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**MOUNT POLLEY MINE
Tailings Storage Facility
2011 Construction**

As-Built Report and Annual Review



Submitted to:

Mount Polley Mining Corporation,
Likely, BC

Submitted by:

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

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SUMMARY

This report presents the annual review of the operation and performance of the Mount Polley Mine Corporation (MPMC) tailings storage facility (TSF) for 2011, together with the as-built report documenting the 2011 construction of the TSF embankment. This report has been prepared in accordance with the requirements of the British Columbia Ministry of Energy and Mines (MEM), including MEM's updated guidelines for Annual Reports, issued 14 February 2003. The following points give a general summary of the 2011 TSF activities and key developments.

1) Classification of the dam(s) in terms of Consequence of Failure (ref. Canadian Dam Association, Dam Safety Guidelines [2007]).

A formal dam safety review was conducted in 2006 (AMEC 2006). This review assigned a "LOW" hazard classification based on 1999 Canadian Dam Association (CDA 1999) guidelines. CDA updated their Dam Safety Guidelines rating in 2007 (CDA 2007), and under the new classification the TSF is classified under "Significant" category (see Classification System Table 1.1).

2) Change in Engineer of Record for the TSF

The design and construction monitoring of the TSF embankments from mine start up to early 2011 had been completed under the direction of Knight Piésold Limited (KP). AMEC Environment & Infrastructure, a division AMEC Americas Limited (AMEC) assumed the role of Engineer of Record for the TSF embankment as of 28 January 2011.

3) Renumbering of embankment instrumentation

KP provided the historical raw instrumentation data collected from the impoundment instrumentation. The raw data was reprocessed, and working piezometers renamed to simplify data management. The revised naming convention for piezometers is presented on Drawings 2011AB.08 through 2011AB.16. The piezometric data is organized by planes and is presented in Appendix B.

4) Embankment instrumentation summary

In 2011, a site investigation and instrumentation installation program was conducted. During the program additional vibrating wire piezometers and slope inclinometers were installed, Table 1.2 summarizes previously and newly installed vibrating wire (VW) installations.

Table 1.1: CDA (2007) Consequence Classification Scheme

Dam Class	Population at Risk [note 1]	Incremental Losses		
		Loss of Life [Note 2]	Environmental and Cultural Values	Infrastructure and Economics
Low	None	0	Minimal short-term loss No long-term loss	Low economic losses; area contains limited infrastructure or services
Significant	Temporary only	Unspecified	No significant loss or deterioration of fish or wildlife habitat Loss of marginal habitat only Restoration or compensation in kind highly possible	Losses to recreational facilities, seasonal workplaces, and infrequently used transportation routes
High	Permanent	10 or fewer	Significant loss or deterioration of <i>important</i> fish or wildlife habitat Restoration or compensation in kind highly possible	High economic losses affecting infrastructure, public transportation, and commercial facilities
Very High	Permanent	100 or fewer	Significant loss or deterioration of <i>critical</i> fish or wildlife habitat Restoration or compensation in kind possible but impractical	Very high economic losses affecting important infrastructure or services (e.g. highway, industrial facility, storage facilities for dangerous substances)
Extreme	Permanent	More than 100	Major loss of <i>critical</i> fish or wildlife habitat Restoration or compensation in kind impossible	Extreme losses affecting critical infrastructure or services (e.g. hospital, major industrial complex, major storage facilities for dangerous substances)

Note 1. Definitions for population at risk:

None – There is no identifiable population at risk, so there is no possibility of loss of life other than through unforeseeable misadventure.

Temporary – People are only temporarily in the dam-breach inundation zone (e.g. seasonal cottage use, passing through on transportation routes, participating in recreational activities).

Permanent – The population at risk is ordinarily located in the dam-breach inundation zone (e.g. as permanent residents); three consequence classes (high, very high, extreme) are proposed to allow for more detailed estimates of potential loss of life (to assist in decision-making if the appropriate analysis is carried out).

Note 2. Implications for loss of life:

Unspecified – The appropriate level of safety required at a dam where people are temporarily at risk depends on the number of people, the exposure time, the nature of their activity, and other conditions. A higher class could be appropriate, depending on the requirements. However, the design flood requirement, for example, might not be higher if the temporary population is not likely to be present during the flood season.

Piezometer readings in 2011 indicated the following general trends for the TSF embankment:

- Pore pressures in foundation soils in and around the TSF embankment were noted as stable with minor fluctuations, except for D1 where upward trending piezometer readings are noted. Newly installed piezometers appear to have stabilized but insufficient data has been collected to show any trends since installation.
- Pore pressures in the till core are found to be stable, with a slightly increasing trend in response to the rising pond level.
- Pore pressures in filters and drains remained unchanged throughout the year.
- Pore pressures in the tailings and upstream fill experienced an upwards trend in response to the rising pond level. Piezometers installed at lower elevations within the tailings experienced lower response relative to the piezometers near the pond elevation, due to the under-drainage system.

Table 1.2: Piezometer Summary

Embankment	Previously Installed		2011 Installed	Total (Functional)
	(Functional)	(Non-functional)		
Main	40	26	15	55
Perimeter	10	9	5	15
South	8	2	3	11
Total	58	37	23	81

As part of the 2011 site investigation three (3) additional inclinometers were installed in the embankment for a total of seven (7) functioning slope inclinometers as shown in Table 1.3. Newly installed slope inclinometers were not initialized until January 24th, 2012. The last 2011 reading of site slope inclinometers was conducted on September 6th. The inclinometer data collected in early 2012 has been included as part of this report, and is presented in Appendix B.

Table 1.3: Slope Inclinometer Summary

Embankment	Previously Installed		2011 Installed	Total (Functional)
	(Functional)	(Non-functional)		
Main	4	1	2	6
Perimeter	0	0	1	1
Total	4	1	3	7

5) Significant changes to dam stability and/or surface water control.

There were no significant changes to dam stability. Based on limit equilibrium stability analyses, the 2.1 m Stage 7 crest raise had a negligible impact on the factor of safety of the dams, with values still in excess of the minimum required 1.3 under static loading, short term construction conditions.

The runoff diversion ditch near Corner 4 at the southwest corner of the TSF was relocated approximately 30 m upslope to accommodate the 2011 extension of the embankment in that area. No other significant changes to surface water control were implemented in 2011.

6) For major tailings impoundments, as described in Part 10.5.2 of the Health, Safety and Reclamation Code for Mines in British Columbia, all operating dams shall have a current Operations, Maintenance and Surveillance (OMS) Manual. The annual report shall indicate the latest revision date of the OMS Manual.

The OMS manual was last updated by MPMC in March 2010, and requires an update in 2012.

7) Scheduled date for formal Dam Safety Review (ref. Canadian Dam Association, Dam Safety Guidelines).

A formal Dam Safety Review is planned to be conducted in 2016 or during detailed closure design, whichever is earliest.

8) Summary of 2011 construction.

AMEC was present on site for critical, non-routine aspects of foundation preparation and fill placement. During this period, AMEC verified that construction methods employed were consistent with design expectations, material specifications were adhered to, and monitoring and testing requirements were understood by MPMC personnel. AMEC's time on site was also used to verify that daily technical/progress reports were being completed properly, QA/QC and reporting responsibilities were thoroughly understood by all parties, and lines of communication between the site and AMEC office-based support were clearly established and functional. Once AMEC was satisfied that the MPMC's field inspectors were fully trained and prepared to undertake the construction monitoring and reporting role with remote support required by AMEC, AMEC reduced their monitoring presence to monthly visits, with monitoring of construction progress carried out via reports and photographs issued by MPMC. Actual timing of AMEC's site visits varied somewhat to align with key construction activities such as foundation preparation and approval, and till core trench approval.

Stage 7 construction involved raising the crest of the embankment to a minimum elevation of 960.1 m. The 2011 construction began mid-spring with placement of upstream fill (Zone U), and was completed by mid-November with placement of NAG rock (Zone C). The majority of construction monitoring was conducted directly by MPMC field inspectors with submission of daily reports to AMEC during placement of critical materials: Till Core (Zone S) and Filter (Zone F). Zone S and Zone F placement was conducted by Peterson Contracting Ltd. Zone U, Transition (Zone T) and Zone C fills were placed by MPMC directly. The abutment preparations were also conducted by MPMC.

9) Overall performance of the Tailings Management Facility

Observations and data obtained over the course of 2011 indicate that the tailings management facility continues to perform in a satisfactory manner. The dam raising carried out in 2011 achieved conformance with design intent.

1.0 INTRODUCTION

The Mount Polley Mine is located in central British Columbia, approximately 60 km northeast of Williams Lake. The main access route is via Likely Road. The turnoff to the Mine is located approximately 1.5 km east of Morehead Lake with the Mine located another eleven km to the southeast, along the Bootjack Lake Forest Service Road. The Mount Polley mine commenced production in June 13, 1997. Ore is crushed and processed by selective flotation to produce a copper-gold concentrate. The mill throughput rate is approximately 20,000 tonnes per day (approx. 7.3 million tonnes per year). Mill tailings are discharged as slurry into the Tailings Storage Facility (TSF) located on the south area of the Mine property.

Tailings slurry is conveyed from the Concentrator to the TSF via a tailings discharge pipeline. The tailings are deposited into the impoundment through moveable or fixed spigots on the embankment crest. A floating reclaim pump recycles process water from the supernatant pond in the TSF for use in the mill processing circuit. Sediment ponds and seepage collection ponds are designed to intercept runoff from the surface and seepage from the embankment respectively. Drains, instrumentation and monitoring wells are constructed in and around the TSF to assist in monitoring the performance of the facility.

Drawing 2011AB.01 presents a plan of the as-built condition of the Mount Polley Mine site. Figure 1.1 shows an aerial view of the site from 2011.

MPMC milled approximately 28 M tonnes of ore between start-up in 1997 and October 2011. The mine entered into care and maintenance status for the period from October 2001 to February 2005, operations re-started in March 2005.

The starter dam for the TSF embankment was constructed in 1996 to a crest elevation of 927.0m. The starter dam was constructed out of a homogeneous compacted till fill. Discharge of the tailings into the impoundment commenced in the summer of 1997. The TSF embankment was raised in subsequent years as follows:

- To elevation 934.0 m in 1997.
- To elevation 936.0 m in 1998.
- To elevation 937.0 m in 1999.
- To elevation 941.0 m in 2000.
- To elevation 942.5 m in 2001.
- To elevation 944.0 m in 2004.
- To elevation 946.0 m in 2005.
- To elevation 949.0 m in 2006.
- To elevation 950.9 m in 2007.
- To elevation 951.9 m in 2008.
- To elevation 953.9 m in 2009.
- To elevation 958.0 m in 2010.
- To elevation 960.1 m in 2011.

The TSF embankments are zoned earth and rockfill dams (see drawings 2011AB04 through 06). In 2011 MPMC crews and equipment were responsible for the placement of Zone U, Zone T, and Zone C. Placement of Zone S and Zone F was performed by Peterson Contracting Ltd. (Contractor).

This report documents the construction monitoring, construction methods, and the results of the quality control testing performed during the 2011 construction of the Mount Polley TSF 2.1 m crest raise to approximately El. 960.1 m. This report also represents the 2011 annual review of the MPMC TSF.

Figure 1.1: Aerial View of Mine Site: 2011



2.0 OPERATION OF THE TAILINGS STORAGE FACILITY

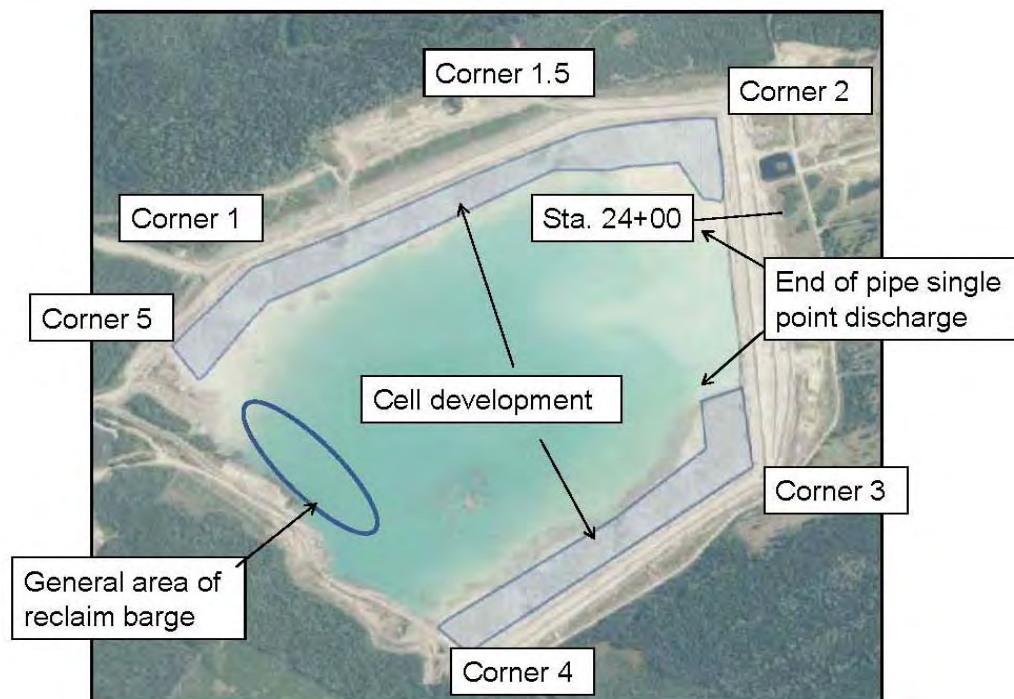
2.1 General

The Mount Polley TSF is comprised of one overall embankment that is approximately 4.2km in length. The embankment is subdivided into three (3) sections; referred to as the Main Embankment, Perimeter Embankment and South Embankment. Heights vary along the embankment and are approximately 48 m, 30 m, and 20 m for the Main, Perimeter and South embankments respectively. As-built sections of the embankment are shown on Drawings 2011AB.04 through 2011AB.06.

2.2 Tailings Discharge and Beach Management

Tailings are transported from the mill to the impoundment via an approximately 7 km long HDPE pipeline. As shown in Figure 2.1, 2011 cell construction was carried out from Corner 5 advancing along the Perimeter embankment to the Main embankment to about Sta. 24+00. Insufficient tailings line pressure prevents cell construction along the central portion of the Main embankment and single point discharge is employed (approximately Sta. 24+00) to facilitate the beach development. Discharge from Sta. 24+00 was maintained for about three (3) weeks after which discharge was relocated to Corner 4 for the resumption of cell development. Cellular development was employed along the South embankment and around Corner 3 where single point discharge was resumed. The pipeline design flow is 20,000 tpd at about 35% solids by dry weight.

Figure 2.1: Tailings Discharge Plan



2.3 Process Water Reclaim

The tailings pond supernatant is recycled to the mill for use as process water. It is transported via the reclaim pumping system, which consists of a barge, pipeline and booster pump station. The reclaim pipeline system returns water from the TSF to the mill for use in the mill process.

2.4 Operations, Maintenance and Surveillance Manual

The Operations, Maintenance and Surveillance (OMS) Manual was updated in 2010. Due to the change in Engineer of Record, the addition of new instrumentation and an updated instrumentation surveillance and reporting plan the TSF management component of the OMS manual will be updated in 2012.

2.5 Freeboard Requirements

The freeboard requirement for the TSF is 1.3 m to allow for storage of the 72-hour PMP event, plus an allowance for wave run-up above the resultant pond level.

2.6 Seepage Collection Ponds

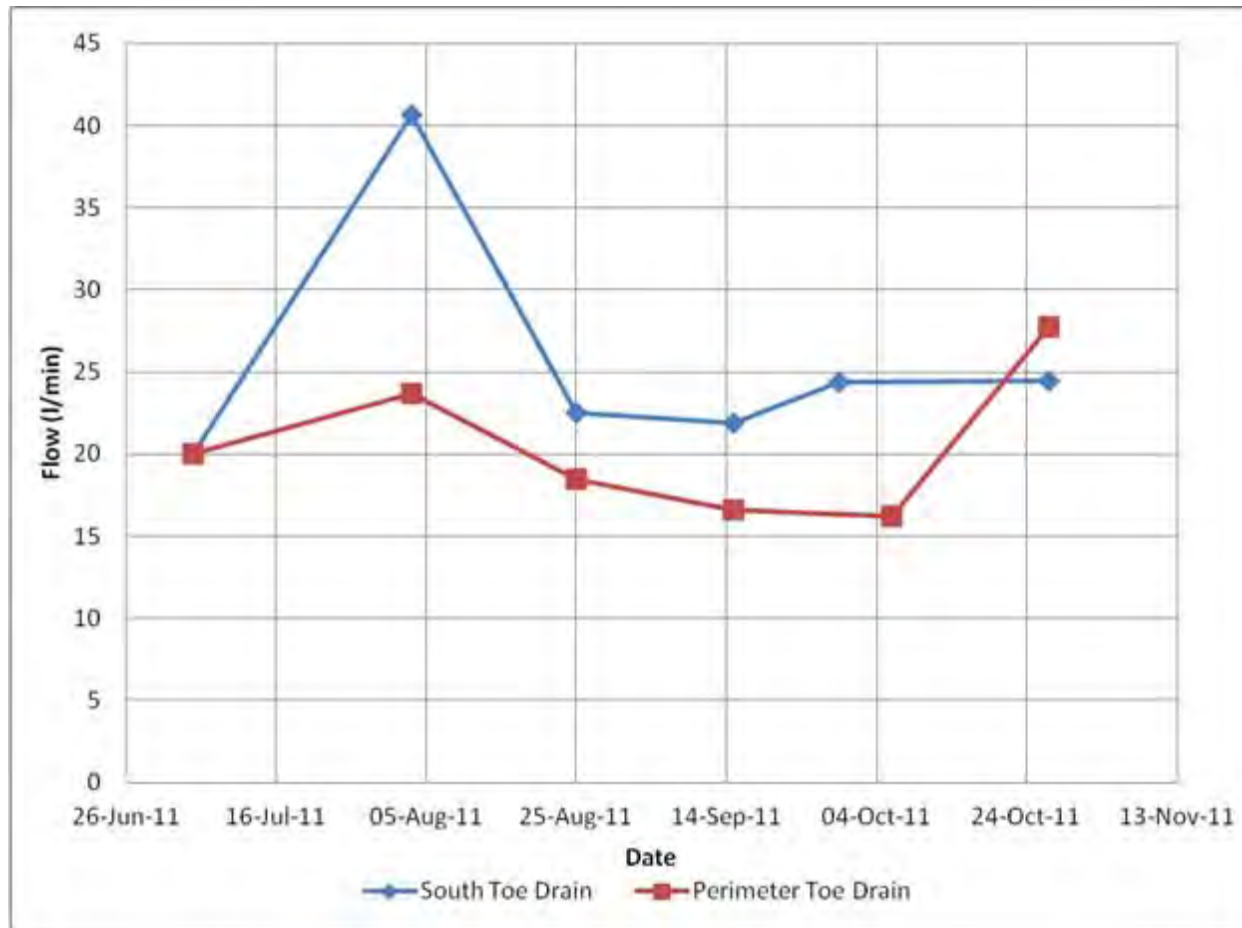
Seepage collection ponds are located downstream of each of the three embankments that create the TSF. The seepage collection ponds collect seepage from the embankments, embankment drain discharge and direct runoff from the embankment and reporting catchments. Records indicate that the ponds were excavated into low conductivity glacial till. The ponds were observed to be in good condition.

2.7 Drain Flow Data

Flows from the upstream toe drain and foundation drains of the Main Embankment are measured at the sump located at the Main Embankment seepage collection pond. Upstream toe drains from the Perimeter and South Embankments discharge into ditches which carry the flow to their respective seepage collection ponds where it is measured at the end of pipe. Water from the upstream toe and foundation drains is recycled to the TSF.

Measurement of drain flows into the Main Embankment requires that the sediment control pond be pumped down to a low level to allow for safe entry into the sump. In 2011, Main Embankment drain readings were not measured and MPMC was out of compliance with the OMS requirements. MPMC is working to revise the monitoring system in an attempt to capture drain flow readings in compliance with the OMS requirements. Frequency of drain flows from the South and Perimeter embankments varied from monthly to bi-weekly as weather permitted. South and Perimeter Embankment drain reading for 2011 are presented in Figure 2.2. There is no note of any turbidity observed in the drain water which indicates that the filters associated with the drains are functioning as intended.

Figure 2.2: South and Perimeter Toe Drain Flow Readings – 2011



3.0 2011 DAM DESIGN

The drawings appended to this report include design and as-built sections of the TSF embankment current as of the end of 2011. The drawings, in plan view, show the locations of the readout stations for the instrumentation (piezometers, inclinometers), and in section view show the relative placement of the instruments within the embankment and its foundation.

The 2011 Stage 7 TSF embankment raise design was to an elevation of 960.5 m. The design is presented on drawing 2011AB.03 and is as follows:

Upstream Fill (Zone U)

- Comprised of tailings or waste rock where tailings placement infeasible;
- Cell construction is to be utilized wherever possible;
- Reworking of the tailings is needed to ensure proper distribution within the cell; and
- NAG/PAG rock fill can be utilized where the tailings placement is not possible.

Till Core (Zone S)

- Comprises compacted, low hydraulic conductivity till fill;
- Material is to be well graded and as specified in 2011AB.03;
- Minimum 5.0 m in width;
- Continuous full width overlap between the previous stage 6 and stage 7;
- Placed in maximum of 300 mm thick lifts;
- Compaction of minimum of 95% of maximum density as determined by the Standard Proctor compaction test (ASTM D 698); and
- Periodic sampling from the borrow pit and dam surface to verify suitability of the material.

Filter (Zone F)

- Comprises well-graded sand and gravel
- Material is to be free draining and as specified in 2011AB.03;
- Minimum 1.8 m in width;
- The transition between new and existing filter material is to be continuous with a minimum of 1.0 m overlap;
- Placed in maximum of 600 mm thick lifts;
- Compacted by a 10 ton vibratory smooth drum;
- Periodic samples are to be collected for laboratory testing.

Transition (Zone T)

- Comprises relatively fine waste rock
- Material is to be free draining and as specified in 2011AB.03;
- New material is to be placed in maximum of 600 mm thick lifts;
- Minimum 1.8 m in width;
- Compacted by uniform routing of haul trucks and spreading equipment.

Rock Fill (Zone C)

- Comprises run-of-mine waste rock
- Nominal maximum particle size of 1m;
- Pavement like surface between consecutive layers is to be scarified.

4.0 CONSTRUCTION MONITORING PROGRAM

Construction Monitoring during the 2011 construction season was mainly carried out by MPMC personnel. AMEC's Support Engineer reviewed daily construction records and performed regular site visits to monitor the quality of construction and assess MPMC's monitoring of the construction.

4.1 AMEC Support Engineer

AMEC's Support Engineer provided on-site supervision during the following periods:

- Pre-construction Meeting: May 31 to June 1
- Construction Kick-off: June 13 to June 16, June 20 to June 24, June 27 to June 28
- July Site Visit: July 25 to July 28
- August Site Visit: August 19 to August 25

While on site the responsibilities of AMEC's Support Engineer were as follows:

- Monitor, train, and assist MPMC personnel with the requirements of construction monitoring;
- Monitor, sample, and requisition tests of the borrow areas, as required;
- Monitor and perform QA testing of compacted till core soils, as required;
- Review and approval of proposed borrow soils;
- Review and approval of transition and filter material, processing methodology and monitoring practices;
- Monitor and approve the filter trench excavation and preparation;
- Monitor and approve abutment preparation;
- Address any concerns or out-of-compliance situations observed and recorded during construction;
- Carry out the quality control field and laboratory testing;
- Direct the MPMC personnel to address the survey requirements, results, etc.; and
- Meet as required with MPMC to review the construction program.

While in the office the responsibilities of AMEC's Support Engineer were as follows:

- Review daily construction reports submitted by MPMC personnel;
- Review compaction results submitted by MPMC personnel;
- Plot and review instrumentation readings submitted by MPMC personnel;
- Address any concerns or out-of-compliance situations noted by MPMC personnel; and
- Coordinate with MPMC personnel and AMEC's Project Manager/Senior Engineer.

4.2 AMEC Senior Support

AMEC's Senior support Engineers visited site on the following dates:

- T. Martin: June 20/21
- D. Dufault: July 25/26

4.3 MPMC Field Inspector

MPMC Field Inspectors were responsible for the following:

- Monitor and maintain a photographic record of ongoing construction activities;
- Review borrow pit material to verify material consistency;
- Delineate embankment zones with stakes (every 50 m);
- Perform QC compaction testing of placed Zone S material (as per material placement specifications);
- Collect material samples for QC laboratory testing;
- Conduct as-built surveys of various zones;
- Prepare and submit daily construction reports;
- Collect and submit instrumentation data; and
- Report out-of-compliance situations to AMEC's Support Engineer.

4.4 QA/QC Testing

A summary of the testing requirements is given in Table 4.1.

Table 4.1: Embankment Material Types and QA/QC Testing Requirements

Material Type	Construction Testing Requirements
Zone S – Till Core	<u>Source Classification</u> D422-07: 1 per 10,000 m ³ per source. <u>In-Place Testing</u> D6780-05: 1 per lift per 150 linear m or 1 per day per lift; D422-07: 1 per 10,000m ³ offset to source.
Zone F – Filter	<u>Source Classification</u> D422-07: 1 per 5,000 m ³ per source. <u>In-Place Testing</u> D422-07: 1 per 5,000 m ³ offset to source. Visual in-place inspection of compaction and zone dimension.
Zone T – Transition	Confirmation of waste rock inertness, as required. D422-07: 1 per 5,000m ³ . Visual in-place inspection of material size, compaction, and zone dimension.
Zone C – Rockfill	Confirmation of waste rock inertness, as required. Visual in-place inspection of material size and placement.
Zone U – Upstream fill	Visual in-place inspection of material size and placement.

During the 2011 construction season, the testing frequencies as outlined above were generally maintained.

4.5 Instrumentation Monitoring

During the 2011 construction period, MPMC personnel monitored the vibratory wire instrumentation along the embankments generally once every two weeks. Inclinerometers were monitored generally every two weeks during the 2011 construction period; inclinometer readings were offset a week from the piezometer readings.

For the period after the 2011 construction period through the end of 2011, the recommended instrumentation surveillance schedule was not maintained. Compliant monitoring frequency was re-established in January 2012.

5.0 2011 TSF STAGE 7 EMBANKMENT RAISE CONSTRUCTION OVERVIEW

5.1 General

Construction of the Stage 7 raise entailed a raise of approximately 2.1 m from approximate El. 958.0 m to El. 960.1 m. Till core construction period took place between June 13 and September 21, 2011. This section provides a brief summary of the 2011 construction activities for the TSF. Drawings AB2011.04 through AB2011.06 show the plan view and as built sections of the embankment in relation to the design. A selection of photographs showing various stages of the 2011 TSF construction are presented in Appendix C.

5.2 Abutment Preparation

To accommodate the 2011 embankment raise, the south and perimeter abutments were extended. Abutment preparation was conducted as follows:

- Bulk removal of overburden (including previously placed waste rock fill) by MPMC personnel and equipment.
- Test pits were conducted to confirm that a minimum of 2 m of till was present beneath the embankment core. The test pits were located upstream and downstream of the core limits such that the existing soils found under the till core contact were not compromised. Bedrock was not encountered in any of the test pits.
- To accommodate a drainage trench detail implemented in past raises, aligned along the toe of the dam, a ditch approximately 1.0 m in depth and 2.0 m in width was excavated along the Perimeter and on the South Embankments downstream of the abutment core extensions. On the South Embankment it was noted that a corrugated drainage pipe was present. The pipe was extended and placed at the base of the trench. No drainage pipe was noted on the perimeter embankment. The trench was then backfilled with filter material (Zone F).
- Prior to placement of the drainage blanket the exposed native abutment material was proof-rolled with a 10 ton vibratory smooth drum compactor.
- The drainage blanket was placed to the full extents of the embankment shell. The blanket consisted of a 0.3 m thick lift of Zone F material overlain by a 0.3 m thickness of Zone T material.

5.3 Fill Placement

5.3.1 Zone U – Upstream Shell

The upstream shell was constructed of end of pipe spigotted tailings utilizing cells, reworked with a dozer, and shaped with the aid of an excavator; the majority of this work was carried out without AMEC supervision. Where the tailings could not be used for shell construction due to pipeline and pumping limitations, NAG waste rock was used, as shown on Figure 2.1. This occurred along the central portion of the Main Embankment between Corner 2 and Corner 3. The NAG was transported by haul truck and placed/shaped by excavators and dozers. Prior to 2011 Zone S placement, AMEC's Support Engineer inspected the NAG waste rock to ensure that large boulders (diameter > 1 m) were not placed near the Zone U/Zone S interface.

5.3.2 Zone S – Till Core

The placement of Zone S material was performed by the Contractor and generally was executed as follows:

- Prior to placement of the first lift of till core for the 2011 raise the existing Zone S/abutments were prepared by proof-rolling with a 10 ton vibratory smooth drum roller. Areas that were noted to be soft or affected by the frost were removed and replaced with approved Zone S material.
- The top 0.1 m of the prepared surface was scarified with the aid of a dozer/grader, to promote good bonding between successive lifts.
- The surface was moisture conditioned as required to further promote proper bonding of successive till lifts.
- The till was placed in 0.3 m thick lifts via scrapers, and was spread with the aid of dozers, excavators, and graders.
- Compaction was achieved by scraper trafficking and a 10 ton smooth drum vibratory compactor.
- On average, for every two (2) to three (3) lifts placed, the downstream face of the till was trimmed and shaped by an excavator to maintain design lines. The extra width trimmed was required to ensure that the full design width of till was compacted.

5.3.3 Zone F – NAG Filter Rock

The material utilized for Zone F was crushed on site and stockpiled around the embankment for rehandling during placement within the dam. Haul trucks were used to stock pile and transport the material to the TSF embankment. Refer to Drawing 2011.02 for stock pile locations used during the 2011 construction.

Prior to placement of Zone F material, the previously placed filter material was exposed to ensure vertical continuity of the filter. This was carried out by excavator as part of the trimming process for the core. The filter material was placed on the embankment by the Contractor in

0.6 m lifts. The material was transported by dump trucks and spread/shaped with the aid of excavator, grader, and a loader.

The placed Zone F material was compacted in conjunction with Zone T material, by 10 ton smooth drum compactor and scraper trafficking.

5.3.4 Zone T – Transition NAG Rock

AMEC understands that historically the Zone T material was produced by manually sorting Zone C material with an excavator. Sorting of Zone C material required experienced operators; was time consuming; and required constant supervision. Initially, Zone T fill was manually sorted during the Stage 7 construction; however, during the initial placement of this material it was noted that the required gradation and consistency of the material was not being achieved. MPMC switched to a manufactured product with a nominal particle size of 75mm and a gradation and distribution that satisfied the required specifications.

Prior to placement of the Zone T material, the interface between the different lifts was exposed or/and scarified to remove any pavement like surfaces. Zone T material was hauled by MPMC and placed by MPMC in 0.6 m to 1.2 m thick lifts with the aid of a loader and grader. Additional material was also placed to provide access ramps utilized by scrapers. These ramps enabled scrapers to place additional till lifts. After the core and the filter material were constructed for the season, the previously placed transition ramp was reshaped to form the transition zone with the aid of an excavator. The compaction of the transition zone was achieved via routing of scrapers and haul trucks.

5.3.5 Zone C – Downstream Shell NAG Rock

Zone C material was placed by MPMC. Prior to placement, where pavement like surfaces had developed the surface was scarified with the aid of grader/dozer, to avoid continuous, low hydraulic conductivity zones within the rockfill shell, and thus promote downward drainage through the rockfill. The NAG rock was transported from active mining areas to the embankment via haul truck and placed and spread by dozers.

5.4 Survey Control

Survey control requirements for the 2011 raise of the TSF included the following:

- Staking out the upstream and downstream of the Zone S; the stakes were generally Placed every 50m along the entire length of the embankment;
- Maintaining the downstream crest stationing during embankment construction;
- Verifying that a 5m width was maintained during construction;
- Establishing and verifying the Zone F/T transition line for placement of Zone T material;
- Confirming that the minimum width of Zone F and Zone T were achieved by conducting spot checks;
- Survey pick-up of the locations of in-situ density tests;
- Collecting and storing data as required for the as-built record; and
- Providing location and elevation data as required by the AMEC Support Engineer.

5.5 Quality Control and Quality Assurance Testing

QA/QC testing of the fills used in the construction of the embankment involved on-site and off-site tests. On-site testing was restricted due to the limited availability of the on-site laboratory. The results of these tests are presented in Appendix A.

A summary of the quantities of each different material type and the number and types of tests performed on the fills is provided in Table 5.1.

Table 5.1: TSF Summary of Material Quantities and Laboratory testing

Material Type	Source Of Material	Volume Placed (m ³)	QA/QC Tests Performed
Zone C – Downstream Shell NAG Rock	Springer Pit (ROM)*	209,500	Visual
Zone T – Transition NAG Rock	Springer Pit (Road Crush product)		31 gradations (MPMC – from stockpile) 4 Gradations (AMEC – from stock piles)
Zone F – NAG Filter Rock	Springer Pit (Filter Crush)	19,550	5 Gradations (MPMC As placed) 3 Gradations (AMEC – As placed) 5 Gradations (AMEC – from stock piles)
Zone S - Till Core	Perimeter and Barge Borrow Pits	54,300	5 Proctor 9 Gradation 7 Atterberg limits 43 ND field density (AMEC) 235 MDI field density(MPMC) 9 Laboratory Moisture tests
Total Fill Volume Placed		283,350	

*Run of mine material (no processing required)

5.5.1 Zone S – Till Core

During the 2011 construction season, two (2) separate borrow pits were utilized, the barge and perimeter borrows. In 2011, the main borrow source used was the perimeter borrow. This borrow pit is located downstream of the Perimeter Embankment between Corner 1 and Corner 1.5. The material sourced from the barge borrow was placed near Corner 5, and was only used for the small section between Corner 1 and Corner 5 of the Perimeter Embankment. The locations of the borrow pits are shown on Drawing 2011AB.02. Till material from both borrows was fairly consistent and was classified as a low plastic Silt, sandy, some clay with some to trace gravel.

Prior to commencement of the 2011 construction season; the MDI testing unit was calibrated as per ASTM 6780-05. In addition, a proctor test was conducted to confirm the maximum density and optimal moisture content as per ASTM D2216-10 of the glacial till to be used for Zone S construction. The in-situ density and moisture content of the compacted fill were determined by performing MDI tests (ASTM D6780-05) by MPMC personnel. AMEC carried out additional QA testing with a nuclear densometer (ASTM D6938-10, ND). Where field test results indicated that the specified 95% Standard Proctor Maximum Dry Density (SPMDD) was not achieved, the

area was re-compacted until satisfactory test results were achieved. Samples of till were also collected and periodically sent to AMEC's Prince George lab facility for geotechnical index testing. Additional detail regarding the QC/QA tests was presented in Table 5.1 with testing results presented in Appendix A.

The SPMDD value used in the field was chosen based on an average of the SPMDD lab results for the 2010 construction season and/or based on visual classification of the soil and/or based on the moisture content and/or the results of field scale test compactions and/or updated SPMDD results, whichever was most appropriate.

New average SPMDD reference values were calculated and applied in the field as new proctor data became available. In general, the fills achieved 95% SPMDD even when a conservative SPMDD reference value was used, due to the compactive effort applied by construction traffic and compaction equipment. Each test result was recorded and entered into a spreadsheet. Plots of the test results were prepared and are presented in Appendix A.

5.5.2 Zone F – NAG Filter Rock

Filter Zone F was produced by running run-of-mine NAG waste rock through the mill crusher. The processed material was fairly consistent and was slightly coarse at the bottom end but was deemed acceptable. Samples of this material were collected and are presented in Appendix A.

5.5.3 Zone T – Transition Zone

As discussed in Section 5.3 the method of producing an acceptable transition zone material was adjusted in 2011. The new processed material consistently satisfied the required specification and was deemed acceptable. Samples of this material were tested and the results are presented in Appendix A.

5.5.4 Zone C – Downstream Shell NAG Rock

Downstream Shell Zone C rockfill was visually checked to ensure filter compatibility with the upstream adjacent Zone T material. Standard practice of placing excessively coarse material towards the downstream limit of the fill was adhered to and the Zone C material placed was deemed acceptable.

5.6 Conformance of 2011 Construction with Design Intent

Based on AMEC's observations of the construction, review of reports prepared by MPMC when AMEC was not on site, and the QA/QC records, the 2011 Stage 7 raise of the dams was carried out in conformance with design intent.

6.0 INSTRUMENTATION MONITORING

6.1 General

The design and construction monitoring of the TSF embankments from mine start-up to early 2011 had been completed under the direction of KP. AMEC assumed the role of Engineer of Record for the TSF embankment as of 28 January 2011. KP provided the historical raw instrumentation data collected from the impoundment instrumentation. The raw data was

reprocessed, and working piezometers renamed to simplify data management. The revised naming convention for piezometers is presented on Drawings 2011AB.08 through 2011AB.16. The piezometric data organized by planes is presented in Appendix B

6.2 New Instrumentation

In 2011, a site investigation program was conducted. During the site investigation additional vibrating wire piezometers and slope inclinometers were installed. Table 1.2 and Table 1.3 summarize the status of vibrating wire piezometers and inclinometers installed in the TSF.

6.3 Piezometers

In 2011 the piezometers indicated the following general trends for the TSF embankment:

- Pore pressures in foundation soils in and around the TSF embankment were noted as stable with minor fluctuations, except for D1 where an upward trend is noted. Newly installed piezometers appear to have stabilized but insufficient data has been collected to show any trends at this point.
- Pore pressures in the till core are found to be stable, with a slightly increasing trend in response to the rising pond level.
- Pore pressures in filter and drains remained unchanged throughout the year.
- Pore pressures in the tailings and upstream fill experienced an upwards trend in response to the rising pond level. Piezometers installed at a lower elevation within the upstream tailings experienced lower response relative to the piezometers near the pond elevation, likely the result of proximity to the upstream under-drainage system.

6.4 Slope Inclinometers

In general, in 2011, the inclinometers indicated the following trends for the TSF embankment:

- SI11-02 showed an approximately 5 mm displacement over the course of the entire year. About half of that movement was observed sometime after or near completion of construction. Regular readings were not conducted during construction. The observed displacement is well within tolerable limits.
- SI06-02 and SI06-03 also displayed slight displacements. Since initialization of these slope inclinometers (in 2006), cumulative lateral displacement of roughly 5 mm has been observed, with no well-defined discrete movement zone. These movements are well within tolerable limits.
- No notable displacement has been noted on SI06-01, SI11-01, and SI11-02.
- SI11-04 has to date indicated displacement suggestive of compression rather than lateral displacement. Such a pattern of displacement sometimes occurs as a result of the installation process. This slope inclinometer should be reinitialized when the compression displacement stabilizes.

