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August 16, 2007

Meadowbank Mining Corporation Suite 950, One Bentall Centre 505 Burrard Street Vancouver, BC V7X 1M4

Attention: Ms. Louise Grondin

RE: MEADOWBANK GOLD PROJECT -

2006 BASELINE GROUND WATER QUALITY

Dear Ms. Grondin:

1.0 INTRODUCTION

The following technical memorandum provides an assessment of the quality of groundwater sampled from monitoring wells at the Meadowbank Gold Project (the Project) in 2006, and a comparison to data from previous years. Since 2003, seven groundwater monitoring wells have been installed at the Project, to evaluate the baseline groundwater quality in the Project area, at the Goose Island and Portage pits, and underneath the Tailings Storage Facility (TSF) in the North Arm of Second Portage Lake. Groundwater flow and quality data obtained from these areas have been used as input into the water quality model for the site. The Nunavut Impact Review Board (NIRB) requested follow-up groundwater quality monitoring to support water quality predictions completed in 2005 (Golder, 2005).

2.0 SITE CONDITIONS

The Goose Island and Portage pits will be developed in areas of thawed permafrost (talik) underneath Third Portage Lake, while the tailings are proposed to be deposited over a talik in the basin of the North arm of Second Portage Lake. Groundwater monitoring





data was used to predict the quality of water accumulating in the pits during operation, and to evaluate baseline groundwater quality underneath the TSF before tailing deposition. To this end, groundwater monitoring wells have been installed to sample talik water in these areas, in each of the three main lithologies that will be encountered in the Goose Island and Portage pits, namely Iron Formation (IF), Intermediate Volcanic (IV) and Ultramafic (UM) rock. No groundwater monitoring wells have been installed at the Vault deposit, as the Vault pit will be developed in continuous permafrost or in a talik that does not extend down through the permafrost (referred to as a "closed talik"). Four of the seven wells were installed in 2003: MW03-01, MW03-02, MW03-03, and MW03-04. During subsequent sampling events, it was discovered that three of these wells (MW03-02, MW03-03, and MW03-04) developed internal damage, likely due to freezing, rendering them inoperable (Golder, 2004a and 2004b).

In 2006, three additional wells (MW06-05, MW06-06, and MW06-07) were installed to replace the damaged wells. Table 2-1 (below) summarizes the installation information for the first four wells and the three additional new wells.

Table 2-1: Meadowbank Groundwater Monitoring Well Installation Information

Well ID	Lithology	Approximate Length of Well (m)	Well Angle (degrees)	Depth of Screen Zone Along Well (m)	True Vertical Depth of Screen Zone (m)	Installation Year	Operable?
MW03-01	UM	200	-50	185 – 200	142 – 154	2003	Yes
MW03-02	IF	180	-54	165 – 180	134 – 146	2003	No
MW03-03	IV	150	-49	135 – 150	102 – 113	2003	No
MW03-04	IV	200	-61	185 – 200	161 – 174	2003	No
MW06-05	IV	180	-55	165 – 180	135.2 – 147.4	2006	No
MW06-06	IF	180	-54	165 – 180	133.5 – 145.6	2006	Yes
MW06-07	QTZ/IV	212	-60	197 – 212	170.6 – 183.6	2006	Yes

Each of the three operable groundwater monitoring wells (MW03-01, MW06-06, and MW06-07) were sampled in 2006. During purging of well MW06-05, an obstruction developed in the well which prevented taking a water sample from the well.

2.1 Drilling Method and Well Installations

Boreholes for the replacement wells were drilled in the same manner as the original four wells. Drilling was completed via the standard HQ diamond coring technique, using water from Third Portage Lake for MW06-05 and MW06-06, and from Second Portage Lake for MW06-07. Drilling water was heated and circulated to prevent freezing. The core from each borehole was recovered and rock geology was logged to confirm the targeted lithology of the screened interval for each monitor well.

The configuration of the replacement wells (location, depth, orientation and position of screened interval) is similar to that of the old wells to facilitate comparison of groundwater quality data between monitoring years. The well construction materials utilized were also similar to those used previously. Given the fragility of the PVC well constructions in the permafrost environment of Meadowbank, consideration was given to utilizing more robust construction materials such as stainless steel, which is considerably heavier and more expensive than PVC. Nevertheless, PVC was selected as the material of choice for the following reasons:

- Short life span of the wells. Wells installed within the footprint of the pits will be
 destroyed shortly after operation is initiated. Should the project go ahead, the wells
 would be replaced with more permanent and robust structures which would be located
 outside the outline of the first years of pit operation.
- Economics and relative ease of installation. The use of lighter PVC equipment allowed for conventional means of transportation of the material to site and well installation using standard equipment available at the site.

The wells were constructed of 42 mm outer diameter Schedule 80 PVC riser pipe installed in the open boreholes. At the bottom of each well, a 15-m section of Schedule 80, No. 10, slotted PVC was installed. Self-regulating heater cables were attached to the outside of each well, along the portion of the well that penetrated through the permafrost. Heater cables were connected to copper wires and to a power source (diesel generators) that was energized to thaw the groundwater inside the well prior to removing water for well development and sampling.

The well screens were surrounded by 20 m to 27 m long sand pack and a 15 m to 20 m layer of bentonite grout was placed above the top of each sand pack. The annulus between the PVC and the borehole walls above the grout seal was left open. Figures A-1

to A-3 in Appendix I provide the installation details for each of the wells installed in 2006.

2.2 Well Development and Sampling

Three groundwater samples were collected in 2006, from monitoring wells MW03-01, MW06-06, and MW06-07. Prior to sampling, the permafrost around each of these wells was thawed by energizing the heater cables attached to the wells. New wells installed in 2006 were developed first, to remove fluids from the vicinity of the wells that were introduced during drilling. All of the wells were then purged, to remove standing water inside the wells and provide fresh groundwater for sampling. Development and purging was conducted using compressed air through flexible 5/8" OD High Density Polyethylene (HDPE) WaTerra® tubing. Groundwater was continually airlifted from the wells until electrical conductivity and pH readings 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 Appendix II.

Groundwater was sampled immediately after the wells were purged using a Solinst® stainless steel Double Valve Pump (DVP) and $^{1}\!4$ " Low Density Polyethylene (LDPE) tubing. Nitrogen gas was used to evacuate water that entered the sampler unit, to minimize alteration of groundwater chemistry. Water samples were collected using guideline procedures provided by the USEPA (2002). Indicator parameters (conductivity, pH) were measured during well development, purging and sampling. 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 μ m inline filter. A new filter was used for each groundwater sample.

2.3 Analyses

2.3.1 Field Parameters

Measurements of groundwater temperature, pH, electrical conductivity, total dissolved solids (TDS), and dissolved oxygen were obtained in the field during development and sampling. In addition, alkalinity was measured during sampling. Groundwater sampling data sheets are included in Appendix II.

2.3.2 Laboratory Parameters

All groundwater samples were stored in coolers with ice packs and shipped to the CANTEST laboratory in Winnipeg for chemical analyses. These analyses included: pH, conductivity, alkalinity (total, bicarbonate, carbonate, and hydroxide), hardness, total suspended solids (TSS), major anions (including sulphate, chloride and fluoride), total metals, dissolved metals, and nutrients (nitrate, nitrite, ammonia nitrogen, TKN, and total phosphate). Samples were collected under strict Chain-of-Custody (COC) procedures to ensure that samples were not compromised during shipping to CANTEST. Copies of the COC forms are included in Appendix III.

2.4 Comparative Guidelines

Metal concentrations in groundwater were compared to the Metal Mining Effluent Regulations (MMER; DFO, 2002) since water accumulating in the pits will be pumped to the stormwater attenuation ponds, and the water from these ponds will be monitored prior to discharge to Third Portage Lake. For consistency with the previous report, groundwater quality was also compared to the Canadian Council of Ministers of the Environment's (CCME) Canadian Environmental Quality Guidelines (CEQG, updated 2003) for the protection of freshwater aquatic life. This comparison is qualitative only as groundwater in the pit will not be discharged directly to the environment. Guidelines for metals are defined for total rather than dissolved phases in both the CEQG and MMER.

2.5 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 three 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.

Field duplicate (FD) samples were collected for each groundwater sample. The relative percent difference (RPD) was calculated for each pair of FD samples, and each set of results was compared for reproducibility. 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.

3.0 RESULTS

3.1 Well Conditions

The following provides a summary of the physical conditions observed at the groundwater monitoring wells in 2006. Wells MW03-02, MW03-03, and MW03-04 were not monitored in 2006.

3.1.1 UM Well MW03-01

This well was installed in Ultramafic (UM) rock. Groundwater purged from this well was clear, relatively free of sediment, and the well pipe was in good working condition. This well was sampled twice in 2006. Approximately 3 well volumes (defined as the volume of water in the piezometer relative to the regional groundwater table) were purged from this well over 4 days prior to the first sampling event. An additional 4 well volumes were purged over 3 days prior to the second sampling event. The sample intake point was positioned above the screened interval (of 185 m to 200 m depth), at a depth of 165 m.

3.1.2 IV Well MW06-05

This well was installed in Intermediate Volcanic (IV) rock. Groundwater purged from this well was very silty. Approximately 53 well volumes were purged from this well over

2 days in an attempt to clarify the groundwater. During development, a fissure is believed to have developed in the PVC pipe and the well became obstructed at approximately 58 m depth after development. This well was not sampled, since the sampling equipment could not be lowered past the obstruction.

3.1.3 IF Well MW06-06

This well was installed in Iron Formation (IF) rock. Contrary to instruction by Golder personnel, a small amount of calcium chloride was introduced into MW06-06 during a drill repair. Consequently, this well was extensively developed prior to sampling in an effort to remove the calcium chloride. Samples of the purge water were obtained during this process to document the progression of water quality. Approximately 24 well volumes were removed from this well over 3 days, prior to sampling. The sample intake point was positioned above the screened interval (165 m to 180 m depth), at a depth of 160 m.

3.1.4 Tailings Storage Facility Well MW06-07

This well was installed in layered Intermediate Volcanic (IV) and quartzite (QTZ) rock. Approximately 65 well volumes were purged from this well over 3 days to clarify the silty groundwater initially recovered (groundwater eventually did clarify). The sample intake point was positioned above the screened interval (198 m to 212 m depth), at a depth of 110 m.

3.2 Water Quality

All of the groundwater quality results obtained in 2003, 2004, and 2006 are presented in Table 3-1. Since no specific criteria exist for groundwater quality, results are compared with the CEQG for freshwater aquatic life and MMER guidelines for discussion purposes only. None of the groundwater quality results exceed the MMER, although some results exceed the CEQG.

Table 3-2 presents a summary of the annual average concentrations of conductivity, sodium, and chloride from each well.

Table 3-2: Summary of Parameters Related to Salinity

Location	Monitoring Well	Lithology	Sampling Year	Conductivity (uS/cm)	Sodium (mg/L)	Chloride (mg/L)
			2003	1855	21	624
	MW03-01	UM	2004	2500	327	845
Goose Island			2006	460	28	65
Goose Island	MW02 02	IF	2003	660	6	5
	MW03-02	IF	2004	1104	90	255
	MW06-06	IF	2006	1306	57	318
Α	verage within G	Goose Island Pit		1314	88	352
North Portage	MW03-03	Portage IV	2003	350	17	50
North Fortage	MW 03-03	romage IV	2004	627	32	121
	Average within	n Portage Pit		489	24	86
Averag	e within Goose I	sland and Portage l	Pit	1108	72	285
Second Portage	MW03-04	Portage IV	2003	410	53	13
Lake	MW06-07	QTZ/Portage IV	2006	440	8	33
Aver	age within Tailir	425	30	23		

Notes: all concentrations shown are annual averages

n/s = not sampled

Figure 3-1 is a trilinear plot (Piper plot) showing general trends in the major ion chemistry of groundwater for the different lithologies. Lake water quality is also shown for comparison (Azimuth, 2003). Lake water quality has a fairly consistent chemical signature while the chemistry of groundwater shows distinct signatures for each lithology. Groundwater generally plots away from the signature of lake water, although groundwater from two of the IV wells (MW03-03 and TSF well MW06-07) is chemically similar to that of lake water.

3.2.1 UM Well MW03-01

A total of three samples were collected from UM well MW03-01 during two sampling events in 2006. Two of these samples (one of which was a field duplicate) were collected during the first sampling event, and the remaining sample was collected during the second sampling event.

The chemistry of groundwater at MW03-01 has considerably stabilized in 2006. By the end of the second round of sampling of this well in 2006, a total of 11.5 well volumes of water have been removed since its installation in 2003, providing further confidence in the results of the 2006 monitoring round. The chemical signature is closer to that of natural groundwater, having a higher proportion of carbonate alkalinity while conductivity and the concentration of total and most dissolved constituent concentrations are lower than in previous years. Dilution from external sources is not considered as no water was introduced into the well since drilling.

In 2006, the field conductivity of samples collected from MW03-01 ranged from 382 to 538 uS/cm, significantly lower than those reported in 2003 to 2004 (ranged from 1855 to 2500 uS/cm. Calculated TDS concentrations were also lower in 2006, ranging from 125 to 292 mg/L, as compared to 793 to 1335 mg/L in 2003 to 2004.

The chloride-sodium ratios in samples collected from MW03-01 in 2006 (2.2 to 2.4) are similar to that of 2004 (2.6), and significantly lower than that of 2003 (28 to 31). In 2004, this discrepancy was due to a significantly higher sodium concentration relative to the 2003 sodium concentrations (327 mg/L in 2004, versus 20 and 22 mg/L in 2003). In 2006, this discrepancy is more due to significantly lower chloride concentrations (33.7 to 128 mg/L in 2006, versus 621 to 845 mg/L in 2003 to 2004). The concentrations of some other major cations (*i.e.*, calcium and magnesium) are also lower, while other major anions (*i.e.*, sulphate and bicarbonate) are higher.

Concentrations of dissolved aluminium (0.3 mg/L), dissolved chromium (0.0012 mg/L), and dissolved iron (0.84 and 0.85 mg/L) in the samples collected from MW03-01 during the first 2006 sampling event exceed the applicable CEQG (0.001/0.0089 mg/L for chromium, 0.1 mg/L for aluminium, and 0.3 mg/L for iron). Concentrations of dissolved fluoride (0.16 to 0.17 mg/L) in the samples collected during both 2006 sampling events also exceed the applicable CEQG (0.12 mg/L). Concentrations of some total metals also exceed the CEQG. Total metal concentrations in groundwater samples are a reflection of total suspended solids (TSS).

In 2006, the dissolved concentrations of most metals of environmental interest were generally lower than in 2003 and 2004, with the exception of dissolved iron and chromium which are slightly higher and exceed CEQG in 2006.

3.2.2 IF Well MW06-06 (replacement well for MW03-02)

Two samples were collected from IF well MW06-06 in 2006, one of which was a field duplicate. This well replaces IF well MW03-02. A small amount of calcium chloride was introduced into this well prior to development, however the low calcium levels measured while it was being purged, and the large volume of purge water removed from this well (24 well volumes) suggest that the bulk of the calcium chloride was removed prior to sampling. The water collected from this well was clear, relatively free of sediments. The high purge volume, clarity of the well water and good duplicate reproducibility offer high confidence that the water quality is representative of the intersected formation groundwater.

The field conductivity of the samples collected from MW06-06 was 1306 uS/cm. This is similar to the field conductivity of the sample collected from MW03-02 in 2004, which was 1104 mg/L. Calculated TDS concentrations are similar in samples collected from these two wells, ranging from 588 to 678 mg/L in the samples from MW06-06, and 499 to 500 mg/L in the samples collected from MW03-02.

The chloride-sodium ratios in samples collected from MW06-06 (5.2 to 5.9) are higher than the chloride-sodium ratios in both samples from MW03-02 (2.8 in 2004 and 0.9 in 2003). In the case of the MW06-06 ratio compared to the MW03-02 ratio from 2004, this is due to lower sodium concentrations (55.9 to 58.2 mg/L in the MW06-06 samples versus 89.5 mg/L in the MW03-02 sample). of the MW06-06 chloride-sodium ratio compared to the MW03-02 ratio from 2003, this is due to significantly higher chloride concentrations (304 to 331 mg/L in the MW06-06 samples versus 5.4 mg/L in the MW03-02 sample). The chloride concentrations in the MW06-06 and 2004 MW03-02 samples are similar (304 to 331 mg/L in the MW06-06 samples versus 251 to 259 mg/L in the MW03-02 samples). The sodium concentrations in the MW06-06 samples are higher than in the 2003 MW03-02 samples (55.9 to 58.2 mg/L in the MW06-06 samples versus 6.29 mg/L in the MW03-02 sample. The concentrations of other major cations (i.e., calcium, magnesium, potassium) do not differ appreciably between samples from the different wells and sampling events, however, the concentrations of the other major anions (i.e., bicarbonate and sulphate) do show some differences, as bicarbonate in the MW06-06 samples and MW03-02 samples from 2004 are lower than the MW03-02 samples from 2003 (50.8 to 60.9 mg/L versus 125 mg/L), and the sulphate concentrations in the MW06-06 samples are higher than the MW03-02 samples from 2004 (56 to 65.1 mg/L versus 38.2 to 38.4 mg/L), and much lower than the MW03-02 samples from 2003 (56 to 65.1 mg/L versus 263 mg/L).

Concentrations of dissolved fluoride (0.55 and 0.63 mg/L) in samples collected from MW06-06 exceed the applicable CEQG (0.12 mg/L). Dissolved concentrations of most metals of environmental interest were generally lower in samples collected from MW06-06 as compared to samples collected from MW03-02, resulting in a fewer number of CEQG exceedances in the MW06-06 samples.

3.2.3 QTZ/IV Well MW06-07 in Tailings Storage Facility (replacement well for MW03-04)

Two samples were collected from MW06-07 in 2006, one of which was a field duplicate. This well replaces MW03-04, sampled only in 2003.

A very large volume of water was removed from this well to clarify the groundwater (65 well volumes). Based on the clarity and intensity of the purge, there is a high confidence that the water quality from this well is representative of the formation groundwater.

The concentration of dissolved major ions and trace metals are generally lower than they were in 2003 at well MW03-04. The field conductivity of the samples collected from MW06-07 was 440 uS/cm. This is similar to the field conductivity of the samples collected from MW03-04, which range from 370 – 450 uS/cm. TDS concentrations were also similar in samples collected from these two wells, ranging from 162 to 172 mg/L in the samples from MW06-07 as compared to 154 mg/L in the sample collected from MW03-04.

The chloride-sodium ratios in samples collected from MW06-07 (both 4.3) are higher than the ratio in the MW03-04 sample (0.25). This is due to higher chloride concentrations (33.3 to 33.5 mg/L in the MW06-07 samples versus 13.4 mg/L in the MW03-04 sample), and significantly lower sodium concentrations (7.7 to 7.8 mg/L in the MW06-07 samples versus 52.9 mg/L in the MW03-04 sample). Some other major ions (*i.e.*, calcium and magnesium) are higher in the MW06-07 samples as compared to the MW03-04 sample, while other major ions (*i.e.*, potassium and sulphate) are lower.

Concentrations of dissolved copper (0.005 and 0.008 mg/L) and dissolved fluoride (0.2 mg/L in one sample) in samples collected from MW06-07 exceed the applicable CEQG (0.003 for copper and 0.12 mg/L for fluoride).

Dissolved concentrations of most metals of environmental interest were generally lower in the samples collected from MW06-07 as compared to the sample collected from

MW03-04, resulting in a fewer number of dissolved metal CEQG exceedances in the MW06-07 samples.

3.3 Quality Assurance/Quality Control

Duplicate pairs of samples were collected at each sampled monitoring well in 2006, and analyzed for the same set of parameters. Table 3-3 presents the RPD values calculated from these duplicate results. The results indicate that the large majority of analytical results have adequate precision, as the difference between duplicate pairs is generally less than 20%. Exceptions to this in samples from MW06-06 include: total suspended solids (55% RPD), total aluminium (21% RPD), total copper (133% RPD), total nickel (35% RPD), and dissolved manganese (67% RPD); in samples MW06-07: dissolved copper (46% RPD) and dissolved fluoride (58% RPD). All other RPD values that are greater than 20% for monitoring wells sampled in 2006 should be disregarded, as they correspond to results that less than 5 times the MDL. In these cases, a margin of +/- MDL is considered acceptable, and has been complied with.

The database of groundwater chemistry data obtained to date is considered adequate for the purpose of evaluating the load of dissolved metals from groundwater since dissolved metal concentrations showed good correlation between data sets. It is also considered adequate to predict the salinity and major ion concentration of groundwater inflow into pits during operation. Groundwater salinity and the concentration of major ions were modelled at various time steps during operation to simulate upwelling of brackish water into the open pits (Golder, 2007e). The estimates are based on the depth profile of TDS and chloride concentration for the Meadowbank site together with data from deep groundwater wells at other sites. For the purposed of pit inflow groundwater quality predictions the Meadowbank site data considered the ratios of TDS to chloride and sodium, as well as other major ions at all wells. This method, together with the high-confidence dataset obtained in 2006, minimizes the possible effects of dilution on measured groundwater salinity.

4.0 CONCLUSION

Groundwater samples were obtained from each of the major lithologies found at the Goose Island and Portage deposits at the Meadowbank Project in Nunavut in 2006. Four new wells were installed in 2006 as part of a commitment to Nunavut Impact Review Board (NIRB) to replace inoperable wells. One of these wells became inoperable shortly after installation and could not be sampled. Two previous sampling events took place in 2003 and 2004, respectively (Golder, 2004a and 2004b).

All of the groundwater samples collected during all of the sampling events met the MMER criteria. However, most groundwater samples show one or more exceedances to a limited number of freshwater CEQG, including: aluminium, arsenic, chromium, copper, fluoride, iron, lead, molybdenum, silver, and zinc. Comparison to CEQG is qualitative only as groundwater will not be discharged directly to Second or Third Portage Lake. Groundwater that will accumulate in the pit during operation, if any, will be pumped to the attenuation pond and be monitored before discharge.

Constituent concentrations in groundwater and the number of CEQG exceedances in samples from each lithology were generally lower in 2006 compared to previous years, with few exceptions. The conductivity of groundwater samples from each lithology was similar in 2006 as compared to previous years, with the exception of MW03-01 which showed lower conductivity values in 2006. The high rate of development, clarity of groundwater samples and good reproducibility of duplicate results convey high confidence that the water samples obtained adequately represent formation groundwater.

Yours very truly,

GOLDER ASSOCIATES LTD.

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PA/VB/DC/cm/mrb

Attachments

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REFERENCES

- Azimuth Consulting Group Inc., 2003. Baseline Aquatic Environment Assessment Report Meadowbank Study Area Lakes, Nunavut. Report prepared for Cumberland Resources Ltd., March 2003.
- Canadian Council of Ministers of the Environment, 2003. Canadian Environmental Quality Guidelines for the Protection of Freshwater Aquatic Life.
- Cumberland Resources Ltd., 2005. Meadowbank Gold Project Baseline Physical Ecosystem Report. 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.
- Golder Associates Ltd., 2005. Report on Mine Site Water Quality Predictions, Meadowbank Gold Project, Nunavut. October 2005.
- Golder Associates Ltd., 2007e. Updated Predictions of Brackish Water Upwelling in Open Pits with Mining Rate of 8500 tpd, Meadowbank Project, Nunavut. July 27, 2007.
- Metal Mining Effluent Regulations (MMER) SOR/2002-222, June 6, 2002.
- 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 3-1 Groundwater Quality Results Meadowbank Project Cumberland Resources Ltd.

	Canadian Water	Metal Mine				Ultramafic I	Rock					Iron Formation	Rock	i	
	Quality Guideline	Effluent				Goose Isla	and				Goose	Island			e Island
	(Aquatic Life) ⁶	Regulation ^r				UM MW03-0	1				IF MW0:	: 3-02			F 06-06
Laboratory sample number	(CEQG)	(MMER)	9755-2 07-Sep-03	9755-3 07-Sep-03	9044-01 Aug-7-04	9044-02 Aug-7-04	12393-01 Aug-8-06	12393-02 Aug-8-06	12395-01 Aug-14-06	9756-03 28-Sep-03	9043-01 Jul 31-04	9043-01 Jul 31-04	9043-02 Jul 31-04	12567-01 24-Aug-06	12567-02 24-Aug-06
QA/QC			0, 000 00	FD FD	/ lug / U l	FD	, ag o oo	FD	7.ug 11.00	20 000 00	00.01.01	Decant °	FD	217 kg 00	FD
FIELD PARAMETERS Depth of Screen Midpoint (m)			150	150	150	-	150	150	150	143	143	143	143	173	173
Temperature (oC) pH (s.u.)	6.5 - 9.0	6.0-9.5	11.7 7.36	11.7 7.36	8 8.03	-	7.7 7.93	-	9.9 7.58	3.5 7.68	12 7.19	-	-	12.4 7.59	-
Conductivity (uS/cm) Redox (mV)			1855	1855	2500 119	-	382	-	538	660 8.2	1104 32	-	-	1306	-
Dissolved Oxygen (mg/L)	5.5 - 9.5		2.0	2.0	2.0	-	8.6	-	4.8	0.8	7.0	-	-	1.15	-
Alkalinity (mg/L as CaCO3) TDS (mg/L)			19 - 22 -	19 - 22 -	27	-	33.9 193	-	48.8 405	96 - 100 -	51 -	-	-	46.3 650	-
Clarity LABORATORY PARAMETERS			minor silt	minor silt	clear	-	clear	clear	clear	clear	silty	clear	silty	clear	clear
Calculated TDS (mg/L) pH (s.u.)	6.5 - 9.0	6.0-9.5	793 7.24	793 7.30	1335 7.46	-	125	125	292 7.36	500 7.04	499 7.25	-	7.34	588 7.33	678 7.29
Conductivity (uS/cm)	6.5 - 9.0	6.0-9.5	-	-	2900	-	-	-	634	-	1270	-	1280	1210	1200
Total Alkalinity CaCO3 (mg/L) Bicarbonate Alkalinity HCO3 (mg/L)			30 36.6	30 36.6	27.3 33.3	-	-	-	51 62.2	103 125	41.6 50.8	-	42.9 52.4	49.9 60.9	49.9 60.9
Carbonate Alkalinity CO3 (mg/L) Hydroxide Alkalinity OH (mg/L)			< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	-	-	-	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	-	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
Dissolved Sulphate SO4 (mg/L) Hardness CaCO3 (mg/L)			15.6 262*	15.8 267*	15.9 380	-	42.8 75.9	43.1 77.3	51.1 150	263 290	38.4 308	-	38.2	65.1 345	56 347
Hardness (Total) CaCO3 (mg/L) Total Suspended Solids			318*	388*	391 13	-	82	81.6	148 4	316	313 96	292	- 90	326 16	316 28
Water Type			Ca-Cl	Ca-Cl	Na + K-Na-Cl	-	Ca-Na-Mg-Cl-SO4-HCO3	Ca-Na-Mg-CI-SO4	Na-Ca-Mg-Cl	Ca-Mg-SO4-HCO3	Na + K-Na-Ca-Mg-Cl	Na + K-Na-Ca-Mg-Cl	-	Ca-Na-Cl	Ca-Na-Cl
Total Metals (mg/L) Aluminum ¹ Al	0.005 - 0.1		4.16	1.2	0.25	_	0.4	0.48	0.13	1.07	2.31	0.37	_	0.16	0.13
Antimony Sb		0.5	<0.001	< 0.001	0.0004	-	<0.0002	< 0.0002	< 0.001	<0.001	0.0003	0.0002	-	<0.001	< 0.001
Arsenic As Barium Ba	0.005	0.5	<0.001 0.18	0.017 0.2	0.004 0.301	-	0.0005 0.027	0.0006 0.028	0.002 0.052	0.002 0.028	0.0038 0.096	0.002 0.076	-	0.003 0.024	0.003 0.024
Beryllium Be Bismuth Bi			<0.001 <0.001	<0.001 <0.001	<0.0002 <0.0002	-	<0.0002 <0.0002	<0.0002 <0.0002	< 0.001 < 0.001	<0.001 <0.001	< 0.0002 < 0.0002	< 0.0002 < 0.0002	-	<0.001 <0.001	<0.001 <0.001
Boron B Cadmium ³ Cd	0.064-0.107 "		0.59 0.00024	1.07 0.00037	2.43 <0.00004	-	0.11 <0.0004	0.11 <0.00004	0.27 < 0.0002	0.06 <0.0002	0.97 0.00018	0.87 0.0001	-	0.36 <0.0002	0.31 <0.0002
Calcium Ca			72	87.1	95.4	-	19.1	19.1	33.4	68.3	74.7	72.5	-	89.3	86.1
Chromium ² Cr Cobalt Co	0.001 / 0.0089		0.049 0.004	0.32 0.016	0.004 0.0009	-	0.0017 0.0005	0.0021 0.0005	< 0.001 < 0.001	0.003 0.004	0.008 0.0072	0.0012 0.0045	-	<0.001 0.002	<0.001 0.002
Copper ³ Cu Iron Fe	0.002 - 0.004 0.3	0.3	0.044 6.05	0.071 10.7	0.0035 1.14	-	0.0022 1.02	0.002 1.11	< 0.001 1.1	0.004 2.96	0.007 4.72	0.002 0.68	-	0.001 0.57	0.005 0.57
Lead ³ Pb Lithium Li	0.001 - 0.007	0.2	0.013 0.025	0.03 0.031	0.0025 0.04	-	0.0015 0.0031	0.0013 0.0032	< 0.001 0.006	0.002 0.021	0.0035 0.021	0.0005 0.017	-	<0.001 0.029	<0.001 0.028
Magnesium Mg			33.2	41.5	37.1	-	8.29	8.2	15.6	35.2	30.7	27	-	25	24.5
Manganese Mn Mercury Hg	0.000004		0.073	0.72	0.415 <0.00002	-	0.309 <0.00002	0.304 <0.00002	0.93 < 0.00002	1.04 <0.00002	0.517 < 0.00002	0.417 < 0.00002	-	0.41 <0.00002	0.43 <0.00002
Molybdenum Mo Nickel ³ Ni	0.073 0.025 - 0.15	0.5	<0.0005 0.056	0.011 0.13	0.0083 0.0045	-	0.013 0.002	0.013 0.0022	0.012 < 0.001	0.022 0.008	0.015 0.017	0.013 0.011	-	0.0087 0.007	0.009 0.01
Phosphorus P Potassium K			0.069 7.31	0.075 9.1	0.16 9.13	-	<0.03 3.63	<0.03 3.68	< 0.15 6.1	0.19 5.94	0.34 7.8	0.09 6.9	-	1.2 6.7	1.2 6.5
Selenium Se Silicon SiO2	0.001		<0.001 0.4	<0.001 4.12	<0.0002 5.07	-	<0.0002 2.31	<0.0002 2.71	< 0.001 2.7	<0.001 10.7	< 0.0002 13.8	< 0.0002 7.57	-	<0.001 4.7	<0.001 4.6
Silver Ag	0.00010		0.0064	0.011	0.00028	-	<0.00005	< 0.00005	< 0.00025	< 0.0001	0.00067	0.00016	-	< 0.00025	< 0.00025
Sodium Na Strontium Sr			22 0.68	25 0.79	357 1.56	-	16 0.119	15.9 0.12	50.5 0.28	6.81 0.26	91.9 0.759	84.9 0.691	-	59 0.75	55.9 0.72
Tellurium Te Thallium TI	0.0008		<0.001 <0.0001	<0.001 <0.0001	<0.0002 <0.00002	-	<0.0002 <0.00002	<0.0002 <0.00002	< 0.001 < 0.0001	<0.001 <0.0001	< 0.0002 0.00006	< 0.0002 < 0.00002	-	<0.001 <0.0001	<0.001 <0.0001
Thorium Th Tin Sn			<0.0005 <0.001	0.0038 0.002	<0.0001 0.0009	-	0.0005 <0.0002	0.0006 <0.0002	< 0.0005 < 0.001	0.0007 <0.001	< 0.0001 0.0003	< 0.0001 < 0.0002	-	<0.0005 <0.001	<0.0005 <0.001
Titanium Ti Uranium U			0.01 0.0012	0.22 0.0017	0.01 0.0003	-	0.024 0.0006	0.029 0.0006	0.006 < 0.0005	0.063 0.0084	0.158 0.002	0.02 0.0013	-	0.005 0.0018	0.005 0.0018
Vanadium V Zinc Zn	0.03	0.5	<0.001 0.063	0.029 0.087	0.0004 0.007	-	0.0007 0.005	0.0008 0.005	< 0.005 < 0.001 < 0.005	0.002 0.014	0.0039 0.042	0.0006 0.015	-	0.002 <0.005	0.002 <0.005
Zirconium Zr	0.03	0.5	<0.0010	<0.0010	<0.002	-	<0.002	<0.003	< 0.003	<0.0010	< 0.002	< 0.002	-	<0.00	<0.003
Dissolved Metals (mg/L) Aluminum ¹ Al	0.005 - 0.1		0.051	0.011	0.005	-	0.3	0.3	< 0.005	0.47	0.019	-	-	<0.005	<0.005
Antimony Sb Arsenic As	0.0050	0.5	<0.001 <0.001	<0.001 0.003	0.0002 0.0038	-	<0.0002 0.0005	<0.0002 0.0005	< 0.001 0.0030	<0.001 0.002	0.0003 0.0020	-	-	<0.001 0.002	<0.001 0.002
Barium Ba	0.0000	0.0	0.12 <0.001	0.13 <0.001	0.3 <0.0002	-	0.025 <0.0002	0.025 <0.0002	0.051 < 0.001	0.023 <0.001	0.086 < 0.0002	-	-	0.018 <0.001	0.019 <0.001
Beryllium Be Bismuth Bi			< 0.001	< 0.001	< 0.0002	-	<0.0002	< 0.0002	< 0.001	<0.001	< 0.0002	-	-	< 0.001	< 0.001
Boron B Cadmium ³ Cd	0.064-0.107 "		0.53 0.00007	1.03 0.00012	2.39 <0.00004	-	0.1 <0.00004	0.1 <0.00004	0.27 < 0.0002	0.06 <0.0002	0.94 0.00016	-	-	0.37 <0.0002	0.44 <0.0002
Calcium Ca Chromium ² Cr	0.001 / 0.0089		65.6 <0.001	67 <0.001	94.2 0.0002	-	17.6 0.0012	17.9 0.0012	33.7 < 0.001	63.1 0.001	73.5 0.0004	-	-	87.1 <0.001	85.3 <0.001
Cobalt Co	0.002 - 0.004	0.3	0.001 0.002	0.001 0.002	0.0002 0.0008 0.0004	-	0.0004 0.0016	0.0004 0.0016	< 0.001 < 0.001 < 0.001	0.004 0.004	0.0060 0.0014	-	-	<0.001 <0.001 0.001	<0.001 <0.001 <0.001
Iron Fe	0.3		< 0.05	0.07	0.08	-	0.84	0.85	0.2	1.91	0.05	-	-	< 0.05	<0.05
Lead ³ Pb Lithium Li	0.001 - 0.007	0.2	<0.001 0.017	<0.001 0.017	<0.0002 0.033	-	0.0014 0.0028	0.0012 0.0027	< 0.001 0.005	0.001 0.019	< 0.0002 0.016	-	-	<0.001 0.028	<0.001 0.025
Magnesium Mg Manganese Mn			23.4 0.06	24.3 0.28	35.1 0.381	-	7.76 0.286	7.92 0.293	16.1 0.980	32.1 0.96	30.2 0.492		-	24.0 0.006	23.6 0.003
Mercury Hg Molybdenum Mo	0.000004 0.073		- <0.0005	0.0057	<0.0002 0.008	-	<0.00002 0.012	<0.00002 0.012	< 0.00002 0.013	<0.00002 0.018	< 0.02 0.014	-	-	<0.0002 0.0081	<0.0002 0.0069
Nickel ³ Ni	0.025 - 0.15	0.5	0.006	0.005	0.0026	-	0.0019	0.0019	< 0.001	0.007	0.012	-	-	0.005	0.004
Phosphorus P Potassium K			0.1 5.71	0.15 5.95	0.04 8.56	-	<0.03 3.27	<0.03 3.28	< 0.15 6.1	0.16 5.36	< 0.03 7.43	=	-	0.9 6.6	0.8 5.8
Selenium Se Silicon SiO2	0.001		<0.001 0.32	<0.001 3.27	<0.0002 3.89	-	<0.0002 1.96	<0.0002 1.98	< 0.001 2.50	<0.001 7.98	< 0.0002 5.88	-	-	<0.001 4.1	<0.001 3.8
Silver Ag Sodium Na	0.0001		<0.0001 20	<0.0001 22	<0.00005 327.0	-	<0.00005 15.0	<0.00005 15.6	< 0.00025 52.5	<0.0001 6.29	< 0.00005 89.5	-	-	<0.00025 58.2	<0.00025 55.9
Strontium Sr Tellurium Te			0.58 <0.001	0.59 <0.001	1.46 <0.0002	-	0.111 <0.0002	0.114 <0.0002	0.29 < 0.001	0.24 <0.001	0.736 < 0.0002	-	-	0.72 <0.001	0.76 <0.001
Thallium TI	0.0008		<0.001 <0.0001 <0.0005	<0.001 <0.0001 <0.0005	< 0.00002	-	<0.0002 <0.00002 0.0004	<0.0002 <0.00002 0.0004	< 0.001 < 0.0001 < 0.0005	<0.001 <0.0001 <0.0005	< 0.00002	-	-	<0.001 <0.0001 <0.0005	<0.001 <0.0001 <0.0005
Tin Sn			<0.001	<0.001	<0.0001 <0.0002	-	<0.0002	< 0.0002	< 0.001	<0.001	< 0.0001 < 0.0002	-	-	<0.001	< 0.001
Titanium Ti Uranium U			<0.001 0.0006	<0.001 0.0006	0.0003 0.0003	-	0.019 0.0006	0.018 0.0006	< 0.001 < 0.0005	0.024 0.0077	0.0008 0.0013	=	-	<0.001 0.0016	<0.001 0.0014
Vanadium V Zinc Zn	0.03	0.5	<0.001 0.006	<0.001 <0.005	<0.0002 0.002	-	0.0006 0.005	0.0006 0.005	< 0.001 < 0.005	<0.001 0.012	< 0.0002 0.029	<u>.</u>	-	0.001 <0.005	0.001 <0.005
Zirconium Zr			<0.0010	<0.0010	<0.002	-	<0.002	<0.002	< 0.01	<0.0010	< 0.002	-	-	<0.01	<0.01
Dissolved Anions (mg/L) Dissolved Fluoride F	0.12		< 0.05	< 0.05	0.12	-	0.16	0.17	0.16	0.35	0.6	-	0.57	0.55	0.63
Dissolved Chloride Cl Nutrients (mg/L)		I.	626	621	845	-	34.7	33.7	128	5.4	251	-	259	304	331
Nitrate and Nitrite NO3 + NO2			< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	< 0.05	< 0.05	-	< 0.05	-	
Dissolved Nitrate NO3 Nitrite NO2	0.060		=	=	< 0.05	-	< 0.05 0.003	< 0.05 0.004	< 0.1 0.002	< 0.05 0.005	< 0.05 0.006	=	< 0.05 0.007	< 0.25 0.005	< 0.25 0.004
Ammonia Nitrogen N Total Kjeldahl Nitrogen N			0.38 0.7	0.37 0.6	0.3	- 0.5	0.21 0.3	0.19 0.3	-	0.19	0.07 0.4	<u>.</u>	0.05	0.6	0.6
Total Phosphorus P Cyanide (mg/L)			0.07	0.08	0.05	0.05	0.04	0.04	-	0.10	0.23	-	0.25	-	-
Total CN Free CN		1.0	-	-	<0.01 <0.1	-	- -	-	-	-	<0.01 <0.1	-	-	-	-
GIV		 			NO. 1			!	t		NO.1				

- NOTES:

 1. Freshwater Aquatic Life Guideline is pH, calcium and DOC dependent. Exceedances identified apply pH criterion.

 2. Freshwater Aquatic Life Guideline for chromium depends on valence of chromium ion (Cr(III) = 0.0089 mg/L, Cr(VI) = 0.001 mg/L).

