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Mount Polley Mine
Hydrogeology Assessment And Data Review
Likely B.C

Submitted to:

Mount Polley Mining Corporation
Vancouver, BC

Submitted by:

AMEC Environment & Infrastructure,
a Division of AMEC Americas Limited
Burnaby, BC

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IMPORTANT NOTICE

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1.0 INTRODUCTION

The Mount Polley Mining Corporation (MPMC) has retained AMEC Environment and Infrastructure, a division of AMEC Americas Ltd. (AMEC), to provide a hydrogeological assessment of the Mount Polley mine site. The mine site is located approximately 60 km northeast of Williams Lake B.C. and approximately 20 km southwest of Likely B.C. The purpose of this assessment is to address concerns expressed by the British Columbia Ministry of Environment (MOE) regarding changes in groundwater quality at the mine site, and to characterize the hydrogeologic setting at the mine site.

1.1 Objectives and Scope of Work

The main objectives of the hydrogeological assessment are to:

- Provide a data gap analysis and attempt to resolve gaps in the available data;
- Characterize the local hydrogeological conditions at the mine site and develop a site specific conceptual model;
- Identify surface and/or groundwater quality changes related to mining activity, specifically acid rock drainage (ARD);
- Determine infiltration rates into the Springer Pit and identify potential groundwater impacts related to the Springer Pit development; and
- Identify areas of potential environmental concern and potential contaminants of concern.

The following work has been performed:

- An in-depth data review and compilation of relevant groundwater information collected by MPMC and from the public domain;
- Ten (10) monitoring wells at five locations have been installed to resolve identified data gaps;
- Development of a conceptual site model and the identification of wells exhibiting significant changes in either baseline static water levels and/or water quality;
- Hydrogeological mapping to define discharge and recharge areas; and
- Decommissioning of one (1) monitoring well.

The main text of this report provides a discussion of the regional setting, a summary of the field program, characterization of the hydrogeological setting, potential impacts and conclusions and recommendations. Supporting information is available in the accompanying figures, tables, and appendix.

2.0 REGIONAL SETTING

The mine site is positioned on a ridge that separates Polley Lake and Bootjack Lake. The regional study area includes the Mount Polley mine site and the adjacent Bootjack Lake/ Morehead Creek drainage basin and the Polley Lake/ Hazeltine Creek drainage basin located southwest and northeast of the mine site respectively, Figure 1.

2.1 Physiography

The regional topographic relief and drainage networks are shown in Figure 1. The study area covers approximately 100 km². The Mount Polley mine site is located within the geographic region known as the Fraser Plateau. This region is west of and adjacent to the Quesnel Highlands and the Cariboo Mountain Range. The topography of this area is bedrock controlled and the elevation ranges from approximately 915 meters above sea level (masl) to 1470 masl. The topographic highs in the area are Mount Polley which peaks at approximately 1470 masl and is located at the center of the mine site, Bootjack and Jacobie mountains are located east of Mount Polley with elevations of 1270 masl and 1310 masl, respectively. These topographic highs have volcanic origins. The terrain within the study area slopes towards the east with a total relief of approximately 680 meters, with the surface of Quesnel Lake at approximately 790 masl.

This area was glaciated during the last glaciation and the overburden in the area is mostly glacial and glacio-lacustrine sediments. The composition of the till is silty clay/clayey silt with varying amounts of gravel and boulders. The overburden thickness in the area ranges from less than 1 meter to greater than 25 meters and bedrock is typically not exposed within most of the site. Bedrock exposure is limited to steep slopes and cuts. The majority of the area is tree covered and supports an active logging industry.

2.2 Regional Climate

The climate in the area can be described as a humid, continental climate with warm summers, with spring being the driest season and the summer being the wettest season.

The climate data is from Environment Canada's Canadian Climate Normals (1971-2000) database. Climate data for Likely B.C. is available from 1974 to 1993 and the findings are summarized below:

- Precipitation rates range from a maximum monthly average of 81.8 mm in June to a minimum monthly average of 35.5 mm in March;
- The average annual precipitation is 692.4 mm, with 215.2 mm occurring as snow;
- Temperatures range from a maximum daily average of 15.4 degrees Celsius in July to minimum daily average of -7.0 degrees Celsius in January;
- The average annual daily temperature is 4.6 degrees Celsius.

The Likely B.C. meteorological station is located approximately 20 from the mine site.

2.3 Regional Geology

The mine site is located within the Quesnellia Terrane. The Quesnellia Terrane consists chiefly of west-facing Upper Triassic to Lower Jurassic (Karnian to Sinemurian) volcanic arc rocks (Nicola Group, Rossland Formation), coeval calc-alkalic and alkalic plutons, and laterally equivalent clastic sedimentary rocks (Mortimer, 1987; Monger, 1989; Andrew and others, 1990; Parrish and Monger, 1992).

The mine site is located within Quesnellia on the eastern margin of the Intermontane Belt. This part of Quesnellia consists of a sequence of volcanic units that dip east to northeast 5 km west of the property, and dip predominantly to the west or southwest 4 km east of the property (Bailey, 1987).

The volcanic rocks include flows, breccias and tuffs. Volumetrically the most important are augite-porphyrific basalt to trachybasalts that locally form pillowed units. Less common are purple and maroon polymictic volcanic breccias, and green crystal and lapilli tuffs. An analcite-bearing flow and flow breccia are interpreted to be the youngest volcanic units in the area (Bailey, 1987).

3.0 PREVIOUS INVESTIGATIONS

Drilling and well installations have been completed in multiple years beginning in 1981. Much of the information from these well investigations is lost other than some reference to their drilling and some flow measurements. A series of holes labelled R81-1 to R86-38 were drilled to depths ranging from 18 meters to 237 meters. Each of these boreholes has a reported groundwater yield from them ranging from 10 to 400 gallons per minute. There is no other information from these wells.

Another series of wells labelled MP89-107 to MP89-236 were drilled in the tailings area and in the Springer or Cariboo pit areas. All of these were 2 inch monitoring wells at one time but have since been destroyed. No drill logs or information from the monitoring wells is available.

In 1995, seven water wells were completed labelled 95-R1 to 95-R7. Two of these wells, 95-R4 and 95-R5 have been incorporated into the regular groundwater monitoring plan, the others have been lost due to development.

Fifteen new monitoring wells were installed in 1996, generally with a shallow and a deep installation at each site. Most of these wells have borehole logs and installation details in the database and most of them are in the current groundwater monitoring network.

In 2000 and 2011 several new installations were constructed in the tailings area.

All of these boreholes provide information on the general geology of the area, particularly overburden geology and they provide groundwater monitoring locations where wells have been retained.

Golder Associates produced a report on Springer pit groundwater inflows and the development of a pit lake. They predicted that at ultimate pit depth (820 masl), the groundwater inflows would be 1600 m³/day and that when the pit lake reaches spill elevation (1060 masl) the groundwater influx would be 100 m³/day.

Knight and Piesold (KP) estimated ultimate pit inflows for Bell, Springer and Wight pits in 2004. Their estimated ultimate inflows were 545, 1309, and 2450 m³/day respectively.

4.0 IDENTIFICATION OF DATA GAPS

The available monitoring network from the previous investigations provides reasonable coverage of the mine site. There are some installations that require modification or replacement as outlined below.

1. The monitoring well GW96-8a/8b was destroyed in the construction of a haul road. This monitoring well nest provided coverage for an area downgradient of the mill and required replacement. This well was replaced by GW12-3a/b.
2. Monitoring well 95-R4 contained multiple screens at six different levels. This potentially connected separate aquifers. Interpretation of water quality results from these multiple screens was thus ambiguous. This well was grouted and replaced with GW12-2a/b.
3. Monitoring well 95-R5 also contained multiple screens creating the same potential to join multiple aquifers and mixing water quality. Water quality in 95-R-5 has shown a recent distinct increase in sulphate. This well will be retained in the monitoring network in the short term and two wells have been installed on either side of this well, GW12-4a/b and GW12-5a/b, to expand the monitoring network. Because of the multiple screens, this well will eventually be replaced.
4. Groundwater level and quality monitoring in the tailings facility is well developed. Some water quality is starting to show a potential impact from mine operations. This will be monitored closely and expanded monitoring in frequency or distribution will be develop if warranted.
5. Baseline characterization down gradient of the temporary PAG storage area is sparse. Monitoring wells GW12-1a/b were established downgradient of the temporary PAG storage area to collect baseline data.