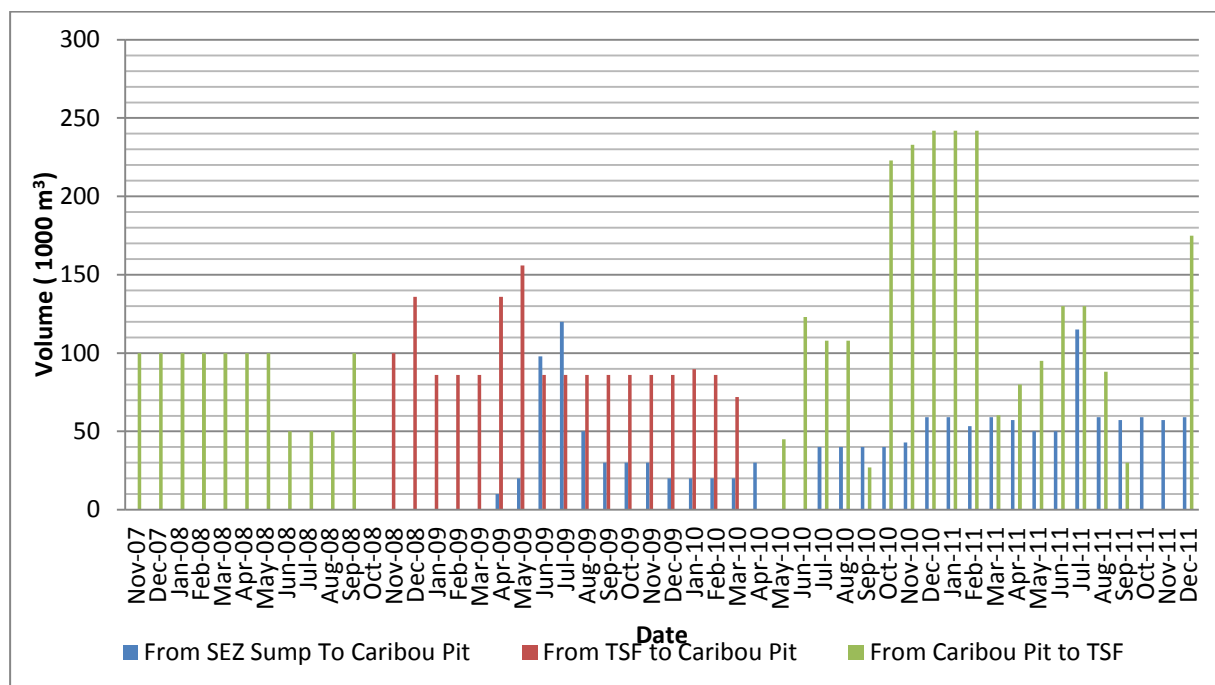
7.0 WATER MANAGEMENT AND IMPOUNDMENT RAISING SCHEDULE

7.1 General

MPMC maintains the water/mass balance model which is updated monthly with actual tonnages (milled/mined), precipitation data and surveyed pond water elevations to maintain the accuracy of the model and pond level projections. The Mount Polley balance has not been reviewed by AMEC. This section therefore provides a general overview of the water balance and site water management as provided by MPMC.

It is AMEC's understanding that currently the total inflow from precipitation and surface runoff exceeds losses from evaporation and storage of water within the voids of deposited tailings. Thus, MPMC mine site is operating under a net annual water surplus condition, with the accumulating surplus being stored in the TSF and the Caribou Pit. MPMC transfers water as needed between the TSF and the Caribou Pit, with the volumes transferred, as provided by MPMC, shown in Figure 7.1.

Figure 7.1: Water Transfer



7.2 Site Water Management

Site water management is illustrated on Figure 7.2 and is described below:

- Northeast Zone Pit water is pumped into the “Long Ditch”. The Long Ditch also intercepts surface runoff along with flows via a buried pipeline from “Joe’s Creek” that collects water from dump runoff at the northern end of the site. The Southeast Rock Dump Site (SERDS) Ditch feeds into a pond (along with the open-flow Long Ditch). This water is conveyed via a buried pipe until just past the Bootjack Creek Bridge crossing (not identified on the map) where it then flows back into an open ditch and into the Perimeter Embankment Seepage Collection Pond. This water is collected and pumped into the TSF.

- The Anaerobic Biological Reactor (ABR) receives toe drain flow, and discharges out to a pond and to the Main Seepage Pond, from where it is pumped back into the TSF.
- The Mill Site Sump is bled into the tailings line and thus directed to the TSF.
- The reclaim water line runs adjacent to the tailings line, and transfers water from the reclaim barge in the TSF to the booster station (not labelled) and to the mill.
- Flows from the TSF toe drains and upstream under-drains report to the seepage collection ponds before being pumped back into the TSF.

7.3 Mass Balance

Survey and pond soundings of the impoundment area were last updated by MPMC personnel in August 2011. The updated survey data was used to create a revised storage elevation curve for the tailings impoundment, which was incorporated into the mass balance model. The updated mass balance model was then used to predict average tailings and pond level/volume within the TSF. In turn, that level plus the PMF event determines the required dam crest elevations and the dam raising schedule. A new bathymetric survey will be carried out when the pond becomes ice free in 2012.

The mass balance model is updated on a regular basis with actual tonnages (milled/mined) and surveyed pond water elevations to calibrate the model and increase the accuracy of pond level projections.

7.4 Overview of Mass Balance Model

The mass balance model projections are based on a number of parameters and assumptions, including those listed below:

- Projected tailings elevations in the TSF are on the basis of the tailings tonnages projected by the design mine plan and assumed in-situ dry density.
- Projected pond water levels do not take into account the water transferred between the TSF and the Cariboo Pit.

The TSF is required to have sufficient live storage capacity for containment of runoff from the entire contributing catchment area during a 24-hour PMP event. In addition, the TSF design also incorporates an allowance for wave run-up. Therefore, the normal and maximum operating pond levels are as follows:

- Normal Operating Level – Water level at least 1.3 meters below the embankment crest; and
- Maximum Operating Level – Water level is 1 meter below the embankment crest, which allows for the storage of the runoff from the design 24 hr duration PMP event above the normal Operating Level.

7.5 Dam Raising Schedule

MPMC is managing the site water balance, and only the corresponding projected pond elevations and respective dam filling schedule have been reviewed by the design engineer. The following section was provided by MPMC. *The water balance projects that the current dam crest elevation of 960.1 m is sufficient until the end May 2012. To remain compliant and satisfy the 1.3 m freeboard requirement, a 0.3 m lift over the entire length of the embankment will be required in early spring 2012 accordingly. MPMC holds the option of transferring excess pond water into the mined out Cariboo Pit if required to satisfy freeboard requirements until the full 2012 embankment raise is realized.*

The 2012 Stage 8 Embankment raise (3.4 m) to crest El. 963.5 m is targeted for completion by the end of September 2012. The impoundment filling curve with predicted and actual pond levels and embankment elevations through the 2012 season is presented in Figure 7.3.

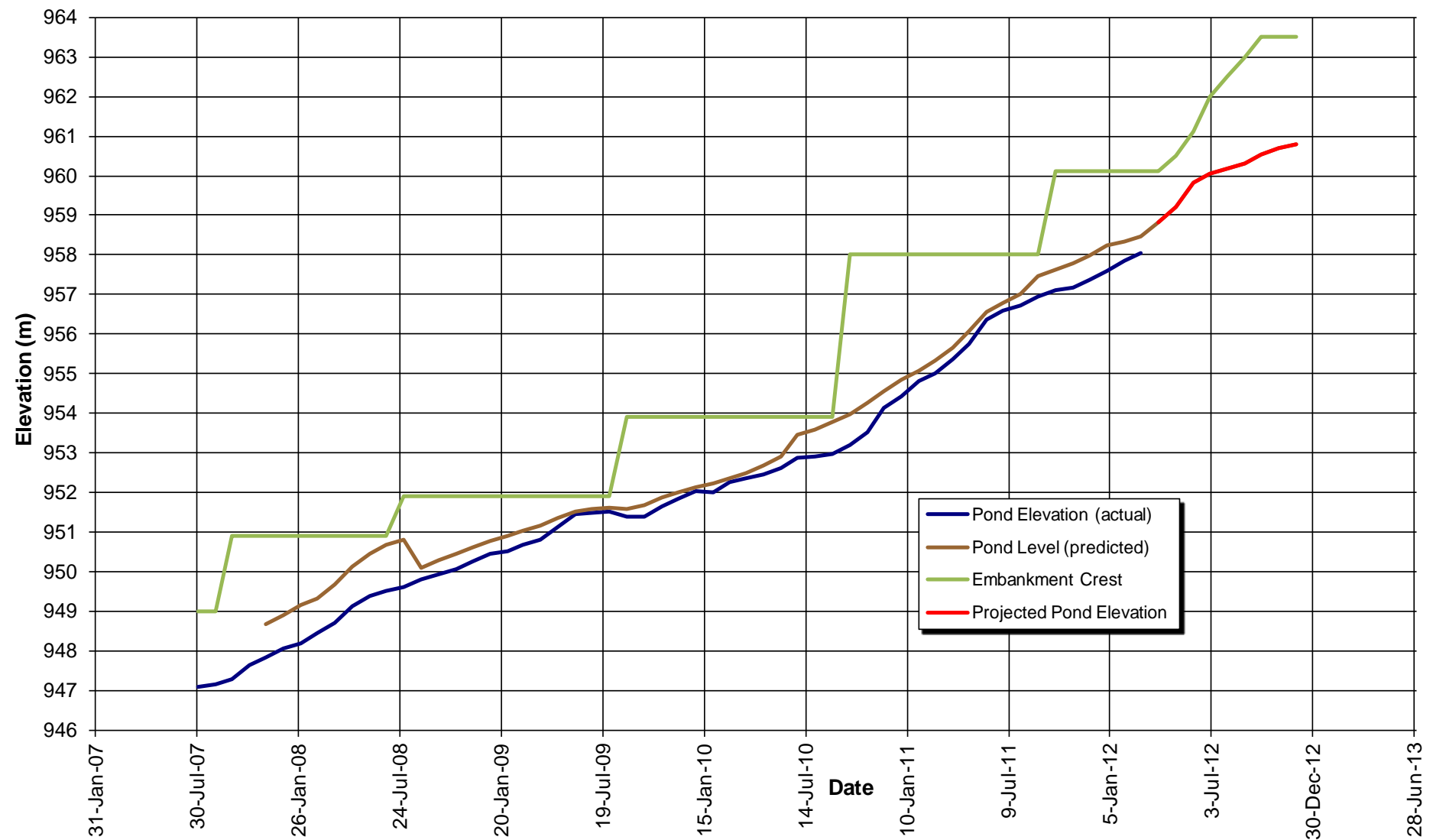
7.6 Mine Planning

The 2016 Mine Plan remains unchanged and forms the basis for future dam raises.

Figure 7.2: Site Water Management Schematic



Figure 7.3: Impoundment Storage Elevation Curve



8.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions drawn on the basis of this annual review and as-built report are as follows:

1. The TSF embankment was raised to a minimum crest elevation (till core) of 960.5 m in 2011.
2. The 2011 raise of the TSF embankment was carried out in conformance with design intent.
3. Monitoring of the TSF embankment via instrumentation and visual inspections indicated the following:
 - a. Surveys of inclinometers within the downstream shell of the dam indicate that movements are minor and well within tolerable limits.
 - b. Foundation pore pressures have been stable.
 - c. Pore pressures in the till fill of the dam have increased slightly due to the pore pressure increase of the tailings.
 - d. The TSF embankment is performing in accordance with its design intent.

Recommendations made on the basis of this annual review and as-built report are as follows:

1. A comprehensive review and update of the site water balance should be undertaken.
2. Toe drain flows need to be measured and recorded per requirements described in the OMS manual.
3. The OMS manual for the TSF is due for an update in 2012.



9.0 REPORT CLOSURE

This report has been prepared for the exclusive use of Mount Polley Mine Corporation for specific application to the area within this report. 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 geotechnical and tailings dam engineering practices. No other warranty, expressed or implied, is made.

Respectfully submitted,

**AMEC Environment & Infrastructure,
a division of AMEC Americas Limited**

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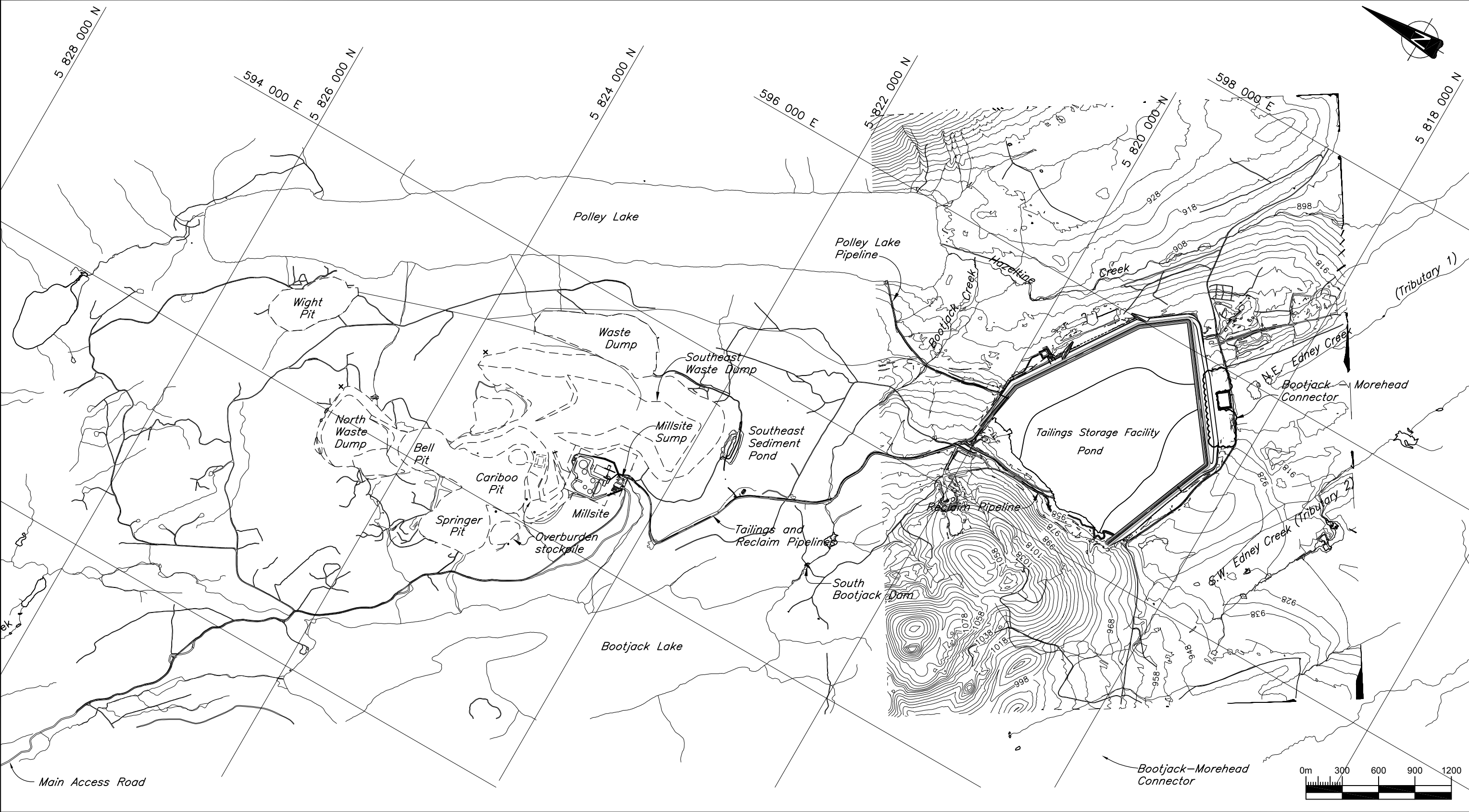
Daryl Dufault, P.Eng.
Project Manager

Todd E. Martin, P.Eng., P.Geo.
Principal Engineer

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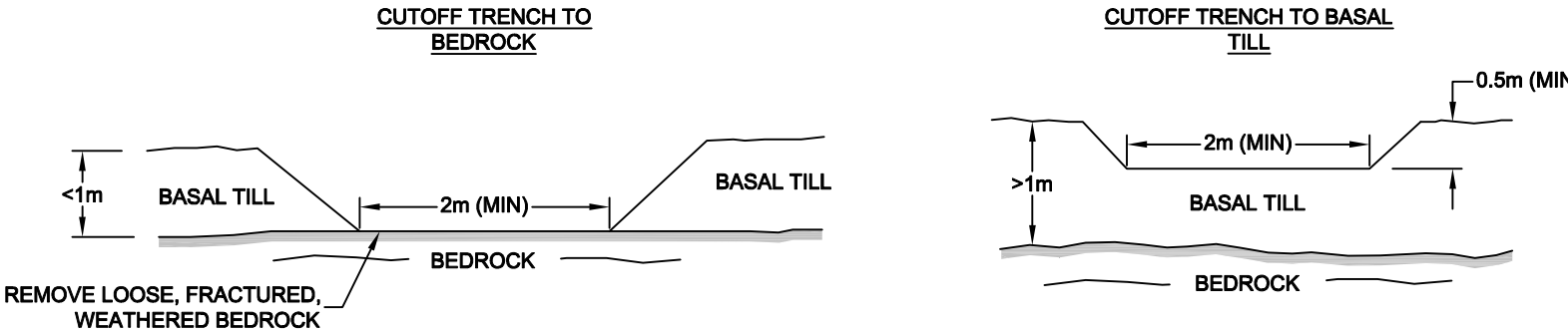
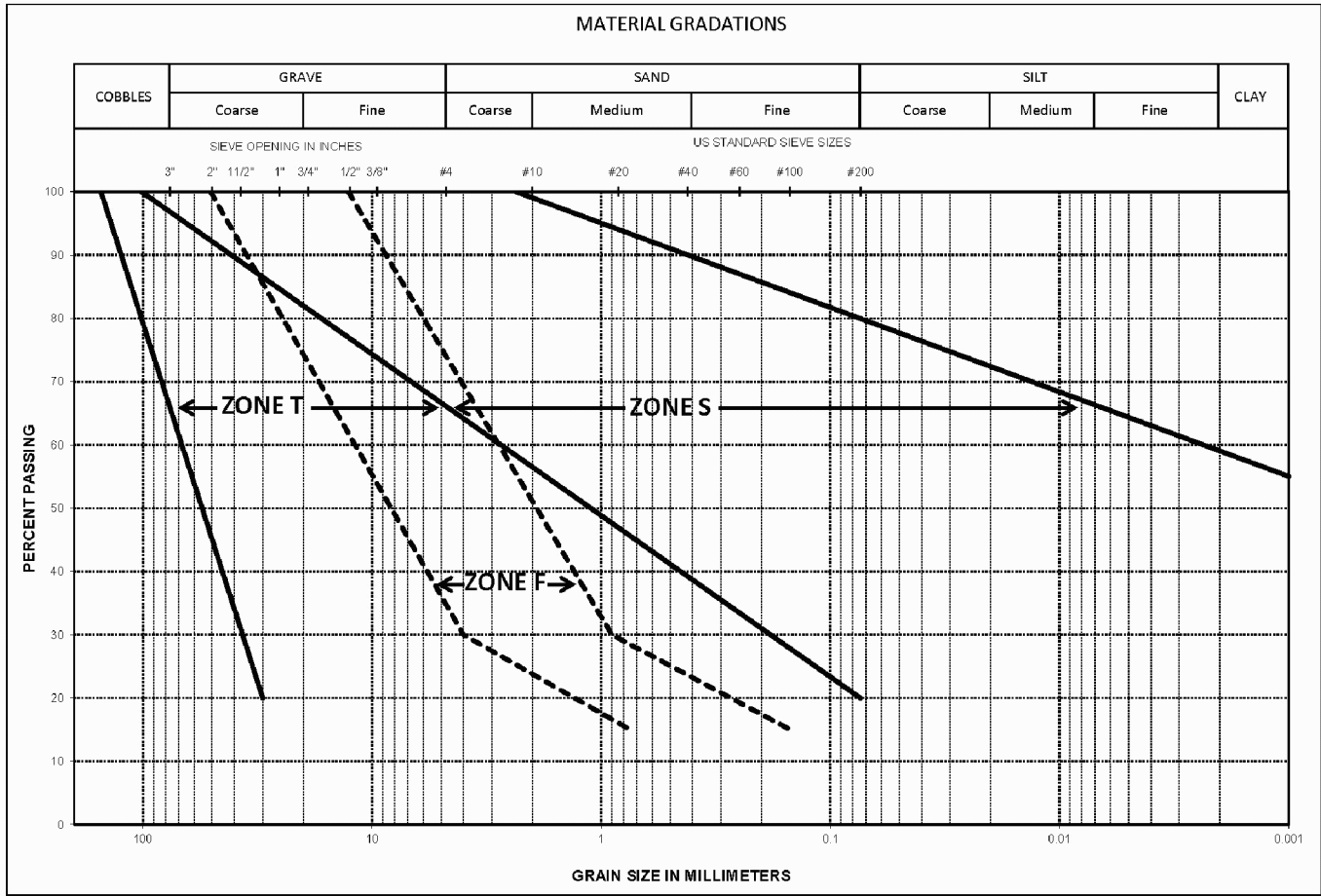
DRAWINGS



<p>NOTE:</p> <p>1. BASE DRAWING FROM KNIGHT PIÉSOLD LTD., '100_r0.dwg' AND 'dam-clip.dwg'.</p>	<p>CLIENT LOGO:</p> 	<p>CLIENT:</p> <p>IMPERIAL METALS</p> <p>AMEC Environment & Infrastructure</p> <p>Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664</p>		<p>DWN BY: BB</p> <p>CHK'D BY: DO</p> <p>DATUM: NAD83</p> <p>PROJECTION: UTM Zone 10</p> <p>SCALE: AS SHOWN</p>	<p>PROJECT:</p> <p>MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT</p> <p>TITLE:</p> <p>STAGE 7 TAILINGS EMBANKMENT 2011 AS-BUILT GENERAL SITE PLAN</p>	<p>DATE: MARCH 2012</p> <p>PROJECT NO: VM00560</p> <p>REV. NO: A</p> <p>FIGURE NO: 2011AB.01</p>
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EMBANKMENT ZONE	DESCRIPTION	MATERIAL TYPE	SPECIFICATIONS	SUBGRADE OR BASE PREPARATION	PLACEMENT AND COMPACTION	ON SITE CONSTRUCTION TESTING	OFF SITE CONSTRUCTION TESTING
S	TILL CORE	GLACIAL TILL	Well graded till moisture content at $\pm 1\%$ of optimum. (See Gradation Envelope below)	Strip all topsoil and organic material. Excavate cutoff trench as per detail. (see Detail 1) Strip all frost softened and weakened soils, proof roll then scarify base soils.	Placed, moisture conditioned and spread in maximum 300mm loose lifts. Vibratory compaction to 95% of standard proctor maximum dry density.	Source Classification D422-07: 1 per 10,000 m ³ per source. In-Place Testing D6780-05: 1 per lift per 150 linear m or 1 per day per lift; D422-07: 1 per 10,000m ³ offset to source.	Source Classification D698-07, D4318-10, D2216-10: 1 per 10,000 m ³ per source; D422-07: 1 per 20,000 m ³ per source. In-Place Testing D422-07: 1 per 20,000m ³ offset to source.
F	FILTER	SAND AND GRAVEL	Sand and gravel sized material. (See Gradation Envelope below)	Strip all frost softened and weakened soils. Smooth roll base soils.	Placed, and spread in maximum 600mm loose lifts. Vibratory compaction minimum of 4 passes utilizing a 10 ton smooth drum.	Source Classification D422-07: 1 per 5,000 m ³ per source. In-Place Testing D422-07: 1 per 5,000 m ³ offset to source. Visual in-place inspection of compaction and zone dimension.	Source Classification D422-07: 1 per 10,000 m ³ per source. In-Place Testing D422-07: 1 per 10,000 m ³ offset to source.
T	TRANSITION	FINE ROCKFILL (NAG)	Cobble and gravel sized material. (See Gradation Envelope below)	Strip all frost softened and weakened soils. Smooth roll base soils.	Placed, and spread in maximum 600mm loose lifts. Compacted by uniform routing of haul trucks and spreading equipment	Confirmation of waste rock inertness, as required. D422-07: 1 per 5,000m ³ . Visual in-place inspection of material size, compaction, and zone dimension.	D422-07: 1 per 10,000 m ³ .
C	ROCKFILL	GENERAL ROCKFILL (NAG)	Nominal 1m maximum particle size.	Strip all frost softened and weakened soils. Smooth roll base soils.	Placed and spread in maximum 2000mm loose lifts. Maximum lift slope 1.3H:1V compacted by haul traffic and spreading equipment. Boulder-rich rockfill not to be placed adjacent to fine rock transition zone.	Confirmation of waste rock inertness, as required. Visual in-place inspection of material size and placement.	
U	UPSTREAM FILL	SELECT FILL	Cell construction is to be utilized. Constant reworking of the tailings is needed to ensure proper distribution within the cell.		Placement and compaction requirements to be determined based on material selection.		



DETAIL 1 - CUTOFF TRENCH

NOTE:
1. ASTM STANDARDS ARE ATTACHED IN APPENDIX C.

CLIENT LOGO:



CLIENT:

IMPERIAL METALS

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Tel. 604-294-3811 Fax 604-294-4664



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DATUM:

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PROJECTION:

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SCALE:

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PROJECT:

**MOUNT POLLEY MINE
TAILINGS STORAGE FACILITY
2011 AS-BUILT / ANNUAL REVIEW REPORT**

TITLE:

**TAILINGS STORAGE FACILITY
CONSTRUCTION:
NOTES AND SPECIFICATIONS**

DATE:

MARCH 2012

PROJECT NO:

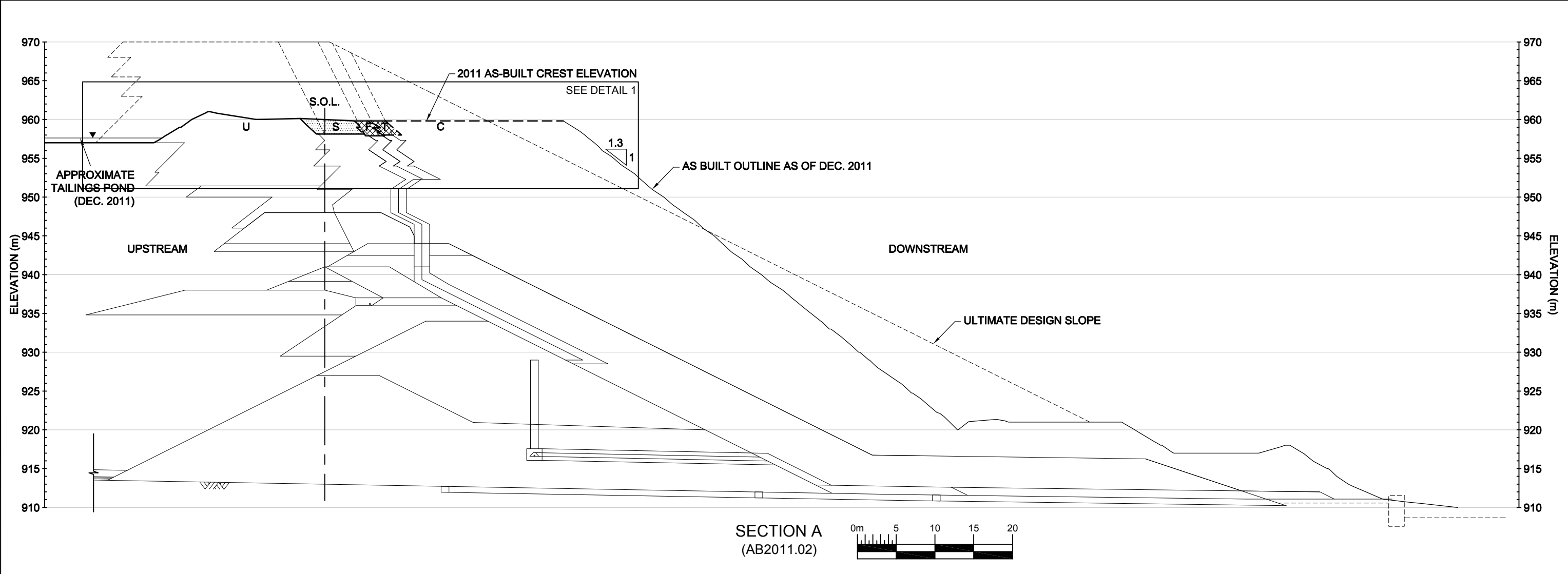
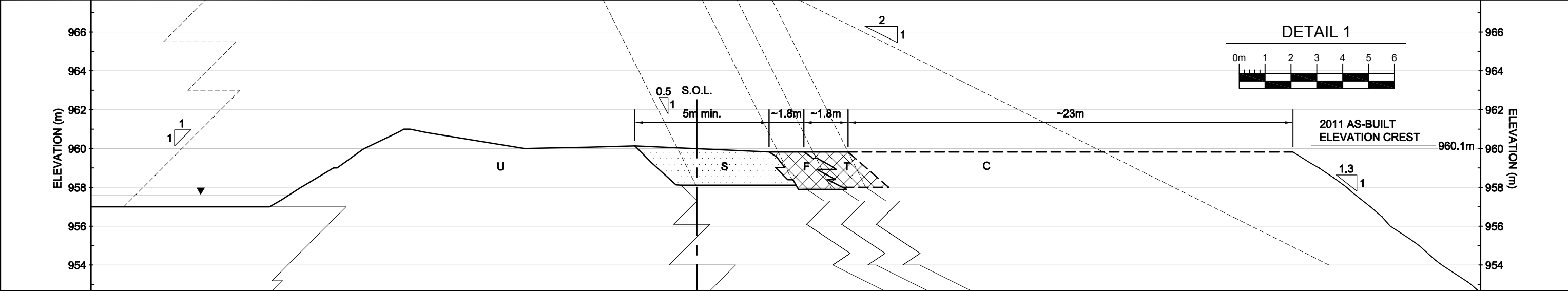
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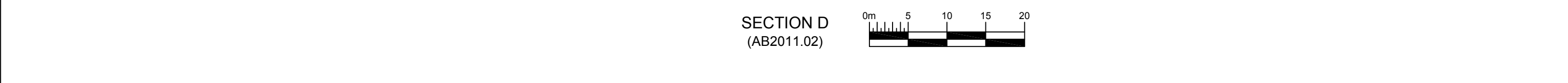
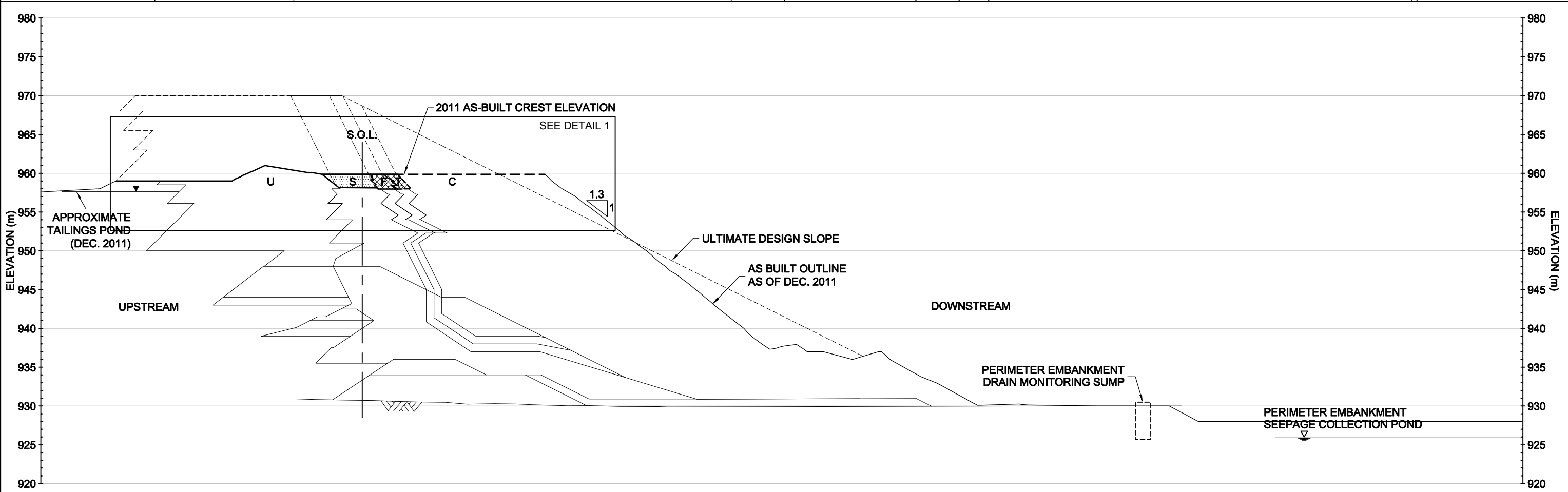
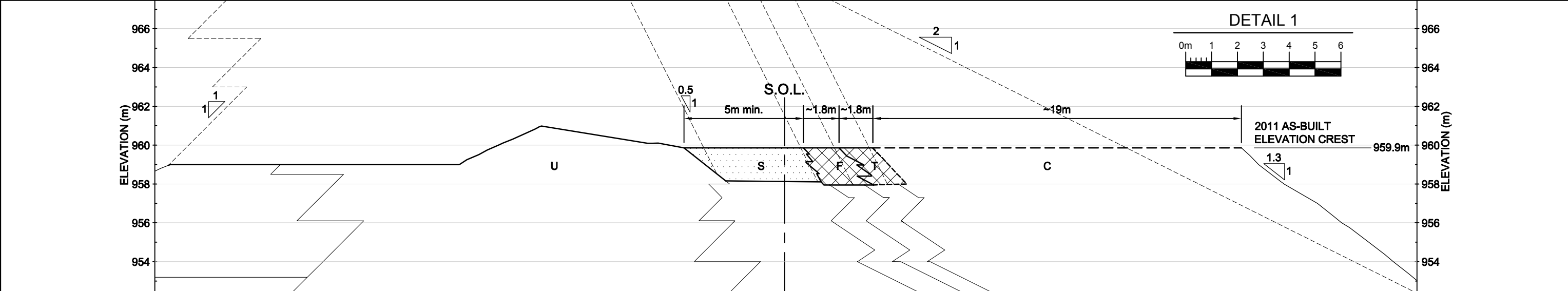
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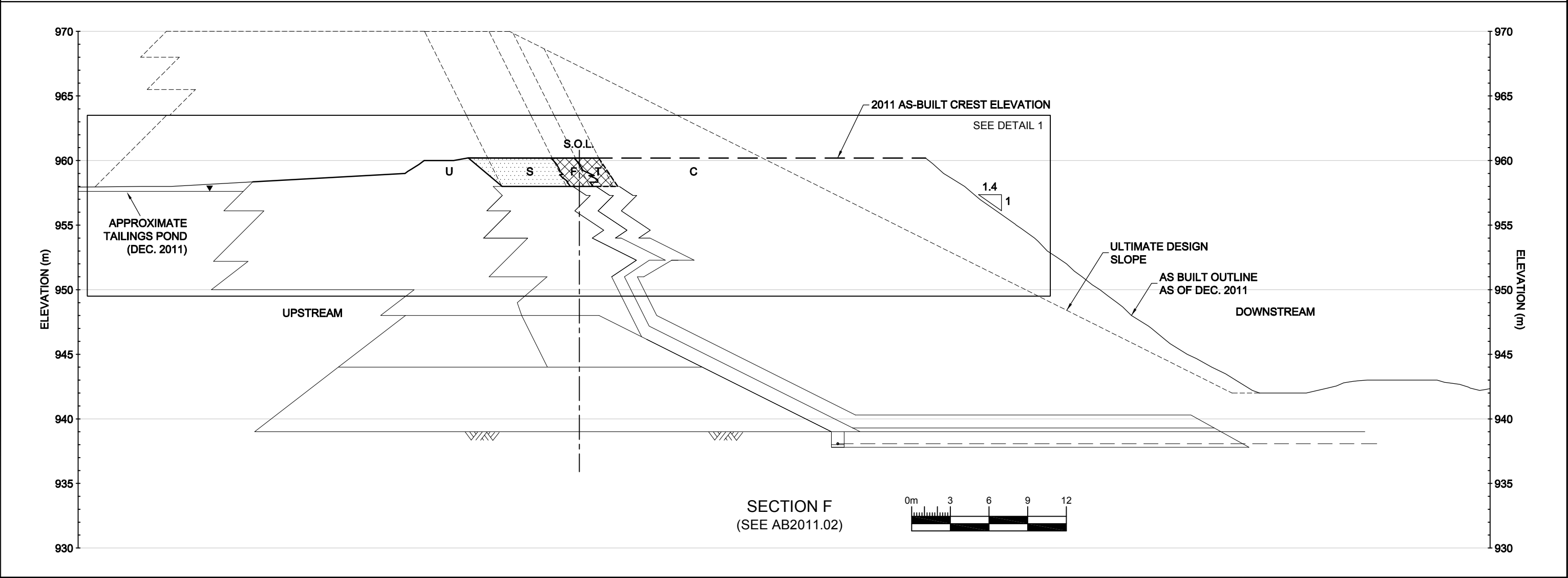
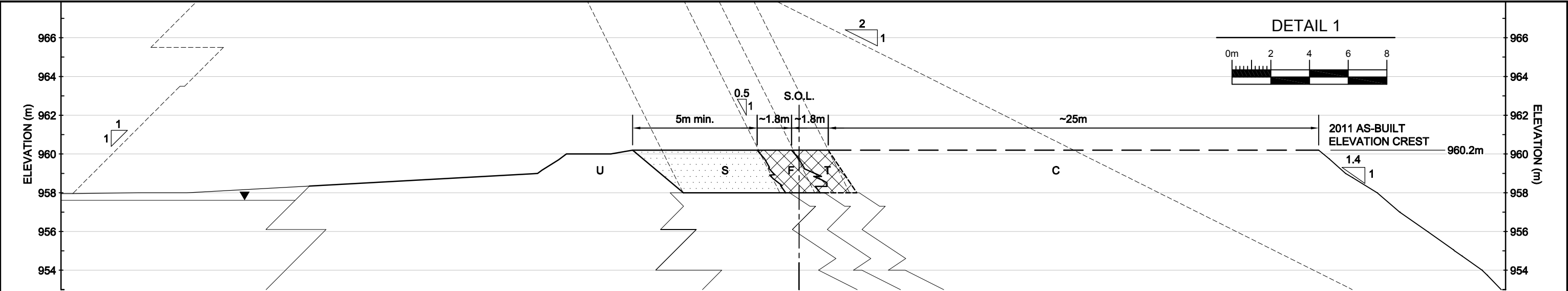
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					PROJECT NO: VM00560 REV. NO: A FIGURE NO: 2011AB.04

