Appendix C4

Report: *2008 Groundwater Quality Monitoring Program, Meadowbank Mine*

TECHNICAL MEMORANDUM

DATE January 14, 2008 **PROJECT No.** 08-1428-0008
Doc. No 801 Ver. 0

TO Stéphane Robert
Agnico-Eagle Mines Limited Meadowbank Division

CC Dan Walker

FROM Denis Vachon & Valérie Bertrand **EMAIL** vbertrand@golder.com

RE: 2008 GROUNDWATER QUALITY MONITORING PROGRAM MEADOWBANK MINE

1.0 INTRODUCTION

This document provides a summary of the 2008 groundwater monitoring program carried out at the Meadowbank Mine site including a description of the new monitoring well installations, and presentation of water quality results from sampling conducted in 2008. Completion of the groundwater monitoring program is a condition of the Meadowbank Project Certificate No.004 issued by the Nunavut Impact Review Board (NIRB) in December 2006 and of the Water License No. 2AM-MEA0815 issued by the Nunavut Water Board (NWB) in June 09, 2008.

Table 2 of Schedule 1 of the Meadowbank Water License states that groundwater must be monitored annually for Group 3 chemical parameters which, per Table 1 of this Schedule, include: pH, turbidity, alkalinity, hardness, ammonia nitrogen, nitrate, nitrite, chloride, fluoride, sulphides, total dissolved solids (TDS), total and free cyanide for wells in the groundwater flow path of the tailing storage facility, and the following dissolved metals: aluminum, arsenic, barium, cadmium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, thallium and zinc.

1.1 Background

The proposed Goose Island and Portage open pits will be developed within a through talik (unfrozen ground that extend to the base of the permafrost) underneath Third Portage Lake. The proposed tailings storage facility in the basin of the North arm of Second Portage Lake is also over a through talik. Groundwater monitoring wells have been installed to characterize baseline groundwater quality in the talik, in each of the three main lithologies that will be removed by mining: Iron Formation (IF), Intermediate Volcanic (IV) and Ultramafic (UM) rock. The objective of the groundwater sampling program initiated in 2003 was two-fold:

- To measure the salinity of the deep groundwater to calibrate the pit groundwater inflow component of the site water quality model; and
- To benchmark pre-mining groundwater quality against which to measure the effects of mining on groundwater quality, if any.

To this end, groundwater flow and quality data has been collected from the Portage area since 2003 and have been used as input into the water quality model for the site (Golder, 2005; 2007; 2008). The Vault area

groundwater is not monitored because the talik present under Vault Lake does not extend through the permafrost.

Four monitoring wells were installed at the site in 2003, three of which developed internal damage after sampling and could no longer be operated (Golder, 2004a; 2004b). In 2006, the three defective monitoring wells were replaced but became inoperable in 2007. Maintenance and replacement of monitoring wells is a condition of the Meadowbank NIRB project certificate and Water Licence. A more robust monitoring well design was installed in 2008. The new wells are placed outside the maximum footprint of the open pits to allow continued monitoring throughout mine life. Figure 1 shows the locations of the groundwater monitoring wells at Meadowbank.

The monitoring wells installed prior to the 2008 program were designed to allow repeated sampling at each monitoring point, but with time, usage, and permafrost conditions, the equipment developed failures that rendered the wells inoperable. The objective of the new design was to maintain dry conditions in the well pipe and well annulus to avoid freeze-thaw pressures and to facilitate subsequent sampling events. The new design includes redundant systems to minimize repetitive freezing of the instrumentation and to facilitate accessibility of the monitoring wells throughout the mine life. Table 1 describes the borehole information for each operable well sampled in 2008.

Table 1: Monitoring Well Borehole Information

Monitoring Well ID	Screened Interval Lithology	Length of Borehole (m)	Inclination (degrees)	Screened Interval Depth Along Borehole (m)	Vertical Depth of Screened Interval (m)	Drilling and Well Installation Year
MW03-01	UM	200	-50	185-200	142-154	2003
MW08-02	IV	200	-60	170-200	147-173	2008
MW08-03	IV	200	-60	170-200	147-173	2008

Note: MW03-01, MW03-02, MW03-02, MW06-01, MW06-02 and MW06-03 are no longer operable.

Site climate only allows for drilling and sampling over a short window of time between June and September inclusively. Replacement of the monitoring well located south of the proposed tailing basin was planned for 2008 but was not carried out because of a change in the location, requiring the well be extended. This was not possible with the planned well design. No wells were installed in IF rock as it is reached from land on Goose Island, and this location was not accessible in summer 2008.

2.0 2008 MONITORING WELL INSTALLATIONS

2.1 Boreholes

The two boreholes drilled for the replacement monitoring wells MW08-02, and MW08-03 were drilled using standard PQ and HQ size coring method. Heated water from the Second Portage Lake was used as drilling fluid during drilling. The boreholes were drilled to 200m depth along a 60 degree angle. Each borehole was cased to 20 m past the anticipated base of the permafrost using HWT flush-joint casing. The geological information used to was based on the core recovered from each borehole. The first 170 meters of the MW08-02 borehole were drilled without core recovery; the screened interval core was collected to confirm the target lithology. The full length of MW08-03 borehole was logged. Agnico-Eagle geologists logged the core from both boreholes, the geological information is presented on Figures 2 and 3. The well locations in UTM coordinates are presented in Table 2.

Table 2: New Monitoring Well Locations

2008 Monitoring Well ID	Collar Location	UTM Coordinates		Azimuth (from true north)	Dip	Borehole depth
		Easting	Northing			
MW08-02		639185.90	7213901.29	010	60	200 m
MW08-03		639282.24	7214483.46	200	60	200 m

2.2 Monitoring Well Instrumentation

Figure 2 and 3 provide installation details for the two monitoring wells installed in 2008. The wells were constructed with 1.5-inch diameter, schedule 40 stainless steel pipe and 18 m long 2-inch diameter stainless steel screen. The annulus between the casing and the monitoring well pipe was sealed at the base of the casing (169 m depth) with a pneumatic packer inflated with propylene glycol (a non-toxic and biodegradable liquid with low freezing point). This isolated the annular space between the borehole casing and the monitoring well pipe from the borehole interval below the permafrost. A small diameter double valve pump (DPV) driven by inert nitrogen gas was fixed to the outside of the riser pipe to allow removal of water from the well annulus above the packer to keep this area dry and minimize the potential for frost damage to the outside of the monitoring well pipe. A smaller diameter stainless steel pneumatic packer was installed inside of the monitoring well pipe immediately above the screen interval to prevent freezing of the inside of the monitoring well pipe throughout the permafrost. After sample collection, the inside packer is inflated and a portable DPV pump is used to evacuate water above this packer and keep the well pipe dry between the sampling events.

A heating cable was attached to the outside of the monitoring well pipe through the entire anticipated interval of permafrost. The heating cables prevent water from freezing during sampling, and constitute a back-up system to melt the ice inside the monitoring well in case of a packer failure.

2.3 Monitoring Well Development

Prior to sampling, each new well was purged using compressed air and flexible 5/8-inch (o.d.) high density polyethylene (HDPE) WaTerra® tubing to remove materials introduced into the wells during drilling and well installation. Groundwater was continually airlifted from the wells until the filed readings of electrical conductivity, total dissolved solids (TDS), and pH stabilized (values remaining within 10% for three consecutive readings). Field parameter readings and descriptions of water clarity and colour observed during well purging are included in groundwater sampling data sheets in Appendix I.

Well MW03-01

Because the 2003 monitoring wells did not include a packer seal above the screen interval the ice present in the annulus of the well and in the well pipe had to be thawed for purging and sampling. The heating cables of MW03-01 were energized with a diesel generator for 7 days to thaw water in the riser pipe and allow access to the screened interval for sampling. After the ice melted the melt water was purged to induce the flow of fresh groundwater from the rock formation. At the end of purging the water coming out of the well was clear and relatively free of sediment. The well pipe and equipment remained in good condition during this process. Approximately 2 standing well volumes (defined as the volume of standing water in the piezometer relative to the regional groundwater table) were purged from this well over 5 days prior to sampling (373 litres). The sampling pump intake point was positioned at 170 m depth, slightly above the screened interval.

Well MW08-02

Approximately 8 well volumes of water were purged from this monitoring well over 5 days prior to sampling. The sample pump intake point was positioned at 167 m depth, above the screened interval. At the end of purging, the water coming out of the well was clear and relatively free of sediment. During development and after

deployment of the casing packer, the heat cable (energized to keep the well water from freezing) melted the nylon lines that were part of the DVP pump system used to remove water from the well annulus above the casing packer. Consequently, the water between the casing and the monitoring well pipe could not be removed. The inside packer was therefore not inflated after sampling to allow groundwater to rise into the well pipe and equalize the freezing pressure on both sides of the well pipe wall. As a consequence, the follow up monitoring rounds will require activation of the heater cables to melt the ice in the well prior to sampling.

Well MW08-03

For the installation in monitoring well MW08-03 the lead tubings for the permanent DVP pump were changed from nylon to stainless steel. This design change allowed the evacuation of the water from the well annulus above the main casing packer as planned with the heat trace cables being energized. After this task was completed the well was purged to remove materials that were introduced into the well during drilling and to induce the flow of fresh groundwater from the rock formation. Approximately 13 monitoring well volumes (2180 litres) were purged from this monitoring well over 3 days period prior to sampling. The sample pump intake point was positioned at 167 meter depth, above the screened interval. At the end of purging the water coming out of the well was clear, relatively free of sediment, and the monitoring equipment remained in good condition.

3.0 GROUNDWATER SAMPLING

3.1 Groundwater Sampling Procedure

Groundwater samples were collected immediately after well purging using a Solinst® stainless steel Double Valve Pump (DVP) and ¼" Low Density Polyethylene (LDPE) tubing. Compressed nitrogen gas was used to induce the groundwater movement through the sampler unit. Nitrogen gas is stable and avoids alteration of groundwater chemistry during sampling. Water sampling was carried out according to the guideline procedures described by the USEPA (2002). Indicator parameters (conductivity, pH, alkalinity and dissolved oxygen) were measured during the well development, purging, and sampling. Readings were recorded on groundwater sampling data sheets (Appendix I and Tables 2 and 3). Groundwater samples were collected in clean, laboratory-supplied containers. Where required, preservatives were added to the sample bottles prior to sample collection, to minimize chemical alteration during transport to the laboratory. Samples analyzed for dissolved metals were filtered through a 45 μm inline filter and preserved on-site prior to shipping.

3.2 Laboratory Analyses

All groundwater samples were stored in coolers with ice packs and sealed before being shipped to Maxxam Analytics of Montreal, Québec for chemical analyses. Groundwater was analyzed for parameters stated in the Water License. Samples were collected under Chain-of-Custody (COC) procedures for shipping to Maxxam. A copy of the COC form and certificate of analysis are included in Appendix I.

3.3 Comparative Guidelines

Groundwater quality data is compared to Third Portage Effluent Discharge Limits stated in the Meadowbank Water License for illustrative purposes only. Constituent concentrations are defined for total rather than dissolved phases in the License.

3.4 Quality Assurance/Quality Control

Guideline procedures provided by the USEPA (2002) were followed to ensure that the samples collected from the wells were representative of water flowing through the targeted rock formations. These procedures included the following:

- measurement of field parameters at selected intervals until stable readings (within 10% of each other) were acquired;
- minimizing the exposure of the sampled water to the atmosphere;

- using compressed, inert gas (nitrogen) to evacuate samples;
- conducting in-situ measurements of sensitive chemical parameters (pH, conductivity, dissolved oxygen, alkalinity, where applicable);
- keeping the samples refrigerated on ice from the time of collection until shipment to the laboratory; and
- shipping the samples to the laboratory in temperature-regulated coolers within the specified sample holding times.

Upon collection of each sample, standard chain of custody procedures were adhered to.

A duplicate (FD) sample was collected for each groundwater sample and one sample blank was collected. The relative percent difference (RPD) was calculated for the pair of FD samples, and evaluated for reproducibility or results. For results greater than or equal to five times the method detection limit (MDL), a water quality objective of 20% RPD or less was established as per USEPA recommended methods (USEPA, 1994). Where one or both results of the duplicate pair were less than 5 times the MDL, a margin of +/- MDL was considered acceptable.

4.0 RESULTS

4.1 Groundwater Chemistry

The results of the groundwater analyses collected during the 2003, 2004, 2006, 2007 and 2008 sampling events are presented in Tables 3 and 4 at the end of the text.

Since salinity of groundwater was of interest in predictive modelling of the quality of open pit inflows during operation, the concentration of salinity constituents measured are presented in Table 5.

Table 5: Concentration of Constituents that relate to Groundwater Salinity

Monitoring Well	Lithology	sample year	TDS** (mg/L)	Conductivity (uS/cm)	Chloride (mg/L)
MW03-01	UM	2003	793	1855	626
		2004	1335	2900	845
		2006	315*	460*	81*
		2007	389	588	126
		2008[5]	1100	3200	950
MW08-02	IV	2008	399	808**	160
MW08-03	IV	2008	215	490	3.3

Note: 1. * average value; **field measurement.

Well MW03-01

One groundwater sample and one duplicate were collected in September 2008. Table 5 shows that the concentration of salinity components in 2008 is higher than in 2007 and 2006 but of similar range than 2004 and 2003 values. Dissolved metals and metalloid concentrations at this location in 2008 do not differ appreciably from those reported in 2004 but are slightly higher than reported in 2006 and 2007, with some exceptions. In 2008, the sulphate concentration (6.0 mg/L) is the lowest concentration measured to date.