In general, these older installations have not been hydraulically tested through rising or falling head tests. This will be completed in a future field program.

5.0 FIELD PROGRAM METHODOLOGY

The field program took place between November 14, 2012 and December 18, 2012 and involved borehole drilling, monitoring well installation, well development, and single well response tests.

5.1 Monitoring Well Installation

Monitoring wells were installed as pairs, with each pair having a shallow and deep monitoring well. Each well had its own borehole.

Drilling was completed with a Fraste Multidrill XL, air rotary, track mounted drill rig to advance a total of ten (10) boreholes at five locations. Rock chip samples were collected every 3.0 meters at each of the deep boreholes. These samples were submitted to the MPMC for analysis. At each location the shallow monitoring wells were installed at the first water bearing zone and the deep monitoring wells were installed at or around 100 meters below ground surface (mbgs).

Installation of PVC monitoring wells and the well development was completed by the drilling contractor, GeoTech Drilling Ltd., with AMEC providing guidance. The monitoring wells were constructed using 5 cm diameter PVC pipe risers and slotted screens. Screen lengths were 3.0 meters and 6.1 meters for the shallow and deep wells respectively. A sand pack was placed around the slotted screen and approximately 0.3 to 1.0 meter above the top of the screen. Bentonite pellets were placed above the sand pack to create a hydraulic seal. The remainder of the borehole was grouted to surface and completed with an above ground protective casing. Monitoring well details are summarized in Table 1. Borehole logs and well completions are in Appendix A.

Table 1: Monitoring Well Installation Details

Monitoring Well ID	Total Well Depth (m)	Ground Surface Elevation (masl)	Well Screen Interval (masl)	Screened Formation
GW12-1A	99.6	991.6	892.0 - 899.2	Bedrock
GW12-1B	24.4	991.4	967.0 - 970.7	Bedrock
GW12-2A	100.6	1035.4	934.8 - 941.5	Bedrock
GW12-2B	30.2	1035.4	1005.2 - 1008.9	Bedrock
GW12-3A	99.7	1039.1	939.4 - 946.4	Bedrock
GW12-3B	16.1	1039.2	1023.1 - 1026.4	Bedrock
GW12-4A	100.6	989.9	889.3 - 896.5	Bedrock
GW12-4B	36.3	990.1	953.8 - 957.3	Bedrock
GW12-5A	100.4	965.3	864.9 - 872.2	Bedrock
GW12-5B	12.7	966.2	953.5 - 957.6	Overburden

The completed monitoring wells were developed using air injection. Each monitoring well was developed by air lifting for at least 2 hours and/or until the purged water was clear and contained no sediments. Prior to well development, static water levels were taken and these are summarized in Section 6.1.1.

5.2 Single Well Response Tests

Upon completion of the air development, water levels were taken to record the recovery in each well (rising head test). The rising head test data was used to calculate hydraulic conductivities of subsurface materials.

6.0 RESULTS

6.1 Hydrogeology and Conceptual Site Model

Groundwater in the Mount Polley area is mainly confined in a bedrock aquifer where flow is largely controlled by the orientation and frequency of fractures, faults and unconformities caused by volcanic events.

Localized overburden aquifers occur in topographic low areas, particularly in the tailings area, as these areas were not scraped/eroded during the last period of glaciation, thus glacial deposits (basal till) have remained intact in these locations. In general these glacial deposits do not contain significant outwash sands and gravels which can typically occur in glacial-fluvial deposits. There are some sandy deposits in the tailings area.

6.1.1 Groundwater Levels and Flow Directions

Groundwater measurements were recorded at all new well locations upon well installation. The groundwater level ranges from an elevation of 957.57 mbgs to 1036.25 mbgs.

Table 2: Summary of Measured Groundwater Levels

Monitoring Well ID	Measured Groundwater Depth (m)	Ground Surface Elevation (m)	Groundwater Level Elevation (m)	Gradient
GW12-1A	4.98	991.59	986.61	Up
GW12-1B	5.12	991.37	986.25	
GW12-2A	21.42	1035.45	1014.03	Down
GW12-2B	21.39	1035.45	1014.06	
GW12-3A	3.15	1039.06	1035.91	Down
GW12-3B	2.99	1039.24	1036.25	
GW12-4A	21.95	989.87	968.17	Down
GW12-4B	12.81	990.12	977.06	
GW12-5A	7.71	965.28	957.57	Down
GW12-5B	5.31	966.22	960.91	

The strongest hydraulic gradients are downward at sites GW12-4 and 5. These are both adjacent to Polley Lake. The other gradients are also down, with the exception of GW12-1, but all are very slight. The downwards gradients adjacent to Polley Lake indicate that groundwater is recharged in the high ground between Polley and Bootjack Lakes and discharges into the

lakes. GW12-1 is located at the toe of Mount Polley and is thus expected to be a groundwater discharge area.

Bootjack Lake is approximately 63 meters in elevation above Polley Lake and imprints a deep seated flow direction from Bootjack to Polley Lake. The shallower flow paths report to both Bootjack and Polley lakes. Figure 2 displays a cross section through the Mount Polley mine site that illustrates the conceptual groundwater flow paths.

Figure 3 presents a map of hydraulic heads derived from water level measurements in monitoring wells, local ponds and pits, and topography. The figure illustrates the general mound of groundwater in the high ground around the mine and the steep groundwater contours surrounding the pits. Figures 2 and 3 represent our conceptual model of groundwater flow directions and approximate head distributions.

6.1.2 Hydraulic Conductivity

Single well response tests were performed on all new installations upon well completion. The well response test used was the rising head test and hydraulic conductivities were calculated based upon the results.

The Hvorslev mathematical solution was used to calculate the hydraulic conductivity. The solution assumes a homogeneous aquifer with infinite vertical extent. This solution is widely used and provides a straight-forward and well-documented approximation of hydraulic conductivity in the vicinity of the monitoring well screen. The results of the single well response tests are summarized in the following table.

Table 3: Hydraulic Testing of New Wells.

Monitoring Well	Screened Formation	Ground Surface Elevation (masl)	Well Screen Interval (masl)	Hydraulic Conductivity (m/s)
GW12-1A	Bedrock	991.59	892.0 - 899.2	2×10^{-9}
GW12-1B	Bedrock	991.37	967.0 - 970.7	$>10^{-4}$
GW12-2A	Bedrock	1035.45	934.8 - 941.5	3×10^{-8}
GW12-2B	Bedrock	1035.45	1005.2 - 1008.9	2×10^{-7}
GW12-3A	Bedrock	1039.06	939.4 - 946.4	2×10^{-7}
GW12-3B	Bedrock	1039.24	1023.1 - 1026.4	1×10^{-5}
GW12-4A	Bedrock	989.87	889.3 - 896.5	4×10^{-9}
GW12-4B	Bedrock	990.12	953.8 - 957.3	2×10^{-5}
GW12-5A	Bedrock	965.28	864.9 - 872.2	$>10^{-4}$
GW12-5B	Glacial Till	966.22	953.5 - 957.6	3×10^{-7}

The hydraulic conductivities of all of the wells range from $>10^{-4}$ to 2×10^{-9} m/s. The geometric mean hydraulic conductivity of the shallow wells is 4×10^{-6} m/s and the geometric mean hydraulic conductivity of the deep wells is 9×10^{-8} m/s. The deep bedrock well at GW12-5A is actually in

the shallow bedrock interval and the shallow well is in overburden, a different hydrostratigraphic unit. If the shallow result at GW12-5B is excluded and the deep result is included in the shallow data set, the geometric mean of the shallow bedrock is 7×10^{-6} m/s and the deep bedrock geometric mean hydraulic conductivity is 1×10^{-8} m/s. The difference in the hydraulic conductivity between the shallow and deep wells is nearly three orders of magnitude.

