Ore | % Global (Litho) |
| 0 | 0 | | | | | |
| 0 | Gabbro 777 | | | | | 0% |
| 0 | IF 778 | 30 | | 0.00% | 0% | 99% |
| 0 | Wesmeg 779 | 74,378,368 | | 91.08% | 99% | 0% |
| 0 | | - | | 0.00% | 0% | 1% |
| 0 | UM 782 | 717,915 | | 0.88% | 1% | |
| Total Waste | | 75,096,312 | 92% | | 100% | 100% |
| 1 | 0 | - | | 0.00% | 0% | |
| 1 | IF 778 | - | | 0.00% | 0% | |
| 1 | Wesmeg 779 | 6,484,585 | | 7.94% | 99% | |
| 1 | SAM 780 | - | | 0.00% | 0% | |
| 1 | UM 782 | 78,499 | | 0.10% | 1% | |
| Total Ore | | 6,563,084 | 8% | | 100% | |
| Grand Total | | 81,659,396 | 100% | 100% | | |

# F-Zone Deposit

Total Pit Daniel Leblanc

| Ore | Waste | |
|---|---|---|
| 1,558,475.00 | 33,496,671.00 | 35,055,146.00 |

Block Model Final : Pitmodf

| FLAG_O_W | ROCKTYPE | Tonne | % Waste / Ore | Distribution Global | % Waste vs Ore | % Global (Litho) |
|---|---|---|---|---|---|---|
| 0 | Gabbro 777 | 287,615 | | 1% | 1% | 1% |
| 0 | IF 778 | 2,666,736 | | 8% | 8% | 13% |
| 0 | Wesmeg 779 | 29,549,458 | | 84% | 91% | 86% |
| Total Waste | | 32,503,810 | 93% | | 100% | 100% |
| 1 | IF 778 | 1,943,457 | | 6% | 76% | |
| 1 | Wesmeg 779 | 607,879 | | 2% | 24% | |
| Total Ore | | 2,551,336 | 7% | 100% | 100% | |
| Grand Total | | 35,055,146 | | | | |

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as provided by AEM June 13, 2011

# Discovery Deposit

Total Pit Daniel Leblanc

| | | Ore | Waste | | | | |
|---|---|---|---|---|---|---|---|
| Block Model Final : Pitmod_f_MSO | | 1,780,816.00 | 73,307,145.00 | 75,087,961.00 | | | |
| FLAG_O_W | ROCKTYPE | Tonne | % Waste / Ore | Distribution Global | % Waste vs Ore | % Global (Litho) | |
| 0 | 0 | 0 | | 0% | 0% | 0% | |
| 0 | Gabbro 777 | 6,055,218 | | 8% | 8% | 8% | |
| 0 | IF 778 | 12,410,757 | | 17% | 17% | 20% | |
| 0 | | - | | 0% | 0% | 0% | |
| 0 | SAM 780 | 6,908,652 | | 9% | 10% | 9% | |
| 0 | UO 781 | 46,703,570 | | 62% | 65% | 63% | |
| Total Waste | | 72,078,198 | 96% | | 100% | 100% | |
| 1 | 0 | 1 | | 0% | 0% | | |
| 1 | Gabbro 777 | 8,749 | | 0% | 0% | | |
| 1 | IF 778 | 2,518,951 | | 3% | 84% | | |
| 1 | | - | | 0% | 0% | | |
| 1 | UO 781 | 482,063 | | 1% | 16% | | |
| Total Ore | | 3,009,763 | 4% | | 100% | | |
| Grand Total | | 75,087,961 | 100% | 100% | | | |

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as provided by AEM June 13, 2011

# Wolf Deposit

Total Pit Daniel Leblanc

| Ore | Waste | |
|---|---|---|
| 2,018,665.00 | 21,102,218.00 | 23,120,883.00 |

Block Model Final : Pitmod_f_MSO

| FLAG_O_W | ROCKTYPE | Tonne | % Waste / Ore | Distribution Global | % Waste vs Ore | % Global (Litho) |
|---|---|---|---|---|---|---|
| 0 | Gabbro 777 | 236,545 | | 1% | 1% | 1% |
| 0 | IF 778 | 2,251,056 | | 10% | 10% | 13% |
| 0 | Wesmeg 779 | 5,162,693 | | 22% | 24% | 24% |
| 0 | SAM 780 | 10,966,869 | | 47% | 51% | 48% |
| 0 | UO 781 | 2,921,367 | | 13% | 14% | 14% |
| Total Waste | | 21,538,531 | 93% | | 100% | 100% |
| 1 | 0 | - | | 0% | 0% | |
| 1 | IF 778 | 864,690 | | 4% | 55% | |
| 1 | Wesmeg 779 | 280,345 | | 1% | 18% | |
| 1 | SAM 780 | 132,525 | | 1% | 8% | |
| 1 | UO 781 | 304,792 | | 1% | 19% | |
| Total Ore | | 1,582,352 | 7% | 100% | 100% | |
| Grand Total | | 23,120,883 | | | | |

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as provided by AEM June 13, 2011

# Pump Deposit

Total Pit Daniel Leblanc

| Ore | Waste | |
|---|---|---|
| 516,097.00 | 40,179,387.00 | 40,695,484.00 |

Block Model Final : Pitmod_f_MSO

| FLAG_O_W | ROCKTYPE | Tonne | % Ore / Waste | Distribution Global | % Waste vs Ore | % Global (Litho) |
|---|---|---|---|---|---|---|
| 0 | | | | 0% | | |
| 0 | | | | 0% | | |
| 0 | IF 778 | 5,530,812 | | 14% | 14% | 17% |
| 0 | Wesmeg 779 | 32,578,392 | | 80% | 85% | 82% |
| 0 | SAM 780 | 196,718 | | 0% | 1% | 0% |
| 0 | | | | 0% | 0% | 0% |
| Total Waste | | 38,305,922 | 94% | | 100% | 100% |
| 1 | 0 | | | 0% | | |
| 1 | IF 778 | 1,512,581 | | 4% | 63% | |
| 1 | Wesmeg 779 | 876,982 | | 2% | 37% | |
| 1 | SAM 780 | | | 0% | 0% | |
| 1 | | | | 0% | 0% | |
| Total Ore | | 2,389,562 | 6% | 100% | 100% | |
| Grand Total | | 40,695,484 | | | | |

# ATTACHMENT B
## Summary of Total Samples Collected per Deposit by Rock Type

Summary of Total Samples Collected per Deposit by Rock Type
Meliadine Project
Agnico-Eagle Mines Ltd.

| Rock Type | | | | Total Tonnage (All Deposits) | | Total Samples Collected (All Deposits) | |
|---|---|---|---|---|---|---|---|
| Type | AEM Rock Type | AEM Model Code | Rock Type | | | | |
| Waste Rock | Gabbro | 777 | Gabbro | 11,233,453 | 3% | 21 | 7% |
| | IF | 778 | Iron Formation | 22,859,390 | 6% | 44 | 14% |
| | Wesmeg | 779 | Mafic Volcanic | 155,450,855 | 41% | 129 | 41% |
| | SAM | 780 | Greywacke / Siltstone | 99,556,572 | 26% | 118 | 37% |
| | UM | 782 | Ultramafic | 717,915 | 0% | 3 | 1% |
| | UO | 781 | Undefined | 90,935,846 | 24% | 0 | 0% |
| | | | **Total Waste** | **380,754,032** | **100%** | **315** | **100%** |
| Ore | Gabbro | 777 | Gabbro | 8,749 | 0% | 0 | 0% |
| | IF | 778 | Iron Formation | 6,839,679 | 22% | 15 | 60% |
| | Wesmeg | 779 | Mafic Volcanic | 9,029,704 | 29% | 7 | 28% |
| | SAM | 780 | Greywacke / Siltstone | 1,207,832 | 4% | 3 | 12% |
| | UM | 782 | Ultramafic | 78,499 | 0% | 0 | 0% |
| | UO | 781 | Undefined | 13,859,135 | 45% | 0 | 0% |
| | | | **Total Ore** | **31,023,598** | **100%** | **25** | **100%** |
| **Grand Total** | | | | **411,777,629** | | **340** | |

notes:

1- estimated tonnage for maxipit (10,000 tpd) provided by AEM (June 14, 2011)

2- calculated excluding undefined units in total tonnage

Summary of Total Samples Collected per Deposit by Rock Type
Meliadine Project
Agnico-Eagle Mines Ltd.

| Rock Type | | | | Discovery | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Type | AEM Rock Type | AEM Model Code | Rock Type | Estimated Tonnage[1] (tonne) | Proportion of Total Tonnage | Samples 2008-2009 | Samples 2011 | Total Sample Count | Proportion of Total Samples |
| Waste Rock | Gabbro | 777 | Gabbro | 6,055,218 | 24% | | 11 | 11 | 11% |
| | IF | 778 | Iron Formation | 12,410,757 | 49% | 10 | 23 | 33 | 34% |
| | Wesmeg | 779 | Mafic Volcanic | - | - | | 0 | 0 | 0% |
| | SAM | 780 | Greywacke / Siltstone | 6,908,652 | 27% | 31 | 23 | 54 | 55% |
| | UM | 782 | Ultramafic | - | - | | 0 | 0 | 0% |
| | UO | 781 | Undefined | 46,703,570 | - | | | - | - |
| | **Total Waste** | | | **72,078,198** | **100%** | **41** | **57** | **98** | **100%** |
| Ore | Gabbro | 777 | Gabbro | 8,749 | 0% | | | 0 | 0% |
| | IF | 778 | Iron Formation | 2,518,951 | 100% | | 5 | 5 | 100% |
| | Wesmeg | 779 | Mafic Volcanic | - | - | | | 0 | 0% |
| | SAM | 780 | Greywacke / Siltstone | - | - | | | 0 | 0% |
| | UM | 782 | Ultramafic | - | - | | | 0 | 0% |
| | UO | 781 | Undefined | 482,063 | - | | | - | - |
| | **Total Ore** | | | **3,009,763** | **100%** | **0** | **5** | **5** | **100%** |
| **Grand Total** | | | | **75,087,961** | | **41** | **62** | **103** | **200%** |

notes:

1- estimated tonnage for maxipit (10,000 tpd) provided by AEM (June 14, 2011)

2- calculated excluding undefined units in total tonnage

Summary of Total Samples Collected per Deposit by Rock Type
Meliadine Project
Agnico-Eagle Mines Ltd.

| Rock Type | | | | F Zone | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Type | AEM Rock Type | AEM Model Code | Rock Type | Estimated Tonnage[1] (tonne) | Proportion of Total Tonnage | Samples 2008-2009 | Samples 2011 | Total Sample Count | Proportion of Total Samples |
| Waste Rock | Gabbro | 777 | Gabbro | 287,615 | 1% | | 0 | 0 | 0% |
| | IF | 778 | Iron Formation | 2,666,736 | 8% | | 5 | 5 | 7% |
| | Wesmeg | 779 | Mafic Volcanic | 29,549,458 | 91% | 55 | 15 | 70 | 93% |
| | SAM | 780 | Greywacke / Siltstone | - | - | | 0 | 0 | 0% |
| | UM | 782 | Ultramafic | - | - | | 0 | 0 | 0% |
| | UO | 781 | Undefined | - | - | | | - | - |
| | | | **Total Waste** | **32,503,809** | **100%** | **55** | **20** | **75** | **100%** |
| Ore | Gabbro | 777 | Gabbro | - | - | | | 0 | 0% |
| | IF | 778 | Iron Formation | 1,943,457 | 76% | 3 | 3 | 6 | 100% |
| | Wesmeg | 779 | Mafic Volcanic | 607,879 | 24% | | | 0 | 0% |
| | SAM | 780 | Greywacke / Siltstone | - | - | | | 0 | 0% |
| | UM | 782 | Ultramafic | - | - | | | 0 | 0% |
| | UO | 781 | Undefined | - | - | | | - | - |
| | | | **Total Ore** | **2,551,336** | **100%** | **3** | **3** | **6** | **100%** |
| **Grand Total** | | | | **35,055,146** | | **58** | **23** | **81** | **200%** |

notes:

1- estimated tonnage for maxipit (10,000 tpd) provided by AEM (June 14, 2011)

2- calculated excluding undefined units in total tonnage

Summary of Total Samples Collected per Deposit by Rock Type
Meliadine Project
Agnico-Eagle Mines Ltd.

| Rock Type | | | | Pump | | | |
|---|---|---|---|---|---|---|---|
| Type | AEM Rock Type | AEM Model Code | Rock Type | Estimated Tonnage[1] (tonne) | Proportion of Total Tonnage | Samples 2011 | Proportion of Total Samples |
| Waste Rock | Gabbro | 777 | Gabbro | | - | 0 | 0% |
| | IF | 778 | Iron Formation | 5,530,812 | 14% | 8 | 18% |
| | Wesmeg | 779 | Mafic Volcanic | 32,578,392 | 85% | 36 | 82% |
| | SAM | 780 | Greywacke / Siltstone | 196,718 | 1% | 0 | 0% |
| | UM | 782 | Ultramafic | - | - | 0 | 0% |
| | UO | 781 | Undefined | - | - | - | - |
| | | | **Total Waste** | **38,305,922** | **100%** | **44** | **100%** |
| Ore | Gabbro | 777 | Gabbro | - | - | | 0% |
| | IF | 778 | Iron Formation | 1,512,581 | 63% | 4 | 100% |
| | Wesmeg | 779 | Mafic Volcanic | 876,982 | 37% | | 0% |
| | SAM | 780 | Greywacke / Siltstone | - | - | | 0% |
| | UM | 782 | Ultramafic | - | - | | 0% |
| | UO | 781 | Undefined | - | - | - | - |
| | | | **Total Ore** | **2,389,562** | **100%** | **4** | **100%** |
| **Grand Total** | | | | **40,695,484** | | **48** | **200%** |

notes:

1- estimated tonnage for maxipit (10,000 tpd) provided by AEM (June 14, 2011)

2- calculated excluding undefined units in total tonnage

Summary of Total Samples Collected per Deposit by Rock Type
Meliadine Project
Agnico-Eagle Mines Ltd.

| Rock Type | | | | Tiriganiaq | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Type | AEM Rock Type | AEM Model Code | Rock Type | Estimated Tonnage[1] (tonne) | Proportion of Total Tonnage[2] | Samples 2008-2009 | Samples 2011 | Total Sample Count | Proportion of Total Samples |
| Waste Rock | Gabbro | 777 | Gabbro | 4,654,075 | 5% | | 10 | 10 | 5% |
| | IF | 778 | Iron Formation | - | - | | 3 | 3 | 1% |
| | Wesmeg | 779 | Mafic Volcanic | 13,781,944 | 14% | 27 | 12 | 39 | 19% |
| | SAM | 780 | Greywacke / Siltstone | 81,484,332 | 82% | 74 | 78 | 152 | 75% |
| | UM | 782 | Ultramafic | - | - | | 0 | 0 | 0% |
| | UO | 781 | Undefined | 41,310,909 | - | | | - | - |
| | | | **Total Waste** | **141,231,261** | **100%** | **101** | **103** | **204** | **100%** |
| Ore | Gabbro | 777 | Gabbro | - | - | | - | 0 | 0% |
| | IF | 778 | Iron Formation | - | - | | - | 0 | 0% |
| | Wesmeg | 779 | Mafic Volcanic | 779,912 | 42% | | 4 | 4 | 57% |
| | SAM | 780 | Greywacke / Siltstone | 1,075,307 | 58% | | 3 | 3 | 43% |
| | UM | 782 | Ultramafic | - | - | | - | 0 | 0% |
| | UO | 781 | Undefined | 13,072,281 | - | | - | - | - |
| | | | **Total Ore** | **14,927,500** | **100%** | **0** | **7** | **7** | **100%** |
| **Grand Total** | | | | **156,158,772** | | **101** | **110** | **211** | |

notes:

1- estimated tonnage for maxipit (10,000 tpd) provided by AEM (June 14, 2011)

2- calculated excluding undefined units in total tonnage

Summary of Total Samples Collected per Deposit by Rock Type
Meliadine Project
Agnico-Eagle Mines Ltd.

| Rock Type | | | | Wesmeg | | | |
|---|---|---|---|---|---|---|---|
| Type | AEM Rock Type | AEM Model Code | Rock Type | Estimated Tonnage[1] (tonne) | Proportion of Total Tonnage | Samples 2011 | Proportion of Total Samples |
| Waste Rock | Gabbro | 777 | Gabbro | - | - | 0 | 0% |
| | IF | 778 | Iron Formation | 30 | 0% | 0 | 0% |
| | Wesmeg | 779 | Mafic Volcanic | 74,378,368 | 99% | 56 | 95% |
| | SAM | 780 | Greywacke / Siltstone | - | - | 0 | 0% |
| | UM | 782 | Ultramafic | 717,915 | 1% | 3 | 5% |
| | UO | 781 | Undefined | - | - | - | - |
| | | | **Total Waste** | **75,096,312** | **100%** | **59** | **100%** |
| Ore | Gabbro | 777 | Gabbro | - | - | | 0% |
| | IF | 778 | Iron Formation | - | - | | 0% |
| | Wesmeg | 779 | Mafic Volcanic | 6,484,585 | 99% | 3 | 100% |
| | SAM | 780 | Greywacke / Siltstone | - | - | | 0% |
| | UM | 782 | Ultramafic | 78,499 | 1% | | 0% |
| | UO | 781 | Undefined | - | - | - | - |
| | | | **Total Ore** | **6,563,084** | **100%** | **3** | **100%** |
| **Grand Total** | | | | **81,659,396** | | **62** | **200%** |

notes:

1- estimated tonnage for maxipit (10,000 tpd) provided by AEM (June 14, 2011)

2- calculated excluding undefined units in total tonnage

Summary of Total Samples Collected per Deposit by Rock Type
Meliadine Project
Agnico-Eagle Mines Ltd.

| Rock Type | | | | Wolf | | | |
|---|---|---|---|---|---|---|---|
| Type | AEM Rock Type | AEM Model Code | Rock Type | Estimated Tonnage[1] (tonne) | Proportion of Total Tonnage | Samples 2011 | Proportion of Total Samples |
| Waste Rock | Gabbro | 777 | Gabbro | 236,545 | 1% | 0 | 0% |
| | IF | 778 | Iron Formation | 2,251,056 | 12% | 5 | 16% |
| | Wesmeg | 779 | Mafic Volcanic | 5,162,693 | 28% | 10 | 31% |
| | SAM | 780 | Greywacke / Siltstone | 10,966,869 | 59% | 17 | 53% |
| | UM | 782 | Ultramafic | - | - | 0 | 0% |
| | UO | 781 | Undefined | 2,921,367 | - | - | - |
| | | | **Total Waste** | **21,538,530** | **100%** | **32** | **100%** |
| Ore | Gabbro | 777 | Gabbro | - | - | | 0% |
| | IF | 778 | Iron Formation | 864,690 | 68% | 3 | 100% |
| | Wesmeg | 779 | Mafic Volcanic | 280,345 | 22% | | 0% |
| | SAM | 780 | Greywacke / Siltstone | 132,525 | 10% | | 0% |
| | UM | 782 | Ultramafic | - | - | | 0% |
| | UO | 781 | Undefined | 304,792 | - | - | - |
| | | | **Total Ore** | **1,582,352** | **100%** | **3** | **100%** |
| **Grand Total** | | | | **23,120,883** | | **35** | **200%** |

notes:

1- estimated tonnage for maxipit (10,000 tpd) provided by AEM (June 14, 2011)

2- calculated excluding undefined units in total tonnage

# ATTACHMENT C
## Geochemical Samples Collected in July 2011

Summary of Geochemical Samples Collected in July 2011
Meliadine Project
Agnico-Eagle Mines Ltd.

| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| DISCOVERY | DS09GT-10-01 | 1240 | DS09GT-10 | 14 | 19 | Greywacke |
| DISCOVERY | ML00-224-01 | 1300 | ML00-224 | 101.5 | 110 | Ore/IF |
| DISCOVERY | ML08-225-01 | 1540 | ML08-225 | 70 | 79 | Iron Formation |
| DISCOVERY | ML08-225-02 | 1540 | ML08-225 | 104 | 115 | Greywacke |
| DISCOVERY | ML08-225-03 | 1540 | ML08-225 | 169 | 178 | Ore/IF |
| DISCOVERY | ML08-226-01 | 1510 | ML08-226 | 23 | 32 | Gabbro |
| DISCOVERY | ML08-226-02 | 1510 | ML08-226 | 36 | 45 | Iron Formation |
| DISCOVERY | ML08-226-03 | 1510 | ML08-226 | 144 | 153 | Iron Formation |
| DISCOVERY | ML08-226-04 | 1480 | ML08-226 | 168.5 | 174.5 | Ore/IF |
| DISCOVERY | ML08-226-05 | 1480 | ML08-226 | 192 | 200 | Greywacke |
| DISCOVERY | ML08-228-01 | 1480 | ML08-228 | 26.5 | 35 | Iron Formation |
| DISCOVERY | ML08-228-02 | 1480 | ML08-228 | 79 | 87.5 | Iron Formation |
| DISCOVERY | ML08-229-01 | 1390 | ML08-229 | 52 | 61 | Iron Formation |
| DISCOVERY | ML08-229-02 | 1390 | ML08-229 | 95.5 | 104.5 | Gabbro |
| DISCOVERY | ML08-229-03 | 1390 | ML08-229 | 113 | 122 | Iron Formation |
| DISCOVERY | ML08-229-04 | 1390 | ML08-229 | 191 | 200 | Greywacke |
| DISCOVERY | ML08-229-05 | 1390 | ML08-229 | 234.5 | 243 | Iron Formation |
| DISCOVERY | ML08-230-01 | 1390 | ML08-230 | 25 | 33 | Greywacke |
| DISCOVERY | ML08-232-01 | 1300 | ML08-232 | 62 | 70 | Greywacke |
| DISCOVERY | ML08-233-01 | 1240 | ML08-233 | 20 | 28 | Greywacke |
| DISCOVERY | ML08-233-02 | 1240 | ML08-233 | 74.5 | 83 | Iron Formation |
| DISCOVERY | ML08-240-01 | 1720 | ML08-240 | 77 | 85 | Greywacke |
| DISCOVERY | ML08-241-01 | 1840 | ML08-241 | 26 | 34 | Greywacke |
| DISCOVERY | ML08-241-02 | 1840 | ML08-241 | 42 | 51 | Iron Formation |
| DISCOVERY | ML08-241-03 | 1840 | ML08-241 | 84 | 93 | Gabbro |
| DISCOVERY | ML08-243-01 | 1780 | ML08-243 | 97.5 | 106 | Iron Formation |
| DISCOVERY | ML08-243-02 | 1780 | ML08-243 | 136 | 144.5 | Gabbro |
| DISCOVERY | ML08-245-01 | 1720 | ML08-245 | 44 | 53 | Gabbro |
| DISCOVERY | ML08-245-02 | 1720 | ML08-245 | 82.5 | 91 | Greywacke |
| DISCOVERY | ML09-254-01 | 1360 | ML09-254 | 84 | 93 | Iron Formation |
| DISCOVERY | ML09-254-02 | 1360 | ML09-254 | 100 | 108 | Greywacke |
| DISCOVERY | ML09-256-01 | 1300 | ML09-256 | 52.5 | 61 | Greywacke |
| DISCOVERY | ML09-259-01 | 1480 | ML09-259 | 11 | 20 | Gabbro |
| DISCOVERY | ML92062-01 | 1510 | ML92062 | 17.5 | 26 | Iron Formation |
| DISCOVERY | ML95-104-01 | 1390 | ML95-104 | 20 | 29 | Gabbro |
| DISCOVERY | ML95-104-02 | 1390 | ML95-104 | 177 | 187 | Ore/IF |
| DISCOVERY | ML95-105-01 | 1780 | ML95-105 | 25 | 34 | Iron Formation |
| DISCOVERY | ML95-105-02 | 1780 | ML95-105 | 63 | 73 | Gabbro |
| DISCOVERY | ML95-105-03 | 1780 | ML95-105 | 94 | 103 | Greywacke |
| DISCOVERY | ML95-105-04 | 1780 | ML95-105 | 138 | 147 | Greywacke |
| DISCOVERY | ML95-107-01 | 1900 | ML95-107 | 11 | 18 | Iron Formation |
| DISCOVERY | ML95-107-02 | 1900 | ML95-107 | 62.5 | 71 | Iron Formation |
| DISCOVERY | ML95-107-03 | 1900 | ML95-107 | 75.5 | 84.5 | Greywacke |
| DISCOVERY | ML95-113-01 | 1240 | ML95-113 | 19 | 27.5 | Greywacke |
| DISCOVERY | ML95-113-02 | 1240 | ML95-113 | 71 | 79 | Greywacke |

Summary of Geochemical Samples Collected in July 2011
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| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| DISCOVERY | ML95-117-01 | 1840 | ML95-117 | 14 | 23 | Iron Formation |
| DISCOVERY | ML95-117-02 | 1840 | ML95-117 | 40 | 48.5 | Gabbro |
| DISCOVERY | ML95-117-03 | 1840 | ML95-117 | 61.5 | 71.5 | Iron Formation |
| DISCOVERY | ML95-120-01 | 1540 | ML95-120 | 93 | 102 | Greywacke |
| DISCOVERY | ML95-82-01 | 1390 | ML95-82 | 54 | 61.5 | Iron Formation |
| DISCOVERY | ML95-82-02 | 1390 | ML95-82 | 68 | 74 | Greywacke |
| DISCOVERY | ML95-83-01 | 1300 | ML95-83 | 22 | 31 | Iron Formation |
| DISCOVERY | ML95-83-02 | 1300 | ML95-83 | 84 | 92 | Greywacke |
| DISCOVERY | ML95-84-01 | 1360 | ML95-84 | 123 | 131 | Ore/IF |
| DISCOVERY | ML95-85-01 | 1270 | ML95-85 | 141 | 150 | Greywacke |
| DISCOVERY | ML95-88-01 | 1330 | ML95-88 | 16 | 24.5 | Greywacke |
| DISCOVERY | ML95-88-02 | 1330 | ML95-88 | 36 | 43 | Gabbro |
| DISCOVERY | ML95-95-01 | 1840 | ML95-95 | 20 | 29 | Iron Formation |
| DISCOVERY | ML95-95-02 | 1840 | ML95-95 | 55 | 64 | Greywacke |
| DISCOVERY | ML95-98-01 | 1570 | ML95-98 | 9.5 | 17.5 | Iron Formation |
| DISCOVERY | ML97-186-01 | 1720 | ML97-186 | 78 | 86 | Iron Formation |
| DISCOVERY | ML97-186-02 | 1720 | ML97-186 | 120 | 129 | Gabbro |

Summary of Geochemical Samples Collected in July 2011
Meliadine Project
Agnico-Eagle Mines Ltd.

| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| F-ZONE | M08-733-01 | 17425 | M08-733 | 62 | 71 | Mafic Volcanic |
| F-ZONE | M08-733-02 | 17425 | M08-733 | 180 | 189 | Mafic Volcanic |
| F-ZONE | M09-802-01 | 17925 | M09-802 | 35 | 44 | Mafic Volcanic |
| F-ZONE | M09-802-02 | 17925 | M09-802 | 65 | 73 | Iron Formation |
| F-ZONE | M09-803-01 | 17875 | M09-803 | 85 | 90 | Iron Formation |
| F-ZONE | M09-809-01 | 13000 | M09-809 | 64.5 | 73.8 | Ore/IF |
| F-ZONE | M09-817-01 | 10000 | M09-817 | 32 | 40 | Ore/IF |
| F-ZONE | M09-817-02 | 10000 | M09-817 | 45 | 53 | Mafic Volcanic |
| F-ZONE | M09-858-01 | 18550 | M09-858 | 44 | 53 | Ore/IF |
| F-ZONE | M09-859-01 | 18500 | M09-859 | 46 | 54.5 | Mafic Volcanic |
| F-ZONE | M10-933-01 | 18500 | M10-933 | 34 | 42 | Mafic Volcanic |
| F-ZONE | M10-935-01 | 18600 | M10-935 | 20.5 | 29 | Mafic Volcanic |
| F-ZONE | M10-935-02 | 18600 | M10-935 | 46 | 56 | Iron Formation |
| F-ZONE | M96-28-01 | 17925 | M96-28 | 27 | 38 | Mafic Volcanic |
| F-ZONE | M97-159-01 | 17500 | M97-159 | 21 | 31 | Mafic Volcanic |
| F-ZONE | M97-159-02 | 17500 | M97-159 | 86 | 93 | Mafic Volcanic |
| F-ZONE | M98-248-01 | 17750 | M98-248 | 88 | 97 | Iron Formation |
| F-ZONE | M98-275-01 | 17325 | M98-275 | 25 | 33 | Mafic Volcanic |
| F-ZONE | M98-275-02 | 17325 | M98-275 | 80 | 89.5 | Mafic Volcanic |
| F-ZONE | W94-111-01 | 17575 | W94-111 | 118 | 127 | Iron Formation |
| F-ZONE | W94-76-01 | 17750 | W94-76 | 13 | 22 | Mafic Volcanic |
| F-ZONE | W94-76-02 | 17750 | W94-76 | 70.5 | 77 | Mafic Volcanic |
| F-ZONE | W94-82-01 | 17925 | W94-82 | 46 | 55 | Mafic Volcanic |

Summary of Geochemical Samples Collected in July 2011
Meliadine Project
Agnico-Eagle Mines Ltd.

| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| PUMP | M96-58-01 | 15630 | M96-58 | 31.5 | 40 | Mafic Volcanic |
| PUMP | M96-58-02 | 15630 | M96-58 | 49 | 58 | Mafic Volcanic |
| PUMP | M96-58-03 | 15630 | M96-58 | 75.5 | 84.5 | Mafic Volcanic |
| PUMP | M97-120-01 | 14370 | M97-120 | 11.5 | 21 | Mafic Volcanic |
| PUMP | M97-120-02 | 14370 | M97-120 | 44.5 | 53 | Mafic Volcanic |
| PUMP | M97-122-01 | 15400 | M97-122 | 26.5 | 36.5 | Mafic Volcanic |
| PUMP | M97-122-02 | 15400 | M97-122 | 103 | 112 | Mafic Volcanic |
| PUMP | M97-122-03 | 15400 | M97-122 | 160 | 169 | Ore/IF |
| PUMP | M97-122-04 | 15370 | M97-122 | 180 | 190 | Ore/IF |
| PUMP | M97-122-05 | 15370 | M97-122 | 230 | 239 | Mafic Volcanic |
| PUMP | M97-123-01 | 15520 | M97-123 | 13.5 | 22.5 | Mafic Volcanic |
| PUMP | M97-123-02 | 15520 | M97-123 | 60 | 70 | Mafic Volcanic |
| PUMP | M97-123-03 | 15520 | M97-123 | 91 | 98 | Mafic Volcanic |
| PUMP | M97-123-04 | 15520 | M97-123 | 121 | 130 | Mafic Volcanic |
| PUMP | M97-124-01 | 14430 | M97-124 | 119.5 | 128 | Mafic Volcanic |
| PUMP | M97-124-02 | 14430 | M97-124 | 141.5 | 150.5 | Mafic Volcanic |
| PUMP | M97-124-03 | 14460 | M97-124 | 182 | 190 | Iron Formation |
| PUMP | M97-124-04 | 14460 | M97-124 | 191 | 200 | Mafic Volcanic |
| PUMP | M97-153-01 | 15630 | M97-153 | 37 | 46 | Mafic Volcanic |
| PUMP | M97-153-02 | 15630 | M97-153 | 67 | 76 | Mafic Volcanic |
| PUMP | M97-154-01 | 10050 | M97-154 | 38 | 47 | Iron Formation |
| PUMP | M98-181-01 | 15400 | M98-181 | 11 | 18.5 | Mafic Volcanic |
| PUMP | M98-181-02 | 15400 | M98-181 | 80 | 89 | Mafic Volcanic |
| PUMP | M98-184-01 | 15280 | M98-184 | 14 | 22 | Mafic Volcanic |
| PUMP | M98-184-02 | 15280 | M98-184 | 66 | 74.5 | Mafic Volcanic |
| PUMP | M98-185-01 | 14430 | M98-185 | 53 | 61.5 | Mafic Volcanic |
| PUMP | M98-185-02 | 14430 | M98-185 | 108 | 116.5 | Mafic Volcanic |
| PUMP | M98-185-03 | 14430 | M98-185 | 160 | 168.5 | Mafic Volcanic |
| PUMP | W94-49-01 | 14880 | W94-49 | 15 | 24 | Mafic Volcanic |
| PUMP | W94-49-02 | 14880 | W94-49 | 32 | 40 | Iron Formation |
| PUMP | W94-49-03 | 14880 | W94-49 | 41 | 51 | Mafic Volcanic |
| PUMP | W94-53-01 | 15000 | W94-53 | 23 | 32 | Mafic Volcanic |
| PUMP | W94-55-01 | 14370 | W94-55 | 16 | 23 | Iron Formation |
| PUMP | W94-55-02 | 14370 | W94-55 | 69.5 | 74 | Mafic Volcanic |
| PUMP | W94-57-01 | 14520 | W94-57 | 8 | 16 | Mafic Volcanic |
| PUMP | W94-57-02 | 14520 | W94-57 | 26 | 36 | Iron Formation |
| PUMP | W94-57-03 | 14520 | W94-57 | 43 | 50 | Iron Formation |
| PUMP | W94-59-01 | 14460 | W94-59 | 12 | 21 | Mafic Volcanic |
| PUMP | W94-61-01 | 14430 | W94-61 | 19 | 29 | Iron Formation |
| PUMP | W94-61-02 | 14430 | W94-61 | 44 | 53 | Mafic Volcanic |
| PUMP | W94-65-01 | 14430 | W94-65 | 14 | 20 | Ore/IF |
| PUMP | W94-65-02 | 14430 | W94-65 | 21 | 26 | Ore/IF |
| PUMP | W94-65-03 | 14430 | W94-65 | 48 | 57 | Mafic Volcanic |
| PUMP | W94-70-01 | 14520 | W94-70 | 8 | 18 | Mafic Volcanic |
| PUMP | W94-70-02 | 14520 | W94-70 | 33 | 42 | Mafic Volcanic |
| PUMP | W94-73-01 | 15400 | W94-73 | 14 | 23 | Mafic Volcanic |
| PUMP | W94-73-02 | 15400 | W94-73 | 60 | 69 | Iron Formation |
| PUMP | W94-73-03 | 15400 | W94-73 | 86 | 95 | Mafic Volcanic |

Summary of Geochemical Samples Collected in July 2011
Meliadine Project
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| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| TIRIGANIAQ | M00-473-01 | 9980 | M00-473 | 134 | 142 | Ore/MV |
| TIRIGANIAQ | M00-483-01 | #N/A | #N/A | #N/A | #N/A | #N/A |
| TIRIGANIAQ | M00-490-01 | #N/A | #N/A | #N/A | #N/A | #N/A |
| TIRIGANIAQ | M03-508-01 | 10575 | M03-508 | 44.5 | 53 | Greywacke |
| TIRIGANIAQ | M03-508-02 | 10575 | M03-508 | 93 | 101 | Iron Formation |
| TIRIGANIAQ | M05-561-01 | 9925 | M05-561 | 22 | 31 | Mafic Volcanic |
| TIRIGANIAQ | M05-561-02 | 9925 | M05-561 | 43.5 | 52.5 | Gabbro |
| TIRIGANIAQ | M06-577-01 | 10225 | M06-577 | 7 | 15.5 | Greywacke |
| TIRIGANIAQ | M06-577-02 | 10225 | M06-577 | 71 | 80 | Greywacke |
| TIRIGANIAQ | M06-577-03 | 10225 | M06-577 | 105 | 114 | Greywacke |
| TIRIGANIAQ | M06-591-01 | 9100 | M06-591 | 20.5 | 29 | Greywacke |
| TIRIGANIAQ | M06-591-02 | 9100 | M06-591 | 40 | 50 | Ore/GW |
| TIRIGANIAQ | M06-591-03 | 9100 | M06-591 | 70 | 78.5 | Mafic Volcanic |
| TIRIGANIAQ | M06-592-01 | 9625 | M06-592 | 26 | 34.5 | Greywacke |
| TIRIGANIAQ | M06-592-02 | 9625 | M06-592 | 60 | 69 | Gabbro |
| TIRIGANIAQ | M06-592-03 | 9625 | M06-592 | 124 | 132.5 | Gabbro |
| TIRIGANIAQ | M06-593-01 | 9775 | M06-593 | 27 | 36 | Greywacke |
| TIRIGANIAQ | M06-593-02 | 9775 | M06-593 | 140 | 148 | Gabbro |
| TIRIGANIAQ | M06-608-01 | 9625 | M06-608 | 27 | 35.5 | Greywacke |
| TIRIGANIAQ | M06-608-02 | 9625 | M06-608 | 75.5 | 84 | Greywacke |
| TIRIGANIAQ | M06-611-01 | 9625 | M06-611 | 28 | 37 | Greywacke |
| TIRIGANIAQ | M06-611-02 | 9625 | M06-611 | 121 | 130 | Greywacke |
| TIRIGANIAQ | M06-623-01 | 8950 | M06-623 | 63 | 72 | Greywacke |
| TIRIGANIAQ | M06-623-02 | 8950 | M06-623 | 81 | 87 | Mafic Volcanic |
| TIRIGANIAQ | M06-625-01 | 8950 | M06-625 | 15 | 24 | Greywacke |
| TIRIGANIAQ | M06-625-02 | 8950 | M06-625 | 49 | 57 | Greywacke |
| TIRIGANIAQ | M06-629-01 | 10000 | M06-629 | 107 | 115 | Ore/GW |
| TIRIGANIAQ | M06-631-01 | 10075 | M06-631 | 17 | 24 | Greywacke |
| TIRIGANIAQ | M07-674-01 | 9775 | M07-674 | 27 | 35.5 | Greywacke |
| TIRIGANIAQ | M07-689-01 | 10875 | M07-689 | 11 | 21 | Greywacke |
| TIRIGANIAQ | M07-689-02 | 10875 | M07-689 | 42 | 52 | Greywacke |
| TIRIGANIAQ | M07-689-03 | 10875 | M07-689 | 88 | 97 | Greywacke |
| TIRIGANIAQ | M08-761-01 | 9350 | M08-761 | 21 | 30 | Greywacke |
| TIRIGANIAQ | M08-761-02 | 9350 | M08-761 | 91 | 100 | Greywacke |
| TIRIGANIAQ | M08-763-01 | 9350 | M08-763 | 55.5 | 64 | Greywacke |
| TIRIGANIAQ | M08-765-01 | 9250 | M08-765 | 25 | 34 | Greywacke |
| TIRIGANIAQ | M08-783-01 | 10075 | M08-783 | 38 | 47 | Greywacke |
| TIRIGANIAQ | M08-783-02 | 10075 | M08-783 | 163 | 172 | Mafic Volcanic |
| TIRIGANIAQ | M10-879-01 | 8800 | M10-879 | 38 | 46.5 | Greywacke |
| TIRIGANIAQ | M10-887-01 | 8800 | M10-887 | 17 | 24.5 | Greywacke |
| TIRIGANIAQ | M10-892-01 | 8450 | M10-892 | 23 | 31.5 | Greywacke |
| TIRIGANIAQ | M10-999-01 | 8550 | M10-999 | 13 | 22 | Greywacke |
| TIRIGANIAQ | M10-999-02 | 8550 | M10-999 | 121.5 | 130 | Greywacke |
| TIRIGANIAQ | M95-17-01 | 9525 | M95-17 | 114 | 122 | Iron Formation |
| TIRIGANIAQ | M95-25-01 | 8450 | M95-25 | 9.5 | 18 | Greywacke |
| TIRIGANIAQ | M95-25-02 | 8450 | M95-25 | 34.5 | 43 | Greywacke |
| TIRIGANIAQ | M95-25-03 | 8450 | M95-25 | 51.5 | 60 | Ore/MV |
| TIRIGANIAQ | M95-25-04 | 8450 | M95-25 | 69 | 77.5 | Mafic Volcanic |
| TIRIGANIAQ | M96-03-01 | 8150 | M96-03 | 10 | 19 | Greywacke |
| TIRIGANIAQ | M96-03-02 | 8150 | M96-03 | 45 | 53.5 | Greywacke |
| TIRIGANIAQ | M96-03-03 | 8150 | M96-03 | 87 | 96 | Mafic Volcanic |
| TIRIGANIAQ | M96-19-01 | 9100 | M96-19 | 20 | 29 | Greywacke |
| TIRIGANIAQ | M96-19-02 | 9100 | M96-19 | 71.5 | 79 | Greywacke |
| TIRIGANIAQ | M96-37-01 | 9775 | M96-37 | 21 | 30 | Greywacke |

Summary of Geochemical Samples Collected in July 2011
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| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| TIRIGANIAQ | M96-37-02 | 9775 | M96-37 | 85.5 | 94 | Greywacke |
| TIRIGANIAQ | M96-37-03 | 9775 | M96-37 | 129 | 138 | Greywacke |
| TIRIGANIAQ | M96-40-01 | 9775 | M96-40 | 14 | 23 | Greywacke |
| TIRIGANIAQ | M96-40-02 | 9775 | M96-40 | 62 | 70 | Greywacke |
| TIRIGANIAQ | M96-4-01 | 8550 | M96-04 | 10 | 20 | Greywacke |
| TIRIGANIAQ | M96-44-01 | 10075 | M96-44 | 15 | 22 | Gabbro |
| TIRIGANIAQ | M96-54-01 | 8650 | M96-54 | 19 | 27 | Greywacke |
| TIRIGANIAQ | M96-54-02 | 8650 | M96-54 | 57 | 66 | Greywacke |
| TIRIGANIAQ | M96-65-01 | 8550 | M96-65 | 36 | 45 | Greywacke |
| TIRIGANIAQ | M96-7-01 | 8650 | M96-07 | 21 | 30 | Greywacke |
| TIRIGANIAQ | M96-7-02 | 8650 | M96-07 | 42 | 51 | Greywacke |
| TIRIGANIAQ | M96-74-01 | 10075 | M96-74 | 96.5 | 103.5 | Iron Formation |
| TIRIGANIAQ | M96-77-01 | 9525 | M96-77 | 41 | 49.5 | Greywacke |
| TIRIGANIAQ | M96-77-02 | 9525 | M96-77 | 140 | 149 | Greywacke |
| TIRIGANIAQ | M97-121-01 | 10975 | M97-121 | 23 | 32 | Greywacke |
| TIRIGANIAQ | M97-135-01 | 9475 | M97-135 | 41 | 50 | Greywacke |
| TIRIGANIAQ | M97-135-02 | 9475 | M97-135 | 85 | 92 | Gabbro |
| TIRIGANIAQ | M97-135-03 | 9475 | M97-135 | 111 | 120 | Greywacke |
| TIRIGANIAQ | M97-149-01 | 10575 | M97-149 | 12.5 | 21 | Gabbro |
| TIRIGANIAQ | M97-149-02 | 10575 | M97-149 | 107.5 | 116 | Greywacke |
| TIRIGANIAQ | M97-94A-01 | 10225 | M97-94A | 75 | 84 | Greywacke |
| TIRIGANIAQ | M97-94A-02 | 10225 | M97-94A | 137 | 146 | Greywacke |
| TIRIGANIAQ | M97-95-01 | 10225 | M97-95 | 51 | 59.5 | Greywacke |
| TIRIGANIAQ | M97-95-02 | 10225 | M97-95 | 102.5 | 111 | Greywacke |
| TIRIGANIAQ | M97-95-03 | 10225 | M97-95 | 213 | 222 | Mafic Volcanic |
| TIRIGANIAQ | M98-201-01 | 10075 | M98-201 | 16 | 24 | Greywacke |
| TIRIGANIAQ | M98-201-02 | 10075 | M98-201 | 44 | 52 | Gabbro |
| TIRIGANIAQ | M98-201-03 | 10075 | M98-201 | 90 | 98 | Greywacke |
| TIRIGANIAQ | M98-201-04 | 10075 | M98-201 | 166 | 175 | Greywacke |
| TIRIGANIAQ | M98-208-01 | 10975 | M98-208 | 58 | 67 | Greywacke |
| TIRIGANIAQ | M98-209-01 | 10975 | M98-209 | 14 | 22 | Greywacke |
| TIRIGANIAQ | M98-265-01 | 9925 | M98-265 | 67 | 76 | Greywacke |
| TIRIGANIAQ | M98-266-01 | 9925 | M98-266 | 163 | 172 | Greywacke |
| TIRIGANIAQ | M98-269-01 | 9775 | M98-269 | 105 | 114 | Mafic Volcanic |
| TIRIGANIAQ | M98-270-01 | 9775 | M98-270 | 92 | 100 | Greywacke |
| TIRIGANIAQ | M98-317-01 | 9350 | M98-317 | 61 | 70 | Greywacke |
| TIRIGANIAQ | M99-309-01 | 10225 | M99-309 | 20 | 28 | Gabbro |
| TIRIGANIAQ | M99-309-02 | 10225 | M99-309 | 36.5 | 45 | Greywacke |
| TIRIGANIAQ | M99-336B-01 | 9925 | M99-336B | 16.5 | 25 | Greywacke |
| TIRIGANIAQ | M99-336B-02 | 9925 | M99-336B | 52 | 62 | Gabbro |
| TIRIGANIAQ | M99-336B-03 | 9925 | M99-336B | 140 | 148 | Greywacke |
| TIRIGANIAQ | M99-336B-04 | 9925 | M99-336B | 249 | 258 | Mafic Volcanic |
| TIRIGANIAQ | M99-345-01 | 9475 | M99-345 | 109 | 117 | Mafic Volcanic |
| TIRIGANIAQ | M99-346-01 | 9475 | M99-346 | 150.5 | 159 | Mafic Volcanic |
| TIRIGANIAQ | M99-347-01 | 9475 | M99-347 | 60 | 68 | Greywacke |
| TIRIGANIAQ | M99-347-02 | 9475 | M99-347 | 94 | 102.5 | Greywacke |
| TIRIGANIAQ | M99-409-01 | 9625 | M99-409 | 25 | 33.5 | Greywacke |
| TIRIGANIAQ | M99-409-02 | 9625 | M99-409 | 89 | 100 | Greywacke |
| TIRIGANIAQ | M99-409-03 | 9625 | M99-409 | 152 | 161 | Greywacke |
| TIRIGANIAQ | M99-409-04 | 9625 | M99-409 | 216 | 224 | Greywacke |
| TIRIGANIAQ | M99-409-05 | 9625 | M99-409 | 224 | 234 | Mafic Volcanic |
| TIRIGANIAQ | M99-410-01 | 9775 | M99-410 | 26 | 34 | Greywacke |
| TIRIGANIAQ | M99-410-02 | 9775 | M99-410 | 52 | 61 | Greywacke |
| TIRIGANIAQ | M99-417-01 | 9960 | M99-417 | 124 | 136 | Ore/GW |
| TIRIGANIAQ | M99-436-01 | 9525 | M99-436 | 32.5 | 41 | Greywacke |
| TIRIGANIAQ | M99-436-02 | 9525 | M99-436 | 96.5 | 105 | Greywacke |

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| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| WESMEG | M04-519-01 | 10300 | M04-519 | 40 | 48 | Mafic Volcanic |
| WESMEG | M04-519-02 | 10300 | M04-519 | 70 | 79 | Mafic Volcanic |
| WESMEG | M04-519-03 | 10350 | M04-519 | 101 | 110 | Mafic Volcanic |
| WESMEG | M04-519-04 | 10350 | M04-519 | 127.5 | 136.5 | Mafic Volcanic |
| WESMEG | M10-981-01 | 11100 | M10-981 | 17 | 27 | Mafic Volcanic |
| WESMEG | M10-981-02 | 11100 | M10-981 | 50 | 59 | Mafic Volcanic |
| WESMEG | M10-981-03 | 11100 | M10-981 | 84.5 | 93 | Mafic Volcanic |
| WESMEG | M10-981-04 | 11100 | M10-981 | 111 | 120 | Mafic Volcanic |
| WESMEG | M10-985-01 | 10050 | M10-985 | 23 | 32 | Mafic Volcanic |
| WESMEG | M10-985-02 | 10000 | M10-985 | 57 | 65 | Mafic Volcanic |
| WESMEG | M10-987-01 | 10400 | M10-987 | 31.5 | 40 | Mafic Volcanic |
| WESMEG | M10-987-02 | 10400 | M10-987 | 84 | 93 | Mafic Volcanic |
| WESMEG | M10-987-03 | 10400 | M10-987 | 179 | 188 | Ultramafic |
| WESMEG | M10-987-04 | 10400 | M10-987 | 215 | 223 | Mafic Volcanic |
| WESMEG | M10-988-01 | 10600 | M10-988 | 22 | 30 | Mafic Volcanic |
| WESMEG | M10-988-02 | 10600 | M10-988 | 60 | 68 | Mafic Volcanic |
| WESMEG | M10-988-03 | 10600 | M10-988 | 159.5 | 168 | Mafic Volcanic |
| WESMEG | M10-992-01 | 10800 | M10-992 | 13.5 | 22 | Mafic Volcanic |
| WESMEG | M10-992-02 | 10800 | M10-992 | 43.5 | 52.5 | Mafic Volcanic |
| WESMEG | M10-992-03 | 10800 | M10-992 | 83 | 92 | Mafic Volcanic |
| WESMEG | M10-992-04 | 10800 | M10-992 | 107 | 113 | Ultramafic |
| WESMEG | M10-992-05 | 10800 | M10-992 | 135 | 144 | Mafic Volcanic |
| WESMEG | M10-994-01 | 10050 | M10-994 | 28 | 36.5 | Mafic Volcanic |
| WESMEG | M10-994-02 | 10050 | M10-994 | 58 | 67 | Mafic Volcanic |
| WESMEG | M10-994-03 | 10000 | M10-994 | 101 | 110 | Mafic Volcanic |
| WESMEG | M10-994-04 | 9975 | M10-994 | 131.5 | 140 | Mafic Volcanic |
| WESMEG | M10-994-05 | 10050 | M10-994 | 15 | 24 | Ultramafic |
| WESMEG | M10-998-01 | 10100 | M10-998 | 10 | 19 | Mafic Volcanic |
| WESMEG | M10-998-02 | 10100 | M10-998 | 36 | 45 | Mafic Volcanic |
| WESMEG | M10-998-03 | 10100 | M10-998 | 71 | 80 | Mafic Volcanic |
| WESMEG | M10-998-04 | 10100 | M10-998 | 97 | 106 | Mafic Volcanic |
| WESMEG | M10-998-05 | 10100 | M10-998 | 191 | 200 | Mafic Volcanic |
| WESMEG | M11-1042-01 | 10375 | M11-1042 | 16 | 24.5 | Mafic Volcanic |
| WESMEG | M11-1042-02 | 10375 | M11-1042 | 59 | 68 | Mafic Volcanic |
| WESMEG | M11-1042-03 | 10375 | M11-1042 | 99 | 107 | Mafic Volcanic |
| WESMEG | M11-1051-01 | 10275 | M11-1051 | 51 | 59 | Mafic Volcanic |
| WESMEG | M11-1051-02 | 10275 | M11-1051 | 89 | 99.5 | Mafic Volcanic |
| WESMEG | M11-1099-01 | 10725 | M11-1099 | 17 | 25 | Mafic Volcanic |
| WESMEG | M11-1099-02 | 10725 | M11-1099 | 38 | 46 | Mafic Volcanic |
| WESMEG | M11-1099-03 | 10725 | M11-1099 | 72 | 80 | Mafic Volcanic |

Summary of Geochemical Samples Collected in July 2011
Meliadine Project
Agnico-Eagle Mines Ltd.

| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| WESMEG | M95-11-01 | 10500 | M95-11 | 40 | 47 | Mafic Volcanic |
| WESMEG | M95-12-01 | 10550 | M95-12 | 41 | 50 | Mafic Volcanic |
| WESMEG | M95-22-01 | 10500 | M95-22 | 11 | 20 | Mafic Volcanic |
| WESMEG | M95-22-02 | 10500 | M95-22 | 71 | 80 | Mafic Volcanic |
| WESMEG | M96-50-01 | 10800 | M96-50 | 30 | 40 | Mafic Volcanic |
| WESMEG | M96-51-01 | 10800 | M96-51 | 10 | 20 | Ore/MV |
| WESMEG | M96-51-02 | 10800 | M96-51 | 40 | 50 | Mafic Volcanic |
| WESMEG | M96-51-03 | 10800 | M96-51 | 73 | 82 | Mafic Volcanic |
| WESMEG | M97-111-01 | 10550 | M97-111 | 21 | 30 | Mafic Volcanic |
| WESMEG | M97-111-02 | 10500 | M97-111 | 95 | 104 | Mafic Volcanic |
| WESMEG | M97-111-03 | 10500 | M97-111 | 126 | 133 | Mafic Volcanic |
| WESMEG | M97-111-04 | 10500 | M97-111 | 186.5 | 195 | Mafic Volcanic |
| WESMEG | M97-176-01 | 10700 | M97-176 | 19 | 27.5 | Mafic Volcanic |
| WESMEG | M97-176-02 | 10700 | M97-176 | 112 | 121 | Mafic Volcanic |
| WESMEG | M97-176-03 | 10700 | M97-176 | 196 | 205.5 | Mafic Volcanic |
| WESMEG | M98-222-01 | 10050 | M98-222 | 16 | 22 | Mafic Volcanic |
| WESMEG | M98-222-02 | 10050 | M98-222 | 56 | 65 | Mafic Volcanic |
| WESMEG | M98-222-03 | 10000 | M98-222 | 104 | 113.5 | Mafic Volcanic |
| WESMEG | M98-223-01 | 11450 | M98-223 | 20.5 | 29 | Mafic Volcanic |
| WESMEG | M98-223-02 | 11450 | M98-223 | 80 | 90 | Ore/MV |
| WESMEG | M98-223-03 | 11450 | M98-223 | 175 | 180 | Ore/MV |
| WESMEG | W94-48-01 | 10000 | W94-48 | 15 | 20 | Mafic Volcanic |

Summary of Geochemical Samples Collected in July 2011
Meliadine Project
Agnico-Eagle Mines Ltd.

| DEPOSIT | SAMPLE ID | SECTION | BOREHOLE | FROM | TO | ROCK TYPE |
|---|---|---|---|---|---|---|
| WOLF | M10-968-01 | 10050 | M10-968 | 29 | 37 | Greywacke |
| WOLF | M10-968-02 | 10050 | M10-968 | 75 | 83 | Greywacke |
| WOLF | M10-968-03 | 10050 | M10-968 | 130.5 | 139 | Greywacke |
| WOLF | M10-970-01 | 10100 | M10-970 | 62 | 70.5 | Iron Formation |
| WOLF | M10-972A-01 | 10250 | M10-972A | 36 | 44.5 | Greywacke |
| WOLF | M10-972A-02 | 10250 | M10-972A | 78.5 | 87 | Greywacke |
| WOLF | M10-972A-03 | 10250 | M10-972A | 113 | 122 | Iron Formation |
| WOLF | M10-972A-04 | 10250 | M10-972A | 156 | 165 | Mafic Volcanic |
| WOLF | M10-976-01 | 10350 | M10-976 | 40 | 48.5 | Greywacke |
| WOLF | M10-976-02 | 10350 | M10-976 | 96 | 105 | Greywacke |
| WOLF | M10-976-03 | 10350 | M10-976 | 126 | 135 | Iron Formation |
| WOLF | M10-976-04 | 10350 | M10-976 | 138 | 144 | Ore/IF |
| WOLF | M10-977-01 | 10350 | M10-977 | 24 | 33 | Greywacke |
| WOLF | M10-977-02 | 10350 | M10-977 | 54.5 | 63 | Ore/IF |
| WOLF | M10-986-01 | 10050 | M10-986 | 51 | 61 | Iron Formation |
| WOLF | M10-986-02 | 10050 | M10-986 | 99 | 107 | Mafic Volcanic |
| WOLF | M10-993-01 | 9950 | M10-993 | 25.5 | 34 | Greywacke |
| WOLF | M10-993-02 | 9950 | M10-993 | 51 | 60 | Greywacke |
| WOLF | M10-993-03 | 9950 | M10-993 | 84.5 | 93 | Greywacke |
| WOLF | M10-993-04 | 9950 | M10-993 | 157.5 | 166 | Mafic Volcanic |
| WOLF | M96-16-01 | 9950 | M96-16 | 22 | 29.5 | Mafic Volcanic |
| WOLF | M96-61-01 | 9650 | M96-61 | 11 | 20 | Mafic Volcanic |
| WOLF | M96-61-02 | 9650 | M96-61 | 34 | 43 | Mafic Volcanic |
| WOLF | M96-61-03 | 9650 | M96-61 | 104 | 112 | Ore/IF |
| WOLF | M98-234-01 | 10050 | M98-234 | 11 | 23 | Greywacke |
| WOLF | M98-234-02 | 10050 | M98-234 | 40 | 48.5 | Greywacke |
| WOLF | M98-238-01 | 9800 | M98-238 | 19 | 28 | Mafic Volcanic |
| WOLF | M98-238-02 | 9800 | M98-238 | 49 | 57 | Mafic Volcanic |
| WOLF | M98-284-01 | 10100 | M98-284 | 91 | 100 | Greywacke |
| WOLF | M98-284-02 | 10100 | M98-284 | 121 | 129.5 | Iron Formation |
| WOLF | M98-286-01 | 10100 | M98-286 | 48 | 57.5 | Greywacke |
| WOLF | M98-329-01 | 9700 | M98-329 | 77.5 | 86 | Mafic Volcanic |
| WOLF | M98-331-01 | 10450 | M98-331 | 19.5 | 28 | Greywacke |
| WOLF | M98-333-01 | 9950 | M98-333 | 15 | 24 | Greywacke |
| WOLF | M98-337-01 | 9700 | M98-337 | 14 | 22 | Mafic Volcanic |

# ATTACHMENT D
## Photographs of Typical Waste Rock and Ore Rock Types




**Photo 1: Mafic Volcanic – Waste Rock**




**Photo 2: Mafic Volcanic - Ore**

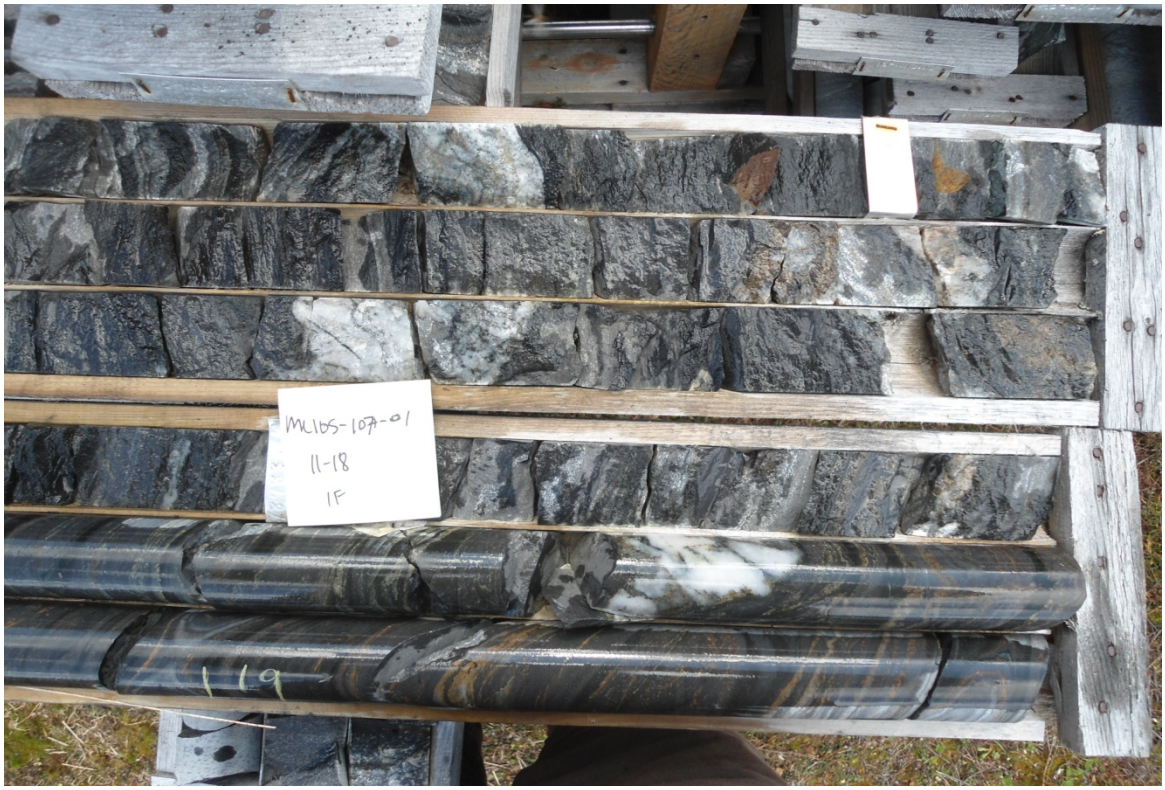



**Photo 3: Iron Formation – Waste Rock**




**Photo 4: Iron Formation - Ore**




**Photo 5: Gabbro - Waste Rock**




**Photo 6: Ultramafic - Waste Rock**

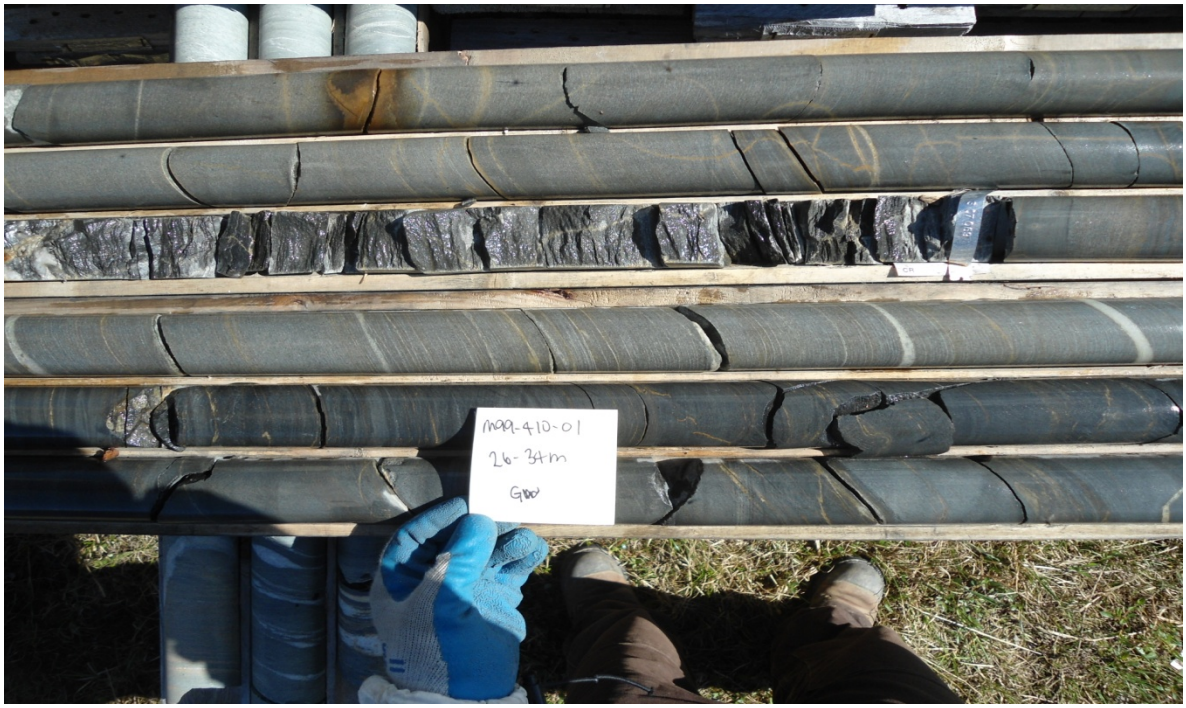



**Photo 7: Greywacke – Waste Rock**




**Photo 8: Greywacke - Ore**

n:\active\2011\0_mining\11-1428-0011_meliadine engineering ph6000 geochem\reports\2011 field report\photo logs\waste rock and ore photolog.docx

# ATTACHMENT E
## Photographs of Field Cell Set-up, Charge Material and Sampled Water



**Photo 1: Field Cell Material – Waste Rock, Typical Material**




**Photo 2: Field Cell Material – Waste Rock, Typical Test Pit**




**Photo 3: Field Cell Material – Ore**




**Photo 4: Field Cell Material – Ore**



**Photo 5: Field Cell – Leach Flush Waste Rock (Cycle 0)**



**Photo 6: Field Cell – Leach Flush Ore (Cycle 0)**



**Photo 7: Field Cell – Final Set-Up**




**Photo 8: Field Cell – Final Set-Up**

# ATTACHMENT F
## Photographs of Proposed Drive Point Piezometer Installation Locations



**Photo 1: DP-11-01**



**Photo 2: DP-11-02**



**Photo 3: DP-11-01 and DP-11-02 – View from Road**



**Photo 4: DP-11-01 and DP-11-02 – View from Tundra**

# APPENDIX G

## PHREEQc Modeling Results

| Sample ID | Aluminum mg/L | | Arsenic mg/L | | Iron mg/L | | Minerals Supersaturated in SFE Leachates[3] | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sol[1] | Eq[2] | Sol[1] | Eq[2] | Sol[1] | Eq[2] | Gibbsite [$Al(OH)_3$] | Diaspore [AlO(OH)] | Hercynite [$FeAl_2O_4$] | CoFe2O4 | Cuprousferrite [$CuFeO_2$] | Cupricferrite [$CuFe_2O_4$] | Ferrihydrite [$(Fe^{3+})2O_3{\cdot}0.5H_2O$] | Magnesioferrite [$Mg(Fe^{3+})2O_4$] | $Fe(OH)_{2.7}Cl_{0.3}$ | Goethite [FeO(OH)] | Hematite [$Fe_2O_3$] | Lepidocrocite [FeO(OH)] | Maghemite [$Fe_2O_3$] | Magnetite [$Fe_3O_4$] | Hausmannite [$Mn^{2+}Mn^{3+}{}_2O$] |
| **Gabbro** | | | | | | | | | | | | | | | | | | | | | |
| ML08-229-02 | 1.7 | 0.0002 | 0.01 | 0.007 | 0.69 | 1.1E-08 | | x | x | x | x | x | x | x | x | x | x | x | x | x | x |
| ML95-105-02 | 1.0 | 0.00008 | 0.50 | 0.50 | 0.02 | 2.0E-08 | | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M98-201-02 | 0.75 | 0.00007 | 0.007 | 0.007 | 0.01 | 2.1E-08 | | x | | x | x | x | x | x | x | x | x | x | x | x | |
| *Minimum* | *0.75* | *0.00007* | *0.007* | *0.007* | *0.01* | *1.1E-08* | | | | | | | | | | | | | | | |
| *Maximum* | *1.7* | *0.0002* | *0.50* | *0.50* | *0.69* | *2.1E-08* | | | | | | | | | | | | | | | |
| *Average* | *1.1* | *0.0001* | *0.17* | *0.17* | *0.24* | *1.8E-08* | | | | | | | | | | | | | | | |
| **Greywacke / Silststone** | | | | | | | | | | | | | | | | | | | | | |
| ML08-226-05 | 1.5 | 0.00009 | 0.12 | 0.12 | 0.16 | 1.8E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| ML92-061-01 | 1.8 | 0.0004 | 0.08 | 0.08 | 0.55 | 6.1E-09 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M00-474-05 | 1.2 | 0.0005 | 0.07 | 0.07 | 0.01 | 5.7E-09 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M00-476-02 | 0.91 | 0.00069 | 0.06 | 0.06 | 0.03 | 5.3E-09 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M99-336B-03 | 1.1 | 0.00006 | 0.07 | 0.07 | 0.01 | 2.8E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M10-968-01 | 1.2 | 0.00008 | 0.05 | 0.05 | 0.03 | 1.9E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M10-968-02 | 1.1 | 0.00007 | 0.04 | 0.04 | 0.03 | 2.3E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| *Minimum* | *0.91* | *0.00006* | *0.04* | *0.04* | *0.01* | *5.3E-09* | | | | | | | | | | | | | | | |
| *Maximum* | *1.8* | *0.0007* | *0.12* | *0.12* | *0.55* | *2.8E-08* | | | | | | | | | | | | | | | |
| *Average* | *1.2* | *0.0003* | *0.07* | *0.07* | *0.12* | *1.5E-08* | | | | | | | | | | | | | | | |
| **Iron Formation** | | | | | | | | | | | | | | | | | | | | | |
| ML08-228-01 | 0.55 | 0.00006 | 0.01 | 0.01 | 0.15 | 2.6E-08 | | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| ML95-95-01 | 0.95 | 0.00007 | 0.03 | 0.03 | 0.19 | 2.3E-08 | | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M08-748-03 | 0.66 | 0.0004 | 0.002 | 0.002 | 0.01 | 6.1E-09 | | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M97-154-01 | 0.48 | 0.00003 | 0.02 | 0.02 | 0.002 | 4.9E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M03-496-02 | 0.49 | 0.001 | 0.00 | 0.003 | 0.01 | 4.9E-09 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M10-976-03 | 0.47 | 0.00003 | 0.02 | 0.02 | 0.002 | 7.0E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| *Minimum* | *0.47* | *0.00003* | *0.002* | *0.002* | *0.002* | *4.9E-09* | | | | | | | | | | | | | | | |
| *Maximum* | *0.95* | *0.001* | *0.03* | *0.03* | *0.19* | *7.0E-08* | | | | | | | | | | | | | | | |
| *Average* | *0.60* | *0.0003* | *0.01* | *0.01* | *0.06* | *3.0E-08* | | | | | | | | | | | | | | | |
| **Mafic Volcanic** | | | | | | | | | | | | | | | | | | | | | |
| M08-750-03 | 1.12 | 0.00070 | 0.01 | 0.01 | 0.01 | 5.3E-09 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M09-857-01 | 0.80 | 0.0006 | 0.01 | 0.01 | 0.01 | 5.4E-09 | | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M98-184-01 | 0.99 | 0.00008 | 0.01 | 0.01 | 0.002 | 1.9E-08 | | x | | x | x | x | x | x | x | x | x | x | x | x | |
| M98-185-01 | 0.74 | 0.00004 | 0.02 | 0.02 | 0.002 | 3.6E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M99-340-01 | 0.65 | 0.001 | 0.01 | 0.01 | 0.01 | 4.9E-09 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M99-409-05 | 0.90 | 0.00004 | 0.02 | 0.02 | 0.002 | 3.5E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M10-985-01 | 0.90 | 0.00005 | 0.02 | 0.02 | 0.04 | 3.1E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| M10-994-04 | 0.80 | 0.00009 | 0.01 | 0.01 | 0.006 | 1.7E-08 | | x | | x | x | x | x | x | x | x | x | x | x | x | |
| M96-61-02 | 0.92 | 0.00006 | 0.007 | 0.007 | 0.002 | 2.4E-08 | | x | | x | x | x | x | x | x | x | x | x | x | x | |
| M98-238-01 | 0.63 | 0.00004 | 0.02 | 0.02 | 0.002 | 4.1E-08 | x | x | x | x | x | x | x | x | x | x | x | x | x | x | |
| *Minimum* | *0.63* | *0.00004* | *0.007* | *0.007* | *0.002* | *4.9E-09* | | | | | | | | | | | | | | | |
| *Maximum* | *1.1* | *0.001* | *0.02* | *0.02* | *0.04* | *4.1E-08* | | | | | | | | | | | | | | | |
| *Average* | *0.84* | *0.0003* | *0.01* | *0.01* | *0.008* | *2.2E-08* | | | | | | | | | | | | | | | |

(1) Solution input into PHREEQC (SFE Leachate)

(2) Solution output from PHREEQC after equilibrium is reached with geochemically credible phases

(3) Minerals reporting saturation indices exceeding 0.5

# PART 2

# APPENDIX H

## Laboratory Certificates of Analysis

# H.1 Waste Rock and Ore Static Test Results

**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA (Price 1997)**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Wednesday, September 21, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10514-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | NP t CaCO3/1000 t | AP t CaCO3/1000 t | Net NP t CaCO3/1000 t | NP/AP ratio | Sulphur (total) % | Acid Leachable SO4-S % | Sulphide % | Carbon (total) % | Carbonate % |
|---|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 |
| 4: Analysis Approval Time | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 |
| 5: M10-968-01 | 27.8 | 5.23 | 22.6 | 5.31 | 0.215 | 0.05 | 0.17 | 0.292 | 1.18 |
| 6: M10-968-02 | 32.7 | 1.76 | 30.9 | 18.6 | 0.172 | 0.12 | 0.06 | 0.412 | 1.48 |
| 7: M10-968-03 | 32.7 | 4.32 | 28.4 | 7.57 | 0.204 | 0.07 | 0.14 | 0.384 | 1.44 |
| 8: M10-970-01 | 148 | 5.39 | 142 | 27.4 | 0.238 | 0.07 | 0.17 | 2.41 | 9.96 |
| 9: M10-972A-01 | 45.8 | 4.31 | 41.5 | 10.6 | 0.199 | 0.06 | 0.14 | 0.663 | 2.41 |
| 10: M10-972A-02 | 36.2 | 5.68 | 30.5 | 6.38 | 0.262 | 0.08 | 0.18 | 0.469 | 1.76 |
| 11: M10-972A-03 | 79.4 | 3.09 | 76.3 | 25.7 | 0.193 | 0.09 | 0.10 | 1.65 | 6.49 |
| 12: M10-972A-04 | 210 | 2.64 | 208 | 79.7 | 0.143 | 0.06 | 0.08 | 2.95 | 14.3 |
| 13: M10-976-01 | 46.4 | 7.89 | 38.5 | 5.88 | 0.296 | 0.04 | 0.25 | 0.612 | 2.49 |
| 14: M10-976-02 | 25.2 | 2.40 | 22.8 | 10.5 | 0.156 | 0.08 | 0.08 | 0.288 | 1.04 |
| 15: M10-976-03 | 140 | 7.38 | 133 | 19.0 | 0.323 | 0.09 | 0.24 | 2.47 | 10.6 |
| 16: M10-976-04 | 102 | 10.0 | 91.6 | 10.1 | 0.350 | 0.03 | 0.32 | 1.93 | 7.75 |
| 17: M10-977-01 | 27.5 | 2.62 | 24.9 | 10.5 | 0.170 | 0.09 | 0.08 | 0.315 | 1.25 |
| 18: M10-977-02 | 97.8 | 10.2 | 87.6 | 9.54 | 0.357 | 0.03 | 0.33 | 1.86 | 7.44 |
| 19: M10-986-01 | 101 | 7.03 | 93.6 | 14.3 | 0.332 | 0.11 | 0.23 | 1.87 | 7.22 |
| 20: M10-986-02 | 188 | 3.03 | 184 | 61.8 | 0.146 | 0.05 | 0.10 | 2.95 | 12.4 |
| 21: M10-993-01 | 35.4 | 3.30 | 32.1 | 10.7 | 0.172 | 0.07 | 0.11 | 0.512 | 1.74 |
| 22: M10-993-02 | 39.0 | 6.11 | 32.9 | 6.39 | 0.262 | 0.07 | 0.20 | 0.548 | 2.02 |

OnLine LIMS


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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

| Sample ID | NP t CaCO3/1000 t | AP t CaCO3/1000 t | Net NP t CaCO3/1000 t | NP/AP ratio | Sulphur (total) % | Acid Leachable SO4-S % | Sulphide % | Carbon (total) % | Carbonate % |
|---|---|---|---|---|---|---|---|---|---|
| 23: M10-993-03 | 42.4 | 1.16 | 41.2 | 36.5 | 0.153 | 0.12 | 0.04 | 0.616 | 2.36 |
| 24: M10-993-04 | 171 | 0.91 | 170 | 189 | 0.056 | 0.03 | 0.03 | 2.35 | 10.9 |
| 25: M96-16-01 | 120 | 0.95 | 119 | 127 | 0.087 | 0.06 | 0.03 | 1.60 | 7.58 |
| 26: M96-61-01 | 197 | 15.1 | 182 | 13.1 | 0.655 | 0.17 | 0.48 | 2.59 | 11.6 |
| 27: M96-61-02 | 208 | 1.49 | 207 | 140 | 0.143 | 0.10 | 0.05 | 2.67 | 12.3 |
| 28: M96-61-03 | 96.0 | 62.6 | 33.4 | 1.53 | 2.32 | 0.31 | 2.00 | 2.48 | 4.49 |
| 29: M98-234-01 | 37.8 | 4.88 | 32.9 | 7.75 | 0.190 | 0.03 | 0.16 | 0.573 | 2.06 |
| 30: M98-234-02 | 47.0 | 8.39 | 38.6 | 5.60 | 0.337 | 0.07 | 0.27 | 0.690 | 2.54 |
| 31: M98-238-01 | 55.8 | 3.77 | 52.0 | 14.8 | 0.212 | 0.09 | 0.12 | 0.725 | 3.09 |
| 32: M98-238-02 | 38.3 | 6.31 | 32.0 | 6.07 | 0.301 | 0.10 | 0.20 | 0.404 | 1.75 |
| 33: M98-284-01 | 56.9 | 5.22 | 51.7 | 10.9 | 0.352 | 0.18 | 0.17 | 0.752 | 3.13 |
| 34: M98-284-02 | 62.3 | 3.27 | 59.0 | 19.1 | 0.240 | 0.14 | 0.10 | 1.28 | 5.02 |
| 35: M98-286-01 | 40.8 | 4.31 | 36.5 | 9.47 | 0.321 | 0.18 | 0.14 | 0.589 | 2.22 |
| 36: M98-329-01 | 284 | 1.48 | 283 | 192 | 0.129 | 0.08 | 0.05 | 4.04 | 18.9 |
| 37: M98-331-01 | 39.7 | 6.33 | 33.4 | 6.27 | 0.338 | 0.14 | 0.20 | 0.551 | 2.25 |
| 38: M98-333-01 | 38.9 | 2.61 | 36.3 | 14.9 | 0.234 | 0.15 | 0.08 | 0.578 | 2.21 |
| 39: M98-337-01 | 226 | 2.05 | 224 | 110 | 0.131 | 0.07 | 0.07 | 2.84 | 13.3 |
| 40: M04-519-01 | 279 | 4.93 | 274 | 56.6 | 0.235 | 0.08 | 0.16 | 4.18 | 19.1 |
| 41: M04-519-02 | 242 | 2.89 | 239 | 83.6 | 0.122 | 0.03 | 0.09 | 3.59 | 16.9 |
| 42: M04-519-03 | 302 | 5.18 | 297 | 58.3 | 0.201 | 0.04 | 0.17 | 4.44 | 20.2 |
| 43: M04-519-04 | 170 | 5.47 | 164 | 31.0 | 0.236 | 0.06 | 0.18 | 2.39 | 10.8 |
| 44: M10-981-01 | 162 | 1.54 | 160 | 105 | 0.113 | 0.06 | 0.05 | 2.16 | 9.95 |
| 45: M10-981-02 | 170 | 5.46 | 164 | 31.1 | 0.248 | 0.07 | 0.17 | 2.36 | 11.2 |
| 46: M10-981-03 | 168 | 3.20 | 165 | 52.5 | 0.177 | 0.07 | 0.10 | 2.36 | 11.0 |
| 47: M10-981-04 | 173 | 2.15 | 171 | 80.7 | 0.118 | 0.05 | 0.07 | 2.20 | 10.7 |
| 48: M10-985-01 | 41.3 | 1.47 | 39.8 | 28.1 | 0.184 | 0.14 | 0.05 | 0.583 | 2.18 |
| 49: M10-985-02 | 54.9 | 1.78 | 53.1 | 30.8 | 0.095 | 0.04 | 0.06 | 0.783 | 2.99 |
| 50: M10-987-01 | 253 | 2.69 | 250 | 93.9 | 0.138 | 0.05 | 0.09 | 3.71 | 17.7 |
| 51: M10-987-02 | 212 | 4.30 | 208 | 49.3 | 0.199 | 0.06 | 0.14 | 3.15 | 14.8 |
| 52: M10-987-03 | 137 | 0.40 | 137 | 340 | 0.053 | 0.04 | 0.01 | 3.65 | 9.94 |
| 53: M10-987-04 | 138 | 3.49 | 135 | 39.6 | 0.141 | 0.03 | 0.11 | 1.85 | 8.79 |
| 54: M10-988-01 | 152 | 1.07 | 151 | 143 | 0.102 | 0.07 | 0.03 | 2.03 | 9.69 |
| 55: M10-988-02 | 190 | 1.46 | 188 | 130 | 0.063 | 0.02 | 0.05 | 2.47 | 12.2 |
| 56: M10-988-03 | 78.1 | 0.31 | 77.8 | 252 | 0.076 | 0.08 | < 0.01 | 1.00 | 4.76 |
| 57: M10-992-01 | 126 | 2.27 | 124 | 55.4 | 0.108 | 0.04 | 0.07 | 1.62 | 7.77 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

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|---|---|---|---|---|---|---|---|---|---|
| 58: M10-992-02 | 180 | 1.05 | 179 | 172 | 0.101 | 0.07 | 0.03 | 2.47 | 11.7 |
| 59: M10-992-03 | 222 | 0.31 | 222 | 716 | 0.031 | 0.03 | < 0.01 | 3.32 | 16.2 |
| 60: M10-992-04 | 209 | 1.70 | 207 | 123 | 0.073 | 0.02 | 0.05 | 2.78 | 13.7 |
| 61: M10-992-05 | 176 | 2.42 | 173 | 72.8 | 0.116 | 0.04 | 0.08 | 2.46 | 11.7 |
| 62: M10-994-01 | 193 | 0.92 | 192 | 211 | 0.063 | 0.03 | 0.03 | 2.61 | 12.7 |
| 63: M10-994-02 | 168 | 6.18 | 162 | 27.3 | 0.268 | 0.07 | 0.20 | 2.33 | 10.7 |
| 64: M10-994-03 | 204 | 1.41 | 202 | 145 | 0.094 | 0.05 | 0.05 | 3.04 | 13.6 |
| 65: M10-994-04 | 62.4 | 1.27 | 61.1 | 49.3 | 0.076 | 0.04 | 0.04 | 0.703 | 3.13 |
| 66: M10-994-05 | 238 | 1.13 | 236 | 210 | 0.066 | 0.03 | 0.04 | 3.41 | 16.7 |
| 67: M10-998-01 | 102 | 2.51 | 100.0 | 40.9 | 0.114 | 0.03 | 0.08 | 1.26 | 6.03 |
| 68: M10-998-02 | 140 | 1.84 | 138 | 76.1 | 0.095 | 0.04 | 0.06 | 1.72 | 8.26 |
| 69: M10-998-03 | 171 | 1.61 | 170 | 106 | 0.091 | 0.04 | 0.05 | 2.39 | 11.6 |
| 70: M10-998-04 | 183 | 1.44 | 182 | 127 | 0.083 | 0.04 | 0.05 | 2.55 | 12.2 |
| 71: M10-998-05 | 314 | 0.31 | 314 | 1013 | 0.015 | 0.01 | < 0.01 | 4.62 | 22.1 |
| 72: M11-1042-01 | 214 | 1.87 | 212 | 114 | 0.068 | < 0.01 | 0.06 | 3.14 | 15.3 |
| 73: M11-1042-02 | 162 | 3.11 | 159 | 52.2 | 0.122 | 0.02 | 0.10 | 2.61 | 11.1 |
| 74: M11-1042-03 | 190 | 1.54 | 189 | 124 | 0.081 | 0.03 | 0.05 | 3.02 | 12.7 |
| 75: M11-1051-01 | 244 | 1.57 | 243 | 155 | 0.061 | 0.01 | 0.05 | 3.70 | 17.1 |
| 76: M11-1051-02 | 154 | 0.70 | 153 | 219 | 0.061 | 0.04 | 0.02 | 2.60 | 9.56 |
| 77: M11-1099-01 | 177 | 10.6 | 167 | 16.7 | 0.413 | 0.07 | 0.34 | 2.66 | 11.8 |
| 78: M11-1099-02 | 142 | 1.50 | 140 | 94.5 | 0.098 | 0.05 | 0.05 | 1.78 | 8.38 |
| 79: M11-1099-03 | 146 | 4.38 | 142 | 33.3 | 0.242 | 0.10 | 0.14 | 1.86 | 8.49 |
| 80: M95-11-01 | 214 | 3.81 | 210 | 56.2 | 0.202 | 0.08 | 0.12 | 2.93 | 13.9 |
| 81: M95-12-01 | 174 | 1.91 | 173 | 91.4 | 0.078 | 0.02 | 0.06 | 2.22 | 10.6 |
| 82: M95-22-01 | 226 | 1.33 | 225 | 169 | 0.081 | 0.04 | 0.04 | 3.21 | 15.2 |
| 83: M95-22-02 | 158 | 5.28 | 153 | 30.0 | 0.213 | 0.04 | 0.17 | 1.98 | 9.40 |
| 84: M96-50-01 | 101 | 0.58 | 101 | 176 | 0.084 | 0.07 | 0.02 | 1.27 | 5.95 |
| 85: M96-51-01 | 297 | 1.88 | 295 | 158 | 0.133 | 0.07 | 0.06 | 4.41 | 20.8 |
| 86: M96-51-02 | 182 | 5.29 | 177 | 34.4 | 0.260 | 0.09 | 0.17 | 2.79 | 12.4 |
| 87: M96-51-03 | 202 | 2.17 | 199 | 92.8 | 0.105 | 0.04 | 0.07 | 2.89 | 13.5 |
| 88: M97-111-01 | 212 | 0.92 | 211 | 230 | 0.138 | 0.11 | 0.03 | 2.93 | 13.9 |
| 89: M97-111-02 | 222 | 14.6 | 208 | 15.3 | 0.506 | 0.04 | 0.47 | 3.23 | 15.1 |
| 90: M97-111-03 | 174 | 2.33 | 172 | 74.9 | 0.095 | 0.02 | 0.07 | 2.40 | 11.4 |
| 91: M97-111-04 | 141 | 0.68 | 141 | 206 | 0.054 | 0.03 | 0.02 | 1.82 | 8.67 |
| 92: M97-176-01 | 210 | 1.81 | 208 | 116 | 0.110 | 0.05 | 0.06 | 2.91 | 13.8 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

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|---|---|---|---|---|---|---|---|---|---|
| 93: M97-176-02 | 142 | 1.16 | 140 | 122 | 0.070 | 0.03 | 0.04 | 1.80 | 8.67 |
| 94: M97-176-03 | 194 | 2.72 | 191 | 71.2 | 0.133 | 0.05 | 0.09 | 2.48 | 11.7 |
| 95: M98-222-01 | 155 | 1.06 | 154 | 146 | 0.059 | 0.03 | 0.03 | 3.09 | 14.2 |
| 96: M98-222-02 | 189 | 2.44 | 187 | 77.6 | 0.104 | 0.03 | 0.08 | 2.53 | 11.4 |
| 97: M98-222-03 | 165 | 3.49 | 161 | 47.2 | 0.165 | 0.05 | 0.11 | 2.29 | 10.7 |
| 98: M98-223-01 | 177 | 1.49 | 176 | 119 | 0.063 | 0.01 | 0.05 | 2.26 | 10.7 |
| 99: M98-223-02 | 231 | 6.28 | 225 | 36.8 | 0.266 | 0.07 | 0.20 | 3.64 | 16.4 |
| 100: M98-223-03 | 168 | 12.6 | 155 | 13.4 | 0.445 | 0.04 | 0.40 | 2.61 | 11.0 |
| 101: W94-48-01 | 64.7 | 2.22 | 62.5 | 29.1 | 0.097 | 0.03 | 0.07 | 0.771 | 3.57 |
| 102: M96-58-01 | 110 | 2.45 | 107 | 44.8 | 0.137 | 0.06 | 0.08 | 1.41 | 6.59 |
| 103: M96-58-02 | 131 | 3.26 | 127 | 40.1 | 0.158 | 0.05 | 0.10 | 1.65 | 7.62 |
| 104: M96-58-03 | 144 | 2.48 | 142 | 58.2 | 0.100 | 0.02 | 0.08 | 1.81 | 8.57 |
| 105: M97-120-01 | 229 | 1.32 | 228 | 173 | 0.047 | < 0.01 | 0.04 | 3.27 | 15.3 |
| 106: M97-120-02 | 169 | 7.82 | 162 | 21.7 | 0.367 | 0.12 | 0.25 | 2.27 | 10.3 |
| 107: M97-122-01 | 51.7 | 3.41 | 48.3 | 15.2 | 0.136 | 0.03 | 0.11 | 0.592 | 2.57 |
| 108: M97-122-02 | 160 | 1.47 | 159 | 109 | 0.050 | < 0.01 | 0.05 | 2.08 | 9.90 |
| 109: M97-122-03 | 184 | 8.23 | 176 | 22.4 | 0.277 | 0.01 | 0.26 | 3.10 | 12.9 |
| 110: M97-122-04 | 102 | 19.1 | 82.7 | 5.33 | 0.718 | 0.11 | 0.61 | 1.82 | 6.14 |
| 111: M97-122-05 | 161 | 2.97 | 158 | 54.1 | 0.125 | 0.03 | 0.10 | 2.17 | 10.2 |
| 112: M97-123-01 | 144 | 0.31 | 143 | 464 | 0.010 | 0.01 | < 0.01 | 1.89 | 9.11 |
| 113: M97-123-02 | 170 | 0.83 | 169 | 206 | 0.026 | < 0.01 | 0.03 | 2.17 | 10.5 |
| 114: M97-123-03 | 231 | 3.34 | 228 | 69.2 | 0.186 | 0.08 | 0.11 | 3.14 | 14.5 |
| 115: M97-123-04 | 174 | 0.90 | 173 | 192 | 0.072 | 0.04 | 0.03 | 2.54 | 11.7 |
| 116: M97-124-01 | 155 | 2.63 | 152 | 58.9 | 0.140 | 0.06 | 0.08 | 2.06 | 9.40 |
| 117: M97-124-02 | 64.2 | 1.92 | 62.3 | 33.4 | 0.092 | 0.03 | 0.06 | 0.752 | 3.24 |
| 118: M97-124-03 | 94.3 | 68.0 | 26.3 | 1.39 | 2.68 | 0.50 | 2.18 | 3.31 | 6.93 |
| 119: M97-124-04 | 142 | 1.83 | 140 | 77.4 | 0.082 | 0.02 | 0.06 | 1.91 | 8.50 |
| 120: M97-153-01 | 197 | 2.49 | 194 | 78.9 | 0.382 | 0.30 | 0.08 | 2.68 | 11.9 |
| 121: M97-153-02 | 214 | 2.56 | 212 | 83.7 | 0.151 | 0.07 | 0.08 | 3.00 | 14.0 |
| 122: M97-154-01 | 192 | 2.07 | 190 | 93.0 | 0.074 | < 0.01 | 0.07 | 2.67 | 12.4 |
| 123: M98-181-01 | 180 | 1.72 | 178 | 104 | 0.072 | 0.02 | 0.06 | 2.34 | 10.8 |
| 124: M98-181-02 | 184 | 0.62 | 184 | 298 | 0.032 | 0.01 | 0.02 | 2.57 | 11.9 |
| 125: M98-184-01 | 158 | 1.16 | 157 | 137 | 0.041 | < 0.01 | 0.04 | 2.06 | 9.70 |
| 126: M98-184-02 | 244 | 1.09 | 243 | 224 | 0.041 | < 0.01 | 0.03 | 3.73 | 17.2 |
| 127: M98-185-01 | 179 | 1.85 | 177 | 96.5 | 0.084 | 0.03 | 0.06 | 2.35 | 11.0 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

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|---|---|---|---|---|---|---|---|---|---|
| 128: M98-185-02 | 122 | 1.88 | 120 | 65.1 | 0.073 | 0.01 | 0.06 | 1.59 | 7.25 |
| 129: M98-185-03 | 108 | 1.90 | 106 | 57.0 | 0.080 | 0.02 | 0.06 | 1.38 | 5.78 |
| 130: W94-49-01 | 115 | 1.30 | 113 | 88.1 | 0.050 | < 0.01 | 0.04 | 1.41 | 6.53 |
| 131: W94-49-02 | 14.6 | 110 | -95.1 | 0.13 | 4.11 | 0.60 | 3.51 | 3.56 | 4.23 |
| 132: W94-49-03 | 141 | 2.63 | 138 | 53.4 | 0.098 | 0.01 | 0.08 | 1.88 | 8.66 |
| 133: W94-53-01 | 46.2 | 3.84 | 42.4 | 12.0 | 0.200 | 0.08 | 0.12 | 0.667 | 2.57 |
| 134: W94-55-01 | 152 | 37.1 | 115 | 4.09 | 1.47 | 0.28 | 1.19 | 3.57 | 10.6 |
| 135: W94-55-02 | 185 | 2.12 | 183 | 87.2 | 0.071 | < 0.01 | 0.07 | 2.48 | 11.3 |
| 136: W94-57-01 | 204 | 4.52 | 199 | 45.0 | 0.251 | 0.11 | 0.14 | 2.99 | 13.3 |
| 137: W94-57-02 | 76.1 | 5.26 | 70.8 | 14.5 | 1.58 | 1.41 | 0.17 | 1.74 | 4.09 |
| 138: W94-57-03 | 114 | 78.9 | 35.6 | 1.45 | 2.90 | 0.37 | 2.52 | 3.82 | 8.80 |
| 139: W94-59-01 | 75.5 | 1.31 | 74.2 | 57.8 | 0.110 | 0.07 | 0.04 | 1.03 | 4.41 |
| 140: W94-61-01 | 42.4 | 48.2 | -5.8 | 0.88 | 1.65 | 0.11 | 1.54 | 4.33 | 4.53 |
| 141: W94-61-02 | 69.5 | 0.84 | 68.7 | 82.4 | 0.087 | 0.06 | 0.03 | 0.940 | 3.81 |
| 142: W94-65-01 | 50.5 | 170 | -120 | 0.30 | 5.69 | 0.25 | 5.44 | 1.48 | 3.46 |
| 143: W94-65-02 | 127 | 88.1 | 38.7 | 1.44 | 3.17 | 0.34 | 2.82 | 2.75 | 7.79 |
| 144: W94-65-03 | 88.5 | 2.58 | 85.9 | 34.3 | 0.125 | 0.04 | 0.08 | 1.18 | 5.22 |
| 145: W94-70-01 | 116 | 0.67 | 115 | 174 | 0.059 | 0.04 | 0.02 | 1.49 | 6.87 |
| 146: W94-70-02 | 164 | 0.41 | 164 | 401 | 0.039 | 0.03 | 0.01 | 2.13 | 10.0 |
| 147: W94-73-01 | 146 | 0.88 | 145 | 166 | 0.076 | 0.05 | 0.03 | 1.92 | 9.01 |
| 148: W94-73-02 | 78.6 | 62.2 | 16.4 | 1.26 | 2.26 | 0.27 | 1.99 | 3.65 | 4.46 |
| 149: W94-73-03 | 181 | 1.53 | 179 | 118 | 0.087 | 0.04 | 0.05 | 2.43 | 11.2 |
| 150: M00-473-01 | 273 | 1.15 | 272 | 238 | 0.977 | 0.94 | 0.04 | 4.21 | 18.7 |
| 151: M00-483-01 | 286 | 6.55 | 280 | 43.7 | 0.476 | 0.27 | 0.21 | 4.57 | 20.1 |
| 152: M00-490-01 | 238 | 16.4 | 222 | 14.5 | 0.736 | 0.21 | 0.53 | 4.05 | 17.7 |
| 153: M03-508-01 | 43.5 | 3.36 | 40.1 | 12.9 | 0.182 | 0.07 | 0.11 | 0.621 | 2.57 |
| 154: M03-508-02 | 80.2 | 4.22 | 76.0 | 19.0 | 0.164 | 0.03 | 0.14 | 1.63 | 6.63 |
| 155: M05-561-01 | 299 | 3.70 | 295 | 80.8 | 0.227 | 0.11 | 0.12 | 4.64 | 21.6 |
| 156: M05-561-02 | 75.7 | 2.12 | 73.6 | 35.8 | 0.097 | 0.03 | 0.07 | 0.885 | 4.03 |
| 157: M06-577-01 | 38.1 | 3.63 | 34.5 | 10.5 | 0.202 | 0.09 | 0.12 | 0.575 | 2.18 |
| 158: M06-577-02 | 42.8 | 2.55 | 40.2 | 16.8 | 0.221 | 0.14 | 0.08 | 0.637 | 2.64 |
| 159: M06-577-03 | 44.2 | 2.82 | 41.4 | 15.7 | 0.214 | 0.12 | 0.09 | 0.673 | 2.51 |
| 160: M06-591-01 | 38.4 | 3.28 | 35.1 | 11.7 | 0.232 | 0.13 | 0.10 | 0.590 | 2.12 |
| 161: M06-591-02 | 62.4 | 2.08 | 60.3 | 30.0 | 0.145 | 0.08 | 0.07 | 1.07 | 3.88 |
| 162: M06-591-03 | 232 | 3.23 | 229 | 71.8 | 0.411 | 0.31 | 0.10 | 3.12 | 14.8 |

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|---|---|---|---|---|---|---|---|---|---|
| 163: M06-592-01 | 36.0 | 0.32 | 35.7 | 111 | 0.149 | 0.14 | 0.01 | 0.524 | 2.07 |
| 164: M06-592-02 | 67.4 | 0.31 | 67.1 | 217 | 0.118 | 0.12 | < 0.01 | 0.813 | 3.63 |
| 165: M06-592-03 | 23.4 | 0.39 | 23.0 | 60.4 | 0.091 | 0.08 | 0.01 | 0.185 | 0.773 |
| 166: M06-593-01 | 48.6 | 7.05 | 41.6 | 6.90 | 0.330 | 0.10 | 0.23 | 0.716 | 2.70 |
| 167: M06-593-02 | 29.0 | 1.11 | 27.9 | 26.1 | 0.088 | 0.05 | 0.04 | 0.240 | 1.04 |
| 168: M06-608-01 | 39.5 | 0.91 | 38.6 | 43.4 | 0.225 | 0.20 | 0.03 | 0.561 | 2.14 |
| 169: M06-608-02 | 40.9 | 0.31 | 40.6 | 132 | 0.155 | 0.16 | < 0.01 | 0.579 | 2.27 |
| 170: M06-611-01 | 36.8 | 0.46 | 36.3 | 80.7 | 0.150 | 0.14 | 0.01 | 0.543 | 2.17 |
| 171: M06-611-02 | 42.6 | 0.31 | 42.3 | 137 | 0.173 | 0.17 | < 0.01 | 0.645 | 2.46 |
| 172: M06-623-01 | 50.7 | 0.31 | 50.4 | 164 | 0.046 | 0.05 | < 0.01 | 0.811 | 3.26 |
| 173: M06-623-02 | 253 | 1.62 | 251 | 156 | 0.151 | 0.10 | 0.05 | 3.42 | 16.6 |
| 174: M06-625-01 | 48.4 | 0.31 | 48.1 | 156 | 0.162 | 0.16 | < 0.01 | 0.760 | 3.04 |
| 175: M06-625-02 | 33.7 | 1.83 | 31.9 | 18.4 | 0.154 | 0.10 | 0.06 | 0.468 | 1.59 |
| 176: M06-629-01 | 143 | 23.6 | 120 | 6.07 | 1.08 | 0.33 | 0.75 | 2.30 | 10.0 |
| 177: M06-631-01 | 41.4 | 4.84 | 36.6 | 8.56 | 0.244 | 0.09 | 0.15 | 0.716 | 2.47 |
| 178: M07-674-01 | 51.5 | 3.23 | 48.3 | 16.0 | 0.233 | 0.13 | 0.10 | 0.798 | 3.10 |
| 179: M07-689-01 | 24.5 | 1.52 | 23.0 | 16.1 | 0.192 | 0.14 | 0.05 | 0.346 | 1.23 |
| 180: M07-689-02 | 29.9 | 0.31 | 29.6 | 96.5 | 0.142 | 0.14 | < 0.01 | 0.477 | 1.49 |
| 181: M07-689-03 | 62.2 | 6.18 | 56.0 | 10.1 | 0.662 | 0.46 | 0.20 | 1.53 | 4.37 |
| 182: M08-761-01 | 40.2 | 5.81 | 34.4 | 6.92 | 0.284 | 0.10 | 0.19 | 0.595 | 2.19 |
| 183: M08-761-02 | 44.4 | 4.27 | 40.1 | 10.4 | 0.208 | 0.07 | 0.14 | 0.673 | 2.67 |
| 184: M08-763-01 | 61.7 | 2.82 | 58.9 | 21.9 | 0.203 | 0.11 | 0.09 | 0.971 | 4.09 |
| 185: M08-765-01 | 47.7 | 4.13 | 43.6 | 11.5 | 0.206 | 0.07 | 0.13 | 0.730 | 2.92 |
| 186: M08-783-01 | 42.1 | 2.81 | 39.3 | 15.0 | 0.162 | 0.07 | 0.09 | 0.655 | 2.86 |
| 187: M08-783-02 | 293 | 4.79 | 288 | 61.2 | 0.232 | 0.08 | 0.15 | 4.19 | 20.0 |
| 188: M10-879-01 | 48.4 | 6.52 | 41.9 | 7.43 | 0.284 | 0.08 | 0.21 | 0.728 | 2.88 |
| 189: M10-887-01 | 51.2 | 6.62 | 44.6 | 7.73 | 0.306 | 0.09 | 0.21 | 0.818 | 3.27 |
| 190: M10-892-01 | 46.6 | 2.21 | 44.4 | 21.1 | 0.148 | 0.08 | 0.07 | 0.707 | 2.43 |
| 191: M10-999-01 | 39.4 | 2.10 | 37.3 | 18.7 | 0.143 | 0.08 | 0.07 | 0.660 | 2.79 |
| 192: M10-999-02 | 48.1 | 6.60 | 41.5 | 7.29 | 0.368 | 0.16 | 0.21 | 0.600 | 2.69 |
| 193: M95-17-01 | 78.7 | 1.65 | 77.1 | 47.8 | 0.131 | 0.08 | 0.05 | 1.32 | 5.25 |
| 194: M95-25-01 | 49.5 | 3.03 | 46.5 | 16.3 | 0.168 | 0.07 | 0.10 | 0.776 | 3.04 |
| 195: M95-25-02 | 61.9 | 3.77 | 58.1 | 16.4 | 0.282 | 0.16 | 0.12 | 0.911 | 3.84 |
| 196: M95-25-03 | 106 | 25.2 | 80.6 | 4.20 | 1.17 | 0.37 | 0.81 | 1.74 | 7.77 |
| 197: M95-25-04 | 274 | 1.77 | 272 | 155 | 0.111 | 0.05 | 0.06 | 3.83 | 18.5 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

| Sample ID | NP t CaCO3/1000 t | AP t CaCO3/1000 t | Net NP t CaCO3/1000 t | NP/AP ratio | Sulphur (total) % | Acid Leachable SO4-S % | Sulphide % | Carbon (total) % | Carbonate % |
|---|---|---|---|---|---|---|---|---|---|
| 198: M96-03-01 | 43.6 | 1.78 | 41.8 | 24.6 | 0.172 | 0.12 | 0.06 | 0.704 | 2.81 |
| 199: M96-03-02 | 50.9 | 4.51 | 46.4 | 11.3 | 0.261 | 0.12 | 0.14 | 0.772 | 3.10 |
| 200: M96-03-03 | 218 | 4.47 | 214 | 48.8 | 0.230 | 0.09 | 0.14 | 2.89 | 13.7 |
| 201: M96-19-01 | 52.6 | 4.10 | 48.5 | 12.8 | 0.266 | 0.14 | 0.13 | 0.814 | 3.16 |
| 202: M96-19-02 | 42.1 | 1.25 | 40.8 | 33.7 | 0.183 | 0.14 | 0.04 | 0.634 | 2.44 |
| 203: M96-37-01 | 51.0 | 2.85 | 48.1 | 17.9 | 0.232 | 0.14 | 0.09 | 0.698 | 2.94 |
| 204: M96-37-02 | 47.8 | 5.54 | 42.3 | 8.62 | 0.297 | 0.12 | 0.18 | 0.725 | 2.70 |
| 205: M96-37-03 | 33.6 | 1.28 | 32.3 | 26.2 | 0.255 | 0.21 | 0.04 | 0.456 | 1.61 |
| 206: M96-40-01 | 36.5 | 1.36 | 35.1 | 26.8 | 0.107 | 0.06 | 0.04 | 0.512 | 2.02 |
| 207: M96-40-02 | 37.2 | 2.79 | 34.4 | 13.3 | 0.263 | 0.17 | 0.09 | 0.548 | 2.32 |
| 208: M96-4-01 | 57.8 | 4.85 | 53.0 | 11.9 | 0.307 | 0.15 | 0.16 | 0.915 | 3.52 |
| 209: M96-44-01 | 41.4 | 3.92 | 37.5 | 10.6 | 0.303 | 0.18 | 0.13 | 0.441 | 1.86 |
| 210: M96-54-01 | 52.5 | 0.55 | 52.0 | 96.0 | 0.183 | 0.17 | 0.02 | 0.827 | 3.30 |
| 211: M96-54-02 | 55.3 | 3.11 | 52.2 | 17.8 | 0.248 | 0.15 | 0.10 | 0.836 | 3.51 |
| 212: M96-65-01 | 48.0 | 2.45 | 45.6 | 19.6 | 0.186 | 0.11 | 0.08 | 0.756 | 3.06 |
| 213: M96-7-01 | 32.3 | 0.31 | 32.0 | 104 | 0.014 | 0.01 | < 0.01 | 0.558 | 2.02 |
| 214: M96-7-02 | 51.8 | 6.08 | 45.7 | 8.52 | 0.373 | 0.18 | 0.19 | 0.826 | 3.21 |
| 215: M96-74-01 | 47.7 | 5.59 | 42.1 | 8.54 | 0.261 | 0.08 | 0.18 | 0.951 | 3.83 |
| 216: M96-77-01 | 38.1 | 1.75 | 36.4 | 21.8 | 0.167 | 0.11 | 0.06 | 0.554 | 2.24 |
| 217: M96-77-02 | 47.4 | 1.42 | 46.0 | 33.4 | 0.342 | 0.30 | 0.05 | 0.722 | 2.84 |
| 218: M97-121-01 | 41.3 | 5.47 | 35.8 | 7.56 | 0.208 | 0.03 | 0.17 | 0.636 | 2.43 |
| 219: M97-135-01 | 59.1 | 4.39 | 54.7 | 13.5 | 0.237 | 0.10 | 0.14 | 0.897 | 3.54 |
| 220: M97-135-02 | 28.8 | 0.55 | 28.3 | 52.7 | 0.125 | 0.11 | 0.02 | 0.259 | 1.11 |
| 221: M97-135-03 | 42.7 | 3.29 | 39.4 | 13.0 | 0.268 | 0.16 | 0.11 | 0.660 | 2.60 |
| 222: M97-149-01 | 41.0 | 2.83 | 38.2 | 14.5 | 0.199 | 0.11 | 0.09 | 0.446 | 1.93 |
| 223: M97-149-02 | 42.5 | 2.14 | 40.4 | 19.9 | 0.266 | 0.20 | 0.07 | 0.587 | 2.27 |
| 224: M97-94A-01 | 51.8 | 0.31 | 51.5 | 167 | 0.168 | 0.17 | < 0.01 | 0.816 | 3.24 |
| 225: M97-94A-02 | 37.7 | 2.70 | 35.0 | 14.0 | 0.215 | 0.13 | 0.09 | 0.597 | 2.25 |
| 226: M97-95-01 | 46.5 | 2.65 | 43.8 | 17.5 | 0.203 | 0.12 | 0.08 | 0.666 | 2.77 |
| 227: M97-95-02 | 48.8 | 2.28 | 46.5 | 21.5 | 0.261 | 0.19 | 0.07 | 0.834 | 3.06 |
| 228: M97-95-03 | 225 | 4.63 | 220 | 48.6 | 0.228 | 0.08 | 0.15 | 3.03 | 14.4 |
| 229: M98-201-01 | 24.6 | 3.85 | 20.8 | 6.39 | 0.279 | 0.16 | 0.12 | 0.304 | 1.10 |
| 230: M98-201-02 | 43.2 | 1.14 | 42.1 | 37.8 | 0.108 | 0.07 | 0.04 | 0.469 | 2.04 |
| 231: M98-201-03 | 53.6 | 2.38 | 51.2 | 22.6 | 0.183 | 0.11 | 0.08 | 0.816 | 3.41 |
| 232: M98-201-04 | 43.3 | 0.37 | 42.9 | 117 | 0.158 | 0.15 | 0.01 | 0.642 | 2.53 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

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|---|---|---|---|---|---|---|---|---|---|
| 233: M98-208-01 | 37.8 | 5.24 | 32.6 | 7.22 | 0.280 | 0.11 | 0.17 | 0.509 | 2.04 |
| 234: M98-209-01 | 31.9 | 0.65 | 31.2 | 48.8 | 0.165 | 0.14 | 0.02 | 0.498 | 1.92 |
| 235: M98-265-01 | 47.3 | 2.60 | 44.7 | 18.2 | 0.164 | 0.08 | 0.08 | 0.725 | 2.85 |
| 236: M98-266-01 | 42.4 | 1.33 | 41.1 | 31.8 | 0.207 | 0.16 | 0.04 | 0.637 | 2.48 |
| 237: M98-269-01 | 211 | 3.27 | 207 | 64.4 | 0.185 | 0.08 | 0.10 | 2.80 | 13.5 |
| 238: M98-270-01 | 40.3 | 0.97 | 39.3 | 41.6 | 0.211 | 0.18 | 0.03 | 0.590 | 2.30 |
| 239: M98-317-01 | 66.6 | 7.31 | 59.3 | 9.12 | 0.320 | 0.09 | 0.23 | 1.09 | 4.26 |
| 240: M99-309-01 | 91.2 | 2.26 | 88.9 | 40.4 | 0.225 | 0.15 | 0.07 | 1.17 | 5.40 |
| 241: M99-309-02 | 45.2 | 3.70 | 41.5 | 12.2 | 0.143 | 0.02 | 0.12 | 0.689 | 2.64 |
| 242: M99-336B-01 | 69.2 | 4.17 | 65.0 | 16.6 | 0.160 | 0.03 | 0.13 | 1.02 | 4.35 |
| 243: M99-336B-02 | 74.3 | 3.45 | 70.8 | 21.5 | 0.219 | 0.11 | 0.11 | 0.904 | 3.78 |
| 244: M99-336B-03 | 50.5 | 3.75 | 46.7 | 13.5 | 0.194 | 0.07 | 0.12 | 0.788 | 3.05 |
| 245: M99-336B-04 | 226 | 8.86 | 218 | 25.6 | 0.349 | 0.07 | 0.28 | 3.02 | 13.8 |
| 246: M99-345-01 | 231 | 5.49 | 226 | 42.1 | 0.247 | 0.07 | 0.18 | 3.42 | 16.0 |
| 247: M99-346-01 | 250 | 3.65 | 246 | 68.5 | 0.196 | 0.08 | 0.12 | 3.73 | 17.7 |
| 248: M99-347-01 | 49.2 | 2.07 | 47.1 | 23.8 | 0.202 | 0.14 | 0.07 | 0.776 | 3.09 |
| 249: M99-347-02 | 55.2 | 3.78 | 51.4 | 14.6 | 0.232 | 0.11 | 0.12 | 0.844 | 3.13 |
| 250: M99-409-01 | 37.3 | 1.37 | 35.9 | 27.2 | 0.186 | 0.14 | 0.04 | 0.516 | 1.85 |
| 251: M99-409-02 | 48.2 | 2.40 | 45.8 | 20.1 | 0.148 | 0.07 | 0.08 | 0.732 | 2.76 |
| 252: M99-409-03 | 34.3 | 0.82 | 33.5 | 41.7 | 0.124 | 0.10 | 0.03 | 0.498 | 1.78 |
| 253: M99-409-04 | 66.0 | 5.39 | 60.6 | 12.2 | 0.328 | 0.16 | 0.17 | 1.04 | 4.21 |
| 254: M99-409-05 | 174 | 3.40 | 170 | 51.1 | 0.284 | 0.18 | 0.11 | 2.39 | 11.0 |
| 255: M99-410-01 | 41.0 | 3.07 | 37.9 | 13.3 | 0.182 | 0.08 | 0.10 | 0.592 | 2.07 |
| 256: M99-410-02 | 40.1 | 1.20 | 38.9 | 33.5 | 0.184 | 0.15 | 0.04 | 0.592 | 2.04 |
| 257: M99-417-01 | 80.0 | 9.28 | 70.7 | 8.62 | 0.492 | 0.20 | 0.30 | 1.40 | 4.89 |
| 258: M99-436-01 | 40.7 | 2.47 | 38.2 | 16.5 | 0.181 | 0.10 | 0.08 | 0.602 | 2.28 |
| 259: M99-436-02 | 38.8 | 2.75 | 36.1 | 14.1 | 0.155 | 0.07 | 0.09 | 0.569 | 1.92 |
| 260: M08-733-01 | 172 | 0.97 | 171 | 177 | 0.103 | 0.07 | 0.03 | 2.20 | 10.5 |
| 261: M08-733-02 | 170 | 3.29 | 166 | 51.6 | 0.237 | 0.13 | 0.11 | 2.17 | 10.0 |
| 262: M09-802-01 | 193 | 9.14 | 184 | 21.1 | 0.458 | 0.17 | 0.29 | 2.50 | 11.0 |
| 263: M09-802-02 | 30.9 | 57.3 | -26.4 | 0.54 | 2.58 | 0.74 | 1.83 | 0.583 | 0.978 |
| 264: M09-803-01 | 67.3 | 78.7 | -11.4 | 0.86 | 2.76 | 0.25 | 2.52 | 1.49 | 3.36 |
| 265: M09-809-01 | 101 | 42.8 | 58.5 | 2.37 | 1.88 | 0.51 | 1.37 | 1.48 | 5.89 |
| 266: M09-817-01 | 63.3 | 30.0 | 33.3 | 2.11 | 1.40 | 0.44 | 0.96 | 1.10 | 2.63 |
| 267: M09-817-02 | 194 | 0.75 | 193 | 257 | 0.093 | 0.07 | 0.02 | 2.64 | 12.9 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

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|---|---|---|---|---|---|---|---|---|---|
| 268: M09-858-01 | 60.8 | 53.8 | 7.05 | 1.13 | 2.25 | 0.53 | 1.72 | 1.23 | 2.84 |
| 269: M09-859-01 | 211 | 6.72 | 204 | 31.4 | 0.433 | 0.22 | 0.22 | 3.17 | 14.2 |
| 270: M10-933-01 | 150 | 7.56 | 143 | 19.9 | 0.464 | 0.22 | 0.24 | 2.00 | 8.65 |
| 271: M10-935-01 | 28.1 | 0.46 | 27.6 | 61.2 | 0.059 | 0.04 | 0.01 | 0.340 | 1.21 |
| 272: M10-935-02 | 33.8 | 26.2 | 7.62 | 1.29 | 1.33 | 0.49 | 0.84 | 0.970 | 2.06 |
| 273: M96-28-01 | 173 | 1.31 | 172 | 132 | 0.140 | 0.10 | 0.04 | 2.31 | 10.6 |
| 274: M97-159-01 | 170 | 1.72 | 168 | 98.6 | 0.125 | 0.07 | 0.06 | 2.19 | 10.9 |
| 275: M97-159-02 | 175 | 1.44 | 173 | 121 | 0.178 | 0.13 | 0.05 | 2.21 | 9.99 |
| 276: M98-248-01 | 53.0 | 51.7 | 1.34 | 1.03 | 3.19 | 1.54 | 1.65 | 1.56 | 1.63 |
| 277: M98-275-01 | 185 | 1.05 | 184 | 177 | 0.081 | 0.05 | 0.03 | 2.35 | 10.8 |
| 278: M98-275-02 | 158 | 1.74 | 156 | 90.8 | 0.113 | 0.06 | 0.06 | 2.16 | 9.46 |
| 279: W94-111-01 | 70.3 | 2.08 | 68.2 | 33.9 | 1.01 | 0.94 | 0.07 | 2.60 | 3.71 |
| 280: W94-76-01 | 99.2 | 0.81 | 98.4 | 123 | 0.060 | 0.03 | 0.03 | 1.30 | 5.98 |
| 281: W94-76-02 | 67.2 | 0.83 | 66.4 | 80.5 | 0.104 | 0.08 | 0.03 | 0.886 | 3.50 |
| 282: W94-82-01 | 80.3 | 0.99 | 79.3 | 80.8 | 0.108 | 0.08 | 0.03 | 1.08 | 4.33 |
| 283: DS09GT-10-01 | 13.4 | 5.82 | 7.58 | 2.30 | 0.280 | 0.09 | 0.19 | 0.113 | 0.316 |
| 284: ML00-224-01 | 26.7 | 29.6 | -2.95 | 0.90 | 1.03 | 0.08 | 0.95 | 0.470 | 1.27 |
| 285: ML08-225-01 | 21.6 | 8.32 | 13.3 | 2.60 | 0.444 | 0.18 | 0.27 | 0.132 | 0.302 |
| 286: ML08-225-02 | 8.9 | 1.53 | 7.37 | 5.82 | 0.118 | 0.07 | 0.05 | 0.054 | 0.157 |
| 287: ML08-225-03 | 33.9 | 24.7 | 9.15 | 1.37 | 1.23 | 0.44 | 0.79 | 0.530 | 1.33 |
| 288: ML08-226-01 | 14.6 | 0.70 | 13.9 | 21.0 | 0.079 | 0.06 | 0.02 | 0.008 | 0.022 |
| 289: ML08-226-02 | 14.5 | 15.8 | -1.34 | 0.92 | 0.664 | 0.16 | 0.51 | 0.065 | 0.125 |
| 290: ML08-226-03 | 21.8 | 8.99 | 12.8 | 2.42 | 0.481 | 0.19 | 0.29 | 0.168 | 0.400 |
| 291: ML08-226-04 | 9.1 | 23.2 | -14.1 | 0.39 | 1.44 | 0.69 | 0.74 | 0.043 | 0.106 |
| 292: ML08-226-05 | 14.0 | 0.50 | 13.5 | 28.0 | 0.103 | 0.09 | 0.02 | 0.158 | 0.554 |
| 293: ML08-228-01 | 35.9 | 1.68 | 34.2 | 21.3 | 0.152 | 0.10 | 0.05 | 0.396 | 1.22 |
| 294: ML08-228-02 | 11.3 | 16.3 | -4.97 | 0.69 | 0.817 | 0.30 | 0.52 | 0.064 | 0.100 |
| 295: ML08-229-01 | 38.8 | 2.72 | 36.1 | 14.3 | 0.169 | 0.08 | 0.09 | 0.452 | 1.48 |
| 296: ML08-229-02 | 16.3 | 1.05 | 15.2 | 15.5 | 0.117 | 0.08 | 0.03 | 0.056 | 0.177 |
| 297: ML08-229-03 | 20.5 | 11.5 | 9.00 | 1.78 | 0.754 | 0.39 | 0.37 | 0.232 | 0.583 |
| 298: ML08-229-04 | 12.7 | 1.77 | 10.9 | 7.19 | 0.396 | 0.34 | 0.06 | 0.142 | 0.454 |
| 299: ML08-229-05 | 35.1 | 7.21 | 27.9 | 4.87 | 0.427 | 0.20 | 0.23 | 0.454 | 1.47 |
| 300: ML08-230-01 | 20.3 | 1.07 | 19.2 | 19.0 | 0.134 | 0.10 | 0.03 | 0.254 | 0.991 |
| 301: ML08-232-01 | 8.1 | 0.31 | 7.79 | 26.1 | 0.147 | 0.15 | < 0.01 | 0.021 | 0.076 |
| 302: ML08-233-01 | 16.8 | 0.31 | 16.5 | 54.2 | 0.071 | 0.07 | < 0.01 | 0.131 | 0.392 |

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|---|---|---|---|---|---|---|---|---|---|
| 303: ML08-233-02 | 23.9 | 3.66 | 20.2 | 6.54 | 0.228 | 0.11 | 0.12 | 0.181 | 0.573 |
| 304: ML08-240-01 | 16.2 | 0.34 | 15.9 | 47.6 | 0.067 | 0.06 | 0.01 | 0.132 | 0.500 |
| 305: ML08-241-01 | 16.1 | 0.53 | 15.6 | 30.1 | 0.129 | 0.11 | 0.02 | 0.142 | 0.493 |
| 306: ML08-241-02 | 34.7 | 3.97 | 30.7 | 8.75 | 0.219 | 0.09 | 0.13 | 0.450 | 1.54 |
| 307: ML08-241-03 | 51.8 | 1.35 | 50.5 | 38.5 | 0.139 | 0.10 | 0.04 | 0.514 | 2.14 |
| 308: ML08-243-01 | 43.5 | 0.31 | 43.2 | 140 | 0.119 | 0.12 | < 0.01 | 0.526 | 2.09 |
| 309: ML08-243-02 | 35.6 | 1.66 | 33.9 | 21.4 | 0.132 | 0.08 | 0.05 | 0.306 | 1.20 |
| 310: ML08-245-01 | 15.9 | 0.56 | 15.3 | 28.6 | 0.076 | 0.06 | 0.02 | 0.063 | 0.173 |
| 311: ML08-245-02 | 8.7 | 0.62 | 8.08 | 14.1 | 0.103 | 0.08 | 0.02 | 0.050 | 0.134 |
| 312: ML09-254-01 | 21.4 | 8.56 | 12.8 | 2.50 | 0.666 | 0.39 | 0.27 | 0.312 | 0.859 |
| 313: ML09-254-02 | 23.1 | 1.76 | 21.3 | 13.1 | 0.073 | 0.02 | 0.06 | 0.265 | 1.11 |
| 314: ML09-256-01 | 18.0 | 0.68 | 17.3 | 26.7 | 0.190 | 0.17 | 0.02 | 0.210 | 0.775 |
| 315: ML09-259-01 | 14.6 | 1.26 | 13.3 | 11.6 | 0.105 | 0.06 | 0.04 | 0.030 | 0.058 |
| 316: ML92062-01 | 38.4 | 2.71 | 35.7 | 14.2 | 0.257 | 0.17 | 0.09 | 0.456 | 1.61 |
| 317: ML95-104-01 | 24.0 | 1.20 | 22.8 | 19.9 | 0.153 | 0.11 | 0.04 | 0.136 | 0.447 |
| 318: ML95-104-02 | 11.5 | 12.0 | -0.52 | 0.96 | 0.574 | 0.19 | 0.38 | 0.155 | 0.255 |
| 319: ML95-105-01 | 30.6 | 5.49 | 25.1 | 5.57 | 0.300 | 0.12 | 0.18 | 0.389 | 1.22 |
| 320: ML95-105-02 | 71.0 | 2.20 | 68.8 | 32.3 | 0.221 | 0.15 | 0.07 | 0.806 | 3.56 |
| 321: ML95-105-03 | 10.6 | 1.85 | 8.75 | 5.72 | 0.253 | 0.19 | 0.06 | 0.076 | 0.153 |
| 322: ML95-105-04 | 27.0 | 0.31 | 26.7 | 87.1 | 0.033 | 0.03 | < 0.01 | 0.190 | 0.799 |
| 323: ML95-107-01 | 32.2 | 8.05 | 24.2 | 4.00 | 0.394 | 0.14 | 0.26 | 0.694 | 2.44 |
| 324: ML95-107-02 | 50.8 | 7.62 | 43.2 | 6.67 | 0.420 | 0.18 | 0.24 | 0.695 | 2.49 |
| 325: ML95-107-03 | 9.9 | 0.31 | 9.59 | 31.9 | 0.126 | 0.13 | < 0.01 | 0.053 | 0.173 |
| 326: ML95-113-01 | 8.7 | 1.29 | 7.41 | 6.72 | 0.134 | 0.09 | 0.04 | 0.074 | 0.264 |
| 327: ML95-113-02 | 21.5 | 1.22 | 20.3 | 17.6 | 0.092 | 0.05 | 0.04 | 0.203 | 0.809 |
| 328: ML95-117-01 | 29.0 | 4.92 | 24.1 | 5.90 | 0.277 | 0.12 | 0.16 | 0.368 | 1.19 |
| 329: ML95-117-02 | 23.8 | 0.89 | 22.9 | 26.8 | 0.079 | 0.05 | 0.03 | 0.137 | 0.519 |
| 330: ML95-117-03 | 13.9 | 11.0 | 2.90 | 1.26 | 0.752 | 0.40 | 0.35 | 0.106 | 0.286 |
| 331: ML95-120-01 | 10.0 | 1.98 | 8.02 | 5.06 | 0.142 | 0.08 | 0.06 | 0.048 | 0.150 |
| 332: ML95-82-01 | 21.8 | 15.2 | 6.60 | 1.43 | 0.776 | 0.29 | 0.49 | 0.255 | 0.710 |
| 333: ML95-82-02 | 19.1 | 0.82 | 18.3 | 23.2 | 0.074 | 0.05 | 0.03 | 0.161 | 0.623 |
| 334: ML95-83-01 | 8.9 | 1.29 | 7.61 | 6.91 | 0.125 | 0.08 | 0.04 | 0.192 | 0.867 |
| 335: ML95-83-02 | 10.8 | 2.32 | 8.48 | 4.65 | 0.138 | 0.06 | 0.07 | 0.032 | 0.087 |
| 336: ML95-84-01 | 20.9 | 30.3 | -9.43 | 0.69 | 1.10 | 0.13 | 0.97 | 0.276 | 0.870 |
| 337: ML95-85-01 | 15.4 | 3.88 | 11.5 | 3.96 | 0.264 | 0.14 | 0.12 | 0.080 | 0.212 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

| Sample ID | NP t CaCO3/1000 t | AP t CaCO3/1000 t | Net NP t CaCO3/1000 t | NP/AP ratio | Sulphur (total) % | Acid Leachable SO4-S % | Sulphide % | Carbon (total) % | Carbonate % |
|---|---|---|---|---|---|---|---|---|---|
| 338: ML95-88-01 | 10.4 | 2.80 | 7.60 | 3.71 | 0.166 | 0.08 | 0.09 | 0.055 | 0.186 |
| 339: ML95-88-02 | 38.9 | 2.65 | 36.2 | 14.7 | 0.151 | 0.07 | 0.08 | 0.415 | 1.80 |
| 340: ML95-95-01 | 44.4 | 8.95 | 35.5 | 4.96 | 0.372 | 0.09 | 0.29 | 0.484 | 1.62 |
| 341: ML95-95-02 | 10.0 | 0.87 | 9.13 | 11.6 | 0.096 | 0.07 | 0.03 | 0.027 | 0.087 |
| 342: ML95-98-01 | 23.0 | 14.0 | 9.01 | 1.64 | 0.602 | 0.15 | 0.45 | 0.161 | 0.337 |
| 343: ML97-186-01 | 36.6 | 5.02 | 31.6 | 7.28 | 0.235 | 0.07 | 0.16 | 0.408 | 1.63 |
| 344: ML97-186-02 | 26.3 | 1.65 | 24.6 | 15.9 | 0.105 | 0.05 | 0.05 | 0.175 | 0.725 |

*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Modified ABA (Price 1997)**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Wednesday, September 21, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10514-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 | 16-Sep-11 |
| 4: Analysis Approval Time | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 | 08:46 |
| 5: M10-968-01 | 9.43 | 3 | 2.01 | 26.30 | 0.10 | 0.10 | 15.11 | 1.51 |
| 6: M10-968-02 | 9.34 | 3 | 2.00 | 28.10 | 0.10 | 0.10 | 15.03 | 1.57 |
| 7: M10-968-03 | 9.33 | 3 | 1.98 | 27.80 | 0.10 | 0.10 | 14.85 | 1.60 |
| 8: M10-970-01 | 8.25 | 4 | 1.95 | 82.10 | 0.10 | 0.10 | 24.53 | 1.83 |
| 9: M10-972A-01 | 9.38 | 3 | 1.96 | 31.00 | 0.10 | 0.10 | 13.05 | 1.83 |
| 10: M10-972A-02 | 9.34 | 3 | 2.00 | 29.20 | 0.10 | 0.10 | 14.72 | 1.56 |
| 11: M10-972A-03 | 8.52 | 4 | 1.95 | 51.20 | 0.10 | 0.10 | 20.23 | 1.69 |
| 12: M10-972A-04 | 9.03 | 4 | 1.98 | 124.40 | 0.10 | 0.10 | 41.10 | 1.70 |
| 13: M10-976-01 | 9.58 | 4 | 2.05 | 40.00 | 0.10 | 0.10 | 20.99 | 1.53 |
| 14: M10-976-02 | 9.44 | 3 | 1.95 | 20.00 | 0.10 | 0.10 | 10.19 | 1.89 |
| 15: M10-976-03 | 8.66 | 4 | 1.98 | 99.50 | 0.10 | 0.10 | 43.90 | 1.69 |
| 16: M10-976-04 | 8.49 | 4 | 2.05 | 80.80 | 0.10 | 0.10 | 39.16 | 1.71 |
| 17: M10-977-01 | 9.49 | 3 | 1.96 | 20.00 | 0.10 | 0.10 | 9.22 | 1.93 |
| 18: M10-977-02 | 8.88 | 4 | 1.97 | 81.20 | 0.10 | 0.10 | 42.66 | 1.64 |
| 19: M10-986-01 | 8.63 | 4 | 2.00 | 77.50 | 0.10 | 0.10 | 37.26 | 1.60 |
| 20: M10-986-02 | 9.20 | 4 | 1.96 | 117.90 | 0.10 | 0.10 | 44.40 | 1.62 |
| 21: M10-993-01 | 9.59 | 3 | 2.05 | 30.10 | 0.10 | 0.10 | 15.60 | 1.63 |
| 22: M10-993-02 | 9.49 | 3 | 1.98 | 28.80 | 0.10 | 0.10 | 13.37 | 1.73 |

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 23: M10-993-03 | 9.39 | 3 | 2.02 | 29.40 | 0.10 | 0.10 | 12.27 | 1.79 |
| 24: M10-993-04 | 8.82 | 4 | 2.00 | 112.20 | 0.10 | 0.10 | 43.80 | 1.56 |
| 25: M96-16-01 | 9.10 | 4 | 1.99 | 67.70 | 0.10 | 0.10 | 19.90 | 1.81 |
| 26: M96-61-01 | 8.85 | 4 | 1.95 | 105.70 | 0.10 | 0.10 | 28.80 | 1.92 |
| 27: M96-61-02 | 9.14 | 4 | 2.00 | 145.50 | 0.10 | 0.10 | 62.10 | 1.58 |
| 28: M96-61-03 | 8.32 | 4 | 2.03 | 80.50 | 0.10 | 0.10 | 41.50 | 1.87 |
| 29: M98-234-01 | 9.35 | 3 | 1.97 | 30.60 | 0.10 | 0.10 | 15.72 | 1.73 |
| 30: M98-234-02 | 9.22 | 3 | 1.98 | 32.10 | 0.10 | 0.10 | 13.50 | 1.93 |
| 31: M98-238-01 | 8.80 | 3 | 2.01 | 41.00 | 0.10 | 0.10 | 18.55 | 1.63 |
| 32: M98-238-02 | 9.44 | 3 | 1.96 | 29.20 | 0.10 | 0.10 | 14.19 | 1.67 |
| 33: M98-284-01 | 9.08 | 4 | 2.00 | 40.00 | 0.10 | 0.10 | 17.23 | 1.73 |
| 34: M98-284-02 | 8.47 | 3 | 2.01 | 54.60 | 0.10 | 0.10 | 29.54 | 1.53 |
| 35: M98-286-01 | 9.23 | 2 | 2.00 | 36.30 | 0.10 | 0.10 | 20.00 | 1.56 |
| 36: M98-329-01 | 8.96 | 4 | 2.03 | 181.00 | 0.10 | 0.10 | 65.50 | 1.71 |
| 37: M98-331-01 | 9.36 | 2 | 1.98 | 28.70 | 0.10 | 0.10 | 12.97 | 1.80 |
| 38: M98-333-01 | 9.01 | 2 | 2.05 | 28.00 | 0.10 | 0.10 | 12.03 | 1.90 |
| 39: M98-337-01 | 9.30 | 4 | 1.98 | 156.50 | 0.10 | 0.10 | 66.90 | 1.63 |
| 40: M04-519-01 | 9.01 | 4 | 2.01 | 175.90 | 0.10 | 0.10 | 63.70 | 1.70 |
| 41: M04-519-02 | 9.03 | 4 | 1.98 | 139.60 | 0.10 | 0.10 | 43.80 | 1.83 |
| 42: M04-519-03 | 8.85 | 4 | 1.97 | 173.40 | 0.10 | 0.10 | 54.40 | 1.85 |
| 43: M04-519-04 | 8.84 | 4 | 2.01 | 111.40 | 0.10 | 0.10 | 43.10 | 1.74 |
| 44: M10-981-01 | 9.02 | 4 | 1.97 | 103.20 | 0.10 | 0.10 | 39.40 | 1.74 |
| 45: M10-981-02 | 8.90 | 4 | 1.97 | 108.30 | 0.10 | 0.10 | 41.40 | 1.70 |
| 46: M10-981-03 | 8.89 | 4 | 2.02 | 109.20 | 0.10 | 0.10 | 41.30 | 1.74 |
| 47: M10-981-04 | 9.14 | 4 | 1.99 | 104.10 | 0.10 | 0.10 | 35.10 | 1.71 |
| 48: M10-985-01 | 9.29 | 3 | 2.05 | 32.40 | 0.10 | 0.10 | 15.46 | 1.78 |
| 49: M10-985-02 | 9.09 | 4 | 2.05 | 40.00 | 0.10 | 0.10 | 17.50 | 1.87 |
| 50: M10-987-01 | 8.80 | 4 | 2.03 | 175.30 | 0.10 | 0.10 | 72.70 | 1.56 |
| 51: M10-987-02 | 8.91 | 4 | 2.00 | 142.50 | 0.10 | 0.10 | 57.60 | 1.65 |
| 52: M10-987-03 | 9.21 | 1 | 1.97 | 71.50 | 0.10 | 0.10 | 17.50 | 1.93 |
| 53: M10-987-04 | 8.88 | 4 | 2.01 | 76.80 | 0.10 | 0.10 | 21.21 | 1.97 |
| 54: M10-988-01 | 8.88 | 4 | 2.00 | 84.80 | 0.10 | 0.10 | 23.98 | 1.92 |
| 55: M10-988-02 | 8.81 | 4 | 2.00 | 112.30 | 0.10 | 0.10 | 36.40 | 1.71 |
| 56: M10-988-03 | 9.04 | 4 | 1.98 | 52.70 | 0.10 | 0.10 | 21.76 | 1.65 |
| 57: M10-992-01 | 8.88 | 4 | 1.98 | 73.20 | 0.10 | 0.10 | 23.40 | 1.78 |

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 58: M10-992-02 | 9.12 | 4 | 2.04 | 110.00 | 0.10 | 0.10 | 36.70 | 1.69 |
| 59: M10-992-03 | 9.22 | 4 | 1.98 | 148.60 | 0.10 | 0.10 | 60.70 | 1.64 |
| 60: M10-992-04 | 9.04 | 4 | 1.97 | 110.90 | 0.10 | 0.10 | 28.70 | 1.84 |
| 61: M10-992-05 | 9.07 | 4 | 1.99 | 112.10 | 0.10 | 0.10 | 42.10 | 1.71 |
| 62: M10-994-01 | 9.10 | 4 | 2.04 | 121.60 | 0.10 | 0.10 | 42.90 | 1.65 |
| 63: M10-994-02 | 9.36 | 4 | 2.01 | 118.90 | 0.10 | 0.10 | 51.20 | 1.68 |
| 64: M10-994-03 | 9.14 | 4 | 1.98 | 140.60 | 0.10 | 0.10 | 59.90 | 1.54 |
| 65: M10-994-04 | 9.30 | 3 | 2.01 | 46.50 | 0.10 | 0.10 | 21.41 | 1.72 |
| 66: M10-994-05 | 9.10 | 3 | 2.02 | 158.50 | 0.10 | 0.10 | 62.50 | 1.62 |
| 67: M10-998-01 | 9.06 | 4 | 2.03 | 63.60 | 0.10 | 0.10 | 22.00 | 1.78 |
| 68: M10-998-02 | 9.35 | 4 | 1.96 | 102.90 | 0.10 | 0.10 | 48.10 | 1.54 |
| 69: M10-998-03 | 9.23 | 4 | 2.00 | 116.00 | 0.10 | 0.10 | 47.50 | 1.61 |
| 70: M10-998-04 | 8.94 | 4 | 2.01 | 108.70 | 0.10 | 0.10 | 35.00 | 1.75 |
| 71: M10-998-05 | 9.00 | 4 | 1.98 | 201.90 | 0.10 | 0.10 | 77.60 | 1.58 |
| 72: M11-1042-01 | 9.00 | 4 | 1.95 | 120.10 | 0.10 | 0.10 | 36.80 | 1.92 |
| 73: M11-1042-02 | 9.13 | 3 | 2.04 | 125.90 | 0.10 | 0.10 | 59.60 | 1.56 |
| 74: M11-1042-03 | 9.25 | 1 | 1.96 | 126.40 | 0.10 | 0.10 | 51.80 | 1.56 |
| 75: M11-1051-01 | 9.08 | 3 | 2.01 | 161.30 | 0.10 | 0.10 | 63.10 | 1.62 |
| 76: M11-1051-02 | 9.20 | 3 | 1.97 | 83.50 | 0.10 | 0.10 | 22.79 | 1.91 |
| 77: M11-1099-01 | 8.60 | 3 | 1.99 | 134.50 | 0.10 | 0.10 | 64.00 | 1.58 |
| 78: M11-1099-02 | 9.16 | 4 | 1.96 | 82.30 | 0.10 | 0.10 | 26.76 | 1.73 |
| 79: M11-1099-03 | 9.05 | 4 | 1.97 | 85.00 | 0.10 | 0.10 | 27.50 | 1.73 |
| 80: M95-11-01 | 8.88 | 4 | 1.97 | 125.90 | 0.10 | 0.10 | 41.60 | 1.68 |
| 81: M95-12-01 | 9.02 | 4 | 1.96 | 119.50 | 0.10 | 0.10 | 51.10 | 1.56 |
| 82: M95-22-01 | 8.94 | 4 | 1.95 | 122.30 | 0.10 | 0.10 | 34.20 | 1.90 |
| 83: M95-22-02 | 9.07 | 4 | 2.03 | 90.00 | 0.10 | 0.10 | 25.82 | 1.85 |
| 84: M96-50-01 | 9.33 | 4 | 2.05 | 64.20 | 0.10 | 0.10 | 22.67 | 1.77 |
| 85: M96-51-01 | 9.11 | 4 | 2.00 | 195.50 | 0.10 | 0.10 | 76.60 | 1.61 |
| 86: M96-51-02 | 8.96 | 4 | 2.00 | 111.00 | 0.10 | 0.10 | 38.10 | 1.85 |
| 87: M96-51-03 | 8.92 | 4 | 1.96 | 111.80 | 0.10 | 0.10 | 32.80 | 1.94 |
| 88: M97-111-01 | 8.93 | 4 | 2.03 | 124.20 | 0.10 | 0.10 | 38.10 | 1.76 |
| 89: M97-111-02 | 8.95 | 4 | 2.05 | 136.80 | 0.10 | 0.10 | 45.60 | 1.79 |
| 90: M97-111-03 | 8.87 | 4 | 2.02 | 119.30 | 0.10 | 0.10 | 48.80 | 1.57 |
| 91: M97-111-04 | 8.90 | 4 | 1.98 | 80.90 | 0.10 | 0.10 | 24.99 | 1.77 |
| 92: M97-176-01 | 8.81 | 4 | 2.00 | 125.00 | 0.10 | 0.10 | 40.97 | 1.78 |

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 93: M97-176-02 | 8.97 | 4 | 2.01 | 116.30 | 0.10 | 0.10 | 59.38 | 1.54 |
| 94: M97-176-03 | 8.89 | 4 | 1.99 | 111.50 | 0.10 | 0.10 | 34.34 | 1.89 |
| 95: M98-222-01 | 8.95 | 4 | 2.02 | 148.00 | 0.10 | 0.10 | 85.55 | 1.52 |
| 96: M98-222-02 | 8.93 | 4 | 2.01 | 126.60 | 0.10 | 0.10 | 50.58 | 1.65 |
| 97: M98-222-03 | 8.93 | 4 | 1.99 | 128.30 | 0.10 | 0.10 | 62.75 | 1.53 |
| 98: M98-223-01 | 8.93 | 4 | 2.05 | 113.30 | 0.10 | 0.10 | 40.57 | 1.76 |
| 99: M98-223-02 | 8.90 | 4 | 2.03 | 166.70 | 0.10 | 0.10 | 72.94 | 1.67 |
| 100: M98-223-03 | 8.78 | 4 | 1.97 | 119.00 | 0.10 | 0.10 | 52.79 | 1.72 |
| 101: W94-48-01 | 9.11 | 4 | 2.03 | 57.50 | 0.10 | 0.10 | 31.25 | 1.50 |
| 102: M96-58-01 | 8.95 | 4 | 1.98 | 96.10 | 0.10 | 0.10 | 52.66 | 1.53 |
| 103: M96-58-02 | 8.93 | 4 | 2.05 | 80.50 | 0.10 | 0.10 | 26.97 | 1.84 |
| 104: M96-58-03 | 8.80 | 4 | 2.03 | 88.10 | 0.10 | 0.10 | 29.53 | 1.82 |
| 105: M97-120-01 | 8.95 | 3 | 1.98 | 158.40 | 0.10 | 0.10 | 67.75 | 1.61 |
| 106: M97-120-02 | 8.88 | 4 | 2.00 | 101.20 | 0.10 | 0.10 | 33.44 | 1.77 |
| 107: M97-122-01 | 9.19 | 4 | 2.01 | 40.00 | 0.10 | 0.10 | 19.20 | 1.66 |
| 108: M97-122-02 | 9.17 | 4 | 2.04 | 90.00 | 0.10 | 0.10 | 24.54 | 1.81 |
| 109: M97-122-03 | 9.01 | 4 | 2.00 | 142.20 | 0.10 | 0.10 | 68.47 | 1.62 |
| 110: M97-122-04 | 8.72 | 4 | 1.97 | 80.70 | 0.10 | 0.10 | 40.58 | 1.66 |
| 111: M97-122-05 | 9.03 | 4 | 1.97 | 112.10 | 0.10 | 0.10 | 48.77 | 1.73 |
| 112: M97-123-01 | 9.23 | 4 | 1.99 | 84.80 | 0.10 | 0.10 | 27.56 | 1.75 |
| 113: M97-123-02 | 9.35 | 4 | 1.99 | 100.50 | 0.10 | 0.10 | 32.78 | 1.83 |
| 114: M97-123-03 | 8.87 | 4 | 2.05 | 140.00 | 0.10 | 0.10 | 45.16 | 1.80 |
| 115: M97-123-04 | 8.96 | 4 | 1.98 | 109.40 | 0.10 | 0.10 | 40.62 | 1.88 |
| 116: M97-124-01 | 8.94 | 4 | 2.02 | 109.60 | 0.10 | 0.10 | 47.04 | 1.66 |
| 117: M97-124-02 | 8.82 | 4 | 1.97 | 53.50 | 0.10 | 0.10 | 28.21 | 1.70 |
| 118: M97-124-03 | 8.27 | 2 | 2.01 | 72.90 | 0.10 | 0.10 | 34.99 | 1.99 |
| 119: M97-124-04 | 8.71 | 4 | 2.02 | 99.00 | 0.10 | 0.10 | 41.66 | 1.68 |
| 120: M97-153-01 | 8.86 | 4 | 2.02 | 127.30 | 0.10 | 0.10 | 47.85 | 1.82 |
| 121: M97-153-02 | 8.89 | 4 | 1.99 | 146.90 | 0.10 | 0.10 | 61.65 | 1.67 |
| 122: M97-154-01 | 8.96 | 4 | 2.00 | 127.00 | 0.10 | 0.10 | 50.12 | 1.80 |
| 123: M98-181-01 | 8.89 | 4 | 1.99 | 119.70 | 0.10 | 0.10 | 48.04 | 1.72 |
| 124: M98-181-02 | 9.07 | 4 | 1.98 | 123.40 | 0.10 | 0.10 | 50.34 | 1.64 |
| 125: M98-184-01 | 9.01 | 4 | 1.99 | 112.20 | 0.10 | 0.10 | 49.14 | 1.53 |
| 126: M98-184-02 | 8.96 | 4 | 1.99 | 182.90 | 0.10 | 0.10 | 85.70 | 1.53 |
| 127: M98-185-01 | 8.85 | 4 | 1.98 | 118.30 | 0.10 | 0.10 | 47.59 | 1.64 |

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 128: M98-185-02 | 8.92 | 4 | 2.01 | 93.60 | 0.10 | 0.10 | 44.46 | 1.56 |
| 129: M98-185-03 | 8.94 | 4 | 2.02 | 64.30 | 0.10 | 0.10 | 20.61 | 1.92 |
| 130: W94-49-01 | 8.91 | 4 | 2.03 | 88.00 | 0.10 | 0.10 | 41.39 | 1.57 |
| 131: W94-49-02 | 7.98 | 1 | 1.96 | 28.90 | 0.10 | 0.10 | 23.20 | 1.60 |
| 132: W94-49-03 | 8.66 | 4 | 1.99 | 78.40 | 0.10 | 0.10 | 22.46 | 1.97 |
| 133: W94-53-01 | 9.36 | 3 | 1.99 | 41.50 | 0.10 | 0.10 | 23.11 | 1.58 |
| 134: W94-55-01 | 7.97 | 4 | 2.02 | 107.90 | 0.10 | 0.10 | 46.60 | 1.93 |
| 135: W94-55-02 | 8.57 | 4 | 2.01 | 115.60 | 0.10 | 0.10 | 41.37 | 1.68 |
| 136: W94-57-01 | 8.82 | 4 | 2.02 | 153.40 | 0.10 | 0.10 | 71.20 | 1.58 |
| 137: W94-57-02 | 8.29 | 4 | 2.02 | 62.50 | 0.10 | 0.10 | 31.76 | 1.95 |
| 138: W94-57-03 | 8.25 | 3 | 1.96 | 88.30 | 0.10 | 0.10 | 43.42 | 1.88 |
| 139: W94-59-01 | 8.99 | 3 | 1.95 | 59.20 | 0.10 | 0.10 | 29.76 | 1.56 |
| 140: W94-61-01 | 7.81 | 4 | 1.95 | 40.00 | 0.10 | 0.10 | 23.46 | 1.98 |
| 141: W94-61-02 | 8.98 | 3 | 1.97 | 56.30 | 0.10 | 0.10 | 28.91 | 1.58 |
| 142: W94-65-01 | 8.12 | 3 | 1.99 | 60.30 | 0.10 | 0.10 | 40.19 | 1.56 |
| 143: W94-65-02 | 8.29 | 4 | 1.99 | 98.80 | 0.10 | 0.10 | 48.35 | 1.79 |
| 144: W94-65-03 | 8.88 | 4 | 1.96 | 59.40 | 0.10 | 0.10 | 24.71 | 1.73 |
| 145: W94-70-01 | 8.88 | 4 | 1.98 | 68.90 | 0.10 | 0.10 | 22.97 | 1.91 |
| 146: W94-70-02 | 8.76 | 4 | 2.04 | 103.20 | 0.10 | 0.10 | 36.17 | 1.68 |
| 147: W94-73-01 | 8.84 | 3 | 2.03 | 90.80 | 0.10 | 0.10 | 31.72 | 1.69 |
| 148: W94-73-02 | 8.20 | 4 | 2.00 | 71.30 | 0.10 | 0.10 | 39.86 | 1.59 |
| 149: W94-73-03 | 8.77 | 4 | 1.95 | 123.60 | 0.10 | 0.10 | 53.13 | 1.59 |
| 150: M00-473-01 | 8.83 | 4 | 1.95 | 176.80 | 0.10 | 0.10 | 70.26 | 1.62 |
| 151: M00-483-01 | 8.98 | 4 | 1.99 | 179.90 | 0.10 | 0.10 | 66.02 | 1.71 |
| 152: M00-490-01 | 9.00 | 4 | 2.02 | 174.10 | 0.10 | 0.10 | 77.80 | 1.58 |
| 153: M03-508-01 | 9.37 | 3 | 2.05 | 33.10 | 0.10 | 0.10 | 15.28 | 1.75 |
| 154: M03-508-02 | 8.66 | 4 | 2.00 | 62.50 | 0.10 | 0.10 | 30.40 | 1.75 |
| 155: M05-561-01 | 9.07 | 4 | 1.98 | 181.10 | 0.10 | 0.10 | 62.78 | 1.76 |
| 156: M05-561-02 | 9.27 | 4 | 1.97 | 57.60 | 0.10 | 0.10 | 27.77 | 1.87 |
| 157: M06-577-01 | 9.30 | 2 | 2.03 | 31.70 | 0.10 | 0.10 | 16.24 | 1.77 |
| 158: M06-577-02 | 9.42 | 3 | 2.00 | 30.40 | 0.10 | 0.10 | 13.29 | 1.93 |
| 159: M06-577-03 | 9.25 | 3 | 1.95 | 41.20 | 0.10 | 0.10 | 23.95 | 1.58 |
| 160: M06-591-01 | 8.98 | 3 | 2.04 | 28.80 | 0.10 | 0.10 | 13.11 | 1.97 |
| 161: M06-591-02 | 8.99 | 3 | 1.99 | 52.10 | 0.10 | 0.10 | 27.27 | 1.75 |
| 162: M06-591-03 | 8.79 | 4 | 2.00 | 149.40 | 0.10 | 0.10 | 56.55 | 1.61 |

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**LR Report :** **CA10514-JUL11**

| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 163: M06-592-01 | 9.21 | 4 | 2.02 | 40.00 | 0.10 | 0.10 | 25.46 | 1.52 |
| 164: M06-592-02 | 9.16 | 4 | 2.02 | 55.60 | 0.10 | 0.10 | 28.39 | 1.65 |
| 165: M06-592-03 | 9.45 | 3 | 1.99 | 29.30 | 0.10 | 0.10 | 20.00 | 1.58 |
| 166: M06-593-01 | 9.63 | 4 | 1.99 | 40.00 | 0.10 | 0.10 | 20.64 | 1.65 |
| 167: M06-593-02 | 9.41 | 3 | 2.00 | 29.70 | 0.10 | 0.10 | 18.10 | 1.75 |
| 168: M06-608-01 | 9.23 | 3 | 2.03 | 32.30 | 0.10 | 0.10 | 16.26 | 1.76 |
| 169: M06-608-02 | 9.26 | 3 | 2.01 | 32.50 | 0.10 | 0.10 | 16.05 | 1.78 |
| 170: M06-611-01 | 9.30 | 3 | 2.05 | 31.90 | 0.10 | 0.10 | 16.80 | 1.73 |
| 171: M06-611-02 | 9.24 | 3 | 2.04 | 33.30 | 0.10 | 0.10 | 15.90 | 1.88 |
| 172: M06-623-01 | 9.15 | 3 | 2.00 | 46.80 | 0.10 | 0.10 | 26.52 | 1.57 |
| 173: M06-623-02 | 8.85 | 4 | 1.98 | 156.80 | 0.10 | 0.10 | 56.69 | 1.66 |
| 174: M06-625-01 | 9.45 | 3 | 1.97 | 34.20 | 0.10 | 0.10 | 15.12 | 1.93 |
| 175: M06-625-02 | 9.40 | 2 | 2.00 | 30.80 | 0.10 | 0.10 | 17.33 | 1.73 |
| 176: M06-629-01 | 8.82 | 4 | 1.98 | 99.50 | 0.10 | 0.10 | 42.79 | 1.67 |
| 177: M06-631-01 | 9.13 | 3 | 2.04 | 33.40 | 0.10 | 0.10 | 16.51 | 1.85 |
| 178: M07-674-01 | 9.26 | 2 | 2.05 | 47.30 | 0.10 | 0.10 | 26.17 | 1.58 |
| 179: M07-689-01 | 9.28 | 2 | 2.00 | 20.00 | 0.10 | 0.10 | 10.20 | 1.88 |
| 180: M07-689-02 | 9.30 | 3 | 1.96 | 28.20 | 0.10 | 0.10 | 16.47 | 1.57 |
| 181: M07-689-03 | 9.31 | 3 | 2.03 | 48.70 | 0.10 | 0.10 | 23.44 | 1.79 |
| 182: M08-761-01 | 9.42 | 3 | 2.05 | 33.00 | 0.10 | 0.10 | 16.50 | 1.81 |
| 183: M08-761-02 | 9.43 | 3 | 2.02 | 33.70 | 0.10 | 0.10 | 15.78 | 1.79 |
| 184: M08-763-01 | 9.34 | 3 | 2.00 | 50.50 | 0.10 | 0.10 | 25.81 | 1.62 |
| 185: M08-765-01 | 9.34 | 3 | 1.97 | 34.00 | 0.10 | 0.10 | 15.19 | 1.82 |
| 186: M08-783-01 | 9.19 | 2 | 1.99 | 34.60 | 0.10 | 0.10 | 17.84 | 1.70 |
| 187: M08-783-02 | 9.07 | 4 | 2.03 | 170.50 | 0.10 | 0.10 | 51.60 | 1.78 |
| 188: M10-879-01 | 9.58 | 3 | 1.98 | 33.90 | 0.10 | 0.10 | 14.73 | 1.74 |
| 189: M10-887-01 | 9.48 | 2 | 1.98 | 33.00 | 0.10 | 0.10 | 12.71 | 1.97 |
| 190: M10-892-01 | 9.42 | 3 | 1.98 | 33.40 | 0.10 | 0.10 | 14.93 | 1.81 |
| 191: M10-999-01 | 9.45 | 2 | 2.03 | 31.70 | 0.10 | 0.10 | 15.71 | 1.76 |
| 192: M10-999-02 | 9.39 | 3 | 2.01 | 33.10 | 0.10 | 0.10 | 13.77 | 1.80 |
| 193: M95-17-01 | 9.26 | 3 | 2.00 | 68.80 | 0.10 | 0.10 | 37.32 | 1.56 |
| 194: M95-25-01 | 9.59 | 2 | 2.01 | 45.10 | 0.10 | 0.10 | 25.21 | 1.54 |
| 195: M95-25-02 | 9.49 | 3 | 2.01 | 46.20 | 0.10 | 0.10 | 21.32 | 1.61 |
| 196: M95-25-03 | 8.95 | 3 | 1.99 | 77.00 | 0.10 | 0.10 | 34.88 | 1.68 |
| 197: M95-25-04 | 8.99 | 4 | 1.98 | 161.30 | 0.10 | 0.10 | 52.71 | 1.74 |

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 198: M96-03-01 | 9.52 | 2 | 1.98 | 32.70 | 0.10 | 0.10 | 15.43 | 1.90 |
| 199: M96-03-02 | 9.56 | 3 | 1.98 | 32.40 | 0.10 | 0.10 | 12.23 | 1.95 |
| 200: M96-03-03 | 8.95 | 4 | 1.97 | 131.60 | 0.10 | 0.10 | 45.72 | 1.67 |
| 201: M96-19-01 | 9.49 | 3 | 2.01 | 44.50 | 0.10 | 0.10 | 23.36 | 1.61 |
| 202: M96-19-02 | 9.34 | 2 | 2.03 | 32.90 | 0.10 | 0.10 | 15.83 | 1.81 |
| 203: M96-37-01 | 9.30 | 3 | 2.00 | 32.90 | 0.10 | 0.10 | 12.51 | 1.85 |
| 204: M96-37-02 | 9.64 | 2 | 2.03 | 32.70 | 0.10 | 0.10 | 13.31 | 1.93 |
| 205: M96-37-03 | 9.42 | 2 | 1.99 | 28.90 | 0.10 | 0.10 | 15.55 | 1.65 |
| 206: M96-40-01 | 9.50 | 2 | 2.03 | 31.10 | 0.10 | 0.10 | 16.28 | 1.69 |
| 207: M96-40-02 | 9.43 | 2 | 2.05 | 32.80 | 0.10 | 0.10 | 17.54 | 1.70 |
| 208: M96-4-01 | 9.35 | 2 | 2.01 | 47.10 | 0.10 | 0.10 | 23.85 | 1.60 |
| 209: M96-44-01 | 9.41 | 3 | 2.02 | 42.10 | 0.10 | 0.10 | 25.38 | 1.54 |
| 210: M96-54-01 | 9.57 | 2 | 2.02 | 44.20 | 0.10 | 0.10 | 22.98 | 1.63 |
| 211: M96-54-02 | 9.51 | 2 | 2.03 | 44.00 | 0.10 | 0.10 | 21.57 | 1.65 |
| 212: M96-65-01 | 9.48 | 2 | 1.96 | 32.20 | 0.10 | 0.10 | 13.40 | 1.94 |
| 213: M96-7-01 | 9.37 | 2 | 2.05 | 30.50 | 0.10 | 0.10 | 17.28 | 1.69 |
| 214: M96-7-02 | 9.48 | 2 | 2.05 | 42.00 | 0.10 | 0.10 | 20.76 | 1.64 |
| 215: M96-74-01 | 8.60 | 3 | 2.02 | 41.80 | 0.10 | 0.10 | 22.53 | 1.59 |
| 216: M96-77-01 | 9.36 | 2 | 2.03 | 27.50 | 0.10 | 0.10 | 12.04 | 1.92 |
| 217: M96-77-02 | 9.38 | 2 | 2.03 | 38.20 | 0.10 | 0.10 | 18.95 | 1.68 |
| 218: M97-121-01 | 9.50 | 2 | 1.99 | 27.70 | 0.10 | 0.10 | 11.28 | 1.96 |
| 219: M97-135-01 | 9.44 | 2 | 2.05 | 44.20 | 0.10 | 0.10 | 19.95 | 1.74 |
| 220: M97-135-02 | 9.40 | 2 | 2.03 | 27.00 | 0.10 | 0.10 | 15.33 | 1.86 |
| 221: M97-135-03 | 9.46 | 2 | 2.01 | 30.40 | 0.10 | 0.10 | 13.22 | 1.84 |
| 222: M97-149-01 | 9.49 | 2 | 2.05 | 39.50 | 0.10 | 0.10 | 22.70 | 1.54 |
| 223: M97-149-02 | 9.56 | 2 | 1.96 | 29.20 | 0.10 | 0.10 | 12.52 | 1.83 |
| 224: M97-94A-01 | 9.52 | 3 | 2.01 | 41.50 | 0.10 | 0.10 | 20.66 | 1.65 |
| 225: M97-94A-02 | 9.47 | 2 | 2.01 | 30.10 | 0.10 | 0.10 | 14.93 | 1.82 |
| 226: M97-95-01 | 9.37 | 3 | 2.05 | 31.20 | 0.10 | 0.10 | 12.14 | 1.95 |
| 227: M97-95-02 | 9.38 | 2 | 2.01 | 40.30 | 0.10 | 0.10 | 20.68 | 1.65 |
| 228: M97-95-03 | 8.77 | 4 | 1.99 | 126.50 | 0.10 | 0.10 | 36.90 | 1.75 |
| 229: M98-201-01 | 9.58 | 2 | 1.96 | 20.00 | 0.10 | 0.10 | 10.38 | 1.92 |
| 230: M98-201-02 | 9.43 | 3 | 1.98 | 40.50 | 0.10 | 0.10 | 23.37 | 1.56 |
| 231: M98-201-03 | 9.16 | 2 | 1.96 | 42.90 | 0.10 | 0.10 | 21.90 | 1.56 |
| 232: M98-201-04 | 9.61 | 2 | 2.04 | 31.80 | 0.10 | 0.10 | 14.13 | 1.83 |

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 233: M98-208-01 | 9.47 | 2 | 2.05 | 29.50 | 0.10 | 0.10 | 14.02 | 1.67 |
| 234: M98-209-01 | 9.48 | 2 | 2.01 | 27.60 | 0.10 | 0.10 | 14.78 | 1.75 |
| 235: M98-265-01 | 9.63 | 2 | 1.97 | 31.70 | 0.10 | 0.10 | 13.06 | 1.92 |
| 236: M98-266-01 | 9.54 | 2 | 2.02 | 31.20 | 0.10 | 0.10 | 14.08 | 1.88 |
| 237: M98-269-01 | 8.90 | 4 | 1.96 | 119.80 | 0.10 | 0.10 | 37.20 | 1.73 |
| 238: M98-270-01 | 9.54 | 2 | 1.99 | 31.10 | 0.10 | 0.10 | 15.08 | 1.72 |
| 239: M98-317-01 | 9.13 | 3 | 2.03 | 47.00 | 0.10 | 0.10 | 19.97 | 1.90 |
| 240: M99-309-01 | 9.13 | 4 | 1.99 | 57.70 | 0.10 | 0.10 | 21.42 | 1.78 |
| 241: M99-309-02 | 9.49 | 3 | 2.00 | 31.60 | 0.10 | 0.10 | 13.54 | 1.88 |
| 242: M99-336B-01 | 9.36 | 3 | 1.99 | 46.60 | 0.10 | 0.10 | 19.04 | 1.71 |
| 243: M99-336B-02 | 9.53 | 4 | 1.98 | 53.50 | 0.10 | 0.10 | 24.07 | 1.73 |
| 244: M99-336B-03 | 9.48 | 3 | 2.04 | 41.20 | 0.10 | 0.10 | 20.61 | 1.65 |
| 245: M99-336B-04 | 8.96 | 4 | 1.95 | 132.20 | 0.10 | 0.10 | 43.88 | 1.62 |
| 246: M99-345-01 | 9.16 | 4 | 2.00 | 159.90 | 0.10 | 0.10 | 67.49 | 1.57 |
| 247: M99-346-01 | 9.27 | 4 | 2.02 | 170.90 | 0.10 | 0.10 | 69.91 | 1.57 |
| 248: M99-347-01 | 9.02 | 3 | 2.00 | 40.80 | 0.10 | 0.10 | 21.12 | 1.55 |
| 249: M99-347-02 | 9.30 | 3 | 2.01 | 44.60 | 0.10 | 0.10 | 22.41 | 1.57 |
| 250: M99-409-01 | 9.23 | 3 | 2.03 | 28.00 | 0.10 | 0.10 | 12.87 | 1.67 |
| 251: M99-409-02 | 9.37 | 2 | 2.02 | 31.40 | 0.10 | 0.10 | 11.91 | 1.94 |
| 252: M99-409-03 | 9.51 | 2 | 2.01 | 29.20 | 0.10 | 0.10 | 15.43 | 1.66 |
| 253: M99-409-04 | 9.04 | 3 | 2.00 | 48.90 | 0.10 | 0.10 | 22.48 | 1.72 |
| 254: M99-409-05 | 9.12 | 4 | 1.99 | 100.10 | 0.10 | 0.10 | 30.88 | 1.79 |
| 255: M99-410-01 | 9.41 | 2 | 1.97 | 31.70 | 0.10 | 0.10 | 15.53 | 1.71 |
| 256: M99-410-02 | 9.43 | 3 | 2.02 | 31.00 | 0.10 | 0.10 | 14.80 | 1.78 |
| 257: M99-417-01 | 9.06 | 3 | 1.96 | 69.10 | 0.10 | 0.10 | 37.74 | 1.54 |
| 258: M99-436-01 | 9.48 | 2 | 1.98 | 30.70 | 0.10 | 0.10 | 14.58 | 1.74 |
| 259: M99-436-02 | 9.34 | 2 | 1.99 | 30.50 | 0.10 | 0.10 | 15.04 | 1.75 |
| 260: M08-733-01 | 8.91 | 4 | 1.99 | 102.40 | 0.10 | 0.10 | 34.08 | 1.80 |
| 261: M08-733-02 | 9.00 | 4 | 2.00 | 120.30 | 0.10 | 0.10 | 52.43 | 1.58 |
| 262: M09-802-01 | 8.85 | 4 | 1.99 | 112.60 | 0.10 | 0.10 | 35.75 | 1.80 |
| 263: M09-802-02 | 8.38 | 3 | 2.03 | 30.10 | 0.10 | 0.10 | 17.56 | 1.41 |
| 264: M09-803-01 | 8.45 | 3 | 1.98 | 49.60 | 0.10 | 0.10 | 22.96 | 1.87 |
| 265: M09-809-01 | 8.39 | 2 | 1.97 | 75.00 | 0.10 | 0.10 | 35.07 | 1.80 |
| 266: M09-817-01 | 8.83 | 3 | 1.99 | 49.80 | 0.10 | 0.10 | 24.62 | 1.82 |
| 267: M09-817-02 | 8.96 | 4 | 1.97 | 119.80 | 0.10 | 0.10 | 43.54 | 1.74 |

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 268: M09-858-01 | 8.40 | 2 | 2.02 | 46.60 | 0.10 | 0.10 | 22.03 | 1.76 |
| 269: M09-859-01 | 8.91 | 3 | 1.97 | 124.90 | 0.10 | 0.10 | 41.71 | 1.93 |
| 270: M10-933-01 | 9.03 | 4 | 2.03 | 86.30 | 0.10 | 0.10 | 25.28 | 1.90 |
| 271: M10-935-01 | 9.47 | 2 | 1.96 | 20.00 | 0.10 | 0.10 | 8.99 | 1.73 |
| 272: M10-935-02 | 8.55 | 3 | 2.04 | 31.50 | 0.10 | 0.10 | 17.69 | 1.71 |
| 273: M96-28-01 | 8.96 | 4 | 1.97 | 101.90 | 0.10 | 0.10 | 33.66 | 1.89 |
| 274: M97-159-01 | 8.98 | 4 | 1.95 | 113.70 | 0.10 | 0.10 | 47.50 | 1.62 |
| 275: M97-159-02 | 8.95 | 4 | 1.98 | 122.50 | 0.10 | 0.10 | 53.34 | 1.61 |
| 276: M98-248-01 | 8.46 | 2 | 1.95 | 43.10 | 0.10 | 0.10 | 22.43 | 1.88 |
| 277: M98-275-01 | 8.86 | 4 | 1.99 | 104.50 | 0.10 | 0.10 | 30.93 | 1.84 |
| 278: M98-275-02 | 8.82 | 4 | 2.00 | 84.60 | 0.10 | 0.10 | 21.49 | 1.95 |
| 279: W94-111-01 | 8.51 | 3 | 2.01 | 66.40 | 0.10 | 0.10 | 38.13 | 1.57 |
| 280: W94-76-01 | 9.16 | 4 | 2.04 | 61.80 | 0.10 | 0.10 | 21.33 | 1.77 |
| 281: W94-76-02 | 9.13 | 4 | 1.96 | 40.00 | 0.10 | 0.10 | 13.64 | 1.92 |
| 282: W94-82-01 | 9.01 | 4 | 2.01 | 54.70 | 0.10 | 0.10 | 22.44 | 1.63 |
| 283: DS09GT-10-01 | 9.64 | 2 | 2.02 | 20.00 | 0.10 | 0.10 | 14.58 | 1.54 |
| 284: ML00-224-01 | 8.61 | 2 | 1.96 | 29.60 | 0.10 | 0.10 | 19.12 | 1.54 |
| 285: ML08-225-01 | 9.51 | 2 | 2.01 | 26.00 | 0.10 | 0.10 | 17.33 | 1.94 |
| 286: ML08-225-02 | 9.51 | 1 | 1.99 | 20.00 | 0.10 | 0.10 | 16.45 | 1.49 |
| 287: ML08-225-03 | 8.52 | 2 | 2.01 | 36.60 | 0.10 | 0.10 | 22.97 | 1.57 |
| 288: ML08-226-01 | 9.89 | 1 | 1.96 | 20.00 | 0.10 | 0.10 | 14.27 | 1.88 |
| 289: ML08-226-02 | 9.06 | 1 | 2.01 | 20.00 | 0.10 | 0.10 | 14.17 | 1.77 |
| 290: ML08-226-03 | 8.95 | 2 | 2.00 | 28.70 | 0.10 | 0.10 | 20.00 | 1.95 |
| 291: ML08-226-04 | 8.33 | 1 | 1.99 | 20.00 | 0.10 | 0.10 | 16.38 | 1.93 |
| 292: ML08-226-05 | 9.39 | 1 | 2.00 | 20.00 | 0.10 | 0.10 | 14.40 | 1.69 |
| 293: ML08-228-01 | 9.74 | 1 | 2.00 | 43.60 | 0.10 | 0.10 | 29.25 | 1.57 |
| 294: ML08-228-02 | 8.69 | 1 | 1.99 | 20.00 | 0.10 | 0.10 | 15.51 | 1.49 |
| 295: ML08-229-01 | 9.54 | 2 | 1.96 | 43.70 | 0.10 | 0.10 | 28.50 | 1.55 |
| 296: ML08-229-02 | 9.77 | 1 | 2.03 | 20.00 | 0.10 | 0.10 | 13.38 | 1.79 |
| 297: ML08-229-03 | 8.76 | 2 | 2.00 | 28.10 | 0.10 | 0.10 | 19.89 | 1.58 |
| 298: ML08-229-04 | 9.37 | 1 | 1.96 | 20.00 | 0.10 | 0.10 | 15.04 | 1.61 |
| 299: ML08-229-05 | 9.01 | 3 | 1.97 | 28.00 | 0.10 | 0.10 | 14.17 | 1.91 |
| 300: ML08-230-01 | 9.37 | 2 | 1.98 | 20.00 | 0.10 | 0.10 | 11.94 | 1.84 |
| 301: ML08-232-01 | 9.59 | 1 | 2.01 | 20.00 | 0.10 | 0.10 | 16.75 | 1.46 |
| 302: ML08-233-01 | 9.67 | 2 | 1.99 | 20.00 | 0.10 | 0.10 | 13.33 | 1.75 |

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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

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| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 303: ML08-233-02 | 9.40 | 2 | 1.98 | 35.20 | 0.10 | 0.10 | 25.75 | 1.54 |
| 304: ML08-240-01 | 9.85 | 2 | 1.97 | 20.00 | 0.10 | 0.10 | 13.61 | 1.71 |
| 305: ML08-241-01 | 9.67 | 2 | 1.97 | 20.00 | 0.10 | 0.10 | 13.66 | 1.72 |
| 306: ML08-241-02 | 8.85 | 2 | 1.99 | 40.40 | 0.10 | 0.10 | 26.58 | 1.52 |
| 307: ML08-241-03 | 9.80 | 3 | 1.98 | 41.00 | 0.10 | 0.10 | 20.49 | 1.79 |
| 308: ML08-243-01 | 9.42 | 3 | 1.98 | 37.70 | 0.10 | 0.10 | 20.49 | 1.76 |
| 309: ML08-243-02 | 9.72 | 2 | 1.97 | 28.20 | 0.10 | 0.10 | 14.18 | 1.88 |
| 310: ML08-245-01 | 9.86 | 1 | 1.96 | 20.00 | 0.10 | 0.10 | 13.75 | 1.72 |
| 311: ML08-245-02 | 9.78 | 1 | 1.97 | 20.00 | 0.10 | 0.10 | 16.56 | 1.38 |
| 312: ML09-254-01 | 8.80 | 2 | 1.96 | 28.40 | 0.10 | 0.10 | 20.00 | 1.51 |
| 313: ML09-254-02 | 9.45 | 2 | 1.97 | 26.30 | 0.10 | 0.10 | 17.21 | 1.54 |
| 314: ML09-256-01 | 9.18 | 2 | 1.99 | 20.00 | 0.10 | 0.10 | 12.82 | 1.69 |
| 315: ML09-259-01 | 10.00 | 1 | 1.95 | 20.00 | 0.10 | 0.10 | 14.29 | 1.62 |
| 316: ML92062-01 | 9.13 | 3 | 2.04 | 28.60 | 0.10 | 0.10 | 12.93 | 1.88 |
| 317: ML95-104-01 | 9.85 | 2 | 2.01 | 26.30 | 0.10 | 0.10 | 16.65 | 1.71 |
| 318: ML95-104-02 | 8.54 | 1 | 2.04 | 20.00 | 0.10 | 0.10 | 15.31 | 1.65 |
| 319: ML95-105-01 | 8.80 | 3 | 2.01 | 36.60 | 0.10 | 0.10 | 24.31 | 1.69 |
| 320: ML95-105-02 | 9.54 | 3 | 1.98 | 51.70 | 0.10 | 0.10 | 23.57 | 1.82 |
| 321: ML95-105-03 | 9.49 | 1 | 1.99 | 20.00 | 0.10 | 0.10 | 15.78 | 1.41 |
| 322: ML95-105-04 | 9.99 | 3 | 2.05 | 36.30 | 0.10 | 0.10 | 25.21 | 1.55 |
| 323: ML95-107-01 | 9.61 | 3 | 2.05 | 37.90 | 0.10 | 0.10 | 24.69 | 1.68 |
| 324: ML95-107-02 | 9.21 | 3 | 2.00 | 43.60 | 0.10 | 0.10 | 23.26 | 1.89 |
| 325: ML95-107-03 | 9.70 | 1 | 1.96 | 20.00 | 0.10 | 0.10 | 16.12 | 1.39 |
| 326: ML95-113-01 | 9.32 | 1 | 2.00 | 20.00 | 0.10 | 0.10 | 16.53 | 1.37 |
| 327: ML95-113-02 | 9.68 | 2 | 2.04 | 28.20 | 0.10 | 0.10 | 19.42 | 1.51 |
| 328: ML95-117-01 | 9.02 | 1 | 2.00 | 27.10 | 0.10 | 0.10 | 15.49 | 1.76 |
| 329: ML95-117-02 | 9.88 | 2 | 2.03 | 26.80 | 0.10 | 0.10 | 17.12 | 1.67 |
| 330: ML95-117-03 | 8.99 | 2 | 1.99 | 20.00 | 0.10 | 0.10 | 14.45 | 1.59 |
| 331: ML95-120-01 | 9.53 | 1 | 1.97 | 20.00 | 0.10 | 0.10 | 16.04 | 1.36 |
| 332: ML95-82-01 | 8.76 | 2 | 1.96 | 27.40 | 0.10 | 0.10 | 18.87 | 1.58 |
| 333: ML95-82-02 | 9.62 | 1 | 1.96 | 20.00 | 0.10 | 0.10 | 12.52 | 1.84 |
| 334: ML95-83-01 | 9.15 | 1 | 2.03 | 20.00 | 0.10 | 0.10 | 16.39 | 1.86 |
| 335: ML95-83-02 | 9.82 | 1 | 1.99 | 20.00 | 0.10 | 0.10 | 15.69 | 1.58 |
| 336: ML95-84-01 | 8.74 | 1 | 2.04 | 27.90 | 0.10 | 0.10 | 19.36 | 1.59 |
| 337: ML95-85-01 | 9.86 | 1 | 2.00 | 20.00 | 0.10 | 0.10 | 13.85 | 1.88 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10514-JUL11**

| Sample ID | Paste pH units | Fizz Rate --- | Sample weight g | HCl added | HCl Normality | NaOH Normality | NaOH to pH=8.3 mL | Final pH units |
|---|---|---|---|---|---|---|---|---|
| 338: ML95-88-01 | 9.29 | 1 | 2.00 | 20.00 | 0.10 | 0.10 | 15.86 | 1.36 |
| 339: ML95-88-02 | 9.81 | 2 | 2.03 | 27.30 | 0.10 | 0.10 | 11.51 | 1.78 |
| 340: ML95-95-01 | 8.96 | 2 | 2.04 | 41.00 | 0.10 | 0.10 | 22.87 | 1.86 |
| 341: ML95-95-02 | 9.65 | 2 | 1.97 | 20.00 | 0.10 | 0.10 | 16.05 | 1.51 |
| 342: ML95-98-01 | 9.08 | 2 | 2.05 | 27.20 | 0.10 | 0.10 | 17.78 | 1.86 |
| 343: ML97-186-01 | 9.03 | 2 | 2.04 | 38.30 | 0.10 | 0.10 | 23.36 | 1.58 |
| 344: ML97-186-02 | 9.71 | 2 | 2.02 | 27.10 | 0.10 | 0.10 | 16.49 | 1.61 |

*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Wednesday, August 24, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10515-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5: M10-968-01 | 61.6 | 17.9 | 6.30 | 2.75 | 1.54 | 2.89 | 2.62 | 0.68 | 0.13 | 0.04 | 0.04 | 0.04 | 3.96 | 100.5 |
| 6: M10-968-02 | 62.1 | 17.3 | 6.23 | 2.72 | 1.35 | 2.69 | 2.58 | 0.65 | 0.12 | 0.05 | 0.02 | 0.02 | 4.14 | 99.9 |
| 7: M10-968-03 | 62.8 | 16.6 | 6.76 | 2.37 | 1.46 | 2.63 | 2.61 | 0.62 | 0.12 | 0.03 | 0.02 | 0.02 | 4.10 | 100.2 |
| 8: M10-970-01 | 48.4 | 4.70 | 29.1 | 1.17 | 8.33 | 0.07 | 0.17 | 0.10 | 0.18 | 0.06 | < 0.01 | < 0.01 | 7.65 | 99.9 |
| 9: M10-972A-01 | 65.6 | 15.4 | 4.84 | 2.16 | 1.69 | 3.42 | 2.18 | 0.52 | 0.10 | 0.04 | 0.02 | 0.02 | 4.29 | 100.2 |
| 10: M10-972A-02 | 65.4 | 15.7 | 5.30 | 2.24 | 1.55 | 3.34 | 2.10 | 0.58 | 0.11 | 0.04 | 0.02 | 0.01 | 3.57 | 99.9 |
| 11: M10-972A-03 | 53.8 | 4.77 | 30.5 | 1.20 | 4.41 | 0.07 | 0.53 | 0.11 | 0.17 | 0.06 | 0.01 | < 0.01 | 4.17 | 99.9 |
| 12: M10-972A-04 | 42.5 | 13.0 | 11.4 | 6.21 | 10.8 | 1.88 | 0.22 | 0.75 | 0.05 | 0.20 | 0.02 | 0.04 | 13.1 | 100.1 |
| 13: M10-976-01 | 66.0 | 14.6 | 4.85 | 2.01 | 2.43 | 3.32 | 1.95 | 0.52 | 0.11 | 0.04 | 0.03 | 0.02 | 3.76 | 99.6 |
| 14: M10-976-02 | 62.0 | 17.6 | 7.05 | 2.68 | 1.19 | 2.07 | 2.95 | 0.64 | 0.12 | 0.04 | 0.02 | 0.03 | 3.71 | 100.0 |
| 15: M10-976-03 | 51.7 | 5.53 | 24.8 | 1.26 | 7.44 | 0.31 | 0.69 | 0.13 | 0.15 | 0.10 | < 0.01 | < 0.01 | 7.53 | 99.6 |
| 16: M10-976-04 | 49.3 | 6.80 | 29.4 | 1.64 | 4.81 | 0.08 | 0.50 | 0.15 | 0.15 | 0.10 | < 0.01 | 0.01 | 6.12 | 99.1 |
| 17: M10-977-01 | 64.1 | 16.1 | 5.66 | 2.48 | 1.55 | 3.10 | 2.21 | 0.58 | 0.11 | 0.05 | 0.02 | 0.02 | 3.37 | 99.4 |
| 18: M10-977-02 | 52.2 | 7.12 | 26.2 | 1.51 | 4.58 | 0.39 | 1.14 | 0.17 | 0.14 | 0.07 | < 0.01 | < 0.01 | 5.15 | 98.7 |
| 19: M10-986-01 | 48.8 | 6.84 | 30.1 | 1.38 | 5.31 | 0.18 | 0.75 | 0.17 | 0.17 | 0.08 | < 0.01 | < 0.01 | 5.61 | 99.4 |
| 20: M10-986-02 | 43.0 | 14.3 | 11.6 | 4.95 | 10.9 | 2.15 | 0.17 | 0.92 | 0.07 | 0.21 | 0.03 | 0.06 | 11.6 | 100.0 |
| 21: M10-993-01 | 64.8 | 16.0 | 5.41 | 2.45 | 1.55 | 3.25 | 2.10 | 0.57 | 0.11 | 0.05 | 0.02 | 0.02 | 3.63 | 99.9 |
| 22: M10-993-02 | 63.0 | 16.6 | 5.69 | 2.48 | 1.84 | 2.95 | 2.47 | 0.62 | 0.12 | 0.05 | 0.03 | 0.02 | 3.97 | 99.8 |
| 23: M10-993-03 | 62.0 | 16.3 | 6.89 | 2.51 | 2.15 | 2.54 | 2.52 | 0.65 | 0.12 | 0.04 | 0.02 | 0.02 | 4.56 | 100.3 |
| 24: M10-993-04 | 43.8 | 13.4 | 11.2 | 6.88 | 11.2 | 1.64 | 0.10 | 0.69 | 0.05 | 0.19 | 0.03 | 0.04 | 11.6 | 100.8 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25: M96-16-01 | 46.7 | 14.6 | 11.9 | 4.45 | 11.1 | 1.29 | 1.39 | 0.76 | 0.05 | 0.26 | 0.02 | 0.05 | 8.24 | 100.9 |
| 26: M96-61-01 | 44.4 | 11.2 | 11.6 | 6.77 | 10.4 | 1.58 | 0.58 | 0.74 | 0.08 | 0.19 | 0.05 | 0.03 | 11.2 | 98.8 |
| 27: M96-61-02 | 43.6 | 11.7 | 11.8 | 6.14 | 11.0 | 2.09 | 0.88 | 0.80 | 0.07 | 0.27 | 0.02 | 0.05 | 11.8 | 100.2 |
| 28: M96-61-03 | 47.9 | 4.93 | 30.0 | 2.41 | 3.74 | 0.13 | 0.10 | 0.24 | 0.10 | 0.30 | < 0.01 | 0.01 | 7.51 | 97.4 |
| 29: M98-234-01 | 62.1 | 17.0 | 6.30 | 2.67 | 1.43 | 2.15 | 3.19 | 0.64 | 0.12 | 0.05 | 0.02 | 0.02 | 4.40 | 100.1 |
| 30: M98-234-02 | 63.4 | 14.9 | 6.51 | 2.50 | 2.28 | 2.78 | 2.10 | 0.56 | 0.12 | 0.06 | 0.01 | 0.02 | 4.00 | 99.2 |
| 31: M98-238-01 | 57.2 | 15.5 | 9.54 | 3.68 | 3.24 | 2.83 | 1.62 | 0.89 | 0.13 | 0.09 | 0.02 | 0.04 | 4.98 | 99.8 |
| 32: M98-238-02 | 56.2 | 13.7 | 11.0 | 4.48 | 6.03 | 3.11 | 0.62 | 0.93 | 0.10 | 0.14 | 0.01 | 0.04 | 3.44 | 99.9 |
| 33: M98-284-01 | 58.5 | 15.7 | 9.21 | 3.28 | 3.21 | 1.95 | 2.04 | 0.72 | 0.13 | 0.07 | 0.02 | 0.02 | 4.95 | 99.8 |
| 34: M98-284-02 | 46.4 | 7.40 | 35.7 | 1.72 | 3.70 | 0.13 | 0.15 | 0.19 | 0.16 | 0.06 | < 0.01 | 0.01 | 4.33 | 100.0 |
| 35: M98-286-01 | 55.3 | 19.7 | 7.82 | 3.38 | 2.01 | 1.94 | 3.43 | 0.80 | 0.13 | 0.06 | 0.03 | 0.03 | 5.09 | 99.7 |
| 36: M98-329-01 | 41.4 | 9.58 | 10.9 | 7.21 | 11.2 | 1.74 | 0.56 | 0.79 | 0.07 | 0.19 | 0.09 | 0.03 | 15.9 | 99.6 |
| 37: M98-331-01 | 60.4 | 17.3 | 6.41 | 2.87 | 1.94 | 2.66 | 2.80 | 0.66 | 0.12 | 0.05 | 0.02 | 0.03 | 4.41 | 99.7 |
| 38: M98-333-01 | 62.2 | 16.9 | 6.23 | 2.97 | 1.70 | 2.65 | 2.46 | 0.64 | 0.13 | 0.05 | 0.02 | 0.02 | 4.31 | 100.2 |
| 39: M98-337-01 | 45.1 | 10.5 | 10.2 | 6.42 | 11.1 | 1.90 | 1.25 | 0.81 | 0.07 | 0.18 | 0.07 | 0.04 | 12.1 | 99.7 |
| 40: M04-519-01 | 38.8 | 12.6 | 10.2 | 7.05 | 11.4 | 2.16 | 0.66 | 0.52 | 0.04 | 0.19 | 0.02 | 0.03 | 16.2 | 99.8 |
| 41: M04-519-02 | 40.5 | 13.5 | 10.9 | 7.62 | 8.64 | 2.32 | 0.93 | 0.59 | 0.04 | 0.15 | 0.02 | 0.04 | 14.7 | 100.0 |
| 42: M04-519-03 | 41.2 | 9.26 | 11.6 | 6.54 | 11.3 | 1.77 | 0.71 | 0.84 | 0.07 | 0.23 | 0.05 | 0.04 | 16.5 | 100.1 |
| 43: M04-519-04 | 45.7 | 12.2 | 13.7 | 4.23 | 8.30 | 2.75 | 0.53 | 1.55 | 0.14 | 0.25 | < 0.01 | 0.06 | 10.2 | 99.6 |
| 44: M10-981-01 | 46.4 | 11.8 | 13.7 | 5.08 | 8.45 | 2.68 | 0.41 | 1.71 | 0.16 | 0.19 | 0.01 | 0.07 | 9.72 | 100.4 |
| 45: M10-981-02 | 45.6 | 12.8 | 12.7 | 5.08 | 8.97 | 2.56 | 0.54 | 1.19 | 0.13 | 0.18 | 0.02 | 0.05 | 10.3 | 100.0 |
| 46: M10-981-03 | 45.2 | 12.7 | 13.0 | 5.12 | 8.21 | 2.49 | 0.64 | 1.74 | 0.20 | 0.25 | < 0.01 | 0.07 | 10.6 | 100.2 |
| 47: M10-981-04 | 44.1 | 13.2 | 12.3 | 5.29 | 10.5 | 2.34 | 0.50 | 1.10 | 0.10 | 0.22 | 0.03 | 0.05 | 10.6 | 100.3 |
| 48: M10-985-01 | 62.8 | 16.6 | 5.64 | 2.53 | 1.97 | 3.28 | 2.14 | 0.62 | 0.12 | 0.05 | 0.02 | 0.02 | 4.13 | 100.0 |
| 49: M10-985-02 | 56.0 | 15.0 | 12.2 | 3.35 | 3.16 | 1.74 | 1.90 | 0.82 | 0.14 | 0.09 | 0.02 | 0.03 | 5.44 | 99.9 |
| 50: M10-987-01 | 41.3 | 9.57 | 12.4 | 7.04 | 11.6 | 1.47 | 0.16 | 0.86 | 0.06 | 0.26 | 0.05 | 0.04 | 15.0 | 99.8 |
| 51: M10-987-02 | 43.7 | 12.4 | 11.2 | 6.22 | 9.34 | 1.99 | 0.82 | 0.80 | 0.09 | 0.17 | 0.03 | 0.04 | 13.0 | 99.7 |
| 52: M10-987-03 | 35.7 | 5.19 | 14.1 | 23.0 | 4.14 | 0.06 | < 0.01 | 0.46 | 0.03 | 0.20 | 0.32 | 0.03 | 16.5 | 99.7 |
| 53: M10-987-04 | 45.0 | 12.3 | 14.4 | 5.62 | 10.1 | 1.96 | 0.08 | 1.31 | 0.12 | 0.19 | 0.03 | 0.06 | 9.11 | 100.3 |
| 54: M10-988-01 | 43.4 | 11.8 | 14.5 | 7.73 | 9.08 | 1.73 | 0.07 | 0.97 | 0.07 | 0.25 | 0.03 | 0.06 | 10.7 | 100.4 |
| 55: M10-988-02 | 44.7 | 12.2 | 11.9 | 4.58 | 11.1 | 2.56 | 0.12 | 1.15 | 0.12 | 0.29 | 0.02 | 0.05 | 11.3 | 100.2 |
| 56: M10-988-03 | 45.6 | 15.2 | 11.4 | 6.71 | 11.7 | 1.86 | 0.03 | 0.93 | 0.07 | 0.19 | 0.04 | 0.05 | 6.90 | 100.7 |
| 57: M10-992-01 | 45.3 | 14.6 | 11.4 | 5.47 | 11.8 | 1.63 | 0.11 | 0.67 | 0.05 | 0.23 | 0.02 | 0.04 | 8.85 | 100.2 |
| 58: M10-992-02 | 45.4 | 14.0 | 10.7 | 4.94 | 11.1 | 3.14 | 0.13 | 0.63 | 0.05 | 0.23 | 0.02 | < 0.01 | 8.91 | 99.3 |
| 59: M10-992-03 | 41.3 | 14.2 | 9.67 | 8.40 | 9.78 | 1.80 | 0.43 | 0.47 | 0.03 | 0.15 | 0.03 | 0.03 | 14.7 | 100.9 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 60: M10-992-04 | 43.4 | 10.2 | 12.6 | 7.29 | 11.2 | 1.80 | 0.02 | 0.93 | 0.07 | 0.26 | 0.04 | 0.04 | 12.7 | 100.6 |
| 61: M10-992-05 | 45.2 | 12.2 | 12.8 | 5.01 | 9.25 | 2.96 | 0.23 | 1.29 | 0.14 | 0.26 | 0.02 | 0.05 | 10.9 | 100.4 |
| 62: M10-994-01 | 44.2 | 9.94 | 12.5 | 8.24 | 10.6 | 1.58 | 0.02 | 0.90 | 0.12 | 0.22 | 0.07 | 0.05 | 12.1 | 100.6 |
| 63: M10-994-02 | 46.3 | 12.8 | 12.4 | 5.08 | 8.17 | 3.16 | 0.71 | 1.07 | 0.12 | 0.20 | 0.02 | 0.04 | 9.77 | 99.8 |
| 64: M10-994-03 | 43.7 | 12.6 | 11.0 | 5.25 | 10.8 | 2.27 | 0.81 | 0.78 | 0.07 | 0.18 | 0.03 | 0.04 | 12.9 | 100.5 |
| 65: M10-994-04 | 46.8 | 15.0 | 12.3 | 7.19 | 9.98 | 1.88 | 0.18 | 0.93 | 0.07 | 0.17 | 0.05 | 0.04 | 5.58 | 100.2 |
| 66: M10-994-05 | 42.1 | 12.8 | 9.46 | 6.98 | 10.3 | 2.44 | 0.66 | 0.55 | 0.04 | 0.16 | 0.05 | 0.03 | 14.4 | 100.0 |
| 67: M10-998-01 | 46.7 | 13.5 | 13.2 | 5.85 | 8.87 | 2.14 | 0.08 | 1.50 | 0.13 | 0.18 | 0.02 | 0.07 | 7.62 | 99.9 |
| 68: M10-998-02 | 46.5 | 12.1 | 13.9 | 5.40 | 8.20 | 2.67 | 0.67 | 1.95 | 0.20 | 0.18 | < 0.01 | 0.06 | 8.29 | 100.1 |
| 69: M10-998-03 | 44.7 | 14.3 | 10.7 | 5.81 | 8.41 | 2.46 | 1.14 | 0.99 | 0.08 | 0.20 | 0.03 | 0.05 | 11.1 | 100.0 |
| 70: M10-998-04 | 47.1 | 12.1 | 10.8 | 4.94 | 10.1 | 2.05 | 0.51 | 0.87 | 0.07 | 0.22 | 0.04 | 0.04 | 11.4 | 100.3 |
| 71: M10-998-05 | 39.8 | 6.74 | 10.4 | 12.6 | 11.1 | 0.35 | 0.04 | 0.49 | 0.04 | 0.19 | 0.20 | 0.03 | 18.9 | 100.8 |
| 72: M11-1042-01 | 40.5 | 13.2 | 12.3 | 6.99 | 8.94 | 1.71 | 1.08 | 0.80 | 0.06 | 0.17 | 0.03 | 0.04 | 13.8 | 99.6 |
| 73: M11-1042-02 | 42.9 | 11.5 | 12.6 | 9.58 | 6.56 | 2.04 | 1.23 | 0.82 | 0.70 | 0.15 | 0.09 | 0.03 | 11.1 | 99.3 |
| 74: M11-1042-03 | 41.5 | 7.83 | 12.6 | 16.1 | 6.06 | 1.20 | 0.07 | 0.72 | 0.07 | 0.18 | 0.16 | 0.03 | 13.8 | 100.3 |
| 75: M11-1051-01 | 43.8 | 12.2 | 9.97 | 6.50 | 8.46 | 2.07 | 1.39 | 0.74 | 0.07 | 0.16 | 0.03 | 0.04 | 14.5 | 99.9 |
| 76: M11-1051-02 | 43.3 | 9.81 | 11.8 | 12.7 | 8.37 | 1.15 | 0.20 | 0.71 | 0.05 | 0.20 | 0.16 | 0.03 | 12.0 | 100.4 |
| 77: M11-1099-01 | 41.2 | 12.5 | 16.8 | 5.98 | 7.60 | 1.16 | 1.30 | 0.85 | 0.10 | 0.25 | 0.04 | 0.04 | 11.5 | 99.3 |
| 78: M11-1099-02 | 46.0 | 13.3 | 11.5 | 5.74 | 11.3 | 2.26 | 0.10 | 1.01 | 0.09 | 0.25 | 0.04 | 0.04 | 8.88 | 100.5 |
| 79: M11-1099-03 | 45.6 | 13.0 | 12.9 | 5.92 | 8.99 | 1.82 | 0.35 | 1.28 | 0.25 | 0.22 | 0.03 | 0.04 | 9.56 | 99.9 |
| 80: M95-11-01 | 42.5 | 12.0 | 12.2 | 4.72 | 12.2 | 2.19 | 0.35 | 1.08 | 0.10 | 0.28 | 0.03 | 0.04 | 12.3 | 100.1 |
| 81: M95-12-01 | 46.1 | 12.4 | 12.4 | 4.51 | 9.81 | 2.26 | 0.70 | 1.46 | 0.23 | 0.23 | 0.02 | 0.04 | 10.3 | 100.4 |
| 82: M95-22-01 | 41.8 | 12.3 | 10.7 | 5.66 | 11.8 | 1.93 | 0.60 | 0.87 | 0.07 | 0.22 | 0.04 | 0.04 | 13.6 | 99.7 |
| 83: M95-22-02 | 44.8 | 13.4 | 11.7 | 6.18 | 9.62 | 2.62 | 0.42 | 1.11 | 0.10 | 0.21 | 0.05 | 0.04 | 9.77 | 100.0 |
| 84: M96-50-01 | 45.6 | 15.0 | 12.3 | 5.46 | 10.8 | 2.94 | 0.15 | 0.97 | 0.08 | 0.22 | 0.03 | 0.04 | 6.97 | 100.5 |
| 85: M96-51-01 | 40.0 | 11.0 | 10.2 | 7.10 | 10.7 | 2.40 | 0.90 | 0.64 | 0.04 | 0.20 | 0.05 | 0.04 | 16.7 | 100.0 |
| 86: M96-51-02 | 44.2 | 12.7 | 12.6 | 5.82 | 7.76 | 3.28 | 0.40 | 1.45 | 0.15 | 0.21 | < 0.01 | 0.04 | 11.2 | 99.9 |
| 87: M96-51-03 | 41.6 | 13.4 | 11.6 | 5.90 | 11.0 | 2.06 | 0.74 | 0.87 | 0.07 | 0.20 | 0.03 | 0.04 | 12.7 | 100.2 |
| 88: M97-111-01 | 42.8 | 12.9 | 10.3 | 5.21 | 12.6 | 1.94 | 0.58 | 0.61 | 0.05 | 0.23 | 0.01 | 0.04 | 12.7 | 100.1 |
| 89: M97-111-02 | 43.5 | 11.7 | 10.6 | 6.86 | 9.99 | 2.00 | 0.46 | 0.51 | 0.04 | 0.17 | 0.01 | 0.02 | 13.3 | 99.2 |
| 90: M97-111-03 | 43.9 | 10.4 | 14.3 | 7.65 | 9.30 | 1.61 | 0.03 | 0.91 | 0.07 | 0.24 | 0.04 | 0.05 | 11.3 | 99.9 |
| 91: M97-111-04 | 46.0 | 12.9 | 11.6 | 7.33 | 9.13 | 1.57 | 0.20 | 0.91 | 0.07 | 0.17 | 0.04 | 0.04 | 10.0 | 100.0 |
| 92: M97-176-01 | 42.5 | 10.0 | 13.4 | 7.76 | 10.9 | 1.20 | 0.07 | 0.88 | 0.06 | 0.26 | 0.06 | 0.04 | 13.1 | 100.3 |
| 93: M97-176-02 | 43.8 | 14.3 | 11.6 | 7.01 | 9.44 | 2.37 | 0.26 | 0.90 | 0.06 | 0.17 | 0.03 | 0.04 | 9.94 | 99.9 |
| 94: M97-176-03 | 45.1 | 11.9 | 12.6 | 4.91 | 10.7 | 1.69 | 0.64 | 1.01 | 0.07 | 0.21 | 0.01 | 0.05 | 11.3 | 100.1 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95: M98-222-01 | 42.7 | 12.9 | 12.2 | 4.45 | 9.88 | 1.99 | 1.25 | 1.47 | 0.15 | 0.25 | 0.02 | 0.07 | 12.8 | 100.1 |
| 96: M98-222-02 | 44.3 | 12.8 | 11.4 | 4.62 | 11.3 | 2.59 | 0.64 | 0.96 | 0.09 | 0.25 | 0.04 | 0.05 | 11.1 | 100.1 |
| 97: M98-222-03 | 45.4 | 12.9 | 11.0 | 5.91 | 10.3 | 2.41 | 0.27 | 1.07 | 0.10 | 0.16 | 0.03 | 0.05 | 10.6 | 100.1 |
| 98: M98-223-01 | 43.2 | 12.9 | 11.4 | 5.92 | 12.6 | 1.64 | 0.33 | 0.89 | 0.08 | 0.22 | 0.05 | 0.05 | 11.0 | 100.4 |
| 99: M98-223-02 | 42.1 | 10.8 | 13.3 | 5.60 | 9.71 | 1.86 | 0.96 | 1.37 | 0.12 | 0.18 | 0.02 | 0.05 | 13.7 | 99.7 |
| 100: M98-223-03 | 45.7 | 10.9 | 15.3 | 4.91 | 7.79 | 2.22 | 0.40 | 1.46 | 0.13 | 0.17 | 0.01 | 0.06 | 10.2 | 99.3 |
| 101: W94-48-01 | 47.8 | 13.6 | 13.5 | 5.73 | 9.71 | 2.03 | 0.10 | 1.42 | 0.13 | 0.20 | 0.02 | 0.05 | 5.37 | 99.7 |
| 102: M96-58-01 | 46.4 | 15.6 | 11.9 | 5.30 | 9.03 | 2.14 | 0.37 | 1.10 | 0.09 | 0.25 | 0.03 | 0.06 | 7.65 | 99.9 |
| 103: M96-58-02 | 44.4 | 14.1 | 13.4 | 6.87 | 9.32 | 1.39 | 0.34 | 0.91 | 0.09 | 0.21 | 0.03 | 0.05 | 8.93 | 100.0 |
| 104: M96-58-03 | 45.1 | 14.3 | 11.8 | 5.60 | 11.1 | 1.50 | 0.21 | 0.74 | 0.06 | 0.25 | 0.04 | 0.04 | 9.11 | 99.9 |
| 105: M97-120-01 | 40.6 | 13.2 | 11.1 | 6.49 | 11.4 | 2.35 | 0.21 | 0.78 | 0.06 | 0.23 | 0.03 | 0.05 | 14.0 | 100.5 |
| 106: M97-120-02 | 44.0 | 11.4 | 12.8 | 6.10 | 11.5 | 1.66 | 0.61 | 0.89 | 0.07 | 0.26 | 0.05 | 0.04 | 9.77 | 99.3 |
| 107: M97-122-01 | 47.5 | 14.6 | 11.9 | 7.28 | 10.7 | 2.51 | 0.07 | 0.81 | 0.05 | 0.20 | 0.04 | 0.05 | 4.17 | 100.0 |
| 108: M97-122-02 | 52.2 | 15.6 | 5.00 | 2.70 | 11.2 | 2.66 | 1.20 | 0.48 | 0.09 | 0.11 | < 0.01 | 0.01 | 9.00 | 100.2 |
| 109: M97-122-03 | 44.5 | 12.8 | 12.7 | 5.31 | 8.81 | 1.90 | 0.62 | 0.93 | 0.09 | 0.19 | 0.03 | 0.05 | 11.6 | 99.5 |
| 110: M97-122-04 | 47.6 | 8.63 | 24.6 | 6.18 | 3.47 | 0.10 | 0.45 | 0.42 | 0.09 | 0.16 | 0.01 | 0.02 | 6.82 | 98.5 |
| 111: M97-122-05 | 46.3 | 14.2 | 11.0 | 4.79 | 8.87 | 3.48 | 0.39 | 1.02 | 0.07 | 0.23 | 0.04 | 0.05 | 9.52 | 100.0 |
| 112: M97-123-01 | 53.5 | 15.5 | 5.57 | 2.52 | 9.03 | 2.92 | 1.48 | 0.49 | 0.10 | 0.12 | < 0.01 | < 0.01 | 8.48 | 99.7 |
| 113: M97-123-02 | 50.3 | 14.8 | 6.47 | 3.32 | 11.0 | 2.55 | 1.39 | 0.52 | 0.09 | 0.16 | 0.01 | 0.02 | 9.54 | 100.1 |
| 114: M97-123-03 | 42.0 | 12.0 | 10.6 | 5.59 | 13.1 | 1.98 | 0.30 | 0.79 | 0.07 | 0.24 | 0.04 | 0.05 | 13.2 | 100.0 |
| 115: M97-123-04 | 44.4 | 12.9 | 12.1 | 6.06 | 9.46 | 1.96 | 0.53 | 0.95 | 0.08 | 0.18 | 0.02 | 0.04 | 11.2 | 99.9 |
| 116: M97-124-01 | 48.3 | 13.1 | 10.6 | 5.39 | 9.02 | 2.04 | 0.47 | 0.91 | 0.08 | 0.18 | 0.02 | 0.04 | 9.68 | 99.9 |
| 117: M97-124-02 | 47.1 | 16.3 | 15.4 | 6.95 | 3.62 | 1.55 | 0.65 | 1.21 | 0.11 | 0.19 | 0.03 | 0.06 | 7.00 | 100.1 |
| 118: M97-124-03 | 53.8 | 2.43 | 27.1 | 2.28 | 3.81 | 0.10 | 0.04 | 0.11 | 0.11 | 0.26 | < 0.01 | < 0.01 | 6.78 | 96.8 |
| 119: M97-124-04 | 44.3 | 14.3 | 13.9 | 6.99 | 7.67 | 1.50 | 0.72 | 0.75 | 0.06 | 0.18 | < 0.01 | 0.05 | 10.2 | 100.6 |
| 120: M97-153-01 | 43.2 | 12.7 | 11.7 | 7.37 | 9.87 | 1.33 | 0.82 | 0.66 | 0.05 | 0.19 | 0.05 | 0.04 | 11.4 | 99.4 |
| 121: M97-153-02 | 45.3 | 11.9 | 9.74 | 5.23 | 12.3 | 1.48 | 0.83 | 0.64 | 0.05 | 0.22 | 0.04 | 0.04 | 12.1 | 99.8 |
| 122: M97-154-01 | 42.3 | 13.7 | 12.3 | 6.00 | 9.70 | 2.59 | 0.86 | 0.87 | 0.09 | 0.20 | 0.02 | 0.04 | 11.4 | 100.1 |
| 123: M98-181-01 | 43.0 | 13.5 | 11.1 | 6.51 | 11.5 | 1.92 | 0.49 | 0.75 | 0.05 | 0.21 | 0.04 | 0.05 | 11.2 | 100.2 |
| 124: M98-181-02 | 43.5 | 13.2 | 12.2 | 5.79 | 10.3 | 2.00 | 0.22 | 0.90 | 0.08 | 0.23 | < 0.01 | 0.05 | 11.9 | 100.3 |
| 125: M98-184-01 | 50.2 | 14.2 | 7.32 | 4.44 | 10.3 | 2.05 | 1.17 | 0.56 | 0.09 | 0.14 | 0.01 | 0.02 | 9.84 | 100.3 |
| 126: M98-184-02 | 41.1 | 13.1 | 10.3 | 5.93 | 9.80 | 3.50 | 0.68 | 0.99 | 0.10 | 0.19 | 0.04 | 0.05 | 13.9 | 99.7 |
| 127: M98-185-01 | 41.7 | 15.3 | 11.3 | 5.38 | 10.5 | 2.78 | 0.53 | 0.76 | 0.06 | 0.28 | 0.02 | 0.05 | 11.2 | 99.7 |
| 128: M98-185-02 | 45.6 | 15.1 | 11.3 | 5.46 | 11.1 | 2.14 | 0.20 | 0.79 | 0.05 | 0.26 | 0.04 | 0.04 | 8.16 | 100.2 |
| 129: M98-185-03 | 46.1 | 13.1 | 12.3 | 6.63 | 11.5 | 1.64 | 0.08 | 0.96 | 0.08 | 0.21 | 0.03 | 0.04 | 7.41 | 100.0 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 130: W94-49-01 | 48.0 | 13.9 | 11.2 | 6.27 | 8.54 | 2.38 | 0.25 | 1.31 | 0.23 | 0.17 | 0.03 | 0.04 | 7.84 | 100.1 |
| 131: W94-49-02 | 56.5 | 3.10 | 27.5 | 1.86 | 0.64 | 0.11 | 0.04 | 0.46 | 0.21 | 0.25 | 0.03 | 0.01 | 9.23 | 100.0 |
| 132: W94-49-03 | 44.8 | 13.2 | 12.9 | 8.52 | 7.84 | 1.39 | 0.17 | 0.72 | 0.06 | 0.19 | < 0.01 | 0.04 | 10.5 | 100.2 |
| 133: W94-53-01 | 59.7 | 17.2 | 7.33 | 2.64 | 2.16 | 2.47 | 2.73 | 0.63 | 0.12 | 0.03 | 0.01 | 0.02 | 4.48 | 99.5 |
| 134: W94-55-01 | 48.2 | 3.18 | 27.0 | 3.22 | 6.48 | 0.08 | 0.05 | 0.13 | 0.10 | 0.20 | < 0.01 | < 0.01 | 8.58 | 97.2 |
| 135: W94-55-02 | 44.4 | 13.0 | 12.3 | 5.23 | 10.3 | 0.68 | 1.11 | 0.97 | 0.09 | 0.18 | 0.03 | 0.05 | 11.6 | 99.9 |
| 136: W94-57-01 | 41.8 | 13.0 | 12.9 | 6.93 | 9.01 | 0.96 | 1.28 | 0.86 | 0.10 | 0.23 | 0.06 | 0.04 | 12.3 | 99.5 |
| 137: W94-57-02 | 58.9 | 4.78 | 22.4 | 2.40 | 3.21 | 0.05 | 0.07 | 0.46 | 0.16 | 0.18 | < 0.01 | < 0.01 | 4.93 | 97.5 |
| 138: W94-57-03 | 53.2 | 2.95 | 24.4 | 2.33 | 4.63 | 0.07 | < 0.01 | 0.12 | 0.12 | 0.30 | 0.02 | < 0.01 | 7.54 | 95.7 |
| 139: W94-59-01 | 47.7 | 14.9 | 11.9 | 6.85 | 8.89 | 2.82 | 0.09 | 0.81 | 0.06 | 0.22 | 0.04 | 0.05 | 5.99 | 100.3 |
| 140: W94-61-01 | 49.3 | 1.98 | 31.3 | 1.92 | 1.91 | 0.05 | < 0.01 | 0.08 | 0.18 | 0.35 | < 0.01 | < 0.01 | 11.8 | 98.8 |
| 141: W94-61-02 | 47.2 | 13.9 | 13.2 | 8.32 | 9.07 | 1.58 | 0.25 | 0.69 | 0.05 | 0.20 | < 0.01 | 0.04 | 5.62 | 100.1 |
| 142: W94-65-01 | 55.6 | 2.86 | 28.9 | 2.82 | 2.08 | 0.10 | 0.02 | 0.10 | 0.08 | 0.29 | < 0.01 | < 0.01 | 5.91 | 98.7 |
| 143: W94-65-02 | 59.6 | 1.24 | 21.5 | 2.17 | 5.08 | 0.05 | < 0.01 | 0.05 | 0.05 | 0.32 | < 0.01 | < 0.01 | 5.16 | 95.3 |
| 144: W94-65-03 | 47.5 | 13.5 | 13.0 | 6.25 | 10.1 | 1.90 | 0.06 | 1.08 | 0.10 | 0.19 | 0.03 | 0.06 | 6.52 | 100.2 |
| 145: W94-70-01 | 46.8 | 14.4 | 10.9 | 6.10 | 10.4 | 1.94 | 0.20 | 0.79 | 0.06 | 0.22 | 0.03 | 0.04 | 8.13 | 100.0 |
| 146: W94-70-02 | 45.5 | 12.6 | 11.6 | 6.19 | 10.6 | 1.83 | 0.04 | 0.93 | 0.08 | 0.17 | 0.03 | 0.05 | 10.3 | 99.8 |
| 147: W94-73-01 | 44.9 | 13.1 | 11.1 | 5.91 | 13.0 | 1.81 | 0.08 | 0.95 | 0.08 | 0.21 | 0.03 | 0.04 | 8.69 | 100.0 |
| 148: W94-73-02 | 54.3 | 2.47 | 24.3 | 2.69 | 3.14 | 0.14 | 0.01 | 0.10 | 0.11 | 0.32 | < 0.01 | < 0.01 | 9.33 | 96.9 |
| 149: W94-73-03 | 43.8 | 13.5 | 12.5 | 4.90 | 10.9 | 2.21 | 0.28 | 0.97 | 0.07 | 0.36 | 0.03 | 0.05 | 10.6 | 100.2 |
| 150: M00-473-01 | 43.5 | 11.8 | 9.15 | 3.89 | 11.5 | 1.16 | 1.70 | 0.75 | 0.06 | 0.26 | 0.03 | 0.04 | 13.5 | 97.3 |
| 151: M00-483-01 | 40.6 | 12.8 | 9.16 | 3.54 | 12.0 | 1.29 | 2.45 | 0.78 | 0.06 | 0.26 | 0.03 | 0.05 | 15.4 | 98.5 |
| 152: M00-490-01 | 44.7 | 12.6 | 8.57 | 3.67 | 10.2 | 2.28 | 1.94 | 0.71 | 0.09 | 0.20 | 0.02 | 0.03 | 12.4 | 97.4 |
| 153: M03-508-01 | 64.9 | 15.4 | 4.78 | 2.09 | 2.38 | 3.23 | 2.05 | 0.54 | 0.11 | 0.05 | 0.02 | 0.03 | 3.80 | 99.4 |
| 154: M03-508-02 | 55.5 | 8.03 | 23.6 | 1.44 | 4.14 | 0.26 | 1.14 | 0.23 | 0.16 | 0.05 | < 0.01 | < 0.01 | 5.42 | 100.0 |
| 155: M05-561-01 | 39.4 | 12.6 | 9.28 | 5.55 | 11.5 | 2.01 | 1.65 | 0.61 | 0.04 | 0.20 | 0.02 | 0.04 | 16.8 | 99.7 |
| 156: M05-561-02 | 49.4 | 13.4 | 15.5 | 4.14 | 7.02 | 2.14 | 1.34 | 1.60 | 0.21 | 0.19 | < 0.01 | 0.03 | 5.00 | 99.9 |
| 157: M06-577-01 | 63.6 | 16.7 | 5.65 | 2.50 | 1.69 | 2.74 | 2.43 | 0.61 | 0.12 | 0.04 | 0.02 | 0.02 | 4.24 | 100.3 |
| 158: M06-577-02 | 60.6 | 17.5 | 6.15 | 2.75 | 1.89 | 3.08 | 2.43 | 0.65 | 0.12 | 0.05 | 0.02 | 0.02 | 4.33 | 99.6 |
| 159: M06-577-03 | 59.5 | 18.0 | 6.62 | 2.86 | 1.69 | 2.62 | 2.98 | 0.69 | 0.13 | 0.05 | 0.03 | 0.03 | 4.49 | 99.7 |
| 160: M06-591-01 | 61.7 | 16.9 | 6.46 | 2.46 | 1.61 | 3.16 | 2.48 | 0.64 | 0.13 | 0.04 | 0.03 | 0.02 | 3.94 | 99.6 |
| 161: M06-591-02 | 57.9 | 12.5 | 15.4 | 1.40 | 2.80 | 2.98 | 1.67 | 0.30 | 0.13 | 0.04 | < 0.01 | < 0.01 | 4.60 | 99.7 |
| 162: M06-591-03 | 42.7 | 13.7 | 9.60 | 3.61 | 12.9 | 1.60 | 1.21 | 0.80 | 0.06 | 0.21 | 0.03 | 0.05 | 13.1 | 99.5 |
| 163: M06-592-01 | 60.6 | 17.6 | 6.54 | 3.10 | 1.68 | 2.44 | 2.70 | 0.66 | 0.13 | 0.05 | 0.02 | 0.02 | 4.26 | 99.8 |
| 164: M06-592-02 | 49.3 | 12.5 | 15.1 | 4.95 | 8.85 | 2.58 | 0.35 | 1.21 | 0.15 | 0.22 | < 0.01 | 0.07 | 4.37 | 99.7 |

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**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 165: M06-592-03 | 51.4 | 14.2 | 13.2 | 5.36 | 9.30 | 2.46 | 0.56 | 1.10 | 0.11 | 0.19 | < 0.01 | 0.06 | 2.46 | 100.4 |
| 166: M06-593-01 | 65.9 | 14.8 | 4.63 | 2.12 | 2.08 | 3.91 | 1.79 | 0.50 | 0.11 | 0.03 | 0.02 | 0.01 | 3.64 | 99.5 |
| 167: M06-593-02 | 51.2 | 14.1 | 12.8 | 5.41 | 9.41 | 2.39 | 0.38 | 1.05 | 0.10 | 0.20 | 0.02 | 0.06 | 3.22 | 100.3 |
| 168: M06-608-01 | 63.3 | 16.5 | 5.62 | 2.46 | 1.86 | 3.09 | 2.28 | 0.61 | 0.11 | 0.06 | 0.02 | 0.02 | 4.01 | 100.0 |
| 169: M06-608-02 | 63.3 | 16.5 | 5.79 | 2.53 | 1.71 | 2.92 | 2.44 | 0.60 | 0.11 | 0.05 | 0.02 | 0.02 | 4.08 | 100.1 |
| 170: M06-611-01 | 66.5 | 15.5 | 4.88 | 2.12 | 1.58 | 3.22 | 2.09 | 0.54 | 0.11 | 0.04 | 0.01 | 0.02 | 3.75 | 100.4 |
| 171: M06-611-02 | 62.7 | 16.6 | 5.67 | 2.42 | 1.79 | 2.74 | 2.63 | 0.61 | 0.12 | 0.04 | 0.01 | 0.02 | 4.39 | 99.8 |
| 172: M06-623-01 | 62.8 | 15.5 | 6.61 | 1.59 | 2.39 | 3.63 | 2.13 | 0.40 | 0.09 | 0.03 | 0.01 | < 0.01 | 4.51 | 99.7 |
| 173: M06-623-02 | 40.0 | 12.9 | 10.2 | 4.29 | 14.4 | 1.86 | 0.62 | 0.79 | 0.06 | 0.24 | 0.03 | 0.05 | 14.3 | 99.6 |
| 174: M06-625-01 | 63.8 | 15.7 | 5.50 | 2.33 | 1.88 | 2.85 | 2.34 | 0.57 | 0.11 | 0.04 | 0.02 | 0.02 | 4.38 | 99.6 |
| 175: M06-625-02 | 61.8 | 16.8 | 6.37 | 2.73 | 1.26 | 2.73 | 2.55 | 0.63 | 0.12 | 0.04 | 0.02 | 0.02 | 4.06 | 99.2 |
| 176: M06-629-01 | 49.8 | 15.4 | 9.22 | 3.04 | 6.96 | 1.29 | 2.51 | 0.72 | 0.12 | 0.11 | 0.04 | 0.03 | 8.17 | 97.4 |
| 177: M06-631-01 | 60.4 | 17.6 | 6.86 | 2.78 | 1.64 | 2.74 | 2.69 | 0.65 | 0.12 | 0.04 | 0.03 | 0.01 | 4.47 | 100.0 |
| 178: M07-674-01 | 61.8 | 16.4 | 5.88 | 2.61 | 2.13 | 2.98 | 2.34 | 0.61 | 0.11 | 0.06 | 0.03 | 0.02 | 4.46 | 99.4 |
| 179: M07-689-01 | 61.1 | 17.9 | 6.66 | 3.01 | 1.27 | 2.74 | 2.55 | 0.68 | 0.12 | 0.05 | 0.02 | 0.03 | 3.65 | 99.7 |
| 180: M07-689-02 | 57.1 | 20.5 | 6.68 | 3.03 | 1.71 | 2.06 | 3.61 | 0.73 | 0.14 | 0.06 | 0.02 | 0.03 | 4.33 | 99.9 |
| 181: M07-689-03 | 62.4 | 15.0 | 6.12 | 1.87 | 2.29 | 3.07 | 2.65 | 0.36 | 0.09 | 0.02 | 0.02 | 0.01 | 4.70 | 98.6 |
| 182: M08-761-01 | 62.2 | 17.0 | 5.92 | 2.44 | 1.64 | 3.74 | 2.27 | 0.64 | 0.12 | 0.04 | 0.02 | 0.02 | 3.95 | 100.0 |
| 183: M08-761-02 | 65.5 | 15.4 | 4.82 | 2.07 | 1.81 | 3.15 | 2.34 | 0.51 | 0.10 | 0.03 | 0.02 | 0.02 | 3.89 | 99.7 |
| 184: M08-763-01 | 61.5 | 16.3 | 5.81 | 2.51 | 2.42 | 3.18 | 2.55 | 0.62 | 0.16 | 0.05 | 0.02 | 0.01 | 4.77 | 99.9 |
| 185: M08-765-01 | 66.2 | 14.8 | 4.66 | 2.00 | 2.05 | 3.04 | 2.16 | 0.51 | 0.10 | 0.04 | 0.02 | 0.01 | 4.01 | 99.6 |
| 186: M08-783-01 | 61.3 | 16.9 | 6.44 | 2.93 | 1.75 | 2.29 | 2.77 | 0.65 | 0.12 | 0.05 | 0.03 | 0.02 | 4.41 | 99.6 |
| 187: M08-783-02 | 38.2 | 12.5 | 10.1 | 3.97 | 15.1 | 1.38 | 0.86 | 0.80 | 0.06 | 0.28 | 0.02 | 0.04 | 16.1 | 99.4 |
| 188: M10-879-01 | 66.0 | 14.9 | 4.64 | 1.86 | 2.12 | 3.38 | 1.92 | 0.52 | 0.10 | 0.04 | 0.02 | < 0.01 | 3.92 | 99.4 |
| 189: M10-887-01 | 64.8 | 15.1 | 5.20 | 2.01 | 1.94 | 2.77 | 2.49 | 0.55 | 0.10 | 0.05 | 0.02 | 0.01 | 4.16 | 99.1 |
| 190: M10-892-01 | 62.6 | 15.8 | 6.12 | 2.47 | 2.09 | 2.96 | 2.12 | 0.64 | 0.12 | 0.05 | 0.03 | 0.02 | 4.28 | 99.3 |
| 191: M10-999-01 | 59.1 | 18.1 | 7.03 | 3.06 | 1.58 | 2.55 | 2.61 | 0.70 | 0.13 | 0.05 | 0.02 | 0.02 | 4.50 | 99.4 |
| 192: M10-999-02 | 64.1 | 15.7 | 5.25 | 2.18 | 2.22 | 3.26 | 2.09 | 0.57 | 0.11 | 0.04 | 0.02 | 0.02 | 3.90 | 99.6 |
| 193: M95-17-01 | 58.5 | 12.8 | 12.6 | 1.33 | 3.41 | 3.79 | 1.60 | 0.35 | 0.13 | 0.05 | < 0.01 | 0.01 | 5.10 | 99.7 |
| 194: M95-25-01 | 63.8 | 16.0 | 5.17 | 2.19 | 1.94 | 3.10 | 2.28 | 0.58 | 0.11 | 0.04 | 0.02 | 0.01 | 4.33 | 99.7 |
| 195: M95-25-02 | 65.9 | 14.5 | 4.25 | 1.55 | 3.03 | 3.23 | 2.06 | 0.50 | 0.10 | 0.03 | 0.02 | 0.01 | 4.24 | 99.5 |
| 196: M95-25-03 | 53.4 | 14.6 | 10.7 | 3.25 | 4.12 | 1.74 | 2.59 | 0.55 | 0.12 | 0.09 | 0.02 | 0.02 | 6.55 | 97.8 |
| 197: M95-25-04 | 38.9 | 13.1 | 10.1 | 4.19 | 14.1 | 2.32 | 0.63 | 0.79 | 0.06 | 0.24 | 0.02 | 0.04 | 15.2 | 99.8 |
| 198: M96-03-01 | 60.1 | 17.6 | 6.59 | 2.93 | 1.71 | 2.47 | 2.74 | 0.68 | 0.13 | 0.06 | 0.02 | 0.02 | 4.65 | 99.7 |
| 199: M96-03-02 | 66.1 | 14.7 | 4.43 | 1.67 | 2.35 | 3.33 | 2.00 | 0.51 | 0.10 | 0.03 | 0.02 | 0.01 | 3.94 | 99.2 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 200: M96-03-03 | 41.7 | 13.9 | 11.0 | 4.71 | 12.6 | 1.87 | 0.38 | 0.84 | 0.06 | 0.21 | 0.03 | 0.04 | 12.4 | 99.8 |
| 201: M96-19-01 | 64.1 | 15.2 | 5.06 | 2.13 | 2.00 | 3.51 | 2.09 | 0.56 | 0.11 | 0.05 | 0.02 | 0.02 | 4.11 | 99.0 |
| 202: M96-19-02 | 63.5 | 16.3 | 5.46 | 2.44 | 1.84 | 3.10 | 2.35 | 0.59 | 0.12 | 0.05 | 0.02 | 0.03 | 4.12 | 99.9 |
| 203: M96-37-01 | 62.6 | 16.1 | 5.56 | 2.38 | 2.89 | 2.77 | 2.41 | 0.61 | 0.12 | 0.06 | 0.03 | 0.02 | 4.12 | 99.7 |
| 204: M96-37-02 | 66.2 | 14.8 | 4.62 | 1.96 | 1.98 | 3.34 | 1.97 | 0.52 | 0.11 | 0.04 | 0.03 | < 0.01 | 3.94 | 99.4 |
| 205: M96-37-03 | 65.0 | 16.0 | 5.25 | 2.28 | 1.54 | 3.35 | 1.98 | 0.58 | 0.12 | 0.04 | 0.02 | 0.02 | 3.48 | 99.6 |
| 206: M96-40-01 | 60.7 | 17.8 | 6.56 | 3.01 | 1.62 | 2.78 | 2.63 | 0.68 | 0.14 | 0.04 | 0.02 | 0.03 | 4.50 | 100.5 |
| 207: M96-40-02 | 60.4 | 17.6 | 6.57 | 2.98 | 1.54 | 2.38 | 2.84 | 0.67 | 0.13 | 0.05 | 0.01 | 0.02 | 4.23 | 99.5 |
| 208: M96-4-01 | 67.5 | 14.4 | 4.35 | 1.70 | 2.39 | 3.27 | 2.00 | 0.50 | 0.11 | 0.03 | 0.03 | 0.01 | 4.33 | 100.6 |
| 209: M96-44-01 | 49.6 | 13.7 | 13.6 | 5.61 | 9.55 | 2.15 | 0.59 | 1.03 | 0.10 | 0.19 | 0.02 | 0.05 | 2.77 | 99.0 |
| 210: M96-54-01 | 64.1 | 16.0 | 5.23 | 2.25 | 2.05 | 3.20 | 2.16 | 0.57 | 0.11 | 0.04 | 0.03 | 0.02 | 4.58 | 100.4 |
| 211: M96-54-02 | 59.9 | 17.3 | 6.00 | 2.68 | 2.32 | 2.81 | 2.67 | 0.64 | 0.12 | 0.07 | 0.03 | 0.02 | 5.00 | 99.5 |
| 212: M96-65-01 | 64.4 | 15.9 | 5.27 | 2.22 | 1.96 | 2.96 | 2.30 | 0.57 | 0.12 | 0.04 | 0.03 | 0.02 | 4.39 | 100.1 |
| 213: M96-7-01 | 61.5 | 17.2 | 7.12 | 2.88 | 1.26 | 2.15 | 2.53 | 0.65 | 0.11 | 0.04 | 0.02 | 0.03 | 4.71 | 100.2 |
| 214: M96-7-02 | 64.6 | 16.0 | 5.26 | 2.21 | 2.04 | 3.07 | 2.46 | 0.57 | 0.11 | 0.05 | 0.02 | 0.02 | 4.00 | 100.4 |
| 215: M96-74-01 | 46.4 | 5.88 | 39.4 | 1.52 | 2.90 | 0.17 | 0.32 | 0.15 | 0.17 | 0.06 | < 0.01 | < 0.01 | 2.47 | 99.4 |
| 216: M96-77-01 | 62.0 | 16.7 | 5.99 | 2.74 | 1.91 | 2.54 | 2.44 | 0.63 | 0.12 | 0.05 | 0.02 | 0.02 | 4.24 | 99.4 |
| 217: M96-77-02 | 60.8 | 17.0 | 6.31 | 2.64 | 1.83 | 2.97 | 2.54 | 0.66 | 0.12 | 0.05 | 0.02 | 0.02 | 4.30 | 99.3 |
| 218: M97-121-01 | 66.0 | 15.4 | 4.82 | 1.96 | 1.89 | 3.11 | 2.34 | 0.55 | 0.11 | 0.04 | 0.03 | 0.02 | 3.68 | 100.0 |
| 219: M97-135-01 | 64.8 | 15.0 | 4.85 | 2.23 | 2.58 | 3.42 | 2.01 | 0.51 | 0.12 | 0.05 | 0.02 | < 0.01 | 4.32 | 99.9 |
| 220: M97-135-02 | 51.9 | 14.1 | 13.0 | 5.44 | 9.25 | 2.30 | 0.49 | 1.06 | 0.11 | 0.19 | 0.01 | 0.05 | 3.02 | 100.9 |
| 221: M97-135-03 | 65.4 | 15.3 | 5.05 | 2.18 | 1.77 | 3.26 | 2.10 | 0.54 | 0.11 | 0.05 | 0.03 | 0.01 | 3.81 | 99.6 |
| 222: M97-149-01 | 50.8 | 13.9 | 12.7 | 5.33 | 9.28 | 2.49 | 0.45 | 1.08 | 0.10 | 0.19 | < 0.01 | 0.05 | 3.38 | 99.7 |
| 223: M97-149-02 | 61.9 | 16.9 | 5.49 | 2.24 | 2.42 | 3.81 | 1.94 | 0.63 | 0.12 | 0.05 | 0.02 | 0.02 | 3.57 | 99.1 |
| 224: M97-94A-01 | 64.1 | 15.5 | 5.21 | 2.36 | 1.97 | 3.05 | 2.23 | 0.55 | 0.10 | 0.05 | 0.02 | 0.02 | 4.32 | 99.5 |
| 225: M97-94A-02 | 64.2 | 16.3 | 6.02 | 2.30 | 1.48 | 3.01 | 2.56 | 0.60 | 0.12 | 0.04 | 0.02 | 0.02 | 3.66 | 100.3 |
| 226: M97-95-01 | 63.3 | 16.1 | 5.35 | 2.36 | 2.44 | 3.18 | 2.11 | 0.60 | 0.11 | 0.05 | 0.02 | 0.01 | 4.15 | 99.8 |
| 227: M97-95-02 | 62.3 | 16.6 | 5.77 | 2.21 | 1.90 | 2.81 | 2.81 | 0.58 | 0.11 | 0.04 | 0.02 | 0.02 | 4.25 | 99.4 |
| 228: M97-95-03 | 42.9 | 12.8 | 10.6 | 4.75 | 12.9 | 2.48 | 0.41 | 0.76 | 0.07 | 0.23 | 0.03 | 0.04 | 12.4 | 100.4 |
| 229: M98-201-01 | 63.5 | 17.1 | 5.91 | 2.53 | 1.29 | 2.74 | 2.48 | 0.63 | 0.12 | 0.03 | 0.03 | 0.02 | 3.47 | 99.8 |
| 230: M98-201-02 | 50.8 | 13.5 | 13.2 | 5.48 | 9.24 | 1.78 | 0.47 | 1.08 | 0.11 | 0.19 | < 0.01 | 0.05 | 4.02 | 100.0 |
| 231: M98-201-03 | 63.4 | 15.8 | 5.26 | 2.43 | 2.41 | 3.23 | 2.08 | 0.56 | 0.11 | 0.05 | 0.02 | 0.02 | 4.45 | 99.9 |
| 232: M98-201-04 | 65.5 | 15.5 | 4.99 | 2.01 | 2.13 | 3.01 | 2.28 | 0.54 | 0.10 | 0.03 | 0.01 | 0.02 | 3.86 | 100.0 |
| 233: M98-208-01 | 64.6 | 15.6 | 5.04 | 2.16 | 2.14 | 3.14 | 2.16 | 0.55 | 0.11 | 0.04 | 0.02 | 0.02 | 3.56 | 99.2 |
| 234: M98-209-01 | 58.2 | 18.9 | 7.18 | 3.43 | 1.65 | 1.97 | 3.03 | 0.74 | 0.14 | 0.07 | 0.02 | 0.03 | 4.58 | 99.9 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 235: M98-265-01 | 66.5 | 14.9 | 4.81 | 2.17 | 1.89 | 3.11 | 2.04 | 0.52 | 0.10 | 0.04 | 0.02 | 0.02 | 4.11 | 100.2 |
| 236: M98-266-01 | 62.4 | 16.6 | 5.77 | 2.44 | 1.69 | 2.97 | 2.64 | 0.62 | 0.12 | 0.04 | 0.02 | 0.02 | 4.03 | 99.3 |
| 237: M98-269-01 | 42.4 | 13.1 | 10.8 | 4.76 | 13.3 | 1.67 | 0.40 | 0.72 | 0.05 | 0.25 | 0.02 | 0.05 | 12.2 | 99.8 |
| 238: M98-270-01 | 64.8 | 16.4 | 5.20 | 2.27 | 1.91 | 3.17 | 2.31 | 0.60 | 0.11 | 0.04 | 0.02 | 0.02 | 3.84 | 100.7 |
| 239: M98-317-01 | 55.1 | 11.2 | 20.1 | 1.55 | 3.01 | 2.36 | 1.47 | 0.31 | 0.16 | 0.05 | 0.01 | < 0.01 | 4.25 | 99.7 |
| 240: M99-309-01 | 51.2 | 13.0 | 13.4 | 4.55 | 7.06 | 3.05 | 0.25 | 1.11 | 0.14 | 0.20 | < 0.01 | 0.06 | 6.11 | 100.2 |
| 241: M99-309-02 | 63.1 | 16.1 | 5.54 | 2.54 | 2.18 | 2.73 | 2.28 | 0.58 | 0.11 | 0.06 | 0.02 | 0.02 | 4.30 | 99.6 |
| 242: M99-336B-01 | 62.6 | 15.9 | 5.17 | 2.70 | 3.12 | 2.68 | 2.42 | 0.60 | 0.17 | 0.04 | 0.02 | 0.02 | 5.24 | 100.7 |
| 243: M99-336B-02 | 49.2 | 13.0 | 12.6 | 5.33 | 10.7 | 2.24 | 0.58 | 1.01 | 0.09 | 0.18 | 0.01 | 0.05 | 4.62 | 99.7 |
| 244: M99-336B-03 | 61.1 | 17.0 | 5.77 | 2.46 | 2.04 | 2.87 | 2.66 | 0.65 | 0.12 | 0.05 | 0.03 | 0.02 | 4.47 | 99.3 |
| 245: M99-336B-04 | 42.2 | 13.6 | 9.67 | 3.37 | 14.6 | 2.33 | 0.35 | 0.84 | 0.07 | 0.36 | 0.03 | 0.04 | 11.9 | 99.4 |
| 246: M99-345-01 | 43.3 | 14.0 | 9.25 | 3.82 | 12.0 | 1.78 | 1.10 | 0.88 | 0.07 | 0.21 | 0.03 | 0.05 | 13.5 | 100.0 |
| 247: M99-346-01 | 40.3 | 14.1 | 9.64 | 4.74 | 12.8 | 1.95 | 0.52 | 0.87 | 0.07 | 0.24 | 0.04 | 0.05 | 14.7 | 100.1 |
| 248: M99-347-01 | 61.6 | 16.7 | 5.90 | 2.60 | 2.01 | 2.97 | 2.47 | 0.66 | 0.12 | 0.05 | 0.03 | 0.02 | 4.32 | 99.5 |
| 249: M99-347-02 | 62.7 | 15.8 | 5.62 | 2.49 | 2.51 | 3.00 | 2.26 | 0.58 | 0.12 | 0.05 | 0.02 | 0.03 | 4.51 | 99.7 |
| 250: M99-409-01 | 66.8 | 14.8 | 4.72 | 2.08 | 1.89 | 3.05 | 2.06 | 0.51 | 0.10 | 0.03 | 0.02 | 0.02 | 3.43 | 99.6 |
| 251: M99-409-02 | 63.4 | 16.3 | 5.44 | 2.38 | 1.93 | 3.37 | 2.19 | 0.58 | 0.11 | 0.05 | 0.03 | 0.02 | 4.17 | 99.9 |
| 252: M99-409-03 | 64.8 | 16.0 | 5.28 | 2.26 | 1.32 | 3.16 | 2.27 | 0.57 | 0.12 | 0.04 | 0.02 | 0.02 | 3.46 | 99.3 |
| 253: M99-409-04 | 59.6 | 14.5 | 10.1 | 2.40 | 2.87 | 2.06 | 1.94 | 0.51 | 0.16 | 0.05 | 0.02 | 0.01 | 5.15 | 99.4 |
| 254: M99-409-05 | 45.5 | 14.8 | 10.4 | 4.07 | 9.46 | 2.05 | 1.03 | 0.94 | 0.09 | 0.18 | 0.02 | 0.05 | 10.4 | 98.9 |
| 255: M99-410-01 | 62.0 | 16.9 | 5.84 | 2.54 | 1.80 | 2.78 | 2.55 | 0.64 | 0.12 | 0.05 | 0.02 | 0.02 | 3.93 | 99.1 |
| 256: M99-410-02 | 63.5 | 16.5 | 5.81 | 2.47 | 1.64 | 2.87 | 2.46 | 0.60 | 0.11 | 0.04 | 0.03 | 0.02 | 3.98 | 100.0 |
| 257: M99-417-01 | 59.4 | 11.7 | 13.6 | 1.46 | 3.41 | 2.63 | 1.82 | 0.38 | 0.17 | 0.05 | 0.01 | < 0.01 | 4.85 | 99.5 |
| 258: M99-436-01 | 64.5 | 15.9 | 5.28 | 2.25 | 1.70 | 3.53 | 2.07 | 0.57 | 0.11 | 0.04 | 0.02 | 0.02 | 3.63 | 99.6 |
| 259: M99-436-02 | 62.4 | 17.0 | 6.20 | 2.71 | 1.56 | 2.76 | 2.52 | 0.64 | 0.13 | 0.05 | 0.03 | 0.02 | 4.01 | 100.0 |
| 260: M08-733-01 | 44.5 | 14.4 | 11.1 | 4.19 | 12.1 | 2.03 | 0.36 | 0.85 | 0.06 | 0.32 | 0.04 | 0.05 | 9.82 | 99.8 |
| 261: M08-733-02 | 45.0 | 14.0 | 11.1 | 5.30 | 11.3 | 2.46 | 0.42 | 0.81 | 0.06 | 0.23 | 0.04 | 0.04 | 9.16 | 99.9 |
| 262: M09-802-01 | 42.0 | 12.0 | 11.9 | 6.67 | 13.6 | 1.55 | 0.28 | 0.58 | 0.05 | 0.25 | 0.07 | 0.04 | 9.98 | 98.9 |
| 263: M09-802-02 | 75.5 | 1.17 | 16.8 | 1.49 | 1.17 | 0.06 | 0.01 | 0.03 | 0.05 | 0.37 | 0.02 | < 0.01 | 1.90 | 98.5 |
| 264: M09-803-01 | 61.9 | 0.88 | 26.5 | 2.31 | 2.79 | 0.06 | 0.02 | 0.05 | 0.15 | 0.50 | 0.01 | < 0.01 | 2.44 | 97.6 |
| 265: M09-809-01 | 58.7 | 5.74 | 20.2 | 2.17 | 5.13 | 0.10 | 0.52 | 0.19 | 0.06 | 0.19 | 0.01 | < 0.01 | 3.15 | 96.2 |
| 266: M09-817-01 | 65.9 | 4.27 | 17.7 | 2.96 | 3.07 | 0.52 | 0.73 | 0.19 | 0.04 | 0.55 | 0.03 | 0.01 | 2.09 | 98.0 |
| 267: M09-817-02 | 43.8 | 12.2 | 10.8 | 7.63 | 10.7 | 1.31 | 0.27 | 0.67 | 0.05 | 0.18 | 0.04 | 0.04 | 11.9 | 99.6 |
| 268: M09-858-01 | 70.2 | 1.43 | 18.1 | 1.89 | 2.92 | 0.15 | 0.05 | 0.06 | 0.09 | 0.56 | 0.03 | < 0.01 | 2.32 | 97.8 |
| 269: M09-859-01 | 40.4 | 13.2 | 13.0 | 6.79 | 9.94 | 1.77 | 0.33 | 0.68 | 0.05 | 0.29 | 0.04 | 0.04 | 12.5 | 99.0 |

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**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 270: M10-933-01 | 46.9 | 12.1 | 11.5 | 5.37 | 12.7 | 1.41 | 0.28 | 0.76 | 0.07 | 0.22 | 0.03 | 0.04 | 8.06 | 99.5 |
| 271: M10-935-01 | 50.5 | 14.8 | 11.1 | 6.92 | 10.7 | 2.40 | 0.08 | 0.96 | 0.07 | 0.18 | 0.02 | 0.06 | 2.73 | 100.4 |
| 272: M10-935-02 | 80.5 | 0.43 | 13.7 | 1.05 | 1.36 | 0.06 | 0.04 | 0.02 | 0.07 | 0.41 | 0.02 | < 0.01 | 2.32 | 99.9 |
| 273: M96-28-01 | 45.3 | 13.7 | 11.2 | 4.22 | 11.8 | 2.04 | 0.54 | 1.05 | 0.08 | 0.26 | 0.04 | 0.05 | 9.43 | 99.7 |
| 274: M97-159-01 | 43.5 | 13.5 | 12.4 | 5.58 | 10.4 | 2.23 | 0.36 | 1.02 | 0.08 | 0.21 | 0.03 | 0.05 | 10.2 | 99.5 |
| 275: M97-159-02 | 44.0 | 14.2 | 11.9 | 4.91 | 10.7 | 2.60 | 0.49 | 1.07 | 0.09 | 0.25 | 0.04 | 0.05 | 9.60 | 100.0 |
| 276: M98-248-01 | 74.4 | 0.44 | 15.3 | 1.39 | 1.79 | 0.12 | 0.04 | 0.01 | 0.06 | 0.55 | 0.02 | < 0.01 | 4.22 | 98.3 |
| 277: M98-275-01 | 43.8 | 13.7 | 11.2 | 5.48 | 11.2 | 2.60 | 0.21 | 1.02 | 0.07 | 0.20 | 0.03 | 0.05 | 10.6 | 100.1 |
| 278: M98-275-02 | 46.2 | 13.6 | 10.6 | 4.92 | 11.5 | 1.88 | 0.13 | 0.94 | 0.06 | 0.25 | 0.04 | 0.06 | 9.41 | 99.7 |
| 279: W94-111-01 | 61.5 | 1.10 | 22.8 | 2.72 | 2.62 | 0.09 | 0.04 | 0.04 | 0.06 | 0.75 | 0.03 | < 0.01 | 6.07 | 97.9 |
| 280: W94-76-01 | 47.7 | 13.7 | 11.3 | 6.21 | 11.6 | 2.14 | 0.14 | 0.92 | 0.09 | 0.20 | 0.03 | 0.05 | 6.21 | 100.3 |
| 281: W94-76-02 | 47.2 | 14.8 | 12.2 | 8.08 | 8.89 | 2.06 | 0.12 | 0.88 | 0.08 | 0.27 | 0.05 | 0.05 | 5.47 | 100.1 |
| 282: W94-82-01 | 47.5 | 15.6 | 10.9 | 5.41 | 12.4 | 1.97 | 0.06 | 0.73 | 0.04 | 0.25 | 0.03 | 0.05 | 5.44 | 100.5 |
| 283: DS09GT-10-01 | 66.6 | 15.7 | 5.24 | 2.11 | 1.92 | 4.05 | 1.71 | 0.58 | 0.11 | 0.05 | 0.03 | 0.01 | 1.84 | 99.9 |
| 284: ML00-224-01 | 53.6 | 5.62 | 32.9 | 1.72 | 2.86 | 0.47 | 0.67 | 0.15 | 0.20 | 0.05 | 0.01 | < 0.01 | 0.93 | 99.2 |
| 285: ML08-225-01 | 54.6 | 7.69 | 29.5 | 1.68 | 2.61 | 1.59 | 1.24 | 0.15 | 0.18 | 0.05 | < 0.01 | < 0.01 | 0.42 | 99.7 |
| 286: ML08-225-02 | 62.2 | 18.0 | 6.38 | 2.83 | 1.61 | 3.21 | 2.83 | 0.66 | 0.12 | 0.05 | 0.02 | 0.02 | 2.43 | 100.4 |
| 287: ML08-225-03 | 47.4 | 5.36 | 39.5 | 1.52 | 3.00 | 0.56 | 0.50 | 0.14 | 0.22 | 0.06 | 0.01 | < 0.01 | 0.65 | 98.9 |
| 288: ML08-226-01 | 48.5 | 15.7 | 15.9 | 4.62 | 8.07 | 3.35 | 1.31 | 2.15 | 0.33 | 0.20 | < 0.01 | 0.05 | 0.70 | 100.8 |
| 289: ML08-226-02 | 50.5 | 3.54 | 41.0 | 1.66 | 2.30 | 0.78 | 0.44 | 0.08 | 0.22 | 0.05 | 0.02 | < 0.01 | -0.20 | 100.5 |
| 290: ML08-226-03 | 51.3 | 5.00 | 37.0 | 1.82 | 2.60 | 0.69 | 0.59 | 0.13 | 0.23 | 0.05 | 0.02 | < 0.01 | -0.14 | 99.3 |
| 291: ML08-226-04 | 64.7 | 4.64 | 24.2 | 1.35 | 1.54 | 0.38 | 0.39 | 0.10 | 0.13 | 0.03 | 0.03 | < 0.01 | 0.58 | 98.0 |
| 292: ML08-226-05 | 60.8 | 17.6 | 8.21 | 3.11 | 1.95 | 2.79 | 2.26 | 0.71 | 0.15 | 0.06 | 0.02 | 0.02 | 2.70 | 100.3 |
| 293: ML08-228-01 | 54.8 | 6.86 | 30.6 | 1.47 | 1.50 | 2.11 | 1.44 | 0.17 | 0.18 | 0.04 | 0.02 | < 0.01 | 0.73 | 100.0 |
| 294: ML08-228-02 | 49.7 | 2.27 | 44.6 | 1.46 | 2.33 | 0.16 | 0.21 | 0.05 | 0.22 | 0.06 | 0.01 | < 0.01 | -0.56 | 100.6 |
| 295: ML08-229-01 | 50.3 | 3.14 | 41.4 | 1.38 | 1.83 | 0.80 | 0.75 | 0.08 | 0.25 | 0.03 | 0.01 | < 0.01 | 0.37 | 100.4 |
| 296: ML08-229-02 | 48.7 | 15.4 | 15.8 | 3.78 | 8.65 | 3.07 | 1.11 | 2.50 | 0.39 | 0.20 | < 0.01 | 0.04 | 0.57 | 100.2 |
| 297: ML08-229-03 | 55.7 | 10.4 | 23.1 | 2.08 | 3.24 | 1.07 | 1.38 | 0.25 | 0.13 | 0.06 | < 0.01 | 0.01 | 1.66 | 99.1 |
| 298: ML08-229-04 | 64.7 | 15.5 | 7.45 | 2.65 | 1.79 | 2.51 | 2.14 | 0.56 | 0.13 | 0.06 | 0.03 | 0.01 | 2.27 | 99.9 |
| 299: ML08-229-05 | 52.4 | 4.89 | 35.0 | 2.04 | 3.34 | 0.70 | 0.52 | 0.12 | 0.15 | 0.06 | 0.01 | < 0.01 | 0.01 | 99.2 |
| 300: ML08-230-01 | 60.8 | 17.6 | 6.80 | 2.88 | 2.06 | 2.91 | 2.38 | 0.64 | 0.13 | 0.06 | 0.03 | 0.02 | 3.23 | 99.5 |
| 301: ML08-232-01 | 63.0 | 17.8 | 6.08 | 2.57 | 1.42 | 3.35 | 2.50 | 0.67 | 0.13 | 0.06 | 0.03 | 0.02 | 2.19 | 99.8 |
| 302: ML08-233-01 | 63.9 | 16.0 | 7.39 | 2.32 | 2.76 | 3.58 | 1.84 | 0.55 | 0.13 | 0.05 | 0.02 | 0.02 | 1.67 | 100.1 |
| 303: ML08-233-02 | 51.8 | 6.37 | 35.7 | 1.58 | 1.98 | 1.97 | 0.82 | 0.16 | 0.23 | 0.04 | < 0.01 | < 0.01 | -0.28 | 100.4 |
| 304: ML08-240-01 | 62.5 | 16.7 | 7.61 | 2.38 | 2.93 | 4.20 | 1.98 | 0.58 | 0.12 | 0.05 | 0.02 | 0.01 | 1.64 | 100.7 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 305: ML08-241-01 | 60.1 | 16.6 | 9.98 | 2.71 | 2.99 | 2.99 | 2.13 | 0.62 | 0.14 | 0.05 | 0.02 | 0.02 | 1.87 | 100.2 |
| 306: ML08-241-02 | 55.0 | 6.99 | 30.3 | 1.65 | 3.21 | 0.68 | 0.88 | 0.18 | 0.18 | 0.06 | 0.02 | < 0.01 | 1.21 | 100.4 |
| 307: ML08-241-03 | 45.1 | 15.9 | 16.4 | 3.69 | 7.56 | 3.45 | 2.27 | 2.94 | 0.50 | 0.20 | < 0.01 | 0.04 | 1.66 | 99.7 |
| 308: ML08-243-01 | 48.1 | 5.92 | 37.6 | 1.42 | 2.76 | 1.24 | 1.00 | 0.16 | 0.20 | 0.04 | 0.01 | < 0.01 | 0.96 | 99.4 |
| 309: ML08-243-02 | 48.8 | 15.7 | 15.5 | 2.88 | 8.23 | 3.72 | 1.02 | 2.67 | 0.58 | 0.20 | < 0.01 | 0.02 | 1.06 | 100.3 |
| 310: ML08-245-01 | 48.6 | 16.3 | 15.0 | 4.12 | 8.32 | 3.25 | 1.08 | 2.13 | 0.34 | 0.19 | 0.01 | 0.04 | 0.87 | 100.3 |
| 311: ML08-245-02 | 67.9 | 15.5 | 5.40 | 2.34 | 1.51 | 3.40 | 2.12 | 0.55 | 0.11 | 0.05 | 0.02 | 0.02 | 1.68 | 100.6 |
| 312: ML09-254-01 | 50.6 | 6.88 | 35.2 | 1.66 | 2.36 | 1.59 | 0.86 | 0.18 | 0.24 | 0.05 | < 0.01 | < 0.01 | 0.26 | 99.9 |
| 313: ML09-254-02 | 62.4 | 16.0 | 6.84 | 2.41 | 3.05 | 3.96 | 1.95 | 0.54 | 0.14 | 0.05 | 0.02 | < 0.01 | 2.09 | 99.5 |
| 314: ML09-256-01 | 68.1 | 14.3 | 5.70 | 2.63 | 1.71 | 2.46 | 2.02 | 0.54 | 0.11 | 0.05 | 0.03 | 0.02 | 2.26 | 99.9 |
| 315: ML09-259-01 | 49.3 | 15.5 | 15.4 | 3.70 | 8.31 | 3.05 | 1.22 | 2.44 | 0.36 | 0.19 | 0.01 | 0.04 | 0.50 | 100.1 |
| 316: ML92062-01 | 53.0 | 4.28 | 35.3 | 1.38 | 3.06 | 0.93 | 0.59 | 0.11 | 0.24 | 0.05 | 0.02 | < 0.01 | 0.19 | 99.2 |
| 317: ML95-104-01 | 50.6 | 14.1 | 15.9 | 2.91 | 8.39 | 2.85 | 1.21 | 2.26 | 0.51 | 0.18 | 0.01 | 0.03 | 0.74 | 99.7 |
| 318: ML95-104-02 | 60.5 | 6.19 | 27.2 | 1.56 | 2.10 | 1.00 | 0.59 | 0.18 | 0.16 | 0.04 | 0.02 | < 0.01 | 0.53 | 100.1 |
| 319: ML95-105-01 | 52.5 | 5.30 | 35.7 | 1.71 | 2.36 | 0.54 | 0.60 | 0.11 | 0.21 | 0.05 | 0.02 | < 0.01 | 0.79 | 99.9 |
| 320: ML95-105-02 | 48.0 | 14.8 | 14.9 | 3.05 | 8.30 | 3.23 | 1.85 | 2.55 | 0.47 | 0.20 | < 0.01 | 0.04 | 2.40 | 99.8 |
| 321: ML95-105-03 | 64.5 | 16.6 | 6.16 | 2.67 | 1.74 | 3.15 | 2.49 | 0.61 | 0.12 | 0.04 | 0.02 | 0.02 | 1.97 | 100.1 |
| 322: ML95-105-04 | 62.6 | 16.5 | 6.58 | 2.47 | 3.06 | 4.89 | 1.80 | 0.56 | 0.15 | 0.06 | 0.02 | 0.01 | 1.19 | 99.9 |
| 323: ML95-107-01 | 53.3 | 5.82 | 34.3 | 1.76 | 1.88 | 0.51 | 1.64 | 0.15 | 0.18 | 0.04 | 0.01 | < 0.01 | 0.42 | 100.0 |
| 324: ML95-107-02 | 54.9 | 9.05 | 24.9 | 1.86 | 3.12 | 1.16 | 1.89 | 0.22 | 0.18 | 0.06 | < 0.01 | < 0.01 | 1.94 | 99.3 |
| 325: ML95-107-03 | 62.8 | 17.6 | 6.78 | 2.88 | 1.63 | 2.92 | 2.65 | 0.66 | 0.12 | 0.05 | 0.03 | 0.03 | 2.11 | 100.3 |
| 326: ML95-113-01 | 63.6 | 18.0 | 5.67 | 2.66 | 1.20 | 2.94 | 2.69 | 0.62 | 0.11 | 0.05 | 0.02 | 0.01 | 2.49 | 100.0 |
| 327: ML95-113-02 | 61.5 | 16.4 | 7.95 | 2.43 | 3.32 | 3.16 | 2.11 | 0.59 | 0.15 | 0.06 | 0.02 | 0.02 | 1.86 | 99.6 |
| 328: ML95-117-01 | 51.5 | 6.28 | 35.1 | 1.63 | 2.31 | 0.99 | 0.78 | 0.18 | 0.17 | 0.05 | 0.01 | < 0.01 | 0.56 | 99.5 |
| 329: ML95-117-02 | 48.5 | 15.8 | 15.9 | 3.94 | 8.12 | 3.19 | 1.15 | 2.54 | 0.46 | 0.20 | < 0.01 | 0.05 | 0.72 | 100.6 |
| 330: ML95-117-03 | 60.3 | 9.72 | 20.4 | 1.87 | 3.17 | 1.49 | 0.92 | 0.33 | 0.15 | 0.05 | 0.02 | 0.01 | 1.34 | 99.7 |
| 331: ML95-120-01 | 64.4 | 16.8 | 5.81 | 2.55 | 1.39 | 3.62 | 2.13 | 0.62 | 0.12 | 0.05 | 0.02 | 0.02 | 2.41 | 100.0 |
| 332: ML95-82-01 | 56.4 | 7.54 | 27.9 | 1.88 | 2.44 | 0.87 | 0.94 | 0.20 | 0.19 | 0.05 | 0.01 | < 0.01 | 1.50 | 99.9 |
| 333: ML95-82-02 | 66.5 | 14.3 | 6.69 | 2.28 | 2.76 | 3.63 | 1.77 | 0.50 | 0.12 | 0.04 | 0.02 | 0.01 | 1.75 | 100.4 |
| 334: ML95-83-01 | 59.4 | 9.33 | 24.4 | 1.51 | 1.72 | 0.69 | 2.10 | 0.23 | 0.16 | 0.04 | 0.01 | < 0.01 | 0.62 | 100.2 |
| 335: ML95-83-02 | 65.5 | 15.3 | 7.31 | 2.43 | 2.32 | 3.27 | 2.21 | 0.51 | 0.14 | 0.03 | 0.02 | 0.02 | 1.48 | 100.6 |
| 336: ML95-84-01 | 58.8 | 6.20 | 27.8 | 1.49 | 2.29 | 0.89 | 0.69 | 0.17 | 0.17 | 0.04 | 0.02 | < 0.01 | 1.00 | 99.6 |
| 337: ML95-85-01 | 63.9 | 16.4 | 7.04 | 2.32 | 2.82 | 3.87 | 2.13 | 0.53 | 0.15 | 0.04 | 0.02 | 0.02 | 1.97 | 101.2 |
| 338: ML95-88-01 | 61.1 | 18.4 | 6.27 | 3.01 | 1.93 | 2.97 | 2.58 | 0.66 | 0.12 | 0.06 | 0.02 | 0.02 | 3.07 | 100.2 |
| 339: ML95-88-02 | 55.9 | 14.5 | 9.17 | 5.25 | 7.26 | 3.83 | 0.63 | 0.73 | 0.17 | 0.14 | 0.01 | 0.03 | 2.20 | 99.8 |

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**LR Report :** **CA10515-JUL11**

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 340: ML95-95-01 | 52.2 | 7.01 | 31.5 | 1.79 | 3.70 | 0.80 | 1.20 | 0.18 | 0.14 | 0.06 | 0.02 | 0.02 | 0.76 | 99.4 |
| 341: ML95-95-02 | 62.1 | 17.1 | 8.05 | 2.53 | 2.12 | 3.67 | 2.22 | 0.60 | 0.12 | 0.05 | 0.02 | 0.02 | 1.85 | 100.4 |
| 342: ML95-98-01 | 54.7 | 5.40 | 33.9 | 1.60 | 2.18 | 1.42 | 0.68 | 0.11 | 0.19 | 0.04 | 0.02 | < 0.01 | 0.46 | 100.7 |
| 343: ML97-186-01 | 54.9 | 5.56 | 31.7 | 1.59 | 2.27 | 0.89 | 1.01 | 0.13 | 0.16 | 0.03 | 0.02 | < 0.01 | 1.18 | 99.4 |
| 344: ML97-186-02 | 48.4 | 16.2 | 14.8 | 3.79 | 8.70 | 3.35 | 1.05 | 2.12 | 0.38 | 0.19 | < 0.01 | 0.04 | 0.97 | 100.0 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

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**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Wednesday, September 14, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10516-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 08-Sep-11 | 14-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 14-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 14-Sep-11 | 14-Sep-11 | 14-Sep-11 | 13-Sep-11 | 14-Sep-11 |
| 4: Analysis Approval Time | 09:14 | 14:58 | 15:39 | 15:39 | 15:39 | 15:39 | 15:39 | 14:58 | 15:39 | 15:39 | 15:39 | 14:58 | 14:58 | 14:58 | 15:39 | 14:58 |
| 5: M10-968-01 | < 0.1 | 90000 | 140 | 0.14 | 600 | 1.1 | 0.28 | 11000 | 0.30 | 22 | 170 | 52 | 44000 | 27000 | 37 | 16000 |
| 6: M10-968-02 | < 0.1 | 88000 | 49 | 0.12 | 650 | 1.1 | 0.17 | 10000 | 0.28 | 20 | 150 | 49 | 43000 | 27000 | 37 | 16000 |
| 7: M10-968-03 | < 0.1 | 85000 | 36 | 0.11 | 580 | 1.1 | 0.19 | 10000 | 0.24 | 17 | 160 | 36 | 48000 | 27000 | 34 | 14000 |
| 8: M10-970-01 | < 0.1 | 23000 | 850 | 0.26 | 53 | 0.44 | < 0.09 | 54000 | 0.13 | 3.3 | 100 | 3.2 | 200000 | 1900 | 6 | 6000 |
| 9: M10-972A-01 | < 0.1 | 79000 | 44 | 0.11 | 680 | 0.95 | < 0.09 | 12000 | 0.30 | 16 | 170 | 42 | 35000 | 23000 | 26 | 13000 |
| 10: M10-972A-02 | < 0.1 | 76000 | 25 | 0.10 | 580 | 1.0 | 0.09 | 11000 | 0.32 | 17 | 160 | 52 | 36000 | 21000 | 31 | 13000 |
| 11: M10-972A-03 | < 0.1 | 23000 | 78 | 0.09 | 190 | 0.83 | < 0.09 | 29000 | 0.08 | 3.4 | 120 | 1.8 | 200000 | 5400 | 8 | 6300 |
| 12: M10-972A-04 | < 0.1 | 46000 | 6.6 | 0.13 | 50 | 0.25 | < 0.09 | 76000 | 0.10 | 43 | 180 | 110 | 81000 | 2400 | 65 | 28000 |
| 13: M10-976-01 | < 0.1 | 76000 | 13 | 0.15 | 580 | 0.94 | 0.16 | 18000 | 0.33 | 17 | 180 | 36 | 35000 | 20000 | 30 | 12000 |
| 14: M10-976-02 | < 0.1 | 88000 | 33 | 0.09 | 670 | 1.2 | < 0.09 | 8400 | 0.25 | 16 | 150 | 44 | 49000 | 30000 | 42 | 16000 |
| 15: M10-976-03 | < 0.1 | 27000 | 1200 | 1.8 | 270 | 0.70 | < 0.09 | 48000 | 0.13 | 3.9 | 110 | 2.4 | 170000 | 7300 | 13 | 6500 |
| 16: M10-976-04 | < 0.1 | 34000 | 1500 | 11 | 210 | 0.76 | < 0.09 | 32000 | 0.16 | 4.6 | 93 | 5.2 | 200000 | 5200 | 13 | 8200 |
| 17: M10-977-01 | < 0.1 | 80000 | 31 | 0.21 | 620 | 1.0 | 0.12 | 11000 | 0.31 | 19 | 170 | 53 | 39000 | 22000 | 36 | 14000 |
| 18: M10-977-02 | < 0.1 | 35000 | 3500 | 0.29 | 280 | 0.88 | 0.11 | 31000 | 0.17 | 5.1 | 100 | 4.6 | 180000 | 12000 | 23 | 7400 |
| 19: M10-986-01 | < 0.1 | 35000 | 240 | 0.25 | 260 | 0.95 | < 0.09 | 35000 | 0.12 | 4.2 | 94 | 5.2 | 210000 | 8100 | 16 | 7300 |
| 20: M10-986-02 | < 0.1 | 49000 | 13 | 0.12 | 12 | 0.25 | < 0.09 | 79000 | 0.14 | 42 | 200 | 110 | 84000 | 1700 | 72 | 21000 |
| 21: M10-993-01 | < 0.1 | 84000 | 29 | 0.09 | 560 | 0.93 | < 0.09 | 11000 | 0.29 | 18 | 170 | 42 | 39000 | 22000 | 35 | 15000 |
| 22: M10-993-02 | < 0.1 | 84000 | 23 | 0.09 | 660 | 1.1 | < 0.09 | 13000 | 0.28 | 17 | 160 | 52 | 40000 | 25000 | 35 | 14000 |
| 23: M10-993-03 | < 0.1 | 83000 | 53 | 0.05 | 580 | 0.98 | 0.12 | 16000 | 0.29 | 21 | 150 | 40 | 48000 | 23000 | 35 | 15000 |
| 24: M10-993-04 | < 0.1 | 44000 | 5.6 | 0.04 | 17 | 0.24 | < 0.09 | 80000 | 0.09 | 39 | 210 | 97 | 81000 | 1100 | 52 | 30000 |
| 25: M96-16-01 | < 0.1 | 76000 | 30 | 0.06 | 120 | 0.25 | < 0.09 | 81000 | 0.17 | 47 | 160 | 140 | 88000 | 14000 | 19 | 26000 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26: M96-61-01 | < 0.1 | 35000 | 38 | 0.04 | 140 | 0.42 | 0.66 | 73000 | 0.87 | 47 | 330 | 250 | 82000 | 5500 | 29 | 30000 |
| 27: M96-61-02 | < 0.1 | 42000 | 20 | 0.05 | 99 | 0.51 | < 0.09 | 75000 | 0.21 | 35 | 160 | 110 | 81000 | 8000 | 24 | 27000 |
| 28: M96-61-03 | < 0.1 | 26000 | 340 | 0.06 | 32 | 0.40 | 0.10 | 27000 | 1.8 | 23 | 120 | 220 | 250000 | 900 | 5 | 14000 |
| 29: M98-234-01 | < 0.1 | 86000 | 120 | 0.04 | 710 | 1.2 | 0.10 | 10000 | 0.36 | 17 | 180 | 50 | 44000 | 30000 | 33 | 15000 |
| 30: M98-234-02 | < 0.1 | 73000 | 31 | 0.04 | 590 | 0.98 | 0.09 | 16000 | 0.30 | 17 | 150 | 43 | 44000 | 19000 | 31 | 14000 |
| 31: M98-238-01 | < 0.1 | 75000 | 44 | 0.04 | 410 | 0.75 | < 0.09 | 22000 | 0.27 | 28 | 110 | 62 | 64000 | 14000 | 37 | 20000 |
| 32: M98-238-02 | < 0.1 | 73000 | 7.4 | 0.05 | 190 | 0.48 | 0.11 | 44000 | 0.18 | 30 | 130 | 91 | 80000 | 6100 | 28 | 27000 |
| 33: M98-284-01 | < 0.1 | 75000 | 30 | 0.04 | 470 | 0.77 | 0.15 | 22000 | 0.25 | 23 | 140 | 62 | 62000 | 18000 | 45 | 18000 |
| 34: M98-284-02 | < 0.1 | 36000 | 74 | 0.10 | 72 | 0.53 | < 0.09 | 25000 | 0.16 | 5.3 | 110 | 1.0 | 270000 | 1500 | 16 | 10000 |
| 35: M98-286-01 | < 0.1 | 97000 | 80 | 0.04 | 860 | 1.2 | < 0.09 | 14000 | 0.35 | 22 | 170 | 83 | 56000 | 32000 | 43 | 19000 |
| 36: M98-329-01 | < 0.1 | 45000 | 270 | 0.06 | 110 | 0.55 | < 0.09 | 80000 | 0.50 | 45 | 530 | 89 | 78000 | 5500 | 26 | 38000 |
| 37: M98-331-01 | < 0.1 | 85000 | 7.0 | 0.04 | 640 | 0.96 | 0.12 | 14000 | 0.27 | 20 | 160 | 33 | 43000 | 25000 | 35 | 16000 |
| 38: M98-333-01 | < 0.1 | 89000 | 61 | 0.03 | 560 | 0.94 | 0.69 | 12000 | 0.37 | 17 | 160 | 49 | 45000 | 24000 | 38 | 18000 |
| 39: M98-337-01 | < 0.1 | 42000 | 16 | 0.05 | 89 | 0.50 | < 0.09 | 81000 | 0.18 | 42 | 410 | 130 | 74000 | 12000 | 27 | 33000 |
| 40: M04-519-01 | < 0.1 | 50000 | 4.8 | 0.04 | 70 | 0.30 | < 0.09 | 82000 | 0.13 | 40 | 150 | 82 | 74000 | 6500 | 50 | 35000 |
| 41: M04-519-02 | < 0.1 | 52000 | 39 | 0.06 | 110 | 0.33 | < 0.09 | 59000 | 0.12 | 39 | 180 | 75 | 75000 | 8600 | 40 | 36000 |
| 42: M04-519-03 | < 0.1 | 47000 | 70 | 0.17 | 77 | 0.46 | < 0.09 | 83000 | 0.19 | 47 | 300 | 150 | 85000 | 7000 | 24 | 38000 |
| 43: M04-519-04 | < 0.1 | 55000 | 43 | 0.08 | 72 | 0.44 | < 0.09 | 56000 | 0.19 | 37 | 94 | 79 | 93000 | 4700 | 26 | 22000 |
| 44: M10-981-01 | < 0.1 | 61000 | 5.3 | 0.07 | 180 | 0.66 | < 0.09 | 61000 | 0.28 | 37 | 80 | 130 | 98000 | 4100 | 24 | 30000 |
| 45: M10-981-02 | < 0.1 | 69000 | 3.2 | 0.07 | 150 | 0.45 | < 0.09 | 66000 | 0.20 | 36 | 180 | 130 | 95000 | 5500 | 31 | 30000 |
| 46: M10-981-03 | < 0.1 | 44000 | 21 | 0.06 | 290 | 0.77 | < 0.09 | 60000 | 0.44 | 40 | 72 | 170 | 96000 | 5600 | 33 | 24000 |
| 47: M10-981-04 | < 0.1 | 64000 | 5.7 | 0.07 | 220 | 0.37 | < 0.09 | 70000 | 0.20 | 42 | 220 | 110 | 82000 | 4500 | 27 | 29000 |
| 48: M10-985-01 | < 0.1 | 90000 | 22 | 0.04 | 680 | 0.90 | < 0.09 | 15000 | 0.31 | 18 | 160 | 53 | 42000 | 21000 | 34 | 15000 |
| 49: M10-985-02 | < 0.1 | 80000 | 22 | 0.04 | 490 | 0.92 | < 0.09 | 23000 | 0.24 | 21 | 130 | 21 | 90000 | 18600 | 39 | 20000 |
| 50: M10-987-01 | < 0.1 | 39000 | 190 | 0.05 | 49 | 0.26 | < 0.09 | 74000 | 0.18 | 48 | 310 | 130 | 79000 | 1500 | 33 | 34000 |
| 51: M10-987-02 | < 0.1 | 66000 | 150 | 0.04 | 120 | 0.35 | < 0.09 | 70000 | 0.19 | 37 | 240 | 110 | 84000 | 8300 | 37 | 38000 |
| 52: M10-987-03 | < 0.1 | 26000 | 170 | 0.06 | 9.0 | 0.75 | < 0.09 | 31000 | 0.13 | 100 | 1900 | 45 | 110000 | 130 | 15 | 132000 |
| 53: M10-987-04 | < 0.1 | 51000 | 34 | 0.05 | 20 | 0.38 | < 0.09 | 74000 | 0.18 | 37 | 200 | 87 | 110000 | 860 | 30 | 28000 |
| 54: M10-988-01 | < 0.1 | 28000 | 24 | 0.04 | 11 | 0.34 | < 0.09 | 57000 | 0.15 | 47 | 260 | 150 | 93000 | 620 | 34 | 29000 |
| 55: M10-988-02 | < 0.1 | 64000 | 35 | 0.07 | 29 | 0.43 | < 0.09 | 82000 | 0.20 | 37 | 140 | 130 | 88000 | 1200 | 32 | 27000 |
| 56: M10-988-03 | < 0.1 | 57000 | 15 | 0.04 | 4.5 | 0.29 | < 0.09 | 85000 | 0.10 | 40 | 230 | 100 | 83000 | 320 | 28 | 30000 |
| 57: M10-992-01 | < 0.1 | 67000 | 12 | 0.07 | 8.9 | 0.17 | < 0.09 | 83000 | 0.06 | 45 | 190 | 110 | 80000 | 940 | 29 | 29000 |
| 58: M10-992-02 | < 0.1 | 73000 | 22 | 0.06 | 14 | 0.23 | < 0.09 | 83000 | 0.10 | 42 | 170 | 96 | 79000 | 1300 | 37 | 28000 |
| 59: M10-992-03 | < 0.1 | 33000 | 11 | 0.03 | 41 | 0.29 | < 0.09 | 64000 | 0.11 | 45 | 230 | 55 | 63000 | 3800 | 58 | 32000 |
| 60: M10-992-04 | < 0.1 | 36000 | 37 | 0.04 | 7.1 | 0.30 | < 0.09 | 84000 | 0.13 | 48 | 310 | 180 | 94000 | 230 | 26 | 38000 |
| 61: M10-992-05 | < 0.1 | 65000 | 40 | 0.06 | 33 | 0.43 | < 0.09 | 68000 | 0.22 | 36 | 110 | 150 | 95000 | 2400 | 28 | 30000 |
| 62: M10-994-01 | < 0.1 | 53000 | 17 | 0.05 | 3.3 | 0.22 | < 0.09 | 78000 | 0.17 | 45 | 390 | 120 | 93000 | 220 | 29 | 49000 |
| 63: M10-994-02 | < 0.1 | 69000 | 61 | 0.04 | 170 | 0.59 | < 0.09 | 61000 | 0.23 | 43 | 110 | 84 | 92000 | 7200 | 31 | 30000 |
| 64: M10-994-03 | < 0.1 | 68000 | 44 | 0.10 | 87 | 0.44 | < 0.09 | 80000 | 0.14 | 35 | 180 | 79 | 82000 | 8000 | 33 | 32000 |
| 65: M10-994-04 | < 0.1 | 71000 | 32 | 0.09 | 31 | 0.26 | < 0.09 | 69000 | 0.14 | 45 | 210 | 90 | 84000 | 1700 | 27 | 43000 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66: M10-994-05 | < 0.1 | 66000 | 16 | 0.07 | 100 | 0.31 | < 0.09 | 74000 | 0.13 | 37 | 260 | 48 | 67000 | 6300 | 42 | 40000 |
| 67: M10-998-01 | < 0.1 | 67000 | 24 | 0.06 | 12 | 0.35 | < 0.09 | 63000 | 0.16 | 42 | 170 | 99 | 92000 | 740 | 29 | 33000 |
| 68: M10-998-02 | < 0.1 | 62000 | 13 | 0.10 | 160 | 0.60 | < 0.09 | 59000 | 0.39 | 40 | 64 | 140 | 100000 | 6400 | 31 | 31000 |
| 69: M10-998-03 | < 0.1 | 78000 | 28 | 0.05 | 180 | 0.56 | < 0.09 | 64000 | 0.28 | 46 | 210 | 110 | 81000 | 12000 | 42 | 36000 |
| 70: M10-998-04 | < 0.1 | 60000 | 9.1 | 0.05 | 100 | 0.39 | < 0.09 | 71000 | 0.20 | 38 | 260 | 100 | 75000 | 4700 | 43 | 28000 |
| 71: M10-998-05 | < 0.1 | 33000 | 210 | 0.04 | 9.9 | 0.25 | < 0.09 | 78000 | 0.23 | 63 | 1100 | 31 | 72000 | 360 | 23 | 70000 |
| 72: M11-1042-01 | < 0.1 | 65000 | 66 | 0.06 | 190 | 0.40 | < 0.09 | 61000 | 0.18 | 40 | 190 | 75 | 83000 | 9700 | 43 | 39000 |
| 73: M11-1042-02 | < 0.1 | 57000 | 730 | 0.08 | 1300 | 1.9 | < 0.09 | 46000 | 0.42 | 82 | 540 | 320 | 87000 | 11000 | 33 | 54000 |
| 74: M11-1042-03 | < 0.1 | 31000 | 70 | 0.05 | 31 | 0.53 | < 0.09 | 42000 | 0.23 | 77 | 960 | 54 | 86000 | 720 | 24 | 82000 |
| 75: M11-1051-01 | < 0.1 | 60000 | 190 | 0.05 | 230 | 0.46 | < 0.09 | 59000 | 0.20 | 39 | 210 | 77 | 68000 | 13000 | 29 | 36000 |
| 76: M11-1051-02 | < 0.1 | 46000 | 200 | 0.05 | 68 | 0.49 | < 0.09 | 63000 | 0.18 | 76 | 990 | 75 | 88000 | 2100 | 21 | 73000 |
| 77: M11-1099-01 | < 0.1 | 74000 | 73 | 0.10 | 300 | 0.66 | 0.39 | 62000 | 0.37 | 39 | 270 | 150 | 130000 | 14000 | 35 | 40000 |
| 78: M11-1099-02 | < 0.1 | 80000 | 39 | 0.06 | 110 | 0.45 | < 0.09 | 96000 | 0.18 | 46 | 280 | 150 | 96000 | 1300 | 26 | 39000 |
| 79: M11-1099-03 | < 0.1 | 62000 | 8.1 | 0.06 | 62 | 0.55 | < 0.09 | 60000 | 0.53 | 37 | 170 | 59 | 86000 | 3200 | 41 | 32000 |
| 80: M95-11-01 | < 0.1 | 58000 | 19 | 0.12 | 99 | 0.48 | < 0.09 | 83000 | 0.35 | 34 | 150 | 110 | 83000 | 3200 | 34 | 26000 |
| 81: M95-12-01 | < 0.1 | 62000 | 18 | 0.06 | 140 | 0.69 | < 0.09 | 69000 | 0.43 | 36 | 130 | 48 | 86000 | 6600 | 33 | 25000 |
| 82: M95-22-01 | < 0.1 | 64000 | 25 | 0.04 | 510 | 0.43 | < 0.09 | 85000 | 0.24 | 43 | 270 | 97 | 76000 | 5800 | 41 | 33000 |
| 83: M95-22-02 | < 0.1 | 66000 | 4.2 | 0.04 | 140 | 0.42 | < 0.09 | 66000 | 0.19 | 43 | 240 | 95 | 80000 | 3900 | 39 | 35000 |
| 84: M96-50-01 | < 0.1 | 75000 | 24 | 0.04 | 30 | 0.25 | < 0.09 | 75000 | 0.12 | 46 | 160 | 67 | 85000 | 1400 | 20 | 30000 |
| 85: M96-51-01 | < 0.1 | 54000 | 40 | 0.13 | 120 | 0.51 | < 0.09 | 75000 | 0.16 | 43 | 290 | 97 | 70000 | 8300 | 26 | 39000 |
| 86: M96-51-02 | < 0.1 | 64000 | 66 | 0.09 | 87 | 0.49 | < 0.09 | 55000 | 0.29 | 43 | 68 | 190 | 89000 | 3800 | 33 | 32000 |
| 87: M96-51-03 | < 0.1 | 67000 | 370 | 0.06 | 98 | 0.40 | < 0.09 | 76000 | 0.18 | 45 | 210 | 79 | 79000 | 6900 | 41 | 33000 |
| 88: M97-111-01 | < 0.1 | 66000 | 21 | 0.06 | 110 | 0.19 | < 0.09 | 92000 | 0.14 | 45 | 140 | 130 | 73000 | 5800 | 28 | 30000 |
| 89: M97-111-02 | < 0.1 | 59000 | 14 | 0.13 | 79 | 0.22 | < 0.09 | 71000 | 0.20 | 43 | 130 | 130 | 75000 | 4500 | 42 | 39000 |
| 90: M97-111-03 | < 0.1 | 51000 | 12 | 0.05 | 13 | 0.23 | < 0.09 | 65000 | 0.18 | 47 | 270 | 110 | 98000 | 350 | 30 | 43000 |
| 91: M97-111-04 | < 0.1 | 64000 | 6.1 | 0.06 | 65 | 0.25 | < 0.09 | 63000 | 0.16 | 43 | 300 | 99 | 80000 | 1900 | 42 | 41000 |
| 92: M97-176-01 | < 0.1 | 55000 | 18 | 0.09 | 25 | 0.25 | < 0.09 | 85000 | 0.21 | 50 | 330 | 180 | 100000 | 780 | 35 | 48000 |
| 93: M97-176-02 | < 0.1 | 70000 | 4.9 | 0.06 | 40 | 0.23 | < 0.09 | 65000 | 0.11 | 41 | 180 | 55 | 79000 | 2400 | 41 | 39000 |
| 94: M97-176-03 | < 0.1 | 60000 | 21 | 0.05 | 74 | 0.32 | < 0.09 | 77000 | 0.21 | 37 | 120 | 83 | 89000 | 6000 | 31 | 28000 |
| 95: M98-222-01 | < 0.1 | 65000 | 51 | 0.06 | 170 | 0.50 | < 0.09 | 70000 | 0.42 | 39 | 140 | 80 | 85000 | 12000 | 26 | 25000 |
| 96: M98-222-02 | < 0.1 | 63000 | 7.9 | 0.06 | 150 | 0.36 | < 0.09 | 78000 | 0.23 | 40 | 220 | 95 | 78000 | 5900 | 29 | 26000 |
| 97: M98-222-03 | < 0.1 | 66000 | 8.7 | 0.07 | 87 | 0.36 | < 0.09 | 73000 | 0.20 | 41 | 190 | 130 | 77000 | 2700 | 32 | 34000 |
| 98: M98-223-01 | < 0.1 | 64000 | 150 | 0.08 | 43 | 0.31 | < 0.09 | 87000 | 0.13 | 44 | 270 | 110 | 78000 | 3200 | 33 | 33000 |
| 99: M98-223-02 | < 0.1 | 52000 | 8.3 | 0.46 | 140 | 0.53 | < 0.09 | 66000 | 0.28 | 37 | 130 | 330 | 89000 | 8900 | 25 | 31000 |
| 100: M98-223-03 | < 0.1 | 54000 | 10.0 | 0.17 | 79 | 0.37 | < 0.09 | 54000 | 0.34 | 31 | 100 | 130 | 100000 | 3800 | 26 | 27000 |
| 101: W94-48-01 | < 0.1 | 56000 | 12 | 0.07 | 25 | 0.49 | < 0.09 | 65000 | 0.14 | 42 | 160 | 120 | 90000 | 920 | 20 | 27000 |
| 102: M96-58-01 | < 0.1 | 76000 | 16 | 0.05 | 76 | 0.26 | < 0.09 | 62000 | 0.26 | 46 | 220 | 72 | 80000 | 3400 | 39 | 29000 |
| 103: M96-58-02 | < 0.1 | 66000 | 230 | 0.06 | 75 | 0.31 | < 0.09 | 64000 | 0.16 | 45 | 180 | 64 | 91000 | 3300 | 46 | 37000 |
| 104: M96-58-03 | < 0.1 | 69000 | 25 | 0.06 | 53 | 0.17 | < 0.09 | 76000 | 0.17 | 45 | 200 | 120 | 79000 | 3000 | 33 | 30000 |
| 105: M97-120-01 | < 0.1 | 62000 | 21 | 0.05 | 17 | 0.23 | < 0.09 | 75000 | 0.19 | 41 | 200 | 93 | 72000 | 1900 | 44 | 34000 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106: M97-120-02 | < 0.1 | 61000 | 24 | 0.06 | 58 | 0.32 | < 0.09 | 87000 | 0.18 | 50 | 300 | 130 | 95000 | 6300 | 19 | 36000 |
| 107: M97-122-01 | < 0.1 | 70000 | 3.9 | 0.04 | 28 | 0.14 | < 0.09 | 72000 | 0.26 | 45 | 220 | 110 | 79000 | 680 | 19 | 40000 |
| 108: M97-122-02 | < 0.1 | 76000 | 1.8 | 0.04 | 170 | 0.57 | < 0.09 | 77000 | 0.34 | 15 | 85 | 45 | 33000 | 11000 | 24 | 15000 |
| 109: M97-122-03 | < 0.1 | 64000 | 110 | 0.03 | 90 | 0.48 | < 0.09 | 61000 | 0.34 | 42 | 180 | 86 | 87000 | 5700 | 36 | 30000 |
| 110: M97-122-04 | < 0.1 | 42000 | 480 | 0.88 | 120 | 0.41 | < 0.09 | 24000 | 0.78 | 32 | 140 | 84 | 160000 | 4100 | 36 | 34000 |
| 111: M97-122-05 | < 0.1 | 71000 | 5.7 | 0.04 | 37 | 0.36 | < 0.09 | 62000 | 0.18 | 38 | 210 | 82 | 76000 | 3600 | 36 | 27000 |
| 112: M97-123-01 | < 0.1 | 77000 | 20 | 0.03 | 200 | 0.57 | < 0.09 | 64000 | 0.37 | 14 | 70 | 28 | 38000 | 14000 | 25 | 14000 |
| 113: M97-123-02 | < 0.1 | 75000 | 2.8 | 0.04 | 230 | 0.51 | < 0.09 | 78000 | 0.31 | 18 | 83 | 42 | 45000 | 13000 | 28 | 19000 |
| 114: M97-123-03 | < 0.1 | 59000 | 35 | 0.04 | 67 | 0.26 | < 0.09 | 91000 | 0.16 | 39 | 260 | 100 | 72000 | 2800 | 39 | 31000 |
| 115: M97-123-04 | < 0.1 | 65000 | 23 | 0.04 | 66 | 0.38 | < 0.09 | 67000 | 0.22 | 40 | 170 | 89 | 85000 | 5000 | 38 | 34000 |
| 116: M97-124-01 | < 0.1 | 63000 | 14 | 0.03 | 60 | 0.26 | < 0.09 | 61000 | 0.37 | 40 | 170 | 100 | 72000 | 4400 | 36 | 29000 |
| 117: M97-124-02 | < 0.1 | 88000 | 33 | 0.04 | 98 | 0.48 | < 0.09 | 26000 | 0.23 | 54 | 240 | 60 | 100000 | 6000 | 60 | 42000 |
| 118: M97-124-03 | < 0.1 | 12000 | 60 | 0.03 | 9.8 | 0.28 | 0.20 | 26000 | 1.6 | 21 | 120 | 420 | 180000 | 360 | 6 | 12000 |
| 119: M97-124-04 | < 0.1 | 67000 | 37 | 0.03 | 130 | 0.46 | < 0.09 | 51000 | 0.21 | 38 | 93 | 110 | 92000 | 6300 | 33 | 37000 |
| 120: M97-153-01 | < 0.1 | 79000 | 230 | 0.04 | 220 | 0.52 | < 0.09 | 88000 | 0.53 | 42 | 300 | 110 | 89000 | 8300 | 53 | 54000 |
| 121: M97-153-02 | < 0.1 | 59000 | 150 | 0.03 | 93 | 0.34 | < 0.09 | 87000 | 0.21 | 38 | 210 | 84 | 67000 | 7700 | 30 | 29000 |
| 122: M97-154-01 | < 0.1 | 66000 | 56 | 0.04 | 82 | 0.46 | < 0.09 | 66000 | 0.26 | 43 | 140 | 94 | 83000 | 7900 | 38 | 33000 |
| 123: M98-181-01 | < 0.1 | 68000 | 4.0 | 0.04 | 67 | 0.26 | < 0.09 | 80000 | 0.10 | 39 | 200 | 96 | 77000 | 4700 | 45 | 37000 |
| 124: M98-181-02 | < 0.1 | 64000 | 5.8 | 0.04 | 56 | 0.18 | < 0.09 | 70000 | 0.23 | 41 | 47 | 95 | 82000 | 2000 | 51 | 32000 |
| 125: M98-184-01 | < 0.1 | 68000 | 4.1 | 0.03 | 190 | 0.47 | < 0.09 | 70000 | 0.28 | 22 | 120 | 45 | 49000 | 10000 | 32 | 24000 |
| 126: M98-184-02 | < 0.1 | 65000 | 49 | 0.04 | 84 | 0.39 | < 0.09 | 69000 | 0.29 | 37 | 160 | 92 | 71000 | 6300 | 27 | 33000 |
| 127: M98-185-01 | < 0.1 | 75000 | 69 | 0.04 | 120 | 0.23 | < 0.09 | 72000 | 0.23 | 45 | 200 | 63 | 76000 | 4900 | 37 | 30000 |
| 128: M98-185-02 | < 0.1 | 75000 | 14 | 0.12 | 63 | 0.18 | < 0.09 | 77000 | 0.21 | 44 | 210 | 110 | 78000 | 1900 | 25 | 30000 |
| 129: M98-185-03 | < 0.1 | 57000 | 2.9 | 0.11 | 17 | 0.26 | < 0.09 | 79000 | 0.12 | 43 | 200 | 100 | 84000 | 710 | 29 | 34000 |
| 130: W94-49-01 | < 0.1 | 68000 | 3.9 | 0.09 | 93 | 0.47 | < 0.09 | 59000 | 0.32 | 36 | 180 | 50 | 78000 | 2400 | 37 | 35000 |
| 131: W94-49-02 | < 0.1 | 15000 | 72 | 0.10 | 12 | 0.43 | 0.94 | 4400 | 2.0 | 42 | 230 | 440 | 180000 | 250 | 3 | 10000 |
| 132: W94-49-03 | < 0.1 | 45000 | 10.0 | 0.08 | 44 | 0.26 | < 0.09 | 53000 | 0.33 | 48 | 84 | 100 | 88000 | 1500 | 42 | 39000 |
| 133: W94-53-01 | < 0.1 | 89000 | 30 | 0.07 | 630 | 0.97 | < 0.09 | 16000 | 0.32 | 18 | 140 | 40 | 52000 | 26000 | 42 | 16000 |
| 134: W94-55-01 | < 0.1 | 15000 | 81 | 0.07 | 30 | 0.58 | < 0.09 | 43000 | 0.73 | 17 | 99 | 170 | 170000 | 460 | 5 | 18000 |
| 135: W94-55-02 | < 0.1 | 62000 | 27 | 0.10 | 150 | 0.49 | < 0.09 | 76000 | 0.22 | 45 | 180 | 94 | 88000 | 9300 | 45 | 29000 |
| 136: W94-57-01 | < 0.1 | 65000 | 85 | 0.08 | 190 | 0.71 | 0.22 | 63000 | 0.24 | 54 | 310 | 85 | 89000 | 12000 | 52 | 39000 |
| 137: W94-57-02 | < 0.1 | 23000 | 220 | 0.14 | 12 | 0.50 | < 0.09 | 22000 | 1.1 | 26 | 120 | 260 | 150000 | 610 | 11 | 13000 |
| 138: W94-57-03 | < 0.1 | 14000 | 110 | 0.12 | 1.3 | 0.39 | 0.29 | 35000 | 3.3 | 26 | 130 | 670 | 170000 | 66 | 3 | 13000 |
| 139: W94-59-01 | < 0.1 | 69000 | 25 | 0.07 | 22 | 0.25 | < 0.09 | 65000 | 0.16 | 49 | 220 | 120 | 84000 | 760 | 32 | 37000 |
| 140: W94-61-01 | < 0.1 | 9500 | 130 | 0.06 | 1.1 | 0.32 | 0.26 | 14000 | 0.32 | 22 | 120 | 190 | 230000 | 43 | 3 | 11000 |
| 141: W94-61-02 | < 0.1 | 59000 | 12 | 0.06 | 52 | 0.24 | < 0.09 | 61000 | 0.14 | 55 | 110 | 98 | 86000 | 2000 | 30 | 41000 |
| 142: W94-65-01 | < 0.1 | 13000 | 10000 | 1.3 | 10.0 | 0.40 | 0.70 | 15000 | 5.4 | 66 | 110 | 650 | 200000 | 96 | 3 | 14000 |
| 143: W94-65-02 | < 0.1 | 5900 | 4500 | 0.44 | 2.5 | 0.23 | 0.31 | 37000 | 2.5 | 29 | 150 | 260 | 150000 | 68 | < 2 | 11000 |
| 144: W94-65-03 | < 0.1 | 64000 | 93 | 0.06 | 15 | 0.35 | < 0.09 | 74000 | 0.17 | 48 | 200 | 120 | 92000 | 490 | 32 | 34000 |
| 145: W94-70-01 | < 0.1 | 66000 | 29 | 0.06 | 41 | 0.24 | < 0.09 | 75000 | 0.10 | 44 | 200 | 96 | 75000 | 1600 | 36 | 32000 |

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**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 146: W94-70-02 | < 0.1 | 59000 | 7.9 | 0.05 | 6.1 | 0.33 | < 0.09 | 78000 | 0.13 | 43 | 170 | 110 | 82000 | 360 | 47 | 34000 |
| 147: W94-73-01 | < 0.1 | 66000 | 17 | 0.06 | 23 | 0.32 | < 0.09 | 92000 | 0.12 | 46 | 200 | 110 | 77000 | 760 | 34 | 34000 |
| 148: W94-73-02 | < 0.1 | 12000 | 96 | 0.06 | 2.4 | 0.45 | 0.15 | 22000 | 1.2 | 17 | 130 | 100 | 160000 | 130 | 8 | 15000 |
| 149: W94-73-03 | < 0.1 | 66000 | 6.6 | 0.05 | 37 | 0.29 | < 0.09 | 74000 | 0.20 | 41 | 210 | 76 | 85000 | 2500 | 41 | 26000 |
| 150: M00-473-01 | < 0.1 | 58000 | 2400 | 1.3 | 340 | 0.62 | 0.19 | 79000 | 1.7 | 39 | 180 | 110 | 62000 | 15000 | 30 | 21000 |
| 151: M00-483-01 | < 0.1 | 63000 | 1800 | 0.32 | 270 | 0.95 | < 0.09 | 83000 | 0.35 | 37 | 170 | 93 | 63000 | 22000 | 17 | 19000 |
| 152: M00-490-01 | < 0.1 | 64000 | 5700 | 113 | 220 | 0.96 | 0.27 | 72000 | 1.2 | 39 | 180 | 73 | 60000 | 18000 | 17 | 20000 |
| 153: M03-508-01 | < 0.1 | 74000 | 59 | 0.80 | 630 | 0.98 | 0.11 | 16000 | 0.22 | 17 | 160 | 33 | 32000 | 18000 | 30 | 11000 |
| 154: M03-508-02 | < 0.1 | 39000 | 47 | 0.23 | 360 | 0.93 | < 0.09 | 29000 | 0.15 | 6.9 | 100 | 7.6 | 160000 | 10000 | 18 | 7900 |
| 155: M05-561-01 | < 0.1 | 24000 | 26 | 0.08 | 100 | 0.26 | < 0.09 | 31000 | 0.04 | 18 | 70 | 34 | 25000 | 5500 | 13 | 12000 |
| 156: M05-561-02 | < 0.1 | 68000 | 68 | 0.07 | 400 | 0.93 | < 0.09 | 49000 | 0.31 | 55 | 81 | 130 | 110000 | 12000 | 36 | 24000 |
| 157: M06-577-01 | < 0.1 | 82000 | 32 | 0.03 | 530 | 1.1 | 0.12 | 12000 | 0.23 | 20 | 160 | 47 | 39000 | 22000 | 35 | 14000 |
| 158: M06-577-02 | < 0.1 | 89000 | 46 | 0.03 | 710 | 1.1 | < 0.09 | 13000 | 0.25 | 22 | 160 | 49 | 43000 | 22000 | 41 | 16000 |
| 159: M06-577-03 | < 0.1 | 91000 | 59 | 0.04 | 660 | 1.2 | 0.10 | 12000 | 0.24 | 22 | 170 | 39 | 46000 | 27000 | 39 | 16000 |
| 160: M06-591-01 | < 0.1 | 84000 | 33 | 0.04 | 610 | 1.1 | 0.11 | 11000 | 0.62 | 20 | 170 | 51 | 45000 | 22000 | 35 | 14000 |
| 161: M06-591-02 | < 0.1 | 63000 | 180 | 0.04 | 430 | 1.1 | < 0.09 | 20000 | 0.16 | 7.6 | 81 | 7.0 | 100000 | 15000 | 20 | 7900 |
| 162: M06-591-03 | < 0.1 | 68000 | 24 | 0.11 | 140 | 0.44 | < 0.09 | 88000 | 0.08 | 43 | 180 | 100 | 65000 | 11000 | 49 | 20000 |
| 163: M06-592-01 | < 0.1 | 86000 | 31 | 0.03 | 570 | 1.2 | 0.15 | 12000 | 0.23 | 20 | 160 | 42 | 44000 | 24000 | 41 | 17000 |
| 164: M06-592-02 | < 0.1 | 62000 | 14 | 0.05 | 63 | 0.49 | < 0.09 | 60000 | 0.25 | 47 | 63 | 96 | 100000 | 3200 | 27 | 27000 |
| 165: M06-592-03 | < 0.1 | 68000 | 8.0 | 0.05 | 110 | 0.41 | < 0.09 | 61000 | 0.15 | 40 | 84 | 69 | 88000 | 5000 | 28 | 28000 |
| 166: M06-593-01 | < 0.1 | 71000 | 7.6 | 0.03 | 880 | 0.92 | 0.13 | 14000 | 0.21 | 19 | 180 | 44 | 31000 | 15000 | 25 | 11000 |
| 167: M06-593-02 | < 0.1 | 73000 | 7.7 | 0.05 | 120 | 0.37 | < 0.09 | 63000 | 0.30 | 43 | 100 | 83 | 87000 | 3600 | 28 | 30000 |
| 168: M06-608-01 | < 0.1 | 85000 | 15 | 0.02 | 590 | 1.0 | 0.19 | 12000 | 0.24 | 18 | 160 | 48 | 37000 | 22000 | 37 | 14000 |
| 169: M06-608-02 | < 0.1 | 80000 | 31 | 0.03 | 610 | 1.2 | < 0.09 | 12000 | 0.21 | 19 | 160 | 35 | 38000 | 21000 | 37 | 14000 |
| 170: M06-611-01 | < 0.1 | 76000 | 43 | 0.02 | 700 | 1.0 | < 0.09 | 11000 | 0.21 | 16 | 160 | 35 | 33000 | 18000 | 63 | 12000 |
| 171: M06-611-02 | < 0.1 | 82000 | 30 | 0.03 | 740 | 1.2 | 0.12 | 12000 | 0.20 | 16 | 190 | 41 | 39000 | 23000 | 32 | 13000 |
| 172: M06-623-01 | < 0.1 | 78000 | 27 | 0.03 | 610 | 1.1 | < 0.09 | 17000 | 0.14 | 11 | 110 | 33 | 46000 | 19000 | 27 | 8900 |
| 173: M06-623-02 | < 0.1 | 67000 | 4.6 | 0.04 | 1100 | 0.42 | < 0.09 | 100000 | 0.07 | 40 | 170 | 83 | 73000 | 5700 | 51 | 25000 |
| 174: M06-625-01 | < 0.1 | 78000 | 110 | 0.07 | 620 | 1.0 | 0.12 | 13000 | 0.22 | 19 | 170 | 43 | 38000 | 21000 | 32 | 13000 |
| 175: M06-625-02 | < 0.1 | 79000 | 57 | 0.02 | 1000 | 1.1 | < 0.09 | 8000 | 0.22 | 17 | 170 | 42 | 41000 | 21000 | 41 | 15000 |
| 176: M06-629-01 | < 0.1 | 76000 | 7000 | 0.79 | 390 | 1.1 | 0.54 | 47000 | 0.17 | 34 | 190 | 88 | 63000 | 22000 | 33 | 16000 |
| 177: M06-631-01 | < 0.1 | 82000 | 49 | 0.03 | 750 | 1.3 | 0.22 | 11000 | 0.24 | 21 | 170 | 45 | 44000 | 23000 | 40 | 15000 |
| 178: M07-674-01 | < 0.1 | 80000 | 50 | 0.02 | 600 | 1.1 | 0.91 | 14000 | 0.32 | 19 | 160 | 54 | 40000 | 21000 | 32 | 14000 |
| 179: M07-689-01 | < 0.1 | 84000 | 31 | 0.02 | 550 | 1.2 | 0.19 | 8000 | 0.26 | 20 | 160 | 49 | 43000 | 22000 | 43 | 16000 |
| 180: M07-689-02 | < 0.1 | 99000 | 58 | 0.03 | 750 | 1.4 | 0.15 | 12000 | 0.31 | 22 | 160 | 46 | 45000 | 32000 | 45 | 17000 |
| 181: M07-689-03 | < 0.1 | 74000 | 90 | 0.05 | 990 | 1.4 | 0.28 | 16000 | 0.37 | 13 | 110 | 27 | 41000 | 24000 | 26 | 10000 |
| 182: M08-761-01 | < 0.1 | 84000 | 61 | 0.06 | 660 | 1.1 | 0.11 | 11000 | 0.30 | 20 | 170 | 39 | 40000 | 20000 | 34 | 14000 |
| 183: M08-761-02 | < 0.1 | 74000 | 19 | 0.03 | 720 | 1.1 | 0.09 | 12000 | 0.23 | 16 | 160 | 28 | 32000 | 21000 | 27 | 11000 |
| 184: M08-763-01 | < 0.1 | 79000 | 240 | 0.03 | 620 | 1.4 | < 0.09 | 16000 | 0.34 | 18 | 150 | 37 | 39000 | 22000 | 29 | 14000 |
| 185: M08-765-01 | < 0.1 | 73000 | 72 | < 0.02 | 600 | 1.0 | < 0.09 | 14000 | 0.25 | 16 | 160 | 41 | 31000 | 19000 | 26 | 11000 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 186: M08-783-01 | < 0.1 | 83000 | 850 | 0.03 | 580 | 1.2 | 0.29 | 12000 | 0.28 | 20 | 170 | 51 | 43000 | 24000 | 41 | 16000 |
| 187: M08-783-02 | < 0.1 | 63000 | 25 | 0.03 | 170 | 0.41 | < 0.09 | 110000 | 0.22 | 43 | 160 | 140 | 71000 | 8000 | 56 | 23000 |
| 188: M10-879-01 | < 0.1 | 73000 | 20 | 0.02 | 570 | 1.0 | 0.12 | 15000 | 0.31 | 17 | 180 | 52 | 32000 | 17000 | 29 | 10000 |
| 189: M10-887-01 | < 0.1 | 74000 | 25 | 0.02 | 600 | 1.1 | 0.15 | 13000 | 0.28 | 20 | 180 | 43 | 35000 | 22000 | 24 | 11000 |
| 190: M10-892-01 | < 0.1 | 80000 | 42 | < 0.02 | 590 | 1.0 | < 0.09 | 23000 | 0.26 | 18 | 170 | 44 | 42000 | 19000 | 37 | 15000 |
| 191: M10-999-01 | < 0.1 | 91000 | 160 | 0.02 | 540 | 1.2 | < 0.09 | 11000 | 0.30 | 20 | 170 | 40 | 48000 | 24000 | 52 | 17000 |
| 192: M10-999-02 | < 0.1 | 78000 | 8.9 | 0.03 | 500 | 1.0 | 0.17 | 15000 | 0.29 | 20 | 170 | 47 | 36000 | 19000 | 36 | 12000 |
| 193: M95-17-01 | < 0.1 | 64000 | 120 | 0.17 | 430 | 1.0 | < 0.09 | 23000 | 0.18 | 7.8 | 99 | 20 | 86000 | 14000 | 16 | 7200 |
| 194: M95-25-01 | < 0.1 | 82000 | 12 | 0.02 | 740 | 1.2 | 0.11 | 14000 | 0.26 | 17 | 180 | 28 | 36000 | 21000 | 35 | 13000 |
| 195: M95-25-02 | < 0.1 | 71000 | 6.0 | < 0.02 | 540 | 1.00 | 0.11 | 21000 | 0.24 | 16 | 160 | 30 | 29000 | 19000 | 24 | 8500 |
| 196: M95-25-03 | < 0.1 | 71000 | 7200 | 1.5 | 450 | 1.4 | 0.46 | 28000 | 0.31 | 18 | 170 | 76 | 72000 | 23000 | 28 | 17000 |
| 197: M95-25-04 | < 0.1 | 65000 | 43 | 0.06 | 64 | 0.36 | < 0.09 | 97000 | 0.16 | 37 | 160 | 81 | 68000 | 5800 | 54 | 23000 |
| 198: M96-03-01 | < 0.1 | 89000 | 180 | 0.02 | 600 | 1.2 | 0.12 | 12000 | 0.18 | 20 | 160 | 54 | 45000 | 25000 | 42 | 17000 |
| 199: M96-03-02 | < 0.1 | 74000 | 11 | 0.03 | 590 | 1.0 | 0.15 | 16000 | 0.22 | 15 | 170 | 40 | 30000 | 18000 | 27 | 9400 |
| 200: M96-03-03 | < 0.1 | 72000 | 6.3 | 0.02 | 55 | 0.29 | < 0.09 | 89000 | 0.13 | 40 | 180 | 120 | 78000 | 3700 | 77 | 27000 |
| 201: M96-19-01 | < 0.1 | 62000 | 230 | 0.02 | 500 | 0.96 | 0.13 | 12000 | 0.23 | 15 | 140 | 40 | 28000 | 16000 | 22 | 10000 |
| 202: M96-19-02 | < 0.1 | 81000 | 110 | 0.02 | 810 | 1.2 | 0.21 | 13000 | 0.22 | 17 | 150 | 41 | 37000 | 21000 | 36 | 14000 |
| 203: M96-37-01 | < 0.1 | 81000 | 16 | 0.02 | 660 | 1.1 | 0.16 | 20000 | 0.26 | 19 | 180 | 50 | 38000 | 22000 | 34 | 13000 |
| 204: M96-37-02 | < 0.1 | 74000 | 60 | < 0.02 | 680 | 1.0 | 0.20 | 14000 | 0.25 | 18 | 190 | 78 | 31000 | 18000 | 25 | 11000 |
| 205: M96-37-03 | < 0.1 | 79000 | 36 | < 0.02 | 630 | 1.1 | 0.23 | 11000 | 0.21 | 17 | 170 | 60 | 36000 | 18000 | 33 | 13000 |
| 206: M96-40-01 | < 0.1 | 86000 | 72 | < 0.02 | 620 | 1.2 | 0.14 | 11000 | 0.23 | 20 | 170 | 38 | 44000 | 24000 | 40 | 16000 |
| 207: M96-40-02 | < 0.1 | 80000 | 910 | < 0.02 | 730 | 1.3 | 0.16 | 10000 | 0.18 | 21 | 160 | 51 | 41000 | 24000 | 36 | 15000 |
| 208: M96-4-01 | < 0.1 | 71000 | 17 | < 0.02 | 600 | 1.0 | 0.15 | 16000 | 0.21 | 15 | 190 | 41 | 29000 | 18000 | 21 | 10000 |
| 209: M96-44-01 | < 0.1 | 65000 | 16 | 0.02 | 110 | 0.42 | < 0.09 | 62000 | 0.13 | 44 | 93 | 72 | 88000 | 5300 | 31 | 30000 |
| 210: M96-54-01 | < 0.1 | 79000 | 51 | < 0.02 | 520 | 1.1 | < 0.09 | 14000 | 0.24 | 18 | 180 | 36 | 35000 | 20000 | 33 | 13000 |
| 211: M96-54-02 | < 0.1 | 88000 | 62 | < 0.02 | 600 | 1.2 | 0.16 | 16000 | 0.23 | 19 | 170 | 43 | 42000 | 25000 | 36 | 15000 |
| 212: M96-65-01 | < 0.1 | 77000 | 56 | < 0.02 | 600 | 1.0 | 0.15 | 13000 | 0.23 | 17 | 180 | 40 | 35000 | 21000 | 30 | 12000 |
| 213: M96-7-01 | < 0.1 | 85000 | 52 | < 0.02 | 650 | 1.2 | < 0.09 | 8700 | 0.18 | 17 | 170 | 16 | 48000 | 23000 | 48 | 16000 |
| 214: M96-7-02 | < 0.1 | 78000 | 61 | < 0.02 | 590 | 1.1 | 0.12 | 14000 | 0.22 | 20 | 170 | 48 | 35000 | 22000 | 28 | 12000 |
| 215: M96-74-01 | < 0.1 | 28000 | 490 | 0.57 | 130 | 0.71 | < 0.09 | 19000 | 0.10 | 4.6 | 96 | 2.0 | 310000 | 2800 | 8 | 8100 |
| 216: M96-77-01 | < 0.1 | 86000 | 45 | 0.04 | 540 | 0.99 | 0.14 | 14000 | 0.28 | 17 | 180 | 45 | 42000 | 23000 | 35 | 16000 |
| 217: M96-77-02 | < 0.1 | 87000 | 98 | 0.03 | 760 | 1.2 | 0.35 | 13000 | 0.34 | 20 | 170 | 55 | 44000 | 24000 | 32 | 15000 |
| 218: M97-121-01 | < 0.1 | 77000 | 13 | 0.04 | 570 | 0.89 | 0.14 | 13000 | 0.26 | 15 | 180 | 43 | 33000 | 22000 | 25 | 11000 |
| 219: M97-135-01 | < 0.1 | 76000 | 94 | 0.03 | 530 | 0.94 | 0.13 | 19000 | 0.30 | 16 | 170 | 42 | 34000 | 19000 | 26 | 13000 |
| 220: M97-135-02 | < 0.1 | 70000 | 12 | 0.04 | 91 | 0.36 | < 0.09 | 64000 | 0.21 | 37 | 95 | 81 | 90000 | 4500 | 22 | 30000 |
| 221: M97-135-03 | < 0.1 | 77000 | 30 | 0.02 | 580 | 0.93 | 0.12 | 13000 | 0.28 | 17 | 180 | 40 | 35000 | 19000 | 26 | 12000 |
| 222: M97-149-01 | < 0.1 | 71000 | 7.9 | 0.04 | 90 | 0.34 | < 0.09 | 65000 | 0.19 | 40 | 90 | 99 | 90000 | 4200 | 24 | 30000 |
| 223: M97-149-02 | < 0.1 | 84000 | 15 | 0.02 | 520 | 1.0 | 0.14 | 17000 | 0.34 | 16 | 190 | 45 | 38000 | 18000 | 32 | 13000 |
| 224: M97-94A-01 | < 0.1 | 76000 | 99 | 0.02 | 510 | 0.96 | 0.18 | 14000 | 0.28 | 17 | 160 | 45 | 35000 | 20000 | 27 | 13000 |
| 225: M97-94A-02 | < 0.1 | 82000 | 320 | 0.31 | 610 | 0.96 | 0.18 | 11000 | 0.26 | 17 | 180 | 43 | 42000 | 24000 | 27 | 13000 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 226: M97-95-01 | < 0.1 | 81000 | 18 | 0.03 | 560 | 0.87 | 0.12 | 17000 | 0.30 | 16 | 170 | 33 | 37000 | 19000 | 34 | 13000 |
| 227: M97-95-02 | < 0.1 | 84000 | 120 | 0.02 | 710 | 1.1 | 0.16 | 14000 | 0.25 | 18 | 160 | 44 | 40000 | 26000 | 27 | 13000 |
| 228: M97-95-03 | < 0.1 | 65000 | 7.8 | 0.07 | 70 | 0.30 | < 0.09 | 91000 | 0.14 | 43 | 160 | 110 | 74000 | 3800 | 45 | 27000 |
| 229: M98-201-01 | < 0.1 | 85000 | 32 | 0.02 | 600 | 0.99 | 0.15 | 9200 | 0.25 | 21 | 180 | 47 | 41000 | 23000 | 34 | 14000 |
| 230: M98-201-02 | < 0.1 | 68000 | 11 | 0.03 | 100 | 0.38 | < 0.09 | 64000 | 0.14 | 40 | 75 | 89 | 91000 | 4300 | 30 | 30000 |
| 231: M98-201-03 | < 0.1 | 78000 | 21 | < 0.02 | 640 | 0.90 | 0.13 | 17000 | 0.31 | 15 | 160 | 43 | 36000 | 19000 | 31 | 14000 |
| 232: M98-201-04 | < 0.1 | 78000 | 20 | 0.02 | 640 | 0.92 | 0.16 | 15000 | 0.25 | 16 | 170 | 44 | 35000 | 21000 | 27 | 11000 |
| 233: M98-208-01 | < 0.1 | 80000 | 24 | 0.03 | 560 | 0.96 | 0.20 | 16000 | 0.24 | 19 | 180 | 51 | 36000 | 20000 | 31 | 13000 |
| 234: M98-209-01 | < 0.1 | 95000 | 57 | < 0.02 | 560 | 1.1 | 0.18 | 12000 | 0.29 | 22 | 170 | 48 | 50000 | 28000 | 46 | 19000 |
| 235: M98-265-01 | < 0.1 | 77000 | 99 | < 0.02 | 630 | 0.92 | 0.66 | 14000 | 0.29 | 15 | 180 | 37 | 34000 | 19000 | 27 | 13000 |
| 236: M98-266-01 | < 0.1 | 85000 | 28 | 0.02 | 660 | 1.0 | 0.14 | 12000 | 0.28 | 19 | 180 | 48 | 40000 | 25000 | 30 | 14000 |
| 237: M98-269-01 | < 0.1 | 67000 | 20 | 0.03 | 66 | 0.26 | < 0.09 | 95000 | 0.14 | 43 | 170 | 100 | 76000 | 3900 | 40 | 27000 |
| 238: M98-270-01 | < 0.1 | 81000 | 85 | 0.02 | 540 | 1.0 | 0.12 | 14000 | 0.27 | 17 | 170 | 45 | 36000 | 21000 | 32 | 13000 |
| 239: M98-317-01 | < 0.1 | 55000 | 8.7 | 0.04 | 420 | 0.93 | 0.10 | 21000 | 0.16 | 7.3 | 93 | 15 | 130000 | 13000 | 19 | 8600 |
| 240: M99-309-01 | < 0.1 | 66000 | 15 | 0.03 | 90 | 0.37 | < 0.09 | 50000 | 0.25 | 42 | 69 | 91 | 95000 | 2400 | 31 | 26000 |
| 241: M99-309-02 | < 0.1 | 81000 | 120 | < 0.02 | 510 | 0.95 | 0.21 | 16000 | 0.27 | 18 | 170 | 43 | 38000 | 21000 | 32 | 15000 |
| 242: M99-336B-01 | < 0.1 | 78000 | 17 | < 0.02 | 740 | 1.0 | 0.12 | 21000 | 0.29 | 17 | 160 | 41 | 35000 | 22000 | 30 | 15000 |
| 243: M99-336B-02 | < 0.1 | 66000 | 14 | 0.03 | 170 | 0.38 | < 0.09 | 75000 | 0.20 | 37 | 87 | 89 | 87000 | 5600 | 28 | 30000 |
| 244: M99-336B-03 | < 0.1 | 87000 | 110 | 0.02 | 770 | 1.0 | 0.18 | 15000 | 0.32 | 18 | 190 | 45 | 40000 | 25000 | 31 | 14000 |
| 245: M99-336B-04 | < 0.1 | 67000 | 28 | 0.02 | 41 | 0.28 | < 0.09 | 100000 | 0.21 | 42 | 180 | 110 | 65000 | 3400 | 43 | 19000 |
| 246: M99-345-01 | < 0.1 | 67000 | 47 | 0.05 | 130 | 0.39 | < 0.09 | 80000 | 0.16 | 37 | 190 | 87 | 61000 | 10000 | 52 | 20000 |
| 247: M99-346-01 | < 0.1 | 72000 | 16 | 0.03 | 61 | 0.31 | < 0.09 | 91000 | 0.21 | 40 | 180 | 83 | 67000 | 5000 | 60 | 27000 |
| 248: M99-347-01 | < 0.1 | 85000 | 290 | 0.04 | 780 | 1.1 | 0.13 | 15000 | 0.29 | 19 | 170 | 45 | 41000 | 23000 | 33 | 15000 |
| 249: M99-347-02 | < 0.1 | 80000 | 56 | 0.09 | 560 | 1.1 | 0.32 | 18000 | 0.25 | 18 | 160 | 63 | 39000 | 21000 | 34 | 14000 |
| 250: M99-409-01 | < 0.1 | 75000 | 30 | < 0.02 | 540 | 0.95 | 0.14 | 13000 | 0.24 | 15 | 170 | 43 | 32000 | 19000 | 27 | 12000 |
| 251: M99-409-02 | < 0.1 | 80000 | 31 | < 0.02 | 700 | 0.97 | 0.22 | 14000 | 0.29 | 17 | 160 | 45 | 37000 | 20000 | 29 | 13000 |
| 252: M99-409-03 | < 0.1 | 81000 | 110 | < 0.02 | 560 | 0.98 | < 0.09 | 10000 | 0.26 | 16 | 180 | 40 | 37000 | 21000 | 31 | 13000 |
| 253: M99-409-04 | < 0.1 | 73000 | 160 | 0.06 | 440 | 1.0 | 0.19 | 20000 | 0.24 | 14 | 140 | 45 | 70000 | 18000 | 26 | 14000 |
| 254: M99-409-05 | < 0.1 | 74000 | 170 | 0.03 | 180 | 0.42 | < 0.09 | 66000 | 0.33 | 37 | 170 | 68 | 72000 | 10000 | 56 | 23000 |
| 255: M99-410-01 | < 0.1 | 83000 | 44 | < 0.02 | 590 | 1.1 | 0.11 | 13000 | 0.29 | 19 | 170 | 52 | 39000 | 23000 | 37 | 14000 |
| 256: M99-410-02 | < 0.1 | 82000 | 52 | < 0.02 | 650 | 1.1 | 0.14 | 12000 | 0.26 | 19 | 180 | 47 | 40000 | 23000 | 34 | 14000 |
| 257: M99-417-01 | < 0.1 | 58000 | 260 | 1.8 | 570 | 1.1 | < 0.09 | 24000 | 0.18 | 6.9 | 120 | 21 | 94000 | 17000 | 18 | 7700 |
| 258: M99-436-01 | < 0.1 | 79000 | 30 | 0.02 | 630 | 0.98 | 0.21 | 12000 | 0.25 | 17 | 180 | 36 | 36000 | 19000 | 29 | 13000 |
| 259: M99-436-02 | < 0.1 | 81000 | 49 | < 0.02 | 570 | 1.0 | 0.17 | 10000 | 0.32 | 18 | 170 | 47 | 41000 | 23000 | 38 | 15000 |
| 260: M08-733-01 | < 0.1 | 73000 | 15 | 0.02 | 110 | 0.24 | < 0.09 | 86000 | 0.18 | 42 | 220 | 83 | 78000 | 3500 | 31 | 24000 |
| 261: M08-733-02 | < 0.1 | 71000 | 6.5 | 0.02 | 170 | 0.23 | < 0.09 | 79000 | 0.19 | 42 | 200 | 110 | 77000 | 4100 | 33 | 30000 |
| 262: M09-802-01 | < 0.1 | 62000 | 2.9 | 0.02 | 140 | 0.22 | < 0.09 | 97000 | 0.53 | 42 | 360 | 100 | 84000 | 2700 | 34 | 38000 |
| 263: M09-802-02 | < 0.1 | 5700 | 120 | 0.02 | 9.4 | 0.25 | 0.09 | 8500 | 0.23 | 8.4 | 210 | 77 | 120000 | 160 | < 2 | 8400 |
| 264: M09-803-01 | < 0.1 | 4400 | 95 | 0.08 | 3.5 | 0.31 | 0.11 | 20000 | 0.51 | 7.8 | 140 | 110 | 180000 | 180 | < 2 | 13000 |
| 265: M09-809-01 | < 0.1 | 28000 | 5300 | 1.8 | 53 | 0.39 | 0.12 | 36000 | 0.51 | 13 | 150 | 68 | 140000 | 4800 | 17 | 11000 |