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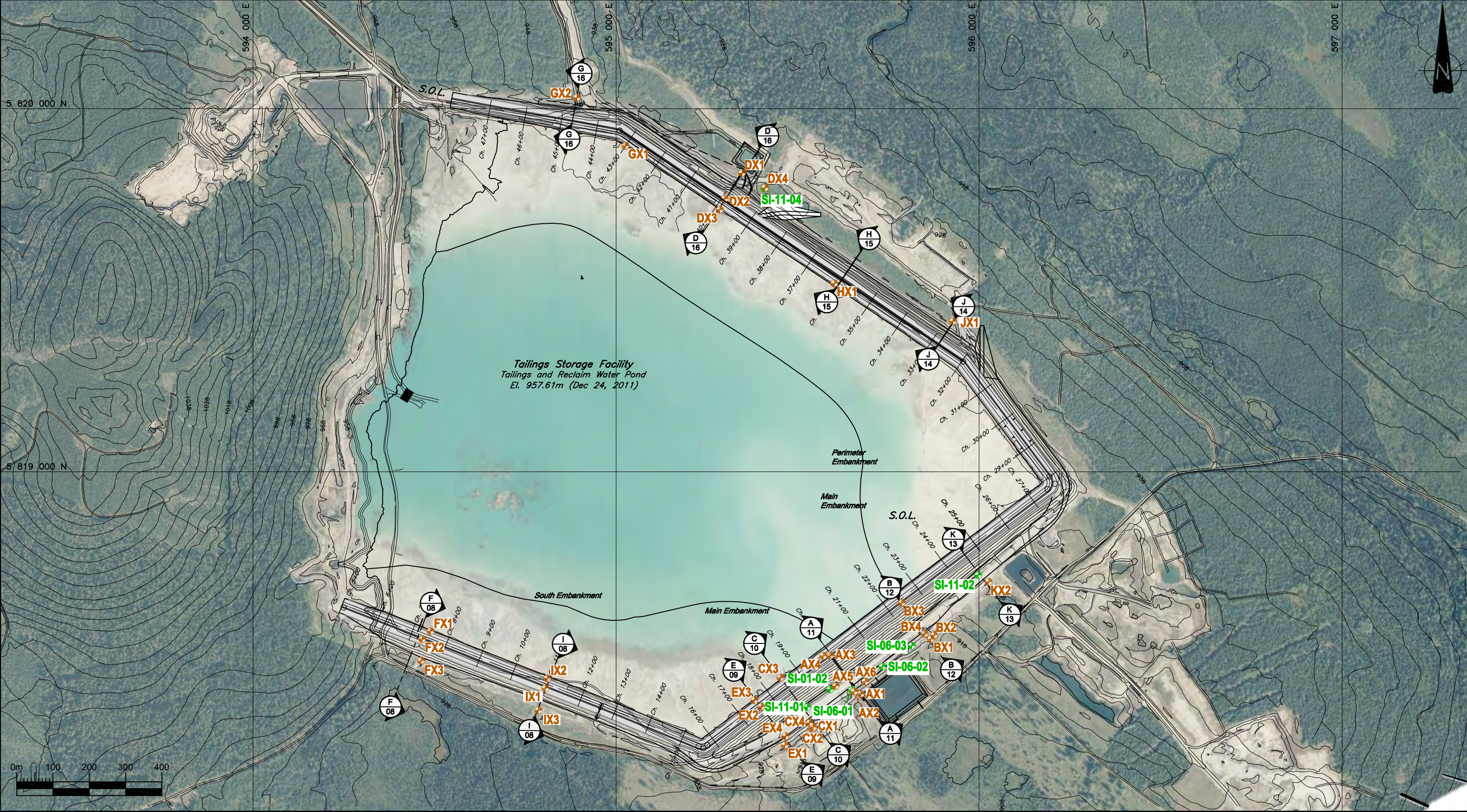
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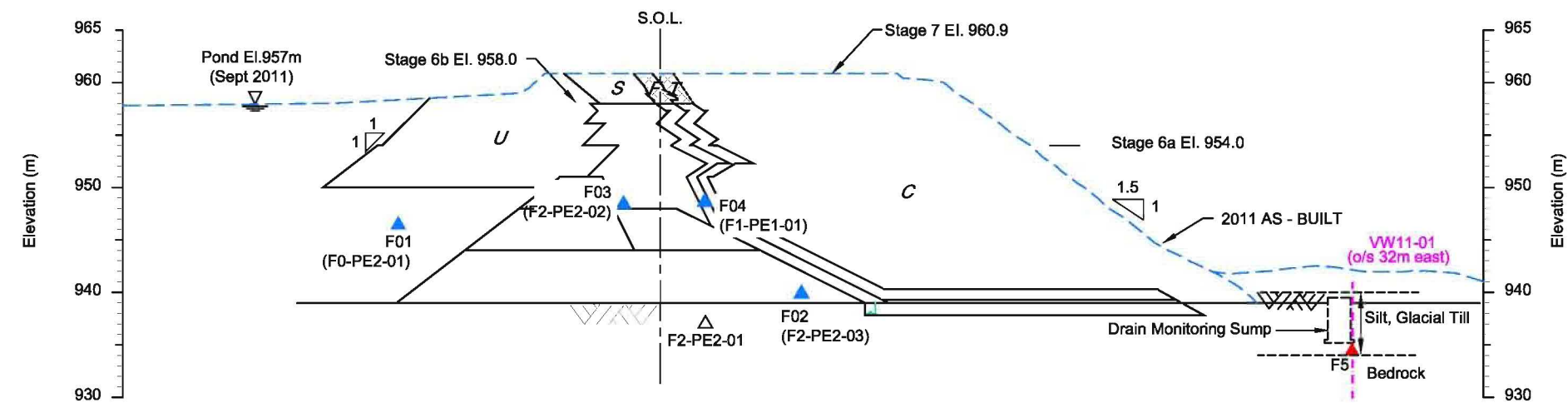
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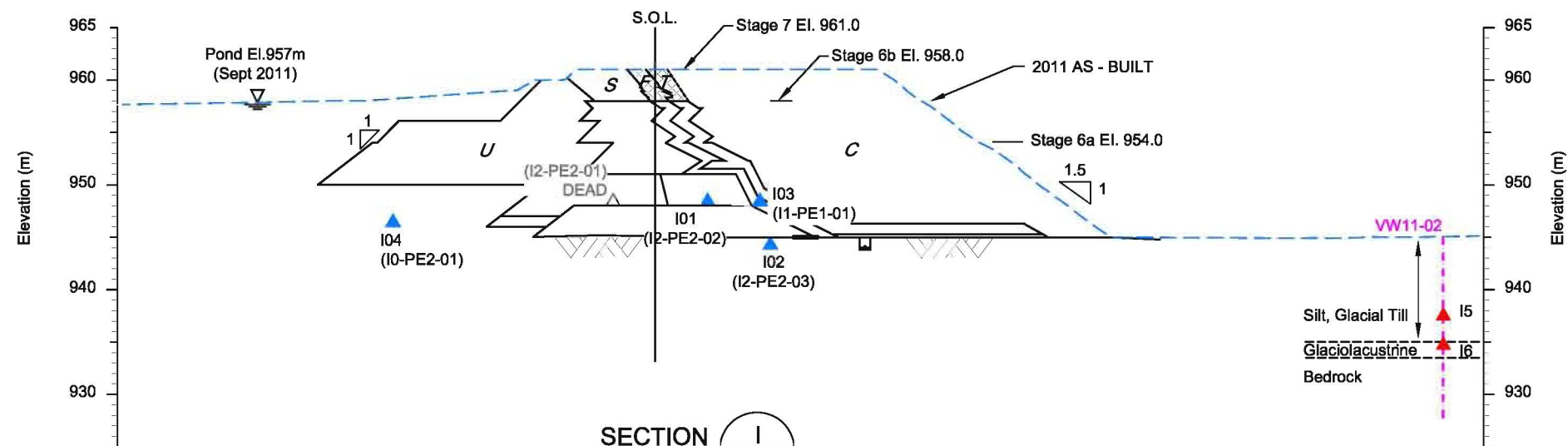
LEGEND:  Slope Inclinator Location  Vibrating Wire Location	CLIENT LOGO: 	CLIENT: IMPERIAL METALS	DWN BY: BB CHK'D BY: DO DATUM: NAD83 PROJECTION: UTM Zone 10 SCALE: AS SHOWN	PROJECT: MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT	DATE: MARCH 2012 PROJECT NO: VM00560 REV. NO: A FIGURE NO: 2011AB.07
NOTES: 1. BASE DATA FROM KP DRAWINGS 102_R0.dwg, 'dam-clip.dwg' AND 2011 AIRBORNE SURVEY PROVIDED BY MPMC. 2. S.O.L. - SETTING OUT LINE		AMEC Environment & Infrastructure Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664 		TITLE: TAILINGS STORAGE FACILITY INSTRUMENTATION PLAN VIEW	

S:\Internal\VM00560-MtPolley-CAD\2011As-built\2011AB.07.dwg - 2011AB.07 - Mar. 22, 2012 4:24pm - ben.brown

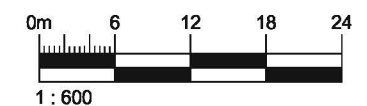



SECTION **F**
07

- LEGEND**
- ▲ 2011 PIEZOMETER
 - ▲ FUNCTIONING PIEZOMETER
 - ▲ NON-FUNCTIONING PIEZOMETER
 - 2011 SLOPE INCLINOMETER
 - FUNCTIONING SLOPE INCLINOMETER
 - S** GLACIAL TILL
 - C** ROCK - SHELL ZONE
 - T** ROCK - TRANSITION ZONE
 - F** FILTER SAND
 - FT** SAND
 - U** SELECT FILL
 - CBL** SELECT COARSE ROCKFILL
 - D** DRAINAGE GRAVEL
- * BRACKETS IN LABEL DENOTE 'OLD' ID

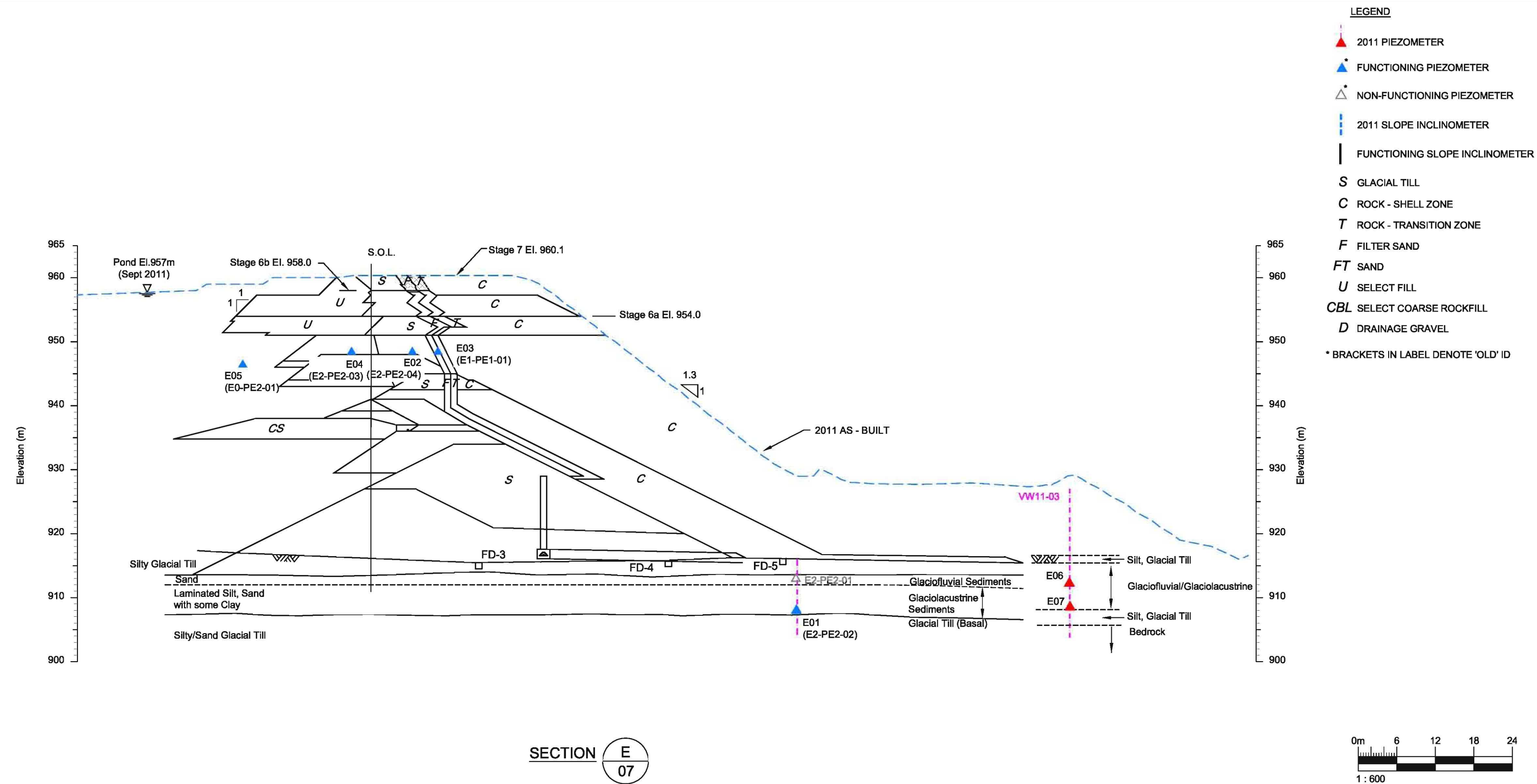


SECTION **I**
07



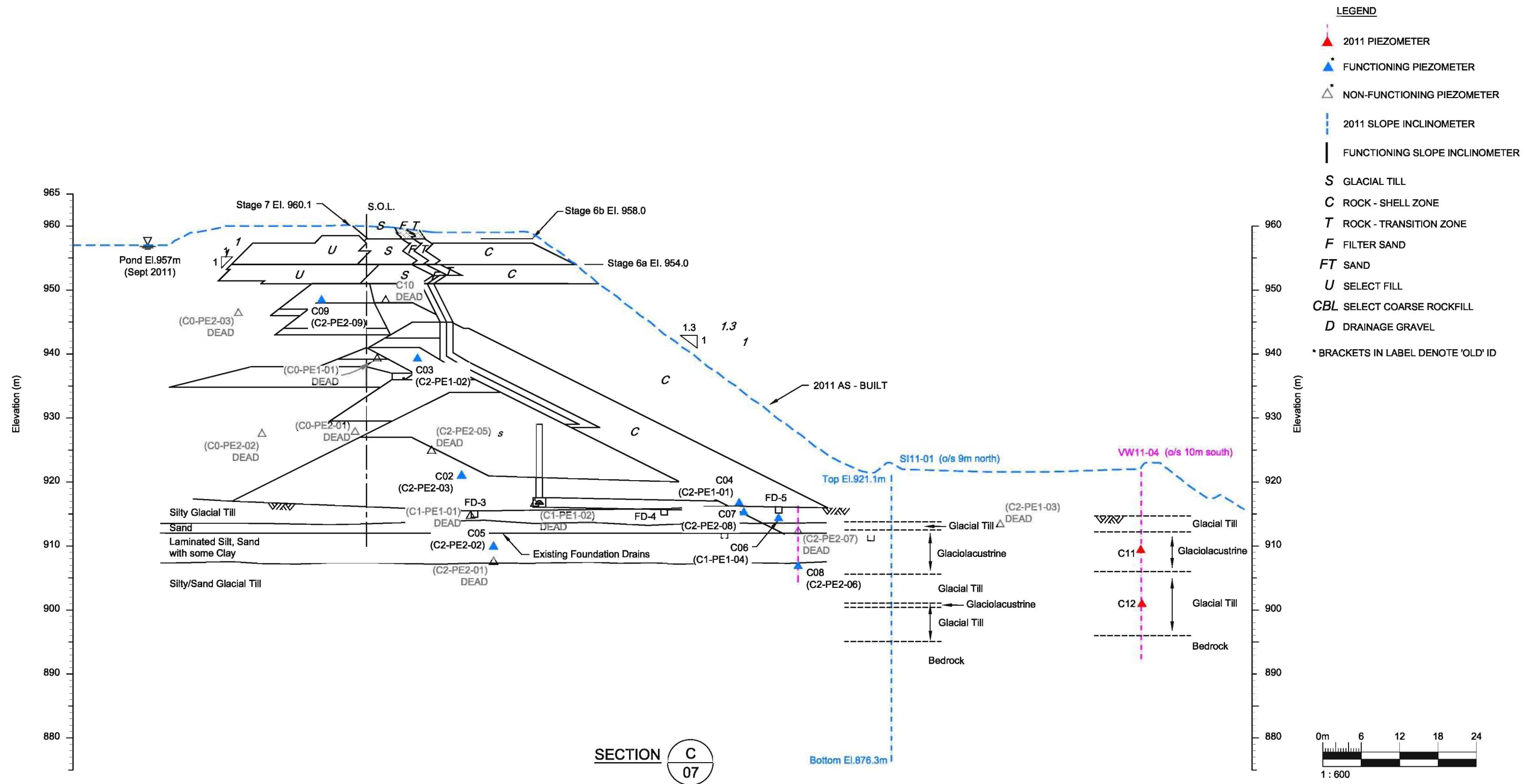
NOTES: 1. SECTIONS ORIGINATING FROM KNIGHT PIESOLD 2010 TSF ANNUAL CONSTRUCTION REPORT. 2. 2011 AS-BUILT BASED ON SEPTEMBER 2011 FLYOVER SURVEY PROVIDED BY MPMC.	CLIENT LOGO: <small>S:\PROJECTS\IM00560 - Mt Polley Engineering Services\Drawings\as-built 2011\2011AB 08-16 DRAFT.dwg - 2011AB.08 - F&I - Mar. 23, 2012 2:37pm - daryl.dufault</small>	CLIENT: IMPERIAL METALS AMEC Environment & Infrastructure Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664		DWN BY: BB/YC CHK'D BY: DO DATUM: N/A PROJECTION: N/A SCALE: AS SHOWN	PROJECT: MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT TITLE: SOUTH EMBANKMENT INSTRUMENTATION SECTIONS F 7+20 & I 11+00	DATE: MARCH 2012 PROJECT NO: VM00560 REV. NO: A FIGURE NO: 2011AB.08

S:\PROJECTS\IM00560 - Mt Polley Engineering Services\Drawings\as-built 2011\2011AB 08-16 DRAFT.dwg - 2011AB.08 - F&I - Mar. 23, 2012 2:37pm - daryl.dufault



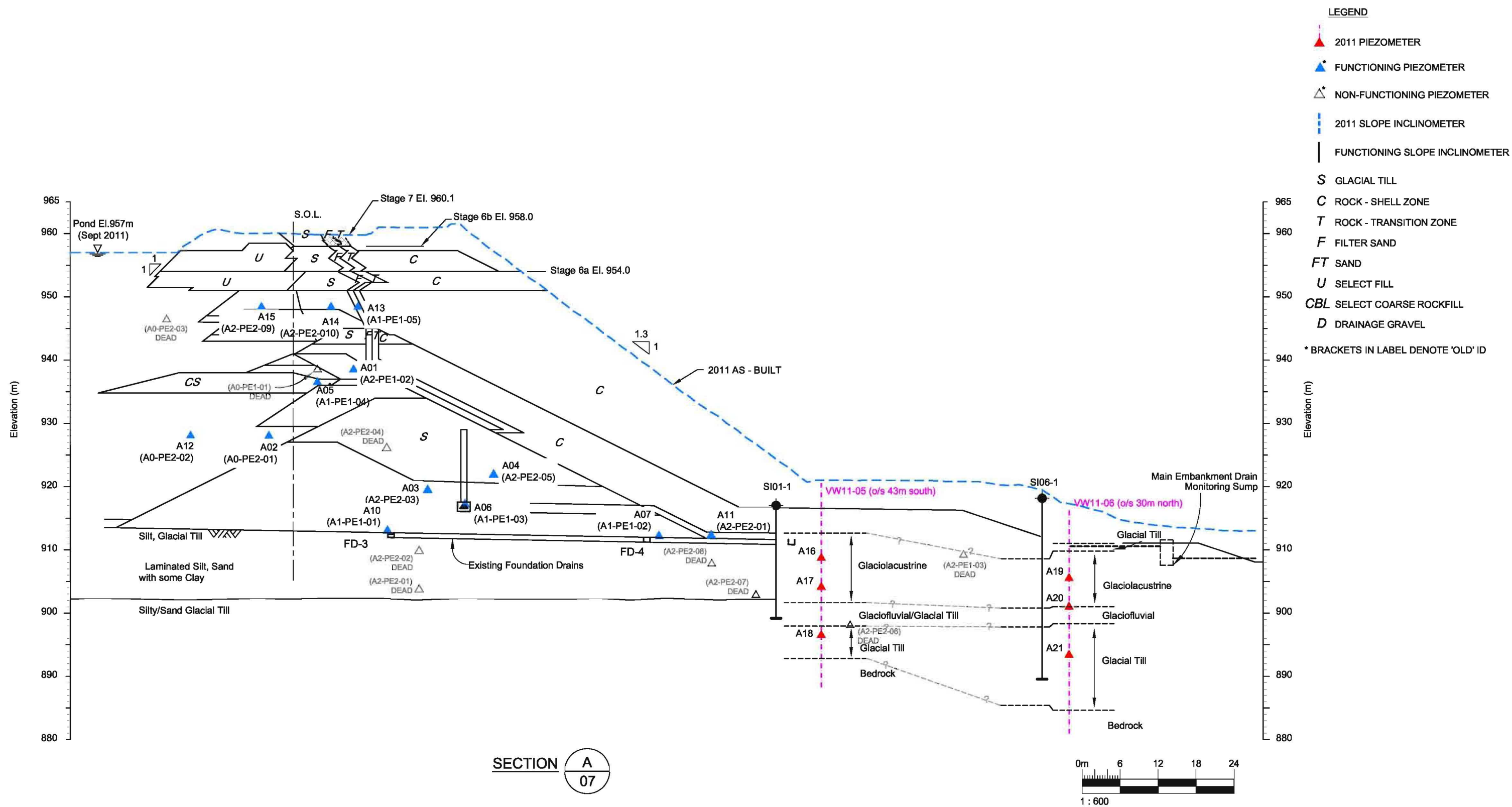
NOTES: 1. SECTIONS ORIGINATING FROM KNIGHT PIESOLD 2010 TSF ANNUAL CONSTRUCTION REPORT. 2. 2011 AS-BUILT BASED ON SEPTEMBER 2011 FLYOVER SURVEY PROVIDED BY MPMC.	CLIENT LOGO: <small>S:\PROJECTS\2011\07 - Mt Polley Engineering Services\Drawings\as-built 2011\2011AB 08-16 DRAFT.dwg - 2011AB.09 - E - Mar. 23, 2012 2:39pm - daryl.dufault</small>	CLIENT: IMPERIAL METALS	DWN BY: BB/YC	PROJECT: MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT	DATE: MARCH 2012	
		AMEC Environment & Infrastructure Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664	CHK'D BY: DO		PROJECT NO: VM00560	
			DATUM: N/A		REV. NO: A	
			PROJECTION: N/A		TITLE: MAIN EMBANKMENT INSTRUMENTATION SECTION E 17+60	FIGURE NO: 2011AB.09
			SCALE: AS SHOWN			

S:\PROJECTS\2011\07 - Mt Polley Engineering Services\Drawings\as-built 2011\2011AB 08-16 DRAFT.dwg - 2011AB.09 - E - Mar. 23, 2012 2:39pm - daryl.dufault

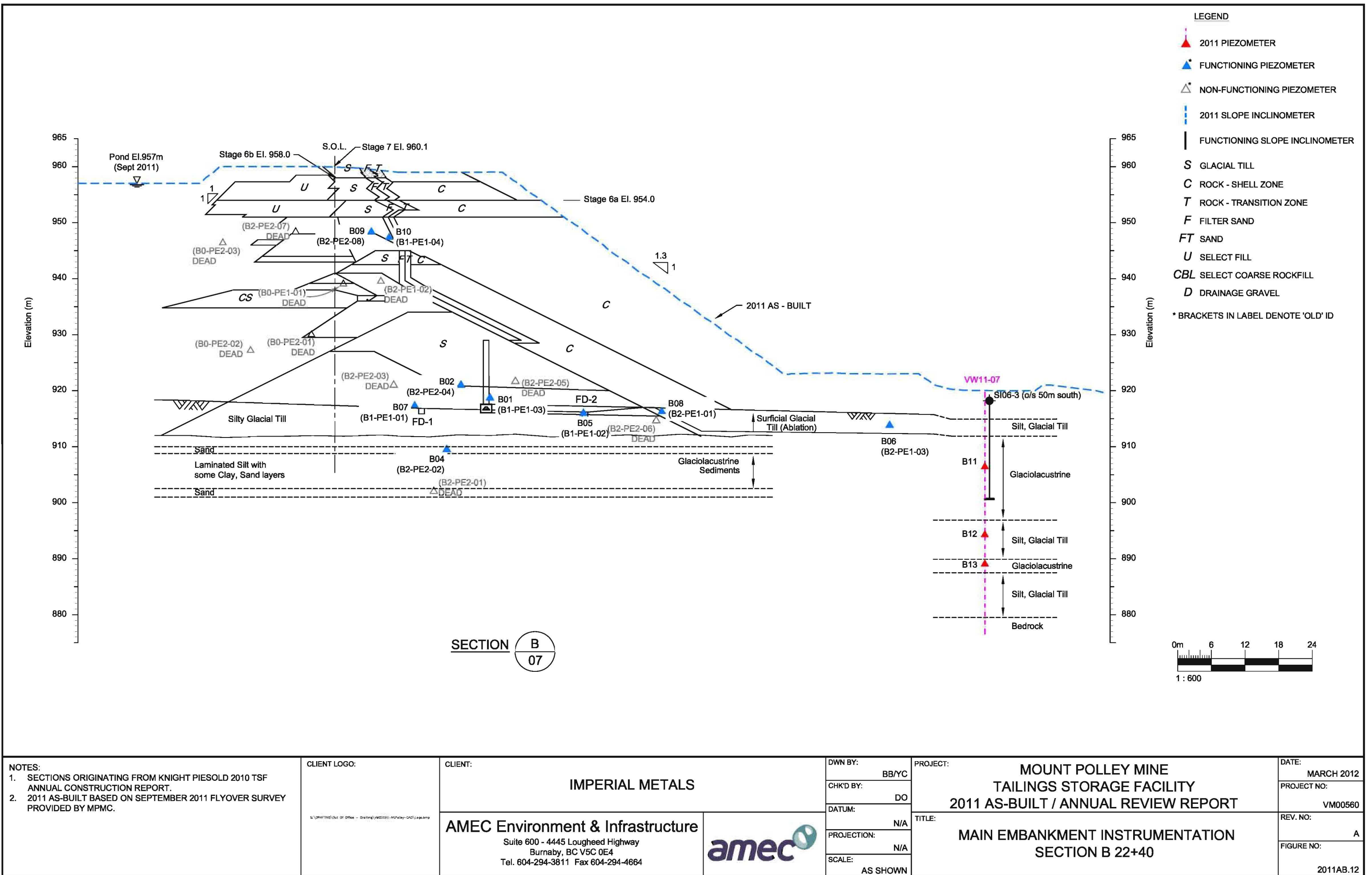


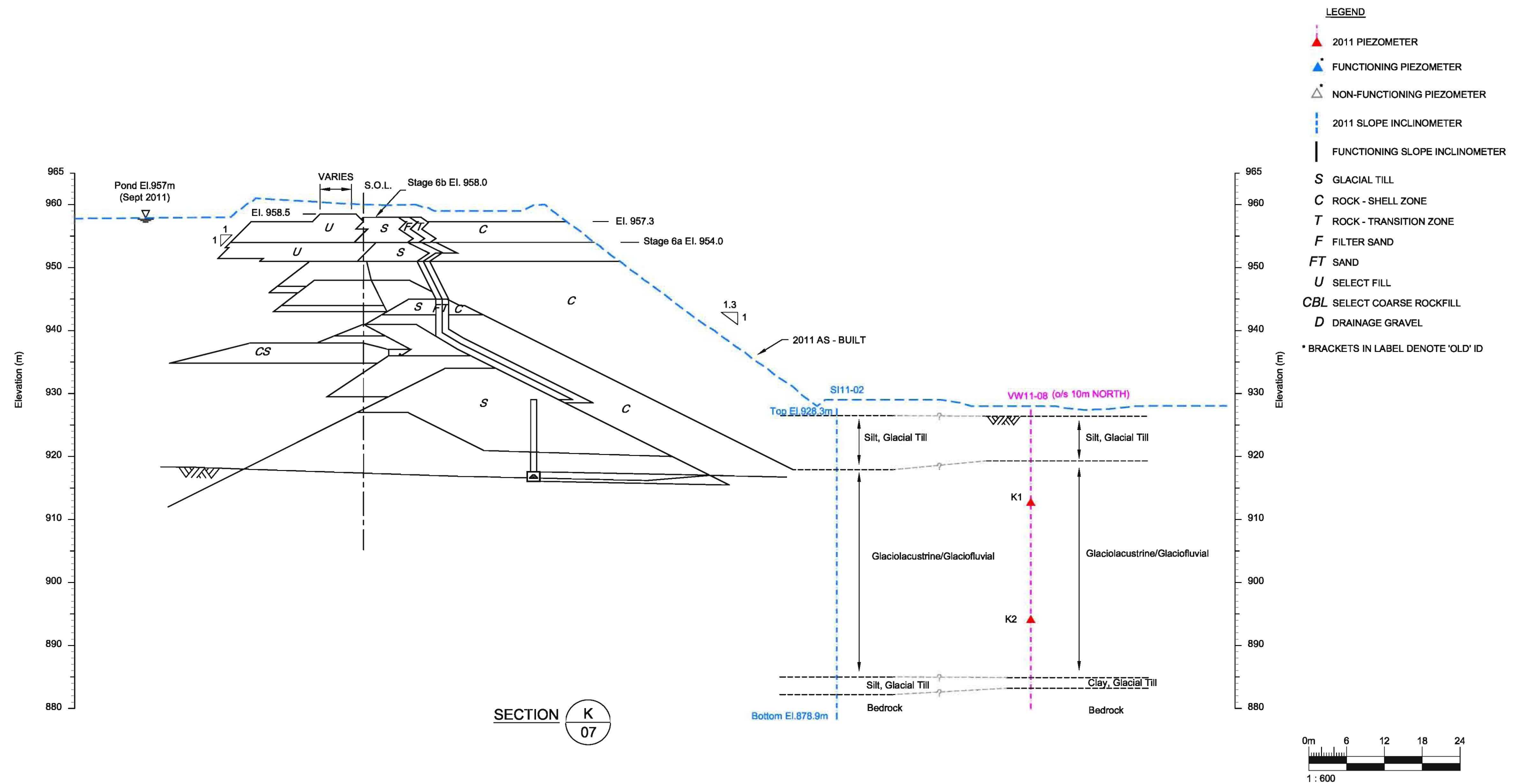
<div>NOTES:</div> <div><div>1. SECTIONS ORIGINATING FROM KNIGHT PIESOLD 2010 TSF ANNUAL CONSTRUCTION REPORT.</div><div>2. 2011 AS-BUILT BASED ON SEPTEMBER 2011 FLYOVER SURVEY PROVIDED BY MPMC.</div></div>	<div>CLIENT LOGO:</div> <div></div>	<div>CLIENT:</div> <div>IMPERIAL METALS</div>		<div>DWN BY:</div> <div>BB/YC</div>	<div>PROJECT:</div> <div>MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT</div>	<div>DATE:</div> <div>MARCH 2012</div>	
				<div>CHK'D BY:</div> <div>DO</div>		<div>PROJECT NO:</div> <div>VM00560</div>	
				<div>DATUM:</div> <div>N/A</div>		<div>REV. NO:</div> <div>A</div>	
		<div>AMEC Environment & Infrastructure</div> <div>Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664</div>	<div></div>	<div>PROJECTION:</div> <div>N/A</div>		<div>TITLE:</div> <div>MAIN EMBANKMENT INSTRUMENTATION SECTION C 18+50</div>	<div>FIGURE NO:</div> <div>2011AB.10</div>
				<div>SCALE:</div> <div>AS SHOWN</div>			

S:\PROJECTS\VM00560 - Mt Polley Engineering Services\Drawings\as-built 2011\2011AB 08-16 DRAFT.dwg - 2011AB.10 - C - Mar. 23, 2012 2:40pm - daryl.dufault

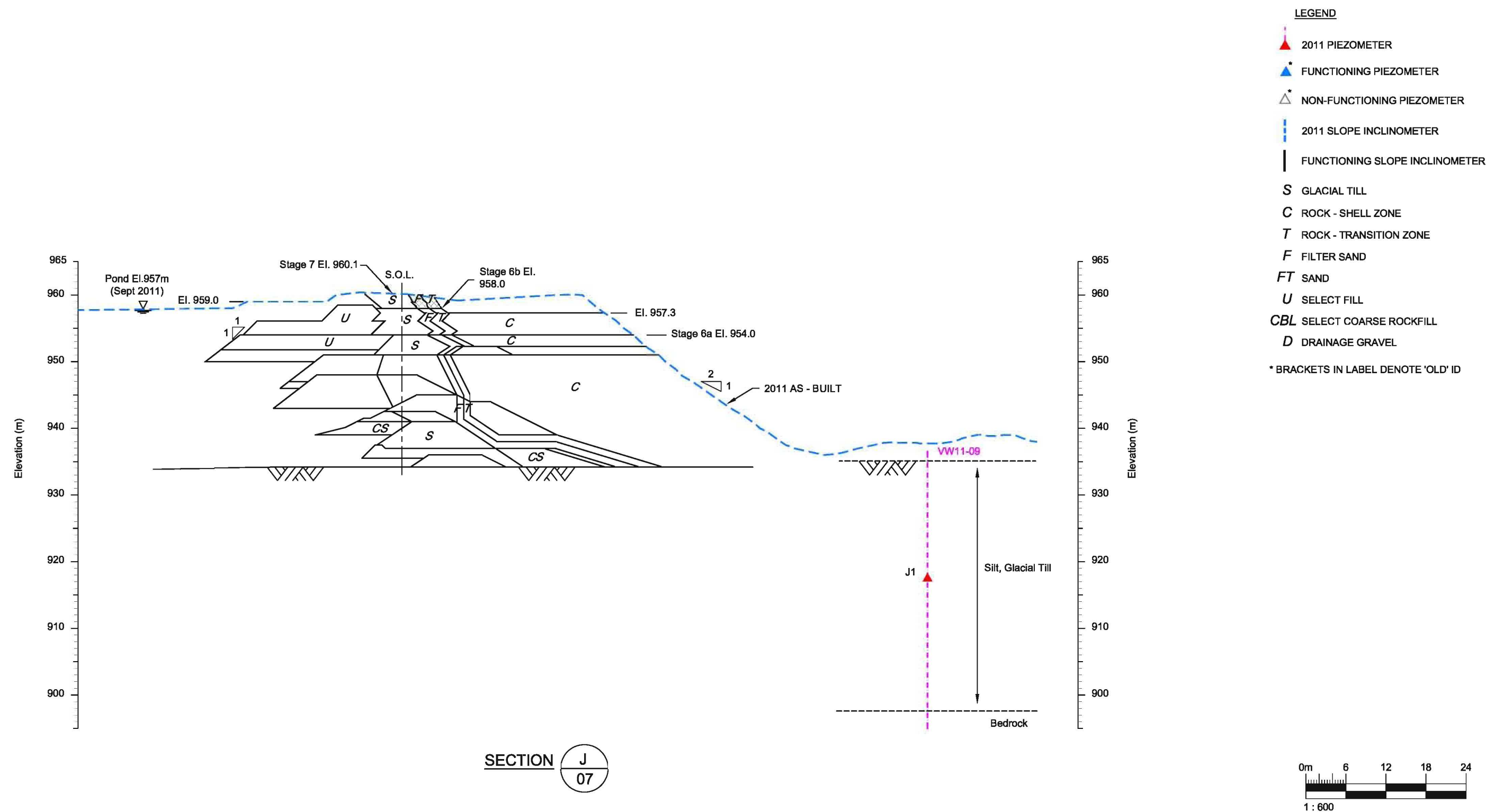


NOTES: 1. SECTIONS ORIGINATING FROM KNIGHT PIESOLD 2010 TSF ANNUAL CONSTRUCTION REPORT. 2. 2011 AS-BUILT BASED ON SEPTEMBER 2011 FLYOVER SURVEY PROVIDED BY MPMC.	CLIENT LOGO: <small>S:\PROJECTS\2011\07 - Mt Polley Engineering Services\Drawings\as-built 2011\2011AB 08-16 DRAFT.dwg - 2011AB.11 - A - Mar. 23, 2012 2:40pm - daryl.dufault</small>	CLIENT: IMPERIAL METALS AMEC Environment & Infrastructure Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664	DWN BY: BB/YC CHK'D BY: DO DATUM: N/A PROJECTION: N/A SCALE: AS SHOWN	PROJECT: MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT TITLE: MAIN EMBANKMENT INSTRUMENTATION SECTION A 20+00	DATE: MARCH 2012 PROJECT NO: VM00560 REV. NO: A FIGURE NO: 2011AB.11



