DOMINION DIAMOND

ANNEX IX: APPENDIX A

JAY PROJECT GEOTECHNICAL AND HYDROGEOLOGICAL FIELD INVESTIGATION FACTUAL REPORT VOL. 3: ASSESSMENT OF GROUNDWATER QUALITY IN JAY PIPE AREA

July 23, 2014

DOMINION DIAMOND EKATI CORPORATION
LAC DU SAUVAGE
NORTHWEST TERRITORIES
CANADA

Jay Project Geotechnical and Hydrogeological Field Investigation Factual Report Vol. 3: Assessment of Groundwater Quality in Jay Pipe Area

REPORT

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ACRONYMS

Dominion Diamond	Dominion Diamond Ekati Corporation
Golder	Golder Associates Ltd.
ID	identification
i.e.	that is
K	hydraulic conductivity
MDL	method detection limits
n/a	not applicable
NAD	North American Datum
QA/QC	quality assurance/quality control
RPD	relative percent difference
UTM	Universal Transverse Mercator

UNITS OF MEASURE

%	percent
°C	degrees Celsius
cm	centimetre
°	degree (angle)
km	kilometre
L	litre
L/m	litres per metre
m	metre
mah	metres along hole, relative to ground (or ice) surface
masl	metres above sea level
mbgs	metres below ground surface
mL	millilitre
mm	millimetre
pH	concentration of hydrogen ions

1.0 INTRODUCTION

Dominion Diamond Ekati Corporation (Dominion Diamond) retained Golder Associates Ltd. (Golder) to conduct a pre-feasibility level study to assess the development of the Jay and Cardinal open pit diamond mines within Lac du Sauvage for the Jay-Cardinal and Jay Projects, at Dominion Diamond's Ekati Mine in the Northwest Territories. In the later stages of the 2014 drilling program, Dominion Diamond communicated to Golder that the Cardinal kimberlite pipe was no longer in scope and that the project would be based solely on the Jay pipe. The Jay Project area is located in the Lac de Gras kimberlite field approximately 300 kilometres (km) northeast of Yellowknife (Figure 1), within the vicinity of existing open pits: Panda, Koala, Fox, Beartooth, Pigeon, Sable, and Misery.

Geotechnical, hydrogeological, thermal, and groundwater characterization field investigations were carried out at the project site between February and June 2014. The field investigation results have been reported in three volumes. Volume 1: Proposed Dikes, presents a summary of the foundation conditions along the proposed dike alignments. Volume 2: Proposed Jay Pit Area presents a summary of the data collected for the proposed Jay kimberlite pit development and; Volume 3: Assessment of Groundwater Quality in Jay Pipe Area provides a summary of the Westbay well installation and groundwater quality.

This report is Volume 3 and includes a summary of the information collected during the field investigations which consisted of installation of a Westbay multi-level monitoring well, and subsequent groundwater sampling in the Jay pipe area. The individual activities carried out as part of this task are listed below, and described in detail in the following sections:

- drilling program (Section 2.0);
- thermistor installation and temperature measurements in support of the Westbay multi-level monitoring well installation (Section 3.0);
- installation, development, and groundwater sample collection from the Westbay multi-level monitoring well (Sections 4.0 and 5.0); and,
- laboratory analyses of groundwater samples (Section 6.0).

2.0 DRILLING PROGRAM

Hydrogeological investigations for the Jay Project involved the advancement of six deep boreholes within the dike footprint (Golder 2014). Two of these deep boreholes and one shallow borehole were advanced from an island in Lac du Sauvage for the purposes of thermistor installation and installation of a Westbay multi-level monitoring well as part of the evaluation of the permafrost and groundwater conditions, and are discussed herein. The three boreholes (JGT-01, JGT-06, and JGT-07) were drilled by Major Drilling Group International Inc. between March 1 and April 7, 2014, using a diamond coring drill rig at the location shown in Figure 2. The boreholes were drilled with a diameter of 96 millimetres (mm) (HQ size) using an HQ3 bit. At each location, HW size casing was advanced through overburden and weathered rock into the competent bedrock to prevent caving of the unconsolidated materials during drilling.

Water from Lac du Sauvage was used for drilling fluid to flush cuttings from the boreholes. A uranine dye tracer (fluorescein), was added to the drilling fluid at a known concentration during drilling of Borehole JGT-06 as a marker for well development. The fluorescein in the drilling fluid was maintained at about 690 parts per billion (ppb). The development purging target was set at approximately 5 percent (%) of the concentration of tagged drill fluid, or about 35 ppb. In this manner, the analyses could be adjusted to account for 5% drill fluid in the sample. Detailed information related to the well development procedure is provided in Section 5.0.

Following completion, Boreholes JGT-01 and JGT-07 were instrumented with thermistors and Borehole JGT-06 was instrumented with a Westbay multi-level monitoring well.

Detailed information on the borehole, including collar coordinates (provided by Dominion Diamond), ground surface elevation, end depth, and drilling period, is presented in Table 1.

Table 1: Summary of Drilling Program

Borehole ID	Final			Planned		Borehole Depth (mah)	Start Drilling Date	End Drilling Date
	Easting (X, m)[a,b]	Northing (Y, m)[a,b]	Elevation (Z, masl)	Azimuth (°)[c]	Inclination (°)[d]			
JGT-01	543,130.8	7,165,638.9	419.4	200	80	251.00	March 1, 2014	March 13, 2014
JGT-06	543,163.3	7,165,609.9	419.6	200	80	461.30	March 25, 2014	April 4, 2014
JGT-07[e]	543,125.0	7,165,622.0	419.0	n/a	90	26.30	April 7, 2014	April 7, 2014

a) Collar coordinates are referenced to UTM NAD 83, Zone 12N.
b) Collar survey data provided by Dominion Diamond.
c) All azimuths are with respect to true north. All angles are in degrees.
d) Inclination is the angle below the horizontal; i.e., 90 degrees = a vertical hole.
e) The coordinates presented for JGT-07 are proposed, as a final collar survey was not carried out.

ID = identification; m = metres; masl = metres above sea level; ° = degree; mah = metres along hole, relative to ground (or ice) surface; n/a = not applicable; UTM = Universal Transverse Mercator; NAD = North American Datum.

A Reflex E-Z Shot tool and a Maxibor tool were used for downhole survey in Boreholes JGT-01 and JGT-06. Because of the relatively shallow depth (27 metres [m]) and 90 degree inclination, no survey was carried out in Borehole JGT-07. A summary of the averaged downhole orientation data for Boreholes JGT-01 and JGT-06 is presented in Table 2.

Table 2: Borehole Orientation Surveys

JGT-01[a]			JGT-06[b]		
Depth Interval (mah)	Azimuth (°)[c]	Inclination (°)[d]	Depth Interval (mah)	Azimuth (°)[c]	Inclination (°)[d]
0 to 30	199.3	80.0	0 to 111	205.9	77.0
30 to 50	205.5	80.2	111 to 183	208.7	76.9
50 to 105	201.5	80.5	183 to 273	211.7	76.9
105 to 130	206.8	80.3	273 to 327	214.8	76.8
130 to 160	203.0	80.3	327 to 400	217.8	76.6
160 to 205	206.8	80.4	400 to 461	220.3	76.4
205 to 225	210.0	80.5			
225 to 251	206.2	80.5			

a) The average azimuth and inclination for Borehole JGT-01 were calculated from Reflex survey data provided by Dominion Diamond.
b) The average azimuth and inclination for Borehole JGT-06 were calculated from Maxibor survey data provided by Dominion Diamond.
c) All azimuths are with respect to true north. All angles are in degrees.
d) Inclination is the angle below the horizontal; i.e., 90 degrees = a vertical hole.
mah = metres along hole, relative to ground (or ice) surface; ° = degree.

3.0 GROUND TEMPERATURE SURVEY

Thermistor strings were installed in each of Boreholes JGT-01 and JGT-07 (Figure 2) to determine the extent and temperature of the permafrost at the location of the proposed groundwater monitoring well in support of the final well design. The presence and depth of permafrost under the island is also considered in slope stability analyses.

3.1 Thermistor Installation

Each of the two thermistor strings included 16 temperature sensors spaced along a single communication cable in intervals designed to obtain information on temperature gradient near the ground surface (JGT-07) and through the base of the permafrost (JGT-01). The thermistor strings were attached to the outside of a 1-inch diameter HDPE pipe and lowered into the borehole. To help guide the instrumentation into the hole, the end of the pipe was secured inside a 3 m long AQ size drill rod. Cement bentonite grout was pumped through the HDPE pipe to backfill the borehole from the bottom up to the surface, securing the thermistor in place. After the grout had cured, a datalogger was connected to each string and placed into a secured box installed beside the borehole casing. The thermistor installation details are shown in Figure 3 and Figure 4 and summarized in Table 3.

Table 3: Thermistor Installation Details

Borehole ID	Depth			
Thermistor Number	JGT-01		JGT-07	
	Along Hole (mah)	Vertical (mbgs)	Along Hole (mah)	Vertical (mbgs)
1	26.0	25.6	2.4	2.4
2	41.0	40.4	2.9	2.9
3	56.0	55.1	3.4	3.4
4	71.0	69.9	4.4	4.4
5	86.0	84.7	5.4	5.4
6	101.0	99.5	6.4	6.4
7	116.0	114.2	7.4	7.4
8	131.0	129.0	8.4	8.4
9	146.0	143.8	9.4	9.4
10	161.0	158.6	10.4	10.4
11	176.0	173.3	12.4	12.4

Borehole ID	Depth			
Thermistor Number	JGT-01		JGT-07	
	Along Hole (mah)	Vertical (mbgs)	Along Hole (mah)	Vertical (mbgs)
12	191.0	188.1	14.4	14.4
13	206.0	202.9	16.4	16.4
14	221.0	217.6	18.4	18.4
15	236.0	232.4	20.4	20.4
16	251.0	247.2	22.4	22.4

ID = identification; mah = metres along hole, relative to ground surface; mbgs = metres below ground surface.

3.2 Thermistor Data

The thermistor string installed in Borehole JGT-07 was designed to measure ground temperature in the upper 23 m, whereas the thermistor string in Borehole JGT-01 was designed to provide information on the ground temperature to approximately 247 m depth. Ground temperature data collected from Thermistors JGT-01 and JGT-07 during April and May 2014 are included in Appendix A.

The lowest temperature of approximately -9 degrees Celsius (°C) was measured on April 7, 2014, in Borehole JGT-07 at 2.5 m depth. By May 24, 2014, the temperature at this sensor stabilized at approximately -7.5°C.

The Figure 5 and Figure 6 show the temperature profiles for Thermistor JGT-01 and JGT-07, respectively. The temperature data recorded by the two thermistors between the period of March 15 to April 13 (JGT-01) and April 6 to May 24 (JGT-07) are presented in Table 4 below. Based on a linear extrapolation of the temperature data, the base of the permafrost (defined as 0°C) was interpreted to be at about 140 m depth below ground surface.

Table 4: Thermistor Data

Borehole ID	JGT-01[a]		JGT-07[b]	
Thermistor Number	Vertical Depth (mbgs)	Temperature (°C)	Vertical Depth (mbgs)	Temperature (°C)
1	25.6	-0.5	2.4	-7.1
2	40.4	-2.2	2.9	-7.0
3	55.1	-1.8	3.4	-6.8
4	69.9	-1.7	4.4	-6.3
5	84.7	-1.3	5.4	-5.8
6	99.5	-0.9	6.4	-5.3
7	114.2	-0.5	7.4	-4.9
8	129.0	-0.3	8.4	-4.5
9	143.8	0.1	9.4	-4.2
10	158.6	0.4	10.4	-4.0
11	173.3	0.8	12.4	-3.7
12	188.1	1.0	14.4	-3.4
13	202.9	1.2	16.4	-3.4
14	217.6	1.5	18.4	-3.3
15	232.4	1.8	20.4	-3.3
16	247.2	2.0	22.4	-3.3

a) The temperature data for Thermistor JGT-01 were measured on April 13, 2014, at 7:35 pm.

b) The temperature data for Thermistor JGT-07 were measured on May 25, 2014, at 9 am.

ID = identification; mbgs = metres below ground surface; °C = degrees Celsius.

4.0 WESTBAY MULTI-LEVEL MONITORING WELL INSTALLATION

The following sections provide information on the installation of a Westbay multi-level groundwater monitoring well in Borehole JGT-06, including design and installation details.

4.1 Well Design

Upon completion of drilling, a Westbay multi-level monitoring well was installed in Borehole JGT-06. The system allows monitoring of hydraulic heads, testing of hydraulic conductivity, and collection of groundwater samples from multiple zones within a single borehole. The instrumentation consists of a 38 mm diameter Schedule 80 PVC pipe, inflatable packers, and monitoring and pumping ports installed at the selected intervals between packers.

The JGT-06 Westbay multi-level monitoring well was designed to isolate nine intervals within the borehole to obtain groundwater samples representative of different depths (Figure 7). The sampling intervals are located in the section of the borehole below permafrost. The well design was based on the information collected during the geotechnical and geological core logging, hydrogeological testing, and ground temperature monitoring conducted by Golder.

4.2 Well Installation

All the materials and components of the Westbay multi-level monitoring well required for installation in Borehole JGT-06 were laid out and prepared at the well site between April 7 and 8, 2014. The preparation included counting and numbering each PVC pipe, packer, sampling port, pumping port, magnetic collar, and other materials according to the order of installation as specified in the well design (Figure 8).

Once the borehole preparation was completed and the well materials were ready, the core barrel was removed from the drill string, and the drill rods equipped with a casing shoe were lowered back into the hole to 350 m depth. The 15% calcium chloride brine used to flush the upper portion of the borehole to prevent freezing was tagged with fluorescein in JGT-06 to allow for identification the amount of drilling fluid that remained during well development. The well components were assembled at the surface and lowered into the borehole thorough the drill rods according to the design order. As the PVC pipe was lowered into the hole it was filled with a 2:1 mix of lake water and propylene glycol to overcome buoyancy of the system and to prevent freezing of fluids within the pipe.

Once the complete Westbay multi-level monitoring well was in place, the drill rods were pulled up to 165 m depth to protect the instrumentation through the zone of permafrost, and the packers were inflated with a mixture of diluted propylene glycol.

The Westbay multi-level monitoring well sampling interval depths are provided in Table 5. All of these sampling intervals were installed in unfrozen bedrock within the talik of Lac du Sauvage.

Table 5: Westbay Multi-Level Monitoring Interval Depths

Interval Number	Depth Along Hole			Vertical Depth		
	From (mah)	To (mah)	Magnetic Collar Depth (mah)	From (mbgs)	To (mbgs)	Magnetic Collar Depth (mbgs)
1	174.0	209.2	174.6	169.5	203.8	170.1
2	210.7	238.2	211.3	205.3	232.0	205.9
3	239.7	268.7	240.3	233.5	261.7	234.1
4	270.2	308.4	270.8	263.2	300.4	263.8
5	309.9	338.9	310.5	301.9	330.0	302.5
6	340.4	367.9	341.0	331.5	358.3	332.1
7	369.4	398.4	370.0	359.8	387.9	360.4
8	399.9	429.0	400.5	389.4	417.7	390.0
9	430.5	460.5	431.1	419.2	449.0	419.8

Note: Values based on "Casing Installation Log," included as part of Completion Report Westbay System Monitoring Wells: JGT-06 – Jay Project, NT. May 28, 2014 (see Appendix B).
mah = metres along hole; mbgs = metres below ground surface.

Testing and sampling ports were installed in each isolated interval to measure the corresponding hydraulic heads and to allow collection of groundwater samples. Sampling ports were also installed below the first two packers to relieve excess pressure generated during the packer inflation process. These ports were opened during the inflation of the packers to allow proper packer inflation, and prevent any potential damage to the well from excess pressure. Pumping ports were also placed at the base and half way through the permafrost zone to allow injection of propylene glycol mixture into the annulus of the borehole within the extent of the permafrost zone to prevent freezing of the well. A comprehensive record of well installation from Schlumberger Water Services, including as-built casing summary, field data calculation sheet, packer pre-inflation and post-inflation profiles, is included in Appendix B.

5.0 WESTBAY MULTI-LEVEL MONITORING WELL DEVELOPMENT

Westbay multi-level monitoring well intervals 9, 7, 5, and 3 of JGT-06 were selected for development. The following sections provide information on the methods and procedures followed during the development of the selected Westbay multi-level monitoring well intervals.

5.1 Development Methods

Based on the hydraulic conductivities derived from the hydrogeological tests carried out in JGT-06, three different methods were used to develop the intervals selected for groundwater sampling:

- high yield airlifting method;
- low yield airlifting method; and,
- Westbay sampler method.

High Yield Airlift

The high yield air lifting method was adopted for the development of significant water-bearing zones identified within Intervals 7 and 9.

After the pumping port of the selected interval was opened with the Mosdax probe, an airline connected to an air compressor was lowered into the well pipe to a depth of approximately 30 m for Intervals 7 and 9. Compressed air run through the airline was used to displace the water from the well pipe, and draw groundwater from the selected interval through the open pumping port. The water recovered from the well was collected at the well head and discharged at a designated spot through a discharge pipe. The relatively high yield of the Intervals 7 and 9 allowed almost continuous removal of water that prevented the water in the pipe from freezing.

During temporary interruptions of the development, a 1:3 mixture of propylene glycol and lake water solution was added in the well pipe to prevent freezing. A schematic of the airlifting system is shown in Figure 9.

Low Yield Airlift

The low yield airlifting method was used for the development of the less permeable zone within Interval 5. The airline connected to the air compressor for this interval was lowered to about 40 m. During the development of the low yield zone, a slug of diluted propylene glycol was consistently maintained in the section of the pipe located within the permafrost zone (approximate 150 m) to prevent freezing of the well. This method that was adopted for the development of Interval 5 consisted of multiple cycles of airlifting followed by refilling of the well pipe with propylene glycol. After each airlift cycle, the higher yield Interval 6 below the sampling port for Interval 5 was opened to absorb the water being pushed back into the well by the new propylene glycol. The bypass at the injection hose was opened between each airlift cycle to allow water enter the tubing during the recovery period.

Westbay Sampler

The Westbay sampler method was used for the final development of the Intervals 5, 7, and 9. Due to the very low hydraulic conductivity of the formation intersected by Interval 3, the Westbay sampler was used during the development of that interval. The Westbay sampler consists of a Mosdax sampler probe, sample containers, and a motorized winch. The probe is controlled remotely from surface and can remove approximately 1 litre (L) of groundwater during each run. The schematic of the Mosdax probe set up is shown in Figure 10.

5.2 Development Procedures

A fluorescent tracer dye was added to the drilling fluid at a concentration of approximately 690 ppb when Borehole JGT-06 reached the projected base of the permafrost as a marker for well development. A hand-held fluorometer was used to measure the dye tracer concentration in the water extracted during the development to determine when about 95% of the water introduced into the formation during drilling had been removed. A representative groundwater sample was collected after removal of about 95% of the drill fluid.

The recovery of the groundwater to the background conditions was monitored by measuring the decrease in the tracer concentration in the water removed from the well during the well development process. The concentrations of fluorescein during the development of the Intervals 9, 7, 5, and 3 are shown in Figure 11 to Figure 14. An interval was deemed sufficiently developed when a dye concentration of approximately 5% of the original concentration in the drilling fluid was achieved.

Flow rate, fluorescein concentration, concentration of hydrogen ions (pH), temperature, and electric conductivity were measured and recorded during the development. The estimated volumes extracted from the four intervals during the well development are shown in Table 6.

Table 6: Estimated Extraction Volumes from Westbay Well JGT-06

Interval ID	Zone Volume (L)	Number of Well Volumes Removed	Actual Volume Removed (L)	Number of Days of Development	Final Dye Concentration
3[(a)]	156.5	0.3	45	n/a	n/a
5	156.5	2.8	446	11	15 ppb
7	156.5	5,901.6	923,600	28	43 ppb
9	162.0	2,061.5	333,960	13	41 ppb

a) The development of Interval 3 was not complete after six days of purging with the Westbay sampler.
ID = identification; m = metre; L = litre; n/a=not applicable; ppb = parts per billion.

The volume of water recovered from Intervals 7 and 9 during the development significantly exceeded the volume recovered from Interval 5. The higher development volumes from Intervals 7 and 9 correspond to the high hydraulic conductivity zones straddled by these two intervals. During drilling, more drill fluid was pumped into Intervals 7 and 9 because of the higher permeability; therefore, more water needed to be purged from the Westbay intervals to remove the affected groundwater.

Conversely, only a small volume of water was removed from Interval 3 due to of the low hydraulic conductivity of this interval, which was lower than that observed in all other intervals. Interval 3 could not be sufficiently developed before the end the field investigations; therefore, a sample was not collected.

6.0 GROUNDWATER SAMPLING

6.1 Sample Collection

Following the development of the Westbay multi-level monitoring well sampling intervals, the concentration of drill fluid remaining in each interval was calculated based on the concentration of fluorescein measured during the development of that interval. The concentrations of calcium, chloride, sodium, and potassium were then calculated from a mass balance equation using the concentrations of these elements in the drill fluid and the concentration of the fluorescein tracer present in the sample.

After the completion of the development, groundwater samples were collected from Intervals 9, 7, and 5. Groundwater samples were collected on April 30, May 29, and June 1, 2014, from sampling Intervals 9, 7, and 5, respectively. A duplicate sample was collected from Interval 5 for quality assurance/quality control (QA/QC) purposes. A field blank and travel blank were taken on May 29, 2014, for QA/QC purposes.

In addition to the groundwater samples, the tagged lake water used in drilling and well installation and the tagged brine used to prevent freezing in the upper portion of the boreholes were sampled on April 30, 2014. Samples were filtered and preserved in the field, when required, and shipped to ALS Environmental in Edmonton, Alberta, for analysis.

The groundwater sampling was performed with the Westbay sampler, which was the same system used for the development for the low conductivity zones. A Mosdax probe sampler connected to four sampling containers of 250 millilitres (mL) each was lowered inside the Westbay pipe. For each single run, the probe was connected to the interval through the monitoring port, the probe's valve was opened, and the containers filled with groundwater from the intervals. The pressure was recorded as the sample containers were filled until the pressure was similar to the formation pressure prior to opening the sample valve. The probe was disconnected from the monitoring port and the sample probe and containers were pulled to surface. The groundwater from the sample containers was collected and sent to the lab for analysis.

6.2 Sample Analysis

Groundwater quality samples were shipped to ALS Environmental for analysis. Groundwater quality samples underwent the following analyses:

- physical tests, including colour, hardness, pH, conductivity, total suspended solids, total dissolved solids, and turbidity;
- anions and nutrients, including alkalinity, ammonia, bicarbonate, carbonate, chloride, fluoride, hydroxide, nitrate and nitrite, nitrate, nitrite, total kjedahl nitrogen, orthophosphate, phosphorus (total and dissolved), sulfate, and sulphide;
- organic carbon (dissolved and total);
- radium (Ra-226); and,
- metals (dissolved and total), including aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, phosphorus, potassium, selenium, silicon, silver, sodium, strontium, sulfur, thallium, thorium, tin, titanium, uranium, vanadium, zinc, zirconium.

The certificates of analysis for the groundwater quality samples are presented in Appendix C.

6.3 Fluorescein Correction Calculation

Following receipt of the analysis, Golder corrected the data to account for the dilution of the sampled groundwater by the lake water drilling fluid. The concentration of fluorescein was measured in both the drilling fluid (lake water tagged with fluorescein) and the sampled groundwater in order to facilitate the correction. Corrected concentrations were calculated using the following formula:

$$C_C = \frac{C_G - rC_{DF}}{1-r},$$

where C_C is the corrected concentration of the chosen parameter, C_G is the concentration of the parameter in the groundwater sample, and C_{DF} is the concentration of the parameter in the drilling fluid. r is the ratio of the concentration of fluorescein in the groundwater sample to the concentration of fluorescein in the drilling fluid. Corrections were applied to all analytes except colour and turbidity.

The results of groundwater quality analysis as received by ALS Environmental and after the fluorescein correction calculation are presented in Table D1.

6.4 Groundwater Quality Results

The corrected groundwater quality results for all sampled intervals are presented in Table D1. The method detection limits (MDL) for each parameter, which varied by sample, are summarized in Table D2.

The following observations were made based on the corrected groundwater results:

- The lab pH of groundwater samples ranged from 7.6 to 7.7.
- A major ion plot for samples collected from Intervals 5, 7, and 9 is presented in Figure 15. All groundwater samples were Na-Ca-Cl-(Mg) water type.
- Total dissolved solids concentrations were 1,674 milligrams per litre (mg/L) (Interval 5), 1,855 mg/L (Interval 7) and 2,390 mg/L (Interval 9). Total dissolved solids concentrations increased with depth.
- The majority of total and dissolved metals concentrations (with concentrations above the detection limit) showed an increasing trend with depth. Exceptions included barium, magnesium, manganese, and silicon, which showed no obvious trend.

6.5 Quality Assurance/Quality Control

A field blank, trip blank, and a duplicate sample were taken during the sampling program to assess various aspects of data quality. The following definitions are used for the purposes of this report:

- **Field blank:** used to assess potential sample contamination during collection, shipping, and analysis. Sample containers were filled with laboratory-provided deionized water in the field and shipped to the laboratory with the field samples.

- **Travel blank:** used to assess potential sample contamination during shipping and field handling procedures. The travel blank consisted of a sample of deionized water, which was prepared and preserved at the analytical laboratory prior to the sampling trip. The travel blank was unopened during the sampling trip and was transported to the sampling site and back to the laboratory.
- **Field duplicate:** used to assess variability in water quality at the sampling site. Two samples were collected from Interval 5 using identical sampling procedures. Samples were labelled and preserved individually prior to being shipped to the laboratory.

6.5.1 Field and Travel Blanks

The composition of the field and travel blanks is presented in Table D3. Parameters should not be measured at detectable concentrations in the field or travel blanks. Concentrations were considered notable if greater than five times the corresponding MDL. As defined by the United States Environmental Protection Agency (U.S. EPA 1985), this threshold criterion is based on the Practical Quantitation Limit, which accounts for reduced data accuracy when concentrations approach or are below the MDLs.

No parameters occurred at concentrations five times greater than the respective MDLs.

6.5.2 Field Duplicate

Relative percent difference (RPD) was used to compare the duplicate samples from Interval 5 and was calculated using the following formula:

$$RPD = \frac{\text{maximum } concentration - \text{minimum } concentration}{average\ concentration} x100$$

The RPDs of the duplicate analyses for Interval 5 are summarized in Table D4, which also notes when the RPD is greater than 20%. The RPDs were only calculated for parameters that had concentrations above the MDL. Groundwater parameters exceeding an RPD of 20% included total suspended solids, total titanium, and dissolved aluminum.

7.0 CLOSURE

This report should be read in conjunction with the ***"Study Limitations"*** which is included at the beginning of the report. The reader's attention is specifically drawn to this information, as it is essential that it be followed for the proper use and interpretation of this report.

We trust this report satisfies your current requirements. If you have any questions or require further assistance, please do not hesitate to contact the undersigned.

GOLDER ASSOCIATES LTD.

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Geological Engineer

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Principal, Senior Hydrogeologist

REGISTERED PROFESSIONAL GEOLOGIST
July 23, 2014
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THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS and GEOSCIENTISTS OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
P 049
GOLDER ASSOCIATES LTD.
July 2014

RQ/MD/ls/rs/it

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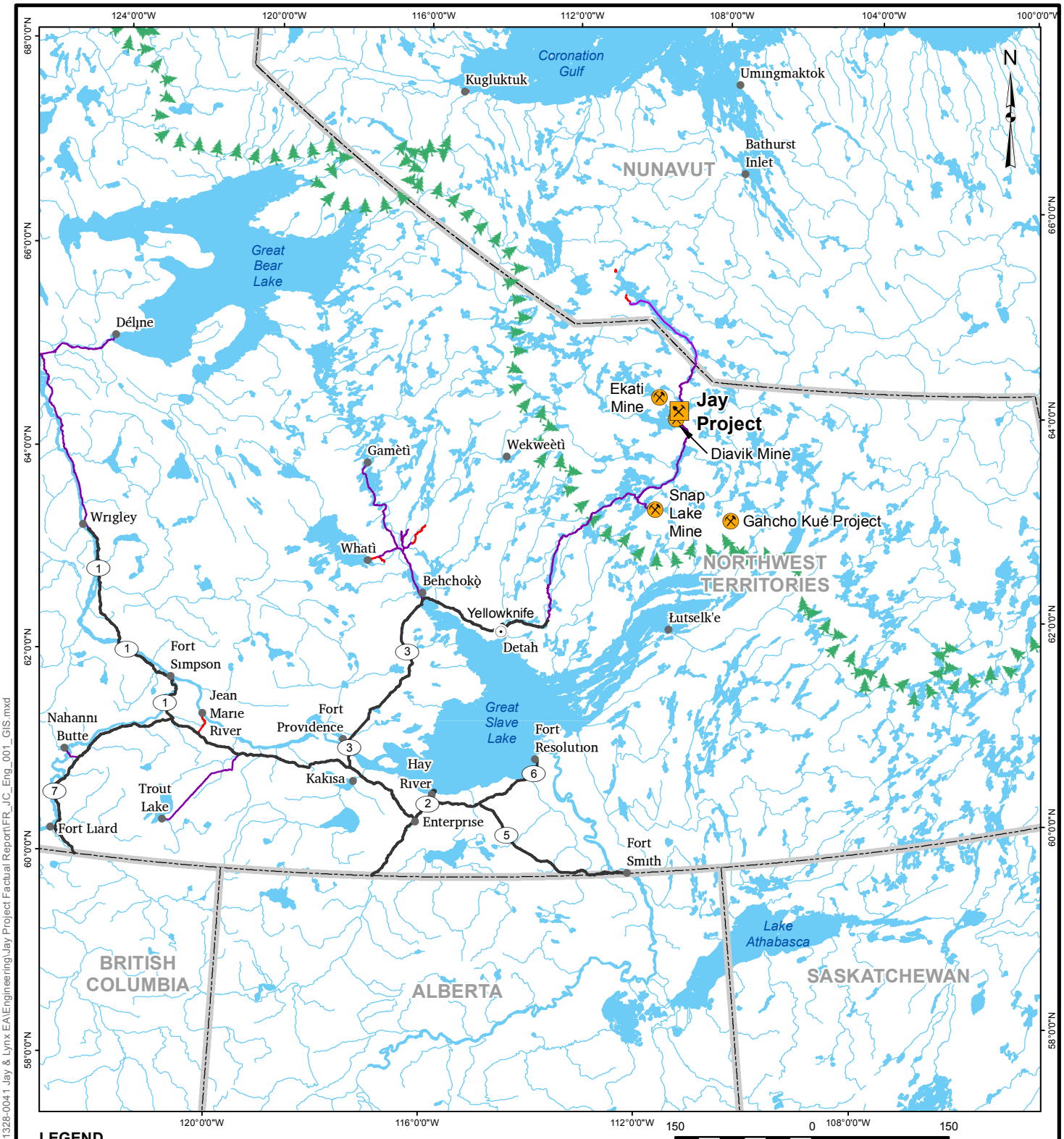
REFERENCES

Golder (Golder Associates Ltd.) 2014. Jay Project Geotechnical and Hydrogeological Field Investigation Factual Report Vol.2, Proposed Jay Pit Area. June 19, 2014.

Gringarten AC. 2008. From Straight Lines to Deconvolution: The Evolution of the State of the Art in Well Test Analysis. SPE Reservoir Evaluation & Engineering 11: 41-62.

United States Environmental Protection Agency (U.S. EPA). 1985. National Primary Drinking Water Regulations; Volatile Synthetic Organic Chemicals. U.S. EPA, Environmental Criteria and Assessment Office. Federal Register: 50; EPA/600/6-87/008. Volume 50. Cincinnati, OH. Submitted November 13, 1985.



LEGEND

- JAY PROJECT
- EXISTING MINE OR PROJECT
- TERRITORIAL CAPITAL
- POPULATED PLACE
- HIGHWAY
- ALL-SEASON ROAD
- WINTER ROAD
- TERRITORIAL/PROVINCIAL BOUNDARY
- TREELINE
- WATERCOURSE
- WATERBODY

REFERENCE

WATER OBTAINED FROM ATLAS OF CANADA
NATURAL RESOURCES CANADA, CENTRE FOR TOPOGRAPHIC INFORMATION, 2012
PROJECTION: CANADA LAMBERT CONFORMAL CONIC

REV	DATE	REVISION DESCRIPTION	DES	GIS	CHK	RVW
2	2014-07-10	ISSUED FOR FINAL	FA	ANK	GJ	JCC
1	2014-06-30	ISSUED FOR DRAFT	LS	ANK	RQ	MD

PROJECT

DOMINION DIAMOND

JAY PROJECT
NORTHWEST TERRITORIES, CANADA

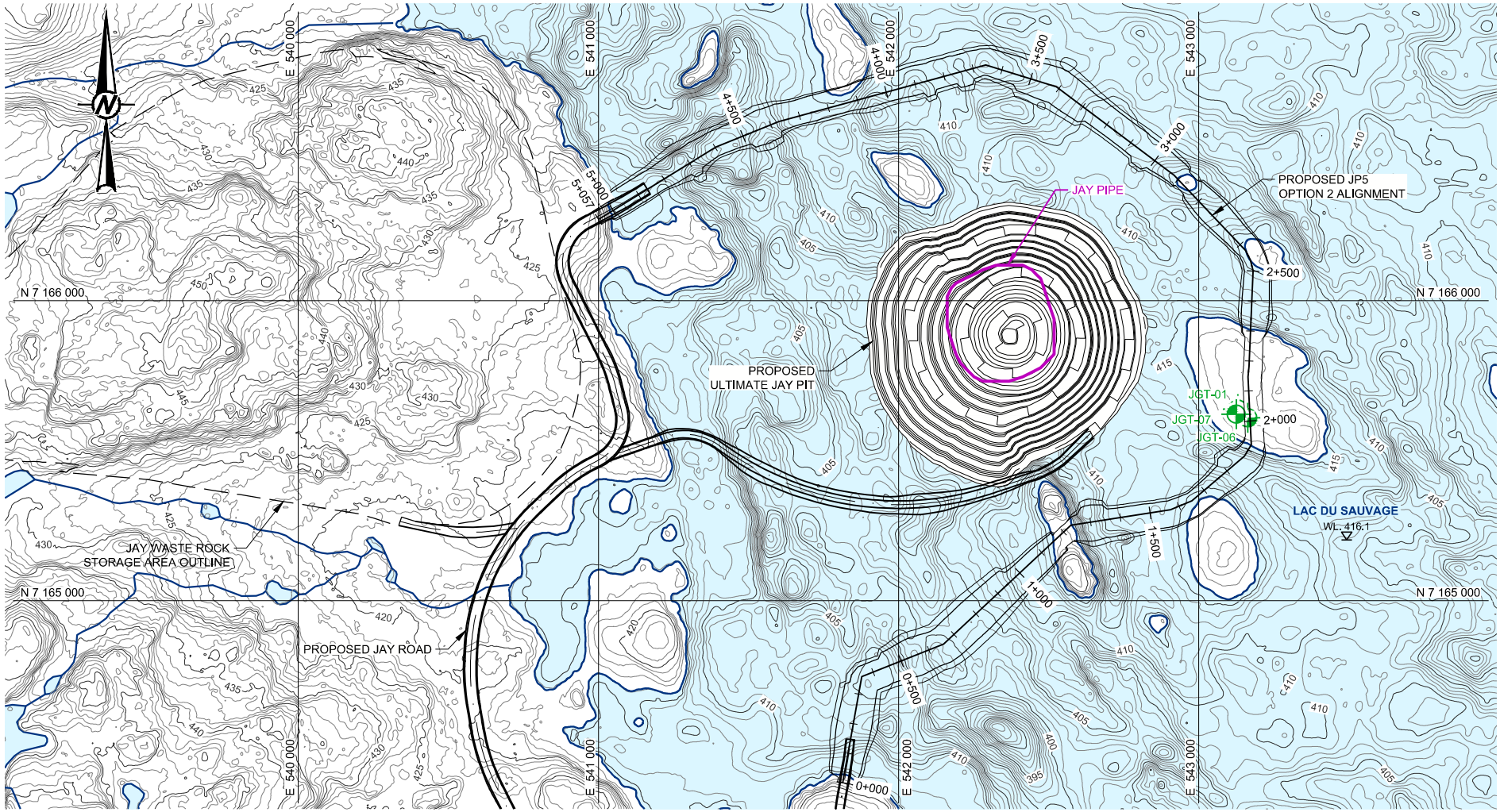
TITLE

JAY PROJECT LOCATION

Golder Associates

PROJECT 13-1328-0041/2010			FILE No. FR_JC_Eng_001_GIS	
DESIGN	FA	2014-06-11	SCALE	AS SHOWN
GIS	ANK	2014-06-11	FIGURE	1
CHECK	GJ	2014-07-10		
REVIEW	JCC	2014-07-10		

G:\CLIENTS\DOMINION\DDEC Jay and Lynx Projects\Figures\13-1328-0041 Jay & Lynx EA\Engineering\Jay Project Factual Report\FR_JC_Eng_001_GIS.mxd



LEGEND

- WATER BODY
- WATER COURSE
- EXISTING ROAD
- JAY PIPE LOCATION
- AS-BUILT DIAMOND BOREHOLE LOCATION

NOTES

1. ALL UNITS ARE IN METRES UNLESS OTHERWISE NOTED.
2. GROUND SURFACE AND BATHYMETRY CONTOURS ARE SHOWN AT 1 m INTERVALS.
3. COORDINATES ARE SHOWN IN DATUM: NAD 83, PROJECTION: UTM ZONE 12.

REFERENCES

1. CONTOUR DATA PROVIDED BY AURORA GEOSCIENCES LTD., FILE: Final 1m Contours - Priority Area.dxf, DATE RECEIVED: OCTOBER 29, 2013.
2. JAY PIPE LOCATION RECEIVED FROM DOMINION DIAMOND CORPORATION, FILE: jay_kimberlite_pipe_OL.dxf, DATED: JULY 19, 2013.
3. ULTIMATE JAY PIT DESIGN: GOLDER ASSOCIATES LTD., FEBRUARY 2014. PRELIMINARY MINE DESIGN - JAY PROJECT. REFERENCE NO: 1313280031-003-R-REV0-4000. (FILE NAME: Ultimate_pit_surf_clipped.dxf).
4. BOREHOLE AS-BUILT SURVEY PROVIDED BY DOMINION DIAMOND CORPORATION, RECEIVED ON APRIL 30, 2014.

0 400 800 1,200
SCALE METRES

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	JD	RQ	MD

PROJECT

DOMINION DIAMOND

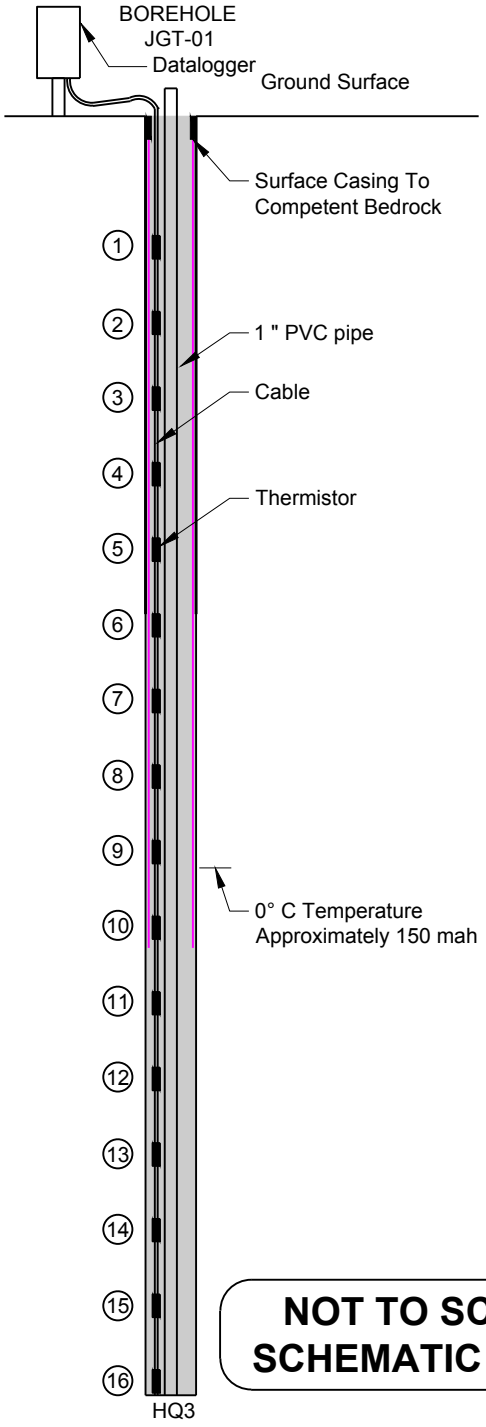
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

WESTBAY GROUNDWATER MONITORING WELL JGT-06 AND THERMISTORS LOCATIONS

Golder Associates

PROJECT No.	13-1328-0041.2010		FILE No.	13-1328-0041-2010-70-02	
DESIGN	SN	2014-06-17	SCALE	AS SHOWN	
CADD	JD	2014-06-18	FIGURE		
CHECK	RQ	2014-06-24		2	
REVIEW	MD	2014-06-30			



NOT TO SCALE
SCHEMATIC ONLY

THERMISTOR DETAILS		
Thermistor Number	JGT-01 Depth	
	Along Hole	Vertical (mbgs)
1	26.0	25.6
2	41.0	40.4
3	56.0	55.2
4	71.0	69.9
5	86.0	84.7
6	101.0	99.5
7	116.0	114.2
8	131.0	129.0
9	146.0	143.8
10	161.0	158.6
11	176.0	173.3
12	191.0	188.1
13	206.0	202.9
14	221.0	217.6
15	236.0	232.4
16	251.0	247.2

LEGEND

GROUT

① THERMISTER NUMBER

mah METERS ALONG HOLE

mbgs METERS BELOW GROUND SURFACE

NOTES

1. PERMAFROST ASSUMED 150 m ALONG HOLE ALIGNMENT
2. DRILL RODS TO COMPETENT BEDROCK
3. GROUT SOLUTION INJECTED IN THE BOREHOLE AFTER THE THERMISTOR INSTALLATION.
4. BOREHOLE LOCATED IN UTM ZONE 15 NAD 83 ZONE 12 N N 7165638.9 E 543130.9 ELEVATION 419.4m.
5. BOREHOLE INCLINATION IS 80°.

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
1	2014-07-23	ISSUED FOR FINAL	SN	SGC	RQ	MD

PROJECT

DOMINION DIAMOND

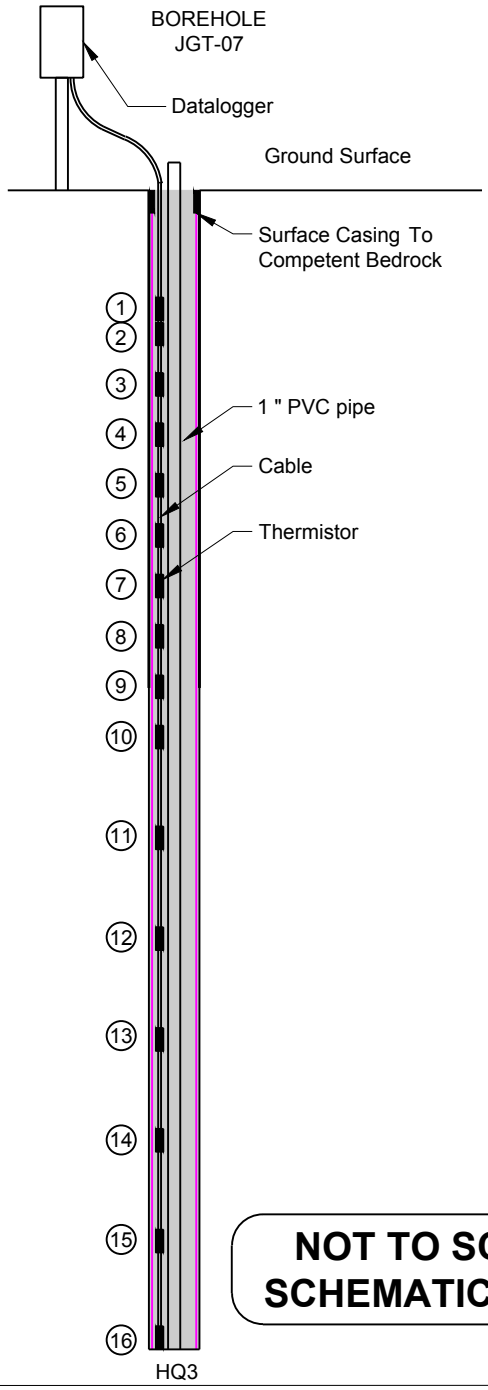
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

THERMISTOR JGT-01 INSTALLATION DETAILS

Golder Associates

PROJECT No.	1313280041.2010		FILE No.	1313280041-2010-Fig3	
DESIGN	SN	2014-06-20	SCALE	AS SHOWN	
CADD	SGC	2014-06-20	FIGURE		
CHECK	RQ	2014-06-24		3	
REVIEW	MD	2014-06-30			



THERMISTOR DETAILS		
Thermistor Number	JGT-07 Depth	
	Along Hole	Vertical (mbgs)
1	2.4	2.4
2	2.9	2.9
3	2.4	2.4
4	4.4	4.4
5	5.4	5.4
6	6.4	6.4
7	7.4	7.4
8	8.4	8.4
9	9.4	9.4
10	10.4	10.4
11	12.4	12.4
12	14.4	14.4
13	16.4	16.4
14	18.4	18.4
15	20.4	20.4
16	22.4	22.4

NOT TO SCALE
SCHEMATIC ONLY

LEGEND

GROUT

(1) THERMISTOR NUMBER

mah METERS ALONG HOLE

mbgs METERS BELOW GROUND SURFACE

NOTES

1. PERMAFROST ASSUMED 150 m ALONG HOLE ALIGNMENT
2. DRILL RODS TO COMPETENT BEDROCK
3. GROUT SOLUTION INJECTED IN THE BOREHOLE AFTER THE THERMISTOR INSTALLATION.
4. BOREHOLE LOCATED IN UTM ZONE 15 NAD 83 ZONE 12 N N 7165622.0 E 553125.5 ELEVATION 419.6m.
5. BOREHOLE INCLINATION IS 90°.

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	SGC	RQ	MD

PROJECT

DOMINION DIAMOND

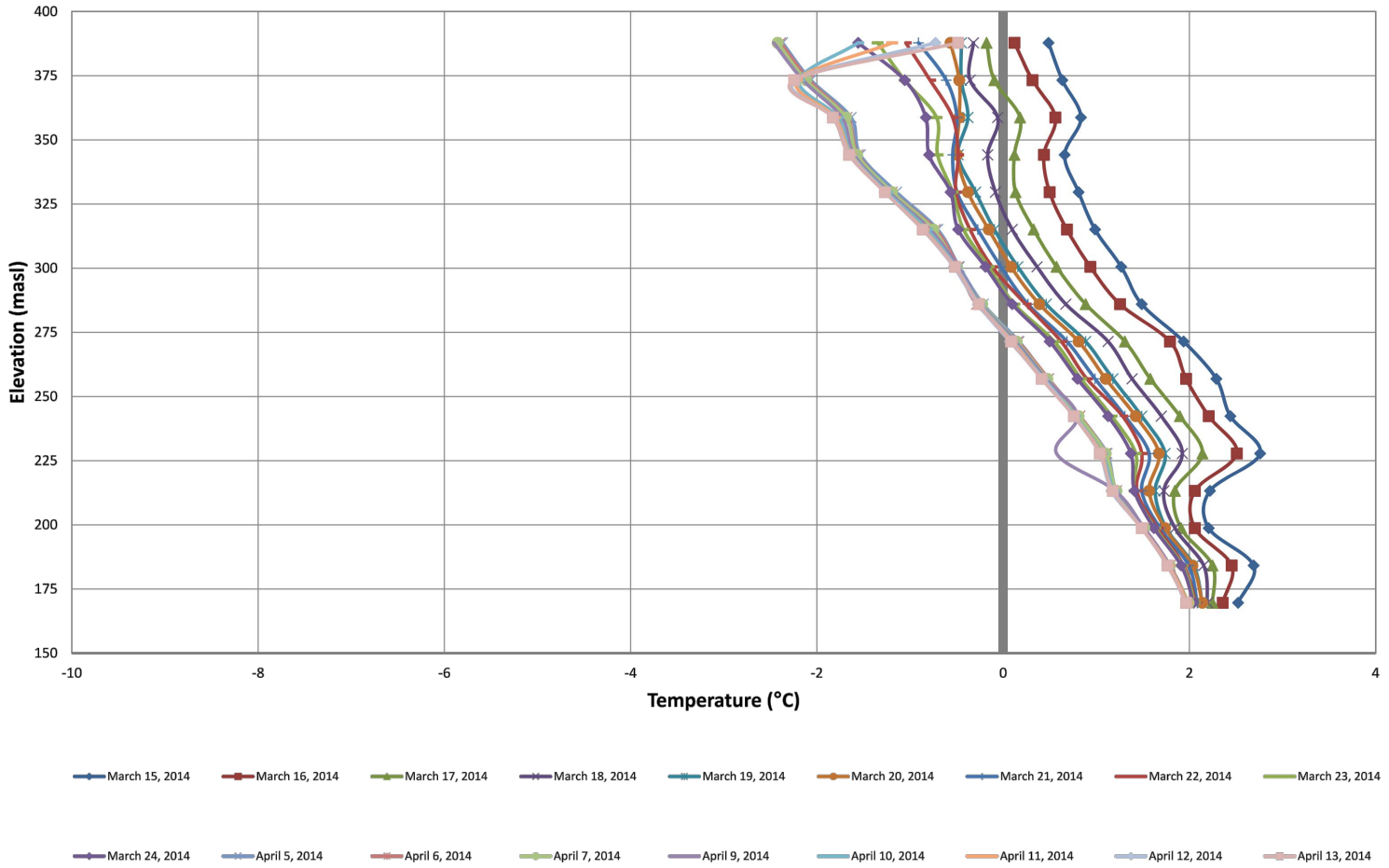
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

THERMISTOR JGT-07 INSTALLATION DETAILS

Golder Associates

PROJECT No.	1313280041.2010		FILE No.	13132800412010-Fig4	
DESIGN	SN	2014-06-20	SCALE	AS SHOWN	
CADD	SGC	2014-06-20	FIGURE		
CHECK	RQ	2014-06-24		4	
REVIEW	MD	2014-06-30			



REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	TD	RQ	MD

PROJECT

DOMINION DIAMOND

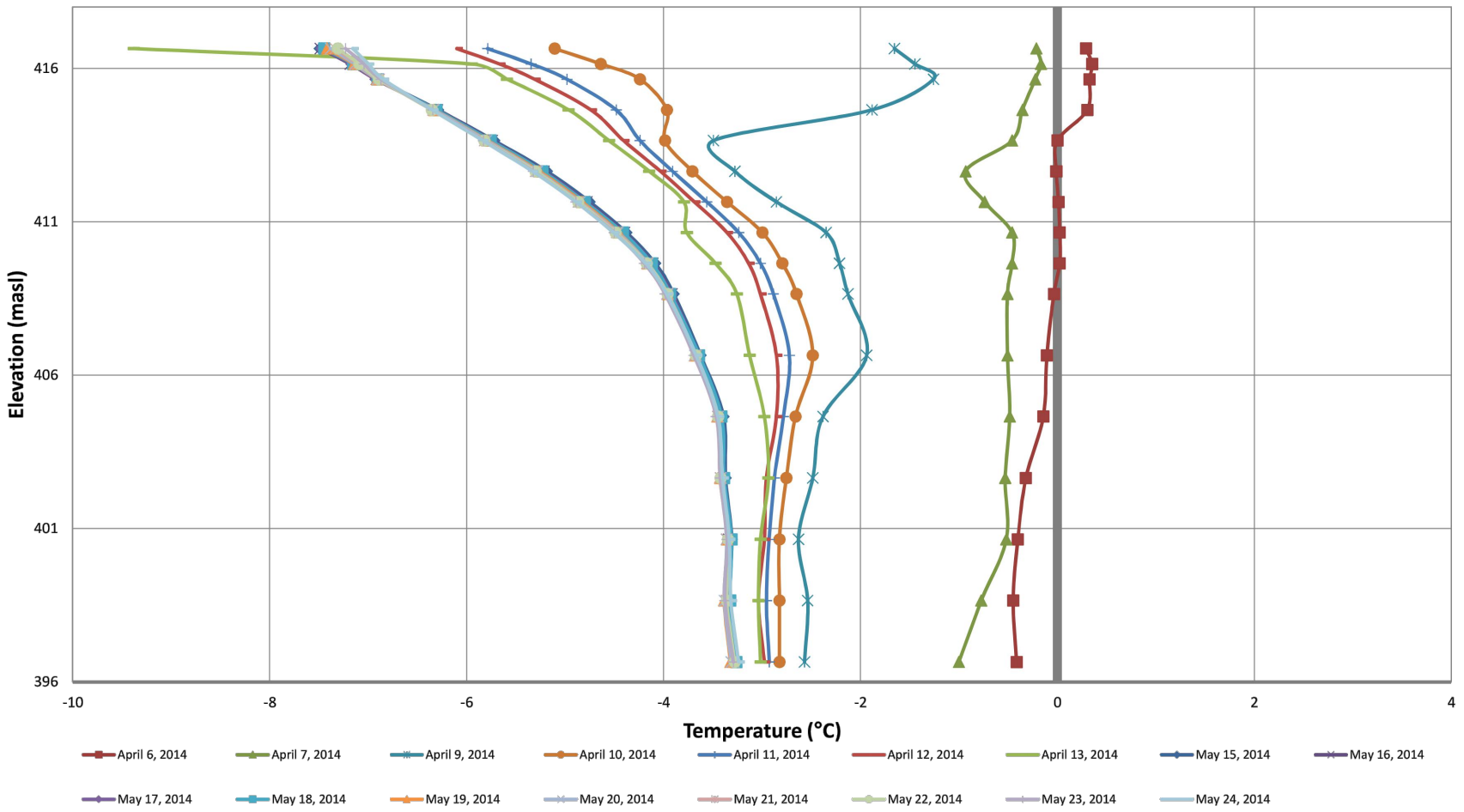
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

THERMISTOR JGT-01 TEMPERATURE PROFILE

Golder Associates

PROJECT No.	13-1328-0041 2010		FILE No.	1313280041-2010-Fig5
DESIGN	SN	2014-06-27	SCALE	NTS
CADD	TD	2014-06-27	FIGURE	
CHECK	RQ	2014-06-27		5
REVIEW	MD	2014-06-30		



REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	TD	RQ	MD

PROJECT

DOMINION DIAMOND

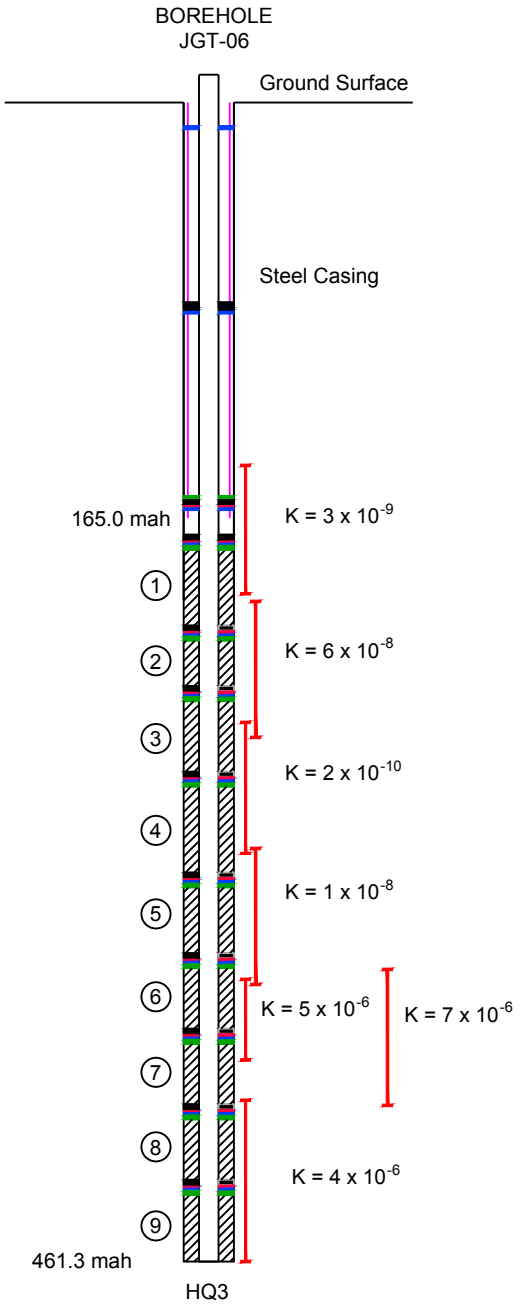
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

THERMISTOR JGT-07 TEMPERATURE PROFILE

Golder Associates

PROJECT No.	13-1328-0041 2010		FILE No.	1313280041-2010-Fig6
DESIGN	SN	2014-06-27	SCALE	NTS
CADD	TD	2014-06-27	FIGURE	
CHECK	RQ	2014-06-27		6
REVIEW	MD	2014-06-30		



WESTBAY MONITORING INTERVAL DEPTHS							
Interval Number	Depth Along Hole			Vertical Depth			Rock Formation
	From (mah)	To (mah)	Magnetic Collar Depth (mah)	From (mbgs)	To (mbgs)	Magnetic Collar Vertical Depth (mbgs)	
1	174.0	209.2	174.6	169.5	203.8	170.1	Two - Mica Granite
2	210.7	238.2	211.3	205.3	232.0	205.9	Two - Mica Granite
3	239.7	268.7	240.3	233.5	261.7	234.1	Two - Mica Granite
4	270.2	308.4	270.8	263.2	300.4	263.8	Two - Mica Granite
5	309.9	338.9	310.5	301.9	330.0	302.5	Two - Mica Granite
6	340.4	367.9	341.0	331.5	358.3	332.1	Two - Mica Granite
7	369.4	398.4	370.0	359.8	387.9	360.4	Two - Mica Granite
8	399.9	429	400.5	389.4	417.7	390.0	Two - Mica Granite
9	430.5	460.5	431.1	419.2	449.0	419.8	Two - Mica Granite

NOT TO SCALE
SCHEMATIC ONLY

LEGEND

- PACKER
- MAGNETIC COLLAR (MC)
- MONITORING PORT (MP)
- PUMPING PORT (PP)

① WEASTBAY MONITORING INTERVAL

K = HYDRAULIC CONDUCTIVITY (m/s)

mah METERS ALONG HOLE

mbgs METERS BELOW GROUND SURFACE

REFERENCE

GEOLOGY AS PER GOLDER'S FACTUAL REPORT: JAY PROJECT GEOTECNICAL AND HYDROGEOLOGICAL FIELD INVESTIGATION DATED: JUNE 5, 2014.

NOTES

1. PERMAFROST ASSUMED 150 m ALONG HOLE ALIGNMENT.
2. DRILL RODS TO 165 m ALONG HOLE.
3. BOREHOLE LOCATED IN UTM ZONE 15 NAD 83 ZONE 12 N N 7165609.9 E 543163.3 ELEVATION 419.6m.
4. BOREHOLE INCLINATION IS 80°.

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	SGC	RQ	MD

PROJECT

DOMINION DIAMOND

JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

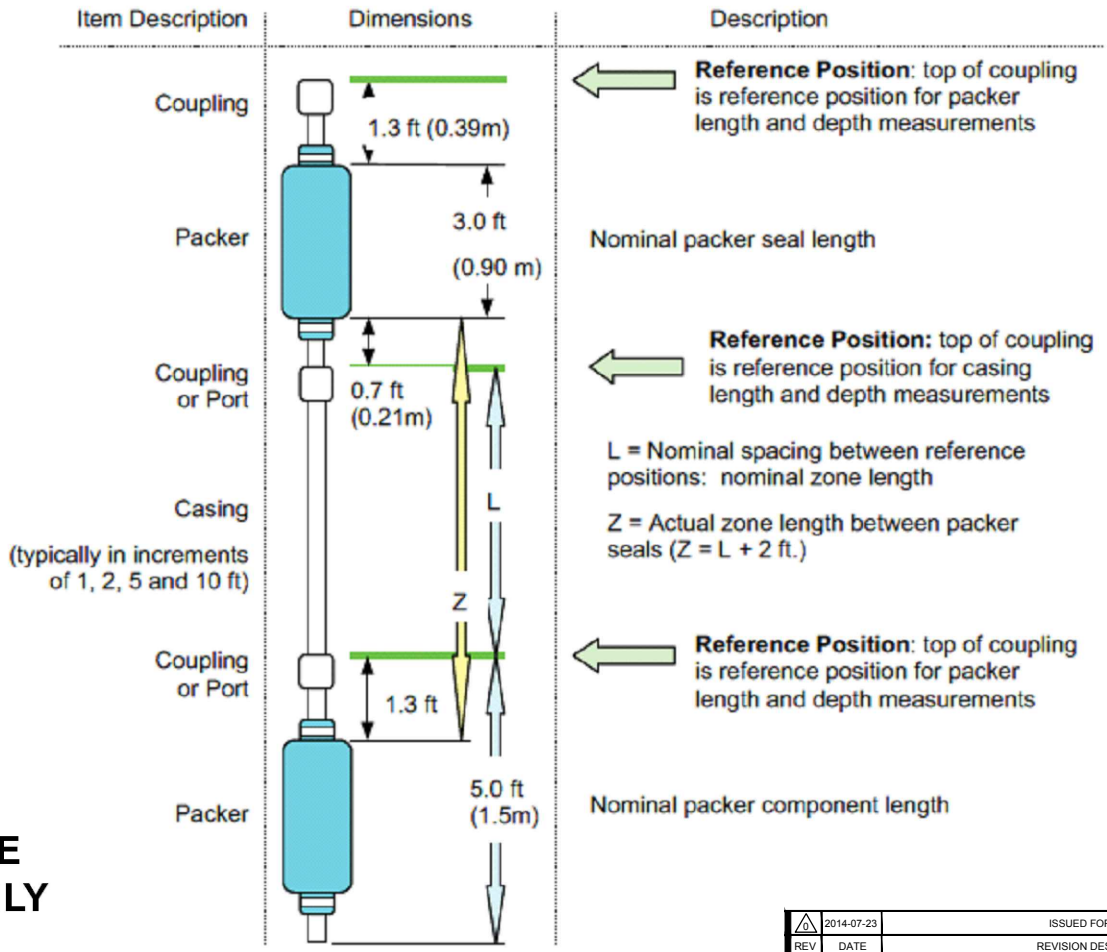
WESTBAY GROUNDWATER MONITORING WELL JGT-06 INSTALLATION DETAILS

Golder Associates

PROJECT No.	13-1328-0041.2010		FILE No.	13-1328-0041-2010-Fig7	
DESIGN	SN	2014-06-20	SCALE	AS SHOWN	
CADD	SGC	2014-06-20	FIGURE		
CHECK	RQ	2014-06-24		7	
REVIEW	MD	2014-06-30			

Dimensions of Packer Seals and Monitoring Zones

Westbay System – Plastic MP38



NOT TO SCALE
SCHEMATIC ONLY

Note: figure from "Westbay System Operating Training Manual", Schlumberger Water Services.