 3. Freshwater Aquatic Edit Guideline is hardness dependent.

 4. Freshwater Aquatic Life Guideline listed for inorganic fluorides.

 5. CECG stipulates that concentrations that stimulate weed growth should be avoided.

 6. CECG (2003 update) Freshwater Guidelines and Criteria are based ortotal metal concentrations

 7. Maximum authorized monthly mean concentration (based ortotal concentration) (June 6, 2002)

 8. Sample decanted off of 9043-01 due to high TSS and reanalysed for total metals

 9. Values in italics indicate detection limit is above standard

 # Range is site specific

 < = Less than the analytical detection limit

 Not analyzed

 * Hardness calculated from calcium and magnesium concentrations

 ** Laboratory measured values

 FD = Field Duplicate

Table 3-1 Groundwater Quality Results Meadowbank Project Cumberland Resources Ltd.

		ı	ı	Inte	ermediate Volcanic Rock		Interr	nediate Volcanic		1	r 1
		Canadian Water	Metal Mine	inte	North Portage			Arm (tailings dis	nosal area)		Mathad
		Quality Guideline	Effluent		IV		IV		Z/IV	Field Blank	Method Detection Limit
		(Aquatic Life) ⁶	Regulation'		MW03-03		MW03-04		2 / IV 06-07		
Laboratory	sample number	(CEQG)	(MMER)	9756-02	9045-01	9045-02	9756-01	12568-01	12568-02	9045-03	
	Date QA/QC			25-Sep-03	Aug-9-04	Aug-9-04 FD	18-Sep-03	30-Aug-06	30-Aug-06 FD	Aug-9-04	
FIELD PARAMETERS				<u></u>	<u> </u>		<u></u>				
Depth of Screen Midpo Temperature (oC)	oint (m)			111 2.2	111 10.3	111	169 3.3	205 5	205 5	-	-
pH (s.u.)		6.5 - 9.0	6.0-9.5	8.63	7.77	-	7.67	8	8	-	-
Conductivity (uS/cm) Redox (mV)				350 79.9	627 3	- -	370 - 450 -	440	440	-	-
Dissolved Oxygen (mg		5.5 - 9.5		1.0	1.5	-	-	8	8	-	-
Alkalinity (mg/L as Ca0 TDS (mg/L)	203)			87 -	102	-	-	84 220	84 220	-	-
Clarity				clear	clear	-	cloudy	clear	clear	clear	-
LABORATORY PARA Calculated TDS (mg/L)			1	254	239		154	172**	162**		_
pH (s.u.)	,	6.5 - 9.0	6.0-9.5	7.83	7.96	-	-	8	7.57	5.81	-
Conductivity (uS/cm) Total Alkalinity CaCO3	(mg/L)			93.8	640 133	-	_	281 89	285 89	1 4.2	1
Bicarbonate Alkalinity I Carbonate Alkalinity C				114 < 0.5	162 < 0.5	-	-	108 < 0.5	108 < 0.5	5.1 < 0.5	0.5 0.5
Hydroxide Alkalinity Of	H (mg/L)			< 0.5	< 0.5	-	-	< 0.5	< 0.5	< 0.5	0.5
Dissolved Sulphate SC Hardness CaCO3 (mg/				26.6 136	6.2 210	-	63.8 53	4 106	3.76 107	< 0.5	0.5 1
Hardness (Total) CaCo	03 (mg/L)			144	216	-	-	124	128	0.3	1
Total Suspended Solid Water Type	ls			- Mg-Ca-Na + K-HCO3-CI	1 Ca-Mg-Na + K-Na-CI-HCO3	-	- Na + K-Na-SO4-HCO3	11 Ca-Mg-HCO3-CI	11 Ca-Mg-HCO3-CI	< 1 -	1 -
Total Metals (mg/L)				2				,			
Aluminum ¹	Al	0.005 - 0.1		0.018	0.12	-	-	1.08	1.06	0.002	0.005
Antimony Arsenic	Sb As	0.005	0.5	0.002 0.004	0.0002 0.015	-	-	< 0.001 0.001	< 0.001 0.002	< 0.0002 < 0.0002	0.001 0.001
Barium	Ba			0.02 <0.001	0.05 < 0.0002	-	-	0.11	0.11 < 0.001	< 0.0002	0.001 0.001
Beryllium Bismuth	Be Bi			<0.001	< 0.0002	-	-	< 0.001	< 0.001	< 0.0002 < 0.0002	0.001
Boron Cadmium ³	B Cd	0.064-0.107 "		0.09	0.19	-	-	< 0.05	< 0.05	< 0.01	0.05
Calcium	Ca			<0.0002 28	0.00006 47.7	-	-	< 0.0002 34.9	< 0.0002 36.4	< 0.00004 0.1	0.0002 0.05
Chromium ² Cobalt	Cr Co	0.001 / 0.0089		<0.001 <0.001	0.001 0.0004	-		0.006 0.001	0.005 0.001	< 0.0002 < 0.0002	0.001 0.001
Copper ³	Cu	0.002 - 0.004	0.3	<0.001	0.0014		-	0.011	0.011	0.0004	0.001
Iron Lead ³	Fe Pb	0.3 0.001 - 0.007	0.2	<0.05 0.001	0.46 0.0006	-		1.50 0.001	1.58 0.001	< 0.01 < 0.0002	0.05 0.001
Lithium	Li	5.501 - 0.007	0.2	0.007	0.0092	-	-	0.004	0.004	< 0.0002	0.001
Magnesium Manganese	Mg Mn			18 0.11	23.5 0.131	- -	-	8.81 0.073	9.04 0.074	< 0.01 0.0003	0.05 0.001
Mercury Molybdenum	Hg Mo	0.000004 0.073		<0.00002 0.056	< 0.00002 0.093	-	-	< 0.00002 0.0050	< 0.00002 0.0048	< 0.00002 0.0002	0.00002 0.0005
Nickel ³	Ni	0.025 - 0.15	0.5	0.003	0.0024	-	-	0.005	0.005	< 0.0002	0.0003
Phosphorus Potassium	P K			0.07 3.51	0.08 2.65	-	-	0.4 2.7	0.4 2.8	0.04 < 0.02	0.01 0.01
Selenium	Se	0.001		<0.001	< 0.0002	-	-	< 0.001	< 0.001	< 0.0002	0.001
Silicon Silver	SiO2 Ag	0.00010		3.78 <0.0001	5.96 0.00010	-	-	5 0.00090	5 0.00090	0.08 < 0.00005	0.05 0.00010
Sodium	Na			17.6	33.6	-	-	8.85	9.12	0.03	0.05
Strontium Tellurium	Sr Te			0.26 <0.001	0.581 < 0.0002	-	-	0.23 < 0.001	0.24 < 0.001	< 0.0002 < 0.0002	0.001 0.001
Thallium Thorium	TI Th	0.0008		<0.0001 <0.0005	< 0.00002 < 0.0001	-	-	< 0.0001 < 0.0005	< 0.0001 < 0.0005	< 0.00002 < 0.0001	0.0001 0.0005
Tin	Sn			<0.001	< 0.0002	-	-	< 0.001	< 0.001	< 0.0002	0.001
Titanium Uranium	Ti U			<0.001 0.012	0.0045 0.0088	-	-	0.032 0.0095	0.031 0.0097	< 0.0002 < 0.0001	0.001 0.0005
Vanadium Zinc	V Zn	0.03	0.5	<0.001 <0.005	0.0002 0.006	-	-	0.002 0.006	0.002 0.006	< 0.0002 0.004	0.001 0.005
Zirconium	Zr	0.00	0.5	<0.0010	< 0.002	-	-	< 0.01	< 0.01	< 0.002	0.001
Dissolved Metals (mg			1								
Aluminum ¹ Antimony	Al Sb	0.005 - 0.1		0.018 0.002	0.006 < 0.0002	-	0.72 0.001	0.040 < 0.001	0.042 < 0.001	-	0.005 0.001
Arsenic Barium	As Ba	0.0050	0.5	0.004 0.018	0.0130 0.048	-	0.007 0.03	< 0.001 0.086	0.0010 0.086	-	0.0010 0.001
Beryllium	Be			<0.001	< 0.0002	-	<0.001	< 0.001	< 0.001	-	0.001
Bismuth Boron	Bi B			<0.001 0.08	< 0.0002 0.17	- -	<0.001 <0.05	< 0.001 < 0.05	< 0.001 < 0.05	-	0.001 0.05
Cadmium ³	Cd	0.064-0.107 #		<0.0002	0.00004	-	<0.0002	< 0.0002	< 0.0002	-	0.0002
Calcium Chromium ²	Ca Cr	0.001 / 0.0089		26.3 <0.001	47.1 0.0003	-	15 <0.001	31 < 0.001	31.5 < 0.001	-	0.05 0.001
Cobalt	Co			<0.001	0.0003	-	0.003	< 0.001	< 0.001	-	0.0010
Copper ³ Iron	Cu Fe	0.002 - 0.004 0.3	0.3	<0.001 <0.05	0.0002 < 0.01	-	0.006 0.55	0.005 < 0.05	0.008 0.05	-	0.001 0.05
Lead ³	Pb	0.001 - 0.007	0.2	<0.001	< 0.0002	-	0.006	< 0.001	< 0.001	-	0.001
Lithium Magnesium	Li Mg			0.007 17.1	0.0081 22.4	-	0.015 3.81	0.002 6.83	0.002 6.92	-	0.001 0.05
Manganese	Mn	0.000004		0.1 <0.00002	0.130	-	0.049 <0.0002	0.032 < 0.00002	0.032	-	0.001
Mercury Molybdenum	Hg Mo	0.073		0.052	< 0.02 0.090	-	0.024	< 0.00002 0.004	< 0.00002 0.004	-	0.00002 0.001
Nickel ³ Phosphorus	Ni P	0.025 - 0.15	0.5	0.003 0.07	0.0018 < 0.03	-	0.003 5.58	0.002 0.3	0.002 0.3	-	0.001 0.01
Potassium	K			3.33	2.64	-	5.44	2.3	2.3	-	0.01
Selenium Silicon	Se SiO2	0.001		<0.001 3.62	< 0.0002 5.70	-	<0.001 10.2	< 0.001 2.70	< 0.001 2.70	-	0.001 0.05
Silver	Ag	0.0001		<0.0001	< 0.00005	-	<0.0001	< 0.00025	< 0.00025	-	0.0001
Sodium Strontium	Na Sr			16.5 0.24	32.0 0.556	-	52.9 0.14	7.7 0.2	7.8 0.2	-	0.1 0.001
Tellurium Thallium	Te TI	0.0008		<0.001 <0.0001	< 0.0002 < 0.00002	-	<0.001 <0.0001	< 0.001 < 0.0001	< 0.001 < 0.0001	-	0.001 0.0001
Thorium	Th	0.0000		<0.0005	< 0.0001	-	<0.0005	< 0.0005	< 0.0005	-	0.0005
Tin Titanium	Sn Ti			<0.001 <0.001	< 0.0002 0.0003	-	<0.001 0.003	< 0.001 < 0.001	< 0.001 < 0.001	-	0.001 0.001
Uranium	U			0.012	0.0087	-	0.013	0.008	0.008	-	0.0005
Vanadium Zinc	V Zn	0.03	0.5	<0.001 <0.005	< 0.0002 0.004	-	<0.001 0.022	< 0.001 < 0.005	< 0.001 < 0.005	-	0.001 0.005
Zirconium	Zr			<0.0010	< 0.002	-	<0.0010	< 0.01	< 0.01	-	0.001
Dissolved Anions (m Dissolved Fluoride ⁴	g/L) F	0.12	l	0.46	0.38	-	0.34	0.20	0.11	< 0.05	0.05
Dissolved Chloride	CI	0.12		50.4 50.4	121		13.4	33.3	33.5	< 0.05	0.05
Nutrients (mg/L)	NOS - NOS		1	0.45	0.05	0.01	.0.05		Т	0.05	0.04 / 0.05
Nitrate and Nitrite Dissolved Nitrate ⁵	NO3 + NO2 NO3			0.15 0.15	< 0.05 < 0.05	< 0.01	< 0.05 < 0.05	0.12	0.12	< 0.05 < 0.05	0.01 / 0.05 0.05
Nitrite	NO2 N	0.060		0.003	< 0.002	-	0.004	0.003	0.003	< 0.002	0.002
Ammonia Nitrogen Total Kjeldahl Nitrogen	n N			0.08	0.2	0.2]	-	-	< 0.2	0.01 0.2
Total Phosphorus Cyanide (mg/L)	Р			0.07	0.05	0.10	-	-	-	< 0.02	0.02
Total	CN		1.0		<0.01	<0.01	-	-	-	<0.01	-
Free	CN				<0.1	<0.1			-	<0.1	-

- NOTES:

 1. Freshwater Aquatic Life Guideline is pH, calcium and DOC dependent. Exceedances identified apply pH criterion.

 2. Freshwater Aquatic Life Guideline for chromium depends on valence of chromium ion (Cr(III) = 0.0089 mg/L, Cr(VI) = 0.001 mg/L).

 3. Freshwater Aquatic Life Guideline is hardness dependent.

 4. Freshwater Aquatic Life Guideline in Stardness dependent.

 5. CEQS stipulates that concentrations that stimulate weed growth should be avoided.

 6. CEQG (2003 update) Freshwater Guidelines and Criteria are based ortotal metal concentrations

 7. Maximum authorized monthly mean concentration (based ortotal concentration) (June 6, 2002)

 8. Sample decanted off of 9043-01 due to high TSS and reanalysed for total metals

 9. Values in italics indicate detection limit is above standard

 # Range is site specific

 < = less than the analytical detection limit.

 = not analyzed.

 **Hardness calculated from calcium and magnesium concentrations

 **Laboratory measured values.

 FD= Field Duplicate

QA/QC of Groundwater Quality Results Meadowbank Project Cumberland Resources Ltd.

		Goose U MW0	М	RPD (%)	ı	s Island F 06-06	RPD (%)	dispos QTZ	ge Arm (tailings al area) Z / IV 06-07	RPD (%)	Method Detection Limit
Laboratory s	sample number Date QA/QC	12393-01 Aug-8-06	12393-02 Aug-8-06 FD	KFD (70)	12567-01 24-Aug-06	12567-02 24-Aug-06 FD	KFD (78)	12568-01 30-Aug-06	12568-02 30-Aug-06 FD	KFD (70)	
LABORATORY PARAI	METERS										
Calculated TDS (mg/L) pH (s.u.)		125	125	0	588 7.33	678 7.29	14 1	172** 8	162** 7.57	6 0	
Conductivity (uS/cm)		-	-	-	7.33 1210	1200	1	o 281	285	1	-
Total Alkalinity CaCO3	` ` '	-	-	-	49.9	49.9	0	89	89	0	1
Bicarbonate Alkalinity H Carbonate Alkalinity CC		-	-	-	60.9 < 0.5	60.9 < 0.5	0	108 < 0.5	108 < 0.5	0	0.5 0.5
Hydroxide Alkalinity OH		-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	0.5
Dissolved Sulphate SO		42.8	43.1	1	65.1	56	15	4	3.76	0	0.5
Hardness CaCO3 (mg/l Hardness (Total) CaCO		75.9 82	77.3 81.6	2 0	345 326	347 316	1 3	106 124	107 128	1 3	1 1
Total Suspended Solids		-	-	-	16	28	55	11	11	0	1
Total Metals (mg/L)											
Aluminum	Al	0.4	0.48	18	0.16	0.13	21	1.08	1.06	2	0.005
Antimony Arsenic	Sb As	<0.0002 0.0005	<0.0002 0.0006	- 18	<0.001 0.003	<0.001 0.003	0	< 0.001 0.001	< 0.001 0.002	- 67*	0.001 0.001
Barium	Ва	0.027	0.028	4	0.024	0.024	0	0.11	0.11	0	0.001
Beryllium Bismuth	Be Bi	<0.0002 <0.0002	<0.0002 <0.0002	-	<0.001 <0.001	<0.001 <0.001	-	< 0.001 < 0.001	< 0.001 < 0.001	-	0.001 0.001
Boron	В	0.0002	0.0002	0	0.36	0.31	15	< 0.001	< 0.001	-	0.001
Cadmium	Cd	<0.00004	< 0.00004	-	<0.0002	<0.0002	-	< 0.0002	< 0.0002	-	0.0002
Calcium	Ca	19.1	19.1	0	89.3	86.1	4	34.9	36.4	4	0.05
Chromium Cobalt	Cr Co	0.0017 0.0005	0.0021 0.0005	21* 0	<0.001 0.002	<0.001 0.002	0	0.006 0.001	0.005 0.001	18 0	0.001 0.001
Copper	Cu	0.0022	0.002	10	0.001	0.005	133	0.011	0.011	0	0.001
Iron	Fe Pb	1.02	1.11	8 14	0.57	0.57	0	1.50	1.58 0.001	5 0	0.05 0.001
Lead Lithium	Pb Li	0.0015 0.0031	0.0013 0.0032	14 3	<0.001 0.029	<0.001 0.028	4	0.001 0.004	0.001 0.004	0	0.001 0.001
Magnesium	Mg	8.29	8.2	1	25	24.5	2	8.81	9.04	3	0.05
Manganese	Mn	0.309	0.304	2	0.41	0.43	5	0.073	0.074	1	0.001
Mercury Molybdenum	Hg Mo	<0.00002 0.013	<0.00002 0.013	0	<0.00002 0.0087	<0.00002 0.009	3	< 0.00002 0.0050	< 0.00002 0.0048	4	0.00002 0.0005
Nickel	Ni	0.002	0.0022	10	0.007	0.01	35	0.005	0.005	0	0.001
Phosphorus Potassium	P K	<0.03 3.63	<0.03 3.68	- 1	1.2 6.7	1.2 6.5	0 3	0.4 2.7	0.4 2.8	0 4	0.01 0.01
Selenium	r. Se	<0.0002	<0.0002	1 -	<0.001	<0.001	-	< 0.001	< 0.001	4	0.01
Silicon	SiO2	2.31	2.71	16	4.7	4.6	2	5	5	4	0.05
Silver Sodium	Ag Na	<0.00005 16	<0.00005 15.9	- 1	<0.00025 59	<0.00025 55.9	- 5	0.00090 8.85	0.00090 9.12	0 3	0.00010 0.05
Strontium	Sr	0.119	0.12	1	0.75	0.72	4	0.23	0.24	4	0.001
Tellurium	Te	<0.0002	<0.0002	-	<0.001	<0.001	-	< 0.001	< 0.001	-	0.001
Thallium Thorium	TI Th	<0.00002 0.0005	<0.00002 0.0006	- 18	<0.0001 <0.0005	<0.0001 <0.0005	-	< 0.0001 < 0.0005	< 0.0001 < 0.0005	-	0.0001 0.0005
Tin	Sn	<0.0003	<0.0002	-	<0.0003	<0.0003	-	< 0.0003	< 0.0005	-	0.0005
Titanium	Ti	0.024	0.029	19	0.005	0.005	0	0.032	0.031	3	0.001
Uranium Vanadium	U V	0.0006 0.0007	0.0006 0.0008	0 13	0.0018 0.002	0.0018 0.002	0	0.0095 0.002	0.0097 0.002	2 0	0.0005 0.001
Zinc	v Zn	0.005	0.005	0	<0.002	<0.002	-	0.002	0.002	0	0.001
Zirconium	Zr	<0.002	<0.002	-	<0.01	<0.01	-	< 0.01	< 0.01	-	0.001
Dissolved Metals (mg/ Aluminum	/L) Al	0.3	0.3	0	<0.005	<0.005	-	0.040	0.042	5	0.005
Antimony	Sb	<0.0002	<0.0002	-	<0.003	<0.003	-	< 0.001	< 0.001	-	0.003
Arsenic	As	0.0005	0.0005	0	0.002	0.002	0	< 0.001	0.0010	-	0.0010
Barium Beryllium	Ba Be	0.025 <0.0002	0.025 <0.0002	0	0.018 <0.001	0.019 <0.001	5	0.086 < 0.001	0.086 < 0.001	0	0.001 0.001
Bismuth	Bi	<0.0002	<0.0002	-	<0.001	<0.001	-	< 0.001	< 0.001	-	0.001
Boron	В	0.1	0.1	0	0.37	0.44	17	< 0.05	< 0.05	-	0.05
Cadmium Calcium	Cd Ca	<0.00004 17.6	<0.00004 17.9	- 2	<0.0002 87.1	<0.0002 85.3	2	< 0.0002 31	< 0.0002 31.5	1	0.0002 0.05
Chromium	Cr	0.0012	0.0012	0	<0.001	<0.001	-	< 0.001	< 0.001	-	0.001
Cobalt	Co	0.0004	0.0004	0	<0.001	<0.001	-	< 0.001	< 0.001	- 46	0.0010
Copper Iron	Cu Fe	0.0016 0.84	0.0016 0.85	0 1	0.001 <0.05	<0.001 <0.05		0.005 < 0.05	0.008 0.05	46 -	0.001 0.05
Lead	Pb	0.0014	0.0012	15	<0.001	<0.001	-	< 0.001	< 0.001	-	0.001
Lithium	Li M-	0.0028	0.0027	4	0.028	0.025	11	0.002	0.002	0	0.001
Magnesium Manganese	Mg Mn	7.76 0.286	7.92 0.293	2 2	24.0 0.006	23.6 0.003	2 67	6.83 0.032	6.92 0.032	1 0	0.05 0.001
Mercury	Hg	<0.00002	<0.00002	-	<0.00002	<0.00002	-	< 0.00002	< 0.00002	-	0.00002
Molybdenum	Mo Ni	0.012	0.012	0 0	0.0081	0.0069	16 22*	0.004	0.004	5 0	0.001
Nickel Phosphorus	Ni P	0.0019 <0.03	0.0019 <0.03	-	0.005 0.9	0.004 0.8	22* 12	0.002 0.3	0.002 0.3	0	0.001 0.01
Potassium	K	3.27	3.28	0	6.6	5.8	13	2.3	2.3	0	0.01
Selenium Silicon	Se SiO2	<0.0002 1.96	<0.0002 1.98	- 1	<0.001 4.1	<0.001 3.8	- 8	< 0.001 2.70	< 0.001 2.70	- 0	0.001 0.05
Silver	Ag	1.96 <0.00005	1.98 <0.00005	-	4.1 <0.00025	<0.00025	8 -	< 0.00025	< 0.00025	-	0.001
Sodium	Na	15.0	15.6	4	58.2	55.9	4	7.7	7.8	2	0.1
Strontium Tellurium	Sr Te	0.111 <0.0002	0.114 <0.0002	3	0.72 <0.001	0.76 <0.001	5	0.2 < 0.001	0.2 < 0.001	5	0.001 0.001
Tellunum Thallium	TI	<0.0002	<0.0002	-	<0.001	<0.001]	< 0.001	< 0.001	-	0.001
Thorium	Th	0.0004	0.0004	0	< 0.0005	<0.0005	-	< 0.0005	< 0.0005	-	0.0005
Tin Titanium	Sn Ti	<0.0002 0.019	<0.0002 0.018	- 5	<0.001 <0.001	<0.001 <0.001	-	< 0.001 < 0.001	< 0.001 < 0.001	-	0.001 0.001
Uranium	U	0.006	0.006	0	0.0016	0.0014	13	0.008	0.008	1	0.000
Vanadium	V	0.0006	0.0006	0	0.001	0.001	0	< 0.001	< 0.001	-	0.001
Zinc Zirconium	Zn Zr	0.005 <0.002	0.005 <0.002	0	<0.005 <0.01	<0.005 <0.01	-	< 0.005	< 0.005	-	0.005 0.001
Dissolved Anions (mg		<0.00Z	<u.uuz< td=""><td>-</td><td><u.u1< td=""><td><0.01</td><td>-</td><td>< 0.01</td><td>< 0.01</td><td>-</td><td>0.001</td></u.u1<></td></u.uuz<>	-	<u.u1< td=""><td><0.01</td><td>-</td><td>< 0.01</td><td>< 0.01</td><td>-</td><td>0.001</td></u.u1<>	<0.01	-	< 0.01	< 0.01	-	0.001
Dissolved Anions (mg	<i>/L)</i> F	0.16	0.17	6	0.55	0.63	14	0.20	0.11	58	0.05
Dissolved Chloride	CI	34.7	33.7	3	304	331	9	33.3	33.5	1	0.2
Nutrients (mg/L)	NOC ::					T			T		0.011.5
Nitrate and Nitrite Dissolved Nitrate	NO3 + NO2 NO3	< 0.01 < 0.05	< 0.01 < 0.05	-	- < 0.25	- < 0.25	-	0.12	0.12	- 0	0.01 / 0.05 0.05
Nitrite	NO2	0.003	0.004	29*	0.005	0.004	22*	0.003	0.003	0	0.002
Ammonia Nitrogen	N	0.21	0.19	10	-	-	-	-	-	-	0.01
Total Kjeldahl Nitrogen Total Phosphorus	N P	0.3 0.04	0.3 0.04	0 0	0.6	0.6	0 -		-	-	0.2 0.02
				-	i	İ	i	ī	İ	İ	1

Golder Associates

NOTES:

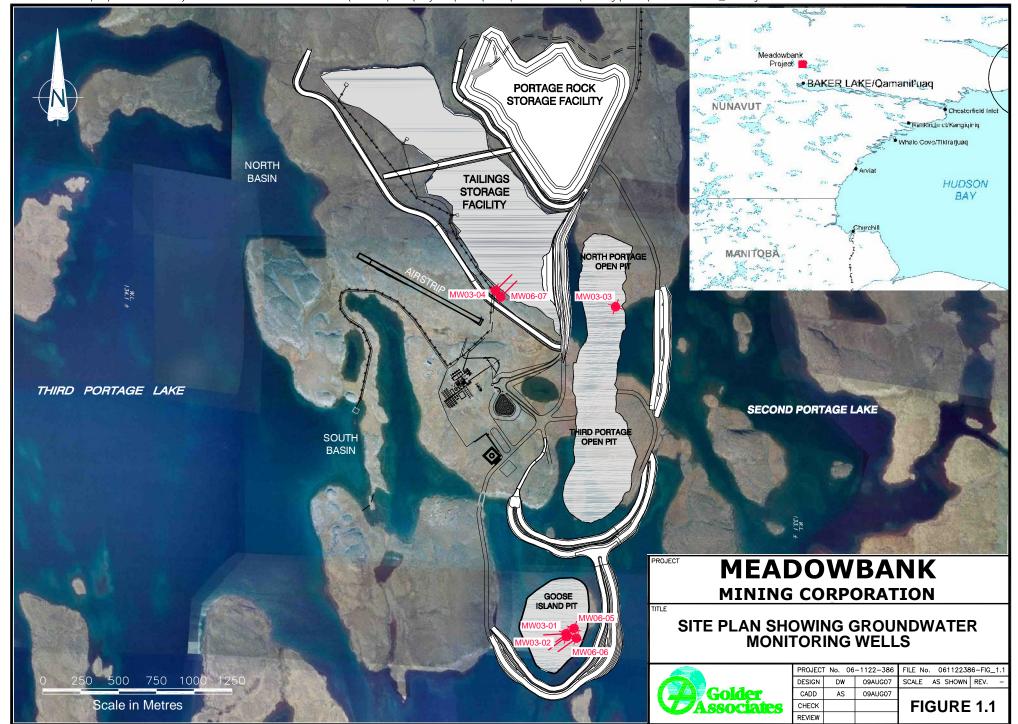
< = Less than the analytical detection limit

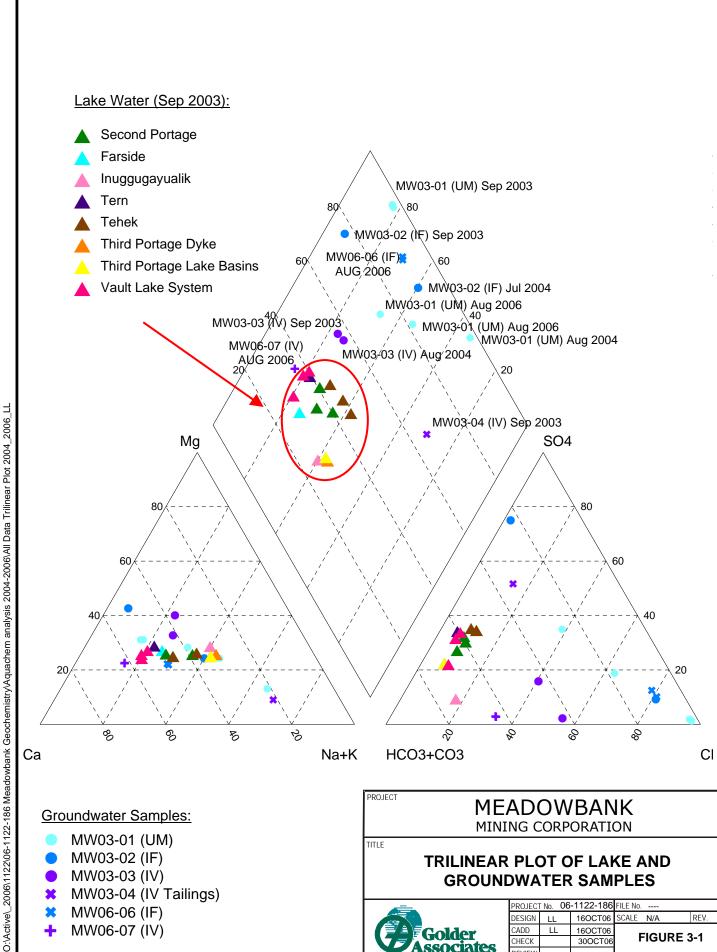
- = Not analyzed.

* RPD considered acceptable since one or more results are less than five times the method detection limit

** Laboratory measured values

FD = Field Duplicate



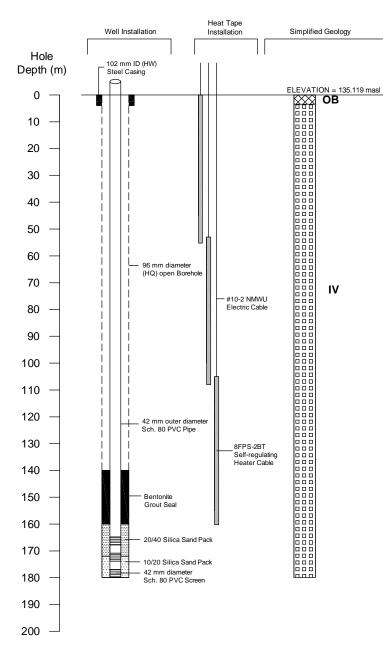


CHECK

30OCT06

APPENDIX I

MONITORING WELL INSTALLATION DETAILS AND GEOLOGICAL LOGS



PIEZOMETER COMPLETION DETAILS

Location: Goose Island
Date Installed: 7-Aug-06
Drilling Method: Diamond Drill
Inclination (degrees): -54.939
UTM NAD83 Zone 14 Northing: 7212220.998
UTM NAD83 Zone 14 Easting: 638753.954

UTM NAD83 Zone 14 Azimuth: 215.447

Mine Grid Northing: -1225.636

Mine Grid Easting: 122.014

Mine Grid Azimuth: 195.367

Collar Elevation (top of pipe): 135.119 masl

LITHOLOGIC UNIT LEGEND

OV Overburden

IV Intermediate Volcanics

IF Iron Formation

UM Ultramafic

QTZ Quartzite

NOTES

masl = metres above sea level

EOH = End of Borehole

- This figure is to be analyzed in conjunction with the accompanying report.
- 2. All depths are measured in metres along the dip of the borehole.
- The borehole was drilled with HQ diamond drilling equipment immediately prior to installation, open hole diameter roughly 96.3 mm.
- Monitoring well was constructed with Schedule 80 PVC pipe,
 42.2 mm Outer Diameter (OD) and 31.9 mm Inner Diameter (ID).
- Heat Trace Tape and connecting electrical cables were affixed to the outside of the PVC with conductive aluminum tape.

PROJECT

MEADOWBANK MINING CORPORATION

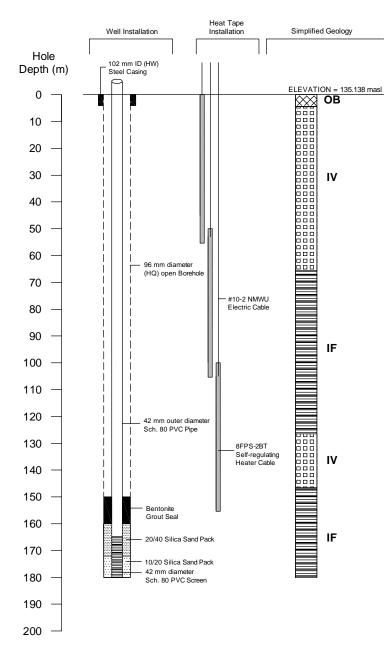
TITLE

MONITORING WELL COMPLETION DETAILS MW06-05

REVIEW



PROJEC1	No. 06	-1122-186	FILE No.			
DESIGN	JY	310CT06	SCALE	N.T.S.	REV.	Α
CADD	NV	310CT06				
CHECK			FIG	URF	Δ-'	1



PIEZOMETER COMPLETION DETAILS

Location: Goose Island
Date Installed: 20-Aug-06
Drilling Method: Diamond Drill
Inclination (degrees): -54.452
UTM NAD83 Zone 14 Northing: 7212221.317
UTM NAD83 Zone 14 Easting: 638754.276
UTM NAD83 Zone 14 Azimuth: 232.013
Mine Grid Northing: -1225.226
Mine Grid Easting: 122.207

Mine Grid Azimuth: 211.933 Collar Elevation (top of pipe): 135.138 masl

LITHOLOGIC UNIT LEGEND

$\otimes \otimes$	ov	Overburden
0001	IV	Intermediate Volcanics
	IF	Iron Formation
****	UM	Ultramafic
	QTZ	Quartzite

NOTES

masl = metres above sea level

EOH = End of Borehole

- This figure is to be analyzed in conjunction with the accompanying report.
- 2. All depths are measured in metres along the dip of the borehole.
- The borehole was drilled with HQ diamond drilling equipment immediately prior to installation, open hole diameter roughly 96.3 mm.
- 4. Monitoring well was constructed with Schedule 80 PVC pipe, 42.2 mm Outer Diameter (OD) and 31.9 mm Inner Diameter (ID).
- Heat Trace Tape and connecting electrical cables were affixed to the outside of the PVC with conductive aluminum tape.

PROJECT

MEADOWBANK MINING CORPORATION

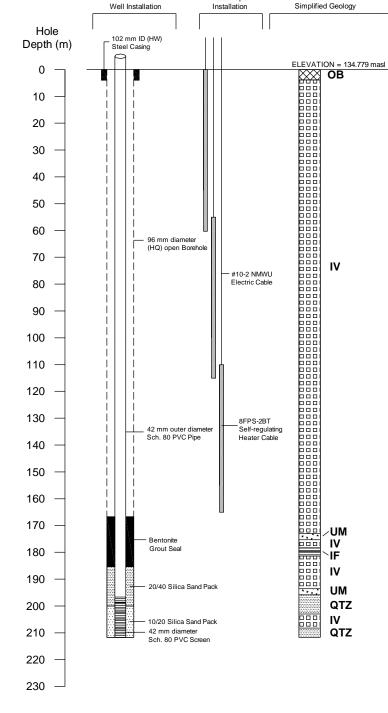
TITLE

MONITORING WELL COMPLETION DETAILS MW06-06

REVIEW



PROJECT	No. 06	-1122-186	FILE No.			
DESIGN	JY	310CT06	SCALE	N.T.S.	REV.	Α
CADD	NV	310CT06				
CHECK			FIG	URE	A-2	2



Heat Tape

PIEZOMETER COMPLETION DETAILS

Location: Goose Island
Date Installed: 25-Aug-06
Drilling Method: Diamond Drill
Inclination (degrees): -60.342
UTM NAD83 Zone 14 Northing: 7212114.525
UTM NAD83 Zone 14 Easting: 639399.363
UTM NAD83 Zone 14 Azimuth: 83.660
Mine Grid Northing: -1104.007
Mine Grid Easting: 764.864
Mine Grid Azimuth: 63.580
Collar Elevation (top of pipe): 134.779 masl

LITHOLOGIC UNIT LEGEND

	OV	Overburden
000	IV	Intermediate Volcanics
	IF	Iron Formation
* * * *	UM	Ultramafic
	QTZ	Quartzite

NOTES

masl = metres above sea level

EOH = End of Borehole

- This figure is to be analyzed in conjunction with the accompanying report.
- 2. All depths are measured in metres along the dip of the borehole.
- The borehole was drilled with HQ diamond drilling equipment immediately prior to installation, open hole diameter roughly 96.3 mm.
- Monitoring well was constructed with Schedule 80 PVC pipe,
 42.2 mm Outer Diameter (OD) and 31.9 mm Inner Diameter (ID).
- Heat Trace Tape and connecting electrical cables were affixed to the outside of the PVC with conductive aluminum tape.