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**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 266: M09-817-01 | < 0.1 | 21000 | 970 | 1.6 | 110 | 0.31 | 0.11 | 22000 | 0.81 | 17 | 200 | 130 | 120000 | 6500 | 17 | 17000 |
| 267: M09-817-02 | < 0.1 | 59000 | 52 | 0.04 | 71 | 0.28 | < 0.09 | 75000 | 0.20 | 44 | 250 | 80 | 75000 | 2700 | 47 | 41000 |
| 268: M09-858-01 | < 0.1 | 7000 | 3800 | 1.0 | 4.9 | 0.11 | 0.22 | 21000 | 0.04 | 12 | 240 | 69 | 120000 | 460 | 6 | 10000 |
| 269: M09-859-01 | < 0.1 | 67000 | 130 | 0.03 | 40 | 0.28 | < 0.09 | 69000 | 0.21 | 44 | 230 | 100 | 90000 | 3300 | 39 | 38000 |
| 270: M10-933-01 | < 0.1 | 61000 | 9.2 | 0.02 | 60 | 0.19 | < 0.09 | 89000 | 0.39 | 38 | 170 | 170 | 79000 | 2700 | 20 | 30000 |
| 271: M10-935-01 | < 0.1 | 72000 | 3.4 | 0.02 | 52 | 0.24 | < 0.09 | 78000 | 0.12 | 42 | 170 | 89 | 81000 | 1000 | 18 | 38000 |
| 272: M10-935-02 | < 0.1 | 2400 | 2200 | 0.27 | 10 | 0.12 | 0.15 | 10000 | 0.17 | 7.1 | 240 | 110 | 97000 | 340 | < 2 | 5600 |
| 273: M96-28-01 | < 0.1 | 70000 | 82 | 0.03 | 150 | 0.26 | < 0.09 | 83000 | 0.16 | 43 | 180 | 85 | 78000 | 5200 | 37 | 24000 |
| 274: M97-159-01 | < 0.1 | 69000 | 17 | 0.02 | 69 | 0.25 | < 0.09 | 73000 | 0.13 | 41 | 180 | 93 | 87000 | 3600 | 39 | 32000 |
| 275: M97-159-02 | < 0.1 | 70000 | 26 | 0.03 | 77 | 0.33 | < 0.09 | 74000 | 0.18 | 42 | 180 | 94 | 81000 | 4700 | 40 | 27000 |
| 276: M98-248-01 | < 0.1 | 2300 | 23 | < 0.02 | 6.0 | 0.20 | 0.19 | 13000 | 0.62 | 7.9 | 230 | 78 | 110000 | 360 | < 2 | 7800 |
| 277: M98-275-01 | < 0.1 | 69000 | 20 | 0.02 | 61 | 0.28 | < 0.09 | 78000 | 0.13 | 40 | 200 | 89 | 78000 | 2000 | 39 | 31000 |
| 278: M98-275-02 | < 0.1 | 68000 | 6.2 | < 0.02 | 28 | 0.23 | < 0.09 | 80000 | 0.18 | 42 | 220 | 95 | 72000 | 1200 | 31 | 27000 |
| 279: W94-111-01 | < 0.1 | 5300 | 48 | 0.05 | 5.4 | 0.20 | < 0.09 | 18000 | 0.33 | 4.2 | 170 | 28 | 150000 | 280 | 2 | 15000 |
| 280: W94-76-01 | < 0.1 | 69000 | 2.6 | 0.07 | 46 | 0.26 | < 0.09 | 81000 | 0.22 | 41 | 170 | 96 | 79000 | 1300 | 24 | 36000 |
| 281: W94-76-02 | < 0.1 | 62000 | 3.4 | 0.07 | 14 | 0.25 | < 0.09 | 61000 | 0.12 | 44 | 230 | 110 | 84000 | 1000 | 31 | 41000 |
| 282: W94-82-01 | < 0.1 | 77000 | 3.4 | 0.06 | 14 | 0.17 | < 0.09 | 85000 | 0.12 | 49 | 200 | 110 | 74000 | 490 | 26 | 30000 |
| 283: DS09GT-10-01 | < 0.1 | 77000 | 18 | 0.05 | 410 | 0.85 | 0.21 | 13000 | 0.31 | 19 | 190 | 52 | 35000 | 15000 | 31 | 12000 |
| 284: ML00-224-01 | < 0.1 | 29000 | 390 | 0.29 | 260 | 0.47 | 0.54 | 21000 | 0.17 | 4.4 | 130 | 13 | 240000 | 5700 | 14 | 9200 |
| 285: ML08-225-01 | < 0.1 | 37000 | 5.8 | 0.05 | 610 | 1.2 | < 0.09 | 18000 | 0.10 | 4.3 | 110 | 6.0 | 200000 | 11000 | 18 | 9200 |
| 286: ML08-225-02 | < 0.1 | 94000 | 60 | 0.08 | 610 | 1.1 | 0.35 | 12000 | 0.36 | 20 | 200 | 37 | 48000 | 27000 | 40 | 17000 |
| 287: ML08-225-03 | < 0.1 | 27000 | 230 | 23 | 300 | 0.59 | 0.24 | 21000 | 0.17 | 4.8 | 110 | 16 | 290000 | 4700 | 13 | 8600 |
| 288: ML08-226-01 | < 0.1 | 82000 | 4.9 | 0.30 | 390 | 0.72 | 0.09 | 62000 | 0.17 | 42 | 76 | 24 | 120000 | 13000 | 26 | 27000 |
| 289: ML08-226-02 | < 0.1 | 18000 | 3.3 | 0.12 | 150 | 0.88 | 0.10 | 17000 | 0.02 | 3.5 | 140 | 4.6 | 310000 | 4200 | 9 | 9600 |
| 290: ML08-226-03 | < 0.1 | 26000 | 3.8 | 0.29 | 300 | 0.64 | < 0.09 | 19000 | 0.21 | 4.2 | 140 | 8.9 | 280000 | 5400 | 13 | 10000 |
| 291: ML08-226-04 | < 0.1 | 24000 | 7500 | 1.4 | 130 | 0.29 | 2.1 | 12000 | 0.20 | 3.6 | 210 | 19 | 170000 | 3600 | 8 | 6300 |
| 292: ML08-226-05 | < 0.1 | 94000 | 95 | 0.07 | 480 | 1.1 | 0.26 | 14000 | 0.41 | 20 | 180 | 33 | 60000 | 22000 | 48 | 19000 |
| 293: ML08-228-01 | < 0.1 | 34000 | 21 | 0.07 | 410 | 0.96 | < 0.09 | 11000 | 0.13 | 4.9 | 130 | 4.0 | 220000 | 13000 | 24 | 8200 |
| 294: ML08-228-02 | < 0.1 | 13000 | 5.8 | 0.07 | 96 | 0.84 | < 0.09 | 16000 | < 0.02 | 3.5 | 150 | 10 | 320000 | 2600 | 5 | 8100 |
| 295: ML08-229-01 | < 0.1 | 16000 | 3.5 | 0.07 | 170 | 0.70 | < 0.09 | 13000 | 0.10 | 3.3 | 140 | 4.0 | 290000 | 6500 | 13 | 7600 |
| 296: ML08-229-02 | < 0.1 | 81000 | 6.9 | 0.09 | 400 | 0.80 | < 0.09 | 61000 | 0.18 | 37 | 72 | 44 | 110000 | 11000 | 20 | 22000 |
| 297: ML08-229-03 | < 0.1 | 53000 | 13 | 0.07 | 720 | 1.2 | < 0.09 | 24000 | 0.17 | 5.6 | 140 | 11 | 160000 | 13000 | 21 | 12000 |
| 298: ML08-229-04 | < 0.1 | 80000 | 38 | 0.06 | 470 | 0.98 | 0.75 | 13000 | 0.29 | 17 | 200 | 64 | 53000 | 20000 | 31 | 15000 |
| 299: ML08-229-05 | < 0.1 | 25000 | 11 | 0.08 | 310 | 0.71 | 0.09 | 24000 | 0.19 | 3.6 | 130 | 3.8 | 260000 | 4600 | 15 | 12000 |
| 300: ML08-230-01 | < 0.1 | 91000 | 36 | 0.06 | 510 | 1.2 | 0.10 | 15000 | 0.31 | 18 | 220 | 37 | 48000 | 22000 | 45 | 17000 |
| 301: ML08-232-01 | < 0.1 | 89000 | 77 | 0.05 | 600 | 1.0 | 0.10 | 10000 | 0.33 | 18 | 200 | 44 | 42000 | 23000 | 35 | 14000 |
| 302: ML08-233-01 | < 0.1 | 84000 | 10 | 0.06 | 520 | 0.93 | < 0.09 | 20000 | 0.30 | 14 | 140 | 25 | 53000 | 17000 | 33 | 14000 |
| 303: ML08-233-02 | < 0.1 | 33000 | 15 | 0.08 | 580 | 0.99 | < 0.09 | 15000 | 0.18 | 4.2 | 100 | 6.6 | 250000 | 7600 | 24 | 9200 |
| 304: ML08-240-01 | < 0.1 | 86000 | 19 | 0.06 | 500 | 0.92 | 0.20 | 21000 | 0.34 | 17 | 150 | 40 | 55000 | 19000 | 36 | 14000 |
| 305: ML08-241-01 | < 0.1 | 87000 | 32 | 0.06 | 560 | 1.0 | < 0.09 | 22000 | 0.28 | 16 | 150 | 42 | 72000 | 20000 | 36 | 15000 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10516-JUL11**

| Sample ID | Hg µg/g | Al µg/g | As µg/g | Au µg/g | Ba µg/g | Be µg/g | Bi µg/g | Ca µg/g | Cd µg/g | Co µg/g | Cr µg/g | Cu µg/g | Fe µg/g | K µg/g | Li µg/g | Mg µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 306: ML08-241-02 | < 0.1 | 35000 | 4.7 | 0.06 | 390 | 0.96 | 0.13 | 23000 | 0.22 | 4.8 | 150 | 5.0 | 230000 | 7800 | 15 | 9200 |
| 307: ML08-241-03 | < 0.1 | 84000 | 7.2 | 0.09 | 710 | 0.89 | < 0.09 | 55000 | 0.54 | 30 | 63 | 27 | 120000 | 22000 | 44 | 22000 |
| 308: ML08-243-01 | < 0.1 | 31000 | 5.3 | 0.06 | 480 | 1.4 | < 0.09 | 20000 | 0.19 | 4.1 | 110 | 3.0 | 270000 | 9300 | 21 | 8100 |
| 309: ML08-243-02 | < 0.1 | 82000 | 3.9 | 0.09 | 420 | 1.00 | < 0.09 | 60000 | 0.39 | 28 | 61 | 49 | 110000 | 10000 | 28 | 17000 |
| 310: ML08-245-01 | < 0.1 | 87000 | 9.3 | 0.08 | 390 | 0.75 | < 0.09 | 60000 | 0.22 | 37 | 81 | 34 | 110000 | 11000 | 27 | 24000 |
| 311: ML08-245-02 | < 0.1 | 79000 | 38 | 0.05 | 440 | 0.92 | 0.18 | 12000 | 0.36 | 17 | 190 | 51 | 40000 | 20000 | 30 | 13000 |
| 312: ML09-254-01 | < 0.1 | 35000 | 7.0 | 0.22 | 310 | 0.67 | 0.39 | 17000 | 0.22 | 5.6 | 120 | 14 | 260000 | 7900 | 17 | 9300 |
| 313: ML09-254-02 | < 0.1 | 84000 | 11 | 0.05 | 550 | 1.0 | < 0.09 | 22000 | 0.32 | 14 | 140 | 37 | 49000 | 19000 | 38 | 14000 |
| 314: ML09-256-01 | < 0.1 | 74000 | 29 | 0.05 | 400 | 0.87 | 0.23 | 13000 | 0.35 | 18 | 240 | 51 | 41000 | 19000 | 36 | 15000 |
| 315: ML09-259-01 | < 0.1 | 80000 | 2.1 | 0.07 | 420 | 0.72 | < 0.09 | 62000 | 0.23 | 37 | 81 | 53 | 110000 | 12000 | 25 | 22000 |
| 316: ML92062-01 | < 0.1 | 22000 | 1.6 | 0.06 | 370 | 0.79 | < 0.09 | 22000 | 0.22 | 4.7 | 160 | 17 | 260000 | 5400 | 10 | 7700 |
| 317: ML95-104-01 | < 0.1 | 73000 | 1.0 | 0.08 | 430 | 1.2 | < 0.09 | 59000 | 0.33 | 29 | 100 | 45 | 110000 | 11000 | 28 | 17000 |
| 318: ML95-104-02 | < 0.1 | 31000 | 1400 | 0.12 | 380 | 0.57 | 0.10 | 15000 | 0.29 | 4.0 | 160 | 6.7 | 190000 | 5300 | 15 | 8600 |
| 319: ML95-105-01 | < 0.1 | 27000 | 21 | 0.22 | 380 | 0.84 | 0.14 | 17000 | 0.22 | 3.6 | 160 | 7.5 | 250000 | 5400 | 13 | 9700 |
| 320: ML95-105-02 | < 0.1 | 77000 | 880 | 0.08 | 700 | 0.96 | < 0.09 | 60000 | 0.70 | 28 | 65 | 45 | 110000 | 18000 | 36 | 18000 |
| 321: ML95-105-03 | < 0.1 | 88000 | 83 | 0.05 | 590 | 0.97 | 0.15 | 13000 | 0.30 | 18 | 180 | 73 | 45000 | 24000 | 32 | 16000 |
| 322: ML95-105-04 | < 0.1 | 86000 | 49 | 0.06 | 540 | 0.99 | < 0.09 | 23000 | 0.40 | 14 | 140 | 24 | 47000 | 17000 | 40 | 14000 |
| 323: ML95-107-01 | < 0.1 | 30000 | 3.3 | 0.05 | 460 | 1.00 | < 0.09 | 14000 | 0.21 | 4.9 | 120 | 3.7 | 260000 | 15000 | 23 | 10000 |
| 324: ML95-107-02 | < 0.1 | 46000 | 280 | 0.05 | 660 | 1.4 | 0.12 | 22000 | 0.23 | 7.2 | 130 | 27 | 170000 | 18000 | 31 | 11000 |
| 325: ML95-107-03 | < 0.1 | 89000 | 130 | 0.05 | 570 | 1.0 | 0.14 | 12000 | 0.34 | 19 | 170 | 35 | 48000 | 25000 | 29 | 16000 |
| 326: ML95-113-01 | < 0.1 | 93000 | 23 | 0.05 | 680 | 1.1 | 0.10 | 8600 | 0.36 | 16 | 170 | 44 | 40000 | 26000 | 39 | 16000 |
| 327: ML95-113-02 | < 0.1 | 89000 | 8.5 | 0.07 | 580 | 1.2 | 0.13 | 25000 | 0.34 | 15 | 150 | 52 | 59000 | 21000 | 38 | 15000 |
| 328: ML95-117-01 | < 0.1 | 34000 | 7.7 | 0.05 | 290 | 0.73 | 0.09 | 17000 | 0.13 | 4.8 | 130 | 14 | 240000 | 7700 | 13 | 9900 |
| 329: ML95-117-02 | < 0.1 | 85000 | 3.2 | 0.07 | 380 | 0.92 | < 0.09 | 59000 | 0.25 | 34 | 72 | 18 | 120000 | 11000 | 28 | 24000 |
| 330: ML95-117-03 | < 0.1 | 53000 | 57 | 0.06 | 280 | 0.64 | 0.18 | 24000 | 0.22 | 8.8 | 160 | 31 | 150000 | 9100 | 16 | 11000 |
| 331: ML95-120-01 | < 0.1 | 90000 | 83 | 0.04 | 470 | 1.0 | 0.26 | 10000 | 0.29 | 17 | 180 | 48 | 43000 | 21000 | 32 | 16000 |
| 332: ML95-82-01 | < 0.1 | 40000 | 310 | 0.30 | 390 | 0.76 | 0.23 | 19000 | 0.22 | 6.5 | 170 | 33 | 190000 | 9200 | 18 | 11000 |
| 333: ML95-82-02 | < 0.1 | 77000 | 19 | 0.04 | 500 | 0.95 | < 0.09 | 20000 | 0.23 | 12 | 170 | 24 | 49000 | 18000 | 35 | 14000 |
| 334: ML95-83-01 | < 0.1 | 49000 | 2.7 | 0.06 | 1100 | 1.7 | < 0.09 | 13000 | 0.15 | 5.4 | 120 | 3.4 | 170000 | 20000 | 32 | 9000 |
| 335: ML95-83-02 | < 0.1 | 81000 | 56 | 0.04 | 530 | 1.00 | 0.14 | 17000 | 0.25 | 14 | 140 | 38 | 54000 | 22000 | 39 | 14000 |
| 336: ML95-84-01 | < 0.1 | 33000 | 180 | 1.7 | 330 | 0.71 | 0.26 | 18000 | 0.22 | 5.2 | 170 | 24 | 190000 | 6700 | 17 | 9100 |
| 337: ML95-85-01 | < 0.1 | 93000 | 9.6 | 0.06 | 550 | 1.1 | 0.14 | 22000 | 0.30 | 14 | 150 | 42 | 55000 | 22000 | 38 | 15000 |
| 338: ML95-88-01 | < 0.1 | 100000 | 11 | 0.06 | 570 | 1.3 | 0.14 | 15000 | 0.35 | 18 | 190 | 57 | 47000 | 26000 | 45 | 19000 |
| 339: ML95-88-02 | < 0.1 | 80000 | 2.0 | 0.05 | 230 | 0.63 | < 0.09 | 54000 | 0.25 | 30 | 120 | 28 | 69000 | 6500 | 41 | 32000 |
| 340: ML95-95-01 | < 0.1 | 37000 | 23 | 0.65 | 650 | 0.97 | 0.23 | 27000 | 0.39 | 5.0 | 130 | 5.7 | 200000 | 12000 | 21 | 11000 |
| 341: ML95-95-02 | < 0.1 | 94000 | 22 | 0.04 | 600 | 1.0 | 0.12 | 17000 | 0.30 | 15 | 150 | 43 | 61000 | 23000 | 36 | 16000 |
| 342: ML95-98-01 | < 0.1 | 29000 | 1.6 | 0.03 | 240 | 1.1 | < 0.09 | 16000 | 0.06 | 3.7 | 150 | 7.4 | 260000 | 6600 | 16 | 9700 |
| 343: ML97-186-01 | < 0.1 | 30000 | 6.1 | 0.03 | 420 | 0.81 | 0.12 | 17000 | 0.15 | 4.3 | 150 | 9.5 | 230000 | 10000 | 19 | 9800 |
| 344: ML97-186-02 | < 0.1 | 89000 | 9.4 | 0.05 | 380 | 0.81 | < 0.09 | 65000 | 0.20 | 33 | 74 | 40 | 110000 | 11000 | 29 | 24000 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10516-JUL11**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, September 14, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10516-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 13-Sep-11 | 13-Sep-11 | 14-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 14-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 13-Sep-11 | 14-Sep-11 |
| 4: Analysis Approval Time | 15:39 | 15:39 | 14:59 | 15:40 | 15:40 | 15:40 | 15:40 | 15:40 | 15:40 | 14:59 | 15:40 | 15:40 | 15:40 | 15:40 | 14:59 |
| 5: M10-968-01 | 280 | 1.6 | 19000 | 70 | 9.6 | 2.2 | < 0.7 | 2.5 | 240 | 1490 | 0.45 | 1.6 | 96 | 8.1 | 89 |
| 6: M10-968-02 | 270 | 1.3 | 18000 | 70 | 9.3 | 1.2 | < 0.7 | 1.9 | 250 | 1300 | 0.45 | 1.5 | 92 | 6.7 | 91 |
| 7: M10-968-03 | 190 | 1.6 | 18000 | 61 | 5.6 | 1.2 | < 0.7 | 1.9 | 170 | 3210 | 0.43 | 1.6 | 88 | 6.3 | 63 |
| 8: M10-970-01 | 390 | 2.1 | 310 | 10 | 5.1 | 1.0 | < 0.7 | 1.4 | 220 | 650 | 0.06 | 0.58 | 15 | 6.5 | 33 |
| 9: M10-972A-01 | 260 | 1.1 | 23000 | 53 | 8.8 | < 0.8 | 0.8 | 1.5 | 300 | 1910 | 0.43 | 1.5 | 68 | 6.8 | 79 |
| 10: M10-972A-02 | 260 | 1.3 | 22000 | 57 | 13 | < 0.8 | < 0.7 | 1.1 | 270 | 1300 | 0.40 | 1.7 | 74 | 6.4 | 81 |
| 11: M10-972A-03 | 390 | 0.7 | 300 | 10 | 3.1 | < 0.8 | < 0.7 | 0.8 | 150 | 700 | 0.13 | 0.52 | 14 | 5.1 | 35 |
| 12: M10-972A-04 | 1200 | 0.1 | 12000 | 120 | 2.4 | < 0.8 | < 0.7 | 1.0 | 89 | 1550 | 0.07 | 0.066 | 190 | 6.4 | 79 |
| 13: M10-976-01 | 320 | 1.0 | 23000 | 53 | 19 | < 0.8 | < 0.7 | 0.9 | 280 | 1300 | 0.36 | 1.7 | 70 | 8.1 | 76 |
| 14: M10-976-02 | 210 | 1.4 | 14000 | 62 | 6.7 | < 0.8 | < 0.7 | 1.2 | 180 | 2660 | 0.51 | 1.6 | 93 | 6.3 | 72 |
| 15: M10-976-03 | 590 | 1.0 | 2100 | 12 | 17 | < 0.8 | < 0.7 | 0.5 | 230 | 790 | 0.22 | 1.6 | 18 | 6.4 | 37 |
| 16: M10-976-04 | 600 | 1.4 | 440 | 11 | 8.7 | < 0.8 | < 0.7 | < 0.5 | 150 | 930 | 0.13 | 0.79 | 19 | 5.3 | 43 |
| 17: M10-977-01 | 280 | 1.2 | 20000 | 59 | 11 | < 0.8 | < 0.7 | 1.0 | 220 | 1550 | 0.40 | 1.5 | 81 | 7.7 | 67 |
| 18: M10-977-02 | 390 | 0.8 | 2600 | 14 | 19 | < 0.8 | < 0.7 | < 0.5 | 130 | 1090 | 0.37 | 0.82 | 22 | 5.4 | 52 |
| 19: M10-986-01 | 460 | 3.1 | 1100 | 12 | 7.2 | < 0.8 | < 0.7 | < 0.5 | 190 | 1100 | 0.21 | 0.57 | 23 | 5.5 | 63 |
| 20: M10-986-02 | 1300 | 0.1 | 14000 | 110 | 3.5 | < 0.8 | < 0.7 | 0.9 | 120 | 2480 | 0.05 | 0.073 | 210 | 10.0 | 95 |
| 21: M10-993-01 | 280 | 1.1 | 23000 | 58 | 8.7 | < 0.8 | < 0.7 | 1.0 | 280 | 1270 | 0.38 | 1.5 | 78 | 7.1 | 85 |
| 22: M10-993-02 | 300 | 1.1 | 20000 | 61 | 10 | < 0.8 | < 0.7 | 1.1 | 250 | 1340 | 0.44 | 1.5 | 86 | 7.3 | 79 |
| 23: M10-993-03 | 240 | 1.4 | 17000 | 59 | 5.5 | < 0.8 | < 0.7 | 1.3 | 180 | 3200 | 0.44 | 1.3 | 92 | 6.3 | 68 |
| 24: M10-993-04 | 1200 | 0.2 | 11000 | 97 | 2.0 | 1.3 | < 0.7 | < 0.5 | 120 | 2800 | 0.02 | 0.089 | 200 | 7.4 | 72 |
| 25: M96-16-01 | 1400 | 0.2 | 8700 | 84 | 2.9 | 0.9 | < 0.7 | < 0.5 | 110 | 4900 | 0.62 | 0.10 | 190 | 12 | 95 |
| 26: M96-61-01 | 1200 | 0.4 | 10000 | 110 | 59 | < 0.8 | 1.0 | 1.3 | 95 | 3700 | 0.44 | 0.19 | 180 | 5.8 | 250 |

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**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27: M96-61-02 | 1700 | 0.4 | 13000 | 56 | 5.8 | < 0.8 | < 0.7 | 0.8 | 100 | 4900 | 0.75 | 0.36 | 210 | 7.0 | 120 |
| 28: M96-61-03 | 2000 | 2.1 | 510 | 31 | 6.3 | < 0.8 | < 0.7 | 1.7 | 38 | 1500 | 0.05 | 0.66 | 55 | 3.9 | 920 |
| 29: M98-234-01 | 280 | 1.4 | 14000 | 60 | 13 | < 0.8 | < 0.7 | 1.0 | 200 | 3200 | 0.59 | 1.3 | 100 | 5.5 | 79 |
| 30: M98-234-02 | 380 | 1.2 | 18000 | 51 | 13 | < 0.8 | < 0.7 | 0.7 | 230 | 2500 | 0.41 | 1.2 | 84 | 6.6 | 72 |
| 31: M98-238-01 | 570 | 1.0 | 18000 | 48 | 5.3 | < 0.8 | < 0.7 | 0.6 | 210 | 4300 | 0.26 | 0.95 | 160 | 8.7 | 95 |
| 32: M98-238-02 | 810 | 0.6 | 22000 | 47 | 6.2 | 1.1 | < 0.7 | 0.9 | 230 | 5800 | 0.15 | 0.67 | 180 | 13 | 85 |
| 33: M98-284-01 | 420 | 1.1 | 12000 | 69 | 6.7 | < 0.8 | < 0.7 | 1.7 | 190 | 2800 | 0.33 | 1.3 | 110 | 6.8 | 87 |
| 34: M98-284-02 | 440 | 1.1 | 650 | 16 | 4.8 | < 0.8 | < 0.7 | < 0.5 | 130 | 1200 | 0.03 | 0.84 | 43 | 6.3 | 56 |
| 35: M98-286-01 | 380 | 1.6 | 13000 | 76 | 11 | < 0.8 | < 0.7 | 0.6 | 230 | 1200 | 0.58 | 1.4 | 130 | 7.3 | 110 |
| 36: M98-329-01 | 1200 | 0.3 | 11000 | 150 | 6.4 | < 0.8 | < 0.7 | 0.7 | 130 | 4200 | 0.26 | 0.26 | 160 | 6.3 | 170 |
| 37: M98-331-01 | 350 | 1.7 | 17000 | 62 | 7.2 | < 0.8 | < 0.7 | 0.7 | 230 | 1300 | 0.48 | 1.3 | 100 | 7.2 | 80 |
| 38: M98-333-01 | 340 | 1.5 | 18000 | 57 | 140 | < 0.8 | < 0.7 | 0.5 | 220 | 1000 | 0.41 | 1.4 | 91 | 6.7 | 99 |
| 39: M98-337-01 | 1200 | 0.3 | 13000 | 110 | 5.7 | < 0.8 | < 0.7 | < 0.5 | 100 | 5200 | 1.3 | 0.31 | 180 | 8.4 | 88 |
| 40: M04-519-01 | 1200 | 0.1 | 14000 | 110 | 3.4 | < 0.8 | < 0.7 | < 0.5 | 100 | 1200 | 0.16 | 0.073 | 150 | 3.1 | 78 |
| 41: M04-519-02 | 950 | 0.2 | 15000 | 93 | 3.2 | < 0.8 | < 0.7 | < 0.5 | 75 | 1600 | 0.24 | 0.049 | 170 | 2.4 | 96 |
| 42: M04-519-03 | 1400 | 0.6 | 12000 | 96 | 4.2 | < 0.8 | < 0.7 | < 0.5 | 110 | 5200 | 0.18 | 0.27 | 180 | 4.2 | 90 |
| 43: M04-519-04 | 1400 | 0.3 | 17000 | 40 | 2.3 | 1.0 | < 0.7 | 0.7 | 77 | 9400 | 0.14 | 0.14 | 240 | 7.8 | 110 |
| 44: M10-981-01 | 1000 | 0.5 | 18000 | 51 | 3.3 | < 0.8 | < 0.7 | 0.9 | 140 | 11000 | 0.19 | 0.23 | 260 | 16 | 130 |
| 45: M10-981-02 | 1100 | 0.4 | 18000 | 65 | 2.5 | < 0.8 | < 0.7 | 0.6 | 100 | 7500 | 0.13 | 0.43 | 200 | 14 | 110 |
| 46: M10-981-03 | 1800 | 0.3 | 17000 | 62 | 3.7 | < 0.8 | < 0.7 | < 0.5 | 83 | 11000 | 0.18 | 0.37 | 300 | 11 | 180 |
| 47: M10-981-04 | 1200 | 0.5 | 15000 | 86 | 2.8 | 1.1 | < 0.7 | 0.7 | 120 | 6500 | 0.13 | 0.22 | 210 | 20 | 98 |
| 48: M10-985-01 | 350 | 1.5 | 23000 | 56 | 14 | < 0.8 | < 0.7 | 0.7 | 390 | 1200 | 0.36 | 1.4 | 89 | 7.0 | 91 |
| 49: M10-985-02 | 580 | 1.0 | 12000 | 51 | 4.1 | < 0.8 | < 0.7 | 0.7 | 160 | 5200 | 0.27 | 1.0 | 150 | 9.9 | 99 |
| 50: M10-987-01 | 1600 | 0.4 | 8600 | 110 | 2.4 | < 0.8 | < 0.7 | 0.7 | 120 | 4700 | 0.05 | 0.080 | 190 | 5.2 | 84 |
| 51: M10-987-02 | 1000 | 0.3 | 14000 | 88 | 3.5 | < 0.8 | < 0.7 | < 0.5 | 120 | 2900 | 0.23 | 0.23 | 160 | 6.0 | 110 |
| 52: M10-987-03 | 1300 | 0.1 | 210 | 860 | 4.1 | 1.2 | < 0.7 | < 0.5 | 75 | 3000 | < 0.02 | 0.81 | 98 | 2.5 | 110 |
| 53: M10-987-04 | 1200 | 0.3 | 13000 | 66 | 2.1 | 1.4 | < 0.7 | 0.6 | 94 | 8700 | < 0.02 | 0.14 | 270 | 19 | 110 |
| 54: M10-988-01 | 1600 | 0.2 | 10000 | 100 | 1.7 | < 0.8 | < 0.7 | 0.6 | 69 | 5400 | 0.06 | 0.15 | 240 | 8.6 | 130 |
| 55: M10-988-02 | 1700 | 0.3 | 18000 | 64 | 1.7 | 0.9 | < 0.7 | 0.6 | 110 | 7500 | < 0.02 | 0.16 | 200 | 18 | 96 |
| 56: M10-988-03 | 1200 | 0.2 | 12000 | 110 | 1.2 | 2.0 | < 0.7 | < 0.5 | 100 | 6100 | < 0.02 | 0.095 | 240 | 13 | 95 |
| 57: M10-992-01 | 1400 | 0.1 | 10000 | 90 | 1.9 | 1.1 | < 0.7 | < 0.5 | 130 | 4200 | < 0.02 | 0.069 | 190 | 12 | 79 |
| 58: M10-992-02 | 1300 | 0.2 | 22000 | 81 | 1.4 | < 0.8 | < 0.7 | < 0.5 | 82 | 3400 | 0.02 | 0.069 | 170 | 9.1 | 78 |
| 59: M10-992-03 | 1100 | 0.1 | 11000 | 140 | 9.1 | < 0.8 | < 0.7 | < 0.5 | 92 | 750 | 0.09 | 0.049 | 150 | 2.7 | 60 |
| 60: M10-992-04 | 1700 | 0.2 | 12000 | 120 | 1.9 | < 0.8 | 0.8 | 0.6 | 87 | 6100 | < 0.02 | 0.11 | 210 | 8.8 | 100 |
| 61: M10-992-05 | 1500 | 0.4 | 21000 | 56 | 2.1 | 0.8 | < 0.7 | 0.8 | 95 | 8500 | 0.04 | 0.17 | 200 | 14 | 120 |
| 62: M10-994-01 | 1200 | 0.2 | 11000 | 110 | 2.4 | < 0.8 | < 0.7 | < 0.5 | 100 | 5600 | < 0.02 | 0.16 | 190 | 9.5 | 100 |
| 63: M10-994-02 | 1200 | 0.4 | 23000 | 62 | 3.5 | < 0.8 | < 0.7 | 0.5 | 120 | 7100 | 0.17 | 0.49 | 180 | 10 | 110 |
| 64: M10-994-03 | 1100 | 0.4 | 16000 | 81 | 4.9 | < 0.8 | < 0.7 | 0.7 | 81 | 4900 | 0.28 | 0.23 | 170 | 10 | 93 |
| 65: M10-994-04 | 1000 | 0.3 | 12000 | 110 | 2.2 | 1.8 | < 0.7 | 0.6 | 110 | 5900 | 0.06 | 0.092 | 220 | 17 | 92 |
| 66: M10-994-05 | 910 | 0.2 | 17000 | 77 | 7.5 | < 0.8 | < 0.7 | < 0.5 | 120 | 1100 | 0.16 | 0.13 | 150 | 5.7 | 71 |
| 67: M10-998-01 | 1040 | 0.3 | 14000 | 63 | 1.7 | 2.1 | < 0.7 | 0.8 | 110 | 9500 | < 0.02 | 0.16 | 280 | 23 | 100 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68: M10-998-02 | 1100 | 0.5 | 18000 | 60 | 4.5 | 1.0 | < 0.7 | 1.1 | 150 | 12000 | 0.32 | 0.36 | 300 | 21 | 110 |
| 69: M10-998-03 | 1180 | 0.3 | 18000 | 120 | 5.6 | < 0.8 | < 0.7 | 1.2 | 87 | 5500 | 0.47 | 0.17 | 220 | 10 | 130 |
| 70: M10-998-04 | 1270 | 0.3 | 13000 | 100 | 4.9 | < 0.8 | < 0.7 | 0.7 | 95 | 5300 | 0.26 | 0.15 | 180 | 14 | 99 |
| 71: M10-998-05 | 1100 | 0.3 | 2200 | 330 | 8.2 | < 0.8 | < 0.7 | < 0.5 | 130 | 2200 | 0.03 | 0.15 | 120 | 3.7 | 110 |
| 72: M11-1042-01 | 970 | 0.3 | 11000 | 96 | 1.7 | < 0.8 | < 0.7 | < 0.5 | 70 | 2900 | 0.32 | 0.15 | 180 | 4.6 | 110 |
| 73: M11-1042-02 | 930 | 0.6 | 14000 | 500 | 8.1 | 143 | < 0.7 | 1.7 | 360 | 5000 | 0.51 | 1.1 | 150 | 11 | 190 |
| 74: M11-1042-03 | 1200 | 0.3 | 7500 | 470 | 4.9 | 47 | < 0.7 | 0.7 | 97 | 4100 | 0.03 | 0.35 | 140 | 3.5 | 180 |
| 75: M11-1051-01 | 930 | 0.4 | 14000 | 100 | 2.3 | 39 | < 0.7 | 0.6 | 88 | 3200 | 0.36 | 0.21 | 160 | 4.0 | 85 |
| 76: M11-1051-02 | 1300 | 0.4 | 8000 | 470 | 3.2 | 19 | < 0.7 | 0.9 | 150 | 4700 | 0.07 | 0.52 | 160 | 11 | 120 |
| 77: M11-1099-01 | 1700 | 1.0 | 8700 | 94 | 39 | 18 | < 0.7 | 2.2 | 82 | 6100 | 0.58 | 0.77 | 210 | 6.2 | 360 |
| 78: M11-1099-02 | 1700 | 0.5 | 18000 | 120 | 6.1 | 13 | < 0.7 | 1.8 | 180 | 7500 | 0.03 | 0.18 | 230 | 23 | 110 |
| 79: M11-1099-03 | 1300 | 0.8 | 11000 | 81 | 4.8 | 7.2 | < 0.7 | 1.5 | 80 | 7200 | 0.05 | 0.27 | 190 | 30 | 120 |
| 80: M95-11-01 | 1600 | 0.4 | 14000 | 74 | 3.4 | 5.9 | < 0.7 | 0.8 | 180 | 6500 | 0.07 | 0.20 | 190 | 16 | 100 |
| 81: M95-12-01 | 1300 | 0.6 | 15000 | 66 | 3.3 | 4.1 | < 0.7 | 1.6 | 110 | 9000 | 0.22 | 0.55 | 190 | 24 | 110 |
| 82: M95-22-01 | 1300 | 0.3 | 13000 | 120 | 7.3 | 3.2 | < 0.7 | 0.7 | 140 | 4500 | 0.20 | 0.15 | 180 | 13 | 110 |
| 83: M95-22-02 | 1200 | 0.3 | 17000 | 110 | 3.7 | 2.8 | < 0.7 | 1.1 | 110 | 6700 | 0.21 | 0.20 | 200 | 20 | 110 |
| 84: M96-50-01 | 1200 | 0.3 | 20000 | 110 | 2.9 | 3.9 | < 0.7 | 0.9 | 140 | 6000 | 0.04 | 0.23 | 200 | 16 | 99 |
| 85: M96-51-01 | 1200 | 1.1 | 16000 | 96 | 4.2 | 2.2 | < 0.7 | 0.5 | 120 | 2600 | 0.21 | 0.19 | 160 | 4.1 | 79 |
| 86: M96-51-02 | 1300 | 0.5 | 22000 | 65 | 3.5 | 2.9 | < 0.7 | 1.1 | 99 | 8600 | 0.11 | 0.39 | 240 | 8.7 | 110 |
| 87: M96-51-03 | 1200 | 0.2 | 14000 | 110 | 3.2 | 2.6 | < 0.7 | < 0.5 | 130 | 5200 | 0.17 | 0.12 | 200 | 11 | 86 |
| 88: M97-111-01 | 1300 | 0.2 | 13000 | 88 | 1.7 | 2.3 | < 0.7 | < 0.5 | 100 | 3200 | 0.16 | 0.092 | 170 | 9.7 | 77 |
| 89: M97-111-02 | 1000 | 0.5 | 14000 | 100 | 2.4 | 1.9 | < 0.7 | < 0.5 | 120 | 1400 | 0.10 | 0.17 | 140 | 4.3 | 110 |
| 90: M97-111-03 | 1400 | 0.2 | 11000 | 120 | 1.7 | 1.7 | < 0.7 | < 0.5 | 79 | 5500 | < 0.02 | 0.10 | 190 | 9.0 | 120 |
| 91: M97-111-04 | 1000 | 0.3 | 10000 | 110 | 1.5 | 1.9 | 0.8 | 0.8 | 95 | 5100 | 0.04 | 0.10 | 190 | 14 | 86 |
| 92: M97-176-01 | 1500 | 0.2 | 8500 | 130 | 2.9 | 1.5 | < 0.7 | 0.5 | 92 | 6000 | 0.05 | 0.16 | 190 | 9.3 | 110 |
| 93: M97-176-02 | 940 | 0.2 | 15000 | 110 | 1.9 | 1.3 | < 0.7 | < 0.5 | 78 | 5500 | 0.06 | 0.088 | 200 | 16 | 88 |
| 94: M97-176-03 | 1200 | 0.3 | 11000 | 68 | 2.6 | 1.4 | < 0.7 | < 0.5 | 86 | 6300 | 0.20 | 0.086 | 200 | 14 | 94 |
| 95: M98-222-01 | 1400 | 0.6 | 13000 | 63 | 6.2 | 1.5 | < 0.7 | 1.0 | 98 | 8900 | 0.32 | 0.35 | 260 | 9.3 | 160 |
| 96: M98-222-02 | 1400 | 0.2 | 17000 | 98 | 2.9 | 1.2 | < 0.7 | 0.7 | 82 | 5800 | 0.18 | 0.18 | 200 | 16 | 95 |
| 97: M98-222-03 | 940 | 0.3 | 16000 | 88 | 4.7 | 1.6 | < 0.7 | < 0.5 | 120 | 6200 | 0.05 | 0.23 | 190 | 14 | 94 |
| 98: M98-223-01 | 1400 | 0.2 | 11000 | 110 | 2.8 | 1.4 | < 0.7 | < 0.5 | 120 | 5400 | 0.07 | 0.25 | 190 | 15 | 88 |
| 99: M98-223-02 | 1100 | 0.4 | 12000 | 95 | 5.2 | 1.4 | 0.8 | < 0.5 | 130 | 8100 | 0.29 | 0.18 | 230 | 7.7 | 96 |
| 100: M98-223-03 | 1000 | 0.6 | 15000 | 66 | 4.1 | 1.7 | < 0.7 | < 0.5 | 91 | 8700 | 0.12 | 0.66 | 240 | 9.6 | 150 |
| 101: W94-48-01 | 1200 | 0.4 | 13000 | 72 | 2.2 | 2.3 | < 0.7 | 0.8 | 190 | 8500 | 0.03 | 0.23 | 240 | 23 | 120 |
| 102: M96-58-01 | 1400 | 0.4 | 14000 | 100 | 2.4 | 1.3 | < 0.7 | 1.4 | 100 | 6700 | 0.10 | 0.15 | 230 | 17 | 110 |
| 103: M96-58-02 | 1200 | 0.3 | 8900 | 67 | 4.9 | 1.5 | 1.0 | < 0.5 | 94 | 5400 | 0.10 | 0.17 | 210 | 14 | 140 |
| 104: M96-58-03 | 1400 | 0.3 | 9500 | 110 | 1.6 | 1.4 | < 0.7 | < 0.5 | 86 | 4300 | 0.08 | 0.13 | 190 | 13 | 110 |
| 105: M97-120-01 | 1300 | 0.2 | 15000 | 91 | 3.0 | 0.9 | < 0.7 | < 0.5 | 67 | 3200 | < 0.02 | 0.066 | 180 | 5.9 | 88 |
| 106: M97-120-02 | 1400 | 0.3 | 12000 | 130 | 3.2 | 1.0 | < 0.7 | 0.7 | 91 | 5600 | 0.22 | 0.13 | 190 | 12 | 130 |
| 107: M97-122-01 | 1100 | 0.3 | 16000 | 100 | 1.2 | 1.4 | 0.7 | < 0.5 | 88 | 5000 | < 0.02 | 0.054 | 200 | 14 | 110 |
| 108: M97-122-02 | 800 | 0.6 | 18000 | 40 | 3.0 | 0.9 | < 0.7 | 0.5 | 150 | 2100 | 0.09 | 0.69 | 78 | 8.3 | 54 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109: M97-122-03 | 1100 | 0.3 | 12000 | 81 | 5.7 | 1.8 | < 0.7 | 0.5 | 88 | 5400 | 0.22 | 0.13 | 180 | 5.3 | 150 |
| 110: M97-122-04 | 1000 | 0.6 | 420 | 68 | 3.7 | 1.6 | 0.7 | 1.0 | 21 | 2400 | 0.30 | 0.35 | 110 | 4.0 | 530 |
| 111: M97-122-05 | 1200 | 0.2 | 24000 | 79 | 3.2 | 0.8 | < 0.7 | < 0.5 | 78 | 6100 | 0.13 | 0.056 | 200 | 8.6 | 92 |
| 112: M97-123-01 | 820 | 1.5 | 20000 | 46 | 3.4 | < 0.8 | < 0.7 | < 0.5 | 130 | 2700 | 0.16 | 0.71 | 79 | 8.3 | 60 |
| 113: M97-123-02 | 1000 | 0.5 | 17000 | 52 | 3.4 | 0.9 | < 0.7 | 0.6 | 120 | 3100 | 0.15 | 0.66 | 92 | 9.8 | 72 |
| 114: M97-123-03 | 1400 | 0.3 | 13000 | 110 | 1.4 | < 0.8 | < 0.7 | < 0.5 | 69 | 4500 | 0.11 | 0.097 | 170 | 14 | 91 |
| 115: M97-123-04 | 970 | 0.3 | 13000 | 70 | 3.9 | 1.1 | < 0.7 | 0.5 | 130 | 5800 | 0.26 | 0.12 | 200 | 12 | 110 |
| 116: M97-124-01 | 1000 | 0.9 | 13000 | 81 | 3.1 | < 0.8 | 0.7 | < 0.5 | 75 | 5300 | 0.33 | 0.20 | 190 | 13 | 120 |
| 117: M97-124-02 | 1100 | 0.3 | 10000 | 110 | 2.0 | < 0.8 | < 0.7 | 0.6 | 40 | 7300 | 0.56 | 0.15 | 260 | 9.8 | 130 |
| 118: M97-124-03 | 1800 | 1.2 | 340 | 25 | 15 | 2.0 | 2.0 | 1.8 | 16 | 640 | 0.06 | 0.18 | 25 | 4.6 | 790 |
| 119: M97-124-04 | 980 | 0.2 | 9200 | 77 | 7.6 | < 0.8 | < 0.7 | 1.3 | 53 | 4100 | 0.61 | 0.061 | 180 | 7.7 | 190 |
| 120: M97-153-01 | 1100 | 0.3 | 12000 | 110 | 13 | 0.9 | < 0.7 | 0.8 | 140 | 3900 | 0.48 | 0.13 | 180 | 10 | 250 |
| 121: M97-153-02 | 1300 | 0.3 | 10000 | 90 | 13 | 1.4 | < 0.7 | < 0.5 | 100 | 3800 | 0.29 | 0.081 | 170 | 9.2 | 71 |
| 122: M97-154-01 | 1200 | 0.3 | 17000 | 86 | 5.3 | 0.9 | < 0.7 | < 0.5 | 130 | 5100 | 0.28 | 0.40 | 170 | 10 | 100 |
| 123: M98-181-01 | 1100 | 0.1 | 13000 | 95 | 2.5 | 0.9 | < 0.7 | < 0.5 | 120 | 4600 | 0.09 | 0.053 | 180 | 13 | 78 |
| 124: M98-181-02 | 1300 | 0.1 | 13000 | 51 | 1.5 | < 0.8 | < 0.7 | < 0.5 | 54 | 5100 | 0.04 | 0.13 | 200 | 8.5 | 97 |
| 125: M98-184-01 | 940 | 0.3 | 13000 | 83 | 2.2 | < 0.8 | 0.8 | 0.6 | 110 | 3000 | 0.08 | 0.65 | 96 | 9.1 | 64 |
| 126: M98-184-02 | 1000 | 0.3 | 24000 | 72 | 6.4 | < 0.8 | < 0.7 | < 0.5 | 110 | 5600 | 0.23 | 0.19 | 190 | 6.7 | 110 |
| 127: M98-185-01 | 1500 | 0.2 | 18000 | 110 | 3.1 | < 0.8 | < 0.7 | < 0.5 | 64 | 4500 | 0.31 | 0.12 | 180 | 9.6 | 110 |
| 128: M98-185-02 | 1400 | 0.4 | 14000 | 120 | 1.3 | 1.2 | < 0.7 | < 0.5 | 88 | 4900 | 0.06 | 0.086 | 190 | 14 | 87 |
| 129: M98-185-03 | 1200 | 0.5 | 10000 | 93 | 1.9 | 1.2 | < 0.7 | 0.5 | 100 | 6000 | 0.02 | 0.15 | 200 | 18 | 88 |
| 130: W94-49-01 | 880 | 0.5 | 16000 | 77 | 1.6 | 1.3 | < 0.7 | 1.2 | 78 | 8200 | 0.08 | 0.35 | 180 | 30 | 100 |
| 131: W94-49-02 | 1700 | 2.7 | 70 | 42 | 16 | 2.1 | 0.7 | 2.3 | 5.32 | 2800 | 0.20 | 0.59 | 39 | 7.4 | 1400 |
| 132: W94-49-03 | 1200 | 0.3 | 8600 | 130 | 5.2 | < 0.8 | < 0.7 | < 0.5 | 67 | 4200 | 0.17 | 0.074 | 180 | 7.4 | 120 |
| 133: W94-53-01 | 240 | 1.4 | 17000 | 63 | 6.2 | 0.9 | < 0.7 | 0.8 | 200 | 3500 | 0.45 | 1.6 | 97 | 6.7 | 77 |
| 134: W94-55-01 | 1300 | 1.0 | 88 | 22 | 4.0 | 1.3 | < 0.7 | 2.5 | 20 | 770 | 0.07 | 0.27 | 29 | 5.0 | 460 |
| 135: W94-55-02 | 1100 | 0.3 | 4300 | 79 | 3.5 | < 0.8 | < 0.7 | < 0.5 | 59 | 5900 | 0.48 | 0.16 | 200 | 14 | 130 |
| 136: W94-57-01 | 1400 | 1.0 | 6000 | 170 | 320 | 0.9 | < 0.7 | < 0.5 | 80 | 4800 | 0.50 | 0.18 | 180 | 6.8 | 130 |
| 137: W94-57-02 | 1200 | 1.0 | 150 | 37 | 11 | < 0.8 | 1.4 | 0.8 | 17 | 2700 | 0.03 | 0.49 | 66 | 5.6 | 570 |
| 138: W94-57-03 | 2200 | 2.2 | 48 | 23 | 13 | 1.2 | 0.9 | 1.3 | 22 | 700 | < 0.02 | 0.45 | 22 | 4.7 | 1700 |
| 139: W94-59-01 | 1300 | 0.4 | 17000 | 120 | 1.9 | 1.0 | < 0.7 | < 0.5 | 84 | 5000 | < 0.02 | 0.11 | 190 | 14 | 160 |
| 140: W94-61-01 | 2600 | 1.8 | 230 | 19 | 7.8 | 0.8 | 0.9 | 0.9 | 7.98 | 470 | < 0.02 | 0.39 | 16 | 4.8 | 190 |
| 141: W94-61-02 | 1200 | 0.3 | 8400 | 150 | 4.9 | 1.7 | < 0.7 | < 0.5 | 73 | 3800 | 0.15 | 0.079 | 170 | 13 | 120 |
| 142: W94-65-01 | 2000 | 3.0 | 140 | 45 | 7.0 | 5.0 | 3.7 | 0.9 | 11 | 620 | < 0.02 | 0.42 | 28 | 4.4 | 2200 |
| 143: W94-65-02 | 2300 | 2.6 | 40 | 27 | 4.4 | 2.6 | 1.0 | < 0.5 | 43 | 300 | < 0.02 | 0.21 | 13 | 3.5 | 1000 |
| 144: W94-65-03 | 1200 | 0.4 | 11000 | 86 | 1.6 | 0.9 | < 0.7 | < 0.5 | 88 | 6700 | < 0.02 | 0.18 | 210 | 21 | 140 |
| 145: W94-70-01 | 1300 | 0.3 | 11000 | 110 | 2.5 | 1.1 | < 0.7 | < 0.5 | 90 | 4600 | 0.05 | 0.10 | 180 | 12 | 100 |
| 146: W94-70-02 | 1100 | 0.4 | 11000 | 74 | 2.5 | 0.9 | < 0.7 | < 0.5 | 83 | 5700 | < 0.02 | 0.12 | 200 | 19 | 110 |
| 147: W94-73-01 | 1300 | 0.7 | 12000 | 94 | 1.9 | 0.9 | < 0.7 | < 0.5 | 98 | 6000 | < 0.02 | 0.14 | 200 | 18 | 110 |
| 148: W94-73-02 | 2300 | 2.5 | 540 | 23 | 10 | < 0.8 | 1.0 | < 0.5 | 15 | 500 | < 0.02 | 0.35 | 24 | 5.5 | 620 |
| 149: W94-73-03 | 2100 | 0.3 | 14000 | 91 | 4.7 | < 0.8 | < 0.7 | < 0.5 | 54 | 5800 | 0.11 | 0.059 | 200 | 15 | 120 |

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**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 150: M00-473-01 | 1500 | 1.5 | 7100 | 92 | 17 | 0.8 | < 0.7 | 0.5 | 160 | 2000 | 0.64 | 0.21 | 160 | 7.2 | 640 |
| 151: M00-483-01 | 1600 | 0.6 | 8200 | 88 | 17 | < 0.8 | < 0.7 | < 0.5 | 160 | 4000 | 0.83 | 0.36 | 170 | 9.6 | 110 |
| 152: M00-490-01 | 1200 | 8.8 | 15000 | 90 | 130 | 1.9 | < 0.7 | < 0.5 | 220 | 3100 | 0.71 | 0.51 | 150 | 4.9 | 310 |
| 153: M03-508-01 | 320 | 1.4 | 20000 | 53 | 9.9 | < 0.8 | < 0.7 | < 0.5 | 310 | 1600 | 0.31 | 1.5 | 78 | 7.0 | 74 |
| 154: M03-508-02 | 430 | 1.0 | 1600 | 19 | 6.7 | < 0.8 | < 0.7 | < 0.5 | 240 | 1300 | 0.17 | 0.69 | 33 | 5.1 | 41 |
| 155: M05-561-01 | 530 | 0.4 | 4700 | 47 | 6.7 | < 0.8 | < 0.7 | < 0.5 | 94 | 1100 | 0.13 | 0.038 | 71 | 1.8 | 23 |
| 156: M05-561-02 | 1100 | 1.2 | 14000 | 90 | 11 | 1.0 | < 0.7 | 1.2 | 220 | 9700 | 0.47 | 1.4 | 150 | 22 | 130 |
| 157: M06-577-01 | 320 | 1.4 | 18000 | 63 | 12 | < 0.8 | < 0.7 | 0.8 | 280 | 1200 | 0.40 | 1.7 | 93 | 6.7 | 81 |
| 158: M06-577-02 | 320 | 1.4 | 20000 | 67 | 14 | < 0.8 | < 0.7 | < 0.5 | 310 | 1900 | 0.43 | 1.8 | 100 | 6.8 | 96 |
| 159: M06-577-03 | 340 | 1.6 | 17000 | 71 | 12 | < 0.8 | < 0.7 | 0.9 | 250 | 3500 | 0.52 | 1.8 | 110 | 6.6 | 93 |
| 160: M06-591-01 | 270 | 1.6 | 20000 | 69 | 44 | < 0.8 | < 0.7 | 0.9 | 230 | 3300 | 0.41 | 1.8 | 99 | 6.5 | 130 |
| 161: M06-591-02 | 330 | 1.1 | 19000 | 17 | 18 | < 0.8 | < 0.7 | 0.6 | 270 | 1900 | 0.24 | 1.0 | 37 | 4.8 | 53 |
| 162: M06-591-03 | 1210 | 0.3 | 10000 | 96 | 4.1 | < 0.8 | < 0.7 | 0.5 | 160 | 1400 | 0.30 | 0.27 | 160 | 8.7 | 79 |
| 163: M06-592-01 | 360 | 1.5 | 15000 | 68 | 15 | < 0.8 | < 0.7 | 0.9 | 270 | 1300 | 0.46 | 2.0 | 110 | 7.4 | 92 |
| 164: M06-592-02 | 1300 | 0.5 | 16000 | 43 | 12 | 0.9 | < 0.7 | 0.7 | 290 | 7400 | 0.23 | 0.26 | 250 | 20 | 120 |
| 165: M06-592-03 | 1100 | 0.4 | 15000 | 47 | 8.2 | < 0.8 | < 0.7 | < 0.5 | 240 | 6500 | 0.20 | 0.23 | 210 | 18 | 88 |
| 166: M06-593-01 | 270 | 1.2 | 24000 | 48 | 11 | < 0.8 | 1.7 | 0.6 | 430 | 2100 | 0.31 | 1.6 | 68 | 7.0 | 73 |
| 167: M06-593-02 | 1100 | 0.4 | 16000 | 50 | 6.8 | < 0.8 | < 0.7 | 1.0 | 200 | 6500 | 0.10 | 0.24 | 210 | 18 | 79 |
| 168: M06-608-01 | 350 | 1.5 | 22000 | 60 | 23 | < 0.8 | < 0.7 | 0.5 | 310 | 1000 | 0.40 | 1.6 | 94 | 6.5 | 74 |
| 169: M06-608-02 | 360 | 1.6 | 18000 | 60 | 12 | < 0.8 | < 0.7 | 0.8 | 270 | 1600 | 0.45 | 1.7 | 91 | 6.5 | 82 |
| 170: M06-611-01 | 270 | 1.5 | 21000 | 52 | 12 | < 0.8 | 0.8 | < 0.5 | 320 | 1100 | 0.37 | 1.6 | 78 | 6.3 | 70 |
| 171: M06-611-02 | 270 | 1.7 | 18000 | 65 | 8.8 | < 0.8 | < 0.7 | 0.9 | 280 | 2200 | 0.46 | 1.8 | 92 | 6.6 | 70 |
| 172: M06-623-01 | 220 | 1.2 | 24000 | 31 | 6.0 | < 0.8 | < 0.7 | 1.1 | 330 | 2300 | 0.34 | 1.0 | 56 | 4.7 | 49 |
| 173: M06-623-02 | 1400 | 0.5 | 12000 | 96 | 13 | < 0.8 | 0.7 | < 0.5 | 230 | 2100 | 0.16 | 0.11 | 160 | 12 | 92 |
| 174: M06-625-01 | 310 | 1.2 | 18000 | 59 | 9.1 | < 0.8 | < 0.7 | 0.8 | 270 | 1800 | 0.42 | 1.7 | 87 | 6.7 | 74 |
| 175: M06-625-02 | 300 | 1.6 | 17000 | 62 | 13 | < 0.8 | < 0.7 | 0.6 | 300 | 1900 | 0.44 | 1.7 | 98 | 6.9 | 86 |
| 176: M06-629-01 | 660 | 1.6 | 8000 | 83 | 27 | 4.2 | < 0.7 | 1.1 | 190 | 2600 | 0.72 | 1.1 | 140 | 7.8 | 62 |
| 177: M06-631-01 | 290 | 1.6 | 17000 | 67 | 11 | < 0.8 | < 0.7 | < 0.5 | 270 | 2100 | 0.49 | 1.8 | 99 | 6.7 | 82 |
| 178: M07-674-01 | 370 | 1.3 | 19000 | 60 | 59 | < 0.8 | < 0.7 | < 0.5 | 320 | 1100 | 0.43 | 1.6 | 92 | 6.4 | 86 |
| 179: M07-689-01 | 310 | 1.4 | 17000 | 69 | 9.7 | < 0.8 | < 0.7 | < 0.5 | 280 | 1500 | 0.41 | 1.8 | 100 | 8.1 | 88 |
| 180: M07-689-02 | 370 | 1.6 | 13000 | 70 | 13 | < 0.8 | < 0.7 | < 0.5 | 290 | 2000 | 0.60 | 2.1 | 120 | 10 | 91 |
| 181: M07-689-03 | 170 | 1.7 | 20000 | 30 | 17 | < 0.8 | 1.0 | < 0.5 | 340 | 2100 | 0.50 | 3.2 | 53 | 7.1 | 100 |
| 182: M08-761-01 | 260 | 1.4 | 24000 | 62 | 10.0 | < 0.8 | < 0.7 | 0.6 | 310 | 2300 | 0.44 | 1.8 | 96 | 6.9 | 95 |
| 183: M08-761-02 | 230 | 1.3 | 20000 | 49 | 8.6 | < 0.8 | < 0.7 | 0.6 | 300 | 1900 | 0.46 | 1.5 | 75 | 6.1 | 64 |
| 184: M08-763-01 | 360 | 1.5 | 20000 | 53 | 17 | < 0.8 | < 0.7 | 0.7 | 360 | 3100 | 0.48 | 1.8 | 92 | 6.3 | 87 |
| 185: M08-765-01 | 290 | 1.2 | 19000 | 49 | 12 | < 0.8 | 1.0 | 0.7 | 320 | 1700 | 0.39 | 1.5 | 73 | 6.4 | 71 |
| 186: M08-783-01 | 330 | 1.6 | 14000 | 67 | 17 | < 0.8 | < 0.7 | < 0.5 | 260 | 1700 | 0.49 | 1.8 | 100 | 6.5 | 89 |
| 187: M08-783-02 | 1800 | 0.4 | 9100 | 95 | 7.2 | < 0.8 | 0.8 | < 0.5 | 140 | 4100 | 0.32 | 0.14 | 180 | 9.8 | 110 |
| 188: M10-879-01 | 320 | 1.1 | 22000 | 50 | 11 | < 0.8 | < 0.7 | 0.6 | 350 | 1100 | 0.35 | 1.8 | 72 | 6.7 | 82 |
| 189: M10-887-01 | 330 | 1.2 | 18000 | 55 | 12 | < 0.8 | < 0.7 | 0.5 | 250 | 2800 | 0.43 | 1.8 | 82 | 6.5 | 66 |
| 190: M10-892-01 | 320 | 1.1 | 21000 | 55 | 12 | < 0.8 | < 0.7 | < 0.5 | 240 | 1500 | 0.39 | 1.6 | 100 | 6.6 | 93 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 191: M10-999-01 | 350 | 1.4 | 16000 | 70 | 11 | < 0.8 | < 0.7 | < 0.5 | 260 | 1100 | 0.45 | 1.8 | 110 | 6.7 | 110 |
| 192: M10-999-02 | 310 | 1.2 | 21000 | 56 | 11 | < 0.8 | < 0.7 | 0.5 | 260 | 1000 | 0.40 | 1.8 | 84 | 6.5 | 70 |
| 193: M95-17-01 | 350 | 0.7 | 25000 | 18 | 5.9 | < 0.8 | < 0.7 | < 0.5 | 290 | 2100 | 0.23 | 1.0 | 41 | 5.0 | 46 |
| 194: M95-25-01 | 310 | 1.3 | 21000 | 57 | 11 | < 0.8 | < 0.7 | < 0.5 | 320 | 1100 | 0.41 | 1.7 | 86 | 6.9 | 81 |
| 195: M95-25-02 | 240 | 1.1 | 21000 | 47 | 8.3 | < 0.8 | 0.7 | < 0.5 | 290 | 1400 | 0.38 | 1.6 | 70 | 6.7 | 52 |
| 196: M95-25-03 | 510 | 5.0 | 11000 | 54 | 66 | 2.4 | < 0.7 | 0.7 | 180 | 2800 | 0.48 | 1.6 | 96 | 7.5 | 73 |
| 197: M95-25-04 | 1400 | 0.2 | 15000 | 93 | 6.4 | < 0.8 | 0.9 | < 0.5 | 160 | 2400 | 0.16 | 0.14 | 160 | 9.3 | 89 |
| 198: M96-03-01 | 360 | 1.5 | 16000 | 72 | 12 | < 0.8 | < 0.7 | 1.6 | 240 | 1100 | 0.53 | 1.8 | 110 | 7.1 | 95 |
| 199: M96-03-02 | 260 | 1.5 | 22000 | 47 | 12 | < 0.8 | 1.3 | 0.9 | 330 | 1200 | 0.38 | 1.7 | 70 | 6.5 | 61 |
| 200: M96-03-03 | 1300 | 0.2 | 13000 | 100 | 3.0 | < 0.8 | < 0.7 | < 0.5 | 140 | 1000 | 0.10 | 0.097 | 170 | 12 | 110 |
| 201: M96-19-01 | 260 | 1.2 | 18000 | 46 | 22 | < 0.8 | < 0.7 | 0.6 | 250 | 2000 | 0.34 | 1.5 | 67 | 5.4 | 68 |
| 202: M96-19-02 | 360 | 1.2 | 20000 | 52 | 23 | < 0.8 | < 0.7 | 0.5 | 330 | 1500 | 0.42 | 1.7 | 86 | 6.5 | 83 |
| 203: M96-37-01 | 380 | 3.0 | 18000 | 59 | 14 | < 0.8 | < 0.7 | 0.7 | 360 | 2000 | 0.39 | 1.9 | 91 | 7.9 | 78 |
| 204: M96-37-02 | 280 | 1.4 | 21000 | 50 | 20 | < 0.8 | < 0.7 | 1.3 | 360 | 1500 | 0.36 | 1.8 | 69 | 6.6 | 70 |
| 205: M96-37-03 | 280 | 1.4 | 21000 | 55 | 21 | < 0.8 | 1.2 | 1.0 | 320 | 930 | 0.36 | 1.7 | 81 | 6.4 | 81 |
| 206: M96-40-01 | 310 | 2.6 | 18000 | 65 | 15 | < 0.8 | < 0.7 | 0.8 | 280 | 2200 | 0.44 | 1.8 | 110 | 7.0 | 85 |
| 207: M96-40-02 | 320 | 1.6 | 14000 | 64 | 11 | < 0.8 | < 0.7 | < 0.5 | 280 | 1900 | 0.44 | 1.7 | 100 | 6.8 | 81 |
| 208: M96-4-01 | 290 | 3.4 | 21000 | 46 | 13 | < 0.8 | < 0.7 | 0.7 | 310 | 1000 | 0.37 | 1.6 | 67 | 6.3 | 59 |
| 209: M96-44-01 | 1000 | 0.4 | 13000 | 49 | 7.2 | < 0.8 | < 0.7 | < 0.5 | 250 | 6000 | 0.22 | 0.25 | 200 | 17 | 87 |
| 210: M96-54-01 | 340 | 3.1 | 21000 | 56 | 13 | < 0.8 | < 0.7 | < 0.5 | 280 | 910 | 0.40 | 1.6 | 83 | 6.5 | 79 |
| 211: M96-54-02 | 420 | 1.5 | 19000 | 66 | 12 | < 0.8 | < 0.7 | 0.9 | 270 | 1200 | 0.50 | 1.7 | 100 | 7.1 | 83 |
| 212: M96-65-01 | 290 | 2.9 | 19000 | 54 | 12 | < 0.8 | < 0.7 | 0.7 | 270 | 1100 | 0.42 | 1.7 | 82 | 6.3 | 72 |
| 213: M96-7-01 | 260 | 1.5 | 14000 | 65 | 10 | < 0.8 | < 0.7 | 0.8 | 220 | 1600 | 0.43 | 1.7 | 110 | 6.8 | 83 |
| 214: M96-7-02 | 330 | 2.6 | 19000 | 55 | 13 | < 0.8 | 1.7 | 0.5 | 280 | 1200 | 0.42 | 1.8 | 83 | 7.1 | 67 |
| 215: M96-74-01 | 350 | 2.1 | 960 | 11 | 5.8 | < 0.8 | < 0.7 | < 0.5 | 200 | 870 | 0.07 | 0.54 | 22 | 5.2 | 57 |
| 216: M96-77-01 | 310 | 2.8 | 17000 | 61 | 13 | < 0.8 | < 0.7 | 0.9 | 290 | 1200 | 0.36 | 1.7 | 97 | 7.3 | 92 |
| 217: M96-77-02 | 340 | 1.8 | 20000 | 63 | 110 | < 0.8 | < 0.7 | 1.0 | 320 | 2000 | 0.45 | 1.9 | 100 | 7.2 | 96 |
| 218: M97-121-01 | 230 | 2.9 | 21000 | 48 | 11 | < 0.8 | < 0.7 | 1.2 | 270 | 2800 | 0.33 | 1.9 | 80 | 6.6 | 59 |
| 219: M97-135-01 | 320 | 1.2 | 23000 | 45 | 25 | < 0.8 | < 0.7 | 0.7 | 320 | 1800 | 0.29 | 1.7 | 75 | 6.8 | 74 |
| 220: M97-135-02 | 1000 | 1.6 | 15000 | 47 | 8.7 | 1.1 | < 0.7 | 0.7 | 260 | 6600 | 0.14 | 0.23 | 200 | 18 | 93 |
| 221: M97-135-03 | 280 | 3.0 | 22000 | 51 | 12 | < 0.8 | < 0.7 | 0.8 | 310 | 1600 | 0.32 | 1.6 | 77 | 6.4 | 76 |
| 222: M97-149-01 | 1000 | 0.4 | 17000 | 47 | 7.0 | 1.1 | < 0.7 | 0.9 | 230 | 6800 | 0.12 | 0.19 | 200 | 19 | 91 |
| 223: M97-149-02 | 330 | 2.7 | 26000 | 51 | 15 | < 0.8 | < 0.7 | 0.6 | 410 | 1800 | 0.25 | 1.9 | 82 | 7.6 | 84 |
| 224: M97-94A-01 | 350 | 1.2 | 20000 | 54 | 15 | < 0.8 | < 0.7 | 0.7 | 300 | 2400 | 0.34 | 1.6 | 82 | 6.5 | 71 |
| 225: M97-94A-02 | 250 | 2.8 | 20000 | 57 | 8.8 | < 0.8 | < 0.7 | 0.9 | 270 | 3400 | 0.37 | 1.7 | 90 | 6.6 | 73 |
| 226: M97-95-01 | 340 | 1.4 | 21000 | 54 | 9.8 | < 0.8 | < 0.7 | 0.9 | 330 | 1300 | 0.29 | 1.6 | 85 | 7.3 | 78 |
| 227: M97-95-02 | 250 | 2.9 | 19000 | 53 | 12 | < 0.8 | < 0.7 | 0.8 | 320 | 3200 | 0.40 | 1.7 | 89 | 6.2 | 64 |
| 228: M97-95-03 | 1300 | 0.2 | 16000 | 100 | 2.0 | < 0.8 | < 0.7 | < 0.5 | 99 | 2900 | 0.04 | 0.079 | 170 | 12 | 73 |
| 229: M98-201-01 | 240 | 2.9 | 18000 | 68 | 12 | < 0.8 | < 0.7 | 0.6 | 290 | 1200 | 0.34 | 1.7 | 93 | 6.8 | 80 |
| 230: M98-201-02 | 1000 | 0.4 | 11000 | 47 | 8.2 | < 0.8 | < 0.7 | 0.6 | 300 | 6600 | 0.10 | 0.22 | 210 | 18 | 93 |
| 231: M98-201-03 | 360 | 2.6 | 22000 | 52 | 14 | < 0.8 | < 0.7 | < 0.5 | 330 | 1400 | 0.31 | 1.5 | 80 | 6.6 | 83 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 232: M98-201-04 | 250 | 1.3 | 20000 | 53 | 8.0 | < 0.8 | < 0.7 | 0.9 | 300 | 2600 | 0.31 | 1.6 | 80 | 6.4 | 53 |
| 233: M98-208-01 | 300 | 2.9 | 22000 | 54 | 9.1 | < 0.8 | < 0.7 | 0.8 | 280 | 2300 | 0.30 | 1.8 | 82 | 8.2 | 63 |
| 234: M98-209-01 | 400 | 1.5 | 13000 | 73 | 12 | < 0.8 | < 0.7 | 0.7 | 260 | 1600 | 0.45 | 1.8 | 120 | 7.5 | 97 |
| 235: M98-265-01 | 300 | 3.3 | 21000 | 51 | 38 | < 0.8 | < 0.7 | 0.9 | 320 | 1500 | 0.32 | 1.5 | 76 | 6.4 | 77 |
| 236: M98-266-01 | 270 | 1.5 | 20000 | 62 | 9.2 | < 0.8 | < 0.7 | 1.0 | 300 | 2900 | 0.39 | 1.9 | 94 | 6.5 | 72 |
| 237: M98-269-01 | 1400 | 1.1 | 11000 | 120 | 3.3 | < 0.8 | < 0.7 | < 0.5 | 130 | 3700 | 0.04 | 0.047 | 180 | 11 | 93 |
| 238: M98-270-01 | 290 | 1.3 | 21000 | 56 | 10 | < 0.8 | < 0.7 | 0.8 | 290 | 1100 | 0.34 | 1.7 | 85 | 6.4 | 73 |
| 239: M98-317-01 | 300 | 0.8 | 15000 | 17 | 6.0 | < 0.8 | < 0.7 | 0.6 | 230 | 1800 | 0.15 | 0.95 | 44 | 5.4 | 57 |
| 240: M99-309-01 | 1100 | 1.4 | 21000 | 43 | 8.1 | < 0.8 | < 0.7 | 0.7 | 210 | 6900 | 0.04 | 0.47 | 210 | 18 | 120 |
| 241: M99-309-02 | 360 | 1.4 | 19000 | 59 | 12 | < 0.8 | < 0.7 | 0.7 | 290 | 1100 | 0.30 | 1.5 | 88 | 7.0 | 75 |
| 242: M99-336B-01 | 320 | 2.3 | 18000 | 64 | 13 | < 0.8 | < 0.7 | 0.6 | 370 | 1000 | 0.34 | 1.6 | 80 | 7.3 | 67 |
| 243: M99-336B-02 | 1000 | 0.4 | 15000 | 50 | 8.4 | 0.9 | < 0.7 | < 0.5 | 270 | 6200 | 0.13 | 0.26 | 190 | 16 | 85 |
| 244: M99-336B-03 | 330 | 2.9 | 20000 | 57 | 18 | < 0.8 | < 0.7 | 0.9 | 340 | 2600 | 0.43 | 1.8 | 98 | 7.1 | 88 |
| 245: M99-336B-04 | 2000 | 0.3 | 15000 | 97 | 4.7 | < 0.8 | < 0.7 | < 0.5 | 110 | 4400 | 0.05 | 0.18 | 180 | 15 | 110 |
| 246: M99-345-01 | 1100 | 1.8 | 11000 | 97 | 5.4 | < 0.8 | < 0.7 | 0.5 | 160 | 3100 | 0.32 | 0.085 | 170 | 7.9 | 86 |
| 247: M99-346-01 | 1300 | 0.2 | 13000 | 110 | 4.9 | < 0.8 | < 0.7 | < 0.5 | 130 | 2600 | 0.09 | 0.067 | 180 | 6.0 | 91 |
| 248: M99-347-01 | 320 | 2.6 | 20000 | 61 | 13 | < 0.8 | < 0.7 | 0.7 | 330 | 1400 | 0.39 | 1.9 | 97 | 6.4 | 90 |
| 249: M99-347-02 | 360 | 2.1 | 20000 | 60 | 19 | < 0.8 | < 0.7 | 1.4 | 280 | 1300 | 0.34 | 1.8 | 87 | 7.3 | 74 |
| 250: M99-409-01 | 260 | 2.8 | 21000 | 50 | 9.1 | < 0.8 | < 0.7 | < 0.5 | 300 | 1500 | 0.25 | 1.5 | 72 | 6.2 | 70 |
| 251: M99-409-02 | 300 | 1.3 | 23000 | 55 | 19 | < 0.8 | < 0.7 | 0.6 | 310 | 1200 | 0.31 | 1.5 | 84 | 6.3 | 82 |
| 252: M99-409-03 | 240 | 3.1 | 22000 | 55 | 14 | < 0.8 | < 0.7 | 0.8 | 260 | 2000 | 0.34 | 1.7 | 83 | 6.4 | 81 |
| 253: M99-409-04 | 340 | 1.3 | 14000 | 46 | 11 | < 0.8 | < 0.7 | 0.9 | 150 | 2400 | 0.38 | 1.5 | 78 | 8.7 | 76 |
| 254: M99-409-05 | 930 | 1.4 | 14000 | 88 | 7.1 | < 0.8 | < 0.7 | 0.6 | 140 | 2900 | 0.26 | 0.33 | 180 | 9.5 | 130 |
| 255: M99-410-01 | 310 | 1.5 | 19000 | 61 | 18 | < 0.8 | < 0.7 | 0.9 | 280 | 1300 | 0.38 | 1.8 | 94 | 6.6 | 80 |
| 256: M99-410-02 | 290 | 3.2 | 19000 | 61 | 17 | < 0.8 | < 0.7 | 0.6 | 290 | 2000 | 0.40 | 1.8 | 90 | 6.3 | 80 |
| 257: M99-417-01 | 310 | 0.9 | 17000 | 17 | 9.8 | < 0.8 | < 0.7 | 1.5 | 290 | 2300 | 0.22 | 0.98 | 42 | 5.4 | 61 |
| 258: M99-436-01 | 260 | 2.8 | 23000 | 63 | 56 | < 0.8 | < 0.7 | 0.8 | 330 | 1700 | 0.30 | 1.6 | 81 | 6.4 | 77 |
| 259: M99-436-02 | 290 | 1.4 | 18000 | 62 | 13 | < 0.8 | < 0.7 | 0.7 | 240 | 1400 | 0.37 | 1.9 | 97 | 6.5 | 83 |
| 260: M08-733-01 | 1700 | 1.2 | 14000 | 110 | 1.9 | < 0.8 | < 0.7 | < 0.5 | 110 | 5300 | 0.03 | 0.31 | 180 | 16 | 89 |
| 261: M08-733-02 | 1200 | 0.2 | 17000 | 110 | 3.4 | < 0.8 | < 0.7 | 0.8 | 110 | 5000 | 0.03 | 0.076 | 180 | 13 | 130 |
| 262: M09-802-01 | 1400 | 1.1 | 11000 | 130 | 3.7 | 0.8 | < 0.7 | 1.1 | 83 | 3700 | 0.11 | 0.18 | 150 | 13 | 210 |
| 263: M09-802-02 | 2600 | 0.8 | 210 | 12 | 2.5 | < 0.8 | < 0.7 | 0.6 | 9.94 | 200 | < 0.02 | 0.50 | 3 | 3.0 | 170 |
| 264: M09-803-01 | 3400 | 3.4 | 180 | 14 | 3.8 | 1.1 | 0.8 | 1.1 | 20 | 290 | < 0.02 | 0.23 | 7 | 4.1 | 260 |
| 265: M09-809-01 | 1300 | 1.1 | 480 | 17 | 4.6 | 2.3 | 0.9 | 0.9 | 47 | 1200 | 0.19 | 0.48 | 31 | 6.1 | 270 |
| 266: M09-817-01 | 3500 | 0.8 | 3200 | 43 | 4.9 | 1.4 | 0.9 | 0.8 | 49 | 1200 | 0.39 | 0.35 | 54 | 4.2 | 240 |
| 267: M09-817-02 | 1000 | 1.3 | 8700 | 120 | 4.2 | < 0.8 | < 0.7 | < 0.5 | 99 | 4000 | 0.03 | 0.049 | 170 | 8.7 | 83 |
| 268: M09-858-01 | 3800 | 1.4 | 830 | 22 | 3.7 | 2.2 | < 0.7 | 0.9 | 20 | 360 | < 0.02 | 0.23 | 15 | 3.9 | 47 |
| 269: M09-859-01 | 1600 | 1.4 | 12000 | 110 | 5.8 | < 0.8 | < 0.7 | 0.9 | 100 | 3900 | 0.05 | 0.12 | 160 | 5.3 | 170 |
| 270: M10-933-01 | 1200 | 0.3 | 9200 | 61 | 8.6 | < 0.8 | < 0.7 | 0.6 | 100 | 4600 | < 0.02 | 0.23 | 170 | 14 | 130 |
| 271: M10-935-01 | 980 | 0.2 | 17000 | 58 | 1.6 | < 0.8 | < 0.7 | 0.6 | 92 | 6300 | < 0.02 | 0.19 | 200 | 15 | 110 |
| 272: M10-935-02 | 2900 | 1.3 | 280 | 10 | 2.2 | 1.3 | 1.2 | 0.9 | 13 | 100 | < 0.02 | 0.29 | < 1 | 2.4 | 67 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 273: M96-28-01 | 1400 | 0.3 | 14000 | 93 | 4.2 | < 0.8 | < 0.7 | 0.9 | 99 | 6400 | 0.09 | 0.13 | 200 | 16 | 98 |
| 274: M97-159-01 | 1100 | 0.1 | 15000 | 81 | 1.5 | < 0.8 | < 0.7 | 0.8 | 92 | 6400 | < 0.02 | 0.13 | 200 | 17 | 93 |
| 275: M97-159-02 | 1300 | 0.2 | 17000 | 77 | 2.9 | < 0.8 | < 0.7 | 0.6 | 110 | 6500 | 0.06 | 0.13 | 200 | 16 | 100 |
| 276: M98-248-01 | 3800 | 0.6 | 550 | 11 | 5.7 | < 0.8 | 0.7 | 0.9 | 13 | 110 | < 0.02 | 0.10 | 2 | 2.5 | 250 |
| 277: M98-275-01 | 1100 | 0.2 | 18000 | 91 | 1.8 | < 0.8 | < 0.7 | < 0.5 | 93 | 6300 | < 0.02 | 0.11 | 200 | 17 | 93 |
| 278: M98-275-02 | 1300 | 0.2 | 13000 | 87 | 3.5 | < 0.8 | < 0.7 | 0.7 | 99 | 5700 | < 0.02 | 0.059 | 190 | 16 | 84 |
| 279: W94-111-01 | 5100 | 0.5 | 280 | 7.2 | 3.2 | < 0.8 | < 0.7 | < 0.5 | 25 | 240 | < 0.02 | 0.30 | 7 | 3.5 | 150 |
| 280: W94-76-01 | 1100 | 0.2 | 14000 | 55 | 1.7 | < 0.8 | < 0.7 | 0.6 | 110 | 5700 | 0.04 | 0.19 | 190 | 18 | 94 |
| 281: W94-76-02 | 1500 | 0.2 | 13000 | 100 | 3.2 | < 0.8 | < 0.7 | 0.7 | 91 | 5200 | < 0.02 | 0.22 | 210 | 15 | 110 |
| 282: W94-82-01 | 1300 | 0.2 | 13000 | 120 | 0.87 | 1.2 | < 0.7 | < 0.5 | 98 | 4200 | < 0.02 | 0.062 | 180 | 13 | 75 |
| 283: DS09GT-10-01 | 320 | 1.3 | 27000 | 54 | 14 | < 0.8 | < 0.7 | 0.6 | 330 | 3400 | 0.30 | 2.1 | 81 | 7.2 | 67 |
| 284: ML00-224-01 | 360 | 0.7 | 2700 | 11 | 6.2 | < 0.8 | < 0.7 | < 0.5 | 220 | 890 | 0.09 | 0.89 | 20 | 6.5 | 47 |
| 285: ML08-225-01 | 310 | 2.4 | 9500 | 10 | 3.4 | < 0.8 | 1.1 | < 0.5 | 220 | 880 | 0.20 | 0.86 | 19 | 6.0 | 24 |
| 286: ML08-225-02 | 350 | 1.6 | 23000 | 64 | 16 | < 0.8 | < 0.7 | 0.6 | 280 | 4200 | 0.65 | 2.2 | 100 | 8.8 | 98 |
| 287: ML08-225-03 | 350 | 1.0 | 3600 | 12 | 6.3 | < 0.8 | < 0.7 | < 0.5 | 240 | 890 | 0.12 | 0.67 | 22 | 6.2 | 52 |
| 288: ML08-226-01 | 1200 | 0.8 | 24000 | 49 | 5.9 | < 0.8 | < 0.7 | 1.3 | 300 | 13000 | 0.23 | 0.55 | 190 | 23 | 170 |
| 289: ML08-226-02 | 270 | 0.8 | 5200 | 8.8 | 2.5 | < 0.8 | < 0.7 | < 0.5 | 110 | 540 | 0.12 | 0.43 | 15 | 5.7 | 36 |
| 290: ML08-226-03 | 320 | 3.8 | 4400 | 11 | 4.1 | < 0.8 | < 0.7 | < 0.5 | 230 | 770 | 0.14 | 0.63 | 16 | 7.2 | 46 |
| 291: ML08-226-04 | 210 | 2.8 | 2400 | 8.5 | 8.6 | 1.6 | < 0.7 | < 0.5 | 170 | 590 | 0.14 | 0.72 | 12 | 4.6 | 52 |
| 292: ML08-226-05 | 400 | 2.6 | 20000 | 72 | 14 | < 0.8 | < 0.7 | 0.7 | 190 | 4500 | 0.44 | 2.1 | 110 | 8.9 | 100 |
| 293: ML08-228-01 | 250 | 0.7 | 13000 | 13 | 4.9 | < 0.8 | < 0.7 | < 0.5 | 93 | 1000 | 0.25 | 1.0 | 25 | 5.5 | 42 |
| 294: ML08-228-02 | 380 | 3.4 | 1600 | 7.2 | 1.7 | < 0.8 | < 0.7 | 0.6 | 55 | 340 | 0.05 | 0.40 | 8 | 5.4 | 36 |
| 295: ML08-229-01 | 210 | 0.5 | 5000 | 8.7 | 5.8 | < 0.8 | < 0.7 | < 0.5 | 190 | 510 | 0.29 | 0.47 | 13 | 5.4 | 36 |
| 296: ML08-229-02 | 1200 | 1.9 | 21000 | 34 | 5.6 | < 0.8 | < 0.7 | 0.8 | 280 | 15000 | 0.20 | 0.63 | 180 | 27 | 140 |
| 297: ML08-229-03 | 450 | 1.3 | 6800 | 18 | 4.9 | < 0.8 | < 0.7 | 0.6 | 220 | 1600 | 0.22 | 1.5 | 32 | 7.7 | 44 |
| 298: ML08-229-04 | 380 | 4.2 | 17000 | 58 | 9.1 | < 0.8 | < 0.7 | 0.6 | 250 | 3400 | 0.40 | 1.8 | 89 | 7.6 | 79 |
| 299: ML08-229-05 | 330 | 0.8 | 4400 | 11 | 5.6 | < 0.8 | < 0.7 | < 0.5 | 340 | 720 | 0.12 | 0.68 | 16 | 6.9 | 52 |
| 300: ML08-230-01 | 400 | 3.3 | 20000 | 64 | 10 | < 0.8 | < 0.7 | 0.6 | 260 | 4000 | 0.46 | 2.7 | 100 | 9.1 | 86 |
| 301: ML08-232-01 | 320 | 1.5 | 23000 | 61 | 11 | < 0.8 | < 0.7 | 0.9 | 300 | 4100 | 0.44 | 2.1 | 100 | 8.0 | 88 |
| 302: ML08-233-01 | 370 | 2.2 | 25000 | 43 | 10 | < 0.8 | < 0.7 | 0.6 | 300 | 3500 | 0.29 | 1.7 | 85 | 9.7 | 74 |
| 303: ML08-233-02 | 260 | 0.5 | 13000 | 12 | 7.4 | < 0.8 | < 0.7 | < 0.5 | 360 | 1000 | 0.28 | 0.92 | 24 | 7.2 | 54 |
| 304: ML08-240-01 | 390 | 2.4 | 30000 | 49 | 15 | < 0.8 | < 0.7 | 0.5 | 310 | 3600 | 0.37 | 1.6 | 86 | 8.9 | 95 |
| 305: ML08-241-01 | 380 | 1.4 | 20000 | 49 | 11 | < 0.8 | < 0.7 | < 0.5 | 310 | 3900 | 0.34 | 2.8 | 99 | 8.8 | 84 |
| 306: ML08-241-02 | 390 | 4.5 | 4300 | 13 | 7.3 | 1.2 | < 0.7 | 0.7 | 420 | 1100 | 0.14 | 1.1 | 27 | 7.5 | 49 |
| 307: ML08-241-03 | 1200 | 1.3 | 24000 | 24 | 12 | < 0.8 | < 0.7 | 1.1 | 310 | 18000 | 0.45 | 1.0 | 200 | 34 | 170 |
| 308: ML08-243-01 | 260 | 3.4 | 8100 | 11 | 10 | < 0.8 | < 0.7 | 1.2 | 600 | 1000 | 0.24 | 0.96 | 23 | 6.9 | 43 |
| 309: ML08-243-02 | 1200 | 1.0 | 26000 | 17 | 9.9 | < 0.8 | < 0.7 | 1.5 | 300 | 17000 | 0.23 | 1.0 | 140 | 39 | 140 |
| 310: ML08-245-01 | 1200 | 2.1 | 23000 | 41 | 11 | < 0.8 | < 0.7 | 1.0 | 290 | 13000 | 0.19 | 0.59 | 180 | 25 | 150 |
| 311: ML08-245-02 | 320 | 1.3 | 24000 | 54 | 10 | < 0.8 | < 0.7 | 0.6 | 260 | 3500 | 0.42 | 2.6 | 83 | 7.2 | 110 |
| 312: ML09-254-01 | 320 | 3.2 | 10000 | 14 | 6.6 | < 0.8 | < 0.7 | < 0.5 | 250 | 1100 | 0.16 | 1.2 | 27 | 8.2 | 51 |
| 313: ML09-254-02 | 360 | 0.8 | 28000 | 41 | 8.9 | < 0.8 | < 0.7 | 0.6 | 290 | 3400 | 0.31 | 2.4 | 80 | 8.6 | 72 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10516-JUL11**

| Sample ID | Mn µg/g | Mo µg/g | Na µg/g | Ni µg/g | Pb µg/g | Sb µg/g | Se µg/g | Sn µg/g | Sr µg/g | Ti µg/g | Tl µg/g | U µg/g | V µg/g | Y µg/g | Zn µg/g |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 314: ML09-256-01 | 350 | 4.3 | 17000 | 56 | 9.6 | < 0.8 | < 0.7 | 0.7 | 260 | 3400 | 0.41 | 1.8 | 83 | 8.3 | 79 |
| 315: ML09-259-01 | 1100 | 0.8 | 22000 | 32 | 5.9 | < 0.8 | < 0.7 | 0.9 | 270 | 15000 | 0.22 | 0.66 | 200 | 26 | 170 |
| 316: ML92062-01 | 250 | 3.9 | 6000 | 11 | 6.3 | < 0.8 | < 0.7 | < 0.5 | 350 | 740 | 0.13 | 0.55 | 16 | 6.7 | 34 |
| 317: ML95-104-01 | 1100 | 1.3 | 19000 | 21 | 8.5 | < 0.8 | < 0.7 | 1.8 | 320 | 14000 | 0.28 | 1.1 | 110 | 40 | 120 |
| 318: ML95-104-02 | 280 | 4.3 | 6200 | 11 | 6.8 | < 0.8 | < 0.7 | < 0.5 | 110 | 1200 | 0.13 | 0.94 | 19 | 5.9 | 51 |
| 319: ML95-105-01 | 350 | 0.8 | 3400 | 8.3 | 6.1 | < 0.8 | < 0.7 | < 0.5 | 240 | 640 | 0.11 | 0.66 | 13 | 6.7 | 49 |
| 320: ML95-105-02 | 1100 | 2.3 | 23000 | 20 | 11 | < 0.8 | < 0.7 | 1.2 | 260 | 16000 | 0.27 | 1.5 | 160 | 33 | 150 |
| 321: ML95-105-03 | 320 | 1.5 | 22000 | 59 | 9.3 | < 0.8 | < 0.7 | 0.9 | 300 | 3900 | 0.45 | 4.1 | 95 | 8.3 | 84 |
| 322: ML95-105-04 | 370 | 2.4 | 35000 | 35 | 7.5 | < 0.8 | < 0.7 | 0.8 | 340 | 3500 | 0.32 | 1.4 | 77 | 9.0 | 64 |
| 323: ML95-107-01 | 260 | 1.0 | 3300 | 12 | 7.5 | < 0.8 | < 0.7 | < 0.5 | 150 | 930 | 0.29 | 0.74 | 22 | 6.1 | 48 |
| 324: ML95-107-02 | 360 | 3.2 | 7500 | 15 | 8.1 | < 0.8 | < 0.7 | < 0.5 | 370 | 1400 | 0.30 | 1.0 | 31 | 7.1 | 54 |
| 325: ML95-107-03 | 310 | 1.4 | 20000 | 59 | 9.8 | < 0.8 | < 0.7 | < 0.5 | 320 | 4100 | 0.45 | 2.5 | 100 | 8.4 | 97 |
| 326: ML95-113-01 | 280 | 3.0 | 21000 | 52 | 11 | < 0.8 | < 0.7 | 0.9 | 280 | 3800 | 0.42 | 2.3 | 94 | 8.3 | 85 |
| 327: ML95-113-02 | 380 | 1.0 | 23000 | 46 | 9.8 | < 0.8 | < 0.7 | 1.1 | 310 | 3900 | 0.36 | 1.5 | 91 | 9.9 | 78 |
| 328: ML95-117-01 | 340 | 3.3 | 6600 | 13 | 4.0 | < 0.8 | < 0.7 | < 0.5 | 210 | 1200 | 0.14 | 0.63 | 25 | 6.4 | 46 |
| 329: ML95-117-02 | 1200 | 1.1 | 23000 | 32 | 9.3 | < 0.8 | < 0.7 | 1.3 | 310 | 16000 | 0.23 | 0.68 | 170 | 31 | 150 |
| 330: ML95-117-03 | 360 | 4.1 | 10000 | 28 | 5.1 | < 0.8 | < 0.7 | 1.1 | 230 | 2200 | 0.16 | 1.3 | 51 | 8.7 | 68 |
| 331: ML95-120-01 | 320 | 1.4 | 26000 | 58 | 9.4 | < 0.8 | < 0.7 | 1.1 | 260 | 4000 | 0.40 | 1.8 | 95 | 8.2 | 85 |
| 332: ML95-82-01 | 330 | 4.0 | 5800 | 18 | 5.9 | < 0.8 | < 0.7 | < 0.5 | 240 | 1300 | 0.19 | 1.0 | 31 | 8.2 | 64 |
| 333: ML95-82-02 | 350 | 0.8 | 27000 | 37 | 7.9 | < 0.8 | < 0.7 | 0.9 | 280 | 3200 | 0.30 | 1.5 | 75 | 8.4 | 74 |
| 334: ML95-83-01 | 250 | 3.2 | 4800 | 14 | 6.8 | < 0.8 | < 0.7 | < 0.5 | 200 | 1500 | 0.41 | 1.1 | 29 | 7.0 | 45 |
| 335: ML95-83-02 | 280 | 1.3 | 24000 | 41 | 8.7 | < 0.8 | < 0.7 | 1.2 | 250 | 3300 | 0.37 | 2.3 | 78 | 9.8 | 85 |
| 336: ML95-84-01 | 270 | 4.1 | 6100 | 15 | 12 | < 0.8 | < 0.7 | < 0.5 | 300 | 1100 | 0.16 | 0.76 | 23 | 6.4 | 62 |
| 337: ML95-85-01 | 340 | 0.9 | 30000 | 39 | 9.9 | < 0.8 | < 0.7 | 1.3 | 330 | 3600 | 0.35 | 1.9 | 78 | 9.1 | 79 |
| 338: ML95-88-01 | 350 | 3.1 | 23000 | 61 | 13 | < 0.8 | < 0.7 | 0.6 | 290 | 4400 | 0.51 | 2.3 | 99 | 8.6 | 100 |
| 339: ML95-88-02 | 870 | 0.5 | 29000 | 86 | 8.7 | < 0.8 | < 0.7 | 1.0 | 280 | 4800 | 0.18 | 0.98 | 120 | 18 | 98 |
| 340: ML95-95-01 | 380 | 3.7 | 5500 | 14 | 7.3 | < 0.8 | < 0.7 | < 0.5 | 240 | 1200 | 0.24 | 1.0 | 27 | 6.4 | 61 |
| 341: ML95-95-02 | 350 | 1.0 | 28000 | 48 | 16 | < 0.8 | < 0.7 | 0.9 | 270 | 4000 | 0.37 | 1.6 | 94 | 9.2 | 88 |
| 342: ML95-98-01 | 260 | 3.7 | 9400 | 9.4 | 4.4 | < 0.8 | < 0.7 | < 0.5 | 290 | 660 | 0.23 | 0.63 | 17 | 5.7 | 33 |
| 343: ML97-186-01 | 220 | 0.9 | 6000 | 12 | 38 | < 0.8 | < 0.7 | < 0.5 | 220 | 860 | 0.29 | 1.1 | 19 | 23 | 54 |
| 344: ML97-186-02 | 1200 | 2.2 | 25000 | 35 | 11 | < 0.8 | < 0.7 | 1.7 | 320 | 14000 | 0.20 | 0.64 | 160 | 26 | 150 |

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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10516-JUL11**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Tuesday, September 13, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10517-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 13-Sep-11 | 13-Sep-11 | 09-Sep-11 | 09-Sep-11 | 06-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 |
| 4: Analysis Approval Time | 12:55 | 12:55 | 12:55 | 12:55 | 10:00 | 10:00 | 10:42 | 10:42 | 12:41 | 12:35 | 12:35 | 12:36 | 12:37 |
| 5: M10-968-01 | 200 | 800 | 9.8 | 9.39 | 7.87 | 101 | 2.6 | 3.6 | < 0.0001 | 0.00001 | 1.18 | 0.0509 | 0.442 |
| 6: M10-968-02 | 200 | 800 | 9.8 | 9.38 | 7.76 | 101 | 1.4 | 2.2 | < 0.0001 | < 0.00001 | 1.05 | 0.0380 | 0.151 |
| 7: M10-968-03 | 200 | 800 | 9.8 | 9.30 | 7.71 | 99 | 3.0 | 1.5 | < 0.0001 | < 0.00001 | 1.16 | 0.0143 | 0.175 |
| 8: M10-970-01 | 200 | 800 | 9.8 | 8.67 | 7.66 | 124 | 0.9 | 4.2 | < 0.0001 | < 0.00001 | 0.52 | 0.0447 | 0.0548 |
| 9: M10-972A-01 | 200 | 800 | 9.4 | 9.32 | 7.90 | 111 | 1.9 | 2.6 | < 0.0001 | < 0.00001 | 0.73 | 0.0684 | 0.0579 |
| 10: M10-972A-02 | 200 | 800 | 9.7 | 9.39 | 7.83 | 95 | 1.5 | 1.7 | < 0.0001 | < 0.00001 | 0.97 | 0.0261 | 0.0316 |
| 11: M10-972A-03 | 200 | 800 | 9.8 | 8.86 | 7.66 | 100 | 0.8 | 2.7 | < 0.0001 | < 0.00001 | 0.72 | 0.0038 | 0.0637 |
| 12: M10-972A-04 | 200 | 800 | 9.8 | 9.07 | 7.83 | 89 | 0.6 | 1.3 | < 0.0001 | < 0.00001 | 0.65 | 0.0006 | 0.0164 |
| 13: M10-976-01 | 200 | 800 | 9.8 | 9.43 | 7.78 | 104 | 2.4 | 4.7 | < 0.0001 | < 0.00001 | 0.81 | 0.0147 | 0.0293 |
| 14: M10-976-02 | 200 | 800 | 9.7 | 9.43 | 7.79 | 100 | 1.6 | 4.1 | < 0.0001 | < 0.00001 | 1.39 | 0.0504 | 0.0243 |
| 15: M10-976-03 | 200 | 800 | 9.6 | 8.59 | 7.93 | 147 | 0.5 | 3.1 | < 0.0001 | < 0.00001 | 0.47 | 0.0234 | 0.0135 |
| 16: M10-976-04 | 200 | 800 | 9.5 | 8.56 | 7.92 | 154 | 0.3 | 1.7 | < 0.0001 | < 0.00001 | 0.39 | 0.0199 | 0.0161 |
| 17: M10-977-01 | 200 | 800 | 9.8 | 9.48 | 7.91 | 95 | 2.1 | 4.3 | < 0.0001 | 0.00003 | 1.09 | 0.0193 | 0.0293 |
| 18: M10-977-02 | 200 | 800 | 9.8 | 8.55 | 7.93 | 189 | 2.4 | 4.5 | < 0.0001 | < 0.00001 | 0.43 | 0.107 | 0.0246 |
| 19: M10-986-01 | 200 | 800 | 9.7 | 8.63 | 7.84 | 157 | 2.5 | 3.7 | < 0.0001 | < 0.00001 | 0.48 | 0.0059 | 0.0232 |
| 20: M10-986-02 | 200 | 800 | 9.8 | 8.95 | 7.87 | 113 | 0.9 | 2.8 | < 0.0001 | < 0.00001 | 0.60 | 0.0006 | 0.0247 |
| 21: M10-993-01 | 200 | 800 | 9.7 | 9.43 | 8.03 | 103 | 2.6 | 3.5 | < 0.0001 | < 0.00001 | 0.87 | 0.0355 | 0.0341 |
| 22: M10-993-02 | 200 | 800 | 9.8 | 9.39 | 7.91 | 97 | 2.3 | 1.4 | < 0.0001 | < 0.00001 | 1.05 | 0.0369 | 0.0281 |
| 23: M10-993-03 | 200 | 800 | 9.7 | 9.32 | 7.72 | 99 | 3.0 | 0.7 | < 0.0001 | < 0.00001 | 1.13 | 0.0190 | 0.0194 |
| 24: M10-993-04 | 200 | 800 | 9.8 | 9.32 | 7.82 | 76 | 0.9 | 3.1 | < 0.0001 | < 0.00001 | 0.64 | 0.0010 | 0.0160 |
| 25: M96-16-01 | 200 | 800 | 9.8 | 9.50 | 8.02 | 82 | 1.4 | 0.6 | < 0.0001 | < 0.00001 | 1.16 | 0.0125 | 0.0201 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26: M96-61-01 | 200 | 800 | 9.8 | 9.12 | 7.68 | 112 | 4.9 | 2.1 | < 0.0001 | < 0.00001 | 0.61 | 0.0049 | 0.0160 |
| 27: M96-61-02 | 200 | 800 | 9.8 | 9.53 | 7.95 | 87 | 0.9 | 0.4 | < 0.0001 | < 0.00001 | 0.92 | 0.0069 | 0.0083 |
| 28: M96-61-03 | 200 | 800 | 9.1 | 8.08 | 8.01 | 233 | 3.4 | 1.3 | < 0.0001 | < 0.00001 | 0.12 | 0.0087 | 0.0086 |
| 29: M98-234-01 | 200 | 800 | 825 | 9.24 | 7.73 | 98 | 1.3 | 0.7 | < 0.0001 | < 0.00001 | 0.98 | 0.0882 | 0.0159 |
| 30: M98-234-02 | 200 | 800 | 9.7 | 9.34 | 7.73 | 95 | 2.1 | 0.5 | < 0.0001 | < 0.00001 | 0.95 | 0.0253 | 0.0105 |
| 31: M98-238-01 | 200 | 800 | 9.7 | 9.13 | 7.70 | 126 | 15 | 0.4 | < 0.0001 | < 0.00001 | 0.63 | 0.0185 | 0.0188 |
| 32: M98-238-02 | 200 | 800 | 9.7 | 9.65 | 7.80 | 70 | 1.6 | 0.3 | < 0.0001 | < 0.00001 | 0.60 | 0.0081 | 0.0108 |
| 33: M98-284-01 | 200 | 800 | 9.7 | 9.30 | 7.66 | 95 | 3.2 | 0.5 | < 0.0001 | < 0.00001 | 1.11 | 0.0160 | 0.0131 |
| 34: M98-284-02 | 200 | 800 | 9.7 | 8.76 | 7.72 | 102 | 0.6 | 2.3 | < 0.0001 | < 0.00001 | 0.69 | 0.0013 | 0.0161 |
| 35: M98-286-01 | 200 | 800 | 9.7 | 9.33 | 7.96 | 96 | 1.4 | 0.4 | < 0.0001 | < 0.00001 | 1.26 | 0.0363 | 0.0133 |
| 36: M98-329-01 | 200 | 800 | 9.7 | 8.95 | 7.92 | 136 | 1.0 | 0.7 | < 0.0001 | < 0.00001 | 0.27 | 0.369 | 0.0079 |
| 37: M98-331-01 | 200 | 800 | 9.7 | 9.35 | 7.76 | 89 | 1.3 | 0.7 | < 0.0001 | < 0.00001 | 1.01 | 0.0088 | 0.0144 |
| 38: M98-333-01 | 200 | 800 | 9.6 | 9.15 | 7.73 | 129 | 13 | 2.1 | < 0.0001 | < 0.00001 | 0.70 | 0.0369 | 0.0177 |
| 39: M98-337-01 | 200 | 800 | 9.9 | 9.47 | 7.99 | 95 | 1.0 | 0.5 | < 0.0001 | < 0.00001 | 0.55 | 0.0054 | 0.0086 |
| 40: M04-519-01 | 200 | 800 | 9.8 | 8.97 | 7.90 | 134 | 0.8 | 2.3 | < 0.0001 | < 0.00001 | 0.42 | 0.0009 | 0.0132 |
| 41: M04-519-02 | 200 | 800 | 9.7 | 9.03 | 7.98 | 124 | 0.3 | 0.5 | < 0.0001 | < 0.00001 | 0.43 | 0.0095 | 0.0079 |
| 42: M04-519-03 | 200 | 800 | 9.7 | 8.86 | 8.10 | 160 | 0.6 | 0.7 | < 0.0001 | < 0.00001 | 0.33 | 0.0166 | 0.0207 |
| 43: M04-519-04 | 200 | 800 | 9.8 | 8.99 | 7.95 | 107 | 0.9 | 0.7 | < 0.0001 | < 0.00001 | 0.59 | 0.0030 | 0.0116 |
| 44: M10-981-01 | 200 | 800 | 9.8 | 9.24 | 7.90 | 106 | 2.3 | 4.0 | < 0.0001 | < 0.00001 | 0.60 | 0.0014 | 0.0131 |
| 45: M10-981-02 | 200 | 800 | 9.8 | 9.11 | 7.86 | 101 | 1.0 | 2.0 | < 0.0001 | < 0.00001 | 0.60 | 0.0007 | 0.0097 |
| 46: M10-981-03 | 200 | 800 | 9.9 | 8.92 | 7.79 | 124 | 0.9 | 3.9 | < 0.0001 | < 0.00001 | 0.56 | 0.0050 | 0.0106 |
| 47: M10-981-04 | 200 | 800 | 10 | 9.58 | 8.50 | 144 | 2.7 | 8.6 | < 0.0001 | < 0.00001 | 1.16 | 0.0200 | 0.0227 |
| 48: M10-985-01 | 200 | 800 | 9.8 | 9.23 | 8.06 | 128 | 7.4 | 5.6 | < 0.0001 | 0.00003 | 0.90 | 0.0226 | 0.0134 |
| 49: M10-985-02 | 200 | 800 | 9.8 | 9.23 | 8.07 | 94 | 0.8 | 3.1 | < 0.0001 | < 0.00001 | 1.10 | 0.0154 | 0.0115 |
| 50: M10-987-01 | 200 | 800 | 9.8 | 8.88 | 7.92 | 124 | 0.7 | 1.8 | < 0.0001 | < 0.00001 | 0.34 | 0.0158 | 0.0078 |
| 51: M10-987-02 | 200 | 800 | 9.8 | 8.85 | 7.96 | 145 | 1.9 | 3.0 | < 0.0001 | < 0.00001 | 0.41 | 0.0109 | 0.0095 |
| 52: M10-987-03 | 200 | 800 | 9.7 | 9.29 | 7.96 | 134 | 0.4 | 0.7 | < 0.0001 | < 0.00001 | 0.03 | 0.134 | 0.0130 |
| 53: M10-987-04 | 200 | 800 | 9.8 | 9.25 | 7.91 | 81 | 0.8 | 2.6 | < 0.0001 | < 0.00001 | 0.68 | 0.0034 | 0.0124 |
| 54: M10-988-01 | 200 | 800 | 9.8 | 9.37 | 8.03 | 80 | 0.9 | 2.6 | < 0.0001 | < 0.00001 | 0.66 | 0.0021 | 0.0142 |
| 55: M10-988-02 | 200 | 800 | 9.9 | 9.28 | 8.17 | 76 | 0.8 | 1.7 | < 0.0001 | < 0.00001 | 0.86 | 0.0038 | 0.0071 |
| 56: M10-988-03 | 200 | 800 | 9.9 | 9.69 | 8.39 | 63 | 1.0 | 2.2 | < 0.0001 | < 0.00001 | 0.73 | 0.0034 | 0.0137 |
| 57: M10-992-01 | 200 | 800 | 9.8 | 9.53 | 8.20 | 79 | 1.5 | 4.7 | < 0.0001 | < 0.00001 | 0.87 | 0.0028 | 0.0133 |
| 58: M10-992-02 | 200 | 800 | 9.9 | 9.29 | 8.15 | 94 | 1.1 | 3.9 | < 0.0001 | < 0.00001 | 0.65 | 0.0028 | 0.0106 |
| 59: M10-992-03 | 200 | 800 | 9.8 | 9.00 | 8.21 | 121 | 0.3 | 2.1 | < 0.0001 | < 0.00001 | 0.39 | 0.0013 | 0.0096 |
| 60: M10-992-04 | 200 | 800 | 9.8 | 9.24 | 7.89 | 81 | 0.8 | 1.6 | < 0.0001 | < 0.00001 | 0.42 | 0.0038 | 0.0080 |
| 61: M10-992-05 | 200 | 800 | 9.8 | 9.03 | 7.89 | 102 | 0.7 | 0.8 | < 0.0001 | < 0.00001 | 0.47 | 0.0042 | 0.0071 |
| 62: M10-994-01 | 200 | 800 | 9.9 | 9.25 | 7.87 | 88 | 0.6 | 2.4 | < 0.0001 | < 0.00001 | 0.25 | 0.0022 | 0.0078 |
| 63: M10-994-02 | 200 | 800 | 9.9 | 9.18 | 8.20 | 122 | 1.7 | 2.1 | < 0.0001 | < 0.00001 | 0.52 | 0.0177 | 0.0083 |
| 64: M10-994-03 | 200 | 800 | 9.9 | 8.97 | 8.12 | 113 | 0.6 | 1.0 | < 0.0001 | < 0.00001 | 0.56 | 0.0158 | 0.0094 |
| 65: M10-994-04 | 200 | 800 | 9.9 | 9.85 | 8.85 | 82 | 0.7 | 1.7 | < 0.0001 | < 0.00001 | 0.80 | 0.0102 | 0.0135 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66: M10-994-05 | 200 | 800 | 9.8 | 9.02 | 7.99 | 140 | 1.4 | 3.8 | < 0.0001 | < 0.00001 | 0.39 | 0.0035 | 0.0208 |
| 67: M10-998-01 | 200 | 800 | 9.8 | 9.56 | 8.49 | 70 | 1.4 | 3.3 | < 0.0001 | < 0.00001 | 0.83 | 0.0035 | 0.0151 |
| 68: M10-998-02 | 200 | 800 | 9.9 | 9.55 | 9.18 | 88 | 1.5 | 2.6 | < 0.0001 | < 0.00001 | 0.83 | 0.0030 | 0.0146 |
| 69: M10-998-03 | 200 | 800 | 9.9 | 9.18 | 7.80 | 97 | 0.8 | 1.2 | < 0.0001 | < 0.00001 | 0.59 | 0.0075 | 0.0106 |
| 70: M10-998-04 | 200 | 800 | 9.8 | 9.02 | 8.13 | 100 | 0.6 | 2.0 | < 0.0001 | < 0.00001 | 0.60 | 0.0022 | 0.0092 |
| 71: M10-998-05 | 200 | 800 | 9.8 | 8.98 | 8.64 | 160 | 0.8 | 2.1 | < 0.0001 | < 0.00001 | 0.06 | 0.412 | 0.0083 |
| 72: M11-1042-01 | 200 | 800 | 9.8 | 8.91 | 8.32 | 193 | 1.6 | 13 | < 0.0001 | < 0.00001 | 0.38 | 0.0206 | 0.0176 |
| 73: M11-1042-02 | 200 | 800 | 9.7 | 8.99 | 8.06 | 205 | 2.2 | 12 | < 0.0001 | < 0.00001 | 0.24 | 0.431 | 0.0115 |
| 74: M11-1042-03 | 200 | 800 | 9.6 | 9.31 | 8.24 | 144 | 1.3 | 9.7 | < 0.0001 | < 0.00001 | 0.04 | 0.0504 | 0.0121 |
| 75: M11-1051-01 | 200 | 800 | 9.7 | 9.00 | 6.05 | 3 | 1.8 | 12 | < 0.0001 | < 0.00001 | 0.38 | 0.116 | 0.0151 |
| 76: M11-1051-02 | 200 | 800 | 9.8 | 9.10 | 7.81 | 135 | 1.7 | 6.9 | < 0.0001 | < 0.00001 | 0.10 | 0.452 | 0.0131 |
| 77: M11-1099-01 | 200 | 800 | 9.6 | 8.59 | 7.70 | 205 | 16 | 6.2 | < 0.0001 | < 0.00001 | 0.31 | 0.0083 | 0.0185 |
| 78: M11-1099-02 | 200 | 800 | 9.8 | 9.55 | 7.42 | 92 | 1.7 | 3.9 | < 0.0001 | < 0.00001 | 0.82 | 0.0070 | 0.0166 |
| 79: M11-1099-03 | 200 | 800 | 9.9 | 9.40 | 7.82 | 152 | 2.7 | 15 | < 0.0001 | < 0.00001 | 0.97 | 0.0029 | 0.0248 |
| 80: M95-11-01 | 200 | 800 | 9.8 | 9.07 | 7.76 | 87 | 0.8 | 0.4 | < 0.0001 | < 0.00001 | 0.58 | 0.0025 | 0.0050 |
| 81: M95-12-01 | 200 | 800 | 9.8 | 9.32 | 7.76 | 152 | 1.1 | 0.7 | < 0.0001 | < 0.00001 | 0.86 | 0.0055 | 0.0078 |
| 82: M95-22-01 | 200 | 800 | 9.8 | 8.95 | 6.81 | < 1 | 1.4 | 1.4 | < 0.0001 | < 0.00001 | 0.50 | 0.0092 | 0.0101 |
| 83: M95-22-02 | 200 | 800 | 9.8 | 9.34 | 7.90 | 67 | 1.0 | 0.4 | < 0.0001 | < 0.00001 | 0.84 | 0.0009 | 0.0080 |
| 84: M96-50-01 | 200 | 800 | 9.8 | 9.79 | 8.31 | 67 | 1.1 | 0.7 | < 0.0001 | < 0.00001 | 0.91 | 0.0079 | 0.0106 |
| 85: M96-51-01 | 200 | 800 | 9.7 | 8.91 | 8.53 | 187 | 0.8 | 0.8 | < 0.0001 | < 0.00001 | 0.31 | 0.0070 | 0.0071 |
| 86: M96-51-02 | 200 | 800 | 9.8 | 8.90 | 7.89 | 133 | 1.0 | 0.9 | < 0.0001 | 0.00007 | 0.33 | 0.0133 | 0.0068 |
| 87: M96-51-03 | 200 | 800 | 9.8 | 8.99 | 8.34 | 100 | 0.8 | 0.5 | < 0.0001 | 0.00002 | 0.44 | 0.0403 | 0.0153 |
| 88: M97-111-01 | 200 | 800 | 9.8 | 9.08 | 8.24 | 94 | 1.9 | 0.5 | < 0.0001 | 0.00001 | 0.59 | 0.0026 | 0.0198 |
| 89: M97-111-02 | 200 | 800 | 9.8 | 8.92 | 8.11 | 120 | 1.6 | 0.5 | < 0.0001 | 0.00001 | 0.38 | 0.0013 | 0.0070 |
| 90: M97-111-03 | 200 | 800 | 9.8 | 9.08 | 8.11 | 83 | 0.6 | 0.5 | < 0.0001 | < 0.00001 | 0.36 | 0.0018 | 0.0108 |
| 91: M97-111-04 | 200 | 800 | 9.8 | 9.36 | 8.00 | 47 | 0.3 | 0.2 | < 0.0001 | < 0.00001 | 0.70 | 0.0014 | 0.0046 |
| 92: M97-176-01 | 200 | 800 | 9.8 | 9.02 | 8.58 | 88 | 0.7 | 0.4 | < 0.0001 | < 0.00001 | 0.33 | 0.0022 | 0.0160 |
| 93: M97-176-02 | 200 | 800 | 9.8 | 9.47 | 8.69 | 72 | 2.5 | 0.5 | < 0.0001 | < 0.00001 | 0.94 | 0.0010 | 0.0151 |
| 94: M97-176-03 | 200 | 800 | 9.8 | 9.23 | 8.27 | 76 | 1.9 | 0.3 | < 0.0001 | < 0.00001 | 0.91 | 0.0026 | 0.0125 |
| 95: M98-222-01 | 200 | 800 | 9.8 | 8.89 | 8.57 | 115 | 0.8 | 0.6 | < 0.0001 | < 0.00001 | 0.59 | 0.0118 | 0.0099 |
| 96: M98-222-02 | 200 | 800 | 9.8 | 9.25 | 8.27 | 77 | 1.4 | 0.4 | < 0.0001 | < 0.00001 | 0.88 | 0.0065 | 0.0111 |
| 97: M98-222-03 | 200 | 800 | 9.8 | 9.18 | 8.24 | 81 | 1.2 | 0.5 | < 0.0001 | < 0.00001 | 0.51 | 0.0034 | 0.0143 |
| 98: M98-223-01 | 200 | 800 | 9.9 | 9.52 | 8.81 | 104 | 2.3 | 2.6 | < 0.0001 | < 0.00001 | 0.66 | 0.0509 | 0.0362 |
| 99: M98-223-02 | 200 | 800 | 9.8 | 8.76 | 8.37 | 172 | 3.6 | 0.8 | < 0.0001 | < 0.00001 | 0.35 | 0.0010 | 0.0062 |
| 100: M98-223-03 | 200 | 800 | 9.7 | 9.66 | 8.23 | 150 | 3.3 | 0.9 | < 0.0001 | < 0.00001 | 0.36 | 0.0007 | 0.0071 |
| 101: W94-48-01 | 200 | 800 | 9.8 | 9.66 | 8.88 | 62 | 1.4 | 0.5 | < 0.0001 | < 0.00001 | 0.61 | 0.0025 | 0.0100 |
| 102: M96-58-01 | 200 | 800 | 9.8 | 9.27 | 8.34 | 90 | 4.2 | 1.1 | < 0.0001 | < 0.00001 | 0.85 | 0.0028 | 0.0122 |
| 103: M96-58-02 | 200 | 800 | 9.8 | 9.38 | 8.27 | 78 | 1.4 | 1.0 | < 0.0001 | < 0.00001 | 0.88 | 0.0088 | 0.0157 |
| 104: M96-58-03 | 200 | 800 | 9.8 | 9.28 | 7.99 | 68 | 5.8 | 0.8 | < 0.0001 | < 0.00001 | 0.82 | 0.0088 | 0.0123 |
| 105: M97-120-01 | 200 | 800 | 9.8 | 9.08 | 8.36 | 117 | 1.6 | 2.4 | < 0.0001 | < 0.00001 | 0.51 | 0.0052 | 0.0260 |

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106: M97-120-02 | 200 | 800 | 9.8 | 9.41 | 8.41 | 70 | 1.6 | 0.5 | < 0.0001 | 0.00005 | 0.60 | 0.0099 | 0.0115 |
| 107: M97-122-01 | 200 | 800 | 9.8 | 9.99 | 9.42 | 59 | 0.6 | 0.5 | < 0.0001 | 0.00002 | 0.68 | 0.0031 | 0.0156 |
| 108: M97-122-02 | 200 | 800 | 9.8 | 9.51 | 8.43 | 73 | 1.7 | 0.9 | < 0.0001 | < 0.00001 | 1.11 | 0.0067 | 0.0175 |
| 109: M97-122-03 | 200 | 800 | 9.8 | 8.79 | 8.43 | 151 | 1.6 | 1.2 | < 0.0001 | < 0.00001 | 0.44 | 0.0239 | 0.0121 |
| 110: M97-122-04 | 200 | 800 | 9.3 | 8.72 | 8.21 | 143 | 2.1 | 0.9 | < 0.0001 | < 0.00001 | 0.25 | 0.0262 | 0.0157 |
| 111: M97-122-05 | 200 | 800 | 9.8 | 9.16 | 8.10 | 87 | 1.4 | 0.4 | < 0.0001 | < 0.00001 | 0.67 | 0.0010 | 0.0041 |
| 112: M97-123-01 | 200 | 800 | 9.8 | 9.44 | 8.65 | 73 | 1.5 | 1.2 | < 0.0001 | < 0.00001 | 1.03 | 0.0266 | 0.0265 |
| 113: M97-123-02 | 200 | 800 | 9.9 | 9.60 | 8.96 | 83 | 1.5 | 1.4 | < 0.0001 | < 0.00001 | 1.08 | 0.0094 | 0.0220 |
| 114: M97-123-03 | 200 | 800 | 9.8 | 9.10 | 8.22 | 87 | 1.2 | 1.1 | < 0.0001 | < 0.00001 | 0.59 | 0.0125 | 0.0110 |
| 115: M97-123-04 | 200 | 800 | 9.8 | 8.99 | 8.22 | 107 | 0.7 | 0.4 | < 0.0001 | < 0.00001 | 0.43 | 0.0035 | 0.0052 |
| 116: M97-124-01 | 200 | 800 | 9.8 | 9.14 | 7.98 | 101 | 2.0 | 1.2 | < 0.0001 | < 0.00001 | 0.69 | 0.0048 | 0.0125 |
| 117: M97-124-02 | 200 | 800 | 9.7 | 9.24 | 8.20 | 68 | 1.1 | 0.5 | < 0.0001 | < 0.00001 | 1.12 | 0.0042 | 0.0089 |
| 118: M97-124-03 | 200 | 800 | 9.4 | 8.12 | 8.09 | 238 | 3.7 | 2.8 | < 0.0001 | < 0.00001 | 0.05 | 0.0014 | 0.0333 |
| 119: M97-124-04 | 200 | 800 | 9.8 | 9.24 | 8.28 | 76 | 0.4 | 1.4 | < 0.0001 | < 0.00001 | 0.98 | 0.0039 | 0.0143 |
| 120: M97-153-01 | 200 | 800 | 9.8 | 9.09 | 8.14 | 120 | 3.0 | 2.7 | < 0.0001 | < 0.00001 | 0.42 | 0.0949 | 0.0129 |
| 121: M97-153-02 | 200 | 800 | 9.8 | 9.14 | 8.15 | 70 | 1.2 | 1.9 | < 0.0001 | < 0.00001 | 0.54 | 0.0257 | 0.0189 |
| 122: M97-154-01 | 200 | 800 | 9.8 | 9.10 | 8.24 | 120 | 1.7 | 1.8 | < 0.0001 | < 0.00001 | 0.48 | 0.0180 | 0.0128 |
| 123: M98-181-01 | 200 | 800 | 9.8 | 9.44 | 8.53 | 69 | 0.8 | 0.4 | < 0.0001 | < 0.00001 | 0.83 | 0.0015 | 0.0095 |
| 124: M98-181-02 | 200 | 800 | 9.8 | 9.04 | 8.17 | 82 | 0.4 | 1.2 | < 0.0001 | < 0.00001 | 0.55 | 0.0005 | 0.0104 |
| 125: M98-184-01 | 200 | 800 | 9.9 | 9.69 | 9.16 | 92 | 1.3 | 0.6 | < 0.0001 | < 0.00001 | 0.99 | 0.0105 | 0.0273 |
| 126: M98-184-02 | 200 | 800 | 9.8 | 9.00 | 7.94 | 87 | 0.5 | 0.6 | < 0.0001 | 0.00009 | 0.39 | 0.0105 | 0.0040 |
| 127: M98-185-01 | 200 | 800 | 9.8 | 9.17 | 7.38 | 143 | 17 | 2.1 | < 0.0001 | 0.00007 | 0.74 | 0.0183 | 0.0282 |
| 128: M98-185-02 | 200 | 800 | 9.9 | 9.50 | 7.76 | 75 | 1.8 | 0.9 | < 0.0001 | 0.00002 | 1.00 | 0.0039 | 0.0110 |
| 129: M98-185-03 | 200 | 800 | 9.9 | 9.63 | 8.22 | 73 | 2.3 | 0.6 | < 0.0001 | 0.00001 | 0.63 | 0.0021 | 0.0151 |
| 130: W94-49-01 | 200 | 800 | 9.8 | 9.49 | 7.60 | 73 | 2.2 | 1.3 | < 0.0001 | < 0.00001 | 0.77 | 0.0020 | 0.0120 |
| 131: W94-49-02 | 200 | 800 | 7.9 | 7.03 | 7.47 | 208 | 9.2 | 8.4 | < 0.0001 | < 0.00001 | < 0.01 | 0.0012 | 0.0387 |
| 132: W94-49-03 | 200 | 800 | 9.8 | 9.21 | 7.67 | 73 | 1.0 | 0.7 | < 0.0001 | < 0.00001 | 0.62 | 0.0010 | 0.0110 |
| 133: W94-53-01 | 200 | 800 | 9.8 | 9.27 | 8.46 | 94 | 1.7 | 0.4 | < 0.0001 | < 0.00001 | 1.02 | 0.0276 | 0.0143 |
| 134: W94-55-01 | 200 | 800 | 9.5 | 8.35 | 8.07 | 202 | 2.1 | 2.2 | < 0.0001 | < 0.00001 | 0.10 | 0.0018 | 0.0156 |
| 135: W94-55-02 | 200 | 800 | 9.8 | 9.09 | 7.98 | 91 | 3.0 | 0.9 | < 0.0001 | < 0.00001 | 0.83 | 0.0032 | 0.0111 |
| 136: W94-57-01 | 200 | 800 | 9.8 | 8.86 | 7.69 | 133 | 2.3 | 0.9 | < 0.0001 | < 0.00001 | 0.39 | 0.0281 | 0.0128 |
| 137: W94-57-02 | 200 | 800 | 9.4 | 8.25 | 8.01 | 203 | 4.4 | 2.7 | < 0.0001 | < 0.00001 | 0.13 | 0.0041 | 0.0189 |
| 138: W94-57-03 | 200 | 800 | 8.8 | 8.02 | 7.97 | 297 | 8.4 | 5.0 | < 0.0001 | < 0.00001 | 0.05 | 0.0012 | 0.0243 |
| 139: W94-59-01 | 200 | 800 | 9.8 | 9.62 | 8.06 | 76 | 1.0 | 0.9 | < 0.0001 | < 0.00001 | 0.67 | 0.0086 | 0.0146 |
| 140: W94-61-01 | 200 | 800 | 7.8 | 7.27 | 7.88 | 357 | 30 | 4.5 | < 0.0001 | < 0.00001 | < 0.01 | 0.0033 | 0.0130 |
| 141: W94-61-02 | 200 | 800 | 9.8 | 9.58 | 8.09 | 75 | 1.5 | 1.0 | < 0.0001 | < 0.00001 | 0.55 | 0.0041 | 0.0171 |
| 142: W94-65-01 | 200 | 800 | 8.2 | 9.63 | 7.89 | 309 | 17 | 3.6 | < 0.0001 | < 0.00001 | 0.01 | 0.184 | 0.0211 |
| 143: W94-65-02 | 200 | 800 | 9.0 | 7.94 | 8.16 | 288 | 11 | 2.8 | < 0.0001 | < 0.00001 | 0.04 | 0.135 | 0.0197 |
| 144: W94-65-03 | 200 | 800 | 9.8 | 9.49 | 7.85 | 69 | 2.6 | 0.7 | < 0.0001 | < 0.00001 | 0.59 | 0.0068 | 0.0388 |
| 145: W94-70-01 | 200 | 800 | 9.8 | 9.41 | 7.89 | 75 | 2.2 | 0.7 | < 0.0001 | < 0.00001 | 0.53 | 0.0057 | 0.0179 |

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 146: W94-70-02 | 200 | 800 | 9.8 | 9.31 | 7.84 | 65 | 0.5 | 0.7 | < 0.0001 | 0.00003 | 0.73 | 0.0008 | 0.0116 |
| 147: W94-73-01 | 200 | 800 | 9.8 | 9.50 | 7.81 | 64 | 1.4 | 0.7 | < 0.0001 | 0.00003 | 0.63 | 0.0038 | 0.0099 |
| 148: W94-73-02 | 200 | 800 | 9.5 | 7.82 | 8.03 | 278 | 6.9 | 1.3 | < 0.0001 | < 0.00001 | 0.02 | 0.0012 | 0.0086 |
| 149: W94-73-03 | 200 | 800 | 9.8 | 9.17 | 8.10 | 87 | 1.8 | 1.4 | < 0.0001 | < 0.00001 | 1.07 | 0.0008 | 0.0033 |
| 150: M00-473-01 | 200 | 800 | 9.7 | 8.67 | 8.12 | 192 | 3.2 | 2.8 | < 0.0001 | < 0.00001 | 0.56 | 0.340 | 0.0174 |
| 151: M00-483-01 | 200 | 800 | 9.8 | 8.68 | 8.01 | 184 | 2.3 | 1.9 | < 0.0001 | < 0.00001 | 0.53 | 0.0898 | 0.0141 |
| 152: M00-490-01 | 200 | 800 | 9.7 | 8.73 | 8.05 | 188 | 2.6 | 2.8 | < 0.0001 | < 0.00001 | 0.63 | 0.687 | 0.0095 |
| 153: M03-508-01 | 200 | 800 | 9.8 | 9.34 | 8.10 | 76 | 1.6 | 0.4 | < 0.0001 | < 0.00001 | 0.94 | 0.0406 | 0.0075 |
| 154: M03-508-02 | 200 | 800 | 9.6 | 8.54 | 7.93 | 104 | 0.7 | 1.5 | < 0.0001 | < 0.00001 | 0.37 | 0.0039 | 0.0067 |
| 155: M05-561-01 | 200 | 800 | 9.8 | 8.83 | 8.31 | 161 | 1.2 | 0.4 | < 0.0001 | < 0.00001 | 0.51 | 0.0162 | 0.0079 |
| 156: M05-561-02 | 200 | 800 | 9.8 | 9.48 | 8.16 | 94 | 1.7 | 0.8 | < 0.0001 | < 0.00001 | 1.15 | 0.0214 | 0.0109 |
| 157: M06-577-01 | 200 | 800 | 9.7 | 9.24 | 7.98 | 138 | 2.0 | 0.6 | < 0.0001 | < 0.00001 | 0.96 | 0.0239 | 0.0116 |
| 158: M06-577-02 | 200 | 800 | 9.7 | 9.18 | 7.91 | 114 | 4.4 | 1.3 | < 0.0001 | < 0.00001 | 0.98 | 0.0172 | 0.0134 |
| 159: M06-577-03 | 200 | 800 | 9.4 | 9.09 | 7.95 | 127 | 5.9 | 1.2 | < 0.0001 | < 0.00001 | 0.75 | 0.0285 | 0.0200 |
| 160: M06-591-01 | 200 | 800 | 9.6 | 9.13 | 7.86 | 120 | 5.7 | 1.1 | < 0.0001 | < 0.00001 | 0.77 | 0.0383 | 0.0123 |
| 161: M06-591-02 | 200 | 800 | 9.6 | 8.85 | 8.01 | 130 | 1.7 | 1.3 | < 0.0001 | < 0.00001 | 0.60 | 0.0082 | 0.0122 |
| 162: M06-591-03 | 200 | 800 | 9.8 | 8.96 | 7.99 | 102 | 1.3 | 1.8 | < 0.0001 | < 0.00001 | 0.86 | 0.0078 | 0.0110 |
| 163: M06-592-01 | 200 | 800 | 9.7 | 9.28 | 8.07 | 97 | 1.4 | 1.5 | < 0.0001 | < 0.00001 | 1.06 | 0.0493 | 0.0119 |
| 164: M06-592-02 | 200 | 800 | 9.8 | 9.73 | 8.63 | 68 | 0.7 | 0.6 | < 0.0001 | < 0.00001 | 0.77 | 0.0031 | 0.0053 |
| 165: M06-592-03 | 200 | 800 | 9.8 | 9.92 | 8.12 | 76 | 1.3 | 1.0 | < 0.0001 | < 0.00001 | 0.90 | 0.0054 | 0.0077 |
| 166: M06-593-01 | 200 | 800 | 9.9 | 9.37 | 8.63 | 89 | 1.6 | 0.4 | < 0.0001 | < 0.00001 | 0.74 | 0.0084 | 0.0054 |
| 167: M06-593-02 | 200 | 800 | 9.9 | 9.79 | 9.00 | 74 | 1.8 | 0.8 | < 0.0001 | < 0.00001 | 0.72 | 0.0033 | 0.0078 |
| 168: M06-608-01 | 200 | 800 | 9.8 | 9.33 | 8.32 | 89 | 2.7 | 0.4 | < 0.0001 | < 0.00001 | 0.99 | 0.0178 | 0.0076 |
| 169: M06-608-02 | 200 | 800 | 9.8 | 9.32 | 6.05 | 1 | 2.1 | 0.8 | < 0.0001 | < 0.00001 | 0.93 | 0.0243 | 0.0086 |
| 170: M06-611-01 | 200 | 800 | 9.8 | 9.31 | 8.64 | 97 | 2.6 | 0.7 | < 0.0001 | < 0.00001 | 0.90 | 0.0616 | 0.0074 |
| 171: M06-611-02 | 200 | 800 | 9.8 | 9.27 | 8.25 | 102 | 3.3 | 1.0 | < 0.0001 | < 0.00001 | 0.98 | 0.0803 | 0.0112 |
| 172: M06-623-01 | 200 | 800 | 9.8 | 9.25 | 8.29 | 97 | 2.0 | 1.1 | < 0.0001 | < 0.00001 | 1.12 | 0.0875 | 0.0135 |
| 173: M06-623-02 | 200 | 800 | 9.8 | 8.97 | 8.14 | 91 | 2.0 | 1.0 | < 0.0001 | < 0.00001 | 0.69 | 0.0011 | 0.0077 |
| 174: M06-625-01 | 200 | 800 | 9.7 | 9.26 | 8.21 | 107 | 1.6 | 1.3 | < 0.0001 | < 0.00001 | 0.93 | 0.0694 | 0.0100 |
| 175: M06-625-02 | 200 | 800 | 9.5 | 9.25 | 8.39 | 92 | 1.3 | 1.3 | < 0.0001 | < 0.00001 | 0.78 | 0.0480 | 0.0107 |
| 176: M06-629-01 | 200 | 800 | 9.7 | 8.74 | 8.05 | 162 | 8.7 | 1.4 | < 0.0001 | < 0.00001 | 0.64 | 0.877 | 0.0280 |
| 177: M06-631-01 | 200 | 800 | 9.7 | 9.08 | 8.05 | 123 | 7.3 | 1.1 | < 0.0001 | < 0.00001 | 0.64 | 0.0385 | 0.0176 |
| 178: M07-674-01 | 200 | 800 | 9.8 | 9.24 | 8.32 | 98 | 1.3 | 0.7 | < 0.0001 | < 0.00001 | 0.88 | 0.0375 | 0.0087 |
| 179: M07-689-01 | 200 | 800 | 9.8 | 9.38 | 8.40 | 93 | 2.0 | 2.4 | < 0.0001 | < 0.00001 | 1.12 | 0.0467 | 0.0123 |
| 180: M07-689-02 | 200 | 800 | 9.8 | 9.45 | 8.31 | 89 | 1.1 | 2.4 | < 0.0001 | < 0.00001 | 1.66 | 0.0501 | 0.0127 |
| 181: M07-689-03 | 200 | 800 | 9.5 | 9.15 | 8.36 | 134 | 2.3 | 3.6 | < 0.0001 | < 0.00001 | 0.59 | 0.0120 | 0.0146 |
| 182: M08-761-01 | 200 | 800 | 9.7 | 9.28 | 8.24 | 104 | 2.3 | 1.1 | < 0.0001 | < 0.00001 | 0.82 | 0.0572 | 0.0097 |
| 183: M08-761-02 | 200 | 800 | 9.8 | 9.32 | 8.60 | 98 | 2.8 | 1.1 | < 0.0001 | < 0.00001 | 0.92 | 0.0470 | 0.0081 |
| 184: M08-763-01 | 200 | 800 | 9.7 | 9.23 | 8.49 | 114 | 1.7 | 1.2 | < 0.0001 | < 0.00001 | 0.89 | 0.0918 | 0.0089 |
| 185: M08-765-01 | 200 | 800 | 9.7 | 9.33 | 8.04 | 102 | 2.1 | 2.2 | < 0.0001 | < 0.00001 | 0.81 | 0.0846 | 0.0088 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 186: M08-783-01 | 200 | 800 | 9.8 | 9.26 | 8.10 | 110 | 0.9 | 3.2 | < 0.0001 | 0.00007 | 0.91 | 0.284 | 0.0115 |
| 187: M08-783-02 | 200 | 800 | 9.9 | 8.84 | 8.27 | 132 | 1.1 | 1.6 | < 0.0001 | 0.00003 | 0.61 | 0.0028 | 0.0125 |
| 188: M10-879-01 | 200 | 800 | 9.9 | 9.35 | 8.29 | 101 | 1.8 | 1.0 | < 0.0001 | 0.00002 | 0.78 | 0.0461 | 0.0076 |
| 189: M10-887-01 | 200 | 800 | 9.8 | 9.31 | 8.13 | 115 | 1.6 | 1.9 | < 0.0001 | 0.00001 | 0.79 | 0.0388 | 0.0139 |
| 190: M10-892-01 | 200 | 800 | 9.7 | 9.26 | 7.92 | 128 | 3.8 | 3.8 | < 0.0001 | 0.00009 | 0.81 | 0.0894 | 0.0156 |
| 191: M10-999-01 | 200 | 800 | 9.6 | 9.26 | 7.93 | 29 | 0.9 | 2.4 | < 0.0001 | 0.00002 | 0.93 | 0.0722 | 0.0205 |
| 192: M10-999-02 | 200 | 800 | 9.8 | 9.28 | 7.94 | 112 | 2.4 | 3.8 | < 0.0001 | 0.00001 | 0.92 | 0.0132 | 0.0149 |
| 193: M95-17-01 | 200 | 800 | 9.7 | 8.91 | 7.99 | 115 | 1.4 | 0.9 | < 0.0001 | < 0.00001 | 0.56 | 0.0127 | 0.0071 |
| 194: M95-25-01 | 200 | 800 | 9.7 | 9.26 | 7.77 | 47 | 1.6 | 0.7 | < 0.0001 | < 0.00001 | 0.95 | 0.0125 | 0.0090 |
| 195: M95-25-02 | 200 | 800 | 9.8 | 9.30 | 7.85 | 85 | 1.8 | 1.0 | < 0.0001 | < 0.00001 | 0.89 | 0.0104 | 0.0083 |
| 196: M95-25-03 | 200 | 800 | 9.5 | 8.71 | 8.09 | 184 | 4.7 | 2.6 | < 0.0001 | < 0.00001 | 0.62 | 0.387 | 0.0226 |
| 197: M95-25-04 | 200 | 800 | 9.8 | 8.81 | 8.00 | 104 | 1.2 | 1.0 | < 0.0001 | < 0.00001 | 0.58 | 0.0033 | 0.0106 |
| 198: M96-03-01 | 200 | 800 | 9.6 | 9.21 | 7.86 | 97 | 1.3 | 0.4 | < 0.0001 | < 0.00001 | 0.91 | 0.0605 | 0.0099 |
| 199: M96-03-02 | 200 | 800 | 9.8 | 9.27 | 7.91 | 104 | 7.3 | 0.2 | < 0.0001 | < 0.00001 | 0.88 | 0.0140 | 0.0072 |
| 200: M96-03-03 | 200 | 800 | 9.8 | 9.08 | 8.04 | 81 | 1.5 | 0.4 | < 0.0001 | < 0.00001 | 1.03 | 0.0007 | 0.0060 |
| 201: M96-19-01 | 200 | 800 | 9.7 | 9.27 | 8.14 | 106 | 2.4 | 0.6 | < 0.0001 | < 0.00001 | 0.73 | 0.124 | 0.0093 |
| 202: M96-19-02 | 200 | 800 | 9.7 | 9.23 | 7.86 | 105 | 6.2 | 0.5 | < 0.0001 | < 0.00001 | 0.85 | 0.131 | 0.0086 |
| 203: M96-37-01 | 200 | 800 | 9.8 | 9.35 | 8.32 | 88 | 3.5 | 0.6 | < 0.0001 | < 0.00001 | 1.13 | 0.0158 | 0.0090 |
| 204: M96-37-02 | 200 | 800 | 9.7 | 9.22 | 7.97 | 112 | 6.0 | 0.5 | < 0.0001 | < 0.00001 | 0.73 | 0.0584 | 0.0072 |
| 205: M96-37-03 | 200 | 800 | 9.7 | 9.18 | 7.75 | 112 | 11 | 0.4 | < 0.0001 | < 0.00001 | 0.84 | 0.0312 | 0.0067 |
| 206: M96-40-01 | 200 | 800 | 9.7 | 9.30 | 7.98 | 96 | 1.0 | 0.3 | < 0.0001 | < 0.00001 | 1.03 | 0.381 | 0.0177 |
| 207: M96-40-02 | 200 | 800 | 9.7 | 9.27 | 7.61 | 91 | 1.1 | 0.3 | < 0.0001 | < 0.00001 | 0.95 | 0.0876 | 0.0102 |
| 208: M96-4-01 | 200 | 800 | 9.7 | 9.16 | 8.00 | 114 | 4.9 | 0.7 | < 0.0001 | < 0.00001 | 0.84 | 0.0188 | 0.0083 |
| 209: M96-44-01 | 200 | 800 | 9.8 | 9.80 | 8.16 | 84 | 2.3 | 1.0 | < 0.0001 | < 0.00001 | 0.63 | 0.0063 | 0.0069 |
| 210: M96-54-01 | 200 | 800 | 9.7 | 9.23 | 7.85 | 108 | 2.3 | 0.4 | < 0.0001 | 0.00005 | 0.86 | 0.0550 | 0.0072 |
| 211: M96-54-02 | 200 | 800 | 9.8 | 9.23 | 8.13 | 104 | 1.8 | 0.5 | < 0.0001 | 0.00002 | 0.96 | 0.0413 | 0.0088 |
| 212: M96-65-01 | 200 | 800 | 9.6 | 9.28 | 7.83 | 103 | 2.2 | 0.7 | < 0.0001 | 0.00001 | 0.83 | 0.0795 | 0.0090 |
| 213: M96-7-01 | 200 | 800 | 9.5 | 9.18 | 7.84 | 103 | 1.2 | 0.6 | < 0.0001 | < 0.00001 | 0.75 | 0.0905 | 0.0123 |
| 214: M96-7-02 | 200 | 800 | 9.7 | 9.20 | 7.94 | 109 | 2.5 | 0.9 | < 0.0001 | < 0.00001 | 0.78 | 0.0696 | 0.0097 |
| 215: M96-74-01 | 200 | 800 | 9.8 | 8.87 | 8.00 | 92 | 0.6 | 2.1 | < 0.0001 | < 0.00001 | 0.85 | 0.0298 | 0.0221 |
| 216: M96-77-01 | 200 | 800 | 9.8 | 9.21 | 7.82 | 105 | 6.1 | 0.5 | < 0.0001 | < 0.00001 | 0.87 | 0.0809 | 0.0148 |
| 217: M96-77-02 | 200 | 800 | 9.6 | 9.15 | 7.94 | 116 | 2.0 | 0.7 | < 0.0001 | < 0.00001 | 0.85 | 0.0445 | 0.0093 |
| 218: M97-121-01 | 200 | 800 | 9.8 | 9.35 | 8.59 | 94 | 2.1 | 0.4 | < 0.0001 | 0.00005 | 0.99 | 0.0147 | 0.0080 |
| 219: M97-135-01 | 200 | 800 | 9.8 | 9.32 | 8.55 | 93 | 1.8 | 0.3 | < 0.0001 | 0.00002 | 0.68 | 0.155 | 0.0072 |
| 220: M97-135-02 | 200 | 800 | 9.9 | 9.84 | 9.28 | 80 | 2.1 | 0.8 | < 0.0001 | < 0.00001 | 0.66 | 0.0108 | 0.0083 |
| 221: M97-135-03 | 200 | 800 | 9.7 | 9.34 | 8.34 | 95 | 4.6 | 0.4 | < 0.0001 | < 0.00001 | 0.92 | 0.0694 | 0.0070 |
| 222: M97-149-01 | 200 | 800 | 9.9 | 9.86 | 9.45 | 88 | 1.5 | 0.9 | < 0.0001 | < 0.00001 | 0.80 | 0.0049 | 0.0090 |
| 223: M97-149-02 | 200 | 800 | 9.8 | 9.39 | 8.26 | 86 | 2.5 | 0.5 | < 0.0001 | < 0.00001 | 1.14 | 0.0162 | 0.0077 |
| 224: M97-94A-01 | 200 | 800 | 9.6 | 9.26 | 8.40 | 104 | 2.7 | 1.1 | < 0.0001 | < 0.00001 | 0.77 | 0.0639 | 0.0121 |
| 225: M97-94A-02 | 200 | 800 | 9.6 | 9.27 | 8.30 | 98 | 1.8 | 0.4 | < 0.0001 | < 0.00001 | 0.91 | 0.0765 | 0.0080 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 226: M97-95-01 | 200 | 800 | 9.8 | 9.32 | 8.57 | 89 | 2.1 | 0.5 | < 0.0001 | < 0.00001 | 0.90 | 0.0193 | 0.0095 |
| 227: M97-95-02 | 200 | 800 | 9.6 | 9.24 | 8.39 | 107 | 1.1 | 0.4 | < 0.0001 | < 0.00001 | 1.01 | 0.0347 | 0.0089 |
| 228: M97-95-03 | 200 | 800 | 9.8 | 9.10 | 8.34 | 78 | 1.0 | 0.5 | < 0.0001 | < 0.00001 | 0.75 | 0.0016 | 0.0038 |
| 229: M98-201-01 | 200 | 800 | 9.8 | 9.38 | 7.83 | 88 | 2.2 | 0.8 | < 0.0001 | < 0.00001 | 1.03 | 0.0444 | 0.0337 |
| 230: M98-201-02 | 200 | 800 | 9.8 | 9.69 | 8.26 | 85 | 3.0 | 0.9 | < 0.0001 | < 0.00001 | 0.75 | 0.0067 | 0.0117 |
| 231: M98-201-03 | 200 | 800 | 9.6 | 9.10 | 8.08 | 137 | 20 | 1.2 | < 0.0001 | < 0.00001 | 0.65 | 0.0166 | 0.0112 |
| 232: M98-201-04 | 200 | 800 | 9.8 | 9.37 | 7.87 | 82 | 1.0 | 0.4 | < 0.0001 | < 0.00001 | 1.02 | 0.0346 | 0.0102 |
| 233: M98-208-01 | 200 | 800 | 9.8 | 9.39 | 7.84 | 89 | 2.3 | 0.6 | < 0.0001 | < 0.00001 | 0.98 | 0.0261 | 0.0218 |
| 234: M98-209-01 | 200 | 800 | 9.8 | 9.28 | 7.80 | 98 | 3.0 | 1.0 | < 0.0001 | < 0.00001 | 1.15 | 0.0368 | 0.0140 |
| 235: M98-265-01 | 200 | 800 | 9.6 | 9.25 | 7.81 | 92 | 3.4 | 0.8 | < 0.0001 | < 0.00001 | 0.73 | 0.0677 | 0.0087 |
| 236: M98-266-01 | 200 | 800 | 9.7 | 9.24 | 7.94 | 110 | 4.1 | 0.6 | < 0.0001 | < 0.00001 | 0.82 | 0.0329 | 0.0084 |
| 237: M98-269-01 | 200 | 800 | 9.8 | 9.09 | 8.01 | 78 | 1.0 | 0.5 | < 0.0001 | < 0.00001 | 0.84 | 0.0028 | 0.0039 |
| 238: M98-270-01 | 200 | 800 | 9.8 | 9.34 | 8.05 | 82 | 2.1 | 0.5 | < 0.0001 | < 0.00001 | 0.89 | 0.0480 | 0.0074 |
| 239: M98-317-01 | 200 | 800 | 9.7 | 8.86 | 7.97 | 120 | 1.8 | 1.0 | < 0.0001 | < 0.00001 | 0.57 | 0.0022 | 0.0070 |
| 240: M99-309-01 | 200 | 800 | 9.8 | 9.45 | 7.87 | 76 | 1.8 | 0.4 | < 0.0001 | < 0.00001 | 0.83 | 0.0027 | 0.0080 |
| 241: M99-309-02 | 200 | 800 | 9.8 | 9.32 | 8.00 | 37 | 1.9 | 0.6 | < 0.0001 | < 0.00001 | 0.93 | 0.0597 | 0.0092 |
| 242: M99-336B-01 | 200 | 800 | 9.8 | 9.19 | 7.98 | 103 | 8.2 | 0.6 | < 0.0001 | < 0.00001 | 0.80 | 0.0274 | 0.0150 |
| 243: M99-336B-02 | 200 | 800 | 9.9 | 9.78 | 8.55 | 83 | 1.7 | 0.8 | < 0.0001 | < 0.00001 | 0.64 | 0.0043 | 0.0082 |
| 244: M99-336B-03 | 200 | 800 | 9.7 | 9.26 | 8.00 | 107 | 2.0 | 0.5 | < 0.0001 | < 0.00001 | 1.05 | 0.0663 | 0.0094 |
| 245: M99-336B-04 | 200 | 800 | 9.8 | 9.04 | 8.12 | 88 | 1.8 | 1.9 | < 0.0001 | < 0.00001 | 0.96 | 0.0037 | 0.0152 |
| 246: M99-345-01 | 200 | 800 | 9.8 | 8.84 | 8.07 | 136 | 1.5 | 0.5 | < 0.0001 | < 0.00001 | 0.60 | 0.0253 | 0.0109 |
| 247: M99-346-01 | 200 | 800 | 9.8 | 8.81 | 8.00 | 125 | 1.1 | 0.4 | < 0.0001 | < 0.00001 | 0.58 | 0.0042 | 0.0141 |
| 248: M99-347-01 | 200 | 800 | 9.7 | 9.11 | 8.03 | 118 | 9.2 | 0.5 | < 0.0001 | < 0.00001 | 0.71 | 0.143 | 0.0086 |
| 249: M99-347-02 | 200 | 800 | 9.7 | 9.25 | 8.09 | 98 | 1.4 | 0.6 | < 0.0001 | < 0.00001 | 0.93 | 0.0294 | 0.0072 |
| 250: M99-409-01 | 200 | 800 | 9.7 | 9.29 | 7.70 | 105 | 7.0 | 0.6 | < 0.0001 | < 0.00001 | 0.75 | 0.0641 | 0.0090 |
| 251: M99-409-02 | 200 | 800 | 9.7 | 9.27 | 8.03 | 107 | 3.6 | 0.8 | < 0.0001 | < 0.00001 | 0.63 | 0.0706 | 0.0112 |
| 252: M99-409-03 | 200 | 800 | 9.8 | 9.35 | 8.20 | 96 | 1.4 | 0.4 | < 0.0001 | < 0.00001 | 1.01 | 0.0579 | 0.0086 |
| 253: M99-409-04 | 200 | 800 | 9.8 | 9.01 | 8.17 | 113 | 2.3 | 1.0 | < 0.0001 | < 0.00001 | 0.87 | 0.0229 | 0.0139 |
| 254: M99-409-05 | 200 | 800 | 9.9 | 9.06 | 7.91 | 92 | 2.0 | 1.0 | < 0.0001 | < 0.00001 | 0.90 | 0.0173 | 0.0166 |
| 255: M99-410-01 | 200 | 800 | 9.8 | 9.29 | 7.94 | 106 | 7.5 | 0.5 | < 0.0001 | < 0.00001 | 0.92 | 0.0290 | 0.0091 |
| 256: M99-410-02 | 200 | 800 | 9.8 | 9.32 | 7.90 | 102 | 3.5 | 0.5 | < 0.0001 | < 0.00001 | 0.92 | 0.0493 | 0.0159 |
| 257: M99-417-01 | 200 | 800 | 9.7 | 8.78 | 7.94 | 165 | 3.4 | 0.8 | < 0.0001 | < 0.00001 | 0.56 | 0.0218 | 0.0077 |
| 258: M99-436-01 | 200 | 800 | 9.8 | 9.34 | 8.30 | 99 | 1.9 | 0.4 | < 0.0001 | < 0.00001 | 0.79 | 0.0429 | 0.0066 |
| 259: M99-436-02 | 200 | 800 | 9.8 | 9.23 | 8.21 | 108 | 5.4 | 0.7 | < 0.0001 | < 0.00001 | 0.80 | 0.0698 | 0.0093 |
| 260: M08-733-01 | 200 | 800 | 9.9 | 9.42 | 8.25 | 103 | 3.2 | 3.7 | < 0.0001 | < 0.00001 | 1.00 | 0.0061 | 0.0203 |
| 261: M08-733-02 | 200 | 800 | 9.9 | 9.46 | 8.25 | 88 | 1.6 | 1.5 | < 0.0001 | < 0.00001 | 0.84 | 0.0025 | 0.0060 |
| 262: M09-802-01 | 200 | 800 | 9.9 | 9.42 | 8.08 | 87 | 1.8 | 2.2 | < 0.0001 | < 0.00001 | 0.68 | 0.0009 | 0.0077 |
| 263: M09-802-02 | 200 | 800 | 9.5 | 8.08 | 8.00 | 197 | 5.4 | 2.2 | < 0.0001 | < 0.00001 | 0.03 | 0.0026 | 0.0153 |
| 264: M09-803-01 | 200 | 800 | 9.4 | 8.36 | 8.03 | 194 | 2.2 | 2.2 | < 0.0001 | < 0.00001 | 0.04 | 0.0014 | 0.0235 |
| 265: M09-809-01 | 200 | 800 | 9.8 | 8.59 | 8.08 | 170 | 1.8 | 2.2 | < 0.0001 | < 0.00001 | 0.41 | 0.226 | 0.0159 |

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 266: M09-817-01 | 200 | 800 | 9.8 | 8.96 | 8.10 | 150 | 2.1 | 2.1 | < 0.0001 | < 0.00001 | 0.13 | 0.212 | 0.0126 |
| 267: M09-817-02 | 200 | 800 | 9.9 | 9.13 | 8.03 | 100 | 0.6 | 1.5 | < 0.0001 | < 0.00001 | 0.42 | 0.0096 | 0.0072 |
| 268: M09-858-01 | 200 | 800 | 9.7 | 8.51 | 8.02 | 178 | 4.9 | 3.7 | < 0.0001 | 0.00007 | 0.02 | 0.135 | 0.0290 |
| 269: M09-859-01 | 200 | 800 | 9.8 | 8.83 | 8.23 | 153 | 1.4 | 2.9 | < 0.0001 | 0.00002 | 0.37 | 0.0122 | 0.0111 |
| 270: M10-933-01 | 200 | 800 | 10.0 | 9.60 | 8.38 | 96 | 2.4 | 3.2 | < 0.0001 | 0.00001 | 0.74 | 0.0050 | 0.0138 |
| 271: M10-935-01 | 200 | 800 | 10.0 | 9.95 | 9.08 | 79 | 1.1 | 2.4 | < 0.0001 | < 0.00001 | 0.63 | 0.0060 | 0.0105 |
| 272: M10-935-02 | 200 | 800 | 9.5 | 8.45 | 7.98 | 159 | 5.2 | 2.4 | < 0.0001 | < 0.00001 | < 0.01 | 0.0815 | 0.0228 |
| 273: M96-28-01 | 200 | 800 | 9.9 | 9.32 | 8.25 | 96 | 3.2 | 1.1 | < 0.0001 | < 0.00001 | 0.98 | 0.0339 | 0.0093 |
| 274: M97-159-01 | 200 | 800 | 9.8 | 9.28 | 8.13 | 91 | 5.3 | 1.0 | < 0.0001 | 0.00008 | 0.88 | 0.0049 | 0.0076 |
| 275: M97-159-02 | 200 | 800 | 9.8 | 9.23 | 8.05 | 95 | 5.9 | 0.6 | < 0.0001 | 0.00002 | 0.90 | 0.0029 | 0.0048 |
| 276: M98-248-01 | 200 | 800 | 9.4 | 8.12 | 7.89 | 150 | 5.0 | 0.8 | < 0.0001 | < 0.00001 | < 0.01 | 0.0004 | 0.0075 |
| 277: M98-275-01 | 200 | 800 | 9.7 | 9.27 | 8.20 | 77 | 2.3 | 0.7 | < 0.0001 | < 0.00001 | 0.79 | 0.0038 | 0.0049 |
| 278: M98-275-02 | 200 | 800 | 9.8 | 9.30 | 8.12 | 74 | 2.1 | 1.2 | < 0.0001 | < 0.00001 | 0.82 | 0.0012 | 0.0057 |
| 279: W94-111-01 | 200 | 800 | 9.4 | 8.18 | 8.01 | 201 | 3.4 | 0.9 | < 0.0001 | < 0.00001 | < 0.01 | 0.0011 | 0.0122 |
| 280: W94-76-01 | 200 | 800 | 9.8 | 9.63 | 8.95 | 65 | 1.4 | 0.7 | < 0.0001 | < 0.00001 | 0.59 | 0.0019 | 0.0074 |
| 281: W94-76-02 | 200 | 800 | 9.8 | 9.55 | 8.24 | 92 | 8.5 | 0.8 | < 0.0001 | < 0.00001 | 0.57 | 0.0027 | 0.0104 |
| 282: W94-82-01 | 200 | 800 | 9.8 | 9.69 | 8.88 | 56 | 1.2 | 1.4 | < 0.0001 | < 0.00001 | 0.77 | 0.0020 | 0.0086 |
| 283: DS09GT-10-01 | 200 | 800 | 9.8 | 9.62 | 7.86 | 95 | 2.1 | 2.6 | < 0.0001 | < 0.00001 | 1.22 | 0.149 | 0.0112 |
| 284: ML00-224-01 | 200 | 800 | 9.7 | 8.81 | 7.92 | 115 | 3.6 | 1.2 | < 0.0001 | < 0.00001 | 0.34 | 0.0315 | 0.0088 |
| 285: ML08-225-01 | 200 | 800 | 9.8 | 9.68 | 8.27 | 94 | 1.0 | 1.0 | < 0.0001 | < 0.00001 | 0.82 | 0.0195 | 0.0086 |
| 286: ML08-225-02 | 200 | 800 | 9.7 | 9.60 | 7.88 | 92 | 3.7 | 1.4 | < 0.0001 | < 0.00001 | 1.37 | 0.0929 | 0.0110 |
| 287: ML08-225-03 | 200 | 800 | 9.7 | 8.95 | 7.76 | 120 | 3.3 | 1.5 | < 0.0001 | < 0.00001 | 0.37 | 0.0183 | 0.0091 |
| 288: ML08-226-01 | 200 | 800 | 9.7 | 10.01 | 9.17 | 83 | 1.1 | 1.0 | < 0.0001 | 0.00008 | 1.96 | 0.0084 | 0.0076 |
| 289: ML08-226-02 | 200 | 800 | 9.7 | 9.36 | 7.70 | 101 | 2.9 | 0.7 | < 0.0001 | < 0.00001 | 0.47 | 0.0032 | 0.0049 |
| 290: ML08-226-03 | 200 | 800 | 9.8 | 9.48 | 7.79 | 97 | 1.1 | 0.7 | < 0.0001 | < 0.00001 | 0.52 | 0.0026 | 0.0068 |
| 291: ML08-226-04 | 200 | 800 | 9.0 | 8.63 | 7.63 | 106 | 3.0 | 1.6 | < 0.0001 | < 0.00001 | 0.44 | 0.789 | 0.0096 |
| 292: ML08-226-05 | 200 | 800 | 9.8 | 9.55 | 7.99 | 79 | 0.9 | 1.2 | < 0.0001 | < 0.00001 | 1.51 | 0.122 | 0.0107 |
| 293: ML08-228-01 | 200 | 800 | 9.8 | 9.59 | 8.25 | 104 | 0.6 | 0.4 | < 0.0001 | < 0.00001 | 0.55 | 0.0108 | 0.0055 |
| 294: ML08-228-02 | 200 | 800 | 9.5 | 9.16 | 7.51 | 89 | 2.6 | 0.7 | < 0.0001 | 0.00004 | 0.20 | 0.0008 | 0.0057 |
| 295: ML08-229-01 | 200 | 800 | 9.8 | 9.57 | 7.78 | 110 | 0.6 | 0.7 | < 0.0001 | 0.00003 | 0.21 | 0.0018 | 0.0033 |
| 296: ML08-229-02 | 200 | 800 | 9.8 | 9.98 | 8.07 | 83 | 1.1 | 0.4 | < 0.0001 | 0.00001 | 1.66 | 0.0075 | 0.0049 |
| 297: ML08-229-03 | 200 | 800 | 9.7 | 8.99 | 7.70 | 125 | 4.6 | 1.9 | < 0.0001 | < 0.00001 | 0.69 | 0.0021 | 0.0131 |
| 298: ML08-229-04 | 200 | 800 | 9.8 | 9.46 | 7.99 | 91 | 2.1 | 1.3 | < 0.0001 | < 0.00001 | 1.69 | 0.0314 | 0.0105 |
| 299: ML08-229-05 | 200 | 800 | 9.8 | 9.40 | 8.17 | 82 | 0.9 | 0.5 | < 0.0001 | < 0.00001 | 0.34 | 0.0186 | 0.0075 |
| 300: ML08-230-01 | 200 | 800 | 9.8 | 9.55 | 8.28 | 149 | 8.5 | 3.8 | < 0.0001 | < 0.00001 | 1.44 | 0.123 | 0.0312 |
| 301: ML08-232-01 | 200 | 800 | 9.6 | 9.61 | 7.97 | 73 | 1.4 | 1.3 | < 0.0001 | < 0.00001 | 2.22 | 0.126 | 0.0141 |
| 302: ML08-233-01 | 200 | 800 | 9.9 | 9.79 | 7.80 | 93 | 1.3 | 1.5 | < 0.0001 | < 0.00001 | 1.22 | 0.0224 | 0.0135 |
| 303: ML08-233-02 | 200 | 800 | 10.0 | 9.65 | 8.22 | 106 | 2.9 | 1.3 | < 0.0001 | < 0.00001 | 0.49 | 0.0105 | 0.0073 |
| 304: ML08-240-01 | 200 | 800 | 10.0 | 9.88 | 8.05 | 94 | 1.3 | 1.3 | < 0.0001 | < 0.00001 | 1.55 | 0.0469 | 0.0092 |
| 305: ML08-241-01 | 200 | 800 | 10.0 | 9.74 | 7.97 | 104 | 2.1 | 1.9 | < 0.0001 | < 0.00001 | 1.51 | 0.0399 | 0.0119 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 306: ML08-241-02 | 200 | 800 | 9.8 | 9.27 | 8.11 | 112 | 2.1 | 2.6 | < 0.0001 | < 0.00001 | 0.83 | 0.0015 | 0.0085 |
| 307: ML08-241-03 | 200 | 800 | 10 | 9.96 | 9.05 | 122 | 3.1 | 1.3 | < 0.0001 | < 0.00001 | 1.41 | 0.0194 | 0.0116 |
| 308: ML08-243-01 | 200 | 800 | 9.9 | 9.61 | 8.48 | 112 | 1.4 | 2.1 | < 0.0001 | < 0.00001 | 0.63 | 0.0021 | 0.0118 |
| 309: ML08-243-02 | 200 | 800 | 9.9 | 9.92 | 8.92 | 85 | 2.1 | 0.9 | < 0.0001 | < 0.00001 | 1.26 | 0.0057 | 0.0059 |
| 310: ML08-245-01 | 200 | 800 | 10.0 | 10.02 | 8.66 | 93 | 2.1 | 0.8 | < 0.0001 | < 0.00001 | 1.76 | 0.0091 | 0.0080 |
| 311: ML08-245-02 | 200 | 800 | 9.9 | 9.75 | 7.85 | 80 | 1.3 | 0.7 | < 0.0001 | < 0.00001 | 2.01 | 0.0731 | 0.0083 |
| 312: ML09-254-01 | 200 | 800 | 9.8 | 9.17 | 7.71 | 142 | 5.0 | 2.6 | < 0.0001 | 0.00001 | 0.55 | 0.0064 | 0.0099 |
| 313: ML09-254-02 | 200 | 800 | 9.9 | 9.73 | 7.88 | 101 | 2.0 | 2.2 | < 0.0001 | < 0.00001 | 1.24 | 0.0549 | 0.0141 |
| 314: ML09-256-01 | 200 | 800 | 9.8 | 9.45 | 7.87 | 135 | 7.7 | 4.8 | < 0.0001 | 0.00001 | 1.21 | 0.0434 | 0.0180 |
| 315: ML09-259-01 | 200 | 800 | 9.9 | 10.04 | 7.87 | 84 | 1.2 | 1.7 | < 0.0001 | < 0.00001 | 2.10 | 0.0048 | 0.0064 |
| 316: ML92062-01 | 200 | 800 | 9.9 | 9.40 | 7.79 | 102 | 2.0 | 1.2 | < 0.0001 | 0.00002 | 0.38 | 0.0033 | 0.0077 |
| 317: ML95-104-01 | 200 | 800 | 9.9 | 9.81 | 8.27 | 85 | 1.3 | 0.5 | < 0.0001 | 0.00002 | 1.44 | 0.0033 | 0.0051 |
| 318: ML95-104-02 | 200 | 800 | 9.3 | 8.47 | 7.70 | 178 | 15 | 1.6 | < 0.0001 | 0.00001 | 0.18 | 0.0685 | 0.0078 |
| 319: ML95-105-01 | 200 | 800 | 9.8 | 8.95 | 7.72 | 130 | 4.0 | 1.1 | < 0.0001 | 0.00003 | 0.54 | 0.0016 | 0.0051 |
| 320: ML95-105-02 | 200 | 800 | 9.8 | 9.61 | 7.98 | 107 | 3.9 | 0.7 | < 0.0001 | < 0.00001 | 1.03 | 0.496 | 0.0065 |
| 321: ML95-105-03 | 200 | 800 | 9.7 | 9.41 | 7.75 | 100 | 6.0 | 0.8 | < 0.0001 | 0.00001 | 1.35 | 0.0608 | 0.0099 |
| 322: ML95-105-04 | 200 | 800 | 9.9 | 9.88 | 8.79 | 89 | 0.6 | 0.3 | < 0.0001 | < 0.00001 | 1.92 | 0.115 | 0.0052 |
| 323: ML95-107-01 | 200 | 800 | 9.8 | 9.47 | 7.92 | 97 | 1.6 | 0.6 | < 0.0001 | < 0.00001 | 0.67 | 0.0034 | 0.0068 |
| 324: ML95-107-02 | 200 | 800 | 9.7 | 9.05 | 7.91 | 140 | 6.2 | 1.2 | < 0.0001 | < 0.00001 | 0.55 | 0.0299 | 0.0073 |
| 325: ML95-107-03 | 200 | 800 | 9.7 | 9.50 | 7.84 | 92 | 4.6 | 0.7 | < 0.0001 | < 0.00001 | 1.45 | 0.105 | 0.0093 |
| 326: ML95-113-01 | 200 | 800 | 9.6 | 9.26 | 7.72 | 100 | 10 | 0.5 | < 0.0001 | < 0.00001 | 1.12 | 0.0466 | 0.0107 |
| 327: ML95-113-02 | 200 | 800 | 9.8 | 9.61 | 8.00 | 97 | 1.5 | 1.0 | < 0.0001 | < 0.00001 | 1.30 | 0.0191 | 0.0094 |
| 328: ML95-117-01 | 200 | 800 | 9.7 | 9.09 | 7.82 | 112 | 3.8 | 0.7 | < 0.0001 | < 0.00001 | 0.44 | 0.0035 | 0.0089 |
| 329: ML95-117-02 | 200 | 800 | 9.8 | 9.87 | 8.14 | 82 | 0.6 | 0.4 | < 0.0001 | < 0.00001 | 1.36 | 0.0071 | 0.0049 |
| 330: ML95-117-03 | 200 | 800 | 9.7 | 9.04 | 7.64 | 78 | 2.6 | 1.0 | < 0.0001 | < 0.00001 | 0.63 | 0.0169 | 0.0068 |
| 331: ML95-120-01 | 200 | 800 | 9.7 | 9.39 | 7.68 | 83 | 7.1 | 0.8 | < 0.0001 | < 0.00001 | 1.19 | 0.0790 | 0.0093 |
| 332: ML95-82-01 | 200 | 800 | 9.6 | 9.05 | 7.73 | 108 | 2.7 | 0.6 | < 0.0001 | < 0.00001 | 0.71 | 0.0117 | 0.0068 |
| 333: ML95-82-02 | 200 | 800 | 9.8 | 9.68 | 8.09 | 94 | 3.2 | 1.2 | < 0.0001 | < 0.00001 | 1.12 | 0.0337 | 0.0106 |
| 334: ML95-83-01 | 200 | 800 | 9.2 | 9.35 | 7.49 | 58 | 0.7 | 0.5 | < 0.0001 | < 0.00001 | 1.40 | 0.0045 | 0.0083 |
| 335: ML95-83-02 | 200 | 800 | 9.8 | 9.60 | 7.74 | 97 | 4.9 | 0.5 | < 0.0001 | 0.00001 | 1.44 | 0.109 | 0.0046 |
| 336: ML95-84-01 | 200 | 800 | 9.6 | 8.86 | 7.71 | 134 | 4.2 | 1.2 | < 0.0001 | 0.00005 | 0.34 | 0.0229 | 0.0089 |
| 337: ML95-85-01 | 200 | 800 | 9.8 | 9.70 | 7.93 | 90 | 1.5 | 0.4 | < 0.0001 | 0.00003 | 1.52 | 0.0277 | 0.0041 |
| 338: ML95-88-01 | 200 | 800 | 9.7 | 9.39 | 7.71 | 91 | 8.5 | 0.8 | < 0.0001 | 0.00003 | 1.32 | 0.0121 | 0.0123 |
| 339: ML95-88-02 | 200 | 800 | 9.9 | 9.83 | 9.14 | 73 | 1.5 | 0.8 | < 0.0001 | < 0.00001 | 0.59 | 0.0053 | 0.0061 |
| 340: ML95-95-01 | 200 | 800 | 9.8 | 9.51 | 7.85 | 91 | 1.1 | 0.6 | < 0.0001 | < 0.00001 | 0.95 | 0.0255 | 0.0072 |
| 341: ML95-95-02 | 200 | 800 | 9.8 | 9.64 | 7.83 | 86 | 1.5 | 0.6 | < 0.0001 | 0.00001 | 1.73 | 0.0598 | 0.0116 |
| 342: ML95-98-01 | 200 | 800 | 9.7 | 9.17 | 7.68 | 130 | 6.3 | 0.8 | < 0.0001 | < 0.00001 | 0.45 | 0.0020 | 0.0083 |
| 343: ML97-186-01 | 200 | 800 | 9.8 | 9.28 | 7.88 | 135 | 11 | 1.2 | < 0.0001 | 0.00001 | 0.49 | 0.0063 | 0.0089 |
| 344: ML97-186-02 | 200 | 800 | 9.8 | 9.78 | 8.01 | 98 | 3.6 | 0.5 | < 0.0001 | < 0.00001 | 1.31 | 0.0078 | 0.0065 |
| 345-DUP: M10-972A-03 | 200 | 800 | 9.7 | 8.89 | 7.69 | 91 | 0.7 | 3.0 | < 0.0001 | < 0.00001 | 0.63 | 0.0051 | 0.0586 |

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Sample weight g | Volume D.I. Water mL | Initial pH units | Final pH units | pH units | Conductivity µS/cm | SO4 mg/L | Cl mg/L | Hg mg/L | Ag mg/L | Al mg/L | As mg/L | B mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 346-DUP: M96-16-01 | 200 | 800 | 9.8 | 9.52 | 8.12 | 80 | 1.4 | 0.6 | < 0.0001 | < 0.00001 | 1.12 | 0.0103 | 0.0193 |
| 347-DUP: M10-981-02 | 200 | 800 | 9.8 | 9.11 | 7.87 | 94 | 0.9 | 2.1 | < 0.0001 | < 0.00001 | 0.53 | 0.0007 | 0.0105 |
| 348-BLK: $D.I. Leachate Blank | --- | 800 | 5.6 | 5.62 | 6.03 | 2 | < 0.2 | < 0.2 | < 0.0001 | < 0.00001 | 0.01 | < 0.0002 | 0.0003 |
| 349-DUP: M10-994-04 | 200 | 800 | 9.8 | 9.86 | 7.76 | 76 | 0.7 | 1.7 | < 0.0001 | < 0.00001 | 0.87 | 0.0116 | 0.0121 |
| 350-DUP: M96-51-01 | 200 | 800 | 9.7 | 8.91 | 7.45 | 99 | 0.8 | 0.8 | < 0.0001 | < 0.00001 | 0.34 | 0.0071 | 0.0071 |
| 351-BLK: $D.I. Leachate Blank | --- | 800 | 5.7 | 5.64 | 8.12 | 71 | < 0.2 | < 0.2 | < 0.0001 | < 0.00001 | < 0.01 | < 0.0002 | < 0.0002 |
| 352-DUP: M97-120-01 | 200 | 800 | 9.8 | 9.15 | 8.66 | 106 | 1.9 | 2.1 | < 0.0001 | < 0.00001 | 0.52 | 0.0059 | 0.0244 |
| 353-DUP: M97-122-02 | 200 | 800 | 9.8 | 9.57 | 8.83 | 65 | 0.8 | 1.1 | < 0.0001 | < 0.00001 | 1.43 | 0.0071 | 0.0179 |
| 354-BLK: $D.I. Leachate Blank | --- | 800 | 5.7 | 5.67 | 6.04 | 2 | < 0.2 | 0.5 | < 0.0001 | < 0.00001 | < 0.01 | < 0.0002 | < 0.0002 |
| 355-DUP: W94-70-01 | 200 | 800 | 9.8 | 9.45 | 8.37 | 70 | 1.3 | 0.7 | < 0.0001 | < 0.00001 | 0.57 | 0.0057 | 0.0139 |
| 356-DUP: M06-592-03 | 200 | 800 | 9.8 | 9.93 | 8.85 | 74 | 1.1 | 0.8 | < 0.0001 | < 0.00001 | 0.81 | 0.0055 | 0.0069 |
| 357-BLK: $D.I. Leachate Blank | --- | 800 | 5.6 | 5.44 | 6.55 | 3 | < 0.2 | 0.2 | < 0.0001 | < 0.00001 | < 0.01 | 0.0003 | < 0.0002 |
| 358-DUP: M08-765-01 | 200 | 800 | 9.7 | 9.32 | 8.10 | 99 | 2.4 | 2.1 | < 0.0001 | < 0.00001 | 0.77 | 0.0850 | 0.0091 |
| 359-DUP: M97-94A-02 | 200 | 800 | 9.6 | 9.27 | 8.13 | 99 | 3.2 | 0.4 | < 0.0001 | < 0.00001 | 0.82 | 0.0687 | 0.0084 |
| 360-BLK: $D.I. Leachate Blank | --- | 800 | 5.6 | 5.70 | 5.87 | 3 | < 0.2 | 0.4 | < 0.0001 | < 0.00001 | < 0.01 | 0.0011 | < 0.0002 |
| 361-DUP: M09-809-01 | 200 | 800 | 9.8 | 8.63 | 8.09 | 162 | 1.5 | 2.0 | < 0.0001 | < 0.00001 | 0.42 | 0.279 | 0.0156 |
| 362-DUP: ML08-241-01 | 200 | 800 | 9.9 | 9.74 | 7.88 | 101 | 1.9 | 1.8 | < 0.0001 | < 0.00001 | 1.72 | 0.0440 | 0.0113 |
| 363-BLK: $D.I. Leachate Blank | --- | 800 | 5.7 | 5.57 | 7.07 | 4 | < 0.2 | 0.3 | < 0.0001 | < 0.00001 | 0.01 | 0.0009 | < 0.0002 |
| 364-DUP: M96-37-03 | 200 | 800 | 9.7 | 9.17 | 7.93 | 102 | 14 | 0.4 | < 0.0001 | < 0.00001 | 0.78 | 0.0275 | 0.0066 |
| 365-DUP: M99-336B-04 | 200 | 800 | 9.8 | 9.04 | 8.03 | 80 | 1.7 | 1.8 | < 0.0001 | < 0.00001 | 0.94 | 0.0041 | 0.0099 |
| 366-BLK: $D.I. Leachate Blank | --- | 800 | 5.7 | 5.55 | 6.14 | 2 | < 0.2 | 0.7 | < 0.0001 | < 0.00001 | < 0.01 | 0.0002 | < 0.0002 |
| 367-DUP: ML08-225-01 | 200 | 800 | 9.8 | 9.60 | 8.32 | 97 | 1.2 | 1.1 | < 0.0001 | < 0.00001 | 1.42 | 0.0171 | 0.0093 |
| 368-DUP: ML08-229-01 | 200 | 800 | 9.8 | 9.52 | 8.28 | 65 | 0.7 | 0.8 | < 0.0001 | < 0.00001 | 0.26 | 0.0022 | 0.0037 |
| 369-BLK: $D.I. Leachate Blank | --- | 800 | 5.9 | 5.61 | 5.94 | 3 | < 0.2 | 0.3 | < 0.0001 | < 0.00001 | < 0.01 | < 0.0002 | < 0.0002 |
| 370-DUP: ML95-107-03 | 200 | 800 | 9.8 | 9.46 | 8.08 | 87 | 4.5 | 0.6 | < 0.0001 | 0.00002 | 1.72 | 0.125 | 0.0100 |
| 371-DUP: ML97-186-02 | 200 | 800 | 9.8 | 9.76 | 8.01 | 81 | 3.2 | 0.4 | < 0.0001 | < 0.00001 | 1.23 | 0.0083 | 0.0055 |
| 372-BLK: $D.I. Leachate Blank | --- | 800 | 5.6 | 5.65 | 6.08 | 6 | < 0.2 | 0.4 | < 0.0001 | < 0.00001 | < 0.01 | 0.0005 | < 0.0002 |



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Tuesday, September 13, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10517-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 |
| 4: Analysis Approval Time | 12:38 | 12:38 | 12:38 | 12:39 | 12:39 | 12:39 | 12:39 | 12:40 | 12:40 | 12:41 | 12:41 | 12:42 | 12:44 |
| 5: M10-968-01 | < 0.00002 | 0.00001 | 5.95 | 0.000008 | 0.000105 | < 0.0005 | < 0.0005 | 0.032 | 8.18 | < 0.001 | 0.578 | 0.00069 | 0.00128 |
| 6: M10-968-02 | < 0.00002 | < 0.00001 | 6.48 | < 0.000003 | 0.000075 | < 0.0005 | < 0.0005 | 0.028 | 9.70 | < 0.001 | 1.12 | 0.00061 | 0.00105 |
| 7: M10-968-03 | < 0.00002 | < 0.00001 | 7.45 | < 0.000003 | 0.000083 | < 0.0005 | < 0.0005 | 0.033 | 9.63 | < 0.001 | 0.841 | 0.00171 | 0.00091 |
| 8: M10-970-01 | < 0.00002 | < 0.00001 | 16.7 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 | 0.002 | 8.46 | < 0.001 | 1.09 | 0.00085 | 0.00034 |
| 9: M10-972A-01 | < 0.00002 | < 0.00001 | 7.27 | < 0.000003 | 0.000157 | < 0.0005 | < 0.0005 | 0.016 | 7.72 | 0.001 | 1.98 | 0.00112 | 0.00052 |
| 10: M10-972A-02 | < 0.00002 | < 0.00001 | 6.45 | < 0.000003 | 0.000073 | < 0.0005 | < 0.0005 | 0.033 | 7.72 | < 0.001 | 1.09 | 0.00074 | 0.00048 |
| 11: M10-972A-03 | < 0.00002 | < 0.00001 | 14.0 | < 0.000003 | 0.000073 | < 0.0005 | < 0.0005 | < 0.002 | 5.38 | < 0.001 | 1.04 | 0.00181 | 0.00058 |
| 12: M10-972A-04 | < 0.00002 | < 0.00001 | 8.55 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 | < 0.002 | 1.52 | 0.001 | 2.29 | 0.00086 | 0.00011 |
| 13: M10-976-01 | < 0.00002 | < 0.00001 | 5.77 | < 0.000003 | 0.000073 | < 0.0005 | < 0.0005 | 0.014 | 6.75 | 0.001 | 0.769 | 0.00269 | 0.00053 |
| 14: M10-976-02 | < 0.00002 | < 0.00001 | 5.56 | < 0.000003 | 0.000222 | < 0.0005 | < 0.0005 | 0.064 | 11.0 | < 0.001 | 0.675 | 0.00086 | 0.00084 |
| 15: M10-976-03 | < 0.00002 | < 0.00001 | 18.2 | < 0.000003 | 0.000068 | < 0.0005 | < 0.0005 | < 0.002 | 10.4 | 0.001 | 2.52 | 0.00228 | 0.00025 |
| 16: M10-976-04 | < 0.00002 | < 0.00001 | 19.0 | < 0.000003 | 0.000069 | < 0.0005 | < 0.0005 | < 0.002 | 11.8 | 0.001 | 2.72 | 0.00336 | 0.00041 |
| 17: M10-977-01 | < 0.00002 | < 0.00001 | 5.92 | < 0.000003 | 0.000139 | 0.0031 | 0.0040 | 0.053 | 7.42 | < 0.001 | 0.531 | 0.00117 | 0.00076 |
| 18: M10-977-02 | < 0.00002 | < 0.00001 | 18.3 | < 0.000003 | 0.000087 | < 0.0005 | < 0.0005 | < 0.002 | 20.2 | 0.003 | 3.27 | 0.00306 | 0.00055 |
| 19: M10-986-01 | < 0.00002 | < 0.00001 | 16.9 | < 0.000003 | 0.000061 | < 0.0005 | < 0.0005 | < 0.002 | 15.3 | 0.001 | 1.88 | 0.00194 | 0.00062 |
| 20: M10-986-02 | < 0.00002 | < 0.00001 | 9.82 | < 0.000003 | 0.000054 | < 0.0005 | < 0.0005 | 0.002 | 0.226 | 0.003 | 3.48 | 0.00241 | 0.00019 |
| 21: M10-993-01 | < 0.00002 | < 0.00001 | 6.14 | < 0.000003 | 0.000138 | < 0.0005 | < 0.0005 | 0.020 | 7.49 | < 0.001 | 1.07 | 0.00067 | 0.00045 |
| 22: M10-993-02 | < 0.00002 | < 0.00001 | 6.26 | 0.000003 | 0.000158 | < 0.0005 | < 0.0005 | 0.015 | 9.22 | < 0.001 | 0.939 | 0.00069 | 0.00052 |
| 23: M10-993-03 | < 0.00002 | < 0.00001 | 7.24 | < 0.000003 | 0.000062 | < 0.0005 | < 0.0005 | 0.018 | 10.6 | < 0.001 | 0.917 | 0.00109 | 0.00041 |
| 24: M10-993-04 | < 0.00002 | < 0.00001 | 6.49 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 | < 0.002 | 1.03 | < 0.001 | 1.29 | 0.00054 | 0.00009 |
| 25: M96-16-01 | < 0.00002 | < 0.00001 | 5.32 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 | 0.004 | 6.85 | < 0.001 | 0.539 | 0.00087 | 0.00020 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26: M96-61-01 | < 0.00002 | < 0.00001 | 9.82 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 | < 0.002 | 9.84 | < 0.001 | 1.80 | 0.00107 | 0.00032 |
| 27: M96-61-02 | < 0.00002 | < 0.00001 | 4.26 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 | < 0.002 | 14.4 | < 0.001 | 0.455 | 0.00045 | 0.00014 |
| 28: M96-61-03 | < 0.00002 | 0.00001 | 33.9 | < 0.000003 | 0.000097 | < 0.0005 | < 0.0005 | < 0.002 | 4.54 | < 0.001 | 8.33 | 0.0389 | 0.00031 |
| 29: M98-234-01 | < 0.00002 | < 0.00001 | 6.83 | < 0.000003 | 0.000055 | < 0.0005 | < 0.0005 | 0.032 | 12.0 | < 0.001 | 1.95 | 0.00087 | 0.00040 |
| 30: M98-234-02 | < 0.00002 | < 0.00001 | 7.94 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 | 0.014 | 9.19 | < 0.001 | 1.24 | 0.00114 | 0.00044 |
| 31: M98-238-01 | < 0.00002 | < 0.00001 | 10.3 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 | < 0.002 | 7.39 | < 0.001 | 1.13 | 0.00067 | 0.00082 |
| 32: M98-238-02 | < 0.00002 | < 0.00001 | 5.93 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 | 0.008 | 3.34 | < 0.001 | 0.678 | 0.00061 | 0.00023 |
| 33: M98-284-01 | < 0.00002 | < 0.00001 | 8.54 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | 0.005 | 7.63 | < 0.001 | 0.819 | 0.00035 | 0.00035 |
| 34: M98-284-02 | < 0.00002 | < 0.00001 | 16.6 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | 0.009 | 4.21 | < 0.001 | 1.15 | 0.00062 | 0.00023 |
| 35: M98-286-01 | < 0.00002 | < 0.00001 | 7.14 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 | 0.008 | 12.1 | < 0.001 | 0.969 | 0.00054 | 0.00057 |
| 36: M98-329-01 | < 0.00002 | < 0.00001 | 11.4 | < 0.000003 | 0.000102 | < 0.0005 | < 0.0005 | < 0.002 | 5.91 | < 0.001 | 6.86 | 0.00111 | 0.00016 |
| 37: M98-331-01 | < 0.00002 | < 0.00001 | 7.19 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | 0.007 | 10.2 | < 0.001 | 1.02 | 0.00058 | 0.00047 |
| 38: M98-333-01 | < 0.00002 | < 0.00001 | 11.1 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 | 0.003 | 10.5 | < 0.001 | 2.60 | 0.00090 | 0.00103 |
| 39: M98-337-01 | < 0.00002 | < 0.00001 | 4.76 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 | < 0.002 | 16.8 | < 0.001 | 1.09 | 0.00053 | 0.00027 |
| 40: M04-519-01 | < 0.00002 | < 0.00001 | 10.1 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 | < 0.002 | 4.07 | 0.002 | 6.28 | 0.00154 | 0.00008 |
| 41: M04-519-02 | < 0.00002 | < 0.00001 | 10.7 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 | < 0.002 | 5.16 | < 0.001 | 5.68 | 0.00054 | 0.00007 |
| 42: M04-519-03 | < 0.00002 | < 0.00001 | 13.5 | < 0.000003 | 0.000082 | < 0.0005 | < 0.0005 | < 0.002 | 5.86 | 0.001 | 10.4 | 0.00256 | 0.00034 |
| 43: M04-519-04 | < 0.00002 | < 0.00001 | 10.1 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 | < 0.002 | 5.97 | < 0.001 | 2.77 | 0.00310 | 0.00019 |
| 44: M10-981-01 | < 0.00002 | < 0.00001 | 6.46 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | < 0.002 | 6.37 | < 0.001 | 1.50 | 0.00082 | 0.00071 |
| 45: M10-981-02 | < 0.00002 | < 0.00001 | 8.68 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | < 0.002 | 3.52 | < 0.001 | 2.53 | 0.00103 | 0.00029 |
| 46: M10-981-03 | < 0.00002 | 0.00002 | 10.1 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 | < 0.002 | 5.31 | < 0.001 | 3.23 | 0.00249 | 0.00031 |
| 47: M10-981-04 | < 0.00002 | 0.00003 | 2.91 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 | 0.007 | 6.70 | < 0.001 | 0.340 | 0.00025 | 0.00031 |
| 48: M10-985-01 | < 0.00002 | 0.00004 | 8.60 | < 0.000003 | 0.000104 | 0.0023 | 0.0025 | 0.036 | 8.72 | < 0.001 | 1.54 | 0.00138 | 0.00074 |
| 49: M10-985-02 | < 0.00002 | < 0.00001 | 6.35 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 | 0.006 | 8.07 | < 0.001 | 0.595 | 0.00041 | 0.00028 |
| 50: M10-987-01 | < 0.00002 | < 0.00001 | 11.3 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 | < 0.002 | 2.22 | < 0.001 | 5.82 | 0.00141 | 0.00013 |
| 51: M10-987-02 | < 0.00002 | 0.00001 | 11.7 | < 0.000003 | 0.000049 | < 0.0005 | < 0.0005 | < 0.002 | 5.11 | 0.001 | 5.72 | 0.00177 | 0.00011 |
| 52: M10-987-03 | < 0.00002 | < 0.00001 | 9.23 | < 0.000003 | 0.000097 | < 0.0005 | < 0.0005 | < 0.002 | 2.70 | < 0.001 | 7.32 | 0.00022 | 0.00006 |
| 53: M10-987-04 | < 0.00002 | < 0.00001 | 7.11 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | < 0.002 | 2.78 | < 0.001 | 1.17 | 0.00074 | 0.00011 |
| 54: M10-988-01 | < 0.00002 | < 0.00001 | 5.75 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 | < 0.002 | 3.30 | < 0.001 | 0.904 | 0.00058 | 0.00010 |
| 55: M10-988-02 | < 0.00002 | < 0.00001 | 7.29 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | < 0.002 | 1.53 | < 0.001 | 0.905 | 0.00129 | 0.00005 |
| 56: M10-988-03 | < 0.00002 | < 0.00001 | 4.92 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 | 0.004 | 1.25 | < 0.001 | 0.548 | 0.00034 | 0.00007 |
| 57: M10-992-01 | < 0.00002 | < 0.00001 | 5.84 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | 0.002 | 1.32 | < 0.001 | 0.604 | 0.00065 | 0.00007 |
| 58: M10-992-02 | < 0.00002 | < 0.00001 | 5.89 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | < 0.002 | 1.20 | < 0.001 | 1.17 | 0.00118 | 0.00020 |
| 59: M10-992-03 | < 0.00002 | < 0.00001 | 9.39 | < 0.000003 | 0.000085 | < 0.0005 | < 0.0005 | < 0.002 | 2.81 | < 0.001 | 5.09 | 0.00057 | 0.00006 |
| 60: M10-992-04 | < 0.00002 | < 0.00001 | 6.62 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 | < 0.002 | 1.45 | < 0.001 | 1.61 | 0.00111 | 0.00007 |
| 61: M10-992-05 | < 0.00002 | < 0.00001 | 8.30 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 | 0.003 | 1.48 | < 0.001 | 2.47 | 0.00213 | 0.00011 |
| 62: M10-994-01 | < 0.00002 | < 0.00001 | 6.27 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | < 0.002 | 0.799 | < 0.001 | 2.05 | 0.00065 | 0.00009 |
| 63: M10-994-02 | < 0.00002 | < 0.00001 | 6.30 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | 0.002 | 8.74 | < 0.001 | 1.99 | 0.00110 | 0.00031 |
| 64: M10-994-03 | < 0.00002 | < 0.00001 | 9.00 | < 0.000003 | 0.000116 | < 0.0005 | < 0.0005 | < 0.002 | 6.38 | < 0.001 | 3.01 | 0.00135 | 0.00012 |
| 65: M10-994-04 | < 0.00002 | < 0.00001 | 2.97 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 | 0.006 | 5.28 | < 0.001 | 0.266 | 0.00026 | 0.00017 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66: M10-994-05 | < 0.00002 | < 0.00001 | 7.67 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | < 0.002 | 4.99 | < 0.001 | 4.17 | 0.00066 | 0.00012 |
| 67: M10-998-01 | < 0.00002 | < 0.00001 | 5.25 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | 0.003 | 3.60 | < 0.001 | 0.532 | 0.00026 | 0.00007 |
| 68: M10-998-02 | < 0.00002 | < 0.00001 | 3.59 | < 0.000003 | 0.000009 | < 0.0005 | < 0.0005 | 0.002 | 10.3 | < 0.001 | 0.375 | 0.00024 | 0.00013 |
| 69: M10-998-03 | < 0.00002 | < 0.00001 | 6.69 | < 0.000003 | 0.000052 | < 0.0005 | < 0.0005 | < 0.002 | 7.86 | < 0.001 | 1.95 | 0.00123 | 0.00018 |
| 70: M10-998-04 | < 0.00002 | 0.00001 | 9.09 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 | < 0.002 | 3.28 | < 0.001 | 2.38 | 0.00165 | 0.00008 |
| 71: M10-998-05 | < 0.00002 | < 0.00001 | 9.67 | < 0.000003 | 0.000218 | < 0.0005 | < 0.0005 | < 0.002 | 2.35 | < 0.001 | 11.1 | 0.00089 | 0.00010 |
| 72: M11-1042-01 | < 0.00002 | < 0.00001 | 10.2 | < 0.000003 | 0.000051 | < 0.0005 | < 0.0005 | < 0.002 | 7.34 | < 0.001 | 6.24 | 0.00132 | 0.00009 |
| 73: M11-1042-02 | < 0.00002 | 0.00002 | 13.7 | 0.000005 | 0.000119 | < 0.0005 | < 0.0005 | < 0.002 | 10.3 | < 0.001 | 6.43 | 0.00088 | 0.00077 |
| 74: M11-1042-03 | < 0.00002 | < 0.00001 | 10.1 | < 0.000003 | 0.000065 | < 0.0005 | < 0.0005 | < 0.002 | 5.21 | < 0.001 | 5.74 | 0.00026 | 0.00015 |
| 75: M11-1051-01 | < 0.00002 | < 0.00001 | 11.1 | < 0.000003 | 0.000137 | < 0.0005 | < 0.0005 | < 0.002 | 8.58 | 0.001 | 6.78 | 0.00115 | 0.00017 |
| 76: M11-1051-02 | < 0.00002 | 0.00001 | 7.56 | < 0.000003 | 0.000111 | < 0.0005 | < 0.0005 | < 0.002 | 7.75 | < 0.001 | 5.56 | 0.00056 | 0.00014 |
| 77: M11-1099-01 | < 0.00002 | 0.00005 | 16.1 | < 0.000003 | 0.000065 | < 0.0005 | < 0.0005 | < 0.002 | 13.4 | 0.001 | 6.49 | 0.00628 | 0.00062 |
| 78: M11-1099-02 | < 0.00002 | < 0.00001 | 4.45 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | 0.003 | 4.19 | < 0.001 | 0.515 | 0.00059 | 0.00018 |
| 79: M11-1099-03 | < 0.00002 | < 0.00001 | 4.74 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | < 0.002 | 5.12 | < 0.001 | 0.596 | 0.00038 | 0.00015 |
| 80: M95-11-01 | < 0.00002 | < 0.00001 | 8.40 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | < 0.002 | 1.82 | < 0.001 | 1.72 | 0.00226 | 0.00009 |
| 81: M95-12-01 | < 0.00002 | < 0.00001 | 6.08 | 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | < 0.002 | 6.53 | < 0.001 | 0.663 | 0.00085 | 0.00017 |
| 82: M95-22-01 | < 0.00002 | < 0.00001 | 10.0 | < 0.000003 | 0.000033 | < 0.0005 | 0.0006 | < 0.002 | 4.83 | < 0.001 | 3.41 | 0.00167 | 0.00011 |
| 83: M95-22-02 | < 0.00002 | < 0.00001 | 6.80 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | < 0.002 | 5.26 | < 0.001 | 0.807 | 0.00104 | 0.00012 |
| 84: M96-50-01 | < 0.00002 | < 0.00001 | 3.96 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 | 0.003 | 3.71 | < 0.001 | 0.366 | 0.00037 | 0.00010 |
| 85: M96-51-01 | < 0.00002 | < 0.00001 | 11.2 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 | < 0.002 | 5.95 | 0.001 | 7.66 | 0.00118 | 0.00015 |
| 86: M96-51-02 | < 0.00002 | < 0.00001 | 11.1 | < 0.000003 | 0.000056 | < 0.0005 | < 0.0005 | < 0.002 | 1.97 | < 0.001 | 5.91 | 0.00205 | 0.00018 |
| 87: M96-51-03 | < 0.00002 | < 0.00001 | 8.61 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 | < 0.002 | 5.22 | < 0.001 | 3.01 | 0.00147 | 0.00011 |
| 88: M97-111-01 | < 0.00002 | < 0.00001 | 9.19 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | < 0.002 | 3.94 | < 0.001 | 2.49 | 0.00150 | 0.00010 |
| 89: M97-111-02 | < 0.00002 | < 0.00001 | 11.0 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 | < 0.002 | 3.01 | < 0.001 | 4.93 | 0.00108 | 0.00021 |
| 90: M97-111-03 | < 0.00002 | < 0.00001 | 9.49 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | < 0.002 | 2.10 | < 0.001 | 3.06 | 0.00104 | 0.00018 |
| 91: M97-111-04 | < 0.00002 | < 0.00001 | 7.20 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | < 0.002 | 2.40 | < 0.001 | 0.956 | 0.00075 | 0.00007 |
| 92: M97-176-01 | < 0.00002 | < 0.00001 | 10.2 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 | < 0.002 | 1.66 | < 0.001 | 3.72 | 0.00153 | 0.00011 |
| 93: M97-176-02 | < 0.00002 | < 0.00001 | 5.44 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 | < 0.002 | 8.10 | < 0.001 | 0.573 | 0.00034 | 0.00011 |
| 94: M97-176-03 | < 0.00002 | < 0.00001 | 7.66 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | < 0.002 | 5.84 | < 0.001 | 0.868 | 0.00105 | 0.00015 |
| 95: M98-222-01 | < 0.00002 | < 0.00001 | 12.3 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 | < 0.002 | 6.47 | < 0.001 | 4.12 | 0.00248 | 0.00043 |
| 96: M98-222-02 | < 0.00002 | < 0.00001 | 7.31 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | < 0.002 | 5.67 | < 0.001 | 0.958 | 0.00098 | 0.00022 |
| 97: M98-222-03 | < 0.00002 | < 0.00001 | 7.30 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | < 0.002 | 5.00 | < 0.001 | 2.01 | 0.00048 | 0.00021 |
| 98: M98-223-01 | < 0.00002 | < 0.00001 | 4.15 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | 0.002 | 7.34 | < 0.001 | 0.613 | 0.00041 | 0.00025 |
| 99: M98-223-02 | < 0.00002 | < 0.00001 | 14.9 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 | < 0.002 | 6.49 | < 0.001 | 9.24 | 0.00270 | 0.00023 |
| 100: M98-223-03 | < 0.00002 | < 0.00001 | 18.2 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 | < 0.002 | 3.22 | < 0.001 | 6.20 | 0.00297 | 0.00027 |
| 101: W94-48-01 | < 0.00002 | < 0.00001 | 5.66 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | 0.003 | 3.06 | < 0.001 | 0.651 | 0.00028 | 0.00014 |
| 102: M96-58-01 | < 0.00002 | < 0.00001 | 8.09 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | < 0.002 | 7.18 | < 0.001 | 1.02 | 0.00129 | 0.00019 |
| 103: M96-58-02 | < 0.00002 | < 0.00001 | 5.90 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 | < 0.002 | 6.50 | < 0.001 | 0.838 | 0.00040 | 0.00011 |
| 104: M96-58-03 | < 0.00002 | < 0.00001 | 8.62 | < 0.000003 | 0.000023 | < 0.0005 | 0.0007 | < 0.002 | 5.58 | < 0.001 | 1.08 | 0.00133 | 0.00011 |
| 105: M97-120-01 | < 0.00002 | < 0.00001 | 7.22 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | < 0.002 | 5.71 | < 0.001 | 2.80 | 0.00090 | 0.00018 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106: M97-120-02 | < 0.00002 | < 0.00001 | 6.15 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | < 0.002 | 4.79 | < 0.001 | 1.10 | 0.00065 | 0.00022 |
| 107: M97-122-01 | < 0.00002 | < 0.00001 | 3.86 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 | 0.012 | 0.788 | < 0.001 | 0.412 | 0.00027 | 0.00018 |
| 108: M97-122-02 | < 0.00002 | < 0.00001 | 4.81 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | < 0.002 | 6.14 | < 0.001 | 0.519 | 0.00094 | 0.00025 |
| 109: M97-122-03 | < 0.00002 | < 0.00001 | 15.0 | < 0.000003 | 0.000082 | < 0.0005 | < 0.0005 | < 0.002 | 5.10 | 0.003 | 7.67 | 0.00297 | 0.00012 |
| 110: M97-122-04 | < 0.00002 | < 0.00001 | 22.3 | < 0.000003 | 0.000050 | < 0.0005 | < 0.0005 | < 0.002 | 4.00 | < 0.001 | 8.51 | 0.00232 | 0.00031 |
| 111: M97-122-05 | < 0.00002 | < 0.00001 | 8.10 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | < 0.002 | 6.26 | < 0.001 | 1.81 | 0.00152 | 0.00008 |
| 112: M97-123-01 | < 0.00002 | < 0.00001 | 5.65 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | < 0.002 | 7.85 | < 0.001 | 0.743 | 0.00114 | 0.00077 |
| 113: M97-123-02 | < 0.00002 | < 0.00001 | 4.05 | < 0.000003 | 0.000010 | < 0.0005 | < 0.0005 | < 0.002 | 8.90 | < 0.001 | 0.437 | 0.00053 | 0.00071 |
| 114: M97-123-03 | < 0.00002 | < 0.00001 | 8.75 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | < 0.002 | 4.67 | < 0.001 | 2.00 | 0.00170 | 0.00016 |
| 115: M97-123-04 | < 0.00002 | < 0.00001 | 9.52 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | < 0.002 | 8.43 | 0.001 | 3.92 | 0.00121 | 0.00010 |
| 116: M97-124-01 | < 0.00002 | < 0.00001 | 8.27 | < 0.000003 | 0.000021 | < 0.0005 | 0.0012 | < 0.002 | 7.54 | < 0.001 | 1.35 | 0.00156 | 0.00041 |
| 117: M97-124-02 | < 0.00002 | < 0.00001 | 8.22 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | < 0.002 | 4.12 | < 0.001 | 0.889 | 0.00025 | 0.00016 |
| 118: M97-124-03 | < 0.00002 | < 0.00001 | 38.1 | < 0.000003 | 0.000101 | < 0.0005 | < 0.0005 | < 0.002 | 1.51 | < 0.001 | 10.6 | 0.0375 | 0.00053 |
| 119: M97-124-04 | < 0.00002 | < 0.00001 | 7.46 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | < 0.002 | 7.57 | < 0.001 | 1.03 | 0.00064 | 0.00011 |
| 120: M97-153-01 | < 0.00002 | < 0.00001 | 8.07 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 | < 0.002 | 11.8 | < 0.001 | 2.78 | 0.00108 | 0.00017 |
| 121: M97-153-02 | < 0.00002 | < 0.00001 | 7.71 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 | < 0.002 | 8.53 | < 0.001 | 2.46 | 0.00140 | 0.00018 |
| 122: M97-154-01 | < 0.00002 | < 0.00001 | 7.33 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 | < 0.002 | 12.8 | 0.001 | 2.59 | 0.00100 | 0.00020 |
| 123: M98-181-01 | < 0.00002 | < 0.00001 | 5.73 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 | < 0.002 | 8.02 | < 0.001 | 0.694 | 0.00052 | 0.00011 |
| 124: M98-181-02 | < 0.00002 | < 0.00001 | 9.50 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | < 0.002 | 2.65 | < 0.001 | 2.77 | 0.00157 | 0.00006 |
| 125: M98-184-01 | < 0.00002 | < 0.00001 | 2.93 | < 0.000003 | 0.000010 | < 0.0005 | < 0.0005 | 0.002 | 8.76 | < 0.001 | 0.337 | 0.00035 | 0.00013 |
| 126: M98-184-02 | < 0.00002 | < 0.00001 | 10.2 | < 0.000003 | 0.000057 | < 0.0005 | < 0.0005 | 0.003 | 5.39 | 0.002 | 6.51 | 0.00156 | 0.00015 |
| 127: M98-185-01 | < 0.00002 | < 0.00001 | 7.20 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 | < 0.002 | 8.88 | < 0.001 | 1.10 | 0.00130 | 0.00031 |
| 128: M98-185-02 | < 0.00002 | < 0.00001 | 4.66 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 | 0.004 | 5.90 | < 0.001 | 0.510 | 0.00035 | 0.00017 |
| 129: M98-185-03 | < 0.00002 | < 0.00001 | 4.30 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 | 0.006 | 2.38 | < 0.001 | 0.551 | 0.00045 | 0.00013 |
| 130: W94-49-01 | < 0.00002 | < 0.00001 | 5.56 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | 0.002 | 6.39 | < 0.001 | 0.647 | 0.00021 | 0.00042 |
| 131: W94-49-02 | < 0.00002 | 0.00002 | 22.1 | < 0.000003 | 0.00138 | < 0.0005 | < 0.0005 | 0.039 | 4.40 | < 0.001 | 10.2 | 0.467 | 0.00005 |
| 132: W94-49-03 | < 0.00002 | < 0.00001 | 7.59 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | < 0.002 | 4.41 | < 0.001 | 1.16 | 0.00273 | 0.00016 |
| 133: W94-53-01 | < 0.00002 | < 0.00001 | 7.82 | 0.000008 | 0.000033 | < 0.0005 | < 0.0005 | 0.014 | 10.6 | < 0.001 | 1.19 | 0.00073 | 0.00054 |
| 134: W94-55-01 | < 0.00002 | < 0.00001 | 24.2 | < 0.000003 | 0.000070 | < 0.0005 | < 0.0005 | < 0.002 | 1.24 | < 0.001 | 8.85 | 0.0105 | 0.00016 |
| 135: W94-55-02 | < 0.00002 | < 0.00001 | 9.21 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | < 0.002 | 7.86 | < 0.001 | 1.25 | 0.00102 | 0.00012 |
| 136: W94-57-01 | < 0.00002 | < 0.00001 | 11.6 | < 0.000003 | 0.000063 | < 0.0005 | < 0.0005 | < 0.002 | 10.6 | 0.001 | 5.04 | 0.00192 | 0.00026 |
| 137: W94-57-02 | < 0.00002 | < 0.00001 | 29.4 | < 0.000003 | 0.000080 | < 0.0005 | < 0.0005 | < 0.002 | 1.01 | < 0.001 | 7.11 | 0.0208 | 0.00036 |
| 138: W94-57-03 | < 0.00002 | < 0.00001 | 39.5 | < 0.000003 | 0.000143 | < 0.0005 | < 0.0005 | < 0.002 | 0.787 | < 0.001 | 11.6 | 0.0681 | 0.00058 |
| 139: W94-59-01 | < 0.00002 | < 0.00001 | 3.58 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 | 0.007 | 2.47 | < 0.001 | 0.497 | 0.00064 | 0.00020 |
| 140: W94-61-01 | < 0.00002 | < 0.00001 | 48.4 | 0.000012 | 0.000580 | < 0.0005 | < 0.0005 | < 0.002 | 0.402 | < 0.001 | 13.6 | 0.660 | 0.00015 |
| 141: W94-61-02 | < 0.00002 | < 0.00001 | 4.04 | < 0.000003 | 0.000017 | < 0.0005 | 0.0010 | 0.006 | 5.48 | < 0.001 | 0.608 | 0.00365 | 0.00016 |
| 142: W94-65-01 | < 0.00002 | < 0.00001 | 44.0 | < 0.000003 | 0.000541 | < 0.0005 | < 0.0005 | 0.005 | 1.15 | < 0.001 | 12.2 | 0.268 | 0.00046 |
| 143: W94-65-02 | < 0.00002 | < 0.00001 | 47.4 | < 0.000003 | 0.000280 | < 0.0005 | < 0.0005 | < 0.002 | 1.74 | 0.001 | 11.6 | 0.122 | 0.00053 |
| 144: W94-65-03 | < 0.00002 | < 0.00001 | 5.73 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | 0.006 | 2.28 | < 0.001 | 0.880 | 0.00136 | 0.00017 |
| 145: W94-70-01 | < 0.00002 | < 0.00001 | 5.21 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | < 0.002 | 4.12 | < 0.001 | 0.819 | 0.00063 | 0.00024 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 146: W94-70-02 | < 0.00002 | < 0.00001 | 6.88 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | < 0.002 | 2.51 | < 0.001 | 0.954 | 0.00040 | 0.00008 |
| 147: W94-73-01 | < 0.00002 | < 0.00001 | 6.36 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 | < 0.002 | 1.73 | < 0.001 | 0.840 | 0.00075 | 0.00008 |
| 148: W94-73-02 | < 0.00002 | 0.00002 | 41.0 | < 0.000003 | 0.000138 | < 0.0005 | < 0.0005 | < 0.002 | 0.354 | < 0.001 | 12.3 | 0.0833 | 0.00055 |
| 149: W94-73-03 | < 0.00002 | < 0.00001 | 8.42 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | < 0.002 | 6.51 | < 0.001 | 1.04 | 0.00228 | 0.00010 |
| 150: M00-473-01 | < 0.00002 | < 0.00001 | 15.6 | < 0.000003 | 0.000121 | < 0.0005 | 0.0005 | < 0.002 | 9.23 | 0.004 | 8.09 | 0.00761 | 0.00066 |
| 151: M00-483-01 | < 0.00002 | < 0.00001 | 14.5 | < 0.000003 | 0.000155 | < 0.0005 | < 0.0005 | < 0.002 | 11.6 | 0.003 | 8.05 | 0.00740 | 0.00029 |
| 152: M00-490-01 | < 0.00002 | < 0.00001 | 15.7 | < 0.000003 | 0.000187 | < 0.0005 | < 0.0005 | < 0.002 | 9.68 | 0.003 | 8.73 | 0.00713 | 0.00058 |
| 153: M03-508-01 | < 0.00002 | < 0.00001 | 6.99 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | 0.004 | 7.56 | < 0.001 | 1.06 | 0.00077 | 0.00040 |
| 154: M03-508-02 | < 0.00002 | < 0.00001 | 19.5 | 0.000005 | 0.000048 | < 0.0005 | < 0.0005 | < 0.002 | 8.46 | < 0.001 | 2.84 | 0.00261 | 0.00016 |
| 155: M05-561-01 | < 0.00002 | < 0.00001 | 12.5 | < 0.000003 | 0.000079 | < 0.0005 | < 0.0005 | < 0.002 | 7.23 | 0.002 | 9.10 | 0.00288 | 0.00023 |
| 156: M05-561-02 | < 0.00002 | < 0.00001 | 4.40 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 | 0.004 | 15.7 | < 0.001 | 0.459 | 0.00035 | 0.00056 |
| 157: M06-577-01 | < 0.00002 | < 0.00001 | 8.60 | 0.000004 | 0.000034 | < 0.0005 | < 0.0005 | 0.008 | 9.74 | < 0.001 | 1.71 | 0.00072 | 0.00030 |
| 158: M06-577-02 | < 0.00002 | < 0.00001 | 8.71 | 0.000017 | 0.000031 | < 0.0005 | < 0.0005 | 0.008 | 10.9 | < 0.001 | 1.79 | 0.00060 | 0.00048 |
| 159: M06-577-03 | < 0.00002 | < 0.00001 | 9.10 | 0.000009 | 0.000041 | < 0.0005 | < 0.0005 | 0.005 | 11.2 | < 0.001 | 2.52 | 0.00090 | 0.00075 |
| 160: M06-591-01 | < 0.00002 | < 0.00001 | 9.60 | 0.000008 | 0.000044 | < 0.0005 | < 0.0005 | 0.009 | 10.6 | < 0.001 | 2.16 | 0.00087 | 0.00073 |
| 161: M06-591-02 | < 0.00002 | < 0.00001 | 13.5 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 | 0.009 | 8.03 | 0.001 | 2.50 | 0.00196 | 0.00042 |
| 162: M06-591-03 | < 0.00002 | < 0.00001 | 9.65 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | 0.018 | 5.97 | < 0.001 | 1.60 | 0.00227 | 0.00017 |
| 163: M06-592-01 | < 0.00002 | < 0.00001 | 7.47 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 | 0.019 | 11.0 | < 0.001 | 1.22 | 0.00060 | 0.00071 |
| 164: M06-592-02 | < 0.00002 | < 0.00001 | 4.26 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | 0.018 | 5.64 | < 0.001 | 0.429 | 0.00037 | 0.00013 |
| 165: M06-592-03 | < 0.00002 | < 0.00001 | 4.78 | < 0.000003 | 0.000062 | < 0.0005 | < 0.0005 | 0.236 | 8.60 | < 0.001 | 0.431 | 0.00162 | 0.00010 |
| 166: M06-593-01 | < 0.00002 | 0.00002 | 8.00 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 | 0.006 | 5.13 | < 0.001 | 1.61 | 0.00067 | 0.00028 |
| 167: M06-593-02 | < 0.00002 | < 0.00001 | 4.42 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 | 0.065 | 8.31 | < 0.001 | 0.421 | 0.00093 | 0.00018 |
| 168: M06-608-01 | < 0.00002 | < 0.00001 | 7.54 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 | 0.013 | 8.50 | < 0.001 | 1.18 | 0.00065 | 0.00030 |
| 169: M06-608-02 | < 0.00002 | < 0.00001 | 7.01 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 | 0.011 | 9.25 | < 0.001 | 1.26 | 0.00067 | 0.00025 |
| 170: M06-611-01 | < 0.00002 | < 0.00001 | 7.98 | < 0.000003 | 0.000053 | < 0.0005 | < 0.0005 | 0.015 | 8.70 | < 0.001 | 1.62 | 0.00065 | 0.00035 |
| 171: M06-611-02 | < 0.00002 | < 0.00001 | 7.96 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.007 | 10.8 | < 0.001 | 1.51 | 0.00058 | 0.00064 |
| 172: M06-623-01 | < 0.00002 | < 0.00001 | 8.53 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 | 0.015 | 11.2 | < 0.001 | 1.30 | 0.00050 | 0.00056 |
| 173: M06-623-02 | < 0.00002 | < 0.00001 | 9.10 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 | < 0.002 | 3.27 | 0.001 | 1.90 | 0.00198 | 0.00012 |
| 174: M06-625-01 | < 0.00002 | < 0.00001 | 8.45 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.005 | 10.8 | < 0.001 | 1.91 | 0.00068 | 0.00048 |
| 175: M06-625-02 | < 0.00002 | < 0.00001 | 6.27 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | 0.012 | 9.25 | < 0.001 | 1.65 | 0.00065 | 0.00044 |
| 176: M06-629-01 | < 0.00002 | < 0.00001 | 16.9 | < 0.000003 | 0.000080 | < 0.0005 | 0.0008 | 0.003 | 11.5 | 0.002 | 4.08 | 0.00306 | 0.00151 |
| 177: M06-631-01 | < 0.00002 | < 0.00001 | 8.29 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 | 0.004 | 9.88 | < 0.001 | 1.96 | 0.00074 | 0.00107 |
| 178: M07-674-01 | < 0.00002 | < 0.00001 | 8.67 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 | 0.003 | 9.68 | < 0.001 | 1.96 | 0.00080 | 0.00039 |
| 179: M07-689-01 | < 0.00002 | < 0.00001 | 5.52 | < 0.000003 | 0.000042 | < 0.0005 | < 0.0005 | 0.079 | 8.72 | < 0.001 | 0.743 | 0.00107 | 0.00070 |
| 180: M07-689-02 | < 0.00002 | < 0.00001 | 5.87 | < 0.000003 | 0.000026 | < 0.0005 | 0.0005 | 0.023 | 12.8 | < 0.001 | 0.501 | 0.00035 | 0.00058 |
| 181: M07-689-03 | < 0.00002 | < 0.00001 | 9.02 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 | 0.006 | 11.2 | 0.001 | 2.63 | 0.00057 | 0.00073 |
| 182: M08-761-01 | < 0.00002 | < 0.00001 | 7.79 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.007 | 8.93 | < 0.001 | 1.78 | 0.00055 | 0.00032 |
| 183: M08-761-02 | < 0.00002 | < 0.00001 | 7.62 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 | 0.010 | 10.5 | < 0.001 | 1.64 | 0.00061 | 0.00024 |
| 184: M08-763-01 | < 0.00002 | < 0.00001 | 9.29 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 | 0.004 | 12.1 | < 0.001 | 2.37 | 0.00076 | 0.00037 |
| 185: M08-765-01 | < 0.00002 | < 0.00001 | 7.71 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 | 0.007 | 8.41 | < 0.001 | 1.62 | 0.00083 | 0.00034 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 186: M08-783-01 | < 0.00002 | 0.00001 | 7.85 | 0.000003 | 0.000041 | < 0.0005 | < 0.0005 | 0.004 | 11.4 | < 0.001 | 1.67 | 0.00068 | 0.00055 |
| 187: M08-783-02 | < 0.00002 | < 0.00001 | 11.8 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | < 0.002 | 4.34 | 0.002 | 4.56 | 0.00363 | 0.00009 |
| 188: M10-879-01 | < 0.00002 | < 0.00001 | 6.74 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 | 0.007 | 7.73 | < 0.001 | 1.34 | 0.00106 | 0.00031 |
| 189: M10-887-01 | < 0.00002 | < 0.00001 | 7.92 | < 0.000003 | 0.000048 | < 0.0005 | < 0.0005 | 0.012 | 11.2 | < 0.001 | 2.14 | 0.00119 | 0.00048 |
| 190: M10-892-01 | < 0.00002 | < 0.00001 | 7.62 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 | 0.016 | 9.83 | < 0.001 | 1.56 | 0.00075 | 0.00080 |
| 191: M10-999-01 | < 0.00002 | < 0.00001 | 5.97 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 | 0.019 | 9.59 | < 0.001 | 1.23 | 0.00054 | 0.00059 |
| 192: M10-999-02 | < 0.00002 | < 0.00001 | 7.30 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 | 0.010 | 9.25 | < 0.001 | 1.40 | 0.00085 | 0.00053 |
| 193: M95-17-01 | < 0.00002 | < 0.00001 | 12.6 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.011 | 8.59 | 0.001 | 3.10 | 0.00191 | 0.00025 |
| 194: M95-25-01 | < 0.00002 | < 0.00001 | 8.59 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 | 0.009 | 9.79 | < 0.001 | 1.90 | 0.00071 | 0.00048 |
| 195: M95-25-02 | < 0.00002 | < 0.00001 | 7.51 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | 0.009 | 7.90 | < 0.001 | 1.22 | 0.00092 | 0.00037 |
| 196: M95-25-03 | < 0.00002 | < 0.00001 | 17.7 | < 0.000003 | 0.000046 | < 0.0005 | < 0.0005 | 0.002 | 13.1 | 0.001 | 4.97 | 0.00239 | 0.00211 |
| 197: M95-25-04 | < 0.00002 | < 0.00001 | 11.7 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | < 0.002 | 3.04 | 0.002 | 4.31 | 0.00298 | 0.00018 |
| 198: M96-03-01 | < 0.00002 | < 0.00001 | 8.76 | < 0.000003 | 0.000028 | < 0.0005 | < 0.0005 | 0.010 | 11.2 | < 0.001 | 1.98 | 0.00066 | 0.00043 |
| 199: M96-03-02 | < 0.00002 | < 0.00001 | 8.69 | < 0.000003 | 0.000024 | < 0.0005 | 0.0006 | 0.011 | 9.69 | < 0.001 | 1.68 | 0.00088 | 0.00025 |
| 200: M96-03-03 | < 0.00002 | < 0.00001 | 9.37 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 | < 0.002 | 1.63 | 0.001 | 1.27 | 0.00175 | 0.00009 |
| 201: M96-19-01 | < 0.00002 | < 0.00001 | 8.08 | < 0.000003 | 0.000050 | < 0.0005 | 0.0009 | 0.012 | 8.10 | < 0.001 | 1.89 | 0.00095 | 0.00043 |
| 202: M96-19-02 | < 0.00002 | < 0.00001 | 9.24 | < 0.000003 | 0.000041 | < 0.0005 | 0.0005 | 0.018 | 9.37 | < 0.001 | 1.70 | 0.00101 | 0.00095 |
| 203: M96-37-01 | < 0.00002 | < 0.00001 | 7.87 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 | 0.008 | 9.70 | < 0.001 | 0.796 | 0.00080 | 0.00048 |
| 204: M96-37-02 | < 0.00002 | < 0.00001 | 9.03 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 | 0.007 | 8.50 | < 0.001 | 2.02 | 0.00104 | 0.00056 |
| 205: M96-37-03 | < 0.00002 | < 0.00001 | 10.5 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 | 0.011 | 8.56 | < 0.001 | 1.67 | 0.00099 | 0.00066 |
| 206: M96-40-01 | < 0.00002 | < 0.00001 | 7.72 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 | 0.015 | 11.1 | < 0.001 | 1.44 | 0.00058 | 0.00061 |
| 207: M96-40-02 | < 0.00002 | < 0.00001 | 7.48 | < 0.000003 | 0.000030 | < 0.0005 | < 0.0005 | 0.012 | 9.74 | < 0.001 | 1.32 | 0.00043 | 0.00061 |
| 208: M96-4-01 | < 0.00002 | < 0.00001 | 9.77 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 | 0.008 | 9.52 | 0.001 | 2.26 | 0.00146 | 0.00071 |
| 209: M96-44-01 | < 0.00002 | < 0.00001 | 4.29 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 | 0.043 | 12.2 | < 0.001 | 0.422 | 0.00064 | 0.00016 |
| 210: M96-54-01 | < 0.00002 | < 0.00001 | 9.32 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 | 0.009 | 9.68 | < 0.001 | 2.22 | 0.00101 | 0.00061 |
| 211: M96-54-02 | < 0.00002 | < 0.00001 | 8.56 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 | 0.005 | 11.9 | < 0.001 | 1.90 | 0.00099 | 0.00051 |
| 212: M96-65-01 | < 0.00002 | < 0.00001 | 8.76 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | 0.007 | 9.23 | < 0.001 | 1.89 | 0.00080 | 0.00043 |
| 213: M96-7-01 | < 0.00002 | < 0.00001 | 7.80 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 | 0.008 | 10.4 | < 0.001 | 1.92 | 0.00051 | 0.00088 |
| 214: M96-7-02 | < 0.00002 | < 0.00001 | 8.86 | < 0.000003 | 0.000026 | < 0.0005 | < 0.0005 | 0.004 | 10.9 | < 0.001 | 2.29 | 0.00112 | 0.00069 |
| 215: M96-74-01 | < 0.00002 | < 0.00001 | 12.6 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 | 0.006 | 12.0 | < 0.001 | 0.900 | 0.00044 | 0.00034 |
| 216: M96-77-01 | < 0.00002 | < 0.00001 | 8.67 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 | 0.008 | 9.84 | < 0.001 | 1.42 | 0.00081 | 0.00068 |
| 217: M96-77-02 | < 0.00002 | < 0.00001 | 9.21 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.008 | 11.2 | < 0.001 | 2.27 | 0.00092 | 0.00071 |
| 218: M97-121-01 | < 0.00002 | < 0.00001 | 8.20 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 | 0.015 | 9.78 | < 0.001 | 1.50 | 0.00066 | 0.00036 |
| 219: M97-135-01 | < 0.00002 | < 0.00001 | 7.17 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 | 0.005 | 6.89 | < 0.001 | 1.57 | 0.00095 | 0.00048 |
| 220: M97-135-02 | < 0.00002 | < 0.00001 | 4.08 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 | 0.050 | 9.17 | < 0.001 | 0.401 | 0.00071 | 0.00055 |
| 221: M97-135-03 | < 0.00002 | < 0.00001 | 8.17 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 | 0.016 | 9.03 | < 0.001 | 1.69 | 0.00075 | 0.00033 |
| 222: M97-149-01 | < 0.00002 | < 0.00001 | 3.42 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | 0.029 | 9.17 | < 0.001 | 0.305 | 0.00044 | 0.00038 |
| 223: M97-149-02 | < 0.00002 | < 0.00001 | 6.21 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 | 0.006 | 7.57 | < 0.001 | 0.736 | 0.00070 | 0.00040 |
| 224: M97-94A-01 | < 0.00002 | < 0.00001 | 8.39 | < 0.000003 | 0.000041 | < 0.0005 | < 0.0005 | 0.008 | 10.8 | < 0.001 | 2.20 | 0.00075 | 0.00048 |
| 225: M97-94A-02 | < 0.00002 | < 0.00001 | 8.31 | < 0.000003 | 0.000050 | < 0.0005 | 0.0006 | 0.023 | 10.2 | < 0.001 | 1.85 | 0.00069 | 0.00042 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 226: M97-95-01 | < 0.00002 | < 0.00001 | 6.66 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 | 0.006 | 7.77 | < 0.001 | 0.943 | 0.00073 | 0.00028 |
| 227: M97-95-02 | < 0.00002 | < 0.00001 | 8.61 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 | 0.009 | 12.6 | < 0.001 | 1.94 | 0.00073 | 0.00054 |
| 228: M97-95-03 | < 0.00002 | < 0.00001 | 9.51 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 | < 0.002 | 2.31 | < 0.001 | 1.88 | 0.00255 | 0.00008 |
| 229: M98-201-01 | < 0.00002 | < 0.00001 | 6.64 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 | 0.025 | 8.57 | < 0.001 | 0.742 | 0.00046 | 0.00063 |
| 230: M98-201-02 | < 0.00002 | < 0.00001 | 5.17 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 | 0.013 | 11.3 | < 0.001 | 0.499 | 0.00034 | 0.00028 |
| 231: M98-201-03 | < 0.00002 | < 0.00001 | 12.4 | < 0.000003 | 0.000054 | < 0.0005 | < 0.0005 | 0.003 | 8.79 | < 0.001 | 2.38 | 0.00136 | 0.00058 |
| 232: M98-201-04 | < 0.00002 | < 0.00001 | 7.28 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.015 | 9.28 | < 0.001 | 1.05 | 0.00057 | 0.00030 |
| 233: M98-208-01 | < 0.00002 | < 0.00001 | 6.97 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | 0.007 | 8.56 | < 0.001 | 0.743 | 0.00066 | 0.00046 |
| 234: M98-209-01 | < 0.00002 | < 0.00001 | 7.53 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | 0.017 | 12.2 | < 0.001 | 1.01 | 0.00053 | 0.00082 |
| 235: M98-265-01 | < 0.00002 | < 0.00001 | 8.91 | < 0.000003 | 0.000033 | < 0.0005 | < 0.0005 | 0.007 | 8.44 | < 0.001 | 2.08 | 0.00092 | 0.00053 |
| 236: M98-266-01 | < 0.00002 | < 0.00001 | 8.64 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.010 | 11.5 | < 0.001 | 1.88 | 0.00067 | 0.00056 |
| 237: M98-269-01 | < 0.00002 | < 0.00001 | 9.73 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | < 0.002 | 2.15 | < 0.001 | 1.53 | 0.00264 | 0.00006 |
| 238: M98-270-01 | < 0.00002 | < 0.00001 | 6.69 | < 0.000003 | 0.000025 | < 0.0005 | < 0.0005 | 0.009 | 8.59 | < 0.001 | 1.12 | 0.00066 | 0.00031 |
| 239: M98-317-01 | < 0.00002 | < 0.00001 | 14.4 | < 0.000003 | 0.000023 | < 0.0005 | < 0.0005 | 0.003 | 8.69 | < 0.001 | 2.96 | 0.00143 | 0.00021 |
| 240: M99-309-01 | < 0.00002 | < 0.00001 | 5.65 | < 0.000003 | 0.000010 | < 0.0005 | < 0.0005 | 0.004 | 4.64 | < 0.001 | 0.630 | 0.00050 | 0.00040 |
| 241: M99-309-02 | < 0.00002 | < 0.00001 | 7.49 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | 0.007 | 9.39 | < 0.001 | 1.28 | 0.00077 | 0.00042 |
| 242: M99-336B-01 | < 0.00002 | < 0.00001 | 9.41 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | < 0.002 | 10.3 | < 0.001 | 2.08 | 0.00080 | 0.00054 |
| 243: M99-336B-02 | < 0.00002 | < 0.00001 | 3.32 | < 0.000003 | 0.000006 | < 0.0005 | < 0.0005 | 0.006 | 10.7 | < 0.001 | 0.335 | 0.00031 | 0.00013 |
| 244: M99-336B-03 | < 0.00002 | < 0.00001 | 8.36 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 | 0.014 | 11.8 | < 0.001 | 1.75 | 0.00073 | 0.00033 |
| 245: M99-336B-04 | < 0.00002 | < 0.00001 | 10.3 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | < 0.002 | 2.54 | 0.001 | 1.32 | 0.00450 | 0.00011 |
| 246: M99-345-01 | < 0.00002 | < 0.00001 | 12.2 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 | < 0.002 | 5.43 | 0.003 | 4.77 | 0.00326 | 0.00015 |
| 247: M99-346-01 | < 0.00002 | < 0.00001 | 12.2 | < 0.000003 | 0.000037 | < 0.0005 | < 0.0005 | < 0.002 | 1.28 | 0.003 | 5.36 | 0.00318 | 0.00011 |
| 248: M99-347-01 | < 0.00002 | < 0.00001 | 11.1 | < 0.000003 | 0.000052 | < 0.0005 | < 0.0005 | 0.003 | 9.91 | < 0.001 | 2.53 | 0.00124 | 0.00134 |
| 249: M99-347-02 | < 0.00002 | < 0.00001 | 8.97 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 | 0.004 | 9.48 | < 0.001 | 1.86 | 0.00093 | 0.00047 |
| 250: M99-409-01 | < 0.00002 | < 0.00001 | 8.32 | < 0.000003 | 0.000040 | < 0.0005 | < 0.0005 | 0.006 | 8.27 | < 0.001 | 1.19 | 0.00090 | 0.00048 |
| 251: M99-409-02 | < 0.00002 | < 0.00001 | 7.37 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 | 0.005 | 7.77 | < 0.001 | 1.74 | 0.00085 | 0.00055 |
| 252: M99-409-03 | < 0.00002 | < 0.00001 | 7.11 | < 0.000003 | 0.000058 | < 0.0005 | < 0.0005 | 0.059 | 9.79 | < 0.001 | 1.73 | 0.00110 | 0.00041 |
| 253: M99-409-04 | < 0.00002 | < 0.00001 | 11.1 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 | 0.003 | 10.7 | < 0.001 | 1.97 | 0.00079 | 0.00094 |
| 254: M99-409-05 | < 0.00002 | < 0.00001 | 9.97 | < 0.000003 | 0.000035 | < 0.0005 | < 0.0005 | < 0.002 | 4.30 | 0.001 | 1.69 | 0.00204 | 0.00019 |
| 255: M99-410-01 | < 0.00002 | < 0.00001 | 9.02 | < 0.000003 | 0.000038 | < 0.0005 | < 0.0005 | 0.004 | 9.83 | < 0.001 | 1.50 | 0.00092 | 0.00076 |
| 256: M99-410-02 | < 0.00002 | < 0.00001 | 8.09 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 | 0.008 | 10.0 | < 0.001 | 1.52 | 0.00068 | 0.00071 |
| 257: M99-417-01 | < 0.00002 | < 0.00001 | 17.6 | < 0.000003 | 0.000056 | < 0.0005 | < 0.0005 | 0.004 | 12.5 | 0.003 | 3.73 | 0.00332 | 0.00017 |
| 258: M99-436-01 | < 0.00002 | < 0.00001 | 7.72 | < 0.000003 | 0.000039 | < 0.0005 | < 0.0005 | 0.009 | 8.24 | < 0.001 | 1.68 | 0.00069 | 0.00032 |
| 259: M99-436-02 | < 0.00002 | < 0.00001 | 9.28 | < 0.000003 | 0.000049 | < 0.0005 | < 0.0005 | 0.011 | 9.82 | < 0.001 | 1.97 | 0.00097 | 0.00085 |
| 260: M08-733-01 | < 0.00002 | < 0.00001 | 5.20 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 | < 0.002 | 6.42 | < 0.001 | 0.605 | 0.00123 | 0.00032 |
| 261: M08-733-02 | < 0.00002 | < 0.00001 | 5.08 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | 0.002 | 8.30 | < 0.001 | 0.632 | 0.00079 | 0.00012 |
| 262: M09-802-01 | < 0.00002 | < 0.00001 | 6.32 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | < 0.002 | 7.72 | < 0.001 | 0.876 | 0.00080 | 0.00007 |
| 263: M09-802-02 | < 0.00002 | < 0.00001 | 27.6 | < 0.000003 | 0.000229 | < 0.0005 | < 0.0005 | 0.003 | 1.49 | 0.001 | 5.85 | 0.251 | 0.00010 |
| 264: M09-803-01 | < 0.00002 | < 0.00001 | 25.6 | < 0.000003 | 0.000091 | < 0.0005 | < 0.0005 | 0.005 | 1.59 | < 0.001 | 7.64 | 0.0918 | 0.00014 |
| 265: M09-809-01 | < 0.00002 | < 0.00001 | 18.4 | < 0.000003 | 0.000051 | < 0.0005 | < 0.0005 | < 0.002 | 15.0 | 0.002 | 2.92 | 0.00813 | 0.00015 |

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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 266: M09-817-01 | < 0.00002 | < 0.00001 | 12.1 | < 0.000003 | 0.000088 | < 0.0005 | < 0.0005 | 0.008 | 12.9 | 0.006 | 3.66 | 0.0203 | 0.00014 |
| 267: M09-817-02 | < 0.00002 | < 0.00001 | 7.99 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | < 0.002 | 7.02 | < 0.001 | 2.94 | 0.00102 | 0.00006 |
| 268: M09-858-01 | < 0.00002 | 0.00003 | 22.5 | < 0.000003 | 0.000103 | 0.0092 | < 0.0005 | 0.010 | 2.82 | 0.002 | 5.06 | 0.0687 | 0.00029 |
| 269: M09-859-01 | < 0.00002 | < 0.00001 | 11.4 | < 0.000003 | 0.000132 | < 0.0005 | < 0.0005 | < 0.002 | 4.80 | 0.001 | 6.72 | 0.00321 | 0.00031 |
| 270: M10-933-01 | < 0.00002 | < 0.00001 | 4.27 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | 0.002 | 5.26 | < 0.001 | 0.601 | 0.00053 | 0.00016 |
| 271: M10-935-01 | < 0.00002 | < 0.00001 | 3.77 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | 0.025 | 1.04 | < 0.001 | 0.513 | 0.00047 | 0.00013 |
| 272: M10-935-02 | < 0.00002 | < 0.00001 | 19.0 | < 0.000003 | 0.000144 | < 0.0005 | < 0.0005 | 0.026 | 2.51 | < 0.001 | 4.28 | 0.114 | 0.00043 |
| 273: M96-28-01 | < 0.00002 | < 0.00001 | 6.49 | < 0.000003 | 0.000029 | < 0.0005 | < 0.0005 | < 0.002 | 8.61 | < 0.001 | 0.839 | 0.00232 | 0.00015 |
| 274: M97-159-01 | < 0.00002 | < 0.00001 | 6.14 | < 0.000003 | 0.000021 | < 0.0005 | < 0.0005 | 0.030 | 8.71 | < 0.001 | 0.789 | 0.00101 | 0.00018 |
| 275: M97-159-02 | < 0.00002 | < 0.00001 | 7.47 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | 0.007 | 9.51 | < 0.001 | 0.939 | 0.00153 | 0.00012 |
| 276: M98-248-01 | < 0.00002 | 0.00002 | 21.9 | < 0.000003 | 0.000093 | < 0.0005 | < 0.0005 | 0.016 | 4.05 | 0.003 | 6.34 | 0.286 | 0.00011 |
| 277: M98-275-01 | < 0.00002 | < 0.00001 | 6.67 | < 0.000003 | 0.000012 | < 0.0005 | < 0.0005 | < 0.002 | 5.35 | < 0.001 | 0.894 | 0.00231 | 0.00011 |
| 278: M98-275-02 | < 0.00002 | < 0.00001 | 6.95 | < 0.000003 | 0.000011 | < 0.0005 | < 0.0005 | < 0.002 | 5.19 | < 0.001 | 0.897 | 0.00151 | 0.00007 |
| 279: W94-111-01 | < 0.00002 | < 0.00001 | 23.4 | < 0.000003 | 0.000055 | < 0.0005 | < 0.0005 | 0.008 | 2.39 | 0.001 | 9.23 | 0.171 | 0.00011 |
| 280: W94-76-01 | < 0.00002 | < 0.00001 | 4.71 | < 0.000003 | 0.000008 | < 0.0005 | 0.0048 | 0.004 | 3.15 | < 0.001 | 0.631 | 0.00120 | 0.00014 |
| 281: W94-76-02 | < 0.00002 | < 0.00001 | 4.85 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | 0.007 | 1.46 | < 0.001 | 0.691 | 0.00050 | 0.00026 |
| 282: W94-82-01 | < 0.00002 | < 0.00001 | 5.19 | < 0.000003 | 0.000014 | < 0.0005 | < 0.0005 | 0.008 | 0.272 | < 0.001 | 0.611 | 0.00059 | 0.00007 |
| 283: DS09GT-10-01 | < 0.00002 | < 0.00001 | 3.46 | 0.000004 | 0.000093 | 0.0006 | < 0.0005 | 0.138 | 9.43 | 0.001 | 0.446 | 0.00138 | 0.00059 |
| 284: ML00-224-01 | < 0.00002 | < 0.00001 | 13.7 | < 0.000003 | 0.000017 | < 0.0005 | < 0.0005 | 0.032 | 10.9 | 0.001 | 1.27 | 0.00054 | 0.00016 |
| 285: ML08-225-01 | < 0.00002 | < 0.00001 | 3.72 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | 0.319 | 16.2 | 0.007 | 0.394 | 0.00140 | 0.00025 |
| 286: ML08-225-02 | < 0.00002 | < 0.00001 | 2.72 | 0.000011 | 0.000099 | 0.0006 | < 0.0005 | 0.181 | 13.0 | < 0.001 | 0.398 | 0.00132 | 0.00029 |
| 287: ML08-225-03 | < 0.00002 | < 0.00001 | 11.8 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | 0.016 | 12.7 | 0.002 | 0.982 | 0.00053 | 0.00015 |
| 288: ML08-226-01 | < 0.00002 | < 0.00001 | 1.85 | < 0.000003 | 0.000421 | 0.0005 | 0.0006 | 1.23 | 11.9 | 0.013 | 0.464 | 0.00695 | 0.00021 |
| 289: ML08-226-02 | < 0.00002 | 0.00001 | 5.64 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 | 0.822 | 14.2 | 0.006 | 0.911 | 0.00330 | 0.00010 |
| 290: ML08-226-03 | < 0.00002 | < 0.00001 | 4.48 | < 0.000003 | 0.000019 | < 0.0005 | < 0.0005 | 0.682 | 17.3 | 0.005 | 0.460 | 0.00115 | 0.00010 |
| 291: ML08-226-04 | < 0.00002 | 0.00004 | 4.81 | 0.000005 | 0.000024 | < 0.0005 | < 0.0005 | 0.807 | 18.1 | 0.003 | 0.712 | 0.00152 | 0.00033 |
| 292: ML08-226-05 | < 0.00002 | < 0.00001 | 3.74 | 0.000007 | 0.000076 | 0.0005 | < 0.0005 | 0.164 | 12.7 | < 0.001 | 0.392 | 0.00122 | 0.00044 |
| 293: ML08-228-01 | < 0.00002 | < 0.00001 | 4.81 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | 0.152 | 19.5 | 0.009 | 0.726 | 0.00097 | 0.00020 |
| 294: ML08-228-02 | < 0.00002 | 0.00003 | 7.60 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | 0.718 | 12.4 | 0.009 | 0.981 | 0.00221 | 0.00009 |
| 295: ML08-229-01 | < 0.00002 | < 0.00001 | 4.33 | < 0.000003 | 0.000009 | < 0.0005 | < 0.0005 | 0.047 | 17.6 | 0.010 | 0.799 | 0.00047 | 0.00007 |
| 296: ML08-229-02 | < 0.00002 | < 0.00001 | 2.95 | < 0.000003 | 0.000177 | < 0.0005 | < 0.0005 | 0.686 | 10.3 | 0.015 | 0.313 | 0.00382 | 0.00011 |
| 297: ML08-229-03 | < 0.00002 | < 0.00001 | 9.65 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | 0.028 | 15.2 | 0.002 | 0.883 | 0.00061 | 0.00026 |
| 298: ML08-229-04 | < 0.00002 | 0.00001 | 4.25 | 0.000009 | 0.000124 | 0.0006 | 0.0006 | 0.390 | 12.3 | < 0.001 | 0.580 | 0.00219 | 0.00034 |
| 299: ML08-229-05 | < 0.00002 | < 0.00001 | 5.59 | < 0.000003 | 0.000007 | < 0.0005 | < 0.0005 | 0.026 | 11.1 | 0.003 | 0.545 | 0.00019 | 0.00011 |
| 300: ML08-230-01 | < 0.00002 | < 0.00001 | 3.11 | 0.000025 | 0.000117 | 0.0006 | < 0.0005 | 0.242 | 12.8 | < 0.001 | 0.516 | 0.00178 | 0.00257 |
| 301: ML08-232-01 | < 0.00002 | < 0.00001 | 1.62 | 0.000016 | 0.000219 | 0.0011 | < 0.0005 | 0.459 | 11.5 | 0.001 | 0.412 | 0.00243 | 0.00039 |
| 302: ML08-233-01 | < 0.00002 | < 0.00001 | 3.09 | < 0.000003 | 0.000068 | < 0.0005 | < 0.0005 | 0.174 | 12.6 | 0.001 | 0.308 | 0.00148 | 0.00032 |
| 303: ML08-233-02 | < 0.00002 | < 0.00001 | 3.81 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | 0.213 | 15.2 | 0.024 | 0.355 | 0.00066 | 0.00012 |
| 304: ML08-240-01 | < 0.00002 | < 0.00001 | 2.55 | < 0.000003 | 0.000113 | 0.0006 | < 0.0005 | 0.286 | 14.3 | 0.002 | 0.270 | 0.00225 | 0.00031 |
| 305: ML08-241-01 | < 0.00002 | < 0.00001 | 3.50 | < 0.000003 | 0.000060 | < 0.0005 | < 0.0005 | 0.197 | 14.4 | 0.001 | 0.329 | 0.00120 | 0.00172 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 306: ML08-241-02 | < 0.00002 | < 0.00001 | 6.92 | < 0.000003 | 0.000018 | < 0.0005 | < 0.0005 | 0.007 | 16.6 | 0.001 | 0.641 | 0.00049 | 0.00023 |
| 307: ML08-241-03 | < 0.00002 | < 0.00001 | 2.43 | < 0.000003 | 0.000154 | < 0.0005 | < 0.0005 | 0.410 | 16.9 | 0.020 | 0.266 | 0.00319 | 0.00041 |
| 308: ML08-243-01 | < 0.00002 | < 0.00001 | 3.94 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | 0.036 | 12.7 | 0.002 | 0.457 | 0.00028 | 0.00022 |
| 309: ML08-243-02 | < 0.00002 | < 0.00001 | 4.27 | < 0.000003 | 0.000025 | < 0.0005 | < 0.0005 | 0.038 | 9.90 | 0.014 | 0.246 | 0.00051 | 0.00015 |
| 310: ML08-245-01 | < 0.00002 | < 0.00001 | 2.44 | < 0.000003 | 0.000313 | < 0.0005 | < 0.0005 | 0.858 | 10.6 | 0.012 | 0.389 | 0.00591 | 0.00022 |
| 311: ML08-245-02 | < 0.00002 | 0.00001 | 2.47 | 0.000004 | 0.000278 | 0.0018 | < 0.0005 | 0.550 | 12.9 | 0.002 | 0.492 | 0.00430 | 0.00087 |
| 312: ML09-254-01 | < 0.00002 | < 0.00001 | 7.52 | < 0.000003 | 0.000054 | < 0.0005 | < 0.0005 | 0.411 | 15.2 | 0.005 | 0.759 | 0.00157 | 0.00034 |
| 313: ML09-254-02 | < 0.00002 | < 0.00001 | 3.36 | < 0.000003 | 0.000088 | < 0.0005 | < 0.0005 | 0.228 | 10.2 | < 0.001 | 0.376 | 0.00166 | 0.00082 |
| 314: ML09-256-01 | < 0.00002 | 0.00002 | 4.46 | 0.000006 | 0.000201 | 0.0014 | < 0.0005 | 0.305 | 12.5 | 0.002 | 0.917 | 0.00296 | 0.00103 |
| 315: ML09-259-01 | < 0.00002 | < 0.00001 | 2.91 | < 0.000003 | 0.000514 | 0.0007 | 0.0005 | 1.34 | 10.9 | 0.017 | 0.451 | 0.0108 | 0.00021 |
| 316: ML92062-01 | < 0.00002 | < 0.00001 | 5.55 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | 0.124 | 17.0 | 0.004 | 0.503 | 0.00048 | 0.00024 |
| 317: ML95-104-01 | < 0.00002 | < 0.00001 | 4.18 | < 0.000003 | 0.000264 | < 0.0005 | 0.0010 | 0.578 | 14.4 | 0.025 | 0.345 | 0.00591 | 0.00022 |
| 318: ML95-104-02 | < 0.00002 | 0.00001 | 17.7 | < 0.000003 | 0.000027 | < 0.0005 | < 0.0005 | 0.066 | 16.0 | 0.005 | 1.67 | 0.00122 | 0.00033 |
| 319: ML95-105-01 | < 0.00002 | < 0.00001 | 9.51 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 | 0.033 | 19.7 | 0.002 | 0.920 | 0.00047 | 0.00016 |
| 320: ML95-105-02 | < 0.00002 | < 0.00001 | 4.02 | < 0.000003 | 0.000024 | < 0.0005 | < 0.0005 | 0.019 | 16.9 | 0.021 | 0.348 | 0.00067 | 0.00032 |
| 321: ML95-105-03 | < 0.00002 | < 0.00001 | 4.52 | 0.000004 | 0.000167 | 0.0011 | 0.0152 | 0.300 | 13.8 | 0.001 | 0.734 | 0.00240 | 0.00429 |
| 322: ML95-105-04 | < 0.00002 | < 0.00001 | 2.30 | 0.000004 | 0.000209 | 0.0009 | < 0.0005 | 0.548 | 16.8 | 0.017 | 0.309 | 0.00493 | 0.00029 |
| 323: ML95-107-01 | < 0.00002 | < 0.00001 | 4.58 | < 0.000003 | 0.000044 | < 0.0005 | < 0.0005 | 0.444 | 20.2 | 0.013 | 0.630 | 0.00201 | 0.00021 |
| 324: ML95-107-02 | < 0.00002 | < 0.00001 | 8.25 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | 0.007 | 19.0 | 0.005 | 1.15 | 0.00089 | 0.00057 |
| 325: ML95-107-03 | < 0.00002 | < 0.00001 | 3.07 | 0.000004 | 0.000136 | 0.0009 | < 0.0005 | 0.258 | 14.1 | 0.001 | 0.523 | 0.00208 | 0.00137 |
| 326: ML95-113-01 | < 0.00002 | < 0.00001 | 5.48 | < 0.000003 | 0.000085 | 0.0006 | < 0.0005 | 0.130 | 11.9 | 0.001 | 0.797 | 0.00137 | 0.00127 |
| 327: ML95-113-02 | < 0.00002 | < 0.00001 | 3.49 | < 0.000003 | 0.000067 | < 0.0005 | < 0.0005 | 0.144 | 14.6 | 0.002 | 0.317 | 0.00124 | 0.00030 |
| 328: ML95-117-01 | < 0.00002 | < 0.00001 | 8.10 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | 0.025 | 14.0 | 0.002 | 0.805 | 0.00053 | 0.00019 |
| 329: ML95-117-02 | < 0.00002 | < 0.00001 | 3.48 | < 0.000003 | 0.000165 | < 0.0005 | < 0.0005 | 0.384 | 11.7 | 0.007 | 0.303 | 0.00413 | 0.00016 |
| 330: ML95-117-03 | < 0.00002 | < 0.00001 | 8.16 | < 0.000003 | 0.000031 | < 0.0005 | < 0.0005 | 0.239 | 8.29 | < 0.001 | 0.752 | 0.00100 | 0.00041 |
| 331: ML95-120-01 | < 0.00002 | < 0.00001 | 4.50 | < 0.000003 | 0.000095 | 0.0008 | < 0.0005 | 0.156 | 12.0 | < 0.001 | 0.589 | 0.00127 | 0.00070 |
| 332: ML95-82-01 | < 0.00002 | < 0.00001 | 7.60 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | 0.103 | 14.9 | 0.001 | 0.618 | 0.00042 | 0.00026 |
| 333: ML95-82-02 | < 0.00002 | < 0.00001 | 2.85 | < 0.000003 | 0.000104 | 0.0006 | 0.0034 | 0.315 | 12.5 | 0.001 | 0.385 | 0.00245 | 0.00047 |
| 334: ML95-83-01 | < 0.00002 | < 0.00001 | 1.01 | < 0.000003 | 0.000095 | < 0.0005 | < 0.0005 | 1.24 | 16.2 | 0.009 | 0.307 | 0.00330 | 0.00027 |
| 335: ML95-83-02 | < 0.00002 | < 0.00001 | 3.02 | 0.000003 | 0.000160 | 0.0007 | < 0.0005 | 0.428 | 16.7 | 0.004 | 0.435 | 0.00286 | 0.00326 |
| 336: ML95-84-01 | < 0.00002 | 0.00003 | 10.5 | < 0.000003 | 0.000022 | < 0.0005 | < 0.0005 | 0.068 | 14.6 | 0.003 | 0.970 | 0.00056 | 0.00033 |
| 337: ML95-85-01 | < 0.00002 | 0.00001 | 2.98 | < 0.000003 | 0.000114 | 0.0006 | < 0.0005 | 0.312 | 15.6 | 0.004 | 0.311 | 0.00267 | 0.00028 |
| 338: ML95-88-01 | < 0.00002 | < 0.00001 | 4.00 | < 0.000003 | 0.000115 | 0.0008 | < 0.0005 | 0.159 | 13.8 | 0.002 | 0.624 | 0.00142 | 0.00045 |
| 339: ML95-88-02 | < 0.00002 | < 0.00001 | 3.59 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | 0.023 | 7.66 | 0.007 | 0.350 | 0.00051 | 0.00024 |
| 340: ML95-95-01 | < 0.00002 | < 0.00001 | 4.67 | < 0.000003 | 0.000023 | < 0.0005 | 0.0006 | 0.186 | 20.2 | 0.005 | 0.358 | 0.00088 | 0.00033 |
| 341: ML95-95-02 | < 0.00002 | < 0.00001 | 2.43 | 0.000085 | 0.000197 | 0.0012 | < 0.0005 | 0.490 | 13.5 | 0.002 | 0.362 | 0.00365 | 0.00028 |
| 342: ML95-98-01 | < 0.00002 | < 0.00001 | 7.46 | < 0.000003 | 0.000034 | < 0.0005 | < 0.0005 | 0.465 | 20.1 | 0.013 | 0.963 | 0.00246 | 0.00020 |
| 343: ML97-186-01 | < 0.00002 | < 0.00001 | 5.81 | < 0.000003 | 0.000036 | < 0.0005 | < 0.0005 | 0.352 | 14.0 | 0.003 | 0.896 | 0.00144 | 0.00066 |
| 344: ML97-186-02 | < 0.00002 | < 0.00001 | 4.16 | 0.000044 | 0.000199 | < 0.0005 | 0.0006 | 0.564 | 11.6 | 0.013 | 0.404 | 0.00552 | 0.00024 |
| 345-DUP: M10-972A-03 | < 0.00002 | < 0.00001 | 14.5 | < 0.000003 | 0.000043 | < 0.0005 | < 0.0005 | 0.003 | 5.08 | < 0.001 | 1.13 | 0.00092 | 0.00056 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Be mg/L | Bi mg/L | Ca mg/L | Cd mg/L | Co mg/L | Cr mg/L | Cu mg/L | Fe mg/L | K mg/L | Li mg/L | Mg mg/L | Mn mg/L | Mo mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 346-DUP: M96-16-01 | < 0.00002 | < 0.00001 | 5.38 | < 0.000003 | 0.000016 | < 0.0005 | < 0.0005 | 0.003 | 6.33 | < 0.001 | 0.554 | 0.00096 | 0.00024 |
| 347-DUP: M10-981-02 | < 0.00002 | < 0.00001 | 7.74 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | < 0.002 | 2.96 | < 0.001 | 2.17 | 0.00124 | 0.00017 |
| 348-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.03 | < 0.000003 | 0.000002 | < 0.0005 | < 0.0005 | < 0.002 | 0.117 | < 0.001 | 0.004 | 0.00038 | 0.00002 |
| 349-DUP: M10-994-04 | < 0.00002 | 0.00003 | 3.48 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 | 0.004 | 5.32 | < 0.001 | 0.308 | 0.00022 | 0.00016 |
| 350-DUP: M96-51-01 | < 0.00002 | 0.00002 | 12.5 | < 0.000003 | 0.000048 | < 0.0005 | 0.0006 | < 0.002 | 6.66 | 0.001 | 9.24 | 0.00140 | 0.00016 |
| 351-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.03 | < 0.000003 | 0.000007 | < 0.0005 | 0.0005 | < 0.002 | 0.197 | < 0.001 | 0.008 | 0.00049 | < 0.00001 |
| 352-DUP: M97-120-01 | < 0.00002 | < 0.00001 | 6.37 | < 0.000003 | 0.000020 | < 0.0005 | < 0.0005 | < 0.002 | 5.74 | < 0.001 | 2.39 | 0.00073 | 0.00015 |
| 353-DUP: M97-122-02 | < 0.00002 | < 0.00001 | 5.22 | < 0.000003 | 0.000015 | < 0.0005 | < 0.0005 | < 0.002 | 7.34 | < 0.001 | 0.520 | 0.00088 | 0.00010 |
| 354-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.06 | 0.000004 | 0.000013 | < 0.0005 | < 0.0005 | < 0.002 | 0.537 | < 0.001 | 0.002 | 0.00040 | 0.00008 |
| 355-DUP: W94-70-01 | < 0.00002 | < 0.00001 | 5.02 | < 0.000003 | 0.000013 | < 0.0005 | 0.0007 | < 0.002 | 4.22 | < 0.001 | 0.764 | 0.00052 | 0.00019 |
| 356-DUP: M06-592-03 | < 0.00002 | < 0.00001 | 4.51 | < 0.000003 | 0.000053 | < 0.0005 | < 0.0005 | 0.180 | 7.71 | < 0.001 | 0.374 | 0.00138 | 0.00010 |
| 357-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | < 0.02 | < 0.000003 | 0.000004 | < 0.0005 | < 0.0005 | < 0.002 | 0.301 | < 0.001 | 0.002 | 0.00036 | < 0.00001 |
| 358-DUP: M08-765-01 | < 0.00002 | < 0.00001 | 7.86 | < 0.000003 | 0.000045 | < 0.0005 | < 0.0005 | 0.006 | 8.41 | < 0.001 | 1.67 | 0.00095 | 0.00036 |
| 359-DUP: M97-94A-02 | < 0.00002 | < 0.00001 | 8.39 | < 0.000003 | 0.000049 | < 0.0005 | 0.0005 | 0.020 | 10.3 | < 0.001 | 1.88 | 0.00071 | 0.00038 |
| 360-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.03 | < 0.000003 | 0.000004 | < 0.0005 | < 0.0005 | < 0.002 | 0.460 | < 0.001 | 0.004 | 0.00032 | 0.00002 |
| 361-DUP: M09-809-01 | < 0.00002 | < 0.00001 | 17.4 | < 0.000003 | 0.000053 | < 0.0005 | < 0.0005 | 0.002 | 15.1 | 0.002 | 2.69 | 0.00693 | 0.00013 |
| 362-DUP: ML08-241-01 | < 0.00002 | < 0.00001 | 3.40 | < 0.000003 | 0.000148 | 0.0009 | < 0.0005 | 0.485 | 13.6 | 0.001 | 0.390 | 0.00311 | 0.00157 |
| 363-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.06 | < 0.000003 | 0.000005 | < 0.0005 | < 0.0005 | < 0.002 | 0.373 | < 0.001 | 0.003 | 0.00030 | 0.00002 |
| 364-DUP: M96-37-03 | < 0.00002 | < 0.00001 | 11.1 | < 0.000003 | 0.000032 | < 0.0005 | < 0.0005 | 0.008 | 8.72 | < 0.001 | 1.80 | 0.00109 | 0.00060 |
| 365-DUP: M99-336B-04 | < 0.00002 | < 0.00001 | 10.2 | < 0.000003 | 0.000013 | < 0.0005 | < 0.0005 | < 0.002 | 2.34 | 0.001 | 1.25 | 0.00512 | 0.00013 |
| 366-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.05 | < 0.000003 | < 0.000002 | < 0.0005 | < 0.0005 | < 0.002 | 0.939 | < 0.001 | 0.002 | 0.00061 | < 0.00001 |
| 367-DUP: ML08-225-01 | < 0.00002 | 0.00002 | 3.82 | 0.000003 | 0.000075 | < 0.0005 | < 0.0005 | 0.989 | 17.5 | 0.007 | 0.543 | 0.00372 | 0.00036 |
| 368-DUP: ML08-229-01 | < 0.00002 | < 0.00001 | 4.23 | < 0.000003 | 0.000006 | < 0.0005 | < 0.0005 | 0.033 | 20.4 | 0.011 | 0.846 | 0.00039 | 0.00011 |
| 369-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.05 | < 0.000003 | < 0.000002 | < 0.0005 | < 0.0005 | < 0.002 | 0.384 | < 0.001 | 0.003 | 0.00030 | < 0.00001 |
| 370-DUP: ML95-107-03 | < 0.00002 | < 0.00001 | 3.32 | 0.000053 | 0.000224 | 0.0015 | < 0.0005 | 0.430 | 14.3 | 0.001 | 0.608 | 0.00323 | 0.00112 |
| 371-DUP: ML97-186-02 | < 0.00002 | < 0.00001 | 3.76 | 0.000036 | 0.000209 | < 0.0005 | < 0.0005 | 0.486 | 10.8 | 0.013 | 0.368 | 0.00511 | 0.00026 |
| 372-BLK: $D.I. Leachate Blank | < 0.00002 | < 0.00001 | 0.04 | < 0.000003 | 0.000003 | < 0.0005 | < 0.0005 | < 0.002 | 0.472 | < 0.001 | 0.002 | 0.00022 | 0.00002 |



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Tuesday, September 13, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10517-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 30-Aug-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 | 12-Sep-11 |
| 4: Analysis Approval Time | 15:31 | 12:50 | 12:50 | 12:51 | 12:51 | 12:51 | 12:51 | 12:52 | 12:52 | 12:52 | 12:53 | 12:53 | 12:53 | 12:54 |
| 5: M10-968-01 | 8.95 | 0.0007 | 0.00011 | 0.0039 | < 0.001 | < 0.00001 | 0.0192 | 0.0011 | 0.00003 | 0.000049 | 0.00476 | 0.00126 | 0.000028 | < 0.001 |
| 6: M10-968-02 | 7.04 | 0.0005 | 0.00013 | 0.0030 | < 0.001 | < 0.00001 | 0.0251 | 0.0009 | < 0.00002 | 0.000051 | 0.00354 | 0.00084 | 0.000036 | 0.001 |
| 7: M10-968-03 | 5.69 | 0.0005 | 0.00010 | 0.0035 | < 0.001 | < 0.00001 | 0.0221 | 0.0012 | < 0.00002 | 0.000094 | 0.00257 | 0.00089 | 0.000034 | 0.002 |
| 8: M10-970-01 | 1.92 | 0.0006 | 0.00004 | 0.0007 | < 0.001 | < 0.00001 | 0.202 | < 0.0001 | < 0.00002 | 0.000006 | 0.00009 | 0.00047 | 0.000003 | < 0.001 |
| 9: M10-972A-01 | 7.69 | 0.0009 | 0.00007 | 0.0031 | < 0.001 | < 0.00001 | 0.0276 | 0.0009 | < 0.00002 | 0.000132 | 0.00335 | 0.00047 | 0.000014 | < 0.001 |
| 10: M10-972A-02 | 6.94 | 0.0004 | 0.00010 | 0.0030 | < 0.001 | < 0.00001 | 0.0243 | 0.0015 | < 0.00002 | 0.000163 | 0.00420 | 0.00030 | 0.000027 | < 0.001 |
| 11: M10-972A-03 | 1.53 | 0.0005 | 0.00004 | 0.0008 | < 0.001 | < 0.00001 | 0.118 | < 0.0001 | < 0.00002 | 0.000016 | 0.00010 | 0.00075 | 0.000002 | < 0.001 |
| 12: M10-972A-04 | 5.51 | 0.0003 | 0.00004 | 0.0010 | < 0.001 | < 0.00001 | 0.0257 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00066 | 0.00049 | 0.000001 | < 0.001 |
| 13: M10-976-01 | 8.26 | 0.0004 | 0.00034 | 0.0019 | < 0.001 | < 0.00001 | 0.0204 | 0.0005 | < 0.00002 | 0.000183 | 0.00477 | 0.00065 | 0.000026 | 0.002 |
| 14: M10-976-02 | 7.25 | 0.0012 | 0.00016 | 0.0040 | < 0.001 | < 0.00001 | 0.0169 | 0.0035 | < 0.00002 | 0.000077 | 0.00394 | 0.00047 | 0.000057 | < 0.001 |
| 15: M10-976-03 | 2.40 | 0.0006 | 0.00005 | 0.0009 | < 0.001 | < 0.00001 | 0.171 | < 0.0001 | < 0.00002 | 0.000004 | 0.00008 | 0.00063 | 0.000002 | < 0.001 |
| 16: M10-976-04 | 1.49 | 0.0006 | 0.00006 | 0.0009 | < 0.001 | < 0.00001 | 0.118 | < 0.0001 | < 0.00002 | 0.000002 | 0.00004 | 0.00052 | 0.000002 | < 0.001 |
| 17: M10-977-01 | 8.70 | 0.0023 | 0.00144 | 0.0032 | < 0.001 | 0.00205 | 0.0201 | 0.0009 | < 0.00002 | 0.000143 | 0.00541 | 0.00042 | 0.000024 | 0.013 |
| 18: M10-977-02 | 2.98 | 0.0008 | 0.00008 | 0.0012 | < 0.001 | < 0.00001 | 0.108 | < 0.0001 | < 0.00002 | 0.000010 | 0.00012 | 0.00157 | 0.000003 | 0.002 |
| 19: M10-986-01 | 3.08 | 0.0005 | 0.00003 | 0.0010 | < 0.001 | < 0.00001 | 0.150 | < 0.0001 | < 0.00002 | 0.000011 | 0.00008 | 0.00094 | 0.000002 | < 0.001 |
| 20: M10-986-02 | 10.1 | 0.0003 | 0.00003 | 0.0010 | < 0.001 | < 0.00001 | 0.0156 | < 0.0001 | < 0.00002 | 0.000003 | 0.00057 | 0.00047 | 0.000002 | < 0.001 |
| 21: M10-993-01 | 9.37 | 0.0010 | 0.00017 | 0.0031 | < 0.001 | < 0.00001 | 0.0220 | 0.0006 | < 0.00002 | 0.000110 | 0.00445 | 0.00040 | 0.000044 | < 0.001 |
| 22: M10-993-02 | 7.20 | 0.0009 | 0.00011 | 0.0024 | < 0.001 | < 0.00001 | 0.0221 | 0.0006 | < 0.00002 | 0.000102 | 0.00424 | 0.00035 | 0.000025 | 0.001 |
| 23: M10-993-03 | 5.29 | 0.0006 | 0.00006 | 0.0034 | < 0.001 | < 0.00001 | 0.0223 | 0.0010 | < 0.00002 | 0.000091 | 0.00306 | 0.00042 | 0.000021 | < 0.001 |
| 24: M10-993-04 | 7.46 | 0.0003 | 0.00005 | 0.0013 | < 0.001 | < 0.00001 | 0.0195 | < 0.0001 | < 0.00002 | 0.000001 | 0.00159 | 0.00142 | 0.000002 | < 0.001 |
| 25: M96-16-01 | 7.31 | 0.0003 | 0.00005 | 0.0041 | < 0.001 | < 0.00001 | 0.0097 | < 0.0001 | < 0.00002 | 0.000004 | 0.00506 | 0.00120 | 0.000002 | < 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26: M96-61-01 | 3.18 | 0.0004 | 0.00007 | 0.0023 | < 0.001 | < 0.00001 | 0.0548 | < 0.0001 | < 0.00002 | 0.000002 | 0.00074 | 0.00115 | 0.000002 | 0.002 |
| 27: M96-61-02 | 2.86 | 0.0002 | 0.00005 | 0.0029 | < 0.001 | < 0.00001 | 0.0243 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00298 | 0.00315 | 0.000001 | < 0.001 |
| 28: M96-61-03 | 1.27 | 0.0012 | 0.00004 | 0.0011 | < 0.001 | < 0.00001 | 0.0625 | < 0.0001 | < 0.00002 | 0.000019 | 0.00005 | 0.00026 | 0.000002 | < 0.001 |
| 29: M98-234-01 | 3.96 | 0.0006 | 0.00010 | 0.0020 | < 0.001 | < 0.00001 | 0.0192 | 0.0022 | < 0.00002 | 0.000041 | 0.00228 | 0.00061 | 0.000034 | < 0.001 |
| 30: M98-234-02 | 4.52 | 0.0006 | 0.00006 | 0.0044 | < 0.001 | < 0.00001 | 0.0251 | 0.0007 | < 0.00002 | 0.000076 | 0.00282 | 0.00041 | 0.000019 | 0.001 |
| 31: M98-238-01 | 4.22 | 0.0006 | 0.00007 | 0.0028 | < 0.001 | < 0.00001 | 0.0386 | 0.0002 | < 0.00002 | 0.000024 | 0.00193 | 0.00076 | 0.000005 | < 0.001 |
| 32: M98-238-02 | 5.40 | 0.0002 | 0.00004 | 0.0026 | < 0.001 | < 0.00001 | 0.0275 | 0.0006 | < 0.00002 | 0.000015 | 0.00963 | 0.00078 | 0.000003 | < 0.001 |
| 33: M98-284-01 | 4.16 | 0.0004 | 0.00004 | 0.0031 | < 0.001 | < 0.00001 | 0.0273 | 0.0001 | < 0.00002 | 0.000020 | 0.00180 | 0.00041 | 0.000004 | < 0.001 |
| 34: M98-284-02 | 0.52 | 0.0005 | 0.00008 | 0.0011 | < 0.001 | < 0.00001 | 0.131 | < 0.0001 | < 0.00002 | 0.000002 | 0.00006 | 0.00052 | 0.000002 | < 0.001 |
| 35: M98-286-01 | 3.74 | 0.0004 | 0.00006 | 0.0034 | < 0.001 | < 0.00001 | 0.0251 | 0.0004 | < 0.00002 | 0.000035 | 0.00289 | 0.00038 | 0.000008 | 0.002 |
| 36: M98-329-01 | 3.74 | 0.0038 | 0.00006 | 0.0030 | < 0.001 | < 0.00001 | 0.0469 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00154 | 0.00186 | 0.000001 | 0.002 |
| 37: M98-331-01 | 4.11 | 0.0003 | 0.00007 | 0.0026 | < 0.001 | < 0.00001 | 0.0233 | 0.0002 | < 0.00002 | 0.000080 | 0.00288 | 0.00032 | 0.000011 | < 0.001 |
| 38: M98-333-01 | 4.75 | 0.0007 | 0.00021 | 0.0065 | < 0.001 | < 0.00001 | 0.0389 | 0.0002 | < 0.00002 | 0.000051 | 0.00148 | 0.00084 | 0.000010 | < 0.001 |
| 39: M98-337-01 | 3.29 | 0.0002 | 0.00006 | 0.0039 | < 0.001 | < 0.00001 | 0.0299 | < 0.0001 | 0.00002 | 0.000003 | 0.00235 | 0.00094 | 0.000001 | < 0.001 |
| 40: M04-519-01 | 7.33 | 0.0004 | 0.00006 | 0.0011 | < 0.001 | < 0.00001 | 0.0210 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00050 | 0.00040 | 0.000002 | 0.004 |
| 41: M04-519-02 | 4.16 | 0.0004 | 0.00004 | 0.0019 | < 0.001 | < 0.00001 | 0.0135 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00065 | 0.00056 | 0.000001 | < 0.001 |
| 42: M04-519-03 | 3.18 | 0.0010 | 0.00011 | 0.0046 | < 0.001 | < 0.00001 | 0.0360 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00053 | 0.00131 | 0.000002 | 0.005 |
| 43: M04-519-04 | 3.91 | 0.0004 | 0.00005 | 0.0039 | < 0.001 | < 0.00001 | 0.0334 | < 0.0001 | < 0.00002 | 0.000002 | 0.00073 | 0.00191 | 0.000002 | < 0.001 |
| 44: M10-981-01 | 8.26 | 0.0002 | 0.00004 | 0.0018 | < 0.001 | < 0.00001 | 0.0379 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00150 | 0.00273 | 0.000003 | < 0.001 |
| 45: M10-981-02 | 6.75 | 0.0003 | 0.00005 | 0.0027 | < 0.001 | < 0.00001 | 0.0282 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00070 | 0.00128 | 0.000002 | < 0.001 |
| 46: M10-981-03 | 6.87 | 0.0001 | 0.00010 | 0.0035 | < 0.001 | < 0.00001 | 0.0343 | 0.0001 | 0.00003 | 0.000012 | 0.00069 | 0.00080 | 0.000003 | < 0.001 |
| 47: M10-981-04 | 23.7 | 0.0004 | 0.00008 | 0.0024 | < 0.001 | < 0.00001 | 0.0126 | 0.0006 | < 0.00002 | 0.000001 | 0.00535 | 0.00098 | 0.000003 | < 0.001 |
| 48: M10-985-01 | 8.81 | 0.0025 | 0.00086 | 0.0049 | < 0.001 | 0.00088 | 0.0453 | 0.0003 | < 0.00002 | 0.000081 | 0.00224 | 0.00037 | 0.000014 | 0.010 |
| 49: M10-985-02 | 5.38 | 0.0002 | 0.00006 | 0.0036 | < 0.001 | < 0.00001 | 0.0224 | 0.0002 | < 0.00002 | 0.000009 | 0.00166 | 0.00306 | 0.000010 | < 0.001 |
| 50: M10-987-01 | 3.63 | 0.0001 | 0.00007 | 0.0021 | < 0.001 | < 0.00001 | 0.0635 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00039 | 0.00171 | 0.000001 | < 0.001 |
| 51: M10-987-02 | 4.94 | 0.0001 | 0.00005 | 0.0015 | < 0.001 | < 0.00001 | 0.0431 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00039 | 0.00355 | 0.000001 | < 0.001 |
| 52: M10-987-03 | 5.60 | 0.0005 | 0.00005 | 0.0051 | < 0.001 | < 0.00001 | 0.0519 | < 0.0001 | 0.00003 | 0.000006 | 0.00124 | 0.00273 | 0.000001 | < 0.001 |
| 53: M10-987-04 | 5.72 | < 0.0001 | 0.00006 | 0.0026 | < 0.001 | < 0.00001 | 0.0262 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00144 | 0.00433 | 0.000001 | < 0.001 |
| 54: M10-988-01 | 7.16 | < 0.0001 | 0.00005 | 0.0018 | < 0.001 | < 0.00001 | 0.0308 | < 0.0001 | 0.00003 | < 0.000001 | 0.00135 | 0.00168 | 0.000001 | < 0.001 |
| 55: M10-988-02 | 5.95 | < 0.0001 | 0.00007 | 0.0030 | < 0.001 | < 0.00001 | 0.0348 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00140 | 0.00281 | 0.000002 | < 0.001 |
| 56: M10-988-03 | 6.12 | < 0.0001 | 0.00006 | 0.0048 | < 0.001 | < 0.00001 | 0.0130 | 0.0001 | < 0.00002 | < 0.000001 | 0.00692 | 0.00278 | < 0.000001 | < 0.001 |
| 57: M10-992-01 | 7.62 | < 0.0001 | 0.00006 | 0.0025 | < 0.001 | 0.00002 | 0.0161 | 0.0002 | < 0.00002 | < 0.000001 | 0.00343 | 0.00235 | < 0.000001 | < 0.001 |
| 58: M10-992-02 | 9.63 | < 0.0001 | 0.00008 | 0.0014 | < 0.001 | < 0.00001 | 0.0155 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00149 | 0.00352 | < 0.000001 | < 0.001 |
| 59: M10-992-03 | 6.24 | 0.0003 | 0.00008 | 0.0008 | < 0.001 | < 0.00001 | 0.0149 | < 0.0001 | < 0.00002 | 0.000001 | 0.00045 | 0.00158 | 0.000002 | < 0.001 |
| 60: M10-992-04 | 5.34 | < 0.0001 | 0.00006 | 0.0012 | < 0.001 | < 0.00001 | 0.0428 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00107 | 0.00120 | 0.000002 | < 0.001 |
| 61: M10-992-05 | 6.01 | < 0.0001 | 0.00008 | 0.0026 | < 0.001 | < 0.00001 | 0.0372 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00065 | 0.00131 | 0.000004 | < 0.001 |
| 62: M10-994-01 | 6.92 | < 0.0001 | 0.00007 | 0.0015 | < 0.001 | < 0.00001 | 0.0432 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00112 | 0.00459 | < 0.000001 | < 0.001 |
| 63: M10-994-02 | 11.4 | 0.0001 | 0.00004 | 0.0028 | < 0.001 | 0.00001 | 0.0339 | 0.0002 | < 0.00002 | 0.000001 | 0.00139 | 0.00193 | 0.000002 | < 0.001 |
| 64: M10-994-03 | 5.55 | 0.0010 | 0.00007 | 0.0025 | < 0.001 | < 0.00001 | 0.0207 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00059 | 0.00277 | 0.000001 | < 0.001 |
| 65: M10-994-04 | 8.28 | 0.0003 | 0.00009 | 0.0044 | < 0.001 | < 0.00001 | 0.0087 | 0.0003 | < 0.00002 | 0.000003 | 0.0113 | 0.00282 | 0.000005 | < 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 66: M10-994-05 | 10.2 | 0.0001 | 0.00006 | 0.0014 | < 0.001 | < 0.00001 | 0.0265 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00072 | 0.00123 | 0.000001 | < 0.001 |
| 67: M10-998-01 | 7.35 | < 0.0001 | 0.00004 | 0.0043 | < 0.001 | < 0.00001 | 0.0164 | 0.0002 | < 0.00002 | < 0.000001 | 0.00463 | 0.00196 | 0.000001 | < 0.001 |
| 68: M10-998-02 | 7.78 | < 0.0001 | 0.00004 | 0.0030 | < 0.001 | < 0.00001 | 0.0278 | 0.0002 | < 0.00002 | < 0.000001 | 0.00480 | 0.00166 | 0.000002 | < 0.001 |
| 69: M10-998-03 | 7.45 | 0.0002 | 0.00007 | 0.0032 | < 0.001 | < 0.00001 | 0.0160 | < 0.0001 | < 0.00002 | 0.000005 | 0.00137 | 0.00125 | 0.000004 | < 0.001 |
| 70: M10-998-04 | 5.24 | 0.0001 | 0.00008 | 0.0023 | < 0.001 | < 0.00001 | 0.0236 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00054 | 0.00118 | 0.000002 | < 0.001 |
| 71: M10-998-05 | 3.96 | 0.0032 | 0.00008 | 0.0023 | < 0.001 | < 0.00001 | 0.0693 | < 0.0001 | 0.00005 | < 0.000001 | 0.00108 | 0.00438 | 0.000001 | 0.001 |
| 72: M11-1042-01 | 14.6 | 0.0001 | 0.00005 | 0.0016 | < 0.001 | < 0.00001 | 0.0249 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00054 | 0.00143 | 0.000001 | < 0.001 |
| 73: M11-1042-02 | 12.0 | 0.0031 | 0.00006 | 0.0051 | < 0.001 | < 0.00001 | 0.0813 | 0.0001 | < 0.00002 | 0.000006 | 0.00171 | 0.00165 | 0.000002 | < 0.001 |
| 74: M11-1042-03 | 13.2 | 0.0005 | 0.00013 | 0.0022 | < 0.001 | 0.00002 | 0.0414 | < 0.0001 | < 0.00002 | 0.000002 | 0.00176 | 0.00172 | 0.000001 | < 0.001 |
| 75: M11-1051-01 | 12.4 | 0.0011 | 0.00011 | 0.0027 | < 0.001 | 0.00004 | 0.0197 | 0.0001 | < 0.00002 | < 0.000001 | 0.00133 | 0.00206 | 0.000002 | 0.001 |
| 76: M11-1051-02 | 9.23 | 0.0018 | 0.00006 | 0.0037 | < 0.001 | < 0.00001 | 0.0503 | 0.0001 | 0.00002 | < 0.000001 | 0.00182 | 0.00297 | 0.000001 | 0.001 |
| 77: M11-1099-01 | 6.65 | 0.0002 | 0.00013 | 0.0015 | < 0.001 | 0.00002 | 0.0387 | 0.0004 | < 0.00002 | 0.000034 | 0.00024 | 0.00223 | 0.000001 | 0.002 |
| 78: M11-1099-02 | 11.1 | < 0.0001 | 0.00008 | 0.0028 | < 0.001 | < 0.00001 | 0.0182 | 0.0002 | < 0.00002 | 0.000135 | 0.00366 | 0.00458 | 0.000001 | < 0.001 |
| 79: M11-1099-03 | 22.9 | < 0.0001 | 0.00007 | 0.0031 | < 0.001 | < 0.00001 | 0.0183 | 0.0001 | < 0.00002 | 0.000002 | 0.00243 | 0.00208 | 0.000006 | < 0.001 |
| 80: M95-11-01 | 3.56 | < 0.0001 | 0.00009 | 0.0037 | < 0.001 | 0.00002 | 0.0457 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00069 | 0.00229 | 0.000002 | < 0.001 |
| 81: M95-12-01 | 3.89 | < 0.0001 | 0.00005 | 0.0049 | < 0.001 | < 0.00001 | 0.0244 | < 0.0001 | < 0.00002 | 0.000002 | 0.00201 | 0.00355 | 0.000004 | < 0.001 |
| 82: M95-22-01 | 3.74 | 0.0002 | 0.00011 | 0.0031 | < 0.001 | < 0.00001 | 0.0372 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00053 | 0.00142 | 0.000001 | < 0.001 |
| 83: M95-22-02 | 3.54 | < 0.0001 | 0.00013 | 0.0020 | < 0.001 | 0.00005 | 0.0279 | < 0.0001 | < 0.00002 | 0.000011 | 0.00170 | 0.00159 | 0.000002 | 0.004 |
| 84: M96-50-01 | 8.25 | < 0.0001 | 0.00008 | 0.0043 | < 0.001 | < 0.00001 | 0.0104 | 0.0002 | < 0.00002 | 0.000002 | 0.0118 | 0.00269 | 0.000001 | < 0.001 |
| 85: M96-51-01 | 3.97 | 0.0001 | < 0.00002 | 0.0020 | < 0.001 | < 0.00001 | 0.0227 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00071 | 0.00129 | < 0.000001 | 0.001 |
| 86: M96-51-02 | 5.98 | 0.0002 | 0.00010 | 0.0067 | < 0.001 | 0.00002 | 0.0295 | < 0.0001 | < 0.00002 | 0.000002 | 0.00086 | 0.00165 | 0.000003 | 0.002 |
| 87: M96-51-03 | 4.02 | 0.0003 | 0.00008 | 0.0047 | < 0.001 | 0.00001 | 0.0256 | 0.0001 | < 0.00002 | < 0.000001 | 0.00080 | 0.00134 | 0.000001 | < 0.001 |
| 88: M97-111-01 | 5.13 | < 0.0001 | 0.00008 | 0.0024 | < 0.001 | < 0.00001 | 0.0239 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00079 | 0.00213 | 0.000001 | < 0.001 |
| 89: M97-111-02 | 3.63 | < 0.0001 | 0.00006 | 0.0010 | < 0.001 | < 0.00001 | 0.0296 | < 0.0001 | < 0.00002 | 0.000023 | 0.00038 | 0.00045 | 0.000001 | < 0.001 |
| 90: M97-111-03 | 2.78 | < 0.0001 | 0.00005 | 0.0027 | < 0.001 | < 0.00001 | 0.0540 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00062 | 0.00103 | 0.000001 | < 0.001 |
| 91: M97-111-04 | 2.72 | < 0.0001 | 0.00007 | 0.0020 | < 0.001 | 0.00002 | 0.0258 | < 0.0001 | < 0.00002 | 0.000007 | 0.00135 | 0.00165 | 0.000001 | < 0.001 |
| 92: M97-176-01 | 2.74 | < 0.0001 | 0.00007 | 0.0025 | < 0.001 | < 0.00001 | 0.0536 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00053 | 0.00133 | 0.000001 | < 0.001 |
| 93: M97-176-02 | 4.76 | < 0.0001 | 0.00009 | 0.0039 | < 0.001 | < 0.00001 | 0.0158 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00261 | 0.00305 | 0.000003 | 0.001 |
| 94: M97-176-03 | 3.13 | < 0.0001 | 0.00007 | 0.0036 | < 0.001 | < 0.00001 | 0.0262 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00136 | 0.00297 | 0.000002 | < 0.001 |
| 95: M98-222-01 | 3.68 | 0.0004 | 0.00008 | 0.0042 | < 0.001 | 0.00002 | 0.0267 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00074 | 0.00159 | 0.000001 | < 0.001 |
| 96: M98-222-02 | 5.32 | < 0.0001 | 0.00006 | 0.0027 | < 0.001 | 0.00002 | 0.0184 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00161 | 0.00099 | 0.000001 | 0.001 |
| 97: M98-222-03 | 8.14 | < 0.0001 | 0.00005 | 0.0037 | < 0.001 | < 0.00001 | 0.0271 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00135 | 0.00117 | 0.000002 | < 0.001 |
| 98: M98-223-01 | 12.5 | 0.0002 | 0.00009 | 0.0033 | < 0.001 | 0.00002 | 0.0151 | < 0.0001 | < 0.00002 | 0.000003 | 0.00598 | 0.00179 | 0.000002 | < 0.001 |
| 99: M98-223-02 | 4.51 | 0.0002 | 0.00008 | 0.0054 | < 0.001 | < 0.00001 | 0.0413 | < 0.0001 | < 0.00002 | 0.000008 | 0.00057 | 0.00199 | 0.000002 | < 0.001 |
| 100: M98-223-03 | 4.20 | 0.0002 | 0.00008 | 0.0043 | < 0.001 | < 0.00001 | 0.0397 | < 0.0001 | < 0.00002 | 0.000007 | 0.00023 | 0.00098 | 0.000002 | < 0.001 |
| 101: W94-48-01 | 4.88 | < 0.0001 | 0.00005 | 0.0045 | < 0.001 | < 0.00001 | 0.0176 | 0.0004 | < 0.00002 | 0.000001 | 0.00773 | 0.00258 | 0.000002 | < 0.001 |
| 102: M96-58-01 | 5.91 | < 0.0001 | 0.00005 | 0.0036 | < 0.001 | < 0.00001 | 0.0145 | 0.0002 | < 0.00002 | < 0.000001 | 0.00220 | 0.00090 | 0.000001 | < 0.001 |
| 103: M96-58-02 | 6.64 | 0.0001 | 0.00007 | 0.0028 | < 0.001 | < 0.00001 | 0.0144 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00213 | 0.00109 | 0.000001 | < 0.001 |
| 104: M96-58-03 | 3.48 | < 0.0001 | 0.00024 | 0.0034 | < 0.001 | 0.00001 | 0.0178 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00181 | 0.00076 | 0.000002 | < 0.001 |
| 105: M97-120-01 | 15.6 | 0.0001 | 0.00007 | 0.0035 | < 0.001 | < 0.00001 | 0.0162 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00094 | 0.00169 | 0.000001 | < 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 106: M97-120-02 | 7.73 | 0.0002 | 0.00002 | 0.0035 | < 0.001 | < 0.00001 | 0.0171 | < 0.0001 | < 0.00002 | 0.000002 | 0.00331 | 0.00172 | 0.000002 | < 0.001 |
| 107: M97-122-01 | 10.1 | < 0.0001 | 0.00006 | 0.0040 | < 0.001 | < 0.00001 | 0.0064 | 0.0004 | < 0.00002 | 0.000008 | 0.0188 | 0.00042 | 0.000001 | < 0.001 |
| 108: M97-122-02 | 5.18 | < 0.0001 | 0.00007 | 0.0038 | < 0.001 | < 0.00001 | 0.0095 | < 0.0001 | < 0.00002 | 0.000014 | 0.00472 | 0.00051 | 0.000002 | < 0.001 |
| 109: M97-122-03 | 4.73 | 0.0004 | 0.00007 | 0.0060 | < 0.001 | < 0.00001 | 0.0229 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00047 | 0.00529 | 0.000002 | < 0.001 |
| 110: M97-122-04 | 0.54 | < 0.0001 | 0.00010 | 0.0027 | < 0.001 | < 0.00001 | 0.0190 | < 0.0001 | < 0.00002 | 0.000001 | 0.00013 | 0.00154 | 0.000002 | < 0.001 |
| 111: M97-122-05 | 5.45 | < 0.0001 | 0.00005 | 0.0032 | < 0.001 | < 0.00001 | 0.0197 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00124 | 0.00220 | 0.000002 | < 0.001 |
| 112: M97-123-01 | 7.32 | < 0.0001 | 0.00007 | 0.0027 | < 0.001 | < 0.00001 | 0.0128 | < 0.0001 | < 0.00002 | 0.000023 | 0.00318 | 0.00046 | 0.000002 | < 0.001 |
| 113: M97-123-02 | 8.94 | < 0.0001 | 0.00015 | 0.0017 | < 0.001 | < 0.00001 | 0.0104 | < 0.0001 | < 0.00002 | 0.000010 | 0.00458 | 0.00047 | 0.000001 | < 0.001 |
| 114: M97-123-03 | 4.63 | < 0.0001 | 0.00008 | 0.0020 | < 0.001 | < 0.00001 | 0.0225 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00084 | 0.00057 | 0.000001 | < 0.001 |
| 115: M97-123-04 | 4.10 | < 0.0001 | 0.00005 | 0.0036 | < 0.001 | < 0.00001 | 0.0302 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00066 | 0.00180 | 0.000002 | 0.001 |
| 116: M97-124-01 | 6.68 | < 0.0001 | 0.00026 | 0.0038 | < 0.001 | 0.00018 | 0.0173 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00118 | 0.00087 | 0.000003 | 0.001 |
| 117: M97-124-02 | 3.07 | < 0.0001 | 0.00007 | 0.0026 | < 0.001 | < 0.00001 | 0.0111 | < 0.0001 | < 0.00002 | 0.000015 | 0.00114 | 0.00094 | 0.000003 | < 0.001 |
| 118: M97-124-03 | 0.68 | 0.0002 | 0.00007 | 0.0013 | < 0.001 | < 0.00001 | 0.0284 | 0.0001 | < 0.00002 | 0.000007 | < 0.00003 | 0.00022 | 0.000003 | < 0.001 |
| 119: M97-124-04 | 3.36 | < 0.0001 | 0.00007 | 0.0018 | < 0.001 | 0.00001 | 0.0169 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00087 | 0.00095 | 0.000002 | < 0.001 |
| 120: M97-153-01 | 7.29 | 0.0004 | 0.00010 | 0.0029 | < 0.001 | < 0.00001 | 0.0248 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00132 | 0.00153 | 0.000002 | 0.001 |
| 121: M97-153-02 | 4.96 | 0.0002 | 0.00005 | 0.0034 | < 0.001 | < 0.00001 | 0.0187 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00127 | 0.00191 | 0.000001 | < 0.001 |
| 122: M97-154-01 | 7.05 | 0.0001 | 0.00010 | 0.0029 | < 0.001 | < 0.00001 | 0.0267 | < 0.0001 | < 0.00002 | 0.000003 | 0.00093 | 0.00194 | 0.000002 | < 0.001 |
| 123: M98-181-01 | 3.47 | < 0.0001 | 0.00007 | 0.0019 | < 0.001 | < 0.00001 | 0.0199 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00197 | 0.00215 | 0.000001 | 0.001 |
| 124: M98-181-02 | 4.59 | < 0.0001 | 0.00008 | 0.0021 | < 0.001 | < 0.00001 | 0.0181 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00065 | 0.00051 | 0.000002 | < 0.001 |
| 125: M98-184-01 | 12.7 | < 0.0001 | 0.00010 | 0.0014 | < 0.001 | < 0.00001 | 0.0075 | 0.0003 | < 0.00002 | 0.000007 | 0.00645 | 0.00063 | 0.000001 | < 0.001 |
| 126: M98-184-02 | 5.78 | 0.0006 | 0.00007 | 0.0024 | < 0.001 | 0.00002 | 0.0203 | < 0.0001 | 0.00003 | 0.000005 | 0.00111 | 0.00119 | 0.000001 | < 0.001 |
| 127: M98-185-01 | 14.2 | 0.0003 | 0.00011 | 0.0022 | < 0.001 | 0.00002 | 0.0157 | 0.0001 | 0.00003 | 0.000012 | 0.00148 | 0.00267 | 0.000002 | < 0.001 |
| 128: M98-185-02 | 6.86 | 0.0002 | 0.00010 | 0.0024 | < 0.001 | 0.00002 | 0.0099 | 0.0002 | < 0.00002 | 0.000016 | 0.00358 | 0.00075 | 0.000001 | < 0.001 |
| 129: M98-185-03 | 8.62 | 0.0002 | 0.00008 | 0.0032 | < 0.001 | 0.00002 | 0.0116 | 0.0003 | < 0.00002 | 0.000005 | 0.00628 | 0.00059 | 0.000001 | < 0.001 |
| 130: W94-49-01 | 5.26 | 0.0003 | 0.00007 | 0.0042 | < 0.001 | 0.00002 | 0.0147 | < 0.0001 | < 0.00002 | 0.000001 | 0.00336 | 0.00297 | 0.000002 | < 0.001 |
| 131: W94-49-02 | 0.31 | 0.0041 | 0.00009 | 0.0003 | < 0.001 | 0.00002 | 0.0284 | 0.0002 | < 0.00002 | 0.000007 | < 0.00003 | 0.00009 | 0.000004 | 0.002 |
| 132: W94-49-03 | 2.71 | 0.0003 | 0.00010 | 0.0032 | < 0.001 | 0.00002 | 0.0317 | < 0.0001 | < 0.00002 | 0.000004 | 0.00071 | 0.00130 | 0.000001 | < 0.001 |
| 133: W94-53-01 | 3.91 | 0.0004 | 0.00013 | 0.0061 | < 0.001 | 0.00003 | 0.0248 | 0.0003 | < 0.00002 | 0.000069 | 0.00226 | 0.00052 | 0.000011 | < 0.001 |
| 134: W94-55-01 | 0.44 | 0.0009 | 0.00010 | 0.0014 | < 0.001 | 0.00001 | 0.0193 | 0.0001 | < 0.00002 | 0.000004 | < 0.00003 | 0.00022 | 0.000001 | < 0.001 |
| 135: W94-55-02 | 2.42 | 0.0003 | 0.00009 | 0.0030 | < 0.001 | 0.00002 | 0.0176 | 0.0001 | < 0.00002 | 0.000002 | 0.00084 | 0.00096 | 0.000001 | < 0.001 |
| 136: W94-57-01 | 2.36 | 0.0012 | 0.00013 | 0.0066 | < 0.001 | 0.00002 | 0.0267 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00036 | 0.00115 | 0.000001 | 0.001 |
| 137: W94-57-02 | 0.51 | 0.0010 | 0.00009 | 0.0007 | < 0.001 | 0.00001 | 0.0290 | 0.0001 | < 0.00002 | 0.000015 | < 0.00003 | 0.00020 | 0.000002 | < 0.001 |
| 138: W94-57-03 | 0.37 | 0.0016 | 0.00007 | 0.0010 | < 0.001 | 0.00002 | 0.0358 | 0.0001 | < 0.00002 | 0.000077 | < 0.00003 | 0.00006 | 0.000003 | < 0.001 |
| 139: W94-59-01 | 10.3 | 0.0002 | 0.00006 | 0.0050 | < 0.001 | 0.00001 | 0.0071 | 0.0005 | < 0.00002 | 0.000001 | 0.00743 | 0.00073 | 0.000003 | < 0.001 |
| 140: W94-61-01 | 0.22 | 0.0028 | 0.00007 | 0.0003 | < 0.001 | 0.00001 | 0.0306 | 0.0002 | < 0.00002 | 0.000037 | < 0.00003 | < 0.00003 | 0.000002 | < 0.001 |
| 141: W94-61-02 | 7.34 | 0.0002 | 0.00030 | 0.0053 | < 0.001 | 0.00003 | 0.0083 | 0.0003 | < 0.00002 | 0.000003 | 0.00434 | 0.00076 | 0.000001 | 0.001 |
| 142: W94-65-01 | 0.44 | 0.0025 | 0.00008 | 0.0013 | < 0.001 | 0.00001 | 0.0385 | 0.0002 | < 0.00002 | 0.000076 | < 0.00003 | < 0.00003 | 0.000002 | 0.001 |
| 143: W94-65-02 | 0.55 | 0.0021 | 0.00006 | 0.0020 | < 0.001 | 0.00001 | 0.0693 | 0.0002 | < 0.00002 | 0.000079 | < 0.00003 | 0.00008 | 0.000003 | < 0.001 |
| 144: W94-65-03 | 6.79 | 0.0020 | 0.00076 | 0.0027 | < 0.001 | 0.00001 | 0.0120 | 0.0004 | < 0.00002 | 0.000008 | 0.00462 | 0.00054 | 0.000001 | 0.006 |
| 145: W94-70-01 | 5.84 | 0.0002 | 0.00009 | 0.0038 | < 0.001 | 0.00001 | 0.0134 | < 0.0001 | < 0.00002 | 0.000001 | 0.00355 | 0.00084 | < 0.000001 | < 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 146: W94-70-02 | 4.02 | 0.0002 | 0.00005 | 0.0035 | < 0.001 | 0.00001 | 0.0187 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00128 | 0.00090 | 0.000001 | < 0.001 |
| 147: W94-73-01 | 5.17 | 0.0002 | 0.00007 | 0.0035 | < 0.001 | 0.00001 | 0.0165 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00496 | 0.00049 | < 0.000001 | 0.001 |
| 148: W94-73-02 | 0.33 | 0.0014 | 0.00005 | 0.0004 | < 0.001 | 0.00001 | 0.0266 | 0.0001 | < 0.00002 | 0.000039 | < 0.00003 | 0.00005 | 0.000002 | < 0.001 |
| 149: W94-73-03 | 3.50 | 0.0003 | 0.00006 | 0.0022 | < 0.001 | 0.00002 | 0.0123 | < 0.0001 | < 0.00002 | 0.000002 | 0.00084 | 0.00095 | 0.000001 | < 0.001 |
| 150: M00-473-01 | 8.21 | 0.0011 | 0.00009 | 0.0031 | < 0.001 | 0.00002 | 0.0394 | 0.0001 | < 0.00002 | 0.000019 | 0.00091 | 0.00052 | 0.000002 | < 0.001 |
| 151: M00-483-01 | 6.19 | 0.0013 | 0.00007 | 0.0013 | < 0.001 | < 0.00001 | 0.0374 | 0.0001 | < 0.00002 | 0.000019 | 0.00053 | 0.00106 | 0.000001 | < 0.001 |
| 152: M00-490-01 | 6.31 | 0.0017 | 0.00010 | 0.0070 | < 0.001 | < 0.00001 | 0.0452 | 0.0002 | < 0.00002 | 0.000042 | 0.00141 | 0.00075 | 0.000001 | < 0.001 |
| 153: M03-508-01 | 5.63 | 0.0003 | 0.00002 | 0.0049 | < 0.001 | < 0.00001 | 0.0285 | < 0.0001 | < 0.00002 | 0.000147 | 0.00409 | 0.00023 | 0.000004 | < 0.001 |
| 154: M03-508-02 | 0.73 | 0.0006 | 0.00012 | 0.0011 | < 0.001 | 0.00001 | 0.150 | < 0.0001 | < 0.00002 | 0.000006 | < 0.00003 | 0.00027 | 0.000001 | 0.001 |
| 155: M05-561-01 | 6.15 | 0.0009 | 0.00006 | 0.0025 | < 0.001 | < 0.00001 | 0.0342 | < 0.0001 | < 0.00002 | 0.000002 | 0.00058 | 0.0109 | 0.000001 | < 0.001 |
| 156: M05-561-02 | 5.10 | 0.0002 | 0.00008 | 0.0045 | < 0.001 | < 0.00001 | 0.0234 | 0.0004 | < 0.00002 | 0.000016 | 0.00336 | 0.00493 | < 0.000001 | 0.001 |
| 157: M06-577-01 | 5.08 | 0.0005 | 0.00010 | 0.0037 | < 0.001 | < 0.00001 | 0.0287 | 0.0004 | < 0.00002 | 0.000141 | 0.00262 | 0.00059 | 0.000010 | 0.001 |
| 158: M06-577-02 | 6.12 | 0.0004 | 0.00007 | 0.0057 | < 0.001 | < 0.00001 | 0.0360 | 0.0002 | < 0.00002 | 0.000072 | 0.00207 | 0.00049 | 0.000010 | < 0.001 |
| 159: M06-577-03 | 4.82 | 0.0006 | 0.00008 | 0.0045 | < 0.001 | < 0.00001 | 0.0289 | 0.0005 | < 0.00002 | 0.000056 | 0.00159 | 0.00052 | 0.000005 | < 0.001 |
| 160: M06-591-01 | 5.69 | 0.0007 | 0.00007 | 0.0046 | < 0.001 | < 0.00001 | 0.0321 | 0.0006 | < 0.00002 | 0.000081 | 0.00162 | 0.00074 | 0.000010 | < 0.001 |
| 161: M06-591-02 | 5.54 | 0.0005 | 0.00006 | 0.0010 | < 0.001 | < 0.00001 | 0.0572 | < 0.0001 | < 0.00002 | 0.000064 | 0.00009 | 0.00059 | 0.000002 | 0.001 |
| 162: M06-591-03 | 5.34 | 0.0003 | 0.00005 | 0.0013 | < 0.001 | < 0.00001 | 0.0336 | < 0.0001 | < 0.00002 | 0.000002 | 0.00062 | 0.00043 | 0.000001 | < 0.001 |
| 163: M06-592-01 | 4.97 | 0.0004 | 0.00009 | 0.0052 | < 0.001 | < 0.00001 | 0.0252 | 0.0003 | < 0.00002 | 0.000072 | 0.00285 | 0.00034 | 0.000017 | < 0.001 |
| 164: M06-592-02 | 6.53 | 0.0002 | 0.00009 | 0.0046 | < 0.001 | < 0.00001 | 0.0284 | 0.0005 | < 0.00002 | 0.000005 | 0.0149 | 0.00137 | 0.000003 | 0.001 |
| 165: M06-592-03 | 7.44 | 0.0003 | 0.00009 | 0.0030 | < 0.001 | 0.00003 | 0.0128 | 0.0071 | < 0.00002 | 0.000025 | 0.0222 | 0.00166 | 0.000012 | 0.002 |
| 166: M06-593-01 | 6.77 | 0.0002 | 0.00010 | 0.0030 | < 0.001 | 0.00001 | 0.0397 | 0.0003 | 0.00003 | 0.000344 | 0.00404 | 0.00026 | 0.000007 | < 0.001 |
| 167: M06-593-02 | 5.86 | 0.0002 | 0.00009 | 0.0027 | < 0.001 | < 0.00001 | 0.0128 | 0.0028 | < 0.00002 | 0.000032 | 0.0175 | 0.00162 | 0.000008 | < 0.001 |
| 168: M06-608-01 | 5.34 | 0.0003 | 0.00017 | 0.0035 | < 0.001 | < 0.00001 | 0.0291 | 0.0002 | < 0.00002 | 0.000092 | 0.00345 | 0.00039 | 0.000009 | < 0.001 |
| 169: M06-608-02 | 5.19 | 0.0002 | 0.00009 | 0.0039 | < 0.001 | < 0.00001 | 0.0248 | 0.0004 | < 0.00002 | 0.000085 | 0.00306 | 0.00037 | 0.000021 | < 0.001 |
| 170: M06-611-01 | 6.09 | 0.0003 | 0.00009 | 0.0029 | < 0.001 | < 0.00001 | 0.0303 | 0.0006 | < 0.00002 | 0.000181 | 0.00361 | 0.00050 | 0.000031 | < 0.001 |
| 171: M06-611-02 | 5.15 | 0.0002 | 0.00006 | 0.0043 | < 0.001 | < 0.00001 | 0.0299 | 0.0002 | < 0.00002 | 0.000111 | 0.00325 | 0.00128 | 0.000011 | < 0.001 |
| 172: M06-623-01 | 5.39 | 0.0003 | 0.00009 | 0.0027 | < 0.001 | < 0.00001 | 0.0355 | 0.0004 | < 0.00002 | 0.000156 | 0.00227 | 0.00141 | 0.000009 | < 0.001 |
| 173: M06-623-02 | 4.08 | < 0.0001 | 0.00006 | 0.0006 | < 0.001 | < 0.00001 | 0.0945 | < 0.0001 | < 0.00002 | 0.000003 | 0.00057 | 0.00073 | 0.000001 | < 0.001 |
| 174: M06-625-01 | 6.13 | 0.0002 | 0.00009 | 0.0029 | < 0.001 | < 0.00001 | 0.0296 | 0.0002 | < 0.00002 | 0.000168 | 0.00295 | 0.00048 | 0.000013 | < 0.001 |
| 175: M06-625-02 | 5.66 | 0.0002 | 0.00009 | 0.0025 | < 0.001 | < 0.00001 | 0.0289 | 0.0005 | < 0.00002 | 0.000044 | 0.00253 | 0.00110 | 0.000014 | < 0.001 |
| 176: M06-629-01 | 7.31 | 0.0004 | 0.00021 | 0.0063 | < 0.001 | 0.00005 | 0.0420 | < 0.0001 | < 0.00002 | 0.000052 | 0.00172 | 0.00098 | 0.000002 | < 0.001 |
| 177: M06-631-01 | 5.33 | 0.0003 | 0.00006 | 0.0038 | < 0.001 | < 0.00001 | 0.0271 | 0.0003 | < 0.00002 | 0.000050 | 0.00134 | 0.00117 | 0.000009 | < 0.001 |
| 178: M07-674-01 | 6.00 | 0.0003 | 0.00007 | 0.0048 | < 0.001 | 0.00003 | 0.0356 | < 0.0001 | < 0.00002 | 0.000062 | 0.00230 | 0.00063 | 0.000007 | < 0.001 |
| 179: M07-689-01 | 5.80 | 0.0003 | 0.00014 | 0.0040 | < 0.001 | < 0.00001 | 0.0204 | 0.0009 | < 0.00002 | 0.000098 | 0.00442 | 0.00035 | 0.000025 | < 0.001 |
| 180: M07-689-02 | 5.88 | 0.0002 | 0.00011 | 0.0041 | < 0.001 | < 0.00001 | 0.0211 | 0.0006 | < 0.00002 | 0.000089 | 0.00577 | 0.00040 | 0.000015 | < 0.001 |
| 181: M07-689-03 | 6.17 | 0.0002 | 0.00003 | 0.0041 | < 0.001 | < 0.00001 | 0.0462 | 0.0002 | < 0.00002 | 0.000249 | 0.00095 | 0.00070 | 0.000011 | < 0.001 |
| 182: M08-761-01 | 7.45 | 0.0008 | 0.00007 | 0.0039 | < 0.001 | < 0.00001 | 0.0275 | 0.0001 | < 0.00002 | 0.000186 | 0.00336 | 0.00045 | 0.000014 | < 0.001 |
| 183: M08-761-02 | 6.26 | 0.0002 | 0.00008 | 0.0038 | < 0.001 | < 0.00001 | 0.0292 | 0.0004 | < 0.00002 | 0.000202 | 0.00401 | 0.00034 | 0.000011 | < 0.001 |
| 184: M08-763-01 | 5.30 | 0.0004 | 0.00013 | 0.0043 | < 0.001 | 0.00002 | 0.0411 | 0.0003 | < 0.00002 | 0.000155 | 0.00264 | 0.00102 | 0.000005 | < 0.001 |
| 185: M08-765-01 | 7.13 | 0.0008 | 0.00007 | 0.0032 | < 0.001 | < 0.00001 | 0.0314 | 0.0003 | < 0.00002 | 0.000241 | 0.00406 | 0.00050 | 0.000007 | < 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 186: M08-783-01 | 5.50 | 0.0002 | 0.00002 | 0.0034 | < 0.001 | < 0.00001 | 0.0318 | 0.0003 | 0.00003 | 0.000056 | 0.00268 | 0.00030 | 0.000007 | < 0.001 |
| 187: M08-783-02 | 6.87 | < 0.0001 | < 0.00002 | 0.0019 | < 0.001 | < 0.00001 | 0.0276 | < 0.0001 | < 0.00002 | 0.000004 | 0.00036 | 0.00093 | 0.000001 | < 0.001 |
| 188: M10-879-01 | 6.52 | 0.0002 | 0.00003 | 0.0027 | < 0.001 | < 0.00001 | 0.0297 | 0.0005 | < 0.00002 | 0.000277 | 0.00361 | 0.00037 | 0.000015 | < 0.001 |
| 189: M10-887-01 | 6.63 | 0.0003 | < 0.00002 | 0.0060 | < 0.001 | < 0.00001 | 0.0260 | 0.0009 | < 0.00002 | 0.000281 | 0.00289 | 0.00054 | 0.000028 | < 0.001 |
| 190: M10-892-01 | 12.5 | 0.0004 | 0.00012 | 0.0036 | < 0.001 | < 0.00001 | 0.0267 | 0.0004 | 0.00003 | 0.000117 | 0.00301 | 0.00041 | 0.000019 | < 0.001 |
| 191: M10-999-01 | 7.25 | 0.0003 | 0.00010 | 0.0030 | < 0.001 | < 0.00001 | 0.0225 | 0.0004 | < 0.00002 | 0.000037 | 0.00277 | 0.00128 | 0.000017 | < 0.001 |
| 192: M10-999-02 | 9.60 | 0.0002 | 0.00037 | 0.0034 | < 0.001 | < 0.00001 | 0.0293 | 0.0003 | < 0.00002 | 0.000090 | 0.00318 | 0.00046 | 0.000009 | < 0.001 |
| 193: M95-17-01 | 6.88 | 0.0002 | 0.00009 | 0.0012 | < 0.001 | < 0.00001 | 0.0737 | 0.0001 | < 0.00002 | 0.000052 | 0.00030 | 0.00104 | 0.000005 | < 0.001 |
| 194: M95-25-01 | 5.93 | < 0.0001 | 0.00010 | 0.0027 | < 0.001 | < 0.00001 | 0.0342 | 0.0002 | < 0.00002 | 0.000187 | 0.00309 | 0.00028 | 0.000019 | < 0.001 |
| 195: M95-25-02 | 6.65 | < 0.0001 | 0.00011 | 0.0013 | < 0.001 | < 0.00001 | 0.0334 | 0.0004 | < 0.00002 | 0.000253 | 0.00375 | 0.00021 | 0.000009 | < 0.001 |
| 196: M95-25-03 | 4.00 | 0.0005 | 0.00013 | 0.0033 | < 0.001 | < 0.00001 | 0.0453 | 0.0002 | < 0.00002 | 0.000047 | 0.00064 | 0.00110 | 0.000003 | < 0.001 |
| 197: M95-25-04 | 7.63 | < 0.0001 | 0.00013 | 0.0014 | < 0.001 | < 0.00001 | 0.0932 | < 0.0001 | < 0.00002 | 0.000001 | 0.00046 | 0.00028 | 0.000002 | < 0.001 |
| 198: M96-03-01 | 5.01 | 0.0002 | 0.00013 | 0.0038 | < 0.001 | < 0.00001 | 0.0271 | 0.0002 | < 0.00002 | 0.000045 | 0.00218 | 0.00069 | 0.000021 | < 0.001 |
| 199: M96-03-02 | 6.37 | < 0.0001 | 0.00021 | 0.0026 | < 0.001 | < 0.00001 | 0.135 | 0.0006 | < 0.00002 | 0.000434 | 0.00353 | 0.00027 | 0.000017 | < 0.001 |
| 200: M96-03-03 | 5.01 | < 0.0001 | 0.00008 | 0.0006 | < 0.001 | < 0.00001 | 0.0317 | < 0.0001 | < 0.00002 | 0.000004 | 0.00080 | 0.00028 | 0.000002 | < 0.001 |
| 201: M96-19-01 | 5.47 | 0.0005 | 0.00012 | 0.0027 | < 0.001 | 0.00008 | 0.0256 | 0.0003 | < 0.00002 | 0.000253 | 0.00346 | 0.00074 | 0.000019 | < 0.001 |
| 202: M96-19-02 | 5.52 | 0.0006 | 0.00022 | 0.0023 | < 0.001 | < 0.00001 | 0.0416 | 0.0008 | < 0.00002 | 0.000138 | 0.00281 | 0.00042 | 0.000014 | < 0.001 |
| 203: M96-37-01 | 4.46 | 0.0004 | 0.00009 | 0.0041 | < 0.001 | < 0.00001 | 0.0408 | 0.0003 | < 0.00002 | 0.000114 | 0.00384 | 0.00142 | 0.000004 | < 0.001 |
| 204: M96-37-02 | 5.25 | 0.0004 | 0.00010 | 0.0029 | < 0.001 | < 0.00001 | 0.0390 | 0.0003 | < 0.00002 | 0.000233 | 0.00288 | 0.00206 | 0.000008 | < 0.001 |
| 205: M96-37-03 | 5.41 | 0.0004 | 0.00010 | 0.0037 | < 0.001 | < 0.00001 | 0.0399 | 0.0003 | < 0.00002 | 0.000121 | 0.00253 | 0.00055 | 0.000008 | < 0.001 |
| 206: M96-40-01 | 4.37 | 0.0003 | 0.00011 | 0.0056 | < 0.001 | < 0.00001 | 0.0287 | 0.0003 | < 0.00002 | 0.000091 | 0.00385 | 0.00035 | 0.000028 | < 0.001 |
| 207: M96-40-02 | 4.73 | 0.0004 | 0.00004 | 0.0037 | < 0.001 | < 0.00001 | 0.0254 | 0.0004 | < 0.00002 | 0.000056 | 0.00326 | 0.00039 | 0.000007 | < 0.001 |
| 208: M96-4-01 | 5.96 | 0.0004 | 0.00007 | 0.0024 | < 0.001 | < 0.00001 | 0.0385 | 0.0003 | < 0.00002 | 0.000335 | 0.00291 | 0.00420 | 0.000011 | < 0.001 |
| 209: M96-44-01 | 6.41 | < 0.0001 | 0.00007 | 0.0028 | < 0.001 | < 0.00001 | 0.0132 | 0.0020 | < 0.00002 | 0.000011 | 0.0160 | 0.00157 | 0.000005 | < 0.001 |
| 210: M96-54-01 | 5.62 | 0.0004 | 0.00007 | 0.0029 | < 0.001 | < 0.00001 | 0.0321 | 0.0003 | < 0.00002 | 0.000167 | 0.00261 | 0.00041 | 0.000011 | < 0.001 |
| 211: M96-54-02 | 5.33 | 0.0003 | 0.00008 | 0.0034 | < 0.001 | < 0.00001 | 0.0278 | < 0.0001 | < 0.00002 | 0.000135 | 0.00304 | 0.00030 | 0.000015 | < 0.001 |
| 212: M96-65-01 | 5.44 | 0.0003 | 0.00010 | 0.0023 | < 0.001 | < 0.00001 | 0.0279 | 0.0002 | < 0.00002 | 0.000169 | 0.00319 | 0.00029 | 0.000008 | < 0.001 |
| 213: M96-7-01 | 4.76 | 0.0002 | 0.00009 | 0.0027 | < 0.001 | < 0.00001 | 0.0252 | 0.0001 | < 0.00002 | 0.000040 | 0.00195 | 0.00029 | 0.000010 | < 0.001 |
| 214: M96-7-02 | 5.90 | 0.0002 | 0.00013 | 0.0088 | < 0.001 | < 0.00001 | 0.0370 | 0.0002 | < 0.00002 | 0.000128 | 0.00294 | 0.00022 | 0.000009 | < 0.001 |
| 215: M96-74-01 | 0.66 | < 0.0001 | 0.00006 | 0.0010 | < 0.001 | < 0.00001 | 0.163 | < 0.0001 | < 0.00002 | 0.000001 | 0.00008 | 0.00062 | 0.000002 | < 0.001 |
| 216: M96-77-01 | 4.58 | 0.0004 | 0.00011 | 0.0043 | < 0.001 | < 0.00001 | 0.0326 | 0.0003 | < 0.00002 | 0.000072 | 0.00282 | 0.00054 | 0.000014 | < 0.001 |
| 217: M96-77-02 | 5.47 | 0.0002 | 0.00025 | 0.0061 | < 0.001 | < 0.00001 | 0.0358 | 0.0005 | < 0.00002 | 0.000084 | 0.00188 | 0.00061 | 0.000012 | < 0.001 |
| 218: M97-121-01 | 5.33 | 0.0004 | 0.00011 | 0.0038 | < 0.001 | 0.00002 | 0.0268 | 0.0008 | < 0.00002 | 0.000404 | 0.00427 | 0.00063 | 0.000019 | < 0.001 |
| 219: M97-135-01 | 5.19 | 0.0004 | 0.00007 | 0.0040 | < 0.001 | < 0.00001 | 0.0237 | 0.0001 | < 0.00002 | 0.000289 | 0.00394 | 0.00040 | 0.000009 | < 0.001 |
| 220: M97-135-02 | 7.55 | < 0.0001 | 0.00009 | 0.0039 | < 0.001 | 0.00008 | 0.0142 | 0.0021 | < 0.00002 | 0.000024 | 0.0201 | 0.00163 | 0.000007 | < 0.001 |
| 221: M97-135-03 | 5.75 | 0.0004 | 0.00008 | 0.0032 | < 0.001 | < 0.00001 | 0.0290 | 0.0004 | < 0.00002 | 0.000195 | 0.00423 | 0.00061 | 0.000011 | < 0.001 |
| 222: M97-149-01 | 10.2 | 0.0002 | 0.00009 | 0.0046 | < 0.001 | < 0.00001 | 0.0121 | 0.0015 | < 0.00002 | 0.000011 | 0.0178 | 0.00197 | 0.000003 | < 0.001 |
| 223: M97-149-02 | 5.60 | 0.0001 | 0.00009 | 0.0039 | < 0.001 | < 0.00001 | 0.0275 | 0.0002 | < 0.00002 | 0.000215 | 0.00466 | 0.00045 | 0.000008 | < 0.001 |
| 224: M97-94A-01 | 6.08 | 0.0003 | 0.00008 | 0.0035 | < 0.001 | < 0.00001 | 0.0303 | 0.0002 | < 0.00002 | 0.000135 | 0.00305 | 0.00054 | 0.000014 | < 0.001 |
| 225: M97-94A-02 | 4.74 | 0.0005 | 0.00016 | 0.0035 | < 0.001 | 0.00001 | 0.0267 | 0.0010 | < 0.00002 | 0.000151 | 0.00276 | 0.00084 | 0.000012 | < 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 226: M97-95-01 | 5.31 | 0.0001 | 0.00006 | 0.0039 | < 0.001 | < 0.00001 | 0.0271 | 0.0002 | < 0.00002 | 0.000117 | 0.00372 | 0.00027 | 0.000009 | < 0.001 |
| 227: M97-95-02 | 5.00 | 0.0002 | 0.00010 | 0.0046 | < 0.001 | 0.00006 | 0.0322 | 0.0006 | < 0.00002 | 0.000163 | 0.00272 | 0.00056 | 0.000019 | 0.005 |
| 228: M97-95-03 | 3.79 | < 0.0001 | 0.00005 | 0.0008 | < 0.001 | < 0.00001 | 0.0256 | < 0.0001 | < 0.00002 | 0.000005 | 0.00078 | 0.00231 | 0.000002 | < 0.001 |
| 229: M98-201-01 | 5.14 | 0.0003 | 0.00009 | 0.0067 | < 0.001 | < 0.00001 | 0.0239 | 0.0005 | < 0.00002 | 0.000148 | 0.00477 | 0.00040 | 0.000031 | < 0.001 |
| 230: M98-201-02 | 5.07 | < 0.0001 | 0.00008 | 0.0041 | < 0.001 | < 0.00001 | 0.0189 | 0.0007 | < 0.00002 | 0.000028 | 0.0140 | 0.00193 | 0.000002 | < 0.001 |
| 231: M98-201-03 | 6.00 | 0.0005 | 0.00009 | 0.0031 | < 0.001 | < 0.00001 | 0.0487 | 0.0002 | < 0.00002 | 0.000116 | 0.00169 | 0.00041 | 0.000009 | < 0.001 |
| 232: M98-201-04 | 5.18 | 0.0003 | 0.00013 | 0.0037 | < 0.001 | < 0.00001 | 0.0256 | 0.0006 | < 0.00002 | 0.000180 | 0.00437 | 0.00037 | 0.000009 | < 0.001 |
| 233: M98-208-01 | 5.63 | < 0.0001 | 0.00008 | 0.0031 | < 0.001 | < 0.00001 | 0.0257 | 0.0002 | < 0.00002 | 0.000162 | 0.00476 | 0.00029 | 0.000013 | < 0.001 |
| 234: M98-209-01 | 4.34 | 0.0001 | 0.00012 | 0.0055 | < 0.001 | < 0.00001 | 0.0235 | 0.0003 | < 0.00002 | 0.000055 | 0.00326 | 0.00031 | 0.000017 | < 0.001 |
| 235: M98-265-01 | 5.71 | 0.0004 | 0.00017 | 0.0040 | < 0.001 | < 0.00001 | 0.0349 | 0.0001 | < 0.00002 | 0.000119 | 0.00268 | 0.00025 | 0.000011 | < 0.001 |
| 236: M98-266-01 | 5.37 | 0.0004 | 0.00010 | 0.0035 | < 0.001 | < 0.00001 | 0.0320 | 0.0006 | < 0.00002 | 0.000108 | 0.00272 | 0.00041 | 0.000017 | < 0.001 |
| 237: M98-269-01 | 3.17 | < 0.0001 | 0.00008 | 0.0012 | < 0.001 | < 0.00001 | 0.0388 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00079 | 0.00068 | 0.000001 | < 0.001 |
| 238: M98-270-01 | 5.05 | 0.0002 | 0.00007 | 0.0040 | < 0.001 | < 0.00001 | 0.0231 | 0.0002 | < 0.00002 | 0.000149 | 0.00401 | 0.00024 | 0.000007 | < 0.001 |
| 239: M98-317-01 | 4.75 | < 0.0001 | 0.00006 | 0.0007 | < 0.001 | < 0.00001 | 0.0743 | < 0.0001 | < 0.00002 | 0.000015 | 0.00017 | 0.00037 | 0.000002 | < 0.001 |
| 240: M99-309-01 | 6.92 | < 0.0001 | 0.00007 | 0.0029 | < 0.001 | < 0.00001 | 0.0339 | 0.0002 | < 0.00002 | 0.000001 | 0.00469 | 0.00177 | 0.000001 | < 0.001 |
| 241: M99-309-02 | 5.52 | 0.0002 | 0.00010 | 0.0060 | < 0.001 | < 0.00001 | 0.0260 | 0.0003 | < 0.00002 | 0.000098 | 0.00383 | 0.00028 | 0.000007 | < 0.001 |
| 242: M99-336B-01 | 5.21 | 0.0003 | 0.00003 | 0.0039 | < 0.001 | < 0.00001 | 0.0436 | < 0.0001 | < 0.00002 | 0.000101 | 0.00244 | 0.00027 | 0.000009 | < 0.001 |
| 243: M99-336B-02 | 6.36 | < 0.0001 | 0.00011 | 0.0036 | < 0.001 | < 0.00001 | 0.0173 | 0.0003 | < 0.00002 | 0.000002 | 0.0136 | 0.00212 | 0.000001 | < 0.001 |
| 244: M99-336B-03 | 5.27 | 0.0001 | 0.00007 | 0.0044 | < 0.001 | < 0.00001 | 0.0335 | 0.0007 | < 0.00002 | 0.000197 | 0.00380 | 0.00053 | 0.000018 | < 0.001 |
| 245: M99-336B-04 | 4.97 | < 0.0001 | 0.00007 | 0.0031 | < 0.001 | < 0.00001 | 0.0367 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00100 | 0.00091 | 0.000001 | < 0.001 |
| 246: M99-345-01 | 8.91 | 0.0004 | 0.00007 | 0.0013 | < 0.001 | < 0.00001 | 0.0245 | < 0.0001 | < 0.00002 | 0.000004 | 0.00081 | 0.00048 | 0.000001 | < 0.001 |
| 247: M99-346-01 | 8.87 | 0.0001 | 0.00006 | 0.0010 | < 0.001 | < 0.00001 | 0.0184 | < 0.0001 | < 0.00002 | 0.000001 | 0.00049 | 0.00091 | 0.000001 | < 0.001 |
| 248: M99-347-01 | 5.03 | 0.0006 | 0.00006 | 0.0037 | < 0.001 | < 0.00001 | 0.0408 | < 0.0001 | < 0.00002 | 0.000211 | 0.00232 | 0.00069 | 0.000006 | < 0.001 |
| 249: M99-347-02 | 5.02 | 0.0003 | 0.00009 | 0.0038 | < 0.001 | < 0.00001 | 0.0322 | 0.0001 | < 0.00002 | 0.000142 | 0.00260 | 0.00048 | 0.000010 | < 0.001 |
| 250: M99-409-01 | 4.97 | 0.0004 | 0.00007 | 0.0035 | < 0.001 | < 0.00001 | 0.0323 | 0.0004 | < 0.00002 | 0.000224 | 0.00360 | 0.00040 | 0.000020 | < 0.001 |
| 251: M99-409-02 | 5.93 | 0.0003 | 0.00005 | 0.0024 | < 0.001 | < 0.00001 | 0.0278 | 0.0001 | < 0.00002 | 0.000128 | 0.00304 | 0.00054 | 0.000011 | < 0.001 |
| 252: M99-409-03 | 5.07 | 0.0003 | 0.00007 | 0.0042 | < 0.001 | < 0.00001 | 0.0237 | 0.0014 | < 0.00002 | 0.000169 | 0.00340 | 0.00061 | 0.000035 | < 0.001 |
| 253: M99-409-04 | 3.45 | 0.0002 | < 0.00002 | 0.0014 | < 0.001 | < 0.00001 | 0.0373 | 0.0002 | < 0.00002 | 0.000023 | 0.00050 | 0.00068 | 0.000005 | < 0.001 |
| 254: M99-409-05 | 5.37 | < 0.0001 | < 0.00002 | 0.0015 | < 0.001 | < 0.00001 | 0.0629 | 0.0001 | < 0.00002 | < 0.000001 | 0.00094 | 0.00023 | 0.000001 | < 0.001 |
| 255: M99-410-01 | 4.55 | 0.0003 | < 0.00002 | 0.0037 | < 0.001 | < 0.00001 | 0.0308 | 0.0003 | < 0.00002 | 0.000124 | 0.00272 | 0.00026 | 0.000008 | < 0.001 |
| 256: M99-410-02 | 4.88 | 0.0003 | 0.00004 | 0.0040 | < 0.001 | < 0.00001 | 0.0312 | 0.0004 | < 0.00002 | 0.000140 | 0.00303 | 0.00030 | 0.000009 | < 0.001 |
| 257: M99-417-01 | 4.66 | < 0.0001 | < 0.00002 | 0.0011 | < 0.001 | < 0.00001 | 0.0970 | 0.0002 | < 0.00002 | 0.000231 | 0.00024 | 0.00130 | 0.000002 | < 0.001 |
| 258: M99-436-01 | 6.11 | 0.0002 | 0.00011 | 0.0034 | < 0.001 | < 0.00001 | 0.0293 | 0.0006 | < 0.00002 | 0.000151 | 0.00307 | 0.00048 | 0.000039 | < 0.001 |
| 259: M99-436-02 | 4.52 | 0.0005 | 0.00005 | 0.0035 | < 0.001 | < 0.00001 | 0.0291 | 0.0009 | < 0.00002 | 0.000129 | 0.00217 | 0.00084 | 0.000014 | < 0.001 |
| 260: M08-733-01 | 11.7 | 0.0001 | < 0.00002 | 0.0017 | < 0.001 | < 0.00001 | 0.0142 | 0.0001 | < 0.00002 | 0.000045 | 0.00289 | 0.00090 | < 0.000001 | < 0.001 |
| 261: M08-733-02 | 5.92 | < 0.0001 | < 0.00002 | 0.0022 | < 0.001 | < 0.00001 | 0.0153 | 0.0003 | < 0.00002 | < 0.000001 | 0.00356 | 0.00089 | 0.000002 | < 0.001 |
| 262: M09-802-01 | 5.85 | < 0.0001 | < 0.00002 | 0.0023 | < 0.001 | < 0.00001 | 0.0276 | 0.0001 | < 0.00002 | 0.000008 | 0.00195 | 0.00232 | 0.000001 | < 0.001 |
| 263: M09-802-02 | 1.68 | 0.0006 | 0.00006 | 0.0055 | < 0.001 | 0.00003 | 0.0341 | 0.0003 | < 0.00002 | 0.000079 | 0.00003 | 0.00041 | 0.000002 | 0.002 |
| 264: M09-803-01 | 1.24 | 0.0002 | < 0.00002 | 0.0018 | < 0.001 | < 0.00001 | 0.0362 | 0.0003 | < 0.00002 | 0.000050 | < 0.00003 | 0.00158 | 0.000002 | < 0.001 |
| 265: M09-809-01 | 2.07 | < 0.0001 | 0.00004 | 0.0021 | < 0.001 | < 0.00001 | 0.0487 | < 0.0001 | < 0.00002 | 0.000005 | 0.00008 | 0.00109 | 0.000001 | < 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 266: M09-817-01 | 4.37 | 0.0004 | < 0.00002 | 0.0037 | < 0.001 | < 0.00001 | 0.0224 | 0.0004 | < 0.00002 | 0.000025 | 0.00054 | 0.00094 | 0.000002 | < 0.001 |
| 267: M09-817-02 | 4.42 | 0.0001 | < 0.00002 | 0.0033 | < 0.001 | < 0.00001 | 0.0288 | 0.0001 | < 0.00002 | < 0.000001 | 0.00069 | 0.00128 | 0.000002 | < 0.001 |
| 268: M09-858-01 | 4.28 | 0.0003 | 0.00011 | 0.0029 | < 0.001 | 0.00003 | 0.0332 | 0.0004 | < 0.00002 | 0.000130 | 0.00011 | 0.00062 | 0.000003 | 0.001 |
| 269: M09-859-01 | 9.02 | 0.0007 | < 0.00002 | 0.0021 | < 0.001 | < 0.00001 | 0.0312 | 0.0001 | < 0.00002 | 0.000003 | 0.00033 | 0.00236 | 0.000001 | < 0.001 |
| 270: M10-933-01 | 12.2 | < 0.0001 | < 0.00002 | 0.0020 | < 0.001 | < 0.00001 | 0.0178 | 0.0003 | < 0.00002 | 0.000006 | 0.00695 | 0.00108 | < 0.000001 | < 0.001 |
| 271: M10-935-01 | 12.3 | < 0.0001 | < 0.00002 | 0.0023 | < 0.001 | < 0.00001 | 0.0090 | 0.0011 | < 0.00002 | 0.000010 | 0.0265 | 0.00068 | 0.000005 | < 0.001 |
| 272: M10-935-02 | 4.96 | 0.0003 | < 0.00002 | 0.0026 | < 0.001 | < 0.00001 | 0.0480 | 0.0004 | < 0.00002 | 0.00112 | 0.00021 | 0.00173 | 0.000002 | < 0.001 |
| 273: M96-28-01 | 7.73 | 0.0001 | < 0.00002 | 0.0018 | < 0.001 | < 0.00001 | 0.0189 | 0.0001 | < 0.00002 | 0.000021 | 0.00293 | 0.00099 | 0.000002 | < 0.001 |
| 274: M97-159-01 | 5.89 | < 0.0001 | 0.00008 | 0.0018 | < 0.001 | < 0.00001 | 0.0167 | 0.0001 | 0.00002 | 0.000023 | 0.00262 | 0.00071 | 0.000003 | < 0.001 |
| 275: M97-159-02 | 4.57 | < 0.0001 | 0.00008 | 0.0016 | < 0.001 | < 0.00001 | 0.0189 | < 0.0001 | < 0.00002 | 0.000001 | 0.00214 | 0.00182 | 0.000004 | < 0.001 |
| 276: M98-248-01 | 0.74 | 0.0004 | 0.00010 | 0.0016 | < 0.001 | < 0.00001 | 0.0240 | 0.0003 | < 0.00002 | 0.000071 | < 0.00003 | 0.00064 | 0.000003 | < 0.001 |
| 277: M98-275-01 | 3.67 | < 0.0001 | 0.00004 | 0.0022 | < 0.001 | < 0.00001 | 0.0200 | < 0.0001 | < 0.00002 | 0.000001 | 0.00224 | 0.00084 | 0.000003 | < 0.001 |
| 278: M98-275-02 | 4.03 | < 0.0001 | 0.00007 | 0.0022 | < 0.001 | < 0.00001 | 0.0174 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00250 | 0.00059 | 0.000001 | < 0.001 |
| 279: W94-111-01 | 0.46 | 0.0002 | 0.00012 | 0.0018 | < 0.001 | < 0.00001 | 0.0299 | 0.0002 | < 0.00002 | 0.000100 | 0.00003 | 0.00021 | 0.000003 | < 0.001 |
| 280: W94-76-01 | 6.68 | < 0.0001 | 0.00122 | 0.0027 | < 0.001 | 0.00020 | 0.0112 | 0.0001 | < 0.00002 | 0.000011 | 0.0105 | 0.00096 | 0.000002 | 0.004 |
| 281: W94-76-02 | 13.8 | 0.0001 | 0.00008 | 0.0033 | < 0.001 | < 0.00001 | 0.0103 | 0.0005 | < 0.00002 | 0.000121 | 0.0107 | 0.00068 | 0.000004 | < 0.001 |
| 282: W94-82-01 | 6.43 | 0.0001 | 0.00005 | 0.0039 | < 0.001 | < 0.00001 | 0.0077 | 0.0003 | < 0.00002 | 0.000003 | 0.0127 | 0.00042 | 0.000001 | < 0.001 |
| 283: DS09GT-10-01 | 11.3 | 0.0008 | 0.00025 | 0.0012 | < 0.001 | < 0.00001 | 0.0138 | 0.0056 | < 0.00002 | 0.000618 | 0.0109 | 0.00044 | 0.000044 | < 0.001 |
| 284: ML00-224-01 | 2.29 | < 0.0001 | 0.00007 | 0.0005 | < 0.001 | < 0.00001 | 0.136 | 0.0003 | < 0.00002 | 0.000050 | 0.00017 | 0.00139 | 0.000006 | < 0.001 |
| 285: ML08-225-01 | 5.25 | < 0.0001 | 0.00014 | 0.0014 | < 0.001 | < 0.00001 | 0.0213 | 0.0044 | < 0.00002 | 0.000720 | 0.00175 | 0.00087 | 0.000042 | < 0.001 |
| 286: ML08-225-02 | 6.91 | 0.0005 | 0.00019 | 0.0008 | < 0.001 | < 0.00001 | 0.0127 | 0.0079 | < 0.00002 | 0.000239 | 0.0102 | 0.00128 | 0.000079 | < 0.001 |
| 287: ML08-225-03 | 2.81 | < 0.0001 | 0.00008 | 0.0005 | < 0.001 | < 0.00001 | 0.121 | 0.0003 | < 0.00002 | 0.000036 | 0.00017 | 0.00131 | 0.000003 | < 0.001 |
| 288: ML08-226-01 | 9.35 | 0.0007 | 0.00025 | 0.0013 | < 0.001 | < 0.00001 | 0.0067 | 0.0418 | < 0.00002 | 0.000140 | 0.0233 | 0.0355 | 0.000117 | 0.002 |
| 289: ML08-226-02 | 4.00 | 0.0002 | 0.00020 | 0.0014 | < 0.001 | 0.00003 | 0.0242 | 0.0084 | < 0.00002 | 0.000139 | 0.00070 | 0.00484 | 0.000090 | < 0.001 |
| 290: ML08-226-03 | 2.99 | 0.0001 | 0.00011 | 0.0005 | < 0.001 | < 0.00001 | 0.0504 | 0.0035 | < 0.00002 | 0.000068 | 0.00046 | 0.0130 | 0.000034 | < 0.001 |
| 291: ML08-226-04 | 2.54 | < 0.0001 | 0.00015 | 0.0010 | < 0.001 | < 0.00001 | 0.0347 | 0.0040 | < 0.00002 | 0.000058 | 0.00027 | 0.00415 | 0.000042 | < 0.001 |
| 292: ML08-226-05 | 6.77 | 0.0004 | 0.00012 | 0.0008 | < 0.001 | < 0.00001 | 0.0147 | 0.0061 | < 0.00002 | 0.000120 | 0.00942 | 0.00383 | 0.000050 | < 0.001 |
| 293: ML08-228-01 | 4.25 | < 0.0001 | 0.00013 | 0.0009 | < 0.001 | < 0.00001 | 0.0254 | 0.0034 | < 0.00002 | 0.000214 | 0.00110 | 0.00303 | 0.000032 | < 0.001 |
| 294: ML08-228-02 | 2.16 | < 0.0001 | 0.00011 | 0.0012 | < 0.001 | < 0.00001 | 0.0358 | 0.0019 | < 0.00002 | 0.000166 | 0.00013 | 0.00085 | 0.000040 | < 0.001 |
| 295: ML08-229-01 | 6.32 | < 0.0001 | 0.00011 | 0.0008 | < 0.001 | 0.00001 | 0.0567 | 0.0005 | < 0.00002 | 0.000079 | 0.00033 | 0.00055 | 0.000005 | < 0.001 |
| 296: ML08-229-02 | 9.25 | 0.0003 | 0.00024 | 0.0015 | < 0.001 | < 0.00001 | 0.0095 | 0.0217 | < 0.00002 | 0.000126 | 0.0210 | 0.00093 | 0.000072 | < 0.001 |
| 297: ML08-229-03 | 5.11 | < 0.0001 | 0.00009 | 0.0009 | < 0.001 | < 0.00001 | 0.0612 | 0.0008 | < 0.00002 | 0.000081 | 0.00030 | 0.00077 | 0.000007 | < 0.001 |
| 298: ML08-229-04 | 6.45 | 0.0005 | 0.00048 | 0.0008 | < 0.001 | < 0.00001 | 0.0207 | 0.0072 | < 0.00002 | 0.000125 | 0.00608 | 0.00088 | 0.000087 | 0.001 |
| 299: ML08-229-05 | 2.13 | < 0.0001 | 0.00007 | 0.0005 | < 0.001 | < 0.00001 | 0.130 | 0.0003 | < 0.00002 | 0.000024 | 0.00050 | 0.00077 | 0.000004 | < 0.001 |
| 300: ML08-230-01 | 21.5 | 0.0007 | 0.00025 | 0.0010 | < 0.001 | < 0.00001 | 0.0141 | 0.0063 | < 0.00002 | 0.000222 | 0.00885 | 0.00092 | 0.000142 | < 0.001 |
| 301: ML08-232-01 | 7.36 | 0.0008 | 0.00029 | 0.0006 | < 0.001 | < 0.00001 | 0.0090 | 0.0117 | < 0.00002 | 0.000444 | 0.0124 | 0.00067 | 0.000179 | 0.001 |
| 302: ML08-233-01 | 7.19 | 0.0002 | 0.00006 | 0.0006 | < 0.001 | < 0.00001 | 0.0106 | 0.0090 | < 0.00002 | 0.000549 | 0.0117 | 0.00093 | 0.000111 | < 0.001 |
| 303: ML08-233-02 | 6.80 | 0.0001 | 0.00011 | 0.0005 | < 0.001 | < 0.00001 | 0.0435 | 0.0019 | < 0.00002 | 0.000226 | 0.00113 | 0.00290 | 0.000021 | 0.001 |
| 304: ML08-240-01 | 8.45 | 0.0005 | 0.00021 | 0.0005 | < 0.001 | < 0.00001 | 0.0127 | 0.0141 | < 0.00002 | 0.000486 | 0.0141 | 0.00283 | 0.000133 | 0.001 |
| 305: ML08-241-01 | 9.71 | 0.0003 | 0.00006 | 0.0007 | < 0.001 | < 0.00001 | 0.0165 | 0.0065 | < 0.00002 | 0.000435 | 0.00726 | 0.00100 | 0.000050 | < 0.001 |

