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DRAFT

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

March 2013

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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 masl to 1470 masl. The topographic highs in the area are Mount Polley which peaks at approximately 1470 meters above sea level (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.

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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-porphyritic 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 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 m^3 /day and that when the pit lake reaches spill elevation (1060 masl) the groundwater influx would be 100 m^3 /day.

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-R-4 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-R-5 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 is warranted.

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.

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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 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.

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

 Table 1:
 Monitoring Well Installation Details

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.

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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) has 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.

Monitoring Well ID	Measured Groundwater Depth (m)	Ground Surface Elevation (m)	Groundwater Level Elevation (m)	Gradient
GW12-1A	4.98	991.59	986.61	LID
GW12-1B	5.12	991.37	986.25	Up
GW12-2A	21.42	1035.45	1014.03	Down
GW12-2B	21.39	1035.45	1014.06	Down
GW12-3A	3.15	1039.06	1035.91	Down
GW12-3B	2.99	1039.24	1036.25	Down
GW12-4A	21.95	989.87	968.17	Down
GW12-4B	12.81	990.12	977.06	Down
GW12-5A	GW12-5A 7.71		957.57	Down
GW12-5B	5.31	966.22	960.91	2000

 Table 2:
 Summary of Measured Groundwater Levels



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.

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 x 10 ⁻⁹
GW12-1B	Bedrock	991.37	967.0 - 970.7	>10 ⁻⁴
GW12-2A	Bedrock	1035.45	934.8 - 941.5	3 x 10⁻ ⁸
GW12-2B	Bedrock	1035.45	1005.2 - 1008.9	2 x 10 ⁻⁷
GW12-3A	Bedrock	1039.06	939.4 - 946.4	2 x 10 ⁻⁷
GW12-3B	Bedrock	1039.24	1023.1 - 1026.4	1 x 10 ⁻⁵
GW12-4A	Bedrock	989.87	889.3 - 896.5	4 x 10 ⁻⁹
GW12-4B	Bedrock	990.12	953.8 – 957.3	2 x 10 ⁻⁵
GW12-5A	Bedrock	965.28	864.9 - 872.2	>10 ⁻⁴
GW12-5B	Glacial Till	966.22	953.5 – 957.6	3 x 10 ⁻⁷

 Table 3:
 Hydraulic Testing of New Wells.



The hydraulic conductivities of all of the wells range from $>10^{-4}$ to $2x10^{-9}$ m/s. The geometric mean hydraulic conductivity of the shallow wells is $4x10^{-6}$ m/s and the geometric mean hydraulic conductivity of the deep wells is $9x10^{-8}$ 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 $7x10^{-6}$ m/s and the deep bedrock geometric mean hydraulic conductivity is $1x10^{-8}$ 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 $7x10^{-6}$ 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 and Cariboo 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 and estimates of bulk hydraulic conductivity, combined inflows to Springer and Cariboo pits may be as high as 725 m³/day which is within the range predicted by Golder Associates.

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,

AMEC Environment & Infrastructure, a division of AMEC Americas Limited

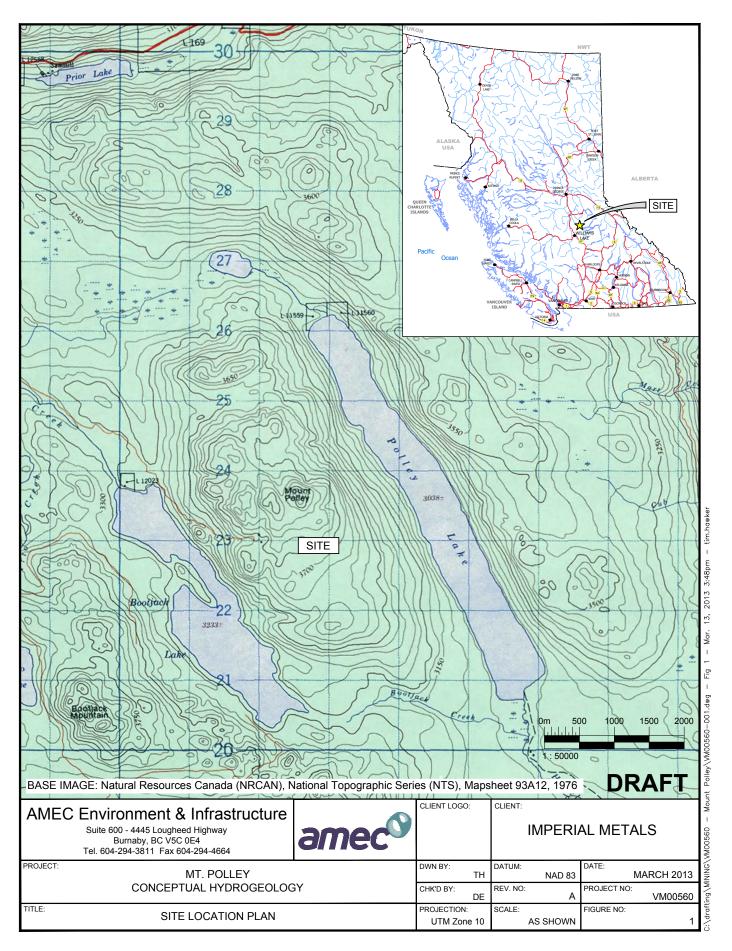
Reviewed by:

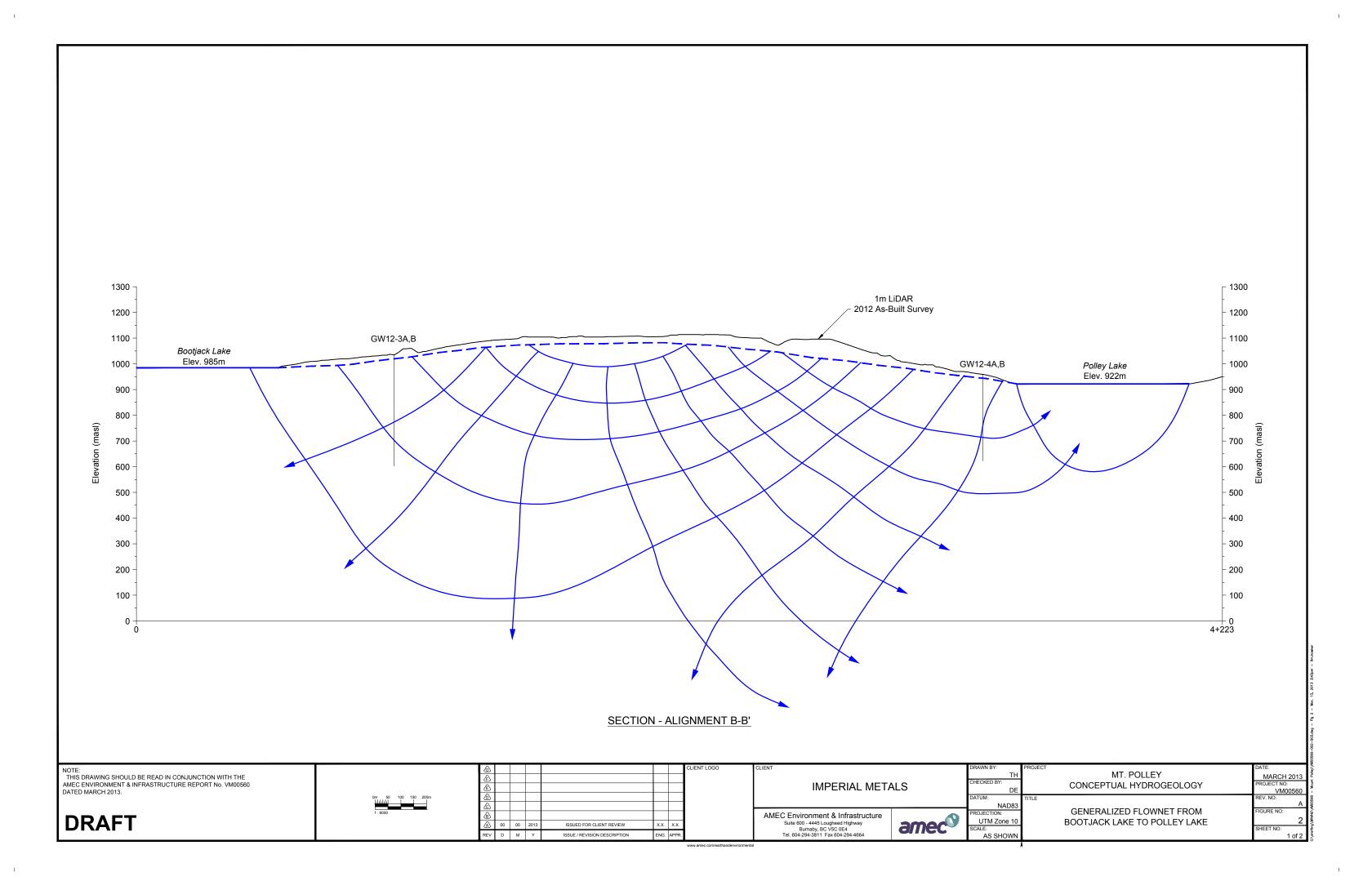
Daniel Kennedy, EIT Hydrogeologist Joann U. Bessler, P.Geo Associate Hydrogeologist