PROJECT

MEADOWBANK MINING CORPORATION

TITLE

MONITORING WELL COMPLETION DETAILS MW06-07

REVIEW



l	CHECK			FIG	URE	A-3	3
Ì	CADD	NV	310CT06				
I	DESIGN	JY	310CT06	SCALE	N.T.S.	REV.	Α
Ī	PROJEC1	No. 06	-1122-186	FILE No.			

-Graphics\Projects\2006\1122\06-1122-386\Drafting\1000\061122386-FIG_1.2.dwg

N:\Bur.

FILE:

CADD

MEADOWBANK PROJECT DRILL LOG COVER SHEET

Diamond Drill Hole: MW-06-05

Deposit / Zone: Goose Island

Section: N/A

DRILL HOLE CO-ORDINATES

	X	Υ	Z
UTM NAD83 Zone 14	638753.954	7212220.998	135.119
Local Grid	122.014	-1225.636	135.119

Casing	6m
Depth	180m

	J.A. Palmer
Date Started:	2-Aug-06
Date Completed:	5-Aug-06

Purpose of Hole: Monitoring (Water) Well on Goose Island; Target rock formation = IV

HQ rock core; quick logged only.

				N HOLE SUR	/EYS		SUMMARY / COMMENTS
Depth	Dip	Az Mag	Az UTM	Az Local	Type	Comments	
0	-54.9		215.447	195.367	Survey	Top of Casing	For downhole surveys use surveyed collar az due to influence of IF
27	-55.0	235.6			Reflex		The second secon
78	-55.2	276.3			Reflex		
129	-54.5	310.8			Reflex	······································	
180	-52.2	339.0			Reflex		
							
Az UTN	= A7	Mag - 4.5°					
		mag 1.0					
Az MB	Main lo	cal = Az L	JTM - 20.08°				
			20.00				
Az Vau	t local	= Az UTM	- 46 89°		· · · · · · · · · · · · · · · · · · ·		
7 - 7 - 4		742 01111	- 40.03				
Az PDF	local	= Az UTM ·	+ 11 62°				
	.0041	72 0 1111	. 11.02			· · · · · · · · · · · · · · · · · · ·	
<u> </u>							

MEADOWBANK PROJECT - DRILL HOLE SUMMARY

Hole No.: MW-06-05 |Co-ordinates: (MB grid: -1225.636N/122.014E), (UTM Z14:7212220.998N/638753.954E) |Azimuth: (MB grid: 195.367°), (UTM Z14: 215.447°) Date Started: August 2, 2006 Total Depth: 180m Date Finished: August 5, 2006 Logged By: J.A. Palmer 6.0m Plunge: -54.939°
Ground Water Monitoring Well (HQ core) on Goose Island. Meterage are accurate; good recovery & good RQD. Casing: Comments:

From	RAGE To	LITHOLOGIES, STRUCTURE, ALTERATION			MINER	ALIZATION
.00	3.6	OVB ~ granite & IV	From	То	Sample #	
00	3.0	OVB ~ granite & IV				
60	180.00	IV; bio				
-	100.00		3.60	9.00		<1%py, 0.1%po
······································	 	Med-drk gry (locally gry-grn), fine-med. Grained, wk-mod foliated.	9.00	14.00		0.1%py [ff, diss, bleb]
		Wk-mod. silicified (~cht) with Mod-Str Biotite alt. Generally ~ <1% qv-ccvn/vts.	17.50	26.00		0.1-3% (local ^5%) py [ff, massive
	 	Ep alt on fractures noted @ 28.75, 29.25, 29.80-30.00m = \$0/\$1 @ 66 dtca @ 7.05m	17.50	20.00		blebs, repl.]
		=\$0/\$1 @ 20; \$2 @ 155 (20P) de-	26.00	28.00		0.1-0.5%cpy [//foln, diss.]
		=S0/S1 @ 20; S2 @ 155 (30R) dtca @ 12.65m =S0/S1 @ 15 dtca @ 20.26m				0.1%py [ff, repl.]
*	 	=\$0(assym fold) @ 10.8 145 (ED) #55 @ 00.45	28.00	42.00		0.1%py [ff, repl.]
	 	=S0(assym fold) @ 10 & 145 (5R) dtca @ 20.45m =S1 @ 15 dtca @ 32.30m	48.00	59.00		1-2%py (±0.1%po) [vf diss, clots, ff]
	 	=S1 @ 20 dtca @ 35.90m	59.00	66.00		1-3%py [diss, clots, repl, ff]
	 	=S1 @ 15 dtca @ 43.60m	68.50	72.00		1-3%py [clots, repl, diss]
	<u> </u>	42.00m 67.00m issessed bidling if	00.50	72.00		<1%po-py [ff]
	<u> </u>	42.00m-67.00m; increased biotite alt; med. grain bio porphyroblasts.	74.00	80.00		1 (local^3%) py [euhedral diss, wist
·		Chl-calcite (& lesser qtz-chl) vns, vts 56.70-67.00m =S1 @ 10 dtca @ 48.25m	74.00			clots]
		1-01 @ 10 dica @ 40.25m	80.00	90.00		0.1-1%py [diss, wisps]
····		=S1 @ 15, S2 @ 120 dtca @ 51.15m (vein conjugate) =S0/S1 @ 30 dtca @ 58.40m	90.00	111.00		0.1-1%py [ff, clots]
		-50/51 @ 30 dica @ 56.40m	111.00	120.00		0.1%py [ff, clots]
		=S0/S1 @ 40 dtca @ 60.30m (marks Ur of 20cm thick med-coarse grained interval)	120.00	128.00		0.1-0.5%py [diss, ff, clots]
		67.00m-84.00m: decreased (dissipation) of bio alt & bio porphyroblasts. Gradually finer (fine-med grain) matrix.	128.00	133.00		1-3%py-po {diss, massive blebs, ff]
		=S1 @ 35 dtca @ 76.80m	120.00	133.00		0.1(^0.5% local)cpy [ff, repl]
······································		=S1 @ 40 dtca @ 78.55m				
·		=S0/S1 @ 30 dtca @ 83.75m				
		84 00m 127 60m; Bio all reserves Di				
		84.00m-127.60m: Bio alt resumes. Bio porphyroblasts increased; var. size.				
		Amphibole (large 2-5mm crystals); (actinolite?) dom. assoc. with qtz-chl vns @ 84.80-85.00m =S0/S1 @ 55 dtca @ 86.60m				
		=S0/S1 @ 60 dtca @ 88.12m				
····		=50/gspym fold need 0 40 5 400 11 = 0 00 00				
		=S0(assym fold nose) @ 40 & 160 dtca @ 93.60m				
		=S0/S1 @ 15 dtca @ 96.20m =S1 @ 10 dtca @ 101.50m				
		=S1 @ 15 dtca @ 114.40m				
						