6.1.3 Groundwater Flow Velocities

Using the approximate distribution of hydraulic heads, Figure 3, the shallow general hydraulic gradient toward both Polley and Bootjack Lake is approximately 0.14 m/m. Around the dewatered Springer and Cariboo pits, the local gradient is much higher and it appears that in the vicinity of the tailings pond the gradients are much lower.

Using the average hydraulic conductivity for shallow wells is 7×10^{-6} m/s and an assumed porosity of 0.1, the average Darcy velocity is approximately 0.8 m/day.

6.1.4 Pit Groundwater Inflows

The actual groundwater inflows to Springer, Cariboo, and Wight pits can be determined from a detailed water balance, which is not in this scope of work; MPMC is preparing the water balance. Using the hydraulic head contours (Fig. 3) and estimates of bulk hydraulic conductivity, combined inflows to Springer and Cariboo pits may be as high as 2,700 m³/day. The KP estimate from 2004 estimated a combined inflow of 1,853 m³/day. Knight and Piesold estimated an inflow to the Wight pit at 2,450 m³/day. Using the head contours (Fig. 3) and estimates of bulk hydraulic conductivity, the estimated inflows from this analysis are 5,000 m³/day which is significantly higher than the KP estimate. This may be due to high bulk hydraulic conductivity estimates or poorly drawn hydraulic head contours.

6.2 Groundwater Quality Trends

Based on recent groundwater sampling programs, five wells appear to be showing evidence of influence by mine operations. Two are in the pit/waste rock area; 95-R4, 95-R5, and three are in the tailings facility area; GW96-2B, GW96-4B, and GW00-1B.

6.2.1 95-R4

Monitoring well 95-R4 has shown elevated Sulphate and Selenium and decreased Molybdenum. There is a slight possibility of elevated copper. This well has multiple screens so the origin of this water quality is not known. This well was also significantly affected by the nearby sub-horizontal borehole that appeared to dramatically lower the water level in the well. Monitoring wells GW12-2A/B have replaced this well. Further monitoring should help to clarify these ambiguous results.

6.2.2 95-R5

Monitoring well 95-R5 shows elevated concentrations of sulphate, cadmium, and possibly copper, as well as elevated hardness. There is also a slight decrease in molybdenum. This well also has multiple screens. Monitoring will continue on this well. Adjacent wells have been constructed, GW12-4A/B and GW12-5A/B, to expand coverage in this area.

Well 95-R5 is screened with four screens at 43ft, 164ft, 209ft, and 254ft. Discrete micro purge samples were collected at these four locations using a submersible pump. The results of the sampling are not entirely conclusive; however the parameters with the greatest historic increases, sulphate and cadmium, were at the highest concentrations in the zone at 164 feet. This may suggest that this is the zone carrying the highest percentage of mine affected water.

6.2.3 GW96-2B

Monitoring well GW96-2B, located on the northeast limb of the tailings facility, is constructed from 31 to 35 meters depth in a water bearing sand. Sulphate in this well is just beginning to show signs of change; no other parameters are showing any clear trends.

6.2.4 GW96-4B

Monitoring well GW96-4B, located on the southwest limb of the tailings facility is showing a distinct trend of rising hardness, sulphate, and nitrate. This is a very shallow well, 3 to 7 meters, constructed in a sand lens.

6.2.5 GW00-1B

This well is also on the southwest limb of the tailings facility and also shallow, 4 – 10 meters and constructed across a thin sand seam. This well shows several elevated parameters; hardness, sulphate, nitrate, cadmium, molybdenum, and selenium.

There are some common themes in this suite of results; sulphate is the commonly elevated parameter. Some wells also show elevated selenium, cadmium, or nitrate. Well GW00-1B includes all of them plus molybdenum.

The mechanisms for these changes are not fully known. A review of geochemistry data and analysis, which we understand is frequently updated with new kinetic data, will help explain some of these mechanisms. This is beyond the scope of this assignment.

7.0 GROUNDWATER QUALITY MONITORING PROTOCOL

A groundwater monitoring protocol including sampling sites, frequency, and parameters has been proposed by MPMC. This proposal is appropriate for current conditions. Because there are initial indications of some mine affected water showing up in a couple of places, the monitoring program should remain adaptable to monitoring results. Additional monitoring sites may be required in future along with enhanced frequency.

8.0 SUMMARY

Hydrogeological conditions at Mt. Polley are defined by boreholes and monitoring wells constructed across the site. This data set and interpretations are summarized below.

1. The area hydrostratigraphy consists of, from top down:
 - a. Generally thin but locally thick glacio-fluvial overburden
 - b. Weathered and/or fractured bedrock
 - c. Intact and competent bedrock
2. It is apparent that some permeable fractures can be present at depth.
3. Hydraulic heads are generally a subdued form of topography being high in the center of the mine area and lower at both lakes and lower south of the tailings pond.
4. Groundwater discharges to both Bootjack and Polley lakes.
5. Groundwater discharges southeast of the tailings pond.
6. Groundwater discharges to Springer and Cariboo pits.
7. Groundwater velocities are approximately 3 meters/year but with considerable variability.
8. Groundwater appears to have been impacted at a few sites in the tailings area and a couple of sites downgradient of mine facilities.
9. Monitoring is established across the mine site with appropriate frequencies and analytical protocols.

9.0 CONCLUSIONS AND RECOMMENDATIONS

MPMC has an established monitoring program with some data records extending back to 1995. Recent possible detections have resulted in an expansion and modification to the monitoring program. MPMC will need to continue to be adaptive to changes in water chemistry and devise mitigation measures where necessary. Some recommendations moving forward are:

1. Conduct a study correlating changes in groundwater chemistry with the waste rock and tailings geochemistry data. Some sampling in the tailings would help define mechanisms there.

2. Continue to monitor 95-R5 for two more events but consider replacing this well with a nested pair.
3. Water quality results for the new wells GW12-4 and GW12-5 may indicate a need for expanded monitoring in this area.
4. A detailed water balance should be prepared to assess the groundwater volumes reporting to the pits. This will aid in calibrating a groundwater flow model that can be used for closure planning.

10.0 LIMITATIONS AND CLOSURE

This report has been prepared for the use of Mount Polley Mining Corporation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibility of such third parties. AMEC accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. It has been prepared in accordance with generally accepted geology and geotechnical engineering practices. No other warranty, expressed or implied, is made.