Wells MW08-02 and MW08-03

Groundwater was sampled from monitoring wells MW08-02 and MW08-03 in September 2008. Results are compared to each other and to those obtained to date at MW03-01 for illustrative purposes. Salinity components

at these locations are within the range of values measured at MW03-01 except for chloride which is much lower at MW08-03 in 2008. Sulphate is also lower in MW08-02 groundwater. Most parameter concentrations met Portage Effluent criteria at both locations, except for turbidity, TSS, and dissolved nitrate at MW08-03.

4.2 Quality Assurance/Quality Control

All groundwater samples were collected in duplicate in 2008. Both the sample and duplicate were analyzed for the same suite of parameters. Table 6 presents the Relative Percent Difference (RPD) calculated from each duplicated result, per the following:

$$RPD = \frac{\text{absolute [difference (concentration of a given parameter)]}}{\text{[average (concentration of a given parameter)]}} \times 100$$

The large majority of analytical results have adequate repeatability, as the RPD values are generally less than the target level of 20% with few exceptions of higher RPD, including copper at all 3 wells; lead at MW08-03, sulphate at MW08-02; and alkalinity, turbidity, TSS and aluminum at MW03-01.

5.0 CONCLUSION

The 2008 groundwater monitoring program was conducted between mid-August and mid-September 2008. The start and duration of the program was dictated by the mine construction activities, the delivery of the monitoring well equipment to the project site and the demobilization of the dedicated drilling equipment out of the site in mid September (shipping requirements). This time period allowed for the successful installation and sampling of two replacement wells in 2008.

The turbidity and suspended solids present in groundwater at well MW08-03 most likely result from drilling where particles may have been introduced into the groundwater during sampling rather than being representative of formation water. The source of nitrates in groundwater from this well is not known. On site contamination is not considered likely since no nitrogen products were used during the drilling, development nor sampling.

The new design of the replacement monitoring wells is more robust, and includes redundant systems to minimize frost impact on the instrumentation. However, the actual performance of the wells under winter conditions is unknown at this time. Given this, together with the following:

- Modifications must be made to the current design to accommodate the new location;
- The high cost of the installation; and,
- Tailings will not be placed in the tailings basin in 2009 (therefore, no changes to baseline chemistry are anticipated in 2009).

It is therefore recommended that consideration be given to postponing the replacement of the well underneath the tailing basin until the performance of the individual components of the newly installed wells are evaluated to allow modifications to the design, if necessary and to evaluate if changes to the well design required by the new location are appropriate. The tailings basin well would be replaced in 2010.

GOLDER ASSOCIATES LTD.

REGISTERED PROFESSIONAL GEOLOGIST
V.J. BERTRAND
LICENSEE
14/01/09
NWT/NU

pp Denis Vachon, B.Sc.
Mine Water Management Group

Valérie Bertrand, M.A.Sc., P.Geol. (NU, NWT)
Associate, Geochemist

DV/VB/lw

Attachments: Tables 3, 4 and 6
Figures 1, 2; and 3
Appendix I

n:\active\2008\0_mining\08-1428-0008 meadowbank 2008\reports\2008 gwter quality\final\doc 801_011409 tm 2008 gwtr quality monitoring - ver 0.doc

REFERENCES

Agnico-Eagle Mines Ltd. 2007. Groundwater Monitoring at the Meadowbank Project Site. Letter submitted to Nunavut Impact Review Board. August 17, 2007.

Canadian Council of Ministers of the Environment (CCME), 2006. Canadian Environmental Quality Guidelines for the Protection of Freshwater Aquatic Life.

Golder Associates Ltd. 2007. Report on Water Quality Predictions, Meadowbank Gold Project, Nunavut. August 2007.

Golder Associates Ltd., 2006. Meadowbank Gold Project – 2006 Baseline Groundwater Quality. December 4, 2006.

Golder Associates Ltd., 2005. Report on Mine Site Water Quality Predictions, Meadowbank Gold Project, Nunavut. October 2005.

Golder Associates Ltd., 2004a. Meadowbank Baseline Groundwater Quality. April 26, 2004.

Golder Associates Ltd., 2004b. Meadowbank 2004 Baseline Groundwater Quality. October 19, 2004.

USEPA, 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, DC, February 1994.

USEPA, 2002. Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers. Ground water Forum Issue Paper. EPA 542-S-02-001

Table 3
Groundwater Quality Results
Agnico-Eagle Mines Ltd
Meadowbank Division

			Ultramafic Rock							Iron Formation Rock			Intermediate Volcanic Rock		Intermediate Volcanic		Field Blank 2008	Method Detection Limit
			Goose Island							Goose Island			North Portage		Second Portage Arm (tailings disposal area)			
			MW03-01							MW03-02		MW06-06	MW03-03		MW03-04	MW06-07		
Laboratory sample number		units	9755-2	9044-01	12393-01	12395-01	8581-01	F66745	F68109	9756-03	9043-01	12567-01	9756-02	9045-01	9756-01	12568-01	F66751	
Sampling date			07-Sep-03	Aug-7-04	Aug-8-06	Aug-14-06	Aug-17-07	15-Sep-08	15-Sep-08	28-Sep-03	Jul 31-04	24-Aug-06	25-Sep-03	Aug-9-04	18-Sep-03	30-Aug-06	39706	
QA/QC									FD									
FIELD-MEASURED PARAMETERS																		
Temperature		°C	11.7	8	7.7	9.9	6.7	1.0	-	3.5	12	12.4	2.2	10.3	3.3	5	-	-
pH		s.u.	7.36	8.03	7.93	7.58	7.43	6.70	-	7.68	7.19	7.59	8.63	7.77	7.67	8	-	-
Conductivity		uS/cm	1855	2500	382	538	776	2100	-	660	1104	1306	350	627	370 - 450	440	-	-
Dissolved Oxygen		mg/L	2.0	2.0	8.6	4.8	3.8	-	-	0.8	7.0	1.2	1.0	1.5	-	8.0	-	-
Total Dissolved Solids	TDS	mg/L	793	1335	193	405	389	1100	-	-	-	650	-	-	-	220	-	-
LABORATORY PARAMETERS																		
pH		s.u.	7.24	7.46	-	7.36	6.78	7.9	7.8	7.04	7.25	7.33	7.83	7.96	-	7.54	-	-
Conductivity		uS/cm	-	2900	-	634	588	3200	3100	-	1270	1210	-	640		281	-	0.001
Total Alkalinity	CaCO3	mg/L	30	27.3	-	51	36.7	24	33	103	41.6	49.9	93.8	133	-	89	-	1
Dissolved Sulphate	SO4	mg/L	15.6	15.9	42.8	51.1	46.5	6.0	5.7	263	38.4	65.1	26.6	6.2	63.8	4	-	0.5
Hardness (Total)		mg/L	318	391	82	148	116	310	320	316	313	326	144	216	-	124	-	1
Total Suspended Solids	TSS	mg/L	-	13	-	4	2	5	7	-	96	16	-	1	-	11	-	1
Turbidity		NTU	-	-	-	-	-	3.3	4.1	-	-	-	-	-	-	-	-	0.1
Dissolved Metals																		
Aluminum	Al	mg/L	0.051	0.005	0.3	< 0.005	< 0.005	0.0013	0.0068	0.47	0.019	<0.005	0.018	0.006	0.72	0.04	<0.001	0.005
Arsenic	As	mg/L	<0.001	0.0038	0.0005	0.003	< 0.001	<0.0001	<0.0001	0.002	0.002	0.002	0.004	0.013	0.007	< 0.001	<0.001	0.0010
Barium	Ba	mg/L	0.12	0.3	0.025	0.051	0.048	0.25	0.25	0.023	0.086	0.018	0.018	0.048	0.03	0.086	0.0025	0.001
Cadmium	Cd	mg/L	0.00007	<0.00004	<0.00004	< 0.0002	< 0.0002	<0.0002	<0.0002	<0.0002	0.00016	<0.0002	<0.0002	0.00004	<0.0002	< 0.0002	<0.0002	0.0002
Calcium	Ca	mg/L	65.6	94.2	17.6	33.7	24	73	75	63.1	73.5	87.1	26.3	47.1	15	31	-	0.05
Copper	Cu	mg/L	0.002	0.0004	0.0016	< 0.001	< 0.001	0.0015	0.0023	0.004	0.0014	0.001	<0.001	0.0002	0.006	0.005	0.094	0.001
Iron	Fe	mg/L	<0.05	0.08	0.84	0.2	< 0.05	<0.03	<0.03	1.91	0.05	<0.05	<0.05	< 0.01	0.55	< 0.05	<0.03	0.05
Lead	Pb	mg/L	<0.001	<0.0002	0.0014	< 0.001	< 0.001	0.00021	0.00020	0.001	< 0.0002	<0.001	<0.001	< 0.0002	0.006	< 0.001	0.0062	0.001
Magnesium	Mg	mg/L	23.4	35.1	7.76	16.1	11.4	31	32	32.1	30.2	24.0	17.1	22.4	3.81	6.83	-	0.05
Manganese	Mn	mg/L	0.06	0.381	0.286	0.980	0.700	0.43	0.44	0.96	0.492	0.006	0.1	0.130	0.049	0.032	-	0.001
Mercury	Hg	mg/L	-	<0.00002	<0.00002	< 0.00002	< 0.00002	<0.00001	<0.00001	<0.00002	< 0.02	<0.00002	<0.00002	< 0.02	<0.00002	< 0.00002	-	0.00002
Molybdenum	Mo	mg/L	<0.0005	0.0076	0.012	0.013	0.0079	0.0082	0.0078	0.018	0.014	0.0081	0.052	0.09	0.024	0.004	<0.0005	0.001
Nickel	Ni	mg/L	0.006	0.0026	0.0019	< 0.001	0.001	0.0015	0.0015	0.007	0.012	0.005	0.003	0.0018	0.003	0.002	0.0029	0.001
Potassium	K	mg/L	5.71	8.56	3.27	6.1	4.3	8.4	8.5	5.36	7.43	6.6	3.33	2.64	5.44	2.3	0.33	0.01
Selenium	Se	mg/L	<0.001	<0.0002	<0.0002	< 0.001	< 0.001	<0.001	<0.001	<0.001	< 0.0002	<0.001	<0.001	< 0.0002	<0.001	< 0.001	<0.001	0.001
Silver	Ag	mg/L	<0.0001	<0.00005	<0.00005	< 0.00025	< 0.00025	<0.0001	<0.0001	<0.0001	< 0.00005	<0.00025	<0.0001	< 0.00005	<0.0001	< 0.00025	0.0001	0.0001
Thallium	Tl	mg/L	<0.0001	<0.00002	<0.00002	< 0.0001	< 0.0001	<0.002	<0.002	<0.0001	< 0.00002	<0.0001	<0.0001	< 0.00002	<0.0001	< 0.0001	0.002	0.0001
Zinc	Zn	mg/L	0.006	0.002	0.005	< 0.005	< 0.005	0.017	0.014	0.012	0.029	<0.005	<0.005	0.004	0.022	< 0.005	-	0.005
Dissolved Anions																		
Dissolved Fluoride	F	mg/L	< 0.05	0.12	0.16	0.16	0.18	<0.1	<0.1	0.35	0.6	0.55	0.46	0.38	0.34	0.2	-	0.05
Dissolved Chloride	Cl	mg/L	626	845	34.7	128	126	950	980	5.4	251	304	50.4	121	13.4	33.3	-	0.2
Nutrients																		
Total Nitrogen	N	mg/L					< 0.2	0.53	0.49								-	<0.02
Nitrate and Nitrite	NO3 + NO2	mg/L	< 0.01	< 0.01	< 0.01	-	-	<0.2	<0.4	< 0.05	< 0.05	-	0.15	< 0.05	< 0.05	-	-	0.01 / 0.05
Nitrate	NO3	mg/L	-	< 0.05	< 0.05	< 0.1	< 0.01	<0.02	<0.02	< 0.05	< 0.05	< 0.25	0.15	< 0.05	< 0.05	0.12	-	0.05
Ammonia Nitrogen	N	mg/L	0.38	-	0.21	-	0.14	-	-	0.19	0.07	-	0.08	-	-	-	-	0.01