		=S1 @ 10 dtca @ 106.35m =S1 @ 20 dtca @ 118.45m				
	 	-51 @ 25 dica @ 118.45m				
	 	=\$1 @ 25 dtca @ 128.00m			1	
	<u> </u>	127.60m-133.00m: Attenuated transposition of S1 planes with proto-mylonitic qtz-chl veining.				
	 	Minor Ep alt on vns and fractures.				
	<u> </u>	Half core dia. composed of sub-angular brecciation (cataclastic) @ 131.0-131.40m			1	
~~~~		=S1 @ 20 dtca @130.55m			<b>†</b>	
	<u> </u>	=S1 @25 dtca, S2 @ 45 (120R) dtca @ 132.20m		1	1	

#### MEADOWBANK PROJECT - DRILL HOLE SUMMARY

Hole No.:	MW-06-05	Co-ordinates: (MB grid: -1225.636N/122.014E), (UTM Z14:7212220.998N/638753.954E)	Date Started:	August 2, 2006
Total Depth:	180m	Azimuth: (MB grid: 195.367°), (UTM Z14: 215.447°)		
Casing:		Plunge: -54.939°		August 5, 2006 J.A. Palmer
Comments:	Ground Water Monitoring W	ell (HQ core) on Goose Island. Meterage are accurate; good recovery & good RQD.	Logged By:	J.A. Famier

METE		LITHOLOGIES, STRUCTURE, ALTERATION	1		MINER	ALIZATION
From	То	Description	From	То	Sample #	Zone/Comments
		100.00150.00				
		133.00m-159.80m: Resumes to classic IV;bio with no attenuation-no protomylonitic texture.	133.00	136.00		3-5% po-py [diss]
		Med-dark gry, fine-med grain, wk-mod foliated. Bio porphyroblastic.	136.00	149.00		0.1%py [diss, ff, clots]
		=S1 @ 10 dtca @ 134.05m	149.00	152.00		1% py [clots, diss.]
		=S1 @ 20 dtca @ 134.35m	152.00	154.00		3-5% py [repl., ff, clots]
		=S1 @ 15 dtca @ 139.70m	156.00	162.00		0.1% py [blebs, ff]
		=S1 @ 20 dtca @ 143.00m				3-5% po-py [blebs, ff, diss]
		=S1 @ 10 dtca @ 150.20m	162.00	165.00		(^5% 163.50-164.50m dom assoc
		=S1 @ 25 dtca @ 150.55m		1		with qtz veins, cht)
		=S0/S1 (fold nose) @ 30 & 330 dtca @ 157.95m	165.00	168.00		3% py [repl., ff]
		=S1 @ 30 dtca @ 158.30m	168.00	180.00		0.1% py [diss, //foln, blebs]
		159.80m-163.00m: Still IV;bio. Psuedolapilli (~protomylonitic) and attenuated.	180.00	1.55.00		EOH
		Qtz-chl-cht (~10cm) @ 159.70 with Transposition of S1 planes below 159.80m	1,00,00	†	<del> </del>	
		Qtz-cht nodules rounded-subrounded; 1-4mm dia, Generally Mod-Str silicified		<del>                                     </del>		
		=S1 @ 15 dtca @ 160.20m		†	<del>                                     </del>	
		=S1 @ 20 dtca, S2 @ 125 (45R) dtca @ 161.30m	<del></del>	<del> </del>	<del>                                     </del>	
		=S2 (fracture) @ 15 dtca @ 163.00m (Lr of protomylonitic texture)		+	-	
		163.00m-168.00m: Returns to classic IV; bio with no attenuation - no protomylonitic texture		<del> </del>		
		Bio porphyroblasts coarser up to 2-3mm dia.	<del>-  </del>	+	+	
		Higher mineralized (^5-7% locally) @ 163.5-164.5m dom assoc with dtz vn & cht (~30 cm)		<del> </del>	<del> </del>	
		Pervasive cc vts/vns, esp. 167.40-168.00m with Ep alt on fractures (167-168m)	<del></del>	<del> </del>	-	
		=FLT/SH/ CCvn (~5cm thick) @ 15 dtca @167.40-168.00m; core is brecciated (dom on this)		<del> </del> -	<del> </del>	
		Lr is psuedolapilli (~protomylonitic). Clay/fines present @167.40-167.50m	· -	<del> </del>	-	
		168.00m-169.00m: IV;bio (psuedolapilli texture) with cht nodules up to 3 mm dia	<del></del>	<del> </del>	<u> </u>	
		= S1 @ 20 dtca @ 168.60m	<del>                                     </del>	+	<del> </del>	
		169.00m-180.00m: Returns to unattenuated (non-protomylonitic) IV:bio.	<del></del>	+	<del> </del>	
		= S0/S1 (fold nose) @ 25 & 200 dtca @ 173.70m		<del> </del>	<del> </del>	
100		EOH			1	
0.00		ICON		ſ		1

#### MEADOWBANK PROJECT - DRILL HOLE SUMMARY

Hole No.:	MW-06-06	Co-ordinates: (MB grid: -1225.226N/122.207E), (UTM Z14:7212221.317N/638754.276E)	Data Charles	
Total Depth:	180m	Azimuth: (MB grid: 211.933°), (UTM Z14: 232.013°)		August 8, 2006
Casing:	5.5m	Plunge: -54 452°	Date Finished:	August 5, 2006
Comments:	Ground Water Monitoring M	OU (HO com) on Coope laboral Mili	Logged By:	J.A. Palmer

From	ERAGE To	LITHOLOGIES, STRUCTURE, ALTERATION			MINER	ALIZATION
		Description	From	То	Sample #	
0.00	4.80	OVB ~ granite & IV				
4.80	65.95	N/. h.c.				
4.00	05.95	IV; bio	4.80	13.00		^ 1% py as diss, wispy, clot.
	<del>                                     </del>	Med-drk gry (locally gry-grn), fine-med. Grained (with some coarse intervals), wk-mod foliated.	13.00	17.00		^3% py as diss, clots, ff.
***************************************	<del>                                     </del>	Wk-mod sil with mod-str bio alt, ~ 1% qv or cc vn/vts.	17.00	64.00		Tr-1% py as clots, ff, diss.
	<del> </del>	Qtz vn (~3cm thick) @ 9.00m. Chi noted in vts @ ~11.85m, chi alt local.	117.00	04.00		(^3-5% local @ fracs)
<del></del>	<del>                                     </del>	=S1 @ 35 dtca @ 9.45m	64.00	65.95		Tr-1% py as clots, diss.
	- <del> </del>	=F1 (bull white qv ~ 1.5cm thick) @ 50 dtca, F2 (crosscutting vn) @ 140 (25R) @ 12.90m	04.00	05.95		Tr % po.
	<del> </del>	=S1 @ 45 dtca @ 14.0m	65.95	73.00		Tr-1% py as clots, ff, //foin.
		=S1 @ 30 dtca @ 17.90m	73.00	73.60		~15 (^20)% py dom. associated with
	<del>-</del>	=S1 @ 25 dtca @ 19.00m	73.00	73.60		vn (~ 5% py in non-vein IF)
	<u> </u>	Ep alt on fracs @ 19.24-19.44m	73.60	75.00		5-7% (local) py as //foln, diss.
		Potassic Feldspar present in qtz / F-spar vns/vts.	75.00	76.70		Tr-1% po-py as ff, repl, //foln.
	ļ	=F1 (qtz-feldspar vn ~ 6cm thick) @ 20 dtca @ 20.30m	76.70	95.00		5-7% py-po as // foin, diss, repl, ff.
	ļ	=S1 @ 25 dtca, S2 @ 120 (160R) dtca @ 25.55m		95.00		Dom. Py (~tarnished)
		Cc vts ~ parrallel to ca @ 28.00m - 31.00m	95.00	97.00		10-15% py as diss, ff, repl.
	<del></del>	=\$1 @ 20 dtca @ 30.60m	97.00	101.30		3-5% py as //foln, ff, diss.
		=S1 @ 15 dtca @ 31.20m	101.30	102.92		1-3% py-po as //foln, diss, repl.
	<del>                                     </del>	=S1 @ 7 dtca, S2 @ 20 dtca @ 36.30m	102.92			Tr-0.5% py as bleb, //foln.
	<del>- </del>	Ep alt on fracs @ 40 dtca @ 41.00m				
	<del> </del>	=S1 @ 5 dtca @ 40.70m				
		=S0/S1 (fold nose) @ 5 & 175 dtca @ 41.00m				
	<del> </del>	=S1 @ 10 dtca @ 41.80m				
	-	Ep alt on fracs @ 30 dtca @ 42.85m		i i		
	<del> </del>	=S1 @ 5 dtca, S2 @ 45 (100R) dtca @ 44.00m				
	4	=S1 @ 15 dtca @ 46.55m				
		Cc & K-Feldspar matrixed breccia (~12 cm thick) @ 48.88-49.00m				
	<del> </del>	=F2 (Ccvt/vn) @ 15 dtca; cross-cuts F1 qtz vn (~6 cm thick) with no distinct orientation				
		Cc vn/vt ~ parrallel to ca; 52.00-53.00m				
	<del> </del>	=S1 @ 20 dtca @ 54.50m				
,	<del> </del>	=S1 @ 25 dtca @ 58.55m				
	<del> </del>	=F1 (qtz/dolomite vn ~ 7cm thick) @ 20 dtca @ 58.00m				
	<del> </del>	Bio porphyroblsts common (2-3 mm dia.) 58.00m-65.95m				
		=S1 @ 25 dtca, S2 (Chl vn) @ 50 dtca (160R) @ 59.10m				
	<del> </del>	=S1 @ 20 dtca, S2 (cross-cutting vn/vt) @ 25 dtca (105R) @ 62.20m		<u> </u>		
	<del> </del>	Lr contact @ ~30 to 40 dtca		T T		
· F OF	400.00	IFOUR PART				
55.95	102.92	IFQM; IVchl				
,	<del> </del>	Drk grn (IVchl) - black (banded IF); generally fine grained with mod foliation.			<u> </u>	
		Presence of large (2-5mm) amphibole (actinolite?), dom. in IVchl bands.		T		

#### MEADOWBANK PROJECT - DRILL HOLE SUMMARY

Hole No.: MW-06-06 Co-ordinates: (MB grid: -1225.226N/122.207E), (UTM Z14:7212221.317N/638754.276E) Date Started: August 8, 2006
Total Depth: 180m Azimuth: (MB grid: 211.933°), (UTM Z14: 232.013°) Date Finished: August 5, 2006
Casing: 5.5m Plunge: -54.452° Date Finished: Logged By: J.A. Palmer

Comments: Ground Water Monitoring Well (HQ core) on Goose Island. Meterage are accurate: good recovery & good RQD

~	ERAGE	LITHOLOGIES, STRUCTURE, ALTERATION	T		MINERA	LIZATION
From	То	Description	From	To	Sample #	Zone/Comments
		Fine grained grunerite crystals developed in IF but dom. between bands. Str. Magnetic.			Odnipie #	2011e/Comments
		=S0/S1 (open folded nose) @ 25 & 165 dtca; S2 @ 35 dtca, @ 67 00m	<del>                                     </del>	····	<del> </del>	
		=S0/S1 @ 25 dtca, S2 @ 120 dtca (130R) @ 70.65m	1		<del> </del>	
		=F1 (Cht; chl vn ~ 3cm thick) @ 25 dtca @ 73.35m	<del>                                     </del>		<del></del>	
		Str mineralized with ~ 5% py (diss, //foln) in non-vn IF and 20(^25)% py as repl. //foln. ff in vn	<del>                                     </del>		<del>                                     </del>	
		=S0/S1 @ 15 dtca @ 74.70m	<del>                                     </del>		<del> </del>	
		=S0/S1 @ 20 dtca @ 77.80m	<del>                                     </del>		<del></del>	
		=S0/S1 @ 25 dtca @ 79.50m	<del>                                     </del>		<del> </del>	
		=S0/S1 (fold nose seperating IVchl [inside fold] & IF [outside]) @ 25 & 150 dtca @ 81 22m	<del> </del>	······································		
		=50/51 (fold nose) @ 25 & 150 dtca @ 84,10m	<del>}</del>			
		=S0/S1 @ 10 dtca @ 84,60m	<del>                                     </del>			
		84.60-92.00m; several fold noses with <10 dtca limbs; S0/S1 approx, parrallel to CA	<del>                                     </del>			
		=S0/S1 (F1 = Lr of IVchl interbed) @ 18 dtca, S2 @ 130 dtca @ 90.45m			<del> </del>	
		=S0/S1 @ 10 dtca @ 94.60m	<del>                                     </del>		+	
		95.00-97.00m: Str folded & crenulate; S0/S1 difficult to read; str mineralized (10-15% py).		<del></del>		
		-50/51 @ ~15 dtca @ 98.75m	<del>                                     </del>	·	<del> </del>	
		=S0/S1 (F1 = Lr ct of IFQM & Ur ct of IVchl unit) @ ~18 dtca @ 102.92m	<del> </del>		<del> </del>	
			<del> </del>			
2.92	105.25	102.92-105.25m: IVchl; IFQM	1		<del> </del>	
		Med-drk grn, Med-coarse grained IVchl with porphyroblastic amphibole (<1mm dia)			<del> </del>	
		Mod-well foliated with qtz-chi laminated fractures: wk crenulated (local)	<del>                                     </del>		<del> </del>	
		Generally not silicified whereas IF and IFQM is str silicified.				
		=S0/S1 @ 25 dtca @ 104.00m	╂───			
		=S0/S1 (F1 = Lr ct of IVchl) @ 35 dtca @ 105.25m	<del>                                     </del>			
			<del>}</del>	······································		
5.25	127.20	IFQM	<del>                                     </del>		<del>                                     </del>	
		As before/above with local IFMQ; IVchl as minor bands 1-3cm thick with fine grunerite	<del> </del>		-	
		bwt cht and mt bands. Up ct approximates Up ct of IF in MW03-02	<del> </del>		<del>                                     </del>	
		S0,S1 S 20 dtca @ 108.20	<del> </del>		<del> </del>	
		S0,S1 @ 15, S2 @ 130 (20R0 dtca @ 109.20m	<del> </del>		<del> </del>	
		S0,S1 @ 7, S2 @ 155 (170R) dtca @ 111.90m	<del> </del>		<u> </u>	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		S0,S1 @ 7, 175 dtca @ 113.60m, fold nose	<del> </del>		<u> </u>	
		109.70-110.40: Cht qtz interval with poor floiation and 3-5% py replacement.			<del> </del>	
		S0,S1 @ 17 dtca @ 115.50m	<b></b>		<del> </del>	
		116.35-117.00: Highly crenulated; S0,S1 not readable			<del> </del>	
		S0,S1 @ 15 dtca @ 118.15			<del> </del>	
		S0,S1 @ 20, S2 @ 160(150R) dtca @ 119.55m	<del>                                     </del>		<del> </del>	
<del></del>		S0,S1 @ 35 dtca @ 122.00m	<del> </del>		<del>                                     </del>	
		S0,S1 @ 15 dtca , S2 @ 165 dtca @ 124.25m	<b> </b>		<del> </del>	
		Ir ct in broken core.	<b> </b>		<u> </u>	
	+		<del>  </del>			
			1		,	

#### MEADOWBANK PROJECT - DRILL HOLE SUMMARY

Hole No.: MW-06-06 Co-ordinates: (MB grid: -1225.226N/122.207E), (UTM Z14:7212221.317N/638754.276E) Date Started: August 8, 2006
Total Depth: 180m Azimuth: (MB grid: 211.933°), (UTM Z14: 232.013°) Date Finished: August 5, 2006
Casing: 5.5m Plunge: -54.452° Date Finished: August 5, 2006
Comments: Ground Water Monitoring Well (HQ core) on Goose Island. Meterage are accurate: good recovery & good RQD

MET	ERAGE	LITHOLOGIES, STRUCTURE, ALTERATION	1		MINES.	WZOSION
From	To	Description	From	То	Sample #	ALIZATION Zone/Comments
		Yellowish gray green med to coarse grained, wk mod foliated			Janpie #	Zone/Comments
		Mod to strong sericitic (bleached) and wk chl matrix.				
		Biotite poryroblastic (generally about 1mm diameter up to 3mm.				
	I	Cut by several cht vns/qtz chl vns up to 10 cm thick with Kspar in some.	1		<del> </del>	
		Veinlets below 133,30	<del>                                     </del>		-	
		136.21-136.28: qtz veining with potssic alteration w 3% disseminated and agregate py, cts 25			+	
		136.50-136.80 Cht: interbed with abundant fol parallel py 7-10% v.fine aggregated bands cts 30				
		138.68-139.00: qv minor py wek kspar fol prll lower ct, up ct infolded at 130 degrees	<del> </del>			
		S0,S1 @ 25 dtca @ 127,50			<del>-</del>	
		S0,S1 @ 27 dtca @ 129.10	<b> </b>	····		
141.35	142.97	QV	ļ			
	1	Clear white massive. Sulphide absent. Minor dark chlorite on fractures.				
	<del></del>	Up ct 130(30R), Lr ct 120 (S0,S1;S2)				
	1	1				
142.97	146.80	IVsc;IVcs				
	1	continuation of 127.20-141.35	<del>                                     </del>	····		
		Bleaching diminishes, chlorite content increasing downhole.				
		Minor veining. Sulphide trace to absent.	<del> </del>			
		S0,S1 @ 30, S2 @ 130(20R) dtca @ 145.20, penetrating and spaced cleavage.	<b> </b>			
	1	So,S1 @ 25 dtca @ 146.80, Ir ct	<del> </del>			
· · · · · · · · · · · · · · · · · · ·			<del> </del>		<del> </del>	
146.80	147.64	IVcs;chl;QV	<b> </b>			
		IV 70: QV 30	<del> </del>		<del> </del>	
		med to dark gray green. Fine grained bio altered.	ļ			
		mod to strong chlorite, wk patchy ser, pervasive alteration.	<del> </del>			
		Ivcs transitional to IVchI	ļ			
		Veining is composite with S1,S2 orientations, fractures	<u> </u>		<del> </del>	
		Minor pyrite in chi altered quartz adjacent segments.	<u> </u>			
		S0, S1 @ 35, S2 @ 150 dtca @ 147,64m kr ctm bedding offsets.	ļ			
		S A THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF T	<b></b>		<u> </u>	
147.64	151.00	IFQM;IVchI	<del> </del>			
		IF 60: IV 40	<u> </u>			
	1	IV: strong chlorite altered 5% biotite porphyrobasts, 2-3mm	<del> </del>			
	1	IF: Chert dominant bands 70% 30%magnetite laminae.	<b> </b>			
	1	weak uniform grunerite alteration of broader bands concentrated on chert margins with	<del>                                     </del>			
	<u> </u>	thinner bands, 7%	<b> </b>		<del> </del>	
		sulphide 1-2% py fracture fill in IV, fr fol fill in IF	<del> </del>		-	
***************************************	1	Broad open central fold	<b> </b>			
······································		S0,S1 @ 25, S2 @140 (20R) dtca @ 151.00m bedding, offset, spaced cleavage	<del> </del>			
	1	Service Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control and Control an	<del> </del>	· · · · · · · · · · · · · · · · · · ·	<del>- </del> -	
151.00	165.58	IFQM	<b> </b>			

### MEADOWBANK PROJECT - DRILL HOLE SUMMARY

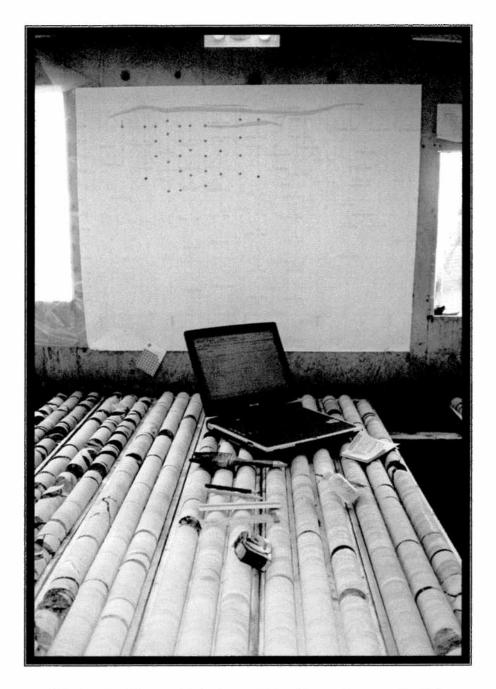
Hole No.: MW-06-06 Co-ordinates: (MB grid: -1225.226N/122.207E), (UTM Z14:7212221.317N/638754.276E) Date Started: August 8, 2006
Total Depth: 180m Azimuth: (MB grid: 211.933°), (UTM Z14: 232.013°) Date Finished: August 5, 2006
Casing: 5.5m Plunge: -54.452° Date Finished: August 5, 2006
Comments: Ground Water Monitoring Well (HQ core) on Goose Island. Meterage are accurate: good recovery 8, good POD

METERAGE		LITHOLOGIES, STRUCTURE, ALTERATION	MINERALIZATION					
From	То	Description	From	То	Sample #			
		Q/M: 60/40	770111	+ 10	Sample #	Zone/Comments		
		Chert dominatn forming 1 cm bands and sub bands interspersed by magnetite laminae,	<u> </u>	<del> </del>				
		sub barios and lesser 1cm bands	<del> </del>	<del> </del>				
		Grunerite weak uniform in broader bands peripheral to complete in subbands, occ sparse in Mt ba	<del> </del>	<del>                                     </del>				
		7 % Overall	<del> </del>	<del> </del>				
		Single 1 cm chlorite band drifts out at 53.00m	<del> </del>	<del></del>				
		Bedding subparallel to core axis		<del> </del>				
		Open folding apparent from periodic closures, noses @ 1545.60,158,00,161,00	<del> </del>					
		Sparse vein content <1% \$2 parallel 1-3mm		<del> </del>				
		sparse sulphide content about 1% overall	<u> </u>	<del> </del>				
		165.22-165.58 weak becoming mod sil off S2 fabric		<del> </del>				
		S0,S1 @ 15, S2 2 140(15) dtca . Ir ct 165 18	<del> </del>	<del> </del>				
		S0,S1 @ @ 20 @ 153.00m; S0,S1 @ 10 dtca @ 156.00m; So,S1 @ 30/160, S2 @ 130/25D)		<del> </del>				
		So,S1 @ 30/160, S2 @ 130(35R), S3 @ 80(80R) fold spaced cleavage, offset		<del></del>				
		S0,S1 @ 30 dtca @ 159;S0,S1 @ 20 dtca @ 162.00m: S0 S1 @ 35 dtca @ 165		<del> </del>				
		S0,S1 @ 20, S2 @ 140 (10R) @ 165.58, compopsite contact		<del> </del>				
				<del></del>				
65.58	166.35	IVchl;cord		<del> </del>	<del>-</del>			
		Dark green. Very fine fine grained.		<del> </del>				
		Strong pervasive chlorite alteration		<del> </del>				
		Biotite rphyroblastic 1-2mm throughout 5-7%		<del> </del>				
		Central 2/3 cordierite altered 1-2mm locally 3mm, 7-10%		<del> </del>				
		Veining absent. Minor py S1,S2 parallel structures, near lower ct	<u> </u>	<del> </del>	<del></del>			
		S0,S1 @ 25 dtca @ 166.35m	<u> </u>	<del> </del>	<del> </del>			
			· · · · · · · · · · · · · · · · · · ·					
66.35	180.00	IFQM	166.35	467.00	<del>                                      </del>			
		Q 60/M 40 Continuation of 151.00-165.58	167.08	167.08	2-3% py>po			
		Regular banding Q>M band width.	168.18	168.18	1-2% py>po			
		Veining minor Q S2 parallel <1%, 2-3mm	169.80	169.80	3-5%py.po			
		Bedding subparallel to core axis. Periodic open folding.	109.00	172.00	1% py=po			
		Weak sil 10cm at Up ct		<del> </del>	<del> </del>			
		Pattern of gruneraite alteration unchanged.		<del> </del>				
		S2 as space cleavage and offsts.		<u> </u>				
		Sulphides sparse concentrated at time at or near fold closures and at ujper ct with silicification.		<del> </del>	<del>                                     </del>			
		fold closures 162.77, 172.85		ļ				
		s0,S1 @ 15 dtca @ 168.00m		<del> </del>				
		S0,S1 @ 10 dtca @ 171.00m		<u> </u>				

CUA	A B E	RLAND  MEADOWBANK PROJECT - DRILL HOLE SUP	MMARY					
Hole No.: Total Depth Casing: Comments	MW06				Date Started: Date Finished: Logged By:			
			····	<del></del>	·			
METER From	RAGE To	LITHOLOGIES, STRUCTURE, ALTERATION	MINERALIZATION					
FIGH	10	Description	From	То	Sample #	Zone/Comments		
3.40	2A.66	claste up to 6-7cm locally in a chloritie to the your description of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the stand	4 ( (\$					
		0 So?/SI (141) @ 75 TUN @ 15.0m						
24.66	52.1	Mis /FV/pof). (wen't ser) mil green fo IV wherbettled in brungs to red (potessie) felson? bids Unit Japanes Compositionally hand of the bands < 1000 Le Gradahi all?						
32.1	74.9	IVES / IVA  Med speed for Chlorific IV. sinilar to 3.4-24 66 but  polar siculty affired (rags. Still pervasive colorife.  50: / Si (ear) of 70 PTCA (D 39.30.  - Si: / Si (e 70 PTCA (D 62:5 m)  - Le gradaboard, marked by disappearance of the larger  polassic (lasts.						
74.9	91.67	Surlar to 24.66 m to St. I m about although the orange subtendion is less prevelent. Unit still appeters Compositional landed. More felse bunds ape generally pull green in Estorer  So? / S. @ 65. Tell @ 83.5 m.  LC. // So/S. @ 60. Teld.	llej					
91.67	110.34	green fis chiorne IV w large felsie frequents						
110.34	116.8	similar to about wit; appears con positionally bonded  112.20-113 Dm: broken richtly one, post wice they  Sonst. Fault wie "to broken to mentation  115-3-116.0 m. Wolfer fault! Mid- From Shearing clay  Sonst Possibly 11 Sofi; & - 40 Took						

RES	VI B E	RLAND CES LTD.  MEADOWBANK PROJECT - DRILL HOLE SUI	MMARY						
Hole No.:	MWOL	- 07 Co-ordinates:	· · · · · · · · · · · · · · · · · · ·		·				
Total Dept	h:	Azimuth:			Date Started:				
Casing:		Plunge:	<del></del>		Date Finished:				
Comment	s <i>:</i>		· · · · · · · · · · · · · · · · · · ·		Logged By:				
METE	RAGE	LITUOLOGIES STRUCTURE A FEB.							
From	То	LITHOLOGIES, STRUCTURE, ALTERATION  Description	MINERALIZATION						
		Description	From	То	Sample #	Zone/Comments			
116.8	137.80	IVES / IVA (IVLT)							
			L						
		clasts; some Rattines of clast 11 fel:							
		The statement of clear 11 tol.							
		120.65m - 120.88m : toult clay song broken poblestore							
		possibly grented & n 35 Test broken possibly love							
		possion checker a rest 104		1					
		LC Gradelisz.							
		- Zrinovici -	<u> </u>						
137.8	146.6	IVCI FV (comp banding as above)		<u> </u>					
	-	3,2/S, @ ho. TCA @ 138. In	<u> </u>						
		L.C. gradelished							
		Tie, D. W. W. Carrey		<u> </u>					
146.6	172.55	IVCS (local IVA?)							
	7-2	med green to IN local week Dotassic alteration of	<u> </u>						
		minor to ravel base a be Devalue and it was	ļ	ļ					
	-	o Sikal) @ 45 . @ 165-12 m		ļ					
		L.C Sharp @ 70.7(A:							
					<del> </del>				
172.55	175.70	KMV		ļ	<u> </u>				
		173.70-175.20m: broken core lucal shows 115, 6 600	Tot	<del> </del>	<del> </del>				
		L.C undulating @ 70. TCA.	ICA	<del> </del>	<del> </del>				
		/		<del> </del> -	<del> </del>				
175.70	178.20	NCS / Chest							
		mig to 18 (locally) IV unit to local act all and added	<u> </u>		<del> </del>				
		chit bridg / 2 1'cm wide tolded.		<del> </del>	ļ				
		LC gradah red.							
				<u> </u>	<del> </del>				
178.20	181.22	IFOM/IFME (monor Wich)	1010-	1010	<del> </del>	Édisse			
<del></del>		to thinly faminated strongly folded near 16	181-20	181.2	1	590 replaps			
		J. J. J. J. J. J. J. J. J. J. J. J. J. J			<del> </del>				
181.72	188.46	IVIG Chert.			<del> </del>				
		-as above numer 50- 50-d of TERION		<del> </del>	<del> </del>				
		-probintella		<del> </del>	<del> </del>				
		contacted; chert boads thicker downhote.		<del> </del>	<del> </del>				
		actually offsite			<del> </del>				
10 11/	16				<del> </del>				
188-46	191.69			<u> </u>	<del> </del>				
		- and contact - see usel			<del> </del>				

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Hole No.:	MW-	06-02.	Co-ordinates:				<del></del>		T=		
Total Dept	.h:		Azimuth:						Date Started:		] !
Casing:			Plunge:						Date Finished: Logged By:		<u> </u>
Comments	<u>s:</u>							<u>-</u>	Logged by.		L
METE	RAGE		LITHOLOGIES (	STOLICTURE AL	TEDATION						
From	То		LITIOLOGICO, C	STRUCTURE, ALTERATION Description					MINER/	ALIZATION	
141.68-		2727					From	То	Sample #	Zone/Comme	nts
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203.84	207.97	TU		<u></u>			<b>_</b>				
			116				<b>-</b>			<u> </u>	
		modelas 5	72000 2 6		cog qu	# <i>Py</i>	12000	206-21	122516	5 830 cg pg	
			trang by B	-200-3-20	62.5		206-21	206.71	122517	5-830 cg py 4-630 mg to 5	Α .
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Meadowbank Gold Project Logging & Data Protocol 2006

#### Meadowbank Gold Project - Logging & Data Protocol 2004

#### **Logging Codes**

A list of standard lithology codes and descriptor abbreviations is provided to each person (see attachment A). The codes are an attempt to aid the logger and standardize on-site geological data capture. Please follow the system closely and feel free to suggest new codes where applicable.

#### **Logging Forms**

An Excel-based logging template is used by Cumberland to facilitate data manipulation. The log consists of two parts, a header sheet and a consolidated (consol) sheet (see attachments B and C, respectively).

The header sheet is where collar coordinates, collar survey data, down-hole survey data, general purpose of drill hole and other pertinent information will be entered.

<u>Survey Coordinates</u> – these are obtained from the surveyor who will provide a sheet with the survey details for the hole (station #, back sight, etc.) and the results (coordinates, elevation, azimuth and dip) in both UTM and local grid coordinates. The logger will enter all data into the appropriate cells on the header page of the electronic log.

<u>Down Hole Surveys (Sperry Suns)</u> - are read by the logger and entered into the header sheet. Correction factors for UTM and local grid azimuths are provided on the sheet.

The Consol sheet is the comprehensive logging form where all descriptive, structural, alteration, mineralization and sampling information is entered.

#### Logging

The geologist will enter data directly into the electronic logging forms closely following the format provided in the sample copy (Follow 1 to 6 below with attachment D).

## Data entry and <u>error</u> free compilation of that data will be the responsibility of the logger.

The logging sheet has several sections including the following highlighted regions:

- 1. **Meterage and Rock Description:** includes from / to measurements and description.
  - Enter <u>only rock codes</u> with <u>semi-colon</u> on the first line of the description (3 units or less is recommended; FLT, FZ & BX are modifiers <u>not</u> rock types thus they never start a rock name). The description should cover colour, grain sizes, bed thickness, foliation intensity, alteration intensity, sulphide abundance and habit, vein occurrences, etc.
  - Structural details are to be grouped as comments at the end of each description and where applicable rotation angles should be recorded.
  - Each unit ends with a lower contact measurement or description.

- 2. **Geodet Intervals**: sub units within the larger rock interval based on lithologic, alteration or structural features. These need from / to, rock type and contact angles assigned where applicable.
  - All geodet meterages must be consecutive.
  - Enter rock codes with <u>semi-colon & use shrink to fit</u> (3 units or less is recommended; FLT, FZ & BX are modifiers <u>not</u> rock types thus they never start a rock name).
  - The lower contact measurement is entered at the start of the next unit.

#### **Important Note!**

- ❖ <u>OA/OC</u>: Batches of <u>22</u> samples will each contain <u>one</u> Blank, <u>one</u> Duplicate & <u>one</u> Standard (different standard values are available). These are randomly inserted within the "22" & vary throughout the sampling process.
- 3. **Structure:** Bedding, foliation, shear angles with intensity (1, 2 or 3 corresponding to weak, moderate or strong, respectively) and RQD for selected intervals.
- 4. **Alteration:** Includes coded vein-types with semi-colons & their abundance as well as a variety of alteration minerals. All are recorded with percentages except: SIL (silicification), SER (sericitization) & MT (magnetite) are given a relative strength measurement (scale of 1 to 3).
- 5. **Minerals:** Includes all sulphide minerals. Pyrite and pyrrhotite are the most common but base metal and other sulphide minerals do occur (Estimated percent composition is taken from the AGI chart, attachment E).
- 6. **Sampling Information:** Includes sample number, interval length and assay results. Loggers will fill in the sample number, tabulate interval lengths & enter notes where applicable (e.g.: Blank, Dup, Std#, Rep Samp, VG, New Tags, etc.).
  - Maximum sample length is <u>1.5m</u> and minimum is <u>30cm</u>. Samples are <u>not</u> taken across lithological contacts and are positioned based on visual sulphide concentration variations.

#### **Structural Measurements**

Structural measurements collected down hole may be either single or multiple angles relative to the core axis (0 to 180 dtca; degrees to core axis), with or without rotational measurements (< or = 180R, rotation). See attached diagrams of angular & rotational recording devices (attachment F).

If a single structural feature is measured then the angle, relative to the core axis, is collected and recorded between 0 and 90 degrees.

= S0 @ 45dtca @ 4.5m

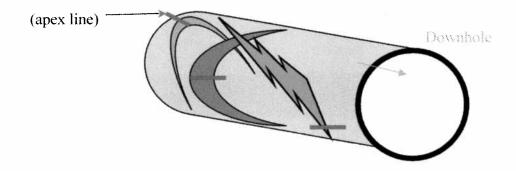


If two structures with variable angles and coincident apices (i.e.: no rotation) are observed the angles to the core axis recorded will be between 0 and 180 degrees.

= S0 @ 70dtca, S1(ser) @ 80dtca @ 12.62m = S1(qvn) @ 85dtca, S2(chl) @ 160dtca @ 20.8m

If two or more structures with varied angles and apices are observed then core axis angles and rotations are recorded. While looking downhole and with the aid of the rotational protractor; set the scale to zero, align the protractor with the apex of the earliest feature and measure in a clockwise direction to the apex of the next oldest feature to be measured, record the rotation (NB: < or = 180R). Next, visually restore the apex of the second feature to the apex of the first feature and record the angle in degrees to core axis, repeat for other structural features.

- = S0 @ 70dtca, S1(py) @ 80(70R) @ 30.27m
- $= S1(p_0) @ 60dtca, S2(chl) @ 60(90R), F1(qv) @ 155(170R) @ 42.3m$



#### **Editing**

Data entered into the logging forms should be edited for from / to mistakes, formatting, typos (SET DICTIONARY to: English, U.K.), incorrect codes, sampling etc.

#### Creation of Hard Copy File

A hard copy file is to be made for each drill hole and should include:

- A drill hole cover sheet.
- The most up to date copy of the main logging (Consol sheet).
- All Sperry Sun surveys (or others), stapled to the inside of the file folder.
- A drill hole survey sheet, provided by the surveyors with UTM and local grid coordinates.
- A copy of the geotech data for the hole (regular data only not detail data).

#### **Quick Logs**

Initial logging procedure whereby a concise collection of primary drill hole geology, select structural information and sulphide percentages is taken for timely geological data interpretation. Generally a designated person will be assigned this task, however other geologists may be called upon to produce quick logs if necessary (see attachment G).

#### **Plotting**

Geologists (or a designate) shall plot the 2004 holes by hand or they will be electronically set onto sections, showing all current data. Interpretation and correlation of geological units and structures with adjacent holes may also be required periodically.

#### Checklist

A complete checklist will be posted that lists all activities associated with the drill program from DDH spotting through to an e-file being sent to Vancouver. All parties involved in the completion of drill tasks will be responsible for keeping this list current (see attachment H).

Additionally you may need to periodically add necessary information to the drill summary sheet (attachment I).

All loggers shall be required to personally keep track of the QA/QC "22's" they use. Two copies of this file are printed so that the splitters and the logger each retain a version. Prior to shipment a logger will personally initial the form confirming that the shipment is ready and meets the required sample protocol detailed above (see attachment J).

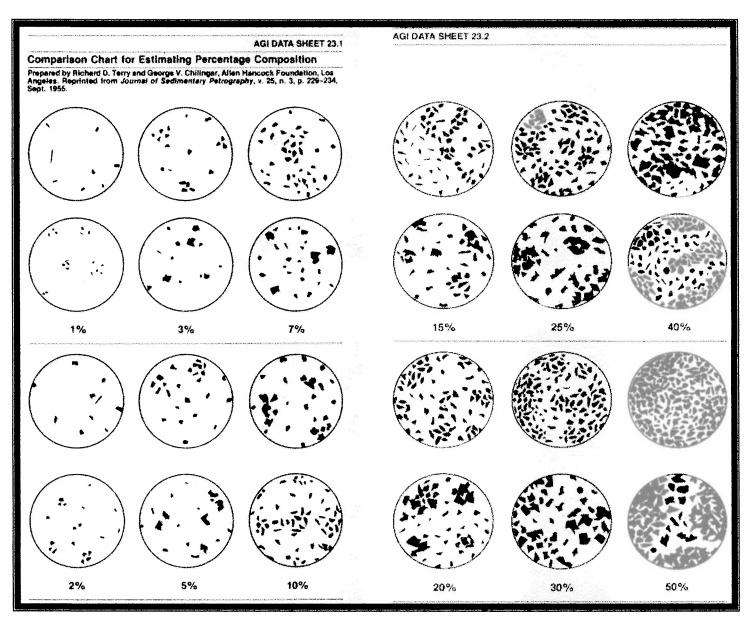
#### Entry of assays (Designated personnel only)

Assays will be entered and assay sheets created only after assay results are posted from IPL Labs. Upon receipt, assays will be copied directly into the log consol sheet. This will include all QA/QC results as well as primary assay results.

#### Creation of Composite, Assay, Geodet and Lith sheets

(Designated personnel only)

Once the logger has deemed the consol sheet error free and the certified assay data has been entered the composite, assay, geodet and lith sheets can be completed by cut and paste method from the consol sheet into the appropriate worksheet. Headers for each worksheet are provided in the template.



Attachment E

Code	Definition
Rock Types	
S	Basalt
	Carbonate Mud
ert	Chert
С	Chert Pebble Conglomerate
	Conglomerate
	Diabase
	Diorite
	Feldspar Porphyry
	Feldspar Quartz Porphyry
	Felsic Dyke
	Felsic Volcaniclastic (quartz-feldspar) schist
	Felsic Volcaniclastic (quartz-feldspar) ash tuff
	Felsic Volcaniclastic (quartz-feldspar) Tuff (>2mm; lapilli)
	Felsic Volcaniclastic (feldspar-quartz) Tuff (>2mm; lapilli)
	Gabbro
	Granite
D	Granodiorite
Y	Greywacke
	Intermediate Volcaniclastic Agglomerate (polymictic)
	Intermediate Volcaniclastic Ash Tuff
	Intermediate Volcaniclastic Post Tuli Intermediate Volcaniclastic biotitie schist (unaltered, ~wacke)
	Intermediate Volcaniclastic biotitie schist (unattered, wacke)
	Intermediate Volcaniclastic chlorite-sericite schist
	Intermediate Volcaniclastic chlorite-sericite tuff
	Intermediate Volcaniclastic chlorite-sericite, biotite schist (altered)
	Intermediate Volcaniclastic sericite schist
(sil)	Intermediate Volcaniclastic sericite schist w silicification
	Intermediate Volcaniclastic sericite-chlorite schist
c, tuff	Intermediate Volcaniclastic sericite-chlorite tuff
	Intermediate Volcaniclastic sericite-chlorite, biotite schist
	Iron Formation chert-magnetite
	Iron Formation magnetite-chert
	Lamprophyre Dyke
	Mafic Volcanic
	Monzodiorite
	Mylonite
	Overburden
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and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s	Quartz Calcite Breccia
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	Quartz Eye Volcanic Tuff
	Quartz Feldspar Porphyry
	Quartz Pebble Conglomerate
	Quartz Porphyry
	Quartz Vein
	Quartz Vein Breccia