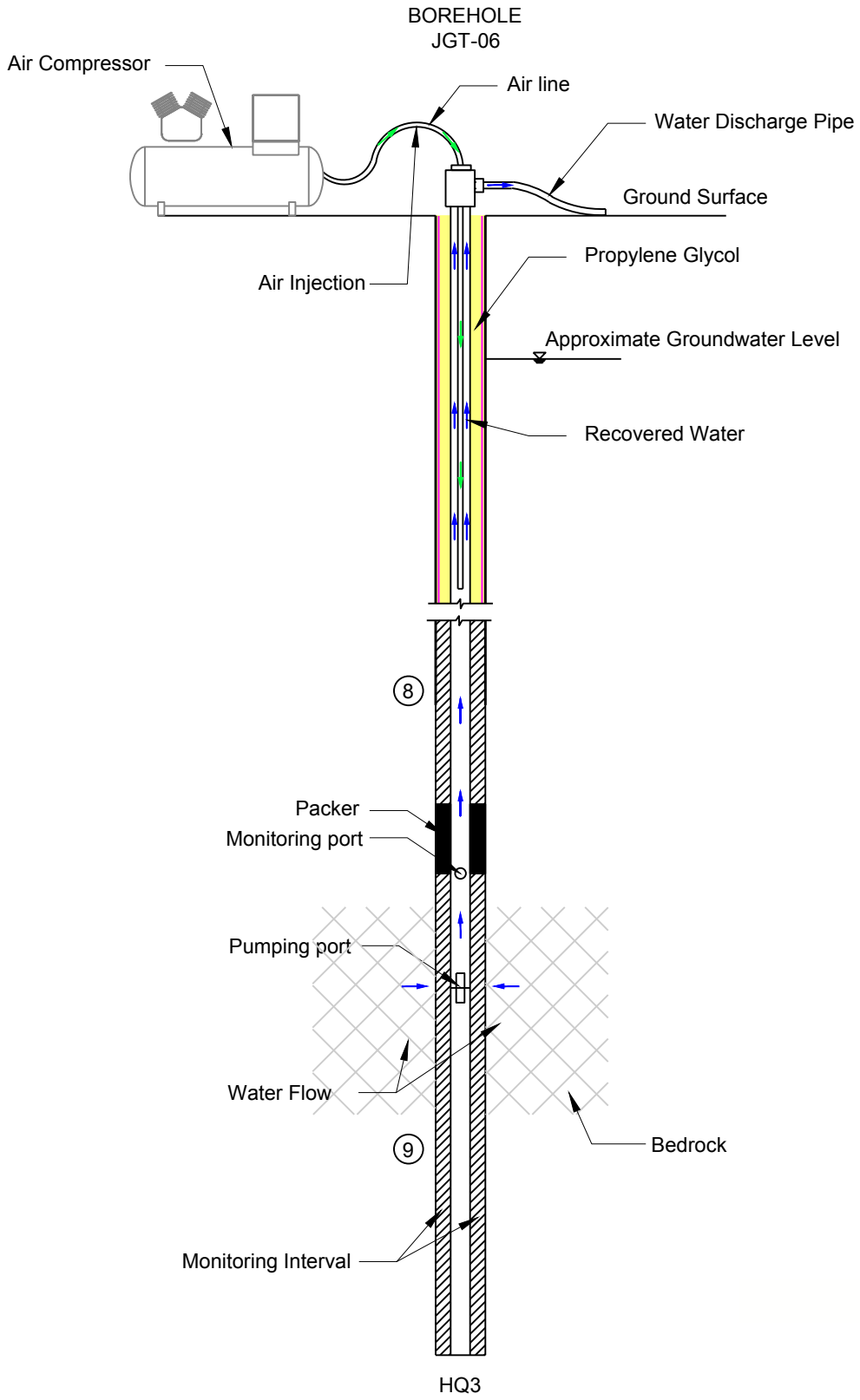
REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	TD	RQ	MD

PROJECT
DOMINION DIAMOND
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE
WESTBAY GROUNDWATER MONITORING WELL JGT-06 DIMENSIONS OF PACKER SEALS AND MONITORING ZONES

Golder Associates

PROJECT No.	13-1328-0041 2010		FILE No.	1313280041-2010-Fig8
DESIGN	SN	2014-06-27	SCALE	NTS
CADD	TD	2014-06-27	FIGURE	
CHECK	RQ	2014-06-27		8
REVIEW	MD	2014-06-30		



NOT TO SCALE
SCHEMATIC ONLY

LEGEND

- PACKER
- (1) MONITORING INTERVAL
- RECOVERED WATER
- AIR INJECTION

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	SGC	RQ	MD

PROJECT

DOMINION DIAMOND

JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

WESTBAY GROUNDWATER MONITORING WELL JGT-06 AIRLIFTING ARRANGEMENT

Golder Associates

PROJECT No.	1313280041.2010		FILE No.	1313280041-2010-Fig9
DESIGN	SN	2014-06-20	SCALE	AS SHOWN
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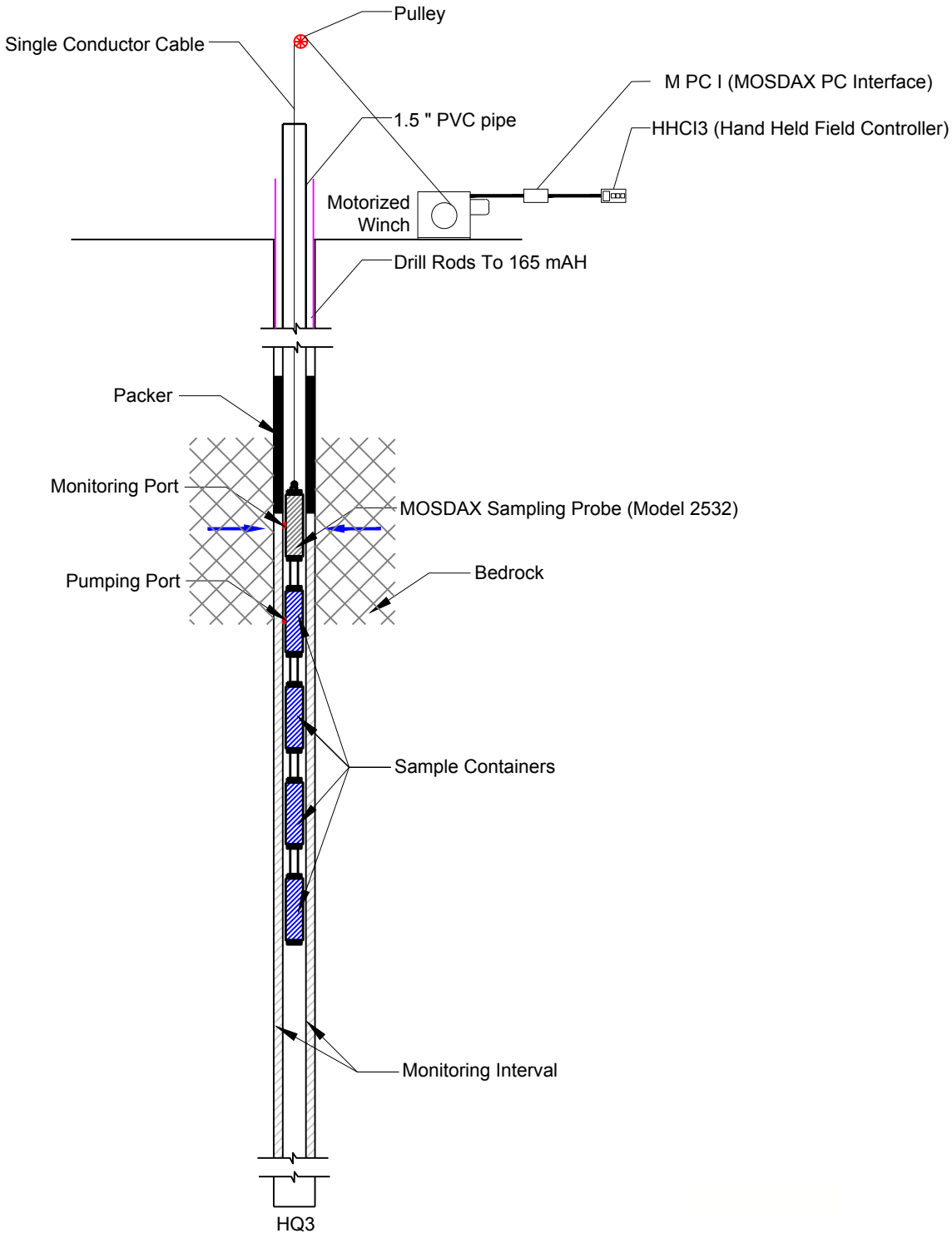
REVIEW	MD	2014-06-30		



NOT TO SCALE
SCHEMATIC ONLY

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	SGC	RQ	MD

PROJECT

DOMINION DIAMOND

JAY PROJECT
NORTHWEST TERRITORIES, CANADA

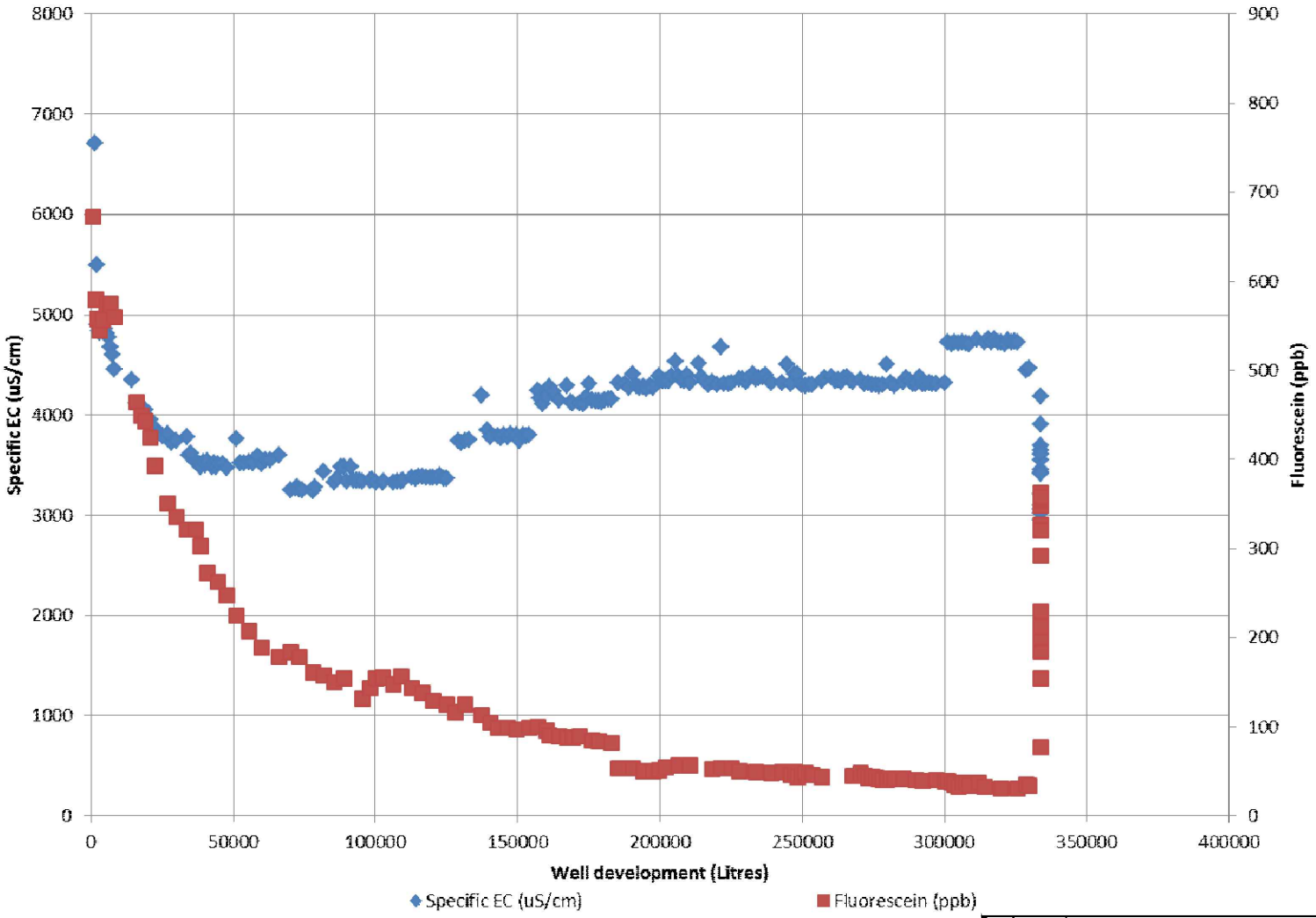
TITLE

WESTBAY GROUNDWATER MONITORING WELL JGT-06 MOSDAX PROBE

Golder Associates

PROJECT No.	1313280041.2010		FILE No.	1313280041-2010-Fig10
DESIGN	SN	2014-06-20	SCALE	AS SHOWN
CADD	SGC	2014-06-20	FIGURE	
CHECK	RQ	2014-06-27		10
REVIEW	MD	2014-06-30		

N:\Client\Dominion Diamond\Jay-Cardinal Project\99_PROJECTS\13-1328-0041\02_PRODUCTION\2010\DD\1313280041-2010-Fig10.dwg | Layout: Fig 10 | Modified: SCARRE 07/23/2014 3:27 PM | Plotted: jdeol 07/23/2014



REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	TD	RQ	MD

PROJECT

DOMINION DIAMOND

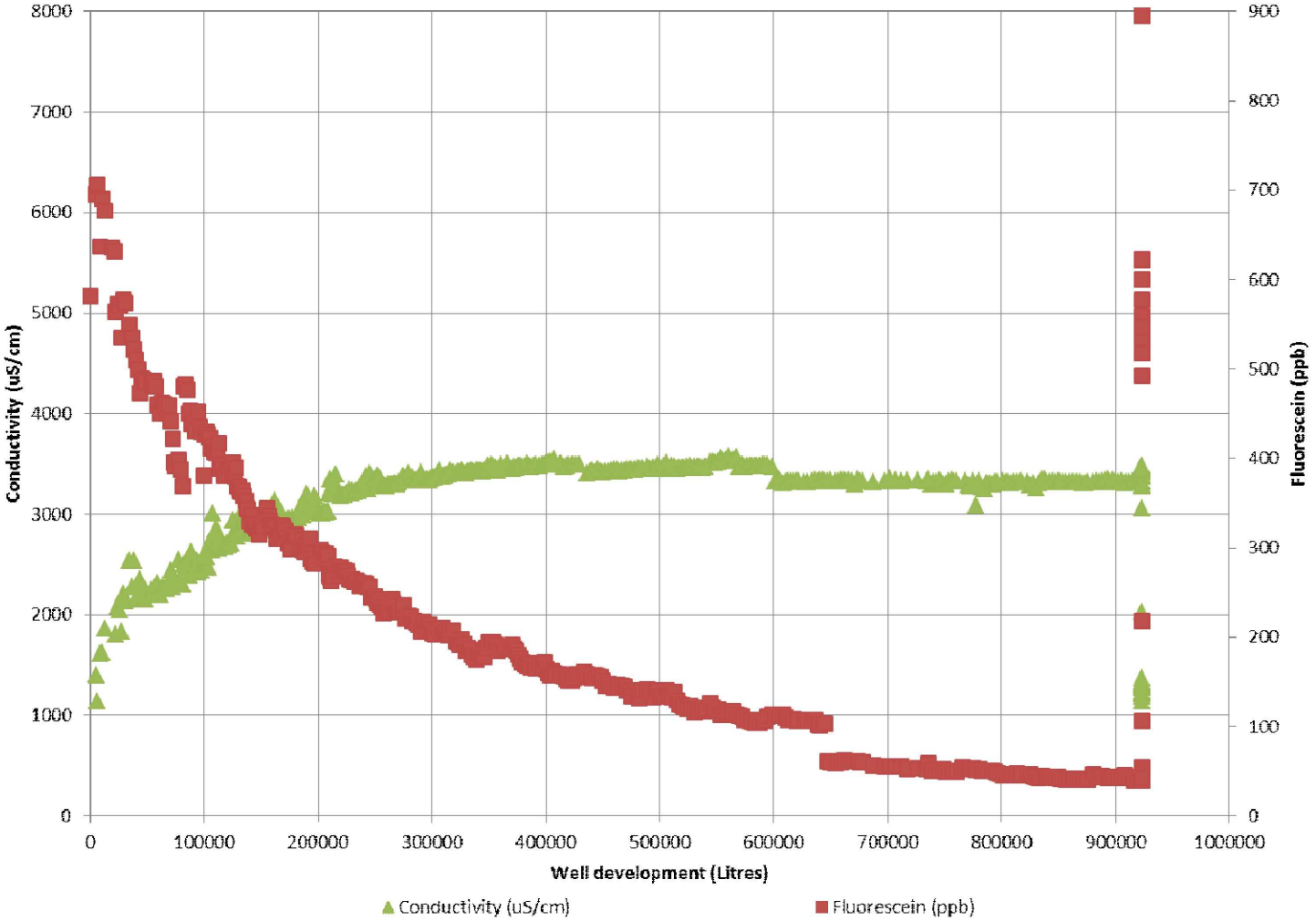
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

WESTBAY GROUNDWATER MONITORING WELL JGT-06 SPECIFIC CONDUCTIVITY AND FLUORESCEIN CONCENTRATION VERSUS VOLUME DEVELOPED INTERVAL 9

Golder Associates

PROJECT No.		13-1328-0041 2010	FILE No.	1313280041-2010-Fig11
DESIGN	SN	2014-06-27	SCALE	NTS
CADD	TD	2014-06-27	FIGURE	
CHECK	RQ	2014-06-27		11
REVIEW	MD	2014-06-30		



REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	TD	RQ	MD

PROJECT

DOMINION DIAMOND

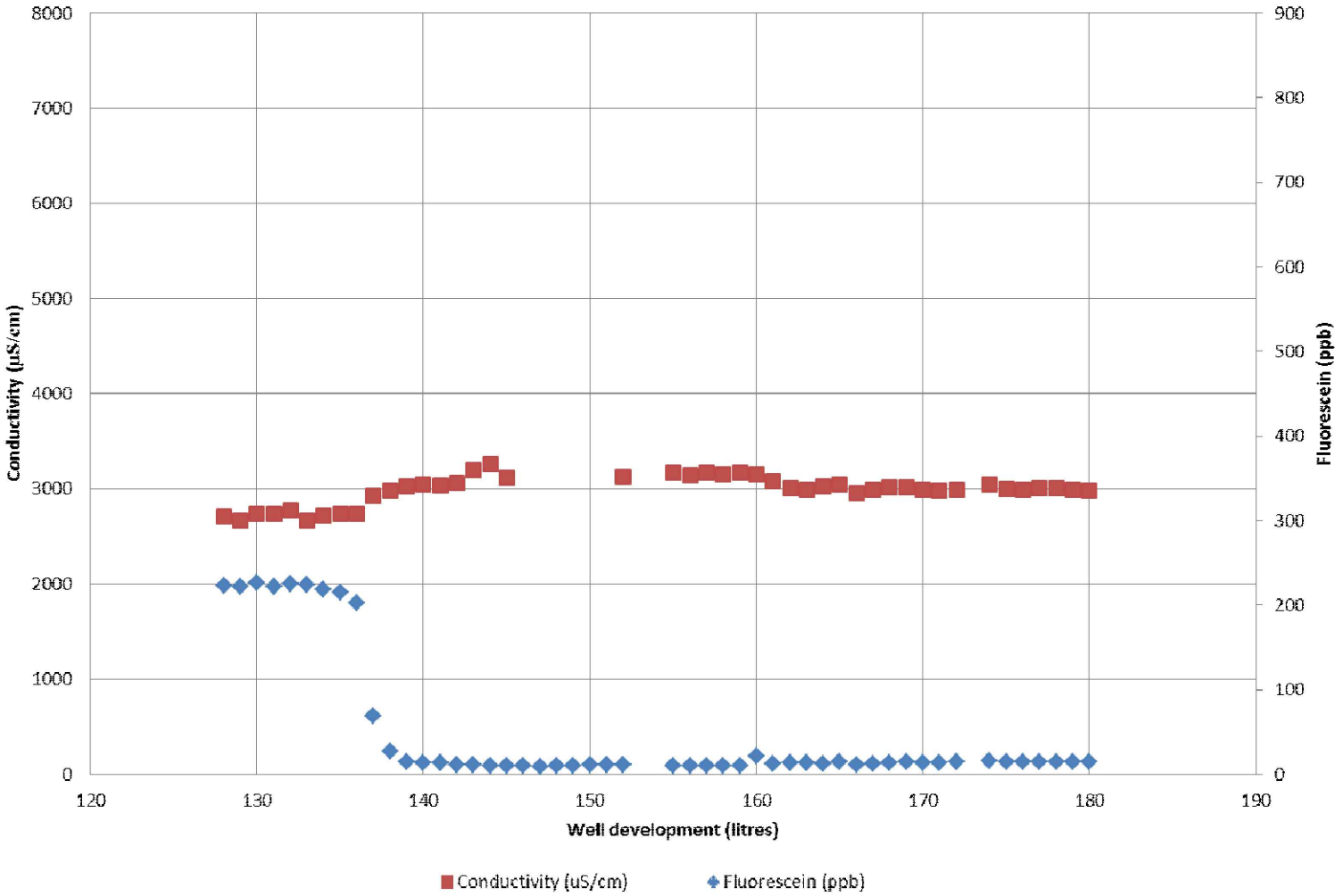
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

WESTBAY GROUNDWATER MONITORING WELL JGT-06 SPECIFIC CONDUCTIVITY AND FLUORESCEIN CONCENTRATION VERSUS VOLUME DEVELOPED INTERVAL 7

Golder Associates

PROJECT No.	13-1328-0041 2010		FILE No.	1313280041-2010-Fig12
DESIGN	ST	2014-06-27	SCALE	NTS
CADD	TD	2014-06-27	FIGURE	
CHECK	RQ	2014-06-27		12
REVIEW	MD	2014-06-30		



REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	TD	RQ	MD

PROJECT

DOMINION DIAMOND

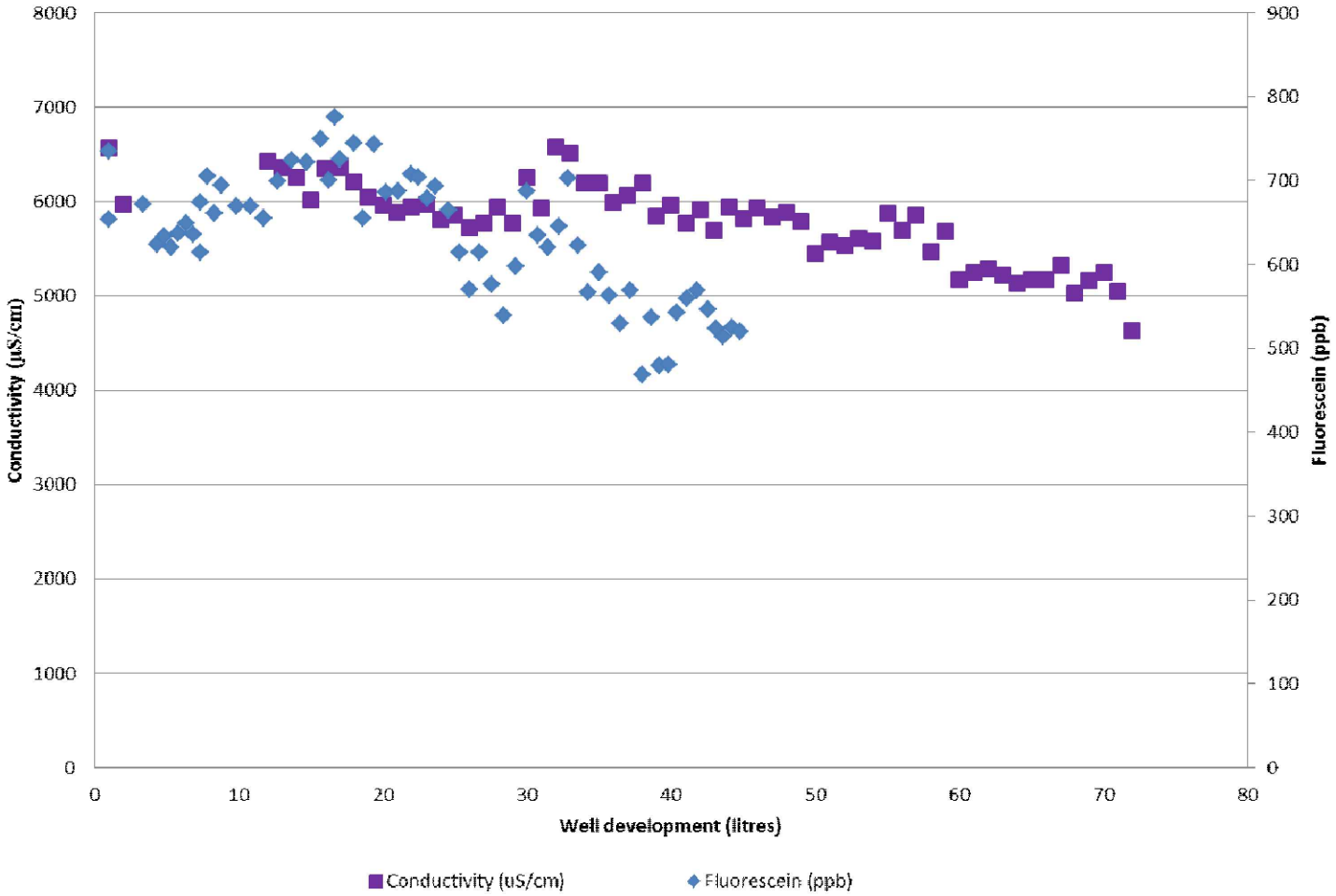
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

WESTBAY GROUNDWATER MONITORING WELL JGT-06 SPECIFIC CONDUCTIVITY AND FLUORESCEIN CONCENTRATION VERSUS VOLUME DEVELOPED INTERVAL 5

Golder Associates

PROJECT No.	13-1328-0041 2010		FILE No.	1313280041-2010-Fig13
DESIGN	SN	2014-06-27	SCALE	NTS
CADD	TD	2014-06-27	FIGURE	
CHECK	RQ	2014-06-27		13
REVIEW	MD	2014-06-30		



REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
0	2014-07-23	ISSUED FOR FINAL	SN	TD	RQ	MD

PROJECT

DOMINION DIAMOND

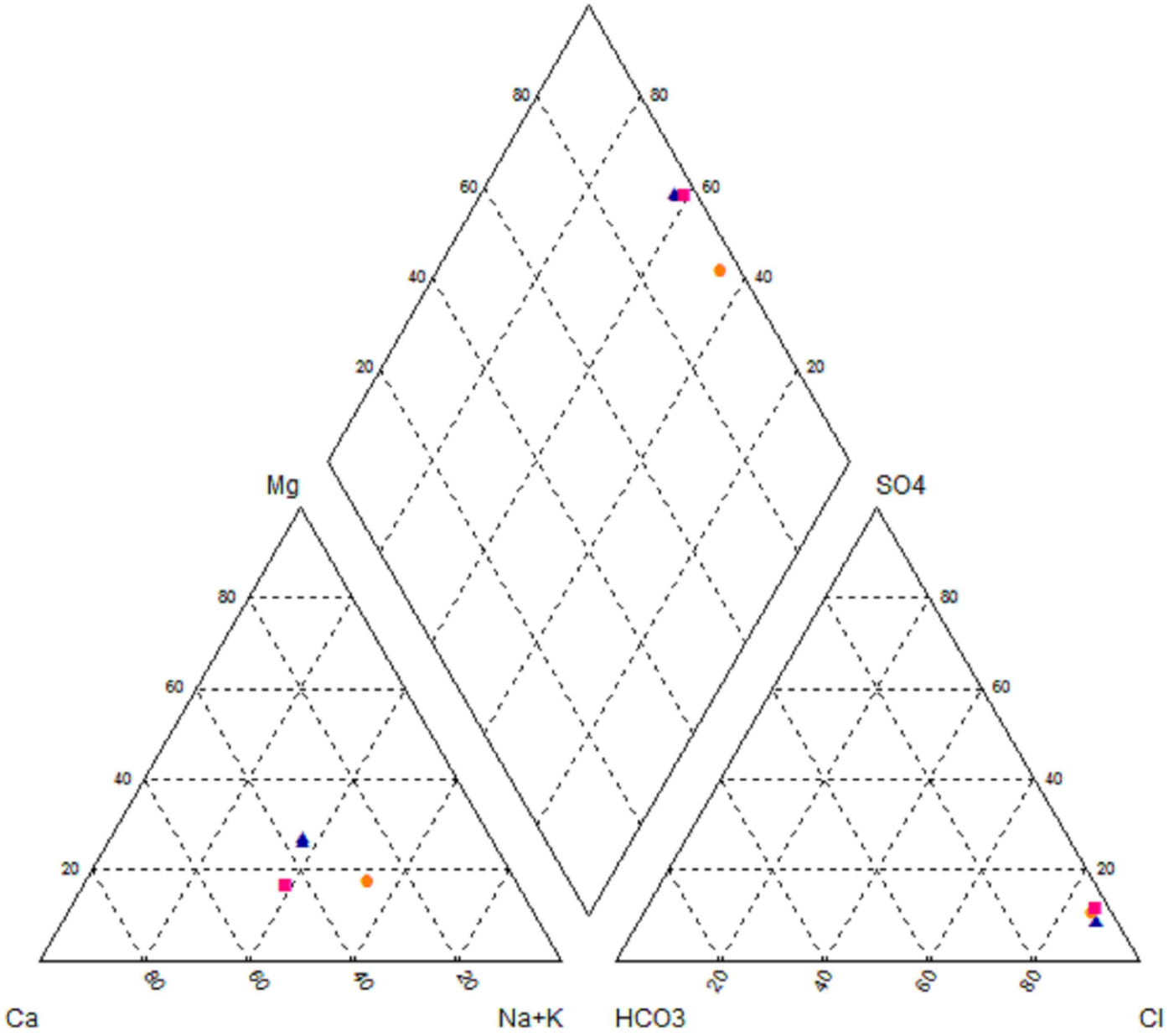
JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

WESTBAY GROUNDWATER MONITORING WELL JGT-06 SPECIFIC CONDUCTIVITY AND FLUORESCEIN CONCENTRATION VERSUS VOLUME DEVELOPED INTERVAL 3

Golder Associates

PROJECT No.		13-1328-0041 2010	FILE No.	1313280041-2010-Fig14
DESIGN	SN	2014-06-27	SCALE	NTS
CADD	TD	2014-06-27	FIGURE	
CHECK	RQ	2014-06-27		14
REVIEW	MD	2014-06-30		



LEGEND

- ▲ JGT-06-I5 S1&S2
- ● JGT-06-I7S1
- ■ JGT-06-I9S1

REV	DATE	REVISION DESCRIPTION	DES	CADD	CHK	RVW
1	2014-07-23	ISSUED FOR FINAL	SN	JD	KS	KS

PROJECT

DOMINION DIAMOND

JAY PROJECT
NORTHWEST TERRITORIES, CANADA

TITLE

PIPER PLOT OF GROUNDWATER AT WESTBAY MULTI-LEVEL MONITORING WELL JGT-06

Golder Associates

PROJECT No. 13-1328-0041.2010.70			FILE No. 1313280041-2010-Fig15
DESIGN	SN	2014-07-16	SCALE AS SHOWN
CADD	JD	2014-07-16	FIGURE
CHECK	KS	2014-07-16	15
REVIEW	KS	2014-07-16	

APPENDIX A

Thermistor Data

Table A-1: Thermistor Readings JGT-01

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-01															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	387.8	373.3	358.7	344.2	329.6	315.1	300.5	286.0	271.4	256.9	242.4	227.8	213.3	198.7	184.2	169.6
Vertical Depth (mbgs)	25.6	40.4	55.1	69.9	84.7	99.5	114.2	129.0	143.8	158.6	173.3	188.1	202.9	217.6	232.4	247.2
15/Mar/14 23:40	0.5	0.6	0.8	0.7	0.8	1.0	1.3	1.5	1.9	2.3	2.4	2.8	2.2	2.2	2.7	2.5
16/Mar/14 16:20	0.1	0.3	0.6	0.4	0.5	0.7	0.9	1.3	1.8	2.0	2.2	2.5	2.1	2.1	2.5	2.4
17/Mar/14 16:10	-0.2	-0.1	0.2	0.1	0.1	0.3	0.6	0.9	1.3	1.6	1.9	2.1	1.8	1.9	2.2	2.2
18/Mar/14 14:05	-0.3	-0.4	-0.1	-0.2	-0.1	0.1	0.4	0.7	1.1	1.4	1.7	1.9	1.7	1.8	2.2	2.2
19/Mar/14 19:40	-0.4	-0.4	-0.4	-0.5	-0.3	-0.1	0.2	0.5	0.9	1.2	1.5	1.7	1.6	1.8	2.0	2.1
20/Mar/14 13:25	-0.6	-0.5	-0.5	-0.5	-0.4	-0.2	0.1	0.4	0.8	1.1	1.4	1.7	1.6	1.7	2.0	2.1
21/Mar/14 15:50	-0.9	-0.6	-0.5	-0.5	-0.5	-0.3	0.0	0.3	0.7	1.0	1.3	1.6	1.5	1.7	2.0	2.1
22/Mar/14 0:00	-1.0	-0.8	-0.5	-0.5	-0.5	-0.4	-0.1	0.2	0.6	0.9	1.3	1.5	1.4	1.7	1.9	2.1
23/Mar/14 14:00	-1.3	-1.1	-0.7	-0.7	-0.5	-0.4	-0.2	0.1	0.5	0.8	1.2	1.4	1.4	1.6	1.9	2.1
24/Mar/14 13:30	-1.6	-1.1	-0.8	-0.8	-0.6	-0.5	-0.2	0.1	0.5	0.8	1.1	1.4	1.4	1.6	1.9	2.0
25/Mar/14 16:30	-1.7	-1.4	-0.9	-0.9	-0.6	-0.5	-0.2	0.0	0.5	0.8	1.1	1.3	1.4	1.6	1.9	2.0
27/Mar/14 15:00	-1.6	-1.6	-1.1	-1.1	-0.7	-0.5	-0.3	0.2	0.6	1.1	1.2	1.3	1.3	1.6	1.9	2.0
05/Apr/14 18:40	-2.4	-2.1	-1.6	-1.5	-1.1	-0.7	-0.5	-0.2	0.2	0.5	0.8	1.1	1.2	1.5	1.8	2.0
06/Apr/14 21:55	-2.4	-2.1	-1.7	-1.6	-1.2	-0.7	-0.5	-0.3	0.2	0.5	0.8	1.1	1.2	1.5	1.8	2.0
07/Apr/14 19:15	-2.4	-2.1	-1.7	-1.6	-1.2	-0.7	-0.5	-0.2	0.1	0.5	0.8	1.1	1.2	1.5	1.8	2.0
09/Apr/14 13:40	-2.5	-2.1	-1.7	-1.6	-1.2	-0.8	-0.5	-0.2	0.1	0.5	0.8	0.6	1.2	1.5	1.8	2.0
10/Apr/14 18:35	-1.6	-2.2	-1.8	-1.6	-1.2	-0.8	-0.5	-0.2	0.1	0.4	0.8	1.1	1.2	1.5	1.8	2.0
11/Apr/14 19:10	-1.2	-2.2	-1.8	-1.6	-1.3	-0.9	-0.5	-0.3	0.1	0.4	0.8	1.1	1.2	1.5	1.8	2.0
12/Apr/14 15:00	-0.7	-2.2	-1.8	-1.6	-1.3	-0.9	-0.5	-0.3	0.1	0.4	0.8	1.0	1.2	1.5	1.8	2.0
13/Apr/14 19:35	-0.5	-2.2	-1.8	-1.7	-1.3	-0.9	-0.5	-0.3	0.1	0.4	0.8	1.0	1.2	1.5	1.8	2.0

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
Initial reading	5.4	6.7	6.3	5.6	4.6	6.6	5.1	5.1	5.3	6.4	8.1	6.3	3.9	2.6	4.4	5.8
06/Apr/14 22:05	0.3	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.3	-0.4	-0.4	-0.4
07/Apr/14 16:15	-0.2	-0.2	-0.2	-0.4	-0.5	-0.9	-0.7	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.8	-1.0
08/Apr/14 16:15	-1.1	-1.5	-0.6	-1.1	-1.9	-2.3	-1.9	-1.4	-1.5	-1.5	-1.3	-1.8	-1.9	-2.2	-2.0	-2.2
09/Apr/14 13:30	-1.7	-1.4	-1.3	-1.9	-3.5	-3.3	-2.9	-2.3	-2.2	-2.1	-1.9	-2.4	-2.5	-2.6	-2.5	-2.6
10/Apr/14 18:30	-5.1	-4.6	-4.2	-4.0	-4.0	-3.7	-3.4	-3.0	-2.8	-2.6	-2.5	-2.7	-2.8	-2.8	-2.8	-2.8
11/Apr/14 19:15	-5.8	-5.3	-5.0	-4.5	-4.2	-3.9	-3.6	-3.2	-3.0	-2.9	-2.7	-2.8	-2.9	-2.9	-3.0	-2.9
12/Apr/14 15:00	-6.1	-5.7	-5.3	-4.7	-4.4	-4.0	-3.7	-3.4	-3.1	-3.0	-2.9	-2.9	-3.0	-3.0	-3.0	-3.0
13/Apr/14 19:30	-9.4	-5.9	-5.6	-5.0	-4.6	-4.1	-3.8	-3.8	-3.5	-3.3	-3.1	-3.0	-2.9	-3.0	-3.0	-3.0
27/Apr/14 17:04	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
27/Apr/14 18:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
27/Apr/14 19:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
27/Apr/14 20:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
27/Apr/14 21:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
27/Apr/14 22:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
27/Apr/14 23:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.1
28/Apr/14 0:00	-7.4	-6.9	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.1
28/Apr/14 1:00	-7.4	-6.9	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.1
28/Apr/14 2:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
28/Apr/14 3:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
28/Apr/14 4:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
28/Apr/14 5:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
28/Apr/14 6:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
28/Apr/14 7:00	-7.4	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 8:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 9:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 10:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
28/Apr/14 11:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
28/Apr/14 12:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
28/Apr/14 13:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
28/Apr/14 14:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
28/Apr/14 15:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
28/Apr/14 16:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 17:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 18:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 19:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 20:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
28/Apr/14 21:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
28/Apr/14 22:00	-7.4	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
28/Apr/14 23:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
29/Apr/14 0:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.4	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 1:00	-7.5	-7.0	-6.6	-5.9	-5.3	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
29/Apr/14 2:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.3	-3.2
29/Apr/14 3:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.4	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 4:00	-7.5	-7.0	-6.6	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 5:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 6:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 7:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 8:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.8	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 9:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
29/Apr/14 10:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 11:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
29/Apr/14 12:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 13:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 14:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 15:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 16:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 17:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 18:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 19:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 20:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 21:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
29/Apr/14 22:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
29/Apr/14 23:00	-7.5	-7.0	-6.7	-5.9	-5.4	-4.9	-4.4	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 0:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 1:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 2:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 3:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 4:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 5:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 6:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 7:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 8:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 9:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
30/Apr/14 10:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 11:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 12:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 13:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 14:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 15:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 16:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 17:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 18:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 19:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 20:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 21:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 22:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
30/Apr/14 23:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 0:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.5	-3.2	-3.3	-3.3	-3.3	-3.2
01/May/14 1:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.7	-3.4	-3.2	-3.3	-3.3	-3.2	-3.1
01/May/14 2:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.2	-3.1
01/May/14 3:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.2	-3.2	-3.1
01/May/14 4:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.2	-3.2	-3.1
01/May/14 5:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.2	-3.2	-3.1
01/May/14 6:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.2	-3.2	-3.1

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
01/May/14 7:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.2	-3.2	-3.1
01/May/14 8:00	-7.5	-7.0	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.2	-3.2	-3.1
01/May/14 9:00	-7.5	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.8	-3.6	-3.4	-3.2	-3.3	-3.3	-3.2	-3.1
01/May/14 10:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 11:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 12:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 13:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 14:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 15:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 16:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 17:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 18:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 19:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 20:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 21:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 22:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
01/May/14 23:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.1	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 0:00	-7.6	-7.1	-6.7	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 1:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 2:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 3:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 4:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 5:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 6:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 7:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 8:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 9:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 10:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 11:00	-7.6	-7.2	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 12:00	-7.6	-7.1	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 13:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 14:00	-7.6	-7.1	-6.8	-6.0	-5.4	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
02/May/14 15:00	-7.6	-7.1	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 16:00	-7.6	-7.1	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 17:00	-7.6	-7.1	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 18:00	-7.6	-7.1	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 19:00	-7.6	-7.2	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 20:00	-7.6	-7.2	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.2
02/May/14 21:00	-7.6	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
02/May/14 22:00	-7.6	-7.2	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
02/May/14 23:00	-7.6	-7.2	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 0:00	-7.6	-7.2	-6.8	-6.0	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 1:00	-7.6	-7.2	-6.8	-6.0	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 2:00	-7.6	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 3:00	-7.6	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 4:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 5:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 6:00	-7.6	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 7:00	-7.6	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 8:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 9:00	-7.6	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 10:00	-7.7	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 11:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 12:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 13:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 14:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 15:00	-7.6	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 16:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
03/May/14 17:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 18:00	-7.7	-7.2	-6.8	-6.1	-5.5	-4.9	-4.5	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 19:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 20:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 21:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.7	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
03/May/14 22:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
03/May/14 23:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 0:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 1:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 2:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 3:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 4:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 5:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 6:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 7:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 8:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 9:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 10:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
04/May/14 11:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
04/May/14 12:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
04/May/14 13:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
04/May/14 14:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
04/May/14 15:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 16:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.5	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.2
04/May/14 17:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 18:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 19:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
04/May/14 20:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.3
04/May/14 21:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
04/May/14 22:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
04/May/14 23:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 0:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 1:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 2:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 3:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 4:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 5:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 6:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
05/May/14 7:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 8:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
05/May/14 9:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.3
05/May/14 10:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 11:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.2
05/May/14 12:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.3
05/May/14 13:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
05/May/14 14:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3
05/May/14 15:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 16:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.2
05/May/14 17:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.2
05/May/14 18:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 19:00	-7.7	-7.2	-6.8	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 20:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.3
05/May/14 21:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-3.9	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
05/May/14 22:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.3
05/May/14 23:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 0:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 1:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 2:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 3:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 4:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 5:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 6:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 7:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.3
06/May/14 8:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 9:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 10:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 11:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.3	-3.3	-3.3	-3.3
06/May/14 12:00	-7.6	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3
06/May/14 13:00	-7.6	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3
06/May/14 14:00	-7.6	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.3	-3.3	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
06/May/14 15:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
06/May/14 16:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
06/May/14 17:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
06/May/14 18:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
06/May/14 19:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
06/May/14 20:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
06/May/14 21:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
06/May/14 22:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
06/May/14 23:00	-7.7	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
07/May/14 0:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 1:00	-7.7	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 2:00	-7.7	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3
07/May/14 3:00	-7.7	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 4:00	-7.7	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 5:00	-7.7	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 6:00	-7.7	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3
07/May/14 7:00	-7.7	-7.2	-6.9	-6.1	-5.5	-5.0	-4.6	-4.2	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 8:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 9:00	-7.7	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3
07/May/14 10:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3
07/May/14 11:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
07/May/14 12:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 13:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 14:00	-7.6	-7.2	-6.9	-6.1	-5.6	-5.0	-4.6	-4.2	-4.0	-3.8	-3.6	-3.4	-3.3	-3.3	-3.3	-3.3
07/May/14 15:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 16:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
07/May/14 17:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
07/May/14 18:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
07/May/14 19:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
07/May/14 20:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
07/May/14 21:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
07/May/14 22:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
07/May/14 23:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 0:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
08/May/14 1:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.2
08/May/14 2:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
08/May/14 3:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
08/May/14 4:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.5	-3.3	-3.4	-3.3	-3.3	-3.2
08/May/14 5:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.2
08/May/14 6:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.5	-3.4	-3.4	-3.3	-3.3	-3.2
08/May/14 7:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
08/May/14 8:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.3	-3.3	-3.3	-3.3	-3.2
08/May/14 9:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.0	-4.6	-4.3	-4.0	-3.8	-3.6	-3.3	-3.3	-3.3	-3.3	-3.2
08/May/14 10:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
08/May/14 11:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
08/May/14 12:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
08/May/14 13:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 14:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 15:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
08/May/14 16:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 17:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
08/May/14 18:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 19:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 20:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 21:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
08/May/14 22:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
08/May/14 23:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 0:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 1:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 2:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 3:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 4:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 5:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 6:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
09/May/14 7:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 8:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 9:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 10:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.6	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 11:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 12:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 13:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 14:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 15:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 16:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
09/May/14 17:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 18:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 19:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 20:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
09/May/14 21:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 22:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
09/May/14 23:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 0:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 1:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 2:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 3:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 4:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 5:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 6:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 7:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 8:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 9:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 10:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 11:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 12:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 13:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
10/May/14 14:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
10/May/14 15:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 16:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 17:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 18:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 19:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 20:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 21:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 22:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
10/May/14 23:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 0:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 1:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 2:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 3:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 4:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 5:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 6:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 7:00	-7.6	-7.2	-6.9	-6.2	-5.6	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 8:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 9:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 10:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 11:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 12:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 13:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 14:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 15:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 16:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 17:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 18:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
11/May/14 19:00	-7.6	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
11/May/14 20:00	-7.6	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
11/May/14 21:00	-7.6	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
11/May/14 22:00	-7.6	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
11/May/14 23:00	-7.6	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
12/May/14 0:00	-7.6	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 1:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
12/May/14 2:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 3:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 4:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
12/May/14 5:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 6:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 7:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 8:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 9:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 10:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 11:00	-7.5	-7.2	-6.9	-6.2	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 12:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.3	-4.0	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
12/May/14 13:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
12/May/14 14:00	-7.6	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 15:00	-7.6	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 16:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 17:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 18:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 19:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 20:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 21:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.1	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 22:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
12/May/14 23:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 0:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 1:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 2:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 3:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 4:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 5:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 6:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
13/May/14 7:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 8:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 9:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 10:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.4	-3.4	-3.3
13/May/14 11:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 12:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 13:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
13/May/14 14:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 15:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 16:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 17:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 18:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 19:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 20:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 21:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 22:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
13/May/14 23:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 0:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 1:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 2:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 3:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 4:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 5:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 6:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 7:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 8:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.3	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 9:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 10:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 11:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 12:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 13:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 14:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings	
Company	Dominion Diamond Corporation
Project	Jay Project
Drillhole	JGT-07
Location	Ekati, Northwest Territories

Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
14/May/14 15:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
14/May/14 16:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 17:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 18:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 19:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 20:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 21:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
14/May/14 22:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
14/May/14 23:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
15/May/14 0:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 1:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 2:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.8	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
15/May/14 3:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
15/May/14 4:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
15/May/14 5:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
15/May/14 6:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 7:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 8:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 9:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 10:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 11:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 12:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.7	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 13:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 14:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 15:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 16:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 17:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 18:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 19:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 20:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 21:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
15/May/14 22:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
15/May/14 23:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 0:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 1:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 2:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 3:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 4:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 5:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 6:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 7:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 8:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
16/May/14 9:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
16/May/14 10:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
16/May/14 11:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
16/May/14 12:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
16/May/14 13:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
16/May/14 14:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
16/May/14 15:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
16/May/14 16:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
16/May/14 17:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
16/May/14 18:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
16/May/14 19:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
16/May/14 20:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
16/May/14 21:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
16/May/14 22:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
16/May/14 23:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 0:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 1:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 2:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 3:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 4:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
17/May/14 5:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
17/May/14 6:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
17/May/14 7:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 8:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 9:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 10:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 11:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
17/May/14 12:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 13:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 14:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 15:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 16:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 17:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 18:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 19:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
17/May/14 20:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
17/May/14 21:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
17/May/14 22:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
17/May/14 23:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 0:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.4	-3.3
18/May/14 1:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
18/May/14 2:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
18/May/14 3:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
18/May/14 4:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 5:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 6:00	-7.5	-7.2	-6.9	-6.3	-5.7	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 7:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 8:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 9:00	-7.5	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 10:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 11:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 12:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 13:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 14:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
18/May/14 15:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 16:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 17:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 18:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 19:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 20:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 21:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
18/May/14 22:00	-7.4	-7.2	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
18/May/14 23:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 0:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 1:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 2:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 3:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 4:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 5:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 6:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 7:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 8:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 9:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 10:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 11:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 12:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
19/May/14 13:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 14:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 15:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 16:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 17:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.2	-4.8	-4.4	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
19/May/14 18:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
19/May/14 19:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
19/May/14 20:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
19/May/14 21:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
19/May/14 22:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
19/May/14 23:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
20/May/14 0:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
20/May/14 1:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
20/May/14 2:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
20/May/14 3:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
20/May/14 4:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
20/May/14 5:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
20/May/14 6:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
20/May/14 7:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
20/May/14 8:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
20/May/14 9:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
20/May/14 10:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
20/May/14 11:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 12:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 13:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
20/May/14 14:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 15:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 16:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 17:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 18:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 19:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
20/May/14 20:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
20/May/14 21:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
20/May/14 22:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
20/May/14 23:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.3
21/May/14 0:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
21/May/14 1:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
21/May/14 2:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
21/May/14 3:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
21/May/14 4:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
21/May/14 5:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
21/May/14 6:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.1	-3.9	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
21/May/14 7:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.8	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
21/May/14 8:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
21/May/14 9:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
21/May/14 10:00	-7.4	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
21/May/14 11:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
21/May/14 12:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 13:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 14:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
21/May/14 15:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
21/May/14 16:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 17:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 18:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 19:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
21/May/14 20:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 21:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 22:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
21/May/14 23:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.4	-3.4	-3.3
22/May/14 0:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
22/May/14 1:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
22/May/14 2:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
22/May/14 3:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
22/May/14 4:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
22/May/14 5:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
22/May/14 6:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.4	-3.3
22/May/14 7:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 8:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.4	-3.3
22/May/14 9:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.4	-3.3
22/May/14 10:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 11:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 12:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 13:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 14:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
22/May/14 15:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 16:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 17:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 18:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 19:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 20:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 21:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 22:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
22/May/14 23:00	-7.3	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 0:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 1:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 2:00	-7.3	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 3:00	-7.2	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 4:00	-7.2	-7.0	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 5:00	-7.3	-7.0	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.3	-3.3
23/May/14 6:00	-7.3	-7.0	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.3	-3.3
23/May/14 7:00	-7.2	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.4	-3.3
23/May/14 8:00	-7.2	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.4	-3.3
23/May/14 9:00	-7.2	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
23/May/14 10:00	-7.2	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
23/May/14 11:00	-7.2	-7.1	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
23/May/14 12:00	-7.2	-7.1	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
23/May/14 13:00	-7.2	-7.0	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
23/May/14 14:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
23/May/14 15:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.4	-3.3
23/May/14 16:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
23/May/14 17:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.4	-3.3
23/May/14 18:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 19:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 20:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 21:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
23/May/14 22:00	-7.2	-7.0	-6.9	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Golder Associates	Thermistor Readings															
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
	Temperature ° C															
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
23/May/14 23:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
24/May/14 0:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 1:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 2:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 3:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 4:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 5:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 6:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 7:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 8:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 9:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 10:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-3.9	-3.6	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 11:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 12:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 13:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 14:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 15:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.3	-3.3
24/May/14 16:00	-7.2	-7.0	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
24/May/14 17:00	-7.2	-7.0	-6.8	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
24/May/14 18:00	-7.2	-7.0	-6.9	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
24/May/14 19:00	-7.2	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.4	-3.4	-3.3
24/May/14 20:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.3	-3.3
24/May/14 21:00	-7.1	-7.0	-6.8	-6.4	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.3	-3.3
24/May/14 22:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.2
24/May/14 23:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
25/May/14 0:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
25/May/14 1:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
25/May/14 2:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.2
25/May/14 3:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
25/May/14 4:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
25/May/14 5:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
25/May/14 6:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.3	-3.3

Table A-2: Thermistor Readings JGT-07

Thermistor Readings																
Company	Dominion Diamond Corporation															
Project	Jay Project															
Drillhole	JGT-07															
Location	Ekati, Northwest Territories															
Temperature ° C																
Bead ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Final El. (masl)	416.7	416.2	415.7	414.7	413.7	412.7	411.7	410.7	409.7	408.7	406.7	404.7	402.7	400.7	398.7	396.7
Vertical Depth (mbgs)	2.4	2.9	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	12.4	14.4	16.4	18.4	20.4	22.4
25/May/14 7:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3
25/May/14 8:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.5	-3.4	-3.3	-3.3	-3.3
25/May/14 9:00	-7.1	-7.0	-6.8	-6.3	-5.8	-5.3	-4.9	-4.5	-4.2	-4.0	-3.7	-3.4	-3.4	-3.3	-3.3	-3.3

APPENDIX B

Completion Report, Westbay System Monitoring Well: JGT-06, Jay Project, NT (Schlumberger Water Services)

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COMPLETION REPORT

Westbay System Monitoring Well:

JGT-06

Jay Project, NT

Prepared for:

Golder Associates Ltd.
500-4260 Still Creek Drive
Burnaby, BC
V5C6C6
Canada

Prepared by:

Schlumberger Water Services
WB810
June 5, 2014

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APPENDIX

Monitoring Well: JGT-06

1. Introduction

This report and the attached appendix document the technical services carried out by Schlumberger Water Services (SWS) under Golder Associates P.O. No. 13-1328-0041 dated April 01, 2014. A Westbay System completion was installed in borehole JGT-06 at the Dominion Diamond Corporation, Jay Project, North West Territories.

Schlumberger Water Services technical representatives Mr. Dennis Oertel and Mr. Vladimir Stastny were on site for the installation of the Westbay System well from April 07 – April 16, 2014. All field work was supervised on site by Golder Associates representatives Mr. Denis Vachon and Mr. Ricardo Quevedo.

This report documents the installation tasks and related QA checks.

2. Previous Activities

The borehole was drilled by Major Drilling Group International Inc. using a diamond core rotary method at a nominal 96-mm diameter (HQ-size). The borehole angle was set to a nominal plunge angle of 80 degrees below horizontal. The drilling water was tagged with Fluorescein, a tracer dye that can be read at low concentrations. The dye addition is required in order to assess when a sampling interval has been sufficiently developed and water introduced during drilling and well installation has been removed.
Once the borehole was drilled to target depth, brine (CaCl 15% in solution) was flushed into the borehole to prevent freezing. A permanent surface casing (HWT) was installed in the borehole to a depth of about 9 m. Borehole fluid was circulated in the borehole immediately prior to installing the Westbay System (Note: depth for the borehole is with respect to top of ground surface. There is no correction for borehole angle from vertical. Monitoring well reference elevation was not available at the time of writing).

Table 1, Summary of Westbay System Installation

Monitoring Well No.	Installation Date	Borehole Depth (m)	MP38 Casing Length (m)	No. Monitoring Zones
JGT-06	April 08 – 16	461.3	461.0	9

3. Installation

The Westbay System completion in borehole JGT-06 was installed according to the procedure described below.

3.1 Preparation of Monitoring Well Design

Monitoring zone locations for the borehole was provided to Schlumberger Water Services by Mr. Denis Vachon of Golder Associates. The well design was created based on the requested monitoring zone locations. The well design was used to prepare a Casing Installation Log, which specifies the location of components in the well. This log was reviewed by Mr. Denis Vachon of Golder Associates prior to installation of the well. The Casing Installation Log as approved was used as an installation guide in the field. A field copy of the log is in the Appendix.

A measurement port coupling was included in each monitoring zone to provide the capability to measure fluid pressures and collect fluid samples. Measurement port couplings were also included in QA zones to provide QA testing capabilities and to permit operation of the squeeze relief venting capabilities of the Model 6055 packer inflation tool. A pumping port coupling was included in each monitoring zone to provide purging and hydraulic conductivity testing capabilities. A pumping port was also placed above the packer located at the expected base of the permafrost. This pumping port at the permafrost transition,was placed as part of the plan to introduce a glycol/water mixture into the annulus in the permafrost zone. Mr. Denis Vachon of Golder Associates requested that optional synthetic (PET) filters were not to be installed over the measurement port couplings in the monitoring zones.

3.2 Layout of Westbay System Components

Prior to installation, the Westbay System components were set out on racks at the borehole, according to the sequence indicated on the Casing Installation Log. Each tubing length was numbered beginning with the lowermost as an aid to confirming the proper sequence of components. The appropriate Westbay System couplings were attached to the tubing sections. Magnetic location collars were attached 0.6-m below the top of the measurement port in each sampling zone and one at 10-m below ground surface. Each component was visually inspected. Serial numbers for each packer, pumping port and measurement port coupling were recorded on the Casing Installation Log. The completion layout was confirmed with the Casing Installation Log before the components were lowered into the borehole.

3.3 Lowering of Westbay System Components

The Westbay System components were lowered into the borehole by hand and rig assisted when applicable, through HQ drill rods, (nominal 76-mm ID) which were used as a temporary guide tube. Each Westbay System component was confirmed to be in the correct sequence during lowering. A record of placement of each component and coupling are noted on the Casing Installation Log by check marks. Joint testing was not done in JGT-06 to confirm hydraulic seals of the individual tubing joints, as requested by Denis Vachon of Golder Associates, to minimize installation time. After the Westbay tubing string was lowered into the borehole, the water inside the Westbay tubing was monitored at depth different from the open borehole water level for a minimum period of thirty minutes to confirm hydraulic integrity of the casing. The data from the hydraulic integrity test is shown on the first page of the Casing Installation Log.

A 2-1 water/propylene glycol mixture supplied by Golder Associates was added to the Westbay System when necessary to counter buoyancy effects while components were lowered into the borehole.

3.4 Positioning of Westbay System Components

After the components were lowered into the well and rested on bottom, the guide tube was lifted to 165 m below ground surface and was fastened permanently at this position. The final position is illustrated on the Casing Installation Log. The positioning of the Westbay System components is based on the "nominal" lengths of Westbay System components. The positioning calculations do not include allowances for borehole temperature or deviation effects.

The attached figure titled “MOSDAX Transducer Position” provides information to correlate the position of MOSDAX Transducer sensors to the reference position at the top of the Measurement

Port. The attached figure titled "Dimensions of Packer Seals and Monitoring Zones" outlines the calculations used to determine the packer centerline depths and zone length.

The Summary Casing Log, which shows the final "as-built" locations of the components in the well, is included in the Appendix. The depths of key items in the well are shown on Table 2 in the Appendix.

3.5 Inflation of Westbay System Packers and Placement of Antifreeze Solution

The Westbay packers were inflated using a 25% - 40% proplyene glycol/water mixture provided by Golder Associates. The Westbay Model No. 6055 vented inflation tool was used for packer inflation. All the packers appear to have inflated normally. The data for inflation of each packer are provided on the Westbay Packer Inflation Records included in the Appendix.

The packers were inflated in a specific sequence as part of a plan to introduce and control an antifreeze solution in the well annulus through out the permafrost zone:

a. A set of two packers positioned immediately at the base of permafrost were inflated.

b. The pumping port above the upper inflated packer was opened.

c. A 2-1 mixture of water and propylene glycol supplied by Golder Associates was pumped inside the Westbay tubing, out the pumping port and into the well annulus. Pumping was continued until the rig had to be removed from JGT-06.

d. The pumping port was closed prior to rig move.

e. After the rig move and a shack was placed over the well head, The remaining packers below the permafrost line were inflated

f. The pumping port above the top permafrost packer was opened. A 2-1 mixture of water and propylene glycol was poured into the annulus of the borehole to replace fluid removed thourgh the Westbay tubing during air lifting procedures.

g. The pumping port above the permafrost packer was closed.

h. The remaining Westbay packer located at 81m was inflated.

4. Fluid Pressure Measurements

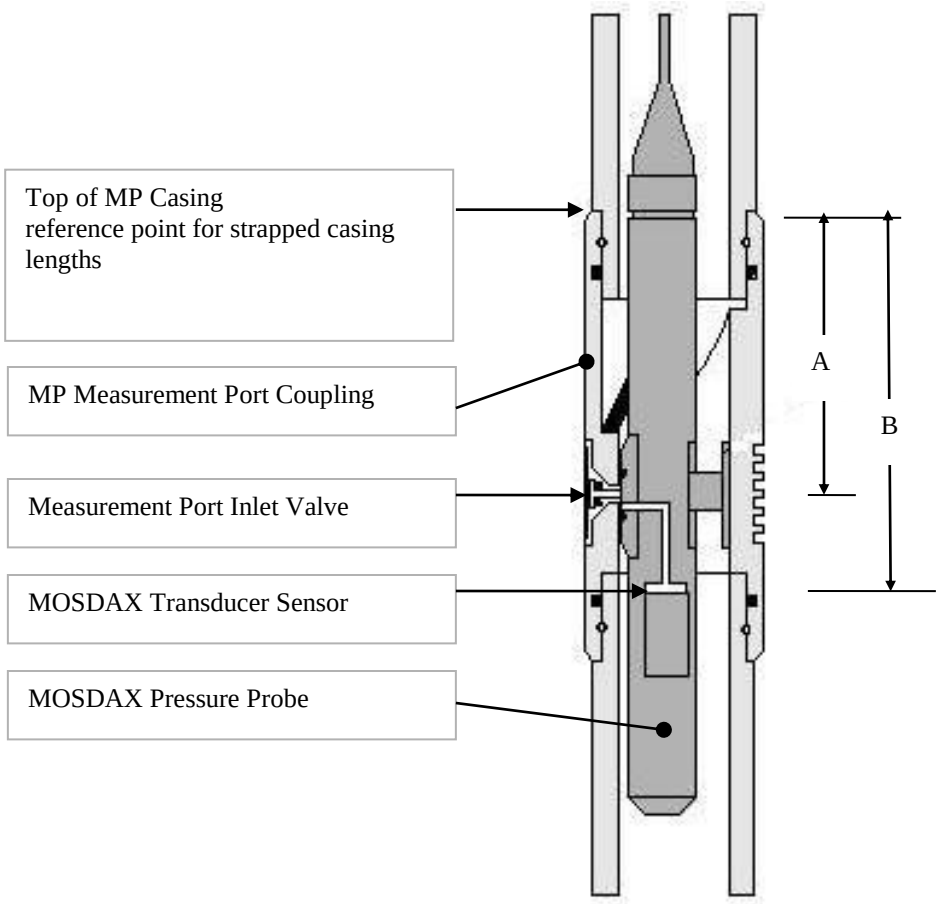
In order to minimize the installation time, standard SWS procedure to measure a pre-inflation pressure profile were completed after the inflation of the two packers at the base of the permafrost and circulation of the water and glycol mixture. After the circulation was complete, fluid pressures were measured at the remaining measurement port. A plot of the Pre-Inflation Piezometric levels is shown on Figure 1 in the Appendix.

After packer inflation was completed, fluid pressures were measured at each measurement port. At that time, the in-situ formation pressures may not have recovered from the pre-installation activities. Longer term monitoring may be required to establish representative fluid pressures.

A plot of the Post-Inflation Piezometric levels is shown on Figure 2 in the Appendix. The data were examined to confirm proper operation of the measurement ports and as a check on the presence of annulus seals between monitoring zones. The calculation sheets for the pressure profiles are also enclosed in the Appendix.

MOSDAX Transducer Position

In an MP System Measurement Port Coupling



System	Measurement Port Type	A	B
Plastic MP38	0222, 0205	4.5" (114.3 mm)	6.5" (165.1 mm)

APPENDIX

Monitoring Well JGT-06

As Built Casing Summary	-4 pages
Summary Casing Log	-4 pages
Pre-Infaltion Piezometric Pressure/ Levels	
Field Data and Calculation Sheet (April 14, 2014)	-1 page
Figure 1, Pre-inflation Profile	-1 page
Pre-Infaltion Piezometric Pressure/ Levels Adjusted for Plunge Angle	
Calculation Sheet (May 27, 2014)	-1 page
Figure 1, Pre-inflation Profile Adjusted for Plunge Angle	-1 page
Post- Inflation Piezometric Pressure/ Levels	
Field Data and Calculation Sheet (April 15, 2014)	-1 page
Figure 2, Post-Inflation Profile	-1 page
Post- Inflation Piezometric Pressure/ Levels Adjusted for Plunge Angle	
Calculation Sheet (May 27, 2014)	-1 page
Figure 2, Post-Inflation Profile Adjusted for Plunge Angle	-1 page
Casing Installation Log (field copy)	-10 pages
Westbay Packer Inflation Records	-11 pages

Item No.	Component Part No.	Component S/N	Coupling P/N	Component Description	Coupling S/N	Accessory P/N	Accessory Depth (m)	Depth (m)*	Plunge Angle Depth (m)* @ 80 Deg
165	0203							-1.9	-1.9
164	020102		0202					-1.9	-1.8
163	020105		0202					-1.3	-1.2
162	020105		0202					0.3	0.3
161	020105		0202					1.8	1.8
160	020105		0202					3.3	3.3
159	020110		0202					4.8	4.8
158	020110		0202					7.9	7.8
157	020110		0202			0216	0.6	10.9	10.8
156	020110		0202					14.0	13.8
155	020110		0202					17.0	16.8
154	020110		0202					20.1	19.8
153	020110		0202					23.1	22.8
152	020110		0202					26.2	25.8
151	020110		0202					29.2	28.8
150	020110		0202					32.3	31.8
149	020110		0202					35.3	34.8
148	020110		0202					38.4	37.8
147	020110		0202					41.4	40.8
146	020110		0202					44.5	43.8
145	020110		0202					47.5	46.8
144	020110		0202					50.6	49.8
143	020110		0202					53.6	52.8
142	020110		0202					56.6	55.8
141	020110		0202					59.7	58.8
140	020110		0202					62.7	61.8
139	020110		0202					65.8	64.8
138	020110		0202					68.8	67.8
137	020110		0202					71.9	70.8
136	020110		0202					74.9	73.8
135	020110		0202					78.0	76.8
134	0238	18704	0202					81.0	79.8
133	020110		0205	Measurement Port	8145	0216	0.6	**82.6**	81.3
132	020110		0202					85.6	84.3
131	020110		0202					88.7	87.3
130	020110		0202					91.7	90.3
129	020110		0202					94.7	93.3
128	020110		0202					97.8	96.3
127	020110		0202					100.8	99.3
126	020110		0202					103.9	102.3
125	020110		0202					106.9	105.3
124	020110		0202					110.0	108.3
123	020110		0202					113.0	111.3
122	020110		0202					116.1	114.3
121	020110		0202					119.1	117.3
120	020110		0202					122.2	120.3
119	020110		0202					125.2	123.3
118	020110		0202					128.3	126.3
117	020110		0202					131.3	129.3
116	020110		0202					134.4	132.3
115	020110		0202					137.4	135.3
114	020110		0202					140.5	138.3
113	020110		0202					143.5	141.3
112	020110		0202					146.6	144.3
111	020110		0202					149.6	147.3
110	020110		0202					152.7	150.3
109	020110		0202					155.7	153.3
108	0238	18705	0206	Pumping Port	323			158.8	156.3
107	020110		0205	Measurement Port	8151	0216	0.6	**160.3**	157.9
106	020105		0202					163.4	160.9
105	020105		0202					164.9	162.4
104	020110		0202					166.4	163.9
103	020110		0202					169.5	166.9
102	0238	18706	0202					172.5	169.9
101	020110		0205	Measurement Port	8152	0216	0.6	**174.0**	171.4

Item No.	Component Part No.	Component S/N	Coupling P/N	Component Description	Coupling S/N	Accessory P/N	Accessory Depth (m)	Depth (m)*	Plunge Angle Depth (m)* @ 80 Deg
100	020105		0206	Pumping Port	318			177.1	174.4
99	020110		0202					178.7	175.9
98	020110		0202					181.7	178.9
97	020110		0202					184.8	182.0
96	020110		0202					187.8	185.0
95	020110		0202					190.9	188.0
94	020110		0202					193.9	191.0
93	020110		0202					197.0	194.0
92	020110		0202					200.0	197.0
91	020110		0202					203.1	200.0
90	020110		0202					206.1	203.0
89	0238	18703	0202					209.1	206.0
88	020110		0205	Measurement Port	8149	0216	0.6	**210.7**	207.5
87	020110		0206	Pumping Port	319			213.7	210.5
86	020110		0202					216.8	213.5
85	020110		0202					219.9	216.5
84	020110		0202					222.9	219.5
83	020110		0202					226.0	222.5
82	020110		0202					229.0	225.5
81	020110		0202					232.1	228.5
80	020110		0202					235.1	231.5
79	0238	18707	0202					238.2	234.5
78	020110		0205	Measurement Port	8150	0216	0.6	**239.7**	236.0
77	020105		0206	Pumping Port	317			242.7	239.0
76	020110		0202					244.3	240.6
75	020110		0202					247.3	243.6
74	020110		0202					250.4	246.6
73	020110		0202					253.4	249.6
72	020110		0202					256.5	252.6
71	020110		0202					259.5	255.6
70	020110		0202					262.6	258.6
69	020110		0202					265.6	261.6
68	0238	18701	0202					268.7	264.6
67	020110		0205	Measurement Port	8147	0216	0.6	**270.2**	266.1
66	020105		0206	Pumping Port	316			273.3	269.1
65	020110		0202					274.8	270.7
64	020110		0202					277.9	273.6
63	020110		0202					280.9	276.7
62	020110		0202					284.0	279.7
61	020110		0202					287.0	282.7
60	020110		0202					290.1	285.7
59	020110		0202					293.1	288.7
58	020110		0202					296.2	291.7
57	020110		0202					299.2	294.7
56	020110		0202					302.3	297.7
55	020110		0202					305.3	300.7
54	0238	18702	0202					308.4	303.7
53	020110		0205	Measurement Port	8148	0216	0.6	**309.9**	305.2
52	020105		0206	Pumping Port	322			312.9	308.2
51	020110		0202					314.5	309.7
50	020110		0202					317.6	312.7
49	020110		0202					320.6	315.7
48	020110		0202					323.6	318.7
47	020110		0202					326.7	321.7
46	020110		0202					329.7	324.7
45	020110		0202					332.8	327.7
44	020110		0202					335.8	330.7
43	0238	18698	0202					338.9	333.7
42	020110		0205	Measurement Port	8146	0216	0.6	**340.4**	335.2
41	020110		0206	Pumping Port	315			343.5	338.2
40	020110		0202					346.6	341.3
39	020110		0202					349.6	344.3
38	020110		0202					352.7	347.3
37	020110		0202					355.7	350.3
36	020110		0202					358.7	353.3

Item No.	Component Part No.	Component S/N	Coupling P/N	Component Description	Coupling S/N	Accessory P/N	Accessory Depth (m)	Depth (m)*	Plunge Angle Depth (m)* @ 80 Deg
35	020110		0202					361.8	356.3
34	020110		0202					364.8	359.3
33	0238	18699	0202					367.9	362.3
32	020110		0205	Measurement Port	8155	0216	0.6	**369.4**	363.8
31	020105		0206	Pumping Port	321			372.5	366.8
30	020110		0202					374.0	368.3
29	020110		0202					377.1	371.4
28	020110		0202					380.1	374.4
27	020110		0202					383.2	377.4
26	020110		0202					386.2	380.4
25	020110		0202					389.3	383.4
24	020110		0202					392.3	386.4
23	020110		0202					395.4	389.4
22	0238	18700	0202					398.4	392.4
21	020110		0205	Measurement Port	8154	0216	0.6	**399.9**	393.9
20	020105		0206	Pumping Port	320			403.0	396.9
19	020110		0202					404.6	398.4
18	020110		0202					407.6	401.4
17	020110		0202					410.7	404.4
16	020110		0202					413.7	407.4
15	020110		0202					416.8	410.4
14	020110		0202					419.8	413.4
13	020110		0202					422.9	416.4
12	020110		0202					425.9	419.4
11	0238	18697	0202					429.0	422.4
10	020110		0205	Measurement Port	8153	0216	0.6	**430.5**	423.9
9	020110		0206	Pumping Port	314			433.5	426.9
8	020110		0202					436.6	430.0
7	020110		0202					439.7	433.0
6	020110		0202					442.7	436.0
5	020110		0202					445.8	439.0
4	020110		0202					448.8	442.0
3	020110		0202					451.9	445.0
2	020110		0202					454.9	448.0
1	020110		0202					458.0	451.0
0	0203							461.0	454.0

Depths are with respect to Ground Surface.

* Component positions are referenced to the top of the subject Westbay System coupling.

* Packer positions are referenced to the top Westbay System coupling on the packer.
Monitoring zone dimensions are determined as described on the attached "Dimensions of Packer Seals and Monitoring Zones".

The position of a MOSDAX Transducer in a Measurement Port is illustrated in the attached "MOSDAX Transducer Position".

This information may be used in calculating piezometric levels.

Plunge Angle Depth =SIN(RADIANS(80))*Port Depth From Log

Summary Casing Log

Company: Golder Associates
Well: JGT-06
Site: Ekati Mine
Project:

Job No: WB810
Author: DO

Well Information

Reference Datum: Ground Surface
Elevation of Datum: 0.00 m.
MP Casing Top: 0.00 m.
MP Casing Length: 461.05 m.