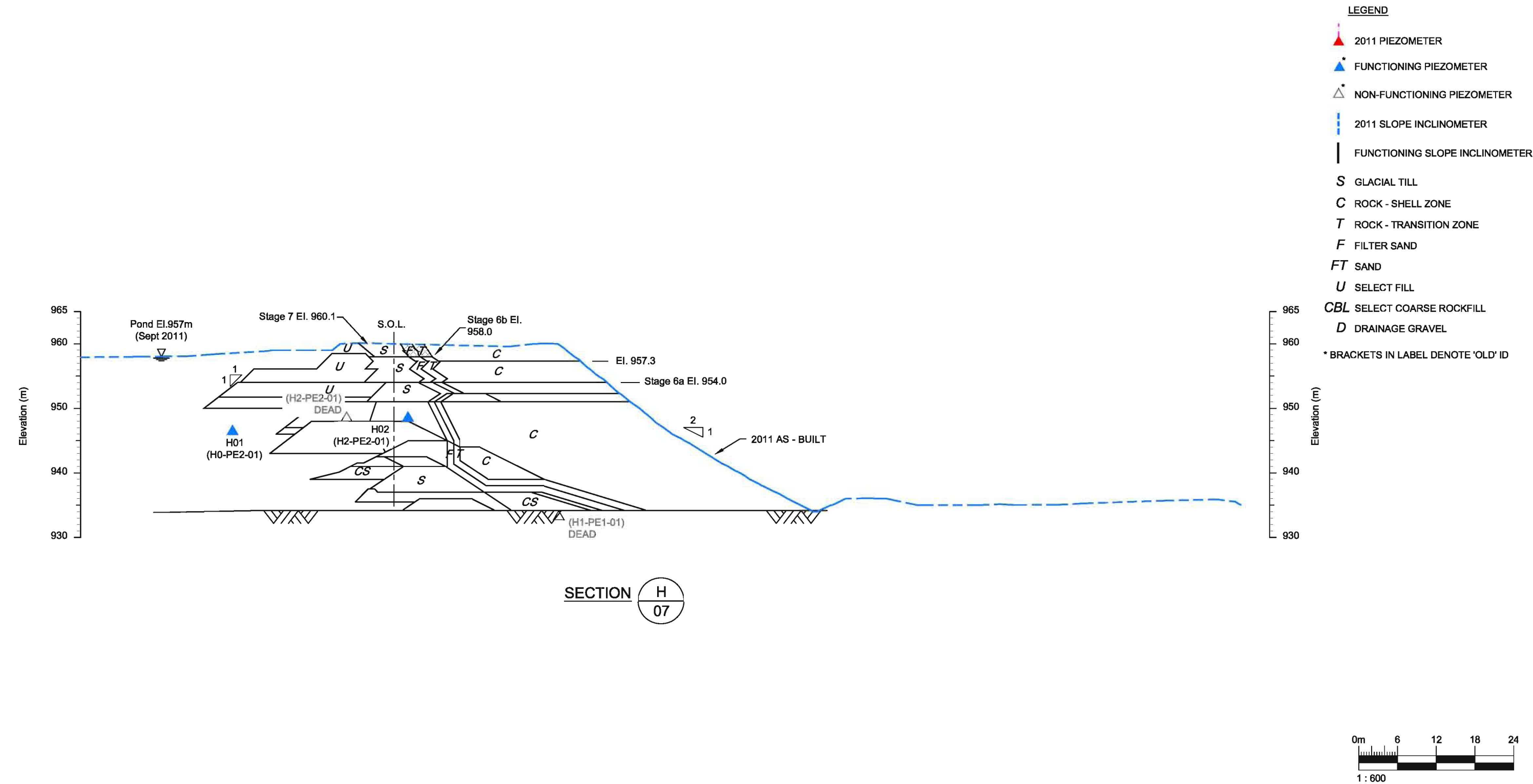


<div>NOTES:</div> <div>1. SECTIONS ORIGINATING FROM KNIGHT PIESOLD 2010 TSF ANNUAL CONSTRUCTION REPORT.</div> <div>2. 2011 AS-BUILT BASED ON SEPTEMBER 2011 FLYOVER SURVEY PROVIDED BY MPMC.</div>	<div>CLIENT LOGO:</div> <div></div> <div>S:\PROJECTS\IM00560 - Mt Polley Engineering Services\Drawings\as-built 2011\2011AB 08-16 DRAFT.dwg - 2011AB.13 - K - Mar. 23, 2012 2:27pm - daryl.dufault</div>	<div>CLIENT:</div> <div>IMPERIAL METALS</div>		<div>DWN BY:</div> <div>BB/YC</div>	<div>PROJECT:</div> <div>MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT</div>	<div>DATE:</div> <div>MARCH 2012</div>
				<div>CHK'D BY:</div> <div>DO</div>		<div>PROJECT NO:</div> <div>VM00560</div>
				<div>DATUM:</div> <div>N/A</div>		<div>REV. NO:</div> <div>A</div>
		<div>AMEC Environment & Infrastructure</div> <div>Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664</div> <div></div>	<div>TITLE:</div> <div>MAIN EMBANKMENT INSTRUMENTATION SECTION K 24+60</div>	<div>FIGURE NO:</div> <div>2011AB.13</div>		
				<div>PROJECTION:</div> <div>N/A</div>		
		<div>SCALE:</div> <div>AS SHOWN</div>				

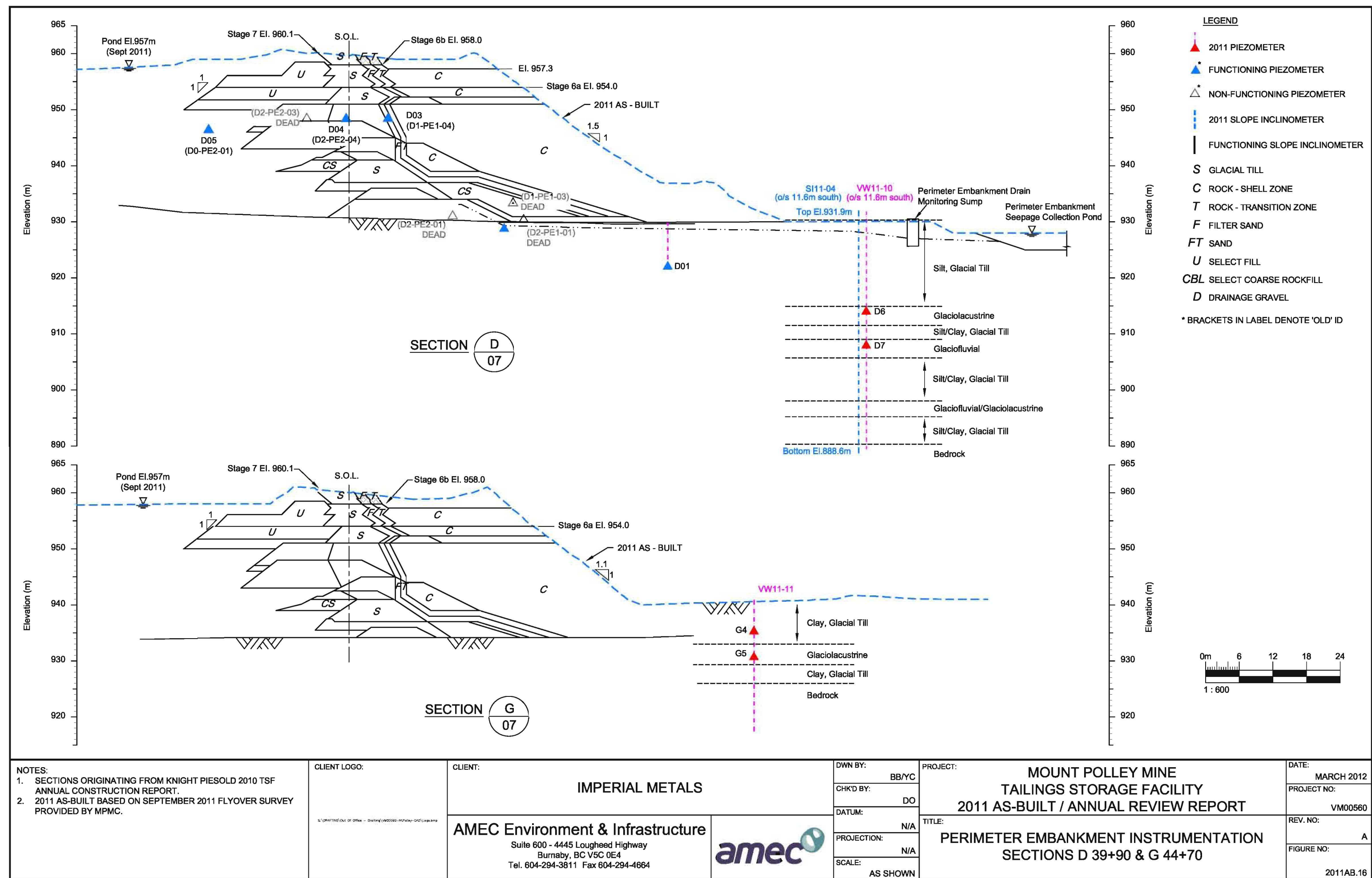


NOTES: 1. SECTIONS ORIGINATING FROM KNIGHT PIESOLD 2010 TSF ANNUAL CONSTRUCTION REPORT. 2. 2011 AS-BUILT BASED ON SEPTEMBER 2011 FLYOVER SURVEY PROVIDED BY MPMC.	CLIENT LOGO: <small>S:\PROJECTS\OUT OF OFFICE - Drafting\W0000000 - Mountley - CAGU.spe.dwg</small>	CLIENT: IMPERIAL METALS		DWN BY: BB/YC	PROJECT: MOUNT POLLEY MINE TAILINGS STORAGE FACILITY 2011 AS-BUILT / ANNUAL REVIEW REPORT	DATE: MARCH 2012
				CHK'D BY: DO		PROJECT NO: VM00560
				DATUM: N/A		REV. NO: A
		PROJECTION: N/A	TITLE: PERIMETER EMBANKMENT INSTRUMENTATION SECTION J 32+80	FIGURE NO: 2011AB.14		
		SCALE: AS SHOWN				
AMEC Environment & Infrastructure Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664						

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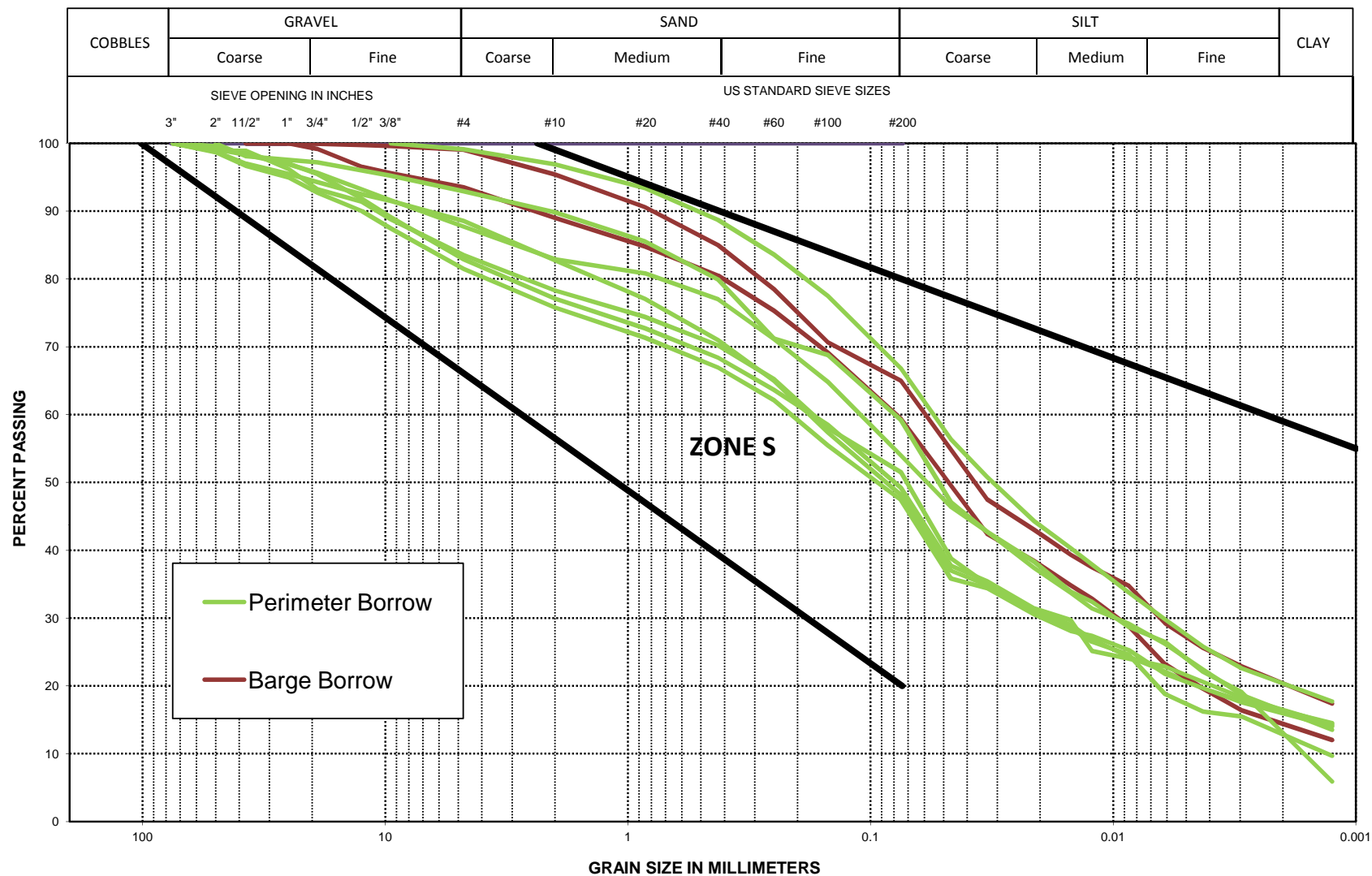
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				CHK'D BY: DO		PROJECT NO: VM00560
				DATUM: N/A		REV. NO: A
		AMEC Environment & Infrastructure Suite 600 - 4445 Lougheed Highway Burnaby, BC V5C 0E4 Tel. 604-294-3811 Fax 604-294-4664 		TITLE: PERIMETER EMBANKMENT INSTRUMENTATION SECTION H 36+00		FIGURE NO: 2011AB.15

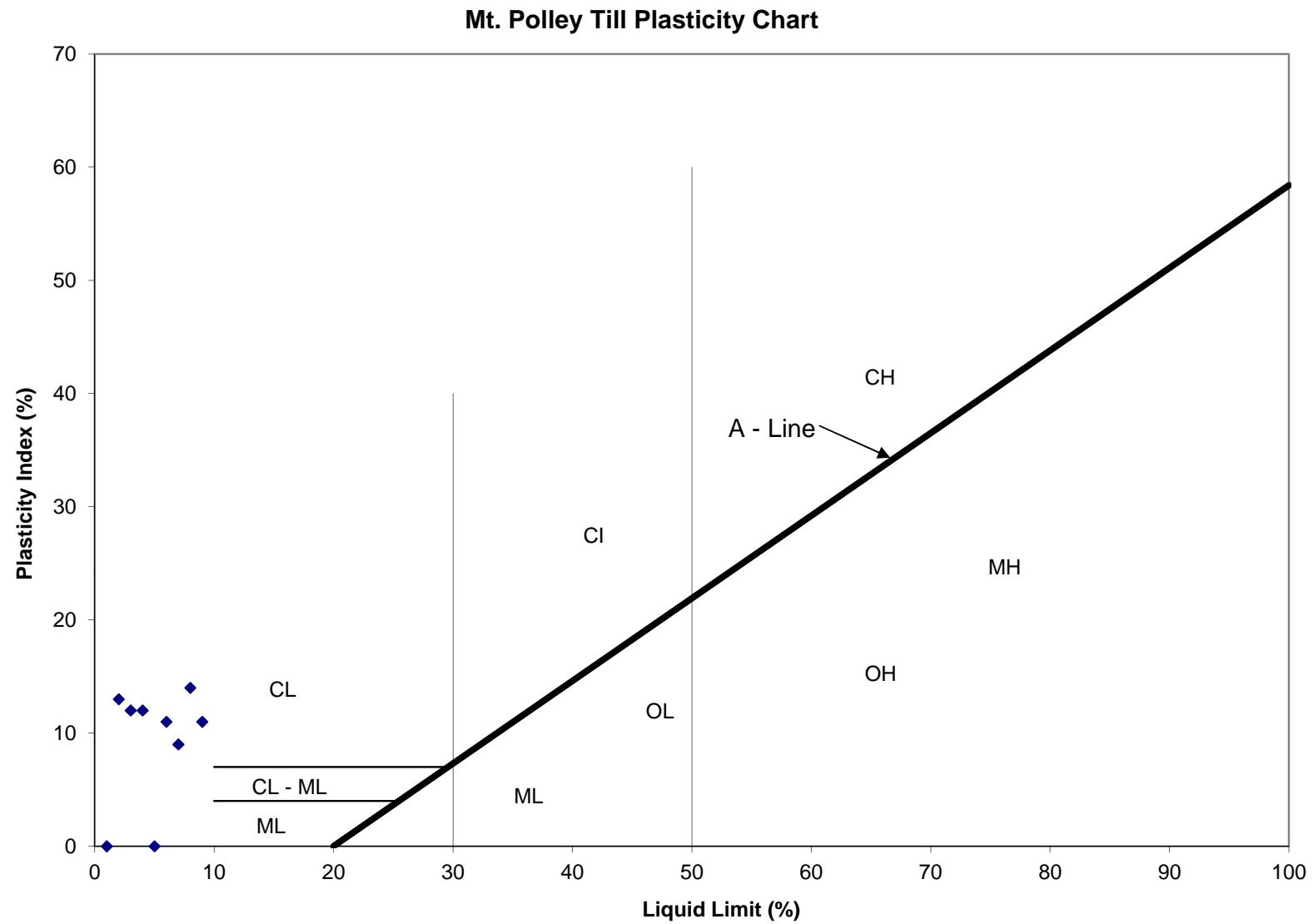


APPENDIX A

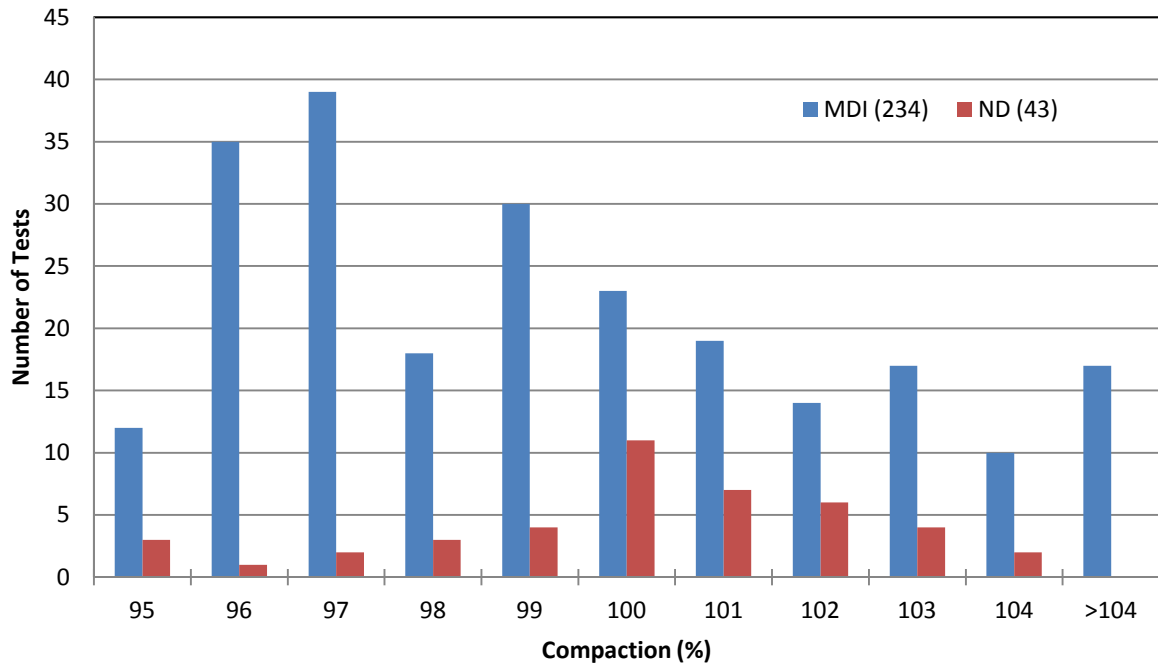
MATERIAL TESTING RESULTS

ZONE S – Till Core Testing Results

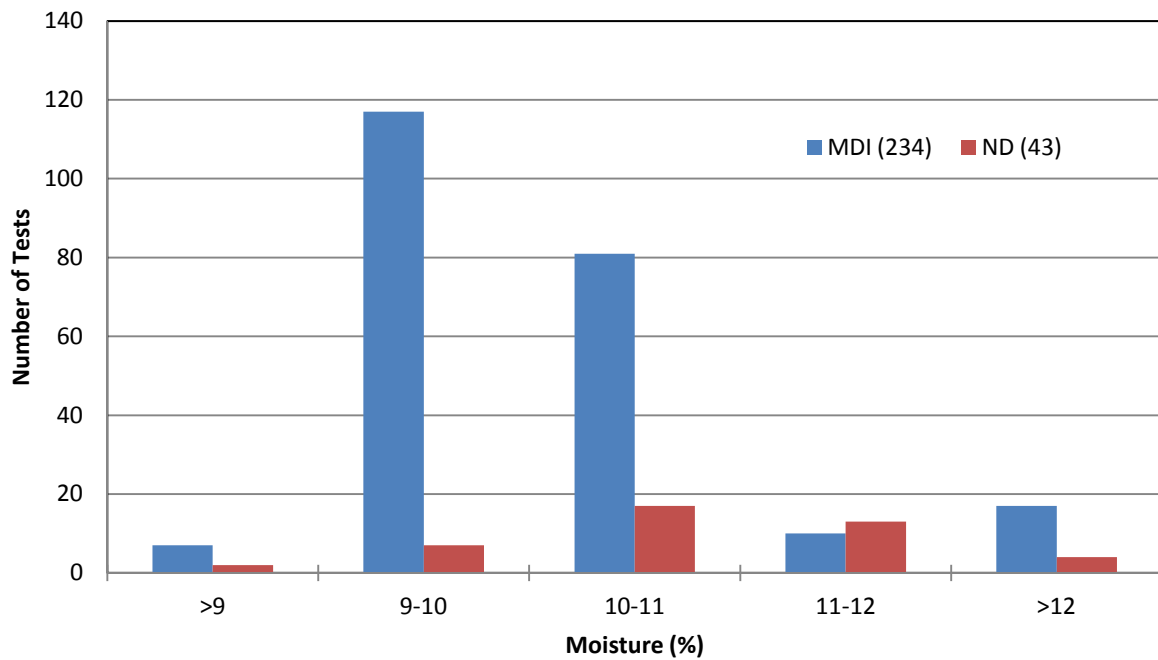




Zone S % Compaction Distribution



Zone S Moisture Content Distribution



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Test #	Date Tested	Stn	Offset S/F	Elevation	Northing	Easting	Max Density	Wet Density	Dry Density	Moisture	Density %	Pass
2	ND 1	21-Jun-11	15.10	3	958.20	-	-	2062	2255	2029	11.1	98%	YES
3	ND 2	21-Jun-11	15.10	2	958.20	-	-	2062	2298	2069	11.0	100%	YES
4	ND 3	21-Jun-11	14.27	4	958.20	-	-	2062	2276	2069	10.0	100%	YES
5	ND 4	21-Jun-11	13.25	1	958.20	-	-	2062	2333	2113	10.4	102%	YES
6	ND 5	21-Jun-11	11.75	3	958.20	-	-	2062	2331	2145	8.6	104%	YES
7	ND 6	21-Jun-11	10.25	4	958.20	-	-	2062	2323	2126	9.3	103%	YES
8	ND 7	21-Jun-11	8.75	1	958.20	-	-	2062	2281	2061	10.7	100%	YES
9	ND 8	21-Jun-11	7.25	4.5	958.20	-	-	2062	2358	2149	9.7	104%	YES
10	ND 9	21-Jun-11	5.75	3	958.20	-	-	2062	2284	2054	11.2	100%	YES
11	ND 10	21-Jun-11	5.25	1	958.20	-	-	2062	2205	1986	10.9	96%	YES
12	ND 11	22-Jun-11	15.00	1	958.36	5818262	595179	2062	2274	2053	10.8	100%	YES
13	ND 12	22-Jun-11	13.50	4	958.38	5818320	595045	2062	2214	1990	11.2	97%	YES
14	ND 13	22-Jun-11	12.00	3	958.45	5818375	594902	2062	2258	2053	10	100%	YES
15	ND 14	22-Jun-11	10.50	1.5	958.40	5818426	594768	2062	2320	2100	10.5	102%	YES
16	ND 15	22-Jun-11	9.00	4	958.41	5818485	594624	2062	2190	1968	11.3	95%	YES
17	ND 16	23-Jun-11	9.00	1	958.41	5818485	594624	2062	2276	2051	11	99%	YES
18	ND 17	23-Jun-11	7.50	2.5	958.34	5818536	594489	2062	2292	2051	11.7	99%	YES
19	ND 18	23-Jun-11	6.50	4	958.36	5818575	594394	2062	2305	2062	11.7	100%	YES
20	ND 19	26-Jun-11	15.20	1	958.58	5818258	595195	2062	2294	2066	11	100%	YES
21	ND 20	26-Jun-11	13.70	3	958.62	5818314	595058	2062	2319	2113	9.7	102%	YES
22	ND 21	26-Jun-11	12.30	4.5	958.55	5818365	594932	2062	2179	1958	11.6	95%	YES
23	ND 22	27-Jun-11	10.80	2.5	958.43	5818420	594787	2062	2322	2120	9.5	103%	YES
24	ND 23	27-Jun-11	9.30	0.5	958.43	5818473	594644	2062	2294	2091	9.7	101%	YES
25	ND 24	27-Jun-11	7.80	4.5	958.42	5818529	594513	2062	2294	2080	10.3	101%	YES
26	ND 25	27-Jun-11	6.35	3	958.54	5818581	594373	2062	2314	2094	10.5	102%	YES
27	ND 26	27-Jun-11	5.50	1	958.48	5818609	594298	2062	2287	2083	9.8	101%	YES
28	ND 27	27-Jun-11	26.90	5	958.14	5818915	596140	2062	2307	2072	11.3	100%	YES
29	ND 28	27-Jun-11	25.50	3.5	958.20	5818830	596030	2062	2302	2110	9.1	102%	YES
30	ND 29	27-Jun-11	24.00	3	958.23	5818739	595909	2062	2252	2037	10.6	99%	YES
31	ND 30	27-Jun-11	22.50	1	958.32	5818649	595791	2062	2308	2081	10.9	101%	YES
32	ND 31	27-Jun-11	21.45	4.5	958.21	5818585	595702	2062	2244	2012	11.5	98%	YES
33	ND 32	25-Jul-11	36.00	3.5	958.68	5819542	595604	2062	2318	2107	10	102%	YES
34	ND 33	25-Jul-11	12.05	2.5	958.69	5818373	594908	2062	2289	2103	8.8	102%	YES
35	ND 34	19-Aug-11	19.60	4	959.40	5818479	595562	2062	2297	2087	10	101%	YES
36	ND 35	19-Aug-11	18.30	1	959.32	5818399	595460	2062	2302	2093	10	101%	YES
37	ND 36	19-Aug-11	17.00	3	959.41	5818322	595353	2062	2297	2085	10.1	101%	YES
38	ND 37	19-Aug-11	15.70	0.5	959.34	5818245	595245	2062	2267	2045	10.8	99%	YES
39	ND 38	21-Aug-11	20.00	2.5	595.80	5818562	595992	2062	2217	1964	12.8	95%	YES
40	ND 39	23-Aug-11	30.00	0.5	959.20	5819105	596106	2062	2297	2059	11.5	100%	YES
41	ND 40	23-Aug-11	4.90	2	960.00	-	-	2062	2276	1993	10.4	97%	YES
42	ND 41	24-Aug-11	48.20	-10	960.00	5820031	594562	2062	2265	2019	12.1	98%	YES
43	ND 42	24-Aug-11	48.20	-15	960.00	5820038	544569	2062	2349	2049	14.6	99%	YES
44	ND 43	24-Aug-11	48.20	3	960.00	-	-	2062	2313	2047	12.9	99%	YES

Mt. Polley on-site till moisture tests

Sample #	Date	Pan Tare (g)	Total Weight of Sample Wet (g)	Weight of >19mm (g)	Wet Sample + Tare (Min 700g)	Dry Sample + Tare (g)	Total Weight of Sample Dry (g)	Oversize (%)	Moisture (%)
1	25-Jul-11	174.14	2209.50	119.20	862.95	802.65	2016.08	5.9%	9.6%
2	27-Jul-11	183.35	1586.72	29.45	831.73	767.58	1429.73	2.1%	11.0%
3	27-Jul-11	178.04	3339.6	102.27	910.9	840.76	3019.98	3.4%	10.6%
4	30-Jul-11	164.31	2481.12	127.59	705.37	637.1	2168.06	5.9%	14.4%
5	30-Jul-11	171.73	1896.19	167.23	860.09	787.5	1696.23	9.9%	11.8%
6	02-Aug-11	178.08	2393.06	138.62	865	780.11	2097.32	6.6%	14.1%
7	12-Aug-11	178.06	2189.74	82.6	759.42	702.7	1976.10	4.2%	10.8%
8	13-Aug-11	182.59	1518.14	77.37	782.34	726.2	1376.03	5.6%	10.3%
9	14-Aug-11	174.31	2622.02	185.94	786.65	723.88	2353.24	7.9%	11.4%



TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
VOL 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

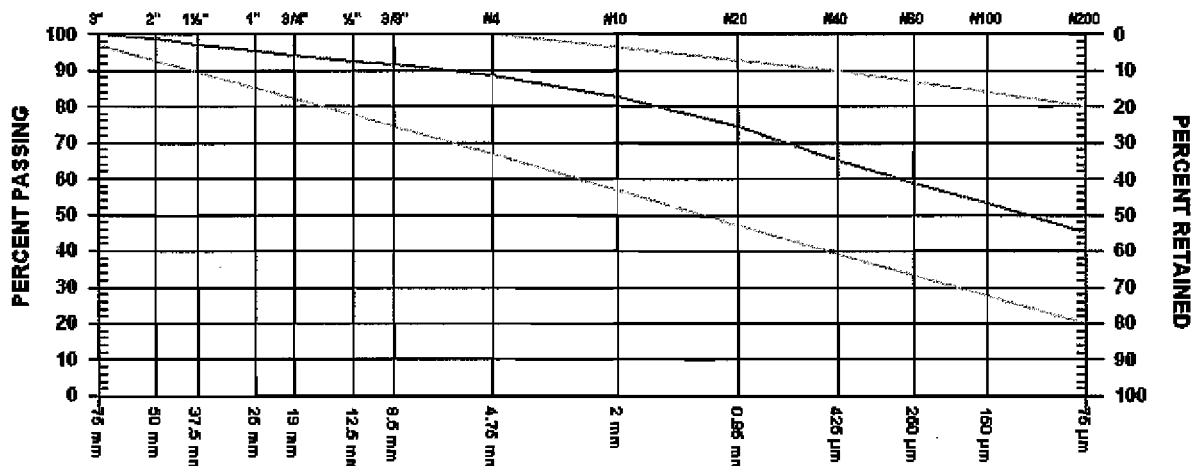
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 4 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone S
MATERIAL TYPE S-01-11

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm	100.0	97.0-100.0
2"	50	mm	98.8	
1 1/2"	37.5	mm	97.0	82.0-100.0
1"	25	mm	95.5	
3/4"	19	mm	94.3	
1/2"	12.5	mm	92.5	
3/8"	9.5	mm	91.5	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	88.5	67.0-100.0
No. 10	2.00 mm	82.8	
No. 20	850 µm	74.4	39.0-90.0
No. 40	425 µm	65.1	
No. 60	250 µm	58.6	
No. 100	150 µm	53.2	20.0-80.0
No. 200	75 µm	45.2	

COMMENTS

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
V0L 2N0

OFFICE: Prince George, BC
PROJECT: VM00580.200.4
DATE: 09-Jun-11

PROJECT NAME: Mount Polley

TEST No:

SAMPLED BY:

D. Ostritchenko

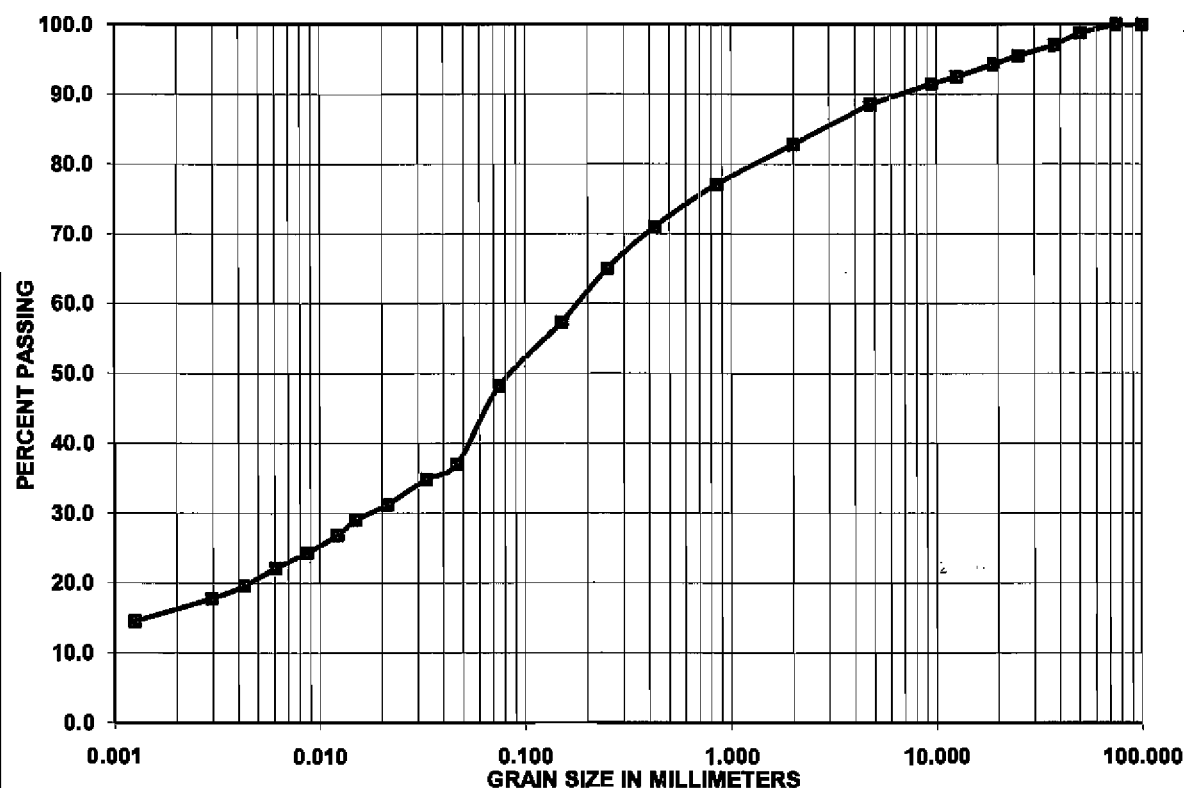
DATE SAMPLED: 31-May-11

SOURCE:

S-01-11

DATE TESTED: 7-Jun-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	98.8
37.5	97.0
25.0	95.5
19.0	94.3
12.5	92.5
9.5	91.5
4.75	88.5
2.00	82.8
0.850	77.0
0.425	71.0
0.250	64.9
0.150	57.3
0.075	48.2
0.0467	37.0
0.0330	34.8
0.0212	31.2
0.0150	29.0
0.0122	26.8
0.0086	24.3
0.0061	22.1
0.0043	19.6
0.0030	17.8
0.0013	14.5

REMARKS:

D₁₀ = N/A
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 11.47%
SAND 40.36%
SILT 32.22%
CLAY 15.94%

TECHNICIAN: *L. Michael*

Reporting of these test results constitutes a testing service only.
Engineering interpretation or evaluation of the test results is provided only on written request.



AMEC Earth & Environmental

A division of AMEC Americas Limited
3456 Ople Crescent, Prince George, BC, V2N 2P9

SIEVE ANALYSIS REPORT 10 20 40 60 SERIES

TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

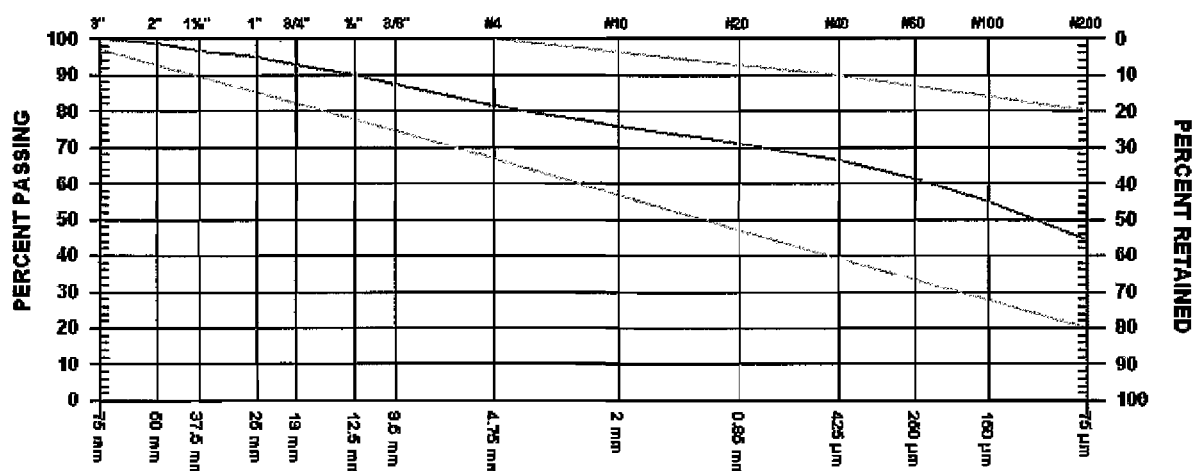
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 5 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone S
MATERIAL TYPE S-02-11

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75 mm		100.0	97.0-100.0
2"	50 mm		98.7	
1 1/2"	37.5 mm		96.7	82.0-100.0
1"	25 mm		95.0	
3/4"	19 mm		92.7	
1/2"	12.5 mm		90.0	
3/8"	9.5 mm		87.4	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	81.5	67.0-100.0
No. 10	2.00 mm	75.8	
No. 20	850 µm	71.1	39.0-90.0
No. 40	425 µm	66.3	
No. 60	250 µm	61.2	
No. 100	150 µm	54.7	20.0-80.0
No. 200	75 µm	44.2	

COMMENTS

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
VOL 2N0

OFFICE: Prince George, BC
PROJECT: VM00560.200.4
DATE: 09-Jun-11

PROJECT NAME: Mount Polley

TEST No:

SAMPLED BY:

D. Ostritchenko

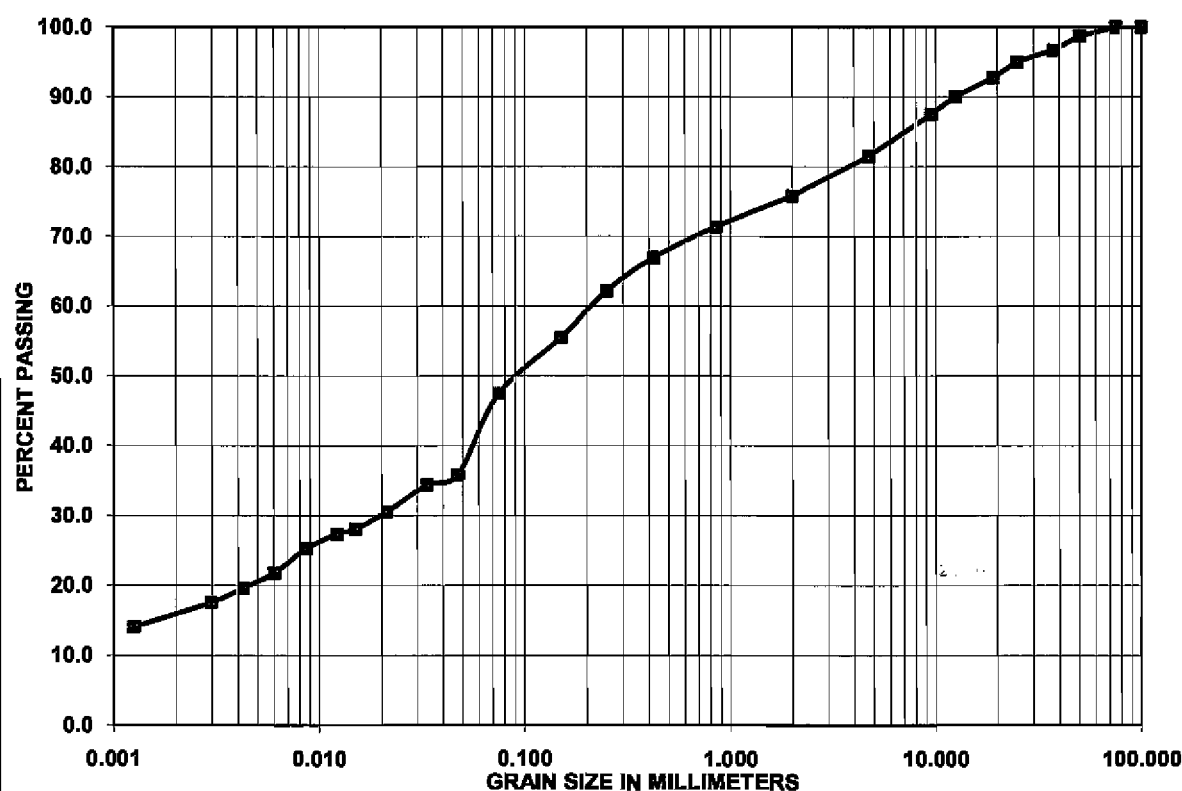
DATE SAMPLED: 31-May-11

SOURCE:

S-02-11

DATE TESTED: 7-Jun-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	98.7
37.5	96.7
25.0	95.0
19.0	92.7
12.5	90.0
9.5	87.4
4.75	81.5
2.00	75.8
0.850	71.3
0.425	66.9
0.250	62.1
0.150	55.4
0.075	47.4
0.0474	35.8
0.0335	34.4
0.0212	30.5
0.0150	28.1
0.0122	27.4
0.0086	25.3
0.0060	21.8
0.0043	19.7
0.0030	17.6
0.0013	14.0

REMARKS:

D₁₀ = N/A
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 18.52%
SAND 34.06%
SILT 31.84%
CLAY 15.58%

TECHNICIAN: *Y. Michael*

Reporting of these test results constitutes a testing service only.