	Quartzite
	Ultramafic Volcanic
	Ultramafic Volcanic Actinolite
F	Ultramafic Volcanic Foliated
	Ultramafic Volcanic Serpentinized
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Code	Definition
Descriptors	
ab	albite
alt	alteration
altd	altered
amph	amphibole
anast	anastomosing
&	and
ang	angular
ank	ankerite
aph	aphanitic
~	approximately
arg	argillic
aspy	arsenopyrite
assoc	associated
asymm	asymmetrical
@	at
ax pl	axial plane
So	bedding
bio	biotite
bk	black
blch	bleached
bx	breccia
bn	brown
bf	buff
cc	calcite
cal	calcite
cm	centimetre
	chalcopyrite
cpy cht	chert
chl	chlorite
cy	clay
	coarse grained
cg comp	compositional
comp bnd	compositionally banded
conc	concentration
ct	contact
cord	cordierite
	crenulated
cren	cross cutting
x-cut xtls	crystals
dk	dark
	decrease
dec def	deformation
mercune and a contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the contract of the	degrees to core axis
dtca	diameter
diam	disseminated
diss	
dol	dolomite
dom	dominantly
E.O.H.	end of hole
ер	epidote
esp	especially
est	estimate
euhd	euhedral
FLT	fault
FZ	fault zone
fsp	feldspar
fg	fine grained
fl	fluorite
fol	foliated
foln	foliation

Code	Definition
S1	foliation
fw	footwall
F1	fracture
frac	fracture
ff	fracture fill
frags	fragments
fuch	fuchsite
gal	galena
gnt	garnet
gm	grams
g/t	grams per tonne
gr	granitic
gn	green
99	green-grey
gy	grey
gru	grunerite
hw	hanging wall
hmc	heavy mineral concentrate
ha	hectare
hem	
hnfls	hematite
HCI	hornfels
	hydrochloric acid
inc	increase
interbd 	interbedded
Fe	iron
Fe-ox	iron oxide
irreg	irregular
JNT	joint
ksp	k-feldspar
kg	kilogram
km	kilometre
am	laminated
t	light
imon	limonite
ſ	lower
_C	Lower Contact
mag	magnetic
nt	magnetite
nass	massive
ned	medium
ng	medium grained
n .	metre
nm	millimetre
nod	moderate
ndst	mudstone
	the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
nusc	muscovite
nylo	mylonitic
) <u>r</u>	orange
rg	organics
rient	orientation
tc	outcrop
TW	outwash; glacio-fluvial
	parallel
pb	parts per billion
ò	percent
ct	percent
k	pinkish
lag	plagioclase
ĹV	polymictic till - locally derived
	The system was a second delived

Code	Definition
porph	porphyroblast
рру	porphyry
poss	possible
pot	potassic
pseudo	pseudomorph
The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon	
ptyg	ptygmatic
ру	pyrite
рух	pyroxene
ро	pyrrhotite
q	quartz
qtz	quartz
qbx	quartz breccia
q-eyes	quartz eyes
qvns	quartz veins
qcc	quartz-calcite
dccA	quartz-calcite vein
qc qcc	quartz-carbonate
qcv	quartz-carbonate veins
qchl	quartz-chlorite
qchlv	quartz-chlorite vein
repl	replacement
rep	representative
R	rotation
sd	sand
2nd	secondary
2°	secondary
ser	sericite
serp	serpentine
SH	shear
sil	silicified, siliceous
st	silt
sitst	siltstone
spec	specularite
sph	sphalerite
stkwk	stockwork
str	strong
sbcp	subcrop
subhd	subhedral
subrnd	subrounded
tc	
	talc
tour	tourmaline
tr	trace
0.1	trace (in geodet)
trem	tremolite
um	ultramafic
٨	up to
ur	upper
uc	Upper Contact
vn	vein
vt	veinlet
vns	veins
V	very
vfg	very fine grained
vwk	very weak
VG	visible gold
wac	wacke
wk	weak
wht	white
w	with
YNG	younging

#### **APPENDIX II**

#### GROUNDWATER DEVELOPMENT/PURGING/SAMPLING DATA SHEETS

#### **Groundwater Development and** ∠ Development **Purging/Sampling Data Sheet** ☐ Purging/Sampling MW03-1 -1122-186 -2200 Well No. Project No. Meadowbank Goose Islan Location: Completed By: Weather: Date: Aug. 66 Temperature: Time:

MONITORING WELL INFORMAT	ION -	
Depth to water Below Top of Casing: Depth to Bottom of Well Below Top of Casing: Diameter Standpipe:	A 2.598 metres B 200 metres C 1.25" mm	One well volume:  (B-A)*2.0 = litres - for a 51 mm (2.0 inch) diameter well  (B-A)*1.1 = litres - for a 38 mm (1.5 inch) diameter well  *0.8} = $\sim 163$ (1.25°)
EQUIPMENT LIST		
pH and Temp. Meter: Model Conductivity Meter: Model	Serial No. Serial No.	Calibration Buffers: 24 27 10 Calibration Solution:
Dissolved Oxygen Meter: Model / YST	SSOA Serial No.	<u>0722</u> ☐ D.O. Chemet Ampoule
Pump:  None  Waterra  Peristaltic Sample Intake Depth:	☐ Submersible	Bailer: ☑ None ☐ Stainless Steel ☐ Teflon ☐ PVC
WELL DEVELOPMENT/PURGING		

F	low Rate:	~ ?	8-14	L/hr		_ <del>/min</del>	Start:	1100 km. Y Finish: 1130 kug. 7
	Time	Volume Removed (L)	Temp. (°C)	pH (Units)	Cond. (yS/cm)	fledox- (finV) _{p,p} v	Diss. O ₂ (mg/L) O	Remarks
4	1115	40	11.4	7.17	460	219	10.15	
_	2145	(00	10.7	7 29	331	167	14.88	
5	0625	140	18.9	7:21	238	151	14.88	
	1150	160	13.0	7.28	672	332	13,38	
	1500	95	(3.2	7.42	345	172	13:03	·
	1715	200	9.7	7.33	229	115	14.25	
	400	240	10.6	7.47	307	154	12.92	
6		360	10.9	7.58	331	165	12-67	
	1050	320	11.2	7,67	324	162	13.01	
	1315	340	8.8	7.46	184	974	13 73	
-	1530	360	11.4	7.40	323	16	12.44	
	1745	880	10.8	7.70	340	170	12-89	

litres

Comments: Hyes Sta Odour: Z Yes Sheen: ☐ Yes Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty Other:

Analysis	+				Co	ntainer Size						
~ Lalysis	''	pe .	40 mL	100 mL	250 mL	500 mL	1 L	2 L	4 L	Filte	ered	Preservativ
	☐ Plastic	☐ Glass						<b>₽</b>		☐ Yes	□ No	
	☐ Plastic	☐ Glass								☐ Yes	□No	
	☐ Plastic	☐ Glass			·					☐ Yes	□ No	
	☐ Plastic	☐ Glass								□Yes	□ No	
	☐ Plastic	☐ Glass								☐Yes	□ No	
	☐ Plastic	_DGlass			·					□Yes	□ No	
	El Plastic	☐ Glass								☐ Yes	□ No	
	☐ Plastic	☐ Glass								☐ Yes	□ No	

	☐ Plastic ☐ Glass				□ Yes	□No		$\dashv$
SCN No.	Consumables:	☐ Waterra Tubing	☐ HDPE Tubing		☐ Gro	undwate	r Filter	
		☐ Silicon Tubing	 ☐ D.O. Ampoules	s <u>.                                    </u>				
DMINENVIROS Forms and	Templered Field Homel CMI De		 					

Well. Vol. X (3)

Purge Volume:

= (490)

Ground Purging										<u>عر</u> ا		elopment ging/Samplin	2 _/
Well No. Location: Weather: Temperature:	Mwo Se		Pag	e = 1	)		Project No Completed Date: Time:		(şe	e f	agi		
MONITORIN	G WELL	. INFOF	MATIC	N									
Depth to water Be Depth to Bottom of Diameter Standpli	of Well Belov	- 1	•	A B	metre metre mm	es	One well vo (B-A)*2.0 = (B-A)*1.1 =	***************************************	litre	s - for a	51 mm ( 38 mm (	(2.0 inch) diamete (1.5 inch) diamete	ər well
Pump:  None Sample Intake Dep	ter: f r: f Meter: f □ Water	Model Model Model rra □ P	Matalitic	□ Subm	Serial I Serial I Serial I ersible	No	Bailer:	Calibr				□ 7 □ 10	»VC
WELL DEVE	LOPMEN	NT/PUR	GING										
Purge Volume: Flow Rate:	Well. Vol.		=	4 <b>9</b> 0		itres							
	Volume	,				/min.T.L					Finish:		
7ime R	emoved (L)	Temp.	pH (Units	) (us.	(cm)	(mV)	Dies. C				Remarks	<b>3</b>	
2255	410	11,5	1 7 3	1 3	9	74	13.1	0					
1105	490	13.7	7.9	1 2	35	142	130	8 0	, d	devel	~^ ·	<b>—</b>	
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N			<del> </del>					KAR	this !	= ai	dilt	- ~ 1-2 min	
			<del> </del>		(8.1)			Cu	atil 1	of al	walts	erevacuate	ً لَٰ
								an	7	reat	s hid	de ruly 66	hel
<del> </del>		<del></del>	<del> </del>			····		(a)	c),#		git s	1-01-000	140
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		·····			_			tu	mole	for 2 (	cucan	1	27.7
omments:			ļ					<u> </u>	UM · N	r L u	ns (1)	ment acti	10
	Service .			IIIII			I Very	Silty					
			Τ			ontoiner C	Ne						
Analysis	Ту	pe .	40 mL	100 mL	250 mL	ontainer S 500 n		21	1 4:	Filt	ered	Preservatives	
	☐ Plastic	☐ Glass		1		30011	1 1 1	2 L	4 L		<del></del>		4
	☐ Plastic	☐ Glass				1		<del></del>	F	☐ Yes	□ No	<del> </del>	-
	☐ Plastic	☐ Glass			,		1	<del>                                     </del>		☐ Yes	□ No	<del>                                     </del>	$\dashv$
	☐ Plastic	☐ Glass								□ Yes	□ No		$\dashv$
	☐ Plastic	☐ Glass							<del></del>	☐ Yes	□ No	·	$\dashv$
	☐ Plastic	□ Glass								□Yes	□ No		$\dashv$
	☐ Plastic	□ Glass								☐ Yes	□ No	<del> </del>	$\dashv$
	□ Plastie	☐ Glass								□ Yes	□ No		1
SCN No.	Consu	mables:	☐ Water	ra Tubing			HDPE Tub	-		☐ Gro	undwate	r Filter	

#### **Purging/Sampling Data Sheet** Purging/Sampling (/> 06-1122-186-2200 Well No. Project No. Location: Completed By: Weather: Date: Temperature: Time: MONITORING WELL INFORMATION One well volume: A 2.60 metres Depth to water Below Top of Casing: $(B-A)^2.0 =$ _ litres, - for a 51 mm (2.0 inch) diameter well Depth to Bottom of Well Below Top of Casing: metres litres - for a 38 mm (1.5 inch) diameter well Diameter Standpipe: **EQUIPMENT LIST** Model HANNA 91300 Serial No. 17992 Calibration Buffers: 04 pH and Temp. Meter: Conductivity Meter: Serial No. Dissolved Oxygen Meter: Serial No. <u>07227</u> □ D.O. Chemet Ampoule Model ☐ Peristaltic ☐ Submersible № DVP □ Waterra Bailer: None ☐ Stainless Steel ☐ Teflon ☐ PVC Sample Intake Depth: V/SO W WELL DEVELOPMENT/PURGING Purge Volume: Well. Vol. X litres Flow Rate: Start: Finish: Volume Cond. Dies. O₂ (mg/L) or % Time Removed (L) (Únits) (uS/cm) 458 7.06 Ø $\infty$ Comments: Odour: Ø No □ Yes If yes Sheen: ☐ Yes If yes Turbidity: Other: Container Size Analysis Type 250 mL Filtered 100 mL Preservatives 500 mL 2 L 4 L ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass □ Yes □ No SCN No. Consumables: ☐ Waterra Tubing ☐ HDPE Tubing ☐ Groundwater Filter ☐ Silicon Tubing ☐ D.O. Ampoules

□ Development

**Groundwater Development and** 

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	Development	
Ø	Purging/Sampling	2/2

Well No. Location:	MINUS Goosé is						oject No. mpleted		6-112 9/10			
Weather:	- SUMMY						te:	+ +	77	a.06		
remperature:	~ 17°C					Tin	ne:	7	000	)	******	
MONITORI Depth to water Depth to Botton Diameter Stand	Below Top of ( n of Well Belov	Casing:	using: E	N 2.6 200 1.25	_ metres	(B-	e well volu A)*2.0 = A)*1.1 = ★ <i>O</i> -∜ }		litres	s -fora	51 mm (; 38 mm (;	2.0 inch) diameter v 1.5 inch) diameter v
EQUIPMEN pH and Temp. No Conductivity Me Dissolved Oxygo Pump:  No Sample Intake	Meter: Meter: Meter: Meter: Meter: Meter: Meter: Meter: Meter	Nodel Y	5i 5	13∙0 DA ⊠Subme	Serial No Serial No	007 007 007	227	Calib	ration Sol O. Cheme	lution: et Ampoui		
WELL DEV	ELOPMEN	IT/PURC	GING				•					
Purge Volume: Flow Rate:		x			litr L/r	es nin.	Start:		1000		Finish:	1330
Time	Volume Removed (L)	Temp.	pH (Units)	Cor (uS/d	10.   44	edex m)(year	Diss. O				Remarks	
1025	/35	7.8	7.7			<b>6</b> 2	(mg/L) or		<del></del>		Tierranco	
1100	145	8.5	7.0			22	11.5			·		`
1115	155	1.3	7.1			10						
1135	165	7.0	7.10		,	Z3	11.79 11.94					
1152	175	7.0	7.24			32	11.79				• •	
1215	185	6.8	7.2			35	11.30		Hkaliu	· · L ·	- M	£. 6.6 D
1310	205	7.7	7.9	3 38		93	8.55	4	mall	MIX	- U	OIL GOOD P
						75	<u> </u>	4/		4	39.7	1/L Caco, Tor
								-1/	· ot	Same of	20	(totai) Alle.
									POAL	may h	<i>U</i>	
Sheen:	Yes DYNA Yes DYNA Clear III				111111	·····			-			
A 1 ·					Col	ntainer Size		-		1		
Analysis		ype .	40 mL	100 mL	250 mL	500 mL	1 L	2L	4 L	- Filt	ered	Preservatives
500 17 + A	Plastic	□ Glass	<u> </u>					1+1	(PD)	☐ Yes	₽ No	RAW
mee+Tot-Ga		□ Glass	ļ				(Pb)			☐ Yes	Æ No	NaoH
Diss. Metal	7	☐ Glass		ļ	1+1(1	(d				Ø∕Yes	□No	HUO
	☐ Plastic	☐ Glass				1-16				□Yes	₽⁄No	1007
	☐ Plastic	☐ Glass				1+10	3			☐ Yes	E No	H-504
	☐ Plastic	☐ Glass				1+1(P	3			☐ Yes	<b>12</b> 100	Rhui
<del></del>	☐ Plastic	☐ Glass								☐ Yes	□ No	ICI/O4
	☐ Plastic	☐ Glass				-			T	☐ Yes	□ No	
												L
scn no. 12393-01	Const	imables:	☐ Water	ra Tubing Tubing			DPE Tubi .O. Ampo			_ 🗆 Gro	undwate	r Filter

□ Development▶ Purging/Sampling

Vell No.	MW 03-	01				Pr	oject No.	0	6- 1/2	2 - 194	THE	. 2200)
ocation:	GOOSE 1	SLAND					ompleted E	By:	· CLA	, K.F	1740	
eather:	OVERCAST	SHOU	Jers				ite:		RUST		lank	
emperature:	16°C					Ti	me:		00 -			
MONITOR	ING WELL	INFOR	ΜΑΤΙΟΙ	u .						1700		
Depth to water Depth to Botton Diameter Stand	Below Top of C n of Well Below	Casing:	A sing: B	2.60 Zoo 33	metres metres mm	(B-	ne well volu (A)*2.0 = (A)*1.1 = (*0.83		litres	- for a t	51 mm (2 38 mm (1	.0 inch) diameter .5 inch) diameter
EQUIPMEN	VT LIST											
pH and Temp. I		Model HA	LIA G.	<b>3</b>	Contal N		<i>a</i> -					
Conductivity Me		noder <u>maa</u> Nodel	AOM []	30Q			992	-	tion Buff		<b>P</b> 4	<b>2</b> 7 🗆 10
Dissolved Oxyg			1 ~~~		Serial No			-	tion Solu			
			1 550	•		_	227		. Chemet	: Ampoul	е	
Pump: □ No			istaltic ,				Bailer:	■Non	ė 🗆 S	Stainless	Steel	☐ Teflon ☐ P\
sample Intake E	Depth: <u>/65</u>	<u>e (white</u>	ss 07H	Bewise	STATE	<u>(a</u>						
WELL DEV	FLOPMEN	IT/DLID/	SINC									
ourge Volume:												
low Rate:	weii. Vol.	x	=-	······································								
		T = -				nin.	Start:	_//0	<u> </u>		Finish: _	
Time	Volume Removed (L)	Temp.	pH (Units)	Cor (uS/d		edox 703 mV)- (gas	Diss. O ₂ (mg/L) or				Remarks	
1130	20	10.1	7.09	17-		85	8.14					
1230	40	8.3	7.03			05	5.66				- 100 m	
1350	65	7.5	6.93	329		3	6.95		mpce p	EPTH	160 m	
1430	%	7.5	7.13	308		80	7.65					
1530	115	7.6	7.12	36:		31	4.56				<u> </u>	
1600	135	10.5	7.88			31	2.43	<del></del>				
1615	140	11.6	7.57	62		13	5.01			· · ·		
1625	141	11.5	7.35	611		06	5.38			···		
1630	141.5	10.7	7.74	620		10	5.75					
1640	MZ	9.8	7.78	74		7)	5.57				· · · · · · · · · · · · · · · · · · ·	
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mments:												
	□ Yes 🖪 No	o If yes										
	☐ Yes ☑ No	,							<del></del>			
Turbidity: (	Clear II		11111						····			
Other:	510di <u>11</u>	211111	111,11			11111	Very S	Silty	*			
											<u> </u>	
					Co	ntainer Siz	·					I -
Analysis	τ,	ype .	40 mL	100 mL	250 mL	500 mL		2 L	4 L	Filt	ered	Preservatives
	☐ Plastic	☐ Glass						<del> </del>	<del>                                     </del>	☐ Yes	İnn	
	☐ Plastic	☐ Glass		····							□ No	·
*****	☐ Plastic	☐ Glass						<del> </del>	<b></b>	☐ Yes	□ No	
		☐ Glass								☐ Yes	□ No	
	☐ Plastic						-	<del>                                     </del>		☐ Yes	□ No	
	☐ Plastic	□ Glass		İ								
		☐ Glass			-			<del></del>		☐ Yes	□ No	
	☐ Plastic	☐ Glass								□ Yes	□ No	
	☐ Plastic ☐ Plastic ☐ Plastic	☐ Glass ☐ Glass ☐ Glass								☐ Yes	□ No	
	☐ Plastic ☐ Plastic ☐ Plastic ☐ Plastic ☐ Plastic	☐ Glass ☐ Glass ☐ Glass ☐ Glass								□ Yes	□ No	
SCN No.	☐ Plastic ☐ Plastic ☐ Plastic ☐ Plastic ☐ Plastic	☐ Glass ☐ Glass ☐ Glass	□ Water	a Tubing			HDPE Tubi	ing		☐ Yes ☐ Yes ☐ Yes	□ No □ No □ No	r Filter

Ш	Development	
Ø	Purging/Sampling	1/2

Well No.	MW 03.	-01					Project No.	~		101 6		1
Location:	GOOSE		***************************************				Completed E		e. Cua	-186 (T	ISK ZZO	ره
Weather:	OVELCAS						Pate:			UGUST 1		
Temperature:	15°C						lme:		815 -		, 2000	
MONITOR	ING WELL	INFOR	MATIO	1				****	P19	1700		
Depth to water	Below Top of C	Sesina:		7 60			ne well volu	me:				
	m of Well Below			2.60	-		3-A)*2.0 =		litres	- for a 51 mm	(2.0 inch)	diameter well
Diameter Stan			-	<u> 100</u> 53	_ metres	(6	B-A)*1.1 =			- for a 38 mm	1 (1.5 inch)	diameter well
					_ mm		D-83 €	<u>= 16</u>	3 L·			
EQUIPME						-						
pH and Temp. Conductivity M			144 913	00	Serial No			Calibra	ition Buff	ers: 🖼 4	7 [	⊐ 10
Dissolved Oxyg		lodei			Serial No			Calibra	tion Solu	rtion:		
			1 550/	4	Serial No	). <u>0</u>	7227	□ D.O	. Chemet	: Ampoule		
Pump: D No	one 🗆 Water Depth: 165		istaltic J	Z Submer	rsible W 2	- PAb	Bailer:	<b>₽</b> Non	ė □\$	Stainless Steel	☐ Teflo	n DPVC
WELL DEV	/FI OPMEN	T/PHP	SING									
Purge Volume:												
Flow Rate:	well. voi.	х	=_				<b>.</b> .		_		_	
	Volume	Temp.	pΗ	Con		nin.	Start:		2815	Finish	1900	)
Time	Removed (L)	(°C)	(Units)	(uS/c		ledox (ps)// pp=	Diss. O₂ (mg/L) or %			Remar	ks	
0815	152	8.1	7.31	360		83	7.45		- //a	un CYCLE	(DRIVE	1400)
0835	160	8.0	7.36	337	1 /	68	7.70			III O IOGE	COMMA	/ WW! /
0915	175	7.7	7.31	349	) /	74	9.16					
/000	190	9.0	7.68	359	1 /	80	10.21			,		
1110	200	7.8	7.65	508	2	57	9.97				······································	
1/40	210	8.0	7.62	379	1 /	91	10.36					
1215	720	8.3	7.39	384		93	9.58					
1245	230	1.8	7.41	394		77	8.14		4			
1330	240	8.1	7.53	921		12	6.50	1 100	n/5,	un Cycle	CORINE	/von)
1445	250	6.3	7.71	430		15	4.00					*
/640	260 265	8.z	7.47	417		08	6.57					
	285	10.0	8.06	534	26	8	6.70		.†			
Sheen:	☐ Yes ☐ No	o Ifyes o Ifyes	<del></del>				I Very S					
Other:	<i></i>		•				, c					
Analysis		pe .	ļ			ntainer S	ize					
		γ	40 mL	100 mL	250 mL	500 m	L 1L	2 L	4 L	Filtered	Pres	ervatives
	☐ Plastic	Glass								□ Yes □ N	5	
	☐ Plastic	Glass								□ Yes □ N	o .	
		☐ Glass								☐ Yes ☐ N	)	
<u> </u>	☐ Plastic☐ Plastic	☐ Glass								□Yes □ N	)	
<del></del>	☐ Plastic	☐ Glass								☐ Yes ☐ No	)	·
	☐ Plastic	☐ Glass				·····				☐ Yes ☐ No	)	
	☐ Plastic	☐ Glass								☐ Yes ☐ No	)	
	1 - 1 1 1 1 1 1 1	□ GiaSS								☐ Yes ☐ No	)	
SCN No.	Consu	ımables:	□ Waterr	-			HDPE Tubir D.O. Ampou			☐ Groundwa	-	
DMINENVIROS/Forms				_			J.C. Ampor	S		_ 0		

#### **Groundwater Development and** ☐ Development **Purging/Sampling Data Sheet** Purging/Sampling 2/2 Well No. MW 03-01 Project No. 06-1122-186 (TASK 2200) Location: GOOSE ISLAND Completed By: R. CLARKE Weather: NUTRCAST ANGUST 11 , 2006 Date: Temperature: 15°C Time: 0815-1900 MONITORING WELL INFORMATION One well volume: Depth to water Below Top of Casing: A 160 metres (B-A)*2.0 = _____ litres - for a 51 mm (2.0 inch) diameter well Depth to Bottom of Well Below Top of Casing: (B-A)*1.1 = B 200 metres litres - for a 38 mm (1.5 inch) diameter well Diameter Standpipe: C 33 mm +083= 163L. **EQUIPMENT LIST** Model Hariala 9/300 Serial No. 07992 Calibration Buffers: pH and Temp. Meter: Conductivity Meter: Model Serial No. _____ Calibration Solution: Dissolved Oxygen Meter: Model Serial No. ______ □ D.O. Chemet Ampoule □ Waterra □ Peristaltic □ Submersible N2 - bVP Baller: □ None ☐ Stainless Steel ☐ Teflon ☐ PVC Sample Intake Depth: WELL DEVELOPMENT/PURGING Purge Volume: Well. Vol. X litres Flow Rate: L/min. Start: 0815 Finish: Volume Temp. Cond. Diss. O₂ (mg/L) or % Time Redox Removed (L) (Units) (°C) (uS/cm) Remarks 4mVX 1725 280 10.0 7.70 427 213 5.57 1745 289 10.1 7.74 449 224 5.49 30 sec / 30 sec CYCLE (DRIVE/VENT) 1800 293 9.3 7.76 458 227 5.75 1815 297 7.77 445 6.09 220 1830 500 10.5 7.75 450 224 6.15 1845 303 10.5 7.77 502 252 6.47 1900 307 11.1 7.77 511 <u> 255</u> 5.91 Comments: No If yes Odour: ☐ Yes Sheen: ☐ Yes If yes Turbidity: Clear Other: Container Size Analysis Туре 40 mL 100 mL Filtered 250 mL 500 mL Preservatives 1 L ☐ Plastic ☐ Glass U Yes DNo ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes □ No

N	SCN NO.	·	☐ Waterra Tubing ☐ Silicon Tubing	D.O	PE Tubing	☐ Groundwa	ter Filter	-
ŀ		D Plastic D Glass	<u> </u>			□ Yes □ No		
			<del></del>			☐ Yes ☐ No		7
1		□ Plastic □ Glass				☐ Yes ☐ No		
١		☐ Plastic ☐ Glass				LI TES   LI NO	<del></del>	_

☐ Yes

□ No

☐ Plastic

☐ Glass

	Development	
图	Purging/Sampling	1/2

Well No.	MW 03	5-01				P	roject No.	•		22 - 10		\	
Location:		(SLAND)					ompleted	-	00	LAR KE	6 (774;	sk 5500)	
Weather:		con	24				ate:	-		T 12,			
Temperature:	_13°C_						lme:			2100	200-		
MONITORI	NG WELL	INFOR	MATIO	N									
Depth to water E Depth to Bottom Diameter Stand	Below Top of ( n of Well Belov	Casing:	Asing: E	A 2.60 200 3 33	metres metres mm	s (B	ne well volu 3-A)*2.0 = 3-A)*1.1 = 本の83:		litre:	s, – fora: s – fora:	51 mm (2 38 mm (1	2.0 inch) diameter 1.5 inch) diameter	well well
EQUIPMEN	T LIST												<del></del>
pH and Temp. M		Model #	NNA 9	1/300	Serial N	io 🍎 '	<del>7</del> 992	Calibro	ation But	·· _,	-12	·	
Conductivity Met		Model			Serial No		1//6		ation Bui		<u>u</u> 4	7 🗆 10	
Dissolved Oxyge	n Meter: M	Model Y	51 55	PO	Serial No		7227			iution: et Ampoul			
Pump: 🗆 Non	ne □ Wateri				•								
Sample Intake D				, Will Coloring	13IDIO .C	2 - ~v F	Dallei.	E Non	ө п	Stainless	Steel	☐ Teflon ☐ PV	C
WELL DEVE	EL ODMEN												
							•						
Purge Volume: Flow Rate:	Well. Voi.	x	=.		Ilt	tres							
	·	T				/min.	Start:		1130	!	Finish: _	2100	
Time	Volume Removed (L)	Temp. (°C)	pH (Units)	Cor (uS/d	na.   F	Flodex (IIIV) pp	Diss. O ₂ (mg/L) or				Remarks		$\exists$
1130	313	10.3	7.36			154	6.41		20000			7	+
1200	320	9.5	7.37			230	7.52		30 sec	70 sec	Cylle	DRIVE/VENT	4
1230	330	9.4	7.34	35		79	7.80						-
1300	340	9.3	7.48			82	8.02				<u> </u>		4
1330	350	8.6	7.42	37		86	8.63				<u> </u>		$\dashv$
1400	360	9.1	7.54			98	8.66						$\dashv$
1430	370	8.7	7.40	400	20	00	8.90			<u> </u>			$\dashv$
1500	378	8.8	7.58	405	5 20	02	9.00			<u>-</u>	·		$\dashv$
1530	388	8.6	7.60	418	20	09	8.92						$\dashv$
1600	398	8.5	7.72		2	18	8.47				·	•	$\dashv$
1630	408	8.7	7.41	434		17	8.22						$\dashv$
/7teo	4/7	8.7	7.70	451	5 2	26	7.27		- 1		·	<del></del>	7
Comments:					<del></del>				<u></u>				
	Yes No					····							
٠	Yes ₽/No	•							·		<del></del> .		
Turbidity:	lear III	IIIIII	HIH	IIIIII	11111	11111	Very S	2iltv		<del></del>			
Other:	<u> </u>		•		-			/mry			•		
													<u> </u>
Analysis	Ту	лре .		·	T	ontainer Siz	:e						٦
			40 mL	100 mL	250 mL	500 mL	. 1L	21	4L	Flite	ered	Preservatives	
	☐ Plastic☐ Plastic☐	☐ Glass	<b> </b>	<b> </b>	<b> </b>	<del> </del>				☐ Yes	□ No		7
	☐ Plastic	☐ Glass	<b></b>	<b> </b>	<del>                                     </del>	<del> </del>				☐ Yes	□No		7
	☐ Plastic	☐ Glass	<del>                                     </del>			<del> </del>		<u> </u>		☐ Yes	□ No		7
	☐ Plastic	☐ Glass ☐ Glass		-	<b></b>			<u> </u>		□Yes	□ No		1
	☐ Plastic	☐ Glass	$\leftarrow$						<del></del>	☐ Yes	□ No		7
	☐ Plastic	☐ Glass		<del></del>			+	<del> </del>		☐ Yes	□ No		]
	Plastic	☐ Glass				<del> </del>		<b></b>		☐ Yes	□ No		]
		LI GIRGO								☐ Yes	□ No		]
SCN No.	Consu	ımables:	□ Waterr	ra Tubing		🗆 ⊦	IDPE Tubir	ng		□ Gro	undwater	Eilter	
<u> </u>			☐ Silicon	-			D.O. Ampou				diame.	i mor	-
MINENVIROSVFORMS an	of Terrolated Field E	Za-mel CNI David			<del></del>								- I

#### Grou

Groun Purgin	dwateı g/Sam	r Dev pling	elop g Da	men ta Sh	t and eet			•			elopment jing/Sampling 2
Well No. Location: Weather: Temperature:	GOUSE PARTY 13°C	15LA				Project Comple Date: Time:	t No. eted By:	Aver	122 - 18 CLARILE 13T 12 - 2100	200	75k 2200) 6
Depth to water Depth to Botton Diameter Stand	m of Well Belov dpipe:	Casing:	A Ising: B	2.60 200 33	metres metres mm	(B-A)*2 (B-A)*1		e: litr	es - for a	51 mm (2	2.0 Inch) diameter wel 1.5 Inch) diameter wel
	Meter: A eter: A gen Meter: A	Model Model ra □ Pel	istaltic	OA :	Serial No Serial No Serial No Sible Al 2 - Al	07227	c	Calibration B Calibration S Calibration S Calibration S Calibration S Calibration B Calibration B	olution:		11 □ 10 □ Teflon □ PVC
urge Volume: low Rate:		×	=_		litres L/min	<b>D5</b> Sta	art:			Finish:	2,00
Time	Removed (L)	Temp. (°C)	pH (Units)		- Hodek	Di	ss. O₂ /L) or %			Remarks	
1730	424	8.6	7.51				.17	30 500/	go sec	CYCLE	(DRIVE/VENT)
1800 1830	433 439	9.6 9.8	7.72			_	.55				
1900	447	9. z	7.73	-			7.24				
1930	454	9.1	7.70		246		. ze			<u> </u>	
2000	460	8.4	7.71	497			og	<u> </u>		·	
2030	466	8.3	7.64				.16	<u> </u>			
2100	472	8.1	7.65		256		92 22		7		
								-			
Sheen:	□Yes ⊡No □Yes ⊡No	) If yes									
Other:		11111	11,11			II V	ery Silty		•		
Analysis	Τ.	фе .			Containe	r Size					
,		, eq.	40 mL	100 mL	250 mL 500	) mL	1 L	2L 4L	PIRO	ered	Preservatives
	☐ Plastic	☐ Glass							☐ Yes	□ No	
	☐ Plastic	☐ Glass							☐ Yes	□ No	<del></del>
	☐ Plastic	☐ Glass							□ Yes	II No	

Analysis	TV	ре .		Container Size										
,	.,	<del>, , , , , , , , , , , , , , , , , , , </del>	40 mL	100 mL	250 mL	500 mL	1 L	2 L	41_	Pillered		Preservatives		
	☐ Plastic	☐ Glass								☐ Yes	□ No			
	☐ Plastic	☐ Glass								<del> </del>	<del>                                     </del>			
	☐ Plastic	☐ Glass	<b>1</b>	·			<del></del>	<del> </del>		☐ Yes	□ No			
	☐ Plastic						ļ			☐ Yes	□ No			
		☐ Glass	<del> </del>							☐ Yes	□ No			
	☐ Plastic	☐ Glass					İ			☐ Yes	□ No			
	☐ Plastic	☐ Glass			•					☐ Yes	□ No			
	☐ Plastic	□ CHass									<del>                                     </del>			
	□ Plastic	☐ Glass			<del></del>					☐ Yes	□ No			
			<u> </u>							☐ Yes	□ No			
ICN No.	Consu	mables:		ra Tubing		D HC	PE Tubi	ing		☐ Gro	undwater	Filter		
			□ Silicon	Tubing		□ D.0	O. Ampo	ules						

☐ Development

Purging/Sampling

ocation: /eather: emperature:	GOOSE											
emperature:		1 ( 1 Z	WD				ect No.		06	110	22 -1	86 /220
		1 (uc					npleted By	r	? cia	CKE,	1 R.	COECHO
	13	-150	VI BY			Date	9;	AC	1G 1	4 20	06	
MONITORING		<del></del>	MATION			Tim	e: 		2800		830	(142)
Depth to water Belo	ow Top of Ca	seina:					well volun	\e:				• •
Depth to Bottom of	Well Below	zaing. Top of Cac	A_ Sina: B	200	metres		()*2.0 = _		litres	- for a 51	mm (2.0	inch) diameter well
Diameter Standpipe	ə: <u> </u>		_	<i>33</i>	metres mm	•	)*1.1 = *083 <u>~</u>	[6]	litres	- for a 38	mm (1.5	inch) diameter well
EQUIPMENT	LIST							- CO C				
pH and Temp. Mete	er: Mo	odel <u>HA</u>	NNA A	12 m	Saalal Ata		201			•	• •	
Conductivity Meter:	Mo	odel	11		Seriai No. Seriai No.			Calibrati			<b>₾</b> 4 <b>e</b>	7 🗆 10
Dissolved Oxygen A	vleter: .Mc	odel 245	1 550		Serial No.	-		Calibrati				
Pump:   None	□. Waterra	-				070	227	□ D.O. 0	Chemet A	Ampoule		3.
Sample Intake Dept		5m	startic L	Submers	ible 		Baller:	None	□ St	ainiess S	Steel [	Teflon DPVC
WELL DEVEL	OPMEN	T/PURG	ING									
Purge Volume:	Well. Vol. >		· _									
low Rate:					litre L/rr			Δ.	300			
	Volume	Temp.	pH	Cond		m.	Start		300	·F	inish: _	1830
Re	moved (L)	(°C)	(Units)	(uS/crr		PPP)	Diss. O ₂ (mg/L) or %			F	Remarks	
	484	8.5	7.42	404	2	22	5.60		o sec			
. 00	492	86	7.51	337	10	9	5.44	16	or sec	DRIV	<u> </u>	O sec VENT
	502	8.3	7.51	325	16	1	5.66	1.			<del>1 -</del>	· · · · · · · · · · · · · · · · · · ·
1		8.3	7.50	323		3.	6.59				+	
1 - 4 -	519	8.6	7.55	402		4	7.23		•		+	
	527 534	8.7	7.51	447			7.73				1	
	43	8.5	7.50	461	22		8.10				,	
1.0	553	8.1	7.48	428	31		8.29				<b>I</b>	
	560	8.8	7.51	461	22		8.49					
1300 5	69	9.2	7.51	457			8-01			•		
	71	89	7.53	445			7.20					·
omments:				1 793	32	2	6.45.				1	
Odour: Y		If yes					•				<del> </del>	•
Turbidity: Clea			11111						`			
Other:		IIII.		11111	11111	IIIII	Very S	ity	•			
Analysis					Co	ntainer Siz						
1010	Plastic	☐ Glass	40 mL	100 mL	250 mL	500 mL		2L	4 L	Fiit	ered _	Preservatives
	Plastic	☐ Glass			-			1		☐ Yes	E No	RAW
	#Plastic	□ Glass				+	-			□Yes	E No	RAW RAW
	<b>©</b> Plastic	□ Glass	1			+	+			Ø Yes	□ No	HNO3
	Plastic	□ Glass					+			□Yes	ET No	HNO3
	☐ Plastic	□ Glass				di.	+			☐ Yes	D No	H2504
		□.Glass			-	142	+			☐Yes	□ No	ST REND
	☐ Plastic	- Glass										
	☐ Plastic	□ Glass					1			☐ Yes	□ No	
SCN No.	☐ Plastic		□ Waterr				IDPE Tubi			☐ Yes	□ No	

Development

Purging/Sampling 2/2

Weather: PACTLY CLO Temperature: 13-15  MONITORING WELL INFORM  Depth to water Below Top of Casing: Depth to Bottom of Well Below Top of Casing: Diameter Standpipe:  EQUIPMENT LIST	MATION  A  sing: B  C 33	metres metres mm	Date: Time:  One wm (B-A)*2 (B-A)*1	ell volume	- AUG - 0800 - Iltres	14 · 18 · 18 · 19 · 18 · 18 · 18 · 18 · 18	7K 2506 30 (	2200 2210 (292) inch) diameter well inch) diameter well
Conductivity Meter: Model	WNA 91300	Serial No. Serial No.			Calibration Buff		\$4 BY	9 □ 10
Dissolved Oxygen Meter: Model to	151 550	-	0722		Calibration Solu	-		
Pump: D None D Waterra D Per Sample Intake Depth: 165 m	istaltic III/Subm	ersible			D.O. Chemet	: Ampoule Stainless S	iteel 🗆	Teflon 🛘 PVC
WELL DEVELOPMENT/PURC	RING							
Purge Volume: Well. Vol. X		litre	s				•	
Flow Rate:		L/m	in. s	Start;	0800	) <u>F</u>	inish:	1830
Time Volume Temp.		ond. Re	缺5	Dies, Oz				7030
1400 578 86		85 2	= (PPP) K	uarryor %			iemarks	
1430 586 88				5.26	(30 sc	20/9	o sect	GRIVE/VEVT)
1500 593 87			52 53	459				
530 603 9.9			35	<u>4·2)</u> 3·30			-	
1600 610 9.9		50 2			<del>'   · _ · _</del>		<u> </u>	
1630. 618 99				3 10	<del></del>		¥	
1700 623 9.09		74 20	~	3.26	<del>-   </del>			
1730 630 9.8		68 28					1-	•
1800 636 9.5	7.58 5	98 2		1.20	(I min	7000	<u> </u>	
1830 640 99	7.58 5			4. 82				of Alkalinity
					Conduc	tod -	<u> ምራንን (</u> ፱ ዩ	
						<u> </u>	75	Tor Y
Comments: Odour: □ Yes \$2 No If yes Sheen: □ Yes \$2 No If yes								
Turbidity: Clear IIIIIIII Other:		imm	11111	Very Si	lity	`.	·.	
Analysis Type	·	Co	ntainer Size					
	40 mL 100 m		500 mL	11	2L 4L	Filth	ered _	Preservatives
☐ Plestic ☐ Glass							1500	
☐ Plastic ☐ Glass	1 - 1					☐ Yes	□ No	. ,
☐ Plastic ☐ Glass	<del>                                     </del>	1.0				☐ Yes	U No	
☐ Plastic ☐ Glass	1 0	a D	AD			☐ Yes	□ No	
☐ Plastic ☐ Glass	1 0	4 1	roxe			☐ Yes	□ No	
☐ Plastic ☐ Glass ☐ Plastic ☐ Glass	<del> </del>		J. U			☐ Yes	□ No	
	<del>  </del>					☐ Yes	□ No	
	<u> </u>					□Yes	□ No	
SCN No. Consumables:	☐ Waterra Tubin☐ Silicon Tubin	9		PE Tubi			oundwater	r Filter

Development

Development

Development

emperature:	10-12	15 MAI	CAST			Completed B Date:	*	27 2006	1 APRE
						Time:	#/	40 am	
	ING WELL Below Top of		MATION	l		One well volu			
Depth to Botto	m of Well Belo	Casing:	Α.		metres	(B-A)*2.0 =		- for a 51 mm (2.0	) inah) diamatan
Diameter Stan	dpipe:	W TOP Of Ca		70	metres	(B-A)****	litres	• for a 38 mm (標	inch) diameter
				33	mm .	08.	x*		25
EQUIPME									
oH and Temp.	Meter:	Model	11 9913	ion i	Serlal No.	07992			
Conductivity M			11 907			07993	Calibration Buff	— · — •	27 □ 10
Dissolved Oxyg	jen Meter:	Model	151 55		Serial No.	07027	Calibration Solu		us/an
nub: □ No				3 Submers			□ D.O. Cheme	•	. 1.
Sample intake	Depth:	Om		2 04511612	NOI <del>O</del>	Bailer:	None 🗆 :	Stainless Steel [	⊒ Teflon □ PV
WELL DE	(5) 6-1-								
VELL DEV	ELOPME!		GING			•			
urge Volume: low Rate:	Weil, Voi	i. X			Iltres				
	·		•	7	L/mir	. Start:	11:44	Finish:	14.34
Time	Volume Removed (L)	Temp.	pH (Units)	Cond	01004				1 7 2 7
11:44	40	11.3	8-43	(uS/cn		PPM (mg/L) or	<b>x</b> 5	Remarks	
11:50	120	9.0	8 9			0.01	Hughly	twoid - qu	zu. adauria
11.53	16D	8-8	9.3:						<u> </u>
1/155	240	80	9.30						
18 - 532	290	8 2	8 32	5.50					•
12 07.	340	9.3	8.90		242	<u> </u>		out through	carrio
12:15	460	10.1	हि सू	1 - 3 .	1 26			<del></del>	· · · · · · · · · · · · · · · · · · ·
13:17	500	8.3	8.54	-		6 8 69			
13 23	640	8.4	7.45	-					
13 26	740	8.0	8 00	-	. 46			47	· · · · · · · · · · · · · · · · · · ·
13:29	800	771	808	1126			>		
mments:		1 7 %	0.00		55	4 8.01	1 .	• •	
	□Yes ZIN	.la 14					7		
	☐ Yes IZ N				<del></del>	. "			•
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Other:		IIIIIII		min	FILLI	II Very S	Silty		
				· · ·		/144 att /	13:59		
Analysis		Туре .			Conta	iner Size			
			40 mL	100 mL	250 mi.	500 mL 1 L	2L 4L	Filtered	Preservatives
	□ Plastic		1				2L 4L		1 10001120100
	☐ Pleatio							☐ Yes ☐ No	
	☐ Plastic			SEE	PIGE	y		☐ Yes ☐ No	-
	☐ Plastle							☐ Yes ☐ No	<del>                                     </del>
		☐ Glass		- 0		ا بالمسمور		☐ Yes ☐ No	-
	☐ Plastic	T 6111		me.			<del></del>		1
	☐ Plastic		4	-		4	1	TE Yes I TINA	,
		☐ Glass		94				☐ Yes ☐ No	

	Development
	Purging/Sampling

ill No.		06 - 9			1	O			m .	110		g/Sampling	
	GUOSE 154	amb -1	MENDOW	RAPIK		. Projec	ct No. eleted By			06 - 1122-186 WELHO+ RILLACKE			
ather:	WINDY	1	CAST			Date:	-	·				LACICE	
nperature:	10-1					Time:				32 32	<u> </u>		
ONITORIN	IG WELL	INFORM	MATION.							<u> 3                                   </u>			
epth to water Bepth to Bottom lameter Standp	of Well Below pipe:	asing: Top of Cas	A_ sing: B_ C_	. 1	metres metres	(B-A)* (B-A)*		le:	litres litres	- for a 5 - for a 38 - 3	g www (‡∷2	inch) diameter inch) diameter	
						•			····	,			
H and Temp. Mete	er: M	lodel III	1 99131 1 99131		erial No. '	0799 0799			ion Buffe			7 🗆 10	
ssolved Oxyger			1 550		erial No.	<i>67.2.</i>		•	ión Soluti		14113 u	1/cm	
ump: 🗆 None			staltic 🗆	Submersit				None	Chemet	•		1	
ımpie intake De	epth: 110	m					Julier.	Privone	LI S	tainiess !	Steel [	Teflon DP	
ELL DEVE	LODMEN	T/DUD 6											
irge Volume: ow Rate:	Well. Vol. :		ing 7 *-		litres L/min	مر•	Start:	11	44		inish:	14:34	
Time	Volume Removed (L)	Temp. (°C)	pH (Units)	Cond.	Redo	*	Diss. O ₂				1011571;	14:34	
/3:33	860	7.9	10.41	(uS/cm)		Tel 24 (1	ng/L) or x	_			Remarks		
	900	7.9	8.76	1126	\$ 59 \$6		10 2.	1 Im	nase	1 tar	hiding		
	960	70	8 52	1140	547		8 23 7 83		hedel	y Kern	नाथ केंद्र	be Bre .	
13:40	1020	8.2	10.36	1121			4 80	<u> </u>		J			
13:46	1060	8.2	0 95		59	+	ट्रां क		•		•	•	
13:51	1100	01	000	1189	59		7 00	Wo	itar oi	it the	o caso	0 63 1100	
13 58	1220	0.1	2018	1190		9	7 87				(	0011 S G	
1402	1200	8.7	8 91	1199	601		7.99	)		·			
1407	t 1840	0.1	LUT	1218	600	9	8.00						
1228	400	61	9.04	1212	- 60	6	9.5	- 3		-			
1426	1400	0.1	7.97	1180	. 59	2.1	11.90	9	•				
1434	10	8.1	8 78	1099	540	9	10.10						
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nments:	Yes No	o If yes		111111	HIII	I I Da	Very S	ilty		•			
Sheen:   Turbidity: Ci	286.70	11111		7		14.			40				
Sheen:   Turbidity: Ci Other:	lear III				Conta	iner Size					==	<u> </u>	
Sheen:   Turbidity: Ci	lear III	ре	//-			iner Size	11	21		Filt	ered .	Preservatives	
Sheen:   Turbidity: Cl Other:	lear [ [ [	pe .	//-			iner Size	11	21	41		ered .	Preservatives	
Sheen:   Furbidity: Cl Other:	lear [ [ [ T]	pe Glass	//-				11	21	41	☐ Yes	ered .	Preservatives	
Sheen:   Turbidity: Cl Other:	lear III	Glass Glass Glass	//-				11.	21	41	☐ Yes	ered .	Preservatives	
Sheen:   Furbidity: Cl Other:	D Plastic D Plastic D Plastic D Plastic D Plastic	pe Glass	//-				11	21	41	☐ Yes☐ Yes☐ Yes☐ Yes☐	ered No	Preservatives	