Respectfully submitted,

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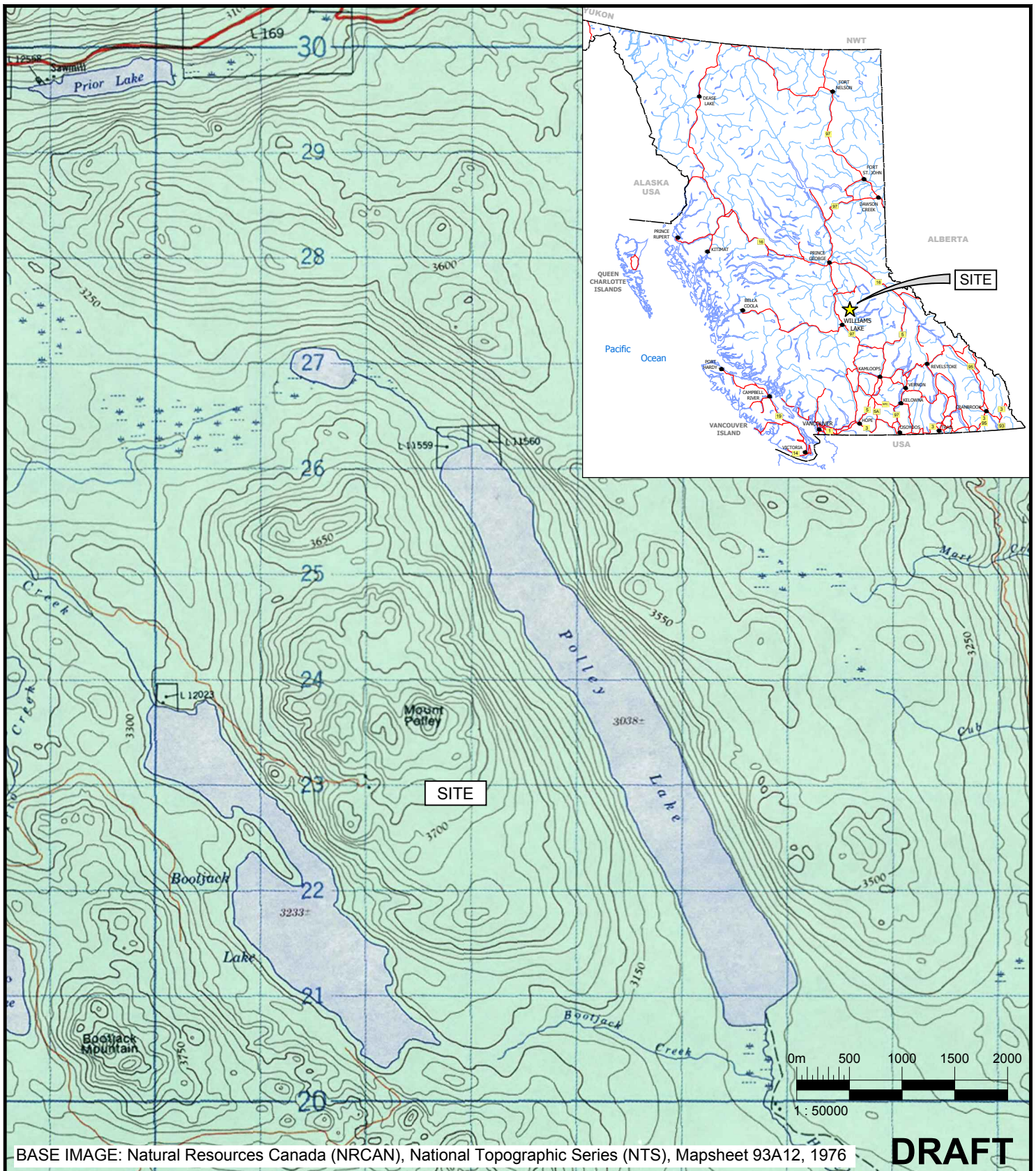
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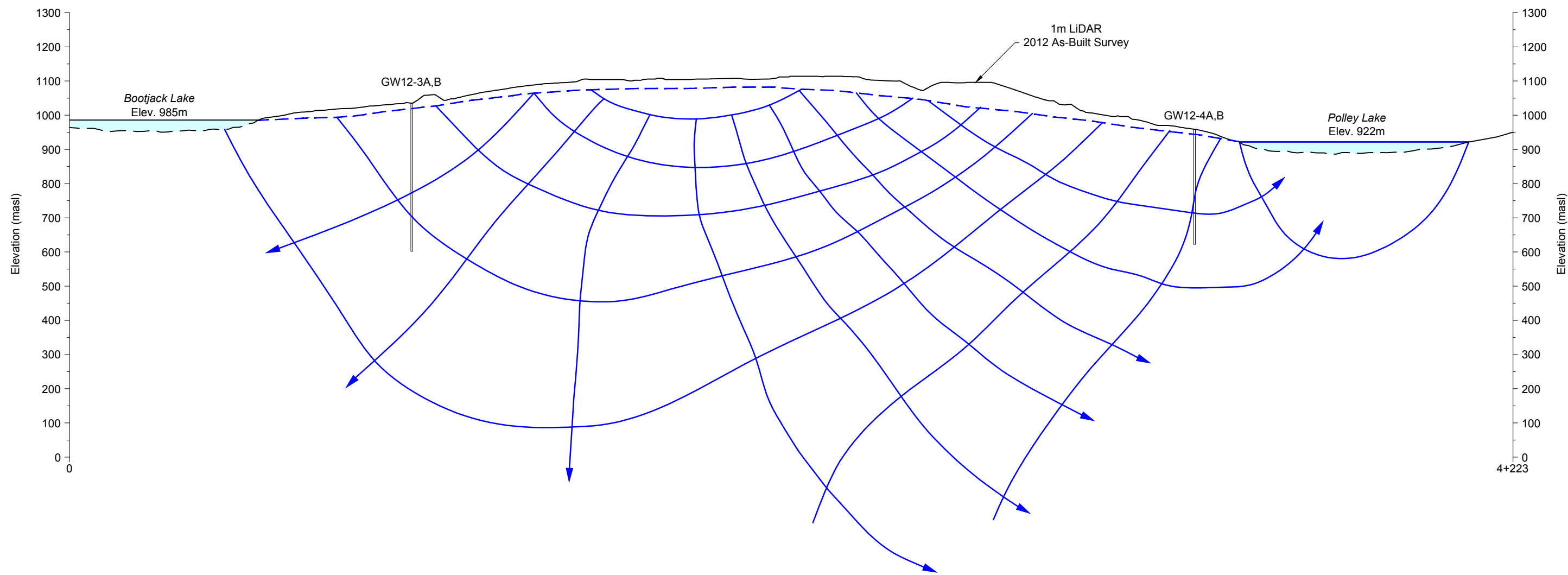
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BASE IMAGE: Natural Resources Canada (NRCAN), National Topographic Series (NTS), Mapsheet 93A12, 1976

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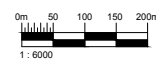
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MARCH 2013

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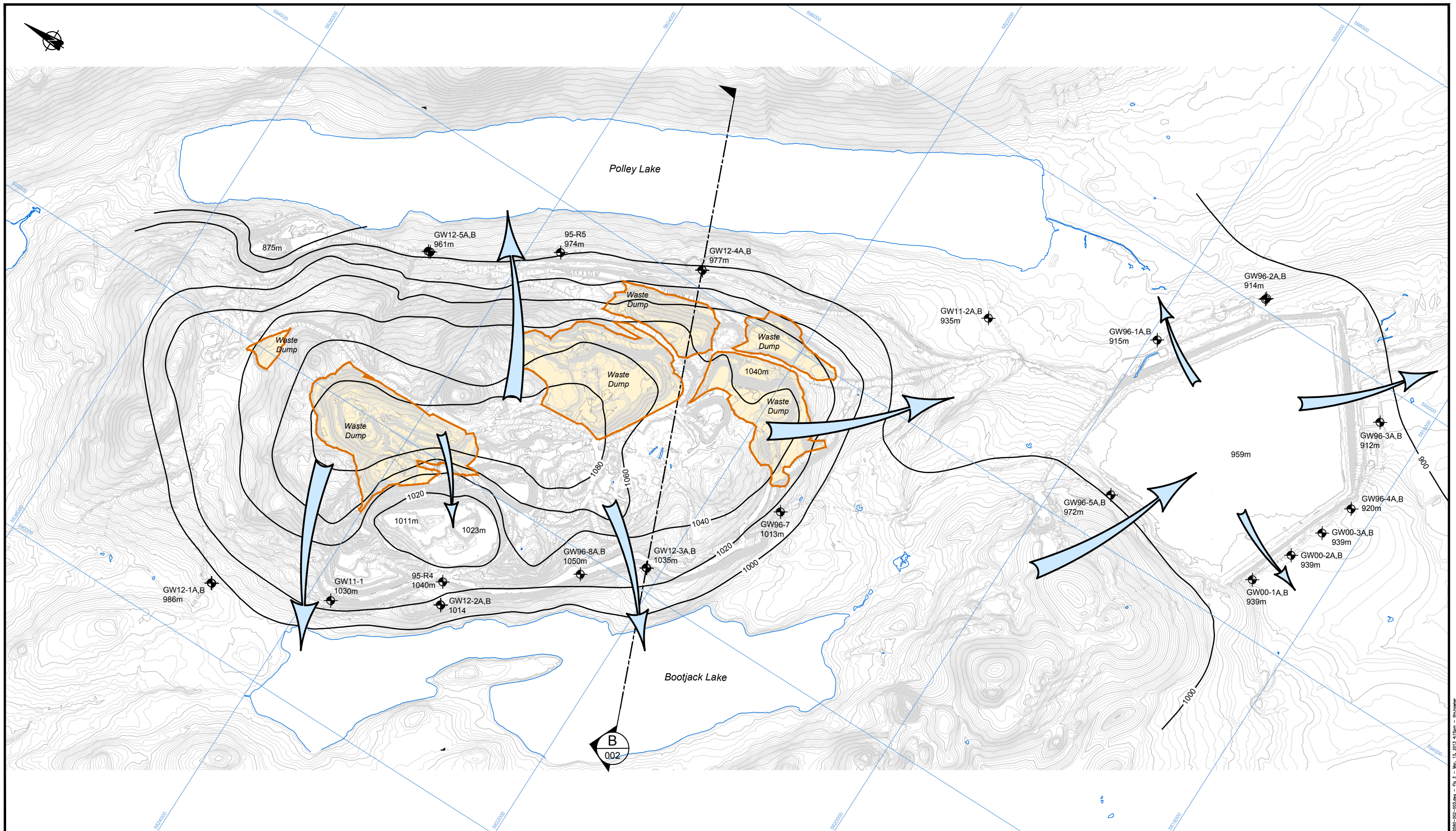
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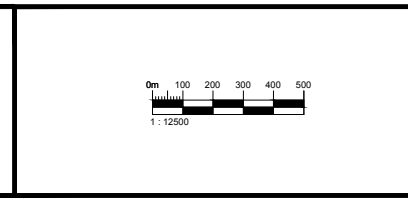
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Burnaby, BC V5C 0E4
Tel. 604-294-3811 Fax 604-294-4664