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 306: ML08-241-02 | 4.51 | < 0.0001 | 0.00002 | 0.0005 | < 0.001 | < 0.00001 | 0.189 | 0.0003 | < 0.00002 | 0.000053 | 0.00032 | 0.00193 | 0.000003 | < 0.001 |
| 307: ML08-241-03 | 11.5 | 0.0004 | 0.00016 | 0.0006 | < 0.001 | < 0.00001 | 0.0148 | 0.0237 | < 0.00002 | 0.000392 | 0.0240 | 0.00149 | 0.000267 | < 0.001 |
| 308: ML08-243-01 | 13.0 | < 0.0001 | < 0.00002 | 0.0008 | < 0.001 | < 0.00001 | 0.0929 | 0.0004 | < 0.00002 | 0.000072 | 0.00082 | 0.00098 | 0.000018 | < 0.001 |
| 309: ML08-243-02 | 7.62 | 0.0002 | 0.00003 | 0.0006 | < 0.001 | < 0.00001 | 0.0186 | 0.0026 | < 0.00002 | 0.000192 | 0.0154 | 0.00186 | 0.000018 | 0.001 |
| 310: ML08-245-01 | 12.2 | 0.0008 | 0.00013 | 0.0008 | < 0.001 | < 0.00001 | 0.0088 | 0.0356 | < 0.00002 | 0.000267 | 0.0228 | 0.00098 | 0.000205 | 0.001 |
| 311: ML08-245-02 | 7.01 | 0.0016 | 0.00045 | 0.0006 | < 0.001 | < 0.00001 | 0.0123 | 0.0227 | < 0.00002 | 0.000707 | 0.0129 | 0.00061 | 0.000199 | 0.002 |
| 312: ML09-254-01 | 7.51 | 0.0004 | 0.00007 | 0.0005 | < 0.001 | < 0.00001 | 0.0676 | 0.0054 | < 0.00002 | 0.000505 | 0.00089 | 0.00043 | 0.000062 | < 0.001 |
| 313: ML09-254-02 | 12.4 | 0.0006 | 0.00010 | 0.0006 | < 0.001 | < 0.00001 | 0.0176 | 0.0107 | < 0.00002 | 0.000554 | 0.0144 | 0.00064 | 0.000089 | < 0.001 |
| 314: ML09-256-01 | 14.0 | 0.0015 | 0.00021 | 0.0010 | < 0.001 | < 0.00001 | 0.0203 | 0.0189 | < 0.00002 | 0.000251 | 0.00699 | 0.00283 | 0.000250 | 0.001 |
| 315: ML09-259-01 | 9.45 | 0.0007 | 0.00012 | 0.0017 | < 0.001 | < 0.00001 | 0.0108 | 0.0830 | < 0.00002 | 0.000185 | 0.0262 | 0.00115 | 0.000230 | 0.002 |
| 316: ML92062-01 | 3.44 | 0.0001 | 0.00011 | 0.0006 | < 0.001 | 0.00001 | 0.0872 | 0.0011 | < 0.00002 | 0.000168 | 0.00102 | 0.00125 | 0.000019 | 0.001 |
| 317: ML95-104-01 | 6.14 | 0.0004 | 0.00025 | 0.0016 | < 0.001 | 0.00006 | 0.0162 | 0.0440 | < 0.00002 | 0.000186 | 0.0157 | 0.00131 | 0.000160 | 0.003 |
| 318: ML95-104-02 | 2.85 | 0.0001 | 0.00012 | 0.0006 | < 0.001 | 0.00001 | 0.238 | 0.0008 | < 0.00002 | 0.000155 | 0.00016 | 0.00062 | 0.000008 | < 0.001 |
| 319: ML95-105-01 | 2.38 | < 0.0001 | 0.00007 | 0.0007 | < 0.001 | < 0.00001 | 0.107 | 0.0003 | < 0.00002 | 0.000024 | 0.00007 | 0.00603 | 0.000006 | < 0.001 |
| 320: ML95-105-02 | 5.36 | 0.0002 | 0.00008 | 0.0008 | < 0.001 | < 0.00001 | 0.0244 | 0.0012 | < 0.00002 | 0.000417 | 0.0165 | 0.00122 | 0.000028 | < 0.001 |
| 321: ML95-105-03 | 6.77 | 0.0011 | 0.00384 | 0.0007 | < 0.001 | 0.00078 | 0.0243 | 0.0180 | < 0.00002 | 0.000831 | 0.00961 | 0.00082 | 0.000233 | 0.015 |
| 322: ML95-105-04 | 10.0 | 0.0007 | 0.00027 | 0.0006 | < 0.001 | 0.00002 | 0.0127 | 0.0254 | < 0.00002 | 0.000530 | 0.0154 | 0.00212 | 0.000279 | 0.002 |
| 323: ML95-107-01 | 2.22 | 0.0003 | 0.00024 | 0.0011 | < 0.001 | 0.00005 | 0.0321 | 0.0078 | < 0.00002 | 0.000279 | 0.00122 | 0.00077 | 0.000067 | 0.004 |
| 324: ML95-107-02 | 3.78 | 0.0002 | 0.00003 | 0.0007 | < 0.001 | 0.00011 | 0.105 | 0.0003 | < 0.00002 | 0.000092 | 0.00037 | 0.00203 | 0.000005 | 0.001 |
| 325: ML95-107-03 | 6.43 | 0.0009 | 0.00021 | 0.0009 | < 0.001 | < 0.00001 | 0.0169 | 0.0133 | < 0.00002 | 0.000424 | 0.00963 | 0.00097 | 0.000237 | 0.001 |
| 326: ML95-113-01 | 5.74 | 0.0009 | 0.00019 | 0.0010 | < 0.001 | 0.00003 | 0.0200 | 0.0075 | < 0.00002 | 0.000247 | 0.00609 | 0.00061 | 0.000143 | 0.001 |
| 327: ML95-113-02 | 6.08 | 0.0003 | 0.00012 | 0.0006 | < 0.001 | < 0.00001 | 0.0164 | 0.0079 | < 0.00002 | 0.000555 | 0.0114 | 0.00095 | 0.000090 | < 0.001 |
| 328: ML95-117-01 | 2.65 | < 0.0001 | 0.00007 | 0.0006 | < 0.001 | < 0.00001 | 0.0734 | 0.0004 | < 0.00002 | 0.000091 | 0.00031 | 0.00123 | 0.000003 | < 0.001 |
| 329: ML95-117-02 | 7.22 | 0.0003 | 0.00011 | 0.0007 | < 0.001 | < 0.00001 | 0.0129 | 0.0250 | < 0.00002 | 0.000148 | 0.02037 | 0.00125 | 0.000089 | 0.001 |
| 330: ML95-117-03 | 3.22 | 0.0003 | 0.00013 | 0.0005 | < 0.001 | < 0.00001 | 0.0612 | 0.0030 | < 0.00002 | 0.000097 | 0.00087 | 0.00180 | 0.000046 | < 0.001 |
| 331: ML95-120-01 | 6.39 | 0.0007 | 0.00010 | 0.0006 | < 0.001 | < 0.00001 | 0.0164 | 0.0096 | < 0.00002 | 0.000170 | 0.00800 | 0.00181 | 0.000122 | < 0.001 |
| 332: ML95-82-01 | 2.93 | < 0.0001 | 0.00004 | 0.0005 | < 0.001 | < 0.00001 | 0.0831 | 0.0008 | < 0.00002 | 0.000053 | 0.00033 | 0.00075 | 0.000012 | < 0.001 |
| 333: ML95-82-02 | 11.0 | 0.0005 | 0.00110 | 0.0006 | < 0.001 | 0.00019 | 0.0153 | 0.0159 | < 0.00002 | 0.000344 | 0.0146 | 0.00044 | 0.000145 | 0.003 |
| 334: ML95-83-01 | 2.25 | 0.0003 | 0.00029 | 0.0004 | < 0.001 | < 0.00001 | 0.0051 | 0.0215 | < 0.00002 | 0.000322 | 0.00207 | 0.00054 | 0.000255 | 0.001 |
| 335: ML95-83-02 | 5.84 | 0.0007 | 0.00023 | 0.0006 | < 0.001 | < 0.00001 | 0.0129 | 0.0215 | < 0.00002 | 0.000663 | 0.0105 | 0.00048 | 0.000404 | 0.001 |
| 336: ML95-84-01 | 3.59 | < 0.0001 | 0.00017 | 0.0007 | < 0.001 | < 0.00001 | 0.124 | 0.0004 | 0.00003 | 0.000055 | 0.00013 | 0.00046 | 0.000009 | < 0.001 |
| 337: ML95-85-01 | 5.62 | 0.0006 | 0.00021 | 0.0006 | < 0.001 | 0.00009 | 0.0125 | 0.0156 | < 0.00002 | 0.000886 | 0.0116 | 0.00076 | 0.000246 | 0.003 |
| 338: ML95-88-01 | 6.78 | 0.0008 | 0.00024 | 0.0009 | < 0.001 | < 0.00001 | 0.0128 | 0.0093 | < 0.00002 | 0.000209 | 0.00722 | 0.00171 | 0.000105 | < 0.001 |
| 339: ML95-88-02 | 8.95 | < 0.0001 | 0.00012 | 0.0008 | < 0.001 | < 0.00001 | 0.0147 | 0.0012 | < 0.00002 | 0.000136 | 0.0149 | 0.00056 | 0.000012 | < 0.001 |
| 340: ML95-95-01 | 2.19 | 0.0001 | 0.00023 | 0.0005 | < 0.001 | 0.00004 | 0.0379 | 0.0025 | < 0.00002 | 0.000301 | 0.00164 | 0.00116 | 0.000037 | 0.002 |
| 341: ML95-95-02 | 6.00 | 0.0007 | 0.00036 | 0.0006 | < 0.001 | 0.00004 | 0.0124 | 0.0228 | < 0.00002 | 0.000387 | 0.0136 | 0.00102 | 0.000313 | 0.002 |
| 342: ML95-98-01 | 4.08 | 0.0001 | 0.00017 | 0.0014 | < 0.001 | < 0.00001 | 0.0377 | 0.0057 | < 0.00002 | 0.000302 | 0.00043 | 0.00160 | 0.000085 | < 0.001 |
| 343: ML97-186-01 | 18.0 | 0.0003 | 0.00023 | 0.0008 | < 0.001 | < 0.00001 | 0.0901 | 0.0040 | < 0.00002 | 0.000696 | 0.00128 | 0.00054 | 0.000884 | 0.002 |
| 344: ML97-186-02 | 9.37 | 0.0005 | 0.00020 | 0.0011 | < 0.001 | 0.00001 | 0.0220 | 0.0341 | < 0.00002 | 0.000316 | 0.0194 | 0.00084 | 0.000164 | 0.001 |
| 345-DUP: M10-972A-03 | 1.43 | 0.0005 | 0.00008 | 0.0010 | < 0.001 | < 0.00001 | 0.116 | < 0.0001 | < 0.00002 | 0.000002 | 0.00006 | 0.00092 | 0.000002 | 0.001 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10517-JUL11**

| Sample ID | Na mg/L | Ni mg/L | Pb mg/L | Sb mg/L | Se mg/L | Sn mg/L | Sr mg/L | Ti mg/L | Tl mg/L | U mg/L | V mg/L | W mg/L | Y mg/L | Zn mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 346-DUP: M96-16-01 | 6.83 | 0.0003 | 0.00005 | 0.0040 | < 0.001 | < 0.00001 | 0.0101 | < 0.0001 | < 0.00002 | 0.000003 | 0.00392 | 0.00117 | 0.000001 | < 0.001 |
| 347-DUP: M10-981-02 | 6.00 | 0.0003 | 0.00005 | 0.0026 | < 0.001 | < 0.00001 | 0.0266 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00070 | 0.00119 | 0.000002 | 0.002 |
| 348-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00010 | 0.0003 | < 0.001 | < 0.00001 | < 0.0001 | < 0.0001 | < 0.00002 | < 0.000001 | < 0.00003 | < 0.00003 | 0.000001 | 0.001 |
| 349-DUP: M10-994-04 | 9.07 | 0.0003 | 0.00010 | 0.0046 | < 0.001 | 0.00004 | 0.0097 | 0.0002 | < 0.00002 | 0.000031 | 0.0120 | 0.00260 | 0.000004 | < 0.001 |
| 350-DUP: M96-51-01 | 4.73 | 0.0002 | 0.00013 | 0.0020 | < 0.001 | 0.00001 | 0.0262 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00068 | 0.00126 | 0.000001 | 0.001 |
| 351-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00014 | 0.0004 | < 0.001 | < 0.00001 | 0.0001 | < 0.0001 | < 0.00002 | 0.000001 | < 0.00003 | 0.00022 | < 0.000001 | < 0.001 |
| 352-DUP: M97-120-01 | 16.1 | < 0.0001 | 0.00007 | 0.0029 | < 0.001 | < 0.00001 | 0.0139 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00112 | 0.00159 | 0.000001 | < 0.001 |
| 353-DUP: M97-122-02 | 5.79 | < 0.0001 | 0.00003 | 0.0030 | < 0.001 | < 0.00001 | 0.0094 | < 0.0001 | < 0.00002 | 0.000013 | 0.00553 | 0.00044 | 0.000004 | < 0.001 |
| 354-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00007 | 0.0003 | < 0.001 | < 0.00001 | < 0.0001 | < 0.0001 | < 0.00002 | 0.000003 | < 0.00003 | < 0.00003 | 0.000001 | < 0.001 |
| 355-DUP: W94-70-01 | 5.97 | 0.0002 | 0.00014 | 0.0035 | < 0.001 | 0.00001 | 0.0125 | 0.0001 | < 0.00002 | 0.000001 | 0.00420 | 0.00090 | < 0.000001 | 0.001 |
| 356-DUP: M06-592-03 | 6.77 | 0.0003 | 0.00009 | 0.0028 | < 0.001 | < 0.00001 | 0.0119 | 0.0061 | < 0.00002 | 0.000018 | 0.0236 | 0.00175 | 0.000012 | 0.001 |
| 357-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00005 | 0.0002 | < 0.001 | < 0.00001 | 0.0001 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00004 | 0.00006 | < 0.000001 | < 0.001 |
| 358-DUP: M08-765-01 | 7.12 | 0.0010 | 0.00007 | 0.0034 | < 0.001 | < 0.00001 | 0.0327 | 0.0002 | < 0.00002 | 0.000269 | 0.00392 | 0.00050 | 0.000008 | < 0.001 |
| 359-DUP: M97-94A-02 | 4.89 | 0.0005 | 0.00014 | 0.0036 | < 0.001 | 0.00001 | 0.0274 | 0.0010 | < 0.00002 | 0.000158 | 0.00275 | 0.00080 | 0.000024 | < 0.001 |
| 360-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00006 | 0.0002 | < 0.001 | < 0.00001 | 0.0001 | < 0.0001 | < 0.00002 | 0.000005 | < 0.00003 | 0.00003 | 0.000001 | < 0.001 |
| 361-DUP: M09-809-01 | 2.13 | < 0.0001 | < 0.00002 | 0.0019 | < 0.001 | < 0.00001 | 0.0424 | 0.0006 | < 0.00002 | 0.000004 | 0.00022 | 0.00093 | 0.000002 | < 0.001 |
| 362-DUP: ML08-241-01 | 9.05 | 0.0007 | 0.00025 | 0.0008 | < 0.001 | < 0.00001 | 0.0161 | 0.0174 | < 0.00002 | 0.000473 | 0.00783 | 0.00082 | 0.000183 | < 0.001 |
| 363-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | < 0.00002 | 0.0002 | < 0.001 | < 0.00001 | 0.0002 | 0.0001 | < 0.00002 | 0.000016 | 0.00006 | < 0.00003 | < 0.000001 | < 0.001 |
| 364-DUP: M96-37-03 | 5.44 | 0.0004 | 0.00011 | 0.0037 | < 0.001 | < 0.00001 | 0.0418 | 0.0003 | < 0.00002 | 0.000118 | 0.00231 | 0.00050 | 0.000013 | < 0.001 |
| 365-DUP: M99-336B-04 | 5.20 | < 0.0001 | 0.00008 | 0.0026 | < 0.001 | < 0.00001 | 0.0340 | < 0.0001 | < 0.00002 | < 0.000001 | 0.00099 | 0.00088 | 0.000001 | < 0.001 |
| 366-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00003 | 0.0003 | < 0.001 | < 0.00001 | 0.0001 | < 0.0001 | < 0.00002 | < 0.000001 | < 0.00003 | < 0.00003 | < 0.000001 | < 0.001 |
| 367-DUP: ML08-225-01 | 6.07 | 0.0004 | 0.00022 | 0.0013 | < 0.001 | < 0.00001 | 0.0226 | 0.0146 | < 0.00002 | 0.000848 | 0.00208 | 0.00093 | 0.000128 | 0.001 |
| 368-DUP: ML08-229-01 | 6.78 | < 0.0001 | 0.00004 | 0.0007 | < 0.001 | < 0.00001 | 0.0584 | 0.0005 | < 0.00002 | 0.000089 | 0.00034 | 0.00057 | 0.000005 | < 0.001 |
| 369-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00006 | 0.0004 | < 0.001 | < 0.00001 | 0.0004 | < 0.0001 | < 0.00002 | 0.000003 | < 0.00003 | 0.00007 | < 0.000001 | < 0.001 |
| 370-DUP: ML95-107-03 | 6.36 | 0.0012 | 0.00032 | 0.0010 | < 0.001 | 0.00002 | 0.0188 | 0.0222 | < 0.00002 | 0.000529 | 0.0105 | 0.00092 | 0.000359 | 0.002 |
| 371-DUP: ML97-186-02 | 8.60 | 0.0004 | 0.00017 | 0.0011 | < 0.001 | 0.00002 | 0.0196 | 0.0330 | < 0.00002 | 0.000297 | 0.0197 | 0.00083 | 0.000147 | 0.002 |
| 372-BLK: $D.I. Leachate Blank | < 0.01 | < 0.0001 | 0.00009 | 0.0002 | < 0.001 | < 0.00001 | 0.0003 | 0.0002 | < 0.00002 | 0.000003 | 0.00013 | 0.00003 | 0.000001 | < 0.001 |



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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March-12-12

**Agnico Eagle Mines Limited**
Attn : Josee Noel

**Date Rec. :** 21 February 2012
**LR Report:** **CA11228-FEB12**

10200, route de Preissac
Rouyn-Noranda, Quebec
J0Y 1C0,

**Copy:** #1

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

# CERTIFICATE OF ANALYSIS

## Final Report

| Sample ID | Sample weight g | Vol H2O2 mL | Final pH units | NaOH Normality | Vol NaOH to PH 4.5 mL | Vol NaOH to PH 7.0 mL | NAG (pH 4.5) kg H2SO4/tonne | NAG (pH 7.0) kg H2SO4/tonne |
|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | 28-Feb-12 | 28-Feb-12 | 28-Feb-12 | 28-Feb-12 | 28-Feb-12 | 28-Feb-12 | 28-Feb-12 | 28-Feb-12 |
| 4: Analysis Approval Time | 12:15 | 12:15 | 12:15 | 12:15 | 12:15 | 12:15 | 12:15 | 12:15 |
| 5: ML08-232-01 | 1.5 | 150 | 4.99 | 0.10 | 0.00 | 0.24 | 0.0 | 0.8 |
| 6: ML08-226-02 | 1.5 | 150 | 2.88 | 0.10 | 2.62 | 3.52 | 8.6 | 12 |
| 7: ML95-82-01 | 1.5 | 150 | 3.36 | 0.10 | 1.00 | 1.95 | 3.2 | 6.3 |
| 8: ML95-95-01 | 1.5 | 150 | 11.05 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 9: ML09-802-02 | 1.5 | 150 | 2.37 | 0.10 | 10.40 | 14.00 | 33 | 45 |
| 10: M10-935-02 | 1.5 | 150 | 3.44 | 0.10 | 0.88 | 2.14 | 2.9 | 6.9 |
| 11: M98-248-01 | 1.5 | 150 | 2.74 | 0.10 | 4.80 | 9.13 | 16 | 30 |
| 12: M09-859-01 | 1.5 | 150 | 10.87 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 13: M08-750-03 | 1.5 | 150 | 11.31 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 14: W94-61-01 | 1.5 | 150 | 5.57 | 0.10 | 0.00 | 0.67 | 0.0 | 2.2 |
| 15: W94-73-02 | 1.5 | 150 | 8.52 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 16: M97-139-01 | 1.5 | 150 | 10.87 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 17: M07-663-01 | 1.5 | 150 | 10.30 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 18: M03-508-01 | 1.5 | 150 | 11.46 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 19: M06-623-01 | 1.5 | 150 | 11.24 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 20: M06-625-01 | 1.5 | 150 | 10.73 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 21: M97-95-02 | 1.5 | 150 | 10.52 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 22: M96-74-01 | 1.6 | 150 | 11.56 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 23: M10-985-01 | 1.5 | 150 | 10.82 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |

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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**NAG Test**

**LR Report :** **CA11228-FEB12**

| Sample ID | Sample weight g | Vol H2O2 mL | Final pH units | NaOH Normality | Vol NaOH to PH 4.5 mL | Vol NaOH to PH 7.0 mL | NAG (pH 4.5) kg H2SO4/tonne | NAG (pH 7.0) kg H2SO4/tonne |
|---|---|---|---|---|---|---|---|---|
| 24: M98-222-01 | 1.5 | 150 | 11.61 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 25: M10-968-02 | 1.5 | 150 | 10.48 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 26: M10-976-02 | 1.5 | 150 | 10.48 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 27: M10-993-02 | 1.5 | 150 | 11.01 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

**SGS Lakefield Research Limited**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA (Price 1997)**

**Project :** Fzone deposit

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Friday, September 11, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA10221-AUG09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M98-316-01 | 6: GT-08-04-01 | 7: M05-536A-01 | 8: GT08-02-01 | 9: M97-138-01 | 10: M05-564-01 | 11: M97-139-01 | 12: M97-141-01 | 13: M97-93-01 | 14: M97-92-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a |
| Paste pH [units] | 11-Sep-09 | 11:10 | 8.69 | 8.89 | 8.73 | 8.66 | 8.71 | 8.85 | 8.88 | 8.78 | 8.63 | 8.78 |
| Fizz Rate [---] | 11-Sep-09 | 11:10 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sample [weight(g)] | 11-Sep-09 | 11:10 | 2.04 | 1.99 | 2.02 | 1.95 | 1.97 | 1.96 | 1.96 | 1.99 | 2.01 | 2.00 |
| HCl added [mL] | 11-Sep-09 | 11:10 | 85.50 | 75.20 | 165.40 | 90.10 | 113.90 | 99.80 | 193.00 | 137.10 | 103.50 | 127.00 |
| HCl [Normality] | 11-Sep-09 | 11:10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 11-Sep-09 | 11:10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 11-Sep-09 | 11:10 | 20.10 | 16.20 | 63.50 | 19.70 | 28.60 | 26.40 | 67.10 | 39.90 | 25.20 | 37.20 |
| Final pH [units] | 11-Sep-09 | 11:10 | 1.84 | 1.99 | 1.61 | 1.88 | 1.86 | 1.80 | 1.73 | 1.86 | 1.99 | 1.74 |
| NP [t CaCO3/1000t] | 11-Sep-09 | 11:10 | 160 | 148 | 252 | 180 | 216 | 187 | 321 | 244 | 195 | 224 |
| AP [t CaCO3/1000 t] | 11-Sep-09 | 11:10 | 4.1 | 2.5 | 5.9 | 4.7 | 1.6 | 1.6 | 8.8 | 7.8 | 3.4 | 2.5 |
| Net NP [t CaCO3/1000 t] | 11-Sep-09 | 11:10 | 156 | 146 | 246 | 176 | 215 | 186 | 312 | 236 | 191 | 222 |
| NP/AP [ratio] | 11-Sep-09 | 11:10 | 38.9 | 59.3 | 42.7 | 38.4 | 135 | 117 | 36.5 | 31.3 | 57.3 | 89.8 |
| Total Sulphur [%] | 04-Sep-09 | 14:41 | 0.226 | 0.109 | 0.253 | 0.192 | 0.098 | 0.064 | 0.439 | 0.323 | 0.155 | 0.125 |
| Acid Leachable SO4-S [%] | 11-Sep-09 | 10:28 | 0.09 | 0.03 | 0.07 | 0.05 | 0.05 | 0.01 | 0.16 | 0.08 | 0.05 | 0.05 |
| Sulphide-S [%] | 11-Sep-09 | 10:28 | 0.13 | 0.08 | 0.19 | 0.15 | 0.05 | 0.05 | 0.28 | 0.25 | 0.11 | 0.08 |
| Total Carbon [%] | 04-Sep-09 | 14:41 | 1.93 | 1.77 | 3.41 | 2.19 | 2.70 | 2.32 | 4.66 | 3.35 | 2.57 | 2.84 |
| Carbonate (CO3) [%] | 04-Sep-09 | 14:42 | 9.43 | 8.62 | 16.2 | 10.3 | 13.0 | 11.2 | 21.5 | 15.8 | 12.0 | 13.6 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

**SGS Lakefield Research Limited**
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Phone: 705-652-2000 FAX: 705-652-6365

**Project :** Fzone deposit

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Friday, September 11, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA10219-AUG09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M98-316-01 | 6: GT-08-04-01 | 7: M05-536A-01 | 8: GT08-02-01 | 9: M97-138-01 | 10: M05-564-01 | 11: M97-139-01 | 12: M97-141-01 | 13: M97-93-01 | 14: M97-92-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a |
| SiO2 [%] | 43.2 | 43.6 | 39.4 | 43.5 | 42.8 | 44.2 | 37.2 | 42.0 | 43.3 | 44.1 |
| Al2O3 [%] | 14.2 | 13.9 | 13.2 | 13.9 | 13.4 | 14.9 | 12.5 | 12.3 | 14.1 | 13.0 |
| Fe2O3 [%] | 11.1 | 11.8 | 11.2 | 12.1 | 10.9 | 10.0 | 9.80 | 11.4 | 12.5 | 9.43 |
| MgO [%] | 5.26 | 6.72 | 4.76 | 3.96 | 4.19 | 4.03 | 4.77 | 6.81 | 4.08 | 4.66 |
| CaO [%] | 13.6 | 10.4 | 12.1 | 11.9 | 13.1 | 12.3 | 12.1 | 9.27 | 10.3 | 11.2 |
| Na2O [%] | 0.99 | 1.81 | 1.66 | 2.47 | 1.89 | 2.50 | 1.75 | 2.16 | 2.52 | 3.16 |
| K2O [%] | 0.07 | 0.19 | 1.21 | 0.06 | 0.48 | 0.29 | 2.41 | 0.73 | 0.53 | 0.55 |
| TiO2 [%] | 0.89 | 0.77 | 0.82 | 0.96 | 0.77 | 0.91 | 0.69 | 0.72 | 0.97 | 0.68 |
| P2O5 [%] | 0.07 | 0.05 | 0.06 | 0.07 | 0.05 | 0.06 | 0.05 | 0.06 | 0.08 | 0.08 |
| MnO [%] | 0.22 | 0.20 | 0.24 | 0.23 | 0.26 | 0.23 | 0.25 | 0.18 | 0.29 | 0.22 |
| Cr2O3 [%] | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.03 | 0.04 | 0.03 | 0.03 |
| V2O5 [%] | 0.05 | 0.05 | 0.05 | 0.06 | 0.05 | 0.05 | 0.05 | 0.05 | 0.06 | 0.04 |
| LOI [%] | 10.0 | 10.1 | 14.2 | 10.4 | 12.4 | 10.9 | 17.4 | 13.7 | 11.3 | 12.6 |
| Sum [%] | 99.7 | 99.7 | 99.0 | 99.7 | 100.3 | 100.5 | 99.0 | 99.4 | 100.1 | 99.7 |

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**Project :** Fzone deposit
**LR Report :** **CA10219-AUG09**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Modified ABA (Price 1997)**

**Project :** Fzone deposit

**LR Report :** **CA10221-AUG09**

*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Project :** Fzone deposit

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Friday, September 11, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA10220-AUG09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M98-316-01 | 6: GT-08-04-01 | 7: M05-536A-01 | 8: GT08-02-01 | 9: M97-138-01 | 10: M05-564-01 | 11: M97-139-01 | 12: M97-141-01 | 13: M97-93-01 | 14: M97-92-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a |
| Silver [µg/g] | 11-Sep-09 | 11:09 | 0.14 | 0.78 | 0.21 | 0.07 | 0.19 | 0.09 | 0.64 | 0.32 | 0.17 | 0.11 |
| Aluminum [µg/g] | 11-Sep-09 | 07:48 | 75000 | 77000 | 72000 | 76000 | 72000 | 81000 | 68000 | 68000 | 75000 | 68000 |
| Arsenic [µg/g] | 11-Sep-09 | 11:09 | 8.8 | 13 | 86 | 8.9 | 16 | 3.0 | 290 | 15 | 61 | 16 |
| Barium [µg/g] | 11-Sep-09 | 11:09 | 6.9 | 87 | 140 | 8.4 | 53 | 55 | 290 | 150 | 72 | 140 |
| Beryllium [µg/g] | 11-Sep-09 | 11:09 | 0.22 | 0.25 | 0.43 | 0.25 | 0.25 | 0.31 | 0.77 | 0.30 | 0.26 | 0.30 |
| Bismuth [µg/g] | 11-Sep-09 | 11:09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | 0.29 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 11-Sep-09 | 07:48 | 89000 | 73000 | 83000 | 80000 | 87000 | 82000 | 83000 | 63000 | 68000 | 73000 |
| Cadmium [µg/g] | 11-Sep-09 | 11:09 | 0.33 | 0.56 | 0.27 | 0.72 | 0.23 | 0.19 | 0.69 | 0.26 | 0.18 | 0.24 |
| Cobalt [µg/g] | 11-Sep-09 | 11:09 | 46 | 43 | 42 | 45 | 47 | 41 | 46 | 37 | 42 | 38 |
| Chromium [µg/g] | 11-Sep-09 | 11:09 | 170 | 160 | 150 | 140 | 170 | 180 | 140 | 150 | 140 | 150 |
| Copper [µg/g] | 11-Sep-09 | 07:48 | 110 | 120 | 110 | 97 | 120 | 83 | 170 | 130 | 100 | 110 |
| Iron [µg/g] | 11-Sep-09 | 07:48 | 75000 | 85000 | 78000 | 84000 | 74000 | 69000 | 69000 | 80000 | 86000 | 64000 |
| Potassium [µg/g] | 11-Sep-09 | 07:48 | 620 | 1800 | 11000 | 640 | 4400 | 2600 | 21000 | 6800 | 4800 | 5000 |
| Lithium [µg/g] | 11-Sep-09 | 11:09 | 60 | 37 | 32 | 40 | 40 | 52 | 9 | 32 | 35 | 37 |
| Magnesium [µg/g] | 11-Sep-09 | 07:48 | 31000 | 41000 | 29000 | 24000 | 25000 | 24000 | 29000 | 41000 | 24000 | 27000 |
| Manganese [µg/g] | 11-Sep-09 | 11:09 | 1300 | 1100 | 1300 | 1300 | 1500 | 1400 | 1500 | 1100 | 1700 | 1400 |
| Molybdenum [µg/g] | 11-Sep-09 | 11:09 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 | 0.7 | 0.8 | 0.8 | 0.6 |
| Sodium [µg/g] | 11-Sep-09 | 07:48 | 7000 | 14000 | 12000 | 18000 | 14000 | 18000 | 13000 | 16000 | 18000 | 21000 |
| Nickel [µg/g] | 11-Sep-09 | 11:09 | 110 | 150 | 120 | 110 | 150 | 110 | 120 | 120 | 110 | 110 |

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**Project :** Fzone deposit
**LR Report :** **CA10220-AUG09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M98-316-01 | 6: GT-08-04-01 | 7: M05-536A-01 | 8: GT08-02-01 | 9: M97-138-01 | 10: M05-564-01 | 11: M97-139-01 | 12: M97-141-01 | 13: M97-93-01 | 14: M97-92-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 11-Sep-09 | 11:09 | 7.5 | 2.7 | 9.9 | 2.6 | 3.2 | 4.2 | 410 | 12 | 6.2 | 2.8 |
| Antimony [µg/g] | 11-Sep-09 | 11:09 | 0.9 | 0.9 | < 0.8 | 1.0 | < 0.8 | < 0.8 | 0.9 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 11-Sep-09 | 11:09 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | 0.9 |
| Tin [µg/g] | 11-Sep-09 | 11:09 | 1.2 | 1.0 | 0.8 | 0.7 | 1.0 | 0.8 | 0.9 | 0.9 | 1.1 | 1.2 |
| Strontium [µg/g] | 11-Sep-09 | 11:09 | 190 | 140 | 110 | 130 | 120 | 140 | 150 | 100 | 89 | 140 |
| Titanium [µg/g] | 11-Sep-09 | 07:48 | 1500 | 5000 | 4600 | 5200 | 4100 | 4600 | 3700 | 4000 | 5600 | 2600 |
| Thallium [µg/g] | 11-Sep-09 | 11:09 | 0.03 | 0.09 | 0.31 | 0.07 | 0.14 | 0.10 | 0.66 | 0.19 | 0.17 | 0.13 |
| Uranium [µg/g] | 11-Sep-09 | 11:09 | 0.074 | 0.056 | 0.056 | 0.11 | 0.053 | 0.063 | 0.26 | 0.051 | 0.060 | 0.31 |
| Vanadium [µg/g] | 11-Sep-09 | 11:09 | 200 | 200 | 210 | 220 | 200 | 210 | 190 | 180 | 220 | 170 |
| Yttrium [µg/g] | 11-Sep-09 | 11:09 | 15 | 14 | 6.4 | 16 | 12 | 15 | 3.1 | 3.4 | 6.3 | 7.7 |
| Zinc [µg/g] | 11-Sep-09 | 07:48 | 88 | 88 | 110 | 100 | 87 | 91 | 67 | 110 | 120 | 78 |

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*Environmental Services, Analytical*

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Friday, January 15, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10174-DEC09**
**Reference:** Tiriganiaq

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | Sample Date & Time | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5: M99-386-01 | Dec 2009 | 64.4 | 15.1 | 5.44 | 2.22 | 1.86 | 3.07 | 2.28 | 0.54 | 0.10 | 0.05 | 0.03 | 0.01 | 4.05 | 99.2 |
| 6: M99-386-02 | Dec 2009 | 64.8 | 16.2 | 5.63 | 2.32 | 1.24 | 3.18 | 2.28 | 0.61 | 0.12 | 0.04 | 0.03 | 0.02 | 3.48 | 100.0 |
| 7: M99-385-01 | Dec 2009 | 63.3 | 16.5 | 5.86 | 2.51 | 1.49 | 2.80 | 2.42 | 0.63 | 0.11 | 0.06 | 0.03 | 0.02 | 3.92 | 99.6 |
| 8: M99-341-03 | Dec 2009 | 62.7 | 16.5 | 7.84 | 2.60 | 1.42 | 2.52 | 2.27 | 0.65 | 0.14 | 0.05 | 0.03 | 0.02 | 3.56 | 100.3 |
| 9: M99-345-01 | Dec 2009 | 64.4 | 15.3 | 5.05 | 2.11 | 1.97 | 3.47 | 1.93 | 0.58 | 0.11 | 0.04 | 0.03 | 0.02 | 3.61 | 98.6 |
| 10: M99-345-02 | Dec 2009 | 65.1 | 16.0 | 5.06 | 2.18 | 1.88 | 3.33 | 2.17 | 0.57 | 0.12 | 0.04 | 0.02 | 0.02 | 3.66 | 100.1 |
| 11: M99-345-03 | Dec 2009 | 62.3 | 14.4 | 5.94 | 2.22 | 4.15 | 2.57 | 1.95 | 0.54 | 0.12 | 0.08 | 0.02 | 0.02 | 5.37 | 99.7 |
| 12: M99-346-01 | Dec 2009 | 63.1 | 17.2 | 6.01 | 2.58 | 1.33 | 2.75 | 2.60 | 0.67 | 0.11 | 0.04 | 0.02 | 0.02 | 3.95 | 100.4 |
| 13: M99-346-02 | Dec 2009 | 66.0 | 14.6 | 4.61 | 1.89 | 2.26 | 3.60 | 1.86 | 0.54 | 0.10 | 0.05 | 0.03 | 0.02 | 3.89 | 99.5 |
| 14: M99-346-03 | Dec 2009 | 65.1 | 15.1 | 4.59 | 1.90 | 1.99 | 3.52 | 2.03 | 0.54 | 0.11 | 0.04 | 0.03 | 0.02 | 3.72 | 98.6 |
| 15: M99-403-05 | Dec 2009 | 61.3 | 15.7 | 7.00 | 2.52 | 2.55 | 2.73 | 2.18 | 0.60 | 0.15 | 0.06 | 0.03 | 0.02 | 4.27 | 99.1 |
| 16: M98-298-01 | Dec 2009 | 63.4 | 16.7 | 6.08 | 2.61 | 1.52 | 2.88 | 2.38 | 0.62 | 0.11 | 0.05 | 0.03 | 0.02 | 3.53 | 100.0 |
| 17: M98-298-02 | Dec 2009 | 63.0 | 15.3 | 5.58 | 2.36 | 3.04 | 2.90 | 2.22 | 0.56 | 0.11 | 0.07 | 0.02 | 0.02 | 4.98 | 100.2 |
| 18: M98-298-03 | Dec 2009 | 66.7 | 15.4 | 4.85 | 2.05 | 1.71 | 3.48 | 1.99 | 0.56 | 0.11 | 0.04 | 0.03 | 0.01 | 3.32 | 100.3 |
| 19: M99-404-05 | Dec 2009 | 63.9 | 16.2 | 6.24 | 2.44 | 1.66 | 2.91 | 2.19 | 0.58 | 0.13 | 0.04 | 0.02 | 0.01 | 3.60 | 99.9 |
| 20: M99-404-06 | Dec 2009 | 64.4 | 16.5 | 5.48 | 2.45 | 1.24 | 2.86 | 2.40 | 0.61 | 0.12 | 0.03 | 0.02 | 0.02 | 3.89 | 100.0 |
| 21: M00-476-01 | Dec 2009 | 65.2 | 16.1 | 5.72 | 2.49 | 1.25 | 2.82 | 2.23 | 0.60 | 0.11 | 0.04 | 0.03 | 0.02 | 3.47 | 100.1 |
| 22: M00-476-02 | Dec 2009 | 63.4 | 16.6 | 5.79 | 2.52 | 1.40 | 2.99 | 2.35 | 0.63 | 0.13 | 0.05 | 0.03 | 0.02 | 3.65 | 99.5 |
| 23: M00-479-01 | Dec 2009 | 64.9 | 15.1 | 6.85 | 2.29 | 1.46 | 2.90 | 1.89 | 0.55 | 0.12 | 0.05 | 0.03 | 0.01 | 3.99 | 100.2 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10174-DEC09**

| Sample ID | Sample Date & Time | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24: M00-479-02 | Dec 2009 | 61.3 | 17.1 | 6.27 | 2.73 | 1.87 | 2.54 | 2.79 | 0.69 | 0.12 | 0.06 | 0.03 | 0.02 | 4.37 | 99.9 |
| 25: M06-628-01 | Dec 2009 | 63.5 | 16.3 | 6.10 | 2.34 | 1.79 | 2.85 | 2.44 | 0.59 | 0.12 | 0.05 | 0.02 | 0.02 | 3.65 | 99.8 |
| 26: M06-628-02 | Dec 2009 | 60.7 | 16.2 | 6.41 | 2.63 | 2.65 | 2.38 | 2.56 | 0.67 | 0.31 | 0.06 | 0.02 | 0.02 | 4.68 | 99.3 |
| 27: M99-418-01 | Dec 2009 | 62.9 | 16.8 | 5.79 | 2.54 | 1.40 | 2.69 | 2.65 | 0.63 | 0.12 | 0.05 | 0.03 | 0.02 | 3.75 | 99.3 |
| 28: M98-194-04 | Dec 2009 | 64.4 | 15.2 | 5.45 | 2.06 | 1.78 | 3.37 | 2.23 | 0.55 | 0.11 | 0.04 | 0.03 | 0.01 | 3.75 | 99.0 |
| 29: M07-660-01 | Dec 2009 | 63.6 | 16.5 | 5.28 | 2.21 | 1.70 | 3.27 | 2.34 | 0.61 | 0.11 | 0.05 | 0.03 | 0.02 | 3.56 | 99.3 |
| 30: M07-660-02 | Dec 2009 | 64.6 | 16.5 | 5.81 | 2.57 | 1.29 | 3.05 | 2.25 | 0.62 | 0.12 | 0.05 | 0.02 | 0.02 | 3.39 | 100.2 |
| 31: M99-404-03 | 2008 | 66.7 | 15.4 | 4.71 | 2.03 | 1.61 | 4.08 | 1.72 | 0.55 | 0.11 | 0.04 | 0.02 | 0.01 | 3.20 | 100.2 |
| 32: M99-350-03 | 2008 | 64.0 | 16.3 | 5.55 | 2.40 | 1.75 | 3.15 | 2.23 | 0.60 | 0.11 | 0.04 | 0.02 | 0.02 | 3.71 | 99.9 |
| 33: M98-297-03 | 2008 | 61.8 | 16.8 | 6.93 | 2.54 | 1.57 | 2.53 | 2.62 | 0.61 | 0.12 | 0.04 | 0.02 | 0.02 | 3.70 | 99.3 |
| 34: M07-713-03 | 2008 | 66.5 | 15.3 | 4.70 | 2.00 | 1.89 | 3.53 | 1.99 | 0.54 | 0.11 | 0.04 | 0.02 | 0.02 | 3.33 | 99.9 |

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**SFE (4:1)**

**Project :** Tiriganiaq deposit

Thursday, September 10, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11184-AUG09**
**Reference:** Meliadine Gold Project

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-734-01 | 6: M08-734-02 | 7: M08-734-03 | 8: M08-734-04 | 9: M08-735-01 | 10: M08-735-02 | 11: M08-735-03 | 12: M08-742-01 | 13: M08-742-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Sample [weight(g)] | 03-Sep-09 | 14:29 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 03-Sep-09 | 14:29 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 03-Sep-09 | 14:29 | 9.95 | 9.82 | 9.87 | 9.83 | 9.96 | 9.94 | 9.90 | 9.87 | 9.89 |
| Final pH [units] | 03-Sep-09 | 14:29 | 9.53 | 9.20 | 9.16 | 8.93 | 9.55 | 9.02 | 9.28 | 9.53 | 9.32 |
| pH [no unit] | 08-Sep-09 | 14:04 | 8.26 | 8.00 | 8.10 | 8.26 | 8.73 | 8.29 | 8.17 | 8.26 | 8.10 |
| Conductivity [uS/cm] | 08-Sep-09 | 14:04 | 100 | 109 | 133 | 166 | 138 | 154 | 120 | 109 | 112 |
| Alkalinity [mg/L as CaCO3] | 08-Sep-09 | 14:04 | 45 | 45 | 46 | 84 | 60 | 77 | 44 | 41 | 44 |
| Sulphate [mg/L] | 09-Sep-09 | 15:09 | 2.0 | 1.8 | 8.6 | 1.0 | 3.2 | 0.9 | 2.3 | 3.4 | 1.5 |
| Chloride [mg/L] | 09-Sep-09 | 15:09 | 4.5 | 6.3 | 5.0 | 4.0 | 6.4 | 2.9 | 9.7 | 7.4 | 7.4 |
| Mercury [mg/L] | 10-Sep-09 | 08:50 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 09-Sep-09 | 13:50 | 0.00007 | 0.00002 | 0.00003 | 0.00001 | 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 08-Sep-09 | 14:43 | 1.10 | 1.01 | 0.75 | 0.41 | 1.51 | 0.55 | 0.97 | 1.05 | 0.99 |
| Arsenic [mg/L] | 09-Sep-09 | 13:50 | 0.0123 | 0.0010 | 0.0134 | 0.0233 | 0.0189 | 0.0585 | 0.0103 | 0.0022 | 0.0014 |
| Boron [mg/L] | 09-Sep-09 | 13:50 | 0.0194 | 0.0129 | 0.0148 | 0.0196 | 0.0369 | 0.0167 | 0.0161 | 0.0184 | 0.0142 |
| Beryllium [mg/L] | 09-Sep-09 | 13:50 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 09-Sep-09 | 13:50 | 0.00004 | 0.00003 | 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 08-Sep-09 | 14:43 | 3.93 | 6.73 | 7.11 | 10.4 | 3.03 | 7.04 | 5.89 | 4.38 | 5.59 |
| Cadmium [mg/L] | 09-Sep-09 | 13:50 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 09-Sep-09 | 13:50 | 0.000033 | 0.000033 | 0.000026 | 0.000045 | 0.000022 | 0.000047 | 0.000021 | 0.000022 | 0.000019 |
| Chromium [mg/L] | 09-Sep-09 | 13:50 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 09-Sep-09 | 13:50 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 08-Sep-09 | 14:43 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 08-Sep-09 | 14:43 | 4.56 | 7.49 | 7.72 | 7.89 | 8.94 | 17.2 | 6.56 | 7.36 | 9.25 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1)**

**Project :** Tiriganiaq deposit

**LR Report :** CA11184-AUG09

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-734-01 | 6: M08-734-02 | 7: M08-734-03 | 8: M08-734-04 | 9: M08-735-01 | 10: M08-735-02 | 11: M08-735-03 | 12: M08-742-01 | 13: M08-742-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium [mg/L] | 09-Sep-09 | 13:50 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.002 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium [mg/L] | 08-Sep-09 | 14:43 | 0.476 | 0.992 | 1.12 | 5.94 | 0.370 | 3.04 | 0.813 | 0.476 | 0.812 |
| Manganese [mg/L] | 09-Sep-09 | 13:50 | 0.00031 | 0.00075 | 0.00079 | 0.00069 | 0.00039 | 0.00118 | 0.00066 | 0.00035 | 0.00046 |
| Molybdenum [mg/L] | 09-Sep-09 | 13:50 | 0.00028 | 0.00018 | 0.00046 | 0.00023 | 0.00030 | 0.00011 | 0.00022 | 0.00013 | 0.00009 |
| Sodium [mg/L] | 08-Sep-09 | 14:44 | 14.0 | 10.2 | 13.6 | 11.9 | 20.1 | 11.5 | 13.4 | 12.8 | 11.6 |
| Nickel [mg/L] | 09-Sep-09 | 13:50 | < 0.0001 | < 0.0001 | 0.0001 | 0.0002 | < 0.0001 | 0.0003 | < 0.0001 | < 0.0001 | < 0.0001 |
| Lead [mg/L] | 09-Sep-09 | 13:50 | 0.00006 | 0.00008 | 0.00005 | 0.00008 | 0.00014 | 0.00023 | 0.00022 | 0.00018 | 0.00014 |
| Antimony [mg/L] | 09-Sep-09 | 13:50 | 0.0027 | 0.0017 | 0.0045 | 0.0018 | 0.0033 | 0.0032 | 0.0024 | 0.0024 | 0.0026 |
| Selenium [mg/L] | 09-Sep-09 | 13:50 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 09-Sep-09 | 13:50 | 0.00003 | 0.00003 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00001 | 0.00003 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 08-Sep-09 | 14:44 | 0.0115 | 0.0157 | 0.0268 | 0.0185 | 0.0132 | 0.0227 | 0.0220 | 0.0156 | 0.0140 |
| Titanium [mg/L] | 09-Sep-09 | 13:50 | 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0001 | < 0.0001 | 0.0002 | 0.0004 | 0.0002 |
| Thallium [mg/L] | 09-Sep-09 | 13:50 | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 09-Sep-09 | 13:50 | 0.000023 | 0.000017 | 0.000013 | 0.000084 | 0.000014 | 0.000005 | 0.000006 | 0.000050 | 0.000002 |
| Vanadium [mg/L] | 09-Sep-09 | 13:50 | 0.00742 | 0.00110 | 0.00189 | 0.00074 | 0.0105 | 0.00148 | 0.00264 | 0.0106 | 0.00248 |
| Tungsten [mg/L] | 09-Sep-09 | 13:50 | 0.00092 | 0.00104 | 0.00268 | 0.00205 | 0.00142 | 0.00207 | 0.00146 | 0.00201 | 0.00065 |
| Yttrium [mg/L] | 09-Sep-09 | 13:50 | 0.000003 | 0.000003 | 0.000002 | 0.000001 | 0.000004 | 0.000002 | 0.000003 | 0.000002 | 0.000002 |
| Zinc [mg/L] | 09-Sep-09 | 13:50 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

**SFE (4:1)**

**Project :** Tiriganiaq deposit

Thursday, September 10, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11184-AUG09**
**Reference:** Meliadine Gold Project

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: M08-742-03 | 15: M08-742-04 | 16: M08-742-05 | 17: M08-742-06 | 18: M08-743-01 | 19: M08-743-02 | 20: M08-743-03 | 21: M08-743-04 | 22: M08-750-01 | 23: M08-750-02 | 24: M08-750-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.84 | 9.88 | 9.53 | 9.90 | 9.92 | 9.85 | 9.60 | 9.96 | 9.94 | 9.82 | 9.91 |
| Final pH [units] | 9.02 | 9.14 | 8.29 | 9.71 | 9.82 | 9.26 | 8.40 | 9.94 | 9.39 | 8.84 | 9.26 |
| pH [no unit] | 8.13 | 8.23 | 8.07 | 8.74 | 9.12 | 8.21 | 8.12 | 9.15 | 8.27 | 8.27 | 8.12 |
| Conductivity [uS/cm] | 138 | 136 | 219 | 85 | 108 | 115 | 237 | 106 | 100 | 177 | 107 |
| Alkalinity [mg/L as CaCO3] | 65 | 61 | 81 | 40 | 43 | 50 | 85 | 49 | 46 | 82 | 48 |
| Sulphate [mg/L] | 1.6 | 1.2 | 5.8 | 1.1 | 2.6 | 1.1 | 4.5 | 1.1 | 1.6 | 1.0 | 1.2 |
| Chloride [mg/L] | 5.0 | 7.1 | 3.7 | 3.7 | 6.5 | 5.6 | 8.7 | 3.9 | 4.0 | 7.5 | 3.8 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00001 | < 0.00001 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00008 | < 0.00001 | < 0.00001 | 0.00009 | 0.00008 |
| Aluminum [mg/L] | 0.51 | 0.61 | 0.07 | 0.67 | 0.87 | 0.67 | 0.15 | 0.90 | 0.86 | 0.49 | 1.12 |
| Arsenic [mg/L] | 0.0052 | 0.0023 | 0.0006 | 0.0026 | 0.0038 | 0.0210 | 0.0070 | 0.0176 | 0.0013 | 0.0159 | 0.0097 |
| Boron [mg/L] | 0.0130 | 0.0182 | 0.0150 | 0.0164 | 0.0175 | 0.0176 | 0.0185 | 0.0315 | 0.0085 | 0.0211 | 0.0311 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00004 | 0.00009 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00004 | 0.00011 |
| Calcium [mg/L] | 7.63 | 6.02 | 25.5 | 3.29 | 3.17 | 5.92 | 24.4 | 2.68 | 4.99 | 10.5 | 5.91 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000152 | < 0.000003 | < 0.000003 | 0.000026 | 0.000043 |
| Cobalt [mg/L] | 0.000026 | 0.000029 | 0.000093 | 0.000022 | 0.000023 | 0.000021 | 0.000213 | 0.000055 | 0.000018 | 0.000070 | 0.000082 |
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.01 | < 0.01 | < 0.01 | 0.08 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 7.98 | 9.71 | 3.18 | 0.98 | 4.90 | 8.14 | 8.92 | 3.77 | 12.1 | 13.1 | 11.8 |

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**SFE (4:1)**

**Project :** Tiriganiaq deposit

**LR Report :** CA11184-AUG09

| Analysis | 14: M08-742-03 | 15: M08-742-04 | 16: M08-742-05 | 17: M08-742-06 | 18: M08-743-01 | 19: M08-743-02 | 20: M08-743-03 | 21: M08-743-04 | 22: M08-750-01 | 23: M08-750-02 | 24: M08-750-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium [mg/L] | 0.001 | 0.001 | 0.003 | < 0.001 | < 0.001 | 0.001 | 0.004 | < 0.001 | < 0.001 | 0.001 | 0.001 |
| Magnesium [mg/L] | 3.12 | 2.03 | 7.93 | 0.448 | 0.330 | 1.54 | 7.30 | 0.279 | 0.707 | 4.77 | 0.792 |
| Manganese [mg/L] | 0.00085 | 0.00059 | 0.121 | 0.00090 | 0.00038 | 0.00070 | 0.0985 | 0.00165 | 0.00068 | 0.00192 | 0.00075 |
| Molybdenum [mg/L] | 0.00013 | 0.00014 | 0.00012 | 0.00006 | 0.00017 | 0.00007 | 0.00059 | 0.00018 | 0.00009 | 0.00039 | 0.00032 |
| Sodium [mg/L] | 11.9 | 13.9 | 4.53 | 12.8 | 15.3 | 11.7 | 7.02 | 17.2 | 7.63 | 12.0 | 8.60 |
| Nickel [mg/L] | < 0.0001 | < 0.0001 | 0.0003 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0009 | 0.0002 | < 0.0001 | 0.0002 | < 0.0001 |
| Lead [mg/L] | 0.00012 | 0.00010 | 0.00009 | 0.00008 | 0.00008 | 0.00008 | 0.00008 | 0.00009 | 0.00008 | 0.00007 | 0.00014 |
| Antimony [mg/L] | 0.0075 | 0.0024 | 0.0015 | 0.0039 | 0.0032 | 0.0039 | 0.0032 | 0.0058 | 0.0015 | 0.0025 | 0.0021 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 0.00001 | 0.00001 | < 0.00001 | 0.00001 | 0.00038 | < 0.00001 | 0.00003 | 0.00002 | 0.00003 | 0.00002 | < 0.00001 |
| Strontium [mg/L] | 0.0261 | 0.0228 | 0.0410 | 0.0101 | 0.0093 | 0.0149 | 0.0404 | 0.0068 | 0.0404 | 0.0441 | 0.0360 |
| Titanium [mg/L] | < 0.0001 | < 0.0001 | 0.0002 | 0.0001 | 0.0005 | < 0.0001 | 0.0002 | 0.0021 | < 0.0001 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00006 | 0.00008 |
| Uranium [mg/L] | 0.000003 | 0.000002 | 0.000165 | 0.000005 | 0.000023 | 0.000002 | 0.000085 | 0.000033 | 0.000002 | 0.000035 | 0.000103 |
| Vanadium [mg/L] | 0.00109 | 0.00109 | 0.00006 | 0.0128 | 0.0212 | 0.00354 | 0.00011 | 0.0359 | 0.00355 | 0.00058 | 0.00218 |
| Tungsten [mg/L] | 0.00122 | 0.00265 | 0.00045 | 0.00154 | 0.00179 | 0.00111 | 0.00037 | 0.00129 | 0.00193 | 0.00142 | 0.00405 |
| Yttrium [mg/L] | 0.000002 | 0.000002 | 0.000002 | 0.000003 | 0.000003 | 0.000002 | 0.000002 | 0.000010 | 0.000002 | 0.000026 | 0.000043 |
| Zinc [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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Thursday, January 14, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10175-DEC09**
**Reference:** Tiriganiaq

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-386-01 | 6: M99-386-02 | 7: M99-385-01 | 8: M99-341-03 | 9: M99-345-01 | 10: M99-345-02 | 11: M99-345-03 | 12: M99-346-01 | 13: M99-346-02 | 14: M99-346-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Silver [µg/g] | 14-Jan-10 | 09:45 | 0.39 | 0.43 | 0.34 | 0.31 | 0.37 | 0.43 | 0.30 | 0.31 | 0.37 | 0.36 |
| Aluminum [µg/g] | 14-Jan-10 | 08:40 | 75000 | 78000 | 76000 | 78000 | 74000 | 75000 | 71000 | 81000 | 71000 | 74000 |
| Arsenic [µg/g] | 14-Jan-10 | 09:45 | 2200 | 31 | 39 | 64 | 44 | 18 | 46 | 91 | 64 | 11 |
| Barium [µg/g] | 14-Jan-10 | 09:45 | 780 | 870 | 600 | 560 | 730 | 730 | 600 | 610 | 690 | 720 |
| Beryllium [µg/g] | 14-Jan-10 | 09:45 | 1.2 | 1.0 | 0.99 | 1.0 | 0.89 | 0.95 | 0.86 | 1.0 | 0.91 | 0.95 |
| Bismuth [µg/g] | 14-Jan-10 | 09:45 | 0.16 | 0.13 | 0.09 | < 0.09 | 0.11 | 0.11 | 0.12 | < 0.09 | 0.13 | 0.13 |
| Calcium [µg/g] | 14-Jan-10 | 08:40 | 12000 | 7900 | 7200 | 9000 | 13000 | 12000 | 26000 | 8400 | 14000 | 13000 |
| Cadmium [µg/g] | 14-Jan-10 | 09:45 | 0.27 | 0.28 | 0.27 | 0.22 | 0.27 | 0.61 | 0.29 | 0.23 | 0.31 | 0.26 |
| Cobalt [µg/g] | 14-Jan-10 | 09:45 | 18 | 20 | 20 | 18 | 19 | 19 | 18 | 20 | 18 | 17 |
| Chromium [µg/g] | 14-Jan-10 | 09:45 | 160 | 170 | 150 | 150 | 170 | 150 | 150 | 140 | 170 | 160 |
| Copper [µg/g] | 14-Jan-10 | 08:39 | 73 | 72 | 39 | 37 | 48 | 130 | 43 | 42 | 45 | 43 |
| Iron [µg/g] | 14-Jan-10 | 08:39 | 37000 | 38000 | 38000 | 52000 | 35000 | 35000 | 41000 | 40000 | 31000 | 31000 |
| Potassium [µg/g] | 14-Jan-10 | 08:39 | 22000 | 22000 | 22000 | 21000 | 19000 | 21000 | 19000 | 24000 | 18000 | 20000 |
| Lithium [µg/g] | 14-Jan-10 | 09:45 | 28 | 36 | 35 | 38 | 32 | 34 | 32 | 35 | 23 | 25 |
| Magnesium [µg/g] | 14-Jan-10 | 08:35 | 13000 | 14000 | 14000 | 15000 | 12000 | 12000 | 13000 | 14000 | 10000 | 11000 |
| Manganese [µg/g] | 14-Jan-10 | 09:46 | 300 | 290 | 330 | 320 | 310 | 280 | 530 | 290 | 310 | 280 |
| Molybdenum [µg/g] | 14-Jan-10 | 09:46 | 2.2 | 1.3 | 1.4 | 1.3 | 1.3 | 1.8 | 1.3 | 1.5 | 1.4 | 1.2 |
| Sodium [µg/g] | 14-Jan-10 | 08:35 | 20000 | 20000 | 17000 | 16000 | 20000 | 19000 | 16000 | 17000 | 21000 | 20000 |
| Nickel [µg/g] | 14-Jan-10 | 09:46 | 59 | 61 | 66 | 71 | 59 | 58 | 61 | 69 | 58 | 54 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA10175-DEC09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-386-01 | 6: M99-386-02 | 7: M99-385-01 | 8: M99-341-03 | 9: M99-345-01 | 10: M99-345-02 | 11: M99-345-03 | 12: M99-346-01 | 13: M99-346-02 | 14: M99-346-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 14-Jan-10 | 09:46 | 27 | 12 | 12 | 6.7 | 10 | 17 | 12 | 11 | 17 | 14 |
| Antimony [µg/g] | 14-Jan-10 | 09:46 | 1.0 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | 1.2 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 14-Jan-10 | 09:46 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 14-Jan-10 | 09:46 | 1.0 | 0.9 | 0.7 | 1.0 | 0.8 | 1.1 | 0.7 | 1.5 | 1.2 | 0.8 |
| Strontium [µg/g] | 14-Jan-10 | 09:46 | 290 | 300 | 250 | 240 | 340 | 300 | 310 | 270 | 360 | 330 |
| Titanium [µg/g] | 14-Jan-10 | 08:32 | 2500 | 1200 | 1200 | 3700 | 1100 | 990 | 1100 | 1500 | 1300 | 1300 |
| Thallium [µg/g] | 14-Jan-10 | 09:46 | 0.45 | 0.40 | 0.42 | 0.35 | 0.32 | 0.35 | 0.33 | 0.46 | 0.31 | 0.37 |
| Uranium [µg/g] | 14-Jan-10 | 09:46 | 1.5 | 1.7 | 1.7 | 1.6 | 1.7 | 1.6 | 1.5 | 1.6 | 1.7 | 1.6 |
| Vanadium [µg/g] | 14-Jan-10 | 09:46 | 78 | 85 | 91 | 99 | 79 | 79 | 81 | 99 | 69 | 73 |
| Yttrium [µg/g] | 14-Jan-10 | 09:46 | 6.7 | 7.8 | 6.4 | 6.9 | 6.9 | 7.9 | 6.3 | 6.6 | 7.1 | 8.0 |
| Zinc [µg/g] | 14-Jan-10 | 08:31 | 87 | 97 | 80 | 80 | 72 | 150 | 79 | 92 | 89 | 74 |

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Thursday, January 14, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10175-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 15: M99-403-05 | 16: M98-298-01 | 17: M98-298-02 | 18: M98-298-03 | 19: M99-404-05 | 20: M99-404-06 | 21: M00-476-01 | 22: M00-476-02 | 23: M00-479-01 | 24: M00-479-02 | 25: M06-628-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Silver [µg/g] | 0.43 | 0.39 | 0.32 | 0.36 | 0.40 | 0.33 | 0.35 | 0.34 | 0.38 | 0.43 | 0.39 |
| Aluminum [µg/g] | 75000 | 80000 | 80000 | 77000 | 79000 | 80000 | 79000 | 81000 | 74000 | 81000 | 78000 |
| Arsenic [µg/g] | 89 | 32 | 330 | 15 | 45 | 120 | 30 | 36 | 110 | 58 | 57 |
| Barium [µg/g] | 620 | 830 | 610 | 800 | 830 | 730 | 670 | 550 | 750 | 740 | 970 |
| Beryllium [µg/g] | 1.1 | 0.94 | 1.00 | 0.89 | 1.1 | 1.0 | 0.96 | 0.98 | 0.92 | 1.2 | 1.1 |
| Bismuth [µg/g] | 0.34 | 0.38 | 0.12 | < 0.09 | 0.09 | < 0.09 | 0.13 | < 0.09 | 0.21 | 0.21 | < 0.09 |
| Calcium [µg/g] | 17000 | 10000 | 21000 | 11000 | 11000 | 7900 | 8100 | 9000 | 9300 | 12000 | 12000 |
| Cadmium [µg/g] | 0.25 | 0.23 | 0.27 | 0.25 | 0.28 | 0.27 | 0.26 | 0.25 | 0.24 | 0.27 | 0.24 |
| Cobalt [µg/g] | 18 | 21 | 18 | 17 | 22 | 19 | 19 | 21 | 15 | 19 | 18 |
| Chromium [µg/g] | 160 | 150 | 140 | 150 | 150 | 130 | 170 | 160 | 150 | 150 | 140 |
| Copper [µg/g] | 37 | 43 | 40 | 42 | 54 | 41 | 48 | 45 | 29 | 52 | 77 |
| Iron [µg/g] | 47000 | 41000 | 39000 | 33000 | 42000 | 37000 | 39000 | 39000 | 45000 | 41000 | 41000 |
| Potassium [µg/g] | 21000 | 23000 | 22000 | 20000 | 22000 | 23000 | 22000 | 23000 | 19000 | 26000 | 23000 |
| Lithium [µg/g] | 36 | 36 | 31 | 32 | 38 | 35 | 37 | 35 | 34 | 36 | 31 |
| Magnesium [µg/g] | 14000 | 14000 | 14000 | 12000 | 14000 | 14000 | 14000 | 14000 | 13000 | 15000 | 14000 |
| Manganese [µg/g] | 410 | 300 | 460 | 270 | 290 | 250 | 280 | 300 | 320 | 360 | 310 |
| Molybdenum [µg/g] | 1.7 | 1.5 | 1.5 | 1.1 | 1.4 | 1.5 | 1.4 | 1.4 | 1.2 | 2.4 | 1.5 |
| Sodium [µg/g] | 17000 | 18000 | 20000 | 21000 | 19000 | 19000 | 19000 | 20000 | 19000 | 16000 | 19000 |
| Nickel [µg/g] | 71 | 65 | 64 | 56 | 64 | 65 | 67 | 68 | 56 | 72 | 66 |

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**LR Report :** **CA10175-DEC09**

| Analysis | 15: M99-403-05 | 16: M98-298-01 | 17: M98-298-02 | 18: M98-298-03 | 19: M99-404-05 | 20: M99-404-06 | 21: M00-476-01 | 22: M00-476-02 | 23: M00-479-01 | 24: M00-479-02 | 25: M06-628-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 32 | 13 | 15 | 13 | 13 | 9.4 | 12 | 11 | 19 | 17 | 22 |
| Antimony [µg/g] | < 0.8 | < 0.8 | 1.1 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 1.1 | < 0.5 | 1.2 | 1.3 | 0.7 | 1.4 | 0.7 | 0.8 | 0.6 | 1.1 | 0.6 |
| Strontium [µg/g] | 290 | 280 | 330 | 350 | 300 | 260 | 250 | 240 | 280 | 260 | 340 |
| Titanium [µg/g] | 3500 | 1400 | 1700 | 930 | 1100 | 1100 | 1300 | 1100 | 2200 | 1400 | 2500 |
| Thallium [µg/g] | 0.37 | 0.39 | 0.39 | 0.33 | 0.39 | 0.40 | 0.39 | 0.39 | 0.33 | 0.49 | 0.40 |
| Uranium [µg/g] | 1.6 | 1.5 | 1.5 | 1.7 | 1.7 | 1.7 | 1.6 | 1.7 | 1.4 | 2.1 | 1.7 |
| Vanadium [µg/g] | 97 | 91 | 86 | 74 | 85 | 90 | 89 | 92 | 78 | 99 | 89 |
| Yttrium [µg/g] | 8.6 | 7.4 | 7.0 | 7.4 | 7.0 | 6.4 | 6.7 | 7.0 | 6.1 | 7.3 | 6.6 |
| Zinc [µg/g] | 77 | 87 | 76 | 74 | 93 | 84 | 84 | 83 | 74 | 82 | 79 |

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Thursday, January 14, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10175-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 26: M06-628-02 | 27: M99-418-01 | 28: M98-194-04 | 29: M07-660-01 | 30: M07-660-02 | 31: M04-520-01 | 32: M04-520-02 | 33: M08-769-01 | 34: M08-721-01 | 35: M08-721-02 | 36: M08-754-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Silver [µg/g] | 0.83 | 1.2 | 0.48 | 0.45 | 0.38 | 0.35 | 0.17 | 0.22 | 0.14 | 1.4 | 0.36 |
| Aluminum [µg/g] | 80000 | 80000 | 76000 | 81000 | 79000 | 78000 | 71000 | 62000 | 22000 | 77000 | 81000 |
| Arsenic [µg/g] | 37 | 190 | 31 | 35 | 31 | 92 | 9.4 | 26 | 8.7 | 280 | 47 |
| Barium [µg/g] | 2100 | 880 | 830 | 770 | 730 | 750 | 230 | 400 | 53 | 920 | 750 |
| Beryllium [µg/g] | 1.6 | 1.2 | 1.0 | 1.1 | 1.1 | 1.2 | 0.62 | 0.89 | 0.37 | 1.2 | 1.0 |
| Bismuth [µg/g] | 0.60 | 0.33 | 0.15 | 0.16 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | 2.4 | < 0.09 |
| Calcium [µg/g] | 17000 | 8900 | 12000 | 11000 | 8300 | 11000 | 49000 | 28000 | 52000 | 15000 | 11000 |
| Cadmium [µg/g] | 0.55 | 0.38 | 0.35 | 0.33 | 0.28 | 0.24 | 0.13 | 0.17 | 0.13 | 0.34 | 0.23 |
| Cobalt [µg/g] | 19 | 20 | 16 | 17 | 18 | 20 | 43 | 8.2 | 44 | 17 | 18 |
| Chromium [µg/g] | 150 | 150 | 140 | 140 | 140 | 170 | 720 | 79 | 690 | 160 | 140 |
| Copper [µg/g] | 39 | 56 | 41 | 44 | 40 | 14 | 54 | 22 | 59 | 40 | 30 |
| Iron [µg/g] | 44000 | 39000 | 37000 | 37000 | 40000 | 42000 | 71000 | 62000 | 65000 | 36000 | 42000 |
| Potassium [µg/g] | 25000 | 25000 | 21000 | 21000 | 21000 | 26000 | 11000 | 12000 | 610 | 25000 | 26000 |
| Lithium [µg/g] | 38 | 35 | 23 | 32 | 38 | 27 | 52 | 19 | 54 | 23 | 29 |
| Magnesium [µg/g] | 15000 | 14000 | 12000 | 13000 | 15000 | 13000 | 35000 | 7400 | 40000 | 13000 | 14000 |
| Manganese [µg/g] | 410 | 330 | 270 | 290 | 270 | 360 | 1100 | 350 | 1200 | 300 | 190 |
| Molybdenum [µg/g] | 1.3 | 1.4 | 1.1 | 1.3 | 1.7 | 1.6 | 0.4 | 0.4 | 0.3 | 1.2 | 1.5 |
| Sodium [µg/g] | 16000 | 17000 | 19000 | 19000 | 19000 | 14000 | 9600 | 19000 | 12000 | 17000 | 16000 |
| Nickel [µg/g] | 73 | 67 | 59 | 57 | 65 | 73 | 250 | 23 | 230 | 67 | 75 |

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**LR Report :** **CA10175-DEC09**

| Analysis | 26: M06-628-02 | 27: M99-418-01 | 28: M98-194-04 | 29: M07-660-01 | 30: M07-660-02 | 31: M04-520-01 | 32: M04-520-02 | 33: M08-769-01 | 34: M08-721-01 | 35: M08-721-02 | 36: M08-754-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 42 | 14 | 8.3 | 15 | 10 | 10 | 14 | 11 | 7.4 | 340 | 17 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 1.0 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 0.8 | 0.6 | 0.7 | 0.8 | 0.8 | 1.3 | 0.7 | 0.9 | < 0.5 | 1.1 | 0.9 |
| Strontium [µg/g] | 430 | 280 | 270 | 310 | 270 | 220 | 270 | 420 | 280 | 230 | 230 |
| Titanium [µg/g] | 2600 | 1200 | 3300 | 1300 | 1000 | 3700 | 4400 | 2100 | 620 | 3400 | 3500 |
| Thallium [µg/g] | 0.71 | 0.59 | 0.43 | 0.46 | 0.39 | 0.48 | 0.51 | 0.19 | < 0.02 | 0.47 | 0.47 |
| Uranium [µg/g] | 1.8 | 1.7 | 1.6 | 1.9 | 1.6 | 1.6 | 0.28 | 0.73 | 0.11 | 1.6 | 1.7 |
| Vanadium [µg/g] | 95 | 95 | 79 | 88 | 90 | 96 | 200 | 37 | 180 | 90 | 100 |
| Yttrium [µg/g] | 10 | 6.7 | 6.4 | 6.4 | 6.2 | 7.0 | 6.5 | 5.5 | 2.4 | 7.4 | 7.4 |
| Zinc [µg/g] | 90 | 88 | 77 | 75 | 94 | 65 | 94 | 46 | 89 | 65 | 69 |

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Thursday, January 14, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10175-DEC09**
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 37: M08-731W1-01 | 38: M08-731W1-02 | 39: M09-823-01 | 40: M09-823-02 | 41: M98-257-01 | 42: M98-266-01 | 43: M06-601A-01 | 45: M03-498-01 | 47: M03-499-02 | 48: M07-649-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Silver [µg/g] | 0.21 | 0.37 | 0.19 | 0.33 | 0.33 | 0.66 | 0.19 | 0.28 | 0.46 | 0.31 |
| Aluminum [µg/g] | 62000 | 80000 | 64000 | 77000 | 78000 | 84000 | 64000 | 77000 | 77000 | 77000 |
| Arsenic [µg/g] | 8.7 | 53 | 16 | 23 | 23 | 75 | 7.2 | 240 | 35 | 280 |
| Barium [µg/g] | 130 | 670 | 170 | 530 | 470 | 700 | 130 | 620 | 1200 | 620 |
| Beryllium [µg/g] | 0.39 | 0.98 | 0.47 | 0.90 | 0.97 | 1.1 | 0.42 | 0.89 | 1.4 | 1.1 |
| Bismuth [µg/g] | < 0.09 | 0.25 | < 0.09 | < 0.09 | 0.10 | 0.18 | < 0.09 | < 0.09 | 0.29 | < 0.09 |
| Calcium [µg/g] | 58000 | 21000 | 57000 | 11000 | 13000 | 15000 | 50000 | 23000 | 17000 | 15000 |
| Cadmium [µg/g] | 0.26 | 0.23 | 0.28 | 0.24 | 0.26 | 0.24 | 0.25 | 0.18 | 0.26 | 0.26 |
| Cobalt [µg/g] | 46 | 20 | 47 | 21 | 17 | 22 | 39 | 12 | 19 | 18 |
| Chromium [µg/g] | 60 | 97 | 34 | 120 | 110 | 130 | 39 | 44 | 120 | 92 |
| Copper [µg/g] | 99 | 61 | 110 | 47 | 40 | 51 | 57 | 24 | 45 | 44 |
| Iron [µg/g] | 96000 | 41000 | 99000 | 35000 | 43000 | 44000 | 82000 | 36000 | 41000 | 53000 |
| Potassium [µg/g] | 2200 | 26000 | 7400 | 21000 | 21000 | 29000 | 6500 | 21000 | 25000 | 24000 |
| Lithium [µg/g] | 22 | 26 | 24 | 29 | 27 | 34 | 39 | 18 | 26 | 26 |
| Magnesium [µg/g] | 27000 | 14000 | 28000 | 13000 | 13000 | 16000 | 27000 | 7600 | 13000 | 14000 |
| Manganese [µg/g] | 1300 | 370 | 1300 | 270 | 370 | 360 | 990 | 280 | 400 | 290 |
| Molybdenum [µg/g] | 0.4 | 1.0 | 0.5 | 1.2 | 1.4 | 1.4 | 0.3 | 0.4 | 1.2 | 0.9 |
| Sodium [µg/g] | 15000 | 18000 | 17000 | 20000 | 19000 | 14000 | 20000 | 25000 | 16000 | 17000 |
| Nickel [µg/g] | 68 | 63 | 70 | 64 | 64 | 77 | 63 | 34 | 71 | 63 |

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**LR Report :** CA10175-DEC09

| Analysis | 37: M08-731W1-01 | 38: M08-731W1-02 | 39: M09-823-01 | 40: M09-823-02 | 41: M98-257-01 | 42: M98-266-01 | 43: M06-601A-01 | 45: M03-498-01 | 47: M03-499-02 | 48: M07-649-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 14 | 12 | 14 | 10 | 11 | 18 | 8.5 | 9.2 | 46 | 8.3 |
| Antimony [µg/g] | 0.9 | < 0.8 | 1.2 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 0.5 | 1.3 | 1.2 | 0.7 | 1.4 | 1.1 | 0.5 | < 0.5 | 1.2 | 0.7 |
| Strontium [µg/g] | 320 | 290 | 250 | 260 | 250 | 260 | 270 | 460 | 280 | 230 |
| Titanium [µg/g] | 7900 | 3400 | 8200 | 2600 | 3500 | 2400 | 7100 | 2800 | 3800 | 3600 |
| Thallium [µg/g] | 0.04 | 0.47 | 0.27 | 0.33 | 0.30 | 0.50 | 0.40 | 0.30 | 0.38 | 0.39 |
| Uranium [µg/g] | 0.23 | 1.7 | 0.75 | 1.6 | 1.6 | 1.7 | 0.21 | 1.0 | 1.5 | 1.4 |
| Vanadium [µg/g] | 260 | 110 | 280 | 84 | 89 | 110 | 220 | 54 | 96 | 94 |
| Yttrium [µg/g] | 21 | 8.2 | 21 | 7.4 | 7.1 | 7.3 | 11 | 5.7 | 7.5 | 6.7 |
| Zinc [µg/g] | 120 | 73 | 120 | 73 | 72 | 90 | 110 | 55 | 62 | 73 |

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Thursday, January 14, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10175-DEC09**
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 50: M06-607-01 | 51: M07-672B-01 | 52: M07-685-01 | 53: M07-685-02 | 54: M07-691-01 | 55: M06-621-01 | 57: M99-404-03 | 58: M99-350-03 | 59: M98-297-03 | 60: M07-713-03 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | 2008 | 2008 | 2008 | 2008 |
| Silver [µg/g] | 0.38 | 0.37 | 0.35 | 0.43 | 0.37 | 0.38 | 0.36 | 0.38 | 0.38 | 0.36 |
| Aluminum [µg/g] | 72000 | 73000 | 64000 | 80000 | 74000 | 79000 | 72000 | 73000 | 79000 | 69000 |
| Arsenic [µg/g] | 120 | 43 | 20 | 150 | 47 | 30 | 46 | 18 | 62 | 17 |
| Barium [µg/g] | 510 | 490 | 350 | 490 | 450 | 560 | 580 | 620 | 750 | 760 |
| Beryllium [µg/g] | 1.0 | 1.0 | 0.76 | 1.0 | 0.94 | 0.98 | 0.87 | 0.90 | 1.1 | 0.88 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | 0.10 | 0.16 | 0.11 | 0.13 | < 0.09 | 0.14 | 0.10 | < 0.09 |
| Calcium [µg/g] | 8900 | 6700 | 9400 | 9000 | 6100 | 11000 | 9700 | 10000 | 9800 | 11000 |
| Cadmium [µg/g] | 0.24 | 0.24 | 0.22 | 0.30 | 0.24 | 0.24 | 0.24 | 0.24 | 0.22 | 0.23 |
| Cobalt [µg/g] | 19 | 21 | 20 | 22 | 18 | 17 | 16 | 17 | 16 | 17 |
| Chromium [µg/g] | 120 | 120 | 99 | 130 | 99 | 110 | 110 | 110 | 110 | 100 |
| Copper [µg/g] | 22 | 27 | 40 | 47 | 43 | 46 | 39 | 36 | 42 | 38 |
| Iron [µg/g] | 45000 | 48000 | 29000 | 45000 | 38000 | 35000 | 30000 | 34000 | 45000 | 29000 |
| Potassium [µg/g] | 20000 | 22000 | 17000 | 23000 | 21000 | 22000 | 16000 | 20000 | 24000 | 18000 |
| Lithium [µg/g] | 37 | 31 | 22 | 31 | 28 | 29 | 29 | 35 | 35 | 29 |
| Magnesium [µg/g] | 13000 | 13000 | 9700 | 15000 | 13000 | 13000 | 11000 | 12000 | 14000 | 10000 |
| Manganese [µg/g] | 300 | 260 | 250 | 350 | 250 | 290 | 270 | 260 | 270 | 220 |
| Molybdenum [µg/g] | 1.2 | 1.2 | 1.2 | 1.4 | 1.1 | 1.3 | 1.4 | 1.2 | 1.3 | 1.0 |
| Sodium [µg/g] | 16000 | 14000 | 18000 | 18000 | 18000 | 20000 | 21000 | 18000 | 16000 | 19000 |
| Nickel [µg/g] | 73 | 73 | 57 | 79 | 65 | 57 | 53 | 57 | 66 | 52 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS Lakefield Research Limited
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10175-DEC09**

| Analysis | 50: M06-607-01 | 51: M07-672B-01 | 52: M07-685-01 | 53: M07-685-02 | 54: M07-691-01 | 55: M06-621-01 | 57: M99-404-03 | 58: M99-350-03 | 59: M98-297-03 | 60: M07-713-03 |
|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 11 | 11 | 8.9 | 12 | 10 | 12 | 9.0 | 9.4 | 9.2 | 12 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 1.0 | 0.8 | < 0.5 | 1.1 | 0.6 | 1.0 | 0.9 | 0.6 | 1.1 | 0.7 |
| Strontium [µg/g] | 220 | 150 | 240 | 190 | 190 | 290 | 300 | 260 | 260 | 320 |
| Titanium [µg/g] | 3100 | 3800 | 2200 | 3800 | 3100 | 1500 | 1000 | 820 | 2500 | 960 |
| Thallium [µg/g] | 0.38 | 0.41 | 0.29 | 0.44 | 0.39 | 0.41 | 0.31 | 0.38 | 0.48 | 0.37 |
| Uranium [µg/g] | 1.6 | 1.5 | 1.5 | 1.7 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 |
| Vanadium [µg/g] | 94 | 110 | 66 | 110 | 91 | 86 | 69 | 81 | 92 | 68 |
| Yttrium [µg/g] | 6.3 | 6.1 | 5.7 | 6.7 | 5.5 | 6.2 | 6.2 | 7.0 | 6.3 | 6.4 |
| Zinc [µg/g] | 82 | 77 | 62 | 84 | 75 | 74 | 78 | 68 | 76 | 67 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1) 0.45µm, 24hr

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Wednesday, January 13, 2010

**Date Rec. :** 18 December 2009
**LR Report:** CA10176-DEC09
**Reference:** Tiriganiaq

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-386-01 | 6: M99-386-02 | 7: M99-385-01 | 8: M99-341-03 | 9: M99-345-01 | 10: M99-345-02 | 11: M99-345-03 | 12: M99-346-01 | 13: M99-346-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Sample [weight(g)] | 07-Jan-10 | 10:51 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 07-Jan-10 | 10:51 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 07-Jan-10 | 10:51 | 9.8 | 9.9 | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 9.6 | 9.8 |
| Final pH [units] | 07-Jan-10 | 10:51 | 9.27 | 9.44 | 9.41 | 9.39 | 9.44 | 9.46 | 9.24 | 9.30 | 9.46 |
| pH [no unit] | 11-Jan-10 | 14:55 | 8.06 | 8.09 | 8.00 | 7.96 | 8.07 | 8.00 | 8.03 | 8.12 | 8.16 |
| Conductivity [uS/cm] | 11-Jan-10 | 14:55 | 105 | 80 | 96 | 88 | 86 | 87 | 108 | 107 | 98 |
| Alkalinity [mg/L as CaCO3] | 11-Jan-10 | 14:55 | 47 | 41 | 44 | 39 | 38 | 39 | 46 | 48 | 47 |
| Sulphate [mg/L] | 12-Jan-10 | 16:35 | 3.5 | 1.4 | 2.8 | 3.2 | 4.8 | 1.4 | 6.0 | 3.5 | 1.3 |
| Chloride [mg/L] | 12-Jan-10 | 16:35 | 2.8 | 1.5 | 1.4 | 1.4 | 1.3 | 1.8 | 1.6 | 1.1 | 1.1 |
| Mercury [mg/L] | 08-Jan-10 | 15:40 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 11-Jan-10 | 07:31 | 0.00006 | 0.00004 | 0.00001 | 0.00002 | 0.00003 | 0.00003 | 0.00002 | 0.00001 | 0.00002 |
| Aluminum [mg/L] | 11-Jan-10 | 07:31 | 0.64 | 0.93 | 0.85 | 0.96 | 0.88 | 0.92 | 0.80 | 0.76 | 0.93 |
| Arsenic [mg/L] | 11-Jan-10 | 07:31 | 0.646 | 0.0466 | 0.0409 | 0.217 | 0.0601 | 0.0352 | 0.0257 | 0.0353 | 0.0850 |
| Boron [mg/L] | 11-Jan-10 | 07:31 | 0.0255 | 0.0221 | 0.0225 | 0.0206 | 0.0214 | 0.0217 | 0.0257 | 0.0254 | 0.0176 |
| Beryllium [mg/L] | 11-Jan-10 | 07:31 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 11-Jan-10 | 07:31 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 11-Jan-10 | 07:31 | 8.58 | 6.79 | 7.14 | 7.47 | 7.80 | 6.67 | 10.4 | 7.73 | 7.97 |
| Cadmium [mg/L] | 11-Jan-10 | 07:31 | 0.000052 | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000030 | 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 11-Jan-10 | 07:31 | 0.000080 | 0.000045 | 0.000051 | 0.000330 | 0.000037 | 0.000039 | 0.000049 | 0.000060 | 0.000108 |

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10176-DEC09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-386-01 | 6: M99-386-02 | 7: M99-385-01 | 8: M99-341-03 | 9: M99-345-01 | 10: M99-345-02 | 11: M99-345-03 | 12: M99-346-01 | 13: M99-346-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | 11-Jan-10 | 07:31 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 11-Jan-10 | 07:31 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 11-Jan-10 | 07:31 | 0.04 | 0.06 | 0.02 | 0.03 | 0.02 | 0.02 | < 0.01 | 0.02 | 0.02 |
| Potassium [mg/L] | 11-Jan-10 | 07:31 | 9.56 | 8.38 | 9.58 | 9.12 | 7.05 | 8.50 | 7.84 | 10.1 | 7.89 |
| Lithium [mg/L] | 11-Jan-10 | 07:31 | 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.001 | 0.001 | < 0.001 |
| Magnesium [mg/L] | 11-Jan-10 | 07:31 | 2.24 | 1.03 | 1.27 | 0.746 | 0.851 | 0.889 | 1.41 | 2.11 | 1.52 |
| Manganese [mg/L] | 11-Jan-10 | 07:31 | 0.00213 | 0.00182 | 0.00234 | 0.00048 | 0.00248 | 0.00085 | 0.00165 | 0.00168 | 0.00082 |
| Molybdenum [mg/L] | 11-Jan-10 | 07:31 | 0.00121 | 0.00035 | 0.00074 | 0.00164 | 0.00071 | 0.00062 | 0.00087 | 0.00084 | 0.00054 |
| Sodium [mg/L] | 11-Jan-10 | 07:31 | 6.00 | 5.21 | 5.20 | 4.46 | 5.30 | 5.50 | 4.90 | 5.09 | 5.68 |
| Nickel [mg/L] | 11-Jan-10 | 07:31 | 0.0007 | 0.0002 | 0.0003 | 0.0006 | 0.0003 | 0.0001 | 0.0005 | 0.0005 | 0.0006 |
| Lead [mg/L] | 11-Jan-10 | 07:31 | 0.00018 | 0.00013 | 0.00007 | 0.00006 | 0.00004 | 0.00005 | 0.00003 | 0.00005 | 0.00006 |
| Antimony [mg/L] | 11-Jan-10 | 07:31 | 0.0032 | 0.0024 | 0.0042 | 0.0060 | 0.0031 | 0.0022 | 0.0040 | 0.0051 | 0.0035 |
| Selenium [mg/L] | 11-Jan-10 | 07:31 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 11-Jan-10 | 07:31 | 0.00002 | < 0.00001 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 11-Jan-10 | 07:31 | 0.0368 | 0.0296 | 0.0270 | 0.0310 | 0.0367 | 0.0308 | 0.0577 | 0.0297 | 0.0350 |
| Titanium [mg/L] | 11-Jan-10 | 07:31 | 0.0026 | 0.0024 | 0.0009 | 0.0014 | 0.0010 | 0.0008 | 0.0003 | 0.0016 | 0.0010 |
| Thallium [mg/L] | 11-Jan-10 | 07:31 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 11-Jan-10 | 07:31 | 0.000182 | 0.000140 | 0.000070 | 0.000117 | 0.000142 | 0.000121 | 0.000081 | 0.000059 | 0.000300 |
| Vanadium [mg/L] | 11-Jan-10 | 07:31 | 0.00256 | 0.00313 | 0.00236 | 0.00293 | 0.00372 | 0.00362 | 0.00127 | 0.00190 | 0.00392 |
| Tungsten [mg/L] | 11-Jan-10 | 07:31 | 0.00086 | 0.00035 | 0.00041 | 0.00075 | 0.00039 | 0.00055 | 0.00044 | 0.00046 | 0.00049 |
| Yttrium [mg/L] | 11-Jan-10 | 07:31 | 0.000036 | 0.000073 | 0.000030 | 0.000042 | 0.000024 | 0.000060 | 0.000008 | 0.000034 | 0.000048 |
| Zinc [mg/L] | 11-Jan-10 | 07:31 | 0.001 | 0.001 | 0.001 | 0.001 | < 0.001 | < 0.001 | 0.002 | 0.001 | 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1) 0.45µm, 24hr

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Wednesday, January 13, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10176-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: M99-346-03 | 15: M99-403-05 | 16: M98-298-01 | 17: M98-298-02 | 18: M98-298-03 | 19: M99-404-05 | 20: M99-404-06 | 21: M00-476-01 | 22: M00-476-02 | 23: M00-479-01 | 24: M00-479-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 9.7 | 9.8 | 9.7 | 9.7 | 9.7 |
| Final pH [units] | 9.48 | 9.32 | 9.51 | 9.31 | 9.52 | 9.37 | 9.32 | 9.44 | 9.37 | 9.25 | 9.33 |
| pH [no unit] | 8.31 | 8.10 | 8.19 | 8.30 | 8.28 | 8.02 | 8.22 | 8.05 | 8.31 | 8.00 | 8.10 |
| Conductivity [uS/cm] | 88 | 99 | 84 | 99 | 85 | 99 | 96 | 90 | 93 | 97 | 99 |
| Alkalinity [mg/L as CaCO3] | 45 | 43 | 42 | 47 | 40 | 44 | 46 | 44 | 46 | 43 | 46 |
| Sulphate [mg/L] | 0.9 | 4.6 | 1.0 | 2.0 | 1.4 | 3.5 | 1.7 | 2.1 | 3.2 | 4.8 | 4.3 |
| Chloride [mg/L] | 0.8 | 1.4 | 0.8 | 1.2 | 1.1 | 1.2 | 0.9 | 1.4 | 1.8 | 0.8 | 1.0 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00002 | 0.00001 | 0.00001 | < 0.00001 | 0.00001 | < 0.00001 | < 0.00001 | 0.00005 | 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.88 | 0.76 | 1.28 | 1.00 | 1.07 | 1.06 | 0.80 | 1.04 | 0.91 | 0.69 | 0.84 |
| Arsenic [mg/L] | 0.0119 | 0.0224 | 0.0215 | 0.0520 | 0.0135 | 0.0109 | 0.0855 | 0.0586 | 0.0566 | 0.0272 | 0.0635 |
| Boron [mg/L] | 0.0191 | 0.0178 | 0.0216 | 0.0176 | 0.0191 | 0.0239 | 0.0227 | 0.0285 | 0.0278 | 0.0230 | 0.0274 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 6.92 | 7.68 | 6.08 | 8.27 | 6.71 | 8.23 | 7.29 | 6.64 | 7.41 | 9.24 | 8.79 |
| Cadmium [mg/L] | < 0.000003 | 0.000012 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000014 | < 0.000003 | < 0.000003 | 0.000012 |
| Cobalt [mg/L] | 0.000035 | 0.000031 | 0.000044 | 0.000060 | 0.000037 | 0.000046 | 0.000047 | 0.000044 | 0.000078 | 0.000099 | 0.000046 |

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10176-DEC09**

| Analysis | 14: M99-346-03 | 15: M99-403-05 | 16: M98-298-01 | 17: M98-298-02 | 18: M98-298-03 | 19: M99-404-05 | 20: M99-404-06 | 21: M00-476-01 | 22: M00-476-02 | 23: M00-479-01 | 24: M00-479-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0005 | < 0.0005 |
| Iron [mg/L] | 0.02 | 0.01 | 0.05 | < 0.01 | 0.03 | 0.02 | < 0.01 | 0.04 | 0.03 | 0.07 | 0.02 |
| Potassium [mg/L] | 7.38 | 8.85 | 8.72 | 9.23 | 7.11 | 8.72 | 8.43 | 9.01 | 9.14 | 6.18 | 10.1 |
| Lithium [mg/L] | 0.001 | < 0.001 | < 0.001 | 0.001 | 0.001 | < 0.001 | 0.001 | 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium [mg/L] | 1.20 | 1.25 | 0.801 | 1.64 | 0.805 | 1.19 | 1.66 | 1.10 | 1.49 | 1.68 | 1.74 |
| Manganese [mg/L] | 0.00197 | 0.00072 | 0.00062 | 0.00100 | 0.00127 | 0.00054 | 0.00100 | 0.00073 | 0.00064 | 0.00230 | 0.00096 |
| Molybdenum [mg/L] | 0.00022 | 0.00047 | 0.00031 | 0.00040 | 0.00031 | 0.00041 | 0.00054 | 0.00085 | 0.00070 | 0.00101 | 0.00109 |
| Sodium [mg/L] | 5.81 | 5.74 | 5.28 | 4.48 | 5.78 | 5.15 | 5.20 | 5.74 | 5.91 | 4.52 | 4.70 |
| Nickel [mg/L] | < 0.0001 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0003 | 0.0003 | 0.0002 | 0.0002 | 0.0003 | 0.0003 |
| Lead [mg/L] | 0.00005 | 0.00004 | 0.00006 | 0.00002 | 0.00006 | 0.00004 | < 0.00002 | 0.00008 | 0.00006 | 0.00016 | 0.00007 |
| Antimony [mg/L] | 0.0024 | 0.0032 | 0.0039 | 0.0039 | 0.0034 | 0.0036 | 0.0036 | 0.0053 | 0.0043 | 0.0012 | 0.0045 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0285 | 0.0373 | 0.0250 | 0.0428 | 0.0311 | 0.0358 | 0.0285 | 0.0270 | 0.0270 | 0.0373 | 0.0367 |
| Titanium [mg/L] | 0.0008 | 0.0005 | 0.0022 | 0.0004 | 0.0009 | 0.0006 | 0.0004 | 0.0015 | 0.0009 | 0.0021 | 0.0006 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000210 | 0.000059 | 0.000067 | 0.000092 | 0.000183 | 0.000063 | 0.000095 | 0.000071 | 0.000100 | 0.000053 | 0.000127 |
| Vanadium [mg/L] | 0.00386 | 0.00194 | 0.00384 | 0.00211 | 0.00454 | 0.00203 | 0.00267 | 0.00346 | 0.00261 | 0.00113 | 0.00210 |
| Tungsten [mg/L] | 0.00029 | 0.00043 | 0.00019 | 0.00044 | 0.00033 | 0.00033 | 0.00133 | 0.00034 | 0.00044 | 0.00126 | 0.00051 |
| Yttrium [mg/L] | 0.000030 | 0.000013 | 0.000046 | 0.000012 | 0.000045 | 0.000022 | 0.000012 | 0.000038 | 0.000054 | 0.000043 | 0.000031 |
| Zinc [mg/L] | 0.001 | 0.001 | < 0.001 | 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS



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SFE (4:1) 0.45µm, 24hr

**Comaplex Minerals Corp**
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Phone: 403-265-2846, Fax:403-232-1421

Wednesday, January 13, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10176-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 25: M06-628-01 | 26: M06-628-02 | 27: M99-418-01 | 28: M98-194-04 | 29: M07-660-01 | 30: M07-660-02 | 31: M04-520-01 | 32: M04-520-02 | 33: M08-769-01 | 34: M08-721-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.7 | 9.7 | 9.8 | 9.7 | 9.8 | 9.7 | 9.7 | 10.0 | 9.8 | 9.8 |
| Final pH [units] | 9.36 | 9.34 | 9.40 | 9.39 | 9.41 | 9.43 | 9.37 | 9.85 | 9.05 | 9.15 |
| pH [no unit] | 8.26 | 8.31 | 8.37 | 8.39 | 8.13 | 8.08 | 8.24 | 9.13 | 8.18 | 8.27 |
| Conductivity [uS/cm] | 100 | 114 | 104 | 104 | 103 | 104 | 98 | 85 | 112 | 131 |
| Alkalinity [mg/L as CaCO3] | 46 | 50 | 48 | 52 | 45 | 45 | 50 | 39 | 59 | 68 |
| Sulphate [mg/L] | 2.9 | 3.0 | 2.9 | 2.5 | 2.1 | 2.0 | 0.5 | 0.5 | 1.2 | 0.5 |
| Chloride [mg/L] | 3.4 | 3.5 | 1.0 | 1.6 | 3.7 | 3.7 | 0.8 | 0.7 | 1.1 | 2.8 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.99 | 0.89 | 0.94 | 0.88 | 1.03 | 0.99 | 1.15 | 0.43 | 0.89 | 0.19 |
| Arsenic [mg/L] | 0.0294 | 0.0169 | 0.0735 | 0.0434 | 0.0221 | 0.0200 | 0.0998 | 0.0030 | 0.0047 | 0.0006 |
| Boron [mg/L] | 0.0229 | 0.0296 | 0.0242 | 0.0384 | 0.0262 | 0.0287 | 0.0431 | 0.0162 | 0.0159 | 0.0159 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 7.62 | 9.41 | 7.69 | 8.75 | 7.04 | 7.29 | 8.17 | 3.49 | 11.6 | 11.9 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000009 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000041 | 0.000032 | 0.000052 | 0.000052 | 0.000039 | 0.000037 | 0.000063 | 0.000020 | 0.000049 | 0.000026 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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| Analysis | 25: M06-628-01 | 26: M06-628-02 | 27: M99-418-01 | 28: M98-194-04 | 29: M07-660-01 | 30: M07-660-02 | 31: M04-520-01 | 32: M04-520-02 | 33: M08-769-01 | 34: M08-721-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | 0.0006 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 0.01 | < 0.01 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 10.1 | 9.95 | 10.8 | 9.85 | 9.58 | 9.14 | 10.3 | 15.8 | 8.95 | 1.00 |
| Lithium [mg/L] | 0.001 | 0.001 | < 0.001 | 0.001 | < 0.001 | < 0.001 | 0.001 | < 0.001 | 0.001 | < 0.001 |
| Magnesium [mg/L] | 1.30 | 1.89 | 1.55 | 2.02 | 1.19 | 1.26 | 1.58 | 0.461 | 1.98 | 8.32 |
| Manganese [mg/L] | 0.00076 | 0.00139 | 0.00064 | 0.00110 | 0.00069 | 0.00087 | 0.00074 | 0.00017 | 0.00110 | 0.00083 |
| Molybdenum [mg/L] | 0.00092 | 0.00046 | 0.00073 | 0.00045 | 0.00049 | 0.00046 | 0.00050 | 0.00013 | 0.00012 | 0.00010 |
| Sodium [mg/L] | 6.63 | 5.78 | 5.42 | 6.45 | 8.06 | 8.06 | 4.90 | 4.33 | 6.20 | 4.41 |
| Nickel [mg/L] | < 0.0001 | < 0.0001 | 0.0001 | 0.0002 | < 0.0001 | 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Lead [mg/L] | 0.00005 | 0.00002 | 0.00005 | 0.00004 | 0.00004 | 0.00005 | 0.00002 | 0.00002 | 0.00002 | 0.00002 |
| Antimony [mg/L] | 0.0057 | 0.0044 | 0.0043 | 0.0045 | 0.0040 | 0.0050 | 0.0041 | 0.0036 | 0.0016 | 0.0026 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0418 | 0.0673 | 0.0362 | 0.0387 | 0.0335 | 0.0336 | 0.0299 | 0.0697 | 0.197 | 0.115 |
| Titanium [mg/L] | 0.0009 | 0.0004 | 0.0015 | 0.0013 | 0.0014 | 0.0008 | 0.0013 | < 0.0001 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000062 | 0.000058 | 0.000085 | 0.000163 | 0.000115 | 0.000071 | 0.000043 | 0.000007 | 0.000014 | < 0.000001 |
| Vanadium [mg/L] | 0.00209 | 0.00154 | 0.00255 | 0.00278 | 0.00333 | 0.00274 | 0.00297 | 0.00616 | 0.00026 | 0.00065 |
| Tungsten [mg/L] | 0.00095 | 0.00067 | 0.00025 | 0.00058 | 0.00025 | 0.00033 | 0.00111 | 0.00107 | 0.00045 | 0.00038 |
| Yttrium [mg/L] | 0.000020 | 0.000012 | 0.000034 | 0.000031 | 0.000040 | 0.000035 | 0.000013 | 0.000003 | 0.000005 | 0.000004 |
| Zinc [mg/L] | < 0.001 | 0.001 | < 0.001 | 0.001 | 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.002 | 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1) 0.45µm, 24hr

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Wednesday, January 13, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10176-DEC09**
**Reference:** Tiriganiaq

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 35: M08-721-02 | 36: M08-754-01 | 37: M08-731W1-01 | 38: M08-731W1-02 | 39: M09-823-01 | 40: M09-823-02 | 41: M98-257-01 | 42: M98-266-01 | 43: M06-601A-01 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.7 | 9.7 | 9.9 | 9.8 | 10.0 | 9.8 | 9.7 | 9.7 | 9.9 |
| Final pH [units] | 9.34 | 9.38 | 9.67 | 9.34 | 10.02 | 9.50 | 9.36 | 9.29 | 9.49 |
| pH [no unit] | 8.30 | 8.13 | 8.22 | 8.20 | 8.27 | 8.16 | 8.40 | 8.20 | 8.25 |
| Conductivity [uS/cm] | 112 | 96 | 69 | 111 | 88 | 99 | 99 | 112 | 80 |
| Alkalinity [mg/L as CaCO3] | 55 | 49 | 31 | 54 | 8 | 45 | 51 | 55 | 37 |
| Sulphate [mg/L] | 0.4 | 0.5 | 0.7 | 0.9 | 0.6 | 0.7 | 0.6 | 1.4 | 0.6 |
| Chloride [mg/L] | 2.0 | 1.1 | 2.1 | 1.6 | 1.9 | 3.8 | 0.6 | 1.0 | 0.8 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00001 | < 0.00001 | 0.00003 |
| Aluminum [mg/L] | 1.07 | 1.26 | 0.97 | 1.16 | 1.11 | 1.09 | 1.03 | 0.98 | 0.81 |
| Arsenic [mg/L] | 0.114 | 0.0471 | 0.0013 | 0.0177 | 0.0062 | 0.0172 | 0.0132 | 0.0255 | 0.0014 |
| Boron [mg/L] | 0.0265 | 0.0338 | 0.0346 | 0.0234 | 0.0247 | 0.0209 | 0.0155 | 0.0276 | 0.0226 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 8.87 | 7.83 | 5.97 | 8.71 | 3.47 | 5.99 | 7.83 | 7.98 | 5.60 |
| Cadmium [mg/L] | 0.000007 | < 0.000003 | < 0.000003 | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000009 | < 0.000003 |
| Cobalt [mg/L] | 0.000043 | 0.000035 | 0.000035 | 0.000030 | 0.000159 | 0.000035 | 0.000031 | 0.000047 | 0.000019 |

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10176-DEC09**

| Analysis | 35: M08-721-02 | 36: M08-754-01 | 37: M08-731W1-01 | 38: M08-731W1-02 | 39: M09-823-01 | 40: M09-823-02 | 41: M98-257-01 | 42: M98-266-01 | 43: M06-601A-01 |
|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | 0.02 | 0.04 | < 0.01 | 0.47 | 0.03 | < 0.01 | 0.01 | < 0.01 |
| Potassium [mg/L] | 11.2 | 10.1 | 3.89 | 11.1 | 10.3 | 9.71 | 9.56 | 12.1 | 6.93 |
| Lithium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.003 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium [mg/L] | 2.19 | 1.48 | 0.746 | 2.40 | 0.443 | 1.01 | 1.77 | 1.87 | 0.769 |
| Manganese [mg/L] | 0.00062 | 0.00030 | 0.00084 | 0.00073 | 0.00458 | 0.00051 | 0.00097 | 0.00072 | 0.00062 |
| Molybdenum [mg/L] | 0.00042 | 0.00033 | 0.00015 | 0.00024 | 0.00018 | 0.00042 | 0.00036 | 0.00037 | 0.00007 |
| Sodium [mg/L] | 6.23 | 6.44 | 6.50 | 6.79 | 11.1 | 7.23 | 5.09 | 4.36 | 6.05 |
| Nickel [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Lead [mg/L] | 0.00046 | 0.00005 | 0.00003 | 0.00002 | 0.00010 | 0.00004 | 0.00004 | 0.00008 | 0.00002 |
| Antimony [mg/L] | 0.0074 | 0.0079 | 0.0029 | 0.0061 | 0.0044 | 0.0051 | 0.0043 | 0.0044 | 0.0027 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00002 | < 0.00001 |
| Strontium [mg/L] | 0.0375 | 0.0363 | 0.0605 | 0.0403 | 0.0173 | 0.0250 | 0.0311 | 0.0326 | 0.0757 |
| Titanium [mg/L] | 0.0005 | 0.0007 | 0.0012 | 0.0005 | 0.0167 | 0.0013 | 0.0003 | 0.0006 | < 0.0001 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000060 | 0.000037 | 0.000001 | 0.000063 | 0.000020 | 0.000118 | 0.000057 | 0.000054 | 0.000001 |
| Vanadium [mg/L] | 0.00250 | 0.00294 | 0.00621 | 0.00216 | 0.0278 | 0.00427 | 0.00202 | 0.00196 | 0.00235 |
| Tungsten [mg/L] | 0.00468 | 0.00100 | 0.00302 | 0.00091 | 0.00255 | 0.00099 | 0.00056 | 0.00036 | 0.00152 |
| Yttrium [mg/L] | 0.000016 | 0.000021 | 0.000005 | 0.000020 | 0.000037 | 0.000027 | 0.000009 | 0.000027 | 0.000004 |
| Zinc [mg/L] | 0.001 | < 0.001 | 0.001 | 0.001 | < 0.001 | < 0.001 | 0.001 | 0.001 | 0.001 |

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*Environmental Services, Analytical*

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SFE (4:1) 0.45µm, 24hr

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Wednesday, January 13, 2010

**Date Rec. :** 18 December 2009
**LR Report:** CA10176-DEC09
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 45: M03-498-01 | 47: M03-499-02 | 48: M07-649-01 | 50: M06-607-01 | 51: M07-672B-01 | 52: M07-685-01 | 53: M07-685-02 | 54: M07-691-01 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.8 | 9.8 | 9.5 | 9.7 | 9.7 | 9.7 | 9.6 | 9.5 |
| Final pH [units] | 9.34 | 9.29 | 9.27 | 9.36 | 9.26 | 9.40 | 9.27 | 9.34 |
| pH [no unit] | 8.56 | 8.18 | 8.37 | 8.35 | 8.15 | 8.18 | 8.10 | 8.15 |
| Conductivity [uS/cm] | 95 | 99 | 101 | 89 | 103 | 99 | 106 | 94 |
| Alkalinity [mg/L as CaCO3] | 54 | 54 | 55 | 47 | 50 | 49 | 49 | 48 |
| Sulphate [mg/L] | 0.5 | 0.6 | 0.6 | 0.7 | 1.0 | 1.7 | 3.5 | 0.8 |
| Chloride [mg/L] | 0.6 | 1.4 | 1.1 | 1.8 | 2.3 | 1.2 | 1.8 | 1.6 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.98 | 0.94 | 0.81 | 1.08 | 1.00 | 0.91 | 0.89 | 0.94 |
| Arsenic [mg/L] | 0.0480 | 0.0184 | 0.0325 | 0.0371 | 0.0237 | 0.0115 | 0.0230 | 0.0200 |
| Boron [mg/L] | 0.0189 | 0.0220 | 0.0245 | 0.0288 | 0.0254 | 0.0252 | 0.0282 | 0.0274 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 7.77 | 8.24 | 8.51 | 7.78 | 6.78 | 7.18 | 7.14 | 5.89 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000017 | < 0.000003 |
| Cobalt [mg/L] | 0.000039 | 0.000057 | 0.000028 | 0.000041 | 0.000042 | 0.000046 | 0.000117 | 0.000041 |

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Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10176-DEC09**

| Analysis | 45: M03-498-01 | 47: M03-499-02 | 48: M07-649-01 | 50: M06-607-01 | 51: M07-672B-01 | 52: M07-685-01 | 53: M07-685-02 | 54: M07-691-01 |
|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | 0.01 | < 0.01 | 0.02 | 0.03 | 0.01 | 0.02 | 0.04 |
| Potassium [mg/L] | 9.56 | 10.7 | 10.7 | 9.88 | 11.6 | 8.79 | 10.6 | 10.2 |
| Lithium [mg/L] | 0.001 | 0.001 | < 0.001 | 0.001 | < 0.001 | 0.001 | < 0.001 | < 0.001 |
| Magnesium [mg/L] | 1.64 | 1.99 | 2.03 | 1.35 | 1.36 | 1.62 | 1.73 | 1.61 |
| Manganese [mg/L] | 0.00100 | 0.00094 | 0.00060 | 0.00049 | 0.00064 | 0.00060 | 0.00066 | 0.00075 |
| Molybdenum [mg/L] | 0.00010 | 0.00032 | 0.00030 | 0.00052 | 0.00085 | 0.00027 | 0.00060 | 0.00047 |
| Sodium [mg/L] | 5.59 | 4.43 | 4.55 | 5.05 | 5.82 | 6.98 | 6.19 | 6.37 |
| Nickel [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0005 | < 0.0001 |
| Lead [mg/L] | < 0.00002 | 0.00006 | < 0.00002 | 0.00006 | 0.00004 | 0.00003 | 0.00007 | 0.00009 |
| Antimony [mg/L] | 0.0030 | 0.0047 | 0.0025 | 0.0041 | 0.0048 | 0.0047 | 0.0055 | 0.0048 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0547 | 0.0409 | 0.0319 | 0.0282 | 0.0224 | 0.0278 | 0.0255 | 0.0227 |
| Titanium [mg/L] | 0.0002 | 0.0009 | 0.0006 | 0.0013 | 0.0020 | 0.0008 | 0.0015 | 0.0031 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000113 | 0.000071 | 0.000019 | 0.000036 | 0.000030 | 0.000169 | 0.000045 | 0.000042 |
| Vanadium [mg/L] | 0.00158 | 0.00191 | 0.00125 | 0.00186 | 0.00189 | 0.00318 | 0.00211 | 0.00237 |
| Tungsten [mg/L] | 0.00067 | 0.00153 | 0.00090 | 0.00084 | 0.00106 | 0.00061 | 0.00094 | 0.00072 |
| Yttrium [mg/L] | 0.000008 | 0.000015 | 0.000011 | 0.000034 | 0.000027 | 0.000023 | 0.000035 | 0.000064 |
| Zinc [mg/L] | 0.001 | 0.001 | 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS Lakefield Research Limited
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Phone: 705-652-2000 FAX: 705-652-6365

SFE (4:1) 0.45µm, 24hr

**Comaplex Minerals Corp**
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Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Wednesday, January 13, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10176-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 55: M06-621-01 | 57: M99-404-03 | 58: M99-350-03 | 59: M98-297-03 | 60: M07-713-03 | 61: M99-404-06 Dup | 62: M09-823-02 Dup | 63: M07-713-03 Dup |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | 2008 | 2008 | 2008 | 2008 | | | |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.7 | 9.7 | 9.8 | 9.7 | 9.8 | 9.7 | 9.7 | 9.8 |
| Final pH [units] | 9.36 | 9.43 | 9.38 | 9.32 | 9.41 | 9.32 | 9.50 | 9.42 |
| pH [no unit] | 8.23 | 8.20 | 8.33 | 8.00 | 8.12 | 8.16 | 8.40 | 8.20 |
| Conductivity [uS/cm] | 104 | 85 | 88 | 98 | 99 | 87 | 88 | 94 |
| Alkalinity [mg/L as CaCO3] | 51 | 53 | 47 | 45 | 44 | 46 | 45 | 44 |
| Sulphate [mg/L] | 1.2 | 1.8 | 1.7 | 3.2 | 2.5 | 1.6 | 0.6 | 2.4 |
| Chloride [mg/L] | 1.2 | 0.6 | 1.0 | 0.8 | 3.4 | 0.8 | 3.3 | 3.5 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 1.03 | 1.20 | 2.28 | 1.12 | 1.55 | 0.89 | 1.13 | 1.49 |
| Arsenic [mg/L] | 0.0143 | 0.0309 | 0.0109 | 0.0334 | 0.0328 | 0.0930 | 0.0170 | 0.0362 |
| Boron [mg/L] | 0.0258 | 0.0197 | 0.0263 | 0.0194 | 0.0257 | 0.0220 | 0.0249 | 0.0298 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 7.05 | 7.08 | 7.79 | 7.72 | 6.81 | 7.33 | 6.56 | 7.20 |
| Cadmium [mg/L] | 0.000004 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000013 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000028 | 0.000044 | 0.000037 | 0.000036 | 0.000032 | 0.000094 | 0.000035 | 0.000033 |

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SFE (4:1) 0.45µm, 24hr

LR Report : CA10176-DEC09

| Analysis | 55: M06-621-01 | 57: M99-404-03 | 58: M99-350-03 | 59: M98-297-03 | 60: M07-713-03 | 61: M99-404-06 Dup | 62: M09-823-02 Dup | 63: M07-713-03 Dup |
|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 0.01 | 0.02 | < 0.01 | 0.02 | 0.02 | 0.05 | 0.03 | 0.02 |
| Potassium [mg/L] | 10.3 | 8.03 | 9.66 | 11.0 | 9.06 | 8.91 | 8.58 | 7.99 |
| Lithium [mg/L] | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | < 0.001 | 0.001 |
| Magnesium [mg/L] | 1.62 | 1.22 | 0.926 | 1.23 | 0.972 | 1.69 | 1.09 | 0.999 |
| Manganese [mg/L] | 0.00059 | 0.00078 | 0.00054 | 0.00064 | 0.00072 | 0.00093 | 0.00053 | 0.00070 |
| Molybdenum [mg/L] | 0.00043 | 0.00029 | 0.00042 | 0.00052 | 0.00059 | 0.00054 | 0.00043 | 0.00063 |
| Sodium [mg/L] | 6.31 | 6.10 | 5.13 | 4.63 | 7.62 | 5.20 | 7.99 | 8.59 |
| Nickel [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0004 | < 0.0001 | < 0.0001 |
| Lead [mg/L] | 0.00003 | 0.00004 | < 0.00002 | 0.00003 | 0.00005 | 0.00008 | 0.00005 | 0.00004 |
| Antimony [mg/L] | 0.0059 | 0.0036 | 0.0038 | 0.0048 | 0.0020 | 0.0036 | 0.0051 | 0.0021 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0299 | 0.0314 | 0.0340 | 0.0350 | 0.0381 | 0.0286 | 0.0259 | 0.0386 |
| Titanium [mg/L] | 0.0010 | 0.0014 | 0.0004 | 0.0011 | 0.0009 | 0.0020 | 0.0016 | 0.0011 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000080 | 0.000128 | 0.000090 | 0.000066 | 0.000134 | 0.000123 | 0.000114 | 0.000139 |
| Vanadium [mg/L] | 0.00284 | 0.00371 | 0.00287 | 0.00224 | 0.00339 | 0.00286 | 0.00403 | 0.00367 |
| Tungsten [mg/L] | 0.00076 | 0.00035 | 0.00042 | 0.00039 | 0.00047 | 0.00119 | 0.00090 | 0.00046 |
| Yttrium [mg/L] | 0.000017 | 0.000028 | 0.000020 | 0.000027 | 0.000036 | 0.000078 | 0.000032 | 0.000033 |
| Zinc [mg/L] | 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, January 13, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10177-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS

## Final Report

| Sample ID | Sample Date & Time | Total Sulphur % | Acid Leachable SO4-S % | Sulphide-S % |
|---|---|---|---|---|
| 3: Analysis Approval Date | | 11-Jan-10 | 13-Jan-10 | 13-Jan-10 |
| 4: Analysis Approval Time | | 11:16 | 10:38 | 10:38 |
| 5: M99-386-01 | Dec 2009 | 0.272 | 0.11 | 0.16 |
| 6: M99-341-03 | Dec 2009 | 0.150 | 0.08 | 0.07 |
| 7: M99-345-01 | Dec 2009 | 0.272 | 0.03 | 0.25 |
| 8: M99-403-05 | Dec 2009 | 0.202 | 0.07 | 0.13 |
| 9: M98-298-01 | Dec 2009 | 0.178 | 0.05 | 0.13 |
| 10: M99-404-06 | Dec 2009 | 0.097 | 0.05 | 0.05 |
| 11: M00-479-01 | Dec 2009 | 0.029 | 0.02 | 0.01 |
| 12: M06-628-01 | Dec 2009 | 0.271 | 0.08 | 0.19 |
| 13: M98-194-04 | Dec 2009 | 0.183 | 0.09 | 0.09 |

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*Environmental Services, Analytical*

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**Modified ABA (Price 1997)**

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Monday, January 25, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10178-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M04-520-01 | 6: M04-520-02 | 7: M08-769-01 | 8: M08-721-01 | 9: M08-721-02 | 10: M08-754-01 | 11: M08-731W1-01 | 12: M08-731W1-02 | 13: M09-823-01 | 14: M09-823-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Paste pH [units] | 20-Jan-10 | 07:37 | 8.61 | 9.41 | 8.24 | 8.56 | 8.62 | 8.63 | 8.64 | 9.08 | 9.31 | 8.79 |
| Fizz Rate [—] | 20-Jan-10 | 07:37 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 |
| Sample [weight(g)] | 20-Jan-10 | 07:37 | 2.00 | 2.00 | 2.00 | 1.99 | 1.97 | 2.01 | 1.96 | 2.04 | 1.97 | 2.03 |
| HCl added [mL] | 20-Jan-10 | 07:37 | 29.90 | 73.60 | 59.80 | 127.30 | 43.40 | 30.10 | 47.10 | 54.90 | 24.10 | 26.50 |
| HCl [Normality] | 20-Jan-10 | 07:37 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 20-Jan-10 | 07:37 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 20-Jan-10 | 07:37 | 12.17 | 20.30 | 24.09 | 28.90 | 21.23 | 13.44 | 19.08 | 24.56 | 15.42 | 12.39 |
| Final pH [units] | 20-Jan-10 | 07:37 | 1.87 | 1.91 | 1.74 | 2.00 | 1.56 | 1.89 | 1.50 | 1.54 | 1.52 | 1.70 |
| NP [t CaCO3/1000t] | 20-Jan-10 | 07:37 | 44.3 | 133 | 89.3 | 247 | 56.3 | 41.4 | 71.5 | 74.4 | 22.0 | 34.8 |
| AP [t CaCO3/1000 t] | 20-Jan-10 | 07:38 | 0.31 | 0.31 | 1.16 | 0.62 | 0.31 | 0.55 | 1.93 | 6.60 | 2.68 | 1.98 |
| Net NP [t CaCO3/1000 t] | 20-Jan-10 | 07:38 | 44.0 | 133 | 88.1 | 247 | 56.0 | 40.8 | 69.6 | 67.8 | 19.3 | 32.8 |
| NP/AP [ratio] | 20-Jan-10 | 07:38 | 143 | 430 | 76.8 | 402 | 182 | 75.3 | 37.0 | 11.3 | 8.22 | 17.6 |
| Total Sulphur [%] | 11-Jan-10 | 11:16 | 0.027 | 0.056 | 0.109 | 0.061 | 0.103 | 0.060 | 0.117 | 0.246 | 0.138 | 0.152 |
| Acid Leachable SO4-S [%] | 13-Jan-10 | 10:38 | 0.02 | 0.05 | 0.07 | 0.04 | 0.09 | 0.04 | 0.05 | < 0.01 | 0.05 | 0.09 |
| Sulphide-S [%] | 13-Jan-10 | 10:38 | < 0.01 | < 0.01 | 0.04 | 0.02 | < 0.01 | 0.02 | 0.06 | 0.21 | 0.09 | 0.06 |
| Total Carbon [%] | 11-Jan-10 | 11:16 | 0.628 | 1.49 | 1.20 | 3.31 | 0.759 | 0.536 | 0.830 | 1.02 | 0.144 | 0.407 |
| Carbonate (CO3) [%] | 13-Jan-10 | 10:41 | 2.58 | 6.90 | 5.29 | 16.0 | 3.31 | 2.12 | 3.75 | 4.34 | 0.546 | 1.64 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA10178-DEC09**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Monday, January 25, 2010

**Date Rec. :** 18 December 2009
**LR Report:** **CA10178-DEC09**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 15: M98-257-01 | 16: M98-266-01 | 17: M06-601A-01 | 18: M03-498-01 | 19: M03-499-02 | 20: M07-649-01 | 21: M06-607-01 | 22: M07-672B-01 | 23: M07-685-01 | 24: M07-685-02 | 25: M07-691-01 | 26: M06-621-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 | Dec 2009 |
| Paste pH [units] | 8.64 | 8.64 | 8.80 | 9.00 | 8.65 | 8.57 | 8.59 | 8.60 | 9.15 | 8.65 | 8.74 | 8.69 |
| Fizz Rate [—] | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| Sample [weight(g)] | 2.05 | 2.04 | 1.97 | 2.00 | 2.00 | 1.99 | 1.97 | 2.00 | 1.96 | 1.96 | 1.98 | 1.96 |
| HCl added [mL] | 30.30 | 41.80 | 92.50 | 48.10 | 40.20 | 43.30 | 25.80 | 26.60 | 28.30 | 27.50 | 25.80 | 30.10 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 12.06 | 19.50 | 36.47 | 16.90 | 15.69 | 19.63 | 12.21 | 14.92 | 12.16 | 12.88 | 14.13 | 14.57 |
| Final pH [units] | 1.84 | 1.62 | 1.54 | 1.89 | 1.89 | 1.79 | 1.89 | 1.90 | 1.70 | 1.73 | 1.75 | 2.04 |
| NP [t CaCO3/1000t] | 44.5 | 54.7 | 142 | 78.0 | 61.3 | 59.5 | 34.5 | 29.2 | 41.2 | 37.3 | 29.5 | 39.6 |
| AP [t CaCO3/1000 t] | 2.05 | 3.52 | 1.90 | 1.83 | 3.07 | 3.08 | 1.36 | 1.62 | 1.60 | 1.27 | 1.99 | 2.28 |
| Net NP [t CaCO3/1000 t] | 42.5 | 51.2 | 140 | 76.2 | 58.2 | 56.4 | 33.1 | 27.6 | 39.6 | 36.0 | 27.5 | 37.3 |
| NP/AP [ratio] | 21.7 | 15.5 | 75.0 | 42.6 | 20.0 | 19.3 | 25.4 | 18.1 | 25.7 | 29.3 | 14.8 | 17.4 |
| Total Sulphur [%] | 0.180 | 0.163 | 0.110 | 0.201 | 0.208 | 0.178 | 0.076 | 0.092 | 0.208 | 0.169 | 0.140 | 0.150 |
| Acid Leachable SO4-S [%] | 0.11 | 0.05 | 0.05 | 0.14 | 0.11 | 0.08 | 0.03 | 0.04 | 0.16 | 0.13 | 0.08 | 0.08 |
| Sulphide-S [%] | 0.07 | 0.11 | 0.06 | 0.06 | 0.10 | 0.10 | 0.04 | 0.05 | 0.05 | 0.04 | 0.06 | 0.07 |
| Total Carbon [%] | 0.590 | 0.756 | 1.64 | 1.08 | 0.877 | 0.889 | 0.492 | 0.437 | 0.526 | 0.538 | 0.374 | 0.558 |
| Carbonate (CO3) [%] | 2.33 | 3.14 | 7.76 | 4.62 | 3.56 | 3.74 | 2.04 | 1.66 | 2.04 | 2.10 | 1.46 | 2.24 |

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*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS



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Monday, January 25, 2010

**Date Rec. :** 14 January 2010
**LR Report:** **CA10966-JAN10**
**Reference:** Tiriganiaq

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M04-520-01 | 6: M04-520-02 | 7: M08-769-01 | 8: M08-721-01 | 9: M08-721-02 | 10: M08-754-01 | 11: M08-731W1-01 | 12: M08-731W1-02 | 13: M09-823-01 | 14: M09-823-02 | 15: M98-257-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| SiO2 [%] | 62.5 | 46.8 | 59.2 | 42.4 | 62.8 | 61.5 | 49.7 | 59.0 | 50.9 | 65.0 | 63.0 |
| Al2O3 [%] | 16.5 | 11.9 | 13.4 | 10.6 | 16.0 | 17.2 | 12.4 | 16.6 | 12.8 | 15.6 | 15.6 |
| Fe2O3 [%] | 6.17 | 10.5 | 9.88 | 9.86 | 5.36 | 6.28 | 14.9 | 6.23 | 15.4 | 5.20 | 6.47 |
| MgO [%] | 2.43 | 10.1 | 1.40 | 10.2 | 2.37 | 2.63 | 4.89 | 2.64 | 5.12 | 2.31 | 2.37 |
| CaO [%] | 1.77 | 7.94 | 4.64 | 8.48 | 2.24 | 1.75 | 9.21 | 3.26 | 9.00 | 1.63 | 2.07 |
| Na2O [%] | 2.31 | 1.57 | 3.72 | 1.99 | 2.61 | 2.49 | 2.32 | 2.72 | 2.63 | 3.24 | 3.08 |
| K2O [%] | 2.81 | 1.12 | 1.26 | 0.06 | 2.67 | 2.77 | 0.20 | 2.67 | 0.71 | 2.15 | 2.10 |
| TiO2 [%] | 0.60 | 0.68 | 0.34 | 0.65 | 0.58 | 0.63 | 1.22 | 0.65 | 1.26 | 0.56 | 0.56 |
| P2O5 [%] | 0.11 | 0.06 | 0.10 | 0.05 | 0.11 | 0.12 | 0.15 | 0.15 | 0.14 | 0.11 | 0.11 |
| MnO [%] | 0.05 | 0.16 | 0.05 | 0.17 | 0.04 | 0.03 | 0.22 | 0.06 | 0.22 | 0.04 | 0.05 |
| Cr2O3 [%] | 0.03 | 0.12 | 0.01 | 0.12 | 0.03 | 0.02 | 0.02 | 0.02 | < 0.01 | 0.02 | 0.02 |
| V2O5 [%] | 0.02 | 0.04 | < 0.01 | 0.04 | 0.02 | 0.02 | 0.06 | 0.02 | 0.07 | 0.02 | 0.02 |
| LOI [%] | 4.23 | 8.70 | 5.51 | 14.8 | 4.42 | 4.13 | 4.58 | 5.35 | 1.42 | 3.03 | 3.57 |
| Sum [%] | 99.5 | 99.7 | 99.6 | 99.5 | 99.2 | 99.5 | 99.9 | 99.4 | 99.7 | 98.9 | 99.0 |

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LR Report : CA10966-JAN10

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Fax:403-232-1421

Monday, January 25, 2010

**Date Rec. :** 14 January 2010
**LR Report:** **CA10966-JAN10**
**Reference:** Tiriganiaq

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 16: M98-266-01 | 17: M06-601A-01 | 18: M03-498-01 | 19: M03-499-02 | 20: M07-649-01 | 21: M06-607-01 | 22: M07-672B-01 | 23: M07-685-01 | 24: M07-685-02 | 25: M07-691-01 | 26: M06-621-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| SiO2 [%] | 60.0 | 48.9 | 61.0 | 62.4 | 59.8 | 61.7 | 59.5 | 66.0 | 60.4 | 62.0 | 64.1 |
| Al2O3 [%] | 17.1 | 12.6 | 15.9 | 15.4 | 16.0 | 16.2 | 18.0 | 15.0 | 17.4 | 17.1 | 16.6 |
| Fe2O3 [%] | 6.57 | 12.4 | 5.47 | 6.11 | 7.86 | 7.47 | 8.43 | 4.81 | 7.00 | 6.53 | 5.17 |
| MgO [%] | 2.91 | 4.85 | 1.45 | 2.29 | 2.51 | 2.61 | 2.87 | 1.98 | 2.87 | 2.70 | 2.37 |
| CaO [%] | 2.25 | 7.73 | 3.61 | 2.53 | 2.30 | 1.52 | 1.24 | 1.68 | 1.47 | 1.10 | 1.78 |
| Na2O [%] | 2.12 | 3.00 | 4.56 | 2.46 | 2.56 | 2.77 | 2.50 | 3.38 | 3.01 | 3.34 | 3.18 |
| K2O [%] | 2.95 | 0.61 | 2.17 | 2.66 | 2.59 | 2.23 | 2.84 | 1.98 | 2.58 | 2.39 | 2.38 |
| TiO2 [%] | 0.66 | 1.06 | 0.46 | 0.59 | 0.56 | 0.60 | 0.73 | 0.52 | 0.71 | 0.63 | 0.58 |
| P2O5 [%] | 0.13 | 0.11 | 0.09 | 0.12 | 0.12 | 0.12 | 0.13 | 0.10 | 0.12 | 0.12 | 0.11 |
| MnO [%] | 0.06 | 0.17 | 0.04 | 0.06 | 0.04 | 0.05 | 0.04 | 0.04 | 0.06 | 0.04 | 0.04 |
| Cr2O3 [%] | 0.02 | < 0.01 | < 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| V2O5 [%] | 0.02 | 0.05 | < 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| LOI [%] | 4.69 | 7.71 | 4.26 | 4.48 | 4.67 | 3.47 | 3.57 | 3.03 | 3.65 | 3.20 | 3.47 |
| Sum [%] | 99.5 | 99.2 | 99.0 | 99.0 | 99.0 | 98.8 | 99.9 | 98.6 | 99.3 | 99.2 | 99.9 |

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LR Report : CA10966-JAN10



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 403-265-2846, Fax:403-232-1421

August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10282-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time |
|---|---|---|---|---|
| Paste pH [units] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| Fizz Rate [---] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| Sample [weight(g)] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| HCl added [mL] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| HCl [Normality] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| NaOH [Normality] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| NaOH to [pH=8.3 mL] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| Final pH [units] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| NP [t CaCO3/1000t] | 05-Aug-09 | 10:00 | 10-Aug-09 | 14:30 |
| AP [t CaCO3/1000 t] | 05-Aug-09 | 10:00 | 13-Aug-09 | 14:40 |
| Net NP [t CaCO3/1000 t] | 05-Aug-09 | 10:00 | 13-Aug-09 | 14:40 |
| NP/AP [ratio] | 05-Aug-09 | 10:00 | 13-Aug-09 | 14:40 |
| Total Sulphur [%] | 06-Aug-09 | 19:28 | 13-Aug-09 | 14:39 |
| Acid Leachable SO4-S [%] | 2.00 | 0.35 | 13-Aug-09 | 14:39 |
| Sulphide-S [%] | 04-Aug-09 | 11:00 | 13-Aug-09 | 14:39 |
| Total Carbon [%] | 06-Aug-09 | 19:28 | 13-Aug-09 | 14:39 |
| Carbonate (CO3) [%] | 04-Aug-09 | 08:30 | 05-Aug-09 | 09:48 |

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**LR Report :** **CA10282-JUL09**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10282-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M05-561-02 | 6: M97-135-01 | 7: M97-133-01 | 8: M97-137-01 | 9: M98-318-01 | 10: M97-143-01 | 11: M97-110-01 |
|---|---|---|---|---|---|---|---|
| Paste pH [units] | 8.89 | 9.02 | 8.78 | 8.84 | 8.85 | 8.71 | 8.86 |
| Fizz Rate [---] | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sample [weight(g)] | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| HCl added [mL] | 171.20 | 178.50 | 136.40 | 152.00 | 157.10 | 123.90 | 125.60 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 67.40 | 81.10 | 36.55 | 49.10 | 53.60 | 38.20 | 31.40 |
| Final pH [units] | 1.58 | 1.66 | 1.93 | 1.74 | 1.78 | 1.77 | 1.96 |
| NP [t CaCO3/1000t] | 254 | 239 | 248 | 258 | 261 | 218 | 230 |
| AP [t CaCO3/1000 t] | 1.46 | 6.84 | 2.96 | 1.34 | 6.62 | 0.95 | 7.38 |
| Net NP [t CaCO3/1000 t] | 253 | 232 | 245 | 257 | 255 | 217 | 222 |
| NP/AP [ratio] | 174 | 34.9 | 84.0 | 193 | 39.5 | 228 | 31.1 |
| Total Sulphur [%] | 0.074 | 0.373 | 0.186 | 0.105 | 0.392 | 0.076 | 0.502 |
| Acid Leachable SO4-S [%] | 0.03 | 0.15 | 0.09 | 0.06 | 0.18 | 0.04 | 0.27 |
| Sulphide-S [%] | 0.05 | 0.22 | 0.09 | 0.04 | 0.21 | 0.03 | 0.24 |
| Total Carbon [%] | 3.38 | 3.60 | 3.21 | 3.33 | 3.43 | 2.76 | 3.07 |
| Carbonate (CO3) [%] | 15.1 | 16.1 | 14.5 | 15.1 | 15.1 | 12.9 | 13.8 |



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10282-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: M05-561-01 | 13: M99-348-01 | 14: M97-136-01 | 15: M97-130-02 | 16: M97-134-01 | 17: M97-130-01 | 18: M05-561-03 |
|---|---|---|---|---|---|---|---|
| Paste pH [units] | 8.69 | 8.94 | 8.79 | 8.79 | 8.66 | 8.92 | 8.59 |
| Fizz Rate [---] | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sample [weight(g)] | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| HCl added [mL] | 110.40 | 137.40 | 149.90 | 175.80 | 142.50 | 136.40 | 142.10 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 38.30 | 40.80 | 46.20 | 70.20 | 48.70 | 46.90 | 61.80 |
| Final pH [units] | 1.68 | 1.79 | 1.85 | 1.62 | 1.76 | 1.69 | 1.64 |
| NP [t CaCO3/1000t] | 182 | 244 | 262 | 260 | 231 | 219 | 201 |
| AP [t CaCO3/1000 t] | 1.83 | 1.91 | 5.62 | 6.94 | 2.89 | 2.06 | 2.12 |
| Net NP [t CaCO3/1000 t] | 180 | 242 | 256 | 253 | 228 | 217 | 199 |
| NP/AP [ratio] | 99.3 | 128 | 46.6 | 37.5 | 79.9 | 106 | 94.9 |
| Total Sulphur [%] | 0.099 | 0.167 | 0.339 | 0.509 | 0.178 | 0.154 | 0.121 |
| Acid Leachable SO4-S [%] | 0.04 | 0.11 | 0.16 | 0.29 | 0.09 | 0.09 | 0.05 |
| Sulphide-S [%] | 0.06 | 0.06 | 0.18 | 0.22 | 0.09 | 0.07 | 0.07 |
| Total Carbon [%] | 2.33 | 3.16 | 3.46 | 3.58 | 2.86 | 2.68 | 2.82 |
| Carbonate (CO3) [%] | 10.5 | 14.3 | 15.3 | 15.5 | 13.8 | 12.6 | 12.8 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10282-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 19: SS-1 | 20: SS-2 | 21: SS-3 | 22: SS-4 | 23: SS-5 |
|---|---|---|---|---|---|
| Paste pH [units] | 8.50 | 6.68 | 8.27 | 6.96 | 8.21 |
| Fizz Rate [---] | 1 | 1 | 3 | 3 | 1 |
| Sample [weight(g)] | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| HCl added [mL] | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 15.90 | 16.45 | 15.40 | 17.20 | 17.30 |
| Final pH [units] | 1.58 | 1.74 | 1.59 | 1.53 | 1.35 |
| NP [t CaCO3/1000t] | 10.0 | 8.8 | 11.6 | 7.1 | 6.9 |
| AP [t CaCO3/1000 t] | 0.53 | 0.99 | 0.31 | 0.31 | 0.64 |
| Net NP [t CaCO3/1000 t] | 9.47 | 7.81 | 11.3 | 6.79 | 6.26 |
| NP/AP [ratio] | 18.8 | 8.86 | 37.4 | 22.9 | 10.7 |
| Total Sulphur [%] | 0.031 | 0.058 | 0.025 | 0.076 | 0.042 |
| Acid Leachable SO4-S [%] | 0.01 | 0.03 | 0.02 | 0.08 | 0.02 |
| Sulphide-S [%] | 0.02 | 0.03 | < 0.01 | < 0.01 | 0.02 |
| Total Carbon [%] | 0.321 | 6.14 | 0.336 | 7.91 | 0.299 |
| Carbonate (CO3) [%] | 0.209 | 0.454 | 0.360 | 0.256 | 0.132 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10280-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M05-561-02 | 6: M97-135-01 | 7: M97-133-01 | 8: M97-137-01 | 9: M98-318-01 | 10: M97-143-01 | 11: M97-110-01 |
|---|---|---|---|---|---|---|---|
| SiO2 [%] | 41.8 | 40.4 | 41.6 | 40.9 | 40.8 | 42.7 | 41.4 |
| Al2O3 [%] | 12.7 | 13.8 | 12.4 | 13.3 | 12.9 | 12.6 | 14.0 |
| Fe2O3 [%] | 10.2 | 10.2 | 10.4 | 9.10 | 10.3 | 10.0 | 11.0 |
| MgO [%] | 5.14 | 3.50 | 4.47 | 3.66 | 4.22 | 6.19 | 3.78 |
| CaO [%] | 12.0 | 13.5 | 13.1 | 14.5 | 13.1 | 12.4 | 11.1 |
| Na2O [%] | 2.29 | 1.91 | 2.51 | 2.29 | 1.78 | 1.76 | 1.96 |
| K2O [%] | 0.92 | 0.68 | 0.30 | 0.71 | 0.66 | 0.23 | 1.73 |
| TiO2 [%] | 0.64 | 0.93 | 0.72 | 0.81 | 0.83 | 0.61 | 0.89 |
| P2O5 [%] | 0.04 | 0.08 | 0.05 | 0.06 | 0.07 | 0.05 | 0.07 |
| MnO [%] | 0.24 | 0.31 | 0.25 | 0.24 | 0.28 | 0.22 | 0.27 |
| Cr2O3 [%] | 0.04 | 0.03 | 0.03 | 0.03 | 0.04 | 0.04 | 0.03 |
| V2O5 [%] | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| LOI [%] | 14.4 | 14.3 | 13.7 | 14.2 | 14.2 | 13.0 | 12.5 |
| Sum [%] | 100.5 | 99.7 | 99.5 | 99.8 | 99.3 | 99.8 | 98.9 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10280-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: M05-561-01 | 13: M99-348-01 | 14: M97-136-01 | 15: M97-130-02 | 16: M97-134-01 | 17: M97-130-01 | 18: M05-561-03 |
|---|---|---|---|---|---|---|---|
| SiO2 [%] | 43.7 | 43.5 | 40.3 | 41.6 | 42.8 | 43.3 | 42.8 |
| Al2O3 [%] | 14.3 | 13.4 | 13.0 | 12.2 | 13.2 | 13.6 | 11.7 |
| Fe2O3 [%] | 11.0 | 8.58 | 11.0 | 10.1 | 10.0 | 9.67 | 15.5 |
| MgO [%] | 6.05 | 3.93 | 3.86 | 5.49 | 4.41 | 3.50 | 5.35 |
| CaO [%] | 9.89 | 13.3 | 13.0 | 11.9 | 13.7 | 12.8 | 8.27 |
| Na2O [%] | 1.68 | 1.94 | 2.16 | 2.08 | 1.83 | 3.27 | 2.96 |
| K2O [%] | 0.86 | 0.58 | 0.76 | 0.46 | 0.37 | 0.29 | 0.18 |
| TiO2 [%] | 0.73 | 0.83 | 0.85 | 0.68 | 0.78 | 0.85 | 1.22 |
| P2O5 [%] | 0.05 | 0.06 | 0.06 | 0.07 | 0.06 | 0.06 | 0.08 |
| MnO [%] | 0.20 | 0.23 | 0.24 | 0.21 | 0.26 | 0.26 | 0.20 |
| Cr2O3 [%] | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | < 0.01 |
| V2O5 [%] | 0.05 | 0.05 | 0.05 | 0.04 | 0.05 | 0.05 | 0.06 |
| LOI [%] | 11.6 | 13.6 | 14.1 | 14.1 | 12.8 | 11.8 | 11.9 |
| Sum [%] | 100.2 | 99.9 | 99.4 | 98.8 | 100.3 | 99.5 | 100.1 |



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10280-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 19: SS-1 | 20: SS-2 | 21: SS-3 | 22: SS-4 | 23: SS-5 |
|---|---|---|---|---|---|
| SiO2 [%] | 69.0 | 57.4 | 66.2 | 57.6 | 67.6 |
| Al2O3 [%] | 13.9 | 13.5 | 15.3 | 11.5 | 14.2 |
| Fe2O3 [%] | 4.60 | 4.56 | 4.57 | 3.53 | 5.05 |
| MgO [%] | 1.72 | 1.94 | 1.88 | 1.34 | 1.89 |
| CaO [%] | 2.20 | 1.60 | 1.71 | 2.09 | 2.12 |
| Na2O [%] | 3.18 | 3.03 | 3.75 | 2.86 | 3.58 |
| K2O [%] | 2.08 | 1.80 | 2.46 | 1.66 | 1.90 |
| TiO2 [%] | 0.51 | 0.48 | 0.46 | 0.38 | 0.56 |
| P2O5 [%] | 0.14 | 0.13 | 0.12 | 0.12 | 0.18 |
| MnO [%] | 0.06 | 0.05 | 0.05 | 0.03 | 0.07 |
| Cr2O3 [%] | 0.03 | 0.02 | 0.04 | 0.03 | 0.05 |
| V2O5 [%] | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 |
| LOI [%] | 2.63 | 15.1 | 2.74 | 18.7 | 2.56 |
| Sum [%] | 100.1 | 99.5 | 99.3 | 99.9 | 99.8 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10281-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time |
|---|---|---|---|---|
| Aluminum [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Arsenic [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Barium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Beryllium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Bismuth [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Calcium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Cadmium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Cobalt [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Chromium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Copper [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Iron [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Potassium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Lithium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Magnesium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Manganese [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Molybdenum [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Sodium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Nickel [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Lead [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Antimony [g/t] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Selenium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Tin [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Strontium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Titanium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |
| Thallium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Uranium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Vanadium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Yttrium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Zinc [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 14:53 |

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**LR Report :** **CA10281-JUL09**



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*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10281-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M05-561-02 | 6: M97-135-01 | 7: M97-133-01 | 8: M97-137-01 | 9: M98-318-01 | 10: M97-143-01 | 11: M97-110-01 |
|---|---|---|---|---|---|---|---|
| Aluminum [µg/g] | 68000 | 73000 | 67000 | 71000 | 66000 | 64000 | 76000 |
| Arsenic [µg/g] | 15 | 11 | 9.0 | 4.3 | 7.5 | 2.9 | 32 |
| Barium [µg/g] | 120 | 81 | 57 | 170 | 86 | 26 | 1300 |
| Beryllium [µg/g] | 0.32 | 0.35 | 0.17 | 0.34 | 0.30 | 0.21 | 0.69 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 80000 | 89000 | 88000 | 98000 | 83000 | 79000 | 75000 |
| Cadmium [µg/g] | 0.15 | 0.30 | 0.13 | 0.10 | 0.20 | 0.08 | 0.21 |
| Cobalt [µg/g] | 44 | 36 | 42 | 39 | 41 | 38 | 45 |
| Chromium [µg/g] | 200 | 190 | 180 | 190 | 200 | 190 | 170 |
| Copper [µg/g] | 130 | 69 | 140 | 90 | 130 | 58 | 120 |
| Iron [µg/g] | 68000 | 68000 | 71000 | 62000 | 66000 | 65000 | 75000 |
| Potassium [µg/g] | 8400 | 6000 | 2700 | 6400 | 5700 | 2100 | 16000 |
| Lithium [µg/g] | 46 | 54 | 54 | 54 | 67 | 67 | 44 |
| Magnesium [µg/g] | 30000 | 20000 | 26000 | 21000 | 23000 | 34000 | 22000 |
| Manganese [µg/g] | 1600 | 2000 | 1600 | 1600 | 1800 | 1400 | 1800 |
| Molybdenum [µg/g] | 1.1 | 1.1 | 0.7 | 0.6 | 1.1 | 0.5 | 1.0 |
| Sodium [µg/g] | 16000 | 13000 | 18000 | 16000 | 12000 | 11000 | 14000 |
| Nickel [µg/g] | 110 | 100 | 120 | 94 | 98 | 110 | 100 |
| Lead [µg/g] | 5.1 | 7.1 | 2.7 | 4.4 | 5.1 | 3.0 | 42 |
| Antimony [g/t] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 1.3 | 1.6 | 0.5 | 3.4 | 0.9 | 1.3 | 0.8 |
| Strontium [µg/g] | 100 | 130 | 95 | 110 | 130 | 110 | 240 |
| Titanium [µg/g] | 2500 | 4500 | 2000 | 3700 | 2100 | 1600 | 4400 |
| Thallium [µg/g] | 0.31 | 0.23 | 0.08 | 0.26 | 0.26 | 0.05 | 0.76 |
| Uranium [µg/g] | 0.071 | 0.080 | 0.031 | 0.052 | 0.076 | 0.035 | 0.36 |
| Vanadium [µg/g] | 230 | 280 | 250 | 240 | 250 | 210 | 280 |
| Yttrium [µg/g] | 6.2 | 5.4 | 6.6 | 9.3 | 5.9 | 8.0 | 8.8 |
| Zinc [µg/g] | 79 | 110 | 87 | 83 | 100 | 71 | 110 |

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**LR Report :** **CA10281-JUL09**



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10281-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: M05-561-01 | 13: M99-348-01 | 14: M97-136-01 | 15: M97-130-02 | 16: M97-134-01 | 17: M97-130-01 | 18: M05-561-03 |
|---|---|---|---|---|---|---|---|
| Aluminum [µg/g] | 74000 | 73000 | 72000 | 70000 | 70000 | 75000 | 65000 |
| Arsenic [µg/g] | 3.7 | 5.4 | 174 | 6.4 | 9.9 | 7.2 | 54 |
| Barium [µg/g] | 93 | 85 | 130 | 87 | 90 | 49 | 33 |
| Beryllium [µg/g] | 0.33 | 0.26 | 0.27 | 0.23 | 0.23 | 0.21 | 0.31 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 64000 | 91000 | 90000 | 85000 | 91000 | 89000 | 58000 |
| Cadmium [µg/g] | 0.09 | 0.18 | 0.16 | 0.12 | 0.16 | 0.11 | 0.18 |
| Cobalt [µg/g] | 40 | 45 | 47 | 48 | 48 | 45 | 52 |
| Chromium [µg/g] | 150 | 200 | 160 | 170 | 170 | 170 | 23 |
| Copper [µg/g] | 64 | 130 | 110 | 120 | 140 | 120 | 250 |
| Iron [µg/g] | 72000 | 60000 | 77000 | 74000 | 67000 | 68000 | 110000 |
| Potassium [µg/g] | 7500 | 5400 | 7000 | 4500 | 3300 | 2800 | 1900 |
| Lithium [µg/g] | 70 | 65 | 44 | 53 | 65 | 44 | 31 |
| Magnesium [µg/g] | 34000 | 23000 | 23000 | 35000 | 26000 | 21000 | 33000 |
| Manganese [µg/g] | 1300 | 1500 | 1600 | 1400 | 1600 | 1700 | 1400 |
| Molybdenum [µg/g] | 0.6 | 0.7 | 0.6 | 0.9 | 0.6 | 0.5 | 0.6 |
| Sodium [µg/g] | 11000 | 14000 | 15000 | 16000 | 12000 | 24000 | 21000 |
| Nickel [µg/g] | 110 | 100 | 110 | 110 | 120 | 110 | 59 |
| Lead [µg/g] | 4.3 | 3.8 | 6.6 | 3.9 | 3.8 | 2.5 | 2.3 |
| Antimony [g/t] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 1.6 | 0.8 | 2.1 | 1.3 | 2.1 | 1.4 | 2.1 |
| Strontium [µg/g] | 130 | 120 | 110 | 98 | 130 | 96 | 130 |
| Titanium [µg/g] | 1100 | 1700 | 4300 | 1100 | 1200 | 3700 | 7400 |
| Thallium [µg/g] | 0.20 | 0.23 | 0.29 | 0.13 | 0.10 | 0.08 | 0.03 |
| Uranium [µg/g] | 0.044 | 0.063 | 0.051 | 0.038 | 0.048 | 0.045 | 0.12 |
| Vanadium [µg/g] | 240 | 240 | 270 | 220 | 240 | 260 | 280 |
| Yttrium [µg/g] | 8.8 | 7.2 | 7.3 | 4.4 | 9.1 | 13 | 5.2 |
| Zinc [µg/g] | 80 | 85 | 96 | 81 | 95 | 92 | 120 |

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**LR Report :** **CA10281-JUL09**



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10281-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 19: SS-1 | 20: SS-2 | 21: SS-3 | 22: SS-4 | 23: SS-5 |
|---|---|---|---|---|---|
| Aluminum [µg/g] | 71000 | 73000 | 70000 | 60000 | 79000 |
| Arsenic [µg/g] | 48 | 48 | 17 | 22 | 48 |
| Barium [µg/g] | 620 | 580 | 600 | 540 | 610 |
| Beryllium [µg/g] | 1.1 | 1.1 | 1.1 | 0.98 | 1.1 |
| Bismuth [µg/g] | 0.17 | 0.14 | 0.12 | 0.11 | 0.14 |
| Calcium [µg/g] | 15000 | 11000 | 10000 | 14000 | 15000 |
| Cadmium [µg/g] | 0.23 | 0.22 | 0.18 | 0.17 | 0.25 |
| Cobalt [µg/g] | 14 | 9.2 | 7.8 | 6.7 | 14 |
| Chromium [µg/g] | 210 | 200 | 230 | 220 | 270 |
| Copper [µg/g] | 29 | 23 | 9.2 | 46 | 24 |
| Iron [µg/g] | 31000 | 32000 | 28000 | 25000 | 36000 |
| Potassium [µg/g] | 18000 | 16000 | 18000 | 14000 | 17000 |
| Lithium [µg/g] | 18 | 22 | 21 | 14 | 20 |
| Magnesium [µg/g] | 9600 | 11000 | 9400 | 7700 | 12000 |
| Manganese [µg/g] | 450 | 370 | 360 | 270 | 490 |
| Molybdenum [µg/g] | 3.3 | 2.4 | 3.9 | 4.1 | 4.6 |
| Sodium [µg/g] | 21000 | 21000 | 22000 | 19000 | 25000 |
| Nickel [µg/g] | 37 | 33 | 30 | 28 | 35 |
| Lead [µg/g] | 15 | 12 | 12 | 11 | 15 |
| Antimony [g/t] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 1.0 | 1.4 | 1.6 | 1.9 | 0.9 |
| Tin [µg/g] | 1.3 | 2.0 | < 0.5 | 1.7 | 1.3 |
| Strontium [µg/g] | 310 | 290 | 300 | 300 | 350 |
| Titanium [µg/g] | 1900 | 1700 | 1700 | 1600 | 2200 |
| Thallium [µg/g] | 0.41 | 0.38 | 0.42 | 0.33 | 0.38 |
| Uranium [µg/g] | 1.3 | 1.4 | 1.2 | 1.4 | 1.6 |
| Vanadium [µg/g] | 82 | 91 | 67 | 58 | 85 |
| Yttrium [µg/g] | 8.6 | 6.9 | 6.7 | 6.9 | 9.7 |
| Zinc [µg/g] | 55 | 67 | 51 | 38 | 61 |

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**LR Report :** **CA10281-JUL09**



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Monday, October 05, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10281-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #2

# CERTIFICATE OF ANALYSIS
## Final Report - Revised

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-561-02 | 6: M97-135-01 | 7: M97-133-01 | 8: M97-137-01 | 9: M98-318-01 | 10: M97-143-01 | 11: M97-110-01 | 12: M05-561-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Silver [g/t] | 02-Oct-09 | 15:28 | 0.17 | 0.18 | 0.14 | 0.11 | 0.20 | 0.08 | 0.21 | 0.10 |
| Aluminum [µg/g] | 10-Aug-09 | 14:53 | 68000 | 73000 | 67000 | 71000 | 66000 | 64000 | 76000 | 74000 |
| Arsenic [µg/g] | 10-Aug-09 | 15:29 | 15 | 11 | 9.0 | 4.3 | 7.5 | 2.9 | 32 | 3.7 |
| Barium [µg/g] | 10-Aug-09 | 15:29 | 120 | 81 | 57 | 170 | 86 | 26 | 1300 | 93 |
| Beryllium [µg/g] | 10-Aug-09 | 15:29 | 0.32 | 0.35 | 0.17 | 0.34 | 0.30 | 0.21 | 0.69 | 0.33 |
| Bismuth [µg/g] | 10-Aug-09 | 15:29 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 10-Aug-09 | 14:53 | 80000 | 89000 | 88000 | 98000 | 83000 | 79000 | 75000 | 64000 |
| Cadmium [µg/g] | 10-Aug-09 | 15:29 | 0.15 | 0.30 | 0.13 | 0.10 | 0.20 | 0.08 | 0.21 | 0.09 |
| Cobalt [µg/g] | 10-Aug-09 | 15:29 | 44 | 36 | 42 | 39 | 41 | 38 | 45 | 40 |
| Chromium [µg/g] | 10-Aug-09 | 15:29 | 200 | 190 | 180 | 190 | 200 | 190 | 170 | 150 |
| Copper [µg/g] | 10-Aug-09 | 14:53 | 130 | 69 | 140 | 90 | 130 | 58 | 120 | 64 |
| Iron [µg/g] | 10-Aug-09 | 14:53 | 68000 | 68000 | 71000 | 62000 | 66000 | 65000 | 75000 | 72000 |
| Potassium [µg/g] | 10-Aug-09 | 14:53 | 8400 | 6000 | 2700 | 6400 | 5700 | 2100 | 16000 | 7500 |
| Lithium [µg/g] | 10-Aug-09 | 15:29 | 46 | 54 | 54 | 54 | 67 | 67 | 44 | 70 |
| Magnesium [µg/g] | 10-Aug-09 | 14:53 | 30000 | 20000 | 26000 | 21000 | 23000 | 34000 | 22000 | 34000 |
| Manganese [µg/g] | 10-Aug-09 | 15:29 | 1600 | 2000 | 1600 | 1600 | 1800 | 1400 | 1800 | 1300 |
| Molybdenum [µg/g] | 10-Aug-09 | 15:29 | 1.1 | 1.1 | 0.7 | 0.6 | 1.1 | 0.5 | 1.0 | 0.6 |
| Sodium [µg/g] | 10-Aug-09 | 14:53 | 16000 | 13000 | 18000 | 16000 | 12000 | 11000 | 14000 | 11000 |
| Nickel [µg/g] | 10-Aug-09 | 15:29 | 110 | 100 | 120 | 94 | 98 | 110 | 100 | 110 |
| Lead [µg/g] | 10-Aug-09 | 15:29 | 5.1 | 7.1 | 2.7 | 4.4 | 5.1 | 3.0 | 42 | 4.3 |

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**LR Report :** **CA10281-JUL09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-561-02 | 6: M97-135-01 | 7: M97-133-01 | 8: M97-137-01 | 9: M98-318-01 | 10: M97-143-01 | 11: M97-110-01 | 12: M05-561-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Antimony [g/t] | 10-Aug-09 | 15:29 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 10-Aug-09 | 15:29 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 10-Aug-09 | 15:29 | 1.3 | 1.6 | 0.5 | 3.4 | 0.9 | 1.3 | 0.8 | 1.6 |
| Strontium [µg/g] | 10-Aug-09 | 15:29 | 100 | 130 | 95 | 110 | 130 | 110 | 240 | 130 |
| Titanium [µg/g] | 10-Aug-09 | 14:53 | 2500 | 4500 | 2000 | 3700 | 2100 | 1600 | 4400 | 1100 |
| Thallium [µg/g] | 10-Aug-09 | 15:29 | 0.31 | 0.23 | 0.08 | 0.26 | 0.26 | 0.05 | 0.76 | 0.20 |
| Uranium [µg/g] | 10-Aug-09 | 15:29 | 0.071 | 0.080 | 0.031 | 0.052 | 0.076 | 0.035 | 0.36 | 0.044 |
| Vanadium [µg/g] | 10-Aug-09 | 15:29 | 230 | 280 | 250 | 240 | 250 | 210 | 280 | 240 |
| Yttrium [µg/g] | 10-Aug-09 | 15:29 | 6.2 | 5.4 | 6.6 | 9.3 | 5.9 | 8.0 | 8.8 | 8.8 |
| Zinc [µg/g] | 10-Aug-09 | 14:53 | 79 | 110 | 87 | 83 | 100 | 71 | 110 | 80 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS Lakefield Research Limited
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
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**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Monday, October 05, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10281-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #2

# CERTIFICATE OF ANALYSIS
## Final Report - Revised

| Analysis | 13: M99-348-01 | 14: M97-136-01 | 15: M97-130-02 | 16: M97-134-01 | 17: M97-130-01 | 18: M05-561-03 | 19: SS-1 | 20: SS-2 | 21: SS-3 | 22: SS-4 | 23: SS-5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silver [g/t] | 0.18 | 0.15 | 0.12 | 0.20 | 0.08 | 0.25 | 0.31 | 0.28 | 0.23 | 0.22 | 0.33 |
| Aluminum [µg/g] | 73000 | 72000 | 70000 | 70000 | 75000 | 65000 | 71000 | 73000 | 70000 | 60000 | 79000 |
| Arsenic [µg/g] | 5.4 | 174 | 6.4 | 9.9 | 7.2 | 54 | 48 | 48 | 17 | 22 | 48 |
| Barium [µg/g] | 85 | 130 | 87 | 90 | 49 | 33 | 620 | 580 | 600 | 540 | 610 |
| Beryllium [µg/g] | 0.26 | 0.27 | 0.23 | 0.23 | 0.21 | 0.31 | 1.1 | 1.1 | 1.1 | 0.98 | 1.1 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | 0.17 | 0.14 | 0.12 | 0.11 | 0.14 |
| Calcium [µg/g] | 91000 | 90000 | 85000 | 91000 | 89000 | 58000 | 15000 | 11000 | 10000 | 14000 | 15000 |
| Cadmium [µg/g] | 0.18 | 0.16 | 0.12 | 0.16 | 0.11 | 0.18 | 0.23 | 0.22 | 0.18 | 0.17 | 0.25 |
| Cobalt [µg/g] | 45 | 47 | 48 | 48 | 45 | 52 | 14 | 9.2 | 7.8 | 6.7 | 14 |
| Chromium [µg/g] | 200 | 160 | 170 | 170 | 170 | 23 | 210 | 200 | 230 | 220 | 270 |
| Copper [µg/g] | 130 | 110 | 120 | 140 | 120 | 250 | 29 | 23 | 9.2 | 46 | 24 |
| Iron [µg/g] | 60000 | 77000 | 74000 | 67000 | 68000 | 110000 | 31000 | 32000 | 28000 | 25000 | 36000 |
| Potassium [µg/g] | 5400 | 7000 | 4500 | 3300 | 2800 | 1900 | 18000 | 16000 | 18000 | 14000 | 17000 |
| Lithium [µg/g] | 65 | 44 | 53 | 65 | 44 | 31 | 18 | 22 | 21 | 14 | 20 |
| Magnesium [µg/g] | 23000 | 23000 | 35000 | 26000 | 21000 | 33000 | 9600 | 11000 | 9400 | 7700 | 12000 |
| Manganese [µg/g] | 1500 | 1600 | 1400 | 1600 | 1700 | 1400 | 450 | 370 | 360 | 270 | 490 |
| Molybdenum [µg/g] | 0.7 | 0.6 | 0.9 | 0.6 | 0.5 | 0.6 | 3.3 | 2.4 | 3.9 | 4.1 | 4.6 |
| Sodium [µg/g] | 14000 | 15000 | 16000 | 12000 | 24000 | 21000 | 21000 | 21000 | 22000 | 19000 | 25000 |
| Nickel [µg/g] | 100 | 110 | 110 | 120 | 110 | 59 | 37 | 33 | 30 | 28 | 35 |
| Lead [µg/g] | 3.8 | 6.6 | 3.9 | 3.8 | 2.5 | 2.3 | 15 | 12 | 12 | 11 | 15 |

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**LR Report :** **CA10281-JUL09**

| Analysis | 13: M99-348-01 | 14: M97-136-01 | 15: M97-130-02 | 16: M97-134-01 | 17: M97-130-01 | 18: M05-561-03 | 19: SS-1 | 20: SS-2 | 21: SS-3 | 22: SS-4 | 23: SS-5 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony [g/t] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | 1.0 | 1.4 | 1.6 | 1.9 | 0.9 |
| Tin [µg/g] | 0.8 | 2.1 | 1.3 | 2.1 | 1.4 | 2.1 | 1.3 | 2.0 | < 0.5 | 1.7 | 1.3 |
| Strontium [µg/g] | 120 | 110 | 98 | 130 | 96 | 130 | 310 | 290 | 300 | 300 | 350 |
| Titanium [µg/g] | 1700 | 4300 | 1100 | 1200 | 3700 | 7400 | 1900 | 1700 | 1700 | 1600 | 2200 |
| Thallium [µg/g] | 0.23 | 0.29 | 0.13 | 0.10 | 0.08 | 0.03 | 0.41 | 0.38 | 0.42 | 0.33 | 0.38 |
| Uranium [µg/g] | 0.063 | 0.051 | 0.038 | 0.048 | 0.045 | 0.12 | 1.3 | 1.4 | 1.2 | 1.4 | 1.6 |
| Vanadium [µg/g] | 240 | 270 | 220 | 240 | 260 | 280 | 82 | 91 | 67 | 58 | 85 |
| Yttrium [µg/g] | 7.2 | 7.3 | 4.4 | 9.1 | 13 | 5.2 | 8.6 | 6.9 | 6.7 | 6.9 | 9.7 |
| Zinc [µg/g] | 85 | 96 | 81 | 95 | 92 | 120 | 55 | 67 | 51 | 38 | 61 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

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**Comaplex Minerals Corp**
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Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10283-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time |
|---|---|---|---|---|
| Sample [weight(g)] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:56 |
| Volume mL [D.I. H2O] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:56 |
| InitialpH [units] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:56 |
| Final pH [units] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:56 |
| pH [no unit] | 10-Aug-09 | 10:34 | 11-Aug-09 | 11:38 |
| Conductivity [uS/cm] | 10-Aug-09 | 10:34 | 11-Aug-09 | 11:38 |
| Alkalinity [mg/L as CaCO3] | 10-Aug-09 | 10:34 | 11-Aug-09 | 11:38 |
| Chloride [mg/L] | 10-Aug-09 | 15:00 | 12-Aug-09 | 15:30 |
| Sulphate [mg/L] | 10-Aug-09 | 15:00 | 12-Aug-09 | 15:30 |
| Mercury [mg/L] | 11-Aug-09 | 14:00 | 12-Aug-09 | 11:09 |
| Silver [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Aluminum [mg/L] | 12-Aug-09 | 11:00 | 12-Aug-09 | 13:40 |
| Arsenic [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Boron [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Beryllium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Bismuth [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Calcium [mg/L] | 12-Aug-09 | 11:00 | 12-Aug-09 | 13:40 |
| Cadmium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Cobalt [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Chromium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Copper [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Iron [mg/L] | 12-Aug-09 | 11:00 | 12-Aug-09 | 13:40 |
| Potassium [mg/L] | 12-Aug-09 | 11:00 | 12-Aug-09 | 13:40 |
| Lithium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Magnesium [mg/L] | 12-Aug-09 | 11:00 | 12-Aug-09 | 13:40 |
| Manganese [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Molybdenum [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Sodium [mg/L] | 12-Aug-09 | 11:00 | 12-Aug-09 | 13:40 |
| Nickel [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Lead [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |

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**LR Report :** **CA10283-JUL09**

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time |
|---|---|---|---|---|
| Antimony [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Selenium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Tin [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Strontium [mg/L] | 12-Aug-09 | 11:00 | 12-Aug-09 | 13:40 |
| Titanium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Thallium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Uranium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Vanadium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Tungsten [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Yttrium [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |
| Zinc [mg/L] | 12-Aug-09 | 15:00 | 13-Aug-09 | 09:33 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10283-JUL09**
**Reference:** Tiriganiaq Footwall Rock

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M05-561-02 | 6: M97-135-01 | 7: M97-133-01 | 8: M97-137-01 | 9: M98-318-01 | 10: M97-143-01 | 11: M97-110-01 |
|---|---|---|---|---|---|---|---|
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.86 | 9.86 | 9.88 | 9.90 | 9.86 | 9.84 | 9.85 |
| Final pH [units] | 8.87 | 8.75 | 8.93 | 9.00 | 8.75 | 8.97 | 8.80 |
| pH [no unit] | 8.01 | 7.95 | 7.80 | 7.93 | 8.06 | 7.38 | 7.71 |
| Conductivity [uS/cm] | 106 | 134 | 84 | 86 | 111 | 103 | 112 |
| Alkalinity [mg/L as CaCO3] | 60 | 72 | 47 | 47 | 61 | 36 | 57 |
| Chloride [mg/L] | 1.3 | 0.3 | 0.4 | 0.5 | 0.8 | 1.0 | 0.4 |
| Sulphate [mg/L] | 0.8 | 1.3 | 1.6 | 0.6 | 1.5 | 15 | 4.2 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00005 | 0.00010 | 0.00004 | 0.00003 | 0.00004 | 0.00002 | 0.00002 |
| Aluminum [mg/L] | 0.54 | 0.71 | 0.73 | 0.91 | 0.58 | 0.57 | 0.68 |
| Arsenic [mg/L] | 0.0032 | 0.0017 | 0.0009 | 0.0007 | 0.0008 | 0.0012 | 0.0041 |
| Boron [mg/L] | 0.0136 | 0.0092 | 0.0121 | 0.0139 | 0.0178 | 0.0064 | 0.0074 |
| Beryllium [mg/L] | < 0.00002 | 0.00008 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | 0.00010 | 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 10.5 | 14.1 | 11.7 | 10.1 | 13.2 | 13.4 | 12.7 |
| Cadmium [mg/L] | < 0.000003 | 0.000055 | 0.000012 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000032 | 0.000117 | 0.000043 | 0.000024 | 0.000028 | 0.000026 | 0.000041 |
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | 0.03 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 6.22 | 1.29 | 1.63 | 2.93 | 2.70 | 1.38 | 8.76 |
| Lithium [mg/L] | 0.001 | 0.004 | 0.001 | 0.002 | 0.003 | 0.002 | 0.002 |
| Magnesium [mg/L] | 4.83 | 4.87 | 3.13 | 2.09 | 4.80 | 2.90 | 4.38 |
| Manganese [mg/L] | 0.00212 | 0.00807 | 0.00295 | 0.00258 | 0.00447 | 0.00261 | 0.00440 |
| Molybdenum [mg/L] | 0.00014 | 0.00013 | 0.00005 | 0.00004 | 0.00009 | 0.00005 | 0.00019 |
| Sodium [mg/L] | 6.28 | 8.81 | 4.10 | 4.89 | 6.75 | 3.00 | 4.31 |
| Nickel [mg/L] | 0.0002 | 0.0004 | 0.0002 | 0.0002 | 0.0002 | 0.0002 | 0.0003 |
| Lead [mg/L] | 0.00004 | 0.00012 | < 0.00002 | < 0.00002 | 0.00003 | < 0.00002 | 0.00003 |

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**LR Report :** **CA10283-JUL09**

| Analysis | 5: M05-561-02 | 6: M97-135-01 | 7: M97-133-01 | 8: M97-137-01 | 9: M98-318-01 | 10: M97-143-01 | 11: M97-110-01 |
|---|---|---|---|---|---|---|---|
| Antimony [mg/L] | 0.0015 | 0.0010 | 0.0007 | 0.0012 | 0.0009 | 0.0011 | 0.0016 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00004 | 0.00002 |
| Strontium [mg/L] | 0.0217 | 0.0169 | 0.0932 | 0.0168 | 0.0304 | 1.24 | 0.144 |
| Titanium [mg/L] | < 0.0001 | 0.0004 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | < 0.00002 | 0.00005 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000022 | 0.000179 | 0.000019 | 0.000004 | 0.000005 | 0.000019 | 0.000008 |
| Vanadium [mg/L] | 0.00051 | 0.00061 | 0.00063 | 0.00087 | 0.00038 | 0.00056 | 0.00060 |
| Tungsten [mg/L] | 0.00083 | 0.00127 | 0.00043 | 0.00064 | 0.00053 | 0.00094 | 0.00106 |
| Yttrium [mg/L] | 0.000003 | 0.000064 | 0.000014 | 0.000002 | 0.000002 | 0.000004 | 0.000003 |
| Zinc [mg/L] | < 0.001 | 0.003 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10283-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: M05-561-01 | 13: M99-348-01 | 14: M97-136-01 | 15: M97-130-02 | 16: M97-134-01 | 17: M97-130-01 | 18: M05-561-03 |
|---|---|---|---|---|---|---|---|
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.88 | 9.88 | 9.88 | 9.86 | 9.80 | 9.89 | 9.78 |
| Final pH [units] | 9.03 | 8.94 | 8.72 | 8.83 | 8.90 | 9.29 | 8.82 |
| pH [no unit] | 7.98 | 7.97 | 7.84 | 7.85 | 7.61 | 7.81 | 7.94 |
| Conductivity [uS/cm] | 87 | 94 | 127 | 125 | 107 | 60 | 132 |
| Alkalinity [mg/L as CaCO3] | 44 | 54 | 69 | 69 | 32 | 33 | 71 |
| Chloride [mg/L] | 1.4 | 0.3 | 0.5 | 0.6 | 0.4 | 0.3 | 1.9 |
| Sulphate [mg/L] | 2.2 | 0.6 | 1.0 | 0.9 | 25 | 1.0 | 1.1 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00002 | 0.00001 | 0.00002 | 0.00002 | < 0.00001 | 0.00001 | 0.00001 |
| Aluminum [mg/L] | 0.70 | 0.85 | 0.58 | 0.49 | 0.85 | 1.06 | 0.42 |
| Arsenic [mg/L] | 0.0005 | 0.0007 | 0.0189 | 0.0008 | 0.0006 | 0.0012 | 0.0041 |
| Boron [mg/L] | 0.0108 | 0.0042 | 0.0061 | 0.0071 | 0.0040 | 0.0059 | 0.0060 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 9.53 | 10.7 | 14.4 | 12.0 | 17.1 | 7.03 | 12.2 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000019 | 0.000023 | 0.000068 | 0.000024 | 0.000025 | 0.000022 | 0.000036 |
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 4.49 | 1.86 | 3.98 | 2.08 | 1.82 | 1.42 | 2.99 |
| Lithium [mg/L] | 0.002 | 0.002 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 |
| Magnesium [mg/L] | 2.15 | 3.01 | 5.22 | 7.15 | 2.36 | 0.817 | 5.95 |
| Manganese [mg/L] | 0.00179 | 0.00241 | 0.00429 | 0.00231 | 0.00540 | 0.00222 | 0.00206 |
| Molybdenum [mg/L] | 0.00006 | 0.00003 | 0.00005 | 0.00005 | 0.00004 | 0.00003 | 0.00008 |
| Sodium [mg/L] | 4.67 | 5.71 | 5.28 | 5.23 | 3.19 | 6.29 | 7.32 |
| Nickel [mg/L] | 0.0001 | 0.0002 | 0.0006 | 0.0002 | 0.0002 | 0.0001 | 0.0002 |
| Lead [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |

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**SGS Lakefield Research Limited**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**LR Report :** **CA10283-JUL09**

| Analysis | 12: M05-561-01 | 13: M99-348-01 | 14: M97-136-01 | 15: M97-130-02 | 16: M97-134-01 | 17: M97-130-01 | 18: M05-561-03 |
|---|---|---|---|---|---|---|---|
| Antimony [mg/L] | 0.0006 | 0.0006 | 0.0026 | 0.0006 | 0.0004 | 0.0009 | 0.0012 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0506 | 0.0174 | 0.0278 | 0.0169 | 0.0697 | 0.0124 | 0.0585 |
| Titanium [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | < 0.000001 | 0.000001 | < 0.000001 | < 0.000001 | < 0.000001 | < 0.000001 | 0.000006 |
| Vanadium [mg/L] | 0.00061 | 0.00075 | 0.00048 | 0.00047 | 0.00077 | 0.00258 | 0.00046 |
| Tungsten [mg/L] | 0.00088 | 0.00015 | 0.00049 | 0.00036 | 0.00031 | 0.00050 | 0.00072 |
| Yttrium [mg/L] | 0.000001 | 0.000001 | 0.000001 | 0.000001 | 0.000002 | 0.000001 | 0.000001 |
| Zinc [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 705-652-2000 FAX: 705-652-6365

**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10283-JUL09**
**Reference:** Tiriganiaq Footwall Rock

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 19: SS-1 | 20: SS-2 | 21: SS-3 | 22: SS-4 | 23: SS-5 | 24: SS-5 |
|---|---|---|---|---|---|---|
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 7.69 | 5.92 | 6.66 | 6.79 | 6.71 | 6.67 |
| Final pH [units] | 7.63 | 5.87 | 7.35 | 6.68 | 6.87 | 6.96 |
| pH [no unit] | 7.12 | 6.99 | 6.95 | 7.20 | 6.89 | 7.05 |
| Conductivity [uS/cm] | 48 | 52 | 37 | 80 | 54 | 45 |
| Alkalinity [mg/L as CaCO3] | 16 | 15 | 13 | 31 | 10 | 12 |
| Chloride [mg/L] | 0.7 | 1.0 | 0.5 | 1.4 | 5.4 | 1.4 |
| Sulphate [mg/L] | 6.5 | 6.9 | 5.0 | 8.8 | 6.6 | 6.4 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00002 | 0.00010 | 0.00002 | 0.00001 | 0.00004 | 0.00004 |
| Aluminum [mg/L] | 0.80 | 0.71 | 1.02 | 0.23 | 0.98 | 0.90 |
| Arsenic [mg/L] | 0.0192 | 0.0213 | 0.0070 | 0.0077 | 0.0208 | 0.0208 |
| Boron [mg/L] | 0.363 | 0.970 | 0.326 | 0.625 | 0.357 | 0.314 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 0.00002 | 0.00005 | 0.00001 | 0.00002 | 0.00002 | 0.00003 |
| Calcium [mg/L] | 1.80 | 1.33 | 0.76 | 6.92 | 1.28 | 1.09 |
| Cadmium [mg/L] | 0.000013 | 0.000018 | 0.000011 | 0.000010 | 0.000018 | 0.000018 |
| Cobalt [mg/L] | 0.00273 | 0.00136 | 0.00115 | 0.000383 | 0.00368 | 0.00323 |
| Chromium [mg/L] | 0.0020 | 0.0028 | 0.0023 | 0.0010 | 0.0023 | 0.0022 |
| Copper [mg/L] | 0.0112 | 0.0044 | 0.0040 | 0.0115 | 0.0108 | 0.0096 |
| Iron [mg/L] | 1.58 | 0.89 | 1.24 | 0.63 | 2.10 | 1.97 |
| Potassium [mg/L] | 0.88 | 1.97 | 1.00 | 1.64 | 2.08 | 1.09 |
| Lithium [mg/L] | 0.001 | 0.005 | 0.001 | 0.002 | 0.001 | 0.001 |
| Magnesium [mg/L] | 0.631 | 0.425 | 0.392 | 1.27 | 0.514 | 0.468 |
| Manganese [mg/L] | 0.0647 | 0.0284 | 0.0428 | 0.00639 | 0.0844 | 0.0717 |
| Molybdenum [mg/L] | 0.00117 | 0.00039 | 0.00094 | 0.00206 | 0.00086 | 0.00122 |
| Sodium [mg/L] | 8.20 | 10.6 | 8.32 | 10.5 | 8.91 | 8.01 |
| Nickel [mg/L] | 0.0095 | 0.0028 | 0.0027 | 0.0035 | 0.0097 | 0.0085 |
| Lead [mg/L] | 0.00227 | 0.00081 | 0.00111 | 0.00037 | 0.00231 | 0.00228 |

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**SGS Lakefield Research Limited**
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**LR Report :** **CA10283-JUL09**

| Analysis | 19: SS-1 | 20: SS-2 | 21: SS-3 | 22: SS-4 | 23: SS-5 | 24: SS-5 |
|---|---|---|---|---|---|---|
| Antimony [mg/L] | 0.0003 | 0.0004 | 0.0004 | 0.0004 | 0.0003 | 0.0003 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 0.00003 | 0.00003 | 0.00002 | 0.00003 | 0.00001 | 0.00002 |
| Strontium [mg/L] | 0.0240 | 0.0239 | 0.0178 | 0.0490 | 0.0239 | 0.0211 |
| Titanium [mg/L] | 0.0178 | 0.0174 | 0.0194 | 0.0122 | 0.0212 | 0.0221 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000083 | 0.000128 | 0.000085 | 0.000194 | 0.000100 | 0.000094 |
| Vanadium [mg/L] | 0.00166 | 0.00199 | 0.00171 | 0.00158 | 0.00184 | 0.00188 |
| Tungsten [mg/L] | < 0.00003 | 0.00004 | 0.00009 | 0.00004 | 0.00009 | < 0.00003 |
| Yttrium [mg/L] | 0.000504 | 0.000410 | 0.000373 | 0.000264 | 0.000479 | 0.000441 |
| Zinc [mg/L] | 0.035 | 0.603 | 0.041 | 0.152 | 0.051 | 0.040 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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**Comaplex Minerals Corp**
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June 12, 2009

**Date Rec. :** 04 June 2009
**LR Report:** **CA11033-JUN09**
**Reference:** Comaplex Project

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-341-01 | 6: GT08-04-02 | 7: M98-194-01 | 8: M04-533-01 | 9: M04-526-01 |
|---|---|---|---|---|---|---|---|
| Sample [weight(g)] | 08-Jun-09 | 15:11 | 1.55 | 1.47 | 1.45 | 1.53 | 1.46 |
| vol H2O2 [mL] | 08-Jun-09 | 15:11 | 150 | 150 | 150 | 150 | 150 |
| Final pH [units] | 08-Jun-09 | 15:11 | 10.73 | 11.11 | 10.48 | 10.50 | 11.09 |
| NaOH [Normality] | 08-Jun-09 | 15:11 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 08-Jun-09 | 15:11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 08-Jun-09 | 15:11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| NAG [@pH4.5] | 08-Jun-09 | 15:11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NAG [@pH7] | 08-Jun-09 | 15:11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Thursday, June 18, 2009

**Date Rec. :** 04 June 2009
**LR Report:** **CA11034-JUN09**
**Reference:** Comaplex Project

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-341-01 | 6: GT08-04-02 | 7: M98-194-01 | 8: M04-533-01 | 9: M04-526-01 |
|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 08-Jun-09 | 15:11 | 2.45 | 2.46 | 2.53 | 2.55 | 2.46 |
| vol H2O2 [mL] | 08-Jun-09 | 15:11 | 250 | 250 | 250 | 250 | 250 |
| pH [no unit] | 10-Jun-09 | 14:31 | 11.2 | 11.4 | 10.5 | 10.5 | 11.1 |
| Conductivity [uS/cm] | 10-Jun-09 | 14:31 | 467 | 429 | 221 | 205 | 489 |
| Alkalinity [mg/L as CaCO3] | 10-Jun-09 | 14:31 | 124 | 142 | 77 | 76 | 125 |
| Sulphate [mg/L] | 12-Jun-09 | 14:56 | 64 | 4.8 | 32 | 21 | 120 |
| Chloride [mg/L] | 12-Jun-09 | 08:26 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Mercury [mg/L] | 12-Jun-09 | 15:33 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 12-Jun-09 | 12:02 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 12-Jun-09 | 12:02 | 1.65 | 1.68 | 2.04 | 1.25 | 4.59 |
| Arsenic [mg/L] | 12-Jun-09 | 12:02 | 0.0007 | 0.0003 | 0.0148 | 0.0044 | 0.0047 |
| Barium [mg/L] | 12-Jun-09 | 12:02 | 0.00265 | 0.00152 | 0.0186 | 0.0802 | 0.00459 |
| Beryllium [mg/L] | 12-Jun-09 | 12:02 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Boron [mg/L] | 12-Jun-09 | 12:02 | 1.04 | 0.498 | 0.726 | 0.820 | 0.896 |
| Bismuth [mg/L] | 12-Jun-09 | 12:02 | 0.00004 | 0.00001 | 0.00002 | 0.00001 | 0.00002 |
| Calcium [mg/L] | 12-Jun-09 | 12:02 | 79.6 | 60.2 | 45.7 | 36.1 | 107 |
| Cadmium [mg/L] | 12-Jun-09 | 12:02 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 12-Jun-09 | 12:02 | 0.000051 | 0.000039 | 0.000025 | 0.000024 | 0.000061 |
| Chromium [mg/L] | 12-Jun-09 | 12:02 | 0.0162 | 0.0141 | 0.0119 | 0.0273 | 0.0018 |
| Copper [mg/L] | 12-Jun-09 | 12:02 | 0.0007 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0008 |
| Iron [mg/L] | 12-Jun-09 | 12:02 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 12-Jun-09 | 12:02 | 3.20 | 2.57 | 6.56 | 12.6 | 0.95 |
| Lithium [mg/L] | 12-Jun-09 | 12:02 | < 0.002 | < 0.002 | < 0.002 | < 0.002 | < 0.002 |
| Magnesium [mg/L] | 12-Jun-09 | 12:02 | 0.010 | 0.004 | 0.004 | 0.006 | < 0.003 |
| Manganese [mg/L] | 12-Jun-09 | 12:02 | 0.00023 | 0.00014 | 0.00003 | 0.00011 | 0.00007 |
| Molybdenum [mg/L] | 12-Jun-09 | 12:02 | 0.00599 | 0.00160 | 0.00566 | 0.0116 | 0.00397 |
| Sodium [mg/L] | 12-Jun-09 | 12:02 | 3.74 | 4.23 | 4.97 | 2.62 | 1.00 |
| Nickel [mg/L] | 12-Jun-09 | 12:02 | 0.0008 | 0.0006 | 0.0004 | 0.0003 | 0.0010 |
| Lead [mg/L] | 12-Jun-09 | 12:02 | 0.00004 | < 0.00002 | < 0.00002 | 0.00008 | 0.00003 |
| Antimony [mg/L] | 12-Jun-09 | 12:02 | 0.0004 | 0.0004 | 0.0007 | 0.0010 | 0.0003 |
| Selenium [mg/L] | 12-Jun-09 | 12:02 | 0.003 | < 0.001 | < 0.001 | < 0.001 | 0.002 |
| Tin [mg/L] | 12-Jun-09 | 12:02 | 0.00009 | 0.00006 | 0.00002 | 0.00008 | 0.00004 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA11034-JUN09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-341-01 | 6: GT08-04-02 | 7: M98-194-01 | 8: M04-533-01 | 9: M04-526-01 |
|---|---|---|---|---|---|---|---|
| Strontium [mg/L] | 12-Jun-09 | 12:02 | 0.120 | 0.0714 | 0.474 | 0.843 | 0.905 |
| Titanium [mg/L] | 12-Jun-09 | 12:02 | 0.0002 | < 0.0001 | < 0.0001 | 0.0001 | 0.0003 |
| Thallium [mg/L] | 12-Jun-09 | 12:02 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 |
| Uranium [mg/L] | 12-Jun-09 | 12:02 | 0.000004 | 0.000002 | 0.000003 | 0.000003 | 0.000003 |
| Vanadium [mg/L] | 12-Jun-09 | 12:02 | 0.00077 | 0.00189 | 0.00253 | 0.00947 | 0.00032 |
| Tungsten [mg/L] | 12-Jun-09 | 12:02 | 0.00028 | 0.00036 | 0.00061 | 0.00104 | 0.00030 |
| Yttrium [mg/L] | 12-Jun-09 | 12:02 | 0.000001 | 0.000001 | 0.000002 | 0.000007 | 0.000003 |
| Zinc [mg/L] | 12-Jun-09 | 12:02 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**NAG Test**

**Project :** Meliadine Tiriganaiq

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW
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T2R 1J4,

Phone: 403-265-2846
Fax:403-232-1421

Thursday, November 19, 2009

**Date Rec. :** 09 November 2009
**LR Report:** **CA10080-NOV09**
**Reference:** 09-1426-0015

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-536A-01 | 6: M97-141-01 | 7: M99-403-03 | 8: M99-404-04 |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 16-Nov-09 | 13:28 | 1.47 | 1.52 | 1.49 | 1.50 |
| vol H2O2 [mL] | 16-Nov-09 | 13:28 | 150 | 150 | 150 | 150 |
| Final pH [units] | 16-Nov-09 | 13:28 | 11.50 | 11.05 | 10.81 | 10.70 |
| NaOH [Normality] | 16-Nov-09 | 13:28 | 0.10 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.00 |
| NAG pH4.5 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.0 |
| NAG pH7.0 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**NAG Test with analyses**

**Project :** Meliadine Tiriganaiq

**Comaplex Minerals Corp**
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Tuesday, November 24, 2009

**Date Rec. :** 10 November 2009
**LR Report:** **CA11233-NOV09**
**Reference:** 07-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-536A-01 | 6: M97-141-01 | 7: M99-403-03 | 8: M99-404-04 |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 17-Nov-09 | 15:27 | 2.5 | 2.6 | 2.5 | 2.5 |
| vol H2O2 [mL] | 17-Nov-09 | 15:27 | 250 | 250 | 250 | 250 |
| Final pH [units] | 17-Nov-09 | 15:27 | 11.52 | 11.14 | 10.98 | 10.89 |
| pH [no unit] | 20-Nov-09 | 08:53 | 10.6 | 10.2 | 9.89 | 9.70 |
| Alkalinity [mg/L as CaCO3] | 20-Nov-09 | 08:53 | 95 | 93 | 80 | 83 |
| Acidity [mg/L as CaCO3] | 20-Nov-09 | 08:53 | < 2 | < 2 | < 2 | < 2 |
| Conductivity [uS/cm] | 20-Nov-09 | 08:53 | 236 | 235 | 205 | 249 |
| Sulphate [mg/L] | 20-Nov-09 | 16:56 | 19 | 31 | 24 | 44 |
| Chloride [mg/L] | 19-Nov-09 | 12:30 | 0.3 | 0.2 | 0.2 | < 0.2 |
| Mercury [mg/L] | 19-Nov-09 | 12:04 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 23-Nov-09 | 09:20 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 23-Nov-09 | 09:20 | 1.65 | 1.15 | 1.71 | 1.10 |
| Arsenic [mg/L] | 23-Nov-09 | 09:20 | 0.0008 | 0.0004 | 0.0330 | 0.0074 |
| Boron [mg/L] | 23-Nov-09 | 09:20 | 0.908 | 0.893 | 0.677 | 0.578 |
| Beryllium [mg/L] | 23-Nov-09 | 09:20 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 23-Nov-09 | 09:20 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 19-Nov-09 | 16:05 | 56.8 | 53.6 | 38.6 | 48.7 |
| Cadmium [mg/L] | 23-Nov-09 | 09:20 | < 0.000003 | 0.000003 | < 0.000003 | 0.000005 |
| Cobalt [mg/L] | 23-Nov-09 | 09:20 | 0.000081 | 0.000072 | 0.000056 | 0.000069 |
| Chromium [mg/L] | 23-Nov-09 | 09:20 | 0.0182 | 0.0177 | 0.0165 | 0.0181 |
| Copper [mg/L] | 23-Nov-09 | 09:20 | 0.0017 | 0.0008 | 0.0006 | < 0.0005 |
| Iron [mg/L] | 19-Nov-09 | 16:05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 19-Nov-09 | 16:05 | 2.76 | 1.89 | 5.66 | 4.70 |
| Lithium [mg/L] | 23-Nov-09 | 09:20 | 0.001 | 0.001 | 0.002 | < 0.001 |
| Magnesium [mg/L] | 19-Nov-09 | 16:05 | 0.003 | 0.004 | < 0.003 | < 0.003 |
| Manganese [mg/L] | 23-Nov-09 | 09:20 | 0.00023 | 0.00003 | 0.00005 | 0.00011 |
| Molybdenum [mg/L] | 23-Nov-09 | 09:20 | 0.00159 | 0.00098 | 0.00629 | 0.0135 |
| Sodium [mg/L] | 19-Nov-09 | 16:05 | 3.15 | 3.83 | 3.64 | 2.60 |
| Nickel [mg/L] | 23-Nov-09 | 09:20 | 0.0011 | 0.0010 | 0.0006 | 0.0009 |
| Lead [mg/L] | 23-Nov-09 | 09:20 | < 0.00002 | 0.00009 | < 0.00002 | 0.00003 |
| Antimony [mg/L] | 23-Nov-09 | 09:20 | 0.0007 | 0.0005 | 0.0009 | 0.0009 |
| Selenium [mg/L] | 23-Nov-09 | 09:20 | 0.001 | 0.002 | < 0.001 | < 0.001 |

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**SGS Lakefield Research Limited**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**NAG Test with analyses**

**Project :** Meliadine Tiriganaiq

**LR Report :** **CA11233-NOV09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-536A-01 | 6: M97-141-01 | 7: M99-403-03 | 8: M99-404-04 |
|---|---|---|---|---|---|---|
| Tin [mg/L] | 23-Nov-09 | 09:20 | 0.00018 | 0.00005 | 0.00006 | 0.00007 |
| Strontium [mg/L] | 23-Nov-09 | 09:20 | 0.0639 | 0.0649 | 0.372 | 0.276 |
| Titanium [mg/L] | 23-Nov-09 | 09:20 | 0.0001 | 0.0002 | 0.0002 | 0.0003 |
| Thallium [mg/L] | 23-Nov-09 | 09:20 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 |
| Uranium [mg/L] | 23-Nov-09 | 09:20 | 0.000028 | 0.000003 | 0.000004 | 0.000016 |
| Vanadium [mg/L] | 23-Nov-09 | 09:20 | 0.00167 | 0.00245 | 0.00431 | 0.00871 |
| Tungsten [mg/L] | 23-Nov-09 | 09:20 | 0.00144 | 0.00072 | 0.00064 | 0.00053 |
| Yttrium [mg/L] | 23-Nov-09 | 09:20 | 0.000003 | 0.000002 | 0.000002 | 0.000005 |
| Zinc [mg/L] | 23-Nov-09 | 09:20 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Lakefield Research Limited**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**NAG Test with analyses**

**Project :** Meliadine Tiriganaiq

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Tuesday, November 24, 2009

**Date Rec. :** 10 November 2009
**LR Report:** **CA11233-NOV09**
**Reference:** 07-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-536A-01 | 6: M97-141-01 | 7: M99-403-03 | 8: M99-404-04 |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 17-Nov-09 | 15:27 | 2.5 | 2.6 | 2.5 | 2.5 |
| vol H2O2 [mL] | 17-Nov-09 | 15:27 | 250 | 250 | 250 | 250 |
| Final pH [units] | 17-Nov-09 | 15:27 | 11.52 | 11.14 | 10.98 | 10.89 |
| pH [no unit] | 20-Nov-09 | 08:53 | 10.6 | 10.2 | 9.89 | 9.70 |
| Alkalinity [mg/L as CaCO3] | 20-Nov-09 | 08:53 | 95 | 93 | 80 | 83 |
| Acidity [mg/L as CaCO3] | 20-Nov-09 | 08:53 | < 2 | < 2 | < 2 | < 2 |
| Conductivity [uS/cm] | 20-Nov-09 | 08:53 | 236 | 235 | 205 | 249 |
| Sulphate [mg/L] | 20-Nov-09 | 16:56 | 19 | 31 | 24 | 44 |
| Chloride [mg/L] | 19-Nov-09 | 12:30 | 0.3 | 0.2 | 0.2 | < 0.2 |
| Mercury [mg/L] | 19-Nov-09 | 12:04 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 23-Nov-09 | 09:20 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 23-Nov-09 | 09:20 | 1.65 | 1.15 | 1.71 | 1.10 |
| Arsenic [mg/L] | 23-Nov-09 | 09:20 | 0.0008 | 0.0004 | 0.0330 | 0.0074 |
| Boron [mg/L] | 23-Nov-09 | 09:20 | 0.908 | 0.893 | 0.677 | 0.578 |
| Beryllium [mg/L] | 23-Nov-09 | 09:20 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 23-Nov-09 | 09:20 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 19-Nov-09 | 16:05 | 56.8 | 53.6 | 38.6 | 48.7 |
| Cadmium [mg/L] | 23-Nov-09 | 09:20 | < 0.000003 | 0.000003 | < 0.000003 | 0.000005 |
| Cobalt [mg/L] | 23-Nov-09 | 09:20 | 0.000081 | 0.000072 | 0.000056 | 0.000069 |
| Chromium [mg/L] | 23-Nov-09 | 09:20 | 0.0182 | 0.0177 | 0.0165 | 0.0181 |
| Copper [mg/L] | 23-Nov-09 | 09:20 | 0.0017 | 0.0008 | 0.0006 | < 0.0005 |
| Iron [mg/L] | 19-Nov-09 | 16:05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 19-Nov-09 | 16:05 | 2.76 | 1.89 | 5.66 | 4.70 |
| Lithium [mg/L] | 23-Nov-09 | 09:20 | 0.001 | 0.001 | 0.002 | < 0.001 |
| Magnesium [mg/L] | 19-Nov-09 | 16:05 | 0.003 | 0.004 | < 0.003 | < 0.003 |
| Manganese [mg/L] | 23-Nov-09 | 09:20 | 0.00023 | 0.00003 | 0.00005 | 0.00011 |
| Molybdenum [mg/L] | 23-Nov-09 | 09:20 | 0.00159 | 0.00098 | 0.00629 | 0.0135 |
| Sodium [mg/L] | 19-Nov-09 | 16:05 | 3.15 | 3.83 | 3.64 | 2.60 |
| Nickel [mg/L] | 23-Nov-09 | 09:20 | 0.0011 | 0.0010 | 0.0006 | 0.0009 |
| Lead [mg/L] | 23-Nov-09 | 09:20 | < 0.00002 | 0.00009 | < 0.00002 | 0.00003 |
| Antimony [mg/L] | 23-Nov-09 | 09:20 | 0.0007 | 0.0005 | 0.0009 | 0.0009 |
| Selenium [mg/L] | 23-Nov-09 | 09:20 | 0.001 | 0.002 | < 0.001 | < 0.001 |

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**NAG Test with analyses**

**Project :** Meliadine Tiriganaiq

**LR Report :** **CA11233-NOV09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-536A-01 | 6: M97-141-01 | 7: M99-403-03 | 8: M99-404-04 |
|---|---|---|---|---|---|---|
| Tin [mg/L] | 23-Nov-09 | 09:20 | 0.00018 | 0.00005 | 0.00006 | 0.00007 |
| Strontium [mg/L] | 23-Nov-09 | 09:20 | 0.0639 | 0.0649 | 0.372 | 0.276 |
| Titanium [mg/L] | 23-Nov-09 | 09:20 | 0.0001 | 0.0002 | 0.0002 | 0.0003 |
| Thallium [mg/L] | 23-Nov-09 | 09:20 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 |
| Uranium [mg/L] | 23-Nov-09 | 09:20 | 0.000028 | 0.000003 | 0.000004 | 0.000016 |
| Vanadium [mg/L] | 23-Nov-09 | 09:20 | 0.00167 | 0.00245 | 0.00431 | 0.00871 |
| Tungsten [mg/L] | 23-Nov-09 | 09:20 | 0.00144 | 0.00072 | 0.00064 | 0.00053 |
| Yttrium [mg/L] | 23-Nov-09 | 09:20 | 0.000003 | 0.000002 | 0.000002 | 0.000005 |
| Zinc [mg/L] | 23-Nov-09 | 09:20 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Lakefield Research Limited**
P.O. Box 4300 - 185 Concession St.
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Phone: 705-652-2000 FAX: 705-652-6365

**Meliadine Resources Ltd**
Attn : Roger March rogermarch@shaw.ca

260-12500 Horseshoe Way
Richmond, BC
V7A 5K2,

Phone: 604-241-4566
Fax:604-241-4586

Thursday, November 19, 2009

**Date Rec. :** 12 November 2009
**LR Report:** **CA11271-NOV09**
**Reference:** 09-1426-0013

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Da | 4: Analysis Approval Ti | 5: ML00-221-04 | 6: ML90-04-01 | 7: ML90-12-01 | 8: ML92-061-01 | 9: ML95-93-02 | 10: ML95-93-03 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 16-Nov-09 | 13:28 | 1.51 | 1.50 | 1.50 | 1.50 | 1.53 | 1.47 |
| vol H2O2 [mL] | 16-Nov-09 | 13:28 | 150 | 150 | 150 | 150 | 150 | 150 |
| Final pH [units] | 16-Nov-09 | 13:28 | 4.89 | 6.49 | 6.36 | 4.48 | 4.13 | 10.08 |
| NaOH [Normality] | 16-Nov-09 | 13:28 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 16-Nov-09 | 13:28 | 0.30 | 0.10 | 0.15 | 0.30 | 0.50 | 0.00 |
| NAG pH4.5 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 |
| NAG pH7.0 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 1.0 | 0.3 | 0.5 | 1.0 | 1.6 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 705-652-2000 FAX: 705-652-6365

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

Tuesday, November 24, 2009

**Date Rec. :** 11 November 2009
**LR Report:** **CA11252-NOV09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-350-02 | 6: M00-474-05 | 7: M98-269-03 | 8: M98-297-04 |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a | Date:n/a |
| Sample [weight(g)] | 16-Nov-09 | 08:23 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 16-Nov-09 | 08:23 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 16-Nov-09 | 08:23 | 9.6 | 9.7 | 9.8 | 9.7 |
| Final pH [units] | 16-Nov-09 | 08:23 | 9.32 | 9.28 | 9.32 | 9.29 |
| pH [no unit] | 20-Nov-09 | 08:53 | 8.24 | 8.16 | 8.44 | 8.13 |
| Conductivity [uS/cm] | 20-Nov-09 | 08:53 | 100 | 99 | 90 | 103 |
| Alkalinity [mg/L as CaCO3] | 20-Nov-09 | 08:53 | 45 | 39 | 38 | 35 |
| Sulphate [mg/L] | 20-Nov-09 | 17:09 | 3.1 | 7.2 | 5.0 | 12 |
| Chloride [mg/L] | 19-Nov-09 | 08:41 | 1.0 | 0.8 | 0.6 | 0.6 |
| Mercury [mg/L] | 18-Nov-09 | 09:19 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 19-Nov-09 | 12:26 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 19-Nov-09 | 16:03 | 1.29 | 1.20 | 1.31 | 1.20 |
| Arsenic [mg/L] | 19-Nov-09 | 12:26 | 0.0093 | 0.0669 | 0.0112 | 0.0119 |
| Boron [mg/L] | 19-Nov-09 | 12:26 | 0.0086 | 0.0066 | 0.0069 | 0.0085 |
| Beryllium [mg/L] | 19-Nov-09 | 12:26 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 19-Nov-09 | 12:26 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 19-Nov-09 | 16:03 | 8.03 | 9.65 | 8.42 | 9.68 |
| Cadmium [mg/L] | 19-Nov-09 | 12:26 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 19-Nov-09 | 12:26 | 0.000032 | 0.000040 | 0.000030 | 0.000028 |
| Chromium [mg/L] | 19-Nov-09 | 12:26 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 19-Nov-09 | 12:26 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 19-Nov-09 | 16:03 | 0.03 | 0.01 | 0.02 | < 0.01 |
| Potassium [mg/L] | 19-Nov-09 | 16:03 | 11.5 | 10.7 | 9.33 | 9.94 |
| Lithium [mg/L] | 19-Nov-09 | 12:26 | < 0.001 | < 0.001 | < 0.001 | 0.001 |
| Magnesium [mg/L] | 19-Nov-09 | 16:03 | 1.47 | 1.22 | 1.02 | 1.13 |
| Manganese [mg/L] | 19-Nov-09 | 12:26 | 0.00069 | 0.00097 | 0.00053 | 0.00059 |
| Molybdenum [mg/L] | 19-Nov-09 | 12:26 | 0.00051 | 0.00060 | 0.00046 | 0.00094 |
| Sodium [mg/L] | 19-Nov-09 | 16:03 | 3.85 | 3.56 | 3.81 | 3.75 |
| Nickel [mg/L] | 19-Nov-09 | 12:26 | 0.0004 | 0.0006 | 0.0004 | 0.0004 |
| Lead [mg/L] | 19-Nov-09 | 12:26 | 0.00002 | 0.00004 | 0.00002 | 0.00003 |
| Antimony [mg/L] | 19-Nov-09 | 12:26 | 0.0030 | 0.0035 | 0.0030 | 0.0027 |
| Selenium [mg/L] | 19-Nov-09 | 12:26 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

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P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

**Modified ABA (Price 1997)**

**Project :** Tiriganiaq deposit

Monday, September 14, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11183-AUG09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-734-01 | 6: M08-734-02 | 7: M08-734-03 | 8: M08-734-04 | 9: M08-735-01 | 10: M08-735-02 | 11: M08-735-03 | 12: M08-742-01 | 13: M08-742-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Paste pH [units] | 11-Sep-09 | 11:08 | 9.25 | 8.92 | 9.06 | 9.05 | 9.42 | 9.24 | 9.05 | 9.45 | 9.12 |
| Fizz Rate [—] | 11-Sep-09 | 11:08 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sample [weight(g)] | 11-Sep-09 | 11:08 | 2.02 | 2.00 | 2.03 | 1.99 | 1.97 | 2.05 | 2.03 | 1.97 | 2.00 |
| HCl added [mL] | 11-Sep-09 | 11:08 | 76.70 | 113.60 | 111.50 | 138.20 | 69.60 | 144.00 | 107.20 | 57.80 | 87.20 |
| HCl [Normality] | 11-Sep-09 | 11:08 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 11-Sep-09 | 11:08 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 11-Sep-09 | 11:08 | 24.10 | 43.40 | 39.95 | 48.10 | 20.70 | 57.10 | 30.40 | 21.00 | 35.30 |
| Final pH [units] | 11-Sep-09 | 11:08 | 1.78 | 1.59 | 1.73 | 1.79 | 1.99 | 1.78 | 1.93 | 1.88 | 1.63 |
| NP [t CaCO3/1000t] | 11-Sep-09 | 11:08 | 130 | 176 | 176 | 226 | 124 | 212 | 189 | 93.4 | 130 |
| AP [t CaCO3/1000 t] | 11-Sep-09 | 11:09 | 2.2 | 8.1 | 5.3 | 1.6 | 1.9 | 3.4 | 2.2 | 1.6 | 3.4 |
| Net NP [t CaCO3/1000 t] | 11-Sep-09 | 11:09 | 128 | 167 | 171 | 225 | 122 | 209 | 187 | 91.8 | 126 |
| NP/AP [ratio] | 11-Sep-09 | 11:09 | 59.2 | 21.7 | 33.1 | 139 | 65.0 | 62.4 | 87.5 | 58.4 | 38.2 |
| Total Sulphur [%] | 04-Sep-09 | 14:41 | 0.107 | 0.334 | 0.261 | 0.088 | 0.106 | 0.179 | 0.124 | 0.132 | 0.207 |
| Acid Leachable SO4-S [%] | 11-Sep-09 | 10:28 | 0.04 | 0.08 | 0.09 | 0.04 | 0.05 | 0.07 | 0.05 | 0.08 | 0.10 |
| Sulphide-S [%] | 11-Sep-09 | 10:28 | 0.07 | 0.26 | 0.17 | 0.05 | 0.06 | 0.11 | 0.07 | 0.05 | 0.11 |
| Total Carbon [%] | 04-Sep-09 | 14:41 | 1.53 | 2.06 | 2.05 | 3.15 | 1.46 | 2.73 | 2.24 | 1.04 | 1.50 |
| Carbonate (CO3) [%] | 04-Sep-09 | 14:43 | 7.34 | 9.52 | 9.58 | 14.8 | 6.86 | 12.8 | 10.7 | 4.72 | 6.92 |

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA (Price 1997)**

**Project :** Tiriganiaq deposit
**LR Report :** CA11183-AUG09

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

**Modified ABA (Price 1997)**

**Project :** Tiriganiaq deposit

Monday, September 14, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11183-AUG09**
**Reference:** 09-1426-0015

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: M08-742-03 | 15: M08-742-04 | 16: M08-742-05 | 17: M08-742-06 | 18: M08-743-01 | 19: M08-743-02 | 20: M08-743-03 | 21: M08-743-04 | 22: M08-750-01 | 23: M08-750-02 | 24: M08-750-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Paste pH [units] | 8.93 | 9.01 | 8.64 | 9.44 | 9.59 | 9.18 | 8.56 | 9.69 | 9.39 | 8.94 | 9.07 |
| Fizz Rate [—] | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 4 |
| Sample [weight(g)] | 1.98 | 2.02 | 2.01 | 2.02 | 2.02 | 2.00 | 2.02 | 1.98 | 1.98 | 2.00 | 1.97 |
| HCl added [mL] | 128.00 | 119.20 | 48.70 | 62.30 | 40.00 | 82.90 | 53.70 | 24.90 | 145.90 | 121.30 | 93.70 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 56.40 | 39.40 | 25.45 | 25.10 | 16.80 | 22.00 | 23.30 | 13.00 | 56.50 | 54.00 | 41.10 |
| Final pH [units] | 1.61 | 1.93 | 1.66 | 1.54 | 1.76 | 2.00 | 1.92 | 1.65 | 1.64 | 1.68 | 1.61 |
| NP [t CaCO3/1000t] | 181 | 198 | 57.8 | 92.1 | 57.4 | 152 | 75.2 | 30.1 | 226 | 168 | 134 |
| AP [t CaCO3/1000 t] | 0.62 | 1.2 | 31.9 | 1.6 | 1.9 | 0.31 | 35.6 | 1.2 | 3.1 | 1.2 | 1.6 |
| Net NP [t CaCO3/1000 t] | 180 | 196 | 25.9 | 90.5 | 55.5 | 152 | 39.6 | 28.9 | 223 | 167 | 132 |
| NP/AP [ratio] | 292 | 165 | 1.81 | 57.6 | 29.9 | 491 | 2.11 | 25.1 | 72.8 | 140 | 83.4 |
| Total Sulphur [%] | 0.051 | 0.086 | 2.17 | 0.082 | 0.101 | 0.033 | 2.21 | 0.070 | 0.155 | 0.070 | 0.118 |
| Acid Leachable SO4-S [%] | 0.03 | 0.04 | 1.15 | 0.03 | 0.04 | 0.02 | 1.07 | 0.03 | 0.06 | 0.03 | 0.06 |
| Sulphide-S [%] | 0.02 | 0.04 | 1.02 | 0.05 | 0.06 | < 0.01 | 1.14 | 0.04 | 0.10 | 0.04 | 0.05 |
| Total Carbon [%] | 2.34 | 2.44 | 0.966 | 1.08 | 0.617 | 1.89 | 1.16 | 0.277 | 2.50 | 2.32 | 1.50 |
| Carbonate (CO3) [%] | 10.9 | 11.5 | 2.11 | 5.06 | 2.81 | 9.01 | 3.02 | 1.22 | 12.5 | 11.1 | 7.17 |

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$$= 50 \times \frac{(\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
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*Environmental Services, Analytical*

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**LR Report :** **CA11252-NOV09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M99-350-02 | 6: M00-474-05 | 7: M98-269-03 | 8: M98-297-04 |
|---|---|---|---|---|---|---|
| Tin [mg/L] | 19-Nov-09 | 12:26 | 0.00001 | < 0.00001 | 0.00001 | < 0.00001 |
| Strontium [mg/L] | 19-Nov-09 | 16:03 | 0.0285 | 0.0417 | 0.0395 | 0.0385 |
| Titanium [mg/L] | 19-Nov-09 | 12:26 | 0.0010 | 0.0004 | 0.0006 | 0.0004 |
| Thallium [mg/L] | 19-Nov-09 | 12:26 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 19-Nov-09 | 12:26 | 0.000100 | 0.000190 | 0.000071 | 0.000044 |
| Vanadium [mg/L] | 19-Nov-09 | 12:26 | 0.00262 | 0.00244 | 0.00256 | 0.00245 |
| Tungsten [mg/L] | 19-Nov-09 | 12:26 | 0.00041 | 0.00052 | 0.00048 | 0.00037 |
| Yttrium [mg/L] | 19-Nov-09 | 12:26 | 0.000025 | 0.000010 | 0.000006 | 0.000006 |
| Zinc [mg/L] | 19-Nov-09 | 12:26 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**NAG Test**

**Project :** Meliadine Tiriganaiq

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW
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Fax:403-232-1421

Thursday, November 19, 2009

**Date Rec. :** 09 November 2009
**LR Report:** **CA10080-NOV09**
**Reference:** 09-1426-0015

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-536A-01 | 6: M97-141-01 | 7: M99-403-03 | 8: M99-404-04 |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 16-Nov-09 | 13:28 | 1.47 | 1.52 | 1.49 | 1.50 |
| vol H2O2 [mL] | 16-Nov-09 | 13:28 | 150 | 150 | 150 | 150 |
| Final pH [units] | 16-Nov-09 | 13:28 | 11.50 | 11.05 | 10.81 | 10.70 |
| NaOH [Normality] | 16-Nov-09 | 13:28 | 0.10 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.00 |
| NAG pH4.5 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.0 |
| NAG pH7.0 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Project :** Tiriganiaq deposit

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Monday, September 14, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11182-AUG09**
**Reference:** 09-1426-0015

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-734-01 | 6: M08-734-02 | 7: M08-734-03 | 8: M08-734-04 | 9: M08-735-01 | 10: M08-735-02 | 11: M08-735-03 | 12: M08-742-01 | 13: M08-742-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Silver [µg/g] | 11-Sep-09 | 12:09 | 0.14 | 0.14 | 0.08 | 0.23 | 0.15 | 0.10 | 0.06 | 0.07 | 0.08 |
| Aluminum [µg/g] | 11-Sep-09 | 07:48 | 78000 | 67000 | 71000 | 69000 | 81000 | 74000 | 72000 | 81000 | 74000 |
| Arsenic [µg/g] | 11-Sep-09 | 12:09 | 8.8 | 3.7 | 12 | 86 | 28 | 200 | 28 | 4.0 | 10 |
| Barium [µg/g] | 11-Sep-09 | 12:09 | 47 | 110 | 41 | 68 | 140 | 230 | 69 | 120 | 74 |
| Beryllium [µg/g] | 11-Sep-09 | 12:09 | 0.25 | 0.32 | 0.23 | 0.26 | 0.29 | 0.36 | 0.26 | 0.21 | 0.20 |
| Bismuth [µg/g] | 11-Sep-09 | 12:09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 11-Sep-09 | 07:49 | 65000 | 71000 | 65000 | 63000 | 60000 | 70000 | 74000 | 50000 | 60000 |
| Cadmium [µg/g] | 11-Sep-09 | 12:09 | 1.4 | 2.0 | 0.53 | 0.59 | 0.63 | 0.39 | 0.30 | 0.38 | 0.32 |
| Cobalt [µg/g] | 11-Sep-09 | 12:09 | 40 | 34 | 42 | 41 | 41 | 44 | 40 | 42 | 41 |
| Chromium [µg/g] | 11-Sep-09 | 12:09 | 160 | 150 | 200 | 200 | 160 | 210 | 190 | 210 | 150 |
| Copper [µg/g] | 11-Sep-09 | 07:49 | 150 | 91 | 120 | 190 | 140 | 120 | 110 | 110 | 140 |
| Iron [µg/g] | 11-Sep-09 | 07:49 | 75000 | 95000 | 77000 | 75000 | 66000 | 82000 | 80000 | 60000 | 80000 |
| Potassium [µg/g] | 11-Sep-09 | 07:49 | 1900 | 3000 | 2900 | 6200 | 8600 | 14000 | 3800 | 5700 | 3600 |
| Lithium [µg/g] | 11-Sep-09 | 12:09 | 21 | 46 | 37 | 30 | 27 | 33 | 28 | 15 | 26 |
| Magnesium [µg/g] | 11-Sep-09 | 07:49 | 32000 | 40000 | 35000 | 46000 | 24000 | 36000 | 32000 | 26000 | 38000 |
| Manganese [µg/g] | 11-Sep-09 | 12:09 | 1100 | 1800 | 1100 | 1100 | 1100 | 1400 | 1200 | 940 | 1200 |
| Molybdenum [µg/g] | 11-Sep-09 | 12:09 | 1.0 | 0.9 | 0.6 | 1.2 | 0.9 | 0.9 | 0.5 | 0.8 | 0.7 |
| Sodium [µg/g] | 11-Sep-09 | 07:49 | 19000 | 6300 | 18000 | 11000 | 13000 | 10000 | 20000 | 24000 | 13000 |
| Nickel [µg/g] | 11-Sep-09 | 12:09 | 76 | 75 | 120 | 140 | 76 | 130 | 100 | 84 | 71 |

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**Project :** Tiriganiaq deposit
**LR Report :** CA11182-AUG09

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-734-01 | 6: M08-734-02 | 7: M08-734-03 | 8: M08-734-04 | 9: M08-735-01 | 10: M08-735-02 | 11: M08-735-03 | 12: M08-742-01 | 13: M08-742-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 11-Sep-09 | 12:09 | 3.3 | 3.2 | 3.6 | 6.1 | 2.4 | 5.5 | 2.7 | 2.7 | 4.1 |
| Antimony [µg/g] | 11-Sep-09 | 12:09 | < 0.8 | < 0.8 | 0.9 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 11-Sep-09 | 12:09 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | 0.9 | < 0.7 | 1.3 | < 0.7 |
| Tin [µg/g] | 11-Sep-09 | 12:09 | 1.0 | 2.3 | 0.8 | 0.5 | 1.0 | 0.9 | 1.1 | 1.0 | 1.1 |
| Strontium [µg/g] | 11-Sep-09 | 12:09 | 110 | 53 | 120 | 120 | 88 | 110 | 100 | 99 | 86 |
| Titanium [µg/g] | 11-Sep-09 | 07:49 | 6400 | 5700 | 5100 | 3100 | 6400 | 5300 | 5300 | 5800 | 5700 |
| Thallium [µg/g] | 11-Sep-09 | 12:09 | 0.05 | 0.14 | 0.09 | 0.11 | 0.40 | 0.44 | 0.12 | 0.26 | 0.14 |
| Uranium [µg/g] | 11-Sep-09 | 12:09 | 0.21 | 0.37 | 0.34 | 0.16 | 0.43 | 0.20 | 0.28 | 0.17 | 0.18 |
| Vanadium [µg/g] | 11-Sep-09 | 12:09 | 230 | 190 | 200 | 150 | 230 | 190 | 210 | 230 | 210 |
| Yttrium [µg/g] | 11-Sep-09 | 12:09 | 18 | 22 | 12 | 4.0 | 14 | 6.5 | 13 | 14 | 14 |
| Zinc [µg/g] | 11-Sep-09 | 07:49 | 110 | 170 | 96 | 110 | 98 | 100 | 100 | 88 | 110 |

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*Environmental Services, Analytical*

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Monday, September 14, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11182-AUG09**
**Reference:** 09-1426-0015

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: M08-742-03 | 15: M08-742-04 | 16: M08-742-05 | 17: M08-742-06 | 18: M08-743-01 | 19: M08-743-02 | 20: M08-743-03 | 21: M08-743-04 | 22: M08-750-01 | 23: M08-750-02 | 24: M08-750-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Silver [µg/g] | 0.19 | 0.08 | 0.22 | 0.05 | 0.11 | 0.19 | 0.60 | 0.24 | 0.18 | 0.47 | 0.75 |
| Aluminum [µg/g] | 68000 | 74000 | 12000 | 74000 | 74000 | 80000 | 15000 | 83000 | 67000 | 69000 | 70000 |
| Arsenic [µg/g] | 29 | 20 | 150 | 7.6 | 2.1 | 74 | 96 | 4.7 | 2.8 | 100 | 66 |
| Barium [µg/g] | 68 | 33 | 12 | 14 | 45 | 79 | 29 | 110 | 170 | 220 | 150 |
| Beryllium [µg/g] | 0.37 | 0.33 | 0.15 | 0.17 | 0.31 | 0.24 | 0.19 | 0.35 | 0.46 | 0.80 | 0.56 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | 0.27 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 60000 | 71000 | 15000 | 76000 | 70000 | 56000 | 22000 | 66000 | 81000 | 47000 | 51000 |
| Cadmium [µg/g] | 0.43 | 0.19 | 0.93 | 0.19 | 0.24 | 0.19 | 1.4 | 0.55 | 0.34 | 0.58 | 0.44 |
| Cobalt [µg/g] | 37 | 42 | 10 | 46 | 42 | 44 | 15 | 51 | 37 | 43 | 41 |
| Chromium [µg/g] | 170 | 190 | 220 | 350 | 140 | 210 | 240 | 240 | 140 | 64 | 78 |
| Copper [µg/g] | 62 | 110 | 110 | 130 | 100 | 120 | 70 | 120 | 64 | 97 | 84 |
| Iron [µg/g] | 77000 | 72000 | 73000 | 76000 | 88000 | 52000 | 91000 | 85000 | 69000 | 85000 | 90000 |
| Potassium [µg/g] | 4700 | 4400 | 530 | 580 | 2000 | 5700 | 2600 | 2800 | 9400 | 9500 | 5500 |
| Lithium [µg/g] | 37 | 49 | 7 | 25 | 18 | 43 | 7 | 24 | 38 | 25 | 36 |
| Magnesium [µg/g] | 37000 | 40000 | 7400 | 49000 | 37000 | 33000 | 11000 | 44000 | 33000 | 26000 | 23000 |
| Manganese [µg/g] | 1100 | 1100 | 1900 | 1100 | 1100 | 990 | 3500 | 1200 | 1200 | 1000 | 1100 |
| Molybdenum [µg/g] | 0.4 | 0.9 | 4.8 | 0.7 | 1.1 | 0.9 | 4.4 | 1.3 | 0.9 | 1.4 | 1.3 |
| Sodium [µg/g] | 14000 | 15000 | 4000 | 15000 | 15000 | 20000 | 2700 | 19000 | 21000 | 23000 | 20000 |
| Nickel [µg/g] | 67 | 120 | 17 | 130 | 59 | 110 | 34 | 110 | 51 | 88 | 55 |

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**Project :** Tiriganiaq deposit
**LR Report :** CA11182-AUG09

| Analysis | 14: M08-742-03 | 15: M08-742-04 | 16: M08-742-05 | 17: M08-742-06 | 18: M08-743-01 | 19: M08-743-02 | 20: M08-743-03 | 21: M08-743-04 | 22: M08-750-01 | 23: M08-750-02 | 24: M08-750-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 6.8 | 6.1 | 3.7 | 1.4 | 3.0 | 2.4 | 4.8 | 2.9 | 3.8 | 10 | 5.1 |
| Antimony [µg/g] | 1.2 | < 0.8 | < 0.8 | 1.0 | < 0.8 | < 0.8 | < 0.8 | 1.1 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | 0.8 | < 0.7 | 0.7 | < 0.7 | < 0.7 | 1.5 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 1.1 | 1.2 | < 0.5 | < 0.5 | 0.9 | 0.6 | 1.3 | < 0.5 | 0.5 | 0.7 | 0.9 |
| Strontium [µg/g] | 97 | 130 | 27 | 110 | 130 | 91 | 30 | 130 | 190 | 150 | 160 |
| Titanium [µg/g] | 5900 | 4200 | 930 | 4100 | 6100 | 3800 | 840 | 6500 | 5100 | 6700 | 8400 |
| Thallium [µg/g] | 0.25 | 0.19 | 0.04 | < 0.02 | 0.07 | 0.42 | 0.22 | 0.14 | 0.41 | 0.37 | 0.17 |
| Uranium [µg/g] | 0.28 | 0.13 | 0.43 | 0.058 | 0.41 | 0.090 | 0.19 | 0.40 | 0.18 | 1.2 | 1.1 |
| Vanadium [µg/g] | 200 | 180 | 19 | 180 | 190 | 190 | 37 | 200 | 180 | 150 | 170 |
| Yttrium [µg/g] | 11 | 9.6 | 3.0 | 12 | 17 | 6.2 | 3.4 | 16 | 12 | 9.7 | 16 |
| Zinc [µg/g] | 120 | 90 | 200 | 78 | 110 | 76 | 170 | 110 | 87 | 200 | 130 |

*Brian Graham B.Sc.*
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Suite 901, 1015-4 St. SW, Calgary
, T2R 1J4
Phone: 403-265-2846, Fax:403-232-1421

**Modified ABA (Price 1997)**

**Project :** Tiriganiaq deposit

Monday, September 14, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11183-AUG09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-734-01 | 6: M08-734-02 | 7: M08-734-03 | 8: M08-734-04 | 9: M08-735-01 | 10: M08-735-02 | 11: M08-735-03 | 12: M08-742-01 | 13: M08-742-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Paste pH [units] | 11-Sep-09 | 11:08 | 9.25 | 8.92 | 9.06 | 9.05 | 9.42 | 9.24 | 9.05 | 9.45 | 9.12 |
| Fizz Rate [---] | 11-Sep-09 | 11:08 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sample [weight(g)] | 11-Sep-09 | 11:08 | 2.02 | 2.00 | 2.03 | 1.99 | 1.97 | 2.05 | 2.03 | 1.97 | 2.00 |
| HCl added [mL] | 11-Sep-09 | 11:08 | 76.70 | 113.60 | 111.50 | 138.20 | 69.60 | 144.00 | 107.20 | 57.80 | 87.20 |
| HCl [Normality] | 11-Sep-09 | 11:08 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 11-Sep-09 | 11:08 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 11-Sep-09 | 11:08 | 24.10 | 43.40 | 39.95 | 48.10 | 20.70 | 57.10 | 30.40 | 21.00 | 35.30 |
| Final pH [units] | 11-Sep-09 | 11:08 | 1.78 | 1.59 | 1.73 | 1.79 | 1.99 | 1.78 | 1.93 | 1.88 | 1.63 |
| NP [t CaCO3/1000t] | 11-Sep-09 | 11:08 | 130 | 176 | 176 | 226 | 124 | 212 | 189 | 93.4 | 130 |
| AP [t CaCO3/1000 t] | 11-Sep-09 | 11:09 | 2.2 | 8.1 | 5.3 | 1.6 | 1.9 | 3.4 | 2.2 | 1.6 | 3.4 |
| Net NP [t CaCO3/1000 t] | 11-Sep-09 | 11:09 | 128 | 167 | 171 | 225 | 122 | 209 | 187 | 91.8 | 126 |
| NP/AP [ratio] | 11-Sep-09 | 11:09 | 59.2 | 21.7 | 33.1 | 139 | 65.0 | 62.4 | 87.5 | 58.4 | 38.2 |
| Total Sulphur [%] | 04-Sep-09 | 14:41 | 0.107 | 0.334 | 0.261 | 0.088 | 0.106 | 0.179 | 0.124 | 0.132 | 0.207 |
| Acid Leachable SO4-S [%] | 11-Sep-09 | 10:28 | 0.04 | 0.08 | 0.09 | 0.04 | 0.05 | 0.07 | 0.05 | 0.08 | 0.10 |
| Sulphide-S [%] | 11-Sep-09 | 10:28 | 0.07 | 0.26 | 0.17 | 0.05 | 0.06 | 0.11 | 0.07 | 0.05 | 0.11 |
| Total Carbon [%] | 04-Sep-09 | 14:41 | 1.53 | 2.06 | 2.05 | 3.15 | 1.46 | 2.73 | 2.24 | 1.04 | 1.50 |
| Carbonate (CO3) [%] | 04-Sep-09 | 14:43 | 7.34 | 9.52 | 9.58 | 14.8 | 6.86 | 12.8 | 10.7 | 4.72 | 6.92 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

SGS Lakefield Research Limited
P.O. Box 4300 - 185 Concession St.
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*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Modified ABA (Price 1997)**

**Project :** Tiriganiaq deposit

Monday, September 14, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA11183-AUG09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: M08-742-03 | 15: M08-742-04 | 16: M08-742-05 | 17: M08-742-06 | 18: M08-743-01 | 19: M08-743-02 | 20: M08-743-03 | 21: M08-743-04 | 22: M08-750-01 | 23: M08-750-02 | 24: M08-750-03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | |
| Paste pH [units] | 8.93 | 9.01 | 8.64 | 9.44 | 9.59 | 9.18 | 8.56 | 9.69 | 9.39 | 8.94 | 9.07 |
| Fizz Rate [—] | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 4 |
| Sample [weight(g)] | 1.98 | 2.02 | 2.01 | 2.02 | 2.02 | 2.00 | 2.02 | 1.98 | 1.98 | 2.00 | 1.97 |
| HCl added [mL] | 128.00 | 119.20 | 48.70 | 62.30 | 40.00 | 82.90 | 53.70 | 24.90 | 145.90 | 121.30 | 93.70 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 56.40 | 39.40 | 25.45 | 25.10 | 16.80 | 22.00 | 23.30 | 13.00 | 56.50 | 54.00 | 41.10 |
| Final pH [units] | 1.61 | 1.93 | 1.66 | 1.54 | 1.76 | 2.00 | 1.92 | 1.65 | 1.64 | 1.68 | 1.61 |
| NP [t CaCO3/1000t] | 181 | 198 | 57.8 | 92.1 | 57.4 | 152 | 75.2 | 30.1 | 226 | 168 | 134 |
| AP [t CaCO3/1000 t] | 0.62 | 1.2 | 31.9 | 1.6 | 1.9 | 0.31 | 35.6 | 1.2 | 3.1 | 1.2 | 1.6 |
| Net NP [t CaCO3/1000 t] | 180 | 196 | 25.9 | 90.5 | 55.5 | 152 | 39.6 | 28.9 | 223 | 167 | 132 |
| NP/AP [ratio] | 292 | 165 | 1.81 | 57.6 | 29.9 | 491 | 2.11 | 25.1 | 72.8 | 140 | 83.4 |
| Total Sulphur [%] | 0.051 | 0.086 | 2.17 | 0.082 | 0.101 | 0.033 | 2.21 | 0.070 | 0.155 | 0.070 | 0.118 |
| Acid Leachable SO4-S [%] | 0.03 | 0.04 | 1.15 | 0.03 | 0.04 | 0.02 | 1.07 | 0.03 | 0.06 | 0.03 | 0.06 |
| Sulphide-S [%] | 0.02 | 0.04 | 1.02 | 0.05 | 0.06 | < 0.01 | 1.14 | 0.04 | 0.10 | 0.04 | 0.05 |
| Total Carbon [%] | 2.34 | 2.44 | 0.966 | 1.08 | 0.617 | 1.89 | 1.16 | 0.277 | 2.50 | 2.32 | 1.50 |
| Carbonate (CO3) [%] | 10.9 | 11.5 | 2.11 | 5.06 | 2.81 | 9.01 | 3.02 | 1.22 | 12.5 | 11.1 | 7.17 |

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**Modified ABA (Price 1997)**

**Project :** Tiriganiaq deposit
**LR Report :** CA11183-AUG09

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SFE (4:1)**

**Project :** Fzone deposit

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Thursday, September 10, 2009

**Date Rec. :** 21 August 2009
**LR Report:** **CA10222-AUG09**
**Reference:** 09-1426-0015

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M98-316-01 | 6: GT-08-04-01 | 7: M05-536A-01 | 8: GT08-02-01 | 9: M97-138-01 | 10: M05-564-01 | 11: M97-139-01 | 12: M97-141-01 | 13: M97-93-01 | 14: M97-92-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a | Date:n/a |
| Sample [weight(g)] | 03-Sep-09 | 14:29 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 03-Sep-09 | 14:29 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 03-Sep-09 | 14:29 | 9.91 | 9.90 | 9.85 | 9.86 | 9.90 | 9.79 | 9.77 | 9.72 | 9.81 | 9.82 |
| Final pH [units] | 03-Sep-09 | 14:29 | 9.21 | 9.30 | 8.69 | 8.91 | 8.91 | 9.20 | 8.71 | 8.78 | 8.73 | 8.93 |
| pH [no unit] | 08-Sep-09 | 14:02 | 7.91 | 7.97 | 8.19 | 7.97 | 8.02 | 8.02 | 8.35 | 8.25 | 8.14 | 8.04 |
| Conductivity [uS/cm] | 08-Sep-09 | 14:02 | 66 | 74 | 155 | 96 | 95 | 73 | 218 | 164 | 136 | 105 |
| Alkalinity [mg/L as CaCO3] | 08-Sep-09 | 14:02 | 34 | 34 | 84 | 46 | 51 | 39 | 117 | 89 | 75 | 58 |
| Sulphate [mg/L] | 09-Sep-09 | 11:21 | 1.3 | 0.9 | 0.8 | 0.9 | 0.6 | 1.1 | 1.0 | 0.8 | 1.0 | 0.8 |
| Chloride [mg/L] | 09-Sep-09 | 11:21 | 0.7 | 2.7 | 1.4 | 3.5 | 0.7 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 |
| Mercury [mg/L] | 10-Sep-09 | 08:50 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 09-Sep-09 | 13:51 | 0.00003 | 0.00001 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 08-Sep-09 | 14:44 | 0.97 | 0.90 | 0.51 | 0.93 | 0.82 | 1.18 | 0.50 | 0.42 | 0.55 | 0.67 |
| Arsenic [mg/L] | 09-Sep-09 | 13:51 | 0.0012 | 0.0028 | 0.0141 | 0.0009 | 0.0024 | 0.0003 | 0.0711 | 0.0014 | 0.0077 | 0.0032 |
| Boron [mg/L] | 09-Sep-09 | 13:51 | 0.0095 | 0.0802 | 0.0121 | 0.0126 | 0.0046 | 0.0033 | 0.0119 | 0.0074 | 0.0045 | 0.0072 |
| Beryllium [mg/L] | 09-Sep-09 | 13:51 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 09-Sep-09 | 13:51 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 08-Sep-09 | 14:44 | 8.62 | 6.70 | 14.2 | 11.2 | 10.6 | 7.98 | 16.0 | 14.3 | 13.8 | 11.1 |
| Cadmium [mg/L] | 09-Sep-09 | 13:51 | 0.000008 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000008 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 09-Sep-09 | 13:51 | 0.000031 | 0.000021 | 0.000075 | 0.000023 | 0.000030 | 0.000019 | 0.000337 | 0.000037 | 0.000054 | 0.000035 |
| Chromium [mg/L] | 09-Sep-09 | 13:51 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 09-Sep-09 | 13:51 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0006 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 08-Sep-09 | 14:44 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 08-Sep-09 | 14:44 | 0.56 | 2.98 | 7.42 | 0.58 | 2.89 | 1.07 | 12.5 | 5.31 | 3.11 | 3.48 |

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**SFE (4:1)**

**Project :** Fzone deposit

**LR Report :** **CA10222-AUG09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M98-316-01 | 6: GT-08-04-01 | 7: M05-536A-01 | 8: GT08-02-01 | 9: M97-138-01 | 10: M05-564-01 | 11: M97-139-01 | 12: M97-141-01 | 13: M97-93-01 | 14: M97-92-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lithium [mg/L] | 09-Sep-09 | 13:51 | < 0.001 | < 0.001 | 0.002 | < 0.001 | < 0.001 | 0.002 | 0.001 | < 0.001 | 0.003 | < 0.001 |
| Magnesium [mg/L] | 08-Sep-09 | 14:44 | 1.10 | 0.814 | 7.04 | 1.88 | 2.44 | 1.10 | 11.5 | 8.60 | 5.73 | 3.66 |
| Manganese [mg/L] | 09-Sep-09 | 13:51 | 0.00133 | 0.00080 | 0.00354 | 0.00239 | 0.00266 | 0.00209 | 0.00737 | 0.00185 | 0.00473 | 0.00238 |
| Molybdenum [mg/L] | 09-Sep-09 | 13:51 | 0.00004 | 0.00006 | 0.00011 | 0.00006 | 0.00006 | 0.00004 | 0.00013 | 0.00009 | 0.00004 | 0.00008 |
| Sodium [mg/L] | 08-Sep-09 | 14:44 | 2.75 | 5.43 | 4.10 | 5.26 | 3.87 | 5.14 | 5.46 | 4.16 | 5.62 | 4.24 |
| Nickel [mg/L] | 09-Sep-09 | 13:51 | < 0.0001 | < 0.0001 | 0.0004 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0028 | 0.0002 | 0.0002 | < 0.0001 |
| Lead [mg/L] | 09-Sep-09 | 13:51 | 0.00005 | 0.00004 | 0.00003 | 0.00004 | 0.00003 | 0.00003 | 0.00017 | 0.00016 | 0.00002 | 0.00003 |
| Antimony [mg/L] | 09-Sep-09 | 13:51 | 0.0015 | 0.0020 | 0.0031 | 0.0017 | 0.0012 | 0.0007 | 0.0129 | 0.0036 | 0.0025 | 0.0007 |
| Selenium [mg/L] | 09-Sep-09 | 13:51 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 09-Sep-09 | 13:51 | < 0.00001 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00009 | < 0.00001 | 0.00001 |
| Strontium [mg/L] | 08-Sep-09 | 14:44 | 0.0386 | 0.0251 | 0.0262 | 0.0457 | 0.0258 | 0.0183 | 0.0324 | 0.0246 | 0.0251 | 0.0393 |
| Titanium [mg/L] | 09-Sep-09 | 13:51 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0002 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | 09-Sep-09 | 13:51 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 09-Sep-09 | 13:51 | 0.000013 | 0.000013 | 0.000002 | 0.000001 | 0.000002 | 0.000003 | 0.000035 | 0.000002 | 0.000003 | 0.000009 |
| Vanadium [mg/L] | 09-Sep-09 | 13:51 | 0.00146 | 0.00157 | 0.00050 | 0.00065 | 0.00060 | 0.00200 | 0.00073 | 0.00047 | 0.00056 | 0.00068 |
| Tungsten [mg/L] | 09-Sep-09 | 13:51 | 0.00036 | 0.00524 | 0.00195 | 0.00047 | 0.00099 | 0.00035 | 0.00179 | 0.00090 | 0.00170 | 0.00141 |
| Yttrium [mg/L] | 09-Sep-09 | 13:51 | 0.000011 | 0.000002 | 0.000001 | 0.000001 | 0.000002 | 0.000002 | 0.000006 | 0.000005 | 0.000002 | 0.000002 |
| Zinc [mg/L] | 09-Sep-09 | 13:51 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.002 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Monday, January 11, 2010

**Date Rec. :** 21 December 2009
**LR Report:** **CA11450-DEC09**
**Reference:** F-Zone

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M09-855-01 | 6: M09-855-02 | 7: M09-858-01 | 8: M09-858-02 | 9: M09-857-01 | 10: M09-816-01 | 11: M09-816-02 | 12: M09-862-01 | 13: M09-798-01 | 14: M09-798-02 | 15: GT09-07-01 | 16: GT09-07-02 | 17: M09-866-01 | 18: M09-866-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | | | | | | | | |
| Silver [µg/g] | 08-Jan-10 | 14:53 | 0.53 | 0.27 | 0.11 | 0.13 | 0.17 | 0.12 | 0.15 | 0.17 | 0.27 | 0.22 | 0.09 | 0.36 | 0.35 | 0.36 |
| Aluminum [µg/g] | 08-Jan-10 | 14:14 | 55000 | 24000 | 66000 | 66000 | 64000 | 69000 | 64000 | 63000 | 77000 | 78000 | 76000 | 50000 | 57000 | 59000 |
| Arsenic [µg/g] | 08-Jan-10 | 14:53 | 220 | 110 | 2.2 | 2.1 | 6.1 | 1.7 | 1.7 | 13 | 4.2 | 4.0 | 3.9 | 9.1 | 33 | 39 |
| Barium [µg/g] | 08-Jan-10 | 14:53 | 120 | 74 | 110 | 49 | 170 | 49 | 88 | 89 | 320 | 200 | 59 | 64 | 200 | 190 |
| Beryllium [µg/g] | 08-Jan-10 | 14:53 | 0.57 | 0.55 | 0.31 | 0.33 | 0.37 | 0.27 | 0.40 | 0.31 | 0.73 | 0.66 | 0.26 | 0.54 | 0.49 | 0.63 |
| Bismuth [µg/g] | 08-Jan-10 | 14:53 | 0.16 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 08-Jan-10 | 14:14 | 56000 | 61000 | 84000 | 77000 | 64000 | 88000 | 75000 | 70000 | 57000 | 57000 | 68000 | 77000 | 79000 | 75000 |
| Cadmium [µg/g] | 08-Jan-10 | 14:53 | 1.2 | 0.29 | 0.10 | 0.11 | 0.24 | 0.14 | 0.10 | 0.19 | 0.28 | 0.17 | 0.13 | 0.34 | 0.54 | 0.32 |
| Cobalt [µg/g] | 08-Jan-10 | 14:53 | 53 | 44 | 40 | 36 | 40 | 40 | 41 | 41 | 47 | 45 | 42 | 34 | 37 | 34 |
| Chromium [µg/g] | 08-Jan-10 | 14:53 | 180 | 290 | 160 | 160 | 150 | 160 | 170 | 150 | 72 | 110 | 170 | 170 | 140 | 150 |
| Copper [µg/g] | 08-Jan-10 | 14:14 | 330 | 86 | 94 | 98 | 110 | 91 | 110 | 83 | 120 | 110 | 100 | 59 | 130 | 62 |
| Iron [µg/g] | 08-Jan-10 | 14:15 | 110000 | 72000 | 64000 | 70000 | 61000 | 72000 | 73000 | 74000 | 93000 | 87000 | 71000 | 68000 | 98000 | 70000 |
| Potassium [µg/g] | 08-Jan-10 | 14:15 | 6300 | 3500 | 1400 | 1200 | 6500 | 850 | 2300 | 4100 | 9100 | 6300 | 2000 | 4800 | 7400 | 5300 |
| Lithium [µg/g] | 08-Jan-10 | 14:53 | 27 | 45 | 15 | 20 | 34 | 14 | 16 | 41 | 23 | 22 | 29 | 48 | 40 | 35 |
| Magnesium [µg/g] | 08-Jan-10 | 14:15 | 23000 | 19000 | 32000 | 31000 | 30000 | 30000 | 34000 | 36000 | 28000 | 29000 | 32000 | 25000 | 30000 | 30000 |
| Manganese [µg/g] | 08-Jan-10 | 14:53 | 2800 | 1900 | 1300 | 1200 | 1200 | 1300 | 1100 | 1200 | 1200 | 1100 | 1100 | 1700 | 2200 | 1700 |
| Molybdenum [µg/g] | 08-Jan-10 | 14:53 | 1.3 | 0.4 | 0.3 | 0.4 | 0.2 | 0.3 | 1.1 | 0.2 | 0.8 | 0.6 | 0.2 | 0.6 | 0.5 | 0.4 |
| Sodium [µg/g] | 08-Jan-10 | 14:15 | 7000 | 14000 | 17000 | 15000 | 17000 | 13000 | 14000 | 15000 | 18000 | 19000 | 19000 | 13000 | 2400 | 12000 |
| Nickel [µg/g] | 08-Jan-10 | 14:53 | 86 | 89 | 57 | 49 | 56 | 57 | 57 | 53 | 67 | 76 | 60 | 69 | 63 | 67 |
| Lead [µg/g] | 08-Jan-10 | 14:53 | 9.5 | 5.7 | 2.5 | 3.8 | 4.4 | 2.3 | 32 | 3.6 | 7.6 | 6.0 | 1.2 | 3.4 | 4.9 | 4.9 |
| Antimony [µg/g] | 08-Jan-10 | 14:53 | 11 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | 5.6 | < 0.8 | 1.0 | 1.1 | < 0.8 | 2.2 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 08-Jan-10 | 14:53 | 1.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 08-Jan-10 | 14:53 | 6.3 | 0.6 | 1.4 | 0.6 | 1.0 | 1.1 | 2.2 | 1.3 | 1.8 | 1.3 | 1.0 | 1.6 | 2.4 | 1.3 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA11450-DEC09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M09-855-01 | 6: M09-855-02 | 7: M09-858-01 | 8: M09-858-02 | 9: M09-857-01 | 10: M09-816-01 | 11: M09-816-02 | 12: M09-862-01 | 13: M09-798-01 | 14: M09-798-02 | 15: GT09-07-01 | 16: GT09-07-02 | 17: M09-866-01 | 18: M09-866-02 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Strontium [µg/g] | 08-Jan-10 | 14:53 | 68 | 120 | 160 | 210 | 110 | 110 | 180 | 90 | 210 | 260 | 93 | 98 | 40 | 91 |
| Titanium [µg/g] | 08-Jan-10 | 14:15 | 3900 | 4200 | 5600 | 5300 | 5200 | 5400 | 5500 | 4900 | 8200 | 6600 | 6100 | 6800 | 5300 | 6000 |
| Thallium [µg/g] | 08-Jan-10 | 14:54 | 0.39 | 0.12 | < 0.02 | < 0.02 | 0.19 | < 0.02 | < 0.02 | 0.09 | 0.44 | 0.27 | 0.05 | 0.16 | 0.27 | 0.16 |
| Uranium [µg/g] | 08-Jan-10 | 14:54 | 0.43 | 0.14 | 0.20 | 0.21 | 0.39 | 0.18 | 0.27 | 0.19 | 1.1 | 0.87 | 0.18 | 0.37 | 0.28 | 0.26 |
| Vanadium [µg/g] | 08-Jan-10 | 14:54 | 140 | 220 | 220 | 210 | 200 | 200 | 210 | 200 | 190 | 180 | 230 | 200 | 170 | 180 |
| Yttrium [µg/g] | 08-Jan-10 | 14:54 | 9.9 | 3.7 | 15 | 17 | 13 | 16 | 17 | 11 | 19 | 16 | 16 | 20 | 13 | 16 |
| Zinc [µg/g] | 08-Jan-10 | 14:15 | 540 | 140 | 90 | 71 | 110 | 92 | 76 | 97 | 120 | 110 | 95 | 100 | 230 | 120 |

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*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1) 0.45µm, 24hr

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Friday, January 08, 2010

**Date Rec. :** 21 December 2009
**LR Report:** **CA11451-DEC09**
**Reference:** F-Zone

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M09-855-01 | 6: M09-855-02 | 7: M09-858-01 | 8: M09-858-02 | 9: M09-857-01 | 10: M09-816-01 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| Sample [weight(g)] | 04-Jan-10 | 15:19 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 04-Jan-10 | 15:19 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 04-Jan-10 | 15:19 | 9.6 | 9.7 | 9.8 | 9.9 | 9.9 | 9.8 |
| Final pH [units] | 04-Jan-10 | 15:19 | 8.69 | 8.89 | 9.87 | 9.92 | 9.51 | 9.61 |
| pH [no unit] | 06-Jan-10 | 09:43 | 8.10 | 8.46 | 9.50 | 9.46 | 8.65 | 8.69 |
| Conductivity [uS/cm] | 06-Jan-10 | 09:43 | 268 | 194 | 85 | 87 | 174 | 84 |
| Alkalinity [mg/L as CaCO3] | 06-Jan-10 | 09:43 | 59 | 77 | 34 | 32 | 42 | 29 |
| Sulphate [mg/L] | 05-Jan-10 | 16:01 | 10 | 2.5 | 1.5 | 1.4 | 4.6 | 1.8 |
| Chloride [mg/L] | 05-Jan-10 | 15:34 | 23 | 13 | 4.4 | 6.8 | 20 | 8.2 |
| Mercury [mg/L] | 04-Jan-10 | 15:11 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 06-Jan-10 | 13:48 | 0.00005 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 06-Jan-10 | 08:34 | 0.40 | 0.37 | 0.65 | 0.70 | 0.80 | 0.71 |
| Arsenic [mg/L] | 06-Jan-10 | 13:48 | 0.0049 | 0.0191 | 0.0012 | 0.0012 | 0.0100 | 0.0010 |
| Boron [mg/L] | 06-Jan-10 | 13:48 | 0.0220 | 0.0134 | 0.0879 | 0.0140 | 0.0237 | 0.0103 |
| Beryllium [mg/L] | 06-Jan-10 | 13:48 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 06-Jan-10 | 13:48 | 0.00003 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 06-Jan-10 | 08:34 | 18.2 | 11.7 | 3.85 | 4.15 | 4.46 | 5.72 |
| Cadmium [mg/L] | 06-Jan-10 | 13:48 | 0.000011 | 0.000006 | < 0.000003 | 0.000003 | 0.000008 | 0.000014 |
| Cobalt [mg/L] | 06-Jan-10 | 13:48 | 0.000080 | 0.000061 | 0.000041 | 0.000027 | 0.000031 | 0.000030 |
| Chromium [mg/L] | 06-Jan-10 | 13:48 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 06-Jan-10 | 13:48 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 06-Jan-10 | 08:34 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 06-Jan-10 | 08:34 | 13.0 | 5.52 | 1.54 | 1.57 | 10.7 | 1.29 |
| Lithium [mg/L] | 06-Jan-10 | 13:48 | 0.002 | 0.002 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium [mg/L] | 06-Jan-10 | 08:34 | 5.14 | 8.25 | 0.615 | 0.582 | 0.719 | 0.864 |
| Manganese [mg/L] | 06-Jan-10 | 13:48 | 0.0120 | 0.00287 | 0.00049 | 0.00028 | 0.00047 | 0.00079 |
| Molybdenum [mg/L] | 06-Jan-10 | 13:48 | 0.00028 | 0.00022 | 0.00031 | 0.00008 | 0.00041 | 0.00013 |
| Sodium [mg/L] | 06-Jan-10 | 08:34 | 19.7 | 13.3 | 11.8 | 12.6 | 23.3 | 9.74 |
| Nickel [mg/L] | 06-Jan-10 | 13:48 | 0.0006 | 0.0006 | 0.0001 | 0.0002 | 0.0003 | 0.0002 |
| Lead [mg/L] | 06-Jan-10 | 13:48 | 0.00005 | 0.00003 | 0.00004 | 0.00004 | 0.00005 | 0.00005 |
| Antimony [mg/L] | 06-Jan-10 | 13:48 | 0.0009 | 0.0024 | 0.0013 | 0.0012 | 0.0012 | 0.0011 |
| Selenium [mg/L] | 06-Jan-10 | 13:48 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

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**LR Report :** **CA11451-DEC09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M09-855-01 | 6: M09-855-02 | 7: M09-858-01 | 8: M09-858-02 | 9: M09-857-01 | 10: M09-816-01 |
|---|---|---|---|---|---|---|---|---|
| Tin [mg/L] | 06-Jan-10 | 13:48 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 06-Jan-10 | 08:34 | 0.0654 | 0.0347 | 0.0128 | 0.0155 | 0.0193 | 0.0160 |
| Titanium [mg/L] | 06-Jan-10 | 13:48 | < 0.0001 | < 0.0001 | 0.0004 | 0.0003 | 0.0002 | 0.0002 |
| Thallium [mg/L] | 06-Jan-10 | 13:48 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 06-Jan-10 | 13:48 | 0.000022 | 0.000025 | 0.000009 | 0.000011 | 0.000022 | 0.000019 |
| Vanadium [mg/L] | 06-Jan-10 | 13:48 | 0.00011 | 0.00045 | 0.0195 | 0.0156 | 0.00363 | 0.00644 |
| Tungsten [mg/L] | 06-Jan-10 | 13:48 | 0.00144 | 0.00170 | 0.00111 | 0.00070 | 0.00154 | 0.00368 |
| Yttrium [mg/L] | 06-Jan-10 | 13:48 | 0.000019 | 0.000011 | 0.000010 | 0.000015 | 0.000017 | 0.000017 |
| Zinc [mg/L] | 06-Jan-10 | 13:48 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
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*Environmental Services, Analytical*

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SFE (4:1) 0.45µm, 24hr

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Phone: 403-265-2846, Fax:403-232-1421

Friday, January 08, 2010

**Date Rec. :** 21 December 2009
**LR Report:** **CA11451-DEC09**
**Reference:** F-Zone

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 11: M09-816-02 | 12: M09-862-01 | 13: M09-798-01 | 14: M09-798-02 | 15: GT09-07-01 | 16: GT09-07-02 | 17: M09-866-01 | 18: M09-866-02 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.8 | 9.8 | 9.9 | 9.9 | 9.8 | 9.7 | 9.8 | 9.7 |
| Final pH [units] | 9.78 | 9.26 | 10.02 | 10.04 | 9.47 | 9.32 | 8.93 | 9.03 |
| pH [no unit] | 9.21 | 8.11 | 9.41 | 9.23 | 8.22 | 8.25 | 8.36 | 8.41 |
| Conductivity [uS/cm] | 85 | 112 | 118 | 96 | 105 | 106 | 199 | 158 |
| Alkalinity [mg/L as CaCO3] | 29 | 40 | 37 | 38 | 32 | 38 | 61 | 66 |
| Sulphate [mg/L] | 2.8 | 1.0 | 1.8 | 1.3 | 1.8 | 1.2 | 3.1 | 1.3 |
| Chloride [mg/L] | 5.3 | 8.6 | 9.0 | 4.5 | 12 | 8.0 | 17 | 10 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.62 | 0.67 | 1.20 | 1.01 | 0.89 | 0.87 | 0.65 | 0.53 |
| Arsenic [mg/L] | 0.0013 | 0.0005 | 0.0075 | 0.0076 | 0.0007 | 0.0016 | 0.0011 | 0.0065 |
| Boron [mg/L] | 0.0218 | 0.0100 | 0.0178 | 0.0264 | 0.0407 | 0.0098 | 0.0246 | 0.0173 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 4.78 | 7.33 | 3.62 | 3.35 | 5.52 | 6.31 | 9.50 | 9.87 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000024 | 0.000014 | 0.000140 | 0.000108 | 0.000006 | 0.000007 | 0.000011 | 0.000022 |
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | < 0.01 | 0.25 | 0.16 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 4.50 | 6.27 | 10.3 | 8.25 | 3.93 | 9.08 | 12.5 | 7.67 |
| Lithium [mg/L] | < 0.001 | < 0.001 | 0.008 | 0.002 | < 0.001 | < 0.001 | < 0.001 | 0.001 |
| Magnesium [mg/L] | 0.645 | 1.72 | 0.355 | 0.346 | 0.820 | 0.986 | 2.62 | 5.18 |
| Manganese [mg/L] | 0.00085 | 0.00078 | 0.00327 | 0.00241 | 0.00049 | 0.00110 | 0.00383 | 0.00276 |
| Molybdenum [mg/L] | 0.00030 | 0.00013 | 0.00033 | 0.00018 | 0.00013 | 0.00015 | 0.00050 | 0.00019 |
| Sodium [mg/L] | 9.48 | 10.0 | 14.2 | 12.3 | 12.7 | 9.84 | 19.0 | 13.2 |
| Nickel [mg/L] | 0.0001 | 0.0001 | 0.0004 | 0.0003 | < 0.0001 | 0.0002 | 0.0002 | 0.0003 |
| Lead [mg/L] | 0.00006 | 0.00002 | 0.00006 | 0.00005 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Antimony [mg/L] | 0.0010 | 0.0012 | 0.0029 | 0.0038 | 0.0011 | 0.0017 | 0.0012 | 0.0028 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

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**LR Report :** **CA11451-DEC09**

| Analysis | 11: M09-816-02 | 12: M09-862-01 | 13: M09-798-01 | 14: M09-798-02 | 15: GT09-07-01 | 16: GT09-07-02 | 17: M09-866-01 | 18: M09-866-02 |
|---|---|---|---|---|---|---|---|---|
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | 0.00008 | < 0.00001 | < 0.00001 | 0.00002 | < 0.00001 |
| Strontium [mg/L] | 0.0729 | 0.0304 | 0.0169 | 0.0128 | 0.0177 | 0.0220 | 0.0221 | 0.0209 |
| Titanium [mg/L] | 0.0003 | < 0.0001 | 0.0107 | 0.0061 | 0.0002 | < 0.0001 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000008 | 0.000005 | 0.000139 | 0.000047 | 0.000001 | 0.000001 | < 0.000001 | < 0.000001 |
| Vanadium [mg/L] | 0.0123 | 0.00090 | 0.0199 | 0.0187 | 0.00385 | 0.00148 | 0.00021 | 0.00045 |
| Tungsten [mg/L] | 0.00144 | 0.00109 | 0.00112 | 0.00101 | 0.00096 | 0.00125 | 0.00076 | 0.00114 |
| Yttrium [mg/L] | 0.000008 | 0.000002 | 0.000038 | 0.000020 | < 0.000001 | 0.000001 | < 0.000001 | < 0.000001 |
| Zinc [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

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*Project Specialist*
*Environmental Services, Analytical*

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Friday, January 08, 2010

**Date Rec. :** 21 December 2009
**LR Report:** **CA11452-DEC09**
**Reference:** F-Zone

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M09-855-01 | 6: M09-855-02 | 7: M09-858-01 | 8: M09-858-02 | 9: M09-857-01 | 10: M09-816-01 | 11: M09-816-02 |
|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | |
| SiO2 [%] | 43.4 | 43.7 | 47.9 | 47.8 | 46.9 | 46.8 | 48.0 |
| Al2O3 [%] | 11.1 | 12.8 | 13.6 | 13.3 | 13.3 | 13.4 | 13.2 |
| Fe2O3 [%] | 17.8 | 11.2 | 9.87 | 11.2 | 9.86 | 11.0 | 11.5 |
| MgO [%] | 3.98 | 5.88 | 5.80 | 5.59 | 5.50 | 5.13 | 6.24 |
| CaO [%] | 8.93 | 9.84 | 13.2 | 12.5 | 10.5 | 13.6 | 12.0 |
| Na2O [%] | 1.02 | 2.13 | 2.37 | 2.28 | 2.67 | 1.77 | 2.00 |
| K2O [%] | 0.67 | 0.38 | 0.14 | 0.12 | 0.70 | 0.08 | 0.23 |
| TiO2 [%] | 0.65 | 0.78 | 0.91 | 0.89 | 0.90 | 0.86 | 0.90 |
| P2O5 [%] | 0.06 | 0.07 | 0.07 | 0.07 | 0.09 | 0.07 | 0.08 |
| MnO [%] | 0.43 | 0.27 | 0.20 | 0.20 | 0.21 | 0.22 | 0.19 |
| Cr2O3 [%] | 0.03 | 0.05 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 |
| V2O5 [%] | 0.03 | 0.04 | 0.05 | 0.05 | 0.04 | 0.05 | 0.05 |
| LOI [%] | 4.62 | 10.1 | 3.40 | 4.01 | 7.32 | 5.52 | 3.49 |
| Sum [%] | 92.8 | 97.2 | 97.6 | 98.0 | 98.0 | 98.5 | 97.9 |

*Brian Graham B.Sc.*
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*Environmental Services, Analytical*

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Phone: 403-265-2846
Fax:403-232-1421

Friday, January 08, 2010

**Date Rec. :** 21 December 2009
**LR Report:** **CA11452-DEC09**
**Reference:** F-Zone

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: M09-862-01 | 13: M09-798-01 | 14: M09-798-02 | 15: GT09-07-01 | 16: GT09-07-02 | 17: M09-866-01 | 18: M09-866-02 |
|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | |
| SiO2 [%] | 43.2 | 51.1 | 50.5 | 47.5 | 43.4 | 40.2 | 43.0 |
| Al2O3 [%] | 12.4 | 14.9 | 15.3 | 14.4 | 12.2 | 11.0 | 11.8 |
| Fe2O3 [%] | 11.2 | 14.5 | 13.6 | 10.6 | 10.9 | 15.3 | 10.9 |
| MgO [%] | 6.23 | 4.69 | 5.18 | 5.23 | 5.21 | 5.12 | 5.19 |
| CaO [%] | 10.9 | 8.82 | 9.02 | 10.3 | 12.5 | 12.3 | 11.8 |
| Na2O [%] | 2.19 | 2.53 | 2.82 | 2.58 | 1.91 | 0.35 | 1.75 |
| K2O [%] | 0.41 | 0.93 | 0.66 | 0.19 | 0.50 | 0.75 | 0.56 |
| TiO2 [%] | 0.83 | 1.32 | 1.11 | 0.98 | 1.19 | 0.88 | 1.03 |
| P2O5 [%] | 0.07 | 0.16 | 0.13 | 0.08 | 0.20 | 0.12 | 0.15 |
| MnO [%] | 0.19 | 0.19 | 0.18 | 0.19 | 0.25 | 0.35 | 0.28 |
| Cr2O3 [%] | 0.03 | 0.01 | 0.02 | 0.03 | 0.03 | 0.03 | 0.04 |
| V2O5 [%] | 0.04 | 0.04 | 0.03 | 0.05 | 0.04 | 0.04 | 0.04 |
| LOI [%] | 9.70 | 0.86 | 1.12 | 6.21 | 9.41 | 9.93 | 11.8 |
| Sum [%] | 97.3 | 100.0 | 99.7 | 98.4 | 97.7 | 96.4 | 98.3 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10278-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time |
|---|---|---|---|---|
| Paste pH [units] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| Fizz Rate [---] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| Sample [weight(g)] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| HCl added [mL] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| HCl [Normality] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| NaOH [Normality] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| NaOH to [pH=8.3 mL] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| Final pH [units] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| NP [t CaCO3/1000t] | 04-Aug-09 | 09:00 | 06-Aug-09 | 14:50 |
| AP [t CaCO3/1000 t] | 04-Aug-09 | 09:00 | 10-Aug-09 | 11:31 |
| Net NP [t CaCO3/1000 t] | 04-Aug-09 | 09:00 | 10-Aug-09 | 11:31 |
| NP/AP [ratio] | 04-Aug-09 | 09:00 | 10-Aug-09 | 11:31 |
| Total Sulphur [%] | 06-Aug-09 | 19:28 | 10-Aug-09 | 11:30 |
| Acid Leachable SO4-S [%] | 2.00 | 0.35 | 10-Aug-09 | 11:30 |
| Sulphide-S [%] | 04-Aug-09 | 11:00 | 05-Aug-09 | 10:00 |
| Total Carbon [%] | 06-Aug-09 | 19:28 | 10-Aug-09 | 11:31 |
| Carbonate (CO3) [%] | 04-Aug-09 | 08:30 | 04-Aug-09 | 14:11 |

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**LR Report : CA10278-JUL09**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Modified ABA (Price 1997)

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10278-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M08-755-01 | 6: M08-740-04 | 7: M08-740-02 | 8: M08-748-03 | 9: M08-755-03 | 10: M08-740-05 | 11: M08-752-02 | 12: M08-752-03 |
|---|---|---|---|---|---|---|---|---|
| Paste pH [units] | 9.20 | 9.40 | 9.21 | 9.02 | 9.09 | 9.34 | 10.04 | 9.35 |
| Fizz Rate [---] | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 4 |
| Sample [weight(g)] | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| HCl added [mL] | 88.90 | 139.95 | 124.00 | 105.00 | 77.20 | 131.30 | 26.60 | 122.80 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 44.40 | 52.05 | 52.20 | 37.60 | 27.00 | 43.80 | 18.60 | 56.20 |
| Final pH [units] | 1.66 | 1.76 | 1.61 | 1.86 | 1.80 | 1.90 | 1.55 | 1.84 |
| NP [t CaCO3/1000t] | 113 | 221 | 180 | 171 | 127 | 222 | 19.7 | 163 |
| AP [t CaCO3/1000 t] | 0.31 | 0.85 | 0.56 | 0.91 | 0.88 | 1.46 | 1.32 | 1.00 |
| Net NP [t CaCO3/1000 t] | 113 | 220 | 180 | 170 | 126 | 221 | 18.4 | 162 |
| NP/AP [ratio] | 364 | 259 | 323 | 188 | 145 | 153 | 14.9 | 164 |
| Total Sulphur [%] | 0.016 | 0.065 | 0.086 | 0.057 | 0.039 | 0.100 | 0.111 | 0.074 |
| Acid Leachable SO4-S [%] | 0.02 | 0.04 | 0.07 | 0.03 | 0.01 | 0.05 | 0.07 | 0.04 |
| Sulphide-S [%] | < 0.01 | 0.03 | 0.02 | 0.03 | 0.03 | 0.05 | 0.04 | 0.03 |
| Total Carbon [%] | 1.25 | 2.82 | 2.35 | 2.06 | 1.56 | 2.54 | 0.141 | 2.10 |
| Carbonate (CO3) [%] | 5.66 | 13.1 | 10.8 | 9.31 | 7.08 | 11.5 | 0.494 | 9.48 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10278-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 13: M08-755-02 | 14: M08-752-04 | 15: M08-752-01 | 16: M08-748-02 | 17: M08-748-01 | 18: M08-740-03 | 19: M08-729-03 | 20: M08-747-01 |
|---|---|---|---|---|---|---|---|---|
| Paste pH [units] | 9.41 | 9.23 | 9.29 | 9.25 | 9.62 | 9.35 | 9.15 | 8.99 |
| Fizz Rate [---] | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sample [weight(g)] | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| HCl added [mL] | 89.50 | 105.80 | 87.20 | 117.10 | 54.70 | 60.30 | 135.95 | 102.60 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 40.00 | 37.50 | 28.25 | 40.10 | 27.50 | 26.10 | 60.90 | 28.20 |
| Final pH [units] | 1.65 | 1.90 | 1.79 | 1.95 | 1.88 | 1.84 | 1.64 | 1.87 |
| NP [t CaCO3/1000t] | 123 | 172 | 147 | 195 | 68.0 | 86.4 | 186 | 185 |
| AP [t CaCO3/1000 t] | 0.47 | 1.07 | 7.88 | 14.3 | 4.67 | 2.30 | 2.01 | 9.48 |
| Net NP [t CaCO3/1000 t] | 123 | 171 | 140 | 181 | 63.3 | 84.1 | 184 | 176 |
| NP/AP [ratio] | 263 | 161 | 18.7 | 13.7 | 14.6 | 37.5 | 92.6 | 19.5 |
| Total Sulphur [%] | 0.042 | 0.053 | 0.566 | 0.574 | 0.211 | 0.103 | 0.086 | 0.436 |
| Acid Leachable SO4-S [%] | 0.03 | 0.02 | 0.31 | 0.12 | 0.06 | 0.03 | 0.02 | 0.13 |
| Sulphide-S [%] | 0.02 | 0.03 | 0.25 | 0.46 | 0.15 | 0.07 | 0.06 | 0.30 |
| Total Carbon [%] | 1.44 | 2.01 | 1.75 | 2.29 | 0.683 | 0.982 | 2.21 | 2.27 |
| Carbonate (CO3) [%] | 6.49 | 8.94 | 7.76 | 9.93 | 2.93 | 4.40 | 10.2 | 10.4 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Modified ABA (Price 1997)

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10278-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 21: M08-740-01 | 22: M08-747-02 | 23: M08-729-04 | 24: M08-747-04 | 25: M08-729-06 | 26: M08-747-03 | 27: M08-729-01 | 28: M08-729-02 |
|---|---|---|---|---|---|---|---|---|
| Paste pH [units] | 8.98 | 9.46 | 9.28 | 9.32 | 9.10 | 8.92 | 9.14 | 8.90 |
| Fizz Rate [---] | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Sample [weight(g)] | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| HCl added [mL] | 120.30 | 40.00 | 91.70 | 55.40 | 115.20 | 110.45 | 105.40 | 105.60 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 47.20 | 15.10 | 39.60 | 25.40 | 39.40 | 36.50 | 44.30 | 41.10 |
| Final pH [units] | 1.71 | 1.99 | 1.63 | 1.73 | 1.90 | 1.86 | 1.64 | 1.67 |
| NP [t CaCO3/1000t] | 180 | 62.2 | 128 | 73.2 | 188 | 188 | 154 | 159 |
| AP [t CaCO3/1000 t] | 3.53 | 8.63 | 3.93 | 3.84 | 2.11 | 0.45 | 7.21 | 0.73 |
| Net NP [t CaCO3/1000 t] | 176 | 53.6 | 124 | 69.4 | 185 | 187 | 146 | 158 |
| NP/AP [ratio] | 51.0 | 7.21 | 32.7 | 19.1 | 88.8 | 417 | 21.3 | 218 |
| Total Sulphur [%] | 0.176 | 0.532 | 0.188 | 0.169 | 0.078 | 0.034 | 0.277 | 0.047 |
| Acid Leachable SO4-S [%] | 0.06 | 0.26 | 0.06 | 0.05 | 0.01 | 0.02 | 0.05 | 0.02 |
| Sulphide-S [%] | 0.11 | 0.28 | 0.13 | 0.12 | 0.07 | 0.01 | 0.23 | 0.02 |
| Total Carbon [%] | 2.16 | 0.712 | 1.63 | 0.849 | 2.40 | 2.25 | 1.79 | 1.88 |
| Carbonate (CO3) [%] | 9.54 | 2.94 | 7.09 | 3.73 | 10.9 | 10.1 | 7.97 | 8.57 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10278-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 29: FZ-SS-6 | 30: FZ-SS-7 | 31: FZ-SS-8 | 32: FZ-SS-9 | 33: FZ-SS-10 |
|---|---|---|---|---|---|
| Paste pH [units] | 8.23 | 8.67 | 8.46 | 8.44 | 8.80 |
| Fizz Rate [---] | 2 | 4 | 3 | 3 | 1 |
| Sample [weight(g)] | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| HCl added [mL] | 20.00 | 52.80 | 29.90 | 20.00 | 20.00 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 16.50 | 27.70 | 15.80 | 13.80 | 17.80 |
| Final pH [units] | 1.84 | 1.67 | 1.79 | 1.77 | 1.56 |
| NP [t CaCO3/1000t] | 8.8 | 64.0 | 35.8 | 15.5 | 5.6 |
| AP [t CaCO3/1000 t] | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| Net NP [t CaCO3/1000 t] | 8.49 | 63.7 | 35.5 | 15.2 | 5.29 |
| NP/AP [ratio] | 28.4 | 206 | 115 | 50.0 | 18.1 |
| Total Sulphur [%] | 0.014 | 0.026 | 0.012 | < 0.005 | < 0.005 |
| Acid Leachable SO4-S [%] | 0.01 | 0.03 | 0.01 | < 0.005 | < 0.005 |
| Sulphide-S [%] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Total Carbon [%] | 0.847 | 0.974 | 0.800 | 0.255 | 0.208 |
| Carbonate (CO3) [%] | 0.268 | 3.14 | 1.85 | 0.589 | 0.022 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10279-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time | 36:BLK: $D.I. Leachate Blank |
|---|---|---|---|---|---|
| Sample [weight(g)] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:57 | N/A |
| Volume mL [D.I. H2O] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:57 | 800 |
| InitialpH [units] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:57 | 5.75 |
| Final pH [units] | 08-Aug-09 | 07:00 | 07-Aug-09 | 08:57 | 5.88 |
| pH [no unit] | 10-Aug-09 | 12:45 | 11-Aug-09 | 11:43 | 5.82 |
| Conductivity [uS/cm] | 10-Aug-09 | 12:45 | 11-Aug-09 | 11:44 | 1 |
| Alkalinity [mg/L as CaCO3] | 10-Aug-09 | 12:45 | 11-Aug-09 | 11:44 | < 2 |
| Sulphate [mg/L] | 10-Aug-09 | 09:43 | 12-Aug-09 | 15:23 | < 0.2 |
| Chloride [mg/L] | 10-Aug-09 | 09:43 | 12-Aug-09 | 15:23 | < 0.2 |
| Mercury [mg/L] | 11-Aug-09 | 10:00 | 11-Aug-09 | 14:33 | < 0.0001 |
| Silver [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00001 |
| Aluminum [mg/L] | 11-Aug-09 | 13:00 | 12-Aug-09 | 11:08 | < 0.01 |
| Arsenic [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.0002 |
| Boron [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | 0.0061 |
| Beryllium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00002 |
| Bismuth [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00001 |
| Calcium [mg/L] | 11-Aug-09 | 13:00 | 12-Aug-09 | 11:07 | < 0.03 |
| Cadmium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.000003 |
| Cobalt [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | 0.000024 |
| Chromium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.0005 |
| Copper [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.0005 |
| Iron [mg/L] | 11-Aug-09 | 13:00 | 12-Aug-09 | 11:07 | < 0.01 |
| Potassium [mg/L] | 11-Aug-09 | 13:00 | 12-Aug-09 | 11:07 | < 0.01 |
| Lithium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.001 |
| Magnesium [mg/L] | 11-Aug-09 | 13:00 | 12-Aug-09 | 11:07 | < 0.003 |
| Manganese [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | 0.00039 |
| Molybdenum [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | 0.00001 |
| Sodium [mg/L] | 11-Aug-09 | 13:00 | 12-Aug-09 | 11:07 | < 0.01 |
| Nickel [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.0001 |
| Lead [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00002 |

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**LR Report :** **CA10279-JUL09**

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time | 36:BLK: $D.I. Leachate Blank |
|---|---|---|---|---|---|
| Antimony [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | 0.0003 |
| Selenium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.001 |
| Tin [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00001 |
| Strontium [mg/L] | 11-Aug-09 | 13:00 | 12-Aug-09 | 11:07 | < 0.0001 |
| Titanium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.0001 |
| Thallium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00002 |
| Uranium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.000001 |
| Vanadium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00003 |
| Tungsten [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.00003 |
| Yttrium [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.000001 |
| Zinc [mg/L] | 12-Aug-09 | 09:54 | 12-Aug-09 | 14:43 | < 0.001 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

**SGS Lakefield Research Limited**
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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW
Calgary, AB
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Phone: 403-265-2846
Fax:403-232-1421

August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10279-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M08-755-01 | 6: M08-740-04 | 7: M08-740-02 | 8: M08-748-03 | 9: M08-755-03 | 10: M08-740-05 | 11: M08-752-02 | 12: M08-752-03 |
|---|---|---|---|---|---|---|---|---|
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.78 | 9.87 | 9.88 | 9.85 | 9.87 | 9.88 | 9.80 | 9.83 |
| Final pH [units] | 9.80 | 9.05 | 9.14 | 9.46 | 9.57 | 9.54 | 9.96 | 9.11 |
| pH [no unit] | 8.81 | 8.05 | 7.97 | 7.94 | 8.32 | 8.51 | 8.53 | 8.03 |
| Conductivity [uS/cm] | 77 | 126 | 119 | 66 | 72 | 116 | 100 | 118 |
| Alkalinity [mg/L as CaCO3] | 32 | 57 | 54 | 30 | 35 | 42 | 41 | 54 |
| Sulphate [mg/L] | 1.2 | 0.9 | 0.9 | 1.0 | 1.0 | 2.5 | 5.7 | 0.8 |
| Chloride [mg/L] | 4.1 | 5.3 | 5.9 | 2.5 | 2.9 | 7.8 | 2.5 | 5.2 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00002 | 0.00001 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.83 | 0.47 | 0.53 | 0.66 | 0.61 | 0.85 | 0.64 | 0.49 |
| Arsenic [mg/L] | 0.0043 | 0.0168 | 0.0723 | 0.0018 | 0.0040 | 0.0367 | 0.0053 | 0.0248 |
| Boron [mg/L] | 0.0075 | 0.0081 | 0.0180 | 0.0199 | 0.0239 | 0.0167 | 0.249 | 0.0164 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 3.91 | 7.72 | 6.58 | 5.53 | 4.44 | 3.56 | 3.27 | 6.94 |
| Cadmium [mg/L] | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000035 | 0.000053 | 0.000053 | 0.000030 | 0.000020 | 0.000025 | 0.000316 | 0.000034 |
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0010 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.70 | < 0.01 |
| Potassium [mg/L] | 5.86 | 10.7 | 3.70 | 1.49 | 1.38 | 10.4 | 5.36 | 9.08 |
| Lithium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.004 | < 0.001 |
| Magnesium [mg/L] | 0.346 | 2.79 | 2.67 | 0.692 | 0.606 | 0.428 | 0.435 | 2.46 |
| Manganese [mg/L] | 0.00037 | 0.00124 | 0.00047 | 0.00053 | 0.00022 | 0.00052 | 0.00613 | 0.00083 |
| Molybdenum [mg/L] | 0.00010 | 0.00012 | 0.00006 | 0.00005 | 0.00008 | 0.00025 | 0.00016 | 0.00012 |
| Sodium [mg/L] | 8.56 | 8.95 | 11.5 | 6.65 | 9.91 | 13.8 | 15.2 | 9.95 |
| Nickel [mg/L] | < 0.0001 | 0.0006 | 0.0003 | 0.0001 | < 0.0001 | 0.0002 | 0.0005 | 0.0002 |
| Lead [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00011 | < 0.00002 |

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**SGS Lakefield Research Limited**
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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**LR Report :** **CA10279-JUL09**

| Analysis | 5: M08-755-01 | 6: M08-740-04 | 7: M08-740-02 | 8: M08-748-03 | 9: M08-755-03 | 10: M08-740-05 | 11: M08-752-02 | 12: M08-752-03 |
|---|---|---|---|---|---|---|---|---|
| Antimony [mg/L] | 0.0016 | 0.0033 | 0.0016 | 0.0036 | 0.0033 | 0.0020 | 0.0037 | 0.0015 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00003 | < 0.00001 |
| Strontium [mg/L] | 0.0080 | 0.0296 | 0.0232 | 0.0211 | 0.0178 | 0.0164 | 0.0292 | 0.0293 |
| Titanium [mg/L] | 0.0004 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0224 | 0.0002 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000011 | 0.000008 | < 0.000001 | 0.000001 | 0.000002 | 0.000006 | 0.000201 | 0.000004 |
| Vanadium [mg/L] | 0.0166 | 0.00113 | 0.00173 | 0.00358 | 0.00584 | 0.00502 | 0.0287 | 0.00141 |
| Tungsten [mg/L] | 0.00219 | 0.00105 | 0.00062 | 0.00083 | 0.00110 | 0.00083 | 0.00102 | 0.00316 |
| Yttrium [mg/L] | < 0.000001 | < 0.000001 | < 0.000001 | < 0.000001 | 0.000001 | 0.000008 | 0.000113 | 0.000001 |
| Zinc [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.005 | < 0.001 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10279-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 13: M08-755-02 | 14: M08-752-04 | 15: M08-752-01 | 16: M08-748-02 | 17: M08-748-01 | 18: M08-740-03 | 19: M08-729-03 | 20: M08-747-01 |
|---|---|---|---|---|---|---|---|---|
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.85 | 9.85 | 9.85 | 9.85 | 9.87 | 9.86 | 9.86 | 9.84 |
| Final pH [units] | 9.69 | 9.44 | 9.50 | 9.23 | 9.77 | 9.75 | 9.38 | 9.23 |
| pH [no unit] | 8.46 | 7.93 | 8.24 | 7.74 | 8.65 | 8.70 | 8.24 | 7.95 |
| Conductivity [uS/cm] | 88 | 82 | 134 | 124 | 104 | 80 | 111 | 110 |
| Alkalinity [mg/L as CaCO3] | 36 | 36 | 33 | 38 | 40 | 32 | 43 | 34 |
| Sulphate [mg/L] | 1.8 | 1.2 | 5.2 | 3.7 | 2.0 | 1.7 | 3.4 | 3.3 |
| Chloride [mg/L] | 4.6 | 3.9 | 12 | 5.7 | 5.6 | 5.2 | 6.0 | 7.1 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.87 | 0.93 | 0.55 | 0.73 | 0.99 | 0.72 | 1.11 | 0.79 |
| Arsenic [mg/L] | 0.0017 | 0.0007 | 0.0073 | 0.0007 | 0.0031 | 0.0025 | 0.0098 | 0.0007 |
| Boron [mg/L] | 0.0123 | 0.0104 | 0.0134 | 0.0112 | 0.0241 | 0.0136 | 0.0242 | 0.0093 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 3.55 | 4.81 | 5.29 | 6.49 | 2.98 | 3.82 | 4.52 | 7.92 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000018 | 0.000017 | 0.000020 | 0.000018 | 0.000019 | 0.000021 | 0.000017 | 0.000055 |
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 8.20 | 7.84 | 4.55 | 11.2 | 8.17 | 3.08 | 8.74 | 4.89 |
| Lithium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium [mg/L] | 0.380 | 0.528 | 0.788 | 0.895 | 0.278 | 0.398 | 0.504 | 0.970 |
| Manganese [mg/L] | 0.00045 | 0.00062 | 0.00067 | 0.00100 | 0.00025 | 0.00026 | 0.00071 | 0.00282 |
| Molybdenum [mg/L] | 0.00014 | 0.00004 | 0.00020 | 0.00006 | 0.00012 | 0.00005 | 0.00032 | 0.00007 |
| Sodium [mg/L] | 9.78 | 7.54 | 17.3 | 9.71 | 13.2 | 10.1 | 12.7 | 9.52 |
| Nickel [mg/L] | < 0.0001 | < 0.0001 | 0.0001 | 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0002 |
| Lead [mg/L] | 0.00003 | < 0.00002 | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**LR Report :** **CA10279-JUL09**

| Analysis | 13: M08-755-02 | 14: M08-752-04 | 15: M08-752-01 | 16: M08-748-02 | 17: M08-748-01 | 18: M08-740-03 | 19: M08-729-03 | 20: M08-747-01 |
|---|---|---|---|---|---|---|---|---|
| Antimony [mg/L] | 0.0016 | 0.0017 | 0.0026 | 0.0017 | 0.0033 | 0.0019 | 0.0020 | 0.0014 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00003 | < 0.00001 | 0.00002 | < 0.00001 |
| Strontium [mg/L] | 0.0110 | 0.0124 | 0.0203 | 0.0302 | 0.0240 | 0.0119 | 0.0110 | 0.0248 |
| Titanium [mg/L] | 0.0003 | < 0.0001 | < 0.0001 | < 0.0001 | 0.0003 | 0.0003 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000003 | < 0.000001 | 0.000008 | < 0.000001 | 0.000014 | 0.000006 | < 0.000001 | 0.000001 |
| Vanadium [mg/L] | 0.00843 | 0.00338 | 0.00715 | 0.00111 | 0.0137 | 0.0174 | 0.00338 | 0.00201 |
| Tungsten [mg/L] | 0.00100 | 0.00269 | 0.00140 | 0.00089 | 0.00082 | 0.00100 | 0.00102 | 0.00057 |
| Yttrium [mg/L] | < 0.000001 | < 0.000001 | < 0.000001 | < 0.000001 | 0.000001 | < 0.000001 | < 0.000001 | < 0.000001 |
| Zinc [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10279-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 21: M08-740-01 | 22: M08-747-02 | 23: M08-729-04 | 24: M08-747-04 | 25: M08-729-06 | 26: M08-747-03 | 27: M08-729-01 | 28: M08-729-02 |
|---|---|---|---|---|---|---|---|---|
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.83 | 9.80 | 9.86 | 9.90 | 9.81 | 9.82 | 9.84 | 9.81 |
| Final pH [units] | 9.25 | 9.70 | 9.27 | 9.78 | 9.08 | 9.40 | 9.49 | 9.46 |
| pH [no unit] | 8.11 | 8.33 | 8.05 | 8.71 | 8.01 | 8.09 | 8.22 | 7.95 |
| Conductivity [uS/cm] | 115 | 93 | 100 | 80 | 107 | 75 | 99 | 90 |
| Alkalinity [mg/L as CaCO3] | 40 | 30 | 47 | 37 | 53 | 35 | 37 | 32 |
| Sulphate [mg/L] | 1.8 | 2.8 | 1.3 | 1.1 | 0.8 | 0.7 | 2.3 | 1.5 |
| Chloride [mg/L] | 10 | 3.8 | 2.5 | 2.0 | 2.2 | 3.9 | 6.0 | 7.7 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00014 | 0.00007 | 0.00004 | 0.00005 | 0.00002 | 0.00001 | 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 1.11 | 0.44 | 0.75 | 0.78 | 0.50 | 0.63 | 0.87 | 0.83 |
| Arsenic [mg/L] | 0.0223 | 0.0022 | 0.0622 | 0.0046 | 0.0409 | 0.0007 | 0.0024 | 0.0026 |
| Boron [mg/L] | 0.0236 | 0.0103 | 0.0185 | 0.0110 | 0.0094 | 0.0066 | 0.0162 | 0.0182 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00001 | < 0.00001 |
| Calcium [mg/L] | 6.15 | 5.58 | 5.85 | 3.15 | 7.35 | 5.46 | 4.45 | 5.03 |
| Cadmium [mg/L] | < 0.000003 | 0.000004 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000030 | 0.000034 | 0.000041 | 0.000020 | 0.000043 | 0.000018 | 0.000021 | 0.000019 |
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 5.18 | 4.27 | 6.31 | 0.88 | 8.53 | 4.35 | 8.50 | 4.94 |
| Lithium [mg/L] | < 0.001 | < 0.001 | 0.002 | < 0.001 | 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Magnesium [mg/L] | 0.678 | 0.787 | 1.41 | 0.342 | 2.29 | 0.720 | 0.465 | 0.516 |
| Manganese [mg/L] | 0.00129 | 0.00061 | 0.00147 | 0.00026 | 0.00090 | 0.00032 | 0.00044 | 0.00038 |
| Molybdenum [mg/L] | 0.00007 | 0.00005 | 0.00009 | 0.00004 | 0.00015 | 0.00003 | 0.00032 | 0.00007 |
| Sodium [mg/L] | 12.7 | 9.36 | 9.77 | 12.9 | 7.36 | 6.91 | 10.1 | 9.62 |
| Nickel [mg/L] | 0.0002 | < 0.0001 | 0.0012 | < 0.0001 | 0.0010 | < 0.0001 | < 0.0001 | < 0.0001 |
| Lead [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |

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**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**LR Report :** **CA10279-JUL09**

| Analysis | 21: M08-740-01 | 22: M08-747-02 | 23: M08-729-04 | 24: M08-747-04 | 25: M08-729-06 | 26: M08-747-03 | 27: M08-729-01 | 28: M08-729-02 |
|---|---|---|---|---|---|---|---|---|
| Antimony [mg/L] | 0.0014 | 0.0022 | 0.0027 | 0.0044 | 0.0035 | 0.0036 | 0.0031 | 0.0018 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00003 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0162 | 0.0172 | 0.0158 | 0.0082 | 0.0306 | 0.0228 | 0.0153 | 0.0141 |
| Titanium [mg/L] | < 0.0001 | 0.0003 | 0.0002 | 0.0004 | < 0.0001 | < 0.0001 | 0.0002 | 0.0001 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000008 | 0.000013 | 0.000011 | 0.000002 | 0.000003 | < 0.000001 | 0.000003 | < 0.000001 |
| Vanadium [mg/L] | 0.00189 | 0.0111 | 0.00629 | 0.0119 | 0.00144 | 0.00180 | 0.00535 | 0.00399 |
| Tungsten [mg/L] | 0.00153 | 0.00126 | 0.00095 | 0.00146 | 0.00134 | 0.00095 | 0.00119 | 0.00159 |
| Yttrium [mg/L] | 0.000005 | 0.000007 | 0.000001 | < 0.000001 | 0.000006 | 0.000001 | 0.000001 | < 0.000001 |
| Zinc [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 705-652-2000 FAX: 705-652-6365

**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10279-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 29: FZ-SS-6 | 30: FZ-SS-7 | 31: FZ-SS-8 | 32: FZ-SS-9 | 33: FZ-SS-10 | 34: M08-748-02 | 35: FZ-SS-10 |
|---|---|---|---|---|---|---|---|
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 7.44 | 8.51 | 8.55 | 8.37 | 7.35 | 9.80 | 7.35 |
| Final pH [units] | 7.54 | 8.52 | 8.59 | 8.58 | 7.54 | 9.15 | 7.55 |
| pH [no unit] | 7.32 | 7.89 | 7.90 | 7.69 | 7.39 | 7.96 | 7.48 |
| Conductivity [uS/cm] | 64 | 137 | 138 | 94 | 91 | 129 | 92 |
| Alkalinity [mg/L as CaCO3] | 25 | 66 | 61 | 46 | 30 | 40 | 33 |
| Sulphate [mg/L] | 5.2 | 7.6 | 10 | 4.4 | 14 | 3.7 | 13 |
| Chloride [mg/L] | 2.1 | 0.6 | 1.9 | 0.6 | 0.7 | 5.5 | 0.5 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00004 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.71 | 0.31 | 0.48 | 0.77 | 0.87 | 0.69 | 0.84 |
| Arsenic [mg/L] | 0.0201 | 0.0203 | 0.0173 | 0.0118 | 0.0131 | 0.0010 | 0.0122 |
| Boron [mg/L] | 0.408 | 0.340 | 0.312 | 0.322 | 0.374 | 0.0173 | 0.339 |
| Beryllium [mg/L] | 0.00003 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00003 | < 0.00001 | 0.00002 |
| Calcium [mg/L] | 4.56 | 17.3 | 18.2 | 12.0 | 9.09 | 6.87 | 10.3 |
| Cadmium [mg/L] | 0.000023 | 0.000038 | 0.000006 | 0.000012 | 0.000019 | < 0.000003 | 0.000018 |
| Cobalt [mg/L] | 0.00244 | 0.00100 | 0.000573 | 0.00111 | 0.00280 | 0.000032 | 0.00282 |
| Chromium [mg/L] | 0.0025 | 0.0015 | 0.0011 | 0.0025 | 0.0031 | < 0.0005 | 0.0028 |
| Copper [mg/L] | 0.0130 | 0.0164 | 0.0059 | 0.0112 | 0.0159 | < 0.0005 | 0.0157 |
| Iron [mg/L] | 1.57 | 0.93 | 0.52 | 1.16 | 1.29 | < 0.01 | 1.24 |
| Potassium [mg/L] | 0.91 | 2.09 | 2.04 | 0.86 | 0.84 | 11.8 | 0.90 |
| Lithium [mg/L] | 0.002 | 0.003 | 0.003 | 0.002 | 0.002 | 0.002 | 0.002 |
| Magnesium [mg/L] | 0.921 | 1.27 | 1.31 | 0.995 | 0.962 | 0.973 | 0.991 |
| Manganese [mg/L] | 0.0479 | 0.0161 | 0.0119 | 0.0326 | 0.0919 | 0.00152 | 0.117 |
| Molybdenum [mg/L] | 0.00033 | 0.00390 | 0.00312 | 0.00097 | 0.00140 | 0.00008 | 0.00137 |
| Sodium [mg/L] | 7.67 | 9.22 | 8.49 | 7.29 | 8.01 | 9.79 | 7.15 |
| Nickel [mg/L] | 0.0089 | 0.0046 | 0.0026 | 0.0058 | 0.0072 | 0.0001 | 0.0072 |
| Lead [mg/L] | 0.00216 | 0.00076 | 0.00046 | 0.00060 | 0.00160 | < 0.00002 | 0.00156 |

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Shake Flask Leach @ 4:1 ratio filter=0.45µ, 24hr**

**LR Report :** **CA10279-JUL09**

| Analysis | 29: FZ-SS-6 | 30: FZ-SS-7 | 31: FZ-SS-8 | 32: FZ-SS-9 | 33: FZ-SS-10 | 34: M08-748-02 | 35: FZ-SS-10 |
|---|---|---|---|---|---|---|---|
| Antimony [mg/L] | 0.0003 | 0.0004 | 0.0007 | 0.0004 | 0.0013 | 0.0016 | 0.0009 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 0.00008 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0356 | 0.0635 | 0.0564 | 0.0340 | 0.0304 | 0.0309 | 0.0299 |
| Titanium [mg/L] | 0.0223 | 0.0117 | 0.0198 | 0.0312 | 0.0293 | 0.0001 | 0.0284 |
| Thallium [mg/L] | 0.00002 | < 0.00002 | < 0.00002 | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000064 | 0.000296 | 0.000640 | 0.000186 | 0.000108 | 0.000002 | 0.000054 |
| Vanadium [mg/L] | 0.00188 | 0.00177 | 0.00228 | 0.00255 | 0.00438 | 0.00104 | 0.00423 |
| Tungsten [mg/L] | < 0.00003 | 0.00006 | 0.00015 | 0.00006 | 0.00005 | 0.00082 | 0.00005 |
| Yttrium [mg/L] | 0.000638 | 0.000447 | 0.000261 | 0.000880 | 0.000642 | 0.000002 | 0.000623 |
| Zinc [mg/L] | 0.038 | 0.020 | 0.010 | 0.013 | 0.017 | < 0.001 | 0.017 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10277-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 29: FZ-SS-6 | 30: FZ-SS-7 | 31: FZ-SS-8 | 32: FZ-SS-9 | 33: FZ-SS-10 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | |
| Silver [µg/g] | 0.34 | 0.27 | 0.29 | 0.33 | 0.32 |
| Aluminum [µg/g] | 62000 | 67000 | 64000 | 60000 | 62000 |
| Arsenic [µg/g] | 56 | 68 | 26 | 28 | 13 |
| Barium [µg/g] | 580 | 430 | 560 | 590 | 560 |
| Beryllium [µg/g] | 1.1 | 0.75 | 1.0 | 1.1 | 0.99 |
| Bismuth [µg/g] | 0.12 | 0.10 | 0.10 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 15000 | 33000 | 27000 | 19000 | 14000 |
| Cadmium [µg/g] | 0.29 | 0.37 | 0.23 | 0.28 | 0.22 |
| Cobalt [µg/g] | 14 | 26 | 14 | 16 | 14 |
| Chromium [µg/g] | 200 | 240 | 250 | 250 | 250 |
| Copper [µg/g] | 34 | 74 | 22 | 32 | 33 |
| Iron [µg/g] | 31000 | 48000 | 33000 | 33000 | 32000 |
| Potassium [µg/g] | 15000 | 11000 | 15000 | 15000 | 15000 |
| Lithium [µg/g] | 18 | 29 | 20 | 16 | 17 |
| Magnesium [µg/g] | 9000 | 18000 | 12000 | 11000 | 11000 |
| Manganese [µg/g] | 490 | 890 | 570 | 630 | 390 |
| Molybdenum [µg/g] | 3.7 | 3.8 | 4.8 | 3.8 | 4.8 |
| Sodium [µg/g] | 21000 | 19000 | 21000 | 20000 | 21000 |
| Nickel [µg/g] | 39 | 69 | 38 | 40 | 39 |
| Lead [µg/g] | 16 | 12 | 13 | 13 | 14 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 1.3 | 0.9 | 1.3 | 0.8 | 0.9 |
| Strontium [µg/g] | 310 | 250 | 330 | 280 | 290 |
| Titanium [µg/g] | 2200 | 3200 | 2600 | 2700 | 2700 |
| Thallium [µg/g] | 0.37 | 0.33 | 0.36 | 0.38 | 0.36 |
| Uranium [µg/g] | 1.2 | 0.91 | 1.2 | 1.0 | 1.0 |
| Vanadium [µg/g] | 77 | 140 | 86 | 84 | 80 |
| Yttrium [µg/g] | 9.2 | 10 | 9.5 | 11 | 10 |
| Zinc [µg/g] | 45 | 110 | 55 | 45 | 44 |

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**LR Report :** **CA10277-JUL09**



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10277-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time |
|---|---|---|---|---|
| Sample Date & Time | | | | |
| Silver [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Aluminum [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Arsenic [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Barium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Beryllium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Bismuth [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Calcium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Cadmium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Cobalt [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Chromium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Copper [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Iron [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Potassium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Lithium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Magnesium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Manganese [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Molybdenum [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Sodium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Nickel [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Lead [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Antimony [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Selenium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Tin [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Strontium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Titanium [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |
| Thallium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Uranium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Vanadium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Yttrium [µg/g] | 10-Aug-09 | 10:41 | 10-Aug-09 | 15:29 |
| Zinc [µg/g] | 10-Aug-09 | 08:00 | 10-Aug-09 | 15:29 |

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**LR Report :** **CA10277-JUL09**



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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 29: FZ-SS-6 | 30: FZ-SS-7 | 31: FZ-SS-8 | 32: FZ-SS-9 | 33: FZ-SS-10 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | |
| SiO2 [%] | 69.9 | 60.4 | 67.0 | 70.7 | 71.4 |
| Al2O3 [%] | 12.3 | 13.1 | 12.4 | 11.9 | 12.3 |
| Fe2O3 [%] | 4.46 | 7.37 | 4.95 | 4.87 | 4.70 |
| MgO [%] | 1.65 | 3.18 | 2.10 | 1.91 | 1.86 |
| CaO [%] | 2.26 | 5.17 | 4.00 | 2.88 | 2.23 |
| Na2O [%] | 3.14 | 2.83 | 3.02 | 3.00 | 3.07 |
| K2O [%] | 1.69 | 1.26 | 1.62 | 1.66 | 1.72 |
| TiO2 [%] | 0.48 | 0.64 | 0.49 | 0.48 | 0.50 |
| P2O5 [%] | 0.14 | 0.11 | 0.13 | 0.13 | 0.13 |
| MnO [%] | 0.06 | 0.12 | 0.08 | 0.09 | 0.06 |
| Cr2O3 [%] | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 |
| V2O5 [%] | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 |
| LOI [%] | 3.47 | 5.43 | 3.98 | 2.26 | 1.90 |
| Sum [%] | 99.6 | 99.7 | 99.8 | 99.9 | 100.0 |

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 13: M08-755-02 | 14: M08-752-04 | 15: M08-752-01 | 16: M08-748-02 | 17: M08-748-01 | 18: M08-740-03 | 19: M08-729-03 | 20: M08-747-01 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| SiO2 [%] | 47.1 | 44.7 | 44.7 | 43.1 | 48.9 | 50.1 | 43.9 | 42.2 |
| Al2O3 [%] | 13.1 | 14.8 | 13.1 | 11.9 | 14.4 | 14.3 | 14.0 | 13.5 |
| Fe2O3 [%] | 11.5 | 10.2 | 10.3 | 12.9 | 13.3 | 10.5 | 10.9 | 11.6 |
| MgO [%] | 5.71 | 5.52 | 6.35 | 6.00 | 5.39 | 5.49 | 5.06 | 4.60 |
| CaO [%] | 12.3 | 10.8 | 13.1 | 11.9 | 8.42 | 9.93 | 11.5 | 14.3 |
| Na2O [%] | 1.38 | 2.21 | 2.48 | 1.52 | 2.36 | 2.47 | 1.72 | 1.88 |
| K2O [%] | 0.51 | 0.67 | 0.35 | 0.53 | 0.95 | 0.28 | 0.60 | 0.13 |
| TiO2 [%] | 0.93 | 0.69 | 0.73 | 0.71 | 1.10 | 0.93 | 1.00 | 0.89 |
| P2O5 [%] | 0.11 | 0.04 | 0.06 | 0.07 | 0.14 | 0.07 | 0.07 | 0.07 |
| MnO [%] | 0.24 | 0.22 | 0.23 | 0.26 | 0.18 | 0.16 | 0.25 | 0.33 |
| Cr2O3 [%] | 0.03 | 0.04 | 0.06 | 0.05 | 0.02 | 0.04 | 0.05 | 0.06 |
| V2O5 [%] | 0.05 | 0.05 | 0.05 | 0.04 | 0.04 | 0.06 | 0.06 | 0.06 |
| LOI [%] | 7.28 | 10.2 | 7.54 | 10.0 | 4.37 | 5.67 | 10.7 | 9.87 |
| Sum [%] | 100.3 | 100.0 | 99.2 | 99.0 | 99.5 | 99.9 | 99.7 | 99.4 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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**Date Rec. :** 23 July 2009
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M08-755-01 | 6: M08-740-04 | 7: M08-740-02 | 8: M08-748-03 | 9: M08-755-03 | 10: M08-740-05 | 11: M08-752-02 | 12: M08-752-03 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| SiO2 [%] | 47.1 | 41.6 | 43.3 | 44.8 | 45.2 | 41.9 | 53.5 | 46.6 |
| Al2O3 [%] | 14.0 | 13.2 | 16.3 | 13.5 | 13.4 | 12.6 | 13.2 | 13.2 |
| Fe2O3 [%] | 11.5 | 11.4 | 8.31 | 10.0 | 11.4 | 10.1 | 14.9 | 12.1 |
| MgO [%] | 5.72 | 5.49 | 6.65 | 6.79 | 7.78 | 6.79 | 4.06 | 5.73 |
| CaO [%] | 11.4 | 10.7 | 9.91 | 11.1 | 10.1 | 11.9 | 7.25 | 7.65 |
| Na2O [%] | 2.07 | 3.05 | 2.61 | 2.04 | 2.39 | 1.77 | 2.39 | 2.45 |
| K2O [%] | 0.37 | 0.68 | 0.25 | 0.05 | 0.05 | 0.96 | 1.23 | 0.87 |
| TiO2 [%] | 0.94 | 0.83 | 0.54 | 0.74 | 0.75 | 0.79 | 1.60 | 1.04 |
| P2O5 [%] | 0.07 | 0.06 | 0.04 | 0.05 | 0.05 | 0.06 | 0.23 | 0.12 |
| MnO [%] | 0.21 | 0.23 | 0.15 | 0.21 | 0.17 | 0.27 | 0.19 | 0.19 |
| Cr2O3 [%] | 0.04 | 0.04 | 0.08 | 0.06 | 0.05 | 0.04 | 0.01 | 0.03 |
| V2O5 [%] | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |
| LOI [%] | 6.61 | 12.1 | 11.3 | 10.7 | 8.60 | 12.2 | 1.34 | 9.99 |
| Sum [%] | 100.1 | 99.4 | 99.5 | 100.0 | 99.9 | 99.4 | 100.0 | 99.9 |



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10276-JUL09**
**Reference:** Meliadine Gold Project

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 21: M08-740-01 | 22: M08-747-02 | 23: M08-729-04 | 24: M08-747-04 | 25: M08-729-06 | 26: M08-747-03 | 27: M08-729-01 | 28: M08-729-02 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| SiO2 [%] | 44.3 | 48.6 | 51.0 | 46.2 | 43.4 | 42.4 | 44.4 | 45.4 |
| Al2O3 [%] | 14.1 | 13.4 | 15.7 | 14.5 | 13.6 | 13.3 | 14.5 | 13.9 |
| Fe2O3 [%] | 11.7 | 11.0 | 8.27 | 12.0 | 11.6 | 10.6 | 10.2 | 9.63 |
| MgO [%] | 4.31 | 8.12 | 4.38 | 7.99 | 6.05 | 7.98 | 5.88 | 6.08 |
| CaO [%] | 11.4 | 11.1 | 8.10 | 10.4 | 8.87 | 10.6 | 11.2 | 11.2 |
| Na2O [%] | 1.65 | 2.64 | 2.61 | 1.81 | 3.18 | 1.85 | 2.16 | 2.01 |
| K2O [%] | 0.34 | 0.15 | 0.73 | 0.06 | 0.44 | 0.10 | 0.44 | 0.13 |
| TiO2 [%] | 0.88 | 0.56 | 1.02 | 0.85 | 0.83 | 0.60 | 0.98 | 0.89 |
| P2O5 [%] | 0.06 | 0.04 | 0.08 | 0.07 | 0.07 | 0.04 | 0.10 | 0.10 |
| MnO [%] | 0.31 | 0.19 | 0.20 | 0.25 | 0.20 | 0.17 | 0.24 | 0.24 |
| Cr2O3 [%] | 0.05 | 0.06 | 0.04 | 0.06 | 0.04 | 0.03 | 0.05 | 0.05 |
| V2O5 [%] | 0.05 | 0.04 | 0.06 | 0.06 | 0.05 | 0.03 | 0.06 | 0.05 |
| LOI [%] | 10.3 | 4.22 | 7.69 | 5.66 | 11.1 | 12.0 | 8.94 | 10.1 |
| Sum [%] | 99.4 | 100.1 | 99.9 | 99.9 | 99.5 | 99.9 | 99.1 | 99.7 |

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*Project Specialist*
*Environmental Services, Analytical*

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**LR Report:** **CA10277-JUL09**
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 29: FZ-SS-6 | 30: FZ-SS-7 | 31: FZ-SS-8 | 32: FZ-SS-9 | 33: FZ-SS-10 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | |
| Silver [µg/g] | 0.34 | 0.27 | 0.29 | 0.33 | 0.32 |
| Aluminum [µg/g] | 62000 | 67000 | 64000 | 60000 | 62000 |
| Arsenic [µg/g] | 56 | 68 | 26 | 28 | 13 |
| Barium [µg/g] | 580 | 430 | 560 | 590 | 560 |
| Beryllium [µg/g] | 1.1 | 0.75 | 1.0 | 1.1 | 0.99 |
| Bismuth [µg/g] | 0.12 | 0.10 | 0.10 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 15000 | 33000 | 27000 | 19000 | 14000 |
| Cadmium [µg/g] | 0.29 | 0.37 | 0.23 | 0.28 | 0.22 |
| Cobalt [µg/g] | 14 | 26 | 14 | 16 | 14 |
| Chromium [µg/g] | 200 | 240 | 250 | 250 | 250 |
| Copper [µg/g] | 34 | 74 | 22 | 32 | 33 |
| Iron [µg/g] | 31000 | 48000 | 33000 | 33000 | 32000 |
| Potassium [µg/g] | 15000 | 11000 | 15000 | 15000 | 15000 |
| Lithium [µg/g] | 18 | 29 | 20 | 16 | 17 |
| Magnesium [µg/g] | 9000 | 18000 | 12000 | 11000 | 11000 |
| Manganese [µg/g] | 490 | 890 | 570 | 630 | 390 |
| Molybdenum [µg/g] | 3.7 | 3.8 | 4.8 | 3.8 | 4.8 |
| Sodium [µg/g] | 21000 | 19000 | 21000 | 20000 | 21000 |
| Nickel [µg/g] | 39 | 69 | 38 | 40 | 39 |
| Lead [µg/g] | 16 | 12 | 13 | 13 | 14 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 1.3 | 0.9 | 1.3 | 0.8 | 0.9 |
| Strontium [µg/g] | 310 | 250 | 330 | 280 | 290 |
| Titanium [µg/g] | 2200 | 3200 | 2600 | 2700 | 2700 |
| Thallium [µg/g] | 0.37 | 0.33 | 0.36 | 0.38 | 0.36 |
| Uranium [µg/g] | 1.2 | 0.91 | 1.2 | 1.0 | 1.0 |
| Vanadium [µg/g] | 77 | 140 | 86 | 84 | 80 |
| Yttrium [µg/g] | 9.2 | 10 | 9.5 | 11 | 10 |
| Zinc [µg/g] | 45 | 110 | 55 | 45 | 44 |

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**LR Report :** **CA10277-JUL09**



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*Environmental Services, Analytical*

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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10277-JUL09**
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 21: M08-740-01 | 22: M08-747-02 | 23: M08-729-04 | 24: M08-747-04 | 25: M08-729-06 | 26: M08-747-03 | 27: M08-729-01 | 28: M08-729-02 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| Silver [µg/g] | < 0.01 | < 0.01 | 0.12 | < 0.01 | 0.02 | < 0.01 | < 0.01 | 0.12 |
| Aluminum [µg/g] | 78000 | 74000 | 90000 | 80000 | 75000 | 72000 | 79000 | 73000 |
| Arsenic [µg/g] | 68 | 3.2 | 68 | 11 | 120 | 1.9 | 7.2 | 7.7 |
| Barium [µg/g] | 66 | 52 | 130 | 8.4 | 64 | 3.3 | 98 | 57 |
| Beryllium [µg/g] | 0.23 | 0.14 | 0.28 | 0.19 | 0.43 | 0.17 | 0.27 | 0.23 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 78000 | 76000 | 58000 | 71000 | 61000 | 71000 | 77000 | 74000 |
| Cadmium [µg/g] | 0.05 | 0.29 | 0.13 | 0.03 | 0.07 | < 0.02 | 0.09 | 0.09 |
| Cobalt [µg/g] | 47 | 43 | 41 | 48 | 43 | 47 | 49 | 38 |
| Chromium [µg/g] | 260 | 360 | 190 | 280 | 230 | 190 | 260 | 260 |
| Copper [µg/g] | 87 | 92 | 110 | 110 | 81 | 90 | 160 | 100 |
| Iron [µg/g] | 83000 | 77000 | 61000 | 85000 | 82000 | 73000 | 71000 | 65000 |
| Potassium [µg/g] | 3100 | 1400 | 6700 | 570 | 4000 | 890 | 4000 | 1200 |
| Lithium [µg/g] | 38 | 24 | 46 | 32 | 43 | 54 | 55 | 49 |
| Magnesium [µg/g] | 26000 | 49000 | 27000 | 48000 | 37000 | 47000 | 35000 | 35000 |
| Manganese [µg/g] | 1800 | 1100 | 1100 | 1400 | 1200 | 1000 | 1300 | 1500 |
| Molybdenum [µg/g] | 0.7 | 0.9 | 1.0 | 0.7 | 0.8 | 0.5 | 1.0 | 0.8 |
| Sodium [µg/g] | 12000 | 19000 | 19000 | 13000 | 22000 | 13000 | 15000 | 14000 |
| Nickel [µg/g] | 120 | 110 | 78 | 110 | 110 | 150 | 110 | 84 |
| Lead [µg/g] | 3.5 | 3.0 | 6.1 | 2.2 | 4.5 | 2.4 | 2.8 | 1.6 |
| Antimony [µg/g] | < 0.8 | 1.8 | < 0.8 | 1.5 | < 0.8 | 1.5 | 1.3 | < 0.8 |
| Selenium [µg/g] | 1.5 | 2.6 | 3.2 | 1.5 | 2.0 | 1.8 | < 0.7 | < 0.7 |
| Tin [µg/g] | < 0.5 | 15 | 1.2 | 2.4 | 0.8 | 2.0 | 0.9 | 0.6 |
| Strontium [µg/g] | 92 | 110 | 110 | 120 | 130 | 120 | 140 | 120 |
| Titanium [µg/g] | 5100 | 3400 | 5900 | 5100 | 4800 | 3400 | 5900 | 5600 |
| Thallium [µg/g] | 0.07 | 0.06 | 0.33 | < 0.02 | 0.12 | 0.02 | 0.12 | < 0.02 |
| Uranium [µg/g] | 0.22 | 0.15 | 0.16 | 0.005 | 0.42 | < 0.002 | 0.11 | 0.20 |
| Vanadium [µg/g] | 270 | 210 | 290 | 260 | 240 | 200 | 300 | 260 |
| Yttrium [µg/g] | 10 | 12 | 6.7 | 14 | 7.4 | 10 | 16 | 14 |
| Zinc [µg/g] | 90 | 170 | 90 | 140 | 110 | 73 | 95 | 78 |

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**LR Report :** **CA10277-JUL09**



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August 14, 2009

**Date Rec. :** 23 July 2009
**LR Report:** **CA10277-JUL09**
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 13: M08-755-02 | 14: M08-752-04 | 15: M08-752-01 | 16: M08-748-02 | 17: M08-748-01 | 18: M08-740-03 | 19: M08-729-03 | 20: M08-747-01 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| Silver [µg/g] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.09 | < 0.01 | < 0.01 | < 0.01 |
| Aluminum [µg/g] | 73000 | 83000 | 72000 | 65000 | 77000 | 76000 | 76000 | 71000 |
| Arsenic [µg/g] | 2.2 | 2.9 | 3.5 | 4.4 | 5.6 | 3.1 | 40 | 2.1 |
| Barium [µg/g] | 210 | 62 | 100 | 130 | 320 | 120 | 220 | 79 |
| Beryllium [µg/g] | 0.44 | 0.32 | 0.25 | 0.34 | 0.55 | 0.20 | 0.24 | 0.26 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 86000 | 75000 | 90000 | 82000 | 57000 | 66000 | 79000 | 93000 |
| Cadmium [µg/g] | 0.08 | 0.13 | 0.03 | 0.13 | 0.07 | < 0.02 | 0.14 | 0.18 |
| Cobalt [µg/g] | 41 | 50 | 41 | 39 | 49 | 40 | 46 | 49 |
| Chromium [µg/g] | 170 | 200 | 280 | 280 | 140 | 180 | 260 | 300 |
| Copper [µg/g] | 95 | 120 | 110 | 88 | 110 | 100 | 84 | 120 |
| Iron [µg/g] | 82000 | 72000 | 72000 | 90000 | 91000 | 72000 | 76000 | 76000 |
| Potassium [µg/g] | 4700 | 6300 | 3200 | 4800 | 8400 | 2600 | 5500 | 1200 |
| Lithium [µg/g] | 30 | 71 | 26 | 42 | 41 | 30 | 46 | 25 |
| Magnesium [µg/g] | 35000 | 34000 | 38000 | 36000 | 31000 | 32000 | 31000 | 26000 |
| Manganese [µg/g] | 1400 | 1200 | 1200 | 1500 | 1100 | 910 | 1400 | 1900 |
| Molybdenum [µg/g] | 1.4 | 0.8 | 0.8 | 1.1 | 1.3 | 0.9 | 1.0 | 1.0 |
| Sodium [µg/g] | 9900 | 16000 | 18000 | 11000 | 16000 | 17000 | 12000 | 12000 |
| Nickel [µg/g] | 60 | 120 | 85 | 86 | 81 | 55 | 87 | 140 |
| Lead [µg/g] | 5.9 | 9.1 | 6.3 | 3.8 | 7.7 | 1.5 | 1.6 | 3.4 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | 1.6 | 1.0 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 1.1 | 1.3 | 1.8 | 0.8 | 1.4 | 0.7 | 1.4 | 2.1 |
| Tin [µg/g] | 2.3 | 1.6 | 1.2 | 2.2 | 1.5 | 3.1 | 3.1 | 2.1 |
| Strontium [µg/g] | 110 | 120 | 170 | 140 | 200 | 110 | 62 | 93 |
| Titanium [µg/g] | 5600 | 4100 | 4300 | 4200 | 6500 | 5400 | 5800 | 5000 |
| Thallium [µg/g] | 0.34 | 0.22 | 0.16 | 0.29 | 0.79 | 0.18 | 0.19 | 0.08 |
| Uranium [µg/g] | 0.23 | < 0.002 | 0.11 | 0.083 | 1.0 | 0.13 | < 0.002 | 0.025 |
| Vanadium [µg/g] | 250 | 250 | 230 | 220 | 210 | 290 | 290 | 260 |
| Yttrium [µg/g] | 22 | 12 | 13 | 12 | 17 | 16 | 15 | 16 |
| Zinc [µg/g] | 160 | 110 | 110 | 180 | 110 | 82 | 130 | 180 |

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: M08-755-01 | 6: M08-740-04 | 7: M08-740-02 | 8: M08-748-03 | 9: M08-755-03 | 10: M08-740-05 | 11: M08-752-02 | 12: M08-752-03 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| Silver [µg/g] | 0.10 | 0.12 | < 0.01 | < 0.01 | 0.03 | 0.05 | 0.09 | 0.20 |
| Aluminum [µg/g] | 78000 | 63000 | 90000 | 73000 | 71000 | 69000 | 65000 | 70000 |
| Arsenic [µg/g] | 3.0 | 40 | 140 | 11 | 16 | 87 | 3.8 | 87 |
| Barium [µg/g] | 140 | 64 | 84 | 9.2 | 11 | 140 | 510 | 140 |
| Beryllium [µg/g] | 0.28 | 0.29 | 0.17 | 0.22 | 0.24 | 0.37 | 0.79 | 0.53 |
| Bismuth [µg/g] | < 0.09 | < 0.09 | 0.15 | < 0.09 | < 0.09 | < 0.09 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 80000 | 64000 | 68000 | 76000 | 67000 | 81000 | 45000 | 51000 |
| Cadmium [µg/g] | 0.14 | 0.16 | < 0.02 | 0.02 | 0.09 | 0.12 | 0.13 | 0.18 |
| Cobalt [µg/g] | 47 | 38 | 53 | 45 | 46 | 50 | 39 | 46 |
| Chromium [µg/g] | 210 | 200 | 420 | 330 | 260 | 230 | 77 | 150 |
| Copper [µg/g] | 100 | 84 | 46 | 88 | 110 | 110 | 90 | 110 |
| Iron [µg/g] | 82000 | 70000 | 58000 | 70000 | 77000 | 70000 | 95000 | 83000 |
| Potassium [µg/g] | 3500 | 5400 | 2400 | 500 | 480 | 8700 | 9800 | 7600 |
| Lithium [µg/g] | 27 | 39 | 51 | 38 | 43 | 49 | 32 | 41 |
| Magnesium [µg/g] | 35000 | 29000 | 40000 | 40000 | 45000 | 40000 | 22000 | 34000 |
| Manganese [µg/g] | 1300 | 1300 | 880 | 1200 | 950 | 1600 | 980 | 1100 |
| Molybdenum [µg/g] | 1.3 | 0.8 | 0.9 | 1.1 | 0.7 | 0.8 | 1.8 | 1.3 |
| Sodium [µg/g] | 15000 | 19000 | 18000 | 14000 | 16000 | 12000 | 15000 | 17000 |
| Nickel [µg/g] | 64 | 87 | 130 | 110 | 96 | 96 | 34 | 91 |
| Lead [µg/g] | 2.5 | 3.4 | 5.1 | 3.3 | 4.8 | 5.8 | 9.4 | 11 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | 0.9 | 0.9 | < 0.8 | 0.9 | < 0.8 |
| Selenium [µg/g] | 0.9 | 0.9 | < 0.7 | 1.6 | 1.5 | 1.1 | 0.7 | 1.4 |
| Tin [µg/g] | 1.9 | 0.7 | < 0.5 | 1.5 | 0.6 | 1.7 | 1.1 | 1.9 |
| Strontium [µg/g] | 100 | 110 | 140 | 130 | 120 | 130 | 170 | 130 |
| Titanium [µg/g] | 5700 | 4100 | 1700 | 4300 | 4300 | 4300 | 8700 | 5700 |
| Thallium [µg/g] | 0.17 | 0.21 | 0.06 | < 0.02 | < 0.02 | 0.40 | 0.90 | 0.35 |
| Uranium [µg/g] | 0.20 | 0.21 | 0.006 | 0.061 | < 0.002 | 0.17 | 1.3 | 0.56 |
| Vanadium [µg/g] | 290 | 210 | 230 | 250 | 240 | 240 | 210 | 220 |
| Yttrium [µg/g] | 17 | 7.3 | 4.8 | 12 | 11 | 9.1 | 20 | 8.6 |
| Zinc [µg/g] | 110 | 110 | 73 | 81 | 81 | 100 | 130 | 110 |

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**LR Report :** **CA10277-JUL09**

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**NAG Test with analyses**

**Project :** 09-1426-0015

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW
Calgary, AB
T2R 1J4,

Phone: 403-265-2846
Fax:403-232-1421

Tuesday, November 24, 2009

**Date Rec. :** 10 November 2009
**LR Report:** **CA11232-NOV09**
**Reference:** Meliadine F-Zone

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-750-03 | 6: M08-740-05 | 7: M08-734-03 |
|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 17-Nov-09 | 15:27 | 2.5 | 2.5 | 2.5 |
| vol H2O2 [mL] | 17-Nov-09 | 15:27 | 250 | 250 | 250 |
| Final pH [units] | 17-Nov-09 | 15:27 | 11.48 | 11.47 | 11.55 |
| pH [no unit] | 19-Nov-09 | 15:10 | 10.9 | 11.0 | 11.0 |
| Alkalinity [mg/L as CaCO3] | 19-Nov-09 | 15:10 | 127 | 132 | 120 |
| Acidity [mg/L as CaCO3] | 19-Nov-09 | 15:10 | < 2 | < 2 | < 2 |
| Conductivity [uS/cm] | 19-Nov-09 | 15:10 | 347 | 388 | 396 |
| Sulphate [mg/L] | 19-Nov-09 | 12:34 | 17 | 21 | 42 |
| Chloride [mg/L] | 19-Nov-09 | 12:34 | 0.7 | 0.6 | 0.3 |
| Mercury [mg/L] | 19-Nov-09 | 12:03 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 23-Nov-09 | 09:20 | 0.00003 | 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 23-Nov-09 | 09:20 | 4.00 | 4.19 | 3.79 |
| Arsenic [mg/L] | 23-Nov-09 | 09:20 | 0.0008 | 0.0021 | 0.0011 |
| Boron [mg/L] | 23-Nov-09 | 09:20 | 0.193 | 0.727 | 0.478 |
| Beryllium [mg/L] | 23-Nov-09 | 09:20 | 0.00003 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 23-Nov-09 | 09:20 | 0.00002 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 19-Nov-09 | 16:05 | 62.4 | 46.9 | 66.1 |
| Cadmium [mg/L] | 23-Nov-09 | 09:20 | 0.000017 | 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 23-Nov-09 | 09:20 | 0.000103 | 0.000074 | 0.000090 |
| Chromium [mg/L] | 23-Nov-09 | 09:20 | 0.0110 | 0.0314 | 0.0253 |
| Copper [mg/L] | 23-Nov-09 | 09:20 | 0.0016 | 0.0015 | < 0.0005 |
| Iron [mg/L] | 19-Nov-09 | 16:05 | < 0.01 | 0.01 | 0.01 |
| Potassium [mg/L] | 19-Nov-09 | 16:05 | 23.3 | 26.7 | 15.6 |
| Lithium [mg/L] | 23-Nov-09 | 09:20 | 0.002 | < 0.001 | 0.001 |
| Magnesium [mg/L] | 19-Nov-09 | 16:05 | < 0.003 | < 0.003 | < 0.003 |
| Manganese [mg/L] | 23-Nov-09 | 09:20 | 0.00014 | 0.00044 | 0.00037 |
| Molybdenum [mg/L] | 23-Nov-09 | 09:20 | 0.00559 | 0.00162 | 0.00208 |
| Sodium [mg/L] | 19-Nov-09 | 16:05 | 3.63 | 5.12 | 4.16 |
| Nickel [mg/L] | 23-Nov-09 | 09:20 | 0.0010 | 0.0008 | 0.0012 |
| Lead [mg/L] | 23-Nov-09 | 09:20 | 0.00003 | 0.00003 | 0.00004 |
| Antimony [mg/L] | 23-Nov-09 | 09:20 | 0.0007 | 0.0005 | 0.0010 |
| Selenium [mg/L] | 23-Nov-09 | 09:20 | < 0.001 | 0.001 | 0.002 |

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**NAG Test with analyses**

**Project :** 09-1426-0015

**LR Report :** **CA11232-NOV09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-750-03 | 6: M08-740-05 | 7: M08-734-03 |
|---|---|---|---|---|---|
| Tin [mg/L] | 23-Nov-09 | 09:20 | 0.00010 | 0.00017 | 0.00021 |
| Strontium [mg/L] | 23-Nov-09 | 09:20 | 0.110 | 0.0698 | 0.0715 |
| Titanium [mg/L] | 23-Nov-09 | 09:20 | 0.0001 | 0.0001 | 0.0002 |
| Thallium [mg/L] | 23-Nov-09 | 09:20 | 0.0002 | 0.0003 | 0.0003 |
| Uranium [mg/L] | 23-Nov-09 | 09:20 | 0.000061 | 0.000011 | 0.000016 |
| Vanadium [mg/L] | 23-Nov-09 | 09:20 | 0.0142 | 0.00956 | 0.00479 |
| Tungsten [mg/L] | 23-Nov-09 | 09:20 | 0.00207 | 0.00079 | 0.00100 |
| Yttrium [mg/L] | 23-Nov-09 | 09:20 | 0.000018 | 0.000006 | 0.000003 |
| Zinc [mg/L] | 23-Nov-09 | 09:20 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**NAG Test**

**Project :** Meliadine F-Zone

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW
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T2R 1J4,

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Fax:403-232-1421

Thursday, November 19, 2009

**Date Rec. :** 09 November 2009
**LR Report:** **CA10083-NOV09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-750-03 | 6: M08-740-05 | 7: M08-734-03 |
|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 16-Nov-09 | 13:27 | 1.51 | 1.52 | 1.51 |
| vol H2O2 [mL] | 16-Nov-09 | 13:27 | 150 | 150 | 150 |
| Final pH [units] | 16-Nov-09 | 13:27 | 11.52 | 11.43 | 11.56 |
| NaOH [Normality] | 16-Nov-09 | 13:27 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 16-Nov-09 | 13:27 | 0.00 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 16-Nov-09 | 13:27 | 0.00 | 0.00 | 0.00 |
| NAG pH4.5 [kg H2SO4/tonne] | 16-Nov-09 | 13:27 | 0.0 | 0.0 | 0.0 |
| NAG pH7.0 [kg H2SO4/tonne] | 16-Nov-09 | 13:27 | 0.0 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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NAG Test