Notes: Concentrations are mg/L unless otherwise noted.
FD = Field Duplicate

Table 4
Groundwater Quality Results
Agnico-Eagle Mines Ltd
Meadowbank Division

		Intermediate Volcanic				Method Detection Limit
		Second Portage Lake Talik				
		MW08-02		MW08-03		
Laboratory sample number		F59984	F59995	F66637	F68088	
Sampling date		08/09/2008	08/09/2008	14/09/2008	14/09/2008	
QA/QC			FD		FD	
FIELD-MEASURED PARAMETERS						
Temperature (oC)		7.3	-	5.0	-	
pH (s.u.)		7.1	-	7.1	-	
Conductivity (uS/cm)		808	-	366	-	
Dissolved Oxygen (mg/L)		9.9	-	10.3	-	
TDS (mg/L)		399	-	215	-	
LABORATORY PARAMETERS						
TDS (mg/L)		500	520	-	-	-
pH (s.u.)		8.0	8.1	8.1	8.2	-
Conductivity (uS/cm)		-	-	490	480	0.001
Total Alkalinity CaCO3 (mg/L)		76	76	60	59	2
Dissolved Sulphate SO4 (mg/L)		2.5	2.0	56	51	0.2
Hardness (Total) CaCO3 (mg/L)		240	230	180	180	1
Total Suspended Solids (mg/L)		-	-	56	54	2
Turbidity (NTU)		2.4	2.4	70	69	0.1
Dissolved Metals (mg/L)						
Aluminum	Al	0.0046	0.00487	0.0046	0.0041	0.001
Arsenic	As	0.0035	0.0035	<0.001	<0.001	0.001
Barium	Ba	0.045	0.043	0.033	0.034	0.002
Cadmium	Cd	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Calcium	Ca	50	48	46	46	1
Copper	Cu	0.00056	0.0011	0.003	0.0039	0.0005
Iron	Fe	<0.03	<0.03	<0.03	<0.03	0.03
Lead	Pb	<0.0001	0.00027	0.00056	0.00027	0.0001
Magnesium	Mg	27	27	17	16	1
Manganese	Mn	0.030	0.031	0.32	0.32	0.0004
Mercury	Hg	<0.00001	<0.00001	<0.00001	<0.00001	0.00001
Molybdenum	Mo	0.026	0.025	0.14	0.14	0.0005
Nickel	Ni	0.019	0.019	<0.001	0.0017	0.001
Potassium	K	1.8	1.5	4.4	4.5	0.1
Selenium	Se	<0.001	<0.001	<0.001	<0.001	0.001
Silver	Ag	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Thallium	Tl	<0.002	<0.002	<0.002	<0.002	0.002
Zinc	Zn	0.014	0.014	0.004	0.0035	0.001
Dissolved Anions (mg/L)						
Dissolved Fluoride	F	0.2	0.2	0.3	0.3	0.1
Dissolved Chloride	Cl	160	180	3.3	3.6	0.05
Nutrients (mg/L)						
Nitrate and Nitrite	NO3 + NO2	<0.1	<0.1	27	27	0.4
Dissolved Nitrate	NO3	-	-	26	26	0.4
Nitrite	NO2	<0.1	<0.1	1.1	1.2	0.02
Ammonia Nitrogen	N-NH3	<0.05	0.05	2.0	2.0	0.04

Notes: Concentrations are mg/L unless otherwise noted.
FD = Field duplicate

Table 6
QA/QC of Groundwater Quality Results
Agnico-Eagle Mines Ltd.
Meadowbank Division

		Intermediate Volcanic				Intermediate Volcanic				Ultramafic			
		Second Portage Lake				Second Portage Lake				Goose Island			
		MW08-02				MW08-03				MW03-01			
Laboratory sample number		F59984	F59995	Method		F66637	F68088	Method		F66745	F68109	Method	
Sampling date		08/09/2008	08/09/2008	Detection	RPD	14/09/2008	14/09/2008	Detection	RPD	15/09/2008	15/09/2008	Detection	RPD
QA/QC			FD	Limit			FD	Limit			FD	Limit	
LABORATORY PARAMETERS													
TDS (mg/L)		500	520	10	3.9	-	-	-	-	-	-	-	-
pH (s.u.)		8.0	8.1	-	-	8.1	8.2	-	-	7.9	7.8	-	-
Conductivity (uS/cm)		-	-	-	-	0.49	0.48	0.001	2	3.2	3.1	0.001	3
Total Alkalinity CaCO3 (mg/L)		76	76	2	0	60	59	2	2	24	33	2	32
Bicarbonate Alkalinity HCO3 (mg/L)		76	76	2	0	-	-	-	-	-	-	-	-
Carbonate Alkalinity CO3 (mg/L)		<2	<2	2		-	-	-	-	-	-	-	-
Dissolved Sulphate SO4 (mg/L)		2.5	2.0	0.1	22	56	51	0.2/0.5	9	6.0	5.7	0.1	5
Hardness (Total) CaCO3 (mg/L)		240	230	1	4	180	180	1	0	310	320	1	3
Turbidity (NTU)		2.4	2.4	0.1	0	70	69	0.1	1	3.3	4.1	0.1	22
Total Suspended Solids (mg/L)		-	-	-	-	56	54	2	4	5	7	2	33
Total Metals (mg/L)													
Calcium	Ca	50	48	1	4	46	46	1	0	73	75	1	3
Magnesium	Mg	27	27	1	0	17	16	1	6	31	32	1	3
Dissolved Metals (mg/L)													
Aluminum	Al	0.0046	0.00487	0.001	6	0.0046	0.0041	0.001	11	0.0013	0.0068	0.001	136
Arsenic	As	0.0035	0.0035	0.001	0	<0.001	<0.001	0.001	-	<0.0001	<0.000	0.001	-
Barium	Ba	0.045	0.043	0.002	5	0.033	0.034	0.002	3	0.25	0.25	0.002	0
Cadmium	Cd	<0.0002	<0.0002	0.0002	-	<0.0002	<0.0002	0.0002	-	<0.0002	<0.0002	0.0002	-
Copper	Cu	0.00056	0.0011	0.0005	65	0.003	0.0039	0.0005	26	0.0015	0.0023	0.0005	42
Iron	Fe	<0.03	<0.03	0.03	-	<0.03	<0.03	0.03	-	<0.03	<0.03	0.03	-
Lead	Pb	<0.0001	0.00027	0.0001	-	0.00056	0.00027	0.0001	70	0.00021	0.0002	0.0001	5
Manganese	Mn	0.030	0.031	0.0004	3	0.32	0.32	0.0004	0	0.43	0.44	0.0004	2
Mercury	Hg	<0.00001	<0.00001	0.00001	-	<0.00001	<0.00001	0.00001	-	<0.00001	<0.00001	0.00001	-
Molybdenum	Mo	0.026	0.025	0.0005	4	0.14	0.14	0.0005	0	0.0082	0.0078	0.0005	5
Nickel	Ni	0.019	0.019	0.001	0	<0.001	0.0017	0.001	-	0.0015	0.0015	0.001	0
Potassium	K	1.8	1.5	0.1	18	4.4	4.5	0.1	2	8.4	8.5	0.1	1
Selenium	Se	<0.001	<0.001	0.001	-	<0.001	<0.001	0.001	-	<0.001	<0.001	0.001	-
Silver	Ag	<0.0001	<0.0001	0.0001	-	<0.0001	<0.0001	0.0001	-	<0.0001	<0.0001	0.0001	-
Thallium	Tl	<0.002	<0.002	0.002	-	<0.002	<0.002	0.002	-	<0.002	<0.002	0.002	-
Zinc	Zn	0.014	0.014	0.001	0	0.0040	0.0035	0.001	13	0.017	0.014	0.001	19
Dissolved Anions (mg/L)													
Dissolved Fluoride[4]	F	0.2	0.2	0.1	0	0.3	0.3	0.1	0	<0.1	<0.1	0.1	-
Dissolved Chloride	Cl	160	180	1	12	3.3	3.6	0.05	9	950	980	5/10	3
Nutrients (mg/L)													
Total Nitrogen	N	-	-	-	-	-	-	-	-	0.53	0.49	0.02	8
Nitrate and Nitrite	NO3 + NO2	<0.1	<0.1	0.1	-	27	27	0.4	0	<0.2	<0.4	0.2/0.4	-
Dissolved Nitrate[5]	NO3	-	-	-	-	26	26	0.02	0	<0.02	<0.02	0.02	-
Nitrite	NO2	<0.1	<0.1	0.1	-	1.1	1.2	0.02	9	<0.2	<0.4	0.2/0.4	-
Ammonia Nitrogen	N-NH3	<0.05	0.05	0.05	-	2.0	2.0	0.02	0	-	-		

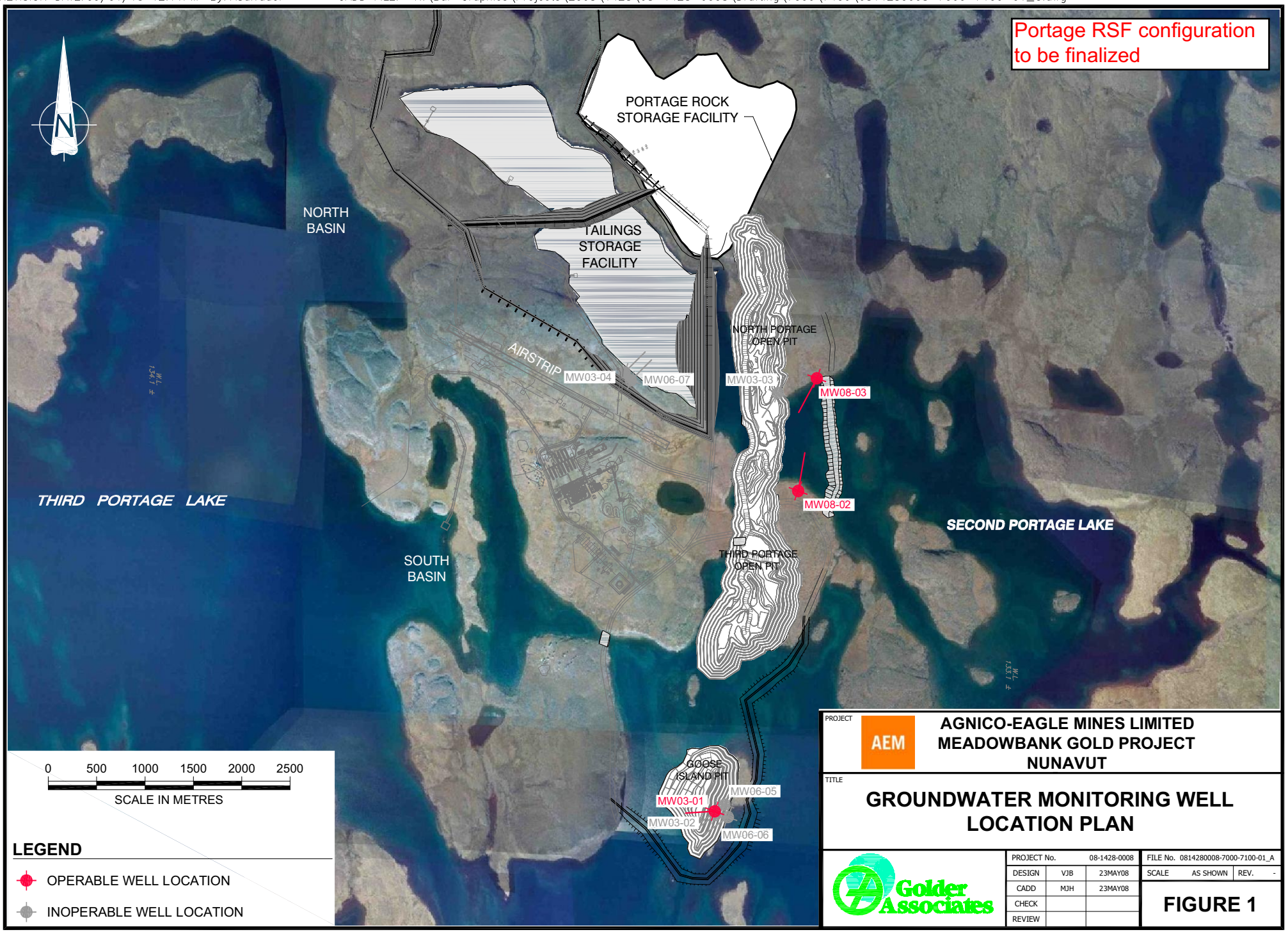
Notes:

RPD value exceeds 20%

FD Field duplicate

RPD relative percent difference

REVISION DATE: 09/01/15 12:11PM By: ASalvador CADD FILE: N:\Bur-Graphics\Projects\2008\1428\08-1428-0008\Drafting\7000\7400\0814280008-7000-7100-01_C.dwg



PROJECT

AEM

AGNICO-EAGLE MINES LIMITED
MEADOWBANK GOLD PROJECT
NUNAVUT

TITLE

GROUNDWATER MONITORING WELL LOCATION PLAN

Golder Associates

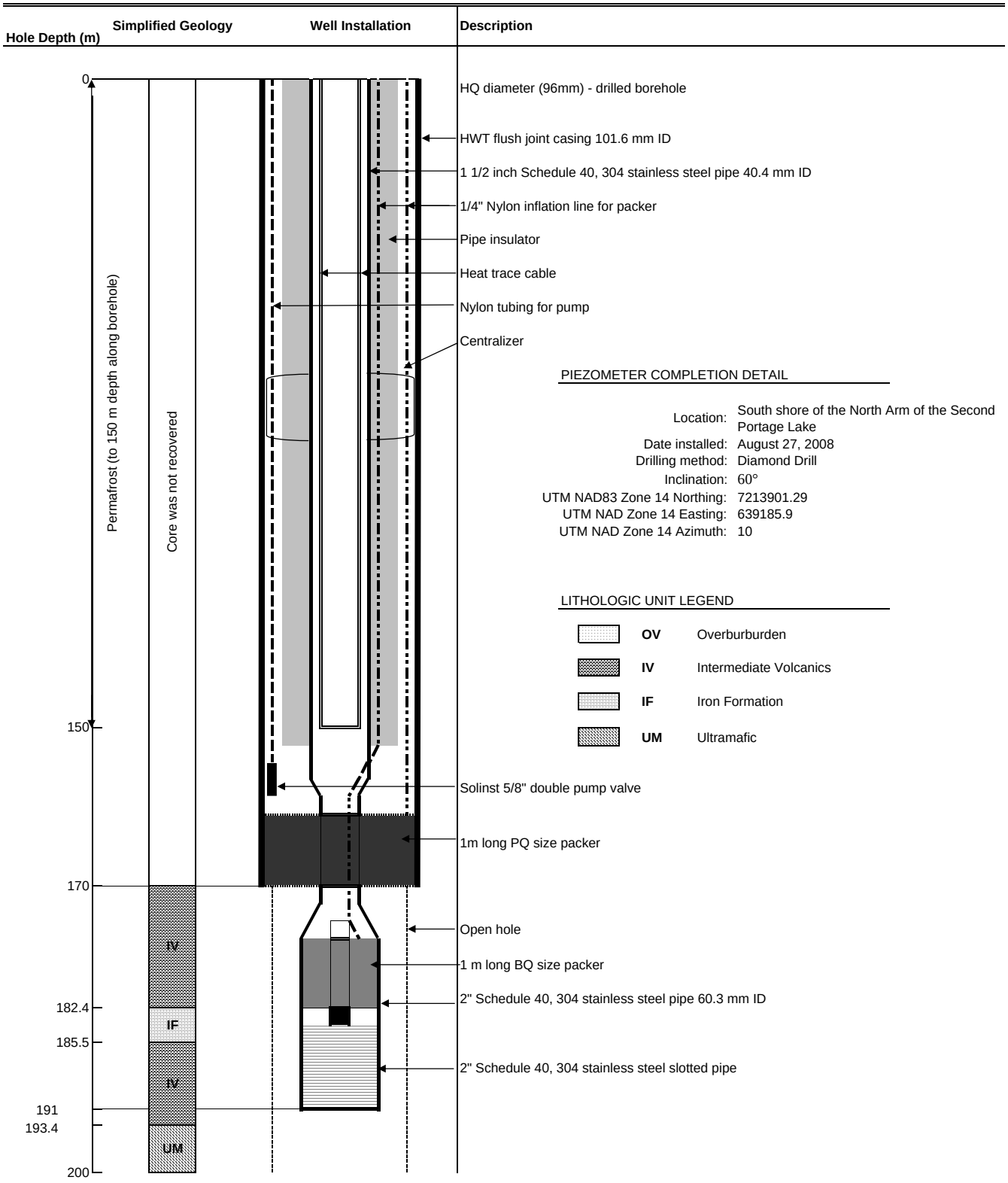
PROJECT No.		08-1428-0008
DESIGN	VJB	23MAY08
CADD	MJH	23MAY08
CHECK		
REVIEW		