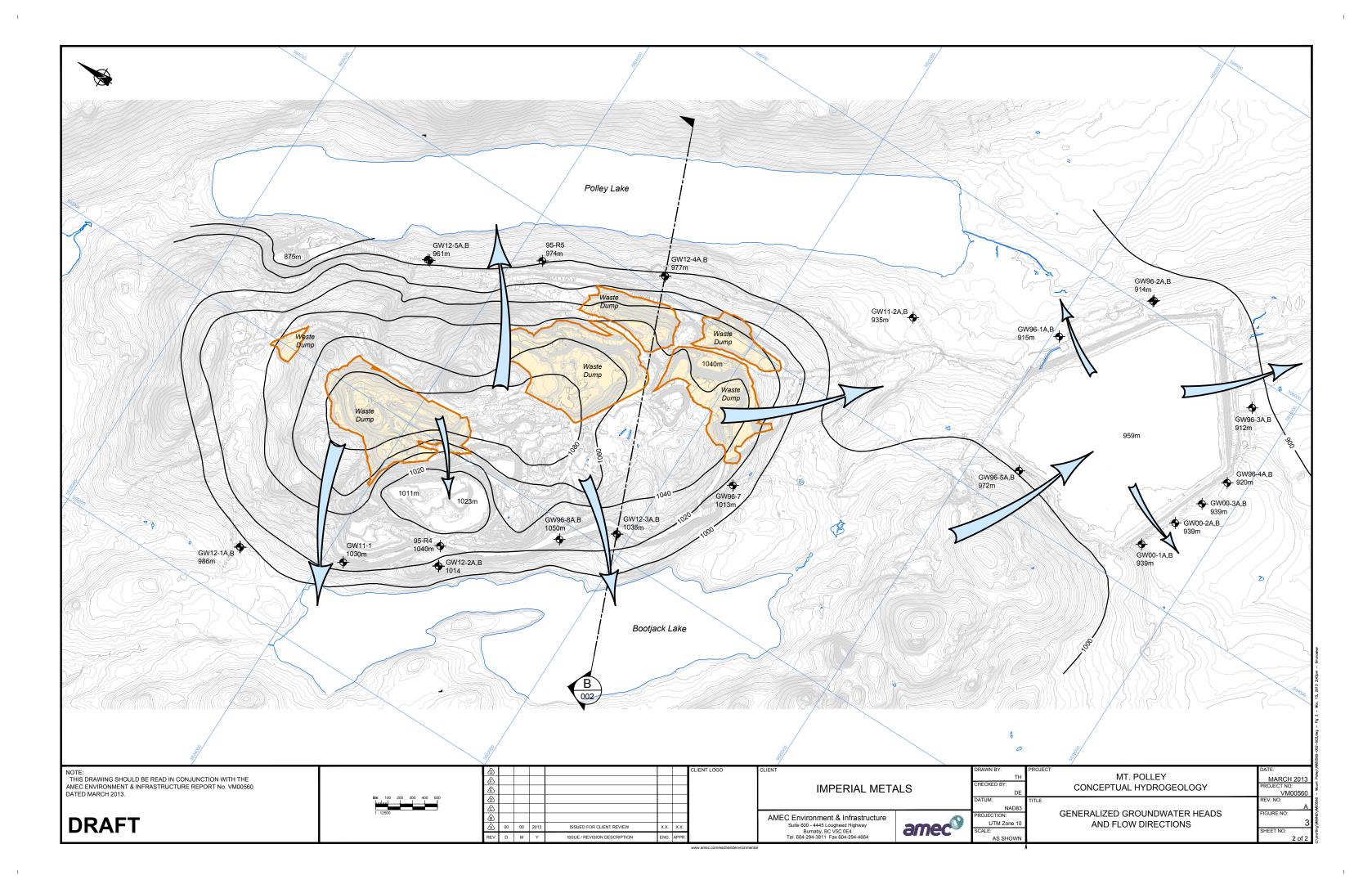
Daniel J. Emerson, P.Geo. Senior Associate Hydrogeologist



FIGURES









APPENDIX A

Borehole Logs

CLIENT: Mount Polley Mining Corporation	PROJECT: Mt. Polley Hyd	Irogeological Assess	sment BOREHOLE NO: C	BOREHOLE NO: GW12-1A			
DRILLER: Geotech Drilling	Mount Polley B.C.			JECT NO: VM00560B			
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"	NORTHING: 5824612.572						
SAMPLE TYPE TUBE NO REC			T DRILL CUTTINGS	CORE RETURN			
		GROU					
(III) TORMAS SOIL DESCRIP	TION	SAMPLE TYPE SAMPLE NO	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS ELEVATION (m)			
0 SILT - Clayey, some sand and grave moist. 2 SAND (fine) - Some silt, trace gravel dry. 3 SAND and GRAVEL (fine to coarse) - Trace silt, well graded, light brown of (gravel), dry. 5 BEDROCK - weathered, fine grained and light green in color, dry. 7 BEDROCK - (Igneous - granitic type brownish red and light green in color) 9 11 11 11	poorly graded, brow subrounded to angu sand), dark grey mass, mixture of pir bedrock) mixture of	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Measured depth to groundwater 5.89 mbg (11/30/2012)	● 991 990 988 988 988 988 986 986 988 988 988 988			
12 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	3 m.	8 9 10 11 12 13 14 15 16 17 18 19	Producing ~12 GPM.	979-978- 9778- 9778- 9779- 9799- 979			
AMEC Environmen Suite 600, 4445 Lo Burnaby, BC V5C Tel: (604) 294-381	ugheed Hwy DE4	LOGGED BY: TK ENTERED BY: GN		COMPLETION DEPTH: 100.6 m COMPLETION DATE: 20-11-12 Page 1 of 4			

CLIEN	T: Mo	unt Polley Mining Corporation	on	PROJECT: Mt. Polley Hydrogeological Assessment BOREHOLE NO: GW12-1A										
		eotech Drilling		Mount Pol	-						ROJECT NO: VN			
		METHOD: Fraste DR238/A			G: 5824612.57						LEVATION: 991.0			
SAMPI	LE TY	PE TUBE		OVERY	SPLIT SPOO	ON					IUD RETURN	COR		RN
BACKE	FILL T	YPE BENTONI	ITE PEA GRA	VEL	SLOUGH		. C	GROL	JT	D	RILL CUTTINGS	SANI	C	
DEPTH (m)	SOIL SYMBOL	:	SOIL DESCRIF	A SAMPLE TYPE SAMPLE TYPE SAMPLE NO			ADDITIONAL	INFORMATION	MELL	INSTALLATION DETAILS	ELEVATION (m)			
30		BEDROCK - (Igned	ous - granitic type	bedrock)	mixture of	30 <u>,1m</u> /		20	+			•	•	961-
-31		brownish red and li	ight green in color,	wet.								•	•	960-
-32								21						959
-33								22					•	
-34								~~						958-
-35								23						957-
-36													•	956-
-37								24				•	•	955-
-38								25						954-
-39													•	953-
40								26				•	•	952
41								27						951-
42														950-
43								28				•	•	949
44								29					•	948-
45														947
46								30				•	•	946
2 47								31					•	945-
48														944
40								32				•	•	943-
49 50 51 51								33				•	•	942-
51								33						941-
52		Trace Sulphides						34						940-
53												•		939
54								35						938-
								36				•		937-
LE .												•	•	936-
SE			(= <u></u> , -	0 4				37						935-
57		Possible fracture z	one trom 57.0 to 5	9.4 m.				38						934-
59													•	933-
59 60								39				•	•	932-
	-		AMEC Environmer Suite 600, 4445 Lo	ugheed H										
AWEC	Suite 600, 4445 Lougheer Burnaby, BC V5C 0E4 Tel: (604) 294-3811)Ē4	-	ENTERE	U B I	G	N		COMPLETION DATE: 20-11-12 Page 2 of 4			2 of 4