Engineering interpretation or evaluation of the test results is provided only on written request.

ATTERBERG LIMITS **ASTM D4318**

PROJECT: Mount Polley Sample ID: S-02-11
Project Number: VM00560.200.4 Date Sampled: 31-May-11
Technician: G. Michaud Depth:
Date: 7-Jun-11 Comments:

Liquid Limit

Trial No.	1	2	3	
No. of Blows	34	22	14	
Tare ID	BC	J	AO	
Mass Wet + Tare	28.75	35.71	33.34	
Mass Dry + Tare	26.19	32.76	30.74	
Mass Tare	15.92	21.59	21.52	
Mass of Water	2.56	2.95	2.60	
Dry Soil Mass	10.27	11.17	9.22	
Moisture Content	24.9	26.4	28.2	
Liquid Limit	26.0	26.0	26.2	

Average Liquid Limit: 26

Plastic Limit

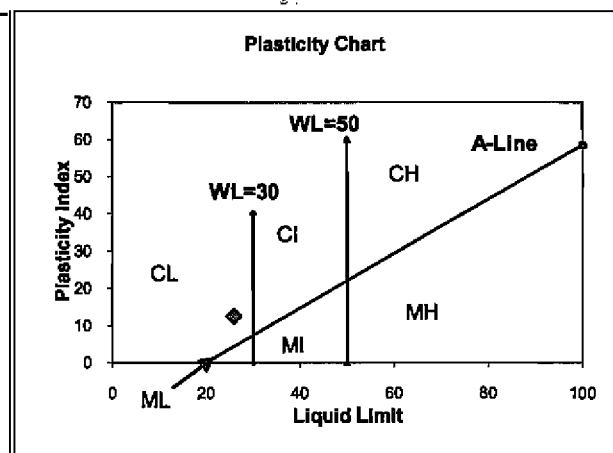
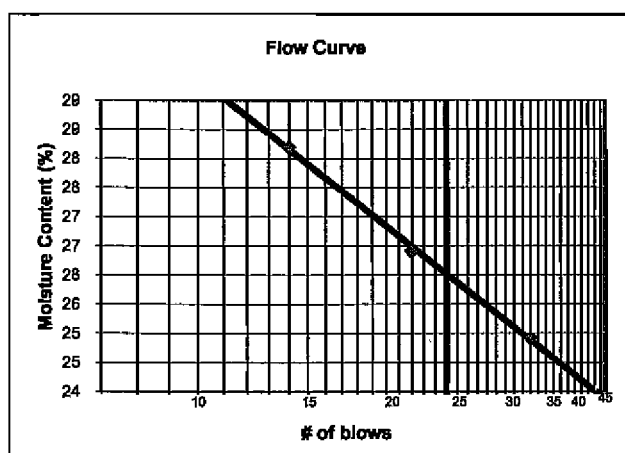
Trial No.	1	2	3	
Tare ID	26	21	24	
Mass Wet + Tare	28.45	30.09	33.37	
Mass Dry + Tare	27.69	29.03	31.96	
Mass Tare	22.00	21.22	21.52	
Mass of Water	0.76	1.06	1.41	
Dry Soil Mass	5.69	7.81	10.44	
Moisture Content	13.4	13.6	13.5	

Average Plastic Limit: 13

Plasticity Index: 13

Received Moisture: 10.8

Plasticity Index $PI = LL - PL$
Liquidity Index $LI = (MC - PL) / PI$



**MOISTURE - DENSITY
RELATIONSHIP REPORT**



TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

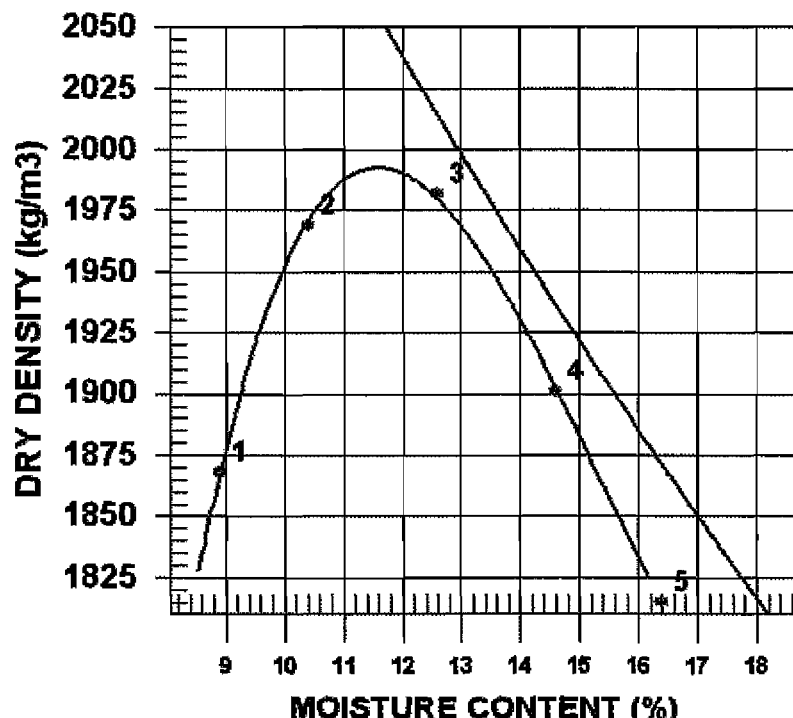
PROJECT Mount Polley

CONTRACTOR

PROCTOR NO. 1 DATE TESTED 2011.Jun.06 DATE RECEIVED 2011.Jun.02 DATE SAMPLED 2011.May.31

INSITU MOISTURE N/A %
SAMPLED BY D Ostritchenko
TESTED BY J. McDonald
SUPPLIER Mount Polley
SOURCE S-02-11
MATERIAL IDENTIFICATION
MAJOR COMPONENT TILL
SIZE 50mm
DESCRIPTION
ROCK TYPE

COMPACTION STANDARD Standard Proctor,
ASTM D698
COMPACTION PROCEDURE C: 152.4mm Mold,
Passing 19mm
Automatic
RAMMER TYPE Dry
PREPARATION
OVERSIZE CORRECTION METHOD ASTM 4718
RETAINED 19mm SCREEN 7.0 %
OVERSIZE SPECIFIC GRAVITY 2.70
TOTAL NUMBER OF TRIALS 5



TRIAL NUMBER	WET DENSITY (kg/m3)	DRY DENSITY (kg/m3)	MOISTURE CONTENT (%)
1	2034	1868	8.9
2	2174	1969	10.4
3	2232	1982	12.6
4	2179	1901	14.6
5	2113	1815	16.4

ZERO AIR VOIDS CURVE FOR ESTIMATED SPECIFIC GRAVITY OF 2.70	MAXIMUM DRY DENSITY (kg/m3)	OPTIMUM MOISTURE CONTENT (%)
CALCULATED	1992	11.5
OVERSIZE CORRECTED	2029	11.0

COMMENTS

**AMEC Earth & Environmental**

A division of AMEC Americas Limited
3456 Opie Crescent, Prince George, BC, V2N 2P9

**SIEVE ANALYSIS REPORT
10 20 40 60 SERIES**

TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
VOL 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

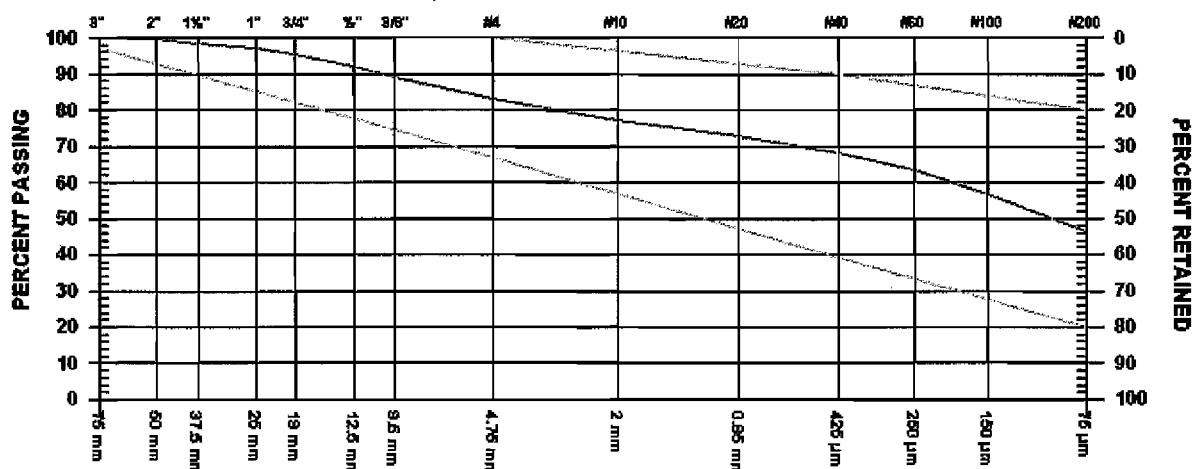
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 6 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone S
MATERIAL TYPE S-03-11

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75 mm		100.0	97.0-100.0
2"	50 mm		99.6	
1 1/2"	37.5 mm		98.4	
1"	25 mm		97.0	
3/4"	19 mm		95.4	82.0-100.0
1/2"	12.5 mm		91.8	
3/8"	9.5 mm		89.1	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	82.9	67.0-100.0
No. 10	2.00 mm	77.1	
No. 20	850 µm	72.8	
No. 40	425 µm	68.3	39.0-90.0
No. 60	250 µm	63.3	
No. 100	150 µm	56.8	20.0-80.0
No. 200	75 µm	46.6	

COMMENTS

Page 1 of 1

2011.Jun.12

AMEC Earth & Environmental

PER.

Y. Michaud

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Report System Software Registered to: AMEC Earth & Environmental, Prince George

AMEC010609_0062

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
V0L 2N0

OFFICE: Prince George, BC
PROJECT: VM00560.200.4
DATE: 09-Jun-11

PROJECT NAME: Mount Polley

TEST No:

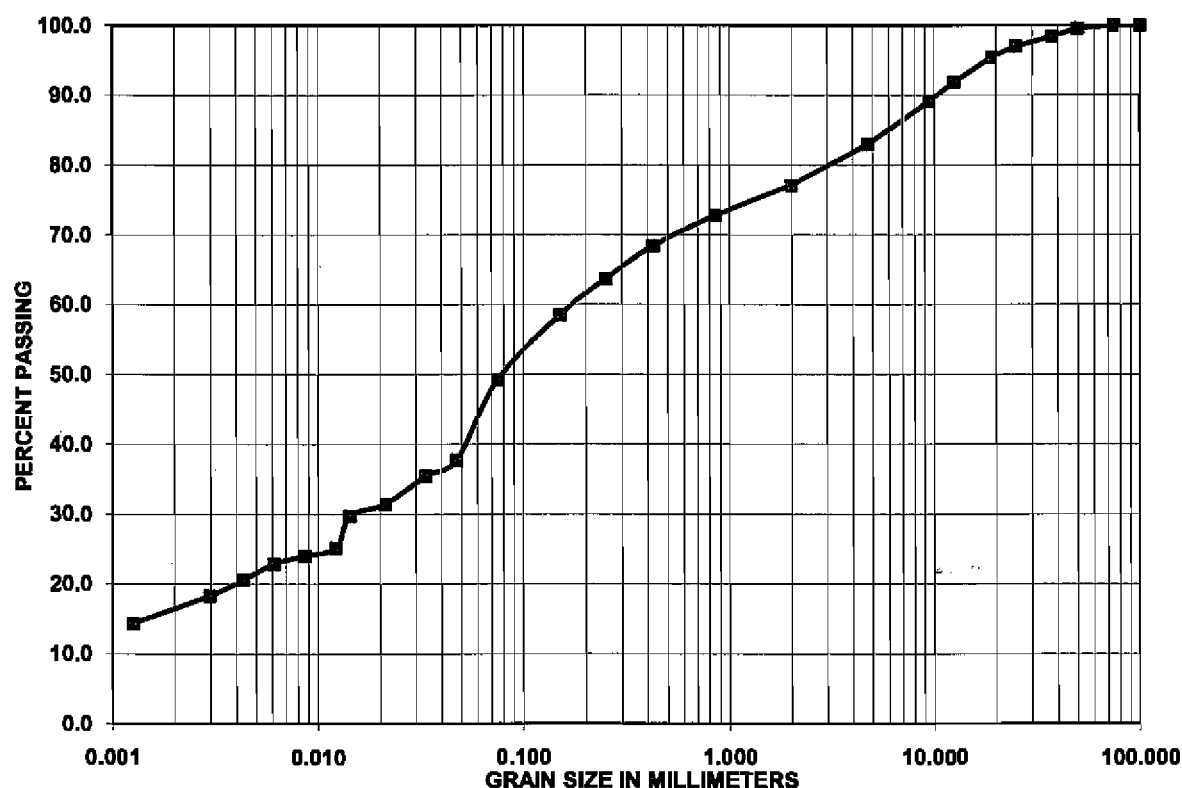
SAMPLED BY: D. Ostritchenko

DATE SAMPLED: 31-May-11

SOURCE: S-03-11

DATE TESTED: 9-Jun-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	99.6
37.5	98.4
25.0	97.0
19.0	95.4
12.5	91.8
9.5	89.1
4.75	82.9
2.00	77.1
0.850	72.7
0.425	68.4
0.250	63.6
0.150	58.5
0.075	49.2
0.0475	37.7
0.0336	35.4
0.0212	31.4
0.0143	29.7
0.0123	25.1
0.0087	24.0
0.0061	22.9
0.0043	20.6
0.0030	18.3
0.0013	14.3

REMARKS:

D₁₀ = N/A
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 17.10%
SAND 33.68%
SILT 33.17%
CLAY 16.04%

TECHNICIAN: *W. Michael*

Reporting of these test results constitutes a testing service only.

Engineering interpretation or evaluation of the test results is provided only on written request.



ATTERBERG LIMITS **ASTM D4318**

PROJECT: Mount Polley Sample ID: S-03-11
Project Number: VM00560.200.4 Date Sampled: 31-May-11
Technician: G. Michaud Depth:
Date: 7-Jun-11 Comments:

Liquid Limit

Trial No.	1	2	3	
No. of Blows	35	28	12	
Tare ID	BA	J	BC	
Mass Wet + Tare	27.71	35.28	28.01	
Mass Dry + Tare	25.36	32.55	25.35	
Mass Tare	15.66	21.66	15.93	
Mass of Water	2.35	2.73	2.66	
Dry Soil Mass	9.70	10.89	9.42	
Moisture Content	24.2	25.1	28.2	
Liquid Limit	25.3	25.5	25.8	

Average Liquid Limit: 25

Plastic Limit

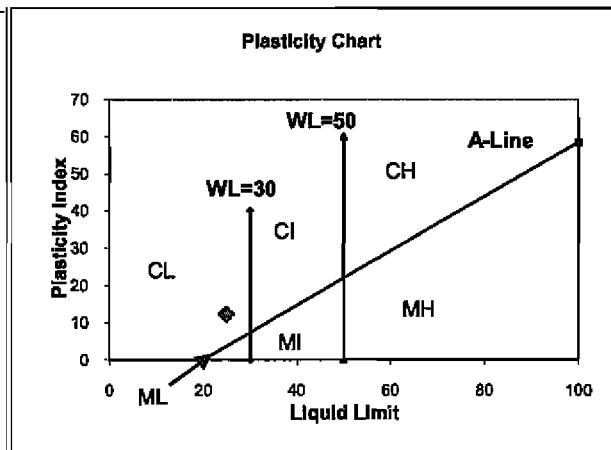
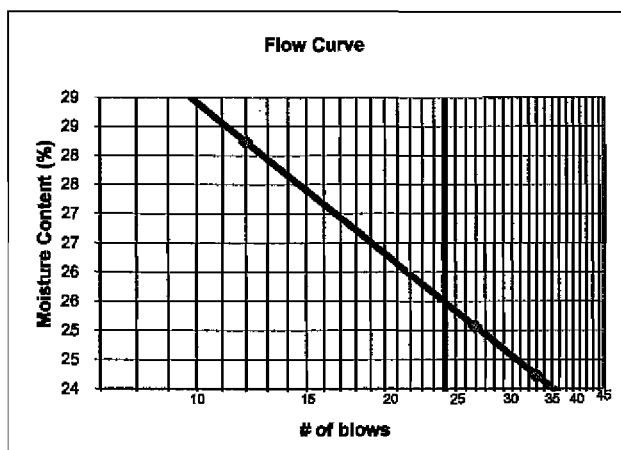
Trial No.	1	2	3	
Tare ID	26	31	15	
Mass Wet + Tare	31.27	30.82	30.18	
Mass Dry + Tare	30.22	29.77	29.25	
Mass Tare	21.99	21.52	22.03	
Mass of Water	1.05	1.05	0.93	
Dry Soil Mass	8.23	8.25	7.22	
Moisture Content	12.8	12.7	12.9	

Average Plastic Limit 13

Plasticity Index 12

Received Moisture 11.7

Plasticity Index $PI = LL - PL$
Liquidity Index $LI = (MC - PL) / PI$



**MOISTURE - DENSITY
RELATIONSHIP REPORT**



TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

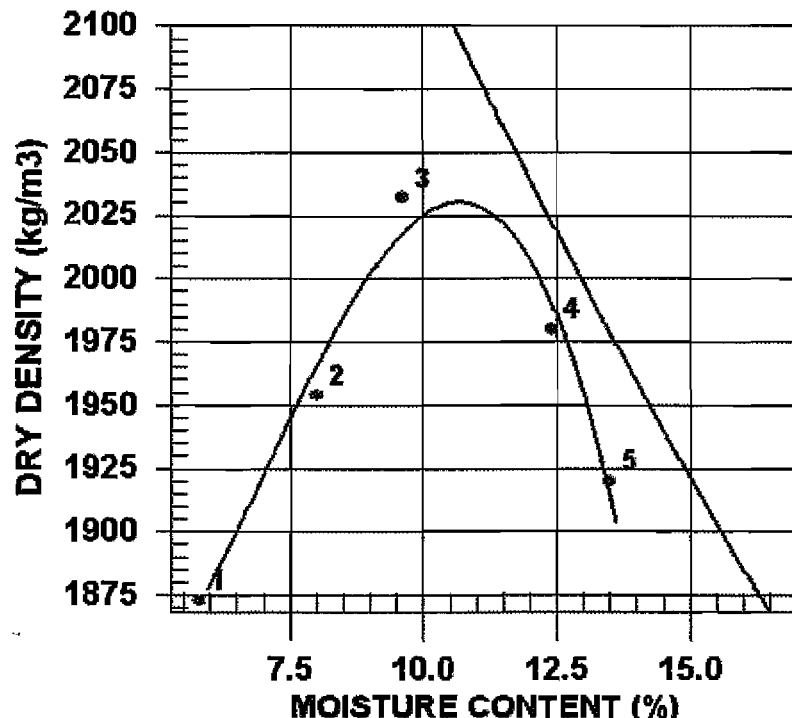
PROJECT Mount Polley

CONTRACTOR

PROCTOR NO. 2 DATE TESTED 2011.Jun.06 DATE RECEIVED 2011.Jun.02 DATE SAMPLED 2011.May.31

INSITU MOISTURE N/A %
SAMPLED BY D Ostritchenko
TESTED BY J. McDonald
SUPPLIER Mount Polley
SOURCE S-03-11
MATERIAL IDENTIFICATION
MAJOR COMPONENT TILL
SIZE 50mm
DESCRIPTION
ROCK TYPE

COMPACTION STANDARD Standard Proctor,
ASTM D698
COMPACTION PROCEDURE C: 152.4mm Mold,
Passing 19mm
Automatic
RAMMER TYPE Dry
PREPARATION
OVERSIZE CORRECTION METHOD ASTM 4718
RETAINED 19mm SCREEN 5.0 %
OVERSIZE SPECIFIC GRAVITY 2.70
TOTAL NUMBER OF TRIALS 5



TRIAL NUMBER	WET DENSITY (kg/m ³)	DRY DENSITY (kg/m ³)	MOISTURE CONTENT (%)
1	1982	1873	5.8
2	2110	1954	8.0
3	2227	2032	9.6
4	2225	1980	12.4
5	2179	1920	13.5

ZERO AIR Voids CURVE FOR ESTIMATED SPECIFIC GRAVITY OF 2.70	MAXIMUM DRY DENSITY (kg/m ³)	OPTIMUM MOISTURE CONTENT (%)
CALCULATED	2030	10.5
OVERSIZE CORRECTED	2056	10.0

COMMENTS



TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

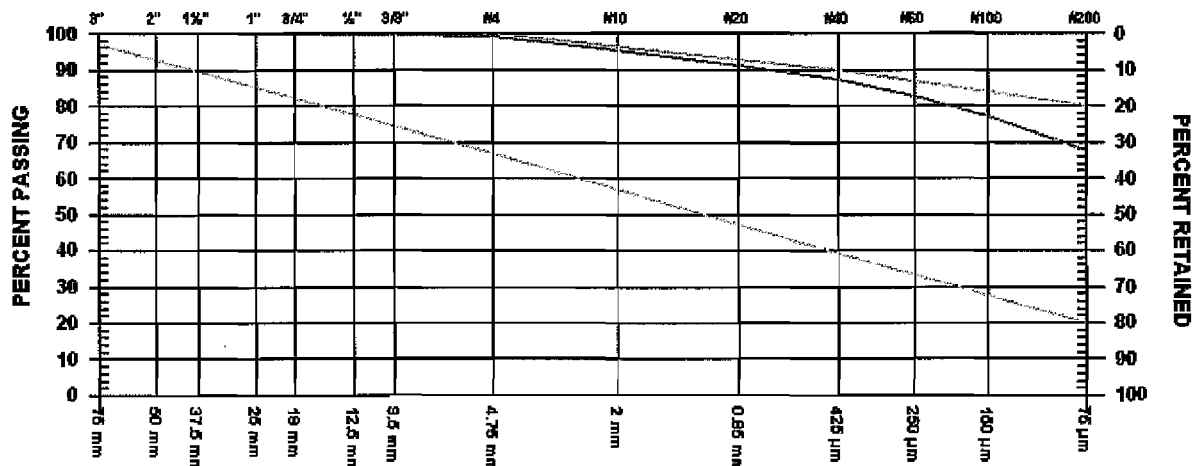
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 7 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone S
MATERIAL TYPE S-04-11

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm		97.0-100.0
2"	50	mm		
1 1/2"	37.5	mm		
1"	25	mm	100.0	
3/4"	19	mm	99.9	82.0-100.0
1/2"	12.5	mm	99.7	
3/8"	9.5	mm	99.6	

SAND SIZES AND FINES			PERCENT PASSING	GRADATION LIMITS
No. 4	4.75	mm	99.1	67.0-100.0
No. 10	2.00	mm	95.4	
No. 20	850	µm	91.2	
No. 40	425	µm	87.1	39.0-90.0
No. 60	250	µm	82.4	
No. 100	150	µm	77.0	
No. 200	75	µm	67.6	20.0-80.0

COMMENTS

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
VOL 2N0

OFFICE: Prince George, BC
PROJECT: VM00560.200.4
DATE: 09-Jun-11

PROJECT NAME: Mount Polley

TEST No:

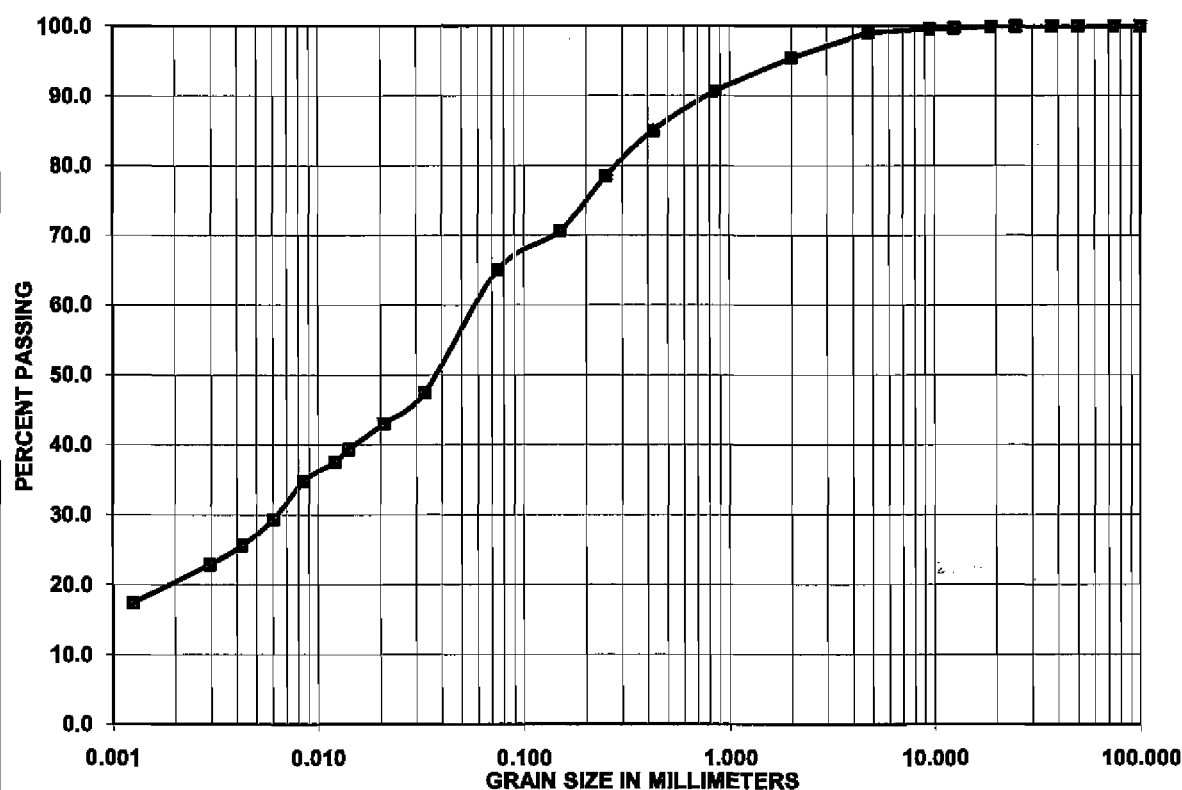
SAMPLED BY: D. Ostritchenko

DATE SAMPLED: 31-May-11

SOURCE: S-04-11

DATE TESTED: 7-Jun-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	100.0
37.5	100.0
25.0	100.0
19.0	99.9
12.5	99.7
9.5	99.6
4.75	99.1
2.00	95.4
0.850	90.6
0.425	85.0
0.250	78.5
0.150	70.6
0.075	65.0
#N/A	-6.4
0.0330	47.5
0.0209	43.0
0.0141	39.3
0.0121	37.5
0.0085	34.8
0.0060	29.3
0.0043	25.6
0.0030	22.9
0.0013	17.4

REMARKS:

D₁₀ = N/A
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 0.94%
SAND 34.07%
SILT 45.20%
CLAY 19.79%

TECHNICIAN: *Y. Michael*

Reporting of these test results constitutes a testing service only.
Engineering interpretation or evaluation of the test results is provided only on written request.

ATTERBERG LIMITS **ASTM D4318**

PROJECT: Mount Polley Sample ID: S-04-11
Project Number: VM00560.200.4 Date Sampled: 31-May-11
Technician: G. Michaud Depth:
Date: 7-Jun-11 Comments:

Liquid Limit

Trial No.	1	2	3
No. of Blows	29	41	16
Tare ID	AI	BA	BB
Mass Wet + Tare	34.64	30.07	28.46
Mass Dry + Tare	31.98	27.27	25.76
Mass Tare	21.36	15.66	15.83
Mass of Water	2.66	2.80	2.70
Dry Soil Mass	10.62	11.61	9.93
Moisture Content	25.0	24.1	27.2
Liquid Limit	25.5	25.8	25.7

Average Liquid Limit: 26

Plastic Limit

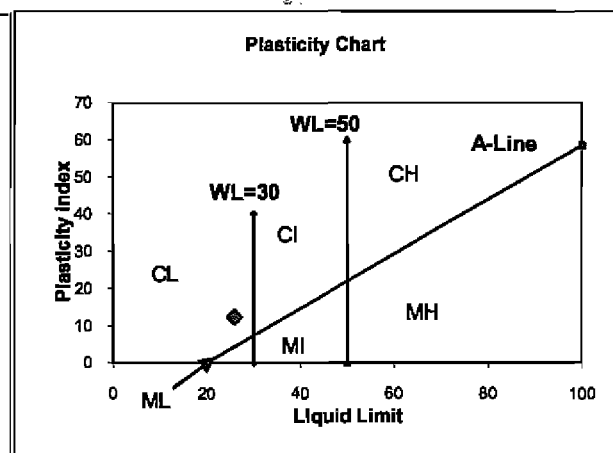
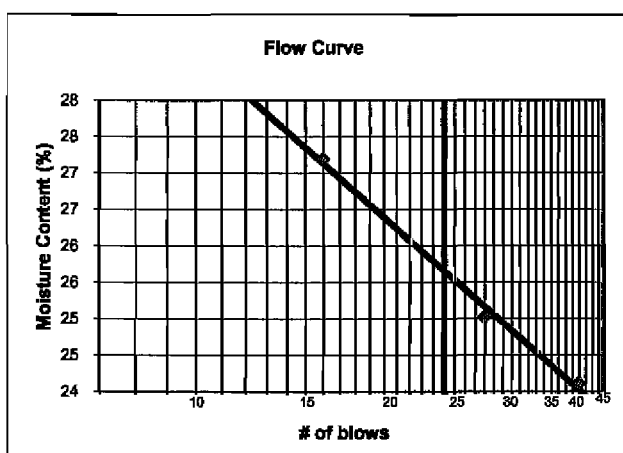
Trial No.	1	2	3
Tare ID	31	15	28
Mass Wet + Tare	31.43	30.00	30.82
Mass Dry + Tare	30.24	29.04	29.68
Mass Tare	21.53	22.04	21.29
Mass of Water	1.19	0.96	1.14
Dry Soil Mass	8.71	7.00	8.39
Moisture Content	13.7	13.7	13.6

Average Plastic Limit: 14

Plasticity Index: 12

Received Moisture: 10.3

Plasticity Index $PI = LL - PL$
Liquidity Index $LI = (MC - PL) / PI$



MOISTURE - DENSITY
RELATIONSHIP REPORT

PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

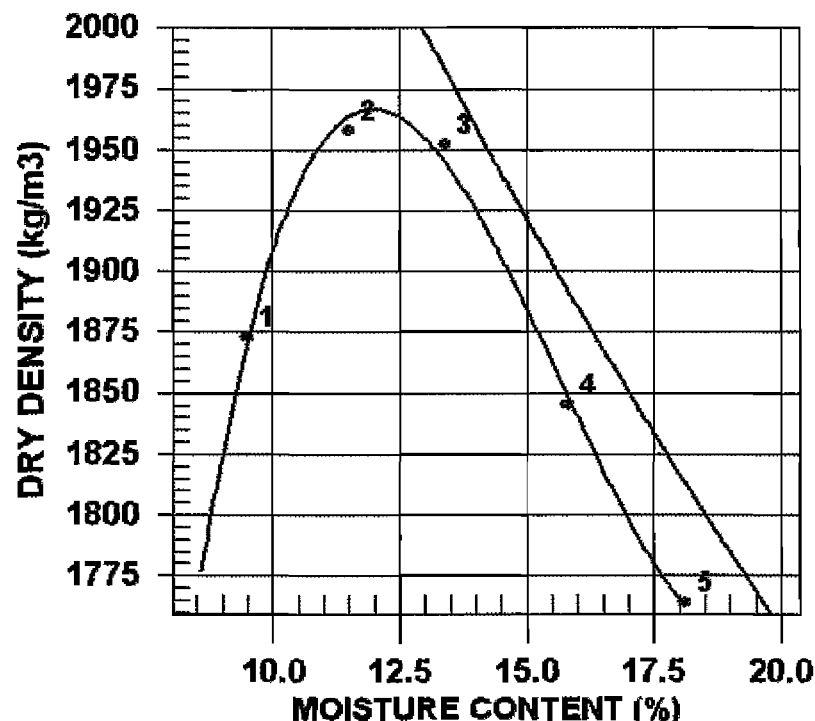
PROJECT Mount Polley

CONTRACTOR

PROCTOR NO. 3 DATE TESTED 2011.Jun.06 DATE RECEIVED 2011.Jun.02 DATE SAMPLED 2011.May.31

INSITU MOISTURE N/A %
 SAMPLED BY D Ostritchenko
 TESTED BY J. McDonald
 SUPPLIER Mount Polley
 SOURCE S-04-11
 MATERIAL IDENTIFICATION
 MAJOR COMPONENT TILL
 SIZE 25mm
 DESCRIPTION
 ROCK TYPE

COMPACTION STANDARD Standard Proctor,
 ASTM D698
 COMPACTION PROCEDURE A: 101.6mm Mold,
 Passing 4.75mm
 Automatic
 RAMMER TYPE Dry
 PREPARATION None
 OVERSIZE CORRECTION METHOD
 RETAINED 4.75mm SCREEN %
 OVERSIZE SPECIFIC GRAVITY
 TOTAL NUMBER OF TRIALS 5



TRIAL NUMBER	WET DENSITY (kg/m3)	DRY DENSITY (kg/m3)	MOISTURE CONTENT (%)
1	2051	1873	9.5
2	2183	1958	11.5
3	2214	1952	13.4
4	2137	1845	15.8
5	2083	1764	18.1

ZERO AIR VOIDS CURVE FOR ESTIMATED SPECIFIC GRAVITY OF 2.70	MAXIMUM DRY DENSITY (kg/m3)	OPTIMUM MOISTURE CONTENT (%)
CALCULATED OVERSIZE CORRECTED	1967	12.0

COMMENTS



TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
VOL 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

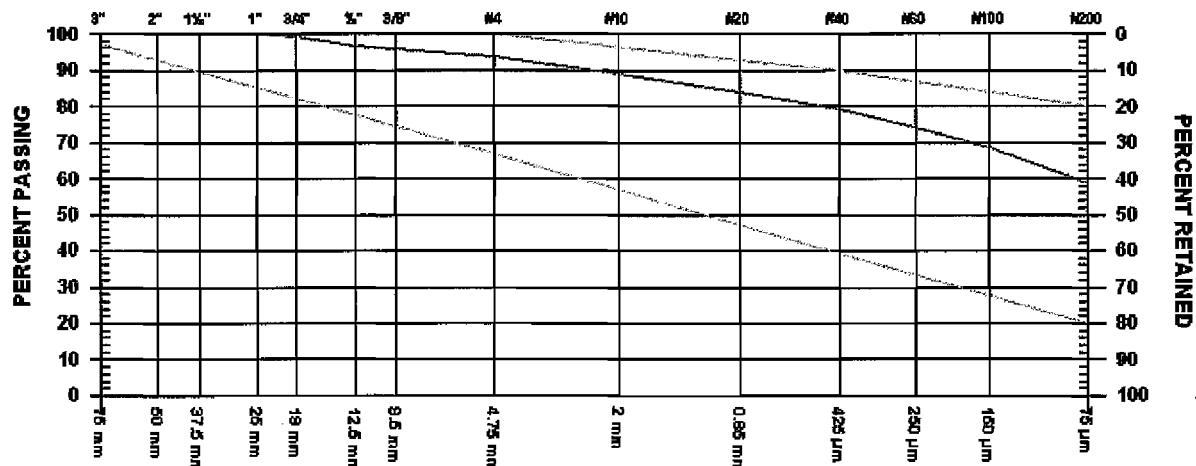
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 8 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone S
MATERIAL TYPE S-05-11, Barge #2

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75 mm			97.0-100.0
2"	50 mm			
1 1/2"	37.5 mm			
1"	25 mm	100.0		
3/4"	19 mm	99.2		82.0-100.0
1/2"	12.5 mm	96.5		
3/8"	9.5 mm	95.6		

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	93.5	67.0-100.0
No. 10	2.00 mm	89.0	
No. 20	850 µm	83.9	
No. 40	425 µm	79.2	39.0-90.0
No. 60	250 µm	74.1	
No. 100	150 µm	68.4	
No. 200	75 µm	58.6	20.0-80.0

COMMENTS

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
VOL 2N0

OFFICE: Prince George, BC
PROJECT: VM00580.200.4
DATE: 09-Jun-11

PROJECT NAME: Mount Polley

TEST No:

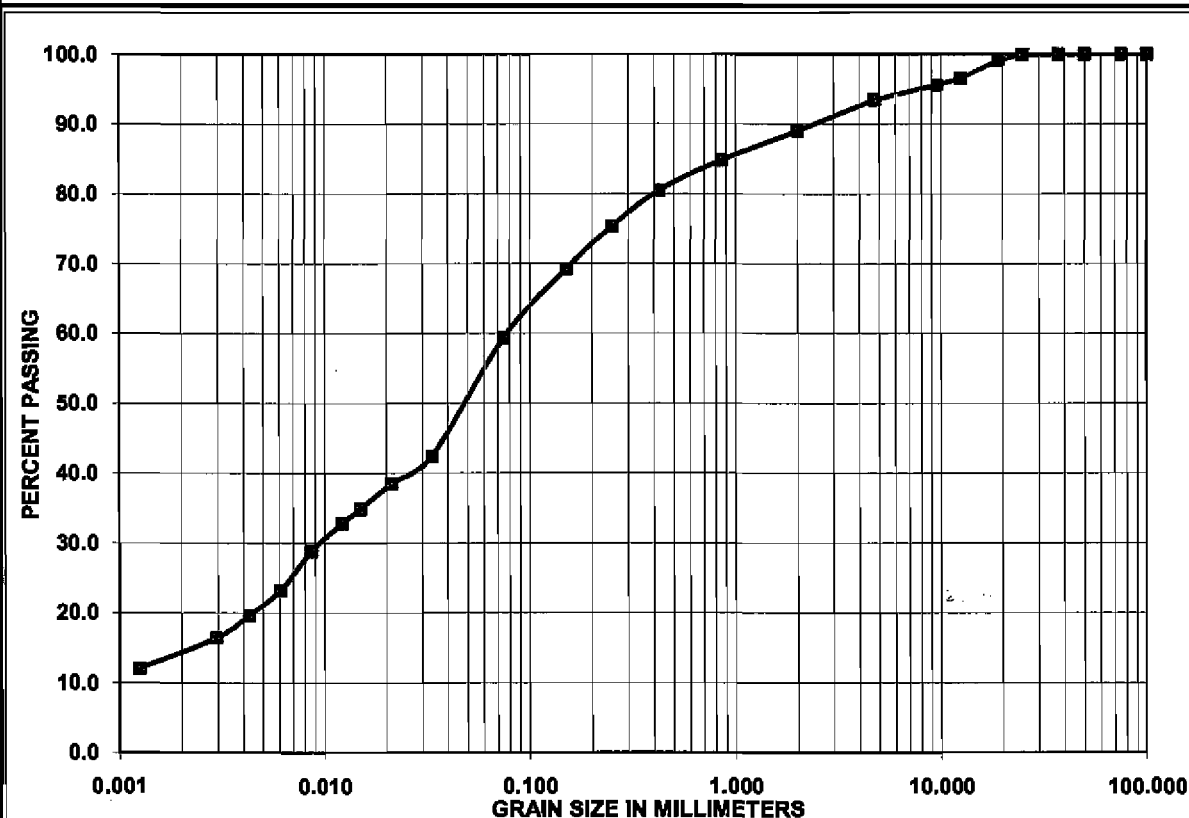
SAMPLED BY: D. Ostrichenko

DATE SAMPLED: 31-May-11

SOURCE: S-05-11

DATE TESTED: 7-Jun-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	100.0
37.5	100.0
25.0	100.0
19.0	99.2
12.5	96.5
9.5	95.6
4.75	93.5
2.00	89.0
0.850	84.8
0.425	80.5
0.250	75.3
0.150	69.2
0.075	59.4
0.0335	42.4
0.0212	38.4
0.0150	34.8
0.0122	32.8
0.0086	28.8
0.0061	23.2
0.0043	19.6
0.0030	16.4
0.0013	12.0

REMARKS:

D₁₀ = #REF!
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 6.52%
SAND 34.10%
SILT 45.44%
CLAY 13.94%

TECHNICIAN: *Y. Michael*

Reporting of these test results constitutes a testing service only.