DRAWN BY: TH
CHECKED BY: DE
DATUM: NAD83
PROJECTION: UTM Zone 10
SCALE: AS SHOWN

PROJECT
**MT. POLLEY
CONCEPTUAL HYDROGEOLOGY**

TITLE
**GENERALIZED GROUNDWATER HEADS
AND FLOW DIRECTIONS**

DATE: MARCH 2013
PROJECT NO: VM00560
REV. NO: A
FIGURE NO: 3
SHEET NO: 2 of 2

APPENDIX A

Borehole Logs

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-1A				
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B				
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824612.572 EASTING: 590420.673	ELEVATION: 991.6 m				
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE	<input type="checkbox"/> NO RECOVERY	<input type="checkbox"/> SPLIT SPOON	<input checked="" type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN	<input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SILT - Clayey, some sand and gravel, high plasticity, brown, moist.						991
1.5m				1				990
2.1m		SAND (fine) - Some silt, trace gravel, poorly graded, brown, dry.		2				989
3m				3				988
3m		SAND and GRAVEL (fine to coarse)(subrounded to angular) - Trace silt, well graded, light brown (sand), dark grey (gravel), dry.		4				987
6.1m		BEDROCK - weathered, fine grained mass, mixture of pink and light green in color, dry.		5		Measured depth to groundwater 5.89 mbg (11/30/2012)		986
6.1m		BEDROCK - (Igneous - granitic type bedrock) mixture of brownish red and light green in color, dry.		6				985
7				7				984
8				8				983
9				9				982
10				10				981
11				11				980
12				12				979
13				13				978
14				14				977
15		Wet		15				976
16		Possible fracture zone from 14.3 - 14.9 m.		16				975
17				17				974
18				18				973
19				19				972
20				20				971
21				21				970
22		Possible fracture zone from 21.3 - 24.3 m.		22		Producing ~12 GPM.		969
23				23				968
24				24				967
25				25				966
26				26				965
27				27				964
28				28				963
29				29				962
30				30				962

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13



AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Hwy
 Burnaby, BC V5C 0E4
 Tel: (604) 294-3811

LOGGED BY: TK
 ENTERED BY: GN

COMPLETION DEPTH: 100.6 m
 COMPLETION DATE: 20-11-12
 Page 1 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-1A				
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B				
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824612.572 EASTING: 590420.673	ELEVATION: 991.6 m				
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE	<input type="checkbox"/> NO RECOVERY	<input type="checkbox"/> SPLIT SPOON	<input checked="" type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN	<input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
30		BEDROCK - (Igneous - granitic type bedrock) mixture of brownish red and light green in color, wet.		20				961
31				21				960
32				22				959
33				23				958
34				24				957
35				25				956
36				26				955
37				27				954
38				28				953
39				29				952
40				30				951
41				31				950
42				32				949
43				33				948
44				34				947
45				35				946
46				36				945
47				37				944
48				38				943
49				39				942
50								941
51								940
52		Trace Sulphides						939
53								938
54								937
55								936
56								935
57		Possible fracture zone from 57.0 to 59.4 m.						934
58								933
59								932
60								932

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 20-11-12
			Page 2 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-1A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824612.572 EASTING: 590420.673	ELEVATION: 991.6 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input checked="" type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
60		BEDROCK - (Igneous - granitic type bedrock) mixture of brownish red and light green in color, wet. <i>(continued)</i>		40				931
61				41		930		
62				42		929		
63				43		928		
64		Possible fracture zone from 64.0 to 65.5 m.		44		927		
65				45		926		
66				46		925		
67				47		924		
68				48		923		
69				49		922		
70				50		921		
71				51		920		
72				52		919		
73				53		918		
74				54		917		
75				55		916		
76				56		915		
77				57		914		
78				58		913		
79						912		
80						911		
81						910		
82						909		
83						908		
84						907		
85						906		
86						905		
87						904		
88						903		
89						902		
90						902		

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 20-11-12
			Page 3 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-1A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824612.572 EASTING: 590420.673	ELEVATION: 991.6 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
90		BEDROCK - (Igneous - granitic type bedrock) mixture of brownish red and light green in color, wet. <i>(continued)</i>		59				901
91			900					
92			899					
93			898					
94			897					
95			896					
96			895					
97			894					
98			893					
99			892					
100		100.6m		66		Producing ~80-100 GPM.		891
101		End of hole at 100.6 m depth.						890
102								889
103								888
104								887
105								886
106								885
107								884
108								883
109								882
110								881
111								880
112								879
113								878
114								877
115								876
116								875
117								874
118								873
119								872
120								872

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-1B
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824617.366 EASTING: 590420.534	ELEVATION: 991.4 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SILT - Clayey, some sand and gravel, high plasticity, brown, moist.						991
1.5								990
2		SAND (fine) - Some silt, trace gravel, poorly graded, brown, dry.						989
6.1								988
6		BEDROCK - weathered, fine grained mass, mixture of brownish red and grey green in color, dry.				Measured depth to groundwater 5.97 mbg (11/30/12)		987
12.2								986
12		BEDROCK - Igneous (Granitic type bedrock) mixture of brownish red and light green in color, dry						985
24.4								984
19		Wet				Producing ~ 12 GPM		983
24								982
24.4		End of hole at 24.4 m depth.						981
25								980
26								979
27								978
28								977
29								976
30								975

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 24.4 m
		ENTERED BY: GN	COMPLETION DATE: 22-11-12
			Page 1 of 1

CLIENT: Mount Polley Mining Corporation		PROJECT: Mt. Polley Hydrogeological Assessment		BOREHOLE NO: GW12-2A		
DRILLER: Geotech Drilling		Mount Polley B.C.		PROJECT NO: VM00560B		
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"		NORTHING: 5823179.943 EASTING: 591154.532		ELEVATION: 1035.4 m		
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE	<input type="checkbox"/> NO RECOVERY	<input type="checkbox"/> SPLIT SPOON	<input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN	<input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SILT and CLAY - Some sand and gravel, high plasticity, brown, moist						1035
1								1034
2								1033
3				1				1032
4								1031
5								1030
6								1029
6.1m		BEDROCK - weathered, fine grained mass, light green in color, dry.		2				1028
7								1027
7.6m		BEDROCK - Igneous (Granitic type bedrock), mixture of greyish purple and olive grey in color, dry.		3				1026
8								1025
9				4				1024
10								1023
11								1022
12				5				1021
13								1020
14								1019
15				6				1018
16								1017
17								1016
18				7				1015
19								1014
20								1013
21				8				1012
22								1011
23								1010
24				9				1009
25								1008
26								1007
27								1006
28								1005
29								1004
30								1003

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

Wet

Measured depth to groundwater
21.33 mbg (11/30/12)


Producing ~ 5-6 GPM.



CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-2A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5823179.943 EASTING: 591154.532	ELEVATION: 1035.4 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
30								1005
31		BEDROCK - Igneous (Granitic type bedrock), mixture of brownish red and grey green in color, wet		10				1004
32								1003
33								1002
34		Possible fracture zone from 33.5 - 36.5 m.		11				1001
35								1000
36								999
37								998
38								997
39								996
40								995
41								994
42								993
43		Possible fracture zone from 42.7 - 44.2 m.		14				992
44								991
45								990
46								989
47								988
48								987
49								986
50								985
51								984
52								983
53								982
54								981
55								980
56								979
57								978
58								977
59								976
60								976

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 24-11-12
			Page 2 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-2A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5823179.943 EASTING: 591154.532	ELEVATION: 1035.4 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
60		BEDROCK - Igneous (Granitic type bedrock), mixture of brownish red and grey green in color, wet (<i>continued</i>)		20				975
61								974
62								973
63								972
64				21		Producing ~40-50 GPM.		971
65								970
66								969
67				22				968
68								967
69								966
70				23				965
71								964
72								963
73				24				962
74								961
75								960
76				25				959
77								958
78								957
79				26				956
80								955
81								954
82				27				953
83								952
84								951
85				28				950
86								949
87								948
88				29				947
89								946

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 24-11-12
			Page 3 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-2A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5823179.943 EASTING: 591154.532	ELEVATION: 1035.4 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)		
90		BEDROCK - Igneous (Granitic type bedrock), mixture of brownish red and grey green in color, wet (<i>continued</i>)						945		
91			30					944		
92									943	
93									942	
94									941	
95				Possible fracture zone from 94.5 - 97.5 m.		31			Producing ~60 GPM.	940
96									939	
97									938	
98						32			937	
99									936	
100						935				
101				33			934			
102		End of hole at 102.1 m depth. 102.1m				Producing >100 GPM.	933			
103							932			
104							931			
105							930			
106							929			
107							928			
108							927			
109							926			
110							925			
111							924			
112							923			
113							922			
114							921			
115							920			
116							919			
117							918			
118							917			
119							916			
120							915			

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 24-11-12
			Page 4 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-2B
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5823176.641 EASTING: 591153.566	ELEVATION: 1035.4 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SILT and CLAY - some sand and gravel , high plasticity, brown, moist.						1035
1						1034		
2								1033
3						1		1032
4								1031
5						2		1030
6								1029
7.6m						1028		
8		BEDROCK - Igneous (granitic type bedrock), mixture of greenish grey and brownish red in color, dry.						1027
9						3		1026
10								1025
11						4		1024
12								1023
13						5		1022
14								1021
15						6		1020
16								1019
17						7		1018
18								1017
19						8		1016
20								1015
21						9		1014
22								1013
23								1012
24								1011
25								1010
26								1009
27								1008
28								1007
29								1006
30								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

Wet

Measured depth to groundwater
21.12 mbg (11/30/12)

Producing ~ 6 GPM.




AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Hwy
Burnaby, BC V5C 0E4
Tel: (604) 294-3811


LOGGED BY: TK
ENTERED BY: GN

COMPLETION DEPTH: 30.2 m
COMPLETION DATE: 25-11-12

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-2B
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5823176.641 EASTING: 591153.566	ELEVATION: 1035.4 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input checked="" type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
30		End of hole at 30.5 m depth.		10		Producing ~ 12 GPM.		1005
31								1004
32								1003
33								1002
34								1001
35								1000
36								999
37								998
38								997
39								996
40								995
41								994
42								993
43								992
44								991
45								990
46								989
47								988
48								987
49								986
50								985
51								984
52								983
53								982
54								981
55								980
56								979
57								978
58								977
59								976
60								976

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 30.2 m
		ENTERED BY: GN	COMPLETION DATE: 25-11-12
			Page 2 of 2

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-3A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822101.875 EASTING: 592147.584	ELEVATION: 1039.1 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input checked="" type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		MINE FILL - Sand and gravel, coarse, angular, moderately graded, olive grey, dry.						1038
2.7						1037		
3		SAND and GRAVEL - fine to coarse grained, subrounded to subangular, some silt, trace organics, well graded, dark brown, moist.		1		Measured depth to groundwater 3.88 mbg (11/30/12)		1036
6.1		Wet		2			1035	
7		BEDROCK, weathered - fine to coarse, subrounded to angular, well graded, low plasticity, grey and brown in color, wet.					1034	
9.1				3			1033	
10		BEDROCK - Igneous (granitic type bedrock), mixture of greenish grey and brownish red in color, wet.					1032	
15.2				4			1031	
16.7		Major fracture zone from 15.2 - 16.7 m.		5			1030	
17				6			1029	
18				7			1028	
19				8			1027	
20				9			1026	
21							1025	
22							1024	
23							1023	
24							1022	
25							1021	
26							1020	
27							1019	
28							1018	
29							1017	
30						Producing ~ 20 GPM, soft water.	1016	
							1015	
							1014	
							1013	
							1012	
							1011	
							1010	

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 28-11-12
			Page 1 of 4

CLIENT: Mount Polley Mining Corporation		PROJECT: Mt. Polley Hydrogeological Assessment		BOREHOLE NO: GW12-3A		
DRILLER: Geotech Drilling		Mount Polley B.C.		PROJECT NO: VM00560B		
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"		NORTHING: 5822101.875 EASTING: 592147.584		ELEVATION: 1039.1 m		
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE	<input type="checkbox"/> NO RECOVERY	<input type="checkbox"/> SPLIT SPOON	<input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN	<input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)		
30		BEDROCK - Igneous (granitic type bedrock), mixture of greenish grey and brownish red in color, wet. (continued)		10		Producing ~ 20 GPM, hard water.		1008		
31								1007		
32								1006		
33								1005		
34					11				1004	
35									1003	
36								12		1002
37									1001	
38									1000	
39								13		999
40									998	
41									997	
42								14		996
43									995	
44					994					
45					993					
46					992					
47					991					
48					990					
49					989					
50					988					
51					987					
52					986					
53					985					
54					984					
55					983					
56					982					
57					981					
58					980					
59										
60										

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 28-11-12
			Page 2 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-3A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822101.875 EASTING: 592147.584	ELEVATION: 1039.1 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
60		BEDROCK - Igneous (granitic type bedrock), mixture of greenish grey and brownish red in color, wet. (continued)						
61								978
62								977
63								976
64								975
65								974
66								973
67								972
68								971
69								970
70								969
71								968
72								967
73								966
74								965
75								964
76								963
77								962
78								961
79								960
80								959
81								958
82								957
83								956
84								955
85								954
86								953
87								952
88								951
89								950
90								950

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 28-11-12
			Page 3 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-3A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822101.875 EASTING: 592147.584	ELEVATION: 1039.1 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
90		BEDROCK - Igneous (granitic type bedrock), mixture of greenish grey and brownish red in color, wet. <i>(continued)</i>						948
91								
92								
93								
94								
95								
96								
97								
98								
99								
100		100.6m				Producing ~ 20 GPM.		939
101		End of hole at 100.6 m depth.						938
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 28-11-12
			Page 4 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-3B
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822098.478 EASTING: 592147.958	ELEVATION: 1039.2 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		MINE FILL - SAND and GRAVEL - coarse, angular, some silt, moderately graded, olive grey, dry.						1039
1								1038
2								1037
3								1036
4		SILT and CLAY - some sand and gravel, high plasticity, brown, trace organics, moist.				Measured depth to groundwater 3.13 mbg (11/30/12) 2.99 mbg (12/17/12)		1035
5								1034
6		CLAY - silty trace sand and gravel, high plasticity, brown, moist.						1033
7		BEDROCK - weathered, fine grain mass, mixture of greenish grey and brownish red in color, dry.						1032
8								1031
9								1030
10		BEDROCK - Igneous (granitic type bedrock) mixture of greenish grey and brownish red in color, dry.						1029
11								1028
12		Wet Major fracture zone from 12.2 - 13.7 m.						1027
13								1026
14		Major fracture zone from 15.2 - 16.1 m.						1025
15								1024
16		End of hole at 16.1 m depth.				Producing ~12 GPM.	1023	
17							1022	
18							1021	
19							1020	
20							1019	
21							1018	
22							1017	
23							1016	
24							1015	
25							1014	
26							1013	
27							1012	
28							1011	
29							1010	
30							1010	