		unt Polley Mining Corporation	on	_	PROJECT: Mt. Polley Hydrogeological Assessment BOREHOLE NO: GW12-1A									
		eotech Drilling		-	unt Polley B.C.					PROJECT NO: VM00560B				
		METHOD: Fraste DR238/A	• ()		RTHING: 5824612.57					VATION: 991.				
SAMPL							GRA						RN	
BACKF		PE BENTONI		RAVEL	SLOUGH	<u> .</u>	GRC			L CUTTINGS	SANE)		
DEPTH (m)	SOIL SYMBOL	:	SOIL DESCR	IPTIC	ON	SAMPI F TYPF	SAMPLE NO	RECOVERY (%)	ADDITIONAL IN	IFORMATION	MELL	INSTALLATION DETAILS	ELEVATION (m)	
60	Ⅲ≡ ≡	BEDROCK - (Igned									•	•	931-	
61	≡	brownish red and li					40				•	•		
62	≡∥ ∥≡												930	
-63	≡ ≡						41					. •	929	
64	≡Ш						42				•	•	928-	
Ē	Possible fracture zone from 64.0 to 65.5 m.										•	•	927	
E													926-	
66												•	925-	
67					44					•	924-			
68	≝∥						45						923-	
69	≝Ⅲ Ⅲ≡						45				•	. •		
70							46				•	•	922	
71													921-	
72	≝∏ ≡≡						47						920-	
73	≝∏ ≡≡						48				•	•	919	
-74	≝∥ ∥≡										•	•	918-	
-75	≝∥ ∥≡						49						917-	
-76	≝∥ ∥≡												916-	
	≝∥ ∥≡						50					•	915-	
	≝∥ ∥≡						51						914-	
78	≝∥ ∥≞										•	•	913-	
≝≣-79 ≦	≝≡ ≡≡						52				•	•	912-	
80	≝∏ Ⅲ≡											•		
₹Ē-81	≝≡ ≡≡						53						911-	
82	≝≡ ≡≡						54					•	910-	
83	≝≡ ≡≡												909	
							55						908-	
85	≝≡ ≡≡											•	907-	
86					56				•	•	906			
ξE I						57						905-		
												904-		
88					58				•	•	903-			
ËE 🗸	≡										•	•	902-	
						LOGGED E	BY: Th	K		COMPLETION DEPTH: 100.6 m				
	a	nec ^o	Suite 600, 4445 Burnaby, BC V5	C 0Ē4	eea Hwy	ENTERED	BY: C	GN		COMPLETION DATE: 20-11-12 Page 3 of 4				
a N			Tel: (604) 294-3	311		1						Page	SOT 4	

CLIEN	T: Mo	unt Polley Mining Corporati	PROJECT: Mt. Polley Hydrogeological Assessment BOREHOLE NO: GW12-1A											
DRILLE	R: G	eotech Drilling			olley B.C.						PROJECT NO: VM00560B			
DRILL	TYPE/	METHOD: Fraste DR238/	Air Rotary (ODEX) 6"	NORTHI	NG: 5824612.57		G: {	59042	20.6	73 ELE	EVATION: 991.6			
SAMPL	E TYF	PE TUBE	NO RE	COVERY	SPLIT SPO	ON		GRA			D RETURN	CORE RETUR	RN	
BACKF		PE BENTON	IITE 门 PEA G	RAVEL	SLOUGH			GRO	UT		ILL CUTTINGS	SAND		
DEPTH (m)	SOIL SYMBOL		SOIL DESCRI	PTION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	additional in	NFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)	
90		BEDROCK - (Igne	ous - granitic typ	e bedrock	<) mixture of			59					901-	
-91 -92		brownish red and I			60					901				
-93					61					899 898				
-94 -95	≡ ≡				62					897				
-96								63					896 895	
97 98								64					894	
-99								65					893	
100						100.6m		66						
101		End of hole at 100	.6 m depth.							Produ GPM	Producing ~80-100 GPM.		891- 890-	
102														
103													889	
104													888 887	
105													886	
-107													885	
2 													884	
													883	
													882	
111													881-	
112													879	
113													878-	
													877-	
115 116													876	
117													875-	
													874-	
119 119													873	
120					the setues								872-	
AMEC BBY		noo	Suite 600, 4445 I	ougheed I	t & Infrastructure LOGGED BY: TK ENTERED BY: GN						COMPLETION DEPTH: 100.6 m COMPLETION DATE: 20-11-12			
AMEC	AMEC Environme Suite 600, 4445 L Burnaby, BC V5C Tel: (604) 294-38:						ט ט.	. 0			Page 4 of 4			

CLIENT: Moun	t Polley Mining Corporation	PROJEC	PROJECT: Mt. Polley Hydrogeological Assessment BOREHOLE NO: GW12-1B										
DRILLER: Geo			Mount Po	•						ROJECT NO: VM00560B			
	ETHOD: Fraste DR238/Ai			NG: 5824617.36						EVATION: 991.4			
SAMPLE TYPE				SPLIT SPO			GRAE			ID RETURN		eturi	N
BACKFILL TYP	BENTONIT	E PEA GI	RAVEL	SLOUGH		(GROL	UT		ILL CUTTINGS	SAND		
DEPTH (m) SOIL SYMBOL		OIL DESCRI		1 1 1 1		SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL II	NFORMATION	WELL	DETAILS	ELEVATION (m)
$ \begin{array}{c} 1 \\ 1 \\ 2 \\ 3 \\ 3 \\ 4 \\ 5 \\ 6 \\ 6 \\ 6 \\ 6 \\ 6 \\ 6 \\ 6 \\ 6 \\ 6$	SILT - Clayey, some moist. SAND (fine) - Some dry. BEDROCK - weathe brownish red and gr BEDROCK - Igneou brownish red and lig Wet End of hole at 24.4	ered, fine graine rey green in colo is (Granitic type th green in colo m depth.	d mass, r d mass, r r, dry.	graded, brow	1.5m VN, 6.1m 12.2m				grour 5.97	sured depth to ndwater mbg (11/30/12) ucing ~ 12 GPM			991 990 989 989 987 988 988 988 988 988 988 988
	AMEC Environmen Suite 600, 4445 Lo Burnaby, BC V5C (Tel: (604) 294-381				LOGGED					COMPLETION DEPTH: 24.4 m COMPLETION DATE: 22-11-12			
	iec -	0Ē4 11		ENTERED BY: GN					Page 1 of 1				

CLIEN	CLIENT: Mount Polley Mining Corporation					PROJECT: Mt. Polley Hydrogeological Assessment							BOREHOLE NO: GW12-2A			
		eotech Drilling			Nount Pol	,						PROJECT NO: VM00560B				
-		METHOD: Fraste DR238/A				G: 5823179.94						EVATION: 1035				
SAMPL				RECOV		SPLIT SPO	NC	_	GRA			ID RETURN		RE RETUR	RN	
BACKF		PE BENTONI	TE <u>·</u> PE	A GRAV	EL	SLOUGH			GRO	UT		ILL CUTTINGS	SA	1D		
DEPTH (m)	SOIL SYMBOL	ę	SOIL DESC	ript	ION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL I	NFORMATION	- IIIW	WELL INSTALLATION DETAILS	ELEVATION (m)	
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20		SILT and CLAY - S brown, moist BEDROCK - weath color, dry. BEDROCK - Igneo greyish purple and	iered, fine gra us (Granitic ty	ined n	nass, lig	ght green ir	<u>6.1m</u> 7.6m		1 2 3 4 5 6 7 8 9		groui 21.3:	sured depth to ndwater 3 mbg (11/30/12) ucing ~ 5-6 GPM.			1035 1034 1033 1033 1034 1033 1034 1035 1037 1030 1029 1026 1027 1026 1027 1028 1027 1028 1027 1028 1021 1021 1021 1021 1021 1017 1018 1017 1018 1017 1018 1019 1011 1011 1012 1011 1012 1011 1012 1013 1014 1017 1018 1019 1011 1011 1011 1011	
29 - 29																
<u>≸</u> 30					0 1								•		1006	
	-		AMEC Enviror Suite 600, 444	45 Loud	heed H							COMPLETION DEPTH: 100.6 m				
	Anter Environment of Suite 600, 4445 Lough Burnaby, BC V5C 0E4 Tel: (604) 294-3811			4	-	ENTERE	:D B	ir: G	IN		COMPLETION DATE: 24-11-12 Page 1 of 4					

CLIEN	CLIENT: Mount Polley Mining Corporation					PROJECT: Mt. Polley Hydrogeological Assessment BOREHOLE NO: GW12-2A										
		eotech Drilling										PROJECT NO: VN				
DRILL	TYPE/	METHOD: Fraste DR238/A	ir Rotary (C	,		IG: 5823179.94						ELEVATION: 1035				
SAMPL						SPLIT SPO	ON	-	GRA			MUD RETURN		RE RETUR	₹N	
BACKF		PE BENTONI	TE	PEA GRA	VEL	SLOUGH			GRO	UT		DRILL CUTTINGS	SAN	ID		
DEPTH (m)	SOIL SYMBOL	\$	soil d	ESCRIP	AND RECOVERY (%)				ADDITIONA	L INFORMATION	WEIL	INSTALLATION DETAILS	ELEVATION (m)			
30 -31		BEDROCK - Igneo				mixture of	30.5m		10				•	•	1005	
-32		brownish red and g	rey gree	n in color,	wet										1004 1003	
-33 -34		Possible fracture zo	Possible fracture zone from 33.5 - 36.5 m.										•	•	1002	
-35												1001				
-36 -37									12				•	•	999 998	
-38															998-	
-39 -40									13				•	•	996 995	
-41															995	
-42 -43		Possible fracture zo	one from	42.7 - 44	.2 m.				14				•	•	993	
-44															992 991	
45 46									15					•	990	
47															989 988	
- 48 49									16				•	•	987	
49 49 50 51 51 52 53 54 55 55 55 55 55 56 57 58 59 60 60															986-	
52									17						984 983	
53															982	
55									18				•		981	
56															980-	
58									19						978	
59													•		977-	
							LOGGE					COMPLETION				
	AMEC Environmer Suite 600, 4445 Lo Burnaby, BC V5C Tel: (604) 294-381			, BC V5C 0	Ē4	wy	ENTERE	DB	Y: G	iN		COMPLETION DATE: 24-11-12 Page 2 of 4				