Engineering interpretation or evaluation of the test results is provided only on written request.



AMEC Earth & Environmental
A division of AMEC Americas Limited
3456 Opie Crescent, Prince George, BC, V2N 2P9

SIEVE ANALYSIS REPORT
10 20 40 60 SERIES

TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
VOL 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

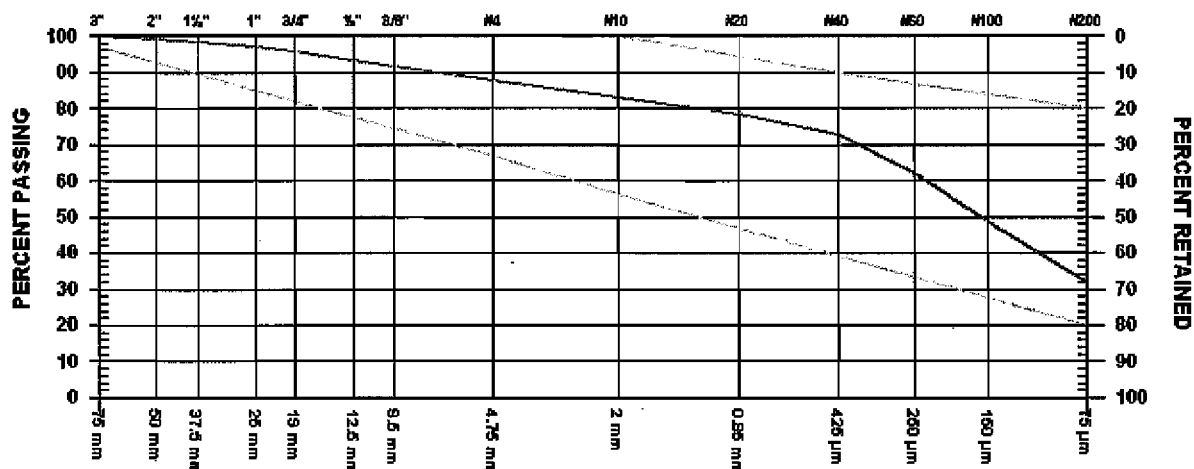
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 9 DATE RECEIVED 2011.Jun.28 DATE TESTED 2011.Jun.29 DATE SAMPLED 2011.Jun.27

SUPPLIER Mt. Polley
SOURCE Mt. Polley
SPECIFICATION Mt Polley - Zone S
MATERIAL TYPE S-06-11

SAMPLED BY D.Ostritchenko
TESTED BY M.Tennant
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm	100.0	97.0-100.0
2"	50	mm	99.1	
1 1/2"	37.5	mm	98.3	
1"	25	mm	96.9	
3/4"	19	mm	95.6	
1/2"	12.5	mm	93.2	
3/8"	9.5	mm	91.6	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	87.7	67.0-100.0
No. 10	2.00 mm	83.0	
No. 20	850 µm	78.3	39.0-90.0
No. 40	425 µm	72.7	
No. 60	250 µm	62.3	
No. 100	150 µm	48.6	20.0-80.0
No. 200	75 µm	32.1	

COMMENTS

PER. *M. Michael*

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
V0L 2N0

OFFICE: Prince George, BC
PROJECT: VM00560.200.4
DATE: 07-Jul-11

PROJECT NAME: Mount Polley

TEST No:

SAMPLED BY:

D. Ostritchenko

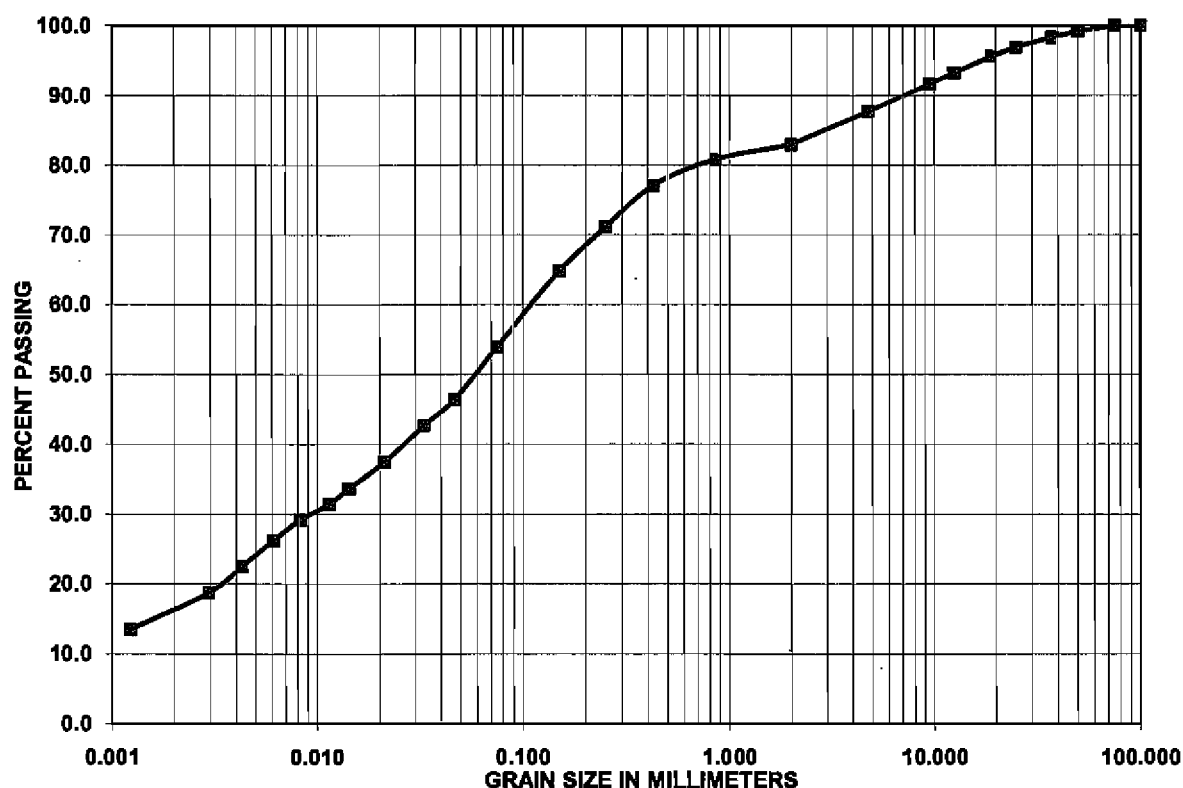
DATE SAMPLED: 27-Jun-11

SOURCE:

S-06-11

DATE TESTED: 5-Jul-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	99.1
37.5	98.3
25.0	96.9
19.0	95.6
12.5	93.2
9.5	91.6
4.75	87.7
2.00	82.9
0.850	80.8
0.425	77.0
0.250	71.1
0.150	64.8
0.075	54.0
0.0467	46.4
0.0330	42.7
0.0212	37.4
0.0143	33.7
0.0115	31.4
0.0083	29.2
0.0061	26.2
0.0043	22.4
0.0029	18.7
0.0012	13.5

REMARKS:

D₁₀ = N/A
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 12.34%
SAND 33.71%
SILT 38.13%
CLAY 15.83%

TECHNICIAN: J. Michael

Reporting of these test results constitutes a testing service only.
Engineering interpretation or evaluation of the test results is provided only on written request.



ATTERBERG LIMITS **ASTM D4318**

PROJECT: Mt. Polley Sample ID: S-06-11
Project Number: VM00560 Date Sampled: 27-Jun-11
Technician: J. McDonald Depth:
Date: 29-Jun-11 Comments: Moisture taken from Proctor

Liquid Limit

Trial No.	1	2	3
No. of Blows	33	26	20
Tare ID	I	R	J
Mass Wet + Tare	35.61	35.07	37.11
Mass Dry + Tare	33.06	32.51	34.09
Mass Tare	21.50	21.47	21.60
Mass of Water	2.55	2.56	3.02
Dry Soil Mass	11.56	11.04	12.49
Moisture Content	22.1	23.2	24.2
Liquid Limit	22.9	23.3	23.5

Average Liquid Limit: 23

Plastic Limit

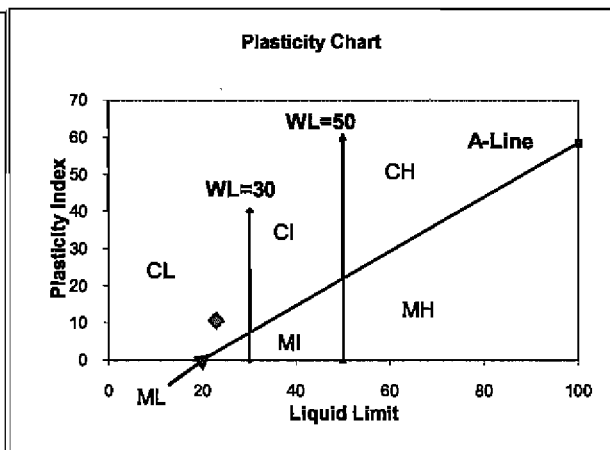
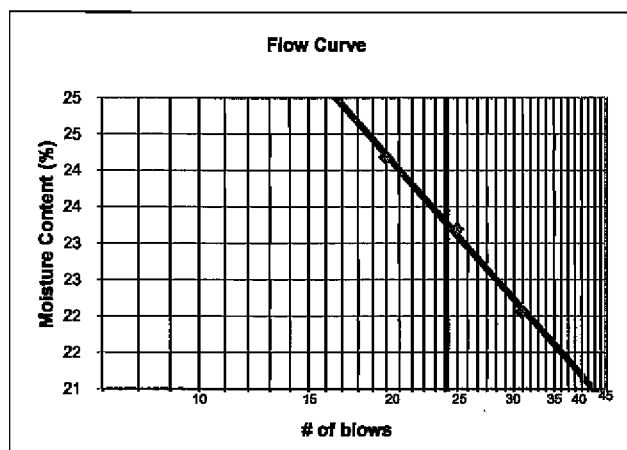
Trial No.	1	2	3
Tare ID	18	24	1
Mass Wet + Tare	23.42	28.40	28.59
Mass Dry + Tare	23.19	27.63	27.80
Mass Tare	21.28	21.53	21.49
Mass of Water	0.23	0.77	0.79
Dry Soil Mass	1.91	6.10	6.31
Moisture Content	12.0	12.6	12.5

Average Plastic Limit: 12

Plasticity Index: 11

Received Moisture: 8.4

Plasticity Index $PI = LL - PL$
Liquid Limit Index $LI = (MC - PL) / PI$



**MOISTURE - DENSITY
RELATIONSHIP REPORT**



PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.

TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
VOL 2N0

PROJECT Mount Polley

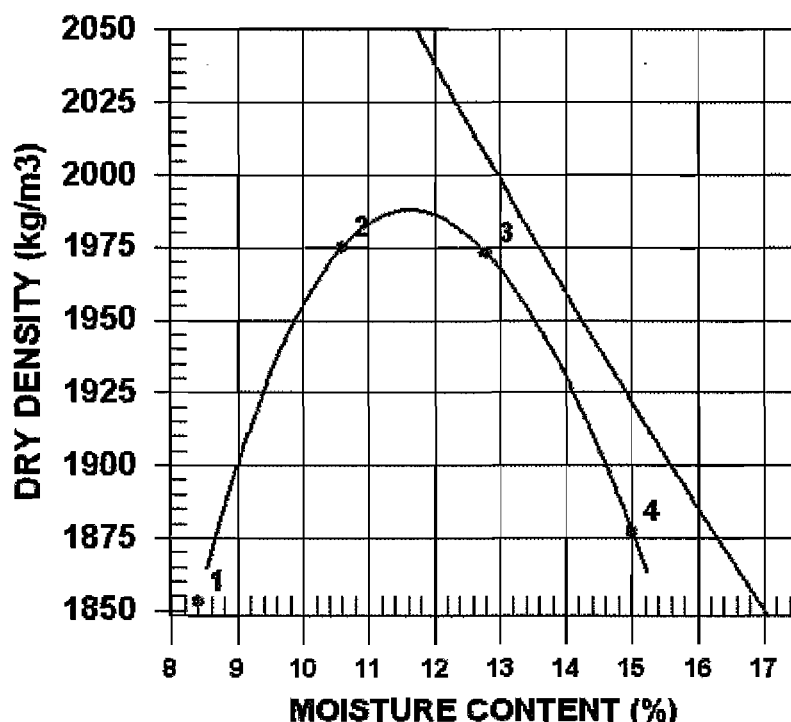
CONTRACTOR

PROCTOR NO. 4

DATE TESTED 2011.Jul.05 DATE RECEIVED 2011.Jun.28 DATE SAMPLED 2011.Jun.27

INSITU MOISTURE N/A %
SAMPLED BY D.Ostritchenko
TESTED BY M.Lemcke
SUPPLIER Mt. Polley
SOURCE S-06-11
MATERIAL IDENTIFICATION
MAJOR COMPONENT TILL
SIZE 50mm
DESCRIPTION CLAYEY
ROCK TYPE OTHER

COMPACTION STANDARD Standard Proctor,
ASTM D698
COMPACTION PROCEDURE A: 101.6mm Mold,
Passing 4.75mm
RAMMER TYPE Automatic
PREPARATION Moist
OVERSIZE CORRECTION METHOD ASTM 4718
RETAINED 4.75mm SCREEN 15.0 %
OVERSIZE SPECIFIC GRAVITY 2.70
TOTAL NUMBER OF TRIALS 4



TRIAL NUMBER	WET DENSITY (kg/m³)	DRY DENSITY (kg/m³)	MOISTURE CONTENT (%)
1	2009	1853	8.4
2	2184	1975	10.6
3	2226	1973	12.8
4	2158	1877	15.0

ZERO AIR VOIDS CURVE FOR ESTIMATED SPECIFIC GRAVITY OF 2.70	MAXIMUM DRY DENSITY (kg/m³)	OPTIMUM MOISTURE CONTENT (%)
CALCULATED	1988	11.5
OVERSIZE CORRECTED	2070	10.0

COMMENTS

**AMEC Environmental & Infrastructure**

A division of AMEC Americas Limited

3456 Opie Crescent, Prince George, BC, V2N 2P9

SIEVE ANALYSIS REPORT**10 20 40 60 SERIES**

TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.

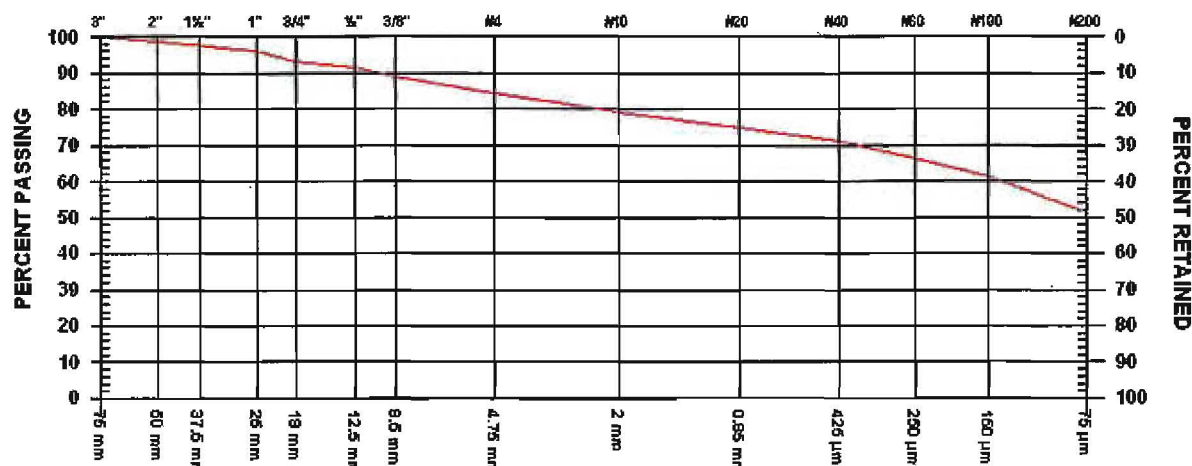
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 12 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Aug.18 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE S-07-11, S-08-11

SAMPLED BY D.Ostritchenko
TESTED BY M. Tennant
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm	100.0	
2"	50	mm	98.9	
1 1/2"	37.5	mm		
1"	25	mm	96.2	
3/4"	19	mm	93.2	
1/2"	12.5	mm	91.5	
3/8"	9.5	mm	89.0	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	84.1	
No. 10	2.00 mm	79.3	
No. 20	850 µm	75.1	
No. 40	425 µm	71.0	
No. 60	250 µm	66.3	
No. 100	150 µm	61.1	
No. 200	75 µm	51.6	

MOISTURE CONTENT 13.5%

COMMENTS

Page 1 of 1

2011.Sep.25

AMEC Environmental & Infrastructure

PER. *M. Michaud*

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of test results is provided only on written request.

AMEC010609_0076

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
VOL 2N0

OFFICE: Prince George, BC
PROJECT: VM00560.200.4
DATE: 07-Jul-11

PROJECT NAME: Mount Polley

TEST No:

SAMPLED BY:

D. Ostritchenko

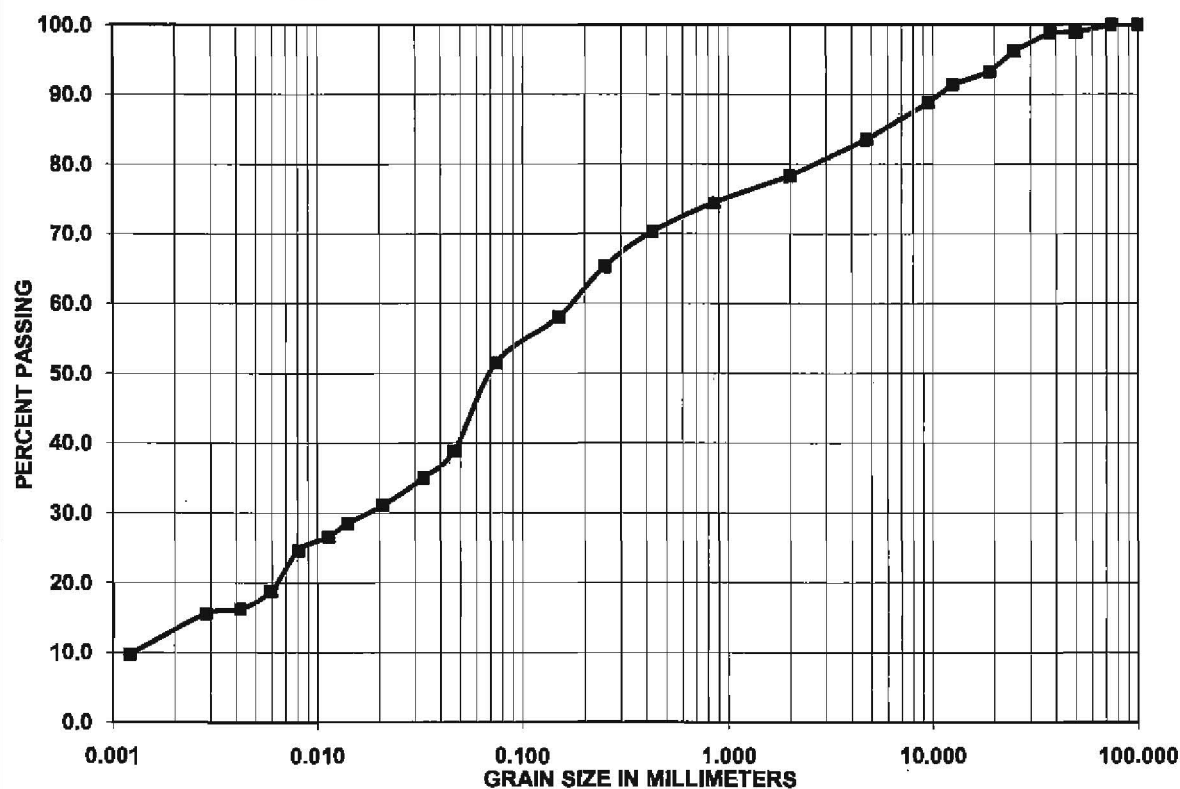
DATE SAMPLED: 15-Aug-11

SOURCE:

S-07-11, S-08-11

DATE TESTED: 22-Aug-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	98.9
37.5	98.9
25.0	96.2
19.0	93.2
12.5	91.4
9.5	88.8
4.75	83.5
2.00	78.3
0.850	74.4
0.425	70.2
0.250	65.2
0.150	58.0
0.075	51.5
0.0467	38.8
0.0330	35.0
0.0209	31.1
0.0141	28.5
0.0113	26.5
0.0081	24.6
0.0059	18.8
0.0042	16.2
0.0028	15.5
0.0012	8.7

REMARKS:

D₁₀ = N/A
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 16.51%
SAND 31.99%
SILT 38.99%
CLAY 12.52%

TECHNICIAN: *B. Michael*

Reporting of these test results constitutes a testing service only.

Engineering Interpretation or evaluation of the test results is provided only on written request.



ATTERBERG LIMITS **ASTM D4318**

PROJECT: Mt. Polley Sample ID: S-07-11, S-08-11
 Project Number: VM00560.200.4 Date Sampled: 15-Aug-11
 Technician: M. Tennant Depth:
 Date: 18-Aug-11 Comments:

Liquid Limit

Trial No.	1	2	3	
No. of Blows	19	25	35	
Tare ID	BH	BG	BK	
Mass Wet + Tare	29.46	30.38	34.27	
Mass Dry + Tare	26.75	27.55	30.87	
Mass Tare	15.86	15.78	15.85	
Mass of Water	2.71	2.83	3.40	
Dry Soil Mass	10.89	11.77	15.02	
Moisture Content	24.9	24.0	22.6	
Liquid Limit	24.0	24.1	23.7	

Average Liquid Limit: 24

Plastic Limit

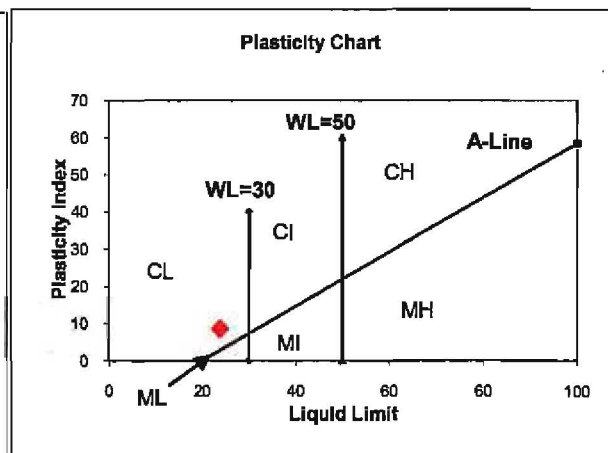
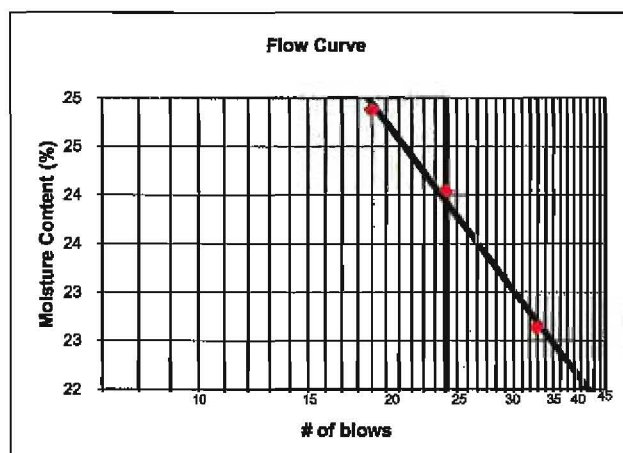
Trial No.	1	2	3	
Tare ID	41	9	11	
Mass Wet + Tare	25.55	24.66	23.07	
Mass Dry + Tare	25.02	24.24	22.82	
Mass Tare	21.44	21.45	21.23	
Mass of Water	0.53	0.42	0.25	
Dry Soil Mass	3.58	2.79	1.59	
Moisture Content	14.8	15.1	15.7	

Average Plastic Limit 15

Plasticity Index 9

Received Moisture 13.5

Plasticity Index $PI = LL - PL$
 Liquidity Index $LI = (MC - PL) / PI$



AMEC Earth & Environmental

A division of AMEC Americas Limited
3456 Opie Crescent, Prince George, BC, V2N 2P9

**MOISTURE - DENSITY
RELATIONSHIP REPORT**

TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.

PROJECT Mount Polley

CONTRACTOR

PROCTOR NO. 5

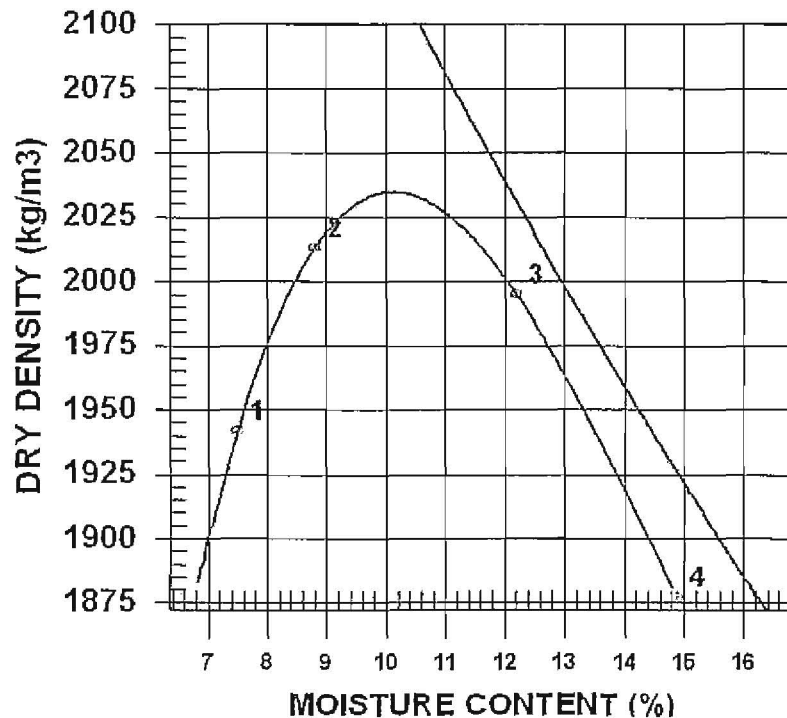
DATE TESTED 2011.Aug.20 DATE RECEIVED 2011.Aug.17 DATE SAMPLED 2011.Aug.15

INSITU MOISTURE N/A %
SAMPLED BY Client
TESTED BY M. Tennant
SUPPLIER Mt. Polley
SOURCE S-07-11; S-08-11

MATERIAL IDENTIFICATION

MAJOR COMPONENT TILL
SIZE 50mm
DESCRIPTION CLAYEY
ROCK TYPE STANDARD

COMPACTION STANDARD Standard Proctor,
ASTM D698
COMPACTION PROCEDURE C: 152.4mm Mold,
Passing 19mm
RAMMER TYPE Automatic
PREPARATION Moist
OVERSIZE CORRECTION METHOD ASTM 4718
RETAINED 19mm SCREEN 6.0 %
OVERSIZE SPECIFIC GRAVITY 2.70
TOTAL NUMBER OF TRIALS 4



TRIAL NUMBER	WET DENSITY (kg/m3)	DRY DENSITY (kg/m3)	MOISTURE CONTENT (%)
1	2088	1942	7.5
2	2190	2013	8.8
3	2238	1995	12.2
4	2157	1877	14.9

ZERO AIR VOIDS CURVE FOR ESTIMATED SPECIFIC GRAVITY OF 2.70	MAXIMUM DRY DENSITY (kg/m3)	OPTIMUM MOISTURE CONTENT (%)
CALCULATED	2035	10.0
OVERSIZE CORRECTED	2066	9.5

COMMENTS

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2011.Aug.23

AMEC Earth & Environmental

PER.

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of test results is provided only on written request.

AMEC010609_0079

**AMEC Environmental & Infrastructure**

A division of AMEC Americas Limited
3456 Opie Crescent, Prince George, BC, V2N 2P9

**SIEVE ANALYSIS REPORT
10 20 40 60 SERIES**

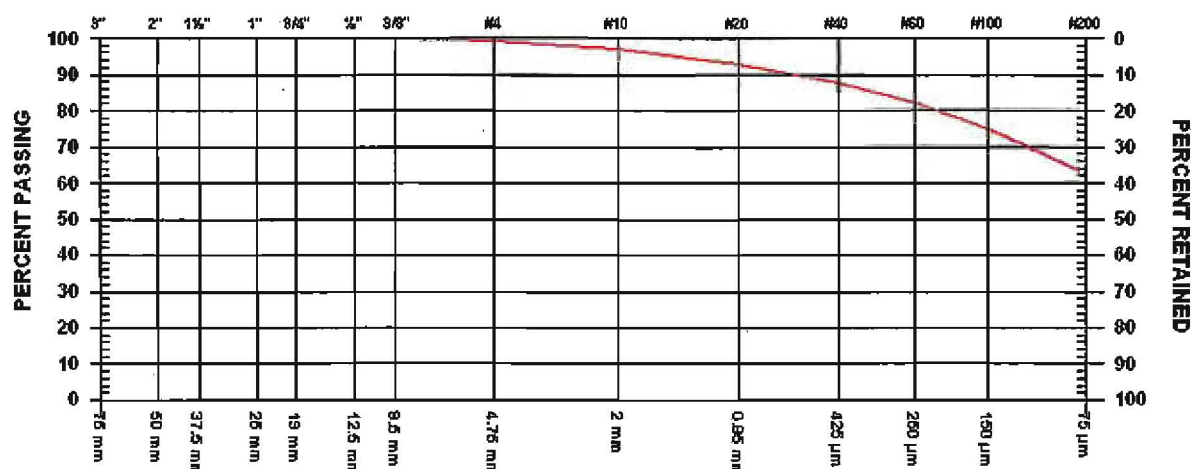
PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 13 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE S-09-11SAMPLED BY D.Ostritchenko
TESTED BY G. Michaud
TEST METHOD WASHED

GRAVEL SIZES		PERCENT PASSING	GRADATION LIMITS
3"	75 mm	100.0	
2"	50 mm		
1 1/2"	37.5 mm		
1"	25 mm		
3/4"	19 mm		
1/2"	12.5 mm		
3/8"	9.5 mm		

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	99.1	
No. 10	2.00 mm	96.9	
No. 20	850 µm	92.9	
No. 40	425 µm	87.9	
No. 60	250 µm	82.0	
No. 100	150 µm	75.1	
No. 200	75 µm	62.7	

MOISTURE CONTENT 15.0%

COMMENTS

Page 1 of 1

2011.Sep.25

AMEC Environmental & Infrastructure

PER.

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of test results is provided only on written request.

Report System Software Registered to: AMEC Earth & Environmental, Prince George

AMEC010609_0080

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
V0L 2N0

OFFICE: Prince George, BC
PROJECT: VM00560.200.4
DATE: 07-Jul-11

PROJECT NAME: Mount Polley

TEST No:

SAMPLED BY:

D. Ostritchenko

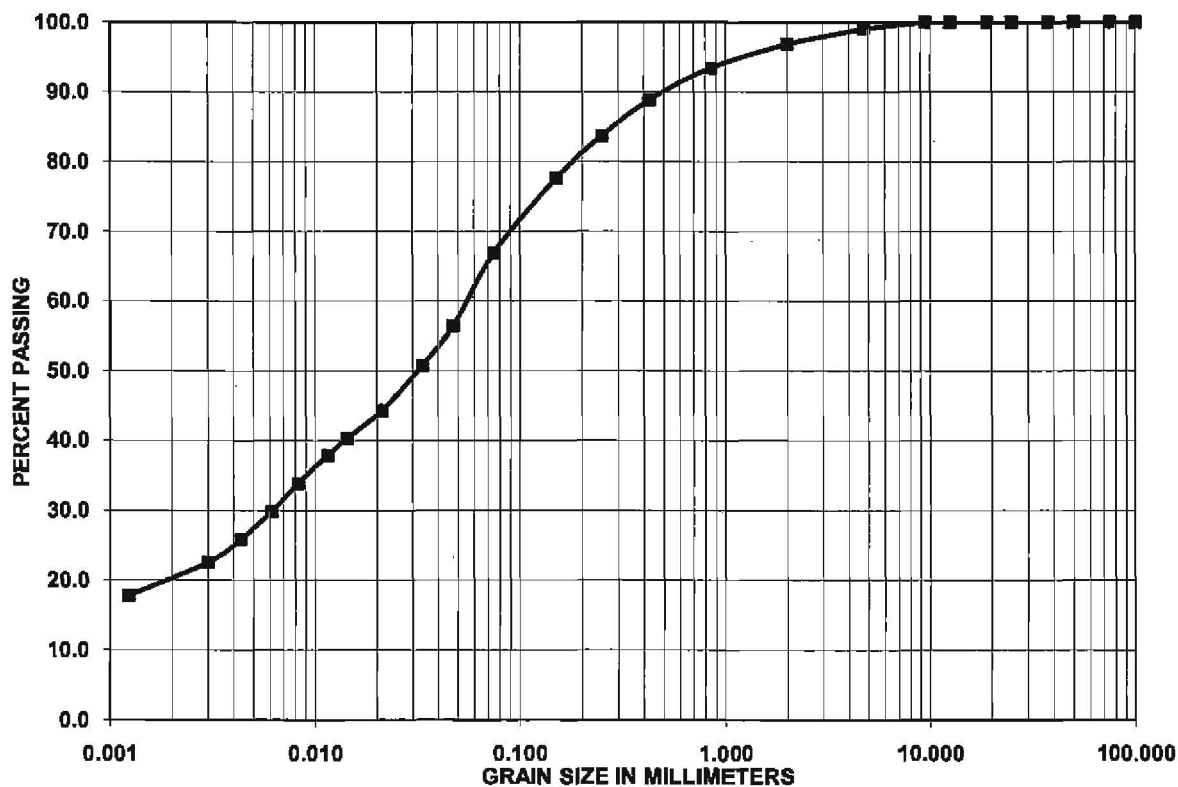
DATE SAMPLED: 15-Aug-11

SOURCE:

S-09-11

DATE TESTED: 15-Sep-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	100.0
37.5	100.0
25.0	100.0
19.0	100.0
12.5	100.0
9.5	100.0
4.75	99.1
2.00	96.9
0.850	93.4
0.425	88.7
0.250	83.6
0.150	77.5
0.075	66.8
0.0476	56.4
0.0337	50.8
0.0213	44.3
0.0144	40.3
0.0115	37.9
0.0083	33.8
0.0061	29.8
0.0043	25.8
0.0030	22.6
0.0012	17.7

REMARKS:

D₁₀ = N/A

GRAVEL 0.93%

D₃₀ = N/A

SAND 32.24%

D₆₀ = N/A

SILT 47.02%

C_u = N/A

CLAY 19.82%

C_c = N/A

TECHNICIAN: *B. Michael*

Reporting of these test results constitutes a testing service only.