FILE No. 0814280008-7000-7100-01_A
SCALE AS SHOWN REV. -

FIGURE 1

Figure 2
MW08-02 - Schematic Borehole Log and Monitoring Well Instrumentation
Agnico-Eagle Mines Ltd
Meadowbank Division

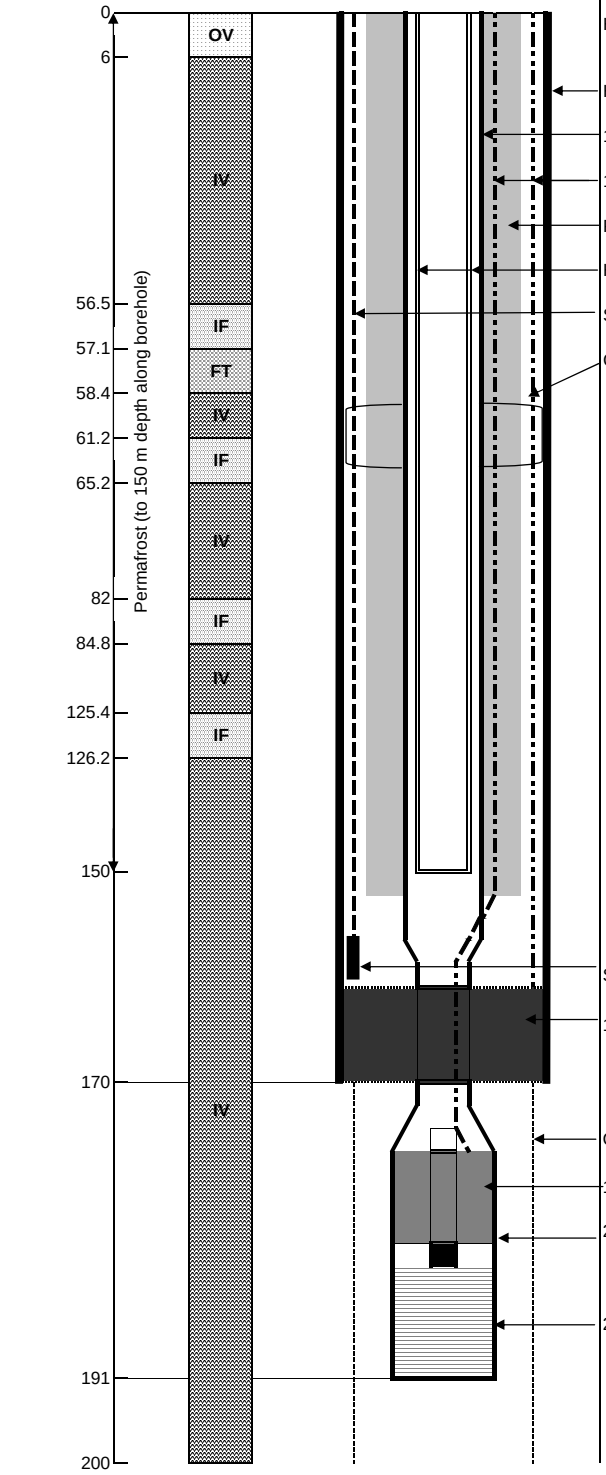
MONITORING WELL ID MW08-02



Not to scale

Figure 3
MW08-03 - Schematic Borehole Log and Monitoring Well Instrumentation
Agnico-Eagle Mines Ltd
Meadowbank Division

MONITORING WELL ID MW08-03



PIEZOMETER COMPLETION DETAIL

Location:	North shore of the North Arm of the Second Portage Lake
Date installed:	September 9, 2008
Drilling method:	Diamond Drill
Inclination:	60°
UTM NAD83 Zone 14 Northing:	7214483.46
UTM NAD Zone 14 Easting:	639282.24
UTM NAD Zone 14 Azimuth:	200

LITHOLOGIC UNIT LEGEND

OV	Overburburden
IV	Intermediate Volcanics
IF	Iron Formation
UM	Ultramafic
FT	Felsic Tuff

Not to scale

TECHNICAL MEMORANDUM

APPENDIX 1

FIELD SAMPLING SHEETS

LABORATORY ANALYTICAL REPORTS

CONFIRMATION-RECEIPT OF SAMPLES FOR ANALYSIS

Maxxam Job # A841555

Client Project #: 08-1428-0008
Quote #: A80677

4 Samples

Samples Received 2008/09/18
Client Confirmation 2008/09/18
Expected Report Delivery 2008/09/25 17:00

Report will be sent to:

Valérie Bertrand
GOLDER ASSOCIATES
32 Steacie Dr.
Kanata
K2K 2A9
Ph 613-592-9600
Fax 613-592-9601
vbertrand@golder.com

Invoice will be sent to:

Ryan VanEngen
Agnico-Eagle Mines Ltd.
Kivalliq district
Baker Lake
X0C 0A0
Ph 8677934610-6728
rVanengen@agnico-eagle.com

We have received the following samples:

MW-08-03 Sampled 2008/09/14 COC# E762240 Matrix: GROUND WATER

Maxxam #: F66637

Ammonia Nitrogen	
*Anions	
Conductivity	
Fluoride	
Hardness	
Mercury by Cold Vapour AA	
*Metals by ICP-MS	
*Nitrate and/or Nitrite	Holding time already past.
pH	Holding time already past.
Total Alkalinity (pH end point 4.5)	
Total Suspended Solids	
Turbidity	

MW-03-01 Sampled 2008/09/15

Maxxam #: F66745

Ammonia Nitrogen	
*Anions	
Conductivity	
Fluoride	
Hardness	
Mercury by Cold Vapour AA	
*Metals by ICP-MS	
*Nitrate and/or Nitrite	Holding time already past.
pH	Holding time already past.
Total Alkalinity (pH end point 4.5)	
Total Suspended Solids	
Turbidity	

MW-08-02 Sampled 2008/09/06

Maxxam #: F66747

Sample rec'd - no analysis requested

BLANC TERRAIN Sampled 2008/09/15

Maxxam #: F66751

*Metals by ICP-MS

Comments:

- An additionnal fee of 20$ per sample could be charged for disposal of Hazardous samples. Client will be contacted before such hazardous charges are applied, and will be given option to pick up samples.
- Unless special storage arrangements are made, all samples will be discarded 30 days after their reception.
- Non-regular samples are flagged as (C) Composite by lab and (L) for Leachate.
- For revisions please contact your Project Management team at ph (514) 448-9001 or via email at ServiceTechniqueMontreal@maxxamanalytics.com .
- For revisions please contact your Maxxam Project Management team at Ph (514) 448-9001 or Fax (514) 448-9199. Your Project Manager is: LEILA SABOURI

Maxxam Job # A841555 PARAMETERS FOR ANALYSIS REQUESTED

The values listed below are RDL's and not results. Report Detection Limit (RDL) may be elevated if there are matrix interferences or limited sample amounts.

Maxxam # F66637, Sample IDN: **MW-08-03**
Maxxam # F66745, Sample IDN: **MW-03-01**

TOTAL ALKALINITY (PH END POINT 4.5)			
Alkalinity Total (as CaCO3) pH 4.5	1 mg/L		
ANIONS			
Chloride (Cl)	0.05 mg/L	Sulfates (SO4)	0.1 mg/L
CONDUCTIVITY			
Conductivity	0.001 mmhos/cm		
FLUORIDE			
Fluoride (F)	0.1 mg/L		
HARDNESS			
Magnesium (Mg)	1 mg/L	Total Hardness (CaCO3)	1 mg/L
Calcium (Ca)	1 mg/L		
MERCURY BY COLD VAPOUR AA			
Mercury (Hg)			
TOTAL SUSPENDED SOLIDS			
Total suspended solids (TSS)	2 mg/L		

Maxxam # F66637, Sample IDN: **MW-08-03**
Maxxam # F66745, Sample IDN: **MW-03-01**
Maxxam # F66751, Sample IDN: **BLANC TERRAIN**

METALS BY ICP-MS			
Aluminum (Al)	1 ug/L	Copper (Cu)	0.5 ug/L
+Iron (Fe)	30 ug/L	+Lead (Pb)	0.1 ug/L
Manganese (Mn)	0.4 ug/L	Molybdenum (Mo)	0.5 ug/L
Nickel (Ni)	1 ug/L	+Potassium (K)	100 ug/L
+Selenium (Se)	1 ug/L	Silver (Ag)	0.1 ug/L
+Arsenic (As)	1 ug/L	Thallium (Tl)	2 ug/L
Zinc (Zn)	1 ug/L	Barium (Ba)	2 ug/L
Cadmium (Cd)	0.2 ug/L		

Maxxam # F66637, Sample IDN: **MW-08-03**
Maxxam # F66745, Sample IDN: **MW-03-01**

AMMONIA NITROGEN			
Nitrogen ammonia (N-NH3)	0.02 mg/L		
NITRATE AND/OR NITRITE			
Nitrates (N-NO3-)	0.02 mg/L	Nitrites (N-NO2-)	0.02 mg/L
+Nitrate (N) and Nitrite(N)	0.02 mg/L		
PH			
pH			
TURBIDITY			
Turbidity	0.1 NTU		

Sample Integrity Form

Invoice To:
Agnico-Eagle Mines Ltd.
ATTN: Ryan VanEngen
Kivalliq district
Baker Lake, NU
CANADA X0C 0A0
Client Contact:
Valérie Bertrand

Report To:
GOLDER ASSOCIATES
OTTAWA
ATTN: Valérie Bertrand
32 Steacie Dr.
Kanata, ON
Canada K2K 2A9

Maxxam Job #:	A841555
Date Received:	2008/09/18
Your C.O.C. #:	E762240
Your Project #:	08-1428-0008
Maxxam Project Manager:	LEILA SABOURI
Quote #:	A80677

[x] Samples received after hold time exceeded

Report Comments

Received Date: 2008/09/18 **(Time):** 15:00 **By:** _____

Inspected Date: 2008/09/18 **(Time):** _____ **By:** _____

SIF Created Date: 2008/09/19 **(Time):** 11:10 **By:** GR

Maxxam Analytique Inc

☐ 889 Montée de Liesse, Saint-Laurent (Québec) H4T 1P5 — Téléphone : (514) 448-9001 — Télécopieur : (514) 448-9199 — Ligne sans frais : 1-877-4MA-XXAM (462-9926)
☐ 2690 Avenue Dalton, Sainte-Foy (Québec) G1P 3S4 — Téléphone : (418) 658-5784 — Télécopieur : (418) 658-6594
☐ 3780 Rue Panet, Saguenay (Québec) G7X 0E5 — Téléphone : (418) 542-8071 — Télécopieur : (418) 542-8692 — Ligne sans frais : 1-866-737-8071

www.maxxamanalytics.com

Bordereau de transmission d'échantillons

Page 1 de 1

E- 762240

Info. Facturation	Info. Rapport (si différent de Facturation)
Compagnie : Golder	Compagnie :
Adresse : ~~[illegible]~~ 32 ~~[illegible]~~ Stacie drive Kanata	Adresse :
Attention de : Valérie Bertrand	Attention de :
Téléphone : 613-592-9600	Téléphone :
Telecopieur : 613-592-9601	Telecopieur :
Échantillonneur : Real C	Échantillonneur :

No. de commande : ______ Projet / Site : ______

No. de cotation : ______ No. de projet : 08-1428-0008

Je déclare par la présente comprendre et accepter les conditions et modalités de Maxxam telles que décrites au verso du présent formulaire.