Sheen:   Furbidity: Cl Other:	lear III	Glass Glass Glass	//-		250 mL	500 mL	X	21	41	☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes	ered .	Preservatives	
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Sheen:   Furbidity: Cl Other:	ear III  T)  Plastic  Plastic  Plastic  Plastic  Plastic  Plastic	Glass Glass Glass Glass Glass Glass Glass	//-		250 mL	500 mL	X	2L	41.	☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes	ered	Preservatives	

Development (1 of 7

Wall No			~							⊔	Purgi	ng/Sampling	
Well No. Location:	4	106-6				Pro	ject No.		06	1100	<u> 1</u> e -	. ·	
	TEUSE	sare	1 - M	odo i	uks 1311.		npleted B	y: 2		1122			
Temperature:	Co'd	10'C				Dat		_	Clar			Carrier	
						Tim		_/\	09.		106		
MONITORIN	G WELL	INFOR	OITAN	V						-7.0			
Depth to water Bel Depth to Bottom or Diameter Standpip	f Well Below e:	Casing: v Top of Ca	sing: B	2.50 180 33	metres metres	(B-A	well volum \)*2.0 = \)*1.1 = \(\circ\) \(\circ\) \(\circ\) \(\circ\)	ne: 147	litres	- for a 5 - for a 3	8 mm (1)	.0 inch) diameter w .5 inch) diameter w 25	ell ell
pH and Temp. Met Conductivity Meter Dissolved Oxygen Pump:   None Sample Intake Dep	er: M : Meter: M	fodel <u>⊬</u> fodel <u>y</u>	s! <i>5</i> s		Seriai No Seriai No Seriai No rsible	». ·	Bailer:	Calibrati			ı	2 05 on □ 10 □ 10 □ 10 □ 10 □ 10 □ 10 □ 10 □ 1	
WELL DEVEL Purge Volume: Flow Rate:	OPMEN Well. Vol.			780	) (#	'es							
	Volume			1	и	min.	Start:	10	:05	. =	inish:	21:1/	
	emoved (L)	Temp.	pH (Units)	Cor (uS/c		BOX	Diss. Oz				111311.	21.77	=
10.05	2	12.8	5.91			4	(mg/L) ogs	5			Remarks		
	12	12.6	8.21				7.42		u ame	ters l	9,1000	ating amin a	7
	90	12.0	7.66	151				; 					
	40	10.2	8.00	2 22:			- W	- W	etric	TigH	ly de	edy lotti	ر ا
	80	8.3	11.32			68	- Charles	LWa			Eur in		7
	120	8.4	10.87			72	10.45				•		1
	60	7·6	119	164			11.70	50A/	YPLE.	L for	sall e	aralusis colle	1
	20	7.3	11.04			19	10.4						1
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	+00	7.1	11.03	140		98	9.06						٦.
	440	11.6	8.43			60	4.57						
	440	10.9	10-13	1148		65	平号	Para	am chas	: Aud	valing		]
Comments:  Odour: Y Sheen: Y Turbletty: Clea	es PNo	If yes				1118	· Very S		•				<u>]</u> - -
	1						5am	•		·	·.		
Analysis	Ту	pe .	ļ	•	Co	ntainer Size	,						_
Salts	19 Plastic	☐ Glass	40 mL	100 mL	250 mL	500 mL	11	2 L	4 L	Filte	ered _	Preservatives	
	□ Plastic	☐ Glass		<u> </u>	·					☐ Yes	<b>M</b> No		┨
	☐ Plastic	☐ Glass			<del></del>	ļ				☐ Yes	□ No	<b>-</b>	┥
	☐ Plastic	□ Glass					<del>                                     </del>			☐ Yes	□ No		1
	☐ Plastic	□ Glass	- '`			<u> </u>	<del> </del>			□Yes	□ No		7
	□ Plastic	☐ Glass				<u> </u>	<del>                                     </del>			☐ Yes	□ No		1
	☐ Plastic	□ Glass			-	<u> </u>	+			☐ Yes	□ No		7
	□ Plastic	□ Glass					+			☐ Yes	20	1	7
SCN No.	Consu	mables:	[] \A/e+							□ Yes	□ No		
12567 -03	) }		☐ Water		48,000	□н	DPE Tubli	ng	***************************************	□ Gro	undwate	or Filter	
DMINENVIROS/Forms and I			☐ Silicon	Indiud		🗆 D	O. Ampor	ules .	and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t				-

Development Development

Project No.   O6 - 1120   185   O5 - 1120   185   O5 - 1120   185   O5 - 1120   185   O5 - 1120   O5 - 1120   O5 - 1120   O5   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120   O5 - 1120	/ell No.	A. 2:	in me			4							ng/Sampling
Sather: Clear 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 April 20 Apri	ocation.						Pro	lect No.		06 -	11.00	_ 10	<i>.</i>
Date:   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colored   Colore		Clear	15 COND	- 14	MON	BRAK							
## ADNITORING WELL INFORMATION  **septh to water Below Top of Casing:		LIEUT, P	Wirdy	- Co	id				-			2000	5800
Seph to water Below Top of Casing:   Seph to bettern of Well Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph to water Below Top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Casing:   B   Seph top of Cas							Tim	e;		12.	10	1006	
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	QUIPMEN	TLIST										3 1.	.25
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☐ Plastic ☐ Glass ☐ Yes ☐ No ☐ Plastic ☐ Glass ☐ Yes ☐ No ☐ Plastic ☐ Glass ☐ Yes ☐ No ☐ Plastic ☐ Glass ☐ Yes ☐ No ☐ Yes ☐ No	Odour:  Sheen:  Sheen:  Other:  Analysis	Yes 11 No ear I I I I Tyr Plastic Plastic Plastic	Pe Glass Glass Glass			Con	tainer Size			44	□ Yes	i No □ No	Preservatives
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☐ Plastic ☐ Glass ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ No ☐ Yes ☐ Yes ☐ No ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ No ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Ye	Odour:  Sheen:  Sheen:  Other:  Analysis	Yes No ear IIII  Tyc  Plastic  Plastic  Plastic  Plastic  Plastic  Plastic	Glass Glass Glass Glass Glass			Con	tainer Size			44.	☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes	No No	Preservatives
□ Yes □ No	Odour:  Sheen:  Turbidity: Cle Other:  Analysis	Yes No ear [ ] [ ] Type Plastic Plastic Plastic Plastic Plastic Plastic	Glass Glass Glass Glass Glass Glass			Con	tainer Size			41.	☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes	20 X0 C X0 C X0 C X0 C X0 C X0 C X0 C X0	Preservatives
No. Consumables:  Waterra Tubing	Odour:  Sheen:  Sheen:  Curbidity: Cle Other:  Analysis	Yes No ear [ ] [ ] Typ Plastic Plastic Plastic Plastic Plastic Plastic Plastic Plastic	Glass Glass Glass Glass Glass Glass Glass			Con	tainer Size			41.	☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes	20 No No No No No No No No No No No No No	Preservatives

Development

Development

Development

Well No.	M	W 06 -	· <i>C</i>		1			-				. u.g.	groampling
Location:	300: E /	5/ : :	MARA	No. 10 a			roject No			06	- 110	2-1	86
Weather:	Clear	Cool	CHEAD	OWER	112	c	ompleted	Ву	$=\overline{\mathcal{R}}$	CLAI	RKE	4. 8	CEEHO
Temperature:	12 -			nny	·····	D	ate:		A	UG o	23 2	006	0-010
MONITORIN	G WELL		ATIO	٧		T	ime:						
Depth to water Be Depth to Bottom of Diameter Standpi	elow Top of C of Well Below pe:	asing:	A sing: B	180 83	metres metres mm	(8	ne well vo 3-A)*2.0 = 3-A)*1=1 = 0.83		e:	litres litres	- for a 51 - for a 38	mm (2.0 7mm (155 / 2	inch) diameter weil inch) diameter weil
•						•				<del></del>			
pH and Temp. Me Conductivity Mete		odel <u>H</u>	991	300	Serial No				Calibrati	na Breffa			<b>.</b>
Dissolved Oxygen		odel 🛂		300	Serial No.	. :			Calibration				רל ם 10 ``
1 .		odel V	1 550	<u> 4</u>	Serial No.				•			1415	us/em
Pump: D None Sample Intake De		n D'Peri	staltic	□ Submer	ekdie		Bailer		₩ None		Ampoule tainless S	Steel C	Teflon □ PVC
WELL DEVE	LOPMEN	T/PURG	ING										
10.05 10.10 10.35 11.03	Well. Vol. :  Volume Removed (L)  830  830  920  920  1000	Temp. (°C) (2.0) (11.3) (10.8) (10.8)	pH (Units) 7 09 7 88 7 50 7 40 7 60	146. 146. 137	Und. 10 10 10 10 10 10 10 10 10 10 10 10 10	95 100 100 100 100 100 100 100 100 100 10	ලි ද පි	O ₂	4	? <u>\$</u>		inish:	2037
	1080	12.2	7.9				80	8	Air	lift r	nozale	1	d to 14500
1328	1100	11.2	7.7			29		10		<del>, _</del> _	,027.6	jowere	d to 145mg.
1430	<del>`~~</del>	12.2	7.9			34	9.0	Ц				<del></del>	
1510	23	11.0	8.28			36	9.7						· .
154	1280	12.0	7.4			7 <u>5</u> 56	8.8	3					
1,615	1320	11.9	8.20			39	8.4	<u>ح</u>					
Comments:					2 1 70	7-1	8.4	<u>_</u>	Sar	rupte 3	3 for co	ell an	alycis willeded.
Sheen:	Yes MINO Yes MINO Par MIT 16:15	If yes		11111	IIIII	1111	i Ver	y Si					
					<u> </u>			÷					
Analysis	Ту	p <b>e</b> .	40 mL	100 -1		ntainer S							
salt	Plastic	☐ Glass	-VAIL	100 mL	250 mL	500 n	NL. 11	_	2 L	4 L	Filte	red _	Preservatives
	□ Plestic	□ Giass			-						☐ Yes '	<b>E</b> No	Marine and .
	CI Plastic	□ Glass						-			☐ Yes	.□ <b>N</b> o	
	☐ Plastic	□ Glass					<del></del>	-			□ Yes	□ No	
	☐ Plastic	□ Glass					<del>-   -</del>	$\dashv$			□Yes	□ No	
	☐ Plastic	□ Glass			·			$\dashv$			☐ Yes.	□ No	•
<u> </u>	☐ Plastic	□ Giass				<u></u>		-+			☐ Yes	□ No	
<u> </u>	☐ Plastic	□ Glass					_	$\dashv$			☐ Yes	□ No	
SCN No.	Consu	mables:	□ Water	ra Tubing					1		□ Yes '	□ No	
12567-0	03		□ Silicon			[	HDPET	ubir	ng		_ □ Gro	undwate	Filter
ADMINENVIROS/Pome so	d Templaces\Piold	orms/GW Daw	d & Purging	Samp Data She	etdos.		D.O. Art	pou	iles				

(4 & 7)

### Groundwater Development and Purging/Sampling Data Sheet

Development

Well No.	M	w 06			1						i urgiri	ig/sampling	
	Green CE	101 DO	<del>~ 6</del>	χ ,		P	roject No.		1	6 -	1120	-186	
Weather:	FOOLE	( 43% E ₂ 2	Mena	240-5	arc		ompleted By	: R		KKE		" CAR CHO	٠
Temperature:	المحت إست	10-15	my .	G00/			ate:		AUG		2.00		
						Т	īme:			2.20		2	
MONITORING	WELL	INFORM	MATION	[ · .									
Depth to water Belo Depth to Bottom of Diameter Standpipe	Well Below e:	asing: Top of Cas		180	metres metres mm	(6	0ne well volum 3-A)*2.0 = 3-A)*■ = 0 88	e:	litres litres	- for a 51	uiu (##	0 inch) diameter 6 inch) diameter 85	well well
pH and Temp. Mete		odel Hi	001	2.00			•						
Conductivity Meter:					Serial No	-		Calibrati	on Buffe	ers:	<b>E</b> 4	<b>2</b>	
Dissolved Oxygen N					Serial No			Calibrati				3 45/m	
1			1 550	A	Serial No			•		Ampoule		<u> </u>	
Pump:   None Sample Intake Dept		Peri	staitic [	Submer	sible			None		Stainless S		☐ Teflon ☐ P\	VC
WELL DEVEL	OPMEN	T/DUDG											
Purge Volume:				eres est one	,		•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Flow Rate:	Well. Vol. 3	^ <u>~ ~ 5</u>		332		'es			_	•			
T	Volume	Temp.				nin. Pern	Start:		20:05	· F	inish:	20:37	
	moved (L)	(°C)	pH (Units)	Cond (uS/c		mV)	Diss. O ₂						
	380	12:1	9.45			46	(mg/L) or %	Ai	r 1 May	ng no	emarks	raised to !	100
1 1 1 11 11	420	106	10.10			03		$-LW_{\delta}$	ides 1	remare	ed tu	roidity .	
	460	10.1	10 2	129		46	758	<u>-</u>		<u> </u>		9	
	500	8.5	9.69			8p		<del>_  </del>	<u> </u>				
	550	8.2	9.56	1126		5 Z_	7.7.	<u> </u>			· · ·		
1742	600	8 2	964	108		45							
	640	8.0	9.66			34		<u> </u>					$\neg$
	680	8.0	9.56	10=			9.43						
1753	720	8.3	9.52			35	11.10	No	<u>िश्रीर</u>	c 12	ne		
	790	6.2	4.3			05	3:85						٦.
	820	8.3	9.10	93		69	8.46						
1803	840	87	8.83			3-7	879						
Comments:	ě				2 1 -7	7 6			•		• •		
Odour. DY	es EN	If yes	-									<del></del>	
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Turbidity: Clea					- 4				\				
Other:					1803		Very Si 17:15	lity	•	٠	·.	• •	
Apalania			T T	<u>\</u>		votal							
Analysis	Ту	pe .	40 mt	100 mL	250 mL	ontainer : 500 r					ered _	2	
	☐ Plestic	□ Glage			7	3001	TL 1L	2L	4L	- ruu		Preservatives	
	□ Plastic	☐ Glass			_	$\leftarrow$				□ Yee	□ No		
	□ Plastic	□ Glass			<b>-</b>	-				☐ Yes	BNO		
	D Plastic	☐ Glass	1				4			☐ Yes	□ No		
	☐ Plastic	□ Glass				<del> </del>				☐ Yes	DW6		
-	☐ Plastic	□ Glass	No.			<del>                                     </del>		No. of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of		☐ Year	□ No	***************************************	
	☐ Plastic	□.Glass	1			<del>  `                                   </del>			, ,	Yes	□ No		44.
	D Plastic	□ Glass		<b>*</b>		<del> </del>			_/_	☐ Yes	□ No	1	
SCN No.	Conce	mables:	<b>C</b> 144 ·			<u> </u>				☐ Yes	□ No	1	
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ADMINENVIROS/Focus and			☐ Silicon	Tubing			D.O. Ampor				کا کاکا کا کا است. مصر		<del></del>
	i emplaces/Field	COTTON TO THE	a) & Barrier v (										

Development

Well No.	1143	06 - 6	,									<u> </u>	· urgin	g/Sampling
							P	rojec	t No.	0	6 - 1	122 -	جه ا	<i>,</i>
Weather:	Chai	15t - : Zvo	MEHDI 1	SINDEAN.	1		c	ompl	leted By		cun			COMMO
Temperature:		15 %	<i>y</i>					ate:	_		AUG	22	2000	
							11	me:				MOR	*** *** **** ***	~
MONITORING Depth to water Below Depth to Bottom of V Diameter Standpipe:	w Top of C Well Below	asino:	A sing: B	1	•	etres etres m	(8	ne we I-A)*2 I-A)*1	•	ne:	_ litres	- for a 5	1 mm (2,0	) inch) diameter well 5 inch) diameter well
pH and Temp, Meter Conductivity Meter: Dissolved Oxygen Meter: Pump:  None Sample Intake Depth	eter: M	a D'Peri	Staltic [	§ 00	Ser Ser	iai No Iai No Iai No	. :	В		Calibrat	ion Buffe ion Solut Chemet	ion:	1413	17 🗆 10 US / em
Flow riate:	Well. Vol. :	x <u>23</u>	6			_ litr	es nin.	s	tart:		0:05	F	inish:	<i>80:3</i> ≠°
Ren	noved (L)	Temp. (°C)	pH (Units)	Con (uS/c			edox mV)		Diss. O ₂	.				
	380	8.6	.8.66	87	2	t.	146		0/L) or %	-			Remarks	
	120	8.6	8.3.	7 78	6		398		9.61					
	960 550	8.4	8.26	व व व	3	3	88		9 1/2	1-				
		8.4	8.8	77			86		3 33	190	mele	9 00/	eded	<u></u>
	000	8.5	8 09		7	ż	88		7.47				<del>- ; · ·</del>	
	080	8.0	8.10	1 -1 -1 4	5	38	38		3 67		· ·			
	20	7.8	'ন্ত ত	78	1		70		8 8	140	27 e /	snored	to na	im
1835 2	160	7.9	8/6	78	5	30							· · · · · · · · · · · · · · · · · · ·	
	200	8.2	8.0			3			8 3:	<del>,   -</del>				
	Ono	83	7.90	3 82			13		8.5	1	-			
	80	8.3	7 93				09		26.5					
1851 23	20	9 · F	7.90	82			09		8.13	123				
Comments:								==	سكورة ك		•		· · ·	
Odour:	s Z No	If yes	IIIIII	IIIII	1 6	311	IIII	i	Very S	lity		·		
														<del></del>
Analysis	Ту	pe .	ļ.,	·			ntainer S	ize						
Sait	Plastic	☐ Glass	40 mL	100 mL	25	η mL	500 m	L.	1L	2 L	41	Filte	ered _	Preservatives
	□ Plestic	☐ Glass						$ \bot                                   $			1	☐ Yes	₽ No	***************************************
	☐ Plestic	☐ Glass			<del></del> -			$\bot$			F	☐ Yes	□ No	. ,
	□ Plastic	☐ Glass		<del></del>								□Yes	O No	
	☐ Plastic	☐ Giass									•	□Yes	□ No	
	☐ Plastic	☐ Glass	-		<del>.</del>				]			☐ Yes	□ No	
	☐ Plastic	□ Glass	<del></del>		<u> </u>							☐ Yes	□ No	
	☐ Plastic	☐ Glass										☐ Yes	□ No	
								$\bot$				□ Yes	□ No	
SCN NO.  1855-03  ADMINENVIROS/Portes and Te	<u>£</u>	mables:	☐ Waterr	Tubing		Carcama Carlo			E Tubli Ampor					r Filter

Development

Development

Purging/Sampling

Well No.	mus	06 - 6											9
Location:	TOOSE	150011	D - N&	12001	200 100		ject No.	_0	6-1	122	- 10	5	•
Weather:	Cool	Clea	$r$ , $\omega$	under	3/936		npleted By		· CG+72	40 -	4. · /m	CLAK	re-
Temperature:	. /J-	15%		<del></del>		Date			MUI	01 3	200	5	
MONITORING	WELL	INFOR	ATION			Tim	e:		18:	22			
Depth to water Beld Depth to Bottom of Diameter Standpipe	ow Top of C Well Below e:	asing:			metres metres mm	(B-A	well volun \)"2.0 = \)"## =	he:	_ litres -	for a 51 for a 3	mm (14	0 inch) diar 5 inch) diar 2 5	neter well
EQUIPMENT						•							
pH and Temp. Mete	er: M	lodel <u>H</u>	् द्व	300	Serial No			0-11			٠,	_	
Conductivity Meter:		-			Serial No				ion Buffer		_	1 🗖 ל	0
Dissolved Oxygen N		odel U	51 57		Serial No			-	ión Soluti	_	1413	us/im	
Pump:   None	Water	a D'Peri	staltic 1	☐ Submers					Chemet A	•			1,
Sample Intake Dept	th: <u>(</u> se	e remo					Baller:	None	□ St	ainless S	Steel [	☐ Teflon	
34/21 4 2 2 3													
WELL DEVEL	OPMEN	T/PURG	ING										
Purge Volume:	Well. Vol.	x <u>-23</u>		3320	itr	d.	36-				٠		
Flow Rate:						nin.	Start		10:05			a - 0	· .
Time	Volume	Temp.	pH	Cond		PPM			0.00	·F	inish: _	20:3	+
1856 2	360	7.9	(Units)	(uS/cm	1)   é	(1000)	Diss. O ₂ (mg/L) (EE			F	lemarks		
	400	79	7.85			1/3	8 38			<del></del> -		<del></del>	
	140		7.8			414	8.8						
	480	76	7.8			22	रे प		stile i	- 17	0 m		
		8.प	7.8			28	8.4		2 6 4. 1C. 1	<u> </u>	Um		
	520	8.2	7.70	1 0 0 )	4		8.4			<del></del>	<del>- ; · ·</del>	·	
	560	8 A	74.8°	883		38	8.4	- I	· · · · · ·				
	690	8.3	·7.70		1	TO L	8.60		<del></del>	· · ·		<del></del>	
	640	8.0	7.33	7 896	1,	148	837					·	
	680	8.0	7-75	907	L	52	8.37			·			
1937 2	720	8.0	7.76	909	. 4	54	8.25		<del></del>			<u> </u>	
	760	8.0	7.73		L. 4	63	8.90						
	800	→ 8	7.77	2 929		66	8. 39	-			<del></del>		
Comments:			•				<u> </u>						
Odour: 🗆 Y		If yes	-										
Sheen: TY	88 E No	If yes	-		· · · · · ·		<u> </u>						•
Turbidity: Clea			HIII	11111	7 1 7 1 7				`				
Other:	1940					11111	Very S	itty	•	٠.			
		-	-: -	<u> </u>			<u> </u>	•		•	. :.		
Analysis				Til I	Co	ntainer Size					i i	<u>:                                    </u>	
77.00	1 9	pe .	40 mL	100 mL	250 mL					AND AND AND AND AND AND AND AND AND AND			
	□ Plestic	☐ Giass	and the same	-		500 mL.	1L	2 L	4	rute	red _	Presen	atives
Today Con Section 1	□ Plastic	□ Glass	·		The State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the State of the S	<del> </del>				□ Yes	₽ 2		
	Plastic	₽ Glass			-	1	+	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s		□ Yes	_ D-No		
	□ Plants	Ü Giass								☐ Yes	₩ 120	and the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of the same of th	and the second
	1 Plastic	D-Glass				100				☐ Yes	29		
	□ Plastic	□ Glass			· .	and the second	+ **			☐ Yes	□ No		Water Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the
	□ Plastic	□ Giass	Washing .			· · · · · · · · · · · · · · · · · · ·	+	William Sanitario		□ Yes	<b>□</b> 100		1
	☐ Plastic	☐ Glass		<u> </u>	4		+		A CONTRACTOR OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF TH	□ Yee	□ No		
SCN No.							<u></u>			□ Yes '	□ No		
	Consu	mables:		a Tubing		пн	IDPE Tubi	na				C*!	· · · · · · · · · · · · · · · · · · ·
NAME			☐ Silicon	Tubing			O. Ampo				undwate	r Filter	
DMINENVIROS/Poms and T	emplaces Plaid	Octobac Dew	l & Pargine	amp Data Sheet	Ldog			me2				· ·	

(7	e.	7)
V.		100

Purging/Sampling Data Sheet ☐ Development □ Purging/Sampling MW 06-6 Well No. Project No. 06-1122-186 Location: - METROWEANK Completed By: R. COSELHO CLARKE Weather: COOL CLEAR. WINDY Date: AUG 23 Temperature: 12-15-6 2205 Time: 19:45 MONITORING WELL INFORMATION One well volume: Depth to water Below Top of Casing: metres  $(B-A)^{2}.0 =$ Depth to Bottom of Well Below Top of Casing: litres - for a 51 mm (2.0 inch) diameter well 180 metres (B-A)*** litres - for a 35 mm (155 inch) diameter well Diameter Standpipe: mm 0.23 125 **EQUIPMENT LIST** pH and Temp. Meter: Model Serial No. Conductivity Meter: Calibration Buffers: E 7 Model Serial No. Calibration Solution: Dissolved Oxygen Meter: .Model 401 Serial No. ☐ D.O. Chemet Ampoule Pump: ☐ None Waterra D'Peristaltic ☐ Submersible Baller: None Sample Intake Depth: ☐ Stainless Steel ☐ Teflon ☐ PVC WELL DEVELOPMENT/PURGING Purge Volume: Well. Vol. X 🚅 3 litres Flow Rate: L/min. Start: 20:37 Finish: Volume Time Temp. pH (Units) Cond. Diss. O2 Removed (L) (0) (uS/cm) Remarks 1945 2840 8.0 1.75 741 470 . 40 3880 0 71 951 UTE 952 2920 961 70 43 959 70 2980 8. 7.7! 90 8.51 20.04 3040 8. 7.69 007 503 8.65 20:12. 3100 68 03 8.60 3160 ୃ 103 516 <u> 2025</u> 3220 1042 520 3220 2037 7.46 049 8.35 Comments: Odour: **₽**No ☐ Yes If yes Sheen: ☐ Yes E No If yes Turbidity: អារារារារារារារារារារិ**មើ** Clear Very Siity Other: Container Size Analysis Туре 40 mL 100 mL 250 mL 500 mL Filtered Preservatives 11 4 L Salt Plastic ☐ Glass □ Yes No ☐ Plastic ☐ Glass ☐ Plastic □ Yes □ No ☐ Giass ☐ Yes ☐ Plastic ☐ Glass □ No ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Plastic ☐ Yes □ No ☐ Glass ☐ Yes □ No ☐ Plastic ☐ Glass ☐ Yes ☐ Plastic □ No ☐ Glass ☐ Yes □ No SCN No. Consumables: ☐ Waterra Tubing

☐ HDPE Tubing

D.O. Ampoules

☐ Groundwater Filter

N:WDMINENVIROS\Forms and Templates\Field Forms\GW Devel & Purging_Samp Data Sheel.dog

☐ Silicon Tubing

12567-03

☐ Development

Purging/Sampling

Well No.	Mus	06-6			1					4	Purg	ing/Sampling
Location:	Goo St	S ISCAN	475	Alem is a		P	roject No.		06 -	1122	- 18	
Weather:	2, 2,4 2	4 9,61	Crost #	CALLUA	WELL	YIK C	ompleted	Ву:	8 WE	2413	<u> </u>	CLAPICE.
Temperature:	<u>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</u>	<u> 10 °C</u>					ate:		AUG.	24.	20176	The state
MONITORIN	IG WELL	INFOR	MATIC	\A.		TI	lme:		12 2	⊃ por		
,	•		inter 1 IC	MA	•							
Depth to water Be	elow Top of	Casing:		A	metre	0	ne well vol	ume:				• •
Depth to Bottom Diameter Standpl	of Well Below	w Top of Co	asing:	B /80			I-A)*2.0 = I-A)*EB =		litres	for a	51 mm (2	2.0 inch) diameter wel
Januar Startopi	be:			C 33	mm	- (0	ु द		litres	· TOF E	<b>48</b> mm (1	inch) diameter well
EQUIPMENT	LIST										88 )	<b>'</b> ?S
pH and Temp. Me		Model H	ii mada	-								
Conductivity Mete			1 3030	300	_ Serial N			Calib	ration Buf	ł	بنــ	
Dissolved Oxygen					_ Serial N				ration Sol		<b>22</b> 4	7 🗆 10
Pump: None			51 550		Serial N	10.			O. Cheme		1413	usy are
Sample Intake De		ra ⊡'Pei	ristaltic	Subm	ersible		Baller	₽No				. 1.
					-		oundi,	SE NO	ne 🖽	Stainless	Steel	□ Teflon □ PVC
WELL DEVE	LOPMEN	IT/PI IP/	SIMIC									
Purge Volume:	Well. Vol.	x /·	<b>b</b>									
Flow Rate:		0.5		161	· ·	tres			2	•		
Time	Volume	Temp.				/min.	Start:	_1.	2:20		Finish:	17:30
12.20	emoved (L)	(°C)	pH (Units	) Co	ind. /cm)	Flores	Diss. O					147.58
12:45	4 3324	13.3	69			272 272	(mg/L) or				Remarks	. ]
13:00	$\frac{12}{3332}$	12 =	7:15	107		2	7.25		ENT.	min	PDRIVI	e I min
	20 (3340) 30 (3350)	12.6	7 - 16			22	<u> </u>				<u> </u>	
	45 (3565)	12.7	7.21			72.1	1 36	┷	<u> </u>			
	50(33%)	12·8	7.2		<b>S</b> 2	\$ 25	1.38				<del></del>	
	55 (3385)	12.3	7 28	11		59	ो पंड		ENIT .	<b>V</b>	- /-	
	70 (3390)	12.1	7 6. 8.07			42	1.54	-   E	ENT .			ELE: Imin
15:30	90340	12.2	7.53			69	0.40		unpi	ducre		SUCEO
15:50 1	00(3420)	125	7 6			36	1.18					
16 33 1	201341	15 - 5	7.51	119		52	1.29	?		<del>-  </del>		· · · · · · · · · · · · · · · · · · ·
17:04 1	40(3460)	12.2	7.5	7 /2/		80	1.52			4		
Comments:						2	1.47	\V£	N7.	30 sec	138	14E : 90
Odour: 🗆 Y	es WNo	If yes	**********									
Sheen: DY		If yes			<del></del>		•					
Turbidity: Class	1111		Hiir	1111					`			
Other: 574	TOID	_			11111.	IIIIII	Very S	ility		٠.		
										•	:	
Analysis	Ty	De .			C	ontainer Siz						
			40 mL	100 mL	250 mL	500 mL		T	<del></del>	-	ered _	
	☐ Plastic	□ Glass					+	2L	44	<del> </del>	<del>.</del>	Preservatives
	☐ Plastic ☐ Plastic	Glass			00		- 0	1	+	☐ Yes	□ No	
	☐ Plastic	□ Glass			CA	JE	1	1	+	□ Yes	□ No	
	☐ Plastic	☐ Giass						/	<del> </del>	☐ Yes	□ No	
	☐ Plastic	☐ Glass			<del> </del>				1	☐ Yes	E No	
	☐ Plastic	□.Glass							1	☐ Yes	□ <b>1</b> %	<u> </u>
	☐ Plastic	□ Glass								☐ Yes	□ No	
SCN No.							$\bot$			□ Yes 1	□ No	· · · · · · · · · · · · · · · · · · ·
***************************************	Consu			a Tubing		DH	IDPE Tubi	n <i>r</i>				
ADMINENVIROS/forms and T	ennelsens State		□ Silicon	Tubing		🗆 o	O.O. Ampor	::W		_ L⊒ Gro	undwater	r Filter

□ Development Purging/Sampling

Well No.	<u> P')3</u>	06 -	6	_	٠					٠.١		g. camping
Location: Weather:	GOOSE	ISLAN	D. M	JA DOU	SEATIN		roject No.		<i>O</i> (	6 - 11:		
Temperature:		1 00,00	<u>и</u>				ompleted			<i>ш</i> о.	· R. C	TURKE
		8-100					ine:		· U.G.	24 20	106·	
MONITORIN	VG WELI	L INFOF	MATIC	N.						17.30	<u> </u>	
Depth to water B Depth to Bottom Diameter Standp	elaw Top of of Well Belo	Casing	asing:	AB_/80 C_33	metre metre mrn	es (E	#ne well vol 3-A)*2.0 = 3-A)*44* = 0 8*	ume:	litres	- TOTA	<b>1</b> min (1	2.0 inch) diameter well inch) diameter well
EQUIPMEN.								-			?3 	25
pH and Temp. Me Conductivity Meta Dissolved Oxyger Pump:   None Sample Intake De	ar:  Meter:  U.Wate  pth:/	Model on the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model of the Model	L GA LE L S distaltic	20V .	Serial N	Vo.	Bailer:	Calibra			/4/3 •	US/cm
WELL DEVE	LOPME	NT/PUR	GING									
Flow Rate:	Well. Vol	.x			L	itres /min.	Start:	16	0:20 ₁	om;	Finish:	1730
17-30	Removed (L) 1 6 O(34%)	12.4	(Units	) (us	/cm)	HOUSE THE	Diss. O. n) (mg/L) or				Remarks	
1735	7 0 0(3180	12.4	7.5	9 /3	06	650	1.19			<del></del>	TOT HELL ICS	
		<del>                                     </del>	<del> </del>						munda	6 (0)	11- 1-	
			<del> </del>					F	eld a	alkalı	ices	d
-				<del></del>					46.	3 mg/	1 80	Fest =
· .				_							1	
			·		<del>.  -</del>			<u> </u>				
								-				
omments:				<u> </u>							<del></del>	
Sheen:	(es EVA											
		o If yes	<del></del>					·				•
Other: Cle	ATAKT/E	ND 1111	i i i i i	1111	11111	IIIII	Very S	Bilty		٠		
			<u> </u>									-
Analysis	T)	/Pe .	40 mL	100		ontainer Siz						
TOT METALS	# Plastic	☐ Giass	-V HIL	100 mL	250 mL	500 mL		2 L	41	Filte	red _	Preservatives
DISS. METALE	Plastic	☐ Glass		<u> </u>	<del>                                     </del>	1+(FD				□ Yes '	<b>P</b> No	HNO3
RAW.	#Plastic	□ Glass		<b> </b>	<del> </del>	/+(F1				#Yes	II No	HNO3
RAW	Plastic	□ Giass			<del> </del>	1+(F)	<u>" ' " " " " " " " " " " " " " " " " " "</u>			□ Yes	No	111703
TKH, TOT PHOSP		□ Giass			<del> </del>	14/50		1+(FD)		□Yes	M No	
	☐ Plastic	□ Glass			· -	1+(FD)	<del>'  </del>			☐ Yes	to No	H2 SO4
<u>-</u>	□ Plastic	□ Giass				<del> </del>	-			□ Yes	□ No	
	☐ Plastic	☐ Giass					+			□ Yes	□ No	
SCN No.	Consu	mables:	D W							□ Yes	□ No	
12567 -	0/	•	- Gillian	ra Tubing Tubing	44		DPE Tubi	ng •			indwate	r Filter
MENVIROSVAGE ENT	·upaxasvnaid F	OFFICE DEVE	& Parging	emp Deta She	et.dod.		· · · · · · · · · · · · · · · · · · ·	ules			· · · · · · · · · · · · · · · · · · ·	·

Development

eation: ather:	WINDY	PORTA	GE LAK	E - ME	DOWBANK	Project No.	<u> </u>	6 - /	122-	186	
nperature:	8-10	RAII	14			Date:	ру: <u>К</u>	COEC	HO +	R	CLARKE
					11	Time:			28	200	G
OMIOR	ING WEL	L INFOF	OITAMS	N.				14	/ට		
pth to water	Below Top of	Casing:	,	~ ~		One well voic	me.				• .
pop to Botton	m of Well Belo	W Top of C	esino: s	3.03	5 metres	(B-A)*2.0 =		litras	. for a f	: 41 <i>co</i>	
ameter Stand	dpipe:			$\frac{212}{33}$	-	(B-A)**	173	litres	-for a s	enni (2 Mon it	2.0 inch) diamete
OHDME	WI LIOT				mm	0.8			ي.	3	-25
QUIPMEN and Temp. (				-							
nductivity Me		Model <u>+</u>	11 991	300	Serial No.	07995	Callera			,	•
solved Oxyg		Model F	11 991		Serial No	04992		tion Buff		<b>2</b> 4	
	laio		s/ 551		Serial No	7227		tion Solu		1413	us/cm
TIP:   No	wate	rra D'Pa	ristaltic	□ Subme	rsible	and the same			t Ampoule		. 1.
mple Intake [	Depth:	0 m				Baller:	None		Stainless	Steel	□ Teflon □ P
ELL DEV	ELOPME	VIT/DI ID				16,290,7		- 34	i.		
ge Volume:	Well. Voi	11/PUK							(a) - 10		
v Rate:	·	·^ =		3400			*				
Time	Volume	Temp.	PH		L/min.		-	5:2	0	inish:	21:30
520	Removed (L)	(0)	(Units)	Con (uS/c		Dies. O	98		327		8730
1526	20	7.6	7:		- 1		*		7.	Remarks	
529	130 ·	7.9	8.7	1 90		5.82 9.25	-				
532	120	8.6	9.48	4 414	107	7.50		<del></del>			
540		6.0	11.69	1 118	0 593.	111410	-	<u> </u>			
544.	240	4.5	11.32	-1118	1 594	11 70	-				180
548	Thorn	4.0	1/34	1990	495	1224			12		
554	520	45	11.0	8 8 9	5 447	12.50	1		<u> </u>		
1600 11	600	4.4	10.9	4 82	PE10	.89	2				
605	700	42	10.7	182	2 4cs	9.74			-		
613	Sou	4.9	1.55	+3	. 368	9-84	9.02			7	
219	900	40	10 62	104	333	9.04	<i>*</i>				
nents:		- 10	1921	1 007	8 349	9 67	30 834				- 45
	Yes EN	<b>3</b> ,		1104/		10 9 A 6	W.				
	Yes Pic	f yes				I					
rbidity: C	lear III	11111			allight - 2 19	122	WE NO	<u> </u>			-
	ware.		111111	START	1111111	De Very S	ilty				
				O LEIF.		15.32		1		:.	
Analysis			<b>₹</b> *•	ins.	Contain						
1		pe .	40 mL	100 mL	Containe 250 mL 500	144 11		direction.	23		4. Car
1	D Plastic	☐ Glass	2	AUP T		mL 1L	2 L	4 L	Filte	red	Preservatives
- 3K	□ Plastic	☐ Glass	(m-		1 16		. A.	1	☐ Yes	□ No	and the same
	☐ Plastic	☐ Glass	ICE	= 6	nep	10		1	☐ Yes	□ No	
patt .	☐ Plastic	C Glass	I wanter		Total Comm	101	1000	を元素	☐ Yes	□ No	-
		☐ Glass	可有	1		-		- 1	☐ Yes	E No	
	☐ Plastic				-	-		2 dla	☐ Yes	□ No	
	☐ Plastic	☐ Glass	2	78							
	☐ Plastic	☐ Glass	1	- 19 - 11				- 2	☐ Yes	□ No	1
I No.	☐ Plastic	☐ Glass	2	A 78	×				☐ Yes		

Development

	Purging/Sampling
--	------------------

ocation:	7.10	06 -				D-	oject No.		$\alpha$	1100		
4/	SELOND PO	KUTYGE	LAKE -	MEAT	DOWGA		mpleted E	. –	100	1100	- 186	
	<u> </u>	DY LA	INY			Da			wer	<u> 40 e</u>	K	CLARKE
emperature:	8-1								AUG			
MONITOR	ING WELL	INFOR	MATIO	N			ne:		3-	<u> 16 :</u>	25	
	•		MINTIU	<b>W</b>								•
Depth to water	Below Top of	Casing:	- A		make.		e well volu	me:		٠		
Depth to Botto	m of Well Below	w Top of Ca	sing: B	212	_ metres metres	\—	A)*2.0 =		_ litres	- for a !	51 mm (2	2.0 Inch) diamete
Diameter Stan	dpipe:		_	33	-	, (B-,	A)*#=		litres	- for a	38 mm (1	1.5 inch) diamete
					_ mm	-	0.8					
EQUIPME	NT LIST											
pH and Temp.	Meter:	Model H	19913	2000	0-114							
Conductivity M	eter:		1 991	200	Senai No	D10	142	Calibra	tion Buffe	ers:	<b>12</b> 4	7 010
Dissolved Oxyg		Model	. , , , ;	300	Serial No	. 04			tión Solu			3 us/cm
Pump: 🗆 No	/Aie	2-LIFT)			Serial No	07	727		Chemet	-		3 -5/4/)
			istaltic	□ Subme	rsible		Bailer:	Non		•		
Sample Intake	Depth: 12	Sm,	110m		-		Daner.	ME NON	9 05	tainless	Steel	☐ Teflon ☐ F
WELL DEV	/EL OBLIE	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-										
WELL DEV	ELOPMEN											
Purge Volume:	Well. Vol.	x 22		340	2) IR	es					•	
Flow Rate:		9.	4			nin_	Charle				-	
Time	Volume	Temp.	pH	Cor		100	Start:		5:20	<u>,</u> .	Finish:	31:30
6 25	Removed (L)	(°C)	(Units)	(uS/c		MY) CA	Diss. O ₂ (mg/L) or				Remarks	
16 40	1000	1.0	10-05	1000	0 3	53	8.97		7 1			
16:45		5.2_	10 16	69		45	0 11	- 1	Olde	6	25 m	•
6:50	120	5.4	950	592		24	2.25			11.		
		4.6	9.97			6	8.83	<del>-   -</del> -	<u> </u>			
	1340	4.6	9.81	71.8		13	9.40		•		<u> </u>	
	1400	7.0	8.2	2 54		77	11.54					
19:13	1480	7-4	:9.50	5 4a		15-	10.22	1 -	rele i	2.110	2 m .	
3 7 7 7 7	1540	S: 7	<i>€-3</i> 3	517		50	10.40					
1922	620.	4	9.61	२=		35						
1909	1720	3.8	9.41	OH		55	10.51					
1934	1800	4.2	9.J#	2.0		52	13.56					
1940	880	40	9-78	20		54	11.12					
omments:					1		7 0 5	<u> </u>			•	
Cul-	□ Yes 🖬 No	o If yes										
Odour:												
4.5	⊔ res 🖼 Ne				N1562							
Sheen:	□Yes DerNo			1164	TITIT	IIIII						
Sheen: Turbidity:			111111	1169			Very S	ittv				• '
Sheen:		111111		1169	71.7		Very S	ilty	•	• •		
Sheen: Turbidity: Other:								ilty	•	•	·.	
Sheen: Turbidity:	Clear III				Co	ntainer Size		ity .		•		
Sheen: Turbidity: Other:	Clear [ [ ]	ype	40 mL	100 mL						Filt	ared	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [	IIIIIII ype □ Giass			Co	ntainer Size		ilty 2L	41			Preservatives
Sheen: Turbidity: Other:	Clear [ ] [	IIIIII ype □ Giass □ Giass			Co	ntainer Size			41	□ Yes '	□ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ T	U Glass ☐ Glass ☐ Glass			Co	ntainer Size			4L	☐ Yes	□ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ ]  Plastic Plastic Plastic Plastic	U Glass U Glass U Glass U Glass			Co	ntainer Size			4L	☐ Yes☐ Yes☐ Yes☐ Yes☐	□ No □ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ ]  Plastic Plastic Plastic Plastic Plastic	U Glass ☐ Glass ☐ Glass			Co	ntainer Size			4L	☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes	□ No □ No □ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ ]  Plastic Plastic Plastic Plastic Plastic	Glass Glass Glass Glass Glass Glass			Co	ntainer Size			41	☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes	□ No □ No □ No □ No □ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ ]  Plastic Plastic Plastic Plastic Plastic Plastic Plastic	Glass Glass Glass Glass Glass Glass Glass			Co	ntainer Size			4L	☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes	□ No □ No □ No □ No □ No □ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ ]  Plastic Plastic Plastic Plastic Plastic	Glass Glass Glass Glass Glass Glass			Co	ntainer Size			41	☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes	□ No □ No □ No □ No □ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ ]  Plastic Plastic Plastic Plastic Plastic Plastic Plastic	Glass Glass Glass Glass Glass Glass Glass Glass	40.mL	100 mL	Co	ntainer Size			41	☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes☐ Yes	□ No □ No □ No □ No □ No □ No	Preservatives
Sheen: Turbidity: Other:	Clear [ ] [ ]  Plastic Plastic Plastic Plastic Plastic Plastic Plastic	Glass Glass Glass Glass Glass Glass Glass Glass Glass		100 mL	Co	500 mL		21	41	☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes ☐ Yes	II No II No II No II No II No II No II No II No	

Development

Development

Development

Well No. MW Of	5-7	1			aa. camping
Location: SECOND PORTA	GE LAKE - MEADOW	Proje	set No. (	26 - 1122 -	186
<u>00 // 159</u>	CAINY	Date:	pleted By: R	WELHO + K	2 WARKE
Temperature: 5-6	°C	Date:	A	UG 28 200	6
MONITORING WELL INF	ORMATION	11me		19:45	
Depth to water Below Top of Casing Depth to Bottom of Well Below Top of Diameter Standpipe:  EQUIPMENT LIST	: A m of Casing: B 2 1 2 m	netres (B-A) netres (B-A)	well volume: *2.0 =	litres - for a 51 mm litres - for a 3# mm 33	(2.0 inch) diameter well (136 inch) diameter well 1°25
Sample Intake Depth:	HI 9913DO Sel YSI 550 A Sel Peristaltic D Submersible	rial No. 079 rial No. 079 rial No. 073	92 Calibrat	Chemet Ampoule	□ 10  1/3 us/cm  □ Teflon □ PVC
WELL DEVELOPMENT/PO	JRGING				
Purge Volume: Well. Vol. X Flow Rate:	20 · 3400 9·4	litres L/min.	Start:	15 30 Finish:	_21:3D
Removed (L)	C) (Units) (US/cm)	Redox (mV)	Diss. O ₂		
	9 9.26 247	1123	mg/L) or %	Remark	<b>(S</b>
1000 14	2 916 274	136	10.08		
19:59 <b>2</b> 200 4	7 9.15 294	146	8 65	·	
	8 9 06 328	164	8 89	<u> </u>	
0 000	4 8 91 320	165	9.86	<u> </u>	
18/18/0	4 882 338		9 63	·	
20-28-2580 4 20:37-3700 4	5 8 83 410		7.40	<u> </u>	
	2 8 80 423		8 93	•	
	4 8.66 464		1.00		
	4 8 54 357.		7 02	<u> </u>	
	4 6 % 43R	\$216	9.20		
	.5 .8 69 425		9 28		
Comments:	•				
Turbidity: Clear IIIIII	/es		. Van On		
oue.			Very Sifty		
Analysis Type .	40 mL 100 mL 25	Container Size			
□ Plastic □ Gi		0 mL 500 mL	1L 2L	4L Filtered	- Preservatives
☐ Plestic ☐ Gi				□ Yes □ No	
☐ Plastic ☐ Gi	1.	/ ISEE	PART	O OYOU DA	<u> </u>
☐ Plastic ☐ Gi				□ Yes □ No	
☐ Plastic ☐ Gi				DYS DN	
☐ Plastic ☐ Gt		-		Yes DNo	
□ Plastic □ Gir		<del></del>		☐ Yes ☐ No	<del></del>