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Phone: 604-241-4566
Fax:604-241-4586

Thursday, November 19, 2009

**Date Rec. :** 12 November 2009
**LR Report:** **CA11271-NOV09**
**Reference:** 09-1426-0013

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Da | 4: Analysis Approval Ti | 5: ML00-221-04 | 6: ML90-04-01 | 7: ML90-12-01 | 8: ML92-061-01 | 9: ML95-93-02 | 10: ML95-93-03 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 16-Nov-09 | 13:28 | 1.51 | 1.50 | 1.50 | 1.50 | 1.53 | 1.47 |
| vol H2O2 [mL] | 16-Nov-09 | 13:28 | 150 | 150 | 150 | 150 | 150 | 150 |
| Final pH [units] | 16-Nov-09 | 13:28 | 4.89 | 6.49 | 6.36 | 4.48 | 4.13 | 10.08 |
| NaOH [Normality] | 16-Nov-09 | 13:28 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 16-Nov-09 | 13:28 | 0.30 | 0.10 | 0.15 | 0.30 | 0.50 | 0.00 |
| NAG pH4.5 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 |
| NAG pH7.0 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 1.0 | 0.3 | 0.5 | 1.0 | 1.6 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1)

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Phone: 604-241-4566
Fax:604-241-4586

Friday, September 04, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11125-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: ML00-221-01 | 15: ML00-221-02 | 16: ML00-221-03 | 17: ML00-221-04 | 18: ML92-061-01 | 19: ML92-061-02 | 20: ML92-061-03 | 21: ML92-061-04 | 22: ML92-062-01 | 23: ML92-062-02 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.73 | 9.20 | 9.43 | 9.63 | 9.27 | 9.34 | 9.81 | 9.43 | 9.72 | 9.24 |
| Final pH [units] | 9.64 | 9.57 | 9.53 | 9.45 | 9.52 | 9.47 | 9.57 | 9.72 | 9.34 | 9.66 |
| pH [no unit] | 9.10 | 8.88 | 8.53 | 8.16 | 8.64 | 8.09 | 9.07 | 8.91 | 8.23 | 9.01 |
| Conductivity [uS/cm] | 88 | 79 | 86 | 84 | 79 | 80 | 89 | 74 | 86 | 85 |
| Alkalinity [mg/L as CaCO3] | 43 | 34 | 38 | 37 | 36 | 33 | 43 | 38 | 36 | 41 |
| Sulphate [mg/L] | 1.9 | 3.1 | 3.6 | 1.8 | 3.1 | 5.5 | 0.6 | 1.1 | 2.2 | 0.8 |
| Chloride [mg/L] | 2.2 | 1.6 | 2.0 | 2.2 | 0.7 | 0.9 | 0.5 | 0.6 | 1.7 | 1.2 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00002 | 0.00002 | 0.00002 | 0.00001 | 0.00002 | 0.00002 | 0.00003 | 0.00003 | 0.00003 | 0.00002 |
| Aluminum [mg/L] | 2.03 | 1.47 | 1.93 | 1.94 | 1.77 | 1.64 | 0.38 | 1.69 | 0.16 | 1.87 |
| Arsenic [mg/L] | 0.347 | 0.0598 | 0.0604 | 0.0270 | 0.0757 | 0.0292 | 0.0044 | 0.0821 | 0.0013 | 0.0090 |
| Boron [mg/L] | 0.0337 | 0.0255 | 0.0319 | 0.0321 | 0.0284 | 0.0272 | 0.0208 | 0.0207 | 0.0395 | 0.0245 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00003 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 0.00001 | 0.00002 | 0.00002 | 0.00001 | 0.00002 | 0.00002 | 0.00002 | 0.00002 | < 0.00001 | 0.00001 |
| Calcium [mg/L] | 2.37 | 3.36 | 3.10 | 3.88 | 3.39 | 4.03 | 4.51 | 3.39 | 7.23 | 2.48 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | 0.000003 | < 0.000003 | 0.000005 | < 0.000003 | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000277 | 0.000262 | 0.000324 | 0.000220 | 0.000393 | 0.000249 | 0.000037 | 0.000245 | 0.000042 | 0.000127 |

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**SFE (4:1)**

**LR Report :** **CA11125-AUG09**

| Analysis | 14: ML00-221-01 | 15: ML00-221-02 | 16: ML00-221-03 | 17: ML00-221-04 | 18: ML92-061-01 | 19: ML92-061-02 | 20: ML92-061-03 | 21: ML92-061-04 | 22: ML92-062-01 | 23: ML92-062-02 |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | 0.0018 | 0.0017 | 0.0022 | 0.0015 | 0.0023 | 0.0018 | < 0.0005 | 0.0012 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | 0.0006 | < 0.0005 | < 0.0005 | 0.0007 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 0.48 | 0.34 | 0.44 | 0.42 | 0.55 | 0.35 | 0.23 | 0.50 | 0.41 | 1.06 |
| Potassium [mg/L] | 10.7 | 8.66 | 10.5 | 9.83 | 10.6 | 9.96 | 12.6 | 9.18 | 6.03 | 17.2 |
| Lithium [mg/L] | 0.001 | 0.002 | 0.002 | < 0.001 | 0.002 | 0.001 | 0.004 | 0.002 | 0.002 | 0.007 |
| Magnesium [mg/L] | 0.444 | 0.489 | 0.543 | 0.519 | 0.629 | 0.612 | 0.449 | 0.387 | 1.05 | 0.351 |
| Manganese [mg/L] | 0.00462 | 0.00366 | 0.00374 | 0.00250 | 0.00488 | 0.00325 | 0.00077 | 0.00389 | 0.00173 | 0.00227 |
| Molybdenum [mg/L] | 0.00043 | 0.00047 | 0.00069 | 0.00048 | 0.00047 | 0.00036 | 0.00009 | 0.00023 | 0.00018 | 0.00017 |
| Sodium [mg/L] | 10.6 | 7.95 | 8.23 | 7.93 | 6.59 | 5.90 | 5.71 | 7.02 | 5.28 | 4.55 |
| Nickel [mg/L] | 0.0010 | 0.0015 | 0.0013 | 0.0008 | 0.0015 | 0.0012 | < 0.0001 | 0.0007 | 0.0001 | 0.0003 |
| Lead [mg/L] | 0.00023 | 0.00031 | 0.00031 | 0.00023 | 0.00021 | 0.00016 | 0.00004 | 0.00014 | 0.00003 | 0.00064 |
| Antimony [mg/L] | 0.0008 | 0.0008 | 0.0008 | 0.0009 | 0.0006 | 0.0008 | 0.0006 | 0.0006 | 0.0006 | 0.0006 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 0.00007 | 0.00009 | 0.00011 | 0.00010 | 0.00005 | 0.00005 | 0.00006 | 0.00006 | 0.00001 | 0.00007 |
| Strontium [mg/L] | 0.0118 | 0.0171 | 0.0154 | 0.0174 | 0.0163 | 0.0170 | 0.0642 | 0.0134 | 0.0922 | 0.0321 |
| Titanium [mg/L] | 0.0225 | 0.0193 | 0.0285 | 0.0200 | 0.0294 | 0.0208 | 0.0013 | 0.0266 | 0.0013 | 0.0201 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00003 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000205 | 0.000441 | 0.000309 | 0.000128 | 0.000269 | 0.000181 | 0.000191 | 0.000251 | 0.000105 | 0.000187 |
| Vanadium [mg/L] | 0.0146 | 0.0115 | 0.0138 | 0.00894 | 0.0113 | 0.0108 | 0.00064 | 0.0125 | 0.00036 | 0.00286 |
| Tungsten [mg/L] | 0.00088 | 0.00080 | 0.00139 | 0.00075 | 0.00134 | 0.00088 | 0.00071 | 0.00053 | 0.00074 | 0.00050 |
| Yttrium [mg/L] | 0.000183 | 0.000185 | 0.000256 | 0.000145 | 0.000339 | 0.000151 | 0.000023 | 0.000148 | 0.000026 | 0.000126 |
| Zinc [mg/L] | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.002 | 0.001 | 0.002 | 0.001 | 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1)

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Fax:604-241-4586

Friday, September 04, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11125-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 24: ML92-062-03 | 25: ML90-12-01 | 26: ML90-12-02 | 27: ML90-04-01 | 28: ML90-04-02 | 29: ML90-04-03 | 30: ML90-03-01 | 31: ML90-03-02 | 32: Disc SS1 | 33: Disc SS2 | 34: Disc SS3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.63 | 9.07 | 9.44 | 9.70 | 9.38 | 9.82 | 9.66 | 9.77 | 8.39 | 6.44 | 6.79 |
| Final pH [units] | 9.80 | 9.59 | 9.64 | 9.53 | 9.56 | 9.58 | 9.50 | 9.54 | 8.67 | 6.65 | 7.15 |
| pH [no unit] | 9.21 | 8.95 | 8.62 | 8.39 | 8.49 | 9.03 | 8.81 | 9.01 | 7.60 | 6.74 | 6.86 |
| Conductivity [uS/cm] | 85 | 76 | 70 | 85 | 70 | 94 | 84 | 84 | 64 | 18 | 22 |
| Alkalinity [mg/L as CaCO3] | 42 | 37 | 35 | 35 | 34 | 45 | 41 | 42 | 34 | 5 | 5 |
| Sulphate [mg/L] | 1.2 | 1.8 | 1.4 | 6.2 | 3.0 | 4.1 | 2.5 | 1.3 | 1.2 | 0.3 | 3.0 |
| Chloride [mg/L] | 0.9 | 0.9 | 1.0 | 0.8 | 0.8 | 1.4 | 0.9 | 1.3 | 0.5 | 0.5 | 0.5 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00003 | 0.00002 | 0.00002 | 0.00003 | 0.00004 | 0.00002 | 0.00003 | 0.00001 | 0.00003 | 0.00003 | 0.00002 |
| Aluminum [mg/L] | 1.91 | 1.78 | 1.49 | 1.73 | 1.72 | 1.32 | 2.06 | 1.71 | 0.72 | 0.89 | 0.76 |
| Arsenic [mg/L] | 0.0437 | 0.242 | 0.0380 | 0.0466 | 0.0565 | 0.0248 | 0.123 | 0.0584 | 0.0181 | 0.0106 | 0.0090 |
| Boron [mg/L] | 0.0252 | 0.0279 | 0.0205 | 0.0303 | 0.0279 | 0.0383 | 0.0459 | 0.0315 | 0.0348 | 0.0673 | 0.0565 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00008 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00003 | < 0.00002 |
| Bismuth [mg/L] | 0.00001 | < 0.00001 | 0.00001 | 0.00003 | 0.00005 | 0.00001 | 0.00003 | < 0.00001 | 0.00002 | 0.00005 | 0.00003 |
| Calcium [mg/L] | 2.77 | 3.26 | 4.05 | 4.36 | 3.38 | 3.73 | 2.75 | 3.70 | 7.84 | 1.07 | 0.98 |
| Cadmium [mg/L] | < 0.000003 | < 0.000003 | < 0.000003 | 0.000006 | 0.000013 | < 0.000003 | 0.000003 | < 0.000003 | 0.000013 | 0.000022 | 0.000011 |
| Cobalt [mg/L] | 0.000249 | 0.000200 | 0.000114 | 0.000384 | 0.000323 | 0.000191 | 0.000339 | 0.000156 | 0.00195 | 0.00652 | 0.00232 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**SFE (4:1)**

**LR Report :** **CA11125-AUG09**

| Analysis | 24: ML92-062-03 | 25: ML90-12-01 | 26: ML90-12-02 | 27: ML90-04-01 | 28: ML90-04-02 | 29: ML90-04-03 | 30: ML90-03-01 | 31: ML90-03-02 | 32: Disc SS1 | 33: Disc SS2 | 34: Disc SS3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | 0.0011 | 0.0012 | < 0.0005 | 0.0020 | 0.0021 | 0.0010 | 0.0023 | 0.0008 | 0.0018 | 0.0032 | 0.0020 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0008 | < 0.0005 | 0.0215 | 0.0225 | 0.0143 |
| Iron [mg/L] | 0.69 | 0.33 | 0.36 | 0.47 | 0.38 | 0.48 | 0.60 | 0.53 | 0.94 | 1.50 | 1.44 |
| Potassium [mg/L] | 11.3 | 9.97 | 7.66 | 10.7 | 7.02 | 11.0 | 13.6 | 10.5 | 3.93 | 0.85 | 1.57 |
| Lithium [mg/L] | 0.003 | 0.003 | 0.001 | 0.003 | 0.001 | 0.001 | 0.002 | 0.001 | 0.003 | 0.001 | < 0.001 |
| Magnesium [mg/L] | 0.396 | 0.406 | 0.380 | 0.639 | 0.501 | 0.511 | 0.588 | 0.471 | 0.749 | 0.405 | 0.359 |
| Manganese [mg/L] | 0.00605 | 0.00264 | 0.00275 | 0.00483 | 0.00379 | 0.00324 | 0.00460 | 0.00386 | 0.0167 | 0.0567 | 0.0202 |
| Molybdenum [mg/L] | 0.00050 | 0.00139 | 0.00023 | 0.00036 | 0.00021 | 0.00033 | 0.00086 | 0.00095 | 0.00191 | 0.00061 | 0.00088 |
| Sodium [mg/L] | 8.44 | 7.28 | 6.20 | 6.66 | 7.27 | 10.2 | 6.99 | 8.14 | 3.67 | 2.39 | 2.40 |
| Nickel [mg/L] | 0.0007 | 0.0008 | 0.0004 | 0.0015 | 0.0011 | 0.0008 | 0.0015 | 0.0006 | 0.0099 | 0.0130 | 0.0076 |
| Lead [mg/L] | 0.00022 | 0.00011 | 0.00008 | 0.00043 | 0.00023 | 0.00013 | 0.00027 | 0.00014 | 0.00091 | 0.00132 | 0.00118 |
| Antimony [mg/L] | 0.0006 | 0.0007 | 0.0006 | 0.0009 | 0.0008 | 0.0008 | 0.0012 | 0.0010 | 0.0006 | 0.0004 | 0.0004 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 0.00003 | 0.00006 | 0.00002 | 0.00006 | 0.00006 | 0.00004 | 0.00009 | 0.00003 | 0.00007 | 0.00004 | 0.00007 |
| Strontium [mg/L] | 0.0123 | 0.0149 | 0.0165 | 0.0173 | 0.0144 | 0.0202 | 0.0130 | 0.0147 | 0.0307 | 0.0062 | 0.0052 |
| Titanium [mg/L] | 0.0344 | 0.0147 | 0.0110 | 0.0206 | 0.0263 | 0.0206 | 0.0287 | 0.0173 | 0.0308 | 0.0444 | 0.0368 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000382 | 0.000677 | 0.000195 | 0.000395 | 0.000354 | 0.000159 | 0.000342 | 0.000170 | 0.000291 | 0.000456 | 0.000177 |
| Vanadium [mg/L] | 0.0138 | 0.0133 | 0.00755 | 0.0122 | 0.0130 | 0.0153 | 0.0143 | 0.00942 | 0.00252 | 0.00283 | 0.00246 |
| Tungsten [mg/L] | 0.00054 | 0.00060 | 0.00042 | 0.00046 | 0.00053 | 0.00057 | 0.00081 | 0.00048 | 0.00019 | 0.00006 | < 0.00003 |
| Yttrium [mg/L] | 0.000252 | 0.000238 | 0.000089 | 0.000196 | 0.000189 | 0.000132 | 0.000308 | 0.000116 | 0.000883 | 0.00254 | 0.00111 |
| Zinc [mg/L] | 0.002 | 0.001 | 0.001 | 0.002 | 0.002 | 0.001 | 0.002 | 0.001 | 0.005 | 0.032 | 0.007 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1)

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Richmond, BC
V7A 5K2,

Phone: 604-241-4566
Fax:604-241-4586

Friday, September 04, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11125-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML95-93-01 | 6: ML95-93-02 | 7: ML95-93-03 | 8: ML95-93-04 | 9: ML90-08-01 | 10: ML90-08-02 | 11: ML90-07-01 | 12: ML08-238-03 | 13: ML08-238-04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 27-Aug-09 | 09:59 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 27-Aug-09 | 09:59 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 27-Aug-09 | 09:59 | 9.54 | 9.66 | 9.71 | 9.80 | 8.91 | 9.68 | 9.43 | 9.31 | 9.72 |
| Final pH [units] | 27-Aug-09 | 09:59 | 9.58 | 9.60 | 8.95 | 9.68 | 9.65 | 9.75 | 9.82 | 9.81 | 9.58 |
| pH [no unit] | 01-Sep-09 | 13:08 | 8.32 | 8.83 | 7.75 | 9.13 | 8.77 | 9.33 | 9.22 | 9.25 | 8.72 |
| Conductivity [uS/cm] | 01-Sep-09 | 13:08 | 84 | 77 | 115 | 93 | 70 | 78 | 73 | 81 | 111 |
| Alkalinity [mg/L as CaCO3] | 01-Sep-09 | 13:08 | 41 | 37 | 43 | 40 | 31 | 40 | 36 | 38 | 41 |
| Sulphate [mg/L] | 02-Sep-09 | 14:09 | 1.3 | 1.3 | 2.1 | 2.2 | 2.8 | 1.7 | 0.7 | 0.8 | 2.7 |
| Chloride [mg/L] | 02-Sep-09 | 14:09 | 2.8 | 0.9 | 1.2 | 0.8 | 1.2 | 0.9 | 0.7 | 3.2 | 8.4 |
| Mercury [mg/L] | 02-Sep-09 | 07:48 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 01-Sep-09 | 10:50 | 0.00004 | 0.00002 | 0.00003 | 0.00003 | 0.00001 | 0.00001 | 0.00002 | 0.00002 | 0.00002 |
| Aluminum [mg/L] | 03-Sep-09 | 11:40 | 1.99 | 1.68 | 0.22 | 1.42 | 1.15 | 1.49 | 1.42 | 1.92 | 2.02 |
| Arsenic [mg/L] | 01-Sep-09 | 10:50 | 0.178 | 0.0699 | 0.0014 | 0.0038 | 0.0192 | 0.0873 | 0.0484 | 0.136 | 0.0642 |
| Boron [mg/L] | 01-Sep-09 | 10:50 | 0.132 | 0.0479 | 0.0205 | 0.0211 | 0.0226 | 0.0225 | 0.0453 | 0.0208 | 0.0436 |
| Beryllium [mg/L] | 01-Sep-09 | 10:50 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 01-Sep-09 | 10:50 | 0.00002 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00001 | 0.00001 |
| Calcium [mg/L] | 03-Sep-09 | 11:40 | 2.53 | 2.86 | 12.5 | 3.70 | 3.23 | 3.65 | 2.48 | 2.68 | 2.75 |
| Cadmium [mg/L] | 01-Sep-09 | 10:49 | 0.000006 | < 0.000003 | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 01-Sep-09 | 10:49 | 0.000645 | 0.000192 | 0.000055 | 0.000165 | 0.000109 | 0.000121 | 0.000120 | 0.000274 | 0.000303 |

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SFE (4:1)

LR Report : CA11125-AUG09

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML95-93-01 | 6: ML95-93-02 | 7: ML95-93-03 | 8: ML95-93-04 | 9: ML90-08-01 | 10: ML90-08-02 | 11: ML90-07-01 | 12: ML08-238-03 | 13: ML08-238-04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | 01-Sep-09 | 10:49 | 0.0030 | 0.0012 | < 0.0005 | 0.0007 | 0.0007 | < 0.0005 | < 0.0005 | 0.0014 | 0.0019 |
| Copper [mg/L] | 01-Sep-09 | 10:49 | 0.0008 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 03-Sep-09 | 11:40 | 0.78 | 0.31 | 0.02 | 0.41 | 0.15 | 0.20 | 0.22 | 0.78 | 0.63 |
| Potassium [mg/L] | 03-Sep-09 | 11:40 | 10.2 | 11.1 | 11.1 | 11.3 | 6.66 | 11.3 | 10.4 | 10.3 | 10.2 |
| Lithium [mg/L] | 01-Sep-09 | 10:49 | 0.002 | 0.001 | 0.003 | 0.003 | 0.003 | 0.002 | 0.003 | 0.005 | 0.001 |
| Magnesium [mg/L] | 03-Sep-09 | 11:40 | 0.592 | 0.381 | 0.850 | 0.346 | 0.361 | 0.282 | 0.236 | 0.377 | 0.491 |
| Manganese [mg/L] | 01-Sep-09 | 10:49 | 0.00525 | 0.00232 | 0.00068 | 0.00342 | 0.00146 | 0.00217 | 0.00223 | 0.00685 | 0.00398 |
| Molybdenum [mg/L] | 01-Sep-09 | 10:49 | 0.00064 | 0.00042 | 0.00011 | 0.00021 | 0.00018 | 0.00015 | 0.00014 | 0.00018 | 0.00073 |
| Sodium [mg/L] | 03-Sep-09 | 11:40 | 10.3 | 6.73 | 1.79 | 9.00 | 7.69 | 6.77 | 6.49 | 8.56 | 14.0 |
| Nickel [mg/L] | 01-Sep-09 | 10:49 | 0.0019 | 0.0005 | 0.0002 | 0.0004 | 0.0004 | 0.0006 | 0.0004 | 0.0008 | 0.0010 |
| Lead [mg/L] | 01-Sep-09 | 10:49 | 0.00045 | 0.00015 | < 0.00002 | 0.00017 | 0.00010 | 0.00006 | 0.00005 | 0.00021 | 0.00025 |
| Antimony [mg/L] | 01-Sep-09 | 10:49 | 0.0012 | 0.0009 | 0.0007 | 0.0007 | 0.0006 | 0.0006 | 0.0005 | 0.0008 | 0.0007 |
| Selenium [mg/L] | 01-Sep-09 | 10:49 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 01-Sep-09 | 10:49 | 0.00011 | 0.00006 | 0.00003 | 0.00008 | 0.00004 | 0.00004 | 0.00002 | 0.00003 | 0.00005 |
| Strontium [mg/L] | 03-Sep-09 | 11:40 | 0.0133 | 0.0140 | 0.106 | 0.0199 | 0.0160 | 0.0136 | 0.0137 | 0.0156 | 0.0171 |
| Titanium [mg/L] | 01-Sep-09 | 10:48 | 0.0268 | 0.0138 | 0.0002 | 0.0173 | 0.0086 | 0.0117 | 0.0123 | 0.0377 | 0.0258 |
| Thallium [mg/L] | 01-Sep-09 | 10:48 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 01-Sep-09 | 10:48 | 0.000227 | 0.000232 | 0.000061 | 0.00119 | 0.000326 | 0.000447 | 0.000434 | 0.000627 | 0.000230 |
| Vanadium [mg/L] | 01-Sep-09 | 10:48 | 0.0115 | 0.0122 | 0.0001 | 0.0104 | 0.0105 | 0.0115 | 0.0109 | 0.0111 | 0.0136 |
| Tungsten [mg/L] | 01-Sep-09 | 10:48 | 0.0178 | 0.00168 | 0.00106 | 0.00171 | 0.00053 | 0.00068 | 0.00111 | 0.00104 | 0.00083 |
| Yttrium [mg/L] | 01-Sep-09 | 10:48 | 0.000398 | 0.000142 | 0.000003 | 0.000216 | 0.000058 | 0.000085 | 0.000146 | 0.000265 | 0.000188 |
| Zinc [mg/L] | 01-Sep-09 | 10:48 | 0.005 | 0.002 | 0.002 | 0.002 | < 0.001 | < 0.001 | < 0.001 | 0.002 | 0.002 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Modified ABA (Price 1997)

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V7A 5K2,

Phone:
Fax:

Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11124-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 24: ML92-062-03 | 25: ML90-12-01 | 26: ML90-12-02 | 27: ML90-04-01 | 28: ML90-04-02 | 29: ML90-04-03 | 30: ML90-03-01 | 31: ML90-03-02 | 32: Disc SS1 | 33: Disc SS2 | 34: Disc SS3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Paste pH [units] | 10.01 | 9.86 | 9.69 | 9.77 | 9.74 | 9.81 | 9.77 | 9.76 | 9.06 | 8.31 | 8.73 |
| Fizz Rate [—] | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sample [weight(g)] | 1.99 | 2.01 | 1.98 | 1.99 | 2.00 | 1.99 | 1.99 | 1.99 | 2.01 | 2.00 | 2.01 |
| HCl added [mL] | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 14.00 | 16.30 | 13.30 | 15.30 | 16.40 | 13.20 | 16.30 | 15.00 | 16.70 | 17.60 | 18.90 |
| Final pH [units] | 1.81 | 1.63 | 1.99 | 1.55 | 1.56 | 1.91 | 1.47 | 1.63 | 1.44 | 1.50 | 1.37 |
| NP [t CaCO3/1000t] | 15 | 9.2 | 17 | 12 | 9.0 | 17 | 9.3 | 13 | 8.2 | 6.0 | 2.7 |
| AP [t CaCO3/1000 t] | 1.58 | 3.35 | 2.93 | 3.64 | 1.99 | 3.70 | 2.03 | 1.56 | 0.31 | 0.31 | 0.31 |
| Net NP [t CaCO3/1000 t] | 13.5 | 5.8 | 14.0 | 8.2 | 7.0 | 13.4 | 7.3 | 11.0 | 7.9 | 5.7 | 2.4 |
| NP/AP [ratio] | 9.5 | 2.7 | 5.8 | 3.2 | 4.5 | 4.6 | 4.6 | 8.1 | 26.5 | 19.4 | 8.7 |
| Total Sulphur [%] | 0.093 | 0.153 | 0.140 | 0.172 | 0.105 | 0.186 | 0.087 | 0.064 | 0.005 | < 0.005 | < 0.005 |
| Acid Leachable SO4-S [%] | 0.04 | 0.05 | 0.05 | 0.06 | 0.04 | 0.07 | 0.02 | 0.02 | < 0.01 | < 0.01 | < 0.01 |
| Sulphide-S [%] | 0.05 | 0.11 | 0.09 | 0.12 | 0.06 | 0.12 | 0.07 | 0.05 | < 0.01 | < 0.01 | < 0.01 |
| Total Carbon [%] | 0.123 | 0.063 | 0.138 | 0.074 | 0.041 | 0.116 | 0.046 | 0.119 | 0.090 | 0.139 | 0.063 |
| Carbonate (CO3) [%] | 0.466 | 0.163 | 0.492 | 0.218 | 0.127 | 0.405 | 0.128 | 0.445 | 0.097 | 0.047 | 0.049 |
| CarbNP | 10 | 5.3 | 12 | 6.2 | 3.4 | 9.7 | 3.8 | 9.9 | 7.5 | 12 | 5.3 |

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*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

Carb-NP = (% Total C)x(100.09/12.01)x(10)
*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Modified ABA (Price 1997)**

**Meliadine Resources Ltd**
Attn : Roger March rogermarch@shaw.ca

260-12500 Horseshoe Way
Richmond, BC
V7A 5K2,

Phone:
Fax:

Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11124-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: ML00-221-01 | 15: ML00-221-02 | 16: ML00-221-03 | 17: ML00-221-04 | 18: ML92-061-01 | 19: ML92-061-02 | 20: ML92-061-03 | 21: ML92-061-04 | 22: ML92-062-01 | 23: ML92-062-02 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Paste pH [units] | 9.92 | 9.87 | 9.82 | 9.52 | 9.65 | 9.60 | 9.56 | 9.83 | 9.26 | 9.85 |
| Fizz Rate [---] | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 |
| Sample [weight(g)] | 2.01 | 1.96 | 2.01 | 2.01 | 1.99 | 2.00 | 1.99 | 2.01 | 2.00 | 2.01 |
| HCl added [mL] | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 41.90 | 20.00 | 20.00 | 20.00 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 16.30 | 15.90 | 16.80 | 16.10 | 17.10 | 16.60 | 26.10 | 13.40 | 11.00 | 20.70 |
| Final pH [units] | 1.31 | 1.46 | 1.39 | 1.60 | 1.48 | 1.52 | 1.58 | 1.91 | 1.91 | 1.74 |
| NP [t CaCO3/1000t] | 9.2 | 10 | 8.0 | 9.7 | 7.3 | 8.5 | 40 | 16 | 22 | -1.7 |
| AP [t CaCO3/1000 t] | 1.56 | 2.49 | 2.05 | 3.14 | 2.45 | 1.96 | 3.61 | 2.94 | 4.80 | 2.90 |
| Net NP [t CaCO3/1000 t] | 7.6 | 8.0 | 6.0 | 6.6 | 4.8 | 6.5 | 36.1 | 13.5 | 17.7 | -4.6 |
| NP/AP [ratio] | 5.9 | 4.2 | 3.9 | 3.1 | 3.0 | 4.3 | 11.0 | 5.6 | 4.7 | -0.59 |
| Total Sulphur [%] | 0.092 | 0.132 | 0.100 | 0.138 | 0.124 | 0.097 | 0.134 | 0.141 | 0.190 | 0.117 |
| Acid Leachable SO4-S [%] | 0.04 | 0.05 | 0.03 | 0.04 | 0.05 | 0.03 | 0.02 | 0.05 | 0.04 | 0.02 |
| Sulphide-S [%] | 0.05 | 0.08 | 0.07 | 0.10 | 0.08 | 0.06 | 0.12 | 0.09 | 0.15 | 0.09 |
| Total Carbon [%] | 0.043 | 0.047 | 0.071 | 0.098 | 0.055 | 0.050 | 0.374 | 0.135 | 0.212 | 0.111 |
| Carbonate (CO3) [%] | 0.102 | 0.139 | 0.214 | 0.280 | 0.192 | 0.148 | 1.48 | 0.472 | 0.780 | 0.425 |
| CarbNP | 3.6 | 4.0 | 5.9 | 8.2 | 4.6 | 4.2 | 31 | 11 | 18 | 9.2 |

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**Modified ABA (Price 1997)**

**LR Report :** **CA11124-AUG09**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

Carb-NP = (% Total C)x(100.09/12.01)x(10)
*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Modified ABA (Price 1997)

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260-12500 Horseshoe Way
Richmond, BC
V7A 5K2,

Phone:
Fax:

Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11124-AUG09**
**Reference:** Discovery Deposit

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML95-93-01 | 6: ML95-93-02 | 7: ML95-93-03 | 8: ML95-93-04 | 9: ML90-08-01 | 10: ML90-08-02 | 11: ML90-07-01 | 12: ML08-238-03 | 13: ML08-238-04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Paste pH [units] | 26-Aug-09 | 15:42 | 9.81 | 9.86 | 8.68 | 9.99 | 9.99 | 10.04 | 10.14 | 10.20 | 9.64 |
| Fizz Rate [---] | 31-Aug-09 | 08:36 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 |
| Sample [weight(g)] | 31-Aug-09 | 08:36 | 1.98 | 1.97 | 2.02 | 1.96 | 2.03 | 1.97 | 1.99 | 2.02 | 1.96 |
| HCl added [mL] | 31-Aug-09 | 08:36 | 20.00 | 20.00 | 42.10 | 31.40 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |
| HCl [Normality] | 31-Aug-09 | 08:36 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 31-Aug-09 | 08:36 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 31-Aug-09 | 08:36 | 16.50 | 16.70 | 20.80 | 20.20 | 16.20 | 11.40 | 14.60 | 14.30 | 16.20 |
| Final pH [units] | 31-Aug-09 | 08:36 | 1.34 | 1.26 | 1.70 | 1.72 | 1.41 | 1.85 | 1.59 | 1.72 | 1.51 |
| NP [t CaCO3/1000t] | 31-Aug-09 | 08:36 | 8.8 | 8.4 | 53 | 29 | 9.4 | 22 | 14 | 14 | 9.7 |
| AP [t CaCO3/1000 t] | 02-Sep-09 | 07:43 | 0.31 | 3.26 | 39.4 | 5.00 | 2.32 | 2.24 | 0.62 | 0.94 | 1.73 |
| Net NP [t CaCO3/1000 t] | 02-Sep-09 | 07:43 | 8.5 | 5.1 | 13.4 | 23.6 | 7.1 | 19.6 | 13.0 | 13.2 | 8.0 |
| NP/AP [ratio] | 02-Sep-09 | 07:43 | 28.4 | 2.6 | 1.3 | 5.7 | 4.0 | 9.7 | 21.9 | 15.0 | 5.6 |
| Total Sulphur [%] | 28-Aug-09 | 10:40 | 0.009 | 0.136 | 1.26 | 0.206 | 0.123 | 0.130 | 0.045 | 0.069 | 0.105 |
| Acid Leachable SO4-S [%] | 02-Sep-09 | 07:42 | < 0.01 | 0.03 | < 0.01 | 0.05 | 0.05 | 0.06 | 0.03 | 0.04 | 0.05 |
| Sulphide-S [%] | 02-Sep-09 | 07:42 | < 0.01 | 0.10 | 1.26 | 0.16 | 0.07 | 0.07 | 0.02 | 0.03 | 0.06 |
| Total Carbon [%] | 28-Aug-09 | 10:40 | 0.112 | 0.068 | 0.742 | 0.203 | 0.162 | 0.175 | 0.044 | 0.071 | 0.048 |
| Carbonate (CO3) [%] | 31-Aug-09 | 09:00 | 0.275 | 0.234 | 2.14 | 0.810 | 0.404 | 0.666 | 0.152 | 0.227 | 0.142 |
| CarbNP | 03-Sep-09 | 08:10 | 9.4 | 5.7 | 62 | 17 | 14 | 15 | 3.7 | 5.9 | 4.0 |

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*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

Carb-NP = (% Total C)x(100.09/12.01)x(10)
*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 24: ML92-062-03 | 25: ML90-12-01 | 26: ML90-12-02 | 27: ML90-04-01 | 28: ML90-04-02 | 29: ML90-04-03 | 30: ML90-03-01 | 31: ML90-03-02 | 32: Disc SS1 | 33: Disc SS2 | 34: Disc SS3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Silver [g/t] | 0.04 | 0.05 | 0.51 | 0.36 | 0.34 | 0.27 | 0.36 | 0.30 | 0.25 | 0.22 | 0.26 |
| Aluminum [g/t] | 93000 | 87000 | 91000 | 92000 | 92000 | 85000 | 98000 | 90000 | 77000 | 71000 | 72000 |
| Arsenic [g/t] | 48 | 110 | 34 | 18 | 43 | 16 | 160 | 16 | 13 | 9.6 | 13 |
| Barium [g/t] | 740 | 650 | 670 | 550 | 650 | 490 | 680 | 570 | 670 | 630 | 650 |
| Beryllium [g/t] | 1.0 | 0.91 | 1.2 | 0.98 | 0.99 | 0.83 | 1.3 | 0.96 | 1.2 | 1.1 | 1.2 |
| Bismuth [g/t] | 0.17 | 0.19 | 0.44 | 0.25 | 0.14 | 0.10 | 0.20 | 0.15 | 0.15 | 0.12 | 0.13 |
| Calcium [g/t] | 22000 | 11000 | 21000 | 12000 | 11000 | 19000 | 11000 | 18000 | 17000 | 17000 | 17000 |
| Cadmium [g/t] | 0.26 | 0.19 | 0.40 | 0.31 | 0.33 | 0.22 | 0.30 | 0.24 | 0.24 | 0.21 | 0.20 |
| Cobalt [g/t] | 14 | 18 | 14 | 18 | 18 | 13 | 21 | 12 | 11 | 9.8 | 11 |
| Chromium [g/t] | 110 | 160 | 130 | 210 | 170 | 110 | 170 | 140 | 180 | 160 | 190 |
| Copper [g/t] | 43 | 84 | 79 | 54 | 49 | 36 | 42 | 35 | 30 | 17 | 33 |
| Iron [g/t] | 49000 | 44000 | 63000 | 40000 | 42000 | 50000 | 49000 | 56000 | 29000 | 26000 | 27000 |
| Potassium [g/t] | 25000 | 21000 | 27000 | 22000 | 23000 | 15000 | 25000 | 22000 | 20000 | 19000 | 20000 |
| Lithium [g/t] | 44 | 35 | 49 | 37 | 36 | 36 | 44 | 45 | 20 | 12 | 15 |
| Magnesium [g/t] | 14000 | 15000 | 14000 | 15000 | 15000 | 15000 | 19000 | 15000 | 10000 | 8000 | 8800 |
| Manganese [g/t] | 350 | 320 | 430 | 360 | 330 | 320 | 380 | 350 | 340 | 300 | 320 |
| Molybdenum [g/t] | 2.5 | 1.3 | 3.2 | 1.5 | 1.9 | 0.7 | 5.0 | 1.3 | 1.8 | 0.7 | 4.6 |
| Sodium [g/t] | 26000 | 23000 | 23000 | 25000 | 26000 | 29000 | 24000 | 25000 | 26000 | 26000 | 25000 |
| Nickel [g/t] | 43 | 59 | 42 | 58 | 58 | 39 | 69 | 39 | 33 | 24 | 29 |

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**LR Report :** **CA11123-AUG09**

| Analysis | 24: ML92-062-03 | 25: ML90-12-01 | 26: ML90-12-02 | 27: ML90-04-01 | 28: ML90-04-02 | 29: ML90-04-03 | 30: ML90-03-01 | 31: ML90-03-02 | 32: Disc SS1 | 33: Disc SS2 | 34: Disc SS3 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [g/t] | 9.8 | 10 | 11 | 16 | 12 | 9.3 | 12 | 9.9 | 15 | 14 | 15 |
| Antimony [g/t] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [g/t] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [g/t] | 1.3 | 1.2 | 1.5 | 1.2 | 1.2 | 0.8 | 1.4 | 1.0 | 1.1 | 0.8 | 1.1 |
| Strontium [g/t] | 300 | 240 | 310 | 320 | 310 | 300 | 340 | 290 | 380 | 360 | 360 |
| Titanium [g/t] | 3500 | 3900 | 3500 | 4200 | 4100 | 3700 | 4600 | 3500 | 2900 | 2500 | 2700 |
| Thallium [g/t] | 0.44 | 0.38 | 0.51 | 0.41 | 0.43 | 0.22 | 0.56 | 0.33 | 0.42 | 0.34 | 0.36 |
| Uranium [g/t] | 1.7 | 2.4 | 1.8 | 1.9 | 1.8 | 1.3 | 2.0 | 1.5 | 1.3 | 1.2 | 1.3 |
| Vanadium [g/t] | 75 | 88 | 80 | 93 | 91 | 78 | 110 | 73 | 61 | 48 | 53 |
| Yttrium [g/t] | 9.0 | 9.1 | 10 | 7.6 | 7.7 | 8.4 | 8.7 | 8.0 | 10 | 8.8 | 9.7 |
| Zinc [g/t] | 73 | 93 | 92 | 86 | 93 | 76 | 98 | 86 | 50 | 36 | 41 |

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*Project Specialist*
*Environmental Services, Analytical*

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Fax:604-241-4586

Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11123-AUG09**
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML95-93-01 | 6: ML95-93-02 | 7: ML95-93-03 | 8: ML95-93-04 | 9: ML90-08-01 | 10: ML90-08-02 | 11: ML90-07-01 | 12: ML08-238-03 | 13: ML08-238-04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Silver [g/t] | 27-Aug-09 | 11:29 | 0.30 | 0.19 | 0.03 | 0.17 | 0.11 | 0.11 | 0.06 | 0.08 | 0.10 |
| Aluminum [g/t] | 27-Aug-09 | 16:16 | 96000 | 91000 | 12000 | 83000 | 85000 | 87000 | 82000 | 89000 | 94000 |
| Arsenic [g/t] | 27-Aug-09 | 11:29 | 85 | 34 | 11 | 1.8 | 16 | 53 | 16 | 30 | 36 |
| Barium [g/t] | 27-Aug-09 | 11:29 | 650 | 600 | 72 | 500 | 570 | 560 | 580 | 590 | 580 |
| Beryllium [g/t] | 27-Aug-09 | 11:29 | 1.2 | 0.99 | 0.15 | 0.89 | 0.88 | 0.93 | 0.94 | 1.00 | 1.1 |
| Bismuth [g/t] | 27-Aug-09 | 11:29 | 0.18 | 0.11 | 0.19 | 0.15 | 0.11 | 0.11 | < 0.09 | 0.10 | 0.22 |
| Calcium [g/t] | 27-Aug-09 | 16:16 | 8400 | 11000 | 24000 | 23000 | 11000 | 22000 | 21000 | 21000 | 12000 |
| Cadmium [g/t] | 27-Aug-09 | 11:29 | 0.25 | 0.26 | 0.26 | 0.29 | 0.26 | 0.25 | 0.26 | 0.25 | 0.27 |
| Cobalt [g/t] | 27-Aug-09 | 11:29 | 20 | 19 | 3.3 | 16 | 16 | 15 | 12 | 14 | 17 |
| Chromium [g/t] | 27-Aug-09 | 11:29 | 170 | 160 | 190 | 150 | 160 | 120 | 150 | 130 | 160 |
| Copper [g/t] | 27-Aug-09 | 16:16 | 56 | 52 | 31 | 30 | 55 | 40 | 20 | 31 | 45 |
| Iron [g/t] | 27-Aug-09 | 16:17 | 50000 | 53000 | 220000 | 59000 | 37000 | 44000 | 44000 | 54000 | 51000 |
| Potassium [g/t] | 27-Aug-09 | 16:17 | 26000 | 22000 | 2300 | 15000 | 19000 | 21000 | 18000 | 21000 | 24000 |
| Lithium [g/t] | 27-Aug-09 | 11:29 | 37 | 38 | 8 | 38 | 31 | 42 | 35 | 41 | 43 |
| Magnesium [g/t] | 27-Aug-09 | 16:17 | 18000 | 17000 | 5300 | 15000 | 12000 | 13000 | 14000 | 15000 | 16000 |
| Manganese [g/t] | 27-Aug-09 | 11:29 | 340 | 370 | 330 | 510 | 290 | 430 | 370 | 440 | 340 |
| Molybdenum [g/t] | 27-Aug-09 | 11:29 | 1.8 | 2.6 | 0.7 | 1.4 | 1.5 | 2.5 | 0.7 | 1.3 | 1.3 |
| Sodium [g/t] | 27-Aug-09 | 16:17 | 20000 | 23000 | 250 | 29000 | 28000 | 25000 | 25000 | 27000 | 24000 |
| Nickel [g/t] | 27-Aug-09 | 11:29 | 79 | 72 | 14 | 50 | 51 | 46 | 44 | 49 | 66 |

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**LR Report :** **CA11123-AUG09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML95-93-01 | 6: ML95-93-02 | 7: ML95-93-03 | 8: ML95-93-04 | 9: ML90-08-01 | 10: ML90-08-02 | 11: ML90-07-01 | 12: ML08-238-03 | 13: ML08-238-04 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [g/t] | 27-Aug-09 | 11:29 | 8.5 | 11 | 3.4 | 7.7 | 12 | 7.3 | 8.5 | 9.1 | 12 |
| Antimony [g/t] | 27-Aug-09 | 11:29 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [g/t] | 27-Aug-09 | 11:29 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [g/t] | 27-Aug-09 | 11:29 | 1.6 | 1.4 | 0.6 | 1.6 | 1.4 | 1.2 | 1.3 | 1.8 | 1.6 |
| Strontium [g/t] | 27-Aug-09 | 11:29 | 230 | 260 | 140 | 310 | 260 | 290 | 320 | 330 | 240 |
| Titanium [g/t] | 27-Aug-09 | 16:17 | 4600 | 4200 | 700 | 3600 | 3600 | 3500 | 3300 | 3800 | 4100 |
| Thallium [g/t] | 27-Aug-09 | 11:29 | 0.43 | 0.39 | 0.08 | 0.31 | 0.30 | 0.36 | 0.29 | 0.40 | 0.53 |
| Uranium [g/t] | 27-Aug-09 | 11:29 | 1.8 | 1.6 | 0.46 | 2.4 | 1.6 | 1.4 | 1.5 | 1.8 | 1.9 |
| Vanadium [g/t] | 27-Aug-09 | 11:29 | 120 | 100 | 9 | 85 | 78 | 79 | 76 | 87 | 100 |
| Yttrium [g/t] | 27-Aug-09 | 11:29 | 9.0 | 8.2 | 6.1 | 9.2 | 7.2 | 8.8 | 8.7 | 8.9 | 9.2 |
| Zinc [g/t] | 27-Aug-09 | 16:17 | 96 | 110 | 58 | 79 | 77 | 59 | 64 | 76 | 86 |

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Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11123-AUG09**
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: ML00-221-01 | 15: ML00-221-02 | 16: ML00-221-03 | 17: ML00-221-04 | 18: ML92-061-01 | 19: ML92-061-02 | 20: ML92-061-03 | 21: ML92-061-04 | 22: ML92-062-01 | 23: ML92-062-02 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Silver [g/t] | 0.09 | 0.04 | 0.04 | 0.05 | 0.05 | 0.03 | 0.09 | 0.01 | 0.03 | 0.03 |
| Aluminum [g/t] | 94000 | 89000 | 87000 | 92000 | 91000 | 89000 | 26000 | 90000 | 18000 | 65000 |
| Arsenic [g/t] | 280 | 31 | 48 | 21 | 49 | 32 | 6.7 | 53 | 1.4 | 13 |
| Barium [g/t] | 660 | 480 | 540 | 540 | 530 | 570 | 420 | 570 | 150 | 1400 |
| Beryllium [g/t] | 1.00 | 0.95 | 0.92 | 0.94 | 0.98 | 0.93 | 0.79 | 0.93 | 0.42 | 2.0 |
| Bismuth [g/t] | 0.14 | 0.17 | 0.14 | 0.17 | 0.18 | 0.17 | < 0.09 | 0.23 | < 0.09 | 0.17 |
| Calcium [g/t] | 13000 | 11000 | 7900 | 9300 | 11000 | 9400 | 18000 | 20000 | 18000 | 16000 |
| Cadmium [g/t] | 0.26 | 0.22 | 0.22 | 0.27 | 0.24 | 0.23 | 0.16 | 0.26 | 0.15 | 0.22 |
| Cobalt [g/t] | 17 | 17 | 17 | 18 | 18 | 20 | 3.4 | 16 | 2.8 | 9.0 |
| Chromium [g/t] | 170 | 220 | 160 | 130 | 170 | 180 | 70 | 120 | 84 | 130 |
| Copper [g/t] | 45 | 50 | 42 | 46 | 48 | 43 | < 6 | 30 | < 6 | < 6 |
| Iron [g/t] | 42000 | 39000 | 39000 | 57000 | 43000 | 41000 | 240000 | 50000 | 280000 | 130000 |
| Potassium [g/t] | 22000 | 21000 | 20000 | 23000 | 22000 | 21000 | 5700 | 20000 | 1600 | 20000 |
| Lithium [g/t] | 40 | 34 | 34 | 43 | 40 | 34 | 12 | 41 | 6 | 58 |
| Magnesium [g/t] | 16000 | 15000 | 16000 | 17000 | 17000 | 16000 | 8100 | 15000 | 11000 | 12000 |
| Manganese [g/t] | 350 | 320 | 290 | 330 | 380 | 330 | 210 | 360 | 290 | 190 |
| Molybdenum [g/t] | 3.1 | 1.7 | 2.0 | 1.4 | 2.6 | 1.5 | 1.3 | 1.0 | 2.6 | 1.0 |
| Sodium [g/t] | 24000 | 24000 | 24000 | 16000 | 23000 | 21000 | 11000 | 29000 | 6500 | 15000 |
| Nickel [g/t] | 67 | 63 | 65 | 66 | 71 | 67 | 12 | 51 | 8.6 | 25 |

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA11123-AUG09**

| Analysis | 14: ML00-221-01 | 15: ML00-221-02 | 16: ML00-221-03 | 17: ML00-221-04 | 18: ML92-061-01 | 19: ML92-061-02 | 20: ML92-061-03 | 21: ML92-061-04 | 22: ML92-062-01 | 23: ML92-062-02 |
|---|---|---|---|---|---|---|---|---|---|---|
| Lead [g/t] | 12 | 11 | 8.6 | 12 | 9.4 | 8.3 | 4.2 | 11 | 3.2 | 39 |
| Antimony [g/t] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [g/t] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [g/t] | 0.9 | 1.6 | 1.5 | 1.3 | 1.2 | 1.1 | < 0.5 | 1.3 | < 0.5 | 1.8 |
| Strontium [g/t] | 300 | 290 | 290 | 170 | 300 | 260 | 290 | 290 | 250 | 930 |
| Titanium [g/t] | 4200 | 3900 | 3700 | 4500 | 4100 | 4000 | 810 | 3700 | 510 | 1900 |
| Thallium [g/t] | 0.43 | 0.42 | 0.36 | 0.42 | 0.45 | 0.42 | 0.20 | 0.32 | 0.04 | 0.51 |
| Uranium [g/t] | 1.8 | 1.9 | 1.7 | 1.7 | 1.7 | 1.7 | 0.66 | 1.5 | 0.33 | 1.3 |
| Vanadium [g/t] | 98 | 87 | 93 | 110 | 100 | 97 | 16 | 84 | 12 | 37 |
| Yttrium [g/t] | 8.3 | 7.1 | 7.4 | 8.1 | 8.0 | 7.4 | 5.5 | 8.5 | 5.9 | 7.4 |
| Zinc [g/t] | 94 | 88 | 77 | 99 | 92 | 82 | 36 | 75 | 39 | 67 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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V7A 5K2,

Phone: 604-241-4566
Fax:604-241-4586

Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11122-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 25: ML90-12-01 | 26: ML90-12-02 | 27: ML90-04-01 | 28: ML90-04-02 | 29: ML90-04-03 | 30: ML90-03-01 | 31: ML90-03-02 | 32: Disc SS1 | 33: Disc SS2 | 34: Disc SS3 | 35: ML90-12-01 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | |
| SiO2 [%] | 65.6 | 62.3 | 64.9 | 66.0 | 63.8 | 61.3 | 63.4 | 70.9 | 73.4 | 72.5 | 65.4 |
| Al2O3 [%] | 16.2 | 16.0 | 16.9 | 16.6 | 15.8 | 18.2 | 16.3 | 13.9 | 12.9 | 13.2 | 16.1 |
| Fe2O3 [%] | 6.34 | 8.61 | 5.74 | 5.80 | 7.20 | 6.80 | 7.85 | 4.03 | 3.42 | 3.71 | 6.38 |
| MgO [%] | 2.36 | 2.12 | 2.43 | 2.31 | 2.47 | 3.02 | 2.31 | 1.65 | 1.24 | 1.46 | 2.36 |
| CaO [%] | 1.62 | 2.74 | 1.71 | 1.51 | 2.75 | 1.58 | 2.51 | 2.39 | 2.40 | 2.44 | 1.61 |
| Na2O [%] | 3.08 | 2.92 | 3.64 | 3.54 | 4.26 | 3.17 | 3.33 | 3.51 | 3.43 | 3.47 | 3.05 |
| K2O [%] | 2.38 | 2.81 | 2.26 | 2.34 | 1.56 | 2.68 | 2.29 | 2.08 | 1.97 | 2.03 | 2.35 |
| TiO2 [%] | 0.61 | 0.52 | 0.64 | 0.61 | 0.57 | 0.68 | 0.51 | 0.44 | 0.40 | 0.44 | 0.61 |
| P2O5 [%] | 0.12 | 0.14 | 0.12 | 0.11 | 0.15 | 0.12 | 0.13 | 0.14 | 0.14 | 0.14 | 0.12 |
| MnO [%] | 0.03 | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 | 0.04 | 0.03 | 0.02 | 0.03 | 0.03 |
| Cr2O3 [%] | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.04 | 0.02 | 0.03 | 0.03 | 0.03 | 0.03 |
| V2O5 [%] | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.03 | 0.02 | 0.02 | < 0.01 | 0.01 | 0.02 |
| LOI [%] | 1.94 | 2.06 | 2.03 | 2.13 | 1.69 | 2.36 | 1.91 | 1.45 | 1.27 | 1.21 | 1.95 |
| Sum [%] | 100.3 | 100.3 | 100.5 | 101.0 | 100.3 | 100.0 | 100.6 | 100.6 | 100.6 | 100.8 | 100.0 |

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**LR Report :** **CA11122-AUG09**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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T2R 1J4,

Phone: 403-265-2846
Fax:403-232-1421

Thursday, March 04, 2010

**Date Rec. :** 24 February 2010
**LR Report:** **CA11029-FEB10**
**Reference:** 09-1426-0013 Discovery

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML92-061-01 | 6: ML90-14-2 | 7: ML95-82-1 |
|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a |
| Sample [weight(g)] | 25-Feb-10 | 14:26 | 1.48 | 1.53 | 1.48 |
| vol H2O2 [mL] | 25-Feb-10 | 14:26 | 150 | 150 | 150 |
| Final pH [units] | 25-Feb-10 | 14:26 | 4.80 | 7.42 | 3.40 |
| NaOH [Normality] | 25-Feb-10 | 14:26 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 25-Feb-10 | 14:26 | 0.00 | 0.00 | 0.60 |
| Vol NaOH to PH 7.0 [mL] | 25-Feb-10 | 14:26 | 0.30 | 0.00 | 1.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 25-Feb-10 | 14:26 | 0.0 | 0.0 | 2.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 25-Feb-10 | 14:26 | 1.0 | 0.0 | 3.3 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 604-241-4566
Fax:604-241-4586

Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11122-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 15: ML00-221-02 | 16: ML00-221-03 | 17: ML00-221-04 | 18: ML92-061-01 | 19: ML92-061-02 | 20: ML92-061-03 | 21: ML92-061-04 | 22: ML92-062-01 | 23: ML92-062-02 | 24: ML92-062-03 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| SiO2 [%] | 65.5 | 65.8 | 60.4 | 63.9 | 63.9 | 48.6 | 63.1 | 47.3 | 60.7 | 64.1 |
| Al2O3 [%] | 16.4 | 16.5 | 18.2 | 17.5 | 16.9 | 5.11 | 16.3 | 3.45 | 11.9 | 16.6 |
| Fe2O3 [%] | 5.52 | 5.61 | 8.65 | 6.40 | 5.99 | 39.0 | 7.10 | 44.7 | 18.7 | 6.74 |
| MgO [%] | 2.41 | 2.61 | 2.97 | 2.88 | 2.80 | 1.42 | 2.29 | 1.80 | 1.93 | 2.23 |
| CaO [%] | 1.50 | 1.15 | 1.40 | 1.62 | 1.36 | 2.65 | 2.80 | 2.52 | 2.25 | 2.88 |
| Na2O [%] | 3.63 | 3.68 | 2.40 | 3.27 | 3.10 | 1.67 | 4.06 | 0.94 | 2.01 | 3.51 |
| K2O [%] | 2.16 | 2.11 | 2.70 | 2.45 | 2.49 | 0.63 | 2.07 | 0.16 | 2.11 | 2.71 |
| TiO2 [%] | 0.61 | 0.60 | 0.74 | 0.66 | 0.64 | 0.13 | 0.58 | 0.08 | 0.29 | 0.53 |
| P2O5 [%] | 0.12 | 0.11 | 0.13 | 0.12 | 0.12 | 0.20 | 0.13 | 0.24 | 0.12 | 0.13 |
| MnO [%] | 0.03 | 0.02 | 0.03 | 0.03 | 0.06 | 0.02 | 0.04 | 0.03 | < 0.01 | 0.03 |
| Cr2O3 [%] | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 | < 0.01 | 0.01 | 0.02 | < 0.01 | < 0.01 |
| V2O5 [%] | 0.01 | 0.02 | 0.02 | 0.03 | 0.02 | < 0.01 | 0.02 | < 0.01 | < 0.01 | 0.02 |
| LOI [%] | 1.94 | 2.16 | 3.09 | 2.19 | 2.39 | 0.30 | 1.74 | -0.61 | 0.80 | 1.48 |
| Sum [%] | 99.9 | 100.4 | 100.8 | 101.1 | 99.9 | 99.9 | 100.3 | 100.7 | 100.8 | 100.9 |

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**LR Report :** **CA11122-AUG09**



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*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 03, 2009

**Date Rec. :** 17 August 2009
**LR Report:** **CA11122-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: ML95-93-01 | 6: ML95-93-02 | 7: ML95-93-03 | 8: ML95-93-04 | 9: ML90-08-01 | 10: ML90-08-02 | 11: ML90-07-01 | 12: ML08-238-03 | 13: ML08-238-04 | 14: ML00-221-01 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| SiO2 [%] | 60.1 | 62.9 | 55.5 | 63.2 | 67.3 | 62.4 | 64.4 | 63.7 | 62.7 | 63.6 |
| Al2O3 [%] | 18.8 | 16.7 | 2.25 | 15.2 | 15.5 | 16.9 | 16.3 | 16.2 | 17.3 | 17.3 |
| Fe2O3 [%] | 7.35 | 7.52 | 34.7 | 8.24 | 5.08 | 6.64 | 6.75 | 7.64 | 7.18 | 5.92 |
| MgO [%] | 3.14 | 2.68 | 0.93 | 2.36 | 1.96 | 2.25 | 2.47 | 2.34 | 2.61 | 2.55 |
| CaO [%] | 1.21 | 1.59 | 3.34 | 3.15 | 1.51 | 3.18 | 3.09 | 2.94 | 1.65 | 1.77 |
| Na2O [%] | 2.74 | 3.10 | 0.08 | 4.21 | 4.10 | 3.92 | 3.94 | 3.95 | 3.33 | 3.57 |
| K2O [%] | 2.99 | 2.33 | 0.25 | 1.61 | 2.04 | 2.53 | 2.04 | 2.13 | 2.61 | 2.48 |
| TiO2 [%] | 0.73 | 0.64 | 0.11 | 0.55 | 0.56 | 0.56 | 0.55 | 0.57 | 0.65 | 0.65 |
| P2O5 [%] | 0.13 | 0.13 | 0.21 | 0.14 | 0.12 | 0.14 | 0.16 | 0.14 | 0.12 | 0.12 |
| MnO [%] | 0.04 | 0.04 | 0.05 | 0.05 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.04 |
| Cr2O3 [%] | 0.03 | 0.03 | 0.02 | 0.02 | 0.04 | 0.02 | 0.02 | 0.03 | 0.03 | 0.02 |
| V2O5 [%] | 0.03 | 0.02 | < 0.01 | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 |
| LOI [%] | 2.80 | 2.17 | 0.87 | 1.80 | 1.62 | 1.63 | 1.11 | 1.21 | 2.43 | 2.04 |
| Sum [%] | 100.1 | 99.9 | 98.3 | 100.5 | 99.8 | 100.3 | 100.8 | 100.9 | 100.6 | 100.1 |

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**LR Report :** **CA11122-AUG09**

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*Environmental Services, Analytical*

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Wednesday, March 10, 2010

**Date Rec. :** 24 February 2010
**LR Report:** **CA11033-FEB10**
**Reference:** 09-1426-0013 Discovery

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML92-061-01 | 6: ML90-14-2 | 7: ML95-82-1 |
|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a |
| Sample [weight(g)] | 25-Feb-10 | 14:26 | 2.47 | 2.59 | 2.47 |
| vol H2O2 [mL] | 25-Feb-10 | 14:26 | 250 | 250 | 250 |
| pH [no unit] | 02-Mar-10 | 09:02 | 4.78 | 6.87 | 3.46 |
| Conductivity [uS/cm] | 02-Mar-10 | 09:02 | 127 | 138 | 269 |
| Alkalinity [mg/L as CaCO3] | 02-Mar-10 | 09:02 | < 2 | 6 | < 2 |
| Sulphate [mg/L] | 09-Mar-10 | 11:03 | 45 | 45 | 62 |
| Chloride [mg/L] | 05-Mar-10 | 15:06 | < 2 | < 2 | < 2 |
| Silver [mg/L] | 02-Mar-10 | 08:49 | 0.00035 | 0.00001 | 0.00028 |
| Aluminum [mg/L] | 02-Mar-10 | 12:58 | 0.14 | 0.14 | 1.19 |
| Arsenic [mg/L] | 02-Mar-10 | 08:49 | < 0.0002 | 0.0301 | 0.0004 |
| Barium [mg/L] | 02-Mar-10 | 08:49 | 0.0489 | 0.0161 | 0.0634 |
| Beryllium [mg/L] | 02-Mar-10 | 08:49 | < 0.00002 | < 0.00002 | 0.00014 |
| Boron [mg/L] | 02-Mar-10 | 08:49 | 0.302 | 0.0884 | 0.328 |
| Bismuth [mg/L] | 02-Mar-10 | 08:49 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 02-Mar-10 | 12:58 | 7.08 | 14.2 | 7.44 |
| Cadmium [mg/L] | 02-Mar-10 | 08:49 | 0.000365 | 0.000005 | 0.000582 |
| Cobalt [mg/L] | 02-Mar-10 | 08:49 | 0.0249 | 0.000060 | 0.132 |
| Chromium [mg/L] | 02-Mar-10 | 08:49 | 0.0072 | 0.0244 | 0.0060 |
| Copper [mg/L] | 02-Mar-10 | 08:49 | 0.0070 | 0.0005 | 0.361 |
| Iron [mg/L] | 02-Mar-10 | 12:58 | < 0.01 | < 0.01 | 0.16 |
| Potassium [mg/L] | 02-Mar-10 | 12:58 | 9.64 | 14.3 | 6.05 |
| Lithium [mg/L] | 02-Mar-10 | 12:58 | < 0.002 | 0.004 | < 0.002 |
| Magnesium [mg/L] | 02-Mar-10 | 12:58 | 3.11 | 0.145 | 1.79 |
| Manganese [mg/L] | 02-Mar-10 | 08:49 | 0.137 | 0.00068 | 0.130 |
| Molybdenum [mg/L] | 02-Mar-10 | 08:49 | 0.0129 | 0.0109 | 0.00009 |
| Sodium [mg/L] | 02-Mar-10 | 12:58 | 1.74 | 1.60 | 1.28 |
| Nickel [mg/L] | 02-Mar-10 | 08:49 | 0.180 | < 0.0001 | 0.390 |
| Lead [mg/L] | 02-Mar-10 | 08:49 | 0.00008 | 0.00047 | 0.00629 |
| Antimony [mg/L] | 02-Mar-10 | 08:49 | 0.0003 | 0.0003 | 0.0003 |
| Selenium [mg/L] | 02-Mar-10 | 08:49 | 0.001 | < 0.001 | 0.001 |
| Tin [mg/L] | 02-Mar-10 | 08:49 | 0.00001 | 0.00004 | < 0.00001 |
| Strontium [mg/L] | 02-Mar-10 | 12:58 | 0.0358 | 0.0377 | 0.0404 |

OnLine LIMS



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**LR Report :** **CA11033-FEB10**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML92-061-01 | 6: ML90-14-2 | 7: ML95-82-1 |
|---|---|---|---|---|---|
| Titanium [mg/L] | 02-Mar-10 | 08:49 | 0.0008 | 0.0018 | 0.0005 |
| Thallium [mg/L] | 02-Mar-10 | 08:49 | < 0.0002 | < 0.0002 | 0.0002 |
| Uranium [mg/L] | 02-Mar-10 | 08:49 | 0.000038 | 0.000047 | 0.00364 |
| Vanadium [mg/L] | 02-Mar-10 | 08:49 | 0.0161 | 0.0271 | < 0.00003 |
| Tungsten [mg/L] | 02-Mar-10 | 08:49 | 0.00216 | 0.00242 | < 0.00003 |
| Yttrium [mg/L] | 02-Mar-10 | 08:49 | 0.00114 | 0.000008 | 0.00976 |
| Zinc [mg/L] | 02-Mar-10 | 08:49 | 0.012 | < 0.001 | 0.112 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS



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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**Meliadine Resources Ltd**
Attn : Roger March rogermarch@shaw.ca

260-12500 Horseshoe Way, Richmond
, V7A 5K2
Phone: 604-241-4566, Fax:604-241-4586

Wednesday, September 16, 2009

**Date Rec. :** 31 August 2009
**LR Report:** **CA11286-AUG09**
**Reference:** Discovery Deposit

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 11: ML08-236-1 | 12: ML08-236-2 | 13: ML08-236-3 | 14: ML92-060-1 | 15: ML90-14-2 | 16: ML95-82-1 | 17: ML95-82-2 | 18: ML95-82-3 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 9.88 | 9.69 | 9.83 | 9.62 | 9.19 | 9.43 | 9.67 | 9.84 |
| Final pH [units] | 9.65 | 9.70 | 9.56 | 8.98 | 9.51 | 9.46 | 8.89 | 9.75 |
| pH [no unit] | 8.58 | 8.31 | 8.49 | 7.81 | 8.17 | 7.88 | 7.73 | 8.83 |
| Conductivity [uS/cm] | 101 | 102 | 119 | 155 | 87 | 86 | 140 | 89 |
| Alkalinity [mg/L as CaCO3] | 44 | 39 | 43 | 47 | 34 | 36 | 46 | 41 |
| Sulphate [mg/L] | 0.6 | 2.5 | 2.9 | 4.6 | 3.5 | 4.6 | 3.5 | 1.6 |
| Chloride [mg/L] | 1.9 | 4.1 | 6.9 | 1.6 | 0.5 | 0.5 | 0.6 | 0.6 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 0.00004 | 0.00002 | 0.00002 | 0.00003 | 0.00002 | 0.00002 | 0.00003 | 0.00007 |
| Aluminum [mg/L] | 1.02 | 1.60 | 1.35 | 0.14 | 1.38 | 1.42 | 0.06 | 1.23 |
| Arsenic [mg/L] | 0.0124 | 0.0489 | 0.0334 | 0.0009 | 0.0603 | 0.116 | 0.0025 | 0.159 |
| Boron [mg/L] | 0.0208 | 0.0243 | 0.0291 | 0.0158 | 0.0186 | 0.0232 | 0.0156 | 0.0207 |
| Beryllium [mg/L] | 0.00004 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00003 | < 0.00002 |
| Bismuth [mg/L] | 0.00005 | 0.00002 | < 0.00001 | < 0.00001 | 0.00001 | 0.00001 | 0.00003 | 0.00003 |
| Calcium [mg/L] | 3.77 | 2.92 | 3.88 | 9.15 | 4.08 | 3.46 | 11.7 | 3.30 |
| Cadmium [mg/L] | 0.000033 | 0.000004 | < 0.000003 | < 0.000003 | < 0.000003 | 0.000003 | 0.000028 | 0.000041 |
| Cobalt [mg/L] | 0.000064 | 0.000120 | 0.000063 | 0.000032 | 0.000151 | 0.000168 | 0.000069 | 0.000110 |
| Chromium [mg/L] | < 0.0005 | 0.0006 | 0.0005 | < 0.0005 | 0.0006 | 0.0010 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0006 |
| Iron [mg/L] | 0.17 | 0.29 | 0.16 | 0.36 | 0.29 | 0.23 | 0.13 | 0.23 |
| Potassium [mg/L] | 15.8 | 12.5 | 9.73 | 20.6 | 9.98 | 11.5 | 18.0 | 10.9 |
| Lithium [mg/L] | 0.003 | 0.002 | < 0.001 | 0.002 | 0.001 | < 0.001 | 0.010 | < 0.001 |
| Magnesium [mg/L] | 0.292 | 0.300 | 0.398 | 1.19 | 0.441 | 0.520 | 0.965 | 0.288 |
| Manganese [mg/L] | 0.00102 | 0.00242 | 0.00119 | 0.00140 | 0.00224 | 0.00196 | 0.00112 | 0.00213 |
| Molybdenum [mg/L] | 0.00036 | 0.00026 | 0.00058 | 0.00023 | 0.00039 | 0.00065 | 0.00022 | 0.00032 |
| Sodium [mg/L] | 6.72 | 9.84 | 13.3 | 5.39 | 6.62 | 6.64 | 1.48 | 8.01 |
| Nickel [mg/L] | < 0.0001 | 0.0004 | 0.0002 | < 0.0001 | 0.0005 | 0.0007 | 0.0001 | 0.0003 |
| Lead [mg/L] | 0.00009 | 0.00014 | 0.00014 | 0.00003 | 0.00010 | 0.00027 | 0.00005 | 0.00013 |
| Antimony [mg/L] | 0.0008 | 0.0006 | 0.0007 | 0.0007 | 0.0005 | 0.0009 | 0.0006 | 0.0022 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

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**LR Report :** **CA11286-AUG09**

| Analysis | 11: ML08-236-1 | 12: ML08-236-2 | 13: ML08-236-3 | 14: ML92-060-1 | 15: ML90-14-2 | 16: ML95-82-1 | 17: ML95-82-2 | 18: ML95-82-3 |
|---|---|---|---|---|---|---|---|---|
| Tin [mg/L] | 0.00004 | 0.00007 | < 0.00001 | 0.00005 | 0.00009 | 0.00004 | 0.00003 | 0.00004 |
| Strontium [mg/L] | 0.0330 | 0.0124 | 0.0156 | 0.110 | 0.0192 | 0.0154 | 0.142 | 0.0148 |
| Titanium [mg/L] | 0.0026 | 0.0161 | 0.0090 | 0.0010 | 0.0165 | 0.0148 | 0.0005 | 0.0129 |
| Thallium [mg/L] | 0.00004 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00003 | < 0.00002 |
| Uranium [mg/L] | 0.00104 | 0.000496 | 0.000148 | 0.000085 | 0.000290 | 0.000543 | 0.000334 | 0.00116 |
| Vanadium [mg/L] | 0.00214 | 0.0110 | 0.00842 | 0.00023 | 0.00869 | 0.0105 | 0.00023 | 0.0133 |
| Tungsten [mg/L] | 0.00160 | 0.00132 | 0.00453 | 0.00068 | 0.00072 | 0.00081 | 0.00074 | 0.00068 |
| Yttrium [mg/L] | 0.000073 | 0.000155 | 0.000065 | 0.000020 | 0.000130 | 0.000177 | 0.000035 | 0.000123 |
| Zinc [mg/L] | 0.003 | 0.002 | < 0.001 | 0.002 | < 0.001 | 0.002 | < 0.001 | 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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SFE (4:1 ratio)

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Wednesday, September 16, 2009

**Date Rec. :** 31 August 2009
**LR Report:** **CA11286-AUG09**
**Reference:** Discovery Deposit

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML90-10-1 | 6: ML90-10-2 | 7: ML90-10-3 | 8: ML90-09-1 | 9: ML90-09-2 | 10: ML92-053-1 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 09-Sep-09 | 10:08 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume mL [D.I. H2O] | 09-Sep-09 | 10:08 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 09-Sep-09 | 10:08 | 9.67 | 9.70 | 9.77 | 9.75 | 9.85 | 9.77 |
| Final pH [units] | 09-Sep-09 | 10:08 | 9.51 | 9.12 | 9.75 | 9.17 | 9.74 | 9.21 |
| pH [no unit] | 14-Sep-09 | 15:52 | 7.92 | 7.88 | 8.47 | 7.76 | 8.81 | 7.85 |
| Conductivity [uS/cm] | 14-Sep-09 | 15:52 | 95 | 122 | 85 | 98 | 97 | 87 |
| Alkalinity [mg/L as CaCO3] | 14-Sep-09 | 15:52 | 40 | 45 | 40 | 41 | 44 | 39 |
| Sulphate [mg/L] | 16-Sep-09 | 11:53 | 3.5 | 3.4 | 1.0 | 1.0 | 1.7 | 0.9 |
| Chloride [mg/L] | 16-Sep-09 | 11:53 | 0.7 | 1.0 | 0.6 | 0.7 | 1.0 | 0.9 |
| Mercury [mg/L] | 14-Sep-09 | 15:29 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 14-Sep-09 | 15:39 | 0.00002 | 0.00025 | 0.00006 | 0.00004 | 0.00003 | < 0.00001 |
| Aluminum [mg/L] | 14-Sep-09 | 15:39 | 0.97 | 0.56 | 1.60 | 0.43 | 1.24 | 0.46 |
| Arsenic [mg/L] | 14-Sep-09 | 15:39 | 0.159 | 0.0059 | 0.0244 | 0.0210 | 0.0230 | 0.0047 |
| Boron [mg/L] | 14-Sep-09 | 15:39 | 0.0322 | 0.0231 | 0.0191 | 0.0188 | 0.0200 | 0.0166 |
| Beryllium [mg/L] | 14-Sep-09 | 15:39 | < 0.00002 | 0.00022 | 0.00003 | 0.00003 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 14-Sep-09 | 15:39 | 0.00017 | 0.00025 | 0.00004 | 0.00003 | 0.00001 | < 0.00001 |
| Calcium [mg/L] | 14-Sep-09 | 15:39 | 4.22 | 9.58 | 2.47 | 8.40 | 3.60 | 8.14 |
| Cadmium [mg/L] | 14-Sep-09 | 15:39 | 0.000005 | 0.000229 | 0.000031 | 0.000021 | 0.000009 | < 0.000003 |
| Cobalt [mg/L] | 14-Sep-09 | 15:39 | 0.000152 | 0.000242 | 0.000141 | 0.000060 | 0.000085 | 0.000037 |
| Chromium [mg/L] | 14-Sep-09 | 15:39 | 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 14-Sep-09 | 15:39 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 14-Sep-09 | 15:39 | 0.16 | 0.01 | 0.31 | 0.10 | 0.16 | 0.04 |
| Potassium [mg/L] | 14-Sep-09 | 15:39 | 10.4 | 13.7 | 13.9 | 12.0 | 12.3 | 9.51 |
| Lithium [mg/L] | 14-Sep-09 | 15:39 | 0.002 | 0.003 | 0.001 | < 0.001 | 0.003 | < 0.001 |
| Magnesium [mg/L] | 14-Sep-09 | 15:39 | 0.579 | 0.792 | 0.280 | 0.644 | 0.276 | 0.770 |
| Manganese [mg/L] | 14-Sep-09 | 15:39 | 0.00145 | 0.00096 | 0.00239 | 0.00064 | 0.00161 | 0.00033 |
| Molybdenum [mg/L] | 14-Sep-09 | 15:39 | 0.00475 | 0.00049 | 0.00042 | 0.00031 | 0.00132 | 0.00021 |
| Sodium [mg/L] | 14-Sep-09 | 15:39 | 7.98 | 4.24 | 6.12 | 1.78 | 8.73 | 1.73 |
| Nickel [mg/L] | 14-Sep-09 | 15:39 | 0.0007 | 0.0003 | 0.0004 | < 0.0001 | 0.0003 | < 0.0001 |
| Lead [mg/L] | 14-Sep-09 | 15:39 | 0.00012 | 0.00021 | 0.00014 | 0.00003 | 0.00010 | 0.00005 |
| Antimony [mg/L] | 14-Sep-09 | 15:39 | 0.0008 | 0.0005 | 0.0007 | 0.0006 | 0.0007 | 0.0007 |
| Selenium [mg/L] | 14-Sep-09 | 15:39 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

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**LR Report :** **CA11286-AUG09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML90-10-1 | 6: ML90-10-2 | 7: ML90-10-3 | 8: ML90-09-1 | 9: ML90-09-2 | 10: ML92-053-1 |
|---|---|---|---|---|---|---|---|---|
| Tin [mg/L] | 14-Sep-09 | 15:39 | 0.00006 | 0.00002 | 0.00009 | 0.00002 | 0.00007 | 0.00002 |
| Strontium [mg/L] | 14-Sep-09 | 15:39 | 0.0205 | 0.0897 | 0.0117 | 0.126 | 0.0175 | 0.134 |
| Titanium [mg/L] | 14-Sep-09 | 15:39 | 0.0098 | 0.0003 | 0.0168 | 0.0005 | 0.0103 | 0.0002 |
| Thallium [mg/L] | 14-Sep-09 | 15:39 | < 0.00002 | 0.00022 | 0.00004 | 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 14-Sep-09 | 15:39 | 0.00116 | 0.000520 | 0.000498 | 0.000062 | 0.00134 | 0.000033 |
| Vanadium [mg/L] | 14-Sep-09 | 15:39 | 0.00874 | 0.00076 | 0.0103 | 0.00030 | 0.0145 | 0.00029 |
| Tungsten [mg/L] | 14-Sep-09 | 15:39 | 0.00146 | 0.00123 | 0.00084 | 0.00066 | 0.00079 | 0.00079 |
| Yttrium [mg/L] | 14-Sep-09 | 15:39 | 0.000250 | 0.000205 | 0.000201 | 0.000027 | 0.000246 | 0.000007 |
| Zinc [mg/L] | 14-Sep-09 | 15:39 | < 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.003 |

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*Project Specialist*
*Environmental Services, Analytical*

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**NAG Test**

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Wednesday, September 09, 2009

**Date Rec. :** 31 August 2009
**LR Report:** **CA11287-AUG09**
**Reference:** Discovery Deposit

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# CERTIFICATE OF ANALYSIS

## Final Report

| Sample ID | Sample Date & Time | Sample weight(g) | vol H2O2 mL | Final pH units | NaOH Normality | Vol NaOH to PH 4.5 mL | Vol NaOH to PH 7.0 mL | NAG (pH 4.5) kg H2SO4/tonne | NAG (pH 7.0) kg H2SO4/tonne |
|---|---|---|---|---|---|---|---|---|---|
| 3: Analysis Approval Date | | 08-Sep-09 | 08-Sep-09 | 08-Sep-09 | 08-Sep-09 | 08-Sep-09 | 08-Sep-09 | 08-Sep-09 | 08-Sep-09 |
| 4: Analysis Approval Time | | 16:00 | 16:00 | 16:00 | 16:00 | 16:00 | 16:00 | 16:00 | 16:00 |
| 5: ML90-10-1 | Date:N/A | 1.54 | 150 | 7.31 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 6: ML90-10-2 | Date:N/A | 1.50 | 150 | 10.03 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 7: ML90-10-3 | Date:N/A | 1.51 | 150 | 7.54 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 8: ML90-09-1 | Date:N/A | 1.47 | 150 | 9.77 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 9: ML90-09-2 | Date:N/A | 1.51 | 150 | 9.86 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 10: ML92-053-1 | Date:N/A | 1.47 | 150 | 10.71 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 11: ML08-236-1 | Date:N/A | 1.48 | 150 | 10.34 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 12: ML08-236-2 | Date:N/A | 1.45 | 150 | 7.83 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 13: ML08-236-3 | Date:N/A | 1.46 | 150 | 7.47 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 14: ML92-060-1 | Date:N/A | 1.52 | 150 | 9.29 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 15: ML90-14-2 | Date:N/A | 1.46 | 150 | 7.11 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |
| 16: ML95-82-1 | Date:N/A | 1.48 | 150 | 3.33 | 0.10 | 0.80 | 1.30 | 2.6 | 4.3 |
| 17: ML95-82-2 | Date:N/A | 1.45 | 150 | 2.88 | 0.10 | 2.50 | 3.50 | 8.4 | 12 |
| 18: ML95-82-3 | Date:N/A | 1.47 | 150 | 10.03 | 0.10 | 0.00 | 0.00 | 0.0 | 0.0 |

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**NAG Test**

**LR Report :** **CA11287-AUG09**

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, September 15, 2009

**Date Rec. :** 31 August 2009
**LR Report:** **CA11285-AUG09**
**Reference:** Discovery Deposit

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 11: ML08-236-1 | 12: ML08-236-2 | 13: ML08-236-3 | 14: ML92-060-1 | 15: ML90-14-2 | 16: ML95-82-1 | 17: ML95-82-2 | 18: ML95-82-3 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Paste pH [units] | 9.65 | 9.74 | 9.47 | 8.95 | 9.61 | 9.32 | 8.67 | 9.82 |
| Fizz Rate [---] | 3 | 2 | 2 | 3 | 1 | 1 | 3 | 3 |
| Sample [weight(g)] | 2.04 | 2.05 | 1.99 | 1.96 | 2.02 | 2.02 | 1.98 | 2.02 |
| HCl added [mL] | 26.00 | 20.00 | 20.00 | 26.90 | 20.00 | 20.00 | 20.00 | 20.00 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 12.60 | 14.60 | 14.60 | 16.30 | 15.10 | 17.00 | 9.30 | 10.60 |
| Final pH [units] | 1.86 | 1.36 | 1.53 | 1.68 | 1.47 | 1.12 | 1.93 | 1.91 |
| NP [t CaCO3/1000t] | 33 | 13 | 14 | 27 | 12 | 7.4 | 27 | 23 |
| AP [t CaCO3/1000 t] | 5.0 | 2.5 | 3.4 | 10.0 | 2.5 | 3.8 | 33.1 | 2.5 |
| Net NP [t CaCO3/1000 t] | 27.8 | 10.7 | 10.2 | 17.0 | 9.6 | 3.6 | -6.1 | 20.8 |
| NP/AP [ratio] | 6.6 | 5.3 | 4.0 | 2.7 | 4.8 | 1.9 | 0.82 | 9.3 |
| Total Sulphur [%] | 0.245 | 0.176 | 0.183 | 0.424 | 0.145 | 0.246 | 1.26 | 0.138 |
| Acid Leachable SO4-S [%] | 0.09 | 0.09 | 0.07 | 0.11 | 0.06 | 0.12 | 0.20 | 0.06 |
| Sulphide-S [%] | 0.16 | 0.08 | 0.11 | 0.32 | 0.08 | 0.12 | 1.06 | 0.08 |
| Total Carbon [%] | 0.430 | 0.095 | 0.117 | 0.238 | 0.108 | 0.031 | 0.326 | 0.208 |
| Carbonate (CO3) [%] | 1.74 | 0.376 | 0.433 | 0.810 | 0.396 | 0.089 | 1.10 | 0.883 |

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**LR Report : CA11285-AUG09**

*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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260-12500 Horseshoe Way, Richmond
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Phone: 604-241-4566, Fax:604-241-4586

Friday, September 11, 2009

**Date Rec. :** 31 August 2009
**LR Report:** **CA11284-AUG09**
**Reference:** Discovery Deposit

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML90-10-1 | 6: ML90-10-2 | 7: ML90-10-3 | 8: ML90-09-1 | 9: ML90-09-2 | 10: ML92-053-1 | 11: ML08-236-1 | 12: ML08-236-2 | 13: ML08-236-3 | 14: ML92-060-1 | 15: ML90-14-2 | 16: ML95-82-1 | 17: ML95-82-2 | 18: ML95-82-3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Silver [µg/g] | 11-Sep-09 | 12:09 | 0.47 | 0.34 | 0.41 | 2.1 | 0.49 | 0.26 | 0.28 | 0.46 | 0.43 | 0.28 | 0.43 | 0.59 | 0.52 | 3.3 |
| Aluminum [µg/g] | 11-Sep-09 | 07:51 | 84000 | 32000 | 78000 | 21000 | 84000 | 18000 | 40000 | 88000 | 89000 | 16000 | 89000 | 92000 | 14000 | 75000 |
| Arsenic [µg/g] | 11-Sep-09 | 12:09 | 36 | 35 | 8.6 | 96 | 8.9 | 19 | 14 | 29 | 34 | 2.0 | 29 | 100 | 10 | 74 |
| Barium [µg/g] | 11-Sep-09 | 12:09 | 550 | 410 | 560 | 81 | 540 | 75 | 720 | 650 | 520 | 160 | 650 | 660 | 100 | 520 |
| Beryllium [µg/g] | 11-Sep-09 | 12:09 | 0.97 | 0.82 | 1.1 | 0.24 | 1.00 | 0.34 | 1.3 | 1.1 | 1.1 | 0.42 | 1.1 | 1.1 | 0.37 | 0.99 |
| Bismuth [µg/g] | 11-Sep-09 | 12:09 | 0.18 | 0.11 | 0.15 | 0.20 | 0.13 | < 0.09 | 0.22 | 0.16 | 0.23 | < 0.09 | 0.18 | 0.16 | 0.30 | 0.37 |
| Calcium [µg/g] | 11-Sep-09 | 07:51 | 9800 | 26000 | 14000 | 21000 | 21000 | 23000 | 21000 | 20000 | 18000 | 16000 | 20000 | 9600 | 18000 | 21000 |
| Cadmium [µg/g] | 11-Sep-09 | 12:09 | 0.16 | 0.20 | 0.18 | 0.25 | 0.26 | 0.24 | 0.17 | 0.21 | 0.23 | 0.12 | 0.24 | 0.25 | 0.21 | 0.35 |
| Cobalt [µg/g] | 11-Sep-09 | 12:09 | 16 | 6.0 | 12 | 3.7 | 13 | 2.9 | 3.9 | 14 | 17 | 3.0 | 15 | 18 | 2.3 | 13 |
| Chromium [µg/g] | 11-Sep-09 | 12:09 | 160 | 130 | 120 | 99 | 120 | 99 | 130 | 130 | 170 | 91 | 140 | 140 | 68 | 140 |
| Copper [µg/g] | 11-Sep-09 | 07:50 | 31 | 18 | 18 | < 1 | 23 | 5 | 2 | 41 | 44 | 5 | 39 | 50 | 25 | 39 |
| Iron [µg/g] | 11-Sep-09 | 07:50 | 36000 | 170000 | 45000 | 260000 | 43000 | 260000 | 140000 | 53000 | 55000 | 270000 | 55000 | 44000 | 220000 | 43000 |
| Potassium [µg/g] | 11-Sep-09 | 07:50 | 20000 | 9900 | 20000 | 2100 | 19000 | 1200 | 15000 | 23000 | 20000 | 2700 | 19000 | 23000 | 2300 | 16000 |
| Lithium [µg/g] | 11-Sep-09 | 12:09 | 35 | 20 | 45 | 6 | 40 | 6 | 23 | 42 | 44 | 5 | 44 | 39 | 7 | 33 |
| Magnesium [µg/g] | 11-Sep-09 | 07:50 | 14000 | 5600 | 13000 | 9100 | 14000 | 9000 | 8600 | 15000 | 17000 | 10000 | 15000 | 17000 | 8800 | 13000 |
| Manganese [µg/g] | 11-Sep-09 | 12:09 | 270 | 380 | 320 | 350 | 410 | 250 | 330 | 430 | 410 | 310 | 400 | 340 | 630 | 430 |
| Molybdenum [µg/g] | 11-Sep-09 | 12:09 | 3.8 | 1.2 | 1.5 | 3.5 | 3.0 | 1.1 | 1.4 | 3.1 | 1.5 | 3.3 | 1.4 | 1.8 | 2.4 | 0.7 |
| Sodium [µg/g] | 11-Sep-09 | 07:49 | 24000 | 2200 | 21000 | 2000 | 27000 | 910 | 2700 | 21000 | 22000 | 3500 | 22000 | 21000 | 1900 | 24000 |
| Nickel [µg/g] | 11-Sep-09 | 12:09 | 49 | 19 | 36 | 9.0 | 40 | 8.0 | 12 | 45 | 54 | 7.7 | 46 | 62 | 6.4 | 44 |
| Lead [µg/g] | 11-Sep-09 | 12:09 | 9.4 | 6.0 | 9.7 | 3.4 | 7.9 | 2.7 | 8.8 | 11 | 16 | 3.2 | 10 | 11 | 5.5 | 8.6 |
| Antimony [µg/g] | 11-Sep-09 | 12:09 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 11-Sep-09 | 12:09 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 11-Sep-09 | 12:09 | 0.8 | 0.5 | 0.9 | < 0.5 | 0.7 | < 0.5 | 1.6 | 1.7 | 1.0 | < 0.5 | 1.0 | 1.2 | < 0.5 | 1.0 |

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**LR Report :** **CA11284-AUG09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML90-10-1 | 6: ML90-10-2 | 7: ML90-10-3 | 8: ML90-09-1 | 9: ML90-09-2 | 10: ML92-053-1 | 11: ML08-236-1 | 12: ML08-236-2 | 13: ML08-236-3 | 14: ML92-060-1 | 15: ML90-14-2 | 16: ML95-82-1 | 17: ML95-82-2 | 18: ML95-82-3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Strontium [µg/g] | 11-Sep-09 | 12:09 | 250 | 260 | 250 | 230 | 320 | 220 | 280 | 240 | 260 | 210 | 290 | 270 | 270 | 310 |
| Titanium [µg/g] | 11-Sep-09 | 07:49 | 3100 | 1300 | 2700 | 570 | 3300 | 560 | 1200 | 3600 | 3900 | 500 | 3700 | 4000 | 330 | 3000 |
| Thallium [µg/g] | 11-Sep-09 | 12:09 | 0.42 | 0.19 | 0.45 | 0.07 | 0.40 | 0.03 | 0.34 | 0.41 | 0.40 | 0.08 | 0.38 | 0.47 | 0.06 | 0.31 |
| Uranium [µg/g] | 11-Sep-09 | 12:09 | 2.9 | 1.4 | 1.6 | 0.45 | 3.7 | 0.40 | 1.3 | 1.9 | 1.8 | 0.46 | 1.8 | 2.5 | 0.65 | 2.0 |
| Vanadium [µg/g] | 11-Sep-09 | 12:09 | 77 | 28 | 66 | 16 | 82 | 14 | 22 | 90 | 110 | 17 | 94 | 100 | 9 | 80 |
| Yttrium [µg/g] | 11-Sep-09 | 12:09 | 9.0 | 6.6 | 7.3 | 6.2 | 11 | 5.7 | 6.3 | 9.9 | 8.6 | 6.3 | 9.0 | 8.3 | 8.0 | 7.8 |
| Zinc [µg/g] | 11-Sep-09 | 07:49 | 71 | 41 | 69 | 78 | 61 | 42 | 40 | 74 | 87 | 41 | 76 | 87 | 53 | 62 |

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*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, September 15, 2009

**Date Rec. :** 31 August 2009
**LR Report:** **CA11285-AUG09**
**Reference:** Discovery Deposit

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML90-10-1 | 6: ML90-10-2 | 7: ML90-10-3 | 8: ML90-09-1 | 9: ML90-09-2 | 10: ML92-053-1 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Paste pH [units] | 11-Sep-09 | 10:32 | 9.85 | 8.96 | 9.97 | 8.83 | 9.88 | 8.94 |
| Fizz Rate [---] | 11-Sep-09 | 10:32 | 1 | 3 | 1 | 3 | 2 | 3 |
| Sample [weight(g)] | 11-Sep-09 | 10:32 | 2.00 | 1.97 | 2.05 | 1.98 | 2.00 | 1.97 |
| HCl added [mL] | 11-Sep-09 | 10:32 | 20.00 | 31.00 | 20.00 | 26.00 | 20.00 | 26.60 |
| HCl [Normality] | 11-Sep-09 | 10:32 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 11-Sep-09 | 10:32 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 11-Sep-09 | 10:32 | 15.70 | 12.20 | 16.00 | 14.40 | 10.50 | 12.10 |
| Final pH [units] | 11-Sep-09 | 10:32 | 1.30 | 1.94 | 1.40 | 1.63 | 1.98 | 1.63 |
| NP [t CaCO3/1000t] | 11-Sep-09 | 10:32 | 11 | 48 | 9.8 | 29 | 24 | 37 |
| AP [t CaCO3/1000 t] | 11-Sep-09 | 10:32 | 1.6 | 20.9 | 0.62 | 9.4 | 1.9 | 4.1 |
| Net NP [t CaCO3/1000 t] | 11-Sep-09 | 10:32 | 9.2 | 26.8 | 9.18 | 19.9 | 21.9 | 32.7 |
| NP/AP [ratio] | 11-Sep-09 | 10:32 | 6.8 | 2.3 | 15.8 | 3.1 | 12.7 | 9.0 |
| Total Sulphur [%] | 04-Sep-09 | 14:41 | 0.116 | 0.908 | 0.038 | 0.426 | 0.145 | 0.189 |
| Acid Leachable SO4-S [%] | 11-Sep-09 | 10:27 | 0.06 | 0.23 | 0.01 | 0.12 | 0.09 | 0.06 |
| Sulphide-S [%] | 11-Sep-09 | 10:27 | 0.05 | 0.67 | 0.02 | 0.30 | 0.06 | 0.13 |
| Total Carbon [%] | 04-Sep-09 | 14:41 | 0.079 | 0.588 | 0.037 | 0.298 | 0.206 | 0.387 |
| Carbonate (CO3) [%] | 09-Sep-09 | 10:08 | 0.245 | 1.81 | 0.107 | 0.969 | 0.877 | 1.56 |

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**LR Report :** **CA11285-AUG09**

*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, September 11, 2009

**Date Rec. :** 31 August 2009
**LR Report:** **CA11283-AUG09**
**Reference:** Discovery Deposit

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 5: ML90-10-1 | 6: ML90-10-2 | 7: ML90-10-3 | 8: ML90-09-1 | 9: ML90-09-2 | 10: ML92-053-1 | 11: ML08-236-1 | 12: ML08-236-2 | 13: ML08-236-3 | 14: ML92-060-1 | 15: ML90-14-2 | 16: ML95-82-1 | 17: ML95-82-2 | 18: ML95-82-3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| SiO2 [%] | 66.6 | 57.5 | 64.7 | 48.5 | 63.0 | 48.8 | 62.5 | 61.7 | 61.4 | 48.8 | 62.0 | 63.1 | 52.9 | 65.5 |
| Al2O3 [%] | 15.5 | 6.37 | 15.5 | 3.96 | 16.3 | 3.55 | 7.68 | 16.9 | 16.6 | 3.06 | 16.6 | 17.3 | 2.98 | 15.4 |
| Fe2O3 [%] | 4.74 | 25.9 | 6.72 | 41.8 | 6.32 | 41.7 | 21.3 | 7.65 | 7.83 | 42.7 | 7.84 | 6.08 | 38.5 | 6.71 |
| MgO [%] | 2.31 | 0.99 | 2.33 | 1.54 | 2.31 | 1.56 | 1.45 | 2.53 | 2.77 | 1.78 | 2.48 | 2.70 | 1.69 | 2.25 |
| CaO [%] | 1.42 | 3.89 | 2.14 | 3.05 | 3.11 | 3.37 | 3.12 | 2.94 | 2.65 | 2.31 | 2.93 | 1.38 | 2.99 | 3.30 |
| Na2O [%] | 3.56 | 0.36 | 3.11 | 0.30 | 4.28 | 0.14 | 0.40 | 3.10 | 3.17 | 0.52 | 3.24 | 2.95 | 0.28 | 3.87 |
| K2O [%] | 2.22 | 1.16 | 2.50 | 0.24 | 2.29 | 0.14 | 1.78 | 2.81 | 2.18 | 0.31 | 2.28 | 2.74 | 0.28 | 1.92 |
| TiO2 [%] | 0.48 | 0.20 | 0.46 | 0.09 | 0.55 | 0.09 | 0.19 | 0.57 | 0.62 | 0.08 | 0.57 | 0.63 | 0.06 | 0.51 |
| P2O5 [%] | 0.10 | 0.17 | 0.11 | 0.27 | 0.15 | 0.22 | 0.15 | 0.14 | 0.11 | 0.20 | 0.12 | 0.12 | 0.26 | 0.14 |
| MnO [%] | 0.04 | 0.05 | 0.05 | 0.04 | 0.06 | 0.03 | 0.05 | 0.06 | 0.06 | 0.04 | 0.06 | 0.05 | 0.09 | 0.06 |
| Cr2O3 [%] | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 |
| V2O5 [%] | 0.02 | < 0.01 | 0.01 | < 0.01 | 0.02 | < 0.01 | < 0.01 | 0.02 | 0.02 | < 0.01 | 0.02 | 0.02 | < 0.01 | 0.02 |
| LOI [%] | 1.75 | 1.13 | 1.38 | -0.18 | 1.68 | 0.44 | 1.03 | 1.42 | 2.17 | -0.47 | 1.59 | 2.10 | -0.93 | 1.48 |
| Sum [%] | 98.8 | 97.7 | 99.0 | 99.6 | 100.1 | 100.1 | 99.7 | 99.9 | 99.6 | 99.4 | 99.8 | 99.2 | 99.1 | 101.2 |

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**LR Report :** **CA11283-AUG09**



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Friday, November 27, 2009

**Date Rec. :** 12 November 2009
**LR Report:** **CA11272-NOV09**
**Reference:** 09-1426-0013

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML00-221-04 | 6: ML90-04-01 | 7: ML90-12-01 | 8: ML92-061-01 | 9: ML95-93-02 | 10: ML95-93-03 |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 17-Nov-09 | 15:27 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| vol H2O2 [mL] | 17-Nov-09 | 15:27 | 250 | 250 | 250 | 250 | 250 | 250 |
| Final pH [units] | 17-Nov-09 | 15:27 | 4.87 | 6.39 | 5.72 | 4.36 | 4.01 | 10.46 |
| pH [no unit] | 19-Nov-09 | 15:10 | 4.92 | 6.07 | 5.38 | 4.56 | 4.12 | 8.89 |
| Alkalinity [mg/L as CaCO3] | 19-Nov-09 | 15:10 | < 2 | < 2 | < 2 | < 2 | < 2 | 46 |
| Acidity [mg/L as CaCO3] | 19-Nov-09 | 15:10 | 10 | 3 | 5 | 8 | 14 | < 2 |
| Conductivity [uS/cm] | 19-Nov-09 | 15:10 | 179 | 200 | 154 | 153 | 172 | 561 |
| Sulphate [mg/L] | 20-Nov-09 | 16:55 | 69 | 77 | 58 | 52 | 59 | 240 |
| Chloride [mg/L] | 19-Nov-09 | 12:30 | 0.3 | 0.2 | < 0.2 | < 0.2 | < 0.2 | 0.2 |
| Mercury [mg/L] | 19-Nov-09 | 12:03 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 23-Nov-09 | 09:19 | 0.00024 | 0.00002 | 0.00013 | 0.00021 | 0.00036 | < 0.00001 |
| Aluminum [mg/L] | 23-Nov-09 | 09:19 | 0.620 | 0.0097 | 0.0163 | 0.348 | 0.657 | 0.960 |
| Arsenic [mg/L] | 23-Nov-09 | 09:19 | 0.0004 | 0.0005 | 0.0011 | 0.0004 | 0.0003 | 0.0007 |
| Boron [mg/L] | 23-Nov-09 | 09:19 | 0.0979 | 0.0654 | 0.0633 | 0.0708 | 0.0464 | 0.503 |
| Beryllium [mg/L] | 23-Nov-09 | 09:19 | 0.00003 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 23-Nov-09 | 09:19 | < 0.00001 | < 0.00001 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 19-Nov-09 | 16:05 | 10.4 | 14.9 | 7.80 | 6.82 | 7.46 | 104 |
| Cadmium [mg/L] | 23-Nov-09 | 09:19 | 0.000643 | 0.000036 | 0.000146 | 0.000434 | 0.000575 | 0.000005 |
| Cobalt [mg/L] | 23-Nov-09 | 09:19 | 0.00918 | 0.000928 | 0.00237 | 0.0453 | 0.0681 | 0.000614 |
| Chromium [mg/L] | 23-Nov-09 | 09:19 | 0.0096 | 0.0403 | 0.0250 | 0.0067 | 0.0076 | 0.0182 |
| Copper [mg/L] | 23-Nov-09 | 09:19 | 0.0035 | 0.0006 | 0.0011 | 0.0151 | 0.0345 | 0.0010 |
| Iron [mg/L] | 19-Nov-09 | 16:05 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Potassium [mg/L] | 19-Nov-09 | 16:05 | 8.46 | 14.3 | 12.7 | 9.73 | 10.9 | 10.5 |
| Lithium [mg/L] | 23-Nov-09 | 09:19 | 0.007 | 0.002 | 0.003 | 0.011 | 0.017 | 0.005 |
| Magnesium [mg/L] | 19-Nov-09 | 16:05 | 5.83 | 4.58 | 4.43 | 3.59 | 3.58 | 0.005 |
| Manganese [mg/L] | 23-Nov-09 | 09:19 | 0.168 | 0.0797 | 0.154 | 0.137 | 0.175 | 0.00135 |
| Molybdenum [mg/L] | 23-Nov-09 | 09:19 | 0.0158 | 0.00843 | 0.0114 | 0.0140 | 0.00968 | 0.00310 |
| Sodium [mg/L] | 19-Nov-09 | 16:05 | 1.73 | 2.69 | 2.42 | 1.58 | 1.69 | 0.94 |
| Nickel [mg/L] | 23-Nov-09 | 09:19 | 0.0637 | 0.0013 | 0.0042 | 0.248 | 0.257 | 0.0013 |
| Lead [mg/L] | 23-Nov-09 | 09:19 | 0.00038 | < 0.00002 | 0.00005 | 0.00039 | 0.00053 | < 0.00002 |
| Antimony [mg/L] | 23-Nov-09 | 09:19 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0003 | 0.0004 |
| Selenium [mg/L] | 23-Nov-09 | 09:19 | 0.002 | 0.002 | 0.002 | 0.001 | 0.001 | 0.003 |

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

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**LR Report :** **CA11272-NOV09**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML00-221-04 | 6: ML90-04-01 | 7: ML90-12-01 | 8: ML92-061-01 | 9: ML95-93-02 | 10: ML95-93-03 |
|---|---|---|---|---|---|---|---|---|
| Tin [mg/L] | 23-Nov-09 | 09:19 | 0.00003 | 0.00004 | 0.00003 | 0.00003 | 0.00003 | 0.00008 |
| Strontium [mg/L] | 23-Nov-09 | 09:19 | 0.0509 | 0.0569 | 0.0559 | 0.0415 | 0.0531 | 0.698 |
| Titanium [mg/L] | 23-Nov-09 | 09:19 | 0.0021 | 0.0006 | 0.0005 | 0.0009 | 0.0009 | 0.0006 |
| Thallium [mg/L] | 23-Nov-09 | 09:19 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 |
| Uranium [mg/L] | 23-Nov-09 | 09:19 | 0.000069 | 0.000040 | 0.000896 | 0.000088 | 0.000488 | 0.000042 |
| Vanadium [mg/L] | 23-Nov-09 | 09:19 | 0.0318 | 0.0157 | 0.0237 | 0.0176 | 0.0177 | 0.00031 |
| Tungsten [mg/L] | 23-Nov-09 | 09:19 | 0.00080 | < 0.00003 | 0.00045 | 0.00078 | 0.00004 | 0.00077 |
| Yttrium [mg/L] | 23-Nov-09 | 09:19 | 0.00210 | 0.000023 | 0.000103 | 0.00419 | 0.00673 | 0.000052 |
| Zinc [mg/L] | 23-Nov-09 | 09:19 | 0.013 | < 0.001 | 0.002 | 0.024 | 0.039 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**NAG Test**

**Project :** Meliadine Tiriganaiq

**Comaplex Minerals Corp**
Attn : Mark Balog mbalog@comaplex.com; Valerie_Bertrand@golder.com

Suite 901, 1015-4 St. SW
Calgary, AB
T2R 1J4,

Phone: 403-265-2846
Fax:403-232-1421

Thursday, November 19, 2009

**Date Rec. :** 09 November 2009
**LR Report:** **CA10080-NOV09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M05-536A-01 | 6: M97-141-01 | 7: M99-403-03 | 8: M99-404-04 |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 16-Nov-09 | 13:28 | 1.47 | 1.52 | 1.49 | 1.50 |
| vol H2O2 [mL] | 16-Nov-09 | 13:28 | 150 | 150 | 150 | 150 |
| Final pH [units] | 16-Nov-09 | 13:28 | 11.50 | 11.05 | 10.81 | 10.70 |
| NaOH [Normality] | 16-Nov-09 | 13:28 | 0.10 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 16-Nov-09 | 13:28 | 0.00 | 0.00 | 0.00 | 0.00 |
| NAG pH4.5 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.0 |
| NAG pH7.0 [kg H2SO4/tonne] | 16-Nov-09 | 13:28 | 0.0 | 0.0 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**NAG Test**

**Project :** Meliadine F-Zone

**Comaplex Minerals Corp**
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Thursday, November 19, 2009

**Date Rec. :** 09 November 2009
**LR Report:** **CA10083-NOV09**
**Reference:** 09-1426-0015

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: M08-750-03 | 6: M08-740-05 | 7: M08-734-03 |
|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A |
| Sample [weight(g)] | 16-Nov-09 | 13:27 | 1.51 | 1.52 | 1.51 |
| vol H2O2 [mL] | 16-Nov-09 | 13:27 | 150 | 150 | 150 |
| Final pH [units] | 16-Nov-09 | 13:27 | 11.52 | 11.43 | 11.56 |
| NaOH [Normality] | 16-Nov-09 | 13:27 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 16-Nov-09 | 13:27 | 0.00 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 16-Nov-09 | 13:27 | 0.00 | 0.00 | 0.00 |
| NAG pH4.5 [kg H2SO4/tonne] | 16-Nov-09 | 13:27 | 0.0 | 0.0 | 0.0 |
| NAG pH7.0 [kg H2SO4/tonne] | 16-Nov-09 | 13:27 | 0.0 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
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*Environmental Services, Analytical*

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Thursday, March 04, 2010

**Date Rec. :** 24 February 2010
**LR Report:** **CA11029-FEB10**
**Reference:** 09-1426-0013 Discovery

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML92-061-01 | 6: ML90-14-2 | 7: ML95-82-1 |
|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a |
| Sample [weight(g)] | 25-Feb-10 | 14:26 | 1.48 | 1.53 | 1.48 |
| vol H2O2 [mL] | 25-Feb-10 | 14:26 | 150 | 150 | 150 |
| Final pH [units] | 25-Feb-10 | 14:26 | 4.80 | 7.42 | 3.40 |
| NaOH [Normality] | 25-Feb-10 | 14:26 | 0.10 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 25-Feb-10 | 14:26 | 0.00 | 0.00 | 0.60 |
| Vol NaOH to PH 7.0 [mL] | 25-Feb-10 | 14:26 | 0.30 | 0.00 | 1.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 25-Feb-10 | 14:26 | 0.0 | 0.0 | 2.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 25-Feb-10 | 14:26 | 1.0 | 0.0 | 3.3 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, March 10, 2010

**Date Rec. :** 24 February 2010
**LR Report:** **CA11033-FEB10**
**Reference:** 09-1426-0013 Discovery

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML92-061-01 | 6: ML90-14-2 | 7: ML95-82-1 |
|---|---|---|---|---|---|
| Sample Date & Time | | | Date:n/a | Date:n/a | Date:n/a |
| Sample [weight(g)] | 25-Feb-10 | 14:26 | 2.47 | 2.59 | 2.47 |
| vol H2O2 [mL] | 25-Feb-10 | 14:26 | 250 | 250 | 250 |
| pH [no unit] | 02-Mar-10 | 09:02 | 4.78 | 6.87 | 3.46 |
| Conductivity [uS/cm] | 02-Mar-10 | 09:02 | 127 | 138 | 269 |
| Alkalinity [mg/L as CaCO3] | 02-Mar-10 | 09:02 | < 2 | 6 | < 2 |
| Sulphate [mg/L] | 09-Mar-10 | 11:03 | 45 | 45 | 62 |
| Chloride [mg/L] | 05-Mar-10 | 15:06 | < 2 | < 2 | < 2 |
| Silver [mg/L] | 02-Mar-10 | 08:49 | 0.00035 | 0.00001 | 0.00028 |
| Aluminum [mg/L] | 02-Mar-10 | 12:58 | 0.14 | 0.14 | 1.19 |
| Arsenic [mg/L] | 02-Mar-10 | 08:49 | < 0.0002 | 0.0301 | 0.0004 |
| Barium [mg/L] | 02-Mar-10 | 08:49 | 0.0489 | 0.0161 | 0.0634 |
| Beryllium [mg/L] | 02-Mar-10 | 08:49 | < 0.00002 | < 0.00002 | 0.00014 |
| Boron [mg/L] | 02-Mar-10 | 08:49 | 0.302 | 0.0884 | 0.328 |
| Bismuth [mg/L] | 02-Mar-10 | 08:49 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 02-Mar-10 | 12:58 | 7.08 | 14.2 | 7.44 |
| Cadmium [mg/L] | 02-Mar-10 | 08:49 | 0.000365 | 0.000005 | 0.000582 |
| Cobalt [mg/L] | 02-Mar-10 | 08:49 | 0.0249 | 0.000060 | 0.132 |
| Chromium [mg/L] | 02-Mar-10 | 08:49 | 0.0072 | 0.0244 | 0.0060 |
| Copper [mg/L] | 02-Mar-10 | 08:49 | 0.0070 | 0.0005 | 0.361 |
| Iron [mg/L] | 02-Mar-10 | 12:58 | < 0.01 | < 0.01 | 0.16 |
| Potassium [mg/L] | 02-Mar-10 | 12:58 | 9.64 | 14.3 | 6.05 |
| Lithium [mg/L] | 02-Mar-10 | 12:58 | < 0.002 | 0.004 | < 0.002 |
| Magnesium [mg/L] | 02-Mar-10 | 12:58 | 3.11 | 0.145 | 1.79 |
| Manganese [mg/L] | 02-Mar-10 | 08:49 | 0.137 | 0.00068 | 0.130 |
| Molybdenum [mg/L] | 02-Mar-10 | 08:49 | 0.0129 | 0.0109 | 0.00009 |
| Sodium [mg/L] | 02-Mar-10 | 12:58 | 1.74 | 1.60 | 1.28 |
| Nickel [mg/L] | 02-Mar-10 | 08:49 | 0.180 | < 0.0001 | 0.390 |
| Lead [mg/L] | 02-Mar-10 | 08:49 | 0.00008 | 0.00047 | 0.00629 |
| Antimony [mg/L] | 02-Mar-10 | 08:49 | 0.0003 | 0.0003 | 0.0003 |
| Selenium [mg/L] | 02-Mar-10 | 08:49 | 0.001 | < 0.001 | 0.001 |
| Tin [mg/L] | 02-Mar-10 | 08:49 | 0.00001 | 0.00004 | < 0.00001 |
| Strontium [mg/L] | 02-Mar-10 | 12:58 | 0.0358 | 0.0377 | 0.0404 |

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**LR Report :** **CA11033-FEB10**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: ML92-061-01 | 6: ML90-14-2 | 7: ML95-82-1 |
|---|---|---|---|---|---|
| Titanium [mg/L] | 02-Mar-10 | 08:49 | 0.0008 | 0.0018 | 0.0005 |
| Thallium [mg/L] | 02-Mar-10 | 08:49 | < 0.0002 | < 0.0002 | 0.0002 |
| Uranium [mg/L] | 02-Mar-10 | 08:49 | 0.000038 | 0.000047 | 0.00364 |
| Vanadium [mg/L] | 02-Mar-10 | 08:49 | 0.0161 | 0.0271 | < 0.00003 |
| Tungsten [mg/L] | 02-Mar-10 | 08:49 | 0.00216 | 0.00242 | < 0.00003 |
| Yttrium [mg/L] | 02-Mar-10 | 08:49 | 0.00114 | 0.000008 | 0.00976 |
| Zinc [mg/L] | 02-Mar-10 | 08:49 | 0.012 | < 0.001 | 0.112 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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# H.2 Waste Rock and Ore Kinetic Test Results

# H.2.1 HCT Kinetic Test Results

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M03-508-01
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11016-DEC11 | CA11021-DEC11 | CA11096-DEC11 | CA10315-DEC11 | CA10055-JAN12 | CA10062-JAN12 | CA11012-JAN12 | CA10201-JAN12 | CA10032-FEB12 | CA10040-FEB12 | CA10148-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 802 | 984 | 992 | 992 | 984 | 986 | 981 | 997 | 987 | 986 | 986 |
| pH | no unit | 8.33 | 7.74 | 7.75 | 7.48 | 7.66 | 7.50 | 7.28 | 7.34 | 7.28 | 7.24 | 7.25 |
| Alkalinity | mg/L as CaCO3 | 17 | 18 | 15 | 15 | 15 | 15 | 12 | 11 | 10 | 11 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 38 | 6 | 38 | 38 | 27 | 30 | 5 | 24 | 27 | 26 | 25 |
| Sulphate | mg/L | 1.8 | 2.8 | 2.4 | 2.4 | 1.8 | 2 | 1.6 | 1.4 | 1.4 | 1.4 | 1.3 |
| Calcium | mg/L | 4.88 | 4.95 | 4.0 | 4.35 | 4.35 | 4.43 | 3.35 | 3.48 | 3.3 | 3.55 | 3.23 |
| Fluoride | mg/L | 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 0.40 | 0.4 | 0.3 | 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.04 | 0.01 | 0.02 | 0.01 | --- | 0.03 | --- | --- | 0.02 | --- | --- |
| Arsenic | mg/L | 0.0046 | 0.0064 | 0.0062 | 0.0062 | --- | 0.0083 | --- | --- | 0.0087 | --- | --- |
| Barium | mg/L | 0.00064 | 0.0007 | 0.0007 | 0.00069 | --- | 0.00077 | --- | --- | 0.00051 | --- | --- |
| Boron | mg/L | < 0.0002 | 0.0032 | 0.0024 | 0.0025 | --- | 0.0025 | --- | --- | 0.0009 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000013 | 0.00001 | < 0.000003 | 0.000007 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000141 | 0.000162 | 0.000105 | 0.000103 | --- | 0.000111 | --- | --- | 0.000105 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.006 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.72 | 2.22 | 1.68 | 1.59 | --- | 1.24 | --- | --- | 0.818 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.332 | 0.683 | 0.601 | 0.71 | --- | 0.707 | --- | --- | 0.565 | --- | --- |
| Manganese | mg/L | 0.0184 | 0.0226 | 0.0193 | 0.0187 | --- | 0.0183 | --- | --- | 0.013 | --- | --- |
| Molybdenum | mg/L | 0.00029 | 0.00048 | 0.00036 | 0.00029 | --- | 0.00021 | --- | --- | 0.00008 | --- | --- |
| Sodium | mg/L | 1.44 | 1.96 | 1.3 | 1.17 | --- | 0.79 | --- | --- | 0.4 | --- | --- |
| Nickel | mg/L | 0.0004 | 0.0003 | 0.0004 | 0.0004 | --- | 0.0004 | --- | --- | 0.0001 | --- | --- |
| Lead | mg/L | 0.00026 | 0.00014 | 0.00006 | < 0.00002 | --- | < 0.00002 | --- | --- | 0.00003 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | 0.01 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0013 | 0.003 | 0.0026 | 0.0026 | --- | 0.0025 | --- | --- | 0.0015 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00267 | 0.00156 | 0.00079 | 0.00044 | --- | 0.00044 | --- | --- | 0.00017 | --- | --- |
| Strontium | mg/L | 0.016 | 0.0209 | 0.0181 | 0.0197 | --- | 0.0189 | --- | --- | 0.0137 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0001 | 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000018 | 0.000158 | 0.000183 | 0.000243 | --- | 0.000298 | --- | --- | 0.000263 | --- | --- |
| Vanadium | mg/L | 0.00016 | 0.00015 | 0.00014 | 0.00009 | --- | 0.00017 | --- | --- | 0.00013 | --- | --- |
| Tungsten | mg/L | 0.00004 | 0.00014 | 0.00011 | 0.0001 | --- | 0.0001 | --- | --- | 0.00004 | --- | --- |
| Yttrium | mg/L | 0.00002 | 0.000011 | 0.000007 | 0.000006 | --- | 0.000005 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M03-508-01
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10206-FEB12 | CA10003-MAR12 | CA10060-MAR12 | CA10115-MAR12 | CA10167-MAR12 | CA10221-MAR12 | CA10047-APR12 | CA10097-APR12 | CA10103-APR12 | CA10197-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 988 | 976 | 992 | 987 | 995 | 985 | 986 | 995 | 990 | 989 |
| pH | no unit | 7.17 | 7.04 | 7.36 | 7.07 | 7.26 | 7.25 | 6.64 | 7.17 | 7.24 | 7.16 |
| Alkalinity | mg/L as CaCO3 | 10 | 9 | 10 | 11 | 10 | 9 | 17 | 9 | 12 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 25 | 24 | 26 | 23 | 24 | 18 | 22 | 22 | 23 | 21 |
| Sulphate | mg/L | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1 | 1 | 1 |
| Calcium | mg/L | 3.28 | 3.08 | 3.56 | 3.16 | 3.37 | 3.18 | 3.22 | 3.4 | 3.05 | 3.28 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.02 | --- | --- | --- | 0.03 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0098 | --- | --- | --- | 0.0126 | --- | --- | --- | 0.0118 |
| Barium | mg/L | --- | 0.0005 | --- | --- | --- | 0.00048 | --- | --- | --- | 0.00037 |
| Boron | mg/L | --- | 0.0008 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0003 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000148 | --- | --- | --- | 0.00015 | --- | --- | --- | 0.000189 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | 0.05 |
| Potassium | mg/L | --- | 0.558 | --- | --- | --- | 0.386 | --- | --- | --- | 0.302 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.532 | --- | --- | --- | 0.515 | --- | --- | --- | 0.486 |
| Manganese | mg/L | --- | 0.012 | --- | --- | --- | 0.0122 | --- | --- | --- | 0.0133 |
| Molybdenum | mg/L | --- | 0.00006 | --- | --- | --- | 0.00006 | --- | --- | --- | 0.00018 |
| Sodium | mg/L | --- | 0.23 | --- | --- | --- | 0.15 | --- | --- | --- | 0.11 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | 0.0004 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0013 | --- | --- | --- | 0.0012 | --- | --- | --- | 0.0009 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00022 | --- | --- | --- | 0.00024 | --- | --- | --- | 0.00021 |
| Strontium | mg/L | --- | 0.0124 | --- | --- | --- | 0.0121 | --- | --- | --- | 0.0122 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000355 | --- | --- | --- | 0.000398 | --- | --- | --- | 0.00039 |
| Vanadium | mg/L | --- | 0.00017 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.00019 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000003 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M06-623-01
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11016-DEC11 | CA11021-DEC11 | CA11096-DEC11 | CA10315-DEC11 | CA10055-JAN12 | CA10062-JAN12 | CA11012-JAN12 | CA10201-JAN12 | CA10032-FEB12 | CA10040-FEB12 | CA10148-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 823 | 954 | 983 | 997 | 974 | 983 | 976 | 993 | 979 | 981 | 988 |
| pH | no unit | 7.79 | 7.55 | 7.41 | 7.37 | 7.38 | 7.42 | 7.37 | 7.35 | 7.32 | 7.22 | 7.31 |
| Alkalinity | mg/L as CaCO3 | 13 | 15 | 15 | 13 | 12 | 13 | 12 | 13 | 12 | 11 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 31 | 5 | 36 | 31 | 21 | 24 | 27 | 22 | 28 | 25 | 25 |
| Sulphate | mg/L | 1.5 | 1.8 | 1.3 | 1.1 | 0.8 | 0.8 | 0.7 | 0.8 | 0.7 | 0.6 | 0.6 |
| Calcium | mg/L | 3.28 | 3.64 | 3.8 | 3.91 | 3.37 | 3.77 | 3.45 | 3.93 | 3.89 | 3.73 | 3.44 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.80 | 1 | 0.5 | 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.07 | 0.03 | 0.02 | 0.02 | --- | 0.03 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0043 | 0.0214 | 0.0199 | 0.0219 | --- | 0.0192 | --- | --- | 0.019 | --- | --- |
| Barium | mg/L | 0.00088 | 0.00101 | 0.00108 | 0.001 | --- | 0.00096 | --- | --- | 0.00122 | --- | --- |
| Boron | mg/L | 0.0003 | 0.0063 | 0.0046 | 0.0038 | --- | 0.0029 | --- | --- | 0.0012 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000016 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000019 | 0.000054 | 0.000099 | 0.000102 | --- | 0.000145 | --- | --- | 0.00014 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0006 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.015 | 0.006 | 0.004 | 0.005 | --- | 0.006 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 2.48 | 2.69 | 1.98 | 1.49 | --- | 0.905 | --- | --- | 0.635 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.3 | 0.561 | 0.654 | 0.65 | --- | 0.612 | --- | --- | 0.635 | --- | --- |
| Manganese | mg/L | 0.00525 | 0.00571 | 0.00758 | 0.00637 | --- | 0.00774 | --- | --- | 0.00743 | --- | --- |
| Molybdenum | mg/L | 0.00045 | 0.00081 | 0.00051 | 0.00034 | --- | 0.0002 | --- | --- | 0.00014 | --- | --- |
| Sodium | mg/L | 1.84 | 1.86 | 1.03 | 0.66 | --- | 0.31 | --- | --- | 0.17 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0003 | 0.0005 | 0.0004 | --- | 0.0006 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | 0.00003 | 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0007 | 0.0032 | 0.0027 | 0.0023 | --- | 0.0017 | --- | --- | 0.0013 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00107 | 0.00067 | 0.00053 | 0.00032 | --- | 0.00025 | --- | --- | 0.00017 | --- | --- |
| Strontium | mg/L | 0.0179 | 0.0239 | 0.0263 | 0.0247 | --- | 0.023 | --- | --- | 0.0223 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0006 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000073 | 0.000474 | 0.000435 | 0.000403 | --- | 0.000314 | --- | --- | 0.000274 | --- | --- |
| Vanadium | mg/L | 0.00013 | 0.00012 | 0.00009 | 0.00006 | --- | 0.00007 | --- | --- | 0.00007 | --- | --- |
| Tungsten | mg/L | 0.00022 | 0.00081 | 0.00058 | 0.00045 | --- | 0.00022 | --- | --- | 0.00015 | --- | --- |
| Yttrium | mg/L | 0.000019 | 0.000009 | 0.000003 | 0.000006 | --- | 0.000002 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M06-623-01
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10206-FEB12 | CA10003-MAR12 | CA10060-MAR12 | CA10115-MAR12 | CA10167-MAR12 | CA10221-MAR12 | CA10047-APR12 | CA10097-APR12 | CA10103-APR12 | CA10197-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 982 | 984 | 986 | 988 | 988 | 986 | 980 | 986 | 987 | 991 |
| pH | no unit | 7.22 | 7.22 | 7.39 | 7.12 | 7.30 | 7.30 | 6.69 | 7.17 | 7.32 | 7.28 |
| Alkalinity | mg/L as CaCO3 | 10 | 11 | 11 | 12 | 11 | 11 | 19 | 9 | 13 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 24 | 20 | 19 | 23 | 24 | 18 | 24 | 18 | 23 | 23 |
| Sulphate | mg/L | 0.7 | 0.7 | 0.6 | 0.6 | 0.7 | 0.6 | 0.6 | 0.5 | 0.6 | 0.6 |
| Calcium | mg/L | 3.31 | 3.72 | 3.69 | 3.53 | 3.61 | 3.56 | 3.59 | 3.38 | 3.4 | 3.47 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.04 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0133 | --- | --- | --- | 0.013 | --- | --- | --- | 0.0088 |
| Barium | mg/L | --- | 0.00072 | --- | --- | --- | 0.00063 | --- | --- | --- | 0.00057 |
| Boron | mg/L | --- | 0.0009 | --- | --- | --- | 0.0004 | --- | --- | --- | 0.0006 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000182 | --- | --- | --- | 0.000216 | --- | --- | --- | 0.00022 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.382 | --- | --- | --- | 0.253 | --- | --- | --- | 0.208 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.609 | --- | --- | --- | 0.587 | --- | --- | --- | 0.593 |
| Manganese | mg/L | --- | 0.0082 | --- | --- | --- | 0.0078 | --- | --- | --- | 0.00826 |
| Molybdenum | mg/L | --- | 0.00013 | --- | --- | --- | 0.00012 | --- | --- | --- | 0.00011 |
| Sodium | mg/L | --- | 0.1 | --- | --- | --- | 0.07 | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | 0.0002 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0011 | --- | --- | --- | 0.001 | --- | --- | --- | 0.0008 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00013 | --- | --- | --- | 0.00011 | --- | --- | --- | 0.00008 |
| Strontium | mg/L | --- | 0.021 | --- | --- | --- | 0.0194 | --- | --- | --- | 0.0199 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000201 | --- | --- | --- | 0.000158 | --- | --- | --- | 0.000126 |
| Vanadium | mg/L | --- | 0.00006 | --- | --- | --- | 0.00004 | --- | --- | --- | 0.00004 |
| Tungsten | mg/L | --- | 0.0001 | --- | --- | --- | 0.00008 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | < 0.000001 | --- | --- | --- | < 0.000001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M06-625-01
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11016-DEC11 | CA11021-DEC11 | CA11096-DEC11 | CA10315-DEC11 | CA10055-JAN12 | CA10062-JAN12 | CA11012-JAN12 | CA10201-JAN12 | CA10032-FEB12 | CA10040-FEB12 | CA10148-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 844 | 985 | 982 | 987 | 991 | 984 | 977 | 981 | 978 | 986 | 990 |
| pH | no unit | 7.58 | 7.45 | 7.36 | 7.74 | 7.26 | 7.27 | 7.18 | 7.14 | 7.17 | 7.14 | 7.16 |
| Alkalinity | mg/L as CaCO3 | 11 | 13 | 12 | 16 | 10 | 9 | 9 | 10 | 9 | 516 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 31 | 5 | 32 | 45 | 22 | 4 | 25 | 24 | 24 | 24 | 24 |
| Sulphate | mg/L | 2.5 | 2.6 | 2.3 | 2.2 | 2.1 | 2 | 1.8 | 1.7 | 1.7 | 1.5 | 1.4 |
| Calcium | mg/L | 2.13 | 2.36 | 2.0 | 2.57 | 2.18 | 2.07 | 2.02 | 2.36 | 2.35 | 2.58 | 2.59 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.70 | 1.2 | 0.7 | 0.5 | --- | 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.04 | 0.01 | 0.04 | 0.02 | --- | 0.03 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0022 | 0.0142 | 0.0166 | 0.015 | --- | 0.0224 | --- | --- | 0.0258 | --- | --- |
| Barium | mg/L | 0.00039 | 0.00059 | 0.00045 | 0.00057 | --- | 0.00049 | --- | --- | 0.00046 | --- | --- |
| Boron | mg/L | < 0.0002 | 0.0039 | 0.0029 | 0.0029 | --- | 0.0025 | --- | --- | 0.0013 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | 0.000003 | < 0.000003 | 0.000016 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000018 | 0.000083 | 0.000121 | 0.000233 | --- | 0.000256 | --- | --- | 0.000295 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.005 | < 0.003 | < 0.003 | 0.007 | --- | 0.005 | --- | --- | 0.004 | --- | --- |
| Potassium | mg/L | 2.52 | 2.73 | 1.99 | 1.78 | --- | 1.22 | --- | --- | 0.986 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.459 | 0.805 | 0.756 | 0.948 | --- | 0.76 | --- | --- | 0.834 | --- | --- |
| Manganese | mg/L | 0.00907 | 0.00956 | 0.00864 | 0.0108 | --- | 0.00886 | --- | --- | 0.00796 | --- | --- |
| Molybdenum | mg/L | 0.00034 | 0.00058 | 0.00041 | 0.00032 | --- | 0.00023 | --- | --- | 0.00013 | --- | --- |
| Sodium | mg/L | 2.42 | 2.39 | 1.48 | 1.22 | --- | 0.73 | --- | --- | 0.41 | --- | --- |
| Nickel | mg/L | 0.0001 | 0.0003 | 0.0002 | 0.0004 | --- | 0.0004 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | < 0.00002 | 0.00003 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0008 | 0.0029 | 0.0025 | 0.0023 | --- | 0.0024 | --- | --- | 0.0021 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00216 | 0.00162 | 0.00066 | 0.00061 | --- | 0.00049 | --- | --- | 0.00038 | --- | --- |
| Strontium | mg/L | 0.0077 | 0.0115 | 0.0104 | 0.013 | --- | 0.0102 | --- | --- | 0.0105 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0001 | < 0.0001 | 0.0002 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000029 | 0.000075 | 0.000125 | 0.000221 | --- | 0.000251 | --- | --- | 0.00039 | --- | --- |
| Vanadium | mg/L | 0.00009 | 0.00012 | 0.0001 | 0.00008 | --- | 0.00008 | --- | --- | 0.00012 | --- | --- |
| Tungsten | mg/L | 0.00006 | 0.0003 | 0.00022 | 0.00021 | --- | 0.00015 | --- | --- | 0.00012 | --- | --- |
| Yttrium | mg/L | 0.000008 | 0.000005 | 0.000001 | 0.000002 | --- | < 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M06-625-01

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10206-FEB12 | CA10003-MAR12 | CA10060-MAR12 | CA10115-MAR12 | CA10167-MAR12 | CA10221-MAR12 | CA10047-APR12 | CA10097-APR12 | CA10103-APR12 | CA10197-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 986 | 986 | 987 | 989 | 991 | 993 | 986 | 991 | 991 | 990 |
| pH | no unit | 7.05 | 7.03 | 7.23 | 6.96 | 7.23 | 7.23 | 6.56 | 7.13 | 7.20 | 7.13 |
| Alkalinity | mg/L as CaCO3 | 9 | 10 | 9 | 12 | 10 | 10 | 15 | 9 | 15 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 24 | 29 | 23 | 25 | 28 | 19 | 25 | 18 | 24 | 24 |
| Sulphate | mg/L | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1 | 1 | 1 |
| Calcium | mg/L | 2.49 | 2.74 | 2.69 | 2.81 | 3.06 | 2.94 | 3.01 | 2.76 | 2.76 | 2.86 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.02 | --- | --- | --- | 0.03 | --- | --- | --- | 0.01 |
| Arsenic | mg/L | --- | 0.0206 | --- | --- | --- | 0.0199 | --- | --- | --- | 0.0163 |
| Barium | mg/L | --- | 0.00052 | --- | --- | --- | 0.00048 | --- | --- | --- | 0.00045 |
| Boron | mg/L | --- | 0.0013 | --- | --- | --- | 0.0005 | --- | --- | --- | 0.0005 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000509 | --- | --- | --- | 0.000598 | --- | --- | --- | 0.000604 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | 0.012 | --- | --- | --- | 0.007 | --- | --- | --- | 0.008 |
| Potassium | mg/L | --- | 0.69 | --- | --- | --- | 0.439 | --- | --- | --- | 0.312 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.91 | --- | --- | --- | 0.903 | --- | --- | --- | 0.812 |
| Manganese | mg/L | --- | 0.0117 | --- | --- | --- | 0.014 | --- | --- | --- | 0.0131 |
| Molybdenum | mg/L | --- | 0.00011 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.00007 |
| Sodium | mg/L | --- | 0.22 | --- | --- | --- | 0.12 | --- | --- | --- | 0.08 |
| Nickel | mg/L | --- | 0.0003 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0019 | --- | --- | --- | 0.0016 | --- | --- | --- | 0.0013 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00039 | --- | --- | --- | 0.00029 | --- | --- | --- | 0.00028 |
| Strontium | mg/L | --- | 0.0119 | --- | --- | --- | 0.0118 | --- | --- | --- | 0.0111 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000497 | --- | --- | --- | 0.000564 | --- | --- | --- | 0.00054 |
| Vanadium | mg/L | --- | 0.00015 | --- | --- | --- | 0.00011 | --- | --- | --- | 0.00012 |
| Tungsten | mg/L | --- | 0.00009 | --- | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M96-74-01

**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11016-DEC11 | CA11021-DEC11 | CA11096-DEC11 | CA10315-DEC11 | CA10055-JAN12 | CA10062-JAN12 | CA11012-JAN12 | CA10201-JAN12 | CA10032-FEB12 | CA10040-FEB12 | CA10148-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 834 | 970 | 981 | 986 | 985 | 989 | 986 | 985 | 990 | 988 | 986 |
| pH | no unit | 8.31 | 7.79 | 7.67 | 7.35 | 7.64 | 7.57 | 7.53 | 7.61 | 7.48 | 7.38 | 7.45 |
| Alkalinity | mg/L as CaCO3 | 15 | 20 | 15 | 13 | 14 | 15 | 14 | 15 | 14 | 14 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 41 | 7 | 46 | 39 | 28 | 30 | 34 | 30 | 33 | 33 | 33 |
| Sulphate | mg/L | 2.4 | 5.4 | 4.2 | 3.3 | 2 | 2.1 | 1.9 | 2 | 1.6 | 1.6 | 1.6 |
| Calcium | mg/L | 6.68 | 7.34 | 6.0 | 6.39 | 5.33 | 5.70 | 5.04 | 5.67 | 5.15 | 5.26 | 5.39 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 3.00 | 3.2 | 1.8 | 1.0 | --- | 0.3 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.03 | 0.01 | 0.03 | 0.02 | --- | 0.03 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0012 | 0.0015 | 0.0014 | 0.0012 | --- | 0.0011 | --- | --- | 0.001 | --- | --- |
| Barium | mg/L | 0.00195 | 0.00283 | 0.00272 | 0.00287 | --- | 0.00292 | --- | --- | 0.00257 | --- | --- |
| Boron | mg/L | 0.0168 | 0.0302 | 0.0209 | 0.0165 | --- | 0.009 | --- | --- | 0.004 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000005 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000011 | 0.000018 | 0.000013 | 0.000013 | --- | 0.000023 | --- | --- | < 0.000002 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.007 | 0.004 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.34 | 2.13 | 1.69 | 1.5 | --- | 1.17 | --- | --- | 1 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.607 | 0.903 | 0.715 | 0.686 | --- | 0.517 | --- | --- | 0.428 | --- | --- |
| Manganese | mg/L | 0.0076 | 0.00775 | 0.00617 | 0.00613 | --- | 0.00738 | --- | --- | 0.00695 | --- | --- |
| Molybdenum | mg/L | 0.00018 | 0.00039 | 0.00028 | 0.00019 | --- | 0.00014 | --- | --- | 0.00005 | --- | --- |
| Sodium | mg/L | 0.48 | 0.59 | 0.35 | 0.25 | --- | 0.13 | --- | --- | 0.06 | --- | --- |
| Nickel | mg/L | 0.0002 | < 0.0001 | < 0.0001 | 0.0002 | --- | 0.0003 | --- | --- | < 0.0001 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.015 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0003 | 0.0005 | 0.0004 | 0.0002 | --- | 0.0002 | --- | --- | 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.0022 | 0.00106 | 0.0005 | 0.00038 | --- | 0.00028 | --- | --- | 0.00017 | --- | --- |
| Strontium | mg/L | 0.0659 | 0.0869 | 0.0712 | 0.071 | --- | 0.0614 | --- | --- | 0.0536 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000023 | 0.000124 | 0.000122 | 0.000122 | --- | 0.000106 | --- | --- | 0.000098 | --- | --- |
| Vanadium | mg/L | 0.00004 | 0.00007 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | < 0.00003 | 0.00013 | 0.0001 | 0.00009 | --- | 0.00005 | --- | --- | 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000002 | 0.000003 | 0.000003 | 0.000003 | --- | 0.000002 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M96-74-01

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10206-FEB12 | CA10003-MAR12 | CA10060-MAR12 | CA10115-MAR12 | CA10167-MAR12 | CA10221-MAR12 | CA10047-APR12 | CA10097-APR12 | CA10103-APR12 | CA10197-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 989 | 988 | 983 | 992 | 991 | 992 | 983 | 991 | 989 | 986 |
| pH | no unit | 7.30 | 7.32 | 7.53 | 7.17 | 7.47 | 7.41 | 6.74 | 7.27 | 7.30 | 7.38 |
| Alkalinity | mg/L as CaCO3 | 14 | 13 | 13 | 15 | 13 | 13 | 16 | 11 | 18 | 12 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 33 | 26 | 25 | 32 | 36 | 24 | 28 | 32 | 29 | 23 |
| Sulphate | mg/L | 1.6 | 1.5 | 1.6 | 1.6 | 1.8 | 1.6 | 1.6 | 1.4 | 1.4 | 1.5 |
| Calcium | mg/L | 5.26 | 5.07 | 5.21 | 5.14 | 5.32 | 5.01 | 4.6 | 4.69 | 4.48 | 4.7 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.04 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0008 | --- | --- | --- | 0.001 | --- | --- | --- | 0.0008 |
| Barium | mg/L | --- | 0.00262 | --- | --- | --- | 0.00276 | --- | --- | --- | 0.00232 |
| Boron | mg/L | --- | 0.0024 | --- | --- | --- | 0.0016 | --- | --- | --- | 0.0011 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000016 | --- | --- | --- | 0.000014 | --- | --- | --- | 0.000023 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.826 | --- | --- | --- | 0.742 | --- | --- | --- | 0.6 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.386 | --- | --- | --- | 0.398 | --- | --- | --- | 0.355 |
| Manganese | mg/L | --- | 0.00786 | --- | --- | --- | 0.0065 | --- | --- | --- | 0.00614 |
| Molybdenum | mg/L | --- | 0.00006 | --- | --- | --- | 0.00008 | --- | --- | --- | 0.00006 |
| Sodium | mg/L | --- | 0.04 | --- | --- | --- | 0.03 | --- | --- | --- | 0.02 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0002 | --- | --- | --- | 0.0003 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00024 | --- | --- | --- | 0.00042 | --- | --- | --- | 0.00031 |
| Strontium | mg/L | --- | 0.0514 | --- | --- | --- | 0.0497 | --- | --- | --- | 0.0463 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.0001 | --- | --- | --- | 0.000104 | --- | --- | --- | 0.000099 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M97-95-02

**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11016-DEC11 | CA11021-DEC11 | CA11096-DEC11 | CA10315-DEC11 | CA10055-JAN12 | CA10062-JAN12 | CA11012-JAN12 | CA10201-JAN12 | CA10032-FEB12 | CA10040-FEB12 | CA10148-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 813 | 994 | 987 | 986 | 987 | 984 | 990 | 981 | 989 | 995 | 988 |
| pH | no unit | 7.98 | 7.62 | 7.42 | 7.36 | 7.40 | 7.45 | 7.30 | 7.35 | 7.27 | 7.28 | 7.26 |
| Alkalinity | mg/L as CaCO3 | 13 | 21 | 14 | 13 | 13 | 14 | 12 | 13 | 12 | 12 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 6 | 43 | 42 | 33 | 26 | 30 | 33 | 36 | 33 | 32 | 31 |
| Sulphate | mg/L | 3 | 5 | 3.9 | 3.3 | 2.8 | 3 | 2.7 | 3 | 2.9 | 3 | 2.9 |
| Calcium | mg/L | 2.59 | 3.8 | 3.5 | 2.94 | 3.14 | 3.84 | 3.37 | 3.71 | 3.57 | 3.65 | 3.62 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 0.60 | 0.4 | 0.2 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.06 | 0.02 | 0.04 | 0.05 | --- | 0.05 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0042 | 0.0063 | 0.0079 | 0.0108 | --- | 0.0106 | --- | --- | 0.0106 | --- | --- |
| Barium | mg/L | 0.00068 | 0.00069 | 0.00059 | 0.00054 | --- | 0.00058 | --- | --- | 0.0005 | --- | --- |
| Boron | mg/L | < 0.0002 | 0.0031 | 0.0021 | 0.002 | --- | 0.002 | --- | --- | 0.0009 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000005 | 0.000003 | < 0.000003 | 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000023 | 0.0001 | 0.000137 | 0.000128 | --- | 0.000243 | --- | --- | 0.000363 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.008 | 0.003 | < 0.003 | 0.005 | --- | 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 3.29 | 4.27 | 3.21 | 2.25 | --- | 1.67 | --- | --- | 1.04 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.582 | 1.19 | 1.16 | 0.951 | --- | 1.17 | --- | --- | 1.08 | --- | --- |
| Manganese | mg/L | 0.00553 | 0.0102 | 0.00869 | 0.00586 | --- | 0.0102 | --- | --- | 0.00991 | --- | --- |
| Molybdenum | mg/L | 0.00039 | 0.00062 | 0.00041 | 0.00028 | --- | 0.00019 | --- | --- | 0.0001 | --- | --- |
| Sodium | mg/L | 1.78 | 2.09 | 1.3 | 0.83 | --- | 0.52 | --- | --- | 0.25 | --- | --- |
| Nickel | mg/L | 0.0001 | 0.0002 | < 0.0001 | 0.0002 | --- | 0.0004 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | 0.00003 | 0.00003 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.014 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0014 | 0.0043 | 0.0035 | 0.0031 | --- | 0.0028 | --- | --- | 0.0019 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00173 | 0.00135 | 0.00058 | 0.00037 | --- | 0.00049 | --- | --- | 0.00019 | --- | --- |
| Strontium | mg/L | 0.0098 | 0.0184 | 0.0178 | 0.0138 | --- | 0.0169 | --- | --- | 0.0152 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0004 | 0.0001 | 0.0002 | 0.0002 | --- | 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000031 | 0.000207 | 0.000244 | 0.000269 | --- | 0.000306 | --- | --- | 0.000348 | --- | --- |
| Vanadium | mg/L | 0.00014 | 0.00015 | 0.0001 | 0.00009 | --- | 0.00013 | --- | --- | 0.00011 | --- | --- |
| Tungsten | mg/L | < 0.00003 | 0.00018 | 0.00013 | 0.00013 | --- | 0.00007 | --- | --- | < 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000014 | 0.000004 | 0.000006 | 0.000003 | --- | < 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M97-95-02

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10206-FEB12 | CA10003-MAR12 | CA10060-MAR12 | CA10115-MAR12 | CA10167-MAR12 | CA10221-MAR12 | CA10047-APR12 | CA10097-APR12 | CA10103-APR12 | CA10197-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 993 | 988 | 986 | 969 | 996 | 990 | 990 | 984 | 986 | 990 |
| pH | no unit | 7.23 | 7.12 | 7.37 | 7.12 | 7.32 | 7.31 | 6.64 | 7.19 | 7.32 | 7.31 |
| Alkalinity | mg/L as CaCO3 | 11 | 11 | 11 | 14 | 12 | 11 | 16 | 9 | 23 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 33 | 26 | 25 | 33 | 39 | 24 | 29 | 34 | 31 | 26 |
| Sulphate | mg/L | 3.3 | 3.4 | 3.5 | 3.7 | 3.4 | 3.2 | 3 | 3 | 3 | 3 |
| Calcium | mg/L | 3.6 | 3.66 | 3.79 | 4.08 | 4.26 | 3.94 | 3.75 | 3.68 | 3.72 | 3.95 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.04 | --- | --- | --- | 0.04 | --- | --- | --- | 0.04 |
| Arsenic | mg/L | --- | 0.0103 | --- | --- | --- | 0.0107 | --- | --- | --- | 0.0099 |
| Barium | mg/L | --- | 0.00046 | --- | --- | --- | 0.00043 | --- | --- | --- | 0.00039 |
| Boron | mg/L | --- | 0.0007 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0004 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000422 | --- | --- | --- | 0.00043 | --- | --- | --- | 0.000457 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | 0.0008 | --- | --- | --- | 0.0005 |
| Iron | mg/L | --- | 0.005 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.695 | --- | --- | --- | 0.437 | --- | --- | --- | 0.332 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 1.09 | --- | --- | --- | 1.11 | --- | --- | --- | 1.09 |
| Manganese | mg/L | --- | 0.0105 | --- | --- | --- | 0.0115 | --- | --- | --- | 0.0125 |
| Molybdenum | mg/L | --- | 0.00009 | --- | --- | --- | 0.00009 | --- | --- | --- | 0.00009 |
| Sodium | mg/L | --- | 0.15 | --- | --- | --- | 0.1 | --- | --- | --- | 0.08 |
| Nickel | mg/L | --- | 0.0001 | --- | --- | --- | 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | 0.00003 | --- | --- | --- | 0.00003 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0015 | --- | --- | --- | 0.0013 | --- | --- | --- | 0.0011 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00018 | --- | --- | --- | 0.00017 | --- | --- | --- | 0.00021 |
| Strontium | mg/L | --- | 0.0152 | --- | --- | --- | 0.016 | --- | --- | --- | 0.0162 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000358 | --- | --- | --- | 0.000344 | --- | --- | --- | 0.000253 |
| Vanadium | mg/L | --- | 0.00012 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.00011 |
| Tungsten | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000001 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M99-409-05
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11016-DEC11 | CA11021-DEC11 | CA11096-DEC11 | CA10315-DEC11 | CA10055-JAN12 | CA10062-JAN12 | CA11012-JAN12 | CA10201-JAN12 | CA10032-FEB12 | CA10040-FEB12 | CA10148-FEB12 |
| | Unit | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 826 | 989 | 985 | 954 | 987 | 984 | 986 | 985 | 985 | 967 | 974 |
| pH | no unit | 8.80 | 8.46 | 8.80 | 7.62 | 8.74 | 8.51 | 8.22 | 8.12 | 8.65 | 8.55 | 8.48 |
| Alkalinity | mg/L as CaCO3 | 25 | 27 | 28 | 17 | 24 | 25 | 26 | 22 | 22 | 17 | 20 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 44 | 49 | 54 | 41 | 37 | 42 | 43 | 48 | 48 | 42 | 42 |
| Sulphate | mg/L | 3.4 | 4.8 | 4.7 | 4.9 | 3.6 | 3.8 | 3.3 | 3.2 | 3.1 | 2.8 | 2.4 |
| Calcium | mg/L | 6.31 | 6.84 | 6.1 | 5.83 | 6.15 | 6.53 | 6.06 | 6.19 | 6.39 | 5.89 | 5.61 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.20 | 1.0 | 0.7 | 0.4 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.09 | 0.04 | 0.04 | 0.05 | --- | 0.05 | --- | --- | 0.05 | --- | --- |
| Arsenic | mg/L | 0.0029 | 0.0053 | 0.0057 | 0.007 | --- | 0.007 | --- | --- | 0.0076 | --- | --- |
| Barium | mg/L | 0.00231 | 0.00414 | 0.00409 | 0.0036 | --- | 0.00407 | --- | --- | 0.00392 | --- | --- |
| Boron | mg/L | 0.0013 | 0.0067 | 0.0054 | 0.0051 | --- | 0.0044 | --- | --- | 0.0025 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000024 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000015 | 0.000024 | 0.00003 | 0.000025 | --- | 0.000051 | --- | --- | 0.000029 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.003 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.05 | 1.17 | 0.927 | 0.784 | --- | 0.609 | --- | --- | 0.458 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.517 | 0.94 | 0.961 | 0.993 | --- | 1.07 | --- | --- | 1.06 | --- | --- |
| Manganese | mg/L | 0.00913 | 0.0192 | 0.023 | 0.0171 | --- | 0.0237 | --- | --- | 0.0241 | --- | --- |
| Molybdenum | mg/L | 0.00013 | 0.00022 | 0.00016 | 0.00012 | --- | 0.0001 | --- | --- | 0.00005 | --- | --- |
| Sodium | mg/L | 1.74 | 2.06 | 1.36 | 1.06 | --- | 0.61 | --- | --- | 0.32 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0001 | 0.0001 | 0.0003 | --- | 0.0004 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.011 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0008 | 0.0016 | 0.0013 | 0.0012 | --- | 0.001 | --- | --- | 0.0008 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.0022 | 0.00123 | 0.00055 | 0.00038 | --- | 0.00037 | --- | --- | 0.00019 | --- | --- |
| Strontium | mg/L | 0.0379 | 0.0821 | 0.0757 | 0.0707 | --- | 0.0704 | --- | --- | 0.0627 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | < 0.000001 | 0.000009 | 0.000017 | 0.000009 | --- | 0.00002 | --- | --- | 0.000014 | --- | --- |
| Vanadium | mg/L | 0.00022 | 0.00023 | 0.00022 | 0.0002 | --- | 0.00023 | --- | --- | 0.0002 | --- | --- |
| Tungsten | mg/L | < 0.00003 | 0.00008 | 0.00006 | 0.00007 | --- | 0.00005 | --- | --- | 0.00005 | --- | --- |
| Yttrium | mg/L | 0.000003 | 0.000005 | 0.000005 | 0.000005 | --- | 0.000006 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Tiriganiaq

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M99-409-05

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10206-FEB12 | CA10003-MAR12 | CA10060-MAR12 | CA10115-MAR12 | CA10167-MAR12 | CA10221-MAR12 | CA10047-APR12 | CA10097-APR12 | CA10103-APR12 | CA10197-APR12 |
| | Unit | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 940 | 935 | 942 | 984 | 986 | 984 | 984 | 985 | 988 | 990 |
| pH | no unit | 8.66 | 8.62 | 8.80 | 7.74 | 8.49 | 7.88 | 6.91 | 7.78 | 7.80 | 7.90 |
| Alkalinity | mg/L as CaCO3 | 18 | 18 | 17 | 22 | 21 | 17 | 27 | 18 | 27 | 17 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 41 | 32 | 31 | 47 | 33 | 43 | 42 | 42 | 42 | 39 |
| Sulphate | mg/L | 2.1 | 2.2 | 2.1 | 2.4 | 2.3 | 2.3 | 2.3 | 2 | 2.2 | 2.2 |
| Calcium | mg/L | 5.46 | 5.77 | 5.82 | 6.08 | 6.18 | 6.04 | 6.2 | 5.87 | 5.74 | 5.99 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.06 | --- | --- | --- | 0.05 | --- | --- | --- | 0.04 |
| Arsenic | mg/L | --- | 0.0078 | --- | --- | --- | 0.0078 | --- | --- | --- | 0.0062 |
| Barium | mg/L | --- | 0.00335 | --- | --- | --- | 0.00337 | --- | --- | --- | 0.00301 |
| Boron | mg/L | --- | 0.0015 | --- | --- | --- | 0.001 | --- | --- | --- | 0.0011 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000068 | --- | --- | --- | 0.000079 | --- | --- | --- | 0.000073 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.275 | --- | --- | --- | 0.215 | --- | --- | --- | 0.161 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.851 | --- | --- | --- | 0.935 | --- | --- | --- | 0.846 |
| Manganese | mg/L | --- | 0.0227 | --- | --- | --- | 0.0241 | --- | --- | --- | 0.0237 |
| Molybdenum | mg/L | --- | 0.00004 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.00006 |
| Sodium | mg/L | --- | 0.15 | --- | --- | --- | 0.12 | --- | --- | --- | 0.08 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0006 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0005 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00014 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.00013 |
| Strontium | mg/L | --- | 0.0476 | --- | --- | --- | 0.0448 | --- | --- | --- | 0.0381 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000003 | --- | --- | --- | 0.000017 | --- | --- | --- | 0.000017 |
| Vanadium | mg/L | --- | 0.00021 | --- | --- | --- | 0.00018 | --- | --- | --- | 0.00016 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000004 | --- | --- | --- | 0.000006 | --- | --- | --- | 0.000006 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** GT08-04-02
**Weight:** 1 kg

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11326-JUN09 | CA11327-JUN09 | CA10036-JUL09 | CA10037-JUL09 | CA10047-JUL09 | CA11077-JUL09 | CA10009-AUG09 | CA10041-AUG09 | CA10167-AUG09 | CA10184-AUG09 |
| | | 23-Jun-09 | 30-Jun-09 | 7-Jul-09 | 14-Jul-09 | 21-Jul-09 | 28-Jul-09 | 4-Aug-09 | 11-Aug-09 | 18-Aug-09 | 25-Aug-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 755 | 960 | 991 | 914 | 952 | 886 | 975 | 907 | 954 | 876 |
| pH | no unit | 8.08 | 8.12 | 8.18 | 8.73 | 8.62 | 8.55 | 8.38 | 8.28 | 7.83 | 8.27 |
| Alkalinity | mg/L as $CaCO_3$ | 18 | 28 | 25 | 21 | 16 | 16 | 17 | 13 | 14 | 15 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 112 | 119 | 91 | 26 | 50 | 48 | 47 | 37 | 39 | 41 |
| Sulphate | mg/L | 3.8 | 5 | 6.8 | 5.1 | 4 | 3.7 | 3.0 | 2.7 | 2.6 | 3.6 |
| Chloride | mg/L | 17 | 14 | 8.5 | 4 | --- | 1.0 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 4.92 | 4.52 | 4.22 | 4.15 | 3.86 | 3.95 | 4.35 | 4.08 | 3.93 | 3.36 |
| Aluminum | mg/L | 0.06 | 0.05 | 0.05 | 0.07 | --- | 0.06 | --- | --- | 0.05 | --- |
| As+3 | mg/L | < 0.001 | 0.061 | --- | --- | --- | --- | --- | --- | 0.029 | --- |
| As+5 | mg/L | 0.005 | 0.005 | --- | --- | --- | --- | --- | --- | 0.042 | --- |
| Arsenic | mg/L | 0.0064 | 0.0664 | 0.0766 | 0.0818 | --- | 0.076 | --- | --- | 0.071 | --- |
| Barium | mg/L | 0.00135 | 0.00033 | 0.00029 | 0.00031 | --- | 0.00023 | --- | --- | 0.00108 | --- |
| Boron | mg/L | 0.0057 | 0.0167 | 0.0144 | 0.0093 | --- | 0.0063 | --- | --- | 0.0044 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000042 | 0.000217 | 0.000318 | 0.000193 | --- | 0.000174 | --- | --- | 0.000224 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0008 | < 0.0005 | < 0.0005 | < 0.0005 | --- | 0.0007 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 2.34 | 2.45 | 1.83 | 1.42 | --- | 0.84 | --- | --- | 0.52 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.804 | 2.04 | 2.31 | 2.07 | --- | 1.7 | --- | --- | 1.59 | --- |
| Manganese | mg/L | 0.00753 | 0.0105 | 0.0152 | 0.0141 | --- | 0.015 | --- | --- | 0.0165 | --- |
| Molybdenum | mg/L | 0.00021 | 0.0008 | 0.00047 | 0.0003 | --- | 0.00016 | --- | --- | 0.00008 | --- |
| Sodium | mg/L | 13.6 | 13.6 | 9.39 | 4.91 | --- | 1.93 | --- | --- | 0.67 | --- |
| Nickel | mg/L | 0.0009 | 0.0014 | 0.0011 | 0.0006 | --- | 0.0003 | --- | --- | 0.0003 | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | 0.00004 | 0.00009 | --- | 0.00006 | --- | --- | 0.00003 | --- |
| Antimony | mg/L | 0.0008 | 0.0045 | 0.0047 | 0.0035 | --- | 0.0023 | --- | --- | 0.0019 | --- |
| Tin | mg/L | 0.00098 | 0.00064 | 0.00049 | 0.00035 | --- | 0.00067 | --- | --- | 0.00072 | --- |
| Strontium | mg/L | 0.0084 | 0.0119 | 0.0105 | 0.0086 | --- | 0.0045 | --- | --- | 0.0058 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.000015 | 0.000019 | 0.00003 | 0.000025 | --- | 0.000025 | --- | --- | 0.00003 | --- |
| Vanadium | mg/L | 0.00021 | 0.00038 | 0.00038 | 0.00044 | --- | 0.00035 | --- | --- | 0.00035 | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** GT08-04-02
**Weight:** 1 kg

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10007-SEP09 | CA10024-SEP09 | CA10041-SEP09 | CA10156-SEP09 | CA11063-SEP09 | CA10019-OCT09 | CA11052-OCT09 | CA11062-OCT09 | CA11171-OCT09 | CA10012-NOV09 | CA11050-NOV09 |
| | | 1-Sep-09 | 8-Sep-09 | 15-Sep-09 | 22-Sep-09 | 29-Sep-09 | 6-Oct-09 | 13-Oct-09 | 21-Oct-09 | 27-Oct-09 | 3-Nov-09 | 10-Nov-09 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 910 | 897 | 938 | 904 | 915 | 922 | 916 | 906 | 905 | 887 | 900 |
| pH | no unit | 6.99 | 7.60 | 7.70 | 7.58 | 8.22 | 7.56 | 7.75 | 7.76 | 7.88 | 7.71 | 7.89 |
| Alkalinity | mg/L as $CaCO_3$ | 14 | 13 | 12 | 16 | 13 | 12 | 12 | | 12 | 12 | 12 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 32 | 33 | 30 | 31 | 28 | 29 | 27 | 29 | 31 | 29 | 28 |
| Sulphate | mg/L | 1.8 | 1.6 | 1.6 | 1.7 | 1.3 | 1.4 | 1.2 | 1.5 | 1.6 | 1.8 | 1.6 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 3.70 | 4.36 | 3.67 | 3.50 | 3.49 | 3.53 | 3.33 | 3.36 | 3.68 | 3.64 | 3.45 |
| Aluminum | mg/L | --- | --- | 0.13 | --- | --- | --- | 0.03 | --- | --- | --- | 0.04 |
| As+3 | mg/L | --- | --- | 0.055 | --- | --- | --- | --- | --- | --- | --- | 0.015 |
| As+5 | mg/L | --- | --- | 0.004 | --- | --- | --- | --- | --- | --- | --- | 0.026 |
| Arsenic | mg/L | --- | --- | 0.0618 | --- | --- | --- | 0.0398 | --- | --- | --- | 0.043 |
| Barium | mg/L | --- | --- | 0.00013 | --- | --- | --- | 0.00018 | --- | --- | --- | 0.00028 |
| Boron | mg/L | --- | --- | 0.0019 | --- | --- | --- | 0.0073 | --- | --- | --- | 0.0012 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.000213 | --- | --- | --- | 0.000215 | --- | --- | --- | 0.000198 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Potassium | mg/L | --- | --- | 0.32 | --- | --- | --- | 0.18 | --- | --- | --- | 0.2 |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | --- | --- | 1.44 | --- | --- | --- | 1.18 | --- | --- | --- | 1.36 |
| Manganese | mg/L | --- | --- | 0.0146 | --- | --- | --- | 0.0144 | --- | --- | --- | 0.0124 |
| Molybdenum | mg/L | --- | --- | 0.0001 | --- | --- | --- | 0.00013 | --- | --- | --- | < 0.00001 |
| Sodium | mg/L | --- | --- | 0.24 | --- | --- | --- | 0.14 | --- | --- | --- | 0.13 |
| Nickel | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | --- | 0.00004 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | 0.0012 | --- | --- | --- | 0.0008 | --- | --- | --- | 0.0008 |
| Tin | mg/L | --- | --- | 0.00086 | --- | --- | --- | 0.00074 | --- | --- | --- | 0.00067 |
| Strontium | mg/L | --- | --- | 0.0048 | --- | --- | --- | 0.0044 | --- | --- | --- | 0.0038 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | 0.000018 | --- | --- | --- | 0.000028 | --- | --- | --- | 0.000011 |
| Vanadium | mg/L | --- | --- | 0.00031 | --- | --- | --- | 0.00017 | --- | --- | --- | 0.00022 |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** GT08-04-02
**Weight:** 1 kg

| Analyte | Unit | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11129-NOV09 | CA11150-NOV09 | CA10008-DEC09 | CA10033-DEC09 | CA10058-DEC09 | CA11206-DEC09 | CA11239-DEC09 | CA10009-JAN10 | CA10033-JAN10 | CA10059-JAN10 |
| | | 17-Nov-09 | 24-Nov-09 | 1-Dec-09 | 8-Dec-09 | 15-Dec-09 | 22-Dec-09 | 29-Dec-09 | 5-Jan-10 | 12-Jan-10 | 19-Jan-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 906 | 919 | 915 | 918 | 931 | 920 | 908 | 886 | 888 | 884 |
| pH | no unit | 7.37 | 7.91 | 7.66 | 8.17 | 7.44 | 8.11 | 8.79 | 8.37 | 8.35 | 8.01 |
| Alkalinity | mg/L as $CaCO_3$ | 13 | 12 | 13 | 11 | 13 | 12 | 13 | 13 | 13 | 13 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 27 | 29 | 24 | 28 | 29 | 27 | 29 | 26 | 29 | 31 |
| Sulphate | mg/L | 1.6 | 1.3 | 1.1 | 1.2 | 1.2 | 1.1 | 1.2 | 1.4 | 1.3 | |
| Chloride | mg/L | --- | --- | --- | <0.2 | --- | <0.2 | --- | --- | --- | --- |
| Calcium | mg/L | 3.43 | 3.42 | 3.54 | 3.58 | 3.87 | 3.36 | 3.37 | 3.07 | 3.19 | 3.66 |
| Aluminum | mg/L | --- | --- | --- | 0.04 | --- | 0.04 | --- | --- | --- | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | 0.012 | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | 0.020 | --- | --- | --- | --- |
| Arsenic | mg/L | --- | --- | --- | 0.0388 | --- | 0.0326 | --- | --- | --- | --- |
| Barium | mg/L | --- | --- | --- | 0.00011 | --- | 0.00009 | --- | --- | --- | --- |
| Boron | mg/L | --- | --- | --- | 0.0009 | --- | 0.0008 | --- | --- | --- | --- |
| Cadmium | mg/L | --- | --- | --- | < 0.000003 | --- | < 0.000003 | --- | --- | --- | --- |
| Cobalt | mg/L | --- | --- | --- | 0.00028 | --- | 0.000251 | --- | --- | --- | --- |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Iron | mg/L | --- | --- | --- | < 0.01 | --- | < 0.01 | --- | --- | --- | --- |
| Potassium | mg/L | --- | --- | --- | 0.14 | --- | 0.13 | --- | --- | --- | --- |
| Lithium | mg/L | --- | --- | --- | < 0.002 | --- | < 0.002 | --- | --- | --- | --- |
| Magnesium | mg/L | --- | --- | --- | 1.33 | --- | 1.2 | --- | --- | --- | --- |
| Manganese | mg/L | --- | --- | --- | 0.0157 | --- | 0.0135 | --- | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | --- | 0.00003 | --- | 0.0001 | --- | --- | --- | --- |
| Sodium | mg/L | --- | --- | --- | 0.09 | --- | 0.08 | --- | --- | --- | --- |
| Nickel | mg/L | --- | --- | --- | 0.0004 | --- | 0.0002 | --- | --- | --- | --- |
| Lead | mg/L | --- | --- | --- | < 0.00002 | --- | 0.00004 | --- | --- | --- | --- |
| Antimony | mg/L | --- | --- | --- | 0.0007 | --- | 0.0007 | --- | --- | --- | --- |
| Tin | mg/L | --- | --- | --- | 0.00039 | --- | 0.00041 | --- | --- | --- | --- |
| Strontium | mg/L | --- | --- | --- | 0.0038 | --- | 0.0034 | --- | --- | --- | --- |
| Titanium | mg/L | --- | --- | --- | < 0.0001 | --- | < 0.0001 | --- | --- | --- | --- |
| Uranium | mg/L | --- | --- | --- | 0.000008 | --- | 0.000018 | --- | --- | --- | --- |
| Vanadium | mg/L | --- | --- | --- | 0.00014 | --- | 0.00013 | --- | --- | --- | --- |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | < 0.001 | --- | --- | --- | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** M04-526-01
**Weight:** 1 kg

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11326-JUN09 | CA11327-JUN09 | CA10036-JUL09 | CA10037-JUL09 | CA10047-JUL09 | CA11077-JUL09 | CA10009-AUG09 | CA10041-AUG09 | CA10167-AUG09 | CA10184-AUG09 |
| | | 23-Jun-09 | 30-Jun-09 | 7-Jul-09 | 14-Jul-09 | 21-Jul-09 | 28-Jul-09 | 4-Aug-09 | 11-Aug-09 | 18-Aug-09 | 25-Aug-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 260 | 854 | 864 | 867 | 1001 | 848 | 860 | 865 | 864 | 852 |
| pH | no unit | 7.46 | 7.56 | 7.66 | 8.55 | 7.14 | 8.26 | 8.22 | 7.68 | 7.22 | 7.36 |
| Alkalinity | mg/L as $CaCO_3$ | 16 | 11 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 11 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 52 | 68 | 39 | 35 | 33 | 35 | 31 | 29 | 31 | 30 |
| Sulphate | mg/L | 3 | 9.6 | 4.8 | 3.5 | 2.5 | 2.1 | 2.0 | 2.1 | 2.1 | 2.0 |
| Chloride | mg/L | 1.3 | 4.3 | 0.8 | 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 9.02 | 8.91 | 5.9 | 5.91 | 5.22 | 5.43 | 5.26 | 5.07 | 4.87 | 4.52 |
| Aluminum | mg/L | 0.03 | 0.02 | 0.02 | 0.04 | --- | 0.04 | --- | --- | 0.03 | --- |
| As+3 | mg/L | < 0.001 | < 0.001 | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.001 | < 0.001 | --- | --- | --- | --- | --- | --- | --- | --- |
| Arsenic | mg/L | 0.0013 | 0.0012 | 0.0012 | 0.0011 | --- | 0.0011 | --- | --- | 0.0009 | --- |
| Barium | mg/L | 0.00111 | 0.001 | 0.0005 | 0.00042 | --- | 0.00047 | --- | --- | 0.00028 | --- |
| Boron | mg/L | 0.0069 | 0.0135 | 0.0085 | 0.0062 | --- | 0.0037 | --- | --- | 0.0022 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000027 | 0.000033 | 0.00002 | 0.000018 | --- | 0.000014 | --- | --- | 0.000007 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | 0.0009 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 0.46 | 0.68 | 0.34 | 0.27 | --- | 0.17 | --- | --- | 0.12 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.314 | 1.02 | 0.55 | 0.507 | --- | 0.377 | --- | --- | 0.377 | --- |
| Manganese | mg/L | 0.00411 | 0.00458 | 0.00456 | 0.00434 | --- | 0.00475 | --- | --- | 0.00416 | --- |
| Molybdenum | mg/L | 0.0002 | 0.00023 | 0.00015 | 0.00011 | --- | 0.00006 | --- | --- | 0.00006 | --- |
| Sodium | mg/L | 0.25 | 0.51 | 0.20 | 0.09 | --- | 0.02 | --- | --- | 0.02 | --- |
| Nickel | mg/L | 0.0002 | 0.0002 | < 0.0001 | 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | < 0.00002 | 0.00003 | 0.00019 | 0.00028 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0008 | 0.0005 | 0.0006 | 0.0005 | --- | 0.0004 | --- | --- | 0.0006 | --- |
| Tin | mg/L | 0.00139 | 0.00078 | 0.00046 | 0.00037 | --- | 0.0002 | --- | --- | 0.00016 | --- |
| Strontium | mg/L | 0.0665 | 0.103 | 0.0583 | 0.0561 | --- | 0.0476 | --- | --- | 0.0427 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.00003 | 0.000116 | 0.000094 | 0.00009 | --- | 0.000097 | --- | --- | 0.000084 | --- |
| Vanadium | mg/L | 0.00005 | 0.00005 | 0.00004 | 0.00004 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Zinc | mg/L | < 0.001 | 0.001 | < 0.001 | 0.002 | --- | 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** M04-526-01
**Weight:** 1 kg

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10007-SEP09 | CA10024-SEP09 | CA10041-SEP09 | CA10156-SEP09 | CA11063-SEP09 | CA10019-OCT09 | CA11052-OCT09 | CA11062-OCT09 | CA11171-OCT09 | CA10012-NOV09 |
| | | 1-Sep-09 | 8-Sep-09 | 15-Sep-09 | 22-Sep-09 | 29-Sep-09 | 6-Oct-09 | 13-Oct-09 | 21-Oct-09 | 27-Oct-09 | 3-Nov-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 914 | 865 | 874 | 878 | 876 | 869 | 881 | 878 | 869 | 883 |
| pH | no unit | 6.84 | 7.38 | 7.47 | 7.43 | 7.68 | 7.41 | 7.6 | 7.99 | 7.42 | 7.81 |
| Alkalinity | mg/L as $CaCO_3$ | 11 | 10 | 10 | 12 | 10 | 9 | 9 | | 10 | 10 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 31 | 30 | 26 | 27 | 24 | 26 | 23 | 32 | 27 | 24 |
| Sulphate | mg/L | 2.5 | 2.5 | 1.6 | 1.3 | 1.2 | 1.3 | 1.4 | 3.4 | 1.9 | 1.4 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Calcium | mg/L | 5.45 | 5.69 | 4.56 | 4.24 | 4.18 | 4.15 | 3.95 | 4.85 | 4.83 | 4.57 |
| Aluminum | mg/L | --- | --- | 0.04 | --- | --- | --- | 0.03 | --- | --- | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0009 | --- | --- | --- | 0.0008 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00046 | --- | --- | --- | 0.00035 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0008 | --- | --- | --- | 0.0014 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.00001 | --- | --- | --- | 0.000006 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.07 | --- | --- | --- | 0.04 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 0.372 | --- | --- | --- | 0.282 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.00419 | --- | --- | --- | 0.00413 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00003 | --- | --- | --- | 0.00002 | --- | --- | --- |
| Sodium | mg/L | --- | --- | < 0.01 | --- | --- | --- | 0.06 | --- | --- | --- |
| Nickel | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00018 | --- | --- | --- | 0.00016 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0369 | --- | --- | --- | 0.0299 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000084 | --- | --- | --- | 0.000065 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** M04-526-01
**Weight:** 1 kg

| Analyte | Unit | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11050-NOV09 | CA11129-NOV09 | CA11150-NOV09 | CA10008-DEC09 | CA10033-DEC09 | CA10058-DEC09 | CA11206-DEC09 | CA11239-DEC09 | CA10009-JAN10 | CA10033-JAN10 | CA10059-JAN10 |
| | | 10-Nov-09 | 17-Nov-09 | 24-Nov-09 | 1-Dec-09 | 8-Dec-09 | 15-Dec-09 | 22-Dec-09 | 29-Dec-09 | 5-Jan-10 | 12-Jan-10 | 19-Jan-10 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 881 | 935 | 878 | 871 | 868 | 873 | 873 | 880 | 874 | 880 | 891 |
| pH | no unit | 7.37 | 7.83 | 7.68 | 7.49 | 7.57 | 7.36 | 7.54 | 8.16 | 7.84 | 7.66 | 7.68 |
| Alkalinity | mg/L as $CaCO_3$ | 9 | 12 | 9 | 8 | 9 | 10 | 10 | 10 | 11 | 10 | 10 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 24 | 27 | 30 | 29 | 26 | 28 | 26 | 30 | 25 | 27 | 33 |
| Sulphate | mg/L | 1.5 | 2.7 | 3.3 | 1.9 | 2.1 | 2.4 | 2.1 | 2.8 | 2.5 | 2.1 | |
| Chloride | mg/L | <0.2 | --- | | | < 0.2 | --- | <0.2 | --- | --- | --- | --- |
| Calcium | mg/L | 4.19 | 4.81 | 4.5 | 4.01 | 4.37 | 4.57 | 4.01 | 4.65 | 4.05 | 4.31 | 4.32 |
| Aluminum | mg/L | 0.04 | --- | --- | --- | 0.04 | --- | 0.03 | --- | --- | --- | --- |
| As+3 | mg/L | < 0.001 | --- | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- |
| As+5 | mg/L | 0.002 | --- | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- |
| Arsenic | mg/L | 0.0007 | --- | --- | --- | 0.0007 | --- | 0.0006 | --- | --- | --- | --- |
| Barium | mg/L | 0.00019 | --- | --- | --- | 0.00019 | --- | 0.00063 | --- | --- | --- | --- |
| Boron | mg/L | 0.0006 | --- | --- | --- | 0.0005 | --- | 0.0005 | --- | --- | --- | --- |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | < 0.000003 | --- | < 0.000003 | --- | --- | --- | --- |
| Cobalt | mg/L | 0.00001 | --- | --- | --- | 0.000009 | --- | 0.000011 | --- | --- | --- | --- |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Copper | mg/L | < 0.0005 | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Iron | mg/L | < 0.01 | --- | --- | --- | < 0.01 | --- | < 0.01 | --- | --- | --- | --- |
| Potassium | mg/L | 0.06 | --- | --- | --- | 0.05 | --- | 0.04 | --- | --- | --- | --- |
| Lithium | mg/L | < 0.002 | --- | --- | --- | < 0.002 | --- | < 0.002 | --- | --- | --- | --- |
| Magnesium | mg/L | 0.386 | --- | --- | --- | 0.488 | --- | 0.477 | --- | --- | --- | --- |
| Manganese | mg/L | 0.0036 | --- | --- | --- | 0.00415 | --- | 0.00396 | --- | --- | --- | --- |
| Molybdenum | mg/L | < 0.00001 | --- | --- | --- | 0.00002 | --- | 0.00003 | --- | --- | --- | --- |
| Sodium | mg/L | < 0.01 | --- | --- | --- | < 0.01 | --- | < 0.01 | --- | --- | --- | --- |
| Nickel | mg/L | < 0.0001 | --- | --- | --- | < 0.0001 | --- | < 0.0001 | --- | --- | --- | --- |
| Lead | mg/L | < 0.00002 | --- | --- | --- | < 0.00002 | --- | < 0.00002 | --- | --- | --- | --- |
| Antimony | mg/L | < 0.0002 | --- | --- | --- | < 0.0002 | --- | < 0.0002 | --- | --- | --- | --- |
| Tin | mg/L | < 0.00001 | --- | --- | --- | 0.00024 | --- | 0.00013 | --- | --- | --- | --- |
| Strontium | mg/L | 0.0336 | --- | --- | --- | 0.0361 | --- | 0.0334 | --- | --- | --- | --- |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | < 0.0001 | --- | < 0.0001 | --- | --- | --- | --- |
| Uranium | mg/L | 0.000068 | --- | --- | --- | 0.000059 | --- | 0.000065 | --- | --- | --- | --- |
| Vanadium | mg/L | 0.00004 | --- | --- | --- | < 0.00003 | --- | < 0.00003 | --- | --- | --- | --- |
| Zinc | mg/L | < 0.001 | --- | --- | --- | < 0.001 | | < 0.001 | --- | --- | --- | --- |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M04-533-01
**Weight:** 1 kg

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11326-JUN09 | CA11327-JUN09 | CA10036-JUL09 | CA10037-JUL09 | CA10047-JUL09 | CA11077-JUL09 | CA10009-AUG09 | CA10041-AUG09 | CA10167-AUG09 | CA10184-AUG09 |
| | | 23-Jun-09 | 30-Jun-09 | 7-Jul-09 | 14-Jul-09 | 21-Jul-09 | 28-Jul-09 | 4-Aug-09 | 11-Aug-09 | 18-Aug-09 | 25-Aug-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 833 | 973 | 991 | 992 | 985 | 986 | 990 | 989 | 987 | 981 |
| pH | no unit | 7.58 | 7.77 | 7.49 | 7.61 | 7.08 | 7.16 | 7.47 | 7.55 | 7.13 | 7.19 |
| Alkalinity | mg/L as $CaCO_3$ | 12 | 21 | 20 | 16 | 15 | 15 | 14 | 14 | 14 | 13 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 38 | 58 | 46 | 40 | 42 | 40 | 33 | 34 | 32 | 32 |
| Sulphate | mg/L | 0.8 | 2.6 | 2.3 | 2 | 1.8 | 1.7 | 1.4 | 1.4 | 1.3 | 1.3 |
| Chloride | mg/L | 1 | 1.1 | 0.4 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 2.35 | 2.95 | 3.43 | 3.95 | 3.90 | 4.09 | 3.92 | 4.17 | 4.02 | 3.77 |
| Aluminum | mg/L | 0.07 | 0.05 | 0.05 | 0.05 | --- | 0.05 | --- | --- | 0.04 | --- |
| As+3 | mg/L | < 0.001 | 0.032 | --- | --- | --- | --- | --- | --- | 0.010 | --- |
| As+5 | mg/L | 0.002 | 0.005 | --- | --- | --- | --- | --- | --- | 0.030 | --- |
| Arsenic | mg/L | 0.0016 | 0.0373 | 0.0505 | 0.0547 | --- | 0.0531 | --- | --- | 0.0405 | --- |
| Barium | mg/L | 0.00258 | 0.00517 | 0.00533 | 0.00466 | --- | 0.0042 | --- | --- | 0.00391 | --- |
| Boron | mg/L | 0.0024 | 0.0094 | 0.0072 | 0.0055 | --- | 0.0033 | --- | --- | 0.0018 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000041 | 0.000128 | 0.000205 | 0.00026 | --- | 0.000337 | --- | --- | 0.00045 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | 0.0008 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 4.88 | 6.58 | 4.14 | 3.03 | --- | 1.86 | --- | --- | 1.04 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.398 | 1.2 | 1.27 | 1.34 | --- | 1.25 | --- | --- | 1.09 | --- |
| Manganese | mg/L | 0.00451 | 0.00379 | 0.00568 | 0.00648 | --- | 0.00799 | --- | --- | 0.00969 | --- |
| Molybdenum | mg/L | 0.00039 | 0.00102 | 0.00046 | 0.00026 | --- | 0.00014 | --- | --- | 0.0001 | --- |
| Sodium | mg/L | 1.71 | 2.49 | 1.19 | 0.66 | --- | 0.29 | --- | --- | 0.12 | --- |
| Nickel | mg/L | 0.0002 | 0.0006 | 0.0006 | 0.0007 | --- | 0.0005 | --- | --- | 0.0005 | --- |
| Lead | mg/L | 0.00009 | 0.00006 | 0.00033 | 0.00032 | --- | 0.00004 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.001 | 0.0044 | 0.0034 | 0.0025 | --- | 0.0016 | --- | --- | 0.0013 | --- |
| Tin | mg/L | 0.00113 | 0.00067 | 0.00056 | 0.00047 | --- | 0.00043 | --- | --- | 0.00045 | --- |
| Strontium | mg/L | 0.0308 | 0.0551 | 0.0581 | 0.0626 | --- | 0.0608 | --- | --- | 0.0595 | --- |
| Titanium | mg/L | 0.0005 | 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.000048 | 0.000371 | 0.000431 | 0.000438 | --- | 0.000409 | --- | --- | 0.000315 | --- |
| Vanadium | mg/L | 0.00026 | 0.00042 | 0.00043 | 0.0004 | --- | 0.00032 | --- | --- | 0.00026 | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M04-533-01
**Weight:** 1 kg

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10007-SEP09 | CA10024-SEP09 | CA10041-SEP09 | CA10156-SEP09 | CA11063-SEP09 | CA10019-OCT09 | CA11052-OCT09 | CA11062-OCT09 | CA11171-OCT09 | CA10012-NOV09 |
| | | 1-Sep-09 | 8-Sep-09 | 15-Sep-09 | 22-Sep-09 | 29-Sep-09 | 6-Oct-09 | 13-Oct-09 | 21-Oct-09 | 27-Oct-09 | 3-Nov-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 994 | 987 | 988 | 1000 | 966 | 986 | 985 | 992 | 994 | 993 |
| pH | no unit | 6.90 | 7.30 | 7.26 | 7.38 | 7.5 | 7.34 | 7.53 | 7.52 | 7.34 | 7.45 |
| Alkalinity | mg/L as $CaCO_3$ | 12 | 12 | 12 | 15 | 12 | 11 | 12 | 14 | 13 | 12 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 30 | 30 | 28 | 27 | 26 | 27 | 27 | 30 | 30 | 27 |
| Sulphate | mg/L | 1.3 | 1.3 | 1.2 | 1.1 | 1.2 | 1.2 | 1.1 | 1.3 | 1.3 | 1.3 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Calcium | mg/L | 3.78 | 4.45 | 3.86 | 3.42 | 3.14 | 3.65 | 3.74 | 3.93 | 4.28 | 4.22 |
| Aluminum | mg/L | --- | --- | 0.06 | --- | --- | --- | 0.04 | --- | --- | --- |
| As+3 | mg/L | --- | --- | 0.033 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | 0.005 | --- | --- | --- | --- | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0387 | --- | --- | --- | 0.0264 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00341 | --- | --- | --- | 0.00309 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0006 | --- | --- | --- | 0.0017 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000356 | --- | --- | --- | 0.000359 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.72 | --- | --- | --- | 0.47 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 0.993 | --- | --- | --- | 0.954 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.00867 | --- | --- | --- | 0.00933 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00009 | --- | --- | --- | 0.00008 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.07 | --- | --- | --- | 0.05 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0002 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00006 | --- | --- | --- | 0.00006 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0006 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.0005 | --- | --- | --- | 0.00034 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.057 | --- | --- | --- | 0.0564 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000372 | --- | --- | --- | 0.000262 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00024 | --- | --- | --- | 0.00016 | --- | --- | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | 0.002 | --- | --- | --- |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M04-533-01
**Weight:** 1 kg

| Analyte | Unit | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11050-NOV09 | CA11129-NOV09 | CA11150-NOV09 | CA10008-DEC09 | CA10033-DEC09 | CA10058-DEC09 | CA11206-DEC09 | CA11239-DEC09 | CA10009-JAN10 | CA10033-JAN10 | CA10059-JAN10 |
| | | 10-Nov-09 | 17-Nov-09 | 24-Nov-09 | 1-Dec-09 | 8-Dec-09 | 15-Dec-09 | 22-Dec-09 | 29-Dec-09 | 5-Jan-10 | 12-Jan-10 | 19-Jan-10 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 988 | 991 | 985 | 992 | 981 | 989 | 989 | 978 | 973 | 969 | 985 |
| pH | no unit | 7.41 | 7.48 | 7.44 | 7.41 | 7.49 | 7.31 | 7.44 | 7.60 | 8.26 | 7.53 | 7.56 |
| Alkalinity | mg/L as $CaCO_3$ | 13 | 13 | 13 | 20 | 12 | 13 | 12 | 13 | 11 | 13 | 12 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 28 | 26 | 30 | 28 | 30 | 28 | 25 | 28 | 28 | 30 | 26 |
| Sulphate | mg/L | 1.3 | 1.3 | 1.4 | 0.9 | 1.1 | 0.9 | 1.0 | 1.0 | 1.0 | 1.2 | |
| Chloride | mg/L | <0.2 | --- | --- | --- | < 0.2 | --- | <0.2 | --- | --- | --- | --- |
| Calcium | mg/L | 3.93 | 3.72 | 3.85 | 3.94 | 4.12 | 4.22 | 3.57 | 3.70 | 3.17 | 4.05 | 3.40 |
| Aluminum | mg/L | 0.05 | --- | --- | --- | 0.05 | --- | 0.03 | --- | --- | --- | --- |
| As+3 | mg/L | 0.026 | --- | --- | --- | --- | --- | 0.007 | --- | --- | --- | --- |
| As+5 | mg/L | < 0.001 | --- | --- | --- | --- | --- | 0.011 | --- | --- | --- | --- |
| Arsenic | mg/L | 0.0278 | --- | --- | --- | 0.0217 | --- | 0.0153 | --- | --- | --- | --- |
| Barium | mg/L | 0.00351 | --- | --- | --- | 0.00322 | --- | 0.00327 | --- | --- | --- | --- |
| Boron | mg/L | 0.0005 | --- | --- | --- | 0.0003 | --- | 0.0003 | --- | --- | --- | --- |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | < 0.000003 | --- | < 0.000003 | --- | --- | --- | --- |
| Cobalt | mg/L | 0.000342 | --- | --- | --- | 0.000384 | --- | 0.000347 | --- | --- | --- | --- |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Copper | mg/L | < 0.0005 | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Iron | mg/L | < 0.01 | --- | --- | --- | < 0.01 | --- | < 0.01 | --- | --- | --- | --- |
| Potassium | mg/L | 0.48 | --- | --- | --- | 0.4 | --- | 0.35 | --- | --- | --- | --- |
| Lithium | mg/L | < 0.002 | --- | --- | --- | < 0.002 | --- | < 0.002 | --- | --- | --- | --- |
| Magnesium | mg/L | 0.948 | --- | --- | --- | 0.968 | --- | 0.84 | --- | --- | --- | --- |
| Manganese | mg/L | 0.0102 | --- | --- | --- | 0.013 | --- | 0.0124 | --- | --- | --- | --- |
| Molybdenum | mg/L | 0.00004 | --- | --- | --- | 0.00007 | --- | 0.00008 | --- | --- | --- | --- |
| Sodium | mg/L | 0.05 | --- | --- | --- | 0.05 | --- | 0.04 | --- | --- | --- | --- |
| Nickel | mg/L | 0.0003 | --- | --- | --- | 0.0003 | --- | 0.0002 | --- | --- | --- | --- |
| Lead | mg/L | 0.00003 | --- | --- | --- | 0.00003 | --- | 0.00004 | --- | --- | --- | --- |
| Antimony | mg/L | 0.0004 | --- | --- | --- | 0.0005 | --- | 0.0005 | --- | --- | --- | --- |
| Tin | mg/L | 0.00024 | --- | --- | --- | 0.00047 | --- | 0.0004 | --- | --- | --- | --- |
| Strontium | mg/L | 0.06 | --- | --- | --- | 0.0637 | --- | 0.057 | --- | --- | --- | --- |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | < 0.0001 | --- | < 0.0001 | --- | --- | --- | --- |
| Uranium | mg/L | 0.000238 | --- | --- | --- | 0.000167 | --- | 0.000142 | --- | --- | --- | --- |
| Vanadium | mg/L | 0.0002 | --- | --- | --- | 0.00012 | --- | 0.00008 | --- | --- | --- | --- |
| Zinc | mg/L | 0.002 | --- | --- | --- | 0.001 | --- | 0.001 | --- | --- | --- | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** M98-194-01
**Weight:** 1 kg

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11326-JUN09 | CA11327-JUN09 | CA10036-JUL09 | CA10037-JUL09 | CA10047-JUL09 | CA11077-JUL09 | CA10009-AUG09 | CA10041-AUG09 | CA10167-AUG09 | CA10184-AUG09 |
| | | 23-Jun-09 | 30-Jun-09 | 7-Jul-09 | 14-Jul-09 | 21-Jul-09 | 28-Jul-09 | 4-Aug-09 | 11-Aug-09 | 18-Aug-09 | 25-Aug-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 793 | 912 | 984 | 935 | 957 | 961 | 964 | 952 | 960 | 872 |
| pH | no unit | 7.40 | 7.64 | 7.49 | 7.52 | 7.15 | 7.09 | 7.6 | 7.6 | 7.15 | 7.29 |
| Alkalinity | mg/L as $CaCO_3$ | 11 | 15 | 17 | 15 | 16 | 15 | 21 | 12 | 14 | 15 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 52 | 73 | 55 | 47 | 42 | 40 | 39 | 33 | 34 | 38 |
| Sulphate | mg/L | 5.6 | 12 | 7.1 | 4.9 | 3.6 | 3 | 2.5 | 2.1 | 2.3 | 2.2 |
| Chloride | mg/L | 2.4 | 1.9 | 0.7 | 0.3 | --- | < 0.2 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 4.23 | 5.8 | 5.82 | 5.25 | 5.09 | 4.78 | 5.33 | 4.52 | 4.66 | 4.93 |
| Aluminum | mg/L | 0.03 | 0.03 | 0.03 | 0.05 | --- | 0.05 | --- | --- | 0.05 | --- |
| As+3 | mg/L | < 0.001 | 0.008 | --- | --- | --- | --- | --- | --- | 0.006 | --- |
| As+5 | mg/L | 0.004 | < 0.001 | --- | --- | --- | --- | --- | --- | <0.001 | --- |
| Arsenic | mg/L | 0.0038 | 0.0076 | 0.0069 | 0.0076 | --- | 0.006 | --- | --- | 0.0058 | --- |
| Barium | mg/L | 0.0017 | 0.00239 | 0.00253 | 0.0018 | --- | 0.00143 | --- | --- | 0.00132 | --- |
| Boron | mg/L | 0.0024 | 0.0067 | 0.0051 | 0.0038 | --- | 0.0023 | --- | --- | 0.0017 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000075 | 0.000112 | 0.000094 | 0.000073 | --- | 0.000078 | --- | --- | 0.000094 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0008 | 0.0007 | < 0.0005 | < 0.0005 | --- | 0.001 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.02 | 0.01 | < 0.01 | < 0.01 | --- | 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 3.39 | 3.64 | 2.24 | 1.72 | --- | 1.05 | --- | --- | 0.65 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.836 | 1.6 | 1.3 | 1.24 | --- | 1.09 | --- | --- | 1.03 | --- |
| Manganese | mg/L | 0.00572 | 0.00451 | 0.00562 | 0.0044 | --- | 0.00489 | --- | --- | 0.00597 | --- |
| Molybdenum | mg/L | 0.00034 | 0.00086 | 0.00044 | 0.0003 | --- | 0.00014 | --- | --- | 0.00009 | --- |
| Sodium | mg/L | 2.28 | 2.93 | 1.48 | 0.91 | --- | 0.43 | --- | --- | 0.2 | --- |
| Nickel | mg/L | 0.0007 | 0.0008 | 0.0004 | 0.0003 | --- | < 0.0001 | --- | --- | 0.0001 | --- |
| Lead | mg/L | 0.00005 | 0.00002 | 0.00003 | 0.00014 | --- | 0.00008 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0008 | 0.0015 | 0.0013 | 0.0011 | --- | 0.0007 | --- | --- | 0.0007 | --- |
| Tin | mg/L | 0.00109 | 0.00065 | 0.00042 | 0.00028 | --- | 0.00031 | --- | --- | 0.00019 | --- |
| Strontium | mg/L | 0.0237 | 0.0373 | 0.0346 | 0.0306 | --- | 0.0262 | --- | --- | 0.027 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.00015 | 0.00125 | 0.000951 | 0.000719 | --- | 0.000439 | --- | --- | 0.000278 | --- |
| Vanadium | mg/L | 0.00007 | 0.00011 | 0.00009 | 0.0001 | --- | 0.00005 | --- | --- | 0.00005 | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.002 | --- | --- | 0.001 | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** M98-194-01
**Weight:** 1 kg

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10007-SEP09 | CA10024-SEP09 | CA10041-SEP09 | CA10156-SEP09 | CA11063-SEP09 | CA10019-OCT09 | CA11052-OCT09 | CA11062-OCT09 | CA11171-OCT09 | CA10012-NOV09 | CA11050-NOV09 |
| | | 1-Sep-09 | 8-Sep-09 | 15-Sep-09 | 22-Sep-09 | 29-Sep-09 | 6-Oct-09 | 13-Oct-09 | 21-Oct-09 | 27-Oct-09 | 3-Nov-09 | 10-Nov-09 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 995 | 960 | 964 | 965 | 960 | 961 | 972 | 948 | 959 | 967 | 976 |
| pH | no unit | 6.8 | 7.37 | 7.17 | 7.43 | 7.52 | 7.43 | 7.61 | 7.61 | 7.34 | 7.45 | 7.42 |
| Alkalinity | mg/L as $CaCO_3$ | 15 | 13 | 14 | 18 | 16 | 13 | 14 | 14 | 14 | 14 | 13 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 36 | 34 | 33 | 35 | 33 | 35 | 35 | 35 | 38 | 37 | 35 |
| Sulphate | mg/L | 1.9 | 1.9 | 2.1 | 2.1 | 2.6 | 3 | 3 | 3.5 | 3.7 | 3.7 | 3.4 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | <0.2 |
| Calcium | mg/L | 5.27 | 5.49 | 4.75 | 4.57 | 4.78 | 4.86 | 4.95 | 4.73 | 5.48 | 5.63 | 5.15 |
| Aluminum | mg/L | --- | --- | 0.06 | --- | --- | --- | 0.03 | --- | --- | --- | 0.04 |
| As+3 | mg/L | --- | --- | 0.003 | --- | --- | --- | --- | --- | --- | --- | < 0.001 |
| As+5 | mg/L | --- | --- | 0.002 | --- | --- | --- | --- | --- | --- | --- | 0.002 |
| Arsenic | mg/L | --- | --- | 0.0048 | --- | --- | --- | 0.0026 | --- | --- | --- | 0.0028 |
| Barium | mg/L | --- | --- | 0.00108 | --- | --- | --- | 0.00094 | --- | --- | --- | 0.00108 |
| Boron | mg/L | --- | --- | 0.0005 | --- | --- | --- | 0.0024 | --- | --- | --- | 0.0004 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.000091 | --- | --- | --- | 0.000103 | --- | --- | --- | 0.0001 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Potassium | mg/L | --- | --- | 0.46 | --- | --- | --- | 0.28 | --- | --- | --- | 0.31 |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | --- | --- | 1.04 | --- | --- | --- | 1.07 | --- | --- | --- | 1.19 |
| Manganese | mg/L | --- | --- | 0.00637 | --- | --- | --- | 0.00838 | --- | --- | --- | 0.00669 |
| Molybdenum | mg/L | --- | --- | 0.00008 | --- | --- | --- | 0.00008 | --- | --- | --- | 0.00003 |
| Sodium | mg/L | --- | --- | 0.13 | --- | --- | --- | 0.09 | --- | --- | --- | 0.09 |
| Nickel | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | 0.0001 |
| Lead | mg/L | --- | --- | 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0003 | --- | --- | --- | < 0.0002 |
| Tin | mg/L | --- | --- | 0.0002 | --- | --- | --- | 0.00018 | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | --- | 0.0284 | --- | --- | --- | 0.0296 | --- | --- | --- | 0.0327 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | 0.000234 | --- | --- | --- | 0.000155 | --- | --- | --- | 0.000134 |
| Vanadium | mg/L | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- | 0.00006 |
| Zinc | mg/L | --- | --- | 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

**Humidity Cell:** M98-194-01
**Weight:** 1 kg

| Analyte | Unit | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11129-NOV09 | CA11150-NOV09 | CA10008-DEC09 | CA10033-DEC09 | CA10058-DEC09 | CA11206-DEC09 | CA11239-DEC09 | CA10009-JAN10 | CA10033-JAN10 | CA10059-JAN10 |
| | | 17-Nov-09 | 24-Nov-09 | 1-Dec-09 | 8-Dec-09 | 15-Dec-09 | 22-Dec-09 | 29-Dec-09 | 5-Jan-10 | 12-Jan-10 | 19-Jan-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 959 | 972 | 982 | 969 | 987 | 978 | 984 | 956 | 976 | 993 |
| pH | no unit | 7.48 | 7.48 | 7.54 | 7.53 | 7.40 | 7.54 | 7.67 | 7.73 | 7.48 | 8.12 |
| Alkalinity | mg/L as $CaCO_3$ | 22 | 15 | 15 | 15 | 17 | 17 | 16 | 63 | 15 | 23 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 31 | 40 | 34 | 39 | 45 | 38 | 39 | 33 | 38 | 48 |
| Sulphate | mg/L | 3.5 | 3.3 | 2.8 | 2.7 | 2.7 | 2.4 | 2.6 | 3.0 | 2.6 | |
| Chloride | mg/L | --- | --- | --- | < 0.2 | --- | <0.2 | --- | --- | --- | --- |
| Calcium | mg/L | 4.87 | 5.16 | 5.19 | 6.00 | 6.41 | 5.65 | 5.31 | 4.78 | 5.01 | 5.67 |
| Aluminum | mg/L | --- | --- | --- | 0.03 | --- | 0.02 | --- | --- | --- | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- |
| Arsenic | mg/L | --- | --- | --- | 0.0021 | --- | 0.0016 | --- | --- | --- | --- |
| Barium | mg/L | --- | --- | --- | 0.00099 | --- | 0.00097 | --- | --- | --- | --- |
| Boron | mg/L | --- | --- | --- | 0.0003 | --- | 0.0004 | --- | --- | --- | --- |
| Cadmium | mg/L | --- | --- | --- | < 0.000003 | --- | < 0.000003 | --- | --- | --- | --- |
| Cobalt | mg/L | --- | --- | --- | 0.000129 | --- | 0.000133 | --- | --- | --- | --- |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | < 0.0005 | --- | --- | --- | --- |
| Iron | mg/L | --- | --- | --- | < 0.01 | --- | < 0.01 | --- | --- | --- | --- |
| Potassium | mg/L | --- | --- | --- | 0.26 | --- | 0.23 | --- | --- | --- | --- |
| Lithium | mg/L | --- | --- | --- | < 0.002 | --- | < 0.002 | --- | --- | --- | --- |
| Magnesium | mg/L | --- | --- | --- | 1.33 | --- | 1.16 | --- | --- | --- | --- |
| Manganese | mg/L | --- | --- | --- | 0.00999 | --- | 0.011 | --- | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | --- | 0.00006 | --- | 0.00009 | --- | --- | --- | --- |
| Sodium | mg/L | --- | --- | --- | 0.08 | --- | 0.06 | --- | --- | --- | --- |
| Nickel | mg/L | --- | --- | --- | 0.0002 | --- | 0.0002 | --- | --- | --- | --- |
| Lead | mg/L | --- | --- | --- | < 0.00002 | --- | 0.00003 | --- | --- | --- | --- |
| Antimony | mg/L | --- | --- | --- | 0.0002 | --- | 0.0003 | --- | --- | --- | --- |
| Tin | mg/L | --- | --- | --- | 0.00032 | --- | 0.00032 | --- | --- | --- | --- |
| Strontium | mg/L | --- | --- | --- | 0.038 | --- | 0.0358 | --- | --- | --- | --- |
| Titanium | mg/L | --- | --- | --- | < 0.0001 | --- | < 0.0001 | --- | --- | --- | --- |
| Uranium | mg/L | --- | --- | --- | 0.0001 | --- | 0.000098 | --- | --- | --- | --- |
| Vanadium | mg/L | --- | --- | --- | < 0.00003 | --- | < 0.00003 | --- | --- | --- | --- |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | 0.002 | --- | --- | --- | --- |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M05-536A-01 Tiriganiaq
**Weight:** 1 kg

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11290-NOV09 | CA11291-NOV09 | CA10022-DEC09 | CA10048-DEC09 | CA10073-DEC09 | CA11220-DEC09 | CA11253-DEC09 | CA10023-JAN10 | CA10047-JAN10 | CA10073-JAN10 |
| | | 18-Nov-09 | 25-Nov-09 | 2-Dec-09 | 9-Dec-09 | 16-Dec-09 | 23-Dec-09 | 30-Dec-09 | 6-Jan-10 | 13-Jan-10 | 20-Jan-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 808 | 934 | 909 | 947 | 942 | 938 | 933 | 907 | 901 | 932 |
| pH | no unit | 7.84 | 8.01 | 7.46 | 8.09 | 8.23 | 8.82 | 9.3 | 8.8 | 8.64 | 8.36 |
| Alkalinity | mg/L as $CaCO_3$ | 15 | 23 | 16 | 21 | 21 | 16 | 18 | 15 | 15 | 15 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 42 | 57 | 41 | 47 | 44 | 36 | 36 | 34 | 33 | 32 |
| Sulphate | mg/L | 1 | 2.2 | 2.5 | 2.7 | 2.4 | 2.1 | 1.9 | 1.8 | 1.7 | 1.6 |
| Chloride | mg/L | 0.7 | 0.9 | 0.4 | < 0.2 | | < 0.2 | | | < 0.2 | --- |
| Calcium | mg/L | 5.2 | 4.13 | 4.63 | 5.00 | 4.85 | 4.62 | 4.31 | 4.17 | 3.68 | 3.95 |
| As+3 | mg/L | 0.005 | 0.007 | 0.007 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.002 | 0.006 | 0.010 | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.04 | 0.05 | 0.06 | 0.06 | --- | 0.06 | --- | --- | 0.05 | --- |
| Arsenic | mg/L | 0.0011 | 0.013 | 0.0157 | 0.0189 | --- | 0.0232 | --- | --- | 0.0259 | --- |
| Barium | mg/L | 0.00086 | 0.00028 | 0.00048 | 0.00043 | --- | 0.00024 | --- | --- | 0.00065 | --- |
| Boron | mg/L | 0.0015 | 0.0043 | 0.0025 | 0.0027 | --- | 0.0014 | --- | --- | 0.0009 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | 0.000042 | < 0.000003 | --- | 0.000036 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000039 | 0.000064 | 0.000133 | 0.000083 | --- | 0.000129 | --- | --- | 0.000069 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0009 | < 0.0005 | 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 1.38 | 1.84 | 1.47 | 1.12 | --- | 0.61 | --- | --- | 0.35 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.601 | 1.97 | 1.97 | 2.37 | --- | 1.74 | --- | --- | 1.27 | --- |
| Manganese | mg/L | 0.0113 | 0.013 | 0.0145 | 0.017 | --- | 0.0186 | --- | --- | 0.0164 | --- |
| Molybdenum | mg/L | 0.00007 | 0.00011 | 0.00004 | 0.00009 | --- | 0.00002 | --- | --- | < 0.00001 | --- |
| Sodium | mg/L | 1.04 | 1.69 | 1.21 | 0.79 | --- | 0.34 | --- | --- | 0.18 | --- |
| Nickel | mg/L | 0.0003 | 0.0004 | 0.0003 | 0.0003 | --- | 0.0003 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | 0.00007 | < 0.00002 | 0.00033 | < 0.00002 | --- | 0.00006 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0009 | 0.0028 | 0.002 | 0.0017 | --- | 0.0013 | --- | --- | 0.001 | --- |
| Tin | mg/L | 0.046 | 0.0215 | 0.0112 | 0.006 | --- | 0.00321 | --- | --- | 0.0136 | --- |
| Strontium | mg/L | 0.0074 | 0.01 | 0.0091 | 0.0114 | --- | 0.0081 | --- | --- | 0.005 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | < 0.000001 | 0.00001 | 0.000085 | 0.000008 | --- | 0.000063 | --- | --- | 0.000006 | --- |
| Vanadium | mg/L | 0.00015 | 0.00041 | 0.00041 | 0.00031 | --- | 0.00034 | --- | --- | 0.00029 | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M05-536A-01 Tiriganiaq
**Weight:** 1 kg

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10101-JAN10 | CA10023-FEB10 | CA10048-FEB10 | CA10078-FEB10 | CA10104-FEB10 | CA10024-MAR10 | CA10050-MAR10 | CA10075-MAR10 | CA10100-MAR10 | CA10145-MAR10 |
| | | 27-Jan-09 | 3-Feb-10 | 10-Feb-10 | 17-Feb-10 | 24-Feb-10 | 3-Mar-10 | 10-Mar-10 | 17-Mar-10 | 24-Mar-10 | 31-Mar-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 925 | 910 | 920 | 912 | 914 | 905 | 913 | 877 | 961 | 903 |
| pH | no unit | 8.71 | 8.08 | 7.97 | 8.87 | 8.77 | 8.14 | 8.81 | 8.01 | 7.98 | 8.37 |
| Alkalinity | mg/L as $CaCO_3$ | 13 | 14 | 14 | 13 | 13 | 12 | 13 | 11 | 15 | 13 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 32 | 32 | 32 | 32 | 30 | 28 | 30 | 28 | 32 | 29 |
| Sulphate | mg/L | 2.1 | 2.1 | 1.8 | 1.8 | 1.8 | 1.7 | 1.6 | 1.5 | 1.2 | 1.2 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Calcium | mg/L | 4.07 | 4.06 | 3.94 | 3.60 | 3.98 | 3.47 | 4.24 | 3.48 | 4.57 | 3.86 |
| As+3 | mg/L | --- | --- | --- | --- | --- | 0.018 | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | 0.007 | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.04 | --- | --- | --- | 0.04 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0284 | --- | --- | 0.0246 | 0.0308 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00012 | --- | --- | --- | 0.00045 | --- | --- | --- |
| Boron | mg/L | --- | --- | < 0.0002 | --- | --- | --- | 0.0003 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000087 | --- | --- | --- | 0.000096 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.22 | --- | --- | --- | 0.2 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 1.12 | --- | --- | --- | 1.23 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.0195 | --- | --- | --- | 0.0167 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00006 | --- | --- | --- | 0.00002 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.09 | --- | --- | --- | 0.07 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0002 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00007 | --- | --- | --- | 0.00039 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0007 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00278 | --- | --- | --- | 0.00128 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0047 | --- | --- | --- | 0.0052 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000009 | --- | --- | --- | 0.000005 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00026 | --- | --- | --- | 0.00027 | --- | --- | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M05-536A-01 Tiriganiaq
**Weight:** 1 kg

| Analyte | Unit | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 |
|---|---|---|---|---|---|---|---|
| | | CA10024-APR10 | CA10053-APR10 | CA10097-APR10 | CA10099-APR10 | CA10023-MAY10 | CA10048-MAY10 |
| | | 7-Apr-10 | 14-Apr-10 | 21-Apr-10 | 28-Apr-10 | 5-May-10 | 12-May-10 |
| | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 886 | 865 | 875 | 849 | 830 | 900 |
| pH | no unit | 7.88 | 7.75 | 7.90 | 9.03 | 8.16 | 8.83 |
| Alkalinity | mg/L as $CaCO_3$ | 12 | 11 | 25 | 12 | 16 | 12 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 28 | 27 | 26 | 25 | 46 | 40 |
| Sulphate | mg/L | 1.4 | 1.4 | 1.2 | 1.1 | 1.1 | 0.9 |
| Chloride | mg/L | < 0.2 | --- | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 3.76 | 3.36 | 3.38 | 3.61 | 3.78 | 3.71 |
| As+3 | mg/L | 0.034 | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.001 | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.05 | --- | --- | --- | --- | 0.04 |
| Arsenic | mg/L | 0.0287 | --- | --- | --- | --- | 0.0272 |
| Barium | mg/L | 0.00023 | --- | --- | --- | --- | 0.00027 |
| Boron | mg/L | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000084 | --- | --- | --- | --- | 0.000085 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Potassium | mg/L | 0.17 | --- | --- | --- | --- | 0.12 |
| Lithium | mg/L | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | 1.1 | --- | --- | --- | --- | 1.05 |
| Manganese | mg/L | 0.0184 | --- | --- | --- | --- | 0.0196 |
| Molybdenum | mg/L | 0.00007 | --- | --- | --- | --- | 0.00005 |
| Sodium | mg/L | 0.08 | --- | --- | --- | --- | 0.03 |
| Nickel | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Lead | mg/L | 0.00039 | --- | --- | --- | --- | 0.00114 |
| Antimony | mg/L | 0.0006 | --- | --- | --- | --- | 0.0006 |
| Tin | mg/L | 0.00125 | --- | --- | --- | --- | 0.00109 |
| Strontium | mg/L | 0.004 | --- | --- | --- | --- | 0.0018 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | 0.000001 | --- | --- | --- | --- | 0.000009 |
| Vanadium | mg/L | 0.00021 | --- | --- | --- | --- | 0.0002 |
| Zinc | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |
| | | |
| **Humidity Cell:** | M97-141-01 | Tiriganiaq |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11290-NOV09 | CA11291-NOV09 | CA10022-DEC09 | CA10048-DEC09 | CA10073-DEC09 | CA11220-DEC09 | CA11253-DEC09 | CA10023-JAN10 | CA10047-JAN10 | CA10073-JAN10 |
| | | 18-Nov-09 | 25-Nov-09 | 2-Dec-09 | 9-Dec-09 | 16-Dec-09 | 23-Dec-09 | 30-Dec-09 | 6-Jan-10 | 13-Jan-10 | 20-Jan-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 781 | 905 | 926 | 916 | 925 | 917 | 931 | 898 | 918 | 940 |
| pH | no unit | 7.75 | 7.79 | 7.54 | 7.8 | 7.84 | 8.62 | 9.1 | 8.12 | 7.93 | 7.93 |
| Alkalinity | mg/L as $CaCO_3$ | 14 | 15 | 15 | 12 | 14 | 12 | 13 | 11 | 12 | 12 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 39 | 43 | 37 | 36 | 36 | 27 | 27 | 28 | 28 | 28 |
| Sulphate | mg/L | 1.1 | 2.1 | 2.7 | 2.7 | 2.6 | 2.3 | 2.2 | 2.2 | 2.1 | 1.8 |
| Chloride | mg/L | 0.8 | 1 | 0.6 | 0.4 | --- | < 0.2 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 4.24 | 2.96 | 3.29 | 3.07 | 3.01 | 2.69 | 2.34 | 2.31 | 2.13 | 2.4 |
| As+3 | mg/L | 0.002 | 0.002 | 0.003 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.002 | 0.004 | < 0.001 | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.05 | 0.04 | 0.05 | 0.06 | --- | 0.06 | --- | --- | 0.03 | --- |
| Arsenic | mg/L | 0.0003 | 0.0007 | 0.0007 | 0.0008 | --- | 0.0013 | --- | --- | 0.0013 | --- |
| Barium | mg/L | 0.00061 | 0.00028 | 0.00028 | 0.00028 | --- | 0.00029 | --- | --- | 0.00042 | --- |
| Boron | mg/L | 0.0017 | 0.0029 | 0.0027 | 0.0022 | --- | 0.0018 | --- | --- | 0.0012 | --- |
| Cadmium | mg/L | < 0.000003 | 0.000007 | < 0.000003 | < 0.000003 | --- | 0.00002 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.00007 | 0.000038 | 0.000022 | 0.000015 | --- | 0.000049 | --- | --- | 0.000009 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0008 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | 0.01 | --- | 0.02 | --- | --- | 0.01 | --- |
| Potassium | mg/L | 0.91 | 1.1 | 1.05 | 0.89 | --- | 0.57 | --- | --- | 0.34 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 1.03 | 1.73 | 2.19 | 2.11 | --- | 1.87 | --- | --- | 1.59 | --- |
| Manganese | mg/L | 0.0074 | 0.00806 | 0.00866 | 0.00798 | --- | 0.00762 | --- | --- | 0.00697 | --- |
| Molybdenum | mg/L | 0.00005 | 0.00009 | 0.00005 | 0.00006 | --- | 0.00004 | --- | --- | < 0.00001 | --- |
| Sodium | mg/L | 0.92 | 1.36 | 1.3 | 1.05 | --- | 0.56 | --- | --- | 0.27 | --- |
| Nickel | mg/L | 0.0003 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | 0.00006 | < 0.00002 | < 0.00002 | < 0.00002 | --- | 0.00005 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0007 | 0.0024 | 0.0022 | 0.0017 | --- | 0.0015 | --- | --- | 0.0013 | --- |
| Tin | mg/L | 0.0278 | 0.0196 | 0.0123 | 0.00518 | --- | 0.00203 | --- | --- | 0.00136 | --- |
| Strontium | mg/L | 0.0046 | 0.0046 | 0.0047 | 0.0046 | --- | 0.0038 | --- | --- | 0.0027 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.000002 | 0.000004 | 0.000006 | 0.000003 | --- | 0.000035 | --- | --- | < 0.000001 | --- |
| Vanadium | mg/L | 0.00012 | 0.00024 | 0.0002 | 0.00019 | --- | 0.00021 | --- | --- | 0.00016 | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

| | | |
|---|---|---|
| **Humidity Cell:** | M97-141-01 | Tiriganiaq |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10101-JAN10 | CA10023-FEB10 | CA10048-FEB10 | CA10078-FEB10 | CA10104-FEB10 | CA10024-MAR10 | CA10050-MAR10 | CA10075-MAR10 | CA10100-MAR10 | CA10145-MAR10 |
| | | 27-Jan-09 | 3-Feb-10 | 10-Feb-10 | 17-Feb-10 | 24-Feb-10 | 3-Mar-10 | 10-Mar-10 | 17-Mar-10 | 24-Mar-10 | 31-Mar-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 901 | 918 | 909 | 912 | 912 | 897 | 906 | 892 | 915 | 892 |
| pH | no unit | 7.77 | 7.58 | 7.47 | 7.69 | 7.54 | 7.28 | 7.39 | 7.37 | 7.42 | 7.39 |
| Alkalinity | mg/L as $CaCO_3$ | 10 | 10 | 10 | 9 | 8 | 8 | 8 | 7 | 8 | 8 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 26 | 26 | 27 | 26 | 27 | 28 | 29 | 31 | 27 | 29 |
| Sulphate | mg/L | 2.2 | 2.3 | 2.8 | 3.2 | 4 | 4.3 | 5.3 | 5.9 | 4.0 | 5.3 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Calcium | mg/L | 2.38 | 2.29 | 2.23 | 2.14 | 2.37 | 2.26 | 2.82 | 2.38 | 2.60 | 2.59 |
| As+3 | mg/L | --- | --- | --- | --- | --- | 0.001 | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.04 | --- | --- | --- | 0.04 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0013 | --- | --- | 0.001 | 0.0013 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00029 | --- | --- | --- | 0.00049 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0004 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000021 | --- | --- | --- | 0.00002 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.22 | --- | --- | --- | 0.18 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 1.43 | --- | --- | --- | 1.76 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.00806 | --- | --- | --- | 0.00801 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00003 | --- | --- | --- | 0.00004 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.14 | --- | --- | --- | 0.10 | --- | --- | --- |
| Nickel | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00006 | --- | --- | --- | 0.0004 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.001 | --- | --- | --- | 0.0009 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00065 | --- | --- | --- | 0.00058 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0026 | --- | --- | --- | 0.0032 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000004 | --- | --- | --- | < 0.000001 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00014 | --- | --- | --- | 0.00011 | --- | --- | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |
| | | |
| **Humidity Cell:** | M97-141-01 | Tiriganiaq |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 |
|---|---|---|---|---|---|---|---|
| | | CA10024-APR10 | CA10053-APR10 | CA10097-APR10 | CA10099-APR10 | CA10023-MAY10 | CA10048-MAY10 |
| | | 7-Apr-10 | 14-Apr-10 | 21-Apr-10 | 28-Apr-10 | 5-May-10 | 12-May-10 |
| | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 892 | 859 | 855 | 855 | 835 | 895 |
| pH | no unit | 7.54 | 7.37 | 7.63 | 8.02 | 7.55 | 7.66 |
| Alkalinity | mg/L as $CaCO_3$ | 8 | 8 | 8 | 9 | 10 | 8 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 30 | 32 | 32 | 29 | 46 | 44 |
| Sulphate | mg/L | 5.5 | 6.4 | 6.1 | 5.2 | 4.9 | 3.1 |
| Chloride | mg/L | < 0.2 | --- | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 2.63 | 2.58 | 2.69 | 2.55 | 2.44 | 2.41 |
| As+3 | mg/L | 0.006 | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.001 | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.04 | --- | --- | --- | --- | 0.04 |
| Arsenic | mg/L | 0.0015 | --- | --- | --- | --- | 0.0017 |
| Barium | mg/L | 0.00027 | --- | --- | --- | --- | 0.00054 |
| Boron | mg/L | 0.0003 | --- | --- | --- | --- | 0.0003 |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000019 | --- | --- | --- | --- | 0.000023 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Potassium | mg/L | 0.16 | --- | --- | --- | --- | 0.08 |
| Lithium | mg/L | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | 1.73 | --- | --- | --- | --- | 1.36 |
| Manganese | mg/L | 0.00692 | --- | --- | --- | --- | 0.00752 |
| Molybdenum | mg/L | 0.00004 | --- | --- | --- | --- | 0.00004 |
| Sodium | mg/L | 0.11 | --- | --- | --- | --- | 0.04 |
| Nickel | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Lead | mg/L | 0.00035 | --- | --- | --- | --- | 0.00097 |
| Antimony | mg/L | 0.0008 | --- | --- | --- | --- | 0.0008 |
| Tin | mg/L | 0.00053 | --- | --- | --- | --- | 0.00061 |
| Strontium | mg/L | 0.0031 | --- | --- | --- | --- | 0.0013 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | < 0.000001 | --- | --- | --- | --- | 0.000004 |
| Vanadium | mg/L | 0.00009 | --- | --- | --- | --- | 0.0001 |
| Zinc | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |
| | | |
| **Humidity Cell:** | M99-403-03 | Tiriganiaq |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11290-NOV09 | CA11291-NOV09 | CA10022-DEC09 | CA10048-DEC09 | CA10073-DEC09 | CA11220-DEC09 | CA11253-DEC09 | CA10023-JAN10 | CA10047-JAN10 | CA10073-JAN10 |
| | | 18-Nov-09 | 25-Nov-09 | 2-Dec-09 | 9-Dec-09 | 16-Dec-09 | 23-Dec-09 | 30-Dec-09 | 6-Jan-10 | 13-Jan-10 | 20-Jan-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 761 | 916 | 954 | 942 | 970 | 977 | 973 | 978 | 986 | 983 |
| pH | no unit | 7.76 | 7.68 | 7.64 | 7.73 | 7.76 | 7.76 | 8.7 | 7.91 | 8.06 | 7.77 |
| Alkalinity | mg/L as $CaCO_3$ | 15 | 22 | 21 | 17 | 18 | 17 | 21 | 21 | 21 | 20 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 52 | 54 | 42 | 41 | 39 | 34 | 35 | 40 | 42 | 37 |
| Sulphate | mg/L | 2.2 | 2.4 | 1.6 | 1.2 | 0.9 | 0.8 | 0.7 | 0.6 | 0.7 | 0.6 |
| Chloride | mg/L | 2.6 | 1.6 | 0.6 | 0.3 | --- | < 0.2 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 4.04 | 4.31 | 5.4 | 5.14 | 5.26 | 5.39 | 4.87 | 5.59 | 5.08 | 4.85 |
| As+3 | mg/L | 0.003 | 0.005 | 0.005 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.002 | 0.004 | 0.002 | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.04 | 0.03 | 0.04 | 0.06 | --- | 0.05 | --- | --- | 0.05 | --- |
| Arsenic | mg/L | 0.0036 | 0.0074 | 0.0057 | 0.0061 | --- | 0.0054 | --- | --- | 0.0052 | --- |
| Barium | mg/L | 0.00074 | 0.00092 | 0.00092 | 0.00083 | --- | 0.00077 | --- | --- | 0.00083 | --- |
| Boron | mg/L | 0.002 | 0.0047 | 0.0033 | 0.0025 | --- | 0.0021 | --- | --- | 0.0014 | --- |
| Cadmium | mg/L | < 0.000003 | 0.000006 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000038 | 0.000038 | 0.000027 | 0.000021 | --- | 0.000035 | --- | --- | 0.000039 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0007 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 4.25 | 3.38 | 2.52 | 1.94 | --- | 1.33 | --- | --- | 0.89 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.521 | 1.01 | 1.07 | 1.04 | --- | 1.04 | --- | --- | 0.941 | --- |
| Manganese | mg/L | 0.0036 | 0.00557 | 0.00744 | 0.00593 | --- | 0.00896 | --- | --- | 0.00921 | --- |
| Molybdenum | mg/L | 0.00077 | 0.00108 | 0.00056 | 0.00043 | --- | 0.00023 | --- | --- | 0.00008 | --- |
| Sodium | mg/L | 2.39 | 1.88 | 1.18 | 0.87 | --- | 0.48 | --- | --- | 0.24 | --- |
| Nickel | mg/L | 0.0004 | 0.0002 | 0.0002 | 0.0002 | --- | 0.0002 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | 0.00005 | 0.00004 | < 0.00002 | < 0.00002 | --- | 0.00003 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0007 | 0.0014 | 0.0011 | 0.0007 | --- | 0.0007 | --- | --- | 0.0005 | --- |
| Tin | mg/L | 0.0134 | 0.00451 | 0.00258 | 0.00143 | --- | 0.00114 | --- | --- | 0.00091 | --- |
| Strontium | mg/L | 0.0209 | 0.0289 | 0.034 | 0.0334 | --- | 0.0325 | --- | --- | 0.0293 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.000018 | 0.000132 | 0.000146 | 0.000141 | --- | 0.000149 | --- | --- | 0.000145 | --- |
| Vanadium | mg/L | 0.00017 | 0.00019 | 0.00014 | 0.00011 | --- | 0.00011 | --- | --- | 0.00009 | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

| | | |
|---|---|---|
| **Humidity Cell:** | M99-403-03 | Tiriganiaq |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10101-JAN10 | CA10023-FEB10 | CA10048-FEB10 | CA10078-FEB10 | CA10104-FEB10 | CA10024-MAR10 | CA10050-MAR10 | CA10075-MAR10 | CA10100-MAR10 | CA10145-MAR10 |
| | | 27-Jan-09 | 3-Feb-10 | 10-Feb-10 | 17-Feb-10 | 24-Feb-10 | 3-Mar-10 | 10-Mar-10 | 17-Mar-10 | 24-Mar-10 | 31-Mar-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 983 | 980 | 987 | 986 | 974 | 968 | 986 | 977 | 983 | 968 |
| pH | no unit | 7.65 | 7.70 | 7.52 | 7.87 | 7.54 | 7.57 | 7.78 | 7.58 | 7.61 | 7.65 |
| Alkalinity | mg/L as $CaCO_3$ | 17 | 17 | 17 | 17 | 16 | 15 | 22 | 16 | 16 | 16 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 36 | 36 | 36 | 35 | 34 | 34 | 41 | 35 | 36 | 35 |
| Sulphate | mg/L | 0.7 | 0.6 | 0.6 | 0.7 | 0.8 | 0.9 | 1.1 | 1.2 | 1.2 | 1.1 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Calcium | mg/L | 5.14 | 4.96 | 4.84 | 4.76 | 4.99 | 4.79 | 6.42 | 5.04 | 5.50 | 5.43 |
| As+3 | mg/L | --- | --- | --- | --- | --- | 0.003 | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | 0.001 | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.07 | --- | --- | --- | 0.06 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.005 | --- | --- | 0.0036 | 0.0048 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00063 | --- | --- | --- | 0.00074 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0006 | --- | --- | --- | 0.0007 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000051 | --- | --- | --- | 0.00008 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.57 | --- | --- | --- | 0.58 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 0.888 | --- | --- | --- | 1.18 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.00897 | --- | --- | --- | 0.0121 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00007 | --- | --- | --- | 0.00009 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.14 | --- | --- | --- | 0.11 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00007 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0004 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00072 | --- | --- | --- | 0.00081 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0278 | --- | --- | --- | 0.0366 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000189 | --- | --- | --- | 0.000226 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00008 | --- | --- | --- | 0.00008 | --- | --- | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |
| | | |
| **Humidity Cell:** | M99-403-03 | Tiriganiaq |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 |
|---|---|---|---|---|---|---|---|
| | | CA10024-APR10 | CA10053-APR10 | CA10097-APR10 | CA10099-APR10 | CA10023-MAY10 | CA10048-MAY10 |
| | | 7-Apr-10 | 14-Apr-10 | 21-Apr-10 | 28-Apr-10 | 5-May-10 | 12-May-10 |
| | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 982 | 988 | 973 | 972 | 961 | 969 |
| pH | no unit | 7.69 | 7.63 | 7.85 | 7.98 | 7.61 | 7.62 |
| Alkalinity | mg/L as $CaCO_3$ | 16 | 20 | 20 | 21 | 23 | 18 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 37 | 41 | 42 | 38 | 60 | 61 |
| Sulphate | mg/L | 1.3 | 1.4 | 1.6 | 1.4 | 1.5 | 1.1 |
| Chloride | mg/L | < 0.2 | --- | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 5.58 | 6.09 | 6.37 | 6.18 | 6.25 | 5.99 |
| As+3 | mg/L | 0.009 | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.005 | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.06 | --- | --- | --- | --- | 0.08 |
| Arsenic | mg/L | 0.0039 | --- | --- | --- | --- | 0.0045 |
| Barium | mg/L | 0.00118 | --- | --- | --- | --- | 0.00069 |
| Boron | mg/L | 0.0004 | --- | --- | --- | --- | 0.0004 |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.00007 | --- | --- | --- | --- | 0.000076 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Potassium | mg/L | 0.44 | --- | --- | --- | --- | 0.38 |
| Lithium | mg/L | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | 1.01 | --- | --- | --- | --- | 1.12 |
| Manganese | mg/L | 0.00931 | --- | --- | --- | --- | 0.00942 |
| Molybdenum | mg/L | 0.00008 | --- | --- | --- | --- | 0.00008 |
| Sodium | mg/L | 0.09 | --- | --- | --- | --- | 0.05 |
| Nickel | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Lead | mg/L | < 0.00002 | --- | --- | --- | --- | 0.00133 |
| Antimony | mg/L | 0.0004 | --- | --- | --- | --- | 0.0003 |
| Tin | mg/L | 0.00077 | --- | --- | --- | --- | 0.00076 |
| Strontium | mg/L | 0.0315 | --- | --- | --- | --- | 0.0318 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | 0.000178 | --- | --- | --- | --- | 0.000165 |
| Vanadium | mg/L | 0.00005 | --- | --- | --- | --- | 0.00004 |
| Zinc | mg/L | < 0.001 | --- | --- | --- | --- | 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M09-802-02
**Weight:** 1 kg

| Analyte | Week/event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11014-DEC11 | CA11023-DEC11 | CA11095-DEC11 | CA10314-DEC11 | CA10054-JAN12 | CA10061-JAN12 | CA11011-JAN12 | CA10200-JAN12 | CA10031-FEB12 | CA10039-FEB12 | CA10147-FEB12 |
| | | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 26/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 826 | 986 | 978 | 980 | 982 | 982 | 986 | 985 | 983 | 983 | 984 |
| pH | no unit | 7.09 | 7.34 | 7.44 | 7.23 | 7.27 | 7.17 | 7.12 | 7.17 | 7.20 | 7.14 | 7.10 |
| Alkalinity | mg/L as CaCO3 | 7 | 14 | 12 | 11 | 12 | 11 | 10 | 11 | 11 | 11 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | 4 | 3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 8 | 89 | 63 | 62 | 40 | 49 | 43 | 46 | 45 | 44 | 38 |
| Sulphate | mg/L | 11 | 23 | 15 | 10 | 6.6 | 6 | 5.1 | 5 | 4.6 | 4.8 | 4.6 |
| Calcium | mg/L | 6.94 | 12.6 | 9.0 | 7.48 | 6.44 | 6.48 | 5.61 | 6.1 | 6.14 | 6.34 | 5.84 |
| Fluoride | mg/L | 0.06 | 0.09 | 0.08 | 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 2.10 | 3.7 | 2.1 | 1.1 | --- | 0.3 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | 0.01 | --- | --- | < 0.01 | --- | --- |
| Arsenic | mg/L | < 0.0002 | 0.0005 | 0.0006 | 0.0003 | --- | 0.0003 | --- | --- | 0.0004 | --- | --- |
| Barium | mg/L | 0.00186 | 0.00395 | 0.00303 | 0.00282 | --- | 0.00283 | --- | --- | 0.00286 | --- | --- |
| Boron | mg/L | 0.0041 | 0.0175 | 0.0132 | 0.0114 | --- | 0.0079 | --- | --- | 0.0037 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.00016 | 0.00028 | 0.000208 | 0.000187 | --- | 0.000172 | --- | --- | 0.000135 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.009 | < 0.003 | 0.006 | 0.01 | --- | 0.011 | --- | --- | 0.011 | --- | --- |
| Potassium | mg/L | 0.366 | 0.82 | 0.594 | 0.47 | --- | 0.317 | --- | --- | 0.228 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 1.41 | 3.09 | 2.26 | 1.76 | --- | 1.25 | --- | --- | 0.989 | --- | --- |
| Manganese | mg/L | 0.113 | 0.153 | 0.13 | 0.119 | --- | 0.124 | --- | --- | 0.131 | --- | --- |
| Molybdenum | mg/L | 0.00004 | 0.00008 | 0.00007 | 0.00004 | --- | 0.00007 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 1.37 | 2.41 | 1.39 | 0.88 | --- | 0.38 | --- | --- | 0.15 | --- | --- |
| Nickel | mg/L | 0.0005 | 0.0008 | 0.0007 | 0.0007 | --- | 0.0006 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | 0.01 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0006 | 0.0029 | 0.003 | 0.0028 | --- | 0.0022 | --- | --- | 0.0016 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00178 | 0.0008 | 0.00043 | 0.00036 | --- | 0.00031 | --- | --- | 0.00021 | --- | --- |
| Strontium | mg/L | 0.0106 | 0.021 | 0.0152 | 0.012 | --- | 0.0095 | --- | --- | 0.0081 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0002 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0003 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000019 | 0.000408 | 0.00034 | 0.000278 | --- | 0.000195 | --- | --- | 0.000149 | --- | --- |
| Vanadium | mg/L | < 0.00003 | 0.0001 | 0.00004 | < 0.00003 | --- | 0.00004 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | 0.00013 | 0.00025 | 0.00019 | 0.00018 | --- | 0.0001 | --- | --- | 0.00005 | --- | --- |
| Yttrium | mg/L | 0.000001 | 0.000002 | 0.000002 | 0.000002 | --- | 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M09-802-02
**Weight:** 1 kg

| Analyte | Week/event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10205-FEB12 | CA10002-MAR12 | CA10059-MAR12 | CA10114-MAR12 | CA10166-MAR12 | CA10220-MAR12 | CA10046-APR12 | CA10096-APR12 | CA10102-APR12 | CA10196-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 983 | 984 | 984 | 984 | 984 | 983 | 981 | 986 | 981 | 985 |
| pH | no unit | 7.14 | 6.93 | 7.23 | 7.02 | 7.16 | 7.27 | 7.93 | 7.14 | 7.24 | 7.18 |
| Alkalinity | mg/L as CaCO3 | 10 | 10 | 10 | 12 | 10 | 11 | 13 | 10 | 15 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | <2 | < 2 | < 2 | < 2 | < 2 | 2 | < 2 | 4 | < 2 |
| Conductivity | uS/cm | 34 | 36 | 34 | 44 | 34 | 35 | 44 | 42 | 45 | 36 |
| Sulphate | mg/L | 4.7 | 4.8 | 4.8 | 5.1 | 5 | 5.2 | 5 | 4.7 | 5 | 4.8 |
| Calcium | mg/L | 6.13 | 6.05 | 6.36 | 6.46 | 6.58 | 6.64 | 6.72 | 6.34 | 6.49 | 6.75 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | 0.0003 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0003 |
| Barium | mg/L | --- | 0.00276 | --- | --- | --- | 0.00279 | --- | --- | --- | 0.00241 |
| Boron | mg/L | --- | 0.0024 | --- | --- | --- | 0.0014 | --- | --- | --- | 0.0024 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000156 | --- | --- | --- | 0.000156 | --- | --- | --- | 0.000161 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | 0.011 | --- | --- | --- | 0.008 | --- | --- | --- | 0.004 |
| Potassium | mg/L | --- | 0.166 | --- | --- | --- | 0.129 | --- | --- | --- | 0.105 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.841 | --- | --- | --- | 0.816 | --- | --- | --- | 0.754 |
| Manganese | mg/L | --- | 0.161 | --- | --- | --- | 0.178 | --- | --- | --- | 0.179 |
| Molybdenum | mg/L | --- | < 0.00001 | --- | --- | --- | 0.00001 | --- | --- | --- | < 0.00001 |
| Sodium | mg/L | --- | 0.06 | --- | --- | --- | 0.04 | --- | --- | --- | 0.03 |
| Nickel | mg/L | --- | 0.0003 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0013 | --- | --- | --- | 0.0012 | --- | --- | --- | 0.001 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00024 | --- | --- | --- | 0.00022 | --- | --- | --- | 0.00019 |
| Strontium | mg/L | --- | 0.0072 | --- | --- | --- | 0.0067 | --- | --- | --- | 0.0062 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000129 | --- | --- | --- | 0.000117 | --- | --- | --- | 0.000099 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | 0.00003 |
| Tungsten | mg/L | --- | 0.00006 | --- | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | 0.002 | --- | --- | --- | 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M09-859-01

**Weight:** 1 kg

| Analyte | Week/event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11014-DEC11 | CA11023-DEC11 | CA11095-DEC11 | CA10314-DEC11 | CA10054-JAN12 | CA10061-JAN12 | CA11011-JAN12 | CA10200-JAN12 | CA10031-FEB12 | CA10039-FEB12 | CA10147-FEB12 |
| | Unit | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 26/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 819 | 988 | 992 | 989 | 995 | 988 | 977 | 994 | 992 | 986 | 985 |
| pH | no unit | 8.17 | 8.29 | 7.96 | 7.78 | 8.12 | 7.79 | 8.20 | 8.33 | 7.68 | 7.71 | 7.57 |
| Alkalinity | mg/L as CaCO3 | 24 | 30 | 26 | 18 | 26 | 22 | 21 | 22 | 20 | 21 | 17 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 79 | 70 | 54 | 43 | 44 | 52 | 48 | 52 | 46 | 45 | 33 |
| Sulphate | mg/L | 4.8 | 5.4 | 6.2 | 5.8 | 4.5 | 4.2 | 3.5 | 3.2 | 3 | 3 | 2.7 |
| Calcium | mg/L | 5.17 | 4.89 | 4.7 | 4.79 | 4.76 | 4.99 | 4.51 | 5.09 | 4.85 | 4.97 | 4.57 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 5.80 | 3.2 | 1.6 | 0.8 | --- | 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.08 | 0.03 | 0.05 | 0.05 | --- | 0.04 | --- | --- | 0.04 | --- | --- |
| Arsenic | mg/L | 0.002 | 0.0097 | 0.0141 | 0.0173 | --- | 0.021 | --- | --- | 0.0249 | --- | --- |
| Barium | mg/L | 0.00034 | 0.0004 | 0.00043 | 0.00035 | --- | 0.0004 | --- | --- | 0.00038 | --- | --- |
| Boron | mg/L | 0.0023 | 0.0082 | 0.0063 | 0.0055 | --- | 0.0045 | --- | --- | 0.0021 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000116 | 0.000253 | 0.000197 | 0.000166 | --- | 0.000219 | --- | --- | 0.000165 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.004 | < 0.003 | < 0.003 | < 0.003 | --- | 0.004 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.4 | 1.42 | 1.3 | 1.1 | --- | 0.886 | --- | --- | 0.702 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.95 | 1.5 | 1.74 | 1.86 | --- | 1.91 | --- | --- | 1.81 | --- | --- |
| Manganese | mg/L | 0.0148 | 0.025 | 0.0259 | 0.0265 | --- | 0.0292 | --- | --- | 0.0288 | --- | --- |
| Molybdenum | mg/L | 0.0002 | 0.00033 | 0.00022 | 0.00014 | --- | 0.00011 | --- | --- | 0.00003 | --- | --- |
| Sodium | mg/L | 8.21 | 8.09 | 5.27 | 3.48 | --- | 1.69 | --- | --- | 0.67 | --- | --- |
| Nickel | mg/L | 0.0007 | 0.0009 | 0.0007 | 0.0007 | --- | 0.0006 | --- | --- | 0.0004 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | 0.012 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0012 | 0.0026 | 0.0023 | 0.0022 | --- | 0.0021 | --- | --- | 0.0017 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00108 | 0.00081 | 0.00045 | 0.0003 | --- | 0.00032 | --- | --- | 0.00017 | --- | --- |
| Strontium | mg/L | 0.0103 | 0.0107 | 0.0104 | 0.0107 | --- | 0.0102 | --- | --- | 0.0091 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | < 0.000001 | 0.000024 | 0.000029 | 0.000011 | --- | 0.000021 | --- | --- | 0.000041 | --- | --- |
| Vanadium | mg/L | 0.00017 | 0.00017 | 0.00018 | 0.00015 | --- | 0.00016 | --- | --- | 0.00017 | --- | --- |
| Tungsten | mg/L | 0.00042 | 0.00063 | 0.00044 | 0.00034 | --- | 0.0002 | --- | --- | 0.00017 | --- | --- |
| Yttrium | mg/L | 0.000007 | 0.000008 | 0.000009 | 0.000008 | --- | 0.00001 | --- | --- | 0.000004 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M09-859-01

**Weight:** 1 kg

| Analyte | Week/event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10205-FEB12 | CA10002-MAR12 | CA10059-MAR12 | CA10114-MAR12 | CA10166-MAR12 | CA10220-MAR12 | CA10046-APR12 | CA10096-APR12 | CA10102-APR12 | CA10196-APR12 |
| | Unit | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 982 | 991 | 983 | 995 | 992 | 994 | 992 | 991 | 989 | 991 |
| pH | no unit | 8.14 | 7.57 | 7.78 | 7.31 | 7.66 | 7.70 | 7.80 | 7.45 | 7.36 | 7.81 |
| Alkalinity | mg/L as CaCO3 | 17 | 17 | 18 | 19 | 17 | 17 | 23 | 15 | 27 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 32 | 33 | 35 | 41 | 44 | 42 | 48 | 30 | 40 | 31 |
| Sulphate | mg/L | 2.6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.4 | 2.3 | 2.4 | 2.1 | 2 |
| Calcium | mg/L | 4.68 | 4.79 | 5.44 | 4.9 | 5.02 | 4.88 | 5.00 | 4.75 | 4.77 | 4.77 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.04 | --- | --- | --- | 0.03 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0248 | --- | --- | --- | 0.0267 | --- | --- | --- | 0.0224 |
| Barium | mg/L | --- | 0.00046 | --- | --- | --- | 0.00037 | --- | --- | --- | 0.00043 |
| Boron | mg/L | --- | 0.0016 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0018 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000227 | --- | --- | --- | 0.000228 | --- | --- | --- | 0.000258 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.566 | --- | --- | --- | 0.469 | --- | --- | --- | 0.404 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 1.7 | --- | --- | --- | 1.62 | --- | --- | --- | 1.45 |
| Manganese | mg/L | --- | 0.0273 | --- | --- | --- | 0.02686 | --- | --- | --- | 0.0271 |
| Molybdenum | mg/L | --- | 0.00003 | --- | --- | --- | 0.00003 | --- | --- | --- | 0.00003 |
| Sodium | mg/L | --- | 0.3 | --- | --- | --- | 0.18 | --- | --- | --- | 0.13 |
| Nickel | mg/L | --- | 0.0003 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0003 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0014 | --- | --- | --- | 0.0014 | --- | --- | --- | 0.0012 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00018 | --- | --- | --- | 0.00015 | --- | --- | --- | 0.00033 |
| Strontium | mg/L | --- | 0.0085 | --- | --- | --- | 0.0079 | --- | --- | --- | 0.0074 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000012 | --- | --- | --- | 0.000009 | --- | --- | --- | 0.000018 |
| Vanadium | mg/L | --- | 0.00017 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.00012 |
| Tungsten | mg/L | --- | 0.00015 | --- | --- | --- | 0.0001 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000008 | --- | --- | --- | 0.000009 | --- | --- | --- | 0.000008 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M10-935-02

**Weight:** 1 kg

| Analyte | Week/event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11014-DEC11 | CA11023-DEC11 | CA11095-DEC11 | CA10314-DEC11 | CA10054-JAN12 | CA10061-JAN12 | CA11011-JAN12 | CA10200-JAN12 | CA10031-FEB12 | CA10039-FEB12 | CA10147-FEB12 |
| | | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 26/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 832 | 967 | 990 | 997 | 985 | 990 | 990 | 988 | 985 | 990 | 985 |
| pH | no unit | 7.30 | 7.43 | 7.93 | 7.80 | 7.30 | 7.24 | 7.28 | 7.28 | 7.25 | 7.16 | 7.21 |
| Alkalinity | mg/L as CaCO3 | 11 | 14 | 16 | 20 | 16 | 15 | 15 | 14 | 14 | 13 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 64 | 99 | 70 | 43 | 44 | 62 | 41 | 56 | 56 | 55 | 42 |
| Sulphate | mg/L | 13 | 29 | 20 | 14 | 9.9 | 11 | 8.6 | 9.9 | 9.8 | 10 | 9.6 |
| Calcium | mg/L | 5.39 | 8.7 | 7.8 | 7.22 | 6.24 | 7.08 | 6.37 | 7 | 7.09 | 7.41 | 6.84 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 3.60 | 4.7 | 1.8 | 0.8 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | 0.01 | --- | --- | < 0.01 | --- | --- |
| Arsenic | mg/L | 0.0012 | 0.0024 | 0.0032 | 0.0028 | --- | 0.0012 | --- | --- | 0.001 | --- | --- |
| Barium | mg/L | 0.00956 | 0.00882 | 0.00851 | 0.00875 | --- | 0.0108 | --- | --- | 0.0108 | --- | --- |
| Boron | mg/L | 0.0102 | 0.0328 | 0.0213 | 0.0172 | --- | 0.0108 | --- | --- | 0.0054 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000166 | 0.000228 | 0.000313 | 0.000275 | --- | 0.000218 | --- | --- | 0.00017 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0007 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.01 | 0.006 | 0.012 | 0.012 | --- | 0.014 | --- | --- | 0.005 | --- | --- |
| Potassium | mg/L | 1.32 | 2.41 | 1.56 | 1.1 | --- | 0.688 | --- | --- | 0.473 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 1.48 | 2.9 | 2.27 | 1.89 | --- | 1.53 | --- | --- | 1.28 | --- | --- |
| Manganese | mg/L | 0.132 | 0.103 | 0.185 | 0.19 | --- | 0.183 | --- | --- | 0.186 | --- | --- |
| Molybdenum | mg/L | 0.00022 | 0.00036 | 0.00022 | 0.00015 | --- | 0.00012 | --- | --- | 0.00004 | --- | --- |
| Sodium | mg/L | 4.98 | 8.48 | 4.25 | 2.59 | --- | 1.23 | --- | --- | 0.61 | --- | --- |
| Nickel | mg/L | 0.0004 | 0.0002 | 0.0003 | 0.0005 | --- | 0.0005 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0004 | 0.0009 | 0.0005 | 0.0004 | --- | 0.0004 | --- | --- | 0.0003 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00117 | 0.00074 | 0.00041 | 0.00027 | --- | 0.00021 | --- | --- | 0.00013 | --- | --- |
| Strontium | mg/L | 0.0104 | 0.0203 | 0.0179 | 0.0161 | --- | 0.0154 | --- | --- | 0.0144 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0002 | 0.0001 | 0.0002 | 0.0002 | --- | 0.0002 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000141 | 0.00315 | 0.00311 | 0.00258 | --- | 0.00169 | --- | --- | 0.00116 | --- | --- |
| Vanadium | mg/L | < 0.00003 | 0.0001 | 0.00005 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | 0.00035 | 0.0006 | 0.00031 | 0.00025 | --- | 0.00011 | --- | --- | 0.00006 | --- | --- |
| Yttrium | mg/L | 0.000001 | 0.000001 | 0.000001 | 0.000001 | --- | 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | 0.001 | < 0.001 | 0.002 | 0.002 | --- | 0.001 | --- | --- | 0.003 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M10-935-02

**Weight:** 1 kg

| Analyte | Week/event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10205-FEB12 | CA10002-MAR12 | CA10059-MAR12 | CA10114-MAR12 | CA10166-MAR12 | CA10220-MAR12 | CA10046-APR12 | CA10096-APR12 | CA10102-APR12 | CA10196-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 986 | 988 | 988 | 988 | 992 | 991 | 991 | 993 | 990 | 990 |
| pH | no unit | 7.07 | 7.23 | 7.27 | 7.04 | 7.17 | 7.23 | 7.25 | 7.15 | 7.28 | 7.19 |
| Alkalinity | mg/L as CaCO3 | 13 | 13 | 13 | 14 | 12 | 12 | 22 | 11 | 16 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 55 | 56 | 43 | 55 | 43 | 41 | 52 | 40 | 54 | 54 |
| Sulphate | mg/L | 10 | 10 | 10 | 11 | 12 | 11 | 10 | 10 | 12 | 11 |
| Calcium | mg/L | 7.39 | 7.4 | 7.58 | 7.77 | 7.97 | 7.53 | 7.68 | 7.3 | 7.54 | 7.57 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | < 0.01 | --- | --- | --- | 0.02 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | 0.0008 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.0007 |
| Barium | mg/L | --- | 0.0109 | --- | --- | --- | 0.00927 | --- | --- | --- | 0.00815 |
| Boron | mg/L | --- | 0.0037 | --- | --- | --- | 0.0022 | --- | --- | --- | 0.0027 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000186 | --- | --- | --- | 0.000184 | --- | --- | --- | 0.000174 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.344 | --- | --- | --- | 0.24 | --- | --- | --- | 0.212 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 1.12 | --- | --- | --- | 1.02 | --- | --- | --- | 0.95 |
| Manganese | mg/L | --- | 0.236 | --- | --- | --- | 0.249 | --- | --- | --- | 0.262 |
| Molybdenum | mg/L | --- | 0.00005 | --- | --- | --- | 0.00004 | --- | --- | --- | 0.00004 |
| Sodium | mg/L | --- | 0.35 | --- | --- | --- | 0.22 | --- | --- | --- | 0.17 |
| Nickel | mg/L | --- | 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0003 | --- | --- | --- | 0.0003 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00019 | --- | --- | --- | 0.00019 | --- | --- | --- | 0.00017 |
| Strontium | mg/L | --- | 0.0133 | --- | --- | --- | 0.0114 | --- | --- | --- | 0.0103 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000823 | --- | --- | --- | 0.000593 | --- | --- | --- | 0.00041 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | 0.002 | --- | --- | --- | 0.002 | --- | --- | --- | 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M98-248-01

**Weight:** 1 kg

| Analyte | Week/event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11014-DEC11 | CA11023-DEC11 | CA11095-DEC11 | CA10314-DEC11 | CA10054-JAN12 | CA10061-JAN12 | CA11011-JAN12 | CA10200-JAN12 | CA10031-FEB12 | CA10039-FEB12 | CA10147-FEB12 |
| | | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 26/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 840 | 984 | 988 | 986 | 986 | 985 | 983 | 984 | 997 | 978 | 988 |
| pH | no unit | 7.28 | 7.45 | 7.60 | 7.19 | 7.26 | 7.19 | 7.26 | 7.24 | 7.22 | 7.15 | 7.10 |
| Alkalinity | mg/L as CaCO3 | 9 | 16 | 16 | 14 | 13 | 12 | 14 | 13 | 13 | 13 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 51 | 94 | 68 | 71 | 44 | 46 | 43 | 42 | 55 | 54 | 40 |
| Sulphate | mg/L | 12 | 28 | 20 | 16 | 11 | 11 | 9.3 | 9.6 | 9.4 | 9.8 | 9.3 |
| Calcium | mg/L | 6.89 | 13.5 | 9.8 | 8.83 | 7.25 | 7.47 | 6.97 | 7.13 | 7.1 | 7.47 | 6.6 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.20 | 1.5 | 0.6 | 0.3 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | 0.00006 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- | --- |
| Arsenic | mg/L | < 0.0002 | < 0.0002 | 0.0002 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Barium | mg/L | 0.00186 | 0.00572 | 0.00465 | 0.00416 | --- | 0.00395 | --- | --- | 0.00355 | --- | --- |
| Boron | mg/L | 0.0028 | 0.0115 | 0.008 | 0.0067 | --- | 0.0048 | --- | --- | 0.0023 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | 0.000006 | 0.000004 | 0.000009 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000028 | 0.000096 | 0.000091 | 0.000092 | --- | 0.000087 | --- | --- | 0.000053 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.032 | 0.01 | 0.01 | 0.012 | --- | 0.008 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 0.942 | 2.32 | 1.66 | 1.34 | --- | 0.965 | --- | --- | 0.775 | --- | --- |
| Lithium | mg/L | < 0.001 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 1.77 | 3.59 | 2.44 | 2.03 | --- | 1.52 | --- | --- | 1.35 | --- | --- |
| Manganese | mg/L | 0.0905 | 0.234 | 0.225 | 0.238 | --- | 0.235 | --- | --- | 0.242 | --- | --- |
| Molybdenum | mg/L | 0.00006 | 0.00008 | 0.00006 | 0.00004 | --- | 0.00007 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 0.66 | 1.21 | 0.61 | 0.4 | --- | 0.17 | --- | --- | 0.08 | --- | --- |
| Nickel | mg/L | 0.0003 | 0.0005 | 0.0004 | 0.0006 | --- | 0.0005 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0006 | 0.001 | 0.0007 | 0.0005 | --- | 0.0005 | --- | --- | 0.0004 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00269 | 0.00134 | 0.00073 | 0.00047 | --- | 0.00036 | --- | --- | 0.00027 | --- | --- |
| Strontium | mg/L | 0.0093 | 0.0199 | 0.014 | 0.0115 | --- | 0.0088 | --- | --- | 0.0077 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0002 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0002 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000052 | 0.000489 | 0.000347 | 0.000256 | --- | 0.000179 | --- | --- | 0.000127 | --- | --- |
| Vanadium | mg/L | < 0.00003 | 0.00007 | 0.00016 | < 0.00003 | --- | 0.00008 | --- | --- | 0.00007 | --- | --- |
| Tungsten | mg/L | 0.00035 | 0.00019 | 0.0001 | 0.00007 | --- | 0.00005 | --- | --- | < 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000003 | 0.000004 | 0.000002 | 0.000002 | --- | 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | 0.006 | 0.011 | 0.004 | --- | 0.002 | --- | --- | 0.007 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Fzone

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M98-248-01

**Weight:** 1 kg

| Analyte | Week/event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10205-FEB12 | CA10002-MAR12 | CA10059-MAR12 | CA10114-MAR12 | CA10166-MAR12 | CA10220-MAR12 | CA10046-APR12 | CA10096-APR12 | CA10102-APR12 | CA10196-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 985 | 992 | 987 | 991 | 985 | 986 | 979 | 989 | 990 | 983 |
| pH | no unit | 7.09 | 6.96 | 7.02 | 6.94 | 7.18 | 7.14 | 7.57 | 7.13 | 7.34 | 7.15 |
| Alkalinity | mg/L as CaCO3 | 13 | 13 | 13 | 13 | 12 | 13 | 14 | 12 | 23 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 40 | 56 | 42 | 52 | 40 | 38 | 49 | 36 | 48 | 38 |
| Sulphate | mg/L | 8.7 | 9.7 | 8.8 | 9.1 | 9.6 | 8.9 | 8.4 | 8.4 | 8.6 | 8.2 |
| Calcium | mg/L | 7.02 | 6.8 | 7.2 | 7.06 | 7.25 | 6.77 | 7.01 | 6.53 | 6.52 | 6.31 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 |
| Barium | mg/L | --- | 0.00331 | --- | --- | --- | 0.00289 | --- | --- | --- | 0.00228 |
| Boron | mg/L | --- | 0.0017 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.0019 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | 0.000003 | --- | --- | --- | 0.000004 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000066 | --- | --- | --- | 0.000064 | --- | --- | --- | 0.000058 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | 0.003 |
| Potassium | mg/L | --- | 0.591 | --- | --- | --- | 0.462 | --- | --- | --- | 0.356 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 1.24 | --- | --- | --- | 1.21 | --- | --- | --- | 1.13 |
| Manganese | mg/L | --- | 0.277 | --- | --- | --- | 0.278 | --- | --- | --- | 0.264 |
| Molybdenum | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Sodium | mg/L | --- | 0.05 | --- | --- | --- | 0.03 | --- | --- | --- | 0.02 |
| Nickel | mg/L | --- | 0.0001 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00003 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0003 | --- | --- | --- | 0.0004 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00025 | --- | --- | --- | 0.00026 | --- | --- | --- | 0.00027 |
| Strontium | mg/L | --- | 0.0068 | --- | --- | --- | 0.0063 | --- | --- | --- | 0.0056 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000067 | --- | --- | --- | 0.000048 | --- | --- | --- | 0.000036 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | 0.00008 |
| Tungsten | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | 0.004 | --- | --- | --- | 0.004 | --- | --- | --- | 0.002 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |
| | | |
| **Humidity Cell:** | M08-734-03 | F-Zone |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11288-NOV09 | CA11289-NOV09 | CA10023-DEC09 | CA10049-DEC09 | CA10074-DEC09 | CA11221-DEC09 | CA11254-DEC09 | CA10024-JAN10 | CA10048-JAN10 | CA10074-JAN10 |
| | | 18-Nov-09 | 25-Nov-09 | 2-Dec-09 | 9-Dec-09 | 16-Dec-09 | 23-Dec-09 | 30-Dec-09 | 6-Jan-10 | 13-Jan-10 | 20-Jan-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 763 | 828 | 871 | 906 | 914 | 905 | 917 | 910 | 908 | 927 |
| pH | no unit | 8.11 | 8.15 | 7.57 | 8.08 | 7.95 | 8.59 | 9.30 | 8.95 | 8.47 | 8.18 |
| Alkalinity | mg/L as $CaCO_3$ | 18 | 15 | 14 | 14 | 14 | 13 | 15 | 13 | 13 | 14 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 82 | 128 | 88 | 59 | 50 | 42 | 39 | 40 | 41 | 37 |
| Sulphate | mg/L | 8.9 | 24 | 17 | 9 | 7.5 | 7.2 | 5.8 | 5.6 | 5.7 | 4.4 |
| Chloride | mg/L | 5.3 | 9.3 | 4.6 | 1.2 | --- | 0.3 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 5.10 | 4.54 | 5.07 | 4.76 | 4.91 | 5.10 | 4.59 | 4.75 | 4.42 | 4.55 |
| As+3 | mg/L | 0.003 | 0.007 | 0.007 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.003 | 0.015 | 0.011 | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.05 | 0.03 | 0.05 | 0.04 | --- | 0.06 | --- | --- | 0.03 | --- |
| Arsenic | mg/L | 0.0063 | 0.0208 | 0.0168 | 0.0129 | --- | 0.0100 | --- | --- | 0.0084 | --- |
| Barium | mg/L | 0.00068 | 0.00063 | 0.00068 | 0.00052 | --- | 0.00156 | --- | --- | 0.00061 | --- |
| Boron | mg/L | 0.0084 | 0.0157 | 0.0129 | 0.0089 | --- | 0.0181 | --- | --- | 0.0043 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | 0.00001 | < 0.000003 | --- | 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000025 | 0.000029 | 0.000053 | 0.000014 | --- | 0.000018 | --- | --- | 0.000008 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | 0.0007 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 1.87 | 2.11 | 2.19 | 1.44 | --- | 1.72 | --- | --- | 1.04 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.447 | 0.862 | 0.934 | 0.697 | --- | 0.615 | --- | --- | 0.748 | --- |
| Manganese | mg/L | 0.00618 | 0.0112 | 0.0147 | 0.0161 | --- | 0.019 | --- | --- | 0.0183 | --- |
| Molybdenum | mg/L | 0.00015 | 0.00055 | 0.00042 | 0.00027 | --- | 0.00019 | --- | --- | 0.00008 | --- |
| Sodium | mg/L | 9.33 | 14.6 | 12.7 | 5.69 | --- | 1.73 | --- | --- | 0.98 | --- |
| Nickel | mg/L | 0.0004 | 0.0004 | 0.0003 | 0.0002 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | 0.00003 | < 0.00002 | 0.00021 | < 0.00002 | --- | 0.00003 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0009 | 0.0055 | 0.0049 | 0.0041 | --- | 0.0009 | --- | --- | 0.0029 | --- |
| Tin | mg/L | 0.0224 | 0.0117 | 0.0066 | 0.00549 | --- | 0.00101 | --- | --- | 0.00117 | --- |
| Strontium | mg/L | 0.0072 | 0.0095 | 0.0094 | 0.0077 | --- | 0.0127 | --- | --- | 0.007 | --- |
| Titanium | mg/L | < 0.0001 | 0.0002 | 0.0002 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | < 0.000001 | 0.000015 | 0.00005 | 0.000016 | --- | 0.000026 | --- | --- | 0.000007 | --- |
| Vanadium | mg/L | 0.00033 | 0.00063 | 0.00061 | 0.00046 | --- | 0.0005 | --- | --- | 0.00033 | --- |
| Zinc | mg/L | 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

| | | |
|---|---|---|
| **Humidity Cell:** | M08-734-03 | F-Zone |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10102-JAN10 | CA10024-FEB10 | CA10049-FEB10 | CA10079-FEB10 | CA10105-FEB10 | CA10025-MAR10 | CA10051-MAR10 | CA10076-MAR10 | CA10101-MAR10 | CA10146-MAR10 |
| | | 27-Jan-09 | 3-Feb-10 | 10-Feb-10 | 17-Feb-10 | 24-Feb-10 | 3-Mar-10 | 10-Mar-10 | 17-Mar-10 | 24-Mar-10 | 31-Mar-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 887 | 922 | 970 | 929 | 928 | 925 | 904 | 910 | 958 | 914 |
| pH | no unit | 8.4 | 8.06 | 8.12 | 8.99 | 8.53 | 8.08 | 8.17 | 7.97 | 7.89 | 8.18 |
| Alkalinity | mg/L as $CaCO_3$ | 12 | 12 | 14 | 13 | 11 | 11 | 12 | 11 | 11 | 11 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 35 | 36 | 39 | 35 | 33 | 31 | 34 | 34 | 31 | 32 |
| Sulphate | mg/L | 4.9 | 4.3 | 3.9 | 3.6 | 3.7 | 3.9 | 4.3 | 4.0 | 3.1 | 3.5 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Calcium | mg/L | 4.44 | 4.44 | 4.79 | 4.37 | 4.35 | 4.21 | 4.97 | 4.17 | 4.50 | 4.77 |
| As+3 | mg/L | --- | --- | --- | --- | --- | 0.005 | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | 0.001 | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.03 | --- | --- | --- | 0.03 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0068 | --- | --- | 0.0047 | 0.0063 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00075 | --- | --- | --- | 0.00063 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0026 | --- | --- | --- | 0.0017 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000012 | --- | --- | --- | 0.000013 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.83 | --- | --- | --- | 0.96 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 0.612 | --- | --- | --- | 0.662 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.0204 | --- | --- | --- | 0.0162 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00006 | --- | --- | --- | 0.00006 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.40 | --- | --- | --- | 0.30 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0002 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00005 | --- | --- | --- | 0.00054 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0027 | --- | --- | --- | 0.002 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00127 | --- | --- | --- | 0.00058 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0075 | --- | --- | --- | 0.0072 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000013 | --- | --- | --- | 0.000016 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00029 | --- | --- | --- | 0.00031 | --- | --- | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |
| | | |
| **Humidity Cell:** | M08-734-03 | F-Zone |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 |
|---|---|---|---|---|---|---|---|
| | | CA10025-APR10 | CA10054-APR10 | CA10098-APR10 | CA10100-APR10 | CA10024-MAY10 | CA10049-MAY10 |
| | | 7-Apr-10 | 14-Apr-10 | 21-Apr-10 | 28-Apr-10 | 5-May-10 | 12-May-10 |
| | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 890 | 876 | 872 | 865 | 866 | 890 |
| pH | no unit | 7.91 | 7.51 | 7.81 | 8.36 | 7.72 | 7.85 |
| Alkalinity | mg/L as $CaCO_3$ | 10 | 9 | 10 | 11 | 13 | 9 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 32 | 30 | 31 | 31 | 50 | 52 |
| Sulphate | mg/L | 4 | 3.8 | 4.1 | 4.4 | 4.5 | 4.5 |
| Chloride | mg/L | < 0.2 | --- | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 4.27 | 3.99 | 4.19 | 4.35 | 4.5 | 4.4 |
| As+3 | mg/L | 0.010 | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.004 | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.03 | --- | --- | --- | --- | 0.04 |
| Arsenic | mg/L | 0.005 | --- | --- | --- | --- | 0.0058 |
| Barium | mg/L | 0.00114 | --- | --- | --- | --- | 0.00083 |
| Boron | mg/L | 0.0011 | --- | --- | --- | --- | 0.0012 |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | --- | 0.00001 |
| Cobalt | mg/L | 0.000018 | --- | --- | --- | --- | 0.000017 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Potassium | mg/L | 0.93 | --- | --- | --- | --- | 1.07 |
| Lithium | mg/L | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | 0.57 | --- | --- | --- | --- | 0.597 |
| Manganese | mg/L | 0.014 | --- | --- | --- | --- | 0.0142 |
| Molybdenum | mg/L | 0.00023 | --- | --- | --- | --- | 0.00005 |
| Sodium | mg/L | 0.22 | --- | --- | --- | --- | 0.18 |
| Nickel | mg/L | < 0.0001 | --- | --- | --- | --- | 0.0001 |
| Lead | mg/L | 0.00004 | --- | --- | --- | --- | 0.00092 |
| Antimony | mg/L | 0.0019 | --- | --- | --- | --- | 0.002 |
| Tin | mg/L | 0.00083 | --- | --- | --- | --- | 0.00043 |
| Strontium | mg/L | 0.0065 | --- | --- | --- | --- | 0.0045 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | 0.000021 | --- | --- | --- | --- | 0.000031 |
| Vanadium | mg/L | 0.00026 | --- | --- | --- | --- | 0.0003 |
| Zinc | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M08-740-05 F-Zone
**Weight:** 1 kg

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11288-NOV09 | CA11289-NOV09 | CA10023-DEC09 | CA10049-DEC09 | CA10074-DEC09 | CA11221-DEC09 | CA11254-DEC09 | CA10024-JAN10 | CA10048-JAN10 | CA10074-JAN10 |
| | | 18-Nov-09 | 25-Nov-09 | 2-Dec-09 | 9-Dec-09 | 16-Dec-09 | 23-Dec-09 | 30-Dec-09 | 6-Jan-10 | 13-Jan-10 | 20-Jan-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 806 | 903 | 927 | 948 | 891 | 927 | 910 | 893 | 888 | 912 |
| pH | no unit | 8.66 | 7.96 | 7.79 | 8.16 | 8.51 | 8.87 | 9.30 | 8.64 | 8.5 | 8.59 |
| Alkalinity | mg/L as $CaCO_3$ | 18 | 26 | 23 | 22 | 20 | 20 | 18 | 15 | 15 | 14 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 92 | 136 | 71 | 61 | 49 | 40 | 37 | 36 | 35 | 33 |
| Sulphate | mg/L | 5.0 | 8.6 | 5.8 | 4.6 | 3.0 | 2.7 | 2.4 | 2.3 | 2 | 1.7 |
| Chloride | mg/L | 12 | 19 | 5.7 | 2.2 | --- | 0.3 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 3.63 | 2.93 | 3.34 | 3.43 | 3.38 | 3.98 | 3.54 | 3.73 | 3.51 | 3.83 |
| As+3 | mg/L | 0.003 | 0.004 | 0.01 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.002 | 0.012 | 0.011 | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.05 | 0.04 | 0.05 | 0.04 | --- | 0.05 | --- | --- | 0.03 | --- |
| Arsenic | mg/L | 0.0025 | 0.0175 | 0.0224 | 0.0243 | --- | 0.0256 | --- | --- | 0.0257 | --- |
| Barium | mg/L | 0.00133 | 0.00106 | 0.00104 | 0.00109 | --- | 0.00124 | --- | --- | 0.00108 | --- |
| Boron | mg/L | 0.0143 | 0.0265 | 0.0159 | 0.0115 | --- | 0.0072 | --- | --- | 0.0038 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000035 | 0.000036 | 0.000026 | 0.000029 | --- | 0.000018 | --- | --- | 0.000023 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | 0.0006 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 2.42 | 2.76 | 2.28 | 2.01 | --- | 1.91 | --- | --- | 1.46 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.211 | 0.334 | 0.374 | 0.432 | --- | 0.564 | --- | --- | 0.507 | --- |
| Manganese | mg/L | 0.0106 | 0.0131 | 0.0164 | 0.0179 | --- | 0.0182 | --- | --- | 0.0181 | --- |
| Molybdenum | mg/L | 0.00011 | 0.0004 | 0.00019 | 0.00014 | --- | 0.00006 | --- | --- | < 0.00001 | --- |
| Sodium | mg/L | 12.6 | 19.5 | 12.6 | 8.5 | --- | 4 | --- | --- | 1.31 | --- |
| Nickel | mg/L | 0.0003 | 0.0004 | 0.0002 | 0.0001 | --- | 0.0002 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | 0.00005 | < 0.00002 | < 0.00002 | < 0.00002 | --- | 0.00004 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0007 | 0.0027 | 0.0025 | 0.0021 | --- | 0.002 | --- | --- | 0.0016 | --- |
| Tin | mg/L | 0.00608 | 0.00517 | 0.00191 | 0.00093 | --- | 0.00069 | --- | --- | 0.00027 | --- |
| Strontium | mg/L | 0.0066 | 0.0069 | 0.0071 | 0.0082 | --- | 0.0096 | --- | --- | 0.0075 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.000002 | 0.000006 | 0.000003 | 0.000009 | --- | 0.000023 | --- | --- | < 0.000001 | --- |
| Vanadium | mg/L | 0.00035 | 0.00064 | 0.00064 | 0.00056 | --- | 0.00053 | --- | --- | 0.00045 | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M08-740-05 F-Zone
**Weight:** 1 kg

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10102-JAN10 | CA10024-FEB10 | CA10049-FEB10 | CA10079-FEB10 | CA10105-FEB10 | CA10025-MAR10 | CA10051-MAR10 | CA10076-MAR10 | CA10101-MAR10 | CA10146-MAR10 | CA10025-APR10 |
| | | 27-Jan-09 | 3-Feb-10 | 10-Feb-10 | 17-Feb-10 | 24-Feb-10 | 3-Mar-10 | 10-Mar-10 | 17-Mar-10 | 24-Mar-10 | 31-Mar-10 | 7-Apr-10 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 892 | 891 | 906 | 896 | 910 | 912 | 891 | 896 | 955 | 910 | 886 |
| pH | no unit | 8.81 | 8.16 | 7.94 | 8.7 | 8.52 | 8.45 | 8.71 | 8.16 | 7.86 | 7.78 | 7.95 |
| Alkalinity | mg/L as $CaCO_3$ | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 10 | 13 | 12 | 11 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 33 | 32 | 31 | 30 | 30 | 30 | 29 | 27 | 31 | 28 | 28 |
| Sulphate | mg/L | 2.2 | 1.9 | 1.7 | 1.7 | 2.0 | 2.2 | 1.7 | 1.8 | 1.8 | 1.6 | 1.9 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 3.86 | 3.92 | 3.76 | 3.70 | 3.86 | 3.87 | 4.47 | 3.54 | 4.58 | 4.12 | 3.74 |
| As+3 | mg/L | --- | --- | --- | --- | --- | 0.023 | --- | --- | --- | --- | 0.011 |
| As+5 | mg/L | --- | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | 0.019 |
| Aluminum | mg/L | --- | --- | 0.03 | --- | --- | --- | 0.04 | --- | --- | --- | 0.04 |
| Arsenic | mg/L | --- | --- | 0.0237 | --- | --- | 0.0224 | 0.0259 | --- | --- | --- | 0.0266 |
| Barium | mg/L | --- | --- | 0.00108 | --- | --- | --- | 0.00174 | --- | --- | --- | 0.00124 |
| Boron | mg/L | --- | --- | 0.0017 | --- | --- | --- | 0.0014 | --- | --- | --- | 0.0009 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.00003 | --- | --- | --- | 0.000033 | --- | --- | --- | 0.000032 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Potassium | mg/L | --- | --- | 1.08 | --- | --- | --- | 1.18 | --- | --- | --- | 1.11 |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | --- | --- | 0.398 | --- | --- | --- | 0.442 | --- | --- | --- | 0.364 |
| Manganese | mg/L | --- | --- | 0.0235 | --- | --- | --- | 0.0203 | --- | --- | --- | 0.0179 |
| Molybdenum | mg/L | --- | --- | 0.00002 | --- | --- | --- | 0.00003 | --- | --- | --- | 0.00001 |
| Sodium | mg/L | --- | --- | 0.65 | --- | --- | --- | 0.46 | --- | --- | --- | 0.34 |
| Nickel | mg/L | --- | --- | 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | --- | 0.00005 | --- | --- | --- | 0.00047 | --- | --- | --- | 0.00041 |
| Antimony | mg/L | --- | --- | 0.0012 | --- | --- | --- | 0.001 | --- | --- | --- | 0.0011 |
| Tin | mg/L | --- | --- | 0.00053 | --- | --- | --- | 0.00021 | --- | --- | --- | 0.00017 |
| Strontium | mg/L | --- | --- | 0.0071 | --- | --- | --- | 0.0082 | --- | --- | --- | 0.0072 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | 0.000008 | --- | --- | --- | 0.000008 | --- | --- | --- | 0.000003 |
| Vanadium | mg/L | --- | --- | 0.00038 | --- | --- | --- | 0.00035 | --- | --- | --- | 0.00031 |
| Zinc | mg/L | | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |
| | | |
| **Humidity Cell:** | M08-740-05 | F-Zone |
| **Weight:** | 1 kg | |

| Analyte | Unit | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 |
|---|---|---|---|---|---|---|
| | | CA10054-APR10 | CA10098-APR10 | CA10100-APR10 | CA10024-MAY10 | CA10049-MAY10 |
| | | 14-Apr-10 | 21-Apr-10 | 28-Apr-10 | 5-May-10 | 12-May-10 |
| | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 878 | 878 | 884 | 876 | 886 |
| pH | no unit | 7.71 | 7.8 | 8.4 | 7.73 | 8.11 |
| Alkalinity | mg/L as $CaCO_3$ | 10 | 11 | 11 | 13 | 10 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 26 | 27 | 26 | 46 | 49 |
| Sulphate | mg/L | 1.6 | 2 | 2.4 | 2.4 | 2.2 |
| Chloride | mg/L | --- | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 3.66 | 3.83 | 3.76 | 3.92 | 3.85 |
| As+3 | mg/L | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0249 |
| Barium | mg/L | --- | --- | --- | --- | 0.00204 |
| Boron | mg/L | --- | --- | --- | --- | 0.0011 |
| Cadmium | mg/L | --- | --- | --- | --- | 0.00001 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.00005 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.01 |
| Potassium | mg/L | --- | --- | --- | --- | 1.13 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | --- | --- | --- | --- | 0.351 |
| Manganese | mg/L | --- | --- | --- | --- | 0.0195 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00004 |
| Sodium | mg/L | --- | --- | --- | --- | 0.26 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0001 |
| Lead | mg/L | --- | --- | --- | --- | 0.00003 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0009 |
| Tin | mg/L | --- | --- | --- | --- | 0.00018 |
| Strontium | mg/L | --- | --- | --- | --- | 0.0067 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000024 |
| Vanadium | mg/L | --- | --- | --- | --- | 0.00033 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M08-750-03 F-Zone
**Weight:** 1 kg

| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11288-NOV09 | CA11289-NOV09 | CA10023-DEC09 | CA10049-DEC09 | CA10074-DEC09 | CA11221-DEC09 | CA11254-DEC09 | CA10024-JAN10 | CA10048-JAN10 | CA10074-JAN10 |
| | | 18-Nov-09 | 25-Nov-09 | 2-Dec-09 | 9-Dec-09 | 16-Dec-09 | 23-Dec-09 | 30-Dec-09 | 6-Jan-10 | 13-Jan-10 | 20-Jan-09 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 813 | 906 | 932 | 928 | 930 | 926 | 933 | 904 | 920 | 924 |
| pH | no unit | 7.79 | 8.16 | 7.78 | 8.21 | 8.17 | 8.30 | 9.20 | 8.47 | 8.43 | 8.76 |
| Alkalinity | mg/L as $CaCO_3$ | 16 | 17 | 17 | 14 | 15 | 14 | 16 | 14 | 14 | 14 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 57 | 72 | 51 | 48 | 41 | 34 | 33 | 35 | 35 | 33 |
| Sulphate | mg/L | 0.8 | 2.6 | 3.2 | 3 | 2.8 | 2.7 | 2.6 | 3.0 | 2.6 | 2 |
| Chloride | mg/L | 4.1 | 7.1 | 3.5 | 1.6 | --- | 0.5 | --- | --- | < 0.2 | --- |
| Calcium | mg/L | 4.61 | 3.6 | 4.32 | 4.3 | 4.19 | 4.28 | 4.03 | 3.80 | 3.76 | 3.98 |
| As+3 | mg/L | 0.004 | 0.002 | 0.004 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.002 | 0.003 | 0.003 | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | 0.05 | 0.05 | 0.06 | 0.06 | --- | 0.06 | --- | --- | 0.04 | --- |
| Arsenic | mg/L | 0.0007 | 0.0044 | 0.0066 | 0.0071 | --- | 0.0100 | --- | --- | 0.0135 | --- |
| Barium | mg/L | 0.00393 | 0.0014 | 0.00166 | 0.00161 | --- | 0.00156 | --- | --- | 0.00143 | --- |
| Boron | mg/L | 0.141 | 0.114 | 0.0572 | 0.032 | --- | 0.0181 | --- | --- | 0.0097 | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000032 | 0.000032 | 0.000018 | 0.000024 | --- | 0.000018 | --- | --- | 0.000024 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 2.24 | 2.47 | 2.48 | 2.06 | --- | 1.72 | --- | --- | 1.55 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.24 | 0.388 | 0.583 | 0.6 | --- | 0.615 | --- | --- | 0.634 | --- |
| Manganese | mg/L | 0.0117 | 0.0123 | 0.0153 | 0.0173 | --- | 0.019 | --- | --- | 0.0175 | --- |
| Molybdenum | mg/L | 0.00017 | 0.00066 | 0.00037 | 0.00028 | --- | 0.00019 | --- | --- | 0.00009 | --- |
| Sodium | mg/L | 4.26 | 7.61 | 5.07 | 3.29 | --- | 1.73 | --- | --- | 0.76 | --- |
| Nickel | mg/L | 0.0002 | 0.0001 | 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | 0.00003 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0007 | 0.002 | 0.0016 | 0.001 | --- | 0.0009 | --- | --- | 0.0009 | --- |
| Tin | mg/L | 0.0155 | 0.00969 | 0.00373 | 0.00199 | --- | 0.00101 | --- | --- | 0.00093 | --- |
| Strontium | mg/L | 0.0106 | 0.0109 | 0.0134 | 0.0138 | --- | 0.0127 | --- | --- | 0.0102 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | < 0.000001 | 0.000014 | 0.000015 | 0.00002 | --- | 0.000026 | --- | --- | 0.000017 | --- |
| Vanadium | mg/L | 0.00046 | 0.00069 | 0.00058 | 0.00051 | --- | 0.0005 | --- | --- | 0.00048 | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M08-750-03 F-Zone
**Weight:** 1 kg

| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10102-JAN10 | CA10024-FEB10 | CA10049-FEB10 | CA10079-FEB10 | CA10105-FEB10 | CA10025-MAR10 | CA10051-MAR10 | CA10076-MAR10 | CA10101-MAR10 | CA10146-MAR10 | CA10025-APR10 |
| | | 27-Jan-09 | 3-Feb-10 | 10-Feb-10 | 17-Feb-10 | 24-Feb-10 | 3-Mar-10 | 10-Mar-10 | 17-Mar-10 | 24-Mar-10 | 31-Mar-10 | 7-Apr-10 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 920 | 917 | 910 | 900 | 911 | 909 | 911 | 896 | 948 | 903 | 893 |
| pH | no unit | 8.50 | 7.98 | 8.03 | 8.73 | 8.72 | 8.51 | 7.75 | 7.91 | 8.05 | 7.82 | 7.79 |
| Alkalinity | mg/L as $CaCO_3$ | 12 | 13 | 12 | 13 | 10 | 13 | 11 | 9 | 11 | 10 | 10 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 31 | 32 | 31 | 32 | 28 | 30 | 29 | 28 | 26 | 27 | 28 |
| Sulphate | mg/L | 2.6 | 2.6 | 2.5 | 2.3 | 2.1 | 2.2 | 2.2 | 2.5 | 1.5 | 2.5 | 2.7 |
| Chloride | mg/L | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 3.82 | 3.74 | 3.58 | 3.67 | 3.58 | 3.45 | 4.18 | 3.22 | 3.80 | 3.70 | 3.53 |
| As+3 | mg/L | --- | --- | --- | --- | --- | 0.014 | --- | --- | --- | --- | 0.010 |
| As+5 | mg/L | --- | --- | --- | --- | --- | 0.001 | --- | --- | --- | --- | 0.018 |
| Aluminum | mg/L | --- | --- | 0.03 | --- | --- | --- | 0.05 | --- | --- | --- | 0.05 |
| Arsenic | mg/L | --- | --- | 0.0237 | --- | --- | 0.0151 | 0.0195 | --- | --- | --- | 0.0215 |
| Barium | mg/L | --- | --- | 0.00108 | --- | --- | --- | 0.00215 | --- | --- | --- | 0.00184 |
| Boron | mg/L | --- | --- | 0.0017 | --- | --- | --- | 0.0022 | --- | --- | --- | 0.0012 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.00003 | --- | --- | --- | 0.00004 | --- | --- | --- | 0.000045 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Potassium | mg/L | --- | --- | 1.08 | --- | --- | --- | 1.4 | --- | --- | --- | 1.33 |
| Lithium | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | --- | --- | 0.398 | --- | --- | --- | 0.647 | --- | --- | --- | 0.591 |
| Manganese | mg/L | --- | --- | 0.0235 | --- | --- | --- | 0.0163 | --- | --- | --- | 0.0132 |
| Molybdenum | mg/L | --- | --- | 0.00002 | --- | --- | --- | 0.00007 | --- | --- | --- | 0.00006 |
| Sodium | mg/L | --- | --- | 0.65 | --- | --- | --- | 0.23 | --- | --- | --- | 0.19 |
| Nickel | mg/L | --- | --- | 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | --- | 0.00005 | --- | --- | --- | 0.00036 | --- | --- | --- | 0.00036 |
| Antimony | mg/L | --- | --- | 0.0012 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.0006 |
| Tin | mg/L | --- | --- | 0.00053 | --- | --- | --- | 0.00031 | --- | --- | --- | 0.00034 |
| Strontium | mg/L | --- | --- | 0.0071 | --- | --- | --- | 0.0122 | --- | --- | --- | 0.01 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | 0.000008 | --- | --- | --- | 0.000033 | --- | --- | --- | 0.00004 |
| Vanadium | mg/L | --- | --- | 0.00038 | --- | --- | --- | 0.00049 | --- | --- | --- | 0.00044 |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** M08-750-03 F-Zone
**Weight:** 1 kg

| Analyte | Unit | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 |
|---|---|---|---|---|---|---|
| | | CA10054-APR10 | CA10098-APR10 | CA10100-APR10 | CA10024-MAY10 | CA10049-MAY10 |
| | | 14-Apr-10 | 21-Apr-10 | 28-Apr-10 | 5-May-10 | 12-May-10 |
| | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 874 | 874 | 804 | 873 | 882 |
| pH | no unit | 7.7 | 7.8 | 8.64 | 7.52 | 8.56 |
| Alkalinity | mg/L as $CaCO_3$ | 9 | 10 | 10 | 12 | 10 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 26 | 28 | 23 | 43 | 41 |
| Sulphate | mg/L | 2.3 | 2.4 | 1.3 | 2.5 | 2.2 |
| Chloride | mg/L | --- | --- | --- | --- | < 0.2 |
| Calcium | mg/L | 3.46 | 3.55 | 3.44 | 3.41 | 3.55 |
| As+3 | mg/L | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | --- | --- | 0.04 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0221 |
| Barium | mg/L | --- | --- | --- | --- | 0.00174 |
| Boron | mg/L | --- | --- | --- | --- | 0.001 |
| Cadmium | mg/L | --- | --- | --- | --- | 0.000013 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.000059 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.01 |
| Potassium | mg/L | --- | --- | --- | --- | 1.53 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.002 |
| Magnesium | mg/L | --- | --- | --- | --- | 0.531 |
| Manganese | mg/L | --- | --- | --- | --- | 0.0151 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00007 |
| Sodium | mg/L | --- | --- | --- | --- | 0.12 |
| Nickel | mg/L | --- | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | --- | --- | --- | 0.00004 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0006 |
| Tin | mg/L | --- | --- | --- | --- | 0.00031 |
| Strontium | mg/L | --- | --- | --- | --- | 0.0075 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000056 |
| Vanadium | mg/L | --- | --- | --- | --- | 0.00049 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** W94-61-01

**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11013-DEC11 | CA11024-DEC11 | CA11093-DEC11 | CA10312-DEC11 | CA10052-JAN12 | CA10059-JAN12 | CA11009-JAN12 | CA10198-JAN12 | CA10029-FEB12 | CA10037-FEB12 | CA10145-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 847 | 976 | 985 | 971 | 978 | 995 | 990 | 985 | 992 | 991 | 986 |
| pH | no unit | 6.84 | 7.06 | 6.65 | 7.03 | 7.36 | 7.17 | 7.29 | 7.25 | 7.22 | 7.09 | 7.19 |
| Alkalinity | mg/L as CaCO3 | 5 | 10 | 10 | 8 | 10 | 12 | 14 | 12 | 15 | 13 | 54 |
| Acidity | mg/L as CaCO3 | 11 | 20 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 207 | 272 | 229 | 222 | 118 | 106 | 90 | 89 | 115 | 104 | 89 |
| Sulphate | mg/L | 100 | 130 | 120 | 89 | 55 | 47 | 35 | 36 | 33 | 30 | 32 |
| Calcium | mg/L | 34.9 | 46 | 43.1 | 33.3 | 21.6 | 19.3 | 14.9 | 15.4 | 15.7 | 14.8 | 13.8 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | 0.18 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 6.20 | 7.1 | 3.7 | 1.7 | --- | 0.4 | --- | --- | 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- | --- |
| Arsenic | mg/L | 0.0003 | 0.0004 | 0.0005 | < 0.0002 | --- | 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Barium | mg/L | 0.00149 | 0.00082 | 0.00067 | 0.00056 | --- | 0.0004 | --- | --- | 0.00029 | --- | --- |
| Boron | mg/L | 0.0047 | 0.0122 | 0.0105 | 0.009 | --- | 0.0079 | --- | --- | 0.0046 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000047 | 0.000019 | 0.000013 | 0.000008 | --- | 0.000004 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.00116 | 0.00051 | 0.000439 | 0.00023 | --- | 0.000138 | --- | --- | 0.000084 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.051 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 0.119 | 0.224 | 0.212 | 0.176 | --- | 0.124 | --- | --- | 0.08 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 10.4 | 15 | 9.62 | 6.05 | --- | 3.77 | --- | --- | 3.29 | --- | --- |
| Manganese | mg/L | 0.484 | 0.434 | 0.407 | 0.186 | --- | 0.0945 | --- | --- | 0.102 | --- | --- |
| Molybdenum | mg/L | 0.00001 | 0.00004 | 0.00003 | 0.00002 | --- | 0.00031 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 0.29 | 0.46 | 0.31 | 0.2 | --- | 0.11 | --- | --- | 0.08 | --- | --- |
| Nickel | mg/L | 0.0029 | 0.0009 | 0.001 | 0.0014 | --- | 0.0009 | --- | --- | 0.0004 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0002 | < 0.0002 | < 0.0002 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | 0.002 | 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00163 | 0.00099 | 0.00042 | 0.0003 | --- | 0.00025 | --- | --- | 0.00011 | --- | --- |
| Strontium | mg/L | 0.0247 | 0.0326 | 0.0293 | 0.0215 | --- | 0.0123 | --- | --- | 0.0096 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0006 | --- | --- | 0.0002 | --- | --- |
| Uranium | mg/L | < 0.000001 | 0.00004 | 0.000032 | 0.000031 | --- | 0.000026 | --- | --- | 0.000023 | --- | --- |
| Vanadium | mg/L | 0.00003 | 0.00005 | 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000008 | 0.000002 | 0.000001 | 0.000002 | --- | < 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | 0.007 | 0.003 | 0.003 | 0.002 | --- | < 0.001 | --- | --- | 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** W94-61-01
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10203-FEB12 | CA10000-MAR12 | CA10057-MAR12 | CA10112-MAR12 | CA10164-MAR12 | CA10218-MAR12 | CA10044-APR12 | CA10094-APR12 | CA10100-APR12 | CA10194-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 980 | 992 | 999 | 986 | 992 | 994 | 987 | 994 | 995 | 988 |
| pH | no unit | 7.17 | 7.06 | 7.29 | 7.02 | 7.20 | 7.17 | 6.59 | 7.11 | 7.13 | 7.19 |
| Alkalinity | mg/L as CaCO3 | 14 | 14 | 14 | 13 | 14 | 13 | 22 | 13 | 23 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 80 | 79 | 79 | 101 | 84 | 79 | 102 | 75 | 98 | 77 |
| Sulphate | mg/L | 29 | 28 | 28 | 30 | 33 | 32 | 30 | 29 | 28 | 28 |
| Calcium | mg/L | 13.9 | 13.5 | 13.6 | 13.5 | 14.9 | 13.9 | 13.8 | 13 | 12.4 | 12.2 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | < 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 |
| Barium | mg/L | --- | 0.00022 | --- | --- | --- | 0.00018 | --- | --- | --- | 0.00018 |
| Boron | mg/L | --- | 0.0031 | --- | --- | --- | 0.0021 | --- | --- | --- | 0.0037 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000056 | --- | --- | --- | 0.000046 | --- | --- | --- | 0.000031 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.053 | --- | --- | --- | 0.038 | --- | --- | --- | 0.031 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 2.98 | --- | --- | --- | 3.22 | --- | --- | --- | 2.87 |
| Manganese | mg/L | --- | 0.0505 | --- | --- | --- | 0.0416 | --- | --- | --- | 0.0308 |
| Molybdenum | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Sodium | mg/L | --- | 0.05 | --- | --- | --- | 0.03 | --- | --- | --- | 0.03 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00013 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.00007 |
| Strontium | mg/L | --- | 0.0077 | --- | --- | --- | 0.0075 | --- | --- | --- | 0.0065 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | 0.0001 |
| Uranium | mg/L | --- | 0.000011 | --- | --- | --- | 0.000013 | --- | --- | --- | 0.000009 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000002 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | 0.003 | --- | --- | --- | 0.002 | --- | --- | --- | 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** W94-73-02

**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11013-DEC11 | CA11024-DEC11 | CA11093-DEC11 | CA10312-DEC11 | CA10052-JAN12 | CA10059-JAN12 | CA11009-JAN12 | CA10198-JAN12 | CA10029-FEB12 | CA10037-FEB12 | CA10145-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 846 | 990 | 990 | 980 | 982 | 982 | 990 | 988 | 986 | 974 | 994 |
| pH | no unit | 7.53 | 7.46 | 6.98 | 7.21 | 7.26 | 7.39 | 7.29 | 7.35 | 7.34 | 7.16 | 7.20 |
| Alkalinity | mg/L as CaCO3 | 11 | 16 | 15 | 13 | 14 | 14 | 14 | 15 | 14 | 14 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 88 | 106 | 72 | 54 | 52 | 8 | 49 | 66 | 64 | 63 | 51 |
| Sulphate | mg/L | 30 | 41 | 26 | 19 | 15 | 17 | 14 | 14 | 14 | 14 | 13 |
| Calcium | mg/L | 14.6 | 17.3 | 12.1 | 9.88 | 8.78 | 9.39 | 7.89 | 8.43 | 8.11 | 8.47 | 8.08 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 2.30 | | 0.6 | 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.01 | < 0.01 | < 0.01 | 0.02 | --- | < 0.01 | --- | --- | < 0.01 | --- | --- |
| Arsenic | mg/L | 0.0002 | < 0.0002 | 0.0003 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Barium | mg/L | 0.00102 | 0.00112 | 0.00071 | 0.0006 | --- | 0.00051 | --- | --- | 0.00037 | --- | --- |
| Boron | mg/L | 0.0026 | 0.0092 | 0.0063 | 0.0051 | --- | 0.0046 | --- | --- | 0.0021 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000049 | 0.000058 | 0.000043 | 0.000033 | --- | 0.000042 | --- | --- | 0.000006 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.001 | < 0.0005 | < 0.0005 | 0.0006 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.01 | < 0.003 | 0.008 | 0.005 | --- | 0.005 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 0.233 | 0.333 | 0.22 | 0.151 | --- | 0.109 | --- | --- | 0.067 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 3.27 | 4.72 | 3.34 | 2.65 | --- | 2.38 | --- | --- | 2.07 | --- | --- |
| Manganese | mg/L | 0.0276 | 0.0377 | 0.0301 | 0.0216 | --- | 0.0224 | --- | --- | 0.0193 | --- | --- |
| Molybdenum | mg/L | 0.00025 | 0.00023 | 0.00021 | 0.00018 | --- | 0.00037 | --- | --- | 0.0001 | --- | --- |
| Sodium | mg/L | 0.37 | 0.39 | 0.19 | 0.12 | --- | 0.07 | --- | --- | 0.04 | --- | --- |
| Nickel | mg/L | 0.0005 | < 0.0001 | < 0.0001 | 0.0004 | --- | 0.0004 | --- | --- | 0.0001 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0003 | 0.0003 | < 0.0002 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00163 | 0.0008 | 0.0005 | 0.0003 | --- | 0.00024 | --- | --- | 0.00012 | --- | --- |
| Strontium | mg/L | 0.0131 | 0.016 | 0.0111 | 0.0085 | --- | 0.0075 | --- | --- | 0.006 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0004 | < 0.0001 | < 0.0001 | 0.0003 | --- | 0.0003 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000041 | 0.000278 | 0.0002 | 0.000161 | --- | 0.000133 | --- | --- | 0.000095 | --- | --- |
| Vanadium | mg/L | < 0.00003 | 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | < 0.00003 | 0.00005 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000003 | 0.000004 | 0.000003 | 0.000003 | --- | 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | 0.001 | 0.001 | --- | < 0.001 | --- | --- | 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** W94-73-02

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10203-FEB12 | CA10000-MAR12 | CA10057-MAR12 | CA10112-MAR12 | CA10164-MAR12 | CA10218-MAR12 | CA10044-APR12 | CA10094-APR12 | CA10100-APR12 | CA10194-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 979 | 988 | 990 | 988 | 988 | 997 | 988 | 995 | 992 | 990 |
| pH | no unit | 7.25 | 6.94 | 7.34 | 7.07 | 7.19 | 7.28 | 6.71 | 7.19 | 7.39 | 7.31 |
| Alkalinity | mg/L as CaCO3 | 13 | 14 | 13 | 13 | 14 | 14 | 14 | 13 | 19 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 48 | 50 | 50 | 61 | 51 | 48 | 62 | 46 | 60 | 48 |
| Sulphate | mg/L | 13 | 13 | 13 | 14 | 14 | 14 | 13 | 12 | 13 | 13 |
| Calcium | mg/L | 7.74 | 7.93 | 8.19 | 7.74 | 8.30 | 7.76 | 7.82 | 7.35 | 7.33 | 7.12 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | < 0.01 | --- | --- | --- | 0.01 | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 |
| Barium | mg/L | --- | 0.00027 | --- | --- | --- | 0.00021 | --- | --- | --- | 0.00019 |
| Boron | mg/L | --- | 0.0016 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.0029 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000025 | --- | --- | --- | 0.000023 | --- | --- | --- | 0.000022 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.046 | --- | --- | --- | 0.03 | --- | --- | --- | 0.027 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 2.18 | --- | --- | --- | 2.31 | --- | --- | --- | 2.19 |
| Manganese | mg/L | --- | 0.0172 | --- | --- | --- | 0.0146 | --- | --- | --- | 0.012 |
| Molybdenum | mg/L | --- | 0.00009 | --- | --- | --- | 0.00007 | --- | --- | --- | 0.00006 |
| Sodium | mg/L | --- | 0.03 | --- | --- | --- | 0.02 | --- | --- | --- | 0.02 |
| Nickel | mg/L | --- | 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | 0.00008 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00013 | --- | --- | --- | 0.00011 | --- | --- | --- | 0.00009 |
| Strontium | mg/L | --- | 0.0056 | --- | --- | --- | 0.0055 | --- | --- | --- | 0.0051 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000078 | --- | --- | --- | 0.00007 | --- | --- | --- | 0.000059 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | 0.002 | --- | --- | --- | 0.001 | --- | --- | --- | 0.002 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M96-58-02
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11013-DEC11 | CA11024-DEC11 | CA11093-DEC11 | CA10312-DEC11 | CA10052-JAN12 | CA10059-JAN12 | CA11009-JAN12 | CA10198-JAN12 | CA10029-FEB12 | CA10037-FEB12 | CA10145-FEB12 |
| | Unit | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 841 | 989 | 980 | 996 | 971 | 1000 | 987 | 998 | 990 | 972 | 996 |
| pH | no unit | 8.40 | 8.52 | 8.24 | 8.41 | 7.91 | 7.92 | 7.65 | 7.94 | 7.56 | 7.83 | 7.47 |
| Alkalinity | mg/L as CaCO3 | 24 | 28 | 24 | 23 | 20 | 21 | 16 | 17 | 14 | 15 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 8 | 8 | 41 | 46 | 6 | 32 | 30 | 29 | 35 | 34 | 26 |
| Sulphate | mg/L | 4.1 | 5.3 | 2.7 | 2.1 | 1.5 | 1.6 | 1.2 | 1.3 | 1.2 | 1.3 | 1.2 |
| Calcium | mg/L | 4.28 | 4.63 | 4.3 | 4.45 | 4.35 | 4.81 | 4.31 | 4.68 | 4.44 | 4.84 | 4.55 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 2.00 | 1.2 | 0.4 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.1 | 0.05 | 0.06 | 0.05 | --- | 0.05 | --- | --- | 0.04 | --- | --- |
| Arsenic | mg/L | 0.0028 | 0.005 | 0.0048 | 0.0049 | --- | 0.0054 | --- | --- | 0.0057 | --- | --- |
| Barium | mg/L | 0.00081 | 0.00107 | 0.00089 | 0.00095 | --- | 0.00117 | --- | --- | 0.00088 | --- | --- |
| Boron | mg/L | 0.0081 | 0.0205 | 0.0117 | 0.0098 | --- | 0.009 | --- | --- | 0.0043 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000004 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000014 | 0.000021 | 0.000016 | 0.000018 | --- | 0.000026 | --- | --- | < 0.000002 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | 0.0007 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.008 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 2.1 | 2.57 | 2.05 | 1.85 | --- | 1.73 | --- | --- | 1.39 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.417 | 0.562 | 0.515 | 0.531 | --- | 0.627 | --- | --- | 0.594 | --- | --- |
| Manganese | mg/L | 0.0134 | 0.0177 | 0.0182 | 0.0191 | --- | 0.0199 | --- | --- | 0.017 | --- | --- |
| Molybdenum | mg/L | 0.00015 | 0.00024 | 0.00012 | 0.00006 | --- | 0.00118 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 5.64 | 7.59 | 4.24 | 3.04 | --- | 1.75 | --- | --- | 0.66 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0001 | < 0.0001 | 0.0002 | --- | 0.0002 | --- | --- | < 0.0001 | --- | --- |
| Lead | mg/L | < 0.00002 | 0.00004 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.001 | 0.0023 | 0.0017 | 0.0015 | --- | 0.0015 | --- | --- | 0.001 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00167 | 0.00078 | 0.00033 | 0.0003 | --- | 0.00026 | --- | --- | 0.00016 | --- | --- |
| Strontium | mg/L | 0.0059 | 0.0069 | 0.0065 | 0.0066 | --- | 0.0074 | --- | --- | 0.0069 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0002 | 0.0001 | 0.0002 | < 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | < 0.000001 | 0.000018 | 0.000017 | 0.000017 | --- | 0.000018 | --- | --- | 0.000016 | --- | --- |
| Vanadium | mg/L | 0.00084 | 0.00088 | 0.00069 | 0.00065 | --- | 0.00067 | --- | --- | 0.00053 | --- | --- |
| Tungsten | mg/L | 0.00008 | 0.00029 | 0.00023 | 0.00022 | --- | 0.00027 | --- | --- | 0.00007 | --- | --- |
| Yttrium | mg/L | 0.000009 | 0.000009 | 0.000009 | 0.000009 | --- | 0.000008 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M96-58-02
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10203-FEB12 | CA10000-MAR12 | CA10057-MAR12 | CA10112-MAR12 | CA10164-MAR12 | CA10218-MAR12 | CA10044-APR12 | CA10094-APR12 | CA10100-APR12 | CA10194-APR12 |
| | Unit | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 980 | 992 | 991 | 993 | 994 | 986 | 990 | 983 | 988 | 992 |
| pH | no unit | 7.61 | 7.46 | 7.57 | 7.39 | 7.48 | 7.62 | 6.71 | 7.54 | 7.41 | 7.45 |
| Alkalinity | mg/L as CaCO3 | 13 | 14 | 13 | 14 | 14 | 13 | 24 | 14 | 21 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 32 | 34 | 25 | 31 | 32 | 35 | 33 | 24 | 32 | 30 |
| Sulphate | mg/L | 1.2 | 1.2 | 1.2 | 1.3 | 1.4 | 1.3 | 1.2 | 1.3 | 1.2 | 1.2 |
| Calcium | mg/L | 4.49 | 4.65 | 4.77 | 4.62 | 4.75 | 4.58 | 4.93 | 4.73 | 4.47 | 4.52 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.04 | --- | --- | --- | 0.03 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.006 | --- | --- | --- | 0.0073 | --- | --- | --- | 0.0068 |
| Barium | mg/L | --- | 0.00099 | --- | --- | --- | 0.00086 | --- | --- | --- | 0.0009 |
| Boron | mg/L | --- | 0.0027 | --- | --- | --- | 0.0016 | --- | --- | --- | 0.0037 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000039 | --- | --- | --- | 0.000029 | --- | --- | --- | 0.000043 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 1.05 | --- | --- | --- | 0.856 | --- | --- | --- | 0.72 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.581 | --- | --- | --- | 0.567 | --- | --- | --- | 0.511 |
| Manganese | mg/L | --- | 0.0171 | --- | --- | --- | 0.016 | --- | --- | --- | 0.0156 |
| Molybdenum | mg/L | --- | 0.00007 | --- | --- | --- | < 0.00001 | --- | --- | --- | 0.00002 |
| Sodium | mg/L | --- | 0.26 | --- | --- | --- | 0.12 | --- | --- | --- | 0.08 |
| Nickel | mg/L | --- | 0.0002 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | 0.00003 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0009 | --- | --- | --- | 0.0008 | --- | --- | --- | 0.0007 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00015 | --- | --- | --- | 0.00015 | --- | --- | --- | 0.00014 |
| Strontium | mg/L | --- | 0.0069 | --- | --- | --- | 0.0067 | --- | --- | --- | 0.0063 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000015 | --- | --- | --- | 0.00002 | --- | --- | --- | 0.000018 |
| Vanadium | mg/L | --- | 0.00049 | --- | --- | --- | 0.00046 | --- | --- | --- | 0.00038 |
| Tungsten | mg/L | --- | 0.00007 | --- | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000003 | --- | --- | --- | 0.000004 | --- | --- | --- | 0.000004 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M97-123-01

**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11013-DEC11 | CA11024-DEC11 | CA11093-DEC11 | CA10312-DEC11 | CA10052-JAN12 | CA10059-JAN12 | CA11009-JAN12 | CA10198-JAN12 | CA10029-FEB12 |
| | Unit | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 |
| | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 842 | 990 | 976 | 993 | 982 | 992 | 986 | 986 | 992 |
| pH | no unit | 8.87 | 8.53 | 8.18 | 7.97 | 7.97 | 7.97 | 7.85 | 8.16 | 7.65 |
| Alkalinity | mg/L as CaCO3 | 27 | 30 | 25 | 22 | 21 | 22 | 18 | 17 | 16 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 49 | 50 | 6 | 41 | 31 | 31 | 5 | 5 | 34 |
| Sulphate | mg/L | 2.7 | 2.5 | 1.1 | 0.6 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 |
| Calcium | mg/L | 4.02 | 4.91 | 4.5 | 4.31 | 5.03 | 5.26 | 4.73 | 5.11 | 4.87 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 |
| Chloride | mg/L | 2.40 | 0.9 | < 0.2 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Aluminum | mg/L | 0.08 | 0.06 | 0.07 | 0.05 | --- | 0.05 | --- | --- | 0.05 |
| Arsenic | mg/L | 0.0245 | 0.0311 | 0.0289 | 0.0265 | --- | 0.0252 | --- | --- | 0.0263 |
| Barium | mg/L | 0.00142 | 0.0026 | 0.00256 | 0.00277 | --- | 0.00327 | --- | --- | 0.00289 |
| Boron | mg/L | 0.0139 | 0.0277 | 0.0161 | 0.0105 | --- | 0.0082 | --- | --- | 0.004 |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Cadmium | mg/L | 0.00001 | < 0.000003 | 0.000003 | 0.000004 | --- | < 0.000003 | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000022 | 0.00003 | 0.000021 | 0.000024 | --- | 0.000034 | --- | --- | 0.000009 |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | 0.0006 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Iron | mg/L | 0.008 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 |
| Potassium | mg/L | 2.94 | 3.25 | 2.65 | 1.97 | --- | 1.64 | --- | --- | 1.19 |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |
| Magnesium | mg/L | 0.391 | 0.607 | 0.602 | 0.547 | --- | 0.608 | --- | --- | 0.543 |
| Manganese | mg/L | 0.0111 | 0.0161 | 0.015 | 0.0148 | --- | 0.0177 | --- | --- | 0.0136 |
| Molybdenum | mg/L | 0.00118 | 0.00125 | 0.00049 | 0.00022 | --- | 0.00072 | --- | --- | 0.00005 |
| Sodium | mg/L | 5.3 | 5.14 | 2.52 | 1.28 | --- | 0.63 | --- | --- | 0.29 |
| Nickel | mg/L | 0.0002 | 0.0001 | 0.0002 | 0.0002 | --- | 0.0003 | --- | --- | < 0.0001 |
| Lead | mg/L | < 0.00002 | 0.00012 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 |
| Antimony | mg/L | 0.0014 | 0.0031 | 0.0023 | 0.0018 | --- | 0.0016 | --- | --- | 0.001 |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |
| Tin | mg/L | 0.00251 | 0.0013 | 0.00063 | 0.00043 | --- | 0.00036 | --- | --- | 0.00018 |
| Strontium | mg/L | 0.0061 | 0.0097 | 0.0097 | 0.0089 | --- | 0.0102 | --- | --- | 0.0094 |
| Thorium | mg/L | < 0.000004 | 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 |
| Titanium | mg/L | 0.0003 | < 0.0001 | 0.0001 | 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 |
| Uranium | mg/L | 0.000059 | 0.000207 | 0.00021 | 0.000221 | --- | 0.00021 | --- | --- | 0.000211 |
| Vanadium | mg/L | 0.00035 | 0.00037 | 0.00031 | 0.00029 | --- | 0.00033 | --- | --- | 0.00028 |
| Tungsten | mg/L | 0.00004 | 0.0002 | 0.00016 | 0.00014 | --- | 0.00015 | --- | --- | 0.00007 |
| Yttrium | mg/L | 0.000023 | 0.00001 | 0.000011 | 0.000011 | --- | 0.000009 | --- | --- | 0.000002 |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M97-123-01

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10203-FEB12 | CA10000-MAR12 | CA10057-MAR12 | CA10112-MAR12 | CA10164-MAR12 | CA10218-MAR12 | CA10044-APR12 | CA10094-APR12 | CA10100-APR12 |
| | Unit | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 984 | 989 | 989 | 984 | 991 | 994 | 985 | 998 | 991 |
| pH | no unit | 8.07 | 7.35 | 7.60 | 7.50 | 7.51 | 7.59 | 6.86 | 7.42 | 7.44 |
| Alkalinity | mg/L as CaCO3 | 15 | 15 | 15 | 14 | 15 | 14 | 24 | 14 | 17 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 25 | 34 | 25 | 30 | 33 | 24 | 31 | 29 | 29 |
| Sulphate | mg/L | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Calcium | mg/L | 4.87 | 5.02 | 5.19 | 4.83 | 5.13 | 4.9 | 5.06 | 4.91 | 4.72 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Aluminum | mg/L | --- | 0.05 | --- | --- | --- | 0.04 | --- | --- | --- |
| Arsenic | mg/L | --- | 0.0251 | --- | --- | --- | 0.0272 | --- | --- | --- |
| Barium | mg/L | --- | 0.00303 | --- | --- | --- | 0.00284 | --- | --- | --- |
| Boron | mg/L | --- | 0.0026 | --- | --- | --- | 0.0014 | --- | --- | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | 0.000049 | --- | --- | --- | 0.000047 | --- | --- | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- |
| Potassium | mg/L | --- | 0.894 | --- | --- | --- | 0.698 | --- | --- | --- |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | 0.488 | --- | --- | --- | 0.427 | --- | --- | --- |
| Manganese | mg/L | --- | 0.0133 | --- | --- | --- | 0.013 | --- | --- | --- |
| Molybdenum | mg/L | --- | 0.00006 | --- | --- | --- | 0.00005 | --- | --- | --- |
| Sodium | mg/L | --- | 0.16 | --- | --- | --- | 0.11 | --- | --- | --- |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- |
| Antimony | mg/L | --- | 0.0009 | --- | --- | --- | 0.0008 | --- | --- | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | 0.00018 | --- | --- | --- | 0.00016 | --- | --- | --- |
| Strontium | mg/L | --- | 0.0091 | --- | --- | --- | 0.0085 | --- | --- | --- |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | 0.000224 | --- | --- | --- | 0.000195 | --- | --- | --- |
| Vanadium | mg/L | --- | 0.00025 | --- | --- | --- | 0.00023 | --- | --- | --- |
| Tungsten | mg/L | --- | 0.00005 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Yttrium | mg/L | --- | 0.000003 | --- | --- | --- | 0.000005 | --- | --- | --- |
| Zinc | mg/L | --- | 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

| 9 | 10 |
|---|---|
| CA10037-FEB12 | CA10145-FEB12 |
| 09-Feb-12 | 16-Feb-12 |
| | |
| 1000 | 1000 |
| 986 | 990 |
| 7.94 | 7.73 |
| 17 | 14 |
| < 2 | < 2 |
| 33 | 28 |
| 0.3 | 0.2 |
| 5.25 | 4.56 |
| --- | --- |
| --- | --- |
| --- | ---

| |
|---|
| 20 |
| CA10194-APR12 |
| 26-Apr-12 |
| |
| 1000 |
| 989 |
| 7.62 |
| 13 |
| < 2 |
| 31 |
| 0.2 |
| 4.81 |
| < 0.06 |
| < 0.2 |
| < 0.0001 |
| < 0.00001 |
| 0.05 |
| 0.0231 |
| 0.00271 |
| 0.0029 |
| < 0.00002 |
| < 0.00001 |
| < 0.000003 |
| 0.000051 |
| < 0.0005 |
| < 0.0005 |
| < 0.003 |
| 0.606 |
| < 0.001 |
| 0.368 |
| 0.0137 |
| 0.00005 |
| 0.08 |
| < 0.0001 |
| < 0.00002 |
| < 0.009 |
| 0.0006 |
| < 0.001 |
| 0.00019 |
| 0.0076 |
| < 0.000004 |
| < 0.0001 |
| 0.000154 |
| 0.0002 |
| < 0.00003 |
| 0.000006 |
| < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M97-124-01

**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11013-DEC11 | CA11024-DEC11 | CA11093-DEC11 | CA10312-DEC11 | CA10052-JAN12 | CA10059-JAN12 | CA11009-JAN12 | CA10198-JAN12 | CA10029-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 |
| | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 842 | 959 | 986 | 985 | 989 | 985 | 972 | 983 | 985 |
| pH | no unit | 8.97 | 8.59 | 7.72 | 8.50 | 8.08 | 7.99 | 8.09 | 7.96 | 7.61 |
| Alkalinity | mg/L as CaCO3 | 24 | 23 | 28 | 22 | 21 | 17 | 16 | 15 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 53 | 58 | 45 | 48 | 58 | 33 | 5 | 6 | 36 |
| Sulphate | mg/L | 6.5 | | 5.3 | 3.5 | 2.5 | 2.7 | 2.2 | 2.3 | 2.2 |
| Calcium | mg/L | 5.1 | 4.71 | 5.0 | 4.97 | 5.19 | 5.02 | 4.53 | 4.85 | 4.82 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 |
| Chloride | mg/L | 2.30 | 1.3 | 0.4 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Aluminum | mg/L | 0.07 | 0.03 | 0.04 | 0.03 | --- | 0.04 | --- | --- | 0.04 |
| Arsenic | mg/L | 0.009 | 0.0111 | 0.0087 | 0.0072 | --- | 0.0078 | --- | --- | 0.0068 |
| Barium | mg/L | 0.00055 | 0.00058 | 0.00069 | 0.00062 | --- | 0.00068 | --- | --- | 0.00066 |
| Boron | mg/L | 0.0052 | 0.0144 | 0.0094 | 0.0072 | --- | 0.006 | --- | --- | 0.0028 |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Cadmium | mg/L | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000043 | 0.000057 | 0.000043 | 0.000032 | --- | 0.000041 | --- | --- | 0.000023 |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Iron | mg/L | 0.013 | 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 |
| Potassium | mg/L | 2.45 | 3.15 | 2.48 | 1.94 | --- | 1.6 | --- | --- | 1.27 |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |
| Magnesium | mg/L | 0.55 | 0.789 | 0.821 | 0.772 | --- | 0.762 | --- | --- | 0.714 |
| Manganese | mg/L | 0.0135 | 0.0166 | 0.0168 | 0.0166 | --- | 0.0153 | --- | --- | 0.0129 |
| Molybdenum | mg/L | 0.00029 | 0.00056 | 0.0003 | 0.00017 | --- | 0.00052 | --- | --- | 0.00005 |
| Sodium | mg/L | 4.98 | 6.21 | 3.07 | 1.71 | --- | 0.8 | --- | --- | 0.32 |
| Nickel | mg/L | 0.0003 | 0.0002 | 0.0004 | 0.0003 | --- | 0.0003 | --- | --- | 0.0001 |
| Lead | mg/L | < 0.00002 | 0.00008 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.015 | --- | < 0.009 | --- | --- | < 0.009 |
| Antimony | mg/L | 0.0017 | 0.0039 | 0.0032 | 0.0028 | --- | 0.0025 | --- | --- | 0.0018 |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |
| Tin | mg/L | 0.00145 | 0.00071 | 0.00036 | 0.00022 | --- | 0.0002 | --- | --- | 0.00015 |
| Strontium | mg/L | 0.0073 | 0.009 | 0.0093 | 0.0086 | --- | 0.0083 | --- | --- | 0.0076 |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 |
| Titanium | mg/L | 0.0005 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 |
| Uranium | mg/L | 0.000005 | 0.000058 | 0.00006 | 0.000048 | --- | 0.000047 | --- | --- | 0.000045 |
| Vanadium | mg/L | 0.00053 | 0.00048 | 0.00033 | 0.0003 | --- | 0.00032 | --- | --- | 0.00025 |
| Tungsten | mg/L | 0.00007 | 0.00019 | 0.00013 | 0.0001 | --- | 0.00012 | --- | --- | 0.00004 |
| Yttrium | mg/L | 0.000025 | 0.000027 | 0.000023 | 0.000021 | --- | 0.000021 | --- | --- | 0.000018 |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M97-124-01

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10203-FEB12 | CA10000-MAR12 | CA10057-MAR12 | CA10112-MAR12 | CA10164-MAR12 | CA10218-MAR12 | CA10044-APR12 | CA10094-APR12 | CA10100-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 979 | 979 | 988 | 981 | 993 | 988 | 983 | 994 | 986 |
| pH | no unit | 7.79 | 7.56 | 7.58 | 7.42 | 7.50 | 7.63 | 6.74 | 7.61 | 7.51 |
| Alkalinity | mg/L as CaCO3 | 14 | 14 | 14 | 14 | 14 | 14 | 22 | 13 | 25 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 35 | 30 | 28 | 34 | 43 | 36 | 33 | 26 | 35 |
| Sulphate | mg/L | 2.4 | 2.4 | 2.4 | 2.6 | 2.8 | 2.6 | 2.6 | 2.7 | 2.7 |
| Calcium | mg/L | 4.9 | 4.88 | 5.74 | 5.07 | 5.31 | 5.14 | 5.04 | 5.08 | 5.04 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Aluminum | mg/L | --- | 0.04 | --- | --- | --- | 0.04 | --- | --- | --- |
| Arsenic | mg/L | --- | 0.0058 | --- | --- | --- | 0.0057 | --- | --- | --- |
| Barium | mg/L | --- | 0.00085 | --- | --- | --- | 0.00103 | --- | --- | --- |
| Boron | mg/L | --- | 0.0017 | --- | --- | --- | 0.0008 | --- | --- | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | 0.00005 | --- | --- | --- | 0.000056 | --- | --- | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- |
| Potassium | mg/L | --- | 1.07 | --- | --- | --- | 0.976 | --- | --- | --- |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | 0.68 | --- | --- | --- | 0.686 | --- | --- | --- |
| Manganese | mg/L | --- | 0.0124 | --- | --- | --- | 0.0111 | --- | --- | --- |
| Molybdenum | mg/L | --- | 0.00006 | --- | --- | --- | 0.00005 | --- | --- | --- |
| Sodium | mg/L | --- | 0.16 | --- | --- | --- | 0.1 | --- | --- | --- |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- |
| Antimony | mg/L | --- | 0.0015 | --- | --- | --- | 0.0013 | --- | --- | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | 0.00008 | --- | --- | --- | 0.00012 | --- | --- | --- |
| Strontium | mg/L | --- | 0.0073 | --- | --- | --- | 0.0074 | --- | --- | --- |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | 0.000045 | --- | --- | --- | 0.000053 | --- | --- | --- |
| Vanadium | mg/L | --- | 0.00021 | --- | --- | --- | 0.00016 | --- | --- | --- |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Yttrium | mg/L | --- | 0.000012 | --- | --- | --- | 0.00001 | --- | --- | --- |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

| 9 | 10 |
|---|---|
| CA10037-FEB12 | CA10145-FEB12 |
| 09-Feb-12 | 16-Feb-12 |
| | |
| 1000 | 1000 |
| 940 | 986 |
| 7.87 | 7.78 |
| 15 | 14 |
| < 2 | < 2 |
| 36 | 27 |
| 2.4 | 2.3 |
| 5.21 | 4.72 |
| --- | --- |
| --- | --- |
| --- | ---

| |
|---|
| 20 |
| CA10194-APR12 |
| 26-Apr-12 |
| |
| 1000 |
| 991 |
| 7.60 |
| 14 |
| < 2 |
| 30 |
| 2.7 |
| 5.25 |
| < 0.06 |
| < 0.2 |
| < 0.0001 |
| < 0.00001 |
| 0.03 |
| 0.0042 |
| 0.00124 |
| 0.0032 |
| < 0.00002 |
| < 0.00001 |
| < 0.000003 |
| 0.000069 |
| < 0.0005 |
| < 0.0005 |
| < 0.003 |
| 0.875 |
| < 0.001 |
| 0.633 |
| 0.0126 |
| 0.00006 |
| 0.07 |
| < 0.0001 |
| < 0.00002 |
| < 0.009 |
| 0.001 |
| < 0.001 |
| 0.0001 |
| 0.0068 |
| < 0.000004 |
| < 0.0001 |
| 0.000045 |
| 0.00013 |
| < 0.00003 |
| 0.00001 |
| < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M98-184-01

**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11013-DEC11 | CA11024-DEC11 | CA11093-DEC11 | CA10312-DEC11 | CA10052-JAN12 | CA10059-JAN12 | CA11009-JAN12 | CA10198-JAN12 | CA10029-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 |
| | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 806 | 978 | 988 | 988 | 989 | 995 | 983 | 983 | 985 |
| pH | no unit | 8.97 | 8.74 | 8.06 | 8.32 | 7.92 | 8.16 | 7.77 | 7.88 | 7.61 |
| Alkalinity | mg/L as CaCO3 | 35 | 36 | 33 | 27 | 25 | 39 | 21 | 20 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 55 | 9 | 51 | 54 | 6 | 37 | 31 | 40 | 36 |
| Sulphate | mg/L | 2.6 | 3 | 2.1 | 1.6 | 1.1 | 1 | 0.7 | 0.7 | 2.2 |
| Calcium | mg/L | 3.24 | 3.34 | 3.1 | 3.21 | 3.39 | 3.66 | 3.33 | 3.79 | 4.82 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 |
| Chloride | mg/L | 0.70 | 0.6 | 0.3 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Aluminum | mg/L | 0.08 | 0.04 | 0.04 | 0.05 | --- | 0.04 | --- | --- | 0.04 |
| Arsenic | mg/L | 0.0036 | 0.0067 | 0.0062 | 0.0054 | --- | 0.0045 | --- | --- | 0.0068 |
| Barium | mg/L | 0.00068 | 0.00124 | 0.00126 | 0.00129 | --- | 0.00165 | --- | --- | 0.00066 |
| Boron | mg/L | 0.0112 | 0.0242 | 0.0181 | 0.0151 | --- | 0.0117 | --- | --- | 0.0028 |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Cadmium | mg/L | 0.000005 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000012 | 0.000015 | 0.000012 | 0.000009 | --- | 0.000017 | --- | --- | 0.000023 |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Copper | mg/L | 0.0007 | < 0.0005 | < 0.0005 | 0.0007 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Iron | mg/L | 0.01 | 0.004 | 0.003 | 0.004 | --- | < 0.003 | --- | --- | < 0.003 |
| Potassium | mg/L | 2.17 | 2.62 | 2.65 | 2.42 | --- | 2.39 | --- | --- | 1.27 |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |
| Magnesium | mg/L | 0.181 | 0.23 | 0.256 | 0.272 | --- | 0.338 | --- | --- | 0.714 |
| Manganese | mg/L | 0.00573 | 0.0119 | 0.0118 | 0.0125 | --- | 0.0136 | --- | --- | 0.0129 |
| Molybdenum | mg/L | 0.00022 | 0.00034 | 0.00022 | 0.00012 | --- | 0.00036 | --- | --- | 0.00005 |
| Sodium | mg/L | 7.85 | 11.2 | 8.34 | 6.19 | --- | 4.06 | --- | --- | 0.32 |
| Nickel | mg/L | < 0.0001 | < 0.0001 | 0.0003 | 0.0001 | --- | 0.0002 | --- | --- | 0.0001 |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.014 | --- | < 0.009 | --- | --- | < 0.009 |
| Antimony | mg/L | 0.0005 | 0.0009 | 0.0007 | 0.0005 | --- | 0.0006 | --- | --- | 0.0018 |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |
| Tin | mg/L | 0.00081 | 0.00062 | 0.0005 | 0.00024 | --- | 0.00022 | --- | --- | 0.00015 |
| Strontium | mg/L | 0.0036 | 0.0044 | 0.0049 | 0.005 | --- | 0.0061 | --- | --- | 0.0076 |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 |
| Titanium | mg/L | 0.0003 | 0.0003 | 0.0003 | 0.0002 | --- | 0.0001 | --- | --- | < 0.0001 |
| Uranium | mg/L | 0.000014 | 0.000078 | 0.000074 | 0.000078 | --- | 0.000073 | --- | --- | 0.000045 |
| Vanadium | mg/L | 0.00121 | 0.00106 | 0.00085 | 0.00074 | --- | 0.00065 | --- | --- | 0.00025 |
| Tungsten | mg/L | 0.00006 | 0.00032 | 0.00028 | 0.00025 | --- | 0.00019 | --- | --- | 0.00004 |
| Yttrium | mg/L | 0.000007 | 0.000015 | 0.000015 | 0.000019 | --- | 0.000012 | --- | --- | 0.000018 |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Pump

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M98-184-01

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10203-FEB12 | CA10000-MAR12 | CA10057-MAR12 | CA10112-MAR12 | CA10164-MAR12 | CA10218-MAR12 | CA10044-APR12 | CA10094-APR12 | CA10100-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 |
| | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 986 | 986 | 989 | 986 | 991 | 995 | 988 | 992 | 993 |
| pH | no unit | 8.00 | 7.77 | 7.53 | 7.37 | 7.52 | 7.62 | 6.77 | 7.58 | 7.71 |
| Alkalinity | mg/L as CaCO3 | 15 | 15 | 15 | 15 | 15 | 15 | 24 | 13 | 25 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 26 | 27 | 31 | 31 | 32 | 33 | 31 | 22 | 30 |
| Sulphate | mg/L | 0.5 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 |
| Calcium | mg/L | 4 | 4.18 | 4.42 | 4.24 | 4.56 | 4.68 | 4.66 | 4.3 | 4.22 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.05 | --- | --- | --- |
| Arsenic | mg/L | --- | 0.0031 | --- | --- | --- | 0.0031 | --- | --- | --- |
| Barium | mg/L | --- | 0.00185 | --- | --- | --- | 0.00169 | --- | --- | --- |
| Boron | mg/L | --- | 0.0044 | --- | --- | --- | 0.0027 | --- | --- | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | 0.000011 | --- | --- | --- | 0.00002 | --- | --- | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | 0.009 | --- | --- | --- |
| Potassium | mg/L | --- | 1.81 | --- | --- | --- | 1.39 | --- | --- | --- |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | 0.459 | --- | --- | --- | 0.463 | --- | --- | --- |
| Manganese | mg/L | --- | 0.0117 | --- | --- | --- | 0.0144 | --- | --- | --- |
| Molybdenum | mg/L | --- | 0.00002 | --- | --- | --- | 0.00001 | --- | --- | --- |
| Sodium | mg/L | --- | 0.78 | --- | --- | --- | 0.35 | --- | --- | --- |
| Nickel | mg/L | --- | 0.0005 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | 0.00002 | --- | --- | --- |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- |
| Antimony | mg/L | --- | 0.0004 | --- | --- | --- | 0.0005 | --- | --- | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | 0.00014 | --- | --- | --- | 0.00024 | --- | --- | --- |
| Strontium | mg/L | --- | 0.008 | --- | --- | --- | 0.0081 | --- | --- | --- |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | 0.000086 | --- | --- | --- | 0.000092 | --- | --- | --- |
| Vanadium | mg/L | --- | 0.00041 | --- | --- | --- | 0.00038 | --- | --- | --- |
| Tungsten | mg/L | --- | 0.0001 | --- | --- | --- | 0.00006 | --- | --- | --- |
| Yttrium | mg/L | --- | 0.000005 | --- | --- | --- | 0.000008 | --- | --- | --- |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

| 9 | 10 |
|---|---|
| CA10037-FEB12 | CA10145-FEB12 |
| 09-Feb-12 | 16-Feb-12 |
| | |
| 1000 | 1000 |
| 985 | 989 |
| 7.67 | 7.55 |
| 16 | 16 |
| < 2 | < 2 |
| 35 | 26 |
| 0.6 | 0.5 |
| 4.23 | 3.87 |
| --- | --- |
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| 20 |
| CA10194-APR12 |
| 26-Apr-12 |
| |
| 1000 |
| 991 |
| 7.44 |
| 13 |
| < 2 |
| 28 |
| 0.4 |
| 4.28 |
| < 0.06 |
| < 0.2 |
| < 0.0001 |
| < 0.00001 |
| 0.03 |
| 0.0025 |
| 0.00142 |
| 0.0041 |
| < 0.00002 |
| < 0.00001 |
| < 0.000003 |
| 0.000014 |
| < 0.0005 |
| < 0.0005 |
| < 0.003 |
| 1.09 |
| < 0.001 |
| 0.419 |
| 0.0117 |
| 0.00002 |
| 0.19 |
| < 0.0001 |
| < 0.00002 |
| < 0.009 |
| 0.0003 |
| < 0.001 |
| 0.00023 |
| 0.0073 |
| < 0.000004 |
| < 0.0001 |
| 0.000092 |
| 0.00032 |
| < 0.00003 |
| 0.000007 |
| < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M98-222-01
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11018-DEC11 | CA11019-DEC11 | CA11098-DEC11 | CA10317-DEC11 | CA10057-JAN12 | CA10064-JAN12 | CA11014-JAN12 | CA10203-JAN12 | CA10034-JAN12 | CA10042-FEB11 | CA10150-FEB11 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-11 | 09-Feb-11 | 16-Feb-11 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 823 | 960 | 945 | 970 | 971 | 973 | 974 | 964 | 996 | 985 | 980 |
| pH | no unit | 8.06 | 7.97 | 7.79 | 7.68 | 7.53 | 7.85 | 7.40 | 7.46 | 7.89 | 7.44 | 7.41 |
| Alkalinity | mg/L as CaCO3 | 17 | 17 | 15 | 15 | 14 | 15 | 15 | 14 | 16 | 14 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 40 | 35 | 5 | 36 | 26 | 28 | 27 | 33 | 36 | 33 | 25 |
| Sulphate | mg/L | 2.2 | 1.9 | 1.7 | 1.6 | 1.5 | 1.6 | 1.7 | 1.6 | 1.5 | 1.3 | 1.3 |
| Calcium | mg/L | 5 | 4.88 | 4.1 | 4.36 | 4.46 | 4.63 | 4.62 | 4.43 | 5.04 | 4.83 | 4.68 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 0.70 | 0.3 | 0.2 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.05 | 0.02 | 0.03 | 0.03 | --- | 0.05 | --- | --- | 0.02 | --- | --- |
| Arsenic | mg/L | 0.0135 | 0.0206 | 0.0242 | 0.027 | --- | 0.0323 | --- | --- | 0.0293 | --- | --- |
| Barium | mg/L | 0.0005 | 0.00068 | 0.00057 | 0.0006 | --- | 0.00059 | --- | --- | 0.00054 | --- | --- |
| Boron | mg/L | 0.0017 | 0.0067 | 0.0044 | 0.004 | --- | 0.0027 | --- | --- | 0.0013 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000007 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000053 | 0.000086 | 0.000082 | 0.000106 | --- | 0.000122 | --- | --- | 0.000257 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.006 | 0.009 | 0.006 | 0.008 | --- | 0.012 | --- | --- | 0.005 | --- | --- |
| Potassium | mg/L | 1.51 | 1.56 | 1.16 | 0.896 | --- | 0.646 | --- | --- | 0.456 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.629 | 1.03 | 0.965 | 0.974 | --- | 0.952 | --- | --- | 1.01 | --- | --- |
| Manganese | mg/L | 0.0225 | 0.022 | 0.0178 | 0.0146 | --- | 0.0144 | --- | --- | 0.0183 | --- | --- |
| Molybdenum | mg/L | 0.0005 | 0.00069 | 0.00048 | 0.00032 | --- | 0.00018 | --- | --- | 0.00008 | --- | --- |
| Sodium | mg/L | 1.21 | 1.02 | 0.58 | 0.4 | --- | 0.21 | --- | --- | 0.13 | --- | --- |
| Nickel | mg/L | 0.0004 | 0.0003 | 0.0003 | 0.0004 | --- | 0.0004 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.012 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0019 | 0.0035 | 0.0032 | 0.003 | --- | 0.0026 | --- | --- | 0.0019 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00169 | 0.00095 | 0.0005 | 0.00038 | --- | 0.00026 | --- | --- | 0.00024 | --- | --- |
| Strontium | mg/L | 0.0086 | 0.0109 | 0.0096 | 0.0097 | --- | 0.0093 | --- | --- | 0.0093 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0002 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000038 | 0.000112 | 0.000126 | 0.00014 | --- | 0.000127 | --- | --- | 0.000105 | --- | --- |
| Vanadium | mg/L | 0.00036 | 0.00036 | 0.00034 | 0.00031 | --- | 0.0003 | --- | --- | 0.00025 | --- | --- |
| Tungsten | mg/L | 0.00015 | 0.00031 | 0.00023 | 0.00019 | --- | 0.00012 | --- | --- | 0.00007 | --- | --- |
| Yttrium | mg/L | 0.000009 | 0.000011 | 0.000009 | 0.000008 | --- | 0.000005 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M98-222-01