Analyses (colonnes) : 1 = HP (C10-C50); 2 = H & G Min. ☐ H & G Tot. ☐; 3 = COV (EPA 624) ☐ BTEX ☐ HAM ☐; 4 = Phénols (GC/MS) ☐ Phénols (Color.) ☐; 5 = HAP; 6 = BPC (Congénères) (GC-MS); 7 = Métaux Lourds (Cd, Cr, Cu, Ni, Pb, Zn); 8 = Métaux (ICP politique - 13 élé.-sol** ☐ 16 élé. eau*** ☐); 9 = Mercure ☒ Sélénium-sol ☐ Autre ☐ (Principaux cations: calcium, potassium, magnesium); 10 = F ☐ Cl ☐ SO4 ☐ NO2 ☐ NO3 ☐ NO2 + NO3 ☐; 11 = NTK ☐ NH3 ☐ P-Tot. ☐; 12 = pH ☒ Conductivité ☒ MES ☒; 13 = Sulfure (SH2) ☐ Soufre (S-Tot.) ☐; 14 = CN-Tot. ☐ CN-Ox. ☐ CN Libre ☐; 15 = DBO5 ☐ DCO ☐ Turbidité ☐ COT ☐; 16 = RDS ☐ RMD ☐; 17 = CUM ART. 10 ☐ ART. 11 ☐; 18 = Eau Potable : ORG. ☐ INOR. ☐ THM ☐; 19 = COLIF (Fec.) ☐ COLIF (Tot.) ☐ BHAA ☐; 20 = Explosif EPA 8095 ☐ EPA 8330 ☐; 21 = Autre (spécifier) : alcalinité totale and spec.; 22 = turbidité, dureté; 23 = NH4, Nitrite, Nitrate; 24 = chlorure, fluorure, sulfate

Identification de l'échantillon (point de prélèvement)	Sol	Type d'eau	Autre	Prélèvement (date / heure)	à filtrer	nombre de contenants	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MW-08-03		S		20080914		16								X	X			X									X	X	X	X
MW-08-01		S		20080915		11								X	X			X									X	X	X	X
MW-08-02		S		20080906		15								~~X~~ NON																
Blanc terrain		P		20080915		1								X																

LÉGENDE : ** Métaux 13 éléments (Ag, As, Ba, Cd, Co, Cr, Cu, Sn, Mn, Mo, Ni, Pb, Zn),
*** Métaux 16 éléments (Al, Sb, Ag, As, Ba, Cd, Cr, Co, Cu, Mn, Mo, Ni, Pb, Se, Na, Zn).

Types d'eau : S = Souterraine P = Potable DL = Déchet liquide
Sur = Surface E = Eau usée C = Captage

Normes/Réglement Applicables : ______ **(À remplir)**

Délais : ☐ 24h ☐ 48h ☐ 72h ☒ Régulier ☐ Date : ______

A moins d'être clairement identifié, tout échantillon d'eau reçu chez Maxxam sera considéré comme non-potable et ne sera pas soumis aux exigences du règlement sur la qualité de l'eau potable.

Condition générale à la réception : MW08-02 => standby

Chaîne de responsabilité

Déssaisi par :	Date : 17/9/08	Heure : 15h	Reçu par : [signature]
Déssaisi par :	Date :	Heure :	Reçu par :

Nombre de glacières : ______ Température de réception : 10°, 11°, 11°

Remarques : Metaux voir avec Genevieve Berthiaume Demande de Valérie

Your Project #: 08-1428-0008
Your C.O.C. #: E762240

Attention: Valérie Bertrand
GOLDER ASSOCIATES
OTTAWA
32 Steacie Dr.
Kanata, ON
Canada K2K 2A9

Report Date: 2008/09/30
Report #: NM-250636
This report supersedes all previous reports with the same Maxxam job number

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A841555
Received: 2008/09/18, 15:00

Sample Matrix: GROUND WATER
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sample rec'd - no analysis requested	1	N/A	2008/09/18		
Total Alkalinity (pH end point 4.5)	2	2008/09/19	2008/09/24	STL SOP-00038/6, STL SOP-00057/1	Titrimetric
Total Alkalinity (pH end point 4.5)	2	2008/09/22	2008/09/19	STL SOP-00038/6, STL SOP-00057/1	Titrimetric
Anions	2	2008/09/18	2008/09/19	STL SOP-00014/6	Ion Chromatography
Anions	2	2008/09/19	2008/09/20	STL SOP-00014/6	Ion Chromatography
Conductivity	2	2008/09/19	2008/09/22	STL SOP-00038/6; STL SOP-00012/2	Conductivity
Conductivity	2	2008/09/23	2008/09/23	STL SOP-00038/6; STL SOP-00012/2	Conductivity
Fluoride	4	2008/09/23	2008/09/24	STL SOP-00011/1, STL SOP-00004/3	Ion Spec. Electrode
Hardness	4	2008/09/23	2008/09/24	STL SOP-00006/7	ICP
Mercury by Cold Vapour AA	3	2008/09/23	2008/09/23	STL SOP-00042/6	Cold Vapor AA
Mercury by Cold Vapour AA	1	2008/09/23	2008/09/24	STL SOP-00042/6	Cold Vapor AA
Total Suspended Solids	2	2008/09/19	2008/09/19	STL SOP-00015/3	Gravimetric
Total Suspended Solids	2	2008/09/22	2008/09/22	STL SOP-00015/3	Gravimetric
Metals by ICP-MS	5	2008/09/23	2008/09/25	STL SOP-00006/7	ICP-MS
Ammonia Nitrogen	4	2008/09/22	2008/09/22	STL SOP-00040/3	Colorimetry
Nitrate and/or Nitrite	2	2008/09/18	2008/09/22	STL SOP-00014/6	Ion chromatography
Nitrate and/or Nitrite	2	2008/09/19	2008/09/20	STL SOP-00014/6	Ion chromatography
pH	2	2008/09/18	2008/09/18	STL SOP-00016/6; STL SOP-00038/6,	pH meter
pH	2	2008/09/19	2008/09/19	STL SOP-00016/6; STL SOP-00038/6,	pH meter
Turbidity	2	N/A	2008/09/18	STL SOP-00022/4	Turbidimeter
Turbidity	2	N/A	2008/09/19	STL SOP-00022/4	Turbidimeter

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Your Project #: 08-1428-0008
Your C.O.C. #: E762240

Attention: Valérie Bertrand
GOLDER ASSOCIATES
OTTAWA
32 Steacie Dr.
Kanata, ON
Canada K2K 2A9

Report Date: 2008/09/30
Report #: NM-250636

CERTIFICATE OF ANALYSIS

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

LORENA DI BENEDETTO, B.Sc., Chemist, Project Manager
Email: LORENA.DIBENEDETTO@maxxamanalytics.com
Phone# (514) 448-9001 Ext:272

==========

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. SCC and CAEAL have approved this reporting process and electronic report format.

For Service Group specific validation please refer to the Validation Signature Page

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A841555
Report Date: 2008/09/30

GOLDER ASSOCIATES
Client Project #: 08-1428-0008

Sampler Initials: RC

METALS (GROUND WATER)

Maxxam ID		F66637	F66745	F66751	F68088		
Sampling Date		2008/09/14	2008/09/15	2008/09/15	2008/09/14		
COC Number		E762240	E762240	E762240	E762240		
	Units	**MW-08-03**	**MW-03-01**	**BLANC TERRAIN**	**MW-08-03-DUP**	**RDL**	**QC Batch**
METALS							
Mercury (Hg)	mg/L	<0.00001	<0.00001	N/A	<0.00001	0.00001	551993
Calcium (Ca)	mg/L	46	73	N/A	46	1	552088
Magnesium (Mg)	mg/L	17	31	N/A	16	1	552088
Total Hardness (CaCO3)	mg/L	180	310	N/A	180	1	552088
METALS ICP-MS							
Aluminum (Al)	ug/L	4.6	1.3	<1.0	4.1	1.0	552087
Silver (Ag)	ug/L	<0.10	<0.10	<0.10	<0.10	0.10	552087
Arsenic (As)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	552087
Barium (Ba)	ug/L	33	250	2.5	34	2.0	552087
Cadmium (Cd)	ug/L	<0.20	<0.20	<0.20	<0.20	0.20	552087
Copper (Cu)	ug/L	3.0	1.5	94	3.9	0.50	552087
Manganese (Mn)	ug/L	320	430	0.53	320	0.40	552087
Molybdenum (Mo)	ug/L	140	8.2	<0.50	140	0.50	552087
Nickel (Ni)	ug/L	<1.0	1.5	2.9	1.7	1.0	552087
Zinc (Zn)	ug/L	4.0	17	320	3.5	1.0	552087
Iron (Fe)	ug/L	<30	<30	<30	<30	30	552087
Potassium (K)	ug/L	4400	8400	330	4500	100	552087
Selenium (Se)	ug/L	<1.0	<1.0	<1.0	<1.0	1.0	552087
Lead (Pb)	ug/L	0.56	0.21	6.2	0.27	0.10	552087
Thallium (Tl)	ug/L	<2.0	<2.0	<2.0	<2.0	2.0	552087

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A841555
Report Date: 2008/09/30

GOLDER ASSOCIATES
Client Project #: 08-1428-0008

Sampler Initials: RC

METALS (GROUND WATER)

Maxxam ID		F68109		
Sampling Date		2008/09/15		
COC Number		E762240		
	Units	**MW-03-01-DUP**	**RDL**	**QC Batch**
METALS				
Mercury (Hg)	mg/L	<0.00001	0.00001	551993
Calcium (Ca)	mg/L	75	1	552088
Magnesium (Mg)	mg/L	32	1	552088
Total Hardness (CaCO3)	mg/L	320	1	552088
METALS ICP-MS				
Aluminum (Al)	ug/L	6.8	1.0	552087
Silver (Ag)	ug/L	<0.10	0.10	552087
Arsenic (As)	ug/L	<1.0	1.0	552087
Barium (Ba)	ug/L	250	2.0	552087
Cadmium (Cd)	ug/L	<0.20	0.20	552087
Copper (Cu)	ug/L	2.3	0.50	552087
Manganese (Mn)	ug/L	440	0.40	552087
Molybdenum (Mo)	ug/L	7.8	0.50	552087
Nickel (Ni)	ug/L	1.5	1.0	552087
Zinc (Zn)	ug/L	14	1.0	552087
Iron (Fe)	ug/L	<30	30	552087
Potassium (K)	ug/L	8500	100	552087
Selenium (Se)	ug/L	<1.0	1.0	552087
Lead (Pb)	ug/L	0.20	0.10	552087
Thallium (Tl)	ug/L	<2.0	2.0	552087

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A841555
Report Date: 2008/09/30

GOLDER ASSOCIATES
Client Project #: 08-1428-0008

Sampler Initials: RC

CONVENTIONAL PARAMETERS (GROUND WATER)

Maxxam ID		F66637		F66745		
Sampling Date		2008/09/14		2008/09/15		
COC Number		E762240		E762240		
	Units	**MW-08-03**	**RDL**	**MW-03-01**	**RDL**	**QC Batch**
CONVENTIONALS						
Conductivity	mmhos/cm	0.49	0.001	3.2	0.001	550930
Fluoride (F)	mg/L	0.3	0.1	<0.1	0.1	551937
Nitrate (N) and Nitrite(N)	mg/L	27	0.4	<0.2	0.2	550843
Nitrates (N-NO3-)	mg/L	26	0.4	<0.02	0.02	550843
Nitrites (N-NO2-)	mg/L	1.1	0.02	<0.2	0.2	550843
Nitrogen ammonia (N-NH3)	mg/L	2.0	0.04	0.53	0.02	551593
pH	pH	8.1	N/A	7.9	N/A	550842
Turbidity	NTU	70	0.1	3.3	0.1	550841
Alkalinity Total (as CaCO3) pH 4.5	mg/L	60	2	24	2	550960
Chloride (Cl)	mg/L	3.3	0.05	950	5	550844
Sulfates (SO4)	mg/L	56	0.2	6.0	0.1	550844
Total suspended solids (TSS)	mg/L	56	2	5	2	551089

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A841555
Report Date: 2008/09/30

GOLDER ASSOCIATES
Client Project #: 08-1428-0008

Sampler Initials: RC

CONVENTIONAL PARAMETERS (GROUND WATER)

Maxxam ID		F68088		F68109		
Sampling Date		2008/09/14		2008/09/15		
COC Number		E762240		E762240		
	Units	**MW-08-03-DUP**	**RDL**	**MW-03-01-DUP**	**RDL**	**QC Batch**
CONVENTIONALS						
Conductivity	mmhos/cm	0.48	0.001	3.1	0.001	551919
Fluoride (F)	mg/L	0.3	0.1	<0.1	0.1	551937
Nitrate (N) and Nitrite(N)	mg/L	27	0.4	<0.4	0.4	551384
Nitrates (N-NO3-)	mg/L	26	0.4	<0.02	0.02	551384
Nitrites (N-NO2-)	mg/L	1.2	0.02	<0.4	0.4	551384
Nitrogen ammonia (N-NH3)	mg/L	2.0	0.04	0.49	0.02	551593
pH	pH	8.2	N/A	7.8	N/A	551361
Turbidity	NTU	69	0.1	4.1	0.1	551423
Alkalinity Total (as CaCO3) pH 4.5	mg/L	59	2	33	2	551560
Chloride (Cl)	mg/L	3.6	0.05	980	10	551276
Sulfates (SO4)	mg/L	51	0.5	5.7	0.1	551276
Total suspended solids (TSS)	mg/L	54	2	7	2	551513

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A841555
Report Date: 2008/09/30

GOLDER ASSOCIATES
Client Project #: 08-1428-0008

Sampler Initials: RC

GENERAL COMMENTS

Condition of sample(s) upon receipt: GOOD except for the following:
Nitrate and/or Nitrite: Holding time already past.: F66637, F66745
pH: Holding time already past.: F66637, F66745
Turbidity: Holding time already past.: F66637, F66745

METALS (GROUND WATER)

Please note that the results have not been corrected for QC recoveries. Please note that the results have been corrected for the blank.