Borehole Depth: 461.30 m.
Borehole Inclination: 80 Degrees
Borehole Diameter: 96.00 mm

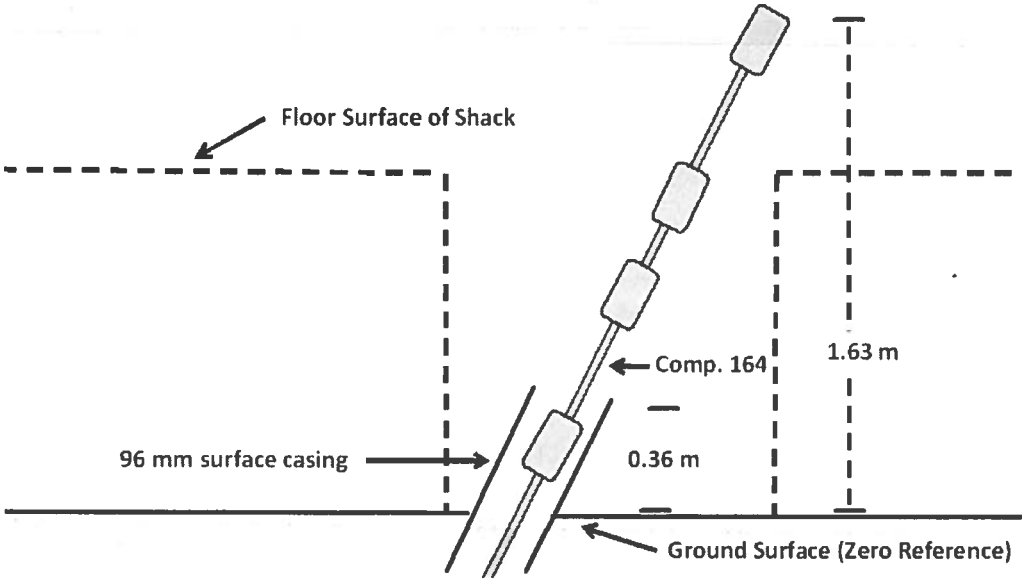
Well Description:
MP38
Other References:
Zero Reference: Ground Surface

File Information

File Name: JGT-06.WWD
Report Date: Wed Apr 23 15:41:58 2014

File Date: Apr 08 17:23:04 2014

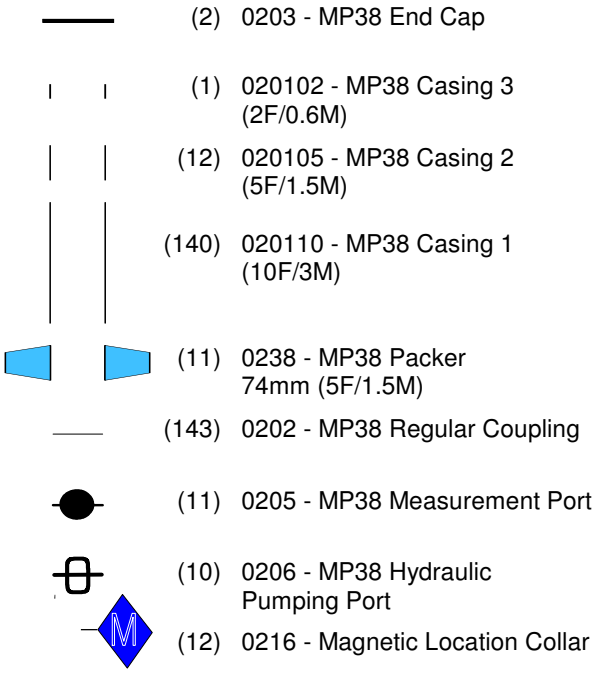
Sketch of Wellhead Completion



Legend

(Qty) MP Components | **Geology** | **Backfill/Casing**

(Library - WD Library 4/3/12)



(2) 0203 - MP38 End Cap

(1) 020102 - MP38 Casing 3 (2F/0.6M)

(12) 020105 - MP38 Casing 2 (5F/1.5M)

(140) 020110 - MP38 Casing 1 (10F/3M)

(11) 0238 - MP38 Packer 74mm (5F/1.5M)

(143) 0202 - MP38 Regular Coupling

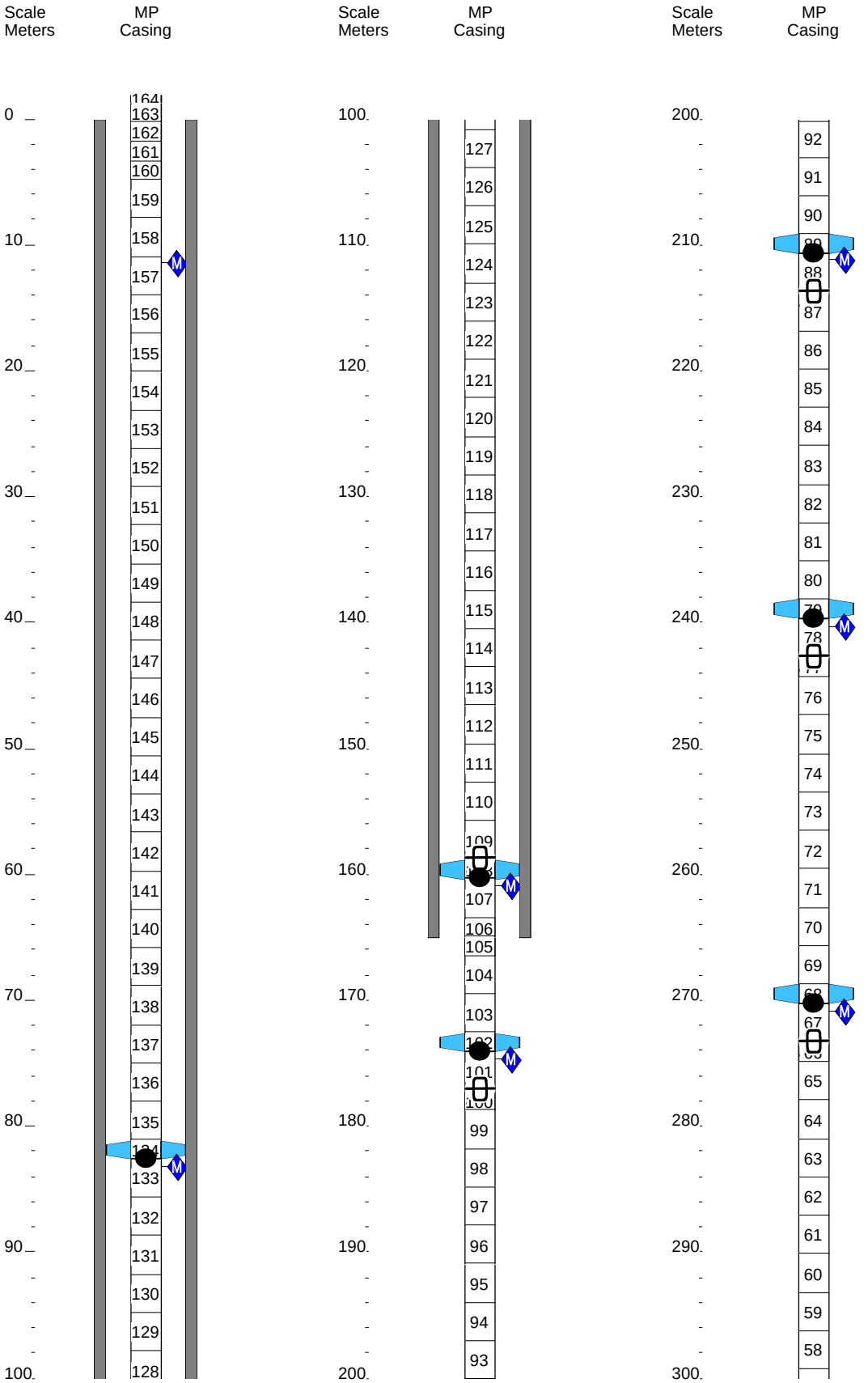
(11) 0205 - MP38 Measurement Port

(10) 0206 - MP38 Hydraulic Pumping Port

(12) 0216 - Magnetic Location Collar

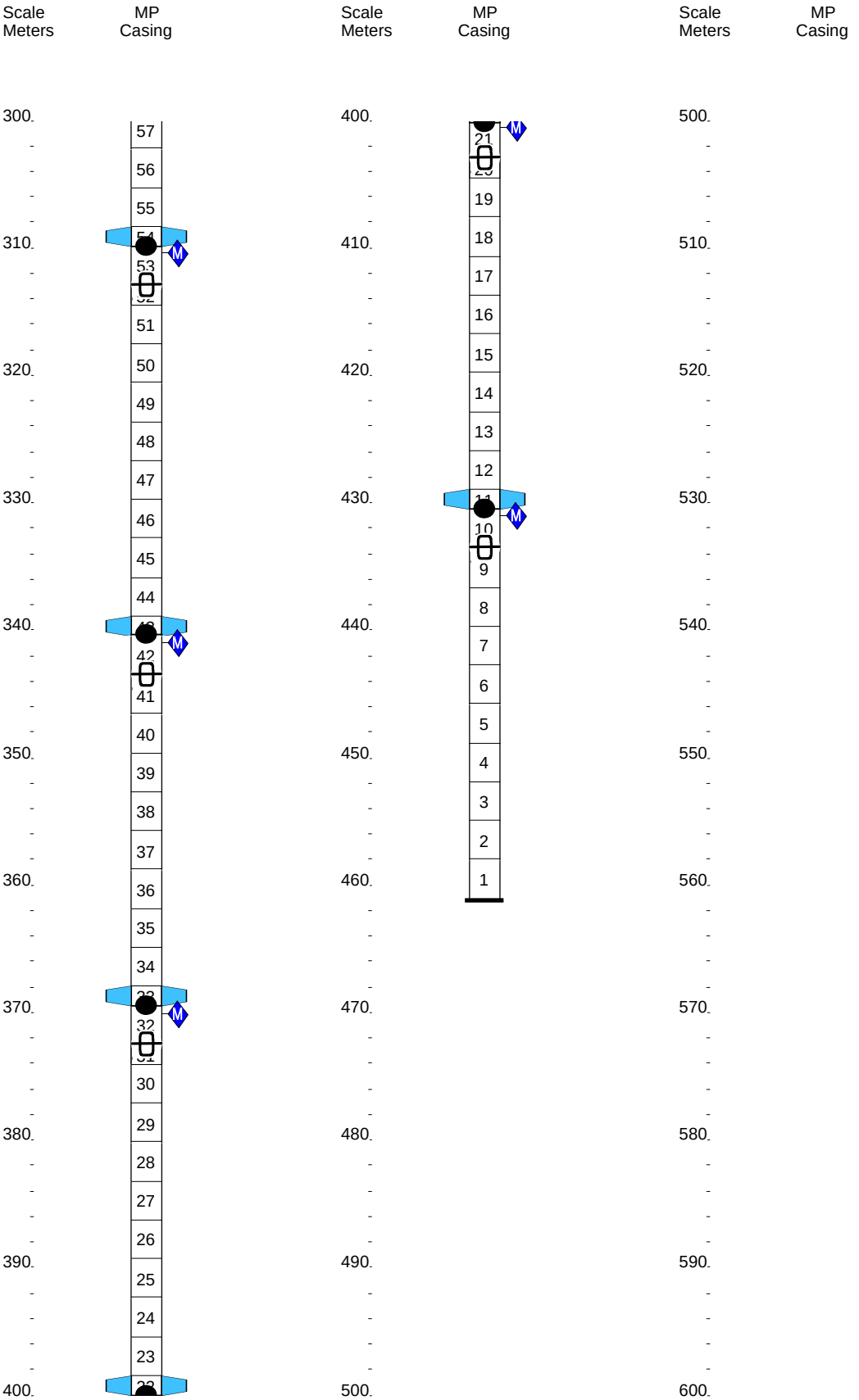
Summary Casing Log
Golder

Job No: WB810
Well: JGT-06



Summary Casing Log
Golder

Job No: WB810
Well: JGT-06



Schlumberger Water Services

Pre-Inflation Profile

Westbay Piezometric Pressures/Levels

Field Data and Calculation Sheet

Well No.: VGT-06
Datum: N/A
Elev. G.S.: N/A
Height of Westbay above G.S.: 1.63 m
Elev. top of Westbay Casing: N/A
Reference Elevation: ~~N/A~~ Ground Surface
Borehole angle: 80°

Probe Type: SAMPLER
Serial No.: EMS 1764
Probe Range: 12000 psi
Westbay Casing Type: MP38
Sampler Valve Position: Closed

Date: Apr 14/14
Client: GOLDER
Job No.: WB810
Location: EGAI Mine
Weather: Sunny -20
Operator: D.O. / D.V

Note: "Port position" in angled boreholes refer to position along drillhole. True depth (Dp) needs to be calculated using borehole angle and deviation data to calculate zone piezometric level (Dz).

Ambient Reading (P_{atm}) (pressure, temperature, time)

Start: Pressure 13.9 Finish: 13.9
Temp 11.6 0.65°C
Time 10:25 12:27

P_{atm} 13.9 psi

[ft]

Port No.	Port Position From Log ~~(ft)~~ m	Port Position From Cable ~~(ft)~~ m	True Port Depth "Dp" ~~(ft)~~ m	Fluid Pressure Readings: Inside Casing (P1)	Outside Casing (P2)	Time H:M:S	Probe Temp. (°C)	Inside Casing (P1)	Pressure Head Outside Port (ft) H = (P2-Patm)/w	Piez. Level Outside Port (ft) Dz = Dp - H	Comments: Magn. Collar
11	430.5	1407,0		639,88	608,57	10:50	4,20	639,82	418.2	12,3	1408,5
10	399.9	~~1307,4~~		595,55	566,10	11:00	4.98	595,58	388,3	11,6	1309,0 1307.4
9	369.4	1207,3		551,20	523,80	11:12	4,54	551,20	358,6	10,8	1209,3
8	340.4	1112,6		509,15	485,52	11:21	4,26	509,15	330,2	10,2	1114,3
7	309.9	1013,0		464,8	441,14	11:27	3,93	464,8	300.4	9,5	1015,0
6	270.2	883,5		407,10	386,0	11:34	3,63	407,10	261,7	8,5	885,5
5	239.7	784,0		362,8	344,08	11:43	3,27	362,8	~~239,5~~	~~7,6~~	785,5 232,2 / 7,5
4	210.7	689,15		320,56	303,27	11:49	2,95	320,5	203,5	7,2	690,7
~~3~~	~~174.0~~	~~569,8~~		~~265,1~~	~~475,6~~	~~11:57~~	~~2,73~~				~~571,3~~
2	160.3	525,0		247,4	238,2	12:11	2,25	247,4	157,7	2,6	526,5
1	82.6	271,4		134,2	137,0	12:17	1,6		86.6	4.0	~~278,8~~ 273,8
3	174,0	569,7		267,3	252,4	12:02	2.48	267,3	167,7	6,3	571,3

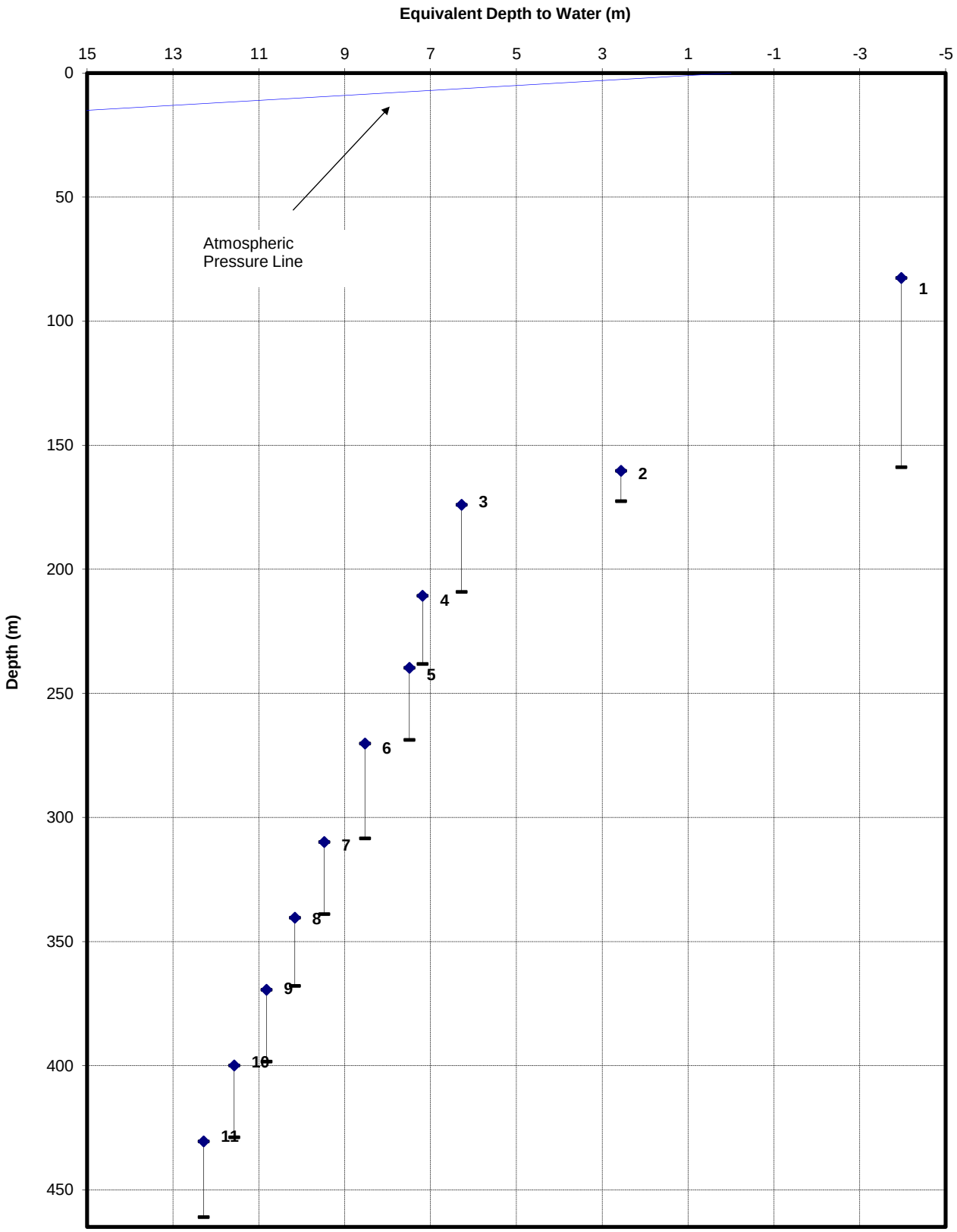
1420.7 1319.7 1219.0 1123.3 1022.7 891.7 ~~799.0~~ 695.3 ~~594.2~~ 529.0 272.6

Notes: w = 0.4335 psi/ft (1.422psi/m) of H_2O Dz = piezometric level in zone Patm = atmospheric pressure H = pressure head of water in zone Dp = true depth of measurement port

Piezometric Profile
Monitoring Well: JGT-06

Not adjusted for borehole deviation
Not adjusted for borehole water salinity

Profile Date: 04/14/2014
Comments: Pre-Inflation Profile



Client: Golder Associates
Site: Ekati Mine
Datum: Ground Surface

Figure 1

Plot By: DO Date: 04/23/2014
Checked By:____Date:____
Westbay Project: WB810

Schlumberger
Water Services

Westbay Piezometric Pressures/Levels

Pre-Inflation Profile Calculation Sheet

Version 1.0

Well No.: **JGT-06**
Datum: GL
Elev. G.S.:
Height of Westbay above G.S.:
Elev. top of Westbay Casing:

Probe Type: Pressure Probe
Serial No.: EMS1764
Probe Range: 1000 psi
Westbay Casing Type: MP 38

Date: Apr 14/2014
Location:
Weather: Overcast
Operator: DO / DV

Units: Metric

Fresh Water Density = 1.422

Ambient Reading (P_{atm}) (pressure, temperature, time)

Start:	Pressure	13.9	Finish:	13.9
	Temp		Temp	
	Time		Time	

P_{atm} 13.9 psi

Notes: w = 0.4335 psi/ft (1.422psi/m) of H_2O Dz = piezometric level in zone Patm = atmospheric pressure H = pressure head of water in zone Dp = true depth of measurement port

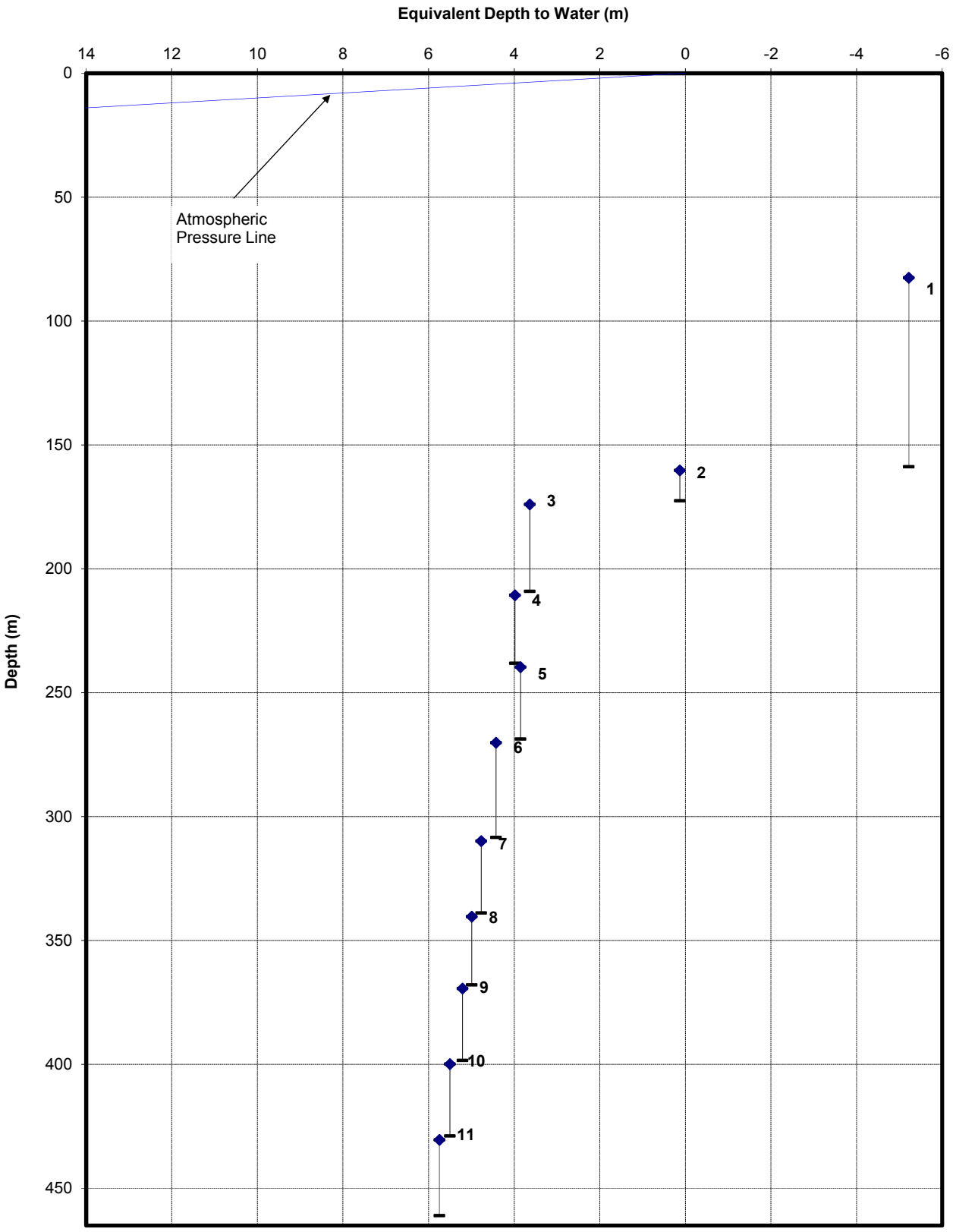
Port No./ Name	Port Position From Log (m)	Port Position From Cable (m)	80 Deg Plunge Angle	Fluid Pressure Readings (psi)					Pressure Head Outside Port (m) H = (P2-Patm)/w	Piez. Level Outside Port (m) Dz = Dp - H	Comments
				Inside Casing (P1)	Outside Casing (P2)	Time H:M:S	Probe Temp. (°C)	Inside Casing (P1)			
1	82.6	-	**81.3**		137.00				**86.57**	**-5.22**	
2	160.3	-	**157.9**		238.20				**157.74**	**0.13**	Packer Inflated
3	174.0	-	**171.4**		252.40				**167.72**	**3.64**	Packer Inflated
4	210.7	-	**207.5**		303.30				**203.52**	**3.98**	
5	239.7	-	**236.1**		344.10				**232.21**	**3.85**	
6	270.2	-	**266.1**		386.00				**261.67**	**4.42**	
7	309.9	-	**305.2**		441.10				**300.42**	**4.77**	
8	340.4	-	**335.2**		483.50				**330.24**	**4.99**	
9	369.4	-	**363.8**		523.80				**358.58**	**5.21**	
10	399.9	-	**393.8**		566.10				**388.33**	**5.50**	
11	430.5	-	**424.0**		608.60				**418.21**	**5.75**	

Depths Adjusted for Borehole Plunge Angle of 80 deg. No Correction for Fluid Density.

Piezometric Profile
Monitoring Well: JGT-06

Depths adjusted for borehole Plunge Angle
Not adjusted for borehole fluid density

Profile Date: 04/14/2014
Comments: Pre-Inflation Profile



Client: Golder Associates
Site: Jay Project
Datum: Ground Surface

Figure 1

Plot By: DO Date: 04/23/2014
Checked By:____Date:____
Westbay Project: WB810

Schlumberger
Water Services

Post-Inflation Profile

Westbay Piezometric Pressures/Levels
Field Data and Calculation Sheet

Well No.: JGT-06
Datum: N/A
Elev. G.S.: N/A
Height of Westbay above G.S.: 1.63 m
Elev. top of Westbay Casing: N/A
Reference Elevation: Ground Surface
Borehole angle: 80°

Probe Type: Sampler
Serial No.: EMS 1768
Probe Range: 1000 psi
Westbay Casing Type: MP38
Sampler Valve Position: closed

Date: Apr. 15/2014
Client: Golder
Job No.: CWB 810
Location: EKATI Mine
Weather: Sunny - 20°C
Operator: D.O.

Note: "Port position" in angled boreholes refer to position along drillhole. True depth (Dp) needs to be calculated using borehole angle and deviation data to calculate zone piezometric level (Dz).

P_{atm} 13.9 psi

Ambient Reading (P_{atm}) (pressure, temperature, time)

		Start	Finish
Pressure		13.9	14.0
Temp		11.8	0.5
Time		12:40	14:12

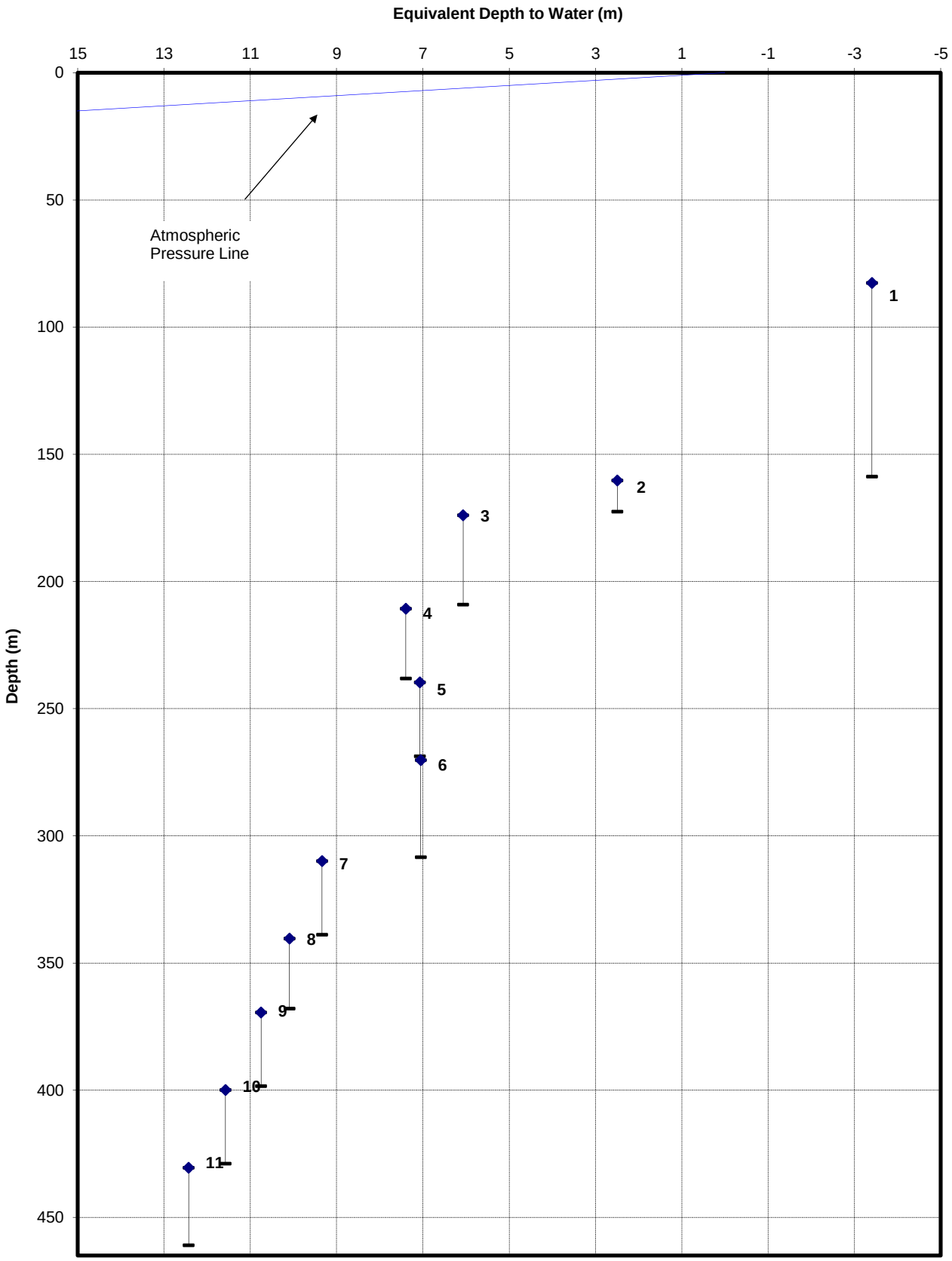
Port No.	Port Position From Log ~~(ft)~~ m	Port Position From Cable ~~FT (ft)~~ m	True Port Depth "Dp" ~~(ft)~~ m	Fluid Pressure Readings: Inside Casing (P1)	Outside Casing (P2)	Time H:M:S	Probe Temp (°C)	Inside Casing (P1)	Pressure Head Outside Port (ft) H = (P2-Patm)/w	Piez. Level Outside Port (ft) Dz = Dp - H	Port pos. in feet:	Comments	May. C.
11	430.5	1408.8	–	634.7	608.4	13:17	4.7	634.7	418.1	12.4	1420.7		1410.4
10	399.9	1308.9	–	590.4	566.1	13:21	4.8	590.4	388.3	11.6	1319.7		1310.8
9	369.4	1209.3	–	546.1	523.9	13:27	4.7	546.1	358.6	10.8	1219.7		1210.9
8	340.4	1114.2	–	504.0	483.6	13:33	4.5	504.0	330.3	~~20.1~~	1123.3	* 10.1	1216.4
7	309.9	1014.6	–	459.6	441.3	13:37	4.0	459.6	300.6	9.3	1022.7		1016.4
6	270.2	885.0	–	401.9	388.1	13:44	3.5	401.9	263.2	7.0	891.7		886.8
5	239.7	785.1	–	357.6	344.7	13:49	3.2	357.6	232.6	7.1	791.0		787.0
4	210.7	690.6	–	315.4	303.0	13:52	3.0	315.4	203.3	7.4	695.3		692.5
3	174.0	570.3	–	262.2	252.7	13:57	2.6	262.2	167.9	6.1	574.2		572.9
2	160.3	526.0	–	242.3	238.3	14:01	2.3	242.3	157.8	2.5	529.0		527.9
1*	82.6	272.4	–	129.2	136.5	14:08	1.2	129.2	86.2	3.6	272.6		274.2
													41 -ft
	* not inflated yet												
1⊛	82.6	273.0	–	136.0	136.2	13³⁰	1.4						
⊛	Pressure from Apr. 16/2014 after inflation of packer #11												

Notes: w = 0.4335 psi/ft (1.422psi/m) of H_2O Dz = piezometric level in zone Patm = atmospheric pressure H = pressure head of water in zone Dp = true depth of measurement port

Piezometric Profile
Monitoring Well: JGT-06

Not adjusted for borehole deviation
Not adjusted for borehole water salinity

Profile Date: 04/15/2014
Comments: Post-Inflation Profile



Client: Golder Associates
Site: Ekati Mine
Datum: Ground Surface

Figure 2

Plot By: DO Date: 04/23/2014
Checked By:____Date:_____
Westbay Project: WB810

Schlumberger
Water Services

Westbay Piezometric Pressures/Levels

Post-Inflation Profile Calculation Sheet

Version 1.0

Well No.: **JGT-06**
Datum: GL
Elev. G.S.:
Height of Westbay above G.S.:
Elev. top of Westbay Casing:

Probe Type: Pressure Probe
Serial No.: EMS1764
Probe Range: 1000 psi
Westbay Casing Type: MP 38

Date: April 15 2014
Location: Ekati Mine
Weather: Sun
Operator: DO

Units: Metric

Fresh Water Density = 1.422

Ambient Reading (P_{atm}) (pressure, temperature, time)

Start:	Pressure	13.61	Finish:	13.6
	Temp	11.8	Temp	0.5
P_{atm} 13.9 psi	Time	12:40	Time	14:12

Notes: w = 0.4335 psi/ft (1.422psi/m) of H_2O Dz = piezometric level in zone Patm = atmospheric pressure H = pressure head of water in zone Dp = true depth of measurement port

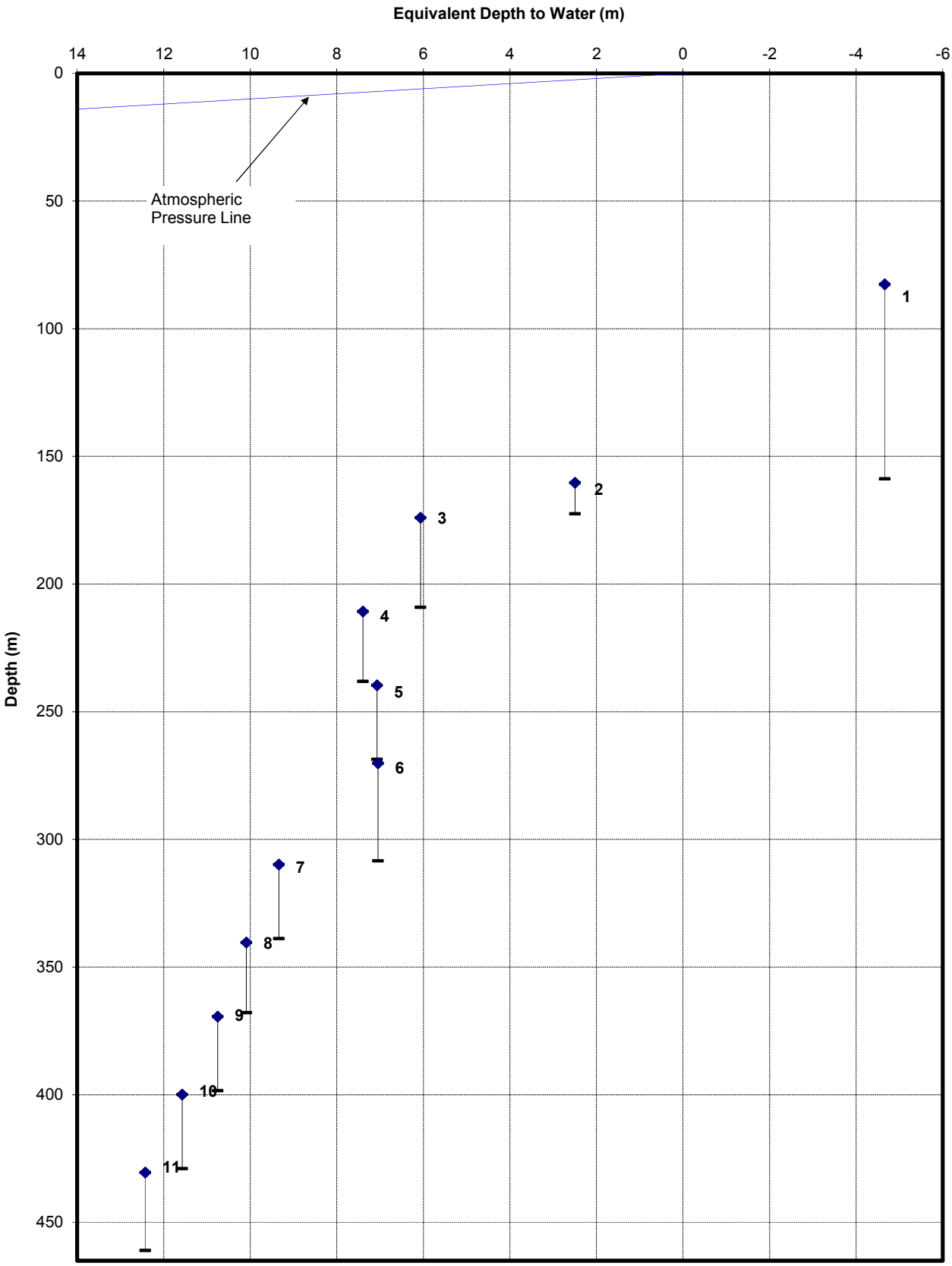
Port No./ Name	Port Position From Log (m)	Port Position From Cable (m)	80 Deg Plunge Angle	Fluid Pressure Readings (psi)					Pressure Head Outside Port (m) H = (P2-Patm)/w	Piez. Level Outside Port (m) Dz = Dp - H	Comments
				Inside Casing (P1)	Outside Casing (P2)	Time H:M:S	Probe Temp. (°C)	Inside Casing (P1)			
1	82.6		**81.3**		136.20				**86.01**	**-4.66**	
2	160.3		**157.9**		238.30				**157.81**	**2.49**	
3	174.0		**171.4**		252.70				**167.93**	**6.07**	
4	210.7		**207.5**		303.00				**203.31**	**7.39**	
5	239.7		**236.1**		344.70				**232.63**	**7.07**	
6	270.2		**266.1**		388.10				**263.15**	**7.05**	
7	309.9		**305.2**		441.30				**300.56**	**9.34**	
8	340.4		**335.2**		483.60				**330.31**	**10.09**	
9	369.4		**363.8**		523.90				**358.65**	**10.75**	
10	399.9		**393.8**		566.10				**388.33**	**11.57**	
11	430.5		**424.0**		608.40				**418.07**	**12.43**	
0											

Depths Adjusted for Borehole Plunge Angle of 80 deg. No Correction for Fluid Density.

Piezometric Profile
Monitoring Well: JGT-06

Depths adjusted for borehole Plunge Angle
Not adjusted for borehole fluid density

Profile Date: 04/15/2014
Comments: Post-Inflation Profile



Client: Golder Associates
Site: Jay Project
Datum: Ground Surface

Figure 2

Plot By: DO Date: 04/23/2014
Checked By:____Date:_____
Westbay Project: WB810

Casing Installation Log

Company: Golder
Well: JGT-06
Site: Ekati Mine
Project:

Job No: WB810
Author: DO

Well Information

Reference Datum:
Elevation of Datum: 0.00 m.
MP Casing Top: 0.00 m.
MP Casing Length: 461.05 m.

Borehole Depth: 461.30 m.
Borehole Inclination: 80 degrees
Borehole Diameter: 96.00 mm

Well Description:
MP38
Other References:
Zero Reference: Ground Surface

File Information

File Name: JGT-06.WWD
Report Date: Tue Apr 08 20:00:51 2014

File Date: Apr 07 18:27:25 2014

Comments

Zero Reference is Ground Surface.
No filter sleeves to be used.
No pressure testing of couplings.

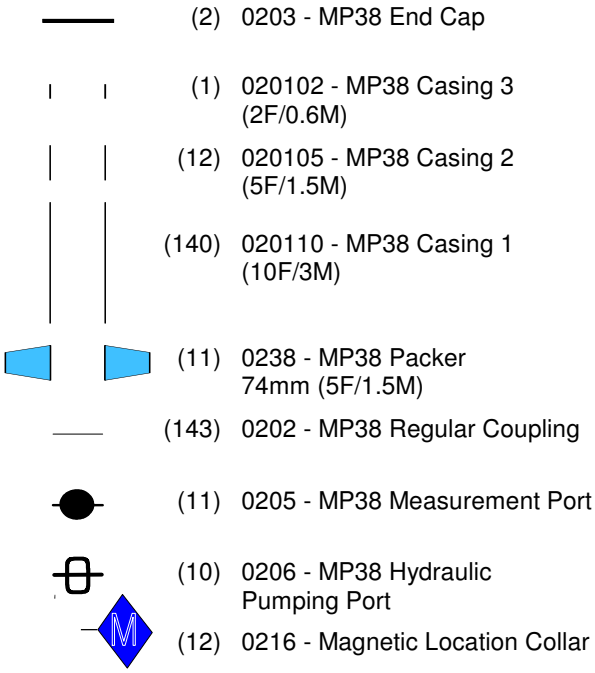
Log Information

Borehole condition confirmed.	(method) DV	Date: April 8, 14
MP well design & preparation.	By: D.O.	Date: April 8/2014
MP well design checked.	By: DV	Date: April 8, 14
MP well and borehole approved to install.	By: DV	Date: April 8/2014

Legend

(Qty) MP Components | **Geology** | **Backfill/Casing**

(Library - WD Library 4/3/12)



(2) 0203 - MP38 End Cap

(1) 020102 - MP38 Casing 3 (2F/0.6M)

(12) 020105 - MP38 Casing 2 (5F/1.5M)

(140) 020110 - MP38 Casing 1 (10F/3M)

(11) 0238 - MP38 Packer 74mm (5F/1.5M)

(143) 0202 - MP38 Regular Coupling

(11) 0205 - MP38 Measurement Port

(10) 0206 - MP38 Hydraulic Pumping Port

(12) 0216 - Magnetic Location Collar

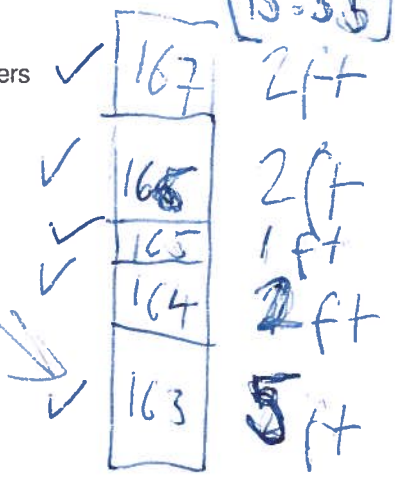
Casing Installation Log
Golder

Job No: WB810
Well: JGT-06

END
13:55

Scale Meters	Westbay Casing	QA Tested OK	MP Casing Description
	164		2 ft.
0	163		5 ft.
	162		020105 - MP38 Casing 2 (5F/1.5M)
	161		020105 - MP38 Casing 2 (5F/1.5M)
	160		020105 - MP38 Casing 2 (5F/1.5M)
	159		020110 - MP38 Casing 1 (10F/3M)
10	158		020110 - MP38 Casing 1 (10F/3M)
	157		020110 - MP38 Casing 1 (10F/3M)
	156		020110 - MP38 Casing 1 (10F/3M)
	155		020110 - MP38 Casing 1 (10F/3M)
20	154		020110 - MP38 Casing 1 (10F/3M)
	153		020110 - MP38 Casing 1 (10F/3M)
	152		020110 - MP38 Casing 1 (10F/3M)
30	151		020110 - MP38 Casing 1 (10F/3M)
	150		020110 - MP38 Casing 1 (10F/3M)
	149		020110 - MP38 Casing 1 (10F/3M)
40	148		020110 - MP38 Casing 1 (10F/3M)
	147		020110 - MP38 Casing 1 (10F/3M)
	146		020110 - MP38 Casing 1 (10F/3M)
50	145		020110 - MP38 Casing 1 (10F/3M)
	144		020110 - MP38 Casing 1 (10F/3M)
	143		020110 - MP38 Casing 1 (10F/3M)
	142		020110 - MP38 Casing 1 (10F/3M)
60			

Serial Numbers



Finished lowering Westbay Casing at 13:55 on Wed. Apr. 9/2014.

BH waterlevel at ~ 30m below zero before lowering.

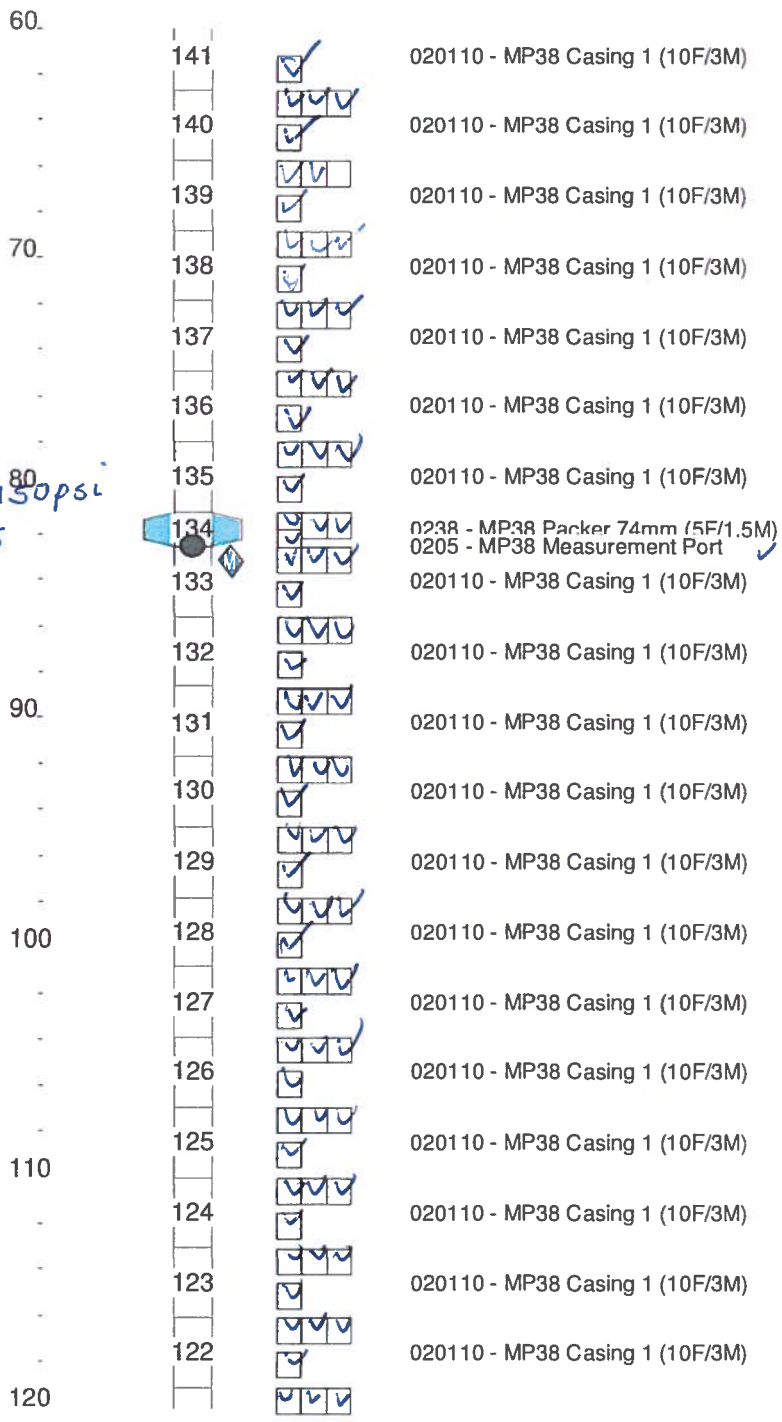
GLYCOL 30 L

Integrity Test performed by Vladimir Stastny:

feet:	time:
444.40	13:27
444.51	13:32
444.50	13:37
444.50	13:42
" "	13:47
" "	13:52
" "	13:57
" "	14:02
444.50	14:07

Casing Installation Log
Golder

Job No: WB810
Well: JGT-06



18704 - 150psi
8145

8145

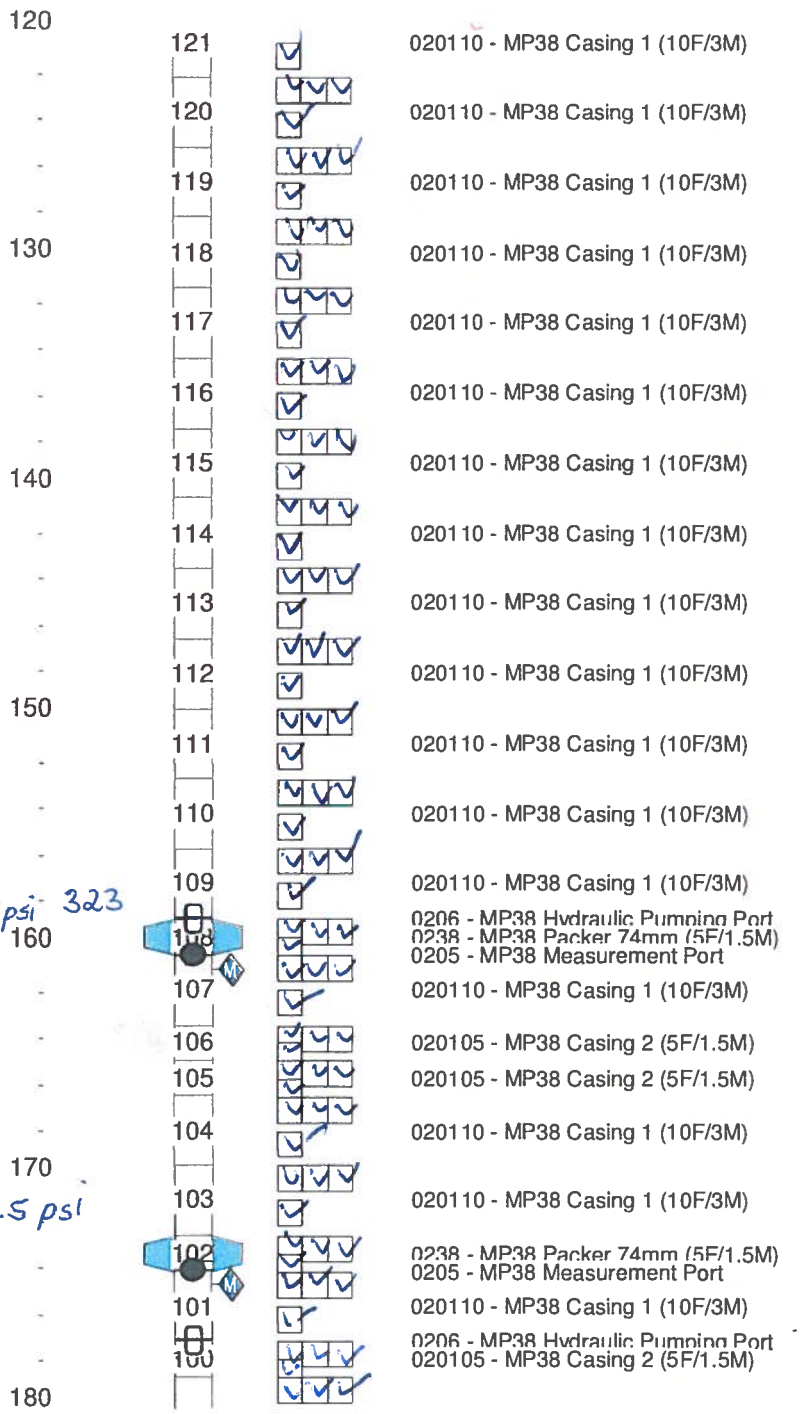
GLYCOL 30L 13:00

GLYCOL 30L 12:45

Tue Apr 08 20:02:39 2014

Casing Installation Log
Golder

Job No: WB810
Well: JGT-06



GLYCOL 20 L 12:30

18705 - 145psi 323
8151

323 GLYCOL 20 L 11:45

18706 - 145 psi
8152

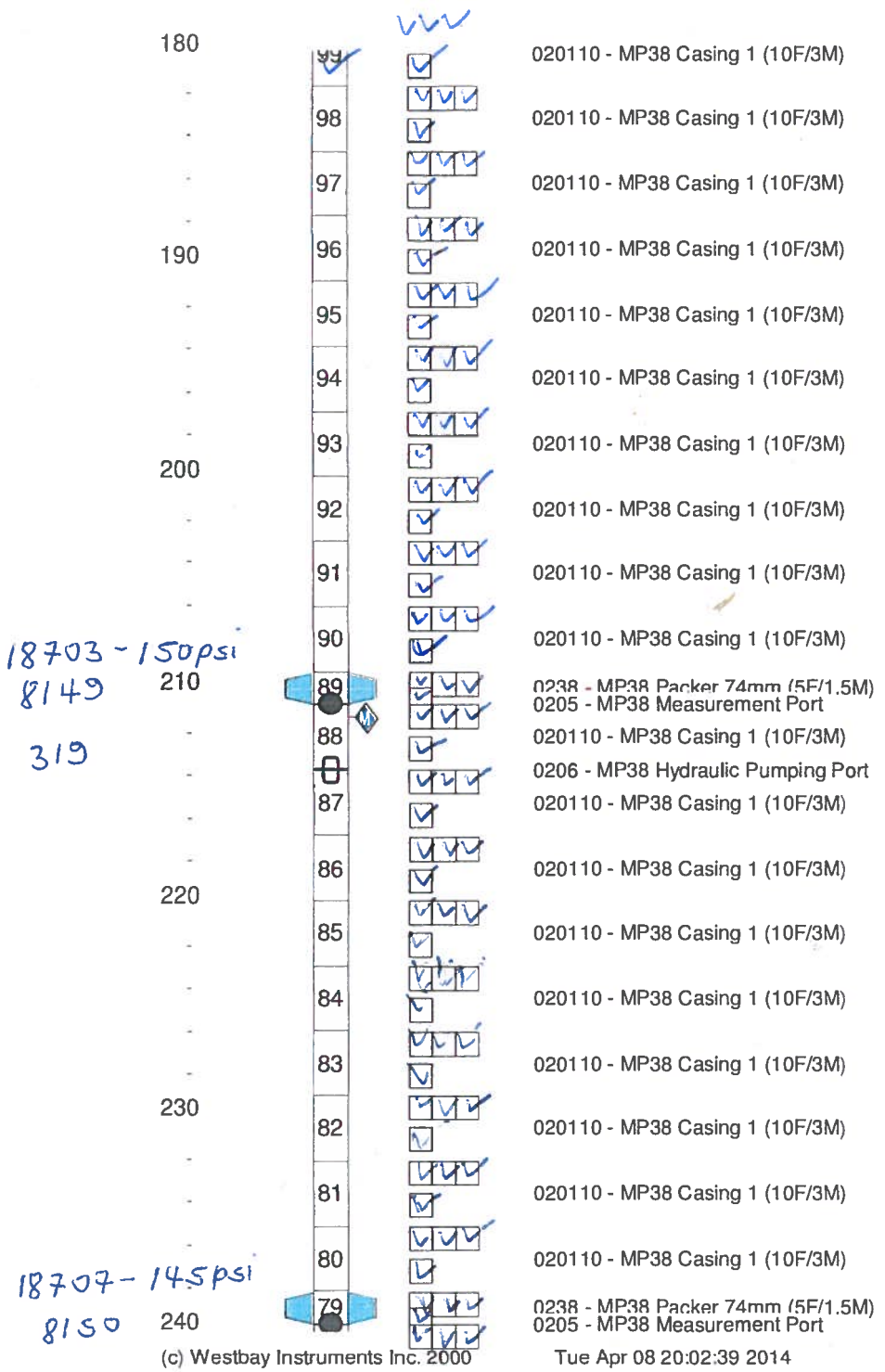
8152

318

318

Casing Installation Log
Golder

Job No: WB810
Well: JGT-06



18703 - 150psi
8149
319

GLYCOL 20 L 11:20

8149

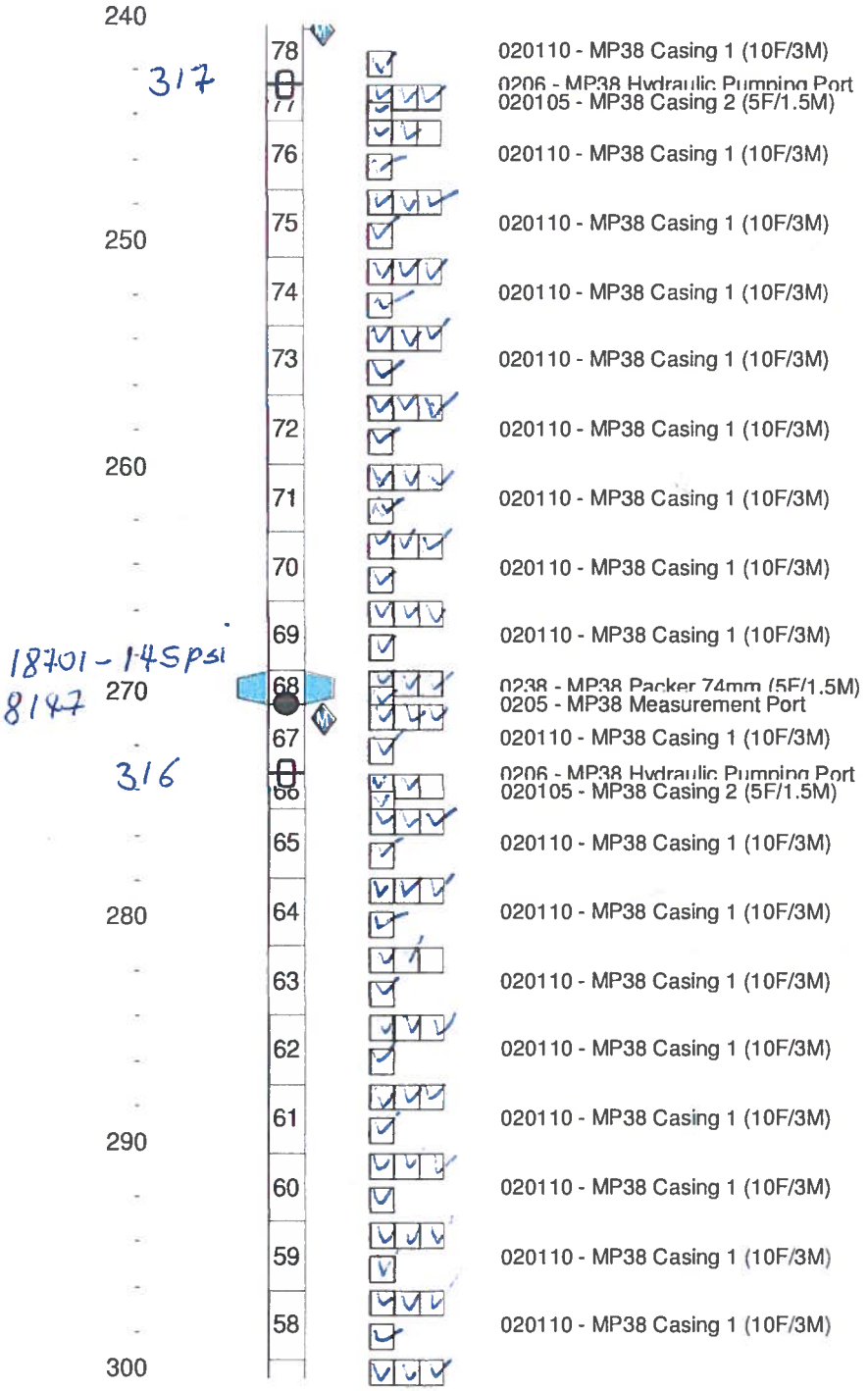
18707 - 145psi
8150

GLYCOL 20 L 11:05

Tue Apr 08 20:02:39 2014

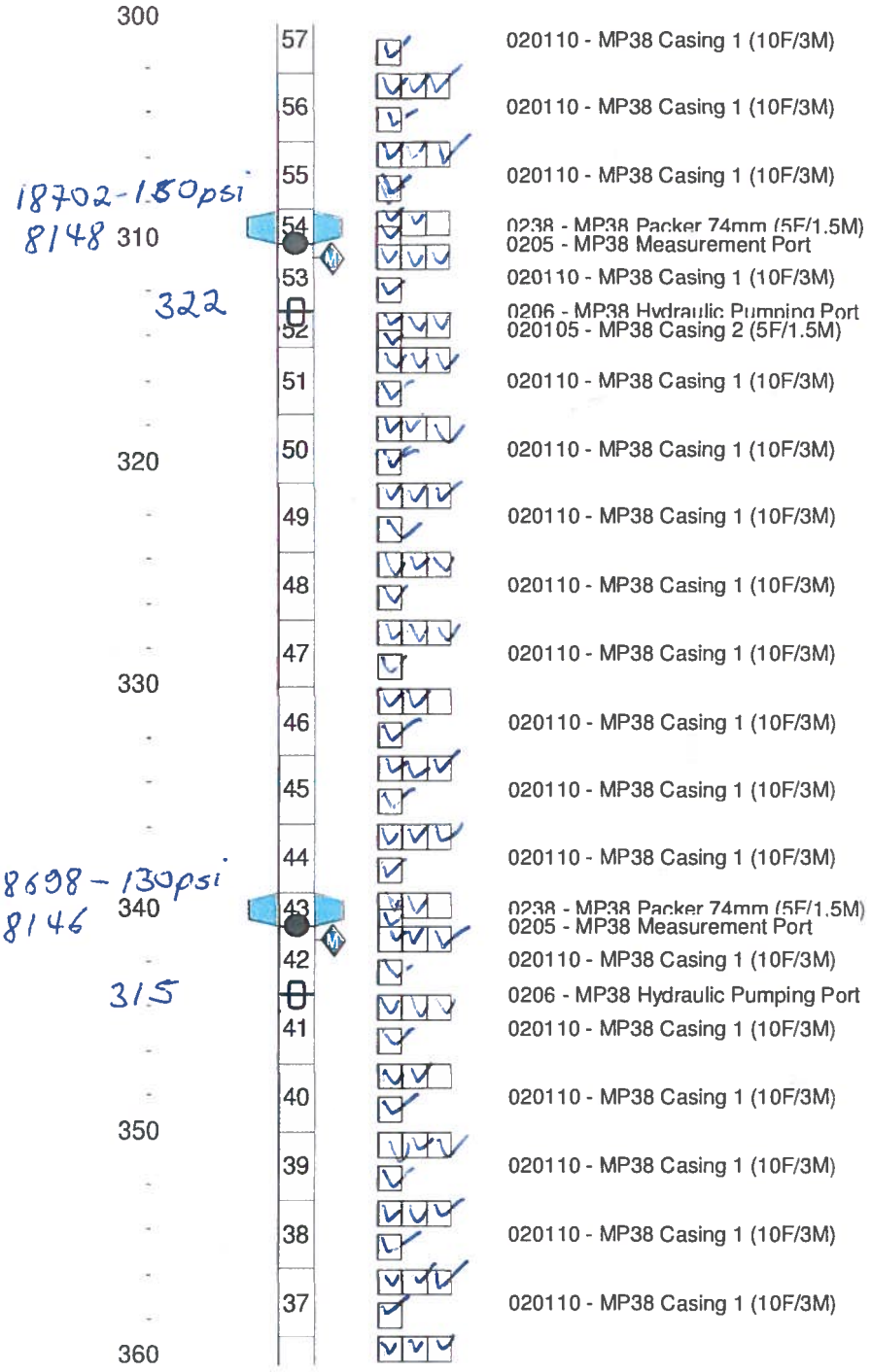
Casing Installation Log
Golder

Job No: WB810
Well: JGT-06



Casing Installation Log
Golder

Job No: WB810
Well: JGT-06



Serial Numbers

18702 - 150psi
8148

322

GLYCOL 20L [10:05]

322

18698 - 130psi
8146

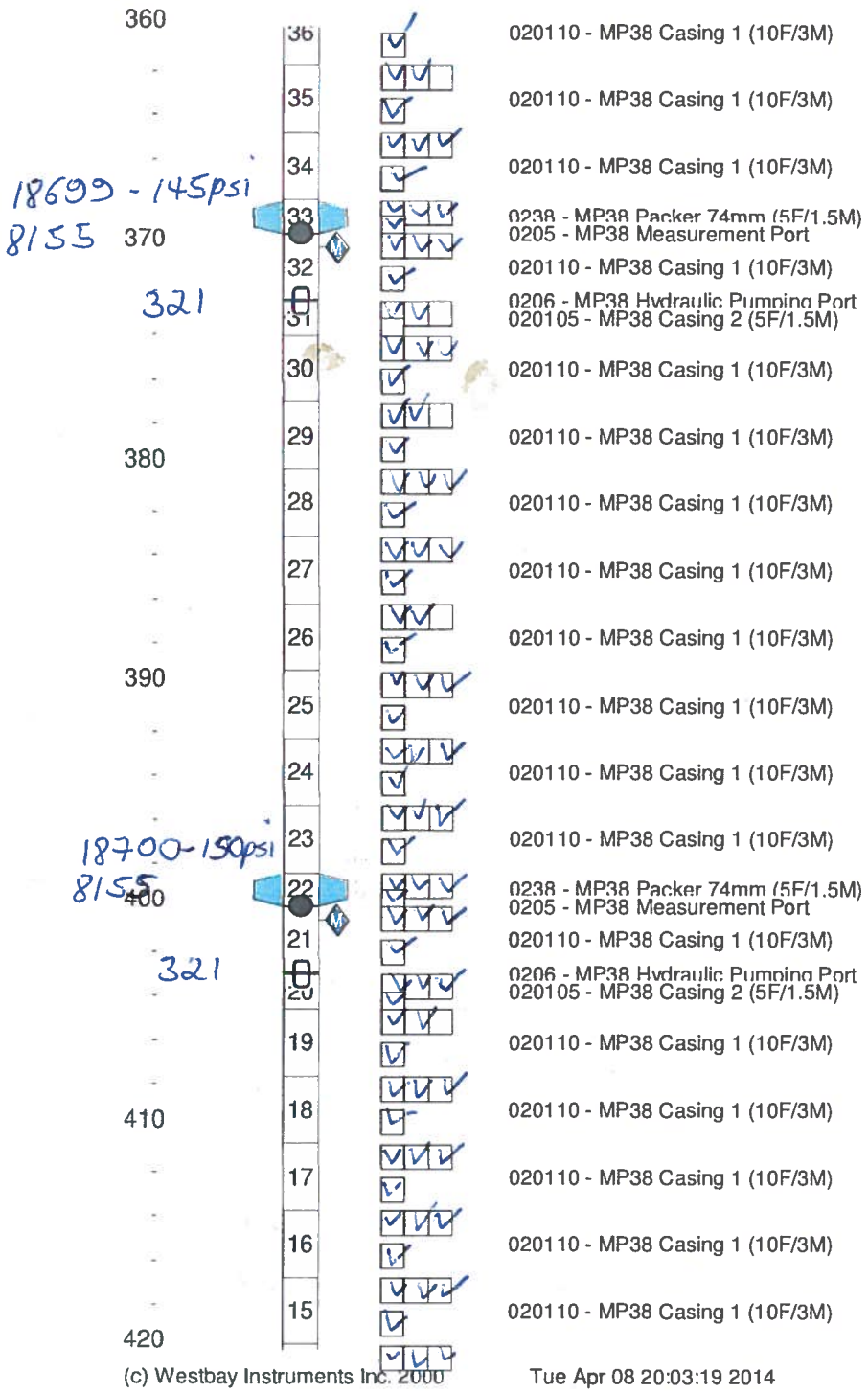
315

GLYCOL 20L [9:45]

315

Casing Installation Log
Golder

Job No: WB810
Well: JGT-06



Tue Apr 08 20:03:19 2014

Casing Installation Log
Golder

Job No: WB810
Well: JGT-06

Scale Meters	Westbay Casing	QA Tested OK	MP Casing Description	Serial Numbers
420				
	14	☑	020110 - MP38 Casing 1 (10F/3M)	
	13	☑	020110 - MP38 Casing 1 (10F/3M)	
	12	☑	020110 - MP38 Casing 1 (10F/3M)	
430	11	☑	0238 - MP38 Packer 74mm (5F/1.5M)	
		☑	0205 - MP38 Measurement Port	
	10	☑	020110 - MP38 Casing 1 (10F/3M)	
		☑	0206 - MP38 Hydraulic Pumping Port	
	9	☑	020110 - MP38 Casing 1 (10F/3M)	
	8	☑	020110 - MP38 Casing 1 (10F/3M)	
440	7	☑	020110 - MP38 Casing 1 (10F/3M)	
	6	☑	020110 - MP38 Casing 1 (10F/3M)	
	5	☑	020110 - MP38 Casing 1 (10F/3M)	
450	4	☑	020110 - MP38 Casing 1 (10F/3M)	
	3	☑	020110 - MP38 Casing 1 (10F/3M)	
	2	☑	020110 - MP38 Casing 1 (10F/3M)	
460	1	☑	020110 - MP38 Casing 1 (10F/3M)	
		☑	0203 - MP38 End Cap	
470				
480				

18697 - 135psi
8153

314

- RIG ASSISTANCE 8:30
#314

8:00

Schlumberger
Water Services

Sheet 1 of 11

Westbay Packer Inflation Record

Project: EKATI | Project No.: WB810 | Well No.: JGT-06

Location: EKATI Mine | Completed by: D.O. | Date Inflated: Apr. 14/2014

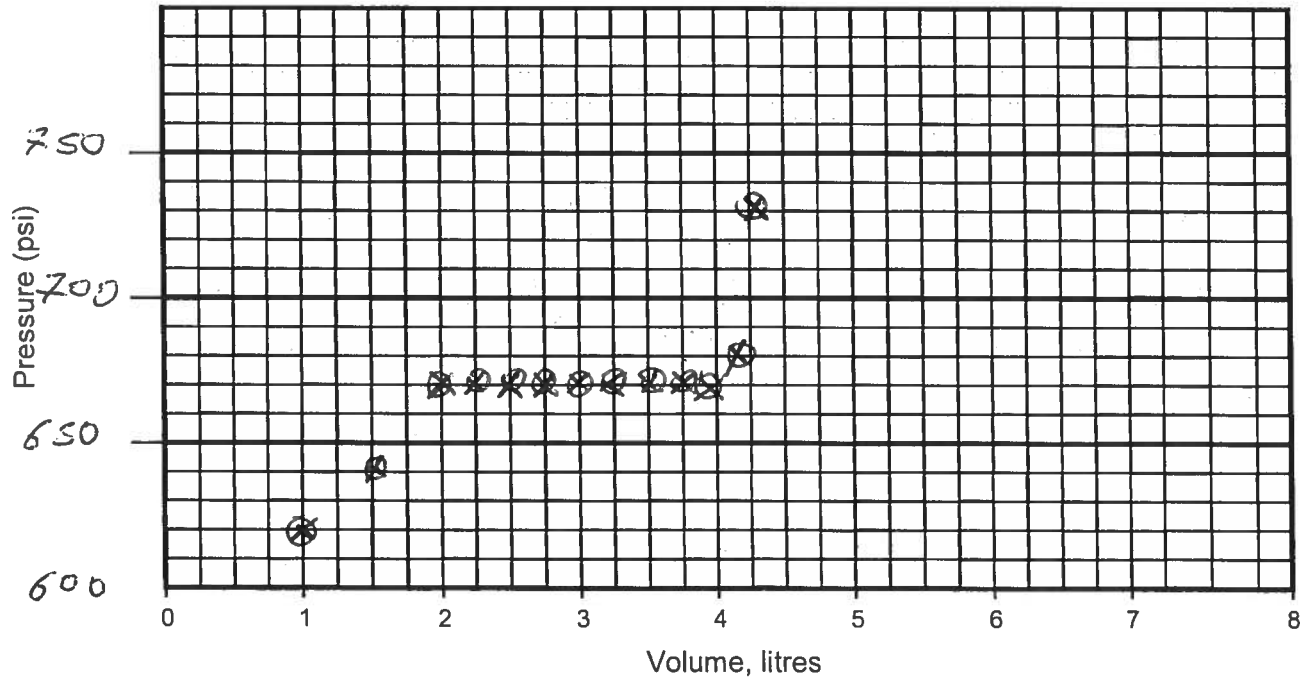
Packer No. 1; comp # 11 | Depth (ft / m): 428.9 | Inflation Tool No.: TIW 852

Packer Valve Pressure, P_V: 135 psi | Final Line Pressure, P_L: 730 psi | Tool Pressure, P_T: 450 psi

Borehole Water Level: GS (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 145 psi

Volume, litres	1.0	1.5	2	2.25	2.5	2.75	3.0	3.25	3.5	3.75
Pressure, psi	620	640	670	670	670	670	670	670	670	670
Volume, litres	4.0	4.2	4.3	/	3.8					
Pressure, psi	670	680	730	/	0					



Comments: Packer # 1 | Time - 15:38

Schlumberger
Water Services

Sheet 2 of 11

Westbay Packer Inflation Record

Project: EKATI - Golder Project No.: 4JB810 Well No.: JGT-05

Location: EKATI - Mine Completed by: D.O. Date Inflated: Apr. 14/2014

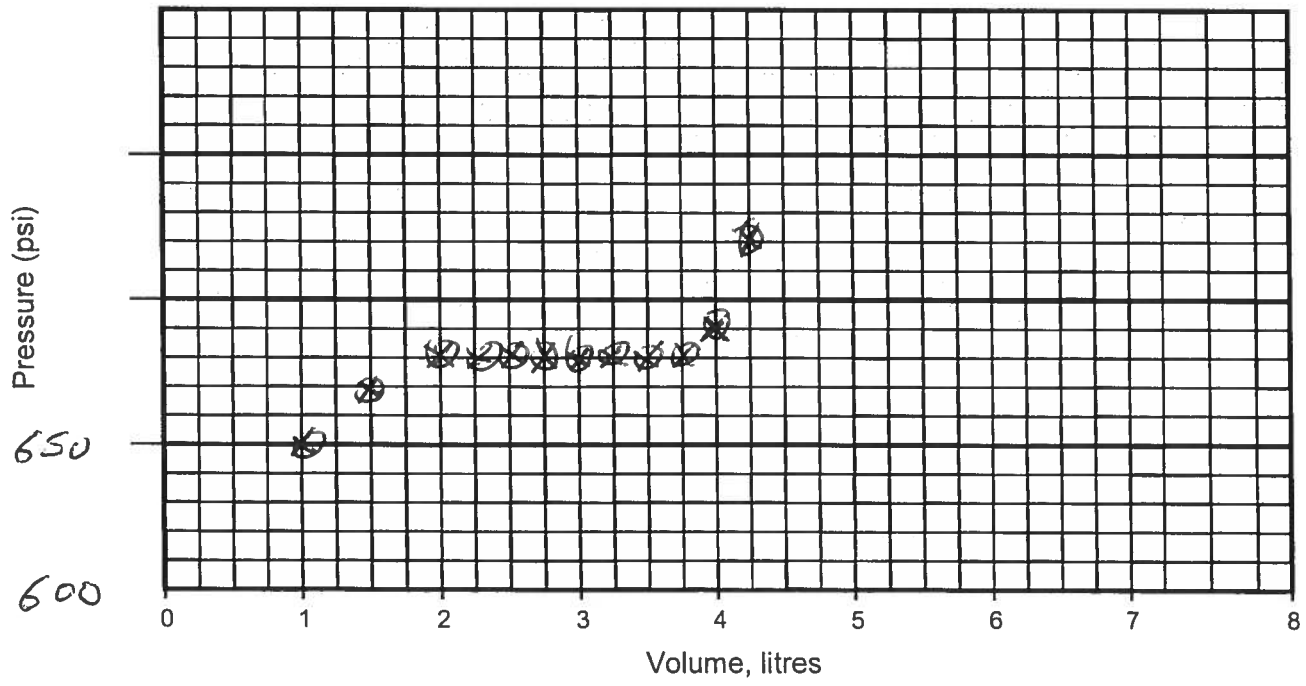
Packer No. 2, comp. # 22 Depth (ft (m)): 498.4 Inflation Tool No.: TIW852

Packer Valve Pressure, P_V: 150 psi Final Line Pressure, P_L: 720 psi Tool Pressure, P_T: 450 psi

Borehole Water Level: G.S. (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 120 psi

Volume, litres	1.0	1.5	2.0	2.25	2.5	2.75	3.0	3.25	3.50	3.75
Pressure, psi	650	670	680	680	680	680	680	680	680	680
Volume, litres	4.0	4.1	4.25	/	3.8					
Pressure, psi	690	690	720	/	0					