CLIEN	T: Mo	unt Polley Mining Corporati	PROJECT: Mt. Polley Hydrogeological Assessment						BOREHOLE NO: GW12-2A					
DRILLE	ER: G	eotech Drilling		Mount Polley B.C.						PROJECT NO: VM00560B				
DRILL	TYPE/	METHOD: Fraste DR238/A	Air Rotary (ODEX) 6"	NORTH	ING: 5823179.94	43 EASTING	G: 59	9115	54.532	2	ELEVATION: 1035.4 m			
SAMPL	E TYF	PE TUBE	NO REC	OVERY	SPLIT SPC	DON	G	GRAE	3	<u> </u>	MUD RETURN	COR	E RETUF	RN
BACKF		YPE BENTON	ITE 📄 PEA GR	AVEL	SLOUGH	[G	GROL	JT		DRILL CUTTINGS	SAN	C	
DEPTH (m)	SOIL SYMBOL		SOIL DESCRI	PTION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONA	L INFORMATION	WELL	INSTALLATION DETAILS	ELEVATION (m)
60 61 62 63 64 65 66 66 67 66 66 67 70 71 71 71 72 73 74 75 76 77 77 78 80 81 88 83 84 83 84 83 84 85		BEDROCK - Igneo brownish red and g						20 21 22 23 24 25 26 27		Pr G	roducing ~40-50 PM.			975 977 977 977 977 977 977 977 977 977
AM00000 - HANKO LOGS/GHA AM6C-4 International and the second sec								28 29						951 950 949 948 948 947 946
			AMEC Environme			LOGGED	BY:	TK			COMPLETION DEPTH: 100.6 m			
IMEC BBY	2	nec ^o	Suite 600, 4445 L	ougheed		ENTERE					COMPLETION DEPTH: 100.6 m COMPLETION DATE: 24-11-12			
Į.	٦	IIEC	Burnaby, BC V5C	∪⊑4 1				. 01	-			E		3 of 4

CLIEN	CLIENT: Mount Polley Mining Corporation					PROJECT: Mt. Polley Hydrogeological Assessment						BOREHOLE NO: GW12-2A				
		eotech Drilling			Mount Po							PROJECT NO: VM00560B				
DRILL	TYPE/	METHOD: Fraste DR238/A				NG: 5823179.94		G: 5	9115	54.5	32 ELE	EVATION: 1035				
SAMPL				NO RECC					GRAE			D RETURN		CORE RETUR	RN	
BACKF		PE BENTONI	TE · F	PEA GRA	VEL	SLOUGH			GROL	UT		LL CUTTINGS	<u></u>	SAND		
DEPTH (m)	SOIL SYMBOL	5	SOIL DES	CRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	additional in	NFORMATION		WELL INSTALLATION DETAILS	ELEVATION (m)	
90 91 92 93 94 95 96 97 98 99 99 99		BEDROCK - Igneo brownish red and g	wet (cc	, mixture of ontinued)			303132		Produ	ucing ~60 GPM.			945 944 943 942 942 941 940 938 938 938 938 937 938			
-101									33			Producing >100 CDM			935 934	
102 103 104 105 106 106 107 106 107 108 109 109 109 109 109 109 109 109 109 109		End of hole at 102.	1 m depth.				102.1m				Produ	ucing >100 GPM.			933 932-11-11-11 930-11-11-11 930-11-11-11 929-12-11-11 922-11-11 922-11-11-11 922-11-11 921-11-11 921-11 9	
≣ <u>120</u>					ment & Infrastructure LOGGED BY: TK					COMPLETION DEPTH: 100.6 m						
	AMEC Environmen Suite 600, 4445 Lo Burnaby, BC V5C C Tel: (604) 294-381)Ē4	ıwy	ENTERE	D BY	r: G	N		COMPLETION DATE: 24-11-12 Page 4 of 4						

CLIEN	T: Mo	unt Polley Mining Corporation						BOREHOLE NO: GW12-2B					
		eotech Drilling		Mount Po						PROJECT NO: VM00560B			
		/METHOD: Fraste DR238/A			NG: 5823176.64					ELEVATION: 1035			
SAMPL					SPLIT SPO		GR			IUD RETURN		TURN	
BACKF	ILL T	YPE BENTONI	ITE PEA GR	AVEL	SLOUGH	<u>[</u>	GR	OUT		RILL CUTTINGS	SAND		
DEPTH (m)	SOIL SYMBOL		SOIL DESCRIF	PTION			SAMPLE IYPE SAMPLE NO	RECOVERY (%)	ADDITIONAL	. INFORMATION	WELL	DE IAILS ELEVATION (m)	
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 8 9 10 11 12 13 14 15 16 10 11 12 13 14 16 17 18 19 20 21 22 23 24 25 26 27 20 20 20 20 20 20 20 20 20 20 20 20 20		SILT and CLAY - s brown, moist. BEDROCK - Igneo greenish grey and I	ous (granitic type b	edrock),	mixture of		1 2 3 4 5 6 7 8 9		Me gro 21.	easured depth to bundwater .12 mbg (11/30/12)		1035 1034 1033 1034 1033 1034 1033 1034 1033 1034 1035 1037 1038 1029 1020 1027 1026 1027 1026 1027 1028 1029 1020 1027 1028 1029 1029 1020 1021 1021 1021 1021 1021 1021 1021 1019 1018 1017 1018 1019 1011 1011 1011 1011 1011 1011 1011 1011 1011 1011	
28 29 30	27 28 29 30											1007 1006	
	AME(`Environment & In					LOGGED				COMPLETION DEPTH: 30.2 m			
	Anice chowners of the second s		0Ē4		ENTERED) BY:	GN		COMPLETION DATE: 25-11-12 Page 1 of 2				

CLIEN	CLIENT: Mount Polley Mining Corporation					PROJECT: Mt. Polley Hydrogeological Assessment						BOREHOLE NO: GW12-2B					
		eotech Drilling			Mount Po							PROJECT NO: VM00560B					
		METHOD: Fraste DR238/A				NG: 5823176.64						ELEVATION: 1035					
SAMPL				O RECC		SPLIT SPO	NC	-	GRA			IUD RETURN		CORE RETUR	RN		
BACKF	ILL T	YPE BENTON	ITE <u>i</u> Pi	EA GRA	VEL	SLOUGH			GRO	UT		ORILL CUTTINGS		SAND			
DEPTH (m)	SOIL SYMBOL		SOIL DESC	CRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL	_ INFORMATION		WELL INSTALLATION DETAILS	ELEVATION (m)		
30		End of hole at 30.5	m denth				30.5m		10		Pro	oducing ~ 12 GPM.			1005		
-31		End of hole at 50.5	ni uepin.												1004-		
-32															1003-		
-33															1002		
-34															1002		
-35																	
-36															1000		
-37															999		
-38															998- 997-		
-39															996		
-40															995-		
41															994-		
42															993-		
-43															992-		
-44															991		
45															990		
-46															989-		
°															988-		
<u>a</u> e															987-		
															986-		
49 19 19 19 19 19 19 19 19 19 19 19 19 19															985-		
52															984		
≧ ⊒_53															983-		
54															982		
1927 AMEC-PG-MOL INVERI 1937 AMEC-PG-MOL INVERI 1937 AMEC-PG-MOL INVERI 1937 AMEC-PG-MOL INVERI															981- 980-		
56 50	5													980-			
57	7													979-			
TAH - 90900000 59															977-		
59 000000000000000000000000000000000000															976		
> <u>= 00</u> }			AMEC Enviro				LOGGEI				ļ	COMPLETION			3		
AMEC BBY	3	nec [©]	Suite 600, 44 Burnaby, BC Tel: (604) 29	V5C 0)Ē4	ivv y	ENTERE	ED E	3Y: G	SN		COMPLETION	I DATE		2 of 2		

	ount Polley Mining Corporation	on	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						BOREHOLE NO: GW12-3A				
	Geotech Drilling		Mount Polley B.						PROJECT NO: VM00560B				
	E/METHOD: Fraste DR238/A			22101.875 EASTI	_				EVATION: 1039	CORE RETURN			
SAMPLE T BACKFILL	_	ITE PEA GRA		PLIT SPOON	-	GRAI GRO			D RETURN	SAN		an	
BACKFILL		ITE PEA GRA	VEL IIIIS	LUUGH		GRU			LL CUTTINGS				
DEPTH (m) SOIL SYMBOL	:	SOIL DESCRIP	TION		SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL IN	FORMATION	MELL	INSTALLATION DETAILS	ELEVATION (m)	
0 1 2 3 4 4 5 6 6 6 7 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	MINE FILL - Sand graded, olive grey, SAND and GRAVE subangular, some brown, moist. Wet BEDROCK, weath angular, well grade wet. BEDROCK - Igneo greenish grey and Major fracture zone	dry. EL - fine to coarse of silt, trace organics, ered - fine to coars ed, low plasticity, gr bus (granitic type be brownish red in col	grained, subr well graded e, subrounde ey and brow edrock), mix or, wet.	2.7m rounded to , dark <u>6.1m</u> ed to n in color, 9.1m		1 2 3 4 5 6 7 8		groun 3.88 r	ured depth to dwater mbg (11/30/12)			LU 1038 1037 1036 1035 1036 1037 1036 1037 1037 1037 1038 1037 1038 1037 1038 1037 1038 1037 1038 1037 1038 1039 1029 1028 1027 1029 1028 1027 1029 1028 1029 1019 10	
27 28 29 30	29							Produ soft w	ıcing ~ 20 GPM, /ater.			1011 1010-	
	S	AMEC Environmen							COMPLETION	I DEPTH:	100.6 m		
	mar	Suite 600, 4445 Lou Burnaby, BC V5C 0	ugheed Hwy E4						COMPLETION		8-11-12		
	anec Awec Environment Suite 600, 4445 I Burnaby, BC V5C Tel: (604) 294-38		- '	ENTERED BY: GN					Page 1 of 4				