Engineering interpretation or evaluation of the test results is provided only on written request.

ATTERBERG LIMITS **ASTM D4318**

PROJECT: Mt. Polley
Project Number: VM00560.200.4
Technician: G. Michaud
Date: 8-Sep-11

Sample ID: S-09-11
Date Sampled: 15-Aug-11
Depth:
Comments:

Liquid Limit

Trial No.	1	2	3	
No. of Blows	34	27	16	
Tare ID	H	T	BB	
Mass Wet + Tare	34.19	34.93	27.39	
Mass Dry + Tare	31.44	31.91	24.72	
Mass Tare	21.63	21.33	15.82	
Mass of Water	2.75	3.02	2.67	
Dry Soil Mass	9.81	10.58	8.90	
Moisture Content	28.0	28.5	30.0	
Liquid Limit	29.2	28.8	28.4	

Average Liquid Limit: 29

Plastic Limit

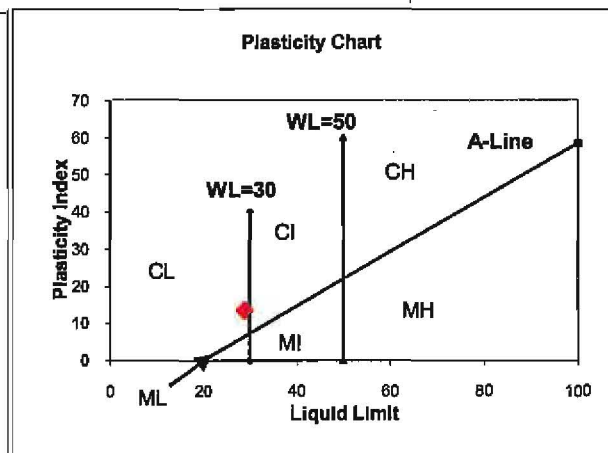
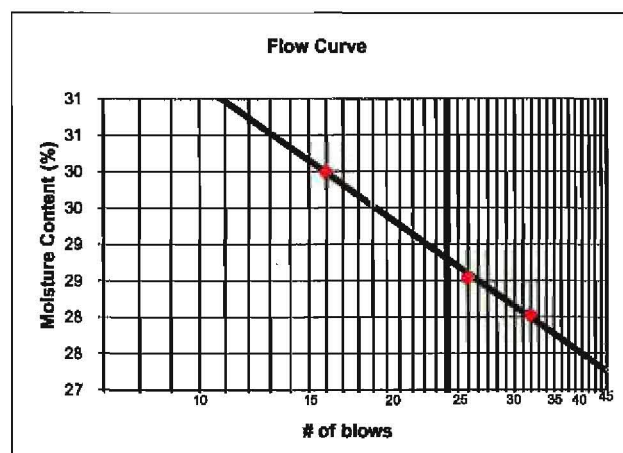
Trial No.	1	2	3	
Tare ID	46	26	21	
Mass Wet + Tare	31.17	30.84	32.10	
Mass Dry + Tare	29.87	29.67	30.64	
Mass Tare	21.37	21.98	21.22	
Mass of Water	1.30	1.17	1.46	
Dry Soil Mass	8.50	7.69	9.42	
Moisture Content	15.3	15.2	15.5	

Average Plastic Limit: 15

Plasticity Index: 14

Received Moisture: 15.0

Plasticity Index $PI = LL - PL$
Liquidity Index $LI = (MC - PL) / PI$



**AMEC Environmental & Infrastructure**

A division of AMEC Americas Limited

3456 Opie Crescent, Prince George, BC, V2N 2P9

SIEVE ANALYSIS REPORT**10 20 40 60 SERIES**

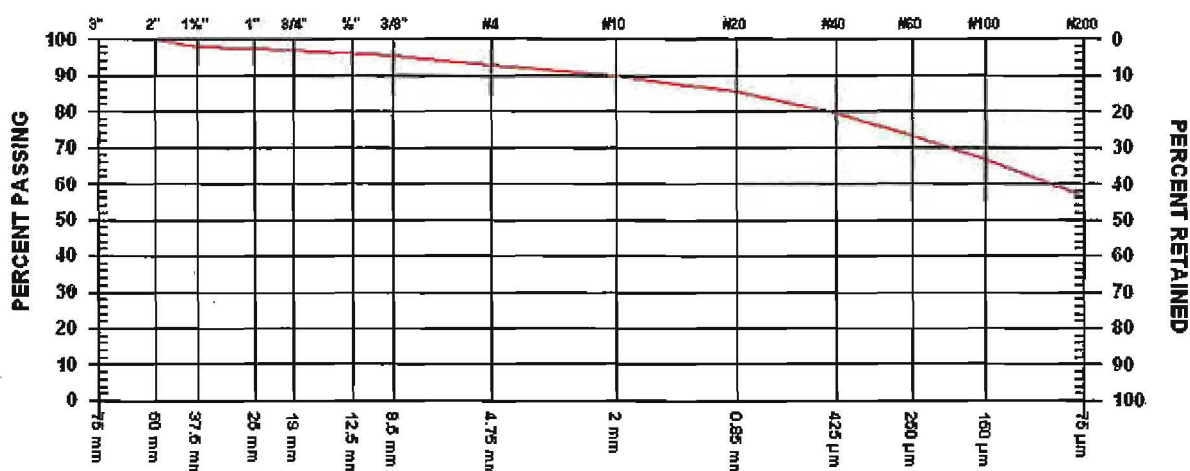
PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 14 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE S-10-11SAMPLED BY D.Ostritchenko
TESTED BY G. Michaud
TEST METHOD WASHED

GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3 "	75	mm	100.0	
2 "	50	mm		
1 1/2 "	37.5	mm	98.1	
1 "	25	mm	97.2	
3/4 "	19	mm	95.2	
1/2 "	12.5	mm		
3/8 "	9.5	mm		

SAND SIZES AND FINES			PERCENT PASSING	GRADATION LIMITS
No. 4	4.75	mm	92.9	
No. 10	2.00	mm	89.8	
No. 20	850	µm	85.5	
No. 40	425	µm	79.7	
No. 60	250	µm	73.3	
No. 100	150	µm	66.8	
No. 200	75	µm	56.6	

MOISTURE CONTENT 9.4%

COMMENTS

Page 1 of 1

2011.Sep.25

AMEC Environmental & Infrastructure

PER.

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of test results is provided only on written request.

Report System Software Registered to: AMEC Earth & Environmental, Prince George

AMEC010609_0083

GRAIN SIZE DISTRIBUTION



Mount Polley Mining Corporation
P.O. Box 12
Likely, BC
V0L 2N0

OFFICE: Prince George, BC
PROJECT: VM00560.200.4
DATE: 07-Jul-11

PROJECT NAME: Mount Polley

TEST No:

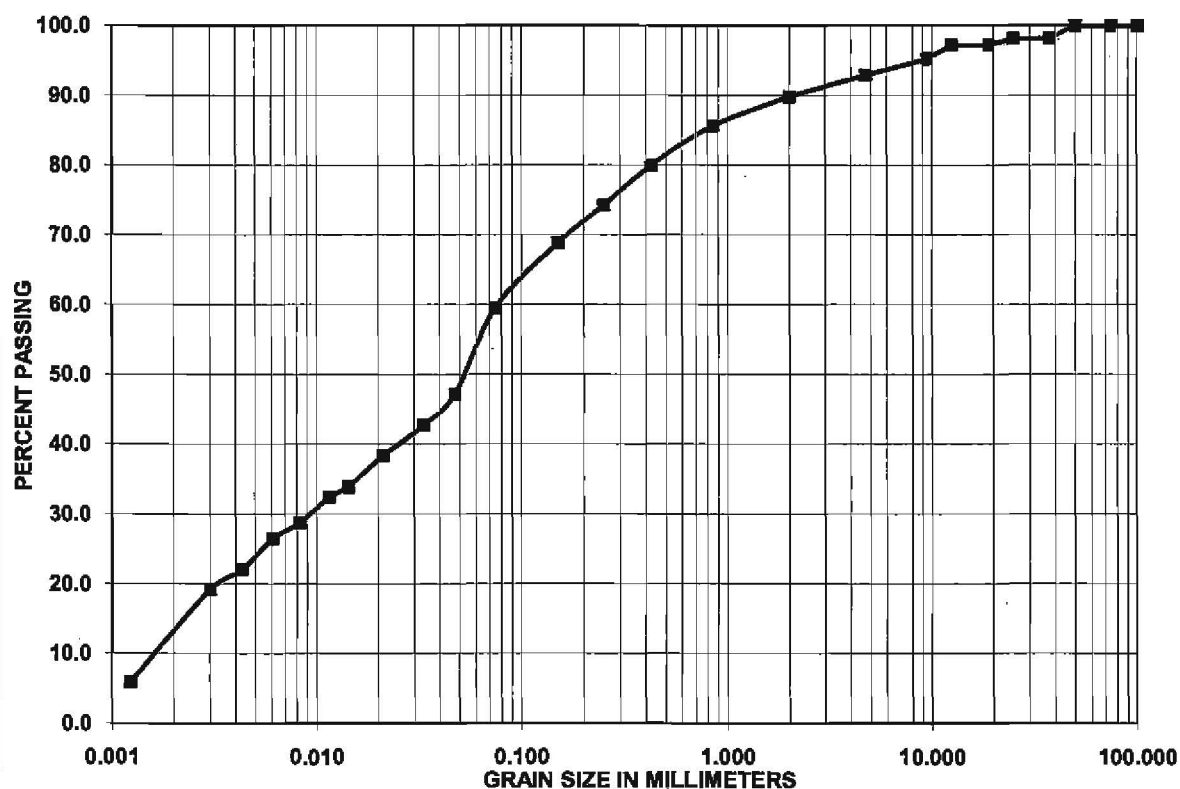
SAMPLED BY: D. Ostritchenko

DATE SAMPLED: 15-Aug-11

SOURCE: S-10-11

DATE TESTED: 15-Sep-11

DEPTH:



SUMMARY

Grain size (mm)	Passing (%)
75.0	100.0
50.0	100.0
37.5	98.1
25.0	98.1
19.0	97.2
12.5	97.2
9.5	95.2
4.75	92.9
2.00	89.8
0.850	85.5
0.425	79.9
0.250	74.2
0.150	68.8
0.075	59.5
0.0474	47.1
0.0335	42.7
0.0212	38.3
0.0143	33.9
0.0115	32.4
0.0083	28.7
0.0061	26.5
0.0043	22.1
0.0030	19.1
0.0012	5.9

REMARKS:

D₁₀ = N/A
D₃₀ = N/A
D₆₀ = N/A
C_u = N/A
C_c = N/A

GRAVEL 7.14%
SAND 33.40%
SILT 47.84%
CLAY 11.62%

TECHNICIAN: *A. Michael*

Reporting of these test results constitutes a testing service only.

Engineering Interpretation or evaluation of the test results is provided only on written request.



ATTERBERG LIMITS **ASTM D4318**

PROJECT: Mt. Polley Sample ID: S-10-11
Project Number: VM00560.200.4 Date Sampled: 15-Aug-11
Technician: G. Michaud Depth:
Date: 8-Sep-11 Comments:

Liquid Limit

Trial No.	1	2	3	
No. of Blows	34	27	13	
Tare ID	AS	S	AG	
Mass Wet + Tare	34.01	33.58	33.60	
Mass Dry + Tare	31.54	31.16	31.00	
Mass Tare	21.42	21.47	21.44	
Mass of Water	2.47	2.42	2.60	
Dry Soil Mass	10.12	9.69	9.56	
Moisture Content	24.4	25.0	27.2	
Liquid Limit	25.4	25.2	25.1	

Average Liquid Limit: 25

Plastic Limit

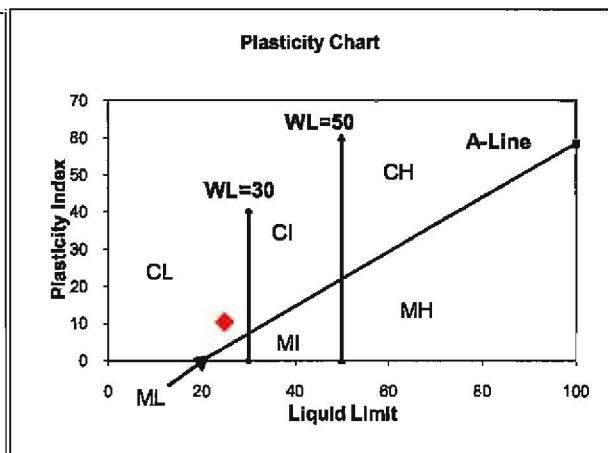
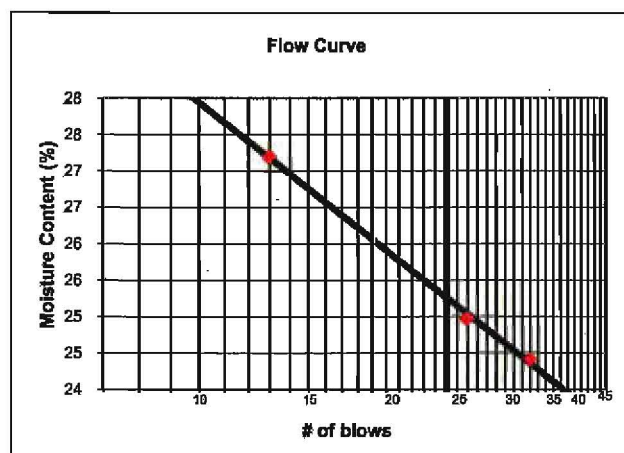
Trial No.	1	2	3	
Tare ID	36	15	40	
Mass Wet + Tare	31.10	31.83	30.39	
Mass Dry + Tare	29.88	30.60	29.25	
Mass Tare	21.48	22.03	21.45	
Mass of Water	1.22	1.23	1.14	
Dry Soil Mass	8.40	8.57	7.80	
Moisture Content	14.5	14.4	14.6	

Average Plastic Limit 14

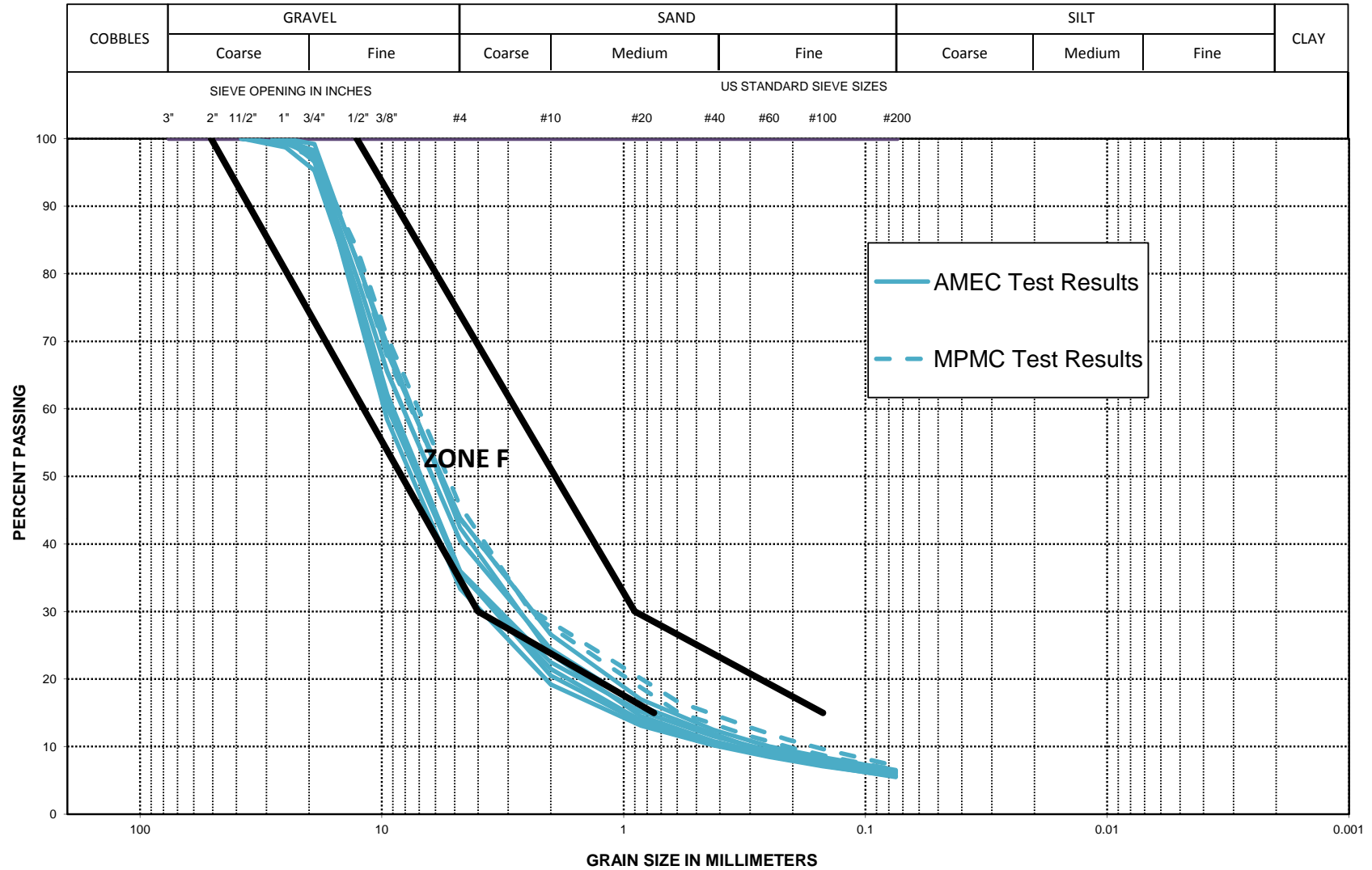
Plasticity Index 11

Received Moisture 9.4

Plasticity Index $PI = LL - PL$
Liquidity Index $LI = (MC - PL) / PI$



ZONE F – Filter Testing Results





SIEVE ANALYSIS REPORT
10 20 40 60 SERIES

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

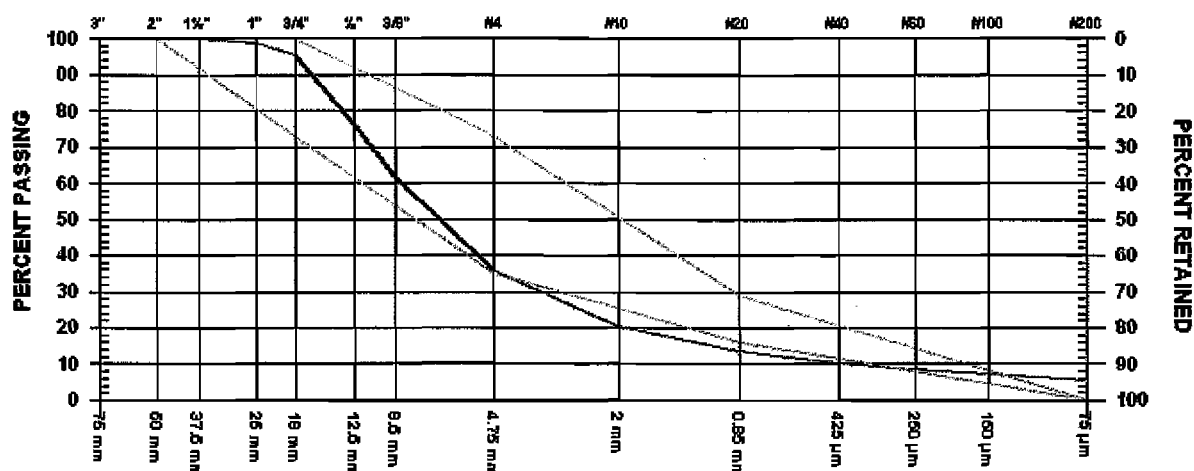
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 1 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone F
MATERIAL TYPE F-01-11

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm		100.0-100.0
2"	50	mm		
1 1/2"	37.5	mm	100.0	
1"	25	mm	98.7	
3/4"	19	mm	95.3	73.0-100.0
1/2"	12.5	mm	76.3	
3/8"	9.5	mm	61.7	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	35.9	35.0-73.0
No. 10	2.00 mm	20.5	
No. 20	850 µm	13.6	16.0-29.0
No. 40	425 µm	10.4	
No. 60	250 µm	8.6	
No. 100	150 µm	7.2	
No. 200	75 µm	5.5	

MOISTURE CONTENT 2.5%

COMMENTS



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Likely, BC
V0L 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
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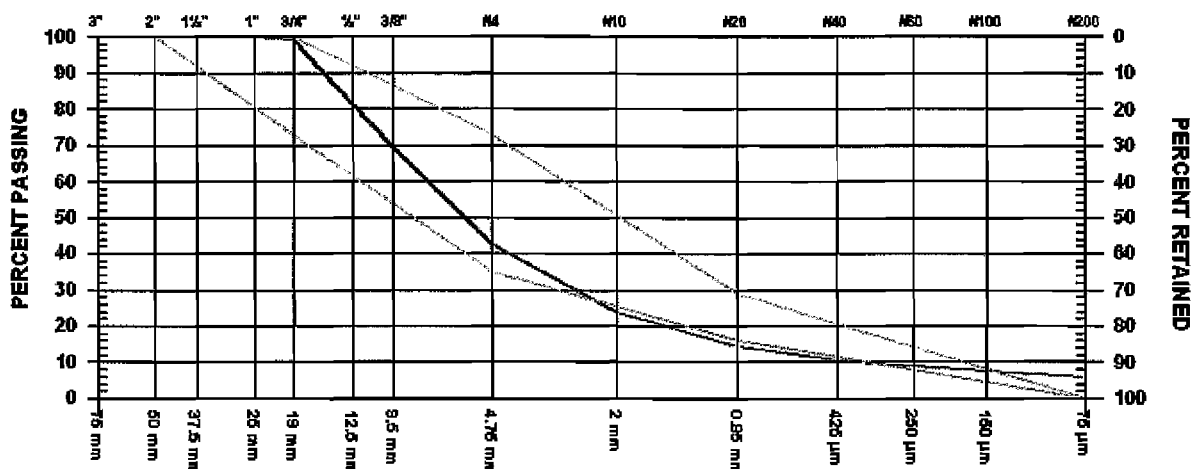
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 2 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone F
MATERIAL TYPE F-02-11

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75 mm			100.0-100.0
2"	50 mm			
1 1/2"	37.5 mm			
1"	25 mm		100.0	
3/4"	19 mm		99.2	73.0-100.0
1/2"	12.5 mm		81.5	
3/8"	9.5 mm		69.5	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	42.4	35.0-73.0
No. 10	2.00 mm	23.7	
No. 20	850 µm	14.5	
No. 40	425 µm	10.8	16.0-29.0
No. 60	250 µm	8.9	
No. 100	150 µm	7.5	
No. 200	75 µm	6.0	

MOISTURE CONTENT 3.5%

COMMENTS



TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
VOL 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

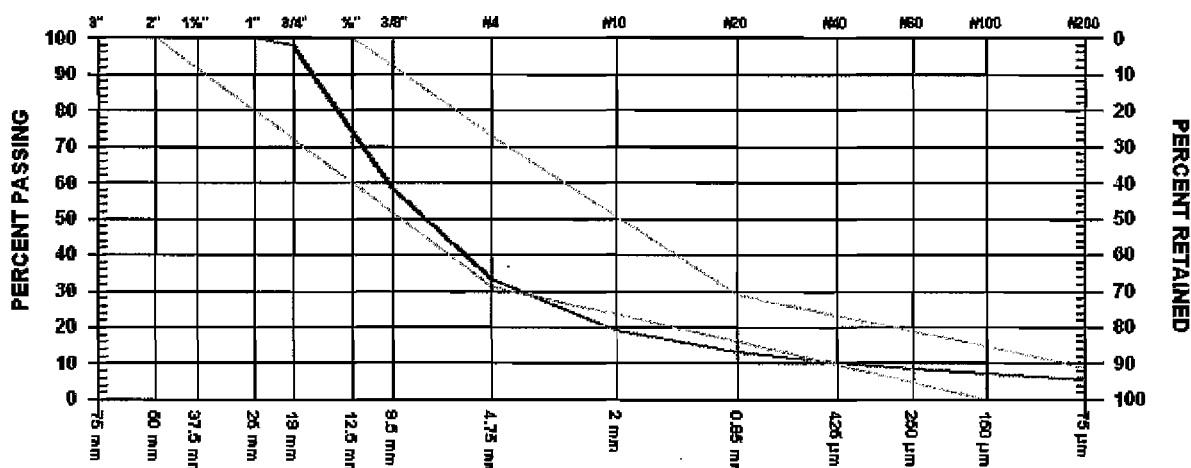
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 11 DATE RECEIVED 2011.Jun.28 DATE TESTED 2011.Jun.29 DATE SAMPLED 2011.Jun.27

SUPPLIER Mt. Polley
SOURCE Zone F
SPECIFICATION Mt Polley - Zone F
MATERIAL TYPE F-04-11

SAMPLED BY D.Ostritchenko
TESTED BY M.Tennant
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm		100.0-100.0
2"	50	mm		
1 1/2"	37.5	mm		
1"	25	mm	100.0	
3/4"	19	mm	97.9	60.0-100.0
1/2"	12.5	mm	74.1	
3/8"	9.5	mm	58.4	

SAND SIZES AND FINES			PERCENT PASSING	GRADATION LIMITS
No. 4	4.75	mm	33.4	31.0-73.0
No. 10	2.00	mm	19.2	16.0-29.0
No. 20	850	µm	13.1	
No. 40	425	µm	10.2	
No. 60	250	µm	8.5	0.0-15.0
No. 100	150	µm	7.1	
No. 200	75	µm	5.6	

MOISTURE CONTENT 3.7%

COMMENTS



TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
VOL 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

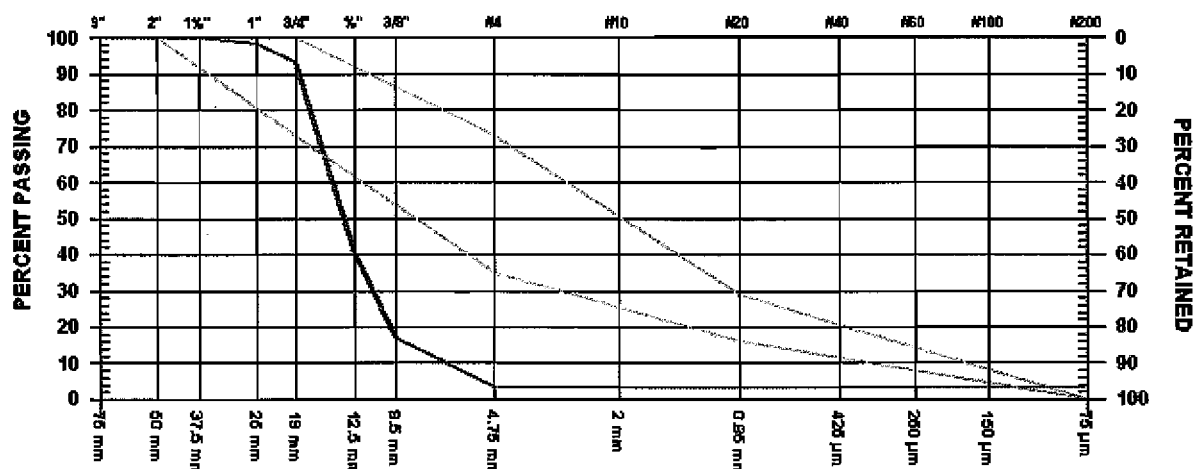
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 3 DATE RECEIVED 2011.Jun.02 DATE TESTED 2011.Jun.02 DATE SAMPLED 2011.May.31

SUPPLIER Mount Polley
SOURCE Mount Polley
SPECIFICATION Mt Polley - Zone F
MATERIAL TYPE F-03-11

SAMPLED BY D Ostritchenko
TESTED BY AMEC lab
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75 mm			100.0-100.0
2"	50 mm			
1 1/2"	37.5 mm	100.0		
1"	25 mm	98.2		73.0-100.0
3/4"	19 mm	93.4		
1/2"	12.5 mm	40.4		
3/8"	9.5 mm	17.1		

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	3.4	35.0-73.0
No. 10	2.00 mm		16.0-29.0
No. 20	850 µm		
No. 40	425 µm		
No. 60	250 µm		
No. 100	150 µm		
No. 200	75 µm	3.4	

MOISTURE CONTENT 1.1%

COMMENTS



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SIEVE ANALYSIS REPORT 10 20 40 60 SERIES

PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
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TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

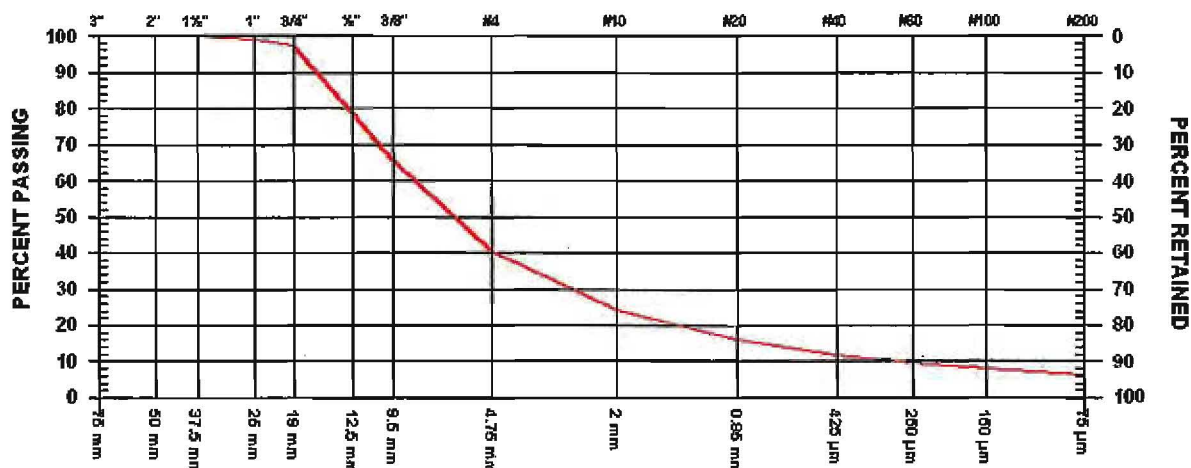
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 18 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE F-05-11

SAMPLED BY D.Ostritchenko
TESTED BY J. McDonald
TEST METHOD WASHED



GRAVEL SIZES		PERCENT PASSING	GRADATION LIMITS
3"	75 mm		
2"	50 mm		
1 1/2"	37.5 mm	100.0	
1"	25 mm	99.3	
3/4"	19 mm	97.5	
1/2"	12.5 mm	78.9	
3/8"	9.5 mm	65.5	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	40.5	
No. 10	2.00 mm	24.4	
No. 20	850 µm	16.0	
No. 40	425 µm	11.9	
No. 60	250 µm	9.7	
No. 100	150 µm	8.1	
No. 200	75 µm	6.3	

MOISTURE CONTENT 3.9%

COMMENTS

Page 1 of 1 2011.Sep.25 AMEC Environmental & Infrastructure PER. cmichoud

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AMEC010609_0092

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**SIEVE ANALYSIS REPORT
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Likely, BC
V0L 2N0

PROJECT NO. VM0560
CLIENT Mount Polley Mining Corp.
C.C.

PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 19 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE Corner 3 of Stockpile
SPECIFICATION
MATERIAL TYPE F-06-11

SAMPLED BY D.Ostritchenko
TESTED BY G. Michaud
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm		
2"	50	mm		
1 1/2"	37.5	mm		
1"	25	mm	100.0	
3/4"	19	mm	98.0	
1/2"	12.5	mm	81.5	
3/8"	9.5	mm	68.4	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	43.8	
No. 10	2.00 mm	26.6	
No. 20	850 µm	17.0	
No. 40	425 µm	12.5	
No. 60	250 µm	10.0	
No. 100	150 µm	8.4	
No. 200	75 µm	6.5	

MOISTURE CONTENT 5.0%

COMMENTS

Page 1 of 1 2011.Sep.25 AMEC Environmental & Infrastructure PER. *G. Michaud*

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Likely, BC
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PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
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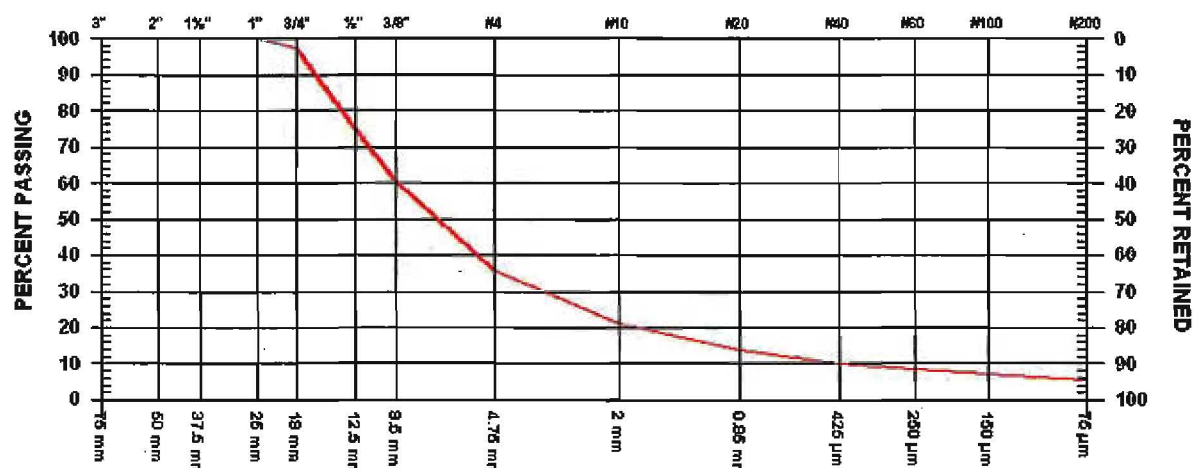
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 20 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE F-07-11

SAMPLED BY D.Ostritchenko
TESTED BY G. Michaud
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm		
2"	50	mm		
1 1/2"	37.5	mm		
1"	25	mm	100.0	
3/4"	19	mm	97.5	
1/2"	12.5	mm	75.1	
3/8"	9.5	mm	60.3	

SAND SIZES AND FINES			PERCENT PASSING	GRADATION LIMITS
No. 4	4.75	mm	35.7	
No. 10	2.00	mm	21.5	
No. 20	850	µm	13.9	
No. 40	425	µm	10.4	
No. 60	250	µm	8.6	
No. 100	150	µm	7.2	
No. 200	75	µm	5.7	

MOISTURE CONTENT 3.7%

COMMENTS

Page 1 of 1

2011.Sep.25

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Likely, BC
VOL 2N0

PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
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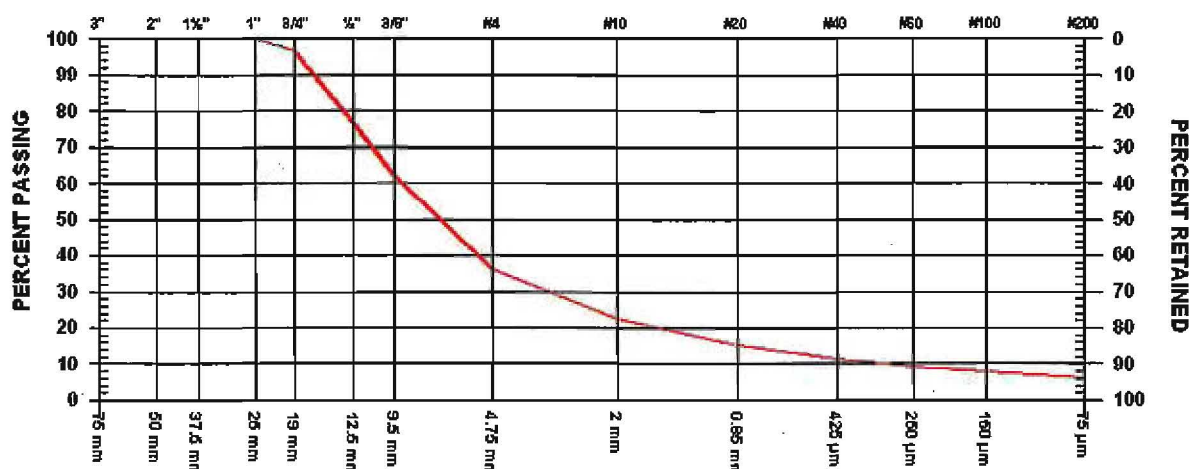
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 21 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE F-08-11

SAMPLED BY D.Ostritchenko
TESTED BY G.Michaud
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm		
2"	50	mm		
1 1/2"	37.5	mm		
1"	25	mm	100.0	
3/4"	19	mm	96.6	
1/2"	12.5	mm	76.7	
3/8"	9.5	mm	62.1	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	36.0	
No. 10	2.00 mm	22.5	
No. 20	850 µm	15.2	
No. 40	425 µm	11.5	
No. 60	250 µm	9.4	
No. 100	150 µm	7.9	
No. 200	75 µm	6.2	

MOISTURE CONTENT 3.2%

COMMENTS

Page 1 of 1

2011.Sep.25

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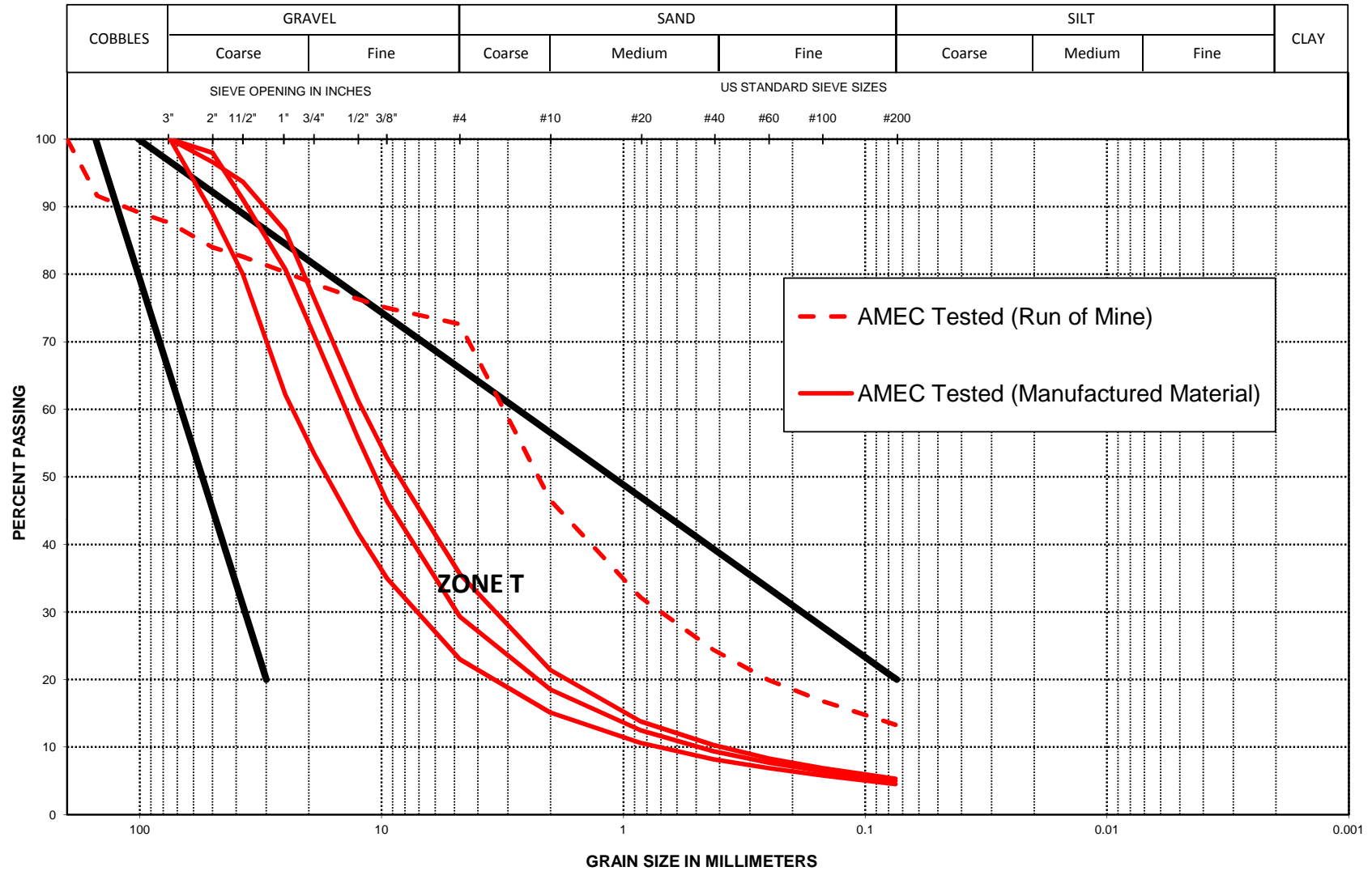
PER.