Comments: Packer # 2 Time - 16 : 14

Schlumberger
Water Services

Sheet 3 of 11

Westbay Packer Inflation Record

Project: EKATI - Golden Project No.: WB810 Well No.: GJT-06

Location: EKATI - Misi Completed by: D.O. Date Inflated: Apr. 14/2014

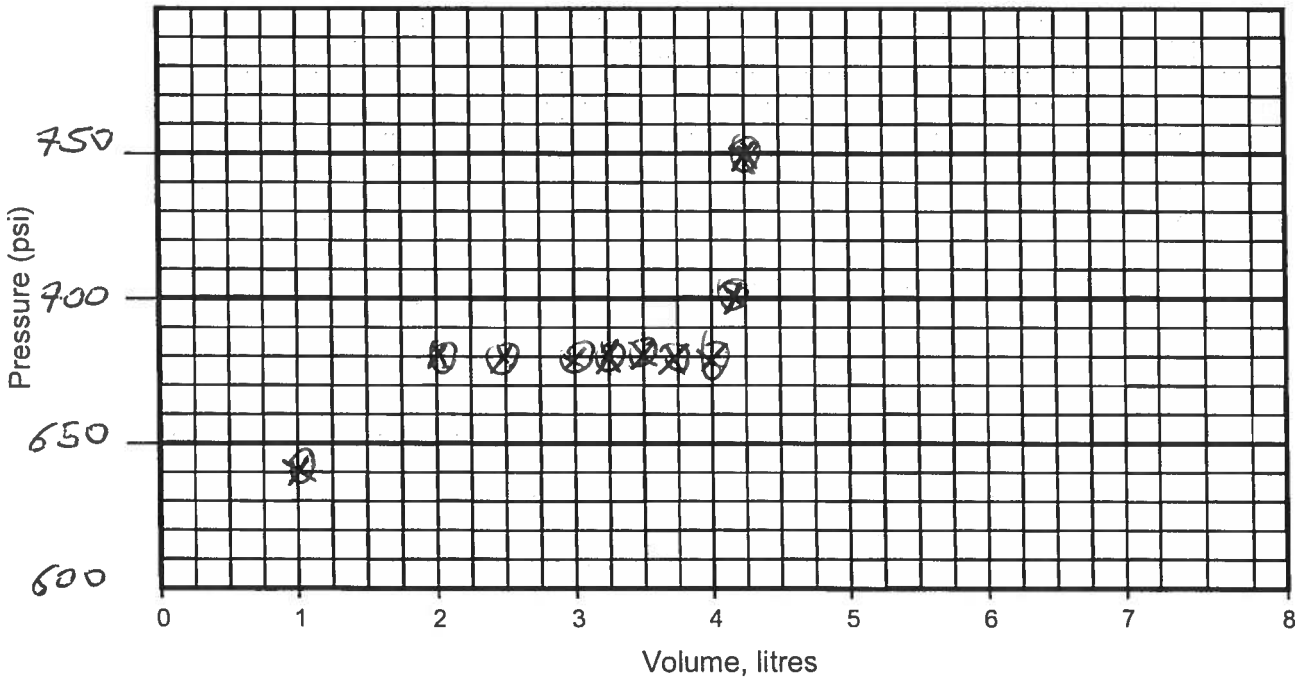
Packer No. 3, comp. # 33 Depth (ft / m): 367.9 Inflation Tool No.: TIW 852

Packer Valve Pressure, P_V: 145 psi Final Line Pressure, P_L: 750 psi Tool Pressure, P_T: 450 psi

Borehole Water Level: G.S. (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 155 psi

Volume, litres	1.0	2.0	2.5	3.0	3.25	3.5	3.75	4.0	4.2	4.3
Pressure, psi	640	680	680	680	680	680	680	680	700	750
Volume, litres	/	3.8								
Pressure, psi	/	0								



Comments: Packer # 3 Time - 16:45

Schlumberger
Water Services

Sheet 4 of 11

Westbay Packer Inflation Record

Project: EKATI - Goider Project No.: WB816 Well No.: JGT-06

Location: EKATI - Misc Completed by: D.O. Date Inflated: Apr. 14/2014

Packer No. 4, comp. # 43 Depth (ft / m): 338.9 Inflation Tool No.: TIW 852

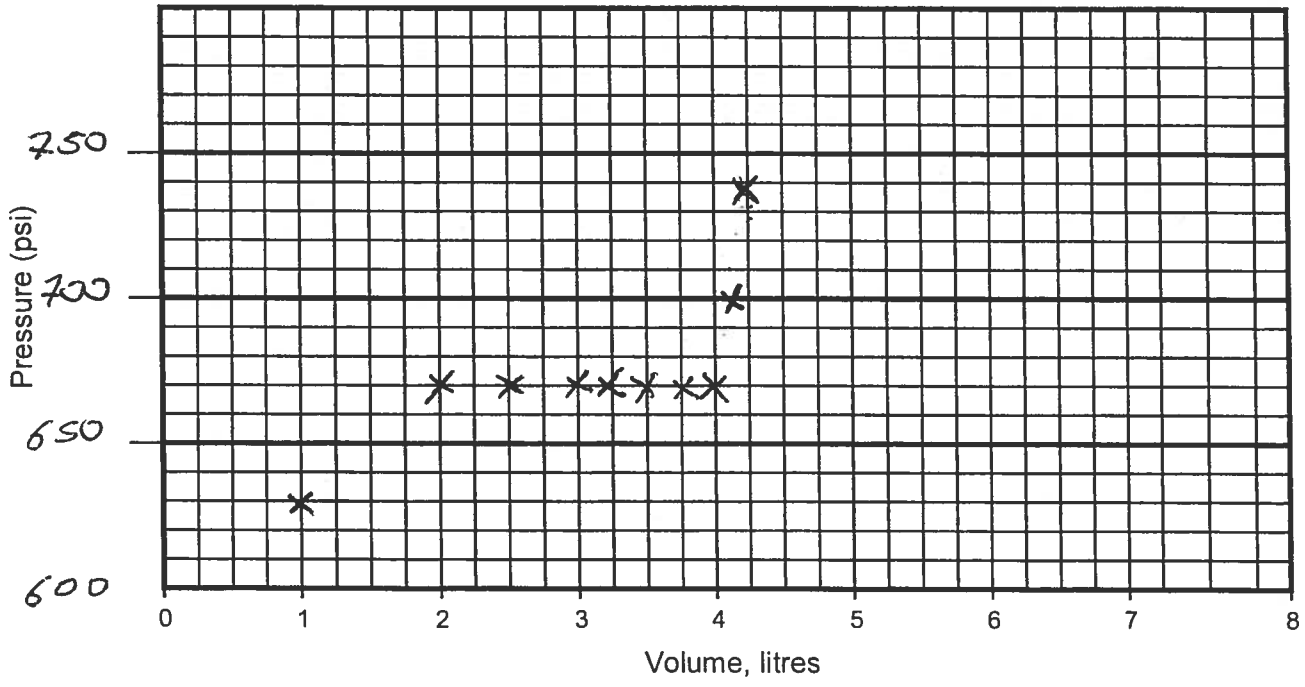
Packer Valve Pressure, P_V: 130 psi Final Line Pressure, P_L: 750 psi Tool Pressure, P_T: 450 psi

Borehole Water Level: G.S. (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 170 psi

Volume, litres	1.0	2.0	2.5	3.0	3.25	3.5	3.75	4.0	4.2	4.25
Pressure, psi	630	670	670	670	670	670	670	670	700	740

Volume, litres	1	3.8								
Pressure, psi	1	0								



Comments: Packer # 4 Time - 17:15

Schlumberger
Water Services

Sheet 5 of 11

Westbay Packer Inflation Record

Project: EKATI - Golder | Project No.: WB810 | Well No.: JGT-06

Location: EKATI Mine | Completed by: D.O. | Date Inflated: Apr. 14/2014

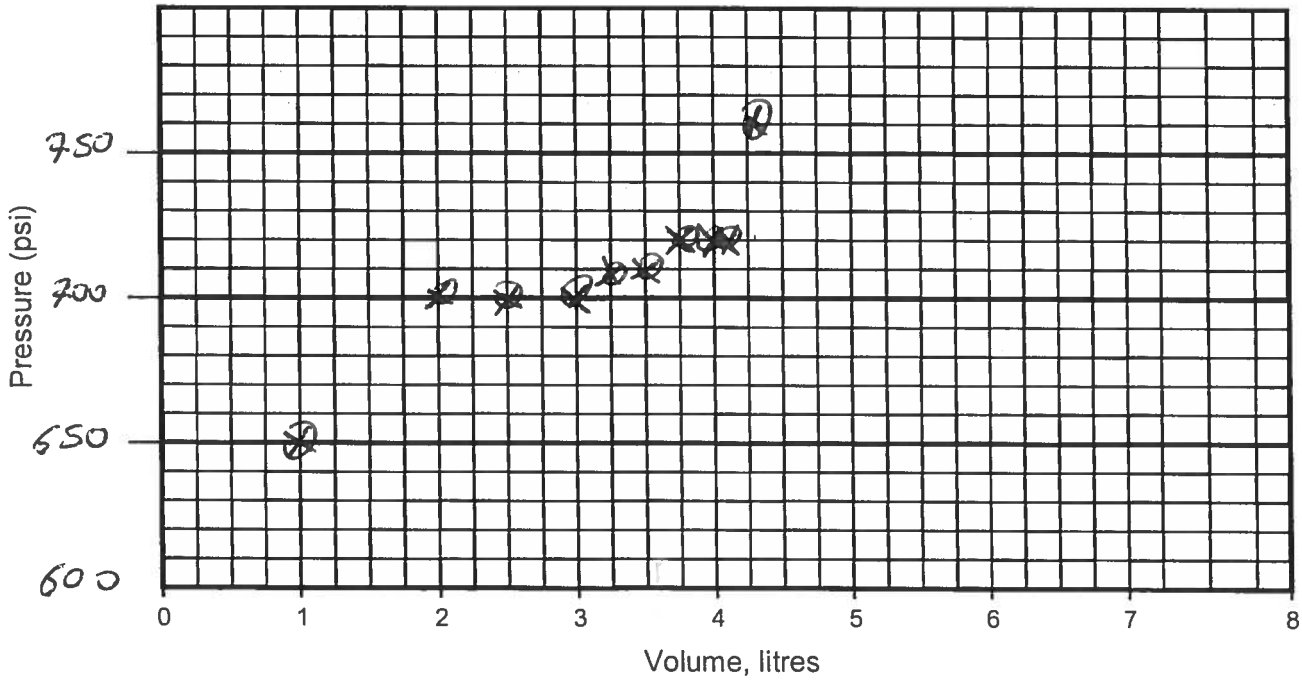
Packer No. 5, Comp. # 54 | Depth (ft / (m)): 308.4 | Inflation Tool No.: TIW-852

Packer Valve Pressure, P_V: 160 psi | Final Line Pressure, P_L: 760 psi | Tool Pressure, P_T: 450 psi

Borehole Water Level: G.S. (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 150 psi

Volume, litres	1.0	2.0	2.25	2.5	3.0	3.25	3.5	3.75	3.85	4.0
Pressure, psi	650	700	700	700	700	710	710	720	720	720
Volume, litres	4.15	4.3	/	3.8						
Pressure, psi	720	760	/	0						



Comments: Packer # 5 Time - 17:53

Schlumberger
Water Services

Westbay Packer Inflation Record

Project: EKATI - Golder Project No.: WB 810 Well No.: JGT-06

Location: EKATI Completed by: D.O. Date Inflated: Apr. 15/2014

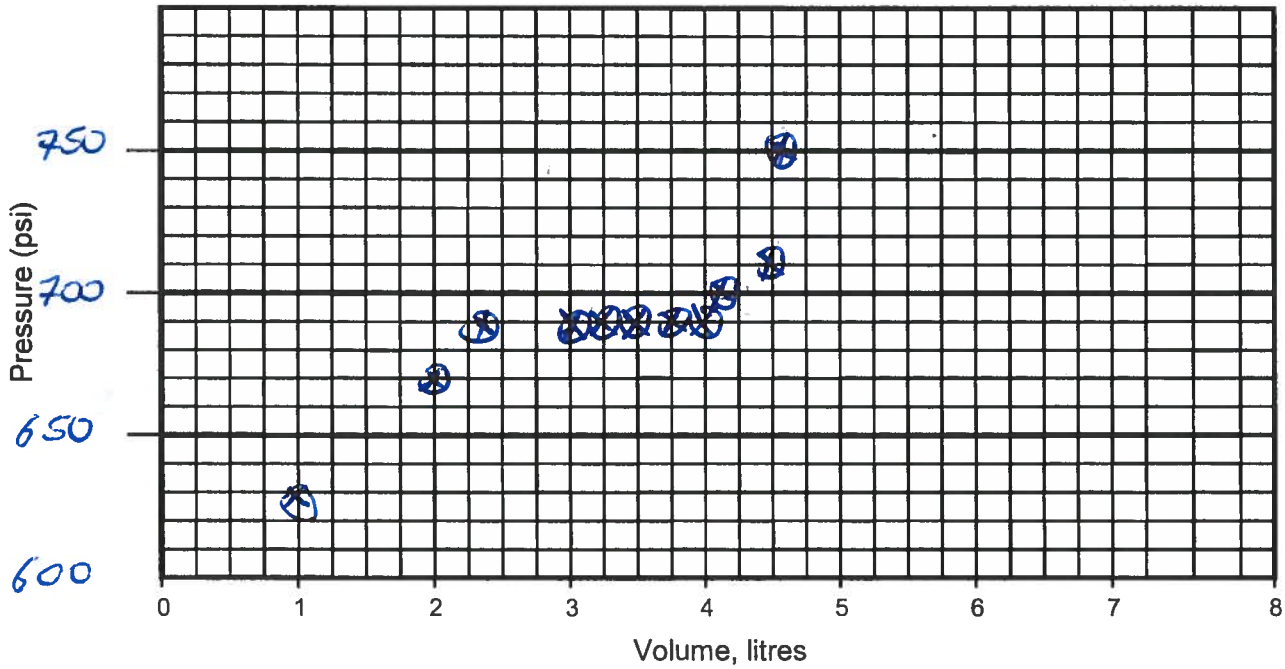
Packer No. 6, comp. # Depth (ft / m): 268.7 Inflation Tool No.: TW 852

Packer Valve Pressure, P_V: 145 psi Final Line Pressure, P_L: 750 psi Tool Pressure, P_T: 450 psi

Borehole Water Level: 0 (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 155 psi

Volume, litres	1.0	2.0	2.4	3.0	3.25	3.5	3.75	4.0	4.15	4.25
Pressure, psi	630	670	690	690	690	690	690	690	700	700
Volume, litres	4.35	4.5	4.6	/	4.1					
Pressure, psi	700	710	750	/	0					



Comments: Packer # 6 Time - 11:05

Schlumberger
Water Services

Westbay Packer Inflation Record

Project: EKATI - Golder | Project No.: WJ8810 | Well No.: JGT-06

Location: EKATI - Mine | Completed by: D.O. | Date Inflated: Apr. 15/2014

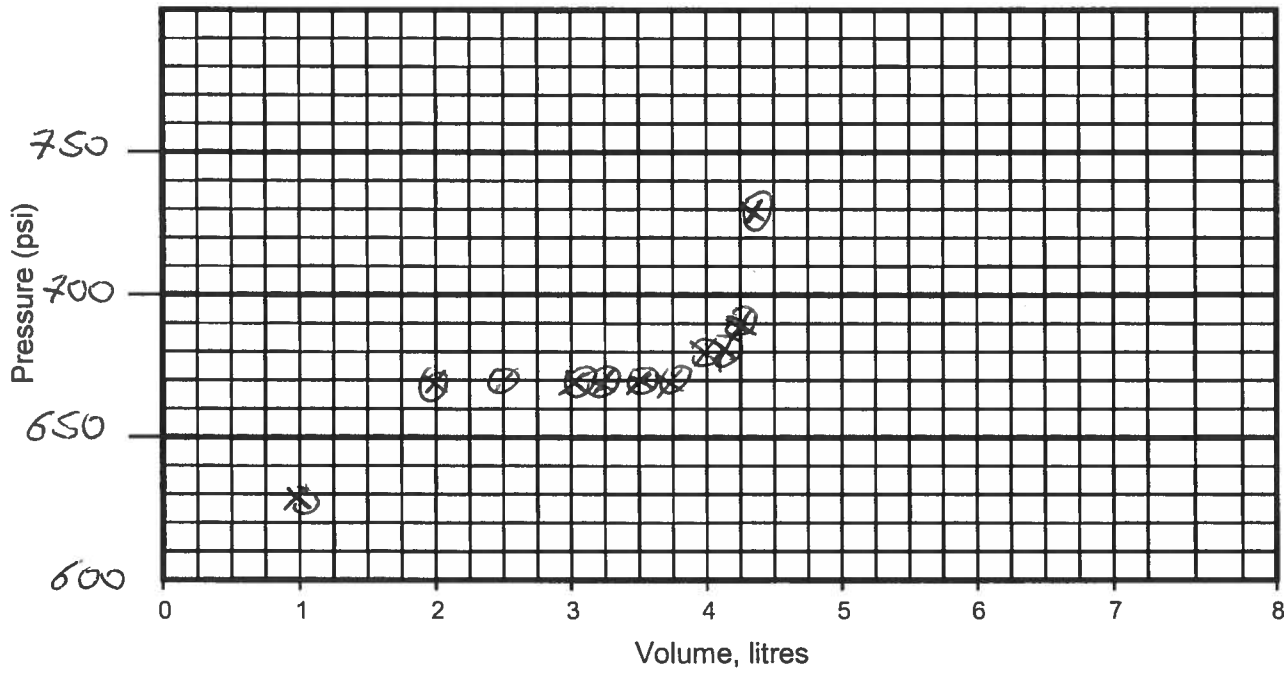
Packer No. 7, comp. # 79 | Depth (ft / m): 238.1 | Inflation Tool No.: TIW852

Packer Valve Pressure, P_V: 145 psi | Final Line Pressure, P_L: 730 psi | Tool Pressure, P_T: 450 psi

Borehole Water Level: 0 (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 135 psi

Volume, litres	1.0	2.0	2.5	3.0	3.25	3.5	3.75	4.0	4.15	4.25
Pressure, psi	630	670	670	670	670	670	670	680	680	690
Volume, litres	4.35	/	3.8							
Pressure, psi	730	/	0							



Comments: Packer # 7 Time - 11:38

Schlumberger
Water Services

Sheet 8 of 11

Westbay Packer Inflation Record

Project: EKATI - Golder | Project No.: 13810 | Well No.: JGT-06

Location: EKATI Mine | Completed by: D.O. | Date Inflated: Apr. 15/2014

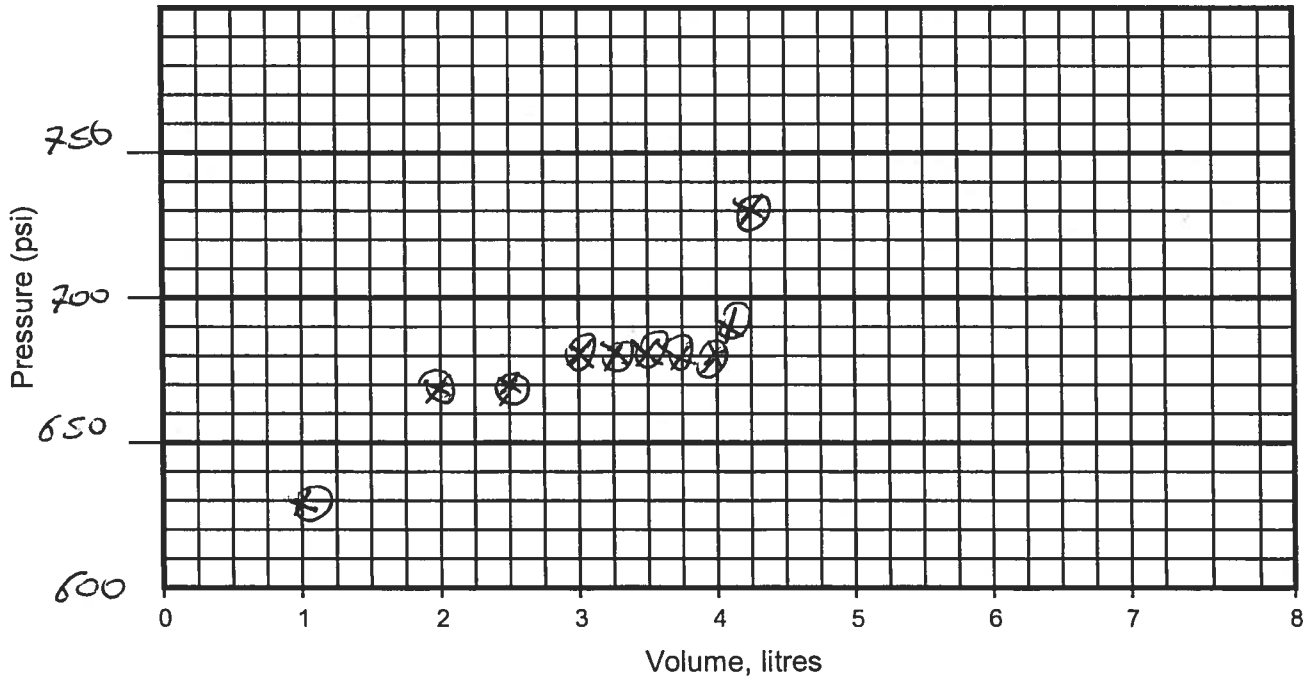
Packer No. 8, comp. # 89 | Depth (ft / m): 209.1 | Inflation Tool No.: TIW 852

Packer Valve Pressure, P_V: 150 psi | Final Line Pressure, P_L: 730 psi | Tool Pressure, P_T: 450 psi

Borehole Water Level: 0 (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 130 psi

Volume, litres	1.0	2.0	2.5	3.0	3.25	3.5	3.75	4.0	4.15	4.25
Pressure, psi	630	670	670	680	680	680	680	680	~~4.25~~	730
Volume, litres	/	3.7								
Pressure, psi	/	0							~~690~~	690



Comments: Packer # 8 | Time - 12:08

Schlumberger
Water Services

Sheet 9 of 11

Westbay Packer Inflation Record

Project: Golder - Ekati | Project No.: CJB810 | Well No.: JGT-06

Location: EKATI | Completed by: D.O. | Date Inflated: Apr. 9/2014

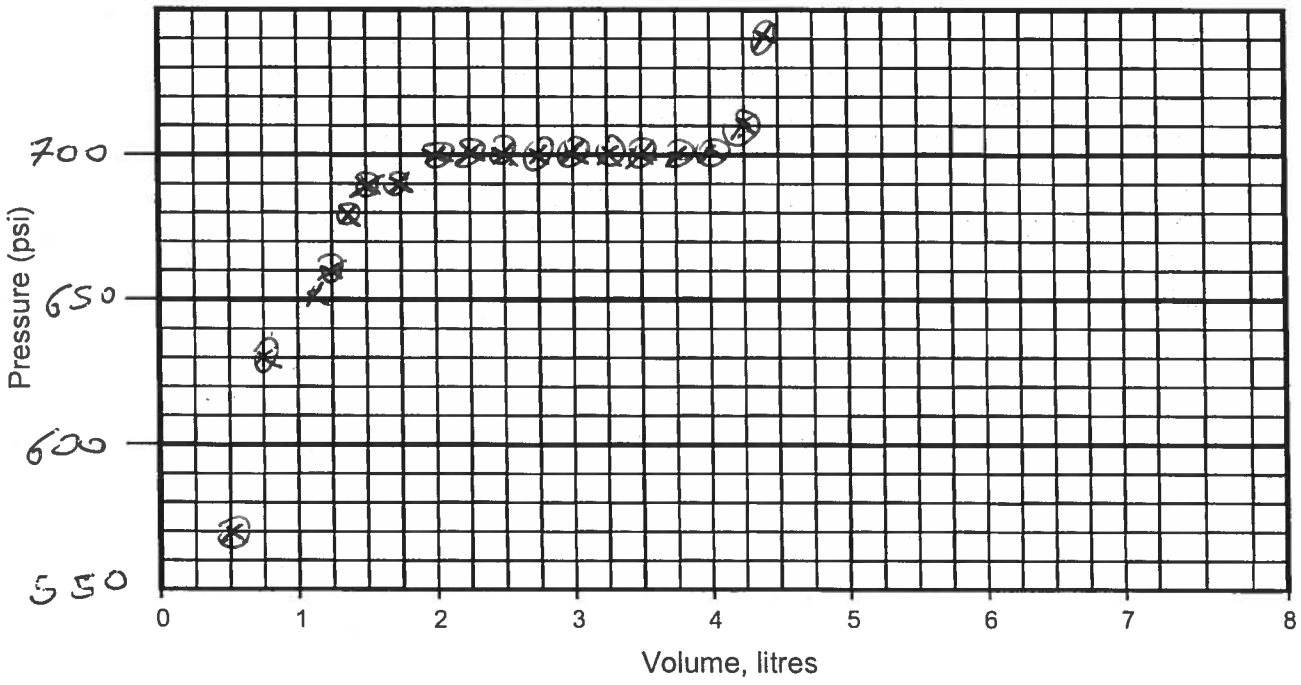
Packer No. 9 / comp. # 102 | Depth (ft (m)): 172.5 | Inflation Tool No.: TIW PS2

Packer Valve Pressure, P_V: 145 psi | Final Line Pressure, P_L: 740 psi | Tool Pressure, P_T: ~~4445~~ 450 psi

Borehole Water Level: 100 (ft / m) = 45 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 145 psi

Volume, litres	0.5	0.75	1.0	1.2	1.3	1.5	1.75	2.0	2.25	2.5
Pressure, psi	570	630	650	660	680	690	690	700	700	700
Volume, litres	2.75	3.0	3.25	3.5	3.75	4.0	4.25	4.35	/	3.0
Pressure, psi	700	700	700	700	700	700	710	740	/	0



Comments: Packer # 9 | Time - 23 40

Schlumberger
Water Services

Sheet 10 of 11

Westbay Packer Inflation Record

Project: Golder - Ekati | Project No.: WB810 | Well No.: JGT - 06

Location: EKATI Mine | Completed by: D.O. | Date Inflated: Apr. 9 / 2014

Packer No. 10, comp. # | Depth (ft / m): 158.8 | Inflation Tool No.: TIW 852

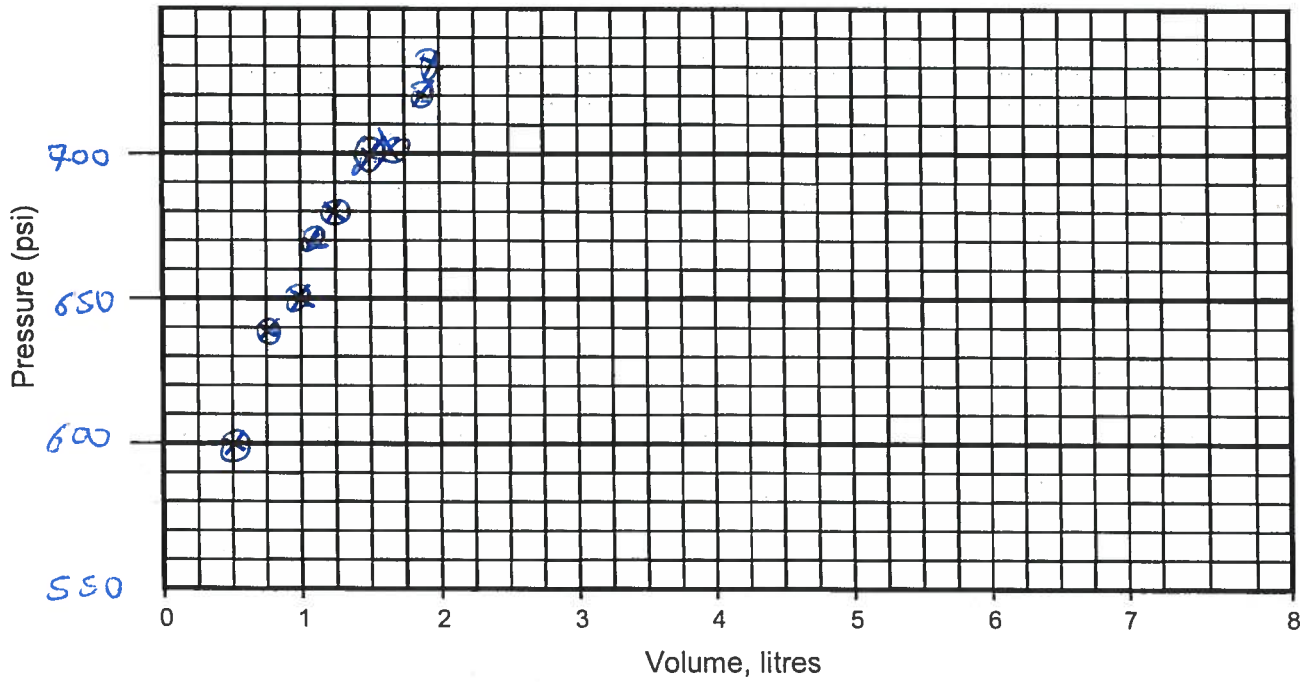
Packer Valve Pressure, P_V: 145 psi | Final Line Pressure, P_L: 730 psi | Tool Pressure, P_T: ~~465~~ 480 psi

Borehole Water Level: 100 (ft / m) = 40 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = ~~465~~ 125 psi

≈ 1L ish ?

Volume, litres	0.25	0.5	0.75	0.9	1.1	1.25	1.4	1.5	1.6	1.7
Pressure, psi	300	600	640	650	670	680	690	700	700	720
Volume, litres	1.8	/	1.4							
Pressure, psi	730	/	0							



Comments: Packer # 10 | Time - 24:00

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Schlumberger
Water Services

Sheet 11 of 11

Westbay Packer Inflation Record

Project: ELATI - Golder Project No.: WB 810 Well No.: JGT-06

Location: ELATI Mine Completed by: D.O. Date Inflated: Apr. 16/2014

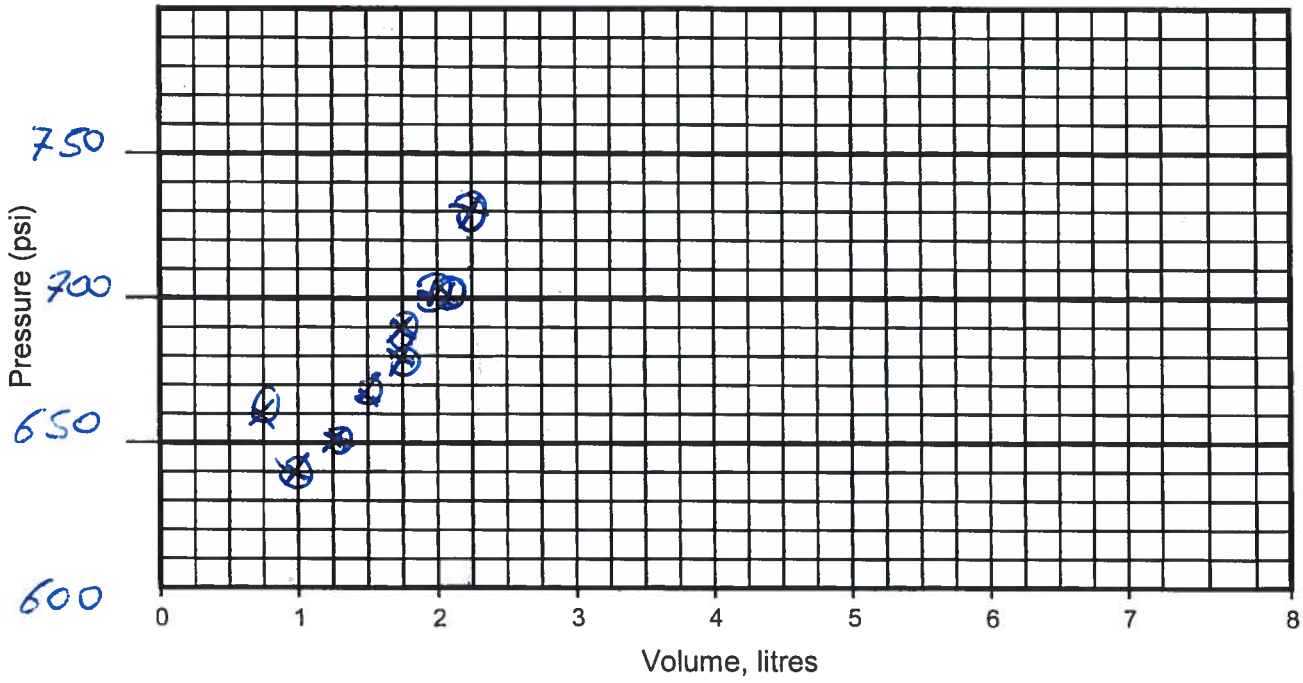
Packer No. 11, comp. # 134 Depth (ft / (m)): 81.0 Inflation Tool No.: TIW 852

Packer Valve Pressure, P_V: 150 psi Final Line Pressure, P_L: 730 psi Tool Pressure, P_T: 440 psi

Borehole Water Level: 0 (ft / m) = 0 psi (P_W)

Calculated Packer Element Pressure, $P_E = P_L + P_W - P_V - P_T$ = 140 psi

Volume, litres	0.5	0.75	1.0	1.25	1.5	1.65	1.75	1.85	2.0	2.15
Pressure, psi	400	660	640	650	670	680	690	690	700	700
Volume, litres	2.25	/	1.6							
Pressure, psi	730	/	0							



Comments: Packer # 11 Time - 11:30

APPENDIX C

Laboratory Analytical Certificates for Groundwater Samples

Golder Associates Ltd.
ATTN: Stefano Nani
102, 2535 - 3rd Ave. SE
Calgary ab T2A7W5

Date Received: 05-MAY-14
Report Date: 25-JUN-14 15:53 (MT)
Version: FINAL REV. 3

Client Phone: 403-216-8943

Certificate of Analysis

Lab Work Order #: L1450733

Project P.O. #: NOT SUBMITTED
Job Reference: 13-1328-0041/2010/91
C of C Numbers: 10-366718
Legal Site Desc:

Comments:
ADDITIONAL 25-JUN-14 15:41
ADDITIONAL 16-JUN-14 15:26
18-JUN-2014 ADDITIONAL ANALYSIS: CALCULATED TDS ADDED
25-JUN-2014 ADDITIONAL ANALYSIS: CALCULATED H2S ADDED

Jessica Spira
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-1 JGT-06-LAKE WATER							
Sampled By: DE/DV on 30-APR-14 @ 12:00							
Matrix: GW							
Nutrients in Water for Golder Calgary							
Ammonia in Water by Colour							
Ammonia, Total (as N)	0.0081		0.0050	mg/L		06-MAY-14	R2833241
TKN in Water by Colour							
Total Kjeldahl Nitrogen	0.334		0.050	mg/L	06-MAY-14	06-MAY-14	R2833153
Total Dissolved P in Water by Colour							
Phosphorus (P)-Total Dissolved	0.0118		0.0010	mg/L		08-MAY-14	R2835265
Total P in Water by Colour							
Phosphorus (P)-Total	0.0167		0.0010	mg/L		08-MAY-14	R2835265
Routine Water for Golder Calgary							
Chloride by IC							
Chloride (Cl)	1.07		0.50	mg/L		05-MAY-14	R2833200
Color, True							
Color, True	94.6		2.0	C.U.		06-MAY-14	R2835877
Fluoride by IC							
Fluoride (F)	<0.020		0.020	mg/L		05-MAY-14	R2833200
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	10.3		0.50	mg/L		08-MAY-14	
Ion Balance Calculation							
TDS (Calculated)	27.3			mg/L		09-MAY-14	
Nitrate in Water (Calculation)							
Nitrate (as N)	0.0083		0.0063	mg/L		07-MAY-14	
Nitrite & Nitrate in Water by Colour							
Nitrate and Nitrite (as N)	0.0134		0.0060	mg/L		07-MAY-14	R2834237
Nitrite in Water by Colour							
Nitrite (as N)	0.0051		0.0020	mg/L		07-MAY-14	R2834237
Sulfate by IC (Low Level)							
Sulfate (SO4)	2.30		0.050	mg/L		05-MAY-14	R2833200
Sulphide							
Sulphide	<0.0015		0.0015	mg/L		09-MAY-14	R2835784
Total Dissolved Solids							
Total Dissolved Solids	47		10	mg/L		07-MAY-14	R2834993
Total Suspended Solids							
Total Suspended Solids	<3.0		3.0	mg/L		07-MAY-14	R2834281
Turbidity							
Turbidity	7.09		0.10	NTU		06-MAY-14	R2835865
pH, Conductivity and Total Alkalinity							
pH	7.30		0.10	pH		05-MAY-14	R2832693
Conductivity (EC)	54.4		0.20	uS/cm		05-MAY-14	R2832693
Bicarbonate (HCO3)	27.6		5.0	mg/L		05-MAY-14	R2832693
Carbonate (CO3)	<5.0		5.0	mg/L		05-MAY-14	R2832693
Hydroxide (OH)	<5.0		5.0	mg/L		05-MAY-14	R2832693
Alkalinity, Total (as CaCO3)	22.6		2.0	mg/L		05-MAY-14	R2832693
Miscellaneous Parameters							
Orthophosphate-Dissolved (as P)	0.0045		0.0010	mg/L		07-MAY-14	R2834237
Dissolved Organic Carbon	5.9		1.0	mg/L		05-MAY-14	R2832552
Ra-226	See Attached	MP	0.010	Bq/L		20-MAY-14	R2841163
Sulphide (as H2S)	<0.0015		0.0015	mg/L		25-JUN-14	
TDS (Calculated from EC)	35.4		1.0	mg/L		16-JUN-14	
Mercury (Hg)-Total	<0.00050		0.00050	ug/L		07-MAY-14	R2835700
Total Organic Carbon	6.3		1.0	mg/L		05-MAY-14	R2832552
Thorium (Th)-Total	<0.000050		0.000050	mg/L		09-MAY-14	R2835599
Total Metals in Water by CRC ICPMS							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-1 JGT-06-LAKE WATER							
Sampled By: DE/DV on 30-APR-14 @ 12:00							
Matrix: GW							
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0763		0.0030	mg/L		08-MAY-14	R2835157
Antimony (Sb)-Total	0.00085		0.00010	mg/L		08-MAY-14	R2835157
Arsenic (As)-Total	0.00060		0.00010	mg/L		08-MAY-14	R2835157
Barium (Ba)-Total	0.00931		0.000050	mg/L		08-MAY-14	R2835157
Beryllium (Be)-Total	<0.00010		0.00010	mg/L		08-MAY-14	R2835157
Bismuth (Bi)-Total	0.000098		0.000050	mg/L		08-MAY-14	R2835157
Boron (B)-Total	<0.010		0.010	mg/L		08-MAY-14	R2835157
Cadmium (Cd)-Total	0.000336		0.000010	mg/L		08-MAY-14	R2835157
Calcium (Ca)-Total	2.32		0.020	mg/L		08-MAY-14	R2835157
Chromium (Cr)-Total	0.00055		0.00010	mg/L		08-MAY-14	R2835157
Cobalt (Co)-Total	<0.00010		0.00010	mg/L		08-MAY-14	R2835157
Copper (Cu)-Total	0.00224		0.00010	mg/L		08-MAY-14	R2835157
Iron (Fe)-Total	0.081		0.010	mg/L		08-MAY-14	R2835157
Lead (Pb)-Total	0.000316		0.000050	mg/L		08-MAY-14	R2835157
Lithium (Li)-Total	<0.0050		0.0050	mg/L		08-MAY-14	R2835157
Magnesium (Mg)-Total	1.34		0.0050	mg/L		08-MAY-14	R2835157
Manganese (Mn)-Total	0.00320		0.000050	mg/L		08-MAY-14	R2835157
Molybdenum (Mo)-Total	0.000127		0.000050	mg/L		08-MAY-14	R2835157
Nickel (Ni)-Total	0.00112		0.00010	mg/L		08-MAY-14	R2835157
Phosphorus (P)-Total	<0.30		0.30	mg/L		08-MAY-14	R2835157
Potassium (K)-Total	1.34		0.050	mg/L		08-MAY-14	R2835157
Selenium (Se)-Total	<0.00010		0.00010	mg/L		08-MAY-14	R2835157
Silicon (Si)-Total	0.220		0.050	mg/L		08-MAY-14	R2835157
Silver (Ag)-Total	0.000013		0.000010	mg/L		08-MAY-14	R2835157
Sodium (Na)-Total	7.07		0.050	mg/L		08-MAY-14	R2835157
Strontium (Sr)-Total	0.0124		0.00010	mg/L		08-MAY-14	R2835157
Thallium (Tl)-Total	0.000031		0.000010	mg/L		08-MAY-14	R2835157
Tin (Sn)-Total	0.00011		0.00010	mg/L		08-MAY-14	R2835157
Titanium (Ti)-Total	0.00391		0.00030	mg/L		08-MAY-14	R2835157
Uranium (U)-Total	0.000044		0.000010	mg/L		08-MAY-14	R2835157
Vanadium (V)-Total	0.00033		0.00010	mg/L		08-MAY-14	R2835157
Zinc (Zn)-Total	0.0230		0.0030	mg/L		08-MAY-14	R2835157
Diss. Mercury in Water by CVAFS (Ultra)							
Dissolved Mercury Filtration Location	FIELD					06-MAY-14	R2835296
Mercury (Hg)-Dissolved	<0.00050		0.00050	ug/L	06-MAY-14	07-MAY-14	R2835700
Dissolved Metals in Water by CRC ICPMS							
Aluminum (Al)-Dissolved	0.0118		0.0010	mg/L		07-MAY-14	R2834394
Antimony (Sb)-Dissolved	<0.00010		0.00010	mg/L		07-MAY-14	R2834394
Arsenic (As)-Dissolved	0.00052		0.00010	mg/L		07-MAY-14	R2834394
Barium (Ba)-Dissolved	0.00238		0.000050	mg/L		07-MAY-14	R2834394
Beryllium (Be)-Dissolved	<0.00010		0.00010	mg/L		07-MAY-14	R2834394
Bismuth (Bi)-Dissolved	<0.000050		0.000050	mg/L		07-MAY-14	R2834394
Boron (B)-Dissolved	<0.010		0.010	mg/L		07-MAY-14	R2834394
Cadmium (Cd)-Dissolved	0.000020		0.000010	mg/L		07-MAY-14	R2834394
Calcium (Ca)-Dissolved	2.17		0.020	mg/L		07-MAY-14	R2834394
Chromium (Cr)-Dissolved	<0.00010		0.00010	mg/L		07-MAY-14	R2834394
Cobalt (Co)-Dissolved	<0.00010		0.00010	mg/L		07-MAY-14	R2834394
Copper (Cu)-Dissolved	0.00139		0.00010	mg/L		07-MAY-14	R2834394
Iron (Fe)-Dissolved	<0.010		0.010	mg/L		07-MAY-14	R2834394
Lead (Pb)-Dissolved	<0.000050		0.000050	mg/L		07-MAY-14	R2834394
Lithium (Li)-Dissolved	<0.0030		0.0030	mg/L		07-MAY-14	R2834394

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-1 JGT-06-LAKE WATER							
Sampled By: DE/DV on 30-APR-14 @ 12:00							
Matrix: GW							
Dissolved Metals in Water by CRC ICPMS							
Magnesium (Mg)-Dissolved	1.20		0.0050	mg/L		07-MAY-14	R2834394
Manganese (Mn)-Dissolved	0.00190		0.000050	mg/L		07-MAY-14	R2834394
Molybdenum (Mo)-Dissolved	0.000100		0.000050	mg/L		07-MAY-14	R2834394
Nickel (Ni)-Dissolved	0.00059		0.00010	mg/L		07-MAY-14	R2834394
Phosphorus (P)-Dissolved	<0.30		0.30	mg/L		07-MAY-14	R2834394
Potassium (K)-Dissolved	1.29		0.050	mg/L		07-MAY-14	R2834394
Selenium (Se)-Dissolved	<0.00010		0.00010	mg/L		07-MAY-14	R2834394
Silicon (Si)-Dissolved	0.053		0.050	mg/L		07-MAY-14	R2834394
Silver (Ag)-Dissolved	<0.000010		0.000010	mg/L		07-MAY-14	R2834394
Sodium (Na)-Dissolved	5.65		0.050	mg/L		07-MAY-14	R2834394
Strontium (Sr)-Dissolved	0.0115		0.00010	mg/L		07-MAY-14	R2834394
Thallium (Tl)-Dissolved	<0.000010		0.000010	mg/L		07-MAY-14	R2834394
Titanium (Ti)-Dissolved	<0.00030		0.00030	mg/L		07-MAY-14	R2834394
Tin (Sn)-Dissolved	<0.00010		0.00010	mg/L		07-MAY-14	R2834394
Uranium (U)-Dissolved	0.000034		0.000010	mg/L		07-MAY-14	R2834394
Vanadium (V)-Dissolved	<0.00010		0.00010	mg/L		07-MAY-14	R2834394
Zinc (Zn)-Dissolved	0.0175		0.0010	mg/L		07-MAY-14	R2834394
Dissolved Thorium in Water by CRC ICPMS							
Thorium (Th)-Dissolved	<0.000050		0.000050	mg/L	08-MAY-14	09-MAY-14	R2835599
Dissolved Metals Filtration Location	FIELD					08-MAY-14	R2834591
L1450733-2 JGT-06-BRINE							
Sampled By: DE/DV on 30-APR-14 @ 13:00							
Matrix: GW							
Nutrients in Water for Golder Calgary							
Ammonia in Water by Colour							
Ammonia, Total (as N)	0.85	DLM	0.50	mg/L		06-MAY-14	R2833241
TKN in Water by Colour							
Total Kjeldahl Nitrogen	<5.0	DLM	5.0	mg/L	06-MAY-14	06-MAY-14	R2833153
Total Dissolved P in Water by Colour							
Phosphorus (P)-Total Dissolved	0.085	DLM	0.010	mg/L		08-MAY-14	R2835265
Total P in Water by Colour							
Phosphorus (P)-Total	0.094	DLM	0.010	mg/L		08-MAY-14	R2835265
Routine Water for Golder Calgary							
Chloride by IC							
Chloride (Cl)	71800	DLM	50	mg/L		05-MAY-14	R2833200
Color, True							
Color, True	42.1		2.0	C.U.		06-MAY-14	R2835877
Fluoride by IC							
Fluoride (F)	<2.0	DLM	2.0	mg/L		05-MAY-14	R2833200
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	103000		5.4	mg/L		09-MAY-14	
Ion Balance Calculation							
TDS (Calculated)	114000			mg/L		09-MAY-14	
Nitrate in Water (Calculation)							
Nitrate (as N)	4.11		0.0060	mg/L		07-MAY-14	
Nitrite & Nitrate in Water by Colour							
Nitrate and Nitrite (as N)	4.14		0.0060	mg/L		07-MAY-14	R2834237
Nitrite in Water by Colour							
Nitrite (as N)	0.0300		0.0020	mg/L		07-MAY-14	R2834237
Sulfate by IC (Low Level)							
Sulfate (SO4)	37.8	DLM	5.0	mg/L		05-MAY-14	R2833200
Sulphide							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-2 JGT-06-BRINE							
Sampled By: DE/DV on 30-APR-14 @ 13:00							
Matrix: GW							
Sulphide							
Sulphide	<0.0015		0.0015	mg/L		09-MAY-14	R2835784
Total Dissolved Solids							
Total Dissolved Solids	112000		10	mg/L		07-MAY-14	R2834993
Total Suspended Solids							
Total Suspended Solids	204		3.0	mg/L		07-MAY-14	R2834281
Turbidity							
Turbidity	37.6		0.10	NTU		06-MAY-14	R2835865
pH, Conductivity and Total Alkalinity							
pH	10.37		0.10	pH		05-MAY-14	R2832693
Conductivity (EC)	132000		0.20	uS/cm		05-MAY-14	R2832693
Bicarbonate (HCO3)	<5.0		5.0	mg/L		05-MAY-14	R2832693
Carbonate (CO3)	140		5.0	mg/L		05-MAY-14	R2832693
Hydroxide (OH)	15.6		5.0	mg/L		05-MAY-14	R2832693
Alkalinity, Total (as CaCO3)	280		2.0	mg/L		05-MAY-14	R2832693
Miscellaneous Parameters							
Orthophosphate-Dissolved (as P)	0.025	DLM	0.010	mg/L		07-MAY-14	R2834237
Dissolved Organic Carbon	11.6		1.0	mg/L		05-MAY-14	R2832552
Ra-226	See Attached	MP	0.010	Bq/L		20-MAY-14	R2841163
Sulphide (as H2S)	<0.0015		0.0015	mg/L		25-JUN-14	
TDS (Calculated from EC)	85800		1.0	mg/L		16-JUN-14	
Mercury (Hg)-Total	0.00160		0.00050	ug/L		07-MAY-14	R2835700
Total Organic Carbon	11.5		1.0	mg/L		05-MAY-14	R2832552
Thorium (Th)-Total	<0.010	DLA	0.010	mg/L		09-MAY-14	R2835599
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.36	DLM	0.30	mg/L		08-MAY-14	R2835157
Antimony (Sb)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Arsenic (As)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Barium (Ba)-Total	2.19	DLM	0.0050	mg/L		08-MAY-14	R2835157
Beryllium (Be)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Bismuth (Bi)-Total	<0.0050	DLM	0.0050	mg/L		08-MAY-14	R2835157
Boron (B)-Total	2.6	DLM	1.0	mg/L		08-MAY-14	R2835157
Cadmium (Cd)-Total	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835157
Calcium (Ca)-Total	42200	DLM	2.0	mg/L		08-MAY-14	R2835157
Chromium (Cr)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Cobalt (Co)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Copper (Cu)-Total	0.011	DLM	0.010	mg/L		08-MAY-14	R2835157
Iron (Fe)-Total	5.4	DLM	1.0	mg/L		08-MAY-14	R2835157
Lead (Pb)-Total	0.0417	DLM	0.0050	mg/L		08-MAY-14	R2835157
Lithium (Li)-Total	0.58	DLM	0.50	mg/L		08-MAY-14	R2835157
Magnesium (Mg)-Total	13.5	DLM	0.50	mg/L		08-MAY-14	R2835157
Manganese (Mn)-Total	0.0628	DLM	0.0050	mg/L		08-MAY-14	R2835157
Molybdenum (Mo)-Total	0.0169	DLM	0.0050	mg/L		08-MAY-14	R2835157
Nickel (Ni)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Phosphorus (P)-Total	<30	DLM	30	mg/L		08-MAY-14	R2835157
Potassium (K)-Total	472	DLM	5.0	mg/L		08-MAY-14	R2835157
Selenium (Se)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Silicon (Si)-Total	<5.0	DLM	5.0	mg/L		08-MAY-14	R2835157
Silver (Ag)-Total	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835157
Sodium (Na)-Total	441	DLM	5.0	mg/L		08-MAY-14	R2835157
Strontium (Sr)-Total	25.1	DLM	0.010	mg/L		08-MAY-14	R2835157
Thallium (Tl)-Total	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835157

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-2 JGT-06-BRINE							
Sampled By: DE/DV on 30-APR-14 @ 13:00							
Matrix: GW							
Total Metals in Water by CRC ICPMS							
Tin (Sn)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Titanium (Ti)-Total	<0.030	DLM	0.030	mg/L		08-MAY-14	R2835157
Uranium (U)-Total	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835157
Vanadium (V)-Total	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835157
Zinc (Zn)-Total	<0.30	DLM	0.30	mg/L		08-MAY-14	R2835157
Diss. Mercury in Water by CVAFS (Ultra)							
Dissolved Mercury Filtration Location	FIELD					06-MAY-14	R2835296
Mercury (Hg)-Dissolved	0.00100		0.00050	ug/L	06-MAY-14	07-MAY-14	R2835700
Dissolved Metals in Water by CRC ICPMS							
Aluminum (Al)-Dissolved	0.12	DLM	0.10	mg/L		08-MAY-14	R2835120
Antimony (Sb)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Arsenic (As)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Barium (Ba)-Dissolved	2.09	DLM	0.0050	mg/L		08-MAY-14	R2835120
Beryllium (Be)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Bismuth (Bi)-Dissolved	<0.0050	DLM	0.0050	mg/L		08-MAY-14	R2835120
Boron (B)-Dissolved	2.4	DLM	1.0	mg/L		08-MAY-14	R2835120
Cadmium (Cd)-Dissolved	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835120
Calcium (Ca)-Dissolved	41100	DLM	2.0	mg/L		08-MAY-14	R2835120
Chromium (Cr)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Cobalt (Co)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Copper (Cu)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Iron (Fe)-Dissolved	<1.0	DLM	1.0	mg/L		08-MAY-14	R2835120
Lead (Pb)-Dissolved	0.0276	DLM	0.0050	mg/L		08-MAY-14	R2835120
Lithium (Li)-Dissolved	0.57	DLM	0.30	mg/L		08-MAY-14	R2835120
Magnesium (Mg)-Dissolved	4.53	DLM	0.50	mg/L		08-MAY-14	R2835120
Manganese (Mn)-Dissolved	0.0247	DLM	0.0050	mg/L		08-MAY-14	R2835120
Molybdenum (Mo)-Dissolved	0.0170	DLM	0.0050	mg/L		08-MAY-14	R2835120
Nickel (Ni)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Phosphorus (P)-Dissolved	<30	DLM	30	mg/L		08-MAY-14	R2835120
Potassium (K)-Dissolved	460	DLM	5.0	mg/L		08-MAY-14	R2835120
Selenium (Se)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Silicon (Si)-Dissolved	<5.0	DLM	5.0	mg/L		08-MAY-14	R2835120
Silver (Ag)-Dissolved	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835120
Sodium (Na)-Dissolved	391	DLM	5.0	mg/L		08-MAY-14	R2835120
Strontium (Sr)-Dissolved	24.8	DLM	0.010	mg/L		08-MAY-14	R2835120
Thallium (Tl)-Dissolved	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835120
Titanium (Ti)-Dissolved	<0.030	DLM	0.030	mg/L		08-MAY-14	R2835120
Tin (Sn)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Uranium (U)-Dissolved	<0.0010	DLM	0.0010	mg/L		08-MAY-14	R2835120
Vanadium (V)-Dissolved	<0.010	DLM	0.010	mg/L		08-MAY-14	R2835120
Zinc (Zn)-Dissolved	<0.10	DLM	0.10	mg/L		08-MAY-14	R2835120
Dissolved Thorium in Water by CRC ICPMS							
Thorium (Th)-Dissolved	<0.010	DLA	0.010	mg/L	08-MAY-14	09-MAY-14	R2835599
Dissolved Metals Filtration Location	FIELD					08-MAY-14	R2834591
L1450733-3 JGT-06-I9S1							
Sampled By: DE/DV on 30-APR-14 @ 13:00							
Matrix: GW							
Nutrients in Water for Golder Calgary							
Ammonia in Water by Colour							
Ammonia, Total (as N)	0.112		0.0050	mg/L		06-MAY-14	R2833241
TKN in Water by Colour							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-3 JGT-06-I9S1							
Sampled By: DE/DV on 30-APR-14 @ 13:00							
Matrix: GW							
TKN in Water by Colour							
Total Kjeldahl Nitrogen	0.123		0.050	mg/L	06-MAY-14	06-MAY-14	R2833153
Total Dissolved P in Water by Colour							
Phosphorus (P)-Total Dissolved	0.018	DLM	0.010	mg/L		08-MAY-14	R2835265
Total P in Water by Colour							
Phosphorus (P)-Total	0.022	DLM	0.010	mg/L		08-MAY-14	R2835265
Routine Water for Golder Calgary							
Chloride by IC							
Chloride (Cl)	1240	DLM	5.0	mg/L		05-MAY-14	R2833200
Color, True							
Color, True	10.6		2.0	C.U.		06-MAY-14	R2835877
Fluoride by IC							
Fluoride (F)	0.23	DLM	0.20	mg/L		05-MAY-14	R2833200
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	1170		0.50	mg/L		08-MAY-14	
Ion Balance Calculation							
TDS (Calculated)	2250			mg/L		09-MAY-14	
Nitrate in Water (Calculation)							
Nitrate (as N)	0.0085		0.0063	mg/L		07-MAY-14	
Nitrite & Nitrate in Water by Colour							
Nitrate and Nitrite (as N)	0.0138		0.0060	mg/L		07-MAY-14	R2834237
Nitrite in Water by Colour							
Nitrite (as N)	0.0053		0.0020	mg/L		07-MAY-14	R2834237
Sulfate by IC (Low Level)							
Sulfate (SO4)	225	DLM	0.50	mg/L		05-MAY-14	R2833200
Sulphide							
Sulphide	3.37		0.0015	mg/L		09-MAY-14	R2835784
Total Dissolved Solids							
Total Dissolved Solids	2580		10	mg/L		07-MAY-14	R2834993
Total Suspended Solids							
Total Suspended Solids	<3.0		3.0	mg/L		07-MAY-14	R2834281
Turbidity							
Turbidity	1.25		0.10	NTU		06-MAY-14	R2835865
pH, Conductivity and Total Alkalinity							
pH	7.55		0.10	pH		05-MAY-14	R2832693
Conductivity (EC)	4240		0.20	uS/cm		05-MAY-14	R2832693
Bicarbonate (HCO3)	56.4		5.0	mg/L		05-MAY-14	R2832693
Carbonate (CO3)	<5.0		5.0	mg/L		05-MAY-14	R2832693
Hydroxide (OH)	<5.0		5.0	mg/L		05-MAY-14	R2832693
Alkalinity, Total (as CaCO3)	46.2		2.0	mg/L		05-MAY-14	R2832693
Miscellaneous Parameters							
Orthophosphate-Dissolved (as P)	<0.010	DLM	0.010	mg/L		07-MAY-14	R2834237
Dissolved Organic Carbon	793	DLA	1.0	mg/L		05-MAY-14	R2832552
Ra-226	See Attached	MP	0.010	Bq/L		20-MAY-14	R2841163
Sulphide (as H2S)	3.58		0.0015	mg/L		25-JUN-14	
TDS (Calculated from EC)	2760		1.0	mg/L		16-JUN-14	
Mercury (Hg)-Total	<0.00050		0.00050	ug/L		07-MAY-14	R2835700
Total Organic Carbon	787	DLA	1.0	mg/L		05-MAY-14	R2832552
Thorium (Th)-Total	<0.00010	DLA	0.00010	mg/L		09-MAY-14	R2835599
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.028	DLM	0.015	mg/L		08-MAY-14	R2835157
Antimony (Sb)-Total	<0.00050	DLM	0.00050	mg/L		08-MAY-14	R2835157

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-3 JGT-06-I9S1							
Sampled By: DE/DV on 30-APR-14 @ 13:00							
Matrix: GW							
Total Metals in Water by CRC ICPMS							
Arsenic (As)-Total	0.0152	DLM	0.00050	mg/L		08-MAY-14	R2835157
Barium (Ba)-Total	0.00821	DLM	0.00025	mg/L		08-MAY-14	R2835157
Beryllium (Be)-Total	<0.00050	DLM	0.00050	mg/L		08-MAY-14	R2835157
Bismuth (Bi)-Total	<0.00025	DLM	0.00025	mg/L		08-MAY-14	R2835157
Boron (B)-Total	0.185	DLM	0.050	mg/L		08-MAY-14	R2835157
Cadmium (Cd)-Total	<0.000050	DLM	0.000050	mg/L		08-MAY-14	R2835157
Calcium (Ca)-Total	370	DLM	0.10	mg/L		08-MAY-14	R2835157
Chromium (Cr)-Total	0.00363	DLM	0.00050	mg/L		08-MAY-14	R2835157
Cobalt (Co)-Total	<0.00050	DLM	0.00050	mg/L		08-MAY-14	R2835157
Copper (Cu)-Total	<0.00050	DLM	0.00050	mg/L		08-MAY-14	R2835157
Iron (Fe)-Total	<0.050	DLM	0.050	mg/L		08-MAY-14	R2835157
Lead (Pb)-Total	<0.00025	DLM	0.00025	mg/L		08-MAY-14	R2835157
Lithium (Li)-Total	0.055	DLM	0.025	mg/L		08-MAY-14	R2835157
Magnesium (Mg)-Total	85.1	DLM	0.025	mg/L		08-MAY-14	R2835157
Manganese (Mn)-Total	0.0979	DLM	0.00025	mg/L		08-MAY-14	R2835157
Molybdenum (Mo)-Total	0.0159	DLM	0.00025	mg/L		08-MAY-14	R2835157
Nickel (Ni)-Total	0.00187	DLM	0.00050	mg/L		08-MAY-14	R2835157
Phosphorus (P)-Total	<1.5	DLM	1.5	mg/L		08-MAY-14	R2835157
Potassium (K)-Total	4.69	DLM	0.25	mg/L		08-MAY-14	R2835157
Selenium (Se)-Total	0.00258	DLM	0.00050	mg/L		08-MAY-14	R2835157
Silicon (Si)-Total	5.24	DLM	0.25	mg/L		08-MAY-14	R2835157
Silver (Ag)-Total	<0.000050	DLM	0.000050	mg/L		08-MAY-14	R2835157
Sodium (Na)-Total	439	DLM	0.25	mg/L		08-MAY-14	R2835157
Strontium (Sr)-Total	6.22	DLM	0.00050	mg/L		08-MAY-14	R2835157
Thallium (Tl)-Total	<0.000050	DLM	0.000050	mg/L		08-MAY-14	R2835157
Tin (Sn)-Total	<0.00050	DLM	0.00050	mg/L		08-MAY-14	R2835157
Titanium (Ti)-Total	<0.0015	DLM	0.0015	mg/L		08-MAY-14	R2835157
Uranium (U)-Total	0.0102	DLM	0.000050	mg/L		08-MAY-14	R2835157
Vanadium (V)-Total	<0.00050	DLM	0.00050	mg/L		08-MAY-14	R2835157
Zinc (Zn)-Total	0.087	DLM	0.015	mg/L		08-MAY-14	R2835157
Diss. Mercury in Water by CVAFS (Ultra)							
Dissolved Mercury Filtration Location	FIELD					06-MAY-14	R2835296
Mercury (Hg)-Dissolved	<0.00050		0.00050	ug/L	06-MAY-14	07-MAY-14	R2835700
Dissolved Metals in Water by CRC ICPMS							
Aluminum (Al)-Dissolved	0.0075	DLM	0.0050	mg/L		07-MAY-14	R2834394
Antimony (Sb)-Dissolved	<0.00050	DLM	0.00050	mg/L		07-MAY-14	R2834394
Arsenic (As)-Dissolved	0.0121	DLM	0.00050	mg/L		07-MAY-14	R2834394
Barium (Ba)-Dissolved	0.00788	DLM	0.00025	mg/L		07-MAY-14	R2834394
Beryllium (Be)-Dissolved	<0.00050	DLM	0.00050	mg/L		07-MAY-14	R2834394
Bismuth (Bi)-Dissolved	<0.00025	DLM	0.00025	mg/L		07-MAY-14	R2834394
Boron (B)-Dissolved	0.169	DLM	0.050	mg/L		07-MAY-14	R2834394
Cadmium (Cd)-Dissolved	<0.000050	DLM	0.000050	mg/L		07-MAY-14	R2834394
Calcium (Ca)-Dissolved	339	DLM	0.10	mg/L		07-MAY-14	R2834394
Chromium (Cr)-Dissolved	<0.00050	DLM	0.00050	mg/L		07-MAY-14	R2834394
Cobalt (Co)-Dissolved	<0.00050	DLM	0.00050	mg/L		07-MAY-14	R2834394
Copper (Cu)-Dissolved	<0.00050	DLM	0.00050	mg/L		07-MAY-14	R2834394
Iron (Fe)-Dissolved	<0.050	DLM	0.050	mg/L		07-MAY-14	R2834394
Lead (Pb)-Dissolved	<0.00025	DLM	0.00025	mg/L		07-MAY-14	R2834394
Lithium (Li)-Dissolved	0.057	DLM	0.015	mg/L		07-MAY-14	R2834394
Magnesium (Mg)-Dissolved	78.2	DLM	0.025	mg/L		07-MAY-14	R2834394
Manganese (Mn)-Dissolved	0.0916	DLM	0.00025	mg/L		07-MAY-14	R2834394

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1450733-3 JGT-06-I9S1							
Sampled By: DE/DV on 30-APR-14 @ 13:00							
Matrix: GW							
Dissolved Metals in Water by CRC ICPMS							
Molybdenum (Mo)-Dissolved	0.0129	DLM	0.00025	mg/L		07-MAY-14	R2834394
Nickel (Ni)-Dissolved	0.00055	DLM	0.00050	mg/L		07-MAY-14	R2834394
Phosphorus (P)-Dissolved	<1.5	DLM	1.5	mg/L		07-MAY-14	R2834394
Potassium (K)-Dissolved	4.42	DLM	0.25	mg/L		07-MAY-14	R2834394
Selenium (Se)-Dissolved	0.00068	DLM	0.00050	mg/L		07-MAY-14	R2834394
Silicon (Si)-Dissolved	4.94	DLM	0.25	mg/L		07-MAY-14	R2834394
Silver (Ag)-Dissolved	<0.000050	DLM	0.000050	mg/L		07-MAY-14	R2834394
Sodium (Na)-Dissolved	336	DLM	0.25	mg/L		07-MAY-14	R2834394
Strontium (Sr)-Dissolved	5.80	DLM	0.00050	mg/L		07-MAY-14	R2834394
Thallium (Tl)-Dissolved	<0.000050	DLM	0.000050	mg/L		07-MAY-14	R2834394
Titanium (Ti)-Dissolved	<0.0015	DLM	0.0015	mg/L		07-MAY-14	R2834394
Tin (Sn)-Dissolved	<0.00050	DLM	0.00050	mg/L		07-MAY-14	R2834394
Uranium (U)-Dissolved	0.00959	DLM	0.000050	mg/L		07-MAY-14	R2834394
Vanadium (V)-Dissolved	<0.00050	DLM	0.00050	mg/L		07-MAY-14	R2834394
Zinc (Zn)-Dissolved	<0.0050	DLM	0.0050	mg/L		07-MAY-14	R2834394
Dissolved Thorium in Water by CRC ICPMS							
Thorium (Th)-Dissolved	<0.00010	DLA	0.00010	mg/L	08-MAY-14	09-MAY-14	R2835599
Dissolved Metals Filtration Location	FIELD					08-MAY-14	R2834591

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-DIS-ORG-ED	Water	Dissolved Organic Carbon	APHA 5310 B-Instrumental
C-TOT-ORG-ED	Water	Total Organic Carbon	APHA 5310 B-Instrumental
CL-IC-ED	Water	Chloride by IC	APHA 4110 B-ION CHROMATOGRAPHY
COL-TRU-ED	Water	Color, True	APHA 2120
The reported color applies to the pH of the sample as submitted unless otherwise noted on the report.			
ETL-HARDNESS-DIS-ED	Water	Hardness (from Dissolved Ca and Mg)	APHA 2340 B-Calculation
F-IC-ED	Water	Fluoride by IC	APHA 4110 B-ION CHROMATOGRAPHY
HG-D-U-CVAF-VA	Water	Diss. Mercury in Water by CVAFS (Ultra)	APHA 3030 B / EPA 1631 REV. E
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
HG-T-U-CVAF-VA	Water	Total Mercury in Water by CVAFS (Ultra)	EPA 1631 REV. E
This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
IONBALANCE-ED	Water	Ion Balance Calculation	APHA 1030E
MET-D-CCMS-ED	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
NH3-L-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
NO2+NO3-L-CFA-ED	Water	Nitrite & Nitrate in Water by Colour	APHA 4500 NO3-F
This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method".			
NO2-L-CFA-ED	Water	Nitrite in Water by Colour	APHA 4500 NO2-A and NO3-F
This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method", omitting the Cu-Cd reduction step to be selective for nitrite.			
NO3-L-CALC-ED	Water	Nitrate in Water (Calculation)	APHA 4500 NO3-F
Nitrate (as N) is a calculated parameter. Nitrate (as N) = [Nitrate and Nitrite (as N)] - Nitrite (as N).			
P-T-L-COL-ED	Water	Total P in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
P-TD-L-COL-ED	Water	Total Dissolved P in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Dissolved Phosphorous is determined colourimetrically after persulphate digestion of a sample that has been lab or field filtered through a 0.45 micron membrane filter.			
PH/EC/ALK-ED	Water	pH, Conductivity and Total Alkalinity	APHA 4500-H, 2510, 2320
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
PO4-DO-L-COL-ED	Water	Diss. Orthophosphate in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter.			
RA226-MMER-FC	Water	Ra226 by Alpha Scint, MDC=0.01 Bq/L	EPA 903.1

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
SO4-L-IC-ED	Water	Sulfate by IC (Low Level)	APHA 4110 B-ION CHROMATOGRAPHY
SOLIDS-TDS-CALCEC-ED	Water	TDS (Calculated from EC)	APHA 1030 E
SOLIDS-TDS-ED	Water	Total Dissolved Solids	APHA 2540 C
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
SULPHIDE-ED	Water	Sulphide	APHA 4500 -S E-Auto-Colorimetry
SULPHIDE>H2S-ED	Water	Sulphide as Hydrogen Sulphide	Calculation from Sulphide
TH-D-CCMS-VA	Water	Dissolved Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

TH-T-CCMS-VA	Water	Total Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

TKN-L-CFA-ED	Water	TKN in Water by Colour	APHA 4500-NORG (TKN)

This analysis is carried out using procedures adapted from APHA Method 4500-Norg "Nitrogen (Organic)". Total Kjeldahl Nitrogen is determined by sample digestion at 380 celcius with analysis using an automated colourimetric finish.