CLIEN	T: Mo	unt Polley Mining Corporation							ent BO	BOREHOLE NO: GW12-3A				
		eotech Drilling		Mount Po							PROJECT NO: VM00560B			
-		METHOD: Fraste DR238/A			NG: 5822101.87						EVATION: 1039			
SAMP					SPLIT SPO	ON		GRA			D RETURN	COR		RN
BACK		PE BENTONI	ITE PEA GR	AVEL	SLOUGH			GRO	UT		ILL CUTTINGS	SAN)	
DEPTH (m)	SOIL SYMBOL	:	SOIL DESCRII	PTION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	additional if	NFORMATION	WELL	INSTALLATION DETAILS	ELEVATION (m)
30		BEDROCK - Igneo	ous (granitic type b	edrock)	, mixture of			10				•	•	
32 33 34 35								11						1007 1006 1005 1004
-36 -37								12		Produ hard	ucing ~ 20 GPM, water.			1003 1002
-38 -39 -40								13						1001 1000 999
-41														998-
42								14						997 996
-44														995
-45														994
-46 												•	•	993- 992-
48												•	•	991-
49												•	•	990-
51														989- 988-
52														987-
53														986
54 55												•		985- 984-
56												•	•	983-
57	7												982	
49 49 50 51 52 53 53 55 55 56 56 57 58 59 60												•		981- 980-
			AMEC Environme Suite 600, 4445 L				GGED BY: TK				COMPLETION DEPTH: 100.6 m			
AMEC BBY	91	nec [©]	Burnaby, BC V5C Tel: (604) 294-38	0Ĕ4	,	ENTERE	DΒ	Y: G	N		COMPLETION	DATE: 28		2 of 4

CLIEN	T: Mo	unt Polley Mining Corporation	PROJEC							BOREHOLE NO: GW12-3A			
		eotech Drilling		Mount P	olley B.C.		PR	PROJECT NO: VM00560B					
		METHOD: Fraste DR238/A	• • • •		NG: 5822101.87					EVATION: 1039			
SAMP				ECOVERY	SPLIT SPC		GR/			JD RETURN	COR		RN
BACK		PE BENTONI	ITE · PEA	GRAVEL	SLOUGH		GRO	DUT		RILL CUTTINGS	SAN	C	
0 DEPTH (m)	SOIL SYMBOL	BEDROCK - Igneo	SOIL DESCR) mixture of	SAMPI F TYPF	SAMPLE NO	RECOVERY (%)	ADDITIONAL I	NFORMATION	MELL	DETAILATION	ELEVATION (m)
61	X	greenish grey and									•	•	978-
62		greenisi grey and			. (continueu)								978 977
-63													976-
-64												•	975
65 66													974– 973–
-67											•	•	972
-68													971-
-69													970-
-70 -71											•	•	969 968
-72													967-
-73											•	•	966-
-74													965-
-75 -76											•	. •	964
E											•	•	963- 962-
21-0-01 											•		961-
											•	•	960-
79 79 70 70 70 70 70 70 70 70 70 70 70 70 70													959
82													958- 957-
83											•	•	956
-5 													955-
MA 19											•	•	954
86												953	
88													952- 951-
600 1000 1											•	٠	950
	İ ŠŠŠ		AMEC Environr	nent & Infra	structure	LOGGED E	<u> </u> 2V- т			COMPLETION		100.6 ~	
	20	nec [©]	Suite 600, 4445 Burnaby, BC V	Lougheed I		ENTERED				COMPLETION			
	J	IIEC	Tel: (604) 294-3	le u⊑4 1811						1			3 of 4

	ount Polley Mining Corpora	ation							ent BOI	BOREHOLE NO: GW12-3A				
	Geotech Drilling		Mount Polley B.C.							PROJECT NO: VM00560B				
	E/METHOD: Fraste DR238			G: 5822101.875						EVATION: 1039				
SAMPLE TY					N	_	GRAE			D RETURN	CORE RETU	RN		
BACKFILL 1	TYPE BENTC	DNITE PEA GRA	VEL	SLOUGH			GRO	UT	DRI	LL CUTTINGS	SAND			
DEPTH (m) SOIL SYMBOL		SOIL DESCRIF	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL IN	NFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)		
90 91 92 93 94 95 96 97 98 99 99 90 100 101 102 103 104 105 106 107 107 108 109 110 107 108 109 110 107 110 108 109 110 111 111 111 111 111 111 111 111		eous (granitic type b d brownish red in co			100.6m				Produ	ucing ~ 20 GPM.		948 947 947 947 947 947 947 947 947 947 947		
			ent & Infrastructure LOGGED BY: TK						COMPLETION DEPTH: 100.6 m					
	mer	Suite 600, 4445 Lo Burnaby, BC V5C	-ougheed Hwy								DATE: 28-11-12			
	AMEC Environme Suite 600, 445 Lc Burnaby, BC V5C Tel: (604) 294-381		1							Page 4 of 4				

	ount Polley Mining Corporation	on	PROJECT: Mt. Po	lley Hydrogeologica	al Asse	BOREHOLE NO: GW12-3B						
	Geotech Drilling		Mount Polley B.C.					PROJECT NO: VM00560B				
	METHOD: Fraste DR238/A		NORTHING: 5822									
SAMPLE TY				IT SPOON	GRA				RN			
BACKFILL T	YPE BENTONI	ITE PEA GRA	VEL SLC	UGH [.	GRO	UT		SAND				
DEPTH (m) SOIL SYMBOL	5	SOIL DESCRIP	TION	SAMPI E TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)			
0 0 1 2 3 4 5 6 7 8 9 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	MINE FILL - SAND silt, moderately gra SILT and CLAY - s brown, trace organ CLAY - silty trace s moist. BEDROCK - weath grey and brownish BEDROCK - Igneo greenish grey and I Wet Major fracture zone End of hole at 16.1	aded, olive grey, dr come sand and gra lics, moist. sand and gravel , h nered, fine grain ma red in color, dry. ous (granitic type ba brownish red in co e from 12.2 - 13.7 n e from 15.2 - 16.1 n	y. vel, high plasti igh plasticity, b ass, mixture of edrock) mixture lor, dry. m.	some 		RE	Measured depth to groundwater 3.13 mbg (11/30/12) 2.99 mbg (12/17/12) Producing ~12 GPM.		1039 1038 1037 1036 1037 1036 1037 1036 1037 1038 1039 1031 1032 1031 1032 1031 1032 1023 1024 1025 1026 1027 1028 1029 1021 1022 1021 1022 1021 1010 1011 1012 1011			
30		t & Infrastructure ugheed Hwy	LOGGED E ENTERED				COMPLETION DEPTH: 16.1 m					
d	anec Suite 600, 4445 Lc Burnaby, BC V5C Tel: (604) 294-381				50	•••	COMPLETION DATE: 27-11-12 Page 1 of 1					

CLIENT: Mount Polley Mining Corporation		PROJECT: N	It. Polley Hydroge	ological	Asse	ssme	nt BOREHOLE NO:	GW12-4A		
DRILLER: Geotech Drilling		Mount Polley	B.C.				PROJECT NO: VI	Л00560B		
DRILL TYPE/METHOD: Fraste DR238/Air Rotary	(ODEX) 6"		5822894.269 EAS	STING:	5941 ⁻	17.41	3 ELEVATION: 989.	.9 m		
SAMPLE TYPE TUBE	NO RECO		SPLIT SPOON		GRA	3			ETURN	N
BACKFILL TYPE BENTONITE	PEA GRA	VEL	SLOUGH		GRO	UT		SAND :		
DEPTH (m) SOIL SYMBOL	DESCRIP	TION		SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATION	WELL	DETAILS	ELEVATION (m)
0 Main SAND - silty, trace Gravel, cobbles, moist 2 GRAVEL - Igneous (granit cobbles, subhedral light grantrix, pophyrhytic, dry 3 GRAVEL - Igneous (granit cobbles, subhedral light grantrix, pophyrhytic, dry 5 GRAVEL - Igneous (granit cobbles, subhedral light grantrix, pophyrhytic, dry 8 BEDROCK - Igneous (granit cobbles, subhedral light green (maf filled fractures from 18.28 10 Major fracture zone from 1 11 Major fracture zone from 1 20 EBDROCK - Igneous (grantrix) 21 BEDROCK - Igneous (grantrix) 22 BEDROCK - Igneous (grantrix)	ic type rocl een (mafic ained, som ic type rocl een (mafic nitic type b ic) phenoci to 24.38, d 8.28 - 24.3	 k), coarse, s he silt, some k), coarse, s k), coarse, s he nocryst edrock) porysts, grey n ry 88 m. 88 m. 	a gravel, e gravel, some sts, grey phyrhytic, matrix, calcite	.6m .5m .1m .8m	1 2 3 4 5 6 7 8	8	Measured depth to groundwater 21.95 mbg (12/15/12)			Image: Second
aphanitic, brown/yellow, dr 26 27 28 BEDROCK - Igneous (gra subhedral light green (mat content increases with dep	nitic type b ic) phenoc	edrock) pop	ohyrhytic,	.4m	9					964 963- 962- 961-
AMEC Suite Burna			200	GED B ERED E				N DEPTH: 100. N DATE: 7-12- P		