CONVENTIONAL PARAMETERS (GROUND WATER)

Please note that the results have not been corrected for QC recoveries. Please note that the results have been corrected for the blank.
Reported detection limits are multiplied by dilution factors used for sample analysis.

This report supersedes all previous reports with the same Maxxam job number

Results relate only to the items tested.

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

GOLDER ASSOCIATES
Attention: Valérie Bertrand
Client Project #: 08-1428-0008
P.O. #:
Project name:

Quality Assurance Report

Maxxam Job Number: A841555

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units
550841	JM6	QC STANDARD	Turbidity	2008/09/18		105	%
		METHOD BLANK	Turbidity	2008/09/18	<0.1		NTU
550842	JM6	Calibration Check	pH	2008/09/18		101	%
		QC STANDARD	pH	2008/09/18		100	%
		SPIKE	pH	2008/09/18		101	%
550843	AK3	SPIKE	Nitrate (N) and Nitrite(N)	2008/09/22		98	%
			Nitrates (N-NO3-)	2008/09/22		96	%
			Nitrites (N-NO2-)	2008/09/22		100	%
		METHOD BLANK	Nitrate (N) and Nitrite(N)	2008/09/22	<0.02		mg/L
			Nitrates (N-NO3-)	2008/09/22	<0.02		mg/L
			Nitrites (N-NO2-)	2008/09/22	<0.02		mg/L
550844	AK3	SPIKE	Chloride (Cl)	2008/09/19		99	%
			Sulfates (SO4)	2008/09/19		101	%
		METHOD BLANK	Chloride (Cl)	2008/09/19	<0.05		mg/L
			Sulfates (SO4)	2008/09/19	<0.1		mg/L
550930	JL1	QC STANDARD	Conductivity	2008/09/22		100	%
		SPIKE	Conductivity	2008/09/22		99	%
		METHOD BLANK	Conductivity	2008/09/22	<0.001		mmhos/cm
550960	AK3	QC STANDARD	Alkalinity Total (as CaCO3) pH 4.5	2008/09/24		99	%
		SPIKE	Alkalinity Total (as CaCO3) pH 4.5	2008/09/24		93	%
		METHOD BLANK	Alkalinity Total (as CaCO3) pH 4.5	2008/09/24	<2		mg/L
551089	HM1	SPIKE	Total suspended solids (TSS)	2008/09/19		101	%
		SPIKE DUP	Total suspended solids (TSS)	2008/09/19		97	%
		METHOD BLANK	Total suspended solids (TSS)	2008/09/19	<2		mg/L
551276	AK3	SPIKE	Chloride (Cl)	2008/09/20		95	%
			Sulfates (SO4)	2008/09/20		90	%
		METHOD BLANK	Chloride (Cl)	2008/09/20	<0.05		mg/L
			Sulfates (SO4)	2008/09/20	<0.1		mg/L
551361	JM6	Calibration Check	pH	2008/09/19		100	%
		QC STANDARD	pH	2008/09/19		100	%
		SPIKE	pH	2008/09/19		101	%
551384	AK3	SPIKE	Nitrate (N) and Nitrite(N)	2008/09/20		97	%
			Nitrates (N-NO3-)	2008/09/20		95	%
			Nitrites (N-NO2-)	2008/09/20		98	%
		METHOD BLANK	Nitrate (N) and Nitrite(N)	2008/09/20	<0.02		mg/L
			Nitrates (N-NO3-)	2008/09/20	<0.02		mg/L
			Nitrites (N-NO2-)	2008/09/20	<0.02		mg/L
551423	VZ	QC STANDARD	Turbidity	2008/09/19		102	%
		METHOD BLANK	Turbidity	2008/09/19	0.1, RDL=0.1		NTU
551513	FSI	SPIKE	Total suspended solids (TSS)	2008/09/22		95	%
		SPIKE DUP	Total suspended solids (TSS)	2008/09/22		95	%
		METHOD BLANK	Total suspended solids (TSS)	2008/09/22	<2		mg/L
551560	AK3	QC STANDARD	Alkalinity Total (as CaCO3) pH 4.5	2008/09/19		99	%
		SPIKE	Alkalinity Total (as CaCO3) pH 4.5	2008/09/19		92	%
		METHOD BLANK	Alkalinity Total (as CaCO3) pH 4.5	2008/09/19	<2		mg/L
551593	DKH	QC STANDARD	Nitrogen ammonia (N-NH3)	2008/09/22		89	%
		SPIKE	Nitrogen ammonia (N-NH3)	2008/09/22		102	%
		METHOD BLANK	Nitrogen ammonia (N-NH3)	2008/09/22	<0.02		mg/L
551919	AK3	QC STANDARD	Conductivity	2008/09/23		98	%
		SPIKE	Conductivity	2008/09/23		100	%
		METHOD BLANK	Conductivity	2008/09/23	<0.001		mmhos/cm
551937	AK3	QC STANDARD	Fluoride (F)	2008/09/24		102	%
		SPIKE	Fluoride (F)	2008/09/24		101	%
		METHOD BLANK	Fluoride (F)	2008/09/24	<0.1		mg/L
551993	MR4	QC STANDARD	Mercury (Hg)	2008/09/23		98	%

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

GOLDER ASSOCIATES
Attention: Valérie Bertrand
Client Project #: 08-1428-0008
P.O. #:
Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: A841555

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units
551993	MR4	SPIKE	Mercury (Hg)	2008/09/23		104	%
		METHOD BLANK	Mercury (Hg)	2008/09/23	<0.00001		mg/L
552087	MCL	SPIKE	Aluminum (Al)	2008/09/25		89	%
			Silver (Ag)	2008/09/25		45	%
			Arsenic (As)	2008/09/25		101	%
			Barium (Ba)	2008/09/25		99	%
			Cadmium (Cd)	2008/09/25		100	%
			Copper (Cu)	2008/09/25		101	%
			Manganese (Mn)	2008/09/25		99	%
			Molybdenum (Mo)	2008/09/25		97	%
			Nickel (Ni)	2008/09/25		102	%
			Zinc (Zn)	2008/09/25		103	%
			Iron (Fe)	2008/09/25		101	%
			Potassium (K)	2008/09/25		95	%
			Selenium (Se)	2008/09/25		101	%
			Lead (Pb)	2008/09/25		100	%
			Thallium (Tl)	2008/09/25		99	%
		METHOD BLANK	Aluminum (Al)	2008/09/25	<1.0		ug/L
			Silver (Ag)	2008/09/25	<0.10		ug/L
			Arsenic (As)	2008/09/25	<1.0		ug/L
			Barium (Ba)	2008/09/25	<2.0		ug/L
			Cadmium (Cd)	2008/09/25	<0.20		ug/L
			Copper (Cu)	2008/09/25	1.9, RDL=0.50		ug/L
			Manganese (Mn)	2008/09/25	<0.40		ug/L
			Molybdenum (Mo)	2008/09/25	<0.50		ug/L
			Nickel (Ni)	2008/09/25	<1.0		ug/L
			Zinc (Zn)	2008/09/25	<1.0		ug/L
			Iron (Fe)	2008/09/25	<30		ug/L
			Potassium (K)	2008/09/25	<100		ug/L
			Selenium (Se)	2008/09/25	<1.0		ug/L
			Lead (Pb)	2008/09/25	0.10, RDL=0.10		ug/L
			Thallium (Tl)	2008/09/25	<2.0		ug/L
552088	MCL	SPIKE	Calcium (Ca)	2008/09/24		95	%
			Magnesium (Mg)	2008/09/24		92	%
		METHOD BLANK	Calcium (Ca)	2008/09/24	<1		mg/L
			Magnesium (Mg)	2008/09/24	<1		mg/L
			Total Hardness (CaCO3)	2008/09/24	<1		mg/L

RDL = Reportable Detection Limit
QC Standard = Quality Control Standard
SPIKE = Fortified sample

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Validation Signature Page

Maxxam Job #: A841555

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

DELIA BARBUL, B.Sc., Chemist, Analyst 2

MARIE-CLAUDE LAUZIER, B.Sc., Chemist, Analyst 2

==========

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. SCC and CAEAL have approved this reporting process and electronic report format.

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Analytique Inc

☐ 889 Montée de Liesse, Saint-Laurent (Québec) H4T 1P5 — Téléphone : (514) 448-9001 — Télécopieur : (514) 448-9199 — Ligne sans frais : 1-877-4MA-XXAM (462-9926)
☐ 2690 Avenue Dalton, Sainte-Foy (Québec) G1P 3S4 — Téléphone : (418) 658-5784 — Télécopieur : (418) 658-6594
☐ 3780 Rue Panet, Saguenay (Québec) G7X 0E5 — Téléphone : (418) 542-8071 — Télécopieur : (418) 542-8692 — Ligne sans frais : 1-866-737-8071

www.maxxamanalytics.com

Bordereau de transmission d'échantillons

Page 1 de 1

E- 762240

Info. Facturation	Info. Rapport (si différent de Facturation)
Compagnie : Golder	Compagnie :
Adresse : ~~[illegible]~~ 32 ~~[illegible]~~ Stacie drive Kanata	Adresse :
Attention de : Valérie Bertrand	Attention de :
Téléphone : 613-592-9600	Téléphone :
Telecopieur : 613-592-9601	Telecopieur :
Échantillonneur : Réal C	Échantillonneur :

No. de commande :
No. de cotation :
Projet / Site :
No. de projet : 08-1428-0008

Je déclare par la présente comprendre et accepter les conditions et modalités de Maxxam telles que décrites au verso du présent formulaire.

Identification de l'échantillon (point de prélèvement)	Sol	Type d'eau	Autre	Prélèvement (date / heure)	à filtrer	nombre de contenants	HP (C_{10}-C_{50})	H & G Min. / H & G Tot.	COV (EPA 624) / BTEX / HAM	Phénols (GC/MS) / Phénols (Color.)	HAP	BPC (Congénères) (GC-MS)	Métaux Lourds (Cd, Cr, Cu, Ni, Pb, Zn)	Métaux ICP politique - 13 élé.-sol** / 16 élé. eau***	Mercure ☒ / Sélénium-sol / Autre: Principaux cations: calcium, potassium, magnesium	F / Cl / SO_4 / NO_2 / NO_3 / NO_2+NO_3	NTK / NH_3 / P-Tot.	pH ☒ / Conductivité ☒ / MES ☒	Sulfure (SH_2) / Soufre (S-Tot.)	CN-Tot. / CN-Ox. / CN Libre	DBO_5 / DCO / Turbidité / COT	RDS / RMD	CUM ART. 10 / ART. 11	Eau Potable : ORG. / INOR. / THM	COLIF (Fec.) / COLIF (Tot.) / BHAA	Explosif EPA 8095 / EPA 8330	Autre (spécifier) : alcalinité totale and spec	Turbidité, dureté	NH_4, Nitrite, Nitrate	Chlorure, Fluorure, Sulfate
MW-08-03		S		20080914		16								X	X			X									X	X	X	X
MW-08-01		S		20080915		11								X	X			X									X	X	X	X
MW-08-02		S		20080906		15								~~X~~	Non															
Blanc terrain		P		20080915		1								X																

LÉGENDE : ** Métaux 13 éléments (Ag, As, Ba, Cd, Co, Cr, Cu, Sn, Mn, Mo, Ni, Pb, Zn),
*** Métaux 16 éléments (Al, Sb, Ag, As, Ba, Cd, Cr, Co, Cu, Mn, Mo, Ni, Pb, Se, Na, Zn).

Types d'eau : S = Souterraine P = Potable DL = Déchet liquide
Sur = Surface E = Eau usée C = Captage

Normes/Réglement Applicables : ______ **(À remplir)**

Délais : ☐ 24h ☐ 48h ☐ 72h ☒ Régulier ☐ Date :

A moins d'être clairement identifié, tout échantillon d'eau reçu chez Maxxam sera considéré comme non-potable et ne sera pas soumis aux exigences du règlement sur la qualité de l'eau potable.