TURBIDITY-ED	Water	Turbidity	APHA 2130 B-Nephelometer

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA
FC	ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA

Chain of Custody Numbers:

10-366718

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: Golder Associates Ltd.
102, 2535 - 3rd Ave. SE
Calgary ab T2A7W5
Contact: Stefano Nani

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-ED	**Water**							
Batch R2832552								
WG1868021-3 CVS								
Dissolved Organic Carbon			107.9		%		80-160	05-MAY-14
WG1868021-2 LCS								
Dissolved Organic Carbon			95.4		%		80-120	05-MAY-14
WG1868021-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	05-MAY-14
C-TOT-ORG-ED	**Water**							
Batch R2832552								
WG1868021-3 CVS								
Total Organic Carbon			107.9		%		80-160	05-MAY-14
WG1868021-2 LCS								
Total Organic Carbon			95.4		%		80-120	05-MAY-14
WG1868021-1 MB								
Total Organic Carbon			<1.0		mg/L		1	05-MAY-14
WG1868021-5 MS		**L1450479-3**						
Total Organic Carbon			N/A	MS-B	%		-	05-MAY-14
WG1868021-9 MS		**L1449475-9**						
Total Organic Carbon			N/A	MS-B	%		-	05-MAY-14
CL-IC-ED	**Water**							
Batch R2833200								
WG1868356-2 LCS								
Chloride (Cl)			99.9		%		90-110	05-MAY-14
WG1868356-7 LCS								
Chloride (Cl)			104.2		%		90-110	05-MAY-14
WG1868356-9 LCS								
Chloride (Cl)			104.8		%		90-110	05-MAY-14
WG1868356-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	05-MAY-14
WG1868356-10 MB								
Chloride (Cl)			<0.50		mg/L		0.5	05-MAY-14
WG1868356-8 MB								
Chloride (Cl)			<0.50		mg/L		0.5	05-MAY-14
WG1868356-4 MS		**L1450459-4**						
Chloride (Cl)			102.9		%		75-125	05-MAY-14
WG1868356-6 MS		**L1449566-36**						
Chloride (Cl)			104.4		%		75-125	05-MAY-14
COL-TRU-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
COL-TRU-ED	**Water**							
Batch R2835877								
WG1868690-2 LCS								
Color, True			101.4		%		85-115	06-MAY-14
WG1868690-1 MB								
Color, True			<2.0		C.U.		2	06-MAY-14
F-IC-ED	**Water**							
Batch R2833200								
WG1868356-2 LCS								
Fluoride (F)			96.4		%		90-110	05-MAY-14
WG1868356-7 LCS								
Fluoride (F)			101.5		%		90-110	05-MAY-14
WG1868356-9 LCS								
Fluoride (F)			97.4		%		90-110	05-MAY-14
WG1868356-1 MB								
Fluoride (F)			<0.020		mg/L		0.02	05-MAY-14
WG1868356-10 MB								
Fluoride (F)			<0.020		mg/L		0.02	05-MAY-14
WG1868356-8 MB								
Fluoride (F)			<0.020		mg/L		0.02	05-MAY-14
WG1868356-4 MS		**L1450459-4**						
Fluoride (F)			101.0		%		75-125	05-MAY-14
WG1868356-6 MS		**L1449566-36**						
Fluoride (F)			97.6		%		75-125	05-MAY-14
HG-D-U-CVAF-VA	**Water**							
Batch R2835700								
WG1870874-4 LCS								
Mercury (Hg)-Dissolved			103.5		%		80-120	07-MAY-14
WG1870874-1 MB								
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	07-MAY-14
WG1870874-2 MB								
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	07-MAY-14
WG1870874-3 MB								
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	07-MAY-14
WG1870874-6 MS		**L1448621-1**						
Mercury (Hg)-Dissolved			93.0		%		70-130	07-MAY-14
HG-T-U-CVAF-VA	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-U-CVAF-VA	**Water**							
Batch R2835700								
WG1870874-4 LCS								
Mercury (Hg)-Total			103.5		%		80-120	07-MAY-14
WG1870874-1 MB								
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	07-MAY-14
WG1870874-2 MB								
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	07-MAY-14
WG1870874-3 MB								
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	07-MAY-14
WG1870874-8 MS		**L1448003-1**						
Mercury (Hg)-Total			N/A	MS-B	%		-	07-MAY-14
MET-D-CCMS-ED	**Water**							
Batch R2834394								
WG1869365-10 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			100.7		%		80-120	07-MAY-14
Antimony (Sb)-Dissolved			102.3		%		80-120	07-MAY-14
Arsenic (As)-Dissolved			96.9		%		80-120	07-MAY-14
Barium (Ba)-Dissolved			100.7		%		80-120	07-MAY-14
Beryllium (Be)-Dissolved			93.9		%		80-120	07-MAY-14
Bismuth (Bi)-Dissolved			98.5		%		80-120	07-MAY-14
Cadmium (Cd)-Dissolved			99.5		%		80-120	07-MAY-14
Calcium (Ca)-Dissolved			96.1		%		80-120	07-MAY-14
Chromium (Cr)-Dissolved			99.5		%		80-120	07-MAY-14
Cobalt (Co)-Dissolved			96.6		%		80-120	07-MAY-14
Copper (Cu)-Dissolved			94.8		%		80-120	07-MAY-14
Lead (Pb)-Dissolved			98.9		%		80-120	07-MAY-14
Lithium (Li)-Dissolved			90.7		%		80-120	07-MAY-14
Magnesium (Mg)-Dissolved			100.2		%		80-120	07-MAY-14
Manganese (Mn)-Dissolved			98.9		%		80-120	07-MAY-14
Molybdenum (Mo)-Dissolved			96.1		%		80-120	07-MAY-14
Nickel (Ni)-Dissolved			96.2		%		80-120	07-MAY-14
Phosphorus (P)-Dissolved			98.9		%		80-120	07-MAY-14
Potassium (K)-Dissolved			95.2		%		80-120	07-MAY-14
Selenium (Se)-Dissolved			99.5		%		80-120	07-MAY-14
Silicon (Si)-Dissolved			109.1		%		80-120	07-MAY-14
Silver (Ag)-Dissolved			96.4		%		80-120	07-MAY-14
Sodium (Na)-Dissolved			94.9		%		80-120	07-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2834394								
WG1869365-10 CRM		**ED-HIGH-WATRM**						
Strontium (Sr)-Dissolved			106.5		%		80-120	07-MAY-14
Thallium (Tl)-Dissolved			100.5		%		80-120	07-MAY-14
Titanium (Ti)-Dissolved			89.9		%		80-120	07-MAY-14
Tin (Sn)-Dissolved			97.9		%		80-120	07-MAY-14
Uranium (U)-Dissolved			96.4		%		80-120	07-MAY-14
Vanadium (V)-Dissolved			99.2		%		80-120	07-MAY-14
Zinc (Zn)-Dissolved			96.3		%		80-120	07-MAY-14
WG1869365-4 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			101.8		%		80-120	07-MAY-14
Antimony (Sb)-Dissolved			102.1		%		80-120	07-MAY-14
Arsenic (As)-Dissolved			99.6		%		80-120	07-MAY-14
Barium (Ba)-Dissolved			101.0		%		80-120	07-MAY-14
Beryllium (Be)-Dissolved			106.0		%		80-120	07-MAY-14
Bismuth (Bi)-Dissolved			96.9		%		80-120	07-MAY-14
Boron (B)-Dissolved			110.1		%		80-120	07-MAY-14
Cadmium (Cd)-Dissolved			100.2		%		80-120	07-MAY-14
Calcium (Ca)-Dissolved			106.4		%		80-120	07-MAY-14
Chromium (Cr)-Dissolved			99.7		%		80-120	07-MAY-14
Cobalt (Co)-Dissolved			100.2		%		80-120	07-MAY-14
Copper (Cu)-Dissolved			97.0		%		80-120	07-MAY-14
Lead (Pb)-Dissolved			99.6		%		80-120	07-MAY-14
Lithium (Li)-Dissolved			102.8		%		80-120	07-MAY-14
Magnesium (Mg)-Dissolved			106.6		%		80-120	07-MAY-14
Manganese (Mn)-Dissolved			101.9		%		80-120	07-MAY-14
Molybdenum (Mo)-Dissolved			106.2		%		80-120	07-MAY-14
Nickel (Ni)-Dissolved			97.3		%		80-120	07-MAY-14
Phosphorus (P)-Dissolved			112.8		%		80-120	07-MAY-14
Potassium (K)-Dissolved			94.6		%		80-120	07-MAY-14
Selenium (Se)-Dissolved			99.1		%		80-120	07-MAY-14
Silicon (Si)-Dissolved			106.4		%		80-120	07-MAY-14
Silver (Ag)-Dissolved			97.2		%		80-120	07-MAY-14
Sodium (Na)-Dissolved			97.8		%		80-120	07-MAY-14
Strontium (Sr)-Dissolved			111.4		%		80-120	07-MAY-14
Thallium (Tl)-Dissolved			101.0		%		80-120	07-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2834394								
WG1869365-4 CRM		**ED-HIGH-WATRM**						
Titanium (Ti)-Dissolved			95.0		%		80-120	07-MAY-14
Tin (Sn)-Dissolved			99.0		%		80-120	07-MAY-14
Uranium (U)-Dissolved			98.2		%		80-120	07-MAY-14
Vanadium (V)-Dissolved			100.4		%		80-120	07-MAY-14
Zinc (Zn)-Dissolved			97.0		%		80-120	07-MAY-14
WG1869365-7 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			96.8		%		80-120	07-MAY-14
Antimony (Sb)-Dissolved			99.8		%		80-120	07-MAY-14
Arsenic (As)-Dissolved			94.2		%		80-120	07-MAY-14
Barium (Ba)-Dissolved			99.9		%		80-120	07-MAY-14
Beryllium (Be)-Dissolved			96.2		%		80-120	07-MAY-14
Bismuth (Bi)-Dissolved			87.6		%		80-120	07-MAY-14
Boron (B)-Dissolved			95.7		%		80-120	07-MAY-14
Cadmium (Cd)-Dissolved			98.0		%		80-120	07-MAY-14
Calcium (Ca)-Dissolved			94.6		%		80-120	07-MAY-14
Chromium (Cr)-Dissolved			92.2		%		80-120	07-MAY-14
Cobalt (Co)-Dissolved			92.6		%		80-120	07-MAY-14
Copper (Cu)-Dissolved			91.6		%		80-120	07-MAY-14
Lead (Pb)-Dissolved			96.2		%		80-120	07-MAY-14
Lithium (Li)-Dissolved			89.1		%		80-120	07-MAY-14
Magnesium (Mg)-Dissolved			94.2		%		80-120	07-MAY-14
Manganese (Mn)-Dissolved			97.1		%		80-120	07-MAY-14
Molybdenum (Mo)-Dissolved			96.7		%		80-120	07-MAY-14
Nickel (Ni)-Dissolved			91.4		%		80-120	07-MAY-14
Phosphorus (P)-Dissolved			96.3		%		80-120	07-MAY-14
Potassium (K)-Dissolved			89.9		%		80-120	07-MAY-14
Selenium (Se)-Dissolved			98.1		%		80-120	07-MAY-14
Silicon (Si)-Dissolved			98.5		%		80-120	07-MAY-14
Silver (Ag)-Dissolved			96.1		%		80-120	07-MAY-14
Sodium (Na)-Dissolved			87.8		%		80-120	07-MAY-14
Strontium (Sr)-Dissolved			98.0		%		80-120	07-MAY-14
Thallium (Tl)-Dissolved			92.0		%		80-120	07-MAY-14
Titanium (Ti)-Dissolved			93.5		%		80-120	07-MAY-14
Tin (Sn)-Dissolved			97.6		%		80-120	07-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2834394								
WG1869365-7 CRM		**ED-HIGH-WATRM**						
Uranium (U)-Dissolved			96.0		%		80-120	07-MAY-14
Vanadium (V)-Dissolved			95.5		%		80-120	07-MAY-14
Zinc (Zn)-Dissolved			92.0		%		80-120	07-MAY-14
WG1869365-3 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	07-MAY-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	07-MAY-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	07-MAY-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	07-MAY-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	07-MAY-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	07-MAY-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	07-MAY-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	07-MAY-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2834394								
WG1869365-3 MB								
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	07-MAY-14
WG1869365-6 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	07-MAY-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	07-MAY-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	07-MAY-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	07-MAY-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	07-MAY-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	07-MAY-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	07-MAY-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	07-MAY-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2834394								
WG1869365-6 MB								
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	07-MAY-14
WG1869365-9 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	07-MAY-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	07-MAY-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	07-MAY-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	07-MAY-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	07-MAY-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	07-MAY-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	07-MAY-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	07-MAY-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	07-MAY-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	07-MAY-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	07-MAY-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	07-MAY-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	07-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1869365-10 CRM		**ED-HIGH-WATRM**						
Boron (B)-Dissolved			103.7		%		80-120	08-MAY-14
WG1870100-11 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			98.5		%		80-120	08-MAY-14
Antimony (Sb)-Dissolved			99.2		%		80-120	08-MAY-14
Arsenic (As)-Dissolved			99.7		%		80-120	08-MAY-14
Barium (Ba)-Dissolved			98.7		%		80-120	08-MAY-14
Beryllium (Be)-Dissolved			99.8		%		80-120	08-MAY-14
Bismuth (Bi)-Dissolved			94.2		%		80-120	08-MAY-14
Boron (B)-Dissolved			100.5		%		80-120	08-MAY-14
Cadmium (Cd)-Dissolved			97.3		%		80-120	08-MAY-14
Calcium (Ca)-Dissolved			100.1		%		80-120	08-MAY-14
Chromium (Cr)-Dissolved			99.3		%		80-120	08-MAY-14
Cobalt (Co)-Dissolved			98.9		%		80-120	08-MAY-14
Copper (Cu)-Dissolved			95.1		%		80-120	08-MAY-14
Lead (Pb)-Dissolved			97.9		%		80-120	08-MAY-14
Lithium (Li)-Dissolved			96.5		%		80-120	08-MAY-14
Magnesium (Mg)-Dissolved			104.1		%		80-120	08-MAY-14
Manganese (Mn)-Dissolved			98.2		%		80-120	08-MAY-14
Molybdenum (Mo)-Dissolved			101.3		%		80-120	08-MAY-14
Nickel (Ni)-Dissolved			100.5		%		80-120	08-MAY-14
Phosphorus (P)-Dissolved			114.7		%		80-120	08-MAY-14
Potassium (K)-Dissolved			93.7		%		80-120	08-MAY-14
Selenium (Se)-Dissolved			98.8		%		80-120	08-MAY-14
Silicon (Si)-Dissolved			94.6		%		80-120	08-MAY-14
Silver (Ag)-Dissolved			94.5		%		80-120	08-MAY-14
Sodium (Na)-Dissolved			106.8		%		80-120	08-MAY-14
Strontium (Sr)-Dissolved			107.8		%		80-120	08-MAY-14
Thallium (Tl)-Dissolved			102.4		%		80-120	08-MAY-14
Titanium (Ti)-Dissolved			92.8		%		80-120	08-MAY-14
Tin (Sn)-Dissolved			97.5		%		80-120	08-MAY-14
Uranium (U)-Dissolved			96.8		%		80-120	08-MAY-14
Vanadium (V)-Dissolved			99.4		%		80-120	08-MAY-14
Zinc (Zn)-Dissolved			98.5		%		80-120	08-MAY-14
WG1870100-2 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			103.0		%		80-120	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1870100-2 CRM		**ED-HIGH-WATRM**						
Antimony (Sb)-Dissolved			100.0		%		80-120	08-MAY-14
Arsenic (As)-Dissolved			102.3		%		80-120	08-MAY-14
Barium (Ba)-Dissolved			101.9		%		80-120	08-MAY-14
Beryllium (Be)-Dissolved			103.8		%		80-120	08-MAY-14
Bismuth (Bi)-Dissolved			101.4		%		80-120	08-MAY-14
Boron (B)-Dissolved			100.4		%		80-120	08-MAY-14
Cadmium (Cd)-Dissolved			101.5		%		80-120	08-MAY-14
Calcium (Ca)-Dissolved			102.7		%		80-120	08-MAY-14
Chromium (Cr)-Dissolved			101.0		%		80-120	08-MAY-14
Cobalt (Co)-Dissolved			100.2		%		80-120	08-MAY-14
Copper (Cu)-Dissolved			98.6		%		80-120	08-MAY-14
Lead (Pb)-Dissolved			99.1		%		80-120	08-MAY-14
Lithium (Li)-Dissolved			100.3		%		80-120	08-MAY-14
Magnesium (Mg)-Dissolved			104.1		%		80-120	08-MAY-14
Manganese (Mn)-Dissolved			100.8		%		80-120	08-MAY-14
Molybdenum (Mo)-Dissolved			104.7		%		80-120	08-MAY-14
Nickel (Ni)-Dissolved			100.3		%		80-120	08-MAY-14
Phosphorus (P)-Dissolved			101.2		%		80-120	08-MAY-14
Potassium (K)-Dissolved			94.9		%		80-120	08-MAY-14
Selenium (Se)-Dissolved			99.9		%		80-120	08-MAY-14
Silicon (Si)-Dissolved			97.9		%		80-120	08-MAY-14
Silver (Ag)-Dissolved			95.4		%		80-120	08-MAY-14
Sodium (Na)-Dissolved			107.6		%		80-120	08-MAY-14
Strontium (Sr)-Dissolved			112.2		%		80-120	08-MAY-14
Thallium (Tl)-Dissolved			102.1		%		80-120	08-MAY-14
Titanium (Ti)-Dissolved			98.8		%		80-120	08-MAY-14
Tin (Sn)-Dissolved			98.7		%		80-120	08-MAY-14
Uranium (U)-Dissolved			99.6		%		80-120	08-MAY-14
Vanadium (V)-Dissolved			102.5		%		80-120	08-MAY-14
Zinc (Zn)-Dissolved			100.2		%		80-120	08-MAY-14
WG1870100-4 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			101.5		%		80-120	08-MAY-14
Antimony (Sb)-Dissolved			99.8		%		80-120	08-MAY-14
Arsenic (As)-Dissolved			100.2		%		80-120	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1870100-4 CRM		**ED-HIGH-WATRM**						
Barium (Ba)-Dissolved			98.6		%		80-120	08-MAY-14
Beryllium (Be)-Dissolved			102.2		%		80-120	08-MAY-14
Bismuth (Bi)-Dissolved			98.4		%		80-120	08-MAY-14
Boron (B)-Dissolved			105.3		%		80-120	08-MAY-14
Cadmium (Cd)-Dissolved			96.9		%		80-120	08-MAY-14
Calcium (Ca)-Dissolved			102.5		%		80-120	08-MAY-14
Chromium (Cr)-Dissolved			100.3		%		80-120	08-MAY-14
Cobalt (Co)-Dissolved			98.8		%		80-120	08-MAY-14
Copper (Cu)-Dissolved			97.3		%		80-120	08-MAY-14
Lead (Pb)-Dissolved			100.6		%		80-120	08-MAY-14
Lithium (Li)-Dissolved			100.5		%		80-120	08-MAY-14
Magnesium (Mg)-Dissolved			103.7		%		80-120	08-MAY-14
Manganese (Mn)-Dissolved			97.7		%		80-120	08-MAY-14
Molybdenum (Mo)-Dissolved			103.1		%		80-120	08-MAY-14
Nickel (Ni)-Dissolved			100.2		%		80-120	08-MAY-14
Phosphorus (P)-Dissolved			109.6		%		80-120	08-MAY-14
Potassium (K)-Dissolved			94.2		%		80-120	08-MAY-14
Selenium (Se)-Dissolved			100.3		%		80-120	08-MAY-14
Silicon (Si)-Dissolved			95.1		%		80-120	08-MAY-14
Silver (Ag)-Dissolved			95.1		%		80-120	08-MAY-14
Sodium (Na)-Dissolved			113.3		%		80-120	08-MAY-14
Strontium (Sr)-Dissolved			106.9		%		80-120	08-MAY-14
Thallium (Tl)-Dissolved			101.2		%		80-120	08-MAY-14
Titanium (Ti)-Dissolved			94.2		%		80-120	08-MAY-14
Tin (Sn)-Dissolved			98.9		%		80-120	08-MAY-14
Uranium (U)-Dissolved			95.3		%		80-120	08-MAY-14
Vanadium (V)-Dissolved			100.3		%		80-120	08-MAY-14
Zinc (Zn)-Dissolved			98.1		%		80-120	08-MAY-14
WG1870100-6 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			97.7		%		80-120	08-MAY-14
Antimony (Sb)-Dissolved			98.1		%		80-120	08-MAY-14
Arsenic (As)-Dissolved			100.1		%		80-120	08-MAY-14
Barium (Ba)-Dissolved			96.0		%		80-120	08-MAY-14
Beryllium (Be)-Dissolved			103.5		%		80-120	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1870100-6 CRM		**ED-HIGH-WATRM**						
Bismuth (Bi)-Dissolved			94.8		%		80-120	08-MAY-14
Boron (B)-Dissolved			105.6		%		80-120	08-MAY-14
Cadmium (Cd)-Dissolved			97.5		%		80-120	08-MAY-14
Calcium (Ca)-Dissolved			103.7		%		80-120	08-MAY-14
Chromium (Cr)-Dissolved			96.3		%		80-120	08-MAY-14
Cobalt (Co)-Dissolved			97.0		%		80-120	08-MAY-14
Copper (Cu)-Dissolved			96.0		%		80-120	08-MAY-14
Lead (Pb)-Dissolved			100.9		%		80-120	08-MAY-14
Lithium (Li)-Dissolved			102.2		%		80-120	08-MAY-14
Magnesium (Mg)-Dissolved			99.5		%		80-120	08-MAY-14
Manganese (Mn)-Dissolved			98.2		%		80-120	08-MAY-14
Molybdenum (Mo)-Dissolved			104.5		%		80-120	08-MAY-14
Nickel (Ni)-Dissolved			99.3		%		80-120	08-MAY-14
Phosphorus (P)-Dissolved			102.7		%		80-120	08-MAY-14
Potassium (K)-Dissolved			93.6		%		80-120	08-MAY-14
Selenium (Se)-Dissolved			99.2		%		80-120	08-MAY-14
Silicon (Si)-Dissolved			92.0		%		80-120	08-MAY-14
Silver (Ag)-Dissolved			92.7		%		80-120	08-MAY-14
Sodium (Na)-Dissolved			106.2		%		80-120	08-MAY-14
Strontium (Sr)-Dissolved			105.0		%		80-120	08-MAY-14
Thallium (Tl)-Dissolved			102.3		%		80-120	08-MAY-14
Titanium (Ti)-Dissolved			97.9		%		80-120	08-MAY-14
Tin (Sn)-Dissolved			95.3		%		80-120	08-MAY-14
Uranium (U)-Dissolved			96.4		%		80-120	08-MAY-14
Vanadium (V)-Dissolved			99.4		%		80-120	08-MAY-14
Zinc (Zn)-Dissolved			100.3		%		80-120	08-MAY-14
WG1870100-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1870100-1 MB								
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	08-MAY-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	08-MAY-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	08-MAY-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	08-MAY-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	08-MAY-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	08-MAY-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
WG1870100-10 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	08-MAY-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1870100-10 MB								
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	08-MAY-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	08-MAY-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	08-MAY-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	08-MAY-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	08-MAY-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	08-MAY-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
WG1870100-3 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	08-MAY-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1870100-3 MB								
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	08-MAY-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	08-MAY-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	08-MAY-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	08-MAY-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	08-MAY-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
WG1870100-5 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	08-MAY-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	08-MAY-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2835120								
WG1870100-5 MB								
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	08-MAY-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	08-MAY-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	08-MAY-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	08-MAY-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	08-MAY-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	08-MAY-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	08-MAY-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	08-MAY-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	08-MAY-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	08-MAY-14
MET-T-CCMS-ED	**Water**							
Batch R2835157								
WG1869607-3 LCS								
Aluminum (Al)-Total			96.5		%		70-130	08-MAY-14
Antimony (Sb)-Total			99.3		%		70-130	08-MAY-14
Arsenic (As)-Total			100.5		%		70-130	08-MAY-14
Barium (Ba)-Total			101.5		%		70-130	08-MAY-14
Beryllium (Be)-Total			101.0		%		70-130	08-MAY-14
Bismuth (Bi)-Total			99.1		%		70-130	08-MAY-14
Boron (B)-Total			104.0		%		70-130	08-MAY-14
Cadmium (Cd)-Total			96.4		%		70-130	08-MAY-14
Calcium (Ca)-Total			99.3		%		70-130	08-MAY-14
Chromium (Cr)-Total			97.6		%		70-130	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED	**Water**							
Batch R2835157								
WG1869607-3 LCS								
Cobalt (Co)-Total			97.3		%		70-130	08-MAY-14
Copper (Cu)-Total			95.7		%		70-130	08-MAY-14
Iron (Fe)-Total			89.4		%		70-130	08-MAY-14
Lead (Pb)-Total			97.2		%		70-130	08-MAY-14
Lithium (Li)-Total			98.1		%		70-130	08-MAY-14
Magnesium (Mg)-Total			98.1		%		70-130	08-MAY-14
Manganese (Mn)-Total			97.6		%		70-130	08-MAY-14
Molybdenum (Mo)-Total			105.1		%		70-130	08-MAY-14
Nickel (Ni)-Total			96.7		%		70-130	08-MAY-14
Potassium (K)-Total			90.8		%		70-130	08-MAY-14
Selenium (Se)-Total			99.8		%		70-130	08-MAY-14
Silicon (Si)-Total			99.5		%		70-130	08-MAY-14
Silver (Ag)-Total			91.2		%		70-130	08-MAY-14
Sodium (Na)-Total			101.4		%		70-130	08-MAY-14
Strontium (Sr)-Total			106.8		%		70-130	08-MAY-14
Thallium (Tl)-Total			100.5		%		70-130	08-MAY-14
Tin (Sn)-Total			97.6		%		70-130	08-MAY-14
Titanium (Ti)-Total			96.9		%		70-130	08-MAY-14
Uranium (U)-Total			95.7		%		70-130	08-MAY-14
Vanadium (V)-Total			97.8		%		70-130	08-MAY-14
Zinc (Zn)-Total			98.0		%		70-130	08-MAY-14
WG1869607-4 LCS								
Aluminum (Al)-Total			98.6		%		80-120	08-MAY-14
Antimony (Sb)-Total			98.8		%		80-120	08-MAY-14
Arsenic (As)-Total			101.2		%		80-120	08-MAY-14
Barium (Ba)-Total			95.9		%		80-120	08-MAY-14
Beryllium (Be)-Total			102.6		%		80-120	08-MAY-14
Bismuth (Bi)-Total			97.8		%		80-120	08-MAY-14
Boron (B)-Total			104.0		%		80-120	08-MAY-14
Cadmium (Cd)-Total			96.3		%		80-120	08-MAY-14
Calcium (Ca)-Total			99.99		%		80-120	08-MAY-14
Chromium (Cr)-Total			97.6		%		80-120	08-MAY-14
Cobalt (Co)-Total			96.8		%		80-120	08-MAY-14
Copper (Cu)-Total			94.9		%		80-120	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED	**Water**							
Batch R2835157								
WG1869607-4 LCS								
Iron (Fe)-Total			88.8		%		80-120	08-MAY-14
Lead (Pb)-Total			96.0		%		80-120	08-MAY-14
Lithium (Li)-Total			99.5		%		80-120	08-MAY-14
Magnesium (Mg)-Total			102.8		%		80-120	08-MAY-14
Manganese (Mn)-Total			97.3		%		80-120	08-MAY-14
Molybdenum (Mo)-Total			105.2		%		80-120	08-MAY-14
Nickel (Ni)-Total			97.5		%		80-120	08-MAY-14
Potassium (K)-Total			91.2		%		80-120	08-MAY-14
Selenium (Se)-Total			99.1		%		80-120	08-MAY-14
Silicon (Si)-Total			95.8		%		80-120	08-MAY-14
Silver (Ag)-Total			91.8		%		80-120	08-MAY-14
Sodium (Na)-Total			106.2		%		80-120	08-MAY-14
Strontium (Sr)-Total			104.1		%		80-120	08-MAY-14
Thallium (Tl)-Total			98.7		%		80-120	08-MAY-14
Tin (Sn)-Total			98.0		%		80-120	08-MAY-14
Titanium (Ti)-Total			112.4		%		80-120	08-MAY-14
Uranium (U)-Total			94.3		%		80-120	08-MAY-14
Vanadium (V)-Total			99.5		%		80-120	08-MAY-14
Zinc (Zn)-Total			96.6		%		80-120	08-MAY-14
WG1869607-1 MB								
Aluminum (Al)-Total			0.00041		mg/L		0.003	08-MAY-14
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Arsenic (As)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Barium (Ba)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Boron (B)-Total			<0.010		mg/L		0.01	08-MAY-14
Cadmium (Cd)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Calcium (Ca)-Total			<0.020		mg/L		0.02	08-MAY-14
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Copper (Cu)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Iron (Fe)-Total			<0.010		mg/L		0.01	08-MAY-14
Lead (Pb)-Total			<0.000050		mg/L		0.00005	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED	**Water**							
Batch R2835157								
WG1869607-1 MB								
Lithium (Li)-Total			<0.0050		mg/L		0.005	08-MAY-14
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	08-MAY-14
Manganese (Mn)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Nickel (Ni)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Phosphorus (P)-Total			<0.30		mg/L		0.3	08-MAY-14
Potassium (K)-Total			<0.050		mg/L		0.05	08-MAY-14
Selenium (Se)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Silicon (Si)-Total			<0.050		mg/L		0.05	08-MAY-14
Silver (Ag)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Sodium (Na)-Total			<0.050		mg/L		0.05	08-MAY-14
Strontium (Sr)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Tin (Sn)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	08-MAY-14
Uranium (U)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Vanadium (V)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Zinc (Zn)-Total			<0.0030		mg/L		0.003	08-MAY-14
WG1869607-2 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	08-MAY-14
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Arsenic (As)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Barium (Ba)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Boron (B)-Total			<0.010		mg/L		0.01	08-MAY-14
Cadmium (Cd)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Calcium (Ca)-Total			<0.020		mg/L		0.02	08-MAY-14
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Iron (Fe)-Total			<0.010		mg/L		0.01	08-MAY-14
Lead (Pb)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Lithium (Li)-Total			<0.0050		mg/L		0.005	08-MAY-14
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	08-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED	**Water**							
Batch R2835157								
WG1869607-2 MB								
Manganese (Mn)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	08-MAY-14
Nickel (Ni)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Phosphorus (P)-Total			<0.30		mg/L		0.3	08-MAY-14
Potassium (K)-Total			<0.050		mg/L		0.05	08-MAY-14
Selenium (Se)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Silicon (Si)-Total			<0.050		mg/L		0.05	08-MAY-14
Silver (Ag)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Sodium (Na)-Total			<0.050		mg/L		0.05	08-MAY-14
Strontium (Sr)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Tin (Sn)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	08-MAY-14
Uranium (U)-Total			<0.000010		mg/L		0.00001	08-MAY-14
Vanadium (V)-Total			<0.00010		mg/L		0.0001	08-MAY-14
Zinc (Zn)-Total			<0.0030		mg/L		0.003	08-MAY-14
NH3-L-CFA-ED	**Water**							
Batch R2833241								
WG1868453-2 LCS								
Ammonia, Total (as N)			99.6		%		85-115	06-MAY-14
WG1868453-3 LCS								
Ammonia, Total (as N)			101.5		%		85-115	06-MAY-14
WG1868453-1 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	06-MAY-14
WG1868453-4 MS		**L1410244-2**						
Ammonia, Total (as N)			104.6		%		75.3-122.1	06-MAY-14
WG1868453-5 MS		**L1449566-36**						
Ammonia, Total (as N)			106.8		%		75.3-122.1	06-MAY-14
NO2+NO3-L-CFA-ED	**Water**							
Batch R2834237								
WG1869491-2 LCS								
Nitrate and Nitrite (as N)			101.0		%		85-115	07-MAY-14
WG1869491-1 MB								
Nitrate and Nitrite (as N)			<0.0060		mg/L		0.006	07-MAY-14
NO2-L-CFA-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-CFA-ED	**Water**							
Batch R2834237								
WG1869491-2 LCS								
Nitrite (as N)			98.0		%		85-115	07-MAY-14
WG1869491-1 MB								
Nitrite (as N)			<0.0020		mg/L		0.002	07-MAY-14
P-T-L-COL-ED	**Water**							
Batch R2835265								
WG1869958-2 LCS								
Phosphorus (P)-Total			104.0		%		80-120	08-MAY-14
WG1869958-6 LCS								
Phosphorus (P)-Total			105.0		%		80-120	08-MAY-14
WG1869958-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	08-MAY-14
WG1869958-5 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	08-MAY-14
WG1869958-10 MS		**L1451519-8**						
Phosphorus (P)-Total			115.2		%		70-130	08-MAY-14
WG1869958-4 MS		**L1448888-5**						
Phosphorus (P)-Total			105.4		%		70-130	08-MAY-14
WG1869958-8 MS		**L1449566-36**						
Phosphorus (P)-Total			125.5		%		70-130	08-MAY-14
P-TD-L-COL-ED	**Water**							
Batch R2835265								
WG1869958-2 LCS								
Phosphorus (P)-Total	Dissolved		103.0		%		80-120	08-MAY-14
WG1869958-6 LCS								
Phosphorus (P)-Total	Dissolved		103.6		%		80-120	08-MAY-14
WG1869958-1 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	08-MAY-14
WG1869958-5 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	08-MAY-14
WG1869958-10 MS		**L1451519-8**						
Phosphorus (P)-Total	Dissolved		123.3		%		70-130	08-MAY-14
WG1869958-4 MS		**L1448888-5**						
Phosphorus (P)-Total	Dissolved		111.8		%		70-130	08-MAY-14
WG1869958-8 MS		**L1449566-36**						
Phosphorus (P)-Total	Dissolved		124.6		%		70-130	08-MAY-14
PH/EC/ALK-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2832693								
WG1867938-2 LCS								
Conductivity (EC)			100.4		%		90-110	05-MAY-14
WG1867938-3 LCS								
pH			7.02		pH		6.7-7.3	05-MAY-14
WG1867938-4 LCS								
Alkalinity, Total (as CaCO3)			102.8		%		85-115	05-MAY-14
WG1867938-5 LCS								
Conductivity (EC)			97.6		%		90-110	05-MAY-14
WG1867938-1 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	05-MAY-14
Carbonate (CO3)			<5.0		mg/L		5	05-MAY-14
Hydroxide (OH)			<5.0		mg/L		5	05-MAY-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	05-MAY-14
PO4-DO-L-COL-ED	**Water**							
Batch R2834237								
WG1869491-2 LCS								
Orthophosphate-Dissolved (as P)			99.0		%		80-120	07-MAY-14
WG1869491-1 MB								
Orthophosphate-Dissolved (as P)			<0.0010		mg/L		0.001	07-MAY-14
SO4-L-IC-ED	**Water**							
Batch R2833200								
WG1868356-2 LCS								
Sulfate (SO4)			98.9		%		90-110	05-MAY-14
WG1868356-7 LCS								
Sulfate (SO4)			99.3		%		90-110	05-MAY-14
WG1868356-9 LCS								
Sulfate (SO4)			99.4		%		90-110	05-MAY-14
WG1868356-10 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	05-MAY-14
WG1868356-8 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	05-MAY-14
WG1868356-6 MS		**L1449566-36**						
Sulfate (SO4)			99.1		%		75-125	05-MAY-14
SOLIDS-TDS-ED	**Water**							
Batch R2834993								
WG1869535-3 DUP		**L1450733-1**						
Total Dissolved Solids		47	46		mg/L	2.2	20	07-MAY-14
WG1869535-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TDS-ED	**Water**							
Batch R2834993								
WG1869535-2 LCS								
Total Dissolved Solids			97.6		%		85-115	07-MAY-14
WG1869535-1 MB								
Total Dissolved Solids			<10		mg/L		10	07-MAY-14
SOLIDS-TOTSUS-ED	**Water**							
Batch R2834281								
WG1869192-3 DUP		**L1450733-1**						
Total Suspended Solids		<3.0	<3.0	RPD-NA	mg/L	N/A	20	07-MAY-14
WG1869192-2 LCS								
Total Suspended Solids			103.4		%		85-115	07-MAY-14
WG1869192-1 MB								
Total Suspended Solids			<3.0		mg/L		3	07-MAY-14
SULPHIDE-ED	**Water**							
Batch R2835784								
WG1870993-1 MB								
Sulphide			<0.0015		mg/L		0.0015	09-MAY-14
TH-D-CCMS-VA	**Water**							
Batch R2835599								
WG1869855-1 MB								
Thorium (Th)-Dissolved			<0.000050		mg/L		0.00005	09-MAY-14
TH-T-CCMS-VA	**Water**							
Batch R2835599								
WG1870500-1 MB								
Thorium (Th)-Total			<0.000050		mg/L		0.00005	09-MAY-14
TKN-L-CFA-ED	**Water**							
Batch R2833153								
WG1868451-2 LCS								
Total Kjeldahl Nitrogen			105		%		75-125	06-MAY-14
WG1868451-3 LCS								
Total Kjeldahl Nitrogen			96		%		75-125	06-MAY-14
WG1868451-4 LCS								
Total Kjeldahl Nitrogen			97		%		75-125	06-MAY-14
WG1868451-1 MB								
Total Kjeldahl Nitrogen			<0.050		mg/L		0.05	06-MAY-14
WG1868451-6 MS		**L1449566-36**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TKN-L-CFA-ED	**Water**							
Batch R2833153								
WG1868451-6 MS		**L1449566-36**						
Total Kjeldahl Nitrogen			114		%		61.4-139.7	06-MAY-14
TURBIDITY-ED	**Water**							
Batch R2835865								
WG1868695-2 LCS								
Turbidity			100.7		%		70-130	06-MAY-14
WG1868695-1 MB								
Turbidity			<0.10		NTU		0.1	06-MAY-14

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Color, True							
	1	30-APR-14 12:00	06-MAY-14 14:35	48	147	hours	EHTR
	2	30-APR-14 13:00	06-MAY-14 14:35	48	146	hours	EHTR
	3	30-APR-14 13:00	06-MAY-14 14:35	48	146	hours	EHTR
Turbidity							
	1	30-APR-14 12:00	06-MAY-14 00:00	48	132	hours	EHTR
	2	30-APR-14 13:00	06-MAY-14 00:00	48	131	hours	EHTR
	3	30-APR-14 13:00	06-MAY-14 00:00	48	131	hours	EHTR
Leachable Anions & Nutrients							
Diss. Orthophosphate in Water by Colour							
	1	30-APR-14 12:00	07-MAY-14 13:07	48	169	hours	EHTR
	2	30-APR-14 13:00	07-MAY-14 13:07	48	168	hours	EHTR
	3	30-APR-14 13:00	07-MAY-14 13:07	48	168	hours	EHTR
Anions and Nutrients							
Nitrite & Nitrate in Water by Colour							
	1	30-APR-14 12:00	07-MAY-14 13:07	48	169	hours	EHTR
	2	30-APR-14 13:00	07-MAY-14 13:07	48	168	hours	EHTR
	3	30-APR-14 13:00	07-MAY-14 13:07	48	168	hours	EHTR
Nitrite in Water by Colour							
	1	30-APR-14 12:00	07-MAY-14 13:07	48	169	hours	EHTR
	2	30-APR-14 13:00	07-MAY-14 13:07	48	168	hours	EHTR
	3	30-APR-14 13:00	07-MAY-14 13:07	48	168	hours	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1450733 were received on 05-MAY-14 11:34.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Radium-226

Case Narrative

ALS Environmental

L1450733

Work Order Number: 1405105

1. This report consists of the analytical results for three water samples received by ALS on 05/07/14.

2. These samples were prepared and analyzed according to the current revision of SOP 783. The analyses were completed on 05/16/14.

3. The analysis results for these samples are reported in units of BQ/L. The samples were not filtered prior to analysis.

4. Sample volume was insufficient to allow preparation of a duplicate. A laboratory control sample duplicate (LCSD) was prepared in lieu of a client sample duplicate.

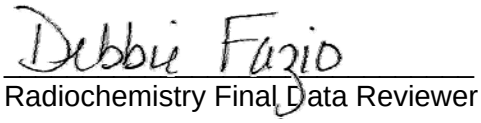
5. Due to elevated levels of calcium, a direct aliquot was taken for sample 1405105-2. Consequently, the requested MDC was not met. The reported activity exceeds the achieved MDC. The results are flagged with an “M3” qualifier on the final report.

6. ALS uses the following convention for reporting significant digits in the TPU and MDC results. The TPU value is rounded to two significant digits. The MDC value is rounded to the same decimal place as the TPU value. In practice, this could result in an MDC reported value of zero for samples with significant activity, including the batch laboratory control sample.

7. No further anomalous situations were encountered during the preparation or analysis of these samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend — 5/16/14
Radiochemistry Primary Data Reviewer — Date



Radiochemistry Final Data Reviewer — 5/16/14
Date

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1405105
Client Name: ALS Environmental
Client Project Name:
Client Project Number: L1450733
Client PO Number: L1450733

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
L1450733-1	1405105-1		WATER	30-Apr-14	
L1450733-2	1405105-2		WATER	30-Apr-14	
L1450733-3	1405105-3		WATER	30-Apr-14	

Subcontract Request Form

5/7/14 gc ~~1405104~~ 1405105

Subcontract To:

ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA
225 COMMERCE DRIVE
FORT COLLINS,CO 80524

NOTES: Please reference on final report and invoice: PO# *L1450733*
ALS requires QC data to be provided with your final results.

Please see enclosed 3 sample(s) in 3 Container(s)

SAMPLE NUMBER	CLIENT ID / ANALYTICAL REQUIRED	DATE SAMPLED / DUE DATE	Priority Flag
L1450733-1 (1)	JGT-06-LAKE WATER	4/30/2014	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	5/22/2014	
L1450733-2 (2)	JGT-06-BRINE	4/30/2014	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	5/22/2014	
L1450733-3 (3)	JGT-06-1951	4/30/2014	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	5/22/2014	

Subcontract Info Contact: Christine Potts (780) 413-5242
Analysis and reporting info contact: Shannon Akkerman
9936 67 AVE
EDMONTON,AB T6E 0P5
Phone: (780) 413-5242 Email: Shannon.Akkerman@alsglobal.com

Please email confirmation of receipt to: Shannon.Akkerman@alsglobal.com

Shipped By: _____ Date Shipped: _____
Received By: [signature] Date Received: 5/7/14 0945
Verified By: _____ Date Verified: _____
Temperature: _____
Sample Integrity Issues: _____

Debbie Fazio

From: Jessica Spira
Sent: Wednesday, May 07, 2014 9:55 AM
To: Debbie Fazio
Subject: RE: ALS Edmonton L1450733 RA226-MMER-FC; Emergency TAT Upgrade

Categories: Important

Thanks Debbie, please put on the emergency TAT due on May 16th

For information about the expansion of our primary laboratories in Alberta, CLICK HERE

Regards,

Jessica Spira

Senior Account Manager, Regional Accounts – Edmonton & Calgary
ALS Life Sciences Division | Environmental

819 58 Street East
Saskatoon, SK S7K 6X5 CANADA
Direct +1 306 261 9418

www.alsglobal.com

From: Debbie Fazio
Sent: May-07-14 9:55 AM
To: Jessica Spira
Subject: RE: ALS Edmonton L1450733 RA226-MMER-FC; Emergency TAT Upgrade

Jessica,

The quickest we could have data is May 16th. This analysis requires a 1 week ingrowth period so we are limited by that. There will be a 50% surcharge applied if you decide you still want us to meet the May 16

Kind Regards,

Debbie Fazio

Client Services Manager
ALS Life Sciences Division | Environmental

225 Commerce Drive
Fort Collins, CO 80524 USA

D +1 970 224 2559 X220
T +1 970 490 1511
F +1 970 490 1522

http://www.alsglobal.com/

From: Jessica Spira
Sent: Wednesday, May 07, 2014 9:48 AM
To: Debbie Fazio
Subject: ALS Edmonton L1450733 RA226-MMER-FC; Emergency TAT Upgrade
Importance: High

Good morning Debbie,

We have shipped you 3 water samples for Ra226 testing. My client would like to upgrade the turnaround time from regular to emergency testing. Can you please let me know the quickest TAT you can provide?

The samples were shipped via FedEx 798788295319 and should be at your lab this morning, they were not marked for emergency TAT. Thanks!

For information about the expansion of our primary laboratories in Alberta, CLICK HERE

Regards,

Jessica Spira

Senior Account Manager, Regional Accounts - Edmonton & Calgary
ALS Life Sciences Division | Environmental

819 58 Street East
Saskatoon, SK S7K 6X5 CANADA
Direct +1 306 261 9418

www.alsglobal.com

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS Edmonton Workorder No: 1405105

Project Manager: DF Initials: JRR Date: 5/7/14

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	(YES)	NO
9. Are all aqueous non-preserved samples pH 4-9?	(N/A)	YES	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 (#4)	(RAD ONLY)	YES	(NO)

Cooler #:	1							
Temperature (°C):	11.2							
No. of custody seals on cooler:	0							
DOT Survey/ Acceptance Information: External µR/hr reading:	11							
Background µR/hr reading:	11							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / (NA) Contact: _____ Date/Time: _____

Project Manager Signature / Date: DF 5/7/14

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

From: (780) 413-5280
Jimmy Oleson
ALS Labortory Group
9938-67 AVE

edmonton, AB T6E0P5
CANADA

Origin ID: YEGA

FedEx Express

J14181482879425

Ship Date: 05MAY14
ActWgt: 7.2 KG
CAD: 100133236/INCA3490

REF:
DESC-1: water sample for research purposes only
DESC-2:
DESC-3:
DESC-4:

COUNTRY MFG: CA
CARRIAGE VALUE: 1.00 CAD
CUSTOMS VALUE: 1.00 CAD

SIGN: Jimmy Oleson
EIN/VAT:
PKG TYPE: CUSTOMER

1405105 11 -0

SHIP TO: (970) 490-1511 BILL SENDER

ALS Ft. Collins
ALS Laboratory Group
225 COMMERCE DR

FORT COLLINS, CO 80524
US

10:30A
INTL PRIORITY
ISR
80524
CO-US
DEN

TRK# 7987 5529 5319
0430

XH FTCA

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The invalidity or unenforceability of any provisions shall not affect any other part of this Air Waybill. Unless otherwise indicated, FEDERAL EXPRESS CORPORATION, 2005 Corporate Avenue, Memphis, TN 38132, USA, is the first carrier of this shipment. Email address located at www.fedex.com.

Temp = 11.2°C (RAD only)

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Method Blank Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1405105
Client Name: ALS Environmental
ClientProject ID: L1450733

Lab ID: RE140508-2MB

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 08-May-14
Date Prepared: 08-May-14
Date Analyzed: 16-May-14

Prep Batch: RE140508-2
QCBatchID: RE140508-2-1
Run ID: RE140508-2A
Count Time: 30 minutes

Final Aliquot: 995 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	BDL	0.0053	0.00999	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16290	15440	ug	94.8	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RE1405105-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1405105
Client Name: ALS Environmental
ClientProject ID: L1450733

Lab ID: RE140508-2LCS

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 08-May-14
Date Prepared: 08-May-14
Date Analyzed: 16-May-14

Prep Batch: RE140508-2
QCBatchID: RE140508-2-1
Run ID: RE140508-2A
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.81 +/- 0.45	0	1.676	108	67 - 120	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16290	15790	ug	97.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE1405105-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1405105
Client Name: ALS Environmental
ClientProject ID: L1450733

Lab ID: RE140508-2LCSD

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 08-May-14
Date Prepared: 08-May-14
Date Analyzed: 16-May-14

Prep Batch: RE140508-2
QCBatchID: RE140508-2-1
Run ID: RE140508-2A
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.73 +/- 0.43	0.01	1.676	103	67 - 120	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16290	15690	ug	96.4	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE1405105-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Environmental -- FC
Work Order Number: 1405105
Client Name: ALS Environmental
ClientProject ID: L1450733

Field ID:
Lab ID: RE140508-2LCSD

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 08-May-14
Date Prepared: 08-May-14
Date Analyzed: 16-May-14

Prep Batch: RE140508-2
QCBatchID: RE140508-2-1
Run ID: RE140508-2A
Count Time: 15 minutes

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Analyte	Sample			Duplicate			DER	DER Lim
		Result +/- 2 s TPU	MDC	Flags	Result +/- 2 s TPU	MDC	Flags		
13982-63-3	Ra-226	1.81 +/- 0.45	0	P	1.73 +/- 0.43	0.01	P	0.122	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RE1405105-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1405105
Client Name: ALS Environmental
ClientProject ID: L1450733

Field ID: L1450733-1
Lab ID: 1405105-1

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 30-Apr-14
Date Prepared: 08-May-14
Date Analyzed: 16-May-14

Prep Batch: RE140508-2
QCBatchID: RE140508-2-1
Run ID: RE140508-2A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.0090 +/- 0.0049	0.0014	0.00999	LT

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16300	15270	ug	93.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1405105-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1405105
Client Name: ALS Environmental
ClientProject ID: L1450733

Field ID: L1450733-2
Lab ID: 1405105-2

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 30-Apr-14
Date Prepared: 08-May-14
Date Analyzed: 16-May-14

Prep Batch: RE140508-2
QCBatchID: RE140508-2-1
Run ID: RE140508-2A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 25.0 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.80 +/- 0.31	0.05	0.00999	M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1405105-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1405105
Client Name: ALS Environmental
ClientProject ID: L1450733

Field ID: L1450733-3
Lab ID: 1405105-3

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 30-Apr-14
Date Prepared: 08-May-14
Date Analyzed: 16-May-14

Prep Batch: RE140508-2
QCBatchID: RE140508-2-1
Run ID: RE140508-2A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 796 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.226 +/- 0.061	0.002	0.00999	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	16310	15520	ug	95.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1405105-1*

10- 366718

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

Page 1 of 1

Report To	Report Format / Distribution	Service Request: (Rush subject to availability - Contact ALS to confirm TAT)
Company: GOLDER ASSOCIATES LTD	Standard: X Other (specify):	X Regular (Standard Turnaround Times - Business Days)
Contact: JONATHAN LOVE	Select: PDF X Excel X Digital X Fax	Priority (2-4 Business Days) - 50% surcharge - Contact ALS to confirm TAT
Address: 500-4260 Still Cr. Drive Burnaby BC	Email 1: Jonathan_Love@golder.com	Emergency (1-2 Business Days) - 100% Surcharge - Contact ALS to confirm TAT
Phone: 604-296-4200 Fax:	Email 2: Stefano_Nani@golder.com Denis_Vachon@golder.com	Same Day or Weekend Emergency - Contact ALS to confirm TAT
Invoice To: Same as Report ? (circle) Yes or No (if No, provide details)	Client / Project Information	Analysis Request
Copy of Invoice with Report? (circle) Yes or No	Job #: 13-1328-0041/2010/91	(Indicate Filtered or Preserved, F/P)
Company:	PO / AFE:	
Contact:	LSD:	
Address:		
Phone: Fax:	Quote #: Q44824	
Lab Work Order # (lab use only): L1450733	ALS Contact: Jessica Spira	Sampler: DE/DV

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	GLD-CAL-WQ-MET-DU-ED	GLD-CAL-WQ-MET-TU-ED	GLD-CAL-WQ-NUT-ED	GL-CAL-WQ-ROU-ED	Hg-D-U-CVAF-VA	Hg-T-U-CVAF-VA	PO4-DO-L-COL-ED	RAZ26-MMER-FC	THD-ECMS-ED	TH-T-CCMS-ED	MET-T-CCMS-1 (ED-P-T-MS)	MET-D-CCMS-H (ED-P-D-MS)	Number of Containers
	JGT-06-Lake water	30-04-14	12:00	GW	X	X	X	X	X	X	X	X	X	X	X	X	9
	JGT-06-Brine	"	13:00	GW	X	X	X	X	X	X	X	X	X	X	X	X	9
	JGT-06-1951	"	13:00	GW	X	X	X	X	X	X	X	X	X	X	X	X	9

L1450733-COFC

Special Instructions / Regulation with water or land use (CCME- Freshwater Aquatic Life/BC CL

Hg samples not preserved

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
DE	30Apr14	17:15	Rm	5/5/2014	11:34	°C				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION | WHITE - LABORATORY COPY | YELLOW - CLIENT COPY | GENF 18.01 Front

GOLDER ASSOCIATES LTD.
ATTN: STEFANO NANI
500 - 4260 Still Creek Drive
Burnaby BC V5C 6C6

Date Received: 30-MAY-14
Report Date: 25-JUN-14 09:29 (MT)
Version: FINAL

Client Phone: 604-296-2784

Certificate of Analysis

Lab Work Order #: L1462851

Project P.O. #: NOT SUBMITTED
Job Reference: 13-1328-0041/2010/91
C of C Numbers: 10-366716
Legal Site Desc:

Jessica Spira
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1462851-1	L1462851-2	L1462851-3		
	Description	DISTILLED WATE		GROUND WATE		
	Sampled Date	29-MAY-14	29-MAY-14	29-MAY-14		
	Sampled Time	01:15	01:00	01:50		
	Client ID	JGT-06-SE (FIELD BLANK)	TRIP BLANK	JGT-06-17S1		
Grouping	**Analyte**					
WATER						
Physical Tests	Color, True (C.U.)	<2.0	<2.0	12.6		
	Hardness (as CaCO3) (mg/L)	<0.50	<0.50	708		
	Total Suspended Solids (mg/L)	<3.0	<3.0	4.6		
	Total Dissolved Solids (mg/L)	<10	<10	2180		
	TDS (Calculated from EC) (mg/L)	<1.0	<1.0	2180		
	Turbidity (NTU)	<0.10	<0.10	1.92		
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L)	<2.0	<2.0	55.6		
	Ammonia, Total (as N) (mg/L)	<0.0050	<0.0050	0.185		
	Bicarbonate (HCO3) (mg/L)	<5.0	<5.0	67.8		
	Carbonate (CO3) (mg/L)	<5.0	<5.0	<5.0		
	Chloride (Cl) (mg/L)	<0.50	<0.50	925		
	Conductivity (EC) (uS/cm)	1.09	1.06	3350		
	Fluoride (F) (mg/L)	<0.020	<0.020	0.158		
	Hydroxide (OH) (mg/L)	<5.0	<5.0	<5.0		
	Nitrate and Nitrite (as N) (mg/L)	<0.0060	<0.0060	<0.0060		
	Nitrate (as N) (mg/L)	<0.0060	<0.0060	<0.0060		
	Nitrite (as N) (mg/L)	<0.0020	<0.0020	<0.0020		
	Total Kjeldahl Nitrogen (mg/L)	<0.050	<0.050	0.221		
	pH (pH)	4.71	4.63	7.64		
	Orthophosphate-Dissolved (as P) (mg/L)	<0.0010	<0.0010	0.0295		
	Phosphorus (P)-Total Dissolved (mg/L)	0.0043 RRV	0.0030 RRV	0.0348		
	Phosphorus (P)-Total (mg/L)	0.0043 RRV	0.0034 RRV	0.0367		
	TDS (Calculated) (mg/L)	<1.0	<1.0	1740		
	Sulfate (SO4) (mg/L)	<0.050	<0.050	155		
	Sulphide (as S) (mg/L)	<0.0015	<0.0015	1.61		
Organic / Inorganic Carbon	Dissolved Organic Carbon (mg/L)	<0.50	<0.50	97.5		
	Total Organic Carbon (mg/L)	<0.50	<0.50	95.4		
Total Metals	Mercury (Hg)-Total (ug/L)	<0.00050	<0.00050	<0.00050		
	Phosphorus (P)-Total (mg/L)	<0.30	<0.30			
	Silicon (Si)-Total (mg/L)	<0.050	<0.050	5.26 DLM		
	Sulfur (S)-Total (mg/L)	<0.50	<0.50	49.2		
	Thorium (Th)-Total (mg/L)	<0.000050	<0.000050	<0.00010 DLA		
	Zirconium (Zr)-Total (mg/L)	<0.00060	<0.00060	<0.0030 DLM		
Total Metals (Undigested)	Aluminum (Al)-Total (mg/L)	<0.00030	0.00044	0.0162		
	Antimony (Sb)-Total (mg/L)	<0.000020	<0.000020	<0.000020		
	Arsenic (As)-Total (mg/L)	<0.000020	<0.000020	0.0111		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1462851-1	L1462851-2	L1462851-3		
	Description	DISTILLED WATE		GROUND WATE		
	Sampled Date	29-MAY-14	29-MAY-14	29-MAY-14		
	Sampled Time	01:15	01:00	01:50		
	Client ID	JGT-06-SE (FIELD BLANK)	TRIP BLANK	JGT-06-17S1		
Grouping	**Analyte**					
WATER						
Total Metals (Undigested)	Barium (Ba)-Total (mg/L)	<0.000050	<0.000050	0.00498		
	Beryllium (Be)-Total (mg/L)	<0.000010	<0.000010	<0.000010		
	Bismuth (Bi)-Total (mg/L)	<0.000010	<0.000010	<0.000010		
	Boron (B)-Total (mg/L)	0.0035 RRV	0.0029	0.112		
	Cadmium (Cd)-Total (mg/L)	<0.0000050	<0.0000050	<0.0000050		
	Calcium (Ca)-Total (mg/L)			174		
	Chromium (Cr)-Total (mg/L)	0.000061 RRV	0.000087	0.000858		
	Cobalt (Co)-Total (mg/L)	<0.000010	<0.000010	0.000024		
	Copper (Cu)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Iron (Fe)-Total (mg/L)	<0.0010	<0.0010	0.0273		
	Lead (Pb)-Total (mg/L)	<0.000010	<0.000010	0.000013		
	Lithium (Li)-Total (mg/L)	<0.00050	<0.00050	0.0605		
	Magnesium (Mg)-Total (mg/L)			65.8		
	Manganese (Mn)-Total (mg/L)	<0.000050	<0.000050	0.267		
	Molybdenum (Mo)-Total (mg/L)	<0.000050	<0.000050	0.00600		
	Nickel (Ni)-Total (mg/L)	<0.000060	<0.000060	0.000830		
	Potassium (K)-Total (mg/L)			6.42		
	Selenium (Se)-Total (mg/L)	<0.000040	<0.000040	0.00240		
	Silver (Ag)-Total (mg/L)	<0.0000050	<0.0000050	0.0000072		
	Sodium (Na)-Total (mg/L)			379		
	Strontium (Sr)-Total (mg/L)	<0.000050	<0.000050	3.60		
	Thallium (Tl)-Total (mg/L)	<0.000010	<0.000010	<0.0000050		
	Tin (Sn)-Total (mg/L)	<0.000050	<0.000050	<0.000050		
	Titanium (Ti)-Total (mg/L)	<0.00010	<0.00010	0.00048		
	Uranium (U)-Total (mg/L)	<0.000010	<0.000010	0.0285		
	Vanadium (V)-Total (mg/L)	<0.000050	<0.000050	0.000053		
	Zinc (Zn)-Total (mg/L)	<0.00080	<0.00080	0.0877		
Dissolved Metals	Dissolved Mercury Filtration Location	FIELD	FIELD	FIELD		
	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD		
	Aluminum (Al)-Dissolved (mg/L)	<0.00030	<0.00030	0.00887		
	Antimony (Sb)-Dissolved (mg/L)	<0.000020	<0.000020	0.000039		
	Arsenic (As)-Dissolved (mg/L)	<0.000020	<0.000020	0.0134		
	Barium (Ba)-Dissolved (mg/L)	<0.000050	<0.000050	0.00412		
	Beryllium (Be)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Boron (B)-Dissolved (mg/L)	<0.0010	0.0017 RRV	0.104		
	Cadmium (Cd)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1462851-1	L1462851-2	L1462851-3		
	Description	DISTILLED WATE		GROUND WATE		
	Sampled Date	29-MAY-14	29-MAY-14	29-MAY-14		
	Sampled Time	01:15	01:00	01:50		
	Client ID	JGT-06-SE (FIELD BLANK)	TRIP BLANK	JGT-06-17S1		
Grouping	**Analyte**					
WATER						
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	<0.020	<0.020	175		
	Chromium (Cr)-Dissolved (mg/L)	<0.000060	<0.000060	0.000153		
	Cobalt (Co)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Copper (Cu)-Dissolved (mg/L)	<0.00010	<0.00010	0.00012		
	Iron (Fe)-Dissolved (mg/L)	<0.0010	<0.0010	0.0075		
	Lead (Pb)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Lithium (Li)-Dissolved (mg/L)	<0.00050	<0.00050	0.0603		
	Magnesium (Mg)-Dissolved (mg/L)	<0.0040	<0.0040	65.6		
	Manganese (Mn)-Dissolved (mg/L)	<0.000050	<0.000050	0.270		
	Mercury (Hg)-Dissolved (ug/L)	<0.00050	<0.00050	<0.00050		
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	<0.000050	0.00811 RRV		
	Nickel (Ni)-Dissolved (mg/L)	<0.000060	<0.000060	0.000323		
	Phosphorus (P)-Dissolved (mg/L)	<0.30	<0.30			
	Potassium (K)-Dissolved (mg/L)	<0.020	<0.020	6.44		
	Selenium (Se)-Dissolved (mg/L)	<0.000040	<0.000040	0.00156		
	Silicon (Si)-Dissolved (mg/L)	<0.050	<0.050	6.02 DLM		
	Silver (Ag)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050		
	Sodium (Na)-Dissolved (mg/L)	<0.0050	<0.0050	379		
	Strontium (Sr)-Dissolved (mg/L)	<0.000050	<0.000050	3.71		
	Sulfur (S)-Dissolved (mg/L)	<0.50	<0.50	71.2		
	Thallium (Tl)-Dissolved (mg/L)	<0.0000050	<0.0000050	<0.0000050		
	Thorium (Th)-Dissolved (mg/L)	<0.000050	<0.000050	<0.00010 DLA		
	Tin (Sn)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		
	Titanium (Ti)-Dissolved (mg/L)	<0.00010	<0.00010	0.00010		
	Uranium (U)-Dissolved (mg/L)	<0.000010	<0.000010	0.0279		
	Vanadium (V)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050		
	Zinc (Zn)-Dissolved (mg/L)	<0.00080	<0.00080	0.00193		
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	<0.0015 DLM		
Sulfur Compounds	Sulphide (as H2S) (mg/L)	<0.0015	<0.0015	1.71		
Radiological Parameters	Ra-226 (Bq/L)	See Attached	See Attached	See Attached		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Chloride (Cl)	MS-B	L1462851-1, -2, -3
Matrix Spike	Mercury (Hg)-Total	MS-B	L1462851-3
Matrix Spike	Total Organic Carbon	MS-B	L1462851-3

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-DIS-ORG-ED	Water	Dissolved Organic Carbon	APHA 5310 B-Instrumental
C-DIS-ORG-LOW-ED	Water	Dissolved Organic Carbon	APHA 5310 B-Instrumental
C-TOT-ORG-ED	Water	Total Organic Carbon	APHA 5310 B-Instrumental
C-TOT-ORG-LOW-ED	Water	Total Organic Carbon	APHA 5310 B-Instrumental
CL-IC-ED	Water	Chloride by IC	APHA 4110 B-ION CHROMATOGRAPHY
COL-TRU-ED	Water	Color, True	APHA 2120

The reported color applies to the pH of the sample as submitted unless otherwise noted on the report.

ETL-HARDNESS-DIS-ED	Water	Hardness (from Dissolved Ca and Mg)	APHA 2340 B-Calculation
F-IC-ED	Water	Fluoride by IC	APHA 4110 B-ION CHROMATOGRAPHY
HG-D-U-CVAF-VA	Water	Diss. Mercury in Water by CVAFS (Ultra)	APHA 3030 B / EPA 1631 REV. E

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

HG-T-U-CVAF-VA	Water	Total Mercury in Water by CVAFS (Ultra)	EPA 1631 REV. E

This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

IONBALANCE-ED	Water	Ion Balance Calculation	APHA 1030E
MET-D-CCMS-ED	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
MET-D-ICP-ED	Water	Dissolved Metals in Water by ICPOES	APHA 3120 B-ICP-OES
MET-D-NP-U-CCMS-ED	Water	Diss. Metals in Water by CRC ICPMS (Ult)	APHA 3125-ICP-MS

Ultra trace metals in water are analyzed by ICPMS, based on US EPA Method 6020A (Jan 1998). This procedure is intended for pristine field-filtered acid-preserved water samples. ALS recommends that filtration blanks be submitted for this test to aid with interpretation of results.

MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
MET-T-ICP-ED	Water	Total Metals in Water by ICPOES	APHA 3120 B-ICP-OES
MET-T-NP-U-CCMS-ED	Water	Metals in Water by CRC ICPMS (No Digest)	APHA 3125-ICP-MS

Ultra trace metals in water are analyzed by ICPMS, based on US EPA Method 6020A (Jan 1998). The detection limits provided can only be met for undigested samples. This procedure is intended for pristine, non-turbid, acid-preserved water samples, where sample turbidity is < 1 NTU. Where turbidity exceeds 1 NTU, results may be biased low compared to true Total Metals concentrations. ALS recommends that turbidity analysis be requested on samples submitted for this test to aid with interpretation of results.

NH3-L-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)

This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.

NO2+NO3-L-CFA-ED	Water	Nitrite & Nitrate in Water by Colour	APHA 4500 NO3-F

This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method".

NO2-L-CFA-ED	Water	Nitrite in Water by Colour	APHA 4500 NO2-A and NO3-F

This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method", omitting the Cu-Cd reduction step to be selective for nitrite.

Reference Information

NO3-L-CALC-ED	Water	Nitrate in Water (Calculation)	APHA 4500 NO3-F

Nitrate (as N) is a calculated parameter. Nitrate (as N) = [Nitrate and Nitrite (as N)] - Nitrite (as N).

P-T-L-COL-ED	Water	Total P in Water by Colour	APHA 4500-P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.

P-TD-L-COL-ED	Water	Total Dissolved P in Water by Colour	APHA 4500-P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Dissolved Phosphorous is determined colourimetrically after persulphate digestion of a sample that has been lab or field filtered through a 0.45 micron membrane filter.

PH/EC/ALK-ED	Water	pH, Conductivity and Total Alkalinity	APHA 4500-H, 2510, 2320

All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)

PO4-DO-L-COL-ED	Water	Diss. Orthophosphate in Water by Colour	APHA 4500-P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter.

RA226-MMER-FC	Water	Ra226 by Alpha Scint, MDC=0.01 Bq/L	EPA 903.1
SO4-L-IC-ED	Water	Sulfate by IC (Low Level)	APHA 4110 B-ION CHROMATOGRAPHY
SOLIDS-TDS-CALCEC-ED	Water	TDS (Calculated from EC)	APHA 1030 E
SOLIDS-TDS-ED	Water	Total Dissolved Solids	APHA 2540 C
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
SULPHIDE-ED	Water	Sulphide	APHA 4500 -S E-Auto-Colorimetry
SULPHIDE>H2S-ED	Water	Sulphide as Hydrogen Sulphide	Calculation from Sulphide
TH-D-CCMS-VA	Water	Dissolved Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

TH-T-CCMS-VA	Water	Total Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

TKN-L-CFA-ED	Water	TKN in Water by Colour	APHA 4500-NORG (TKN)

This analysis is carried out using procedures adapted from APHA Method 4500-Norg "Nitrogen (Organic)". Total Kjeldahl Nitrogen is determined by sample digestion at 380 celcius with analysis using an automated colourimetric finish.