CLIENT:	Moun	t Polley Mining Corporation	n		PROJEC	T: Mt. Polley Hy	drogeologi	cal	Asse	ssm	ent BC	Orehole No: C	GW12-4	I A		
DRILLEF	R: Geo	tech Drilling			Mount Po	lley B.C.					PF	ROJECT NO: VM	100560	В		
DRILL T	YPE/M	ETHOD: Fraste DR238/A	ir Rotary (ODEX)	6"	NORTHIN	NG: 5822894.26	9 EASTING	G: 8	5941 ⁻	17.4	13 EL	EVATION: 989.9	9 m			
SAMPLE	E TYPE	TUBE		D RECC	VERY	SPLIT SPO	ON		GRA	В	Шм	JD RETURN		ORE I	RETUR	N
BACKFIL	LL TYP	E BENTONI	TE <u>·</u> PE	A GRA	VEL	SLOUGH	[GRO	UT	DF	RILL CUTTINGS	:::S	AND		
DEPTH (m)	SOIL SYMBOL	S	SOIL DESC	RIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL	INFORMATION		WELL INSTALLATION	DETAILS	ELEVATION (m)
30 31 32	¥3 5	BEDROCK - Igneo subhedral light gree content increases v	en (mafic) ph	enocr	ysts, gr	ey matrix, gi	reen		10		Proc	ducing ~ 5 GPM.				959 958
33 34									11						•	957 956
35 36 37									12							955 954 953
38 39									13					•	•	952 951
40 41 42															•	950 949 948
43 44 44									14							947 946
45 46									15				•		•	945- 944- 943-
48 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX									16							942 941
									17							940 939 938
53 53 54 54 54 54 54															•	937 936
55 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX									18						•	935 934 933
									19						•	932 931
	222		AMEC Enviro	nmen	t & Infras	tructure	LOGGED	BV	אח י			COMPLETION		H 10	<u> </u>	
		nec [©]	Suite 600, 44	45 Loi	ugheed H		ENTERE					COMPLETION				
		IEC _	Burnaby, BC Tel: (604) 294	v5C 0 1-3811	/⊑4					•						2 of 4

CLIENT	: Mou	unt Polley Mining Corporation	on	PROJE	CT: Mt. Polley Hy	drogeologic	al As	ssess	sment	BORE	Hole No: G	W12-4A		
DRILLE	R: Ge	eotech Drilling		Mount F	Polley B.C.					PROJ	IECT NO: VM	00560B		
DRILL T	TYPE/	METHOD: Fraste DR238/A	Air Rotary (ODEX) 6"	NORTH	HING: 5822894.26	9 EASTING	6: 59	4117	7.413	ELEV	ATION: 989.9	m		
SAMPL	E TYF	E TUBE		OVERY	SPLIT SPO	ION	GF	RAB			RETURN	COF	RE RETU	RN
BACKFI	ILL TY	PE BENTON	ITE PEA GF	AVEL	SLOUGH	•	G	ROUT	r 🛛		CUTTINGS	SAN	ID	
DEPTH (m)	SOIL SYMBOL		SOIL DESCRI	PTION	l		SAMPLE I YPE SAMPLE NO	DECOVEDV (%)	ADDITIDDA	ial inf	ORMATION	WFLI	INSTALLATION DETAILS	ELEVATION (m)
60		BEDROCK - Igneo	ous (granitic type	bedrock) pophyrhytic		-						•	
61		subhedral light gre					2	20					•	929
62		content increases v												928-
														927-
63												•	•	
64							2	21				•	•	926-
65	ХХ ХХ													925
66														924-
												•	•	923-
67							2	22				•	•	
68	XX													922-
69												•	•	921-
70							2	23				•	•	920-
-71							1					•	•	919-
														918-
72	XX													
73							2	24				•	•	917
74												•	•	916-
75														915-
76													•	914-
							2	25						913-
77	XX													1 =
- 78	XX													912
79							2	26		Droduoi	ng a 19 CDM	•	•	911-
											ng ~ 18 GPM.	•	•	910
₹ -81 k	<u> </u>													909-
														908
							2	27				•	•	
83												•	•	907
84														906
														905-
86								28				•	•	904
SE Ľ	XX											•		903-
	XX											₽		
88							2	9					•	902-
87 88 88 89 90														901-
<u>≹ 90</u>	<u> XXX</u>		AMEC Environme	nt & Infra	astructure	LOGGED		<u>א</u> ח			OMPLETION			
	2	nec ^o	Suite 600, 4445 L	ougheed	Hwy	ENTERED					COMPLETION			1
			Burnaby, BC V5C Tel: (604) 294-38	∪⊏4 11										3 of 4

CLIEN	Г: Мо	unt Polley Mining Corporati	ion		PROJEC	T: Mt. Polley Hy	drogeolog	ical	Asse	ssm	ent BC	DREHOLE NO: G	W12-4A		
		eotech Drilling			Mount Po	-						ROJECT NO: VM			
		METHOD: Fraste DR238/	• •	,		NG: 5822894.26						EVATION: 989.9			
SAMPL						SPLIT SPO	NC		GRA			JD RETURN	CORE	RETUR	RN
BACKF		PE BENTON	IITE ·	PEA GRA	VEL	SLOUGH		•	GRO	UT		RILL CUTTINGS	SAND		
DEPTH (m)	SOIL SYMBOL		SOIL DE	SCRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL I	NFORMATION	WELL WELL	DETAILS	ELEVATION (m)
90		BEDROCK - Igned											•	•	
91		subhedral light gre							30						899-
-92		content increases	with depth,	wet at 2	27.43 m	(continued)									898-
-93															897-
-94															896-
-95									31						895
-96															894-
-97															893
-98									32						892
99															891-
100							100.6m		22						890
101		End of hole at 100	.58 m dept	h.					33						889
102															888
103															887
104															886
105															885
106															884-
2 107															883-
108															882
109															881-
109 110 110															880
111															879-
112															878-
113															877-
114															876-
115															875-
115 116															874
117															873-
118															872
119 120															871-
<u>≸≣ 120</u>			AMEC En				LOGGE) BY	': DK	\downarrow		COMPLETION	DEPTH: 10)0.6 m	
AIVIEO BB1	a	nec ^o	Suite 600 Burnaby,	BC V5C 0	Ĕ4	lwy	ENTERE					COMPLETION	DATE: 7-12	2-12	
			Tel: (604)											Page	4 of 4

CLIENT: M	ount Polley Mining Corporation	on	PROJEC	T: Mt. Polley Hy	drogeolog	ical	Asse	ssme	ent BOI	Rehole no: (GW12-4B		
	Geotech Drilling		Mount Po	,						OJECT NO: VN			
	E/METHOD: Fraste DR238/A			NG: 5822890.94		_				EVATION: 990.			
SAMPLE T				SPLIT SPO	ON	_	GRA			D RETURN		RE RETUR	RN
BACKFILL	TYPE BENTONI	ITE PEA GR	AVEL	SLOUGH			GRO	UT		LL CUTTINGS	SAN	D	
DEPTH (m) SOIL SYMBOL		SOIL DESCRII	PTION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL IN	NFORMATION	WELL	INSTALLATION DETAILS	ELEVATION (m)
0 1 2 3 3 4 4 5 4 4 5 6 7 7 8 8 9 9 10 11 12 13 14 15 16 10 11 12 13 14 15 10 10 10 10 10 10 10 10 10 10	SAND - silty, trace cobbles, brown, ma GRAVEL - Igneous pophyritic, subhedr matrix, dry SAND - fine to me brown/red, moist BEDROCK - Igneo subhedral light great calcite filled fracture Major fracture zone BEDROCK - Igneo aphanitic, brown/yee BEDROCK - Igneo	oist s (granitic type roo ral light green (ma edium grained, son ous (granitic type k en (mafic) phenod es from 18.28 to 2 e from 18.28 - 24. ous (granitic type k ellow, dry (Intrusic ous (granitic type k en (mafic) phenod	ck) , some afic) phen me silt, so pedrock) crysts, gro 24.38, dry 38 m. 38 m. bedrock), on), wet a pedrock), on), wet a	e cobbles, locrysts, gro ome gravel, pophyritic, ey matrix, y fine grained it approx. 27 pophyrhytic ey matrix, w	<u>4.6m</u> <u>5.2m</u> <u>5.2m</u> <u>7.43</u>		7: DK		groun	ured depth to Idwater mbg (12/15/12)		▲ 1 • • • • • • • • • • • • • • • • • •	989 988 987 988 988 988 988 988 988 988
	mec	Suite 600, 4445 L Burnaby, BC V5C	0Ĕ4	lwy	ENTERE					COMPLETION		-12-12	4
ξ U		Tel: (604) 294-38	11									Page	1 of 2