☐ Plastic ☐ Gia	**************************************		- 1	✓ □ Yes □ No	
				☐ Yes ☐ No	
SCN No. Consumable		OHD	PE Tubing -	- C	
DMINENVIROS/Forms and Templates/Field Forms/G	Silicon Tubing     W Devel & Purging Samp Data Sheat door		D. Ampoules	D Groundwa	ter Filter

Development

Development

Development

Well No.	Mu	06	- 7		:						ng/ourriping	
Location:	EZOND F WIND		1000			Proj	ect No.	(	16 -	1122-1	86	
Weather:	WIND	7 Cc	K t	- ME	Aboub,	ank com	pleted B	y. <u>R</u> .	WE	UHO P R.	UPERE	
Temperature:	. 5	-6 °C		·		Date		AL	ICT :	28 200	F.	
MONITORI						Time	<b>)</b> ;		2	1:10	<u> </u>	
MONITORI	NG WELL	INFOR	OITAM	N.								
Depth to water EDepth to Bottom Diameter Stand	of Well Below pipe:	Casing: v Top of Ca		2)2 33	metres metres mm	(B-A) (B-A)	well volur )*2.0 = )*1## = O.\$	ne:	litres litres	- 10 L ST 322 NUÙU (J	.0 inch) diameter well is inch) diameter well	
pH and Temp. M Conductivity Met Dissolved Oxyge	feter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: Noter: No	fodel <u>f</u>	1 99 1 11 99 1 Si SS	1300		0. 079 0. 079 0. 072	92	Calibratio	in Soluti	on: 141	10 10 3 us/cm	
Pump: II Non Sample Intake D	epth:t	Ta D'Per	istaltic	□ Subme		. 074	Baller:	□ D.O. C	•	Ampoule	□ Teflon □ PVC	
WELL DEVE	ELOPMEN	IT/PURC	RING									
Purge Volume:		x _20		3400	) is	es				. •		
Flow Rate:		9.4			""	min.	O		عد سرو			
Time	Volume	Temp.	pH	Cor		ledox	Start:		15 3	Finish:	21.30	
21.10	Removed (L)	(,c)	(Units)	(US/0	(m:		Diss. O ₂ (mg/L) or 9			Remarks		
122	3300	4.4	8-6	- 13- 6-	-4-1	9:	9. 5.					
2 30	340		7.0			35	8 70					
	w/ " ( , J/)		8.60	3 3 2	14 10	2.3	-2.5			· · · · · · · · · · · · · · · · · · ·		
						.	<u> </u>		· ·	<del></del>		
								<del></del>	<u> </u>	<del></del>		
	·								<u> </u>	· · · · · · · · · · · · · · · · · · ·		
<b> </b>			:					<del></del>	· .			
						<del> </del> ∸						
											<u>.                                    </u>	
<del> </del>						<del></del>			·			
Comments:									•	<u> </u>		
Sheen:	Yes Erno Yes Erno Hear III		IIIII	III 162	i i i i i i	11177,						
Other:					· · · ·		Very S	illy		·		
Analysis	73	rpe .	40 mL	100 mL		Intainer Size	·			······································	T	
	□ Plastic	□ Glass	10 1110	100 1112	250 mL	500 mL	11_	2 L	4 L	Filtered _	Preservatives	
	D Plastic	□ Glass	<u> </u>		ļ.,	<del>/</del>				□Yes □No	1	
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	1 - 1 10340	L G1255									<del>                                     </del>	
SCN No.	Const	mables:	□ Water	ra Tubing	٠					□ Yes □ No		
	*	•	☐ Silicon	Tubion	break		OPE Tubi			☐ Groundwat	er Filter*******	
DMINENVIROS/Forms as	nd Templates\Picid	Forms\GW Daw	d Pureine	Samo Dave Co		⊔ D.	O. Ampo	ules	intersection		Kit-vangerie	
			<del></del>		HELDOG.							

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## Groundwater Development and Purging/Sampling Data Sheet

Development

Development

Purging/Sampling

Well No.		06 - 7					~ ~	, ·		, , , ,
	6.2431-17			re		Project No.	06	<u>- //22-</u>	<u> 786</u>	-
	とうこと		<u>.</u>			Completed By Date:		ECHO P	R-CLF	<b>FLE</b>
Temperature:		€, c				Pale: Time:	10	16-29 2	2006	
MONITORING	WELL	INFORM	MATION			mile.		7.05 am		
Depth to water Beld Depth to Bottom of Diameter Standpipe EQUIPMENT	ow Top of C Well Below e:	asing:	A_ sing: B_	m	etres (	One well volun B-A)*2.0 = B-A)*±3 = 0 - ⊘	xxxer	tres - for a 5 tres - for a st	3 mm (4:	0 inch) diameter well 5 inch) diameter well 우 전
pH and Temp. Mete		1-10 to 17 d	1 0010		,					
Conductivity Meter: Dissolved Oxygen M Pump:  None Sample Intake Dept	Meter: M Meter: M Materr th: 110	odel 90 odel 90 a DPeri	SSO A	బా∨ Sen	lal No. O	=992 =227	<b>≠</b>			10 0 10 0 10 0 10 0 10 0 10 0 10 0 10
WELL DEVEL Purge Volume: Flow Rate:	Well. Vol.			56 <del>0</del> 0	litres L/min.	Start:	10:	13 20	•	1 and 51 or .
	Volume moved (L)	Temp.	pH	Cond.	Redex	Dies O		10 om F	inish: _	17 40
	500	80	(Units)	(uS/cm) 5 7 1	(mb/) F	TIT (mg/L) or %		F	Remarks	
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	100	F   1 2 6 12 447	6 60	241	155	10 75				
	to protect the second		8.68	2 <i>88</i>	142	1207				
	300	47	8.69	701	1214	0.84				
	400	itis	18 AV	.92	43	9.01				
11.06 4	1500	4.6	8.50	3.16	157	9.76				
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	☐ Plaste	☐ Glass		-				☐ Yes	D No	
	D Plastic	Glass		PAGE	112			☐ Yes	□ No	
	☐ Plastic	☐ Glass			111	>(		□Yes	□ No	
	☐ Plastic	☐ Glass		<del></del>	-			☐ Yes	D 346	
/ .	☐ Plastic	□ Giass	<del></del>		<del>- / · · ·</del>			☐ Yes	No No	<u>``</u>
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SONA								☐ Yes	□ No	<u> </u>
SCN No.	Consu	mables:	☐ Waterra	_		HDPE Tubi	00			***************************************
MINENVIROS\Porms and ]		-	☐ Silicon T	ubing		D.O. Ampor		□ Gro	undwate	or Filter

	Development
	Purging/Sampling

Il No. cation: ather: nperature:	SELOND. WINDY 6 - 8	2002 2	: Lake					r. <u>R</u>	WEU AUG	10 +	- 184 8- 0 300c	FERE
epth to water	ING WELL  Below Top of C  m of Well Below dpipe:	Pasing:	A ling: B	212	metres metres	One (B-A	well volum \\`2.0 = \\`13 = \(\circ\) ?		litres	- for a 51	1 mm (2.0 3 mm (151	) inch) diameter v inch) diameter v
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nments:	J 100	5-0	4 9/	1 25	2 /	2.5	10 51	>	-		•	
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CN No.		umables:		ra Tubing			HDPE Tub	<u> </u>		☐ Yes	□ No	

Development

Well No.	NJ11	06 -	7								Purgi	ng/Sampling
	TOND PO					Pro	oject No.		06 -	1122	-184	5
Veather:	WILIT	4 Co	31				mpleted B		l-co			
Temperature:	5-1	5 °C				Da	te:	_	4ilG			
						Tin	1e:			4:14	0	
MONITORIN	WELL	INFOR	MATION	1						• • • •		
Depth to water Be Depth to Bottom of Diameter Standple EQUIPMENT	of Well Belov pe:	Casing: v Top of Ca		212	metres metres mm	(B-,	e well volum A)*2.0 = A)*## = O 8	Tie:	_ litres _ litres	- for a 3	8 mm (14	0 inch) diameter w s inch) diameter w 강도
			_									
pH and Temp. Me Conductivity Meter			19913		Serial No	0. 07	992	0-11				
Dissolved Oxygen	- 4		1991			0. 07			tion Buffe		124	
	/	lodel 4	52 12	> <b>A</b> ·		0. 07		•	tion Solut	_	1413	us/um
Pump:   None	E. Water	ra D'Per	istaltic [	3 Submer					Chemet	•		. 1.
Sample Intake De	pth:	110m			51010		Baller:	DE None	i os	tainless	Steel	□ Teflon □ PV0
WELL DEVE						<u> </u>						
WELL DEVE												
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Flow Rate:		12.5				min.	Start		10:12	_	•	* <del></del>
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Other:	SSV	DL/ 6900	L				very S	uty .	•	•		4.5
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		☐ Glass	<del>                                     </del>						4 L			
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-			☐ Silicon				IDPE Tubi	ng <u></u>	TOTO WHAT PRICE	□ Gro	undwate	r Filter

Development 8 d

	. 1				· · · · · · · · · · · · · · · · · · ·			☐ Purgin	g/Sampling
Vell No. .ocation:		W 06			:	Project No.	06 = 11	22 - 186	
/eather:	2M PORT	tae un	KE , ME	ADOUR		Completed By:	P=C.721	712 - 100	
emperature:	MINDY		<u> </u>	***************************************		Date:	AUG 2	10 + · p.	CLARKE
	<u> </u>					Time:		15:20	
MONITORI	NG WELL	INFOR	MOITAN			··········			
Depth to water Depth to Botton Diameter Stand EQUIPMEN	n of Well Below pipe:	Casing: / Top of Ca	****	212 m	netres	One well volume (B-A)*2.0 = (B-A)* = 0 8	litres - f	or a 388 mún (144)	) Inch) diameter water water water water
			_						
pH and Temp. N			11 9913		riai No C	7991	alth	٠,	
Conductivity Me			1 9913		rial No. · O	1000	alibration Buffers:		•
Dissolved Oxyge		lodel y	072 12			7	alibration Solution		45 /cm
Pump:     Nor	ne IZ Water	upi)	istaitic 🛘	Submersible			D.O. Chemet Am		. 1.
Sample Intake D	epth:	110 m	<u> </u>		•	Bailer: 1	None Stali	nless Steel E	Teflon PVC
MITTER STATE									
WELL DEV	FLOPMEN	T/PURC	aing			•			
Purge Volume:	Well. Vol.	x <u>- 3</u> ೨		5600	litres				
Flow Rate:		10.	5		L/min.	Start	10:12		199 . (1)3
Time	Volume Removed (L)	Temp.	PH	Cond.	Redox		10.12	· Finish:	17:40
15.21	7100	(6)	(Units)	(uS/cm)	(mV)	Dies, O ₂ (mg/L) or %		Remarks	
15 31	7300	5:/	P. 03	442	22	808	CONTINUO	IC A18 = 15	
15 45	- 500 - 500	5/	8.02	436	218	8 45	1	A AIR -IN	ruev .
15:57	7.400	5	800	428	214	8.43		<del></del>	·
16 10	7900	5:/	8 02	430	215	928		<del></del>	
16 23	8150	52	802	429	2 '4"	रि २४	<u> </u>	<del></del>	
16 38	8300	53	8.04	450	2	389	<del>                                     </del>	<del></del>	
16:55	8500	53	8 03	had his y	219	700	<del>                                     </del>	·	
17-12	8700	5.2	8 50	444	220	8.09	<del>                                     </del>		
	8900	5.4	7-98	423	2/0	7.7/			· · · · · · · · · · · · · · · · · · ·
17 40	7000	5.4	8-00	444.	22:	9.70		<del></del>	•
	1,000,0	3.4	8 OO	450	225	9 32			
							<del></del>	<del>- T</del>	
Sheen: [	Yes EZNo	lf yes							·
	year I			IIIIIII	IIIIII	I i Very Sifty			
Other:		1/17:40				- v voly Only	•		**
			T						
Analysis	T)	ρ <del>e</del>			Container	Size	· .		
	☐ Plastic	T E et	40 fint	100 mL 25	0 mL 500	ML 1L	2L 4L	Filtered _	Preservatives
	☐ Plastic	Glass			***************************************			Yes DNo	<del></del>
1.	☐ Plastic	Ø Glass						<del>- \                                   </del>	
	2 Plastic	Glass	SI	FIF	20/1	=VIAT		Yes O No	
	☐ Plastic	Glass			MA	- 10		<del></del>	· · · · · · · · · · · · · · · · · · ·
as summer of the	☐ Plastic	Glass	<del>  -</del>			in the			
	☐ Plastic	□ Glass	<b></b>						
<del></del>	☐ Plastic	□ Glass						Yes DNo	<u> </u>
		□ Glass						Yes No	
SCN No.	Const	mables:	□ Waterra	Tubing		711000		Yes D No	
**************************************		•	☐ Silicon T			HDPE Tubing		Groundwater	Filter
INENVIROS/Forms	and Townson W. 14		·			3 D.O. Ampoule	s	<b>.</b>	

(.9 of 10)

Development

Development

Purging/Sampling

Well No.	MU	N 06	- 7		1							
Location:	2 POKTY	GE II	ario i	Vienos		Project No. 06-1122-186  IK- Completed By: R WELLO ( R. CLAFLIC)						
Weather:	WIND	PAU	700 , I	TEADO	WATTA			:	we	THO	K.C	ANKE
Temperature:		2-,C	<u> </u>			_ Date:			UG =	30 a	00%	
						_ Time:			9	28 a	m·	
MONITOR	ING WELL	INFORM	IATION.									
Depth to water Depth to Botto Diameter Stand		asing: Top of Cas	-	212 33	metres metres mm	(B-A)* (B-A)*		e:	litres -	for a 51 n for a 35 n 33	nm (2.0 nm (2:5	inch) diameter with inch) diameter with
pH and Temp. Conductivity M Dissolved Oxyg	Meter: Mo eter: Mo gen Meter: Mo	odel <u>H</u>	9913   9913   550	00	Serial No. Serial No. Serial No.	079 .070 072	22	Calibration	on Buffen on Solutio Chemet A	on:	14/3	17 010 Sufan
Pump: D No Sample Intake  WELL DE\	one Waterra	Perts		Submers	ible -			<b>82</b> Noné	•	•	el C	Teflon DPV0
Purge Volume: Flow Rate:	Well. Vol. )			2600	litres	<b>)</b> .	Start:	9	1:28ai	^m Fin	leh:	SISI ISIC
Time	Volume Removed (L)	Temp.	pH (1/2)	Cond	. 222		Diss. O ₂	<del>- T-</del>			15(1.	100
9.08	9400	8-2	(Units)	(uS/cr		(PPP)	mg/L) or %			, Re	marks	
7 33	9600	39		37		25	14.0	5				
940	9855	48	8.01	338			9.96					
9:53	10 000		7.97	336		0	8.56	1.		*********		<del></del>
		5.3	7.98	378		0	8.33				<del></del>	<del></del>
10.03	10200	2.8	7.97	428	3 21.	3	8,00		· · · · · · · · · · · · · · · · · · ·		<del></del>	
10 12.	10 4 00	5.8	7.99	44			8.12					
10 58	19600	5.5	'8' on	460				<del>-   `</del>				
10 41	10800	5.3	8.01	460			8.02				•	
10 54	11000	5.2	<u>ਲੋਂ ਹੁਝ</u>	44			8.00					
11 12	11300	5.2	8 02				8.09	,				
11:26	11500	5.3		430			7.16			<del></del>		
12 59	12000			429			9.17	-	·			<del></del>
	12000	5.3	7.60	324	2/16	0	9.13				• -	
Comments: Odour: Sheen:	☐ Yes ☑ No	if yes	•									
Turbidity: Other:	Clear [ M ]	-	HILITI	iiii		1111	Very S	ity	•		. :.	
Analysis	Ту		X		Conf	ainer Size					<u></u>	-
	☐ Plastic	☐ Glass	40 mL	100 mL	250 mL	500 mL	1.leans	2L	4 L	Filter	ad _	Preservatives
1	☐ Plastic	Glass					ļ			□ Yes.	□ No	Marine Control
	□ Plastic	☐ Giass	-	turbanda annata an ann a	Page 10 - St. Co.	organis, usus	-			□ Yes	'Q No	ammerica .
	1 Plastic	Glass		Acres frances			and a	10			D/66	
	☐ Plastic	☐ Giass		200 2 (Spr. 2)	1	No. of Contrasts	alexan.	1			□ No	
	☐ Riastic		<b> </b>  -		,	A SAN TAMERA PAR	ACA1024-18 100-	LACED CARPERS BLOCK	=.2.***		□ No	
45		☐ Glass									□ No	-
<u> </u>	☐ Plestic	☐ Giass										
	☐ Plastic	☐ Glass									□ No	<del> </del>
SCN No.		mables:	☐ Waterra	Tubing			OPE Tubi O. Ampo			□ Grou	□ No ndwate	r Filter
WDMIN'ENVIROS/Foo	ns and Templates Fleid	Forms\GW Dav	el & Purzing Sa	mo Data Sha	et dae		- willo	4168	<u> </u>			<del>_</del>

☐ Development

Purging/Sampling

Well No.	M	N 06	- 7		1					#E	ruigii	g/Sampling		
Location: 2	PORTA	GE LAK	FALE	~ ~ ~		Proj	ect No.		06	-112	2-1	86		
Weather:	RAINY	WIN	L ME	ADOW	BANK	Con	rpleted B	y. R			R.CL			
Temperature:		5 c	1119			Date	);	A	UG 3	0 20	06	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
MONITODING		· · · · · · · · · · · · · · · · · · ·				Time	e:			153				
MONITORIN	G WELL	INFOR	OITAM	N.										
Depth to water Bel	low Too of c	acion.	_			One	well volum	me·			•	· ·		
Depth to Bottom of	f Well Below	zasing: / Top of Co	A		_ metres		)*2.0 =		litrae	- for a E	1 10 1	<b>.</b>		
Diameter Standpip	e:	r rop or ca		2/2	metres	(B-A	)*辯=		litres	-fora \$	1 11111 (2.1 8 mm /44	inch) diameter well inch) diameter well		
			· C	33	_ mm	,	0.8	***		3	3 1/2	25 Tildi) diameter well		
EQUIPMENT	LIST											-		
pH and Temp. Met		todel HI	9913			•				•				
Conductivity Meter		-	9913			070		Calibrat	ion Buffe	ers:	D/4 E	7 🗆 10		
Dissolved Oxygen	Meter: 1/				Serial No		192		ion Solu			3 45/an		
1 .	20		5/ 55		Serial No	. <u>072</u>	27	•		Ampoule	14/-	y y an		
1	Water	ra D'Per	istaltic i	Subme	rsible		Baller:	None	•	,		Tr.		
Sample Intake Dep	th:			(DV	(P) ·		Daser.	■ None	u s	tainless :	Steel " [	☐ Teflon ☐ PVC		
WELL DEVELOPMENT/PURGING														
TYLLL DEVEL			RING											
Purge Volume:	Well. Vol.			_18c	O intr	as.					•			
Flow Rate:														
Time Volume Temp. pH Cond. Removed (L) (*C) (I lotte) (*Start: Diss. O.														
16:02		8:6	(Units)	(us/c	m) (	mV) / [***	(mg/L) ass				Remarks			
6 54	40	-	17 8			14	5 50	7	<b>9</b> 0 se	·	1 = / O/			
1/3 25	30	8.9	27.0	9 33	4 1	66	4.54	- 1 -	10 70	C DEN	/ E / 9(	2 sec Vert		
17:58	80	9.0	<del>-1</del> <del>-1</del>			રે6	759			- 1		<u>·</u>		
100 00	100		771			70	7 5	7	<del></del>	<del></del>	<del></del>			
19.10.	12.0	9.1	7.7.		1 16	51	7 77		<del></del>	-	<del></del>	·		
19:56	140	8.9	777			6	7 89	1.7						
20:39	60	9.1	7.73	30	1 /	50	7.05.	<del>-   \</del>	TT(t)P(t)	DRIVE	/ / m	IN YEAR		
43	80	9. D	7.71	30		47.	7.96					·		
21.15		7.1	7.4/	29	$S \mid I$	46	7.97			-				
							-		UDI 62	7 / 7 /	LECTE	· · · · · · · · · · · · · · · · · · ·		
									12 016	بر (، کردار ر د ا	1 to 1 to 2 to 2 to 2 to 2 to 2 to 2 to			
0								- 12	ICF FILE	aw.	<u>∵</u> C:	+ mg/4 0 Co		
Comments:			•											
Odour: DY			·											
Sheen: TY		If yes										•		
Turbidity: Clea	ur Ø∐	TENT.	111111	11111	1111	11111								
Other:	- STAK	END				11111	Very S	lity	•	٠		**		
				· ·										
Analysis	Ту	na .		•	Co	ntainer Size								
			40 mL	100 mL	250 mL	500 mL	Ţ			E114	ered _			
RAW	Plastic	☐ Giass	***************************************	and the second second second	Management of August Street, and and	JOS TIL	1 L	2L	4 L			Preservatives		
PAW TKH TOT MINE	Plastic	□ Giass	<b>~</b>			1+ FD		1+FD		□ Yee	<b>B</b> No	"Marine"		
1, 4, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	(Plastic	□ Glass	Mark Substitution of the Control			IFD	-			☐ Yes	No No	MDSD-1275		
TOT. HETALS	☐ Plastic	Ü Giass	-			TIPD	*******			□ Yes	<b>EP</b> THO	42504		
DIES L'ETALS	Plastic	□ Giass			Darrage	1 + FD				☐ Yes	EP/No	HN03 .		
7	☐ Plestic	☐ Glass		Constant	$\searrow$	, F.W.				E Yes	□ No	HNO.		
	11 Plastic	□ Glass	$\leq$		<del></del>	$\overline{}$	746			☐ Yes	D No.			
	☐ Plastic	□ Glass		-/				$\searrow$ 4		□ Yes	Ø No			
SCN No.	Conc						<u></u>			□ Yes	□ No			
12568-0	)/	mables:	□ Waterr	a Tubing	- Charles	🗆 но	OPE Tubi	na						
			Silicon	Tubing	0.1	n 🗆 D.	O. Ampo	ulee ~			undwate	r Filter		
12568-0	emplates Field F	oms/GW Dave	de Purging S	amp Dets She	e£dod.		· · · · · · ·	~163			- <del></del>			

# APPENDIX III CHAIN OF CUSTODY FORMS AND LABORATORY REPORTS

### CHAIN OF CUSTODY RECORD/ANALYSIS REQUEST

12393 page 1 of 1

500 - 4260 Still Creek Drive Burnaby, British Columbia, Canada V5C 6C6

Project Number: 06-1122-	100 - 400	Laboratory Name: Can Test	
Short Title: MEADOW BANK	GDH20 SAMPLING	MAJT D-675 Berry St., Win	rupea MB
Golder Contact: Bortrand	Golder E-mail Address:  Voctoral @golder.com	Telephone/Fax: Contact:	Kolach

Telephone (604) 298	-6623 Fax (6	504) 298-5	5253	Val	ecie (	sertran	4	Galder E- Voec	mail Address:	@gol	der.co	m Z	bt-	e/Fax:	72	76/	2381	6	ontact:	nie	Kolach
Office the final repo																equirec			·····		
202 - 2790 Gladwin Road   220 - Burnaby, B.C.   Abbotsford, B.C.   Victor   V9A										ontainers	LSZMCR.	#5/5/	fool	NITROLEN SPECIES	A KASAUNIT	PARATICIE	ST. CYANIBE	UST	(PN,TRU)	6LC)	
Sample Control Number (SCN)	Sample Location	Sa.#	Sample Depth (m)	Sample Matrix (over)	Date Sampled (D/M/Y)		Sample Type (over)	QAQC Code (over	Related SCN (over)	Number of Containers	Ta. nemes	N.S. METRY	TSS + MAJOR	MITTROL	<b>BECINIDA</b>	RYSICK!	FREE + TOT.	NUTRIEN	TAS	RUSH	Remarks (over)
	10- 80WM	l l	160	WKFER	8/8/06	1310	D	FIX	12393-02	6					1						
	10-50WM	1	160	WATER	8/8/06	1310	7	FD	12393-01	6											
- 03																					
- 04																					
- 05																					
- 06				***										-	-+		-				
- 07												_	_								
- 08														-							
- 09												_			-						
- 10							7.4					-					_				
- 11																					
- 12					***						_							-			
Sampler's Signature:			Relinquis	hed by: Si	onature -		Common					 T		<u> </u>						$\perp$	
	L 4.	$\times$			74	4	Company	der	Date /2/2	06		Time 19	00		Rece	eived by	y: Sigr	nature		Com	pany
Sample Storage (20)	ice	$\mathcal{O}$	Relinquis	hed by: Si	grature		Company		Date			Time			Rece	ived by	y: Sign	ature		Com	pany
Comments:	omments: Method of Shipment:				Waybill !	No.:	<u>-</u>		Rece	ived for	d for Lab by:			Date				Time			
Shipped by:				1	Condition	n:	Temp (°C) Cooler ope			er oper	ned by	y:	Date			<u></u>	Time				
			Shipped b	oy:			Shipment Seal Intac		n:		Temp	o (°C)	Cool	er opei	ned by	y:	Date				Time

#### **Analysis Report**

CANTEST LTD.

Professional Analytical Services

4606 Canada Way Burnaby, B.C. V5G 1K5

Fax: 604 731 2386

Tel: 604 734 7276

1 800 665 8566

REPORT ON: Analysis of Water Samples

**REPORTED TO:** 

1

Golder Associates Ltd.

32 Steacle Dr Kanata, ON K2K 2A9

Att'n: Ms. Valerie Bertrand

**CHAIN OF CUSTODY:** 

12393

**NUMBER OF SAMPLES: 2** 

REPORT DATE: August 24, 2006

DATE SUBMITTED: August 10, 2006

**GROUP NUMBER: 70817179** 

SAMPLE TYPE: Water

**NOTE:** Results contained in this report refer only to the testing of samples as submitted. Other information is available on request.

#### **TEST METHODS:**

Anions in Water by Ion Chromatography - was determined based on Method 4110 in Standard Methods (20th Edition) and EPA Method 300.0 (Revision 2.1).

Nitrate and Nitrite in Water - was determined based on Method 4500-NO3 F in Standard Methods (20th Edition) and Method X328 in the BC Laboratory Manual (1994 Edition).

Ammonia in Water - analysis was performed based on Standard Methods for the Examination of Water and Wastewater, 19th Ed. (1995); Method 4500-NH3.

Nitrite in Water - was determined based on Method 4500-NO3 B in Standard Methods for the examination of Water and Wastewater (20th Edition) and from the BC Laboratory Methods Manual (2003 Edition).

Total Kjeldahl Nitrogen in Water - was determined based on Method 4500-N in Standard Methods (20th Edition) and Method X325 in the BC Laboratory Manual (1994 Edition).

**Total Phosphate in Water** - was determined based on Method 4500-P in Standard Methods (20th Edition) and Method X185 in the BC Laboratory Manual (1994 Edition).

Conventional Parameters - analyses were performed using procedures based on those described in "British Columbia Environmental Laboratory Manual For the Analysis of Water, Wastewater, Sediment and Biological Materials" (1994 Edition), Province of British Columbia and "Standard Methods for the Examination of Water and Wastewater" 20th Edition, (1998), published by the American Public Health Association.

(Continued)

CANTEST LTD.

Richard S. Jornitz

Supervisor, Inorganic Testing

Page 1 of 5

Golder Associates Ltd.

**REPORT DATE:** 

August 24, 2006

**GROUP NUMBER: 70817179** 



Mercury in Water - analysis was performed using procedures based on U. S. EPA Method 245.7, oxidative digestion using bromination, and analysis using Cold Vapour Atomic Fluorescence Spectroscopy.

Metals in Water - analysis was performed using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP), Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

Dissolved Metals in Water - Samples were filtered in the laboratory and quantitatively determined using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP) and/or Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

#### **TEST RESULTS:**

(See following pages)

Golder Associates Ltd.

REPORT DATE:

August 24, 2006

**GROUP NUMBER: 70817179** 

## CANTEST*

#### Conventional Parameters in Water

CLIENT SAMPLE IDENTIFICATION:		12393-01	12393-02		
DATE SAMPLED:		Aug 8/06	Aug 8/06	DETECTION	TUNITS
CANTEST ID:		608170602	608170609	LIMIT	
Hardness Hardness (Total) Dissolved Fluoride Dissolved Chloride Nitrate and Nitrite Dissolved Nitrate Nitrite Dissolved Sulphate	CaCO3 CaCO3 F CJ N N N SO4	75.9 82.0 0.16 34.7 < 0.003 42.8	77.3 81.6 0.17 33.7 < 0.004 43.1	0.2 0.2 0.05 0.2 0.01 0.05 0.002	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L
Ammonia Nitrogen Total Kjeldahl Nitrogen Total Phosphorus	N N P	0.21 0.3 0.04	0.19 0.3 0.04	0.5 0.01 0.2 0.02	mg/L mg/L mg/L mg/L as P

mg/L = milligrams per liter < = Less than detection limit mg/L as P = milligrams per liter as P

Golder Associates Ltd.

REPORT DATE:

**GROUP NUMBER: 70817179** 

### CANTEST August 24, 2006

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12393-01	12393-01	12393-02	12393-02		
SAMPLE PREPARATION:	TOTAL	DISSOLVED	TOTAL	DISSOLVED	<u>]</u> ]	
DATE SAMPLED:	Aug 8/06	Aug 8/06	Aug 8/06	Aug 8/06	DETECTION.	Transa
CANTEST ID:	608170602	608170602	608170609	608170609	DETECTION LIMIT	UNITS
Aluminum Al Antimony Sb	0.40	0.30	0.48	0.30	0.001 0.0002	mg/L mg/L
Arsenic As Barium Ba	0.0005 0.027	0.0005 0.025	0.0006 0.028	0.0005 0.025	0.0002 0.0002	mg/L mg/L
Beryllium Be Bismuth Bi Boron B	<	<	V V	٧٧	0.0002 0.0002	mg/L mg/L
Cadmium Cd Calcium Ca	0.11 < 19.1	0.10 < 17.6	0.11 < 19.1	0.10 <	0.01 0.00004	mg/L mg/L
Chromium Cr Cobalt Co	0.0017 0.0005	0.0012 0.0004	0.0021 0.0005	17.9 0.0012 0.0004	0.01 0.0002 0.0002	mg/L mg/L mg/L
Copper Cu Iron Fe	0.0022 1.02	0.0016 0.84	0.0020 1.11	0.0016 0.85	0.0002	mg/L mg/L mg/L
Lead Pb Lithlum Li Magnesium Ma	0.0015 0.0031	0.0014 0.0028	0.0013 0.0032	0.0012 0.0027	0.0002 0.0002	mg/L mg/L
Magnesium Mg Manganese Mn Mercury Hg	8.29 0.309 <	7.76 0.286 <	8.20 0.304	7.92 0.293		mg/L mg/L
Molybdenum Mo Nickel Ni	0.013 0.0020	0.012 0.0019	< 0.013 0.0022	< 0.012 0.0019	0.0001	<i>µ</i> g/L mg/L mg/L
Phosphorus P Potassium K	< 3.63	3.27	3.68	3.28	0.03	mg/L mg/L mg/L
Selenium Se Silicon SI Silver Ag	2.31	< 1.96	< 2.71	1.98	0.0002 0.05	mg/L mg/L
Silver Ag Sodium Na Strontium Sr	< 16.0 0.119	< 15.0 0.111	< 15.9	15.6	0.00005 0.01	mg/L mg/L
Fellurium Te Fhallium Ti	(	<   	0.120 <	0.114 < <	0.0002	mg/L mg/L
Thorium Th In Sn	0.0005 <	0.0004 <	0.0006	0.0004 <	0.0001	mg/L mg/L mg/L

(Continued on next page)

Golder Associates Ltd.

REPORT DATE:

August 24, 2006

**GROUP NUMBER: 70817179** 

## CANTEST®

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12393-01	12393-01	12393-02	12393-02		
SAMPLE PREPARATION:	TOTAL	DISSOLVED	TOTAL	DISSOLVED		
DATE SAMPLED:	Aug 8/06	Aug 8/06	Aug 8/06	Aug 8/06	DETECTION	UNITS
CANTEST ID:	608170602	608170602	608170609	608170609	LIMIT	UNITS
Titanium TI	0.024	0.019	0.029	0.018	0.0002	mg/L
Uranium U	0.0006	0.0006	0.0006	0.0006	0.0001	mg/L
Vanadium V	0.0007	0.0006	0.0008	0.0006	0.0002	mg/L
Zinc Zn	0.005	0.005	0.005	0.005	0.001	mg/L
Zirconium Zr	<	<	<	<	0.002	mg/L

mg/L = milligrams per liter < = Less than detection limit

 $\mu$ g/L = micrograms per liter

#### **Analysis Report**

CANTEST®

**REPORT ON:** 

Analysis of Water Samples

**REPORTED TO:** 

Golder Associates Ltd.

32 Steacie Dr Kanata, ON K2K 2A9

Att'n: Ms. Valerie Bertrand

**CHAIN OF CUSTODY:** 

12393

**NUMBER OF SAMPLES: 2** 

REPORT DATE: August 22, 2006

DATE SUBMITTED: August 10, 2006

**GROUP NUMBER: 70810091** 

**SAMPLE TYPE:** Water

**NOTE:** Results contained in this report refer only to the testing of samples as submitted. Other information is available on request.

#### **TEST METHODS:**

Anions in Water by Ion Chromatography - was determined based on Method 4110 in Standard Methods (20th Edition) and EPA Method 300.0 (Revision 2.1).

**Nitrite in Water** - was determined based on Method 4500-NO3 B in Standard Methods for the examination of Water and Wastewater (20th Edition) and from the BC Laboratory Methods Manual (2003 Edition).

**Total Dissolved Solids in Water** - was determined based on Method 2540 C in Standard Methods (20th Edition).

Conventional Parameters - Winnipeg Laboratory (Unit D-675 Berry Street, Winnipeg, Manitoba R3H 1A7): - Analyses performed at Cantest's Winnipeg facilities follow procedures based on those described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials" (1994 Edition) and "Standard Methods for the Examination of Water and Wastewater" (20th Edition, 1998).

#### **TEST RESULTS:**

(See following pages)

CANTEST LTD.

Marnie Kolach Project Manager Page 1 of 3

Golder Associates Ltd.

REPORT DATE:

August 22, 2006

**GROUP NUMBER: 70810091** 

#### Conventional Parameters-Winnipeg Laboratory- in Water

CLIENT SAMPLE IDENTIFICATION:	12393-01	12393-02		
DATE SAMPLED:	Aug 8/06	Aug 8/06	DETECTION	UNITS
CANTEST ID:	608100392	608100401	LIMIT	
pH, Laboratory Conductivity	7.68 284	7.89 282	1	pH units μS/cm
Total Alkalinity CaC Bicarbonate Alkalinity HCC Carbonate Alkalinity COS	D3 46.4	38.0 46.4	0.5 0.5	mg/L mg/L mg/L
Carbonate Alkalinity CO3 Hydroxide Alkalinity OH	<	<	0.5	mg/L

 $\mu$ S/cm = mlcroslemens per centimeter < = Less than detection limit

Golder Associates Ltd.

REPORT DATE:

August 22, 2006

**GROUP NUMBER: 70810091** 

#### **Conventional Parameters in Water**

CLIENT SAMPLE IDENTIFICATION:	SAMPLE DATE	CANTEST ID	Total Dissolved Solids	Dissolved Nitrate N	Nitrite N
12393-01 12393-02		608100392 608100401	174 155	<	0.002 0.002
DETECTION LIMIT		3. w.d.i.i.i	10 mg/L	0.05 mg/L	0.002 mg/L

mg/L = milligrams per liter < = Less than detection limit

### CHAIN OF CUSTODY RECORD/ANALYSIS REQUEST

GO ASSO	16-112	-2-18	36-	2200			L;	aborator	ry Nam	ne:	an	Te	st								
500 – 4260 Still Creek Burnaby, British Colur	k Drive		2	Short 7	Fitle: HEA	MOUBI	ANK	GAH	120 SA	MA	12	ر م ا	Address	FD	,-6	,75	Be	200	1 54	- Wi	unipeg, MB
Telephone (604) 298-	-6623 Fax (6	j04) 298-f	5253	Golder V0	Levil	Bert	rand	Golder E-r	2200 tzO SAY -mail Address: It trand	. @ge	older.c	om	elephon 204	ie/Eax:	12-		76/2	/ Kr	Contact:	Jan	
Office the final repor	rts should be sen	it to:													yses Re						
500-4260 Still ( Burnaby, B.C. V5C 6C6 Tel: (604) 298-6 Fax: (604) 298-6	-6623;		202 – 2790 Abbotsford V2T 4S8 Tel: (604) 8 Fax: (604)	850-8786		Victoria, E V9A 7N6 Tel: (250)		<u>.</u>		Number of Containers	TOTIS Jung.	The Stage	1	3		HE/JE	ALC:	184	(PN,TKV)		
Sample Control	Sample	Sa.#	Sample	•	1 3	Time	Sample			Joe.	META	巴	Z	7C	¥	P	H	3	1		
Number (SCN)	Location		Depth (m)	Matrix (over)	1 - 1	Sampled (HH:MM)	Type (over)	Code (over	SCN (over)		101-1	1	15SF	DITTE	SPEC.	3/12		NUTRIG	185	RUSH	Remarks (over)
12395 - 01	1003-01	1	165	WATER	14/8/06	rang	1			5					寸			-	1		M No Me
- 02		1			1	1000				+	<del>                                     </del>					-	-				NB-Diss.Me is field filtered + Preserved
- 03		1			1					+					+	_	+				B Mud FILTURE
- 04		1								+				-		-			1		WHOO,
- 05		i			1					+	+		+	-					<del></del>		W MUS
- 06	1									+		$\Box$		+		-	+	-		$\Box$	l
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- 09		<del></del>			<del></del>					+			+		_	_					
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-11	1									+-	$\vdash$		_	_	+			,—+			
- 12									(	+-		$\sqcap$		+		+	+	-	, —	$\Box$	
Sampler's Signature:	TKU	<u></u>	Relinquis	ished by: Sig	enature		Company	<u>=</u>	Date 1/8	2/0	<u></u> -	Tibe	949	7	Rece	eived b	by: Sigr	mature		Com	npany
	onica	-6	Relinquis	ished by: Sig	gnature		Company	<del></del>	Date /	<del>y -</del>	*****	Time	7		Rece	ived b	by: Sign	nature		Com	npany
Comments:	V		Method o	of Shipment:	.:		Waybill N	No.:			Rece	eived fc	for Lab b	ōy:	1		Date	;			Time
			Shipped b	эу:			Shipment Seal Intac	nt Condition act:	1:		Tem	mp (°C)	Coo	oler oper	ned by	/:	Date	,	*		Time

#### **Analysis Report**

CANTEST

CANTEST LTD.

Professional Analytical Services

4606 Canada Way Burnaby, B.C. V5G 1K5

Fax: 604 731 2386

Tel: 604 734 7276

1 800 665 8566

REPORT ON:

Analysis of Water Sample

**REPORTED TO:** 

Golder Associates Ltd.

32 Steacie Dr Kanata, ON K2K 2A9

Att'n: Ms. Valerie Bertrand

CHAIN OF CUSTODY:

12395

PROJECT NUMBER:

06-1122-186-2200

**NUMBER OF SAMPLES: 1** 

REPORT DATE: August 24, 2096

DATE SUBMITTED: August 16, 2006

**GROUP NUMBER: 70816019** 

**SAMPLE TYPE:** Water

**NOTE:** Results contained in this report refer only to the testing of samples as submitted. Other information is available on request.

#### **TEST METHODS:**

Anions in Water by Ion Chromatography - was determined based on Method 4110 in Standard Methods (20th Edition) and EPA Method 300.0 (Revision 2.1).

Hardness in Water - was calculated based on Method 2340 B in Standard Methods for the Examination of Water and Wastewater (20th Edition, 1998).

**Total Dissolved Solids in Water** - was determined based on Method 2540 C in Standard Methods (20th Edition).

Total Suspended Solids in Water - was determined based on Method 2540 D in Standard Methods (20th Edition) and Method X332 In the BC Laboratory Manual (1994 Edition).

Conventional Parameters - analyses were performed using procedures based on those described in "British Columbia Environmental Laboratory Manual For the Analysis of Water, Wastewater, Sediment and Biological Materials" (1994 Edition), Province of British Columbia and "Standard Methods for the Examination of Water and Wastewater" 20th Edition, (1998), published by the American Public Health Association.

Conventional Parameters - Winnipeg Laboratory (Unit D-675 Berry Street, Winnipeg, Manitoba R3H 1A7): - Analyses performed at Cantest's Winnipeg facilities follow procedures based on those described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials" (1994 Edition) and "Standard Methods for the Examination of Water and Wastewater" (20th Edition, 1998).

(Continued)

CANTEST LTD.

Richard S. Jornitz

Supervisor, Inorganic Testing

Page 1 of 6



Golder Associates Ltd.

**REPORT DATE:** 

August 24, 2006

**GROUP NUMBER: 70816019** 

70816019

**Mercury in Water** - analysis was performed using procedures based on U. S. EPA Method 245.7, oxidative digestion using bromination, and analysis using Cold Vapour Atomic Fluorescence Spectroscopy.

**Metals in Water** - analysis was performed using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP), Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

Field Filtered Metals in Water - Samples were filtered in the field (e.g. at the time of sampling) and quantitatively determined using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP) and/or Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

#### **TEST RESULTS:**

(See following pages)

**REPORTED TO:** Golder Associates Ltd.

**REPORT DATE:** August 24, 2006

**GROUP NUMBER: 70816019** 

## CANTEST*

#### **Conventional Parameters in Water**

CLIENT SAMPLE IDENTIFICATION:	•	12395-01	
DATE SAMPLED:		Aug 14/06	DETECTION
CANTEST ID:		608160106	LIMIT
Hardness	CaCO3	150	1
Hardness (Total)	CaCO3	148	1
Total Dissolved Solids	* * 14 54 54 65 65 6 5 6 5 6 5 6 5 6 5 6 5 6	405	10
Total Suspended Solids		4	1
Dissolved Fluoride	F	0.16	0.1
Dissolved Chloride	CI	128	0.4
Dissolved Nitrate	N	<	0.1
Dissolved Sulphate	SO4	51.1	1

Results expressed as milligrams per liter (mg/L) < = Less than detection limit

Golder Associates Ltd.

REPORT DATE:

August 24, 2006

**GROUP NUMBER: 70816019** 

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:		12395-01	12395-01		
SAMPLE PREPARA	ATION:	TOTAL	DISSOLVED		
DATE SAMPLED:		Aug 14/06	Aug 14/06	DETECTION	TUNITS
CANTEST ID:		608160106	608160106	LIMIT	
Aluminum	Al	0.13	<	0.005	mg/L
Antimony	Sb	<		0.001	mg/L
Arsenic	As	0.002	0.003	0.001	mg/L
Barlum	Ва	0.052	0.051	0.001	mg/L
Beryllium	Be	~	<	0.001	mg/L
Bismuth	Bi	< ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		0.001	mg/L
Boron	В	0.27	0.27	0.05	mg/L
Cadmium	Cd		<	0.0002	mg/L
Calcium	Ca	33.4	33.7	0.05	mg/L
Chromium	Cr	<	<u> </u>	0.001	mg/L
Cobalt	Co	<	<	0.001	mg/L