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10208-FEB11 | CA10005-NAR12 | CA10062-MAR12 | CA10117-MAR12 | CA10169-MAR12 | CA10223-MAR12 | CA10049-APR12 | CA10099-APR12 | CA10105-APR12 | CA10199-APR12 |
| | | 23-Feb-11 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 983 | 986 | 987 | 988 | 990 | 992 | 985 | 987 | 984 | 986 |
| pH | no unit | 7.31 | 7.18 | 6.89 | 7.24 | 7.39 | 7.50 | 7.50 | 7.26 | 7.31 | 7.28 |
| Alkalinity | mg/L as CaCO3 | 14 | 14 | 14 | 14 | 14 | 13 | 23 | 11 | 17 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 31 | 26 | 31 | 31 | 24 | 39 | 30 | 27 | 26 | 23 |
| Sulphate | mg/L | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.1 | 1.3 | 1.4 |
| Calcium | mg/L | 4.39 | 4.63 | 4.86 | 4.65 | 4.63 | 4.56 | 4.66 | 3.79 | 3.66 | 3.82 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.02 | --- | --- | --- | 0.02 | --- | --- | --- | 0.01 |
| Arsenic | mg/L | --- | 0.028 | --- | --- | --- | 0.0304 | --- | --- | --- | 0.0242 |
| Barium | mg/L | --- | 0.00048 | --- | --- | --- | 0.00039 | --- | --- | --- | 0.00035 |
| Boron | mg/L | --- | 0.0008 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0004 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000369 | --- | --- | --- | 0.000381 | --- | --- | --- | 0.000433 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.283 | --- | --- | --- | 0.188 | --- | --- | --- | 0.131 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.904 | --- | --- | --- | 0.892 | --- | --- | --- | 0.743 |
| Manganese | mg/L | --- | 0.0165 | --- | --- | --- | 0.0156 | --- | --- | --- | 0.0148 |
| Molybdenum | mg/L | --- | 0.00006 | --- | --- | --- | 0.00005 | --- | --- | --- | 0.00004 |
| Sodium | mg/L | --- | 0.08 | --- | --- | --- | 0.04 | --- | --- | --- | 0.03 |
| Nickel | mg/L | --- | 0.0004 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0003 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0014 | --- | --- | --- | 0.0013 | --- | --- | --- | 0.0009 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00019 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.00012 |
| Strontium | mg/L | --- | 0.0079 | --- | --- | --- | 0.0073 | --- | --- | --- | 0.0059 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.00009 | --- | --- | --- | 0.000077 | --- | --- | --- | 0.00007 |
| Vanadium | mg/L | --- | 0.00019 | --- | --- | --- | 0.00017 | --- | --- | --- | 0.00014 |
| Tungsten | mg/L | --- | 0.00006 | --- | --- | --- | 0.00006 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-981-03
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11018-DEC11 | CA11019-DEC11 | CA11098-DEC11 | CA10317-DEC11 | CA10057-JAN12 | CA10064-JAN12 | CA11014-JAN12 | CA10203-JAN12 | CA10034-JAN12 | CA10042-FEB11 | CA10150-FEB11 |
| | Unit | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-11 | 09-Feb-11 | 16-Feb-11 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 821 | 988 | 992 | 990 | 989 | 994 | 986 | 985 | 995 | 989 | 987 |
| pH | no unit | 8.61 | 7.91 | 8.25 | 8.02 | 7.98 | 8.13 | 7.60 | 7.68 | 8.11 | 7.91 | 7.59 |
| Alkalinity | mg/L as CaCO3 | 28 | 24 | 26 | 23 | 23 | 22 | 20 | 18 | 18 | 20 | 17 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 7 | 51 | 46 | 51 | 39 | 36 | 45 | 40 | 40 | 40 | 29 |
| Sulphate | mg/L | 1.6 | 1.6 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.2 | 1.1 | 1.2 | 1.1 |
| Calcium | mg/L | 4.82 | 5.29 | 4.7 | 5.03 | 5.25 | 5.29 | 4.81 | 5.02 | 5 | 5.28 | 5.28 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 4.10 | 4 | 2.9 | 1.6 | --- | 0.5 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.04 | 0.02 | 0.03 | 0.04 | --- | 0.04 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0023 | 0.0043 | 0.0046 | 0.0047 | --- | 0.0047 | --- | --- | 0.0038 | --- | --- |
| Barium | mg/L | 0.0008 | 0.00114 | 0.00117 | 0.00103 | --- | 0.00122 | --- | --- | 0.00123 | --- | --- |
| Boron | mg/L | 0.0017 | 0.0079 | 0.006 | 0.0054 | --- | 0.004 | --- | --- | 0.0018 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000007 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000014 | 0.000034 | 0.000037 | 0.000036 | --- | 0.000047 | --- | --- | 0.000064 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.003 | < 0.003 | < 0.003 | < 0.003 | --- | 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 0.935 | 1.21 | 0.94 | 0.861 | --- | 0.703 | --- | --- | 0.544 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.447 | 0.976 | 1.02 | 1.18 | --- | 1.28 | --- | --- | 1.25 | --- | --- |
| Manganese | mg/L | 0.019 | 0.0288 | 0.0281 | 0.0257 | --- | 0.0271 | --- | --- | 0.025 | --- | --- |
| Molybdenum | mg/L | 0.00019 | 0.00034 | 0.00029 | 0.0002 | --- | 0.00014 | --- | --- | 0.00006 | --- | --- |
| Sodium | mg/L | 3.83 | 4.54 | 2.81 | 2.09 | --- | 1.03 | --- | --- | 0.41 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0002 | 0.0004 | 0.0003 | --- | 0.0004 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | 0.014 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0016 | 0.0047 | 0.0045 | 0.0043 | --- | 0.0038 | --- | --- | 0.0027 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00103 | 0.00111 | 0.00062 | 0.00044 | --- | 0.00045 | --- | --- | 0.00033 | --- | --- |
| Strontium | mg/L | 0.0088 | 0.0126 | 0.0119 | 0.0125 | --- | 0.0129 | --- | --- | 0.0114 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | < 0.000001 | 0.000009 | 0.000007 | 0.000008 | --- | 0.000008 | --- | --- | 0.000005 | --- | --- |
| Vanadium | mg/L | 0.0003 | 0.0003 | 0.00022 | 0.00019 | --- | 0.00018 | --- | --- | 0.00017 | --- | --- |
| Tungsten | mg/L | 0.00005 | 0.00014 | 0.00011 | 0.00009 | --- | 0.00006 | --- | --- | 0.00005 | --- | --- |
| Yttrium | mg/L | 0.000004 | 0.000011 | 0.000009 | 0.000008 | --- | 0.000015 | --- | --- | 0.000003 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M10-981-03

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10208-FEB11 | CA10005-NAR12 | CA10062-MAR12 | CA10117-MAR12 | CA10169-MAR12 | CA10223-MAR12 | CA10049-APR12 | CA10099-APR12 | CA10105-APR12 | CA10199-APR12 |
| | Unit | 23-Feb-11 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 984 | 986 | 982 | 986 | 992 | 993 | 990 | 990 | 992 | 991 |
| pH | no unit | 7.76 | 7.61 | 7.80 | 7.56 | 7.64 | 7.74 | 7.92 | 7.79 | 7.59 | 7.66 |
| Alkalinity | mg/L as CaCO3 | 17 | 17 | 18 | 17 | 21 | 17 | 22 | 16 | 25 | 16 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 6 | 32 | 31 | 38 | 31 | 30 | 37 | 28 | 38 | 29 |
| Sulphate | mg/L | 1.1 | 1.0 | 1.0 | 1.0 | 1 | 0.9 | 0.9 | 0.8 | 0.8 | 0.9 |
| Calcium | mg/L | 5.12 | 5.23 | 5.46 | 5.27 | 5.57 | 5.29 | 5.43 | 5.18 | 5.11 | 5.07 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.04 | --- | --- | --- | 0.05 | --- | --- | --- | 0.04 |
| Arsenic | mg/L | --- | 0.0032 | --- | --- | --- | 0.0029 | --- | --- | --- | 0.0022 |
| Barium | mg/L | --- | 0.00134 | --- | --- | --- | 0.00147 | --- | --- | --- | 0.00221 |
| Boron | mg/L | --- | 0.0012 | --- | --- | --- | 0.0005 | --- | --- | --- | 0.0062 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000054 | --- | --- | --- | 0.000056 | --- | --- | --- | 0.000052 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.461 | --- | --- | --- | 0.382 | --- | --- | --- | 0.326 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 1.27 | --- | --- | --- | 1.26 | --- | --- | --- | 1.14 |
| Manganese | mg/L | --- | 0.0224 | --- | --- | --- | 0.0219 | --- | --- | --- | 0.0194 |
| Molybdenum | mg/L | --- | 0.00004 | --- | --- | --- | 0.00003 | --- | --- | --- | 0.00003 |
| Sodium | mg/L | --- | 0.18 | --- | --- | --- | 0.1 | --- | --- | --- | 0.07 |
| Nickel | mg/L | --- | 0.0001 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | 0.00007 | --- | --- | --- | 0.00003 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0021 | --- | --- | --- | 0.0016 | --- | --- | --- | 0.0012 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00025 | --- | --- | --- | 0.0015 | --- | --- | --- | 0.00022 |
| Strontium | mg/L | --- | 0.0113 | --- | --- | --- | 0.0107 | --- | --- | --- | 0.0097 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000007 | --- | --- | --- | 0.000187 | --- | --- | --- | 0.000015 |
| Vanadium | mg/L | --- | 0.00017 | --- | --- | --- | 0.00015 | --- | --- | --- | 0.00017 |
| Tungsten | mg/L | --- | 0.00005 | --- | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000006 | --- | --- | --- | 0.000007 | --- | --- | --- | 0.000006 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | 0.002 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-985-01
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11018-DEC11 | CA11019-DEC11 | CA11098-DEC11 | CA10317-DEC11 | CA10057-JAN12 | CA10064-JAN12 | CA11014-JAN12 | CA10203-JAN12 | CA10034-JAN12 | CA10042-FEB11 | CA10150-FEB11 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-11 | 09-Feb-11 | 16-Feb-11 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 795 | 995 | 998 | 963 | 1007 | 994 | 997 | 977 | 997 | 975 | 999 |
| pH | no unit | 8.82 | 7.83 | 7.88 | 8.02 | 7.79 | 7.81 | 7.54 | 7.72 | 7.86 | 8.02 | 7.60 |
| Alkalinity | mg/L as CaCO3 | 21 | 26 | 25 | 23 | 21 | 20 | 17 | 21 | 15 | 22 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 106 | 103 | 86 | 67 | 45 | 42 | 38 | 41 | 42 | 52 | 31 |
| Sulphate | mg/L | 23 | 24 | 13 | 7.7 | 6.3 | 5.3 | 4.6 | 4.1 | 3.4 | 4.2 | 3.1 |
| Calcium | mg/L | 8.38 | 9.53 | 8.3 | 6.67 | 7.17 | 6.68 | 6.41 | 7.07 | 5.84 | 7.48 | 6.23 |
| Fluoride | mg/L | 0.14 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 10.00 | 7.1 | 2.6 | 1 | --- | 0.3 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.09 | 0.07 | 0.11 | 0.09 | --- | 0.11 | --- | --- | 0.09 | --- | --- |
| Arsenic | mg/L | 0.0067 | 0.0104 | 0.0122 | 0.0123 | --- | 0.0163 | --- | --- | 0.0214 | --- | --- |
| Barium | mg/L | 0.00164 | 0.00211 | 0.00151 | 0.00115 | --- | 0.001 | --- | --- | 0.00076 | --- | --- |
| Boron | mg/L | 0.005 | 0.0128 | 0.0084 | 0.0056 | --- | 0.0038 | --- | --- | 0.0018 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000004 | 0.000005 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000103 | 0.000156 | 0.000119 | 0.000114 | --- | 0.000171 | --- | --- | 0.000151 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.003 | 0.004 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 5.2 | 4.53 | 2.83 | 1.61 | --- | 1.02 | --- | --- | 0.638 | --- | --- |
| Lithium | mg/L | < 0.001 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 1.84 | 2.36 | 1.88 | 1.38 | --- | 1.21 | --- | --- | 0.97 | --- | --- |
| Manganese | mg/L | 0.0076 | 0.0113 | 0.0121 | 0.0119 | --- | 0.0162 | --- | --- | 0.0165 | --- | --- |
| Molybdenum | mg/L | 0.00069 | 0.0011 | 0.00072 | 0.00041 | --- | 0.00023 | --- | --- | 0.00013 | --- | --- |
| Sodium | mg/L | 11.4 | 8.32 | 3.67 | 1.62 | --- | 0.79 | --- | --- | 0.34 | --- | --- |
| Nickel | mg/L | 0.0014 | 0.0014 | 0.0009 | 0.0007 | --- | 0.0006 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | 0.00004 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0016 | 0.003 | 0.0029 | 0.0023 | --- | 0.0022 | --- | --- | 0.0015 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00231 | 0.00108 | 0.00048 | 0.00032 | --- | 0.00033 | --- | --- | 0.00021 | --- | --- |
| Strontium | mg/L | 0.0475 | 0.0604 | 0.0493 | 0.0359 | --- | 0.0347 | --- | --- | 0.0288 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0003 | < 0.0001 | 0.0001 | < 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.00003 | 0.000385 | 0.00027 | 0.000213 | --- | 0.000206 | --- | --- | 0.000249 | --- | --- |
| Vanadium | mg/L | 0.00021 | 0.00016 | 0.00024 | 0.00019 | --- | 0.00027 | --- | --- | 0.00024 | --- | --- |
| Tungsten | mg/L | 0.00005 | 0.00015 | 0.00012 | 0.00007 | --- | 0.00005 | --- | --- | 0.00005 | --- | --- |
| Yttrium | mg/L | 0.000011 | 0.000011 | 0.000016 | 0.000004 | --- | 0.000008 | --- | --- | 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M10-985-01

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10208-FEB11 | CA10005-NAR12 | CA10062-MAR12 | CA10117-MAR12 | CA10169-MAR12 | CA10223-MAR12 | CA10049-APR12 | CA10099-APR12 | CA10105-APR12 | CA10199-APR12 |
| | | 23-Feb-11 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 988 | 984 | 990 | 988 | 998 | 987 | 998 | 990 | 996 | 985 |
| pH | no unit | 7.65 | 7.40 | 7.56 | 7.19 | 7.50 | 7.73 | 7.40 | 7.46 | 7.46 | 7.54 |
| Alkalinity | mg/L as CaCO3 | 13 | 14 | 14 | 14 | 14 | 14 | 25 | 13 | 27 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 6 | 30 | 31 | 37 | 38 | 30 | 37 | 33 | 37 | 30 |
| Sulphate | mg/L | 2.8 | 3 | 2.8 | 2.9 | 2.6 | 2.7 | 2.6 | 2.3 | 2.6 | 2.6 |
| Calcium | mg/L | 5.35 | 5.42 | 5.78 | 5.54 | 5.54 | 5.79 | 5.74 | 5.14 | 5.54 | 5.47 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | 0.0004 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.08 | --- | --- | --- | 0.11 | --- | --- | --- | 0.08 |
| Arsenic | mg/L | --- | 0.0246 | --- | --- | --- | 0.0321 | --- | --- | --- | 0.0317 |
| Barium | mg/L | --- | 0.00062 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.00059 |
| Boron | mg/L | --- | 0.0013 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.0025 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000256 | --- | --- | --- | 0.000278 | --- | --- | --- | 0.000298 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.414 | --- | --- | --- | 0.313 | --- | --- | --- | 0.24 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.914 | --- | --- | --- | 0.923 | --- | --- | --- | 0.807 |
| Manganese | mg/L | --- | 0.0169 | --- | --- | --- | 0.0185 | --- | --- | --- | 0.018 |
| Molybdenum | mg/L | --- | 0.0001 | --- | --- | --- | 0.00009 | --- | --- | --- | 0.00008 |
| Sodium | mg/L | --- | 0.18 | --- | --- | --- | 0.13 | --- | --- | --- | 0.09 |
| Nickel | mg/L | --- | 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00003 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0013 | --- | --- | --- | 0.0011 | --- | --- | --- | 0.0009 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00018 | --- | --- | --- | 0.00026 | --- | --- | --- | 0.00017 |
| Strontium | mg/L | --- | 0.0269 | --- | --- | --- | 0.0276 | --- | --- | --- | 0.0258 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000341 | --- | --- | --- | 0.000362 | --- | --- | --- | 0.000314 |
| Vanadium | mg/L | --- | 0.00023 | --- | --- | --- | 0.00024 | --- | --- | --- | 0.00024 |
| Tungsten | mg/L | --- | 0.00006 | --- | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000001 | --- | --- | --- | 0.000005 | --- | --- | --- | 0.000003 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-987-04
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11018-DEC11 | CA11019-DEC11 | CA11098-DEC11 | CA10317-DEC11 | CA10057-JAN12 | CA10064-JAN12 | CA11014-JAN12 | CA10203-JAN12 | CA10034-JAN12 | CA10042-FEB11 | CA10150-FEB11 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-11 | 09-Feb-11 | 16-Feb-11 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 806 | 943 | 991 | 985 | 995 | 990 | 983 | 991 | 991 | 985 | 989 |
| pH | no unit | 9.09 | 8.25 | 8.15 | 8.37 | 7.94 | 8.11 | 7.64 | 7.64 | 8.51 | 8.13 | 7.90 |
| Alkalinity | mg/L as CaCO3 | 28 | 20 | 31 | 21 | 22 | 17 | 16 | 17 | 16 | 15 | 16 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 34 | 38 | 36 | 6 | 6 | 32 | 30 | 39 | 37 | 34 | 32 |
| Sulphate | mg/L | 0.9 | 1.2 | 1.2 | 1.6 | 1.3 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.1 |
| Calcium | mg/L | 5.38 | 4.89 | 5.2 | 5.27 | 5.54 | 5.19 | 4.74 | 5.06 | 5.12 | 4.95 | 4.96 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.70 | 1.8 | 1.3 | 1.1 | --- | 0.5 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.04 | 0.02 | 0.03 | 0.04 | --- | 0.05 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0005 | 0.0008 | 0.0008 | 0.0006 | --- | 0.0005 | --- | --- | 0.0005 | --- | --- |
| Barium | mg/L | 0.00074 | 0.00076 | 0.001 | 0.00093 | --- | 0.00106 | --- | --- | 0.00109 | --- | --- |
| Boron | mg/L | 0.0025 | 0.01 | 0.0067 | 0.0067 | --- | 0.0046 | --- | --- | 0.0028 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000011 | 0.000015 | 0.000015 | 0.000017 | --- | 0.000025 | --- | --- | < 0.000002 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.003 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | 0.008 | --- | --- |
| Potassium | mg/L | 0.502 | 0.742 | 0.636 | 0.63 | --- | 0.479 | --- | --- | 0.433 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.319 | 0.695 | 0.794 | 0.969 | --- | 0.856 | --- | --- | 0.881 | --- | --- |
| Manganese | mg/L | 0.0149 | 0.0196 | 0.0194 | 0.0193 | --- | 0.023 | --- | --- | 0.022 | --- | --- |
| Molybdenum | mg/L | 0.00009 | 0.00018 | 0.00013 | 0.0001 | --- | 0.00008 | --- | --- | 0.00003 | --- | --- |
| Sodium | mg/L | 1.75 | 2.19 | 1.4 | 1.29 | --- | 0.7 | --- | --- | 0.42 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0001 | 0.0002 | 0.0002 | --- | 0.0003 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0008 | 0.0017 | 0.0014 | 0.0014 | --- | 0.0012 | --- | --- | 0.0009 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.001 | 0.00098 | 0.00059 | 0.00044 | --- | 0.00028 | --- | --- | 0.00014 | --- | --- |
| Strontium | mg/L | 0.0075 | 0.0094 | 0.01 | 0.0105 | --- | 0.0091 | --- | --- | 0.0086 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | < 0.000001 | 0.000005 | 0.000006 | 0.000006 | --- | 0.000013 | --- | --- | 0.000007 | --- | --- |
| Vanadium | mg/L | 0.00035 | 0.00037 | 0.00024 | 0.00021 | --- | 0.00016 | --- | --- | 0.00017 | --- | --- |
| Tungsten | mg/L | 0.00041 | 0.00062 | 0.00032 | 0.00026 | --- | 0.00012 | --- | --- | 0.0001 | --- | --- |
| Yttrium | mg/L | 0.000003 | 0.000004 | 0.000005 | 0.000005 | --- | 0.000004 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M10-987-04

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10208-FEB11 | CA10005-NAR12 | CA10062-MAR12 | CA10117-MAR12 | CA10169-MAR12 | CA10223-MAR12 | CA10049-APR12 | CA10099-APR12 | CA10105-APR12 | CA10199-APR12 |
| | | 23-Feb-11 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 987 | 991 | 984 | 988 | 993 | 988 | 995 | 991 | 994 | 983 |
| pH | no unit | 8.04 | 8.42 | 7.98 | 7.52 | 7.55 | 7.52 | 7.48 | 7.71 | 7.49 | 7.68 |
| Alkalinity | mg/L as CaCO3 | 14 | 16 | 15 | 14 | 15 | 14 | 25 | 14 | 25 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 36 | 28 | 28 | 31 | 35 | 24 | 32 | 35 | 29 | 25 |
| Sulphate | mg/L | 1.2 | 1.1 | 1.1 | 1.1 | 1 | 1 | 1 | 1 | 0.9 | 0.8 |
| Calcium | mg/L | 4.65 | 5.05 | 5.14 | 4.73 | 4.81 | 4.66 | 4.95 | 4.83 | 4.34 | 4.65 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.03 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0004 | --- | --- | --- | 0.0005 | --- | --- | --- | 0.0004 |
| Barium | mg/L | --- | 0.00105 | --- | --- | --- | 0.00102 | --- | --- | --- | 0.00097 |
| Boron | mg/L | --- | 0.0017 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.0018 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000012 | --- | --- | --- | 0.000012 | --- | --- | --- | 0.000014 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.334 | --- | --- | --- | 0.278 | --- | --- | --- | 0.245 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.772 | --- | --- | --- | 0.767 | --- | --- | --- | 0.685 |
| Manganese | mg/L | --- | 0.0242 | --- | --- | --- | 0.0231 | --- | --- | --- | 0.0239 |
| Molybdenum | mg/L | --- | 0.00002 | --- | --- | --- | 0.00002 | --- | --- | --- | 0.00002 |
| Sodium | mg/L | --- | 0.2 | --- | --- | --- | 0.12 | --- | --- | --- | 0.08 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00003 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0007 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0005 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00015 | --- | --- | --- | 0.00012 | --- | --- | --- | 0.00012 |
| Strontium | mg/L | --- | 0.0074 | --- | --- | --- | 0.0068 | --- | --- | --- | 0.0062 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | 0.0003 |
| Uranium | mg/L | --- | 0.000003 | --- | --- | --- | 0.000011 | --- | --- | --- | 0.000011 |
| Vanadium | mg/L | --- | 0.00014 | --- | --- | --- | 0.00011 | --- | --- | --- | 0.00011 |
| Tungsten | mg/L | --- | 0.00009 | --- | --- | --- | 0.00007 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000003 | --- | --- | --- | 0.000008 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-992-04
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11018-DEC11 | CA11019-DEC11 | CA11098-DEC11 | CA10317-DEC11 | CA10057-JAN12 | CA10064-JAN12 | CA11014-JAN12 | CA10203-JAN12 | CA10034-JAN12 | CA10042-FEB11 | CA10150-FEB11 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-11 | 09-Feb-11 | 16-Feb-11 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 832 | 976 | 995 | 980 | 975 | 1000 | 980 | 973 | 1006 | 982 | 989 |
| pH | no unit | 9.01 | 8.68 | 8.77 | 8.44 | 8.06 | 8.80 | 7.92 | 7.85 | 8.74 | 8.69 | 8.41 |
| Alkalinity | mg/L as CaCO3 | 30 | 31 | 28 | 26 | 27 | 24 | 26 | 25 | 24 | 26 | 26 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 8 | 54 | 53 | 51 | 41 | 38 | 51 | 54 | 47 | 47 | 37 |
| Sulphate | mg/L | 2.9 | 1.5 | 1.2 | 1.2 | 1.2 | 1.0 | 1.0 | 1.0 | 0.9 | 1.0 | 1.0 |
| Calcium | mg/L | 5.34 | 5.51 | 5.6 | 6.49 | 7.12 | 6.57 | 6.67 | 7.07 | 6.72 | 6.98 | 7.49 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 3.40 | 1.9 | 0.6 | 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.09 | 0.07 | 0.08 | 0.11 | --- | 0.1 | --- | --- | 0.1 | --- | --- |
| Arsenic | mg/L | 0.0033 | 0.0122 | 0.0156 | 0.0183 | --- | 0.0252 | --- | --- | 0.0319 | --- | --- |
| Barium | mg/L | 0.00085 | 0.00102 | 0.00109 | 0.00117 | --- | 0.00124 | --- | --- | 0.00118 | --- | --- |
| Boron | mg/L | 0.0036 | 0.0091 | 0.0053 | 0.0043 | --- | 0.0028 | --- | --- | 0.0009 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000045 | 0.000061 | 0.000058 | 0.000058 | --- | 0.000076 | --- | --- | 0.000062 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.004 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 0.739 | 0.883 | 0.681 | 0.566 | --- | 0.366 | --- | --- | 0.261 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.715 | 1.17 | 1.32 | 1.61 | --- | 1.52 | --- | --- | 1.41 | --- | --- |
| Manganese | mg/L | 0.00559 | 0.00603 | 0.00628 | 0.00753 | --- | 0.00789 | --- | --- | 0.00849 | --- | --- |
| Molybdenum | mg/L | 0.00025 | 0.0002 | 0.00011 | 0.00005 | --- | 0.00004 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 7.54 | 6.19 | 2.65 | 1.52 | --- | 0.48 | --- | --- | 0.19 | --- | --- |
| Nickel | mg/L | 0.0003 | 0.0003 | 0.0002 | 0.0003 | --- | 0.0004 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.032 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0009 | 0.0011 | 0.0007 | 0.0005 | --- | 0.0005 | --- | --- | 0.0004 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00129 | 0.00092 | 0.00058 | 0.00037 | --- | 0.0003 | --- | --- | 0.00013 | --- | --- |
| Strontium | mg/L | 0.0123 | 0.0165 | 0.0179 | 0.0204 | --- | 0.0193 | --- | --- | 0.0185 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000011 | 0.000004 | 0.000004 | 0.000002 | --- | 0.000005 | --- | --- | 0.000006 | --- | --- |
| Vanadium | mg/L | 0.00105 | 0.00123 | 0.00119 | 0.00115 | --- | 0.00119 | --- | --- | 0.00131 | --- | --- |
| Tungsten | mg/L | 0.00041 | 0.00095 | 0.00081 | 0.0007 | --- | 0.00053 | --- | --- | 0.00042 | --- | --- |
| Yttrium | mg/L | 0.000001 | 0.000003 | 0.000002 | 0.000003 | --- | 0.000002 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.002 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-992-04
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10208-FEB11 | CA10005-NAR12 | CA10062-MAR12 | CA10117-MAR12 | CA10169-MAR12 | CA10223-MAR12 | CA10049-APR12 | CA10099-APR12 | CA10105-APR12 | CA10199-APR12 |
| | | 23-Feb-11 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 983 | 988 | 987 | 978 | 998 | 997 | 982 | 983 | 998 | 989 |
| pH | no unit | 8.73 | 8.41 | 7.83 | 7.94 | 8.06 | 8.64 | 7.58 | 8.42 | 7.90 | 7.91 |
| Alkalinity | mg/L as CaCO3 | 25 | 24 | 24 | 26 | 24 | 24 | 31 | 23 | 29 | 24 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 7 | 39 | 39 | 49 | 34 | 37 | 50 | 34 | 44 | 38 |
| Sulphate | mg/L | 0.9 | 0.8 | 0.8 | 0.8 | 0.7 | 0.8 | 0.8 | 0.6 | 0.6 | 0.7 |
| Calcium | mg/L | 7.12 | 7.15 | 7.63 | 7.37 | 7.00 | 7.3 | 7.84 | 7.07 | 6.68 | 7.19 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.12 | --- | --- | --- | 0.12 | --- | --- | --- | 0.11 |
| Arsenic | mg/L | --- | 0.0394 | --- | --- | --- | 0.0475 | --- | --- | --- | 0.042 |
| Barium | mg/L | --- | 0.00123 | --- | --- | --- | 0.0012 | --- | --- | --- | 0.00107 |
| Boron | mg/L | --- | 0.0007 | --- | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000093 | --- | --- | --- | 0.000088 | --- | --- | --- | 0.000085 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.215 | --- | --- | --- | 0.166 | --- | --- | --- | 0.14 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 1.48 | --- | --- | --- | 1.5 | --- | --- | --- | 1.39 |
| Manganese | mg/L | --- | 0.00815 | --- | --- | --- | 0.0071 | --- | --- | --- | 0.00552 |
| Molybdenum | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Sodium | mg/L | --- | 0.11 | --- | --- | --- | 0.07 | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0004 | --- | --- | --- | 0.0004 | --- | --- | --- | 0.0003 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00012 | --- | --- | --- | 0.00008 | --- | --- | --- | 0.00013 |
| Strontium | mg/L | --- | 0.0194 | --- | --- | --- | 0.0181 | --- | --- | --- | 0.0169 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000006 | --- | --- | --- | 0.000027 |
| Vanadium | mg/L | --- | 0.00138 | --- | --- | --- | 0.0014 | --- | --- | --- | 0.00116 |
| Tungsten | mg/L | --- | 0.00027 | --- | --- | --- | 0.00016 | --- | --- | --- | 0.00004 |
| Yttrium | mg/L | --- | 0.000001 | --- | --- | --- | 0.000003 | --- | --- | --- | 0.000003 |
| Zinc | mg/L | --- | 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-994-04
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11018-DEC11 | CA11019-DEC11 | CA11098-DEC11 | CA10317-DEC11 | CA10057-JAN12 | CA10064-JAN12 | CA11014-JAN12 | CA10203-JAN12 | CA10034-JAN12 | CA10042-FEB11 | CA10150-FEB11 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-11 | 09-Feb-11 | 16-Feb-11 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 860 | 953 | 968 | 981 | 976 | 977 | 979 | 968 | 994 | 988 | 984 |
| pH | no unit | 8.90 | 8.15 | 7.85 | 7.81 | 7.60 | 7.69 | 7.43 | 7.47 | 7.67 | 7.59 | 7.38 |
| Alkalinity | mg/L as CaCO3 | 26 | 27 | 22 | 17 | 15 | 14 | 13 | 13 | 14 | 13 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 58 | 49 | 36 | 38 | 26 | 25 | 24 | 29 | 32 | 31 | 22 |
| Sulphate | mg/L | 2 | 1 | 0.9 | 1 | 0.8 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 |
| Calcium | mg/L | 2.76 | 2.8 | 3.1 | 3.5 | 3.82 | 3.78 | 3.73 | 3.81 | 4.46 | 4.4 | 4.33 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 6.20 | 1.5 | 0.4 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.09 | 0.07 | 0.06 | 0.07 | --- | 0.06 | --- | --- | 0.06 | --- | --- |
| Arsenic | mg/L | 0.0061 | 0.0089 | 0.0089 | 0.009 | --- | 0.0095 | --- | --- | 0.0103 | --- | --- |
| Barium | mg/L | 0.00092 | 0.00111 | 0.00143 | 0.00165 | --- | 0.0019 | --- | --- | 0.00311 | --- | --- |
| Boron | mg/L | 0.013 | 0.0176 | 0.0096 | 0.0067 | --- | 0.0039 | --- | --- | 0.002 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000131 | 0.000083 | 0.000045 | 0.000041 | --- | 0.000044 | --- | --- | 0.000045 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.008 | < 0.003 | < 0.003 | 0.004 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.27 | 1.53 | 1.4 | 1.37 | --- | 1.25 | --- | --- | 1.34 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.193 | 0.295 | 0.39 | 0.496 | --- | 0.491 | --- | --- | 0.501 | --- | --- |
| Manganese | mg/L | 0.0075 | 0.0105 | 0.0114 | 0.0101 | --- | 0.01 | --- | --- | 0.00955 | --- | --- |
| Molybdenum | mg/L | 0.00072 | 0.00033 | 0.00012 | 0.00003 | --- | 0.00003 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 10.8 | 9.2 | 4.62 | 2.72 | --- | 1.03 | --- | --- | 0.42 | --- | --- |
| Nickel | mg/L | 0.0009 | 0.0005 | 0.0003 | 0.0003 | --- | 0.0003 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | 0.00003 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.006 | 0.0064 | 0.0042 | 0.0032 | --- | 0.0022 | --- | --- | 0.0014 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00129 | 0.00078 | 0.00038 | 0.00023 | --- | 0.0002 | --- | --- | 0.00013 | --- | --- |
| Strontium | mg/L | 0.0049 | 0.0062 | 0.0077 | 0.0094 | --- | 0.0098 | --- | --- | 0.0104 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0004 | 0.0001 | 0.0003 | 0.0002 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | < 0.000001 | 0.000004 | 0.000018 | 0.000004 | --- | 0.000005 | --- | --- | 0.000002 | --- | --- |
| Vanadium | mg/L | 0.00206 | 0.00156 | 0.00112 | 0.00097 | --- | 0.00077 | --- | --- | 0.00071 | --- | --- |
| Tungsten | mg/L | 0.00107 | 0.0014 | 0.00083 | 0.00055 | --- | 0.00026 | --- | --- | 0.00017 | --- | --- |
| Yttrium | mg/L | 0.000007 | 0.000004 | 0.000003 | 0.000003 | --- | 0.000002 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wesmeg

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M10-994-04

**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10208-FEB11 | CA10005-NAR12 | CA10062-MAR12 | CA10117-MAR12 | CA10169-MAR12 | CA10223-MAR12 | CA10049-APR12 | CA10099-APR12 | CA10105-APR12 | CA10199-APR12 |
| | | 23-Feb-11 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 992 | 990 | 988 | 980 | 986 | 983 | 982 | 991 | 982 | 984 |
| pH | no unit | 7.37 | 7.27 | 7.34 | 7.08 | 7.42 | 7.56 | 7.50 | 7.31 | 7.39 | 7.31 |
| Alkalinity | mg/L as CaCO3 | 13 | 13 | 12 | 10 | 11 | 11 | 20 | 10 | 22 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 29 | 29 | 23 | 25 | 20 | 26 | 25 | 23 | 24 | 23 |
| Sulphate | mg/L | 0.9 | 0.9 | 0.9 | 0.9 | 1 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 |
| Calcium | mg/L | 4.2 | 4.19 | 4.42 | 3.87 | 3.99 | 3.9 | 3.92 | 3.78 | 3.62 | 3.54 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.06 | --- | --- | --- | 0.05 | --- | --- | --- | 0.05 |
| Arsenic | mg/L | --- | 0.0112 | --- | --- | --- | 0.0144 | --- | --- | --- | 0.0137 |
| Barium | mg/L | --- | 0.00319 | --- | --- | --- | 0.00294 | --- | --- | --- | 0.00273 |
| Boron | mg/L | --- | 0.0014 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.001 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000069 | --- | --- | --- | 0.000069 | --- | --- | --- | 0.000071 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | 0.0009 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 1.16 | --- | --- | --- | 0.958 | --- | --- | --- | 0.806 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.398 | --- | --- | --- | 0.313 | --- | --- | --- | 0.239 |
| Manganese | mg/L | --- | 0.00815 | --- | --- | --- | 0.0069 | --- | --- | --- | 0.00591 |
| Molybdenum | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Sodium | mg/L | --- | 0.17 | --- | --- | --- | 0.09 | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | 0.0002 | --- | --- | --- | 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0011 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.0007 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00017 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.0001 |
| Strontium | mg/L | --- | 0.0091 | --- | --- | --- | 0.0076 | --- | --- | --- | 0.0062 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000008 | --- | --- | --- | 0.000004 |
| Vanadium | mg/L | --- | 0.0006 | --- | --- | --- | 0.00059 | --- | --- | --- | 0.00053 |
| Tungsten | mg/L | --- | 0.00015 | --- | --- | --- | 0.00012 | --- | --- | --- | 0.00004 |
| Yttrium | mg/L | --- | 0.000003 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M96-16-01
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11017-DEC11 | CA11020-DEC11 | CA11097-DEC11 | CA10316-DEC11 | CA10056-JAN12 | CA10063-JAN12 | CA11013-JAN12 | CA10202-JAN12 | CA10033-FEB12 | CA10041-FEB12 | CA10149-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 836 | 985 | 991 | 984 | 977 | 990 | 992 | 987 | 992 | 988 | 988 |
| pH | no unit | 8.92 | 8.06 | 8.24 | 7.75 | 7.80 | 7.91 | 7.52 | 7.49 | 7.44 | 7.51 | 7.48 |
| Alkalinity | mg/L as CaCO3 | 26 | 27 | 23 | 21 | 16 | 15 | 15 | 14 | 12 | 14 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 50 | 53 | 50 | 47 | 28 | 37 | 34 | 25 | 30 | 32 | 24 |
| Sulphate | mg/L | 3.8 | 4.6 | 3.1 | 2.4 | 1.9 | 1.7 | 1.6 | 1.7 | 1.7 | 1.6 | 1.6 |
| Calcium | mg/L | 3.76 | 4.04 | 3.9 | 4.01 | 4.32 | 4.85 | 4.53 | 4.5 | 4.38 | 5.1 | 4.76 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.00 | 0.5 | 0.2 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.08 | 0.02 | 0.04 | 0.04 | --- | 0.03 | --- | --- | 0.04 | --- | --- |
| Arsenic | mg/L | 0.0139 | 0.0204 | 0.0188 | 0.0168 | --- | 0.0157 | --- | --- | 0.0195 | --- | --- |
| Barium | mg/L | 0.00083 | 0.00101 | 0.00092 | 0.00094 | --- | 0.00116 | --- | --- | 0.00094 | --- | --- |
| Boron | mg/L | 0.01 | 0.0216 | 0.0133 | 0.01 | --- | 0.0059 | --- | --- | 0.0031 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.00001 | < 0.000003 | < 0.000003 | 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000116 | 0.000078 | 0.000064 | 0.000098 | --- | 0.000111 | --- | --- | 0.000052 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0008 | 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.028 | 0.006 | 0.004 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.53 | 1.74 | 1.44 | 1.14 | --- | 0.819 | --- | --- | 0.548 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.238 | 0.358 | 0.394 | 0.429 | --- | 0.507 | --- | --- | 0.48 | --- | --- |
| Manganese | mg/L | 0.0185 | 0.0246 | 0.0248 | 0.0239 | --- | 0.0279 | --- | --- | 0.0172 | --- | --- |
| Molybdenum | mg/L | 0.00026 | 0.00033 | 0.00019 | 0.0001 | --- | 0.00007 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 6.59 | 8.65 | 4.95 | 3.01 | --- | 1.2 | --- | --- | 0.39 | --- | --- |
| Nickel | mg/L | 0.0005 | 0.0006 | 0.0004 | 0.0004 | --- | 0.0004 | --- | --- | 0.0002 | --- | --- |
| Lead | mg/L | 0.00005 | 0.00003 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0016 | 0.0052 | 0.0044 | 0.004 | --- | 0.0031 | --- | --- | 0.0023 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00251 | 0.00084 | 0.0005 | 0.00037 | --- | 0.00035 | --- | --- | 0.00015 | --- | --- |
| Strontium | mg/L | 0.0043 | 0.0062 | 0.0067 | 0.0071 | --- | 0.0087 | --- | --- | 0.0081 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0009 | 0.0003 | 0.0002 | 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000049 | 0.000284 | 0.000218 | 0.000184 | --- | 0.000169 | --- | --- | 0.000154 | --- | --- |
| Vanadium | mg/L | 0.00289 | 0.00224 | 0.00176 | 0.0015 | --- | 0.00115 | --- | --- | 0.00131 | --- | --- |
| Tungsten | mg/L | 0.00019 | 0.00055 | 0.00039 | 0.0003 | --- | 0.00015 | --- | --- | 0.00012 | --- | --- |
| Yttrium | mg/L | 0.000031 | 0.000026 | 0.000019 | 0.000011 | --- | 0.000008 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M96-16-01
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10207-FEB12 | CA10004-MAR12 | CA10061-MAR12 | CA10116-MAR12 | CA10168-MAR12 | CA10222-MAR12 | CA10048-APR12 | CA10098-APR12 | CA10104-APR12 | CA10198-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 983 | 988 | 990 | 988 | 993 | 989 | 979 | 986 | 989 | 990 |
| pH | no unit | 7.31 | 7.26 | 7.21 | 7.22 | 7.48 | 7.45 | 6.65 | 7.29 | 6.61 | 7.52 |
| Alkalinity | mg/L as CaCO3 | 12 | 13 | 13 | 14 | 13 | 12 | 19 | 11 | 23 | 12 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 30 | 34 | 31 | 31 | 23 | 23 | 27 | 21 | 29 | 28 |
| Sulphate | mg/L | 1.7 | 1.6 | 1.5 | 1.6 | 1.5 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 |
| Calcium | mg/L | 4.66 | 4.89 | 5.06 | 4.96 | 5.12 | 4.9 | 4.78 | 4.41 | 4.79 | 4.96 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.02 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0182 | --- | --- | --- | 0.0194 | --- | --- | --- | 0.0186 |
| Barium | mg/L | --- | 0.00103 | --- | --- | --- | 0.00104 | --- | --- | --- | 0.00083 |
| Boron | mg/L | --- | 0.0018 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0011 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000112 | --- | --- | --- | 0.000132 | --- | --- | --- | 0.000146 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | 0.0043 |
| Iron | mg/L | --- | 0.005 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.356 | --- | --- | --- | 0.233 | --- | --- | --- | 0.181 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.463 | --- | --- | --- | 0.388 | --- | --- | --- | 0.341 |
| Manganese | mg/L | --- | 0.0183 | --- | --- | --- | 0.0159 | --- | --- | --- | 0.0129 |
| Molybdenum | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | 0.00001 |
| Sodium | mg/L | --- | 0.15 | --- | --- | --- | 0.07 | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | 0.0003 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00003 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0017 | --- | --- | --- | 0.0013 | --- | --- | --- | 0.0011 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00023 | --- | --- | --- | 0.00016 | --- | --- | --- | 0.00016 |
| Strontium | mg/L | --- | 0.0084 | --- | --- | --- | 0.0077 | --- | --- | --- | 0.0073 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000159 | --- | --- | --- | 0.000325 | --- | --- | --- | 0.000138 |
| Vanadium | mg/L | --- | 0.00099 | --- | --- | --- | 0.00088 | --- | --- | --- | 0.00078 |
| Tungsten | mg/L | --- | 0.00008 | --- | --- | --- | 0.00005 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000006 | --- | --- | --- | 0.000004 | --- | --- | --- | 0.000004 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | 0.002 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M98-238-02
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11017-DEC11 | CA11020-DEC11 | CA11097-DEC11 | CA10316-DEC11 | CA10056-JAN12 | CA10063-JAN12 | CA11013-JAN12 | CA10202-JAN12 | CA10033-FEB12 | CA10041-FEB12 | CA10149-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 842 | 984 | 995 | 988 | 992 | 1001 | 980 | 991 | 996 | 986 | 986 |
| pH | no unit | 7.88 | 7.69 | 7.83 | 7.62 | 7.45 | 7.34 | 7.32 | 7.36 | 7.27 | 7.24 | 7.21 |
| Alkalinity | mg/L as CaCO3 | 15 | 21 | 16 | 14 | 12 | 13 | 11 | 12 | 11 | 11 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 48 | 6 | 39 | 34 | 25 | 33 | 30 | 26 | 32 | 30 | 26 |
| Sulphate | mg/L | 4.2 | 4.1 | 2.6 | 2.2 | 2 | 2.9 | 3 | 3.3 | 3 | 2.8 | 2.4 |
| Calcium | mg/L | 6.22 | 5.48 | 4.7 | 4.64 | 4.34 | 4.51 | 4.21 | 4.67 | 4.55 | 4.66 | 4.28 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 0.60 | 0.4 | < 0.2 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.06 | 0.02 | 0.05 | 0.04 | --- | 0.04 | --- | --- | 0.04 | --- | --- |
| Arsenic | mg/L | 0.003 | 0.0047 | 0.0048 | 0.0044 | --- | 0.0043 | --- | --- | 0.0047 | --- | --- |
| Barium | mg/L | 0.00155 | 0.00166 | 0.00151 | 0.00138 | --- | 0.00149 | --- | --- | 0.00144 | --- | --- |
| Boron | mg/L | 0.0096 | 0.027 | 0.0159 | 0.0118 | --- | 0.0065 | --- | --- | 0.0036 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000015 | < 0.000003 | < 0.000003 | 0.000008 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000049 | 0.000043 | 0.000031 | 0.00003 | --- | 0.000039 | --- | --- | 0.000002 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.001 | 0.0007 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.017 | 0.004 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.26 | 1.55 | 1.16 | 1.02 | --- | 0.793 | --- | --- | 0.749 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.458 | 0.755 | 0.675 | 0.674 | --- | 0.584 | --- | --- | 0.528 | --- | --- |
| Manganese | mg/L | 0.0327 | 0.018 | 0.0141 | 0.0101 | --- | 0.00804 | --- | --- | 0.00449 | --- | --- |
| Molybdenum | mg/L | 0.00048 | 0.00084 | 0.00041 | 0.00022 | --- | 0.00013 | --- | --- | 0.00007 | --- | --- |
| Sodium | mg/L | 2.35 | 2.51 | 1.28 | 0.82 | --- | 0.39 | --- | --- | 0.22 | --- | --- |
| Nickel | mg/L | 0.0004 | 0.0002 | 0.0003 | 0.0002 | --- | 0.0003 | --- | --- | 0.0001 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0006 | 0.0012 | 0.001 | 0.0009 | --- | 0.0008 | --- | --- | 0.0007 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00256 | 0.00123 | 0.00063 | 0.00046 | --- | 0.00036 | --- | --- | 0.00018 | --- | --- |
| Strontium | mg/L | 0.0186 | 0.0197 | 0.0177 | 0.0175 | --- | 0.0165 | --- | --- | 0.0163 | --- | --- |
| Thorium | mg/L | 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0013 | 0.0003 | 0.0004 | 0.0002 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000021 | 0.000248 | 0.000224 | 0.000257 | --- | 0.00034 | --- | --- | 0.000389 | --- | --- |
| Vanadium | mg/L | 0.00085 | 0.00092 | 0.00082 | 0.00077 | --- | 0.00066 | --- | --- | 0.00074 | --- | --- |
| Tungsten | mg/L | 0.00009 | 0.00023 | 0.00014 | 0.0001 | --- | 0.00005 | --- | --- | < 0.00003 | --- | --- |
| Yttrium | mg/L | 0.00002 | 0.000012 | 0.00001 | 0.000006 | --- | 0.000002 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M98-238-02
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10207-FEB12 | CA10004-MAR12 | CA10061-MAR12 | CA10116-MAR12 | CA10168-MAR12 | CA10222-MAR12 | CA10048-APR12 | CA10098-APR12 | CA10104-APR12 | CA10198-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 990 | 983 | 989 | 990 | 994 | 994 | 989 | 990 | 992 | 991 |
| pH | no unit | 7.12 | 7.11 | 7.33 | 7.06 | 7.26 | 7.23 | 6.80 | 7.30 | 6.62 | 7.25 |
| Alkalinity | mg/L as CaCO3 | 10 | 9 | 10 | 11 | 10 | 9 | 14 | 9 | 14 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | <2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 28 | 27 | 26 | 26 | 20 | 27 | 25 | 20 | 26 | 20 |
| Sulphate | mg/L | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2 | 1.9 | 2.1 | 2 |
| Calcium | mg/L | 4.08 | 4.08 | 4.3 | 4.04 | 4.25 | 4.13 | 4.18 | 3.87 | 4.06 | 4.11 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.04 | --- | --- | --- | 0.02 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0036 | --- | --- | --- | 0.0042 | --- | --- | --- | 0.0037 |
| Barium | mg/L | --- | 0.00134 | --- | --- | --- | 0.00136 | --- | --- | --- | 0.00126 |
| Boron | mg/L | --- | 0.0018 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.0009 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000026 | --- | --- | --- | 0.000033 | --- | --- | --- | 0.00003 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.562 | --- | --- | --- | 0.45 | --- | --- | --- | 0.393 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.363 | --- | --- | --- | 0.294 | --- | --- | --- | 0.245 |
| Manganese | mg/L | --- | 0.00376 | --- | --- | --- | 0.0041 | --- | --- | --- | 0.00421 |
| Molybdenum | mg/L | --- | 0.00007 | --- | --- | --- | 0.00008 | --- | --- | --- | 0.00009 |
| Sodium | mg/L | --- | 0.12 | --- | --- | --- | 0.09 | --- | --- | --- | 0.08 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0006 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0004 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00018 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.00011 |
| Strontium | mg/L | --- | 0.0141 | --- | --- | --- | 0.0138 | --- | --- | --- | 0.0133 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000362 | --- | --- | --- | 0.000354 | --- | --- | --- | 0.000305 |
| Vanadium | mg/L | --- | 0.0006 | --- | --- | --- | 0.00058 | --- | --- | --- | 0.00054 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-968-02
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11017-DEC11 | CA11020-DEC11 | CA11097-DEC11 | CA10316-DEC11 | CA10056-JAN12 | CA10063-JAN12 | CA11013-JAN12 | CA10202-JAN12 | CA10033-FEB12 | CA10041-FEB12 | CA10149-FEB12 |
| | Unit | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 832 | 954 | 993 | 1001 | 976 | 1000 | 989 | 987 | 989 | 989 | 987 |
| pH | no unit | 7.63 | 7.50 | 7.39 | 7.40 | 7.36 | 7.36 | 7.21 | 7.28 | 7.21 | 7.26 | 6.95 |
| Alkalinity | mg/L as CaCO3 | 13 | 14 | 14 | 14 | 11 | 12 | 10 | 10 | 10 | 11 | 8 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 44 | 39 | 43 | 38 | 25 | 33 | 28 | 30 | 27 | 28 | 27 |
| Sulphate | mg/L | 3 | 3.4 | 4 | 3.8 | 2.9 | 2.8 | 2.5 | 2.4 | 2.2 | 2.4 | 2.1 |
| Calcium | mg/L | 3.34 | 2.64 | 3.1 | 3.3 | 2.95 | 3.55 | 3.05 | 3.23 | 3.1 | 3.52 | 3.33 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 3.70 | 2.2 | 1.4 | 0.8 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.05 | 0.03 | 0.04 | 0.03 | --- | 0.03 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.006 | 0.0194 | 0.0244 | 0.0313 | --- | 0.0348 | --- | --- | 0.04 | --- | --- |
| Barium | mg/L | 0.00054 | 0.0006 | 0.0007 | 0.00068 | --- | 0.00076 | --- | --- | 0.00054 | --- | --- |
| Boron | mg/L | 0.0749 | 0.132 | 0.0915 | 0.0739 | --- | 0.0364 | --- | --- | 0.0178 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000012 | 0.000007 | < 0.000003 | 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000048 | 0.000075 | 0.000129 | 0.00017 | --- | 0.000251 | --- | --- | 0.000419 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.006 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 2.5 | 2.72 | 2.24 | 1.82 | --- | 1.19 | --- | --- | 0.705 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.377 | 0.599 | 0.773 | 0.835 | --- | 0.848 | --- | --- | 0.76 | --- | --- |
| Manganese | mg/L | 0.0152 | 0.00823 | 0.00994 | 0.00927 | --- | 0.0119 | --- | --- | 0.0103 | --- | --- |
| Molybdenum | mg/L | 0.00092 | 0.00151 | 0.00115 | 0.0008 | --- | 0.00036 | --- | --- | 0.00018 | --- | --- |
| Sodium | mg/L | 4.7 | 4.27 | 2.74 | 1.86 | --- | 0.82 | --- | --- | 0.32 | --- | --- |
| Nickel | mg/L | 0.0004 | 0.0003 | 0.0004 | 0.0005 | --- | 0.0005 | --- | --- | 0.0004 | --- | --- |
| Lead | mg/L | 0.00002 | 0.00003 | < 0.00002 | < 0.00002 | --- | 0.00012 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0012 | 0.0028 | 0.0028 | 0.0027 | --- | 0.0023 | --- | --- | 0.0018 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00208 | 0.00104 | 0.0006 | 0.00035 | --- | 0.00041 | --- | --- | 0.00016 | --- | --- |
| Strontium | mg/L | 0.0141 | 0.0149 | 0.0183 | 0.0188 | --- | 0.0186 | --- | --- | 0.0156 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | 0.000006 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0001 | 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | 0.0003 | --- | --- |
| Uranium | mg/L | 0.000013 | 0.000031 | 0.000052 | 0.000078 | --- | 0.000096 | --- | --- | 0.000153 | --- | --- |
| Vanadium | mg/L | 0.00018 | 0.00029 | 0.00017 | 0.00014 | --- | 0.00014 | --- | --- | 0.00017 | --- | --- |
| Tungsten | mg/L | 0.0001 | 0.00043 | 0.00032 | 0.00026 | --- | 0.00013 | --- | --- | 0.00008 | --- | --- |
| Yttrium | mg/L | 0.000019 | 0.000007 | 0.000005 | 0.000004 | --- | 0.000003 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.002 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-968-02
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10207-FEB12 | CA10004-MAR12 | CA10061-MAR12 | CA10116-MAR12 | CA10168-MAR12 | CA10222-MAR12 | CA10048-APR12 | CA10098-APR12 | CA10104-APR12 | CA10198-APR12 |
| | Unit | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 986 | 979 | 988 | 986 | 995 | 992 | 989 | 994 | 991 | 991 |
| pH | no unit | 7.11 | 7.04 | 7.16 | 7.03 | 7.19 | 7.20 | 6.63 | 7.10 | 6.49 | 7.13 |
| Alkalinity | mg/L as CaCO3 | 9 | 9 | 9 | 11 | 9 | 9 | 11 | 8 | 11 | 8 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 25 | 20 | 20 | 25 | 25 | 19 | 24 | 18 | 24 | 23 |
| Sulphate | mg/L | 2 | 2 | 2 | 2 | 2.1 | 2 | 2.1 | 2 | 2.2 | 2.3 |
| Calcium | mg/L | 3.03 | 3.01 | 3.3 | 3.22 | 3.25 | 3.2 | 3.33 | 3.06 | 3.09 | 3.19 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.02 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0403 | --- | --- | --- | 0.0459 | --- | --- | --- | 0.0384 |
| Barium | mg/L | --- | 0.00049 | --- | --- | --- | 0.00042 | --- | --- | --- | 0.00043 |
| Boron | mg/L | --- | 0.0083 | --- | --- | --- | 0.0045 | --- | --- | --- | 0.0041 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.00052 | --- | --- | --- | 0.000623 | --- | --- | --- | 0.000816 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | 0.0008 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.42 | --- | --- | --- | 0.285 | --- | --- | --- | 0.204 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.694 | --- | --- | --- | 0.71 | --- | --- | --- | 0.671 |
| Manganese | mg/L | --- | 0.0114 | --- | --- | --- | 0.013 | --- | --- | --- | 0.0165 |
| Molybdenum | mg/L | --- | 0.00014 | --- | --- | --- | 0.00012 | --- | --- | --- | 0.0001 |
| Sodium | mg/L | --- | 0.14 | --- | --- | --- | 0.09 | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | 0.0003 | --- | --- | --- | 0.0004 | --- | --- | --- | 0.0003 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | 0.0001 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0016 | --- | --- | --- | 0.0014 | --- | --- | --- | 0.0012 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00017 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.00012 |
| Strontium | mg/L | --- | 0.0144 | --- | --- | --- | 0.0147 | --- | --- | --- | 0.0141 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000158 | --- | --- | --- | 0.000192 | --- | --- | --- | 0.000205 |
| Vanadium | mg/L | --- | 0.00016 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.00014 |
| Tungsten | mg/L | --- | 0.00007 | --- | --- | --- | 0.00005 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-970-01
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11017-DEC11 | CA11020-DEC11 | CA11097-DEC11 | CA10316-DEC11 | CA10056-JAN12 | CA10063-JAN12 | CA11013-JAN12 | CA10202-JAN12 | CA10033-FEB12 | CA10041-FEB12 | CA10149-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 851 | 980 | 990 | 989 | 992 | 994 | 975 | 1001 | 994 | 972 | 987 |
| pH | no unit | 8.54 | 7.95 | 8.58 | 7.40 | 8.08 | 8.04 | 7.91 | 7.70 | 7.69 | 7.63 | 7.55 |
| Alkalinity | mg/L as CaCO3 | 21 | 21 | 21 | 12 | 21 | 20 | 17 | 18 | 16 | 16 | 17 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 69 | 8 | 49 | 35 | 34 | 34 | 5 | 32 | 39 | 38 | 37 |
| Sulphate | mg/L | 4.8 | 3.8 | 2.8 | 2.3 | 1.8 | 1.8 | 1.6 | 1.6 | 1.6 | 1.7 | 1.6 |
| Calcium | mg/L | 8.97 | 7.86 | 6.4 | 7.01 | 6.71 | 6.68 | 5.95 | 6.47 | 6.2 | 6.31 | 6.85 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 9.80 | 4.9 | 1.8 | 0.7 | --- | 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.02 | 0.03 | 0.04 | 0.03 | --- | 0.04 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0012 | 0.0015 | 0.0016 | 0.0011 | --- | 0.0012 | --- | --- | 0.0012 | --- | --- |
| Barium | mg/L | 0.00208 | 0.00294 | 0.00248 | 0.00271 | --- | 0.00283 | --- | --- | 0.00266 | --- | --- |
| Boron | mg/L | 0.0825 | 0.122 | 0.0644 | 0.0425 | --- | 0.0214 | --- | --- | 0.0108 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000007 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000041 | 0.00003 | 0.00003 | 0.000027 | --- | 0.00003 | --- | --- | < 0.000002 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.003 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.43 | 1.56 | 1.12 | 1.02 | --- | 0.89 | --- | --- | 0.8 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.807 | 0.799 | 0.591 | 0.588 | --- | 0.509 | --- | --- | 0.444 | --- | --- |
| Manganese | mg/L | 0.00385 | 0.00629 | 0.00632 | 0.0071 | --- | 0.00751 | --- | --- | 0.00694 | --- | --- |
| Molybdenum | mg/L | 0.00039 | 0.00061 | 0.00039 | 0.00023 | --- | 0.00019 | --- | --- | 0.00009 | --- | --- |
| Sodium | mg/L | 4.18 | 2.73 | 1.1 | 0.62 | --- | 0.24 | --- | --- | 0.1 | --- | --- |
| Nickel | mg/L | 0.0004 | 0.0001 | 0.0001 | 0.0003 | --- | 0.0003 | --- | --- | 0.0001 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.017 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0003 | 0.0004 | 0.0003 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00157 | 0.00129 | 0.00067 | 0.00042 | --- | 0.00031 | --- | --- | 0.00016 | --- | --- |
| Strontium | mg/L | 0.0577 | 0.0598 | 0.0473 | 0.0486 | --- | 0.0453 | --- | --- | 0.0406 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000245 | 0.000706 | 0.000752 | 0.000888 | --- | 0.000933 | --- | --- | 0.000837 | --- | --- |
| Vanadium | mg/L | 0.00009 | 0.00011 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | 0.00007 | 0.00016 | 0.00012 | 0.00008 | --- | 0.00004 | --- | --- | 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000003 | 0.000003 | 0.000003 | 0.000004 | --- | 0.000003 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-970-01
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10207-FEB12 | CA10004-MAR12 | CA10061-MAR12 | CA10116-MAR12 | CA10168-MAR12 | CA10222-MAR12 | CA10048-APR12 | CA10098-APR12 | CA10104-APR12 | CA10198-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 999 | 986 | 988 | 990 | 993 | 988 | 988 | 1000 | 991 | 990 |
| pH | no unit | 7.54 | 7.48 | 7.38 | 7.28 | 7.45 | 7.52 | 6.82 | 7.42 | 6.69 | 7.46 |
| Alkalinity | mg/L as CaCO3 | 16 | 16 | 15 | 17 | 16 | 15 | 24 | 15 | 25 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 40 | 30 | 30 | 36 | 38 | 38 | 35 | 46 | 36 | 28 |
| Sulphate | mg/L | 1.6 | 1.8 | 1.8 | 1.8 | 2 | 1.8 | 1.7 | 1.6 | 1.8 | 1.9 |
| Calcium | mg/L | 6.5 | 6.17 | 6.42 | 6.31 | 6.33 | 6.18 | 6.36 | 6.03 | 5.84 | 6.09 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.03 | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | 0.0011 | --- | --- | --- | 0.0011 | --- | --- | --- | 0.0009 |
| Barium | mg/L | --- | 0.00271 | --- | --- | --- | 0.00255 | --- | --- | --- | 0.00222 |
| Boron | mg/L | --- | 0.0062 | --- | --- | --- | 0.0037 | --- | --- | --- | 0.0033 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000016 | --- | --- | --- | 0.000016 | --- | --- | --- | 0.00002 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.711 | --- | --- | --- | 0.602 | --- | --- | --- | 0.503 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.427 | --- | --- | --- | 0.427 | --- | --- | --- | 0.396 |
| Manganese | mg/L | --- | 0.00687 | --- | --- | --- | 0.0063 | --- | --- | --- | 0.00627 |
| Molybdenum | mg/L | --- | 0.00007 | --- | --- | --- | 0.00008 | --- | --- | --- | 0.00006 |
| Sodium | mg/L | --- | 0.05 | --- | --- | --- | 0.03 | --- | --- | --- | 0.02 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | 0.00014 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00019 | --- | --- | --- | 0.00017 | --- | --- | --- | 0.00017 |
| Strontium | mg/L | --- | 0.0398 | --- | --- | --- | 0.0389 | --- | --- | --- | 0.0365 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000837 | --- | --- | --- | 0.000714 | --- | --- | --- | 0.000582 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000002 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | 0.002 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-972A-03
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11017-DEC11 | CA11020-DEC11 | CA11097-DEC11 | CA10316-DEC11 | CA10056-JAN12 | CA10063-JAN12 | CA11013-JAN12 | CA10202-JAN12 | CA10033-FEB12 | CA10041-FEB12 | CA10149-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 828 | 986 | 1001 | 991 | 986 | 986 | 990 | 986 | 978 | 991 | 995 |
| pH | no unit | 8.03 | 7.75 | 7.81 | 7.93 | 7.69 | 7.98 | 7.42 | 7.57 | 7.33 | 7.38 | 7.20 |
| Alkalinity | mg/L as CaCO3 | 14 | 20 | 17 | 25 | 15 | 14 | 13 | 13 | 12 | 13 | 12 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 39 | 51 | 46 | 63 | 26 | 34 | 30 | 33 | 29 | 30 | 29 |
| Sulphate | mg/L | 2 | 3.2 | 2.4 | 2 | 1.4 | 1.3 | 1.2 | 1.1 | 1.1 | 1.2 | 1.1 |
| Calcium | mg/L | 5.89 | 7.63 | 6.5 | 6.18 | 5.42 | 5.4 | 4.82 | 4.86 | 4.71 | 5.26 | 5.08 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 3.60 | 4.9 | 1.9 | 0.7 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.01 | < 0.01 | 0.02 | 0.02 | --- | 0.02 | --- | --- | 0.02 | --- | --- |
| Arsenic | mg/L | 0.0005 | 0.0007 | 0.0008 | 0.0006 | --- | 0.0007 | --- | --- | 0.0007 | --- | --- |
| Barium | mg/L | 0.00084 | 0.00163 | 0.00125 | 0.00103 | --- | 0.00098 | --- | --- | 0.00085 | --- | --- |
| Boron | mg/L | 0.0365 | 0.097 | 0.0578 | 0.0385 | --- | 0.0171 | --- | --- | 0.0081 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000054 | 0.000097 | 0.000053 | 0.000042 | --- | 0.000039 | --- | --- | 0.000009 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.006 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 0.787 | 1.14 | 0.723 | 0.501 | --- | 0.34 | --- | --- | 0.281 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.396 | 0.893 | 0.674 | 0.545 | --- | 0.421 | --- | --- | 0.36 | --- | --- |
| Manganese | mg/L | 0.0108 | 0.0147 | 0.0144 | 0.0137 | --- | 0.0119 | --- | --- | 0.00885 | --- | --- |
| Molybdenum | mg/L | 0.00044 | 0.00098 | 0.00061 | 0.00038 | --- | 0.00022 | --- | --- | 0.00011 | --- | --- |
| Sodium | mg/L | 1.93 | 2.68 | 1.13 | 0.59 | --- | 0.21 | --- | --- | 0.09 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0006 | 0.0001 | 0.0003 | --- | 0.0003 | --- | --- | 0.0001 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0003 | 0.0004 | 0.0003 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00076 | 0.0006 | 0.00057 | 0.00048 | --- | 0.00032 | --- | --- | 0.00024 | --- | --- |
| Strontium | mg/L | 0.029 | 0.0481 | 0.0414 | 0.0365 | --- | 0.0322 | --- | --- | 0.0287 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000017 | 0.000222 | 0.000232 | 0.00022 | --- | 0.000209 | --- | --- | 0.000205 | --- | --- |
| Vanadium | mg/L | 0.00004 | 0.00012 | 0.00004 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | 0.00004 | 0.00014 | 0.00012 | 0.00013 | --- | 0.00006 | --- | --- | 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000004 | 0.000011 | 0.000003 | 0.000003 | --- | 0.000002 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-972A-03
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10207-FEB12 | CA10004-MAR12 | CA10061-MAR12 | CA10116-MAR12 | CA10168-MAR12 | CA10222-MAR12 | CA10048-APR12 | CA10098-APR12 | CA10104-APR12 | CA10198-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 987 | 989 | 989 | 989 | 984 | 994 | 992 | 998 | 992 | 990 |
| pH | no unit | 7.33 | 7.21 | 7.53 | 7.13 | 7.37 | 7.40 | 6.78 | 7.24 | 7.33 | 7.31 |
| Alkalinity | mg/L as CaCO3 | 12 | 12 | 12 | 13 | 12 | 11 | 13 | 11 | 18 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 28 | 24 | 22 | 28 | 22 | 21 | 28 | 21 | 27 | 22 |
| Sulphate | mg/L | 1.1 | 1.2 | 1.1 | 1.2 | 1.3 | 1.1 | 1.1 | 1.1 | 1.2 | 1.4 |
| Calcium | mg/L | 4.74 | 4.84 | 4.89 | 4.76 | 4.94 | 4.75 | 4.81 | 4.54 | 4.41 | 4.78 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.02 | --- | --- | --- | 0.02 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0006 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0006 |
| Barium | mg/L | --- | 0.00085 | --- | --- | --- | 0.00081 | --- | --- | --- | 0.00083 |
| Boron | mg/L | --- | 0.0044 | --- | --- | --- | 0.0024 | --- | --- | --- | 0.0026 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000029 | --- | --- | --- | 0.000026 | --- | --- | --- | 0.000028 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.252 | --- | --- | --- | 0.202 | --- | --- | --- | 0.191 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.337 | --- | --- | --- | 0.302 | --- | --- | --- | 0.29 |
| Manganese | mg/L | --- | 0.00823 | --- | --- | --- | 0.0074 | --- | --- | --- | 0.00698 |
| Molybdenum | mg/L | --- | 0.0001 | --- | --- | --- | 0.00009 | --- | --- | --- | 0.00008 |
| Sodium | mg/L | --- | 0.04 | --- | --- | --- | 0.02 | --- | --- | --- | 0.02 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | < 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00035 | --- | --- | --- | 0.00025 | --- | --- | --- | 0.00021 |
| Strontium | mg/L | --- | 0.0295 | --- | --- | --- | 0.0282 | --- | --- | --- | 0.0276 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000206 | --- | --- | --- | 0.000178 | --- | --- | --- | 0.000177 |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | 0.00005 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-976-02
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11017-DEC11 | CA11020-DEC11 | CA11097-DEC11 | CA10316-DEC11 | CA10056-JAN12 | CA10063-JAN12 | CA11013-JAN12 | CA10202-JAN12 | CA10033-FEB12 | CA10041-FEB12 | CA10149-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 827 | 984 | 990 | 993 | 977 | 988 | 992 | 978 | 1000 | 987 | 977 |
| pH | no unit | 7.80 | 7.58 | 7.51 | 7.37 | 7.41 | 7.34 | 7.36 | 7.29 | 7.23 | 7.29 | 7.31 |
| Alkalinity | mg/L as CaCO3 | 14 | 20 | 16 | 16 | 12 | 12 | 11 | 11 | 14 | 10 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 81 | 7 | 41 | 71 | 24 | 29 | 28 | 21 | 26 | 25 | 25 |
| Sulphate | mg/L | 4.7 | 2.4 | 1.7 | 1.4 | 1 | 0.9 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 |
| Calcium | mg/L | 2.65 | 3.13 | 3.1 | 3.28 | 3.31 | 3.53 | 3.36 | 3.42 | 3.61 | 3.75 | 3.59 |
| Fluoride | mg/L | 0.07 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 9.80 | 3.5 | 1.3 | 0.5 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.08 | 0.02 | 0.02 | 0.03 | --- | 0.03 | --- | --- | 0.04 | --- | --- |
| Arsenic | mg/L | 0.0154 | 0.0302 | 0.0332 | 0.0376 | --- | 0.0431 | --- | --- | 0.0538 | --- | --- |
| Barium | mg/L | 0.0006 | 0.00072 | 0.00069 | 0.00062 | --- | 0.00063 | --- | --- | 0.00054 | --- | --- |
| Boron | mg/L | 0.0088 | 0.0218 | 0.0133 | 0.0097 | --- | 0.0057 | --- | --- | 0.0031 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000007 | < 0.000003 | < 0.000003 | 0.000004 | --- | 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000326 | 0.000286 | 0.000185 | 0.000172 | --- | 0.000197 | --- | --- | 0.000228 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.012 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 4.09 | 3.72 | 2.65 | 1.95 | --- | 1.12 | --- | --- | 0.658 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.303 | 0.539 | 0.589 | 0.627 | --- | 0.613 | --- | --- | 0.557 | --- | --- |
| Manganese | mg/L | 0.0063 | 0.00777 | 0.00712 | 0.00634 | --- | 0.00764 | --- | --- | 0.00841 | --- | --- |
| Molybdenum | mg/L | 0.00122 | 0.00132 | 0.00077 | 0.00045 | --- | 0.00025 | --- | --- | 0.00013 | --- | --- |
| Sodium | mg/L | 8.9 | 5.43 | 2.6 | 1.4 | --- | 0.47 | --- | --- | 0.18 | --- | --- |
| Nickel | mg/L | 0.0024 | 0.0019 | 0.0011 | 0.0008 | --- | 0.0006 | --- | --- | 0.0004 | --- | --- |
| Lead | mg/L | 0.00024 | 0.00009 | 0.00003 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0023 | 0.0074 | 0.0063 | 0.0057 | --- | 0.0049 | --- | --- | 0.0037 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00104 | 0.00102 | 0.00056 | 0.00035 | --- | 0.0003 | --- | --- | 0.00015 | --- | --- |
| Strontium | mg/L | 0.0113 | 0.0156 | 0.0162 | 0.0161 | --- | 0.0158 | --- | --- | 0.0150 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0005 | < 0.0001 | 0.0002 | 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000004 | 0.00003 | 0.000031 | 0.000046 | --- | 0.000088 | --- | --- | 0.000156 | --- | --- |
| Vanadium | mg/L | 0.00029 | 0.00026 | 0.00019 | 0.00017 | --- | 0.00017 | --- | --- | 0.00021 | --- | --- |
| Tungsten | mg/L | 0.00008 | 0.00028 | 0.0002 | 0.00018 | --- | 0.00008 | --- | --- | 0.00004 | --- | --- |
| Yttrium | mg/L | 0.000037 | 0.000011 | 0.000014 | 0.000004 | --- | 0.000001 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** M10-976-02

**Weight:** 1 kg

** result not available due to instrument malfunction
*reported from ICP-OES

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10207-FEB12 | CA10004-MAR12 | CA10061-MAR12 | CA10116-MAR12 | CA10168-MAR12 | CA10222-MAR12 | CA10048-APR12 | CA10098-APR12 | CA10104-APR12 | CA10198-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 995 | 985 | 987 | 989 | 989 | 988 | 981 | 988 | 966 | 984 |
| pH | no unit | 7.09 | 7.10 | 7.33 | 7.07 | 7.23 | 7.28 | 6.64 | 7.11 | 7.18 | 7.09 |
| Alkalinity | mg/L as CaCO3 | 10 | 10 | 10 | 11 | 9 | 9 | 14 | 9 | 17 | 7 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 25 | 29 | 22 | 22 | 24 | 33 | 23 | 16 | 21 | 19 |
| Sulphate | mg/L | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 |
| Calcium | mg/L | 3.55 | 3.35 | 3.52 | 3.38 | 3.43 | 3.38 | 3.5 | 3.29 | 3.15 | 2.99 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.02 | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | 0.0550 | --- | --- | --- | 0.0593 | --- | --- | --- | 0.0394 |
| Barium | mg/L | --- | 0.00053 | --- | --- | --- | 0.00034 | --- | --- | --- | 0.00029 |
| Boron | mg/L | --- | 0.0016 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.0013 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | ** | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000352 | --- | --- | --- | 0.000401 | --- | --- | --- | 0.000502 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | <0.002* | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.376 | --- | --- | --- | 0.244 | --- | --- | --- | 0.166 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.476 | --- | --- | --- | 0.446 | --- | --- | --- | 0.38 |
| Manganese | mg/L | --- | 0.00893 | --- | --- | --- | 0.0096 | --- | --- | --- | 0.00978 |
| Molybdenum | mg/L | --- | 0.00010 | --- | --- | --- | 0.00009 | --- | --- | --- | 0.00007 |
| Sodium | mg/L | --- | 0.08 | --- | --- | --- | 0.05 | --- | --- | --- | 0.04 |
| Nickel | mg/L | --- | ** | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | ** | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0032 | --- | --- | --- | 0.0028 | --- | --- | --- | 0.0021 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | ** | --- | --- | --- | 0.00018 | --- | --- | --- | 0.00014 |
| Strontium | mg/L | --- | 0.0136 | --- | --- | --- | 0.0132 | --- | --- | --- | 0.0114 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.00022 | --- | --- | --- | 0.000234 | --- | --- | --- | 0.000258 |
| Vanadium | mg/L | --- | 0.00021 | --- | --- | --- | 0.00018 | --- | --- | --- | 0.00014 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | <0.002* | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-993-02
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11017-DEC11 | CA11020-DEC11 | CA11097-DEC11 | CA10316-DEC11 | CA10056-JAN12 | CA10063-JAN12 | CA11013-JAN12 | CA10202-JAN12 | CA10033-FEB12 | CA10041-FEB12 | CA10149-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 820 | 976 | 990 | 988 | 986 | 973 | 986 | 985 | 991 | 990 | 988 |
| pH | no unit | 8.11 | 7.72 | 7.58 | 7.61 | 7.43 | 7.32 | 7.23 | 7.34 | 7.23 | 7.20 | 7.19 |
| Alkalinity | mg/L as CaCO3 | 15 | 17 | 15 | 16 | 12 | 12 | 11 | 11 | 10 | 10 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 40 | 39 | 41 | 40 | 23 | 29 | 28 | 22 | 26 | 24 | 24 |
| Sulphate | mg/L | 3.4 | 2.6 | 3 | 2.6 | 1.9 | 1.7 | 1.6 | 1.5 | 1.3 | 1.2 | 1.2 |
| Calcium | mg/L | 3.05 | 3.53 | 3.3 | 3.58 | 3.13 | 3.1 | 3.23 | 3.24 | 3.15 | 3.07 | 3.11 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 2.50 | 1.2 | 0.9 | 0.5 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | 0.00013 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.06 | 0.02 | < 0.01 | 0.03 | --- | 0.02 | --- | --- | 0.02 | --- | --- |
| Arsenic | mg/L | 0.0108 | 0.0195 | 0.0207 | 0.0234 | --- | 0.025 | --- | --- | 0.0308 | --- | --- |
| Barium | mg/L | 0.00049 | 0.00066 | 0.0008 | 0.00072 | --- | 0.00063 | --- | --- | 0.00057 | --- | --- |
| Boron | mg/L | 0.0059 | 0.0153 | 0.0114 | 0.0096 | --- | 0.0057 | --- | --- | 0.0034 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000015 | < 0.000003 | 0.000004 | 0.000006 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000157 | 0.000135 | 0.000128 | 0.000535 | --- | 0.000164 | --- | --- | 0.000196 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.005 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 2.41 | 2.52 | 2.23 | 1.79 | --- | 1.1 | --- | --- | 0.756 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.233 | 0.509 | 0.649 | 0.678 | --- | 0.624 | --- | --- | 0.648 | --- | --- |
| Manganese | mg/L | 0.0138 | 0.0199 | 0.0171 | 0.018 | --- | 0.0156 | --- | --- | 0.0145 | --- | --- |
| Molybdenum | mg/L | 0.00133 | 0.002 | 0.00176 | 0.00131 | --- | 0.00067 | --- | --- | 0.0004 | --- | --- |
| Sodium | mg/L | 4.62 | 3.8 | 2.68 | 1.85 | --- | 0.81 | --- | --- | 0.35 | --- | --- |
| Nickel | mg/L | 0.0014 | 0.001 | 0.0009 | 0.0033 | --- | 0.0005 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | 0.0001 | 0.00004 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0009 | 0.0016 | 0.0015 | 0.0012 | --- | 0.0011 | --- | --- | 0.0009 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00179 | 0.00087 | 0.00051 | 0.00034 | --- | 0.00029 | --- | --- | 0.00014 | --- | --- |
| Strontium | mg/L | 0.0121 | 0.0174 | 0.0191 | 0.0191 | --- | 0.0158 | --- | --- | 0.015 | --- | --- |
| Thorium | mg/L | 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0002 | < 0.0001 | 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000012 | 0.000053 | 0.000109 | 0.000125 | --- | 0.000159 | --- | --- | 0.000242 | --- | --- |
| Vanadium | mg/L | 0.00035 | 0.00029 | 0.00022 | 0.0002 | --- | 0.00022 | --- | --- | 0.00022 | --- | --- |
| Tungsten | mg/L | 0.00007 | 0.00026 | 0.0002 | 0.00019 | --- | 0.00008 | --- | --- | 0.00004 | --- | --- |
| Yttrium | mg/L | 0.000022 | 0.000008 | 0.000004 | 0.000004 | --- | 0.000003 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | 0.025 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Wolf

**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** M10-993-02
**Weight:** 1 kg

Alk reassay done

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10207-FEB12 | CA10004-MAR12 | CA10061-MAR12 | CA10116-MAR12 | CA10168-MAR12 | CA10222-MAR12 | CA10048-APR12 | CA10098-APR12 | CA10104-APR12 | CA10198-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 988 | 989 | 987 | 989 | 988 | 987 | 989 | 988 | 989 | 988 |
| pH | no unit | 7.08 | 7.06 | 7.20 | 7.03 | 7.21 | 7.21 | 6.62 | 7.13 | 6.49 | 7.20 |
| Alkalinity | mg/L as CaCO3 | 10 | 9 | 9 | 11 | 9 | 9 | 16 | 8 | 12 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 23 | 18 | 22 | 21 | 17 | 24 | 22 | 22 | 21 | 17 |
| Sulphate | mg/L | 1.1 | 1.1 | 1.1 | 1 | 1.1 | 1 | 1 | 1 | 0.9 | 1.1 |
| Calcium | mg/L | 2.88 | 2.89 | 3.05 | 2.99 | 3.04 | 3.03 | 3.21 | 3.05 | 2.99 | 3.06 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.02 | --- | --- | --- | 0.02 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | 0.0302 | --- | --- | --- | 0.0351 | --- | --- | --- | 0.0282 |
| Barium | mg/L | --- | 0.00047 | --- | --- | --- | 0.00039 | --- | --- | --- | 0.00038 |
| Boron | mg/L | --- | 0.0017 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0016 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000335 | --- | --- | --- | 0.000363 | --- | --- | --- | 0.000396 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 0.432 | --- | --- | --- | 0.285 | --- | --- | --- | 0.204 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.572 | --- | --- | --- | 0.57 | --- | --- | --- | 0.518 |
| Manganese | mg/L | --- | 0.0139 | --- | --- | --- | 0.0145 | --- | --- | --- | 0.0163 |
| Molybdenum | mg/L | --- | 0.00022 | --- | --- | --- | 0.00016 | --- | --- | --- | 0.00012 |
| Sodium | mg/L | --- | 0.14 | --- | --- | --- | 0.09 | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | 0.00061 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0007 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0005 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00022 | --- | --- | --- | 0.00015 | --- | --- | --- | 0.00015 |
| Strontium | mg/L | --- | 0.013 | --- | --- | --- | 0.0131 | --- | --- | --- | 0.0126 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000337 | --- | --- | --- | 0.000399 | --- | --- | --- | 0.000367 |
| Vanadium | mg/L | --- | 0.00022 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.00019 |
| Tungsten | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** ML08-226-02
**Weight:** 1 kg

| Analyte | Week/Ewvent | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11015-DEC11 | CA11022-DEC11 | CA11094-DEC11 | CA10313-DEC11 | CA10053-JAN12 | CA10060-JAN12 | CA11010-JAN12 | CA10199-JAN12 | CA10030-FEB12 | CA10038-FEB12 | CA10146-FEB12 |
| | | 8/Dec/11 | 15-Dec-11 | 22-Dec-11 | 30-Dec-11 | 05-Jan-12 | 12-Jan-12 | 19-Jan-12 | 25-Jan-12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 846 | 988 | 980 | 983 | 992 | 991 | 983 | 1000 | 984 | 984 | 991 |
| pH | no unit | 7.37 | 7.42 | 7.43 | 7.18 | 7.18 | 7.18 | 7.13 | 7.21 | 7.11 | 7.14 | 7.18 |
| Alkalinity | mg/L as CaCO3 | 11 | 12 | 10 | 10 | 9 | 9 | 10 | 9 | 8 | 9 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 37 | 7 | 43 | 36 | 24 | 5 | 23 | 22 | 28 | 27 | 26 |
| Sulphate | mg/L | 5.8 | 8.6 | 6.6 | 5.2 | 3.7 | 3.4 | 3 | 2.9 | 2.8 | 2.7 | 2.5 |
| Calcium | mg/L | 3.58 | 3.62 | 3.5 | 3.04 | 2.91 | 3.08 | 2.94 | 3.04 | 3.05 | 3.17 | 2.92 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.00 | 0.9 | 0.5 | 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.04 | < 0.01 | 0.01 | < 0.01 | --- | 0.02 | --- | --- | 0.02 | --- | --- |
| Arsenic | mg/L | 0.0003 | 0.0004 | 0.0005 | 0.0002 | --- | 0.0004 | --- | --- | 0.0005 | --- | --- |
| Barium | mg/L | 0.00719 | 0.00913 | 0.00887 | 0.00908 | --- | 0.0108 | --- | --- | 0.00995 | --- | --- |
| Boron | mg/L | 0.0011 | 0.0051 | 0.0035 | 0.003 | --- | 0.0023 | --- | --- | 0.0008 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000017 | 0.000017 | 0.000013 | 0.000008 | --- | 0.000014 | --- | --- | < 0.000002 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.074 | 0.009 | 0.007 | 0.004 | --- | 0.006 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 2.84 | 3.74 | 3.47 | 2.98 | --- | 2.57 | --- | --- | 2.46 | --- | --- |
| Lithium | mg/L | 0.001 | 0.002 | 0.002 | 0.002 | --- | 0.002 | --- | --- | 0.002 | --- | --- |
| Magnesium | mg/L | 0.427 | 0.584 | 0.568 | 0.453 | --- | 0.367 | --- | --- | 0.307 | --- | --- |
| Manganese | mg/L | 0.00387 | 0.00408 | 0.00357 | 0.00283 | --- | 0.00325 | --- | --- | 0.00171 | --- | --- |
| Molybdenum | mg/L | 0.00005 | 0.00011 | 0.00007 | 0.00004 | --- | 0.00008 | --- | --- | < 0.00001 | --- | --- |
| Sodium | mg/L | 2.82 | 3.34 | 2.24 | 1.32 | --- | 0.57 | --- | --- | 0.23 | --- | --- |
| Nickel | mg/L | 0.0002 | < 0.0001 | < 0.0001 | 0.0002 | --- | 0.0002 | --- | --- | < 0.0001 | --- | --- |
| Lead | mg/L | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0003 | 0.0006 | 0.0004 | 0.0002 | --- | 0.0003 | --- | --- | < 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.0022 | 0.00143 | 0.00064 | 0.00043 | --- | 0.00031 | --- | --- | 0.00018 | --- | --- |
| Strontium | mg/L | 0.0137 | 0.0155 | 0.0159 | 0.0135 | --- | 0.013 | --- | --- | 0.0124 | --- | --- |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0009 | 0.0002 | 0.0002 | 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000078 | 0.000533 | 0.000515 | 0.000513 | --- | 0.000408 | --- | --- | 0.000373 | --- | --- |
| Vanadium | mg/L | 0.00005 | 0.00005 | 0.00006 | < 0.00003 | --- | 0.00011 | --- | --- | 0.00005 | --- | --- |
| Tungsten | mg/L | 0.00088 | 0.00254 | 0.00196 | 0.00151 | --- | 0.00079 | --- | --- | 0.00058 | --- | --- |
| Yttrium | mg/L | 0.000031 | 0.000021 | 0.000008 | 0.000005 | --- | 0.000006 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | 0.002 | 0.002 | --- | 0.001 | --- | --- | 0.002 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** ML08-226-02

**Weight:** 1 kg

| Analyte | Week/Ewvent | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10204-FEB12 | CA10001-MAR12 | CA10058-MAR12 | CA10113-MAR12 | CA10165-MAR12 | CA10219-MAR12 | CA10045-APR12 | CA10095-APR12 | CA10101-APR12 | CA10195-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 985 | 992 | 985 | 988 | 994 | 992 | 987 | 992 | 993 | 987 |
| pH | no unit | 7.03 | 7.00 | 7.22 | 7.43 | 7.12 | 7.20 | 8.04 | 7.01 | 7.21 | 7.12 |
| Alkalinity | mg/L as CaCO3 | 8 | 8 | 8 | 11 | 8 | 8 | 9 | 7 | 13 | 8 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 27 | 26 | 21 | 26 | 20 | 20 | 24 | 18 | 24 | 19 |
| Sulphate | mg/L | 2.5 | 2.5 | 2.4 | 2.5 | 2.8 | 2.5 | 2.4 | 2.2 | 2.4 | 2.4 |
| Calcium | mg/L | 3.13 | 3.00 | 3.2 | 3.12 | 3.29 | 3.22 | 3.25 | 3.11 | 3.11 | 2.93 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.02 | --- | --- | --- | 0.02 | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | 0.0005 | --- | --- | --- | 0.0004 | --- | --- | --- | 0.0005 |
| Barium | mg/L | --- | 0.0107 | --- | --- | --- | 0.0118 | --- | --- | --- | 0.0106 |
| Boron | mg/L | --- | 0.0006 | --- | --- | --- | < 0.0002 | --- | --- | --- | 0.0022 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000005 | --- | --- | --- | 0.000008 | --- | --- | --- | 0.000011 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | 0.005 |
| Potassium | mg/L | --- | 2.13 | --- | --- | --- | 1.89 | --- | --- | --- | 1.62 |
| Lithium | mg/L | --- | 0.002 | --- | --- | --- | 0.002 | --- | --- | --- | 0.002 |
| Magnesium | mg/L | --- | 0.237 | --- | --- | --- | 0.199 | --- | --- | --- | 0.147 |
| Manganese | mg/L | --- | 0.00295 | --- | --- | --- | 0.00303 | --- | --- | --- | 0.00297 |
| Molybdenum | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | 0.00001 |
| Sodium | mg/L | --- | 0.1 | --- | --- | --- | 0.07 | --- | --- | --- | 0.05 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | 0.0002 | --- | --- | --- | 0.0003 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00022 | --- | --- | --- | 0.00022 | --- | --- | --- | 0.00016 |
| Strontium | mg/L | --- | 0.0122 | --- | --- | --- | 0.0125 | --- | --- | --- | 0.0116 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000312 | --- | --- | --- | 0.000268 | --- | --- | --- | 0.000225 |
| Vanadium | mg/L | --- | 0.00005 | --- | --- | --- | < 0.00003 | --- | --- | --- | 0.00005 |
| Tungsten | mg/L | --- | 0.00043 | --- | --- | --- | 0.00028 | --- | --- | --- | 0.00012 |
| Yttrium | mg/L | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | 0.004 | --- | --- | --- | 0.002 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** ML08-232-01

**Weight:** 1 kg

| Analyte | Week/Ewvent | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11015-DEC11 | CA11022-DEC11 | CA11094-DEC11 | CA10313-DEC11 | CA10053-JAN12 | CA10060-JAN12 | CA11010-JAN12 | CA10199-JAN12 | CA10030-FEB12 | CA10038-FEB12 | CA10146-FEB12 |
| | Unit | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 02-Feb-12 | 09-Feb-12 | 16-Feb-12 |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 817 | 975 | 990 | 991 | 993 | 973 | 990 | 991 | 992 | 978 | 990 |
| pH | no unit | 7.29 | 7.34 | 7.40 | 7.12 | 7.07 | 6.96 | 7.06 | 6.97 | 6.90 | 6.89 | 6.80 |
| Alkalinity | mg/L as CaCO3 | 9 | 11 | 9 | 8 | 7 | 6 | 6 | 6 | 5 | 5 | 4 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 28 | 34 | 26 | 27 | 16 | 20 | 20 | 14 | 17 | 17 | 3 |
| Sulphate | mg/L | 3 | 3.8 | 3.5 | 2.9 | 2.1 | 2 | 1.7 | 1.7 | 1.6 | 1.7 | 1.6 |
| Calcium | mg/L | 0.52 | 0.93 | 1.0 | 1.16 | 1.1 | 1.24 | 1.19 | 1.27 | 1.32 | 1.49 | 1.34 |
| Fluoride | mg/L | 0.06 | 0.09 | 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Chloride | mg/L | 1.80 | 1.7 | 1.0 | 0.5 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.17 | 0.04 | 0.04 | 0.03 | --- | 0.03 | --- | --- | 0.03 | --- | --- |
| Arsenic | mg/L | 0.0042 | 0.014 | 0.0186 | 0.0235 | --- | 0.0308 | --- | --- | 0.0385 | --- | --- |
| Barium | mg/L | 0.00073 | 0.00047 | 0.00047 | 0.0004 | --- | 0.00046 | --- | --- | 0.00049 | --- | --- |
| Boron | mg/L | 0.0027 | 0.0079 | 0.0063 | 0.0052 | --- | 0.0039 | --- | --- | 0.0021 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000058 | 0.000047 | 0.000025 | 0.000022 | --- | 0.000004 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000133 | 0.000223 | 0.000215 | 0.000226 | --- | 0.000188 | --- | --- | 0.000152 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.038 | 0.006 | 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 2.95 | 3.3 | 2.78 | 2.44 | --- | 1.68 | --- | --- | 1.36 | --- | --- |
| Lithium | mg/L | 0.001 | 0.001 | 0.001 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.158 | 0.288 | 0.322 | 0.347 | --- | 0.325 | --- | --- | 0.317 | --- | --- |
| Manganese | mg/L | 0.0009 | 0.00083 | 0.00163 | 0.00099 | --- | 0.00109 | --- | --- | < 0.00001 | --- | --- |
| Molybdenum | mg/L | 0.00031 | 0.00054 | 0.00041 | 0.00025 | --- | 0.00017 | --- | --- | 0.00006 | --- | --- |
| Sodium | mg/L | 3.93 | 4.5 | 2.97 | 2.12 | --- | 1.06 | --- | --- | 0.54 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0003 | 0.0005 | 0.0004 | --- | 0.0003 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | 0.00032 | 0.00028 | 0.00011 | 0.00004 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | 0.012 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0003 | 0.0005 | 0.0003 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00335 | 0.00171 | 0.00095 | 0.00064 | --- | 0.00044 | --- | --- | 0.00026 | --- | --- |
| Strontium | mg/L | 0.0034 | 0.0072 | 0.0081 | 0.0086 | --- | 0.0083 | --- | --- | 0.0081 | --- | --- |
| Thorium | mg/L | 0.000048 | 0.000024 | 0.000007 | 0.000007 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0027 | 0.0006 | 0.0005 | 0.0003 | --- | 0.0002 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000038 | 0.000273 | 0.000385 | 0.000475 | --- | 0.00055 | --- | --- | 0.000649 | --- | --- |
| Vanadium | mg/L | 0.00056 | 0.00053 | 0.00053 | 0.00049 | --- | 0.00061 | --- | --- | 0.00052 | --- | --- |
| Tungsten | mg/L | 0.00007 | 0.00031 | 0.00023 | 0.0002 | --- | 0.0001 | --- | --- | 0.00008 | --- | --- |
| Yttrium | mg/L | 0.000114 | 0.00007 | 0.000044 | 0.000022 | --- | 0.000008 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | 0.001 | 0.001 | 0.001 | 0.001 | --- | 0.002 | --- | --- | 0.002 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** ML08-232-01

**Weight:** 1 kg

| Analyte | Week/Ewvent | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10204-FEB12 | CA10001-MAR12 | CA10058-MAR12 | CA10113-MAR12 | CA10165-MAR12 | CA10219-MAR12 | CA10045-APR12 | CA10095-APR12 | CA10101-APR12 | CA10195-APR12 |
| | Unit | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 993 | 991 | 988 | 986 | 991 | 991 | 976 | 999 | 992 | 990 |
| pH | no unit | 6.76 | 6.80 | 6.92 | 6.81 | 6.83 | 6.85 | 6.44 | 6.71 | 6.25 | 6.73 |
| Alkalinity | mg/L as CaCO3 | 5 | 4 | 4 | 6 | 4 | 4 | 4 | 3 | 4 | 4 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 16 | 25 | 14 | 14 | 15 | 15 | 13 | 13 | 13 | 14 |
| Sulphate | mg/L | 1.6 | 1.6 | 1.5 | 1.6 | 1.7 | 1.6 | 1.6 | 1.6 | 1.7 | 1.8 |
| Calcium | mg/L | 1.37 | 1.39 | 1.41 | 1.43 | 1.43 | 1.4 | 1.35 | 1.34 | 1.29 | 1.3 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.03 | --- | --- | --- | 0.02 | --- | --- | --- | 0.01 |
| Arsenic | mg/L | --- | 0.0454 | --- | --- | --- | 0.0511 | --- | --- | --- | 0.0418 |
| Barium | mg/L | --- | 0.00053 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.00062 |
| Boron | mg/L | --- | 0.0016 | --- | --- | --- | 0.0008 | --- | --- | --- | 0.0024 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000196 | --- | --- | --- | 0.00026 | --- | --- | --- | 0.000324 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 1.05 | --- | --- | --- | 0.844 | --- | --- | --- | 0.733 |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.291 | --- | --- | --- | 0.259 | --- | --- | --- | 0.215 |
| Manganese | mg/L | --- | 0.00159 | --- | --- | --- | 0.00206 | --- | --- | --- | 0.00198 |
| Molybdenum | mg/L | --- | 0.00005 | --- | --- | --- | 0.00004 | --- | --- | --- | 0.00004 |
| Sodium | mg/L | --- | 0.29 | --- | --- | --- | 0.18 | --- | --- | --- | 0.13 |
| Nickel | mg/L | --- | 0.0004 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.001 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | < 0.0002 | --- | --- | --- | 0.0003 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00024 | --- | --- | --- | 0.00028 | --- | --- | --- | 0.00022 |
| Strontium | mg/L | --- | 0.0079 | --- | --- | --- | 0.0075 | --- | --- | --- | 0.007 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000726 | --- | --- | --- | 0.000672 | --- | --- | --- | 0.000486 |
| Vanadium | mg/L | --- | 0.00055 | --- | --- | --- | 0.00051 | --- | --- | --- | 0.00052 |
| Tungsten | mg/L | --- | 0.00008 | --- | --- | --- | 0.00005 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000001 | --- | --- | --- | 0.000003 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | 0.005 | --- | --- | --- | 0.002 | --- | --- | --- | 0.002 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** ML95-82-01

**Weight:** 1 kg

| Analyte | Week/Ewvent | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11015-DEC11 | CA11022-DEC11 | CA11094-DEC11 | CA10313-DEC11 | CA10053-JAN12 | CA10060-JAN12 | CA11010-JAN12 | CA10199-JAN12 | CA10030-FEB12 | CA10038-FEB12 | CA10146-FEB12 |
| | | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 2/Feb/12 | 9/Feb/12 | 16/Feb/12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 837 | 982 | 988 | 991 | 989 | 981 | 996 | 989 | 992 | 996 | 978 |
| pH | no unit | 7.63 | 7.38 | 7.24 | 7.21 | 7.24 | 7.19 | 7.24 | 7.17 | 7.13 | 7.04 | 7.08 |
| Alkalinity | mg/L as CaCO3 | 11 | 11 | 13 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 38 | 46 | 50 | 39 | 27 | 27 | 25 | 32 | 30 | 30 | 24 |
| Sulphate | mg/L | 6.1 | 12 | 9.5 | 6.1 | 4.7 | 4.5 | 4 | 3.7 | 3.5 | 3.6 | 3.5 |
| Calcium | mg/L | 4.81 | 5.02 | 4.8 | 4.21 | 3.64 | 3.82 | 3.82 | 3.55 | 3.85 | 3.92 | 3.65 |
| Fluoride | mg/L | < 0.06 | 0.09 | 0.1 | 0.08 | --- | 0.09 | --- | --- | 0.08 | --- | --- |
| Chloride | mg/L | 1.10 | 0.6 | 0.4 | < 0.2 | --- | < 0.2 | --- | --- | < 0.2 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Aluminum | mg/L | 0.03 | < 0.01 | 0.01 | 0.02 | --- | 0.02 | --- | --- | 0.01 | --- | --- |
| Arsenic | mg/L | 0.0019 | 0.0025 | 0.0027 | 0.0023 | --- | 0.0025 | --- | --- | 0.0026 | --- | --- |
| Barium | mg/L | 0.00467 | 0.00721 | 0.00765 | 0.00812 | --- | 0.00878 | --- | --- | 0.00928 | --- | --- |
| Boron | mg/L | 0.0019 | 0.0076 | 0.0055 | 0.0041 | --- | 0.0035 | --- | --- | 0.0015 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000028 | 0.000025 | 0.00002 | 0.000019 | --- | 0.000037 | --- | --- | 0.000009 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.058 | 0.006 | 0.004 | 0.004 | --- | 0.004 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 1.92 | 2.76 | 2.8 | 2.28 | --- | 1.96 | --- | --- | 1.93 | --- | --- |
| Lithium | mg/L | < 0.001 | 0.001 | 0.001 | 0.001 | --- | 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 0.534 | 0.712 | 0.652 | 0.474 | --- | 0.374 | --- | --- | 0.302 | --- | --- |
| Manganese | mg/L | 0.00329 | 0.00245 | 0.002 | 0.00134 | --- | 0.00127 | --- | --- | 0.00118 | --- | --- |
| Molybdenum | mg/L | 0.00012 | 0.00016 | 0.00012 | 0.00005 | --- | 0.00009 | --- | --- | 0.00001 | --- | --- |
| Sodium | mg/L | 2.44 | 2.8 | 1.88 | 1.16 | --- | 0.68 | --- | --- | 0.35 | --- | --- |
| Nickel | mg/L | 0.0002 | 0.0002 | 0.0002 | 0.0003 | --- | 0.0003 | --- | --- | 0.0001 | --- | --- |
| Lead | mg/L | 0.00003 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Phosphorus | mg/L | < 0.009 | < 0.009 | 0.011 | 0.02 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Antimony | mg/L | 0.0004 | 0.0004 | 0.0003 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00208 | 0.00106 | 0.00052 | 0.0003 | --- | 0.00022 | --- | --- | 0.00013 | --- | --- |
| Strontium | mg/L | 0.0519 | 0.0584 | 0.0583 | 0.051 | --- | 0.046 | --- | --- | 0.0471 | --- | --- |
| Thorium | mg/L | 0.000005 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 | --- | --- |
| Titanium | mg/L | 0.0007 | < 0.0001 | 0.0002 | 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Uranium | mg/L | 0.000239 | 0.00152 | 0.00167 | 0.00132 | --- | 0.00113 | --- | --- | 0.000888 | --- | --- |
| Vanadium | mg/L | 0.00013 | 0.0001 | 0.00009 | 0.00005 | --- | 0.00009 | --- | --- | 0.00007 | --- | --- |
| Tungsten | mg/L | 0.00011 | 0.00038 | 0.00035 | 0.00031 | --- | 0.00026 | --- | --- | 0.00019 | --- | --- |
| Yttrium | mg/L | 0.000022 | 0.000014 | 0.000007 | 0.000005 | --- | 0.000005 | --- | --- | < 0.000001 | --- | --- |
| Zinc | mg/L | < 0.001 | 0.001 | < 0.001 | 0.002 | --- | 0.002 | --- | --- | 0.001 | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** ML95-82-01

**Weight:** 1 kg

| Analyte | Week/Ewvent | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10204-FEB12 | CA10001-MAR12 | CA10058-MAR12 | CA10113-MAR12 | CA10165-MAR12 | CA10219-MAR12 | CA10045-APR12 | CA10095-APR12 | CA10101-APR12 | CA10195-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 | 26-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 989 | 989 | 997 | 985 | 996 | 990 | 975 | 996 | 992 | 990 |
| pH | no unit | 7.12 | 6.99 | 7.20 | 6.93 | 7.16 | 7.26 | 7.33 | 7.05 | 7.27 | 7.15 |
| Alkalinity | mg/L as CaCO3 | 9 | 9 | 9 | 8 | 9 | 9 | 20 | 8 | 14 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 22 | 38 | 23 | 27 | 22 | 23 | 29 | 22 | 28 | 28 |
| Sulphate | mg/L | 3.4 | 3.4 | 3.3 | 3.5 | 3.8 | 3.4 | 3.2 | 3 | 3.3 | 3.3 |
| Calcium | mg/L | 3.73 | 3.68 | 3.89 | 3.68 | 4.01 | 4.09 | 4.18 | 3.95 | 3.87 | 3.98 |
| Fluoride | mg/L | --- | 0.08 | --- | --- | --- | 0.08 | --- | --- | --- | 0.07 |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Silver | mg/L | --- | 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Aluminum | mg/L | --- | 0.02 | --- | --- | --- | 0.01 | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | 0.0028 | --- | --- | --- | 0.0029 | --- | --- | --- | 0.0024 |
| Barium | mg/L | --- | 0.0105 | --- | --- | --- | 0.0127 | --- | --- | --- | 0.012 |
| Boron | mg/L | --- | 0.0014 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.002 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | 0.000013 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000041 | --- | --- | --- | 0.00003 | --- | --- | --- | 0.000031 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 1.72 | --- | --- | --- | 1.59 | --- | --- | --- | 1.37 |
| Lithium | mg/L | --- | 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 0.228 | --- | --- | --- | 0.201 | --- | --- | --- | 0.156 |
| Manganese | mg/L | --- | 0.00109 | --- | --- | --- | 0.00109 | --- | --- | --- | 0.00125 |
| Molybdenum | mg/L | --- | 0.00008 | --- | --- | --- | 0.00001 | --- | --- | --- | 0.00001 |
| Sodium | mg/L | --- | 0.18 | --- | --- | --- | 0.12 | --- | --- | --- | 0.08 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | 0.00003 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Antimony | mg/L | --- | < 0.0002 | --- | --- | --- | 0.0003 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | 0.00015 | --- | --- | --- | 0.00017 | --- | --- | --- | 0.00025 |
| Strontium | mg/L | --- | 0.0462 | --- | --- | --- | 0.051 | --- | --- | --- | 0.0503 |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- | < 0.000004 |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | 0.000834 | --- | --- | --- | 0.000705 | --- | --- | --- | 0.000532 |
| Vanadium | mg/L | --- | 0.00009 | --- | --- | --- | 0.00005 | --- | --- | --- | 0.00007 |
| Tungsten | mg/L | --- | 0.00015 | --- | --- | --- | 0.0001 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000011 | --- | --- | --- | 0.000002 | --- | --- | --- | 0.000003 |
| Zinc | mg/L | --- | 0.003 | --- | --- | --- | 0.002 | --- | --- | --- | 0.003 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** ML95-95-01

**Weight:** 1 kg

| Analyte | Week/Ewvent | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11015-DEC11 | CA11022-DEC11 | CA11094-DEC11 | CA10313-DEC11 | CA10053-JAN12 | CA10060-JAN12 | CA11010-JAN12 | CA10199-JAN12 | CA10030-FEB12 |
| | | 8/Dec/11 | 15/Dec/11 | 22/Dec/11 | 30/Dec/11 | 5/Jan/12 | 12/Jan/12 | 19/Jan/12 | 25/Jan/12 | 2/Feb/12 |
| | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 831 | 987 | 990 | 986 | 995 | 982 | 996 | 985 | 994 |
| pH | no unit | 8.82 | 8.34 | 7.90 | 7.93 | 7.66 | 7.68 | 7.66 | 7.49 | 7.39 |
| Alkalinity | mg/L as CaCO3 | 17 | 21 | 17 | 15 | 14 | 15 | 15 | 13 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 39 | 48 | 44 | 47 | 5 | 34 | 31 | 30 | 37 |
| Sulphate | mg/L | 3.0 | 6.8 | 6.3 | 5.2 | 3.7 | 3.5 | 2.8 | 2.8 | 2.5 |
| Calcium | mg/L | 5.26 | 5.76 | 5.0 | 5.1 | 4.29 | 4.74 | 4.21 | 4.08 | 4.03 |
| Fluoride | mg/L | < 0.06 | < 0.06 | 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 |
| Chloride | mg/L | 0.60 | 0.5 | 0.4 | 0.2 | --- | < 0.2 | --- | --- | < 0.2 |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 |
| Silver | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Aluminum | mg/L | 0.04 | < 0.01 | 0.02 | 0.02 | --- | 0.03 | --- | --- | 0.03 |
| Arsenic | mg/L | 0.0011 | 0.002 | 0.0028 | 0.003 | --- | 0.0034 | --- | --- | 0.0036 |
| Barium | mg/L | 0.00559 | 0.0101 | 0.0102 | 0.0103 | --- | 0.0108 | --- | --- | 0.0115 |
| Boron | mg/L | 0.0014 | 0.0068 | 0.0048 | 0.0043 | --- | 0.0034 | --- | --- | 0.0016 |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 |
| Cadmium | mg/L | 0.000004 | 0.000004 | < 0.000003 | 0.000019 | --- | < 0.000003 | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000017 | 0.000026 | 0.000026 | 0.000023 | --- | 0.000025 | --- | --- | 0.000012 |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 |
| Iron | mg/L | 0.022 | 0.008 | < 0.003 | < 0.003 | --- | 0.004 | --- | --- | < 0.003 |
| Potassium | mg/L | 3.76 | 5.9 | 5.25 | 5.26 | --- | 4.81 | --- | --- | 4.85 |
| Lithium | mg/L | 0.002 | 0.004 | 0.004 | 0.004 | --- | 0.004 | --- | --- | 0.004 |
| Magnesium | mg/L | 0.326 | 0.447 | 0.379 | 0.352 | --- | 0.261 | --- | --- | 0.2 |
| Manganese | mg/L | 0.00415 | 0.0064 | 0.0059 | 0.00503 | --- | 0.00517 | --- | --- | 0.00358 |
| Molybdenum | mg/L | 0.00019 | 0.00032 | 0.00024 | 0.00018 | --- | 0.00015 | --- | --- | 0.00005 |
| Sodium | mg/L | 1.03 | 1.17 | 0.8 | 0.67 | --- | 0.39 | --- | --- | 0.22 |
| Nickel | mg/L | 0.0002 | 0.0002 | 0.0003 | 0.0003 | --- | 0.0003 | --- | --- | 0.0001 |
| Lead | mg/L | 0.00003 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 |
| Phosphorus | mg/L | < 0.009 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 |
| Antimony | mg/L | 0.0003 | 0.0004 | 0.0002 | < 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |
| Tin | mg/L | 0.00228 | 0.00143 | 0.00077 | 0.00058 | --- | 0.00037 | --- | --- | 0.00016 |
| Strontium | mg/L | 0.0372 | 0.0457 | 0.0416 | 0.0413 | --- | 0.038 | --- | --- | 0.0329 |
| Thorium | mg/L | < 0.000004 | < 0.000004 | < 0.000004 | < 0.000004 | --- | < 0.000004 | --- | --- | < 0.000004 |
| Titanium | mg/L | 0.0003 | 0.0001 | 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 |
| Uranium | mg/L | 0.000312 | 0.00181 | 0.00162 | 0.00146 | --- | 0.00118 | --- | --- | 0.000891 |
| Vanadium | mg/L | 0.00007 | 0.00007 | 0.00006 | 0.00003 | --- | 0.00006 | --- | --- | 0.00005 |
| Tungsten | mg/L | 0.00009 | 0.00028 | 0.00025 | 0.00024 | --- | 0.00019 | --- | --- | 0.00017 |
| Yttrium | mg/L | 0.000012 | 0.000013 | 0.000009 | 0.000007 | --- | 0.000005 | --- | --- | < 0.000001 |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited - Meliadine
Meliadine - Discovery

**Project Manager:** Josee Noel

**SGS Contact:** Brian Graham

**Humidity Cell:** ML95-95-01

**Weight:** 1 kg

| Analyte | Week/Ewvent | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10204-FEB12 | CA10001-MAR12 | CA10058-MAR12 | CA10113-MAR12 | CA10165-MAR12 | CA10219-MAR12 | CA10045-APR12 | CA10095-APR12 | CA10101-APR12 |
| | | 23-Feb-12 | 01-Mar-12 | 08-Mar-12 | 15-Mar-12 | 22-Mar-12 | 29-Mar-12 | 05-Apr-12 | 12-Apr-12 | 19-Apr-12 |
| | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 993 | 987 | 987 | 989 | 995 | 992 | 978 | 995 | 993 |
| pH | no unit | 7.63 | 7.28 | 7.56 | 7.26 | 7.42 | 7.57 | 7.62 | 7.43 | 7.49 |
| Alkalinity | mg/L as CaCO3 | 13 | 13 | 13 | 13 | 14 | 15 | 27 | 12 | 25 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 27 | 35 | 33 | 34 | 27 | 40 | 38 | 26 | 34 |
| Sulphate | mg/L | 2.1 | 2.1 | 2 | 2 | 2 | 2 | 1.9 | 1.7 | 1.8 |
| Calcium | mg/L | 3.72 | 3.67 | 3.98 | 3.87 | 4.02 | 4.7 | 4.08 | 3.85 | 3.75 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | 0.06 | --- | --- | --- |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Silver | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Aluminum | mg/L | --- | 0.04 | --- | --- | --- | 0.05 | --- | --- | --- |
| Arsenic | mg/L | --- | 0.0036 | --- | --- | --- | 0.0043 | --- | --- | --- |
| Barium | mg/L | --- | 0.0141 | --- | --- | --- | 0.0181 | --- | --- | --- |
| Boron | mg/L | --- | 0.0014 | --- | --- | --- | 0.0006 | --- | --- | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | 0.00004 | --- | --- | --- | 0.000022 | --- | --- | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | 0.0006 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | 0.004 | --- | --- | --- |
| Potassium | mg/L | --- | 4.45 | --- | --- | --- | 4.61 | --- | --- | --- |
| Lithium | mg/L | --- | 0.005 | --- | --- | --- | 0.006 | --- | --- | --- |
| Magnesium | mg/L | --- | 0.15 | --- | --- | --- | 0.143 | --- | --- | --- |
| Manganese | mg/L | --- | 0.00289 | --- | --- | --- | 0.00372 | --- | --- | --- |
| Molybdenum | mg/L | --- | 0.00005 | --- | --- | --- | 0.00002 | --- | --- | --- |
| Sodium | mg/L | --- | 0.12 | --- | --- | --- | 0.09 | --- | --- | --- |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | 0.00004 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- |
| Antimony | mg/L | --- | < 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | 0.00016 | --- | --- | --- | 0.00011 | --- | --- | --- |
| Strontium | mg/L | --- | 0.0305 | --- | --- | --- | 0.0375 | --- | --- | --- |
| Thorium | mg/L | --- | < 0.000004 | --- | --- | --- | < 0.000004 | --- | --- | --- |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Uranium | mg/L | --- | 0.000791 | --- | --- | --- | 0.000688 | --- | --- | --- |
| Vanadium | mg/L | --- | 0.00008 | --- | --- | --- | 0.00005 | --- | --- | --- |
| Tungsten | mg/L | --- | 0.00014 | --- | --- | --- | 0.00011 | --- | --- | --- |
| Yttrium | mg/L | --- | 0.000006 | --- | --- | --- | 0.000004 | --- | --- | --- |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

| 9 | 10 |
|---|---|
| CA10038-FEB12 | CA10146-FEB12 |
| 9/Feb/12 | 16/Feb/12 |
| | |
| 1000 | 1000 |
| 993 | 982 |
| 7.36 | 7.30 |
| 13 | 14 |
| < 2 | < 2 |
| 35 | 29 |
| 2.3 | 2.2 |
| 3.91 | 3.96 |
| --- | --- |
| --- | --- |
| --- | ---

| |
|---|
| 20 |
| CA10195-APR12 |
| 26-Apr-12 |
| |
| 1000 |
| 992 |
| 7.43 |
| 13 |
| < 2 |
| 34 |
| 1.8 |
| 4.08 |
| < 0.06 |
| < 0.2 |
| < 0.0001 |
| < 0.00001 |
| 0.05 |
| 0.0034 |
| 0.0167 |
| 0.002 |
| < 0.00002 |
| < 0.00001 |
| < 0.000003 |
| 0.000021 |
| < 0.0005 |
| < 0.0005 |
| 0.004 |
| 4.15 |
| 0.006 |
| 0.122 |
| 0.0027 |
| 0.00002 |
| 0.07 |
| < 0.0001 |
| < 0.00002 |
| 0.015 |
| < 0.0002 |
| < 0.001 |
| 0.00011 |
| 0.0323 |
| < 0.000004 |
| < 0.0001 |
| 0.000507 |
| 0.00007 |
| < 0.00003 |
| 0.000002 |
| < 0.001 |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML90-14-2 Discovery
**Weight:** 1 kg

| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk#9 |
| | | CA10114-MAR10 | CA10115-MAR10 | CA10116-MAR10 | CA10117-MAR10 | CA10130-MAR10 | CA10009-APR10 | CA10036-APR10 | CA10078-APR10 | CA11102-APR10 | CA10009-MAY10 |
| | | 2-Mar-10 | 9-Mar-10 | 16-Mar-10 | 23-Mar-10 | 30-Mar-10 | 6-Apr-10 | 13-Apr-10 | 20-Apr-10 | 27-Apr-10 | 4-May-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 841 | 887 | 908 | 826 | 956 | 903 | 879 | 866 | 887 | 868 |
| pH | units | 7.40 | 7.42 | 7.28 | 7.12 | 7.43 | 7.35 | 7.26 | 7.31 | 7.27 | 7.05 |
| Alkalinity | mg/L as $CaCO_3$ | 10 | 9 | 8 | 7 | 10 | 5 | 5 | 5 | 5 | 5 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 44 | 57 | 35 | 26 | 29 | 20 | 18 | 21 | 17 | 20 |
| Sulphate | mg/L | 6.1 | 13 | 6.1 | 4.2 | 2.8 | 3 | 2.5 | 3.7 | 4.7 | 3 |
| Chloride | mg/L | 1.0 | 0.7 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.98 | 3.31 | 2.10 | 1.98 | 2.99 | 1.80 | 1.69 | 1.98 | 1.78 | 1.92 |
| As+3 | mg/L | 0.007 | 0.014 | 0.002 | --- | --- | 0.019 | --- | --- | 0.009 | --- |
| As+5 | mg/L | 0.001 | 0.001 | 0.013 | --- | --- | 0.008 | --- | --- | 0.02 | --- |
| Aluminum | mg/L | 0.07 | 0.07 | 0.06 | 0.05 | --- | 0.06 | --- | --- | 0.06 | --- |
| Arsenic | mg/L | 0.0077 | 0.0169 | 0.0209 | 0.0192 | --- | 0.0273 | --- | --- | 0.0309 | --- |
| Barium | mg/L | 0.001 | 0.00135 | 0.00097 | 0.00251 | --- | 0.00072 | --- | --- | 0.00095 | --- |
| Boron | mg/L | 0.0245 | 0.0141 | 0.0079 | 0.0056 | --- | 0.0025 | --- | --- | 0.0026 | --- |
| Cadmium | mg/L | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Di | mg/L | 0.00013 | 0.000107 | 0.000089 | 0.000091 | --- | 0.00015 | --- | --- | 0.000445 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0006 | 0.0006 | 0.0133 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 2.92 | 4.16 | 2.29 | 1.73 | --- | 1.36 | --- | --- | 1.24 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.302 | 0.77 | 0.44 | 0.427 | --- | 0.332 | --- | --- | 0.295 | --- |
| Manganese | mg/L | 0.00246 | 0.00299 | 0.00225 | 0.0015 | --- | 0.00149 | --- | --- | 0.00339 | --- |
| Molybdenum | mg/L | 0.00025 | 0.00049 | 0.00026 | 0.00021 | --- | 0.0001 | --- | --- | 0.00017 | --- |
| Sodium | mg/L | 3.51 | 5.52 | 2.37 | 1.27 | --- | 0.62 | --- | --- | 0.36 | --- |
| Nickel | mg/L | 0.0009 | 0.0007 | 0.0006 | 0.0003 | --- | < 0.0001 | --- | --- | 0.0013 | --- |
| Lead | mg/L | 0.00032 | 0.00006 | 0.00107 | 0.00034 | --- | 0.00041 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0004 | 0.0004 | 0.0004 | 0.0003 | --- | < 0.0002 | --- | --- | 0.0002 | --- |
| Tin | mg/L | 0.00063 | 0.00042 | 0.00121 | 0.00047 | --- | 0.00038 | --- | --- | 0.00028 | --- |
| Strontium | mg/L | 0.0107 | 0.0219 | 0.0129 | 0.0117 | --- | 0.0098 | --- | --- | 0.0097 | --- |
| Titanium | mg/L | 0.0013 | 0.0002 | 0.0003 | 0.0002 | --- | 0.0001 | --- | --- | 0.0004 | --- |
| Uranium | mg/L | 0.000076 | 0.00069 | 0.000555 | 0.000552 | --- | 0.000423 | --- | --- | 0.000318 | --- |
| Vanadium | mg/L | 0.00058 | 0.00076 | 0.00078 | 0.00058 | --- | 0.00068 | --- | --- | 0.00067 | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | 0.006 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML90-14-2 Discovery
**Weight:** 1 kg

| | | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 |
| | | CA10035-MAY10 | CA10060-MAY10 | CA10085-MAY10 | CA10009-JUN10 | CA10034-JUN10 | CA10072-JUN10 | CA10084-JUN10 | CA10188-JUN10 | CA10008-JUL10 | CA10032-JUL10 |
| | | 11-May-10 | 18-May-10 | 25-May-10 | 1-Jun-10 | 8-Jun-10 | 15-Jun-10 | 22-Jun-10 | 29-Jun-10 | 6-Jul-10 | 13-Jul-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 910 | 859 | 932 | 856 | 926 | 889 | 900 | 892 | 907 | 892 |
| pH | units | 7.07 | 7.24 | 7.09 | 7.08 | 7.12 | 7.1 | 7.13 | 7.17 | 7.06 | 7.11 |
| Alkalinity | mg/L as $CaCO_3$ | 5 | 6 | 6 | 4 | 6 | 4 | 4 | 5 | 4 | 4 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 18 | 20 | 22 | 16 | 19 | 15 | 16 | 17 | 15 | 15 |
| Sulphate | mg/L | 2.6 | 2.8 | 2.7 | 2.4 | 2.4 | 2.2 | 2.3 | 2.3 | 2.2 | 2.4 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.86 | 2.15 | 2.53 | 1.92 | 2.4 | 1.7 | 1.76 | 1.78 | 1.8 | 1.52 |
| As+3 | mg/L | --- | --- | | --- | --- | --- | 0.034 | --- | --- | --- |
| As+5 | mg/L | --- | --- | | --- | --- | --- | 0.003 | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.03 | --- | --- | --- | 0.05 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0335 | --- | --- | --- | 0.0331 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00135 | --- | --- | --- | 0.00121 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0017 | --- | --- | --- | 0.0008 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | 0.000099 | --- | --- | --- |
| Di | mg/L | --- | --- | 0.000202 | --- | --- | --- | 0.000218 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | 0.0024 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 1.09 | --- | --- | --- | 0.902 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.1 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 0.313 | --- | --- | --- | 0.194 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.00314 | --- | --- | --- | 0.00212 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00006 | --- | --- | --- | 0.00001 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.23 | --- | --- | --- | 0.14 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0002 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00003 | --- | --- | --- | 0.00005 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00015 | --- | --- | --- | 0.00006 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0119 | --- | --- | --- | 0.0082 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | 0.0002 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000421 | --- | --- | --- | 0.000255 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00052 | --- | --- | --- | 0.00045 | --- | --- | --- |
| Zinc | mg/L | --- | --- | 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML90-14-2 Discovery
**Weight:** 1 kg

| | | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#20 | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| | | CA10058-JUL10 | CA10084-JUL10 | CA10008-AUG10 | CA10034-AUG10 | CA10060-AUG10 | CA11296-AUG10 | CA10276-AUG10 | CA10020-SEP10 | CA10046-SEP10 | CA10070-SEP10 | CA10094-SEP10 |
| | | 20-Jul-10 | 27-Jul-10 | 3-Aug-10 | 10-Aug-10 | 17-Aug-10 | 24-Aug-10 | 31-Aug-10 | 7-Sep-10 | 14-Sep-10 | 21-Sep-10 | 28-Sep-10 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 894 | 897 | 891 | 899 | 891 | 887 | 890 | 896 | 899 | 904 | 898 |
| pH | units | 6.81 | 6.77 | 6.81 | 7.06 | 7 | 6.93 | 6.99 | 6.95 | 6.98 | 7 | 6.69 |
| Alkalinity | mg/L as $CaCO_3$ | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 14 | 15 | 14 | 17 | 14 | 14 | 15 | 14 | 14 | 13 | 13 |
| Sulphate | mg/L | 2.2 | 2.3 | 2.2 | 2.4 | 2.2 | 2 | | 2.2 | 2.1 | 2.1 | 1.7 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.56 | 1.69 | 1.72 | 1.67 | 1.69 | 1.66 | | 1.76 | 1.76 | 1.78 | 1.61 |
| As+3 | mg/L | 0.033 | --- | --- | --- | --- | 0.031 | --- | --- | --- | --- | 0.03 |
| As+5 | mg/L | 0.003 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | 0.002 |
| Aluminum | mg/L | 0.03 | --- | --- | --- | --- | 0.07 | --- | --- | --- | --- | 0.05 |
| Arsenic | mg/L | 0.0364 | --- | --- | --- | --- | 0.032 | --- | --- | --- | --- | 0.0324 |
| Barium | mg/L | 0.00091 | --- | --- | --- | --- | 0.00099 | --- | --- | --- | --- | 0.00168 |
| Boron | mg/L | 0.0011 | --- | --- | --- | --- | 0.0007 | --- | --- | --- | --- | 0.0007 |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | --- | 0.000024 | --- | --- | --- | --- | < 0.000003 |
| Di | mg/L | 0.000745 | --- | --- | --- | --- | 0.000187 | --- | --- | --- | --- | 0.000185 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | < 0.002 | --- | --- | --- | --- | 0.004 | --- | --- | --- | --- | < 0.002 |
| Potassium | mg/L | 0.814 | --- | --- | --- | --- | 0.732 | --- | --- | --- | --- | 0.711 |
| Lithium | mg/L | 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | 0.001 |
| Magnesium | mg/L | 0.16 | --- | --- | --- | --- | 0.125 | --- | --- | --- | --- | 0.115 |
| Manganese | mg/L | 0.0016 | --- | --- | --- | --- | 0.00163 | --- | --- | --- | --- | 0.00163 |
| Molybdenum | mg/L | 0.00004 | --- | --- | --- | --- | 0.00008 | --- | --- | --- | --- | 0.00003 |
| Sodium | mg/L | 0.1 | --- | --- | --- | --- | 0.07 | --- | --- | --- | --- | 0.07 |
| Nickel | mg/L | 0.0004 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | 0.0003 |
| Lead | mg/L | < 0.00002 | --- | --- | --- | --- | 0.00004 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | 0.0003 | --- | --- | --- | --- | 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Tin | mg/L | 0.00004 | --- | --- | --- | --- | 0.00004 | --- | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | 0.0074 | --- | --- | --- | --- | 0.0068 | --- | --- | --- | --- | 0.0068 |
| Titanium | mg/L | 0.0002 | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | 0.0004 |
| Uranium | mg/L | 0.000166 | --- | --- | --- | --- | 0.00014 | --- | --- | --- | --- | 0.000197 |
| Vanadium | mg/L | 0.00038 | --- | --- | --- | --- | 0.00041 | --- | --- | --- | --- | 0.00033 |
| Zinc | mg/L | < 0.002 | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML90-14-2 Discovery
**Weight:** 1 kg

| | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| | | CA10089-OCT10 | CA10113-OCT10 | CA10261-OCT10 | CA10282-OCT10 | CA10007-NOV10 | CA10030-NOV10 | CA11184-NOV10 | CA11205-NOV10 | CA11226-NOV10 | CA10115-DEC10 |
| | | 5-Oct-10 | 12-Oct-10 | 19-Oct-10 | 26-Oct-10 | 2-Nov-10 | 9-Nov-10 | 16-Nov-10 | 23-Nov-10 | 30-Nov-10 | 7-Dec-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 891 | 910 | 893 | 891 | 889 | 883 | 891 | 896 | 909 | 923 |
| pH | units | 6.76 | 6.82 | 6.78 | 6.87 | 6.84 | 6.74 | 6.87 | 7.01 | 6.92 | 6.73 |
| Alkalinity | mg/L as $CaCO_3$ | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 4 | 4 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 14 | 14 | 13 | 14 | 14 | 15 | 15 | 19 | 14 | 14 |
| Sulphate | mg/L | 2.4 | 2.3 | 2 | 2.2 | 2 | 2.5 | 2.4 | 2.3 | 2.4 | 2.3 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.78 | 1.74 | 1.73 | 2.59 | 1.64 | 2.01 | 1.92 | 1.69 | 1.75 | 1.9 |
| As+3 | mg/L | --- | --- | --- | --- | 0.026 | --- | --- | --- | --- | |
| As+5 | mg/L | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- | |
| Aluminum | mg/L | --- | --- | --- | --- | 0.01 | --- | --- | --- | --- | 0.03 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.025 | --- | --- | --- | --- | 0.0251 |
| Barium | mg/L | --- | --- | --- | --- | 0.00105 | --- | --- | --- | --- | 0.00121 |
| Boron | mg/L | --- | --- | --- | --- | 0.0009 | --- | --- | --- | --- | 0.0002 |
| Cadmium | mg/L | --- | --- | --- | --- | 0.000177 | --- | --- | --- | --- | < 0.000003 |
| Di | mg/L | --- | --- | --- | --- | 0.000187 | --- | --- | --- | --- | 0.000239 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | 0.0007 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Potassium | mg/L | --- | --- | --- | --- | 0.64 | --- | --- | --- | --- | 0.673 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 0.108 | --- | --- | --- | --- | 0.104 |
| Manganese | mg/L | --- | --- | --- | --- | 0.00283 | --- | --- | --- | --- | 0.0026 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00003 | --- | --- | --- | --- | 0.00002 |
| Sodium | mg/L | --- | --- | --- | --- | 0.06 | --- | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0004 | --- | --- | --- | --- | 0.0003 |
| Lead | mg/L | --- | --- | --- | --- | 0.00018 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Tin | mg/L | --- | --- | --- | --- | 0.00004 | --- | --- | --- | --- | 0.00007 |
| Strontium | mg/L | --- | --- | --- | --- | 0.0067 | --- | --- | --- | --- | 0.0072 |
| Titanium | mg/L | --- | --- | --- | --- | 0.0002 | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000112 | --- | --- | --- | --- | 0.000126 |
| Vanadium | mg/L | --- | --- | --- | --- | 0.00027 | --- | --- | --- | --- | 0.00029 |
| Zinc | mg/L | --- | --- | --- | --- | 0.003 | --- | --- | --- | --- | < 0.002 |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML92-061-01 Discovery
**Weight:** 1 kg

| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk# 9 |
| | | CA10114-MAR10 | CA10115-MAR10 | CA10116-MAR10 | CA10117-MAR10 | CA10130-MAR10 | CA10009-APR10 | CA10036-APR10 | CA10078-APR10 | CA11102-APR10 | CA10009-MAY10 |
| | | 2-Mar-10 | 9-Mar-10 | 16-Mar-10 | 23-Mar-10 | 30-Mar-10 | 6-Apr-10 | 13-Apr-10 | 20-Apr-10 | 27-Apr-10 | 4-May-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 775 | 833 | 859 | 887 | 881 | 866 | 843 | 848 | 862 | 845 |
| pH | units | 7.25 | 7.28 | 7.39 | 6.99 | 7.16 | 7.16 | 7.17 | 7.11 | 7.21 | 6.88 |
| Alkalinity | mg/L as $CaCO_3$ | 8 | 6 | 6 | 6 | < 2 | 4 | 5 | 4 | 4 | 4 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 43 | 51 | 32 | 24 | 21 | 20 | 24 | 19 | 16 | 20 |
| Sulphate | mg/L | 6.1 | 11 | 6.0 | 4.2 | 3.3 | 3.7 | 4.7 | 4 | 3.1 | 4.1 |
| Chloride | mg/L | 1.3 | 0.8 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.60 | 2.05 | 1.38 | 1.51 | 1.37 | 1.37 | 1.67 | 1.57 | 1.36 | 1.67 |
| As+3 | mg/L | 0.004 | 0.008 | 0.003 | 0.008 | --- | 0.020 | --- | --- | 0.003 | --- |
| As+5 | mg/L | < 0.001 | < 0.001 | 0.005 | 0.003 | --- | < 0.001 | --- | --- | 0.014 | --- |
| Aluminum | mg/L | 0.07 | 0.06 | 0.05 | 0.03 | --- | 0.04 | --- | --- | 0.03 | --- |
| Arsenic | mg/L | 0.0043 | 0.008 | 0.0092 | 0.0094 | --- | 0.0156 | --- | --- | 0.0187 | --- |
| Barium | mg/L | 0.00065 | 0.00071 | 0.00039 | 0.00045 | --- | 0.00054 | --- | --- | 0.00096 | --- |
| Boron | mg/L | 0.0047 | 0.008 | 0.0053 | 0.0054 | --- | 0.0023 | --- | --- | 0.0032 | --- |
| Cadmium | mg/L | 0.00001 | < 0.000003 | < 0.000003 | < 0.000003 | --- | 0.000009 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.00027 | 0.00017 | 0.00011 | 0.000107 | --- | 0.000132 | --- | --- | 0.000843 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0008 | 0.0009 | 0.0008 | 0.0005 | --- | < 0.0005 | --- | --- | 0.0012 | --- |
| Iron | mg/L | 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 3.43 | 5.08 | 2.77 | 2.15 | --- | 1.78 | --- | --- | 1.19 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.401 | 0.845 | 0.514 | 0.524 | --- | 0.471 | --- | --- | 0.404 | --- |
| Manganese | mg/L | 0.00413 | 0.00373 | 0.00303 | 0.00203 | --- | 0.00207 | --- | --- | 0.00515 | --- |
| Molybdenum | mg/L | 0.00028 | 0.00068 | 0.00044 | 0.0004 | --- | 0.00033 | --- | --- | 0.00037 | --- |
| Sodium | mg/L | 3.26 | 4.13 | 1.67 | 0.96 | --- | 0.48 | --- | --- | 0.2 | --- |
| Nickel | mg/L | 0.001 | 0.001 | 0.0004 | 0.0004 | --- | < 0.0001 | --- | --- | 0.0024 | --- |
| Lead | mg/L | 0.00007 | 0.00005 | < 0.00002 | < 0.00002 | --- | 0.00038 | --- | --- | 0.00003 | --- |
| Antimony | mg/L | 0.0004 | 0.0003 | 0.0004 | 0.0003 | --- | < 0.0002 | --- | --- | 0.0003 | --- |
| Tin | mg/L | 0.0186 | 0.00657 | 0.00313 | 0.00221 | --- | 0.00103 | --- | --- | 0.00057 | --- |
| Strontium | mg/L | 0.0084 | 0.015 | 0.0094 | 0.0101 | --- | 0.0089 | --- | --- | 0.0087 | --- |
| Titanium | mg/L | 0.0014 | 0.0004 | 0.0003 | 0.0002 | --- | 0.0002 | --- | --- | 0.0002 | --- |
| Uranium | mg/L | 0.00004 | 0.00026 | 0.000237 | 0.000274 | --- | 0.000274 | --- | --- | 0.000208 | --- |
| Vanadium | mg/L | 0.0003 | 0.00034 | 0.0003 | 0.00022 | --- | 0.00031 | --- | --- | 0.00029 | --- |
| Zinc | mg/L | 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

| | | |
|---|---|---|
| **Humidity Cell:** | ML92-061-01 | Discovery |
| **Weight:** | 1 kg | |

| | | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| | | CA10035-MAY10 | CA10060-MAY10 | CA10085-MAY10 | CA10009-JUN10 | CA10034-JUN10 | CA10072-JUN10 | CA10084-JUN10 | CA10188-JUN10 | CA10008-JUL10 | CA10032-JUL10 | CA10058-JUL10 |
| | | 11-May-10 | 18-May-10 | 25-May-10 | 1-Jun-10 | 8-Jun-10 | 15-Jun-10 | 22-Jun-10 | 29-Jun-10 | 6-Jul-10 | 13-Jul-10 | 20-Jul-10 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 900 | 858 | 896 | 881 | 887 | 891 | 890 | 887 | 883 | 887 | 889 |
| pH | units | 6.92 | 6.99 | 6.84 | 6.8 | 6.78 | 6.87 | 6.81 | 6.88 | 6.84 | 6.88 | 6.69 |
| Alkalinity | mg/L as $CaCO_3$ | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 16 | 16 | 17 | 15 | 15 | 14 | 14 | 15 | 15 | 15 | 15 |
| Sulphate | mg/L | 2.4 | 3 | 2.7 | 2.7 | 2.6 | 2.6 | 2.5 | 2.9 | 2.6 | 3 | 2.9 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.56 | 1.31 | 1.63 | 1.72 | 1.66 | 1.43 | 1.59 | 1.58 | 1.58 | 1.43 | 1.51 |
| As+3 | mg/L | --- | --- | | --- | --- | --- | 0.023 | --- | --- | --- | 0.025 |
| As+5 | mg/L | --- | --- | | --- | --- | --- | < 0.001 | --- | --- | --- | 0.001 |
| Aluminum | mg/L | --- | --- | 0.02 | --- | --- | --- | 0.03 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | 0.0196 | --- | --- | --- | 0.0197 | --- | --- | --- | 0.0231 |
| Barium | mg/L | --- | --- | 0.00118 | --- | --- | --- | 0.00137 | --- | --- | --- | 0.00048 |
| Boron | mg/L | --- | --- | 0.0008 | --- | --- | --- | 0.0005 | --- | --- | --- | 0.0017 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | 0.000004 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.000217 | --- | --- | --- | 0.00027 | --- | --- | --- | 0.00191 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | 0.0007 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |
| Potassium | mg/L | --- | --- | 0.804 | --- | --- | --- | 0.604 | --- | --- | --- | 0.65 |
| Lithium | mg/L | --- | --- | < 0.1 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | 0.33 | --- | --- | --- | 0.237 | --- | --- | --- | 0.237 |
| Manganese | mg/L | --- | --- | 0.00191 | --- | --- | --- | 0.00175 | --- | --- | --- | 0.00183 |
| Molybdenum | mg/L | --- | --- | 0.0001 | --- | --- | --- | < 0.00001 | --- | --- | --- | 0.0001 |
| Sodium | mg/L | --- | --- | 0.12 | --- | --- | --- | 0.08 | --- | --- | --- | 0.07 |
| Nickel | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0004 | --- | --- | --- | 0.0012 |
| Lead | mg/L | --- | --- | 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- | 0.0003 |
| Tin | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.00032 | --- | --- | --- | 0.00034 |
| Strontium | mg/L | --- | --- | 0.0084 | --- | --- | --- | 0.0077 | --- | --- | --- | 0.0074 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | 0.000221 | --- | --- | --- | 0.000206 | --- | --- | --- | 0.000186 |
| Vanadium | mg/L | --- | --- | 0.00022 | --- | --- | --- | 0.00019 | --- | --- | --- | 0.00013 |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML92-061-01 Discovery
**Weight:** 1 kg

| | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| | | CA10084-JUL10 | CA10008-AUG10 | CA10034-AUG10 | CA10060-AUG10 | CA11296-AUG10 | CA10276-AUG10 | CA10020-SEP10 | CA10046-SEP10 | CA10070-SEP10 | CA10094-SEP10 |
| | | 27-Jul-10 | 3-Aug-10 | 10-Aug-10 | 17-Aug-10 | 24-Aug-10 | 31-Aug-10 | 7/Sep/10 | 14/Sep/10 | 21/Sep/10 | 28/Sep/10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 879 | 888 | 900 | 887 | 890 | 899 | 890 | 900 | 903 | 917 |
| pH | units | 6.51 | 6.59 | 6.86 | 6.75 | 6.72 | 6.84 | 6.66 | 6.8 | 6.92 | 6.56 |
| Alkalinity | mg/L as $CaCO_3$ | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 4 | 3 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 15 | 14 | 16 | 14 | 15 | 14 | 14 | 15 | 16 | 15 |
| Sulphate | mg/L | 2.8 | 2.8 | 2.8 | 2.9 | 2.6 | | 2.8 | 2.8 | 2.9 | 2.8 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.67 | 1.63 | 1.52 | 1.62 | 1.73 | | 2.72 | 1.85 | 2.06 | 1.85 |
| As+3 | mg/L | --- | --- | --- | --- | 0.021 | --- | --- | --- | --- | 0.021 |
| As+5 | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | 0.003 |
| Aluminum | mg/L | --- | --- | --- | --- | 0.03 | --- | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.022 | --- | --- | --- | --- | 0.0231 |
| Barium | mg/L | --- | --- | --- | --- | 0.00061 | --- | --- | --- | --- | 0.00052 |
| Boron | mg/L | --- | --- | --- | --- | 0.0004 | --- | --- | --- | --- | 0.0003 |
| Cadmium | mg/L | --- | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | 0.000004 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.000323 | --- | --- | --- | --- | 0.000364 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Potassium | mg/L | --- | --- | --- | --- | 0.595 | --- | --- | --- | --- | 0.573 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 0.173 | --- | --- | --- | --- | 0.161 |
| Manganese | mg/L | --- | --- | --- | --- | 0.00131 | --- | --- | --- | --- | 0.00141 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00022 | --- | --- | --- | --- | 0.00012 |
| Sodium | mg/L | --- | --- | --- | --- | 0.04 | --- | --- | --- | --- | 0.06 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0004 | --- | --- | --- | --- | 0.0007 |
| Lead | mg/L | --- | --- | --- | --- | 0.00003 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | < 0.0002 |
| Tin | mg/L | --- | --- | --- | --- | 0.00025 | --- | --- | --- | --- | 0.00018 |
| Strontium | mg/L | --- | --- | --- | --- | 0.007 | --- | --- | --- | --- | 0.0072 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | 0.0003 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000196 | --- | --- | --- | --- | 0.000594 |
| Vanadium | mg/L | --- | --- | --- | --- | 0.00021 | --- | --- | --- | --- | 0.00015 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |

**Humidity Cell Results**

**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML92-061-01 Discovery
**Weight:** 1 kg

| | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| | | CA10089-OCT10 | CA10113-OCT10 | CA10261-OCT10 | CA10282-OCT10 | CA10007-NOV10 | CA10030-NOV10 | CA11184-NOV10 | CA11205-NOV10 | CA11226-NOV10 | CA10115-DEC10 |
| | | 5-Oct-10 | 12-Oct-10 | 19-Oct-10 | 26-Oct-10 | 2/Nov/10 | 9/Nov/10 | 16/Nov/10 | 23/Nov/10 | 30/Nov/10 | 7-Dec-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 901 | 911 | 897 | 902 | 896 | 887 | 895 | 906 | 912 | 938 |
| pH | units | 6.72 | 6.73 | 6.91 | 6.63 | 6.63 | 6.69 | 6.71 | 6.88 | 6.83 | 6.70 |
| Alkalinity | mg/L as $CaCO_3$ | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 3 | 3 | 4 |
| Acidity | mg/L as $CaCO_3$ | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 14 | 14 | 17 | 15 | 14 | 16 | 15 | 20 | 17 | 19 |
| Sulphate | mg/L | 2.8 | 3 | 2.7 | 2.6 | 2.9 | 3.5 | 3.1 | 3.1 | 3.3 | 3.7 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.88 | 1.97 | 1.92 | 1.89 | 2.26 | 2.15 | 1.98 | 1.89 | 2.18 | 2.49 |
| As+3 | mg/L | --- | --- | --- | --- | 0.02 | --- | --- | --- | --- | |
| As+5 | mg/L | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- | |
| Aluminum | mg/L | --- | --- | --- | --- | 0.01 | --- | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0188 | --- | --- | --- | --- | 0.0223 |
| Barium | mg/L | --- | --- | --- | --- | 0.00046 | --- | --- | --- | --- | 0.00065 |
| Boron | mg/L | --- | --- | --- | --- | 0.0007 | --- | --- | --- | --- | < 0.0002 |
| Cadmium | mg/L | --- | --- | --- | --- | 0.000463 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.00038 | --- | --- | --- | --- | 0.000518 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | 0.0011 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | 0.024 | --- | --- | --- | --- | < 0.002 |
| Potassium | mg/L | --- | --- | --- | --- | 0.471 | --- | --- | --- | --- | 0.569 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 0.311 | --- | --- | --- | --- | 0.145 |
| Manganese | mg/L | --- | --- | --- | --- | 0.00388 | --- | --- | --- | --- | 0.00152 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00007 | --- | --- | --- | --- | 0.00007 |
| Sodium | mg/L | --- | --- | --- | --- | 0.04 | --- | --- | --- | --- | 0.05 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0009 | --- | --- | --- | --- | 0.001 |
| Lead | mg/L | --- | --- | --- | --- | 0.00063 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | 0.0002 |
| Tin | mg/L | --- | --- | --- | --- | 0.00017 | --- | --- | --- | --- | 0.00032 |
| Strontium | mg/L | --- | --- | --- | --- | 0.007 | --- | --- | --- | --- | 0.0086 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000196 | --- | --- | --- | --- | 0.000224 |
| Vanadium | mg/L | --- | --- | --- | --- | 0.00013 | --- | --- | --- | --- | 0.00015 |
| Zinc | mg/L | --- | --- | --- | --- | 0.003 | --- | --- | --- | --- | < 0.002 |

**Humidity Cell Results**

| | | |
|---|---|---|
| **Customer:** | Comaplex Minerals | Golder Associates |
| **Project Manager:** | Mark Balog | Valerie Bertrand |
| **SGS Contact:** | Brian Graham | |

| | | |
|---|---|---|
| **Humidity Cell:** | ML95-82-1 | Discovery |
| **Weight:** | 1 kg | |

| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#0 | Wk#1 | Wk#2 | Wk#3 | Wk#4 | Wk#5 | Wk#6 | Wk#7 | Wk#8 | Wk# 9 |
| | | CA10114-MAR10 | CA10115-MAR10 | CA10116-MAR10 | CA10117-MAR10 | CA10130-MAR10 | CA10009-APR10 | CA10036-APR10 | CA10078-APR10 | CA11102-APR10 | CA10009-MAY10 |
| | | 2-Mar-10 | 9-Mar-10 | 16-Mar-10 | 23-Mar-10 | 30-Mar-10 | 6-Apr-10 | 13-Apr-10 | 20-Apr-10 | 27-Apr-10 | 4-May-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 775 | 879 | 917 | 891 | 994 | 990 | 985 | 980 | 979 | 974 |
| pH | units | 7.20 | 7.13 | 7.20 | 7.08 | 7.36 | 7.38 | 7.26 | 7.22 | 7.21 | 7.1 |
| Alkalinity | mg/L as CaCO3 | 7 | 6 | 7 | 9 | 12 | 10 | 7 | 6 | 7 | 6 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 39 | 49 | 40 | 33 | 36 | 28 | 26 | 25 | 23 | 26 |
| Sulphate | mg/L | 6.8 | 13 | 8.5 | 5.7 | 3.8 | 3.7 | 4.2 | 4.2 | 4.3 | 4.5 |
| Chloride | mg/L | 0.8 | 0.4 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 1.55 | 2.78 | 2.4 | 2.83 | 3.72 | 3.07 | 2.92 | 2.74 | 2.89 | 2.86 |
| As+3 | mg/L | 0.005 | 0.006 | 0.010 | 0.015 | --- | 0.009 | --- | --- | 0.004 | --- |
| As+5 | mg/L | 0.002 | 0.007 | 0.001 | < 0.001 | --- | 0.016 | --- | --- | 0.021 | --- |
| Aluminum | mg/L | 0.06 | 0.05 | 0.04 | 0.03 | --- | 0.04 | --- | --- | 0.03 | --- |
| Arsenic | mg/L | 0.0056 | 0.0104 | 0.0142 | 0.0159 | --- | 0.0225 | --- | --- | 0.0249 | --- |
| Barium | mg/L | 0.00063 | 0.00073 | 0.00087 | 0.00069 | --- | 0.00074 | --- | --- | 0.00092 | --- |
| Boron | mg/L | 0.0055 | 0.0065 | 0.006 | 0.0049 | --- | 0.0022 | --- | --- | 0.0019 | --- |
| Cadmium | mg/L | 0.000005 | 0.000003 | < 0.000003 | < 0.000003 | --- | 0.000006 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000097 | 0.000145 | 0.000123 | 0.000102 | --- | 0.000156 | --- | --- | 0.000349 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0008 | 0.0006 | 0.0037 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Potassium | mg/L | 3.14 | 4.33 | 2.84 | 2.33 | --- | 1.76 | --- | --- | 1.15 | --- |
| Lithium | mg/L | < 0.002 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- |
| Magnesium | mg/L | 0.372 | 0.97 | 0.697 | 0.741 | --- | 0.641 | --- | --- | 0.476 | --- |
| Manganese | mg/L | 0.0034 | 0.00404 | 0.00411 | 0.00382 | --- | 0.0038 | --- | --- | 0.00503 | --- |
| Molybdenum | mg/L | 0.0003 | 0.0008 | 0.00054 | 0.00039 | --- | 0.00017 | --- | --- | 0.00026 | --- |
| Sodium | mg/L | 2.59 | 3.23 | 1.75 | 1.04 | --- | 0.41 | --- | --- | 0.21 | --- |
| Nickel | mg/L | 0.0009 | 0.0009 | 0.0006 | 0.0005 | --- | 0.0001 | --- | --- | 0.001 | --- |
| Lead | mg/L | 0.00034 | 0.00006 | 0.0003 | 0.00043 | --- | 0.00052 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0003 | 0.0004 | 0.0004 | 0.0004 | --- | 0.0002 | --- | --- | 0.0003 | --- |
| Tin | mg/L | 0.0104 | 0.00271 | 0.00175 | 0.00203 | --- | 0.00083 | --- | --- | 0.00069 | --- |
| Strontium | mg/L | 0.0075 | 0.0161 | 0.0128 | 0.014 | --- | 0.0136 | --- | --- | 0.0123 | --- |
| Titanium | mg/L | 0.0011 | 0.0001 | 0.0001 | 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Uranium | mg/L | 0.000097 | 0.000681 | 0.000736 | 0.000782 | --- | 0.000852 | --- | --- | 0.000749 | --- |
| Vanadium | mg/L | 0.00032 | 0.00035 | 0.00039 | 0.00034 | --- | 0.00046 | --- | --- | 0.0004 | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.002 | --- | --- | 0.001 | --- |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML95-82-1 Discovery
**Weight:** 1 kg

| | | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#10 | Wk#11 | Wk#12 | Wk#13 | Wk#14 | Wk#15 | Wk#16 | Wk#17 | Wk#18 | Wk#19 | Wk#20 |
| | | CA10035-MAY10 | CA10060-MAY10 | CA10085-MAY10 | CA10009-JUN10 | CA10034-JUN10 | CA10072-JUN10 | CA10084-JUN10 | CA10188-JUN10 | CA10008-JUL10 | CA10032-JUL10 | CA10058-JUL10 |
| | | 11-May-10 | 18-May-10 | 25-May-10 | 1-Jun-10 | 8-Jun-10 | 15-Jun-10 | 22-Jun-10 | 29-Jun-10 | 6-Jul-10 | 13-Jul-10 | 20-Jul-10 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 981 | 982 | 905 | 984 | 989 | 985 | 894 | 985 | 901 | 985 | 985 |
| pH | units | 7.02 | 7.07 | 7.13 | 7.18 | 7.14 | 7.1 | 6.99 | 7.07 | 7.07 | 7.19 | 6.83 |
| Alkalinity | mg/L as CaCO3 | 6 | 5 | 6 | 7 | 8 | 5 | 4 | 6 | 5 | 5 | 5 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 21 | 21 | 26 | 23 | 26 | 18 | 16 | 20 | 21 | 21 | 19 |
| Sulphate | mg/L | 2.9 | 3.1 | 3.7 | 2.9 | 3.2 | 2.3 | 2.5 | 2.9 | 3.3 | 3 | 3 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 2.55 | 2.43 | 3.03 | 3.15 | 3.77 | 2.35 | 2.01 | 2.64 | 2.72 | 2.36 | 2.44 |
| As+3 | mg/L | --- | --- | | --- | --- | --- | 0.009 | --- | --- | --- | 0.024 |
| As+5 | mg/L | --- | --- | | --- | --- | --- | 0.022 | --- | --- | --- | 0.01 |
| Aluminum | mg/L | --- | --- | 0.03 | --- | --- | --- | 0.06 | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | --- | 0.0326 | --- | --- | --- | 0.0271 | --- | --- | --- | 0.0305 |
| Barium | mg/L | --- | --- | 0.00066 | --- | --- | --- | 0.00051 | --- | --- | --- | 0.00081 |
| Boron | mg/L | --- | --- | 0.0008 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0006 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | 0.000011 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.00022 | --- | --- | --- | 0.000225 | --- | --- | --- | 0.00042 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.002 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |
| Potassium | mg/L | --- | --- | 0.957 | --- | --- | --- | 0.655 | --- | --- | --- | 0.746 |
| Lithium | mg/L | --- | --- | < 0.1 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | 0.395 | --- | --- | --- | 0.211 | --- | --- | --- | 0.214 |
| Manganese | mg/L | --- | --- | 0.00337 | --- | --- | --- | 0.00287 | --- | --- | --- | 0.00451 |
| Molybdenum | mg/L | --- | --- | 0.00012 | --- | --- | --- | < 0.00001 | --- | --- | --- | 0.00007 |
| Sodium | mg/L | --- | --- | 0.14 | --- | --- | --- | 0.07 | --- | --- | --- | 0.07 |
| Nickel | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | --- | 0.00038 | --- | --- | --- | 0.00002 | --- | --- | --- | 0.00008 |
| Antimony | mg/L | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- | 0.0003 |
| Tin | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0004 | --- | --- | --- | 0.00023 |
| Strontium | mg/L | --- | --- | 0.0112 | --- | --- | --- | 0.0073 | --- | --- | --- | 0.0091 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | 0.0001 | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | 0.000662 | --- | --- | --- | 0.000419 | --- | --- | --- | 0.000417 |
| Vanadium | mg/L | --- | --- | 0.00039 | --- | --- | --- | 0.00028 | --- | --- | --- | 0.00023 |
| Zinc | mg/L | --- | --- | 0.001 | --- | --- | --- | < 0.002 | --- | --- | --- | < 0.002 |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML95-82-1 Discovery
**Weight:** 1 kg

| | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#21 | Wk#22 | Wk#23 | Wk#24 | Wk#25 | Wk#26 | Wk#27 | Wk#28 | Wk#29 | Wk#30 |
| | | CA10084-JUL10 | CA10008-AUG10 | CA10034-AUG10 | CA10060-AUG10 | CA11296-AUG10 | CA10276-AUG10 | CA10020-SEP10 | CA10046-SEP10 | CA10070-SEP10 | CA10094-SEP10 |
| | | 27-Jul-10 | 3-Aug-10 | 10-Aug-10 | 17-Aug-10 | 24-Aug-10 | 31-Aug-10 | 7-Sep-10 | 14-Sep-10 | 21-Sep-10 | 28-Sep-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 985 | 990 | 920 | 989 | 984 | 986 | 984 | 990 | 942 | 992 |
| pH | units | 6.5 | 6.83 | 7 | 7.01 | 6.95 | 7.09 | 6.95 | 6.94 | 7.1 | 6.85 |
| Alkalinity | mg/L as CaCO3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 22 | 20 | 19 | 20 | 20 | 20 | 21 | 19 | 20 | 20 |
| Sulphate | mg/L | 3 | 3 | 2.9 | 3 | 2.8 | | 2.9 | 2.7 | 3.1 | 2.6 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 2.69 | 2.71 | 2.25 | 2.73 | 2.71 | | 2.64 | 2.64 | 3.14 | 2.61 |
| As+3 | mg/L | --- | --- | --- | --- | 0.028 | --- | --- | --- | --- | 0.028 |
| As+5 | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | 0.002 |
| Aluminum | mg/L | --- | --- | --- | --- | 0.02 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0284 | --- | --- | --- | --- | 0.0304 |
| Barium | mg/L | --- | --- | --- | --- | 0.00073 | --- | --- | --- | --- | 0.00088 |
| Boron | mg/L | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | 0.0003 |
| Cadmium | mg/L | --- | --- | --- | --- | 0.000004 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.000281 | --- | --- | --- | --- | 0.000317 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Potassium | mg/L | --- | --- | --- | --- | 0.67 | --- | --- | --- | --- | 0.632 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 0.175 | --- | --- | --- | --- | 0.151 |
| Manganese | mg/L | --- | --- | --- | --- | 0.00526 | --- | --- | --- | --- | 0.00545 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00008 | --- | --- | --- | --- | 0.00005 |
| Sodium | mg/L | --- | --- | --- | --- | 0.04 | --- | --- | --- | --- | 0.05 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0001 | --- | --- | --- | --- | 0.0005 |
| Lead | mg/L | --- | --- | --- | --- | 0.00003 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | < 0.0002 |
| Tin | mg/L | --- | --- | --- | --- | 0.00015 | --- | --- | --- | --- | 0.00011 |
| Strontium | mg/L | --- | --- | --- | --- | 0.0093 | --- | --- | --- | --- | 0.0088 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | 0.0003 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000351 | --- | --- | --- | --- | 0.000281 |
| Vanadium | mg/L | --- | --- | --- | --- | 0.00031 | --- | --- | --- | --- | 0.00026 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |

**Humidity Cell Results**
**Customer:** Comaplex Minerals Golder Associates
**Project Manager:** Mark Balog Valerie Bertrand
**SGS Contact:** Brian Graham

**Humidity Cell:** ML95-82-1 Discovery
**Weight:** 1 kg

| | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Unit | Wk#31 | Wk#32 | Wk#33 | Wk#34 | Wk#35 | Wk#36 | Wk#37 | Wk#38 | Wk#39 | Wk#40 |
| | | CA10089-OCT10 | CA10113-OCT10 | CA10261-OCT10 | CA10282-OCT10 | CA10007-NOV10 | CA10030-NOV10 | CA11184-NOV10 | CA11205-NOV10 | CA11226-NOV10 | CA10115-DEC10 |
| | | 5-Oct-10 | 12-Oct-10 | 19-Oct-10 | 26-Oct-10 | 2-Nov-10 | 9-Nov-10 | 16-Nov-10 | 23-Nov-10 | 30-Nov-10 | 7-Dec-10 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 974 | 926 | 983 | 981 | 982 | 977 | 984 | 982 | 906 | 982 |
| pH | units | 6.95 | 6.84 | 6.88 | 6.90 | 6.90 | 7.22 | 6.9 | 7.01 | 6.85 | 6.95 |
| Alkalinity | mg/L as CaCO3 | 5 | 5 | 5 | 5 | 4 | 6 | 5 | 4 | 4 | 6 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | µS/cm | 18 | 18 | 19 | 19 | 17 | 22 | 19 | 22 | 17 | 22 |
| Sulphate | mg/L | 2.8 | 3.2 | 2.6 | 2.9 | 2.9 | 3.5 | 3.1 | 2.9 | 3 | 3.2 |
| Chloride | mg/L | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 | < 0.2 |
| Calcium | mg/L | 2.64 | 2.78 | 2.77 | 1.65 | 2.36 | 3.01 | 2.78 | 2.32 | 2.34 | 3.37 |
| As+3 | mg/L | --- | --- | --- | --- | 0.025 | --- | --- | --- | --- | |
| As+5 | mg/L | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- | |
| Aluminum | mg/L | --- | --- | --- | --- | < 0.01 | --- | --- | --- | --- | 0.01 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0241 | --- | --- | --- | --- | 0.0288 |
| Barium | mg/L | --- | --- | --- | --- | 0.00079 | --- | --- | --- | --- | 0.00084 |
| Boron | mg/L | --- | --- | --- | --- | 0.0007 | --- | --- | --- | --- | < 0.0002 |
| Cadmium | mg/L | --- | --- | --- | --- | 0.000093 | --- | --- | --- | --- | 0.000004 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.000335 | --- | --- | --- | --- | 0.000434 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |
| Potassium | mg/L | --- | --- | --- | --- | 0.531 | --- | --- | --- | --- | 0.608 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 0.12 | --- | --- | --- | --- | 0.148 |
| Manganese | mg/L | --- | --- | --- | --- | 0.00643 | --- | --- | --- | --- | 0.00844 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00004 | --- | --- | --- | --- | 0.00003 |
| Sodium | mg/L | --- | --- | --- | --- | 0.04 | --- | --- | --- | --- | 0.05 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0005 | --- | --- | --- | --- | 0.0005 |
| Lead | mg/L | --- | --- | --- | --- | 0.0001 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | < 0.0002 |
| Tin | mg/L | --- | --- | --- | --- | 0.00012 | --- | --- | --- | --- | 0.00011 |
| Strontium | mg/L | --- | --- | --- | --- | 0.0078 | --- | --- | --- | --- | 0.0107 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000199 | --- | --- | --- | --- | 0.000334 |
| Vanadium | mg/L | --- | --- | --- | --- | 0.00019 | --- | --- | --- | --- | 0.00024 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.002 | --- | --- | --- | --- | < 0.002 |

# H.2.2 Large Column Kinetic Test Results

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 1: Tiri GW OP E
**Weight:** 98 kg

EXTRA SAMPLING

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11198-JUL11 | CA11199-JUL11 | CA10090-AUG11 | CA10091-AUG11 | CA11133-AUG11 | CA11207-AUG11 | CA10310-AUG11 | CA10043-SEP11 | CA10087-SEP11 | CA10209-SEP11 | CA10342-SEP11 |
| | | 20-Jul-11 | 27-Jul-11 | 03-Aug-11 | 10-Aug-11 | 17-Aug-11 | 24-Aug-11 | 31-Aug-11 | 07-Sep-11 | 14-Sep-11 | 21-Sep-11 | 28-Sep-11 |
| Leachate Volume Added (mL) | mL | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 34300 | 9800 | 9800 |
| Hum Cell Leachate Volume | mLs | 1393 | 8951 | 9836 | 9768 | 9632 | 9768 | 9586 | 9518 | 33318 | 10494 | 9268 |
| pH | no unit | 7.67 | 8.16 | 8.30 | 8.46 | 8.18 | 8.08 | 8 | 8 | 8 | 8 | 8.06 |
| Alkalinity | mg/L as CaCO3 | 31 | 83 | 65 | 64 | 60.00 | 60.00 | 63.00 | 63.00 | 52.00 | 51.00 | 49 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 194 | 529 | 285 | 275 | 268 | 265 | 232 | 227 | 143 | 154 | 141 |
| Sulphate | mg/L | 37 | 150 | 80 | 64 | 57 | 54 | 51 | 48 | 39 | 42 | 33 |
| Calcium | mg/L | 10.2 | 24 | 19.7 | 17.7 | 19.3 | 19.0 | 20.2 | 17.9 | 16.0 | 18.8 | 18.6 |
| As+3 | mg/L | 0.007 | 0.012 | 0.012 | 0.01 | --- | 0.011 | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.001 | 0.019 | 0.013 | 0.018 | --- | 0.014 | --- | --- | --- | --- | --- |
| Chloride | mg/L | 7.4 | 25 | 12 | 8.7 | --- | 5.7 | --- | --- | 1.7 | --- | --- |
| Fluoride | mg/L | 0.17 | 0.22 | 0.13 | 0.13 | --- | 0.1 | --- | --- | 0.07 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.34 | 0.15 | 0.22 | 0.18 | --- | 0.19 | --- | --- | 0.18 | --- | --- |
| Arsenic | mg/L | 0.0037 | 0.0296 | 0.0296 | 0.0309 | --- | 0.0361 | --- | --- | 0.0382 | --- | --- |
| Barium | mg/L | 0.0106 | 0.0293 | 0.016 | 0.0125 | --- | 0.0116 | --- | --- | 0.00862 | --- | --- |
| Boron | mg/L | 0.0086 | 0.0271 | 0.0144 | 0.0132 | --- | 0.03 | --- | --- | 0.0093 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000056 | 0.000223 | 0.000216 | 0.0002 | --- | 0.0002 | --- | --- | 0.000316 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | 0.0008 | 0.0006 | < 0.0005 | --- | 0.00 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.003 | < 0.002 | < 0.002 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- | --- |
| Potassium | mg/L | 15.8 | 34.7 | 23.7 | 17.6 | --- | 15.2 | --- | --- | 9.52 | --- | --- |
| Lithium | mg/L | 0.001 | 0.002 | 0.002 | 0.001 | --- | 0.002 | --- | --- | 0.001 | --- | --- |
| Magnesium | mg/L | 1.61 | 8.72 | 6.83 | 6.07 | --- | 6.36 | --- | --- | 4.87 | --- | --- |
| Manganese | mg/L | 0.00902 | 0.00874 | 0.00798 | 0.00998 | --- | 0.0139 | --- | --- | 0.0134 | --- | --- |
| Molybdenum | mg/L | 0.00121 | 0.0063 | 0.00373 | 0.00267 | --- | 0.003 | --- | --- | 0.00143 | --- | --- |
| Sodium | mg/L | 16.2 | 49 | 30.7 | 20.6 | --- | 15.2 | --- | --- | 6.33 | --- | --- |
| Nickel | mg/L | 0.0005 | 0.0018 | 0.0008 | 0.0007 | --- | 0.001 | --- | --- | 0.0009 | --- | --- |
| Phosphorus | mg/L | 0.033 | 0.02 | 0.012 | 0.018 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | 0.00002 | < 0.00002 | 0.00002 | 0.00007 | --- | 0.00043 | --- | --- | 0.00006 | --- | --- |
| Antimony | mg/L | 0.001 | 0.0051 | 0.0039 | 0.0036 | --- | 0.00 | --- | --- | 0.0027 | --- | --- |
| Selenium | mg/L | < 0.001 | 0.003 | < 0.001 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00035 | 0.0001 | 0.00002 | < 0.00001 | --- | 0.000 | --- | --- | 0.00002 | --- | --- |
| Strontium | mg/L | 0.0601 | 0.194 | 0.141 | 0.126 | --- | 0.125 | --- | --- | 0.0949 | --- | --- |
| Titanium | mg/L | 0.0005 | 0.0003 | 0.0009 | 0.0004 | --- | 0.0006 | --- | --- | 0.0011 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.00004 | 0.00172 | 0.000966 | 0.000865 | --- | 0.00 | --- | --- | 0.000761 | --- | --- |
| Vanadium | mg/L | 0.00021 | 0.00081 | 0.00044 | 0.00042 | --- | 0.00043 | --- | --- | 0.00034 | --- | --- |
| Tungsten | mg/L | 0.0001 | 0.00132 | 0.00022 | 0.00018 | --- | 0.0002 | --- | --- | 0.00022 | --- | --- |
| Yttrium | mg/L | 0.000009 | 0.000006 | 0.000005 | 0.000006 | --- | 0.000007 | --- | --- | 0.000019 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.006 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 1: Tiri GW OP E
**Weight:** 98 kg

| Analyte | Event # | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10073-OCT11 | CA10125-OCT11 | CA10176-OCT11 | CA11261-OCT11 | CA10033-NOV11 | CA10108-NOV11 | CA10168-NOV11 | CA10259-NOV11 | CA11815-NOV11 | CA10031-DEC11 |
| | | 05-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 02-Nov-11 | 09-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 07-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 |
| Hum Cell Leachate Volume | mLs | 9632 | 9178 | 9360 | 10108 | 9518 | 9292 | 9088 | 10131 | 9836 | 9518 |
| pH | no unit | 7.67 | 8.09 | 8.00 | 7.78 | 8.05 | 7.96 | 7.84 | 7.91 | 7.92 | 7.87 |
| Alkalinity | mg/L as CaCO3 | 21 | 47 | 53 | 50 | 48 | 48 | 44 | 48 | 49 | 52 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 177 | 169 | 186 | 209 | 148 | 135 | 157 | 188 | 144 | 175 |
| Sulphate | mg/L | 41 | 37 | 42 | 49 | 41 | 39 | 33 | 41 | 43 | 37 |
| Calcium | mg/L | 22.0 | 18.9 | 20.8 | 23.2 | 22.1 | 21.8 | 19.1 | 22.8 | 22.5 | 21.7 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | 0.4 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Fluoride | mg/L | --- | 0.07 | --- | --- | --- | 0.08 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | 0.14 | --- | --- | --- | 0.13 | --- | --- | --- | 0.13 |
| Arsenic | mg/L | --- | 0.0326 | --- | --- | --- | 0.0302 | --- | --- | --- | 0.0262 |
| Barium | mg/L | --- | 0.00854 | --- | --- | --- | 0.00862 | --- | --- | --- | 0.00775 |
| Boron | mg/L | --- | 0.013 | --- | --- | --- | 0.006 | --- | --- | --- | 0.0058 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | 0.000008 |
| Cobalt | mg/L | --- | 0.00043 | --- | --- | --- | 0.000503 | --- | --- | --- | 0.000444 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | 0.0007 |
| Iron | mg/L | --- | 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 7.05 | --- | --- | --- | 6.01 | --- | --- | --- | 4.59 |
| Lithium | mg/L | --- | 0.001 | --- | --- | --- | 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | 5.29 | --- | --- | --- | 5.93 | --- | --- | --- | 5.61 |
| Manganese | mg/L | --- | 0.0164 | --- | --- | --- | 0.0177 | --- | --- | --- | 0.0142 |
| Molybdenum | mg/L | --- | 0.00109 | --- | --- | --- | 0.00134 | --- | --- | --- | 0.00178 |
| Sodium | mg/L | --- | 3.12 | --- | --- | --- | 2.22 | --- | --- | --- | 1.46 |
| Nickel | mg/L | --- | 0.0012 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.0004 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | 0.00002 | --- | --- | --- | 0.00002 | --- | --- | --- | 0.00005 |
| Antimony | mg/L | --- | 0.0025 | --- | --- | --- | 0.0024 | --- | --- | --- | 0.0017 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | 0.11 | --- | --- | --- | 0.122 | --- | --- | --- | 0.116 |
| Titanium | mg/L | --- | 0.0009 | --- | --- | --- | 0.0008 | --- | --- | --- | 0.0011 |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00002 |
| Uranium | mg/L | --- | 0.000731 | --- | --- | --- | 0.000839 | --- | --- | --- | 0.000677 |
| Vanadium | mg/L | --- | 0.00027 | --- | --- | --- | 0.00022 | --- | --- | --- | 0.00019 |
| Tungsten | mg/L | --- | 0.00013 | --- | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | 0.000012 | --- | --- | --- | 0.000011 | --- | --- | --- | 0.000011 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 1: Tiri GW OP E
**Weight:** 98 kg

| Analyte | Event # | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10083-DEC11 | CA11070-DEC11 | CA10290-DEC11 | CA10043-JAN12 | CA10084-JAN12 | CA11022-JAN12 | CA10226-JAN12 | CA10007-FEB12 | CA10084-FEB12 | CA10138-FEB12 |
| | | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 04-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 01-Feb-12 | 08-Feb-12 | 15-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 | 9800 |
| Hum Cell Leachate Volume | mLs | 9677 | 9541 | 9791 | 9700 | 9428 | 9609 | 9224 | 9541 | 9586 | 9677 |
| pH | no unit | 7.84 | 7.97 | 7.77 | 7.87 | 7.96 | 7.86 | 7.92 | 7.96 | 8 | 7.91 |
| Alkalinity | mg/L as CaCO3 | 45 | 43 | 44 | 44 | 43 | 43 | 44 | 42 | 43 | 45 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 176 | 129 | 120 | 163 | 116 | 156 | 118 | 119 | 120 | 127 |
| Sulphate | mg/L | 37 | 34 | 33 | 33 | 29 | 31 | 29 | 31 | 32 | 35 |
| Calcium | mg/L | 21.9 | 21 | 19.1 | 20.4 | 19.2 | 19.7 | 19 | 19.4 | 21.2 | 22 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | < 0.2 | --- | --- | --- | --- | --- | |
| Fluoride | mg/L | --- | --- | --- | < 0.06 | --- | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | 0.11 | --- | --- | --- | --- | --- | 0.12 |
| Arsenic | mg/L | --- | --- | --- | 0.0231 | --- | --- | --- | --- | --- | 0.0197 |
| Barium | mg/L | --- | --- | --- | 0.00703 | --- | --- | --- | --- | --- | 0.00723 |
| Boron | mg/L | --- | --- | --- | 0.0039 | --- | --- | --- | --- | --- | 0.0039 |
| Beryllium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | 0.00001 | --- | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | 0.000488 | --- | --- | --- | --- | --- | 0.000575 |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | 0.004 | --- | --- | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | --- | 3.95 | --- | --- | --- | --- | --- | 3.27 |
| Lithium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | 5.23 | --- | --- | --- | --- | --- | 5.43 |
| Manganese | mg/L | --- | --- | --- | 0.0111 | --- | --- | --- | --- | --- | 0.0118 |
| Molybdenum | mg/L | --- | --- | --- | 0.00178 | --- | --- | --- | --- | --- | 0.00227 |
| Sodium | mg/L | --- | --- | --- | 0.98 | --- | --- | --- | --- | --- | 0.74 |
| Nickel | mg/L | --- | --- | --- | 0.0012 | --- | --- | --- | --- | --- | 0.0012 |
| Phosphorus | mg/L | --- | --- | --- | 0.011 | --- | --- | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | --- | --- | 0.00002 | --- | --- | --- | --- | --- | 0.00006 |
| Antimony | mg/L | --- | --- | --- | 0.0013 | --- | --- | --- | --- | --- | 0.0014 |
| Selenium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | --- | --- | 0.107 | --- | --- | --- | --- | --- | 0.115 |
| Titanium | mg/L | --- | --- | --- | 0.0013 | --- | --- | --- | --- | --- | 0.0009 |
| Thallium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | 0.000653 | --- | --- | --- | --- | --- | 0.000791 |
| Vanadium | mg/L | --- | --- | --- | 0.00015 | --- | --- | --- | --- | --- | 0.00013 |
| Tungsten | mg/L | --- | --- | --- | 0.00003 | --- | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | --- | 0.000005 | --- | --- | --- | --- | --- | 0.000007 |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 2: Tiri GW OP W
**Weight:** 48.3 kg

EXTRA SAMPLING

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11198-JUL11 | CA11199-JUL11 | CA10090-AUG11 | CA10091-AUG11 | CA11133-AUG11 | CA11207-AUG11 | CA10310-AUG11 | CA10043-SEP11 | CA10087-SEP11 | CA10209-SEP11 | CA10342-SEP11 |
| | | 20-Jul-11 | 27-Jul-11 | 03-Aug-11 | 10-Aug-11 | 17-Aug-11 | 24-Aug-11 | 31-Aug-11 | 07-Sep-11 | 14-Sep-11 | 21-Sep-11 | 28-Sep-11 |
| Leachate Volume Added (mL) | mL | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 16900 | 4830 | 4830 |
| Hum Cell Leachate Volume | mLs | 4403 | 4801 | 4756 | 4778 | 4665 | 4710 | 4620 | 4733 | 16331 | 5005 | 4530 |
| pH | no unit | 7.44 | 8.2 | 8.2 | 8.32 | 8 | 8 | 8 | 8 | 8 | 8 | 8.01 |
| Alkalinity | mg/L as CaCO3 | 46 | 57 | 59 | 55 | 55.00 | 54.00 | 57.00 | 54.00 | 46.00 | 45.00 | 48 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 406 | 269 | 218 | 241 | 242 | 227 | 211 | 216 | 150 | 137 | 143 |
| Sulphate | mg/L | 85 | 58 | 51 | 48 | 46 | 50 | 50 | 48 | 41 | 22 | 37 |
| Calcium | mg/L | 16.1 | 13.7 | 17 | 17.3 | 17.6 | 18.3 | 19.9 | 19.3 | 17.6 | 18.0 | 19.7 |
| As+3 | mg/L | 0.021 | 0.043 | 0.018 | 0.01 | --- | 0.016 | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.056 | 0.034 | 0.041 | 0.059 | --- | 0.043 | --- | --- | --- | --- | --- |
| Chloride | mg/L | 32 | 20 | 13 | 12 | --- | 9 | --- | --- | 3.2 | --- | --- |
| Fluoride | mg/L | 0.2 | 0.14 | 0.12 | 0.1 | --- | 0.06 | --- | --- | 0.06 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.21 | 0.13 | 0.15 | 0.15 | --- | 0.15 | --- | --- | 0.14 | --- | --- |
| Arsenic | mg/L | 0.0767 | 0.0677 | 0.0702 | 0.0721 | --- | 0.0799 | --- | --- | 0.0717 | --- | --- |
| Barium | mg/L | 0.0143 | 0.0116 | 0.0108 | 0.01 | --- | 0.00993 | --- | --- | 0.00825 | --- | --- |
| Boron | mg/L | 0.0174 | 0.0197 | 0.0162 | 0.0155 | --- | 0.02 | --- | --- | 0.0112 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | 0.000003 | 0.000012 | < 0.000003 | --- | 0.000005 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000246 | 0.000222 | 0.000309 | 0.000339 | --- | 0.0005 | --- | --- | 0.000661 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0045 | 0.001 | 0.0009 | 0.0007 | --- | 0.00 | --- | --- | 0.0007 | --- | --- |
| Iron | mg/L | 0.004 | < 0.002 | 0.022 | 0.009 | --- | 0.005 | --- | --- | 0.003 | --- | --- |
| Potassium | mg/L | 22.2 | 14.5 | 15.5 | 12.8 | --- | 11.200000 | --- | --- | 7.93 | --- | --- |
| Lithium | mg/L | 0.002 | 0.002 | 0.002 | 0.002 | --- | 0.002 | --- | --- | 0.002 | --- | --- |
| Magnesium | mg/L | 4.59 | 4.32 | 5.51 | 5.73 | --- | 5.88 | --- | --- | 5.29 | --- | --- |
| Manganese | mg/L | 0.0122 | 0.0107 | 0.0158 | 0.0149 | --- | 0.0231 | --- | --- | 0.0236 | --- | --- |
| Molybdenum | mg/L | 0.00771 | 0.00547 | 0.00477 | 0.00387 | --- | 0.004 | --- | --- | 0.00225 | --- | --- |
| Sodium | mg/L | 56.7 | 26.8 | 25.7 | 21.3 | --- | 16.7 | --- | --- | 8.7 | --- | --- |
| Nickel | mg/L | 0.0021 | 0.0017 | 0.0014 | 0.0014 | --- | 0.002 | --- | --- | 0.0018 | --- | --- |
| Phosphorus | mg/L | 0.022 | < 0.009 | 0.01 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | 0.00004 | 0.00005 | 0.00002 | 0.00006 | --- | 0.00010 | --- | --- | 0.00005 | --- | --- |
| Antimony | mg/L | 0.0045 | 0.0056 | 0.0059 | 0.0058 | --- | 0.01 | --- | --- | 0.0042 | --- | --- |
| Selenium | mg/L | 0.003 | 0.002 | 0.001 | 0.002 | --- | 0.0020 | --- | --- | 0.001 | --- | --- |
| Tin | mg/L | 0.0001 | 0.00002 | 0.00003 | < 0.00001 | --- | 0.000 | --- | --- | < 0.00001 | --- | --- |
| Strontium | mg/L | 0.107 | 0.091 | 0.11 | 0.112 | --- | 0.111 | --- | --- | 0.0971 | --- | --- |
| Titanium | mg/L | 0.0006 | 0.0004 | 0.0009 | 0.0008 | --- | 0.0007 | --- | --- | 0.0007 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000752 | 0.00117 | 0.00134 | 0.00155 | --- | 0.00 | --- | --- | 0.00172 | --- | --- |
| Vanadium | mg/L | 0.0012 | 0.00084 | 0.00058 | 0.0006 | --- | 0.00056 | --- | --- | 0.0004 | --- | --- |
| Tungsten | mg/L | 0.00073 | 0.00107 | 0.00053 | 0.00053 | --- | 0.0005 | --- | --- | 0.00023 | --- | --- |
| Yttrium | mg/L | 0.000014 | 0.00001 | 0.000008 | 0.000015 | --- | 0.000022 | --- | --- | 0.000017 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.001 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 2: Tiri GW OP W
**Weight:** 48.3 kg

| Analyte | Event # | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10073-OCT11 | CA10125-OCT11 | CA10176-OCT11 | CA11261-OCT11 | CA10033-NOV11 | CA10108-NOV11 | CA10168-NOV11 | CA10259-NOV11 | CA11815-NOV11 | CA10031-DEC11 |
| | | 05-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 02-Nov-11 | 09-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 07-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Hum Cell Leachate Volume | mLs | 4688 | 4461 | 4506 | 4846 | 4552 | 4461 | 4415 | 4960 | 4801 | 4620 |
| pH | no unit | 7.51 | 8.21 | 7.9 | 7.72 | 7.94 | 8.02 | 7.76 | 7.85 | 7.86 | 7.92 |
| Alkalinity | mg/L as CaCO3 | 49 | 44 | 44 | 48 | 45 | 45 | 37 | 43 | 46 | 49 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 183 | 169 | 166 | 194 | 141 | 115 | 146 | 178 | 135 | 166 |
| Sulphate | mg/L | 37 | 35 | 37 | 43 | 38 | 37 | 32 | 39 | 41 | 36 |
| Calcium | mg/L | 19.9 | 17.9 | 18.5 | 21 | 21.2 | 21.2 | 17.6 | 20.8 | 21.4 | 20.9 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | 0.7 | --- | --- | --- | 0.3 | --- | --- | --- | < 0.2 |
| Fluoride | mg/L | --- | 0.07 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | 0.13 | --- | --- | --- | 0.11 | --- | --- | --- | 0.08 |
| Arsenic | mg/L | --- | 0.0623 | --- | --- | --- | 0.0524 | --- | --- | --- | 0.0449 |
| Barium | mg/L | --- | 0.00778 | --- | --- | --- | 0.00765 | --- | --- | --- | 0.00714 |
| Boron | mg/L | --- | 0.0097 | --- | --- | --- | 0.0068 | --- | --- | --- | 0.006 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | 0.000008 |
| Cobalt | mg/L | --- | 0.000837 | --- | --- | --- | 0.00101 | --- | --- | --- | 0.000959 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | 0.0005 |
| Iron | mg/L | --- | 0.004 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 5.36 | --- | --- | --- | 4.63 | --- | --- | --- | 3.27 |
| Lithium | mg/L | --- | 0.002 | --- | --- | --- | 0.001 | --- | --- | --- | 0.001 |
| Magnesium | mg/L | --- | 4.88 | --- | --- | --- | 5.6 | --- | --- | --- | 5.15 |
| Manganese | mg/L | --- | 0.028 | --- | --- | --- | 0.0315 | --- | --- | --- | 0.0259 |
| Molybdenum | mg/L | --- | 0.00143 | --- | --- | --- | 0.00131 | --- | --- | --- | 0.00156 |
| Sodium | mg/L | --- | 3.68 | --- | --- | --- | 2.49 | --- | --- | --- | 1.48 |
| Nickel | mg/L | --- | 0.001 | --- | --- | --- | 0.001 | --- | --- | --- | 0.001 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | 0.00004 | --- | --- | --- | 0.00003 | --- | --- | --- | 0.00004 |
| Antimony | mg/L | --- | 0.0037 | --- | --- | --- | 0.0033 | --- | --- | --- | 0.0022 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | 0.0915 | --- | --- | --- | 0.103 | --- | --- | --- | 0.0965 |
| Titanium | mg/L | --- | 0.0008 | --- | --- | --- | 0.001 | --- | --- | --- | 0.0006 |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | 0.00153 | --- | --- | --- | 0.00173 | --- | --- | --- | 0.00156 |
| Vanadium | mg/L | --- | 0.0003 | --- | --- | --- | 0.00027 | --- | --- | --- | 0.00021 |
| Tungsten | mg/L | --- | 0.00016 | --- | --- | --- | 0.00006 | --- | --- | --- | 0.00024 |
| Yttrium | mg/L | --- | 0.000014 | --- | --- | --- | 0.000013 | --- | --- | --- | 0.000008 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 2: Tiri GW OP W
**Weight:** 48.3 kg

| Analyte | Event # | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10083-DEC11 | CA11070-DEC11 | CA10290-DEC11 | CA10043-JAN12 | CA10084-JAN12 | CA11022-JAN12 | CA10226-JAN12 | CA10007-FEB12 | CA10084-FEB12 | CA10138-FEB12 |
| | | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 04-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 01-Feb-12 | 08-Feb-12 | 15-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Hum Cell Leachate Volume | mLs | 4688 | 4597 | 4733 | 4642 | 4597 | 4597 | 4597 | 4665 | 4688 | 4620 |
| pH | no unit | 7.97 | 7.97 | 7.61 | 7.77 | 7.91 | 7.72 | 7.85 | 7.87 | 7.91 | 7.79 |
| Alkalinity | mg/L as CaCO3 | 42 | 40 | 36 | 38 | 39 | 37 | 39 | 39 | 37 | 48 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 164 | 115 | 108 | 148 | 113 | 145 | 121 | 118 | 121 | 120 |
| Sulphate | mg/L | 35 | 32 | 32 | 32 | 31 | 32 | 34 | 35 | 36 | 36 |
| Calcium | mg/L | 20.6 | 19.7 | 18.2 | 17.7 | 18.9 | 18.6 | 19.5 | 19.5 | 21.6 | 21 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | < 0.2 | --- | --- | --- | --- | --- | |
| Fluoride | mg/L | --- | --- | --- | < 0.06 | --- | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | 0.09 | --- | --- | --- | --- | --- | 0.09 |
| Arsenic | mg/L | --- | --- | --- | 0.0406 | --- | --- | --- | --- | --- | 0.0332 |
| Barium | mg/L | --- | --- | --- | 0.00567 | --- | --- | --- | --- | --- | 0.00633 |
| Boron | mg/L | --- | --- | --- | 0.004 | --- | --- | --- | --- | --- | 0.0039 |
| Beryllium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | 0.000012 | --- | --- | --- | --- | --- | 0.000006 |
| Cobalt | mg/L | --- | --- | --- | 0.000819 | --- | --- | --- | --- | --- | 0.000808 |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | 0.0007 |
| Iron | mg/L | --- | --- | --- | 0.007 | --- | --- | --- | --- | --- | 0.006 |
| Potassium | mg/L | --- | --- | --- | 2.45 | --- | --- | --- | --- | --- | 2.22 |
| Lithium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | 4.25 | --- | --- | --- | --- | --- | 5 |
| Manganese | mg/L | --- | --- | --- | 0.017 | --- | --- | --- | --- | --- | 0.0141 |
| Molybdenum | mg/L | --- | --- | --- | 0.00167 | --- | --- | --- | --- | --- | 0.00332 |
| Sodium | mg/L | --- | --- | --- | 0.87 | --- | --- | --- | --- | --- | 0.71 |
| Nickel | mg/L | --- | --- | --- | 0.0017 | --- | --- | --- | --- | --- | 0.002 |
| Phosphorus | mg/L | --- | --- | --- | < 0.009 | --- | --- | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | --- | --- | 0.00006 | --- | --- | --- | --- | --- | 0.00008 |
| Antimony | mg/L | --- | --- | --- | 0.0016 | --- | --- | --- | --- | --- | 0.0016 |
| Selenium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | --- | --- | 0.0781 | --- | --- | --- | --- | --- | 0.092 |
| Titanium | mg/L | --- | --- | --- | 0.0019 | --- | --- | --- | --- | --- | 0.0007 |
| Thallium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | 0.00126 | --- | --- | --- | --- | --- | 0.00145 |
| Vanadium | mg/L | --- | --- | --- | 0.00016 | --- | --- | --- | --- | --- | 0.00013 |
| Tungsten | mg/L | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | --- | 0.000024 | --- | --- | --- | --- | --- | 0.000024 |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 3: Tiri GW UG (All)
**Weight:** 50 kg

| | | | | | | | | | | Extra sampling | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | | CA11198-JUL11 | CA11199-JUL11 | CA10090-AUG11 | CA10091-AUG11 | CA11133-AUG11 | CA11207-AUG11 | CA10310-AUG11 | CA10043-SEP11 | CA10087-SEP11 | CA10209-SEP11 | CA10342-SEP11 |
| | | 20-Jul-11 | 27-Jul-11 | 03-Aug-11 | 10-Aug-11 | 17-Aug-11 | 24-Aug-11 | 31-Aug-11 | 07-Sep-11 | 14-Sep-11 | 21-Sep-11 | 28-Sep-11 |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 17500 | 5000 | 5000 |
| Hum Cell Leachate Volume | mLs | 924 | 4846 | 4982 | 4959 | 4846 | 4914 | 4778 | 4823 | 16669 | 5413 | 4542 |
| pH | no unit | 7.35 | 8.14 | 8.35 | 8.38 | 7.90 | 8.10 | 8.22 | 8.25 | 8 | 8 | 8.12 |
| Alkalinity | mg/L as CaCO3 | 47 | 79 | 74 | 64 | 59.00 | 59.00 | 61.00 | 58.00 | 46.00 | 46.00 | 46 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 564 | 392 | 257 | 213 | 212 | 179 | 158 | 160 | 99 | 94 | 97 |
| Sulphate | mg/L | 100 | 85 | 52 | 36 | 30 | 27 | 24 | 21 | 16 | 13 | 12 |
| Calcium | mg/L | 29.1 | 20.9 | 16.4 | 15 | 14.3 | 13.9 | 15.0 | 13.5 | 12.2 | 12.4 | 12.4 |
| As+3 | mg/L | 0.011 | 0.112 | 0.035 | 0.018 | --- | 0.027 | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.002 | 0.003 | 0.04 | 0.093 | --- | 0.083 | --- | --- | --- | --- | --- |
| Chloride | mg/L | 37 | 24 | 9.8 | 5.6 | --- | 2.5 | --- | --- | 0.3 | --- | --- |
| Fluoride | mg/L | 0.34 | 0.27 | 0.21 | 0.17 | --- | 0.14 | --- | --- | 0.08 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.08 | 0.13 | 0.15 | 0.17 | --- | 0.2 | --- | --- | 0.18 | --- | --- |
| Arsenic | mg/L | 0.0056 | 0.111 | 0.0997 | 0.116 | --- | 0.141 | --- | --- | 0.137 | --- | --- |
| Barium | mg/L | 0.0663 | 0.038 | 0.0352 | 0.0305 | --- | 0.0281 | --- | --- | 0.022 | --- | --- |
| Boron | mg/L | 0.0276 | 0.0424 | 0.0294 | 0.0241 | --- | 0.02 | --- | --- | 0.0122 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000011 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000819 | 0.000583 | 0.0005 | 0.00049 | --- | 0.0005 | --- | --- | 0.000525 | --- | --- |
| Chromium | mg/L | 0.0005 | 0.0006 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0018 | 0.0009 | 0.0007 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.002 | < 0.002 | 0.017 | < 0.002 | --- | 0.004 | --- | --- | < 0.002 | --- | --- |
| Potassium | mg/L | 39.7 | 35.6 | 23.3 | 16.9 | --- | 12.100000 | --- | --- | 8.05 | --- | --- |
| Lithium | mg/L | 0.003 | 0.003 | 0.003 | 0.002 | --- | 0.002 | --- | --- | 0.002 | --- | --- |
| Magnesium | mg/L | 7.17 | 9.85 | 7.64 | 6.73 | --- | 5.85 | --- | --- | 4.73 | --- | --- |
| Manganese | mg/L | 0.136 | 0.0101 | 0.00965 | 0.00958 | --- | 0.0114 | --- | --- | 0.00908 | --- | --- |
| Molybdenum | mg/L | 0.00594 | 0.00611 | 0.00378 | 0.00247 | --- | 0.002 | --- | --- | 0.00093 | --- | --- |
| Sodium | mg/L | 52 | 42 | 22.6 | 13.9 | --- | 7.23 | --- | --- | 2.93 | --- | --- |
| Nickel | mg/L | 0.0025 | 0.0033 | 0.0018 | 0.0016 | --- | 0.001 | --- | --- | 0.0008 | --- | --- |
| Phosphorus | mg/L | 0.018 | < 0.009 | 0.011 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | 0.00003 | 0.00005 | 0.00004 | 0.00004 | --- | 0.00008 | --- | --- | 0.00003 | --- | --- |
| Antimony | mg/L | 0.0053 | 0.0151 | 0.0144 | 0.0139 | --- | 0.01 | --- | --- | 0.0089 | --- | --- |
| Selenium | mg/L | 0.003 | 0.003 | < 0.001 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00106 | 0.00015 | 0.00007 | < 0.00001 | --- | 0.000 | --- | --- | 0.00001 | --- | --- |
| Strontium | mg/L | 0.222 | 0.207 | 0.158 | 0.144 | --- | 0.126 | --- | --- | 0.102 | --- | --- |
| Titanium | mg/L | 0.0003 | 0.0004 | 0.0005 | 0.0002 | --- | 0.0003 | --- | --- | 0.0004 | --- | --- |
| Thallium | mg/L | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000305 | 0.00106 | 0.000746 | 0.000599 | --- | 0.00 | --- | --- | 0.000403 | --- | --- |
| Vanadium | mg/L | 0.00014 | 0.00126 | 0.00118 | 0.00114 | --- | 0.00130 | --- | --- | 0.00103 | --- | --- |
| Tungsten | mg/L | 0.0008 | 0.00136 | 0.00075 | 0.00064 | --- | 0.0005 | --- | --- | 0.00039 | --- | --- |
| Yttrium | mg/L | 0.000013 | 0.00001 | 0.000009 | 0.000012 | --- | 0.00001 | --- | --- | 0.000006 | --- | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 3: Tiri GW UG (All)
**Weight:** 50 kg

| Analyte | Event # | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10073-OCT11 | CA10125-OCT11 | CA10176-OCT11 | CA11261-OCT11 | CA10033-NOV11 | CA10108-NOV11 | CA10168-NOV11 | CA10259-NOV11 | CA11815-NOV11 | CA10031-DEC11 |
| | | 05-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 02-Nov-11 | 09-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 07-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Hum Cell Leachate Volume | mLs | 4800 | 4347 | 4392 | 5254 | 4641 | 4619 | 4483 | 5231 | 5004 | 4800 |
| pH | no unit | 8 | 8.14 | 8.13 | 7.89 | 8.12 | 8.14 | 7.95 | 7.71 | 7.89 | 8.17 |
| Alkalinity | mg/L as CaCO3 | 52 | 45 | 49 | 54 | 47 | 47 | 41 | 48 | 46 | 48 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 130 | 117 | 117 | 137 | 98 | 131 | 104 | 100 | 92 | 116 |
| Sulphate | mg/L | 13 | 11 | 13 | 15 | 13 | 12 | 11 | 13 | 13 | 12 |
| Calcium | mg/L | 13.9 | 11.7 | 12.6 | 13.6 | 13.2 | 12.9 | 11.7 | 12.8 | 13.2 | 12.8 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Fluoride | mg/L | --- | 0.08 | --- | --- | --- | 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | 0.2 | --- | --- | --- | 0.19 | --- | --- | --- | 0.16 |
| Arsenic | mg/L | --- | 0.135 | --- | --- | --- | 0.137 | --- | --- | --- | 0.132 |
| Barium | mg/L | --- | 0.023 | --- | --- | --- | 0.0234 | --- | --- | --- | 0.0227 |
| Boron | mg/L | --- | 0.0081 | --- | --- | --- | 0.0058 | --- | --- | --- | 0.0049 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000595 | --- | --- | --- | 0.000705 | --- | --- | --- | 0.000857 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | 0.007 | --- | --- | --- | 0.004 | --- | --- | --- | 0.004 |
| Potassium | mg/L | --- | 5.51 | --- | --- | --- | 5.34 | --- | --- | --- | 4.47 |
| Lithium | mg/L | --- | 0.002 | --- | --- | --- | 0.002 | --- | --- | --- | 0.002 |
| Magnesium | mg/L | --- | 3.95 | --- | --- | --- | 4.37 | --- | --- | --- | 4.07 |
| Manganese | mg/L | --- | 0.00957 | --- | --- | --- | 0.011 | --- | --- | --- | 0.0119 |
| Molybdenum | mg/L | --- | 0.00063 | --- | --- | --- | 0.00048 | --- | --- | --- | 0.00059 |
| Sodium | mg/L | --- | 1.19 | --- | --- | --- | 1 | --- | --- | --- | 0.69 |
| Nickel | mg/L | --- | 0.0003 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0003 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | 0.00005 | --- | --- | --- | 0.00007 | --- | --- | --- | 0.00008 |
| Antimony | mg/L | --- | 0.0072 | --- | --- | --- | 0.007 | --- | --- | --- | 0.0054 |
| Selenium | mg/L | --- | 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | 0.0954 | --- | --- | --- | 0.102 | --- | --- | --- | 0.1 |
| Titanium | mg/L | --- | 0.0004 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0005 |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | 0.000454 | --- | --- | --- | 0.000581 | --- | --- | --- | 0.000722 |
| Vanadium | mg/L | --- | 0.00091 | --- | --- | --- | 0.0009 | --- | --- | --- | 0.00079 |
| Tungsten | mg/L | --- | 0.00027 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.00057 |
| Yttrium | mg/L | --- | 0.000013 | --- | --- | --- | 0.000007 | --- | --- | --- | 0.00001 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 3: Tiri GW UG (All)
**Weight:** 50 kg

| Analyte | Event # | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10083-DEC11 | CA11070-DEC11 | CA10290-DEC11 | CA10043-JAN12 | CA10084-JAN12 | CA11022-JAN12 | CA10226-JAN12 | CA10007-FEB12 | CA10084-FEB12 | CA10138-FEB12 |
| | | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 04-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 01-Feb-12 | 08-Feb-12 | 15-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Hum Cell Leachate Volume | mLs | 4914 | 4732 | 4959 | 4868 | 4778 | 4800 | 4732 | 4800 | 4846 | 4868 |
| pH | no unit | 8 | 8.15 | 7.85 | 7.9 | 8.05 | 7.85 | 8.03 | 7.98 | 8.01 | 7.97 |
| Alkalinity | mg/L as CaCO3 | 45 | 44 | 40 | 42 | 42 | 41 | 42 | 42 | 43 | 43 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 116 | 87 | 81 | 108 | 83 | 107 | 88 | 86 | 88 | 89 |
| Sulphate | mg/L | 12 | 11 | 12 | 11 | 11 | 11 | 12 | 13 | 13 | 14 |
| Calcium | mg/L | 13.4 | 12 | 12 | 12.4 | 12.1 | 12.5 | 12.5 | 12.8 | 14.2 | 13.8 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | < 0.2 | --- | --- | --- | --- | --- | |
| Fluoride | mg/L | --- | --- | --- | < 0.06 | --- | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | 0.15 | --- | --- | --- | --- | --- | 0.16 |
| Arsenic | mg/L | --- | --- | --- | 0.119 | --- | --- | --- | --- | --- | 0.0994 |
| Barium | mg/L | --- | --- | --- | 0.0203 | --- | --- | --- | --- | --- | 0.0226 |
| Boron | mg/L | --- | --- | --- | 0.0034 | --- | --- | --- | --- | --- | 0.0029 |
| Beryllium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | 0.000004 | --- | --- | --- | --- | --- | 0.000012 |
| Cobalt | mg/L | --- | --- | --- | 0.000859 | --- | --- | --- | --- | --- | 0.000989 |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | 0.0005 |
| Iron | mg/L | --- | --- | --- | 0.005 | --- | --- | --- | --- | --- | 0.006 |
| Potassium | mg/L | --- | --- | --- | 4.19 | --- | --- | --- | --- | --- | 3.97 |
| Lithium | mg/L | --- | --- | --- | 0.002 | --- | --- | --- | --- | --- | 0.002 |
| Magnesium | mg/L | --- | --- | --- | 3.77 | --- | --- | --- | --- | --- | 4.04 |
| Manganese | mg/L | --- | --- | --- | 0.00945 | --- | --- | --- | --- | --- | 0.00981 |
| Molybdenum | mg/L | --- | --- | --- | 0.00051 | --- | --- | --- | --- | --- | 0.00081 |
| Sodium | mg/L | --- | --- | --- | 0.5 | --- | --- | --- | --- | --- | 0.44 |
| Nickel | mg/L | --- | --- | --- | 0.0009 | --- | --- | --- | --- | --- | 0.0009 |
| Phosphorus | mg/L | --- | --- | --- | < 0.009 | --- | --- | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | --- | --- | 0.00006 | --- | --- | --- | --- | --- | 0.00012 |
| Antimony | mg/L | --- | --- | --- | 0.0043 | --- | --- | --- | --- | --- | 0.004 |
| Selenium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | --- | --- | 0.0917 | --- | --- | --- | --- | --- | 0.0993 |
| Titanium | mg/L | --- | --- | --- | 0.0004 | --- | --- | --- | --- | --- | 0.0004 |
| Thallium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | 0.000595 | --- | --- | --- | --- | --- | 0.00082 |
| Vanadium | mg/L | --- | --- | --- | 0.00059 | --- | --- | --- | --- | --- | 0.00056 |
| Tungsten | mg/L | --- | --- | --- | 0.00012 | --- | --- | --- | --- | --- | 0.00009 |
| Yttrium | mg/L | --- | --- | --- | 0.000006 | --- | --- | --- | --- | --- | 0.000006 |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 4: Tiri MV UG (All)
**Weight:** 48.3 kg

Extra Sampling

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11198-JUL11 | CA11199-JUL11 | CA10090-AUG11 | CA10091-AUG11 | CA11133-AUG11 | CA11207-AUG11 | CA10310-AUG11 | CA10043-SEP11 | CA10087-SEP11 | CA10209-SEP11 | CA10342-SEP11 |
| | | 20-Jul-11 | 27-Jul-11 | 03-Aug-11 | 10-Aug-11 | 17-Aug-11 | 24-Aug-11 | 31-Aug-11 | 07-Sep-11 | 14-Sep-11 | 21-Sep-11 | 28-Sep-11 |
| Leachate Volume Added (mL) | mL | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 16900 | 4830 | 4830 |
| Hum Cell Leachate Volume | mLs | 1714 | 4709 | 4777 | 4754 | 4573 | 4618 | 4505 | 4641 | 16009 | 5163 | 4268 |
| pH | no unit | 7.56 | 8.19 | 8.38 | 8.48 | 8.36 | 8.20 | 8.08 | 8.32 | 8 | 8 | 8.22 |
| Alkalinity | mg/L as CaCO3 | 47 | 72 | 67 | 59 | 54.00 | 53.00 | 58.00 | 56.00 | 46.00 | 46.00 | 48 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 416 | 357 | 226 | 196 | 176 | 171 | 157 | 156 | 110 | 101 | 105 |
| Sulphate | mg/L | 95 | 80 | 52 | 39 | 30 | 29 | 30 | 30 | 26 | 19 | 19 |
| Calcium | mg/L | 20.6 | 14.9 | 15.8 | 14.4 | 14.0 | 14.1 | 16.1 | 15.3 | 14.9 | 13.3 | 15 |
| As+3 | mg/L | 0.005 | 0.019 | 0.017 | 0.007 | --- | 0.008 | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.003 | 0.01 | 0.008 | 0.024 | --- | 0.023 | --- | --- | --- | --- | --- |
| Chloride | mg/L | 15 | 14 | 5.1 | 3.2 | --- | 0.9 | --- | --- | < 0.2 | --- | --- |
| Fluoride | mg/L | 0.11 | 0.1 | 0.1 | 0.08 | --- | 0.07 | --- | --- | < 0.06 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.14 | 0.12 | 0.19 | 0.19 | --- | 0.2 | --- | --- | 0.18 | --- | --- |
| Arsenic | mg/L | 0.0049 | 0.0223 | 0.0257 | 0.0279 | --- | 0.0339 | --- | --- | 0.0376 | --- | --- |
| Barium | mg/L | 0.0079 | 0.00479 | 0.00477 | 0.00382 | --- | 0.00384 | --- | --- | 0.00407 | --- | --- |
| Boron | mg/L | 0.0247 | 0.0416 | 0.0295 | 0.0228 | --- | 0.02 | --- | --- | 0.0112 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000008 | 0.000005 | 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000207 | 0.000229 | 0.000206 | 0.000177 | --- | 0.0002 | --- | --- | 0.00031 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0033 | 0.0014 | 0.0011 | 0.0007 | --- | 0.00 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.002 | < 0.002 | 0.007 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- | --- |
| Potassium | mg/L | 9.51 | 8.46 | 7.43 | 5.47 | --- | 3.480000 | --- | --- | 2.42 | --- | --- |
| Lithium | mg/L | 0.001 | 0.002 | 0.002 | 0.002 | --- | 0.002 | --- | --- | 0.001 | --- | --- |
| Magnesium | mg/L | 5.33 | 8.67 | 9.27 | 8.2 | --- | 7.22 | --- | --- | 7.1 | --- | --- |
| Manganese | mg/L | 0.0522 | 0.012 | 0.0123 | 0.0108 | --- | 0.0159 | --- | --- | 0.0114 | --- | --- |
| Molybdenum | mg/L | 0.01497 | 0.013 | 0.00902 | 0.00544 | --- | 0.004 | --- | --- | 0.00177 | --- | --- |
| Sodium | mg/L | 52.8 | 36.5 | 25.2 | 14.6 | --- | 6.7 | --- | --- | 2.79 | --- | --- |
| Nickel | mg/L | 0.0012 | 0.0013 | 0.0005 | 0.0004 | --- | 0.001 | --- | --- | 0.0006 | --- | --- |
| Phosphorus | mg/L | 0.084 | < 0.009 | 0.011 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | 0.00003 | 0.00004 | 0.00004 | 0.00004 | --- | 0.00010 | --- | --- | 0.00008 | --- | --- |
| Antimony | mg/L | 0.002 | 0.0054 | 0.0054 | 0.0049 | --- | 0.00 | --- | --- | 0.0039 | --- | --- |
| Selenium | mg/L | 0.003 | 0.003 | 0.001 | 0.001 | --- | 0.0010 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00053 | 0.00018 | 0.00018 | < 0.00001 | --- | 0.000 | --- | --- | < 0.00001 | --- | --- |
| Strontium | mg/L | 0.0848 | 0.115 | 0.125 | 0.115 | --- | 0.106 | --- | --- | 0.106 | --- | --- |
| Titanium | mg/L | 0.0002 | 0.0002 | 0.0003 | 0.0002 | --- | 0.0001 | --- | --- | 0.0002 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000053 | 0.000124 | 0.000091 | 0.000059 | --- | 0.00 | --- | --- | 0.000112 | --- | --- |
| Vanadium | mg/L | 0.00035 | 0.00111 | 0.00113 | 0.00104 | --- | 0.00111 | --- | --- | 0.00079 | --- | --- |
| Tungsten | mg/L | 0.00081 | 0.00089 | 0.00062 | 0.00049 | --- | 0.0004 | --- | --- | 0.00031 | --- | --- |
| Yttrium | mg/L | 0.000016 | 0.000007 | 0.000008 | 0.000008 | --- | 0.00001 | --- | --- | 0.000005 | --- | --- |
| Zinc | mg/L | < 0.001 | 0.001 | 0.002 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 4: Tiri MV UG (All)
**Weight:** 48.3 kg

| Analyte | Event # | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10073-OCT11 | CA10125-OCT11 | CA10176-OCT11 | CA11261-OCT11 | CA10033-NOV11 | CA10108-NOV11 | CA10168-NOV11 | CA10259-NOV11 | CA11815-NOV11 | CA10031-DEC11 |
| | | 05-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 02-Nov-11 | 09-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 07-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Hum Cell Leachate Volume | mLs | 4573 | 4210 | 4550 | 4890 | 4346 | 4369 | 4278 | 4868 | 4754 | 4528 |
| pH | no unit | 8.16 | 8.34 | 8.15 | 7.94 | 8.3 | 8.23 | 8.14 | 7.75 | 8.03 | 8.36 |
| Alkalinity | mg/L as CaCO3 | 57 | 44 | 51 | 51 | 49 | 50 | 52 | 54 | 51 | 53 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 147 | 140 | 154 | 177 | 125 | 167 | 142 | 134 | 130 | 159 |
| Sulphate | mg/L | 25 | 24 | 31 | 34 | 30 | 29 | 27 | 32 | 31 | 29 |
| Calcium | mg/L | 17.1 | 15.2 | 17.5 | 18.4 | 18 | 18.3 | 16.4 | 18.1 | 18.9 | 18.9 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | 0.15 | --- | --- | --- | 0.12 | --- | --- | --- | 0.11 |
| Arsenic | mg/L | --- | 0.0315 | --- | --- | --- | 0.0271 | --- | --- | --- | 0.025 |
| Barium | mg/L | --- | 0.00376 | --- | --- | --- | 0.00404 | --- | --- | --- | 0.00402 |
| Boron | mg/L | --- | 0.0078 | --- | --- | --- | 0.0054 | --- | --- | --- | 0.0046 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000352 | --- | --- | --- | 0.000464 | --- | --- | --- | 0.000521 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.002 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 1.51 | --- | --- | --- | 1.38 | --- | --- | --- | 1.17 |
| Lithium | mg/L | --- | 0.001 | --- | --- | --- | 0.001 | --- | --- | --- | 0.001 |
| Magnesium | mg/L | --- | 6.14 | --- | --- | --- | 7.2 | --- | --- | --- | 7.23 |
| Manganese | mg/L | --- | 0.0128 | --- | --- | --- | 0.018 | --- | --- | --- | 0.0175 |
| Molybdenum | mg/L | --- | 0.00085 | --- | --- | --- | 0.00063 | --- | --- | --- | 0.00065 |
| Sodium | mg/L | --- | 1.04 | --- | --- | --- | 0.84 | --- | --- | --- | 0.62 |
| Nickel | mg/L | --- | 0.0001 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0002 |
| Phosphorus | mg/L | --- | 0.012 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | 0.00009 | --- | --- | --- | 0.00007 | --- | --- | --- | 0.00007 |
| Antimony | mg/L | --- | 0.0033 | --- | --- | --- | 0.0032 | --- | --- | --- | 0.0025 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | 0.00001 |
| Strontium | mg/L | --- | 0.0976 | --- | --- | --- | 0.109 | --- | --- | --- | 0.106 |
| Titanium | mg/L | --- | 0.0002 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0003 |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | 0.000061 | --- | --- | --- | 0.000074 | --- | --- | --- | 0.000152 |
| Vanadium | mg/L | --- | 0.00053 | --- | --- | --- | 0.00042 | --- | --- | --- | 0.00035 |
| Tungsten | mg/L | --- | 0.0002 | --- | --- | --- | 0.00009 | --- | --- | --- | 0.00049 |
| Yttrium | mg/L | --- | 0.000004 | --- | --- | --- | 0.000006 | --- | --- | --- | 0.000007 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 4: Tiri MV UG (All)
**Weight:** 48.3 kg

| Analyte | Event # | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10083-DEC11 | CA11070-DEC11 | CA10290-DEC11 | CA10043-JAN12 | CA10084-JAN12 | CA11022-JAN12 | CA10226-JAN12 | CA10007-FEB12 | CA10084-FEB12 | CA10138-FEB12 |
| | | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 04-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 01-Feb-12 | 08-Feb-12 | 15-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 | 4830 |
| Hum Cell Leachate Volume | mLs | 4664 | 4528 | 4732 | 4641 | 4573 | 4596 | 4528 | 4596 | 4596 | 4641 |
| pH | no unit | 8.02 | 8.2 | 8.05 | 8.11 | 8.2 | 8.08 | 8.07 | 8.19 | 8.15 | 8.14 |
| Alkalinity | mg/L as CaCO3 | 53 | 59 | 48 | 49 | 45 | 49 | 48 | 47 | 48 | 46 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 161 | 109 | 103 | 136 | 108 | 129 | 104 | 103 | 102 | 101 |
| Sulphate | mg/L | 28 | 23 | 22 | 21 | 19 | 19 | 19 | 19 | 19 | 19 |
| Calcium | mg/L | 19 | 16.1 | 15.2 | 15 | 15.4 | 15 | 15 | 15.4 | 16.5 | 15.3 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | < 0.2 | --- | --- | --- | --- | --- | |
| Fluoride | mg/L | --- | --- | --- | < 0.06 | --- | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | 0.1 | --- | --- | --- | --- | --- | 0.11 |
| Arsenic | mg/L | --- | --- | --- | 0.0205 | --- | --- | --- | --- | --- | 0.0174 |
| Barium | mg/L | --- | --- | --- | 0.00315 | --- | --- | --- | --- | --- | 0.00327 |
| Boron | mg/L | --- | --- | --- | 0.0028 | --- | --- | --- | --- | --- | 0.0022 |
| Beryllium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | 0.000429 | --- | --- | --- | --- | --- | 0.000378 |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | 0.0006 |
| Iron | mg/L | --- | --- | --- | < 0.003 | --- | --- | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | --- | 0.916 | --- | --- | --- | --- | --- | 0.801 |
| Lithium | mg/L | --- | --- | --- | 0.001 | --- | --- | --- | --- | --- | 0.001 |
| Magnesium | mg/L | --- | --- | --- | 5.59 | --- | --- | --- | --- | --- | 5.72 |
| Manganese | mg/L | --- | --- | --- | 0.0132 | --- | --- | --- | --- | --- | 0.0128 |
| Molybdenum | mg/L | --- | --- | --- | 0.00047 | --- | --- | --- | --- | --- | 0.00053 |
| Sodium | mg/L | --- | --- | --- | 0.45 | --- | --- | --- | --- | --- | 0.36 |
| Nickel | mg/L | --- | --- | --- | 0.0009 | --- | --- | --- | --- | --- | 0.0008 |
| Phosphorus | mg/L | --- | --- | --- | < 0.009 | --- | --- | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | --- | --- | 0.00006 | --- | --- | --- | --- | --- | 0.00007 |
| Antimony | mg/L | --- | --- | --- | 0.0018 | --- | --- | --- | --- | --- | 0.0018 |
| Selenium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | --- | --- | 0.0775 | --- | --- | --- | --- | --- | 0.0762 |
| Titanium | mg/L | --- | --- | --- | 0.0003 | --- | --- | --- | --- | --- | 0.0004 |
| Thallium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | 0.000045 | --- | --- | --- | --- | --- | 0.000055 |
| Vanadium | mg/L | --- | --- | --- | 0.00024 | --- | --- | --- | --- | --- | 0.00023 |
| Tungsten | mg/L | --- | --- | --- | 0.00006 | --- | --- | --- | --- | --- | 0.00008 |
| Yttrium | mg/L | --- | --- | --- | 0.000004 | --- | --- | --- | --- | --- | 0.000006 |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 5: F-Zone MV (OP)
**Weight:** 99 kg

Extra Sampling

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11198-JUL11 | CA11199-JUL11 | CA10090-AUG11 | CA10091-AUG11 | CA11133-AUG11 | CA11207-AUG11 | CA10310-AUG11 | CA10043-SEP11 | CA10087-SEP11 | CA10209-SEP11 | CA10342-SEP11 |
| | | 20-Jul-11 | 27-Jul-11 | 03-Aug-11 | 10-Aug-11 | 17-Aug-11 | 24-Aug-11 | 31-Aug-11 | 07-Sep-11 | 14-Sep-11 | 21-Sep-11 | 28-Sep-11 |
| Leachate Volume Added (mL) | mL | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 34700 | 9900 | 9900 |
| Hum Cell Leachate Volume | mLs | 3167 | 9678 | 9973 | 9950 | 9723 | 9859 | 9700 | 9746 | 33524 | 10721 | 9170 |
| pH | no unit | 7.63 | 8.18 | 8.47 | 8.64 | 8.41 | 8.35 | 8.41 | 8.20 | 8 | 8 | 8.22 |
| Alkalinity | mg/L as CaCO3 | 47 | 93 | 90 | 78 | 67.00 | 67.00 | 70.00 | 61.00 | 50.00 | 50.00 | 53 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 567 | 972 | 485 | 339 | 281 | 270 | 220 | 206 | 121 | 114 | 121 |
| Sulphate | mg/L | 78 | 150 | 93 | 56 | 47 | 44 | 43 | 35 | 25 | 35 | 20 |
| Calcium | mg/L | 11.8 | 12.4 | 12.1 | 9.07 | 10.4 | 11.1 | 12.4 | 11.2 | 9.9 | 11.1 | 11.5 |
| As+3 | mg/L | 0.003 | 0.008 | 0.011 | 0.006 | --- | 0.009 | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.004 | 0.032 | 0.014 | 0.025 | --- | 0.022 | --- | --- | --- | --- | --- |
| Chloride | mg/L | 86 | 140 | 59 | 31 | --- | 10 | --- | --- | 1.8 | --- | --- |
| Fluoride | mg/L | 0.14 | 0.26 | 0.18 | 0.16 | --- | 0.12 | --- | --- | 0.07 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.19 | 0.15 | 0.2 | 0.14 | --- | 0.18 | --- | --- | 0.14 | --- | --- |
| Arsenic | mg/L | 0.0046 | 0.0372 | 0.0308 | 0.032 | --- | 0.0368 | --- | --- | 0.0344 | --- | --- |
| Barium | mg/L | 0.0493 | 0.0459 | 0.0374 | 0.0429 | --- | 0.0465 | --- | --- | 0.0388 | --- | --- |
| Boron | mg/L | 0.0485 | 0.12 | 0.082 | 0.0639 | --- | 0.05 | --- | --- | 0.025 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000073 | 0.000184 | 0.00013 | 0.000098 | --- | 0.0001 | --- | --- | 0.000103 | --- | --- |
| Chromium | mg/L | 0.0023 | 0.0017 | 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0005 | 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.002 | < 0.002 | 0.007 | < 0.002 | --- | < 0.002 | --- | --- | < 0.002 | --- | --- |
| Potassium | mg/L | 15.1 | 19.1 | 17.3 | 10.6 | --- | 9.660000 | --- | --- | 6.21 | --- | --- |
| Lithium | mg/L | 0.002 | 0.002 | 0.002 | 0.002 | --- | 0.002 | --- | --- | 0.002 | --- | --- |
| Magnesium | mg/L | 3.56 | 7.15 | 6.86 | 4.9 | --- | 5.96 | --- | --- | 4.94 | --- | --- |
| Manganese | mg/L | 0.014 | 0.00749 | 0.00686 | 0.00693 | --- | 0.00879 | --- | --- | 0.00732 | --- | --- |
| Molybdenum | mg/L | 0.00187 | 0.00435 | 0.0027 | 0.00159 | --- | 0.001 | --- | --- | 0.00052 | --- | --- |
| Sodium | mg/L | 97 | 147 | 84.5 | 48.9 | --- | 30.6 | --- | --- | 11 | --- | --- |
| Nickel | mg/L | 0.0006 | 0.0015 | 0.001 | 0.0006 | --- | 0.001 | --- | --- | 0.0006 | --- | --- |
| Phosphorus | mg/L | 0.016 | 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | 0.00002 | --- | 0.00007 | --- | --- | < 0.00002 | --- | --- |
| Antimony | mg/L | 0.0022 | 0.0053 | 0.0044 | 0.0042 | --- | 0.00 | --- | --- | 0.0033 | --- | --- |
| Selenium | mg/L | 0.003 | 0.004 | 0.002 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00056 | 0.00025 | 0.00009 | 0.00004 | --- | 0.000 | --- | --- | 0.00001 | --- | --- |
| Strontium | mg/L | 0.0538 | 0.0673 | 0.0622 | 0.0445 | --- | 0.0511 | --- | --- | 0.0407 | --- | --- |
| Titanium | mg/L | 0.0001 | 0.0002 | 0.0004 | 0.0002 | --- | 0.0001 | --- | --- | 0.0002 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000023 | 0.000151 | 0.000097 | 0.000059 | --- | 0.00 | --- | --- | 0.000075 | --- | --- |
| Vanadium | mg/L | 0.00099 | 0.00371 | 0.00214 | 0.00222 | --- | 0.00212 | --- | --- | 0.00172 | --- | --- |
| Tungsten | mg/L | 0.00072 | 0.00141 | 0.00074 | 0.00058 | --- | 0.0005 | --- | --- | 0.00041 | --- | --- |
| Yttrium | mg/L | 0.000017 | 0.000014 | 0.000008 | 0.000009 | --- | 0.000011 | --- | --- | 0.000008 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | 0.001 | --- | 0.001 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 5: F-Zone MV (OP)
**Weight:** 99 kg

| Analyte | Event # | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10073-OCT11 | CA10125-OCT11 | CA10176-OCT11 | CA11261-OCT11 | CA10033-NOV11 | CA10108-NOV11 | CA10168-NOV11 | CA10259-NOV11 | CA11815-NOV11 | CA10031-DEC11 |
| | | 05-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 02-Nov-11 | 09-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 07-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 |
| Hum Cell Leachate Volume | mLs | 9791 | 9088 | 9564 | 10245 | 9542 | 9428 | 9111 | 10245 | 4754 | 9610 |
| pH | no unit | 8.15 | 8.41 | 8.12 | 8.06 | 8.26 | 8.22 | 8.09 | 8.19 | 8.03 | 8.28 |
| Alkalinity | mg/L as CaCO3 | 49 | 50 | 53 | 52 | 53 | 50 | 45 | 49 | 51 | 48 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 149 | 133 | 145 | 154 | 126 | 159 | 132 | 146 | 130 | 144 |
| Sulphate | mg/L | 22 | 20 | 22 | 24 | 24 | 23 | 20 | 23 | 31 | 23 |
| Calcium | mg/L | 12.8 | 11.4 | 12.3 | 12.9 | 13.6 | 13.3 | 12.3 | 13 | 18.9 | 13.5 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Fluoride | mg/L | --- | 0.08 | --- | --- | --- | 0.08 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | 0.15 | --- | --- | --- | 0.13 | --- | --- | --- | 0.12 |
| Arsenic | mg/L | --- | 0.0371 | --- | --- | --- | 0.0413 | --- | --- | --- | 0.0413 |
| Barium | mg/L | --- | 0.0483 | --- | --- | --- | 0.0467 | --- | --- | --- | 0.043 |
| Boron | mg/L | --- | 0.0185 | --- | --- | --- | 0.0155 | --- | --- | --- | 0.0116 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | 0.000106 | --- | --- | --- | 0.000145 | --- | --- | --- | 0.000167 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | < 0.002 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | 5.47 | --- | --- | --- | 5.51 | --- | --- | --- | 4.51 |
| Lithium | mg/L | --- | 0.002 | --- | --- | --- | 0.002 | --- | --- | --- | 0.003 |
| Magnesium | mg/L | --- | 5.36 | --- | --- | --- | 6.38 | --- | --- | --- | 5.84 |
| Manganese | mg/L | --- | 0.00848 | --- | --- | --- | 0.0105 | --- | --- | --- | 0.0113 |
| Molybdenum | mg/L | --- | 0.0004 | --- | --- | --- | 0.00026 | --- | --- | --- | 0.00026 |
| Sodium | mg/L | --- | 4.58 | --- | --- | --- | 3.8 | --- | --- | --- | 2.36 |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | 0.0005 | --- | --- | --- | 0.0001 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | 0.0036 | --- | --- | --- | 0.0038 | --- | --- | --- | 0.003 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | 0.0439 | --- | --- | --- | 0.0488 | --- | --- | --- | 0.0452 |
| Titanium | mg/L | --- | 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.0002 |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | 0.000039 | --- | --- | --- | 0.000059 | --- | --- | --- | 0.000085 |
| Vanadium | mg/L | --- | 0.00165 | --- | --- | --- | 0.00165 | --- | --- | --- | 0.00155 |
| Tungsten | mg/L | --- | 0.00031 | --- | --- | --- | 0.00027 | --- | --- | --- | 0.00085 |
| Yttrium | mg/L | --- | 0.000009 | --- | --- | --- | 0.000009 | --- | --- | --- | 0.000009 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 5: F-Zone MV (OP)
**Weight:** 99 kg

| Analyte | Event # | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10083-DEC11 | CA11070-DEC11 | CA10290-DEC11 | CA10043-JAN12 | CA10084-JAN12 | CA11022-JAN12 | CA10226-JAN12 | CA10007-FEB12 | CA10084-FEB12 | CA10138-FEB12 |
| | | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 04-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 01-Feb-12 | 08-Feb-12 | 15-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 | 9900 |
| Hum Cell Leachate Volume | mLs | 9746 | 9678 | 9905 | 9837 | 9655 | 9723 | 9610 | 9746 | 9769 | 9791 |
| pH | no unit | 8.07 | 8.22 | 8.06 | 8.12 | 8.21 | 8.1 | 8.09 | 8.19 | 8.18 | 8.15 |
| Alkalinity | mg/L as CaCO3 | 48 | 49 | 47 | 46 | 48 | 47 | 50 | 49 | 49 | 50 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 146 | 108 | 101 | 140 | 103 | 138 | 142 | 111 | 114 | 115 |
| Sulphate | mg/L | 22 | 20 | 21 | 22 | 21 | 21 | 22 | 23 | 24 | 24 |
| Calcium | mg/L | 14 | 13.3 | 12.8 | 13.4 | 13.8 | 13.8 | 14.9 | 14.8 | 16.3 | 15.6 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | < 0.2 | --- | --- | --- | --- | --- | |
| Fluoride | mg/L | --- | --- | --- | < 0.06 | --- | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | 0.11 | --- | --- | --- | --- | --- | 0.13 |
| Arsenic | mg/L | --- | --- | --- | 0.0407 | --- | --- | --- | --- | --- | 0.0374 |
| Barium | mg/L | --- | --- | --- | 0.041 | --- | --- | --- | --- | --- | 0.0431 |
| Boron | mg/L | --- | --- | --- | 0.0083 | --- | --- | --- | --- | --- | 0.0071 |
| Beryllium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | --- | 0.000003 |
| Cobalt | mg/L | --- | --- | --- | 0.000189 | --- | --- | --- | --- | --- | 0.000221 |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | < 0.003 | --- | --- | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | --- | 4.47 | --- | --- | --- | --- | --- | 4.53 |
| Lithium | mg/L | --- | --- | --- | 0.003 | --- | --- | --- | --- | --- | 0.003 |
| Magnesium | mg/L | --- | --- | --- | 5.52 | --- | --- | --- | --- | --- | 6.04 |
| Manganese | mg/L | --- | --- | --- | 0.0109 | --- | --- | --- | --- | --- | 0.0145 |
| Molybdenum | mg/L | --- | --- | --- | 0.00018 | --- | --- | --- | --- | --- | 0.00019 |
| Sodium | mg/L | --- | --- | --- | 1.67 | --- | --- | --- | --- | --- | 1.39 |
| Nickel | mg/L | --- | --- | --- | 0.0008 | --- | --- | --- | --- | --- | 0.001 |
| Phosphorus | mg/L | --- | --- | --- | < 0.009 | --- | --- | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | 0.00002 |
| Antimony | mg/L | --- | --- | --- | 0.0026 | --- | --- | --- | --- | --- | 0.0029 |
| Selenium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | --- | --- | 0.0422 | --- | --- | --- | --- | --- | 0.048 |
| Titanium | mg/L | --- | --- | --- | 0.0004 | --- | --- | --- | --- | --- | 0.0003 |
| Thallium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | 0.000057 | --- | --- | --- | --- | --- | 0.000079 |
| Vanadium | mg/L | --- | --- | --- | 0.00126 | --- | --- | --- | --- | --- | 0.00122 |
| Tungsten | mg/L | --- | --- | --- | 0.00019 | --- | --- | --- | --- | --- | 0.00016 |
| Yttrium | mg/L | --- | --- | --- | 0.000008 | --- | --- | --- | --- | --- | 0.000009 |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-7 Pump
**Weight:** 50kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10399-JAN12 | CA10400-JAN12 | CA10035-FEB12 | CA10102-FEB12 | CA10160-FEB12 | CA10231-FEB12 | CA10028-MAR12 | CA10072-MAR12 | CA10139-MAR12 | CA10180-MAR12 | CA10007-APR12 |
| | Units | 24-Jan-12 | 31-Jan-12 | 07-Feb-12 | 14-Feb-12 | 21-Feb-12 | 28-Feb-12 | 06-Mar-12 | 13-Mar-12 | 20-Mar-12 | 27-Mar-12 | 03-Apr-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Column Leachate Volume | mLs | 1255 | 4930 | 4816 | 4975 | 4907 | 5020 | 4975 | 4975 | 4884 | 4907 | 4861 |
| pH | no unit | 8.24 | 8.12 | 8.06 | 8.07 | 8.11 | 8.13 | 8.04 | 7.91 | 7.95 | 7.94 | 8.07 |
| Alkalinity | mg/L as CaCO3 | 263 | 127 | 111 | 113 | 124 | 84 | 83.0 | 72.0 | 72.00 | 68 | 62 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 453 | 702 | 365 | 339 | 301 | 282 | 254 | 334 | 310 | 288 | 221 |
| Sulphate | mg/L | 81 | 190 | 130 | 120 | 110 | 100 | 91 | 83 | 83 | 66 | 69 |
| Calcium | mg/L | 20.3 | 35.3 | 31 | 33.8 | 33.2 | 32.4 | 30.4 | 32.2 | 31.8 | 30.7 | 29.9 |
| As+3 | mg/L | 0.003 | 0.005 | 0.007 | 0.006 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | < 0.001 | 0.003 | < 0.001 | 0.003 | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | 14 | 21 | 10 | 5.6 | --- | 4.1 | --- | --- | 0.9 | --- | --- |
| Fluoride | mg/L | 0.09 | 0.08 | 0.07 | 0.07 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.18 | 0.1 | 0.11 | 0.11 | --- | 0.12 | --- | --- | 0.11 | --- | --- |
| Arsenic | mg/L | 0.0029 | 0.0095 | 0.0073 | 0.007 | --- | 0.0077 | --- | --- | 0.0088 | --- | --- |
| Barium | mg/L | 0.00691 | 0.0109 | 0.00771 | 0.0071 | --- | 0.00661 | --- | --- | 0.0054 | --- | --- |
| Boron | mg/L | 0.0422 | 0.0872 | 0.059 | 0.0552 | --- | 0.046 | --- | --- | 0.0292 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | 0.000005 | < 0.000003 | --- | 0.0001 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000122 | 0.000268 | 0.000233 | 0.000287 | --- | 0.00030 | --- | --- | 0.000289 | --- | --- |
| Chromium | mg/L | < 0.0005 | 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.001 | 0.0011 | 0.0006 | 0.0009 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.005 | < 0.003 | < 0.003 | 0.006 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 17.2 | 25.1 | 16.3 | 14.8 | --- | 12.10 | --- | --- | 9.46 | --- | --- |
| Lithium | mg/L | < 0.001 | 0.002 | 0.002 | 0.002 | --- | 0.002 | --- | --- | 0.002 | --- | --- |
| Magnesium | mg/L | 7.49 | 17.3 | 13.8 | 14.7 | --- | 13.800000 | --- | --- | 12.3 | --- | --- |
| Manganese | mg/L | 0.0161 | 0.0326 | 0.0436 | 0.0464 | --- | 0.0409 | --- | --- | 0.0373 | --- | --- |
| Molybdenum | mg/L | 0.00231 | 0.00194 | 0.00108 | 0.00091 | --- | 0.00065 | --- | --- | 0.00049 | --- | --- |
| Sodium | mg/L | 53.3 | 80.4 | 46.9 | 31 | --- | 18.1 | --- | --- | 8.29 | --- | --- |
| Nickel | mg/L | 0.0012 | 0.0019 | 0.0014 | 0.0006 | --- | 0.001 | --- | --- | 0.0007 | --- | --- |
| Phosphorus | mg/L | 0.122 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | 0.00002 | 0.00003 | 0.00004 | < 0.00002 | --- | < 0.00002 | --- | --- | 0.00002 | --- | --- |
| Antimony | mg/L | 0.0039 | 0.0071 | 0.0064 | 0.0074 | --- | 0.0047 | --- | --- | 0.0039 | --- | --- |
| Selenium | mg/L | 0.003 | 0.004 | 0.002 | 0.002 | --- | 0.00100 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00217 | 0.00235 | 0.00122 | 0.00056 | --- | 0.00 | --- | --- | 0.0003 | --- | --- |
| Strontium | mg/L | 0.0433 | 0.0956 | 0.0778 | 0.0821 | --- | 0.0755 | --- | --- | 0.0684 | --- | --- |
| Titanium | mg/L | 0.0005 | 0.0002 | 0.0009 | 0.0003 | --- | 0.001 | --- | --- | 0.0001 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000053 | 0.000377 | 0.000244 | 0.000272 | --- | 0.0003 | --- | --- | 0.000198 | --- | --- |
| Vanadium | mg/L | 0.00036 | 0.00052 | 0.00043 | 0.00043 | --- | 0.00052 | --- | --- | 0.00044 | --- | --- |
| Tungsten | mg/L | 0.00098 | 0.00034 | 0.00319 | 0.00003 | --- | 0.00 | --- | --- | < 0.00003 | --- | --- |
| Yttrium | mg/L | 0.000009 | 0.000017 | 0.000012 | 0.000016 | --- | 0.00001 | --- | --- | 0.000012 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | 0.0110 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-7 Pump
**Weight:** 50kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10007-APR12 | CA10070-APR12 | CA10133-APR12 | CA10499-APR21 | CA10109-MAY12 | CA10110-MAY12 | CA10140-MAY12 | CA11127-MAY12 | CA10350-MAY12 | CA10021-JUN12 | CA10052-JUN12 |
| | Units | 03-Apr-12 | 10-Apr-12 | 17-Apr-12 | 24-Apr-12 | 01-May-12 | 08-May-12 | 15-May-12 | 22-May-12 | 29-May-12 | 05-Jun-12 | 12-Jun-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Column Leachate Volume | mLs | 4861 | 4839 | 4816 | 4816 | 4952 | 4725 | 4975 | 4703 | 4907 | 4952 | 4839 |
| pH | no unit | 8.07 | 8.03 | 8.08 | 7.97 | 7.96 | 7.93 | 7.98 | 8.05 | 8.03 | 7.71 | 8.04 |
| Alkalinity | mg/L as CaCO3 | 62 | 61 | 71 | 70 | 63 | 63 | 62 | 68 | 58 | 62 | 55 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 221 | 269 | 201 | 269 | 256 | 256 | 249 | 253 | 234 | 256 | 251 |
| Sulphate | mg/L | 69 | 71 | 70 | 68 | 63 | 64 | 63 | 63 | 57 | 64 | 63 |
| Calcium | mg/L | 29.9 | 30.0 | 28.9 | 29.5 | 29.2 | 29.8 | 29.3 | 29.0 | 28.6 | 30.2 | 31.5 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | 0.6 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | <0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | 0.1 | --- | --- | --- | 0.09 | --- | --- | --- | 0.1 |
| Arsenic | mg/L | --- | --- | 0.0086 | --- | --- | --- | 0.0085 | --- | --- | --- | 0.0082 |
| Barium | mg/L | --- | --- | 0.00523 | --- | --- | --- | 0.00546 | --- | --- | --- | 0.00582 |
| Boron | mg/L | --- | --- | 0.0242 | --- | --- | --- | 0.0187 | --- | --- | --- | 0.0149 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.000276 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.000312 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | 0.0006 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | 7.02 | --- | --- | --- | 6.43 | --- | --- | --- | 6.16 |
| Lithium | mg/L | --- | --- | 0.002 | --- | --- | --- | 0.002 | --- | --- | --- | 0.002 |
| Magnesium | mg/L | --- | --- | 10.2 | --- | --- | --- | 9.91 | --- | --- | --- | 10 |
| Manganese | mg/L | --- | --- | 0.0254 | --- | --- | --- | 0.0231 | --- | --- | --- | 0.0239 |
| Molybdenum | mg/L | --- | --- | 0.00053 | --- | --- | --- | 0.00081 | --- | --- | --- | 0.00039 |
| Sodium | mg/L | --- | --- | 3.37 | --- | --- | --- | 2.01 | --- | --- | --- | 1.4 |
| Nickel | mg/L | --- | --- | 0.0006 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.0006 |
| Phosphorus | mg/L | --- | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | 0.00002 |
| Antimony | mg/L | --- | --- | 0.0034 | --- | --- | --- | 0.0029 | --- | --- | --- | 0.0027 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | 0.001 |
| Tin | mg/L | --- | --- | 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.00024 |
| Strontium | mg/L | --- | --- | 0.0574 | --- | --- | --- | 0.0542 | --- | --- | --- | 0.055 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | 0.00002 | --- | --- | --- | 0.00006 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.000406 | --- | --- | --- | 0.00017 | --- | --- | --- | 0.000166 |
| Vanadium | mg/L | --- | --- | 0.00038 | --- | --- | --- | 0.00028 | --- | --- | --- | 0.00025 |
| Tungsten | mg/L | --- | --- | 0.00011 | --- | --- | --- | 0.00009 | --- | --- | --- | 0.00009 |
| Yttrium | mg/L | --- | --- | 0.000022 | --- | --- | --- | 0.000012 | --- | --- | --- | 0.000009 |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-7 Pump
**Weight:** 50kg

| Analyte | Week/Event | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10094-JUN12 | CA10136-JUN12 | CA10162-JUL12 | CA10163-JUL12 | CA10164-JUL12 | CA10165-JUL12 | CA11240-JUL12 | CA10026-AUG12 | CA10069-AUG12 | CA10189-AUG12 | CA10398-AUG12 | CA10008-SEP12 |
| | Units | 19-Jun-12 | 26-Jun-12 | 03-Jul-12 | 10-Jul-12 | 17-Jul-12 | 24-Jul-12 | 31-Jul-12 | 07-Aug-12 | 14-Aug-12 | 21-Aug-12 | 28-Aug-12 | 04-Sep-12 |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Column Leachate Volume | mLs | 4990 | 5194 | 4899 | 5239 | 5058 | 4990 | 4990 | 5126 | 4990 | 5103 | 5103 | 5103 |
| pH | no unit | 7.78 | 8.09 | 7.94 | 7.86 | 7.83 | 7.26 | 7.91 | 7.92 | 7.95 | 7.96 | 7.99 | 7.93 |
| Alkalinity | mg/L as CaCO3 | 61 | 58 | 61 | 55 | 60 | 59 | 60 | 52 | 47 | 49 | 51 | 53 |
| Acidity | mg/L as CaCO3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Conductivity | uS/cm | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sulphate | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Calcium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fluoride | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mercury | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Arsenic | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Barium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Boron | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Beryllium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bismuth | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cadmium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cobalt | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chromium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Copper | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Iron | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Potassium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lithium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Magnesium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Manganese | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sodium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nickel | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Phosphorus | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lead | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Antimony | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Selenium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tin | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Strontium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Titanium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Thallium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Uranium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Vanadium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tungsten | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yttrium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Zinc | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-8 Wesmeg
**Weight:** 100kg

| Analyte | Wee/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10399-JAN12 | CA10400-JAN12 | CA10035-FEB12 | CA10102-FEB12 | CA10160-FEB12 | CA10231-FEB12 | CA10028-MAR12 | CA10072-MAR12 | CA10139-MAR12 | CA10180-MAR12 | CA10007-APR12 |
| | Units | 24-Jan-12 | 31-Jan-12 | 07-Feb-12 | 14-Feb-12 | 21-Feb-12 | 28-Feb-12 | 06-Mar-12 | 13-Mar-12 | 20-Mar-12 | 27-Mar-12 | 03-Apr-12 |
| Leachate Volume Added (mL) | mL | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| Column Leachate Volume | mLs | 2434 | 9805 | 9556 | 9850 | 10009 | 9964 | 9964 | 9964 | 9896 | 9896 | 9896 |
| pH | no unit | 8.37 | 8.34 | 8.31 | 8.26 | 8.26 | 8.13 | 8.19 | 8.12 | 8.21 | 8.14 | 8.18 |
| Alkalinity | mg/L as CaCO3 | 116 | 128 | 100 | 92 | 85 | 84 | 72 | 70 | 66 | 61 | 61 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 253 | 343 | 232 | 208 | 190 | 171 | 155 | 196 | 179 | 166 | 129 |
| Sulphate | mg/L | 14 | 33 | 27 | 26 | 25 | 24 | 25 | 23 | 23 | 21 | 21 |
| Calcium | mg/L | 10.1 | 12.2 | 11.9 | 12.6 | 13.3 | 13.2 | 13.0 | 13.9 | 13.9 | 13.6 | 13.1 |
| As+3 | mg/L | 0.003 | 0.009 | 0.013 | 0.014 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.006 | 0.035 | 0.028 | 0.03 | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | 38 | 42 | 23 | 14 | --- | 6.9 | --- | --- | 2.1 | --- | --- |
| Fluoride | mg/L | 0.13 | 0.12 | 0.09 | 0.07 | --- | 0.06 | --- | --- | < 0.06 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.34 | 0.2 | 0.21 | 0.2 | --- | 0.19 | --- | --- | 0.18 | --- | --- |
| Arsenic | mg/L | 0.0093 | 0.052 | 0.0484 | 0.0535 | --- | 0.0614 | --- | --- | 0.0663 | --- | --- |
| Barium | mg/L | 0.0495 | 0.0509 | 0.033 | 0.0271 | --- | 0.0244 | --- | --- | 0.0199 | --- | --- |
| Boron | mg/L | 0.0392 | 0.0773 | 0.0499 | 0.0449 | --- | 0.0379 | --- | --- | 0.0253 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000116 | 0.000246 | 0.000178 | 0.0002 | --- | 0.00021 | --- | --- | 0.000215 | --- | --- |
| Chromium | mg/L | 0.0006 | 0.0008 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | < 0.0005 | 0.0005 | < 0.0005 | 0.0009 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | < 0.003 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | < 0.003 | --- | --- |
| Potassium | mg/L | 12.2 | 17.3 | 11.5 | 10.5 | --- | 8.76 | --- | --- | 6.75 | --- | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | 0.001 | < 0.001 | --- | 0.001 | --- | --- | 0.001 | --- | --- |
| Magnesium | mg/L | 3.85 | 8.97 | 7.94 | 7.94 | --- | 8.240000 | --- | --- | 7.97 | --- | --- |
| Manganese | mg/L | 0.0056 | 0.00551 | 0.00913 | 0.00818 | --- | 0.00931 | --- | --- | 0.00837 | --- | --- |
| Molybdenum | mg/L | 0.00208 | 0.00337 | 0.00192 | 0.00161 | --- | 0.00108 | --- | --- | 0.00071 | --- | --- |
| Sodium | mg/L | 43.4 | 64.5 | 41.2 | 27.7 | --- | 17.6 | --- | --- | 8.00 | --- | --- |
| Nickel | mg/L | 0.0013 | 0.0021 | 0.0014 | 0.0009 | --- | 0.001 | --- | --- | 0.0007 | --- | --- |
| Phosphorus | mg/L | 0.09 | < 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | < 0.00002 | 0.00003 | 0.00003 | 0.00003 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Antimony | mg/L | 0.006 | 0.0095 | 0.0088 | 0.0102 | --- | 0.0072 | --- | --- | 0.0063 | --- | --- |
| Selenium | mg/L | < 0.001 | 0.002 | < 0.001 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00232 | 0.00022 | 0.00014 | 0.0001 | --- | 0.00 | --- | --- | 0.0001 | --- | --- |
| Strontium | mg/L | 0.0403 | 0.0644 | 0.0549 | 0.0563 | --- | 0.0552 | --- | --- | 0.0547 | --- | --- |
| Titanium | mg/L | 0.0004 | 0.0002 | 0.0003 | 0.0001 | --- | 0.000 | --- | --- | < 0.0001 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000011 | 0.000066 | 0.000057 | 0.000059 | --- | 0.0001 | --- | --- | 0.000081 | --- | --- |
| Vanadium | mg/L | 0.00068 | 0.00139 | 0.00137 | 0.00141 | --- | 0.00149 | --- | --- | 0.00147 | --- | --- |
| Tungsten | mg/L | 0.00311 | 0.00166 | 0.00555 | 0.00067 | --- | 0.00 | --- | --- | 0.00057 | --- | --- |
| Yttrium | mg/L | 0.000007 | 0.000009 | 0.000007 | 0.000008 | --- | 0.00001 | --- | --- | 0.000007 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-8 Wesmeg
**Weight:** 100kg

| Analyte | Wee/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10070-APR12 | CA10133-APR12 | CA10499-APR21 | CA10109-MAY12 | CA10110-MAY12 | CA10140-MAY12 | CA11127-MAY12 | CA10350-MAY12 | CA10021-JUN12 | CA10052-JUN12 | CA10094-JUN12 |
| | Units | 10-Apr-12 | 17-Apr-12 | 24-Apr-12 | 01-May-12 | 08-May-12 | 15-May-12 | 22-May-12 | 29-May-12 | 05-Jun-12 | 12-Jun-12 | 19-Jun-12 |
| Leachate Volume Added (mL) | mL | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| Column Leachate Volume | mLs | 9850 | 9714 | 9714 | 10100 | 9556 | 10077 | 9601 | 9896 | 10077 | 8576 | 9828 |
| pH | no unit | 8.09 | 8.19 | 8.15 | 8.14 | 8.14 | 8.33 | 8.08 | 8.15 | 7.91 | 8.09 | 8.1 |
| Alkalinity | mg/L as CaCO3 | 55 | 56 | 56 | 51 | 51 | 51 | 49 | 45 | 50 | 45 | 48 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | --- |
| Conductivity | uS/cm | 154 | 112 | 146 | 144 | 140 | 132 | 140 | 127 | 135 | 130 | --- |
| Sulphate | mg/L | 20 | 19 | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 16 | --- |
| Calcium | mg/L | 13.0 | 12.4 | 13 | 13 | 12.7 | 12.7 | 12.8 | 12.8 | 13.1 | 13.3 | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | 0.4 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | <0.06 | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | --- | 0.16 | --- | --- | --- | 0.14 | --- | --- | --- | 0.15 | --- |
| Arsenic | mg/L | --- | 0.0725 | --- | --- | --- | 0.0804 | --- | --- | --- | 0.0862 | --- |
| Barium | mg/L | --- | 0.0184 | --- | --- | --- | 0.0183 | --- | --- | --- | 0.0183 | --- |
| Boron | mg/L | --- | 0.0195 | --- | --- | --- | 0.0146 | --- | --- | --- | 0.0112 | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | --- | 0.000229 | --- | --- | --- | 0.000272 | --- | --- | --- | 0.000304 | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- |
| Potassium | mg/L | --- | 4.96 | --- | --- | --- | 4.48 | --- | --- | --- | 4.18 | --- |
| Lithium | mg/L | --- | 0.001 | --- | --- | --- | 0.001 | --- | --- | --- | 0.001 | --- |
| Magnesium | mg/L | --- | 6.52 | --- | --- | --- | 6.09 | --- | --- | --- | 5.96 | --- |
| Manganese | mg/L | --- | 0.00766 | --- | --- | --- | 0.00824 | --- | --- | --- | 0.00814 | --- |
| Molybdenum | mg/L | --- | 0.00046 | --- | --- | --- | 0.00045 | --- | --- | --- | 0.0003 | --- |
| Sodium | mg/L | --- | 3.13 | --- | --- | --- | 1.72 | --- | --- | --- | 1.11 | --- |
| Nickel | mg/L | --- | 0.0006 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.0004 | --- |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 | --- |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | --- | 0.0059 | --- | --- | --- | 0.0052 | --- | --- | --- | 0.0051 | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | 0.001 | --- |
| Tin | mg/L | --- | 0.00006 | --- | --- | --- | 0.00004 | --- | --- | --- | 0.00013 | --- |
| Strontium | mg/L | --- | 0.0462 | --- | --- | --- | 0.0445 | --- | --- | --- | 0.0451 | --- |
| Titanium | mg/L | --- | 0.0002 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.0001 | --- |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | --- | 0.000107 | --- | --- | --- | 0.000084 | --- | --- | --- | 0.000081 | --- |
| Vanadium | mg/L | --- | 0.00149 | --- | --- | --- | 0.00139 | --- | --- | --- | 0.00141 | --- |
| Tungsten | mg/L | --- | 0.00065 | --- | --- | --- | 0.00061 | --- | --- | --- | 0.00044 | --- |
| Yttrium | mg/L | --- | 0.000009 | --- | --- | --- | 0.000005 | --- | --- | --- | 0.000006 | --- |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-8 Wesmeg
**Weight:** 100kg

| Analyte | Wee/Event | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10136-JUN12 | CA10162-JUL12 | CA10163-JUL12 | CA10164-JUL12 | CA10165-JUL12 | CA11240-JUL12 | CA10026-AUG12 | CA10069-AUG12 | CA10189-AUG12 | CA10398-AUG12 | CA10008-SEP12 |
| | Units | 26-Jun-12 | 03-Jul-12 | 10-Jul-12 | 17-Jul-12 | 24-Jul-12 | 31-Jul-12 | 07-Aug-12 | 14-Aug-12 | 21-Aug-12 | 28-Aug-12 | 04-Sep-12 |
| Leachate Volume Added (mL) | mL | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| Column Leachate Volume | mLs | 10191 | 9624 | 10349 | 9941 | 9737 | 9805 | 10009 | 9941 | 9941 | 9987 | 9987 |
| pH | no unit | 7.28 | 7.42 | 8.01 | 8.02 | 8.05 | 8.02 | 8.22 | 7.9 | 8.08 | 8.01 | 8.07 |
| Alkalinity | mg/L as CaCO3 | 46 | 51 | 44 | 48 | 46 | 50 | 43 | 41 | 41 | 38 | 43 |
| Acidity | mg/L as CaCO3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Conductivity | uS/cm | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sulphate | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Calcium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fluoride | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mercury | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Arsenic | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Barium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Boron | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Beryllium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bismuth | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cadmium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cobalt | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chromium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Copper | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Iron | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Potassium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lithium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Magnesium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Manganese | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sodium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nickel | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Phosphorus | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lead | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Antimony | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Selenium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tin | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Strontium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Titanium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Thallium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Uranium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Vanadium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tungsten | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yttrium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Zinc | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-9 Wolf
**Weight:** 50kg

| Analyte | Wee/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10399-JAN12 | CA10400-JAN12 | CA10035-FEB12 | CA10102-FEB12 | CA10160-FEB12 | CA10231-FEB12 | CA10028-MAR12 | CA10072-MAR12 | CA10139-MAR12 | CA10180-MAR12 | CA10007-APR12 |
| | Units | 24-Jan-12 | 31-Jan-12 | 07-Feb-12 | 14-Feb-12 | 21-Feb-12 | 28-Feb-12 | 06-Mar-12 | 13-Mar-12 | 20-Mar-12 | 27-Mar-12 | 03-Apr-12 |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Column Leachate Volume | mLs | 1072 | 4928 | 4860 | 4996 | 4883 | 4996 | 4973 | 4951 | 4883 | 4905 | 4883 |
| pH | no unit | 8.34 | 8.23 | 8.22 | 8.17 | 8.21 | 8.16 | 8 | 8 | 8.07 | 8.09 | 8.12 |
| Alkalinity | mg/L as CaCO3 | 134 | 93 | 76 | 68 | 67 | 62 | 58 | 59 | 60 | 54 | 54 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 243 | 319 | 221 | 202 | 175 | 161 | 146 | 188 | 178 | 171 | 139 |
| Sulphate | mg/L | 35 | 70 | 50 | 44 | 38 | 33 | 31 | 30 | 31 | 29 | 30 |
| Calcium | mg/L | 12.6 | 18.3 | 16.3 | 16.4 | 16.7 | 16.2 | 16.1 | 17.2 | 17.3 | 17.2 | 17.9 |
| As+3 | mg/L | 0.003 | 0.007 | 0.027 | 0.009 | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | 0.006 | 0.019 | 0.004 | 0.025 | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | 25 | 28 | 16 | 10 | --- | 5.2 | --- | --- | 1.1 | --- | --- |
| Fluoride | mg/L | 0.22 | 0.19 | 0.14 | 0.13 | --- | 0.11 | --- | --- | 0.09 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.25 | 0.13 | 0.14 | 0.15 | --- | 0.16 | --- | --- | 0.16 | --- | --- |
| Arsenic | mg/L | 0.0118 | 0.0313 | 0.0364 | 0.0416 | --- | 0.0495 | --- | --- | 0.0585 | --- | --- |
| Barium | mg/L | 0.00396 | 0.00668 | 0.00507 | 0.00453 | --- | 0.00421 | --- | --- | 0.00396 | --- | --- |
| Boron | mg/L | 0.397 | 0.622 | 0.382 | 0.318 | --- | 0.217 | --- | --- | 0.117 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | 0.000005 | 0.000005 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000197 | 0.000415 | 0.000307 | 0.000309 | --- | 0.00030 | --- | --- | 0.000344 | --- | --- |
| Chromium | mg/L | 0.0006 | 0.0006 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0009 | 0.0008 | 0.0008 | 0.001 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.011 | < 0.003 | < 0.003 | < 0.003 | --- | < 0.003 | --- | --- | 0.018 | --- | --- |
| Potassium | mg/L | 20 | 27.1 | 18.3 | 15.5 | --- | 12.00 | --- | --- | 9.66 | --- | --- |
| Lithium | mg/L | 0.001 | 0.002 | 0.002 | 0.002 | --- | 0.002 | --- | --- | 0.002 | --- | --- |
| Magnesium | mg/L | 2.58 | 7.08 | 6.2 | 6.05 | --- | 5.550000 | --- | --- | 5.4 | --- | --- |
| Manganese | mg/L | 0.00872 | 0.00915 | 0.0106 | 0.00982 | --- | 0.0106 | --- | --- | 0.0119 | --- | --- |
| Molybdenum | mg/L | 0.00431 | 0.00797 | 0.00493 | 0.00415 | --- | 0.00257 | --- | --- | 0.00175 | --- | --- |
| Sodium | mg/L | 33.9 | 43.2 | 28.1 | 19.2 | --- | 10.7 | --- | --- | 4.83 | --- | --- |
| Nickel | mg/L | 0.0022 | 0.0039 | 0.0024 | 0.0015 | --- | 0.002 | --- | --- | 0.001 | --- | --- |
| Phosphorus | mg/L | 0.136 | 0.009 | < 0.009 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- | --- |
| Lead | mg/L | 0.00006 | 0.00021 | 0.00011 | 0.00005 | --- | 0.000 | --- | --- | 0.00002 | --- | --- |
| Antimony | mg/L | 0.029 | 0.055 | 0.0355 | 0.0358 | --- | 0.0205 | --- | --- | 0.0145 | --- | --- |
| Selenium | mg/L | < 0.001 | 0.002 | 0.001 | 0.002 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00217 | 0.0005 | 0.00032 | 0.00023 | --- | 0.00 | --- | --- | 0.00017 | --- | --- |
| Strontium | mg/L | 0.0564 | 0.113 | 0.093 | 0.0914 | --- | 0.0870 | --- | --- | 0.0877 | --- | --- |
| Titanium | mg/L | 0.0011 | 0.0003 | 0.0004 | 0.0002 | --- | 0.000 | --- | --- | 0.0002 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000116 | 0.00123 | 0.000894 | 0.000929 | --- | 0.0009 | --- | --- | 0.000945 | --- | --- |
| Vanadium | mg/L | 0.00067 | 0.00085 | 0.00085 | 0.00086 | --- | 0.00095 | --- | --- | 0.00092 | --- | --- |
| Tungsten | mg/L | 0.00142 | 0.00122 | 0.00539 | 0.00048 | --- | 0.00 | --- | --- | 0.0003 | --- | --- |
| Yttrium | mg/L | 0.000032 | 0.000017 | 0.000012 | 0.000011 | --- | 0.00001 | --- | --- | 0.000008 | --- | --- |
| Zinc | mg/L | < 0.001 | < 0.001 | 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-9 Wolf
**Weight:** 50kg

| Analyte | Wee/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10070-APR12 | CA10133-APR12 | CA10499-APR21 | CA10109-MAY12 | CA10110-MAY12 | CA10140-MAY12 | CA11127-MAY12 | CA10350-MAY12 | CA10021-JUN12 | CA10052-JUN12 | CA10094-JUN12 |
| | Units | 10-Apr-12 | 17-Apr-12 | 24-Apr-12 | 01-May-12 | 08-May-12 | 15-May-12 | 22-May-12 | 29-May-12 | 05-Jun-12 | 12-Jun-12 | 19-Jun-12 |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Column Leachate Volume | mLs | 4837 | 4814 | 4724 | 4951 | 4701 | 4973 | 4724 | 4883 | 4928 | 4837 | 4883 |
| pH | no unit | 8 | 8.14 | 7.98 | 7.97 | 7.95 | 8.05 | 7.9 | 8.06 | 7.79 | 7.98 | 7.85 |
| Alkalinity | mg/L as CaCO3 | 53 | 51 | 52 | 47 | 48 | 46 | 45 | 50 | 43 | 41 | 42 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | --- |
| Conductivity | uS/cm | 180 | 140 | 188 | 192 | 185 | 184 | 184 | 176 | 189 | 180 | --- |
| Sulphate | mg/L | 34 | 38 | 40 | 41 | 42 | 41 | 42 | 35 | 43 | 39 | --- |
| Calcium | mg/L | 19.3 | 19.1 | 20.1 | 21.8 | 21.6 | 20.8 | 21.2 | 21.4 | 22.8 | 22.2 | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 | --- |
| Fluoride | mg/L | --- | 0.06 | --- | --- | --- | 0.06 | --- | --- | --- | <0.06 | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | --- | 0.14 | --- | --- | --- | 0.13 | --- | --- | --- | 0.14 | --- |
| Arsenic | mg/L | --- | 0.065 | --- | --- | --- | 0.0658 | --- | --- | --- | 0.0589 | --- |
| Barium | mg/L | --- | 0.00436 | --- | --- | --- | 0.00471 | --- | --- | --- | 0.00473 | --- |
| Boron | mg/L | --- | 0.0642 | --- | --- | --- | 0.0393 | --- | --- | --- | 0.0257 | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | --- | 0.000504 | --- | --- | --- | 0.000658 | --- | --- | --- | 0.000631 | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- |
| Potassium | mg/L | --- | 8.19 | --- | --- | --- | 7.4 | --- | --- | --- | 6.57 | --- |
| Lithium | mg/L | --- | 0.002 | --- | --- | --- | 0.002 | --- | --- | --- | 0.002 | --- |
| Magnesium | mg/L | --- | 5.55 | --- | --- | --- | 5.48 | --- | --- | --- | 5.24 | --- |
| Manganese | mg/L | --- | 0.0148 | --- | --- | --- | 0.0174 | --- | --- | --- | 0.0186 | --- |
| Molybdenum | mg/L | --- | 0.00116 | --- | --- | --- | 0.00114 | --- | --- | --- | 0.00106 | --- |
| Sodium | mg/L | --- | 2.2 | --- | --- | --- | 1.29 | --- | --- | --- | 0.82 | --- |
| Nickel | mg/L | --- | 0.0008 | --- | --- | --- | 0.0008 | --- | --- | --- | 0.0007 | --- |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 | --- |
| Lead | mg/L | --- | 0.00009 | --- | --- | --- | 0.00007 | --- | --- | --- | 0.00006 | --- |
| Antimony | mg/L | --- | 0.0118 | --- | --- | --- | 0.0097 | --- | --- | --- | 0.0084 | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | 0.002 | --- |
| Tin | mg/L | --- | 0.00017 | --- | --- | --- | 0.00014 | --- | --- | --- | 0.00015 | --- |
| Strontium | mg/L | --- | 0.0935 | --- | --- | --- | 0.0932 | --- | --- | --- | 0.0949 | --- |
| Titanium | mg/L | --- | 0.0005 | --- | --- | --- | 0.0005 | --- | --- | --- | 0.0001 | --- |
| Thallium | mg/L | --- | 0.00002 | --- | --- | --- | 0.00002 | --- | --- | --- | 0.00003 | --- |
| Uranium | mg/L | --- | 0.00151 | --- | --- | --- | 0.00175 | --- | --- | --- | 0.00171 | --- |
| Vanadium | mg/L | --- | 0.00079 | --- | --- | --- | 0.0007 | --- | --- | --- | 0.00063 | --- |
| Tungsten | mg/L | --- | 0.00029 | --- | --- | --- | 0.00021 | --- | --- | --- | 0.00022 | --- |
| Yttrium | mg/L | --- | 0.00001 | --- | --- | --- | 0.00001 | --- | --- | --- | 0.000008 | --- |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** C-9 Wolf
**Weight:** 50kg

| Analyte | Wee/Event | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10136-JUN12 | CA10162-JUL12 | CA10163-JUL12 | CA10164-JUL12 | CA10165-JUL12 | CA11240-JUL12 | CA10026-AUG12 | CA10069-AUG12 | CA10189-AUG12 | CA10398-AUG12 | CA10008-SEP12 |
| | Units | 26-Jun-12 | 03-Jul-12 | 10-Jul-12 | 17-Jul-12 | 24-Jul-12 | 31-Jul-12 | 07-Aug-12 | 14-Aug-12 | 21-Aug-12 | 28-Aug-12 | 04-Sep-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Column Leachate Volume | mLs | 5087 | 4792 | 5200 | 4973 | 4883 | 4928 | 4973 | 4973 | 5019 | 5019 | 5019 |
| pH | no unit | 7.99 | 7.62 | 8.14 | 7.85 | 7.8 | 7.86 | 8.02 | 7.92 | 7.95 | 7.97 | 7.87 |
| Alkalinity | mg/L as CaCO3 | 49 | 47 | 47 | 42 | 44 | 43 | 39 | 38 | 43 | 37 | 40 |
| Acidity | mg/L as CaCO3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Conductivity | uS/cm | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sulphate | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Calcium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fluoride | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mercury | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Aluminum | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Arsenic | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Barium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Boron | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Beryllium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bismuth | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cadmium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cobalt | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chromium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Copper | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Iron | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Potassium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lithium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Magnesium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Manganese | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sodium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Nickel | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Phosphorus | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Lead | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Antimony | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Selenium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tin | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Strontium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Titanium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Thallium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Uranium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Vanadium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tungsten | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Yttrium | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Zinc | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 6: Disc GW (OP)
**Weight:** 52 kg

Extra Sampling

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11198-JUL11 | CA11199-JUL11 | CA10090-AUG11 | CA10091-AUG11 | CA11133-AUG11 | CA11207-AUG11 | CA10310-AUG11 | CA10043-SEP11 | CA10087-SEP11 | CA10209-SEP11 |
| | | 20-Jul-11 | 27-Jul-11 | 03-Aug-11 | 10-Aug-11 | 17-Aug-11 | 24-Aug-11 | 31-Aug-11 | 07-Sep-11 | 14-Sep-11 | 21-Sep-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 23400 | 5200 |
| Hum Cell Leachate Volume | mLs | 1981 | 5005 | 5096 | 5073 | 4960 | 5073 | 4937 | 4983 | 22228 | 5822 |
| pH | no unit | 7.80 | 7.96 | 8.36 | 8.25 | 7.99 | 7.80 | 8.12 | 7.95 | 7 | 8 |
| Alkalinity | mg/L as CaCO3 | 56 | 65 | 64 | 52 | 47 | 43 | 45 | 39 | 31.00 | 36.00 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 503 | 422 | 270 | 237 | 223 | 238 | 208 | 207 | 95 | 123 |
| Sulphate | mg/L | 87 | 97 | 63 | 51 | 49 | 60 | 65 | 64 | 47 | 37 |
| Calcium | mg/L | 11 | 11 | 10.4 | 10.8 | 12.5 | 16.3 | 20.2 | 20.5 | 17.1 | 18.7 |
| As+3 | mg/L | 0.005 | 0.057 | 0.064 | 0.019 | --- | 0.033 | --- | --- | --- | --- |
| As+5 | mg/L | 0.014 | 0.008 | 0.011 | 0.118 | --- | 0.131 | --- | --- | --- | --- |
| Chloride | mg/L | 39 | 32 | 14 | 8.6 | --- | 2.7 | --- | --- | 0.4 | --- |
| Fluoride | mg/L | 0.77 | 0.72 | 0.69 | 0.56 | --- | 0.4 | --- | --- | 0.26 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.3 | 0.18 | 0.2 | 0.19 | --- | 0.18 | --- | --- | 0.15 | --- |
| Arsenic | mg/L | 0.0214 | 0.0624 | 0.102 | 0.153 | --- | 0.194 | --- | --- | 0.155 | --- |
| Barium | mg/L | 0.0254 | 0.0229 | 0.022 | 0.019 | --- | 0.0212 | --- | --- | 0.0156 | --- |
| Boron | mg/L | 0.0834 | 0.114 | 0.0837 | 0.0683 | --- | 0.04 | --- | --- | 0.0231 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.00009 | 0.000034 | 0.000108 | 0.000032 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000667 | 0.000582 | 0.000413 | 0.000436 | --- | 0.0006 | --- | --- | 0.000554 | --- |
| Chromium | mg/L | 0.0081 | 0.0033 | 0.0011 | 0.0007 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0043 | 0.003 | 0.0019 | 0.0014 | --- | 0.00 | --- | --- | 0.0006 | --- |
| Iron | mg/L | 0.022 | 0.02 | 0.031 | 0.026 | --- | 0.013 | --- | --- | 0.007 | --- |
| Potassium | mg/L | 32.2 | 24.5 | 21.2 | 17.2 | --- | 14.100000 | --- | --- | 8.99 | --- |
| Lithium | mg/L | 0.007 | 0.008 | 0.008 | 0.007 | --- | 0.008 | --- | --- | 0.007 | --- |
| Magnesium | mg/L | 2.35 | 3.28 | 3.03 | 3.04 | --- | 3.9 | --- | --- | 3.17 | --- |
| Manganese | mg/L | 0.00769 | 0.0106 | 0.00985 | 0.00836 | --- | 0.013 | --- | --- | 0.00777 | --- |
| Molybdenum | mg/L | 0.184 | 0.131 | 0.0748 | 0.045 | --- | 0.024 | --- | --- | 0.00783 | --- |
| Sodium | mg/L | 75.9 | 58.4 | 39.7 | 27.1 | --- | 16.4 | --- | --- | 5.51 | --- |
| Nickel | mg/L | 0.0039 | 0.0043 | 0.0028 | 0.0023 | --- | 0.003 | --- | --- | 0.0016 | --- |
| Phosphorus | mg/L | 0.061 | 0.009 | 0.012 | < 0.009 | --- | < 0.009 | --- | --- | < 0.009 | --- |
| Lead | mg/L | 0.00026 | 0.00017 | 0.0001 | 0.00012 | --- | 0.00005 | --- | --- | 0.00002 | --- |
| Antimony | mg/L | 0.0012 | 0.002 | 0.0017 | 0.0014 | --- | 0.00 | --- | --- | 0.0006 | --- |
| Selenium | mg/L | 0.002 | 0.003 | 0.001 | 0.002 | --- | 0.0010 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00064 | 0.00018 | 0.00008 | 0.00003 | --- | 0.000 | --- | --- | 0.00001 | --- |
| Strontium | mg/L | 0.073 | 0.0779 | 0.0713 | 0.0715 | --- | 0.0923 | --- | --- | 0.0786 | --- |
| Titanium | mg/L | 0.0017 | 0.0024 | 0.0027 | 0.0023 | --- | 0.0016 | --- | --- | 0.001 | --- |
| Thallium | mg/L | 0.00002 | < 0.00002 | 0.00003 | 0.00002 | --- | 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000415 | 0.00469 | 0.00341 | 0.003503 | --- | 0.01 | --- | --- | 0.00361 | --- |
| Vanadium | mg/L | 0.00192 | 0.00328 | 0.0033 | 0.00342 | --- | 0.00288 | --- | --- | 0.00208 | --- |
| Tungsten | mg/L | 0.00869 | 0.00814 | 0.00563 | 0.0044 | --- | 0.0023 | --- | --- | 0.00075 | --- |
| Yttrium | mg/L | 0.000093 | 0.00013 | 0.000091 | 0.000075 | --- | 0.000058 | --- | --- | 0.000032 | --- |
| Zinc | mg/L | 0.002 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 6: Disc GW (OP)
**Weight:** 52 kg

| Analyte | Event # | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10073-OCT11 | CA10125-OCT11 | CA10176-OCT11 | CA11261-OCT11 | CA10033-NOV11 | CA10108-NOV11 | CA10168-NOV11 | CA10259-NOV11 | CA11815-NOV11 | CA10031-DEC11 |
| | | 05-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 02-Nov-11 | 09-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 07-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 |
| Hum Cell Leachate Volume | mLs | 4983 | 4574 | 4937 | 5232 | 4733 | 4733 | 4665 | 5278 | 5164 | 4847 |
| pH | no unit | 7.57 | 7.35 | 7.62 | 7.55 | 7.77 | 7.74 | 7.84 | 7.58 | 7.71 | 7.7 |
| Alkalinity | mg/L as CaCO3 | 34 | 32 | 38 | 35 | 36 | 33 | 32 | 33 | 44 | 33 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 200 | 192 | 211 | 219 | 174 | 223 | 197 | 211 | 157 | 187 |
| Sulphate | mg/L | 58 | 56 | 68 | 70 | 67 | 63 | 60 | 63 | 63 | 53 |
| Calcium | mg/L | 27.6 | 25.1 | 29.4 | 30.6 | 31.1 | 30 | 28.7 | 29.4 | 29.6 | 26.7 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | < 0.2 | --- | --- | --- | < 0.2 | --- | --- | --- | < 0.2 |
| Fluoride | mg/L | --- | 0.31 | --- | --- | --- | 0.3 | --- | --- | --- | 0.28 |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | 0.1 | --- | --- | --- | 0.1 | --- | --- | --- | 0.09 |
| Arsenic | mg/L | --- | 0.123 | --- | --- | --- | 0.111 | --- | --- | --- | 0.11 |
| Barium | mg/L | --- | 0.0268 | --- | --- | --- | 0.0261 | --- | --- | --- | 0.0222 |
| Boron | mg/L | --- | 0.0146 | --- | --- | --- | 0.0107 | --- | --- | --- | 0.0085 |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | 0.000009 | --- | --- | --- | 0.000011 | --- | --- | --- | 0.00001 |
| Cobalt | mg/L | --- | 0.000717 | --- | --- | --- | 0.000764 | --- | --- | --- | 0.00065 |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | 0.006 | --- | --- | --- | 0.004 | --- | --- | --- | 0.004 |
| Potassium | mg/L | --- | 7.63 | --- | --- | --- | 7.13 | --- | --- | --- | 5.73 |
| Lithium | mg/L | --- | 0.007 | --- | --- | --- | 0.006 | --- | --- | --- | 0.005 |
| Magnesium | mg/L | --- | 3.3 | --- | --- | --- | 3.19 | --- | --- | --- | 2.36 |
| Manganese | mg/L | --- | 0.00552 | --- | --- | --- | 0.00416 | --- | --- | --- | 0.00312 |
| Molybdenum | mg/L | --- | 0.00543 | --- | --- | --- | 0.00639 | --- | --- | --- | 0.00652 |
| Sodium | mg/L | --- | 2.39 | --- | --- | --- | 1.86 | --- | --- | --- | 1.23 |
| Nickel | mg/L | --- | 0.0011 | --- | --- | --- | 0.0012 | --- | --- | --- | 0.001 |
| Phosphorus | mg/L | --- | < 0.009 | --- | --- | --- | < 0.009 | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | 0.0005 | --- | --- | --- | 0.0005 | --- | --- | --- | 0.0002 |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | 0.00002 |
| Strontium | mg/L | --- | 0.102 | --- | --- | --- | 0.107 | --- | --- | --- | 0.0888 |
| Titanium | mg/L | --- | 0.0007 | --- | --- | --- | 0.001 | --- | --- | --- | 0.0009 |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | 0.00487 | --- | --- | --- | 0.00495 | --- | --- | --- | 0.00346 |
| Vanadium | mg/L | --- | 0.0014 | --- | --- | --- | 0.0012 | --- | --- | --- | 0.00116 |
| Tungsten | mg/L | --- | 0.00034 | --- | --- | --- | 0.00025 | --- | --- | --- | 0.00112 |
| Yttrium | mg/L | --- | 0.000021 | --- | --- | --- | 0.000022 | --- | --- | --- | 0.00002 |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Large Scale Column**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Column 6: Disc GW (OP)
**Weight:** 52 kg

| Analyte | Event # | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10083-DEC11 | CA11070-DEC11 | CA10290-DEC11 | CA10043-JAN12 | CA10084-JAN12 | CA11022-JAN12 | CA10226-JAN12 | CA10007-FEB12 | CA10084-FEB12 | CA10138-FEB12 |
| | | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 04-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 01-Feb-12 | 08-Feb-12 | 15-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 | 5200 |
| Hum Cell Leachate Volume | mLs | 4983 | 4915 | 5028 | 5005 | 4937 | 5005 | 4915 | 5005 | 4983 | 5051 |
| pH | no unit | 7.58 | 7.88 | 7.42 | 7.61 | 7.73 | 7.57 | 7.57 | 7.65 | 7.75 | 7.64 |
| Alkalinity | mg/L as CaCO3 | 33 | 30 | 29 | 30 | 30 | 29 | 32 | 31 | 29 | 299 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 186 | 129 | 120 | 158 | 119 | 151 | 157 | 118 | 116 | 116 |
| Sulphate | mg/L | 52 | 47 | 44 | 40 | 39 | 38 | 38 | 38 | 38 | 38 |
| Calcium | mg/L | 27 | 25.1 | 24.1 | 22.5 | 22.4 | 22.5 | 22.3 | 22.2 | 23.6 | 22.8 |
| As+3 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| As+5 | mg/L | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chloride | mg/L | --- | --- | --- | < 0.2 | --- | --- | --- | --- | --- | |
| Fluoride | mg/L | --- | --- | --- | 0.20 | --- | --- | --- | --- | --- | 0.25 |
| Mercury | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | 0.1 | --- | --- | --- | --- | --- | 0.1 |
| Arsenic | mg/L | --- | --- | --- | 0.114 | --- | --- | --- | --- | --- | 0.103 |
| Barium | mg/L | --- | --- | --- | 0.0173 | --- | --- | --- | --- | --- | 0.0187 |
| Boron | mg/L | --- | --- | --- | 0.0059 | --- | --- | --- | --- | --- | 0.0051 |
| Beryllium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | 0.000004 | --- | --- | --- | --- | --- | 0.00001 |
| Cobalt | mg/L | --- | --- | --- | 0.000554 | --- | --- | --- | --- | --- | 0.000533 |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | --- | 0.0005 |
| Iron | mg/L | --- | --- | --- | 0.008 | --- | --- | --- | --- | --- | 0.005 |
| Potassium | mg/L | --- | --- | --- | 5.26 | --- | --- | --- | --- | --- | 4.87 |
| Lithium | mg/L | --- | --- | --- | 0.004 | --- | --- | --- | --- | --- | 0.004 |
| Magnesium | mg/L | --- | --- | --- | 1.79 | --- | --- | --- | --- | --- | 1.49 |
| Manganese | mg/L | --- | --- | --- | 0.00193 | --- | --- | --- | --- | --- | 0.00193 |
| Molybdenum | mg/L | --- | --- | --- | 0.00537 | --- | --- | --- | --- | --- | 0.00502 |
| Sodium | mg/L | --- | --- | --- | 0.9 | --- | --- | --- | --- | --- | 0.74 |
| Nickel | mg/L | --- | --- | --- | 0.0018 | --- | --- | --- | --- | --- | 0.0017 |
| Phosphorus | mg/L | --- | --- | --- | < 0.009 | --- | --- | --- | --- | --- | < 0.009 |
| Lead | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | 0.00004 |
| Antimony | mg/L | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | --- | 0.0003 |
| Selenium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | --- | < 0.00001 |
| Strontium | mg/L | --- | --- | --- | 0.0717 | --- | --- | --- | --- | --- | 0.071 |
| Titanium | mg/L | --- | --- | --- | 0.0012 | --- | --- | --- | --- | --- | 0.001 |
| Thallium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | 0.00271 | --- | --- | --- | --- | --- | 0.00266 |
| Vanadium | mg/L | --- | --- | --- | 0.00098 | --- | --- | --- | --- | --- | 0.00105 |
| Tungsten | mg/L | --- | --- | --- | 0.00019 | --- | --- | --- | --- | --- | 0.00019 |
| Yttrium | mg/L | --- | --- | --- | 0.000017 | --- | --- | --- | --- | --- | 0.00002 |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | --- | < 0.001 |

# H.2.3 Field Cell Leaching Test Results

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | KF3485 | | KF3486 | KF3486 | KF3487 | | KF3488 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/16 07:00 | | 2011/07/16 07:00 | 2011/07/16 07:00 | 2011/07/16 07:00 | | 2011/07/16 07:00 | | |
| | **Units** | **LODE 1000 CYCLE 0** | **RDL** | **LODE 1100 CYCLE 0** | **LODE 1100 CYCLE 0 Lab-Dup** | **WR1 CYCLE 0** | **QC Batch** | **WR2 CYCLE 0** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | | | | |
| Total Ammonia-N | mg/L | 16 | 0.5 | 0.86 | | 0.75 | 2557760 | 0.75 | 0.05 | 2557760 |
| Conductivity | umho/cm | 2790 | 1 | 1140 | | 709 | 2556434 | 752 | 1 | 2556434 |
| pH | pH | 7.60 | | 7.72 | | 7.76 | 2556433 | 7.78 | | 2556433 |
| Total Phosphorus | mg/L | 0.024 | 0.002 | 0.023 | | 0.040 | 2557832 | 0.032 | 0.002 | 2557832 |
| Dissolved Sulphate (SO4) | mg/L | 310 | 1 | 320 | | 31 | 2557352 | 32 | 1 | 2557352 |
| Alkalinity (Total as CaCO3) | mg/L | 48 | 1 | 48 | | 48 | 2556431 | 47 | 1 | 2556431 |
| Dissolved Chloride (Cl) | mg/L | 450 | 5 | 140 | | 160 | 2557351 | 180 | 1 | 2557351 |
| Nitrite (N) | mg/L | 0.03 | 0.01 | 0.04 | 0.04 | 0.03 | 2556459 | 0.02 | 0.01 | 2556432 |
| Nitrate (N) | mg/L | 90 | 2 | 3.9 | 3.8 | 2.3 | 2556459 | 1.7 | 0.1 | 2556432 |
| Nitrate + Nitrite | mg/L | 90 | 2 | 3.9 | 3.9 | 2.3 | 2556459 | 1.7 | 0.1 | 2556432 |

| Maxxam ID | | KF3489 | | KF3490 | | | KF3491 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/16 07:00 | | 2011/07/17 08:00 | | | 2011/07/17 08:00 | | |
| | **Units** | **LEACH WATER** | **RDL** | **LODE 1000 CYCLE 1** | **RDL** | **QC Batch** | **LODE 1100 CYCLE 1** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | | | |
| Total Ammonia-N | mg/L | <0.05 | 0.05 | 26 | 0.5 | 2557760 | 1.3 | 0.05 | 2557760 |
| Conductivity | umho/cm | 492 | 1 | 4830 | 1 | 2556434 | 1380 | 1 | 2556434 |
| pH | pH | 7.81 | | 7.55 | | 2556433 | 7.82 | | 2556433 |
| Total Phosphorus | mg/L | 0.020 | 0.002 | 0.027 | 0.002 | 2557832 | 0.032 | 0.002 | 2557832 |
| Dissolved Sulphate (SO4) | mg/L | 8 | 1 | 500 | 5 | 2557352 | 410 | 2 | 2558765 |
| Alkalinity (Total as CaCO3) | mg/L | 50 | 1 | 41 | 1 | 2556431 | 54 | 1 | 2556431 |
| Dissolved Chloride (Cl) | mg/L | 110 | 1 | 810 | 5 | 2557351 | 140 | 1 | 2558764 |
| Nitrite (N) | mg/L | <0.01 | 0.01 | 0.07 | 0.01 | 2556439 | 0.09 | 0.01 | 2556432 |
| Nitrate (N) | mg/L | <0.1 | 0.1 | 190 | 5 | 2556439 | 4.3 | 0.1 | 2556432 |
| Nitrate + Nitrite | mg/L | <0.1 | 0.1 | 190 | 5 | 2556439 | 4.4 | 0.1 | 2556432 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | KF3491 | | | KF3492 | KF3492 | | | KF3493 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/17 08:00 | | | 2011/07/17 08:00 | 2011/07/17 08:00 | | | 2011/07/17 08:00 | | |
| | **Units** | **LODE 1100 CYCLE 1 Lab-Dup** | **RDL** | **QC Batch** | **WR1 CYCLE 1** | **WR1 CYCLE 1 Lab-Dup** | **RDL** | **QC Batch** | **WR2 CYCLE 1** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | | | | | |
| Total Ammonia-N | mg/L | | 0.05 | 2557760 | 0.46 | | 0.05 | 2557760 | 0.78 | 0.05 | 2557760 |
| Conductivity | umho/cm | | 1 | 2556434 | 809 | | 1 | 2556434 | 958 | 1 | 2556434 |
| pH | pH | | | 2556433 | 7.76 | | | 2556433 | 7.75 | | 2556433 |
| Total Phosphorus | mg/L | | 0.002 | 2557832 | 0.037 | 0.033 | 0.002 | 2557832 | 0.044 | 0.002 | 2557832 |
| Dissolved Sulphate (SO4) | mg/L | 400 | 2 | 2558765 | 50 | | 1 | 2557352 | 61 | 1 | 2557352 |
| Alkalinity (Total as CaCO3) | mg/L | | 1 | 2556431 | 50 | | 1 | 2556431 | 49 | 1 | 2556431 |
| Dissolved Chloride (Cl) | mg/L | 140 | 1 | 2558764 | 180 | | 1 | 2557351 | 190 | 2 | 2557351 |
| Nitrite (N) | mg/L | | 0.01 | 2556432 | 0.02 | | 0.01 | 2556459 | 0.04 | 0.01 | 2556439 |
| Nitrate (N) | mg/L | | 0.1 | 2556432 | 2.4 | | 0.1 | 2556459 | 2.8 | 0.1 | 2556439 |
| Nitrate + Nitrite | mg/L | | 0.1 | 2556432 | 2.4 | | 0.1 | 2556459 | 2.8 | 0.1 | 2556439 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KF3485 | | KF3486 | KF3487 | KF3488 | | KF3489 | KF3490 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/16 07:00 | | 2011/07/16 07:00 | 2011/07/16 07:00 | 2011/07/16 07:00 | | 2011/07/16 07:00 | 2011/07/17 08:00 | | |
| | **Units** | **LODE 1000 CYCLE 0** | **QC Batch** | **LODE 1100 CYCLE 0** | **WR1 CYCLE 0** | **WR2 CYCLE 0** | **QC Batch** | **LEACH WATER** | **LODE 1000 CYCLE 1** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | | | | | |
| Dissolved Aluminum (Al) | mg/L | 0.017 | 2555986 | 0.037 | 0.061 | 0.061 | 2555986 | 0.008 | 0.021 | 0.005 | 2555986 |
| Total Aluminum (Al) | mg/L | 0.34 | 2557634 | 0.33 | 1.5 | 1.4 | 2557792 | 0.022 | 0.054 | 0.005 | 2557634 |
| Dissolved Antimony (Sb) | mg/L | 0.0021 | 2555986 | 0.0013 | 0.0024 | 0.0024 | 2555986 | <0.0005 | 0.0044 | 0.0005 | 2555986 |
| Total Antimony (Sb) | mg/L | 0.0020 | 2557634 | 0.0011 | 0.0030 | 0.0027 | 2557792 | <0.0005 | 0.0045 | 0.0005 | 2557634 |
| Dissolved Arsenic (As) | mg/L | 0.034 | 2555986 | 0.015 | 0.015 | 0.015 | 2555986 | 0.003 | 0.046 | 0.001 | 2555986 |
| Total Arsenic (As) | mg/L | 0.069 | 2557634 | 0.043 | 0.026 | 0.023 | 2557792 | 0.004 | 0.053 | 0.001 | 2557634 |
| Dissolved Barium (Ba) | mg/L | 0.036 | 2555986 | 0.046 | 0.018 | 0.020 | 2555986 | 0.062 | 0.086 | 0.002 | 2555986 |
| Total Barium (Ba) | mg/L | 0.038 | 2557634 | 0.053 | 0.033 | 0.036 | 2557792 | 0.065 | 0.091 | 0.002 | 2557634 |
| Dissolved Beryllium (Be) | mg/L | <0.0005 | 2555986 | <0.0005 | <0.0005 | <0.0005 | 2555986 | <0.0005 | <0.0005 | 0.0005 | 2555986 |
| Total Beryllium (Be) | mg/L | <0.0005 | 2557634 | <0.0005 | <0.0005 | <0.0005 | 2557792 | <0.0005 | <0.0005 | 0.0005 | 2557634 |
| Dissolved Bismuth (Bi) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 2555986 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Bismuth (Bi) | mg/L | <0.001 | 2557634 | <0.001 | <0.001 | <0.001 | 2557792 | <0.001 | <0.001 | 0.001 | 2557634 |
| Dissolved Boron (B) | mg/L | 0.07 | 2555986 | 0.04 | 0.02 | 0.03 | 2555986 | <0.01 | 0.15 | 0.01 | 2555986 |
| Total Boron (B) | mg/L | 0.08 | 2557634 | 0.05 | 0.02 | 0.03 | 2557792 | 0.01 | 0.17 | 0.01 | 2557634 |
| Dissolved Cadmium (Cd) | mg/L | 0.0008 | 2555986 | <0.0001 | 0.0001 | <0.0001 | 2555986 | <0.0001 | 0.0009 | 0.0001 | 2555986 |
| Total Cadmium (Cd) | mg/L | 0.0008 | 2557634 | <0.0001 | <0.0001 | <0.0001 | 2557792 | <0.0001 | 0.0008 | 0.0001 | 2557634 |
| Dissolved Calcium (Ca) | mg/L | 260 | 2555986 | 160 | 88 | 93 | 2555986 | 59 | 490 | 0.2 | 2555986 |
| Total Calcium (Ca) | mg/L | 280 | 2557634 | 180 | 100 | 100 | 2557792 | 63 | 500 | 0.2 | 2557634 |
| Dissolved Chromium (Cr) | mg/L | <0.005 | 2555986 | <0.005 | <0.005 | <0.005 | 2555986 | <0.005 | <0.005 | 0.005 | 2555986 |
| Total Chromium (Cr) | mg/L | <0.005 | 2557634 | <0.005 | 0.005 | <0.005 | 2557792 | <0.005 | <0.005 | 0.005 | 2557634 |
| Dissolved Cobalt (Co) | mg/L | 0.0059 | 2555986 | 0.0016 | 0.0022 | 0.0020 | 2555986 | <0.0005 | 0.010 | 0.0005 | 2555986 |
| Total Cobalt (Co) | mg/L | 0.0059 | 2557634 | 0.0019 | 0.0062 | 0.0049 | 2557792 | <0.0005 | 0.010 | 0.0005 | 2557634 |
| Dissolved Copper (Cu) | mg/L | 0.007 | 2555986 | 0.004 | 0.005 | 0.005 | 2555986 | 0.002 | 0.006 | 0.001 | 2555986 |
| Total Copper (Cu) | mg/L | 0.009 | 2557634 | 0.004 | 0.008 | 0.009 | 2557792 | 0.005 | 0.007 | 0.001 | 2557634 |
| Dissolved Iron (Fe) | mg/L | <0.1 | 2555986 | <0.1 | <0.1 | <0.1 | 2555986 | 0.3 | <0.1 | 0.1 | 2555986 |
| Total Iron (Fe) | mg/L | 0.7 | 2557634 | 1.0 | 2.1 | 1.5 | 2557792 | 0.5 | 0.2 | 0.1 | 2557634 |
| Dissolved Lead (Pb) | mg/L | 0.0031 | 2555986 | 0.0006 | 0.0008 | 0.0008 | 2555986 | <0.0005 | 0.0031 | 0.0005 | 2555986 |
| Total Lead (Pb) | mg/L | 0.020 | 2557634 | 0.014 | 0.011 | 0.0081 | 2557792 | <0.0005 | 0.0056 | 0.0005 | 2557634 |
| Dissolved Lithium (Li) | mg/L | 0.046 | 2555986 | 0.019 | 0.045 | 0.054 | 2555986 | 0.018 | 0.068 | 0.005 | 2555986 |
| Total Lithium (Li) | mg/L | 0.041 | 2557634 | 0.018 | 0.047 | 0.056 | 2557792 | 0.015 | 0.068 | 0.005 | 2557634 |
| Dissolved Magnesium (Mg) | mg/L | 63 | 2555986 | 27 | 9.5 | 9.7 | 2555986 | 7.3 | 120 | 0.05 | 2555986 |
| Total Magnesium (Mg) | mg/L | 62 | 2557634 | 28 | 12 | 11 | 2557792 | 7.5 | 120 | 0.05 | 2557634 |
| Dissolved Manganese (Mn) | mg/L | 0.43 | 2555986 | 0.11 | 0.049 | 0.050 | 2555986 | 0.015 | 0.67 | 0.002 | 2555986 |
| Total Manganese (Mn) | mg/L | 0.44 | 2557634 | 0.13 | 0.080 | 0.072 | 2557792 | 0.025 | 0.69 | 0.002 | 2557634 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KF3485 | | KF3486 | KF3487 | KF3488 | | KF3489 | KF3490 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/16 07:00 | | 2011/07/16 07:00 | 2011/07/16 07:00 | 2011/07/16 07:00 | | 2011/07/16 07:00 | 2011/07/17 08:00 | | |
| | **Units** | **LODE 1000 CYCLE 0** | **QC Batch** | **LODE 1100 CYCLE 0** | **WR1 CYCLE 0** | **WR2 CYCLE 0** | **QC Batch** | **LEACH WATER** | **LODE 1000 CYCLE 1** | **RDL** | **QC Batch** |
| Dissolved Molybdenum (Mo) | mg/L | 0.010 | 2555986 | 0.007 | 0.001 | <0.001 | 2555986 | <0.001 | 0.027 | 0.001 | 2555986 |
| Total Molybdenum (Mo) | mg/L | 0.010 | 2557634 | 0.007 | 0.001 | 0.001 | 2557792 | <0.001 | 0.028 | 0.001 | 2557634 |
| Dissolved Nickel (Ni) | mg/L | 0.023 | 2555986 | 0.004 | 0.009 | 0.008 | 2555986 | 0.002 | 0.037 | 0.001 | 2555986 |
| Total Nickel (Ni) | mg/L | 0.025 | 2557634 | 0.005 | 0.019 | 0.015 | 2557792 | 0.002 | 0.039 | 0.001 | 2557634 |
| Dissolved Phosphorus (P) | mg/L | <0.1 | 2555986 | <0.1 | <0.1 | <0.1 | 2555986 | <0.1 | <0.1 | 0.1 | 2555986 |
| Dissolved Potassium (K) | mg/L | 40 | 2555986 | 12 | 7.5 | 7.8 | 2555986 | 2.4 | 67 | 0.2 | 2555986 |
| Total Potassium (K) | mg/L | 41 | 2557634 | 13 | 8.7 | 8.8 | 2557792 | 2.6 | 69 | 0.2 | 2557634 |
| Dissolved Selenium (Se) | mg/L | 0.016 | 2555986 | 0.002 | <0.002 | <0.002 | 2555986 | <0.002 | 0.033 | 0.002 | 2555986 |
| Dissolved Silicon (Si) | mg/L | 1.2 | 2555986 | 1.2 | 0.94 | 0.95 | 2555986 | 0.90 | 1.8 | 0.05 | 2555986 |
| Total Silicon (Si) | mg/L | 1.8 | 2557634 | 1.7 | 2.7 | 3.4 | 2557792 | 0.93 | 1.9 | 0.05 | 2557634 |
| Total Selenium (Se) | mg/L | 0.017 | 2557634 | 0.002 | <0.002 | <0.002 | 2557792 | <0.002 | 0.036 | 0.002 | 2557634 |
| Dissolved Silver (Ag) | mg/L | <0.0001 | 2555986 | <0.0001 | <0.0001 | <0.0001 | 2555986 | <0.0001 | <0.0001 | 0.0001 | 2555986 |
| Total Silver (Ag) | mg/L | <0.0001 | 2557634 | <0.0001 | <0.0001 | <0.0001 | 2557792 | <0.0001 | <0.0001 | 0.0001 | 2557634 |
| Dissolved Sodium (Na) | mg/L | 130 | 2555986 | 16 | 12 | 12 | 2555986 | 9.3 | 240 | 0.1 | 2555986 |
| Total Sodium (Na) | mg/L | 130 | 2557634 | 16 | 14 | 13 | 2557792 | 9.3 | 240 | 0.1 | 2557634 |
| Dissolved Strontium (Sr) | mg/L | 1.7 | 2555986 | 1.3 | 0.62 | 0.73 | 2555986 | 0.41 | 3.1 | 0.001 | 2555986 |
| Total Strontium (Sr) | mg/L | 1.7 | 2557634 | 1.4 | 0.73 | 0.84 | 2557792 | 0.44 | 3.2 | 0.001 | 2557634 |
| Dissolved Tellurium (Te) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 2555986 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Tellurium (Te) | mg/L | <0.001 | 2557634 | <0.001 | <0.001 | <0.001 | 2557792 | <0.001 | <0.001 | 0.001 | 2557634 |
| Dissolved Thallium (Tl) | mg/L | 0.00017 | 2555986 | <0.00005 | 0.00005 | <0.00005 | 2555986 | <0.00005 | 0.00030 | 0.00005 | 2555986 |
| Total Thallium (Tl) | mg/L | 0.00015 | 2557634 | <0.00005 | <0.00005 | <0.00005 | 2557792 | <0.00005 | 0.00029 | 0.00005 | 2557634 |
| Dissolved Thorium (Th) | mg/L | <0.002 | 2555986 | <0.002 | <0.002 | <0.002 | 2555986 | <0.002 | <0.002 | 0.002 | 2555986 |
| Total Thorium (Th) | mg/L | <0.002 | 2557634 | <0.002 | <0.002 | <0.002 | 2557792 | <0.002 | <0.002 | 0.002 | 2557634 |
| Dissolved Tin (Sn) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 2555986 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Tin (Sn) | mg/L | <0.001 | 2557634 | <0.001 | <0.001 | <0.001 | 2557792 | <0.001 | <0.001 | 0.001 | 2557634 |
| Dissolved Titanium (Ti) | mg/L | <0.005 | 2555986 | <0.005 | <0.005 | <0.005 | 2555986 | <0.005 | <0.005 | 0.005 | 2555986 |
| Total Titanium (Ti) | mg/L | <0.005 | 2557634 | 0.007 | 0.027 | 0.027 | 2557792 | <0.005 | <0.005 | 0.005 | 2557634 |
| Dissolved Tungsten (W) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 2555986 | <0.001 | 0.001 | 0.001 | 2555986 |
| Total Tungsten (W) | mg/L | <0.001 | 2557634 | <0.001 | <0.001 | <0.001 | 2557792 | <0.001 | 0.001 | 0.001 | 2557634 |
| Dissolved Uranium (U) | mg/L | 0.0023 | 2555986 | 0.0017 | 0.0010 | 0.0009 | 2555986 | 0.0001 | 0.0049 | 0.0001 | 2555986 |
| Total Uranium (U) | mg/L | 0.0025 | 2557634 | 0.0021 | 0.0013 | 0.0012 | 2557792 | 0.0001 | 0.0052 | 0.0001 | 2557634 |
| Dissolved Vanadium (V) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 2555986 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Vanadium (V) | mg/L | 0.003 | 2557634 | <0.001 | 0.003 | 0.003 | 2557792 | 0.002 | 0.003 | 0.001 | 2557634 |
| Dissolved Zinc (Zn) | mg/L | 0.029 | 2555986 | <0.005 | <0.005 | <0.005 | 2555986 | <0.005 | 0.023 | 0.005 | 2555986 |
| Total Zinc (Zn) | mg/L | 0.038 | 2557634 | <0.005 | 0.010 | 0.007 | 2557792 | <0.005 | 0.025 | 0.005 | 2557634 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KF3485 | | KF3486 | KF3487 | KF3488 | | KF3489 | KF3490 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/16 07:00 | | 2011/07/16 07:00 | 2011/07/16 07:00 | 2011/07/16 07:00 | | 2011/07/16 07:00 | 2011/07/17 08:00 | | |
| | **Units** | **LODE 1000 CYCLE 0** | **QC Batch** | **LODE 1100 CYCLE 0** | **WR1 CYCLE 0** | **WR2 CYCLE 0** | **QC Batch** | **LEACH WATER** | **LODE 1000 CYCLE 1** | **RDL** | **QC Batch** |
| Dissolved Zirconium (Zr) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 2555986 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Zirconium (Zr) | mg/L | <0.001 | 2557634 | <0.001 | 0.003 | 0.002 | 2557792 | <0.001 | <0.001 | 0.001 | 2557634 |

RDL = Reportable Detection Limit
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Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KF3490 | | KF3491 | KF3492 | KF3493 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/17 08:00 | | 2011/07/17 08:00 | 2011/07/17 08:00 | 2011/07/17 08:00 | | |
| | **Units** | **LODE 1000 CYCLE 1 Lab-Dup** | **QC Batch** | **LODE 1100 CYCLE 1** | **WR1 CYCLE 1** | **WR2 CYCLE 1** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | | |
| Dissolved Aluminum (Al) | mg/L | 0.019 | 2555986 | 0.026 | 0.037 | 0.039 | 0.005 | 2555986 |
| Total Aluminum (Al) | mg/L | | 2557634 | 0.10 | 1.1 | 3.3 | 0.005 | 2557792 |
| Dissolved Antimony (Sb) | mg/L | 0.0044 | 2555986 | 0.0014 | 0.0022 | 0.0027 | 0.0005 | 2555986 |
| Total Antimony (Sb) | mg/L | | 2557634 | 0.0015 | 0.0024 | 0.0032 | 0.0005 | 2557792 |
| Dissolved Arsenic (As) | mg/L | 0.046 | 2555986 | 0.014 | 0.013 | 0.015 | 0.001 | 2555986 |
| Total Arsenic (As) | mg/L | | 2557634 | 0.021 | 0.022 | 0.038 | 0.001 | 2557792 |
| Dissolved Barium (Ba) | mg/L | 0.087 | 2555986 | 0.058 | 0.024 | 0.028 | 0.002 | 2555986 |
| Total Barium (Ba) | mg/L | | 2557634 | 0.063 | 0.038 | 0.064 | 0.002 | 2557792 |
| Dissolved Beryllium (Be) | mg/L | <0.0005 | 2555986 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | 2555986 |
| Total Beryllium (Be) | mg/L | | 2557634 | <0.0005 | <0.0005 | <0.0005 | 0.0005 | 2557792 |
| Dissolved Bismuth (Bi) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Bismuth (Bi) | mg/L | | 2557634 | <0.001 | <0.001 | <0.001 | 0.001 | 2557792 |
| Dissolved Boron (B) | mg/L | 0.16 | 2555986 | 0.07 | 0.03 | 0.04 | 0.01 | 2555986 |
| Total Boron (B) | mg/L | | 2557634 | 0.08 | 0.03 | 0.04 | 0.01 | 2557792 |
| Dissolved Cadmium (Cd) | mg/L | 0.0008 | 2555986 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | 2555986 |
| Total Cadmium (Cd) | mg/L | | 2557634 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | 2557792 |
| Dissolved Calcium (Ca) | mg/L | 490 | 2555986 | 200 | 100 | 120 | 0.2 | 2555986 |
| Total Calcium (Ca) | mg/L | | 2557634 | 220 | 120 | 140 | 0.2 | 2557792 |
| Dissolved Chromium (Cr) | mg/L | <0.005 | 2555986 | <0.005 | <0.005 | <0.005 | 0.005 | 2555986 |
| Total Chromium (Cr) | mg/L | | 2557634 | <0.005 | <0.005 | 0.010 | 0.005 | 2557792 |
| Dissolved Cobalt (Co) | mg/L | 0.010 | 2555986 | 0.0019 | 0.0023 | 0.0026 | 0.0005 | 2555986 |
| Total Cobalt (Co) | mg/L | | 2557634 | 0.0020 | 0.0047 | 0.0094 | 0.0005 | 2557792 |
| Dissolved Copper (Cu) | mg/L | 0.007 | 2555986 | 0.003 | 0.007 | 0.006 | 0.001 | 2555986 |
| Total Copper (Cu) | mg/L | | 2557634 | 0.011 | 0.008 | 0.016 | 0.001 | 2557792 |
| Dissolved Iron (Fe) | mg/L | 0.1 | 2555986 | <0.1 | 0.1 | 0.1 | 0.1 | 2555986 |
| Total Iron (Fe) | mg/L | | 2557634 | 0.4 | 1.6 | 6.0 | 0.1 | 2557792 |
| Dissolved Lead (Pb) | mg/L | 0.0030 | 2555986 | <0.0005 | 0.0012 | 0.0010 | 0.0005 | 2555986 |
| Total Lead (Pb) | mg/L | | 2557634 | 0.0042 | 0.0074 | 0.016 | 0.0005 | 2557792 |
| Dissolved Lithium (Li) | mg/L | 0.070 | 2555986 | 0.016 | 0.038 | 0.047 | 0.005 | 2555986 |
| Total Lithium (Li) | mg/L | | 2557634 | 0.015 | 0.041 | 0.054 | 0.005 | 2557792 |
| Dissolved Magnesium (Mg) | mg/L | 120 | 2555986 | 36 | 12 | 13 | 0.05 | 2555986 |
| Total Magnesium (Mg) | mg/L | | 2557634 | 38 | 13 | 16 | 0.05 | 2557792 |
| Dissolved Manganese (Mn) | mg/L | 0.67 | 2555986 | 0.17 | 0.047 | 0.060 | 0.002 | 2555986 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KF3490 | | KF3491 | KF3492 | KF3493 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/17 08:00 | | 2011/07/17 08:00 | 2011/07/17 08:00 | 2011/07/17 08:00 | | |
| | **Units** | **LODE 1000 CYCLE 1 Lab-Dup** | **QC Batch** | **LODE 1100 CYCLE 1** | **WR1 CYCLE 1** | **WR2 CYCLE 1** | **RDL** | **QC Batch** |
| Total Manganese (Mn) | mg/L | | 2557634 | 0.19 | 0.072 | 0.14 | 0.002 | 2557792 |
| Dissolved Molybdenum (Mo) | mg/L | 0.027 | 2555986 | 0.012 | 0.002 | 0.002 | 0.001 | 2555986 |
| Total Molybdenum (Mo) | mg/L | | 2557634 | 0.014 | 0.002 | 0.002 | 0.001 | 2557792 |
| Dissolved Nickel (Ni) | mg/L | 0.038 | 2555986 | 0.004 | 0.011 | 0.013 | 0.001 | 2555986 |
| Total Nickel (Ni) | mg/L | | 2557634 | 0.007 | 0.018 | 0.032 | 0.001 | 2557792 |
| Dissolved Phosphorus (P) | mg/L | <0.1 | 2555986 | <0.1 | <0.1 | <0.1 | 0.1 | 2555986 |
| Dissolved Potassium (K) | mg/L | 67 | 2555986 | 15 | 7.5 | 9.0 | 0.2 | 2555986 |
| Total Potassium (K) | mg/L | | 2557634 | 16 | 8.4 | 10 | 0.2 | 2557792 |
| Dissolved Selenium (Se) | mg/L | 0.033 | 2555986 | 0.003 | <0.002 | <0.002 | 0.002 | 2555986 |
| Dissolved Silicon (Si) | mg/L | 1.8 | 2555986 | 1.5 | 1.1 | 1.2 | 0.05 | 2555986 |
| Total Silicon (Si) | mg/L | | 2557634 | 1.6 | 2.8 | 5.8 | 0.05 | 2557792 |
| Total Selenium (Se) | mg/L | | 2557634 | 0.004 | <0.002 | 0.002 | 0.002 | 2557792 |
| Dissolved Silver (Ag) | mg/L | <0.0001 | 2555986 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | 2555986 |
| Total Silver (Ag) | mg/L | | 2557634 | <0.0001 | <0.0001 | <0.0001 | 0.0001 | 2557792 |
| Dissolved Sodium (Na) | mg/L | 250 | 2555986 | 18 | 14 | 15 | 0.1 | 2555986 |
| Total Sodium (Na) | mg/L | | 2557634 | 19 | 15 | 16 | 0.1 | 2557792 |
| Dissolved Strontium (Sr) | mg/L | 3.2 | 2555986 | 1.7 | 0.82 | 1.1 | 0.001 | 2555986 |
| Total Strontium (Sr) | mg/L | | 2557634 | 1.9 | 0.98 | 1.2 | 0.001 | 2557792 |
| Dissolved Tellurium (Te) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Tellurium (Te) | mg/L | | 2557634 | <0.001 | <0.001 | <0.001 | 0.001 | 2557792 |
| Dissolved Thallium (Tl) | mg/L | 0.00028 | 2555986 | <0.00005 | <0.00005 | <0.00005 | 0.00005 | 2555986 |
| Total Thallium (Tl) | mg/L | | 2557634 | <0.00005 | <0.00005 | <0.00005 | 0.00005 | 2557792 |
| Dissolved Thorium (Th) | mg/L | <0.002 | 2555986 | <0.002 | <0.002 | <0.002 | 0.002 | 2555986 |
| Total Thorium (Th) | mg/L | | 2557634 | <0.002 | <0.002 | <0.002 | 0.002 | 2557792 |
| Dissolved Tin (Sn) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Tin (Sn) | mg/L | | 2557634 | <0.001 | <0.001 | <0.001 | 0.001 | 2557792 |
| Dissolved Titanium (Ti) | mg/L | <0.005 | 2555986 | <0.005 | <0.005 | <0.005 | 0.005 | 2555986 |
| Total Titanium (Ti) | mg/L | | 2557634 | <0.005 | 0.018 | 0.065 | 0.005 | 2557792 |
| Dissolved Tungsten (W) | mg/L | 0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Tungsten (W) | mg/L | | 2557634 | <0.001 | <0.001 | <0.001 | 0.001 | 2557792 |
| Dissolved Uranium (U) | mg/L | 0.0048 | 2555986 | 0.0028 | 0.0016 | 0.0021 | 0.0001 | 2555986 |
| Total Uranium (U) | mg/L | | 2557634 | 0.0032 | 0.0022 | 0.0027 | 0.0001 | 2557792 |
| Dissolved Vanadium (V) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Vanadium (V) | mg/L | | 2557634 | <0.001 | 0.003 | 0.008 | 0.001 | 2557792 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KF3490 | | KF3491 | KF3492 | KF3493 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/07/17 08:00 | | 2011/07/17 08:00 | 2011/07/17 08:00 | 2011/07/17 08:00 | | |
| | **Units** | **LODE 1000 CYCLE 1 Lab-Dup** | **QC Batch** | **LODE 1100 CYCLE 1** | **WR1 CYCLE 1** | **WR2 CYCLE 1** | **RDL** | **QC Batch** |
| Dissolved Zinc (Zn) | mg/L | 0.022 | 2555986 | <0.005 | <0.005 | <0.005 | 0.005 | 2555986 |
| Total Zinc (Zn) | mg/L | | 2557634 | <0.005 | 0.006 | 0.018 | 0.005 | 2557792 |
| Dissolved Zirconium (Zr) | mg/L | <0.001 | 2555986 | <0.001 | <0.001 | <0.001 | 0.001 | 2555986 |
| Total Zirconium (Zr) | mg/L | | 2557634 | <0.001 | 0.002 | 0.004 | 0.001 | 2557792 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## Test Summary

**Maxxam ID** KF3485 **Collected** 2011/07/16
**Sample ID** LODE 1000 CYCLE 0 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557634 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556459 | N/A | 2011/07/22 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

**Maxxam ID** KF3486 **Collected** 2011/07/16
**Sample ID** LODE 1100 CYCLE 0 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557792 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556459 | N/A | 2011/07/22 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |



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Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## Test Summary

**Maxxam ID** KF3486 Dup **Collected** 2011/07/16
**Sample ID** LODE 1100 CYCLE 0 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556459 | N/A | 2011/07/22 | LEYLA SIAHPOOSH |

**Maxxam ID** KF3487 **Collected** 2011/07/16
**Sample ID** WR1 CYCLE 0 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557792 | N/A | 2011/07/22 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556459 | N/A | 2011/07/22 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

**Maxxam ID** KF3488 **Collected** 2011/07/16
**Sample ID** WR2 CYCLE 0 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557792 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556432 | N/A | 2011/07/22 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## Test Summary

| | | | | | |
|---|---|---|---|---|---|
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

**Maxxam ID** KF3489 **Collected** 2011/07/16
**Sample ID** LEACH WATER **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557634 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556439 | N/A | 2011/07/21 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

**Maxxam ID** KF3490 **Collected** 2011/07/17
**Sample ID** LODE 1000 CYCLE 1 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557634 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556439 | N/A | 2011/07/21 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## Test Summary

**Maxxam ID** KF3490 Dup **Collected** 2011/07/17
**Sample ID** LODE 1000 CYCLE 1 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |

**Maxxam ID** KF3491 **Collected** 2011/07/17
**Sample ID** LODE 1100 CYCLE 1 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2558764 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557792 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556432 | N/A | 2011/07/22 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2558765 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

**Maxxam ID** KF3491 Dup **Collected** 2011/07/17
**Sample ID** LODE 1100 CYCLE 1 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Chloride by Automated Colourimetry | AC | 2558764 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Sulphate by Automated Colourimetry | AC | 2558765 | N/A | 2011/07/22 | DEONARINE RAMNARINE |

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## Test Summary

**Maxxam ID** KF3492 **Collected** 2011/07/17
**Sample ID** WR1 CYCLE 1 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557792 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556459 | N/A | 2011/07/22 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

**Maxxam ID** KF3492 Dup **Collected** 2011/07/17
**Sample ID** WR1 CYCLE 1 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |

**Maxxam ID** KF3493 **Collected** 2011/07/17
**Sample ID** WR2 CYCLE 1 **Shipped**
**Matrix** Water **Received** 2011/07/18

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2556431 | N/A | 2011/07/20 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2557351 | N/A | 2011/07/21 | DEONARINE RAMNARINE |
| Conductivity | COND | 2556434 | N/A | 2011/07/20 | YOGESH PATEL |
| Dissolved Metals by ICPMS | ICP/MS | 2555986 | N/A | 2011/07/20 | GRACE BU |
| Total Metals Analysis by ICPMS | ICP/MS | 2557792 | N/A | 2011/07/21 | HUA REN |
| Ammonia-N | LACH/NH4 | 2557760 | N/A | 2011/07/22 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2556439 | N/A | 2011/07/21 | LEYLA SIAHPOOSH |
| pH | PH | 2556433 | N/A | 2011/07/20 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2557352 | N/A | 2011/07/22 | DEONARINE RAMNARINE |



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Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## Test Summary

| | | | | | |
|---|---|---|---|---|---|
| Total Phosphorus (Colourimetric) | LACH/P | 2557832 | 2011/07/21 | 2011/07/22 | VIORICA ROTARU |



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Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

| | |
|---|---|
| Package 1 | 7.3°C |

Each temperature is the average of up to three cooler temperatures taken at receipt

**GENERAL COMMENTS**

Custody seal was not present on the cooler.



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Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## QUALITY ASSURANCE REPORT

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | Units | Value (%) | QC Limits | % Recovery | QC Limits |
| 2555986 | Dissolved Aluminum (Al) | 2011/07/20 | 94 | 80 - 120 | 99 | 90 - 110 | <0.005 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Antimony (Sb) | 2011/07/20 | 105 | 80 - 120 | 101 | 90 - 110 | <0.0005 | mg/L | 1.6 | 25 | | |
| 2555986 | Dissolved Arsenic (As) | 2011/07/20 | 99 | 80 - 120 | 100 | 90 - 110 | <0.001 | mg/L | 0.1 | 25 | | |
| 2555986 | Dissolved Barium (Ba) | 2011/07/20 | 94 | 80 - 120 | 100 | 90 - 110 | <0.002 | mg/L | 0.8 | 25 | | |
| 2555986 | Dissolved Beryllium (Be) | 2011/07/20 | 91 | 80 - 120 | 98 | 90 - 110 | <0.0005 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Bismuth (Bi) | 2011/07/20 | 89 | 80 - 120 | 96 | 90 - 110 | <0.001 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Boron (B) | 2011/07/20 | 90 | 80 - 120 | 97 | 90 - 110 | <0.01 | mg/L | 1.3 | 25 | | |
| 2555986 | Dissolved Cadmium (Cd) | 2011/07/20 | 100 | 80 - 120 | 102 | 90 - 110 | <0.0001 | mg/L | 12.6 | 25 | | |
| 2555986 | Dissolved Calcium (Ca) | 2011/07/20 | NC | 80 - 120 | 97 | 90 - 110 | <0.2 | mg/L | 0.5 | 25 | | |
| 2555986 | Dissolved Chromium (Cr) | 2011/07/20 | 98 | 80 - 120 | 100 | 90 - 110 | <0.005 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Cobalt (Co) | 2011/07/20 | 97 | 80 - 120 | 99 | 90 - 110 | <0.0005 | mg/L | 1.6 | 25 | | |
| 2555986 | Dissolved Copper (Cu) | 2011/07/20 | 92 | 80 - 120 | 100 | 90 - 110 | <0.001 | mg/L | 9.7 | 25 | | |
| 2555986 | Dissolved Iron (Fe) | 2011/07/20 | 97 | 80 - 120 | 98 | 90 - 110 | <0.1 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Lead (Pb) | 2011/07/20 | 92 | 80 - 120 | 98 | 90 - 110 | <0.0005 | mg/L | 2.8 | 25 | | |
| 2555986 | Dissolved Lithium (Li) | 2011/07/20 | 94 | 80 - 120 | 101 | 90 - 110 | <0.005 | mg/L | 2.8 | 25 | | |
| 2555986 | Dissolved Magnesium (Mg) | 2011/07/20 | NC | 80 - 120 | 99 | 90 - 110 | <0.05 | mg/L | 0.06 | 25 | | |
| 2555986 | Dissolved Manganese (Mn) | 2011/07/20 | NC | 80 - 120 | 98 | 90 - 110 | <0.002 | mg/L | 0.1 | 25 | | |
| 2555986 | Dissolved Molybdenum (Mo) | 2011/07/20 | 102 | 80 - 120 | 101 | 90 - 110 | <0.001 | mg/L | 0.5 | 25 | | |
| 2555986 | Dissolved Nickel (Ni) | 2011/07/20 | 94 | 80 - 120 | 99 | 90 - 110 | <0.001 | mg/L | 0.1 | 25 | | |
| 2555986 | Dissolved Phosphorus (P) | 2011/07/20 | 101 | 80 - 120 | 100 | 90 - 110 | <0.1 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Potassium (K) | 2011/07/20 | NC | 80 - 120 | 100 | 90 - 110 | <0.2 | mg/L | 0.6 | 25 | | |
| 2555986 | Dissolved Selenium (Se) | 2011/07/20 | 97 | 80 - 120 | 99 | 90 - 110 | <0.002 | mg/L | 0.6 | 25 | | |
| 2555986 | Dissolved Silicon (Si) | 2011/07/20 | 97 | 80 - 120 | 98 | 90 - 110 | <0.05 | mg/L | 0.2 | 25 | | |
| 2555986 | Dissolved Silver (Ag) | 2011/07/20 | 95 | 80 - 120 | 99 | 90 - 110 | <0.0001 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Sodium (Na) | 2011/07/20 | NC | 80 - 120 | 101 | 90 - 110 | <0.1 | mg/L | 0.9 | 25 | | |
| 2555986 | Dissolved Strontium (Sr) | 2011/07/20 | NC | 80 - 120 | 98 | 90 - 110 | <0.001 | mg/L | 1.3 | 25 | | |
| 2555986 | Dissolved Tellurium (Te) | 2011/07/20 | 95 | 80 - 120 | 98 | 90 - 110 | <0.001 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Thallium (Tl) | 2011/07/20 | 92 | 80 - 120 | 98 | 90 - 110 | <0.00005 | mg/L | 7.2 | 25 | | |
| 2555986 | Dissolved Thorium (Th) | 2011/07/20 | 98 | 80 - 120 | 101 | 90 - 110 | <0.002 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Tin (Sn) | 2011/07/20 | 101 | 80 - 120 | 101 | 90 - 110 | <0.001 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Titanium (Ti) | 2011/07/20 | 97 | 80 - 120 | 99 | 90 - 110 | <0.005 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Tungsten (W) | 2011/07/20 | 97 | 80 - 120 | 100 | 90 - 110 | <0.001 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Uranium (U) | 2011/07/20 | 99 | 80 - 120 | 101 | 90 - 110 | <0.0001 | mg/L | 1.7 | 25 | | |
| 2555986 | Dissolved Vanadium (V) | 2011/07/20 | 100 | 80 - 120 | 100 | 90 - 110 | <0.001 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Zinc (Zn) | 2011/07/20 | 93 | 80 - 120 | 100 | 90 - 110 | <0.005 | mg/L | NC | 25 | | |
| 2555986 | Dissolved Zirconium (Zr) | 2011/07/20 | 102 | 80 - 120 | 100 | 90 - 110 | <0.001 | mg/L | NC | 25 | | |
| 2556431 | Alkalinity (Total as CaCO3) | 2011/07/20 | | | | | <1 | mg/L | 1.1 | 25 | 95 | 85 - 115 |
| 2556432 | Nitrite (N) | 2011/07/22 | 99 | 80 - 120 | 102 | 85 - 115 | <0.01 | mg/L | NC | 25 | | |
| 2556432 | Nitrate (N) | 2011/07/22 | 103 | 80 - 120 | 103 | 85 - 115 | <0.1 | mg/L | NC | 25 | | |
| 2556434 | Conductivity | 2011/07/20 | | | | | <1 | umho/cm | 0 | 25 | 102 | 85 - 115 |

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## QUALITY ASSURANCE REPORT

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | Units | Value (%) | QC Limits | % Recovery | QC Limits |
| 2556439 | Nitrite (N) | 2011/07/21 | 101 | 80 - 120 | 104 | 85 - 115 | <0.01 | mg/L | NC | 25 | | |
| 2556439 | Nitrate (N) | 2011/07/21 | 75(1) | 80 - 120 | 108 | 85 - 115 | <0.1 | mg/L | 0.1 | 25 | | |
| 2556459 | Nitrite (N) | 2011/07/22 | 99 | 80 - 120 | 103 | 85 - 115 | <0.01 | mg/L | NC | 25 | | |
| 2556459 | Nitrate (N) | 2011/07/22 | 76(1) | 80 - 120 | 101 | 85 - 115 | <0.1 | mg/L | 0.7 | 25 | | |
| 2557351 | Dissolved Chloride (Cl) | 2011/07/21 | 108 | 75 - 125 | 106 | 80 - 120 | <1 | mg/L | 0.2 | 20 | | |
| 2557352 | Dissolved Sulphate (SO4) | 2011/07/22 | 97 | 75 - 125 | 105 | 80 - 120 | <1 | mg/L | 3.5 | 25 | | |
| 2557634 | Total Aluminum (Al) | 2011/07/21 | 95 | 80 - 120 | 95 | 85 - 115 | <0.005 | mg/L | | | | |
| 2557634 | Total Antimony (Sb) | 2011/07/21 | 111 | 80 - 120 | 110 | 85 - 115 | <0.0005 | mg/L | | | | |
| 2557634 | Total Arsenic (As) | 2011/07/21 | 103 | 80 - 120 | 102 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Barium (Ba) | 2011/07/21 | 99 | 80 - 120 | 98 | 85 - 115 | <0.002 | mg/L | | | | |
| 2557634 | Total Beryllium (Be) | 2011/07/21 | 103 | 80 - 120 | 104 | 85 - 115 | <0.0005 | mg/L | | | | |
| 2557634 | Total Bismuth (Bi) | 2011/07/21 | 104 | 80 - 120 | 104 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Boron (B) | 2011/07/21 | 103 | 80 - 120 | 103 | 85 - 115 | <0.01 | mg/L | | | | |
| 2557634 | Total Cadmium (Cd) | 2011/07/21 | 103 | 80 - 120 | 104 | 85 - 116 | <0.0001 | mg/L | | | | |
| 2557634 | Total Calcium (Ca) | 2011/07/21 | NC | 80 - 120 | 104 | 85 - 115 | <0.2 | mg/L | | | | |
| 2557634 | Total Chromium (Cr) | 2011/07/21 | 99 | 80 - 120 | 99 | 85 - 115 | <0.005 | mg/L | | | | |
| 2557634 | Total Cobalt (Co) | 2011/07/21 | 98 | 80 - 120 | 98 | 85 - 115 | <0.0005 | mg/L | | | | |
| 2557634 | Total Copper (Cu) | 2011/07/21 | 98 | 80 - 120 | 99 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Iron (Fe) | 2011/07/21 | 101 | 80 - 120 | 101 | 85 - 115 | <0.1 | mg/L | | | | |
| 2557634 | Total Lead (Pb) | 2011/07/21 | 101 | 80 - 120 | 101 | 85 - 115 | <0.0005 | mg/L | | | | |
| 2557634 | Total Lithium (Li) | 2011/07/21 | 98 | 80 - 120 | 98 | 85 - 115 | <0.005 | mg/L | | | | |
| 2557634 | Total Magnesium (Mg) | 2011/07/21 | 95 | 80 - 120 | 98 | 85 - 115 | <0.05 | mg/L | | | | |
| 2557634 | Total Manganese (Mn) | 2011/07/21 | 96 | 80 - 120 | 98 | 85 - 115 | <0.002 | mg/L | | | | |
| 2557634 | Total Molybdenum (Mo) | 2011/07/21 | 109 | 80 - 120 | 107 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Nickel (Ni) | 2011/07/21 | 96 | 80 - 120 | 99 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Potassium (K) | 2011/07/21 | 104 | 80 - 120 | 105 | 85 - 115 | <0.2 | mg/L | | | | |
| 2557634 | Total Silicon (Si) | 2011/07/21 | 99 | 80 - 120 | 100 | 85 - 115 | <0.05 | mg/L | | | | |
| 2557634 | Total Selenium (Se) | 2011/07/21 | 98 | 80 - 120 | 100 | 85 - 115 | <0.002 | mg/L | | | | |
| 2557634 | Total Silver (Ag) | 2011/07/21 | 96 | 80 - 120 | 97 | 85 - 115 | <0.0001 | mg/L | | | | |
| 2557634 | Total Sodium (Na) | 2011/07/21 | NC | 80 - 120 | 102 | 85 - 115 | <0.1 | mg/L | | | | |
| 2557634 | Total Strontium (Sr) | 2011/07/21 | 100 | 80 - 120 | 101 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Tellurium (Te) | 2011/07/21 | 102 | 80 - 120 | 102 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Thallium (Tl) | 2011/07/21 | 99 | 80 - 120 | 100 | 85 - 115 | <0.00005 | mg/L | | | | |
| 2557634 | Total Thorium (Th) | 2011/07/21 | 101 | 80 - 120 | 96 | 85 - 115 | <0.002 | mg/L | | | | |
| 2557634 | Total Tin (Sn) | 2011/07/21 | 107 | 80 - 120 | 106 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Titanium (Ti) | 2011/07/21 | 102 | 80 - 120 | 100 | 85 - 115 | <0.005 | mg/L | | | | |
| 2557634 | Total Tungsten (W) | 2011/07/21 | 107 | 80 - 120 | 104 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Uranium (U) | 2011/07/21 | 103 | 80 - 120 | 102 | 85 - 115 | <0.0001 | mg/L | | | | |
| 2557634 | Total Vanadium (V) | 2011/07/21 | 99 | 80 - 120 | 98 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557634 | Total Zinc (Zn) | 2011/07/21 | 98 | 80 - 120 | 99 | 85 - 115 | <0.005 | mg/L | | | | |

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## QUALITY ASSURANCE REPORT

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | Units | Value (%) | QC Limits | % Recovery | QC Limits |
| 2557634 | Total Zirconium (Zr) | 2011/07/21 | 110 | 80 - 120 | 107 | 85 - 115 | <0.001 | mg/L | | | | |
| 2557760 | Total Ammonia-N | 2011/07/22 | 96 | 80 - 120 | 103 | 85 - 115 | <0.05 | mg/L | NC | 25 | | |
| 2557792 | Total Aluminum (Al) | 2011/07/21 | 88 | 80 - 120 | 89 | 85 - 115 | <0.005 | mg/L | NC | 25 | | |
| 2557792 | Total Antimony (Sb) | 2011/07/21 | 116 | 80 - 120 | 109 | 85 - 115 | <0.0005 | mg/L | NC | 25 | | |
| 2557792 | Total Arsenic (As) | 2011/07/21 | 110 | 80 - 120 | 104 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557792 | Total Barium (Ba) | 2011/07/21 | 100 | 80 - 120 | 97 | 85 - 115 | <0.002 | mg/L | 0.5 | 25 | | |
| 2557792 | Total Beryllium (Be) | 2011/07/21 | 104 | 80 - 120 | 102 | 85 - 115 | <0.0005 | mg/L | NC | 25 | | |
| 2557792 | Total Bismuth (Bi) | 2011/07/21 | 108 | 80 - 120 | 106 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557792 | Total Boron (B) | 2011/07/21 | 97 | 80 - 120 | 95 | 85 - 115 | <0.01 | mg/L | 1.1 | 25 | | |
| 2557792 | Total Cadmium (Cd) | 2011/07/21 | 107 | 80 - 120 | 103 | 85 - 116 | <0.0001 | mg/L | NC | 25 | | |
| 2557792 | Total Calcium (Ca) | 2011/07/21 | NC | 80 - 120 | 98 | 85 - 115 | <0.2 | mg/L | 0.8 | 25 | | |
| 2557792 | Total Chromium (Cr) | 2011/07/21 | 98 | 80 - 120 | 96 | 85 - 115 | <0.005 | mg/L | NC | 25 | | |
| 2557792 | Total Cobalt (Co) | 2011/07/21 | 101 | 80 - 120 | 98 | 85 - 115 | <0.0005 | mg/L | 2.7 | 25 | | |
| 2557792 | Total Copper (Cu) | 2011/07/21 | 99 | 80 - 120 | 99 | 85 - 115 | <0.001 | mg/L | 0.8 | 25 | | |
| 2557792 | Total Iron (Fe) | 2011/07/21 | 102 | 80 - 120 | 100 | 85 - 115 | <0.1 | mg/L | NC | 25 | | |
| 2557792 | Total Lead (Pb) | 2011/07/21 | 105 | 80 - 120 | 104 | 85 - 115 | <0.0005 | mg/L | NC | 25 | | |
| 2557792 | Total Lithium (Li) | 2011/07/21 | 98 | 80 - 120 | 92 | 85 - 115 | <0.005 | mg/L | 1.6 | 25 | | |
| 2557792 | Total Magnesium (Mg) | 2011/07/21 | 94 | 80 - 120 | 92 | 85 - 115 | <0.05 | mg/L | 0.4 | 25 | | |
| 2557792 | Total Manganese (Mn) | 2011/07/21 | 98 | 80 - 120 | 95 | 85 - 115 | <0.002 | mg/L | NC | 25 | | |
| 2557792 | Total Molybdenum (Mo) | 2011/07/21 | 115 | 80 - 120 | 106 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557792 | Total Nickel (Ni) | 2011/07/21 | 97 | 80 - 120 | 97 | 85 - 115 | <0.001 | mg/L | 2.8 | 25 | | |
| 2557792 | Total Potassium (K) | 2011/07/21 | NC | 80 - 120 | 100 | 85 - 115 | <0.2 | mg/L | 0.2 | 25 | | |
| 2557792 | Total Silicon (Si) | 2011/07/21 | 95 | 80 - 120 | 93 | 85 - 115 | <0.05 | mg/L | 1.5 | 25 | | |
| 2557792 | Total Selenium (Se) | 2011/07/21 | 108 | 80 - 120 | 102 | 85 - 115 | <0.002 | mg/L | 1.6 | 25 | | |
| 2557792 | Total Silver (Ag) | 2011/07/21 | 96 | 80 - 120 | 95 | 85 - 115 | <0.0001 | mg/L | NC | 25 | | |
| 2557792 | Total Sodium (Na) | 2011/07/21 | NC | 80 - 120 | 97 | 85 - 115 | <0.1 | mg/L | 0.09 | 25 | | |
| 2557792 | Total Strontium (Sr) | 2011/07/21 | NC | 80 - 120 | 97 | 85 - 115 | <0.001 | mg/L | 1.0 | 25 | | |
| 2557792 | Total Tellurium (Te) | 2011/07/21 | 109 | 80 - 120 | 103 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557792 | Total Thallium (Tl) | 2011/07/21 | 105 | 80 - 120 | 104 | 85 - 115 | <0.00005 | mg/L | 1.2 | 25 | | |
| 2557792 | Total Thorium (Th) | 2011/07/21 | 109 | 80 - 120 | 97 | 85 - 115 | <0.002 | mg/L | NC | 25 | | |
| 2557792 | Total Tin (Sn) | 2011/07/21 | 111 | 80 - 120 | 104 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557792 | Total Titanium (Ti) | 2011/07/21 | 98 | 80 - 120 | 94 | 85 - 115 | <0.005 | mg/L | NC | 25 | | |
| 2557792 | Total Tungsten (W) | 2011/07/21 | 112 | 80 - 120 | 106 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557792 | Total Uranium (U) | 2011/07/21 | 112 | 80 - 120 | 108 | 85 - 115 | <0.0001 | mg/L | NC | 25 | | |
| 2557792 | Total Vanadium (V) | 2011/07/21 | 97 | 80 - 120 | 95 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557792 | Total Zinc (Zn) | 2011/07/21 | 98 | 80 - 120 | 99 | 85 - 115 | <0.005 | mg/L | NC | 25 | | |
| 2557792 | Total Zirconium (Zr) | 2011/07/21 | 114 | 80 - 120 | 106 | 85 - 115 | <0.001 | mg/L | NC | 25 | | |
| 2557832 | Total Phosphorus | 2011/07/22 | 94 | 80 - 120 | 100 | 85 - 115 | <0.002 | mg/L | 11.6 | 20 | 99 | 85 - 115 |

Maxxam Job #: B1A6825
Report Date: 2011/07/25

Golder Associates Ltd
Client Project #: 11-1428-0011-6000
Site Location: Meliadine Project
Sampler Initials: JC

## QUALITY ASSURANCE REPORT

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | Units | Value (%) | QC Limits | % Recovery | QC Limits |
| 2558764 | Dissolved Chloride (Cl) | 2011/07/22 | NC | 75 - 125 | 101 | 80 - 120 | <1 | mg/L | 0.4 | 20 | | |
| 2558765 | Dissolved Sulphate (SO4) | 2011/07/22 | NC | 75 - 125 | 100 | 80 - 120 | <1 | mg/L | 1.0 | 25 | | |

N/A = Not Applicable
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

# Validation Signature Page

**Maxxam Job #: B1A6825**

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The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere

CRISTINA CARRIERE, Scientific Services

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Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

IMMEDIATE TEST

**Maxxam**

Maxxam Analytics International Corporation o/a Maxxam Analytics
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-653-6266 Fax:(905) 817-5779 www.maxxam.ca

CHAIN OF CUS

18-Jul-11 11:50
JULIE CLEMENT
B1A6825
RSO ENV-773

Page 1 of 1

| INVOICE INFORMATION: | | REPORT INFORMATION (if differs from invoice): | | PROJECT INFORMATION: | | Use Only: |
|---|---|---|---|---|---|---|
| Company Name: | #14090 Golder Associates Ltd | Company Name: | | Quotation #: | B14624 | BOTTLE ORDER #: |
| Contact Name: | Central Accounting / Jennifer Cole | Contact Name: | Jennifer Cole | P.O. #: | | 271091 |
| Address: | 32 Steacie Dr | Address: | | Project #: | 11-1428-0011-6000 | PROJECT MANAGER: |
| | Kanata ON K2K 2A9 | | | Project Name: | Meliadine | JULIE CLEMENT |
| Phone: | (613)592-9600 Fax: (613)592-9601 | Phone: | Fax: | Site #: | | C#271091-04-01 |
| Email: | maxxam@golder.com, OttawaAccounting@golder.c | Email: | jcole@golder.com | Sampled By: | J. Cole | |

**Regulation 153 (2011)**: ☐ Table 1 ☐ Table 2 ☐ Table 3 ☐ Table ___ ☐ Res/Park ☐ Ind/Comm ☐ Agri/Other ☐ Medium/Fine ☐ Coarse ☐ For RSC

**Other Regulations**: ☐ CCME ☐ Reg. 558 ☐ MISA ☐ PWQO ☐ Other ___ ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ___

**SPECIAL INSTRUCTIONS**

*Include Criteria on Certificate of Analysis (Y/N)? ___*

*Note: For MOE regulated drinking water samples - please use the Drinking Water Chain of Custody Form*

**SAMPLES MUST BE KEPT COOL ( < 10°C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM**

**TURNAROUND TIME (TAT) REQUIRED:**

**PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS**

**Regular (Standard) TAT:**
*(will be applied if Rush TAT is not specified)*
*Standard TAT = 5-7 Working days for most tests.*
*Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.*

**Job Specific Rush TAT (if applies to entire submission)**
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Regulated Drinking Water ? (Y/N) | Metals Field Filtered ? (Y/N) | Alkalinity, Conductivity, pH | Chloride by Automated Colourimetry | Ammonia-N | Nitrate (NO3) and Nitrite (NO2) in Water | Sulphate by Automated Colourimetry | Total Phosphorus (Colourimetric) | Dissolved Metals by ICPMS | Total Metals Analysis by ICPMS | Speciated Arsenic | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | LODE 1000 Cycle 0 | 16/07 | 7pm | W | N | Y | X | X | X | X | X | X | X | X | | | 5 | |
| 2 | | LODE 1100 Cycle 0 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | |
| 3 | | WR1 Cycle 0 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | |
| 4 | | WR2 Cycle 0 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | |
| 5 | | Leach water | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | |
| 6 | | Lode 1000 Cycle 1 | 17/07 | 8am | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | |
| 7 | | Lode 1100 Cycle 1 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | |
| 8 | | WR1 cycle 1 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | |
| 9 | | WR 2 Cycle 1 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | ↓ | REC'D IN OTTAWA 7/18°C 9/8/9° |
| 10 | | | | | | | | | | | | | | | | | | | |

| *RELINQUISHED BY: (Signature/Print) | Date: (YY/MM/DD) | Time: | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time: | # Jars Used and Not Submitted |
|---|---|---|---|---|---|---|
| J. Cole | 18/07/11 | | Josh Freeman | 11/07/18 | 11:50 | |

| Laboratory Use Only | | | | |
|---|---|---|---|---|
| Time Sensitive | Temperature (°C) on Receipt | Custody Seal | Yes | No |
| | 6/7/9 | Present | | ✓ |
| | | Intact | | ✓ |

ON ICE

White: Maxxam Yellow: Client

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.