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 16.1 m
		ENTERED BY: GN	COMPLETION DATE: 27-11-12
			Page 1 of 1

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-4A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822894.269 EASTING: 594117.413	ELEVATION: 989.9 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SAND - silty, trace Gravel, trace organics, occassional cobbles, moist						989
1		GRAVEL - Igneous (granitic type rock), coarse, some cobbles, subhedral light green (mafic) phenocrysts, grey matrix, pophyrhytic, dry						988
2		SAND - fine to medium grained, some silt, some gravel, brown/red, moist		1				987
3		GRAVEL - Igneous (granitic type rock), coarse, some cobbles, subhedral light green (mafic) phenocrysts, grey matrix, pophyrhytic, dry		2				986
4		BEDROCK - Igneous (granitic type bedrock) pophyrhytic, subhedral light green (mafic) phenocrysts, grey matrix, calcite filled fractures from 18.28 to 24.38, dry		3				985
5				4				984
6				5				983
7				6				982
8				7				981
9				8				980
10				9				979
11								978
12								977
13								976
14								975
15								974
16								973
17								972
18								971
19								970
20								969
21								968
22								967
23								966
24								965
25								964
26								963
27								962
28								961
29								960
30								959

Major fracture zone from 18.28 - 24.38 m.

Measured depth to groundwater
21.95 mbg (12/15/12)

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13



AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Hwy
Burnaby, BC V5C 0E4
Tel: (604) 294-3811

LOGGED BY: DK
ENTERED BY: GN

COMPLETION DEPTH: 100.6 m
COMPLETION DATE: 7-12-12
Page 1 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-4A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822894.269 EASTING: 594117.413	ELEVATION: 989.9 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)		
30		BEDROCK - Igneous (granitic type bedrock) pophyrytic, subhedral light green (mafic) phenocrysts, grey matrix, green content increases with depth, wet at 27.43 m (<i>continued</i>)		10		Producing ~ 5 GPM.		959		
31										958
32										957
33										956
34					11					955
35										954
36										953
37										952
38										951
39										950
40					12					949
41										948
42										947
43					13					946
44										945
45										944
46					14					943
47										942
48										941
49							940			
50							939			
51							938			
52							937			
53							936			
54							935			
55							934			
56							933			
57							932			
58							931			
59										
60										

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: DK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 7-12-12
			Page 2 of 4

CLIENT: Mount Polley Mining Corporation		PROJECT: Mt. Polley Hydrogeological Assessment		BOREHOLE NO: GW12-4A		
DRILLER: Geotech Drilling		Mount Polley B.C.		PROJECT NO: VM00560B		
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"		NORTHING: 5822894.269 EASTING: 594117.413		ELEVATION: 989.9 m		
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE	<input type="checkbox"/> NO RECOVERY	<input type="checkbox"/> SPLIT SPOON	<input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN	<input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE	<input type="checkbox"/> PEA GRAVEL	<input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
60		BEDROCK - Igneous (granitic type bedrock) pophyrytic, subhedral light green (mafic) phenocrysts, grey matrix, green content increases with depth, wet at 27.43 m (<i>continued</i>)		20				929
61								928
62								927
63								926
64					21			925
65								924
66								923
67					22			922
68								921
69								920
70				23		919		
71						918		
72						917		
73				24		916		
74						915		
75						914		
76				25		913		
77						912		
78						911		
79				26		910		
80						909		
81						908		
82				27		907		
83						906		
84						905		
85				28		904		
86						903		
87						902		
88				29		901		
89								
90								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

Producing ~ 18 GPM.

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: DK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 7-12-12
			Page 3 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-4A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822894.269 EASTING: 594117.413	ELEVATION: 989.9 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)	
90		BEDROCK - Igneous (granitic type bedrock) pophyrytic, subhedral light green (mafic) phenocrysts, grey matrix, green content increases with depth, wet at 27.43 m (<i>continued</i>)		30				899	
91									898
92									897
93									896
94						31			895
95									894
96									893
97									892
98						32			891
99									890
100								889	
101		End of hole at 100.58 m depth.		33				888	
102								887	
103								886	
104								885	
105								884	
106								883	
107								882	
108								881	
109								880	
110								879	
111								878	
112								877	
113								876	
114								875	
115								874	
116								873	
117								872	
118								871	
119								870	
120								869	

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: DK	COMPLETION DEPTH: 100.6 m
		ENTERED BY: GN	COMPLETION DATE: 7-12-12
			Page 4 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-4B
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822890.944 EASTING: 594115.972	ELEVATION: 990.1 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SAND - silty, trace Gravel, trace organics, occassional cobbles, brown, moist						989
0.6		GRAVEL - Igneous (granitic type rock) , some cobbles, pophyritic, subhedral light green (mafic) phenocrysts, grey matrix, dry						988
4.6		SAND - fine to medium grained, some silt, some gravel, brown/red, moist						986
5.2		BEDROCK - Igneous (granitic type bedrock) pophyritic, subhedral light green (mafic) phenocrysts, grey matrix, calcite filled fractures from 18.28 to 24.38, dry						985
18.28		Major fracture zone from 18.28 - 24.38 m.						984
24.4		BEDROCK - Igneous (granitic type bedrock), fine grained, aphanitic, brown/yellow, dry (Intrusion), wet at approx. 27.43						983
27.4		BEDROCK - Igneous (granitic type bedrock) pophyritic, subhedral light green (mafic) phenocrysts, grey matrix, wet						982
30								981
								980
								979
								978
								977
								976
								975
								974
								973
								972
								971
								970
								969
								968
								967
								966
								965
								964
								963
								962
								961

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

Measured depth to groundwater
12.81 mbg (12/15/12)



AMEC Environment & Infrastructure
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Tel: (604) 294-3811

LOGGED BY: DK
ENTERED BY: GN

COMPLETION DEPTH: 36.3 m
COMPLETION DATE: 8-12-12
Page 1 of 2

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-4B
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5822890.944 EASTING: 594115.972	ELEVATION: 990.1 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
30		BEDROCK - Igneous (granitic type bedrock) pophyrytic, subhedral light green (mafic) phenocrysts, grey matrix, wet (continued)				Producing ~5 GPM.		959
31								958
32								957
33								956
34								955
35								954
36								36.3m
37		End of hole at 36.27 m depth.					952	
38							951	
39							950	
40							949	
41							948	
42							947	
43							946	
44							945	
45							944	
46							943	
47							942	
48							941	
49							940	
50							939	
51							938	
52							937	
53							936	
54							935	
55							934	
56							933	
57							932	
58							931	
59								
60								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-5A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824568.66 EASTING: 593199.483	ELEVATION: 966.2 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		CLAY - silty, some gravel and cobbles, trace sand, high plasticity, brown, moist to wet (Basal Till)						966
1						965		
2						964		
3				1		963		
4						962		
5						961		
6				2		960		
7						959		
8		GRAVEL - some sand and clay, occasional cobbles, subrounded gravel, brown, wet at 9.0 m, (Basal Till)				Measured depth to groundwater 7.71 mbg (12/14/12)		958
9				3		957		
10						956		
11						955		
12				4		954		
13						953		
14						952		
15		Numerous boulders throughout unit		5		Producing ~ 90 GPM.	951	
16						950		
17						949		
18				6		948		
19						947		
20						946		
21						945		
22				7		944		
23						943		
24						942		
25				8		941		
26						940		
27		BEDROCK - Igneous (granitic type rock), phaneritic, pink/grey, banded, wet					939	
28		Highly weathered zone from 25.9 - 39.6 m.					938	
29				9			937	
30								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: DK	COMPLETION DEPTH: 100.4 m
		ENTERED BY: GN	COMPLETION DATE: 11-12-12
			Page 1 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-5A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824568.66 EASTING: 593199.483	ELEVATION: 966.2 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)	
30		<p>BEDROCK - Igneous (granitic type rock), phaneritic, pink/grey, banded, wet (<i>continued</i>)</p> <p>Fracture zone from 39.6 - 45.7 m, calcite filled fractures.</p>		10				936	
31									935
32									934
33									933
34					11				932
35									931
36									930
37					12				929
38									928
39									927
40					13				926
41									925
42									924
43					14				923
44									922
45									921
46					15				920
47									919
48									918
49				16			917		
50							916		
51							915		
52				17			914		
53							913		
54							912		
55				18			911		
56							910		
57							909		
58				19			908		
59							907		
60							907		