Copper	Cu	<b> </b>	<	0.001	mg/L
Iron	Fe	1.10	0.20	0.05	mg/L
Lead	Pb	<		0.001	mg/L
Lithium	. U	0.006	0.005	0.001	mg/L
Magnesium	Mg	15.6	16.1	0.05	mg/L
Manganese	Mn	0.93	0.98	0.001	mg/L
Mercury	Hg			0.02	<i>µ</i> g/L
Molybdenum	Мо	0.012	0.013	0.0005	mg/L
Nickel	Ni	<	<b>  &lt;</b>	0.001	mg/L
Phosphorus	P		< no m2003	0.15	mg/L
Potassium	K	6.1	6.1	0.1	mg/L
Selenium	Se	<	<	0.001	mg/L
Silicon	SI	2.7	2.5	0.25	mg/L
Silver	Ag	<b>S</b>		0.00023	mg/L
Sodium	Na	50.5	52.5	0.05	mg/L
Strontlum	Sr	0.28	0.29	0.001	mg/L
Tellurium	Te	<	<	0.001	mg/L
Thallium	ŢĮ			0.0001	mg/L
Thorium	Th	<	<	0.0005	mg/L
Tin	Sn	<	<	0.001	mg/L

(Continued on next page)

Golder Associates Ltd.

REPORT DATE:

August 24, 2006

**GROUP NUMBER:** 70816019

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12395-01	12395-01		
SAMPLE PREPARATION:	TOTAL	DISSOLVED		
DATE SAMPLED:	Aug 14/06	Aug 14/06	DETECTION	UNITS
CANTEST ID:	608160106	608160106	LIMIT	
Tranium TI Uranium U Vanadium V	0.006	<b>«</b> «		mg/L mg/L mg/L
Zinc Zn Zirconium Zr		\	0.005 0.01	mg/L mg/L

mg/L = milligrams per liter < = Less than detection limit

 $\mu$ g/L = micrograms per liter

Golder Associates Ltd.

REPORT DATE:

August 24, 2006

**GROUP NUMBER: 70816019** 

#### Conventional Parameters-Winnipeg Laboratory- in Water

CLIENT SAMPLE IDENTIFICATION:	12395-01		
DATE SAMPLED:	Aug 14/06	DETECTION	UNITS
CANTEST ID:	608160106	LIMIT	
pH, Laboratory Conductivity	7.3 <b>6</b> 634	-	pH units μS/cm
Total Alkalinity CaCO3	51.0	1	mg/L
Bicarbonate Alkalinity HCO3 Carbonate Alkalinity CO3	62.2 <	0.5 0.5	mg/L mg/L
Hydroxide Alkalinity OH Nitrite N	< 0.002	0.5 0.002	mg/L mg/L

 $\mu$ S/cm = microsiemens per centimeter

< = Less than detection limit

### CHAIN OF CUSTODY RECORD/ANALYSIS REQUEST

12567 page 1 of 1

<b>Golder</b>	
<b>Associates</b>	

500 - 4260 Still Creek Drive Burnaby, British Columbia, Canada V5C 6C6 Telephone (604) 298-6623 Fax (604) 298-5253

Project Number: 05 - //22 -	186 - 2200	Laboratory Name: CAN TEST
Short Title: MEADOWBANK	GRNDWATER SMYPLING	Address: UNIT D-675 BERRY ST, WINNIPEG, MB
Golder Contact: VALERIE BERTRAND	Golder E-mail Address: vbertrand @golder.com	Telephone/Fax: Contact: 204 - 772 - 7276/2386 MARNIE KOLACH

																				16 10 CACA
Office the final repor		it to:											Anal	yses F	Require	d				
500-4260 Still of Burnaby, B.C. V5C 6C6 Tel: (604) 298- Fax: (604) 298- ATIN PREETI	6623; -5253	_	202 – 2790 Abbotsford V2T 4S8 Tel: (604) Fax: (604)	I, B.C. 850-8786	Road	Victoria, I V9A 7N6 Tel: (250)		eet		Number of Containers	1		SPECIES	D ALKALINITH	SICAL PARAM.	CYANIDE	75 Pin TRN			
Sample Control	Sample	Sa.#	Sample	Sample	Date	Time	Sample	QAQC	Related	r of C	121	METALS	7.00	ATE	23	+ ToT.	EN			
Number (SCN)	Location		Depth (m)	Matrix (over)	Sampled (D / M / Y)	Sampled (HH:MM)	Type (over)	Code (over	SCN (over)	Number	TOT. HETALS	1.4	TSS + THO	SPECIATED	PASSIC PASSIC	FREE +	NUTRIENTS	<b>Z</b>	RUSH	Remarks (over)
12567-01		1	160	WATER	24/8/06	17:30	A	FDA	12567-2	5										DISS HETALS
12567-02		1	160	WATER.	24/8/06	17:30	A	Ą	12567-1	5										FIELD FILTEREL
12567 - 03	HW 06-6	2	110	WATER	23/8/06	16:00	D			15										AND PRESERVED
- 04																				W/ HNOZ
- 05																				
- 06																				
- 07																				
- 08									410											
- 09																				
- 10																				
- 11																				
- 12																				
Sampler's Signature:	L		Relingui	fee S	ignature		Company GA	Ĺ	Date AUG 2	4 20	506	Time	7:45	Re	ceived t	oy: Si	gnature		Con	pany
Sample Storage (°C)	N ICE		Relinqui	shed by: Si	gnature		Company	/	Date			Time		Re	ceived l	y: Si	gnature		Con	pany
Comments:			Method o	of Shipmen	t:		Waybill 1	No.:			Rece	ived for	Lab by:	l		Dat	te			Time
			Shipped	by:			Shipmen Seal Inta	Condition	1:		Temp	) (°C)	Cooler of	pened	by:	Dat	ie			Time

#### **Analysis Report**

**REPORT ON:** 

**Analysis of Water Samples** 

**REPORTED TO:** 

Golder Associates Ltd.

32 Steacie Dr Kanata, ON K2K 2A9

Att'n: Ms. Valerie Bertrand

**CHAIN OF CUSTODY:** 

12567

PROJECT NUMBER:

06-1122-186-2200

CANTEST LTD.

Professional Analytical Services

4606 Canada Way Burnaby, B.C. V5G 1K5

Fax: 604 731 2386

Tel: 604 734 7276

1 800 665 8566

**NUMBER OF SAMPLES: 7** 

REPORT DATE: October 18, 2006

DATE SUBMITTED: August 29, 2006

**GROUP NUMBER: 70829070** 

**SAMPLE TYPE:** Water

**NOTE:** Results contained in this report refer only to the testing of samples as submitted. Other information is available on request.

**TEST METHODS:** 

Anions in Water by Ion Chromatography - was determined based on Method 4110 in Standard Methods (20th Edition) and EPA Method 300.0 (Revision 2.1).

Total Dissolved Solids in Water - was determined based on Method 2540 C in Standard Methods (20th Edition).

**Total Kjeldahl Nitrogen in Water** - was determined based on Method 4500-N in Standard Methods (20th Edition) and Method X325 in the BC Laboratory Manual (1994 Edition).

**Total Suspended Solids in Water** - was determined based on Method 2540 D in Standard Methods (20th Edition) and Method X332 in the BC Laboratory Manual (1994 Edition).

Conventional Parameters - analyses were performed using procedures based on those described in the most current editions of "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials", Province of British Columbia and "Standard Methods for the Examination of Water and Wastewater", published by the American Public Health Association.

Conventional Parameters - Winnipeg Laboratory (Unit D-675 Berry Street, Winnipeg, Manitoba R3H 1A7): - Analyses performed at Cantest's Winnipeg facilities follow procedures based on those described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials" (1994 Edition) and "Standard Methods for the Examination of Water and Wastewater" (20th Edition, 1998).

(Continued)

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Greg Sparrow, B.Sc. Senior Analyst

Page 1 of 24

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Golder Associates Ltd.

REPORT DATE:

October 18, 2006

GROUP NUMBER: 70829070

Mercury in Water - analysis was performed using procedures based on U. S. EPA Method 245.7, oxidative digestion using bromination, and analysis using Cold Vapour Atomic Fluorescence Spectroscopy.

Metals in Water - analysis was performed using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP), Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

Dissolved Metals in Water - Samples were filtered in the laboratory and quantitatively determined using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP) and/or Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

#### **COMMENTS:**

Samples 608290188 and 608290196 had exceeded holding time at the time of submission for pH, Nitrite and Nitrate. Client requested that the analysis be completed.

#### **TEST RESULTS:**

(See following pages)

Golder Associates Ltd.

CANTEST®

REPORT DATE: October 18, 2006

GROUP NUMBER: 70829070

#### **Conventional Parameters in Water**

CLIENT SAMPLE IDENTIFICATION:		12567-01	12567-02	12567-03A	12567-03B	
DATE SAMPLED:		Aug 24/06	Aug 24/06	Aug 23/06	Aug 23/06	DETECTION
CANTEST ID:		608290188	608290196	608290206	608290209	LIMIT
Hardness	CaCO3		2.20	335	319	
Hardness (Total) Total Dissolved Solids	CaCO3	326 588	316 678	<u>.</u>	-	jo
	Ę		20 000 1 1	- - - - - -	-	0.05
Dissolved Chloride Dissolved Nitrate	CI N		วร <b>ั</b> ขวองจองจองจองกระสายสายสายสายสายสายสายสายสายสายสายสายสายส	233	417	0.2 0.25
Dissolved Sulphate Total Kjeldahi Nitrogen	SO4 N	65.1 0.6	56.0 0.6	-	-	0.5 0.2

Results expressed as milligrams per liter (mg/L)

< = Less than detection limit

REPORTED TO: Golder Associates Ltd.

REPORT DATE: October 18, 2006

GROUP NUMBER: 70829070

#### Conventional Parameters in Water

CLIENT SAMPLE IDENTIFICATION:	12567-03C	12567-03D	12567-03E	
DATE SAMPLED:	Aug 23/06	Aug 23/06	Aug 23/06	DETECTION
CANTEST ID:	608290211	608290212	608290213	LIMIT
Hardness Cat Dissolved Chloride Cl	CO3 142 164	293 312	311 197	1 0.2

Results expressed as milligrams per liter (mg/L)

**REPORTED TO:** Golder Associates Ltd.

REPORT DATE: October 18, 2006

**GROUP NUMBER: 70829070** 

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12567-01	12567-01	12567-02	12567-02		
SAMPLE PREPARATION:	TOTAL	DISSOLVED	TOTAL	DISSOLVED		
DATE SAMPLED:	Aug 24/06	Aug 24/06	Aug 24/06	Aug 24/06	DETECTION	UNITS
CANTEST ID:	608290188	608290188	608290196	608290196	LIMIT	
Aluminum Al Antimony Sb Arsenic As Barium Ba Beryllium Be Bismuth Bi Boron B Cadmium Cd Calcium Ca Chromium Cr Cobalt Co Copper Cu Iron Fe Lead Pb Lithium Li Magneslum Mg Manganese Mn Mercury Hg Molybdenum Mo Nickel Ni Phosphorus P Potassium K Selenium Se Silicon Si Siliver Ag Sodium Na	<pre></pre>	<pre></pre>	0.13 < 0.003 0.024 < 0.31 < 86.1 < 0.002 0.005 0.57 < 0.028 24.5 0.43 < 0.0090 0.010 1.2 6.5 < 4.6 < 55.9	0.019 < 0.44 < 85.3 < < < 0.025 23.6 0.003 < 0.0069 0.004 0.8 5.8 < 3.8 < 55.9	0.005 0.001 0.001 0.001 0.001 0.005 0.0002 0.05 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.002 0.0005 0.001 0.15 0.1 0.25 0.001 0.25 0.001	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L
Strontium Sr Tellurium Te Thallium Ti Thorlum Th	0.75°	0.72 < < <	0.72 < < <	0.76 < < <	0.001 0.001 0.0001 0.0005	mg/L mg/L mg/L mg/L
Tin Sn	<	<		<	0.001	mg/L

(Continued on next page)

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

GROUP NUMBER: 70829070

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12567-01	12567-01	12567-02	12567-02		
SAMPLE PREPARATION:	TOTAL	DISSOLVED	TOTAL	DISSOLVED		
DATE SAMPLED:	Aug 24/06	Aug 24/06	Aug 24/06	Aug 24/06	DETECTION	UNITS
CANTEST ID:	608290188	608290188	608290196		LIMIT	
Titanium: Ti Uranium U Vanadium V Zinc Zn	0.005 0.0018 0.002	<ul><li>0.0016</li><li>0.001</li></ul>	0.005 0.0018 0.002	0.0014 0.001	0.001 0.0005 0.001 0.005	mg/L mg/L mg/L mg/L
Zirconium Zr	<	<		<	0.01	mg/L

mg/L = milligrams per liter < = Less than detection limit

 $\mu$ g/L = micrograms per liter

Golder Associates Ltd.

REPORT DATE: October 18, 2006

**GROUP NUMBER: 70829070** 

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12567-03A	12567-03B	12567-03C	12567-03D		
SAMPLE PREPARATION:	TOTAL	TOTAL	TOTAL	TOTAL		
DATE SAMPLED:	Aug 23/06	Aug 23/06	Aug 23/06	Aug 23/06	DETECTION	UNITS
CANTEST ID:	608290206	608290209	608290211	608290212	LIMIT	
Calcium Ca	93.7	86.1	40.8	92.8	0.05	mg/L

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER: 70829070** 

#### Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12567-03E	
SAMPLE PREPARATION:	TOTAL	
DATE SAMPLED:	Aug 23/06	DETECTION UNITS
CANTEST ID:	608290213	LIMIT
Calcium Ca	2790	0.05 mg/L

Golder Associates Ltd.

CANTEST

REPORT DATE:

October 18, 2006

GROUP NUMBER: 70829070

## Conventional Parameters-Winnipeg Laboratory- in Water

Conventional Parameters-CLIENT SAMPLE	12567-01	12567-02	12567-03A	12567-03B		
DATE SAMPLED:	Aug 24/06	Aug 24/06	Aug 23/06	Aug 23/06	DETECTION	UNITS
CANTEST ID:	608290188	608290196	608290206	608290209		pH units
I DISI WINGILIDA	٠	7.29 1200 49.9 60.9 <	7.34 980 - - -	1490	1 1 0.5 0.5 0.5 0.5 0.002	µS/cm mg/L mg/L mg/L mg/L mg/L

 $\mu$ S/cm = microslemens per centimeter

< = Less than detection limit

**REPORTED TO:** Golder Associates Ltd.

REPORT DATE: October 18, 2006

**GROUP NUMBER:** 70829070

#### Conventional Parameters-Winnipeg Laboratory- in Water

CLIENT SAMPLE IDENTIFICATION:	12567-03C	12567-03D	12567-03E		
DATE SAMPLED:	Aug 23/06	Aug 23/06	Aug 23/06	DETECTION	UNITS
CANTEST ID:	608290211	608290212	608290213	LIMIT	
pH, Laboratory Conductivity	7.81 729	8.25 1120	11.7 4900	1	pH units µS/cm

 $\mu$ S/cm = microsiemens per centimeter

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER: 70829070** 

#### **Batch Quality Control for Conventional Parameters in Water**

Parameter	QC Type	QC Result	Units	Lower Limit	Upper Limit
Total Dissolved Solids	Duplicate	4.2	R.P.D.	0	18
Total Suspended Solids	Blank TSS Control Standard (CalVe Duplicate	< 1 1)00.0 1.0	mg/L % Recovery	0 91 0	3 105 18
	Duplicate Duplicate Duplicate	1.4 2.4 5.9	R.P.D. R.P.D. R.P.D.	0 0 0	18 18 18
Dissolved Fluoride F	Dionex Certified Standard Duplicate Duplicate	108.0 0.0 0.0	% Recovery R.P.D. R.P.D.	90 0 0	110 10 10
Dissolved Chloride CI	Duplicate  Dionex Certified Standard	97.0	R.P.D. % Recovery R.P.D.	90	10 110 12
	Duplicate Duplicate Duplicate	0.0 2.0 2.8	R.P.D. R.P.D. R.P.D.	0 0 0	12 12 12
Dissolved Nitrate N	Dionex Certified Standard	102.7	% Recovery	90	110
Dissolved Sulphate SO4	Dionex Certified Standard Duplicate Duplicate	91.3 0.0 0.8	% Recovery R.P.D. R.P.D.	0 0	110 10 10
	Duplicate Duplicate	0.8 6.1	R.P.D.	0	10  10
Total Kjeldahl Nitrogen N	Blank Spike Spike	< 0.2 101.0 112.0	mg/L % Recovery % Recovery	0 66 66	0.2 124 124
	Spike Spike Duplicate	114.0 118.0 0.0	% Recovery % Recovery R.P.D.	66 66 0	124 124 20

(Continued on next page)

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER: 70829070** 

### **Batch Quality Control for Conventional Parameters in Water**

Parameter	QC Type	QC Result	Units	Lower Limit	Upper Limit
Total Kjeldahl Nitrogen N	Duplicate Duplicate	0.0	R.P.D. R.P.D.	0	20 20
	Duplicate	0.0	R.P.D.	0	20

mg/L = milligrams per liter < = Less than detection limit R.P.D. = Relative Percent Difference

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER: 70829070** 

## 

#### Batch Quality Control for Conventional Parameters-Winnipeg Laboratory- in Water

Parameter		QC Type	QC Result	Units	Lower Limit	Upper Limit	
pH, Laboratory		pH Calibration Verification Duplicate	100.3 0.1	% Recovery R.P.D.	98 0	102 3	
Conductivity		Blank	< 1	uS/cm	0	1	
Conductivity		Calibration Verification Duplicate	100.0	% Recovery R.P.D.	80 0	120 20	
Total Alkalinity	CaCO3	Blank	< 1	mg/L	0	4	
Total / wwalling		Calibration Verification Duplicate	93.8 0.5	% Recovery R.P.D.	80 0	120 20	
Blcarbonate Alkalinity	HCO3	Duplicate	0.4	R.P.D.	0	20	
Carbonate Alkalinity	CO3	Duplicate	NC	R.P.D.	0	20	
Hydroxide Alkalinity	ОН	Duplicate	NC	R.P.D.	0	20	
Nitrite	N	Blank	< 0.002	mg/L	0	0.002	
		Spike Calibration Verification Duplicate	95.1 98.6 PASS	% Recovery % Recovery R.P.D.	80 80 0	120 120 12	

uS/cm = microsiemens per centimeter

< = Less than detection limit

R.P.D. = Relative Percent Difference

PASS = Duplicate sample results were in the range of one to five times the detection limit. R.P.D. calculation is not applicable in this range. Acceptance criteria is a maximum difference between the duplicates equivalent to the value of the detection limit.

NC = Not Calculated. Duplicate sample results were less than the detection limit. Relative Percent Difference calculation is not defined for analyte levels of less than detection limit.

Golder Associates Ltd.

**REPORT DATE:** 

October 18, 2006

**GROUP NUMBER: 70829070** 

## 

#### Batch Quality Control for Dissolved Metals Analysis in Water (QC# 85189)

Parameter	Dissolved Blank (mg/L)	Dissolved Blank Limits	Duplicate (R.P.D.) 608290188	Duplicate Limits	Duplicate (R.P.D.) 608290283	Duplicate Limits
Aluminum Al	0.001	0.015	NC	20	PASS	20
Antimony Sb	< 0.0002	0.001	NC	20	NC	20
Arsenic As	< 0.0002	0.001	PASS	20	0	20
Barium Ba	< 0.0002	0.001	<u> </u>	_		
Beryllium Be	< 0.0002	0.001	*	<u>.</u>	-	-inc.
Cadmium Cd	< 0.00004	0.001	NC	20	NC	20
Calcium Ca			2.2	20	2.9	20
Chromium Cr	< 0.0002	0.001	NC	20	NC	20
Cobalt Co	< 0.0002	0.001	NC	20	NC	20
Copper Cu	< 0.0002	0.001	NC	20	NC	20
Lead Pb	< 0.0002	0.001	NC	20	NC	20
Magnesium Mg		-	2.1	20	4.5	20
Manganese Mn	< 0.0002	0.001		(Faces officer and	in the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of th	
Mercury Hg	< 0.02	0.05	NC	20	-	
Molybdenum Mo	< 0.0001	0.001	0	20	PASS	20
Nickel Ni	< 0.0002	0.001	PASS	20	NC	20
Potassium K	< 0.02	0.05	4.6	20	PASS	20
Silver Ag	< 0.00005	0.001	NC	20	NC	20
Sodium Na Strontium Sr	< 0.0002	0.001	3.8	20	3.8	20
Strontium Sr Thallium TI	. 2006 000000000 1.20000000000	0.001	NC	20	NC .	20
Thorium Th	< 0.00002 < 0.0001	0.0005	NC NC	20	NC	20
Tin	< 0.0001	0.0003	NČ	20	NC NC	
Titanium Ti	< 0.0002	0.003	INC.	20	140	20
Uranium U	< 0.0002	0.0005	PASS	20	NC	20
Vanadium V	< 0.0001	0.000	_	_	_	-
Zinc Zn	< 0.0002	0.001	oo#itiis			-
Zirconium Zr	< 0.002	0.01	po://www.s	_	] _	*******

mg/L = milligrams per liter

Mercury Hg expressed as: ug/L (micrograms per liter)

R.P.D. = Relative Percent Difference

PASS = Duplicate sample results were in the range of one to five times the detection limit. R.P.D. calculation is not applicable in this range. Acceptance criteria is a maximum difference between the duplicates equivalent to the value of the detection limit.

NC = Not Calculated. Duplicate sample results were less than the detection limit. Relative Percent Difference calculation is not defined for analyte levels of less than detection limit.

Golder Associates Ltd.

**REPORT DATE:** 

October 18, 2006

**GROUP NUMBER: 70829070** 

## Batch Quality Control for Dissolved Metals Analysis in Water (QC# 85189)

Parameter	Duplicate (R.P.D.) 608300483	Duplicate Limits
Calcium Ca Magnesium Mg Potassium K Sodium Na	0	20 20 20 20

mg/L = milligrams per liter R.P.D. = Relative Percent Difference

PASS = Duplicate sample results were in the range of one to five times the detection limit. R.P.D. calculation is not applicable in this range. Acceptance criteria is a maximum difference between the duplicates equivalent to the value of the detection limit.

Golder Associates Ltd.

CANTEST

**REPORT DATE:** 

October 18, 2006

**GROUP NUMBER: 70829070** 

## Batch Quality Control for Total Metals Analysis in Water (QC# 85153)

Parameter	Duplicate (R.P.D.) 608290188	Duplicate Limits	Duplicate (R.P.D.) 608300204	Duplicate Limits	Duplicate (R.P.D.) 608300211	Duplicate Limits
Mercury Hg	NC	20	NC	20	NC	20

ug/L = micrograms per liter

R.P.D. = Relative Percent Difference

NC = Not Calculated. Duplicate sample results were less than the detection limit. Relative Percent Difference calculation is not defined for analyte levels of less than detection limit.

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER: 70829070** 

## Batch Quality Control for Total Metals Analysis in Water (QC# 85153)

Parameter	Spike (% Recovery) 608290188	Spike Limits	Spike (% Recovery) 608300204	Spike Limits	Spike (% Recovery) 608300211	Spike Limits
Mercury Hg	112	70 - 128	105	70 - 128	85	70 - 128

ug/L = micrograms per liter

Golder Associates Ltd.

**REPORT DATE:** 

October 18, 2006

**GROUP NUMBER: 70829070** 

## Batch Quality Control for Total Metals Analysis in Water (QC# 85169)

Parameter	Duplicate (R.P.D.) 608300239	Duplicate Limits	ICPMS Spike (% Recovery) 608300236	ICPMS Spike Limits	ICPMS Lab Fortified Blank (% Recovery)	ICPMS Lab Fortified Blank Limits
Aluminum Al	8.5	20		-	105	78 - 122
Antimony Sb	NC	20	91	78 - 118	90	<b>7</b> 5 - 117
Arsenic As	NC	20	91	80 - 118	80	72 - 114
Barlum Ba	<b>-</b>		_		100	81 - 119
Beryllium Be	-	-	88	79 - 123	95	73 - 115
Boron B	-	-			100	92 - 110
Cadmium Cd	NC	20	93	74 - 124	88	78 - 116
Calcium Ca	3.4	20	- ,	- .000000-1 UKS000000000000000000000000000000000000		-
Chromium Cr Cr	NC	20	93 🦠 🔆 .	70 - 130	95	83 - 119
Cobalt Co	NC	20	90	76 - 126	95	85 - 119
Copper Cu	PASS	20	92	77 - 125	100	85 - 120
Lead Pb	NC	20	94	77 - 124	100	80 - 116
Magnesium Mg	3.8	20		g. 		
Manganese Mn		- 500-1	92	69 - 131	100	82 - 120
Molybdenum Mo	NC	20	91	68 - 118	95	82 - 114
Nickel Ni	NC	20	94	77 - 123	100	78 - 118
Potassium K	0	20	Research of	- 40,780,880,873,70		50 400
Selenium Se	best	-		• constants of the second	<b>70</b>	58 - 120
llouver va	NC	20	i <del>t</del> arania a	•	95	85 - 117
Sodium Na	3.6	20	-			
Strontium Sr	. To grande and		1	70 400	95	83 - 115
Thallium TI	NC	20	92	73 - 123	98	86 - 118
Thorlum Th	NC	20	-		1 ¹⁵ - 38	· (表表) (本) (本)
Tin Sn	NC	20	97	70 120	100	79 - 119
Titanium Ti		-		70 - 130	100   95	75 - 121
Uranium U	NC	20	89	65 - 133	95	76 - 118
Vanadium V		. <del>-</del>	91	75 - 123	80	64 - 126
Zinc Zn	-	-	<u> </u>		00	04-120

mg/L = milligrams per liter

R.P.D. = Relative Percent Difference

PASS = Duplicate sample results were in the range of one to five times the detection limit. R.P.D. calculation is not applicable in this range. Acceptance criteria is a maximum difference between the duplicates equivalent to the value of the detection limit.

NC = Not Calculated. Duplicate sample results were less than the detection limit. Relative Percent Difference calculation is not defined for analyte levels of less than detection limit.

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER:** 70829070

## Batch Quality Control for Total Metals Analysis in Water (QC# 85169)

Parameter		Total Blank (mg/L)	Total Blank Limits
_			
Aluminum	Al	< 0.001	0.015
Antimony	Sb	< 0.0002	0.001
Arsenic	As	< 0.0002	0.001
Barium	Ва	< 0.0002	0.001
Beryllium	Be	< 0.0002	0.001
Cadmium	Cd	< 0.00004	0.001
Chromium	Cr	< 0.0002	0.001
Cobalt	, Co	< 0.0002	0.001
Copper	Cu	< 0.0002	0.001
Lead	Pb	< 0.0002	0.001
Manganese	Mn	< 0.0002	0.001
Molybdenum	Мо	< 0.0001	0.001
Nickel	Ni	< 0.0002	0.001
Potassium	K	< 0.02	0.05
Silver	Ag	< 0.00005	0.001
Strontium	Sr	< 0.0002	0.001
Thallium	TI	< 0.00002	0.001
Thorlum	Th	< 0.0001	0.0005
Tin	Sn	< 0.0002	0.005
Tltanlum	TI	< 0.0002	0.001
Uranium	ور بالشرال	< 0.0001	0.0005
Vanadium	V	< 0.0002	0.001
Zinc	Zn	< 0.001	0.01
Zirconium	Zr	< 0.002	0.01

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mg/L = milligrams per liter

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER: 7**0829070

Instrument Quality Control for the PSA Mercury Analyzer-AF (QC# 167177)

QC Type: Calibration Verification

Parameter	% Recovery	Limits
Mercury Hg	104	90 - 110

Golder Associates Ltd.

**REPORT DATE:** 

October 18, 2006

GROUP NUMBER: 70829070

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## **Batch Quality Control Frequency Summary**

## Nitrite in Water-Winnipeg (Batch# 85137)

QC Type	No. Samples
Blank	*
Calibration Verification	1
Duplicate Spike	1

## pH Analysis (WPG) (Batch# 85139)

QC Type	No. Sam	ples
Duplicate	1	

## Conductivity Analysis (WPG) (Batch# 85140)

QС Туре	No. Samples
Blank	1
Calibration Verification Duplicate	1

## Mercury Water Bromination Prep (Batch# 85153)

QC Type	No.	Samples
Duplicate	3	
Spike	 3	

## Total Metals Preparation (Batch# 85169)

QC Type	No. Samples
ICPMS Spike	1
ICP Spike Vista ICAP	1
Potassium/Silicon Spike Vis	ta 1
ICPMS Lab Fortified Blank Duplicate	1   <b>2</b>
Total Blank	2

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER: 70829070** 

## **Batch Quality Control Frequency Summary**

## TKN Preparation (Batch# 85187)

CANTEST

QC Type	No. Samples
Blank	1
Duplicate	4
Spike	4

## Dissolved Metals Preparation (Batch# 85189)

QC Type	No. Samples
Dissolved Blank	3
Duplicate	4

## Water Lab Ion Chromatography (Batch# 85192)

QC Type	No. Samples
Blank	2
Duplicate	4

## Water Lab Titration (WPG) (Batch# 85227)

QC Type	N	o. Sampl	les
Blank	1	. ;	.11
Calibration Verification Duplicate	1	ii. j	

## Suspended Solids Analysis (Batch# 85285)

QC Type	No. Samples
Blank	1
TSS Control Standard (CalVer)  Duplicate	1 4

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

**GROUP NUMBER:** 70829070

## **Batch Quality Control Frequency Summary**

## Nitrite in Water-Winnipeg (Batch# 85137)

CANTEST

QC Type	No. Samples
Batch Size	 2

## pH Analysis (WPG) (Batch# 85139)

QC Туре	No. Samples
Batch Size	1.1

## Conductivity Analysis (WPG) (Batch# 85140)

QC Type	-	No. Samples
Batch Size		9

## Mercury Water Bromination Prep (Batch# 85153)

QC Type	No. Samples
Batch Size	32

## Total Metals Preparation (Batch# 85169)

QC Type	No. Samples
Batch Size	 39

## TKN Preparation (Batch# 85187)

QC Type			No. Samples
Batch Size	1,248	. 44.56	38

Golder Associates Ltd.

REPORT DATE:

October 18, 2006

GROUP NUMBER: 70829070

## **Batch Quality Control Frequency Summary**

## Dissolved Metals Preparation (Batch# 85189)

CANTEST*

QC Type		No. Sample	<b>5</b>
Batch Size	100	31	(A)

## Water Lab Ion Chromatography (Batch# 85192)

QC Type	No. Samples
Batch Size	39

## Water Lab Titration (WPG) (Batch# 85227)

QC Type	No. Samples
Batch Size	13

## Suspended Solids Analysis (Batch# 85285)

QC Type	 No. Samples
Batch Size	35

# CHAIN OF CUSTODY RECORD/ANALYSIS REQUEST

Νō 12568 page 1 of 1

Golder Associates
<b>ASSOCIATES</b>

500 - 4260 Still Creek Drive Burnaby, British Columbia, Canada V5C 6C6 Telephone (604) 298-6623 Fax (604) 298-5253

	Laboratory Name: CANTEST
Short Title: MEADOWBANK GROUND WATER SAMPLING	Address: UNIT-D, 675 BEERY ST, WINNIPECT, MB
Golder Contact: VALERIE BERTRAND Golder E-mail Address: VBERTRAND VBERTRAND @golder.com	Telephone/Fax: Contact: WARNIE KOTACH

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Office the final repor		nt to:						•••••				······································		Analys	es Rec	quired		***************************************	***************************************		
500-4260 Still Burnaby, B.C. V5C 6C6 Tel: (604) 298-Fax: (604) 298-	6623;		202 – 2790 Abbotsford V2T 4S8 Tel: (604) 8 Fax: (604)	, B.C. 350-8786	Road [	Victoria, I V9A 7N6 Tel: (250)	3.C.			ntainers	ETALS / AS SE	LS J Hg	A IONS	Species			NUTRIENTS (P.N. TO)				
Sample Control Number (SCN)	Sample Location	Sa. #	Sample Depth (m)	Sample Matrix (over)	Date Sampled (D/M/Y)	Time Sampled (HH:MM)	Sample Type (over)	QAQC Code (over	Related SCN (over)	Number of Containers	TOT. META	DISS. HETALS	TSS + MAJOR		SPEC ALK	PHYS. PARAMETERS	NUTRIEN	705		RUSH	Remarks (over)
12568 - 01	MW 06-7	1	165	WATER	30/8/06	21/15	D	FDA	12568-02	5											NB   DISS. HETAL
12568 -02	MW 06-7	1	165	WATER	30/8/06	21:15	D	FD	12568-01	5										1	BAMPLE FIELD
- 03														1							FILTERED +
- 04																					PRESERV WY
- 05														-							HNOZ
- 06															_						111403
- 07									7-7						$\dashv$	$\dashv$					
- 08														_	+	-					
- 09				***************************************								$\neg +$	-			-					
- 10																					
- 11							*			-,,					-	+					
- 12	Ø		-											_							
Sampler's Signature:			Relinquie	hed by: Si	g ature ()		Company		Date	/		Time			Recei	ived b	y: Sig	nature		Con	npany
Sample Storage (°C)			Relinquis	hed by: Si	imatura		C	GHL	Date 30/8/	/ 2×	<u> </u>	<del></del>	1:00	·	ļ	·····				-	
	MICE		remiquis	ca oy. 61	giiaiui C		Company	y 	Date			Time	e		Recei	ived by	y: Sig	nature		Con	прапу
Comments:			Method o	f Shipmen	t:		Waybill 1	No.:			Rec	eived fo	or Lab b	y:	<u> </u>		Date	2			Time
			Shipped l	y:			Shipmen Seal Inta	t Condition	n:		Tem	ıp (°C)	Coo	ler oper	ned by	·:	Date	:			Time
					****		1				1										

WHITE: Golder Copy

YELLOW: Lab Copy

PINK: Lab Returns with Final Report

## **Analysis Report**

CANTEST LTD.

Professional Analytical Services

4606 Canada Way Burnaby, B.C. V5G 1K5

Fax: 604 731 2386

Tel: 604 734 7276

1 800 665 8566

REPORT ON: Analysis of Water Samples

**REPORTED TO:** 

Golder Associates Ltd.

32 Steacie Dr Kanata, ON K2K 2A9

Att'n: Ms. Valerie Bertrand

CHAIN OF CUSTODY: PROJECT NUMBER:

12568

06-1122-186-2200

**NUMBER OF SAMPLES: 2** 

REPORT DATE: September 14, 2006

DATE SUBMITTED: September 5, 2006

**GROUP NUMBER: 70905001** 

**SAMPLE TYPE:** Water

**NOTE:** Results contained in this report refer only to the testing of samples as submitted. Other information is available on request.

**TEST METHODS:** 

Anions in Water by Ion Chromatography - was determined based on Method 4110 in Standard Methods (20th Edition) and EPA Method 300.0 (Revision 2.1).

**Total Dissolved Solids in Water** - was determined based on Method 2540 C in Standard Methods (20th Edition).

**Total Suspended Solids In Water** - was determined based on Method 2540 D in Standard Methods (20th Edition) and Method X332 in the BC Laboratory Manual (1994 Edition).

Conventional Parameters - analyses were performed using procedures based on those described in the most current editions of "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials", Province of British Columbia and "Standard Methods for the Examination of Water and Wastewater", published by the American Public Health Association.

Conventional Parameters - Winnipeg Laboratory (Unit D-675 Berry Street, Winnipeg, Manitoba R3H 1A7): - Analyses performed at Cantest's Winnipeg facilities follow procedures based on those described in the "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials" (1994 Edition) and "Standard Methods for the Examination of Water and Wastewater" (20th Edition, 1998).

**Mercury In Water** - analysis was performed using procedures based on U. S. EPA Method 245.7, oxidative digestion using bromination, and analysis using Cold Vapour Atomic Fluorescence Spectroscopy.

(Continued)

CANTEST LTD.

Richard S. Jornitz

Supervisor, Inorganic Testing

Page 1 of 6

Golder Associates Ltd.

REPORT DATE:

September 14, 2006

GROUP NUMBER: 70905001

**Metals in Water** - analysis was performed using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP), Inductively Coupled Plasma-Mass Spectroscopy (ICP/MS).

Dissolved Metals In Water - Samples were filtered in the laboratory and quantitatively determined using Inductively Coupled Plasma Optical Emission Spectroscopy (ICP/MS)

## **COMMENTS:**

pH, nitrite and total suspended solids had exceeded holding time at the time of submission for samples 609050002 and 609 05003. Client requested that analysis be completed. Samples received at a temperature of 12.4 degrees Celcius.

#### **TEST RESULTS:**

(See following pages)

Golder Associates Ltd.

REPORT DATE:

September 14, 2006

GROUP NUMBER: 70905001

# CANTEST®

## **Conventional Parameters in Water**

CLIENT SAMPLE IDENTIFICATION:	12568-01	12568-02	
DATE SAMPLED:	Aug 30/06	Aug 30/06	DETECTION
CANTEST ID:	609050002	609050003	DETECTION LIMIT
Hardness CaCO3 Hardness (Total) CaCO3 Total Dissolved Solids Total Suspended Solids Dissolved Fluoride F	106 124 172 11 0.20	107 128 162 11 0.11	1 1 10 1 0.05
Dissolved Chloride Cl Dissolved Nitrate N Dissolved Sulphate SO4	33.3	33.5 0.12 3.76	0.05 0.05 0.5

Results expressed as milligrams per liter (mg/L)

Golder Associates Ltd.

REPORT DATE:

September 14, 2006

**GROUP NUMBER: 70905001** 

# 

## Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12568-01	12568-01	12568-02	12568-02		
SAMPLE PREPARATION:	TOTAL	DISSOLVED	TOTAL	DISSOLVED		
DATE SAMPLED:	Aug 30/06	Aug 30/06	Aug 30/06	Aug 30/06	DETECTION	UNITS
CANTEST ID:	609050002	609050002	609050003	609050003	LIMIT	ONTO
Aluminum Al	1.08	0.040	1.06	0.042	0.005	mg/L
Antimony Sb Arsenic As	0.001	\ \ \	0,002	<	0.001	mg/L
Barium Ba	0.001	0.086	0.002	0.001 0.086	0.001 0.001	mg/L
Beryllium Be	<	U.U60	U.11 	U.U66 <	0.001	mg/L mg/L
Bismuth Bi	<	<	<	<	0.001	mg/L
Boron B	<	i e	Ž.	Ž	0.05	mg/L
Cadmium Cd	<	<	<	<	0.0002	mg/L
Calcium Ca	34.9	31.3	36.4	31.5	0.05	mg/L
Chromium Cr	0.006	<	0.005	<	0.001	mg/L
Cobalt Co	0.001	<b>*</b>	0.001	<	0.001	mg/L
Copper Cu	0.011	0.005	0.011	0.008	0.001	mg/L
Iron Fe	1.50	<	1.58	0.05	0.05	mg/L
Lead Pb	0.001	<	0.001	<	0.001	mg/L
Lithium LI	0.004	0.002	0.004	0.002	0.001	mg/L
Magnesium Mg	8.81	6.83	9.04	6.92	0.05	mg/L
Manganese Mn	0.073	0.032	0.074	0.032	0.001	mg/L
Mercury Hg	<	************************************	<	<	0.02	μg/L
Molybdenum Mo Nickel Ni	0.0050	0.0040	0.0048	0.0042	0.0005	mg/L
Nickel Ni Phosphorus P	0.005	0.002	0.005	0.002	0.001	mg/L
Potassium K	0.4	0.3	0.4	0.3	0.15	mg/L
Selenium Se	2.7 <	2.3	2.8	2.3	0.1	mg/L
Sillicon Si	5.2	≤ 2.7	< 5.0	<	0.001	mg/L
Silver Ag	0.0009	2.7	0.0009	2.7	0.25	mg/L
Sodium Na	8.85	7.68	9.12	< 7.84	0.00025	mg/L
Strontium Sr	0.23	0.19	9.12 0.24	7.84 0.20	0.05 0.001	mg/L
Tellurium Te	<	v.15 <	U.24 <		0.001	mg/L
Thallium Ti	<b>,</b>	<	· Č	<	0.001	mg/L
Thorlum Th	<	7	<	_	0.0005	mg/L mg/L
Tin Sn	. <	· k	`	`~	1.55.55	mg/L

Golder Associates Ltd.

**REPORT DATE:** 

September 14, 2006

**GROUP NUMBER: 70905001** 

## Metals Analysis in Water

CLIENT SAMPLE IDENTIFICATION:	12568-01	12568-01	12568-02	12568-02		
SAMPLE PREPARATION:	TOTAL	DISSOLVED	TOTAL	DISSOLVED		
DATE SAMPLED:	Aug 30/06	Aug 30/06	Aug 30/06	Aug 30/06	DETECTION	UNITS
CANTEST ID:	609050002	609050002	609050003	609050003	LIMIT	
Titanium Ti Uranium U Vanadium V Zinc Zn	0.032 0.0095 0.002 0.006	< 0.0079 < <	0.031 0.0097 0.002 0.006	<	0.001 0.0005 0.001 0.005	mg/L mg/L mg/L mg/L
Zirconium Zr	<	_ <	<	<	0.01	mg/L

mg/L = milligrams per liter < = Less than detection limit

 $\mu$ g/L = micrograms per liter

Golder Associates Ltd.

REPORT DATE:

September 14, 2006

**GROUP NUMBER: 70905001** 

## Conventional Parameters-Winnipeg Laboratory- in Water

CLIENT SAMPLE IDENTIFICATION:		12568-01	12568-02		
DATE SAMPLED:		Aug 30/06	Aug 30/06	DETECTION	UNITS
CANTEST ID:		609050002	609050003	LIMIT	
pH, Laboratory		7.54	to the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second se		pH units
Conductivity	©A≅AAA	281	285 89.0	<b>1</b> 	μS/cm  mg/L
Total Alkalinity Bicarbonate Alkalinity	CaCO3 HCO3	89.0 108	108	0.5	mg/L
Carbonate Alkalinity	CO3	<		0.5	mg/L
Hydroxide Alkalinity	ОН	<	<	0.5	mg/L
Nitrite	N	0.003	0.003	0.002	mg/L

 $\mu$ S/cm = microsiemens per centimeter

< = Less than detection limit

mg/L = milligrams per liter