Maxxam Analytics International Corporation o/a Maxxam Analytics

Your Project #: 11-1428-0011
Site Location: Meliadine Project
Your C.O.C. #: 27735701, 277357-01-01

**Attention: Jennifer Cole**
Golder Associates Ltd
32 Steacie Dr
Kanata, ON
K2K 2A9

**Report Date: 2011/09/21**

# CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B1E1882**
**Received: 2011/09/15, 11:20**

Sample Matrix: Water
# Samples Received: 5

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Method Reference |
|---|---|---|---|---|---|
| Alkalinity | 5 | N/A | 2011/09/19 | CAM SOP-00448 | SM 2320B |
| Chloride by Automated Colourimetry | 5 | N/A | 2011/09/19 | CAM SOP-00463 | SM 4500 Cl E |
| Conductivity | 5 | N/A | 2011/09/19 | CAM SOP-00448 | SM 2510 |
| Fluoride | 5 | 2011/09/17 | 2011/09/19 | CAM SOP-00448 | APHA 4500FC |
| Mercury | 5 | 2011/09/21 | 2011/09/21 | CAM SOP-00453 | EPA 7470 |
| Dissolved Metals by ICPMS (1) | 5 | N/A | 2011/09/16 | CAM SOP-00447 | EPA 6020 |
| Total Metals Analysis by ICPMS (1) | 5 | N/A | 2011/09/16 | CAM SOP-00447 | EPA 6020 |
| Ammonia-N | 5 | N/A | 2011/09/21 | CAM SOP-00441 | US GS I-2522-90 |
| Nitrate (NO3) and Nitrite (NO2) in Water (1) | 5 | N/A | 2011/09/19 | CAM SOP-00440 | SM 4500 NO3I/NO2B |
| pH | 5 | N/A | 2011/09/19 | CAM SOP-00448 | SM 4500H |
| Sulphate by Automated Colourimetry | 5 | N/A | 2011/09/19 | CAM SOP-00464 | EPA 375.4 |
| Total Dissolved Solids | 4 | N/A | 2011/09/19 | CAM SOP-00428 | APHA 2540C |
| Total Dissolved Solids | 1 | N/A | 2011/09/21 | CAM SOP-00428 | APHA 2540C |
| Total Phosphorus (Colourimetric) | 5 | 2011/09/20 | 2011/09/20 | CAM SOP-00407 | APHA 4500 P,B,F |
| Total Suspended Solids | 5 | N/A | 2011/09/16 | CAM SOP-00428 | SM 2540D |

## Remarks:

Maxxam Analytics has performed all analytical testing herein in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. All methodologies comply with this document and are validated for use in the laboratory. The methods and techniques employed in this analysis conform to the performance criteria (detection limits, accuracy and precision) as outlined in the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.

The CWS PHC methods employed by Maxxam conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following the 'Alberta Environment Draft Addenda to the CWS-PHC, Appendix 6, Validation of Alternate Methods'. Documentation is available upon request. Maxxam has made the following improvements to the CWS-PHC reference benchmark method: (i) Headspace for F1; and, (ii) Mechanical extraction for F2-F4. Note: F4G cannot be added to the C6 to C50 hydrocarbons. The extraction date for samples field preserved with methanol for F1 and Volatile Organic Compounds is considered to be the date sampled.

Maxxam Analytics is accredited by SCC (Lab ID 97) for all specific parameters as required by Ontario Regulation 153/04. Maxxam Analytics is limited in liability to the actual cost of analysis unless otherwise agreed in writing. There is no other warranty expressed or implied. Samples will be retained at Maxxam Analytics for three weeks from receipt of data or as per contract.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
* Results relate only to the items tested.

(1) This test was performed by Maxxam Ottawa

(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

JULIE CLEMENT, Ottawa Customer Service
Email: JClement@maxxam.ca
Phone# (613) 274-3549

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 1

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | KW9635 | KW9636 | | KW9637 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/09/11 | 2011/09/11 | | 2011/09/11 | | |
| | **Units** | **WR1** | **WR2** | **RDL** | **L1000** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | |
| Total Ammonia-N | mg/L | <0.05 | <0.05 | 0.05 | 7.3 | 0.3 | 2618527 |
| Conductivity | umho/cm | 132 | 149 | 1 | 3650 | 1 | 2618062 |
| Total Dissolved Solids | mg/L | 112 | 94 | 10 | 2540 | 10 | 2618393 |
| Fluoride (F-) | mg/L | 0.05 | 0.04 | 0.01 | 0.13 | 0.01 | 2618063 |
| pH | pH | 7.70 | 7.68 | | 7.37 | | 2618064 |
| Total Phosphorus | mg/L | 0.064 | 0.068 | 0.002 | 0.030 | 0.002 | 2620069 |
| Total Suspended Solids | mg/L | 76 | 27 | 10 | 12 | 10 | 2617640 |
| Dissolved Sulphate (SO4) | mg/L | 12 | 14 | 1 | 470 | 5 | 2618015 |
| Alkalinity (Total as CaCO3) | mg/L | 25 | 25 | 1 | 44 | 1 | 2618061 |
| Dissolved Chloride (Cl) | mg/L | 16 | 20 | 1 | 550 | 5 | 2618014 |
| Nitrite (N) | mg/L | <0.01 | <0.01 | 0.01 | 0.68 | 0.01 | 2618066 |
| Nitrate (N) | mg/L | 0.2 | 0.2 | 0.1 | 140 | 2 | 2618066 |
| Nitrate + Nitrite | mg/L | 0.2 | 0.2 | 0.1 | 140 | 2 | 2618066 |

| Maxxam ID | | KW9638 | KW9638 | | | KW9639 | KW9639 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/09/11 | 2011/09/11 | | | 2011/09/11 | 2011/09/11 | | |
| | **Units** | **L1100** | **L1100 Lab-Dup** | **RDL** | **QC Batch** | **LEACH WATER** | **LEACH WATER Lab-Dup** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | | | |
| Total Ammonia-N | mg/L | <0.05 | | 0.05 | 2618527 | <0.05 | <0.05 | 0.05 | 2618527 |
| Conductivity | umho/cm | 1190 | 1190 | 1 | 2618062 | 80 | | 1 | 2618062 |
| Total Dissolved Solids | mg/L | 868 | | 10 | 2618706 | 46 | | 10 | 2618393 |
| Fluoride (F-) | mg/L | 0.05 | 0.05 | 0.01 | 2618063 | 0.04 | | 0.01 | 2618063 |
| pH | pH | 7.83 | 7.82 | | 2618064 | 7.42 | | | 2618064 |
| Total Phosphorus | mg/L | 0.011 | 0.012 | 0.002 | 2620069 | 0.009 | | 0.002 | 2620069 |
| Total Suspended Solids | mg/L | <10 | | 10 | 2617614 | <10 | | 10 | 2617640 |
| Dissolved Sulphate (SO4) | mg/L | 470 | | 5 | 2618015 | 4 | | 1 | 2618015 |
| Alkalinity (Total as CaCO3) | mg/L | 56 | 55 | 1 | 2618061 | 17 | | 1 | 2618061 |
| Dissolved Chloride (Cl) | mg/L | 54 | | 1 | 2618014 | 9 | | 1 | 2618014 |
| Nitrite (N) | mg/L | 0.57 | | 0.01 | 2618066 | <0.01 | | 0.01 | 2618066 |
| Nitrate (N) | mg/L | 1.8 | | 0.1 | 2618066 | <0.1 | | 0.1 | 2618066 |
| Nitrate + Nitrite | mg/L | 2.3 | | 0.1 | 2618066 | <0.1 | | 0.1 | 2618066 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KW9635 | KW9636 | | KW9637 | | KW9638 | KW9638 | | KW9639 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/09/11 | 2011/09/11 | | 2011/09/11 | | 2011/09/11 | 2011/09/11 | | 2011/09/11 | | |
| | **Units** | **WR1** | **WR2** | **RDL** | **L1000** | **RDL** | **L1100** | **L1100 Lab-Dup** | **RDL** | **LEACH WATER** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | | | | | | |
| Mercury (Hg) | ug/L | <0.1 | <0.1 | 0.1 | <0.1 | 0.1 | <0.1 | | 0.1 | <0.1 | 0.1 | 2620369 |
| Dissolved Aluminum (Al) | ug/L | 23 | 22 | 5 | 6 | 5 | 12 | | 5 | <5 | 5 | 2615511 |
| Total Aluminum (Al) | ug/L | 6600 | 2900 | 5 | 230 | 5 | 240 | 220 | 5 | 27 | 5 | 2615543 |
| Dissolved Antimony (Sb) | ug/L | <0.5 | <0.5 | 0.5 | 2.4 | 0.5 | 0.7 | | 0.5 | <0.5 | 0.5 | 2615511 |
| Total Antimony (Sb) | ug/L | 0.9 | <0.5 | 0.5 | 2.4 | 0.5 | 0.8 | 0.6 | 0.5 | <0.5 | 0.5 | 2615543 |
| Dissolved Arsenic (As) | ug/L | 4 | 3 | 1 | 140 | 1 | 9 | | 1 | <1 | 1 | 2615511 |
| Total Arsenic (As) | ug/L | 38 | 17 | 1 | 190 | 1 | 32 | 30 | 1 | <1 | 1 | 2615543 |
| Dissolved Barium (Ba) | ug/L | 2 | 3 | 2 | 30 | 2 | 28 | | 2 | 8 | 2 | 2615511 |
| Total Barium (Ba) | ug/L | 63 | 35 | 2 | 33 | 2 | 31 | 29 | 2 | 9 | 2 | 2615543 |
| Dissolved Beryllium (Be) | ug/L | <0.5 | <0.5 | 0.5 | <0.5 | 0.5 | <0.5 | | 0.5 | <0.5 | 0.5 | 2615511 |
| Total Beryllium (Be) | ug/L | <0.5 | <0.5 | 0.5 | <0.5 | 0.5 | <0.5 | <0.5 | 0.5 | <0.5 | 0.5 | 2615543 |
| Dissolved Bismuth (Bi) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | | 1 | <1 | 1 | 2615511 |
| Total Bismuth (Bi) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | <1 | 1 | <1 | 1 | 2615543 |
| Dissolved Boron (B) | ug/L | <10 | <10 | 10 | 110 | 10 | 38 | | 10 | <10 | 10 | 2615511 |
| Total Boron (B) | ug/L | <10 | <10 | 10 | 110 | 10 | 36 | 36 | 10 | <10 | 10 | 2615543 |
| Dissolved Cadmium (Cd) | ug/L | <0.1 | <0.1 | 0.1 | 0.9 | 0.1 | <0.1 | | 0.1 | <0.1 | 0.1 | 2615511 |
| Total Cadmium (Cd) | ug/L | <0.1 | <0.1 | 0.1 | 1.0 | 0.1 | <0.1 | <0.1 | 0.1 | <0.1 | 0.1 | 2615543 |
| Dissolved Calcium (Ca) | ug/L | 15000 | 17000 | 200 | 340000 | 200 | 180000 | | 200 | 7600 | 200 | 2615511 |
| Total Calcium (Ca) | ug/L | 22000 | 18000 | 200 | 370000 | 200 | 180000 | 170000 | 200 | 7300 | 200 | 2615543 |
| Dissolved Chromium (Cr) | ug/L | <5 | <5 | 5 | <5 | 5 | <5 | | 5 | <5 | 5 | 2615511 |
| Total Chromium (Cr) | ug/L | 17 | 7 | 5 | <5 | 5 | <5 | <5 | 5 | <5 | 5 | 2615543 |
| Dissolved Cobalt (Co) | ug/L | <0.5 | <0.5 | 0.5 | 13 | 0.5 | 1.9 | | 0.5 | <0.5 | 0.5 | 2615511 |
| Total Cobalt (Co) | ug/L | 15 | 6.2 | 0.5 | 15 | 0.5 | 2.2 | 2.1 | 0.5 | <0.5 | 0.5 | 2615543 |
| Dissolved Copper (Cu) | ug/L | 2 | 2 | 1 | 3 | 1 | 2 | | 1 | 1 | 1 | 2615511 |
| Total Copper (Cu) | ug/L | 14 | 7 | 1 | 5 | 1 | 2 | 2 | 1 | 6 | 1 | 2615543 |
| Dissolved Iron (Fe) | ug/L | <100 | <100 | 100 | <100 | 100 | <100 | | 100 | <100 | 100 | 2615511 |
| Total Iron (Fe) | ug/L | 8100 | 3400 | 100 | 670 | 100 | 610 | 740 | 100 | <100 | 100 | 2615543 |
| Dissolved Lead (Pb) | ug/L | <0.5 | <0.5 | 0.5 | 2.1 | 0.5 | <0.5 | | 0.5 | <0.5 | 0.5 | 2615511 |
| Total Lead (Pb) | ug/L | 32 | 14 | 0.5 | 20 | 0.5 | 11 | 10 | 0.5 | <0.5 | 0.5 | 2615543 |
| Dissolved Lithium (Li) | ug/L | <5 | <5 | 5 | 42 | 5 | 10 | | 5 | <5 | 5 | 2615511 |
| Total Lithium (Li) | ug/L | 12 | 8 | 5 | 41 | 5 | 10 | 9 | 5 | <5 | 5 | 2615543 |
| Dissolved Magnesium (Mg) | ug/L | 1800 | 1900 | 50 | 120000 | 50 | 48000 | | 50 | 1200 | 50 | 2615511 |
| Total Magnesium (Mg) | ug/L | 5200 | 3000 | 50 | 130000 | 50 | 48000 | 42000 | 50 | 1100 | 50 | 2615543 |
| Dissolved Manganese (Mn) | ug/L | 24 | 26 | 2 | 500 | 2 | 210 | | 2 | 4 | 2 | 2615511 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KW9635 | KW9636 | | KW9637 | | KW9638 | KW9638 | | KW9639 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/09/11 | 2011/09/11 | | 2011/09/11 | | 2011/09/11 | 2011/09/11 | | 2011/09/11 | | |
| | **Units** | **WR1** | **WR2** | **RDL** | **L1000** | **RDL** | **L1100** | **L1100 Lab-Dup** | **RDL** | **LEACH WATER** | **RDL** | **QC Batch** |
| Total Manganese (Mn) | ug/L | 120 | 61 | 2 | 550 | 2 | 210 | 200 | 2 | 7 | 2 | 2615543 |
| Dissolved Molybdenum (Mo) | ug/L | <0.5 | <0.5 | 0.5 | 17 | 0.5 | 6.8 | | 0.5 | <0.5 | 0.5 | 2615511 |
| Total Molybdenum (Mo) | ug/L | 0.8 | <0.5 | 0.5 | 18 | 0.5 | 6.4 | 6.3 | 0.5 | <0.5 | 0.5 | 2615543 |
| Dissolved Nickel (Ni) | ug/L | 3 | 3 | 1 | 38 | 5 | 3 | | 1 | <1 | 1 | 2615511 |
| Total Nickel (Ni) | ug/L | 38 | 17 | 1 | 46 | 1 | 4 | 3 | 1 | <1 | 1 | 2615543 |
| Dissolved Phosphorus (P) | ug/L | <100 | <100 | 100 | <100 | 100 | <100 | | 100 | <100 | 100 | 2615511 |
| Dissolved Potassium (K) | ug/L | 1400 | 1500 | 200 | 47000 | 200 | 12000 | | 200 | 860 | 200 | 2615511 |
| Total Potassium (K) | ug/L | 3100 | 2200 | 200 | 51000 | 200 | 12000 | 11000 | 200 | 760 | 200 | 2615543 |
| Dissolved Selenium (Se) | ug/L | <2 | <2 | 2 | 29 | 2 | <2 | | 2 | <2 | 2 | 2615511 |
| Total Selenium (Se) | ug/L | <2 | <2 | 2 | 31 | 2 | <2 | <2 | 2 | <2 | 2 | 2615543 |
| Dissolved Silicon (Si) | ug/L | 270 | 270 | 50 | 1100 | 50 | 810 | | 50 | 240 | 50 | 2615511 |
| Total Silicon (Si) | ug/L | 9400 | 4800 | 50 | 1500 | 50 | 1100 | 1000 | 50 | 380 | 50 | 2615543 |
| Dissolved Silver (Ag) | ug/L | <0.1 | <0.1 | 0.1 | <0.1 | 0.1 | <0.1 | | 0.1 | <0.1 | 0.1 | 2615511 |
| Total Silver (Ag) | ug/L | <0.1 | <0.1 | 0.1 | <0.1 | 0.1 | <0.1 | <0.1 | 0.1 | <0.1 | 0.1 | 2615543 |
| Dissolved Sodium (Na) | ug/L | 5200 | 5100 | 100 | 190000 | 100 | 12000 | | 100 | 4500 | 100 | 2615511 |
| Total Sodium (Na) | ug/L | 6300 | 5400 | 100 | 200000 | 100 | 12000 | 11000 | 100 | 4200 | 100 | 2615543 |
| Dissolved Strontium (Sr) | ug/L | 84 | 110 | 1 | 2300 | 10 | 1400 | | 10 | 37 | 1 | 2615511 |
| Total Strontium (Sr) | ug/L | 150 | 120 | 1 | 2500 | 10 | 1400 | 1300 | 10 | 37 | 1 | 2615543 |
| Dissolved Tellurium (Te) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | | 1 | <1 | 1 | 2615511 |
| Total Tellurium (Te) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | <1 | 1 | <1 | 1 | 2615543 |
| Dissolved Thallium (Tl) | ug/L | <0.05 | <0.05 | 0.05 | 0.17 | 0.05 | <0.05 | | 0.05 | <0.05 | 0.05 | 2615511 |
| Total Thallium (Tl) | ug/L | <0.05 | <0.05 | 0.05 | 0.19 | 0.05 | 0.05 | <0.05 | 0.05 | <0.05 | 0.05 | 2615543 |
| Dissolved Tin (Sn) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | | 1 | <1 | 1 | 2615511 |
| Total Tin (Sn) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | <1 | 1 | <1 | 1 | 2615543 |
| Dissolved Titanium (Ti) | ug/L | <5 | <5 | 5 | <5 | 5 | <5 | | 5 | <5 | 5 | 2615511 |
| Total Titanium (Ti) | ug/L | 110 | 62 | 5 | <5 | 5 | <5 | <5 | 5 | <5 | 5 | 2615543 |
| Dissolved Tungsten (W) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | | 1 | <1 | 1 | 2615511 |
| Total Tungsten (W) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | <1 | 1 | <1 | 1 | 2615543 |
| Dissolved Uranium (U) | ug/L | 0.3 | 0.3 | 0.1 | 3.3 | 0.1 | 1.8 | | 0.1 | <0.1 | 0.1 | 2615511 |
| Total Uranium (U) | ug/L | 1.0 | 0.5 | 0.1 | 3.6 | 0.1 | 1.8 | 1.7 | 0.1 | <0.1 | 0.1 | 2615543 |
| Dissolved Vanadium (V) | ug/L | 3.0 | 1.0 | 0.5 | 0.7 | 0.5 | 1.2 | | 0.5 | 0.9 | 0.5 | 2615511 |
| Total Vanadium (V) | ug/L | 12 | 5.7 | 0.5 | 0.7 | 0.5 | 0.7 | 0.8 | 0.5 | 0.7 | 0.5 | 2615543 |
| Dissolved Zinc (Zn) | ug/L | <5 | <5 | 5 | 55 | 5 | <5 | | 5 | 6 | 5 | 2615511 |
| Total Zinc (Zn) | ug/L | 30 | 16 | 5 | 69 | 5 | <5 | <5 | 5 | <5 | 5 | 2615543 |
| Dissolved Zirconium (Zr) | ug/L | <1 | <1 | 1 | <1 | 1 | <1 | | 1 | <1 | 1 | 2615511 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | KW9635 | KW9636 | | KW9637 | | KW9638 | KW9638 | | KW9639 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2011/09/11 | 2011/09/11 | | 2011/09/11 | | 2011/09/11 | 2011/09/11 | | 2011/09/11 | | |
| | **Units** | **WR1** | **WR2** | **RDL** | **L1000** | **RDL** | **L1100** | **L1100 Lab-Dup** | **RDL** | **LEACH WATER** | **RDL** | **QC Batch** |
| Total Zirconium (Zr) | ug/L | 10 | 4 | 1 | <1 | 1 | <1 | <1 | 1 | <1 | 1 | 2615543 |

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## Test Summary

**Maxxam ID** KW9635 **Collected** 2011/09/11
**Sample ID** WR1 **Shipped**
**Matrix** Water **Received** 2011/09/15

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2618061 | N/A | 2011/09/19 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2618014 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Conductivity | COND | 2618062 | N/A | 2011/09/19 | YOGESH PATEL |
| Fluoride | F | 2618063 | 2011/09/17 | 2011/09/19 | YOGESH PATEL |
| Mercury | CVAA | 2620369 | 2011/09/21 | 2011/09/21 | LAWRENCE CHEUNG |
| Dissolved Metals by ICPMS | ICP/MS | 2615511 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Total Metals Analysis by ICPMS | ICP/MS | 2615543 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Ammonia-N | LACH/NH4 | 2618527 | N/A | 2011/09/21 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2618066 | N/A | 2011/09/19 | HELEN HE |
| pH | PH | 2618064 | N/A | 2011/09/19 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2618015 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Total Dissolved Solids | SLDS | 2618393 | N/A | 2011/09/19 | SUBHASHCHANDRA PATEL |
| Total Phosphorus (Colourimetric) | LACH/P | 2620069 | 2011/09/20 | 2011/09/20 | VIORICA ROTARU |
| Total Suspended Solids | SLDS | 2617640 | N/A | 2011/09/16 | SUBHASHCHANDRA PATEL |

**Maxxam ID** KW9636 **Collected** 2011/09/11
**Sample ID** WR2 **Shipped**
**Matrix** Water **Received** 2011/09/15

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2618061 | N/A | 2011/09/19 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2618014 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Conductivity | COND | 2618062 | N/A | 2011/09/19 | YOGESH PATEL |
| Fluoride | F | 2618063 | 2011/09/17 | 2011/09/19 | YOGESH PATEL |
| Mercury | CVAA | 2620369 | 2011/09/21 | 2011/09/21 | LAWRENCE CHEUNG |
| Dissolved Metals by ICPMS | ICP/MS | 2615511 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Total Metals Analysis by ICPMS | ICP/MS | 2615543 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Ammonia-N | LACH/NH4 | 2618527 | N/A | 2011/09/21 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2618066 | N/A | 2011/09/19 | HELEN HE |
| pH | PH | 2618064 | N/A | 2011/09/19 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2618015 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Total Dissolved Solids | SLDS | 2618393 | N/A | 2011/09/19 | SUBHASHCHANDRA PATEL |
| Total Phosphorus (Colourimetric) | LACH/P | 2620069 | 2011/09/20 | 2011/09/20 | VIORICA ROTARU |

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## Test Summary

| | | | | | |
|---|---|---|---|---|---|
| Total Suspended Solids | SLDS | 2617640 | N/A | 2011/09/16 | SUBHASHCHANDRA PATEL |

**Maxxam ID** KW9637 **Collected** 2011/09/11
**Sample ID** L1000 **Shipped**
**Matrix** Water **Received** 2011/09/15

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2618061 | N/A | 2011/09/19 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2618014 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Conductivity | COND | 2618062 | N/A | 2011/09/19 | YOGESH PATEL |
| Fluoride | F | 2618063 | 2011/09/17 | 2011/09/19 | YOGESH PATEL |
| Mercury | CVAA | 2620369 | 2011/09/21 | 2011/09/21 | LAWRENCE CHEUNG |
| Dissolved Metals by ICPMS | ICP/MS | 2615511 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Total Metals Analysis by ICPMS | ICP/MS | 2615543 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Ammonia-N | LACH/NH4 | 2618527 | N/A | 2011/09/21 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2618066 | N/A | 2011/09/19 | HELEN HE |
| pH | PH | 2618064 | N/A | 2011/09/19 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2618015 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Total Dissolved Solids | SLDS | 2618393 | N/A | 2011/09/19 | SUBHASHCHANDRA PATEL |
| Total Phosphorus (Colourimetric) | LACH/P | 2620069 | 2011/09/20 | 2011/09/20 | VIORICA ROTARU |
| Total Suspended Solids | SLDS | 2617640 | N/A | 2011/09/16 | SUBHASHCHANDRA PATEL |

**Maxxam ID** KW9638 **Collected** 2011/09/11
**Sample ID** L1100 **Shipped**
**Matrix** Water **Received** 2011/09/15

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2618061 | N/A | 2011/09/19 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2618014 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Conductivity | COND | 2618062 | N/A | 2011/09/19 | YOGESH PATEL |
| Fluoride | F | 2618063 | 2011/09/17 | 2011/09/19 | YOGESH PATEL |
| Mercury | CVAA | 2620369 | 2011/09/21 | 2011/09/21 | LAWRENCE CHEUNG |
| Dissolved Metals by ICPMS | ICP/MS | 2615511 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Total Metals Analysis by ICPMS | ICP/MS | 2615543 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Ammonia-N | LACH/NH4 | 2618527 | N/A | 2011/09/21 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2618066 | N/A | 2011/09/19 | HELEN HE |
| pH | PH | 2618064 | N/A | 2011/09/19 | YOGESH PATEL |

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## Test Summary

| | | | | | |
|---|---|---|---|---|---|
| Sulphate by Automated Colourimetry | AC | 2618015 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Total Dissolved Solids | SLDS | 2618706 | N/A | 2011/09/21 | TEJPRATAP MISHRA |
| Total Phosphorus (Colourimetric) | LACH/P | 2620069 | 2011/09/20 | 2011/09/20 | VIORICA ROTARU |
| Total Suspended Solids | SLDS | 2617614 | N/A | 2011/09/16 | SUBHASHCHANDRA PATEL |

**Maxxam ID** KW9638 Dup **Collected** 2011/09/11
**Sample ID** L1100 **Shipped**
**Matrix** Water **Received** 2011/09/15

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2618061 | N/A | 2011/09/19 | YOGESH PATEL |
| Conductivity | COND | 2618062 | N/A | 2011/09/19 | YOGESH PATEL |
| Fluoride | F | 2618063 | 2011/09/17 | 2011/09/19 | YOGESH PATEL |
| Total Metals Analysis by ICPMS | ICP/MS | 2615543 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| pH | PH | 2618064 | N/A | 2011/09/19 | YOGESH PATEL |
| Total Phosphorus (Colourimetric) | LACH/P | 2620069 | 2011/09/20 | 2011/09/20 | VIORICA ROTARU |

**Maxxam ID** KW9639 **Collected** 2011/09/11
**Sample ID** LEACH WATER **Shipped**
**Matrix** Water **Received** 2011/09/15

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Alkalinity | PH | 2618061 | N/A | 2011/09/19 | YOGESH PATEL |
| Chloride by Automated Colourimetry | AC | 2618014 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Conductivity | COND | 2618062 | N/A | 2011/09/19 | YOGESH PATEL |
| Fluoride | F | 2618063 | 2011/09/17 | 2011/09/19 | YOGESH PATEL |
| Mercury | CVAA | 2620369 | 2011/09/21 | 2011/09/21 | LAWRENCE CHEUNG |
| Dissolved Metals by ICPMS | ICP/MS | 2615511 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Total Metals Analysis by ICPMS | ICP/MS | 2615543 | N/A | 2011/09/16 | RAIGAMAGE PERERA |
| Ammonia-N | LACH/NH4 | 2618527 | N/A | 2011/09/21 | ALINA DOBREANU |
| Nitrate (NO3) and Nitrite (NO2) in Water | LACH | 2618066 | N/A | 2011/09/19 | HELEN HE |
| pH | PH | 2618064 | N/A | 2011/09/19 | YOGESH PATEL |
| Sulphate by Automated Colourimetry | AC | 2618015 | N/A | 2011/09/19 | DEONARINE RAMNARINE |
| Total Dissolved Solids | SLDS | 2618393 | N/A | 2011/09/19 | SUBHASHCHANDRA PATEL |
| Total Phosphorus (Colourimetric) | LACH/P | 2620069 | 2011/09/20 | 2011/09/20 | VIORICA ROTARU |
| Total Suspended Solids | SLDS | 2617640 | N/A | 2011/09/16 | SUBHASHCHANDRA PATEL |

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## Test Summary

| | | | |
|---|---|---|---|
| **Maxxam ID** | KW9639 Dup | **Collected** | 2011/09/11 |
| **Sample ID** | LEACH WATER | **Shipped** | |
| **Matrix** | Water | **Received** | 2011/09/15 |

| Test Description | Instrumentation | Batch | Extracted | Analyzed | Analyst |
|---|---|---|---|---|---|
| Ammonia-N | LACH/NH4 | 2618527 | N/A | 2011/09/21 | ALINA DOBREANU |



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Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

| | |
|---|---|
| Package 1 | 4.0°C |

Each temperature is the average of up to three cooler temperatures taken at receipt

**GENERAL COMMENTS**

Cooler custody seal was present and intact.

Sample KW9637-01: Metal analysis:

RDL of Nickel was adjusted due to high concentration of Calcium.



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Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## QUALITY ASSURANCE REPORT

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | Units | Value (%) | QC Limits | % Recovery | QC Limits |
| 2615511 | Dissolved Aluminum (Al) | 2011/09/16 | 105 | 80 - 120 | 107 | 90 - 110 | <5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Antimony (Sb) | 2011/09/16 | 106 | 80 - 120 | 104 | 90 - 110 | <0.5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Arsenic (As) | 2011/09/16 | 108 | 80 - 120 | 104 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Barium (Ba) | 2011/09/16 | NC | 80 - 120 | 104 | 90 - 110 | <2 | ug/L | 1.1 | 25 | | |
| 2615511 | Dissolved Beryllium (Be) | 2011/09/16 | 97 | 80 - 120 | 102 | 90 - 110 | <0.5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Bismuth (Bi) | 2011/09/16 | 89 | 80 - 120 | 103 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Boron (B) | 2011/09/16 | 105 | 80 - 120 | 105 | 90 - 110 | <10 | ug/L | 1.3 | 25 | | |
| 2615511 | Dissolved Cadmium (Cd) | 2011/09/16 | 101 | 80 - 120 | 104 | 90 - 110 | <0.1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Calcium (Ca) | 2011/09/16 | NC | 80 - 120 | 101 | 90 - 110 | <200 | ug/L | 0.4 | 25 | | |
| 2615511 | Dissolved Chromium (Cr) | 2011/09/16 | 95 | 80 - 120 | 104 | 90 - 110 | <5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Cobalt (Co) | 2011/09/16 | 101 | 80 - 120 | 106 | 90 - 110 | <0.5 | ug/L | 2.9 | 25 | | |
| 2615511 | Dissolved Copper (Cu) | 2011/09/16 | 97 | 80 - 120 | 103 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Iron (Fe) | 2011/09/16 | 101 | 80 - 120 | 105 | 90 - 110 | <100 | ug/L | 0.8 | 25 | | |
| 2615511 | Dissolved Lead (Pb) | 2011/09/16 | 96 | 80 - 120 | 104 | 90 - 110 | <0.5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Lithium (Li) | 2011/09/16 | 98 | 80 - 120 | 102 | 90 - 110 | <5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Magnesium (Mg) | 2011/09/16 | NC | 80 - 120 | 102 | 90 - 110 | <50 | ug/L | 0.8 | 25 | | |
| 2615511 | Dissolved Manganese (Mn) | 2011/09/16 | NC | 80 - 120 | 108 | 90 - 110 | <2 | ug/L | 2.6 | 25 | | |
| 2615511 | Dissolved Molybdenum (Mo) | 2011/09/16 | 107 | 80 - 120 | 105 | 90 - 110 | <0.5 | ug/L | 4.9 | 25 | | |
| 2615511 | Dissolved Nickel (Ni) | 2011/09/16 | 98 | 80 - 120 | 105 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Phosphorus (P) | 2011/09/16 | 111 | 80 - 120 | 115(1) | 90 - 110 | <100 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Potassium (K) | 2011/09/16 | 104 | 80 - 120 | 106 | 90 - 110 | <200 | ug/L | 2.0 | 25 | | |
| 2615511 | Dissolved Selenium (Se) | 2011/09/16 | 104 | 80 - 120 | 104 | 90 - 110 | <2 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Silicon (Si) | 2011/09/16 | 104 | 80 - 120 | 104 | 90 - 110 | <50 | ug/L | 2.2 | 25 | | |
| 2615511 | Dissolved Silver (Ag) | 2011/09/16 | 97 | 80 - 120 | 104 | 90 - 110 | <0.1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Sodium (Na) | 2011/09/16 | S | 80 - 120 | 107 | 90 - 110 | <100 | ug/L | 9.4 | 25 | | |
| 2615511 | Dissolved Strontium (Sr) | 2011/09/16 | NC | 80 - 120 | 104 | 90 - 110 | <1 | ug/L | 3.2 | 25 | | |
| 2615511 | Dissolved Tellurium (Te) | 2011/09/16 | 97 | 80 - 120 | 101 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Thallium (Tl) | 2011/09/16 | 93 | 80 - 120 | 103 | 90 - 110 | <0.05 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Tin (Sn) | 2011/09/16 | 106 | 80 - 120 | 103 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Titanium (Ti) | 2011/09/16 | 106 | 80 - 120 | 107 | 90 - 110 | <5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Tungsten (W) | 2011/09/16 | 101 | 80 - 120 | 107 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Uranium (U) | 2011/09/16 | 91 | 80 - 120 | 100 | 90 - 110 | <0.1 | ug/L | 1.7 | 25 | | |
| 2615511 | Dissolved Vanadium (V) | 2011/09/16 | 106 | 80 - 120 | 105 | 90 - 110 | <0.5 | ug/L | NC | 25 | | |
| 2615511 | Dissolved Zinc (Zn) | 2011/09/16 | 93 | 80 - 120 | 103 | 90 - 110 | <5 | ug/L | 7.7 | 25 | | |
| 2615511 | Dissolved Zirconium (Zr) | 2011/09/16 | 107 | 80 - 120 | 106 | 90 - 110 | <1 | ug/L | NC | 25 | | |
| 2615543 | Total Aluminum (Al) | 2011/09/16 | 106 | 80 - 120 | 99 | 85 - 115 | 8, RDL=5 | ug/L | 8.1 | 25 | | |
| 2615543 | Total Antimony (Sb) | 2011/09/16 | 99 | 80 - 120 | 100 | 85 - 115 | <0.5 | ug/L | NC | 25 | | |
| 2615543 | Total Arsenic (As) | 2011/09/16 | 97 | 80 - 120 | 98 | 85 - 115 | <1 | ug/L | 6.3 | 25 | | |
| 2615543 | Total Barium (Ba) | 2011/09/16 | 96 | 80 - 120 | 98 | 85 - 115 | 2, RDL=2 | ug/L | 5.1 | 25 | | |
| 2615543 | Total Beryllium (Be) | 2011/09/16 | 95 | 80 - 120 | 94 | 85 - 115 | <0.5 | ug/L | NC | 25 | | |

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## QUALITY ASSURANCE REPORT

| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | Units | Value (%) | QC Limits | % Recovery | QC Limits |
| 2615543 | Total Bismuth (Bi) | 2011/09/16 | 98 | 80 - 120 | 100 | 85 - 115 | <1 | ug/L | NC | 25 | | |
| 2615543 | Total Boron (B) | 2011/09/16 | 98 | 80 - 120 | 95 | 85 - 115 | <10 | ug/L | NC | 25 | | |
| 2615543 | Total Cadmium (Cd) | 2011/09/16 | 100 | 80 - 120 | 101 | 85 - 116 | <0.1 | ug/L | NC | 25 | | |
| 2615543 | Total Calcium (Ca) | 2011/09/16 | NC | 80 - 120 | 97 | 85 - 115 | <200 | ug/L | 7.1 | 25 | | |
| 2615543 | Total Chromium (Cr) | 2011/09/16 | 95 | 80 - 120 | 97 | 85 - 115 | <5 | ug/L | NC | 25 | | |
| 2615543 | Total Cobalt (Co) | 2011/09/16 | 98 | 80 - 120 | 100 | 85 - 115 | <0.5 | ug/L | NC | 25 | | |
| 2615543 | Total Copper (Cu) | 2011/09/16 | 96 | 80 - 120 | 99 | 85 - 115 | <1 | ug/L | NC | 25 | | |
| 2615543 | Total Iron (Fe) | 2011/09/16 | 97 | 80 - 120 | 96 | 85 - 115 | <100 | ug/L | 19.7 | 25 | | |
| 2615543 | Total Lead (Pb) | 2011/09/16 | 98 | 80 - 120 | 99 | 85 - 115 | <0.5 | ug/L | 7.0 | 25 | | |
| 2615543 | Total Lithium (Li) | 2011/09/16 | 96 | 80 - 120 | 96 | 85 - 115 | <5 | ug/L | NC | 25 | | |
| 2615543 | Total Magnesium (Mg) | 2011/09/16 | NC | 80 - 120 | 93 | 85 - 115 | <50 | ug/L | 12.3 | 25 | | |
| 2615543 | Total Manganese (Mn) | 2011/09/16 | 98 | 80 - 120 | 100 | 85 - 115 | <2 | ug/L | 4.3 | 25 | | |
| 2615543 | Total Molybdenum (Mo) | 2011/09/16 | 101 | 80 - 120 | 98 | 85 - 115 | <0.5 | ug/L | 1.3 | 25 | | |
| 2615543 | Total Nickel (Ni) | 2011/09/16 | 95 | 80 - 120 | 96 | 85 - 115 | <1 | ug/L | NC | 25 | | |
| 2615543 | Total Potassium (K) | 2011/09/16 | 97 | 80 - 120 | 96 | 85 - 115 | <200 | ug/L | 4.2 | 25 | | |
| 2615543 | Total Selenium (Se) | 2011/09/16 | 101 | 80 - 120 | 100 | 85 - 115 | <2 | ug/L | NC | 25 | | |
| 2615543 | Total Silicon (Si) | 2011/09/16 | 99 | 80 - 120 | 98 | 85 - 115 | <50 | ug/L | 9.1 | 25 | | |
| 2615543 | Total Silver (Ag) | 2011/09/16 | 97 | 80 - 120 | 100 | 85 - 115 | <0.1 | ug/L | NC | 25 | | |
| 2615543 | Total Sodium (Na) | 2011/09/16 | 98 | 80 - 120 | 98 | 85 - 115 | <100 | ug/L | 6.9 | 25 | | |
| 2615543 | Total Strontium (Sr) | 2011/09/16 | NC | 80 - 120 | 99 | 85 - 115 | <1 | ug/L | 3.3 | 25 | | |
| 2615543 | Total Tellurium (Te) | 2011/09/16 | 94 | 80 - 120 | 96 | 85 - 115 | <1 | ug/L | NC | 25 | | |
| 2615543 | Total Thallium (Tl) | 2011/09/16 | 98 | 80 - 120 | 100 | 85 - 115 | <0.05 | ug/L | NC | 25 | | |
| 2615543 | Total Tin (Sn) | 2011/09/16 | 99 | 80 - 120 | 99 | 85 - 115 | <1 | ug/L | NC | 25 | | |
| 2615543 | Total Titanium (Ti) | 2011/09/16 | 97 | 80 - 120 | 98 | 85 - 115 | <5 | ug/L | NC | 25 | | |
| 2615543 | Total Tungsten (W) | 2011/09/16 | 100 | 80 - 120 | 99 | 85 - 115 | <1 | ug/L | NC | 25 | | |
| 2615543 | Total Uranium (U) | 2011/09/16 | 97 | 80 - 120 | 96 | 85 - 115 | <0.1 | ug/L | 6.7 | 25 | | |
| 2615543 | Total Vanadium (V) | 2011/09/16 | 96 | 80 - 120 | 96 | 85 - 115 | 0.6, RDL=0.5 | ug/L | NC | 25 | | |
| 2615543 | Total Zinc (Zn) | 2011/09/16 | 97 | 80 - 120 | 100 | 85 - 115 | <5 | ug/L | NC | 25 | | |
| 2615543 | Total Zirconium (Zr) | 2011/09/16 | 100 | 80 - 120 | 99 | 85 - 115 | <1 | ug/L | NC | 25 | | |
| 2617614 | Total Suspended Solids | 2011/09/16 | | | | | <10 | mg/L | 1.5 | 25 | 97 | 85 - 115 |
| 2617640 | Total Suspended Solids | 2011/09/16 | | | | | <10 | mg/L | NC | 25 | 98 | 85 - 115 |
| 2618014 | Dissolved Chloride (Cl) | 2011/09/19 | NC | 75 - 125 | 102 | 80 - 120 | <1 | mg/L | 0.2 | 20 | | |
| 2618015 | Dissolved Sulphate (SO4) | 2011/09/19 | NC | 75 - 125 | 98 | 80 - 120 | <1 | mg/L | 1.1 | 25 | | |
| 2618061 | Alkalinity (Total as CaCO3) | 2011/09/19 | | | | | <1 | mg/L | 1 | 25 | 96 | 85 - 115 |
| 2618062 | Conductivity | 2011/09/19 | | | | | <1 | umho/cm | 0.08 | 25 | 101 | 85 - 115 |
| 2618063 | Fluoride (F-) | 2011/09/19 | 101 | 80 - 120 | 102 | 80 - 120 | <0.1 | mg/L | 3.5 | 20 | | |
| 2618066 | Nitrite (N) | 2011/09/19 | 108 | 80 - 120 | 108 | 85 - 115 | <0.01 | mg/L | | | | |
| 2618066 | Nitrate (N) | 2011/09/19 | 102 | 80 - 120 | 100 | 85 - 115 | <0.1 | mg/L | NC | 25 | | |
| 2618393 | Total Dissolved Solids | 2011/09/19 | | | | | <10 | mg/L | 1.4 | 25 | 95 | 90 - 110 |
| 2618527 | Total Ammonia-N | 2011/09/21 | 100 | 80 - 120 | 99 | 85 - 115 | <0.05 | mg/L | NC | 20 | | |

Maxxam Job #: B1E1882
Report Date: 2011/09/21

Golder Associates Ltd
Client Project #: 11-1428-0011
Site Location: Meliadine Project
Sampler Initials: BH

## QUALITY ASSURANCE REPORT

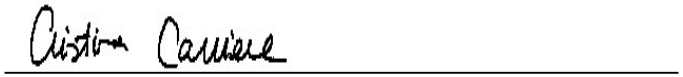
| | | | Matrix Spike | | Spiked Blank | | Method Blank | | RPD | | QC Standard | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QC Batch | Parameter | Date | % Recovery | QC Limits | % Recovery | QC Limits | Value | Units | Value (%) | QC Limits | % Recovery | QC Limits |
| 2618706 | Total Dissolved Solids | 2011/09/21 | | | | | <10 | mg/L | 3.7 | 25 | 98 | 90 - 110 |
| 2620069 | Total Phosphorus | 2011/09/20 | 103 | 80 - 120 | 102 | 85 - 115 | <0.002 | mg/L | 13.8 | 20 | 107 | 85 - 115 |
| 2620369 | Mercury (Hg) | 2011/09/21 | 112 | 75 - 125 | 112 | 80 - 120 | <0.1 | ug/L | NC | 25 | | |

N/A = Not Applicable
RDL = Reportable Detection Limit
RPD = Relative Percent Difference
Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
(1) - Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

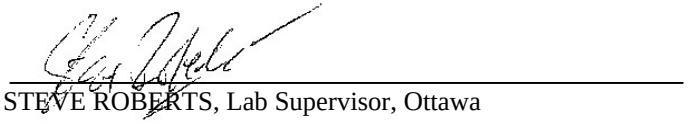
# Validation Signature Page

**Maxxam Job #: B1E1882**

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



CRISTINA CARRIERE, Scientific Services



STEVE ROBERTS, Lab Supervisor, Ottawa

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



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# CHAIN OF CUSTODY RECORD

Page of

| INVOICE INFORMATION: | | REPORT INFORMATION (if differs from invoice): | | PROJECT INFORMATION: | | Laboratory Use Only: | |
|---|---|---|---|---|---|---|---|
| Company Name: | #14090 Golder Associates Ltd | Company Name: | | Quotation #: | B14624 | MAXXAM JOB #: | BOTTLE ORDER #: 277357 |
| Contact Name: | Central Accounting | Contact Name: | Jennifer Cole & V Bertrand | P.O. #: | | | |
| Address: | 32 Steacie Dr<br>Kanata ON K2K 2A9 | Address: | | Project #: | 11-1428-0011 | | |
| Phone: | (613)592-9600 Fax: (613)592-9601 | Phone: | Fax: | Project Name: | | CHAIN OF CUSTODY #: | PROJECT MANAGER: |
| Email: | maxxam@golder.com, OttawaAccounting@golder.c | Email: | jcole@golder.com, valerie_bertrand@golder.com | Site #: | Meliadine Project | C#277357-01-01 | JULIE CLEMENT |
| | | | | Sampled By: | BH | | |

**Regulation 153 (2011):** ☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table ___ ☐ For RSC

**Other Regulations:** ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg. 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Other ___

**SPECIAL INSTRUCTIONS**

*Include Criteria on Certificate of Analysis (Y/N)? ___*

*Note: For MOE regulated drinking water samples - please use the Drinking Water Chain of Custody Form*

**SAMPLES MUST BE KEPT COOL ( < 10ºC ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM**

**TURNAROUND TIME (TAT) REQUIRED:**

**PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS**

**Regular (Standard) TAT:** ☒
*(will be applied if Rush TAT is not specified):*
*Standard TAT = 5-7 Working days for most tests.*
*Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.*

**Job Specific Rush TAT (if applies to entire submission)** ☐
Date Required: _____ Time Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

| | Sample Barcode Label | Sample (Location) Identification | Date Sampled | Time Sampled | Matrix | Regulated Drinking Water ? (Y / N) | Metals Field Filtered ? (Y / N) | Alkalinity, Conductivity, pH | Ammonia-N/Total P | Chloride/Fluoride/Sulphate | Dissolved Metals by ICPMS | Nitrate (NO3) and Nitrite (NO2) in Water | Total Metals Analysis by ICPMS | Mercury | TDS/TSS | | | # of Bottles | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | WR1 | 11/09/2011 | | WATER | N | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | 6 | ONLY DISSOLVED METALS + MERCURY FIELD FILTERED |
| 2 | | WR2 | ↓ | | ↓ | N | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | 6 | ↓ |
| 3 | | L1000 | | | | N | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | 6 | |
| 4 | | L1100 | | | | N | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | 6 | |
| 5 | | LOUCH LATOR | | | | N | Y | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | 6 | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |

15-Sep-11 11:20
JULIE CLEMENT
B1E1882
JOF

REC'D IN OTTAWA

| *RELINQUISHED BY: (Signature/Print) | Date: (YY/MM/DD) | Time: | RECEIVED BY: (Signature/Print) | Date: (YY/MM/DD) | Time: | # Jars Used and Not Submitted |
|---|---|---|---|---|---|---|
| B. Henderson | 11/09/12 | | Shawn Colbert | 2011/09/15 | 11:20 am | |

| Laboratory Use Only | | | | | |
|---|---|---|---|---|---|
| Time Sensitive | Temperature (ºC) on Receipt | Custody Seal | Yes | No |
| | 4/4/4 | Present | ✓ | |
| | | Intact | ✓ | |

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY RECORD MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

ICE PACKS

Your Project #: LEACHATE CELL
Site Location: MELIADINE
Your C.O.C. #: na

**Attention: Philip Roy**
Agnico-Eagle
Meliadine
Rankin Inlet, NU
CANADA X0C 0G0

**Report Date: 2012/07/10**

# CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B298154**
**Received: 2012/06/30, 10:20**

Sample Matrix: Water
# Samples Received: 11

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Method Reference |
|---|---|---|---|---|---|
| Alkalinity | 11 | N/A | 2012/07/04 | CAM SOP-00448 | SM 2320B |
| Chloride by Automated Colourimetry | 11 | N/A | 2012/07/05 | CAM SOP-00463 | EPA 325.2 |
| Colour | 11 | N/A | 2012/07/04 | CAM SOP-00412 | APHA 2120 |
| Conductivity | 11 | N/A | 2012/07/04 | CAM SOP-00448 | SM 2510 |
| Fluoride | 11 | 2012/07/04 | 2012/07/04 | CAM SOP-00448 | APHA 4500FC |
| Mercury | 5 | 2012/07/04 | 2012/07/04 | CAM SOP-00453 | SW-846 7470A |
| Mercury | 5 | 2012/07/05 | 2012/07/05 | CAM SOP-00453 | SW-846 7470A |
| Dissolved Metals by ICPMS | 11 | N/A | 2012/07/09 | CAM SOP-00447 | EPA 6020 |
| Total Metals Analysis by ICPMS | 5 | N/A | 2012/07/06 | CAM SOP-00447 | EPA 6020 |
| Total Metals Analysis by ICPMS | 6 | N/A | 2012/07/09 | CAM SOP-00447 | EPA 6020 |
| Total Ammonia-N | 1 | N/A | 2012/07/05 | CAM SOP-00441 | US GS I-2522-90 |
| Total Ammonia-N | 10 | N/A | 2012/07/06 | CAM SOP-00441 | US GS I-2522-90 |
| Nitrate (NO3) and Nitrite (NO2) in Water (1) | 11 | N/A | 2012/07/05 | CAM SOP-00440 | SM 4500 NO3I/NO2B |
| pH | 11 | N/A | 2012/07/04 | CAM SOP-00448 | SM 4500H+ B |
| Sulphate by Automated Colourimetry | 11 | N/A | 2012/07/05 | CAM SOP-00464 | EPA 375.4 |
| Total Dissolved Solids | 11 | N/A | 2012/07/04 | CAM SOP-00428 | APHA 2540C |
| Total Phosphorus (Colourimetric) | 9 | 2012/07/05 | 2012/07/05 | CAM SOP-00407 | APHA 4500 P,B,F |
| Total Phosphorus (Colourimetric) | 1 | 2012/07/06 | 2012/07/09 | CAM SOP-00407 | APHA 4500 P,B,F |
| Total Phosphorus (Colourimetric) | 1 | 2012/07/06 | 2012/07/09 | CAM SOP-00407 | SM 4500 P,B,F |
| Total Suspended Solids | 11 | N/A | 2012/07/04 | CAM SOP-00428 | SM 2540D |

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

../2

Your Project #: LEACHATE CELL
Site Location: MELIADINE
Your C.O.C. #: na

**Attention: Philip Roy**
Agnico-Eagle
Meliadine
Rankin Inlet, NU
CANADA X0C 0G0

**Report Date: 2012/07/10**

## CERTIFICATE OF ANALYSIS



Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Julie Clement, Ottawa Customer Service
Email: JClement@maxxam.ca
Phone# (613) 274-3549

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2

Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | NZ4623 | | NZ4624 | | NZ4625 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 19:45 | | 2012/06/27 19:55 | | 2012/06/27 20:05 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR1** | **QC Batch** | **WR1-DUP** | **QC Batch** | **WR2** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | | |
| Total Ammonia-N | mg/L | ND | 2900704 | 1.3 | 2900425 | ND | 0.050 | 2900704 |
| Colour | TCU | 5 | 2898149 | 6 | 2898149 | 5 | 2 | 2898149 |
| Conductivity | umho/cm | 610 | 2898142 | 610 | 2898142 | 640 | 1.0 | 2898142 |
| Total Dissolved Solids | mg/L | 510 | 2898039 | 488 | 2898039 | 516 | 10 | 2898039 |
| Fluoride (F-) | mg/L | ND | 2898144 | ND | 2898144 | ND | 0.10 | 2898144 |
| pH | pH | 7.58 | 2898134 | 7.42 | 2898134 | 7.43 | | 2898134 |
| Total Phosphorus | mg/L | 0.051 | 2899435 | 0.15 | 2899435 | 0.052 | 0.002 | 2899435 |
| Total Suspended Solids | mg/L | 75 | 2898036 | 53 | 2898036 | 77 | 10 | 2898036 |
| Dissolved Sulphate (SO4) | mg/L | 39 | 2899085 | 40 | 2899085 | 42 | 1 | 2899085 |
| Alkalinity (Total as CaCO3) | mg/L | 39 | 2898141 | 38 | 2898141 | 37 | 1.0 | 2898141 |
| Dissolved Chloride (Cl) | mg/L | 130 | 2899083 | 130 | 2899083 | 130 | 1 | 2899083 |
| Nitrite (N) | mg/L | ND | 2899072 | ND | 2899072 | ND | 0.010 | 2899072 |
| Nitrate (N) | mg/L | 0.39 | 2899072 | 0.41 | 2899072 | 0.44 | 0.10 | 2899072 |
| Nitrate + Nitrite | mg/L | 0.39 | 2899072 | 0.41 | 2899072 | 0.44 | 0.10 | 2899072 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | NZ4626 | | NZ4627 | | NZ4628 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:15 | | 2012/06/27 20:25 | | 2012/06/27 20:35 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR2-DUP** | **RDL** | **LODE 1000** | **QC Batch** | **LODE 1000-DUP** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | | |
| Total Ammonia-N | mg/L | 0.10 | 0.050 | 0.49 | 2900425 | 0.48 | 0.050 | 2899251 |
| Colour | TCU | 5 | 2 | ND | 2898149 | 2 | 2 | 2898149 |
| Conductivity | umho/cm | 640 | 1.0 | 1200 | 2898142 | 1200 | 1.0 | 2898142 |
| Total Dissolved Solids | mg/L | 508 | 10 | 938 | 2898039 | 886 | 10 | 2898039 |
| Fluoride (F-) | mg/L | ND | 0.10 | ND | 2898144 | ND | 0.10 | 2898144 |
| pH | pH | 7.53 | | 7.49 | 2898134 | 7.49 | | 2898134 |
| Total Phosphorus | mg/L | 0.079 | 0.002 | 0.054 | 2899435 | 0.14 | 0.002 | 2901633 |
| Total Suspended Solids | mg/L | 17 | 10 | 430 | 2898036 | 150 | 10 | 2898036 |
| Dissolved Sulphate (SO4) | mg/L | 43 | 1 | 220 | 2899085 | 220 | 1 | 2899085 |
| Alkalinity (Total as CaCO3) | mg/L | 39 | 1.0 | 36 | 2898141 | 37 | 1.0 | 2898141 |
| Dissolved Chloride (Cl) | mg/L | 130 | 1 | 160 | 2899083 | 160 | 2 | 2899083 |
| Nitrite (N) | mg/L | ND | 0.010 | 0.42 | 2899072 | 0.42 | 0.010 | 2899072 |
| Nitrate (N) | mg/L | 0.61 | 0.10 | 13 | 2899072 | 13 | 1.0 | 2899072 |
| Nitrate + Nitrite | mg/L | 0.61 | 0.10 | 14 | 2899072 | 14 | 1.0 | 2899072 |

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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | NZ4629 | | | NZ4630 | | NZ4631 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:45 | | | 2012/06/27 20:55 | | 2012/06/27 21:05 | | |
| COC Number | | na | | | na | | na | | |
| | **Units** | **LODE 1100** | **RDL** | **QC Batch** | **LODE 1100-DUP** | **RDL** | **LEACHATE WATER** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | | | |
| Total Ammonia-N | mg/L | ND | 0.050 | 2900704 | ND | 0.050 | ND | 0.050 | 2900425 |
| Colour | TCU | ND | 2 | 2898149 | 2 | 2 | 9 | 2 | 2898149 |
| Conductivity | umho/cm | 1000 | 1.0 | 2898142 | 1000 | 1.0 | 530 | 1.0 | 2898142 |
| Total Dissolved Solids | mg/L | 770 | 10 | 2898039 | 778 | 10 | 430 | 10 | 2898039 |
| Fluoride (F-) | mg/L | ND | 0.10 | 2898144 | ND | 0.10 | ND | 0.10 | 2898144 |
| pH | pH | 7.61 | | 2898134 | 7.63 | | 7.45 | | 2898134 |
| Total Phosphorus | mg/L | 0.69 | 0.040 | 2900762 | 0.60 | 0.01 | ND | 0.002 | 2899435 |
| Total Suspended Solids | mg/L | 1700 | 10 | 2898036 | 580 | 10 | ND | 10 | 2898036 |
| Dissolved Sulphate (SO4) | mg/L | 300 | 1 | 2899085 | 290 | 1 | 18 | 1 | 2899085 |
| Alkalinity (Total as CaCO3) | mg/L | 45 | 1.0 | 2898141 | 43 | 1.0 | 32 | 1.0 | 2898141 |
| Dissolved Chloride (Cl) | mg/L | 120 | 1 | 2899083 | 120 | 1 | 120 | 1 | 2899083 |
| Nitrite (N) | mg/L | 0.25 | 0.010 | 2899072 | 0.24 | 0.010 | ND | 0.010 | 2899072 |
| Nitrate (N) | mg/L | 1.1 | 0.10 | 2899072 | 1.1 | 0.10 | ND | 0.10 | 2899072 |
| Nitrate + Nitrite | mg/L | 1.4 | 0.10 | 2899072 | 1.3 | 0.10 | ND | 0.10 | 2899072 |

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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | NZ4632 | NZ4633 | | |
|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 21:15 | | | |
| COC Number | | na | na | | |
| | **Units** | **LEACHATE WATER-DUP** | **TRIP BLANK** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | |
| Total Ammonia-N | mg/L | ND | ND | 0.050 | 2900425 |
| Colour | TCU | 8 | ND | 2 | 2898149 |
| Conductivity | umho/cm | 530 | 1.1 | 1.0 | 2898142 |
| Total Dissolved Solids | mg/L | 416 | ND | 10 | 2898039 |
| Fluoride (F-) | mg/L | ND | ND | 0.10 | 2898144 |
| pH | pH | 7.37 | 6.16 | | 2898134 |
| Total Phosphorus | mg/L | 0.004 | ND | 0.002 | 2899435 |
| Total Suspended Solids | mg/L | ND | ND | 10 | 2898036 |
| Dissolved Sulphate (SO4) | mg/L | 18 | ND | 1 | 2899085 |
| Alkalinity (Total as CaCO3) | mg/L | 32 | ND | 1.0 | 2898141 |
| Dissolved Chloride (Cl) | mg/L | 120 | ND | 1 | 2899083 |
| Nitrite (N) | mg/L | ND | ND | 0.010 | 2899072 |
| Nitrate (N) | mg/L | 0.10 | ND | 0.10 | 2899072 |
| Nitrate + Nitrite | mg/L | 0.10 | ND | 0.10 | 2899072 |

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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4623 | NZ4624 | NZ4625 | NZ4626 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 19:45 | 2012/06/27 19:55 | 2012/06/27 20:05 | 2012/06/27 20:15 | | |
| COC Number | | na | na | na | na | | |
| | **Units** | **WR1** | **WR1-DUP** | **WR2** | **WR2-DUP** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | |
| Mercury (Hg) | ug/L | ND | ND | ND | ND | 0.1 | 2899101 |
| Dissolved Aluminum (Al) | ug/L | 24 | 23 | 29 | 34 | 5.0 | 2901333 |
| Total Aluminum (Al) | ug/L | 2200 | 3600 | 2400 | 5100 | 5.0 | 2900429 |
| Dissolved Antimony (Sb) | ug/L | 2.0 | 1.8 | 1.9 | 1.7 | 0.50 | 2901333 |
| Total Antimony (Sb) | ug/L | 1.4 | 1.5 | 1.8 | 2.2 | 0.50 | 2900429 |
| Dissolved Arsenic (As) | ug/L | 5.4 | 5.8 | 7.7 | 7.5 | 1.0 | 2901333 |
| Total Arsenic (As) | ug/L | 20 | 30 | 23 | 44 | 1.0 | 2900429 |
| Dissolved Barium (Ba) | ug/L | 21 | 20 | 18 | 17 | 2.0 | 2901333 |
| Total Barium (Ba) | ug/L | 46 | 59 | 45 | 67 | 2.0 | 2900429 |
| Dissolved Beryllium (Be) | ug/L | ND | ND | ND | ND | 0.50 | 2901333 |
| Total Beryllium (Be) | ug/L | ND | ND | ND | ND | 0.50 | 2900429 |
| Dissolved Bismuth (Bi) | ug/L | ND | ND | ND | ND | 1.0 | 2901333 |
| Total Bismuth (Bi) | ug/L | ND | ND | ND | ND | 1.0 | 2900429 |
| Dissolved Boron (B) | ug/L | 21 | 20 | 27 | 25 | 10 | 2901333 |
| Total Boron (B) | ug/L | 17 | 18 | 21 | 20 | 10 | 2900429 |
| Dissolved Cadmium (Cd) | ug/L | ND | ND | ND | ND | 0.10 | 2901333 |
| Total Cadmium (Cd) | ug/L | ND | ND | ND | ND | 0.10 | 2900429 |
| Dissolved Calcium (Ca) | ug/L | 78000 | 78000 | 83000 | 80000 | 200 | 2901333 |
| Total Calcium (Ca) | ug/L | 85000 | 86000 | 87000 | 84000 | 200 | 2900429 |
| Dissolved Chromium (Cr) | ug/L | ND | ND | ND | ND | 5.0 | 2901333 |
| Total Chromium (Cr) | ug/L | 6.2 | 9.8 | 6.6 | 17 | 5.0 | 2900429 |
| Dissolved Cobalt (Co) | ug/L | 1.1 | 1.1 | 1.2 | 1.2 | 0.50 | 2901333 |
| Total Cobalt (Co) | ug/L | 7.7 | 11 | 7.5 | 15 | 0.50 | 2900429 |
| Dissolved Copper (Cu) | ug/L | 4.1 | 3.2 | 3.9 | 4.1 | 1.0 | 2901333 |
| Total Copper (Cu) | ug/L | 8.1 | 13 | 9.8 | 22 | 1.0 | 2900429 |
| Dissolved Iron (Fe) | ug/L | ND | ND | ND | ND | 100 | 2901333 |
| Total Iron (Fe) | ug/L | 3400 | 5800 | 3500 | 9500 | 100 | 2900429 |
| Dissolved Lead (Pb) | ug/L | 1.0 | 0.99 | 0.80 | 0.73 | 0.50 | 2901333 |
| Total Lead (Pb) | ug/L | 15 | 22 | 15 | 29 | 0.50 | 2900429 |
| Dissolved Lithium (Li) | ug/L | 28 | 28 | 33 | 34 | 5.0 | 2901333 |
| Total Lithium (Li) | ug/L | 34 | 36 | 40 | 44 | 5.0 | 2900429 |

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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4623 | NZ4624 | NZ4625 | NZ4626 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 19:45 | 2012/06/27 19:55 | 2012/06/27 20:05 | 2012/06/27 20:15 | | |
| COC Number | | na | na | na | na | | |
| | **Units** | **WR1** | **WR1-DUP** | **WR2** | **WR2-DUP** | **RDL** | **QC Batch** |
| Dissolved Magnesium (Mg) | ug/L | 8200 | 8400 | 8800 | 8400 | 50 | 2901333 |
| Total Magnesium (Mg) | ug/L | 9900 | 10000 | 9800 | 11000 | 50 | 2900429 |
| Dissolved Manganese (Mn) | ug/L | 17 | 18 | 18 | 18 | 2.0 | 2901333 |
| Total Manganese (Mn) | ug/L | 61 | 95 | 62 | 150 | 2.0 | 2900429 |
| Dissolved Molybdenum (Mo) | ug/L | 1.9 | 2.2 | 2.1 | 2.0 | 0.50 | 2901333 |
| Total Molybdenum (Mo) | ug/L | 1.9 | 2.3 | 2.3 | 3.0 | 0.50 | 2900429 |
| Dissolved Nickel (Ni) | ug/L | 8.9 | 9.0 | 8.5 | 8.6 | 1.0 | 2901333 |
| Total Nickel (Ni) | ug/L | 25 | 34 | 23 | 44 | 1.0 | 2900429 |
| Dissolved Phosphorus (P) | ug/L | ND | ND | ND | ND | 100 | 2901333 |
| Dissolved Potassium (K) | ug/L | 4200 | 4300 | 5000 | 4900 | 200 | 2901333 |
| Total Potassium (K) | ug/L | 5000 | 5100 | 5700 | 5400 | 200 | 2900429 |
| Dissolved Selenium (Se) | ug/L | ND | ND | ND | ND | 2.0 | 2901333 |
| Dissolved Silicon (Si) | ug/L | 220 | 240 | 280 | 280 | 50 | 2901333 |
| Total Silicon (Si) | ug/L | 3100 | 4200 | 3300 | 5300 | 50 | 2900429 |
| Total Selenium (Se) | ug/L | ND | ND | ND | ND | 2.0 | 2900429 |
| Dissolved Silver (Ag) | ug/L | ND | ND | ND | ND | 0.10 | 2901333 |
| Total Silver (Ag) | ug/L | ND | ND | ND | ND | 0.10 | 2900429 |
| Dissolved Sodium (Na) | ug/L | 13000 | 13000 | 13000 | 13000 | 100 | 2901333 |
| Total Sodium (Na) | ug/L | 14000 | 13000 | 13000 | 12000 | 100 | 2900429 |
| Dissolved Strontium (Sr) | ug/L | 570 | 570 | 650 | 630 | 1.0 | 2901333 |
| Total Strontium (Sr) | ug/L | 610 | 610 | 670 | 660 | 1.0 | 2900429 |
| Dissolved Tellurium (Te) | ug/L | ND | ND | ND | ND | 1.0 | 2901333 |
| Total Tellurium (Te) | ug/L | ND | ND | ND | ND | 1.0 | 2900429 |
| Dissolved Thallium (Tl) | ug/L | ND | ND | ND | ND | 0.050 | 2901333 |
| Total Thallium (Tl) | ug/L | ND | ND | ND | 0.077 | 0.050 | 2900429 |
| Dissolved Tin (Sn) | ug/L | ND | ND | ND | ND | 1.0 | 2901333 |
| Total Tin (Sn) | ug/L | ND | ND | ND | ND | 1.0 | 2900429 |
| Dissolved Titanium (Ti) | ug/L | ND | ND | ND | ND | 5.0 | 2901333 |
| Total Titanium (Ti) | ug/L | 35 | 56 | 35 | 97 | 5.0 | 2900429 |
| Dissolved Tungsten (W) | ug/L | ND | ND | ND | ND | 1.0 | 2901333 |
| Total Tungsten (W) | ug/L | ND | ND | ND | ND | 1.0 | 2900429 |
| Dissolved Uranium (U) | ug/L | 1.5 | 1.6 | 1.7 | 1.6 | 0.10 | 2901333 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4623 | NZ4624 | NZ4625 | NZ4626 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 19:45 | 2012/06/27 19:55 | 2012/06/27 20:05 | 2012/06/27 20:15 | | |
| COC Number | | na | na | na | na | | |
| | **Units** | **WR1** | **WR1-DUP** | **WR2** | **WR2-DUP** | **RDL** | **QC Batch** |
| Total Uranium (U) | ug/L | 1.8 | 2.1 | 2.1 | 2.2 | 0.10 | 2900429 |
| Dissolved Vanadium (V) | ug/L | ND | ND | ND | ND | 0.50 | 2901333 |
| Total Vanadium (V) | ug/L | 4.6 | 7.5 | 5.3 | 9.9 | 0.50 | 2900429 |
| Dissolved Zinc (Zn) | ug/L | ND | ND | ND | 7.7 | 5.0 | 2901333 |
| Total Zinc (Zn) | ug/L | 13 | 19 | 14 | 34 | 5.0 | 2900429 |
| Dissolved Zirconium (Zr) | ug/L | ND | ND | ND | ND | 1.0 | 2901333 |
| Total Zirconium (Zr) | ug/L | 2.6 | 4.4 | 3.0 | 6.5 | 1.0 | 2900429 |

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QC Batch = Quality Control Batch



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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4627 | | | NZ4628 | | NZ4629 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:25 | | | 2012/06/27 20:35 | | 2012/06/27 20:45 | | |
| COC Number | | na | | | na | | na | | |
| | **Units** | **LODE 1000** | **RDL** | **QC Batch** | **LODE 1000-DUP** | **RDL** | **LODE 1100** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | | | |
| Mercury (Hg) | ug/L | ND | 0.1 | 2899101 | ND | 0.1 | ND | 0.1 | 2897885 |
| Dissolved Aluminum (Al) | ug/L | 17 | 5.0 | 2901333 | 21 | 5.0 | 20 | 5.0 | 2900026 |
| Total Aluminum (Al) | ug/L | 990 | 5.0 | 2900429 | 3000 | 5.0 | 19000 | 5.0 | 2900429 |
| Dissolved Antimony (Sb) | ug/L | 1.9 | 0.50 | 2901333 | 2.1 | 0.50 | 1.1 | 0.50 | 2900026 |
| Total Antimony (Sb) | ug/L | 1.9 | 0.50 | 2900429 | 2.2 | 0.50 | 2.7 | 0.50 | 2900429 |
| Dissolved Arsenic (As) | ug/L | 81 | 1.0 | 2901333 | 82 | 1.0 | 12 | 1.0 | 2900026 |
| Total Arsenic (As) | ug/L | 300 | 1.0 | 2900429 | 870 | 5.0 | 2900 | 10 | 2900429 |
| Dissolved Barium (Ba) | ug/L | 16 | 2.0 | 2901333 | 17 | 2.0 | 34 | 2.0 | 2900026 |
| Total Barium (Ba) | ug/L | 20 | 2.0 | 2900429 | 27 | 2.0 | 220 | 2.0 | 2900429 |
| Dissolved Beryllium (Be) | ug/L | ND | 0.50 | 2901333 | ND | 0.50 | ND | 0.50 | 2900026 |
| Total Beryllium (Be) | ug/L | ND | 0.50 | 2900429 | ND | 0.50 | 0.53 | 0.50 | 2900429 |
| Dissolved Bismuth (Bi) | ug/L | ND | 1.0 | 2901333 | ND | 1.0 | ND | 1.0 | 2900026 |
| Total Bismuth (Bi) | ug/L | ND | 1.0 | 2900429 | 1.5 | 1.0 | 1.6 | 1.0 | 2900429 |
| Dissolved Boron (B) | ug/L | 52 | 10 | 2901333 | 51 | 10 | 41 | 10 | 2900026 |
| Total Boron (B) | ug/L | 48 | 10 | 2900429 | 48 | 10 | 38 | 10 | 2900429 |
| Dissolved Cadmium (Cd) | ug/L | 0.23 | 0.10 | 2901333 | 0.23 | 0.10 | ND | 0.10 | 2900026 |
| Total Cadmium (Cd) | ug/L | 0.25 | 0.10 | 2900429 | 0.40 | 0.10 | 0.22 | 0.10 | 2900429 |
| Dissolved Calcium (Ca) | ug/L | 140000 | 200 | 2901333 | 140000 | 200 | 150000 | 200 | 2900026 |
| Total Calcium (Ca) | ug/L | 140000 | 200 | 2900429 | 140000 | 200 | 160000 | 200 | 2900429 |
| Dissolved Chromium (Cr) | ug/L | ND | 5.0 | 2901333 | ND | 5.0 | ND | 5.0 | 2900026 |
| Total Chromium (Cr) | ug/L | ND | 5.0 | 2900429 | 6.3 | 5.0 | 21 | 5.0 | 2900429 |
| Dissolved Cobalt (Co) | ug/L | 2.0 | 0.50 | 2901333 | 2.2 | 0.50 | 1.6 | 0.50 | 2900026 |
| Total Cobalt (Co) | ug/L | 4.3 | 0.50 | 2900429 | 7.4 | 0.50 | 23 | 0.50 | 2900429 |
| Dissolved Copper (Cu) | ug/L | 5.3 | 1.0 | 2901333 | 6.3 | 1.0 | 3.1 | 1.0 | 2900026 |
| Total Copper (Cu) | ug/L | 12 | 1.0 | 2900429 | 27 | 1.0 | 48 | 1.0 | 2900429 |
| Dissolved Iron (Fe) | ug/L | ND | 100 | 2901333 | ND | 100 | ND | 100 | 2900026 |
| Total Iron (Fe) | ug/L | 3100 | 100 | 2900429 | 9600 | 100 | 72000 | 100 | 2900429 |
| Dissolved Lead (Pb) | ug/L | 1.3 | 0.50 | 2901333 | 1.4 | 0.50 | 0.73 | 0.50 | 2900026 |
| Total Lead (Pb) | ug/L | 93 | 0.50 | 2900429 | 200 | 0.50 | 470 | 0.50 | 2900429 |
| Dissolved Lithium (Li) | ug/L | 33 | 5.0 | 2901333 | 34 | 5.0 | 20 | 5.0 | 2900026 |
| Total Lithium (Li) | ug/L | 38 | 5.0 | 2900429 | 40 | 5.0 | 42 | 5.0 | 2900429 |

ND = Not detected
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QC Batch = Quality Control Batch

Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4627 | | | NZ4628 | | NZ4629 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:25 | | | 2012/06/27 20:35 | | 2012/06/27 20:45 | | |
| COC Number | | na | | | na | | na | | |
| | **Units** | **LODE 1000** | **RDL** | **QC Batch** | **LODE 1000-DUP** | **RDL** | **LODE 1100** | **RDL** | **QC Batch** |
| Dissolved Magnesium (Mg) | ug/L | 25000 | 50 | 2901333 | 26000 | 50 | 30000 | 50 | 2900026 |
| Total Magnesium (Mg) | ug/L | 24000 | 50 | 2900429 | 24000 | 50 | 32000 | 50 | 2900429 |
| Dissolved Manganese (Mn) | ug/L | 97 | 2.0 | 2901333 | 99 | 2.0 | 110 | 2.0 | 2900026 |
| Total Manganese (Mn) | ug/L | 130 | 2.0 | 2900429 | 200 | 2.0 | 490 | 2.0 | 2900429 |
| Dissolved Molybdenum (Mo) | ug/L | 9.0 | 0.50 | 2901333 | 9.1 | 0.50 | 8.0 | 0.50 | 2900026 |
| Total Molybdenum (Mo) | ug/L | 9.5 | 0.50 | 2900429 | 12 | 0.50 | 16 | 0.50 | 2900429 |
| Dissolved Nickel (Ni) | ug/L | 11 | 1.0 | 2901333 | 11 | 1.0 | 3.8 | 1.0 | 2900026 |
| Total Nickel (Ni) | ug/L | 19 | 1.0 | 2900429 | 30 | 1.0 | 49 | 1.0 | 2900429 |
| Dissolved Phosphorus (P) | ug/L | ND | 100 | 2901333 | ND | 100 | ND | 100 | 2900026 |
| Dissolved Potassium (K) | ug/L | 17000 | 200 | 2901333 | 18000 | 200 | 12000 | 200 | 2900026 |
| Total Potassium (K) | ug/L | 17000 | 200 | 2900429 | 17000 | 200 | 14000 | 200 | 2900429 |
| Dissolved Selenium (Se) | ug/L | 8.6 | 2.0 | 2901333 | 9.2 | 2.0 | ND | 2.0 | 2900026 |
| Dissolved Silicon (Si) | ug/L | 440 | 50 | 2901333 | 450 | 50 | 630 | 50 | 2900026 |
| Total Silicon (Si) | ug/L | 1400 | 50 | 2900429 | 3600 | 50 | 21000 | 50 | 2900429 |
| Total Selenium (Se) | ug/L | 7.6 | 2.0 | 2900429 | 7.3 | 2.0 | ND | 2.0 | 2900429 |
| Dissolved Silver (Ag) | ug/L | ND | 0.10 | 2901333 | ND | 0.10 | ND | 0.10 | 2900026 |
| Total Silver (Ag) | ug/L | ND | 0.10 | 2900429 | 0.19 | 0.10 | 0.22 | 0.10 | 2900429 |
| Dissolved Sodium (Na) | ug/L | 33000 | 100 | 2901333 | 35000 | 100 | 15000 | 100 | 2900026 |
| Total Sodium (Na) | ug/L | 32000 | 100 | 2900429 | 31000 | 100 | 14000 | 100 | 2900429 |
| Dissolved Strontium (Sr) | ug/L | 750 | 1.0 | 2901333 | 770 | 1.0 | 1300 | 1.0 | 2900026 |
| Total Strontium (Sr) | ug/L | 800 | 1.0 | 2900429 | 780 | 1.0 | 1400 | 1.0 | 2900429 |
| Dissolved Tellurium (Te) | ug/L | ND | 1.0 | 2901333 | ND | 1.0 | ND | 1.0 | 2900026 |
| Total Tellurium (Te) | ug/L | ND | 1.0 | 2900429 | ND | 1.0 | ND | 1.0 | 2900429 |
| Dissolved Thallium (Tl) | ug/L | 0.060 | 0.050 | 2901333 | 0.060 | 0.050 | ND | 0.050 | 2900026 |
| Total Thallium (Tl) | ug/L | 0.059 | 0.050 | 2900429 | 0.082 | 0.050 | 0.23 | 0.050 | 2900429 |
| Dissolved Tin (Sn) | ug/L | ND | 1.0 | 2901333 | ND | 1.0 | ND | 1.0 | 2900026 |
| Total Tin (Sn) | ug/L | ND | 1.0 | 2900429 | ND | 1.0 | ND | 1.0 | 2900429 |
| Dissolved Titanium (Ti) | ug/L | ND | 5.0 | 2901333 | ND | 5.0 | ND | 5.0 | 2900026 |
| Total Titanium (Ti) | ug/L | ND | 5.0 | 2900429 | 13 | 5.0 | 400 | 5.0 | 2900429 |
| Dissolved Tungsten (W) | ug/L | ND | 1.0 | 2901333 | ND | 1.0 | ND | 1.0 | 2900026 |
| Total Tungsten (W) | ug/L | ND | 1.0 | 2900429 | 1.2 | 1.0 | 2.8 | 1.0 | 2900429 |
| Dissolved Uranium (U) | ug/L | 1.1 | 0.10 | 2901333 | 0.99 | 0.10 | 1.0 | 0.10 | 2900026 |

ND = Not detected
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QC Batch = Quality Control Batch

Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4627 | | | NZ4628 | | NZ4629 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:25 | | | 2012/06/27 20:35 | | 2012/06/27 20:45 | | |
| COC Number | | na | | | na | | na | | |
| | **Units** | **LODE 1000** | **RDL** | **QC Batch** | **LODE 1000-DUP** | **RDL** | **LODE 1100** | **RDL** | **QC Batch** |
| Total Uranium (U) | ug/L | 1.2 | 0.10 | 2900429 | 1.3 | 0.10 | 2.3 | 0.10 | 2900429 |
| Dissolved Vanadium (V) | ug/L | ND | 0.50 | 2901333 | ND | 0.50 | ND | 0.50 | 2900026 |
| Total Vanadium (V) | ug/L | 2.0 | 0.50 | 2900429 | 6.5 | 0.50 | 19 | 0.50 | 2900429 |
| Dissolved Zinc (Zn) | ug/L | 11 | 5.0 | 2901333 | 19 | 5.0 | 8.5 | 5.0 | 2900026 |
| Total Zinc (Zn) | ug/L | 49 | 5.0 | 2900429 | 93 | 5.0 | 97 | 5.0 | 2900429 |
| Dissolved Zirconium (Zr) | ug/L | ND | 1.0 | 2901333 | ND | 1.0 | ND | 1.0 | 2900026 |
| Total Zirconium (Zr) | ug/L | 2.0 | 1.0 | 2900429 | 4.9 | 1.0 | 18 | 1.0 | 2900429 |

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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4630 | | | NZ4631 | | NZ4632 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:55 | | | 2012/06/27 21:05 | | 2012/06/27 21:15 | | |
| COC Number | | na | | | na | | na | | |
| | **Units** | **LODE 1100-DUP** | **RDL** | **QC Batch** | **LEACHATE WATER** | **QC Batch** | **LEACHATE WATER-DUP** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | | | |
| Mercury (Hg) | ug/L | ND | 0.1 | 2897885 | ND | 2897885 | ND | 0.1 | 2897885 |
| Dissolved Aluminum (Al) | ug/L | 20 | 5.0 | 2901333 | 8.5 | 2901333 | 13 | 5.0 | 2901333 |
| Total Aluminum (Al) | ug/L | 11000 | 5.0 | 2900429 | 21 | 2900535 | 16 | 5.0 | 2902721 |
| Dissolved Antimony (Sb) | ug/L | 1.0 | 0.50 | 2901333 | ND | 2901333 | ND | 0.50 | 2901333 |
| Total Antimony (Sb) | ug/L | 1.9 | 0.50 | 2900429 | ND | 2900535 | ND | 0.50 | 2902721 |
| Dissolved Arsenic (As) | ug/L | 11 | 1.0 | 2901333 | 1.4 | 2901333 | 1.4 | 1.0 | 2901333 |
| Total Arsenic (As) | ug/L | 1500 | 5.0 | 2900429 | 1.9 | 2900535 | 1.9 | 1.0 | 2902721 |
| Dissolved Barium (Ba) | ug/L | 32 | 2.0 | 2901333 | 59 | 2901333 | 60 | 2.0 | 2901333 |
| Total Barium (Ba) | ug/L | 140 | 2.0 | 2900429 | 62 | 2900535 | 62 | 2.0 | 2902721 |
| Dissolved Beryllium (Be) | ug/L | ND | 0.50 | 2901333 | ND | 2901333 | ND | 0.50 | 2901333 |
| Total Beryllium (Be) | ug/L | ND | 0.50 | 2900429 | ND | 2900535 | ND | 0.50 | 2902721 |
| Dissolved Bismuth (Bi) | ug/L | ND | 1.0 | 2901333 | ND | 2901333 | ND | 1.0 | 2901333 |
| Total Bismuth (Bi) | ug/L | 1.0 | 1.0 | 2900429 | ND | 2900535 | ND | 1.0 | 2902721 |
| Dissolved Boron (B) | ug/L | 38 | 10 | 2901333 | 13 | 2901333 | 12 | 10 | 2901333 |
| Total Boron (B) | ug/L | 35 | 10 | 2900429 | 11 | 2900535 | ND | 10 | 2902721 |
| Dissolved Cadmium (Cd) | ug/L | ND | 0.10 | 2901333 | ND | 2901333 | ND | 0.10 | 2901333 |
| Total Cadmium (Cd) | ug/L | 0.12 | 0.10 | 2900429 | ND | 2900535 | ND | 0.10 | 2902721 |
| Dissolved Calcium (Ca) | ug/L | 150000 | 200 | 2901333 | 66000 | 2901333 | 65000 | 200 | 2901333 |
| Total Calcium (Ca) | ug/L | 150000 | 200 | 2900429 | 68000 | 2900535 | 63000 | 200 | 2902721 |
| Dissolved Chromium (Cr) | ug/L | ND | 5.0 | 2901333 | ND | 2901333 | ND | 5.0 | 2901333 |
| Total Chromium (Cr) | ug/L | 12 | 5.0 | 2900429 | ND | 2900535 | ND | 5.0 | 2902721 |
| Dissolved Cobalt (Co) | ug/L | 1.8 | 0.50 | 2901333 | ND | 2901333 | ND | 0.50 | 2901333 |
| Total Cobalt (Co) | ug/L | 15 | 0.50 | 2900429 | ND | 2900535 | ND | 0.50 | 2902721 |
| Dissolved Copper (Cu) | ug/L | 4.1 | 1.0 | 2901333 | 1.7 | 2901333 | 1.8 | 1.0 | 2901333 |
| Total Copper (Cu) | ug/L | 27 | 1.0 | 2900429 | 2.4 | 2900535 | 2.4 | 1.0 | 2902721 |
| Dissolved Iron (Fe) | ug/L | ND | 100 | 2901333 | 120 | 2901333 | 110 | 100 | 2901333 |
| Total Iron (Fe) | ug/L | 38000 | 100 | 2900429 | 150 | 2900535 | 140 | 100 | 2902721 |
| Dissolved Lead (Pb) | ug/L | 0.66 | 0.50 | 2901333 | ND | 2901333 | ND | 0.50 | 2901333 |
| Total Lead (Pb) | ug/L | 280 | 0.50 | 2900429 | ND | 2900535 | ND | 0.50 | 2902721 |
| Dissolved Lithium (Li) | ug/L | 19 | 5.0 | 2901333 | 26 | 2901333 | 25 | 5.0 | 2901333 |

ND = Not detected
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QC Batch = Quality Control Batch

Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4630 | | | NZ4631 | | NZ4632 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:55 | | | 2012/06/27 21:05 | | 2012/06/27 21:15 | | |
| COC Number | | na | | | na | | na | | |
| | **Units** | **LODE 1100-DUP** | **RDL** | **QC Batch** | **LEACHATE WATER** | **QC Batch** | **LEACHATE WATER-DUP** | **RDL** | **QC Batch** |
| Total Lithium (Li) | ug/L | 31 | 5.0 | 2900429 | 28 | 2900535 | 27 | 5.0 | 2902721 |
| Dissolved Magnesium (Mg) | ug/L | 29000 | 50 | 2901333 | 7000 | 2901333 | 7000 | 50 | 2901333 |
| Total Magnesium (Mg) | ug/L | 29000 | 50 | 2900429 | 7400 | 2900535 | 6200 | 50 | 2902721 |
| Dissolved Manganese (Mn) | ug/L | 110 | 2.0 | 2901333 | 6.7 | 2901333 | 6.5 | 2.0 | 2901333 |
| Total Manganese (Mn) | ug/L | 300 | 2.0 | 2900429 | 9.9 | 2900535 | 10 | 2.0 | 2902721 |
| Dissolved Molybdenum (Mo) | ug/L | 7.7 | 0.50 | 2901333 | 0.60 | 2901333 | 0.53 | 0.50 | 2901333 |
| Total Molybdenum (Mo) | ug/L | 13 | 0.50 | 2900429 | 0.74 | 2900535 | 0.56 | 0.50 | 2902721 |
| Dissolved Nickel (Ni) | ug/L | 3.6 | 1.0 | 2901333 | 1.9 | 2901333 | 2.0 | 1.0 | 2901333 |
| Total Nickel (Ni) | ug/L | 33 | 1.0 | 2900429 | 2.9 | 2900535 | 2.0 | 1.0 | 2902721 |
| Dissolved Phosphorus (P) | ug/L | ND | 100 | 2901333 | ND | 2901333 | ND | 100 | 2901333 |
| Dissolved Potassium (K) | ug/L | 12000 | 200 | 2901333 | 3100 | 2901333 | 3200 | 200 | 2901333 |
| Total Potassium (K) | ug/L | 13000 | 200 | 2900429 | 3300 | 2900535 | 3000 | 200 | 2902721 |
| Dissolved Selenium (Se) | ug/L | ND | 2.0 | 2901333 | ND | 2901333 | ND | 2.0 | 2901333 |
| Dissolved Silicon (Si) | ug/L | 630 | 50 | 2901333 | 94 | 2901333 | 94 | 50 | 2901333 |
| Total Silicon (Si) | ug/L | 13000 | 50 | 2900429 | 130 | 2900535 | 56 | 50 | 2902721 |
| Total Selenium (Se) | ug/L | ND | 2.0 | 2900429 | ND | 2900535 | ND | 2.0 | 2902721 |
| Dissolved Silver (Ag) | ug/L | ND | 0.10 | 2901333 | ND | 2901333 | ND | 0.10 | 2901333 |
| Total Silver (Ag) | ug/L | 0.16 | 0.10 | 2900429 | ND | 2900535 | ND | 0.10 | 2902721 |
| Dissolved Sodium (Na) | ug/L | 14000 | 100 | 2901333 | 12000 | 2901333 | 12000 | 100 | 2901333 |
| Total Sodium (Na) | ug/L | 14000 | 100 | 2900429 | 12000 | 2900535 | 11000 | 100 | 2902721 |
| Dissolved Strontium (Sr) | ug/L | 1200 | 1.0 | 2901333 | 510 | 2901333 | 510 | 1.0 | 2901333 |
| Total Strontium (Sr) | ug/L | 1300 | 1.0 | 2900429 | 520 | 2900535 | 500 | 1.0 | 2902721 |
| Dissolved Tellurium (Te) | ug/L | ND | 1.0 | 2901333 | ND | 2901333 | ND | 1.0 | 2901333 |
| Total Tellurium (Te) | ug/L | ND | 1.0 | 2900429 | ND | 2900535 | ND | 1.0 | 2902721 |
| Dissolved Thallium (Tl) | ug/L | ND | 0.050 | 2901333 | ND | 2901333 | ND | 0.050 | 2901333 |
| Total Thallium (Tl) | ug/L | 0.14 | 0.050 | 2900429 | 0.070 | 2900535 | ND | 0.050 | 2902721 |
| Dissolved Tin (Sn) | ug/L | ND | 1.0 | 2901333 | ND | 2901333 | ND | 1.0 | 2901333 |
| Total Tin (Sn) | ug/L | ND | 1.0 | 2900429 | ND | 2900535 | ND | 1.0 | 2902721 |
| Dissolved Titanium (Ti) | ug/L | ND | 5.0 | 2901333 | ND | 2901333 | ND | 5.0 | 2901333 |
| Total Titanium (Ti) | ug/L | 230 | 5.0 | 2900429 | ND | 2900535 | ND | 5.0 | 2902721 |
| Dissolved Tungsten (W) | ug/L | ND | 1.0 | 2901333 | ND | 2901333 | ND | 1.0 | 2901333 |

ND = Not detected
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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4630 | | | NZ4631 | | NZ4632 | | |
|---|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/06/27 20:55 | | | 2012/06/27 21:05 | | 2012/06/27 21:15 | | |
| COC Number | | na | | | na | | na | | |
| | **Units** | **LODE 1100-DUP** | **RDL** | **QC Batch** | **LEACHATE WATER** | **QC Batch** | **LEACHATE WATER-DUP** | **RDL** | **QC Batch** |
| Total Tungsten (W) | ug/L | 1.8 | 1.0 | 2900429 | ND | 2900535 | ND | 1.0 | 2902721 |
| Dissolved Uranium (U) | ug/L | 1.1 | 0.10 | 2901333 | ND | 2901333 | 0.11 | 0.10 | 2901333 |
| Total Uranium (U) | ug/L | 1.9 | 0.10 | 2900429 | 0.25 | 2900535 | ND | 0.10 | 2902721 |
| Dissolved Vanadium (V) | ug/L | ND | 0.50 | 2901333 | ND | 2901333 | ND | 0.50 | 2901333 |
| Total Vanadium (V) | ug/L | 11 | 0.50 | 2900429 | ND | 2900535 | ND | 0.50 | 2902721 |
| Dissolved Zinc (Zn) | ug/L | ND | 5.0 | 2901333 | ND | 2901333 | 14 | 5.0 | 2901333 |
| Total Zinc (Zn) | ug/L | 59 | 5.0 | 2900429 | 5.9 | 2900535 | ND | 5.0 | 2902721 |
| Dissolved Zirconium (Zr) | ug/L | ND | 1.0 | 2901333 | ND | 2901333 | ND | 1.0 | 2901333 |
| Total Zirconium (Zr) | ug/L | 12 | 1.0 | 2900429 | ND | 2900535 | ND | 1.0 | 2902721 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4633 | | |
|---|---|---|---|---|
| Sampling Date | | | | |
| COC Number | | na | | |
| | **Units** | **TRIP BLANK** | **RDL** | **QC Batch** |
| **Metals** | | | | |
| Dissolved Aluminum (Al) | ug/L | ND | 5.0 | 2901333 |
| Total Aluminum (Al) | ug/L | ND | 5.0 | 2900535 |
| Dissolved Antimony (Sb) | ug/L | ND | 0.50 | 2901333 |
| Total Antimony (Sb) | ug/L | ND | 0.50 | 2900535 |
| Dissolved Arsenic (As) | ug/L | ND | 1.0 | 2901333 |
| Total Arsenic (As) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Barium (Ba) | ug/L | ND | 2.0 | 2901333 |
| Total Barium (Ba) | ug/L | ND | 2.0 | 2900535 |
| Dissolved Beryllium (Be) | ug/L | ND | 0.50 | 2901333 |
| Total Beryllium (Be) | ug/L | ND | 0.50 | 2900535 |
| Dissolved Bismuth (Bi) | ug/L | ND | 1.0 | 2901333 |
| Total Bismuth (Bi) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Boron (B) | ug/L | ND | 10 | 2901333 |
| Total Boron (B) | ug/L | ND | 10 | 2900535 |
| Dissolved Cadmium (Cd) | ug/L | ND | 0.10 | 2901333 |
| Total Cadmium (Cd) | ug/L | ND | 0.10 | 2900535 |
| Dissolved Calcium (Ca) | ug/L | ND | 200 | 2901333 |
| Total Calcium (Ca) | ug/L | ND | 200 | 2900535 |
| Dissolved Chromium (Cr) | ug/L | ND | 5.0 | 2901333 |
| Total Chromium (Cr) | ug/L | ND | 5.0 | 2900535 |
| Dissolved Cobalt (Co) | ug/L | ND | 0.50 | 2901333 |
| Total Cobalt (Co) | ug/L | ND | 0.50 | 2900535 |
| Dissolved Copper (Cu) | ug/L | ND | 1.0 | 2901333 |
| Total Copper (Cu) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Iron (Fe) | ug/L | ND | 100 | 2901333 |
| Total Iron (Fe) | ug/L | ND | 100 | 2900535 |
| Dissolved Lead (Pb) | ug/L | ND | 0.50 | 2901333 |
| Total Lead (Pb) | ug/L | ND | 0.50 | 2900535 |
| Dissolved Lithium (Li) | ug/L | ND | 5.0 | 2901333 |
| Total Lithium (Li) | ug/L | ND | 5.0 | 2900535 |
| Dissolved Magnesium (Mg) | ug/L | ND | 50 | 2901333 |
| Total Magnesium (Mg) | ug/L | ND | 50 | 2900535 |

ND = Not detected
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QC Batch = Quality Control Batch



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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4633 | | |
|---|---|---|---|---|
| Sampling Date | | | | |
| COC Number | | na | | |
| | **Units** | **TRIP BLANK** | **RDL** | **QC Batch** |
| Dissolved Manganese (Mn) | ug/L | ND | 2.0 | 2901333 |
| Total Manganese (Mn) | ug/L | ND | 2.0 | 2900535 |
| Dissolved Molybdenum (Mo) | ug/L | ND | 0.50 | 2901333 |
| Total Molybdenum (Mo) | ug/L | ND | 0.50 | 2900535 |
| Dissolved Nickel (Ni) | ug/L | ND | 1.0 | 2901333 |
| Total Nickel (Ni) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Phosphorus (P) | ug/L | ND | 100 | 2901333 |
| Dissolved Potassium (K) | ug/L | ND | 200 | 2901333 |
| Total Potassium (K) | ug/L | ND | 200 | 2900535 |
| Dissolved Selenium (Se) | ug/L | ND | 2.0 | 2901333 |
| Dissolved Silicon (Si) | ug/L | ND | 50 | 2901333 |
| Total Silicon (Si) | ug/L | ND | 50 | 2900535 |
| Total Selenium (Se) | ug/L | ND | 2.0 | 2900535 |
| Dissolved Silver (Ag) | ug/L | ND | 0.10 | 2901333 |
| Total Silver (Ag) | ug/L | ND | 0.10 | 2900535 |
| Dissolved Sodium (Na) | ug/L | ND | 100 | 2901333 |
| Total Sodium (Na) | ug/L | ND | 100 | 2900535 |
| Dissolved Strontium (Sr) | ug/L | ND | 1.0 | 2901333 |
| Total Strontium (Sr) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Tellurium (Te) | ug/L | ND | 1.0 | 2901333 |
| Total Tellurium (Te) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Thallium (Tl) | ug/L | ND | 0.050 | 2901333 |
| Total Thallium (Tl) | ug/L | ND | 0.050 | 2900535 |
| Dissolved Tin (Sn) | ug/L | ND | 1.0 | 2901333 |
| Total Tin (Sn) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Titanium (Ti) | ug/L | ND | 5.0 | 2901333 |
| Total Titanium (Ti) | ug/L | ND | 5.0 | 2900535 |
| Dissolved Tungsten (W) | ug/L | ND | 1.0 | 2901333 |
| Total Tungsten (W) | ug/L | ND | 1.0 | 2900535 |
| Dissolved Uranium (U) | ug/L | ND | 0.10 | 2901333 |
| Total Uranium (U) | ug/L | 0.11 | 0.10 | 2900535 |
| Dissolved Vanadium (V) | ug/L | ND | 0.50 | 2901333 |
| Total Vanadium (V) | ug/L | ND | 0.50 | 2900535 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | NZ4633 | | |
|---|---|---|---|---|
| Sampling Date | | | | |
| COC Number | | na | | |
| | **Units** | **TRIP BLANK** | **RDL** | **QC Batch** |
| Dissolved Zinc (Zn) | ug/L | ND | 5.0 | 2901333 |
| Total Zinc (Zn) | ug/L | ND | 5.0 | 2900535 |
| Dissolved Zirconium (Zr) | ug/L | ND | 1.0 | 2901333 |
| Total Zirconium (Zr) | ug/L | ND | 1.0 | 2900535 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Maxxam Job #: B298154
Report Date: 2012/07/10

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

| | |
|---|---|
| Package 1 | 6.3°C |
| Package 2 | 3.3°C |

Each temperature is the average of up to three cooler temperatures taken at receipt

**GENERAL COMMENTS**

**Results relate only to the items tested.**



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

# Quality Assurance Report

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2897885 | MC | Matrix Spike | | | | | | |
| | | [NZ4630-06] | Mercury (Hg) | 2012/07/04 | | 109 | % | 75 - 125 |
| | | Spiked Blank | Mercury (Hg) | 2012/07/04 | | 106 | % | 80 - 120 |
| | | Method Blank | Mercury (Hg) | 2012/07/04 | ND, RDL=0.1 | | ug/L | |
| | | RPD [NZ4630-06] | Mercury (Hg) | 2012/07/04 | NC | | % | 20 |
| 2898036 | SUP | QC Standard | Total Suspended Solids | 2012/07/04 | | 95 | % | 85 - 115 |
| | | Method Blank | Total Suspended Solids | 2012/07/04 | ND, RDL=10 | | mg/L | |
| | | RPD | Total Suspended Solids | 2012/07/04 | NC | | % | 25 |
| 2898039 | JIZ | QC Standard | Total Dissolved Solids | 2012/07/04 | | 96 | % | 90 - 110 |
| | | Method Blank | Total Dissolved Solids | 2012/07/04 | ND, RDL=10 | | mg/L | |
| | | RPD | Total Dissolved Solids | 2012/07/04 | 2.1 | | % | 25 |
| 2898141 | SAU | QC Standard | Alkalinity (Total as CaCO3) | 2012/07/04 | | 95 | % | 85 - 115 |
| | | Method Blank | Alkalinity (Total as CaCO3) | 2012/07/04 | ND, RDL=1.0 | | mg/L | |
| | | RPD [NZ4632-01] | Alkalinity (Total as CaCO3) | 2012/07/04 | 1.3 | | % | 25 |
| 2898142 | SAU | QC Standard | Conductivity | 2012/07/04 | | 101 | % | 85 - 115 |
| | | Method Blank | Conductivity | 2012/07/04 | ND, RDL=1.0 | | umho/cm | |
| | | RPD [NZ4632-01] | Conductivity | 2012/07/04 | 0.2 | | % | 25 |
| 2898144 | SAU | Matrix Spike | | | | | | |
| | | [NZ4632-01] | Fluoride (F-) | 2012/07/04 | | 107 | % | 80 - 120 |
| | | Spiked Blank | Fluoride (F-) | 2012/07/04 | | 100 | % | 80 - 120 |
| | | Method Blank | Fluoride (F-) | 2012/07/04 | ND, RDL=0.10 | | mg/L | |
| | | RPD [NZ4632-01] | Fluoride (F-) | 2012/07/04 | NC | | % | 20 |
| 2898149 | CP | Spiked Blank | Colour | 2012/07/04 | | 100 | % | 85 - 115 |
| | | Method Blank | Colour | 2012/07/04 | ND, RDL=2 | | TCU | |
| | | RPD [NZ4626-01] | Colour | 2012/07/04 | NC | | % | 25 |
| 2899072 | ADB | Matrix Spike | | | | | | |
| | | [NZ4626-01] | Nitrite (N) | 2012/07/05 | | 109 | % | 80 - 120 |
| | | | Nitrate (N) | 2012/07/05 | | NC | % | 80 - 120 |
| | | Spiked Blank | Nitrite (N) | 2012/07/05 | | 110 | % | 85 - 115 |
| | | | Nitrate (N) | 2012/07/05 | | 106 | % | 85 - 115 |
| | | Method Blank | Nitrite (N) | 2012/07/05 | ND, RDL=0.010 | | mg/L | |
| | | | Nitrate (N) | 2012/07/05 | ND, RDL=0.10 | | mg/L | |
| | | RPD [NZ4626-01] | Nitrite (N) | 2012/07/05 | NC | | % | 25 |
| | | | Nitrate (N) | 2012/07/05 | 1.9 | | % | 25 |
| 2899083 | DRM | Matrix Spike | | | | | | |
| | | [NZ4626-01] | Dissolved Chloride (Cl) | 2012/07/05 | | NC | % | 75 - 125 |
| | | Spiked Blank | Dissolved Chloride (Cl) | 2012/07/05 | | 103 | % | 80 - 120 |
| | | Method Blank | Dissolved Chloride (Cl) | 2012/07/05 | ND, RDL=1 | | mg/L | |
| | | RPD [NZ4626-01] | Dissolved Chloride (Cl) | 2012/07/05 | 2.0 | | % | 20 |
| 2899085 | DRM | Matrix Spike | | | | | | |
| | | [NZ4626-01] | Dissolved Sulphate (SO4) | 2012/07/05 | | NC | % | 75 - 125 |
| | | Spiked Blank | Dissolved Sulphate (SO4) | 2012/07/05 | | 98 | % | 80 - 120 |
| | | Method Blank | Dissolved Sulphate (SO4) | 2012/07/05 | ND, RDL=1 | | mg/L | |
| | | RPD [NZ4626-01] | Dissolved Sulphate (SO4) | 2012/07/05 | 1.6 | | % | 20 |
| 2899101 | MC | Matrix Spike | | | | | | |
| | | [NZ4626-06] | Mercury (Hg) | 2012/07/05 | | 100 | % | 75 - 125 |
| | | Spiked Blank | Mercury (Hg) | 2012/07/05 | | 99 | % | 80 - 120 |
| | | Method Blank | Mercury (Hg) | 2012/07/05 | ND, RDL=0.1 | | ug/L | |
| | | RPD [NZ4626-06] | Mercury (Hg) | 2012/07/05 | NC | | % | 20 |
| 2899251 | L_A | Matrix Spike | Total Ammonia-N | 2012/07/05 | | 100 | % | 80 - 120 |
| | | Spiked Blank | Total Ammonia-N | 2012/07/05 | | 102 | % | 85 - 115 |
| | | Method Blank | Total Ammonia-N | 2012/07/05 | ND, RDL=0.050 | | mg/L | |
| | | RPD | Total Ammonia-N | 2012/07/05 | 2.2 | | % | 20 |
| 2899435 | AHA | Matrix Spike | | | | | | |
| | | [NZ4631-04] | Total Phosphorus | 2012/07/05 | | 95 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2899435 | AHA | QC Standard | Total Phosphorus | 2012/07/05 | | 103 | % | 85 - 115 |
| | | Spiked Blank | Total Phosphorus | 2012/07/05 | | 104 | % | 85 - 115 |
| | | Method Blank | Total Phosphorus | 2012/07/05 | 0.003, RDL=0.002 | | mg/L | |
| | | RPD [NZ4631-04] | Total Phosphorus | 2012/07/05 | NC | | % | 20 |
| 2900026 | JBW | Matrix Spike | Dissolved Aluminum (Al) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Antimony (Sb) | 2012/07/09 | | 114 | % | 80 - 120 |
| | | | Dissolved Arsenic (As) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Barium (Ba) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Beryllium (Be) | 2012/07/09 | | 108 | % | 80 - 120 |
| | | | Dissolved Bismuth (Bi) | 2012/07/09 | | 93 | % | 80 - 120 |
| | | | Dissolved Boron (B) | 2012/07/09 | | 110 | % | 80 - 120 |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | | 109 | % | 80 - 120 |
| | | | Dissolved Calcium (Ca) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Copper (Cu) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Dissolved Iron (Fe) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Lead (Pb) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Lithium (Li) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Magnesium (Mg) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Manganese (Mn) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | | 112 | % | 80 - 120 |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Phosphorus (P) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Potassium (K) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Selenium (Se) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Silicon (Si) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Silver (Ag) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Sodium (Na) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Strontium (Sr) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Tellurium (Te) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Tin (Sn) | 2012/07/09 | | 114 | % | 80 - 120 |
| | | | Dissolved Titanium (Ti) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Tungsten (W) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Uranium (U) | 2012/07/09 | | 97 | % | 80 - 120 |
| | | | Dissolved Vanadium (V) | 2012/07/09 | | 107 | % | 80 - 120 |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Zirconium (Zr) | 2012/07/09 | | 120 | % | 80 - 120 |
| | | Spiked Blank | Dissolved Aluminum (Al) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Antimony (Sb) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Arsenic (As) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Barium (Ba) | 2012/07/09 | | 96 | % | 80 - 120 |
| | | | Dissolved Beryllium (Be) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Bismuth (Bi) | 2012/07/09 | | 89 | % | 80 - 120 |
| | | | Dissolved Boron (B) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Calcium (Ca) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Copper (Cu) | 2012/07/09 | | 97 | % | 80 - 120 |
| | | | Dissolved Iron (Fe) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Lead (Pb) | 2012/07/09 | | 94 | % | 80 - 120 |
| | | | Dissolved Lithium (Li) | 2012/07/09 | | 95 | % | 80 - 120 |
| | | | Dissolved Magnesium (Mg) | 2012/07/09 | | 104 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2900026 | JBW | Spiked Blank | Dissolved Manganese (Mn) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Dissolved Phosphorus (P) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Potassium (K) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Selenium (Se) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Silicon (Si) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Silver (Ag) | 2012/07/09 | | 96 | % | 80 - 120 |
| | | | Dissolved Sodium (Na) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Strontium (Sr) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Tellurium (Te) | 2012/07/09 | | 97 | % | 80 - 120 |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | | 94 | % | 80 - 120 |
| | | | Dissolved Tin (Sn) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Titanium (Ti) | 2012/07/09 | | 96 | % | 80 - 120 |
| | | | Dissolved Tungsten (W) | 2012/07/09 | | 95 | % | 80 - 120 |
| | | | Dissolved Uranium (U) | 2012/07/09 | | 91 | % | 80 - 120 |
| | | | Dissolved Vanadium (V) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Zirconium (Zr) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | Method Blank | Dissolved Aluminum (Al) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Antimony (Sb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Arsenic (As) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Barium (Ba) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Beryllium (Be) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Bismuth (Bi) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Boron (B) | 2012/07/09 | ND, RDL=10 | | ug/L | |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Calcium (Ca) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Copper (Cu) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Iron (Fe) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Lead (Pb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Lithium (Li) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Magnesium (Mg) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Dissolved Manganese (Mn) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Phosphorus (P) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Potassium (K) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Dissolved Selenium (Se) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Silicon (Si) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Dissolved Silver (Ag) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Sodium (Na) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Strontium (Sr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Tellurium (Te) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | ND, RDL=0.050 | | ug/L | |
| | | | Dissolved Tin (Sn) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Titanium (Ti) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Tungsten (W) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Uranium (U) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Vanadium (V) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Zirconium (Zr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | RPD | Dissolved Aluminum (Al) | 2012/07/09 | NC | | % | 20 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2900026 | JBW | RPD | Dissolved Antimony (Sb) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Arsenic (As) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Barium (Ba) | 2012/07/09 | 1.7 | | % | 20 |
| | | | Dissolved Beryllium (Be) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Bismuth (Bi) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Boron (B) | 2012/07/09 | 5.9 | | % | 20 |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Calcium (Ca) | 2012/07/09 | 2.8 | | % | 20 |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Copper (Cu) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Iron (Fe) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Lead (Pb) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Lithium (Li) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Magnesium (Mg) | 2012/07/09 | 1.3 | | % | 20 |
| | | | Dissolved Manganese (Mn) | 2012/07/09 | 1.9 | | % | 20 |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Phosphorus (P) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Potassium (K) | 2012/07/09 | 2.5 | | % | 20 |
| | | | Dissolved Selenium (Se) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Silicon (Si) | 2012/07/09 | 2.9 | | % | 20 |
| | | | Dissolved Silver (Ag) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Sodium (Na) | 2012/07/09 | 1.4 | | % | 20 |
| | | | Dissolved Strontium (Sr) | 2012/07/09 | 3.2 | | % | 20 |
| | | | Dissolved Tellurium (Te) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Tin (Sn) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Titanium (Ti) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Tungsten (W) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Uranium (U) | 2012/07/09 | 0 | | % | 20 |
| | | | Dissolved Vanadium (V) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Zirconium (Zr) | 2012/07/09 | NC | | % | 20 |
| 2900425 | L_A | Matrix Spike | Total Ammonia-N | 2012/07/06 | | 96 | % | 80 - 120 |
| | | Spiked Blank | Total Ammonia-N | 2012/07/06 | | 95 | % | 85 - 115 |
| | | Method Blank | Total Ammonia-N | 2012/07/06 | ND, RDL=0.050 | | mg/L | |
| | | RPD | Total Ammonia-N | 2012/07/06 | NC | | % | 20 |
| 2900429 | PBA | Matrix Spike | Total Aluminum (Al) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Antimony (Sb) | 2012/07/06 | | 105 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/07/06 | | 105 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/07/06 | | 107 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/07/06 | | 112 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/07/06 | | 96 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/07/06 | | 105 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/07/06 | | NC | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/07/06 | | 106 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/07/06 | | 108 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/07/06 | | 94 | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/07/06 | | 105 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2900429 | PBA | Matrix Spike | Total Molybdenum (Mo) | 2012/07/06 | | 109 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/07/06 | | 99 | % | 80 - 120 |
| | | | Total Selenium (Se) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Silver (Ag) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/07/06 | | 96 | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/07/06 | | 109 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/07/06 | | 107 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/07/06 | | 120 | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/07/06 | | 108 | % | 80 - 120 |
| | | Spiked Blank | Total Aluminum (Al) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Antimony (Sb) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/07/06 | | 107 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/07/06 | | 95 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/07/06 | | 99 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/07/06 | | 94 | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Molybdenum (Mo) | 2012/07/06 | | 106 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/07/06 | | 97 | % | 80 - 120 |
| | | | Total Selenium (Se) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Silver (Ag) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/07/06 | | 99 | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/07/06 | | 97 | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/07/06 | | 95 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/07/06 | | 113 | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/07/06 | | 107 | % | 80 - 120 |
| | | Method Blank | Total Aluminum (Al) | 2012/07/09 | 11, RDL=5.0 | | ug/L | |
| | | | Total Antimony (Sb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Arsenic (As) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Barium (Ba) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2900429 | PBA | Method Blank | Total Beryllium (Be) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Bismuth (Bi) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Boron (B) | 2012/07/09 | ND, RDL=10 | | ug/L | |
| | | | Total Cadmium (Cd) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Total Calcium (Ca) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Total Chromium (Cr) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Cobalt (Co) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Copper (Cu) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Iron (Fe) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Total Lead (Pb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Lithium (Li) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Magnesium (Mg) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Total Manganese (Mn) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Total Molybdenum (Mo) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Nickel (Ni) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Potassium (K) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Total Silicon (Si) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Total Selenium (Se) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Total Silver (Ag) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Total Sodium (Na) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Total Strontium (Sr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Tellurium (Te) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Thallium (Tl) | 2012/07/09 | ND, RDL=0.050 | | ug/L | |
| | | | Total Tin (Sn) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Titanium (Ti) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Tungsten (W) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Uranium (U) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Total Vanadium (V) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Zinc (Zn) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Zirconium (Zr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | RPD | Total Arsenic (As) | 2012/07/06 | NC | | % | 20 |
| | | | Total Cadmium (Cd) | 2012/07/06 | NC | | % | 20 |
| | | | Total Lead (Pb) | 2012/07/06 | NC | | % | 20 |
| 2900535 | JBW | Matrix Spike | Total Aluminum (Al) | 2012/07/06 | | 106 | % | 80 - 120 |
| | | | Total Antimony (Sb) | 2012/07/06 | | 108 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/07/06 | | 106 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/07/06 | | 93 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/07/06 | | NC | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/07/06 | | 96 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/07/06 | | 96 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/07/06 | | NC | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Molybdenum (Mo) | 2012/07/06 | | 108 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Selenium (Se) | 2012/07/06 | | 104 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2900535 | JBW | Matrix Spike | Total Silver (Ag) | 2012/07/06 | | 97 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/07/06 | | NC | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/07/06 | | NC | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/07/06 | | 99 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/07/06 | | 95 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/07/06 | | 107 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/07/06 | | 105 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/07/06 | | 94 | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/07/06 | | 105 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/07/06 | | 109 | % | 80 - 120 |
| | | Spiked Blank | Total Aluminum (Al) | 2012/07/06 | | 105 | % | 80 - 120 |
| | | | Total Antimony (Sb) | 2012/07/06 | | 103 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/07/06 | | 99 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/07/06 | | 92 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/07/06 | | 99 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/07/06 | | 96 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/07/06 | | 100 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Molybdenum (Mo) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/07/06 | | 104 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Selenium (Se) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Silver (Ag) | 2012/07/06 | | 96 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/07/06 | | 107 | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/07/06 | | 101 | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/07/06 | | 99 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/07/06 | | 96 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/07/06 | | 97 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/07/06 | | 92 | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/07/06 | | 102 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/07/06 | | 98 | % | 80 - 120 |
| | | Method Blank | Total Aluminum (Al) | 2012/07/06 | ND, RDL=5.0 | | ug/L | |
| | | | Total Antimony (Sb) | 2012/07/06 | ND, RDL=0.50 | | ug/L | |
| | | | Total Arsenic (As) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Barium (Ba) | 2012/07/06 | ND, RDL=2.0 | | ug/L | |
| | | | Total Beryllium (Be) | 2012/07/06 | ND, RDL=0.50 | | ug/L | |
| | | | Total Bismuth (Bi) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Boron (B) | 2012/07/06 | ND, RDL=10 | | ug/L | |
| | | | Total Cadmium (Cd) | 2012/07/06 | ND, RDL=0.10 | | ug/L | |
| | | | Total Calcium (Ca) | 2012/07/06 | ND, RDL=200 | | ug/L | |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2900535 | JBW | Method Blank | Total Chromium (Cr) | 2012/07/06 | ND, RDL=5.0 | | ug/L | |
| | | | Total Cobalt (Co) | 2012/07/06 | ND, RDL=0.50 | | ug/L | |
| | | | Total Copper (Cu) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Iron (Fe) | 2012/07/06 | ND, RDL=100 | | ug/L | |
| | | | Total Lead (Pb) | 2012/07/06 | ND, RDL=0.50 | | ug/L | |
| | | | Total Lithium (Li) | 2012/07/06 | ND, RDL=5.0 | | ug/L | |
| | | | Total Magnesium (Mg) | 2012/07/06 | ND, RDL=50 | | ug/L | |
| | | | Total Manganese (Mn) | 2012/07/06 | ND, RDL=2.0 | | ug/L | |
| | | | Total Molybdenum (Mo) | 2012/07/06 | ND, RDL=0.50 | | ug/L | |
| | | | Total Nickel (Ni) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Potassium (K) | 2012/07/06 | ND, RDL=200 | | ug/L | |
| | | | Total Silicon (Si) | 2012/07/06 | ND, RDL=50 | | ug/L | |
| | | | Total Selenium (Se) | 2012/07/06 | ND, RDL=2.0 | | ug/L | |
| | | | Total Silver (Ag) | 2012/07/06 | ND, RDL=0.10 | | ug/L | |
| | | | Total Sodium (Na) | 2012/07/06 | 340, RDL=100 | | ug/L | |
| | | | Total Strontium (Sr) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Tellurium (Te) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Thallium (Tl) | 2012/07/06 | ND, RDL=0.050 | | ug/L | |
| | | | Total Tin (Sn) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Titanium (Ti) | 2012/07/06 | ND, RDL=5.0 | | ug/L | |
| | | | Total Tungsten (W) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | | Total Uranium (U) | 2012/07/06 | ND, RDL=0.10 | | ug/L | |
| | | | Total Vanadium (V) | 2012/07/06 | ND, RDL=0.50 | | ug/L | |
| | | | Total Zinc (Zn) | 2012/07/06 | ND, RDL=5.0 | | ug/L | |
| | | | Total Zirconium (Zr) | 2012/07/06 | ND, RDL=1.0 | | ug/L | |
| | | RPD | Total Lead (Pb) | 2012/07/06 | 3.5 | | % | 20 |
| 2900704 | L_A | Matrix Spike [NZ4625-04] | Total Ammonia-N | 2012/07/06 | | 94 | % | 80 - 120 |
| | | Spiked Blank | Total Ammonia-N | 2012/07/06 | | 97 | % | 85 - 115 |
| | | Method Blank | Total Ammonia-N | 2012/07/06 | ND, RDL=0.050 | | mg/L | |
| | | RPD [NZ4625-04] | Total Ammonia-N | 2012/07/06 | NC | | % | 20 |
| 2900762 | VRO | Matrix Spike | Total Phosphorus | 2012/07/09 | | 99 | % | 80 - 120 |
| | | QC Standard | Total Phosphorus | 2012/07/09 | | 101 | % | 85 - 115 |
| | | Spiked Blank | Total Phosphorus | 2012/07/09 | | 105 | % | 85 - 115 |
| | | Method Blank | Total Phosphorus | 2012/07/09 | ND, RDL=0.020 | | mg/L | |
| | | RPD | Total Phosphorus | 2012/07/09 | NC | | % | 20 |
| 2901333 | JBW | Matrix Spike | Dissolved Aluminum (Al) | 2012/07/09 | | 107 | % | 80 - 120 |
| | | | Dissolved Antimony (Sb) | 2012/07/09 | | 113 | % | 80 - 120 |
| | | | Dissolved Arsenic (As) | 2012/07/09 | | 108 | % | 80 - 120 |
| | | | Dissolved Barium (Ba) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Beryllium (Be) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Bismuth (Bi) | 2012/07/09 | | 95 | % | 80 - 120 |
| | | | Dissolved Boron (B) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | | 108 | % | 80 - 120 |
| | | | Dissolved Calcium (Ca) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Copper (Cu) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Iron (Fe) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Lead (Pb) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Lithium (Li) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Dissolved Magnesium (Mg) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Manganese (Mn) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | | 112 | % | 80 - 120 |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | | 102 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2901333 | JBW | Matrix Spike | Dissolved Phosphorus (P) | 2012/07/09 | | 111 | % | 80 - 120 |
| | | | Dissolved Potassium (K) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Selenium (Se) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Silicon (Si) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Silver (Ag) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Dissolved Sodium (Na) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Strontium (Sr) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Dissolved Tellurium (Te) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Tin (Sn) | 2012/07/09 | | 114 | % | 80 - 120 |
| | | | Dissolved Titanium (Ti) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Tungsten (W) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Dissolved Uranium (U) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Vanadium (V) | 2012/07/09 | | 107 | % | 80 - 120 |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Zirconium (Zr) | 2012/07/09 | | 120 | % | 80 - 120 |
| | | Spiked Blank | Dissolved Aluminum (Al) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Antimony (Sb) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Arsenic (As) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Barium (Ba) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Beryllium (Be) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Bismuth (Bi) | 2012/07/09 | | 93 | % | 80 - 120 |
| | | | Dissolved Boron (B) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Calcium (Ca) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Copper (Cu) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Iron (Fe) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Lead (Pb) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Dissolved Lithium (Li) | 2012/07/09 | | 96 | % | 80 - 120 |
| | | | Dissolved Magnesium (Mg) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Dissolved Manganese (Mn) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Phosphorus (P) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Potassium (K) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Selenium (Se) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Silicon (Si) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Dissolved Silver (Ag) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Sodium (Na) | 2012/07/09 | | 107 | % | 80 - 120 |
| | | | Dissolved Strontium (Sr) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Tellurium (Te) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Dissolved Tin (Sn) | 2012/07/09 | | 107 | % | 80 - 120 |
| | | | Dissolved Titanium (Ti) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Dissolved Tungsten (W) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Dissolved Uranium (U) | 2012/07/09 | | 94 | % | 80 - 120 |
| | | | Dissolved Vanadium (V) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Dissolved Zirconium (Zr) | 2012/07/09 | | 110 | % | 80 - 120 |
| | | Method Blank | Dissolved Aluminum (Al) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Antimony (Sb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Arsenic (As) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Barium (Ba) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2901333 | JBW | Method Blank | Dissolved Beryllium (Be) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Bismuth (Bi) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Boron (B) | 2012/07/09 | ND, RDL=10 | | ug/L | |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Calcium (Ca) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Copper (Cu) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Iron (Fe) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Lead (Pb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Lithium (Li) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Magnesium (Mg) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Dissolved Manganese (Mn) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Phosphorus (P) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Potassium (K) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Dissolved Selenium (Se) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Silicon (Si) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Dissolved Silver (Ag) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Sodium (Na) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Strontium (Sr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Tellurium (Te) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | ND, RDL=0.050 | | ug/L | |
| | | | Dissolved Tin (Sn) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Titanium (Ti) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Tungsten (W) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Uranium (U) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Vanadium (V) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Zirconium (Zr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | RPD | Dissolved Antimony (Sb) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Arsenic (As) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Barium (Ba) | 2012/07/09 | 1.6 | | % | 20 |
| | | | Dissolved Beryllium (Be) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Boron (B) | 2012/07/09 | 1.7 | | % | 20 |
| | | | Dissolved Cadmium (Cd) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Chromium (Cr) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Cobalt (Co) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Copper (Cu) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Lead (Pb) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Molybdenum (Mo) | 2012/07/09 | 0.8 | | % | 20 |
| | | | Dissolved Nickel (Ni) | 2012/07/09 | 1.9 | | % | 20 |
| | | | Dissolved Selenium (Se) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Silver (Ag) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Sodium (Na) | 2012/07/09 | 4.2 | | % | 20 |
| | | | Dissolved Thallium (Tl) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Uranium (U) | 2012/07/09 | 2.0 | | % | 20 |
| | | | Dissolved Vanadium (V) | 2012/07/09 | NC | | % | 20 |
| | | | Dissolved Zinc (Zn) | 2012/07/09 | NC | | % | 20 |
| 2901633 | AHA | Matrix Spike | Total Phosphorus | 2012/07/09 | | 99 | % | 80 - 120 |
| | | QC Standard | Total Phosphorus | 2012/07/09 | | 107 | % | 85 - 115 |
| | | Spiked Blank | Total Phosphorus | 2012/07/09 | | 107 | % | 85 - 115 |
| | | Method Blank | Total Phosphorus | 2012/07/09 | 0.002, RDL=0.002 | | mg/L | |
| | | RPD | Total Phosphorus | 2012/07/09 | NC | | % | 20 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2902721 | PBA | Matrix Spike | Total Aluminum (Al) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Total Antimony (Sb) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/07/09 | | 97 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/07/09 | | 95 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/07/09 | | 88 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/07/09 | | 97 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/07/09 | | 106 | % | 80 - 120 |
| | | | Total Molybdenum (Mo) | 2012/07/09 | | 108 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/07/09 | | 95 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/07/09 | | 93 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/07/09 | | 89 | % | 80 - 120 |
| | | | Total Selenium (Se) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Total Silver (Ag) | 2012/07/09 | | 96 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/07/09 | | NC | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/07/09 | | 96 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/07/09 | | 123 (1) | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/07/09 | | 108 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/07/09 | | 107 | % | 80 - 120 |
| | | Spiked Blank | Total Aluminum (Al) | 2012/07/09 | | 91 | % | 80 - 120 |
| | | | Total Antimony (Sb) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/07/09 | | 95 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/07/09 | | 107 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/07/09 | | 91 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/07/09 | | 92 | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/07/09 | | 100 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/07/09 | | 101 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/07/09 | | 86 | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Total Molybdenum (Mo) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/07/09 | | 97 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/07/09 | | 94 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/07/09 | | 92 | % | 80 - 120 |



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Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2902721 | PBA | Spiked Blank | Total Selenium (Se) | 2012/07/09 | | 99 | % | 80 - 120 |
| | | | Total Silver (Ag) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/07/09 | | 93 | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/07/09 | | 95 | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/07/09 | | 98 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/07/09 | | 102 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/07/09 | | 94 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/07/09 | | 115 | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/07/09 | | 103 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/07/09 | | 104 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/07/09 | | 105 | % | 80 - 120 |
| | | Method Blank | Total Aluminum (Al) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Antimony (Sb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Arsenic (As) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Barium (Ba) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Total Beryllium (Be) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Bismuth (Bi) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Boron (B) | 2012/07/09 | ND, RDL=10 | | ug/L | |
| | | | Total Cadmium (Cd) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Total Calcium (Ca) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Total Chromium (Cr) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Cobalt (Co) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Copper (Cu) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Iron (Fe) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Total Lead (Pb) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Lithium (Li) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Magnesium (Mg) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Total Manganese (Mn) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Total Molybdenum (Mo) | 2012/07/09 | ND, RDL=0.50 | | ug/L | |
| | | | Total Nickel (Ni) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Potassium (K) | 2012/07/09 | ND, RDL=200 | | ug/L | |
| | | | Total Silicon (Si) | 2012/07/09 | ND, RDL=50 | | ug/L | |
| | | | Total Selenium (Se) | 2012/07/09 | ND, RDL=2.0 | | ug/L | |
| | | | Total Silver (Ag) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Total Sodium (Na) | 2012/07/09 | ND, RDL=100 | | ug/L | |
| | | | Total Strontium (Sr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Tellurium (Te) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Thallium (Tl) | 2012/07/09 | ND, RDL=0.050 | | ug/L | |
| | | | Total Tin (Sn) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Titanium (Ti) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Tungsten (W) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | | Total Uranium (U) | 2012/07/09 | ND, RDL=0.10 | | ug/L | |
| | | | Total Vanadium (V) | 2012/07/09 | 0.57, RDL=0.50 | | ug/L | |
| | | | Total Zinc (Zn) | 2012/07/09 | ND, RDL=5.0 | | ug/L | |
| | | | Total Zirconium (Zr) | 2012/07/09 | ND, RDL=1.0 | | ug/L | |
| | | RPD | Total Aluminum (Al) | 2012/07/10 | 6.7 | | % | 20 |
| | | | Total Antimony (Sb) | 2012/07/10 | NC | | % | 20 |
| | | | Total Arsenic (As) | 2012/07/10 | NC | | % | 20 |
| | | | Total Barium (Ba) | 2012/07/10 | 2.2 | | % | 20 |
| | | | Total Beryllium (Be) | 2012/07/10 | NC | | % | 20 |
| | | | Total Bismuth (Bi) | 2012/07/10 | NC | | % | 20 |
| | | | Total Boron (B) | 2012/07/10 | NC | | % | 20 |
| | | | Total Cadmium (Cd) | 2012/07/10 | NC | | % | 20 |



Maxxam Analytics International Corporation o/a Maxxam Analytics 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.maxxam.ca

Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: MB298154

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2902721 | PBA | RPD | Total Calcium (Ca) | 2012/07/10 | 3.5 | | % | 20 |
| | | | Total Chromium (Cr) | 2012/07/10 | NC | | % | 20 |
| | | | Total Cobalt (Co) | 2012/07/10 | 0.02 | | % | 20 |
| | | | Total Copper (Cu) | 2012/07/10 | NC | | % | 20 |
| | | | Total Iron (Fe) | 2012/07/10 | NC | | % | 20 |
| | | | Total Lead (Pb) | 2012/07/10 | NC | | % | 20 |
| | | | Total Magnesium (Mg) | 2012/07/10 | 3.5 | | % | 20 |
| | | | Total Manganese (Mn) | 2012/07/10 | 4.0 | | % | 20 |
| | | | Total Molybdenum (Mo) | 2012/07/10 | 0.4 | | % | 20 |
| | | | Total Nickel (Ni) | 2012/07/10 | 1.8 | | % | 20 |
| | | | Total Potassium (K) | 2012/07/10 | 2.2 | | % | 20 |
| | | | Total Silicon (Si) | 2012/07/10 | 4.2 | | % | 20 |
| | | | Total Selenium (Se) | 2012/07/10 | NC | | % | 20 |
| | | | Total Silver (Ag) | 2012/07/10 | NC | | % | 20 |
| | | | Total Sodium (Na) | 2012/07/10 | 3.3 | | % | 20 |
| | | | Total Strontium (Sr) | 2012/07/10 | 9.1 | | % | 20 |
| | | | Total Thallium (Tl) | 2012/07/10 | NC | | % | 20 |
| | | | Total Tin (Sn) | 2012/07/10 | NC | | % | 20 |
| | | | Total Titanium (Ti) | 2012/07/10 | NC | | % | 20 |
| | | | Total Tungsten (W) | 2012/07/10 | NC | | % | 20 |
| | | | Total Uranium (U) | 2012/07/10 | 1.1 | | % | 20 |
| | | | Total Vanadium (V) | 2012/07/10 | 2.2 | | % | 20 |
| | | | Total Zinc (Zn) | 2012/07/10 | NC | | % | 20 |

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.
( 1 ) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



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# Validation Signature Page

**Maxxam Job #: B298154**

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Cristina Carriere, Scientific Services

==========

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Maxxam 6740 Campobello Road, Mississauga, ON L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll

30-Jun-12 10:20
Julie Clement
B298154
FW ENV-659

# CHAIN OF CUSTODY RECORD

Page ____ of ____

| INVOICE INFORMATION: | REPOR |
|---|---|
| Company Name: AGNICO-EAGLE | Company Name |
| Contact Name: PHILIP ROY/ALANDRE GAUTHIER/DAVID FRENETTE | Contact Name: |
| Address: RANKIN INLET, NU, CAN, X0C 0G0 | Address: |
| Phone: Fax: | Phone: Fax: |
| Email: philip.roy@agnico-eagle.com ; alexandre.gauthier@agnico-eagle.com ; dav | Email: |

| PROJECT INFORMATION: | MAXXAM JOB NUMBER: |
|---|---|
| b24404 | |
| Project #: leachate cell | CHAIN OF CUSTODY # : |
| Site Location: meliadine | |
| Site #: | |
| Sampled By: PR/AD | |

***Note: For MOE Regulated Drinking Water samples, please use the Drinking Water COC.***

**Regulation 153 (2011)**

- [ ] Table 1 [ ] Res/Park [ ] Med/Fine
- [ ] Table 2 [ ] Ind/Comm [ ] Coarse
- [ ] Table 3 [ ] Agri/Other
- [ ] Table ___

For RSC: [ ] Yes [ ] No

**Other Regulations**

- [x] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA
- [ ] PWQO Municipality:
- [ ] Other (Specify):

**Include Criteria on Certificate of Analysis (Y/N)?** ____

**SAMPLES MUST BE KEPT COOL ( < 10 °C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM**

| | Sample Identification | Date Sampled | Time Sampled | Matrix (GW, SW, Soil, etc.) | MOE Regulated Drinking Water ? ( Y / N ) | Metals Field Filtered ? ( Y / N ) | DISSOLVED METALS BY ICPMS | ALKALINITY, CHLORIDE, SULPHATE | COLOURIMETRY, CONDUCTIVITY | FLUORIDE, NO3, NO2, Ph | MERCURY | TOTAL METAL ANALYSIS BY ICPMS | AMMONIA-N, TOTAL PHOSPHORUS | TDS | TSS | | | | # of Cont. | COMMENTS / TAT COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WR1 | 2012-06-27 | 19:45 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 2 | WR1-DUP | 2012-06-27 | 19:55 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 3 | WR2 | 2012-06-27 | 20:05 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 4 | WR2-DUP | 2012-06-27 | 20:15 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 5 | LODE 1000 | 2012-06-27 | 20:25 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 6 | LODE 1000-DUP | 2012-06-27 | 20:35 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 7 | LODE 1100 | 2012-06-27 | 20:45 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 8 | LODE 1100-DUP | 2012-06-27 | 20:55 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 9 | LEACHATE WATER | 2012-06-27 | 21:05 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |
| 10 | LEACHATE WATER-DUP | 2012-06-27 | 21:15 | WATER | N | Y | X | X | X | X | X | X | X | X | X | | | | 6 | |

**TURNAROUND TIME (TAT) REQUIRED:**

**PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS**

**Regular (Standard) TAT:** [x]
( 5-7 working days for most tests)

**Rush TAT:**
***Samples must be received by 3pm to guarantee your TAT***
Rush Confirmation #: PN
[ ] 1 day [ ] 2 days [ ] 3 days
DATE Req'd:

TAT for certain tests are > 5 days.
Please contact your Project Manager for details.

| RELINQUISHED BY: (Signature/Print) | Date (YYYY/MM/DD) | Time: | RECEIVED BY: (Signature/Print) | Date (YYYY/MM/DD) | Time: |
|---|---|---|---|---|---|
| Philip Roy | 2012-06-28 | 06:58 | MP | 2012/06/28 | 13:20 |
| | | | | 2012 06 30 | 10:20 |
| | | | | | |

# JARS USED AND NOT SUBMITTED

| Laboratory Use Only | | | |
|---|---|---|---|
| Custody Seal | Yes | No | Temperature (°C) on Receipt |
| Present | | ✓ | 6/6.7C |
| Intact | | ✓ | 3/3.4°C |

**MANDATORY SECTIONS IN GREY MUST BE FILLED OUT. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS**

Your Project #: LEACHATE CELL
Site Location: MELIADINE
Your C.O.C. #: na

**Attention: Philip Roy**
Agnico-Eagle
Meliadine
Rankin Inlet, NU
CANADA X0C 0G0

**Report Date: 2012/08/07**

# CERTIFICATE OF ANALYSIS

**MAXXAM JOB #: B2B4281**
**Received: 2012/07/28, 10:05**

Sample Matrix: Water
# Samples Received: 9

| Analyses | Quantity | Date Extracted | Date Analyzed | Laboratory Method | Method Reference |
|---|---|---|---|---|---|
| Alkalinity (1) | 9 | N/A | 2012/08/01 | CAM SOP-00448 | SM 2320B |
| Chloride by Automated Colourimetry (1) | 9 | N/A | 2012/08/01 | CAM SOP-00463 | EPA 325.2 |
| Colour (1) | 9 | N/A | 2012/07/31 | CAM SOP-00412 | APHA 2120 |
| Conductivity (1) | 9 | N/A | 2012/08/01 | CAM SOP-00448 | SM 2510 |
| Fluoride (1) | 9 | 2012/07/31 | 2012/08/01 | CAM SOP-00448 | APHA 4500FC |
| Mercury (1) | 9 | 2012/08/02 | 2012/08/02 | CAM SOP-00453 | SW-846 7470A |
| Dissolved Metals by ICPMS (1) | 9 | N/A | 2012/08/03 | CAM SOP-00447 | EPA 6020 |
| Total Metals Analysis by ICPMS (1) | 9 | N/A | 2012/08/03 | CAM SOP-00447 | EPA 6020 |
| Total Ammonia-N (1) | 9 | N/A | 2012/08/05 | CAM SOP-00441 | US GS I-2522-90 |
| Nitrate (NO3) and Nitrite (NO2) in Water (1,2) | 9 | N/A | 2012/08/01 | CAM SOP-00440 | SM 4500 NO3I/NO2B |
| pH (1) | 9 | N/A | 2012/08/01 | CAM SOP-00448 | SM 4500H+ B |
| Sulphate by Automated Colourimetry (1) | 9 | N/A | 2012/08/01 | CAM SOP-00464 | EPA 375.4 |
| Total Dissolved Solids (1) | 9 | N/A | 2012/07/31 | CAM SOP-00428 | APHA 2540C |
| Total Phosphorus (Colourimetric) (1) | 9 | 2012/08/01 | 2012/08/02 | CAM SOP-00407 | APHA 4500 P,B,F |
| Total Suspended Solids (1) | 9 | N/A | 2012/07/31 | CAM SOP-00428 | SM 2540D |

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Analytics Mississauga
(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Julie Clement, Ottawa Customer Service
Email: JClement@maxxam.ca
Phone# (613) 274-3549

==========

Your Project #: LEACHATE CELL
Site Location: MELIADINE
Your C.O.C. #: na

**Attention: Philip Roy**
Agnico-Eagle
Meliadine
Rankin Inlet, NU
CANADA X0C 0G0

**Report Date: 2012/08/07**

## CERTIFICATE OF ANALYSIS



Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Total cover pages: 2



Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxamanalytics.com

Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | OH7506 | OH7507 | OH7508 | OH7509 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:30 | 2012/07/24 21:30 | 2012/07/24 21:41 | 2012/07/24 21:41 | | |
| COC Number | | na | na | na | na | | |
| | **Units** | **WR1** | **WR1-DUP** | **WR2** | **WR2-DUP** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | |
| Total Ammonia-N | mg/L | 0.051 | 0.066 | 0.093 | ND | 0.050 | 2927005 |
| Colour | TCU | 13 | 14 | 13 | 12 | 2 | 2924207 |
| Conductivity | umho/cm | 1200 | 1200 | 1200 | 1200 | 1.0 | 2925467 |
| Total Dissolved Solids | mg/L | 1190 | 1160 | 1200 | 1230 | 10 | 2923889 |
| Fluoride (F-) | mg/L | ND | 0.12 | ND | ND | 0.10 | 2925468 |
| pH | pH | 7.51 | 7.51 | 7.52 | 7.52 | | 2925469 |
| Total Phosphorus | mg/L | 0.036 | 0.031 | 0.025 | 0.031 | 0.002 | 2926862 |
| Total Suspended Solids | mg/L | 22 | ND | 24 | 11 | 10 | 2923879 |
| Dissolved Sulphate (SO4) | mg/L | 66 | 66 | 64 | 66 | 1 | 2925396 |
| Alkalinity (Total as CaCO3) | mg/L | 41 | 42 | 40 | 41 | 1.0 | 2925466 |
| Dissolved Chloride (Cl) | mg/L | 280 | 280 | 270 | 270 | 4 | 2925395 |
| Nitrite (N) | mg/L | ND | ND | ND | ND | 0.010 | 2925179 |
| Nitrate (N) | mg/L | 0.19 | 0.19 | 0.16 | 0.16 | 0.10 | 2925179 |
| Nitrate + Nitrite | mg/L | 0.19 | 0.19 | 0.16 | 0.16 | 0.10 | 2925179 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | OH7510 | OH7511 | OH7512 | OH7513 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 22:06 | 2012/07/24 22:06 | 2012/07/24 21:53 | 2012/07/24 21:53 | | |
| COC Number | | na | na | na | na | | |
| | **Units** | **LODE 1000** | **LODE 1000-DUP** | **LODE 1100** | **LODE 1100-DUP** | **RDL** | **QC Batch** |
| **Inorganics** | | | | | | | |
| Total Ammonia-N | mg/L | 0.11 | 0.12 | 0.068 | ND | 0.050 | 2927005 |
| Colour | TCU | 6 | 6 | 6 | 6 | 2 | 2924207 |
| Conductivity | umho/cm | 1400 | 1400 | 1300 | 1200 | 1.0 | 2925467 |
| Total Dissolved Solids | mg/L | 1290 | 1310 | 1150 | 1140 | 10 | 2923889 |
| Fluoride (F-) | mg/L | ND | ND | ND | ND | 0.10 | 2925468 |
| pH | pH | 7.56 | 7.63 | 7.65 | 7.64 | | 2925469 |
| Total Phosphorus | mg/L | 0.10 | 0.11 | 0.055 | 0.048 | 0.002 | 2926862 |
| Total Suspended Solids | mg/L | 55 | 55 | 59 | 42 | 10 | 2923879 |
| Dissolved Sulphate (SO4) | mg/L | 200 | 200 | 190 | 190 | 1 | 2925396 |
| Alkalinity (Total as CaCO3) | mg/L | 43 | 44 | 46 | 45 | 1.0 | 2925466 |
| Dissolved Chloride (Cl) | mg/L | 250 | 250 | 220 | 230 | 3 | 2925395 |
| Nitrite (N) | mg/L | 0.51 | 0.51 | 0.036 | 0.034 | 0.010 | 2925179 |
| Nitrate (N) | mg/L | 4.0 | 4.0 | 0.45 | 0.44 | 0.10 | 2925179 |
| Nitrate + Nitrite | mg/L | 4.5 | 4.5 | 0.48 | 0.47 | 0.10 | 2925179 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## RESULTS OF ANALYSES OF WATER

| Maxxam ID | | OH7514 | | |
|---|---|---|---|---|
| Sampling Date | | 2012/07/24 22:56 | | |
| COC Number | | na | | |
| | **Units** | **LEACHATE WATER** | **RDL** | **QC Batch** |
| **Inorganics** | | | | |
| Total Ammonia-N | mg/L | 0.057 | 0.050 | 2927005 |
| Colour | TCU | 18 | 2 | 2924207 |
| Conductivity | umho/cm | 1200 | 1.0 | 2925467 |
| Total Dissolved Solids | mg/L | 1190 | 10 | 2923889 |
| Fluoride (F-) | mg/L | ND | 0.10 | 2925468 |
| pH | pH | 7.54 | | 2925469 |
| Total Phosphorus | mg/L | ND | 0.002 | 2926862 |
| Total Suspended Solids | mg/L | ND | 10 | 2923879 |
| Dissolved Sulphate (SO4) | mg/L | 51 | 1 | 2925396 |
| Alkalinity (Total as CaCO3) | mg/L | 40 | 1.0 | 2925466 |
| Dissolved Chloride (Cl) | mg/L | 270 | 4 | 2925395 |
| Nitrite (N) | mg/L | ND | 0.010 | 2925179 |
| Nitrate (N) | mg/L | ND | 0.10 | 2925179 |
| Nitrate + Nitrite | mg/L | ND | 0.10 | 2925179 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7506 | | OH7507 | | OH7508 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:30 | | 2012/07/24 21:30 | | 2012/07/24 21:41 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR1** | **QC Batch** | **WR1-DUP** | **QC Batch** | **WR2** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | | |
| Mercury (Hg) | ug/L | ND | 2925952 | ND | 2926022 | ND | 0.1 | 2925952 |
| Dissolved Aluminum (Al) | ug/L | 12 | 2928376 | 12 | 2928376 | 12 | 5.0 | 2928376 |
| Total Aluminum (Al) | ug/L | 2500 | 2928418 | 2500 | 2928418 | 2200 | 5.0 | 2928418 |
| Dissolved Antimony (Sb) | ug/L | 0.52 | 2928376 | ND | 2928376 | 0.54 | 0.50 | 2928376 |
| Total Antimony (Sb) | ug/L | 0.78 | 2928418 | 0.80 | 2928418 | 0.87 | 0.50 | 2928418 |
| Dissolved Arsenic (As) | ug/L | 5.8 | 2928376 | 5.9 | 2928376 | 6.3 | 1.0 | 2928376 |
| Total Arsenic (As) | ug/L | 19 | 2928418 | 19 | 2928418 | 19 | 1.0 | 2928418 |
| Dissolved Barium (Ba) | ug/L | 70 | 2928376 | 71 | 2928376 | 64 | 2.0 | 2928376 |
| Total Barium (Ba) | ug/L | 100 | 2928418 | 99 | 2928418 | 93 | 2.0 | 2928418 |
| Dissolved Beryllium (Be) | ug/L | ND | 2928376 | ND | 2928376 | ND | 0.50 | 2928376 |
| Total Beryllium (Be) | ug/L | ND | 2928418 | ND | 2928418 | ND | 0.50 | 2928418 |
| Dissolved Bismuth (Bi) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Bismuth (Bi) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Boron (B) | ug/L | 13 | 2928376 | 11 | 2928376 | 14 | 10 | 2928376 |
| Total Boron (B) | ug/L | 16 | 2928418 | 16 | 2928418 | 16 | 10 | 2928418 |
| Dissolved Cadmium (Cd) | ug/L | ND | 2928376 | ND | 2928376 | ND | 0.10 | 2928376 |
| Total Cadmium (Cd) | ug/L | ND | 2928418 | ND | 2928418 | ND | 0.10 | 2928418 |
| Dissolved Calcium (Ca) | ug/L | 150000 | 2928376 | 150000 | 2928376 | 150000 | 200 | 2928376 |
| Total Calcium (Ca) | ug/L | 160000 | 2928418 | 150000 | 2928418 | 150000 | 200 | 2928418 |
| Dissolved Chromium (Cr) | ug/L | ND | 2928376 | ND | 2928376 | ND | 5.0 | 2928376 |
| Total Chromium (Cr) | ug/L | 7.5 | 2928418 | 7.8 | 2928418 | 7.0 | 5.0 | 2928418 |
| Dissolved Cobalt (Co) | ug/L | 1.1 | 2928376 | 1.1 | 2928376 | 1.1 | 0.50 | 2928376 |
| Total Cobalt (Co) | ug/L | 6.9 | 2928418 | 6.5 | 2928418 | 6.2 | 0.50 | 2928418 |
| Dissolved Copper (Cu) | ug/L | 2.8 | 2928376 | 3.1 | 2928376 | 4.6 | 1.0 | 2928376 |
| Total Copper (Cu) | ug/L | 7.0 | 2928418 | 6.7 | 2928418 | 6.7 | 1.0 | 2928418 |
| Dissolved Iron (Fe) | ug/L | ND | 2928376 | ND | 2928376 | ND | 100 | 2928376 |
| Total Iron (Fe) | ug/L | 3100 | 2928418 | 3100 | 2928418 | 2700 | 100 | 2928418 |
| Dissolved Lead (Pb) | ug/L | 0.84 | 2928376 | 0.70 | 2928376 | 0.52 | 0.50 | 2928376 |
| Total Lead (Pb) | ug/L | 12 | 2928418 | 12 | 2928418 | 11 | 0.50 | 2928418 |
| Dissolved Lithium (Li) | ug/L | 55 | 2928376 | 55 | 2928376 | 54 | 5.0 | 2928376 |
| Total Lithium (Li) | ug/L | 63 | 2928418 | 61 | 2928418 | 60 | 5.0 | 2928418 |
| Dissolved Magnesium (Mg) | ug/L | 16000 | 2928376 | 16000 | 2928376 | 16000 | 50 | 2928376 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7506 | | OH7507 | | OH7508 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:30 | | 2012/07/24 21:30 | | 2012/07/24 21:41 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR1** | **QC Batch** | **WR1-DUP** | **QC Batch** | **WR2** | **RDL** | **QC Batch** |
| Total Magnesium (Mg) | ug/L | 19000 | 2928418 | 18000 | 2928418 | 18000 | 50 | 2928418 |
| Dissolved Manganese (Mn) | ug/L | 24 | 2928376 | 24 | 2928376 | 27 | 2.0 | 2928376 |
| Total Manganese (Mn) | ug/L | 65 | 2928418 | 61 | 2928418 | 62 | 2.0 | 2928418 |
| Dissolved Molybdenum (Mo) | ug/L | 1.0 | 2928376 | 0.90 | 2928376 | 0.90 | 0.50 | 2928376 |
| Total Molybdenum (Mo) | ug/L | 1.1 | 2928418 | 1.1 | 2928418 | 1.1 | 0.50 | 2928418 |
| Dissolved Nickel (Ni) | ug/L | 9.1 | 2928376 | 8.8 | 2928376 | 7.3 | 1.0 | 2928376 |
| Total Nickel (Ni) | ug/L | 23 | 2928418 | 22 | 2928418 | 20 | 1.0 | 2928418 |
| Dissolved Phosphorus (P) | ug/L | ND | 2928376 | ND | 2928376 | ND | 100 | 2928376 |
| Dissolved Potassium (K) | ug/L | 6300 | 2928376 | 6300 | 2928376 | 6300 | 200 | 2928376 |
| Total Potassium (K) | ug/L | 7400 | 2928418 | 7000 | 2928418 | 7000 | 200 | 2928418 |
| Dissolved Selenium (Se) | ug/L | 2.1 | 2928376 | ND | 2928376 | 2.1 | 2.0 | 2928376 |
| Dissolved Silicon (Si) | ug/L | 1500 | 2928376 | 1400 | 2928376 | 1500 | 50 | 2928376 |
| Total Silicon (Si) | ug/L | 5600 | 2928418 | 5300 | 2928418 | 4800 | 50 | 2928418 |
| Total Selenium (Se) | ug/L | ND | 2928418 | ND | 2928418 | ND | 2.0 | 2928418 |
| Dissolved Silver (Ag) | ug/L | ND | 2928376 | ND | 2928376 | ND | 0.10 | 2928376 |
| Total Silver (Ag) | ug/L | ND | 2928418 | ND | 2928418 | ND | 0.10 | 2928418 |
| Dissolved Sodium (Na) | ug/L | 32000 | 2928376 | 31000 | 2928376 | 31000 | 100 | 2928376 |
| Total Sodium (Na) | ug/L | 35000 | 2928418 | 34000 | 2928418 | 32000 | 100 | 2928418 |
| Dissolved Strontium (Sr) | ug/L | 1200 | 2928376 | 1200 | 2928376 | 1200 | 1.0 | 2928376 |
| Total Strontium (Sr) | ug/L | 1400 | 2928418 | 1300 | 2928418 | 1300 | 1.0 | 2928418 |
| Dissolved Tellurium (Te) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Tellurium (Te) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Thallium (Tl) | ug/L | ND | 2928376 | ND | 2928376 | ND | 0.050 | 2928376 |
| Total Thallium (Tl) | ug/L | ND | 2928418 | ND | 2928418 | ND | 0.050 | 2928418 |
| Dissolved Tin (Sn) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Tin (Sn) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Titanium (Ti) | ug/L | ND | 2928376 | ND | 2928376 | ND | 5.0 | 2928376 |
| Total Titanium (Ti) | ug/L | 37 | 2928418 | 39 | 2928418 | 35 | 5.0 | 2928418 |
| Dissolved Tungsten (W) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Tungsten (W) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Uranium (U) | ug/L | 1.3 | 2928376 | 1.3 | 2928376 | 1.4 | 0.10 | 2928376 |
| Total Uranium (U) | ug/L | 1.6 | 2928418 | 1.6 | 2928418 | 1.7 | 0.10 | 2928418 |
| Dissolved Vanadium (V) | ug/L | ND | 2928376 | ND | 2928376 | ND | 0.50 | 2928376 |

ND = Not detected
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QC Batch = Quality Control Batch



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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7506 | | OH7507 | | OH7508 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:30 | | 2012/07/24 21:30 | | 2012/07/24 21:41 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR1** | **QC Batch** | **WR1-DUP** | **QC Batch** | **WR2** | **RDL** | **QC Batch** |
| Total Vanadium (V) | ug/L | 4.8 | 2928418 | 6.1 | 2928418 | 5.4 | 0.50 | 2928418 |
| Dissolved Zinc (Zn) | ug/L | ND | 2928376 | ND | 2928376 | 11 | 5.0 | 2928376 |
| Total Zinc (Zn) | ug/L | 13 | 2928418 | 11 | 2928418 | 12 | 5.0 | 2928418 |
| Dissolved Zirconium (Zr) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Zirconium (Zr) | ug/L | 4.5 | 2928418 | 2.9 | 2928418 | 2.6 | 1.0 | 2928418 |

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Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7509 | | OH7510 | | OH7511 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:41 | | 2012/07/24 22:06 | | 2012/07/24 22:06 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR2-DUP** | **QC Batch** | **LODE 1000** | **QC Batch** | **LODE 1000-DUP** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | | |
| Mercury (Hg) | ug/L | ND | 2926022 | ND | 2925952 | ND | 0.1 | 2926022 |
| Dissolved Aluminum (Al) | ug/L | 13 | 2928376 | 10 | 2928376 | 11 | 5.0 | 2928376 |
| Total Aluminum (Al) | ug/L | 2200 | 2928418 | 1800 | 2928418 | 2100 | 5.0 | 2928418 |
| Dissolved Antimony (Sb) | ug/L | 0.57 | 2928376 | 1.6 | 2928376 | 1.6 | 0.50 | 2928376 |
| Total Antimony (Sb) | ug/L | 0.82 | 2928418 | 2.1 | 2928418 | 2.1 | 0.50 | 2928418 |
| Dissolved Arsenic (As) | ug/L | 6.9 | 2928376 | 220 | 2928376 | 210 | 1.0 | 2928376 |
| Total Arsenic (As) | ug/L | 18 | 2928418 | 490 | 2928418 | 480 | 1.0 | 2928418 |
| Dissolved Barium (Ba) | ug/L | 66 | 2928376 | 28 | 2928376 | 29 | 2.0 | 2928376 |
| Total Barium (Ba) | ug/L | 94 | 2928418 | 40 | 2928418 | 42 | 2.0 | 2928418 |
| Dissolved Beryllium (Be) | ug/L | ND | 2928376 | ND | 2928376 | ND | 0.50 | 2928376 |
| Total Beryllium (Be) | ug/L | ND | 2928418 | ND | 2928418 | ND | 0.50 | 2928418 |
| Dissolved Bismuth (Bi) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Bismuth (Bi) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Boron (B) | ug/L | 14 | 2928376 | 50 | 2928376 | 49 | 10 | 2928376 |
| Total Boron (B) | ug/L | 18 | 2928418 | 57 | 2928418 | 60 | 10 | 2928418 |
| Dissolved Cadmium (Cd) | ug/L | ND | 2928376 | 0.16 | 2928376 | 0.17 | 0.10 | 2928376 |
| Total Cadmium (Cd) | ug/L | ND | 2928418 | 0.28 | 2928418 | 0.22 | 0.10 | 2928418 |
| Dissolved Calcium (Ca) | ug/L | 160000 | 2928376 | 180000 | 2928376 | 170000 | 200 | 2928376 |
| Total Calcium (Ca) | ug/L | 150000 | 2928418 | 190000 | 2928418 | 190000 | 200 | 2928418 |
| Dissolved Chromium (Cr) | ug/L | ND | 2928376 | ND | 2928376 | ND | 5.0 | 2928376 |
| Total Chromium (Cr) | ug/L | 7.2 | 2928418 | 5.3 | 2928418 | 6.6 | 5.0 | 2928418 |
| Dissolved Cobalt (Co) | ug/L | 1.1 | 2928376 | 3.0 | 2928376 | 3.1 | 0.50 | 2928376 |
| Total Cobalt (Co) | ug/L | 6.0 | 2928418 | 5.8 | 2928418 | 5.7 | 0.50 | 2928418 |
| Dissolved Copper (Cu) | ug/L | 3.0 | 2928376 | 4.6 | 2928376 | 5.1 | 1.0 | 2928376 |
| Total Copper (Cu) | ug/L | 7.1 | 2928418 | 12 | 2928418 | 11 | 1.0 | 2928418 |
| Dissolved Iron (Fe) | ug/L | ND | 2928376 | ND | 2928376 | ND | 100 | 2928376 |
| Total Iron (Fe) | ug/L | 2800 | 2928418 | 3600 | 2928418 | 3700 | 100 | 2928418 |
| Dissolved Lead (Pb) | ug/L | 0.55 | 2928376 | 1.5 | 2928376 | 1.4 | 0.50 | 2928376 |
| Total Lead (Pb) | ug/L | 11 | 2928418 | 98 | 2928418 | 99 | 0.50 | 2928418 |
| Dissolved Lithium (Li) | ug/L | 56 | 2928376 | 51 | 2928376 | 50 | 5.0 | 2928376 |
| Total Lithium (Li) | ug/L | 58 | 2928418 | 54 | 2928418 | 57 | 5.0 | 2928418 |
| Dissolved Magnesium (Mg) | ug/L | 16000 | 2928376 | 28000 | 2928376 | 27000 | 50 | 2928376 |

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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7509 | | OH7510 | | OH7511 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:41 | | 2012/07/24 22:06 | | 2012/07/24 22:06 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR2-DUP** | **QC Batch** | **LODE 1000** | **QC Batch** | **LODE 1000-DUP** | **RDL** | **QC Batch** |
| Total Magnesium (Mg) | ug/L | 18000 | 2928418 | 31000 | 2928418 | 30000 | 50 | 2928418 |
| Dissolved Manganese (Mn) | ug/L | 28 | 2928376 | 98 | 2928376 | 98 | 2.0 | 2928376 |
| Total Manganese (Mn) | ug/L | 59 | 2928418 | 140 | 2928418 | 140 | 2.0 | 2928418 |
| Dissolved Molybdenum (Mo) | ug/L | 0.95 | 2928376 | 13 | 2928376 | 12 | 0.50 | 2928376 |
| Total Molybdenum (Mo) | ug/L | 1.1 | 2928418 | 14 | 2928418 | 14 | 0.50 | 2928418 |
| Dissolved Nickel (Ni) | ug/L | 7.7 | 2928376 | 12 | 2928376 | 11 | 1.0 | 2928376 |
| Total Nickel (Ni) | ug/L | 19 | 2928418 | 21 | 2928418 | 21 | 1.0 | 2928418 |
| Dissolved Phosphorus (P) | ug/L | ND | 2928376 | ND | 2928376 | ND | 100 | 2928376 |
| Dissolved Potassium (K) | ug/L | 6700 | 2928376 | 12000 | 2928376 | 12000 | 200 | 2928376 |
| Total Potassium (K) | ug/L | 6900 | 2928418 | 14000 | 2928418 | 14000 | 200 | 2928418 |
| Dissolved Selenium (Se) | ug/L | ND | 2928376 | 4.9 | 2928376 | 5.7 | 2.0 | 2928376 |
| Dissolved Silicon (Si) | ug/L | 1500 | 2928376 | 1600 | 2928376 | 1600 | 50 | 2928376 |
| Total Silicon (Si) | ug/L | 5000 | 2928418 | 5000 | 2928418 | 4900 | 50 | 2928418 |
| Total Selenium (Se) | ug/L | ND | 2928418 | 4.2 | 2928418 | 3.8 | 2.0 | 2928418 |
| Dissolved Silver (Ag) | ug/L | ND | 2928376 | 0.24 | 2928376 | 0.24 | 0.10 | 2928376 |
| Total Silver (Ag) | ug/L | ND | 2928418 | ND | 2928418 | ND | 0.10 | 2928418 |
| Dissolved Sodium (Na) | ug/L | 32000 | 2928376 | 34000 | 2928376 | 34000 | 100 | 2928376 |
| Total Sodium (Na) | ug/L | 33000 | 2928418 | 38000 | 2928418 | 37000 | 100 | 2928418 |
| Dissolved Strontium (Sr) | ug/L | 1300 | 2928376 | 1100 | 2928376 | 1100 | 1.0 | 2928376 |
| Total Strontium (Sr) | ug/L | 1300 | 2928418 | 1200 | 2928418 | 1200 | 1.0 | 2928418 |
| Dissolved Tellurium (Te) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Tellurium (Te) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Thallium (Tl) | ug/L | ND | 2928376 | ND | 2928376 | ND | 0.050 | 2928376 |
| Total Thallium (Tl) | ug/L | ND | 2928418 | 0.084 | 2928418 | 0.071 | 0.050 | 2928418 |
| Dissolved Tin (Sn) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Tin (Sn) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Titanium (Ti) | ug/L | ND | 2928376 | ND | 2928376 | ND | 5.0 | 2928376 |
| Total Titanium (Ti) | ug/L | 38 | 2928418 | 15 | 2928418 | 22 | 5.0 | 2928418 |
| Dissolved Tungsten (W) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Tungsten (W) | ug/L | ND | 2928418 | ND | 2928418 | ND | 1.0 | 2928418 |
| Dissolved Uranium (U) | ug/L | 1.5 | 2928376 | 1.3 | 2928376 | 1.2 | 0.10 | 2928376 |
| Total Uranium (U) | ug/L | 1.6 | 2928418 | 1.6 | 2928418 | 1.6 | 0.10 | 2928418 |
| Dissolved Vanadium (V) | ug/L | ND | 2928376 | 0.53 | 2928376 | 0.57 | 0.50 | 2928376 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7509 | | OH7510 | | OH7511 | | |
|---|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:41 | | 2012/07/24 22:06 | | 2012/07/24 22:06 | | |
| COC Number | | na | | na | | na | | |
| | **Units** | **WR2-DUP** | **QC Batch** | **LODE 1000** | **QC Batch** | **LODE 1000-DUP** | **RDL** | **QC Batch** |
| Total Vanadium (V) | ug/L | 4.7 | 2928418 | 5.5 | 2928418 | 5.1 | 0.50 | 2928418 |
| Dissolved Zinc (Zn) | ug/L | ND | 2928376 | 14 | 2928376 | 20 | 5.0 | 2928376 |
| Total Zinc (Zn) | ug/L | 13 | 2928418 | 52 | 2928418 | 54 | 5.0 | 2928418 |
| Dissolved Zirconium (Zr) | ug/L | ND | 2928376 | ND | 2928376 | ND | 1.0 | 2928376 |
| Total Zirconium (Zr) | ug/L | 2.3 | 2928418 | 4.8 | 2928418 | 4.7 | 1.0 | 2928418 |

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QC Batch = Quality Control Batch



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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7512 | | OH7513 | OH7514 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:53 | | 2012/07/24 21:53 | 2012/07/24 22:56 | | |
| COC Number | | na | | na | na | | |
| | **Units** | **LODE 1100** | **QC Batch** | **LODE 1100-DUP** | **LEACHATE WATER** | **RDL** | **QC Batch** |
| **Metals** | | | | | | | |
| Mercury (Hg) | ug/L | ND | 2926022 | ND | ND | 0.1 | 2925952 |
| Dissolved Aluminum (Al) | ug/L | 15 | 2928376 | 16 | ND | 5.0 | 2928376 |
| Total Aluminum (Al) | ug/L | 1600 | 2928418 | 1600 | 60 | 5.0 | 2928418 |
| Dissolved Antimony (Sb) | ug/L | ND | 2928376 | ND | ND | 0.50 | 2928376 |
| Total Antimony (Sb) | ug/L | 0.57 | 2928418 | 0.60 | ND | 0.50 | 2928418 |
| Dissolved Arsenic (As) | ug/L | 15 | 2928376 | 16 | 1.5 | 1.0 | 2928376 |
| Total Arsenic (As) | ug/L | 150 | 2928418 | 150 | 2.8 | 1.0 | 2928418 |
| Dissolved Barium (Ba) | ug/L | 47 | 2928376 | 47 | 130 | 2.0 | 2928376 |
| Total Barium (Ba) | ug/L | 65 | 2928418 | 67 | 130 | 2.0 | 2928418 |
| Dissolved Beryllium (Be) | ug/L | ND | 2928376 | ND | ND | 0.50 | 2928376 |
| Total Beryllium (Be) | ug/L | ND | 2928418 | ND | ND | 0.50 | 2928418 |
| Dissolved Bismuth (Bi) | ug/L | ND | 2928376 | ND | ND | 1.0 | 2928376 |
| Total Bismuth (Bi) | ug/L | ND | 2928418 | ND | ND | 1.0 | 2928418 |
| Dissolved Boron (B) | ug/L | 20 | 2928376 | 21 | ND | 10 | 2928376 |
| Total Boron (B) | ug/L | 25 | 2928418 | 36 | 11 | 10 | 2928418 |
| Dissolved Cadmium (Cd) | ug/L | ND | 2928376 | ND | ND | 0.10 | 2928376 |
| Total Cadmium (Cd) | ug/L | ND | 2928418 | ND | ND | 0.10 | 2928418 |
| Dissolved Calcium (Ca) | ug/L | 160000 | 2928376 | 160000 | 140000 | 200 | 2928376 |
| Total Calcium (Ca) | ug/L | 170000 | 2928418 | 170000 | 150000 | 200 | 2928418 |
| Dissolved Chromium (Cr) | ug/L | ND | 2928376 | ND | ND | 5.0 | 2928376 |
| Total Chromium (Cr) | ug/L | ND | 2928418 | ND | ND | 5.0 | 2928418 |
| Dissolved Cobalt (Co) | ug/L | 1.4 | 2928376 | 1.4 | ND | 0.50 | 2928376 |
| Total Cobalt (Co) | ug/L | 3.7 | 2928418 | 3.9 | ND | 0.50 | 2928418 |
| Dissolved Copper (Cu) | ug/L | 3.0 | 2928376 | 2.0 | 3.9 | 1.0 | 2928376 |
| Total Copper (Cu) | ug/L | 4.6 | 2928418 | 4.5 | 2.4 | 1.0 | 2928418 |
| Dissolved Iron (Fe) | ug/L | ND | 2928376 | ND | 150 | 100 | 2928376 |
| Total Iron (Fe) | ug/L | 4200 | 2928418 | 4200 | 410 | 100 | 2928418 |
| Dissolved Lead (Pb) | ug/L | 0.65 | 2928376 | 0.67 | ND | 0.50 | 2928376 |
| Total Lead (Pb) | ug/L | 44 | 2928418 | 45 | ND | 0.50 | 2928418 |
| Dissolved Lithium (Li) | ug/L | 35 | 2928376 | 36 | 56 | 5.0 | 2928376 |
| Total Lithium (Li) | ug/L | 40 | 2928418 | 42 | 58 | 5.0 | 2928418 |

ND = Not detected
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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7512 | | OH7513 | OH7514 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:53 | | 2012/07/24 21:53 | 2012/07/24 22:56 | | |
| COC Number | | na | | na | na | | |
| | **Units** | **LODE 1100** | **QC Batch** | **LODE 1100-DUP** | **LEACHATE WATER** | **RDL** | **QC Batch** |
| Dissolved Magnesium (Mg) | ug/L | 25000 | 2928376 | 26000 | 15000 | 50 | 2928376 |
| Total Magnesium (Mg) | ug/L | 28000 | 2928418 | 28000 | 17000 | 50 | 2928418 |
| Dissolved Manganese (Mn) | ug/L | 80 | 2928376 | 84 | 12 | 2.0 | 2928376 |
| Total Manganese (Mn) | ug/L | 110 | 2928418 | 120 | 18 | 2.0 | 2928418 |
| Dissolved Molybdenum (Mo) | ug/L | 4.7 | 2928376 | 4.8 | ND | 0.50 | 2928376 |
| Total Molybdenum (Mo) | ug/L | 5.1 | 2928418 | 5.2 | ND | 0.50 | 2928418 |
| Dissolved Nickel (Ni) | ug/L | 4.0 | 2928376 | 3.6 | 3.2 | 1.0 | 2928376 |
| Total Nickel (Ni) | ug/L | 7.9 | 2928418 | 7.6 | 5.0 | 1.0 | 2928418 |
| Dissolved Phosphorus (P) | ug/L | ND | 2928376 | ND | ND | 100 | 2928376 |
| Dissolved Potassium (K) | ug/L | 10000 | 2928376 | 11000 | 5600 | 200 | 2928376 |
| Total Potassium (K) | ug/L | 12000 | 2928418 | 12000 | 6300 | 200 | 2928418 |
| Dissolved Selenium (Se) | ug/L | ND | 2928376 | ND | ND | 2.0 | 2928376 |
| Dissolved Silicon (Si) | ug/L | 1200 | 2928376 | 1300 | 1400 | 50 | 2928376 |
| Total Silicon (Si) | ug/L | 3600 | 2928418 | 3500 | 1700 | 50 | 2928418 |
| Total Selenium (Se) | ug/L | ND | 2928418 | ND | ND | 2.0 | 2928418 |
| Dissolved Silver (Ag) | ug/L | 0.15 | 2928376 | 0.11 | ND | 0.10 | 2928376 |
| Total Silver (Ag) | ug/L | ND | 2928418 | ND | ND | 0.10 | 2928418 |
| Dissolved Sodium (Na) | ug/L | 26000 | 2928376 | 26000 | 31000 | 100 | 2928376 |
| Total Sodium (Na) | ug/L | 28000 | 2928418 | 28000 | 34000 | 100 | 2928418 |
| Dissolved Strontium (Sr) | ug/L | 1300 | 2928376 | 1300 | 1100 | 1.0 | 2928376 |
| Total Strontium (Sr) | ug/L | 1500 | 2928418 | 1500 | 1300 | 1.0 | 2928418 |
| Dissolved Tellurium (Te) | ug/L | ND | 2928376 | ND | ND | 1.0 | 2928376 |
| Total Tellurium (Te) | ug/L | ND | 2928418 | ND | ND | 1.0 | 2928418 |
| Dissolved Thallium (Tl) | ug/L | ND | 2928376 | ND | ND | 0.050 | 2928376 |
| Total Thallium (Tl) | ug/L | ND | 2928418 | ND | ND | 0.050 | 2928418 |
| Dissolved Tin (Sn) | ug/L | ND | 2928376 | ND | ND | 1.0 | 2928376 |
| Total Tin (Sn) | ug/L | ND | 2928418 | ND | ND | 1.0 | 2928418 |
| Dissolved Titanium (Ti) | ug/L | ND | 2928376 | ND | ND | 5.0 | 2928376 |
| Total Titanium (Ti) | ug/L | 34 | 2928418 | 28 | ND | 5.0 | 2928418 |
| Dissolved Tungsten (W) | ug/L | ND | 2928376 | ND | ND | 1.0 | 2928376 |
| Total Tungsten (W) | ug/L | ND | 2928418 | ND | ND | 1.0 | 2928418 |
| Dissolved Uranium (U) | ug/L | 0.72 | 2928376 | 0.72 | ND | 0.10 | 2928376 |

ND = Not detected
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch



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Maxxam Job #: B2B4281
Report Date: 2012/08/07

Agnico-Eagle
Client Project #: LEACHATE CELL
Site Location: MELIADINE

## ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Maxxam ID | | OH7512 | | OH7513 | OH7514 | | |
|---|---|---|---|---|---|---|---|
| Sampling Date | | 2012/07/24 21:53 | | 2012/07/24 21:53 | 2012/07/24 22:56 | | |
| COC Number | | na | | na | na | | |
| | **Units** | **LODE 1100** | **QC Batch** | **LODE 1100-DUP** | **LEACHATE WATER** | **RDL** | **QC Batch** |
| Total Uranium (U) | ug/L | 0.86 | 2928418 | 0.98 | ND | 0.10 | 2928418 |
| Dissolved Vanadium (V) | ug/L | 0.59 | 2928376 | 0.66 | 0.64 | 0.50 | 2928376 |
| Total Vanadium (V) | ug/L | 2.6 | 2928418 | 3.2 | 0.99 | 0.50 | 2928418 |
| Dissolved Zinc (Zn) | ug/L | 7.8 | 2928376 | 5.7 | 9.2 | 5.0 | 2928376 |
| Total Zinc (Zn) | ug/L | 9.4 | 2928418 | 8.7 | 6.1 | 5.0 | 2928418 |
| Dissolved Zirconium (Zr) | ug/L | ND | 2928376 | ND | ND | 1.0 | 2928376 |
| Total Zirconium (Zr) | ug/L | 1.8 | 2928418 | 1.9 | ND | 1.0 | 2928418 |

ND = Not detected
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QC Batch = Quality Control Batch



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| | |
|---|---|
| Package 1 | 11.0°C |
| Package 2 | 12.0°C |

Each temperature is the average of up to three cooler temperatures taken at receipt

**GENERAL COMMENTS**

**Results relate only to the items tested.**



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

# Quality Assurance Report

Maxxam Job Number: TB2B4281

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2923879 | RAY | QC Standard | Total Suspended Solids | 2012/07/31 | | 98 | % | 85 - 115 |
| | | Method Blank | Total Suspended Solids | 2012/07/31 | ND, RDL=10 | | mg/L | |
| | | RPD | Total Suspended Solids | 2012/07/31 | NC | | % | 25 |
| 2923889 | RAY | QC Standard | Total Dissolved Solids | 2012/07/31 | | 96 | % | 90 - 110 |
| | | Method Blank | Total Dissolved Solids | 2012/07/31 | ND, RDL=10 | | mg/L | |
| | | RPD | Total Dissolved Solids | 2012/07/31 | 1.3 | | % | 25 |
| 2924207 | CP | Spiked Blank | Colour | 2012/07/31 | | 98 | % | 85 - 115 |
| | | Method Blank | Colour | 2012/07/31 | ND, RDL=2 | | TCU | |
| | | RPD | Colour | 2012/07/31 | NC | | % | 25 |
| 2925179 | C_H | Matrix Spike | | | | | | |
| | | [OH7509-01] | Nitrite (N) | 2012/08/01 | | 104 | % | 80 - 120 |
| | | | Nitrate (N) | 2012/08/01 | | 93 | % | 80 - 120 |
| | | Spiked Blank | Nitrite (N) | 2012/08/01 | | 103 | % | 85 - 115 |
| | | | Nitrate (N) | 2012/08/01 | | 96 | % | 85 - 115 |
| | | Method Blank | Nitrite (N) | 2012/08/01 | ND, RDL=0.010 | | mg/L | |
| | | | Nitrate (N) | 2012/08/01 | ND, RDL=0.10 | | mg/L | |
| | | RPD [OH7509-01] | Nitrite (N) | 2012/08/01 | NC | | % | 25 |
| | | | Nitrate (N) | 2012/08/01 | NC | | % | 25 |
| 2925395 | DRM | Matrix Spike | | | | | | |
| | | [OH7509-01] | Dissolved Chloride (Cl) | 2012/08/01 | | NC | % | 80 - 120 |
| | | Spiked Blank | Dissolved Chloride (Cl) | 2012/08/01 | | 101 | % | 80 - 120 |
| | | Method Blank | Dissolved Chloride (Cl) | 2012/08/01 | ND, RDL=1 | | mg/L | |
| | | RPD [OH7509-01] | Dissolved Chloride (Cl) | 2012/08/01 | 1.9 | | % | 20 |
| 2925396 | DRM | Matrix Spike | | | | | | |
| | | [OH7509-01] | Dissolved Sulphate (SO4) | 2012/08/01 | | NC | % | 75 - 125 |
| | | Spiked Blank | Dissolved Sulphate (SO4) | 2012/08/01 | | 103 | % | 80 - 120 |
| | | Method Blank | Dissolved Sulphate (SO4) | 2012/08/01 | ND, RDL=1 | | mg/L | |
| | | RPD [OH7509-01] | Dissolved Sulphate (SO4) | 2012/08/01 | 1.5 | | % | 20 |
| 2925466 | SAU | QC Standard | Alkalinity (Total as CaCO3) | 2012/08/01 | | 94 | % | 85 - 115 |
| | | Method Blank | Alkalinity (Total as CaCO3) | 2012/08/01 | ND, RDL=1.0 | | mg/L | |
| | | RPD [OH7506-01] | Alkalinity (Total as CaCO3) | 2012/08/01 | 2.5 | | % | 25 |
| 2925467 | SAU | QC Standard | Conductivity | 2012/08/01 | | 103 | % | 85 - 115 |
| | | Method Blank | Conductivity | 2012/08/01 | ND, RDL=1.0 | | umho/cm | |
| | | RPD [OH7506-01] | Conductivity | 2012/08/01 | 0.2 | | % | 25 |
| 2925468 | SAU | Matrix Spike | | | | | | |
| | | [OH7506-01] | Fluoride (F-) | 2012/08/01 | | 107 | % | 80 - 120 |
| | | Spiked Blank | Fluoride (F-) | 2012/08/01 | | 98 | % | 80 - 120 |
| | | Method Blank | Fluoride (F-) | 2012/08/01 | ND, RDL=0.10 | | mg/L | |
| | | RPD [OH7506-01] | Fluoride (F-) | 2012/08/01 | NC | | % | 20 |
| 2925952 | MC | Matrix Spike | Mercury (Hg) | 2012/08/02 | | 108 | % | 75 - 125 |
| | | Spiked Blank | Mercury (Hg) | 2012/08/02 | | 100 | % | 80 - 120 |
| | | Method Blank | Mercury (Hg) | 2012/08/02 | ND, RDL=0.1 | | ug/L | |
| | | RPD | Mercury (Hg) | 2012/08/02 | NC | | % | 20 |
| 2926022 | MC | Matrix Spike | | | | | | |
| | | [OH7511-06] | Mercury (Hg) | 2012/08/02 | | 115 | % | 75 - 125 |
| | | Spiked Blank | Mercury (Hg) | 2012/08/02 | | 105 | % | 80 - 120 |
| | | Method Blank | Mercury (Hg) | 2012/08/02 | ND, RDL=0.1 | | ug/L | |
| | | RPD [OH7511-06] | Mercury (Hg) | 2012/08/02 | NC | | % | 20 |
| 2926862 | AHA | Matrix Spike | | | | | | |
| | | [OH7514-05] | Total Phosphorus | 2012/08/02 | | 107 | % | 80 - 120 |
| | | QC Standard | Total Phosphorus | 2012/08/02 | | 107 | % | 85 - 115 |
| | | Spiked Blank | Total Phosphorus | 2012/08/02 | | 108 | % | 85 - 115 |
| | | Method Blank | Total Phosphorus | 2012/08/02 | ND, RDL=0.002 | | mg/L | |
| | | RPD [OH7514-05] | Total Phosphorus | 2012/08/02 | NC | | % | 20 |
| 2927005 | L_A | Matrix Spike | | | | | | |
| | | [OH7514-05] | Total Ammonia-N | 2012/08/05 | | 95 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: TB2B4281

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2927005 | L_A | Spiked Blank | Total Ammonia-N | 2012/08/05 | | 95 | % | 85 - 115 |
| | | Method Blank | Total Ammonia-N | 2012/08/05 | ND, RDL=0.050 | | mg/L | |
| | | RPD [OH7514-05] | Total Ammonia-N | 2012/08/05 | NC | | % | 20 |
| 2928376 | HRE | Matrix Spike | Dissolved Aluminum (Al) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Antimony (Sb) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Dissolved Arsenic (As) | 2012/08/03 | | 110 | % | 80 - 120 |
| | | | Dissolved Barium (Ba) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Dissolved Beryllium (Be) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Dissolved Bismuth (Bi) | 2012/08/03 | | 91 | % | 80 - 120 |
| | | | Dissolved Boron (B) | 2012/08/03 | | 100 | % | 80 - 120 |
| | | | Dissolved Cadmium (Cd) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Dissolved Calcium (Ca) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Dissolved Chromium (Cr) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Cobalt (Co) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Copper (Cu) | 2012/08/03 | | 93 | % | 80 - 120 |
| | | | Dissolved Iron (Fe) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Lead (Pb) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Lithium (Li) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Magnesium (Mg) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Dissolved Manganese (Mn) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Dissolved Molybdenum (Mo) | 2012/08/03 | | 105 | % | 80 - 120 |
| | | | Dissolved Nickel (Ni) | 2012/08/03 | | 94 | % | 80 - 120 |
| | | | Dissolved Phosphorus (P) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Dissolved Potassium (K) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Dissolved Selenium (Se) | 2012/08/03 | | 111 | % | 80 - 120 |
| | | | Dissolved Silicon (Si) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Silver (Ag) | 2012/08/03 | | 89 | % | 80 - 120 |
| | | | Dissolved Sodium (Na) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Dissolved Strontium (Sr) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Tellurium (Te) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Thallium (Tl) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Tin (Sn) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | | Dissolved Titanium (Ti) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Dissolved Tungsten (W) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Dissolved Uranium (U) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Vanadium (V) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Zinc (Zn) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Dissolved Zirconium (Zr) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | Spiked Blank | Dissolved Aluminum (Al) | 2012/08/03 | | 95 | % | 80 - 120 |
| | | | Dissolved Antimony (Sb) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Arsenic (As) | 2012/08/03 | | 100 | % | 80 - 120 |
| | | | Dissolved Barium (Ba) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Dissolved Beryllium (Be) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Dissolved Bismuth (Bi) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Boron (B) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Dissolved Cadmium (Cd) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Calcium (Ca) | 2012/08/03 | | 95 | % | 80 - 120 |
| | | | Dissolved Chromium (Cr) | 2012/08/03 | | 93 | % | 80 - 120 |
| | | | Dissolved Cobalt (Co) | 2012/08/03 | | 95 | % | 80 - 120 |
| | | | Dissolved Copper (Cu) | 2012/08/03 | | 95 | % | 80 - 120 |
| | | | Dissolved Iron (Fe) | 2012/08/03 | | 94 | % | 80 - 120 |
| | | | Dissolved Lead (Pb) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Dissolved Lithium (Li) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Magnesium (Mg) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Manganese (Mn) | 2012/08/03 | | 94 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: TB2B4281

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2928376 | HRE | Spiked Blank | Dissolved Molybdenum (Mo) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Dissolved Nickel (Ni) | 2012/08/03 | | 93 | % | 80 - 120 |
| | | | Dissolved Phosphorus (P) | 2012/08/03 | | 95 | % | 80 - 120 |
| | | | Dissolved Potassium (K) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Selenium (Se) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Silicon (Si) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Dissolved Silver (Ag) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Sodium (Na) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Strontium (Sr) | 2012/08/03 | | 94 | % | 80 - 120 |
| | | | Dissolved Tellurium (Te) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Dissolved Thallium (Tl) | 2012/08/03 | | 100 | % | 80 - 120 |
| | | | Dissolved Tin (Sn) | 2012/08/03 | | 100 | % | 80 - 120 |
| | | | Dissolved Titanium (Ti) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Dissolved Tungsten (W) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Dissolved Uranium (U) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Dissolved Vanadium (V) | 2012/08/03 | | 95 | % | 80 - 120 |
| | | | Dissolved Zinc (Zn) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Dissolved Zirconium (Zr) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | Method Blank | Dissolved Aluminum (Al) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Antimony (Sb) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Arsenic (As) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Barium (Ba) | 2012/08/03 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Beryllium (Be) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Bismuth (Bi) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Boron (B) | 2012/08/03 | ND, RDL=10 | | ug/L | |
| | | | Dissolved Cadmium (Cd) | 2012/08/03 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Calcium (Ca) | 2012/08/03 | ND, RDL=200 | | ug/L | |
| | | | Dissolved Chromium (Cr) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Cobalt (Co) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Copper (Cu) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Iron (Fe) | 2012/08/03 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Lead (Pb) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Lithium (Li) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Magnesium (Mg) | 2012/08/03 | ND, RDL=50 | | ug/L | |
| | | | Dissolved Manganese (Mn) | 2012/08/03 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Molybdenum (Mo) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Nickel (Ni) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Phosphorus (P) | 2012/08/03 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Potassium (K) | 2012/08/03 | ND, RDL=200 | | ug/L | |
| | | | Dissolved Selenium (Se) | 2012/08/03 | ND, RDL=2.0 | | ug/L | |
| | | | Dissolved Silicon (Si) | 2012/08/03 | ND, RDL=50 | | ug/L | |
| | | | Dissolved Silver (Ag) | 2012/08/03 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Sodium (Na) | 2012/08/03 | ND, RDL=100 | | ug/L | |
| | | | Dissolved Strontium (Sr) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Tellurium (Te) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Thallium (Tl) | 2012/08/03 | ND, RDL=0.050 | | ug/L | |
| | | | Dissolved Tin (Sn) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Titanium (Ti) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Tungsten (W) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Dissolved Uranium (U) | 2012/08/03 | ND, RDL=0.10 | | ug/L | |
| | | | Dissolved Vanadium (V) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Dissolved Zinc (Zn) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Dissolved Zirconium (Zr) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | RPD | Dissolved Lead (Pb) | 2012/08/03 | 0.2 | | % | 20 |
| 2928418 | ADA | Matrix Spike [OH7509-03] | Total Aluminum (Al) | 2012/08/03 | | NC | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: TB2B4281

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2928418 | ADA | Matrix Spike [OH7509-03] | Total Antimony (Sb) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/08/03 | | 100 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/08/03 | | 97 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/08/03 | | 100 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/08/03 | | 100 | % | 80 - 120 |
| | | | Total Molybdenum (Mo) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Total Selenium (Se) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Silver (Ag) | 2012/08/03 | | 98 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/08/03 | | NC | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/08/03 | | 99 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | Spiked Blank | Total Aluminum (Al) | 2012/08/03 | | 108 | % | 80 - 120 |
| | | | Total Antimony (Sb) | 2012/08/03 | | 107 | % | 80 - 120 |
| | | | Total Arsenic (As) | 2012/08/03 | | 105 | % | 80 - 120 |
| | | | Total Barium (Ba) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Beryllium (Be) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Total Bismuth (Bi) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Boron (B) | 2012/08/03 | | 96 | % | 80 - 120 |
| | | | Total Cadmium (Cd) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | | Total Calcium (Ca) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | | Total Chromium (Cr) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Total Cobalt (Co) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Copper (Cu) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Iron (Fe) | 2012/08/03 | | 105 | % | 80 - 120 |
| | | | Total Lead (Pb) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Lithium (Li) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Magnesium (Mg) | 2012/08/03 | | 108 | % | 80 - 120 |
| | | | Total Manganese (Mn) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Molybdenum (Mo) | 2012/08/03 | | 105 | % | 80 - 120 |
| | | | Total Nickel (Ni) | 2012/08/03 | | 101 | % | 80 - 120 |
| | | | Total Potassium (K) | 2012/08/03 | | 108 | % | 80 - 120 |
| | | | Total Silicon (Si) | 2012/08/03 | | 104 | % | 80 - 120 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: TB2B4281

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2928418 | ADA | Spiked Blank | Total Selenium (Se) | 2012/08/03 | | 105 | % | 80 - 120 |
| | | | Total Silver (Ag) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Sodium (Na) | 2012/08/03 | | 107 | % | 80 - 120 |
| | | | Total Strontium (Sr) | 2012/08/03 | | 107 | % | 80 - 120 |
| | | | Total Tellurium (Te) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Thallium (Tl) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Tin (Sn) | 2012/08/03 | | 106 | % | 80 - 120 |
| | | | Total Titanium (Ti) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | | Total Tungsten (W) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | | Total Uranium (U) | 2012/08/03 | | 105 | % | 80 - 120 |
| | | | Total Vanadium (V) | 2012/08/03 | | 104 | % | 80 - 120 |
| | | | Total Zinc (Zn) | 2012/08/03 | | 103 | % | 80 - 120 |
| | | | Total Zirconium (Zr) | 2012/08/03 | | 102 | % | 80 - 120 |
| | | Method Blank | Total Aluminum (Al) | 2012/08/03 | 5.1, RDL=5.0 | | ug/L | |
| | | | Total Antimony (Sb) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Total Arsenic (As) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Barium (Ba) | 2012/08/03 | ND, RDL=2.0 | | ug/L | |
| | | | Total Beryllium (Be) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Total Bismuth (Bi) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Boron (B) | 2012/08/03 | ND, RDL=10 | | ug/L | |
| | | | Total Cadmium (Cd) | 2012/08/03 | ND, RDL=0.10 | | ug/L | |
| | | | Total Calcium (Ca) | 2012/08/03 | ND, RDL=200 | | ug/L | |
| | | | Total Chromium (Cr) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Total Cobalt (Co) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Total Copper (Cu) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Iron (Fe) | 2012/08/03 | ND, RDL=100 | | ug/L | |
| | | | Total Lead (Pb) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Total Lithium (Li) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Total Magnesium (Mg) | 2012/08/03 | ND, RDL=50 | | ug/L | |
| | | | Total Manganese (Mn) | 2012/08/03 | ND, RDL=2.0 | | ug/L | |
| | | | Total Molybdenum (Mo) | 2012/08/03 | ND, RDL=0.50 | | ug/L | |
| | | | Total Nickel (Ni) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Potassium (K) | 2012/08/03 | ND, RDL=200 | | ug/L | |
| | | | Total Silicon (Si) | 2012/08/03 | ND, RDL=50 | | ug/L | |
| | | | Total Selenium (Se) | 2012/08/03 | ND, RDL=2.0 | | ug/L | |
| | | | Total Silver (Ag) | 2012/08/03 | ND, RDL=0.10 | | ug/L | |
| | | | Total Sodium (Na) | 2012/08/03 | ND, RDL=100 | | ug/L | |
| | | | Total Strontium (Sr) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Tellurium (Te) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Thallium (Tl) | 2012/08/03 | ND, RDL=0.050 | | ug/L | |
| | | | Total Tin (Sn) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Titanium (Ti) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Total Tungsten (W) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | | Total Uranium (U) | 2012/08/03 | ND, RDL=0.10 | | ug/L | |
| | | | Total Vanadium (V) | 2012/08/03 | 0.77, RDL=0.50 | | ug/L | |
| | | | Total Zinc (Zn) | 2012/08/03 | ND, RDL=5.0 | | ug/L | |
| | | | Total Zirconium (Zr) | 2012/08/03 | ND, RDL=1.0 | | ug/L | |
| | | RPD [OH7509-03] | Total Aluminum (Al) | 2012/08/03 | 4.4 | | % | 20 |
| | | | Total Antimony (Sb) | 2012/08/03 | NC | | % | 20 |
| | | | Total Arsenic (As) | 2012/08/03 | 0.8 | | % | 20 |
| | | | Total Barium (Ba) | 2012/08/03 | 4.2 | | % | 20 |
| | | | Total Beryllium (Be) | 2012/08/03 | NC | | % | 20 |
| | | | Total Bismuth (Bi) | 2012/08/03 | NC | | % | 20 |
| | | | Total Boron (B) | 2012/08/03 | NC | | % | 20 |
| | | | Total Cadmium (Cd) | 2012/08/03 | NC | | % | 20 |



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Agnico-Eagle
Attention: Philip Roy
Client Project #: LEACHATE CELL
P.O. #:
Site Location: MELIADINE

## Quality Assurance Report (Continued)

Maxxam Job Number: TB2B4281

| QA/QC Batch Num | Init | QC Type | Parameter | Date Analyzed yyyy/mm/dd | Value | Recovery | Units | QC Limits |
|---|---|---|---|---|---|---|---|---|
| 2928418 | ADA | RPD [OH7509-03] | Total Calcium (Ca) | 2012/08/03 | 0.3 | | % | 20 |
| | | | Total Chromium (Cr) | 2012/08/03 | NC | | % | 20 |
| | | | Total Cobalt (Co) | 2012/08/03 | 0.9 | | % | 20 |
| | | | Total Copper (Cu) | 2012/08/03 | 3.9 | | % | 20 |
| | | | Total Iron (Fe) | 2012/08/03 | 0.2 | | % | 20 |
| | | | Total Lead (Pb) | 2012/08/03 | 1.8 | | % | 20 |
| | | | Total Lithium (Li) | 2012/08/03 | 1.4 | | % | 20 |
| | | | Total Magnesium (Mg) | 2012/08/03 | 1.1 | | % | 20 |
| | | | Total Manganese (Mn) | 2012/08/03 | 2.8 | | % | 20 |
| | | | Total Molybdenum (Mo) | 2012/08/03 | NC | | % | 20 |
| | | | Total Nickel (Ni) | 2012/08/03 | 3.7 | | % | 20 |
| | | | Total Potassium (K) | 2012/08/03 | 0.6 | | % | 20 |
| | | | Total Silicon (Si) | 2012/08/03 | 3.6 | | % | 20 |
| | | | Total Selenium (Se) | 2012/08/03 | NC | | % | 20 |
| | | | Total Silver (Ag) | 2012/08/03 | NC | | % | 20 |
| | | | Total Sodium (Na) | 2012/08/03 | 0.8 | | % | 20 |
| | | | Total Strontium (Sr) | 2012/08/03 | 1.0 | | % | 20 |
| | | | Total Tellurium (Te) | 2012/08/03 | NC | | % | 20 |
| | | | Total Thallium (Tl) | 2012/08/03 | NC | | % | 20 |
| | | | Total Tin (Sn) | 2012/08/03 | NC | | % | 20 |
| | | | Total Titanium (Ti) | 2012/08/03 | 14.5 | | % | 20 |
| | | | Total Tungsten (W) | 2012/08/03 | NC | | % | 20 |
| | | | Total Uranium (U) | 2012/08/03 | 3.0 | | % | 20 |
| | | | Total Vanadium (V) | 2012/08/03 | 0.2 | | % | 20 |
| | | | Total Zinc (Zn) | 2012/08/03 | NC | | % | 20 |
| | | | Total Zirconium (Zr) | 2012/08/03 | NC | | % | 20 |

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.
Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.
QC Standard: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Spiked Blank: A blank matrix to which a known amount of the analyte has been added. Used to evaluate analyte recovery.
Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was not sufficiently significant to permit a reliable recovery calculation.
NC (RPD): The RPD was not calculated. The level of analyte detected in the parent sample and its duplicate was not sufficiently significant to permit a reliable calculation.

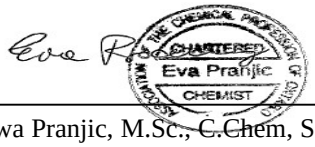


Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxamanalytics.com

# Validation Signature Page

**Maxxam Job #: B2B4281**

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).




Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



Maxxam Analytics International Corporation o/a Maxxam Analytics 32 Colonnade Rd, Unit #1000, Nepean, ON K2E 7J6 Phone: 613 274-0573 Fax: 613 274-0574 Website: www.maxxamanalytics.com

# CHAIN OF CUSTODY RECORD

Maxxam 6740 Campobello Road, Mississauga, ON L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: (800) 563-6266

Page ____ of ____

| INVOICE INFORMATION: | REPORT INFORMATION (if differs from invoice): | PROJECT INFORMATION: | MAXXAM JOB NUMBER: |
|---|---|---|---|
| Company Name: AGNICO-EAGLE | Com 28-Jul-12 10:05 | Quotation #: b24404 | |
| Contact Name: PHILIP ROY/ALANDRE GAUTHIER/DAVID FRENETTE | Con Julie Clement | P.O. #: | |
| Address: RANKIN INLET, NU, CAN, X0C 0G0 | Add B2B4281 | Project #: leachate cell | CHAIN OF CUSTODY # : |
| Phone: Fax: | Pho DES ENV-907 | Site Location: meliadine | |
| Email: philip.roy@agnico-eagle.com ; alexandre.gauthier@agnico-eagle.com ; da | Ema | Site #: | |
| | | Sampled By: PR/AD | |

***Note: For MOE Regulated Drinking Water samples, please use the Drinking Water COC.***

**Regulation 153 (2011)**

- [ ] Table 1 [ ] Res/Park [ ] Med/Fine
- [ ] Table 2 [ ] Ind/Comm [ ] Coarse
- [ ] Table 3 [ ] Agri/Other
- [ ] Table ___

For RSC: [ ] Yes [ ] No

**Other Regulations**

- [X] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA
- [ ] PWQO Municipality:
- [ ] Other (Specify):

Include Criteria on Certificate of Analysis (Y/N)? ____

SAMPLES MUST BE KEPT COOL ( < 10 °C ) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED ( Please be specific ):

| | Sample Identification | Date Sampled | Time Sampled | Matrix (GW, SW, Soil, etc.) | MOE Regulated Drinking Water ? ( Y / N ) | Metals Field Filtered ? ( Y / N ) | DISSOLVED METALS BY ICPMS | ALKALINITY, CHLORIDE, SULPHATE | COLOURIMETRY, CONDUCTIVITY | FLUORIDE, NO3, NO2, Ph | MERCURY | TOTAL METAL ANALYSIS BY ICPMS | AMMONIA-N, TOTAL PHOSPHORUS | TDS | TSS | # of Cont. | COMMENTS / TAT COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | WR1 | 2012-07-24 | 21:30 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | field pH = 6.96 ; temp = 10.7 ; µs =1142 |
| 2 | WR1-DUP | 2012-07-24 | 21:30 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | |
| 3 | WR2 | 2012-07-24 | 21:41 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | field pH = 7.13 ; temp = 10.1 ; µs =1130 |
| 4 | WR2-DUP | 2012-07-24 | 21:41 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | |
| 5 | LODE 1000 | 2012-07-24 | 22:06 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | field pH = 7.44 ; temp = 10.9 ; µs =1314 |
| 6 | LODE 1000-DUP | 2012-07-24 | 22:06 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | |
| 7 | LODE 1100 | 2012-07-24 | 21:53 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | field pH = 7.36 ; temp = 10.9 ; µs =1187 |
| 8 | LODE 1100-DUP | 2012-07-24 | 21:53 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | |
| 9 | LEACHATE WATER | 2012-07-24 | 22:56 | WATER | N | Y | X | X | X | X | X | X | X | X | X | 6 | field pH = 7.60 ; temp = 10.1 ; µs =1124 |
| 10 | | | | | | | | | | | | | | | | | SHIP IN OTTAWA ICE PACKS |

TURNAROUND TIME (TAT) REQUIRED:

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

**Regular (Standard) TAT:** [X]
( 5-7 working days for most tests)

**Rush TAT:**
***Samples must be received by 3pm to guarantee your TAT***
Rush Confirmation #: PN ____
[ ] 1 day [ ] 2 days [ ] 3 days
DATE Req'd: ____

TAT for certain tests are > 5 days.
Please contact your Project Manager for details.

| RELINQUISHED BY: (Signature/Print) | Date (YYYY/MM/DD) | Time: | RECEIVED BY: (Signature/Print) | Date (YYYY/MM/DD) | Time: |
|---|---|---|---|---|---|
| Philip Roy | 2012-07-24 | 23:45 | [signature] | 2012/07/27 | 13:45 |
| | | | ds Deepak Sahni | 2012/07/28 | 10:05 |
| | | | | | |

# JARS USED AND NOT SUBMITTED

Laboratory Use Only

| Custody Seal | Yes | No | Temperature (°C) on Receipt |
|---|---|---|---|
| Present | | ✓ | 11.10.12 |
| Intact | | ✓ | |

MANDATORY SECTIONS IN GREY MUST BE FILLED OUT. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS



9/9/10c 11,15,10
10/9/10c

# H.3 Tiriganiaq Pad Static Test Results

**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA (Price 1997)**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Friday, September 02, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10518-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: TP-PAD-11-05 | 13: TP-PAD-11-09 | 14: TP-PAD-11-12 | 15: TP-PAD-11-07 | 16: TP-PAD-11-08 | 17: TP-PAD-11-10 | 18: TP-PAD-11-11 | 19: TP-PAD-11 COMPOSITE |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA |
| Paste pH [units] | 9.27 | 9.25 | 9.22 | 9.02 | 9.13 | 8.92 | 9.32 | 9.12 |
| Fizz Rate [---] | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Sample weight [g] | 1.98 | 1.99 | 1.99 | 1.99 | 1.99 | 1.98 | 1.99 | 1.95 |
| HCl added | 57.70 | 60.60 | 39.80 | 30.90 | 28.70 | 51.30 | 42.20 | 42.20 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to pH=8.3 [mL] | 34.17 | 34.82 | 23.50 | 14.61 | 14.42 | 22.11 | 26.63 | 21.10 |
| Final pH [units] | 1.54 | 1.52 | 1.56 | 1.92 | 1.91 | 1.81 | 1.53 | 1.72 |
| NP [t CaCO3/1000 t] | 59.4 | 64.8 | 41.0 | 40.9 | 35.9 | 73.7 | 39.1 | 54.1 |
| AP [t CaCO3/1000 t] | 3.93 | 6.24 | 4.00 | 4.19 | 4.17 | 4.31 | 2.45 | 3.61 |
| Net NP [t CaCO3/1000 t] | 55.5 | 58.6 | 37.0 | 36.7 | 31.7 | 69.4 | 36.7 | 50.5 |
| NP/AP [ratio] | 15.1 | 10.4 | 10.2 | 9.76 | 8.62 | 17.1 | 16.0 | 15.0 |
| Sulphur (total) [%] | 0.182 | 0.239 | 0.180 | 0.189 | 0.173 | 0.191 | 0.134 | 0.180 |
| Acid Leachable SO4-S [%] | 0.06 | 0.04 | 0.05 | 0.06 | 0.04 | 0.05 | 0.06 | 0.06 |
| Sulphide [%] | 0.13 | 0.20 | 0.13 | 0.13 | 0.13 | 0.14 | 0.08 | 0.12 |
| Carbon (total) [%] | 0.685 | 0.818 | 0.532 | 0.527 | 0.884 | 1.12 | 0.429 | 0.705 |
| Carbonate [%] | 2.59 | 3.08 | 1.77 | 1.90 | 1.37 | 3.93 | 1.53 | 2.46 |

OnLine LIMS


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Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365



*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS



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**Modified ABA (Price 1997)**

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Attn : Josee Noel

Division LaRonde 20, Route 395
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J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Friday, September 02, 2011

**Date Rec. :** 29 July 2011
**LR Report:** **CA10518-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: LODE 1000 ORE | 6: LODE 1100 ORE | 7: TP-PAD-11-06 | 8: TP-PAD-11-04 | 9: TP-PAD-11-03 | 10: TP-PAD-11-01 | 11: TP-PAD-11-02 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA |
| Paste pH [units] | 11-Aug-11 | 15:37 | 8.55 | 8.79 | 9.09 | 9.08 | 9.34 | 9.06 | 8.37 |
| Fizz Rate [---] | 11-Aug-11 | 15:37 | 3 | 2 | 3 | 3 | 3 | 3 | 3 |
| Sample weight [g] | 11-Aug-11 | 15:37 | 1.98 | 1.99 | 1.96 | 1.99 | 2.03 | 2.00 | 1.99 |
| HCl added | 11-Aug-11 | 15:37 | 90.90 | 70.40 | 32.20 | 42.50 | 47.00 | 43.00 | 44.20 |
| HCl [Normality] | 11-Aug-11 | 15:37 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 11-Aug-11 | 15:37 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to pH=8.3 [mL] | 11-Aug-11 | 15:37 | 42.90 | 41.79 | 14.59 | 21.88 | 28.35 | 22.24 | 22.97 |
| Final pH [units] | 11-Aug-11 | 15:37 | 1.56 | 1.51 | 1.94 | 1.63 | 1.50 | 1.68 | 1.66 |
| NP [t CaCO3/1000 t] | 11-Aug-11 | 15:37 | 121 | 71.9 | 44.9 | 51.8 | 45.9 | 51.9 | 53.3 |
| AP [t CaCO3/1000 t] | 31-Aug-11 | 16:44 | 32.8 | 53.4 | 5.07 | 5.90 | 3.04 | 8.13 | 4.96 |
| Net NP [t CaCO3/1000 t] | 31-Aug-11 | 16:44 | 88.4 | 18.5 | 39.8 | 45.9 | 42.9 | 43.8 | 48.3 |
| NP/AP [ratio] | 31-Aug-11 | 16:44 | 3.69 | 1.35 | 8.85 | 8.78 | 15.1 | 6.38 | 10.7 |
| Sulphur (total) [%] | 18-Aug-11 | 15:06 | 1.09 | 1.73 | 0.236 | 0.232 | 0.173 | 0.314 | 0.224 |
| Acid Leachable SO4-S [%] | 31-Aug-11 | 16:43 | 0.04 | 0.03 | 0.07 | 0.04 | 0.08 | 0.05 | 0.06 |
| Sulphide [%] | 31-Aug-11 | 16:29 | 1.05 | 1.71 | 0.16 | 0.19 | 0.10 | 0.26 | 0.16 |
| Carbon (total) [%] | 18-Aug-11 | 15:06 | 2.16 | 1.35 | 0.618 | 0.703 | 0.516 | 0.716 | 0.724 |
| Carbonate [%] | 24-Aug-11 | 14:27 | 7.74 | 3.91 | 2.12 | 2.47 | 1.92 | 2.33 | 1.95 |

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*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, August 17, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10519-JUL11**
**Reference:** Meliadine

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# CERTIFICATE OF ANALYSIS
## Final Report

| Sample ID | SiO2 % | Al2O3 % | Fe2O3 % | MgO % | CaO % | Na2O % | K2O % | TiO2 % | P2O5 % | MnO % | Cr2O3 % | V2O5 % | LOI % | Sum % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5: LODE 1000 ORE | 63.2 | 9.75 | 6.51 | 2.38 | 5.16 | 0.72 | 2.09 | 0.49 | 0.10 | 0.10 | 0.04 | 0.02 | 7.89 | 98.5 |
| 6: LODE 1100 ORE | 58.4 | 9.45 | 17.3 | 1.62 | 3.06 | 1.23 | 1.67 | 0.25 | 0.13 | 0.04 | 0.02 | < 0.01 | 4.87 | 98.0 |
| 7: TP-PAD-11-06 | 65.2 | 15.4 | 5.37 | 2.06 | 1.96 | 3.57 | 1.94 | 0.53 | 0.12 | 0.04 | 0.04 | 0.01 | 3.87 | 100.1 |
| 8: TP-PAD-11-04 | 64.4 | 15.2 | 5.66 | 2.44 | 2.18 | 2.97 | 2.14 | 0.57 | 0.11 | 0.05 | 0.03 | 0.02 | 4.19 | 100.0 |
| 9: TP-PAD-11-03 | 58.4 | 15.1 | 8.63 | 3.77 | 4.98 | 2.71 | 1.63 | 0.78 | 0.12 | 0.11 | 0.04 | 0.03 | 3.81 | 100.2 |
| 10: TP-PAD-11-01 | 64.9 | 14.9 | 5.66 | 2.35 | 2.26 | 3.17 | 1.95 | 0.57 | 0.11 | 0.05 | 0.04 | 0.02 | 4.19 | 100.2 |
| 11: TP-PAD-11-02 | 61.3 | 16.8 | 5.90 | 2.52 | 2.26 | 2.86 | 2.56 | 0.64 | 0.13 | 0.05 | 0.04 | 0.02 | 4.78 | 99.8 |
| 12: TP-PAD-11-05 | 60.4 | 15.3 | 7.50 | 3.03 | 3.17 | 3.23 | 1.80 | 0.70 | 0.12 | 0.08 | 0.03 | 0.03 | 4.34 | 99.7 |
| 13: TP-PAD-11-09 | 60.4 | 15.6 | 6.80 | 2.89 | 3.26 | 2.79 | 2.24 | 0.66 | 0.11 | 0.07 | 0.04 | 0.03 | 4.67 | 99.6 |
| 14: TP-PAD-11-12 | 64.3 | 15.9 | 5.59 | 2.38 | 1.78 | 2.91 | 2.26 | 0.59 | 0.11 | 0.04 | 0.04 | 0.02 | 3.99 | 99.8 |
| 15: TP-PAD-11-07 | 60.2 | 17.8 | 6.26 | 2.75 | 1.96 | 2.30 | 2.89 | 0.68 | 0.12 | 0.05 | 0.04 | 0.02 | 4.38 | 99.4 |
| 16: TP-PAD-11-08 | 59.9 | 16.0 | 8.91 | 2.74 | 1.60 | 2.81 | 2.20 | 0.61 | 0.14 | 0.04 | 0.03 | 0.02 | 4.96 | 100.0 |
| 17: TP-PAD-11-10 | 61.0 | 12.7 | 10.3 | 2.65 | 3.65 | 2.07 | 1.57 | 0.56 | 0.16 | 0.09 | 0.02 | 0.03 | 5.08 | 99.9 |
| 18: TP-PAD-11-11 | 61.2 | 16.0 | 7.33 | 3.13 | 2.51 | 3.72 | 1.52 | 0.70 | 0.11 | 0.07 | 0.03 | 0.02 | 3.68 | 100.1 |
| 19: TP-PAD-11 COMPOSITE | 61.3 | 15.7 | 7.21 | 2.93 | 2.97 | 2.80 | 2.07 | 0.65 | 0.11 | 0.06 | 0.04 | 0.02 | 4.39 | 100.3 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, August 24, 2011

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**Date Rec. :** 29 July 2011
**LR Report:** **CA10520-JUL11**
**Reference:** Meliadine

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: TP-PAD-11-02 | 13: TP-PAD-11-05 | 14: TP-PAD-11-09 | 15: TP-PAD-11-12 | 16: TP-PAD-11-07 | 17: TP-PAD-11-08 | 18: TP-PAD-11-10 | 19: TP-PAD-11-11 | 20: TP-PAD-11 COMPOSITE |
|---|---|---|---|---|---|---|---|---|---|
| % Moisture (wet wt) [%] | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mercury [µg/g] | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aluminum [µg/g] | 82000 | 72000 | 76000 | 67000 | 88000 | 74000 | 59000 | 78000 | 76000 |
| Gold [µg/g] | 0.11 | 0.13 | 0.11 | 0.09 | 0.09 | 0.10 | 0.15 | 0.09 | 0.10 |
| Arsenic [µg/g] | 100 | 45 | 630 | 76 | 68 | 90 | 470 | 33 | 160 |
| Barium [µg/g] | 780 | 750 | 570 | 720 | 660 | 720 | 490 | 460 | 670 |
| Beryllium [µg/g] | 1.00 | 0.79 | 0.87 | 0.94 | 1.1 | 0.97 | 0.70 | 0.74 | 0.93 |
| Bismuth [µg/g] | 0.17 | 0.10 | 0.14 | 0.16 | 0.15 | 0.09 | 0.13 | < 0.09 | < 0.09 |
| Calcium [µg/g] | 16000 | 21000 | 22000 | 11000 | 14000 | 10000 | 24000 | 17000 | 20000 |
| Cadmium [µg/g] | 0.29 | 0.27 | 0.24 | 0.26 | 0.31 | 0.27 | 0.29 | 0.24 | 0.29 |
| Cobalt [µg/g] | 20 | 24 | 24 | 17 | 20 | 18 | 19 | 22 | 21 |
| Chromium [µg/g] | 220 | 150 | 170 | 170 | 180 | 150 | 140 | 150 | 170 |
| Copper [µg/g] | 46 | 42 | 58 | 35 | 55 | 29 | 32 | 47 | 40 |
| Iron [µg/g] | 40000 | 50000 | 47000 | 33000 | 43000 | 58000 | 69000 | 50000 | 49000 |
| Potassium [µg/g] | 22000 | 15000 | 19000 | 17000 | 24000 | 18000 | 13000 | 13000 | 17000 |
| Lithium [µg/g] | 33 | 35 | 34 | 30 | 35 | 34 | 28 | 31 | 34 |
| Magnesium [µg/g] | 14000 | 17000 | 16000 | 11000 | 15000 | 14000 | 14000 | 17000 | 16000 |
| Manganese [µg/g] | 350 | 490 | 470 | 320 | 340 | 330 | 650 | 440 | 450 |
| Molybdenum [µg/g] | 1.6 | 1.8 | 1.1 | 2.2 | 1.5 | 2.2 | 1.1 | 1.5 | 1.9 |

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**LR Report :** **CA10520-JUL11**

| Analysis | 12: TP-PAD-11-02 | 13: TP-PAD-11-05 | 14: TP-PAD-11-09 | 15: TP-PAD-11-12 | 16: TP-PAD-11-07 | 17: TP-PAD-11-08 | 18: TP-PAD-11-10 | 19: TP-PAD-11-11 | 20: TP-PAD-11 COMPOSITE |
|---|---|---|---|---|---|---|---|---|---|
| Sodium [µg/g] | 19000 | 21000 | 18000 | 17000 | 15000 | 17000 | 13000 | 24000 | 18000 |
| Nickel [µg/g] | 61 | 56 | 59 | 57 | 65 | 61 | 47 | 58 | 58 |
| Lead [µg/g] | 19 | 11 | 11 | 14 | 13 | 11 | 22 | 12 | 14 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 0.5 | 0.7 | < 0.5 | 0.5 | < 0.5 | 0.6 | < 0.5 | < 0.5 | < 0.5 |
| Strontium [µg/g] | 340 | 280 | 300 | 320 | 270 | 260 | 280 | 270 | 300 |
| Titanium [µg/g] | 1800 | 3100 | 2900 | 1500 | 1900 | 2000 | 2200 | 3200 | 2400 |
| Thallium [µg/g] | 0.43 | 0.36 | 0.42 | 0.37 | 0.43 | 0.34 | 0.26 | 0.28 | 0.34 |
| Uranium [µg/g] | 1.7 | 1.3 | 1.3 | 1.6 | 1.7 | 1.5 | 1.1 | 1.3 | 1.4 |
| Vanadium [µg/g] | 94 | 130 | 120 | 88 | 110 | 93 | 110 | 130 | 110 |
| Yttrium [µg/g] | 7.4 | 10 | 8.5 | 7.1 | 7.4 | 7.3 | 9.6 | 9.5 | 8.4 |
| Zinc [µg/g] | 79 | 75 | 77 | 67 | 84 | 74 | 76 | 79 | 79 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, August 24, 2011

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Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10520-JUL11**
**Reference:** Meliadine

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: LODE 1000 ORE | 6: LODE 1100 ORE | 7: LODE 1000 ORE (MOIST) | 8: TP-PAD-11-06 | 9: TP-PAD-11-04 | 10: TP-PAD-11-03 | 11: TP-PAD-11-01 |
|---|---|---|---|---|---|---|---|---|---|
| % Moisture (wet wt) [%] | 11-Aug-11 | 10:12 | --- | --- | 3.59 | --- | --- | --- | --- |
| Mercury [µg/g] | 16-Aug-11 | 14:48 | < 0.1 | < 0.1 | --- | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aluminum [µg/g] | 12-Aug-11 | 13:15 | 48000 | 43000 | --- | 67000 | 69000 | 69000 | 67000 |
| Gold [µg/g] | 17-Aug-11 | 13:10 | 17 | 3.1 | --- | 0.20 | 0.12 | 0.13 | 0.25 |
| Arsenic [µg/g] | 11-Aug-11 | 14:12 | 9400 | 5000 | --- | 88 | 74 | 32 | 42 |
| Barium [µg/g] | 11-Aug-11 | 14:12 | 320 | 580 | --- | 630 | 630 | 1100 | 710 |
| Beryllium [µg/g] | 11-Aug-11 | 14:12 | 0.93 | 1.0 | --- | 0.98 | 0.95 | 0.75 | 0.86 |
| Bismuth [µg/g] | 11-Aug-11 | 14:12 | 1.7 | 4.0 | --- | 0.22 | 0.15 | 0.11 | 0.19 |
| Calcium [µg/g] | 12-Aug-11 | 13:15 | 37000 | 20000 | --- | 12000 | 14000 | 32000 | 14000 |
| Cadmium [µg/g] | 12-Aug-11 | 15:33 | 2.2 | 0.59 | --- | 0.26 | 0.29 | 0.24 | 0.32 |
| Cobalt [µg/g] | 11-Aug-11 | 14:12 | 21 | 6.4 | --- | 15 | 17 | 28 | 18 |
| Chromium [µg/g] | 11-Aug-11 | 14:12 | 200 | 150 | --- | 160 | 180 | 150 | 200 |
| Copper [µg/g] | 12-Aug-11 | 13:15 | 130 | 29 | --- | 28 | 37 | 53 | 44 |
| Iron [µg/g] | 12-Aug-11 | 13:15 | 46000 | 110000 | --- | 33000 | 37000 | 55000 | 36000 |
| Potassium [µg/g] | 12-Aug-11 | 13:15 | 18000 | 13000 | --- | 15000 | 17000 | 13000 | 15000 |
| Lithium [µg/g] | 11-Aug-11 | 14:12 | 12 | 15 | --- | 27 | 29 | 36 | 26 |
| Magnesium [µg/g] | 12-Aug-11 | 13:16 | 12000 | 7500 | --- | 10000 | 12000 | 20000 | 12000 |
| Manganese [µg/g] | 11-Aug-11 | 14:13 | 650 | 330 | --- | 290 | 370 | 630 | 320 |
| Molybdenum [µg/g] | 11-Aug-11 | 14:13 | 6.2 | 9.6 | --- | 1.4 | 2.3 | 0.9 | 2.3 |

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**LR Report :** **CA10520-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: LODE 1000 ORE | 6: LODE 1100 ORE | 7: LODE 1000 ORE (MOIST) | 8: TP-PAD-11-06 | 9: TP-PAD-11-04 | 10: TP-PAD-11-03 | 11: TP-PAD-11-01 |
|---|---|---|---|---|---|---|---|---|---|
| Sodium [µg/g] | 12-Aug-11 | 13:16 | 4600 | 7300 | --- | 21000 | 18000 | 17000 | 19000 |
| Nickel [µg/g] | 11-Aug-11 | 14:13 | 53 | 20 | --- | 50 | 57 | 57 | 53 |
| Lead [µg/g] | 11-Aug-11 | 14:13 | 210 | 2600 | --- | 22 | 17 | 15 | 17 |
| Antimony [µg/g] | 11-Aug-11 | 14:13 | 1.8 | 1.7 | --- | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 11-Aug-11 | 14:13 | < 0.7 | < 0.7 | --- | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 11-Aug-11 | 14:13 | 1.7 | < 0.5 | --- | 0.7 | < 0.5 | < 0.5 | < 0.5 |
| Strontium [µg/g] | 11-Aug-11 | 14:13 | 140 | 300 | --- | 320 | 290 | 370 | 330 |
| Titanium [µg/g] | 12-Aug-11 | 13:16 | 1500 | 1300 | --- | 1400 | 1900 | 2900 | 2300 |
| Thallium [µg/g] | 11-Aug-11 | 14:13 | 0.64 | 0.39 | --- | 0.31 | 0.34 | 0.31 | 0.33 |
| Uranium [µg/g] | 11-Aug-11 | 14:13 | 0.99 | 1.3 | --- | 1.5 | 1.6 | 1.0 | 1.8 |
| Vanadium [µg/g] | 11-Aug-11 | 14:13 | 84 | 42 | --- | 74 | 84 | 140 | 78 |
| Yttrium [µg/g] | 11-Aug-11 | 14:13 | 7.0 | 5.6 | --- | 6.4 | 6.5 | 11 | 7.0 |
| Zinc [µg/g] | 12-Aug-11 | 13:16 | 580 | 53 | --- | 56 | 66 | 76 | 68 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SFE (4:1) 0.45µm, 24hr**

Wednesday, August 17, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
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Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10521-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: TP-PAD-11-05 | 13: TP-PAD-11-09 | 14: TP-PAD-11-12 | 15: TP-PAD-11-07 | 16: TP-PAD-11-08 | 17: TP-PAD-11-10 | 18: TP-PAD-11-11 | 19: TP-PAD-11 COMPOSITE |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| Sample weight [g] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume D.I. Water [mL] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| Initial pH [units] | 9.8 | 9.8 | 9.7 | 9.4 | 9.6 | 9.7 | 9.8 | 9.6 |
| Final pH [units] | 9.41 | 9.35 | 9.37 | 9.15 | 9.13 | 9.06 | 9.48 | 9.21 |
| pH [no unit] | 7.85 | 7.85 | 7.99 | 7.75 | 7.82 | 7.91 | 7.90 | 7.81 |
| Conductivity [uS/cm] | 90 | 91 | 90 | 153 | 101 | 116 | 82 | 120 |
| Sulphate [mg/L] | 3.2 | 2.2 | 2.1 | 12 | 4.8 | 3.2 | 1.6 | 3.5 |
| Chloride [mg/L] | 0.6 | 0.5 | 0.8 | 14 | 0.7 | 3.6 | 0.7 | 11 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.76 | 0.91 | 1.00 | 1.00 | 0.71 | 0.71 | 0.92 | 0.74 |
| Arsenic [mg/L] | 0.0238 | 0.329 | 0.0576 | 0.0212 | 0.0260 | 0.0410 | 0.0266 | 0.0345 |
| Boron [mg/L] | 0.0076 | 0.0112 | 0.0081 | 0.0111 | 0.0107 | 0.0104 | 0.0078 | 0.0117 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 5.45 | 7.22 | 7.48 | 14.1 | 9.74 | 10.9 | 5.74 | 9.97 |
| Cadmium [mg/L] | 0.000003 | 0.000004 | < 0.000003 | 0.000017 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000077 | 0.000055 | 0.000067 | 0.000100 | 0.000067 | 0.000073 | 0.000051 | 0.000080 |

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**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10521-JUL11**

| Analysis | 12: TP-PAD-11-05 | 13: TP-PAD-11-09 | 14: TP-PAD-11-12 | 15: TP-PAD-11-07 | 16: TP-PAD-11-08 | 17: TP-PAD-11-10 | 18: TP-PAD-11-11 | 19: TP-PAD-11 COMPOSITE |
|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0007 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 0.005 | 0.007 | 0.011 | 0.003 | 0.007 | 0.005 | 0.010 | 0.004 |
| Potassium [mg/L] | 9.94 | 9.77 | 8.25 | 12.0 | 8.11 | 8.73 | 8.03 | 9.92 |
| Lithium [mg/L] | 0.002 | 0.001 | < 0.001 | 0.001 | 0.001 | < 0.001 | < 0.001 | 0.002 |
| Magnesium [mg/L] | 0.885 | 1.16 | 1.25 | 1.67 | 1.61 | 2.30 | 0.891 | 1.76 |
| Manganese [mg/L] | 0.00130 | 0.00064 | 0.00059 | 0.00065 | 0.00062 | 0.00133 | 0.00036 | 0.00205 |
| Molybdenum [mg/L] | 0.00034 | 0.00039 | 0.00035 | 0.00059 | 0.00088 | 0.00045 | 0.00032 | 0.00055 |
| Sodium [mg/L] | 3.90 | 4.45 | 4.47 | 4.52 | 4.00 | 3.99 | 5.65 | 5.19 |
| Nickel [mg/L] | 0.0005 | 0.0001 | < 0.0001 | 0.0001 | 0.0003 | 0.0002 | < 0.0001 | 0.0002 |
| Lead [mg/L] | 0.00011 | 0.00009 | 0.00007 | 0.00006 | 0.00010 | 0.00005 | 0.00007 | 0.00008 |
| Antimony [mg/L] | 0.0027 | 0.0024 | 0.0028 | 0.0026 | 0.0020 | 0.0025 | 0.0025 | 0.0032 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 0.00002 | 0.00003 | < 0.00001 | 0.00003 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0304 | 0.0345 | 0.0296 | 0.0494 | 0.0385 | 0.0516 | 0.0228 | 0.0566 |
| Titanium [mg/L] | 0.0004 | 0.0003 | 0.0006 | 0.0002 | 0.0003 | 0.0002 | 0.0003 | 0.0002 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000038 | 0.000045 | 0.000070 | 0.000046 | 0.000037 | 0.000028 | 0.000018 | 0.000051 |
| Vanadium [mg/L] | 0.00291 | 0.00379 | 0.00319 | 0.00164 | 0.00088 | 0.00111 | 0.00430 | 0.00198 |
| Tungsten [mg/L] | 0.00077 | 0.00046 | 0.00037 | 0.00060 | 0.00044 | 0.00046 | 0.00065 | 0.00051 |
| Yttrium [mg/L] | 0.000006 | 0.000002 | 0.000007 | 0.000003 | 0.000012 | 0.000003 | 0.000004 | 0.000008 |
| Zinc [mg/L] | 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

Wednesday, August 17, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10521-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: LODE 1000 ORE | 6: LODE 1100 ORE | 7: TP-PAD-11-06 | 8: TP-PAD-11-04 | 9: TP-PAD-11-03 | 10: TP-PAD-11-01 | 11: TP-PAD-11-02 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | | |
| Sample weight [g] | 11-Aug-11 | 15:42 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume D.I. Water [mL] | 11-Aug-11 | 15:42 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| Initial pH [units] | 11-Aug-11 | 15:42 | 9.0 | 9.4 | 9.7 | 9.8 | 9.7 | 9.7 | 9.0 |
| Final pH [units] | 11-Aug-11 | 15:42 | 8.54 | 8.46 | 9.24 | 9.30 | 9.39 | 9.24 | 8.71 |
| pH [no unit] | 16-Aug-11 | 11:41 | 7.84 | 7.96 | 7.91 | 7.96 | 7.77 | 7.80 | 7.49 |
| Conductivity [uS/cm] | 16-Aug-11 | 11:41 | 394 | 225 | 104 | 99 | 107 | 104 | 429 |
| Sulphate [mg/L] | 17-Aug-11 | 12:47 | 65 | 24 | 5.4 | 2.5 | 4.1 | 4.4 | 4.0 |
| Chloride [mg/L] | 17-Aug-11 | 12:47 | 29 | 2.7 | 2.2 | 0.7 | 8.6 | 5.1 | 100 |
| Mercury [mg/L] | 15-Aug-11 | 13:43 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 15-Aug-11 | 12:57 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 16-Aug-11 | 12:16 | 0.36 | 0.29 | 0.88 | 0.91 | 0.81 | 0.74 | 0.47 |
| Arsenic [mg/L] | 15-Aug-11 | 12:58 | 0.286 | 0.214 | 0.0335 | 0.0379 | 0.0141 | 0.0259 | 0.0172 |
| Boron [mg/L] | 15-Aug-11 | 12:58 | 0.0341 | 0.0112 | 0.0083 | 0.0096 | 0.0176 | 0.0092 | 0.0212 |
| Beryllium [mg/L] | 15-Aug-11 | 12:58 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 15-Aug-11 | 12:58 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 16-Aug-11 | 12:16 | 40.0 | 25.3 | 9.22 | 8.05 | 7.66 | 9.24 | 50.5 |
| Cadmium [mg/L] | 15-Aug-11 | 12:58 | 0.000006 | < 0.000003 | 0.000003 | < 0.000003 | < 0.000003 | 0.000006 | < 0.000003 |
| Cobalt [mg/L] | 15-Aug-11 | 12:58 | 0.000312 | 0.000110 | 0.000078 | 0.000069 | 0.000061 | 0.000075 | 0.000187 |

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SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10521-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: LODE 1000 ORE | 6: LODE 1100 ORE | 7: TP-PAD-11-06 | 8: TP-PAD-11-04 | 9: TP-PAD-11-03 | 10: TP-PAD-11-01 | 11: TP-PAD-11-02 |
|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | 15-Aug-11 | 12:58 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 15-Aug-11 | 12:58 | 0.0008 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 16-Aug-11 | 12:17 | 0.004 | 0.004 | 0.011 | 0.009 | 0.011 | 0.009 | < 0.002 |
| Potassium [mg/L] | 16-Aug-11 | 12:17 | 15.3 | 16.5 | 7.93 | 9.05 | 10.7 | 7.54 | 15.5 |
| Lithium [mg/L] | 15-Aug-11 | 12:58 | 0.006 | 0.003 | 0.002 | 0.002 | 0.003 | 0.003 | 0.014 |
| Magnesium [mg/L] | 16-Aug-11 | 12:17 | 9.39 | 4.58 | 1.72 | 1.68 | 1.26 | 1.74 | 5.16 |
| Manganese [mg/L] | 15-Aug-11 | 12:58 | 0.01706 | 0.00538 | 0.00087 | 0.00094 | 0.00063 | 0.00092 | 0.00345 |
| Molybdenum [mg/L] | 15-Aug-11 | 12:58 | 0.00831 | 0.00193 | 0.00066 | 0.00064 | 0.00067 | 0.00044 | 0.00061 |
| Sodium [mg/L] | 16-Aug-11 | 12:17 | 10.3 | 2.44 | 4.61 | 4.07 | 4.91 | 4.44 | 5.78 |
| Nickel [mg/L] | 15-Aug-11 | 12:58 | 0.0006 | 0.0002 | 0.0002 | 0.0002 | < 0.0001 | 0.0001 | 0.0006 |
| Lead [mg/L] | 15-Aug-11 | 12:58 | 0.00057 | 0.00014 | 0.00009 | 0.00006 | 0.00006 | 0.00017 | 0.00014 |
| Antimony [mg/L] | 15-Aug-11 | 12:58 | 0.0035 | 0.0021 | 0.0024 | 0.0027 | 0.0024 | 0.0020 | 0.0024 |
| Selenium [mg/L] | 15-Aug-11 | 12:58 | 0.004 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 15-Aug-11 | 12:58 | 0.00004 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 16-Aug-11 | 12:17 | 0.160 | 0.195 | 0.0468 | 0.0388 | 0.0653 | 0.0591 | 0.509 |
| Titanium [mg/L] | 15-Aug-11 | 12:58 | 0.0002 | 0.0002 | 0.0004 | 0.0006 | 0.0007 | 0.0005 | 0.0002 |
| Thallium [mg/L] | 15-Aug-11 | 12:58 | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 15-Aug-11 | 12:58 | 0.000499 | 0.000142 | 0.000103 | 0.000081 | 0.000029 | 0.000088 | 0.000033 |
| Vanadium [mg/L] | 15-Aug-11 | 12:58 | 0.00072 | 0.00012 | 0.00162 | 0.00234 | 0.00355 | 0.00170 | 0.00126 |
| Tungsten [mg/L] | 15-Aug-11 | 12:58 | 0.00219 | 0.00111 | 0.00049 | 0.00045 | 0.00094 | 0.00054 | 0.00037 |
| Yttrium [mg/L] | 15-Aug-11 | 12:58 | 0.000004 | 0.000003 | 0.000018 | 0.000010 | 0.000007 | 0.000012 | 0.000004 |
| Zinc [mg/L] | 15-Aug-11 | 12:58 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA (minus 2mm)**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

10200, route de Preissac, Rouyn-Noranda
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

Sunday, February 05, 2012

**Date Rec. :** 26 January 2012
**LR Report:** **CA11297-JAN12**
**Reference:** Meliadine PO#: 264488

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP-PAD-11 COMPOSITE | 6: TP-PAD-11-02 | 7: TP-PAD-11-03 | 8: TP-PAD-11-06 | 9: TP-PAD-11-08 | 10: TP-PAD-11-10 | 11: TP-PAD-11-12 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA |
| Paste pH [units] | 03-Feb-12 | 11:28 | 8.93 | 8.23 | 9.13 | 9.10 | 8.88 | 8.68 | 9.18 |
| Fizz Rate [---] | 03-Feb-12 | 11:28 | 3 | 4 | 4 | 3 | 3 | 3 | 3 |
| Sample weight [g] | 03-Feb-12 | 11:28 | 2.01 | 2.03 | 1.97 | 2.01 | 2.05 | 1.98 | 2.00 |
| HCl added | 03-Feb-12 | 11:28 | 40.90 | 40.00 | 40.00 | 38.30 | 27.90 | 43.70 | 30.20 |
| HCl [Normality] | 03-Feb-12 | 11:28 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 03-Feb-12 | 11:28 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to pH=8.3 [mL] | 03-Feb-12 | 11:28 | 20.15 | 20.40 | 19.36 | 20.35 | 13.88 | 16.27 | 14.74 |
| Final pH [units] | 03-Feb-12 | 11:28 | 1.65 | 1.57 | 1.73 | 1.55 | 1.73 | 1.88 | 1.69 |
| NP [t CaCO3/1000 t] | 03-Feb-12 | 11:28 | 51.6 | 48.3 | 52.4 | 44.7 | 34.2 | 69.3 | 38.7 |
| AP [t CaCO3/1000 t] | 03-Feb-12 | 11:28 | 5.60 | 4.42 | 5.59 | 3.81 | 2.14 | 4.04 | 3.24 |
| Net NP [t CaCO3/1000 t] | 03-Feb-12 | 11:28 | 46.0 | 43.9 | 46.8 | 40.9 | 32.1 | 65.3 | 35.5 |
| NP/AP [ratio] | 03-Feb-12 | 11:28 | 9.21 | 10.9 | 9.37 | 11.7 | 16.0 | 17.2 | 11.9 |
| Sulphur (total) [%] | 31-Jan-12 | 14:18 | 0.254 | 0.236 | 0.234 | 0.275 | 0.174 | 0.210 | 0.217 |
| Acid Leachable SO4-S [%] | 31-Jan-12 | 14:20 | 0.07 | 0.09 | 0.05 | 0.15 | 0.11 | 0.08 | 0.11 |
| Sulphide [%] | 31-Jan-12 | 14:11 | 0.18 | 0.14 | 0.18 | 0.12 | 0.07 | 0.13 | 0.10 |
| Carbon (total) [%] | 31-Jan-12 | 14:18 | 0.627 | 0.605 | 0.580 | 0.576 | 0.695 | 0.994 | 0.467 |
| Carbonate [%] | 31-Jan-12 | 14:20 | 2.30 | 1.83 | 2.29 | 2.23 | 1.65 | 4.00 | 1.86 |

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA (minus 2mm)**

**LR Report :** **CA11297-JAN12**

Analysis performed on minus 2mm fraction

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Bulk Metals (minus 2mm)**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

10200, route de Preissac, Rouyn-Noranda
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

February-03-12

**Date Rec. :** 26 January 2012
**LR Report:** **CA11298-JAN12**
**Reference:** Meliadine PO#: 264488

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP-PAD-11 COMPOSITE | 6: TP-PAD-11-02 | 7: TP-PAD-11-03 | 8: TP-PAD-11-06 | 9: TP-PAD-11-08 | 10: TP-PAD-11-10 | 11: TP-PAD-11-12 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA |
| Mercury [µg/g] | 31-Jan-12 | 17:11 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aluminum [µg/g] | 03-Feb-12 | 09:49 | 74000 | 84000 | 72000 | 76000 | 63000 | 63000 | 71000 |
| Arsenic [µg/g] | 03-Feb-12 | 13:54 | 160 | 94 | 33 | 81 | 100 | 400 | 77 |
| Barium [µg/g] | 03-Feb-12 | 13:54 | 600 | 720 | 820 | 580 | 530 | 470 | 590 |
| Beryllium [µg/g] | 03-Feb-12 | 13:54 | 0.89 | 1.1 | 0.80 | 1.00 | 0.90 | 0.76 | 0.90 |
| Bismuth [µg/g] | 03-Feb-12 | 13:54 | 0.16 | 0.14 | 0.14 | 0.11 | < 0.09 | 0.11 | < 0.09 |
| Calcium [µg/g] | 03-Feb-12 | 09:49 | 18000 | 15000 | 33000 | 14000 | 9300 | 25000 | 12000 |
| Cadmium [µg/g] | 03-Feb-12 | 13:54 | 0.25 | 0.27 | 0.25 | 0.25 | 0.20 | 0.27 | 0.23 |
| Cobalt [µg/g] | 03-Feb-12 | 13:54 | 19 | 19 | 26 | 16 | 15 | 19 | 16 |
| Chromium [µg/g] | 03-Feb-12 | 13:54 | 120 | 140 | 120 | 120 | 110 | 120 | 120 |
| Copper [µg/g] | 03-Feb-12 | 09:49 | 55 | 47 | 68 | 39 | 33 | 41 | 39 |
| Iron [µg/g] | 03-Feb-12 | 09:49 | 46000 | 42000 | 55000 | 40000 | 45000 | 64000 | 36000 |
| Potassium [µg/g] | 03-Feb-12 | 09:49 | 20000 | 26000 | 17000 | 20000 | 17000 | 16000 | 20000 |
| Lithium [µg/g] | 03-Feb-12 | 13:55 | 32 | 35 | 35 | 28 | 30 | 29 | 29 |
| Magnesium [µg/g] | 03-Feb-12 | 09:49 | 15000 | 15000 | 19000 | 12000 | 13000 | 15000 | 12000 |
| Manganese [µg/g] | 03-Feb-12 | 13:55 | 400 | 330 | 590 | 300 | 270 | 580 | 280 |
| Molybdenum [µg/g] | 03-Feb-12 | 13:55 | 1.9 | 1.7 | 1.6 | 1.6 | 1.6 | 1.5 | 1.7 |
| Sodium [µg/g] | 03-Feb-12 | 09:49 | 18000 | 19000 | 17000 | 22000 | 14000 | 14000 | 17000 |

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Lakefield - Ontario - KOL 2HO
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**Bulk Metals (minus 2mm)**

**LR Report :** **CA11298-JAN12**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP-PAD-11 COMPOSITE | 6: TP-PAD-11-02 | 7: TP-PAD-11-03 | 8: TP-PAD-11-06 | 9: TP-PAD-11-08 | 10: TP-PAD-11-10 | 11: TP-PAD-11-12 |
|---|---|---|---|---|---|---|---|---|---|
| Nickel [µg/g] | 03-Feb-12 | 13:55 | 54 | 58 | 53 | 49 | 49 | 46 | 50 |
| Lead [µg/g] | 03-Feb-12 | 13:55 | 19 | 27 | 23 | 19 | 10 | 33 | 14 |
| Antimony [µg/g] | 03-Feb-12 | 13:55 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 03-Feb-12 | 13:55 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 03-Feb-12 | 13:55 | 1.0 | 1.0 | 0.9 | 0.9 | < 0.5 | 0.7 | < 0.5 |
| Strontium [µg/g] | 03-Feb-12 | 13:55 | 290 | 340 | 340 | 310 | 210 | 280 | 280 |
| Titanium [µg/g] | 03-Feb-12 | 09:49 | 2400 | 1900 | 3000 | 1800 | 1800 | 2400 | 1600 |
| Thallium [µg/g] | 03-Feb-12 | 13:55 | 0.38 | 0.48 | 0.32 | 0.35 | 0.30 | 0.29 | 0.36 |
| Uranium [µg/g] | 03-Feb-12 | 13:55 | 1.4 | 1.7 | 1.1 | 1.4 | 1.2 | 1.2 | 1.4 |
| Vanadium [µg/g] | 03-Feb-12 | 13:55 | 100 | 100 | 130 | 82 | 83 | 100 | 86 |
| Zinc [µg/g] | 03-Feb-12 | 09:49 | 95 | 89 | 81 | 72 | 73 | 81 | 75 |

Analysis performed on minus 2mm fraction

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

February-02-12

**Agnico Eagle Mines Limited**
Attn : Josee Noel

10200, route de Preissac
Rouyn-Noranda, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 26 January 2012
**LR Report:** **CA11299-JAN12**
**Reference:** Meliadine PO#: 264488

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: TP-PAD-11 COMPOSITE | 6: TP-PAD-11-02 | 7: TP-PAD-11-03 | 8: TP-PAD-11-06 | 9: TP-PAD-11-08 | 10: TP-PAD-11-10 | 11: TP-PAD-11-12 |
|---|---|---|---|---|---|---|---|
| Sample Date & Time | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA |
| SiO2 [%] | 61.2 | 60.4 | 58.4 | 63.8 | 59.7 | 60.5 | 64.0 |
| Al2O3 [%] | 15.8 | 17.2 | 15.1 | 15.7 | 16.2 | 13.2 | 15.9 |
| Fe2O3 [%] | 7.04 | 6.17 | 8.12 | 5.85 | 8.21 | 9.50 | 5.73 |
| MgO [%] | 2.72 | 2.59 | 3.43 | 2.15 | 2.78 | 2.64 | 2.32 |
| CaO [%] | 2.72 | 2.16 | 4.80 | 2.06 | 1.65 | 3.60 | 1.82 |
| Na2O [%] | 2.95 | 2.90 | 2.77 | 3.47 | 2.92 | 2.20 | 2.93 |
| K2O [%] | 2.15 | 2.66 | 1.77 | 2.06 | 2.28 | 1.72 | 2.31 |
| TiO2 [%] | 0.66 | 0.66 | 0.76 | 0.55 | 0.63 | 0.59 | 0.60 |
| P2O5 [%] | 0.12 | 0.13 | 0.12 | 0.12 | 0.15 | 0.16 | 0.11 |
| MnO [%] | 0.05 | 0.05 | 0.09 | 0.04 | 0.05 | 0.09 | 0.04 |
| Cr2O3 [%] | 0.03 | 0.02 | 0.02 | 0.03 | 0.02 | 0.02 | 0.02 |
| V2O5 [%] | 0.02 | 0.02 | 0.04 | 0.02 | 0.03 | 0.03 | 0.01 |
| LOI [%] | 4.23 | 4.41 | 3.97 | 3.90 | 4.46 | 5.10 | 3.69 |
| Sum [%] | 99.7 | 99.4 | 99.4 | 99.7 | 99.1 | 99.4 | 99.5 |
| Weight [g] | 1927 | 5128 | 5912 | 3891 | 3973 | 3462 | 2781 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS


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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

February-09-12

**Agnico Eagle Mines Limited**
Attn : Josee Noel

10200, route de Preissac, Rouyn-Noranda
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 26 January 2012
**LR Report:** **CA11300-JAN12**
**Reference:** Meliadine PO#: 264488

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP-PAD-11 COMPOSITE | 6: TP-PAD-11-02 | 7: TP-PAD-11-03 | 8: TP-PAD-11-06 | 9: TP-PAD-11-08 | 10: TP-PAD-11-10 | 11: TP-PAD-11-12 |
|---|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA | Date: NA |
| Sample weight [g] | 03-Feb-12 | 11:34 | 250 | 250 | 250 | 250 | 250 | 250 | 250 |
| Volume D.I. Water [mL] | 03-Feb-12 | 11:34 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Initial pH [units] | 03-Feb-12 | 11:34 | 9.33 | 8.76 | 9.38 | 9.59 | 9.31 | 9.41 | 9.68 |
| Final pH [units] | 03-Feb-12 | 11:34 | 8.98 | 8.50 | 9.10 | 9.10 | 8.98 | 8.96 | 9.27 |
| pH [no unit] | 07-Feb-12 | 11:53 | 7.77 | 7.46 | 7.81 | 7.85 | 7.71 | 7.78 | 7.97 |
| Conductivity [µS/cm] | 07-Feb-12 | 11:53 | 208 | 777 | 193 | 139 | 156 | 188 | 115 |
| Alkalinity [mg/L as CaCO3] | 07-Feb-12 | 11:53 | 36 | 25 | 32 | 42 | 39 | 45 | 41 |
| Sulphate [mg/L] | 07-Feb-12 | 13:48 | 17 | 19 | 24 | 17 | 28 | 28 | 8.1 |
| Chloride [mg/L] | 09-Feb-12 | 08:39 | 24 | 210 | 17 | 1.8 | 1.4 | 6.3 | 1.8 |
| Mercury [mg/L] | 07-Feb-12 | 15:11 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 06-Feb-12 | 12:15 | 0.69 | 0.35 | 0.66 | 0.86 | 0.66 | 0.70 | 1.09 |
| Arsenic [mg/L] | 09-Feb-12 | 12:33 | 0.0191 | 0.0123 | 0.0105 | 0.0283 | 0.0252 | 0.0213 | 0.0342 |
| Boron [mg/L] | 09-Feb-12 | 12:33 | 0.0177 | 0.0327 | 0.0246 | 0.0148 | 0.0164 | 0.0144 | 0.0104 |
| Beryllium [mg/L] | 09-Feb-12 | 12:33 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 09-Feb-12 | 12:33 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 06-Feb-12 | 12:15 | 18.0 | 97.9 | 14.5 | 11.8 | 14.8 | 17.2 | 8.97 |
| Cadmium [mg/L] | 09-Feb-12 | 12:33 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 09-Feb-12 | 12:33 | 0.000045 | 0.000221 | 0.000027 | 0.000029 | 0.000061 | 0.000063 | 0.000047 |

OnLine LIMS



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P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (3:1) 0.45µm, 24hr (minus 2mm)**

**LR Report :** **CA11300-JAN12**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP-PAD-11 COMPOSITE | 6: TP-PAD-11-02 | 7: TP-PAD-11-03 | 8: TP-PAD-11-06 | 9: TP-PAD-11-08 | 10: TP-PAD-11-10 | 11: TP-PAD-11-12 |
|---|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | 09-Feb-12 | 12:33 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 09-Feb-12 | 12:33 | 0.0008 | 0.0009 | < 0.0005 | 0.0006 | 0.0010 | 0.0007 | < 0.0005 |
| Iron [mg/L] | 06-Feb-12 | 12:15 | < 0.003 | < 0.003 | < 0.003 | 0.004 | 0.004 | < 0.003 | 0.023 |
| Potassium [mg/L] | 06-Feb-12 | 12:15 | 13.6 | 23.5 | 14.7 | 10.8 | 10.8 | 11.9 | 11.6 |
| Lithium [mg/L] | 09-Feb-12 | 12:33 | 0.004 | 0.023 | 0.007 | 0.003 | 0.002 | 0.002 | 0.002 |
| Magnesium [mg/L] | 06-Feb-12 | 12:15 | 3.46 | 9.16 | 3.18 | 2.49 | 2.91 | 4.11 | 1.79 |
| Manganese [mg/L] | 09-Feb-12 | 12:34 | 0.00145 | 0.00964 | 0.00140 | 0.00088 | 0.00124 | 0.00216 | 0.00065 |
| Molybdenum [mg/L] | 09-Feb-12 | 12:34 | 0.00239 | 0.00138 | 0.00153 | 0.00140 | 0.00195 | 0.00110 | 0.00098 |
| Sodium [mg/L] | 06-Feb-12 | 12:15 | 5.01 | 8.87 | 6.09 | 4.60 | 3.37 | 5.16 | 4.22 |
| Nickel [mg/L] | 09-Feb-12 | 12:34 | 0.0005 | 0.0004 | 0.0003 | 0.0001 | 0.0009 | 0.0004 | < 0.0001 |
| Lead [mg/L] | 09-Feb-12 | 12:34 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00003 | 0.00004 | < 0.00002 | 0.00007 |
| Antimony [mg/L] | 09-Feb-12 | 12:34 | 0.0052 | 0.0030 | 0.0032 | 0.0032 | 0.0028 | 0.0035 | 0.0039 |
| Selenium [mg/L] | 09-Feb-12 | 12:34 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 09-Feb-12 | 12:34 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 06-Feb-12 | 12:15 | 0.124 | 1.01 | 0.146 | 0.0650 | 0.0717 | 0.0842 | 0.0400 |
| Titanium [mg/L] | 09-Feb-12 | 12:34 | 0.0002 | 0.0004 | 0.0002 | 0.0003 | 0.0003 | 0.0002 | 0.0004 |
| Thallium [mg/L] | 09-Feb-12 | 12:34 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 09-Feb-12 | 12:34 | 0.000081 | 0.000209 | 0.000061 | 0.000119 | 0.000141 | 0.000154 | 0.000125 |
| Vanadium [mg/L] | 09-Feb-12 | 12:34 | 0.00115 | 0.00091 | 0.00185 | 0.00144 | 0.00088 | 0.00107 | 0.00262 |
| Zinc [mg/L] | 09-Feb-12 | 12:34 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

Analysis performed on minus 2mm fraction

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS


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**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Wednesday, August 24, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10520-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: LODE 1000 ORE | 6: LODE 1100 ORE | 7: LODE 1000 ORE (MOIST) | 8: TP-PAD-11-06 | 9: TP-PAD-11-04 | 10: TP-PAD-11-03 | 11: TP-PAD-11-01 |
|---|---|---|---|---|---|---|---|---|---|
| % Moisture (wet wt) [%] | 11-Aug-11 | 10:12 | --- | --- | 3.59 | --- | --- | --- | --- |
| Mercury [µg/g] | 16-Aug-11 | 14:48 | < 0.1 | < 0.1 | --- | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Aluminum [µg/g] | 12-Aug-11 | 13:15 | 48000 | 43000 | --- | 67000 | 69000 | 69000 | 67000 |
| Gold [µg/g] | 17-Aug-11 | 13:10 | 17 | 3.1 | --- | 0.20 | 0.12 | 0.13 | 0.25 |
| Arsenic [µg/g] | 11-Aug-11 | 14:12 | 9400 | 5000 | --- | 88 | 74 | 32 | 42 |
| Barium [µg/g] | 11-Aug-11 | 14:12 | 320 | 580 | --- | 630 | 630 | 1100 | 710 |
| Beryllium [µg/g] | 11-Aug-11 | 14:12 | 0.93 | 1.0 | --- | 0.98 | 0.95 | 0.75 | 0.86 |
| Bismuth [µg/g] | 11-Aug-11 | 14:12 | 1.7 | 4.0 | --- | 0.22 | 0.15 | 0.11 | 0.19 |
| Calcium [µg/g] | 12-Aug-11 | 13:15 | 37000 | 20000 | --- | 12000 | 14000 | 32000 | 14000 |
| Cadmium [µg/g] | 12-Aug-11 | 15:33 | 2.2 | 0.59 | --- | 0.26 | 0.29 | 0.24 | 0.32 |
| Cobalt [µg/g] | 11-Aug-11 | 14:12 | 21 | 6.4 | --- | 15 | 17 | 28 | 18 |
| Chromium [µg/g] | 11-Aug-11 | 14:12 | 200 | 150 | --- | 160 | 180 | 150 | 200 |
| Copper [µg/g] | 12-Aug-11 | 13:15 | 130 | 29 | --- | 28 | 37 | 53 | 44 |
| Iron [µg/g] | 12-Aug-11 | 13:15 | 46000 | 110000 | --- | 33000 | 37000 | 55000 | 36000 |
| Potassium [µg/g] | 12-Aug-11 | 13:15 | 18000 | 13000 | --- | 15000 | 17000 | 13000 | 15000 |
| Lithium [µg/g] | 11-Aug-11 | 14:12 | 12 | 15 | --- | 27 | 29 | 36 | 26 |
| Magnesium [µg/g] | 12-Aug-11 | 13:16 | 12000 | 7500 | --- | 10000 | 12000 | 20000 | 12000 |
| Manganese [µg/g] | 11-Aug-11 | 14:13 | 650 | 330 | --- | 290 | 370 | 630 | 320 |
| Molybdenum [µg/g] | 11-Aug-11 | 14:13 | 6.2 | 9.6 | --- | 1.4 | 2.3 | 0.9 | 2.3 |

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Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10520-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: LODE 1000 ORE | 6: LODE 1100 ORE | 7: LODE 1000 ORE (MOIST) | 8: TP-PAD-11-06 | 9: TP-PAD-11-04 | 10: TP-PAD-11-03 | 11: TP-PAD-11-01 |
|---|---|---|---|---|---|---|---|---|---|
| Sodium [µg/g] | 12-Aug-11 | 13:16 | 4600 | 7300 | --- | 21000 | 18000 | 17000 | 19000 |
| Nickel [µg/g] | 11-Aug-11 | 14:13 | 53 | 20 | --- | 50 | 57 | 57 | 53 |
| Lead [µg/g] | 11-Aug-11 | 14:13 | 210 | 2600 | --- | 22 | 17 | 15 | 17 |
| Antimony [µg/g] | 11-Aug-11 | 14:13 | 1.8 | 1.7 | --- | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 11-Aug-11 | 14:13 | < 0.7 | < 0.7 | --- | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 11-Aug-11 | 14:13 | 1.7 | < 0.5 | --- | 0.7 | < 0.5 | < 0.5 | < 0.5 |
| Strontium [µg/g] | 11-Aug-11 | 14:13 | 140 | 300 | --- | 320 | 290 | 370 | 330 |
| Titanium [µg/g] | 12-Aug-11 | 13:16 | 1500 | 1300 | --- | 1400 | 1900 | 2900 | 2300 |
| Thallium [µg/g] | 11-Aug-11 | 14:13 | 0.64 | 0.39 | --- | 0.31 | 0.34 | 0.31 | 0.33 |
| Uranium [µg/g] | 11-Aug-11 | 14:13 | 0.99 | 1.3 | --- | 1.5 | 1.6 | 1.0 | 1.8 |
| Vanadium [µg/g] | 11-Aug-11 | 14:13 | 84 | 42 | --- | 74 | 84 | 140 | 78 |
| Yttrium [µg/g] | 11-Aug-11 | 14:13 | 7.0 | 5.6 | --- | 6.4 | 6.5 | 11 | 7.0 |
| Zinc [µg/g] | 12-Aug-11 | 13:16 | 580 | 53 | --- | 56 | 66 | 76 | 68 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS



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**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

Wednesday, August 17, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 July 2011
**LR Report:** **CA10521-JUL11**
**Reference:** Meliadine

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 12: TP-PAD-11-05 | 13: TP-PAD-11-09 | 14: TP-PAD-11-12 | 15: TP-PAD-11-07 | 16: TP-PAD-11-08 | 17: TP-PAD-11-10 | 18: TP-PAD-11-11 | 19: TP-PAD-11 COMPOSITE |
|---|---|---|---|---|---|---|---|---|
| Sample Date & Time | | | | | | | | |
| Sample weight [g] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume D.I. Water [mL] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| Initial pH [units] | 9.8 | 9.8 | 9.7 | 9.4 | 9.6 | 9.7 | 9.8 | 9.6 |
| Final pH [units] | 9.41 | 9.35 | 9.37 | 9.15 | 9.13 | 9.06 | 9.48 | 9.21 |
| pH [no unit] | 7.85 | 7.85 | 7.99 | 7.75 | 7.82 | 7.91 | 7.90 | 7.81 |
| Conductivity [uS/cm] | 90 | 91 | 90 | 153 | 101 | 116 | 82 | 120 |
| Sulphate [mg/L] | 3.2 | 2.2 | 2.1 | 12 | 4.8 | 3.2 | 1.6 | 3.5 |
| Chloride [mg/L] | 0.6 | 0.5 | 0.8 | 14 | 0.7 | 3.6 | 0.7 | 11 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.76 | 0.91 | 1.00 | 1.00 | 0.71 | 0.71 | 0.92 | 0.74 |
| Arsenic [mg/L] | 0.0238 | 0.329 | 0.0576 | 0.0212 | 0.0260 | 0.0410 | 0.0266 | 0.0345 |
| Boron [mg/L] | 0.0076 | 0.0112 | 0.0081 | 0.0111 | 0.0107 | 0.0104 | 0.0078 | 0.0117 |
| Beryllium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 5.45 | 7.22 | 7.48 | 14.1 | 9.74 | 10.9 | 5.74 | 9.97 |
| Cadmium [mg/L] | 0.000003 | 0.000004 | < 0.000003 | 0.000017 | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 0.000077 | 0.000055 | 0.000067 | 0.000100 | 0.000067 | 0.000073 | 0.000051 | 0.000080 |

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P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**SFE (4:1) 0.45µm, 24hr**

**LR Report :** **CA10521-JUL11**

| Analysis | 12: TP-PAD-11-05 | 13: TP-PAD-11-09 | 14: TP-PAD-11-12 | 15: TP-PAD-11-07 | 16: TP-PAD-11-08 | 17: TP-PAD-11-10 | 18: TP-PAD-11-11 | 19: TP-PAD-11 COMPOSITE |
|---|---|---|---|---|---|---|---|---|
| Chromium [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | 0.0007 | < 0.0005 | < 0.0005 | < 0.0005 |
| Iron [mg/L] | 0.005 | 0.007 | 0.011 | 0.003 | 0.007 | 0.005 | 0.010 | 0.004 |
| Potassium [mg/L] | 9.94 | 9.77 | 8.25 | 12.0 | 8.11 | 8.73 | 8.03 | 9.92 |
| Lithium [mg/L] | 0.002 | 0.001 | < 0.001 | 0.001 | 0.001 | < 0.001 | < 0.001 | 0.002 |
| Magnesium [mg/L] | 0.885 | 1.16 | 1.25 | 1.67 | 1.61 | 2.30 | 0.891 | 1.76 |
| Manganese [mg/L] | 0.00130 | 0.00064 | 0.00059 | 0.00065 | 0.00062 | 0.00133 | 0.00036 | 0.00205 |
| Molybdenum [mg/L] | 0.00034 | 0.00039 | 0.00035 | 0.00059 | 0.00088 | 0.00045 | 0.00032 | 0.00055 |
| Sodium [mg/L] | 3.90 | 4.45 | 4.47 | 4.52 | 4.00 | 3.99 | 5.65 | 5.19 |
| Nickel [mg/L] | 0.0005 | 0.0001 | < 0.0001 | 0.0001 | 0.0003 | 0.0002 | < 0.0001 | 0.0002 |
| Lead [mg/L] | 0.00011 | 0.00009 | 0.00007 | 0.00006 | 0.00010 | 0.00005 | 0.00007 | 0.00008 |
| Antimony [mg/L] | 0.0027 | 0.0024 | 0.0028 | 0.0026 | 0.0020 | 0.0025 | 0.0025 | 0.0032 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 0.00002 | 0.00003 | < 0.00001 | 0.00003 | 0.00002 | < 0.00001 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 0.0304 | 0.0345 | 0.0296 | 0.0494 | 0.0385 | 0.0516 | 0.0228 | 0.0566 |
| Titanium [mg/L] | 0.0004 | 0.0003 | 0.0006 | 0.0002 | 0.0003 | 0.0002 | 0.0003 | 0.0002 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000038 | 0.000045 | 0.000070 | 0.000046 | 0.000037 | 0.000028 | 0.000018 | 0.000051 |
| Vanadium [mg/L] | 0.00291 | 0.00379 | 0.00319 | 0.00164 | 0.00088 | 0.00111 | 0.00430 | 0.00198 |
| Tungsten [mg/L] | 0.00077 | 0.00046 | 0.00037 | 0.00060 | 0.00044 | 0.00046 | 0.00065 | 0.00051 |
| Yttrium [mg/L] | 0.000006 | 0.000002 | 0.000007 | 0.000003 | 0.000012 | 0.000003 | 0.000004 | 0.000008 |
| Zinc [mg/L] | 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS



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# H.4 Overburden Static Test Results

**SGS Canada Inc.**
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA (Price 1997)**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Friday, November 11, 2011

**Date Rec. :** 13 October 2011
**LR Report:** **CA11187-OCT11**
**Reference:** AEM Soil Samples

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 13: TP11-06 SA#1 | 14: TP11-07 SA#1 | 15: TP11-07 SA#2 | 16: TP11-08 SA#1 | 17: TP11-08 SA#2 | 18: TP11-09 SA#1 | 19: TP11-09 SA#2 | 20: TP11-10 SA#1 | 21: TP11-10 SA#2 | 22: TP11-12 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Paste pH [units] | 8.58 | 7.69 | 8.23 | 7.45 | 7.64 | 8.12 | 8.58 | 5.52 | 6.28 | 8.33 |
| Fizz Rate [---] | 3 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 3 |
| Sample weight [g] | 1.99 | 2.04 | 2.03 | 1.99 | 2.02 | 2.01 | 1.98 | 1.96 | 1.97 | 1.96 |
| HCl added [mL] | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 27.80 | 26.60 | 20.00 | 20.00 |
| HCl [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 7.13 | 17.47 | 15.35 | 16.99 | 17.16 | 11.32 | 10.81 | 31.36 | 18.09 | 7.92 |
| Final pH [units] | 1.91 | 1.16 | 1.27 | 1.17 | 1.18 | 1.61 | 1.70 | 1.58 | 1.19 | 1.67 |
| NP [t CaCO3/1000 t] | 32 | 6.2 | 11 | 7.6 | 7.0 | 22 | 43 | -12 | 4.8 | 31 |
| AP [t CaCO3/1000 t] | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 |
| Net NP [t CaCO3/1000 t] | 32.0 | 5.89 | 11.1 | 7.29 | 6.69 | 21.3 | 42.6 | -12.4 | 4.49 | 30.5 |
| NP/AP [ratio] | 104 | 20.0 | 36.8 | 24.5 | 22.6 | 69.7 | 138 | -39.0 | 15.5 | 99.4 |
| Sulphur (total) [%] | < 0.005 | 0.007 | 0.009 | < 0.005 | 0.007 | 0.034 | < 0.005 | < 0.005 | < 0.005 | 0.024 |
| Acid Leachable SO4-S [%] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | 0.03 | < 0.01 | < 0.01 | < 0.01 | 0.02 |
| Sulphide [%] | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Carbon (total) [%] | 0.487 | 0.200 | 0.298 | 0.222 | 0.614 | 0.708 | 0.588 | 29.8 | 0.355 | 0.403 |
| Carbonate [%] | 1.59 | 0.038 | 0.400 | 0.034 | 0.030 | 0.877 | 2.05 | 0.342 | 0.031 | 1.58 |
| Total Inorganic Carbon [%] | 0.320 | 0.010 | 0.080 | 0.010 | 0.010 | 0.180 | 0.410 | 0.070 | 0.010 | 0.320 |

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*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Modified ABA (Price 1997)**

**Agnico Eagle Mines Limited**
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J0Y 1C0,

Phone: (819) 759-3700 x5821
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Friday, November 11, 2011

**Date Rec. :** 13 October 2011
**LR Report:** **CA11187-OCT11**
**Reference:** AEM Soil Samples

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP11-01 SA#2 | 6: TP11-01 SA#3 | 7: TP11-02 SA#1 | 8: TP11-02 SA#2 | 9: TP11-04 SA#0 | 10: TP11-04 SA#1 | 11: TP11-04 SA#2 | 12: TP11-05 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Paste pH [units] | 10-Nov-11 | 14:19 | 8.11 | 8.44 | 8.83 | 8.39 | 6.57 | 7.21 | 8.10 | 8.39 |
| Fizz Rate [---] | 10-Nov-11 | 14:19 | 3 | 3 | 3 | 3 | 1 | 1 | 2 | 1 |
| Sample weight [g] | 10-Nov-11 | 14:19 | 1.97 | 2.05 | 1.97 | 1.97 | 1.98 | 2.04 | 2.01 | 1.96 |
| HCl added [mL] | 10-Nov-11 | 14:19 | 20.00 | 24.70 | 25.90 | 25.10 | 20.00 | 20.00 | 20.00 | 20.00 |
| HCl [Normality] | 10-Nov-11 | 14:19 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 10-Nov-11 | 14:19 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 10-Nov-11 | 14:19 | 14.64 | 11.24 | 8.42 | 10.60 | 15.54 | 16.65 | 13.37 | 17.39 |
| Final pH [units] | 10-Nov-11 | 14:19 | 1.31 | 1.57 | 1.81 | 1.63 | 1.22 | 1.16 | 1.39 | 1.14 |
| NP [t CaCO3/1000 t] | 10-Nov-11 | 14:19 | 14 | 33 | 44 | 37 | 11 | 8.2 | 16 | 6.7 |
| AP [t CaCO3/1000 t] | 10-Nov-11 | 14:19 | 0.62 | 0.31 | 0.31 | 0.31 | 1.25 | 0.31 | 0.31 | 0.31 |
| Net NP [t CaCO3/1000 t] | 10-Nov-11 | 14:19 | 13.0 | 32.5 | 44.1 | 36.5 | 10.05 | 7.89 | 16.2 | 6.39 |
| NP/AP [ratio] | 10-Nov-11 | 14:17 | 21.9 | 106 | 143 | 119 | 9.04 | 26.5 | 53.2 | 21.6 |
| Sulphur (total) [%] | 04-Nov-11 | 13:01 | 0.046 | 0.016 | 0.018 | 0.024 | 0.054 | 0.020 | 0.010 | < 0.005 |
| Acid Leachable SO4-S [%] | 07-Nov-11 | 11:21 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.02 | < 0.01 | < 0.01 |
| Sulphide [%] | 07-Nov-11 | 11:21 | 0.02 | < 0.01 | < 0.01 | < 0.01 | 0.04 | < 0.01 | < 0.01 | < 0.01 |
| Carbon (total) [%] | 04-Nov-11 | 13:02 | 0.735 | 0.519 | 0.551 | 0.497 | 2.49 | 0.350 | 0.242 | 0.069 |
| Carbonate [%] | 04-Nov-11 | 13:04 | 0.428 | 1.83 | 2.32 | 1.91 | 0.451 | 0.132 | 0.640 | 0.046 |
| Total Inorganic Carbon [%] | 04-Nov-11 | 13:04 | 0.090 | 0.370 | 0.470 | 0.380 | 0.090 | 0.030 | 0.130 | 0.010 |

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*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, November 09, 2011

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Fax:(819) 759-3663

**Date Rec. :** 13 October 2011
**LR Report:** **CA11189-OCT11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 14: TP11-06 SA#1 | 15: TP11-07 SA#1 | 16: TP11-07 SA#2 | 17: TP11-08 SA#1 | 18: TP11-08 SA#2 | 19: TP11-09 SA#1 | 20: TP11-09 SA#2 | 21: TP11-10 SA#1 | 22: TP11-10 SA#2 | 23: TP11-11 SA#1 | 24: TP11-12 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury [µg/g] | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Gold [µg/g] | 0.08 | 0.08 | 0.07 | 0.08 | 0.07 | 0.06 | 0.08 | 0.04 | 0.06 | 0.02 | 0.06 |
| Aluminum [µg/g] | 60000 | 60000 | 69000 | 63000 | 61000 | 61000 | 62000 | 14000 | 59000 | 10000 | 61000 |
| Arsenic [µg/g] | 16 | 40 | 76 | 3.4 | 7.9 | 13 | 6.9 | 56 | 8.6 | 10 | 48 |
| Barium [µg/g] | 600 | 620 | 670 | 650 | 600 | 520 | 660 | 320 | 550 | 160 | 500 |
| Beryllium [µg/g] | 1.1 | 1.0 | 1.0 | 1.1 | 1.1 | 0.94 | 1.1 | 0.27 | 0.96 | 0.24 | 0.93 |
| Bismuth [µg/g] | 0.14 | 0.16 | 0.15 | 0.16 | 0.14 | 0.13 | 0.17 | < 0.09 | 0.14 | < 0.09 | 0.13 |
| Calcium [µg/g] | 27000 | 15000 | 14000 | 19000 | 17000 | 19000 | 33000 | 18000 | 17000 | 13000 | 19000 |
| Cadmium [µg/g] | 0.23 | 0.21 | 0.21 | 0.27 | 0.23 | 0.23 | 0.24 | 0.42 | 0.21 | 0.40 | 0.21 |
| Cobalt [µg/g] | 9.2 | 11 | 13 | 9.1 | 8.2 | 9.3 | 10 | 29 | 9.7 | 4.6 | 14 |
| Chromium [µg/g] | 92 | 71 | 120 | 79 | 95 | 84 | 95 | 39 | 95 | 22 | 90 |
| Copper [µg/g] | 21 | 26 | 28 | 17 | 17 | 18 | 23 | 48 | 21 | 49 | 39 |
| Iron [µg/g] | 26000 | 24000 | 33000 | 26000 | 24000 | 29000 | 28000 | 43000 | 28000 | 7600 | 45000 |
| Potassium [µg/g] | 17000 | 18000 | 21000 | 18000 | 17000 | 15000 | 19000 | 4000 | 16000 | 3100 | 15000 |
| Lithium [µg/g] | 14 | 12 | 20 | 14 | 14 | 16 | 16 | 4 | 13 | 3 | 22 |
| Magnesium [µg/g] | 8800 | 7200 | 11000 | 10000 | 8300 | 10000 | 10000 | 2400 | 10000 | 1200 | 11000 |
| Manganese [µg/g] | 360 | 360 | 390 | 360 | 320 | 390 | 400 | 2400 | 360 | 130 | 440 |
| Molybdenum [µg/g] | 1.4 | 1.8 | 1.0 | 0.9 | 0.9 | 0.8 | 1.2 | 19 | 2.1 | 3.8 | 1.8 |
| Sodium [µg/g] | 20000 | 20000 | 19000 | 20000 | 21000 | 20000 | 20000 | 3800 | 18000 | 2500 | 17000 |
| Nickel [µg/g] | 25 | 29 | 39 | 26 | 22 | 29 | 28 | 31 | 24 | 25 | 40 |

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**LR Report :** **CA11189-OCT11**

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|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 13 | 14 | 13 | 14 | 13 | 14 | 14 | 4.9 | 13 | 4.7 | 14 |
| Antimony [µg/g] | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | 2.1 | 1.0 | 2.0 | < 0.7 |
| Tin [µg/g] | 1.0 | 1.1 | 0.8 | 1.1 | 0.9 | 0.6 | 1.0 | < 0.5 | 0.6 | < 0.5 | 0.7 |
| Strontium [µg/g] | 380 | 320 | 310 | 340 | 330 | 330 | 400 | 140 | 280 | 100 | 260 |
| Titanium [µg/g] | 2300 | 3700 | 2300 | 2700 | 2300 | 2100 | 2600 | 510 | 2300 | 580 | 2000 |
| Thallium [µg/g] | 0.39 | 0.35 | 0.40 | 0.39 | 0.38 | 0.34 | 0.42 | 0.17 | 0.35 | 0.16 | 0.33 |
| Uranium [µg/g] | 1.1 | 1.2 | 1.4 | 1.3 | 1.3 | 1.2 | 1.4 | 2.5 | 1.7 | 5.1 | 1.1 |
| Vanadium [µg/g] | 63 | 59 | 82 | 65 | 59 | 71 | 66 | 36 | 72 | 23 | 81 |
| Yttrium [µg/g] | 10 | 9.5 | 9.5 | 11 | 9.4 | 8.7 | 11 | 6.1 | 9.4 | 3.7 | 8.7 |
| Zinc [µg/g] | 37 | 35 | 48 | 39 | 36 | 38 | 42 | 27 | 36 | 12 | 51 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, November 09, 2011

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Fax:(819) 759-3663

**Date Rec. :** 13 October 2011
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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP11-01 SA#2 | 6: TP11-01 SA#3 | 7: TP11-02 SA#1 | 8: TP11-02 SA#2 | 9: TP11-03 SA#1 | 10: TP11-04 SA#0 | 11: TP11-04 SA#1 | 12: TP11-04 SA#2 | 13: TP11-05 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury [µg/g] | 04-Nov-11 | 08:32 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 | < 0.1 |
| Gold [µg/g] | 07-Nov-11 | 15:05 | 0.12 | 0.11 | 0.09 | 0.12 | 0.06 | 0.08 | 0.08 | 0.08 | 0.08 |
| Aluminum [µg/g] | 04-Nov-11 | 09:13 | 66000 | 62000 | 57000 | 63000 | 44000 | 65000 | 66000 | 63000 | 63000 |
| Arsenic [µg/g] | 07-Nov-11 | 15:05 | 18 | 33 | 39 | 16 | 74 | 25 | 53 | 23 | 12 |
| Barium [µg/g] | 07-Nov-11 | 15:05 | 510 | 550 | 470 | 560 | 480 | 500 | 640 | 630 | 680 |
| Beryllium [µg/g] | 07-Nov-11 | 15:05 | 0.84 | 1.1 | 0.89 | 1.1 | 0.61 | 0.84 | 1.1 | 1.1 | 1.1 |
| Bismuth [µg/g] | 07-Nov-11 | 15:05 | 0.12 | 0.14 | 0.10 | 0.12 | 0.14 | 0.18 | 0.13 | 0.15 | 0.14 |
| Calcium [µg/g] | 04-Nov-11 | 09:13 | 18000 | 25000 | 29000 | 28000 | 11000 | 8800 | 14000 | 19000 | 15000 |
| Cadmium [µg/g] | 07-Nov-11 | 15:05 | 0.19 | 0.24 | 0.20 | 0.27 | 0.38 | 0.29 | 0.21 | 0.25 | 0.19 |
| Cobalt [µg/g] | 07-Nov-11 | 15:05 | 19 | 13 | 15 | 12 | 10 | 14 | 12 | 13 | 11 |
| Chromium [µg/g] | 07-Nov-11 | 15:05 | 150 | 88 | 160 | 81 | 530 | 170 | 87 | 97 | 68 |
| Copper [µg/g] | 07-Nov-11 | 15:05 | 43 | 35 | 31 | 33 | 83 | 28 | 20 | 25 | 17 |
| Iron [µg/g] | 04-Nov-11 | 09:13 | 43000 | 33000 | 31000 | 33000 | 26000 | 32000 | 29000 | 29000 | 24000 |
| Potassium [µg/g] | 04-Nov-11 | 09:13 | 14000 | 17000 | 14000 | 17000 | 13000 | 15000 | 18000 | 19000 | 18000 |
| Lithium [µg/g] | 07-Nov-11 | 15:05 | 23 | 16 | 14 | 17 | 11 | 25 | 19 | 18 | 13 |
| Magnesium [µg/g] | 04-Nov-11 | 09:13 | 15000 | 12000 | 12000 | 12000 | 5600 | 10000 | 10000 | 10000 | 7400 |
| Manganese [µg/g] | 07-Nov-11 | 15:05 | 490 | 510 | 470 | 400 | 280 | 390 | 400 | 390 | 390 |
| Molybdenum [µg/g] | 07-Nov-11 | 15:05 | 0.9 | 0.8 | 1.3 | 1.2 | 5.0 | 0.9 | 0.8 | 0.8 | 1.0 |
| Sodium [µg/g] | 04-Nov-11 | 09:14 | 19000 | 19000 | 19000 | 20000 | 10000 | 20000 | 21000 | 20000 | 22000 |
| Nickel [µg/g] | 07-Nov-11 | 15:05 | 44 | 34 | 46 | 32 | 35 | 42 | 30 | 37 | 25 |

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**LR Report :** **CA11189-OCT11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP11-01 SA#2 | 6: TP11-01 SA#3 | 7: TP11-02 SA#1 | 8: TP11-02 SA#2 | 9: TP11-03 SA#1 | 10: TP11-04 SA#0 | 11: TP11-04 SA#1 | 12: TP11-04 SA#2 | 13: TP11-05 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead [µg/g] | 07-Nov-11 | 15:05 | 11 | 12 | 11 | 12 | 13 | 19 | 12 | 13 | 14 |
| Antimony [µg/g] | 07-Nov-11 | 15:05 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 | < 0.8 |
| Selenium [µg/g] | 07-Nov-11 | 15:05 | 1.1 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 | < 0.7 |
| Tin [µg/g] | 07-Nov-11 | 15:05 | 1.0 | 1.0 | 1.3 | 1.1 | 1.0 | 0.8 | 1.0 | 1.6 | 1.0 |
| Strontium [µg/g] | 07-Nov-11 | 15:05 | 290 | 310 | 310 | 320 | 190 | 330 | 380 | 330 | 360 |
| Titanium [µg/g] | 04-Nov-11 | 09:14 | 3700 | 2600 | 2400 | 2700 | 1000 | 1100 | 2300 | 4200 | 2000 |
| Thallium [µg/g] | 07-Nov-11 | 15:05 | 0.35 | 0.39 | 0.32 | 0.38 | 0.43 | 0.32 | 0.35 | 0.40 | 0.37 |
| Uranium [µg/g] | 07-Nov-11 | 15:05 | 1.3 | 1.1 | 0.89 | 1.3 | 3.6 | 2.1 | 1.3 | 1.3 | 1.4 |
| Vanadium [µg/g] | 07-Nov-11 | 15:05 | 110 | 80 | 74 | 84 | 67 | 80 | 72 | 72 | 56 |
| Yttrium [µg/g] | 07-Nov-11 | 15:05 | 10 | 10 | 8.8 | 10 | 7.8 | 8.1 | 9.4 | 9.9 | 8.5 |
| Zinc [µg/g] | 07-Nov-11 | 15:05 | 57 | 44 | 40 | 47 | 33 | 59 | 46 | 45 | 34 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**Modified ASTM D3987 Leach (4:1 0.45µ, 24hr)**

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Wednesday, November 09, 2011

**Date Rec. :** 13 October 2011
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 13: TP11-06 SA#1 | 14: TP11-07 SA#1 | 15: TP11-07 SA#2 | 16: TP11-08 SA#1 | 17: TP11-08 SA#2 | 18: TP11-09 SA#1 | 19: TP11-09 SA#2 | 20: TP11-10 SA#1 | 21: TP11-10 SA#2 | 22: TP11-12 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample weight [g] | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume D.I. Water [mL] | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 8.78 | 7.17 | 8.70 | 5.94 | 7.64 | 8.15 | 9.08 | 6.68 | 6.43 | 9.13 |
| Final pH [units] | 8.84 | 6.96 | 8.64 | 5.83 | 7.42 | 8.50 | 8.88 | 6.58 | 5.87 | 9.00 |
| pH [no unit] | 9.00 | 7.66 | 8.69 | 7.75 | 8.90 | 8.02 | 8.85 | 8.01 | 7.74 | 9.06 |
| Sulphate [mg/L] | 1.5 | 25 | 18 | 6.3 | 2.2 | 3.4 | 2.8 | 6.4 | 2.5 | 2.9 |
| Chloride [mg/L] | 0.4 | 0.7 | 1.4 | 0.4 | 0.6 | 0.8 | 0.4 | 100 | 1.3 | 0.3 |
| Mercury [mg/L] | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00002 | 0.00002 | < 0.00001 | 0.00002 | 0.00001 | < 0.00001 |
| Aluminum [mg/L] | 0.37 | 0.31 | 0.25 | 0.39 | 0.46 | 0.48 | 0.37 | 0.17 | 0.27 | 0.38 |
| Arsenic [mg/L] | 0.0158 | 0.0295 | 0.0296 | 0.0041 | 0.0045 | 0.0067 | 0.0038 | 0.0196 | 0.0062 | 0.0399 |
| Barium [mg/L] | 0.0155 | 0.0122 | 0.00688 | 0.00763 | 0.00884 | 0.0102 | 0.0147 | 0.110 | 0.00723 | 0.00779 |
| Boron [mg/L] | 0.118 | 0.0934 | 0.0733 | 0.173 | 0.144 | 0.0667 | 0.124 | 1.56 | 0.199 | 0.0714 |
| Beryllium [mg/L] | 0.00002 | < 0.00002 | < 0.00002 | 0.00002 | 0.00003 | < 0.00002 | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | < 0.00001 | 0.00001 | < 0.00001 | 0.00002 | 0.00002 | < 0.00001 | < 0.00001 | 0.00241 | 0.00002 | 0.00002 |
| Calcium [mg/L] | 16.8 | 10.6 | 17.7 | 0.46 | 1.65 | 14.1 | 14.9 | 91.6 | 0.79 | 10.2 |
| Cadmium [mg/L] | 0.000019 | 0.000009 | 0.000007 | 0.000008 | 0.000010 | 0.000005 | 0.000012 | 0.000183 | 0.000011 | 0.000012 |
| Cobalt [mg/L] | 0.000544 | 0.000725 | 0.000368 | 0.000436 | 0.000447 | 0.000179 | 0.000327 | 0.0473 | 0.000462 | 0.00121 |
| Chromium [mg/L] | 0.0015 | 0.0008 | 0.0007 | 0.0026 | 0.0024 | 0.0008 | 0.0015 | 0.0068 | 0.0032 | 0.0012 |
| Copper [mg/L] | 0.0081 | 0.0054 | 0.0042 | 0.0054 | 0.0101 | 0.0062 | 0.0079 | 0.0163 | 0.0106 | 0.0099 |

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Phone: 705-652-2000 FAX: 705-652-6365

**Modified ASTM D3987 Leach (4:1 0.45µ, 24hr)**

**LR Report :** **CA11190-OCT11**

| Analysis | 13: TP11-06 SA#1 | 14: TP11-07 SA#1 | 15: TP11-07 SA#2 | 16: TP11-08 SA#1 | 17: TP11-08 SA#2 | 18: TP11-09 SA#1 | 19: TP11-09 SA#2 | 20: TP11-10 SA#1 | 21: TP11-10 SA#2 | 22: TP11-12 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Iron [mg/L] | 0.566 | 0.347 | 0.324 | 0.510 | 0.652 | 0.228 | 0.418 | 9.28 | 0.742 | 0.807 |
| Potassium [mg/L] | 1.73 | 2.09 | 3.44 | 1.11 | 1.07 | 2.13 | 1.80 | 3.78 | 0.921 | 3.04 |
| Lithium [mg/L] | 0.003 | 0.002 | 0.002 | 0.006 | 0.001 | 0.002 | 0.004 | 0.022 | 0.005 | 0.002 |
| Magnesium [mg/L] | 1.07 | 1.24 | 1.36 | 0.188 | 0.329 | 0.664 | 0.830 | 11.1 | 0.187 | 0.794 |
| Manganese [mg/L] | 0.00689 | 0.167 | 0.00537 | 0.00577 | 0.00692 | 0.00424 | 0.00667 | 9.14 | 0.0117 | 0.00926 |
| Molybdenum [mg/L] | 0.00494 | 0.00920 | 0.00534 | 0.00041 | 0.00111 | 0.00117 | 0.00292 | 0.0477 | 0.00168 | 0.00554 |
| Sodium [mg/L] | 13.1 | 11.4 | 12.8 | 12.8 | 12.9 | 11.8 | 13.2 | 91.0 | 12.6 | 10.3 |
| Nickel [mg/L] | 0.0032 | 0.0029 | 0.0027 | 0.0015 | 0.0036 | 0.0022 | 0.0025 | 0.0310 | 0.0014 | 0.0054 |
| Lead [mg/L] | 0.00063 | 0.00050 | 0.00029 | 0.00061 | 0.00073 | 0.00018 | 0.00055 | 0.00118 | 0.00074 | 0.00135 |
| Antimony [mg/L] | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0004 | 0.0005 | 0.0003 | 0.0011 | 0.0004 | 0.0004 |
| Selenium [mg/L] | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 | 0.008 | 0.002 | < 0.001 |
| Tin [mg/L] | 0.00006 | 0.00004 | 0.00003 | 0.00005 | 0.00009 | 0.00011 | 0.00007 | 0.00018 | 0.00006 | 0.00003 |
| Strontium [mg/L] | 0.0830 | 0.0478 | 0.0607 | 0.0015 | 0.0040 | 0.0706 | 0.0701 | 0.325 | 0.0025 | 0.0251 |
| Titanium [mg/L] | 0.0256 | 0.0105 | 0.0076 | 0.0469 | 0.0353 | 0.0090 | 0.0405 | 0.0107 | 0.0335 | 0.0147 |
| Thallium [mg/L] | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 0.000378 | 0.000430 | 0.000579 | 0.000142 | 0.000199 | 0.000715 | 0.000992 | 0.00261 | 0.000514 | 0.000233 |
| Vanadium [mg/L] | 0.00386 | 0.00233 | 0.00089 | 0.00625 | 0.00341 | 0.00246 | 0.00272 | 0.00920 | 0.00599 | 0.00113 |
| Tungsten [mg/L] | 0.00012 | 0.00006 | 0.00018 | < 0.00003 | 0.00005 | 0.00013 | 0.00027 | 0.00020 | 0.00004 | 0.00034 |
| Yttrium [mg/L] | 0.000462 | 0.000126 | 0.000102 | 0.000346 | 0.000565 | 0.000214 | 0.000422 | 0.00139 | 0.000374 | 0.000292 |
| Zinc [mg/L] | 0.002 | 0.002 | 0.001 | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.001 | 0.007 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 705-652-2000 FAX: 705-652-6365

**Modified ASTM D3987 Leach (4:1 0.45µ, 24hr)**

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

Wednesday, November 09, 2011

**Date Rec. :** 13 October 2011
**LR Report:** **CA11190-OCT11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP11-01 SA#2 | 6: TP11-01 SA#3 | 7: TP11-02 SA#1 | 8: TP11-02 SA#2 | 9: TP11-04 SA#0 | 10: TP11-04 SA#1 | 11: TP11-04 SA#2 | 12: TP11-05 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample weight [g] | 01-Nov-11 | 15:12 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Volume D.I. Water [mL] | 01-Nov-11 | 15:12 | 800 | 800 | 800 | 800 | 800 | 800 | 800 | 800 |
| InitialpH [units] | 01-Nov-11 | 15:13 | 8.41 | 9.04 | 8.95 | 8.84 | 6.39 | 7.52 | 8.75 | 8.44 |
| Final pH [units] | 01-Nov-11 | 15:13 | 8.49 | 8.90 | 8.87 | 8.54 | 6.37 | 8.10 | 8.75 | 8.74 |
| pH [no unit] | 02-Nov-11 | 09:50 | 8.95 | 8.64 | 8.82 | 8.69 | 8.00 | 8.32 | 8.82 | 9.14 |
| Sulphate [mg/L] | 07-Nov-11 | 14:39 | 15 | 4.0 | 4.1 | 47 | 7.4 | 3.4 | 10 | 3.2 |
| Chloride [mg/L] | 08-Nov-11 | 08:50 | 0.6 | 0.3 | 0.6 | 0.6 | 5.9 | 35 | 2.2 | 0.2 |
| Mercury [mg/L] | 02-Nov-11 | 18:29 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Silver [mg/L] | 02-Nov-11 | 19:11 | 0.00003 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00006 | < 0.00001 | < 0.00001 | 0.00002 |
| Aluminum [mg/L] | 03-Nov-11 | 15:20 | 0.39 | 0.23 | 0.26 | 0.21 | 0.20 | 0.21 | 0.70 | 0.62 |
| Arsenic [mg/L] | 02-Nov-11 | 19:11 | 0.0185 | 0.0286 | 0.0342 | 0.0118 | 0.0028 | 0.0154 | 0.0232 | 0.0202 |
| Barium [mg/L] | 02-Nov-11 | 19:11 | 0.00861 | 0.00535 | 0.00839 | 0.0123 | 0.00624 | 0.00945 | 0.0160 | 0.0217 |
| Boron [mg/L] | 02-Nov-11 | 19:11 | 0.0810 | 0.0864 | 0.0804 | 0.0880 | 0.338 | 0.121 | 0.126 | 0.105 |
| Beryllium [mg/L] | 02-Nov-11 | 19:11 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | 0.00003 | 0.00003 |
| Bismuth [mg/L] | 02-Nov-11 | 19:11 | 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | 0.00020 | < 0.00001 | < 0.00001 | 0.00004 |
| Calcium [mg/L] | 03-Nov-11 | 15:20 | 16.1 | 12.0 | 14.9 | 32.0 | 9.38 | 22.9 | 13.8 | 4.29 |
| Cadmium [mg/L] | 02-Nov-11 | 19:12 | 0.000018 | 0.000007 | 0.000050 | 0.000018 | 0.000057 | 0.000051 | 0.000019 | 0.000025 |
| Cobalt [mg/L] | 02-Nov-11 | 19:12 | 0.000850 | 0.000302 | 0.00103 | 0.000358 | 0.00286 | 0.00215 | 0.00101 | 0.00312 |
| Chromium [mg/L] | 02-Nov-11 | 19:12 | 0.0018 | 0.0010 | 0.0018 | 0.0008 | 0.0010 | 0.0011 | 0.0021 | 0.0028 |
| Copper [mg/L] | 02-Nov-11 | 19:12 | 0.0096 | 0.0044 | 0.0115 | 0.0049 | 0.0037 | 0.0038 | 0.0088 | 0.0126 |

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Phone: 705-652-2000 FAX: 705-652-6365



| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: TP11-01 SA#2 | 6: TP11-01 SA#3 | 7: TP11-02 SA#1 | 8: TP11-02 SA#2 | 9: TP11-04 SA#0 | 10: TP11-04 SA#1 | 11: TP11-04 SA#2 | 12: TP11-05 SA#1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Iron [mg/L] | 03-Nov-11 | 15:20 | 0.759 | 0.328 | 0.587 | 0.272 | 0.338 | 0.269 | 0.703 | 0.879 |
| Potassium [mg/L] | 03-Nov-11 | 15:20 | 3.55 | 1.77 | 2.31 | 4.62 | 6.04 | 4.51 | 2.04 | 1.70 |
| Lithium [mg/L] | 02-Nov-11 | 19:12 | 0.002 | 0.003 | 0.002 | 0.003 | 0.008 | 0.013 | 0.003 | 0.003 |
| Magnesium [mg/L] | 03-Nov-11 | 15:20 | 1.92 | 1.69 | 0.866 | 1.19 | 4.55 | 2.10 | 1.86 | 0.732 |
| Manganese [mg/L] | 02-Nov-11 | 19:12 | 0.0108 | 0.00400 | 0.0117 | 0.00226 | 0.132 | 0.00965 | 0.00947 | 0.0726 |
| Molybdenum [mg/L] | 02-Nov-11 | 19:12 | 0.00128 | 0.00544 | 0.00486 | 0.0242 | 0.00045 | 0.00279 | 0.00216 | 0.00639 |
| Sodium [mg/L] | 03-Nov-11 | 15:20 | 17.5 | 13.6 | 12.5 | 14.1 | 20.3 | 14.3 | 16.8 | 17.0 |
| Nickel [mg/L] | 02-Nov-11 | 19:12 | 0.0023 | 0.0012 | 0.0054 | 0.0020 | 0.0050 | 0.0026 | 0.0047 | 0.0066 |
| Lead [mg/L] | 02-Nov-11 | 19:12 | 0.00094 | 0.00030 | 0.00076 | 0.00031 | 0.00065 | 0.00033 | 0.00062 | 0.00237 |
| Antimony [mg/L] | 02-Nov-11 | 19:12 | 0.0007 | 0.0005 | 0.0004 | 0.0011 | 0.0003 | 0.0004 | 0.0005 | 0.0003 |
| Selenium [mg/L] | 02-Nov-11 | 19:12 | < 0.001 | < 0.001 | < 0.001 | 0.001 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Tin [mg/L] | 02-Nov-11 | 19:12 | 0.00013 | 0.00005 | 0.00004 | 0.00004 | 0.00002 | 0.00006 | 0.00007 | 0.00004 |
| Strontium [mg/L] | 03-Nov-11 | 15:20 | 0.0396 | 0.0282 | 0.0530 | 0.108 | 0.0473 | 0.200 | 0.0393 | 0.0126 |
| Titanium [mg/L] | 02-Nov-11 | 19:12 | 0.0224 | 0.0152 | 0.0184 | 0.0110 | 0.0030 | 0.0072 | 0.0527 | 0.0406 |
| Thallium [mg/L] | 02-Nov-11 | 19:12 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 02-Nov-11 | 19:12 | 0.000518 | 0.000476 | 0.00124 | 0.00425 | 0.000128 | 0.000097 | 0.000325 | 0.000252 |
| Vanadium [mg/L] | 02-Nov-11 | 19:12 | 0.00357 | 0.00172 | 0.00216 | 0.00176 | 0.00042 | 0.00082 | 0.00303 | 0.00381 |
| Tungsten [mg/L] | 02-Nov-11 | 19:12 | 0.00033 | 0.00024 | 0.00014 | 0.00012 | 0.00007 | 0.00018 | 0.00016 | 0.00016 |
| Yttrium [mg/L] | 02-Nov-11 | 19:12 | 0.000455 | 0.000164 | 0.000455 | 0.000199 | 0.000119 | 0.000220 | 0.000513 | 0.000825 |
| Zinc [mg/L] | 02-Nov-11 | 19:12 | 0.002 | 0.001 | 0.004 | < 0.001 | 0.003 | 0.002 | 0.003 | 0.006 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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# H.5 Tailings Static Test Results

**SGS Canada Inc.**
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Phone: 705-652-2000 FAX: 705-652-6365

Thursday, September 22, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 02 September 2011
**LR Report:** **CA10157-SEP11**
**Reference:** CN3

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN3 Westmag (CND8-10) |
|---|---|---|---|
| Sample Date & Time | | | 02-Sep-11 |
| Temperature Upon Receipt [°C] | --- | --- | 18.0 |
| pH [no unit] | 08-Sep-11 | 14:43 | 8.28 |
| Conductivity [uS/cm] | 08-Sep-11 | 14:43 | 3340 |
| Alkalinity [mg/L as CaCO3] | 08-Sep-11 | 14:43 | 105 |
| Total Dissolved Solids [mg/L] | 07-Sep-11 | 10:49 | 2790 |
| Fluoride [mg/L] | 06-Sep-11 | 09:01 | 0.12 |
| Chloride [mg/L] | 12-Sep-11 | 17:17 | 14 |
| Sulphate [mg/L] | 13-Sep-11 | 15:23 | 1500 |
| Nitrite (as N) [mg/L] | 07-Sep-11 | 15:56 | < 0.06 |
| Nitrate (as N) [mg/L] | 07-Sep-11 | 15:56 | 0.15 |
| Cyanide (total) [mg/L] | 13-Sep-11 | 10:19 | 19.5 |
| Cyanide (WAD) [mg/L] | 16-Sep-11 | 13:58 | 0.06 |
| Cyanide (free) [mg/L] | 16-Sep-11 | 15:34 | < 2 |
| Cyanate [mg/L] | 08-Sep-11 | 12:06 | 110 |
| Thiocyanate [mg/L] | 08-Sep-11 | 12:06 | 72 |
| Thiosulphate [mg/L] | 16-Sep-11 | 12:20 | 12 |
| As+3 [mg/L] | 12-Sep-11 | 12:10 | 0.046 |
| As+5 [mg/L] | 12-Sep-11 | 12:10 | 0.209 |
| Aluminum (total) [mg/L] | 08-Sep-11 | 12:25 | 0.28 |
| Aluminum (dissolved) [mg/L] | 08-Sep-11 | 12:25 | 0.02 |
| Arsenic (total) [mg/L] | 09-Sep-11 | 12:32 | 0.255 |
| Arsenic (dissolved) [mg/L] | 09-Sep-11 | 12:32 | 0.220 |
| Barium (total) [mg/L] | 09-Sep-11 | 12:32 | 0.0337 |
| Barium (dissolved) [mg/L] | 09-Sep-11 | 12:32 | 0.0258 |
| Beryllium (total) [mg/L] | 09-Sep-11 | 12:32 | < 0.0002 |
| Beryllium (dissolved) [mg/L] | 09-Sep-11 | 12:32 | < 0.0002 |
| Boron (total) [mg/L] | 09-Sep-11 | 12:32 | 0.036 |
| Boron (dissolved) [mg/L] | 09-Sep-11 | 12:32 | 0.033 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA10157-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN3 Westmag (CND8-10) |
|---|---|---|---|
| Bismuth (total) [mg/L] | 09-Sep-11 | 12:32 | < 0.0001 |
| Bismuth (dissolved) [mg/L] | 09-Sep-11 | 12:32 | < 0.0001 |
| Calcium (total) [mg/L] | 08-Sep-11 | 12:25 | 222 |
| Calcium (dissolved) [mg/L] | 08-Sep-11 | 12:25 | 180 |
| Cadmium (total) [mg/L] | 09-Sep-11 | 12:32 | 0.00021 |
| Cadmium (dissolved) [mg/L] | 09-Sep-11 | 12:32 | < 0.00003 |
| Cobalt (total) [mg/L] | 09-Sep-11 | 12:32 | 0.109 |
| Cobalt (dissolved) [mg/L] | 09-Sep-11 | 12:32 | 0.113 |
| Chromium (total) [mg/L] | 09-Sep-11 | 12:32 | < 0.005 |
| Chromium (dissolved) [mg/L] | 09-Sep-11 | 12:32 | < 0.005 |
| Copper (total) [mg/L] | 09-Sep-11 | 12:32 | 0.067 |
| Copper (dissolved) [mg/L] | 09-Sep-11 | 12:32 | 0.052 |
| Iron (total) [mg/L] | 08-Sep-11 | 12:25 | 10.1 |
| Iron (dissolved) [mg/L] | 08-Sep-11 | 12:25 | 8.13 |
| Potassium (total) [mg/L] | 08-Sep-11 | 12:25 | 31.4 |
| Potassium (dissolved) [mg/L] | 08-Sep-11 | 12:25 | 30.1 |
| Lithium (total) [mg/L] | 09-Sep-11 | 12:33 | 0.003 |
| Lithium (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.002 |
| Magnesium (total) [mg/L] | 08-Sep-11 | 12:25 | 16.1 |
| Magnesium (dissolved) [mg/L] | 08-Sep-11 | 12:25 | 13.3 |
| Manganese (total) [mg/L] | 09-Sep-11 | 12:33 | 0.0953 |
| Manganese (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.0523 |
| Molybdenum (total) [mg/L] | 09-Sep-11 | 12:33 | 0.0615 |
| Molybdenum (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.0500 |
| Sodium (total) [mg/L] | 08-Sep-11 | 12:26 | 707 |
| Sodium (dissolved) [mg/L] | 13-Sep-11 | 13:58 | 584 |
| Nickel (total) [mg/L] | 09-Sep-11 | 12:33 | 0.012 |
| Nickel (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.008 |
| Lead (total) [mg/L] | 09-Sep-11 | 12:33 | 0.0453 |
| Lead (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.0003 |
| Antimony (total) [mg/L] | 09-Sep-11 | 12:33 | 0.006 |
| Antimony (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.007 |
| Selenium (total) [mg/L] | 09-Sep-11 | 12:33 | 0.02 |
| Selenium (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.02 |
| Tin (total) [mg/L] | 09-Sep-11 | 12:33 | 0.0013 |
| Tin (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.0006 |
| Strontium (total) [mg/L] | 08-Sep-11 | 12:26 | 0.264 |
| Strontium (dissolved) [mg/L] | 08-Sep-11 | 12:26 | 0.204 |
| Titanium (total) [mg/L] | 09-Sep-11 | 12:33 | 0.002 |
| Titanium (dissolved) [mg/L] | 09-Sep-11 | 12:33 | < 0.001 |
| Thallium (total) [mg/L] | 09-Sep-11 | 12:33 | < 0.002 |
| Thallium (dissolved) [mg/L] | 09-Sep-11 | 12:33 | < 0.002 |
| Uranium (total) [mg/L] | 09-Sep-11 | 12:33 | 0.00325 |
| Uranium (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.00296 |

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**LR Report :** **CA10157-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN3 Westmag (CND8-10) |
|---|---|---|---|
| Vanadium (total) [mg/L] | 09-Sep-11 | 12:33 | 0.0012 |
| Vanadium (dissolved) [mg/L] | 09-Sep-11 | 12:33 | < 0.0003 |
| Tungsten (total) [mg/L] | 09-Sep-11 | 12:33 | 0.0052 |
| Tungsten (dissolved) [mg/L] | 09-Sep-11 | 12:33 | 0.0041 |
| Yttrium (total) [mg/L] | 09-Sep-11 | 12:33 | 0.00005 |
| Yttrium (dissolved) [mg/L] | 09-Sep-11 | 12:33 | < 0.00001 |
| Zinc (total) [mg/L] | 08-Sep-11 | 12:26 | 0.002 |
| Zinc (dissolved) [mg/L] | 08-Sep-11 | 12:26 | < 0.002 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Wednesday, October 05, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 12 September 2011
**LR Report:** **CA10273-SEP11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN8 Discovery (CND 5-7) |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Paste pH [units] | 22-Sep-11 | 15:15 | 8.18 |
| Fizz Rate [---] | 22-Sep-11 | 15:15 | 3 |
| Sample weight [g] | 22-Sep-11 | 15:15 | 2.01 |
| HCl added [mL] | 22-Sep-11 | 15:15 | 36.40 |
| HCl [Normality] | 22-Sep-11 | 15:15 | 0.10 |
| NaOH [Normality] | 22-Sep-11 | 15:15 | 0.10 |
| NaOH to [pH=8.3 mL] | 22-Sep-11 | 15:15 | 26.95 |
| Final pH [units] | 22-Sep-11 | 15:15 | 1.79 |
| NP [t CaCO3/1000 t] | 22-Sep-11 | 15:15 | 24 |
| AP [t CaCO3/1000 t] | 05-Oct-11 | 09:20 | 51.3 |
| Net NP [t CaCO3/1000 t] | 05-Oct-11 | 09:20 | -27.8 |
| NP/AP [ratio] | 05-Oct-11 | 09:20 | 0.46 |
| Sulphur (total) [%] | 05-Oct-11 | 09:20 | 1.97 |
| Acid Leachable SO4-S [%] | 05-Oct-11 | 09:20 | 0.33 |
| Sulphide [%] | 15-Sep-11 | 09:09 | 1.64 |
| Carbon (total) [%] | 05-Oct-11 | 09:20 | 0.218 |
| Carbonate [%] | 15-Sep-11 | 08:16 | 0.347 |

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**LR Report :** **CA10273-SEP11**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Monday, October 03, 2011

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**Date Rec. :** 12 September 2011
**LR Report:** **CA10274-SEP11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN 8 Discovery (CND 5-7) |
|---|---|---|---|
| Sample Date & Time | | | |
| Mercury [µg/g] | 16-Sep-11 | 09:09 | < 0.1 |
| Aluminum [µg/g] | 30-Sep-11 | 10:00 | 35000 |
| Arsenic [µg/g] | 30-Sep-11 | 10:00 | 4000 |
| Barium [µg/g] | 30-Sep-11 | 10:00 | 430 |
| Beryllium [µg/g] | 30-Sep-11 | 10:00 | 0.78 |
| Bismuth [µg/g] | 30-Sep-11 | 10:00 | 1.4 |
| Calcium [µg/g] | 30-Sep-11 | 10:00 | 20000 |
| Cadmium [µg/g] | 30-Sep-11 | 10:00 | 0.33 |
| Cobalt [µg/g] | 30-Sep-11 | 10:00 | 6.8 |
| Chromium [µg/g] | 30-Sep-11 | 10:00 | 310 |
| Copper [µg/g] | 30-Sep-11 | 10:00 | 100 |
| Iron [µg/g] | 30-Sep-11 | 10:00 | 190000 |
| Potassium [µg/g] | 30-Sep-11 | 10:00 | 9400 |
| Lithium [µg/g] | 30-Sep-11 | 10:00 | 19 |
| Magnesium [µg/g] | 30-Sep-11 | 10:00 | 9100 |
| Manganese [µg/g] | 30-Sep-11 | 10:00 | 370 |
| Molybdenum [µg/g] | 30-Sep-11 | 10:00 | 7.4 |
| Sodium [µg/g] | 30-Sep-11 | 10:00 | 3600 |
| Nickel [µg/g] | 30-Sep-11 | 10:00 | 67 |
| Lead [µg/g] | 30-Sep-11 | 10:00 | 15 |
| Antimony [µg/g] | 30-Sep-11 | 10:00 | 2.1 |
| Selenium [µg/g] | 30-Sep-11 | 10:00 | < 0.7 |
| Tin [µg/g] | 30-Sep-11 | 10:00 | 2.5 |
| Strontium [µg/g] | 30-Sep-11 | 10:00 | 250 |
| Titanium [µg/g] | 30-Sep-11 | 10:00 | 960 |
| Thallium [µg/g] | 30-Sep-11 | 10:00 | 0.23 |
| Uranium [µg/g] | 30-Sep-11 | 10:00 | 1.7 |
| Vanadium [µg/g] | 30-Sep-11 | 10:00 | 24 |
| Zinc [µg/g] | 30-Sep-11 | 10:00 | 59 |

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**LR Report :** **CA10274-SEP11**



*Brian Graham B.Sc.*
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Thursday, September 22, 2011

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**Date Rec. :** 12 September 2011
**LR Report:** **CA10275-SEP11**
**Reference:** CN8 Discovery

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: CN8 Discovery (CND 5-7) |
|---|---|
| Sample Date & Time | |
| SiO2 [%] | 55.0 |
| Al2O3 [%] | 7.14 |
| Fe2O3 [%] | 28.8 |
| MgO [%] | 1.72 |
| CaO [%] | 2.97 |
| Na2O [%] | 0.62 |
| K2O [%] | 1.05 |
| TiO2 [%] | 0.16 |
| P2O5 [%] | 0.20 |
| MnO [%] | 0.05 |
| Cr2O3 [%] | 0.05 |
| V2O5 [%] | 0.01 |
| LOI [%] | 1.99 |
| Sum [%] | 99.8 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 29, 2011

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**Date Rec. :** 12 September 2011
**LR Report:** **CA10276-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN8 Discovery (CND 5-7) |
|---|---|---|---|
| Sample weight [g] | 28-Sep-11 | 11:30 | 1.5 |
| Vol H2O2 [mL] | 28-Sep-11 | 11:30 | 150 |
| Final pH [units] | 28-Sep-11 | 11:30 | 2.54 |
| NaOH [Normality] | 28-Sep-11 | 11:30 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 28-Sep-11 | 11:30 | 7.42 |
| Vol NaOH to PH 7.0 [mL] | 28-Sep-11 | 11:30 | 11.37 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 28-Sep-11 | 11:30 | 24 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 28-Sep-11 | 11:30 | 37 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, September 23, 2011

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**Date Rec. :** 12 September 2011
**LR Report:** **CA10277-SEP11**
**Reference:** CN8 Discovery

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN8 Discovery (CND 5-7) |
|---|---|---|---|
| Sample Date & Time | | | |
| Sample weight [g] | 22-Sep-11 | 15:10 | 2.5 |
| Vol H2O2 [mL] | 22-Sep-11 | 15:10 | 250 |
| Final pH [units] | 22-Sep-11 | 15:10 | 2.55 |
| pH [no unit] | 20-Sep-11 | 15:15 | 2.53 |
| Conductivity [uS/cm] | 20-Sep-11 | 15:15 | 1830 |
| Alkalinity [mg/L as CaCO3] | 20-Sep-11 | 15:15 | < 2 |
| Chloride [mg/L] | 21-Sep-11 | 17:45 | < 2 |
| Sulphate [mg/L] | 23-Sep-11 | 11:36 | 520 |
| Mercury [mg/L] | 22-Sep-11 | 15:04 | < 0.0001 |
| Aluminum [mg/L] | 22-Sep-11 | 13:28 | 15.2 |
| Arsenic [mg/L] | 23-Sep-11 | 13:29 | 0.0557 |
| Barium [mg/L] | 23-Sep-11 | 13:29 | 0.546 |
| Beryllium [mg/L] | 23-Sep-11 | 13:29 | 0.00070 |
| Bismuth [mg/L] | 23-Sep-11 | 13:29 | 0.00002 |
| Calcium [mg/L] | 22-Sep-11 | 13:28 | 74.9 |
| Cadmium [mg/L] | 23-Sep-11 | 13:30 | 0.00129 |
| Cobalt [mg/L] | 23-Sep-11 | 13:30 | 0.0493 |
| Chromium [mg/L] | 23-Sep-11 | 13:30 | 0.0115 |
| Copper [mg/L] | 23-Sep-11 | 13:30 | 0.940 |
| Iron [mg/L] | 22-Sep-11 | 13:28 | 26.4 |
| Potassium [mg/L] | 22-Sep-11 | 13:28 | 24.7 |
| Lithium [mg/L] | 23-Sep-11 | 13:30 | 0.035 |
| Magnesium [mg/L] | 22-Sep-11 | 13:28 | 7.09 |
| Manganese [mg/L] | 23-Sep-11 | 13:30 | 0.548 |
| Molybdenum [mg/L] | 23-Sep-11 | 13:30 | 0.00009 |
| Sodium [mg/L] | 22-Sep-11 | 13:28 | 2.78 |
| Nickel [mg/L] | 23-Sep-11 | 13:30 | 0.0902 |
| Lead [mg/L] | 23-Sep-11 | 13:30 | 0.0149 |

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**LR Report :** **CA10277-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN8 Discovery (CND 5-7) |
|---|---|---|---|
| Antimony [mg/L] | 23-Sep-11 | 13:30 | 0.0004 |
| Selenium [mg/L] | 23-Sep-11 | 13:30 | 0.006 |
| Tin [mg/L] | 23-Sep-11 | 13:30 | 0.00004 |
| Strontium [mg/L] | 23-Sep-11 | 13:30 | 0.634 |
| Titanium [mg/L] | 23-Sep-11 | 13:30 | 0.0065 |
| Thallium [mg/L] | 23-Sep-11 | 13:30 | 0.00056 |
| Uranium [mg/L] | 23-Sep-11 | 13:30 | 0.00970 |
| Vanadium [mg/L] | 23-Sep-11 | 13:30 | 0.00025 |
| Zinc [mg/L] | 23-Sep-11 | 13:30 | 0.166 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 29, 2011

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**Date Rec. :** 12 September 2011
**LR Report:** **CA10280-SEP11**
**Reference:** CN8 Discovery

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN8 Discovery (CND 5-7) |
|---|---|---|---|
| Sample weight [g] | 20-Sep-11 | 07:49 | 250 |
| Volume D.I. Water [mL] | 20-Sep-11 | 07:49 | 750 |
| Initial pH [units] | 20-Sep-11 | 07:49 | 8.8 |
| Final pH [units] | 20-Sep-11 | 07:49 | 8.48 |
| pH [no unit] | 26-Sep-11 | 12:42 | 7.40 |
| Conductivity [uS/cm] | 26-Sep-11 | 12:42 | 809 |
| Alkalinity [mg/L as CaCO3] | 26-Sep-11 | 12:42 | 16 |
| Sulphate [mg/L] | 28-Sep-11 | 14:20 | 250 |
| Chloride [mg/L] | 28-Sep-11 | 14:20 | 0.4 |
| Mercury [mg/L] | 22-Sep-11 | 14:57 | < 0.0001 |
| Aluminum [mg/L] | 26-Sep-11 | 12:01 | 0.15 |
| Arsenic [mg/L] | 26-Sep-11 | 14:42 | 0.180 |
| Barium [mg/L] | 26-Sep-11 | 14:42 | 0.145 |
| Beryllium [mg/L] | 26-Sep-11 | 14:42 | < 0.00002 |
| Bismuth [mg/L] | 26-Sep-11 | 14:42 | 0.00004 |
| Calcium [mg/L] | 26-Sep-11 | 12:02 | 128 |
| Cadmium [mg/L] | 26-Sep-11 | 14:43 | < 0.000003 |
| Cobalt [mg/L] | 26-Sep-11 | 14:43 | 0.00144 |
| Chromium [mg/L] | 26-Sep-11 | 14:43 | < 0.0005 |
| Copper [mg/L] | 26-Sep-11 | 14:43 | 0.0084 |
| Iron [mg/L] | 26-Sep-11 | 12:02 | 0.645 |
| Potassium [mg/L] | 26-Sep-11 | 12:02 | 45.5 |
| Lithium [mg/L] | 26-Sep-11 | 14:43 | 0.023 |
| Magnesium [mg/L] | 26-Sep-11 | 12:02 | 1.46 |
| Manganese [mg/L] | 26-Sep-11 | 14:43 | 0.00253 |
| Molybdenum [mg/L] | 26-Sep-11 | 14:43 | 0.00254 |
| Sodium [mg/L] | 26-Sep-11 | 12:02 | 4.10 |
| Nickel [mg/L] | 26-Sep-11 | 14:43 | 0.0002 |
| Lead [mg/L] | 26-Sep-11 | 14:43 | < 0.00002 |

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**LR Report :** **CA10280-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN8 Discovery (CND 5-7) |
|---|---|---|---|
| Antimony [mg/L] | 26-Sep-11 | 14:43 | 0.0012 |
| Selenium [mg/L] | 26-Sep-11 | 14:43 | < 0.001 |
| Tin [mg/L] | 26-Sep-11 | 14:43 | < 0.00001 |
| Strontium [mg/L] | 26-Sep-11 | 12:02 | 0.194 |
| Titanium [mg/L] | 26-Sep-11 | 14:43 | 0.0002 |
| Thallium [mg/L] | 26-Sep-11 | 14:43 | 0.00002 |
| Uranium [mg/L] | 26-Sep-11 | 14:43 | 0.00105 |
| Vanadium [mg/L] | 26-Sep-11 | 14:43 | 0.00016 |
| Zinc [mg/L] | 26-Sep-11 | 14:43 | 0.002 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 22, 2011

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**Date Rec. :** 12 September 2011
**LR Report:** **CA10282-SEP11**
**Reference:** F1 Ro Tails

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F1 Ro Tails Supernatant |
|---|---|---|---|
| Temperature Upon Receipt [°C] | | | 14.0 |
| pH [no unit] | 14-Sep-11 | 10:04 | 7.96 |
| Conductivity [uS/cm] | 14-Sep-11 | 10:04 | 324 |
| Alkalinity [mg/L as CaCO3] | 14-Sep-11 | 10:04 | 88 |
| Chloride [mg/L] | 15-Sep-11 | 14:02 | 15 |
| Sulphate [mg/L] | 15-Sep-11 | 14:02 | 39 |
| Nitrite (as N) [mg/L] | 15-Sep-11 | 14:02 | < 0.06 |
| Nitrate (as N) [mg/L] | 15-Sep-11 | 14:02 | 0.05 |
| Cyanide (total) [mg/L] | 16-Sep-11 | 14:12 | < 0.01 |
| Cyanide (WAD) [mg/L] | 16-Sep-11 | 14:12 | < 0.01 |
| Cyanide (free) [mg/L] | 16-Sep-11 | 14:12 | < 0.01 |
| Aluminum (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 0.07 |
| Arsenic (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.0436 |
| Barium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.0168 |
| Beryllium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | < 0.00002 |
| Boron (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.0129 |
| Bismuth (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.00001 |
| Calcium (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 32.5 |
| Cadmium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | < 0.000003 |
| Cobalt (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.000122 |
| Chromium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | < 0.0005 |
| Copper (dissolved) [mg/L] | 16-Sep-11 | 14:28 | < 0.0005 |
| Iron (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 0.002 |
| Potassium (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 19.3 |
| Lithium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.004 |
| Magnesium (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 5.89 |
| Manganese (dissolved) [mg/L] | 16-Sep-11 | 14:28 | < 0.00001 |
| Molybdenum (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.00399 |
| Sodium (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 17.1 |

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**LR Report :** **CA10282-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F1 Ro Tails Supernatant |
|---|---|---|---|
| Nickel (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.0013 |
| Lead (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.00022 |
| Antimony (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.0019 |
| Selenium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | < 0.001 |
| Tin (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.00035 |
| Strontium (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 0.162 |
| Titanium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.0006 |
| Thallium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | < 0.0002 |
| Uranium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.000217 |
| Vanadium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.00015 |
| Yttrium (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.000023 |
| Tungsten (dissolved) [mg/L] | 16-Sep-11 | 14:28 | 0.00114 |
| Zinc (dissolved) [mg/L] | 15-Sep-11 | 19:34 | 0.006 |



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Monday, October 03, 2011

**Agnico Eagle Mines Limited**
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, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 12 September 2011
**LR Report:** **CA10283-SEP11**
**Reference:** F2, F7, F8 Ro tails