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: DK	COMPLETION DEPTH: 100.4 m
		ENTERED BY: GN	COMPLETION DATE: 11-12-12
			Page 2 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-5A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824568.66 EASTING: 593199.483	ELEVATION: 966.2 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
60		BEDROCK - Igneous (granitic type rock), phaneritic, pink/grey, banded, wet (<i>continued</i>)		20				906
61								905
62						904		
63						903		
64				21		902		
65						901		
66						900		
67				22		899		
68		BEDROCK - Igneous (granitic type rock), phaneritic, green/grey, wet, (Intrusion) 67.1m				898		
69						897		
70				23		896		
71						895		
72						894		
73				24		893		
74						892		
75						891		
76				25		890		
77		BEDROCK - Igneous (granitic type rock), phaneritic, pink/grey, banded, occasional grey/green seams from 91.44 to 94.49, wet 76.2m				889		
78						888		
79				26		887		
80						886		
81						885		
82				27		884		
83						883		
84						882		
85				28		881		
86						880		
87						879		
88				29		878		
89						877		
90								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: DK	COMPLETION DEPTH: 100.4 m
		ENTERED BY: GN	COMPLETION DATE: 11-12-12
			Page 3 of 4




CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-5A
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824568.66 EASTING: 593199.483	ELEVATION: 966.2 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
90		BEDROCK - Igneous (granitic type rock), phaneritic, pink/grey, banded, occasional grey/green seams from 91.44 to 94.49, wet (<i>continued</i>)		30				876
91								875
92								874
93							873	
94				31			872	
95							871	
96							870	
97							869	
98				32			868	
99							867	
100							866	
101		End of hole at 100.58 m depth		33				865
102							864	
103							863	
104							862	
105							861	
106							860	
107							859	
108							858	
109							857	
110							856	
111							855	
112							854	
113							853	
114							852	
115							851	
116							850	
117							849	
118							848	
119							847	
120								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: DK	COMPLETION DEPTH: 100.4 m
		ENTERED BY: GN	COMPLETION DATE: 11-12-12
			Page 4 of 4

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: GW12-5B
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824582.252 EASTING: 593197.113	ELEVATION: 965.3 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input checked="" type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		CLAY - silty, some gravel and cobbles, trace sand, high plasticity, brown, moist to wet (Basal Till)					 <p>Measured depth to groundwater 5.31 mbg (12/14/12)</p> <p>Producing ~ 3 GPM.</p>	965
1						964		
2						963		
3						962		
4						961		
5						960		
6						959		
7						958		
8		GRAVEL - subrounded, some clay and sand, some cobbles, (Basal Till), brown, wet at 9.0				957		
9						956		
10		Numerous boulders throughout unit				955		
11						954		
12						953		
13		End of hole at 12.74 m depth.				952		
14						951		
15						950		
16						949		
17						948		
18						947		
19						946		
20						945		
21						944		
22						943		
23						942		
24						941		
25						940		
26						939		
27						938		
28						937		
29						936		
30								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: SI12-01
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5819786 EASTING: 595408	ELEVATION: 940 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SILT - some clay, trace sand, moderate plasticity, dark brown, trace organics, moist. 1.5m						939
2		SILT and CLAY - some sand and gravel, high plasticity, brown, moist. 3m						938
4		SAND - fine to coarse, gravelly, subrounded to subangular, some silt, trace clay, well graded, brown, moist. 4.5m						937
5		SILT - clayey to some clay, some to trace sand and gravel, high to medium plasticity, brown, moist.						936
6								935
7								934
8		Interbedded sand and gravel lenses between 7.6 - 9.1 m.						933
9								932
10		Becomes less clay (to trace clay), and more sandy (to sandy) between 9.1 - 16.7 m.						931
11								930
12								929
13								928
14								927
15								926
16								925
17		Color change to olive grey at 16.7 m.						924
18								923
19		Sand and gravel lenses between 18.3 - 18.9 m						922
20								921
21		21.3m						920
22		SILT - sandy, some gravel, trace clay, low plasticity, olive grey, moist.						919
23								918
24								917
25								916
26								915
27								914
28								913
29								912
30								911

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13



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Burnaby, BC V5C 0E4
Tel: (604) 294-3811


LOGGED BY: TK
ENTERED BY: GN

COMPLETION DEPTH: 41.5 m
COMPLETION DATE: 3-12-12
Page 1 of 2

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: SI12-01
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5819786 EASTING: 595408	ELEVATION: 940 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
30		SILT - sandy, some gravel, trace clay, low plasticity, olive grey, mosit. (continued)						909
31								908
32								907
33								906
34								905
35								904
36								903
37								902
38								901
39								900
40								900
41								899
41		BEDROCK - fine grained matrix, light grey in color.						899
42		End of hole at 41.5 m depth. Installed SI at 41.5m.						898
43		3 telescopic SI sections installed at 5.8 mbg, 9.8 mbg, and 13.4 mbg.						897
44								896
45								895
46								894
47								893
48								892
49								891
50								890
51								889
52								888
53								887
54								886
55								885
56								884
57								883
58								882
59								881
60								881


AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 41.5 m
		ENTERED BY: GN	COMPLETION DATE: 3-12-12
			Page 2 of 2

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: S112-02
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5819421 EASTING: 595920	ELEVATION: 940 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		SILT and CLAY - gravelly, some sand, high plasticity, olive grey, dry.						939
1								938
2								937
3								936
4								935
5								934
6								933
7								932
8								931
9								930
10								929
11								928
12								927
13								926
14								925
15								924
16								923
17								922
18								921
19								920
20								919
21								918
22								917
23								916
24								915
25								914
26								913
27								912
28								911
29								
30								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 42.7 m
		ENTERED BY: GN	COMPLETION DATE: 5-12-12
			Page 1 of 2

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hydrogeological Assessment	BOREHOLE NO: SI12-02
DRILLER: Geotech Drilling	Mount Polley B.C.	PROJECT NO: VM00560B
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5819421 EASTING: 595920	ELEVATION: 940 m
SAMPLE TYPE	<input checked="" type="checkbox"/> TUBE <input type="checkbox"/> NO RECOVERY <input type="checkbox"/> SPLIT SPOON <input type="checkbox"/> GRAB	<input type="checkbox"/> MUD RETURN <input type="checkbox"/> CORE RETURN
BACKFILL TYPE	<input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH	<input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND

DEPTH (m)	SOIL SYMBOL	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
30		SILT and CLAY - gravelly, some sand, high plasticity, olive grey, dry. <i>(continued)</i>						909
31								908
32								907
33								906
34								905
35								904
36								903
37								902
38								901
39								900
40								899
41								898
42								
43		End of hole at 42.7 mbg. Installed SI at 42.7 mbg. 3 Telescopic SI sections installed at 4.2 mbg, 7.9 mbg and 11.6 mbg. 42.7m						897
44	896							
45	895							
46	894							
47	893							
48	892							
49	891							
50	890							
51	889							
52	888							
53	887							
54	886							
55	885							
56	884							
57	883							
58	882							
59	881							
60								

AMEC BBY VM00560B - HYDRO LOGS.GPJ AMEC-PG-MUL-TIWELL-DATATEMPLATE.GDT 15-3-13

	AMEC Environment & Infrastructure Suite 600, 4445 Lougheed Hwy Burnaby, BC V5C 0E4 Tel: (604) 294-3811	LOGGED BY: TK	COMPLETION DEPTH: 42.7 m
		ENTERED BY: GN	COMPLETION DATE: 5-12-12
			Page 2 of 2