TURBIDITY-ED	Water	Turbidity	APHA 2130 B-Nephelometer
ZR-D-CCMS-ED	Water	Dissolved Zirconium in water, CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
ZR-T-CCMS-ED	Water	Total Zirconium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
FC	ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

10-366716

Reference Information

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.
mg/kg - milligrams per kilogram based on dry weight of sample.
mg/kg wwt - milligrams per kilogram based on wet weight of sample.
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.
mg/L - milligrams per litre.
< - Less than.
D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1462851 Report Date: 25-JUN-14

Client: GOLDER ASSOCIATES LTD.
500 - 4260 Still Creek Drive
Burnaby BC V5C 6C6
Contact: STEFANO NANI

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-ED	**Water**							
Batch R2870042								
WG1896637-3 CVS								
Dissolved Organic Carbon			103.6		%		80-160	21-JUN-14
WG1896637-2 LCS								
Dissolved Organic Carbon			88.8		%		80-120	21-JUN-14
WG1896637-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	21-JUN-14
WG1896637-7 MS		**L1469940-12**						
Dissolved Organic Carbon			85.7		%		70-130	21-JUN-14
C-DIS-ORG-LOW-ED	**Water**							
Batch R2869704								
WG1895241-3 CVS								
Dissolved Organic Carbon			125.3		%		80-160	19-JUN-14
WG1895241-2 LCS								
Dissolved Organic Carbon			83.5		%		70-130	19-JUN-14
WG1895241-1 MB								
Dissolved Organic Carbon			<0.50		mg/L		0.5	19-JUN-14
C-TOT-ORG-ED	**Water**							
Batch R2870042								
WG1896637-3 CVS								
Total Organic Carbon			103.6		%		80-160	21-JUN-14
WG1896637-2 LCS								
Total Organic Carbon			88.8		%		80-120	21-JUN-14
WG1896637-1 MB								
Total Organic Carbon			<1.0		mg/L		1	21-JUN-14
WG1896637-5 MS		**L1465807-6**						
Total Organic Carbon			N/A	MS-B	%		-	21-JUN-14
C-TOT-ORG-LOW-ED	**Water**							
Batch R2869704								
WG1895241-3 CVS								
Total Organic Carbon			125.3		%		80-160	19-JUN-14
WG1895241-6 DUP		**L1462851-2**						
Total Organic Carbon		<0.50	<0.50	RPD-NA	mg/L	N/A	20	20-JUN-14
WG1895241-2 LCS								
Total Organic Carbon			87.9		%		80-120	19-JUN-14
WG1895241-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	19-JUN-14
WG1895241-5 MS		**L1467550-10**						
Total Organic Carbon			94.3		%		70-130	20-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOT-ORG-LOW-ED	**Water**							
Batch R2869704								
WG1895241-7 MS		**L1462851-2**						
Total Organic Carbon			95.6		%		70-130	20-JUN-14
CL-IC-ED	**Water**							
Batch R2849467								
WG1882741-13 LCS								
Chloride (Cl)			101.3		%		90-110	30-MAY-14
WG1882741-2 LCS								
Chloride (Cl)			103.0		%		90-110	30-MAY-14
WG1882741-5 LCS								
Chloride (Cl)			101.5		%		90-110	30-MAY-14
WG1882741-9 LCS								
Chloride (Cl)			101.5		%		90-110	30-MAY-14
WG1882741-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	30-MAY-14
WG1882741-10 MB								
Chloride (Cl)			<0.50		mg/L		0.5	30-MAY-14
WG1882741-14 MB								
Chloride (Cl)			<0.50		mg/L		0.5	30-MAY-14
WG1882741-15 MB								
Chloride (Cl)			<0.50		mg/L		0.5	30-MAY-14
WG1882741-16 MB								
Chloride (Cl)			<0.50		mg/L		0.5	30-MAY-14
WG1882741-12 MS		**L1462877-3**						
Chloride (Cl)			100.2		%		75-125	30-MAY-14
WG1882741-4 MS		**L1462470-3**						
Chloride (Cl)			98.4		%		75-125	30-MAY-14
WG1882741-8 MS		**L1462474-9**						
Chloride (Cl)			N/A	MS-B	%		-	30-MAY-14
COL-TRU-ED	**Water**							
Batch R2849251								
WG1882225-2 LCS								
Color, True			104.8		%		85-115	30-MAY-14
WG1882225-1 MB								
Color, True			<2.0		C.U.		2	30-MAY-14
F-IC-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F-IC-ED	**Water**							
Batch R2849467								
WG1882741-13 LCS								
Fluoride (F)			95.7		%		90-110	30-MAY-14
WG1882741-2 LCS								
Fluoride (F)			99.0		%		90-110	30-MAY-14
WG1882741-5 LCS								
Fluoride (F)			98.3		%		90-110	30-MAY-14
WG1882741-9 LCS								
Fluoride (F)			97.5		%		90-110	30-MAY-14
WG1882741-1 MB								
Fluoride (F)			<0.020		mg/L		0.02	30-MAY-14
WG1882741-10 MB								
Fluoride (F)			<0.020		mg/L		0.02	30-MAY-14
WG1882741-14 MB								
Fluoride (F)			<0.020		mg/L		0.02	30-MAY-14
WG1882741-15 MB								
Fluoride (F)			<0.020		mg/L		0.02	30-MAY-14
WG1882741-16 MB								
Fluoride (F)			<0.020		mg/L		0.02	30-MAY-14
WG1882741-12 MS		**L1462877-3**						
Fluoride (F)			98.3		%		75-125	30-MAY-14
HG-D-U-CVAF-VA	**Water**							
Batch R2854558								
WG1887103-2 LCS								
Mercury (Hg)-Dissolved			93.6		%		80-120	03-JUN-14
WG1887103-1 MB								
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	03-JUN-14
Batch R2854698								
WG1887103-4 DUP		**L1462851-3**						
Mercury (Hg)-Dissolved		<0.00050	<0.00050	RPD-NA	ug/L	N/A	20	05-JUN-14
HG-T-U-CVAF-VA	**Water**							
Batch R2854558								
WG1884825-2 LCS								
Mercury (Hg)-Total			93.6		%		80-120	03-JUN-14
WG1884825-1 MB								
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	03-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-U-CVAF-VA	**Water**							
Batch R2854698								
WG1887315-2 LCS								
Mercury (Hg)-Total			98.2		%		80-120	05-JUN-14
WG1887315-1 MB								
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	05-JUN-14
WG1887315-4 MS		**L1462450-3**						
Mercury (Hg)-Total			88.1		%		70-130	05-JUN-14
WG1887315-5 MS		**L1462036-1**						
Mercury (Hg)-Total			N/A	MS-B	%		-	05-JUN-14
MET-D-CCMS-ED	**Water**							
Batch R2865735								
WG1893117-2 CRM		**ED-HIGH-WATRM**						
Phosphorus (P)-Dissolved			109.1		%		80-120	17-JUN-14
Silicon (Si)-Dissolved			104.8		%		80-120	17-JUN-14
WG1893117-1 MB								
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	17-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	17-JUN-14
WG1893117-3 MB								
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	17-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	17-JUN-14
WG1893117-5 MB								
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	17-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	17-JUN-14
WG1893117-7 MB								
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	17-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	17-JUN-14
WG1893117-9 MB								
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	17-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	17-JUN-14
Batch R2868515								
WG1895017-13 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			103.8		%		80-120	19-JUN-14
WG1895017-16 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			98.9		%		80-120	19-JUN-14
WG1895017-2 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			106.1		%		80-120	19-JUN-14
WG1895017-4 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			106.2		%		80-120	19-JUN-14
WG1895017-8 CRM		**ED-HIGH-WATRM**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2868515								
WG1895017-8 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			107.2		%		80-120	19-JUN-14
WG1895017-1 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	19-JUN-14
WG1895017-12 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	19-JUN-14
WG1895017-3 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	19-JUN-14
WG1895017-7 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	19-JUN-14
MET-D-ICP-ED	**Water**							
Batch R2850491								
WG1883595-2 CRM		**ED-HIGH-WATRM**						
WG1883595-5 CRM		**ED-HIGH-WATRM**						
WG1883595-1 MB								
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	02-JUN-14
WG1883595-7 MB								
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	02-JUN-14
MET-D-NP-U-CCMS-ED	**Water**							
Batch R2865740								
WG1893123-2 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			106.5		%		80-120	17-JUN-14
Antimony (Sb)-Dissolved			99.4		%		80-120	17-JUN-14
Arsenic (As)-Dissolved			97.6		%		80-120	17-JUN-14
Barium (Ba)-Dissolved			99.4		%		80-120	17-JUN-14
Beryllium (Be)-Dissolved			97.9		%		80-120	17-JUN-14
Bismuth (Bi)-Dissolved			95.6		%		80-120	17-JUN-14
Boron (B)-Dissolved			97.8		%		80-120	17-JUN-14
Cadmium (Cd)-Dissolved			89.5		%		80-120	17-JUN-14
Calcium (Ca)-Dissolved			98.2		%		80-120	17-JUN-14
Chromium (Cr)-Dissolved			100.4		%		80-120	17-JUN-14
Cobalt (Co)-Dissolved			98.2		%		80-120	17-JUN-14
Copper (Cu)-Dissolved			95.3		%		80-120	17-JUN-14
Lead (Pb)-Dissolved			99.7		%		80-120	17-JUN-14
Lithium (Li)-Dissolved			104.1		%		80-120	17-JUN-14
Magnesium (Mg)-Dissolved			104.7		%		80-120	17-JUN-14
Manganese (Mn)-Dissolved			104.3		%		80-120	17-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-NP-U-CCMS-ED	**Water**							
Batch	**R2865740**							
WG1893123-2	**CRM**	**ED-HIGH-WATRM**						
Molybdenum (Mo)-Dissolved			90.4		%		80-120	17-JUN-14
Nickel (Ni)-Dissolved			99.5		%		80-120	17-JUN-14
Potassium (K)-Dissolved			101.3		%		80-120	17-JUN-14
Selenium (Se)-Dissolved			95.4		%		80-120	17-JUN-14
Silver (Ag)-Dissolved			103.5		%		80-120	17-JUN-14
Sodium (Na)-Dissolved			99.7		%		80-120	17-JUN-14
Strontium (Sr)-Dissolved			95.6		%		80-120	17-JUN-14
Thallium (Tl)-Dissolved			98.8		%		80-120	17-JUN-14
Tin (Sn)-Dissolved			90.7		%		80-120	17-JUN-14
Titanium (Ti)-Dissolved			103.2		%		80-120	17-JUN-14
Uranium (U)-Dissolved			93.9		%		80-120	17-JUN-14
Vanadium (V)-Dissolved			100.2		%		80-120	17-JUN-14
Zinc (Zn)-Dissolved			100.4		%		80-120	17-JUN-14
WG1893123-1	**MB**							
Aluminum (Al)-Dissolved			<0.00030		mg/L		0.0003	17-JUN-14
Antimony (Sb)-Dissolved			<0.000020		mg/L		0.00002	17-JUN-14
Arsenic (As)-Dissolved			<0.000020		mg/L		0.00002	17-JUN-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	17-JUN-14
Beryllium (Be)-Dissolved			<0.000010		mg/L		0.00001	17-JUN-14
Bismuth (Bi)-Dissolved			<0.000010		mg/L		0.00001	17-JUN-14
Boron (B)-Dissolved			<0.0010		mg/L		0.001	17-JUN-14
Cadmium (Cd)-Dissolved			<0.0000050		mg/L		0.000005	17-JUN-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	17-JUN-14
Chromium (Cr)-Dissolved			<0.000060		mg/L		0.00006	17-JUN-14
Cobalt (Co)-Dissolved			<0.000010		mg/L		0.00001	17-JUN-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	17-JUN-14
Iron (Fe)-Dissolved			<0.0010		mg/L		0.001	17-JUN-14
Lead (Pb)-Dissolved			<0.000010		mg/L		0.00001	17-JUN-14
Lithium (Li)-Dissolved			<0.00050		mg/L		0.0005	17-JUN-14
Magnesium (Mg)-Dissolved			<0.0040		mg/L		0.004	17-JUN-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	17-JUN-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	17-JUN-14
Nickel (Ni)-Dissolved			<0.000060		mg/L		0.00006	17-JUN-14
Potassium (K)-Dissolved			<0.020		mg/L		0.02	17-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-NP-U-CCMS-ED	**Water**							
Batch R2865740								
WG1893123-1 MB								
Selenium (Se)-Dissolved			<0.000040		mg/L		0.00004	17-JUN-14
Silver (Ag)-Dissolved			<0.000005(		mg/L		0.000005	17-JUN-14
Sodium (Na)-Dissolved			<0.0050		mg/L		0.005	17-JUN-14
Strontium (Sr)-Dissolved			<0.000050		mg/L		0.00005	17-JUN-14
Thallium (Tl)-Dissolved			<0.000005(		mg/L		0.000005	17-JUN-14
Tin (Sn)-Dissolved			<0.000050		mg/L		0.00005	17-JUN-14
Titanium (Ti)-Dissolved			<0.00010		mg/L		0.0001	17-JUN-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	17-JUN-14
Vanadium (V)-Dissolved			<0.000050		mg/L		0.00005	17-JUN-14
Zinc (Zn)-Dissolved			<0.00080		mg/L		0.0008	17-JUN-14
Batch R2869624								
WG1895941-2 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			105.9		%		80-120	20-JUN-14
Antimony (Sb)-Dissolved			96.9		%		80-120	20-JUN-14
Arsenic (As)-Dissolved			100.2		%		80-120	20-JUN-14
Barium (Ba)-Dissolved			104.3		%		80-120	20-JUN-14
Beryllium (Be)-Dissolved			99.0		%		80-120	20-JUN-14
Bismuth (Bi)-Dissolved			96.3		%		80-120	20-JUN-14
Boron (B)-Dissolved			100.1		%		80-120	20-JUN-14
Cadmium (Cd)-Dissolved			100.4		%		80-120	20-JUN-14
Calcium (Ca)-Dissolved			101.5		%		80-120	20-JUN-14
Chromium (Cr)-Dissolved			100.4		%		80-120	20-JUN-14
Cobalt (Co)-Dissolved			100.2		%		80-120	20-JUN-14
Copper (Cu)-Dissolved			99.4		%		80-120	20-JUN-14
Lead (Pb)-Dissolved			97.3		%		80-120	20-JUN-14
Lithium (Li)-Dissolved			100.7		%		80-120	20-JUN-14
Magnesium (Mg)-Dissolved			100.8		%		80-120	20-JUN-14
Manganese (Mn)-Dissolved			100.0		%		80-120	20-JUN-14
Molybdenum (Mo)-Dissolved			97.1		%		80-120	20-JUN-14
Nickel (Ni)-Dissolved			103.3		%		80-120	20-JUN-14
Potassium (K)-Dissolved			104.3		%		80-120	20-JUN-14
Selenium (Se)-Dissolved			98.4		%		80-120	20-JUN-14
Silver (Ag)-Dissolved			100.4		%		80-120	20-JUN-14
Sodium (Na)-Dissolved			101.7		%		80-120	20-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-NP-U-CCMS-ED	**Water**							
Batch R2869624								
WG1895941-2 CRM		**ED-HIGH-WATRM**						
Strontium (Sr)-Dissolved			102.8		%		80-120	20-JUN-14
Thallium (Tl)-Dissolved			102.2		%		80-120	20-JUN-14
Tin (Sn)-Dissolved			100.0		%		80-120	20-JUN-14
Titanium (Ti)-Dissolved			105.2		%		80-120	20-JUN-14
Uranium (U)-Dissolved			95.8		%		80-120	20-JUN-14
Vanadium (V)-Dissolved			103.1		%		80-120	20-JUN-14
Zinc (Zn)-Dissolved			102.9		%		80-120	20-JUN-14
WG1895941-1 MB								
Aluminum (Al)-Dissolved			<0.00030		mg/L		0.0003	20-JUN-14
Antimony (Sb)-Dissolved			<0.000020		mg/L		0.00002	20-JUN-14
Arsenic (As)-Dissolved			<0.000020		mg/L		0.00002	20-JUN-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	20-JUN-14
Beryllium (Be)-Dissolved			<0.000010		mg/L		0.00001	20-JUN-14
Bismuth (Bi)-Dissolved			<0.000010		mg/L		0.00001	20-JUN-14
Boron (B)-Dissolved			<0.0010		mg/L		0.001	20-JUN-14
Cadmium (Cd)-Dissolved			<0.000005C		mg/L		0.000005	20-JUN-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	20-JUN-14
Chromium (Cr)-Dissolved			<0.000060		mg/L		0.00006	20-JUN-14
Cobalt (Co)-Dissolved			<0.000010		mg/L		0.00001	20-JUN-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	20-JUN-14
Iron (Fe)-Dissolved			<0.0010		mg/L		0.001	20-JUN-14
Lead (Pb)-Dissolved			<0.000010		mg/L		0.00001	20-JUN-14
Lithium (Li)-Dissolved			<0.00050		mg/L		0.0005	20-JUN-14
Magnesium (Mg)-Dissolved			<0.0040		mg/L		0.004	20-JUN-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	20-JUN-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	20-JUN-14
Nickel (Ni)-Dissolved			<0.000060		mg/L		0.00006	20-JUN-14
Potassium (K)-Dissolved			<0.020		mg/L		0.02	20-JUN-14
Selenium (Se)-Dissolved			<0.000040		mg/L		0.00004	20-JUN-14
Silver (Ag)-Dissolved			<0.000005C		mg/L		0.000005	20-JUN-14
Sodium (Na)-Dissolved			<0.0050		mg/L		0.005	20-JUN-14
Strontium (Sr)-Dissolved			<0.000050		mg/L		0.00005	20-JUN-14
Thallium (Tl)-Dissolved			<0.000005C		mg/L		0.000005	20-JUN-14
Tin (Sn)-Dissolved			<0.000050		mg/L		0.00005	20-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-NP-U-CCMS-ED	**Water**							
Batch R2869624								
WG1895941-1 MB								
Titanium (Ti)-Dissolved			<0.00010		mg/L		0.0001	20-JUN-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	20-JUN-14
Vanadium (V)-Dissolved			<0.000050		mg/L		0.00005	20-JUN-14
Zinc (Zn)-Dissolved			<0.00080		mg/L		0.0008	20-JUN-14
MET-T-CCMS-ED	**Water**							
Batch R2852121								
WG1883203-9 DUP		**L1462851-3**						
Silicon (Si)-Total		5.26	5.26		mg/L	0.0	20	04-JUN-14
WG1883203-5 LCS								
Silicon (Si)-Total			93.8		%		70-130	04-JUN-14
WG1883203-6 LCS								
Silicon (Si)-Total			93.1		%		70-130	04-JUN-14
WG1883203-2 MB								
Phosphorus (P)-Total			<0.30		mg/L		0.3	04-JUN-14
Silicon (Si)-Total			<0.050		mg/L		0.05	04-JUN-14
WG1883203-3 MB								
Phosphorus (P)-Total			<0.30		mg/L		0.3	04-JUN-14
Silicon (Si)-Total			<0.050		mg/L		0.05	04-JUN-14
WG1884563-1 MB								
Phosphorus (P)-Total			<0.30		mg/L		0.3	06-JUN-14
Silicon (Si)-Total			<0.050		mg/L		0.05	06-JUN-14
WG1884563-2 MB								
Phosphorus (P)-Total			<0.30		mg/L		0.3	06-JUN-14
Silicon (Si)-Total			<0.050		mg/L		0.05	06-JUN-14
MET-T-ICP-ED	**Water**							
Batch R2851633								
WG1883203-9 DUP		**L1462851-3**						
Sulfur (S)-Total		49.2	49.3		mg/L	0.3	20	03-JUN-14
WG1883203-1 MB								
Sulfur (S)-Total			<0.50		mg/L		0.5	03-JUN-14
WG1884563-1 MB								
Sulfur (S)-Total			<0.50		mg/L		0.5	03-JUN-14
WG1884563-2 MB								
Sulfur (S)-Total			<0.50		mg/L		0.5	03-JUN-14
MET-T-NP-U-CCMS-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-NP-U-CCMS-ED	**Water**							
Batch R2865740								
WG1893123-2 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Total			106.5		%		80-120	17-JUN-14
Antimony (Sb)-Total			99.4		%		80-120	17-JUN-14
Arsenic (As)-Total			97.6		%		80-120	17-JUN-14
Barium (Ba)-Total			99.4		%		80-120	17-JUN-14
Beryllium (Be)-Total			97.9		%		80-120	17-JUN-14
Bismuth (Bi)-Total			95.6		%		80-120	17-JUN-14
Boron (B)-Total			97.8		%		80-120	17-JUN-14
Cadmium (Cd)-Total			89.5		%		80-120	17-JUN-14
Chromium (Cr)-Total			100.4		%		80-120	17-JUN-14
Cobalt (Co)-Total			98.2		%		80-120	17-JUN-14
Copper (Cu)-Total			95.3		%		80-120	17-JUN-14
Lead (Pb)-Total			99.7		%		80-120	17-JUN-14
Lithium (Li)-Total			104.1		%		80-120	17-JUN-14
Manganese (Mn)-Total			104.3		%		80-120	17-JUN-14
Molybdenum (Mo)-Total			90.4		%		80-120	17-JUN-14
Nickel (Ni)-Total			99.5		%		80-120	17-JUN-14
Selenium (Se)-Total			95.4		%		80-120	17-JUN-14
Silver (Ag)-Total			103.5		%		80-120	17-JUN-14
Strontium (Sr)-Total			95.6		%		80-120	17-JUN-14
Thallium (Tl)-Total			98.8		%		80-120	17-JUN-14
Tin (Sn)-Total			90.7		%		80-120	17-JUN-14
Titanium (Ti)-Total			103.2		%		80-120	17-JUN-14
Uranium (U)-Total			93.9		%		80-120	17-JUN-14
Vanadium (V)-Total			100.2		%		80-120	17-JUN-14
Zinc (Zn)-Total			100.4		%		80-120	17-JUN-14
WG1893123-1 MB								
Aluminum (Al)-Total			<0.00030		mg/L		0.0003	17-JUN-14
Antimony (Sb)-Total			<0.000020		mg/L		0.00002	17-JUN-14
Arsenic (As)-Total			<0.000020		mg/L		0.00002	17-JUN-14
Barium (Ba)-Total			<0.000050		mg/L		0.00005	17-JUN-14
Beryllium (Be)-Total			<0.000010		mg/L		0.00001	17-JUN-14
Bismuth (Bi)-Total			<0.000010		mg/L		0.00001	17-JUN-14
Boron (B)-Total			<0.0010		mg/L		0.001	17-JUN-14
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	17-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-NP-U-CCMS-ED	**Water**							
Batch R2865740								
WG1893123-1 MB								
Chromium (Cr)-Total			<0.000060		mg/L		0.00006	17-JUN-14
Cobalt (Co)-Total			<0.000010		mg/L		0.00001	17-JUN-14
Copper (Cu)-Total			<0.00010		mg/L		0.0001	17-JUN-14
Iron (Fe)-Total			<0.0010		mg/L		0.001	17-JUN-14
Lead (Pb)-Total			<0.000010		mg/L		0.00001	17-JUN-14
Lithium (Li)-Total			<0.00050		mg/L		0.0005	17-JUN-14
Manganese (Mn)-Total			<0.000050		mg/L		0.00005	17-JUN-14
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	17-JUN-14
Nickel (Ni)-Total			<0.000060		mg/L		0.00006	17-JUN-14
Selenium (Se)-Total			<0.000040		mg/L		0.00004	17-JUN-14
Silver (Ag)-Total			<0.000005C		mg/L		0.000005	17-JUN-14
Strontium (Sr)-Total			<0.000050		mg/L		0.00005	17-JUN-14
Thallium (Tl)-Total			<0.000005C	J	mg/L		0.000005	17-JUN-14
Tin (Sn)-Total			<0.000050		mg/L		0.00005	17-JUN-14
Titanium (Ti)-Total			<0.00010		mg/L		0.0001	17-JUN-14
Uranium (U)-Total			<0.000010		mg/L		0.00001	17-JUN-14
Vanadium (V)-Total			<0.000050		mg/L		0.00005	17-JUN-14
Zinc (Zn)-Total			<0.00080		mg/L		0.0008	17-JUN-14
Batch R2869624								
WG1895941-2 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Total			105.9		%		80-120	20-JUN-14
Antimony (Sb)-Total			96.9		%		80-120	20-JUN-14
Arsenic (As)-Total			100.2		%		80-120	20-JUN-14
Barium (Ba)-Total			104.3		%		80-120	20-JUN-14
Beryllium (Be)-Total			99.0		%		80-120	20-JUN-14
Bismuth (Bi)-Total			96.3		%		80-120	20-JUN-14
Boron (B)-Total			100.1		%		80-120	20-JUN-14
Cadmium (Cd)-Total			100.4		%		80-120	20-JUN-14
Calcium (Ca)-Total			101.5		%		80-120	20-JUN-14
Chromium (Cr)-Total			100.4		%		80-120	20-JUN-14
Cobalt (Co)-Total			100.2		%		80-120	20-JUN-14
Copper (Cu)-Total			99.4		%		80-120	20-JUN-14
Lead (Pb)-Total			97.3		%		80-120	20-JUN-14
Lithium (Li)-Total			100.7		%		80-120	20-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-NP-U-CCMS-ED	**Water**							
Batch R2869624								
WG1895941-2 CRM		**ED-HIGH-WATRM**						
Magnesium (Mg)-Total			100.8		%		80-120	20-JUN-14
Manganese (Mn)-Total			100.0		%		80-120	20-JUN-14
Molybdenum (Mo)-Total			97.1		%		80-120	20-JUN-14
Nickel (Ni)-Total			103.3		%		80-120	20-JUN-14
Potassium (K)-Total			104.3		%		80-120	20-JUN-14
Selenium (Se)-Total			98.4		%		80-120	20-JUN-14
Silver (Ag)-Total			100.4		%		80-120	20-JUN-14
Sodium (Na)-Total			101.7		%		80-120	20-JUN-14
Strontium (Sr)-Total			102.8		%		80-120	20-JUN-14
Thallium (Tl)-Total			102.2		%		80-120	20-JUN-14
Tin (Sn)-Total			100.0		%		80-120	20-JUN-14
Titanium (Ti)-Total			105.2		%		80-120	20-JUN-14
Uranium (U)-Total			95.8		%		80-120	20-JUN-14
Vanadium (V)-Total			103.1		%		80-120	20-JUN-14
Zinc (Zn)-Total			102.9		%		80-120	20-JUN-14
WG1895941-1 MB								
Aluminum (Al)-Total			<0.00030		mg/L		0.0003	20-JUN-14
Antimony (Sb)-Total			<0.000020		mg/L		0.00002	20-JUN-14
Arsenic (As)-Total			<0.000020		mg/L		0.00002	20-JUN-14
Barium (Ba)-Total			<0.000050		mg/L		0.00005	20-JUN-14
Beryllium (Be)-Total			<0.000010		mg/L		0.00001	20-JUN-14
Bismuth (Bi)-Total			<0.000010		mg/L		0.00001	20-JUN-14
Boron (B)-Total			<0.0010		mg/L		0.001	20-JUN-14
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	20-JUN-14
Calcium (Ca)-Total			<0.020		mg/L		0.02	20-JUN-14
Chromium (Cr)-Total			<0.000060		mg/L		0.00006	20-JUN-14
Cobalt (Co)-Total			<0.000010		mg/L		0.00001	20-JUN-14
Copper (Cu)-Total			<0.00010		mg/L		0.0001	20-JUN-14
Iron (Fe)-Total			<0.0010		mg/L		0.001	20-JUN-14
Lead (Pb)-Total			<0.000010		mg/L		0.00001	20-JUN-14
Lithium (Li)-Total			<0.00050		mg/L		0.0005	20-JUN-14
Magnesium (Mg)-Total			<0.0040		mg/L		0.004	20-JUN-14
Manganese (Mn)-Total			<0.000050		mg/L		0.00005	20-JUN-14
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	20-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-NP-U-CCMS-ED	**Water**							
Batch R2869624								
WG1895941-1 MB								
Nickel (Ni)-Total			<0.000060		mg/L		0.00006	20-JUN-14
Potassium (K)-Total			<0.020		mg/L		0.02	20-JUN-14
Selenium (Se)-Total			<0.000040		mg/L		0.00004	20-JUN-14
Silver (Ag)-Total			<0.000005C		mg/L		0.000005	20-JUN-14
Sodium (Na)-Total			<0.0050		mg/L		0.005	20-JUN-14
Strontium (Sr)-Total			<0.000050		mg/L		0.00005	20-JUN-14
Thallium (Tl)-Total			<0.000005C		mg/L		0.000005	20-JUN-14
Tin (Sn)-Total			<0.000050		mg/L		0.00005	20-JUN-14
Titanium (Ti)-Total			<0.00010		mg/L		0.0001	20-JUN-14
Uranium (U)-Total			<0.000010		mg/L		0.00001	20-JUN-14
Vanadium (V)-Total			<0.000050		mg/L		0.00005	20-JUN-14
Zinc (Zn)-Total			<0.00080		mg/L		0.0008	20-JUN-14
NH3-L-CFA-ED	**Water**							
Batch R2869361								
WG1895636-2 LCS								
Ammonia, Total (as N)			100.7		%		85-115	20-JUN-14
WG1895636-3 LCS								
Ammonia, Total (as N)			100.0		%		85-115	20-JUN-14
WG1895636-1 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	20-JUN-14
WG1895636-10 MS		**L1465812-2**						
Ammonia, Total (as N)			100.4		%		75.3-122.1	20-JUN-14
WG1895636-7 MS		**L1462851-2**						
Ammonia, Total (as N)			106.0		%		75.3-122.1	20-JUN-14
NO2+NO3-L-CFA-ED	**Water**							
Batch R2849295								
WG1882764-2 LCS								
Nitrate and Nitrite (as N)			100.1		%		85-115	30-MAY-14
WG1882764-1 MB								
Nitrate and Nitrite (as N)			<0.0060		mg/L		0.006	30-MAY-14
WG1882764-4 MS		**L1460508-5**						
Nitrate and Nitrite (as N)			91.7		%		75-125	30-MAY-14
WG1882764-6 MS		**L1462076-5**						
Nitrate and Nitrite (as N)			100.3		%		75-125	30-MAY-14
NO2-L-CFA-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-CFA-ED	**Water**							
Batch R2849295								
WG1882764-2 LCS								
Nitrite (as N)			99.6		%		85-115	30-MAY-14
WG1882764-1 MB								
Nitrite (as N)			<0.0020		mg/L		0.002	30-MAY-14
WG1882764-4 MS		**L1460508-5**						
Nitrite (as N)			91.5		%		75-125	30-MAY-14
WG1882764-6 MS		**L1462076-5**						
Nitrite (as N)			100.5		%		75-125	30-MAY-14
P-T-L-COL-ED	**Water**							
Batch R2869636								
WG1895403-14 LCS								
Phosphorus (P)-Total			101.4		%		80-120	20-JUN-14
WG1895403-16 LCS								
Phosphorus (P)-Total			102.8		%		80-120	20-JUN-14
WG1895403-18 LCS								
Phosphorus (P)-Total			106.0		%		80-120	20-JUN-14
WG1895403-2 LCS								
Phosphorus (P)-Total			101.0		%		80-120	20-JUN-14
WG1895403-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	20-JUN-14
WG1895403-13 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	20-JUN-14
WG1895403-15 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	20-JUN-14
WG1895403-17 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	20-JUN-14
WG1895403-10 MS		**L1467330-1**						
Phosphorus (P)-Total			93.7		%		70-130	20-JUN-14
WG1895403-12 MS		**L1467328-3**						
Phosphorus (P)-Total			109.9		%		70-130	20-JUN-14
WG1895403-4 MS		**L1465768-5**						
Phosphorus (P)-Total			106.1		%		70-130	20-JUN-14
WG1895403-6 MS		**L1463346-1**						
Phosphorus (P)-Total			103.9		%		70-130	20-JUN-14
WG1895403-8 MS		**L1466548-2**						
Phosphorus (P)-Total			101.5		%		70-130	20-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-L-COL-ED	**Water**							
Batch R2872002								
WG1897430-2 LCS								
Phosphorus (P)-Total			101.0		%		80-120	24-JUN-14
WG1897430-8 LCS								
Phosphorus (P)-Total			101.4		%		80-120	24-JUN-14
WG1897430-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	24-JUN-14
WG1897430-7 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	24-JUN-14
WG1897430-4 MS		**L1467629-3**						
Phosphorus (P)-Total			103.0		%		70-130	24-JUN-14
WG1897430-6 MS		**L1468053-5**						
Phosphorus (P)-Total			100.6		%		70-130	24-JUN-14
P-TD-L-COL-ED	**Water**							
Batch R2869636								
WG1895403-14 LCS								
Phosphorus (P)-Total	Dissolved		99.2		%		80-120	20-JUN-14
WG1895403-16 LCS								
Phosphorus (P)-Total	Dissolved		99.0		%		80-120	20-JUN-14
WG1895403-18 LCS								
Phosphorus (P)-Total	Dissolved		98.4		%		80-120	20-JUN-14
WG1895403-2 LCS								
Phosphorus (P)-Total	Dissolved		99.8		%		80-120	20-JUN-14
WG1895403-1 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	20-JUN-14
WG1895403-13 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	20-JUN-14
WG1895403-15 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	20-JUN-14
WG1895403-17 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	20-JUN-14
WG1895403-10 MS		**L1467330-1**						
Phosphorus (P)-Total	Dissolved		96.6		%		70-130	20-JUN-14
WG1895403-12 MS		**L1467328-3**						
Phosphorus (P)-Total	Dissolved		101.6		%		70-130	20-JUN-14
WG1895403-4 MS		**L1465768-5**						
Phosphorus (P)-Total	Dissolved		109.6		%		70-130	20-JUN-14
WG1895403-6 MS		**L1463346-1**						
Phosphorus (P)-Total	Dissolved		106.6		%		70-130	20-JUN-14
WG1895403-8 MS		**L1466548-2**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-TD-L-COL-ED	**Water**							
Batch R2869636								
WG1895403-8 MS		**L1466548-2**						
Phosphorus (P)-Total	Dissolved		106.4		%		70-130	20-JUN-14
Batch R2872002								
WG1897430-2 LCS								
Phosphorus (P)-Total	Dissolved		99.2		%		80-120	24-JUN-14
WG1897430-8 LCS								
Phosphorus (P)-Total	Dissolved		96.4		%		80-120	24-JUN-14
WG1897430-1 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	24-JUN-14
WG1897430-7 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	24-JUN-14
WG1897430-4 MS		**L1467629-3**						
Phosphorus (P)-Total	Dissolved		106.3		%		70-130	24-JUN-14
WG1897430-6 MS		**L1468053-5**						
Phosphorus (P)-Total	Dissolved		103.4		%		70-130	24-JUN-14
PH/EC/ALK-ED	**Water**							
Batch R2849660								
WG1882857-12 LCS								
Conductivity (EC)			93.1		%		90-110	31-MAY-14
WG1882857-13 LCS								
pH			7.03		pH		6.7-7.3	31-MAY-14
WG1882857-14 LCS								
Alkalinity, Total (as CaCO3)			103.5		%		85-115	31-MAY-14
WG1882857-15 LCS								
Conductivity (EC)			91.8		%		90-110	31-MAY-14
WG1882857-17 LCS								
Conductivity (EC)			98.6		%		90-110	31-MAY-14
WG1882857-18 LCS								
pH			7.03		pH		6.7-7.3	31-MAY-14
WG1882857-19 LCS								
Alkalinity, Total (as CaCO3)			104.1		%		85-115	31-MAY-14
WG1882857-2 LCS								
Conductivity (EC)			93.6		%		90-110	31-MAY-14
WG1882857-22 LCS								
Conductivity (EC)			97.9		%		90-110	31-MAY-14
WG1882857-23 LCS								
pH			7.03		pH		6.7-7.3	31-MAY-14
WG1882857-24 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2849660								
WG1882857-24 LCS								
Alkalinity, Total (as CaCO3)			104.5		%		85-115	31-MAY-14
WG1882857-25 LCS								
Conductivity (EC)			97.2		%		90-110	31-MAY-14
WG1882857-27 LCS								
Conductivity (EC)			97.8		%		90-110	01-JUN-14
WG1882857-28 LCS								
pH			7.04		pH		6.7-7.3	01-JUN-14
WG1882857-29 LCS								
Alkalinity, Total (as CaCO3)			103.9		%		85-115	01-JUN-14
WG1882857-3 LCS								
pH			7.03		pH		6.7-7.3	31-MAY-14
WG1882857-30 LCS								
Conductivity (EC)			96.6		%		90-110	01-JUN-14
WG1882857-4 LCS								
Alkalinity, Total (as CaCO3)			103.5		%		85-115	31-MAY-14
WG1882857-5 LCS								
Conductivity (EC)			92.8		%		90-110	31-MAY-14
WG1882857-1 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	31-MAY-14
Carbonate (CO3)			<5.0		mg/L		5	31-MAY-14
Hydroxide (OH)			<5.0		mg/L		5	31-MAY-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	31-MAY-14
WG1882857-11 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	31-MAY-14
Carbonate (CO3)			<5.0		mg/L		5	31-MAY-14
Hydroxide (OH)			<5.0		mg/L		5	31-MAY-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	31-MAY-14
WG1882857-16 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	31-MAY-14
Carbonate (CO3)			<5.0		mg/L		5	31-MAY-14
Hydroxide (OH)			<5.0		mg/L		5	31-MAY-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	31-MAY-14
WG1882857-21 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	31-MAY-14
Carbonate (CO3)			<5.0		mg/L		5	31-MAY-14
Hydroxide (OH)			<5.0		mg/L		5	31-MAY-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	31-MAY-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2849660								
WG1882857-26 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	01-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	01-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	01-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	01-JUN-14
PO4-DO-L-COL-ED	**Water**							
Batch R2849295								
WG1882764-2 LCS								
Orthophosphate-Dissolved (as P)			95.8		%		80-120	30-MAY-14
WG1882764-1 MB								
Orthophosphate-Dissolved (as P)			<0.0010		mg/L		0.001	30-MAY-14
WG1882764-4 MS		**L1460508-5**						
Orthophosphate-Dissolved (as P)			94.0		%		70-130	30-MAY-14
WG1882764-6 MS		**L1462076-5**						
Orthophosphate-Dissolved (as P)			87.4		%		70-130	30-MAY-14
SO4-L-IC-ED	**Water**							
Batch R2849467								
WG1882741-13 LCS								
Sulfate (SO4)			99.4		%		90-110	30-MAY-14
WG1882741-2 LCS								
Sulfate (SO4)			101.4		%		90-110	30-MAY-14
WG1882741-5 LCS								
Sulfate (SO4)			99.6		%		90-110	30-MAY-14
WG1882741-9 LCS								
Sulfate (SO4)			99.5		%		90-110	30-MAY-14
WG1882741-1 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	30-MAY-14
WG1882741-10 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	30-MAY-14
WG1882741-14 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	30-MAY-14
WG1882741-15 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	30-MAY-14
WG1882741-16 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	30-MAY-14
WG1882741-12 MS		**L1462877-3**						
Sulfate (SO4)			98.5		%		75-125	30-MAY-14
SOLIDS-TDS-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TDS-ED	**Water**							
Batch R2853200								
WG1884897-2 LCS								
Total Dissolved Solids			97.0		%		85-115	04-JUN-14
WG1884897-1 MB								
Total Dissolved Solids			<10		mg/L		10	04-JUN-14
SOLIDS-TOTSUS-ED	**Water**							
Batch R2852435								
WG1884877-2 LCS								
Total Suspended Solids			98.6		%		85-115	04-JUN-14
WG1884877-1 MB								
Total Suspended Solids			<3.0		mg/L		3	04-JUN-14
SULPHIDE-ED	**Water**							
Batch R2860599								
WG1891569-6 DUP		**L1462851-2**						
Sulphide (as S)		<0.0015	<0.0015	RPD-NA	mg/L	N/A	20	13-JUN-14
WG1891569-2 LCS								
Sulphide (as S)			96.1		%		75-125	13-JUN-14
WG1891569-3 LCS								
Sulphide (as S)			95.2		%		75-125	13-JUN-14
WG1891569-1 MB								
Sulphide (as S)			0.0015		mg/L		0.0015	13-JUN-14
WG1891569-5 MS		**L1466525-1**						
Sulphide (as S)			114.4		%		65-135	13-JUN-14
WG1891569-7 MS		**L1462851-2**						
Sulphide (as S)			96.0		%		65-135	13-JUN-14
WG1891569-9 MS		**L1468057-8**						
Sulphide (as S)			72.4		%		65-135	13-JUN-14
Batch R2869629								
WG1896284-2 LCS								
Sulphide (as S)			98.7		%		75-125	20-JUN-14
WG1896284-3 LCS								
Sulphide (as S)			90.4		%		75-125	20-JUN-14
WG1896284-1 MB								
Sulphide (as S)			0.0000		mg/L		0.0015	20-JUN-14
WG1896284-5 MS		**L1473416-2**						
Sulphide (as S)			77.0		%		65-135	20-JUN-14
WG1896284-7 MS		**L1470736-3**						
Sulphide (as S)			95.0		%		65-135	20-JUN-14
TH-D-CCMS-VA	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TH-D-CCMS-VA	**Water**							
Batch R2856217								
WG1884831-1 MB								
Thorium (Th)-Dissolved			<0.000050		mg/L		0.00005	07-JUN-14
TH-T-CCMS-VA	**Water**							
Batch R2865899								
WG1886457-1 MB								
Thorium (Th)-Total			<0.000050		mg/L		0.00005	17-JUN-14
WG1889375-1 MB								
Thorium (Th)-Total			<0.000050		mg/L		0.00005	17-JUN-14
TKN-L-CFA-ED	**Water**							
Batch R2871953								
WG1897824-5 DUP		**L1462851-1**						
Total Kjeldahl Nitrogen		<0.050	<0.050	RPD-NA	mg/L	N/A	20	24-JUN-14
WG1897824-2 LCS								
Total Kjeldahl Nitrogen			93		%		75-125	24-JUN-14
WG1897824-3 LCS								
Total Kjeldahl Nitrogen			93		%		75-125	24-JUN-14
WG1897824-4 LCS								
Total Kjeldahl Nitrogen			103		%		75-125	24-JUN-14
WG1897824-1 MB								
Total Kjeldahl Nitrogen			<0.050		mg/L		0.05	24-JUN-14
WG1897824-6 MS		**L1462851-2**						
Total Kjeldahl Nitrogen			103		%		61.4-139.7	24-JUN-14
TURBIDITY-ED	**Water**							
Batch R2849265								
WG1882213-2 LCS								
Turbidity			100.0		%		70-130	30-MAY-14
WG1882213-1 MB								
Turbidity			<0.10		NTU		0.1	30-MAY-14
ZR-D-CCMS-ED	**Water**							
Batch R2865735								
WG1893117-2 CRM		**ED-HIGH-WATRM**						
Zirconium (Zr)-Dissolved			97.9		%		80-120	17-JUN-14
WG1893117-1 MB								
Zirconium (Zr)-Dissolved			<0.00030		mg/L		0.0003	17-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ZR-D-CCMS-ED	**Water**							
Batch R2868515								
WG1895017-2 CRM		**ED-HIGH-WATRM**						
Zirconium (Zr)-Dissolved			100.3		%		80-120	19-JUN-14
WG1895017-8 CRM		**ED-HIGH-WATRM**						
Zirconium (Zr)-Dissolved			100.7		%		80-120	19-JUN-14
WG1895017-1 MB								
Zirconium (Zr)-Dissolved			<0.00030		mg/L		0.0003	19-JUN-14
WG1895017-7 MB								
Zirconium (Zr)-Dissolved			<0.00030		mg/L		0.0003	19-JUN-14
ZR-T-CCMS-ED	**Water**							
Batch R2852121								
WG1883203-9 DUP		**L1462851-3**						
Zirconium (Zr)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	04-JUN-14
WG1883203-5 LCS								
Zirconium (Zr)-Total			91.5		%		70-130	04-JUN-14
WG1883203-6 LCS								
Zirconium (Zr)-Total			97.3		%		70-130	04-JUN-14
WG1883203-2 MB								
Zirconium (Zr)-Total			<0.00060		mg/L		0.0006	04-JUN-14
WG1883203-3 MB								
Zirconium (Zr)-Total			<0.00060		mg/L		0.0006	04-JUN-14
WG1884563-1 MB								
Zirconium (Zr)-Total			<0.00060		mg/L		0.0006	06-JUN-14
WG1884563-2 MB								
Zirconium (Zr)-Total			<0.00060		mg/L		0.0006	06-JUN-14

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Radium-226

Case Narrative

ALS Environmental

L1462851

Work Order Number: 1406033

1. This report consists of the analytical results for three water samples received by ALS on 06/03/14.

2. These samples were prepared and analyzed according to the current revision of SOP 783. The analyses were completed on 06/12/14.

3. The analysis results for these samples are reported in units of BQ/L. The samples were not filtered prior to analysis.

4. Sample volume was insufficient to allow preparation of a duplicate. A laboratory control sample duplicate (LCSD) was prepared in lieu of a client sample duplicate.

5. The ICP-AES measurement of barium concentrations prior to chemical separation for samples RE140604-1MB and -1LCSD showed concentrations less than zero. To avoid a low bias in the final analytical results, the initial barium concentration was taken to be zero.

6. ALS uses the following convention for reporting significant digits in the TPU and MDC results. The TPU value is rounded to two significant digits. The MDC value is rounded to the same decimal place as the TPU value. In practice, this could result in an MDC reported value of zero for samples with significant activity, including the batch laboratory control sample.

7. No further anomalous situations were encountered during the preparation or analysis of these samples. All quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend — 6/13/14
Radiochemistry Primary Data Reviewer — Date

Debbie Fazio — 6/16/14
Radiochemistry Final Data Reviewer — Date

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1406033
Client Name: ALS Environmental
Client Project Name:
Client Project Number: L1462851
Client PO Number: L1462851

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
L1462851-1	1406033-1		WATER	29-May-14	
L1462851-2	1406033-2		WATER	29-May-14	
L1462851-3	1406033-3		WATER	29-May-14	

14060033

Subcontract Request Form

Subcontract To:

ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA
225 COMMERCE DRIVE
FORT COLLINS,CO 80524

NOTES: Please reference on final report and invoice: PO# *L1462851*
ALS requires QC data to be provided with your final results.

Please see enclosed 3 sample(s) in 3 Container(s)

SAMPLE NUMBER	CLIENT ID / ANALYTICAL REQUIRED	DATE SAMPLED / DUE DATE	Priority Flag
(1) L1462851-1	**JGT-06-SE (FIELD BLANK)**	**5/29/2014**	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	6/20/2014	
(2) L1462851-2	**TRIP BLANK**	**5/29/2014**	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	6/20/2014	
(3) L1462851-3	**JGT-06-17S1**	**5/29/2014**	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	6/20/2014	

Subcontract Info Contact: Christine Potts (780) 413-5242
Analysis and reporting info contact: Jessica Spira
9936 67 AVE
EDMONTON,AB T6E 0P5
Phone: (780) 413-5242 Email: JESSICA.SPIRA@alsglobal.com

Please email confirmation of receipt to: **JESSICA.SPIRA@alsglobal.com**

Shipped By: _____ Date Shipped: _____
Received By: C Trumble Date Received: COC 5/30/14 6-3-14 0920
Verified By: _____ Date Verified: _____
Temperature: _____

Sample Integrity Issues: _____

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS-ED Workorder No: 1406033

Project Manager: DF Initials: CDT Date: 6-3-14

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	(YES)	NO
9. Are all aqueous non-preserved samples pH 4-9?	(N/A)	YES	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		YES	(NO)
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	(RAD ONLY)	YES	(NO)

Cooler #:	1							
Temperature (°C):	Amb							
No. of custody seals on cooler:	0							
DOT Survey/Acceptance Information — External µR/hr reading:	12							
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / (NA) Contact: _____ Date/Time: _____

Project Manager Signature / Date: DF 6/3/14

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

12

From: (780) 413-5280
Jimmy Oleson
ALS Labortory Group
9938-67 AVE

edmonton, AB T6E0P5
CANADA

Origin ID: YEGA

FedEx Express

J14081402070426

Ship Date: 02JUN14
ActWgt: 5.5 KG
CAD: 100133236/INCA3490

1406033

REF:
DESC-1: water sample for research purposes only
DESC-2:
DESC-3:
DESC-4:

COUNTRY MFG: CA
CARRIAGE VALUE: 1.00 CAD
CUSTOMS VALUE: 1.00 CA

SIGN: Jimmy Oleson
EIN/VAT:
PKG TYPE: CUSTOMER

Amb

SHIP TO: (970) 490-1511 BILL SENDER

ALS Ft. Collins
ALS Laboratory Group
225 COMMERCE DR

FORT COLLINS, CO 80524
US

10:30A
INTL PRIORITY
ISR
80524
CO-US
DEN

TRK# 7701 6530 9089
0430

XH FTCA

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Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Method Blank Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1406033
Client Name: ALS Environmental
ClientProject ID: L1462851

Lab ID: RE140604-1MB

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 04-Jun-14
Date Prepared: 04-Jun-14
Date Analyzed: 12-Jun-14

Prep Batch: RE140604-1
QCBatchID: RE140604-1-2
Run ID: RE140604-1A
Count Time: 30 minutes

Final Aliquot: 1490 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.0009 +/- 0.0019	0.0033	0.00999	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15280	14770	ug	96.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RE1406033-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1406033
Client Name: ALS Environmental
ClientProject ID: L1462851

Lab ID: RE140604-1LCS

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 04-Jun-14
Date Prepared: 04-Jun-14
Date Analyzed: 12-Jun-14

Prep Batch: RE140604-1
QCBatchID: RE140604-1-2
Run ID: RE140604-1A
Count Time: 15 minutes

Final Aliquot: 1490 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.19 +/- 0.30	0	1.117	106	67 - 120	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15280	14370	ug	94.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE1406033-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1406033
Client Name: ALS Environmental
ClientProject ID: L1462851

Lab ID: RE140604-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 04-Jun-14
Date Prepared: 04-Jun-14
Date Analyzed: 12-Jun-14

Prep Batch: RE140604-1
QCBatchID: RE140604-1-2
Run ID: RE140604-1A
Count Time: 15 minutes

Final Aliquot: 1490 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.11 +/- 0.28	0.01	1.117	99.6	67 - 120	P

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15280	14850	ug	97.2	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE1406033-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Environmental -- FC
Work Order Number: 1406033
Client Name: ALS Environmental
ClientProject ID: L1462851

Field ID:
Lab ID: RE140604-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 04-Jun-14
Date Prepared: 04-Jun-14
Date Analyzed: 12-Jun-14

Prep Batch: RE140604-1
QCBatchID: RE140604-1-2
Run ID: RE140604-1A
Count Time: 15 minutes

Final Aliquot: 1490 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Analyte	Sample			Duplicate			DER	DER Lim
		Result +/- 2 s TPU	MDC	Flags	Result +/- 2 s TPU	MDC	Flags		
13982-63-3	Ra-226	1.19 +/- 0.30	0	P	1.11 +/- 0.28	0.01	P	0.185	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RE1406033-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1406033
Client Name: ALS Environmental
ClientProject ID: L1462851

Field ID: L1462851-1
Lab ID: 1406033-1

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 29-May-14
Date Prepared: 04-Jun-14
Date Analyzed: 12-Jun-14

Prep Batch: RE140604-1
QCBatchID: RE140604-1-2
Run ID: RE140604-1A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0 +/- 0.0029	0.0043	0.00999	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15280	12520	ug	81.9	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1406033-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1406033
Client Name: ALS Environmental
ClientProject ID: L1462851

Field ID: L1462851-2
Lab ID: 1406033-2

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 29-May-14
Date Prepared: 04-Jun-14
Date Analyzed: 12-Jun-14

Prep Batch: RE140604-1
QCBatchID: RE140604-1-2
Run ID: RE140604-1A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.0009 +/- 0.0023	0.0035	0.00999	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15290	14600	ug	95.5	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1406033-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1406033
Client Name: ALS Environmental
ClientProject ID: L1462851

Field ID: L1462851-3
Lab ID: 1406033-3

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 29-May-14
Date Prepared: 04-Jun-14
Date Analyzed: 12-Jun-14

Prep Batch: RE140604-1
QCBatchID: RE140604-1-2
Run ID: RE140604-1A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.142 +/- 0.040	0.002	0.00999	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15290	11750	ug	76.8	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1406033-1*

10- 366716

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

Page 1 of 1

Report To	Report Format / Distribution	Service Request:(Rush subject to availability - Contact ALS to confirm TAT)
Company: GOLDER ASSOCIATES LTD	Standard: ✓ Other (specify):	X Regular (Standard Turnaround Times - Business Days)
Contact: ERMANNO RAMBELLI	Select: PDF ✓ Excel ✓ Digital Fax	Priority(2-4 Business Days)-50% surcharge - Contact ALS to confirm TAT
Address: 500-4260 STILLCREEK DRIVE, BURNABY, BC V5C 6C6	Email 1: Ermanno_Rambelli@golder.com	Emergency (1-2 Business Days)-100% Surcharge - Contact ALS to confirm TAT
	Email 2: Don_Chorley@golder.com	Same Day or Weekend Emergency - Contact ALS to confirm TAT
Phone: (604) 296 4200 Fax: (604) 298 5253	Email 3: Stefano_Nani@golder.com	
Invoice To Same as Report ? (circle) (Yes) or No (if No, provide details)	Client / Project Information	Analysis Request
Copy of Invoice with Report? (circle) (Yes) or No	Job #: 13-1328-004-1/2010/91	(Indicate Filtered or Preserved, F/P)
Company:	PO / AFE:	
Contact:	LSD:	
Address:		
Phone: Fax:	Quote #: Q44824	
Lab Work Order # (lab use only): L1462851	ALS Contact: Jessica Spira Sampler: SN / DH / AC	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	F/P GLD-CAL-WQ-MET-DW-ED	F/P GLD-CAL-WQ-MET-TU-ED	F/P GLD-CAL-WQ-NUT-ED	GL-CAL-WQ-ROU-ED	F HG-D-U-CVAF-VA	HG-T-U-CVAF-VA	F/P RA-D-L-COL-ED	P RA226-MMER-FC	F/P TH-D-CCMS-ED	P TH-T-CCMS-ED	F/P MET-T-CCMS-1(ED-P-MS)	F/P MET-D-CCMS-1(ED-P-MS)	Number of Containers
	JGT-06-SE (FIELD BLANK)	29-MAY-14	01:15	DISTILLED WATER	X	X	X	X	X	X	X	X	X	X	X	X	9
	TRIP BLANK	29-MAY-14	01:00		X	X	X	X	X	X	X	X	X	X	X	X	9
	JGT-06-1751	29-MAY-14	01:50	GROUNDWATER	X	X	X	X	X	X	X	X	X	X	X	X	9

L1462851-COFC

Special Instructions / Regulation with water or land use (CCME- Freshwater Aquatic Life/BC CSR-Commercial/AB Tier 1-Natural/ETC) / Hazardous Details

NO PRESERVATIVES ADDED TO MERCURY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
STEFANO NANI	29/05/2014	8:00		30 MAY 14	12:00	10.0 °C				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION | WHITE - LABORATORY COPY | YELLOW - CLIENT COPY | GENF 18.01 Front

Golder Associates Ltd.
ATTN: STEFANO NANI
500-4260 STILL CREEK DRIVE
BURNABY BC V5C 6C6

Date Received: 04-JUN-14
Report Date: 26-JUN-14 08:19 (MT)
Version: DRAFT

Client Phone: 604-296-2784

Certificate of Analysis

Lab Work Order #: L1464913

Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers: 10-366717
Legal Site Desc:

Jessica Spira
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1464913-1 JGT-06-I5S1							
Sampled By: DH on 01-JUN-14 @ 12:00							
Matrix: WATER							
Dissolved Metals in Water for Golder Cgy							
Dissolved Metals in Water by CRC ICPMS							
Silicon (Si)-Dissolved	4.62	DLM	0.25	mg/L		24-JUN-14	R2871863
Dissolved Metals in Water by ICPOES							
Sulfur (S)-Dissolved	36.9		0.50	mg/L		06-JUN-14	R2854390
Dissolved Zirconium in water, CRC ICPMS							
Zirconium (Zr)-Dissolved	<0.0015	DLM	0.0015	mg/L		24-JUN-14	R2871863
Total Metals in Water for Golder Cgy							
Total Metals in Water by CRC ICPMS							
Silicon (Si)-Total	4.95	DLM	0.25	mg/L		24-JUN-14	R2870918
Total Metals in Water by ICPOES							
Sulfur (S)-Total	39.4		0.50	mg/L		21-JUN-14	R2869944
Total Zirconium in Water by CRC ICPMS							
Zirconium (Zr)-Total	<0.0030	DLM	0.0030	mg/L		24-JUN-14	R2870918
Nutrients in Water for Golder Calgary							
Ammonia in Water by Colour							
Ammonia, Total (as N)	0.289		0.0050	mg/L		24-JUN-14	R2871624
Total Dissolved P in Water by Colour							
Phosphorus (P)-Total Dissolved	0.0125		0.0010	mg/L		24-JUN-14	R2872002
Total P in Water by Colour							
Phosphorus (P)-Total	0.0287		0.0010	mg/L		24-JUN-14	R2872002
Routine Water for Golder Calgary							
Chloride by IC							
Chloride (Cl)	961		0.50	mg/L		04-JUN-14	R2854266
Color, True							
Color, True	<2.0		2.0	C.U.		04-JUN-14	R2852625
Fluoride by IC							
Fluoride (F)	0.278		0.020	mg/L		04-JUN-14	R2854266
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	876		0.50	mg/L		25-JUN-14	
Ion Balance Calculation							
TDS (Calculated)	1650			mg/L		25-JUN-14	
Nitrate in Water (Calculation)							
Nitrate (as N)	<0.0060		0.0060	mg/L		06-JUN-14	
Nitrite & Nitrate in Water by Colour							
Nitrate and Nitrite (as N)	<0.0060		0.0060	mg/L		04-JUN-14	R2854061
Nitrite in Water by Colour							
Nitrite (as N)	<0.0020		0.0020	mg/L		04-JUN-14	R2854061
Sulfate by IC (Low Level)							
Sulfate (SO4)	130		0.050	mg/L		04-JUN-14	R2854266
Sulphide							
Sulphide (as S)	0.108		0.0015	mg/L		24-JUN-14	R2871919
Total Dissolved Solids							
Total Dissolved Solids	1930		10	mg/L		05-JUN-14	R2854102
Total Suspended Solids							
Total Suspended Solids	3.6		3.0	mg/L		05-JUN-14	R2853881
Turbidity							
Turbidity	2.51		0.10	NTU		04-JUN-14	R2852635
pH, Conductivity and Total Alkalinity							
pH	7.54		0.10	pH		04-JUN-14	R2851628
Conductivity (EC)	3140		0.20	uS/cm		04-JUN-14	R2851628
Bicarbonate (HCO3)	68.2		5.0	mg/L		04-JUN-14	R2851628
Carbonate (CO3)	<5.0		5.0	mg/L		04-JUN-14	R2851628

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1464913-1 JGT-06-I5S1							
Sampled By: DH on 01-JUN-14 @ 12:00							
Matrix: WATER							
pH, Conductivity and Total Alkalinity							
Hydroxide (OH)	<5.0		5.0	mg/L		04-JUN-14	R2851628
Alkalinity, Total (as CaCO3)	55.9		2.0	mg/L		04-JUN-14	R2851628
Miscellaneous Parameters							
Orthophosphate-Dissolved (as P)	0.0067		0.0010	mg/L		04-JUN-14	R2854061
Ra-226	See Attached		0.010	Bq/L		16-JUN-14	R2868227
Sulphide (as H2S)	0.115		0.0015	mg/L		25-JUN-14	
TDS (Calculated from EC)	2040		1.0	mg/L		24-JUN-14	
Mercury (Hg)-Total	<0.00050		0.00050	ug/L		07-JUN-14	R2858786
Thorium (Th)-Total	<0.000050		0.000050	mg/L		19-JUN-14	R2868593
Metals in Water by CRC ICPMS (No Digest)							
Aluminum (Al)-Total	0.0117	DLM	0.0015	mg/L		25-JUN-14	R2872891
Antimony (Sb)-Total	<0.00010	DLM	0.00010	mg/L		25-JUN-14	R2872891
Arsenic (As)-Total	0.00197	DLM	0.00010	mg/L		25-JUN-14	R2872891
Barium (Ba)-Total	0.00877	DLM	0.00025	mg/L		25-JUN-14	R2872891
Beryllium (Be)-Total	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Bismuth (Bi)-Total	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Boron (B)-Total	0.136	DLM	0.0050	mg/L		25-JUN-14	R2872891
Cadmium (Cd)-Total	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Calcium (Ca)-Total	199	DLM	0.10	mg/L		25-JUN-14	R2872891
Chromium (Cr)-Total	0.00187	DLM	0.00030	mg/L		25-JUN-14	R2872891
Cobalt (Co)-Total	0.000076	DLM	0.000050	mg/L		25-JUN-14	R2872891
Copper (Cu)-Total	0.00082	DLM	0.00050	mg/L		25-JUN-14	R2872891
Iron (Fe)-Total	0.507	DLM	0.0050	mg/L		25-JUN-14	R2872891
Lead (Pb)-Total	0.000176	DLM	0.000050	mg/L		25-JUN-14	R2872891
Lithium (Li)-Total	0.0590	DLM	0.0025	mg/L		25-JUN-14	R2872891
Magnesium (Mg)-Total	90.2	DLM	0.020	mg/L		25-JUN-14	R2872891
Manganese (Mn)-Total	0.0723	DLM	0.00025	mg/L		25-JUN-14	R2872891
Molybdenum (Mo)-Total	0.00375	DLM	0.00025	mg/L		25-JUN-14	R2872891
Nickel (Ni)-Total	0.00196	DLM	0.00030	mg/L		25-JUN-14	R2872891
Potassium (K)-Total	2.81	DLM	0.10	mg/L		25-JUN-14	R2872891
Selenium (Se)-Total	<0.00020	DLM	0.00020	mg/L		25-JUN-14	R2872891
Silver (Ag)-Total	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Sodium (Na)-Total	241	DLM	0.025	mg/L		25-JUN-14	R2872891
Strontium (Sr)-Total	3.48	DLM	0.00025	mg/L		25-JUN-14	R2872891
Thallium (Tl)-Total	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Tin (Sn)-Total	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Titanium (Ti)-Total	0.00075	DLM	0.00050	mg/L		25-JUN-14	R2872891
Uranium (U)-Total	0.00252	DLM	0.000050	mg/L		25-JUN-14	R2872891
Vanadium (V)-Total	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Zinc (Zn)-Total	0.122	DLM	0.0040	mg/L		25-JUN-14	R2872891
Diss. Mercury in Water by CVAFS (Ultra)							
Dissolved Mercury Filtration Location	FIELD					04-JUN-14	R2857693
Mercury (Hg)-Dissolved	<0.00050		0.00050	ug/L	04-JUN-14	07-JUN-14	R2858786
Diss. Metals in Water by CRC ICPMS (Ult)							
Aluminum (Al)-Dissolved	0.0024	DLM	0.0015	mg/L		25-JUN-14	R2872891
Antimony (Sb)-Dissolved	<0.00010	DLM	0.00010	mg/L		25-JUN-14	R2872891
Arsenic (As)-Dissolved	0.00119	DLM	0.00010	mg/L		25-JUN-14	R2872891
Barium (Ba)-Dissolved	0.00695	DLM	0.00025	mg/L		25-JUN-14	R2872891
Beryllium (Be)-Dissolved	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Bismuth (Bi)-Dissolved	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Boron (B)-Dissolved	0.137	DLM	0.0050	mg/L		25-JUN-14	R2872891

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1464913-1 JGT-06-I5S1							
Sampled By: DH on 01-JUN-14 @ 12:00							
Matrix: WATER							
Diss. Metals in Water by CRC ICPMS (Ult)							
Cadmium (Cd)-Dissolved	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Calcium (Ca)-Dissolved	199	DLM	0.10	mg/L		25-JUN-14	R2872891
Chromium (Cr)-Dissolved	<0.00030	DLM	0.00030	mg/L		25-JUN-14	R2872891
Cobalt (Co)-Dissolved	0.000060	DLM	0.000050	mg/L		25-JUN-14	R2872891
Copper (Cu)-Dissolved	<0.00050	DLM	0.00050	mg/L		25-JUN-14	R2872891
Iron (Fe)-Dissolved	0.207	DLM	0.0050	mg/L		25-JUN-14	R2872891
Lead (Pb)-Dissolved	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Lithium (Li)-Dissolved	0.0581	DLM	0.0025	mg/L		25-JUN-14	R2872891
Magnesium (Mg)-Dissolved	91.9	DLM	0.020	mg/L		25-JUN-14	R2872891
Manganese (Mn)-Dissolved	0.0733	DLM	0.00025	mg/L		25-JUN-14	R2872891
Molybdenum (Mo)-Dissolved	0.00364	DLM	0.00025	mg/L		25-JUN-14	R2872891
Nickel (Ni)-Dissolved	0.00036	DLM	0.00030	mg/L		25-JUN-14	R2872891
Potassium (K)-Dissolved	2.84	DLM	0.10	mg/L		25-JUN-14	R2872891
Selenium (Se)-Dissolved	<0.00020	DLM	0.00020	mg/L		25-JUN-14	R2872891
Silver (Ag)-Dissolved	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Sodium (Na)-Dissolved	234	DLM	0.025	mg/L		25-JUN-14	R2872891
Strontium (Sr)-Dissolved	3.54	DLM	0.00025	mg/L		25-JUN-14	R2872891
Thallium (Tl)-Dissolved	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Tin (Sn)-Dissolved	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Titanium (Ti)-Dissolved	<0.00050	DLM	0.00050	mg/L		25-JUN-14	R2872891
Uranium (U)-Dissolved	0.00251	DLM	0.000050	mg/L		25-JUN-14	R2872891
Vanadium (V)-Dissolved	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Zinc (Zn)-Dissolved	<0.0040	DLM	0.0040	mg/L		25-JUN-14	R2872891
Dissolved Thorium in Water by CRC ICPMS							
Thorium (Th)-Dissolved	<0.000050		0.000050	mg/L	06-JUN-14	19-JUN-14	R2868593
Dissolved Metals Filtration Location	FIELD					06-JUN-14	R2853547
L1464913-2 JGT-06-I5S2							
Sampled By: DH on 01-JUN-14 @ 22:00							
Matrix: WATER							
Dissolved Metals in Water for Golder Cgy							
Dissolved Metals in Water by CRC ICPMS							
Silicon (Si)-Dissolved	4.69	DLM	0.25	mg/L		24-JUN-14	R2871863
Dissolved Metals in Water by ICPOES							
Sulfur (S)-Dissolved	37.3		0.50	mg/L		06-JUN-14	R2854390
Dissolved Zirconium in water, CRC ICPMS							
Zirconium (Zr)-Dissolved	<0.0015	DLM	0.0015	mg/L		24-JUN-14	R2871863
Total Metals in Water for Golder Cgy							
Total Metals in Water by CRC ICPMS							
Silicon (Si)-Total	4.95	DLM	0.25	mg/L		24-JUN-14	R2870918
Total Metals in Water by ICPOES							
Sulfur (S)-Total	37.1		0.50	mg/L		21-JUN-14	R2869944
Total Zirconium in Water by CRC ICPMS							
Zirconium (Zr)-Total	<0.0030	DLM	0.0030	mg/L		24-JUN-14	R2870918
Nutrients in Water for Golder Calgary							
Ammonia in Water by Colour							
Ammonia, Total (as N)	0.294		0.0050	mg/L		24-JUN-14	R2871624
Total Dissolved P in Water by Colour							
Phosphorus (P)-Total Dissolved	0.0110		0.0010	mg/L		24-JUN-14	R2872002
Total P in Water by Colour							
Phosphorus (P)-Total	0.0259		0.0010	mg/L		24-JUN-14	R2872002
Routine Water for Golder Calgary							
Chloride by IC							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1464913-2 JGT-06-I5S2							
Sampled By: DH on 01-JUN-14 @ 22:00							
Matrix: WATER							
Chloride by IC							
Chloride (Cl)	966		0.50	mg/L		04-JUN-14	R2854266
Color, True							
Color, True	<2.0		2.0	C.U.		04-JUN-14	R2852625
Fluoride by IC							
Fluoride (F)	0.237		0.020	mg/L		04-JUN-14	R2854266
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	822		0.50	mg/L		25-JUN-14	
Nitrate in Water (Calculation)							
Nitrate (as N)	<0.0060		0.0060	mg/L		06-JUN-14	
Nitrite & Nitrate in Water by Colour							
Nitrate and Nitrite (as N)	<0.0060		0.0060	mg/L		04-JUN-14	R2854061
Nitrite in Water by Colour							
Nitrite (as N)	<0.0020		0.0020	mg/L		04-JUN-14	R2854061
Sulfate by IC (Low Level)							
Sulfate (SO4)	131		0.050	mg/L		04-JUN-14	R2854266
Sulphide							
Sulphide (as S)	0.109		0.0015	mg/L		24-JUN-14	R2871919
Total Dissolved Solids							
Total Dissolved Solids	1950		10	mg/L		05-JUN-14	R2854102
Total Suspended Solids							
Total Suspended Solids	5.2		3.0	mg/L		05-JUN-14	R2853881
Turbidity							
Turbidity	2.40		0.10	NTU		04-JUN-14	R2852635
pH, Conductivity and Total Alkalinity							
pH	7.61		0.10	pH		04-JUN-14	R2851628
Conductivity (EC)	3140		0.20	uS/cm		04-JUN-14	R2851628
Bicarbonate (HCO3)	69.0		5.0	mg/L		04-JUN-14	R2851628
Carbonate (CO3)	<5.0		5.0	mg/L		04-JUN-14	R2851628
Hydroxide (OH)	<5.0		5.0	mg/L		04-JUN-14	R2851628
Alkalinity, Total (as CaCO3)	56.6		2.0	mg/L		04-JUN-14	R2851628
Miscellaneous Parameters							
Orthophosphate-Dissolved (as P)	0.0080		0.0010	mg/L		04-JUN-14	R2854061
Ra-226	See Attached		0.010	Bq/L		16-JUN-14	R2868227
Sulphide (as H2S)	0.116		0.0015	mg/L		25-JUN-14	
TDS (Calculated from EC)	2040		1.0	mg/L		24-JUN-14	
Mercury (Hg)-Total	<0.00050		0.00050	ug/L		07-JUN-14	R2858786
Thorium (Th)-Total	<0.000050		0.000050	mg/L		19-JUN-14	R2868593
Metals in Water by CRC ICPMS (No Digest)							
Aluminum (Al)-Total	0.0103	DLM	0.0015	mg/L		25-JUN-14	R2872891
Antimony (Sb)-Total	<0.00010	DLM	0.00010	mg/L		25-JUN-14	R2872891
Arsenic (As)-Total	0.00190	DLM	0.00010	mg/L		25-JUN-14	R2872891
Barium (Ba)-Total	0.00901	DLM	0.00025	mg/L		25-JUN-14	R2872891
Beryllium (Be)-Total	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Bismuth (Bi)-Total	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Boron (B)-Total	0.140	DLM	0.0050	mg/L		25-JUN-14	R2872891
Cadmium (Cd)-Total	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Calcium (Ca)-Total	194	DLM	0.10	mg/L		25-JUN-14	R2872891
Chromium (Cr)-Total	0.00190	DLM	0.00030	mg/L		25-JUN-14	R2872891
Cobalt (Co)-Total	0.000076	DLM	0.000050	mg/L		25-JUN-14	R2872891
Copper (Cu)-Total	<0.00050	DLM	0.00050	mg/L		25-JUN-14	R2872891
Iron (Fe)-Total	0.492	DLM	0.0050	mg/L		25-JUN-14	R2872891

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1464913-2 JGT-06-I5S2							
Sampled By: DH on 01-JUN-14 @ 22:00							
Matrix: WATER							
Metals in Water by CRC ICPMS (No Digest)							
Lead (Pb)-Total	0.000212	DLM	0.000050	mg/L		25-JUN-14	R2872891
Lithium (Li)-Total	0.0518	DLM	0.0025	mg/L		25-JUN-14	R2872891
Magnesium (Mg)-Total	86.8	DLM	0.020	mg/L		25-JUN-14	R2872891
Manganese (Mn)-Total	0.0704	DLM	0.00025	mg/L		25-JUN-14	R2872891
Molybdenum (Mo)-Total	0.00367	DLM	0.00025	mg/L		25-JUN-14	R2872891
Nickel (Ni)-Total	0.00177	DLM	0.00030	mg/L		25-JUN-14	R2872891
Potassium (K)-Total	2.72	DLM	0.10	mg/L		25-JUN-14	R2872891
Selenium (Se)-Total	<0.00020	DLM	0.00020	mg/L		25-JUN-14	R2872891
Silver (Ag)-Total	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Sodium (Na)-Total	229	DLM	0.025	mg/L		25-JUN-14	R2872891
Strontium (Sr)-Total	3.42	DLM	0.00025	mg/L		25-JUN-14	R2872891
Thallium (Tl)-Total	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Tin (Sn)-Total	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Titanium (Ti)-Total	0.00058	DLM	0.00050	mg/L		25-JUN-14	R2872891
Uranium (U)-Total	0.00238	DLM	0.000050	mg/L		25-JUN-14	R2872891
Vanadium (V)-Total	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Zinc (Zn)-Total	0.121	DLM	0.0040	mg/L		25-JUN-14	R2872891
Diss. Mercury in Water by CVAFS (Ultra)							
Dissolved Mercury Filtration Location	FIELD					04-JUN-14	R2857693
Mercury (Hg)-Dissolved	<0.00050		0.00050	ug/L	04-JUN-14	07-JUN-14	R2858786
Diss. Metals in Water by CRC ICPMS (Ult)							
Aluminum (Al)-Dissolved	0.0020	DLM	0.0015	mg/L		25-JUN-14	R2872891
Antimony (Sb)-Dissolved	<0.00010	DLM	0.00010	mg/L		25-JUN-14	R2872891
Arsenic (As)-Dissolved	0.00105	DLM	0.00010	mg/L		25-JUN-14	R2872891
Barium (Ba)-Dissolved	0.00654	DLM	0.00025	mg/L		25-JUN-14	R2872891
Beryllium (Be)-Dissolved	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Bismuth (Bi)-Dissolved	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Boron (B)-Dissolved	0.130	DLM	0.0050	mg/L		25-JUN-14	R2872891
Cadmium (Cd)-Dissolved	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Calcium (Ca)-Dissolved	189	DLM	0.10	mg/L		25-JUN-14	R2872891
Chromium (Cr)-Dissolved	<0.00030	DLM	0.00030	mg/L		25-JUN-14	R2872891
Cobalt (Co)-Dissolved	0.000054	DLM	0.000050	mg/L		25-JUN-14	R2872891
Copper (Cu)-Dissolved	<0.00050	DLM	0.00050	mg/L		25-JUN-14	R2872891
Iron (Fe)-Dissolved	0.188	DLM	0.0050	mg/L		25-JUN-14	R2872891
Lead (Pb)-Dissolved	<0.000050	DLM	0.000050	mg/L		25-JUN-14	R2872891
Lithium (Li)-Dissolved	0.0529	DLM	0.0025	mg/L		25-JUN-14	R2872891
Magnesium (Mg)-Dissolved	85.0	DLM	0.020	mg/L		25-JUN-14	R2872891
Manganese (Mn)-Dissolved	0.0702	DLM	0.00025	mg/L		25-JUN-14	R2872891
Molybdenum (Mo)-Dissolved	0.00338	DLM	0.00025	mg/L		25-JUN-14	R2872891
Nickel (Ni)-Dissolved	<0.00030	DLM	0.00030	mg/L		25-JUN-14	R2872891
Potassium (K)-Dissolved	2.73	DLM	0.10	mg/L		25-JUN-14	R2872891
Selenium (Se)-Dissolved	<0.00020	DLM	0.00020	mg/L		25-JUN-14	R2872891
Silver (Ag)-Dissolved	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Sodium (Na)-Dissolved	225	DLM	0.025	mg/L		25-JUN-14	R2872891
Strontium (Sr)-Dissolved	3.38	DLM	0.00025	mg/L		25-JUN-14	R2872891
Thallium (Tl)-Dissolved	<0.000025	DLM	0.000025	mg/L		25-JUN-14	R2872891
Tin (Sn)-Dissolved	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Titanium (Ti)-Dissolved	<0.00050	DLM	0.00050	mg/L		25-JUN-14	R2872891
Uranium (U)-Dissolved	0.00233	DLM	0.000050	mg/L		25-JUN-14	R2872891
Vanadium (V)-Dissolved	<0.00025	DLM	0.00025	mg/L		25-JUN-14	R2872891
Zinc (Zn)-Dissolved	<0.0040	DLM	0.0040	mg/L		25-JUN-14	R2872891
Dissolved Thorium in Water by CRC ICPMS							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1464913-2 JGT-06-I5S2							
Sampled By: DH on 01-JUN-14 @ 22:00							
Matrix: WATER							
Dissolved Thorium in Water by CRC ICPMS							
Thorium (Th)-Dissolved	<0.000050		0.000050	mg/L	06-JUN-14	19-JUN-14	R2868593
Dissolved Metals Filtration Location	FIELD					06-JUN-14	R2853547

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1464913-1	JGT-06-I5S1	T-UT	Total Ultra Metals Bottle - Turbidity, colour, or odour was noted in undigested total metals sample. Reported results may be biased low.
L1464913-2	JGT-06-I5S2	T-UT	Total Ultra Metals Bottle - Turbidity, colour, or odour was noted in undigested total metals sample. Reported results may be biased low.