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F2 Ro Tails Supernatant | 6: F7 Ro Tails Supernatant | 7: F8 Ro Tails Supernatant |
|---|---|---|---|---|---|
| Temperature Upon Receipt [°C] | --- | --- | 10.0 | 10.0 | 10.0 |
| pH [no unit] | 15-Sep-11 | 10:03 | 7.92 | 8.20 | 7.98 |
| Conductivity [uS/cm] | 15-Sep-11 | 10:03 | 343 | 306 | 380 |
| Alkalinity [mg/L as CaCO3] | 15-Sep-11 | 10:03 | 93 | 94 | 67 |
| Total Dissolved Solids [mg/L] | 14-Sep-11 | 10:43 | 183 | 174 | 249 |
| Fluoride [mg/L] | 21-Sep-11 | 08:39 | 0.18 | < 0.06 | 0.11 |
| Chloride [mg/L] | 21-Sep-11 | 10:55 | 17 | 14 | 14 |
| Sulphate [mg/L] | 21-Sep-11 | 10:55 | 41 | 31 | 77 |
| Nitrite (as N) [mg/L] | 16-Sep-11 | 16:54 | < 0.06 | < 0.06 | < 0.06 |
| Nitrate (as N) [mg/L] | 16-Sep-11 | 16:54 | < 0.05 | < 0.05 | < 0.05 |
| Cyanide (total) [mg/L] | 16-Sep-11 | 14:17 | < 0.01 | < 0.01 | < 0.01 |
| Cyanide (WAD) [mg/L] | 16-Sep-11 | 14:17 | < 0.01 | < 0.01 | < 0.01 |
| Cyanide (free) [mg/L] | 16-Sep-11 | 14:17 | < 0.01 | < 0.01 | < 0.01 |
| Cyanate [mg/L] | 19-Sep-11 | 09:04 | < 0.1 | < 0.1 | < 0.1 |
| Thiocyanate [mg/L] | 16-Sep-11 | 10:00 | < 0.2 | < 0.2 | < 2 |
| Thiosalts (total) [as S2O3 mg/L] | 19-Sep-11 | 11:20 | 26 | 26 | 21 |
| As+3 [mg/L] | 30-Sep-11 | 09:19 | 0.012 | 0.008 | 0.006 |
| As+5 [mg/L] | 30-Sep-11 | 09:19 | 0.012 | 0.015 | 0.007 |
| Aluminum (total) [mg/L] | 14-Sep-11 | 15:37 | 0.19 | 0.22 | 0.49 |
| Aluminum (dissolved) [mg/L] | 14-Sep-11 | 15:37 | 0.10 | 0.12 | 0.10 |
| Arsenic (total) [mg/L] | 15-Sep-11 | 14:13 | 0.0236 | 0.0223 | 0.0125 |
| Arsenic (dissolved) [mg/L] | 15-Sep-11 | 14:13 | 0.0220 | 0.0141 | 0.0073 |
| Barium (total) [mg/L] | 15-Sep-11 | 14:13 | 0.0139 | 0.0133 | 0.105 |
| Barium (dissolved) [mg/L] | 15-Sep-11 | 14:13 | 0.0132 | 0.0127 | 0.0966 |
| Beryllium (total) [mg/L] | 15-Sep-11 | 14:13 | < 0.00002 | < 0.00002 | < 0.00002 |
| Beryllium (dissolved) [mg/L] | 15-Sep-11 | 14:13 | < 0.00002 | < 0.00002 | < 0.00002 |
| Boron (total) [mg/L] | 15-Sep-11 | 14:13 | 0.0214 | 0.0197 | 0.0153 |
| Boron (dissolved) [mg/L] | 15-Sep-11 | 14:13 | 0.0186 | 0.0181 | 0.0145 |
| Bismuth (total) [mg/L] | 15-Sep-11 | 14:13 | < 0.00001 | < 0.00001 | 0.00002 |

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**LR Report :** **CA10283-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F2 Ro Tails Supernatant | 6: F7 Ro Tails Supernatant | 7: F8 Ro Tails Supernatant |
|---|---|---|---|---|---|
| Bismuth (dissolved) [mg/L] | 15-Sep-11 | 14:13 | < 0.00001 | < 0.00001 | < 0.00001 |
| Calcium (total) [mg/L] | 14-Sep-11 | 15:37 | 31.9 | 33.7 | 32.2 |
| Calcium (dissolved) [mg/L] | 14-Sep-11 | 15:37 | 31.0 | 33.9 | 31.9 |
| Cadmium (total) [mg/L] | 15-Sep-11 | 14:13 | 0.000007 | 0.000016 | 0.000017 |
| Cadmium (dissolved) [mg/L] | 15-Sep-11 | 14:13 | 0.000007 | 0.000014 | 0.000008 |
| Cobalt (total) [mg/L] | 15-Sep-11 | 14:13 | 0.000093 | 0.000133 | 0.000120 |
| Cobalt (dissolved) [mg/L] | 15-Sep-11 | 14:13 | 0.000097 | 0.000073 | 0.000079 |
| Chromium (total) [mg/L] | 15-Sep-11 | 14:13 | < 0.0005 | < 0.0005 | < 0.0005 |
| Chromium (dissolved) [mg/L] | 15-Sep-11 | 14:13 | < 0.0005 | < 0.0005 | < 0.0005 |
| Copper (total) [mg/L] | 15-Sep-11 | 14:13 | 0.0013 | 0.0018 | 0.0181 |
| Copper (dissolved) [mg/L] | 15-Sep-11 | 14:13 | 0.0010 | < 0.0005 | 0.0048 |
| Iron (total) [mg/L] | 14-Sep-11 | 15:38 | 0.084 | 0.502 | 1.08 |
| Iron (dissolved) [mg/L] | 14-Sep-11 | 15:38 | 0.004 | 0.002 | 0.007 |
| Potassium (total) [mg/L] | 14-Sep-11 | 15:38 | 24.7 | 11.1 | 38.6 |
| Potassium (dissolved) [mg/L] | 14-Sep-11 | 15:38 | 23.7 | 11.0 | 37.1 |
| Lithium (total) [mg/L] | 15-Sep-11 | 14:14 | 0.005 | 0.007 | 0.018 |
| Lithium (dissolved) [mg/L] | 15-Sep-11 | 14:14 | 0.005 | 0.007 | 0.017 |
| Magnesium (total) [mg/L] | 14-Sep-11 | 15:38 | 6.68 | 7.75 | 4.00 |
| Magnesium (dissolved) [mg/L] | 14-Sep-11 | 15:38 | 6.41 | 7.67 | 3.86 |
| Manganese (total) [mg/L] | 15-Sep-11 | 14:14 | 0.0131 | 0.0498 | 0.0155 |
| Manganese (dissolved) [mg/L] | 15-Sep-11 | 14:14 | 0.0119 | 0.0391 | 0.0122 |
| Molybdenum (total) [mg/L] | 15-Sep-11 | 14:14 | 0.00768 | 0.00854 | 0.00429 |
| Molybdenum (dissolved) [mg/L] | 15-Sep-11 | 14:14 | 0.00771 | 0.00826 | 0.00449 |
| Sodium (total) [mg/L] | 14-Sep-11 | 15:38 | 19.4 | 14.9 | 17.1 |
| Sodium (dissolved) [mg/L] | 14-Sep-11 | 15:38 | 18.4 | 14.7 | 16.7 |
| Nickel (total) [mg/L] | 15-Sep-11 | 14:14 | 0.0015 | 0.0019 | 0.0014 |
| Nickel (dissolved) [mg/L] | 15-Sep-11 | 14:14 | 0.0015 | 0.0017 | 0.0014 |
| Lead (total) [mg/L] | 15-Sep-11 | 14:14 | 0.00030 | 0.00144 | 0.00092 |
| Lead (dissolved) [mg/L] | 15-Sep-11 | 14:14 | 0.00010 | 0.00007 | 0.00006 |
| Antimony (total) [mg/L] | 15-Sep-11 | 14:14 | 0.0021 | 0.0014 | 0.0005 |
| Antimony (dissolved) [mg/L] | 15-Sep-11 | 14:14 | 0.0024 | 0.0016 | 0.0011 |
| Selenium (total) [mg/L] | 15-Sep-11 | 14:14 | < 0.001 | < 0.001 | < 0.001 |
| Selenium (dissolved) [mg/L] | 15-Sep-11 | 14:14 | < 0.001 | < 0.001 | < 0.001 |
| Tin (total) [mg/L] | 15-Sep-11 | 14:14 | 0.00104 | 0.00011 | 0.00014 |
| Tin (dissolved) [mg/L] | 15-Sep-11 | 14:14 | 0.00090 | 0.00003 | 0.00017 |
| Strontium (total) [mg/L] | 14-Sep-11 | 15:38 | 0.190 | 0.101 | 0.231 |
| Strontium (dissolved) [mg/L] | 14-Sep-11 | 15:38 | 0.185 | 0.102 | 0.229 |
| Titanium (total) [mg/L] | 15-Sep-11 | 14:15 | 0.0016 | 0.0017 | 0.0127 |
| Titanium (dissolved) [mg/L] | 15-Sep-11 | 14:15 | 0.0005 | 0.0004 | 0.0008 |
| Thallium (total) [mg/L] | 15-Sep-11 | 14:15 | < 0.0002 | < 0.0002 | < 0.0002 |
| Thallium (dissolved) [mg/L] | 15-Sep-11 | 14:15 | < 0.0002 | < 0.0002 | < 0.0002 |
| Uranium (total) [mg/L] | 15-Sep-11 | 14:15 | 0.000294 | 0.000130 | 0.000312 |
| Uranium (dissolved) [mg/L] | 15-Sep-11 | 14:15 | 0.000224 | 0.000109 | 0.000258 |
| Vanadium (total) [mg/L] | 15-Sep-11 | 14:15 | 0.00016 | 0.00037 | 0.00035 |

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**LR Report :** **CA10283-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F2 Ro Tails Supernatant | 6: F7 Ro Tails Supernatant | 7: F8 Ro Tails Supernatant |
|---|---|---|---|---|---|
| Vanadium (dissolved) [mg/L] | 15-Sep-11 | 14:15 | 0.00013 | 0.00010 | 0.00010 |
| Tungsten (total) [mg/L] | 15-Sep-11 | 14:15 | 0.00058 | 0.00048 | 0.00033 |
| Tungsten (dissolved) [mg/L] | 15-Sep-11 | 14:15 | 0.00059 | 0.00046 | 0.00036 |
| Yttrium (total) [mg/L] | 15-Sep-11 | 14:15 | 0.000016 | 0.000040 | 0.000119 |
| Yttrium (dissolved) [mg/L] | 15-Sep-11 | 14:15 | 0.000004 | 0.000003 | 0.000006 |
| Zinc (total) [mg/L] | 14-Sep-11 | 15:38 | < 0.002 | 0.002 | < 0.002 |
| Zinc (dissolved) [mg/L] | 14-Sep-11 | 15:38 | 0.008 | 0.003 | 0.002 |

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*Project Specialist*
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Wednesday, October 05, 2011

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Fax:(819) 759-3663

**Date Rec. :** 12 September 2011
**LR Report:** **CA10284-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F1 Float Tails | 6: F2 Ro Tails | 7: F7 Ro Tails | 8: F8 Ro Tails |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Paste pH [units] | 22-Sep-11 | 15:16 | 8.84 | 8.78 | 8.27 | 8.94 |
| Fizz Rate [---] | 22-Sep-11 | 15:16 | 4 | 3 | 4 | 3 |
| Sample weight [g] | 22-Sep-11 | 15:16 | 1.95 | 1.95 | 1.98 | 2.00 |
| HCl added [mL] | 22-Sep-11 | 15:16 | 75.90 | 61.50 | 84.00 | 34.00 |
| HCl [Normality] | 22-Sep-11 | 15:16 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 22-Sep-11 | 15:16 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 22-Sep-11 | 15:16 | 43.11 | 34.97 | 36.65 | 26.44 |
| Final pH [units] | 22-Sep-11 | 15:16 | 1.55 | 1.55 | 1.82 | 1.55 |
| NP [t CaCO3/1000 t] | 22-Sep-11 | 15:16 | 83.9 | 67.9 | 120 | 18.9 |
| AP [t CaCO3/1000 t] | 05-Oct-11 | 09:23 | 1.88 | 2.50 | 10.6 | 2.50 |
| Net NP [t CaCO3/1000 t] | 05-Oct-11 | 09:23 | 82.0 | 65.4 | 109 | 16.4 |
| NP/AP [ratio] | 05-Oct-11 | 09:23 | 44.6 | 27.2 | 11.4 | 7.56 |
| Sulphur (total) [%] | 05-Oct-11 | 09:23 | 0.140 | 0.103 | 0.472 | 0.103 |
| Acid Leachable SO4-S [%] | 05-Oct-11 | 09:23 | 0.08 | 0.02 | 0.13 | 0.02 |
| Sulphide [%] | 15-Sep-11 | 09:13 | 0.06 | 0.08 | 0.34 | 0.08 |
| Carbon (total) [%] | 05-Oct-11 | 09:23 | 1.24 | 1.08 | 2.05 | 0.163 |
| Carbonate [%] | 15-Sep-11 | 08:54 | 5.16 | 4.45 | 7.50 | 0.438 |

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**LR Report :** **CA10284-SEP11**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 04, 2011

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**Date Rec. :** 16 September 2011
**LR Report:** **CA10420-SEP11**
**Reference:** F1, F2, F7, F8

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F1 Concentrate (C1-C8) Comp | 6: F2 Concentrate (C1-C8) Comp | 7: F7 Ro Con (C1-C8) Comp | 8: F8 Ro Con (C1-C10) Comp |
|---|---|---|---|---|---|---|
| Paste pH [units] | 04-Oct-11 | 09:09 | 8.25 | 8.18 | 7.73 | 7.89 |
| Fizz Rate [---] | 04-Oct-11 | 09:09 | 4 | 4 | 4 | 2 |
| Sample weight [g] | 04-Oct-11 | 09:09 | 1.95 | 1.97 | 2.00 | 1.96 |
| HCl added [mL] | 04-Oct-11 | 09:09 | 62.60 | 62.70 | 84.70 | 47.50 |
| HCl [Normality] | 04-Oct-11 | 09:09 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH [Normality] | 04-Oct-11 | 09:09 | 0.10 | 0.10 | 0.10 | 0.10 |
| NaOH to pH=8.3 [mL] | 04-Oct-11 | 09:09 | 33.35 | 32.75 | 51.10 | 38.73 |
| Final pH [units] | 04-Oct-11 | 09:09 | 1.94 | 1.98 | 1.57 | 1.54 |
| NP [t CaCO3/1000 t] | 04-Oct-11 | 09:09 | 75.0 | 76.0 | 84.0 | 22.4 |
| AP [t CaCO3/1000 t] | 04-Oct-11 | 09:09 | 364 | 224 | 455 | 54.0 |
| Net NP [t CaCO3/1000 t] | 04-Oct-11 | 09:09 | -289 | -148 | -371 | -31.6 |
| NP/AP [ratio] | 04-Oct-11 | 09:09 | 0.21 | 0.34 | 0.18 | 0.41 |
| Sulphur (total) [%] | 27-Sep-11 | 15:56 | 12.9 | 7.29 | 15.6 | 2.08 |
| Acid Leachable SO4-S [%] | 28-Sep-11 | 15:15 | 1.29 | 0.12 | 1.02 | 0.35 |
| Sulphide [%] | 28-Sep-11 | 15:15 | 11.6 | 7.17 | 14.6 | 1.73 |
| Carbon (total) [%] | 27-Sep-11 | 15:56 | 1.18 | 1.71 | 1.78 | 0.310 |
| Carbonate [%] | 27-Sep-11 | 17:41 | 3.02 | 4.61 | 4.33 | 0.467 |

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**LR Report :** **CA10420-SEP11**



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Wednesday, October 05, 2011

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**Date Rec. :** 16 September 2011
**LR Report:** **CA10421-SEP11**
**Reference:** F1, F2, F7, F8

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F1 Concentrate (C1-C8) Comp | 6: F2 Concentrate (C1-C8) Comp | 7: F7 Ro Con (C1-C8) Comp | 8: F8 Ro Con (C1-C10) Comp |
|---|---|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A | Date:N/A | Date:N/A |
| Sample weight [g] | 28-Sep-11 | 07:20 | 250 | 200 | 250 | 250 |
| Volume D.I. Water [mL] | 28-Sep-11 | 07:20 | 750 | 600 | 750 | 750 |
| Initial pH [units] | 28-Sep-11 | 07:20 | 9.0 | 8.4 | 8.5 | 8.2 |
| Final pH [units] | 28-Sep-11 | 07:20 | 7.84 | 8.06 | 7.55 | 7.63 |
| pH [no unit] | 03-Oct-11 | 11:54 | 8.03 | 8.05 | 7.92 | 7.79 |
| Conductivity [uS/cm] | 03-Oct-11 | 11:54 | 644 | 492 | 753 | 718 |
| Alkalinity [mg/L as CaCO3] | 03-Oct-11 | 11:54 | 116 | 95 | 99 | 74 |
| Sulphate [mg/L] | 03-Oct-11 | 15:35 | 160 | 100 | 95 | 140 |
| Chloride [mg/L] | 01-Oct-11 | 11:00 | 4.2 | 6.1 | 2.4 | 3.9 |
| Mercury [mg/L] | 30-Sep-11 | 13:50 | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 04-Oct-11 | 14:08 | 0.07 | 0.08 | < 0.01 | < 0.01 |
| Arsenic [mg/L] | 30-Sep-11 | 15:46 | 1.22 | 0.653 | 0.373 | 0.0644 |
| Barium [mg/L] | 30-Sep-11 | 15:46 | 0.0381 | 0.0157 | 0.0292 | 0.0963 |
| Beryllium [mg/L] | 30-Sep-11 | 15:46 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 30-Sep-11 | 15:46 | 0.00024 | 0.00003 | 0.00005 | 0.00001 |
| Calcium [mg/L] | 04-Oct-11 | 14:08 | 88.2 | 50.6 | 116 | 111 |
| Cadmium [mg/L] | 30-Sep-11 | 15:46 | 0.000006 | 0.000004 | 0.000013 | 0.000003 |
| Cobalt [mg/L] | 30-Sep-11 | 15:46 | 0.000250 | 0.000228 | 0.000770 | 0.000197 |
| Chromium [mg/L] | 30-Sep-11 | 15:46 | < 0.0005 | 0.0010 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 30-Sep-11 | 15:46 | 0.0014 | 0.0021 | 0.0012 | 0.0043 |
| Iron [mg/L] | 04-Oct-11 | 14:08 | 0.010 | 0.008 | 0.003 | 0.007 |
| Potassium [mg/L] | 04-Oct-11 | 14:08 | 25.5 | 17.2 | 10.0 | 37.1 |
| Lithium [mg/L] | 30-Sep-11 | 15:46 | 0.007 | 0.006 | 0.014 | 0.025 |
| Magnesium [mg/L] | 04-Oct-11 | 14:09 | 22.9 | 16.6 | 23.3 | 9.19 |
| Manganese [mg/L] | 30-Sep-11 | 15:46 | 0.0555 | 0.0318 | 0.386 | 0.0368 |
| Molybdenum [mg/L] | 30-Sep-11 | 15:46 | 0.00896 | 0.0106 | 0.00395 | 0.00282 |
| Sodium [mg/L] | 04-Oct-11 | 14:09 | 12.3 | 12.5 | 4.70 | 8.81 |
| Nickel [mg/L] | 30-Sep-11 | 15:46 | 0.0012 | 0.0012 | 0.0042 | 0.0012 |

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**LR Report :** **CA10421-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F1 Concentrate (C1-C8) Comp | 6: F2 Concentrate (C1-C8) Comp | 7: F7 Ro Con (C1-C8) Comp | 8: F8 Ro Con (C1-C10) Comp |
|---|---|---|---|---|---|---|
| Lead [mg/L] | 30-Sep-11 | 15:46 | 0.00012 | 0.00003 | < 0.00002 | < 0.00002 |
| Antimony [mg/L] | 30-Sep-11 | 15:46 | 0.0066 | 0.0174 | 0.0035 | 0.0008 |
| Selenium [mg/L] | 30-Sep-11 | 15:46 | 0.002 | 0.002 | 0.001 | < 0.001 |
| Tin [mg/L] | 30-Sep-11 | 15:46 | 0.00002 | 0.00001 | 0.00011 | 0.00006 |
| Strontium [mg/L] | 04-Oct-11 | 14:09 | 0.541 | 0.340 | 0.168 | 0.786 |
| Titanium [mg/L] | 30-Sep-11 | 15:46 | 0.0004 | 0.0003 | 0.0002 | 0.0003 |
| Thallium [mg/L] | 30-Sep-11 | 15:46 | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 30-Sep-11 | 15:46 | 0.00217 | 0.00211 | 0.000661 | 0.00244 |
| Vanadium [mg/L] | 30-Sep-11 | 15:46 | 0.00018 | 0.00018 | < 0.00003 | < 0.00003 |
| Zinc [mg/L] | 30-Sep-11 | 15:46 | < 0.001 | < 0.001 | 0.002 | 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 04, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 16 September 2011
**LR Report:** **CA10423-SEP11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|---|---|
| Paste pH [units] | 04-Oct-11 | 09:06 | 8.57 | 8.55 |
| Fizz Rate [---] | 04-Oct-11 | 09:06 | 4 | 4 |
| Sample weight [g] | 04-Oct-11 | 09:06 | 2.02 | 2.03 |
| HCl added [mL] | 04-Oct-11 | 09:06 | 88.60 | 91.90 |
| HCl [Normality] | 04-Oct-11 | 09:06 | 0.10 | 0.10 |
| NaOH [Normality] | 04-Oct-11 | 09:06 | 0.10 | 0.10 |
| NaOH to pH=8.3 [mL] | 04-Oct-11 | 09:06 | 43.00 | 49.53 |
| Final pH [units] | 04-Oct-11 | 09:06 | 1.88 | 1.70 |
| NP [t CaCO3/1000 t] | 04-Oct-11 | 09:06 | 113 | 104 |
| AP [t CaCO3/1000 t] | 04-Oct-11 | 09:06 | 64.1 | 17.1 |
| Net NP [t CaCO3/1000 t] | 04-Oct-11 | 09:06 | 48.8 | 87.3 |
| NP/AP [ratio] | 04-Oct-11 | 09:06 | 1.76 | 6.10 |
| Sulphur (total) [%] | 27-Sep-11 | 15:56 | 2.29 | 0.912 |
| Acid Leachable SO4-S [%] | 27-Sep-11 | 17:38 | 0.24 | 0.36 |
| Sulphide [%] | 27-Sep-11 | 17:38 | 2.05 | 0.55 |
| Carbon (total) [%] | 27-Sep-11 | 15:56 | 2.27 | 1.74 |
| Carbonate [%] | 27-Sep-11 | 17:42 | 6.23 | 5.89 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Lakefield - Ontario - KOL 2HO
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Monday, October 03, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 16 September 2011
**LR Report:** **CA10424-SEP11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Mercury [µg/g] | 28-Sep-11 | 15:24 | < 0.1 | < 0.1 |
| Aluminum [µg/g] | 30-Sep-11 | 10:02 | 9000 | 52000 |
| Arsenic [µg/g] | 30-Sep-11 | 10:00 | 8600 | 1700 |
| Barium [µg/g] | 30-Sep-11 | 10:00 | 33 | 420 |
| Beryllium [µg/g] | 30-Sep-11 | 10:00 | 0.22 | 1.2 |
| Bismuth [µg/g] | 30-Sep-11 | 10:00 | 0.59 | 0.23 |
| Calcium [µg/g] | 30-Sep-11 | 10:02 | 34000 | 31000 |
| Cadmium [µg/g] | 30-Sep-11 | 10:00 | 0.54 | 0.42 |
| Cobalt [µg/g] | 30-Sep-11 | 10:00 | 11 | 11 |
| Chromium [µg/g] | 30-Sep-11 | 10:00 | 230 | 270 |
| Copper [µg/g] | 30-Sep-11 | 10:00 | 190 | 90 |
| Iron [µg/g] | 30-Sep-11 | 10:03 | 120000 | 91000 |
| Potassium [µg/g] | 30-Sep-11 | 10:03 | 1500 | 15000 |
| Lithium [µg/g] | 30-Sep-11 | 10:00 | 4 | 20 |
| Magnesium [µg/g] | 30-Sep-11 | 10:03 | 12000 | 10000 |
| Manganese [µg/g] | 30-Sep-11 | 10:01 | 3400 | 620 |
| Molybdenum [µg/g] | 30-Sep-11 | 10:01 | 4.3 | 13 |
| Sodium [µg/g] | 30-Sep-11 | 10:03 | 710 | 9000 |
| Nickel [µg/g] | 30-Sep-11 | 10:01 | 70 | 95 |
| Lead [µg/g] | 30-Sep-11 | 10:01 | 6.4 | 130 |
| Antimony [µg/g] | 30-Sep-11 | 10:01 | 4.1 | 1.0 |
| Selenium [µg/g] | 30-Sep-11 | 10:01 | 1.4 | < 0.7 |
| Tin [µg/g] | 30-Sep-11 | 10:01 | 1.1 | 1.1 |
| Strontium [µg/g] | 30-Sep-11 | 10:01 | 72 | 190 |
| Titanium [µg/g] | 30-Sep-11 | 10:03 | 380 | 1900 |
| Thallium [µg/g] | 30-Sep-11 | 10:01 | 0.07 | 0.49 |
| Uranium [µg/g] | 30-Sep-11 | 10:01 | 0.38 | 1.1 |
| Vanadium [µg/g] | 30-Sep-11 | 10:01 | 20 | 61 |
| Zinc [µg/g] | 30-Sep-11 | 10:01 | 160 | 110 |

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**LR Report :** **CA10424-SEP11**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, September 23, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 16 September 2011
**LR Report:** **CA10425-SEP11**
**Reference:** Whole Rock Analysis

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|
| SiO2 [%] | 62.2 | 62.3 |
| Al2O3 [%] | 1.81 | 1.83 |
| Fe2O3 [%] | 17.7 | 17.7 |
| MgO [%] | 2.40 | 2.40 |
| CaO [%] | 4.77 | 4.77 |
| Na2O [%] | 0.14 | 0.13 |
| K2O [%] | 0.16 | 0.16 |
| TiO2 [%] | 0.07 | 0.07 |
| P2O5 [%] | 0.05 | 0.05 |
| MnO [%] | 0.45 | 0.45 |
| Cr2O3 [%] | 0.03 | 0.04 |
| V2O5 [%] | < 0.01 | < 0.01 |
| LOI [%] | 5.64 | 6.40 |
| Sum [%] | 95.4 | 96.3 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 29, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 16 September 2011
**LR Report:** **CA10426-SEP11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Sample weight [g] | 28-Sep-11 | 11:31 | 1.53 | 1.51 |
| Vol H2O2 [mL] | 28-Sep-11 | 11:31 | 150 | 150 |
| Final pH [units] | 28-Sep-11 | 11:31 | 8.27 | 10.49 |
| NaOH [Normality] | 28-Sep-11 | 11:31 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 28-Sep-11 | 11:31 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 28-Sep-11 | 11:31 | 0.00 | 0.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 28-Sep-11 | 11:31 | 0.0 | 0.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 28-Sep-11 | 11:31 | 0.0 | 0.0 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 04, 2011

**Agnico Eagle Mines Limited**
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Fax:(819) 759-3663

**Date Rec. :** 16 September 2011
**LR Report:** **CA10427-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Sample weight [g] | 28-Sep-11 | 11:33 | 2.52 | 2.50 |
| Vol H2O2 [mL] | 28-Sep-11 | 11:33 | 250 | 250 |
| Final pH [units] | 28-Sep-11 | 11:33 | 8.56 | 10.49 |
| pH [no unit] | 29-Sep-11 | 08:41 | 7.34 | 2.44 |
| Conductivity [uS/cm] | 29-Sep-11 | 08:41 | 446 | 2480 |
| Alkalinity [mg/L as CaCO3] | 29-Sep-11 | 08:41 | 21 | < 2 |
| Chloride [mg/L] | 30-Sep-11 | 11:42 | 3.9 | < 2 |
| Sulphate [mg/L] | 03-Oct-11 | 21:28 | 260 | 120 |
| Mercury [mg/L] | 27-Sep-11 | 17:48 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 28-Sep-11 | 15:53 | < 0.01 | 1.83 |
| Arsenic [mg/L] | 30-Sep-11 | 11:24 | 0.290 | 0.0918 |
| Barium [mg/L] | 30-Sep-11 | 11:24 | 0.00115 | 0.00415 |
| Beryllium [mg/L] | 30-Sep-11 | 11:24 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 30-Sep-11 | 11:24 | 0.00004 | < 0.00001 |
| Calcium [mg/L] | 28-Sep-11 | 15:53 | 106 | 65.6 |
| Cadmium [mg/L] | 30-Sep-11 | 11:24 | 0.000006 | 0.000056 |
| Cobalt [mg/L] | 30-Sep-11 | 11:24 | 0.000174 | 0.000089 |
| Chromium [mg/L] | 30-Sep-11 | 11:24 | < 0.0005 | 0.0233 |
| Copper [mg/L] | 30-Sep-11 | 11:24 | 0.0233 | 0.0011 |
| Iron [mg/L] | 28-Sep-11 | 15:53 | < 0.002 | 0.003 |
| Potassium [mg/L] | 28-Sep-11 | 15:53 | 5.98 | 9.15 |
| Lithium [mg/L] | 30-Sep-11 | 11:24 | 0.004 | 0.002 |
| Magnesium [mg/L] | 28-Sep-11 | 15:53 | 5.80 | 0.018 |
| Manganese [mg/L] | 30-Sep-11 | 11:24 | 0.0182 | 0.00017 |
| Molybdenum [mg/L] | 30-Sep-11 | 11:24 | 0.00912 | 0.0884 |
| Sodium [mg/L] | 28-Sep-11 | 15:53 | 0.89 | 2.99 |
| Nickel [mg/L] | 30-Sep-11 | 11:24 | < 0.0001 | < 0.0001 |
| Lead [mg/L] | 30-Sep-11 | 11:24 | < 0.00002 | < 0.00002 |
| Antimony [mg/L] | 30-Sep-11 | 11:24 | 0.0011 | 0.0009 |

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**LR Report :** **CA10427-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|---|---|
| Selenium [mg/L] | 30-Sep-11 | 11:24 | 0.008 | 0.004 |
| Tin [mg/L] | 30-Sep-11 | 11:24 | 0.00002 | 0.00004 |
| Strontium [mg/L] | 30-Sep-11 | 11:24 | 0.165 | 0.260 |
| Titanium [mg/L] | 30-Sep-11 | 11:24 | 0.0003 | 0.0005 |
| Thallium [mg/L] | 30-Sep-11 | 11:24 | < 0.00002 | 0.00010 |
| Uranium [mg/L] | 30-Sep-11 | 11:24 | 0.000009 | 0.000013 |
| Vanadium [mg/L] | 30-Sep-11 | 11:24 | 0.00011 | 0.00248 |
| Zinc [mg/L] | 30-Sep-11 | 11:24 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Wednesday, October 05, 2011

**Agnico Eagle Mines Limited**
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Division LaRonde 20, Route 395
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J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 16 September 2011
**LR Report:** **CA10428-SEP11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Sample weight [g] | 28-Sep-11 | 07:20 | 250 | 250 |
| Volume D.I. Water [mL] | 28-Sep-11 | 07:20 | 750 | 750 |
| Initial pH [units] | 28-Sep-11 | 07:20 | 8.8 | 8.7 |
| Final pH [units] | 28-Sep-11 | 07:20 | 8.19 | 8.27 |
| pH [no unit] | 30-Sep-11 | 12:29 | 8.12 | 7.82 |
| Conductivity [uS/cm] | 30-Sep-11 | 12:29 | 289 | 615 |
| Alkalinity [mg/L as CaCO3] | 30-Sep-11 | 12:29 | 101 | 51 |
| Sulphate [mg/L] | 03-Oct-11 | 10:45 | 92 | 240 |
| Chloride [mg/L] | 30-Sep-11 | 11:49 | 1.0 | < 1 |
| Mercury [mg/L] | 30-Sep-11 | 13:50 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 04-Oct-11 | 14:09 | 0.02 | 0.15 |
| Arsenic [mg/L] | 30-Sep-11 | 15:47 | 0.266 | 0.0547 |
| Barium [mg/L] | 30-Sep-11 | 15:47 | 0.00647 | 0.0185 |
| Beryllium [mg/L] | 30-Sep-11 | 15:47 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 30-Sep-11 | 15:47 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 04-Oct-11 | 14:09 | 55.8 | 115 |
| Cadmium [mg/L] | 30-Sep-11 | 15:47 | 0.000006 | 0.000010 |
| Cobalt [mg/L] | 30-Sep-11 | 15:47 | 0.00348 | 0.00135 |
| Chromium [mg/L] | 30-Sep-11 | 15:47 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 30-Sep-11 | 15:47 | 0.0025 | 0.0022 |
| Iron [mg/L] | 04-Oct-11 | 14:09 | 0.515 | 0.185 |
| Potassium [mg/L] | 04-Oct-11 | 14:09 | 9.29 | 13.9 |
| Lithium [mg/L] | 30-Sep-11 | 15:47 | 0.004 | 0.003 |
| Magnesium [mg/L] | 04-Oct-11 | 14:09 | 13.4 | 6.83 |
| Manganese [mg/L] | 30-Sep-11 | 15:47 | 0.102 | 0.0252 |
| Molybdenum [mg/L] | 30-Sep-11 | 15:47 | 0.00290 | 0.00623 |
| Sodium [mg/L] | 04-Oct-11 | 14:10 | 3.52 | 2.60 |
| Nickel [mg/L] | 30-Sep-11 | 15:47 | 0.0005 | 0.0010 |
| Lead [mg/L] | 30-Sep-11 | 15:47 | < 0.00002 | 0.00012 |

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**LR Report :** **CA10428-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND Residue | 6: WFOP CN4 CND Residue |
|---|---|---|---|---|
| Antimony [mg/L] | 30-Sep-11 | 15:47 | 0.0043 | 0.0032 |
| Selenium [mg/L] | 30-Sep-11 | 15:47 | < 0.001 | 0.005 |
| Tin [mg/L] | 30-Sep-11 | 15:47 | 0.00005 | < 0.00001 |
| Strontium [mg/L] | 04-Oct-11 | 14:10 | 0.0959 | 0.192 |
| Titanium [mg/L] | 30-Sep-11 | 15:47 | 0.0002 | 0.0001 |
| Thallium [mg/L] | 30-Sep-11 | 15:47 | < 0.00002 | 0.00002 |
| Uranium [mg/L] | 30-Sep-11 | 15:47 | 0.00193 | 0.000835 |
| Vanadium [mg/L] | 30-Sep-11 | 15:47 | 0.00006 | 0.00005 |
| Zinc [mg/L] | 30-Sep-11 | 15:47 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 29, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 16 September 2011
**LR Report:** **CA10430-SEP11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND | 6: WFOP CN4 CND |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| pH [no unit] | 20-Sep-11 | 15:16 | 8.01 | 8.17 |
| Conductivity [uS/cm] | 20-Sep-11 | 15:16 | 2970 | 4140 |
| Alkalinity [mg/L as CaCO3] | 20-Sep-11 | 15:16 | 72 | 92 |
| Total Dissolved Solids [mg/L] | 26-Sep-11 | 12:14 | 2160 | 3090 |
| Fluoride [mg/L] | 23-Sep-11 | 15:22 | 0.07 | 0.15 |
| Chloride [mg/L] | 29-Sep-11 | 13:03 | 12 | 16 |
| Sulphate [mg/L] | 29-Sep-11 | 13:03 | 1100 | 2000 |
| Nitrite (as N) [mg/L] | 21-Sep-11 | 16:17 | < 0.06 | < 0.6 |
| Nitrate (as N) [mg/L] | 21-Sep-11 | 16:17 | 0.13 | < 0.5 |
| Cyanide (total) [mg/L] | 23-Sep-11 | 14:39 | < 0.01 | < 0.01 |
| Cyanide (WAD) [mg/L] | 23-Sep-11 | 14:39 | < 0.01 | < 0.01 |
| Cyanide (free) [mg/L] | 23-Sep-11 | 14:39 | < 0.01 | < 0.01 |
| Cyanate [mg/L] | 23-Sep-11 | 16:05 | 80 | 70 |
| Thiocyanate [mg/L] | 22-Sep-11 | 11:26 | 160 | 42 |
| Thiosalts (total) [as S2O3 mg/L] | 26-Sep-11 | 20:22 | 108 | 107 |
| As+3 [mg/L] | 29-Sep-11 | 07:46 | 0.014 | 0.17 |
| As+5 [mg/L] | 29-Sep-11 | 07:46 | 1.19 | 0.14 |
| Aluminum (total) [mg/L] | 21-Sep-11 | 12:40 | 0.06 | 0.16 |
| Aluminum (dissolved) [mg/L] | 21-Sep-11 | 12:40 | 0.04 | 0.14 |
| Arsenic (total) [mg/L] | 23-Sep-11 | 13:24 | 1.20 | 0.311 |
| Arsenic (dissolved) [mg/L] | 23-Sep-11 | 13:24 | 1.17 | 0.292 |
| Barium (total) [mg/L] | 23-Sep-11 | 13:24 | 0.012 | 0.054 |
| Barium (dissolved) [mg/L] | 23-Sep-11 | 13:24 | 0.011 | 0.051 |
| Beryllium (total) [mg/L] | 23-Sep-11 | 13:24 | < 0.0002 | < 0.0002 |
| Beryllium (dissolved) [mg/L] | 23-Sep-11 | 13:24 | < 0.0002 | < 0.0002 |
| Boron (total) [mg/L] | 23-Sep-11 | 13:24 | 0.030 | 0.036 |
| Boron (dissolved) [mg/L] | 23-Sep-11 | 13:24 | 0.027 | 0.034 |
| Bismuth (total) [mg/L] | 23-Sep-11 | 13:24 | < 0.0001 | < 0.0001 |
| Bismuth (dissolved) [mg/L] | 23-Sep-11 | 13:24 | < 0.0001 | < 0.0001 |

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**LR Report :** **CA10430-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND | 6: WFOP CN4 CND |
|---|---|---|---|---|
| Calcium (total) [mg/L] | 21-Sep-11 | 12:40 | 171 | 209 |
| Calcium (dissolved) [mg/L] | 21-Sep-11 | 12:40 | 167 | 200 |
| Cadmium (total) [mg/L] | 23-Sep-11 | 13:24 | 0.00007 | < 0.00003 |
| Cadmium (dissolved) [mg/L] | 23-Sep-11 | 13:24 | 0.00007 | < 0.00003 |
| Cobalt (total) [mg/L] | 23-Sep-11 | 13:24 | 0.125 | 0.0823 |
| Cobalt (dissolved) [mg/L] | 23-Sep-11 | 13:24 | 0.124 | 0.0805 |
| Chromium (total) [mg/L] | 23-Sep-11 | 13:24 | < 0.005 | < 0.005 |
| Chromium (dissolved) [mg/L] | 23-Sep-11 | 13:24 | < 0.005 | < 0.005 |
| Copper (total) [mg/L] | 23-Sep-11 | 13:25 | 0.150 | 0.095 |
| Copper (dissolved) [mg/L] | 23-Sep-11 | 13:25 | 0.068 | 0.061 |
| Iron (total) [mg/L] | 21-Sep-11 | 12:40 | 8.00 | 5.89 |
| Iron (dissolved) [mg/L] | 21-Sep-11 | 12:40 | 7.90 | 5.58 |
| Potassium (total) [mg/L] | 21-Sep-11 | 12:40 | 39.2 | 53.1 |
| Potassium (dissolved) [mg/L] | 21-Sep-11 | 12:40 | 37.3 | 49.6 |
| Lithium (total) [mg/L] | 23-Sep-11 | 13:25 | 0.003 | 0.003 |
| Lithium (dissolved) [mg/L] | 23-Sep-11 | 13:25 | 0.003 | 0.003 |
| Magnesium (total) [mg/L] | 21-Sep-11 | 12:40 | 7.37 | 11.3 |
| Magnesium (dissolved) [mg/L] | 21-Sep-11 | 12:40 | 7.09 | 10.6 |
| Manganese (total) [mg/L] | 23-Sep-11 | 13:25 | 0.0594 | 0.0241 |
| Manganese (dissolved) [mg/L] | 23-Sep-11 | 13:25 | 0.0533 | 0.0212 |
| Molybdenum (total) [mg/L] | 23-Sep-11 | 13:25 | 0.0679 | 0.0590 |
| Molybdenum (dissolved) [mg/L] | 23-Sep-11 | 13:25 | 0.0655 | 0.0576 |
| Sodium (total) [mg/L] | 22-Sep-11 | 14:37 | 544 | 808 |
| Sodium (dissolved) [mg/L] | 22-Sep-11 | 14:37 | 528 | 877 |
| Nickel (total) [mg/L] | 23-Sep-11 | 13:25 | 0.007 | 0.012 |
| Nickel (dissolved) [mg/L] | 23-Sep-11 | 13:25 | 0.005 | 0.012 |
| Lead (total) [mg/L] | 23-Sep-11 | 13:25 | 0.0002 | 0.0046 |
| Lead (dissolved) [mg/L] | 23-Sep-11 | 13:25 | < 0.0002 | 0.0008 |
| Antimony (total) [mg/L] | 23-Sep-11 | 13:25 | 0.007 | 0.014 |
| Antimony (dissolved) [mg/L] | 23-Sep-11 | 13:25 | 0.012 | 0.019 |
| Selenium (total) [mg/L] | 23-Sep-11 | 13:25 | < 0.01 | < 0.01 |
| Selenium (dissolved) [mg/L] | 23-Sep-11 | 13:25 | < 0.01 | < 0.01 |
| Tin (total) [mg/L] | 23-Sep-11 | 13:25 | < 0.0001 | < 0.0001 |
| Tin (dissolved) [mg/L] | 23-Sep-11 | 13:25 | < 0.0001 | < 0.0001 |
| Strontium (total) [mg/L] | 21-Sep-11 | 12:40 | 0.184 | 0.410 |
| Strontium (dissolved) [mg/L] | 21-Sep-11 | 12:40 | 0.179 | 0.393 |
| Titanium (total) [mg/L] | 23-Sep-11 | 13:25 | < 0.001 | 0.001 |
| Titanium (dissolved) [mg/L] | 23-Sep-11 | 13:25 | < 0.001 | < 0.001 |
| Thallium (total) [mg/L] | 23-Sep-11 | 13:25 | < 0.002 | < 0.002 |
| Thallium (dissolved) [mg/L] | 23-Sep-11 | 13:25 | < 0.002 | < 0.002 |
| Uranium (total) [mg/L] | 23-Sep-11 | 13:25 | 0.00231 | 0.00465 |
| Uranium (dissolved) [mg/L] | 23-Sep-11 | 13:25 | 0.00216 | 0.00446 |
| Vanadium (total) [mg/L] | 23-Sep-11 | 13:25 | < 0.0003 | 0.0003 |
| Vanadium (dissolved) [mg/L] | 23-Sep-11 | 13:25 | < 0.0003 | < 0.0003 |

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**LR Report :** **CA10430-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Open Pit CN6 CND | 6: WFOP CN4 CND |
|---|---|---|---|---|
| Tungsten (total) [mg/L] | 23-Sep-11 | 13:26 | 0.0044 | 0.0045 |
| Tungsten (dissolved) [mg/L] | 23-Sep-11 | 13:26 | 0.0042 | 0.0041 |
| Yttrium (total) [mg/L] | 23-Sep-11 | 13:26 | 0.00001 | 0.00002 |
| Yttrium (dissolved) [mg/L] | 23-Sep-11 | 13:26 | < 0.00001 | < 0.00001 |
| Zinc (total) [mg/L] | 21-Sep-11 | 12:40 | < 0.002 | < 0.002 |
| Zinc (dissolved) [mg/L] | 21-Sep-11 | 12:40 | < 0.002 | 0.002 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 05, 2011

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Fax:(819) 759-3663

**Date Rec. :** 26 September 2011
**LR Report:** **CA10516-SEP11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Paste pH [units] | 05-Oct-11 | 08:58 | 8.43 | 8.60 |
| Fizz Rate [---] | 05-Oct-11 | 08:58 | 3 | 3 |
| Sample weight [g] | 05-Oct-11 | 08:58 | 1.96 | 2.03 |
| HCl added [mL] | 05-Oct-11 | 08:58 | 75.60 | 72.10 |
| HCl [Normality] | 05-Oct-11 | 08:58 | 0.10 | 0.10 |
| NaOH [Normality] | 05-Oct-11 | 08:58 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 05-Oct-11 | 08:58 | 32.98 | 34.84 |
| Final pH [units] | 05-Oct-11 | 08:58 | 1.67 | 1.66 |
| NP [t CaCO3/1000 t] | 05-Oct-11 | 08:58 | 109 | 92 |
| AP [t CaCO3/1000 t] | 05-Oct-11 | 08:58 | 81.3 | 32.6 |
| Net NP [t CaCO3/1000 t] | 05-Oct-11 | 08:58 | 27.4 | 59.2 |
| NP/AP [ratio] | 05-Oct-11 | 08:58 | 1.34 | 2.81 |
| Sulphur (total) [%] | 03-Oct-11 | 12:01 | 3.40 | 1.73 |
| Acid Leachable SO4-S [%] | 03-Oct-11 | 12:04 | 0.80 | 0.68 |
| Sulphide [%] | 03-Oct-11 | 11:58 | 2.60 | 1.04 |
| Carbon (total) [%] | 03-Oct-11 | 12:01 | 1.89 | 1.37 |
| Carbonate [%] | 03-Oct-11 | 12:04 | 6.09 | 4.99 |

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**LR Report :** **CA10516-SEP11**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 12, 2011

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**Date Rec. :** 26 September 2011
**LR Report:** **CA10517-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Mercury [µg/g] | 06-Oct-11 | 11:29 | < 0.1 | < 0.1 |
| Aluminum [µg/g] | 10-Oct-11 | 18:47 | 7200 | 54000 |
| Arsenic [µg/g] | 10-Oct-11 | 19:09 | 6800 | 6600 |
| Barium [µg/g] | 10-Oct-11 | 19:09 | 15 | 450 |
| Beryllium [µg/g] | 10-Oct-11 | 19:09 | 0.13 | 1.1 |
| Bismuth [µg/g] | 10-Oct-11 | 19:09 | 0.11 | 0.41 |
| Calcium [µg/g] | 10-Oct-11 | 18:47 | 31000 | 27000 |
| Cadmium [µg/g] | 10-Oct-11 | 19:09 | 0.47 | 0.46 |
| Cobalt [µg/g] | 10-Oct-11 | 19:09 | 11 | 9.0 |
| Chromium [µg/g] | 10-Oct-11 | 19:09 | 290 | 230 |
| Copper [µg/g] | 10-Oct-11 | 19:09 | 170 | 110 |
| Iron [µg/g] | 10-Oct-11 | 18:47 | 120000 | 100000 |
| Potassium [µg/g] | 10-Oct-11 | 18:47 | 770 | 14000 |
| Lithium [µg/g] | 10-Oct-11 | 19:10 | 3 | 18 |
| Magnesium [µg/g] | 10-Oct-11 | 18:47 | 11000 | 11000 |
| Manganese [µg/g] | 10-Oct-11 | 19:10 | 2700 | 490 |
| Molybdenum [µg/g] | 10-Oct-11 | 19:10 | 2.9 | 14 |
| Sodium [µg/g] | 10-Oct-11 | 18:47 | 670 | 14000 |
| Nickel [µg/g] | 10-Oct-11 | 19:10 | 110 | 83 |
| Lead [µg/g] | 10-Oct-11 | 19:10 | 5.7 | 360 |
| Antimony [µg/g] | 10-Oct-11 | 19:10 | 3.4 | 2.4 |
| Selenium [µg/g] | 10-Oct-11 | 19:10 | 1.1 | < 0.7 |
| Tin [µg/g] | 10-Oct-11 | 19:10 | 0.8 | 1.0 |
| Strontium [µg/g] | 10-Oct-11 | 19:10 | 65 | 270 |
| Titanium [µg/g] | 10-Oct-11 | 18:47 | 300 | 1800 |
| Thallium [µg/g] | 10-Oct-11 | 19:10 | 0.03 | 0.33 |
| Uranium [µg/g] | 10-Oct-11 | 19:10 | 0.35 | 1.4 |
| Vanadium [µg/g] | 10-Oct-11 | 19:10 | 18 | 63 |
| Zinc [µg/g] | 10-Oct-11 | 19:10 | 150 | 76 |

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**LR Report :** **CA10517-SEP11**



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*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 05, 2011

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**Date Rec. :** 26 September 2011
**LR Report:** **CA10518-SEP11**
**Reference:** Whole Rock Analysis

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|
| Sample Date & Time | Date: n/a | Date: n/a |
| SiO2 [%] | 64.0 | 57.0 |
| Al2O3 [%] | 1.49 | 10.6 |
| Fe2O3 [%] | 18.3 | 14.8 |
| MgO [%] | 2.13 | 2.04 |
| CaO [%] | 4.49 | 3.84 |
| Na2O [%] | 0.09 | 2.15 |
| K2O [%] | 0.09 | 1.51 |
| TiO2 [%] | 0.05 | 0.34 |
| P2O5 [%] | 0.04 | 0.14 |
| MnO [%] | 0.40 | 0.07 |
| Cr2O3 [%] | 0.05 | 0.04 |
| V2O5 [%] | < 0.01 | 0.01 |
| LOI [%] | 3.90 | 4.98 |
| Sum [%] | 95.0 | 97.5 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 04, 2011

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**Date Rec. :** 26 September 2011
**LR Report:** **CA10519-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Sample weight [g] | 04-Oct-11 | 06:42 | 1.5 | 1.5 |
| Vol H2O2 [mL] | 04-Oct-11 | 06:42 | 150 | 150 |
| Final pH [units] | 04-Oct-11 | 06:42 | 8.06 | 8.97 |
| NaOH [Normality] | 04-Oct-11 | 06:42 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 04-Oct-11 | 06:42 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 04-Oct-11 | 06:42 | 0.00 | 0.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 04-Oct-11 | 06:42 | 0.0 | 0.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 04-Oct-11 | 06:42 | 0.0 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 12, 2011

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**Date Rec. :** 26 September 2011
**LR Report:** **CA10520-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Sample weight [g] | 03-Oct-11 | 13:49 | 2.5 | 2.5 |
| Vol H2O2 [mL] | 03-Oct-11 | 13:49 | 250 | 250 |
| Final pH [units] | 03-Oct-11 | 13:49 | 8.09 | 8.99 |
| pH [no unit] | 10-Oct-11 | 19:13 | 6.71 | 7.20 |
| Conductivity [uS/cm] | 10-Oct-11 | 19:13 | 1500 | 607 |
| Alkalinity [mg/L as CaCO3] | 10-Oct-11 | 19:13 | 4 | 13 |
| Chloride [mg/L] | 05-Oct-11 | 15:11 | < 2 | < 2 |
| Sulphate [mg/L] | 07-Oct-11 | 15:39 | 810 | 270 |
| Mercury [mg/L] | 07-Oct-11 | 14:45 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 05-Oct-11 | 15:45 | < 0.01 | 0.29 |
| Arsenic [mg/L] | 05-Oct-11 | 13:44 | 0.195 | 4.09 |
| Barium [mg/L] | 05-Oct-11 | 13:44 | 0.00224 | 0.0128 |
| Beryllium [mg/L] | 05-Oct-11 | 13:44 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 05-Oct-11 | 13:44 | 0.00002 | 0.00001 |
| Calcium [mg/L] | 05-Oct-11 | 15:45 | 269 | 111 |
| Cadmium [mg/L] | 05-Oct-11 | 13:45 | 0.000014 | 0.000009 |
| Cobalt [mg/L] | 05-Oct-11 | 13:45 | 0.000706 | 0.000211 |
| Chromium [mg/L] | 05-Oct-11 | 13:45 | 0.0059 | 0.0068 |
| Copper [mg/L] | 05-Oct-11 | 13:45 | 0.0017 | 0.0015 |
| Iron [mg/L] | 05-Oct-11 | 15:45 | 0.016 | 0.003 |
| Potassium [mg/L] | 05-Oct-11 | 15:45 | 4.38 | 10.1 |
| Lithium [mg/L] | 05-Oct-11 | 13:45 | 0.005 | 0.007 |
| Magnesium [mg/L] | 05-Oct-11 | 15:45 | 44.3 | 4.29 |
| Manganese [mg/L] | 05-Oct-11 | 13:45 | 1.06 | 0.00821 |
| Molybdenum [mg/L] | 05-Oct-11 | 13:45 | 0.00539 | 0.0930 |
| Sodium [mg/L] | 05-Oct-11 | 15:45 | 0.65 | 1.80 |
| Nickel [mg/L] | 05-Oct-11 | 13:45 | 0.0007 | < 0.0001 |
| Lead [mg/L] | 05-Oct-11 | 13:45 | 0.00025 | 0.00029 |
| Antimony [mg/L] | 05-Oct-11 | 13:45 | 0.0007 | 0.0039 |
| Selenium [mg/L] | 05-Oct-11 | 13:45 | 0.020 | 0.006 |

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**LR Report :** **CA10520-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Tin [mg/L] | 05-Oct-11 | 13:45 | 0.00034 | 0.00014 |
| Strontium [mg/L] | 05-Oct-11 | 13:45 | 0.438 | 0.465 |
| Titanium [mg/L] | 05-Oct-11 | 13:45 | 0.0006 | 0.0005 |
| Thallium [mg/L] | 05-Oct-11 | 13:45 | 0.00004 | 0.00006 |
| Uranium [mg/L] | 05-Oct-11 | 13:45 | 0.000028 | 0.000030 |
| Vanadium [mg/L] | 05-Oct-11 | 13:45 | 0.00009 | 0.00101 |
| Zinc [mg/L] | 05-Oct-11 | 13:45 | 0.010 | 0.001 |



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 18, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
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Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 26 September 2011
**LR Report:** **CA10521-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Sample weight [g] | 06-Oct-11 | 08:46 | 250 | 250 |
| Volume D.I. Water [mL] | 06-Oct-11 | 08:46 | 750 | 750 |
| Initial pH [units] | 06-Oct-11 | 08:46 | 9.0 | 9.0 |
| Final pH [units] | 06-Oct-11 | 08:46 | 8.52 | 8.49 |
| pH [no unit] | 13-Oct-11 | 13:23 | 7.98 | 7.97 |
| Conductivity [uS/cm] | 13-Oct-11 | 13:23 | 322 | 373 |
| Alkalinity [mg/L as CaCO3] | 13-Oct-11 | 13:23 | 68 | 71 |
| Sulphate [mg/L] | 12-Oct-11 | 16:47 | 51 | 93 |
| Chloride [mg/L] | 14-Oct-11 | 11:24 | 0.6 | 0.8 |
| Mercury [mg/L] | 12-Oct-11 | 09:10 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 14-Oct-11 | 12:35 | 0.02 | 0.18 |
| Arsenic [mg/L] | 17-Oct-11 | 19:11 | 0.636 | 0.550 |
| Barium [mg/L] | 17-Oct-11 | 19:11 | 0.00490 | 0.0237 |
| Beryllium [mg/L] | 17-Oct-11 | 19:11 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 17-Oct-11 | 19:11 | 0.00004 | < 0.00001 |
| Calcium [mg/L] | 14-Oct-11 | 12:35 | 49.5 | 48.9 |
| Cadmium [mg/L] | 17-Oct-11 | 19:11 | 0.000004 | < 0.000003 |
| Cobalt [mg/L] | 17-Oct-11 | 19:11 | 0.00268 | 0.00135 |
| Chromium [mg/L] | 17-Oct-11 | 19:11 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 17-Oct-11 | 19:11 | 0.0022 | 0.0019 |
| Iron [mg/L] | 14-Oct-11 | 12:35 | 0.384 | 0.256 |
| Potassium [mg/L] | 14-Oct-11 | 12:35 | 9.63 | 16.2 |
| Lithium [mg/L] | 17-Oct-11 | 19:11 | 0.004 | 0.003 |
| Magnesium [mg/L] | 14-Oct-11 | 12:35 | 7.24 | 5.04 |
| Manganese [mg/L] | 17-Oct-11 | 19:11 | 0.0420 | 0.0102 |
| Molybdenum [mg/L] | 17-Oct-11 | 19:11 | 0.00320 | 0.00395 |
| Sodium [mg/L] | 14-Oct-11 | 12:35 | 3.10 | 4.38 |
| Nickel [mg/L] | 17-Oct-11 | 19:11 | 0.0006 | 0.0004 |
| Lead [mg/L] | 17-Oct-11 | 19:11 | < 0.00002 | 0.00027 |

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**LR Report :** **CA10521-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Antimony [mg/L] | 17-Oct-11 | 19:11 | 0.0042 | 0.0065 |
| Selenium [mg/L] | 17-Oct-11 | 19:11 | < 0.001 | 0.002 |
| Tin [mg/L] | 17-Oct-11 | 19:11 | 0.00002 | 0.00002 |
| Strontium [mg/L] | 14-Oct-11 | 12:36 | 0.0678 | 0.140 |
| Titanium [mg/L] | 17-Oct-11 | 19:11 | 0.0002 | 0.0003 |
| Thallium [mg/L] | 17-Oct-11 | 19:11 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 17-Oct-11 | 19:11 | 0.000755 | 0.000671 |
| Vanadium [mg/L] | 17-Oct-11 | 19:11 | 0.00015 | 0.00024 |
| Zinc [mg/L] | 17-Oct-11 | 19:11 | < 0.001 | < 0.001 |

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*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 18, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

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Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 26 September 2011
**LR Report:** **CA10523-SEP11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| pH [no unit] | 28-Sep-11 | 11:06 | 8.30 | 8.15 |
| Conductivity [uS/cm] | 28-Sep-11 | 11:06 | 2690 | 2550 |
| Alkalinity [mg/L as CaCO3] | 28-Sep-11 | 11:06 | 72 | 98 |
| Total Dissolved Solids [mg/L] | 03-Oct-11 | 08:57 | 2680 | 2480 |
| Fluoride [mg/L] | 03-Oct-11 | 12:09 | < 0.06 | 0.10 |
| Chloride [mg/L] | 03-Oct-11 | 16:59 | 11 | 13 |
| Sulphate [mg/L] | 03-Oct-11 | 16:59 | 1200 | 1200 |
| Nitrite (as N) [mg/L] | 03-Oct-11 | 16:12 | < 0.06 | < 0.06 |
| Nitrate (as N) [mg/L] | 03-Oct-11 | 16:12 | 0.13 | 0.12 |
| Cyanide (total) [mg/L] | 05-Oct-11 | 13:12 | 17.3 | 14.2 |
| Cyanide (WAD) [mg/L] | 30-Sep-11 | 13:28 | 0.14 | 0.05 |
| Cyanide (free) [mg/L] | 30-Sep-11 | 13:28 | 0.14 | 0.05 |
| Cyanate [mg/L] | 28-Sep-11 | 15:44 | 70 | 89 |
| Thiocyanate [mg/L] | 29-Sep-11 | 16:57 | 170 | 100 |
| Thiosalts (total) [as S2O3 mg/L] | 05-Oct-11 | 14:31 | 192 | --- |
| Thiosulphate [mg/L] | 05-Oct-11 | 13:54 | --- | 17 |
| As+3 [mg/L] | 11-Oct-11 | 10:02 | 0.181 | 0.381 |
| As+5 [mg/L] | 11-Oct-11 | 10:02 | 2.43 | 5.99 |
| Aluminum (total) [mg/L] | 14-Oct-11 | 10:36 | 0.03 | 0.20 |
| Aluminum (dissolved) [mg/L] | 14-Oct-11 | 10:36 | 0.01 | 0.13 |
| Arsenic (total) [mg/L] | 11-Oct-11 | 15:54 | 3.17 | 7.29 |
| Arsenic (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 3.33 | 7.60 |
| Barium (total) [mg/L] | 11-Oct-11 | 15:54 | 0.0134 | 0.0696 |
| Barium (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.0131 | 0.0708 |
| Beryllium (total) [mg/L] | 11-Oct-11 | 15:54 | < 0.0002 | < 0.0002 |
| Beryllium (dissolved) [mg/L] | 11-Oct-11 | 15:54 | < 0.0002 | < 0.0002 |
| Boron (total) [mg/L] | 11-Oct-11 | 15:54 | 0.030 | 0.030 |
| Boron (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.026 | 0.030 |
| Bismuth (total) [mg/L] | 11-Oct-11 | 15:54 | 0.0015 | 0.0007 |
| Bismuth (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.0013 | < 0.0001 |
| Calcium (total) [mg/L] | 14-Oct-11 | 10:36 | 226 | 199 |
| Calcium (dissolved) [mg/L] | 14-Oct-11 | 10:36 | 222 | 202 |
| Cadmium (total) [mg/L] | 11-Oct-11 | 15:54 | 0.00011 | 0.00010 |

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**LR Report :** **CA10523-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F-Zone Underground CN5 | 6: Tiriganiaq Underground CN1 |
|---|---|---|---|---|
| Cadmium (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.00011 | 0.00007 |
| Cobalt (total) [mg/L] | 11-Oct-11 | 15:54 | 0.0971 | 0.0814 |
| Cobalt (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.0982 | 0.0832 |
| Chromium (total) [mg/L] | 11-Oct-11 | 15:54 | < 0.005 | < 0.005 |
| Chromium (dissolved) [mg/L] | 11-Oct-11 | 15:54 | < 0.005 | < 0.005 |
| Copper (total) [mg/L] | 11-Oct-11 | 15:54 | 0.099 | 0.088 |
| Copper (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.088 | 0.090 |
| Iron (total) [mg/L] | 14-Oct-11 | 10:36 | 9.93 | 7.17 |
| Iron (dissolved) [mg/L] | 14-Oct-11 | 10:36 | 9.54 | 6.84 |
| Potassium (total) [mg/L] | 14-Oct-11 | 10:36 | 48.2 | 52.0 |
| Potassium (dissolved) [mg/L] | 14-Oct-11 | 10:36 | 48.0 | 52.9 |
| Lithium (total) [mg/L] | 11-Oct-11 | 15:54 | 0.004 | 0.003 |
| Lithium (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.004 | 0.003 |
| Magnesium (total) [mg/L] | 14-Oct-11 | 10:36 | 5.98 | 3.58 |
| Magnesium (dissolved) [mg/L] | 14-Oct-11 | 10:36 | 5.82 | 3.50 |
| Manganese (total) [mg/L] | 11-Oct-11 | 15:54 | 0.0292 | 0.0098 |
| Manganese (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.0263 | 0.0072 |
| Molybdenum (total) [mg/L] | 11-Oct-11 | 15:54 | 0.0705 | 0.0569 |
| Molybdenum (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.0685 | 0.0578 |
| Sodium (total) [mg/L] | 17-Oct-11 | 11:10 | 620 | 586 |
| Sodium (dissolved) [mg/L] | 17-Oct-11 | 11:10 | 574 | 560 |
| Nickel (total) [mg/L] | 11-Oct-11 | 15:54 | 0.008 | 0.006 |
| Nickel (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.008 | 0.007 |
| Lead (total) [mg/L] | 11-Oct-11 | 15:54 | 0.0004 | 0.0047 |
| Lead (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.0003 | 0.0009 |
| Antimony (total) [mg/L] | 11-Oct-11 | 15:54 | 0.009 | 0.015 |
| Antimony (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.024 | 0.032 |
| Selenium (total) [mg/L] | 11-Oct-11 | 15:54 | < 0.01 | 0.01 |
| Selenium (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.01 | 0.01 |
| Tin (total) [mg/L] | 11-Oct-11 | 15:54 | 0.0044 | 0.0019 |
| Tin (dissolved) [mg/L] | 11-Oct-11 | 15:54 | 0.0010 | 0.0008 |
| Strontium (total) [mg/L] | 14-Oct-11 | 10:36 | 0.208 | 0.438 |
| Strontium (dissolved) [mg/L] | 14-Oct-11 | 10:36 | 0.206 | 0.430 |
| Titanium (total) [mg/L] | 11-Oct-11 | 15:55 | < 0.001 | < 0.001 |
| Titanium (dissolved) [mg/L] | 11-Oct-11 | 15:55 | < 0.001 | < 0.001 |
| Thallium (total) [mg/L] | 11-Oct-11 | 15:55 | < 0.002 | < 0.002 |
| Thallium (dissolved) [mg/L] | 11-Oct-11 | 15:55 | < 0.002 | < 0.002 |
| Uranium (total) [mg/L] | 11-Oct-11 | 15:55 | 0.00270 | 0.00261 |
| Uranium (dissolved) [mg/L] | 11-Oct-11 | 15:55 | 0.00252 | 0.00262 |
| Vanadium (total) [mg/L] | 11-Oct-11 | 15:55 | < 0.0003 | 0.0005 |
| Vanadium (dissolved) [mg/L] | 11-Oct-11 | 15:55 | < 0.0003 | < 0.0003 |
| Tungsten (total) [mg/L] | 11-Oct-11 | 15:55 | 0.0030 | 0.0064 |
| Tungsten (dissolved) [mg/L] | 11-Oct-11 | 15:55 | 0.0023 | 0.0062 |
| Yttrium (total) [mg/L] | 11-Oct-11 | 15:55 | < 0.00001 | 0.00004 |
| Yttrium (dissolved) [mg/L] | 11-Oct-11 | 15:55 | < 0.00001 | < 0.00001 |
| Zinc (total) [mg/L] | 14-Oct-11 | 10:36 | 0.002 | 0.003 |
| Zinc (dissolved) [mg/L] | 14-Oct-11 | 10:36 | < 0.002 | 0.003 |

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**LR Report :** **CA10523-SEP11**

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*Environmental Services, Analytical*

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Wednesday, October 05, 2011

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Fax:(819) 759-3663

**Date Rec. :** 29 September 2011
**LR Report:** **CA10593-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F3 Rougher Tails | 6: F4Rougher Tails |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Paste pH [units] | 05-Oct-11 | 09:01 | 8.43 | 8.70 |
| Fizz Rate [---] | 05-Oct-11 | 09:01 | 3 | 3 |
| Sample weight [g] | 05-Oct-11 | 09:01 | 2.05 | 1.96 |
| HCl added [mL] | 05-Oct-11 | 09:01 | 74.40 | 82.90 |
| HCl [Normality] | 05-Oct-11 | 09:01 | 0.10 | 0.10 |
| NaOH [Normality] | 05-Oct-11 | 09:01 | 0.10 | 0.10 |
| NaOH to pH=8.3 [mL] | 05-Oct-11 | 09:01 | 38.92 | 31.09 |
| Final pH [units] | 05-Oct-11 | 09:01 | 1.58 | 1.79 |
| NP [t CaCO3/1000 t] | 05-Oct-11 | 09:01 | 86.5 | 132 |
| AP [t CaCO3/1000 t] | 05-Oct-11 | 09:02 | 6.56 | 1.88 |
| Net NP [t CaCO3/1000 t] | 05-Oct-11 | 09:02 | 79.9 | 130 |
| NP/AP [ratio] | 05-Oct-11 | 09:02 | 13.2 | 70.3 |
| Sulphur (total) [%] | 05-Oct-11 | 09:06 | 0.521 | 0.148 |
| Acid Leachable SO4-S [%] | 05-Oct-11 | 09:06 | 0.31 | 0.09 |
| Sulphide [%] | 05-Oct-11 | 09:06 | 0.21 | 0.06 |
| Carbon (total) [%] | 05-Oct-11 | 09:06 | 3.16 | 2.20 |
| Carbonate [%] | 05-Oct-11 | 09:06 | 4.89 | 8.77 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 18, 2011

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**Date Rec. :** 29 September 2011
**LR Report:** **CA10594-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F3 Rougher Tails | 6: F4 Rougher Tails |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Sample weight [g] | 06-Oct-11 | 08:47 | 250 | 250 |
| Volume D.I. Water [mL] | 06-Oct-11 | 08:47 | 750 | 750 |
| Initial pH [units] | 06-Oct-11 | 08:47 | 9.2 | 9.5 |
| Final pH [units] | 06-Oct-11 | 08:47 | 8.46 | 9.04 |
| pH [no unit] | 13-Oct-11 | 13:35 | 8.15 | 8.11 |
| Conductivity [uS/cm] | 13-Oct-11 | 13:35 | 192 | 112 |
| Alkalinity [mg/L as CaCO3] | 13-Oct-11 | 13:35 | 84 | 47 |
| Sulphate [mg/L] | 13-Oct-11 | 12:21 | 3.0 | 2.3 |
| Chloride [mg/L] | 14-Oct-11 | 11:22 | 0.3 | 0.4 |
| Mercury [mg/L] | 12-Oct-11 | 09:09 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 14-Oct-11 | 12:32 | 0.20 | 0.87 |
| Arsenic [mg/L] | 17-Oct-11 | 19:11 | 0.0033 | 0.0079 |
| Barium [mg/L] | 17-Oct-11 | 19:11 | 0.0311 | 0.00447 |
| Beryllium [mg/L] | 17-Oct-11 | 19:11 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 17-Oct-11 | 19:11 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 14-Oct-11 | 12:32 | 22.3 | 13.6 |
| Cadmium [mg/L] | 17-Oct-11 | 19:11 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 17-Oct-11 | 19:11 | 0.000075 | 0.000037 |
| Chromium [mg/L] | 17-Oct-11 | 19:11 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 17-Oct-11 | 19:11 | 0.0009 | 0.0006 |
| Iron [mg/L] | 14-Oct-11 | 12:34 | 0.003 | 0.004 |
| Potassium [mg/L] | 14-Oct-11 | 12:34 | 7.94 | 5.75 |
| Lithium [mg/L] | 17-Oct-11 | 19:11 | 0.002 | < 0.001 |
| Magnesium [mg/L] | 14-Oct-11 | 12:34 | 7.30 | 3.07 |
| Manganese [mg/L] | 17-Oct-11 | 19:11 | 0.0509 | 0.00415 |
| Molybdenum [mg/L] | 17-Oct-11 | 19:11 | 0.00130 | 0.00150 |
| Sodium [mg/L] | 14-Oct-11 | 12:34 | 0.45 | 0.73 |
| Nickel [mg/L] | 17-Oct-11 | 19:11 | 0.0002 | < 0.0001 |
| Lead [mg/L] | 17-Oct-11 | 19:11 | < 0.00002 | < 0.00002 |

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**LR Report :** **CA10594-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F3 Rougher Tails | 6: F4 Rougher Tails |
|---|---|---|---|---|
| Antimony [mg/L] | 17-Oct-11 | 19:11 | 0.0019 | 0.0034 |
| Selenium [mg/L] | 17-Oct-11 | 19:11 | < 0.001 | < 0.001 |
| Tin [mg/L] | 17-Oct-11 | 19:11 | < 0.00001 | < 0.00001 |
| Strontium [mg/L] | 14-Oct-11 | 12:34 | 0.0484 | 0.0505 |
| Titanium [mg/L] | 17-Oct-11 | 19:11 | < 0.0001 | < 0.0001 |
| Thallium [mg/L] | 17-Oct-11 | 19:11 | 0.00004 | 0.00002 |
| Uranium [mg/L] | 17-Oct-11 | 19:11 | 0.000019 | 0.000129 |
| Vanadium [mg/L] | 17-Oct-11 | 19:11 | 0.00013 | 0.00044 |
| Zinc [mg/L] | 17-Oct-11 | 19:11 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 05, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 September 2011
**LR Report:** **CA10596-SEP11**

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# CERTIFICATE OF ANALYSIS
## Final Report

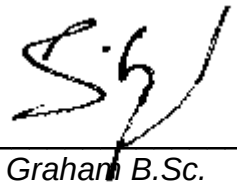
| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiag Open Pit CN2 |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Paste pH [units] | 05-Oct-11 | 09:02 | 8.53 |
| Fizz Rate [---] | 05-Oct-11 | 09:02 | 3 |
| Sample weight [g] | 05-Oct-11 | 09:02 | 2.02 |
| HCl added [mL] | 05-Oct-11 | 09:02 | 67.30 |
| HCl [Normality] | 05-Oct-11 | 09:02 | 0.10 |
| NaOH [Normality] | 05-Oct-11 | 09:02 | 0.10 |
| NaOH to pH=8.3 [mL] | 05-Oct-11 | 09:02 | 36.58 |
| Final pH [units] | 05-Oct-11 | 09:02 | 1.54 |
| NP [t CaCO3/1000 t] | 05-Oct-11 | 09:02 | 76 |
| AP [t CaCO3/1000 t] | 05-Oct-11 | 09:03 | 27.8 |
| Net NP [t CaCO3/1000 t] | 05-Oct-11 | 09:03 | 48.2 |
| NP/AP [ratio] | 05-Oct-11 | 09:03 | 2.73 |
| Sulphur (total) [%] | 05-Oct-11 | 09:06 | 1.18 |
| Acid Leachable SO4-S [%] | 05-Oct-11 | 09:06 | 0.29 |
| Sulphide [%] | 05-Oct-11 | 09:06 | 0.89 |
| Carbon (total) [%] | 05-Oct-11 | 09:06 | 1.33 |
| Carbonate [%] | 05-Oct-11 | 09:06 | 4.74 |

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**LR Report :** **CA10596-SEP11**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 12, 2011

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Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 September 2011
**LR Report:** **CA10597-SEP11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiaq Open Pit CN2 |
|---|---|---|---|
| Mercury [µg/g] | 06-Oct-11 | 11:32 | < 0.1 |
| Aluminum [µg/g] | 10-Oct-11 | 18:56 | 48000 |
| Arsenic [µg/g] | 07-Oct-11 | 15:48 | 4900 |
| Barium [µg/g] | 07-Oct-11 | 15:48 | 384 |
| Beryllium [µg/g] | 07-Oct-11 | 15:48 | 0.98 |
| Bismuth [µg/g] | 07-Oct-11 | 15:48 | 0.62 |
| Calcium [µg/g] | 10-Oct-11 | 18:56 | 23000 |
| Cadmium [µg/g] | 07-Oct-11 | 15:48 | 0.37 |
| Cobalt [µg/g] | 07-Oct-11 | 15:48 | 8.5 |
| Chromium [µg/g] | 07-Oct-11 | 15:48 | 270 |
| Copper [µg/g] | 07-Oct-11 | 15:48 | 76 |
| Iron [µg/g] | 10-Oct-11 | 18:56 | 110000 |
| Potassium [µg/g] | 10-Oct-11 | 18:56 | 12000 |
| Lithium [µg/g] | 07-Oct-11 | 15:48 | 16 |
| Magnesium [µg/g] | 10-Oct-11 | 18:56 | 8800 |
| Manganese [µg/g] | 07-Oct-11 | 15:49 | 400 |
| Molybdenum [µg/g] | 07-Oct-11 | 15:49 | 5.8 |
| Sodium [µg/g] | 10-Oct-11 | 18:56 | 11000 |
| Nickel [µg/g] | 07-Oct-11 | 15:49 | 79 |
| Lead [µg/g] | 07-Oct-11 | 15:49 | 140 |
| Antimony [µg/g] | 07-Oct-11 | 15:49 | 1.9 |
| Selenium [µg/g] | 07-Oct-11 | 15:49 | < 0.7 |
| Tin [µg/g] | 07-Oct-11 | 15:49 | 2.4 |
| Strontium [µg/g] | 07-Oct-11 | 15:49 | 200 |
| Titanium [µg/g] | 10-Oct-11 | 18:56 | 1600 |
| Thallium [µg/g] | 07-Oct-11 | 15:49 | 0.32 |
| Uranium [µg/g] | 07-Oct-11 | 15:49 | 1.1 |
| Vanadium [µg/g] | 07-Oct-11 | 15:49 | 47 |
| Zinc [µg/g] | 07-Oct-11 | 15:49 | 78 |

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**LR Report :** **CA10597-SEP11**



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Wednesday, October 05, 2011

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**Date Rec. :** 29 September 2011
**LR Report:** **CA10598-SEP11**
**Reference:** Whole Rock Analysis

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# CERTIFICATE OF ANALYSIS
## Final Report

| **Analysis** | **5: Tiriganiaq Open Pit CN2** |
|---|---|
| SiO2 [%] | 59.1 |
| Al2O3 [%] | 9.63 |
| Fe2O3 [%] | 15.6 |
| MgO [%] | 1.71 |
| CaO [%] | 3.39 |
| Na2O [%] | 1.77 |
| K2O [%] | 1.38 |
| TiO2 [%] | 0.29 |
| P2O5 [%] | 0.13 |
| MnO [%] | 0.05 |
| Cr2O3 [%] | 0.04 |
| V2O5 [%] | < 0.01 |
| LOI [%] | 5.10 |
| Sum [%] | 98.2 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 05, 2011

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**Date Rec. :** 29 September 2011
**LR Report:** **CA10599-SEP11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiaq Open Pit CN2 |
|---|---|---|---|
| Sample Date & Time | | | Date: n/a |
| Sample weight [g] | 04-Oct-11 | 14:11 | 1.48 |
| Vol H2O2 [mL] | 04-Oct-11 | 14:11 | 150 |
| Final pH [units] | 04-Oct-11 | 14:11 | 9.85 |
| NaOH [Normality] | 04-Oct-11 | 14:11 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 04-Oct-11 | 14:11 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 04-Oct-11 | 14:11 | 0.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 04-Oct-11 | 14:11 | 0.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 04-Oct-11 | 14:11 | 0.0 |

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*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 12, 2011

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**Date Rec. :** 29 September 2011
**LR Report:** **CA10600-SEP11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiaq Open Pit CN2 |
|---|---|---|---|
| Sample Date & Time | | | Date: n/a |
| Sample weight [g] | 04-Oct-11 | 14:11 | 2.49 |
| Vol H2O2 [mL] | 04-Oct-11 | 14:11 | 250 |
| Final pH [units] | 04-Oct-11 | 14:11 | 9.74 |
| pH [no unit] | 10-Oct-11 | 21:13 | 7.79 |
| Conductivity [uS/cm] | 10-Oct-11 | 21:13 | 377 |
| Alkalinity [mg/L as CaCO3] | 10-Oct-11 | 21:13 | 23 |
| Chloride [mg/L] | 07-Oct-11 | 14:55 | < 2 |
| Sulphate [mg/L] | 06-Oct-11 | 14:30 | 120 |
| Mercury [mg/L] | 12-Oct-11 | 13:27 | < 0.0001 |
| Aluminum [mg/L] | 07-Oct-11 | 14:30 | 0.24 |
| Arsenic [mg/L] | 07-Oct-11 | 14:30 | 0.331 |
| Barium [mg/L] | 07-Oct-11 | 14:30 | 0.00780 |
| Beryllium [mg/L] | 07-Oct-11 | 14:30 | < 0.00002 |
| Bismuth [mg/L] | 07-Oct-11 | 14:30 | < 0.00001 |
| Calcium [mg/L] | 11-Oct-11 | 09:29 | 64.2 |
| Cadmium [mg/L] | 07-Oct-11 | 14:30 | 0.000010 |
| Cobalt [mg/L] | 07-Oct-11 | 14:30 | 0.000116 |
| Chromium [mg/L] | 07-Oct-11 | 14:30 | 0.0081 |
| Copper [mg/L] | 07-Oct-11 | 14:30 | 0.0006 |
| Iron [mg/L] | 11-Oct-11 | 09:30 | 0.007 |
| Potassium [mg/L] | 11-Oct-11 | 09:30 | 9.52 |
| Lithium [mg/L] | 07-Oct-11 | 14:30 | 0.001 |
| Magnesium [mg/L] | 11-Oct-11 | 09:30 | 0.051 |
| Manganese [mg/L] | 07-Oct-11 | 14:31 | 0.00015 |
| Molybdenum [mg/L] | 07-Oct-11 | 14:31 | 0.0301 |
| Sodium [mg/L] | 11-Oct-11 | 09:30 | 3.03 |
| Nickel [mg/L] | 07-Oct-11 | 14:31 | 0.0015 |
| Lead [mg/L] | 07-Oct-11 | 14:31 | 0.00005 |
| Antimony [mg/L] | 07-Oct-11 | 14:31 | 0.0022 |

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**LR Report :** **CA10600-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiaq Open Pit CN2 |
|---|---|---|---|
| Selenium [mg/L] | 07-Oct-11 | 14:31 | 0.003 |
| Tin [mg/L] | 07-Oct-11 | 14:31 | < 0.00001 |
| Strontium [mg/L] | 07-Oct-11 | 14:31 | 0.434 |
| Titanium [mg/L] | 07-Oct-11 | 14:31 | 0.0010 |
| Thallium [mg/L] | 07-Oct-11 | 14:31 | 0.00004 |
| Uranium [mg/L] | 07-Oct-11 | 14:31 | 0.000075 |
| Vanadium [mg/L] | 07-Oct-11 | 14:31 | 0.00277 |
| Zinc [mg/L] | 07-Oct-11 | 14:31 | < 0.001 |



*Brian Graham B.Sc.*
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*Environmental Services, Analytical*

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Wednesday, October 19, 2011

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**Date Rec. :** 11 October 2011
**LR Report:** **CA11112-OCT11**
**Reference:** F5 F6

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F5 Rougher Tails Supernatant | 6: F6 Rougher Tails Supernatant |
|---|---|---|---|---|
| Temperature Upon Receipt [°C] | --- | --- | 9.0 | 9.0 |
| pH [no unit] | 14-Oct-11 | 08:19 | 8.18 | 8.29 |
| Conductivity [uS/cm] | 14-Oct-11 | 08:19 | 386 | 391 |
| Alkalinity [mg/L as CaCO3] | 14-Oct-11 | 08:19 | 145 | 81 |
| Fluoride [mg/L] | 19-Oct-11 | 07:41 | 0.11 | 0.07 |
| Chloride [mg/L] | 17-Oct-11 | 15:37 | 13 | 13 |
| Sulphate [mg/L] | 17-Oct-11 | 15:37 | 68 | 68 |
| Nitrite (as N) [mg/L] | 17-Oct-11 | 15:37 | < 0.06 | < 0.06 |
| Nitrate (as N) [mg/L] | 17-Oct-11 | 15:37 | < 0.05 | < 0.05 |
| Cyanide (total) [mg/L] | 17-Oct-11 | 16:02 | < 0.01 | < 0.01 |
| Cyanide (WAD) [mg/L] | 17-Oct-11 | 16:02 | < 0.01 | < 0.01 |
| Cyanide (free) [mg/L] | 17-Oct-11 | 16:02 | < 0.01 | < 0.01 |
| Thiosalts (total) [as S2O3 mg/L] | 19-Oct-11 | 09:16 | < 10 | < 10 |
| Aluminum (dissolved) [mg/L] | 18-Oct-11 | 15:47 | 0.05 | 0.07 |
| Arsenic (dissolved) [mg/L] | 18-Oct-11 | 15:08 | 0.0132 | 0.0058 |
| Barium (dissolved) [mg/L] | 18-Oct-11 | 15:08 | 0.0269 | 0.0235 |
| Beryllium (dissolved) [mg/L] | 18-Oct-11 | 15:08 | < 0.00002 | < 0.00002 |
| Boron (dissolved) [mg/L] | 18-Oct-11 | 15:08 | 0.0158 | 0.0136 |
| Bismuth (dissolved) [mg/L] | 18-Oct-11 | 15:08 | < 0.00001 | < 0.00001 |
| Calcium (dissolved) [mg/L] | 18-Oct-11 | 15:47 | 42.6 | 43.9 |
| Cadmium (dissolved) [mg/L] | 18-Oct-11 | 15:08 | < 0.000003 | < 0.000003 |
| Cobalt (dissolved) [mg/L] | 18-Oct-11 | 15:08 | 0.000105 | 0.000111 |
| Chromium (dissolved) [mg/L] | 18-Oct-11 | 15:08 | < 0.0005 | < 0.0005 |
| Copper (dissolved) [mg/L] | 18-Oct-11 | 15:47 | 0.0022 | 0.0031 |
| Iron (dissolved) [mg/L] | 18-Oct-11 | 15:47 | 0.006 | 0.010 |
| Potassium (dissolved) [mg/L] | 18-Oct-11 | 15:47 | 19.4 | 17.0 |
| Lithium (dissolved) [mg/L] | 18-Oct-11 | 15:08 | 0.005 | 0.005 |
| Magnesium (dissolved) [mg/L] | 18-Oct-11 | 15:48 | 7.96 | 9.35 |
| Manganese (dissolved) [mg/L] | 18-Oct-11 | 15:08 | 0.0663 | 0.0559 |

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**LR Report :** **CA11112-OCT11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F5 Rougher Tails Supernatant | 6: F6 Rougher Tails Supernatant |
|---|---|---|---|---|
| Molybdenum (dissolved) [mg/L] | 18-Oct-11 | 15:08 | 0.00385 | 0.00323 |
| Sodium (dissolved) [mg/L] | 18-Oct-11 | 15:48 | 14.5 | 13.9 |
| Nickel (dissolved) [mg/L] | 18-Oct-11 | 15:09 | 0.0009 | 0.0007 |
| Lead (dissolved) [mg/L] | 18-Oct-11 | 15:09 | < 0.00002 | < 0.00002 |
| Antimony (dissolved) [mg/L] | 18-Oct-11 | 15:09 | 0.0044 | 0.0031 |
| Selenium (dissolved) [mg/L] | 18-Oct-11 | 15:09 | < 0.001 | < 0.001 |
| Tin (dissolved) [mg/L] | 18-Oct-11 | 15:09 | < 0.00001 | < 0.00001 |
| Strontium (dissolved) [mg/L] | 18-Oct-11 | 15:48 | 0.136 | 0.129 |
| Titanium (dissolved) [mg/L] | 18-Oct-11 | 15:09 | 0.0005 | 0.0004 |
| Thallium (dissolved) [mg/L] | 18-Oct-11 | 15:09 | < 0.0002 | < 0.0002 |
| Uranium (dissolved) [mg/L] | 18-Oct-11 | 15:09 | 0.000102 | 0.000042 |
| Vanadium (dissolved) [mg/L] | 18-Oct-11 | 15:09 | 0.00017 | 0.00019 |
| Tungsten (dissolved) [mg/L] | 18-Oct-11 | 15:09 | 0.00176 | 0.00155 |
| Yttrium (dissolved) [mg/L] | 18-Oct-11 | 15:09 | 0.000003 | 0.000009 |
| Zinc (dissolved) [mg/L] | 18-Oct-11 | 15:48 | < 0.002 | < 0.002 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Friday, November 11, 2011

**Agnico Eagle Mines Limited**
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**Date Rec. :** 11 October 2011
**LR Report:** **CA11113-OCT11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F5 Rougher Tails | 6: F6 Rougher Tails |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Paste pH [units] | 10-Nov-11 | 14:22 | 8.34 | 8.37 |
| Fizz Rate [---] | 10-Nov-11 | 14:22 | 3 | 3 |
| Sample weight [g] | 10-Nov-11 | 14:22 | 2.04 | 1.96 |
| HCl added [mL] | 10-Nov-11 | 14:22 | 71.30 | 88.30 |
| HCl [Normality] | 10-Nov-11 | 14:22 | 0.10 | 0.10 |
| NaOH [Normality] | 10-Nov-11 | 14:22 | 0.10 | 0.10 |
| NaOH to pH=8.3 [mL] | 10-Nov-11 | 14:22 | 29.59 | 47.73 |
| Final pH [units] | 10-Nov-11 | 14:22 | 1.96 | 1.58 |
| NP [t CaCO3/1000 t] | 10-Nov-11 | 14:22 | 102 | 104 |
| AP [t CaCO3/1000 t] | 10-Nov-11 | 14:23 | 7.05 | 7.36 |
| Net NP [t CaCO3/1000 t] | 10-Nov-11 | 14:23 | 95.2 | 96.1 |
| NP/AP [ratio] | 10-Nov-11 | 14:23 | 14.5 | 14.1 |
| Sulphur (total) [%] | 31-Oct-11 | 13:19 | 0.564 | 0.482 |
| Acid Leachable SO4-S [%] | 01-Nov-11 | 17:08 | 0.34 | 0.25 |
| Sulphide [%] | 01-Nov-11 | 17:08 | 0.23 | 0.24 |
| Carbon (total) [%] | 31-Oct-11 | 13:20 | 1.59 | 1.91 |
| Carbonate [%] | 31-Oct-11 | 18:26 | 5.28 | 5.39 |

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**LR Report :** **CA11113-OCT11**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Monday, October 31, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 11 October 2011
**LR Report:** **CA11114-OCT11**
**Reference:** F5/F6 Rougher Tls

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F5 RougherTails | 6: F6 RougherTails |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| Sample weight [g] | 26-Oct-11 | 08:11 | 250 | 250 |
| Volume D.I. Water [mL] | 26-Oct-11 | 08:11 | 750 | 750 |
| Initial pH [units] | 26-Oct-11 | 08:11 | 9.2 | 9.0 |
| Final pH [units] | 26-Oct-11 | 08:11 | 9.00 | 8.89 |
| pH [no unit] | 28-Oct-11 | 13:57 | 8.09 | 8.21 |
| Conductivity [uS/cm] | 28-Oct-11 | 13:57 | 138 | 160 |
| Alkalinity [mg/L as CaCO3] | 28-Oct-11 | 13:57 | 57 | 68 |
| Sulphate [mg/L] | 28-Oct-11 | 15:06 | 9.1 | 9.7 |
| Chloride [mg/L] | 28-Oct-11 | 15:31 | 0.4 | 0.4 |
| Mercury [mg/L] | 27-Oct-11 | 17:15 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 27-Oct-11 | 18:37 | 0.20 | 0.26 |
| Arsenic [mg/L] | 27-Oct-11 | 19:00 | 0.0137 | 0.0039 |
| Barium [mg/L] | 27-Oct-11 | 19:00 | 0.00670 | 0.00634 |
| Beryllium [mg/L] | 27-Oct-11 | 19:00 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 27-Oct-11 | 19:00 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 27-Oct-11 | 18:37 | 15.0 | 16.9 |
| Cadmium [mg/L] | 27-Oct-11 | 19:00 | 0.000005 | < 0.000003 |
| Cobalt [mg/L] | 27-Oct-11 | 19:00 | 0.000030 | 0.000024 |
| Chromium [mg/L] | 27-Oct-11 | 19:00 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 27-Oct-11 | 19:00 | 0.0006 | 0.0007 |
| Iron [mg/L] | 27-Oct-11 | 18:37 | < 0.003 | < 0.003 |
| Potassium [mg/L] | 27-Oct-11 | 18:37 | 9.49 | 6.17 |
| Lithium [mg/L] | 27-Oct-11 | 19:00 | 0.003 | 0.003 |
| Magnesium [mg/L] | 27-Oct-11 | 18:37 | 3.69 | 5.01 |
| Manganese [mg/L] | 27-Oct-11 | 19:00 | 0.0137 | 0.0160 |
| Molybdenum [mg/L] | 27-Oct-11 | 19:00 | 0.00354 | 0.00201 |
| Sodium [mg/L] | 27-Oct-11 | 18:37 | 4.16 | 5.42 |
| Nickel [mg/L] | 27-Oct-11 | 19:00 | < 0.0001 | < 0.0001 |
| Lead [mg/L] | 27-Oct-11 | 19:00 | < 0.00002 | < 0.00002 |
| Antimony [mg/L] | 27-Oct-11 | 19:00 | 0.0022 | 0.0014 |
| Selenium [mg/L] | 27-Oct-11 | 19:00 | < 0.001 | < 0.001 |
| Tin [mg/L] | 27-Oct-11 | 19:00 | < 0.00001 | < 0.00001 |

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**LR Report :** **CA11114-OCT11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F5 RougherTails | 6: F6 RougherTails |
|---|---|---|---|---|
| Strontium [mg/L] | 27-Oct-11 | 18:37 | 0.0363 | 0.0333 |
| Titanium [mg/L] | 27-Oct-11 | 19:00 | 0.0002 | 0.0001 |
| Thallium [mg/L] | 27-Oct-11 | 19:00 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 27-Oct-11 | 19:00 | 0.000311 | 0.000155 |
| Vanadium [mg/L] | 27-Oct-11 | 19:00 | 0.00032 | 0.00023 |
| Zinc [mg/L] | 27-Oct-11 | 19:00 | < 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Monday, October 03, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
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Fax:(819) 759-3663

**Date Rec. :** 07 September 2011
**LR Report:** **CA11122-SEP11**
**Reference:** CN50-51

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Comp Water |
|---|---|---|---|
| Temperature Upon Receipt [°C] | --- | --- | 21.0 |
| pH [no unit] | 16-Sep-11 | 20:51 | 10.3 |
| Conductivity [uS/cm] | 16-Sep-11 | 20:51 | 1340 |
| Alkalinity [mg/L as CaCO3] | 16-Sep-11 | 20:51 | 365 |
| Chloride [mg/L] | 13-Sep-11 | 16:03 | 7.7 |
| Sulphate [mg/L] | 12-Sep-11 | 14:59 | 45 |
| Nitrite (as N) [mg/L] | 09-Sep-11 | 10:48 | < 0.06 |
| Nitrate (as N) [mg/L] | 09-Sep-11 | 10:48 | < 0.05 |
| Cyanide (total) [mg/L] | 22-Sep-11 | 08:49 | 273 |
| Cyanide (WAD) [mg/L] | 22-Sep-11 | 08:40 | 248 |
| Cyanide (free) [mg/L] | 29-Sep-11 | 16:02 | 146 |
| Thiosalts (total) [as S2O3 mg/L] | 13-Sep-11 | 10:17 | 45 |
| Aluminum (dissolved) [mg/L] | 09-Sep-11 | 15:50 | 1.46 |
| Arsenic (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 6.54 |
| Barium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00987 |
| Beryllium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | < 0.00002 |
| Boron (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.0205 |
| Bismuth (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00007 |
| Calcium (dissolved) [mg/L] | 09-Sep-11 | 15:50 | 30.2 |
| Cadmium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00168 |
| Cobalt (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.0785 |
| Chromium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.0015 |
| Copper (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 5.64 |
| Iron (dissolved) [mg/L] | 09-Sep-11 | 15:50 | 5.33 |
| Potassium (dissolved) [mg/L] | 09-Sep-11 | 15:50 | 22.2 |
| Lithium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | < 0.001 |
| Magnesium (dissolved) [mg/L] | 09-Sep-11 | 15:50 | 5.73 |
| Manganese (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00756 |
| Molybdenum (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.0447 |

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**LR Report :** **CA11122-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Comp Water |
|---|---|---|---|
| Sodium (dissolved) [mg/L] | 09-Sep-11 | 15:50 | 269 |
| Nickel (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.321 |
| Lead (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00354 |
| Antimony (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.0152 |
| Selenium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.013 |
| Tin (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00033 |
| Strontium (dissolved) [mg/L] | 09-Sep-11 | 15:51 | 0.0910 |
| Titanium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.0017 |
| Thallium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | < 0.0002 |
| Uranium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.000292 |
| Vanadium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00599 |
| Yttrium (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.000006 |
| Tungsten (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.00588 |
| Zinc (dissolved) [mg/L] | 09-Sep-11 | 13:02 | 0.621 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, October 05, 2011

**Agnico Eagle Mines Limited**
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**Date Rec. :** 07 September 2011
**LR Report:** **CA11123-SEP11**
**Reference:** CN50-51

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Composite |
|---|---|---|---|
| Sample Date & Time | | | |
| Paste pH [units] | 22-Sep-11 | 15:14 | 8.64 |
| Fizz Rate [---] | 22-Sep-11 | 15:14 | 3 |
| Sample weight [g] | 22-Sep-11 | 15:14 | 1.99 |
| HCl added [mL] | 22-Sep-11 | 15:14 | 66.80 |
| HCl [Normality] | 22-Sep-11 | 15:14 | 0.10 |
| NaOH [Normality] | 22-Sep-11 | 15:14 | 0.10 |
| NaOH to [pH=8.3 mL] | 22-Sep-11 | 15:14 | 32.15 |
| Final pH [units] | 22-Sep-11 | 15:14 | 1.84 |
| NP [t CaCO3/1000 t] | 22-Sep-11 | 15:14 | 87 |
| AP [t CaCO3/1000 t] | 05-Oct-11 | 09:17 | 44.1 |
| Net NP [t CaCO3/1000 t] | 05-Oct-11 | 09:17 | 42.8 |
| NP/AP [ratio] | 05-Oct-11 | 09:17 | 1.97 |
| Sulphur (total) [%] | 05-Oct-11 | 09:17 | 1.74 |
| Acid Leachable SO4-S [%] | 05-Oct-11 | 09:17 | 0.33 |
| Sulphide [%] | 15-Sep-11 | 09:12 | 1.41 |
| Carbon (total) [%] | 05-Oct-11 | 09:16 | 1.78 |
| Carbonate [%] | 15-Sep-11 | 08:22 | 4.89 |

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**LR Report :** **CA11123-SEP11**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, September 23, 2011

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**Date Rec. :** 07 September 2011
**LR Report:** **CA11124-SEP11**
**Reference:** CN50-51

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Composite |
|---|---|---|---|
| Sample weight [g] | 22-Sep-11 | 15:11 | 2.5 |
| Vol H2O2 [mL] | 22-Sep-11 | 15:11 | 250 |
| Final pH [units] | 22-Sep-11 | 15:11 | 9.14 |
| NaOH [Normality] | 22-Sep-11 | 15:11 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 22-Sep-11 | 15:11 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 22-Sep-11 | 15:11 | 0.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 22-Sep-11 | 15:11 | 0.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 22-Sep-11 | 15:11 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, September 23, 2011

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**Date Rec. :** 07 September 2011
**LR Report:** **CA11125-SEP11**
**Reference:** CN50-51

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Composite |
|---|---|---|---|
| Sample weight [g] | 22-Sep-11 | 15:10 | 2.5 |
| Vol H2O2 [mL] | 22-Sep-11 | 15:10 | 250 |
| Final pH [units] | 22-Sep-11 | 15:10 | 9.14 |
| pH [no unit] | 20-Sep-11 | 15:14 | 7.42 |
| Conductivity [uS/cm] | 20-Sep-11 | 15:14 | 577 |
| Alkalinity [mg/L as CaCO3] | 20-Sep-11 | 15:14 | 17 |
| Chloride [mg/L] | 21-Sep-11 | 17:45 | < 2 |
| Sulphate [mg/L] | 23-Sep-11 | 11:35 | 250 |
| Mercury [mg/L] | 22-Sep-11 | 15:05 | < 0.0001 |
| Aluminum [mg/L] | 22-Sep-11 | 13:35 | 0.26 |
| Arsenic [mg/L] | 23-Sep-11 | 13:49 | 0.534 |
| Barium [mg/L] | 23-Sep-11 | 13:49 | 0.0390 |
| Beryllium [mg/L] | 23-Sep-11 | 13:49 | < 0.00002 |
| Bismuth [mg/L] | 23-Sep-11 | 13:49 | < 0.00001 |
| Calcium [mg/L] | 22-Sep-11 | 13:36 | 104 |
| Cadmium [mg/L] | 23-Sep-11 | 13:49 | < 0.000003 |
| Cobalt [mg/L] | 23-Sep-11 | 13:49 | 0.000222 |
| Chromium [mg/L] | 23-Sep-11 | 13:49 | < 0.0005 |
| Copper [mg/L] | 23-Sep-11 | 13:49 | 0.0018 |
| Iron [mg/L] | 22-Sep-11 | 13:36 | 0.011 |
| Potassium [mg/L] | 22-Sep-11 | 13:36 | 10.2 |
| Lithium [mg/L] | 23-Sep-11 | 13:49 | 0.005 |
| Magnesium [mg/L] | 22-Sep-11 | 13:36 | 1.38 |
| Manganese [mg/L] | 23-Sep-11 | 13:50 | 0.00345 |
| Molybdenum [mg/L] | 23-Sep-11 | 13:50 | 0.0559 |
| Sodium [mg/L] | 22-Sep-11 | 13:36 | 2.45 |
| Nickel [mg/L] | 23-Sep-11 | 13:50 | 0.0028 |
| Lead [mg/L] | 23-Sep-11 | 13:50 | 0.00003 |
| Antimony [mg/L] | 23-Sep-11 | 13:50 | 0.0011 |

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**LR Report :** **CA11125-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Composite |
|---|---|---|---|
| Selenium [mg/L] | 23-Sep-11 | 13:50 | 0.006 |
| Tin [mg/L] | 23-Sep-11 | 13:50 | 0.00010 |
| Strontium [mg/L] | 23-Sep-11 | 13:50 | 0.379 |
| Titanium [mg/L] | 23-Sep-11 | 13:50 | 0.0006 |
| Thallium [mg/L] | 23-Sep-11 | 13:50 | 0.00005 |
| Uranium [mg/L] | 23-Sep-11 | 13:50 | 0.000013 |
| Vanadium [mg/L] | 23-Sep-11 | 13:50 | 0.00027 |
| Zinc [mg/L] | 23-Sep-11 | 13:50 | 0.001 |



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Wednesday, September 21, 2011

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**Date Rec. :** 07 September 2011
**LR Report:** **CA11126-SEP11**
**Reference:** CN50-51

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Composite |
|---|---|---|---|
| Mercury [µg/g] | 16-Sep-11 | 09:08 | < 0.1 |
| Aluminum [µg/g] | 20-Sep-11 | 09:49 | 37000 |
| Arsenic [µg/g] | 16-Sep-11 | 14:34 | 6900 |
| Barium [µg/g] | 16-Sep-11 | 14:34 | 360 |
| Beryllium [µg/g] | 16-Sep-11 | 14:34 | 0.76 |
| Bismuth [µg/g] | 16-Sep-11 | 14:34 | 0.73 |
| Calcium [µg/g] | 20-Sep-11 | 09:49 | 26000 |
| Cadmium [µg/g] | 16-Sep-11 | 14:34 | 0.59 |
| Cobalt [µg/g] | 16-Sep-11 | 14:34 | 13 |
| Chromium [µg/g] | 16-Sep-11 | 14:34 | 150 |
| Copper [µg/g] | 16-Sep-11 | 14:34 | 81 |
| Iron [µg/g] | 20-Sep-11 | 09:49 | 120000 |
| Potassium [µg/g] | 20-Sep-11 | 09:49 | 8800 |
| Lithium [µg/g] | 16-Sep-11 | 14:34 | 14 |
| Magnesium [µg/g] | 20-Sep-11 | 09:49 | 11000 |
| Manganese [µg/g] | 16-Sep-11 | 14:34 | 1200 |
| Molybdenum [µg/g] | 16-Sep-11 | 14:34 | 7.1 |
| Sodium [µg/g] | 20-Sep-11 | 09:49 | 7700 |
| Nickel [µg/g] | 16-Sep-11 | 14:34 | 30 |
| Lead [µg/g] | 16-Sep-11 | 14:34 | 180 |
| Antimony [µg/g] | 16-Sep-11 | 14:34 | 2.7 |
| Selenium [µg/g] | 16-Sep-11 | 14:34 | < 0.7 |
| Tin [µg/g] | 16-Sep-11 | 14:34 | 1.8 |
| Strontium [µg/g] | 16-Sep-11 | 14:34 | 170 |
| Titanium [µg/g] | 20-Sep-11 | 09:49 | 1500 |
| Thallium [µg/g] | 16-Sep-11 | 14:34 | 0.26 |
| Uranium [µg/g] | 16-Sep-11 | 14:34 | 0.90 |
| Vanadium [µg/g] | 16-Sep-11 | 14:34 | 50 |
| Zinc [µg/g] | 16-Sep-11 | 14:34 | 150 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA11126-SEP11**



*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Monday, September 26, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 07 September 2011
**LR Report:** **CA11128-SEP11**
**Reference:** CN50-51

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Composite |
|---|---|---|---|
| Sample [weight(g)] | 14-Sep-11 | 08:05 | 250 |
| Volume mL [D.I. H2O] | 14-Sep-11 | 08:05 | 750 |
| InitialpH [units] | 14-Sep-11 | 08:05 | 8.6 |
| Final pH [units] | 14-Sep-11 | 08:05 | 8.23 |
| pH [no unit] | 16-Sep-11 | 19:40 | 8.13 |
| Conductivity [uS/cm] | 16-Sep-11 | 19:40 | 295 |
| Alkalinity [mg/L as CaCO3] | 16-Sep-11 | 19:40 | 80 |
| Sulphate [mg/L] | 23-Sep-11 | 15:02 | 110 |
| Chloride [mg/L] | 23-Sep-11 | 15:02 | 0.4 |
| Mercury [mg/L] | 16-Sep-11 | 09:02 | < 0.0001 |
| Aluminum [mg/L] | 16-Sep-11 | 09:56 | 0.09 |
| Arsenic [mg/L] | 21-Sep-11 | 10:15 | 0.246 |
| Barium [mg/L] | 21-Sep-11 | 10:15 | 0.0207 |
| Beryllium [mg/L] | 21-Sep-11 | 10:15 | < 0.00002 |
| Bismuth [mg/L] | 21-Sep-11 | 10:15 | < 0.00001 |
| Calcium [mg/L] | 16-Sep-11 | 09:56 | 52.5 |
| Cadmium [mg/L] | 21-Sep-11 | 10:15 | < 0.000003 |
| Cobalt [mg/L] | 21-Sep-11 | 10:15 | 0.00452 |
| Chromium [mg/L] | 21-Sep-11 | 10:15 | < 0.0005 |
| Copper [mg/L] | 21-Sep-11 | 10:15 | < 0.0005 |
| Iron [mg/L] | 16-Sep-11 | 09:57 | 0.046 |
| Potassium [mg/L] | 16-Sep-11 | 09:57 | 13.1 |
| Lithium [mg/L] | 21-Sep-11 | 10:15 | 0.005 |
| Magnesium [mg/L] | 16-Sep-11 | 09:57 | 9.14 |
| Manganese [mg/L] | 21-Sep-11 | 10:15 | 0.0345 |
| Molybdenum [mg/L] | 21-Sep-11 | 10:15 | 0.00320 |
| Sodium [mg/L] | 16-Sep-11 | 09:57 | 4.64 |
| Nickel [mg/L] | 21-Sep-11 | 10:15 | 0.0002 |
| Lead [mg/L] | 21-Sep-11 | 10:15 | 0.00010 |

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**LR Report :** **CA11128-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN50-51 Composite |
|---|---|---|---|
| Antimony [mg/L] | 21-Sep-11 | 10:15 | 0.0054 |
| Selenium [mg/L] | 21-Sep-11 | 10:15 | 0.002 |
| Tin [mg/L] | 21-Sep-11 | 10:15 | < 0.00001 |
| Strontium [mg/L] | 16-Sep-11 | 09:57 | 0.181 |
| Titanium [mg/L] | 21-Sep-11 | 10:15 | 0.0003 |
| Thallium [mg/L] | 21-Sep-11 | 10:15 | < 0.00002 |
| Uranium [mg/L] | 21-Sep-11 | 10:15 | 0.00157 |
| Vanadium [mg/L] | 21-Sep-11 | 10:15 | 0.00010 |
| Zinc [mg/L] | 21-Sep-11 | 10:15 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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**SGS Canada Inc.**
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Wednesday, October 05, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 07 September 2011
**LR Report:** **CA11130-SEP11**
**Reference:** CN-3, CN-7

**Copy:** #1

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN-3 (Wesmeg Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Paste pH [units] | 28-Sep-11 | 11:17 | 8.54 | 8.30 |
| Fizz Rate [---] | 28-Sep-11 | 11:17 | 4 | 4 |
| Sample weight [g] | 28-Sep-11 | 11:17 | 2.03 | 1.96 |
| HCl added [mL] | 28-Sep-11 | 11:17 | 88.20 | 107.00 |
| HCl [Normality] | 28-Sep-11 | 11:17 | 0.10 | 0.10 |
| NaOH [Normality] | 28-Sep-11 | 11:17 | 0.10 | 0.10 |
| NaOH to [pH=8.3 mL] | 28-Sep-11 | 11:17 | 49.78 | 58.50 |
| Final pH [units] | 28-Sep-11 | 11:17 | 1.66 | 1.58 |
| NP [t CaCO3/1000 t] | 28-Sep-11 | 11:17 | 95 | 124 |
| AP [t CaCO3/1000 t] | 05-Oct-11 | 09:19 | 47.2 | 67.5 |
| Net NP [t CaCO3/1000 t] | 05-Oct-11 | 09:19 | 47.4 | 56.0 |
| NP/AP [ratio] | 05-Oct-11 | 09:19 | 2.00 | 1.83 |
| Sulphur (total) [%] | 15-Sep-11 | 09:13 | 1.62 | 2.82 |
| Acid Leachable SO4-S [%] | 05-Oct-11 | 09:19 | 0.11 | 0.66 |
| Sulphide [%] | 15-Sep-11 | 09:12 | 1.51 | 2.16 |
| Carbon (total) [%] | 05-Oct-11 | 09:19 | 3.31 | 2.33 |
| Carbonate [%] | 15-Sep-11 | 08:36 | 4.21 | 6.74 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, September 23, 2011

**Agnico Eagle Mines Limited**
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Division LaRonde 20, Route 395, Cadillac
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**Date Rec. :** 07 September 2011
**LR Report:** **CA11131-SEP11**
**Reference:** CN-3, CN-7

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN-3 (Wesmeg@Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Sample weight [g] | 22-Sep-11 | 15:11 | 2.5 | 2.5 |
| Vol H2O2 [mL] | 22-Sep-11 | 15:11 | 250 | 250 |
| Final pH [units] | 22-Sep-11 | 15:11 | 8.85 | 8.94 |
| NaOH [Normality] | 22-Sep-11 | 15:11 | 0.10 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 22-Sep-11 | 15:11 | 0.00 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 22-Sep-11 | 15:11 | 0.00 | 0.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 22-Sep-11 | 15:11 | 0.0 | 0.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 22-Sep-11 | 15:11 | 0.0 | 0.0 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, September 23, 2011

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**Date Rec. :** 07 September 2011
**LR Report:** **CA11132-SEP11**
**Reference:** CN-3, CN-7

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN-3 (Wesmeg@Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Sample weight [g] | 22-Sep-11 | 15:09 | 2.5 | 2.5 |
| Vol H2O2 [mL] | 22-Sep-11 | 15:09 | 250 | 250 |
| Final pH [units] | 22-Sep-11 | 15:09 | 8.85 | 8.94 |
| pH [no unit] | 20-Sep-11 | 15:14 | 7.24 | 7.27 |
| Conductivity [uS/cm] | 20-Sep-11 | 15:14 | 566 | 746 |
| Alkalinity [mg/L as CaCO3] | 20-Sep-11 | 15:14 | 14 | 13 |
| Chloride [mg/L] | 21-Sep-11 | 17:42 | < 2 | < 2 |
| Sulphate [mg/L] | 23-Sep-11 | 11:34 | 250 | 360 |
| Mercury [mg/L] | 22-Sep-11 | 15:05 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 22-Sep-11 | 13:36 | 0.01 | 0.03 |
| Arsenic [mg/L] | 23-Sep-11 | 13:54 | 0.0084 | 0.0399 |
| Barium [mg/L] | 23-Sep-11 | 13:54 | 0.00424 | 0.00521 |
| Beryllium [mg/L] | 23-Sep-11 | 13:54 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 23-Sep-11 | 13:54 | < 0.00001 | < 0.00001 |
| Calcium [mg/L] | 22-Sep-11 | 13:36 | 99.7 | 147 |
| Cadmium [mg/L] | 23-Sep-11 | 13:55 | < 0.000003 | < 0.000003 |
| Cobalt [mg/L] | 23-Sep-11 | 13:55 | 0.000253 | 0.000347 |
| Chromium [mg/L] | 23-Sep-11 | 13:55 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 23-Sep-11 | 13:55 | 0.0438 | 0.0043 |
| Iron [mg/L] | 22-Sep-11 | 13:37 | 0.004 | < 0.002 |
| Potassium [mg/L] | 22-Sep-11 | 13:37 | 4.46 | 4.35 |
| Lithium [mg/L] | 23-Sep-11 | 13:55 | 0.005 | 0.004 |
| Magnesium [mg/L] | 22-Sep-11 | 13:37 | 12.4 | 8.13 |
| Manganese [mg/L] | 23-Sep-11 | 13:55 | 0.0259 | 0.0141 |
| Molybdenum [mg/L] | 23-Sep-11 | 13:55 | 0.0118 | 0.0115 |
| Sodium [mg/L] | 22-Sep-11 | 13:37 | 1.29 | 0.92 |
| Nickel [mg/L] | 23-Sep-11 | 13:55 | 0.0028 | 0.0042 |
| Lead [mg/L] | 23-Sep-11 | 13:55 | < 0.00002 | < 0.00002 |

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**LR Report :** **CA11132-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN-3 (Wesmeg@Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|---|---|
| Antimony [mg/L] | 23-Sep-11 | 13:55 | 0.0002 | 0.0004 |
| Selenium [mg/L] | 23-Sep-11 | 13:55 | 0.008 | 0.012 |
| Tin [mg/L] | 23-Sep-11 | 13:55 | < 0.00001 | 0.00008 |
| Strontium [mg/L] | 23-Sep-11 | 13:55 | 0.118 | 0.134 |
| Titanium [mg/L] | 23-Sep-11 | 13:55 | 0.0002 | 0.0003 |
| Thallium [mg/L] | 23-Sep-11 | 13:55 | 0.00002 | 0.00004 |
| Uranium [mg/L] | 23-Sep-11 | 13:55 | 0.000006 | 0.000005 |
| Vanadium [mg/L] | 23-Sep-11 | 13:55 | < 0.00003 | < 0.00003 |
| Zinc [mg/L] | 23-Sep-11 | 13:55 | 0.001 | 0.002 |



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*Project Specialist*
*Environmental Services, Analytical*

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Thursday, September 22, 2011

**Agnico Eagle Mines Limited**
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Division LaRonde 20, Route 395, Cadillac
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Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 07 September 2011
**LR Report:** **CA11133-SEP11**
**Reference:** CN-3, CN-7

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN-3 (Wesmeg@Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|---|---|
| Sample Date & Time | | | Date: n/a | Date: n/a |
| Mercury [µg/g] | 16-Sep-11 | 09:08 | < 0.1 | < 0.1 |
| Aluminum [µg/g] | 20-Sep-11 | 13:57 | 17000 | 16000 |
| Arsenic [µg/g] | 20-Sep-11 | 14:14 | 2800 | 8000 |
| Barium [µg/g] | 20-Sep-11 | 14:14 | 130 | 39 |
| Beryllium [µg/g] | 20-Sep-11 | 14:14 | 0.39 | 0.26 |
| Bismuth [µg/g] | 20-Sep-11 | 14:14 | 0.27 | 0.33 |
| Calcium [µg/g] | 20-Sep-11 | 13:57 | 27000 | 35000 |
| Cadmium [µg/g] | 20-Sep-11 | 14:14 | 1.2 | 1.1 |
| Cobalt [µg/g] | 20-Sep-11 | 14:14 | 18 | 24 |
| Chromium [µg/g] | 20-Sep-11 | 14:14 | 240 | 310 |
| Copper [µg/g] | 20-Sep-11 | 14:14 | 200 | 280 |
| Iron [µg/g] | 20-Sep-11 | 13:58 | 140000 | 150000 |
| Potassium [µg/g] | 20-Sep-11 | 13:58 | 2900 | 1300 |
| Lithium [µg/g] | 20-Sep-11 | 14:14 | 10 | 9 |
| Magnesium [µg/g] | 20-Sep-11 | 13:58 | 15000 | 14000 |
| Manganese [µg/g] | 20-Sep-11 | 14:14 | 2200 | 2200 |
| Molybdenum [µg/g] | 20-Sep-11 | 14:14 | 2.0 | 2.6 |
| Sodium [µg/g] | 20-Sep-11 | 13:58 | 2400 | 1700 |
| Nickel [µg/g] | 20-Sep-11 | 14:15 | 79 | 120 |
| Lead [µg/g] | 20-Sep-11 | 14:15 | 38 | 8.2 |
| Antimony [µg/g] | 20-Sep-11 | 14:15 | 1.0 | 3.6 |
| Selenium [µg/g] | 20-Sep-11 | 14:15 | < 0.7 | 1.5 |
| Tin [µg/g] | 20-Sep-11 | 14:15 | 1.0 | 2.5 |
| Strontium [µg/g] | 20-Sep-11 | 14:15 | 53 | 48 |
| Titanium [µg/g] | 20-Sep-11 | 13:58 | 1400 | 820 |
| Thallium [µg/g] | 20-Sep-11 | 14:15 | 0.11 | 0.10 |
| Uranium [µg/g] | 20-Sep-11 | 14:15 | 0.31 | 0.33 |
| Vanadium [µg/g] | 20-Sep-11 | 14:15 | 55 | 60 |
| Zinc [µg/g] | 20-Sep-11 | 14:15 | 410 | 350 |

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**LR Report :** **CA11133-SEP11**

*Brian Graham B.Sc.*
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*Environmental Services, Analytical*

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Friday, September 16, 2011

**Agnico Eagle Mines Limited**
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**Date Rec. :** 07 September 2011
**LR Report:** **CA11134-SEP11**
**Reference:** CN3, CN7

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 5: CN-3 (Wesmeg@Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|
| Sample Date & Time | Date: n/a | Date: n/a |
| SiO2 [%] | 55.6 | 54.5 |
| Al2O3 [%] | 3.54 | 3.36 |
| Fe2O3 [%] | 20.6 | 22.6 |
| MgO [%] | 2.63 | 2.80 |
| CaO [%] | 3.93 | 5.15 |
| Na2O [%] | 0.39 | 0.27 |
| K2O [%] | 0.32 | 0.15 |
| TiO2 [%] | 0.24 | 0.15 |
| P2O5 [%] | 0.08 | 0.08 |
| MnO [%] | 0.31 | 0.32 |
| Cr2O3 [%] | 0.04 | 0.05 |
| V2O5 [%] | < 0.01 | < 0.01 |
| LOI [%] | 9.21 | 5.95 |
| Sum [%] | 96.9 | 95.4 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

OnLine LIMS


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**SGS Canada Inc.**
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Monday, September 26, 2011

**Agnico Eagle Mines Limited**
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Division LaRonde 20, Route 395, Cadillac
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**Date Rec. :** 07 September 2011
**LR Report:** **CA11135-SEP11**
**Reference:** CN-3, CN-7

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN-3 (Wesmeg@Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|---|---|
| Sample [weight(g)] | 14-Sep-11 | 08:06 | 250 | 250 |
| Volume mL [D.I. H2O] | 14-Sep-11 | 08:06 | 750 | 750 |
| InitialpH [units] | 14-Sep-11 | 08:06 | 8.7 | 8.9 |
| Final pH [units] | 14-Sep-11 | 08:06 | 8.17 | 8.39 |
| pH [no unit] | 16-Sep-11 | 19:52 | 8.15 | 7.85 |
| Conductivity [uS/cm] | 16-Sep-11 | 19:52 | 331 | 387 |
| Alkalinity [mg/L as CaCO3] | 16-Sep-11 | 19:52 | 93 | 46 |
| Sulphate [mg/L] | 23-Sep-11 | 15:04 | 67 | 150 |
| Chloride [mg/L] | 23-Sep-11 | 15:04 | < 0.2 | 0.9 |
| Mercury [mg/L] | 16-Sep-11 | 09:03 | < 0.0001 | < 0.0001 |
| Aluminum [mg/L] | 16-Sep-11 | 09:57 | 0.03 | 0.04 |
| Arsenic [mg/L] | 21-Sep-11 | 10:16 | 0.0715 | 0.624 |
| Barium [mg/L] | 21-Sep-11 | 10:16 | 0.0228 | 0.00716 |
| Beryllium [mg/L] | 21-Sep-11 | 10:16 | < 0.00002 | < 0.00002 |
| Bismuth [mg/L] | 21-Sep-11 | 10:16 | < 0.00001 | 0.00005 |
| Calcium [mg/L] | 16-Sep-11 | 09:57 | 39.6 | 94.3 |
| Cadmium [mg/L] | 21-Sep-11 | 10:16 | 0.000003 | 0.000008 |
| Cobalt [mg/L] | 21-Sep-11 | 10:16 | 0.00163 | 0.00397 |
| Chromium [mg/L] | 21-Sep-11 | 10:16 | < 0.0005 | < 0.0005 |
| Copper [mg/L] | 21-Sep-11 | 10:16 | 0.0020 | 0.0096 |
| Iron [mg/L] | 16-Sep-11 | 09:57 | 0.204 | 0.228 |
| Potassium [mg/L] | 16-Sep-11 | 09:57 | 6.69 | 6.35 |
| Lithium [mg/L] | 21-Sep-11 | 10:16 | 0.003 | 0.002 |
| Magnesium [mg/L] | 16-Sep-11 | 09:58 | 12.2 | 5.07 |
| Manganese [mg/L] | 21-Sep-11 | 10:16 | 0.0731 | 0.0293 |
| Molybdenum [mg/L] | 21-Sep-11 | 10:16 | 0.00296 | 0.00677 |
| Sodium [mg/L] | 16-Sep-11 | 09:58 | 0.84 | 2.56 |
| Nickel [mg/L] | 21-Sep-11 | 10:16 | 0.0004 | 0.0005 |
| Lead [mg/L] | 21-Sep-11 | 10:16 | < 0.00002 | < 0.00002 |

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**LR Report :** **CA11135-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CN-3 (Wesmeg@Open Pit) | 6: CN-7 (Pump CND Treated) |
|---|---|---|---|---|
| Antimony [mg/L] | 21-Sep-11 | 10:16 | 0.0014 | 0.0057 |
| Selenium [mg/L] | 21-Sep-11 | 10:16 | < 0.001 | 0.002 |
| Tin [mg/L] | 21-Sep-11 | 10:16 | < 0.00001 | 0.00005 |
| Strontium [mg/L] | 16-Sep-11 | 09:58 | 0.0618 | 0.0846 |
| Titanium [mg/L] | 21-Sep-11 | 10:17 | 0.0001 | 0.0002 |
| Thallium [mg/L] | 21-Sep-11 | 10:17 | < 0.00002 | < 0.00002 |
| Uranium [mg/L] | 21-Sep-11 | 10:17 | 0.000629 | 0.000619 |
| Vanadium [mg/L] | 21-Sep-11 | 10:17 | 0.00003 | 0.00021 |
| Zinc [mg/L] | 21-Sep-11 | 10:17 | 0.001 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, October 18, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 September 2011
**LR Report:** **CA11346-SEP11**
**Reference:** F3 F4

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F3 Rougher Tails Supernatant | 6: F4 Rougher Tails Supernatant |
|---|---|---|---|---|
| Sample Date & Time | | | Date:N/A | Date:N/A |
| pH [no unit] | 03-Oct-11 | 12:37 | 8.08 | 8.26 |
| Conductivity [uS/cm] | 03-Oct-11 | 12:37 | 357 | 391 |
| Alkalinity [mg/L as CaCO3] | 03-Oct-11 | 12:37 | 68 | 95 |
| Fluoride [mg/L] | 13-Oct-11 | 09:10 | 0.09 | 0.09 |
| Chloride [mg/L] | 30-Sep-11 | 16:00 | 13 | 13 |
| Sulphate [mg/L] | 30-Sep-11 | 16:00 | 68 | 69 |
| Nitrite (as N) [mg/L] | 30-Sep-11 | 16:00 | < 0.06 | < 0.06 |
| Nitrate (as N) [mg/L] | 30-Sep-11 | 16:00 | < 0.05 | < 0.05 |
| Cyanide (total) [mg/L] | 04-Oct-11 | 12:02 | < 0.1 | < 0.1 |
| Cyanide (WAD) [mg/L] | 04-Oct-11 | 12:02 | < 0.1 | < 0.1 |
| Cyanide (free) [mg/L] | 04-Oct-11 | 12:02 | < 0.1 | < 0.1 |
| Thiosalts (total) [as S2O3 mg/L] | 11-Oct-11 | 09:31 | < 10 | < 10 |
| Aluminum (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 0.06 | 0.21 |
| Arsenic (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0082 | 0.0051 |
| Barium (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0386 | 0.0131 |
| Beryllium (dissolved) [mg/L] | 05-Oct-11 | 10:00 | < 0.00002 | < 0.00002 |
| Boron (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0110 | 0.0143 |
| Bismuth (dissolved) [mg/L] | 05-Oct-11 | 10:00 | < 0.00001 | < 0.00001 |
| Calcium (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 46.1 | 42.7 |
| Cadmium (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.000019 | 0.000004 |
| Cobalt (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.00126 | 0.000078 |
| Chromium (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0008 | 0.0009 |
| Copper (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0022 | 0.0031 |
| Iron (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 0.004 | 0.009 |
| Potassium (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 14.9 | 19.0 |
| Lithium (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.004 | 0.005 |
| Magnesium (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 8.39 | 8.06 |
| Manganese (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0719 | 0.0195 |

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**LR Report :** **CA11346-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: F3 Rougher Tails Supernatant | 6: F4 Rougher Tails Supernatant |
|---|---|---|---|---|
| Molybdenum (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.00331 | 0.00196 |
| Sodium (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 14.7 | 15.9 |
| Nickel (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0006 | 0.0002 |
| Lead (dissolved) [mg/L] | 05-Oct-11 | 10:00 | < 0.00002 | 0.00002 |
| Antimony (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.0026 | 0.0038 |
| Selenium (dissolved) [mg/L] | 05-Oct-11 | 10:00 | < 0.001 | < 0.001 |
| Tin (dissolved) [mg/L] | 05-Oct-11 | 10:00 | 0.00004 | 0.00002 |
| Strontium (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 0.130 | 0.155 |
| Titanium (dissolved) [mg/L] | 05-Oct-11 | 10:01 | 0.0002 | 0.0006 |
| Thallium (dissolved) [mg/L] | 05-Oct-11 | 10:01 | < 0.0002 | < 0.0002 |
| Uranium (dissolved) [mg/L] | 05-Oct-11 | 10:01 | 0.000066 | 0.000018 |
| Vanadium (dissolved) [mg/L] | 05-Oct-11 | 10:01 | 0.00031 | 0.00042 |
| Tungsten (dissolved) [mg/L] | 05-Oct-11 | 10:01 | 0.00198 | 0.00154 |
| Yttrium (dissolved) [mg/L] | 05-Oct-11 | 10:01 | 0.000001 | 0.000011 |
| Zinc (dissolved) [mg/L] | 04-Oct-11 | 10:14 | 0.002 | 0.002 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, October 14, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 29 September 2011
**LR Report:** **CA11347-SEP11**
**Reference:** CN2

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiaq Open Pit CN2 |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| pH [no unit] | 03-Oct-11 | 12:34 | 8.20 |
| Conductivity [uS/cm] | 03-Oct-11 | 12:34 | 4470 |
| Alkalinity [mg/L as CaCO3] | 03-Oct-11 | 12:34 | 92 |
| Total Dissolved Solids [mg/L] | 11-Oct-11 | 09:32 | 3710 |
| Fluoride [mg/L] | 07-Oct-11 | 08:25 | 0.09 |
| Chloride [mg/L] | 05-Oct-11 | 15:11 | 20 |
| Sulphate [mg/L] | 07-Oct-11 | 15:41 | 2200 |
| Nitrite (as N) [mg/L] | 05-Oct-11 | 14:59 | < 0.06 |
| Nitrate (as N) [mg/L] | 05-Oct-11 | 14:59 | 0.13 |
| Cyanide (total) [mg/L] | 06-Oct-11 | 10:54 | 5.95 |
| Cyanide (WAD) [mg/L] | 06-Oct-11 | 10:54 | 0.04 |
| Cyanide (free) [mg/L] | 06-Oct-11 | 10:54 | 0.04 |
| Cyanate [mg/L] | 04-Oct-11 | 14:24 | 100 |
| Thiocyanate [mg/L] | 04-Oct-11 | 14:23 | 58 |
| Thiosulphate [mg/L] | 13-Oct-11 | 11:40 | 6.6 |
| As+3 [mg/L] | 05-Oct-11 | 08:45 | 0.464 |
| As+5 [mg/L] | 05-Oct-11 | 08:45 | 8.79 |
| Aluminum (total) [mg/L] | 04-Oct-11 | 10:38 | 0.18 |
| Aluminum (dissolved) [mg/L] | 04-Oct-11 | 10:38 | 0.12 |
| Arsenic (total) [mg/L] | 04-Oct-11 | 13:03 | 9.25 |
| Arsenic (dissolved) [mg/L] | 04-Oct-11 | 13:03 | 9.74 |
| Barium (total) [mg/L] | 04-Oct-11 | 13:03 | 0.0969 |
| Barium (dissolved) [mg/L] | 04-Oct-11 | 13:03 | 0.0863 |
| Beryllium (total) [mg/L] | 04-Oct-11 | 13:03 | < 0.0002 |
| Beryllium (dissolved) [mg/L] | 04-Oct-11 | 13:03 | < 0.0002 |
| Boron (total) [mg/L] | 04-Oct-11 | 13:03 | 0.124 |
| Boron (dissolved) [mg/L] | 04-Oct-11 | 13:03 | 0.027 |
| Bismuth (total) [mg/L] | 04-Oct-11 | 13:03 | < 0.0001 |

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**LR Report :** **CA11347-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiaq Open Pit CN2 |
|---|---|---|---|
| Bismuth (dissolved) [mg/L] | 04-Oct-11 | 13:03 | < 0.0001 |
| Calcium (total) [mg/L] | 04-Oct-11 | 10:38 | 344 |
| Calcium (dissolved) [mg/L] | 04-Oct-11 | 10:38 | 354 |
| Cadmium (total) [mg/L] | 04-Oct-11 | 13:03 | < 0.00003 |
| Cadmium (dissolved) [mg/L] | 04-Oct-11 | 13:03 | < 0.00003 |
| Cobalt (total) [mg/L] | 04-Oct-11 | 13:03 | 0.0857 |
| Cobalt (dissolved) [mg/L] | 04-Oct-11 | 13:03 | 0.0769 |
| Chromium (total) [mg/L] | 04-Oct-11 | 13:03 | < 0.005 |
| Chromium (dissolved) [mg/L] | 04-Oct-11 | 13:03 | < 0.005 |
| Copper (total) [mg/L] | 04-Oct-11 | 13:03 | 0.050 |
| Copper (dissolved) [mg/L] | 04-Oct-11 | 13:03 | 0.029 |
| Iron (total) [mg/L] | 04-Oct-11 | 10:38 | 3.17 |
| Iron (dissolved) [mg/L] | 04-Oct-11 | 10:38 | 3.10 |
| Potassium (total) [mg/L] | 04-Oct-11 | 10:38 | 51.6 |
| Potassium (dissolved) [mg/L] | 04-Oct-11 | 10:38 | 53.4 |
| Lithium (total) [mg/L] | 04-Oct-11 | 13:03 | < 0.01 |
| Lithium (dissolved) [mg/L] | 04-Oct-11 | 13:03 | < 0.01 |
| Magnesium (total) [mg/L] | 04-Oct-11 | 17:54 | 5.14 |
| Magnesium (dissolved) [mg/L] | 04-Oct-11 | 17:54 | 5.20 |
| Manganese (total) [mg/L] | 04-Oct-11 | 13:03 | 0.0218 |
| Manganese (dissolved) [mg/L] | 04-Oct-11 | 13:03 | 0.0109 |
| Molybdenum (total) [mg/L] | 04-Oct-11 | 13:03 | 0.0546 |
| Molybdenum (dissolved) [mg/L] | 04-Oct-11 | 13:03 | 0.0511 |
| Sodium (total) [mg/L] | 04-Oct-11 | 10:38 | 811 |
| Sodium (dissolved) [mg/L] | 04-Oct-11 | 10:38 | 694 |
| Nickel (total) [mg/L] | 04-Oct-11 | 13:04 | 0.016 |
| Nickel (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.012 |
| Lead (total) [mg/L] | 04-Oct-11 | 13:04 | 0.0020 |
| Lead (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.0006 |
| Antimony (total) [mg/L] | 04-Oct-11 | 13:04 | 0.037 |
| Antimony (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.041 |
| Selenium (total) [mg/L] | 04-Oct-11 | 13:04 | 0.02 |
| Selenium (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.01 |
| Tin (total) [mg/L] | 04-Oct-11 | 13:04 | 0.0026 |
| Tin (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.0010 |
| Strontium (total) [mg/L] | 04-Oct-11 | 17:54 | 0.531 |
| Strontium (dissolved) [mg/L] | 04-Oct-11 | 17:54 | 0.551 |
| Titanium (total) [mg/L] | 04-Oct-11 | 13:04 | 0.001 |
| Titanium (dissolved) [mg/L] | 04-Oct-11 | 13:04 | < 0.001 |
| Thallium (total) [mg/L] | 04-Oct-11 | 13:04 | < 0.002 |
| Thallium (dissolved) [mg/L] | 04-Oct-11 | 13:04 | < 0.002 |
| Uranium (total) [mg/L] | 04-Oct-11 | 13:04 | 0.00338 |
| Uranium (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.00316 |
| Vanadium (total) [mg/L] | 04-Oct-11 | 13:04 | 0.0021 |

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**LR Report :** **CA11347-SEP11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: Tiriganiaq Open Pit CN2 |
|---|---|---|---|
| Vanadium (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.0019 |
| Tungsten (total) [mg/L] | 04-Oct-11 | 13:04 | 0.0203 |
| Tungsten (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.0075 |
| Yttrium (total) [mg/L] | 04-Oct-11 | 13:04 | 0.00004 |
| Yttrium (dissolved) [mg/L] | 04-Oct-11 | 13:04 | 0.00001 |
| Zinc (total) [mg/L] | 04-Oct-11 | 10:38 | < 0.002 |
| Zinc (dissolved) [mg/L] | 04-Oct-11 | 10:38 | < 0.002 |

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*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, July 20, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 22 June 2011
**LR Report:** **CA10416-JUN11**
**Reference:** CND9

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Temperature Upon Receipt [°C] | --- | --- | 20.0 |
| pH [no unit] | 27-Jun-11 | 10:42 | 7.75 |
| Conductivity [uS/cm] | 27-Jun-11 | 10:42 | 5220 |
| Alkalinity [mg/L as CaCO3] | 27-Jun-11 | 10:42 | 106 |
| Carbonate [mg/L as CaCO3] | 27-Jun-11 | 10:42 | < 2 |
| Bicarbonate [mg/L as CaCO3] | 27-Jun-11 | 10:42 | 106 |
| OH [mg/L as CaCO3] | 27-Jun-11 | 10:42 | < 2 |
| Acidity [mg/L as CaCO3] | 27-Jun-11 | 10:41 | < 2 |
| Fluoride [mg/L] | 27-Jun-11 | 11:45 | 0.22 |
| Total Dissolved Solids [mg/L] | 27-Jun-11 | 12:19 | 4760 |
| Total Suspended Solids [mg/L] | 24-Jun-11 | 21:30 | 5 |
| Chloride [mg/L] | 30-Jun-11 | 14:36 | 47 |
| Sulphate [mg/L] | 05-Jul-11 | 08:28 | 2400 |
| Nitrite (as N) [mg/L] | 28-Jun-11 | 17:53 | < 0.6 |
| Nitrate (as N) [mg/L] | 28-Jun-11 | 17:53 | < 0.5 |
| Nitrate + Nitrite (as N) [mg/L] | 28-Jun-11 | 17:53 | < 0.6 |
| Total Inorganic Carbon [mg/L] | 14-Jul-11 | 10:58 | 43.5 |
| Total Organic Carbon [mg/L] | 29-Jun-11 | 16:53 | 63.8 |
| Thiosalts (total) [as S2O3 mg/L] | 04-Jul-11 | 14:56 | 21 |
| Cyanide (total) [mg/L] | 30-Jun-11 | 16:24 | 1.58 |
| Cyanide (WAD) [mg/L] | 28-Jun-11 | 16:40 | 0.06 |
| Cyanide (free) [mg/L] | 28-Jun-11 | 16:40 | 0.06 |
| Cyanate [mg/L] | 24-Jun-11 | 11:43 | 120 |
| Thiocyanate [mg/L] | 28-Jun-11 | 14:51 | 150 |
| As+3 [mg/L] | 19-Jul-11 | 08:49 | 0.087 |
| As+5 [mg/L] | 19-Jul-11 | 08:49 | 0.554 |
| Mercury (total) [ug/L] | 23-Jun-11 | 14:40 | 1.1 |
| Aluminum (total) [mg/L] | 27-Jun-11 | 13:40 | 0.11 |

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**LR Report :** **CA10416-JUN11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Aluminum (dissolved) [mg/L] | 27-Jun-11 | 13:40 | 0.05 |
| Arsenic (total) [mg/L] | 28-Jun-11 | 16:02 | 0.833 |
| Arsenic (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.814 |
| Barium (total) [mg/L] | 28-Jun-11 | 16:02 | 0.168 |
| Barium (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.143 |
| Beryllium (total) [mg/L] | 28-Jun-11 | 16:02 | < 0.00002 |
| Beryllium (dissolved) [mg/L] | 28-Jun-11 | 16:02 | < 0.00002 |
| Boron (total) [mg/L] | 28-Jun-11 | 16:02 | 0.0220 |
| Boron (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.0216 |
| Bismuth (total) [mg/L] | 28-Jun-11 | 16:02 | 0.00003 |
| Bismuth (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.00002 |
| Calcium (total) [mg/L] | 27-Jun-11 | 13:40 | 379 |
| Calcium (dissolved) [mg/L] | 27-Jun-11 | 13:40 | 387 |
| Cadmium (total) [mg/L] | 28-Jun-11 | 16:02 | 0.000035 |
| Cadmium (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.000004 |
| Cobalt (total) [mg/L] | 28-Jun-11 | 16:02 | 0.0339 |
| Cobalt (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.0332 |
| Chromium (total) [mg/L] | 28-Jun-11 | 16:02 | 0.0011 |
| Chromium (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.0010 |
| Copper (total) [mg/L] | 28-Jun-11 | 16:02 | 0.420 |
| Copper (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.229 |
| Iron (total) [mg/L] | 27-Jun-11 | 13:40 | 0.488 |
| Iron (dissolved) [mg/L] | 27-Jun-11 | 13:40 | 0.259 |
| Potassium (total) [mg/L] | 27-Jun-11 | 13:40 | 59.8 |
| Potassium (dissolved) [mg/L] | 27-Jun-11 | 13:40 | 59.9 |
| Lithium (total) [mg/L] | 28-Jun-11 | 16:02 | 0.007 |
| Lithium (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.006 |
| Magnesium (total) [mg/L] | 27-Jun-11 | 13:40 | 9.53 |
| Magnesium (dissolved) [mg/L] | 27-Jun-11 | 13:40 | 9.57 |
| Manganese (total) [mg/L] | 28-Jun-11 | 16:02 | 0.0674 |
| Manganese (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.0663 |
| Molybdenum (total) [mg/L] | 28-Jun-11 | 16:02 | 0.117 |
| Molybdenum (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.118 |
| Sodium (total) [mg/L] | 30-Jun-11 | 15:31 | 887 |
| Sodium (dissolved) [mg/L] | 30-Jun-11 | 15:30 | 906 |
| Nickel (total) [mg/L] | 28-Jun-11 | 16:02 | 0.0096 |
| Nickel (dissolved) [mg/L] | 28-Jun-11 | 16:02 | 0.0095 |
| Phosphorus (total) [mg/L] | 27-Jun-11 | 13:40 | < 0.009 |
| Phosphorus (dissolved) [mg/L] | 27-Jun-11 | 13:40 | < 0.009 |
| Lead (total) [mg/L] | 28-Jun-11 | 16:03 | 0.00255 |
| Lead (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.00013 |
| Antimony (total) [mg/L] | 28-Jun-11 | 16:03 | 0.0086 |
| Antimony (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.0116 |
| Selenium (total) [mg/L] | 28-Jun-11 | 16:03 | 0.029 |

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**LR Report :** **CA10416-JUN11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Selenium (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.048 |
| Tin (total) [mg/L] | 28-Jun-11 | 16:03 | 0.00022 |
| Tin (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.00005 |
| Strontium (total) [mg/L] | 27-Jun-11 | 13:41 | 0.964 |
| Strontium (dissolved) [mg/L] | 27-Jun-11 | 13:41 | 0.983 |
| Titanium (total) [mg/L] | 28-Jun-11 | 16:03 | 0.0014 |
| Titanium (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.0005 |
| Thallium (total) [mg/L] | 28-Jun-11 | 16:03 | < 0.0002 |
| Thallium (dissolved) [mg/L] | 28-Jun-11 | 16:03 | < 0.0002 |
| Uranium (total) [mg/L] | 28-Jun-11 | 16:03 | 0.00487 |
| Uranium (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.00479 |
| Vanadium (total) [mg/L] | 28-Jun-11 | 16:03 | 0.00044 |
| Vanadium (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.00038 |
| Tungsten (total) [mg/L] | 28-Jun-11 | 16:03 | 0.00761 |
| Tungsten (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.00761 |
| Yttrium (total) [mg/L] | 28-Jun-11 | 16:03 | 0.000029 |
| Yttrium (dissolved) [mg/L] | 28-Jun-11 | 16:03 | 0.000007 |
| Zinc (total) [mg/L] | 27-Jun-11 | 13:42 | 0.008 |
| Zinc (dissolved) [mg/L] | 27-Jun-11 | 13:42 | 0.005 |

Ra226 subcontracted to Becquerel Labs

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Wednesday, July 06, 2011

**Agnico Eagle Mines Limited**
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**Date Rec. :** 22 June 2011
**LR Report:** **CA10417-JUN11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Paste pH [units] | 29-Jun-11 | 08:11 | 8.59 |
| Fizz Rate [---] | 29-Jun-11 | 08:11 | 3 |
| Sample weight [g] | 29-Jun-11 | 08:11 | 2.01 |
| HCl added [mL] | 29-Jun-11 | 08:11 | 64.70 |
| HCl [Normality] | 29-Jun-11 | 08:11 | 0.10 |
| NaOH [Normality] | 29-Jun-11 | 08:11 | 0.10 |
| NaOH to [pH=8.3 mL] | 29-Jun-11 | 08:11 | 30.34 |
| Final pH [units] | 29-Jun-11 | 08:11 | 1.81 |
| NP [t CaCO3/1000 t] | 29-Jun-11 | 08:11 | 86 |
| AP [t CaCO3/1000 t] | 29-Jun-11 | 08:11 | 27.8 |
| Net NP [t CaCO3/1000 t] | 29-Jun-11 | 08:11 | 57.7 |
| NP/AP [ratio] | 29-Jun-11 | 08:11 | 3.08 |
| Sulphur (total) [%] | 27-Jun-11 | 15:23 | 1.34 |
| Acid Leachable SO4-S [%] | 28-Jun-11 | 07:37 | 0.44 |
| Sulphide [%] | 28-Jun-11 | 07:37 | 0.89 |
| Carbon (total) [%] | 28-Jun-11 | 12:37 | 1.60 |
| Carbonate [%] | 28-Jun-11 | 07:40 | 5.29 |

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*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Mercury [µg/g] | 04-Jul-11 | 12:36 | < 0.1 |
| Aluminum [µg/g] | 06-Jul-11 | 10:50 | 41000 |
| Arsenic [µg/g] | 30-Jun-11 | 11:29 | 5600 |
| Barium [µg/g] | 30-Jun-11 | 11:29 | 530 |
| Beryllium [µg/g] | 30-Jun-11 | 11:29 | 1.1 |
| Bismuth [µg/g] | 30-Jun-11 | 11:29 | 1.1 |
| Calcium [µg/g] | 06-Jul-11 | 10:50 | 26000 |
| Cadmium [µg/g] | 30-Jun-11 | 11:30 | 0.55 |
| Cobalt [µg/g] | 30-Jun-11 | 11:30 | 9.6 |
| Chromium [µg/g] | 30-Jun-11 | 11:30 | 150 |
| Copper [µg/g] | 30-Jun-11 | 11:30 | 430 |
| Iron [µg/g] | 06-Jul-11 | 10:50 | 110000 |
| Potassium [µg/g] | 06-Jul-11 | 10:50 | 13000 |
| Lithium [µg/g] | 30-Jun-11 | 11:30 | 17 |
| Magnesium [µg/g] | 06-Jul-11 | 10:50 | 9800 |
| Manganese [µg/g] | 30-Jun-11 | 11:30 | 680 |
| Molybdenum [µg/g] | 30-Jun-11 | 11:30 | 8.1 |
| Sodium [µg/g] | 06-Jul-11 | 10:50 | 5900 |
| Nickel [µg/g] | 30-Jun-11 | 11:30 | 24 |
| Lead [µg/g] | 30-Jun-11 | 11:30 | 330 |
| Antimony [µg/g] | 30-Jun-11 | 11:30 | 2.1 |
| Selenium [µg/g] | 30-Jun-11 | 11:30 | < 0.7 |
| Tin [µg/g] | 30-Jun-11 | 11:30 | 1.2 |
| Strontium [µg/g] | 30-Jun-11 | 11:30 | 200 |
| Titanium [µg/g] | 06-Jul-11 | 10:50 | 1400 |
| Thallium [µg/g] | 30-Jun-11 | 11:30 | 0.39 |
| Uranium [µg/g] | 30-Jun-11 | 11:30 | 1.0 |
| Vanadium [µg/g] | 30-Jun-11 | 11:30 | 56 |
| Zinc [µg/g] | 30-Jun-11 | 11:30 | 130 |

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Wednesday, July 06, 2011

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**Reference:** Whole Rock Analysis

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## Final Report

| **Analysis** | **5: CND9-1A** |
|---|---|
| Sample Date & Time | Date:N/A |
| SiO2 [%] | 59.3 |
| Al2O3 [%] | 8.36 |
| Fe2O3 [%] | 15.8 |
| MgO [%] | 1.91 |
| CaO [%] | 3.65 |
| Na2O [%] | 0.94 |
| K2O [%] | 1.49 |
| TiO2 [%] | 0.31 |
| P2O5 [%] | 0.14 |
| MnO [%] | 0.10 |
| Cr2O3 [%] | 0.02 |
| V2O5 [%] | 0.01 |
| LOI [%] | 5.05 |
| Sum [%] | 97.1 |

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*Environmental Services, Analytical*

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Sample weight [g] | 27-Jun-11 | 15:22 | 2.5 |
| Vol H2O2 [mL] | 27-Jun-11 | 15:22 | 250 |
| Final pH [units] | 27-Jun-11 | 15:22 | 9.92 |
| NaOH [Normality] | 27-Jun-11 | 15:22 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 27-Jun-11 | 15:22 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 27-Jun-11 | 15:22 | 0.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 27-Jun-11 | 15:22 | 0.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 27-Jun-11 | 15:22 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

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*Project Specialist*
*Environmental Services, Analytical*

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Sample weight [g] | 27-Jun-11 | 15:21 | 2.5 |
| Vol H2O2 [mL] | 27-Jun-11 | 15:22 | 250 |
| Final pH [units] | 27-Jun-11 | 15:22 | 9.92 |
| pH [no unit] | 30-Jun-11 | 16:37 | 8.00 |
| Conductivity [uS/cm] | 30-Jun-11 | 16:37 | 360 |
| Alkalinity [mg/L as CaCO3] | 30-Jun-11 | 16:37 | 33 |
| Chloride [mg/L] | 05-Jul-11 | 09:05 | < 2 |
| Sulphate [mg/L] | 04-Jul-11 | 12:26 | 120 |
| Mercury [mg/L] | 29-Jun-11 | 09:47 | < 0.0001 |
| Aluminum [mg/L] | 05-Jul-11 | 07:16 | 0.50 |
| Arsenic [mg/L] | 30-Jun-11 | 15:28 | 0.890 |
| Barium [mg/L] | 30-Jun-11 | 15:28 | 0.0116 |
| Beryllium [mg/L] | 30-Jun-11 | 15:28 | < 0.00002 |
| Bismuth [mg/L] | 30-Jun-11 | 15:28 | < 0.00001 |
| Calcium [mg/L] | 05-Jul-11 | 07:16 | 59.0 |
| Cadmium [mg/L] | 30-Jun-11 | 15:28 | < 0.000003 |
| Cobalt [mg/L] | 30-Jun-11 | 15:28 | 0.000281 |
| Chromium [mg/L] | 30-Jun-11 | 15:28 | < 0.0005 |
| Copper [mg/L] | 30-Jun-11 | 15:28 | 0.0010 |
| Iron [mg/L] | 05-Jul-11 | 07:16 | 0.018 |
| Potassium [mg/L] | 05-Jul-11 | 07:16 | 9.55 |
| Lithium [mg/L] | 30-Jun-11 | 15:28 | 0.003 |
| Magnesium [mg/L] | 05-Jul-11 | 07:16 | 0.028 |
| Manganese [mg/L] | 30-Jun-11 | 15:28 | 0.00122 |
| Molybdenum [mg/L] | 30-Jun-11 | 15:28 | 0.0561 |
| Sodium [mg/L] | 05-Jul-11 | 07:16 | 1.56 |
| Nickel [mg/L] | 30-Jun-11 | 15:28 | 0.0008 |
| Lead [mg/L] | 30-Jun-11 | 15:28 | 0.00028 |
| Antimony [mg/L] | 30-Jun-11 | 15:28 | 0.0017 |

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**LR Report :** **CA10421-JUN11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Selenium [mg/L] | 30-Jun-11 | 15:28 | 0.003 |
| Tin [mg/L] | 30-Jun-11 | 15:28 | 0.00007 |
| Strontium [mg/L] | 30-Jun-11 | 15:28 | 0.346 |
| Titanium [mg/L] | 30-Jun-11 | 15:28 | 0.0009 |
| Thallium [mg/L] | 30-Jun-11 | 15:28 | 0.00008 |
| Uranium [mg/L] | 30-Jun-11 | 15:28 | 0.000428 |
| Vanadium [mg/L] | 30-Jun-11 | 15:28 | 0.00200 |
| Zinc [mg/L] | 30-Jun-11 | 15:28 | 0.001 |

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*Environmental Services, Analytical*

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Tuesday, July 12, 2011

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**Date Rec. :** 22 June 2011
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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Sample weight [g] | 05-Jul-11 | 09:55 | 250 |
| Volume D.I. Water [mL] | 05-Jul-11 | 09:55 | 750 |
| Initial pH [units] | 05-Jul-11 | 09:55 | 8.8 |
| Final pH [units] | 05-Jul-11 | 09:55 | 8.33 |
| pH [no unit] | 11-Jul-11 | 18:47 | 8.07 |
| Conductivity [uS/cm] | 11-Jul-11 | 18:47 | 300 |
| Alkalinity [mg/L as CaCO3] | 11-Jul-11 | 18:47 | 153 |
| Chloride [mg/L] | 11-Jul-11 | 09:37 | 0.9 |
| Sulphate [mg/L] | 07-Jul-11 | 15:08 | 25 |
| Mercury (total) [mg/L] | 06-Jul-11 | 15:22 | < 0.0001 |
| Aluminum [mg/L] | 11-Jul-11 | 12:43 | 0.0634 |
| Arsenic [mg/L] | 11-Jul-11 | 12:43 | 0.153 |
| Barium [mg/L] | 11-Jul-11 | 12:43 | 0.0135 |
| Beryllium [mg/L] | 11-Jul-11 | 12:43 | < 0.00002 |
| Bismuth [mg/L] | 11-Jul-11 | 12:43 | 0.00002 |
| Calcium [mg/L] | 07-Jul-11 | 09:00 | 37.6 |
| Cadmium [mg/L] | 11-Jul-11 | 12:43 | 0.000009 |
| Cobalt [mg/L] | 11-Jul-11 | 12:43 | 0.00100 |
| Chromium [mg/L] | 11-Jul-11 | 12:43 | < 0.0005 |
| Copper [mg/L] | 11-Jul-11 | 12:43 | 0.0175 |
| Iron [mg/L] | 07-Jul-11 | 09:00 | 0.011 |
| Potassium [mg/L] | 07-Jul-11 | 09:00 | 9.29 |
| Lithium [mg/L] | 11-Jul-11 | 12:43 | 0.005 |
| Magnesium [mg/L] | 07-Jul-11 | 09:00 | 8.92 |
| Manganese [mg/L] | 11-Jul-11 | 12:43 | 0.0341 |
| Molybdenum [mg/L] | 11-Jul-11 | 12:43 | 0.00489 |
| Sodium [mg/L] | 07-Jul-11 | 09:00 | 1.58 |
| Nickel [mg/L] | 11-Jul-11 | 12:44 | 0.0011 |
| Lead [mg/L] | 11-Jul-11 | 12:44 | 0.00036 |

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**LR Report :** **CA10422-JUN11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND9-1A |
|---|---|---|---|
| Antimony [mg/L] | 11-Jul-11 | 12:44 | 0.0031 |
| Selenium [mg/L] | 11-Jul-11 | 12:44 | < 0.001 |
| Tin [mg/L] | 11-Jul-11 | 12:44 | 0.00005 |
| Strontium [mg/L] | 07-Jul-11 | 09:00 | 0.188 |
| Titanium [mg/L] | 11-Jul-11 | 12:44 | 0.0006 |
| Thallium [mg/L] | 11-Jul-11 | 12:44 | 0.00003 |
| Uranium [mg/L] | 11-Jul-11 | 12:44 | 0.000305 |
| Vanadium [mg/L] | 11-Jul-11 | 12:44 | 0.00006 |
| Zinc [mg/L] | 11-Jul-11 | 12:44 | < 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, July 22, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 05 July 2011
**LR Report:** **CA10195-JUL11**
**Reference:** CND-10

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Paste pH [units] | 19-Jul-11 | 15:59 | 8.18 |
| Fizz Rate [---] | 19-Jul-11 | 15:59 | 3 |
| Sample weight [g] | 19-Jul-11 | 15:59 | 2.03 |
| HCl added [mL] | 19-Jul-11 | 15:59 | 64.00 |
| HCl [Normality] | 19-Jul-11 | 15:59 | 0.10 |
| NaOH [Normality] | 19-Jul-11 | 15:59 | 0.10 |
| NaOH to pH=8.3 [mL] | 19-Jul-11 | 15:59 | 31.60 |
| Final pH [units] | 19-Jul-11 | 15:59 | 1.74 |
| NP [t CaCO3/1000 t] | 19-Jul-11 | 15:59 | 80 |
| AP [t CaCO3/1000 t] | 19-Jul-11 | 16:01 | 277 |
| Net NP [t CaCO3/1000 t] | 19-Jul-11 | 16:01 | -197.45 |
| NP/AP [ratio] | 19-Jul-11 | 16:02 | 0.29 |
| Sulphur (total) [%] | 14-Jul-11 | 16:00 | 10.5 |
| Acid Leachable SO4-S [%] | 19-Jul-11 | 15:59 | 1.59 |
| Sulphide [%] | 14-Jul-11 | 15:55 | 8.87 |
| Carbon (total) [%] | 14-Jul-11 | 16:00 | 1.62 |
| Carbonate [%] | 14-Jul-11 | 15:56 | 4.93 |

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**LR Report :** **CA10195-JUL11**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Tuesday, July 19, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

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Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 05 July 2011
**LR Report:** **CA10196-JUL11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## DRAFT

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| pH [no unit] | 07-Jul-11 | 09:44 | 8.43 |
| Conductivity [uS/cm] | 07-Jul-11 | 09:44 | 7860 |
| Alkalinity [mg/L as CaCO3] | 07-Jul-11 | 09:44 | 153 |
| Carbonate [mg/L as CaCO3] | 07-Jul-11 | 09:44 | 6 |
| Bicarbonate [mg/L as CaCO3] | 07-Jul-11 | 09:44 | 148 |
| OH [mg/L as CaCO3] | 07-Jul-11 | 09:44 | < 2 |
| Acidity [mg/L as CaCO3] | 07-Jul-11 | 09:44 | < 2 |
| Fluoride [mg/L] | 07-Jul-11 | 09:13 | 0.17 |
| Total Dissolved Solids [mg/L] | 07-Jul-11 | 09:16 | 7030 |
| Total Suspended Solids [mg/L] | 08-Jul-11 | 08:10 | 18 |
| Chloride [mg/L] | 13-Jul-11 | 13:40 | 190 |
| Sulphate [mg/L] | 15-Jul-11 | 08:54 | 3600 |
| Nitrite (as N) [mg/L] | 11-Jul-11 | 17:14 | < 0.6 |
| Nitrate (as N) [mg/L] | 11-Jul-11 | 17:14 | 0.33 |
| Nitrate + Nitrite (as N) [mg/L] | 11-Jul-11 | 17:14 | <0.6 |
| Total Inorganic Carbon [mg/L] | 14-Jul-11 | 10:59 | 75.8 |
| Total Organic Carbon [mg/L] | 13-Jul-11 | 14:13 | 79.3 |
| Thiosalts (total) [as S2O3 mg/L] | 07-Jul-11 | 09:42 | 29 |
| Cyanide (total) [mg/L] | 07-Jul-11 | 17:55 | 0.36 |
| Cyanide (WAD) [mg/L] | 06-Jul-11 | 16:26 | 0.18 |
| Cyanide (free) [mg/L] | 06-Jul-11 | 16:26 | 0.18 |
| Cyanate [mg/L] | 07-Jul-11 | 09:53 | 190 |
| Thiocyanate [mg/L] | 12-Jul-11 | 09:54 | 200 |
| As+3 [mg/L] | | | |
| As+5 [mg/L] | | | |
| Mercury (total) [ug/L] | 06-Jul-11 | 15:21 | 2.2 |
| Aluminum (total) [mg/L] | 06-Jul-11 | 14:35 | 0.46 |
| Aluminum (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 0.04 |
| Arsenic (total) [mg/L] | 08-Jul-11 | 15:06 | 40.9 |

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**LR Report :** **CA10196-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Arsenic (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 40.2 |
| Barium (total) [mg/L] | 08-Jul-11 | 15:06 | 0.0660 |
| Barium (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 0.0625 |
| Beryllium (total) [mg/L] | 08-Jul-11 | 15:06 | < 0.00002 |
| Beryllium (dissolved) [mg/L] | 08-Jul-11 | 15:06 | < 0.00002 |
| Boron (total) [mg/L] | 08-Jul-11 | 15:06 | 0.0298 |
| Boron (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 0.0287 |
| Bismuth (total) [mg/L] | 08-Jul-11 | 15:06 | 0.00011 |
| Bismuth (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 0.00002 |
| Calcium (total) [mg/L] | 06-Jul-11 | 14:35 | 219 |
| Calcium (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 208 |
| Cadmium (total) [mg/L] | 08-Jul-11 | 15:06 | 0.000104 |
| Cadmium (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 0.000068 |
| Cobalt (total) [mg/L] | 08-Jul-11 | 15:06 | 0.0623 |
| Cobalt (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 0.0576 |
| Chromium (total) [mg/L] | 08-Jul-11 | 15:06 | 0.0032 |
| Chromium (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 0.0027 |
| Copper (total) [mg/L] | 08-Jul-11 | 15:06 | 0.487 |
| Copper (dissolved) [mg/L] | 08-Jul-11 | 15:06 | 0.262 |
| Iron (total) [mg/L] | 06-Jul-11 | 14:35 | 1.98 |
| Iron (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 0.062 |
| Potassium (total) [mg/L] | 06-Jul-11 | 14:35 | 62.5 |
| Potassium (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 57.8 |
| Lithium (total) [mg/L] | 08-Jul-11 | 15:07 | 0.006 |
| Lithium (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.005 |
| Magnesium (total) [mg/L] | 06-Jul-11 | 14:35 | 10.8 |
| Magnesium (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 9.81 |
| Manganese (total) [mg/L] | 08-Jul-11 | 15:07 | 0.0570 |
| Manganese (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.0386 |
| Molybdenum (total) [mg/L] | 08-Jul-11 | 15:07 | 0.0478 |
| Molybdenum (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.0439 |
| Sodium (total) [mg/L] | 07-Jul-11 | 07:40 | 2000 |
| Sodium (dissolved) [mg/L] | 07-Jul-11 | 07:40 | 1900 |
| Nickel (total) [mg/L] | 08-Jul-11 | 15:07 | 0.0053 |
| Nickel (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.0051 |
| Phosphorus (total) [mg/L] | 06-Jul-11 | 14:35 | 0.033 |
| Phosphorus (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 0.027 |
| Lead (total) [mg/L] | 08-Jul-11 | 15:07 | 0.0118 |
| Lead (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.00173 |
| Antimony (total) [mg/L] | 08-Jul-11 | 15:07 | 0.0415 |
| Antimony (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.0405 |
| Selenium (total) [mg/L] | 08-Jul-11 | 15:07 | 0.035 |
| Selenium (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.033 |
| Tin (total) [mg/L] | 08-Jul-11 | 15:07 | 0.00110 |

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**LR Report :** **CA10196-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Tin (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.00070 |
| Strontium (total) [mg/L] | 06-Jul-11 | 14:35 | 0.359 |
| Strontium (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 0.338 |
| Titanium (total) [mg/L] | 08-Jul-11 | 15:07 | 0.0091 |
| Titanium (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.0009 |
| Thallium (total) [mg/L] | 08-Jul-11 | 15:07 | < 0.0002 |
| Thallium (dissolved) [mg/L] | 08-Jul-11 | 15:07 | < 0.0002 |
| Uranium (total) [mg/L] | 08-Jul-11 | 15:07 | 0.00300 |
| Uranium (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.00288 |
| Vanadium (total) [mg/L] | 08-Jul-11 | 15:07 | 0.00128 |
| Vanadium (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.00132 |
| Tungsten (total) [mg/L] | 08-Jul-11 | 15:07 | 0.0112 |
| Tungsten (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.0108 |
| Yttrium (total) [mg/L] | 08-Jul-11 | 15:07 | 0.000145 |
| Yttrium (dissolved) [mg/L] | 08-Jul-11 | 15:07 | 0.000008 |
| Zinc (total) [mg/L] | 06-Jul-11 | 14:35 | 0.010 |
| Zinc (dissolved) [mg/L] | 06-Jul-11 | 14:35 | 0.004 |

DRAFT

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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July 27, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 07 July 2011
**LR Report:** **CA10212-JUL11**
**Reference:** CND - 10

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|---|---|
| Mercury [µg/g] | 22-Jul-11 | 09:26 | 24-Jul-11 | 19:52 | < 0.1 |
| Aluminum [µg/g] | 21-Jul-11 | 09:15 | 22-Jul-11 | 11:29 | 34000 |
| Arsenic [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 60000 |
| Barium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 260 |
| Beryllium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 0.65 |
| Bismuth [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 3.2 |
| Calcium [µg/g] | 21-Jul-11 | 09:15 | 22-Jul-11 | 11:30 | 29000 |
| Cadmium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 0.98 |
| Cobalt [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 33 |
| Chromium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 44 |
| Copper [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 620 |
| Iron [µg/g] | 21-Jul-11 | 09:15 | 22-Jul-11 | 11:30 | 300000 |
| Potassium [µg/g] | 21-Jul-11 | 09:15 | 22-Jul-11 | 11:30 | 9400 |
| Lithium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 12 |
| Magnesium [µg/g] | 21-Jul-11 | 09:15 | 22-Jul-11 | 11:30 | 9500 |
| Manganese [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 810 |
| Molybdenum [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 21 |
| Sodium [µg/g] | 21-Jul-11 | 09:15 | 22-Jul-11 | 11:30 | 5500 |
| Nickel [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 63 |
| Lead [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 540 |
| Antimony [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 16 |
| Selenium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | < 0.7 |
| Tin [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 0.9 |
| Strontium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 160 |
| Titanium [µg/g] | 21-Jul-11 | 09:15 | 22-Jul-11 | 11:31 | 1200 |
| Thallium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:05 | 0.25 |
| Uranium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:06 | 1.1 |
| Vanadium [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:06 | 38 |
| Zinc [µg/g] | 21-Jul-11 | 15:24 | 24-Jul-11 | 20:06 | 200 |

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**LR Report :** **CA10212-JUL11**



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, July 22, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 07 July 2011
**LR Report:** **CA10213-JUL11**
**Reference:** CND-10

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 5: CND-10 |
|---|---|
| SiO2 [%] | 33.0 |
| Al2O3 [%] | 6.03 |
| Fe2O3 [%] | 36.2 |
| MgO [%] | 1.88 |
| CaO [%] | 3.73 |
| Na2O [%] | 0.76 |
| K2O [%] | 0.97 |
| TiO2 [%] | 0.21 |
| P2O5 [%] | 0.15 |
| MnO [%] | 0.11 |
| Cr2O3 [%] | < 0.01 |
| V2O5 [%] | 0.01 |
| LOI [%] | 13.6 |
| Sum [%] | < 98 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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Friday, July 22, 2011

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**Date Rec. :** 07 July 2011
**LR Report:** **CA10214-JUL11**
**Reference:** CND-10

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Sample weight [g] | 22-Jul-11 | 11:59 | 1.51 |
| Vol H2O2 [mL] | 22-Jul-11 | 11:59 | 150 |
| Final pH [units] | 22-Jul-11 | 11:59 | 3.15 |
| NaOH [Normality] | 22-Jul-11 | 11:59 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 22-Jul-11 | 11:59 | 2.60 |
| Vol NaOH to PH 7.0 [mL] | 22-Jul-11 | 11:59 | 16.60 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 22-Jul-11 | 11:59 | 8.4 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 22-Jul-11 | 11:59 | 54 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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July 28, 2011

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**Date Rec. :** 07 July 2011
**LR Report:** **CA10215-JUL11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Sample weight [g] | 22-Jul-11 | 11:59 | 2.49 |
| Vol H2O2 [mL] | 22-Jul-11 | 11:59 | 250 |
| Final pH [units] | 22-Jul-11 | 11:59 | 3.09 |
| pH [no unit] | 22-Jul-11 | 19:03 | 2.96 |
| Conductivity [uS/cm] | 22-Jul-11 | 19:03 | 2730 |
| Alkalinity [mg/L as CaCO3] | 22-Jul-11 | 19:03 | < 2 |
| Chloride [mg/L] | 26-Jul-11 | 17:42 | < 2 |
| Sulphate [mg/L] | 27-Jul-11 | 09:20 | 1600 |
| Mercury [mg/L] | 22-Jul-11 | 14:05 | 0.0003 |
| Aluminum [mg/L] | 25-Jul-11 | 12:37 | 2.03 |
| Arsenic [mg/L] | 26-Jul-11 | 08:53 | 9.84 |
| Barium [mg/L] | 26-Jul-11 | 08:53 | 0.0883 |
| Beryllium [mg/L] | 26-Jul-11 | 08:53 | 0.00073 |
| Bismuth [mg/L] | 26-Jul-11 | 08:53 | < 0.00001 |
| Calcium [mg/L] | 25-Jul-11 | 12:37 | 268 |
| Cadmium [mg/L] | 26-Jul-11 | 08:53 | 0.00588 |
| Cobalt [mg/L] | 26-Jul-11 | 08:53 | 0.141 |
| Chromium [mg/L] | 26-Jul-11 | 08:53 | 0.0006 |
| Copper [mg/L] | 26-Jul-11 | 08:53 | 0.103 |
| Iron [mg/L] | 27-Jul-11 | 10:56 | 522 |
| Potassium [mg/L] | 25-Jul-11 | 12:37 | 11.2 |
| Lithium [mg/L] | 26-Jul-11 | 08:53 | 0.025 |
| Magnesium [mg/L] | 25-Jul-11 | 12:37 | 41.0 |
| Manganese [mg/L] | 26-Jul-11 | 08:53 | 6.32 |
| Molybdenum [mg/L] | 26-Jul-11 | 08:53 | 0.00071 |
| Sodium [mg/L] | 25-Jul-11 | 12:37 | 1.36 |
| Nickel [mg/L] | 26-Jul-11 | 08:53 | 0.337 |
| Lead [mg/L] | 26-Jul-11 | 08:53 | 0.0408 |
| Antimony [mg/L] | 26-Jul-11 | 08:53 | 0.0017 |
| Selenium [mg/L] | 26-Jul-11 | 08:53 | 0.037 |

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**LR Report :** **CA10215-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Tin [mg/L] | 26-Jul-11 | 08:53 | 0.00018 |
| Strontium [mg/L] | 26-Jul-11 | 08:53 | 1.23 |
| Titanium [mg/L] | 26-Jul-11 | 08:53 | 0.0013 |
| Thallium [mg/L] | 26-Jul-11 | 08:53 | 0.00011 |
| Uranium [mg/L] | 26-Jul-11 | 08:53 | 0.000750 |
| Vanadium [mg/L] | 26-Jul-11 | 08:53 | 0.00392 |
| Zinc [mg/L] | 26-Jul-11 | 08:53 | 1.29 |



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 705-652-2000 FAX: 705-652-6365

Wednesday, August 10, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 07 July 2011
**LR Report:** **CA10216-JUL11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Sample Date & Time | | | Date:N/A |
| Sample weight [g] | 27-Jul-11 | 13:06 | 250 |
| Volume D.I. Water [mL] | 27-Jul-11 | 13:06 | 750 |
| Initial pH [units] | 27-Jul-11 | 13:06 | 8.4 |
| Final pH [units] | 27-Jul-11 | 13:06 | 8.12 |
| pH [no unit] | 28-Jul-11 | 13:14 | 8.18 |
| Conductivity [uS/cm] | 28-Jul-11 | 13:14 | 1040 |
| Alkalinity [mg/L as CaCO3] | 28-Jul-11 | 13:14 | 59 |
| Chloride [mg/L] | 08-Aug-11 | 15:09 | 0.4 |
| Sulphate [mg/L] | 08-Aug-11 | 15:09 | 390 |
| Mercury (total) [mg/L] | 28-Jul-11 | 15:02 | 0.0003 |
| Aluminum [mg/L] | 29-Jul-11 | 11:37 | 0.0517 |
| Arsenic [mg/L] | 29-Jul-11 | 11:37 | 2.85 |
| Barium [mg/L] | 29-Jul-11 | 11:37 | 0.0352 |
| Beryllium [mg/L] | 29-Jul-11 | 11:37 | < 0.00002 |
| Bismuth [mg/L] | 29-Jul-11 | 11:37 | 0.00009 |
| Calcium [mg/L] | 28-Jul-11 | 15:02 | 182 |
| Cadmium [mg/L] | 29-Jul-11 | 11:37 | 0.000010 |
| Cobalt [mg/L] | 29-Jul-11 | 11:37 | 0.00542 |
| Chromium [mg/L] | 29-Jul-11 | 11:37 | < 0.0005 |
| Copper [mg/L] | 29-Jul-11 | 11:37 | 0.0490 |
| Iron [mg/L] | 28-Jul-11 | 15:02 | 0.177 |
| Potassium [mg/L] | 28-Jul-11 | 15:02 | 17.7 |
| Lithium [mg/L] | 29-Jul-11 | 11:37 | 0.008 |
| Magnesium [mg/L] | 28-Jul-11 | 15:02 | 14.0 |
| Manganese [mg/L] | 29-Jul-11 | 11:37 | 0.0411 |
| Molybdenum [mg/L] | 29-Jul-11 | 11:37 | 0.00232 |
| Sodium [mg/L] | 28-Jul-11 | 15:02 | 8.89 |
| Nickel [mg/L] | 29-Jul-11 | 11:37 | 0.0028 |
| Lead [mg/L] | 29-Jul-11 | 11:37 | 0.00006 |

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**LR Report :** **CA10216-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND-10 |
|---|---|---|---|
| Antimony [mg/L] | 29-Jul-11 | 11:37 | 0.0107 |
| Selenium [mg/L] | 29-Jul-11 | 11:37 | 0.011 |
| Tin [mg/L] | 29-Jul-11 | 11:37 | 0.00019 |
| Strontium [mg/L] | 28-Jul-11 | 15:03 | 0.317 |
| Titanium [mg/L] | 29-Jul-11 | 11:37 | 0.0003 |
| Thallium [mg/L] | 29-Jul-11 | 11:37 | 0.00002 |
| Uranium [mg/L] | 29-Jul-11 | 11:37 | 0.00114 |
| Vanadium [mg/L] | 29-Jul-11 | 11:37 | 0.00022 |
| Zinc [mg/L] | 29-Jul-11 | 11:37 | 0.002 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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August 5, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 20 July 2011
**LR Report:** **CA11200-JUL11**
**Reference:** CND11

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|
| Temperature Upon Receipt [°C] | --- | --- | 11.0 |
| pH [no unit] | 22-Jul-11 | 19:39 | 8.30 |
| Conductivity [uS/cm] | 22-Jul-11 | 19:39 | 8110 |
| Alkalinity [mg/L as CaCO3] | 22-Jul-11 | 19:39 | 131 |
| Carbonate [mg/L as CaCO3] | 22-Jul-11 | 19:39 | 4 |
| Bicarbonate [mg/L as CaCO3] | 22-Jul-11 | 19:39 | 128 |
| OH [mg/L as CaCO3] | 22-Jul-11 | 19:39 | < 2 |
| Acidity [mg/L as CaCO3] | 22-Jul-11 | 19:39 | < 2 |
| Fluoride [mg/L] | 22-Jul-11 | 09:07 | 0.14 |
| Total Dissolved Solids [mg/L] | 25-Jul-11 | 06:40 | 7050 |
| Total Suspended Solids [mg/L] | 22-Jul-11 | 14:14 | 59 |
| Chloride [mg/L] | 03-Aug-11 | 14:52 | 32 |
| Sulphate [mg/L] | 05-Aug-11 | 08:48 | 4400 |
| Nitrite (as N) [mg/L] | 27-Jul-11 | 21:21 | < 0.6 |
| Nitrate (as N) [mg/L] | 27-Jul-11 | 21:21 | < 0.5 |
| Nitrate + Nitrite (as N) [mg/L] | 27-Jul-11 | 21:21 | < 0.6 |
| Total Inorganic Carbon [mg/L] | 27-Jul-11 | 09:24 | 45 |
| Total Organic Carbon [mg/L] | 27-Jul-11 | 12:55 | 13.9 |
| Thiosulphate [mg/L] | 04-Aug-11 | 12:31 | 2.8 |
| Cyanide (total) [mg/L] | 28-Jul-11 | 14:56 | 0.15 |
| Cyanide (WAD) [mg/L] | 26-Jul-11 | 15:06 | 0.05 |
| Cyanide (free) [mg/L] | 27-Jul-11 | 09:14 | 0.05 |
| Cyanate [mg/L] | 28-Jul-11 | 11:50 | 51 |
| Thiocyanate [mg/L] | 27-Jul-11 | 14:26 | 23 |
| As+3 [mg/L] | 21-Jul-11 | 13:42 | 0.040 |
| As+5 [mg/L] | 21-Jul-11 | 13:42 | 0.230 |
| Mercury (total) [ug/L] | 22-Jul-11 | 12:54 | 2.4 |
| Aluminum (total) [mg/L] | 25-Jul-11 | 16:27 | 1.44 |
| Aluminum (dissolved) [mg/L] | 25-Jul-11 | 16:27 | 0.02 |

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**LR Report :** **CA11200-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|
| Arsenic (total) [mg/L] | 25-Jul-11 | 09:04 | 0.362 |
| Arsenic (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.290 |
| Barium (total) [mg/L] | 25-Jul-11 | 09:04 | 0.137 |
| Barium (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.104 |
| Beryllium (total) [mg/L] | 25-Jul-11 | 09:04 | < 0.00002 |
| Beryllium (dissolved) [mg/L] | 25-Jul-11 | 09:04 | < 0.00002 |
| Boron (total) [mg/L] | 25-Jul-11 | 09:04 | 0.0251 |
| Boron (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.0234 |
| Bismuth (total) [mg/L] | 25-Jul-11 | 09:04 | 0.00002 |
| Bismuth (dissolved) [mg/L] | 25-Jul-11 | 09:04 | < 0.00001 |
| Calcium (total) [mg/L] | 25-Jul-11 | 16:27 | 237 |
| Calcium (dissolved) [mg/L] | 25-Jul-11 | 16:27 | 220 |
| Cadmium (total) [mg/L] | 25-Jul-11 | 09:04 | 0.000032 |
| Cadmium (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.000009 |
| Cobalt (total) [mg/L] | 25-Jul-11 | 09:04 | 0.00177 |
| Cobalt (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.00144 |
| Chromium (total) [mg/L] | 25-Jul-11 | 09:04 | 0.0017 |
| Chromium (dissolved) [mg/L] | 25-Jul-11 | 09:04 | < 0.0005 |
| Copper (total) [mg/L] | 25-Jul-11 | 09:04 | 0.184 |
| Copper (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.102 |
| Iron (total) [mg/L] | 25-Jul-11 | 16:27 | 5.35 |
| Iron (dissolved) [mg/L] | 25-Jul-11 | 16:27 | 0.008 |
| Potassium (total) [mg/L] | 25-Jul-11 | 16:27 | 96.5 |
| Potassium (dissolved) [mg/L] | 25-Jul-11 | 16:27 | 86.7 |
| Lithium (total) [mg/L] | 25-Jul-11 | 09:04 | 0.013 |
| Lithium (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.012 |
| Magnesium (total) [mg/L] | 25-Jul-11 | 16:27 | 13.8 |
| Magnesium (dissolved) [mg/L] | 25-Jul-11 | 16:27 | 11.8 |
| Manganese (total) [mg/L] | 25-Jul-11 | 09:04 | 0.120 |
| Manganese (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.0753 |
| Molybdenum (total) [mg/L] | 25-Jul-11 | 09:04 | 0.0384 |
| Molybdenum (dissolved) [mg/L] | 25-Jul-11 | 09:04 | 0.0349 |
| Sodium (total) [mg/L] | 27-Jul-11 | 11:06 | 2440 |
| Sodium (dissolved) [mg/L] | 27-Jul-11 | 11:06 | 2090 |
| Nickel (total) [mg/L] | 25-Jul-11 | 09:05 | 0.0059 |
| Nickel (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.0046 |
| Phosphorus (total) [mg/L] | 25-Jul-11 | 16:27 | 0.047 |
| Phosphorus (dissolved) [mg/L] | 25-Jul-11 | 16:27 | 0.011 |
| Lead (total) [mg/L] | 25-Jul-11 | 09:05 | 0.00083 |
| Lead (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.00013 |
| Antimony (total) [mg/L] | 25-Jul-11 | 09:05 | 0.0044 |
| Antimony (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.0041 |
| Selenium (total) [mg/L] | 25-Jul-11 | 09:05 | 0.002 |
| Selenium (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.002 |

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**LR Report :** **CA11200-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|
| Tin (total) [mg/L] | 25-Jul-11 | 09:05 | 0.00205 |
| Tin (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.00174 |
| Strontium (total) [mg/L] | 25-Jul-11 | 16:27 | 0.288 |
| Strontium (dissolved) [mg/L] | 25-Jul-11 | 16:27 | 0.257 |
| Titanium (total) [mg/L] | 25-Jul-11 | 09:05 | 0.0286 |
| Titanium (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.0009 |
| Thallium (total) [mg/L] | 25-Jul-11 | 09:05 | < 0.0002 |
| Thallium (dissolved) [mg/L] | 25-Jul-11 | 09:05 | < 0.0002 |
| Uranium (total) [mg/L] | 25-Jul-11 | 09:05 | 0.00116 |
| Uranium (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.00104 |
| Vanadium (total) [mg/L] | 25-Jul-11 | 09:05 | 0.00165 |
| Vanadium (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.00024 |
| Tungsten (total) [mg/L] | 25-Jul-11 | 09:05 | 0.00348 |
| Tungsten (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.00304 |
| Yttrium (total) [mg/L] | 25-Jul-11 | 09:05 | 0.000339 |
| Yttrium (dissolved) [mg/L] | 25-Jul-11 | 09:05 | 0.000024 |
| Zinc (total) [mg/L] | 25-Jul-11 | 16:28 | 0.007 |
| Zinc (dissolved) [mg/L] | 25-Jul-11 | 16:28 | < 0.002 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 4, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 20 July 2011
**LR Report:** **CA11201-JUL11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | 20-Jul-11 |
| Paste pH [units] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 8.24 |
| Fizz Rate [---] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 3 |
| Sample weight [g] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 2.03 |
| HCl added [mL] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 76.00 |
| HCl [Normality] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 0.10 |
| NaOH [Normality] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 0.10 |
| NaOH to [pH=8.3 mL] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 41.46 |
| Final pH [units] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 1.66 |
| NP [t CaCO3/1000 t] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:27 | 85 |
| AP [t CaCO3/1000 t] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:28 | 1.38 |
| Net NP [t CaCO3/1000 t] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:28 | 83.7 |
| NP/AP [ratio] | 25-Jul-11 | 10:01 | 29-Jul-11 | 14:28 | 61.6 |
| Sulphur (total) [%] | 25-Jul-11 | 08:57 | 25-Jul-11 | 10:02 | 0.266 |
| Acid Leachable SO4-S [%] | 27-Jul-11 | 11:46 | 27-Jul-11 | 17:38 | 0.22 |
| Sulphide [%] | 27-Jul-11 | 11:22 | 27-Jul-11 | 17:38 | 0.04 |
| Carbon (total) [%] | 25-Jul-11 | 08:57 | 25-Jul-11 | 10:02 | 1.51 |
| Carbonate [%] | 27-Jul-11 | 12:33 | 27-Jul-11 | 17:46 | 5.14 |

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Phone: 705-652-2000 FAX: 705-652-6365

**LR Report :** **CA11201-JUL11**

*NP (Neutralization Potential)

$$= \frac{50 \times (\text{N of HCL} \times \text{Total HCL added} - \text{N NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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July 29, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

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Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 20 July 2011
**LR Report:** **CA11202-JUL11**

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# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | 20-Jul-11 |
| Aluminum [µg/g] | 26-Jul-11 | 12:50 | 27-Jul-11 | 10:51 | 34000 |
| Arsenic [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 140 |
| Barium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 240 |
| Beryllium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 0.73 |
| Bismuth [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | < 0.09 |
| Calcium [µg/g] | 26-Jul-11 | 12:50 | 27-Jul-11 | 10:51 | 24000 |
| Cadmium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 0.26 |
| Cobalt [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 2.9 |
| Chromium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 130 |
| Copper [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 160 |
| Iron [µg/g] | 26-Jul-11 | 12:50 | 27-Jul-11 | 10:52 | 99000 |
| Potassium [µg/g] | 26-Jul-11 | 12:50 | 27-Jul-11 | 10:52 | 7700 |
| Lithium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 15 |
| Magnesium [µg/g] | 26-Jul-11 | 12:50 | 27-Jul-11 | 10:52 | 9000 |
| Manganese [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 760 |
| Molybdenum [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:01 | 3.4 |
| Sodium [µg/g] | 26-Jul-11 | 12:50 | 27-Jul-11 | 10:52 | 7900 |
| Nickel [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 12 |
| Lead [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 11 |
| Antimony [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | < 0.8 |
| Selenium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | < 0.7 |
| Tin [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 0.8 |
| Strontium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 180 |
| Titanium [µg/g] | 26-Jul-11 | 12:50 | 27-Jul-11 | 10:52 | 1300 |
| Thallium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 0.22 |
| Uranium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 0.73 |
| Vanadium [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 41 |
| Zinc [µg/g] | 26-Jul-11 | 17:03 | 27-Jul-11 | 17:02 | 62 |

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**LR Report :** **CA11202-JUL11**



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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July 27, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 20 July 2011
**LR Report:** **CA11203-JUL11**
**Reference:** Whole Rock Analysis

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| **Analysis** | **5: CND 11** |
|---|---|
| Sample Date & Time | 20-Jul-11 |
| SiO2 [%] | 61.3 |
| Al2O3 [%] | 7.80 |
| Fe2O3 [%] | 16.1 |
| MgO [%] | 1.77 |
| CaO [%] | 3.79 |
| Na2O [%] | 1.35 |
| K2O [%] | 0.95 |
| TiO2 [%] | 0.25 |
| P2O5 [%] | 0.12 |
| MnO [%] | 0.12 |
| Cr2O3 [%] | 0.03 |
| V2O5 [%] | < 0.01 |
| LOI [%] | 5.57 |
| Sum [%] | 99.2 |

*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Lakefield - Ontario - KOL 2HO
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August 5, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
J0Y 1C0,

Phone: (819) 759-3700 x5821
Fax:(819) 759-3663

**Date Rec. :** 20 July 2011
**LR Report:** **CA11204-JUL11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | 20-Jul-11 |
| Sample weight [g] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 1.5 |
| Vol H2O2 [mL] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 150 |
| Final pH [units] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 10.90 |
| NaOH [Normality] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 0.10 |
| Vol NaOH to PH 4.5 [mL] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 0.00 |
| Vol NaOH to PH 7.0 [mL] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 0.00 |
| NAG (pH 4.5) [kg H2SO4/tonne] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 0.0 |
| NAG (pH 7.0) [kg H2SO4/tonne] | 27-Jul-11 | 07:38 | 29-Jul-11 | 14:32 | 0.0 |

NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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August 5, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395
Cadillac, Quebec
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**Date Rec. :** 20 July 2011
**LR Report:** **CA11205-JUL11**

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# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|
| Sample Date & Time | | | 20-Jul-11 |
| Sample weight [g] | 29-Jul-11 | 14:32 | 2.5 |
| Vol H2O2 [mL] | 29-Jul-11 | 14:32 | 250 |
| Final pH [units] | 29-Jul-11 | 14:32 | 10.90 |
| pH [no unit] | 02-Aug-11 | 14:34 | 10.8 |
| Conductivity [uS/cm] | 02-Aug-11 | 14:34 | 302 |
| Alkalinity [mg/L as CaCO3] | 02-Aug-11 | 14:34 | 67 |
| Chloride [mg/L] | 04-Aug-11 | 12:45 | 4.8 |
| Sulphate [mg/L] | 04-Aug-11 | 12:45 | 63 |
| Mercury [mg/L] | 29-Jul-11 | 09:09 | < 0.0001 |
| Aluminum [mg/L] | 01-Aug-11 | 19:35 | 1.74 |
| Arsenic [mg/L] | 01-Aug-11 | 20:10 | 0.0193 |
| Barium [mg/L] | 01-Aug-11 | 20:10 | 0.00839 |
| Beryllium [mg/L] | 01-Aug-11 | 20:10 | < 0.00002 |
| Bismuth [mg/L] | 01-Aug-11 | 20:10 | < 0.00001 |
| Calcium [mg/L] | 01-Aug-11 | 19:35 | 55.0 |
| Cadmium [mg/L] | 01-Aug-11 | 20:10 | 0.000006 |
| Cobalt [mg/L] | 01-Aug-11 | 20:10 | 0.000157 |
| Chromium [mg/L] | 01-Aug-11 | 20:10 | 0.0335 |
| Copper [mg/L] | 01-Aug-11 | 20:10 | 0.0014 |
| Iron [mg/L] | 01-Aug-11 | 19:35 | 0.005 |
| Potassium [mg/L] | 01-Aug-11 | 19:35 | 10.1 |
| Lithium [mg/L] | 01-Aug-11 | 20:10 | 0.002 |
| Magnesium [mg/L] | 01-Aug-11 | 19:35 | 0.006 |
| Manganese [mg/L] | 01-Aug-11 | 20:10 | 0.00011 |
| Molybdenum [mg/L] | 01-Aug-11 | 20:10 | 0.0274 |
| Sodium [mg/L] | 01-Aug-11 | 19:35 | 2.49 |
| Nickel [mg/L] | 01-Aug-11 | 20:10 | 0.0018 |
| Lead [mg/L] | 01-Aug-11 | 20:10 | < 0.00002 |
| Antimony [mg/L] | 01-Aug-11 | 20:10 | 0.0003 |

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**LR Report :** **CA11205-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|
| Selenium [mg/L] | 01-Aug-11 | 20:10 | < 0.001 |
| Tin [mg/L] | 01-Aug-11 | 20:10 | 0.00015 |
| Strontium [mg/L] | 01-Aug-11 | 20:10 | 0.361 |
| Titanium [mg/L] | 01-Aug-11 | 20:10 | 0.0006 |
| Thallium [mg/L] | 01-Aug-11 | 20:10 | 0.00013 |
| Uranium [mg/L] | 01-Aug-11 | 20:10 | 0.000010 |
| Vanadium [mg/L] | 01-Aug-11 | 20:10 | 0.00206 |
| Zinc [mg/L] | 01-Aug-11 | 20:10 | < 0.001 |



*Chris Sullivan, B.Sc., C.Chem*
*Project Specialist*
*Environmental Services, Analytical*

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Phone: 705-652-2000 FAX: 705-652-6365

Wednesday, August 10, 2011

**Agnico Eagle Mines Limited**
Attn : Josee Noel

Division LaRonde 20, Route 395, Cadillac
, J0Y 1C0
Phone: (819) 759-3700 x5821, Fax:(819) 759-3663

**Date Rec. :** 20 July 2011
**LR Report:** **CA11206-JUL11**

**Copy:** #1

# CERTIFICATE OF ANALYSIS
## Final Report

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|
| Sample Date & Time | | | 20-Jul-11 |
| Sample weight [g] | 27-Jul-11 | 13:07 | 250 |
| Volume D.I. Water [mL] | 27-Jul-11 | 13:07 | 750 |
| Initial pH [units] | 27-Jul-11 | 13:07 | 8.39 |
| Final pH [units] | 27-Jul-11 | 13:07 | 8.10 |
| pH [no unit] | 28-Jul-11 | 13:12 | 7.56 |
| Conductivity [uS/cm] | 28-Jul-11 | 13:12 | 2330 |
| Alkalinity [mg/L as CaCO3] | 28-Jul-11 | 13:12 | 32 |
| Chloride [mg/L] | 05-Aug-11 | 14:25 | < 2 |
| Sulphate [mg/L] | 09-Aug-11 | 08:56 | 1500 |
| Mercury (total) [mg/L] | 29-Jul-11 | 09:34 | < 0.0001 |
| Aluminum [mg/L] | 29-Jul-11 | 11:43 | 0.0545 |
| Arsenic [mg/L] | 29-Jul-11 | 11:43 | 0.0259 |
| Barium [mg/L] | 29-Jul-11 | 11:43 | 0.135 |
| Beryllium [mg/L] | 29-Jul-11 | 11:43 | < 0.00002 |
| Bismuth [mg/L] | 29-Jul-11 | 11:43 | < 0.00001 |
| Calcium [mg/L] | 29-Jul-11 | 10:12 | 573 |
| Cadmium [mg/L] | 29-Jul-11 | 11:43 | 0.000014 |
| Cobalt [mg/L] | 29-Jul-11 | 11:43 | 0.00352 |
| Chromium [mg/L] | 29-Jul-11 | 11:43 | < 0.0005 |
| Copper [mg/L] | 29-Jul-11 | 11:43 | 0.0119 |
| Iron [mg/L] | 28-Jul-11 | 15:06 | 0.020 |
| Potassium [mg/L] | 28-Jul-11 | 15:06 | 33.7 |
| Lithium [mg/L] | 29-Jul-11 | 11:43 | 0.011 |
| Magnesium [mg/L] | 28-Jul-11 | 15:06 | 5.33 |
| Manganese [mg/L] | 29-Jul-11 | 11:43 | 0.0581 |
| Molybdenum [mg/L] | 29-Jul-11 | 11:43 | 0.00449 |
| Sodium [mg/L] | 28-Jul-11 | 15:06 | 4.96 |
| Nickel [mg/L] | 29-Jul-11 | 11:44 | < 0.0001 |
| Lead [mg/L] | 29-Jul-11 | 11:44 | 0.00005 |

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**LR Report :** **CA11206-JUL11**

| Analysis | 3: Analysis Approval Date | 4: Analysis Approval Time | 5: CND 11 |
|---|---|---|---|
| Antimony [mg/L] | 29-Jul-11 | 11:44 | 0.0009 |
| Selenium [mg/L] | 29-Jul-11 | 11:44 | 0.001 |
| Tin [mg/L] | 29-Jul-11 | 11:44 | 0.00004 |
| Strontium [mg/L] | 28-Jul-11 | 15:06 | 0.687 |
| Titanium [mg/L] | 29-Jul-11 | 11:44 | 0.0002 |
| Thallium [mg/L] | 29-Jul-11 | 11:44 | 0.00009 |
| Uranium [mg/L] | 29-Jul-11 | 11:44 | 0.00134 |
| Vanadium [mg/L] | 29-Jul-11 | 11:44 | 0.00008 |
| Zinc [mg/L] | 29-Jul-11 | 11:44 | 0.001 |

*Brian Graham B.Sc.*
*Project Specialist*
*Environmental Services, Analytical*

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# H.6 Tailings Kinetic Test Results

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN8 Discovery (CND 5-7)
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10469-SEP11 | CA10471-SEP11 | CA10183-OCT11 | CA10184-OCT11 | CA10185-OCT11 | CA11262-OCT11 | CA10034-NOV11 | CA10109-NOV11 | CA10169-NOV11 | CA10260-NOV11 |
| | Unit | 21-Sep-11 | 28-Sep-11 | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | mL | 676 | 983 | 996 | 994 | 995 | 972 | 982 | 978 | 979 | 974 |
| pH | no unit | 7.02 | 7.03 | 7.26 | 7.08 | 7.17 | 7.31 | 7.15 | 7.19 | 7.19 | 7.22 |
| Alkalinity | mg/L as CaCO3 | 13 | 14 | 13 | 18 | 23 | 14 | 12 | 12 | 12 | 27 |
| Acidity | mg/L as CaCO3 | 292 | 147 | 31 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 832 | 754 | 308 | 263 | 453 | 161 | 112 | 87 | 117 | 368 |
| Sulphate | mg/L | 240 | 300 | 160 | 100 | 200 | 75 | 41 | 47 | 52 | 140 |
| Calcium | mg/L | 147 | 146 | 74.0 | 44.6 | 80.4 | 32 | 20.7 | 21.5 | 22.7 | 61.8 |
| Fluoride | mg/L | 0.07 | < 0.06 | < 0.06 | 0.07 | --- | 0.09 | --- | --- | 0.08 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.05 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.0537 | 0.0427 | 0.024 | 0.0175 | --- | 0.0135 | --- | --- | 0.0086 | --- |
| Barium | mg/L | 0.0626 | 0.0292 | 0.0174 | 0.0118 | --- | 0.00933 | --- | --- | 0.00802 | --- |
| Boron | mg/L | 0.0034 | 0.0036 | 0.0024 | 0.0019 | --- | 0.0021 | --- | --- | 0.003 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | 0.00018 | 0.00016 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000009 | 0.000011 | 0.000013 | 0.000004 | --- | < 0.000003 | --- | --- | 0.000006 | --- |
| Cobalt | mg/L | 0.00114 | 0.00119 | 0.000677 | 0.000457 | --- | 0.000449 | --- | --- | 0.000394 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0058 | 0.0077 | 0.0028 | 0.0018 | --- | 0.0012 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.055 | 0.032 | 0.02 | 0.013 | --- | 0.017 | --- | --- | 0.011 | --- |
| Potassium | mg/L | 29.5 | 25.5 | 13.3 | 9.65 | --- | 8.69 | --- | --- | 5.78 | --- |
| Lithium | mg/L | 0.012 | 0.012 | 0.007 | 0.005 | --- | 0.004 | --- | --- | 0.003 | --- |
| Magnesium | mg/L | 1.88 | 2.26 | 1.25 | 0.848 | --- | 0.745 | --- | --- | 0.539 | --- |
| Manganese | mg/L | 0.00545 | 0.0242 | 0.0176 | 0.0141 | --- | 0.00979 | --- | --- | 0.00937 | --- |
| Molybdenum | mg/L | 0.00222 | 0.00128 | 0.00137 | 0.00124 | --- | 0.00052 | --- | --- | 0.00034 | --- |
| Sodium | mg/L | 5.41 | 4.04 | 1.68 | 0.88 | --- | 0.64 | --- | --- | 0.35 | --- |
| Nickel | mg/L | 0.0002 | 0.0009 | 0.0022 | 0.0004 | --- | 0.0008 | --- | --- | 0.0002 | --- |
| Lead | mg/L | 0.00022 | 0.00004 | 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.001 | 0.0005 | 0.0007 | 0.0005 | --- | 0.0003 | --- | --- | 0.0004 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00132 | 0.00086 | 0.00033 | 0.00032 | --- | 0.00022 | --- | --- | 0.0002 | --- |
| Strontium | mg/L | 0.191 | 0.207 | 0.12 | 0.0818 | --- | 0.0563 | --- | --- | 0.0558 | --- |
| Titanium | mg/L | 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0005 | --- | --- | 0.0006 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.00134 | 0.00205 | 0.00129 | 0.00108 | --- | 0.00124 | --- | --- | 0.000826 | --- |
| Vanadium | mg/L | 0.00006 | 0.00005 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | 0.00005 | --- |
| Tungsten | mg/L | 0.00008 | 0.00004 | 0.00008 | 0.00005 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000005 | 0.000011 | 0.000006 | 0.000004 | --- | < 0.000001 | --- | --- | 0.000002 | --- |
| Zinc | mg/L | 0.003 | 0.002 | < 0.001 | < 0.001 | --- | 0.001 | --- | --- | 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN8 Discovery (CND 5-7)
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11816-NOV11 | CA10032-DEC11 | CA10084-DEC11 | CA11071-DEC11 | CA10291-DEC11 | CA10044-JAN12 | CA10085-JAN12 | CA11023-JAN12 | CA10227-JAN12 | CA10008-FEB12 |
| | Unit | 30-Nov-11 | 7-Dec-11 | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 1-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | mL | 987 | 986 | 980 | 977 | 981 | 982 | 986 | 979 | 983 | 986 |
| pH | no unit | 7.03 | 7.46 | 7.06 | 7.48 | 6.99 | 7.23 | 7.13 | 6.87 | 7.16 | 7.05 |
| Alkalinity | mg/L as CaCO3 | 28 | 27 | 15 | 13 | 13 | 11 | 11 | 10 | 11 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 283 | 145 | 144 | 104 | 110 | 109 | 99 | 149 | 128 | 123 |
| Sulphate | mg/L | 94 | 57 | 43 | 38 | 45 | 45 | 42 | 49 | 57 | 53 |
| Calcium | mg/L | 44.6 | 29.1 | 22.1 | 19.7 | 22.3 | 21.1 | 20.8 | 23.1 | 25.0 | 23.4 |
| Fluoride | mg/L | --- | --- | 0.09 | --- | --- | --- | < 0.06 | --- | --- | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0089 | --- | --- | --- | 0.0048 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00917 | --- | --- | --- | 0.00742 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0008 | --- | --- | --- | 0.0013 | --- | --- | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | 0.000003 | --- | --- | --- | 0.000008 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000316 | --- | --- | --- | 0.000263 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | 0.0006 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | 0.018 | --- | --- | --- | 0.014 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 5.57 | --- | --- | --- | 4.1 | --- | --- | --- |
| Lithium | mg/L | --- | --- | 0.003 | --- | --- | --- | 0.002 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 0.465 | --- | --- | --- | 0.41 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.0106 | --- | --- | --- | 0.0125 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00033 | --- | --- | --- | 0.0002 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.22 | --- | --- | --- | 0.17 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0002 | --- | --- | --- | 0.0011 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00003 | --- | --- | --- | 0.00004 | --- | --- | --- |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.0002 | --- | --- | --- | 0.00023 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0669 | --- | --- | --- | 0.0755 | --- | --- | --- |
| Titanium | mg/L | --- | --- | 0.0004 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.00101 | --- | --- | --- | 0.000583 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Yttrium | mg/L | --- | --- | 0.000002 | --- | --- | --- | 0.000002 | --- | --- | --- |
| Zinc | mg/L | --- | --- | 0.002 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN8 Discovery (CND 5-7)
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10085-FEB12 | CA10139-FEB12 | CA10186-FEB12 | CA10243-FEB12 | CA10051-MAR12 | CA10098-MAR12 | CA10158-MAR12 | CA10212-MAR12 | CA10038-APR12 | CA10081-A{R12 | CA10113-APR12 |
| | Unit | 8-Feb-12 | 15-Feb-12 | 22-Feb-12 | 29-Feb-12 | 7-Mar-12 | 14-Mar-12 | 21-Mar-12 | 28-Mar-12 | 4-Apr-12 | 11-Apr-12 | 18-Apr-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered | mL | 984 | 993 | 990 | 978 | 978 | 990 | 989 | 983 | 986 | 981 | 988 |
| pH | no unit | 7.38 | 6.98 | 7.02 | 7.09 | 7.14 | 7.00 | 6.97 | 6.88 | 7.10 | 7.16 | 7.06 |
| Alkalinity | mg/L as CaCO3 | 9 | 11 | 11 | 10 | 11 | 13 | 13 | 12 | 15 | 13 | 25 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 128 | 139 | 149 | 142 | 150 | 211 | 212 | 138 | 176 | 184 | 172 |
| Sulphate | mg/L | 54 | 68 | 72 | 67 | 74 | 72 | 75 | 66 | 76 | 66 | 61 |
| Calcium | mg/L | 26.5 | 30.0 | 32.1 | 30.1 | 32.1 | 32.9 | 35.4 | 29.8 | 36.5 | 29.6 | 27.7 |
| Fluoride | mg/L | < 0.06 | --- | --- | --- | --- | 0.08 | --- | --- | --- | --- | 0.08 |
| Mercury | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | < 0.01 | --- | --- | --- | --- | 0.01 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | 0.0035 | --- | --- | --- | --- | 0.0044 | --- | --- | --- | --- | 0.0043 |
| Barium | mg/L | 0.00617 | --- | --- | --- | --- | 0.00736 | --- | --- | --- | --- | 0.00644 |
| Boron | mg/L | 0.0005 | --- | --- | --- | --- | 0.0014 | --- | --- | --- | --- | 0.0015 |
| Beryllium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | 0.000031 | --- | --- | --- | --- | 0.000005 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000273 | --- | --- | --- | --- | 0.000251 | --- | --- | --- | --- | 0.000243 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | 0.011 | --- | --- | --- | --- | 0.008 | --- | --- | --- | --- | 0.01 |
| Potassium | mg/L | 3.86 | --- | --- | --- | --- | 4.76 | --- | --- | --- | --- | 3.95 |
| Lithium | mg/L | 0.002 | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- | 0.002 |
| Magnesium | mg/L | 0.486 | --- | --- | --- | --- | 0.531 | --- | --- | --- | --- | 0.402 |
| Manganese | mg/L | 0.0192 | --- | --- | --- | --- | 0.0199 | --- | --- | --- | --- | 0.0172 |
| Molybdenum | mg/L | 0.00026 | --- | --- | --- | --- | 0.00018 | --- | --- | --- | --- | 0.00017 |
| Sodium | mg/L | 0.18 | --- | --- | --- | --- | 0.19 | --- | --- | --- | --- | 0.15 |
| Nickel | mg/L | 0.0005 | --- | --- | --- | --- | 0.0004 | --- | --- | --- | --- | 0.0004 |
| Lead | mg/L | 0.00075 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | 0.00002 |
| Antimony | mg/L | 0.0002 | --- | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | 0.00024 | --- | --- | --- | --- | 0.00023 | --- | --- | --- | --- | 0.00019 |
| Strontium | mg/L | 0.106 | --- | --- | --- | --- | 0.156 | --- | --- | --- | --- | 0.15 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | 0.0002 |
| Thallium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | 0.000495 | --- | --- | --- | --- | 0.000504 | --- | --- | --- | --- | 0.000586 |
| Vanadium | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | 0.00289 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | 0.000005 | --- | --- | --- | --- | < 0.000001 | --- | --- | --- | --- | 0.000002 |
| Zinc | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F-Zone Open Pit CN6
CND Residue
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10568-SEP11 | CA10193-OCT11 | CA10194-OCT11 | CA10195-OCT11 | CA11265-OCT11 | CA10037-NOV11 | CA10112-NOV11 | CA10172-NOV11 | CA10263-NOV11 | CA11819-NOV11 |
| | Units | 28-Sep-11 | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 731 | 982 | 966 | 968 | 960 | 954 | 979 | 949 | 946 | 957 |
| pH | no unit | 7.88 | 7.80 | 7.72 | 7.23 | 7.39 | 7.40 | 7.71 | 6.97 | 6.93 | 6.83 |
| Alkalinity | mg/L as CaCO3 | 74 | 31 | 25 | 18 | 17 | 22 | 16 | 13 | 13 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 700 | 94 | 72 | 75 | 65 | 90 | 99 | 68 | 86 | 107 |
| Sulphate | mg/L | 280 | 22 | 11 | 16 | 19 | 22 | 24 | 25 | 29 | 30 |
| Calcium | mg/L | 88.7 | 14.7 | 8.9 | 9.02 | 9.87 | 10.3 | 11.3 | 10.2 | 11.3 | 12 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | 0.02 | --- |
| Arsenic | mg/L | 0.218 | 0.0389 | 0.0221 | 0.0144 | --- | 0.0159 | --- | --- | 0.0129 | --- |
| Barium | mg/L | 0.00877 | 0.00124 | 0.00085 | 0.00093 | --- | 0.00152 | --- | --- | 0.00088 | --- |
| Boron | mg/L | 0.0112 | 0.002 | 0.0009 | 0.0006 | --- | 0.001 | --- | --- | 0.0011 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.00002 | 0.000006 | < 0.000003 | 0.000007 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.00613 | 0.00062 | 0.000343 | 0.000474 | --- | 0.000546 | --- | --- | 0.000579 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0061 | 0.0018 | 0.0008 | 0.0008 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.052 | 0.022 | 0.014 | 0.009 | --- | 0.01 | --- | --- | 0.007 | --- |
| Potassium | mg/L | 11.2 | 1.65 | 1.02 | 0.991 | --- | 1.01 | --- | --- | 0.885 | --- |
| Lithium | mg/L | 0.004 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 27 | 3.23 | 1.84 | 2.21 | --- | 2.98 | --- | --- | 3.64 | --- |
| Manganese | mg/L | 0.211 | 0.114 | 0.0909 | 0.1 | --- | 0.0825 | --- | --- | 0.0868 | --- |
| Molybdenum | mg/L | 0.00544 | 0.00284 | 0.00038 | 0.00033 | --- | 0.00033 | --- | --- | 0.00019 | --- |
| Sodium | mg/L | 10.9 | 0.76 | 0.29 | 0.3 | --- | 0.31 | --- | --- | 0.26 | --- |
| Nickel | mg/L | 0.0011 | 0.0005 | < 0.0001 | 0.0002 | --- | 0.0005 | --- | --- | 0.0004 | --- |
| Lead | mg/L | 0.0003 | 0.00003 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0045 | 0.0011 | 0.0005 | < 0.0002 | --- | 0.0002 | --- | --- | 0.0002 | --- |
| Selenium | mg/L | 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00216 | 0.00071 | 0.00016 | 0.00008 | --- | 0.00012 | --- | --- | < 0.00001 | --- |
| Strontium | mg/L | 0.142 | 0.0228 | 0.0133 | 0.0147 | --- | 0.0176 | --- | --- | 0.0204 | --- |
| Titanium | mg/L | 0.0002 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.002 | 0.000553 | 0.000129 | 0.000148 | --- | 0.000116 | --- | --- | 0.0001 | --- |
| Vanadium | mg/L | 0.00014 | 0.00005 | < 0.00003 | 0.00004 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | 0.00017 | 0.00018 | 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000007 | 0.000002 | 0.000001 | 0.000001 | --- | < 0.000001 | --- | --- | < 0.000001 | --- |
| Zinc | mg/L | 0.008 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F-Zone Open Pit CN6
CND Residue
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10035-DEC11 | CA10087-DEC11 | CA11074-DEC11 | CA10294-DEC11 | CA10047-JAN12 | CA10088-JAN12 | CA11026-JAN12 | CA10230-JAN12 | CA10011-FEB12 | CA10086-FEB12 |
| | Units | 7-Dec-11 | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 1-Feb-12 | 8-Feb-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 957 | 963 | 956 | 950 | 922 | 950 | 957 | 955 | 958 | 935 |
| pH | no unit | 7.61 | 7.42 | 7.83 | 7.59 | 7.38 | 7.41 | 7.53 | 7.32 | 7.18 | 7.21 |
| Alkalinity | mg/L as CaCO3 | 13 | 14 | 14 | 11 | 10 | 11 | 12 | 13 | 11 | 9 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 127 | 87 | 88 | 91 | 104 | 91 | 128 | 104 | 102 | 82 |
| Sulphate | mg/L | 31 | 34 | 35 | 40 | 32 | 39 | 41 | 43 | 44 | 36 |
| Calcium | mg/L | 12.3 | 13.2 | 13.4 | 13 | 11.5 | 12.4 | 13.4 | 13.8 | 13.9 | 11.7 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.02 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0157 | --- | --- | --- | 0.0057 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00104 | --- | --- | --- | 0.00096 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0009 | --- | --- | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | 0.000061 | --- | --- | --- | 0.00001 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000615 | --- | --- | --- | 0.000321 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | 0.008 | --- | --- | --- | 0.008 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.762 | --- | --- | --- | 0.756 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 4.42 | --- | --- | --- | 5.1 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.106 | --- | --- | --- | 0.116 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00023 | --- | --- | --- | 0.00022 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.21 | --- | --- | --- | 0.2 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00007 | --- | --- | --- | 0.00005 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.024 | --- | --- | --- | 0.0255 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000087 | --- | --- | --- | 0.000067 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | 0.00004 | --- | --- | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- |
| Zinc | mg/L | --- | --- | 0.005 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**

**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F-Zone Open Pit CN6
CND Residue
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10140-FEB12 | CA10187-FEB12 | CA10244-FEB12 | CA10052-MAR12 | CA10099-MAR12 | CA10159-MAR12 | CA10213-MAR12 | CA10039-APR12 | CA10082-APR12 | CA10114-APR12 | CA10182-APR12 |
| | Units | 15-Feb-12 | 22-Feb-12 | 29-Feb-12 | 7-Mar-12 | 14-Mar-12 | 21-Mar-12 | 28-Mar-12 | 4-Apr-12 | 11-Apr-12 | 18-Apr-12 | 25-Apr-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 951 | 957 | 947 | 946 | 932 | 924 | 932 | 932 | 897 | 924 | 908 |
| pH | no unit | 7.18 | 7.20 | 7.24 | 7.15 | 7.03 | 6.98 | 7.06 | 7.49 | 7.26 | 7.05 | 7.28 |
| Alkalinity | mg/L as CaCO3 | 11 | 9 | 8 | 8 | 8 | 8 | 11 | 13 | 10 | 17 | 8 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 96 | 93 | 88 | 83 | 118 | 112 | 77 | 108 | 110 | 105 | 91 |
| Sulphate | mg/L | 42 | 39 | 39 | 36 | 36 | 38 | 30 | 45 | 36 | 35 | 29 |
| Calcium | mg/L | 13.4 | 12.5 | 12.3 | 11.1 | 11 | 11.4 | 9.26 | 13.9 | 11.1 | 10.5 | 9.09 |
| Fluoride | mg/L | < 0.06 | --- | --- | --- | --- | < 0.06 | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | < 0.01 | --- | --- | --- | --- | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | 0.0035 | --- | --- | --- | --- | 0.0031 | --- | --- | --- | --- | 0.0044 |
| Barium | mg/L | 0.00088 | --- | --- | --- | --- | 0.00074 | --- | --- | --- | --- | 0.00044 |
| Boron | mg/L | 0.0011 | --- | --- | --- | --- | 0.0008 | --- | --- | --- | --- | 0.0006 |
| Beryllium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | 0.000006 | --- | --- | --- | --- | 0.000004 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000489 | --- | --- | --- | --- | 0.000332 | --- | --- | --- | --- | 0.000266 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | 0.0007 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | 0.003 | --- | --- | --- | --- | 0.004 | --- | --- | --- | --- | 0.003 |
| Potassium | mg/L | 0.718 | --- | --- | --- | --- | 0.666 | --- | --- | --- | --- | 0.481 |
| Lithium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | 5.2 | --- | --- | --- | --- | 4.92 | --- | --- | --- | --- | 3.84 |
| Manganese | mg/L | 0.11 | --- | --- | --- | --- | 0.0803 | --- | --- | --- | --- | 0.0641 |
| Molybdenum | mg/L | 0.00019 | --- | --- | --- | --- | 0.00013 | --- | --- | --- | --- | 0.00012 |
| Sodium | mg/L | 0.16 | --- | --- | --- | --- | 0.13 | --- | --- | --- | --- | 0.08 |
| Nickel | mg/L | 0.0008 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | 0.0001 |
| Lead | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | < 0.0002 | --- | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | 0.00007 | --- | --- | --- | --- | 0.00008 | --- | --- | --- | --- | 0.00005 |
| Strontium | mg/L | 0.0267 | --- | --- | --- | --- | 0.0233 | --- | --- | --- | --- | 0.0173 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | 0.000054 | --- | --- | --- | --- | 0.000042 | --- | --- | --- | --- | 0.000137 |
| Vanadium | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | 0.000001 | --- | --- | --- | --- | < 0.000001 | --- | --- | --- | --- | < 0.000001 |
| Zinc | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** WFOP CN4 CND Residue
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10568-SEP11 | CA10193-OCT11 | CA10194-OCT11 | CA10195-OCT11 | CA11265-OCT11 | CA10037-NOV11 | CA10112-NOV11 | CA10172-NOV11 | CA10263-NOV11 | CA11819-NOV11 |
| | Unit | 28-Sep-11 | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 741 | 993 | 984 | 952 | 972 | 946 | 984 | 943 | 956 | 967 |
| pH | no unit | 7.77 | 7.66 | 7.91 | 7.42 | 7.57 | 7.14 | 7.66 | 7.06 | 7.39 | 7.45 |
| Alkalinity | mg/L as CaCO3 | 63 | 22 | 24 | 21 | 22 | 15 | 20 | 11 | 15 | 21 |
| Acidity | mg/L as CaCO3 | 79 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 1550 | 126 | 126 | 104 | 77 | 82 | 98 | 58 | 78 | 68 |
| Sulphate | mg/L | 730 | 43 | 32 | 25 | 23 | 17 | 20 | 14 | 17 | 20 |
| Calcium | mg/L | 320 | 25.1 | 16.9 | 12.6 | 12.6 | 9.54 | 11.7 | 6.47 | 8.09 | 9.55 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.09 | 0.03 | < 0.01 | 0.01 | --- | 0.010 | --- | --- | 0.03 | --- |
| Arsenic | mg/L | 0.0596 | 0.0097 | 0.0061 | 0.0047 | --- | 0.0025 | --- | --- | 0.003 | --- |
| Barium | mg/L | 0.0507 | 0.00346 | 0.00289 | 0.0021 | --- | 0.00182 | --- | --- | 0.0016 | --- |
| Boron | mg/L | 0.01 | 0.0018 | 0.0013 | 0.0008 | --- | 0.001 | --- | --- | 0.0011 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000021 | 0.000016 | 0.000003 | 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.00439 | 0.000318 | 0.000242 | 0.000203 | --- | 0.000156 | --- | --- | 0.00016 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0036 | 0.0028 | 0.0014 | 0.001 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.064 | 0.009 | 0.005 | 0.003 | --- | < 0.003 | --- | --- | 0.004 | --- |
| Potassium | mg/L | 26.6 | 2.68 | 2.15 | 1.83 | --- | 1.56 | --- | --- | 1.36 | --- |
| Lithium | mg/L | 0.005 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 18.4 | 1.81 | 2.25 | 2.33 | --- | 2.44 | --- | --- | 2.65 | --- |
| Manganese | mg/L | 0.0735 | 0.0207 | 0.0231 | 0.0185 | --- | 0.0154 | --- | --- | 0.0132 | --- |
| Molybdenum | mg/L | 0.0132 | 0.00202 | 0.00071 | 0.00058 | --- | 0.00054 | --- | --- | 0.00061 | --- |
| Sodium | mg/L | 9.4 | 0.57 | 0.45 | 0.43 | --- | 0.4 | --- | --- | 0.4 | --- |
| Nickel | mg/L | 0.0019 | 0.001 | 0.0003 | 0.0004 | --- | 0.0004 | --- | --- | 0.0004 | --- |
| Lead | mg/L | 0.00174 | 0.00182 | 0.00037 | 0.00015 | --- | 0.00004 | --- | --- | 0.00002 | --- |
| Antimony | mg/L | 0.0043 | 0.0009 | 0.0005 | < 0.0002 | --- | 0.0003 | --- | --- | 0.0003 | --- |
| Selenium | mg/L | 0.009 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.0014 | 0.00037 | 0.00011 | 0.00006 | --- | 0.00006 | --- | --- | < 0.00001 | --- |
| Strontium | mg/L | 0.529 | 0.0486 | 0.0396 | 0.0339 | --- | 0.0299 | --- | --- | 0.029 | --- |
| Titanium | mg/L | 0.0002 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.00178 | 0.000179 | 0.000129 | 0.000089 | --- | 0.000048 | --- | --- | 0.000046 | --- |
| Vanadium | mg/L | 0.00005 | 0.00004 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | 0.00016 | 0.00011 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000006 | 0.000004 | 0.000003 | 0.000001 | --- | < 0.000001 | --- | --- | < 0.000001 | --- |
| Zinc | mg/L | 0.004 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** WFOP CN4 CND Residue
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10035-DEC11 | CA10087-DEC11 | CA11074-DEC11 | CA10294-DEC11 | CA10047-JAN12 | CA10088-JAN12 | CA11026-JAN12 | CA10230-JAN12 | CA10011-FEB12 | CA10086-FEB12 | CA10140-FEB12 |
| | Unit | 7-Dec-11 | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 1-Feb-12 | 8-Feb-12 | 15-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 957 | 960 | 964 | 951 | 927 | 957 | 963 | 956 | 963 | 947 | 952 |
| pH | no unit | 7.62 | 7.33 | 7.45 | 7.45 | 7.24 | 7.41 | 7.25 | 7.38 | 7.26 | 7.18 | 7.23 |
| Alkalinity | mg/L as CaCO3 | 22 | 15 | 15 | 12 | 10 | 13 | 14 | 13 | 12 | 9 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 73 | 73 | 56 | 7 | 38 | 51 | 76 | 70 | 68 | 39 | 42 |
| Sulphate | mg/L | 16 | 16 | 15 | 13 | 10 | 16 | 17 | 16 | 15 | 11 | 12 |
| Calcium | mg/L | 7.92 | 7.81 | 6.58 | 5.75 | 4.8 | 6.48 | 7.34 | 6.71 | 6.23 | 4.74 | 4.94 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | 0.01 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | 0.0012 | --- | --- | --- | 0.001 | --- | --- | --- | 0.0011 |
| Barium | mg/L | --- | --- | 0.00138 | --- | --- | --- | 0.00153 | --- | --- | --- | 0.00099 |
| Boron | mg/L | --- | --- | 0.0008 | --- | --- | --- | 0.0014 | --- | --- | --- | 0.0008 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | 0.000017 | --- | --- | --- | 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.000208 | --- | --- | --- | 0.000213 | --- | --- | --- | 0.000125 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | 1.05 | --- | --- | --- | 1.16 | --- | --- | --- | 0.828 |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | 2.63 | --- | --- | --- | 3.19 | --- | --- | --- | 2.32 |
| Manganese | mg/L | --- | --- | 0.0155 | --- | --- | --- | 0.0165 | --- | --- | --- | 0.00937 |
| Molybdenum | mg/L | --- | --- | 0.00058 | --- | --- | --- | 0.0006 | --- | --- | --- | 0.00047 |
| Sodium | mg/L | --- | --- | 0.3 | --- | --- | --- | 0.33 | --- | --- | --- | 0.23 |
| Nickel | mg/L | --- | --- | 0.0005 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.0004 |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | 0.00006 | --- | --- | --- | 0.00005 | --- | --- | --- | 0.00003 |
| Strontium | mg/L | --- | --- | 0.0259 | --- | --- | --- | 0.0316 | --- | --- | --- | 0.0232 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.000042 | --- | --- | --- | 0.00004 | --- | --- | --- | 0.000026 |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | --- | 0.002 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** WFOP CN4 CND Residue
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10187-FEB12 | CA10244-FEB12 | CA10052-MAR12 | CA10099-MAR12 | CA10159-MAR12 | CA10213-MAR12 | CA10039-APR12 | CA10082-APR12 | CA10114-APR12 | CA10182-APR12 |
| | Unit | 22-Feb-12 | 29-Feb-12 | 7-Mar-12 | 14-Mar-12 | 21-Mar-12 | 28-Mar-12 | 4-Apr-12 | 11-Apr-12 | 18-Apr-12 | 25-Apr-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 952 | 957 | 960 | 940 | 931 | 937 | 930 | 908 | 926 | 913 |
| pH | no unit | 7.10 | 7.01 | 7.34 | 7.18 | 7.04 | 7.18 | 7.44 | 7.57 | 7.38 | 7.40 |
| Alkalinity | mg/L as CaCO3 | 9 | 11 | 11 | 17 | 11 | 9 | 11 | 12 | 10 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 60 | 50 | 46 | 68 | 58 | 56 | 56 | 65 | 8 | 60 |
| Sulphate | mg/L | 13 | 12 | 10 | 13 | 11 | 11 | 15 | 14 | 16 | 14 |
| Calcium | mg/L | 4.9 | 5.62 | 5.44 | 5.56 | 5.18 | 4.87 | 6.34 | 6.17 | 6.36 | 5.79 |
| Fluoride | mg/L | --- | --- | --- | --- | < 0.06 | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | --- | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0013 | --- | --- | --- | --- | 0.0016 |
| Barium | mg/L | --- | --- | --- | --- | 0.00085 | --- | --- | --- | --- | 0.00086 |
| Boron | mg/L | --- | --- | --- | --- | 0.0006 | --- | --- | --- | --- | 0.0005 |
| Beryllium | mg/L | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.00009 | --- | --- | --- | --- | 0.000116 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.003 | --- | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | --- | --- | 0.739 | --- | --- | --- | --- | 0.711 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 2.09 | --- | --- | --- | --- | 2.53 |
| Manganese | mg/L | --- | --- | --- | --- | 0.0106 | --- | --- | --- | --- | 0.0101 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00036 | --- | --- | --- | --- | 0.00049 |
| Sodium | mg/L | --- | --- | --- | --- | 0.2 | --- | --- | --- | --- | 0.19 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0001 | --- | --- | --- | --- | 0.0001 |
| Lead | mg/L | --- | --- | --- | --- | 0.00002 | --- | --- | --- | --- | 0.00004 |
| Antimony | mg/L | --- | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | --- | 0.0001 | --- | --- | --- | --- | 0.00008 |
| Strontium | mg/L | --- | --- | --- | --- | 0.0224 | --- | --- | --- | --- | 0.0258 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000028 | --- | --- | --- | --- | 0.000065 |
| Vanadium | mg/L | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | --- | --- | < 0.000001 | --- | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F-Zone Underground CN5
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11028-OCT11 | CA11032-OCT11 | CA11033-OCT11 | CA11034-OCT11 | CA10038-NOV11 | CA10113-NOV11 | CA10173-NOV11 | CA10264-NOV11 | CA11820-NOV11 | CA10036-DEC11 |
| | Unit | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 7-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 710 | 973 | 973 | 927 | 962 | 946 | 922 | 940 | 938 | 951 |
| pH | no unit | 7.92 | 7.83 | 7.92 | 8.19 | 7.64 | 7.84 | 7.37 | 7.91 | 7.83 | 7.39 |
| Alkalinity | mg/L as CaCO3 | 67 | 94 | 82 | 80 | 38 | 36 | 54 | 39 | 35 | 28 |
| Acidity | mg/L as CaCO3 | 118 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 632 | 336 | 251 | 180 | 141 | 144 | 166 | 154 | 146 | 127 |
| Sulphate | mg/L | 150 | 45 | 38 | 36 | 24 | 27 | 57 | 31 | 30 | 29 |
| Calcium | mg/L | 99.3 | 35.7 | 35.1 | 34.4 | 19.3 | 19.9 | 31.1 | 20.2 | 18.4 | 16.5 |
| Fluoride | mg/L | 0.06 | 0.08 | 0.07 | 0.1 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.02 | 0.01 | 0.02 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.79 | 0.709 | 0.556 | 0.439 | --- | 0.0957 | --- | --- | 0.052 | --- |
| Barium | mg/L | 0.00999 | 0.00463 | 0.00456 | 0.00441 | --- | 0.00251 | --- | --- | 0.00267 | --- |
| Boron | mg/L | 0.0126 | 0.0065 | 0.0042 | 0.0038 | --- | 0.0023 | --- | --- | 0.0009 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | 0.00002 | < 0.00001 | < 0.00001 | 0.00009 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | 0.000003 | --- | --- | 0.000004 | --- |
| Cobalt | mg/L | 0.0051 | 0.00318 | 0.00415 | 0.00353 | --- | 0.00119 | --- | --- | 0.000869 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0022 | 0.001 | 0.0011 | 0.0005 | --- | 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.083 | 0.166 | 0.297 | 0.351 | --- | 0.065 | --- | --- | 0.032 | --- |
| Potassium | mg/L | 14.7 | 7.96 | 7.12 | 6.09 | --- | 2.32 | --- | --- | 1.74 | --- |
| Lithium | mg/L | 0.007 | 0.004 | 0.003 | 0.003 | --- | 0.001 | --- | --- | 0.001 | --- |
| Magnesium | mg/L | 14.7 | 6.1 | 6.34 | 6.46 | --- | 3.63 | --- | --- | 4.04 | --- |
| Manganese | mg/L | 0.0748 | 0.0701 | 0.096 | 0.103 | --- | 0.0968 | --- | --- | 0.127 | --- |
| Molybdenum | mg/L | 0.0138 | 0.00273 | 0.00195 | 0.00149 | --- | 0.00057 | --- | --- | 0.00039 | --- |
| Sodium | mg/L | 11.3 | 1.41 | 0.68 | 0.41 | --- | 0.18 | --- | --- | 0.13 | --- |
| Nickel | mg/L | 0.0032 | 0.0004 | 0.0006 | 0.001 | --- | 0.0006 | --- | --- | 0.0006 | --- |
| Lead | mg/L | 0.00015 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.006 | 0.0064 | 0.0054 | 0.0042 | --- | 0.0012 | --- | --- | 0.0007 | --- |
| Selenium | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00079 | 0.00051 | 0.00036 | 0.00023 | --- | 0.00013 | --- | --- | 0.00028 | --- |
| Strontium | mg/L | 0.134 | 0.0509 | 0.0525 | 0.0508 | --- | 0.0298 | --- | --- | 0.0298 | --- |
| Titanium | mg/L | 0.0003 | 0.0002 | 0.0002 | 0.0002 | --- | 0.0003 | --- | --- | 0.0003 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000969 | 0.000938 | 0.000966 | 0.000962 | --- | 0.000354 | --- | --- | 0.000236 | --- |
| Vanadium | mg/L | 0.00018 | 0.00011 | 0.00014 | 0.00008 | --- | 0.00004 | --- | --- | 0.00004 | --- |
| Tungsten | mg/L | 0.00043 | 0.00013 | 0.00007 | 0.00012 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000003 | 0.000001 | 0.000002 | < 0.000001 | --- | < 0.000001 | --- | --- | 0.000001 | --- |
| Zinc | mg/L | 0.002 | 0.001 | 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F-Zone Underground CN5
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10088-DEC11 | CA11075-DEC11 | CA10295-DEC11 | CA10048-JAN12 | CA10089-JAN12 | CA11027-JAN12 | CA10231-JAN12 | CA10012-FEB12 | CA10087-FEB12 | CA10141-FEB12 | CA10188-FEB12 |
| | Unit | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 1-Feb-12 | 8-Feb-12 | 15-Feb-12 | 22-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 937 | 926 | 940 | 957 | 928 | 949 | 907 | 954 | 955 | 936 | 972 |
| pH | no unit | 7.35 | 7.75 | 7.71 | 7.62 | 7.44 | 7.42 | 7.52 | 7.45 | 7.61 | 7.49 | 7.77 |
| Alkalinity | mg/L as CaCO3 | 20 | 28 | 24 | 33 | 20 | 25 | 16 | 26 | 23 | 21 | 53 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 76 | 96 | 98 | 189 | 92 | 149 | 81 | 126 | 120 | 99 | 248 |
| Sulphate | mg/L | 23 | 32 | 37 | 52 | 32 | 36 | 25 | 48 | 44 | 35 | 100 |
| Calcium | mg/L | 12 | 15.7 | 16.8 | 22.9 | 13.8 | 16 | 12.1 | 19.9 | 18.3 | 15.4 | 44.1 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | 0.0309 | --- | --- | --- | 0.0231 | --- | --- | --- | 0.0579 |
| Barium | mg/L | --- | --- | 0.00231 | --- | --- | --- | 0.00123 | --- | --- | --- | 0.00559 |
| Boron | mg/L | --- | --- | 0.0009 | --- | --- | --- | 0.0014 | --- | --- | --- | 0.0022 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | 0.000006 | --- | --- | --- | < 0.000003 | --- | --- | --- | 0.000012 |
| Cobalt | mg/L | --- | --- | 0.000612 | --- | --- | --- | 0.000183 | --- | --- | --- | 0.00125 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | 0.01 | --- | --- | --- | 0.009 | --- | --- | --- | 0.004 |
| Potassium | mg/L | --- | --- | 1.18 | --- | --- | --- | 0.792 | --- | --- | --- | 2.95 |
| Lithium | mg/L | --- | --- | 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | 0.002 |
| Magnesium | mg/L | --- | --- | 4.25 | --- | --- | --- | 2.93 | --- | --- | --- | 12.8 |
| Manganese | mg/L | --- | --- | 0.142 | --- | --- | --- | 0.1 | --- | --- | --- | 0.443 |
| Molybdenum | mg/L | --- | --- | 0.00038 | --- | --- | --- | 0.00029 | --- | --- | --- | 0.00076 |
| Sodium | mg/L | --- | --- | 0.1 | --- | --- | --- | 0.07 | --- | --- | --- | 0.23 |
| Nickel | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.0015 |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.0007 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | 0.00007 | --- | --- | --- | 0.00006 | --- | --- | --- | 0.00013 |
| Strontium | mg/L | --- | --- | 0.0275 | --- | --- | --- | 0.0198 | --- | --- | --- | 0.0851 |
| Titanium | mg/L | --- | --- | 0.0005 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.000158 | --- | --- | --- | 0.00008 | --- | --- | --- | 0.000311 |
| Vanadium | mg/L | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | 0.00004 |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | 0.00005 |
| Yttrium | mg/L | --- | --- | 0.000002 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | 0.002 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F-Zone Underground CN5
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10245-FEB12 | CA10053-MAR12 | CA10100-MAR12 | CA10160-MAR12 | CA10214-MAR12 | CA10040-APR12 | CA10083-APR12 | CA10115-APR12 | CA10183-APR12 | CA10034-May12 |
| | Unit | 29-Feb-12 | 7-Mar-12 | 14-Mar-12 | 21-Mar-12 | 28-Mar-12 | 4-Apr-12 | 11-Apr-12 | 18-Apr-12 | 25-Apr-12 | 2-May-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 947 | 954 | 946 | 924 | 936 | 922 | 875 | 930 | 903 | 893 |
| pH | no unit | 7.76 | 7.92 | 7.62 | 7.53 | 7.55 | 7.55 | 7.56 | 7.63 | 7.41 | 7.34 |
| Alkalinity | mg/L as CaCO3 | 34 | 89 | 47 | 32 | 26 | 22 | 16 | 31 | 11 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 142 | 256 | 198 | 139 | 96 | 90 | 171 | 179 | 103 | 131 |
| Sulphate | mg/L | 31 | 53 | 41 | 31 | 31 | 27 | 56 | 80 | 31 | 43 |
| Calcium | mg/L | 18.8 | 39.3 | 26.4 | 18.8 | 15.9 | 13.3 | 21.2 | 31.6 | 12.6 | 17.3 |
| Fluoride | mg/L | --- | --- | --- | --- | < 0.06 | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | --- | 0.02 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0182 | --- | --- | --- | --- | 0.0212 |
| Barium | mg/L | --- | --- | --- | --- | 0.00158 | --- | --- | --- | --- | 0.00223 |
| Boron | mg/L | --- | --- | --- | --- | 0.0005 | --- | --- | --- | --- | 0.0002 |
| Beryllium | mg/L | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.000358 | --- | --- | --- | --- | 0.000257 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | < 0.003 | --- | --- | --- | --- | 0.005 |
| Potassium | mg/L | --- | --- | --- | --- | 0.938 | --- | --- | --- | --- | 0.815 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 3.68 | --- | --- | --- | --- | 3.89 |
| Manganese | mg/L | --- | --- | --- | --- | 0.166 | --- | --- | --- | --- | 0.119 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.00015 | --- | --- | --- | --- | 0.00013 |
| Sodium | mg/L | --- | --- | --- | --- | 0.05 | --- | --- | --- | --- | 0.05 |
| Nickel | mg/L | --- | --- | --- | --- | 0.0002 | --- | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | --- | --- | 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | --- | 0.00024 | --- | --- | --- | --- | 0.00006 |
| Strontium | mg/L | --- | --- | --- | --- | 0.0289 | --- | --- | --- | --- | 0.0314 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000111 | --- | --- | --- | --- | 0.000096 |
| Vanadium | mg/L | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | --- | --- | < 0.000001 | --- | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Tiriganiaq Underground CN1
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11028-OCT11 | CA11032-OCT11 | CA11033-OCT11 | CA11034-OCT11 | CA10038-NOV11 | CA10113-NOV11 | CA10173-NOV11 | CA10264-NOV11 | CA11820-NOV11 | CA10036-DEC11 |
| | Unit | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 7-Dec-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 706 | 994 | 950 | 992 | 999 | 982 | 974 | 986 | 984 | 982 |
| pH | no unit | 7.96 | 7.57 | 8.08 | 8.22 | 8.18 | 8.09 | 7.21 | 7.73 | 7.65 | 7.84 |
| Alkalinity | mg/L as CaCO3 | 72 | 106 | 104 | 94 | 98 | 93 | 30 | 23 | 23 | 26 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 785 | 292 | 250 | 170 | 232 | 135 | 52 | 49 | 8 | 65 |
| Sulphate | mg/L | 280 | 40 | 18 | 16 | 19 | 17 | 4.1 | 5 | 6.4 | 8 |
| Calcium | mg/L | 126 | 40.5 | 30.9 | 30.1 | 33.4 | 33 | 10.1 | 7.52 | 7.61 | 8.6 |
| Fluoride | mg/L | 0.07 | 0.11 | 0.09 | 0.14 | --- | 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.1 | 0.12 | 0.15 | 0.14 | --- | 0.130 | --- | --- | 0.01 | --- |
| Arsenic | mg/L | 0.846 | 0.751 | 0.581 | 0.421 | --- | 0.342 | --- | --- | 0.0161 | --- |
| Barium | mg/L | 0.053 | 0.022 | 0.0156 | 0.0158 | --- | 0.0175 | --- | --- | 0.005 | --- |
| Boron | mg/L | 0.0099 | 0.0074 | 0.0033 | 0.0031 | --- | 0.0027 | --- | --- | 0.0003 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | 0.00002 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000011 | < 0.000003 | 0.000003 | < 0.000003 | --- | 0.000011 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.00326 | 0.00141 | 0.0016 | 0.00152 | --- | 0.00182 | --- | --- | 0.000205 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0028 | 0.0015 | 0.0013 | 0.0012 | --- | 0.0028 | --- | --- | 0.0005 | --- |
| Iron | mg/L | 0.086 | 0.182 | 0.318 | 0.366 | --- | 0.501 | --- | --- | 0.037 | --- |
| Potassium | mg/L | 26.9 | 16.8 | 13 | 11.1 | --- | 10.9 | --- | --- | 1.43 | --- |
| Lithium | mg/L | 0.005 | 0.004 | 0.003 | 0.003 | --- | 0.003 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 11.1 | 5.14 | 4.54 | 4.87 | --- | 6.2 | --- | --- | 1.36 | --- |
| Manganese | mg/L | 0.0183 | 0.0139 | 0.0148 | 0.0192 | --- | 0.0258 | --- | --- | 0.0231 | --- |
| Molybdenum | mg/L | 0.0141 | 0.00441 | 0.00171 | 0.0013 | --- | 0.00107 | --- | --- | 0.00027 | --- |
| Sodium | mg/L | 18.2 | 4.18 | 1.78 | 1.17 | --- | 1 | --- | --- | 0.14 | --- |
| Nickel | mg/L | 0.003 | 0.0001 | 0.0003 | 0.0006 | --- | 0.0005 | --- | --- | 0.0003 | --- |
| Lead | mg/L | 0.00077 | 0.00052 | 0.00032 | 0.00031 | --- | 0.00022 | --- | --- | 0.00041 | --- |
| Antimony | mg/L | 0.0106 | 0.01 | 0.0066 | 0.0046 | --- | 0.0045 | --- | --- | 0.0004 | --- |
| Selenium | mg/L | 0.004 | 0.004 | 0.003 | 0.003 | --- | 0.003 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00102 | 0.00041 | 0.00015 | 0.00016 | --- | 0.00024 | --- | --- | 0.00014 | --- |
| Strontium | mg/L | 0.325 | 0.127 | 0.11 | 0.113 | --- | 0.139 | --- | --- | 0.0393 | --- |
| Titanium | mg/L | 0.0003 | 0.0002 | 0.0001 | < 0.0001 | --- | 0.0002 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.00101 | 0.000962 | 0.000941 | 0.000955 | --- | 0.000906 | --- | --- | 0.000071 | --- |
| Vanadium | mg/L | 0.00029 | 0.00023 | 0.00024 | 0.00015 | --- | 0.00018 | --- | --- | 0.00003 | --- |
| Tungsten | mg/L | 0.00051 | 0.00036 | 0.00018 | 0.00022 | --- | 0.0002 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000005 | 0.000002 | 0.000002 | < 0.000001 | --- | 0.000001 | --- | --- | 0.000001 | --- |
| Zinc | mg/L | 0.002 | 0.002 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | 0.002 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Tiriganiaq Underground CN1
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10088-DEC11 | CA11075-DEC11 | CA10295-DEC11 | CA10048-JAN12 | CA10089-JAN12 | CA11027-JAN12 | CA10231-JAN12 | CA10012-FEB12 | CA10087-FEB12 | CA10141-FEB12 | CA10188-FEB12 |
| | Unit | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 1-Feb-12 | 8-Feb-12 | 15-Feb-12 | 22-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 988 | 978 | 986 | 991 | 989 | 972 | 986 | 986 | 982 | 989 | 980 |
| pH | no unit | 7.51 | 7.71 | 7.76 | 7.43 | 7.56 | 7.56 | 7.56 | 7.51 | 7.54 | 7.42 | 7.44 |
| Alkalinity | mg/L as CaCO3 | 22 | 24 | 22 | 23 | 23 | 24 | 24 | 24 | 23 | 25 | 21 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 56 | 8 | 64 | 106 | 79 | 101 | 83 | 86 | 92 | 126 | 89 |
| Sulphate | mg/L | 13 | 14 | 17 | 20 | 24 | 22 | 24 | 26 | 31 | 33 | 28 |
| Calcium | mg/L | 9.53 | 9.42 | 10.3 | 11.5 | 12.7 | 12.3 | 13 | 13.5 | 14.9 | 15.7 | 13 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | 0.0112 | --- | --- | --- | 0.0067 | --- | --- | --- | 0.0067 |
| Barium | mg/L | --- | --- | 0.00724 | --- | --- | --- | 0.00845 | --- | --- | --- | 0.008 |
| Boron | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0008 | --- | --- | --- | 0.0006 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | 0.000008 | --- | --- | --- | 0.000006 | --- | --- | --- | 0.000008 |
| Cobalt | mg/L | --- | --- | 0.000259 | --- | --- | --- | 0.000175 | --- | --- | --- | 0.000272 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | 0.008 | --- | --- | --- | 0.004 | --- | --- | --- | 0.003 |
| Potassium | mg/L | --- | --- | 1.46 | --- | --- | --- | 1.79 | --- | --- | --- | 1.73 |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | 2.24 | --- | --- | --- | 3.23 | --- | --- | --- | 3.74 |
| Manganese | mg/L | --- | --- | 0.0337 | --- | --- | --- | 0.0444 | --- | --- | --- | 0.0363 |
| Molybdenum | mg/L | --- | --- | 0.00037 | --- | --- | --- | 0.00033 | --- | --- | --- | 0.00031 |
| Sodium | mg/L | --- | --- | 0.2 | --- | --- | --- | 0.26 | --- | --- | --- | 0.27 |
| Nickel | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0002 | --- | --- | --- | 0.0003 |
| Lead | mg/L | --- | --- | 0.00032 | --- | --- | --- | 0.00018 | --- | --- | --- | 0.00009 |
| Antimony | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | 0.00009 | --- | --- | --- | 0.00013 | --- | --- | --- | 0.00009 |
| Strontium | mg/L | --- | --- | 0.0584 | --- | --- | --- | 0.0837 | --- | --- | --- | 0.092 |
| Titanium | mg/L | --- | --- | 0.0003 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.000084 | --- | --- | --- | 0.000074 | --- | --- | --- | 0.000084 |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- | 0.00004 |
| Yttrium | mg/L | --- | --- | 0.000002 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Tiriganiaq Underground CN1
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10245-FEB12 | CA10053-MAR12 | CA10100-MAR12 | CA10160-MAR12 | CA10214-MAR12 | CA10040-APR12 | CA10083-APR12 | CA10115-APR12 | CA10183-APR12 | CA10034-May12 |
| | Unit | 29-Feb-12 | 7-Mar-12 | 14-Mar-12 | 21-Mar-12 | 28-Mar-12 | 4-Apr-12 | 11-Apr-12 | 18-Apr-12 | 25-Apr-12 | 2-May-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 980 | 984 | 975 | 985 | 981 | 986 | 972 | 994 | 985 | 988 |
| pH | no unit | 7.53 | 7.55 | 7.30 | 7.21 | 7.20 | 7.43 | 7.44 | 7.42 | 7.47 | 7.37 |
| Alkalinity | mg/L as CaCO3 | 22 | 22 | 26 | 26 | 22 | 23 | 23 | 21 | 17 | 23 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 93 | 97 | 160 | 161 | 100 | 104 | 127 | 84 | 111 | 134 |
| Sulphate | mg/L | 31 | 33 | 42 | 47 | 36 | 35 | 35 | 28 | 29 | 38 |
| Calcium | mg/L | 14.4 | 14.9 | 18.1 | 19.6 | 15.2 | 14.6 | 14.3 | 12.2 | 12 | 15.6 |
| Fluoride | mg/L | --- | --- | --- | --- | < 0.06 | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | --- | 0.01 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | --- | --- | 0.0057 | --- | --- | --- | --- | 0.0068 |
| Barium | mg/L | --- | --- | --- | --- | 0.00899 | --- | --- | --- | --- | 0.00919 |
| Boron | mg/L | --- | --- | --- | --- | 0.0004 | --- | --- | --- | --- | 0.0006 |
| Beryllium | mg/L | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | --- | 0.000004 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | --- | 0.000336 | --- | --- | --- | --- | 0.0004 |
| Chromium | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | --- | 0.004 | --- | --- | --- | --- | 0.013 |
| Potassium | mg/L | --- | --- | --- | --- | 1.85 | --- | --- | --- | --- | 2.02 |
| Lithium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | --- | 4.91 | --- | --- | --- | --- | 5.43 |
| Manganese | mg/L | --- | --- | --- | --- | 0.0385 | --- | --- | --- | --- | 0.0365 |
| Molybdenum | mg/L | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | 0.00038 |
| Sodium | mg/L | --- | --- | --- | --- | 0.3 | --- | --- | --- | --- | 0.33 |
| Nickel | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | --- | --- | --- | 0.00009 | --- | --- | --- | --- | 0.00005 |
| Antimony | mg/L | --- | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | --- | 0.00015 | --- | --- | --- | --- | 0.0002 |
| Strontium | mg/L | --- | --- | --- | --- | 0.12 | --- | --- | --- | --- | 0.125 |
| Titanium | mg/L | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | --- | 0.000094 | --- | --- | --- | --- | 0.00011 |
| Vanadium | mg/L | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | --- | --- | 0.000004 | --- | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | 0.002 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Tiriganiaq Open Pit CN2
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11027-OCT11 | CA11035-OCT11 | CA11036-OCT11 | CA11037-OCT11 | CA10050-NOV11 | CA10107-NOV11 | CA10167-NOV11 | CA10258-NOV11 | CA11814-NOV11 | CA10030-DEC11 | CA10082-DEC11 |
| | Unit | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 | 7-Dec-11 | 14-Dec-11 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 699 | 1001 | 998 | 986 | 997 | 974 | 984 | 970 | 970 | 984 | 984 |
| pH | no unit | 7.92 | 7.80 | 7.33 | 7.55 | 7.41 | 7.54 | 7.44 | 7.26 | 6.86 | 7.26 | 7.50 |
| Alkalinity | mg/L as CaCO3 | 36 | 24 | 17 | 22 | 27 | 21 | 22 | 17 | 16 | 18 | 21 |
| Acidity | mg/L as CaCO3 | 72 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 617 | 182 | 112 | 117 | 126 | 112 | 80 | 92 | 74 | 91 | 68 |
| Sulphate | mg/L | 160 | 53 | 32 | 45 | 31 | 27 | 26 | 22 | 15 | 20 | 18 |
| Calcium | mg/L | 97.1 | 27.4 | 15.8 | 23.1 | 18.6 | 16.9 | 15.5 | 13.4 | 9.56 | 12.8 | 12.5 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.17 | 0.02 | < 0.01 | < 0.01 | --- | 0.010 | --- | --- | 0.01 | --- | --- |
| Arsenic | mg/L | 0.859 | 0.121 | 0.0431 | 0.0301 | --- | 0.0223 | --- | --- | 0.0093 | --- | --- |
| Barium | mg/L | 0.0124 | 0.00456 | 0.00296 | 0.00575 | --- | 0.00346 | --- | --- | 0.00257 | --- | --- |
| Boron | mg/L | 0.0048 | 0.0017 | 0.0005 | 0.0014 | --- | 0.0011 | --- | --- | 0.0018 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | 0.00007 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | < 0.000003 | < 0.000003 | < 0.000003 | < 0.000003 | --- | 0.000003 | --- | --- | 0.000004 | --- | --- |
| Cobalt | mg/L | 0.00163 | 0.00045 | 0.000241 | 0.00029 | --- | 0.000242 | --- | --- | 0.000178 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.0029 | 0.001 | 0.0006 | < 0.0005 | --- | 0.0006 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.244 | 0.047 | 0.015 | 0.013 | --- | 0.01 | --- | --- | 0.009 | --- | --- |
| Potassium | mg/L | 7.79 | 2.59 | 1.48 | 2.05 | --- | 1.58 | --- | --- | 1.05 | --- | --- |
| Lithium | mg/L | 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Magnesium | mg/L | 2.37 | 0.977 | 0.933 | 1.61 | --- | 1.55 | --- | --- | 1.3 | --- | --- |
| Manganese | mg/L | 0.00612 | 0.0164 | 0.0193 | 0.0295 | --- | 0.0305 | --- | --- | 0.0268 | --- | --- |
| Molybdenum | mg/L | 0.00623 | 0.00121 | 0.00068 | 0.00064 | --- | 0.00041 | --- | --- | 0.00257 | --- | --- |
| Sodium | mg/L | 4.45 | 1.1 | 0.53 | 0.83 | --- | 0.66 | --- | --- | 0.43 | --- | --- |
| Nickel | mg/L | 0.0027 | < 0.0001 | 0.0002 | 0.0005 | --- | 0.0005 | --- | --- | 0.0003 | --- | --- |
| Lead | mg/L | 0.00025 | 0.00007 | 0.0001 | 0.00006 | --- | 0.00003 | --- | --- | 0.00006 | --- | --- |
| Antimony | mg/L | 0.0051 | 0.0027 | 0.0009 | 0.001 | --- | 0.0008 | --- | --- | 0.0005 | --- | --- |
| Selenium | mg/L | 0.018 | 0.002 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00356 | 0.00099 | 0.00023 | 0.00026 | --- | 0.00014 | --- | --- | 0.00019 | --- | --- |
| Strontium | mg/L | 0.14 | 0.0529 | 0.041 | 0.0583 | --- | 0.0516 | --- | --- | 0.0365 | --- | --- |
| Titanium | mg/L | 0.0002 | < 0.0001 | < 0.0001 | 0.0003 | --- | 0.0003 | --- | --- | 0.0001 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000514 | 0.000198 | 0.000161 | 0.000182 | --- | 0.000119 | --- | --- | 0.000053 | --- | --- |
| Vanadium | mg/L | 0.00066 | < 0.00003 | 0.00008 | < 0.00003 | --- | < 0.00003 | --- | --- | 0.00008 | --- | --- |
| Tungsten | mg/L | 0.00051 | 0.00009 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | 0.00008 | --- | --- |
| Yttrium | mg/L | 0.000002 | 0.000002 | 0.000002 | < 0.000001 | --- | < 0.000001 | --- | --- | 0.000001 | --- | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Tiriganiaq Open Pit CN2
**Weight:** 1 kg

| Analyte | Week/Event | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA11069-DEC11 | CA10289-DEC11 | CA10042-JAN12 | CA10083-JAN12 | CA11021-JAN12 | CA10225-JAN12 | CA10006-FEB12 | CA10083-FEB12 | CA10137-FEB12 | CA10184-FEB12 | CA10241-FEB12 |
| | Unit | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 | 25-Jan-12 | 1-Feb-12 | 8-Feb-12 | 15-Feb-12 | 22-Feb-12 | 29-Feb-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 972 | 981 | 989 | 981 | 979 | 987 | 983 | 995 | 984 | 979 | 991 |
| pH | no unit | 7.22 | 7.25 | 7.40 | 7.42 | 7.17 | 7.63 | 7.52 | 7.53 | 7.32 | 7.51 | 7.60 |
| Alkalinity | mg/L as CaCO3 | 28 | 21 | 21 | 21 | 23 | 24 | 27 | 23 | 25 | 35 | 25 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 65 | 67 | 69 | 67 | 116 | 104 | 109 | 80 | 87 | 133 | 82 |
| Sulphate | mg/L | 19 | 19 | 19 | 19 | 27 | 21 | 33 | 22 | 22 | 37 | 20 |
| Calcium | mg/L | 10.4 | 11.7 | 11.6 | 11.4 | 14.8 | 13.4 | 17.3 | 14.3 | 13.2 | 19.6 | 13.7 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | <0.006 | --- | --- | --- | < 0.06 | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | --- | < 0.01 | --- | --- | --- | 0.02 | --- | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | --- | 0.0097 | --- | --- | --- | 0.0132 | --- | --- | --- | 0.0328 | --- |
| Barium | mg/L | --- | 0.00289 | --- | --- | --- | 0.00283 | --- | --- | --- | 0.00513 | --- |
| Boron | mg/L | --- | 0.0012 | --- | --- | --- | 0.0019 | --- | --- | --- | 0.002 | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | --- | 0.000008 | --- | --- | --- | 0.000004 | --- | --- | --- | 0.000014 | --- |
| Cobalt | mg/L | --- | 0.000238 | --- | --- | --- | 0.00015 | --- | --- | --- | 0.000524 | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- | 0.0006 | --- |
| Iron | mg/L | --- | < 0.003 | --- | --- | --- | 0.003 | --- | --- | --- | 0.008 | --- |
| Potassium | mg/L | --- | 0.97 | --- | --- | --- | 1.09 | --- | --- | --- | 1.62 | --- |
| Lithium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | --- | 2.01 | --- | --- | --- | 2.75 | --- | --- | --- | 5.45 | --- |
| Manganese | mg/L | --- | 0.0404 | --- | --- | --- | 0.0388 | --- | --- | --- | 0.0392 | --- |
| Molybdenum | mg/L | --- | 0.0003 | --- | --- | --- | 0.00052 | --- | --- | --- | 0.00073 | --- |
| Sodium | mg/L | --- | 0.4 | --- | --- | --- | 0.42 | --- | --- | --- | 0.61 | --- |
| Nickel | mg/L | --- | 0.0002 | --- | --- | --- | 0.0003 | --- | --- | --- | 0.0005 | --- |
| Lead | mg/L | --- | 0.00005 | --- | --- | --- | 0.00006 | --- | --- | --- | 0.00007 | --- |
| Antimony | mg/L | --- | 0.0005 | --- | --- | --- | 0.0011 | --- | --- | --- | 0.0005 | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Tin | mg/L | --- | 0.00012 | --- | --- | --- | 0.00021 | --- | --- | --- | 0.00032 | --- |
| Strontium | mg/L | --- | 0.0476 | --- | --- | --- | 0.0569 | --- | --- | --- | 0.0887 | --- |
| Titanium | mg/L | --- | 0.0003 | --- | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | --- | 0.000075 | --- | --- | --- | 0.000077 | --- | --- | --- | 0.000127 | --- |
| Vanadium | mg/L | --- | < 0.00003 | --- | --- | --- | 0.00004 | --- | --- | --- | 0.00005 | --- |
| Tungsten | mg/L | --- | < 0.00003 | --- | --- | --- | 0.0001 | --- | --- | --- | 0.00006 | --- |
| Yttrium | mg/L | --- | 0.000001 | --- | --- | --- | < 0.000001 | --- | --- | --- | 0.000002 | --- |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** Tiriganiaq Open Pit CN2
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10049-MAR12 | CA10096-MAR12 | CA10156-MAR12 | CA10211-MAR12 | AC10037-APR12 | CA10080-APR12 | CA10112-APR12 | CA11245-APR12 | CA10111-MAY12 |
| | Unit | 7-Mar-12 | 14-Mar-12 | 21-Mar-12 | 28-Mar-12 | 4-Apr-12 | 11-Apr-12 | 18-Apr-12 | 25-Apr-12 | 2-May-12 |
| | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 986 | 984 | 992 | 982 | 984 | 981 | 993 | 962 | 1002 |
| pH | no unit | 7.55 | 7.38 | 7.29 | 7.36 | 7.35 | 7.46 | 7.36 | 7.38 | 7.26 |
| Alkalinity | mg/L as CaCO3 | 29 | 27 | 24 | 16 | 18 | 23 | 20 | 23 | 17 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 85 | 114 | 97 | 71 | 69 | 107 | 67 | 93 | 90 |
| Sulphate | mg/L | 19 | 17 | 19 | 13 | 18 | 23 | 18 | 27 | 19 |
| Calcium | mg/L | 13.6 | 11.8 | 12.7 | 8.52 | 10 | 12.1 | 10 | 13.5 | 10.7 |
| Fluoride | mg/L | --- | --- | --- | < 0.06 | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | --- | 0.02 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | --- | --- | --- | 0.0063 | --- | --- | --- | --- | 0.008 |
| Barium | mg/L | --- | --- | --- | 0.00163 | --- | --- | --- | --- | 0.00216 |
| Boron | mg/L | --- | --- | --- | 0.0005 | --- | --- | --- | --- | 0.0006 |
| Beryllium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | --- | 0.000163 | --- | --- | --- | --- | 0.000218 |
| Chromium | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | --- | < 0.003 | --- | --- | --- | --- | 0.006 |
| Potassium | mg/L | --- | --- | --- | 0.57 | --- | --- | --- | --- | 0.721 |
| Lithium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | --- | 2.34 | --- | --- | --- | --- | 3.39 |
| Manganese | mg/L | --- | --- | --- | 0.0259 | --- | --- | --- | --- | 0.0309 |
| Molybdenum | mg/L | --- | --- | --- | 0.00022 | --- | --- | --- | --- | 0.00036 |
| Sodium | mg/L | --- | --- | --- | 0.18 | --- | --- | --- | --- | 0.22 |
| Nickel | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Lead | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | 0.00003 |
| Antimony | mg/L | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | --- | 0.00025 | --- | --- | --- | --- | 0.00021 |
| Strontium | mg/L | --- | --- | --- | 0.0444 | --- | --- | --- | --- | 0.0591 |
| Titanium | mg/L | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | --- | 0.000035 | --- | --- | --- | --- | 0.00005 |
| Vanadium | mg/L | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | --- | < 0.000001 | --- | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN-3 (Wesmeg Open Pit)
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10370-SEP11 | CA10373-SEP11 | CA10374-SEP11 | CA10050-OCT11 | CA10102-OCT11 | CA10153-OCT11 | CA11236-OCT11 | CA10011-NOV11 | CA10082-NOV11 | CA10142-NOV11 |
| | Unit | 13/Sep/11 | 20/Sep/11 | 27-Sep-11 | 4-Oct-11 | 11-Oct-11 | 18-Oct-11 | 25-Oct-11 | 1-Nov-11 | 8-Nov-11 | 15-Nov-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 653 | 956 | 950 | 955 | 938 | 934 | 971 | 934 | 921 | 914 |
| pH | no unit | 7.82 | 7.74 | 7.46 | 7.75 | 6.90 | 7.43 | 7.45 | 7.60 | 7.39 | 7.57 |
| Alkalinity | mg/L as CaCO3 | 53 | 51 | 38 | 42 | 34 | 30 | 32 | 28 | 21 | 27 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 492 | 148 | 150 | 150 | 114 | 110 | 89 | 86 | 7 | 78 |
| Sulphate | mg/L | 190 | 41 | 20 | 26 | 20 | 23 | 23 | 24 | 20 | 25 |
| Calcium | mg/L | 52.5 | 22.7 | 15.9 | 17.2 | 13.1 | 14.5 | 14.6 | 14.2 | 9.93 | 11.3 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.0574 | 0.0942 | 0.0114 | 0.0093 | --- | 0.0072 | --- | --- | 0.0016 | --- |
| Barium | mg/L | 0.0163 | 0.00365 | 0.00493 | 0.0053 | --- | 0.00403 | --- | --- | 0.00295 | --- |
| Boron | mg/L | 0.0059 | 0.002 | 0.0027 | 0.0015 | --- | 0.0009 | --- | --- | 0.0005 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | 0.00006 | --- |
| Cadmium | mg/L | 0.000269 | < 0.000003 | 0.000012 | 0.00023 | --- | 0.000009 | --- | --- | 0.000016 | --- |
| Cobalt | mg/L | 0.00304 | 0.00206 | 0.000456 | 0.000612 | --- | 0.000365 | --- | --- | 0.000299 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.018 | 0.0048 | 0.0012 | 0.0022 | --- | 0.0007 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.032 | 0.01 | 0.006 | 0.007 | --- | 0.005 | --- | --- | < 0.003 | --- |
| Potassium | mg/L | 7.56 | 2.78 | 1.5 | 1.52 | --- | 1.01 | --- | --- | 0.752 | --- |
| Lithium | mg/L | 0.003 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 27.4 | 8.55 | 4.65 | 5.52 | --- | 4.68 | --- | --- | 3.63 | --- |
| Manganese | mg/L | 0.107 | 0.0604 | 0.097 | 0.113 | --- | 0.0896 | --- | --- | 0.081 | --- |
| Molybdenum | mg/L | 0.00283 | 0.00224 | 0.0003 | 0.00046 | --- | 0.00026 | --- | --- | 0.0001 | --- |
| Sodium | mg/L | 2.93 | 0.58 | 0.25 | 0.28 | --- | 0.19 | --- | --- | 0.15 | --- |
| Nickel | mg/L | 0.0021 | 0.0024 | 0.0003 | 0.0014 | --- | 0.0004 | --- | --- | 0.0004 | --- |
| Lead | mg/L | 0.00065 | < 0.00002 | < 0.00002 | 0.00011 | --- | 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0012 | 0.0009 | 0.0004 | 0.0002 | --- | < 0.0002 | --- | --- | < 0.0002 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00094 | 0.0005 | 0.00031 | 0.00029 | --- | 0.00034 | --- | --- | 0.00031 | --- |
| Strontium | mg/L | 0.0797 | 0.032 | 0.0202 | 0.0235 | --- | 0.0181 | --- | --- | 0.0152 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0002 | --- | --- | 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000512 | 0.000208 | 0.000082 | 0.000119 | --- | 0.000064 | --- | --- | 0.000034 | --- |
| Vanadium | mg/L | < 0.00003 | < 0.00003 | 0.00005 | 0.00004 | --- | < 0.00003 | --- | --- | 0.00003 | --- |
| Tungsten | mg/L | 0.00005 | < 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000019 | 0.000001 | 0.000028 | 0.000014 | --- | 0.000001 | --- | --- | 0.000001 | --- |
| Zinc | mg/L | 0.031 | 0.002 | 0.002 | 0.003 | --- | 0.002 | --- | --- | 0.002 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN-3 (Wesmeg Open Pit)
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10467-NOV11 | CA11789-NOV11 | CA10009-DEC11 | CA10071-DEC11 | CA11045-DEC11 | CA10268-DEC11 | CA10018-JAN12 | CA10101-JAN12 | CA11051-JAN12 | CA10191-JAN12 |
| | Unit | 22-Nov-11 | 29-Nov-11 | 6-Dec-11 | 13-Dec-11 | 20-Dec-11 | 28-Dec-11 | 3-Jan-12 | 10-Jan-12 | 17-Jan-12 | 24-Jan-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 931 | 933 | 954 | 926 | 926 | 931 | 940 | 930 | 927 | 927 |
| pH | no unit | 7.40 | 7.55 | 7.69 | 7.50 | 7.38 | 7.69 | 7.45 | 7.23 | 7.01 | 7.32 |
| Alkalinity | mg/L as CaCO3 | 26 | 27 | 30 | 22 | 21 | 25 | 24 | 23 | 20 | 22 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 45 | 118 | 110 | 89 | 89 | 104 | 96 | 97 | 91 | 96 |
| Sulphate | mg/L | 28 | 28 | 38 | 30 | 31 | 35 | 33 | 35 | 35 | 39 |
| Calcium | mg/L | 14.5 | 14.2 | 16.4 | 13.1 | 12.2 | 14.7 | 14.4 | 13.8 | 12.5 | 13.1 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.02 | --- | --- | --- | 0.02 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0033 | --- | --- | --- | 0.0018 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00414 | --- | --- | --- | 0.0039 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0009 | --- | --- | --- | 0.0008 | --- | --- | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | 0.000022 | --- | --- | --- | 0.00002 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000531 | --- | --- | --- | 0.000523 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | 0.0006 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.834 | --- | --- | --- | 0.644 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 6.15 | --- | --- | --- | 5.55 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.145 | --- | --- | --- | 0.152 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00019 | --- | --- | --- | 0.00041 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.21 | --- | --- | --- | 0.16 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0008 | --- | --- | --- | 0.0008 | --- | --- | --- |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- | --- | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0003 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0243 | --- | --- | --- | 0.0239 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000046 | --- | --- | --- | 0.000036 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- |
| Zinc | mg/L | --- | --- | 0.002 | --- | --- | --- | 0.004 | --- | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN-3 (Wesmeg Open Pit)
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10251-JAN12 | CA10050-FEB12 | CA10113-FEB12 | CA10171-FEB12 | CA10216-FEB12 | CA10013-MAR12 | CA10083-MAR12 | CA10125-MAR12 | CA10191-MAR12 | CA10018-APR12 | CA10057-APR12 |
| | Unit | 31-Jan-12 | 7-Feb-12 | 14-Feb-12 | 21-Feb-12 | 25-Feb-12 | 6-Mar-12 | 13-Mar-12 | 20-Mar-12 | 27-Mar-12 | 3-Apr-12 | 10-Apr-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 931 | 929 | 930 | 934 | 931 | 920 | 900 | 918 | 921 | 930 | 940 |
| pH | no unit | 7.23 | 7.41 | 7.41 | 7.51 | 7.38 | 6.86 | 7.08 | 7.37 | 7.55 | 7.59 | 7.30 |
| Alkalinity | mg/L as CaCO3 | 22 | 26 | 26 | 28 | 27 | 31 | 24 | 24 | 18 | 21 | 22 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 108 | 115 | 115 | 125 | 111 | 161 | 160 | 122 | 92 | 102 | 147 |
| Sulphate | mg/L | 40 | 42 | 44 | 48 | 40 | 49 | 46 | 51 | 32 | 37 | 44 |
| Calcium | mg/L | 15.1 | 15.8 | 17.2 | 19 | 15.9 | 18 | 17.5 | 18.3 | 13.7 | 14.4 | 15.6 |
| Fluoride | mg/L | < 0.06 | --- | --- | --- | --- | < 0.06 | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | < 0.01 | --- | --- | --- | --- | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | 0.0012 | --- | --- | --- | --- | 0.0012 | --- | --- | --- | --- | 0.0012 |
| Barium | mg/L | 0.0035 | --- | --- | --- | --- | 0.00373 | --- | --- | --- | --- | 0.00304 |
| Boron | mg/L | 0.0006 | --- | --- | --- | --- | 0.0007 | --- | --- | --- | --- | 0.0004 |
| Beryllium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | 0.00008 |
| Cadmium | mg/L | 0.000023 | --- | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | 0.000175 |
| Cobalt | mg/L | 0.000497 | --- | --- | --- | --- | 0.000579 | --- | --- | --- | --- | 0.00052 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | < 0.003 | --- | --- | --- | --- | < 0.003 | --- | --- | --- | --- | < 0.003 |
| Potassium | mg/L | 0.686 | --- | --- | --- | --- | 0.727 | --- | --- | --- | --- | 0.61 |
| Lithium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | 6.39 | --- | --- | --- | --- | 7.63 | --- | --- | --- | --- | 6.81 |
| Manganese | mg/L | 0.146 | --- | --- | --- | --- | 0.15 | --- | --- | --- | --- | 0.136 |
| Molybdenum | mg/L | 0.00011 | --- | --- | --- | --- | 0.00007 | --- | --- | --- | --- | 0.00011 |
| Sodium | mg/L | 0.16 | --- | --- | --- | --- | 0.15 | --- | --- | --- | --- | 0.11 |
| Nickel | mg/L | 0.0009 | --- | --- | --- | --- | 0.0008 | --- | --- | --- | --- | 0.0005 |
| Lead | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | 0.00005 |
| Antimony | mg/L | < 0.0002 | --- | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | 0.00023 | --- | --- | --- | --- | 0.00019 | --- | --- | --- | --- | 0.00021 |
| Strontium | mg/L | 0.0259 | --- | --- | --- | --- | 0.0303 | --- | --- | --- | --- | 0.0263 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | 0.000038 | --- | --- | --- | --- | 0.000041 | --- | --- | --- | --- | 0.00004 |
| Vanadium | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | 0.00003 |
| Tungsten | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | 0.000002 | --- | --- | --- | --- | < 0.000001 | --- | --- | --- | --- | 0.000016 |
| Zinc | mg/L | 0.003 | --- | --- | --- | --- | 0.004 | --- | --- | --- | --- | 0.002 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN-7 (Pump CND Treated)
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10370-SEP11 | CA10373-SEP11 | CA10374-SEP11 | CA10050-OCT11 | CA10102-OCT11 | CA10153-OCT11 | CA11236-OCT11 | CA10011-NOV11 | CA10082-NOV11 | CA10142-NOV11 |
| | Unit | 13/Sep/11 | 20/Sep/11 | 27/Sep/11 | 4/Oct/11 | 11/Oct/11 | 18/Oct/11 | 25/Oct/11 | 1/Nov/11 | 8/Nov/11 | 15/Nov/11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL | mL | 709 | 994 | 959 | 938 | 940 | 938 | 899 | 934 | 920 | 942 |
| pH | no unit | 7.89 | 7.48 | 7.24 | 7.14 | 7.16 | 7.01 | 6.91 | 7.12 | 7.23 | 7.16 |
| Alkalinity | mg/L as CaCO3 | 15 | 18 | 21 | 16 | 21 | 13 | 8 | 12 | 11 | 14 |
| Acidity | mg/L as CaCO3 | 30 | 43 | 12 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 272 | 269 | 363 | 275 | 290 | 185 | 92 | 131 | 104 | 126 |
| Sulphate | mg/L | 67 | 110 | 120 | 96 | 110 | 65 | 41 | 61 | 45 | 54 |
| Calcium | mg/L | 45.1 | 61 | 56.9 | 44.4 | 48.4 | 29.4 | 17.7 | 23.4 | 17.6 | 21.3 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.01 | 0.02 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.225 | 0.0005 | 0.0733 | 0.0446 | --- | 0.025 | --- | --- | 0.021 | --- |
| Barium | mg/L | 0.00206 | 0.00004 | 0.00399 | 0.003 | --- | 0.00181 | --- | --- | 0.00112 | --- |
| Boron | mg/L | 0.0016 | 0.0071 | 0.0023 | 0.0022 | --- | 0.0015 | --- | --- | 0.001 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | 0.00004 | 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | 0.00002 | --- |
| Cadmium | mg/L | 0.000091 | < 0.000003 | 0.00001 | 0.000105 | --- | 0.000006 | --- | --- | 0.000003 | --- |
| Cobalt | mg/L | 0.00127 | 0.000031 | 0.00162 | 0.0016 | --- | 0.00103 | --- | --- | 0.000744 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.002 | 0.0025 | 0.0011 | 0.0013 | --- | 0.0006 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.017 | 0.007 | < 0.002 | 0.004 | --- | 0.005 | --- | --- | < 0.003 | --- |
| Potassium | mg/L | 1.42 | 2.42 | 2.14 | 1.64 | --- | 1.05 | --- | --- | 0.75 | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 1.75 | 3.19 | 3.52 | 3.26 | --- | 2.92 | --- | --- | 2.55 | --- |
| Manganese | mg/L | 0.012 | 0.00059 | 0.108 | 0.108 | --- | 0.0631 | --- | --- | 0.0445 | --- |
| Molybdenum | mg/L | 0.00226 | 0.00023 | 0.00128 | 0.00097 | --- | 0.00076 | --- | --- | 0.00064 | --- |
| Sodium | mg/L | 1.55 | 1.79 | 1.34 | 0.95 | --- | 0.51 | --- | --- | 0.32 | --- |
| Nickel | mg/L | 0.0014 | < 0.0001 | 0.001 | 0.0024 | --- | 0.0004 | --- | --- | 0.0005 | --- |
| Lead | mg/L | 0.00008 | 0.00018 | < 0.00002 | 0.00005 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.001 | < 0.0002 | 0.0008 | 0.0006 | --- | 0.0004 | --- | --- | 0.0003 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00172 | < 0.00001 | 0.00026 | 0.00007 | --- | 0.0001 | --- | --- | 0.00029 | --- |
| Strontium | mg/L | 0.0348 | 0.0513 | 0.0475 | 0.0381 | --- | 0.0245 | --- | --- | 0.017 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | 0.0004 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000127 | 0.000005 | 0.00022 | 0.000182 | --- | 0.000174 | --- | --- | 0.000076 | --- |
| Vanadium | mg/L | 0.00004 | < 0.00003 | 0.00005 | 0.00003 | --- | < 0.00003 | --- | --- | 0.00003 | --- |
| Tungsten | mg/L | 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000002 | < 0.000001 | 0.00001 | 0.000008 | --- | 0.000001 | --- | --- | 0.000001 | --- |
| Zinc | mg/L | 0.002 | < 0.001 | 0.002 | 0.003 | --- | 0.002 | --- | --- | 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN-7 (Pump CND Treated)
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10467-NOV11 | CA11789-NOV11 | CA10009-DEC11 | CA10071-DEC11 | CA11045-DEC11 | CA10268-DEC11 | CA10018-JAN12 | CA10101-JAN12 | CA11051-JAN12 | CA10191-JAN12 |
| | Unit | 22/Nov/11 | 29/Nov/11 | 6/Dec/11 | 13/Dec/11 | 20/Dec/11 | 28/Dec/11 | 3/Jan/12 | 10/Jan/12 | 17/Jan/12 | 24/Jan/12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL | mL | 916 | 896 | 952 | 939 | 930 | 933 | 945 | 935 | 934 | 932 |
| pH | no unit | 7.15 | 7.17 | 7.45 | 7.43 | 7.59 | 7.50 | 7.37 | 7.29 | 7.17 | 7.25 |
| Alkalinity | mg/L as CaCO3 | 10 | 12 | 16 | 16 | 11 | 12 | 16 | 14 | 12 | 13 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 104 | 141 | 130 | 125 | 100 | 111 | 122 | 109 | 96 | 96 |
| Sulphate | mg/L | 39 | 46 | 57 | 54 | 42 | 46 | 52 | 48 | 40 | 39 |
| Calcium | mg/L | 16.7 | 18.5 | 22.6 | 21.3 | 15.7 | 17.4 | 20.3 | 18.2 | 13.8 | 14.7 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- | --- | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.02 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0178 | --- | --- | --- | 0.0157 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00134 | --- | --- | --- | 0.00143 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0015 | --- | --- | --- | 0.0013 | --- | --- | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | 0.000018 | --- | --- | --- | 0.000011 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.00116 | --- | --- | --- | 0.00102 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 0.926 | --- | --- | --- | 0.862 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 4.58 | --- | --- | --- | 5.02 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.088 | --- | --- | --- | 0.102 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00079 | --- | --- | --- | 0.00067 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.33 | --- | --- | --- | 0.24 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0008 | --- | --- | --- | 0.0009 | --- | --- | --- |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0004 | --- | --- | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00019 | --- | --- | --- | 0.00015 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0221 | --- | --- | --- | 0.0228 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000091 | --- | --- | --- | 0.000083 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000002 | --- | --- | --- |
| Zinc | mg/L | --- | --- | 0.003 | --- | --- | --- | 0.003 | | | |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN-7 (Pump CND Treated)
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10251-JAN12 | CA10050-FEB12 | CA10113-FEB12 | CA10171-FEB12 | CA10216-FEB12 | CA10013-MAR12 | CA10083-MAR12 | CA10125-MAR12 | CA10191-MAR12 | CA10018-APR12 | CA10057-APR12 |
| | Unit | 31/Jan/12 | 7/Feb/12 | 14/Feb/12 | 21/Feb/12 | 25/Feb/12 | 6/Mar/12 | 13/Mar/12 | 20/Mar/12 | 27/Mar/12 | 3/Apr/12 | 10/Apr/12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL | mL | 946 | 928 | 927 | 940 | 937 | 919 | 904 | 926 | 919 | 950 | 920 |
| pH | no unit | 7.33 | 7.01 | 7.41 | 7.34 | 7.56 | 7.00 | 7.39 | 7.46 | 7.42 | 7.41 | 7.27 |
| Alkalinity | mg/L as CaCO3 | 16 | 15 | 16 | 18 | 20 | 17 | 18 | 16 | 14 | 15 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 145 | 147 | 110 | 120 | 148 | 158 | 125 | 124 | 102 | 125 | 155 |
| Sulphate | mg/L | 46 | 46 | 44 | 51 | 63 | 51 | 52 | 55 | 40 | 46 | 47 |
| Calcium | mg/L | 17.7 | 16.6 | 17.2 | 19.5 | 22.8 | 19.3 | 20 | 20.3 | 15.6 | 16.6 | 16.6 |
| Fluoride | mg/L | < 0.06 | --- | --- | --- | --- | < 0.06 | --- | --- | --- | --- | < 0.06 |
| Mercury | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | < 0.01 | --- | --- | --- | --- | < 0.01 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | 0.0129 | --- | --- | --- | --- | 0.0118 | --- | --- | --- | --- | 0.012 |
| Barium | mg/L | 0.00129 | --- | --- | --- | --- | 0.00112 | --- | --- | --- | --- | 0.00106 |
| Boron | mg/L | 0.001 | --- | --- | --- | --- | 0.0009 | --- | --- | --- | --- | 0.0006 |
| Beryllium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | 0.000016 | --- | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | 0.000011 |
| Cobalt | mg/L | 0.000801 | --- | --- | --- | --- | 0.000757 | --- | --- | --- | --- | 0.000612 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | < 0.003 | --- | --- | --- | --- | < 0.003 | --- | --- | --- | --- | < 0.003 |
| Potassium | mg/L | 0.76 | --- | --- | --- | --- | 0.76 | --- | --- | --- | --- | 0.664 |
| Lithium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | 4.67 | --- | --- | --- | --- | 5.35 | --- | --- | --- | --- | 4.96 |
| Manganese | mg/L | 0.0976 | --- | --- | --- | --- | 0.102 | --- | --- | --- | --- | 0.101 |
| Molybdenum | mg/L | 0.00043 | --- | --- | --- | --- | 0.00038 | --- | --- | --- | --- | 0.00028 |
| Sodium | mg/L | 0.17 | --- | --- | --- | --- | 0.13 | --- | --- | --- | --- | 0.09 |
| Nickel | mg/L | 0.001 | --- | --- | --- | --- | 0.0008 | --- | --- | --- | --- | 0.0006 |
| Lead | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | 0.0003 | --- | --- | --- | --- | 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | 0.00012 | --- | --- | --- | --- | 0.00017 | --- | --- | --- | --- | 0.0001 |
| Strontium | mg/L | 0.0197 | --- | --- | --- | --- | 0.0214 | --- | --- | --- | --- | 0.0198 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | 0.000063 | --- | --- | --- | --- | 0.000095 | --- | --- | --- | --- | 0.000047 |
| Vanadium | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | 0.000001 | --- | --- | --- | --- | < 0.000001 | --- | --- | --- | --- | 0.000004 |
| Zinc | mg/L | 0.003 | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- | 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN50-51 Composite
**Weight:** 1 kg

| Analyte | Week/Event | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10369-SEP11 | CA10371-SEP11 | CA10372-SEP11 | CA10051-OCT11 | CA10103-OCT11 | CA10154-OCT11 | CA11237-OCT11 | CA10012-NOV12 | CA10083-NOV11 | CA10143-NOV11 |
| | Unit | 13/Sep/11 | 20-Sep-11 | 27-Sep-11 | 4-Oct-11 | 11-Oct-11 | 18-Oct-11 | 25-Oct-11 | 1-Nov-11 | 8-Nov-11 | 15-Nov-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 774 | 993 | 992 | 995 | 967 | 980 | 937 | 927 | 928 | 911 |
| pH | no unit | 7.71 | 7.75 | 7.79 | 7.68 | 7.04 | 7.83 | 7.46 | 7.41 | 7.40 | 7.12 |
| Alkalinity | mg/L as CaCO3 | 22 | 29 | 48 | 24 | 22 | 26 | 12 | 12 | 12 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 145 | 166 | 272 | 165 | 129 | 188 | 62 | 89 | 56 | 63 |
| Sulphate | mg/L | 38 | 68 | 63 | 47 | 33 | 59 | 21 | 35 | 28 | 22 |
| Calcium | mg/L | 17.2 | 26 | 24.3 | 18.9 | 14.8 | 24.6 | 10.2 | 13.6 | 11.1 | 9.93 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | <0.06 | --- | <0.06 | --- | --- | <0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.01 | 0.02 | < 0.01 | 0.02 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.0991 | 0.0156 | 0.049 | 0.0363 | --- | 0.0172 | --- | --- | 0.0204 | --- |
| Barium | mg/L | 0.00621 | 0.00691 | 0.00737 | 0.00506 | --- | 0.00682 | --- | --- | 0.00266 | --- |
| Boron | mg/L | 0.0015 | 0.0022 | 0.0018 | 0.0016 | --- | 0.0019 | --- | --- | 0.0008 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | 0.00011 | --- |
| Cadmium | mg/L | 0.000039 | 0.000022 | 0.000009 | 0.000051 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.00171 | 0.000904 | 0.00217 | 0.0015 | --- | 0.00139 | --- | --- | 0.00027 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | < 0.0005 | 0.0035 | 0.001 | 0.0006 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.017 | 0.016 | 0.009 | 0.008 | --- | 0.006 | --- | --- | < 0.003 | --- |
| Potassium | mg/L | 2.76 | 4.23 | 3.69 | 2.72 | --- | 2.96 | --- | --- | 1.44 | --- |
| Lithium | mg/L | < 0.001 | 0.001 | < 0.001 | < 0.001 | --- | 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 2.47 | 4.82 | 4.63 | 3.71 | --- | 5.45 | --- | --- | 2.46 | --- |
| Manganese | mg/L | 0.0195 | 0.0946 | 0.045 | 0.0479 | --- | 0.062 | --- | --- | 0.0257 | --- |
| Molybdenum | mg/L | 0.00068 | 0.00088 | 0.00079 | 0.00067 | --- | 0.00063 | --- | --- | 0.0003 | --- |
| Sodium | mg/L | 2.07 | 2.89 | 2.25 | 1.62 | --- | 1.57 | --- | --- | 0.55 | --- |
| Nickel | mg/L | 0.001 | 0.0012 | 0.0008 | 0.0009 | --- | 0.0004 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | 0.00054 | 0.00004 | 0.00022 | 0.00016 | --- | 0.00008 | --- | --- | 0.00005 | --- |
| Antimony | mg/L | 0.0009 | 0.0005 | 0.0009 | 0.0005 | --- | 0.0006 | --- | --- | < 0.0002 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00056 | 0.00041 | 0.00017 | 0.00007 | --- | 0.0001 | --- | --- | 0.00004 | --- |
| Strontium | mg/L | 0.0539 | 0.0937 | 0.089 | 0.0702 | --- | 0.0873 | --- | --- | 0.0438 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | 0.0002 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.00029 | 0.000163 | 0.000407 | 0.000316 | --- | 0.000414 | --- | --- | 0.000156 | --- |
| Vanadium | mg/L | < 0.00003 | < 0.00003 | 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000003 | 0.000003 | 0.000004 | 0.000006 | --- | 0.000003 | --- | --- | 0.000001 | --- |
| Zinc | mg/L | 0.002 | 0.005 | < 0.001 | 0.002 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN50-51 Composite
**Weight:** 1 kg

| Analyte | Week/Event | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10199-NOV11 | CA11790-NOV11 | CA10010-DEC11 | CA10072-DEC11 | CA11046-DEC11 | CA10269-DEC11 | CA10019-JAN12 | CA10102-JAN12 | CA11052-JAN12 | CA10192-JAN12 |
| | Unit | 22-Nov-11 | 29-Nov-11 | 6-Dec-11 | 13-Dec-11 | 20-Dec-11 | 28-Dec-11 | 3-Jan-12 | 10-Jan-12 | 17-Jan-12 | 24-Jan-12 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 893 | 897 | 875 | 899 | 888 | 869 | 932 | 902 | 891 | 905 |
| pH | no unit | 7.56 | 7.45 | 7.30 | 7.30 | 7.10 | 7.70 | 7.47 | 7.65 | 7.37 | 7.66 |
| Alkalinity | mg/L as CaCO3 | 12 | 20 | 9 | 10 | 11 | 11 | 12 | 12 | 10 | 11 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 66 | 89 | 9 | 73 | 88 | 103 | 86 | 95 | 75 | 109 |
| Sulphate | mg/L | 23 | 28 | 23 | 29 | 30 | 29 | 31 | 38 | 30 | 34 |
| Calcium | mg/L | 10.2 | 11.8 | 8.94 | 11.3 | 11.1 | 12.6 | 11 | 14.2 | 10.4 | 12 |
| Fluoride | mg/L | --- | --- | <0.06 | --- | --- | --- | <0.06 | --- | --- | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Aluminum | mg/L | --- | --- | 0.02 | --- | --- | --- | < 0.01 | --- | --- | --- |
| Arsenic | mg/L | --- | --- | 0.0116 | --- | --- | --- | 0.015 | --- | --- | --- |
| Barium | mg/L | --- | --- | 0.00173 | --- | --- | --- | 0.00271 | --- | --- | --- |
| Boron | mg/L | --- | --- | 0.0006 | --- | --- | --- | 0.0007 | --- | --- | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- | --- | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- | --- | --- |
| Cobalt | mg/L | --- | --- | 0.000163 | --- | --- | --- | 0.000146 | --- | --- | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- | --- | --- |
| Iron | mg/L | --- | --- | 0.004 | --- | --- | --- | < 0.003 | --- | --- | --- |
| Potassium | mg/L | --- | --- | 1.09 | --- | --- | --- | 1.13 | --- | --- | --- |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Magnesium | mg/L | --- | --- | 1.97 | --- | --- | --- | 2.8 | --- | --- | --- |
| Manganese | mg/L | --- | --- | 0.0165 | --- | --- | --- | 0.039 | --- | --- | --- |
| Molybdenum | mg/L | --- | --- | 0.00022 | --- | --- | --- | 0.00026 | --- | --- | --- |
| Sodium | mg/L | --- | --- | 0.3 | --- | --- | --- | 0.31 | --- | --- | --- |
| Nickel | mg/L | --- | --- | 0.0002 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Lead | mg/L | --- | --- | 0.00006 | --- | --- | --- | 0.00006 | --- | --- | --- |
| Antimony | mg/L | --- | --- | 0.0002 | --- | --- | --- | 0.0002 | --- | --- | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |
| Tin | mg/L | --- | --- | 0.00018 | --- | --- | --- | 0.00006 | --- | --- | --- |
| Strontium | mg/L | --- | --- | 0.0342 | --- | --- | --- | 0.0412 | --- | --- | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- | --- | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- | --- | --- |
| Uranium | mg/L | --- | --- | 0.000048 | --- | --- | --- | 0.000076 | --- | --- | --- |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- | --- | --- |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000001 | --- | --- | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** CN50-51 Composite
**Weight:** 1 kg

Terminate wk30

| Analyte | Week/Event | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10252-JAN12 | CA10051-FEB12 | CA10114-FEB12 | CA10172-FEB12 | CA10217-FEB12 | CA10014-MAR12 | CA10084-MAR12 | CA10126-MAR12 | CA10192-MAR12 | CA10019-APR12 | CA10058-APR12 |
| | Unit | 31-Jan-12 | 7-Feb-12 | 14-Feb-12 | 21-Feb-12 | 28-Feb-12 | 6-Mar-12 | 13-Mar-12 | 20-Mar-12 | 27-Mar-12 | 3-Apr-12 | 10-Apr-12 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 892 | 894 | 897 | 908 | 875 | 880 | 869 | 859 | 858 | 904 | 926 |
| pH | no unit | 6.94 | 6.88 | 7.29 | 7.28 | 7.21 | 7.02 | 7.44 | 7.09 | 7.31 | 7.41 | 7.15 |
| Alkalinity | mg/L as CaCO3 | 8 | 8 | 9 | 8 | 7 | 16 | 10 | 9 | 9 | 11 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 65 | 100 | 82 | 74 | 98 | 110 | 87 | 119 | 94 | 151 | 128 |
| Sulphate | mg/L | 25 | 28 | 31 | 28 | 23 | 29 | 33 | 32 | 39 | 65 | 29 |
| Calcium | mg/L | 9.04 | 9.83 | 10.9 | 9.74 | 8.8 | 11.2 | 12.7 | 11.6 | 13.8 | 17.6 | < 0.06 |
| Fluoride | mg/L | <0.06 | --- | --- | --- | --- | < 0.06 | --- | --- | --- | --- | 9.98 |
| Mercury | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | 0.02 | --- | --- | --- | --- | 0.02 | --- | --- | --- | --- | < 0.01 |
| Arsenic | mg/L | 0.0103 | --- | --- | --- | --- | 0.0078 | --- | --- | --- | --- | 0.0071 |
| Barium | mg/L | 0.00176 | --- | --- | --- | --- | 0.00208 | --- | --- | --- | --- | 0.00213 |
| Boron | mg/L | 0.0004 | --- | --- | --- | --- | 0.0003 | --- | --- | --- | --- | 0.0002 |
| Beryllium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | < 0.00001 | --- | --- | --- | --- | < 0.00001 | --- | --- | --- | --- | < 0.00001 |
| Cadmium | mg/L | < 0.000003 | --- | --- | --- | --- | < 0.000003 | --- | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | 0.000101 | --- | --- | --- | --- | 0.000104 | --- | --- | --- | --- | 0.000115 |
| Chromium | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Copper | mg/L | < 0.0005 | --- | --- | --- | --- | < 0.0005 | --- | --- | --- | --- | < 0.0005 |
| Iron | mg/L | 0.005 | --- | --- | --- | --- | < 0.003 | --- | --- | --- | --- | < 0.003 |
| Potassium | mg/L | 1.06 | --- | --- | --- | --- | 0.911 | --- | --- | --- | --- | 1.08 |
| Lithium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | 2.45 | --- | --- | --- | --- | 2.44 | --- | --- | --- | --- | 3.31 |
| Manganese | mg/L | 0.0244 | --- | --- | --- | --- | 0.031 | --- | --- | --- | --- | 0.029 |
| Molybdenum | mg/L | 0.00015 | --- | --- | --- | --- | 0.00019 | --- | --- | --- | --- | 0.00044 |
| Sodium | mg/L | 0.24 | --- | --- | --- | --- | 0.21 | --- | --- | --- | --- | 0.22 |
| Nickel | mg/L | 0.0002 | --- | --- | --- | --- | 0.0002 | --- | --- | --- | --- | 0.0002 |
| Lead | mg/L | 0.00008 | --- | --- | --- | --- | 0.00006 | --- | --- | --- | --- | 0.00003 |
| Antimony | mg/L | < 0.0002 | --- | --- | --- | --- | < 0.0002 | --- | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | < 0.001 | --- | --- | --- | --- | < 0.001 | --- | --- | --- | --- | < 0.001 |
| Tin | mg/L | 0.00009 | --- | --- | --- | --- | 0.00004 | --- | --- | --- | --- | 0.00008 |
| Strontium | mg/L | 0.0365 | --- | --- | --- | --- | 0.0433 | --- | --- | --- | --- | 0.0437 |
| Titanium | mg/L | < 0.0001 | --- | --- | --- | --- | < 0.0001 | --- | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | < 0.00002 | --- | --- | --- | --- | < 0.00002 | --- | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | 0.000039 | --- | --- | --- | --- | 0.000036 | --- | --- | --- | --- | 0.000459 |
| Vanadium | mg/L | < 0.00003 | --- | --- | --- | --- | 0.00004 | --- | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | < 0.00003 | --- | --- | --- | --- | < 0.00003 | --- | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | 0.000001 | --- | --- | --- | --- | 0.000002 | --- | --- | --- | --- | < 0.000001 |
| Zinc | mg/L | < 0.001 | --- | --- | --- | --- | 0.002 | --- | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F1 Concentrate (C1-C8) Comp
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10567-SEP11 | CA10196-OCT11 | CA10197-OCT11 | CA10198-OCT11 | CA11263-OCT11 | CA10035-NOV11 | CA10110-NOV11 | CA10170-NOV11 | CA10260-NOV11 | CA11817-NOV11 |
| | | 28-Sep-11 | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 | 30-Nov-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 845 | 987 | 977 | 968 | 980 | 961 | 973 | 961 | 955 | 958 |
| pH | no unit | 7.26 | 7.60 | 7.13 | 7.56 | 7.60 | 7.40 | 7.45 | 7.38 | 7.10 | 6.68 |
| Alkalinity | mg/L as CaCO3 | 13 | 23 | 24 | 26 | 25 | 22 | 20 | 16 | 14 | 23 |
| Acidity | mg/L as CaCO3 | 6 | 14 | 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 163 | 258 | 244 | 249 | 183 | 190 | 140 | 150 | 205 | 192 |
| Sulphate | mg/L | 74 | 110 | 81 | 82 | 80 | 88 | 83 | 73 | 76 | 69 |
| Calcium | mg/L | 21.4 | 38.3 | 28.0 | 28.7 | 28.8 | 29.7 | 27.7 | 24.2 | 24.3 | 24.2 |
| Fluoride | mg/L | < 0.06 | < 0.06 | 0.07 | < 0.06 | --- | < 0.06 | --- | --- | 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | < 0.01 | < 0.01 | 0.01 | 0.02 | --- | 0.010 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.212 | 0.600 | 0.498 | 0.439 | --- | 0.252 | --- | --- | 0.181 | --- |
| Barium | mg/L | 0.00432 | 0.00709 | 0.00556 | 0.0044 | --- | 0.0045 | --- | --- | 0.00425 | --- |
| Boron | mg/L | 0.0041 | 0.0072 | 0.0052 | 0.0037 | --- | 0.0047 | --- | --- | 0.0042 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | 0.00011 | 0.00009 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000006 | 0.000005 | 0.000004 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000083 | 0.000246 | 0.000253 | 0.000264 | --- | 0.000393 | --- | --- | 0.00034 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0012 | 0.0014 | 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | 0.0021 | --- |
| Iron | mg/L | 0.007 | 0.005 | 0.006 | 0.004 | --- | 0.012 | --- | --- | 0.023 | --- |
| Potassium | mg/L | 6.34 | 8.7 | 5.79 | 4.98 | --- | 4.75 | --- | --- | 3.82 | --- |
| Lithium | mg/L | < 0.001 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 6.31 | 11.4 | 7.28 | 6.88 | --- | 7.24 | --- | --- | 5.81 | --- |
| Manganese | mg/L | 0.0265 | 0.0521 | 0.0555 | 0.0626 | --- | 0.0597 | --- | --- | 0.0436 | --- |
| Molybdenum | mg/L | 0.00122 | 0.0021 | 0.00127 | 0.00102 | --- | 0.0012 | --- | --- | 0.00116 | --- |
| Sodium | mg/L | 5.12 | 7.5 | 4.03 | 3.25 | --- | 2.68 | --- | --- | 1.74 | --- |
| Nickel | mg/L | 0.0003 | 0.0019 | 0.0014 | 0.0016 | --- | 0.0028 | --- | --- | 0.0018 | --- |
| Lead | mg/L | 0.00069 | 0.00043 | 0.00018 | 0.00011 | --- | 0.00006 | --- | --- | 0.00012 | --- |
| Antimony | mg/L | 0.0009 | 0.0013 | 0.0018 | 0.0013 | --- | 0.0012 | --- | --- | 0.0009 | --- |
| Selenium | mg/L | < 0.001 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00091 | 0.00046 | 0.00015 | 0.00006 | --- | 0.0001 | --- | --- | 0.00088 | --- |
| Strontium | mg/L | 0.119 | 0.213 | 0.152 | 0.15 | --- | 0.155 | --- | --- | 0.13 | --- |
| Titanium | mg/L | 0.0001 | 0.0002 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000272 | 0.000735 | 0.000455 | 0.000431 | --- | 0.000353 | --- | --- | 0.00033 | --- |
| Vanadium | mg/L | 0.00005 | 0.00009 | < 0.00003 | 0.00005 | --- | < 0.00003 | --- | --- | 0.00006 | --- |
| Tungsten | mg/L | 0.00004 | 0.00003 | 0.00004 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000011 | 0.000023 | 0.000009 | 0.000006 | --- | 0.000004 | --- | --- | 0.000004 | --- |
| Zinc | mg/L | 0.003 | 0.001 | < 0.001 | < 0.001 | --- | 0.001 | --- | --- | 0.002 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F1 Concentrate (C1-C8) Comp
**Weight:** 1 kg

Terminated Jan19/12

| Analyte | Event # | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| | | CA10033-DEC11 | CA10085-DEC11 | CA11072-DEC11 | CA10292-DEC11 | CA10045-JAN12 | CA10086-JAN12 | CA11024-JAN12 |
| | | 7-Dec-11 | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 |
| | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 960 | 961 | 972 | 950 | 934 | 955 | 957 |
| pH | no unit | 7.18 | 7.25 | 6.73 | 7.04 | 7.22 | 7.12 | 7.07 |
| Alkalinity | mg/L as CaCO3 | 12 | 13 | 11 | 13 | 13 | 11 | 10 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 138 | 189 | 138 | 128 | 122 | 124 | 170 |
| Sulphate | mg/L | 65 | 63 | 67 | 60 | 57 | 58 | 62 |
| Calcium | mg/L | 22.7 | 24.6 | 19.8 | 21.4 | 19.7 | 20.7 | 21.6 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | --- | 0.102 | --- | --- | --- | 0.0737 |
| Barium | mg/L | --- | --- | 0.00357 | --- | --- | --- | 0.00334 |
| Boron | mg/L | --- | --- | 0.0025 | --- | --- | --- | 0.0027 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | 0.00007 |
| Cadmium | mg/L | --- | --- | 0.000003 | --- | --- | --- | 0.000005 |
| Cobalt | mg/L | --- | --- | 0.000344 | --- | --- | --- | 0.00036 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | 0.013 | --- | --- | --- | 0.02 |
| Potassium | mg/L | --- | --- | 2.87 | --- | --- | --- | 2.86 |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | 4.42 | --- | --- | --- | 4.33 |
| Manganese | mg/L | --- | --- | 0.0417 | --- | --- | --- | 0.0405 |
| Molybdenum | mg/L | --- | --- | 0.00146 | --- | --- | --- | 0.00088 |
| Sodium | mg/L | --- | --- | 1 | --- | --- | --- | 0.85 |
| Nickel | mg/L | --- | --- | 0.0013 | --- | --- | --- | 0.001 |
| Lead | mg/L | --- | --- | 0.00014 | --- | --- | --- | 0.00023 |
| Antimony | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0008 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | 0.00005 | --- | --- | --- | 0.00005 |
| Strontium | mg/L | --- | --- | 0.105 | --- | --- | --- | 0.112 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.00018 | --- | --- | --- | 0.000186 |
| Vanadium | mg/L | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | 0.000002 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | --- | 0.003 | --- | --- | --- | 0.002 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F2 Concentrate (C1-C8) Comp
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10567-SEP11 | CA10196-OCT11 | CA10197-OCT11 | CA10198-OCT11 | CA11263-OCT11 | CA10035-NOV11 | CA10110-NOV11 | CA10170-NOV11 | CA10260-NOV11 | CA11817-NOV11 |
| | | 28/Sep/11 | 5/Oct/11 | 12/Oct/11 | 19/Oct/11 | 26/Oct/11 | 2/Nov/11 | 9/Nov/11 | 16/Nov/11 | 23/Nov/11 | 30/Nov/11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 853 | 990 | 966 | 970 | 988 | 943 | 975 | 959 | 968 | 960 |
| pH | no unit | 7.36 | 7.74 | 7.86 | 7.43 | 7.77 | 7.59 | 7.62 | 7.64 | 7.20 | 6.91 |
| Alkalinity | mg/L as CaCO3 | 13 | 23 | 51 | 22 | 24 | 17 | 23 | 22 | 24 | 23 |
| Acidity | mg/L as CaCO3 | 4 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 180 | 151 | 159 | 149 | 160 | 144 | 123 | 133 | 140 | 172 |
| Sulphate | mg/L | 41 | 47 | 40 | 46 | 67 | 59 | 66 | 59 | 55 | 55 |
| Calcium | mg/L | 13.8 | 18.4 | 14.5 | 15.5 | 22.2 | 19.7 | 22.8 | 18.7 | 18 | 19.1 |
| Fluoride | mg/L | < 0.06 | 0.06 | < 0.06 | < 0.06 | --- | 0.07 | --- | --- | 0.08 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.01 | 0.02 | 0.01 | 0.02 | --- | 0.030 | --- | --- | 0.02 | --- |
| Arsenic | mg/L | 0.0915 | 0.224 | 0.26 | 0.193 | --- | 0.136 | --- | --- | 0.0602 | --- |
| Barium | mg/L | 0.00341 | 0.00389 | 0.00285 | 0.00267 | --- | 0.00308 | --- | --- | 0.00303 | --- |
| Boron | mg/L | 0.0052 | 0.0065 | 0.0047 | 0.0032 | --- | 0.0052 | --- | --- | 0.0043 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | 0.00003 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000008 | 0.000011 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000107 | 0.000215 | 0.000102 | 0.000105 | --- | 0.000139 | --- | --- | 0.000162 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0025 | 0.0026 | 0.0009 | 0.0007 | --- | 0.0006 | --- | --- | 0.0008 | --- |
| Iron | mg/L | 0.014 | 0.051 | 0.008 | 0.008 | --- | 0.005 | --- | --- | < 0.003 | --- |
| Potassium | mg/L | 4.91 | 4.97 | 3.57 | 3.21 | --- | 3.93 | --- | --- | 3.09 | --- |
| Lithium | mg/L | < 0.001 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 4.78 | 6.16 | 4.26 | 4.33 | --- | 6.18 | --- | --- | 5.73 | --- |
| Manganese | mg/L | 0.0236 | 0.0368 | 0.0281 | 0.0276 | --- | 0.0273 | --- | --- | 0.0362 | --- |
| Molybdenum | mg/L | 0.00287 | 0.00248 | 0.00141 | 0.00127 | --- | 0.00173 | --- | --- | 0.00156 | --- |
| Sodium | mg/L | 5.57 | 5.58 | 3.18 | 2.7 | --- | 3.21 | --- | --- | 2.02 | --- |
| Nickel | mg/L | 0.0005 | 0.0011 | 0.0003 | 0.0006 | --- | 0.0013 | --- | --- | 0.0007 | --- |
| Lead | mg/L | 0.00038 | 0.00034 | 0.00007 | 0.00007 | --- | 0.00003 | --- | --- | 0.00003 | --- |
| Antimony | mg/L | 0.002 | 0.0021 | 0.0018 | 0.0015 | --- | 0.0017 | --- | --- | 0.0015 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00352 | 0.00211 | 0.00035 | 0.00019 | --- | 0.0003 | --- | --- | 0.00055 | --- |
| Strontium | mg/L | 0.101 | 0.13 | 0.102 | 0.108 | --- | 0.13 | --- | --- | 0.121 | --- |
| Titanium | mg/L | < 0.0001 | 0.0002 | < 0.0001 | 0.0002 | --- | 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000325 | 0.000483 | 0.000362 | 0.000423 | --- | 0.000465 | --- | --- | 0.000442 | --- |
| Vanadium | mg/L | 0.00006 | 0.00008 | < 0.00003 | 0.00006 | --- | < 0.00003 | --- | --- | 0.00005 | --- |
| Tungsten | mg/L | 0.00026 | 0.00014 | 0.00009 | < 0.00003 | --- | 0.00007 | --- | --- | 0.00004 | --- |
| Yttrium | mg/L | 0.000017 | 0.000043 | 0.000006 | 0.000005 | --- | 0.000004 | --- | --- | 0.000002 | --- |
| Zinc | mg/L | 0.004 | 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F2 Concentrate (C1-C8) Comp
**Weight:** 1 kg

Terminated Jan19/12

| Analyte | Event # | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| | | CA10033-DEC11 | CA10085-DEC11 | CA11072-DEC11 | CA10292-DEC11 | CA10045-JAN12 | CA10086-JAN12 | CA11024-JAN12 |
| | | 7/Dec/11 | 14/Dec/11 | 21/Dec/11 | 29/Dec/11 | 4/Jan/12 | 11/Jan/12 | 18/Jan/12 |
| | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 952 | 958 | 967 | 959 | 931 | 948 | 958 |
| pH | no unit | 6.63 | 7.44 | 6.81 | 7.41 | 7.69 | 7.46 | 7.31 |
| Alkalinity | mg/L as CaCO3 | 22 | 16 | 15 | 16 | 14 | 14 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 163 | 156 | 118 | 114 | 125 | 118 | 160 |
| Sulphate | mg/L | 52 | 50 | 51 | 49 | 40 | 52 | 55 |
| Calcium | mg/L | 18.2 | 18.5 | 15.1 | 16.7 | 13.1 | 15.6 | 17.1 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | 0.02 | --- | --- | --- | 0.02 |
| Arsenic | mg/L | --- | --- | 0.0235 | --- | --- | --- | 0.0173 |
| Barium | mg/L | --- | --- | 0.00277 | --- | --- | --- | 0.00299 |
| Boron | mg/L | --- | --- | 0.0029 | --- | --- | --- | 0.0032 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | 0.00004 |
| Cadmium | mg/L | --- | --- | 0.000004 | --- | --- | --- | 0.000004 |
| Cobalt | mg/L | --- | --- | 0.000216 | --- | --- | --- | 0.000283 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Iron | mg/L | --- | --- | 0.006 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | 2.41 | --- | --- | --- | 2.46 |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Magnesium | mg/L | --- | --- | 5.38 | --- | --- | --- | 6.46 |
| Manganese | mg/L | --- | --- | 0.0325 | --- | --- | --- | 0.0369 |
| Molybdenum | mg/L | --- | --- | 0.0013 | --- | --- | --- | 0.00102 |
| Sodium | mg/L | --- | --- | 1.18 | --- | --- | --- | 1.06 |
| Nickel | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0006 |
| Lead | mg/L | --- | --- | 0.00004 | --- | --- | --- | 0.00004 |
| Antimony | mg/L | --- | --- | 0.001 | --- | --- | --- | 0.0011 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | 0.001 |
| Tin | mg/L | --- | --- | 0.00003 | --- | --- | --- | 0.00003 |
| Strontium | mg/L | --- | --- | 0.103 | --- | --- | --- | 0.113 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.000319 | --- | --- | --- | 0.000312 |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | 0.00004 |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F7 Ro Con (C1-C8) Comp
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10567-SEP11 | CA10196-OCT11 | CA10197-OCT11 | CA10198-OCT11 | CA11263-OCT11 | CA10035-NOV11 | CA10110-NOV11 | CA10170-NOV11 | CA10260-NOV11 | CA11817-NOV11 |
| | | 28/Sep/11 | 5/Oct/11 | 12/Oct/11 | 19/Oct/11 | 26/Oct/11 | 2/Nov/11 | 9/Nov/11 | 16/Nov/11 | 23/Nov/11 | 30/Nov/11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 871 | 974 | 974 | 958 | 958 | 954 | 957 | 948 | 948 | 961 |
| pH | no unit | 7.04 | 7.39 | 6.97 | 7.25 | 7.16 | 7.14 | 7.25 | 7.22 | 6.92 | 6.71 |
| Alkalinity | mg/L as CaCO3 | 9 | 14 | 21 | 14 | 13 | 11 | 11 | 11 | 12 | 10 |
| Acidity | mg/L as CaCO3 | 198 | 159 | 123 | 76 | 56 | 42 | 32 | 31 | 26 | 27 |
| Conductivity | uS/cm | 419 | 258 | 282 | 282 | 202 | 230 | 143 | 149 | 152 | 184 |
| Sulphate | mg/L | 53 | 56 | 64 | 67 | 70 | 55 | 55 | 49 | 47 | 45 |
| Calcium | mg/L | 50 | 42.7 | 37.3 | 37.1 | 37.1 | 32.4 | 32.4 | 27.1 | 26 | 26 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | < 0.01 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.0503 | 0.0942 | 0.0966 | 0.0834 | --- | 0.0536 | --- | --- | 0.0424 | --- |
| Barium | mg/L | 0.00417 | 0.00371 | 0.00317 | 0.00277 | --- | 0.00173 | --- | --- | 0.00134 | --- |
| Boron | mg/L | 0.0048 | 0.0054 | 0.005 | 0.0036 | --- | 0.0037 | --- | --- | 0.0032 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | 0.00006 | 0.00002 | 0.00003 | 0.00013 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | < 0.000003 | 0.000008 | 0.000006 | 0.000014 | --- | 0.000004 | --- | --- | 0.00001 | --- |
| Cobalt | mg/L | 0.000272 | 0.000654 | 0.000688 | 0.000641 | --- | 0.000408 | --- | --- | 0.000354 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0136 | 0.0051 | 0.0039 | 0.0035 | --- | 0.0031 | --- | --- | 0.0023 | --- |
| Iron | mg/L | 0.004 | < 0.002 | 0.02 | < 0.003 | --- | 0.002 | --- | --- | < 0.003 | --- |
| Potassium | mg/L | 4.84 | 3.38 | 2.64 | 2.29 | --- | 1.8 | --- | --- | 1.48 | --- |
| Lithium | mg/L | 0.003 | 0.003 | 0.004 | 0.003 | --- | 0.003 | --- | --- | 0.003 | --- |
| Magnesium | mg/L | 11.8 | 9.98 | 7.89 | 6.95 | --- | 5.00 | --- | --- | 3.68 | --- |
| Manganese | mg/L | 0.0865 | 0.17 | 0.182 | 0.169 | --- | 0.102 | --- | --- | 0.077 | --- |
| Molybdenum | mg/L | 0.00044 | 0.00055 | 0.00031 | 0.00031 | --- | 0.00013 | --- | --- | 0.00014 | --- |
| Sodium | mg/L | 3.7 | 2.58 | 1.86 | 1.56 | --- | 1.11 | --- | --- | 0.81 | --- |
| Nickel | mg/L | 0.0008 | 0.0025 | 0.0017 | 0.0016 | --- | 0.0017 | --- | --- | 0.0007 | --- |
| Lead | mg/L | 0.00011 | 0.00003 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0005 | 0.0004 | 0.0005 | < 0.0002 | --- | 0.0003 | --- | --- | < 0.0002 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.0032 | 0.00149 | 0.00038 | 0.00023 | --- | 0.00015 | --- | --- | 0.00046 | --- |
| Strontium | mg/L | 0.079 | 0.064 | 0.0534 | 0.0507 | --- | 0.0401 | --- | --- | 0.0302 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000115 | 0.000087 | 0.000084 | 0.000098 | --- | 0.000068 | --- | --- | 0.000052 | --- |
| Vanadium | mg/L | < 0.00003 | 0.00006 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | 0.00003 | --- |
| Tungsten | mg/L | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.00001 | 0.000017 | 0.000004 | 0.000004 | --- | 0.000001 | --- | --- | 0.000001 | --- |
| Zinc | mg/L | 0.004 | 0.002 | 0.002 | 0.001 | --- | 0.001 | --- | --- | 0.002 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F7 Ro Con (C1-C8) Comp
**Weight:** 1 kg

Terminated Jan19/12

| Analyte | Event # | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| | | CA10033-DEC11 | CA10085-DEC11 | CA11072-DEC11 | CA10292-DEC11 | CA10045-JAN12 | CA10086-JAN12 | CA11024-JAN12 |
| | | 7/Dec/11 | 14/Dec/11 | 21/Dec/11 | 29/Dec/11 | 4/Jan/12 | 11/Jan/12 | 18/Jan/12 |
| | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 953 | 958 | 958 | 954 | 916 | 954 | 963 |
| pH | no unit | 6.48 | 7.41 | 7.25 | 7.09 | 7.58 | 7.46 | 7.22 |
| Alkalinity | mg/L as CaCO3 | 15 | 12 | 10 | 11 | 10 | 12 | 11 |
| Acidity | mg/L as CaCO3 | 23 | 12 | 14 | 6 | 5 | 7 | 9 |
| Conductivity | uS/cm | 166 | 109 | 108 | 92 | 74 | 93 | 128 |
| Sulphate | mg/L | 41 | 35 | 34 | 29 | 22 | 29 | 31 |
| Calcium | mg/L | 23.6 | 22.1 | 19.1 | 17.1 | 13.2 | 16.2 | 17.1 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | 0.01 |
| Arsenic | mg/L | --- | --- | 0.0297 | --- | --- | --- | 0.0206 |
| Barium | mg/L | --- | --- | 0.00108 | --- | --- | --- | 0.00106 |
| Boron | mg/L | --- | --- | 0.002 | --- | --- | --- | 0.0022 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | 0.00007 |
| Cadmium | mg/L | --- | --- | 0.00001 | --- | --- | --- | 0.000012 |
| Cobalt | mg/L | --- | --- | 0.000328 | --- | --- | --- | 0.000398 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0014 |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | < 0.003 |
| Potassium | mg/L | --- | --- | 1.03 | --- | --- | --- | 0.95 |
| Lithium | mg/L | --- | --- | 0.003 | --- | --- | --- | 0.003 |
| Magnesium | mg/L | --- | --- | 2.77 | --- | --- | --- | 2.72 |
| Manganese | mg/L | --- | --- | 0.0741 | --- | --- | --- | 0.0677 |
| Molybdenum | mg/L | --- | --- | 0.00016 | --- | --- | --- | 0.00011 |
| Sodium | mg/L | --- | --- | 0.47 | --- | --- | --- | 0.39 |
| Nickel | mg/L | --- | --- | 0.0007 | --- | --- | --- | 0.0006 |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | 0.00011 | --- | --- | --- | 0.0001 |
| Strontium | mg/L | --- | --- | 0.0225 | --- | --- | --- | 0.0197 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.000042 | --- | --- | --- | 0.00009 |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | 0.00003 |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000001 |
| Zinc | mg/L | --- | --- | 0.002 | --- | --- | --- | 0.004 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F8 Ro Con (C1-C10) Comp
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10567-SEP11 | CA10196-OCT11 | CA10197-OCT11 | CA10198-OCT11 | CA11263-OCT11 | CA10035-NOV11 | CA10110-NOV11 | CA10170-NOV11 | CA10260-NOV11 | CA11817-NOV11 |
| | | 28/Sep/11 | 5/Oct/11 | 12/Oct/11 | 19/Oct/11 | 26/Oct/11 | 2/Nov/11 | 9/Nov/11 | 16/Nov/11 | 23/Nov/11 | 30/Nov/11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 883 | 946 | 990 | 965 | 974 | 962 | 963 | 967 | 959 | 955 |
| pH | no unit | 6.94 | 7.17 | 7.07 | 7.03 | 7.26 | 6.98 | 7.11 | 6.92 | 6.78 | 7.06 |
| Alkalinity | mg/L as CaCO3 | 8 | 8 | 17 | 4 | 8 | 8 | 8 | 7 | 6 | 6 |
| Acidity | mg/L as CaCO3 | 72 | 72 | 75 | 48 | 52 | 48 | 50 | 36 | 18 | 26 |
| Conductivity | uS/cm | 255 | 163 | 197 | 161 | 129 | 131 | 107 | 101 | 110 | 91 |
| Sulphate | mg/L | 41 | 37 | 41 | 34 | 38 | 38 | 40 | 33 | 32 | 28 |
| Calcium | mg/L | 30.7 | 26.6 | 24.5 | 18.6 | 20.8 | 21.7 | 22.4 | 17.1 | 16.4 | 16.2 |
| Fluoride | mg/L | < 0.06 | < 0.06 | 0.06 | 0.07 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.02 | < 0.01 | < 0.01 | 0.01 | --- | 0.030 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.0067 | 0.0165 | 0.032 | 0.0451 | --- | 0.0609 | --- | --- | 0.0531 | --- |
| Barium | mg/L | 0.013 | 0.0099 | 0.00793 | 0.00798 | --- | 0.00606 | --- | --- | 0.00322 | --- |
| Boron | mg/L | 0.003 | 0.0034 | 0.0033 | 0.0023 | --- | 0.0033 | --- | --- | 0.0026 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000008 | 0.000004 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000079 | 0.000109 | 0.0001 | 0.000113 | --- | 0.000153 | --- | --- | 0.000119 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0229 | 0.0124 | 0.0039 | 0.0013 | --- | 0.0009 | --- | --- | 0.0007 | --- |
| Iron | mg/L | 0.012 | 0.005 | 0.007 | 0.01 | --- | 0.01 | --- | --- | 0.006 | --- |
| Potassium | mg/L | 7.76 | 6.97 | 6.71 | 5.15 | --- | 5.35 | --- | --- | 4 | --- |
| Lithium | mg/L | 0.002 | 0.003 | 0.003 | 0.002 | --- | 0.003 | --- | --- | 0.002 | --- |
| Magnesium | mg/L | 3.17 | 2.82 | 2.54 | 1.86 | --- | 2.05 | --- | --- | 1.42 | --- |
| Manganese | mg/L | 0.0134 | 0.00954 | 0.00966 | 0.00997 | --- | 0.00903 | --- | --- | 0.00639 | --- |
| Molybdenum | mg/L | 0.00024 | 0.00022 | 0.00023 | 0.00019 | --- | 0.00015 | --- | --- | 0.00015 | --- |
| Sodium | mg/L | 3.14 | 2.76 | 2.38 | 1.79 | --- | 1.82 | --- | --- | 1.19 | --- |
| Nickel | mg/L | 0.0003 | 0.0009 | 0.0002 | 0.0003 | --- | 0.0009 | --- | --- | 0.0002 | --- |
| Lead | mg/L | 0.0001 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0005 | 0.0002 | 0.0003 | < 0.0002 | --- | 0.0002 | --- | --- | < 0.0002 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00077 | 0.00021 | 0.00018 | 0.00011 | --- | 0.00015 | --- | --- | 0.00041 | --- |
| Strontium | mg/L | 0.176 | 0.159 | 0.154 | 0.123 | --- | 0.148 | --- | --- | 0.12 | --- |
| Titanium | mg/L | < 0.0001 | 0.0001 | < 0.0001 | < 0.0001 | --- | 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000444 | 0.000379 | 0.000414 | 0.000249 | --- | 0.000259 | --- | --- | 0.000287 | --- |
| Vanadium | mg/L | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | < 0.00003 | < 0.00003 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000032 | 0.000008 | 0.000007 | 0.000004 | --- | 0.000003 | --- | --- | 0.000003 | --- |
| Zinc | mg/L | 0.004 | < 0.001 | 0.002 | 0.001 | --- | 0.001 | --- | --- | 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F8 Ro Con (C1-C10) Comp
**Weight:** 1 kg

Terminated Jan19/12

| Analyte | Event # | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|
| | | CA10033-DEC11 | CA10085-DEC11 | CA11072-DEC11 | CA11263-OCT11 | CA10045-JAN12 | CA10086-JAN12 | CA11024-JAN12 |
| | | 7/Dec/11 | 14/Dec/11 | 21/Dec/11 | 29/Dec/11 | 4/Jan/12 | 11/Jan/12 | 18/Jan/12 |
| | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 967 | 966 | 964 | 961 | 926 | 958 | 979 |
| pH | no unit | 6.88 | 6.50 | 6.82 | 6.82 | 6.84 | 6.86 | 6.85 |
| Alkalinity | mg/L as CaCO3 | 5 | 4 | 6 | 4 | 4 | 3 | 5 |
| Acidity | mg/L as CaCO3 | 26 | 23 | 30 | 23 | 15 | 19 | 22 |
| Conductivity | uS/cm | 89 | 94 | 136 | 105 | 68 | 98 | 122 |
| Sulphate | mg/L | 30 | 30 | 39 | 29 | 24 | 27 | 35 |
| Calcium | mg/L | 15.8 | 14.9 | 17.9 | 13.9 | 11.7 | 12.6 | 16.6 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | 0.01 |
| Arsenic | mg/L | --- | --- | 0.0309 | --- | --- | --- | 0.0257 |
| Barium | mg/L | --- | --- | 0.00401 | --- | --- | --- | 0.00279 |
| Boron | mg/L | --- | --- | 0.0021 | --- | --- | --- | 0.0023 |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | 0.00001 |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 |
| Cobalt | mg/L | --- | --- | 0.000184 | --- | --- | --- | 0.00013 |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 |
| Copper | mg/L | --- | --- | 0.0006 | --- | --- | --- | 0.0007 |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | 0.003 |
| Potassium | mg/L | --- | --- | 3.66 | --- | --- | --- | 3.31 |
| Lithium | mg/L | --- | --- | 0.002 | --- | --- | --- | 0.002 |
| Magnesium | mg/L | --- | --- | 1.44 | --- | --- | --- | 1.17 |
| Manganese | mg/L | --- | --- | 0.0082 | --- | --- | --- | 0.00644 |
| Molybdenum | mg/L | --- | --- | 0.00015 | --- | --- | --- | 0.00009 |
| Sodium | mg/L | --- | --- | 1 | --- | --- | --- | 0.83 |
| Nickel | mg/L | --- | --- | 0.0004 | --- | --- | --- | 0.0002 |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 |
| Tin | mg/L | --- | --- | 0.00012 | --- | --- | --- | 0.00015 |
| Strontium | mg/L | --- | --- | 0.139 | --- | --- | --- | 0.124 |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 |
| Uranium | mg/L | --- | --- | 0.000281 | --- | --- | --- | 0.000271 |
| Vanadium | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 |
| Yttrium | mg/L | --- | --- | 0.000001 | --- | --- | --- | 0.000002 |
| Zinc | mg/L | --- | --- | 0.001 | --- | --- | --- | 0.005 |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F1 Flot Tails 1
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10468-SEP11 | CA10470-SEP11 | CA10180-OCT11 | CA10181-OCT11 | CA10182-OCT11 | CA11264-OCT11 | CA10036-NOV11 | CA10111-NOV11 | CA10171-NOV11 | CA10262-NOV11 |
| | | 21-Sep-11 | 28-Sep-11 | 5-Oct-11 | 12-Oct-11 | 19-Oct-11 | 26-Oct-11 | 2-Nov-11 | 9-Nov-11 | 16-Nov-11 | 23-Nov-11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 750 | 1000 | 995 | 980 | 983 | 963 | 1003 | 980 | 980 | 988 |
| pH | no unit | 8.16 | 7.80 | 8.75 | 7.85 | 7.40 | 7.63 | 7.58 | 7.65 | 7.48 | 7.59 |
| Alkalinity | mg/L as CaCO3 | 32 | 36 | 25 | 31 | 26 | 24 | 25 | 21 | 22 | 17 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 92 | 73 | 64 | 70 | 60 | 67 | 49 | 41 | 51 | 47 |
| Sulphate | mg/L | 6.2 | 8.7 | 7.3 | 6.8 | 5.7 | 5.6 | 4.6 | 4.5 | 4.4 | 3.6 |
| Calcium | mg/L | 7.78 | 10.7 | 10.1 | 7.85 | 7.03 | 6.88 | 7.28 | 6.25 | 5.93 | 5.44 |
| Fluoride | mg/L | < 0.06 | < 0.06 | < 0.06 | < 0.06 | --- | < 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.14 | 0.02 | 0.02 | 0.03 | --- | < 0.01 | --- | --- | 0.01 | --- |
| Arsenic | mg/L | 0.0402 | 0.0092 | 0.0067 | 0.0055 | --- | 0.0054 | --- | --- | 0.0024 | --- |
| Barium | mg/L | 0.00289 | 0.00557 | 0.00482 | 0.00419 | --- | 0.0041 | --- | --- | 0.0036 | --- |
| Boron | mg/L | 0.003 | 0.0038 | 0.0028 | 0.0034 | --- | 0.0015 | --- | --- | 0.0019 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000004 | 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | 0.000093 | 0.000057 | 0.000068 | 0.000034 | --- | 0.000032 | --- | --- | 0.000031 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0005 | 0.0006 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.028 | 0.007 | 0.002 | 0.007 | --- | < 0.003 | --- | --- | 0.005 | --- |
| Potassium | mg/L | 4.49 | 4.42 | 3.51 | 2.89 | --- | 2.32 | --- | --- | 1.98 | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 1.45 | 2.66 | 2.37 | 1.93 | --- | 1.74 | --- | --- | 1.59 | --- |
| Manganese | mg/L | 0.0171 | 0.0264 | 0.0267 | 0.0222 | --- | 0.0218 | --- | --- | 0.0193 | --- |
| Molybdenum | mg/L | 0.00139 | 0.00171 | 0.00244 | 0.0109 | --- | 0.00054 | --- | --- | 0.00093 | --- |
| Sodium | mg/L | 1.27 | 1.34 | 1.03 | 0.76 | --- | 0.54 | --- | --- | 0.45 | --- |
| Nickel | mg/L | 0.0002 | < 0.0001 | 0.0003 | < 0.0001 | --- | 0.0002 | --- | --- | 0.0002 | --- |
| Lead | mg/L | 0.00029 | 0.0001 | 0.00004 | 0.00012 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0013 | 0.0006 | 0.0006 | 0.0005 | --- | 0.0004 | --- | --- | 0.0004 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00094 | 0.0003 | 0.00013 | 0.00008 | --- | 0.00004 | --- | --- | 0.00003 | --- |
| Strontium | mg/L | 0.0432 | 0.0707 | 0.0667 | 0.0517 | --- | 0.0459 | --- | --- | 0.0399 | --- |
| Titanium | mg/L | 0.0005 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000395 | 0.000123 | 0.000094 | 0.000078 | --- | 0.000061 | --- | --- | 0.000044 | --- |
| Vanadium | mg/L | 0.00015 | 0.00007 | 0.00004 | < 0.00003 | --- | < 0.00003 | --- | --- | 0.00004 | --- |
| Tungsten | mg/L | 0.00014 | 0.00019 | 0.00054 | 0.00017 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000008 | 0.000016 | 0.000006 | 0.000006 | --- | < 0.000001 | --- | --- | 0.000002 | --- |
| Zinc | mg/L | 0.003 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F1 Flot Tails 1
**Weight:** 1 kg

Terminated Jan 19/12

| Analyte | Event # | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|
| | | CA11818-NOV11 | CA10034-DEC11 | CA10086-DEC11 | CA11073-DEC11 | CA10293-DEC11 | CA10046-JAN12 | CA10087-JAN12 | CA11025-JAN12 |
| | | 30-Nov-11 | 7-Dec-11 | 14-Dec-11 | 21-Dec-11 | 29-Dec-11 | 4-Jan-12 | 11-Jan-12 | 18-Jan-12 |
| | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 977 | 978 | 980 | 978 | 990 | 981 | 983 | 978 |
| pH | no unit | 7.37 | 7.45 | 7.30 | 7.08 | 7.12 | 7.38 | 7.43 | 7.33 |
| Alkalinity | mg/L as CaCO3 | 15 | 17 | 16 | 15 | 15 | 15 | 16 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 43 | 6 | 41 | 6 | 5 | 30 | 40 | 37 |
| Sulphate | mg/L | 3.3 | 3.5 | 3.2 | 2.9 | 2.8 | 2.6 | 2.8 | 2.4 |
| Calcium | mg/L | 5.32 | 4.95 | 4.69 | 4.76 | 4.59 | 4.18 | 4.4 | 4.1 |
| Fluoride | mg/L | --- | --- | 0.12 | --- | --- | --- | < 0.06 | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | 0.02 | --- |
| Arsenic | mg/L | --- | --- | 0.0019 | --- | --- | --- | 0.0028 | --- |
| Barium | mg/L | --- | --- | 0.00281 | --- | --- | --- | 0.00262 | --- |
| Boron | mg/L | --- | --- | 0.0003 | --- | --- | --- | 0.0026 | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | --- | --- | 0.000013 | --- | --- | --- | 0.000022 | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Iron | mg/L | --- | --- | 0.004 | --- | --- | --- | 0.004 | --- |
| Potassium | mg/L | --- | --- | 1.67 | --- | --- | --- | 1.56 | --- |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | --- | --- | 1.41 | --- | --- | --- | 1.35 | --- |
| Manganese | mg/L | --- | --- | 0.0137 | --- | --- | --- | 0.0132 | --- |
| Molybdenum | mg/L | --- | --- | 0.00034 | --- | --- | --- | 0.00023 | --- |
| Sodium | mg/L | --- | --- | 0.32 | --- | --- | --- | 0.25 | --- |
| Nickel | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | 0.0002 | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Tin | mg/L | --- | --- | 0.00002 | --- | --- | --- | 0.00004 | --- |
| Strontium | mg/L | --- | --- | 0.0318 | --- | --- | --- | 0.0305 | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | --- | --- | 0.000036 | --- | --- | --- | 0.000047 | --- |
| Vanadium | mg/L | --- | --- | 0.00005 | --- | --- | --- | 0.00004 | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | --- | --- | < 0.000001 | --- | --- | --- | 0.000005 | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F2 Ro Tails 1
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10468-SEP11 | CA10470-SEP11 | CA10180-OCT11 | CA10181-OCT11 | CA10182-OCT11 | CA11264-OCT11 | CA10036-NOV11 | CA10111-NOV11 | CA10171-NOV11 | CA10262-NOV11 |
| | | 21/Sep/11 | 28/Sep/11 | 5/Oct/11 | 12/Oct/11 | 19/Oct/11 | 26/Oct/11 | 2/Nov/11 | 9/Nov/11 | 16/Nov/11 | 23/Nov/11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 755 | 1006 | 999 | 991 | 988 | 982 | 983 | 978 | 989 | 977 |
| pH | no unit | 7.98 | 8.18 | 7.87 | 7.90 | 7.37 | 7.59 | 7.23 | 7.62 | 7.57 | 6.99 |
| Alkalinity | mg/L as CaCO3 | 30 | 40 | 32 | 28 | 25 | 24 | 26 | 22 | 23 | 20 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 82 | 73 | 60 | 65 | 56 | 58 | 59 | 31 | 38 | 42 |
| Sulphate | mg/L | 3.7 | 5.8 | 5 | 4.6 | 4.1 | 4 | 3.7 | 3.5 | 3.3 | 2.8 |
| Calcium | mg/L | 7.31 | 10.2 | 9.7 | 7.72 | 6.84 | 6.66 | 7.03 | 6.92 | 6 | 5.43 |
| Fluoride | mg/L | < 0.06 | < 0.06 | 0.17 | < 0.06 | --- | 0.29 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.12 | 0.03 | 0.03 | 0.02 | --- | < 0.01 | --- | --- | 0.01 | --- |
| Arsenic | mg/L | 0.0144 | 0.0081 | 0.0045 | 0.0032 | --- | 0.0023 | --- | --- | 0.0014 | --- |
| Barium | mg/L | 0.00174 | 0.00276 | 0.00223 | 0.00233 | --- | 0.00207 | --- | --- | 0.00172 | --- |
| Boron | mg/L | 0.0032 | 0.004 | 0.0028 | 0.0025 | --- | 0.0018 | --- | --- | 0.002 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000007 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | 0.000006 | --- |
| Cobalt | mg/L | 0.000037 | 0.000041 | 0.00005 | 0.000034 | --- | 0.000028 | --- | --- | 0.00002 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | < 0.0005 | < 0.0005 | 0.0011 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.029 | 0.009 | 0.005 | 0.007 | --- | < 0.003 | --- | --- | < 0.003 | --- |
| Potassium | mg/L | 3.25 | 3.17 | 2.45 | 2.12 | --- | 1.7 | --- | --- | 1.44 | --- |
| Lithium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 1.26 | 2.28 | 2.04 | 1.78 | --- | 1.63 | --- | --- | 1.51 | --- |
| Manganese | mg/L | 0.0134 | 0.0231 | 0.0252 | 0.0224 | --- | 0.0211 | --- | --- | 0.02 | --- |
| Molybdenum | mg/L | 0.00154 | 0.00205 | 0.00207 | 0.00423 | --- | 0.00077 | --- | --- | 0.00064 | --- |
| Sodium | mg/L | 1.48 | 1.59 | 1.17 | 0.88 | --- | 0.65 | --- | --- | 0.46 | --- |
| Nickel | mg/L | 0.0002 | 0.0001 | 0.0003 | < 0.0001 | --- | 0.0002 | --- | --- | < 0.0001 | --- |
| Lead | mg/L | 0.00025 | 0.00005 | 0.00003 | 0.00003 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0013 | 0.0007 | 0.0006 | 0.0006 | --- | 0.0004 | --- | --- | 0.0004 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00159 | 0.00056 | 0.00025 | 0.00025 | --- | 0.00023 | --- | --- | 0.00027 | --- |
| Strontium | mg/L | 0.0421 | 0.0654 | 0.0617 | 0.0496 | --- | 0.0431 | --- | --- | 0.0392 | --- |
| Titanium | mg/L | 0.0002 | 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000093 | 0.000112 | 0.000111 | 0.000107 | --- | 0.000059 | --- | --- | 0.000066 | --- |
| Vanadium | mg/L | 0.00009 | 0.00006 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | 0.00007 | 0.00014 | 0.00037 | 0.00008 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000006 | 0.000011 | 0.000005 | 0.000005 | --- | < 0.000001 | --- | --- | 0.000001 | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F2 Ro Tails 1
**Weight:** 1 kg

Terminated Jan 19/12

| Analyte | Event # | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|
| | | CA11818-NOV11 | CA10034-DEC11 | CA10086-DEC11 | CA11073-DEC11 | CA10293-DEC11 | CA10046-JAN12 | CA10087-JAN12 | CA11025-JAN12 |
| | | 30/Nov/11 | 7/Dec/11 | 14/Dec/11 | 21/Dec/11 | 29/Dec/11 | 4/Jan/12 | 11/Jan/12 | 18/Jan/12 |
| | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 986 | 979 | 983 | 974 | 980 | 988 | 983 | 982 |
| pH | no unit | 6.93 | 7.46 | 7.58 | 7.52 | 7.17 | 7.34 | 7.44 | 7.35 |
| Alkalinity | mg/L as CaCO3 | 24 | 20 | 21 | 17 | 23 | 16 | 15 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 47 | 6 | 45 | 6 | 33 | 39 | 40 | 38 |
| Sulphate | mg/L | 3.4 | 3.1 | 2.6 | 2.6 | 2.7 | 2.5 | 2.5 | 2.3 |
| Calcium | mg/L | 5.76 | 5.45 | 5.29 | 4.64 | 5.1 | 4.67 | 4.67 | 4.62 |
| Fluoride | mg/L | --- | --- | < 0.06 | --- | --- | --- | < 0.06 | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | --- | --- | 0.02 | --- | --- | --- | 0.02 | --- |
| Arsenic | mg/L | --- | --- | 0.0009 | --- | --- | --- | 0.0012 | --- |
| Barium | mg/L | --- | --- | 0.00154 | --- | --- | --- | 0.00144 | --- |
| Boron | mg/L | --- | --- | 0.0005 | --- | --- | --- | 0.0014 | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | --- | --- | < 0.000003 | --- | --- | --- | 0.000005 | --- |
| Cobalt | mg/L | --- | --- | 0.000016 | --- | --- | --- | 0.000023 | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- |
| Potassium | mg/L | --- | --- | 1.2 | --- | --- | --- | 1.08 | --- |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | --- | --- | 1.4 | --- | --- | --- | 1.32 | --- |
| Manganese | mg/L | --- | --- | 0.0177 | --- | --- | --- | 0.0145 | --- |
| Molybdenum | mg/L | --- | --- | 0.00035 | --- | --- | --- | 0.00026 | --- |
| Sodium | mg/L | --- | --- | 0.31 | --- | --- | --- | 0.24 | --- |
| Nickel | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Tin | mg/L | --- | --- | 0.00017 | --- | --- | --- | 0.00015 | --- |
| Strontium | mg/L | --- | --- | 0.033 | --- | --- | --- | 0.0303 | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | --- | --- | 0.00004 | --- | --- | --- | 0.000036 | --- |
| Vanadium | mg/L | --- | --- | 0.00004 | --- | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | --- | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F7 Ro Tails 1
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10468-SEP11 | CA10470-SEP11 | CA10180-OCT11 | CA10181-OCT11 | CA10182-OCT11 | CA11264-OCT11 | CA10036-NOV11 | CA10111-NOV11 | CA10171-NOV11 | CA10262-NOV11 |
| | | 21/Sep/11 | 28/Sep/11 | 5/Oct/11 | 12/Oct/11 | 19/Oct/11 | 26/Oct/11 | 2/Nov/11 | 9/Nov/11 | 16/Nov/11 | 23/Nov/11 |
| | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 753 | 1002 | 993 | 970 | 997 | 988 | 968 | 985 | 982 | 986 |
| pH | no unit | 7.30 | 7.51 | 7.78 | 7.81 | 7.43 | 7.60 | 7.64 | 7.67 | 7.56 | 7.05 |
| Alkalinity | mg/L as CaCO3 | 29 | 30 | 30 | 29 | 30 | 28 | 25 | 22 | 27 | 23 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 151 | 85 | 75 | 88 | 82 | 51 | 54 | 47 | 55 | 51 |
| Sulphate | mg/L | 36 | 18 | 14 | 12 | 11 | 8.5 | 7.8 | 6.9 | 6.9 | 6.4 |
| Calcium | mg/L | 15.5 | 12 | 11.7 | 10.3 | 10.1 | 7.78 | 8.36 | 7.83 | 6.78 | 6.73 |
| Fluoride | mg/L | < 0.06 | < 0.06 | 0.16 | < 0.06 | --- | 0.06 | --- | --- | < 0.06 | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | 0.04 | < 0.01 | < 0.01 | < 0.01 | --- | < 0.01 | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | 0.0072 | 0.0019 | 0.0022 | 0.0026 | --- | 0.0012 | --- | --- | 0.0007 | --- |
| Barium | mg/L | 0.00468 | 0.00333 | 0.00267 | 0.00245 | --- | 0.0019 | --- | --- | 0.00138 | --- |
| Boron | mg/L | 0.0076 | 0.0047 | 0.0038 | 0.0032 | --- | 0.0021 | --- | --- | 0.0021 | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | 0.000007 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | 0.000013 | --- |
| Cobalt | mg/L | 0.000079 | 0.000067 | 0.000066 | 0.000054 | --- | 0.000044 | --- | --- | 0.000044 | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Copper | mg/L | 0.0009 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- |
| Iron | mg/L | 0.005 | < 0.002 | < 0.002 | 0.004 | --- | < 0.003 | --- | --- | 0.006 | --- |
| Potassium | mg/L | 3.76 | 2.11 | 1.78 | 1.59 | --- | 1.1 | --- | --- | 0.847 | --- |
| Lithium | mg/L | 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | 5.87 | 3.93 | 3.52 | 3.08 | --- | 2.3 | --- | --- | 2.08 | --- |
| Manganese | mg/L | 0.0892 | 0.116 | 0.1 | 0.0939 | --- | 0.0758 | --- | --- | 0.0651 | --- |
| Molybdenum | mg/L | 0.00535 | 0.00345 | 0.00339 | 0.0037 | --- | 0.00152 | --- | --- | 0.001 | --- |
| Sodium | mg/L | 1.69 | 0.75 | 0.49 | 0.34 | --- | 0.19 | --- | --- | 0.14 | --- |
| Nickel | mg/L | 0.0007 | 0.0003 | 0.0005 | < 0.0001 | --- | 0.0003 | --- | --- | 0.0001 | --- |
| Lead | mg/L | 0.00016 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | 0.0015 | 0.0005 | 0.0006 | 0.0006 | --- | 0.0003 | --- | --- | 0.0004 | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- |
| Tin | mg/L | 0.00167 | 0.00067 | 0.00025 | 0.00026 | --- | 0.0003 | --- | --- | 0.00039 | --- |
| Strontium | mg/L | 0.0347 | 0.0234 | 0.0215 | 0.0182 | --- | 0.013 | --- | --- | 0.0114 | --- |
| Titanium | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | 0.000252 | 0.000129 | 0.000103 | 0.00012 | --- | 0.000058 | --- | --- | 0.000046 | --- |
| Vanadium | mg/L | 0.00003 | 0.00004 | < 0.00003 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | 0.00005 | 0.00009 | 0.00036 | 0.00005 | --- | < 0.00003 | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | 0.000006 | 0.000005 | 0.000002 | 0.000002 | --- | < 0.000001 | --- | --- | 0.000002 | --- |
| Zinc | mg/L | 0.002 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | 0.002 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F7 Ro Tails 1
**Weight:** 1 kg

Terminated Jan 19/12

| Analyte | Event # | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|
| | | CA11818-NOV11 | CA10034-DEC11 | CA10086-DEC11 | CA11073-DEC11 | CA10293-DEC11 | CA10046-JAN12 | CA10087-JAN12 | CA11025-JAN12 |
| | | 30/Nov/11 | 7/Dec/11 | 14/Dec/11 | 21/Dec/11 | 29/Dec/11 | 4/Jan/12 | 11/Jan/12 | 18/Jan/12 |
| | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 969 | 988 | 982 | 980 | 987 | 989 | 977 | 989 |
| pH | no unit | 6.92 | 7.52 | 7.27 | 7.35 | 7.07 | 7.24 | 7.40 | 7.33 |
| Alkalinity | mg/L as CaCO3 | 20 | 18 | 15 | 14 | 14 | 15 | 14 | 15 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 52 | 42 | 45 | 36 | 6 | 44 | 33 | 44 |
| Sulphate | mg/L | 6.4 | 6.6 | 5.3 | 5.6 | 5.7 | 5.5 | 5.3 | 5.4 |
| Calcium | mg/L | 6.35 | 6.37 | 5.54 | 4.86 | 5.05 | 4.98 | 4.83 | 5.14 |
| Fluoride | mg/L | --- | --- | 0.11 | --- | --- | --- | < 0.06 | --- |
| Mercury | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | --- | --- | < 0.01 | --- | --- | --- | < 0.01 | --- |
| Arsenic | mg/L | --- | --- | 0.0005 | --- | --- | --- | 0.0007 | --- |
| Barium | mg/L | --- | --- | 0.00103 | --- | --- | --- | 0.00091 | --- |
| Boron | mg/L | --- | --- | 0.0002 | --- | --- | --- | 0.0012 | --- |
| Beryllium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | --- | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | --- | --- | 0.000003 | --- | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | --- | --- | 0.00004 | --- | --- | --- | 0.000043 | --- |
| Chromium | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Copper | mg/L | --- | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Iron | mg/L | --- | --- | < 0.003 | --- | --- | --- | < 0.003 | --- |
| Potassium | mg/L | --- | --- | 0.667 | --- | --- | --- | 0.593 | --- |
| Lithium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Magnesium | mg/L | --- | --- | 1.74 | --- | --- | --- | 1.68 | --- |
| Manganese | mg/L | --- | --- | 0.0528 | --- | --- | --- | 0.0375 | --- |
| Molybdenum | mg/L | --- | --- | 0.00063 | --- | --- | --- | 0.00047 | --- |
| Sodium | mg/L | --- | --- | 0.08 | --- | --- | --- | 0.08 | --- |
| Nickel | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Lead | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | --- | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- |
| Selenium | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Tin | mg/L | --- | --- | 0.00025 | --- | --- | --- | 0.00019 | --- |
| Strontium | mg/L | --- | --- | 0.0089 | --- | --- | --- | 0.0082 | --- |
| Titanium | mg/L | --- | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | --- | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | --- | --- | 0.000037 | --- | --- | --- | 0.000037 | --- |
| Vanadium | mg/L | --- | --- | 0.00003 | --- | --- | --- | < 0.00003 | --- |
| Tungsten | mg/L | --- | --- | < 0.00003 | --- | --- | --- | < 0.00003 | --- |
| Yttrium | mg/L | --- | --- | < 0.000001 | --- | --- | --- | 0.000001 | --- |
| Zinc | mg/L | --- | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F8 Ro Tails 1
**Weight:** 1 kg

| Analyte | Event # | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CA10468-SEP11 | CA10470-SEP11 | CA10180-OCT11 | CA10181-OCT11 | CA10182-OCT11 | CA11264-OCT11 | CA10036-NOV11 | CA10111-NOV11 | CA10171-NOV11 | CA10262-NOV11 | CA11818-NOV11 |
| | | 21/Sep/11 | 28/Sep/11 | 5/Oct/11 | 12/Oct/11 | 19/Oct/11 | 26/Oct/11 | 2/Nov/11 | 9/Nov/11 | 16/Nov/11 | 23/Nov/11 | 30/Nov/11 |
| | | | | | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 858 | 997 | 990 | 984 | 986 | 960 | 981 | 984 | 957 | 997 | 971 |
| pH | no unit | 7.41 | 7.48 | 7.62 | 7.38 | 6.99 | 7.10 | 7.27 | 7.31 | 7.26 | 7.47 | 7.38 |
| Alkalinity | mg/L as CaCO3 | 26 | 22 | 22 | 14 | 11 | 10 | 12 | 11 | 9 | 11 | 14 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 98 | 52 | 9 | 38 | 33 | 23 | 35 | 19 | 26 | 34 | 30 |
| Sulphate | mg/L | 15 | 7.1 | 5.9 | 3.4 | 3.2 | 2.6 | 3 | 2.9 | 2.9 | 3.1 | 2.9 |
| Calcium | mg/L | 8.35 | 6.18 | 6.4 | 3.79 | 3.6 | 3.2 | 4.01 | 3.95 | 3.77 | 3.93 | 3.56 |
| Fluoride | mg/L | 0.27 | 0.14 | < 0.06 | 0.14 | --- | 0.08 | --- | --- | 0.11 | --- | --- |
| Mercury | mg/L | < 0.0001 | < 0.0001 | < 0.0001 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Aluminum | mg/L | 0.09 | 0.04 | 0.03 | 0.02 | --- | < 0.01 | --- | --- | 0.02 | --- | --- |
| Arsenic | mg/L | 0.0036 | 0.0018 | 0.0016 | 0.0012 | --- | 0.0008 | --- | --- | 0.0007 | --- | --- |
| Barium | mg/L | 0.0221 | 0.0184 | 0.0175 | 0.0121 | --- | 0.0097 | --- | --- | 0.0102 | --- | --- |
| Boron | mg/L | 0.006 | 0.0036 | 0.0031 | 0.0016 | --- | 0.0012 | --- | --- | 0.0017 | --- | --- |
| Beryllium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Bismuth | mg/L | < 0.00001 | < 0.00001 | < 0.00001 | < 0.00001 | --- | < 0.00001 | --- | --- | < 0.00001 | --- | --- |
| Cadmium | mg/L | 0.000006 | < 0.000003 | < 0.000003 | < 0.000003 | --- | < 0.000003 | --- | --- | 0.000003 | --- | --- |
| Cobalt | mg/L | 0.000033 | 0.000019 | 0.000037 | 0.000014 | --- | 0.000006 | --- | --- | 0.000014 | --- | --- |
| Chromium | mg/L | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0005 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Copper | mg/L | 0.002 | 0.0009 | 0.0007 | 0.0006 | --- | < 0.0005 | --- | --- | < 0.0005 | --- | --- |
| Iron | mg/L | 0.114 | 0.028 | 0.03 | 0.023 | --- | 0.01 | --- | --- | 0.02 | --- | --- |
| Potassium | mg/L | 11.6 | 6.53 | 6.34 | 3.83 | --- | 2.81 | --- | --- | 2.91 | --- | --- |
| Lithium | mg/L | 0.007 | 0.005 | 0.004 | 0.003 | --- | 0.002 | --- | --- | 0.002 | --- | --- |
| Magnesium | mg/L | 0.87 | 0.543 | 0.564 | 0.31 | --- | 0.235 | --- | --- | 0.256 | --- | --- |
| Manganese | mg/L | 0.00753 | 0.00687 | 0.00576 | 0.00398 | --- | 0.00382 | --- | --- | 0.00422 | --- | --- |
| Molybdenum | mg/L | 0.00207 | 0.00127 | 0.00168 | 0.00148 | --- | 0.00027 | --- | --- | 0.00032 | --- | --- |
| Sodium | mg/L | 2.27 | 1.12 | 0.96 | 0.44 | --- | 0.28 | --- | --- | 0.26 | --- | --- |
| Nickel | mg/L | 0.0003 | < 0.0001 | 0.0002 | < 0.0001 | --- | < 0.0001 | --- | --- | < 0.0001 | --- | --- |
| Lead | mg/L | 0.00019 | 0.00003 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Antimony | mg/L | 0.0013 | 0.0004 | 0.0005 | 0.0004 | --- | 0.0002 | --- | --- | 0.0003 | --- | --- |
| Selenium | mg/L | < 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |
| Tin | mg/L | 0.00299 | 0.00152 | 0.00071 | 0.0004 | --- | 0.00019 | --- | --- | 0.00025 | --- | --- |
| Strontium | mg/L | 0.0629 | 0.0484 | 0.0511 | 0.0302 | --- | 0.0256 | --- | --- | 0.0308 | --- | --- |
| Titanium | mg/L | 0.0013 | 0.0004 | 0.0004 | 0.0002 | --- | < 0.0001 | --- | --- | 0.0002 | --- | --- |
| Thallium | mg/L | < 0.00002 | < 0.00002 | < 0.00002 | < 0.00002 | --- | < 0.00002 | --- | --- | < 0.00002 | --- | --- |
| Uranium | mg/L | 0.000566 | 0.000356 | 0.000324 | 0.000172 | --- | 0.00014 | --- | --- | 0.000153 | --- | --- |
| Vanadium | mg/L | 0.00007 | 0.00004 | 0.00004 | < 0.00003 | --- | < 0.00003 | --- | --- | < 0.00003 | --- | --- |
| Tungsten | mg/L | 0.00009 | 0.00013 | 0.00036 | 0.00007 | --- | 0.00003 | --- | --- | 0.00004 | --- | --- |
| Yttrium | mg/L | 0.000022 | 0.000009 | 0.000006 | 0.000003 | --- | < 0.000001 | --- | --- | 0.000002 | --- | --- |
| Zinc | mg/L | 0.001 | < 0.001 | < 0.001 | < 0.001 | --- | < 0.001 | --- | --- | < 0.001 | --- | --- |

**Humidity Cell Results**
**Customer:** Agnico Eagle Mines Limited
**Project Manager:** Josee Noel
**SGS Contact:** Brian Graham

**Humidity Cell:** F8 Ro Tails 1
**Weight:** 1 kg

Terminated Jan 19/12

| Analyte | Event # | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|
| | | CA10034-DEC11 | CA10086-DEC11 | CA11073-DEC11 | CA10293-DEC11 | CA10046-JAN12 | CA10087-JAN12 | CA11025-JAN12 |
| | | 7/Dec/11 | 14/Dec/11 | 21/Dec/11 | 29/Dec/11 | 4/Jan/12 | 11/Jan/12 | 18/Jan/12 |
| | | | | | | | | |
| Leachate Volume Added (mL) | mL | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| Leachate Volume Recovered (mL) | mL | 985 | 973 | 983 | 992 | 972 | 984 | 983 |
| pH | no unit | 7.22 | 7.11 | 6.84 | 7.06 | 7.34 | 7.29 | 7.29 |
| Alkalinity | mg/L as CaCO3 | 11 | 11 | 12 | 12 | 11 | 13 | 12 |
| Acidity | mg/L as CaCO3 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 | < 2 |
| Conductivity | uS/cm | 34 | 33 | 5 | 28 | 27 | 28 | 34 |
| Sulphate | mg/L | 3.1 | 3.0 | 3.0 | 3.2 | 2.8 | 3 | 2.6 |
| Calcium | mg/L | 3.83 | 3.82 | 3.83 | 4.11 | 3.95 | 4.3 | 4.03 |
| Fluoride | mg/L | --- | < 0.06 | --- | --- | --- | 0.15 | --- |
| Mercury | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Aluminum | mg/L | --- | < 0.01 | --- | --- | --- | 0.02 | --- |
| Arsenic | mg/L | --- | 0.0007 | --- | --- | --- | 0.0008 | --- |
| Barium | mg/L | --- | 0.0098 | --- | --- | --- | 0.0106 | --- |
| Boron | mg/L | --- | 0.0005 | --- | --- | --- | 0.0016 | --- |
| Beryllium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Bismuth | mg/L | --- | < 0.00001 | --- | --- | --- | < 0.00001 | --- |
| Cadmium | mg/L | --- | < 0.000003 | --- | --- | --- | < 0.000003 | --- |
| Cobalt | mg/L | --- | 0.000005 | --- | --- | --- | 0.000016 | --- |
| Chromium | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Copper | mg/L | --- | < 0.0005 | --- | --- | --- | < 0.0005 | --- |
| Iron | mg/L | --- | 0.008 | --- | --- | --- | < 0.003 | --- |
| Potassium | mg/L | --- | 3.22 | --- | --- | --- | 3.45 | --- |
| Lithium | mg/L | --- | 0.002 | --- | --- | --- | 0.002 | --- |
| Magnesium | mg/L | --- | 0.287 | --- | --- | --- | 0.306 | --- |
| Manganese | mg/L | --- | 0.00314 | --- | --- | --- | 0.00335 | --- |
| Molybdenum | mg/L | --- | 0.00024 | --- | --- | --- | 0.00021 | --- |
| Sodium | mg/L | --- | 0.22 | --- | --- | --- | 0.19 | --- |
| Nickel | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Lead | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Antimony | mg/L | --- | < 0.0002 | --- | --- | --- | < 0.0002 | --- |
| Selenium | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |
| Tin | mg/L | --- | 0.00022 | --- | --- | --- | 0.00017 | --- |
| Strontium | mg/L | --- | 0.0294 | --- | --- | --- | 0.0339 | --- |
| Titanium | mg/L | --- | < 0.0001 | --- | --- | --- | < 0.0001 | --- |
| Thallium | mg/L | --- | < 0.00002 | --- | --- | --- | < 0.00002 | --- |
| Uranium | mg/L | --- | 0.00018 | --- | --- | --- | 0.000193 | --- |
| Vanadium | mg/L | --- | 0.00004 | --- | --- | --- | 0.00003 | --- |
| Tungsten | mg/L | --- | < 0.00003 | --- | --- | --- | 0.00005 | --- |
| Yttrium | mg/L | --- | 0.000001 | --- | --- | --- | 0.000002 | --- |
| Zinc | mg/L | --- | < 0.001 | --- | --- | --- | < 0.001 | --- |

# H.7 Mineralogy Results: Waste Rock and Tailings

# *QUANTITATIVE PHASE ANALYSIS OF EIGHT POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.*

***(Project: Meliadine - Tiriganiaq and F Zone)***

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***Dept. of Earth & Ocean Sciences***
***6339 Stores Road***
***The University of British Columbia***
***Vancouver, BC  V6T 1Z4***

***November 26, 2009***

## EXPERIMENTAL METHOD

The eight samples of **Project Meliadine** were reduced into fine powder to the optimum grain-size range for X-ray analysis (<10µm) grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

## RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 using Search-Match software by Siemens (Bruker). X-ray powder-diffraction data were refined with Rietveld program Topas 3 (Bruker AXS).