		unt Polley Mining Corporation	on		PROJEC	T: Mt. Polley Hy	drogeolog	ical	Asse	ssm	ent BO	Rehole no: G	W12-4B	
		eotech Drilling			Mount Po							OJECT NO: VM		
DRILL	TYPE/	METHOD: Fraste DR238/	• (,		NG: 5822890.94						EVATION: 990.1		
SAMPL			-			SPLIT SPO			GRA			D RETURN	CORE RETU	RN
BACKF		PE BENTON	ITE ·	PEA GRA	VEL	SLOUGH			GRO	UT		LL CUTTINGS	SAND	1
DEPTH (m)	SOIL SYMBOL		SOIL DE	SCRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	additional in	NFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
30 31 32 33 34		BEDROCK - Igneo subhedral light gre (continued)									Produ	ucing ~5 GPM.		959 958 957 956
-35														955-
-36							36.3m							954
-37		End of hole at 36.2	?/ m depth											953-
-38														952
-39														951-
40														950-
-41														949
42														948-
43														947-
-44														946-
45														945
-46														944
2														943-
48														942-
≝ – 49														941
50														940-
49 50 51 51														939-
52														938
53														937-
54														936-
55 G														935-
56 5														934-
57														933
58														932-
														931-
			AMEC En				LOGGED) BY	/: DK	<u>і </u>		COMPLETION	DEPTH: 36.3 m	1 3
AMEC BBY	a	nec [©]	Suite 600 Burnaby,	BC V5C 0	Ē4	ıwy	ENTERE						DATE: 8-12-12	0
ξ I			Tel: (604)	294-3811									Page	2 of 2

	ount Polley Mining Corporation	on		T: Mt. Polley Hy	drogeolog	ical	Asse	ssme	ent BOREHOLE NO	: GW12-5	A	
	Seotech Drilling		Mount Po						PROJECT NO:		1	
	METHOD: Fraste DR238/A			NG: 5824568.66								
SAMPLE TY					ON		GRA				ORE RETUR	RN
BACKFILL T	YPE BENTONI	ITE PEA GRA	AVEL .	SLOUGH		•	GRO			S 💽 S/	AND	1
DEPTH (m) SOIL SYMBOL		SOIL DESCRIF	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL INFORMATIO	N	WELL INSTALLATION DETAILS	ELEVATION (m)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 30 30 30 40 40 40 40 40 40 40 40 40 4	CLAY - silty, some plasticity, brown, m GRAVEL - some sa subrounded gravel Numerous boulders BEDROCK - lgneo pink/grey, banded, Highly weathered z	and and clay, occa and and clay, occa by throughout unit s throughout unit bus (granitic type rowet zone from 25.9 - 3	Till) assional) m, (Ba) ck), pha 9.6 m.	cobbles, sal Till) aneritic,	7.6m				Measured depth to groundwater 7.71 mbg (12/14/12 Producing ~ 90 GPI			966 965 964 963 962 961 960 959 955 955 955 955 954 955 955 954 953 955 954 953 955 954 953 952 954 953 955 954 953 955 954 953 955 954 953 955 954 953 955 954 953 955 954 953 955 954 953 955 954 955 955 954 955 955 954 955 955
a	mec	Suite 600, 4445 Lo Burnaby, BC V5C Tel: (604) 294-381	DĔ4	łwy	ENTERE				COMPLETI		11-12-12	1 of 4

CLIENT	: Mo	unt Polley Mining Corporation	on		PROJECT	T: Mt. Polley Hy	drogeologi	ical	Asse	essm	ient	BOREHOLE NO:	GW12-5/	١	
		eotech Drilling		_	Mount Po							PROJECT NO: VI			
DRILL T	YPE/	METHOD: Fraste DR238/A				NG: 5824568.66						ELEVATION: 966			
SAMPL						SPLIT SPO		-	GRA			MUD RETURN		RE RETU	RN
BACKFI		PE BENTON	ITE PEA	GRAV	/EL	SLOUGH			GRO	UT		DRILL CUTTINGS	SA	ND	
DEPTH (m)	SOIL SYMBOL		SOIL DESCF	RIPT	ΓΙΟΝ			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITION	al information		WELL INSTALLATION DETAILS	ELEVATION (m)
30		BEDROCK - Igneo			ck), pha	aneritic,			10				•	() •	936-
31		pink/grey, banded,	wet (continued)	, .								•		935-
32															934
33															
									11				•		933-
-34													•	•	932-
-35															931-
-36													930-		
37								12				•		929-	
-38													•		
-39															928
		Freedows - and freedow							13						927-
40		Fracture zone from	1 39.6 - 45.7 m,	caid		d fractures.									926-
-41															925-
42															924-
43									14				•	•	923-
44													•	•	
E I															922-
-45									15				•		921
46													•		920-
47													•		919-
48															918
49									16				•	•	917-
49 50													•		
															916
ie I									17				•		
-52													•	•	914-
53													•	•	913
54															912-
55									18						911-
56													•	910-	
-57															
							19						909-		
-58													•	•	908-
59													•	•	907-
60			AMEC Environm				LOGGED) B)	/: Dł	<u>لـــا</u> ۲		COMPLETIO	N DEPTH	: 100.4 m	<u>่เ :</u> เ
	R	nec [©]	Suite 600, 4445 Burnaby, BC VS	5C 0E	gneed H E4	iwy	ENTERE					COMPLETIO		11-12-12	
			Tel: (604) 294-3	3811			1							Page	2 of 4

		lining Corporation			: Mt. Polley Hyd	rogeologi	cal As	sses	smen		BOREHOLE NO: (
	Geotech Drilli	ng Fraste DR238/Air Rotar			ley B.C. G: 5824568.66 I	EASTINO	· 502	100	183		PROJECT NO: VN ELEVATION: 966.2			
SAMPLE TY		TUBE	y (UDEX) 6"		G: 5824568.66 I		: 593 G GI				ELEVATION: 966.7 MUD RETURN		E RETUR	2N
BACKFILL T		BENTONITE			SFLIT SFOC		G				DRILL CUTTINGS	SANI		
DEPTH (m) SOIL SYMBOL		SOIL	DESCRIP	TION					RECOVERY (%)	ADDITIONA	L INFORMATION		INSTALLATION DETAILS	
60 60 -61 -62 -63 -64 -65 -66 -67 -68 -69 -70 -71 -72 -73 -74 -75 -76 -77 -78 -79 -80 -81 -82 -83 -84 -85 -86 -87 -88 -90	BEDRC green/g	DCK - Igneous (gr by, banded, wet (DCK - Igneous (gr prey, wet, (Intrusic DCK - Igneous (gr by, banded, occas 9, wet	anitic type ro n)	ock), pha	neritic,	<u>67.1m</u>		220 221 222 223 224 225 226 226 227 228						□ □ □ 0 90 90 90 90 90 90 90 90 90 88 88 88 88 88 88 88 88 88 88 88 88 88
- 89 90	me	AME	C Environmen e 600, 4445 Loi			LOGGED	BY:				COMPLETION COMPLETION			87

CLIEN	Г: Мо	unt Polley Mining Corporati	on		PROJEC	T: Mt. Polley Hy	/drogeolog	ical	Asse	essm	ent BO	Rehole no: C	GW12-5A	
		eotech Drilling			Mount Po							OJECT NO: VM		
-		METHOD: Fraste DR238/	Air Rotary (0			NG: 5824568.66						EVATION: 966.2		
SAMPL							ON		GRA			D RETURN		JRN
BACKF		PE BENTON	ITE	PEA GRA	VEL	SLOUGH			GRO	UT		LL CUTTINGS	SAND	1
DEPTH (m)	SOIL SYMBOL		SOIL D	ESCRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	additional in	NFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
90		BEDROCK - Igned	ous (gran	itic type ro	ck), pha	aneritic,							•	876-
91		pink/grey, banded,	occassi	onal grey/g	green se	eams from 9	1.44		30				· · · ·	875-
92		to 94.49, wet (cont	(inuea)											874
-93														. 873-
-94									31					872
-95									01					871
-96														870-
-97									32					869
-98									02					868
-99														867-
100							100.6m		33					866
101		End of hole at 100	.58 m de	pth										865
102														864-
103														863
104														862
105														861
106														860
- 107 108														859
h E														858
														857-
														856
														855
113														854
114														853
115														852
g 116														850
114 115 115 116 116 117 117 117 118 119 120														849
118														848
119														847-
			AMEC	Environmen	t & Infras	tructure	LOGGE		<u>ام</u> ۰				DEPTH: 100.4 r	
	2	nec ^o	Suite 6	00, 4445 Lou y, BC V5C 0	ugheed H		ENTERE						DATE: 11-12-12	
		IICL	Tel: (60	y, BC V3C 0)4) 294-3811									Page	e 4 of 4