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CL-IC-ED	Water	Chloride by IC	APHA 4110 B-ION CHROMATOGRAPHY
COL-TRU-ED	Water	Color, True	APHA 2120
The reported color applies to the pH of the sample as submitted unless otherwise noted on the report.			
ETL-HARDNESS-DIS-ED	Water	Hardness (from Dissolved Ca and Mg)	APHA 2340 B-Calculation
F-IC-ED	Water	Fluoride by IC	APHA 4110 B-ION CHROMATOGRAPHY
HG-D-U-CVAF-VA	Water	Diss. Mercury in Water by CVAFS (Ultra)	APHA 3030 B / EPA 1631 REV. E
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
HG-T-U-CVAF-VA	Water	Total Mercury in Water by CVAFS (Ultra)	EPA 1631 REV. E
This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
IONBALANCE-ED	Water	Ion Balance Calculation	APHA 1030E
MET-D-CCMS-ED	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
MET-D-ICP-ED	Water	Dissolved Metals in Water by ICPOES	APHA 3120 B-ICP-OES
MET-D-NP-U-CCMS-ED	Water	Diss. Metals in Water by CRC ICPMS (Ult)	APHA 3125-ICP-MS
Ultra trace metals in water are analyzed by ICPMS, based on US EPA Method 6020A (Jan 1998). This procedure is intended for pristine field-filtered acid-preserved water samples. ALS recommends that filtration blanks be submitted for this test to aid with interpretation of results.			
MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
MET-T-ICP-ED	Water	Total Metals in Water by ICPOES	APHA 3120 B-ICP-OES
MET-T-NP-U-CCMS-ED	Water	Metals in Water by CRC ICPMS (No Digest)	APHA 3125-ICP-MS
Ultra trace metals in water are analyzed by ICPMS, based on US EPA Method 6020A (Jan 1998). The detection limits provided can only be met for undigested samples. This procedure is intended for pristine, non-turbid, acid-preserved water samples, where sample turbidity is < 1 NTU. Where turbidity exceeds 1 NTU, results may be biased low compared to true Total Metals concentrations. ALS recommends that turbidity analysis be requested on samples submitted for this test to aid with interpretation of results.			
NH3-L-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
NO2+NO3-L-CFA-ED	Water	Nitrite & Nitrate in Water by Colour	APHA 4500 NO3-F
This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method".			
NO2-L-CFA-ED	Water	Nitrite in Water by Colour	APHA 4500 NO2-A and NO3-F
This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method", omitting the Cu-Cd reduction step to be selective for nitrite.			
NO3-L-CALC-ED	Water	Nitrate in Water (Calculation)	APHA 4500 NO3-F
Nitrate (as N) is a calculated parameter. Nitrate (as N) = [Nitrate and Nitrite (as N)] - Nitrite (as N).			
P-T-L-COL-ED	Water	Total P in Water by Colour	APHA 4500-P PHOSPHORUS

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
P-TD-L-COL-ED	Water	Total Dissolved P in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Dissolved Phosphorous is determined colourimetrically after persulphate digestion of a sample that has been lab or field filtered through a 0.45 micron membrane filter.			
PH/EC/ALK-ED	Water	pH, Conductivity and Total Alkalinity	APHA 4500-H, 2510, 2320
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
PO4-DO-L-COL-ED	Water	Diss. Orthophosphate in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter.			
RA226-MMER-FC	Water	Ra226 by Alpha Scint, MDC=0.01 Bq/L	EPA 903.1
SO4-L-IC-ED	Water	Sulfate by IC (Low Level)	APHA 4110 B-ION CHROMATOGRAPHY
SOLIDS-TDS-CALCEC-ED	Water	TDS (Calculated from EC)	APHA 1030 E
SOLIDS-TDS-ED	Water	Total Dissolved Solids	APHA 2540 C
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
SULPHIDE-ED	Water	Sulphide	APHA 4500 -S E-Auto-Colorimetry
SULPHIDE>H2S-ED	Water	Sulphide as Hydrogen Sulphide	Calculation from Sulphide
TH-D-CCMS-VA	Water	Dissolved Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).			
TH-T-CCMS-VA	Water	Total Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).			
TURBIDITY-ED	Water	Turbidity	APHA 2130 B-Nephelometer
ZR-D-CCMS-ED	Water	Dissolved Zirconium in water, CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
ZR-T-CCMS-ED	Water	Total Zirconium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA
FC	ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA

Chain of Custody Numbers:

10-366717

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1464913 Report Date: 26-JUN-14

Client: Golder Associates Ltd.
500-4260 STILL CREEK DRIVE
BURNABY BC V5C 6C6
Contact: STEFANO NANI

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-ED	**Water**							
Batch R2854266								
WG1885527-10 LCS								
Chloride (Cl)			107.0		%		90-110	04-JUN-14
WG1885527-11 LCS								
Chloride (Cl)			105.9		%		90-110	04-JUN-14
WG1885527-13 LCS								
Chloride (Cl)			108.1		%		90-110	04-JUN-14
WG1885527-15 LCS								
Chloride (Cl)			108.3		%		90-110	04-JUN-14
WG1885527-2 LCS								
Chloride (Cl)			92.8		%		90-110	04-JUN-14
WG1885527-3 LCS								
Chloride (Cl)			103.4		%		90-110	04-JUN-14
WG1885527-6 LCS								
Chloride (Cl)			92.5		%		90-110	04-JUN-14
WG1885527-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	04-JUN-14
WG1885527-12 MB								
Chloride (Cl)			<0.50		mg/L		0.5	04-JUN-14
WG1885527-14 MB								
Chloride (Cl)			<0.50		mg/L		0.5	04-JUN-14
WG1885527-16 MB								
Chloride (Cl)			<0.50		mg/L		0.5	04-JUN-14
WG1885527-9 MB								
Chloride (Cl)			<0.50		mg/L		0.5	04-JUN-14
WG1885527-5 MS		**L1464943-5**						
Chloride (Cl)			108.7		%		75-125	04-JUN-14
WG1885527-8 MS		**L1464939-4**						
Chloride (Cl)			108.5		%		75-125	04-JUN-14
COL-TRU-ED	**Water**							
Batch R2852625								
WG1885027-2 LCS								
Color, True			94.1		%		85-115	04-JUN-14
WG1885027-1 MB								
Color, True			<2.0		C.U.		2	04-JUN-14
F-IC-ED	**Water**							

Quality Control Report

Workorder: L1464913 Report Date: 26-JUN-14

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F-IC-ED	**Water**							
Batch R2854266								
WG1885527-10 LCS								
Fluoride (F)			105.7		%		90-110	04-JUN-14
WG1885527-11 LCS								
Fluoride (F)			107.1		%		90-110	04-JUN-14
WG1885527-13 LCS								
Fluoride (F)			106.6		%		90-110	04-JUN-14
WG1885527-15 LCS								
Fluoride (F)			99.3		%		90-110	04-JUN-14
WG1885527-2 LCS								
Fluoride (F)			90.6		%		90-110	04-JUN-14
WG1885527-3 LCS								
Fluoride (F)			91.2		%		90-110	04-JUN-14
WG1885527-6 LCS								
Fluoride (F)			90.8		%		90-110	04-JUN-14
WG1885527-1 MB								
Fluoride (F)			<0.020		mg/L		0.02	04-JUN-14
WG1885527-12 MB								
Fluoride (F)			<0.020		mg/L		0.02	04-JUN-14
WG1885527-14 MB								
Fluoride (F)			<0.020		mg/L		0.02	04-JUN-14
WG1885527-16 MB								
Fluoride (F)			<0.020		mg/L		0.02	04-JUN-14
WG1885527-9 MB								
Fluoride (F)			<0.020		mg/L		0.02	04-JUN-14
HG-D-U-CVAF-VA	**Water**							
Batch R2858786								
WG1887596-2 LCS								
Mercury (Hg)-Dissolved			100.4		%		80-120	07-JUN-14
WG1887596-1 MB								
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	07-JUN-14
Batch R2859624								
WG1887596-6 MB								
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	11-JUN-14
HG-T-U-CVAF-VA	**Water**							

Quality Control Report

Workorder: L1464913 Report Date: 26-JUN-14

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-U-CVAF-VA	**Water**							
Batch R2858786								
WG1887595-2 LCS								
Mercury (Hg)-Total			100.4		%		80-120	07-JUN-14
WG1887595-1 MB								
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	07-JUN-14
MET-D-CCMS-ED	**Water**							
Batch R2871863								
WG1898013-11 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			94.4		%		80-120	24-JUN-14
WG1898013-14 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			95.7		%		80-120	24-JUN-14
WG1898013-17 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			95.0		%		80-120	24-JUN-14
WG1898013-2 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			101.4		%		80-120	24-JUN-14
WG1898013-5 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			104.6		%		80-120	24-JUN-14
WG1898013-8 CRM		**ED-HIGH-WATRM**						
Silicon (Si)-Dissolved			94.9		%		80-120	24-JUN-14
WG1898013-12 DUP		**L1464913-1**						
Silicon (Si)-Dissolved		4.62	4.68		mg/L	1.3	20	24-JUN-14
WG1898013-1 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	24-JUN-14
WG1898013-10 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	24-JUN-14
WG1898013-4 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	24-JUN-14
WG1898013-7 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	24-JUN-14
MET-D-ICP-ED	**Water**							
Batch R2854390								
WG1886862-2 CRM		**ED-HIGH-WATRM**						
WG1886862-5 CRM		**ED-HIGH-WATRM**						
WG1886862-1 MB								
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	06-JUN-14
WG1886862-4 MB								
Sulfur (S)-Dissolved			<0.50		mg/L		0.5	06-JUN-14
MET-D-NP-U-CCMS-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-NP-U-CCMS-ED	**Water**							
Batch R2872891								
WG1898966-2 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			101.7		%		80-120	25-JUN-14
Antimony (Sb)-Dissolved			106.6		%		80-120	25-JUN-14
Arsenic (As)-Dissolved			99.8		%		80-120	25-JUN-14
Barium (Ba)-Dissolved			97.7		%		80-120	25-JUN-14
Beryllium (Be)-Dissolved			101.5		%		80-120	25-JUN-14
Bismuth (Bi)-Dissolved			96.6		%		80-120	25-JUN-14
Boron (B)-Dissolved			117.2		%		80-120	25-JUN-14
Cadmium (Cd)-Dissolved			99.2		%		80-120	25-JUN-14
Calcium (Ca)-Dissolved			99.7		%		80-120	25-JUN-14
Chromium (Cr)-Dissolved			104.2		%		80-120	25-JUN-14
Cobalt (Co)-Dissolved			101.5		%		80-120	25-JUN-14
Copper (Cu)-Dissolved			97.9		%		80-120	25-JUN-14
Lead (Pb)-Dissolved			98.3		%		80-120	25-JUN-14
Lithium (Li)-Dissolved			101.8		%		80-120	25-JUN-14
Magnesium (Mg)-Dissolved			97.4		%		80-120	25-JUN-14
Manganese (Mn)-Dissolved			100.7		%		80-120	25-JUN-14
Molybdenum (Mo)-Dissolved			98.2		%		80-120	25-JUN-14
Nickel (Ni)-Dissolved			100.7		%		80-120	25-JUN-14
Potassium (K)-Dissolved			100.1		%		80-120	25-JUN-14
Selenium (Se)-Dissolved			99.3		%		80-120	25-JUN-14
Silver (Ag)-Dissolved			99.9		%		80-120	25-JUN-14
Sodium (Na)-Dissolved			101.1		%		80-120	25-JUN-14
Strontium (Sr)-Dissolved			97.9		%		80-120	25-JUN-14
Thallium (Tl)-Dissolved			102.7		%		80-120	25-JUN-14
Tin (Sn)-Dissolved			101.2		%		80-120	25-JUN-14
Titanium (Ti)-Dissolved			97.4		%		80-120	25-JUN-14
Uranium (U)-Dissolved			96.4		%		80-120	25-JUN-14
Vanadium (V)-Dissolved			104.2		%		80-120	25-JUN-14
Zinc (Zn)-Dissolved			97.8		%		80-120	25-JUN-14
WG1898966-1 MB								
Antimony (Sb)-Dissolved			<0.000020		mg/L		0.00002	25-JUN-14
Arsenic (As)-Dissolved			<0.000020		mg/L		0.00002	25-JUN-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	25-JUN-14
Beryllium (Be)-Dissolved			<0.000010		mg/L		0.00001	25-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-NP-U-CCMS-ED	**Water**							
Batch **R2872891**								
WG1898966-1 **MB**								
Bismuth (Bi)-Dissolved			<0.000010		mg/L		0.00001	25-JUN-14
Cadmium (Cd)-Dissolved			<0.000005		mg/L		0.000005	25-JUN-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	25-JUN-14
Chromium (Cr)-Dissolved			<0.000060		mg/L		0.00006	25-JUN-14
Cobalt (Co)-Dissolved			<0.000010		mg/L		0.00001	25-JUN-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	25-JUN-14
Iron (Fe)-Dissolved			<0.0010		mg/L		0.001	25-JUN-14
Lead (Pb)-Dissolved			<0.000010		mg/L		0.00001	25-JUN-14
Lithium (Li)-Dissolved			<0.00050		mg/L		0.0005	25-JUN-14
Magnesium (Mg)-Dissolved			<0.0040		mg/L		0.004	25-JUN-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	25-JUN-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	25-JUN-14
Nickel (Ni)-Dissolved			<0.000060		mg/L		0.00006	25-JUN-14
Potassium (K)-Dissolved			<0.020		mg/L		0.02	25-JUN-14
Selenium (Se)-Dissolved			<0.000040		mg/L		0.00004	25-JUN-14
Silver (Ag)-Dissolved			<0.000005		mg/L		0.000005	25-JUN-14
Sodium (Na)-Dissolved			<0.0050		mg/L		0.005	25-JUN-14
Strontium (Sr)-Dissolved			<0.000050		mg/L		0.00005	25-JUN-14
Thallium (Tl)-Dissolved			<0.000005		mg/L		0.000005	25-JUN-14
Tin (Sn)-Dissolved			<0.000050		mg/L		0.00005	25-JUN-14
Titanium (Ti)-Dissolved			<0.00010		mg/L		0.0001	25-JUN-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	25-JUN-14
Vanadium (V)-Dissolved			<0.000050		mg/L		0.00005	25-JUN-14
Zinc (Zn)-Dissolved			<0.00080		mg/L		0.0008	25-JUN-14
MET-T-CCMS-ED	**Water**							
Batch **R2870918**								
WG1896698-1 **MB**								
Silicon (Si)-Total			<0.050		mg/L		0.05	24-JUN-14
WG1896698-4 **MB**								
Silicon (Si)-Total			<0.050		mg/L		0.05	24-JUN-14
MET-T-ICP-ED	**Water**							
Batch **R2869944**								
WG1896698-1 **MB**								
Sulfur (S)-Total			<0.50		mg/L		0.5	21-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-NP-U-CCMS-ED	**Water**							
Batch R2872891								
WG1898966-2 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Total			101.7		%		80-120	25-JUN-14
Antimony (Sb)-Total			106.6		%		80-120	25-JUN-14
Arsenic (As)-Total			99.8		%		80-120	25-JUN-14
Barium (Ba)-Total			97.7		%		80-120	25-JUN-14
Beryllium (Be)-Total			101.5		%		80-120	25-JUN-14
Bismuth (Bi)-Total			96.6		%		80-120	25-JUN-14
Boron (B)-Total			117.2		%		80-120	25-JUN-14
Cadmium (Cd)-Total			99.2		%		80-120	25-JUN-14
Calcium (Ca)-Total			99.7		%		80-120	25-JUN-14
Chromium (Cr)-Total			104.2		%		80-120	25-JUN-14
Cobalt (Co)-Total			101.5		%		80-120	25-JUN-14
Copper (Cu)-Total			97.9		%		80-120	25-JUN-14
Lead (Pb)-Total			98.3		%		80-120	25-JUN-14
Lithium (Li)-Total			101.8		%		80-120	25-JUN-14
Magnesium (Mg)-Total			97.4		%		80-120	25-JUN-14
Manganese (Mn)-Total			100.7		%		80-120	25-JUN-14
Molybdenum (Mo)-Total			98.2		%		80-120	25-JUN-14
Nickel (Ni)-Total			100.7		%		80-120	25-JUN-14
Potassium (K)-Total			100.1		%		80-120	25-JUN-14
Selenium (Se)-Total			99.3		%		80-120	25-JUN-14
Silver (Ag)-Total			99.9		%		80-120	25-JUN-14
Sodium (Na)-Total			101.1		%		80-120	25-JUN-14
Strontium (Sr)-Total			97.9		%		80-120	25-JUN-14
Thallium (Tl)-Total			102.7		%		80-120	25-JUN-14
Tin (Sn)-Total			101.2		%		80-120	25-JUN-14
Titanium (Ti)-Total			97.4		%		80-120	25-JUN-14
Uranium (U)-Total			96.4		%		80-120	25-JUN-14
Vanadium (V)-Total			104.2		%		80-120	25-JUN-14
Zinc (Zn)-Total			97.8		%		80-120	25-JUN-14
WG1898966-1 MB								
Antimony (Sb)-Total			<0.000020		mg/L		0.00002	25-JUN-14
Arsenic (As)-Total			<0.000020		mg/L		0.00002	25-JUN-14
Barium (Ba)-Total			<0.000050		mg/L		0.00005	25-JUN-14
Beryllium (Be)-Total			<0.000010		mg/L		0.00001	25-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-NP-U-CCMS-ED	**Water**							
Batch R2872891								
WG1898966-1 MB								
Bismuth (Bi)-Total			<0.000010		mg/L		0.00001	25-JUN-14
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	25-JUN-14
Calcium (Ca)-Total			<0.020		mg/L		0.02	25-JUN-14
Chromium (Cr)-Total			<0.000060		mg/L		0.00006	25-JUN-14
Cobalt (Co)-Total			<0.000010		mg/L		0.00001	25-JUN-14
Copper (Cu)-Total			<0.00010		mg/L		0.0001	25-JUN-14
Iron (Fe)-Total			<0.0010		mg/L		0.001	25-JUN-14
Lead (Pb)-Total			<0.000010		mg/L		0.00001	25-JUN-14
Lithium (Li)-Total			<0.00050		mg/L		0.0005	25-JUN-14
Magnesium (Mg)-Total			<0.0040		mg/L		0.004	25-JUN-14
Manganese (Mn)-Total			<0.000050		mg/L		0.00005	25-JUN-14
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	25-JUN-14
Nickel (Ni)-Total			<0.000060		mg/L		0.00006	25-JUN-14
Potassium (K)-Total			<0.020		mg/L		0.02	25-JUN-14
Selenium (Se)-Total			<0.000040		mg/L		0.00004	25-JUN-14
Silver (Ag)-Total			<0.000005C		mg/L		0.000005	25-JUN-14
Sodium (Na)-Total			<0.0050		mg/L		0.005	25-JUN-14
Strontium (Sr)-Total			<0.000050		mg/L		0.00005	25-JUN-14
Thallium (Tl)-Total			<0.000005C		mg/L		0.000005	25-JUN-14
Tin (Sn)-Total			<0.000050		mg/L		0.00005	25-JUN-14
Titanium (Ti)-Total			<0.00010		mg/L		0.0001	25-JUN-14
Uranium (U)-Total			<0.000010		mg/L		0.00001	25-JUN-14
Vanadium (V)-Total			<0.000050		mg/L		0.00005	25-JUN-14
Zinc (Zn)-Total			<0.00080		mg/L		0.0008	25-JUN-14
NH3-L-CFA-ED	**Water**							
Batch R2871624								
WG1897832-6 DUP		**L1464913-2**						
Ammonia, Total (as N)		0.294	0.297		mg/L	1.0	20	24-JUN-14
WG1897832-2 LCS								
Ammonia, Total (as N)			97.7		%		85-115	24-JUN-14
WG1897832-3 LCS								
Ammonia, Total (as N)			98.1		%		85-115	24-JUN-14
WG1897832-1 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	24-JUN-14
WG1897832-5 MS		**L1467329-5**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-L-CFA-ED	**Water**							
Batch R2871624								
WG1897832-5 MS		**L1467329-5**						
Ammonia, Total (as N)			98.8		%		75.3-122.1	24-JUN-14
WG1897832-7 MS		**L1469807-1**						
Ammonia, Total (as N)			115.6		%		75.3-122.1	24-JUN-14
NO2+NO3-L-CFA-ED	**Water**							
Batch R2854061								
WG1885563-2 LCS								
Nitrate and Nitrite (as N)			100.2		%		85-115	04-JUN-14
WG1885563-1 MB								
Nitrate and Nitrite (as N)			<0.0060		mg/L		0.006	04-JUN-14
WG1885563-4 MS		**L1464016-3**						
Nitrate and Nitrite (as N)			100.4		%		75-125	04-JUN-14
WG1885563-6 MS		**L1464016-12**						
Nitrate and Nitrite (as N)			101.5		%		75-125	04-JUN-14
NO2-L-CFA-ED	**Water**							
Batch R2854061								
WG1885563-2 LCS								
Nitrite (as N)			96.8		%		85-115	04-JUN-14
WG1885563-1 MB								
Nitrite (as N)			<0.0020		mg/L		0.002	04-JUN-14
WG1885563-4 MS		**L1464016-3**						
Nitrite (as N)			101.5		%		75-125	04-JUN-14
WG1885563-6 MS		**L1464016-12**						
Nitrite (as N)			104.5		%		75-125	04-JUN-14
P-T-L-COL-ED	**Water**							
Batch R2872002								
WG1897430-2 LCS								
Phosphorus (P)-Total			101.0		%		80-120	24-JUN-14
WG1897430-8 LCS								
Phosphorus (P)-Total			101.4		%		80-120	24-JUN-14
WG1897430-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	24-JUN-14
WG1897430-7 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	24-JUN-14
WG1897430-10 MS		**L1472106-6**						
Phosphorus (P)-Total			104.5		%		70-130	24-JUN-14
WG1897430-4 MS		**L1467629-3**						
Phosphorus (P)-Total			103.0		%		70-130	24-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-L-COL-ED	**Water**							
Batch R2872002								
WG1897430-6 MS		**L1468053-5**						
Phosphorus (P)-Total			100.6		%		70-130	24-JUN-14
P-TD-L-COL-ED	**Water**							
Batch R2872002								
WG1897430-2 LCS								
Phosphorus (P)-Total	Dissolved		99.2		%		80-120	24-JUN-14
WG1897430-8 LCS								
Phosphorus (P)-Total	Dissolved		96.4		%		80-120	24-JUN-14
WG1897430-1 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	24-JUN-14
WG1897430-7 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	24-JUN-14
WG1897430-10 MS		**L1472106-6**						
Phosphorus (P)-Total	Dissolved		107.3		%		70-130	24-JUN-14
WG1897430-4 MS		**L1467629-3**						
Phosphorus (P)-Total	Dissolved		106.3		%		70-130	24-JUN-14
WG1897430-6 MS		**L1468053-5**						
Phosphorus (P)-Total	Dissolved		103.4		%		70-130	24-JUN-14
PH/EC/ALK-ED	**Water**							
Batch R2851628								
WG1883777-18 LCS								
Conductivity (EC)			97.6		%		90-110	03-JUN-14
WG1883777-19 LCS								
pH			6.98		pH		6.7-7.3	03-JUN-14
WG1883777-2 LCS								
Conductivity (EC)			97.4		%		90-110	03-JUN-14
WG1883777-20 LCS								
Alkalinity, Total (as CaCO3)			104.5		%		85-115	03-JUN-14
WG1883777-21 LCS								
Conductivity (EC)			97.1		%		90-110	03-JUN-14
WG1883777-23 LCS								
Conductivity (EC)			99.0		%		90-110	03-JUN-14
WG1883777-24 LCS								
pH			7.09		pH		6.7-7.3	03-JUN-14
WG1883777-25 LCS								
Alkalinity, Total (as CaCO3)			104.8		%		85-115	03-JUN-14
WG1883777-26 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2851628								
WG1883777-26 LCS								
Conductivity (EC)			97.0		%		90-110	03-JUN-14
WG1883777-28 LCS								
Conductivity (EC)			97.7		%		90-110	03-JUN-14
WG1883777-29 LCS								
pH			7.00		pH		6.7-7.3	03-JUN-14
WG1883777-3 LCS								
pH			6.97		pH		6.7-7.3	03-JUN-14
WG1883777-30 LCS								
Alkalinity, Total (as CaCO3)			103.2		%		85-115	03-JUN-14
WG1883777-31 LCS								
Conductivity (EC)			95.7		%		90-110	03-JUN-14
WG1883777-33 LCS								
Conductivity (EC)			96.6		%		90-110	04-JUN-14
WG1883777-34 LCS								
pH			7.00		pH		6.7-7.3	04-JUN-14
WG1883777-35 LCS								
Alkalinity, Total (as CaCO3)			103.7		%		85-115	04-JUN-14
WG1883777-36 LCS								
Conductivity (EC)			94.4		%		90-110	04-JUN-14
WG1883777-38 LCS								
Conductivity (EC)			98.9		%		90-110	04-JUN-14
WG1883777-39 LCS								
pH			7.01		pH		6.7-7.3	04-JUN-14
WG1883777-4 LCS								
Alkalinity, Total (as CaCO3)			103.7		%		85-115	03-JUN-14
WG1883777-40 LCS								
Alkalinity, Total (as CaCO3)			104.7		%		85-115	04-JUN-14
WG1883777-41 LCS								
Conductivity (EC)			92.8		%		90-110	04-JUN-14
WG1883777-43 LCS								
Conductivity (EC)			97.9		%		90-110	04-JUN-14
WG1883777-44 LCS								
pH			7.00		pH		6.7-7.3	04-JUN-14
WG1883777-45 LCS								
Alkalinity, Total (as CaCO3)			102.4		%		85-115	04-JUN-14
WG1883777-46 LCS								
Conductivity (EC)			91.8		%		90-110	04-JUN-14
WG1883777-48 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2851628								
WG1883777-48 LCS								
Conductivity (EC)			97.3		%		90-110	04-JUN-14
WG1883777-49 LCS								
pH			6.98		pH		6.7-7.3	04-JUN-14
WG1883777-5 LCS								
Conductivity (EC)			97.5		%		90-110	03-JUN-14
WG1883777-50 LCS								
Alkalinity, Total (as CaCO3)			103.8		%		85-115	04-JUN-14
WG1883777-51 LCS								
Conductivity (EC)			90.8		%		90-110	04-JUN-14
WG1883777-53 LCS								
Conductivity (EC)			96.4		%		90-110	04-JUN-14
WG1883777-54 LCS								
pH			7.01		pH		6.7-7.3	04-JUN-14
WG1883777-55 LCS								
Alkalinity, Total (as CaCO3)			103.9		%		85-115	04-JUN-14
WG1883777-56 LCS								
Conductivity (EC)			95.5		%		90-110	04-JUN-14
WG1883777-1 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	03-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	03-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	03-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	03-JUN-14
WG1883777-17 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	03-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	03-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	03-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	03-JUN-14
WG1883777-22 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	03-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	03-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	03-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	03-JUN-14
WG1883777-27 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	03-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	03-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	03-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	03-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2851628								
WG1883777-32 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	04-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	04-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	04-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	04-JUN-14
WG1883777-37 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	04-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	04-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	04-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	04-JUN-14
WG1883777-42 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	04-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	04-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	04-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	04-JUN-14
WG1883777-47 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	04-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	04-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	04-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	04-JUN-14
WG1883777-52 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	04-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	04-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	04-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	04-JUN-14
PO4-DO-L-COL-ED	**Water**							
Batch R2854061								
WG1885563-2 LCS								
Orthophosphate-Dissolved (as P)			96.8		%		80-120	04-JUN-14
WG1885563-1 MB								
Orthophosphate-Dissolved (as P)			<0.0010		mg/L		0.001	04-JUN-14
WG1885563-4 MS		**L1464016-3**						
Orthophosphate-Dissolved (as P)			95.2		%		70-130	04-JUN-14
WG1885563-6 MS		**L1464016-12**						
Orthophosphate-Dissolved (as P)			87.6		%		70-130	04-JUN-14
SO4-L-IC-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-L-IC-ED	**Water**							
Batch R2854266								
WG1885527-10 LCS								
Sulfate (SO4)			105.0		%		90-110	04-JUN-14
WG1885527-11 LCS								
Sulfate (SO4)			104.9		%		90-110	04-JUN-14
WG1885527-13 LCS								
Sulfate (SO4)			106.1		%		90-110	04-JUN-14
WG1885527-15 LCS								
Sulfate (SO4)			106.5		%		90-110	04-JUN-14
WG1885527-2 LCS								
Sulfate (SO4)			91.4		%		90-110	04-JUN-14
WG1885527-3 LCS								
Sulfate (SO4)			101.1		%		90-110	04-JUN-14
WG1885527-6 LCS								
Sulfate (SO4)			90.5		%		90-110	04-JUN-14
WG1885527-1 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	04-JUN-14
WG1885527-12 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	04-JUN-14
WG1885527-14 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	04-JUN-14
WG1885527-16 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	04-JUN-14
WG1885527-9 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	04-JUN-14
SOLIDS-TDS-ED	**Water**							
Batch R2854102								
WG1885772-2 LCS								
Total Dissolved Solids			100.3		%		85-115	05-JUN-14
WG1885772-1 MB								
Total Dissolved Solids			<10		mg/L		10	05-JUN-14
SOLIDS-TOTSUS-ED	**Water**							
Batch R2853881								
WG1885652-2 LCS								
Total Suspended Solids			99.4		%		85-115	05-JUN-14
WG1885652-1 MB								
Total Suspended Solids			<3.0		mg/L		3	05-JUN-14
SULPHIDE-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SULPHIDE-ED	**Water**							
Batch R2871919								
WG1898393-2 LCS								
Sulphide (as S)			92.1		%		75-125	24-JUN-14
WG1898393-3 LCS								
Sulphide (as S)			95.2		%		75-125	24-JUN-14
WG1898393-1 MB								
Sulphide (as S)			<0.0015		mg/L		0.0015	24-JUN-14
WG1898393-5 MS		**L1467629-3**						
Sulphide (as S)			108.4		%		65-135	24-JUN-14
WG1898393-7 MS		**L1473040-2**						
Sulphide (as S)			99.6		%		65-135	24-JUN-14
TH-T-CCMS-VA	**Water**							
Batch R2867652								
WG1892248-1 MB								
Thorium (Th)-Total			<0.000050		mg/L		0.00005	17-JUN-14
TURBIDITY-ED	**Water**							
Batch R2852635								
WG1885099-2 LCS								
Turbidity			100.0		%		70-130	04-JUN-14
WG1885099-1 MB								
Turbidity			<0.10		NTU		0.1	04-JUN-14
ZR-D-CCMS-ED	**Water**							
Batch R2871863								
WG1898013-11 CRM		**ED-HIGH-WATRM**						
Zirconium (Zr)-Dissolved			101.8		%		80-120	24-JUN-14
WG1898013-12 DUP		**L1464913-1**						
Zirconium (Zr)-Dissolved		<0.0015	<0.0015	RPD-NA	mg/L	N/A	20	24-JUN-14
WG1898013-10 MB								
Zirconium (Zr)-Dissolved			<0.00030		mg/L		0.0003	24-JUN-14
ZR-T-CCMS-ED	**Water**							
Batch R2870918								
WG1896698-1 MB								
Zirconium (Zr)-Total			<0.00060		mg/L		0.0006	24-JUN-14
WG1896698-4 MB								
Zirconium (Zr)-Total			<0.00060		mg/L		0.0006	24-JUN-14

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Color, True							
	1	01-JUN-14 12:00	04-JUN-14 16:56	48	77	hours	EHTR
	2	01-JUN-14 22:00	04-JUN-14 16:56	48	67	hours	EHTR
Turbidity							
	1	01-JUN-14 12:00	04-JUN-14 00:00	48	60	hours	EHTR
	2	01-JUN-14 22:00	04-JUN-14 00:00	48	50	hours	EHTR
Leachable Anions & Nutrients							
Diss. Orthophosphate in Water by Colour							
	1	01-JUN-14 12:00	04-JUN-14 00:00	48	60	hours	EHTR
	2	01-JUN-14 22:00	04-JUN-14 00:00	48	50	hours	EHTR
Anions and Nutrients							
Nitrite & Nitrate in Water by Colour							
	1	01-JUN-14 12:00	04-JUN-14 00:00	48	60	hours	EHTR
	2	01-JUN-14 22:00	04-JUN-14 00:00	48	50	hours	EHTR
Nitrite in Water by Colour							
	1	01-JUN-14 12:00	04-JUN-14 00:00	48	60	hours	EHTR
	2	01-JUN-14 22:00	04-JUN-14 00:00	48	50	hours	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1464913 were received on 04-JUN-14 10:02.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Radium-226

Case Narrative

ALS Environmental

L1464913

Work Order Number: 1406099

1. This report consists of the analytical results for two water sample received by ALS on 06/05/14.

2. The samples were prepared and analyzed according to the current revision of SOP 783. The analyses were completed on 06/16/14.

3. The analysis results for these samples are reported in units of BQ/L. The samples were not filtered prior to analysis.

4. Sample volume was insufficient to allow preparation of a duplicate. A laboratory control sample duplicate (LCSD) was prepared in lieu of a client sample duplicate.

5. The ICP-AES measurement of barium concentrations prior to chemical separation for samples 1406099-1, -2, RE140606-1MB, -1LCS, and -1LCSD showed concentrations less than zero. To avoid a low bias in the final analytical results, the initial barium concentration was taken to be zero.

6. No further anomalous situations were encountered during the preparation or analysis of these samples. All quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Linda Arend — 6/17/14
Radiochemistry Primary Data Reviewer — Date

Dubbi Fazio — 6/17/14
Radiochemistry Final Data Reviewer — Date

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1406099
Client Name: ALS Environmental
Client Project Name:
Client Project Number: L1464913
Client PO Number: L1464913

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
L1464913-1	1406099-1		WATER	01-Jun-14	
L1464913-2	1406099-2		WATER	01-Jun-14	

ALS Environmental

Subcontract Request Form

Subcontract To:

1406099

ALS ENVIRONMENTAL - FORT COLLINS, COLORADO, USA
225 COMMERCE DRIVE
FORT COLLINS,CO 80524

NOTES: Please reference on final report and invoice: PO# *L1464913*
ALS requires QC data to be provided with your final results.

Please see enclosed 2 **sample(s) in** 2 **Container(s)**

SAMPLE NUMBER	CLIENT ID / ANALYTICAL REQUIRED	DATE SAMPLED / DUE DATE	Priority Flag
L1464913-1 (1)	JG-T-06-I5S1	6/ 1/ 2014	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	6/25/2014	
L1464913-2 (2)	JG-T-06-I5S2	6/ 1/ 2014	
	Ra226 by Alpha Scint, MDC=0.01 Bq/L (RA226-MMER-FC 1)	6/25/2014	

Subcontract Info Contact: Christine Potts (780) 413-5242
Analysis and reporting info contact: Jessica Spira
9936 67 AVE
EDMONTON,AB T6E 0P5
Phone: (780) 413-5242 Email: JESSICA.SPIRA@alsglobal.com

Please email confirmation of receipt to: **JESSICA.SPIRA@alsglobal.com**

Shipped By: _____ Date Shipped: _____

Received By: _____ Date Received: 6/5/14 0935

Verified By: _____ Date Verified: _____

Temperature: _____

Sample Integrity Issues: _____

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS Edmonton Workorder No: 14060099

Project Manager: DJF Initials: JLR Date: 6/5/14

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	(YES)	NO
9. Are all aqueous non-preserved samples pH 4-9?	(N/A)	YES	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 (#4)	(RAD ONLY)	YES	(NO)

Cooler #:	1							
Temperature (°C):	7.6°							
No. of custody seals on cooler:	0							
DOT Survey/ Acceptance Information — External µR/hr reading:	13							
Background µR/hr reading:	12							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / (NA) Contact: _____ Date/Time: _____

Project Manager Signature / Date: DJF 6/6/14

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

Form 201r24.xls (06/04/2012)

From: (780) 413-5280
Jimmy Oleson
ALS Labortory Group
9938-67 AVE

edmonton, AB T6E0P5
CANADA

Origin ID: YEGA

FedEx Express

J14181402870426

Ship Date: 04JUN14
ActWgt: 6.0 KG
CAD: 100133236/INCA3490

1406099

REF:
DESC-1: water sample for research purposes only
DESC-2:
DESC-3:
DESC-4:

COUNTRY MFG: CA
CARRIAGE VALUE: 2.00 CAD
CUSTOMS VALUE: 2.00 CAD

SIGN: Jimmy Oleson
EIN/VAT:
PKG TYPE: CUSTOMER

SHIP TO: (970) 490-1511
ALS Ft. Collins
ALS Laboratory Group
225 COMMERCE DR

FORT COLLINS, CO 80524
US

BILL SENDER

130

TRK# 0430 **7701 9590 5303**

XH FTCA

10:30A
INTL PRIORITY
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522G3/A26DMF220

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Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Temp = 7.6°C (RAD only)

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Method Blank Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1406099
Client Name: ALS Environmental
ClientProject ID: L1464913

Lab ID: RE140606-1MB

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 06-Jun-14
Date Prepared: 06-Jun-14
Date Analyzed: 16-Jun-14

Prep Batch: RE140606-1
QCBatchID: RE140606-1-2
Run ID: RE140606-1A
Count Time: 30 minutes

Final Aliquot: 995 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.0015 +/- 0.0037	0.0066	0.00999	U

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15610	15130	ug	96.9	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

M - Requested MDC not met.

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Data Package ID: *RE1406099-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1406099
Client Name: ALS Environmental
ClientProject ID: L1464913

Lab ID: RE140606-1LCS

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 06-Jun-14
Date Prepared: 06-Jun-14
Date Analyzed: 16-Jun-14

Prep Batch: RE140606-1
QCBatchID: RE140606-1-2
Run ID: RE140606-1A
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.69 +/- 0.42	0.02	1.676	101	67 - 120	P,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15610	11790	ug	75.6	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE1406099-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1406099
Client Name: ALS Environmental
ClientProject ID: L1464913

Lab ID: RE140606-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 06-Jun-14
Date Prepared: 06-Jun-14
Date Analyzed: 16-Jun-14

Prep Batch: RE140606-1
QCBatchID: RE140606-1-2
Run ID: RE140606-1A
Count Time: 15 minutes

Final Aliquot: 995 ml
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	1.69 +/- 0.42	0.01	1.676	101	67 - 120	P,M3

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15610	15050	ug	96.4	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

LT - Result is less than Requested MDC, greater than sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS Recovery within control limits.

M - The requested MDC was not met.

M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

Data Package ID: *RE1406099-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Duplicate Sample Results (DER)

Lab Name: ALS Environmental -- FC
Work Order Number: 1406099
Client Name: ALS Environmental
ClientProject ID: L1464913

Field ID:
Lab ID: RE140606-1LCSD

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 06-Jun-14
Date Prepared: 06-Jun-14
Date Analyzed: 16-Jun-14

Prep Batch: RE140606-1
QCBatchID: RE140606-1-2
Run ID: RE140606-1A
Count Time: 15 minutes

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Analyte	Sample			Duplicate			DER	DER Lim
		Result +/- 2 s TPU	MDC	Flags	Result +/- 2 s TPU	MDC	Flags		
13982-63-3	Ra-226	1.69 +/- 0.42	0.02	P,M3	1.69 +/- 0.42	0.01	P,M3	0.00281	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits

Abbreviations:

TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *RE1406099-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1406099
Client Name: ALS Environmental
ClientProject ID: L1464913

Field ID: L1464913-1
Lab ID: 1406099-1

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 01-Jun-14
Date Prepared: 06-Jun-14
Date Analyzed: 16-Jun-14

Prep Batch: RE140606-1
QCBatchID: RE140606-1-2
Run ID: RE140606-1A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.319 +/- 0.082	0.004	0.00999	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15610	12590	ug	80.7	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1406099-1*

Ra-226 by Radon Emanation - Method 903.1

PAI 783 Rev 10

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1406099
Client Name: ALS Environmental
ClientProject ID: L1464913

Field ID: L1464913-2
Lab ID: 1406099-2

Sample Matrix: WATER
Prep SOP: PAI 783 Rev 10
Date Collected: 01-Jun-14
Date Prepared: 06-Jun-14
Date Analyzed: 16-Jun-14

Prep Batch: RE140606-1
QCBatchID: RE140606-1-2
Run ID: RE140606-1A
Count Time: 30 minutes
Report Basis: Unfiltered

Final Aliquot: 995 ml
Prep Basis: Unfiltered
Moisture(%): NA
Result Units: BQ/l
File Name: Manual Entry

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	0.277 +/- 0.072	0.004	0.00999	

Chemical Yield Summary

Carrier/Tracer	Amount Added	Result	Units	Yield	Control Limits	Flag
BARIUM	15610	14510	ug	93.0	40 - 110 %	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

Data Package ID: *RE1406099-1*

10-366717

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

Page 1 of 1

Report To		Report Format / Distribution		Service Request: (Rush subject to availability - Contact ALS to confirm TAT)	
Company:	Golder Associates Ltd.	Standard: ✓	Other (specify):	X	Regular (Standard Turnaround Times - Business Days)
Contact:	Stefano Nani	Select: PDF ✓	Excel ✓ Digital Fax		Priority (2-4 Business Days) - 50% surcharge - Contact ALS to confirm TAT
Address:	500-4260 Still Creek Drive, Burnaby, British Columbia V5C 6C6	Email 1:	Stefano_Nani@golder.com		Emergency (1-2 Business Days) - 100% Surcharge - Contact ALS to confirm TAT
Phone:	604-296-2734 Fax: 604-298-5253	Email 2:	Ermanno_Rambelli@golder.com		Same Day or Weekend Emergency - Contact ALS to confirm TAT
Invoice To	Same as Report ? (circle) Yes or No (if No, provide details)	Email 3:	Don_Charley@golder.com	Analysis Request	
	Copy of Invoice with Report? (circle) Yes or No	Client / Project Information		(Indicate Filtered or Preserved, F/P)	
Company:		Job #:			
Contact:		PO / AFE:			
Address:		LSD:			
Phone:	Fax:	Quote #:	Q44824		
Lab Work Order # (lab use only)	L1464913	ALS Contact:	~~Geur~~ Jessica Spira	Sampler:	David Haviland

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	F/P GLD-CAL-WQ-MET-DIS-ED	P GLD-CAL-WQ-MET-TU-ED	P GLD-CAL-WQ-Aqueous NUT-ED	GLD-CAL-WQ-ROU-ED	F HG-D-U-CVAF-VA	HG-T-U-CVAF-VA	F/P PAH-DO-L-COL-ED	J/P RA226-MMER-FC	F/P TH-D-ICMS-ED	P TH-T-ICMS-ED	P MET-T-ICMS-1 (EDP.T.MS)	F/P MET-D-ICMS-1 (ED.P-D-MS)	Number of Containers
	~~JGT-06-I550~~																
	JGT-06-I551	02-Jun-14	22h00	Groundwater	X	X	X	X	X	X	X	X	X	X	X	X	9
	JGT-06-I552	02-Jun-14	22h00	Groundwater	X	X	X	X	X	X	X	X	X	X	X	X	9

L1464913-COFC

Special Instructions / Regulation with water or land use (CCME- Freshwater Aquatic Life/BC CSR-Commercial/AB Tier 1-Natural/ETC) / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
Dale Halfyard	June 3 2014			6/4/14	10:02	3.0 °C				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION — WHITE - LABORATORY COPY — YELLOW - CLIENT COPY — GENF 18.01 Front

Golder Associates Ltd.
ATTN: STEFANO NANI
500-4260 STILL CREEK DRIVE
BURNABY BC V5C 6C6

Date Received: 11-JUN-14
Report Date: 16-JUN-14 10:56 (MT)
Version: FINAL REV. 2

Client Phone: 604-296-422

Certificate of Analysis

Lab Work Order #: L1468736

Project P.O. #: NOT SUBMITTED
Job Reference: 13-1328-0041
C of C Numbers: 14-132841
Legal Site Desc:

Comments:

16-JUN-2014 REVISED REPORT: SAMPLE ID CORRECTION

Jessica Spira
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1468736-1 JGT-06-I5AA							
Sampled By: DH/DH on 09-JUN-14 @ 10:45							
Matrix: WATER							
Diss. Mercury in Water by CVAFS (Ultra)							
Dissolved Mercury Filtration Location	FIELD					13-JUN-14	R2861043
Mercury (Hg)-Dissolved	<0.00050		0.00050	ug/L	13-JUN-14	14-JUN-14	R2861046
L1468736-2 JGT-06-I5BB							
Sampled By: DH/DH on 09-JUN-14 @ 10:55							
Matrix: WATER							
Diss. Mercury in Water by CVAFS (Ultra)							
Dissolved Mercury Filtration Location	FIELD					13-JUN-14	R2861043
Mercury (Hg)-Dissolved	<0.00050		0.00050	ug/L	13-JUN-14	14-JUN-14	R2861046

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
HG-D-U-CVAF-VA	Water	Diss. Mercury in Water by CVAFS (Ultra)	APHA 3030 B / EPA 1631 REV. E

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure may involve preliminary sample treatment by filtration (APHA 3030B) and involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

14-132841

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Client: Golder Associates Ltd.
500-4260 STILL CREEK DRIVE
BURNABY BC V5C 6C6
Contact: STEFANO NANI

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-U-CVAF-VA	**Water**							
Batch R2861046								
WG1891936-2 LCS								
Mercury (Hg)-Dissolved			99.2		%		80-120	14-JUN-14
WG1891936-1 MB								
Mercury (Hg)-Dissolved			<0.00050		ug/L		0.0005	14-JUN-14
WG1891936-3 MS		**L1468736-1**						
Mercury (Hg)-Dissolved			97.6		%		70-130	14-JUN-14

Quality Control Report

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Chain of Custody (COC) / Analytical Request Form

ALS Environmental

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

COC Number: 14 - 132841

Affix ALS barcode label here (lab use only)

Page 1 of 1

Report To		Report Format / Distribution	Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)
Company:	Golder Associates Ltd.	Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)	R ☑ Regular (Standard TAT if received by 3 pm - business days)
Contact:	Stefano Nani	Quality Control (QC) Report with Report ☑ Yes ☐ No	P ☐ Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT
Address:	500 - 4260 Still Creek Drive Burnaby, British Columbia, V5C 6C6	☑ Criteria on Report - provide details below if box checked Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX	E ☐ Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT E2 ☐ Same day or weekend emergency - contact ALS to confirm TAT and surcharge
Phone:	1-604-296-4200	Email 1 or Fax stefano_nani@golder.com	Specify Date Required for E2,E or P:
		Email 2 don_chorley@golder.com	Analysis Request

Invoice To	Same as Report To ☑ Yes ☐ No	Invoice Distribution	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below
	Copy of Invoice with Report ☐ Yes ☑ No	Select Invoice Distribution: ☑ EMAIL ☑ MAIL ☐ FAX	F
Company:		Email 1 or Fax	
Contact:		Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Quote #:	Q44824	Approver ID:	Cost Center:
Job #:	13-1328-0041	GL Account:	Routing Code:
PO / AFE:		Activity Code:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): L1468736 | ALS Contact: Jessica Spira | Sampler: Dale Holtze, David Haviland

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	HG-D-U-CVAF-VA	Number of Containers
	JGT-08-I5AA	09-06-2014	10:45	Water	R	1
	JGT-08-I5BB	09-06-2014	10:55	Water	R	1

L1468736-COFC

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report (client Use)
Are samples taken from a Regulated DW System? ☐ Yes ☑ No	Please also email report of analyses to ermanno_rambelli@golder.com
Are samples for human drinking water use? ☐ Yes ☑ No	

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No ☐	
Ice packs	Yes ☑	No ☐	Custody seal intact	Yes ☐	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
11.6					

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
Dale Holtze	June 10, 2014	5:50		11/9/14	0946			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-FM-0328e v09 Front/04 January 2014

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Golder Associates Ltd.
ATTN: STEFANO NANI
500-4260 STILL CREEK DRIVE
BURNABY BC V5C 6C6

Date Received: 12-JUN-14
Report Date: 19-JUN-14 15:37 (MT)
Version: DRAFT REV. 5

Client Phone: 604-296-4200

Certificate of Analysis

Lab Work Order #: L1470073

Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers: 10-366715
Legal Site Desc:

Comments:

16-JUN-2014 REVISED REPORT: SAMPLE ID CORRECTION
19-JUN-2014 REVISED REPORT: FULL METALS LIST ADDED

Jessica Spira
Senior Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1470073-1 JGT-06-I5A							
Sampled By: DH on 08-JUN-14 @ 17:00							
Matrix: GROUNDWATER							
Dissolved Metals in Water for Golder Cgy							
Dissolved Zirconium in water, CRC ICPMS							
Zirconium (Zr)-Dissolved	<0.00030		0.00030	mg/L		14-JUN-14	R2860500
Total Metals in Water for Golder Cgy							
Total Zirconium in Water by CRC ICPMS							
Zirconium (Zr)-Total	<0.00060		0.00060	mg/L		13-JUN-14	R2860493
Nutrients in Water for Golder Calgary							
Ammonia in Water by Colour							
Ammonia, Total (as N)	0.328		0.0050	mg/L		16-JUN-14	R2862311
TKN in Water by Colour							
Total Kjeldahl Nitrogen	0.274		0.050	mg/L	16-JUN-14	16-JUN-14	R2862174
Total Dissolved P in Water by Colour							
Phosphorus (P)-Total Dissolved	0.0036		0.0010	mg/L		14-JUN-14	R2861080
Total P in Water by Colour							
Phosphorus (P)-Total	0.0155		0.0010	mg/L		14-JUN-14	R2861080
Routine Water for Golder Calgary							
Chloride by IC							
Chloride (Cl)	896	DLM	2.5	mg/L		13-JUN-14	R2860965
Color, True							
Color, True	14.7		2.0	C.U.		13-JUN-14	R2860655
Fluoride by IC							
Fluoride (F)	0.20	DLM	0.10	mg/L		13-JUN-14	R2860965
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	932		1.3	mg/L		14-JUN-14	
Ion Balance Calculation							
TDS (Calculated)	1570			mg/L		16-JUN-14	R2863549
Nitrate in Water (Calculation)							
Nitrate (as N)	0.0098		0.0060	mg/L		16-JUN-14	
Nitrite & Nitrate in Water by Colour							
Nitrate and Nitrite (as N)	0.0098		0.0060	mg/L		13-JUN-14	R2862710
Nitrite in Water by Colour							
Nitrite (as N)	<0.0020		0.0020	mg/L		13-JUN-14	R2862710
Sulfate by IC (Low Level)							
Sulfate (SO4)	109	DLM	0.25	mg/L		13-JUN-14	R2860965
Sulphide							
Sulphide (as S)	0.0089		0.0015	mg/L		13-JUN-14	R2860599
Total Dissolved Solids							
Total Dissolved Solids	1970		10	mg/L		13-JUN-14	R2860906
Total Suspended Solids							
Total Suspended Solids	4.4		3.0	mg/L		13-JUN-14	R2860453
Turbidity							
Turbidity	4.23		0.10	NTU		13-JUN-14	R2860660
pH, Conductivity and Total Alkalinity							
pH	7.81		0.10	pH		13-JUN-14	R2860400
Conductivity (EC)	3120		0.20	uS/cm		13-JUN-14	R2860400
Bicarbonate (HCO3)	70.5		5.0	mg/L		13-JUN-14	R2860400
Carbonate (CO3)	<5.0		5.0	mg/L		13-JUN-14	R2860400
Hydroxide (OH)	<5.0		5.0	mg/L		13-JUN-14	R2860400
Alkalinity, Total (as CaCO3)	57.8		2.0	mg/L		13-JUN-14	R2860400
Miscellaneous Parameters							
Orthophosphate-Dissolved (as P)	<0.0010		0.0010	mg/L		13-JUN-14	R2862710
Dissolved Organic Carbon	241	DLA	1.0	mg/L		14-JUN-14	R2860924
TDS (Calculated from EC)	2030		1.0	mg/L		16-JUN-14	

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1470073-1 JGT-06-I5A							
Sampled By: DH on 08-JUN-14 @ 17:00							
Matrix: GROUNDWATER							
Mercury (Hg)-Total	<0.00050		0.00050	ug/L		16-JUN-14	R2863588
Total Organic Carbon	221	DLA	1.0	mg/L		14-JUN-14	R2860924
Thorium (Th)-Total	<0.000050		0.000050	mg/L		17-JUN-14	R2865899
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0111		0.0030	mg/L		13-JUN-14	R2860493
Antimony (Sb)-Total	0.00022		0.00010	mg/L		13-JUN-14	R2860493
Arsenic (As)-Total	0.00252		0.00010	mg/L		13-JUN-14	R2860493
Barium (Ba)-Total	0.0104		0.000050	mg/L		13-JUN-14	R2860493
Beryllium (Be)-Total	<0.00010		0.00010	mg/L		13-JUN-14	R2860493
Bismuth (Bi)-Total	<0.000050		0.000050	mg/L		13-JUN-14	R2860493
Boron (B)-Total	0.114		0.010	mg/L		13-JUN-14	R2860493
Cadmium (Cd)-Total	0.000040		0.000010	mg/L		13-JUN-14	R2860493
Calcium (Ca)-Total	197		0.020	mg/L		13-JUN-14	R2860493
Chromium (Cr)-Total	0.00253		0.00010	mg/L		13-JUN-14	R2860493
Cobalt (Co)-Total	<0.00010		0.00010	mg/L		13-JUN-14	R2860493
Copper (Cu)-Total	0.00062		0.00010	mg/L		13-JUN-14	R2860493
Iron (Fe)-Total	1.00		0.010	mg/L		13-JUN-14	R2860493
Lead (Pb)-Total	<0.000050		0.000050	mg/L		13-JUN-14	R2860493
Lithium (Li)-Total	0.0505		0.0050	mg/L		13-JUN-14	R2860493
Magnesium (Mg)-Total	92.5		0.0050	mg/L		13-JUN-14	R2860493
Manganese (Mn)-Total	0.0970		0.000050	mg/L		13-JUN-14	R2860493
Molybdenum (Mo)-Total	0.00744		0.000050	mg/L		13-JUN-14	R2860493
Nickel (Ni)-Total	0.00181		0.00010	mg/L		13-JUN-14	R2860493
Phosphorus (P)-Total	<0.30		0.30	mg/L		13-JUN-14	R2860493
Potassium (K)-Total	3.58		0.050	mg/L		13-JUN-14	R2860493
Selenium (Se)-Total	0.00023		0.00010	mg/L		13-JUN-14	R2860493
Silicon (Si)-Total	4.76		0.050	mg/L		13-JUN-14	R2860493
Silver (Ag)-Total	0.000013		0.000010	mg/L		13-JUN-14	R2860493
Sodium (Na)-Total	242		0.050	mg/L		13-JUN-14	R2860493
Strontium (Sr)-Total	3.59		0.00010	mg/L		13-JUN-14	R2860493
Thallium (Tl)-Total	<0.000010		0.000010	mg/L		13-JUN-14	R2860493
Tin (Sn)-Total	<0.00010		0.00010	mg/L		13-JUN-14	R2860493
Titanium (Ti)-Total	<0.00030		0.00030	mg/L		13-JUN-14	R2860493
Uranium (U)-Total	0.00433		0.000010	mg/L		13-JUN-14	R2860493
Vanadium (V)-Total	0.00015		0.00010	mg/L		13-JUN-14	R2860493
Zinc (Zn)-Total	0.0581		0.0030	mg/L		13-JUN-14	R2860493
Dissolved Metals in Water by CRC ICPMS							
Aluminum (Al)-Dissolved	0.0030		0.0010	mg/L		14-JUN-14	R2860500
Antimony (Sb)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Arsenic (As)-Dissolved	0.00132		0.00010	mg/L		14-JUN-14	R2860500
Barium (Ba)-Dissolved	0.0105		0.000050	mg/L		14-JUN-14	R2860500
Beryllium (Be)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Bismuth (Bi)-Dissolved	<0.000050		0.000050	mg/L		14-JUN-14	R2860500
Boron (B)-Dissolved	0.111		0.010	mg/L		14-JUN-14	R2860500
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L		14-JUN-14	R2860500
Calcium (Ca)-Dissolved	191		0.020	mg/L		14-JUN-14	R2860500
Chromium (Cr)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Cobalt (Co)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Copper (Cu)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Iron (Fe)-Dissolved	0.209		0.010	mg/L		14-JUN-14	R2860500
Lead (Pb)-Dissolved	<0.000050		0.000050	mg/L		14-JUN-14	R2860500
Lithium (Li)-Dissolved	0.0548		0.0030	mg/L		14-JUN-14	R2860500

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1470073-1 JGT-06-I5A							
Sampled By: DH on 08-JUN-14 @ 17:00							
Matrix: GROUNDWATER							
Dissolved Metals in Water by CRC ICPMS							
Magnesium (Mg)-Dissolved	89.7		0.0050	mg/L		14-JUN-14	R2860500
Manganese (Mn)-Dissolved	0.0947		0.000050	mg/L		14-JUN-14	R2860500
Molybdenum (Mo)-Dissolved	0.00649		0.000050	mg/L		14-JUN-14	R2860500
Nickel (Ni)-Dissolved	0.00039		0.00010	mg/L		14-JUN-14	R2860500
Phosphorus (P)-Dissolved	<0.30		0.30	mg/L		14-JUN-14	R2860500
Potassium (K)-Dissolved	3.64		0.050	mg/L		14-JUN-14	R2860500
Selenium (Se)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Silicon (Si)-Dissolved	4.85		0.050	mg/L		14-JUN-14	R2860500
Silver (Ag)-Dissolved	<0.000010		0.000010	mg/L		14-JUN-14	R2860500
Sodium (Na)-Dissolved	242		0.050	mg/L		14-JUN-14	R2860500
Strontium (Sr)-Dissolved	3.47		0.00010	mg/L		14-JUN-14	R2860500
Thallium (Tl)-Dissolved	<0.000010		0.000010	mg/L		14-JUN-14	R2860500
Titanium (Ti)-Dissolved	<0.00030		0.00030	mg/L		14-JUN-14	R2860500
Tin (Sn)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Uranium (U)-Dissolved	0.00419		0.000010	mg/L		14-JUN-14	R2860500
Vanadium (V)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Zinc (Zn)-Dissolved	0.0111		0.0010	mg/L		14-JUN-14	R2860500
Dissolved Thorium in Water by CRC ICPMS							
Thorium (Th)-Dissolved	<0.000050		0.000050	mg/L	16-JUN-14	17-JUN-14	R2865899
Dissolved Metals Filtration Location	FIELD					16-JUN-14	R2862341
L1470073-2 JGT-06-I5B							
Sampled By: DH on 08-JUN-14 @ 17:10							
Matrix: GROUNDWATER							
Dissolved Metals in Water for Golder Cgy							
Dissolved Zirconium in water, CRC ICPMS							
Zirconium (Zr)-Dissolved	<0.00030		0.00030	mg/L		14-JUN-14	R2860500
Total Metals in Water for Golder Cgy							
Total Zirconium in Water by CRC ICPMS							
Zirconium (Zr)-Total	<0.00060		0.00060	mg/L		13-JUN-14	R2860493
Nutrients in Water for Golder Calgary							
Ammonia in Water by Colour							
Ammonia, Total (as N)	0.306		0.0050	mg/L		16-JUN-14	R2862311
TKN in Water by Colour							
Total Kjeldahl Nitrogen	0.286		0.050	mg/L	16-JUN-14	16-JUN-14	R2862174
Total Dissolved P in Water by Colour							
Phosphorus (P)-Total Dissolved	0.0025		0.0010	mg/L		14-JUN-14	R2861080
Total P in Water by Colour							
Phosphorus (P)-Total	0.0153		0.0010	mg/L		14-JUN-14	R2861080
Routine Water for Golder Calgary							
Chloride by IC							
Chloride (Cl)	901	DLM	2.5	mg/L		13-JUN-14	R2860965
Color, True							
Color, True	11.0		2.0	C.U.		13-JUN-14	R2860655
Fluoride by IC							
Fluoride (F)	0.23	DLM	0.10	mg/L		13-JUN-14	R2860965
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	864		0.50	mg/L		14-JUN-14	
Ion Balance Calculation							
TDS (Calculated)	1580			mg/L		16-JUN-14	R2863549
Nitrate in Water (Calculation)							
Nitrate (as N)	<0.0060		0.0060	mg/L		16-JUN-14	
Nitrite & Nitrate in Water by Colour							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1470073-2 JGT-06-I5B							
Sampled By: DH on 08-JUN-14 @ 17:10							
Matrix: GROUNDWATER							
Nitrite & Nitrate in Water by Colour							
Nitrate and Nitrite (as N)	<0.0060		0.0060	mg/L		13-JUN-14	R2862710
Nitrite in Water by Colour							
Nitrite (as N)	<0.0020		0.0020	mg/L		13-JUN-14	R2862710
Sulfate by IC (Low Level)							
Sulfate (SO4)	111	DLM	0.25	mg/L		13-JUN-14	R2860965
Sulphide							
Sulphide (as S)	0.0036		0.0015	mg/L		13-JUN-14	R2860599
Total Dissolved Solids							
Total Dissolved Solids	2010		10	mg/L		13-JUN-14	R2860906
Total Suspended Solids							
Total Suspended Solids	5.4		3.0	mg/L		13-JUN-14	R2860453
Turbidity							
Turbidity	4.33		0.10	NTU		13-JUN-14	R2860660
pH, Conductivity and Total Alkalinity							
pH	7.73		0.10	pH		13-JUN-14	R2860400
Conductivity (EC)	3150		0.20	uS/cm		13-JUN-14	R2860400
Bicarbonate (HCO3)	69.6		5.0	mg/L		13-JUN-14	R2860400
Carbonate (CO3)	<5.0		5.0	mg/L		13-JUN-14	R2860400
Hydroxide (OH)	<5.0		5.0	mg/L		13-JUN-14	R2860400
Alkalinity, Total (as CaCO3)	57.0		2.0	mg/L		13-JUN-14	R2860400
Miscellaneous Parameters							
Orthophosphate-Dissolved (as P)	<0.0010		0.0010	mg/L		13-JUN-14	R2862710
Dissolved Organic Carbon	232	DLA	1.0	mg/L		14-JUN-14	R2860924
TDS (Calculated from EC)	2050		1.0	mg/L		16-JUN-14	
Mercury (Hg)-Total	<0.00050		0.00050	ug/L		16-JUN-14	R2863588
Total Organic Carbon	20.3	DLA	1.0	mg/L		14-JUN-14	R2860924
Thorium (Th)-Total	<0.000050		0.000050	mg/L		17-JUN-14	R2865899
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0101		0.0030	mg/L		13-JUN-14	R2860493
Antimony (Sb)-Total	0.00027		0.00010	mg/L		13-JUN-14	R2860493
Arsenic (As)-Total	0.00253		0.00010	mg/L		13-JUN-14	R2860493
Barium (Ba)-Total	0.0101		0.000050	mg/L		13-JUN-14	R2860493
Beryllium (Be)-Total	<0.00010		0.00010	mg/L		13-JUN-14	R2860493
Bismuth (Bi)-Total	0.000051		0.000050	mg/L		13-JUN-14	R2860493
Boron (B)-Total	0.112		0.010	mg/L		13-JUN-14	R2860493
Cadmium (Cd)-Total	0.000039		0.000010	mg/L		13-JUN-14	R2860493
Calcium (Ca)-Total	196		0.020	mg/L		13-JUN-14	R2860493
Chromium (Cr)-Total	0.00220		0.00010	mg/L		13-JUN-14	R2860493
Cobalt (Co)-Total	<0.00010		0.00010	mg/L		13-JUN-14	R2860493
Copper (Cu)-Total	0.00071		0.00010	mg/L		13-JUN-14	R2860493
Iron (Fe)-Total	0.978		0.010	mg/L		13-JUN-14	R2860493
Lead (Pb)-Total	0.000066		0.000050	mg/L		13-JUN-14	R2860493
Lithium (Li)-Total	0.0526		0.0050	mg/L		13-JUN-14	R2860493
Magnesium (Mg)-Total	90.0		0.0050	mg/L		13-JUN-14	R2860493
Manganese (Mn)-Total	0.0951		0.000050	mg/L		13-JUN-14	R2860493
Molybdenum (Mo)-Total	0.00725		0.000050	mg/L		13-JUN-14	R2860493
Nickel (Ni)-Total	0.00162		0.00010	mg/L		13-JUN-14	R2860493
Phosphorus (P)-Total	<0.30		0.30	mg/L		13-JUN-14	R2860493
Potassium (K)-Total	3.52		0.050	mg/L		13-JUN-14	R2860493
Selenium (Se)-Total	0.00023		0.00010	mg/L		13-JUN-14	R2860493
Silicon (Si)-Total	4.73		0.050	mg/L		13-JUN-14	R2860493

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1470073-2 JGT-06-I5B							
Sampled By: DH on 08-JUN-14 @ 17:10							
Matrix: GROUNDWATER							
Total Metals in Water by CRC ICPMS							
Silver (Ag)-Total	0.000025		0.000010	mg/L		13-JUN-14	R2860493
Sodium (Na)-Total	240		0.050	mg/L		13-JUN-14	R2860493
Strontium (Sr)-Total	3.53		0.00010	mg/L		13-JUN-14	R2860493
Thallium (Tl)-Total	0.000022		0.000010	mg/L		13-JUN-14	R2860493
Tin (Sn)-Total	<0.00010		0.00010	mg/L		13-JUN-14	R2860493
Titanium (Ti)-Total	<0.00030		0.00030	mg/L		13-JUN-14	R2860493
Uranium (U)-Total	0.00434		0.000010	mg/L		13-JUN-14	R2860493
Vanadium (V)-Total	0.00017		0.00010	mg/L		13-JUN-14	R2860493
Zinc (Zn)-Total	0.0541		0.0030	mg/L		13-JUN-14	R2860493
Dissolved Metals in Water by CRC ICPMS							
Aluminum (Al)-Dissolved	0.0027		0.0010	mg/L		14-JUN-14	R2860500
Antimony (Sb)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Arsenic (As)-Dissolved	0.00136		0.00010	mg/L		14-JUN-14	R2860500
Barium (Ba)-Dissolved	0.0103		0.000050	mg/L		14-JUN-14	R2860500
Beryllium (Be)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Bismuth (Bi)-Dissolved	<0.000050		0.000050	mg/L		14-JUN-14	R2860500
Boron (B)-Dissolved	0.113		0.010	mg/L		14-JUN-14	R2860500
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L		14-JUN-14	R2860500
Calcium (Ca)-Dissolved	194		0.020	mg/L		14-JUN-14	R2860500
Chromium (Cr)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Cobalt (Co)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Copper (Cu)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Iron (Fe)-Dissolved	0.284		0.010	mg/L		14-JUN-14	R2860500
Lead (Pb)-Dissolved	<0.000050		0.000050	mg/L		14-JUN-14	R2860500
Lithium (Li)-Dissolved	0.0581		0.0030	mg/L		14-JUN-14	R2860500
Magnesium (Mg)-Dissolved	91.9		0.0050	mg/L		14-JUN-14	R2860500
Manganese (Mn)-Dissolved	0.0949		0.000050	mg/L		14-JUN-14	R2860500
Molybdenum (Mo)-Dissolved	0.00645		0.000050	mg/L		14-JUN-14	R2860500
Nickel (Ni)-Dissolved	0.00046		0.00010	mg/L		14-JUN-14	R2860500
Phosphorus (P)-Dissolved	<0.30		0.30	mg/L		14-JUN-14	R2860500
Potassium (K)-Dissolved	3.64		0.050	mg/L		14-JUN-14	R2860500
Selenium (Se)-Dissolved	0.00010		0.00010	mg/L		14-JUN-14	R2860500
Silicon (Si)-Dissolved	4.82		0.050	mg/L		14-JUN-14	R2860500
Silver (Ag)-Dissolved	<0.000010		0.000010	mg/L		14-JUN-14	R2860500
Sodium (Na)-Dissolved	244		0.050	mg/L		14-JUN-14	R2860500
Strontium (Sr)-Dissolved	3.38		0.00010	mg/L		14-JUN-14	R2860500
Thallium (Tl)-Dissolved	<0.000010		0.000010	mg/L		14-JUN-14	R2860500
Titanium (Ti)-Dissolved	<0.00030		0.00030	mg/L		14-JUN-14	R2860500
Tin (Sn)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Uranium (U)-Dissolved	0.00414		0.000010	mg/L		14-JUN-14	R2860500
Vanadium (V)-Dissolved	<0.00010		0.00010	mg/L		14-JUN-14	R2860500
Zinc (Zn)-Dissolved	0.0111		0.0010	mg/L		14-JUN-14	R2860500
Dissolved Thorium in Water by CRC ICPMS							
Thorium (Th)-Dissolved	<0.000050		0.000050	mg/L	16-JUN-14	17-JUN-14	R2865899
Dissolved Metals Filtration Location	FIELD					16-JUN-14	R2862341

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-DIS-ORG-ED	Water	Dissolved Organic Carbon	APHA 5310 B-Instrumental
C-TOT-ORG-ED	Water	Total Organic Carbon	APHA 5310 B-Instrumental
CL-IC-ED	Water	Chloride by IC	APHA 4110 B-ION CHROMATOGRAPHY
COL-TRU-ED	Water	Color, True	APHA 2120
The reported color applies to the pH of the sample as submitted unless otherwise noted on the report.			
ETL-HARDNESS-DIS-ED	Water	Hardness (from Dissolved Ca and Mg)	APHA 2340 B-Calculation
F-IC-ED	Water	Fluoride by IC	APHA 4110 B-ION CHROMATOGRAPHY
HG-T-U-CVAF-VA	Water	Total Mercury in Water by CVAFS (Ultra)	EPA 1631 REV. E
This analysis is carried out using procedures adapted from Method 1631 Rev. E. by the United States Environmental Protection Agency (EPA). The procedure involves a cold-oxidation of the acidified sample using bromine monochloride prior to a purge and trap concentration step and final reduction of the sample with stannous chloride. Instrumental analysis is by cold vapour atomic fluorescence spectrophotometry.			
IONBALANCE-ED	Water	Ion Balance Calculation	APHA 1030E
MET-D-CCMS-ED	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
NH3-L-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
NO2+NO3-L-CFA-ED	Water	Nitrite & Nitrate in Water by Colour	APHA 4500 NO3-F
This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method".			
NO2-L-CFA-ED	Water	Nitrite in Water by Colour	APHA 4500 NO2-A and NO3-F
This analysis is carried out using procedures adapted from APHA Method 4500 NO3-F "Automated Cadmium Reduction Method", omitting the Cu-Cd reduction step to be selective for nitrite.			
NO3-L-CALC-ED	Water	Nitrate in Water (Calculation)	APHA 4500 NO3-F
Nitrate (as N) is a calculated parameter. Nitrate (as N) = [Nitrate and Nitrite (as N)] - Nitrite (as N).			
P-T-L-COL-ED	Water	Total P in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
P-TD-L-COL-ED	Water	Total Dissolved P in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Dissolved Phosphorous is determined colourimetrically after persulphate digestion of a sample that has been lab or field filtered through a 0.45 micron membrane filter.			
PH/EC/ALK-ED	Water	pH, Conductivity and Total Alkalinity	APHA 4500-H, 2510, 2320
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
PO4-DO-L-COL-ED	Water	Diss. Orthophosphate in Water by Colour	APHA 4500-P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Dissolved Orthophosphate is determined colourimetrically on a sample that has been lab or field filtered through a 0.45 micron membrane filter.			
SO4-L-IC-ED	Water	Sulfate by IC (Low Level)	APHA 4110 B-ION CHROMATOGRAPHY
SOLIDS-TDS-CALCEC-ED	Water	TDS (Calculated from EC)	APHA 1030 E
SOLIDS-TDS-ED	Water	Total Dissolved Solids	APHA 2540 C
SOLIDS-TOTSUS-ED	Water	Total Suspended Solids	APHA 2540 D-Gravimetric
SULPHIDE-ED	Water	Sulphide	APHA 4500 -S E-Auto-Colorimetry

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
TH-D-CCMS-VA	Water	Dissolved Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

TH-T-CCMS-VA	Water	Total Thorium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

TKN-L-CFA-ED	Water	TKN in Water by Colour	APHA 4500-NORG (TKN)

This analysis is carried out using procedures adapted from APHA Method 4500-Norg "Nitrogen (Organic)". Total Kjeldahl Nitrogen is determined by sample digestion at 380 celcius with analysis using an automated colourimetric finish.