The results of quantitative phase analysis by Rietveld refinement are given in Table 1. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots for the samples are shown in Figures 1 – 8.

Table 1. Results of quantitative phase analysis (wt. %)

| **Mineral** | **Ideal Formula** | **M05-536A-01** | **M97-141-01** | **M97-139-01** | **M99-403-03** | **M07-663-01** | **M08-750-03** | **M08-740-05** | **M08-734-03** |
|---|---|---|---|---|---|---|---|---|---|
| Quartz | $SiO_2$ | 20.7 | 22.1 | 17.3 | 42.9 | 34.2 | 25.2 | 23.0 | 19.7 |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$ | 18.3 | 18.1 | 3.8 | 11.5 | 12.9 | 21.9 | 25.1 | 29.5 |
| Muscovite | $KAl_2(AlSi_3O_{10})(OH)_2$ | 10.3 | 7.2 | 21.4 | 14.7 | 23.1 | | | |
| Biotite | $K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$ | | | | | | 4.9 | 6.6 | 2.8 |
| K-Feldspar | $KAlSi_3O_8$ | | | 1.9 | | | | | |
| Plagioclase | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ | 18.4 | 21.4 | 13.7 | 23.7 | 23.3 | 29.8 | 19.7 | 26.6 |
| Calcite | $CaCO_3$ | 12.5 | 1.4 | 1.8 | 1.2 | 1.0 | 14.9 | 24.7 | 19.9 |
| Dolomite/Ankerite | $CaMg(CO_3)_2/Ca(Fe^{2+},Mg,Mn^{2+})(CO_3)_2$ | 18.6 | 27.5 | 38.6 | 5.5 | 4.2 | 0.5 | | |
| Pyrite | $FeS_2$ | 0.3 | 0.5 | 0.6 | | | | | |
| Ilmenite | $Fe^{2+}TiO_3$ | | 1.1 | 0.8 | 0.4 | 1.0 | 2.7 | 0.9 | 1.5 |
| Arsenopyrite ? | FeAsS | | | | | 0.3 | | | |
| Chromite | $Fe^{2+}Cr_2O_4$ | | 0.7 | | | | | | |
| Total | | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

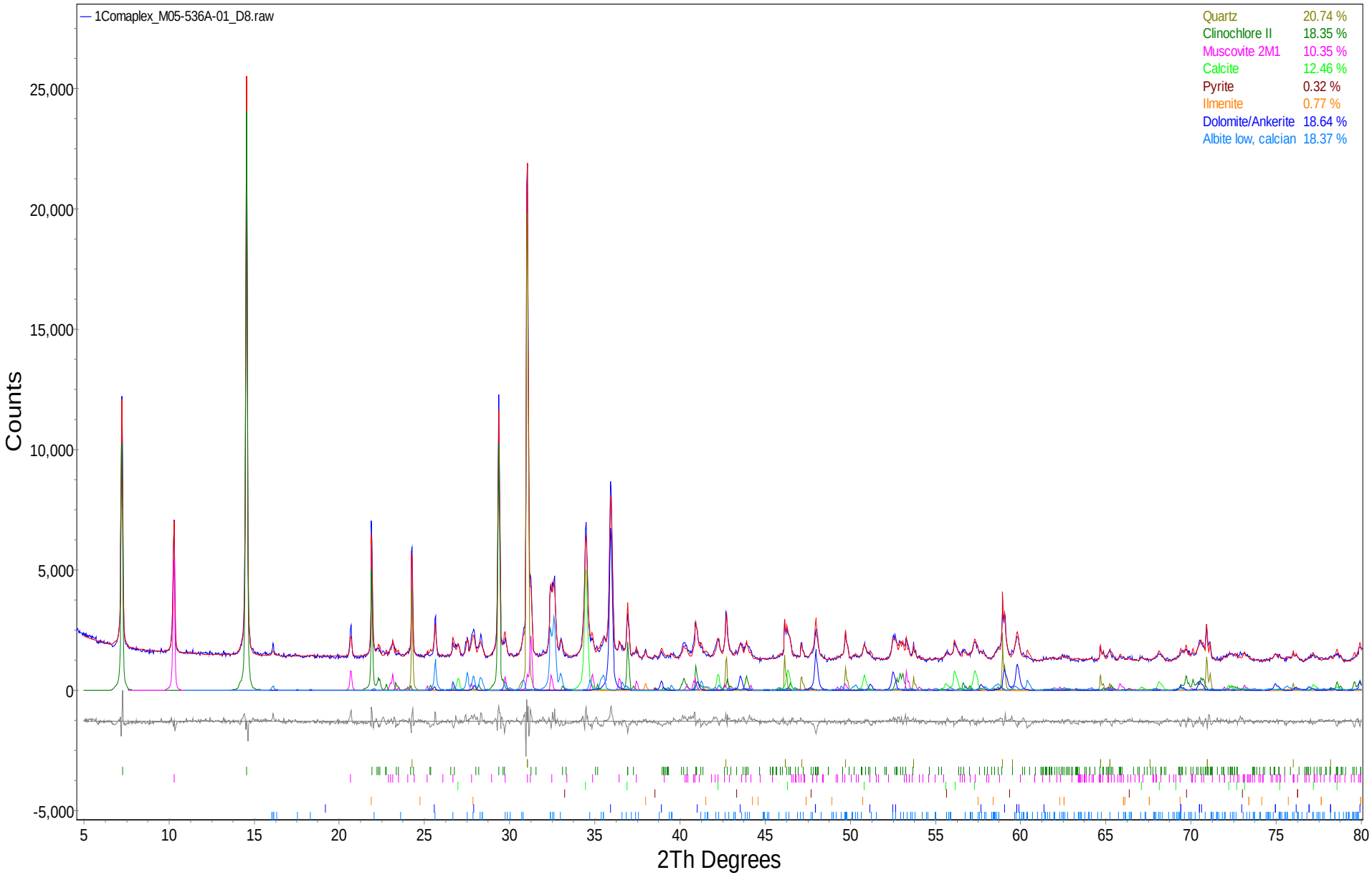



Figure 1. Rietveld refinement plot of sample **Comaplex "M05-536A-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

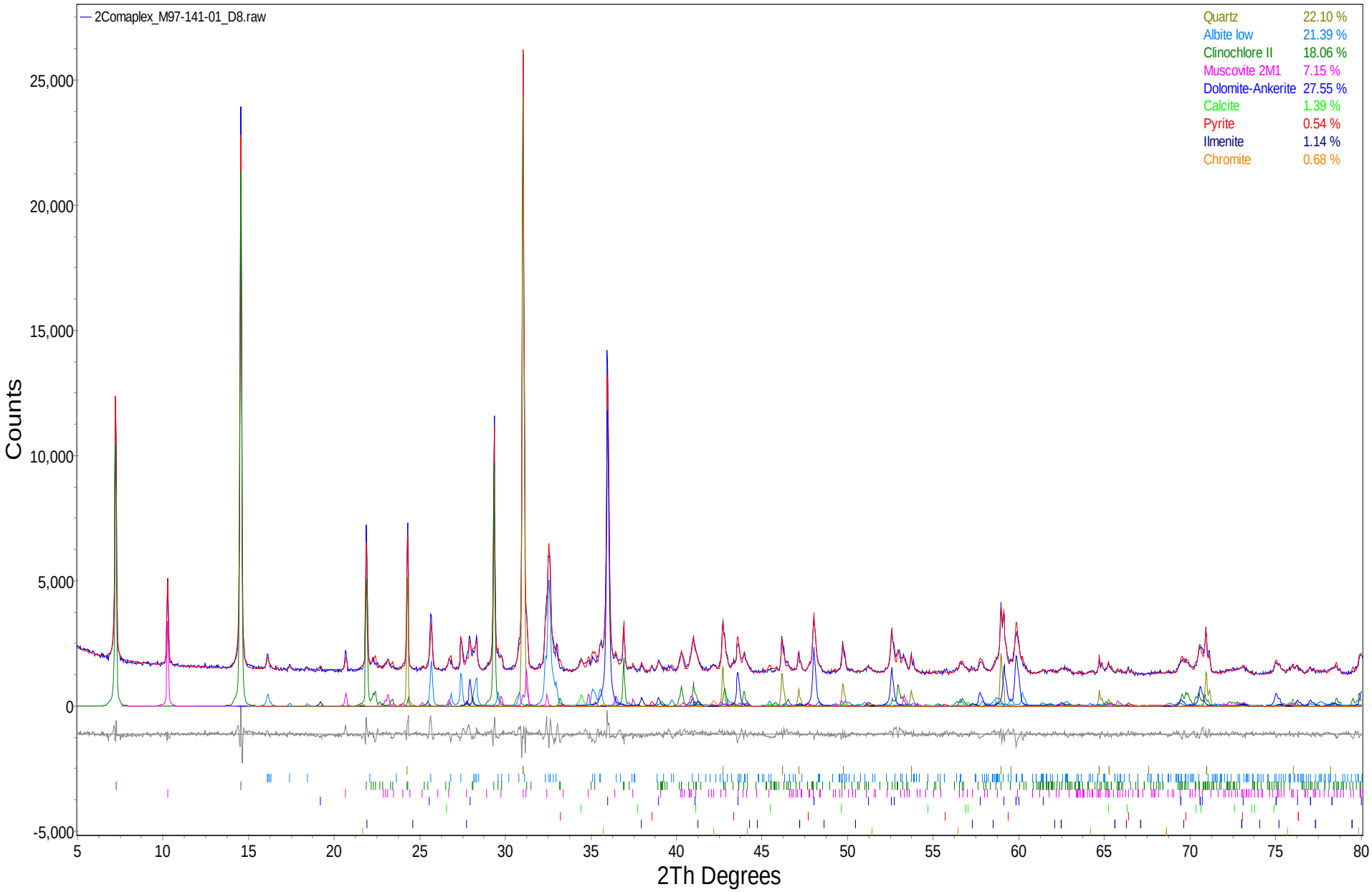



Figure 2. Rietveld refinement plot of sample **Comaplex "M97-141-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

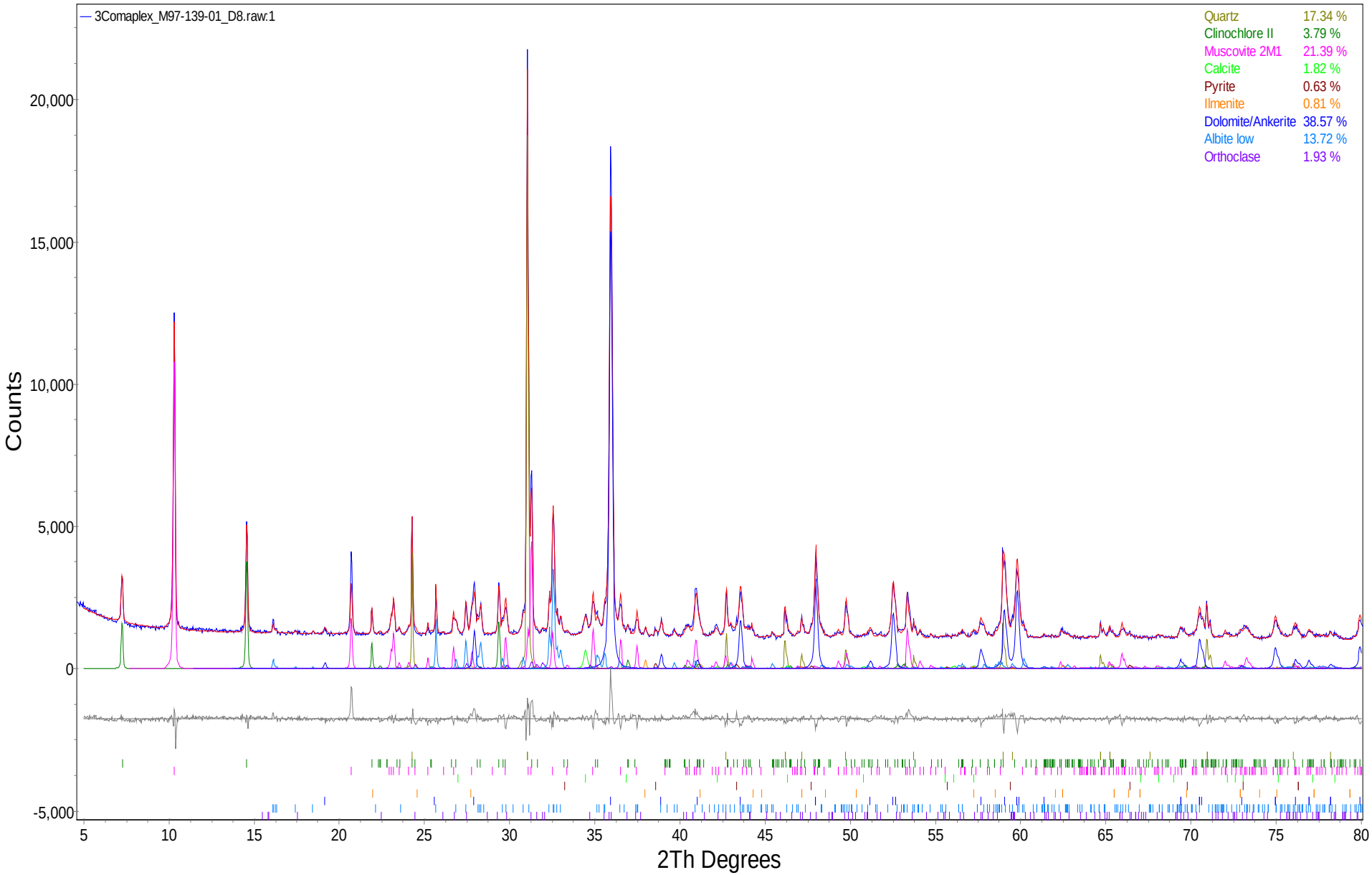



Figure 3. Rietveld refinement plot of sample **Comaplex "M97-139-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

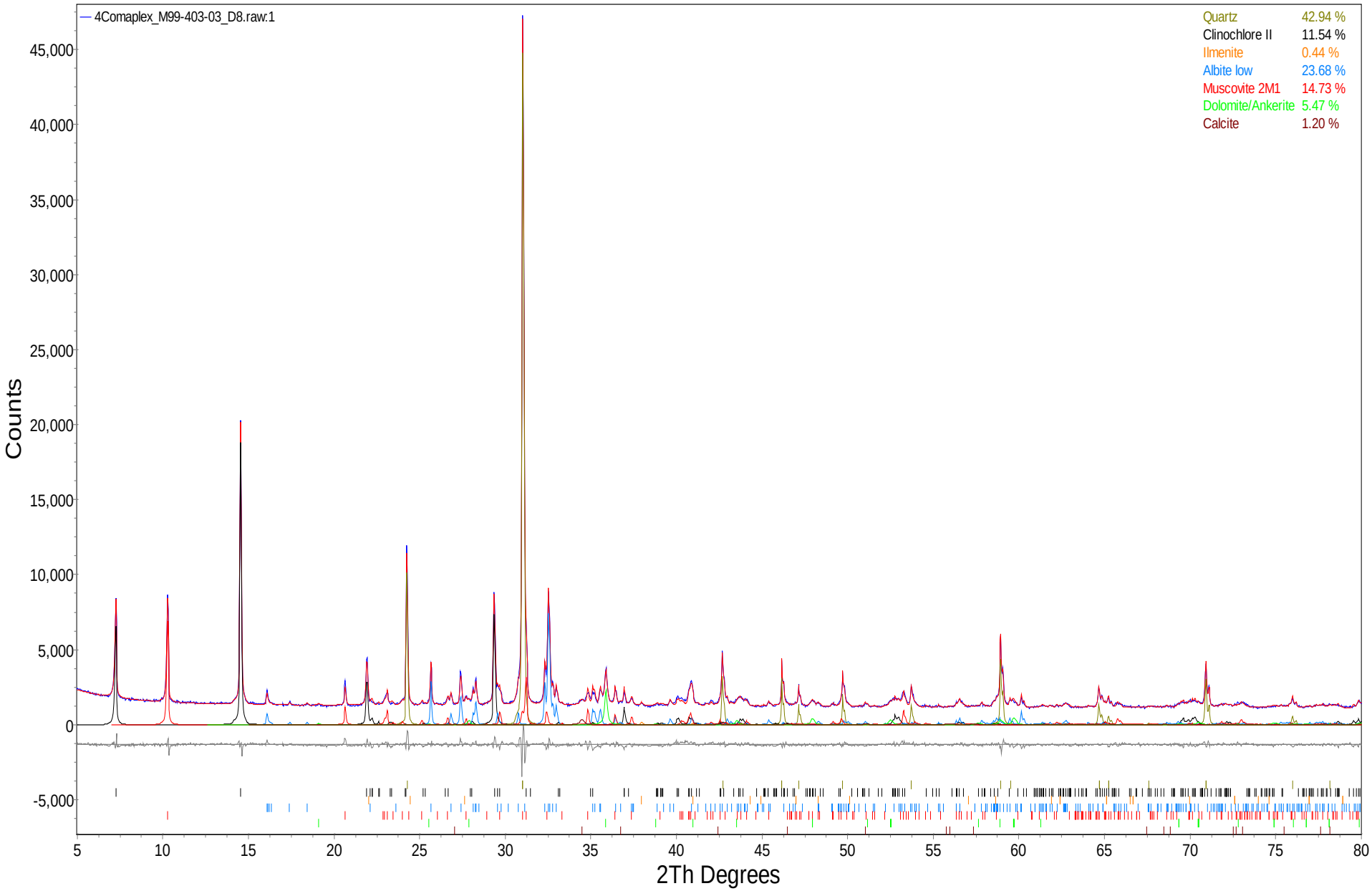



Figure 4. Rietveld refinement plot of sample **Comaplex "M99-403-03"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

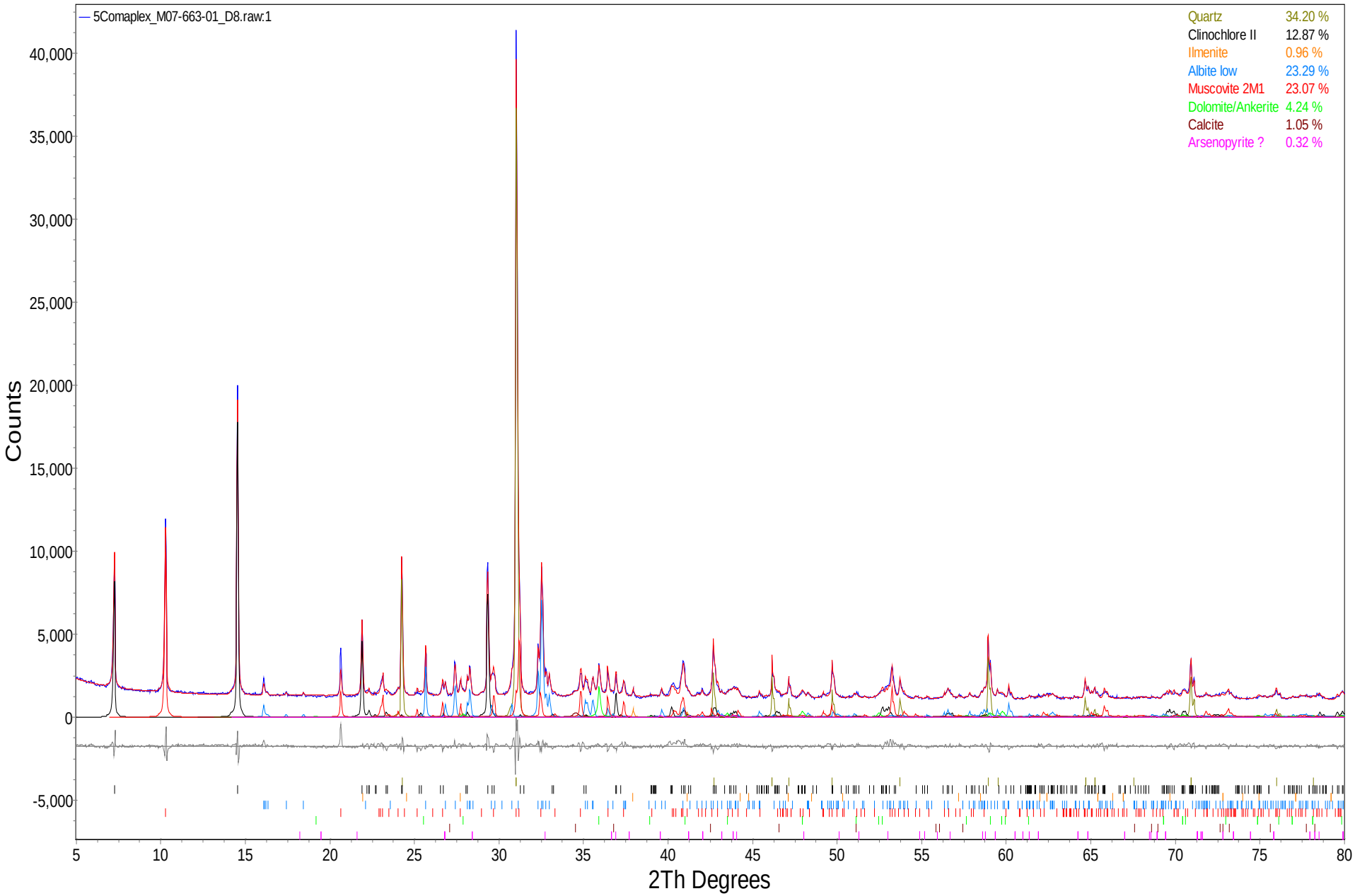



Figure 5. Rietveld refinement plot of sample **Comaplex "M07-663-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

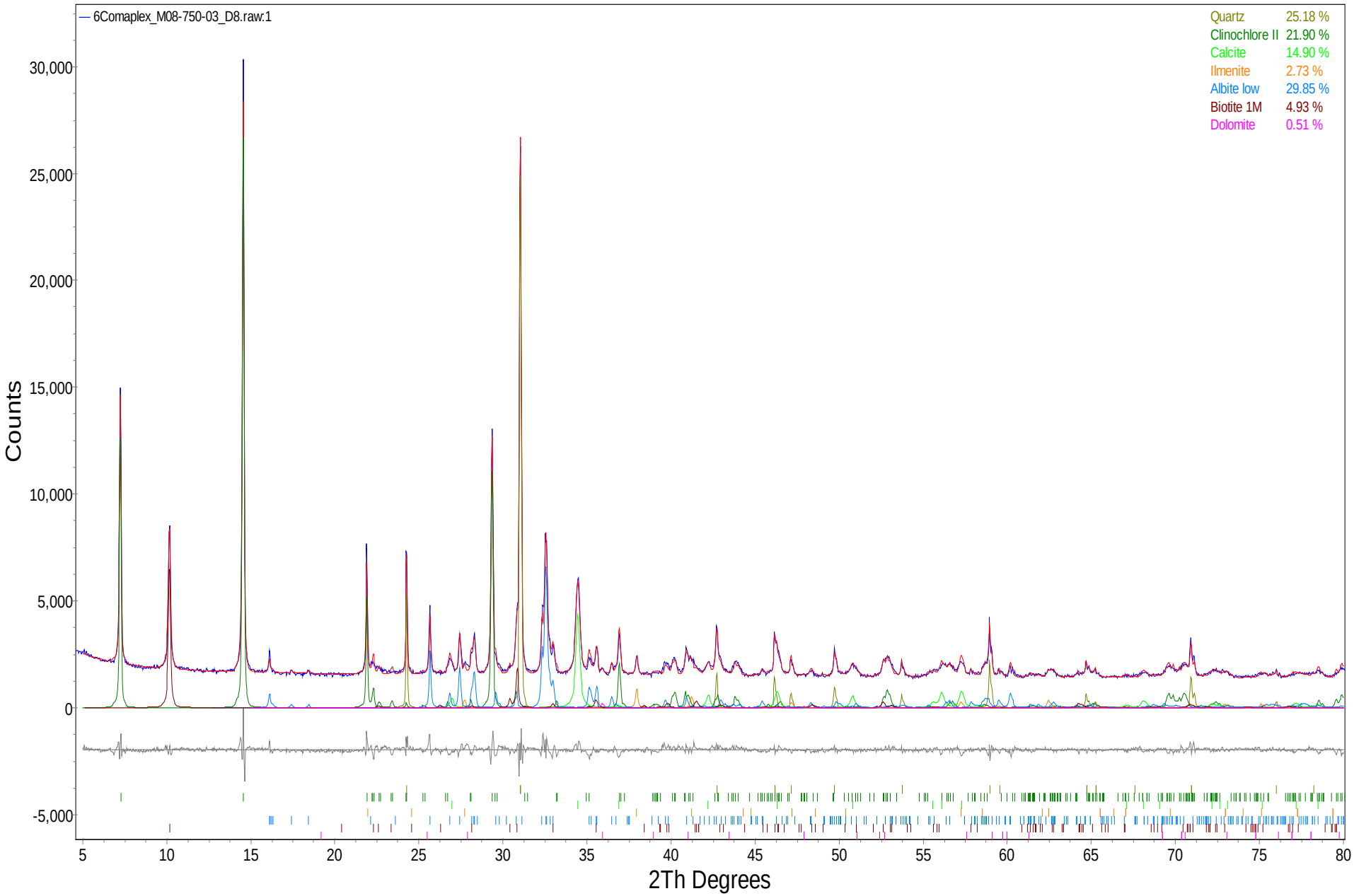



Figure 6. Rietveld refinement plot of sample **Comaplex "M08-750-03"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

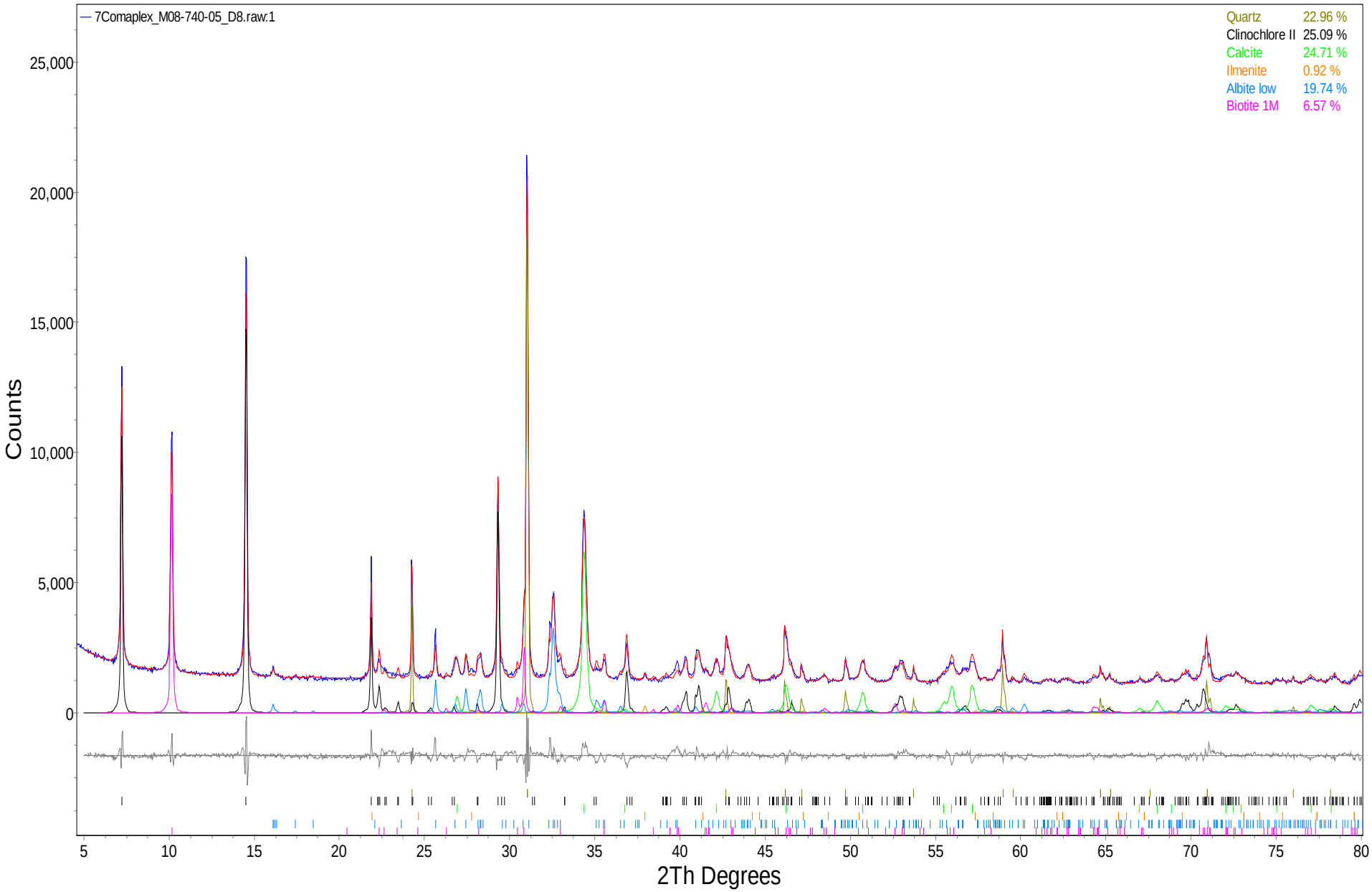



Figure 7. Rietveld refinement plot of sample **Comaplex "M08-740-05"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

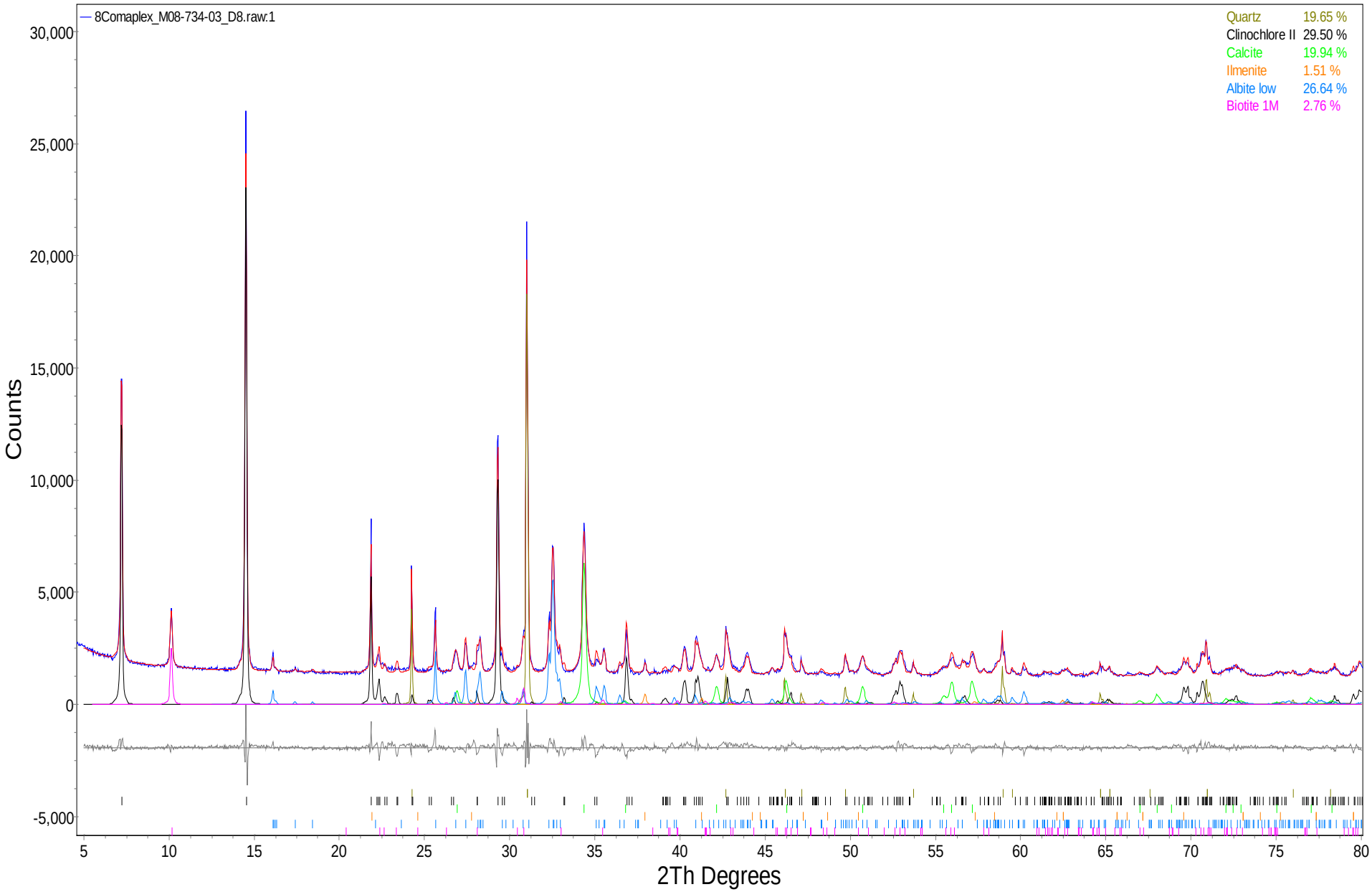



Figure 8. Rietveld refinement plot of sample **Comaplex "M08-734-03"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

# *QUANTITATIVE PHASE ANALYSIS OF 33 POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.*

***Project: 11-1428-0011 Meliadine, PO# 255 813***

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***Dept. of Earth & Ocean Sciences***
***The University of British Columbia***
***6339 Stores Road***
***Vancouver, BC  V6T 1Z4***

***December 22, 2011***

## EXPERIMENTAL METHOD

The thirty-three samples of **Project 11-1428-0011 Meliadine** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Fine grain-size is an important factor in reducing micro-absorption contrast between phases. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

## RESULTS

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1 (separate file, ***Golder Associates Results Dec 22 2011 - Proj 11-1428-0011 Meliadine.xls*)**. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 33. The ideal formulae of phases present are given in Table 2.

Table 2.

| **Mineral** | **Ideal Formula** |
|---|---|
| Actinolite | $Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$ |
| Ankerite – Dolomite | $Ca(Fe^{2+},Mg,Mn^{2+})(CO_3)_2$ - $CaMg(CO_3)_2$ |
| Arsenopyrite | FeAsS |
| Biotite | $K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$ |
| Calcite | $CaCO_3$ |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$ |
| Clinozoisite | $Ca_2Al_3(SiO_4)_3(OH)$ |
| Cummingtonite | $(Mg,Fe)_7Si_8O_{22}(OH)_2$ |
| Diopside | $CaMgSi_2O_6$ |
| Epidote | $Ca_2(Fe^{3+},Al)_3(SiO_4)_3(OH)$ |
| Ilmenite | $Fe^{2+}TiO_3$ |
| K-Feldspar | $KAlSi_3O_8$ |
| Magnetite | $Fe^{2+}Fe^{3+}{}_2O_4$ |
| Muscovite | $KAl_2AlSi_3O_{10}(OH)_2$ |
| Plagioclase | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ |
| Pyrite | $FeS_2$ |
| Pyrrhotite | $Fe_{1-x}S$ |
| Quartz | $SiO_2$ |
| Siderite | $Fe^{2+}CO_3$ |
| Titanite | $CaTiSiO_5$ |

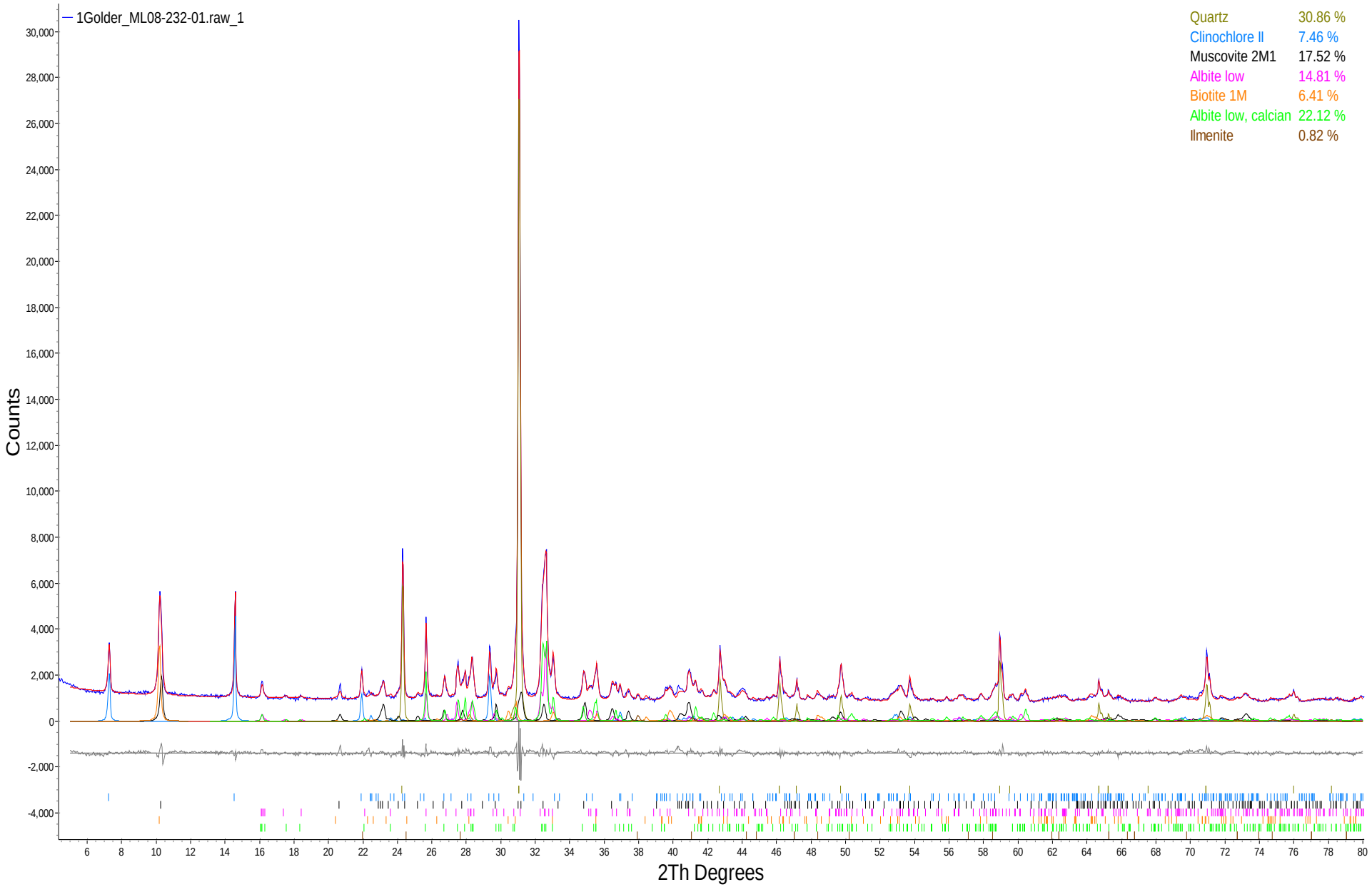



Figure 1. Rietveld refinement plot of sample **Golder Associates "ML08-232-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

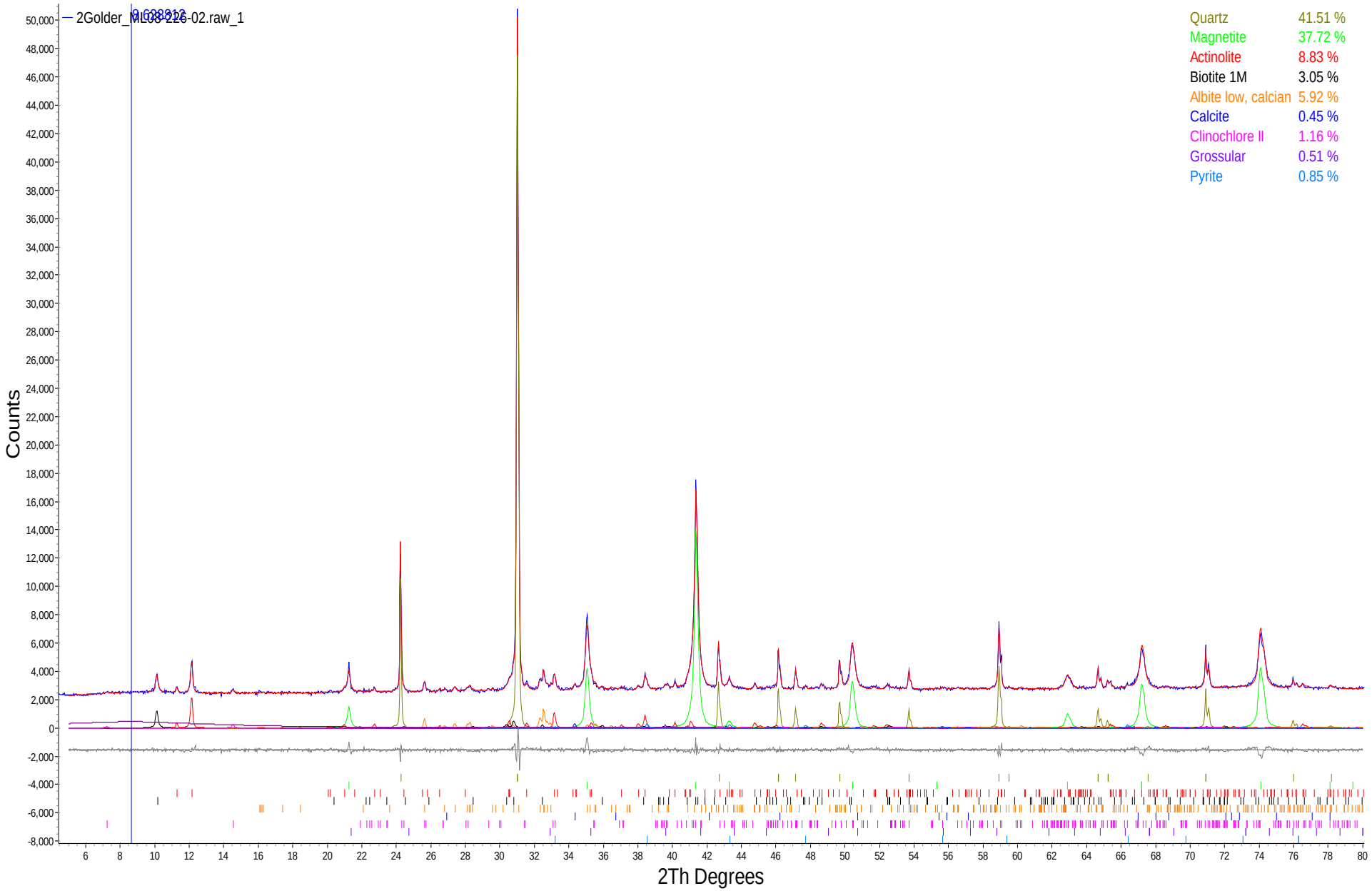



Figure 2. Rietveld refinement plot of sample **Golder Associates "ML08-226-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

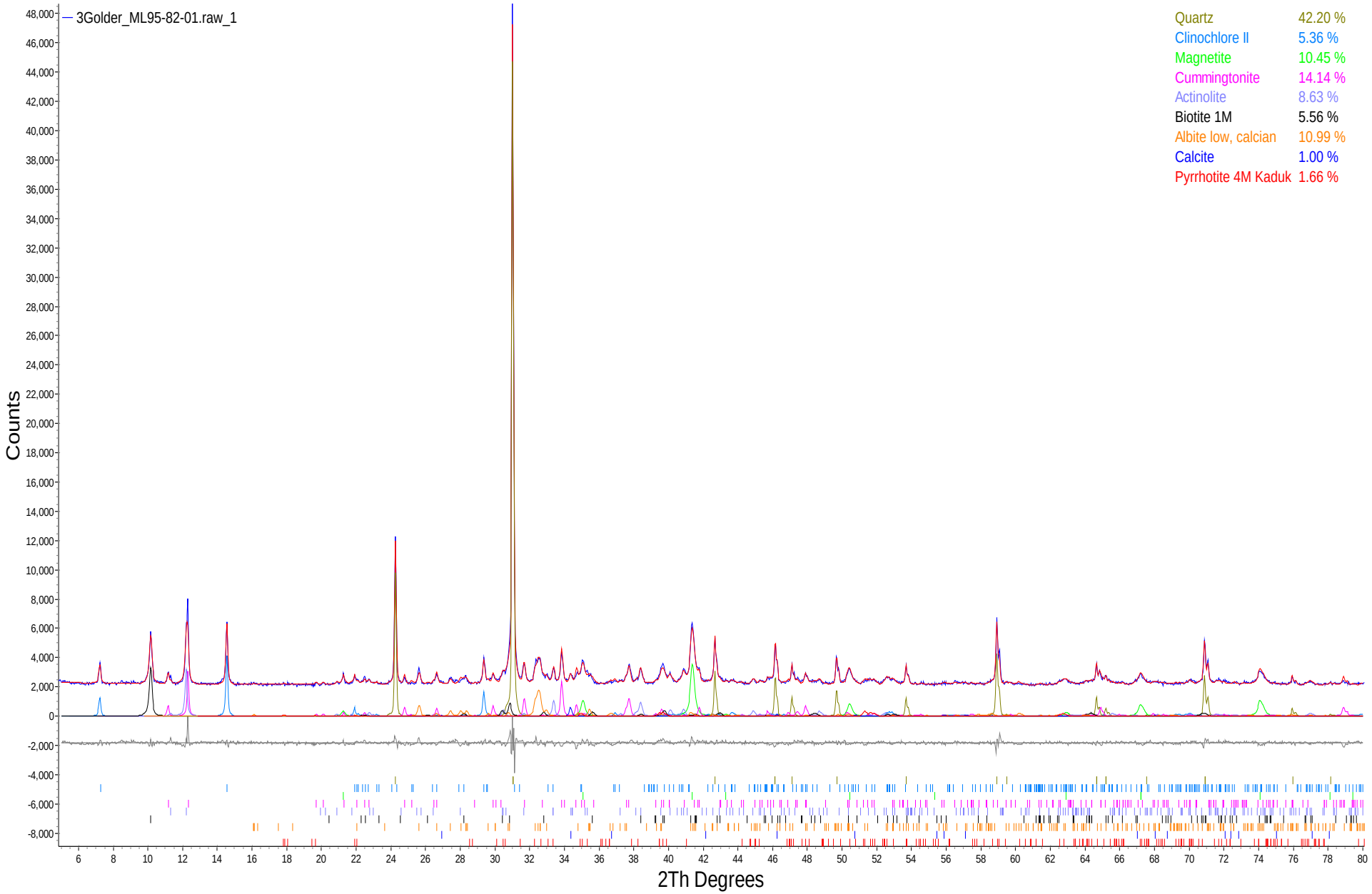



Figure 3. Rietveld refinement plot of sample **Golder Associates "ML95-82-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

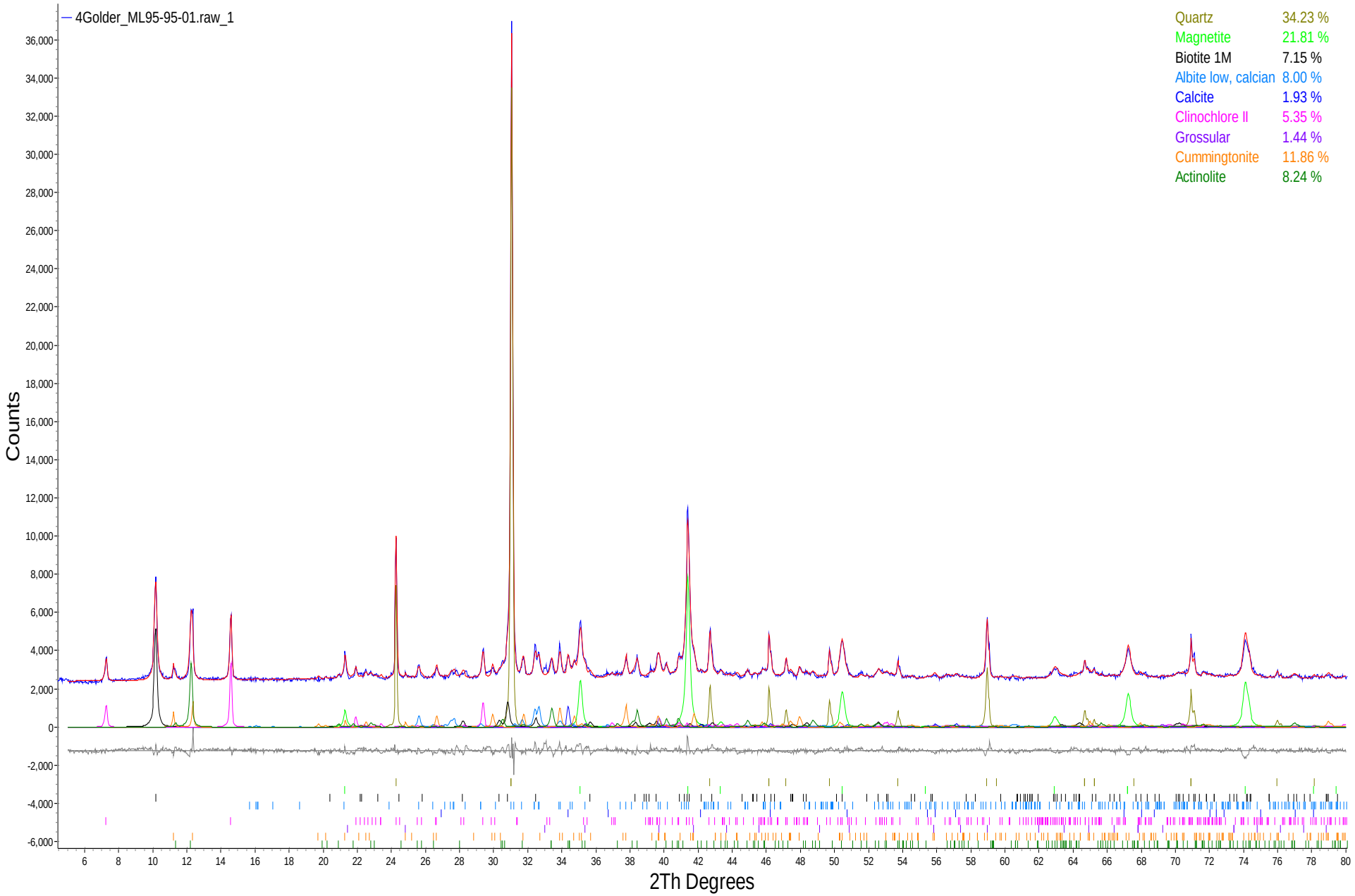



Figure 4. Rietveld refinement plot of sample **Golder Associates "ML95-95-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

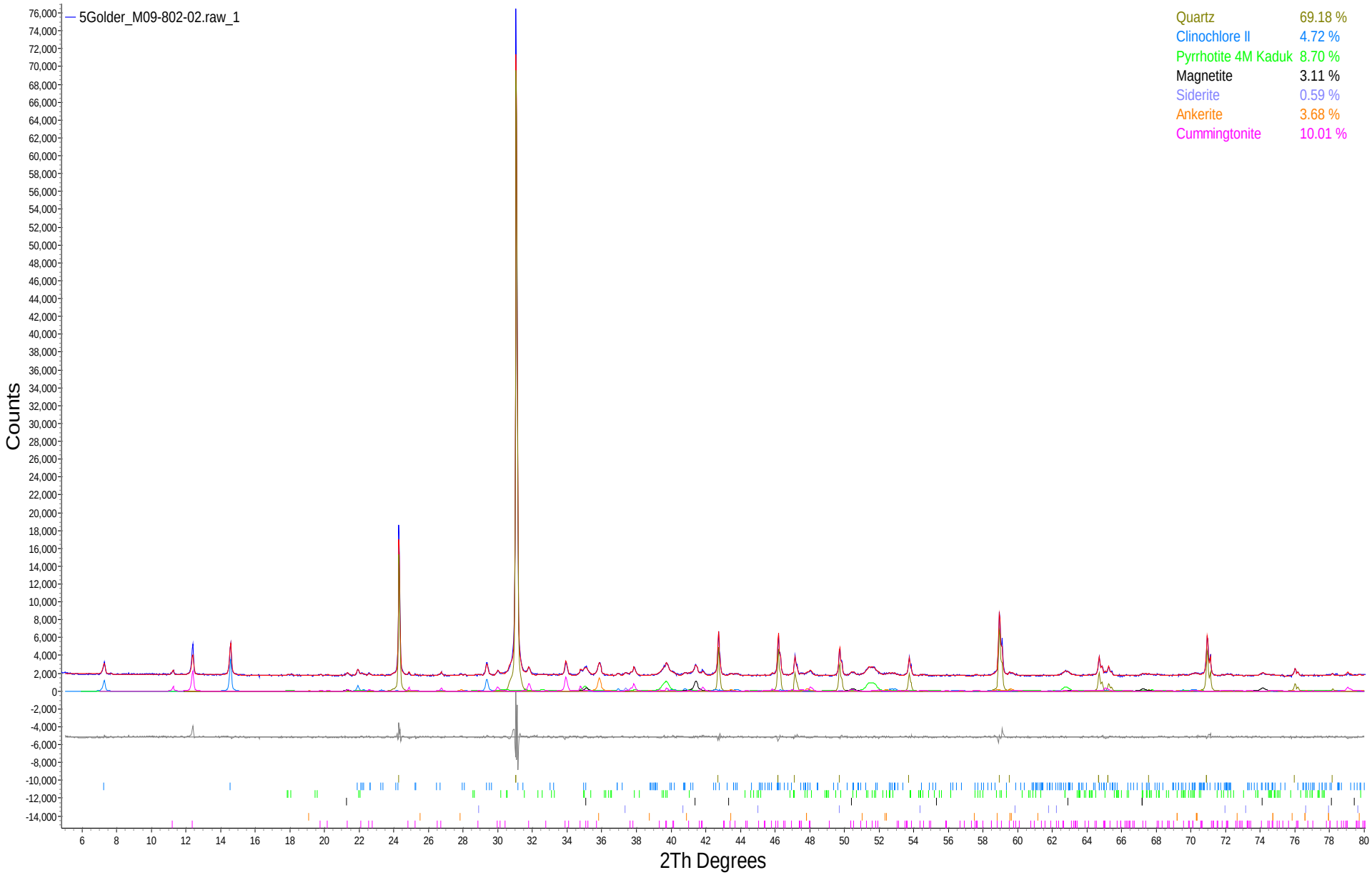



Figure 5. Rietveld refinement plot of sample **Golder Associates "M09-802-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

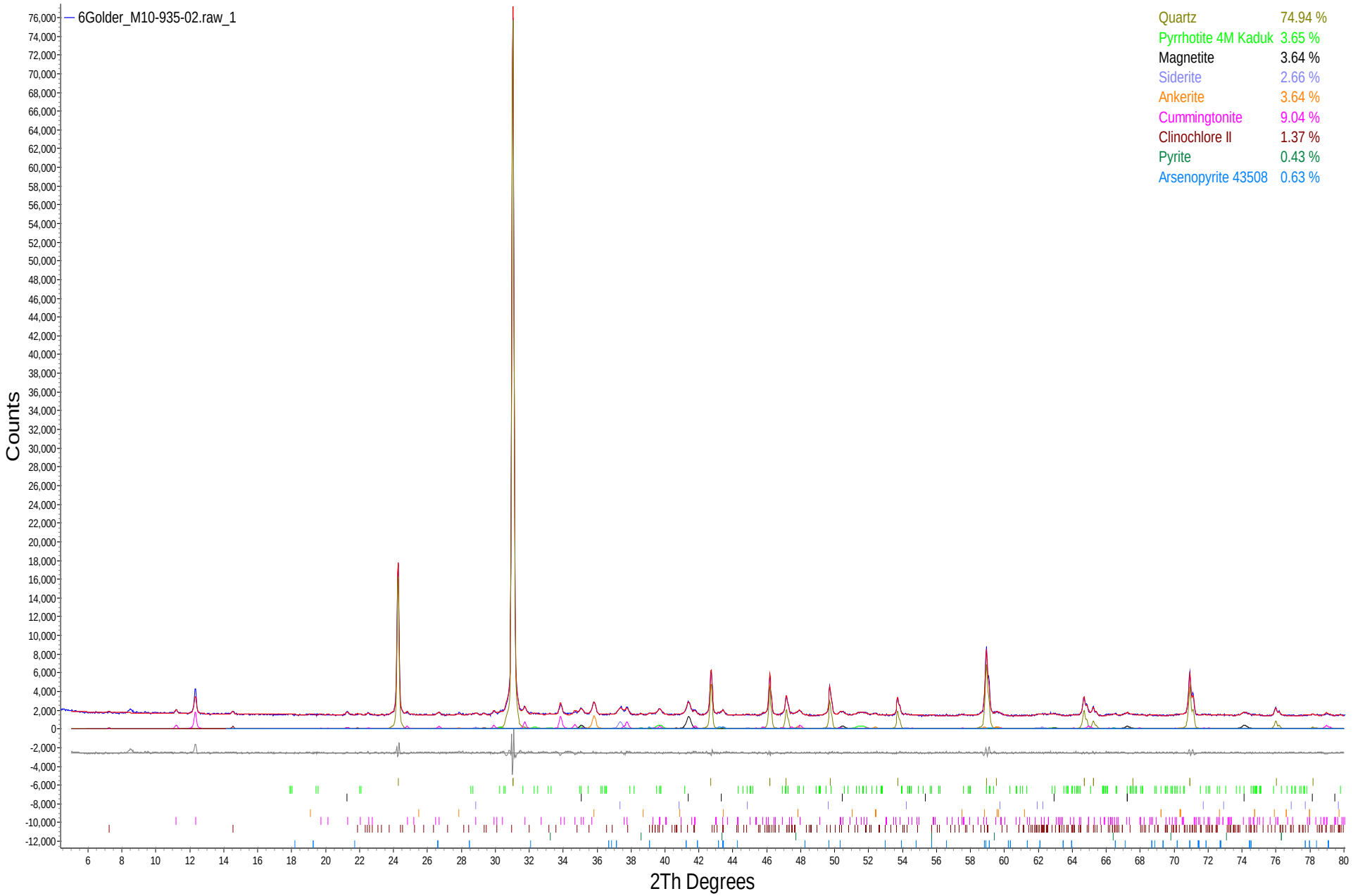



Figure 6. Rietveld refinement plot of sample **Golder Associates "M10-935-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

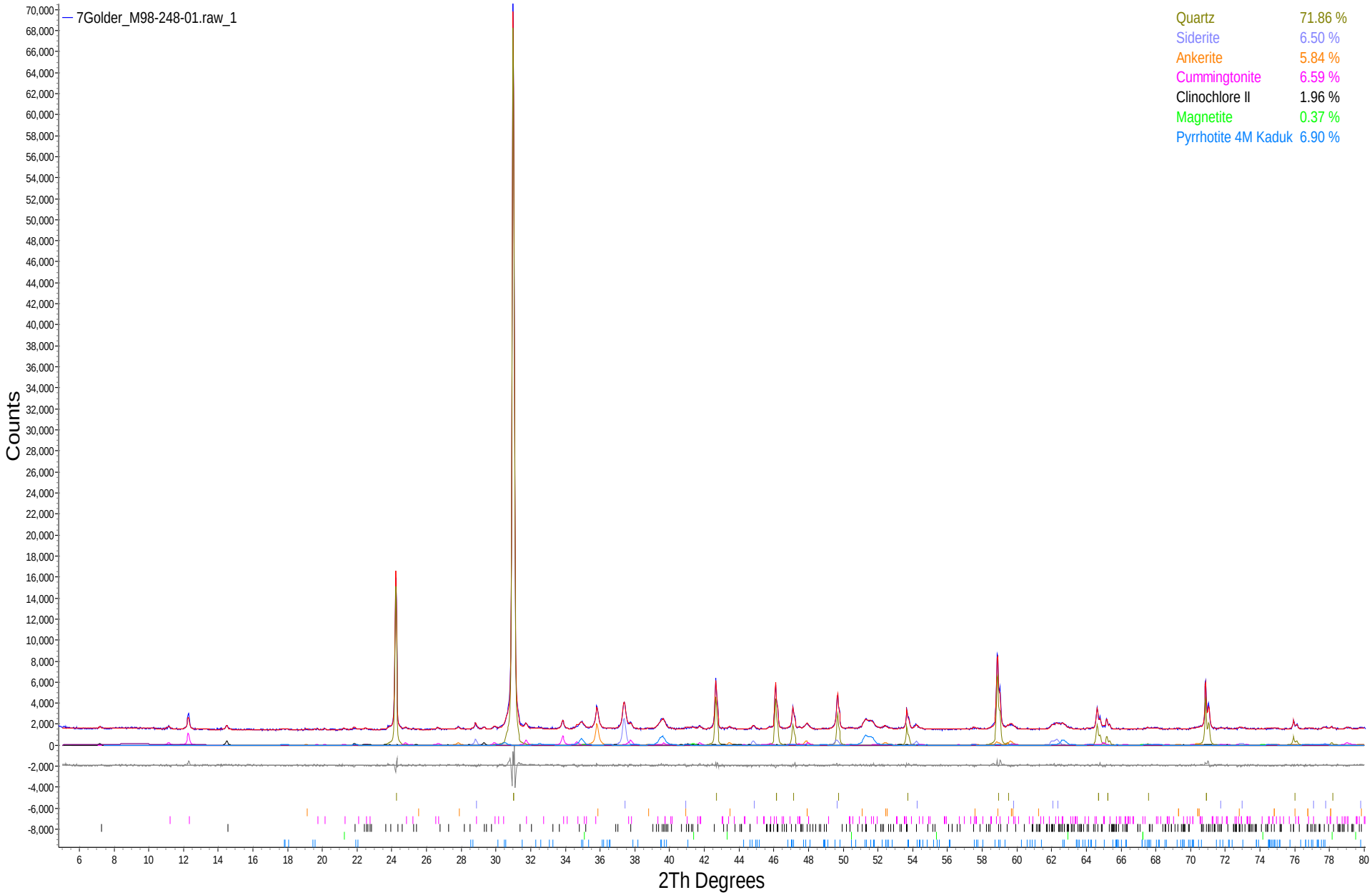



Figure 7. Rietveld refinement plot of sample **Golder Associates "M98-248-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

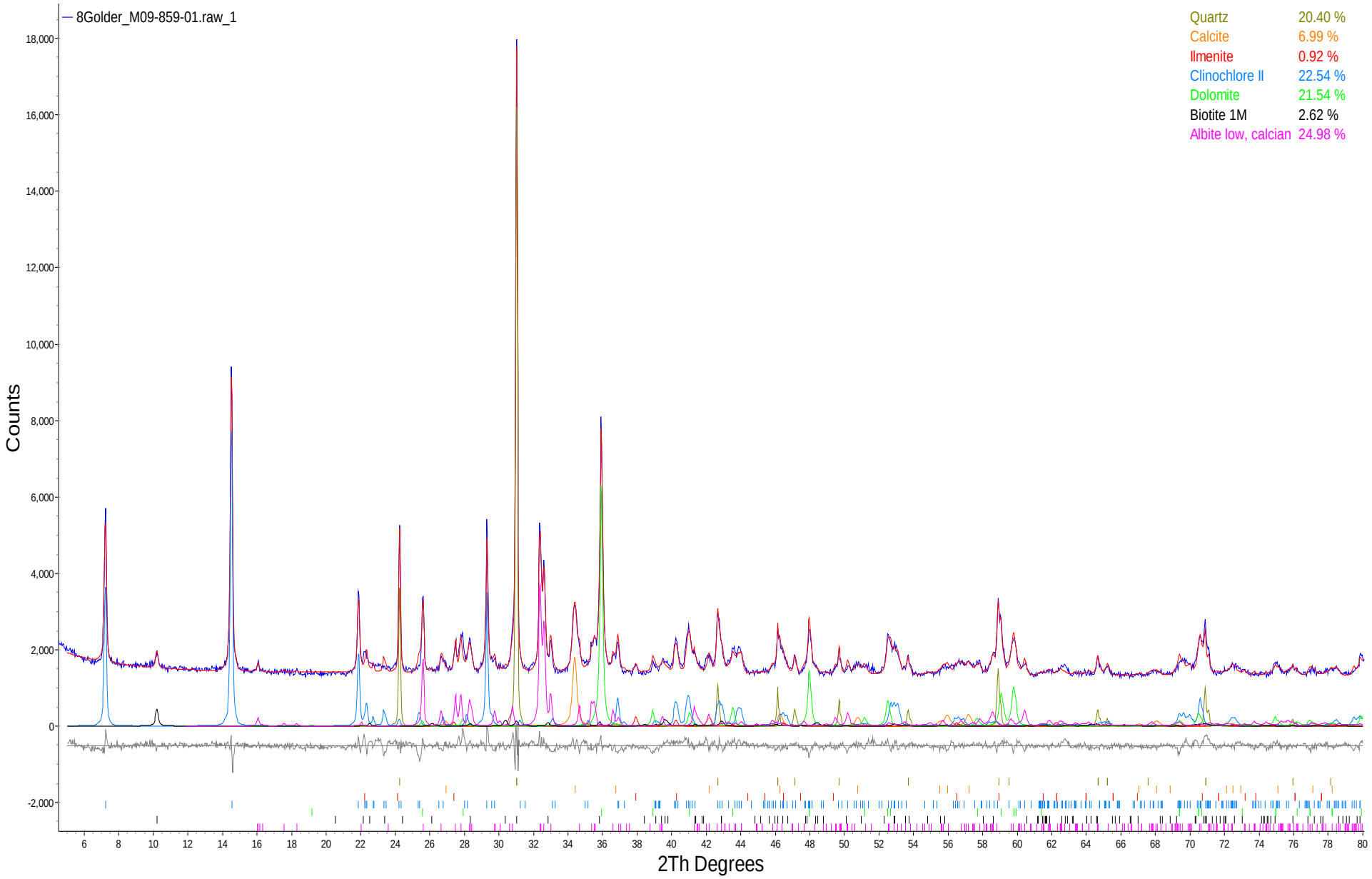



Figure 8. Rietveld refinement plot of sample **Golder Associates "M09-859-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

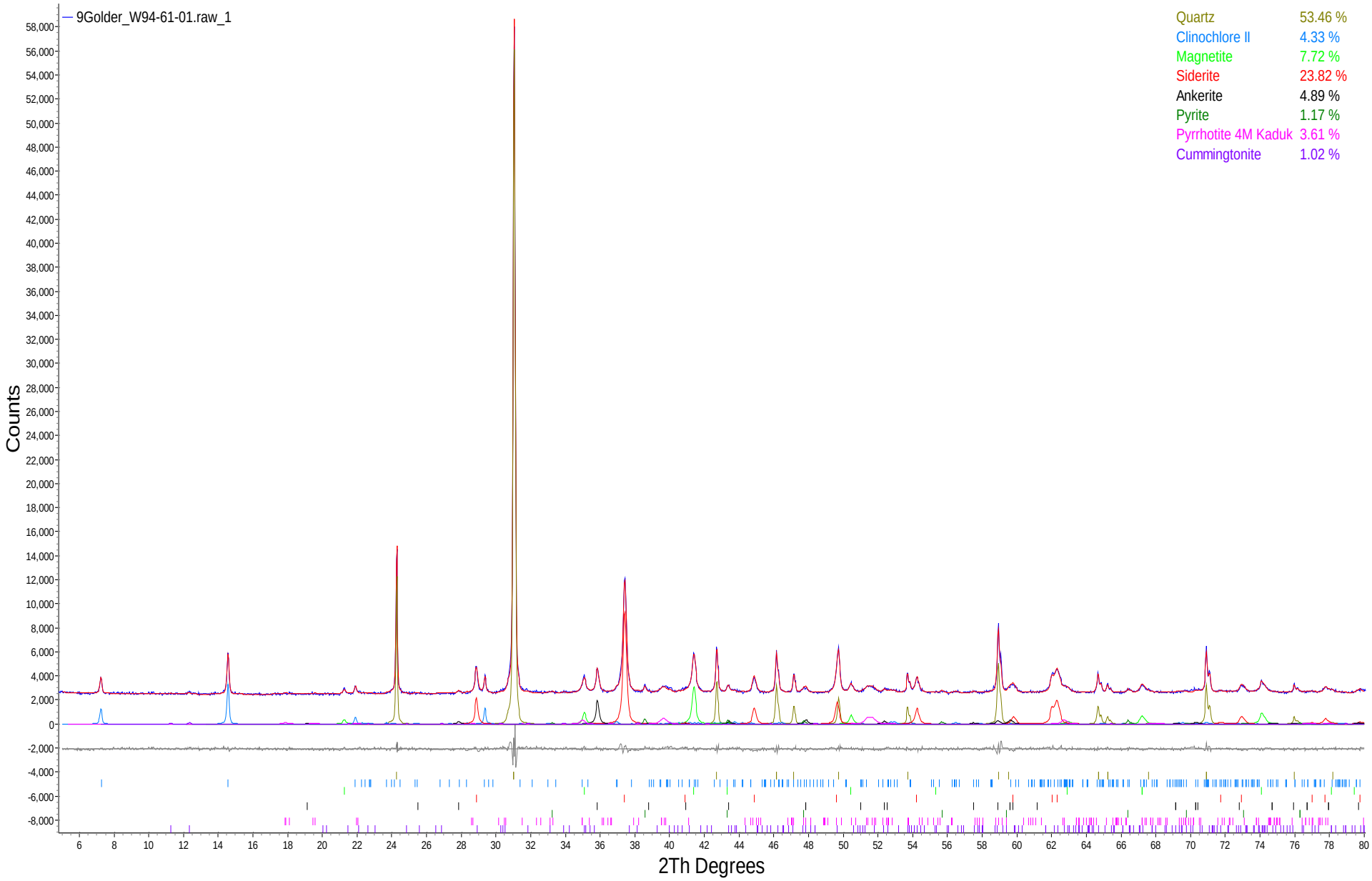



Figure 9. Rietveld refinement plot of sample **Golder Associates "W94-61-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

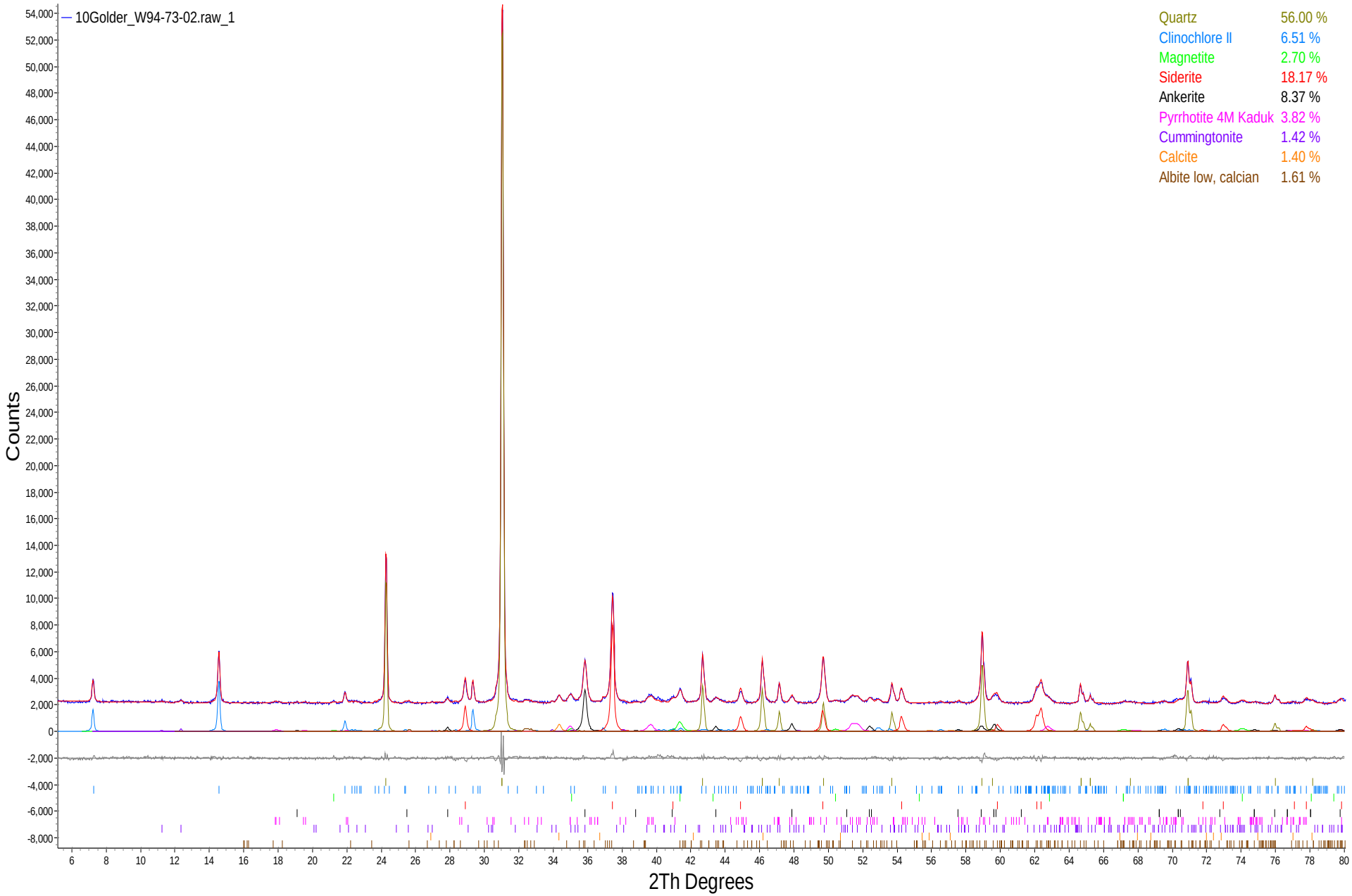



Figure 10. Rietveld refinement plot of sample **Golder Associates "W94-73-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

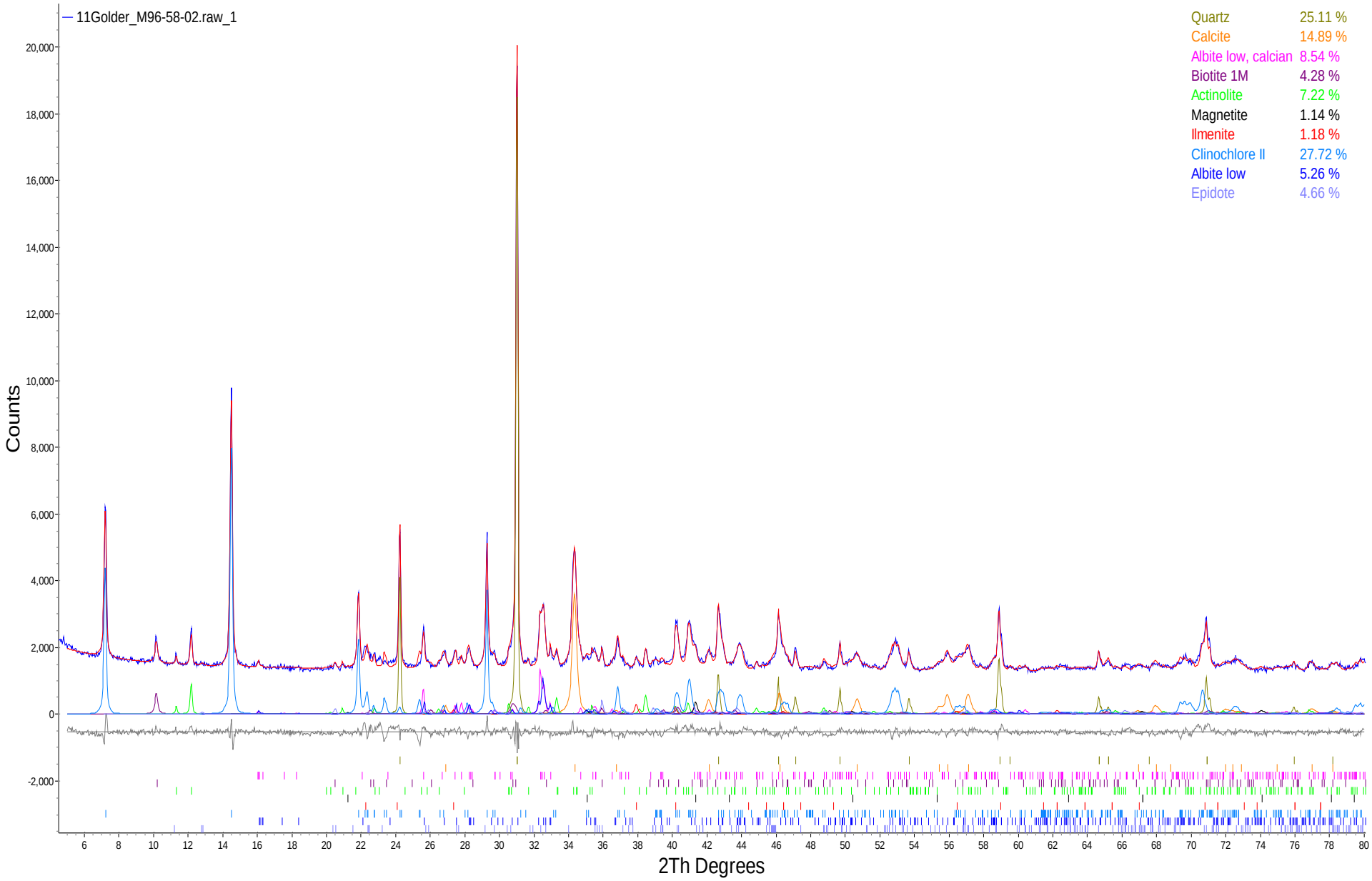



Figure 11. Rietveld refinement plot of sample **Golder Associates "M96-58-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

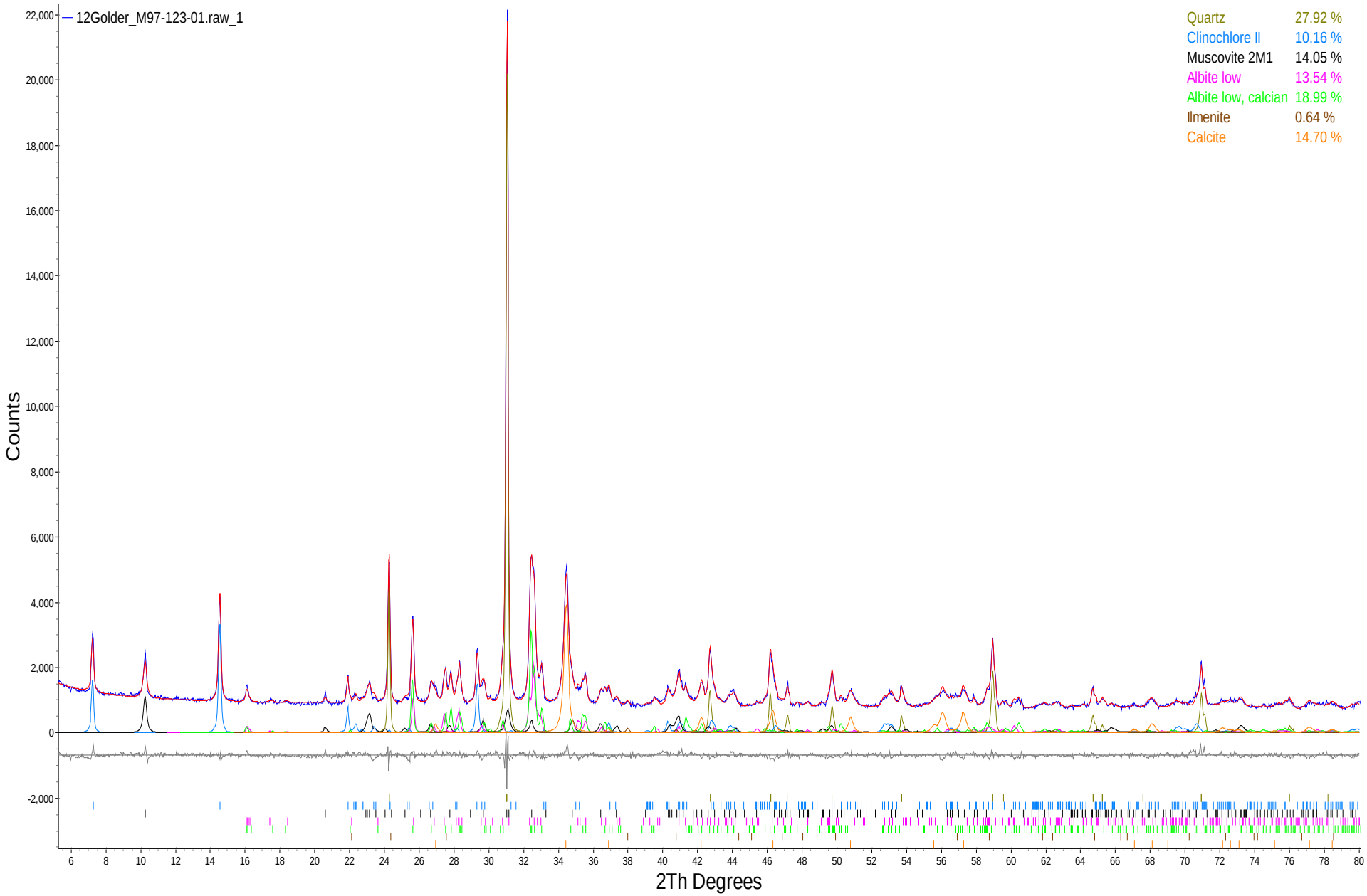



Figure 12. Rietveld refinement plot of sample **Golder Associates "M97-123-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

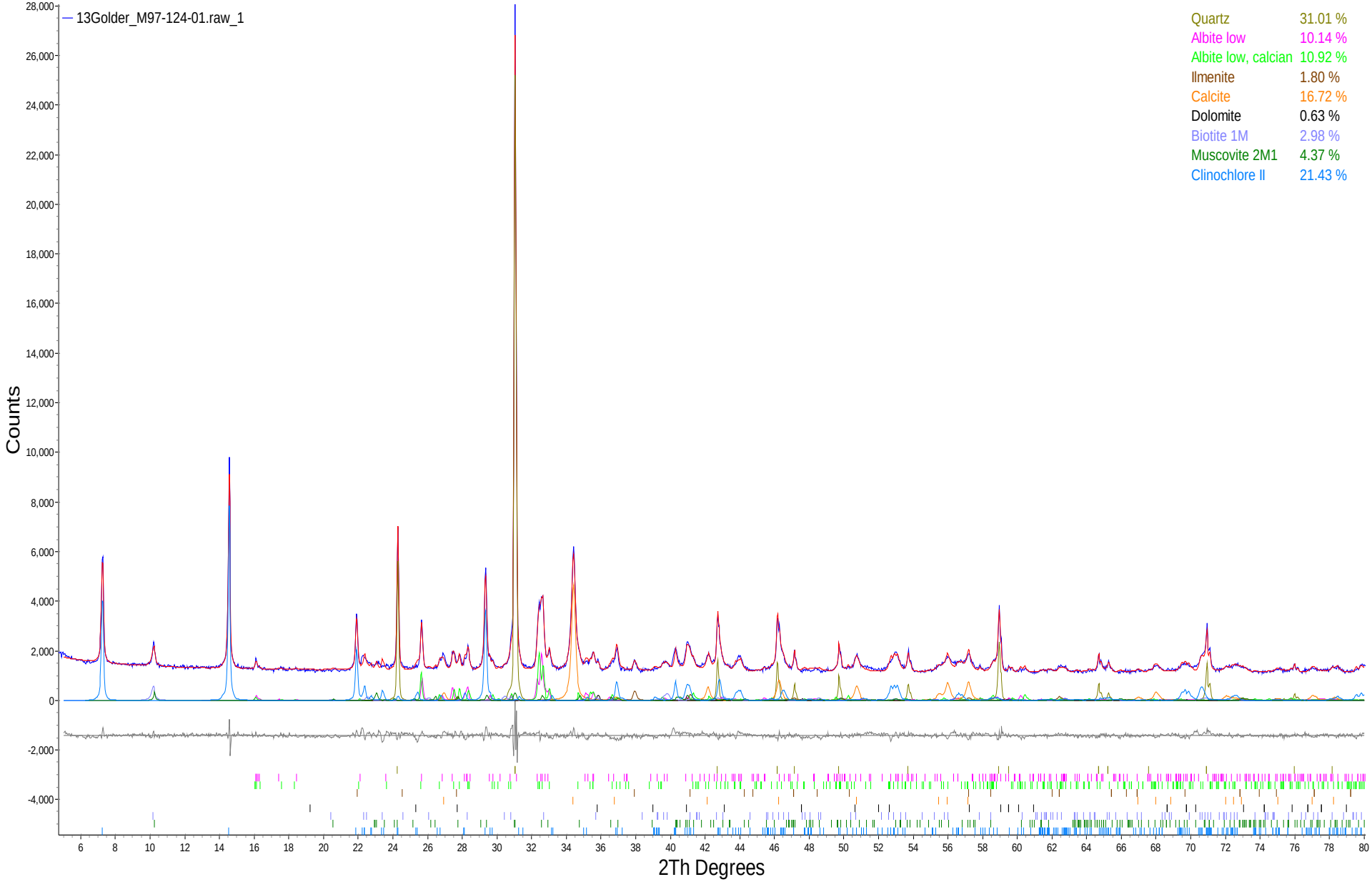



Figure 13. Rietveld refinement plot of sample **Golder Associates "M97-124-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

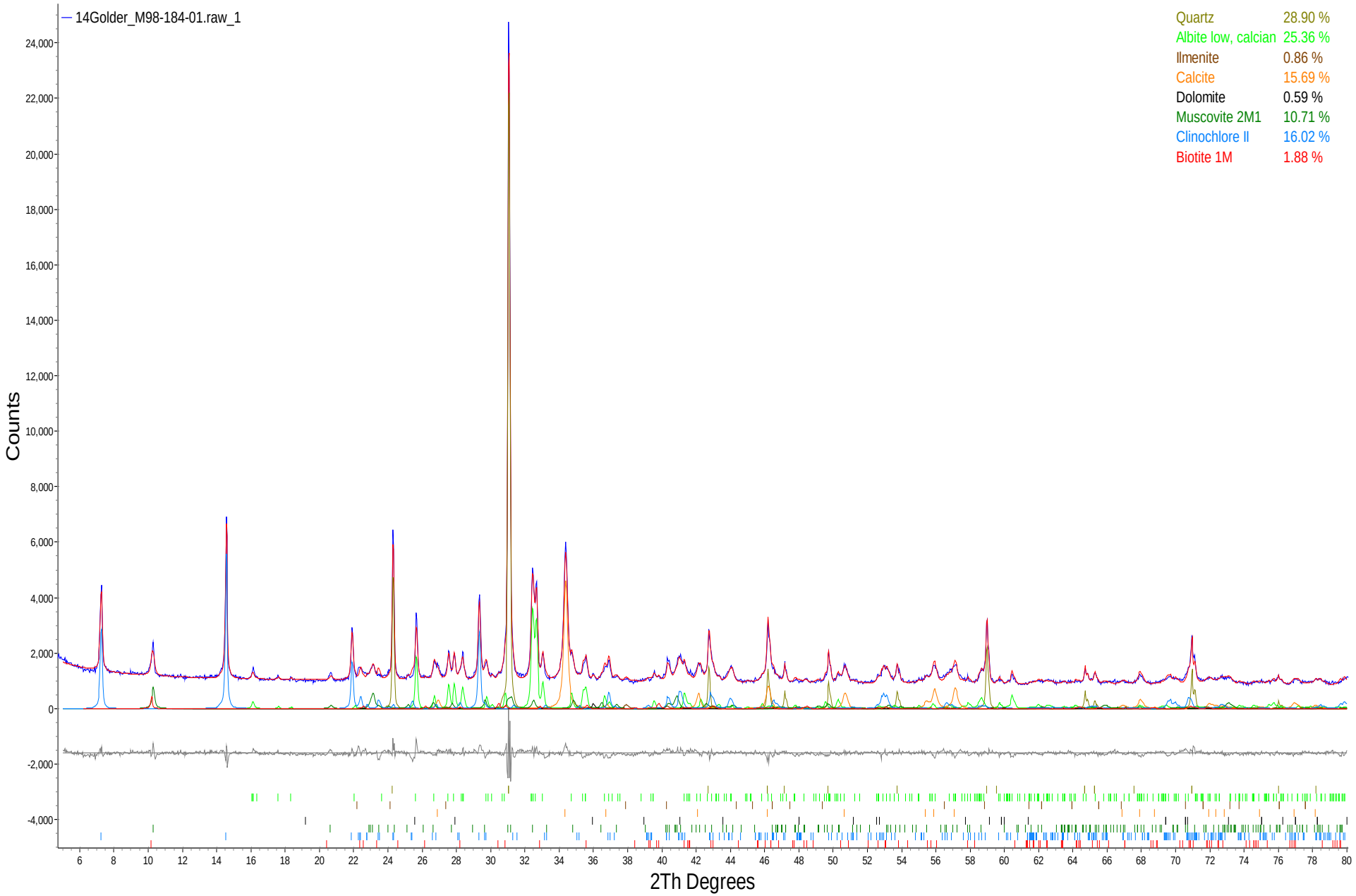



Figure 14. Rietveld refinement plot of sample **Golder Associates "M98-184-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

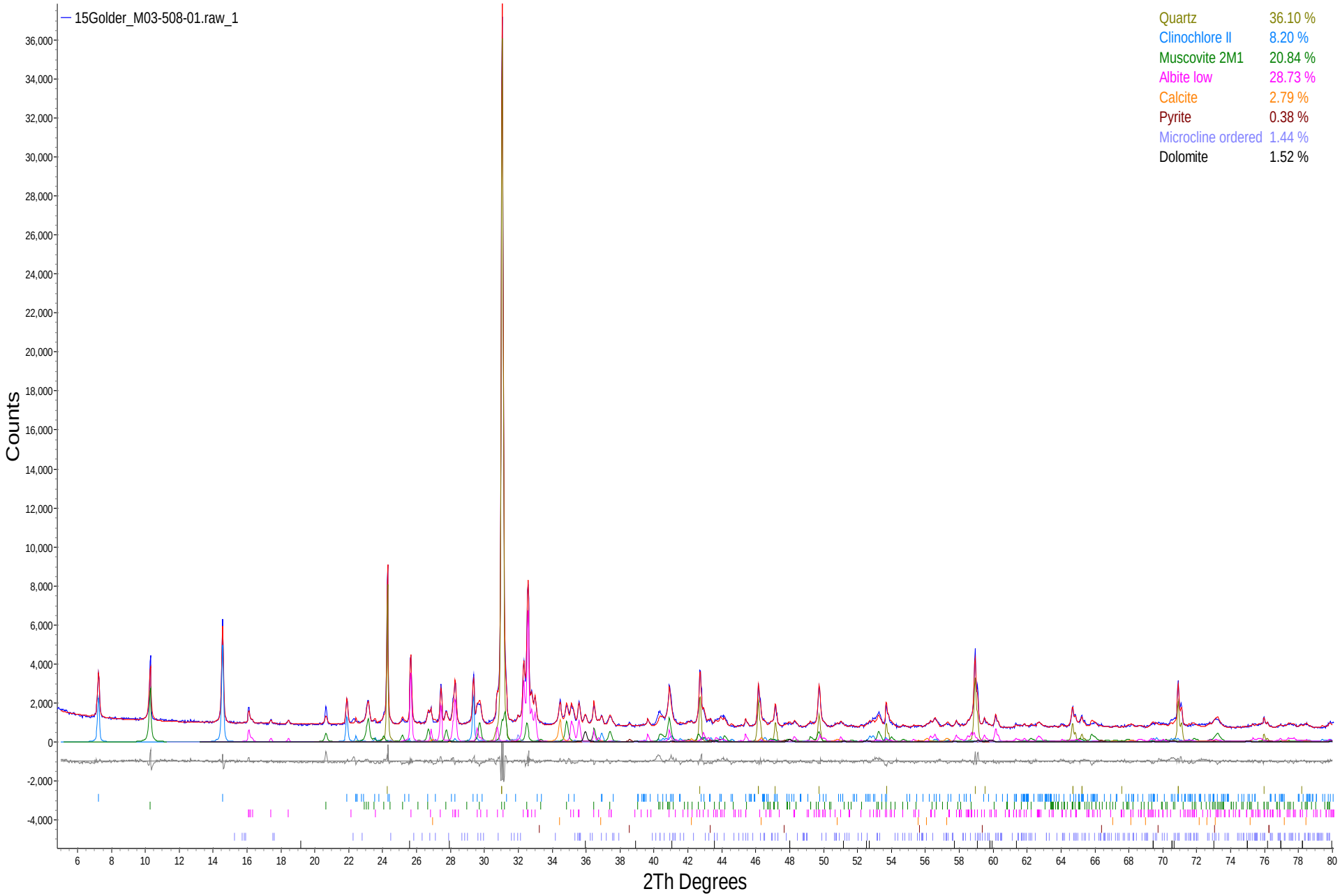



Figure 15. Rietveld refinement plot of sample **Golder Associates "M03-508-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

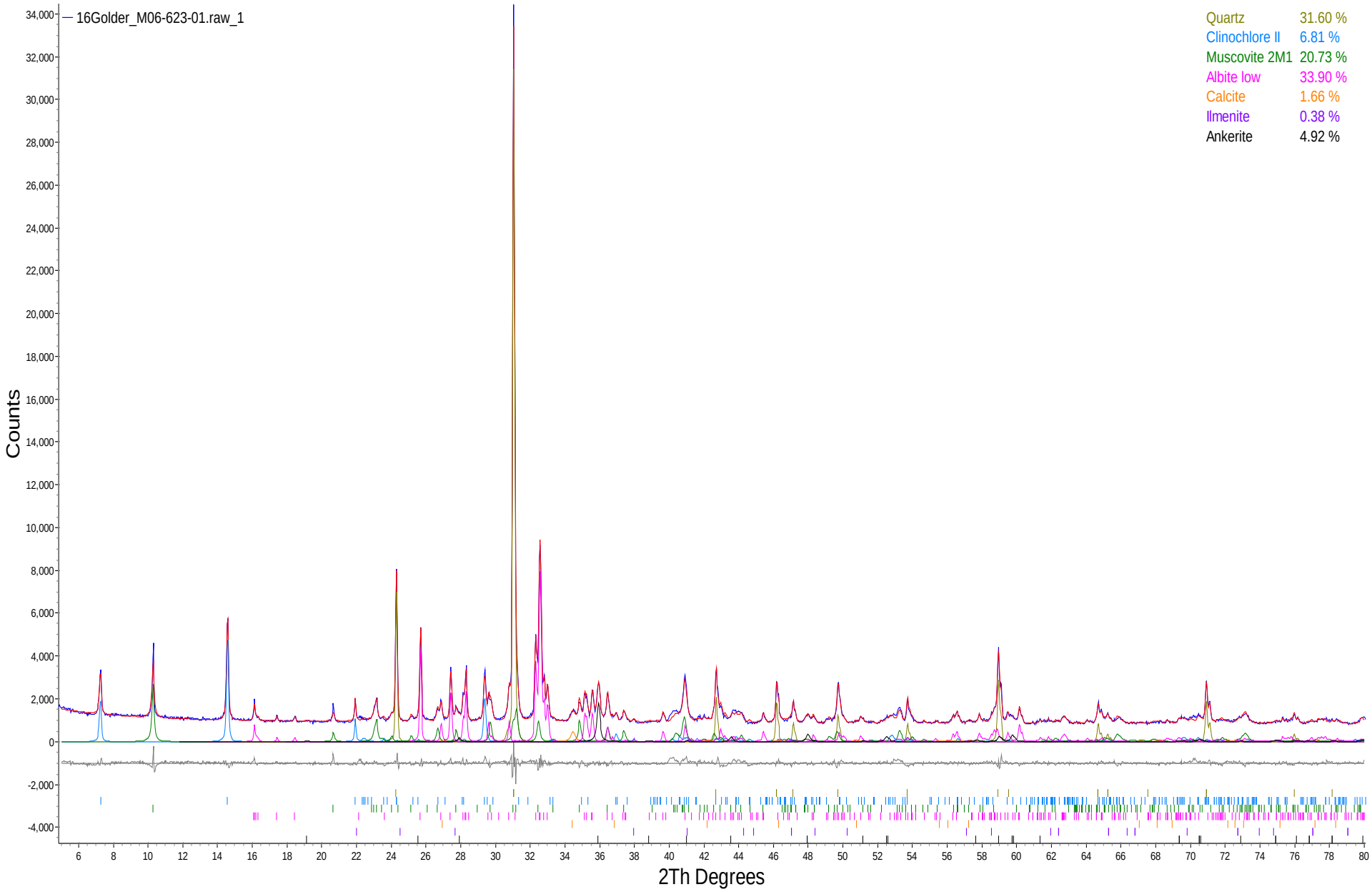



Figure 16. Rietveld refinement plot of sample **Golder Associates "M06-623-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

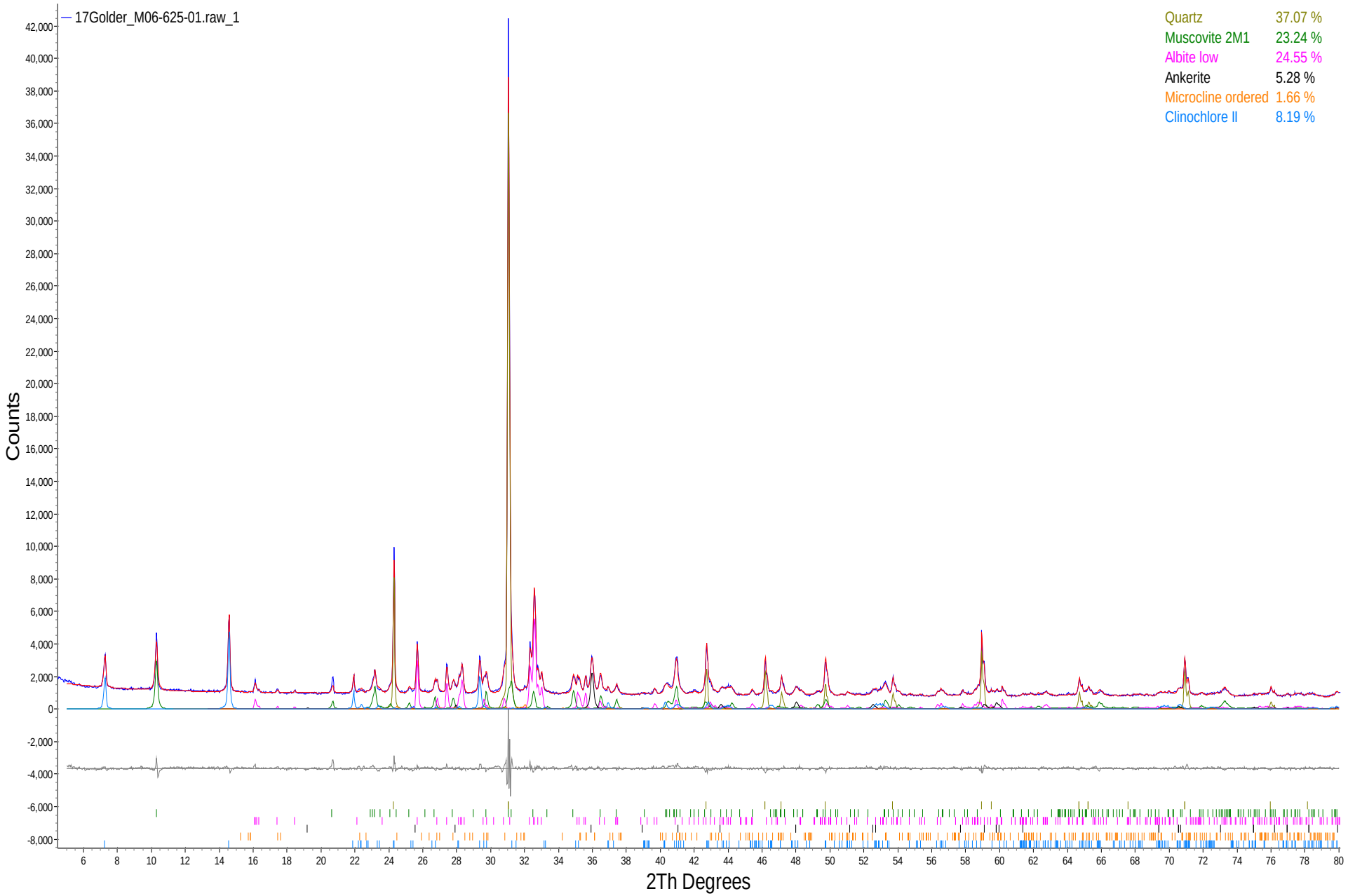



Figure 17. Rietveld refinement plot of sample **Golder Associates "M06-625-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

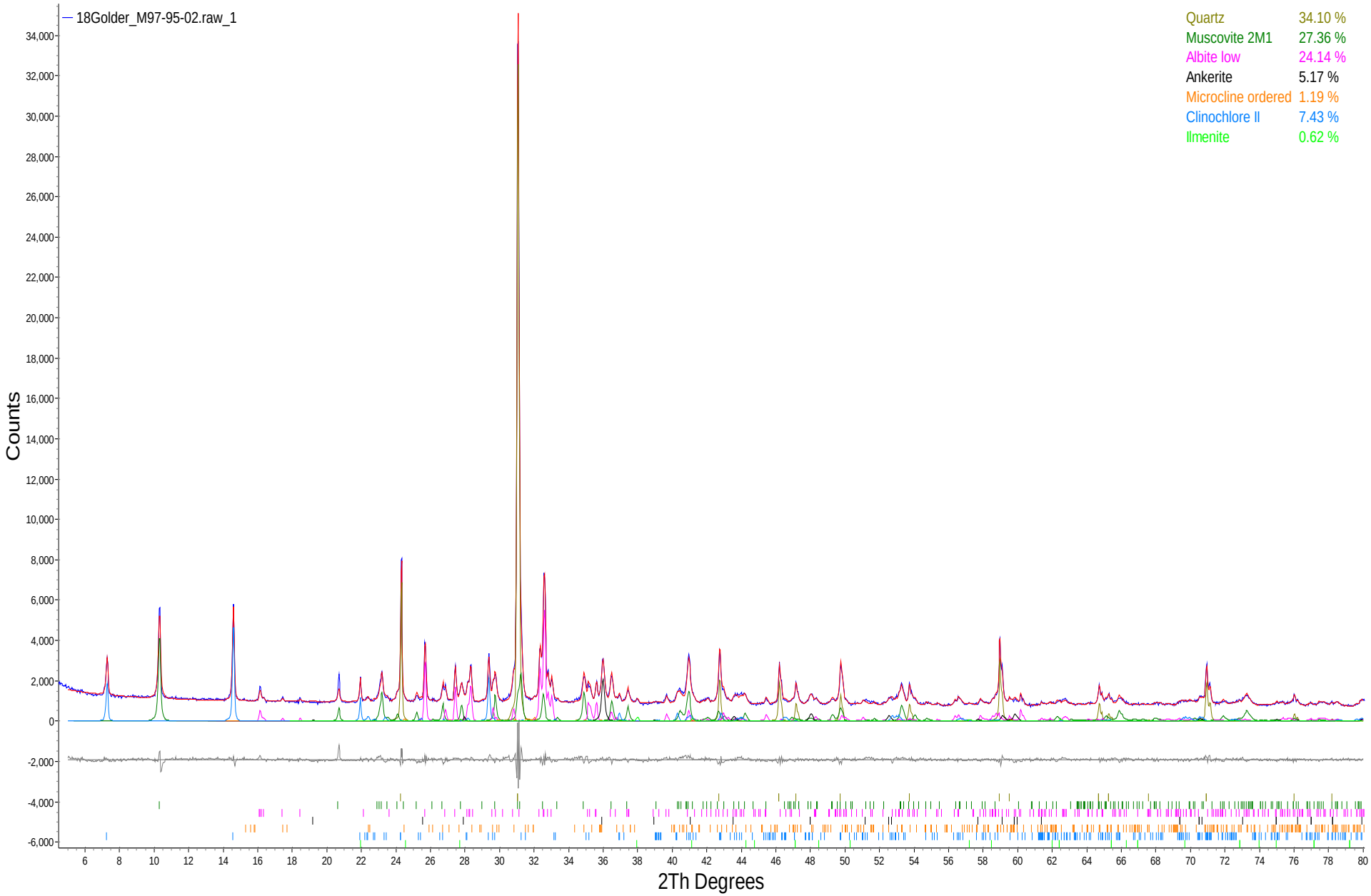



Figure 18. Rietveld refinement plot of sample **Golder Associates "M97-95-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

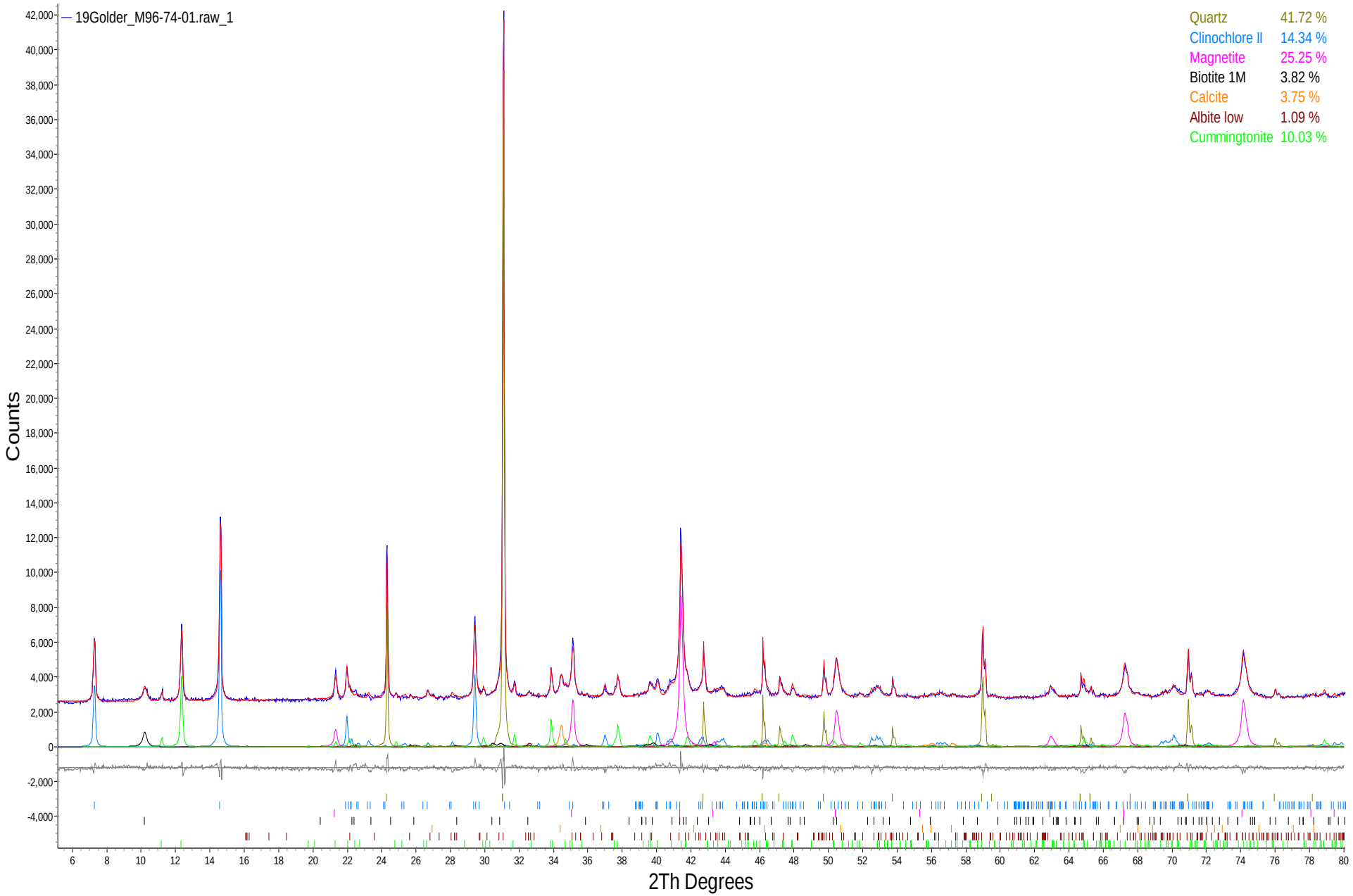



Figure 19. Rietveld refinement plot of sample **Golder Associates "M96-74-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

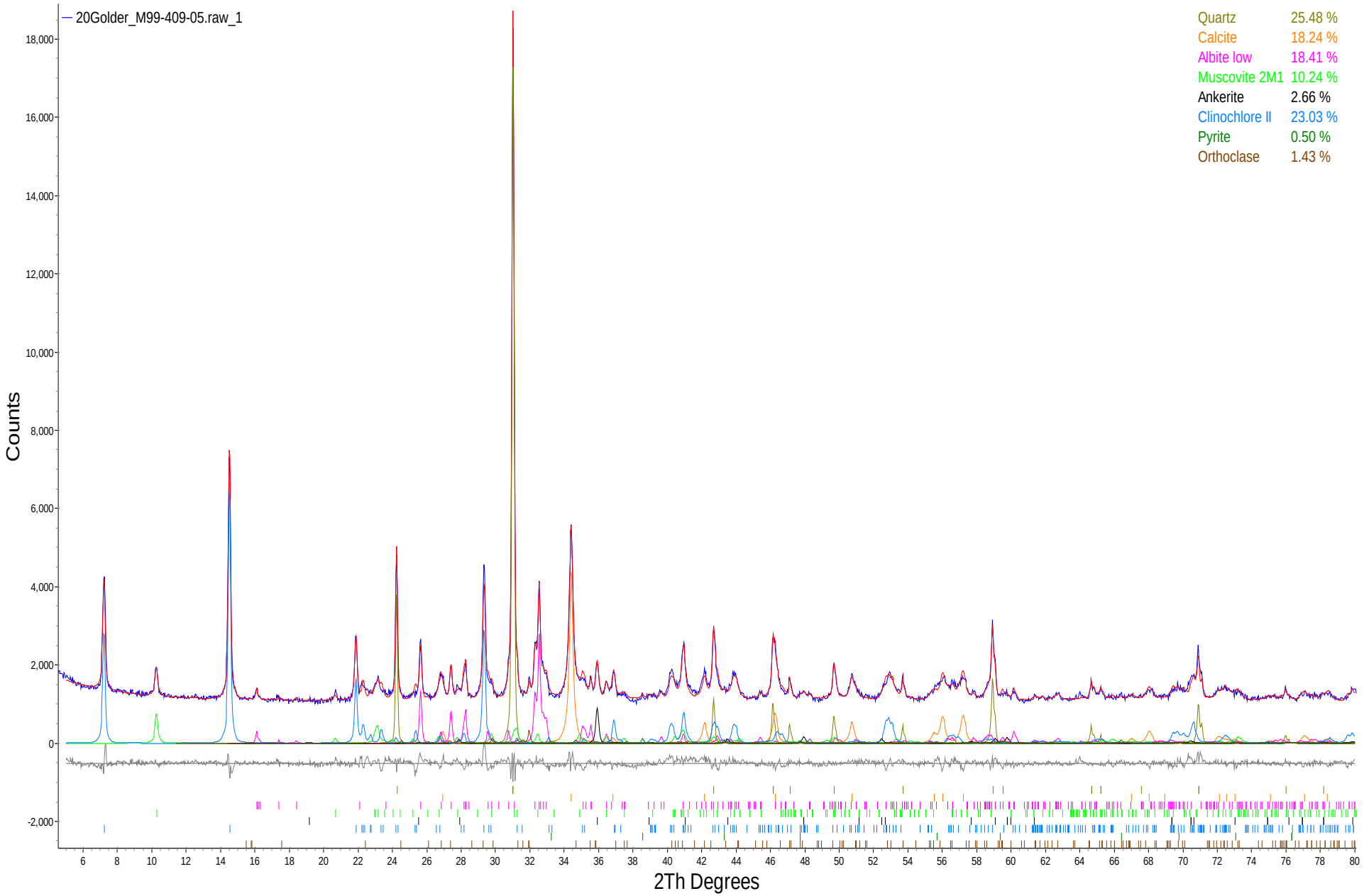



Figure 20. Rietveld refinement plot of sample **Golder Associates "M99-409-05"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

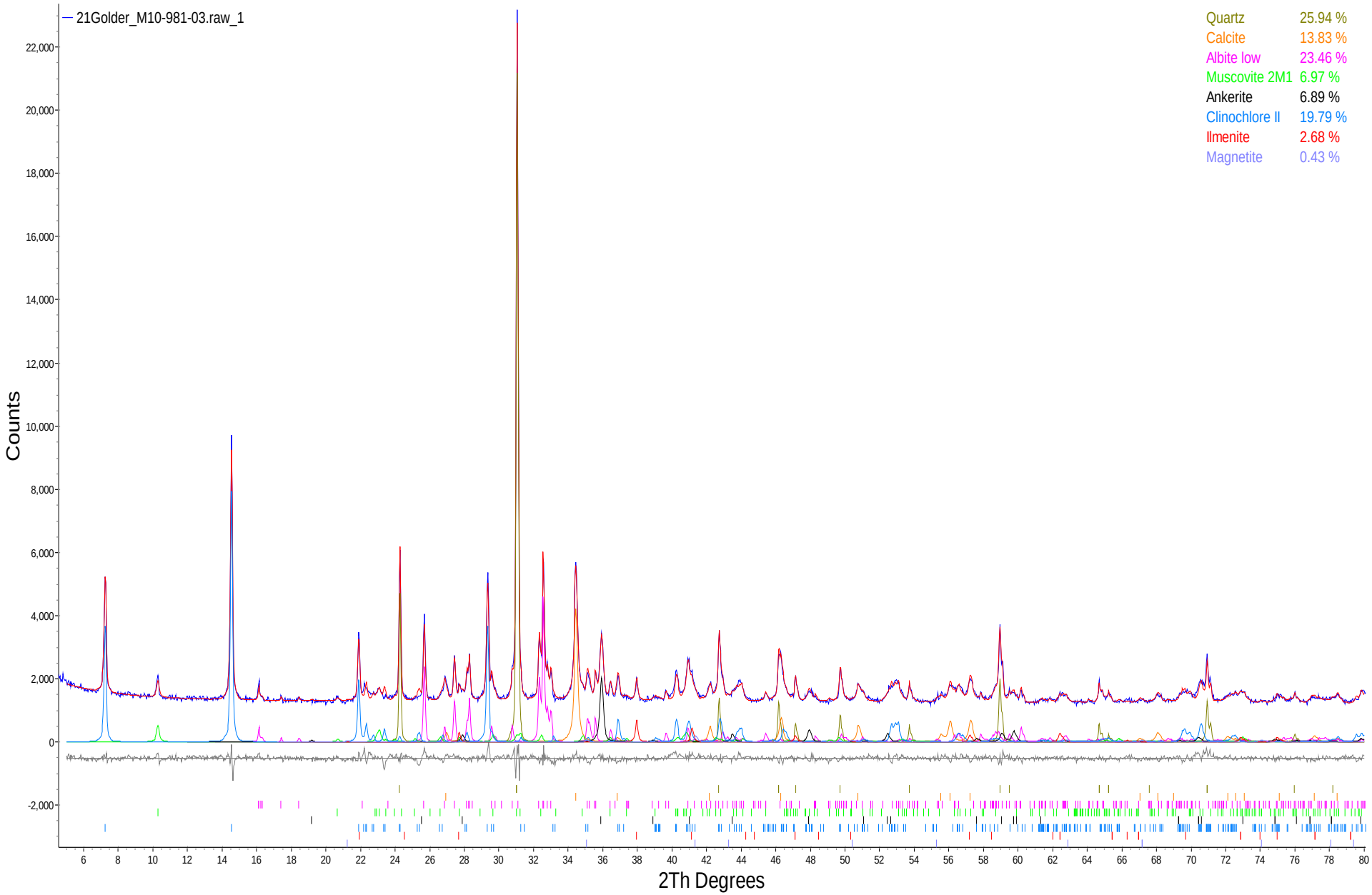



Figure 21. Rietveld refinement plot of sample **Golder Associates "M10-981-03"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

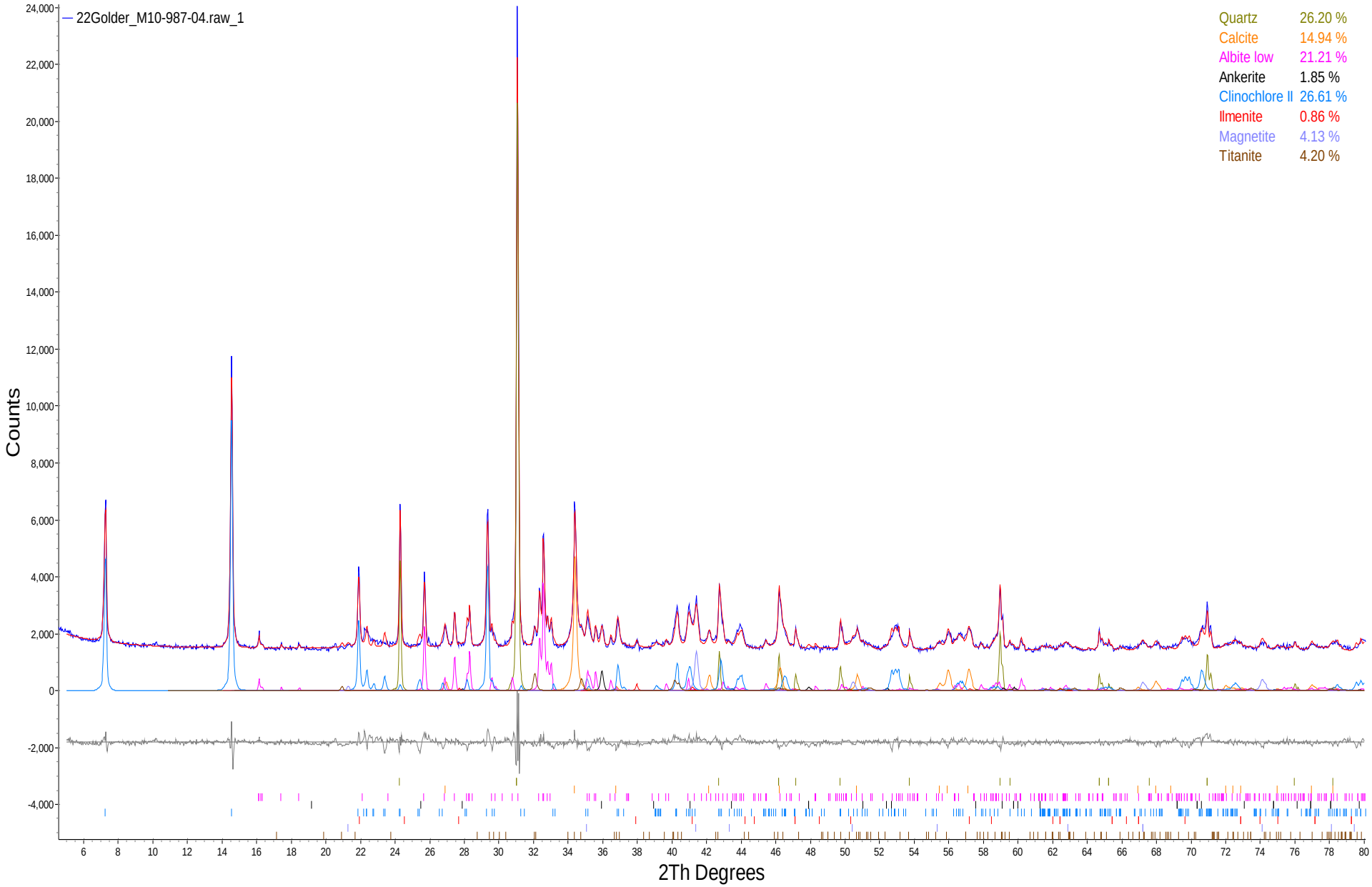



Figure 22. Rietveld refinement plot of sample **Golder Associates "M10-987-04"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

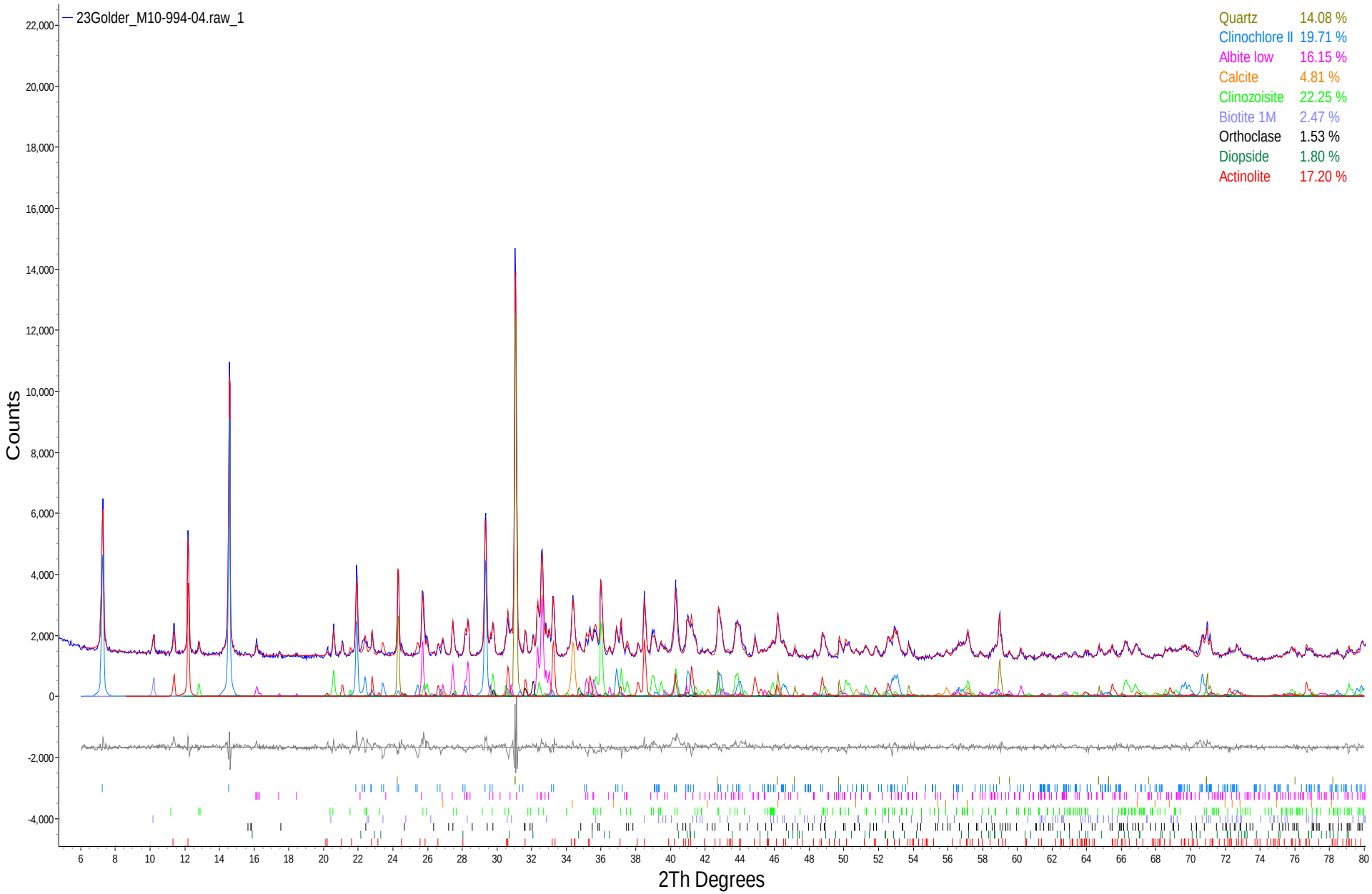



Figure 23. Rietveld refinement plot of sample **Golder Associates "M10-994-04"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

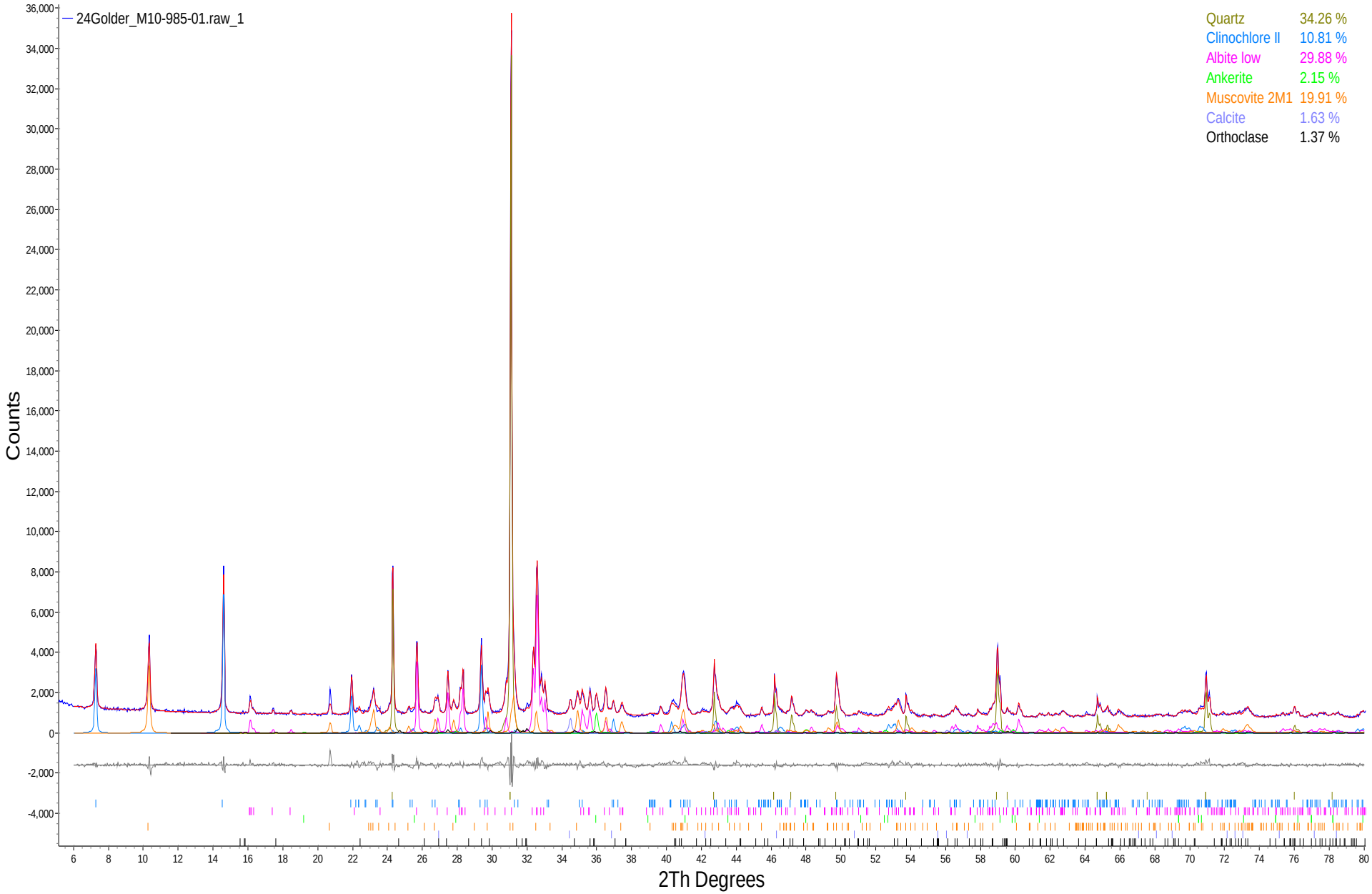



Figure 24. Rietveld refinement plot of sample **Golder Associates "M10-985-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

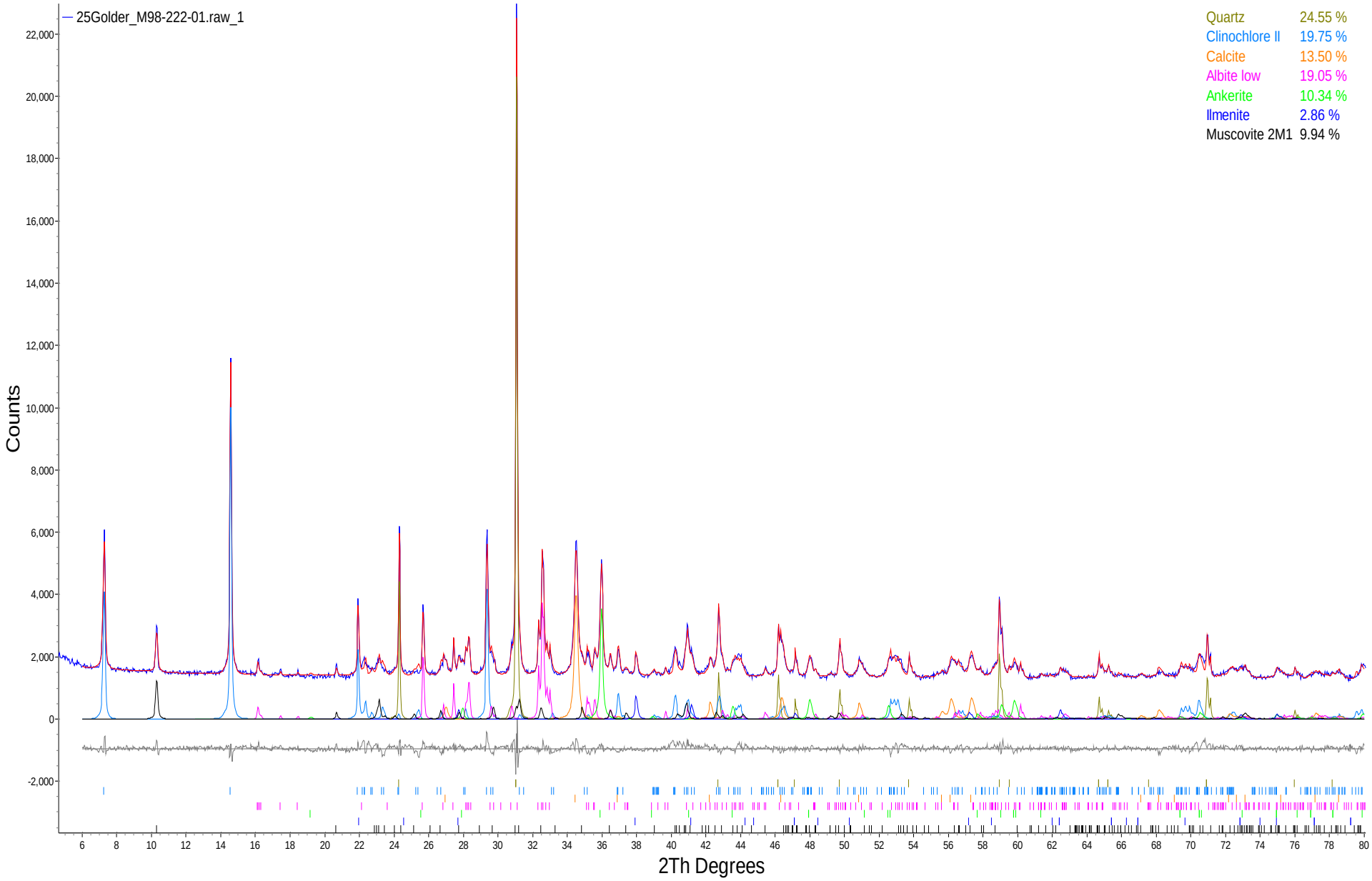



Figure 25. Rietveld refinement plot of sample **Golder Associates "M98-222-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

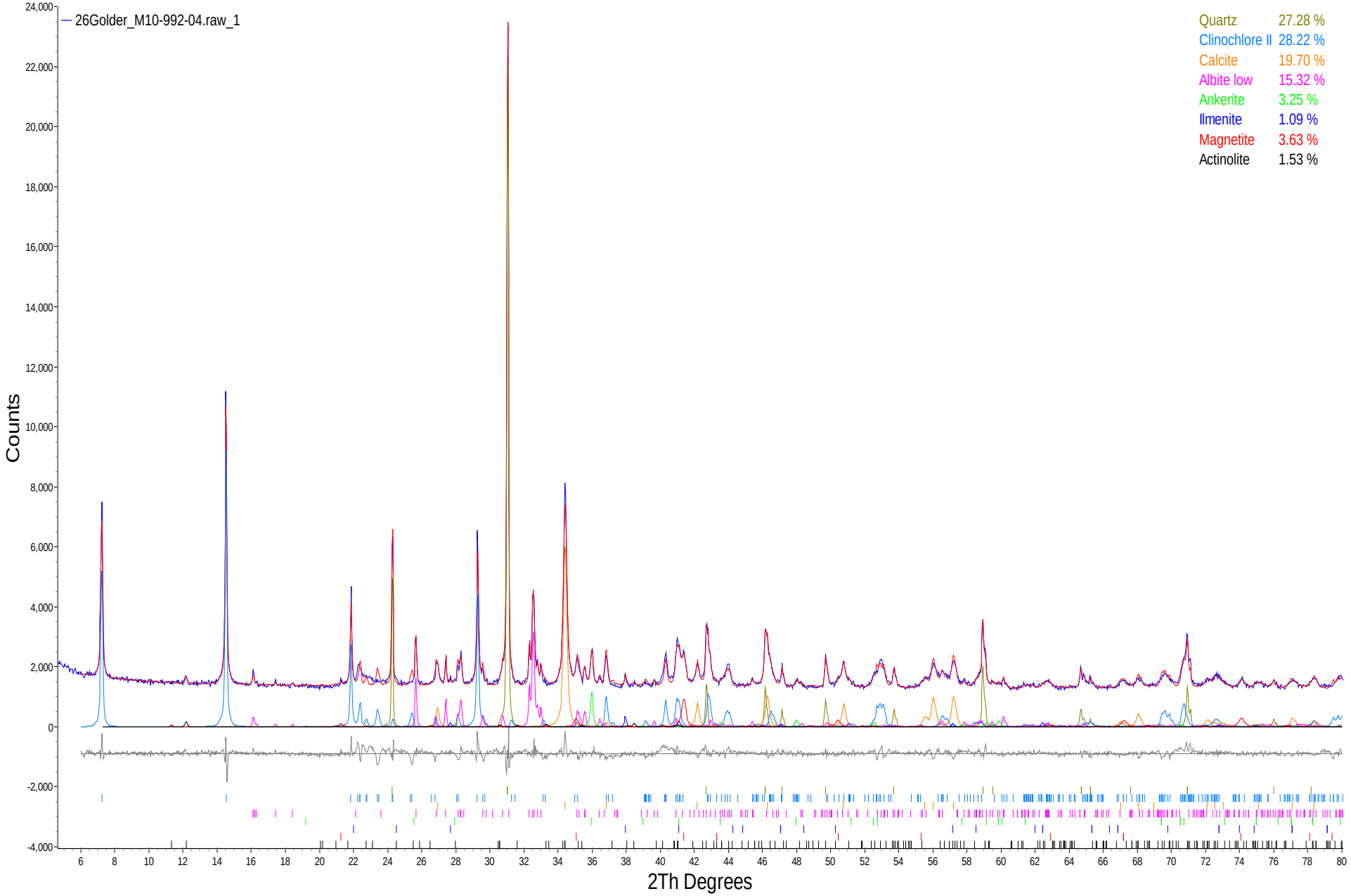



Figure 26. Rietveld refinement plot of sample **Golder Associates "M10-992-04"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

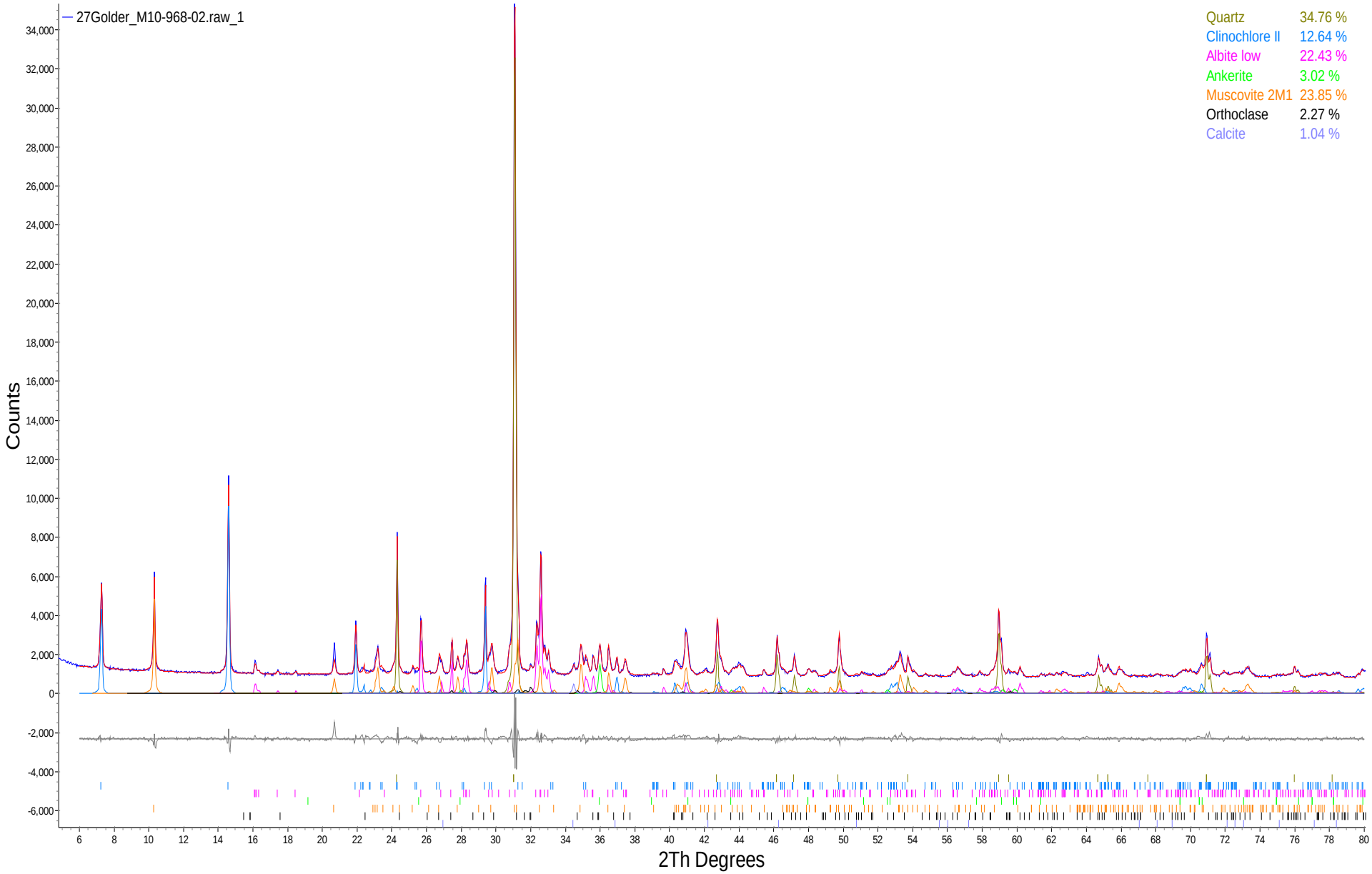



Figure 27. Rietveld refinement plot of sample **Golder Associates "M10-968-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

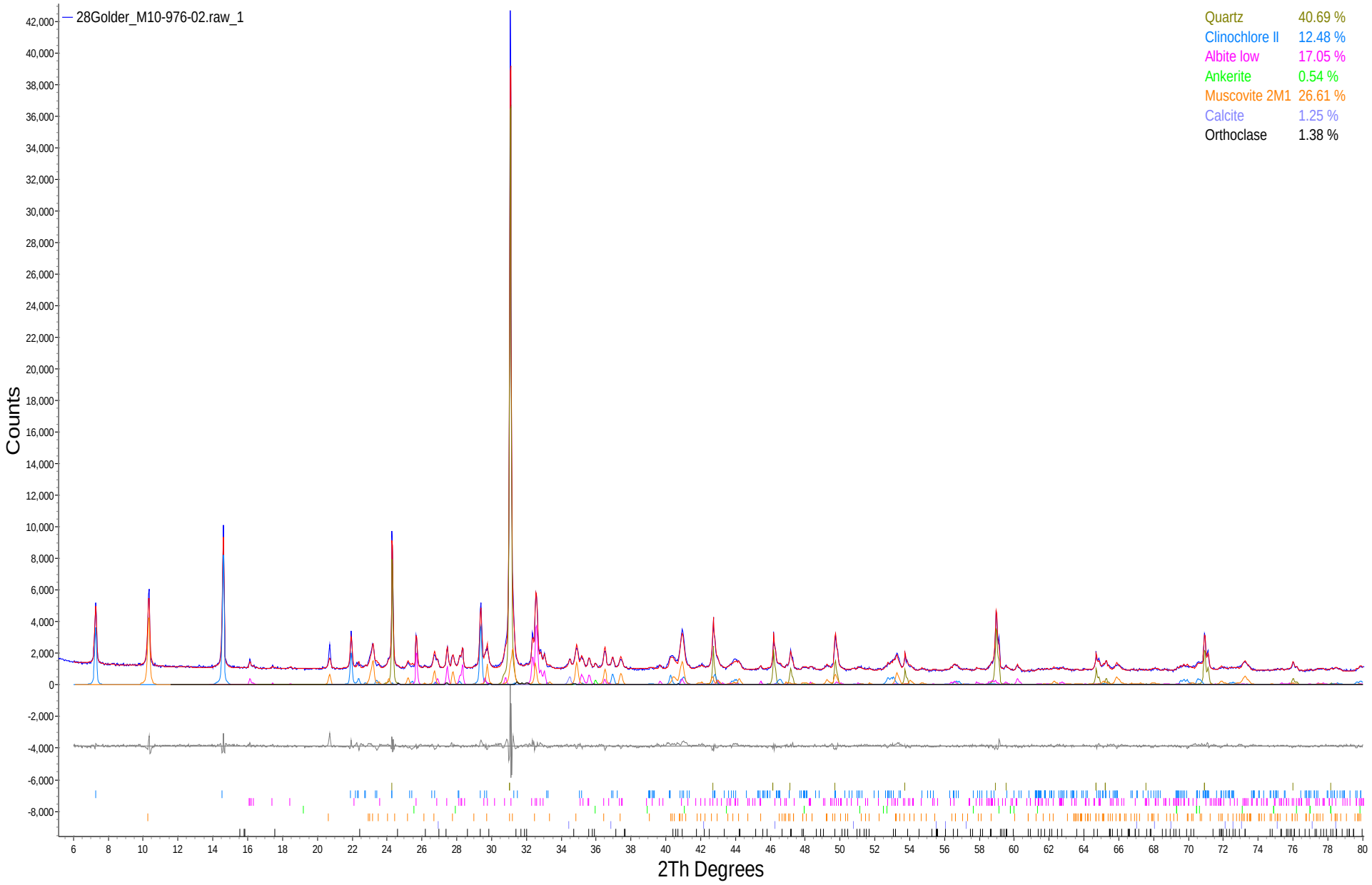



Figure 28. Rietveld refinement plot of sample **Golder Associates "M10-976-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

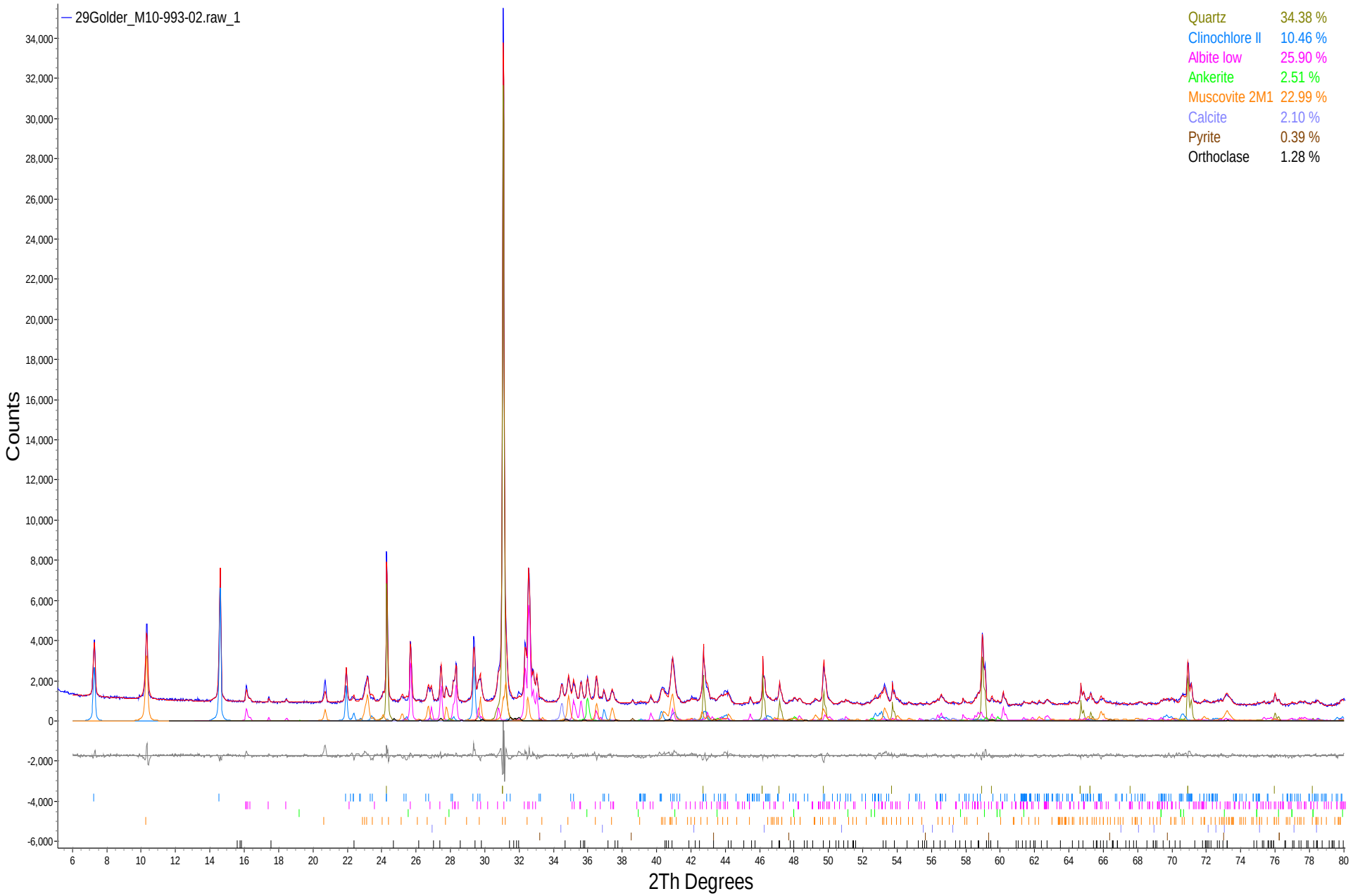



Figure 29. Rietveld refinement plot of sample **Golder Associates "M10-993-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

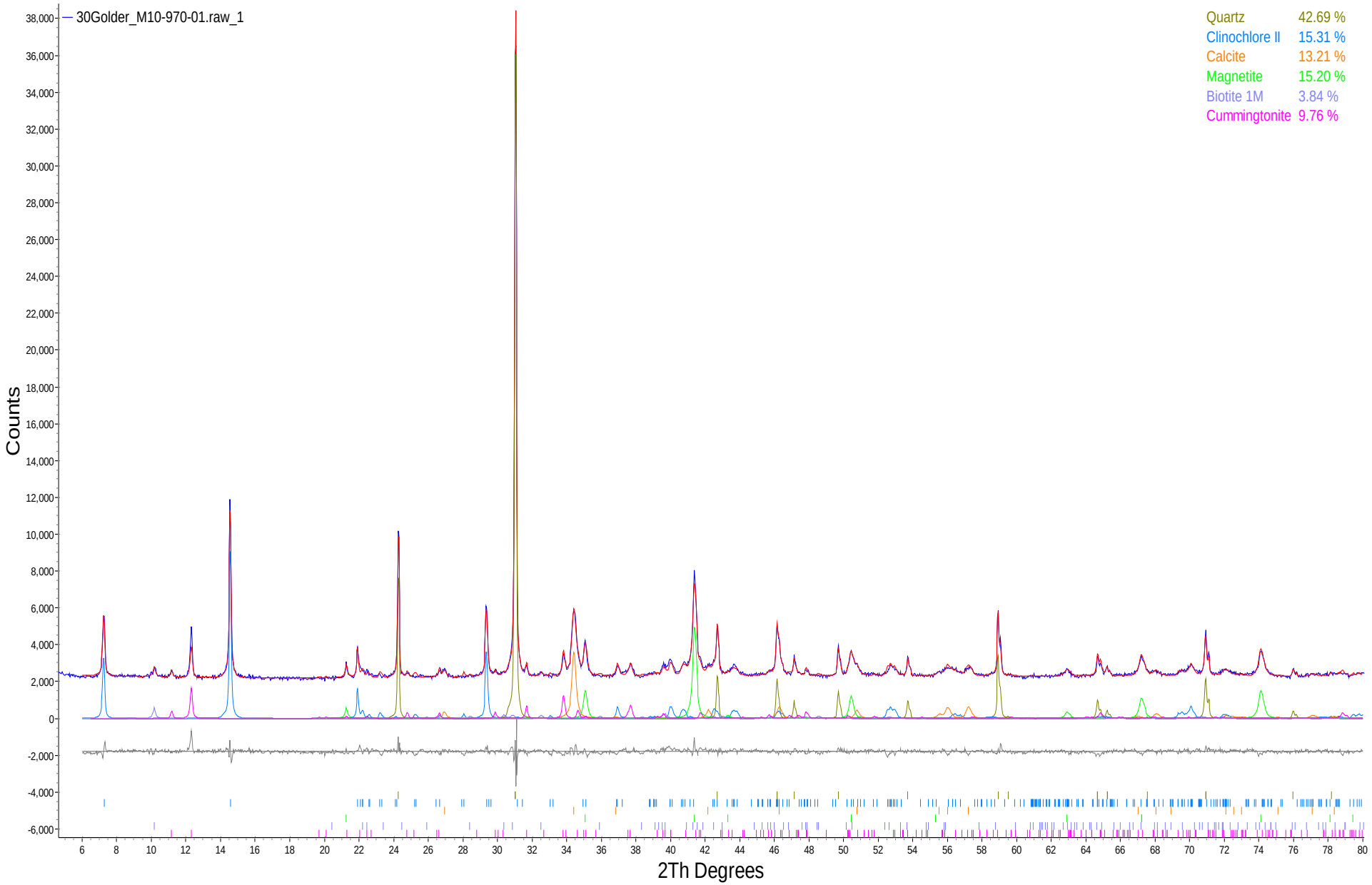



Figure 30. Rietveld refinement plot of sample **Golder Associates "M10-970-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

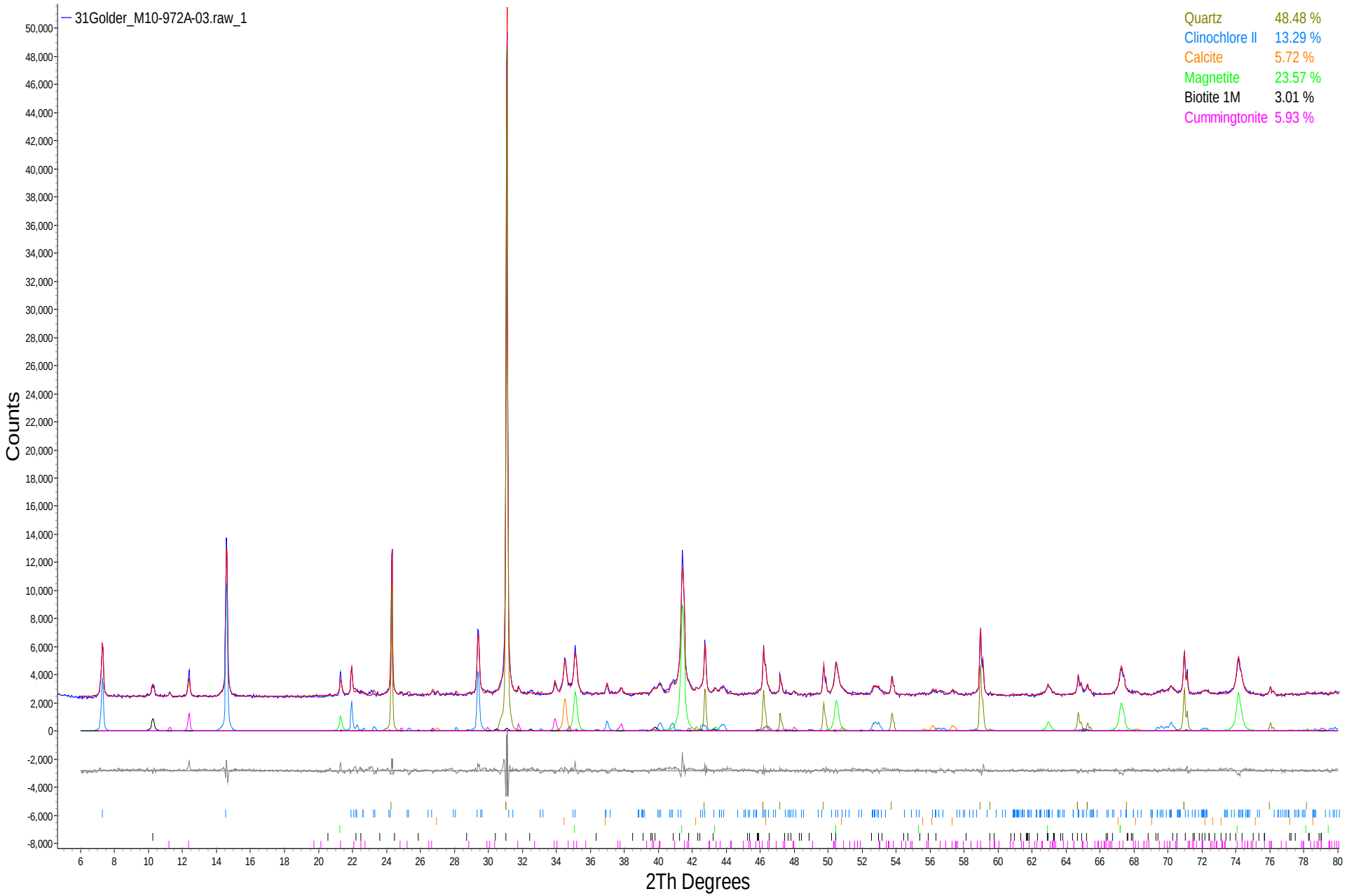



Figure 31. Rietveld refinement plot of sample **Golder Associates "M10-972A-03"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

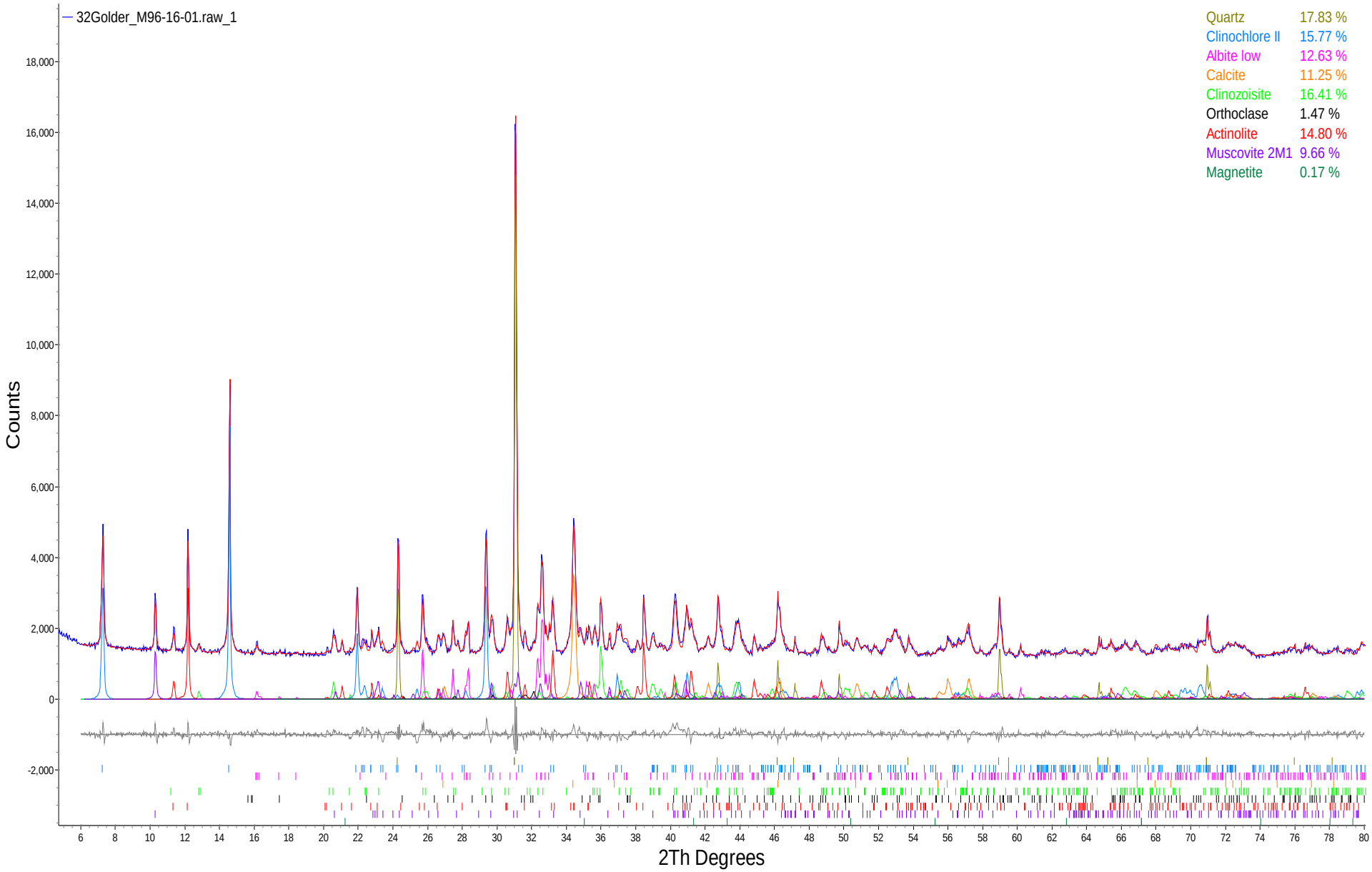



Figure 32. Rietveld refinement plot of sample **Golder Associates "M96-16-01"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

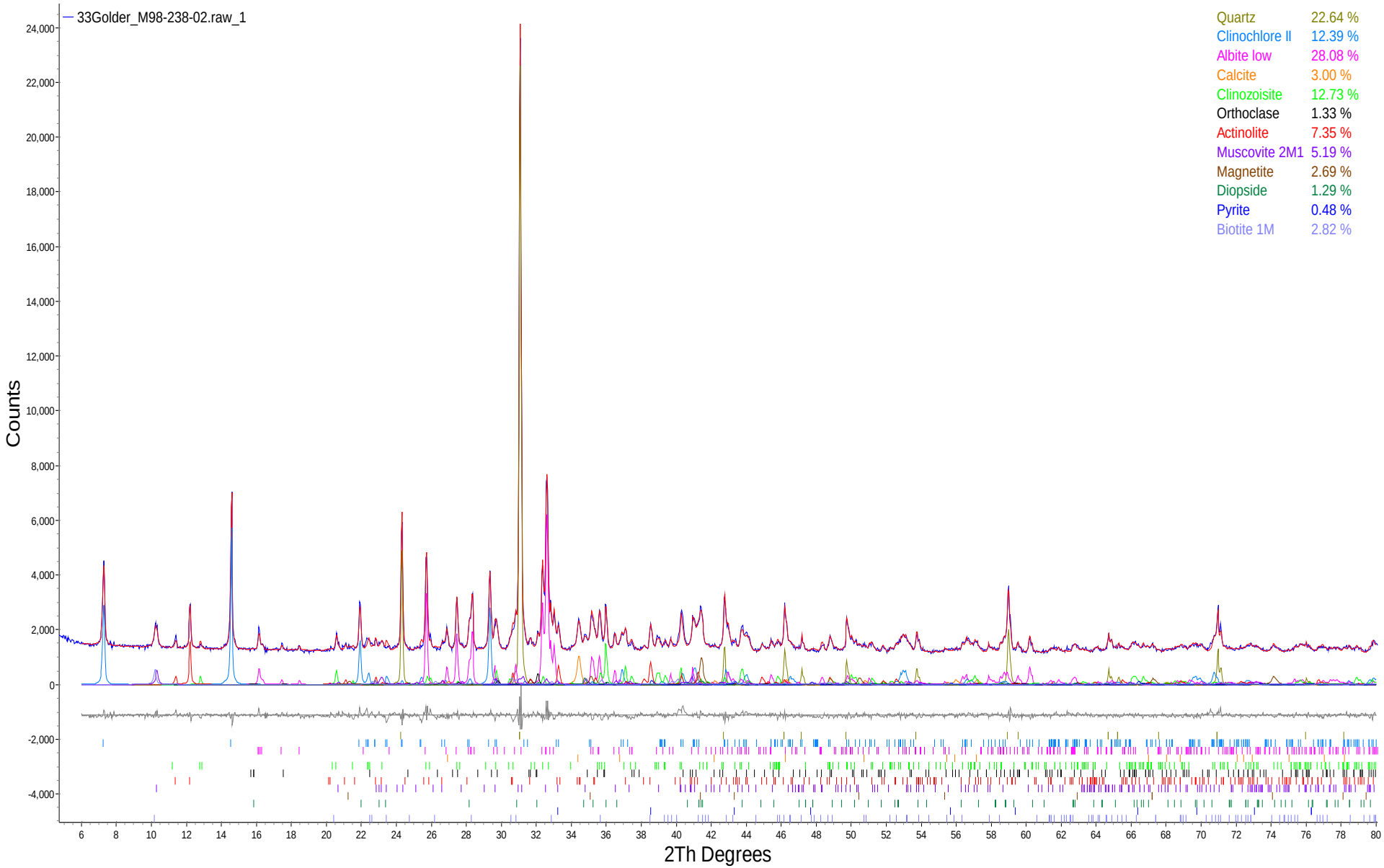



Figure 33. Rietveld refinement plot of sample **Golder Associates "M98-238-02"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

# QEM AUTOMATED RAPID MINERAL SCAN
## Meliadine Project Samples

prepared for

## Agnico Eagle Mines Ltd.

Project 12592-002/ MI6000-AUG11

September 2, 2011


Ted Washburn
Mineralogist

Chris Gunning, H. B. Sc.
Senior Mineralogist



SGS Minerals
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P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0
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Member of the SGS Group (SGS SA)

## QEMSCAN Method Summary

***Mineral Identification and Interpretation:***

The QEM-ARMS, or Automated Rapid Mineral Scan by QEMSCAN, is a method designed to provide simple bulk mineralogy as well as basic liberation analysis of one or two minerals of interest which occur in significant quantities (>1% mineral mass) by using high definition mineralogical analyses; QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy) (METH# 8.11.1) and XRD (X-ray Diffraction, BRUKER AXS D8 Advance Diffractometer).

***Test Limitations:***

The reader should note that this is a semi-quantative study. Any data should be treated as approximations. The study is subject to the representativity of the sample selected, and its accuracy limited by the particle statistics.

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## XRD Method Summary

***Mineral Identification and Interpretation:***

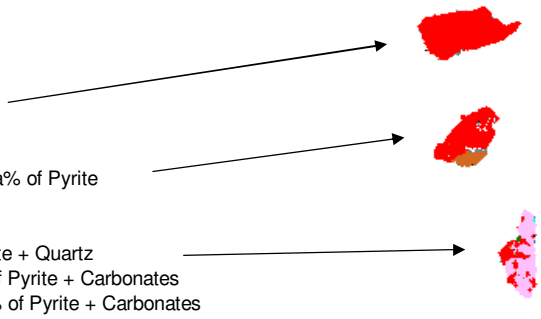
Mineral identification and interpretation involve matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds. Mineral proportions are based on relative peak heights and may be strongly influenced by crystallinity, structural group or preferred orientations. Interpretations and relative proportions should be accompanied by supporting petrographic and geochemical data (Whole Rock Analysis, Inductively Coupled Plasma - Optical Emission Spectroscopy, etc.).

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## Terminology for Association data

**Association classes were defined as the following;**



- **Free Pyrite** - A particle that has >=95% of Pyrite
- **Liberated Pyrite**: A particle that has ≥80 but <95 area% of Pyrite
- **Pyrite: Quartz** - A particle that has ≥95 area% of Pyrite + Quartz
- **Pyrite: Carbonates** - A particle that has ≥95 area% of Pyrite + Carbonates
- **Pyrite: Hard Silicates** - A particle that has ≥95 area% of Pyrite + Carbonates
- **Pyrite**: **Other Sulphides** - A particle that has ≥95 area% of Pyrite + Other Sulphides
- **Pyrite**: **Other** - A particle that has ≥95 area% of Pyrite + Any Other Minerals
- **Complex**: Any combination of the above definitions has been defined as a complex particle.

Note: similar associations have been created for Arsenopyrite

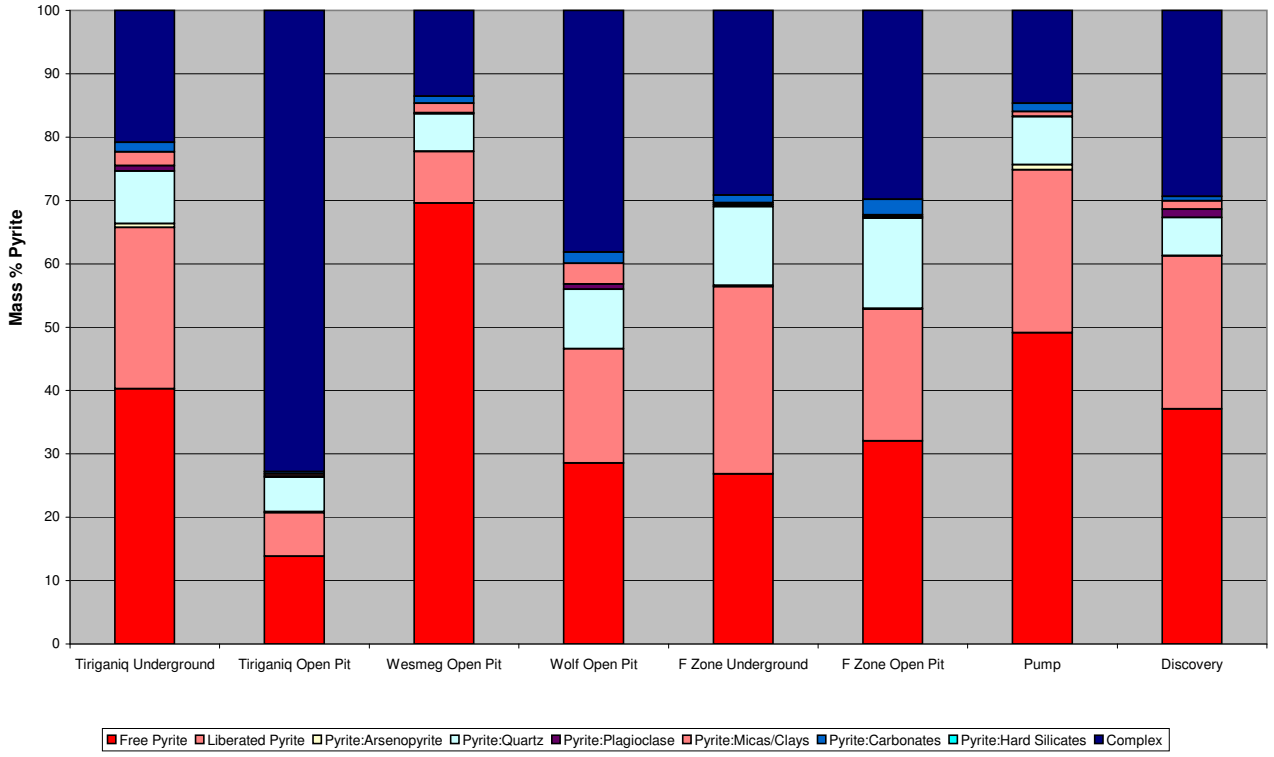
QEM AUTOMATED RAPID MINERAL SCAN
Data Report

***QEMSCAN Modals***

| | Survey | Agnico Eagle Mines Ltd. - Meliadine | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Project | 12592-002/ MI6000-AUG11 | | | | | | | |
| | Sample | Tiriganiq Underground | Tiriganiq Open Pit | Wesmeg Open Pit | Wolf Open Pit | F Zone Underground | F Zone Open Pit | Pump | Discovery |
| Mineral Mass (%) | Pyrite | 4.4 | 4.1 | 9.2 | 2.5 | 8.7 | 7.1 | 7.4 | 5.9 |
| | Arsenopyrite | 2.8 | 6.2 | 0.3 | 0.8 | 7.3 | 2.6 | 3.8 | 1.5 |
| | Other Sulphides | 0.1 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 |
| | Fe/Ti-Oxides | 3.6 | 3.0 | 15.6 | 2.8 | 4.3 | 4.1 | 6.3 | 9.1 |
| | Quartz | 38.9 | 42.2 | 45.5 | 37.7 | 46.1 | 54.9 | 45.3 | 34.3 |
| | Ankerite | 3.0 | 2.1 | 6.2 | 2.4 | 1.4 | 2.4 | 2.6 | 1.0 |
| | Dolomite | 5.7 | 3.9 | 5.3 | 7.8 | 6.9 | 9.7 | 11.7 | 0.2 |
| | Calcite | 1.3 | 0.9 | 0.8 | 1.3 | 1.3 | 0.3 | 1.0 | 0.7 |
| | Plagioclase | 13.0 | 11.2 | 3.0 | 11.7 | 3.3 | 4.6 | 2.5 | 13.0 |
| | K-Feldspar | 0.4 | 0.2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | 0.1 |
| | Chlorites | 12.7 | 9.4 | 7.9 | 13.4 | 4.4 | 4.6 | 9.2 | 6.5 |
| | Micas | 8.8 | 8.3 | 1.9 | 11.5 | 0.6 | 1.4 | 1.5 | 8.2 |
| | Clays | 1.8 | 3.6 | 0.6 | 3.2 | 0.3 | 0.4 | 0.5 | 1.2 |
| | Amphibole/Pyroxene | 3.2 | 4.4 | 3.4 | 3.9 | 15.1 | 7.6 | 7.9 | 17.7 |
| | Apatite | 0.2 | 0.2 | 0.1 | 0.4 | 0.1 | 0.2 | 0.1 | 0.4 |
| | Other | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

***Pyrite Association***

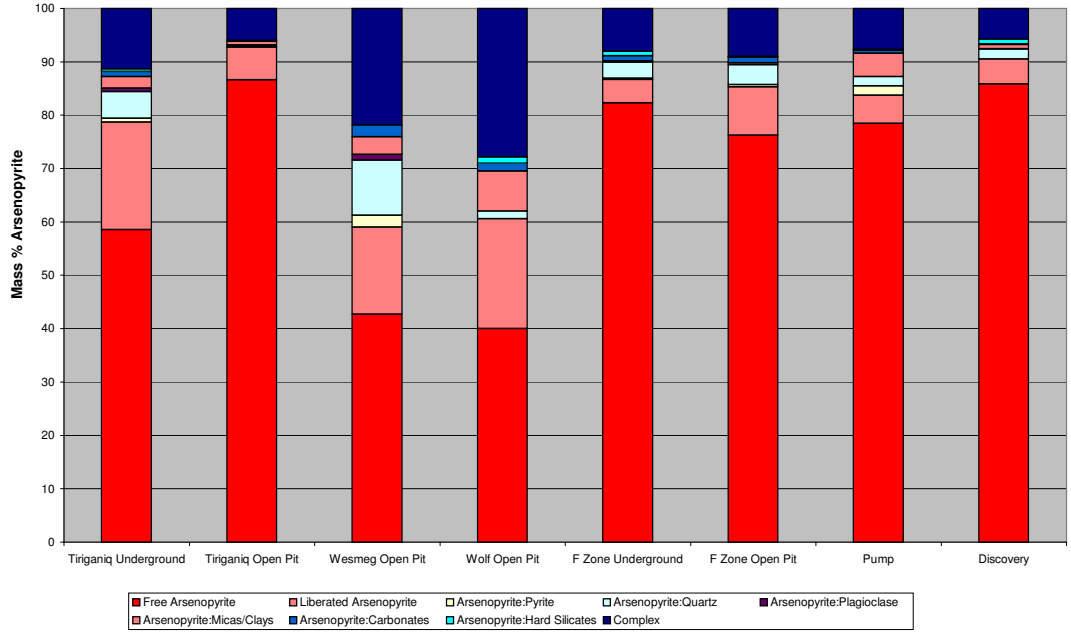



**Normalized Mass of Pyrite Across Samples**

| Mineral Name | Tiriganiq Underground | Tiriganiq Open Pit | Wesmeg Open Pit | Wolf Open Pit | F Zone Underground | F Zone Open Pit | Pump | Discovery |
|---|---|---|---|---|---|---|---|---|
| **Free Pyrite** | 40.3 | 13.8 | 69.6 | 28.5 | 26.8 | 32.0 | 49.1 | 37.1 |
| **Liberated Pyrite** | 25.5 | 6.9 | 8.2 | 18.1 | 29.5 | 20.8 | 25.7 | 24.2 |
| **Pyrite:Arsenopyrite** | 0.6 | 0.2 | 0.1 | 0.0 | 0.2 | 0.1 | 0.8 | 0.0 |
| **Pyrite:Quartz** | 8.3 | 5.4 | 5.9 | 9.4 | 12.4 | 14.2 | 7.6 | 6.0 |
| **Pyrite:Plagioclase** | 0.8 | 0.1 | 0.2 | 0.8 | 0.3 | 0.2 | 0.0 | 1.3 |
| **Pyrite:Micas/Clays** | 2.2 | 0.3 | 1.5 | 3.3 | 0.3 | 0.3 | 0.8 | 1.3 |
| **Pyrite:Carbonates** | 1.5 | 0.4 | 1.1 | 1.7 | 1.2 | 2.4 | 1.3 | 0.7 |
| **Pyrite:Hard Silicates** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Complex** | 20.8 | 72.8 | 13.5 | 38.2 | 29.1 | 29.8 | 14.6 | 29.4 |
| **Total** | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

***Arsenopyrite Association***

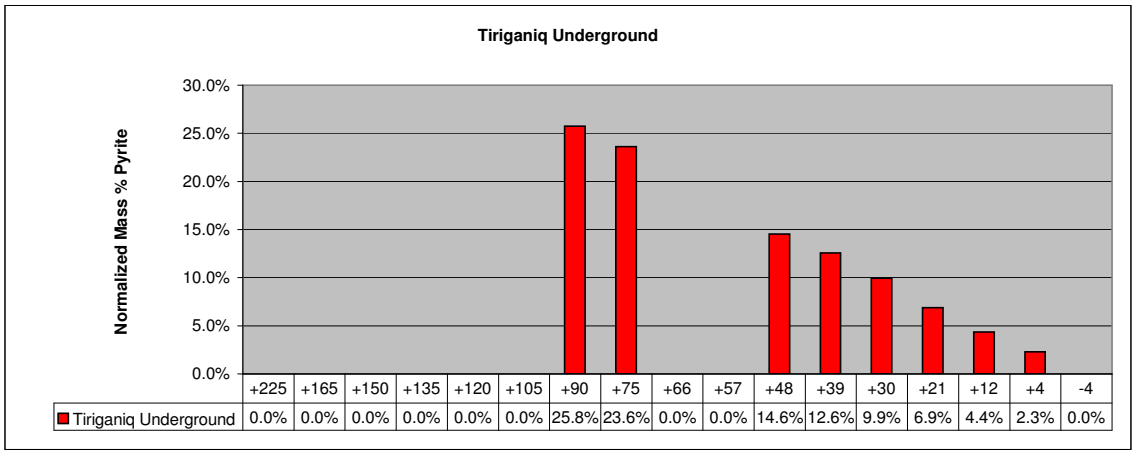



**Normalized Mass of Arsenopyrite Across Samples**

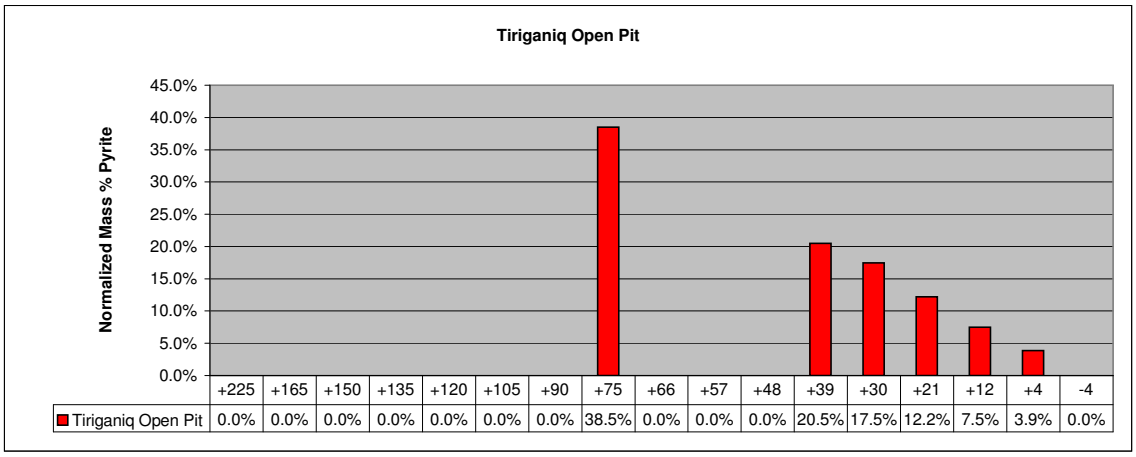
| Mineral Name | Tiriganiq Underground | Tiriganiq Open Pit | Wesmeg Open Pit | Wolf Open Pit | F Zone Underground | F Zone Open Pit | Pump | Discovery |
|---|---|---|---|---|---|---|---|---|
| **Free Arsenopyrite** | 58.6 | 86.6 | 42.7 | 40.0 | 82.3 | 76.2 | 78.4 | 85.9 |
| **Liberated Arsenopyrite** | 20.1 | 6.1 | 16.4 | 20.6 | 4.4 | 9.0 | 5.3 | 4.7 |
| **Arsenopyrite:Pyrite** | 0.7 | 0.0 | 2.2 | 0.0 | 0.2 | 0.4 | 1.7 | 0.0 |
| **Arsenopyrite:Quartz** | 5.0 | 0.3 | 10.3 | 1.4 | 3.0 | 3.7 | 1.8 | 1.8 |
| **Arsenopyrite:Plagioclase** | 0.6 | 0.1 | 1.1 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 |
| **Arsenopyrite:Micas/Clays** | 2.2 | 0.6 | 3.3 | 7.5 | 0.0 | 0.4 | 4.3 | 0.8 |
| **Arsenopyrite:Carbonates** | 0.9 | 0.2 | 2.2 | 1.4 | 1.0 | 1.0 | 0.5 | 0.1 |
| **Arsenopyrite:Hard Silicates** | 0.5 | 0.0 | 0.0 | 1.2 | 0.8 | 0.1 | 0.2 | 0.9 |
| **Complex** | 11.3 | 6.0 | 21.8 | 27.8 | 8.1 | 9.0 | 7.7 | 5.7 |
| **Total** | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

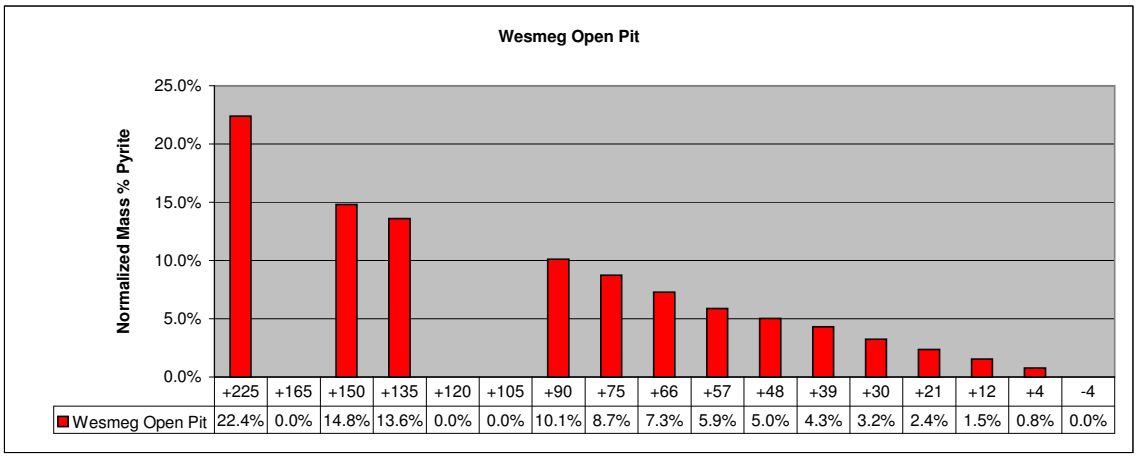
***Histograms - Pyrite Size by Mass***




| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tiriganiq Underground | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 25.8% | 23.6% | 0.0% | 0.0% | 14.6% | 12.6% | 9.9% | 6.9% | 4.4% | 2.3% | 0.0% |



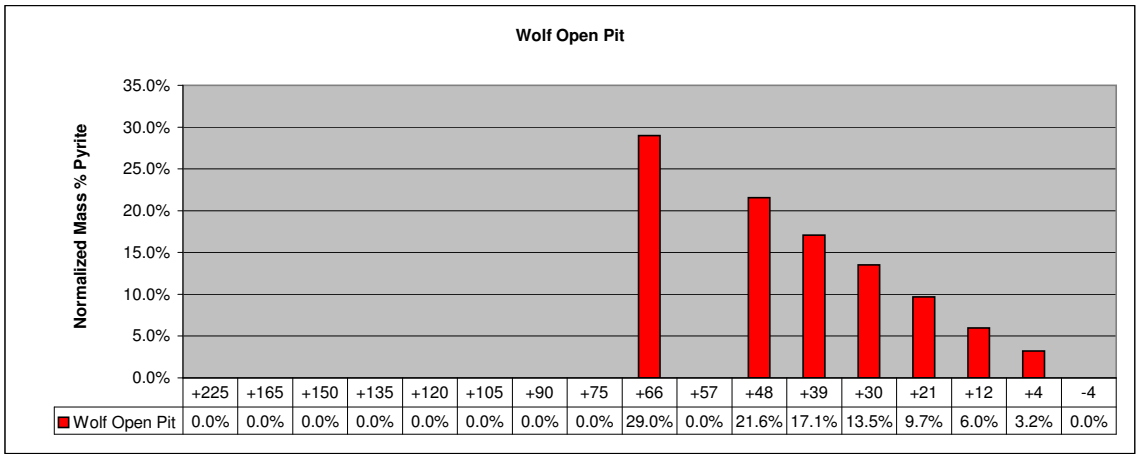

| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tiriganiq Open Pit | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 38.5% | 0.0% | 0.0% | 0.0% | 20.5% | 17.5% | 12.2% | 7.5% | 3.9% | 0.0% |



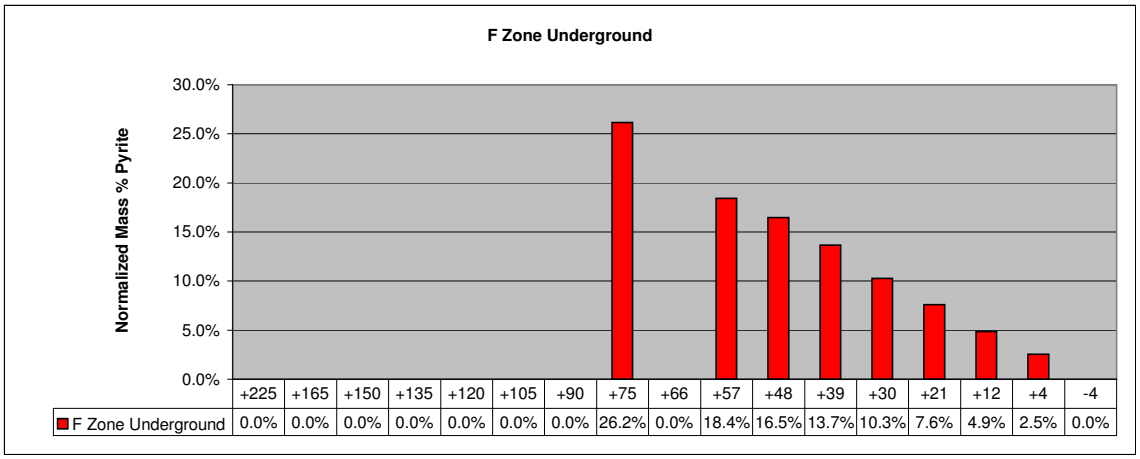

| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wesmeg Open Pit | 22.4% | 0.0% | 14.8% | 13.6% | 0.0% | 0.0% | 10.1% | 8.7% | 7.3% | 5.9% | 5.0% | 4.3% | 3.2% | 2.4% | 1.5% | 0.8% | 0.0% |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

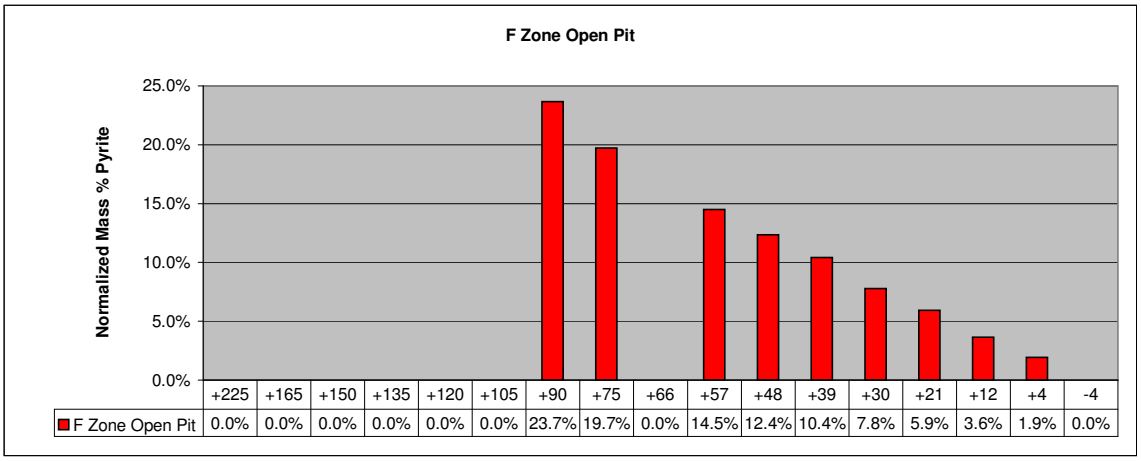
***Histograms - Pyrite Size by Mass***




| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wolf Open Pit | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 29.0% | 0.0% | 21.6% | 17.1% | 13.5% | 9.7% | 6.0% | 3.2% | 0.0% |



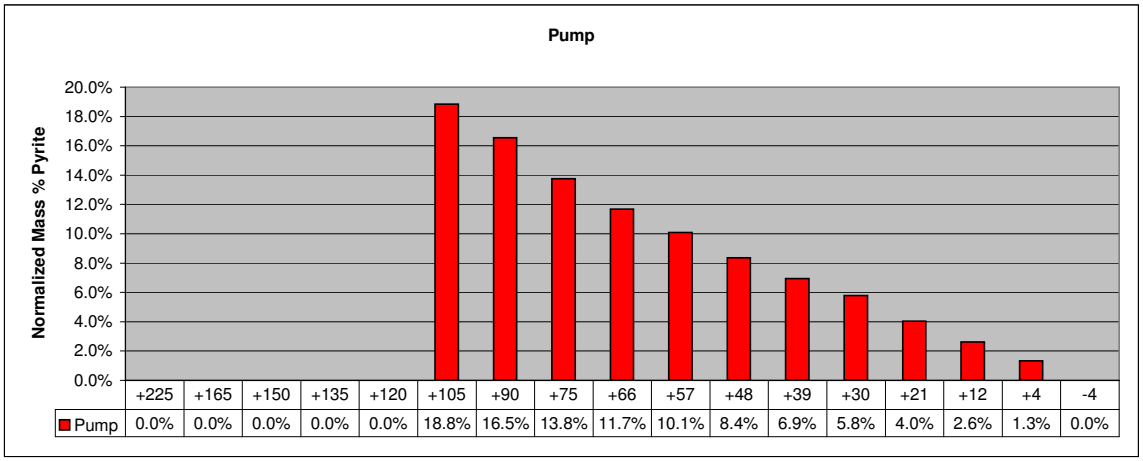

| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F Zone Underground | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 26.2% | 0.0% | 18.4% | 16.5% | 13.7% | 10.3% | 7.6% | 4.9% | 2.5% | 0.0% |



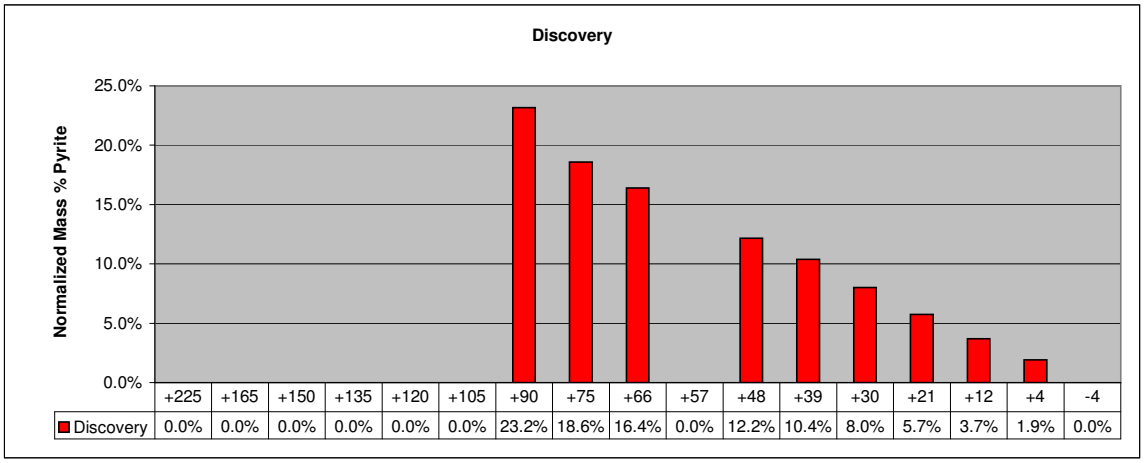

| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F Zone Open Pit | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 23.7% | 19.7% | 0.0% | 14.5% | 12.4% | 10.4% | 7.8% | 5.9% | 3.6% | 1.9% | 0.0% |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

***Histograms - Pyrite Size by Mass***



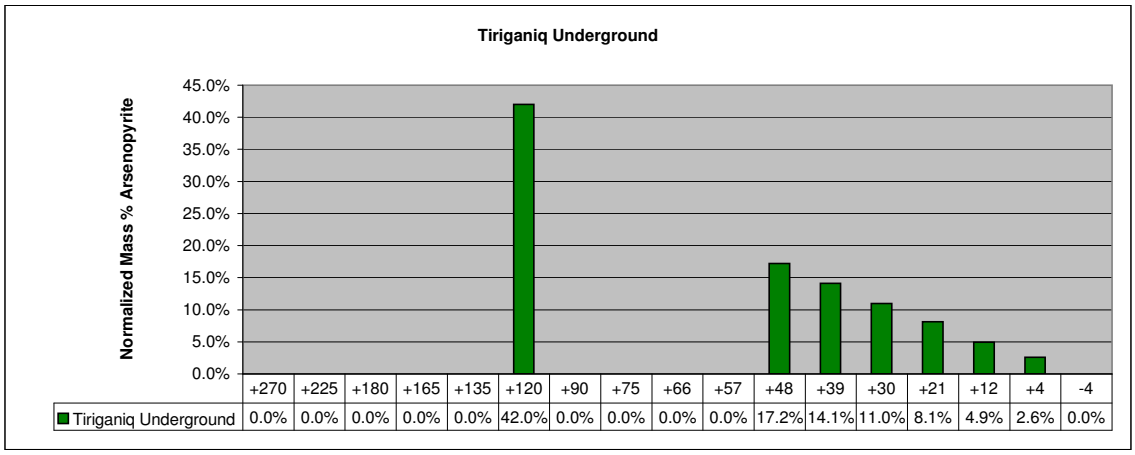

| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pump | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 18.8% | 16.5% | 13.8% | 11.7% | 10.1% | 8.4% | 6.9% | 5.8% | 4.0% | 2.6% | 1.3% | 0.0% |



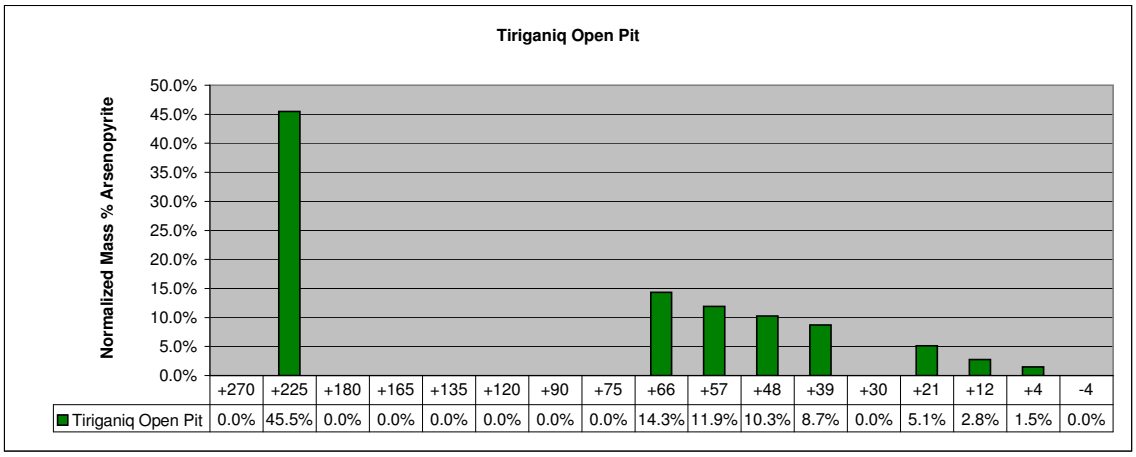

| | +225 | +165 | +150 | +135 | +120 | +105 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Discovery | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 23.2% | 18.6% | 16.4% | 0.0% | 12.2% | 10.4% | 8.0% | 5.7% | 3.7% | 1.9% | 0.0% |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

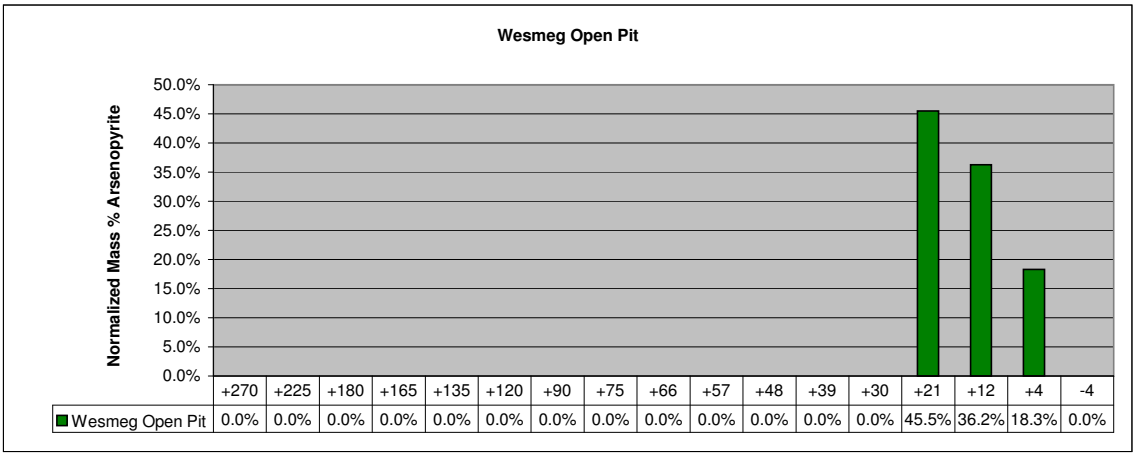
***Histograms - Arsenopyrite Size by Mass***




| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tiriganiq Underground | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 42.0% | 0.0% | 0.0% | 0.0% | 0.0% | 17.2% | 14.1% | 11.0% | 8.1% | 4.9% | 2.6% | 0.0% |



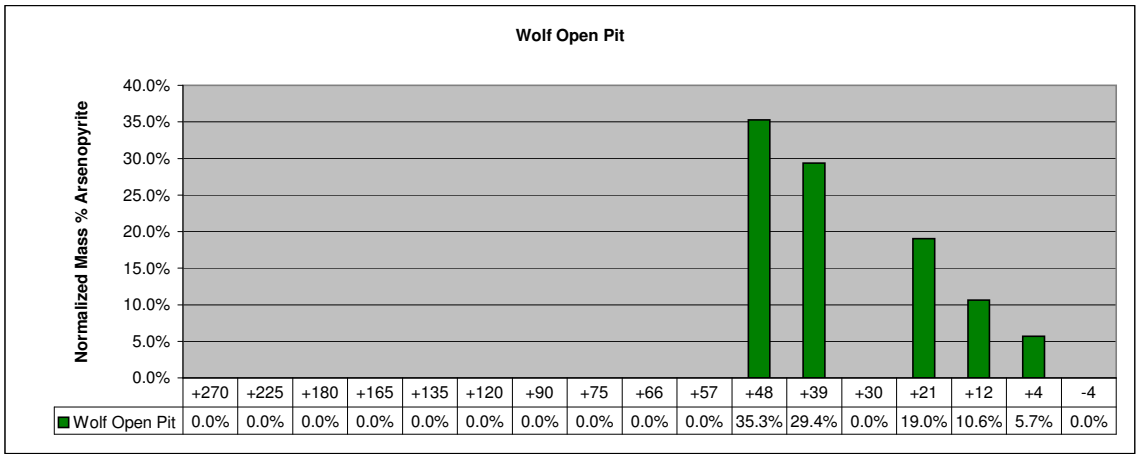

| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tiriganiq Open Pit | 0.0% | 45.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 14.3% | 11.9% | 10.3% | 8.7% | 0.0% | 5.1% | 2.8% | 1.5% | 0.0% |



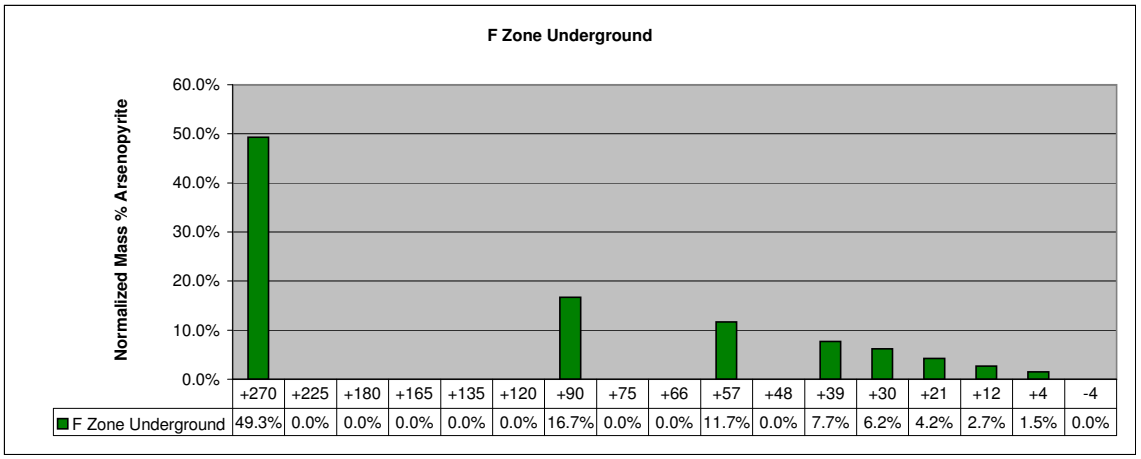

| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wesmeg Open Pit | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 45.5% | 36.2% | 18.3% | 0.0% |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

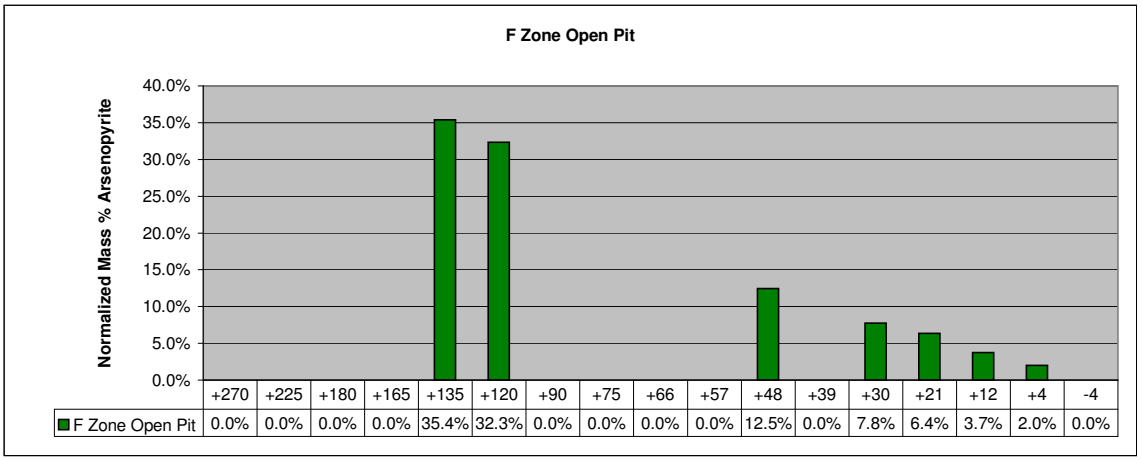
***Histograms - Arsenopyrite Size by Mass***




| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wolf Open Pit | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 35.3% | 29.4% | 0.0% | 19.0% | 10.6% | 5.7% | 0.0% |



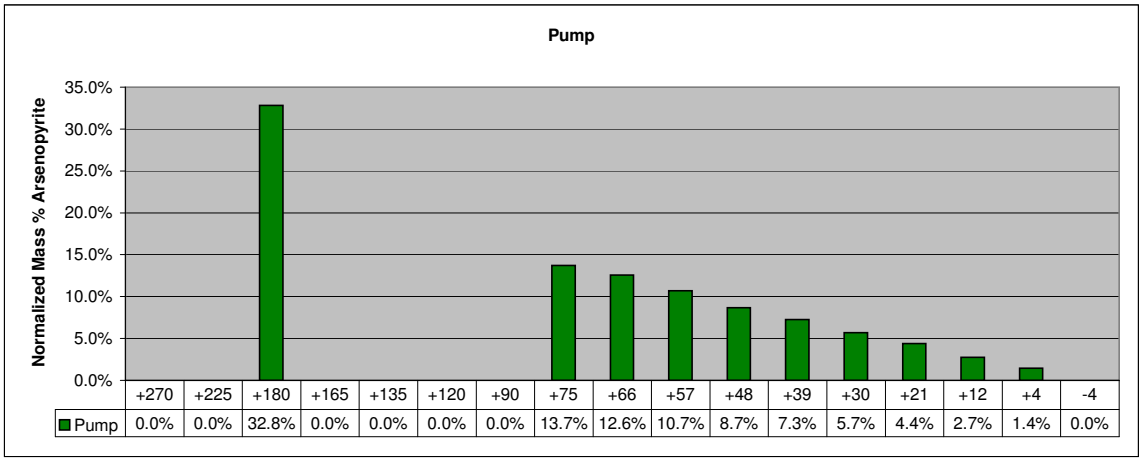

| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F Zone Underground | 49.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 16.7% | 0.0% | 0.0% | 11.7% | 0.0% | 7.7% | 6.2% | 4.2% | 2.7% | 1.5% | 0.0% |



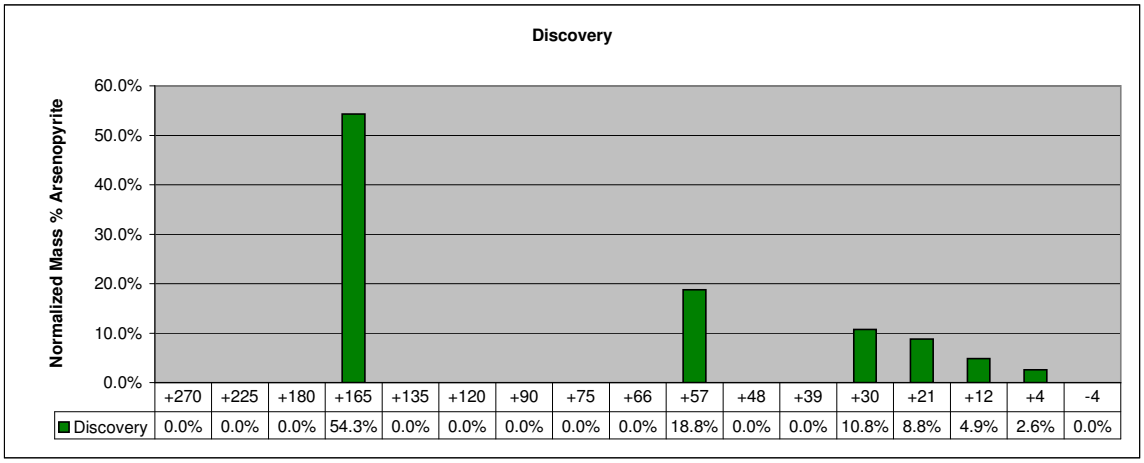

| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F Zone Open Pit | 0.0% | 0.0% | 0.0% | 0.0% | 35.4% | 32.3% | 0.0% | 0.0% | 0.0% | 0.0% | 12.5% | 0.0% | 7.8% | 6.4% | 3.7% | 2.0% | 0.0% |

QEM AUTOMATED RAPID MINERAL SCAN
Data Report

***Histograms - Arsenopyrite Size by Mass***




| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pump | 0.0% | 0.0% | 32.8% | 0.0% | 0.0% | 0.0% | 0.0% | 13.7% | 12.6% | 10.7% | 8.7% | 7.3% | 5.7% | 4.4% | 2.7% | 1.4% | 0.0% |




| | +270 | +225 | +180 | +165 | +135 | +120 | +90 | +75 | +66 | +57 | +48 | +39 | +30 | +21 | +12 | +4 | -4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Discovery | 0.0% | 0.0% | 0.0% | 54.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 18.8% | 0.0% | 0.0% | 10.8% | 8.8% | 4.9% | 2.6% | 0.0% |

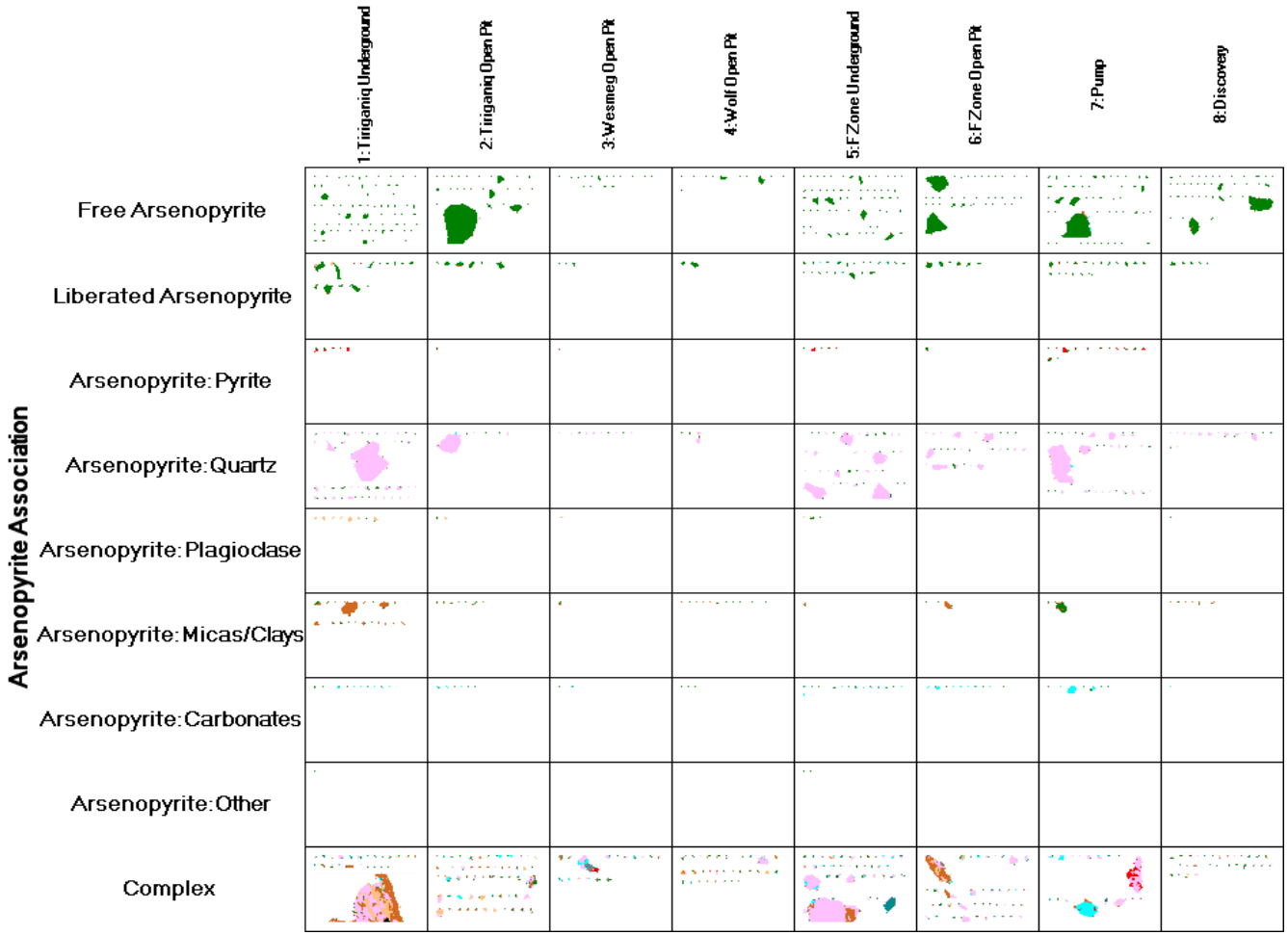
QEM AUTOMATED RAPID MINERAL SCAN
Data Report

***Image Grid - Pyrite Association***



QEM AUTOMATED RAPID MINERAL SCAN
Data Report

***Image Grid - Arsenopyrite Association***



QEM AUTOMATED RAPID MINERAL SCAN
Data Report

## Summary of Qualitative X-ray Diffraction Results

***Crystalline Mineral Assemblage (relative proportions based on peak height)***

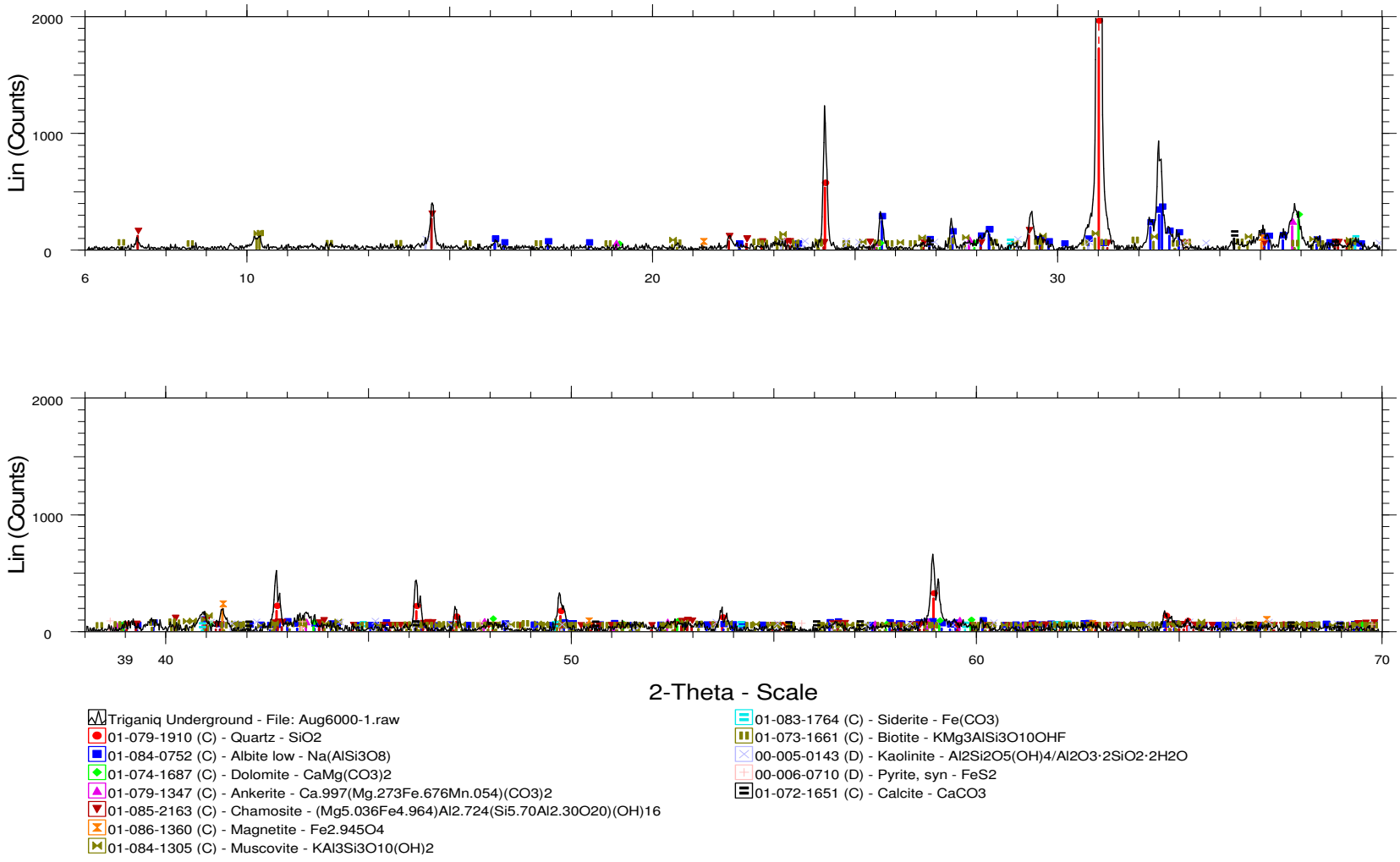
| Sample ID | Major | Moderate | Minor | Trace |
|---|---|---|---|---|
| *#1 Triganiq Underground* | quartz | plagioclase | mica, chlorite, dolomite, magnetite | *ankerite, *kaolinite, *calcite, *pyrite |
| *#2 Triganiq Open Pit* | quartz | plagioclase | mica, chlorite | *dolomite, *ankerite, *magnetite, *calcite, *pyrite, *siderite |
| *#3 Wesmeg Open Pit* | quartz | siderite | ankerite, chlorite, dolomite, plagioclase | *pyrite, *magnetite, *mica, *calcite |
| *#4 Wolf Open Pit* | quartz | plagioclase | dolomite, ankerite, chlorite, mica | *magnetite, *pyrite, *calcite |
| *#5 F Zone Underground* | quartz | - | chlorite, mica, ankerite, dolomite, amphibole | *magnetite, *calcite, *pyrrhotite, *arsenopyrite |
| *#6 F Zone Open Pit* | quartz | dolomite | calcite, ankerite, plagioclase | *chlorite, *magnetite, *mica, *pyrite, *magnesite, *amphibole |
| *#7 Pump* | quartz | dolomite | calcite, plagioclase, ankerite, chlorite, pyrrhotite | *amphibole, *magnetite, *mica, *pyrite |
| *#8 Discovery* | quartz | - | plagioclase, mica, chlorite, amphibole, magnetite | *pyrite, *pyrrhotite, *calcite |

** tentative identification due to low concentrations, diffraction line overlap or poor crystallinity*

| Mineral | Composition |
|---|---|
| Amphibole | $(Na,K)Ca_2(Fe,Mg)_5(Al,Si)_8O_{22}(OH)_2$ |
| Ankerite | $CaFe(CO_3)_2$ |
| Arsenopyrite | FeAsS |
| Calcite | $CaCO_3$ |
| Chlorite | $(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$ |
| Dolomite | $CaMg(CO_3)_2$ |
| Kaolinite | $Al_2Si_2O_5(OH)_4$ |
| Magnetite | $Fe_3O_4$ |
| Mica | $K(Mg,Fe)Al_2Si_3AlO_{10}(OH)_2$ |
| Plagioclase | $(NaSi,CaAl)AlSi_2O_8$ |
| Pyrite | $FeS_2$ |
| Pyrrhotite | $Fe_{(1-x)}S$ |
| Quartz | $SiO_2$ |

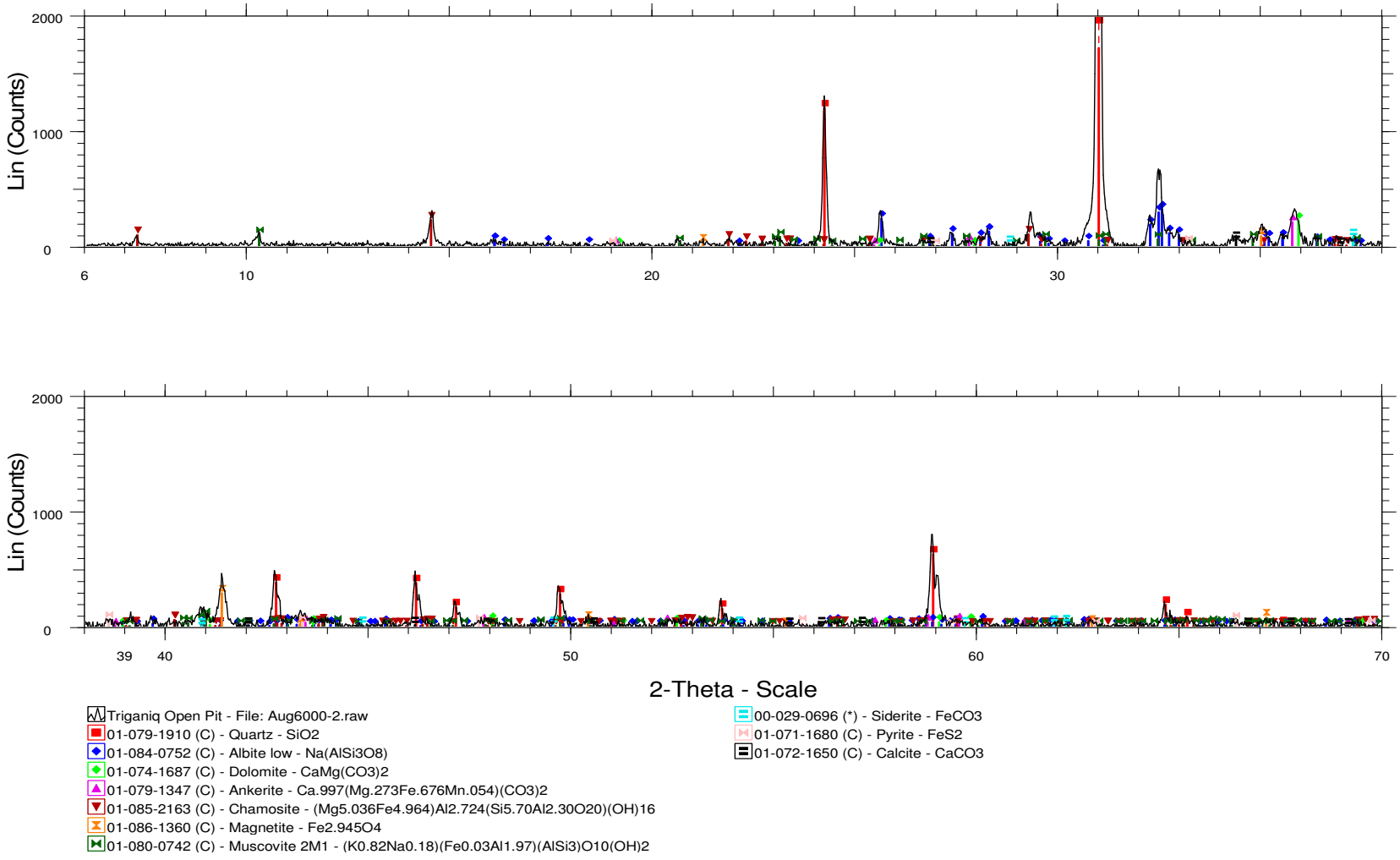
Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

# Triganiq Underground



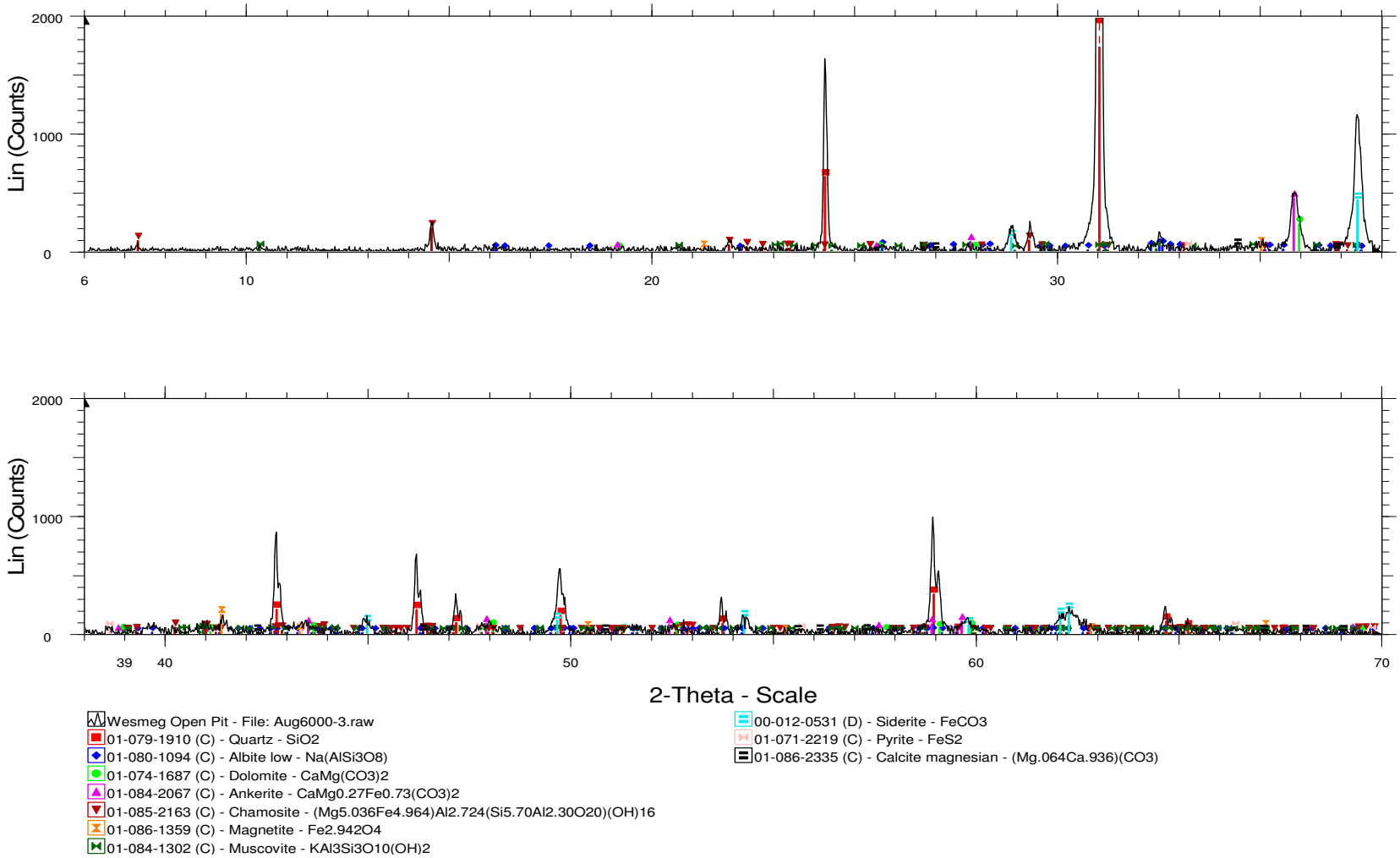
Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

# Triganiq Open Pit



Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

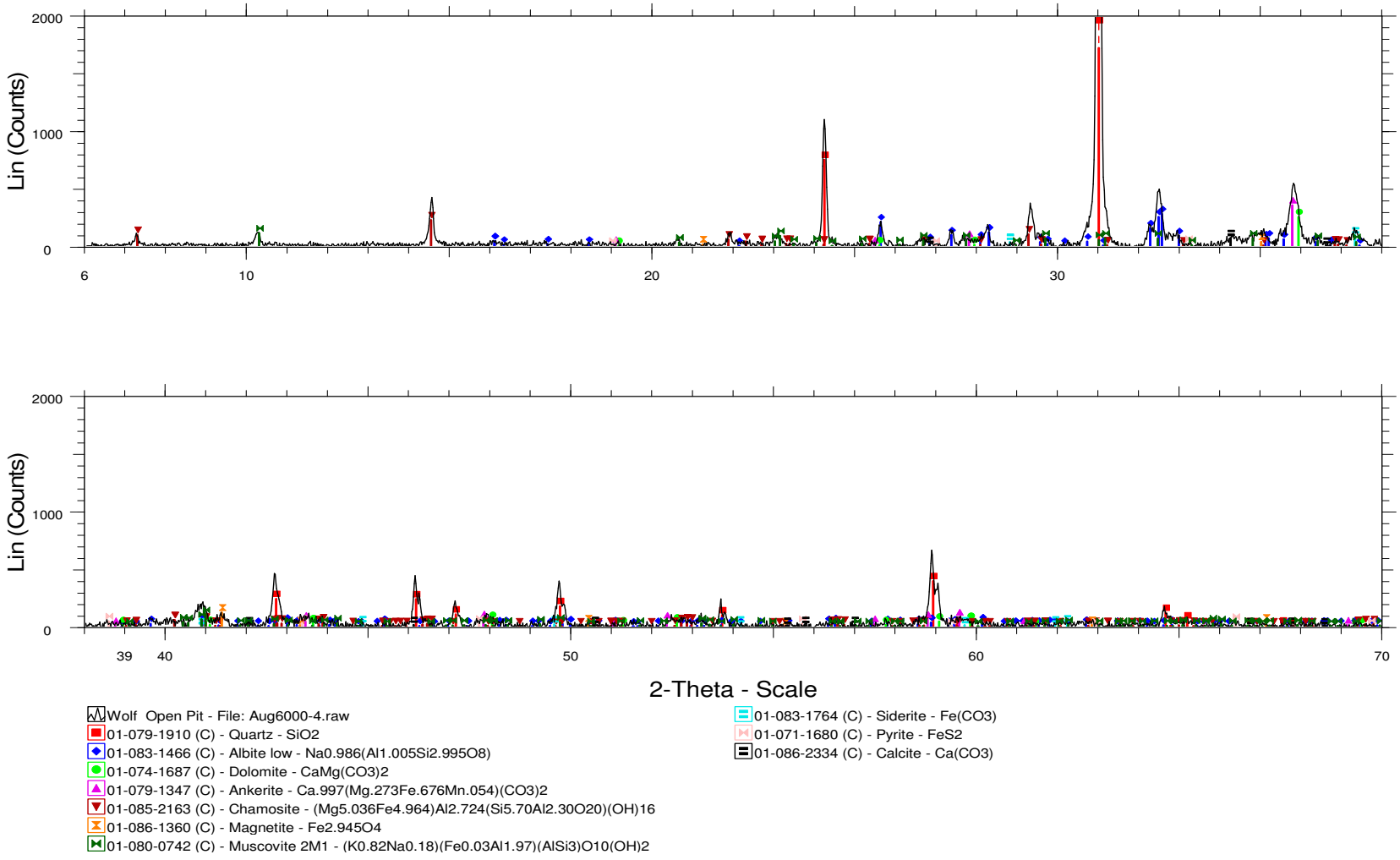
# Wesmeg Open Pit




*The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.*
*Tel: (705) 652-2000 Fax: (705) 652-6365  Mini-method available upon request.*

Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

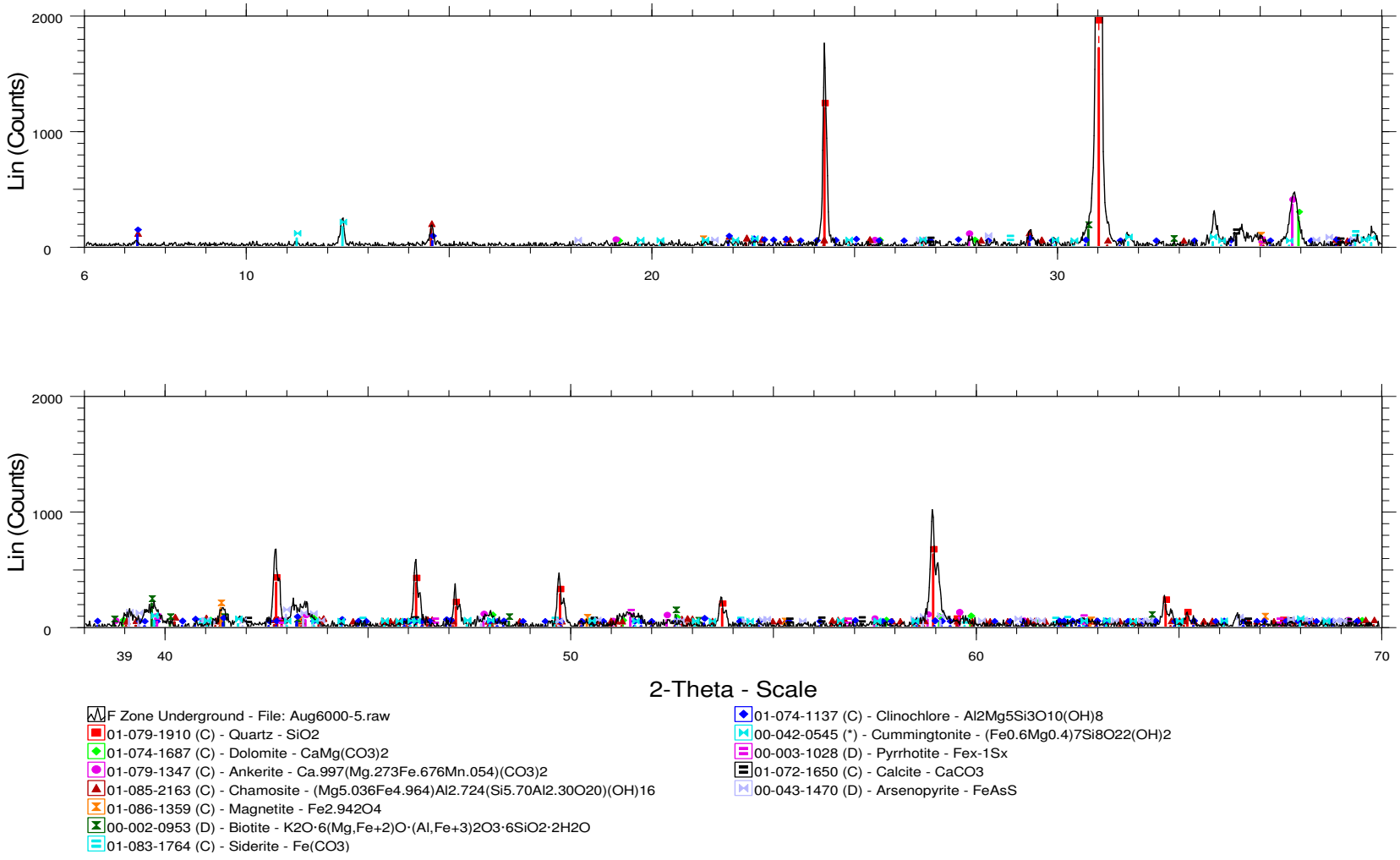
# Wolf Open Pit




*The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.*
*Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.*

Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

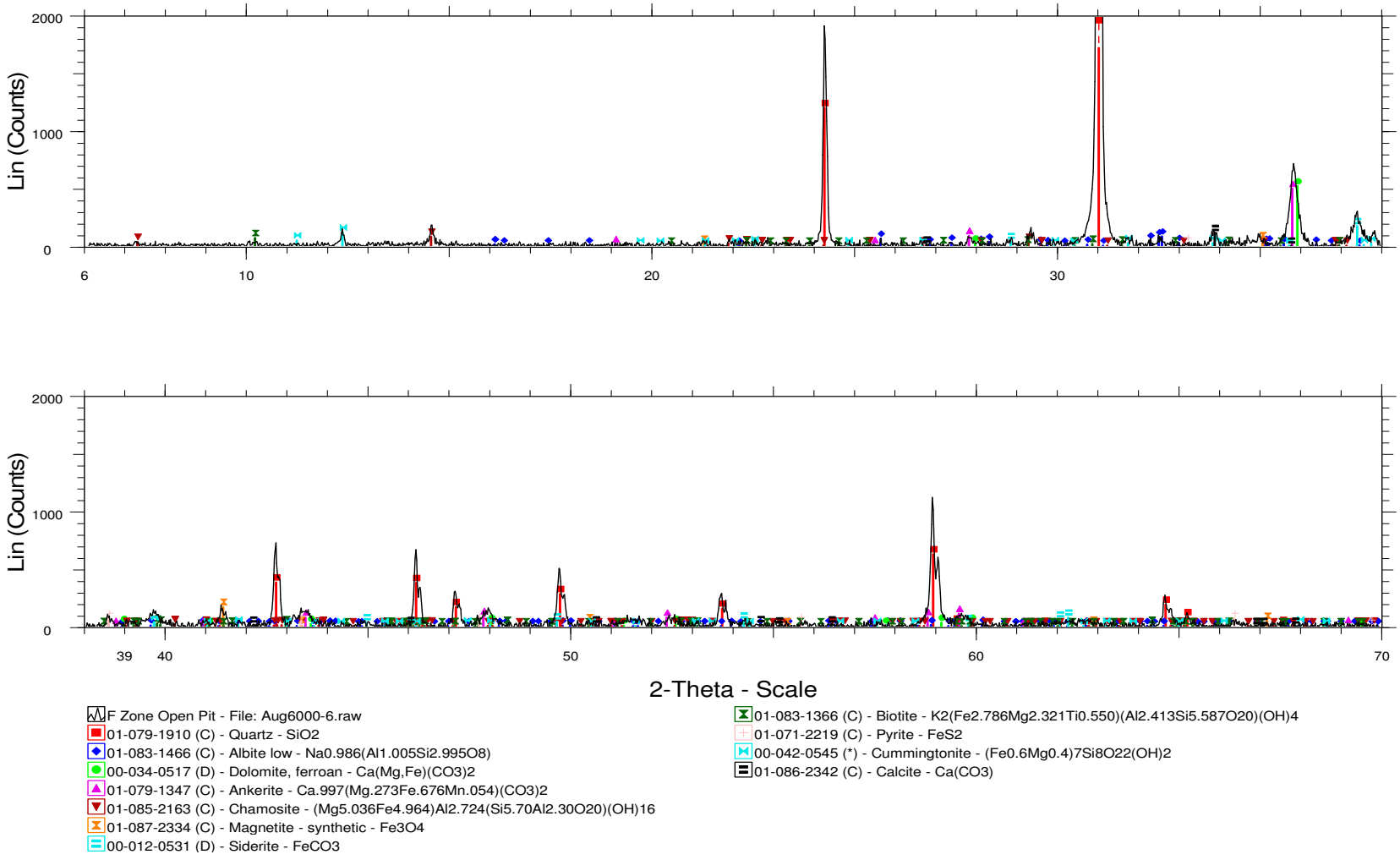
# F Zone Underground




*The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.*
*Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.*

Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

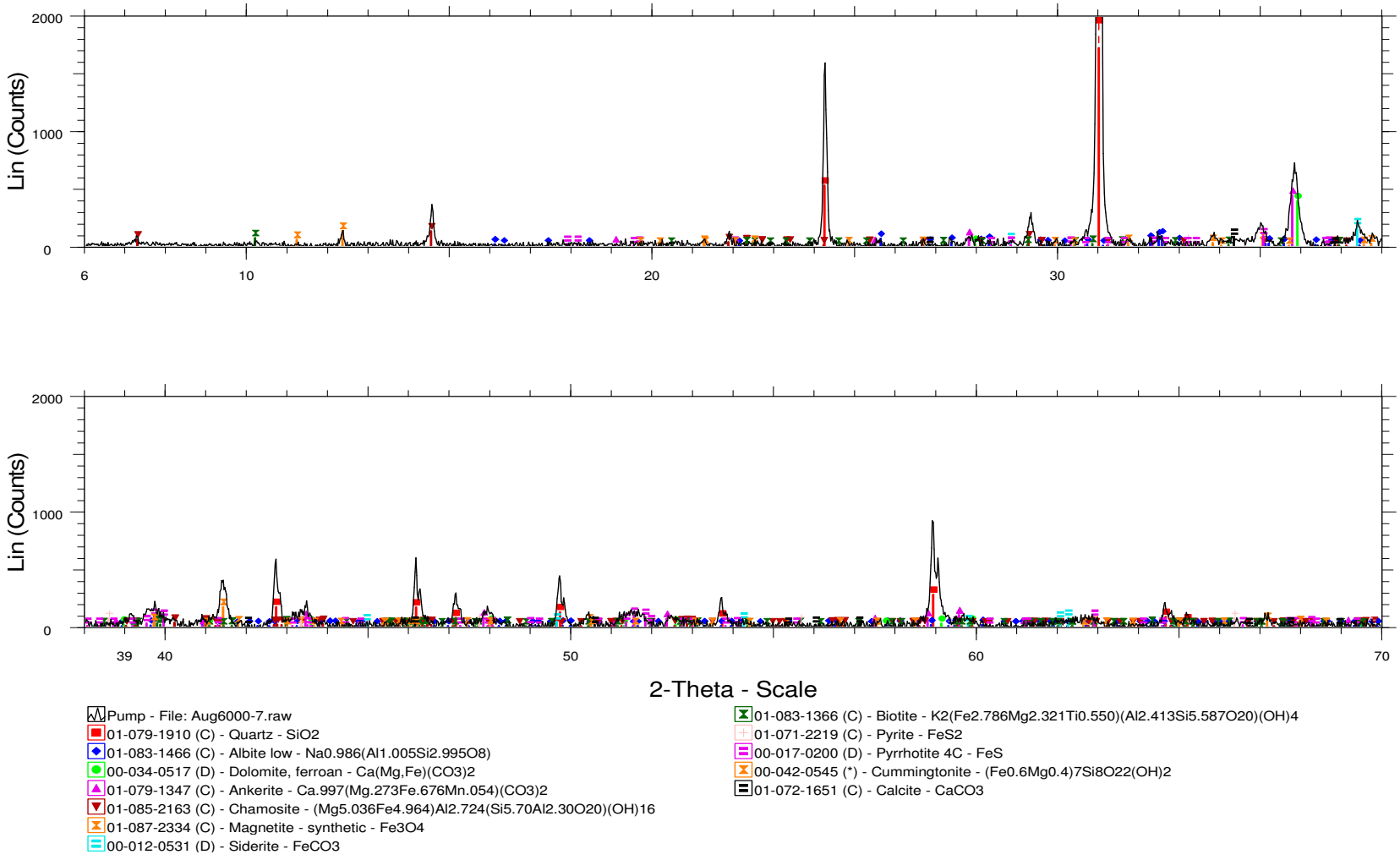
# F Zone Open Pit




*The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.*
*Tel: (705) 652-2000 Fax: (705) 652-6365  Mini-method available upon request.*

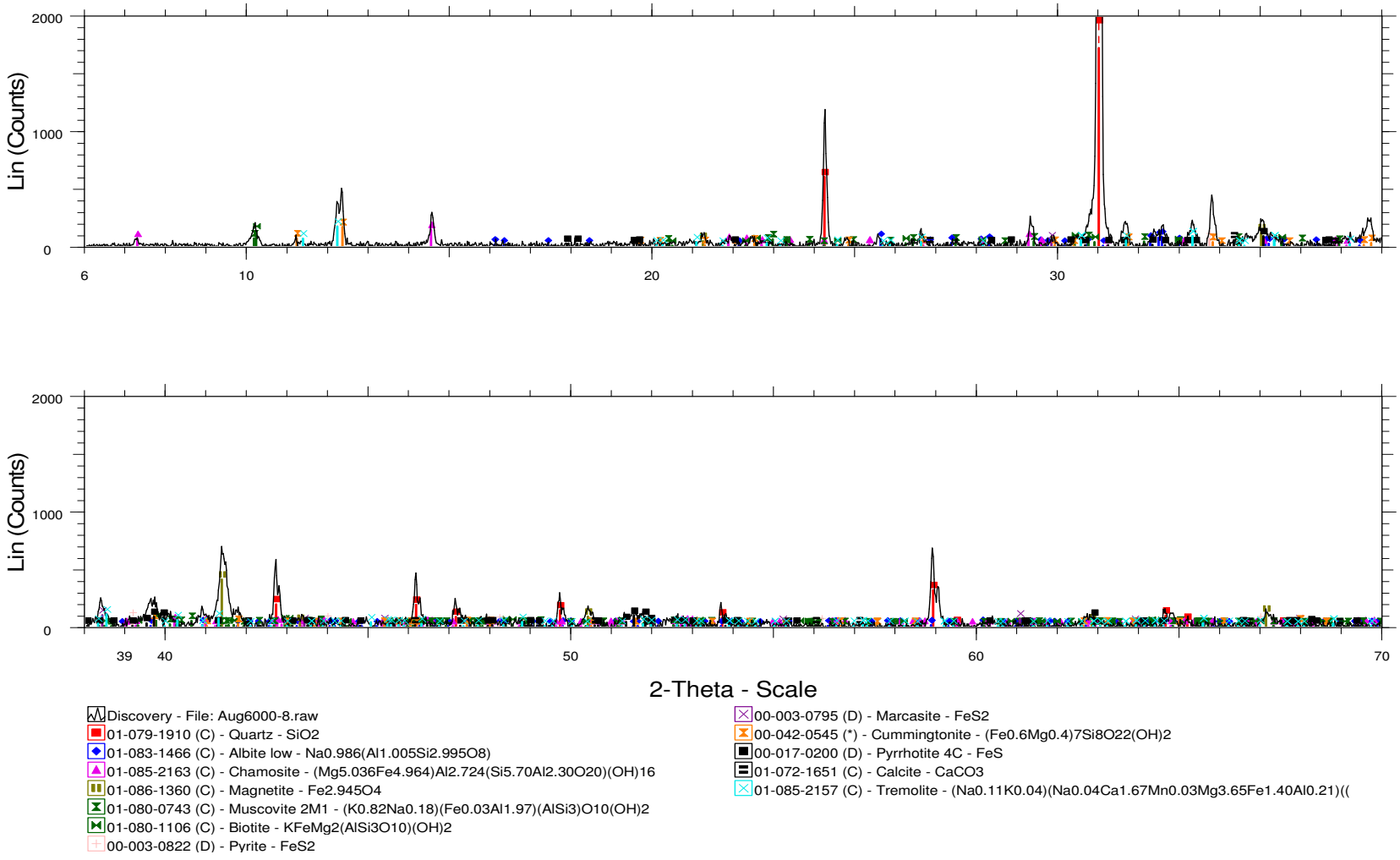
Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

# Pump



Agnico Eagle Mines Ltd. - Meliadine
12592-002/ MI6000-AUG11
09/02/2011

# Discovery



Process Mineralogical Consulting

*A Mineralogical Description of*

# THREE HEAD SAMPLES FROM MELIADINE PROJECT FOR RAPID ORE CHARACTERIZATION

Prepared for

## AGNICO-EAGLE MINES LTD.

**Project #** AUG2011-05
September 20, 2011

**NOTE:**
This report refers to the samples as received.

The practice of this Company in issuing reports of this nature is to require the recipient not to publish the report or any part thereof without the written consent of Process Mineralogical Consulting.

## Summary Results

Three samples of assay reject material identified as TOP, FZOP, and WMOP were submitted to Process Mineralogical Consulting Ltd for Rapid Ore Characterisation analysis. Representative portions of each sample were riffled and submitted for polished section preparation and quantitative X-ray diffraction analysis.

The results of the Rapid Ore Characterisation determined the following:

- TOP contains the most magnetite of the 3 samples containing ~8% by weight. ~2% magnetite is present the two other samples.
- The fine intergrowth texture of the magnetite in the TOP sample will make liberation difficult as a significant portion of the grains are <10µm.
- The sample identified as WMOP contains the highest amount of sulphide minerals being mainly composed of arsenopyrite with subordinate amounts of pyrite and trace amounts of pyrrhotite and chalcopyrite.
- The arsenopyrite present in all samples is relatively coarse and may achieve optimal liberation at standard primary grind sizes (~$K_{80}$ 150µm). Pyrite is not as coarse as arsenopyrite but may also liberate well at standard grind conditions.
- Elongated and fibrous non-opaque gangue minerals were observed within each sample. The aspect ratio of some grains measured 3:1 or greater with mineral chemistry of Fe, Mg, Al silicate. Semi-quantitative Energy Dispersive Spectrometry of select grains plotted into the Minident mineral database indicated that the chemistry of the grains was most similar to chamosite (chlorite), biotite and anthophyllite. It is strongly recommended that an accredited laboratory carry out appropriate asbestos evaluation. The following table details the mineral chemistry analysed by semi-quantitative Energy Dispersive Spectrometry (EDS).

**Table 1:** SEM-EDS analyses of selected elongated gangue minerals

| | WMOP | WMOP | | FZOP | FZOP | | TOP | TOP |
|---|---|---|---|---|---|---|---|---|
| **O** | 44.1 | 48.5 | **O** | 42.88 | 47.25 | **O** | 45.91 | 43.55 |
| **Mg** | 4.49 | 7.7 | **Mg** | 4.67 | 5.59 | **Mg** | 3.48 | 2.71 |
| **Al** | 11.2 | 10.8 | **Al** | | 10.26 | **Al** | 10.96 | 11.18 |
| **Si** | 12.1 | 14.8 | **Si** | 25.29 | 25.22 | **Si** | 16.57 | 11.55 |
| | | | **Mn** | 0.71 | 0.87 | **K** | 7.3 | |
| | | | | | | **Ti** | 1.24 | |
| **Fe** | 28.0 | 18.3 | **Fe** | 26.45 | 28.44 | **Fe** | 30.14 | 31.02 |
| | ***Biotite*** | ***Phlogopite*** | | ***Anthophyllite*** | ***Biotite*** | | ***Chamosite*** | ***Chamosite*** |

- Semi-Quantitative XRD results (Rietveld Refinement Method) determined the following non-opaque gangue mineral composition as detailed in Table 2. The presence of clinochlore and cummingtonite support the findings of the SEM-EDS where the fine elongated grains are a result of minor alteration sequences and are only present in trace amounts below the detection limits of XRD.

**Table 2:** Semi-quantitative XRD results

| Mineral | Ideal Formula | WMOP (WesMeg Open Pit) | TOP (Tiriganiaq Open Pit) | FZOP (F-Zone Open Pit) |
|---|---|---|---|---|
| Quartz | $SiO_2$ | 51.8 | 42.8 | 58.6 |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$ | 6.3 | 7.1 | 3.3 |
| Muscovite | $KAl_2(AlSi_3O_{10})(OH)_2$ | 3.7 | 13.5 | 1.4 |
| Biotite | $K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$ | | | 1.5 |
| Plagioclase | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ | 3.5 | 14.7 | 2.5 |
| Cummingtonite | $Mg_7Si_8O_{22}(OH)_2$ | | 1.5 | 6.5 |
| Calcite | $CaCO_3$ | 1.6 | 2.4 | 0.5 |
| Ankerite | $Ca(Fe^{2+},Mg,Mn^{2+})(CO_3)_2$ | 9.9 | 7.8 | 12.9 |
| Siderite | $Fe^{2+}CO_3$ | 17.4 | | 4.9 |
| Pyrite | $FeS_2$ | 0.7 | 1.4 | 1.3 |
| Pyrrhotite | $Fe_{1-x}S$ | 2.9 | | 3.3 |
| Magnetite | $Fe^{2+}Fe^{3+}{}_2O_4$ | 0.9 | 5.5 | 2.1 |
| Ilmenite | $Fe^{2+}TiO_3$ | 0.4 | 0.6 | |
| Arsenopyrite | FeAsS | 0.8 | 2.1 | 1.2 |
| Sphalerite | (Zn,Fe)S | 0.1 | | |
| Grossular | $Ca_3Al_2(SiO_4)_3$ | | 0.5 | |
| **Total** | | **100.0** | **100.0** | **100.0** |

PMC Ltd. recommends a detailed size-by-size liberation analysis be carried out to better predict the optimal grind sizes for liberation and ultimate mineral textures that will influence concentration techniques. Further more a comprehensive gold deportment study, which would include SIMS analysis of the pyrite and arsenopyrite, will also provide valuable information with regard to gold-bearing mineral speciation, and association.

**September 20, 2011**



Geoffrey R. Lane B.Sc., P.Geo.
Chief Mineralogist
***Process Mineralogical Consulting Ltd.***

| | |
|---|---|
| *Polished Section Preparation:* | Emily Lane, Mineralogical Technician |
| *Report Preparation:* | Geoff Lane |
| *Report Editing:* | Chris Blake Ph.D. Senior Mineralogist |

## RAPID ORE CHARACTERIZATION

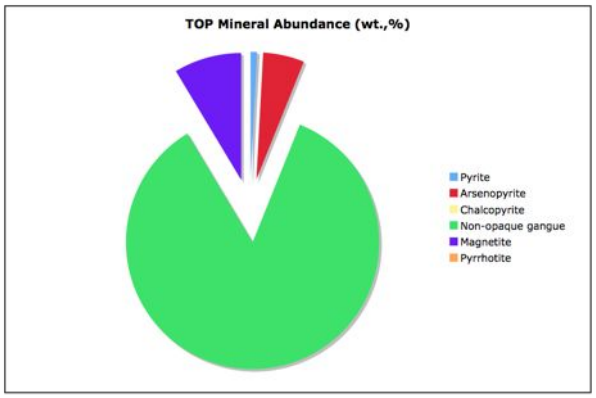
### Sample: TOP

The sample is primarily composed of coarse granular non-opaque gangue minerals (see XRD results for mineral composition) having intergrowths of fine to coarse magnetite and to a lesser extent pyrite and arsenopyrite. Magnetite comprises a significant portion of the sample being present as fine and coarse intergrowths in NOG and as liberated grains. Arsenopyrite is present in moderate amounts mainly as liberated grains and ternary and complex particles mainly with NOG and magnetite. Pyrite is present as ternary and complex particles with moderate amounts occurring as liberated grains.

The NOG mineral population includes a minor amount of acicular (elongated) grains occasionally present as liberated grains or as disseminated grains within other NOG minerals. The aspect ratio of these grains is approximately 3:1 consistent with the definition of a fiber but may not necessarily be defined as asbestos. SEM-EDS semi-quantitative analysis indicates the composition of the grains is similar to chamosite (chlorite).

### TOP Mineral Abundance

| Mineral Component | Wt.,% |
|---|---|
| Pyrite | 0.91 |
| Arsenopyrite | 5.08 |
| Chalcopyrite | 0.02 |
| Non-opaque gangue | 85.5 |
| Magnetite | 8.53 |
| Pyrrhotite | 0.00 |
| **Total** | **100.0** |

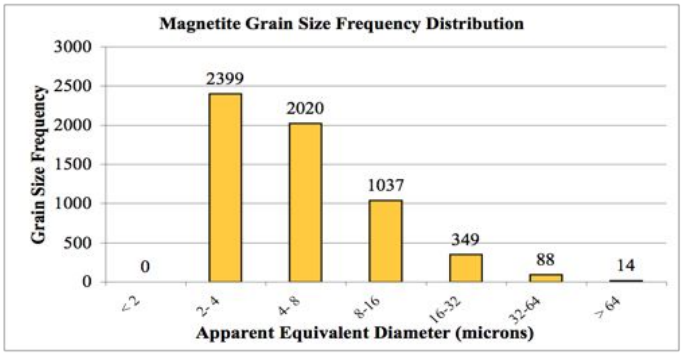



### TOP Mineral Association

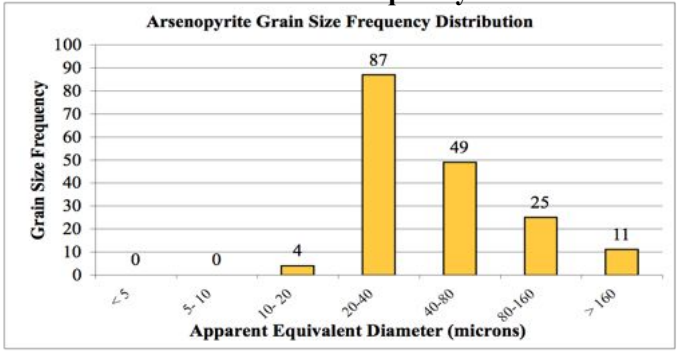
| Association | Pyrite | Arsenopyrite | Magnetite |
|---|---|---|---|
| Liberated (100%) | 27.4 | 47.9 | 30.0 |
| Pyrite | --- | 0.00 | 0.90 |
| Pyrrhotite | 0.00 | 0.00 | 0.00 |
| Arsenopyrite | 0.00 | --- | 2.24 |
| Magnetite | 0.5 | 0.20 | --- |
| Chalcopyrite | 0.00 | 0.00 | 0.01 |
| Non-opaque Gangue | 0.00 | 0.25 | 57.7 |
| Ternary | 38.1 | 30.6 | 2.67 |
| Complex | 34.0 | 21.0 | 6.45 |
| Total | 100.0 | 100.0 | 100.0 |

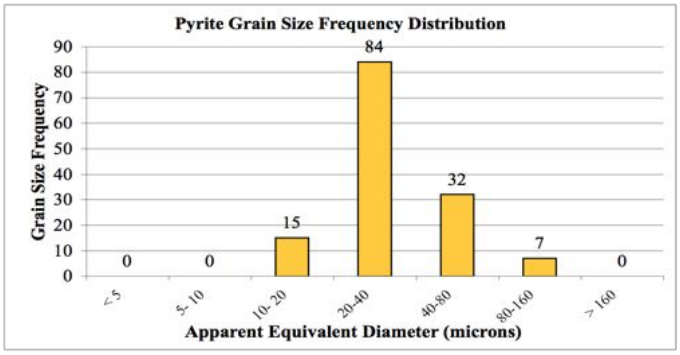
### TOP Mineral Liberation

| Liberation | Pyrite | Arsenopyrite | Magnetite |
|---|---|---|---|
| Free (100%) | 27.4 | 47.9 | 30.0 |
| Liberated (80-100%) | 8.6 | 35.7 | 8.66 |
| Middling (50-80%) | 18.2 | 10.7 | 17.2 |
| Sub-Middling (20-50%) | 9.84 | 2.78 | 22.7 |
| Locked (<20%) | 36.0 | 2.85 | 21.4 |
| Total | 100.0 | 100.0 | 100.0 |




### TOP Mineral Grain Size Frequency Distribution



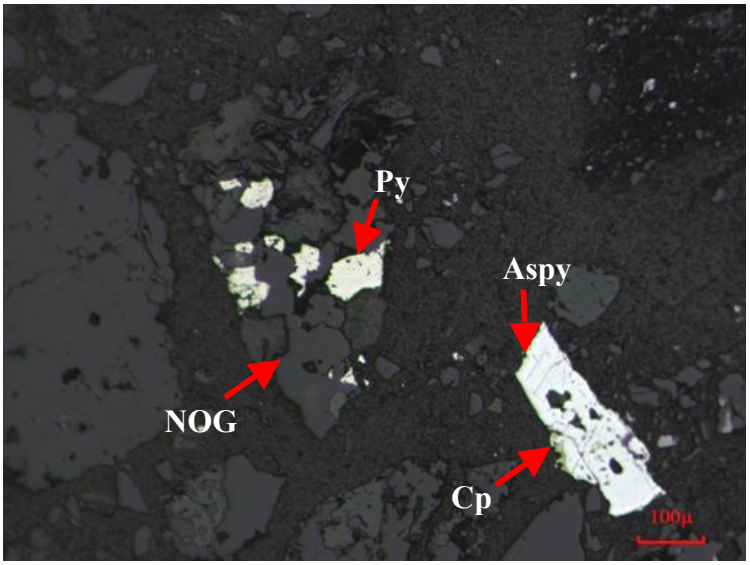



**Plate 1:**
Equi-granular pyrite (Py) intergrown with Non-opaque gangue (NOG). Mainly liberated arsenopyrite (Aspy) with minor attachment of chalcopyrite (Cp).

*Plane Polarized Reflected Light (PPRL) 100x Magnification*

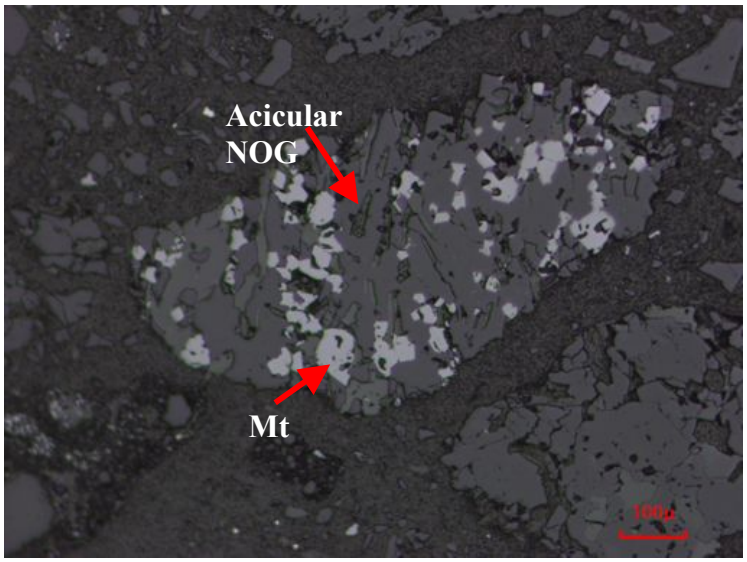



**Plate 2:**
Subhedral magnetite (Mt) evenly disseminated within Non-opaque gangue (NOG). Finely acicular NOG (possible amphibole) is also disseminated within the more massive NOG.

*Plane Polarized Reflected Light (PPRL) 100x Magnification*

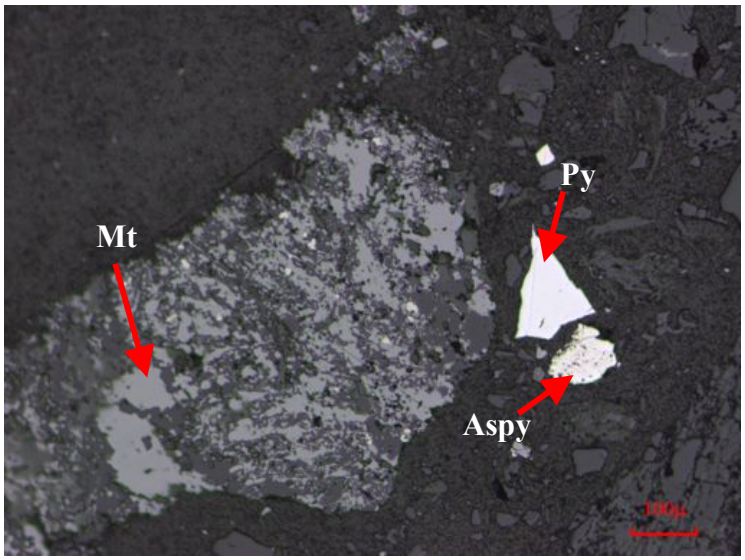



**Plate 3:**
Complex anhedral magnetite disseminated within Non-opaque gangue (NOG). Fine inclusions of pyrite are present interstitial to magnetite and NOG grains. Liberated arsenopyrite and pyrite are also present in the photomicrograph.

*Plane Polarized Reflected Light (PPRL) 100x Magnification*

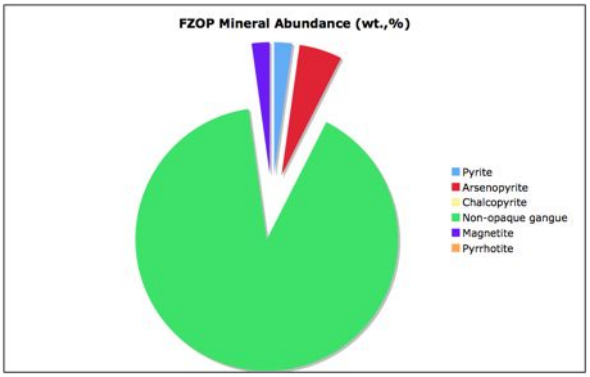
## RAPID ORE CHARACTERIZATION

### Sample: FZOP

The sample is primarily composed of NOG minerals with lesser amounts of arsenopyrite, magnetite and pyrite in decreasing order. Pyrite, arsenopyrite, and magnetite occur as liberated grains and as composite particles within NOG minerals. Arsenopyrite is mainly present as associated grains with NOG and as ternary particles. Lesser amounts are present as liberated grains. Minor amounts of pyrite and magnetite are present as liberated grains with moderate amounts of pyrite associated with NOG minerals and as ternary particles. Major amounts of magnetite are associated with NOG minerals with moderate amounts associated as ternary particles.

### FZOP Mineral Abundance

| Mineral | Wt., % |
|---|---|
| Pyrite | 2.33 |
| Arsenopyrite | 5.26 |
| Chalcopyrite | 0.01 |
| Non-opaque gangue | 90.0 |
| Magnetite | 2.34 |
| Pyrrhotite | 0.00 |
| **Total** | 100.0 |



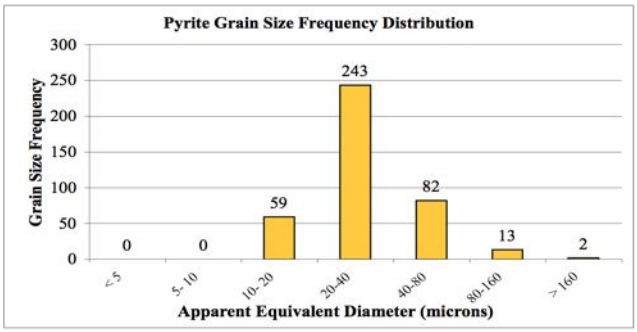

### FZOP Mineral Association

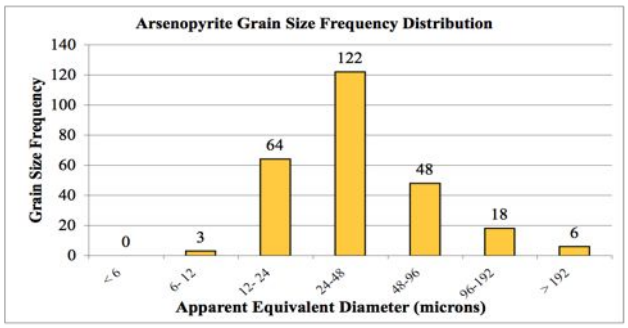
| Association | Pyrite | Arsenopyrite | Magnetite | Pyrrhotite |
|---|---|---|---|---|
| Liberated (100%) | 69.3 | 21.4 | 42.7 | 0.0 |
| Pyrite | --- | 0.50 | 2.12 | 0.0 |
| Pyrrhotite | 0.84 | 0.00 | 0.00 | 0.0 |
| Arsenopyrite | 2.25 | --- | 0.00 | 100 |
| Magnetite | 0.75 | 0.0 | --- | 0.0 |
| Chalcopyrite | 0.00 | 0.00 | 0.01 | 0.0 |
| Non-opaque Gangue | 11.7 | 45.9 | 46.5 | 0.0 |
| Ternary | 11.9 | 31.1 | 7.60 | 0.0 |
| Complex | 3.25 | 1.2 | 1.00 | 0.0 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** |

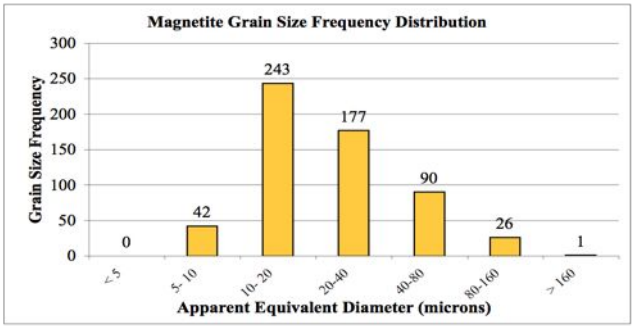
### FZOP Mineral Liberation

| Liberation | Pyrite | Arsenopyrite | Magnetite | Pyrrhotite |
|---|---|---|---|---|
| Free (100%) | 69.3 | 21.4 | 42.7 | 0.0 |
| Liberated (80-100%) | 5.87 | 64.5 | 13.1 | 0.0 |
| Middling (50-80%) | 6.32 | 5.57 | 15.6 | 0.0 |
| Sub-Middling (20-50%) | 7.50 | 5.64 | 19.4 | 0.0 |
| Locked (<20%) | 11.0 | 2.97 | 9.14 | 100 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** |

### FZOP Mineral Grain Size Frequency Distribution



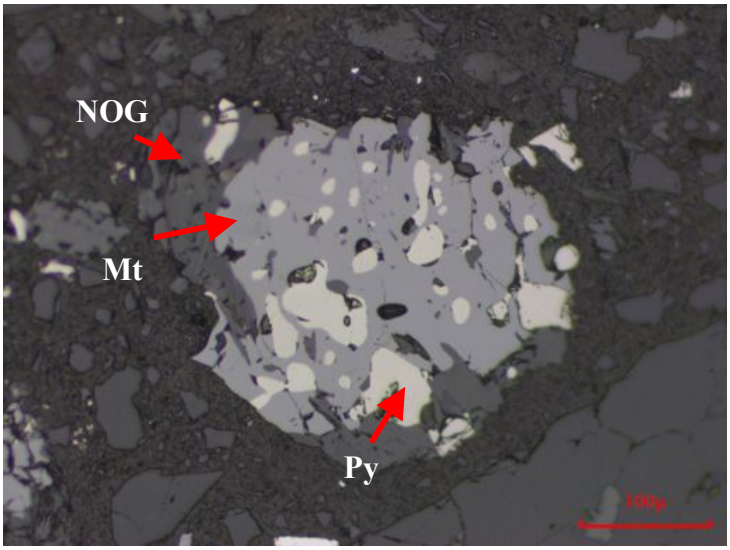



**Plate 4:**
Complex intergrowth of anhedral pyrite in magnetite with inclusions and attachments of NOG minerals.

*Plane Polarized Reflected Light (PPRL) 200x Magnification*

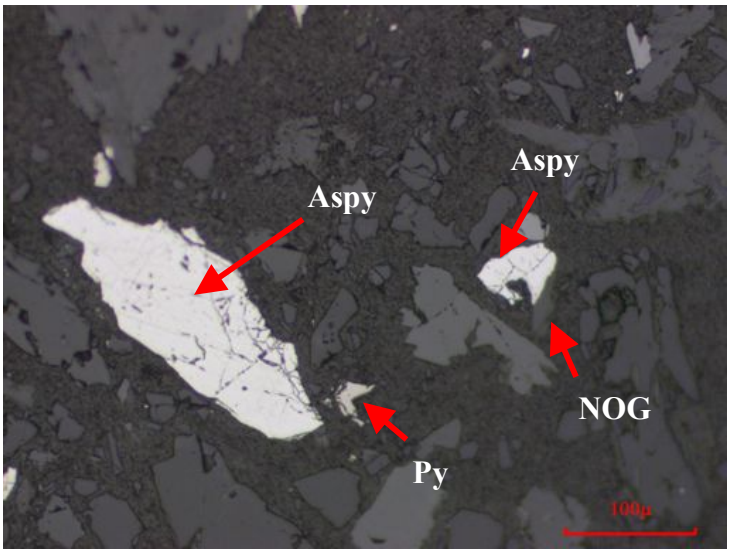



**Plate 5:**
Coarse liberated arsenopyrite and binary particle of arsenopyrite and NOG. Fine liberated pyrite is also present.

*Plane Polarized Reflected Light (PPRL) 200x Magnification*

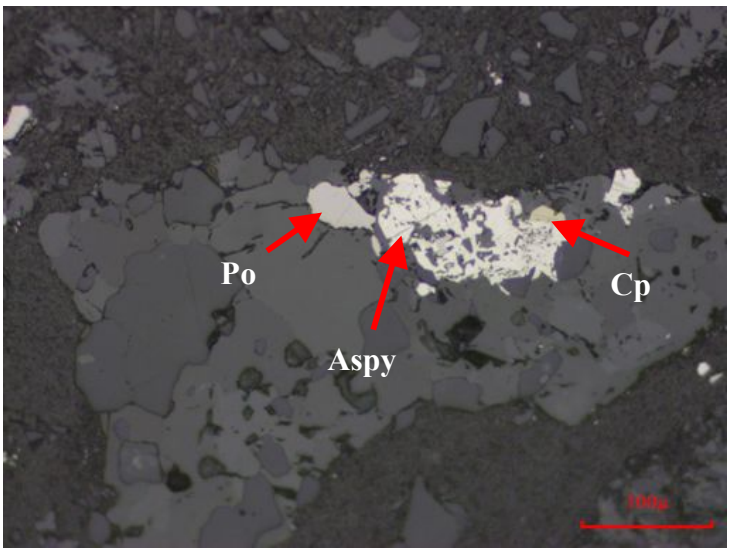



**Plate 6:**
Complex NOG particle with inclusions of coarse anhedral arsenopyrite, pyrrhotite (Po) and chalcopyrite.

*Plane Polarized Reflected Light (PPRL) 200x Magnification*

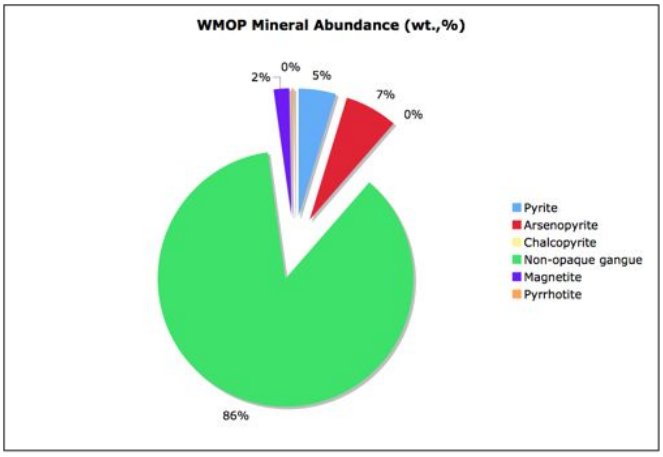
## RAPID ORE CHARACTERIZATION

### Sample: WMOP

The sample is primarily composed of NOG minerals occurring as coarse particles intergrown with the sulphide minerals and oxide minerals. Sulphide minerals comprise a minor amount of the sample and include significant amounts of arsenopyrite, with lesser amounts of pyrite and trace amounts of pyrrhotite. Arsenopyrite is primarily present as associated grains with NOG minerals with lesser amounts present as liberated grains and subordinate amounts as ternary particles. Pyrite is present in similar amounts as liberated grains and as associated grains with NOG minerals. Pyrrhotite is present in trace amounts primarily as liberated grains and to a lesser extent as associated grains with NOG minerals. Magnetite is present in minor amounts in the sample mainly as liberated grains with subordinate amounts associated with NOG minerals and minor amounts as ternary particles. Elongated NOG minerals are present but SEM-EDS analysis determined these grains have the composition most similar to biotite / phlogopite. Muscovite was identified by XRD.

### WMOP Mineral Abundance

| Mineral | Wt.,% |
|---|---|
| Pyrite | 4.82 |
| Arsenopyrite | 6.53 |
| Chalcopyrite | 0.04 |
| Non-opaque gangue | 86.5 |
| Magnetite | 1.86 |
| Pyrrhotite | 0.30 |
| **Total** | **100.0** |



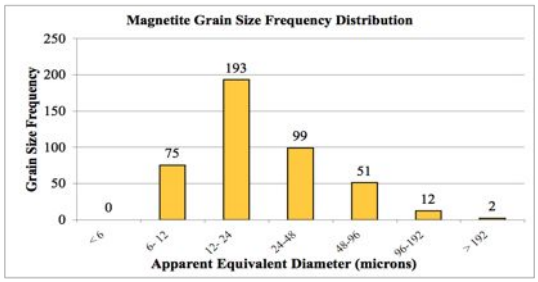

### WMOP Mineral Association

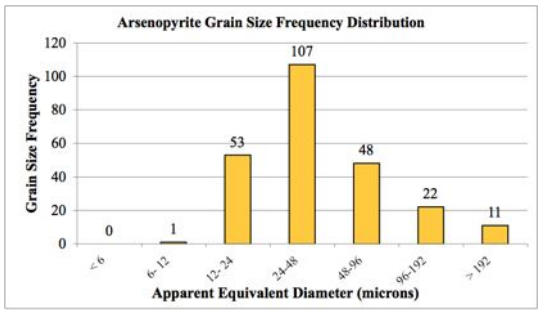
| Association | Pyrite | Pyrrhotite | Arsenopyrite | Magnetite |
|---|---|---|---|---|
| Liberated (100%) | 36.5 | 65.1 | 23.3 | 54.3 |
| Pyrite | --- | 1.34 | 2.31 | 1.82 |
| Pyrrhotite | 0.18 | --- | 0.04 | 0.00 |
| Arsenopyrite | 1.17 | 1.36 | --- | 0.05 |
| Magnetite | 1.28 | 0.00 | 6.28 | --- |
| Chalcopyrite | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-opaque Gangue | 35.0 | 29.0 | 46.9 | 38.5 |
| Ternary | 24.7 | 3.14 | 16.6 | 5.00 |
| Complex | 1.13 | 0.00 | 4.53 | 0.26 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** |

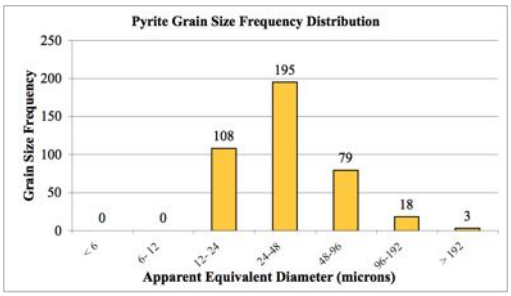
### WMOP Mineral Liberation

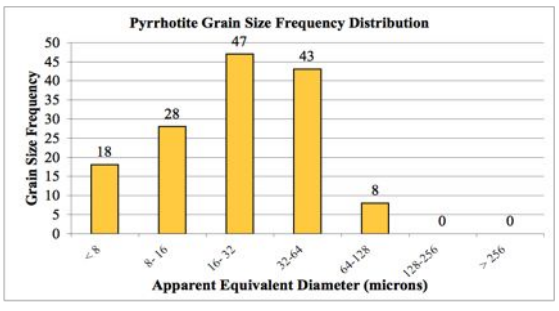
| Liberation | Pyrite | Pyrrhotite | Arsenopyrite | Magnetite |
|---|---|---|---|---|
| Free (100%) | 36.5 | 65.1 | 23.3 | 54.3 |
| Liberated (80-100%) | 47.8 | 24.6 | 65.5 | 28.6 |
| Middling (50-80%) | 2.31 | 4.77 | 3.41 | 6.33 |
| Sub-Middling (20-50%) | 4.78 | 1.34 | 4.82 | 7.97 |
| Locked (<20%) | 8.61 | 4.20 | 2.94 | 2.82 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** |

### WMOP Mineral Grain Size Distribution



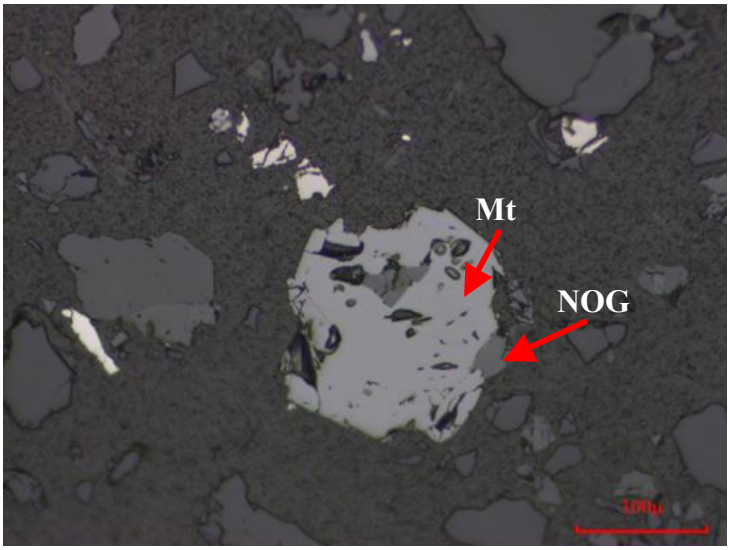



**Plate 7:**
Coarse subhedral magnetite with minor inclusions of NOG mineral.

*Plane Polarized Reflected Light (PPRL) 200x Magnification*

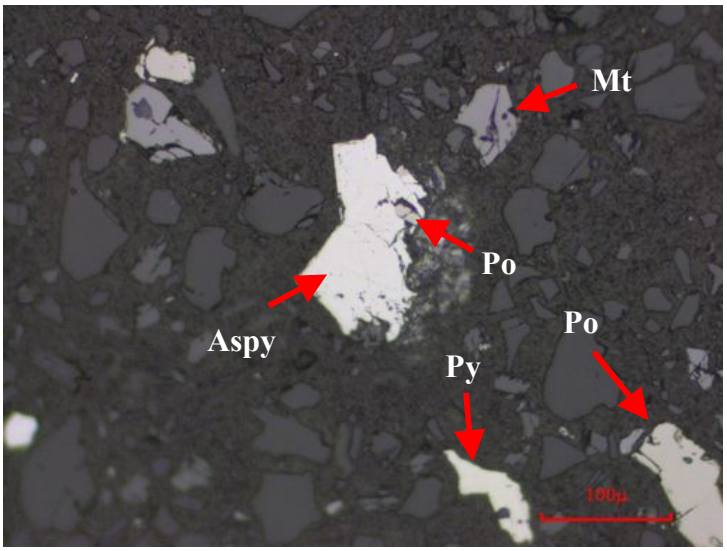



**Plate 8:**
Coarse subhedral arsenopyrite with fine attachment of pyrrhotite. Liberated magnetite, pyrrhotite and pyrrhotite is also present in the field of view.

*Plane Polarized Reflected Light (PPRL) 200x Magnification*

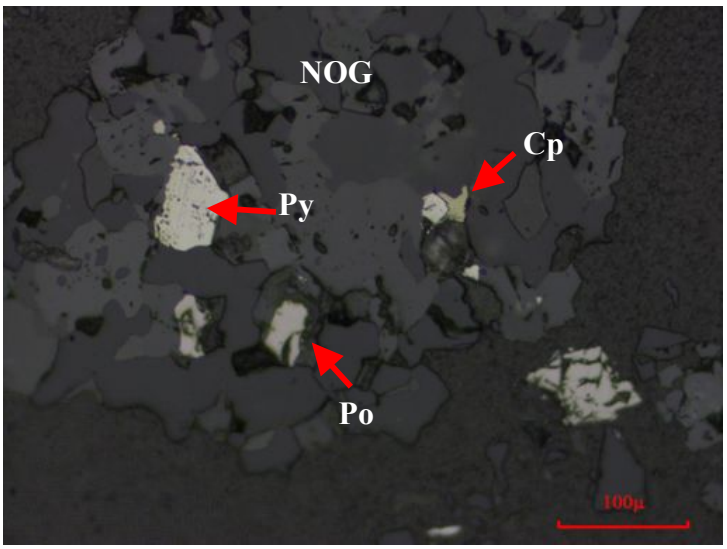



**Plate 9:**
Complex NOG particle with inclusions of pyrite, pyrrhotite and chalcopyrite.

*Plane Polarized Reflected Light (PPRL) 200x Magnification*

# APPENDIX 1

X-ray Diffraction Report

***QUANTITATIVE PHASE ANALYSIS OF THREE POWDER SAMPLES USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.***

***(Project: Aug2011-05)***

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***September 20, 2011***

**Experimental Method**

The three samples of **Project Aug2011-05** were reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronising Mill for 7 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Focus Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

**Results**

The X-ray diffractograms were analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Siemens (Bruker). X-ray powder-diffraction data of the samples were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plots are shown in Figures 1 – 3.

Table 1. Results of quantitative phase analysis (wt.%)

| **Mineral** | **Ideal Formula** | **WMOP (WesMeg Open Pit)** | **TOP (Tiriganiaq Open Pit)** | **FZOP (F-Zone Open Pit)** |
|---|---|---|---|---|
| Quartz | $SiO_2$ | 51.8 | 42.8 | 58.6 |
| Clinochlore | $(Mg,Fe^{2+})_5Al(Si_3Al)O_{10}(OH)_8$ | 6.3 | 7.1 | 3.3 |
| Muscovite | $KAl_2(AlSi_3O_{10})(OH)_2$ | 3.7 | 13.5 | 1.4 |
| Biotite | $K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$ | | | 1.5 |
| Plagioclase | $NaAlSi_3O_8 – CaAl_2Si_2O_8$ | 3.5 | 14.7 | 2.5 |
| Cummingtonite | $Mg_7Si_8O_{22}(OH)_2$ | | 1.5 | 6.5 |
| Calcite | $CaCO_3$ | 1.6 | 2.4 | 0.5 |
| Ankerite | $Ca(Fe^{2+},Mg,Mn^{2+})(CO_3)_2$ | 9.9 | 7.8 | 12.9 |
| Siderite | $Fe^{2+}CO_3$ | 17.4 | | 4.9 |
| Pyrite | $FeS_2$ | 0.7 | 1.4 | 1.3 |
| Pyrrhotite | $Fe_{1-x}S$ | 2.9 | | 3.3 |
| Magnetite | $Fe^{2+}Fe^{3+}{}_2O_4$ | 0.9 | 5.5 | 2.1 |
| Ilmenite | $Fe^{2+}TiO_3$ | 0.4 | 0.6 | |
| Arsenopyrite | FeAsS | 0.8 | 2.1 | 1.2 |
| Sphalerite | (Zn,Fe)S | 0.1 | | |
| Grossular | $Ca_3Al_2(SiO_4)_3$ | | 0.5 | |
| Total | | 100.0 | 100.0 | 100.0 |

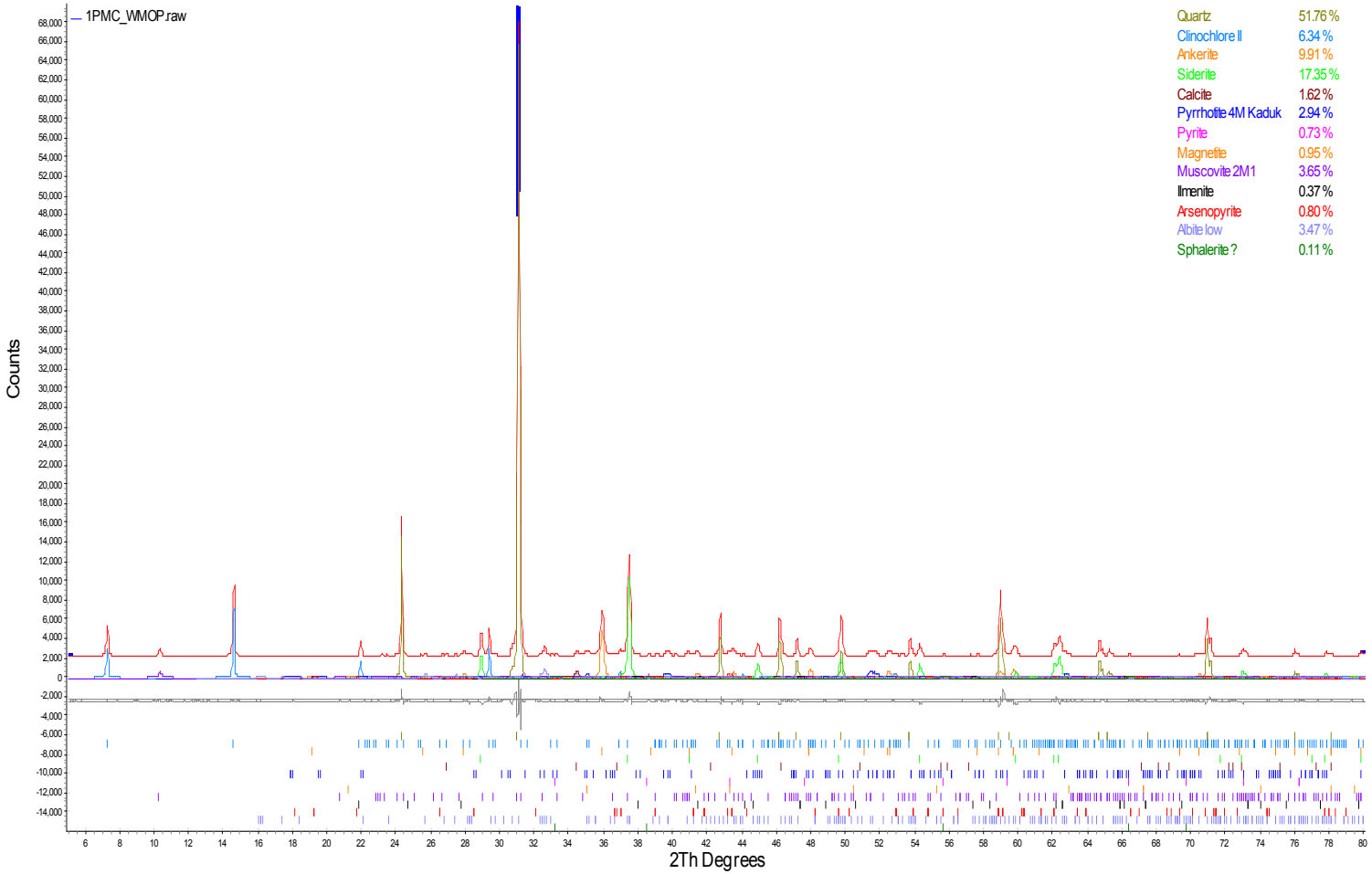



Figure 1. Rietveld refinement plot of sample **Process Mineralogical Consulting "WMOP (WesMeg Open Pit)"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

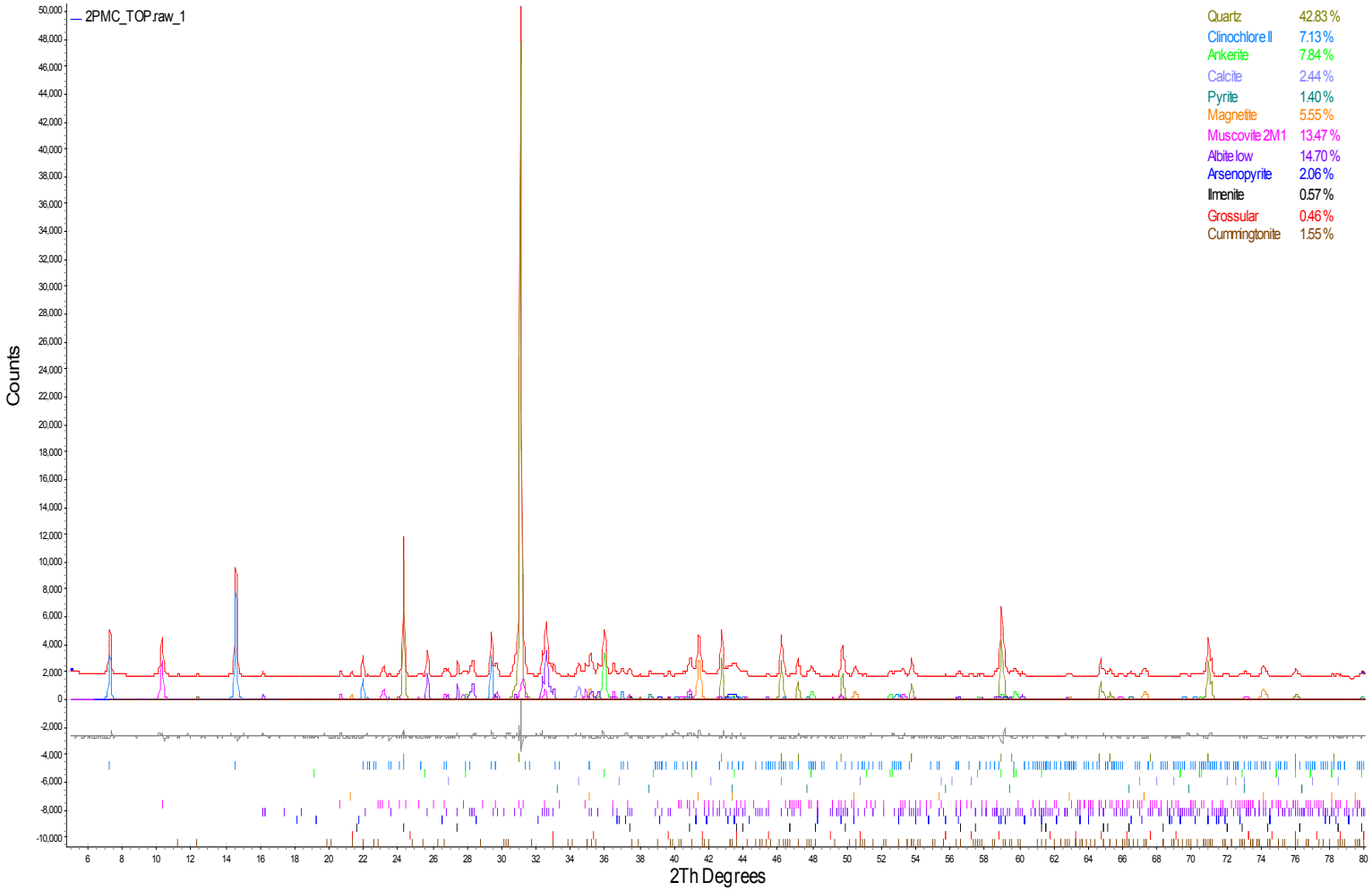



Figure 2. Rietveld refinement plot of sample **Process Mineralogical Consulting "TOP (Tiriganiaq Open Pit)"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

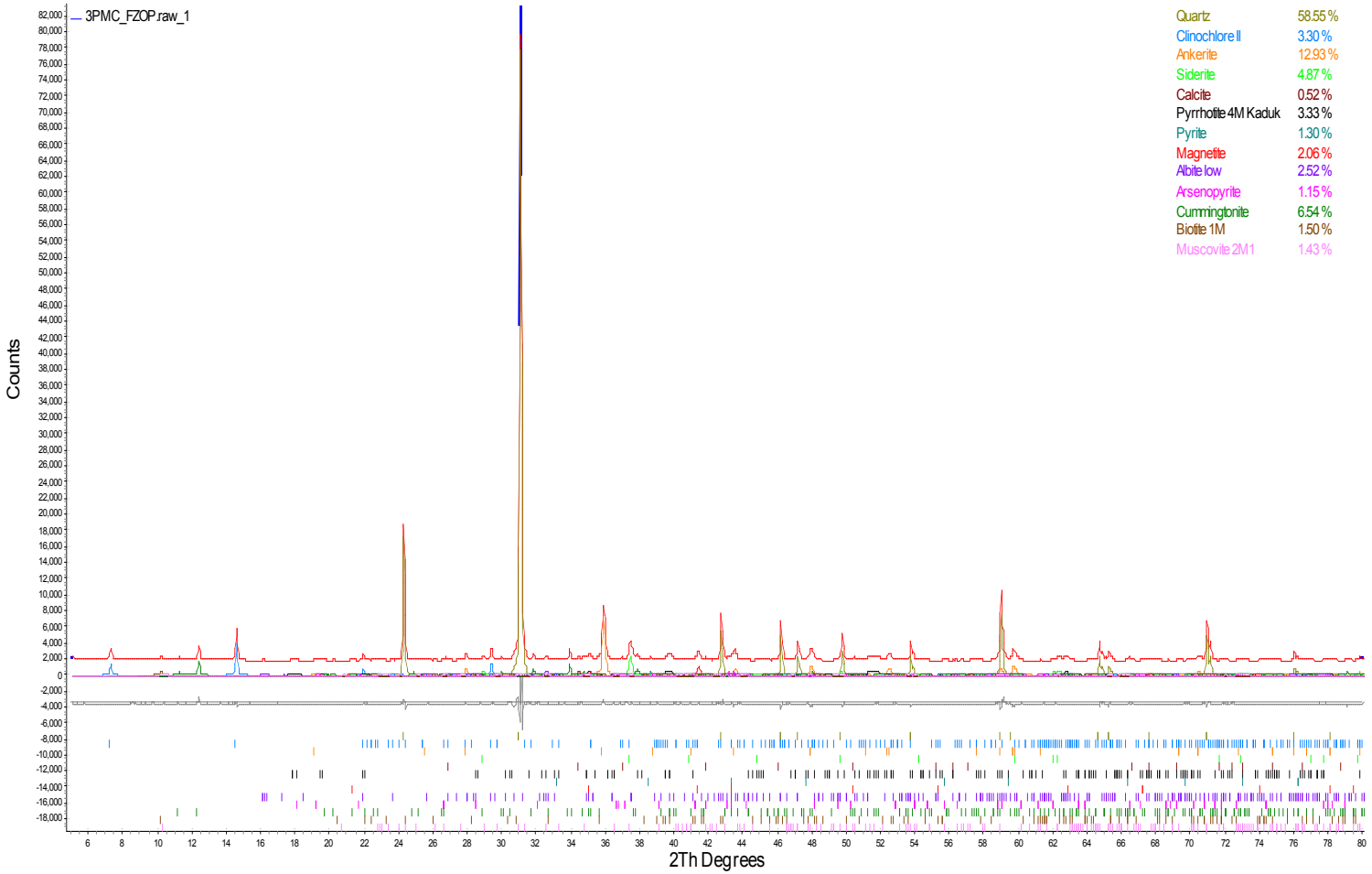



Figure 3. Rietveld refinement plot of sample **Process Mineralogical Consulting "FZOP (F-Zone Open Pit)"** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below – difference between observed and calculated intensities; vertical bars, positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

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