CLIENT	T: Mou	int Polley Min	ng Corporation		PROJEC	T: Mt. Polley H	/drogeolog	ical	Asse	ssme	ent BC	OREHOLE NO:	GW12	-5B	
		eotech Drilling			Mount Po							ROJECT NO: VI		60B	
			aste DR238/Air R			IG: 5824582.2						EVATION: 965		1	
SAMPL			TUBE				DON		GRA			JD RETURN	_	CORE RETUR	RN
BACKF	ILL I Y	PE	BENTONITE	PEA GRA	VEL	SLOUGH		••	GRO			RILL CUTTINGS	<u>•••</u>	SAND	
DEPTH (m)	SOIL SYMBOL		SC	DIL DESCRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL I	INFORMATION		WELL INSTALLATION DETAILS	ELEVATION (m)
0 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20		GRAVEL (Basal Til Numerou	- subrounde l), brown, we	nroughout unit	Till)		7.6m				grou 5.31	Isured depth to Indwater mbg (12/14/12) ducing ~ 3 GPM.			□ 965 964 963 969 969 969 969 959 950 950 950 950 950 950 950 950 95
	_			MEC Environmen Suite 600, 4445 Lo	ugheed H										
	ЭГ	nec		Burnaby, BC V5C (el: (604) 294-381	E4	,	ENTERE	:D B	r: G	νN		COMPLETION	NDAI		1 of 1

			nt Polley Mining Corporatio	n		PROJEC	T: Mt. Polley Hy	drogeolog	jical	Asse	essm		Rehole no: S		
			otech Drilling			Mount Po							OJECT NO: VN		
			METHOD: Fraste DR238/A	ir Rotary (O	,		NG: 5819786 EA						EVATION: 940		
SAMPL								ON		GRA					RN
BACKF	-ILL T	TY	PE BENTONIT	TE	· PEA GRA	VEL	SLOUGH			GRO			LL CUTTINGS	SAND	
DEPTH (m)	SOIL SYMBOL		S	soil di	ESCRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONAL IN	NFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)
0		Π	SILT - some clay, tr brown, trace organi			ate plas	ticity, dark	1.5m							939
2		1	SILT and CLAY - so	ome san	d and gra	vel, hig	h plasticity,								938-
3	ļ	1	brown, moist.					<u>3m</u>							937-
4		。 。	SAND - fine to coar					ar,							936
E	і́́.	, L	some silt, trace clay SILT - clayey to sor					<u>4.5m</u>							
5	Ш		high to medium plas				nu anu grav	ы,							935-
6	Ш		5	,	,										934-
-7	Ш														933
8	Ш		Interbedded sand a	and grave	el lenses l	petweer	n 7.6 - 9.1 m								932-
-9	Ш			// /			1 /1								931-
10	Ш		Becomes less clay between 9.1 - 16.7	(to trace	clay), and	a more	sandy (to sa	nay)							930-
-11	Ш														929-
12	Ш														928-
13	Ш														927-
-14	Ш														926-
15															925-
16															924-
			Color change to oliv	ve grey a	at 16.7 m.										923-
18			- · · · · ·												922-
DALATEMPLATE.G			Sand and gravel ler	nses bet	ween 18.3	3 - 18.9	m								921-
20	Ш														920-
21	Ш							21.3m							919-
			SILT - sandy, some grey, mosit.	e gravel,	trace clay	, low pla	asticity, olive)							918-
23			grey, mosit.												917-
E21															916-
															915-
26															914-
27															913-
28															912-
29															911-
<u>≷ 30</u>	111				Invironmen			LOGGE	D BY	 /: TK			COMPLETION	DEPTH: 41.5 m	
	2	1	nec	Burnaby	0, 4445 Lo , BC V5C 0)Ē4	łwy	ENTERE						DATE: 3-12-12	
}				Tel: (604	4) 294-381 ⁻	1		1						Page	1 of 2

CLIENT: Mount Polley Mining Corporation						PROJECT: Mt. Polley Hydrogeological Assessment						BOREHOLE NO: SI12-01			
		eotech Drilling	Mount Polley B.C.						PROJECT NO: VM00560B						
DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"					NORTHING: 5819786 EASTING: 595408							ELEVATION: 940 m			
										D RETURN					
BACKFILL TYPE BENTONITE PEA GRA					VEL	SLOUGH			GRO	UT		ILL CUTTINGS	SAND :		
DEPTH (m)	SOIL SYMBOL		SOIL D	ESCRIP	TION			SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	additional II	NFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)	
30 -31		SILT - sandy, som grey, mosit. (contin	/, low plasticity, olive									909-			
-32														908-	
-33 -34														907- 906-	
-35		Wet												905-	
-36														904-	
-37														903	
-38														902- 901-	
40														900	
-41		BEDROCK - fine g	rained m	atrix, light	arey in	color.	40.8m 41.5m	1						899	
42		End of hole at 41.5 3 telescopic SI sec	n. Installed	d SI at 4	1.5m.								898-		
43		13.4 mbg.		lalleu al 5.	o mby,	9.0 mby, and	u							897-	
-44 -45														896- 895-	
46														894-	
47														893-	
-48														892-	
49 50														891- 890-	
-51														889	
-52														888-	
-53														887	
54 55														886 885	
-56														884-	
-57														883-	
58														882	
59 60														881-	
			Suite 60	Environmen 00, 4445 Loi	ugheed H		LOGGEI ENTERE					COMPLETION DEPTH: 41.5 m			
	AMEC Environmer Suite 600, 4445 Lo Burnaby, BC V5C / Tel: (604) 294-381					DE4			st: G	νN		COMPLETION DATE: 3-12-12 Page 2 of 2			

CLIENT: Mount Polley Mining Corporation						PROJECT: Mt. Polley Hydrogeological Assessment						ent	BOREHOLE NO: SI12-02			
DRILLER: Geotech Drilling						Mount Polley B.C.							PROJECT NO: VM00560B			
		/METHOD: Frast		• •		NORTHING: 5819421 EASTING: 595920							ELEVATION: 940 m			
			NO RECO					MUD RETURN	RN							
BACKFILL TYPE BENTONITE			PEA GRA	VEL	SLOUGH			GRO	UT		DRILL CUTTINGS	SAND				
DEPTH (m)	SOIL SYMBOL				SCRIP				SAMPLE TYPE	SAMPLE NO	RECOVERY (%)	ADDITIONA	AL INFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)	
0		SILT and C grey, dry.	LAY - grav	/elly, sc	ome sand	l, high p	lasticity, oli	ve							939-	
-2		0 - 9 - 9													938-	
-3															937-	
4															936-	
5															935-	
6															934-	
7															933-	
8															932-	
-9															931-	
-10 -11															930- 929-	
12															928	
13															927-	
-14															926-	
15															925-	
16															924-	
24-5-41 17 18 18															923	
18															922-	
															921-	
															920- 919-	
19 20 20 21 22 23 24 24 24 25 25 25															918-	
23															917-	
-5 															916	
25															915-	
26															914-	
27															913-	
26 1935001 02044 - 20 27 28 29 30															912	
30															911-	
			Δ 		nvironment), 4445 Lou		LOGGED					COMPLETION DEPTH: 42.7 m				
	amec [©]			Burnaby,	BC V5C 0) 294-3811	Ē4	ENTERE	ENTERED BY: GN				COMPLETION DATE: 5-12-12 Page 1 0				

CLIENT: Mo	unt Polley Mining Corporati	PF	PROJECT: Mt. Polley Hydrogeological Assessment						BOREHOLE NO: SI12-02				
	eotech Drilling		Mount Polley B.C.					PR	PROJECT NO: VM00560B				
	DRILL TYPE/METHOD: Fraste DR238/Air Rotary (ODEX) 6"				NORTHING: 5819421 EASTING: 595920					ELEVATION: 940 m			
										JD RETURN		RN	
BACKFILL TYPE BENTONITE PEA GRAV				L IIIISLC	UGH		GRC	DUT		RILL CUTTINGS	SAND SAND		
DEPTH (m) SOIL SYMBOL		SOIL DESC	ripti	ION		SAMPI F TYPF	SAMPLE NO	RECOVERY (%)	ADDITIONAL I	NFORMATION	WELL INSTALLATION DETAILS	ELEVATION (m)	
30 31 31 32 33 34 35 36 37 38 38 39 40 41 42 43 44 45 46 47 48 49 50 50	SILT and CLAY - g grey, dry. <i>(continue</i> BEDROCK - fine g End of hole at 42.7 3 Telescopic SI se 11.6 mbg.	grained matrix, 7 mbg. Installer	light gr d SI at	rey in color. 42.7 mbg.	4	2.1m 2.7m						909-1	
51 52 53 54 55 56 56 57												889 888 887 886 885 885 885 884	
58 59 60	nec [©]	AMEC Enviror Suite 600, 444 Burgaby BC	5 Lough	heed Hwy		GED E					DEPTH: 42.7 m DATE: 5-12-12	882-	
Burnaby, BC V5C Tel: (604) 294-381				+						Page 2 of 2			