Condition générale à la réception : MW08-02 => standby

Chaîne de responsabilité

Déssaisi par :	Date : 17/9/08	Heure : 15h	Reçu par : [signature]
Déssaisi par :	Date :	Heure :	Reçu par :

Nombre de glacières :

Température de réception : 10°, 11°, 11°

Remarques : Metaux voir avec Genevieve Berthiaume Demande de Valérie

 2008/09/30 15:40

CONFIRMATION-RECEIPT OF SAMPLES FOR ANALYSIS

Maxxam Job # A840232

Client Project #: PROJET GOLDER 08-1428-0008 3 Samples
Quote #: A80677
Site Location: MEADOWBANK

Samples Received 2008/09/11
Client Confirmation 2008/09/11
Expected Report Delivery 2008/09/18 17:00

Report will be sent to:
Valérie Bertrand
GOLDER ASSOCIATES
32 Steacie Dr.
Kanata
K2K 2A9
Ph 613-727-0510
Fax 613-727-0704
vbertrand@golder.com

Invoice will be sent to:
Ryan VanEngen
Agnico-Eagle Mines Ltd.
Kivalliq district
Baker Lake
X0C 0A0
Ph 8677934610-6728
rVanengen@agnico-eagle.com

We have received the following samples:

MW08-02 Sampled 2008/09/08 Matrix: SURFACE WATER
Maxxam #: F59984

Ammonia Nitrogen	
*Anions	
Conductivity	
Disposal Charges	
Fluoride	
Hardness	
Mercury by Cold Vapour AA	Arrived unpreserved, preserved upon reception at the laboratory.
*Metals by ICP-MS	
*Nitrate and/or Nitrite	
pH	
*Total Alkalinity (pH end point 4.5)	
Total Dissolved Solids	
Turbidity	

MW08-02 DUPLICATA Sampled 2008/09/08
Maxxam #: F59995

Ammonia Nitrogen	
*Anions	
Conductivity	
Disposal Charges	
Fluoride	
Hardness	
Mercury by Cold Vapour AA	Arrived unpreserved, preserved upon reception at the laboratory.
*Metals by ICP-MS	
*Nitrate and/or Nitrite	
pH	
*Total Alkalinity (pH end point 4.5)	
Total Dissolved Solids	

Turbidity

MW08-02 TRIPLICATA Sampled 2008/09/08
Maxxam #: F59996

Comments:

- An additionnal fee of 20$ per sample could be charged for disposal of Hazardous samples. Client will be contacted before such hazardous charges are applied, and will be given option to pick up samples.
- Unless special storage arrangements are made, all samples will be discarded 30 days after their reception.
- Non-regular samples are flagged as (C) Composite by lab and (L) for Leachate.
- For revisions please contact your Project Management team at ph (514) 448-9001 or via email at ServiceTechniqueMontreal@maxxamanalytics.com .
- For revisions please contact your Maxxam Project Management team at Ph (514) 448-9001 or Fax (514) 448-9199. Your Project Manager is: GENEVIEVE BERTHIAUME Alternate Project Manager KARIMA DLIMI

Maxxam Job # A840232 PARAMETERS FOR ANALYSIS REQUESTED

The values listed below are RDL's and not results. Report Detection Limit (RDL) may be elevated if there are matrix interferences or limited sample amounts.

Maxxam # F59984, Sample IDN: **MW08-02**
Maxxam # F59995, Sample IDN: **MW08-02 DUPLICATA**

TOTAL ALKALINITY (PH END POINT 4.5)			
Alkalinity Total (as CaCO3) pH 4.5	1 mg/L	+Bicarbonates (HCO3 as CaCO3)	1 mg/L
ANIONS			
Chloride (Cl)	0.05 mg/L	Sulfates (SO4)	0.1 mg/L
CONDUCTIVITY			
Conductivity	0.001 mmhos/cm		
FLUORIDE			
Fluoride (F)	0.1 mg/L		
HARDNESS			
Magnesium (Mg)	1 mg/L	Total Hardness (CaCO3)	1 mg/L
Calcium (Ca)	1 mg/L		
MERCURY BY COLD VAPOUR AA			
Mercury (Hg)			
METALS BY ICP-MS			
Aluminum (Al)	1 ug/L	Copper (Cu)	0.5 ug/L
+Iron (Fe)	30 ug/L	+Lead (Pb)	0.1 ug/L
+Magnesium (Mg)	10 ug/L	Manganese (Mn)	0.4 ug/L
Molybdenum (Mo)	0.5 ug/L	Nickel (Ni)	1 ug/L
+Potassium (K)	100 ug/L	+Selenium (Se)	1 ug/L
Silver (Ag)	0.1 ug/L	+Arsenic (As)	1 ug/L
Thallium (Tl)	2 ug/L	Zinc (Zn)	1 ug/L
Barium (Ba)	2 ug/L	Cadmium (Cd)	0.2 ug/L
+Calcium (Ca)	50 ug/L		
AMMONIA NITROGEN			
Nitrogen ammonia (N-NH3)	0.02 mg/L		
NITRATE AND/OR NITRITE			
Nitrites (N-NO2-)	0.02 mg/L	+Nitrate (N) and Nitrite(N)	0.02 mg/L
PH			
pH			
TOTAL DISSOLVED SOLIDS			
Total Dissolved Solids	10 mg/L		
TURBIDITY			
Turbidity	0.1 NTU		

Sample Integrity Form

Invoice To:
Agnico-Eagle Mines Ltd.
ATTN: Ryan VanEngen
Kivalliq district
Baker Lake, NU
CANADA X0C 0A0
Client Contact:
Valérie Bertrand

Report To:
GOLDER ASSOCIATES
OTTAWA
ATTN: Valérie Bertrand
32 Steacie Dr.
Kanata, ON
Canada K2K 2A9

Maxxam Job #:	A840232
Date Received:	2008/09/11
Your Project #:	PROJET GOLDER 08-1428-0008
Maxxam Project Manager:	GENEVIEVE BERTHIAUME
Quote #:	A80677

No discrepancies noted.

Report Comments

Received Date: 2008/09/11 **(Time):** 14:30 **By:** _____

Inspected Date: _____ **(Time):** _____ **By:** _____

SIF Created Date: _____ **(Time):** 00:00 **By:** _____

Your Project #: PROJET GOLDER 08-1428-0008
Site: MEADOWBANK

Attention: Valérie Bertrand
GOLDER ASSOCIATES
OTTAWA
32 Steacie Dr.
Kanata, ON
Canada K2K 2A9

Report Date: 2008/09/22

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A840232
Received: 2008/09/11, 14:30

Sample Matrix: SURFACE WATER
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Alkalinity (pH end point 4.5)	2	2008/09/16	2008/09/17	STL SOP-00038/5	Titrimetric
Anions	2	2008/09/13	2008/09/13	STL SOP-00014/5	Ion Chromatography
Disposal Charges	2	N/A	2008/09/11		
Fluoride	2	2008/09/15	2008/09/16	STL SOP-00011/1, STL SOP-00004/2	Ion Spec. Electrode
Hardness	2	2008/09/16	2008/09/16	STL SOP-00006/7	ICP
Mercury by Cold Vapour AA	2	2008/09/16	2008/09/16	STL SOP-00042/6	Cold Vapor AA
Metals by ICP-MS	2	2008/09/16	2008/09/16	STL SOP-00006/7	ICP-MS
Metals by ICP-MS	2	2008/09/19	2008/09/19	STL SOP-00006/7	ICP-MS
Ammonia Nitrogen (1)	2	2008/09/18	2008/09/16	QUE SOP-00126/1	Colorimetry
Nitrate and/or Nitrite	2	2008/09/13	2008/09/13	STL SOP-00014/5	Ion chromatography
pH	2	2008/09/12	2008/09/12	STL SOP-00016/5; STL SOP-00038/5,	pH meter
Total Dissolved Solids	2	2008/09/12	2008/09/15	STL SOP-00050/1	Gravimetric
Turbidity	2	N/A	2008/09/12	STL SOP-00022/3	Turbidimeter

(1) This test was performed by Maxxam - Québec

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

GENEVIEVE BERTHIAUME, Technical Sales Rep
Email: genevieve.berthiaume@maxxamanalytics.com
Phone# (514) 448-9001

==========

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. SCC and CAEAL have approved this reporting process and electronic report format.

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Your Project #: PROJET GOLDER 08-1428-0008
Site: MEADOWBANK

Attention: Valérie Bertrand
GOLDER ASSOCIATES
OTTAWA
32 Steacie Dr.
Kanata, ON
Canada K2K 2A9

Report Date: 2008/09/22

CERTIFICATE OF ANALYSIS

-2-

For Service Group specific validation please refer to the Validation Signature Page

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A840232
Report Date: 2008/09/22

GOLDER ASSOCIATES
Client Project #: PROJET GOLDER 08-1428-0008
Project name: MEADOWBANK
Sampler Initials: SM

METALS (SURFACE WATER)

Maxxam ID		F59984		F59984	F59984		
Sampling Date		2008/09/08		2008/09/08	2008/09/08		
	Units	**MW08-02**	**QC Batch**	**MW08-02 REPEAT**	**MW08-02 REPEAT Lab-Dup**	**RDL**	**QC Batch**
METALS							
Mercury (Hg)	mg/L	<0.00001	549583	N/A	N/A	0.00001	549583
Calcium (Ca)	mg/L	50	549578	N/A	N/A	1	549578
Magnesium (Mg)	mg/L	27	549578	N/A	N/A	1	549578
Total Hardness (CaCO3)	mg/L	240	549578	N/A	N/A	1	549578
METALS ICP-MS							
Aluminum (Al)	ug/L	4.6	549577	N/A	N/A	1.0	549577
Silver (Ag)	ug/L	<0.10	549577	N/A	N/A	0.10	549577
Arsenic (As)	ug/L	3.5	549577	N/A	N/A	1.0	549577
Barium (Ba)	ug/L	45	549577	N/A	N/A	2.0	549577
Cadmium (Cd)	ug/L	<0.20	549577	N/A	N/A	0.20	549577
Copper (Cu)	ug/L	0.56	549577	N/A	N/A	0.50	549577
Manganese (Mn)	ug/L	230	549577	30	30	0.40	550971
Molybdenum (Mo)	ug/L	26	549577	N/A	N/A	0.50	N/A
Nickel (Ni)	ug/L	19	549577	N/A	N/A	1.0	N/A
Zinc (Zn)	ug/L	14	549577	N/A	N/A	1.0	N/A
Iron (Fe)	ug/L	<30	549577	N/A	N/A	30	N/A
Potassium (K)	ug/L	1800	549577	N/A	N/A	100	N/A
Selenium (Se)	ug/L	<1.0	549577	N/A	N/A	1.0	N/A
Lead (Pb)	ug/L	<0.10	549577	N/A	N/A	0.10	N/A
Thallium (Tl)	ug/L	<2.0	549577	N/A	N/A	2.0	N/A

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A840232
Report Date: 2008/09/22

GOLDER ASSOCIATES
Client Project #: PROJET GOLDER 08-1428-0008
Project name: MEADOWBANK
Sampler Initials: SM

METALS (SURFACE WATER)

Maxxam ID		F59995		F59995	F59995		
Sampling Date		2008/09/08		2008/09/08	2008/09/08		
	Units	**MW08-02 DUPLICATA**	**QC Batch**	**MW08-02 DUPLICATA REPEAT**	**MW08-02 DUPLICATA REPEAT Lab-Dup**	**RDL**	**QC Batch**
METALS							
Mercury (Hg)	mg/L	<0.00001	549583	N/A	N/A	0.00001	549583
Calcium (Ca)	mg/L	48	549578	N/A	N/A	1	549578
Magnesium (Mg)	mg/L	27	549578	N/A	N/A	1	549578
Total Hardness (CaCO3)	mg/L	230	549578	N/A	N/A	1	549578
METALS ICP-MS							
Aluminum (Al)	ug/L	4.8	549577	N/A	N/A	1.0	549577
Silver (Ag)	ug/L	<0.10	549577	N/A	N/A	0.10	549577
Arsenic (As)	ug/L	3.5	549577	N/A	N/A	1.0	549577
Barium (Ba)	ug/L	43	549577	N/A	N/A	2.0	549577
Cadmium (Cd)	ug/L	<0.20	549577	N/A	N/A	0.20	549577
Copper (Cu)	ug/L	1.1	549577	N/A	N/A	0.50	549577
Manganese (Mn)	ug/L	31	549577	30	30	0.40	550971
Molybdenum (Mo)	ug/L	25	549577	N/A	N/A	0.50	N/A
Nickel (Ni)	ug/L	19	549577	N/A	N/A	1.0	N/A
Zinc (Zn)	ug/L	14	549577	N/A	N/A	1.0	N/A
Iron (Fe)	ug/L	<30	549577	N/A	N/A	30	N/A
Potassium (K)	ug/L	1500	549577	N/A	N/A	100	N/A
Selenium (Se)	ug/L	<1.0	549577	N/A	N/A	1.0	N/A
Lead (Pb)	ug/L	0.27	549577	N/A	N/A	0.10	N/A
Thallium (Tl)	ug/L	<2.0	549577	N/A	N/A	2.0	N/A

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A840232
Report Date: 2008/09/22

GOLDER ASSOCIATES
Client Project #: PROJET GOLDER 08-1428-0008
Project name: MEADOWBANK
Sampler Initials: SM

CONVENTIONAL PARAMETERS (SURFACE WATER)

Maxxam ID		F59984	F59984	F59995		
Sampling Date		2008/09/08	2008/09/08	2008/09/08		
	Units	**MW08-02**	**MW08-02 Lab-Dup**	**MW08-02 DUPLICATA**	**RDL**	**QC Batch**
CONVENTIONALS						
Fluoride (F)	mg/L	0.2	N/A	0.2	0.1	549457
Nitrate (N) and Nitrite(N)	mg/L	<0.1	N/A	<0.1	0.1	549094
Nitrites (N-NO2-)	mg/L	<0.1	N/A	<0.1	0.1	549094
Nitrogen ammonia (N-NH3)	mg/L	<0.05	N/A	0.05	0.05	549804
pH	pH	8.0	N/A	8.1	N/A	548815
Turbidity	NTU	2.4	N/A	2.4	0.1	548798
Alkalinity Total (as CaCO3) pH 4.5	mg/L	76	77	76	2	549524
Bicarbonates (HCO3 as CaCO3)	mg/L	76	77	76	2	549524
Carbonate (CO3 as CaCO3)	mg/L	<2	<2	<2	2	549524
Chloride (Cl)	mg/L	160	N/A	180	1	549095
Sulfates (SO4)	mg/L	2.5	N/A	2.0	0.1	549095
Total Dissolved Solids	mg/L	500	N/A	520	10	548734

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Maxxam Job #: A840232
Report Date: 2008/09/22

GOLDER ASSOCIATES
Client Project #: PROJET GOLDER 08-1428-0008
Project name: MEADOWBANK
Sampler Initials: SM

GENERAL COMMENTS

Condition of sample(s) upon receipt: GOOD except for the following:
Mercury by Cold Vapour AA: Arrived unpreserved, preserved upon reception at the laboratory.: F59984, F59995
pH: Holding time already past.: F59984, F59995

METALS (SURFACE WATER)

Please note that the results have not been corrected for QC recoveries. Please note that the results have been corrected for the blank.