TURBIDITY-ED	Water	Turbidity	APHA 2130 B-Nephelometer
ZR-D-CCMS-ED	Water	Dissolved Zirconium in water, CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
ZR-T-CCMS-ED	Water	Total Zirconium in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using hotblock, or filtration (APHA 3030B&E). Instrumental analysis is by collision cell inductively coupled plasma - mass spectrometry (modifed from EPA Method 6020A).

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

10-366715

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1470073 Report Date: 19-JUN-14

Client: Golder Associates Ltd.
500-4260 STILL CREEK DRIVE
BURNABY BC V5C 6C6
Contact: STEFANO NANI

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-ED	**Water**							
Batch R2860924								
WG1891799-3 CVS								
Dissolved Organic Carbon			121.9		%		80-160	14-JUN-14
WG1891799-2 LCS								
Dissolved Organic Carbon			119.6		%		80-120	14-JUN-14
WG1891799-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	14-JUN-14
WG1891799-5 MS		**L1466095-11**						
Dissolved Organic Carbon			N/A	MS-B	%		-	14-JUN-14
C-TOT-ORG-ED	**Water**							
Batch R2860924								
WG1891799-3 CVS								
Total Organic Carbon			121.9		%		80-160	14-JUN-14
WG1891799-2 LCS								
Total Organic Carbon			119.6		%		80-120	14-JUN-14
WG1891799-1 MB								
Total Organic Carbon			<1.0		mg/L		1	14-JUN-14
WG1891799-11 MS		**L1462777-5**						
Total Organic Carbon			N/A	MS-B	%		-	14-JUN-14
WG1891799-9 MS		**L1462805-5**						
Total Organic Carbon			101.5		%		70-130	14-JUN-14
CL-IC-ED	**Water**							
Batch R2860965								
WG1891387-11 LCS								
Chloride (Cl)			99.4		%		90-110	13-JUN-14
WG1891387-13 LCS								
Chloride (Cl)			99.6		%		90-110	13-JUN-14
WG1891387-15 LCS								
Chloride (Cl)			99.0		%		90-110	13-JUN-14
WG1891387-2 LCS								
Chloride (Cl)			98.5		%		90-110	13-JUN-14
WG1891387-9 LCS								
Chloride (Cl)			99.2		%		90-110	13-JUN-14
WG1891387-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	13-JUN-14
WG1891387-10 MB								
Chloride (Cl)			<0.50		mg/L		0.5	13-JUN-14
WG1891387-12 MB								
Chloride (Cl)			<0.50		mg/L		0.5	13-JUN-14

Quality Control Report

Workorder: L1470073 Report Date: 19-JUN-14

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-ED	**Water**							
Batch R2860965								
WG1891387-14 MB								
Chloride (Cl)			<0.50		mg/L		0.5	13-JUN-14
WG1891387-16 MB								
Chloride (Cl)			<0.50		mg/L		0.5	13-JUN-14
WG1891387-4 MS		**L1469028-20**						
Chloride (Cl)			102.8		%		75-125	13-JUN-14
WG1891387-6 MS		**L1469028-40**						
Chloride (Cl)			100.0		%		75-125	13-JUN-14
WG1891387-8 MS		**L1469028-60**						
Chloride (Cl)			100.5		%		75-125	13-JUN-14
COL-TRU-ED	**Water**							
Batch R2860655								
WG1891169-3 DUP		**L1470073-1**						
Color, True		14.7	14.7		C.U.	0.1	20	13-JUN-14
WG1891169-2 LCS								
Color, True			98.6		%		85-115	13-JUN-14
WG1891169-1 MB								
Color, True			<2.0		C.U.		2	13-JUN-14
F-IC-ED	**Water**							
Batch R2860965								
WG1891387-11 LCS								
Fluoride (F)			98.7		%		90-110	13-JUN-14
WG1891387-13 LCS								
Fluoride (F)			99.4		%		90-110	13-JUN-14
WG1891387-15 LCS								
Fluoride (F)			98.7		%		90-110	13-JUN-14
WG1891387-2 LCS								
Fluoride (F)			96.1		%		90-110	13-JUN-14
WG1891387-9 LCS								
Fluoride (F)			98.3		%		90-110	13-JUN-14
WG1891387-1 MB								
Fluoride (F)			<0.020		mg/L		0.02	13-JUN-14
WG1891387-10 MB								
Fluoride (F)			<0.020		mg/L		0.02	13-JUN-14
WG1891387-12 MB								
Fluoride (F)			<0.020		mg/L		0.02	13-JUN-14
WG1891387-14 MB								
Fluoride (F)			<0.020		mg/L		0.02	13-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F-IC-ED	**Water**							
Batch R2860965								
WG1891387-16 MB								
Fluoride (F)			<0.020		mg/L		0.02	13-JUN-14
HG-T-U-CVAF-VA	**Water**							
Batch R2863588								
WG1892748-3 DUP		**L1470073-1**						
Mercury (Hg)-Total		<0.00050	<0.00050	RPD-NA	ug/L	N/A	20	16-JUN-14
WG1892748-2 LCS								
Mercury (Hg)-Total			103.4		%		80-120	16-JUN-14
WG1892748-1 MB								
Mercury (Hg)-Total			<0.00050		ug/L		0.0005	16-JUN-14
WG1892748-4 MS		**L1470073-2**						
Mercury (Hg)-Total			101.2		%		70-130	16-JUN-14
MET-D-CCMS-ED	**Water**							
Batch R2860500								
WG1891283-15 CRM		**ED-HIGH-WATRM**						
Aluminum (Al)-Dissolved			102.5		%		80-120	14-JUN-14
Antimony (Sb)-Dissolved			102.8		%		80-120	14-JUN-14
Arsenic (As)-Dissolved			100.1		%		80-120	14-JUN-14
Barium (Ba)-Dissolved			106.9		%		80-120	14-JUN-14
Beryllium (Be)-Dissolved			99.5		%		80-120	14-JUN-14
Bismuth (Bi)-Dissolved			108.2		%		80-120	14-JUN-14
Boron (B)-Dissolved			112.4		%		80-120	14-JUN-14
Cadmium (Cd)-Dissolved			103.0		%		80-120	14-JUN-14
Calcium (Ca)-Dissolved			112.0		%		80-120	14-JUN-14
Chromium (Cr)-Dissolved			103.7		%		80-120	14-JUN-14
Cobalt (Co)-Dissolved			100.9		%		80-120	14-JUN-14
Copper (Cu)-Dissolved			100.1		%		80-120	14-JUN-14
Lead (Pb)-Dissolved			105.4		%		80-120	14-JUN-14
Lithium (Li)-Dissolved			106.5		%		80-120	14-JUN-14
Magnesium (Mg)-Dissolved			98.6		%		80-120	14-JUN-14
Manganese (Mn)-Dissolved			101.2		%		80-120	14-JUN-14
Molybdenum (Mo)-Dissolved			99.7		%		80-120	14-JUN-14
Nickel (Ni)-Dissolved			101.9		%		80-120	14-JUN-14
Phosphorus (P)-Dissolved			104.1		%		80-120	14-JUN-14
Potassium (K)-Dissolved			106.4		%		80-120	14-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2860500								
WG1891283-15 CRM		**ED-HIGH-WATRM**						
Selenium (Se)-Dissolved			100.6		%		80-120	14-JUN-14
Silicon (Si)-Dissolved			113.0		%		80-120	14-JUN-14
Silver (Ag)-Dissolved			103.9		%		80-120	14-JUN-14
Sodium (Na)-Dissolved			114.5		%		80-120	14-JUN-14
Thallium (Tl)-Dissolved			106.5		%		80-120	14-JUN-14
Titanium (Ti)-Dissolved			103.0		%		80-120	14-JUN-14
Tin (Sn)-Dissolved			101.6		%		80-120	14-JUN-14
Uranium (U)-Dissolved			106.7		%		80-120	14-JUN-14
Vanadium (V)-Dissolved			105.6		%		80-120	14-JUN-14
Zinc (Zn)-Dissolved			92.4		%		80-120	14-JUN-14
WG1891283-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	13-JUN-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	13-JUN-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	13-JUN-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	13-JUN-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	13-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2860500								
WG1891283-1 MB								
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	13-JUN-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
WG1891283-13 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	13-JUN-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	13-JUN-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	13-JUN-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	13-JUN-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2860500								
WG1891283-13 MB								
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	13-JUN-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
WG1891283-4 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	13-JUN-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	13-JUN-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	13-JUN-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	13-JUN-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	13-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2860500								
WG1891283-4 MB								
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	13-JUN-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
WG1891283-7 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Beryllium (Be)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Boron (B)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	13-JUN-14
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	13-JUN-14
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Lithium (Li)-Dissolved			<0.0030		mg/L		0.003	13-JUN-14
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	13-JUN-14
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	13-JUN-14
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Phosphorus (P)-Dissolved			<0.30		mg/L		0.3	13-JUN-14
Potassium (K)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	13-JUN-14
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	**Water**							
Batch R2860500								
WG1891283-7 MB								
Thallium (Tl)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	13-JUN-14
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	13-JUN-14
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	13-JUN-14
Zinc (Zn)-Dissolved			<0.0010		mg/L		0.001	13-JUN-14
MET-T-CCMS-ED	**Water**							
Batch R2860493								
WG1890996-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	13-JUN-14
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Arsenic (As)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Barium (Ba)-Total			<0.000050		mg/L		0.00005	13-JUN-14
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	13-JUN-14
Boron (B)-Total			<0.010		mg/L		0.01	13-JUN-14
Cadmium (Cd)-Total			<0.000010		mg/L		0.00001	13-JUN-14
Calcium (Ca)-Total			<0.020		mg/L		0.02	13-JUN-14
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Copper (Cu)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Iron (Fe)-Total			<0.010		mg/L		0.01	13-JUN-14
Lead (Pb)-Total			<0.000050		mg/L		0.00005	13-JUN-14
Lithium (Li)-Total			<0.0050		mg/L		0.005	13-JUN-14
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	13-JUN-14
Manganese (Mn)-Total			<0.000050		mg/L		0.00005	13-JUN-14
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	13-JUN-14
Nickel (Ni)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Phosphorus (P)-Total			<0.30		mg/L		0.3	13-JUN-14
Potassium (K)-Total			<0.050		mg/L		0.05	13-JUN-14
Selenium (Se)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Silicon (Si)-Total			<0.050		mg/L		0.05	13-JUN-14
Silver (Ag)-Total			<0.000010		mg/L		0.00001	13-JUN-14
Sodium (Na)-Total			<0.050		mg/L		0.05	13-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED	**Water**							
Batch R2860493								
WG1890996-1 MB								
Strontium (Sr)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	13-JUN-14
Tin (Sn)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	13-JUN-14
Uranium (U)-Total			<0.000010		mg/L		0.00001	13-JUN-14
Vanadium (V)-Total			<0.00010		mg/L		0.0001	13-JUN-14
Zinc (Zn)-Total			<0.0030		mg/L		0.003	13-JUN-14
NH3-L-CFA-ED	**Water**							
Batch R2862311								
WG1892203-2 LCS								
Ammonia, Total (as N)			103.6		%		85-115	16-JUN-14
WG1892203-3 LCS								
Ammonia, Total (as N)			100.5		%		85-115	16-JUN-14
WG1892203-1 MB								
Ammonia, Total (as N)			<0.0050		mg/L		0.005	16-JUN-14
WG1892203-10 MS		**L1464016-11**						
Ammonia, Total (as N)			85.4		%		75.3-122.1	16-JUN-14
WG1892203-7 MS		**L1461324-3**						
Ammonia, Total (as N)			95.8		%		75.3-122.1	16-JUN-14
NO2+NO3-L-CFA-ED	**Water**							
Batch R2862710								
WG1891443-3 DUP		**L1470073-2**						
Nitrate and Nitrite (as N)		<0.0060	<0.0060	RPD-NA	mg/L	N/A	20	13-JUN-14
WG1891443-2 LCS								
Nitrate and Nitrite (as N)			100.3		%		85-115	13-JUN-14
WG1891443-1 MB								
Nitrate and Nitrite (as N)			<0.0060		mg/L		0.006	13-JUN-14
WG1891443-4 MS		**L1470073-2**						
Nitrate and Nitrite (as N)			104.3		%		75-125	13-JUN-14
NO2-L-CFA-ED	**Water**							
Batch R2862710								
WG1891443-3 DUP		**L1470073-2**						
Nitrite (as N)		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	13-JUN-14
WG1891443-2 LCS								
Nitrite (as N)			93.4		%		85-115	13-JUN-14
WG1891443-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-L-CFA-ED	**Water**							
Batch R2862710								
WG1891443-1 MB								
Nitrite (as N)			<0.0020		mg/L		0.002	13-JUN-14
WG1891443-4 MS		**L1470073-2**						
Nitrite (as N)			102.0		%		75-125	13-JUN-14
P-T-L-COL-ED	**Water**							
Batch R2861080								
WG1891551-2 LCS								
Phosphorus (P)-Total			100.8		%		80-120	14-JUN-14
WG1891551-6 LCS								
Phosphorus (P)-Total			101.4		%		80-120	14-JUN-14
WG1891551-1 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	14-JUN-14
WG1891551-5 MB								
Phosphorus (P)-Total			<0.0010		mg/L		0.001	14-JUN-14
WG1891551-10 MS		**L1466095-6**						
Phosphorus (P)-Total			123.0		%		70-130	14-JUN-14
WG1891551-4 MS		**L1463635-7**						
Phosphorus (P)-Total			114.8		%		70-130	14-JUN-14
WG1891551-8 MS		**L1464016-19**						
Phosphorus (P)-Total			95.5		%		70-130	14-JUN-14
P-TD-L-COL-ED	**Water**							
Batch R2861080								
WG1891551-2 LCS								
Phosphorus (P)-Total	Dissolved		100.6		%		80-120	14-JUN-14
WG1891551-6 LCS								
Phosphorus (P)-Total	Dissolved		100.4		%		80-120	14-JUN-14
WG1891551-1 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	14-JUN-14
WG1891551-5 MB								
Phosphorus (P)-Total	Dissolved		<0.0010		mg/L		0.001	14-JUN-14
WG1891551-10 MS		**L1466095-6**						
Phosphorus (P)-Total	Dissolved		120.3		%		70-130	14-JUN-14
WG1891551-8 MS		**L1464016-19**						
Phosphorus (P)-Total	Dissolved		98.7		%		70-130	14-JUN-14
PH/EC/ALK-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2860400								
WG1891248-12 LCS								
Conductivity (EC)			99.1		%		90-110	13-JUN-14
WG1891248-13 LCS								
pH			7.01		pH		6.7-7.3	13-JUN-14
WG1891248-14 LCS								
Alkalinity, Total (as CaCO3)			102.4		%		85-115	13-JUN-14
WG1891248-15 LCS								
Conductivity (EC)			96.7		%		90-110	13-JUN-14
WG1891248-17 LCS								
Conductivity (EC)			98.8		%		90-110	13-JUN-14
WG1891248-18 LCS								
pH			7.01		pH		6.7-7.3	13-JUN-14
WG1891248-19 LCS								
Alkalinity, Total (as CaCO3)			104.3		%		85-115	13-JUN-14
WG1891248-20 LCS								
Conductivity (EC)			96.8		%		90-110	13-JUN-14
WG1891248-22 LCS								
Conductivity (EC)			98.4		%		90-110	13-JUN-14
WG1891248-23 LCS								
pH			7.03		pH		6.7-7.3	13-JUN-14
WG1891248-24 LCS								
Alkalinity, Total (as CaCO3)			103.4		%		85-115	13-JUN-14
WG1891248-25 LCS								
Conductivity (EC)			96.5		%		90-110	13-JUN-14
WG1891248-3 LCS								
pH			7.01		pH		6.7-7.3	13-JUN-14
WG1891248-1 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	13-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	13-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	13-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	13-JUN-14
WG1891248-11 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	13-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	13-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	13-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	13-JUN-14
WG1891248-16 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	13-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	**Water**							
Batch R2860400								
WG1891248-16 MB								
Carbonate (CO3)			<5.0		mg/L		5	13-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	13-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	13-JUN-14
WG1891248-21 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	13-JUN-14
Carbonate (CO3)			<5.0		mg/L		5	13-JUN-14
Hydroxide (OH)			<5.0		mg/L		5	13-JUN-14
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	13-JUN-14
PO4-DO-L-COL-ED	**Water**							
Batch R2862710								
WG1891443-3 DUP		**L1470073-2**						
Orthophosphate-Dissolved (as P)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	13-JUN-14
WG1891443-2 LCS								
Orthophosphate-Dissolved (as P)			93.8		%		80-120	13-JUN-14
WG1891443-1 MB								
Orthophosphate-Dissolved (as P)			<0.0010		mg/L		0.001	13-JUN-14
WG1891443-4 MS		**L1470073-2**						
Orthophosphate-Dissolved (as P)			91.8		%		70-130	13-JUN-14
SO4-L-IC-ED	**Water**							
Batch R2860965								
WG1891387-11 LCS								
Sulfate (SO4)			99.96		%		90-110	13-JUN-14
WG1891387-13 LCS								
Sulfate (SO4)			100.1		%		90-110	13-JUN-14
WG1891387-15 LCS								
Sulfate (SO4)			98.9		%		90-110	13-JUN-14
WG1891387-2 LCS								
Sulfate (SO4)			99.5		%		90-110	13-JUN-14
WG1891387-9 LCS								
Sulfate (SO4)			99.9		%		90-110	13-JUN-14
WG1891387-1 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	13-JUN-14
WG1891387-14 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	13-JUN-14
WG1891387-16 MB								
Sulfate (SO4)			<0.050		mg/L		0.05	13-JUN-14
SOLIDS-TDS-ED	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TDS-ED	**Water**							
Batch R2860906								
WG1891002-3 DUP		**L1470073-2**						
Total Dissolved Solids		2010	2080		mg/L	3.7	20	13-JUN-14
WG1891002-2 LCS								
Total Dissolved Solids			97.6		%		85-115	13-JUN-14
WG1891002-1 MB								
Total Dissolved Solids			<10		mg/L		10	13-JUN-14
SOLIDS-TOTSUS-ED	**Water**							
Batch R2860453								
WG1890954-4 DUP		**L1470073-2**						
Total Suspended Solids		5.4	5.9		mg/L	8.8	20	13-JUN-14
WG1890954-2 LCS								
Total Suspended Solids			96.0		%		85-115	13-JUN-14
WG1890954-1 MB								
Total Suspended Solids			<3.0		mg/L		3	13-JUN-14
SULPHIDE-ED	**Water**							
Batch R2860599								
WG1891569-2 LCS								
Sulphide (as S)			96.1		%		75-125	13-JUN-14
WG1891569-3 LCS								
Sulphide (as S)			95.2		%		75-125	13-JUN-14
WG1891569-1 MB								
Sulphide (as S)			0.0015		mg/L		0.0015	13-JUN-14
WG1891569-5 MS		**L1466525-1**						
Sulphide (as S)			114.4		%		65-135	13-JUN-14
WG1891569-7 MS		**L1462851-2**						
Sulphide (as S)			96.0		%		65-135	13-JUN-14
WG1891569-9 MS		**L1468057-8**						
Sulphide (as S)			72.4		%		65-135	13-JUN-14
TH-D-CCMS-VA	**Water**							
Batch R2865899								
WG1892460-1 MB								
Thorium (Th)-Dissolved			<0.000050		mg/L		0.00005	17-JUN-14
TH-T-CCMS-VA	**Water**							
Batch R2865899								
WG1892494-1 MB								
Thorium (Th)-Total			<0.000050		mg/L		0.00005	17-JUN-14

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TKN-L-CFA-ED	**Water**							
Batch R2862174								
WG1892194-2 LCS								
Total Kjeldahl Nitrogen			108		%		75-125	16-JUN-14
WG1892194-3 LCS								
Total Kjeldahl Nitrogen			87		%		75-125	16-JUN-14
WG1892194-4 LCS								
Total Kjeldahl Nitrogen			102		%		75-125	16-JUN-14
WG1892194-1 MB								
Total Kjeldahl Nitrogen			<0.050		mg/L		0.05	16-JUN-14
TURBIDITY-ED	**Water**							
Batch R2860660								
WG1891170-3 DUP		**L1470073-1**						
Turbidity		4.23	4.10		NTU	3.1	15	13-JUN-14
WG1891170-2 LCS								
Turbidity			100.7		%		70-130	13-JUN-14
WG1891170-1 MB								
Turbidity			<0.10		NTU		0.1	13-JUN-14
ZR-D-CCMS-ED	**Water**							
Batch R2860500								
WG1891283-7 MB								
Zirconium (Zr)-Dissolved			<0.00030		mg/L		0.0003	13-JUN-14
ZR-T-CCMS-ED	**Water**							
Batch R2860493								
WG1890996-1 MB								
Zirconium (Zr)-Total			<0.00060		mg/L		0.0006	13-JUN-14

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Color, True							
	1	08-JUN-14 17:00	13-JUN-14 17:21	48	120	hours	EHTR
	2	08-JUN-14 17:10	13-JUN-14 17:21	48	120	hours	EHTR
Turbidity							
	1	08-JUN-14 17:00	13-JUN-14 00:00	48	103	hours	EHTR
	2	08-JUN-14 17:10	13-JUN-14 00:00	48	103	hours	EHTR
Leachable Anions & Nutrients							
Diss. Orthophosphate in Water by Colour							
	1	08-JUN-14 17:00	13-JUN-14 00:00	48	103	hours	EHTR
	2	08-JUN-14 17:10	13-JUN-14 00:00	48	103	hours	EHTR
Anions and Nutrients							
Nitrite & Nitrate in Water by Colour							
	1	08-JUN-14 17:00	13-JUN-14 00:00	48	103	hours	EHTR
	2	08-JUN-14 17:10	13-JUN-14 00:00	48	103	hours	EHTR
Nitrite in Water by Colour							
	1	08-JUN-14 17:00	13-JUN-14 00:00	48	103	hours	EHTR
	2	08-JUN-14 17:10	13-JUN-14 00:00	48	103	hours	EHTR

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1470073 were received on 12-JUN-14 16:20.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS Environmental

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # 10-366715

Page 1 of 1

Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	GOLDER ASSOCIATES LTD	☑ Standard ☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Stefano Nani	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	500 - 4260 Still Creek Drive, Burnaby, British Columbia	Email 1: stefano_nani@golder.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	V5C 6C6	Email 2: ermanno_rambelli@golder.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	1-604-296-4200 Fax: 1-604-298-2543	Email 3: don_chorley@golder.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q44824	
Lab Work Order # (lab use only)	L1470073	ALS Contact: Jessica Spira	Sampler: Dale Holtze

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	GLD-CAL-WQ-MET-DU-ED (F/P)	GLD-CAL-WQ-MET-TU-ED (P)	GLD-CAL-WQ-NUT-ED (P)	GL-CAL-WQ-ROU-ED	HG-D-U-CVAF-VA (F)	HG-T-U-CVAF-VA	PO4-DO-L-COL-ED (F/P)	RA226-MMER-FC (P)	TH-D-CCMS-ED (F/P)	TH-T-CCMS-ED (P)	MET-T-CCMS-1 (ED-P-T-MS) (P)	MET-D-CCMS-1 (ED-P-D-MS) (F/P)	Number of Containers
	JGT-06-I5A	08-Jun-14	17:00	Groundwater	X	X	X	X		X	X	X	X	X	X	X	8
	JGT-06-I5B	08-Jun-14	17:10	Groundwater	X	X	X	X		X	X	X	X	X	X	X	8
				Groundwater													
				Groundwater													
				Groundwater													
				Groundwater													
				Groundwater													
				Groundwater													
				Groundwater													

L1470073-COFC

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

Ultra low total mercury (total) samples were not preserved as instructed.

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
Dale Holtze	9-Jun-14	5:50		June 12 2014	1620	0.5 °C				

APPENDIX D

Groundwater Sampling Results

Table D1
Original and Corrected Data
Dominion Diamonds Resources Coorporation

		Original Data					Corrected Data[a]			
Sample ID		JGT-06-LAKE WATER	JGT-06-I5S1	JGT-06-I5S2	JGT-06-17S1	JGT-06-I9S1	JGT-06-I5S1	JGT-06-I5S2	JGT-06-17S1	JGT-06-I9S1
Date Sampled		30-Apr-14	1-Jun-14	1-Jun-14	29-May-14	30-Apr-14	1-Jun-14	1-Jun-14	29-May-14	30-Apr-14
Time Sampled		12:00	12:00	22:00	01:50	13:00	12:00	22:00	01:50	13:00
ALS Sample ID		L1450733-1	L1464913-1	L1464913-2	L1462851-3	L1450733-3	L1464913-1	L1464913-2	L1462851-3	L1450733-3
Matrix		Water	Water	Water	Water	Water	Water	Water	Water	Water
Physical Tests										
Color, True	C.U.	95	<2	<2	13	11	<2	<2	7.1	5.3
Hardness (as CaCO3)	mg/L	10	876	822	708	1170	888	835	755	1243
pH	pH	7.3	7.5	7.6	7.6	7.6	7.5	7.6	7.7	7.6
Conductivity (EC)	uS/cm	54.4	3140	3140	3350	4240	3184	3185	3571	4504
Total Suspended Solids	mg/L	<3.0	3.6	5.2	4.6	<3.0	3.6	5.3	4.8	<3.0
TDS (Calculated)	mg/L	27	1650	-	1740	2250	1673	-	1855	2390
Turbidity	NTU	7.1	2.5	2.4	1.9	1.3	2.5	2.4	1.6	0.88
Anions and Nutrients										
Alkalinity, Total (as CaCO3)	mg/L	23	56	57	56	46	56	57	58	48
Ammonia, Total (as N)	mg/L	0.0081	0.29	0.29	0.19	0.11	0.29	0.30	0.20	0.12
Bicarbonate (HCO3)	mg/L	28	68	69	68	56	69	70	70	58
Carbonate (CO3)	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloride (Cl)	mg/L	1.1	961	966	925	1240	975	982	987	1318
Fluoride (F)	mg/L	<0.02	0.28	0.237	0.16	0.23	0.28	0.24	0.17	0.24
Hydroxide (OH)	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Nitrate and Nitrite (as N)	mg/L	0.013	<0.0060	<0.0060	<0.0060	0.014	<0.0060	<0.0060	<0.0060	0.014
Nitrate (as N)	mg/L	0.0083	<0.0060	<0.0060	<0.0060	0.0085	<0.0060	<0.0060	<0.0060	0.0085
Nitrite (as N)	mg/L	0.0051	<0.002	<0.002	<0.002	0.0053	<0.002	<0.002	<0.002	0.0053
Total Kjeldahl Nitrogen	mg/L	0.33	-	-	0.22	0.12	-	-	0.21	0.11
Orthophosphate-Dissolved (as P)	mg/L	0.0045	0.0067	0.008	0.030	<0.0010	0.0067	0.0081	0.031	<0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.012	0.0125	0.011	0.035	0.018	0.013	0.011	0.036	0.018
Phosphorus (P)-Total	mg/L	0.017	0.029	0.026	0.037	0.022	0.029	0.026	0.038	0.022
Sulfate (SO4)	mg/L	2.3	130	131	155	225	132	133	165	239
Sulphide (as S)	mg/L	<0.0015	0.108	0.109	1.6	3.4	0.110	0.111	1.7	3.6
Organic / Inorganic Carbon										
Dissolved Organic Carbon	mg/L	5.9	-	-	793	793	-	-	846	843
Total Organic Carbon	mg/L	6.3	-	-	787	787	-	-	839	836
Total Metals										
Aluminum (Al)-Total	mg/L	0.076	0.012	0.010	0.016	0.028	0.011	0.0092	0.012	0.025
Antimony (Sb)-Total	mg/L	0.00085	<0.00010	<0.00010	<0.000020	<0.00050	<0.00010	<0.00010	<0.000020	<0.00050
Arsenic (As)-Total	mg/L	0.00060	0.0020	0.0019	0.011	0.015	0.0020	0.0019	0.012	0.016
Barium (Ba)-Total	mg/L	0.0093	0.009	0.009	0.0050	0.0082	0.009	0.009	0.0047	0.0081
Beryllium (Be)-Total	mg/L	<0.000010	<0.000050	<0.000050	<0.000010	<0.00050	<0.000050	<0.000050	<0.000010	<0.00050
Bismuth (Bi)-Total	mg/L	0.000098	<0.000050	<0.000050	<0.000010	<0.00025	<0.000050	<0.000050	<0.000010	<0.00025
Boron (B)-Total	mg/L	<0.01	0.14	0.14	0.11	0.19	0.14	0.14	0.12	0.20
Cadmium (Cd)-Total	mg/L	0.00034	<0.0000250	<0.0000250	<0.0000050	<0.000050	<0.0000250	<0.0000250	<0.0000050	<0.000050
Calcium (Ca)-Total	mg/L	2.3	199	194	174	370	202	197	185	393
Chromium (Cr)-Total	mg/L	0.00055	0.0019	0.0019	0.00086	0.0036	0.0019	0.0019	0.00088	0.0038
Cobalt (Co)-Total	mg/L	<0.000010	0.000076	0.000076	0.000024	<0.00050	0.000076	0.000076	0.000022	<0.00050
Copper (Cu)-Total	mg/L	0.0022	0.00082	<0.00050	<0.00010	<0.00050	0.00080	<0.00050	<0.00010	<0.00050
Iron (Fe)-Total	mg/L	0.081	0.51	0.49	0.027	<0.050	0.51	0.50	0.024	<0.050
Lead (Pb)-Total	mg/L	0.00032	0.00018	0.00021	0.000013	<0.00025	0.00017	0.00021	0.0000073	<0.00025
Lithium (Li)-Total	mg/L	<0.0050	0.059	0.052	0.061	0.055	0.060	0.053	0.064	0.058
Magnesium (Mg)-Total	mg/L	1.3	90	87	66	85	91	88	70	90
Manganese (Mn)-Total	mg/L	0.0032	0.072	0.070	0.27	0.098	0.073	0.071	0.28	0.10
Mercury (Hg)-Total	mg/L	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005
Molybdenum (Mo)-Total	mg/L	0.00013	0.0038	0.0037	0.0060	0.016	0.0038	0.0037	0.0064	0.017
Nickel (Ni)-Total	mg/L	0.0011	0.0020	0.0018	0.00083	0.0019	0.0020	0.0018	0.00081	0.0019
Phosphorus (P)-Total	mg/L	0.017	-	-	0.037	0.022	-	-	0.038	0.022
Potassium (K)-Total	mg/L	1.3	2.8	2.7	6.4	4.7	2.8	2.7	6.8	4.9
Selenium (Se)-Total	mg/L	<0.00010	<0.00020	<0.00020	0.0024	0.0026	<0.00020	<0.00020	0.0026	0.0027
Silicon (Si)-Total	mg/L	0.22	5.0	5.0	5.3	5.2	5.0	5.0	5.6	5.6
Silver (Ag)-Total	mg/L	0.000013	<0.0000250	<0.0000250	0.0000072	<0.000050	<0.0000250	<0.0000250	0.0000068	<0.000050
Sodium (Na)-Total	mg/L	7.1	241	229	379	439	244	233	404	466
Strontium (Sr)-Total	mg/L	0.012	3.5	3.4	3.6	6.2	3.5	3.5	3.8	6.6
Sulfur (S)-Total	mg/L	-	39.4	37.1	49	-	-	-	-	-
Thallium (Tl)-Total	mg/L	0.000031	<0.0000250	<0.0000250	<0.0000050	<0.000050	<0.0000250	<0.0000250	<0.0000050	<0.000050
Thorium (Th)-Total	mg/L	<0.000050	<0.000050	<0.000050	<0.00010	<0.00010	<0.000050	<0.000050	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.00011	<0.000250	<0.000250	<0.000050	<0.00050	<0.000250	<0.000250	<0.000050	<0.00050
Titanium (Ti)-Total	mg/L	0.0039	0.00075	0.00058	0.00048	<0.0015	0.00070	0.00053	0.00025	<0.0015
Uranium (U)-Total	mg/L	0.000044	0.0025	0.0024	0.029	0.010	0.0026	0.0024	0.030	0.011
Vanadium (V)-Total	mg/L	0.00033	<0.000250	<0.000250	0.000053	<0.00050	<0.000250	<0.000250	0.000034	<0.00050
Zinc (Zn)-Total	mg/L	0.023	0.122	0.121	0.088	0.087	0.123	0.123	0.092	0.091
Zirconium (Z)-Total	mg/L	-	<0.0030	<0.0030	<0.0030	-	<0.0030	<0.0030	-	-
Dissolved Metals										
Aluminum (Al)-Dissolved	mg/L	0.012	0.0024	0.002	0.0089	0.0075	0.0023	0.0018	0.0087	0.0072
Antimony (Sb)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	0.000039	<0.00050	<0.00010	<0.00010	0.000038	<0.00050
Arsenic (As)-Dissolved	mg/L	0.00052	0.0012	0.0011	0.013	0.012	0.0012	0.0011	0.014	0.013
Barium (Ba)-Dissolved	mg/L	0.0024	0.007	0.007	0.0041	0.0079	0.007	0.007	0.0042	0.0082
Beryllium (Be)-Dissolved	mg/L	<0.00010	<0.000050	<0.000050	<0.000010	<0.00050	<0.000050	<0.000050	<0.000010	<0.00050
Bismuth (Bi)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000010	<0.00025	<0.000050	<0.000050	<0.000010	<0.00025
Boron (B)-Dissolved	mg/L	<0.010	0.14	0.13	0.10	0.17	0.14	0.13	0.11	0.18
Cadmium (Cd)-Dissolved	mg/L	0.00002	<0.0000250	<0.0000250	<0.0000050	<0.000050	<0.0000250	<0.0000250	<0.0000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	2.2	199	189	175	339	202	192	187	360
Chromium (Cr)-Dissolved	mg/L	<0.00010	<0.00030	<0.00030	0.00015	<0.00050	<0.00030	<0.00030	0.00016	<0.00050
Cobalt (Co)-Dissolved	mg/L	<0.00010	0.00006	0.000054	<0.00010	<0.00050	0.000060	0.000054	<0.00010	<0.00050
Copper (Cu)-Dissolved	mg/L	0.0014	<0.00050	<0.00050	0.00012	<0.00050	<0.00050	<0.00050	0.000035	<0.00050
Iron (Fe)-Dissolved	mg/L	<0.010	0.21	0.19	0.0075	<0.050	0.21	0.19	0.0077	<0.050
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000010	<0.00025	<0.000050	<0.000050	<0.000010	<0.00025
Lithium (Li)-Dissolved	mg/L	<0.0030	0.058	0.053	0.060	0.057	0.059	0.054	0.064	0.061
Magnesium (Mg)-Dissolved	mg/L	1.2	92	85	66	78	93	86	70	83
Manganese (Mn)-Dissolved	mg/L	0.0019	0.073	0.070	0.27	0.092	0.074	0.071	0.29	0.097
Mercury (Hg)-Dissolved	mg/L	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005
Molybdenum (Mo)-Dissolved	mg/L	0.00010	0.0036	0.0034	0.0081	0.013	0.0037	0.0034	0.0086	0.014
Nickel (Ni)-Dissolved	mg/L	0.00059	0.00036	<0.00030	0.00032	0.00055	0.00036	<0.00030	0.00031	0.00055
Phosphorus (P)-Dissolved	mg/L	<0.30	-	-	-	<1.5	-	-	-	<1.5
Potassium (K)-Dissolved	mg/L	1.3	2.8	2.7	6.4	4.4	2.9	2.8	6.8	4.6
Selenium (Se)-Dissolved	mg/L	<0.00010	<0.00020	<0.00020	0.0016	0.00068	<0.00020	<0.00020	0.0017	0.00072
Silicon (Si)-Dissolved	mg/L	0.053	4.6	4.7	6.0	4.9	4.7	4.8	6.4	5.2
Silver (Ag)-Dissolved	mg/L	<0.000010	<0.0000250	<0.0000250	<0.0000050	<0.000050	<0.0000250	<0.0000250	<0.0000050	<0.000050
Sodium (Na)-Dissolved	mg/L	5.7	234	225	379	336	237	229	404	357
Strontium (Sr)-Dissolved	mg/L	0.012	3.5	3.4	3.7	5.8	3.6	3.4	4.0	6.2
Sulphur (S)-Dissolved	mg/L	-	-	-	71	-	-	-	-	-
Thallium (Tl)-Dissolved	mg/L	<0.000010	<0.000250	<0.000250	<0.0000050	<0.000050	<0.000250	<0.000250	<0.0000050	<0.000050
Thorium (Th)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.00010	<0.00010	<0.000050	<0.000050	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L	<0.00010	<0.000250	<0.000250	<0.000050	<0.00050	<0.000250	<0.000250	<0.000050	<0.00050
Titanium (Ti)-Dissolved	mg/L	<0.00030	<0.00050	<0.00050	0.0001	<0.0015	<0.00050	<0.00050	0.000097	<0.0015
Uranium (U)-Dissolved	mg/L	0.000034	0.0025	0.0023	0.028	0.0096	0.0025	0.0024	0.030	0.010
Vanadium (V)-Dissolved	mg/L	<0.00010	<0.000250	<0.000250	<0.000050	<0.00050	<0.000250	<0.000250	<0.000050	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.018	<0.0040	<0.0040	0.0019	<0.0050	<0.0040	<0.0040	0.00089	<0.0050
Zirconium (Z)-Dissolved	mg/L	-	<0.00150	<0.00150	<0.0015	-	<0.00150	<0.00150	-	-
Radiological Parameters										
Ra-226		-	-	-	-	-	-	-	-	-

Notes
(a) No correction was applied to results below the detection limit.
" - " indicates no result is available.

Mean Detection Limits [a]

Dominion Diamonds Resources Coorporation

Sample ID		JGT-06-LAKE WATER	JGT-06-I5S1	JGT-06-I5S2	JGT-06-17S1	JGT-06-I9S1	JGT-06-SE (FIELD BLANK)	TRIP BLANK
Date Sampled		30-Apr-14	1-Jun-14	1-Jun-14	29-May-14	30-Apr-14	29-May-14	29-May-14
Time Sampled		12:00	12:00	22:00	01:50	13:00	01:15	01:00
ALS Sample ID		L1450733-1	L1464913-1	L1464913-2	L1462851-3	L1450733-3	L1462851-1	L1462851-2
Matrix		Water	Water	Water	Water	Water	Water	Water
Physical Tests								
Color, True	C.U.	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Hardness (as CaCO3)	mg/L	0.50	0.50	0.50	0.50	0.50	0.50	0.50
pH	pH	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Conductivity (EC)	uS/cm	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Total Suspended Solids	mg/L	3.0	3.0	3.0	3.0	3.0	3.0	3.0
TDS (Calculated)	mg/L	-	-	-	-	-	-	-
Turbidity	NTU	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Anions and Nutrients								
Alkalinity, Total (as CaCO3)	mg/L	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ammonia, Total (as N)	mg/L	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Bicarbonate (HCO3)	mg/L	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Carbonate (CO3)	mg/L	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Chloride (Cl)	mg/L	0.50	0.50	0.50	0.50	5.0	0.5	0.5
Fluoride (F)	mg/L	0.020	0.020	0.020	0.020	0.20	0.020	0.020
Hydroxide (OH)	mg/L	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Nitrate and Nitrite (as N)	mg/L	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060
Nitrate (as N)	mg/L	0.0063	0.0060	0.0060	0.0060	0.0063	0.0060	0.0060
Nitrite (as N)	mg/L	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020	0.0020
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	0.050	0.050	0.050	0.050
Orthophosphate-Dissolved (as P)	mg/L	0.0010	0.0010	0.0010	0.0010	0.010	0.0010	0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.0010	0.0010	0.0010	0.0010	0.010	0.0010	0.0010
Phosphorus (P)-Total	mg/L	0.0010	0.0010	0.0010	0.0010	0.010	0.0010	0.0010
Sulfate (SO4)	mg/L	0.050	0.050	0.050	0.050	0.50	0.050	0.050
Sulphide (as S)	mg/L	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Organic / Inorganic Carbon								
Dissolved Organic Carbon	mg/L	1.0	-	-	1.0	1.0	0.50	0.50
Total Organic Carbon	mg/L	1.0	-	-	1.0	1.0	0.50	0.50
Total Metals								
Aluminum (Al)-Total	mg/L	0.0030	0.0015	0.0015	0.00030	0.015	0.00030	0.00030
Antimony (Sb)-Total	mg/L	0.00010	0.00010	0.00010	0.000020	0.00050	0.000020	0.000020
Arsenic (As)-Total	mg/L	0.00010	0.00010	0.00010	0.000020	0.00050	0.000020	0.000020
Barium (Ba)-Total	mg/L	0.000050	0.00025	0.00025	0.000050	0.00025	0.000050	0.000050
Beryllium (Be)-Total	mg/L	0.00010	0.000050	0.000050	0.000010	0.000500	0.000010	0.000010
Bismuth (Bi)-Total	mg/L	0.000050	0.000050	0.000050	0.000010	0.00025	0.000010	0.000010
Boron (B)-Total	mg/L	0.010	0.0050	0.0050	0.0010	0.050	0.0010	0.0010
Cadmium (Cd)-Total	mg/L	0.000010	0.000025	0.000025	0.0000050	0.000050	0.0000050	0.0000050
Calcium (Ca)-Total	mg/L	0.020	0.10	0.10	0.020	0.10	-	-
Chromium (Cr)-Total	mg/L	0.00010	0.00030	0.00030	0.000060	0.00050	0.000060	0.000060
Cobalt (Co)-Total	mg/L	0.00010	0.000050	0.000050	0.000010	0.00050	0.000010	0.000010
Copper (Cu)-Total	mg/L	0.00010	0.00050	0.00050	0.00010	0.00050	0.00010	0.00010
Iron (Fe)-Total	mg/L	0.010	0.0050	0.0050	0.0010	0.050	0.0010	0.0010
Lead (Pb)-Total	mg/L	0.000050	0.000050	0.000050	0.000010	0.00025	0.000010	0.000010
Lithium (Li)-Total	mg/L	0.0050	0.0025	0.0025	0.00050	0.025	0.00050	0.00050
Magnesium (Mg)-Total	mg/L	0.0050	0.020	0.020	0.0040	0.025	-	-
Manganese (Mn)-Total	mg/L	0.000050	0.00025	0.00025	0.000050	0.00025	0.000050	0.000050
Mercury (Hg)-Total	mg/L	0.00000050	0.00000050	0.00000050	0.00000050	0.00000050	0.00000050	0.00000050
Molybdenum (Mo)-Total	mg/L	0.000050	0.00025	0.00025	0.000050	0.00025	0.000050	0.000050
Nickel (Ni)-Total	mg/L	0.00010	0.00030	0.00030	0.000060	0.00050	0.000060	0.000060
Phosphorus (P)-Total	mg/L	0.0010	0.0010	0.0010	0.0010	0.010	0.0010	0.0010
Potassium (K)-Total	mg/L	0.050	0.10	0.10	0.020	0.25	-	-
Selenium (Se)-Total	mg/L	0.00010	0.00020	0.00020	0.000040	0.00050	0.000040	0.000040
Silicon (Si)-Total	mg/L	0.050	0.25	0.25	0.25	0.25	0.050	0.050
Silver (Ag)-Total	mg/L	0.000010	0.000025	0.000025	0.0000050	0.000050	0.0000050	0.0000050
Sodium (Na)-Total	mg/L	0.05	0.025	0.025	0.0050	0.25	-	-
Strontium (Sr)-Total	mg/L	0.00010	0.00025	0.00025	0.000050	0.00050	0.000050	0.000050
Sulfur (S)-Total	mg/L	-	0.50	0.50	0.50	-	0.50	0.50
Thallium (Tl)-Total	mg/L	0.000010	0.000025	0.000025	0.0000050	0.000050	0.000010	0.000010
Thorium (Th)-Total	mg/L	0.000050	0.000050	0.000050	0.00010	0.00010	0.000050	0.000050
Tin (Sn)-Total	mg/L	0.00010	0.00025	0.00025	0.000050	0.00050	0.000050	0.000050
Titanium (Ti)-Total	mg/L	0.00030	0.00050	0.00050	0.00010	0.0015	0.00010	0.00010
Uranium (U)-Total	mg/L	0.000010	0.000050	0.000050	0.000010	0.000050	0.000010	0.000010
Vanadium (V)-Total	mg/L	0.00010	0.00025	0.00025	0.000050	0.00050	0.000050	0.000050
Zinc (Zn)-Total	mg/L	0.0030	0.0040	0.0040	0.00080	0.015	0.00080	0.00080
Zirconium (Zr)-Total	mg/L	-	0.0030	0.0030	0.0030	-	0.00060	0.00060
Dissolved Metals								
Aluminum (Al)-Dissolved	mg/L	0.0010	0.0015	0.0015	0.00030	0.0050	0.00030	0.00030
Antimony (Sb)-Dissolved	mg/L	0.00010	0.00010	0.00010	0.000020	0.00050	0.000020	0.000020
Arsenic (As)-Dissolved	mg/L	0.00010	0.00010	0.00010	0.000020	0.00050	0.000020	0.000020
Barium (Ba)-Dissolved	mg/L	0.000050	0.00025	0.00025	0.000050	0.00025	0.000050	0.000050
Beryllium (Be)-Dissolved	mg/L	0.00010	0.000050	0.000050	0.000010	0.00050	0.000010	0.000010
Bismuth (Bi)-Dissolved	mg/L	0.000050	0.000050	0.000050	0.000010	0.00025	0.000010	0.000010
Boron (B)-Dissolved	mg/L	0.010	0.0050	0.0050	0.0010	0.050	0.0010	0.0010
Cadmium (Cd)-Dissolved	mg/L	0.000010	0.000025	0.000025	0.0000050	0.000050	0.0000050	0.0000050
Calcium (Ca)-Dissolved	mg/L	0.020	0.10	0.10	0.020	0.10	0.020	0.020
Chromium (Cr)-Dissolved	mg/L	0.00010	0.00030	0.00030	0.000060	0.00050	0.000060	0.000060
Cobalt (Co)-Dissolved	mg/L	0.00010	0.000050	0.000050	0.000010	0.00050	0.000010	0.000010
Copper (Cu)-Dissolved	mg/L	0.00010	0.00050	0.00050	0.00010	0.00050	0.00010	0.00010
Iron (Fe)-Dissolved	mg/L	0.010	0.0050	0.0050	0.0010	0.050	0.0010	0.0010
Lead (Pb)-Dissolved	mg/L	0.000050	0.000050	0.000050	0.000010	0.00025	0.000010	0.000010
Lithium (Li)-Dissolved	mg/L	0.0030	0.0025	0.0025	0.00050	0.015	0.00050	0.00050
Magnesium (Mg)-Dissolved	mg/L	0.0050	0.020	0.020	0.0040	0.025	0.004	0.004
Manganese (Mn)-Dissolved	mg/L	0.000050	0.00025	0.00025	0.000050	0.00025	0.000050	0.000050
Mercury (Hg)-Dissolved	mg/L	0.00000050	0.00000050	0.00000050	0.00000050	0.00000050	0.00000050	0.00000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	0.00025	0.00025	0.000050	0.00025	0.000050	0.000050
Nickel (Ni)-Dissolved	mg/L	0.00010	0.00030	0.00030	0.000060	0.00050	0.000060	0.000060
Phosphorus (P)-Dissolved	mg/L	0.30	-	-	-	1.5	0.30	0.30
Potassium (K)-Dissolved	mg/L	0.050	0.10	0.10	0.020	0.25	0.020	0.020
Selenium (Se)-Dissolved	mg/L	0.00010	0.00020	0.00020	0.000040	0.00050	0.000040	0.000040
Silicon (Si)-Dissolved	mg/L	0.050	0.25	0.25	0.25	0.25	0.050	0.050
Silver (Ag)-Dissolved	mg/L	0.000010	0.000025	0.000025	0.0000050	0.000050	0.0000050	0.0000050
Sodium (Na)-Dissolved	mg/L	0.050	0.025	0.025	0.0050	0.25	0.0050	0.0050
Strontium (Sr)-Dissolved	mg/L	0.00010	0.00025	0.00025	0.000050	0.00050	0.000050	0.000050
Sulphur (S)-Dissolved	mg/L	-	0.50	0.50	0.50	-	0.50	0.50
Thallium (Tl)-Dissolved	mg/L	0.000010	0.000025	0.000025	0.0000050	0.000050	0.0000050	0.0000050
Thorium (Th)-Dissolved	mg/L	0.000050	0.000050	0.000050	0.00010	0.00010	0.000050	0.000050
Tin (Sn)-Dissolved	mg/L	0.00010	0.00025	0.00025	0.000050	0.00050	0.000050	0.000050
Titanium (Ti)-Dissolved	mg/L	0.00030	0.00050	0.00050	0.00010	0.0015	0.00010	0.00010
Uranium (U)-Dissolved	mg/L	0.000010	0.000050	0.000050	0.000010	0.000050	0.000010	0.000010
Vanadium (V)-Dissolved	mg/L	0.00010	0.00025	0.00025	0.000050	0.00050	0.000050	0.000050
Zinc (Zn)-Dissolved	mg/L	0.0010	0.0040	0.0040	0.00080	0.005	0.00080	0.00080
Zirconium (Zr)-Dissolved	mg/L	-	0.0015	0.0015	0.0015	-	0.00030	0.00030
Radiological Parameters								
Ra-226		0.010	0.010	0.010	0.010	0.010	0.010	0.010

Notes

(a) Mean detection limits varied between samples.

" - " indicates no result is available.

Table D3
QA/QC Field and Travel Blank Results
Dominion Diamonds Resources Coorporation

		QAQC			
Sample ID		**JGT-06-SE (FIELD BLANK)**	**JGT-06-SE MDL**	**TRIP BLANK**	**TRIP BLANK MDL**
Date Sampled		29-May-14	29-May-14	29-May-14	29-May-14
Time Sampled		01:15	01:15	01:00	01:00
ALS Sample ID		L1462851-1	L1462851-1	L1462851-2	L1462851-2
Matrix		Water	Water	Water	Water
Physical Tests					
Color, True	C.U.	<2.0	2.0	<2.0	2.0
Hardness (as CaCO3)	mg/L	<0.50	0.50	<0.50	0.50
Total Suspended Solids	mg/L	<3.0	3.0	<3.0	3.0
TDS (Calculated)	mg/L	<1.0	-	<1.0	-
Turbidity	NTU	<0.10	0.10	<0.10	0.10
Anions and Nutrients			-		
Alkalinity, Total (as CaCO3)	mg/L	<2.0	2.0	<2.0	2.0
Ammonia, Total (as N)	mg/L	<0.0050	0.0050	<0.0050	0.0050
Bicarbonate (HCO3)	mg/L	<5.0	5.0	<5.0	5.0
Carbonate (CO3)	mg/L	<5.0	5.0	<5.0	5.0
Chloride (Cl)	mg/L	<0.50	0.50	<0.50	0.50
Conductivity (EC)	uS/cm	1.1	0.20	1.1	0.20
Fluoride (F)	mg/L	<0.020	0.020	<0.020	0.020
Hydroxide (OH)	mg/L	<5.0	5.0	<5.0	5.0
Nitrate and Nitrite (as N)	mg/L	<0.0060	0.0060	<0.0060	0.0060
Nitrate (as N)	mg/L	<0.0060	0.0060	<0.0060	0.0060
Nitrite (as N)	mg/L	<0.0020	0.0020	<0.0020	0.0020
Total Kjeldahl Nitrogen	mg/L	<0.050	0.050	<0.050	0.050
pH	pH	4.7	0.10	4.6	0.10
Orthophosphate-Dissolved (as P)	mg/L	<0.0010	0.0010	<0.0010	0.0010
Phosphorus (P)-Total Dissolved	mg/L	0.0043	0.0010	0.003	0.0010
Phosphorus (P)-Total	mg/L	0.0043	0.0010	0.0034	0.0010
Sulfate (SO4)	mg/L	<0.050	0.050	<0.050	0.050
Sulphide (as S)	mg/L	<0.0015	0.0015	<0.0015	0.0015
Organic / Inorganic Carbon					
Dissolved Organic Carbon	mg/L	<0.50	0.50	<0.50	0.50
Total Organic Carbon	mg/L	<0.50	0.50	<0.50	0.50
Total Metals					
Aluminum (Al)-Total	mg/L	<0.00030	0.00030	0.00044	0.00030
Antimony (Sb)-Total	mg/L	<0.000020	0.000020	<0.000020	0.000020
Arsenic (As)-Total	mg/L	<0.000020	0.000020	<0.000020	0.000020
Barium (Ba)-Total	mg/L	<0.000050	0.000050	<0.000050	0.000050
Beryllium (Be)-Total	mg/L	<0.000010	0.000010	<0.000010	0.000010
Bismuth (Bi)-Total	mg/L	<0.000010	0.000010	<0.000010	0.000010
Boron (B)-Total	mg/L	0.0035	0.0010	0.0029	0.0010
Cadmium (Cd)-Total	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050
Calcium (Ca)-Total	mg/L	-	-	-	-
Chromium (Cr)-Total	mg/L	0.000061	0.000060	0.000087	0.000060
Cobalt (Co)-Total	mg/L	<0.000010	0.000010	<0.000010	0.000010
Copper (Cu)-Total	mg/L	<0.00010	0.00010	<0.00010	0.00010
Iron (Fe)-Total	mg/L	<0.0010	0.0010	<0.0010	0.0010
Lead (Pb)-Total	mg/L	<0.000010	0.000010	<0.000010	0.000010
Lithium (Li)-Total	mg/L	<0.00050	0.00050	<0.00050	0.00050
Magnesium (Mg)-Total	mg/L	-	-	-	-
Manganese (Mn)-Total	mg/L	<0.000050	0.000050	<0.000050	0.000050
Mercury (Hg)-Total	mg/L	<0.0000005	0.00000050	<0.0000005	0.00000050
Molybdenum (Mo)-Total	mg/L	<0.000050	0.000050	<0.000050	0.000050
Nickel (Ni)-Total	mg/L	<0.000060	0.000060	<0.000060	0.000060
Phosphorus (P)-Total	mg/L	0.0043	0.0010	0.0034	0.0010
Potassium (K)-Total	mg/L	-	-	-	-
Selenium (Se)-Total	mg/L	<0.000040	0.000040	<0.000040	0.000040
Silicon (Si)-Total	mg/L	<0.050	0.050	<0.050	0.050
Silver (Ag)-Total	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050
Sodium (Na)-Total	mg/L	-	-	-	-
Strontium (Sr)-Total	mg/L	<0.000050	0.000050	<0.000050	0.000050
Sulfur (S)-Total	mg/L	<0.50	0.50	<0.50	0.50
Thallium (Tl)-Total	mg/L	<0.000010	0.000010	<0.000010	0.000010
Thorium (Th)-Total	mg/L	<0.000050	0.000050	<0.000050	0.000050
Tin (Sn)-Total	mg/L	<0.000050	0.000050	<0.000050	0.000050
Titanium (Ti)-Total	mg/L	<0.00010	0.00010	<0.00010	0.00010
Uranium (U)-Total	mg/L	<0.000010	0.000010	<0.000010	0.000010
Vanadium (V)-Total	mg/L	<0.000050	0.000050	<0.000050	0.000050
Zinc (Zn)-Total	mg/L	<0.00080	0.00080	<0.00080	0.00080
Zirconium (Zr)-Total	mg/L	-	0.00060	-	0.00060
Dissolved Metals					
Aluminum (Al)-Dissolved	mg/L	<0.00030	0.00030	<0.00030	0.00030
Antimony (Sb)-Dissolved	mg/L	<0.000020	0.000020	<0.000020	0.000020
Arsenic (As)-Dissolved	mg/L	<0.000020	0.000020	<0.000020	0.000020
Barium (Ba)-Dissolved	mg/L	<0.000050	0.000050	<0.000050	0.000050
Beryllium (Be)-Dissolved	mg/L	<0.000010	0.000010	<0.000010	0.000010
Bismuth (Bi)-Dissolved	mg/L	<0.000010	0.000010	<0.000010	0.000010
Boron (B)-Dissolved	mg/L	<0.0010	0.0010	0.0017	0.0010
Cadmium (Cd)-Dissolved	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050
Calcium (Ca)-Dissolved	mg/L	<0.020	0.020	<0.020	0.020
Chromium (Cr)-Dissolved	mg/L	<0.000060	0.000060	<0.000060	0.000060
Cobalt (Co)-Dissolved	mg/L	<0.000010	0.000010	<0.000010	0.000010
Copper (Cu)-Dissolved	mg/L	<0.00010	0.00010	<0.00010	0.00010
Iron (Fe)-Dissolved	mg/L	<0.0010	0.0010	<0.0010	0.0010
Lead (Pb)-Dissolved	mg/L	<0.000010	0.000010	<0.000010	0.000010
Lithium (Li)-Dissolved	mg/L	<0.00050	0.00050	<0.00050	0.00050
Magnesium (Mg)-Dissolved	mg/L	<0.0040	0.0040	<0.0040	0.0040
Manganese (Mn)-Dissolved	mg/L	<0.000050	0.000050	<0.000050	0.000050
Mercury (Hg)-Dissolved	mg/L	<0.0000005	0.00000050	<0.0000005	0.00000050
Molybdenum (Mo)-Dissolved	mg/L	<0.000050	0.000050	<0.000050	0.000050
Nickel (Ni)-Dissolved	mg/L	<0.000060	0.000060	<0.000060	0.000060
Phosphorus (P)-Dissolved	mg/L	<0.30	0.30	<0.30	0.30
Potassium (K)-Dissolved	mg/L	<0.020	0.020	<0.020	0.020
Selenium (Se)-Dissolved	mg/L	<0.000040	0.000040	<0.000040	0.000040
Silicon (Si)-Dissolved	mg/L	<0.050	0.050	<0.050	0.050
Silver (Ag)-Dissolved	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050
Sodium (Na)-Dissolved	mg/L	<0.0050	0.0050	<0.0050	0.0050
Strontium (Sr)-Dissolved	mg/L	<0.000050	0.000050	<0.000050	0.000050
Sulphur (S)-Dissolved	mg/L	-	0.50	-	0.50
Thallium (Tl)-Dissolved	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050
Thorium (Th)-Dissolved	mg/L	<0.000050	0.000050	<0.000050	0.000050
Tin (Sn)-Dissolved	mg/L	<0.000050	0.000050	<0.000050	0.000050
Titanium (Ti)-Dissolved	mg/L	<0.00010	0.00010	-	0.00010
Uranium (U)-Dissolved	mg/L	<0.000010	0.000010	<0.000010	0.000010
Vanadium (V)-Dissolved	mg/L	<0.000050	0.000050	<0.000050	0.000050
Zinc (Zn)-Dissolved	mg/L	<0.00080	0.00080	<0.00080	0.00080
Zirconium (Zr)-Dissolved	mg/L	-	0.00030	-	0.00030
Radiological Parameters					
Ra-226		-	0.010	-	0.010

Notes
NC = Not Calculated
"-" indicates no result is available

Table D4
QA/QC Duplicate Results and Relative Percentage Difference
Dominion Diamonds Resources Coorporation

		Original Data			Corrected Data[a]		Relative Percentage Difference (RPD as %) for JGT-06-15 Duplicates[b]	
Sample ID		JGT-06-LAKE WATER	JGT-06-I5S1	JGT-06-I5S2	JGT-06-I5S1	JGT-06-I5S2	RPD for Original Data	RPD for Corrected Data
Date Sampled		30-Apr-14	1-Jun-14	1-Jun-14	1-Jun-14	1-Jun-14	1-Jun-14	1-Jun-14
Time Sampled		12:00	12:00	22:00	12:00	22:00	22:00	22:00
ALS Sample ID		L1450733-1	L1464913-1	L1464913-2	L1464913-1	L1464913-2	L1464913	L1464913
Matrix		Water	Water	Water	Water	Water	Water	Water
Physical Tests								
Color, True	C.U.	95	<2	<2	<2	<2	NC	NC
Hardness (as CaCO3)	mg/L	10	876	822	888	835	6.4%	6.2%
pH	pH	7.3	7.5	7.6	7.5	7.6	0.92%	1.0%
Conductivity (EC)	uS/cm	54.4	3140	3140	3184	3185	0%	0%
Total Suspended Solids	mg/L	<3.0	3.6	5.2	3.6	5.3	**36%**	**37%**
TDS (Calculated)	mg/L	27	1650	-	1673	-	NC	NC
Turbidity	NTU	7.1	2.5	2.4	2.5	2.4	4.5%	4.5%
Anions and Nutrients								
Alkalinity, Total (as CaCO3)	mg/L	23	56	57	56	57	1.2%	1.4%
Ammonia, Total (as N)	mg/L	0.0081	0.29	0.29	0.29	0.30	1.7%	1.9%
Bicarbonate (HCO3)	mg/L	28	68	69	69	70	1.2%	1.3%
Carbonate (CO3)	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	NC	NC
Chloride (Cl)	mg/L	1.1	961	966	975	982	0.52%	0.70%
Fluoride (F)	mg/L	<0.02	0.28	0.237	0.28	0.24	16%	16%
Hydroxide (OH)	mg/L	<5.0	<5.0	<5.0	<5.0	<5.0	NC	NC
Nitrate and Nitrite (as N)	mg/L	0.013	<0.0060	<0.0060	<0.0060	<0.0060	NC	NC
Nitrate (as N)	mg/L	0.0083	<0.0060	<0.0060	<0.0060	<0.0060	NC	NC
Nitrite (as N)	mg/L	0.0051	<0.002	<0.002	<0.002	<0.002	NC	NC
Total Kjeldahl Nitrogen	mg/L	0.33	-	-	-	-	NC	NC
Orthophosphate-Dissolved (as P)	mg/L	0.0045	0.0067	0.008	0.0067	0.0081	18%	18%
Phosphorus (P)-Total Dissolved	mg/L	0.012	0.0125	0.011	0.013	0.011	13%	13%
Phosphorus (P)-Total	mg/L	0.017	0.029	0.026	0.029	0.026	10%	10%
Sulfate (SO4)	mg/L	2.3	130	131	132	133	0.77%	0.94%
Sulphide (as S)	mg/L	<0.0015	0.108	0.109	0.110	0.111	0.92%	1.1%
Organic / Inorganic Carbon								
Dissolved Organic Carbon	mg/L	5.9	-	-	-	-	NC	NC
Total Organic Carbon	mg/L	6.3	-	-	-	-	NC	NC
Total Metals								
Aluminum (Al)-Total	mg/L	0.076	0.012	0.010	0.011	0.0092	13%	15%
Antimony (Sb)-Total	mg/L	0.00085	<0.00010	<0.00010	<0.00010	<0.00010	NC	NC
Arsenic (As)-Total	mg/L	0.00060	0.0020	0.0019	0.0020	0.0019	3.6%	3.5%
Barium (Ba)-Total	mg/L	0.0093	0.009	0.009	0.009	0.009	2.7%	2.7%
Beryllium (Be)-Total	mg/L	<0.000010	<0.000050	<0.000050	<0.000050	<0.000050	NC	NC
Bismuth (Bi)-Total	mg/L	0.000098	<0.000050	<0.000050	<0.000050	<0.000050	NC	NC
Boron (B)-Total	mg/L	<0.01	0.14	0.14	0.14	0.14	2.9%	3.1%
Cadmium (Cd)-Total	mg/L	0.00034	<0.0000250	<0.0000250	<0.0000250	<0.0000250	NC	NC
Calcium (Ca)-Total	mg/L	2.3	199	194	202	197	2.5%	2.4%
Chromium (Cr)-Total	mg/L	0.00055	0.0019	0.0019	0.0019	0.0019	1.6%	1.7%
Cobalt (Co)-Total	mg/L	<0.000010	0.000076	0.000076	0.000076	0.000076	0%	0.061%
Copper (Cu)-Total	mg/L	0.0022	0.00082	<0.00050	0.00080	<0.00050	NC	NC
Iron (Fe)-Total	mg/L	0.081	0.51	0.49	0.51	0.50	3.0%	2.9%
Lead (Pb)-Total	mg/L	0.00032	0.00018	0.00021	0.00017	0.00021	19%	19%
Lithium (Li)-Total	mg/L	<0.0050	0.059	0.052	0.060	0.053	13%	13%
Magnesium (Mg)-Total	mg/L	1.3	90	87	91	88	3.8%	3.7%
Manganese (Mn)-Total	mg/L	0.0032	0.072	0.070	0.073	0.071	2.7%	2.5%
Mercury (Hg)-Total	mg/L	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	NC	NC
Molybdenum (Mo)-Total	mg/L	0.00013	0.0038	0.0037	0.0038	0.0037	2.2%	2.0%
Nickel (Ni)-Total	mg/L	0.0011	0.0020	0.0018	0.0020	0.0018	10%	10%
Phosphorus (P)-Total	mg/L	0.017	-	-	-	-	NC	NC
Potassium (K)-Total	mg/L	1.3	2.8	2.7	2.8	2.7	3.3%	3.2%
Selenium (Se)-Total	mg/L	<0.00010	<0.00020	<0.00020	<0.00020	<0.00020	NC	NC
Silicon (Si)-Total	mg/L	0.22	5.0	5.0	5.0	5.0	0%	0.17%
Silver (Ag)-Total	mg/L	0.000013	<0.0000250	<0.0000250	<0.0000250	<0.0000250	NC	NC
Sodium (Na)-Total	mg/L	7.1	241	229	244	233	5.1%	4.9%
Strontium (Sr)-Total	mg/L	0.012	3.5	3.4	3.5	3.5	1.7%	1.6%
Sulfur (S)-Total	mg/L	-	39.4	37.1	-	-	6.0%	NC
Thallium (Tl)-Total	mg/L	0.000031	<0.0000250	<0.0000250	<0.0000250	<0.0000250	NC	NC
Thorium (Th)-Total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	NC	NC
Tin (Sn)-Total	mg/L	0.00011	<0.000250	<0.000250	<0.000250	<0.000250	NC	NC
Titanium (Ti)-Total	mg/L	0.0039	0.00075	0.00058	0.00070	0.00053	**26%**	**29%**
Uranium (U)-Total	mg/L	0.000044	0.0025	0.0024	0.0026	0.0024	5.7%	5.5%
Vanadium (V)-Total	mg/L	0.00033	<0.000250	<0.000250	<0.000250	<0.000250	NC	NC
Zinc (Zn)-Total	mg/L	0.023	0.122	0.121	0.123	0.123	0.82%	0.68%
Zirconium (Z)-Total	mg/L	-	<0.0030	<0.0030	<0.0030	<0.0030	NC	NC
Dissolved Metals								
Aluminum (Al)-Dissolved	mg/L	0.012	0.0024	0.002	0.0023	0.0018	18%	**21%**
Antimony (Sb)-Dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	NC	NC
Arsenic (As)-Dissolved	mg/L	0.00052	0.0012	0.0011	0.0012	0.0011	13%	12%
Barium (Ba)-Dissolved	mg/L	0.0024	0.007	0.007	0.007	0.007	6.1%	6.0%
Beryllium (Be)-Dissolved	mg/L	<0.00010	<0.000050	<0.000050	<0.000050	<0.000050	NC	NC
Bismuth (Bi)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	NC	NC
Boron (B)-Dissolved	mg/L	<0.010	0.14	0.13	0.14	0.13	5.2%	5.1%
Cadmium (Cd)-Dissolved	mg/L	0.00002	<0.0000250	<0.0000250	<0.0000250	<0.0000250	NC	NC
Calcium (Ca)-Dissolved	mg/L	2.2	199	189	202	192	5.2%	5.0%
Chromium (Cr)-Dissolved	mg/L	<0.00010	<0.00030	<0.00030	<0.00030	<0.00030	NC	NC
Cobalt (Co)-Dissolved	mg/L	<0.00010	0.00006	0.000054	0.000060	0.000054	11%	11%
Copper (Cu)-Dissolved	mg/L	0.0014	<0.00050	<0.00050	<0.00050	<0.00050	NC	NC
Iron (Fe)-Dissolved	mg/L	<0.010	0.21	0.19	0.21	0.19	10%	9.5%
Lead (Pb)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	NC	NC
Lithium (Li)-Dissolved	mg/L	<0.0030	0.058	0.053	0.059	0.054	9.4%	9.2%
Magnesium (Mg)-Dissolved	mg/L	1.2	92	85	93	86	7.8%	7.6%
Manganese (Mn)-Dissolved	mg/L	0.0019	0.073	0.070	0.074	0.071	4.3%	4.2%
Mercury (Hg)-Dissolved	mg/L	<0.0000005	<0.0000005	<0.0000005	<0.0000005	<0.0000005	NC	NC
Molybdenum (Mo)-Dissolved	mg/L	0.00010	0.0036	0.0034	0.0037	0.0034	7.4%	7.2%
Nickel (Ni)-Dissolved	mg/L	0.00059	0.00036	<0.00030	0.00036	<0.00030	NC	NC
Phosphorus (P)-Dissolved	mg/L	<0.30	-	-	-	-	NC	NC
Potassium (K)-Dissolved	mg/L	1.3	2.8	2.7	2.9	2.8	3.9%	3.9%
Selenium (Se)-Dissolved	mg/L	<0.00010	<0.00020	<0.00020	<0.00020	<0.00020	NC	NC
Silicon (Si)-Dissolved	mg/L	0.053	4.6	4.7	4.7	4.8	1.5%	1.7%
Silver (Ag)-Dissolved	mg/L	<0.000010	<0.0000250	<0.0000250	<0.0000250	<0.0000250	NC	NC
Sodium (Na)-Dissolved	mg/L	5.7	234	225	237	229	3.9%	3.8%
Strontium (Sr)-Dissolved	mg/L	0.012	3.5	3.4	3.6	3.4	4.6%	4.4%
Sulphur (S)-Dissolved	mg/L	-	-	-	-	-	NC	NC
Thallium (Tl)-Dissolved	mg/L	<0.000010	<0.000250	<0.000250	<0.000250	<0.000250	NC	NC
Thorium (Th)-Dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	NC	NC
Tin (Sn)-Dissolved	mg/L	<0.00010	<0.000250	<0.000250	<0.000250	<0.000250	NC	NC
Titanium (Ti)-Dissolved	mg/L	<0.00030	<0.00050	<0.00050	<0.00050	<0.00050	NC	NC
Uranium (U)-Dissolved	mg/L	0.000034	0.0025	0.0023	0.0025	0.0024	7.4%	7.3%
Vanadium (V)-Dissolved	mg/L	<0.00010	<0.000250	<0.000250	<0.000250	<0.000250	NC	NC
Zinc (Zn)-Dissolved	mg/L	0.018	<0.0040	<0.0040	<0.0040	<0.0040	NC	NC
Zirconium (Z)-Dissolved	mg/L	-	<0.00150	<0.00150	<0.00150	<0.00150	NC	NC
Radiological Parameters								
Ra-226		-	-	-	-	-	-	-

Notes
(a) No correction was applied to results below the detection limit.
(b) RPD values were calculated for concentrations above the detection limit.
" - " indicates no result is available.
NC = Not Calculated
20% indicates the RPD value is flagged as a potential variability issue (RPD threshold is 20%).

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