CONVENTIONAL PARAMETERS (SURFACE WATER)

Please note that the results have not been corrected for QC recoveries. Please note that the results have been corrected for the blank.
Reported detection limits are multiplied by dilution factors used for sample analysis.

Results relate only to the items tested.

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

GOLDER ASSOCIATES
Attention: Valérie Bertrand
Client Project #: PROJET GOLDER 08-1428-0008
P.O. #:
Project name: MEADOWBANK

Quality Assurance Report

Maxxam Job Number: A840232

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units
548734	HM1	SPIKE	Total Dissolved Solids	2008/09/15		101	%
		SPIKE DUP	Total Dissolved Solids	2008/09/15		101	%
		METHOD BLANK	Total Dissolved Solids	2008/09/15	<10		mg/L
548798	JM6	QC STANDARD	Turbidity	2008/09/12		102	%
		METHOD BLANK	Turbidity	2008/09/12	0.1, RDL=0.1		NTU
548815	CN1	Calibration Check	pH	2008/09/12		101	%
		QC STANDARD	pH	2008/09/12		101	%
		SPIKE	pH	2008/09/12		101	%
549094	AK3	SPIKE	Nitrate (N) and Nitrite(N)	2008/09/13		102	%
			Nitrites (N-NO2-)	2008/09/13		100	%
		METHOD BLANK	Nitrate (N) and Nitrite(N)	2008/09/13	<0.02		mg/L
			Nitrites (N-NO2-)	2008/09/13	<0.02		mg/L
549095	AK3	SPIKE	Chloride (Cl)	2008/09/13		101	%
			Sulfates (SO4)	2008/09/13		102	%
		METHOD BLANK	Chloride (Cl)	2008/09/13	<0.05		mg/L
			Sulfates (SO4)	2008/09/13	<0.1		mg/L
549457	AK3	QC STANDARD	Fluoride (F)	2008/09/16		95	%
		SPIKE	Fluoride (F)	2008/09/16		96	%
		METHOD BLANK	Fluoride (F)	2008/09/16	<0.1		mg/L
549524	AK3	QC STANDARD	Alkalinity Total (as CaCO3) pH 4.5	2008/09/17		102	%
			Bicarbonates (HCO3 as CaCO3)	2008/09/17		102	%
			Carbonate (CO3 as CaCO3)	2008/09/17		102	%
		SPIKE	Alkalinity Total (as CaCO3) pH 4.5	2008/09/17		91	%
			Bicarbonates (HCO3 as CaCO3)	2008/09/17		91	%
			Carbonate (CO3 as CaCO3)	2008/09/17		91	%
		METHOD BLANK	Alkalinity Total (as CaCO3) pH 4.5	2008/09/17	<2		mg/L
			Bicarbonates (HCO3 as CaCO3)	2008/09/17	<2		mg/L
			Carbonate (CO3 as CaCO3)	2008/09/17	<2		mg/L
549577	MCL	SPIKE	Aluminum (Al)	2008/09/16		99	%
			Silver (Ag)	2008/09/16		73	%
			Arsenic (As)	2008/09/16		104	%
			Barium (Ba)	2008/09/16		101	%
			Cadmium (Cd)	2008/09/16		105	%
			Copper (Cu)	2008/09/16		99	%
			Manganese (Mn)	2008/09/16		102	%
			Molybdenum (Mo)	2008/09/16		107	%
			Nickel (Ni)	2008/09/16		97	%
			Zinc (Zn)	2008/09/16		100	%
			Iron (Fe)	2008/09/16		101	%
			Potassium (K)	2008/09/16		102	%
			Selenium (Se)	2008/09/16		93	%
			Lead (Pb)	2008/09/16		98	%
			Thallium (Tl)	2008/09/16		102	%
		METHOD BLANK	Aluminum (Al)	2008/09/16	<1.0		ug/L
			Silver (Ag)	2008/09/16	0.36, RDL=0.10		ug/L
			Arsenic (As)	2008/09/16	<1.0		ug/L
			Barium (Ba)	2008/09/16	<2.0		ug/L
			Cadmium (Cd)	2008/09/16	<0.20		ug/L
			Copper (Cu)	2008/09/16	0.61, RDL=0.50		ug/L
			Manganese (Mn)	2008/09/16	<0.40		ug/L
			Molybdenum (Mo)	2008/09/16	<0.50		ug/L
			Nickel (Ni)	2008/09/16	<1.0		ug/L
			Zinc (Zn)	2008/09/16	<1.0		ug/L
			Iron (Fe)	2008/09/16	<30		ug/L
			Potassium (K)	2008/09/16	<100		ug/L

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

GOLDER ASSOCIATES
Attention: Valérie Bertrand
Client Project #: PROJET GOLDER 08-1428-0008
P.O. #:
Project name: MEADOWBANK

Quality Assurance Report (Continued)

Maxxam Job Number: A840232

QA/QC Batch Num	Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	Recovery	Units
549577	MCL	METHOD BLANK	Selenium (Se)	2008/09/16	<1.0		ug/L
			Lead (Pb)	2008/09/16	0.15, RDL=0.10		ug/L
			Thallium (Tl)	2008/09/16	<2.0		ug/L
549578	MCL	SPIKE	Calcium (Ca)	2008/09/16		97	%
			Magnesium (Mg)	2008/09/16		96	%
		METHOD BLANK	Calcium (Ca)	2008/09/16	<1		mg/L
			Magnesium (Mg)	2008/09/16	<1		mg/L
			Total Hardness (CaCO3)	2008/09/16	<1		mg/L
549583	MR4	QC STANDARD	Mercury (Hg)	2008/09/16		95	%
		SPIKE	Mercury (Hg)	2008/09/16		100	%
		METHOD BLANK	Mercury (Hg)	2008/09/16	<0.00001		mg/L
549804	JE	QC STANDARD	Nitrogen ammonia (N-NH3)	2008/09/16		99	%
		METHOD BLANK	Nitrogen ammonia (N-NH3)	2008/09/16	<0.05		mg/L
550971	MCL	SPIKE	Manganese (Mn)	2008/09/19		96	%
		METHOD BLANK	Manganese (Mn)	2008/09/19	<0.40		ug/L

RDL = Reportable Detection Limit
QC Standard = Quality Control Standard
SPIKE = Fortified sample

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Validation Signature Page

Maxxam Job #: A840232

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

DELIA BARBUL, B.Sc., Chemist, Analyst 2

MARIE-CLAUDE LAUZIER, B.Sc., Chemist, Analyst 2

MARIO PERRON,

==========

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. SCC and CAEAL have approved this reporting process and electronic report format.

889 Montée de Liesse, Ville St-Laurent, Québec, Canada H4T 1P5 Tél. : (514) 448-9001 Télécopieur : (514) 448-9199 Ligne sans frais : 1-877-4MAXXAM (462-9926)

Golder Associés

SUJET	Purge et echantillonnage MW-08-02		
Projet Réf.	08-1428-0008 / 7000	Fait par: Real Cantin Vérifié par: Revisé par: Patrick Dufresne	Date: 2008-09-03 Feuille de

Purge finale

Purge volume	ph	cond µs	t°C	TDS	oxy Dis mg/L
40 L	7.21	705	12.0	346	4.96
80 L	7.82	702	6.3	348	10.17
120 L	8.07	705	6.2	353	11.21
140 L	8.09	718	6.9	359	10.95
146 L	6.62	735	7.8	366	9.95
Début échantillonnage	7.05	808	7.3	399	-
fin échantillonnage	7.36	758	5.2	351	-

L'échantillon a été prelevé en triplicata
Métaux et Mercure filtré sur le terrain.

Golder Associés

SUJET Purge

Projet
Réf. 08-1428-0008

Fait par: Réal C
Vérifié par:
Revisé par: Patrick U

MW08-03

Date: 2008-09-12
Feuille de

2008-09-12 ∇ = 1,34 m

Purge volume		pH	Cond µs	t°C	TDS (ppm)	DO (mg/L)
0h						
60 L		7.33	41	8.6	23	8,05
60 L	(120)	7.52	33	6.4	17	8.54
60 L	(180)	7.54	34	6.0	16	14.21
90 L	(270)	7.52	39	5.4	19	14.12

total 270 L

13 h

60 L		7.23	357	14.1	180	10.47
40 L	(100)	7.51	360	8.8	179	11.65
60 L	(160)	7.67	371	6.0	188	11.78
60 L	(220)	7.72	380	6.1	185	11.71
50 L	(270)	7.81	375	6.3	185	10.82
60 L	(330)	7.82	366	6.1	181	10.30

total 330 L

total Journée = 600 litres purgés

Golder Associés

SUJET Purge MW-0803		
Projet Réf. 08-1428-0008	Fait par: R.C. Vérifié par: Revisé par: P.U	Date: 2008 09-13 Feuille de

2008-09-13

Purge (L)		ph	cond µs	t°C	TDS (ppm)	DO (µs/L)
40		6.20	431	18.4	215	7.48
40	(80)	6.47	435	9.9	218	11.0
40	(120)	6.70	442	7.6	221	10.27
40	(160)	6.84	441	6.6	221	9.20
40	(200)	6.89	445	6.6	221	9.40
40	(240)	6.98	446	6.2	221	10.12
40	(280)	—	—	—	—	—
40	(320)	7.26	452	6.0	229	—
60	(380)	—	—	—	—	—
60	(440)	8.47	475	6.0	240	11.89
60	(500)	—	—	—	—	—
60	(560)	7.07	505	5.9	252	10.97
60	(630)	—	—	—	—	—
60	(690)	8.29	558	4.9	284	10.96
60	(750)	—	—	—	—	—
60	(810)	8.39	545	4.1	275	11.67
60	(870)	—	—	—	—	—
60	(930)	8.21	550	4.0	273	11.94
60	(990)	—	—	—	—	—
60	(1050)	—	—	—	—	—
60	(1110)	8.0	529	4.0	263	11.78

total 1110 Litres

2008-09-14

40		7.14	480	28.8	238	5.51
40	(80)	7.45	459	20.0	225	6.28
50	(130)	7.61	448	11.3	221	8.40
50	(180)	7.57	439	8.3	221	10.20
60	(240)	7.03	446	6.8	223	9.47
60	(300)	7.25	440	6.3	221	10.14
60	(360)	6.95	430	5.3	215	10.29
60	(420)	7.10	434	5.7	215	11.86
60	(480)	—	433	5.0	215	10.25

total 480 Litres

Grand total Purge MW-0803 => 2180 Litres.

échantillonnage en duplicata.
Métaux et Mercure filtré sur le terrain.

Golder Associés

SUJET	Purge MW-03-01		
Projet Réf. 08-1428-0008	Fait par: Real C Vérifié par: Revisé par: Patrick U	Date: 2008-09-11 Feuille de	

2008-09-11 ▽ = 2.51 m

Purge (L)		ph	cond(µS)	t°C	TDS (ppm)	DO (µs/L)
20		6.70	208	0.3	104	6.51
40	(60)	6.56	229	1.5	112	10.22
30	(90)	6.58	349	2.2	175	13.32
40	(130)	6.60	422	2.0	212	15.20
8	(138)	6.94	414	1.7	207	14.78

total 138 Litres

2008-09-12

10L	(eau avec glace)	6.60	262	0.3	13	16.20

2008-09-13

35	8.32	226	2.2	113	15.31
30 (65)	8.09	441	2.1	222	15.30
30 (95)	7.95	698	2.1	349	15.09

total (95 L)

total purge du 11 sept au 13 sept: 243 Litres

SUJET	Purge MW-03-01 et échantillonnage		
Projet Réf. 08-1428-0008	Fait par: Réal Cantin Vérifié par: Revisé par:	Date: 2008 09 14 Feuille de	

2008-09-14 (7h45)

Purge (L)	ph	cond (µs)	t°C	TDS (ppm)	DO (µg/L)
50	7.44	399	2.8	193	15.03
50 (100)	7.22	1295	3.1	643	14,58

2008 09 14 (16h50)

30	7.60	1029	4.2	515	14,15

total Journée 130 litres

Grand total MW03-01 : D 373 Litres

2008-09-15

échantillonnage

	ph	cond (µs)	t°C	TDS	DO (µg/L)
avant	6.7	2100	1.0	1100	-
après	7.0	2820	1.0	1414	-

Métaux et Mercure filtré sur le terrain.
échantillon pris en duplicata
Blanc de terrain pour les métaux (eau du camp!!!)

SUJET	Essai de perméabilité MW08-03		
Projet Réf. 08-1428-0008	Fait par: RC Vérifié par: PU Revisé par:	Date: 2008-09-16 Feuille de	

1er essai

∇ = 2,515 m

Purge de ± 30 Litres

temps	∇ (m)
16h06:24	5.38
28	4.66
33	4.03
36	3.76
45	3.35
50	3.05
16h07:03	2.86
10	2.82
17	2.80
28	2.78
46	2.76
16h08 08	2.74
46	2.72
59	2.70

2e essai

Purge ± 40 Litres

temps	∇ (m)
16:15:56	7.22
16:16:00	6.40
03	5.85
06	5.31
10	4.80
14	4.27
23	3.60
32	3.18
40	3.02
46	2.95
56	2.90
16:17:07	2.85
16:17:50	2.80
16:18:52	2.76
16:19:29	2.75