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AMEC010609_0095

ZONE T – Transition Testing Results





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Likely, BC
V0L 2N0

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CLIENT Mount Polley Mining Corp.
C.C.

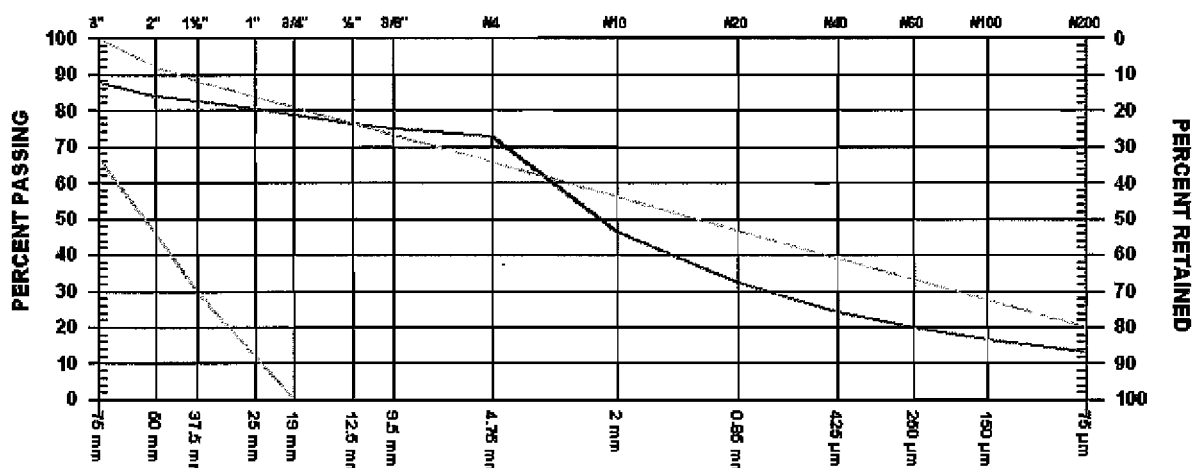
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 10 DATE RECEIVED 2011.Jun.28 DATE TESTED 2011.Jun.29 DATE SAMPLED 2011.Jun.27

SUPPLIER Mt. Polley
SOURCE Zone T
SPECIFICATION Mt Polley - Zone T
MATERIAL TYPE T-01-11

SAMPLED BY D.Ostritchenko
TESTED BY M.Tennant
TEST METHOD WASHED



GRAVEL SIZES		PERCENT PASSING	GRADATION LIMITS
3"	75 mm	87.6	67.0-97.0
2"	50 mm	84.0	46.0-92.0
1 1/2"	37.5 mm	82.6	30.0-88.0
1"	25 mm	80.3	
3/4"	19 mm	78.6	0.0-81.0
1/2"	12.5 mm	76.3	
3/8"	9.5 mm	75.0	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	72.6	
No. 10	2.00 mm	46.5	
No. 20	850 µm	32.2	
No. 40	425 µm	24.4	
No. 60	250 µm	19.9	
No. 100	150 µm	16.8	
No. 200	75 µm	13.3	0.0-20.0

COMMENTS

Three oversized rocks retained on the 100mm sieve measured:
225mm x 175mm x 175mm, 150mm x 150mm x 125mm, 200mm x 125mm x 87mm

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**SIEVE ANALYSIS REPORT
10 20 40 60 SERIES**

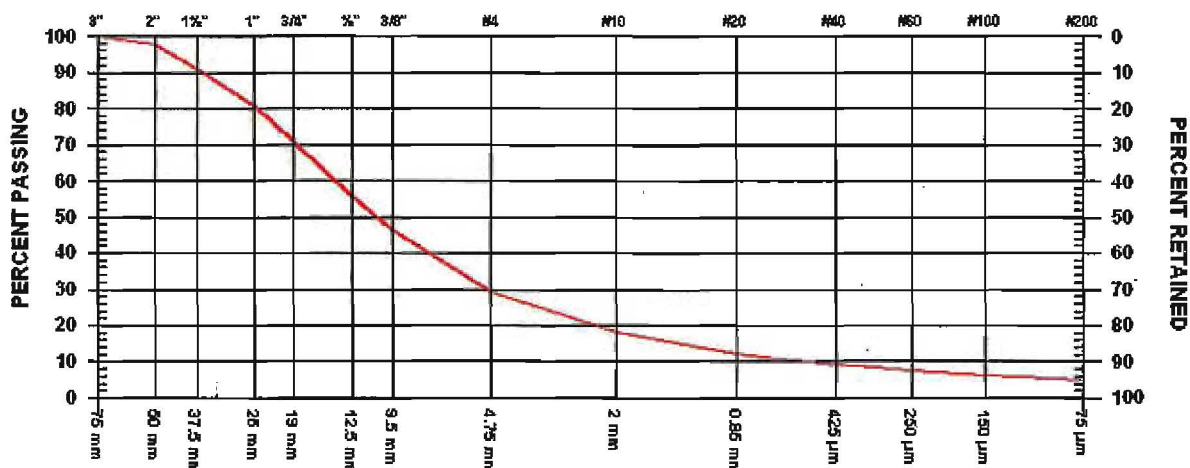
PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.TO
Mount Polley Mining Corp.
P.O. Box 12
Likely, BC
V0L 2N0

PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 15 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE T-02-11SAMPLED BY D.Ostritchenko
TESTED BY J. McDonald
TEST METHOD WASHED

GRAVEL SIZES		PERCENT PASSING	GRADATION LIMITS
3"	75 mm	100.0	
2"	50 mm	98.0	
1 1/2"	37.5 mm	91.1	
1"	25 mm	80.7	
3/4"	19 mm	70.9	
1/2"	12.5 mm	55.7	
3/8"	9.5 mm	46.4	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	29.3	
No. 10	2.00 mm	18.5	
No. 20	0.85 mm	12.5	
No. 40	425 µm	9.4	
No. 60	250 µm	7.7	
No. 100	150 µm	6.4	
No. 200	75 µm	5.0	

MOISTURE CONTENT 2.0%

COMMENTS

Page 1 of 1

2011.Sep.25

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PER.

J. McDonald

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SIEVE ANALYSIS REPORT**10 20 40 60 SERIES**

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V0L 2N0

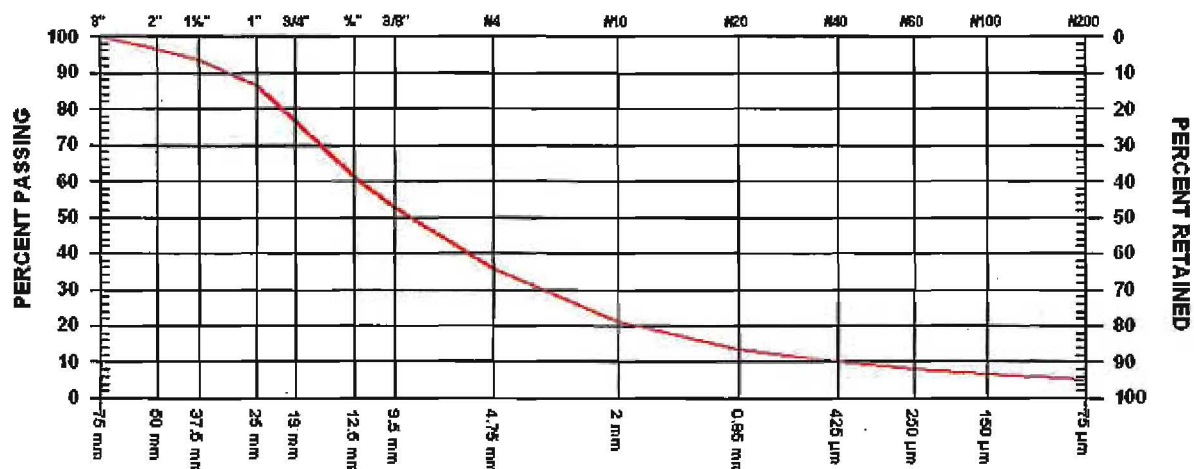
PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.

PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 16 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE
SPECIFICATION
MATERIAL TYPE T-03-11SAMPLED BY D.Ostritchenko
TESTED BY J. McDonald
TEST METHOD WASHED

GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75	mm	100.0	
2"	50	mm	96.6	
1 1/2"	37.5	mm	93.7	
1"	25	mm	86.4	
3/4"	19	mm	76.5	
1/2"	12.5	mm	61.3	
3/8"	9.5	mm	52.9	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	35.6	
No. 10	2.00 mm	21.4	
No. 20	850 µm	13.8	
No. 40	425 µm	10.3	
No. 60	250 µm	8.3	
No. 100	150 µm	6.9	
No. 200	75 µm	5.3	

MOISTURE CONTENT 2.1%

COMMENTS

Page 1 of 1

2011.Sep.25

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PER. *J. McDonald*

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AMEC010609_0100



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SIEVE ANALYSIS REPORT

10 20 40 60 SERIES

TO
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P.O. Box 12
Likely, BC
V0L 2N0

PROJECT NO. VM0560

CLIENT Mount Polley Mining Corp.
C.C.

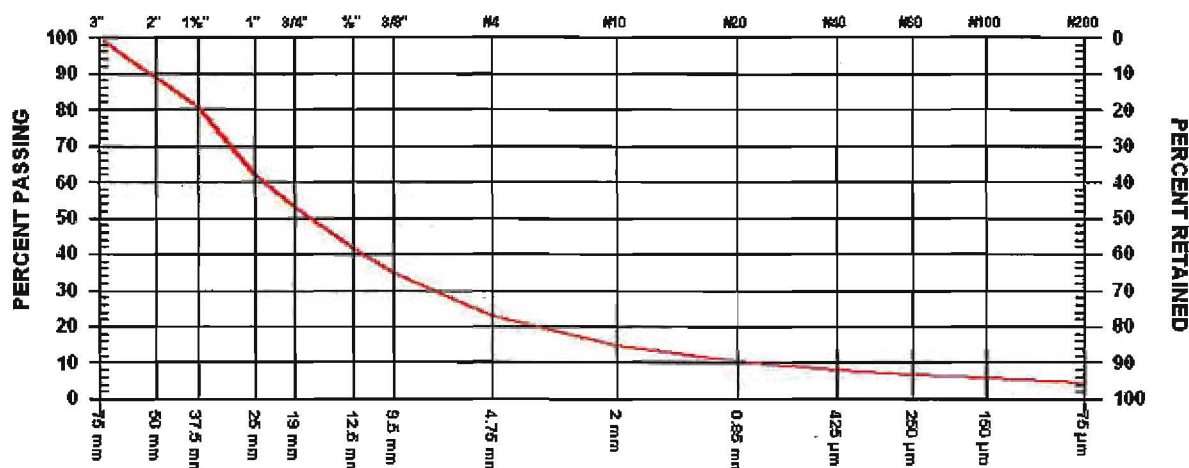
PROJECT Mount Polley

CONTRACTOR

SIEVE TEST NO. 17 DATE RECEIVED 2011.Aug.17 DATE TESTED 2011.Sep.08 DATE SAMPLED 2011.Aug.15

SUPPLIER Mt. Polley
SOURCE Corner 5 Perimeter
SPECIFICATION
MATERIAL TYPE T-04-11

SAMPLED BY D.Ostritchenko
TESTED BY G. Michaud
TEST METHOD WASHED



GRAVEL SIZES			PERCENT PASSING	GRADATION LIMITS
3"	75 mm		100.0	
2"	50 mm		89.0	
1 1/2"	37.5 mm		80.7	
1"	25 mm		62.2	
3/4"	19 mm		53.4	
1/2"	12.5 mm		41.7	
3/8"	9.5 mm		35.0	

SAND SIZES AND FINES		PERCENT PASSING	GRADATION LIMITS
No. 4	4.75 mm	23.0	
No. 10	2.00 mm	15.1	
No. 20	850 µm	10.6	
No. 40	425 µm	8.2	
No. 60	250 µm	6.9	
No. 100	150 µm	5.8	
No. 200	75 µm	4.5	

MOISTURE CONTENT 2.9%

COMMENTS

Page 1 of 1

2011.Sep.25

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PER. G. Michaud

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AMEC010609_0101

APPENDIX B
INSTRUMENTATION PLOTS

Inclinometer Plots

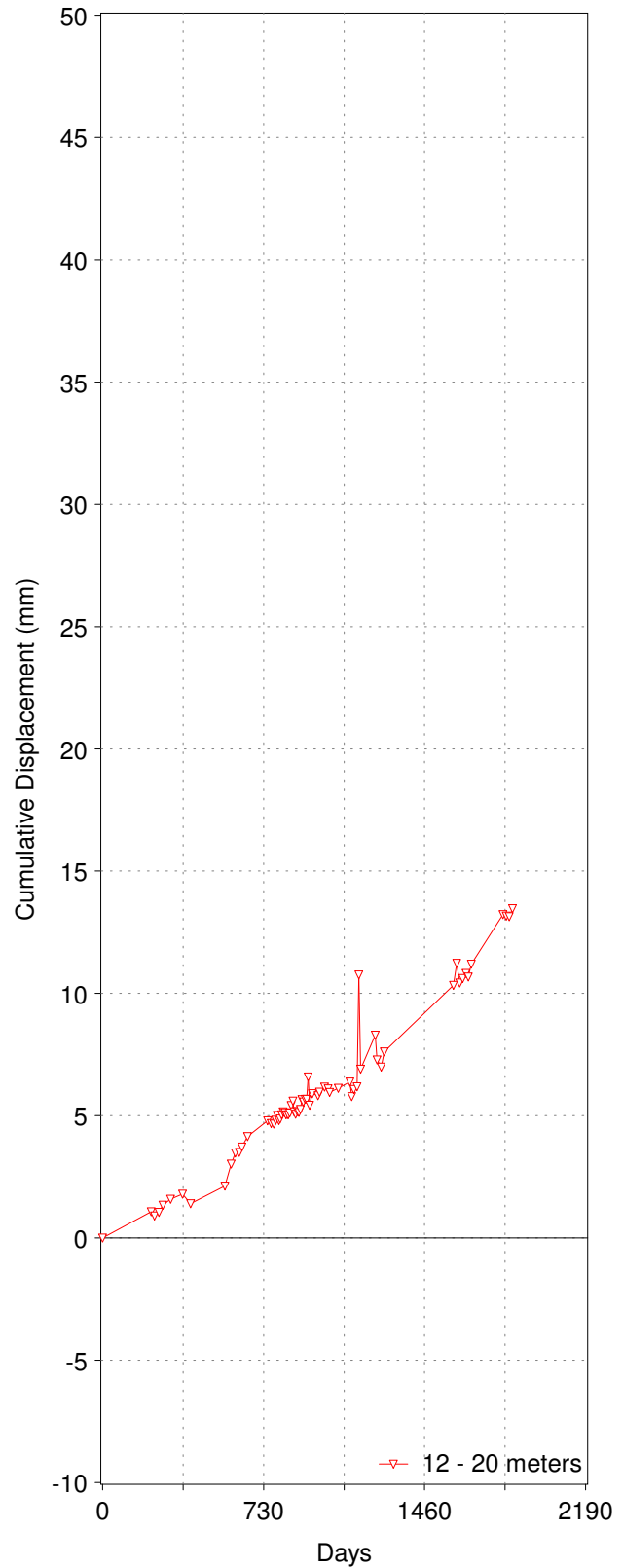
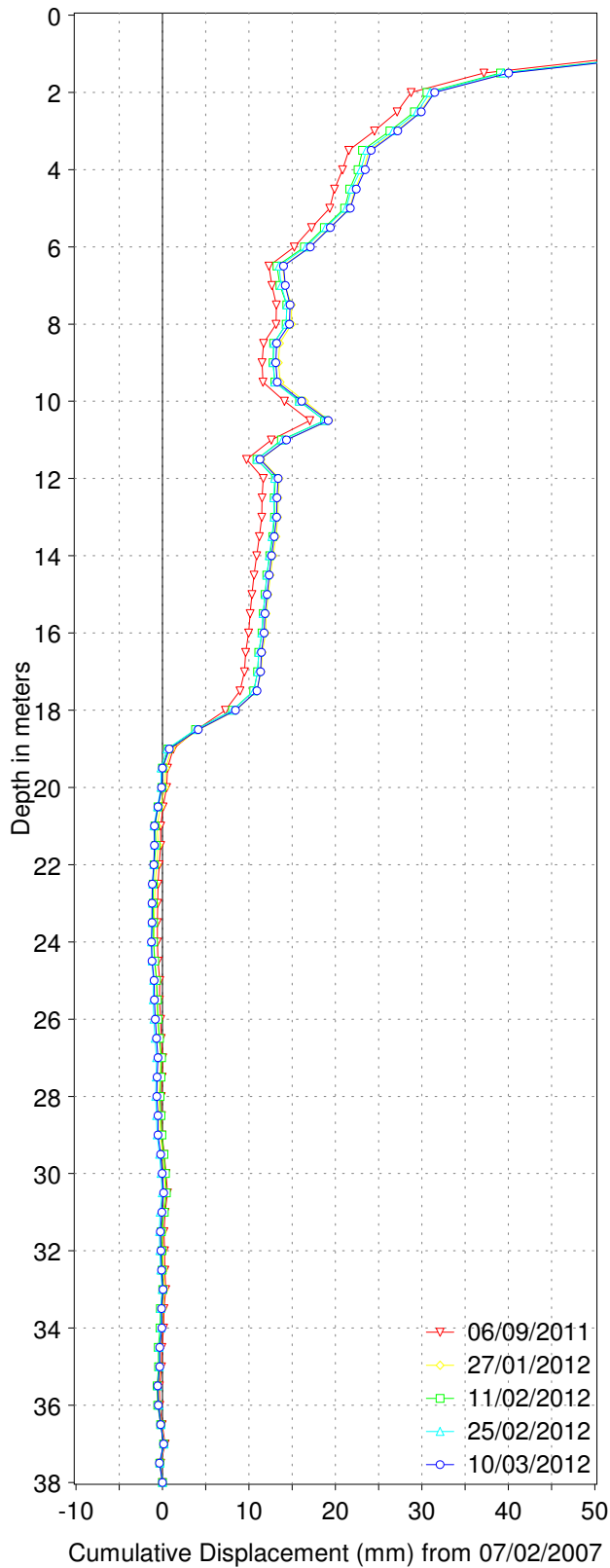
VM00560

Mt. Polley

Cumulative & Time Displacement

SI01-02

A-Axis



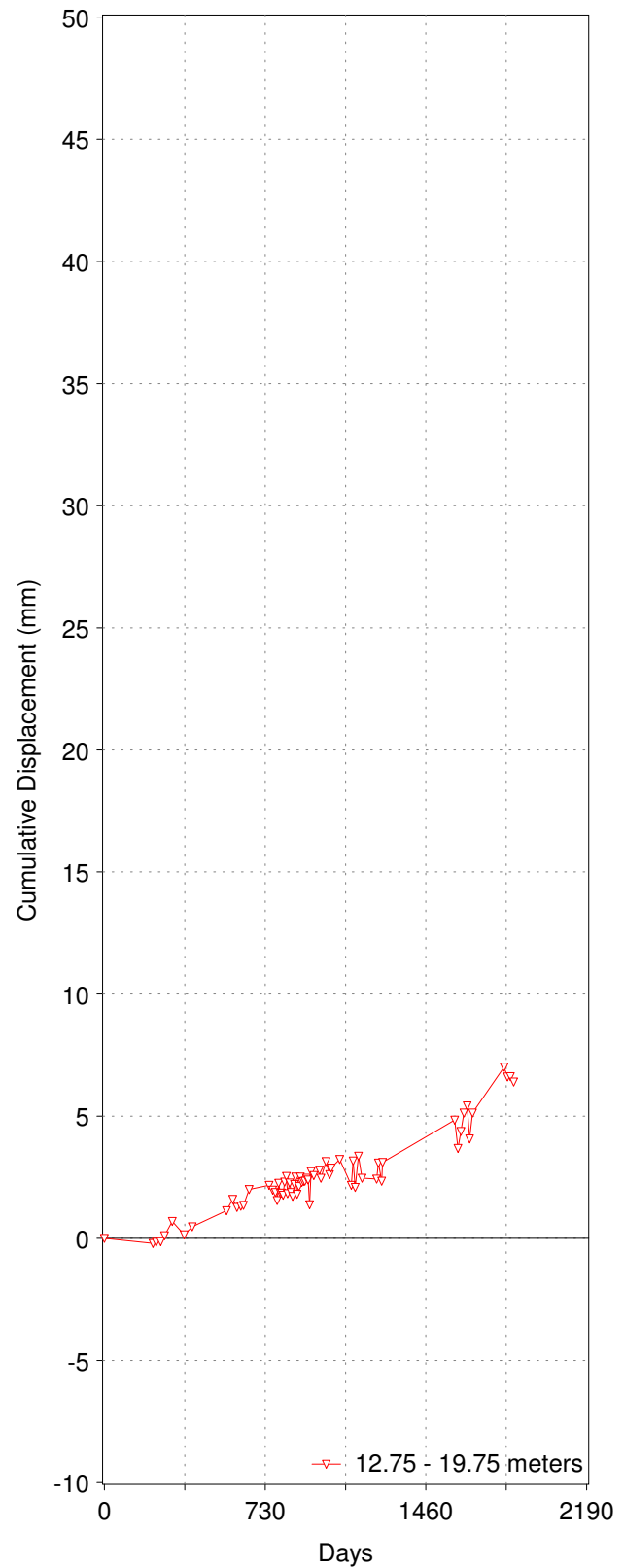
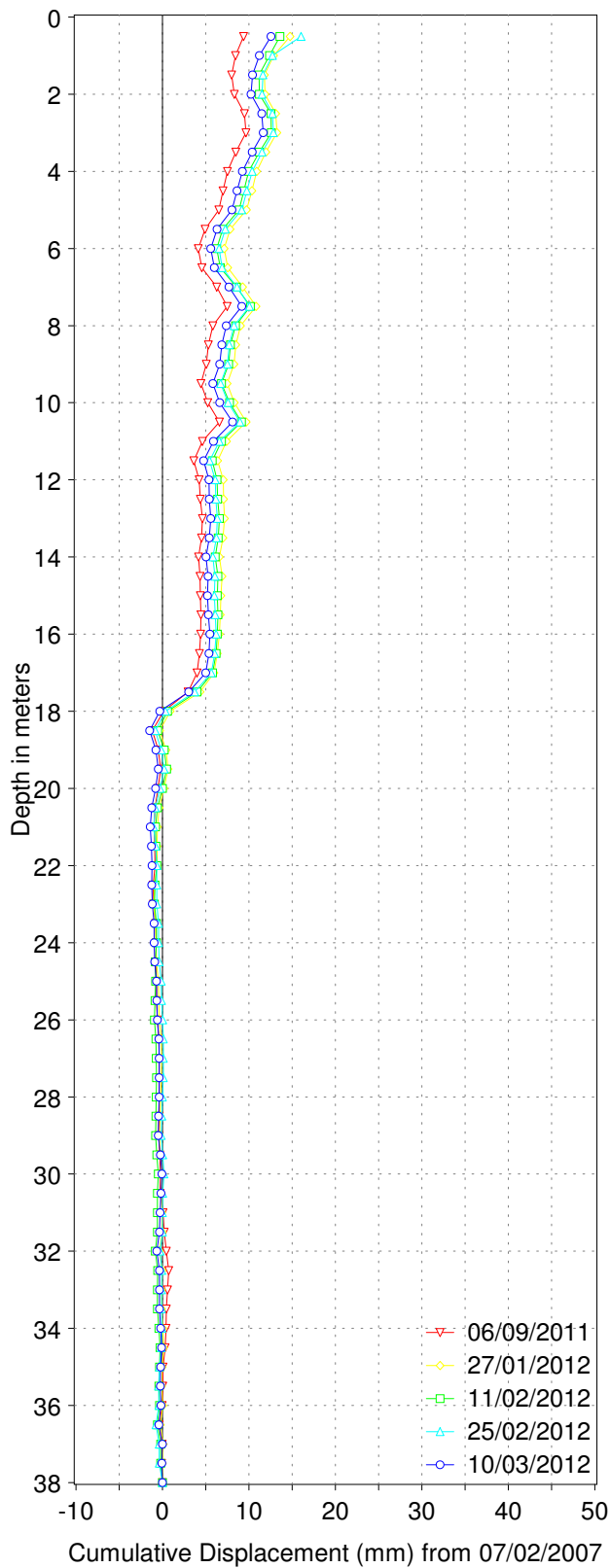
VM00560

Mt. Polley

Cumulative & Incremental Displacement

SI01-02

B-Axis



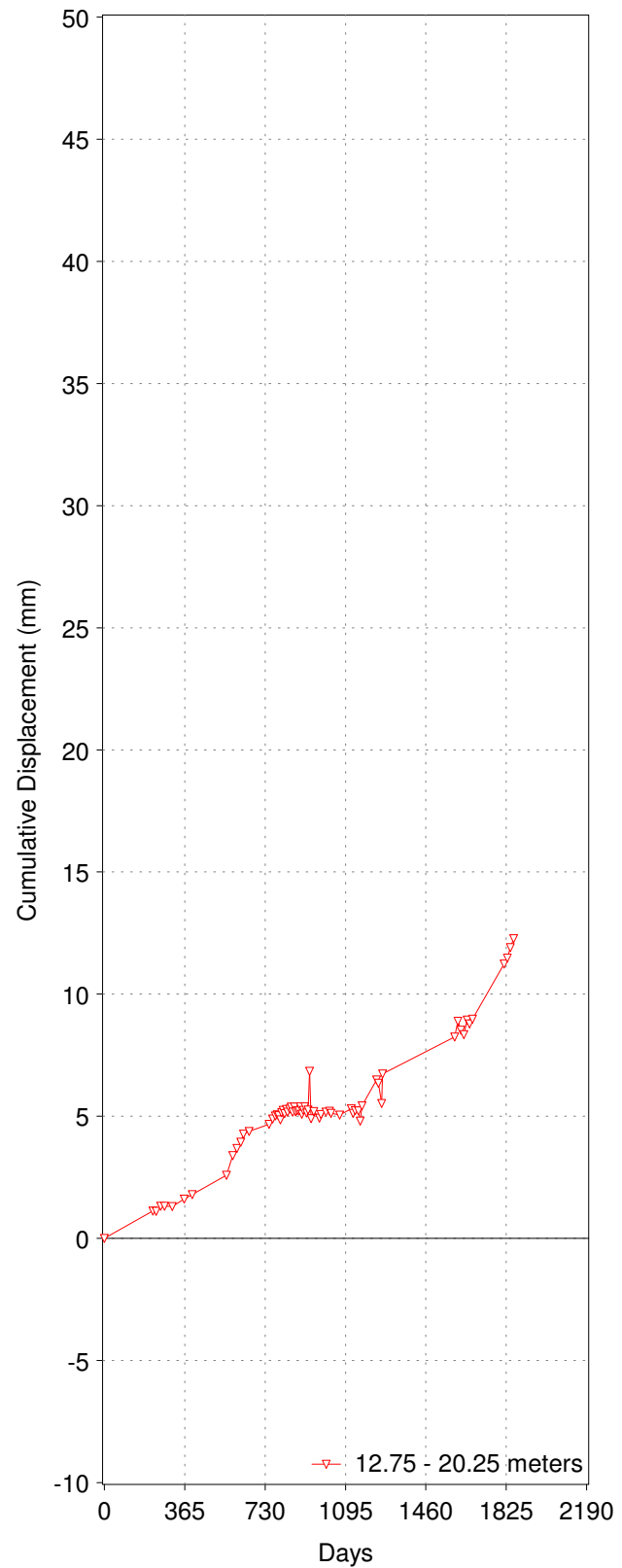
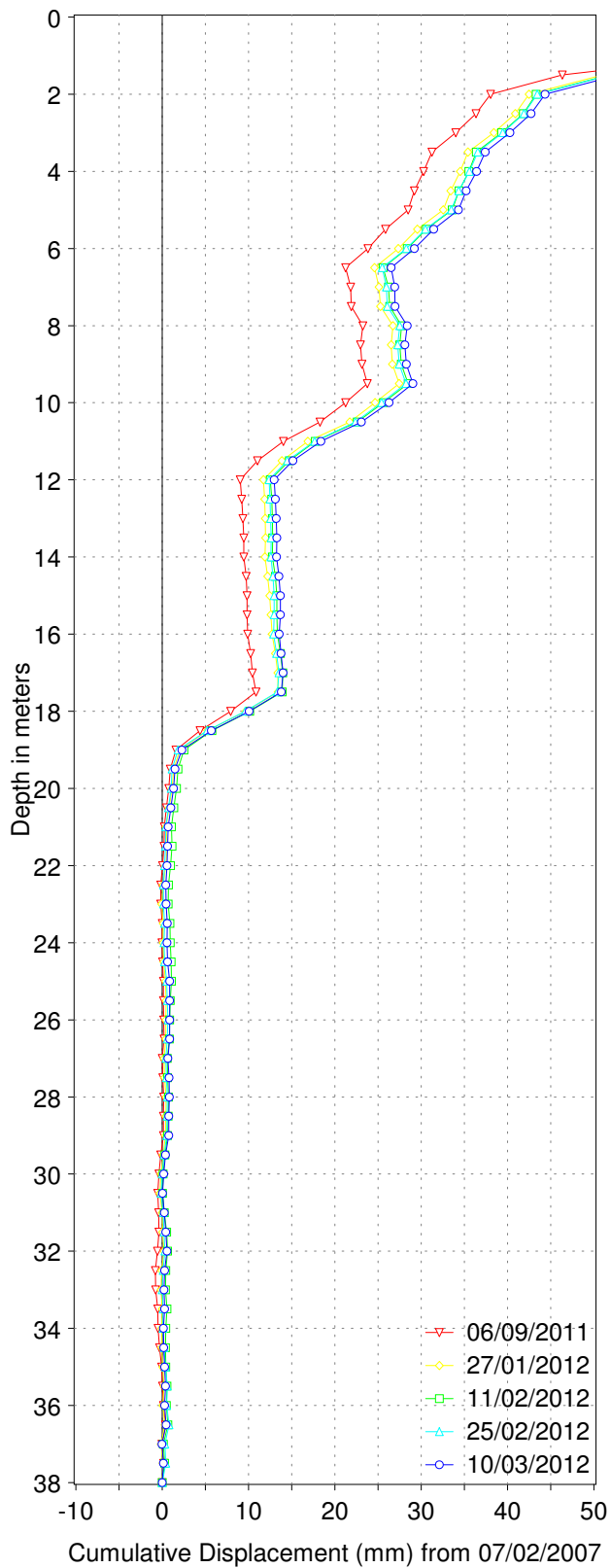
VM00560

Mt. Polley

Cumulative & Incremental Displacement

SI01-02

AB-Axis



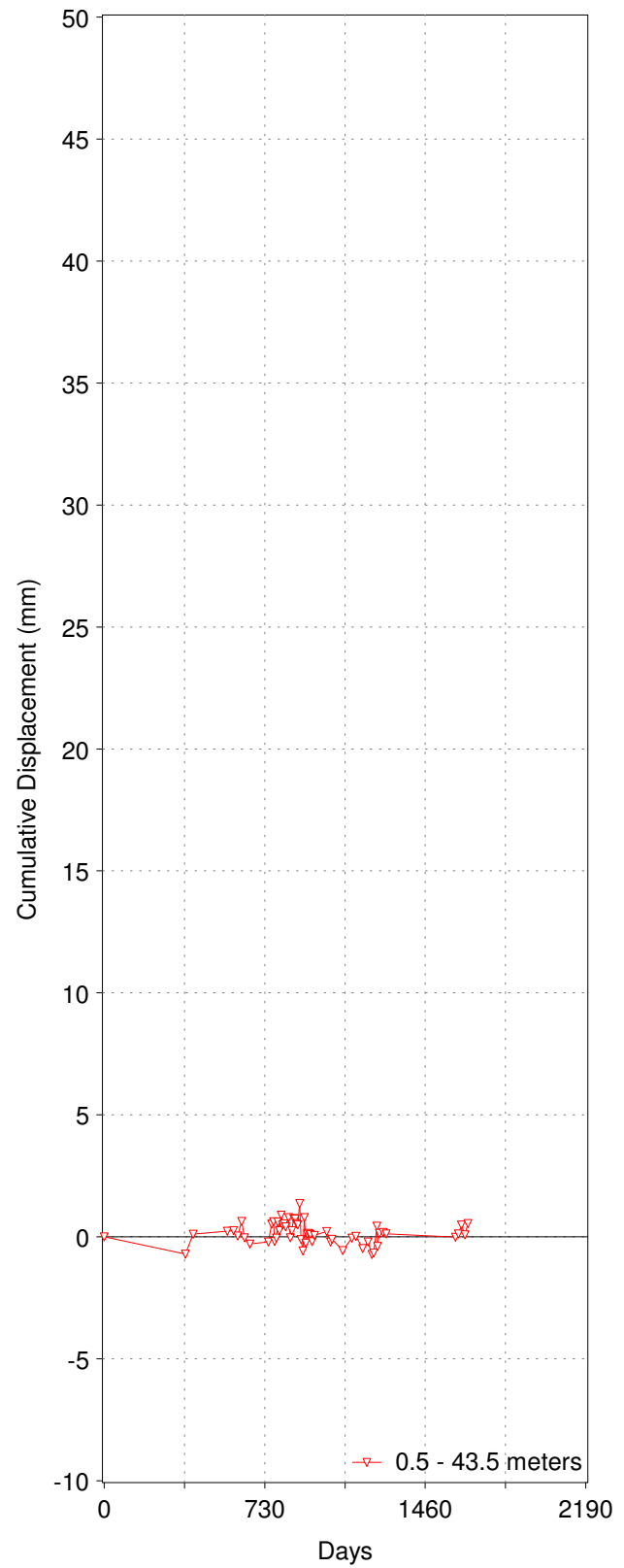
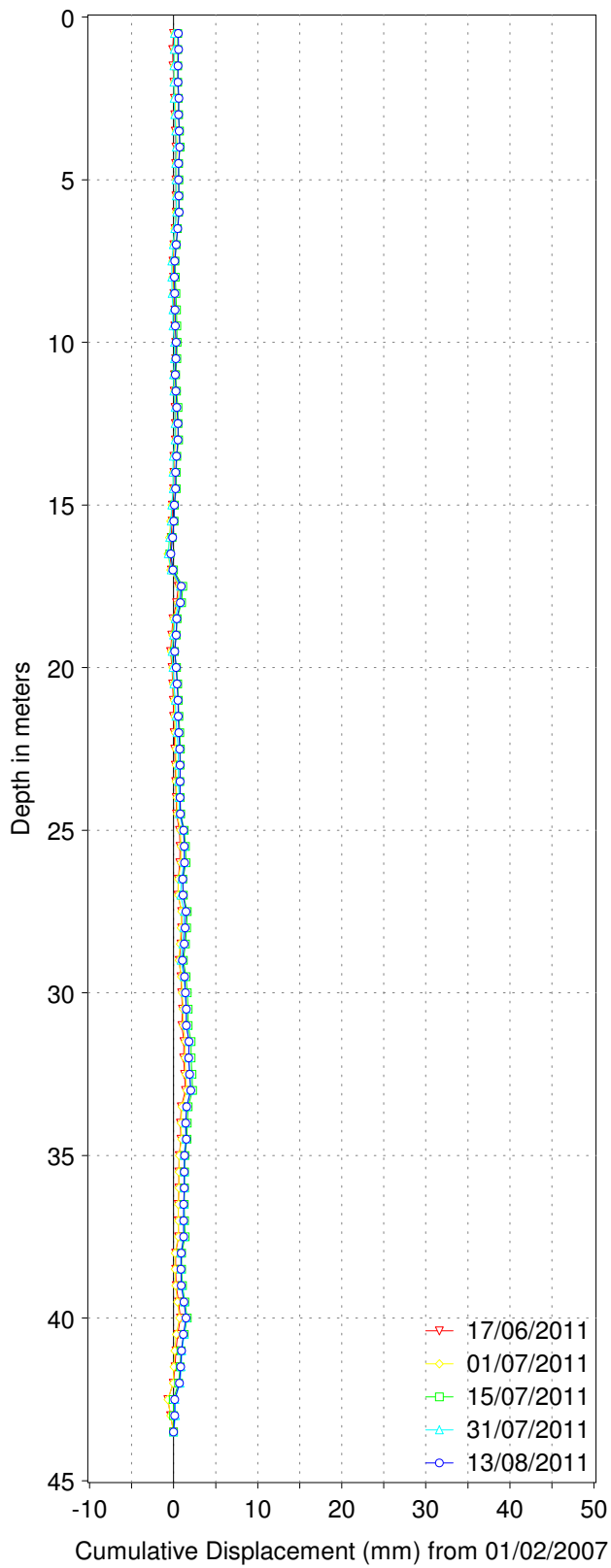
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Mt. Polley

Cumulative & Time Displacement

SI06-01

A-Axis



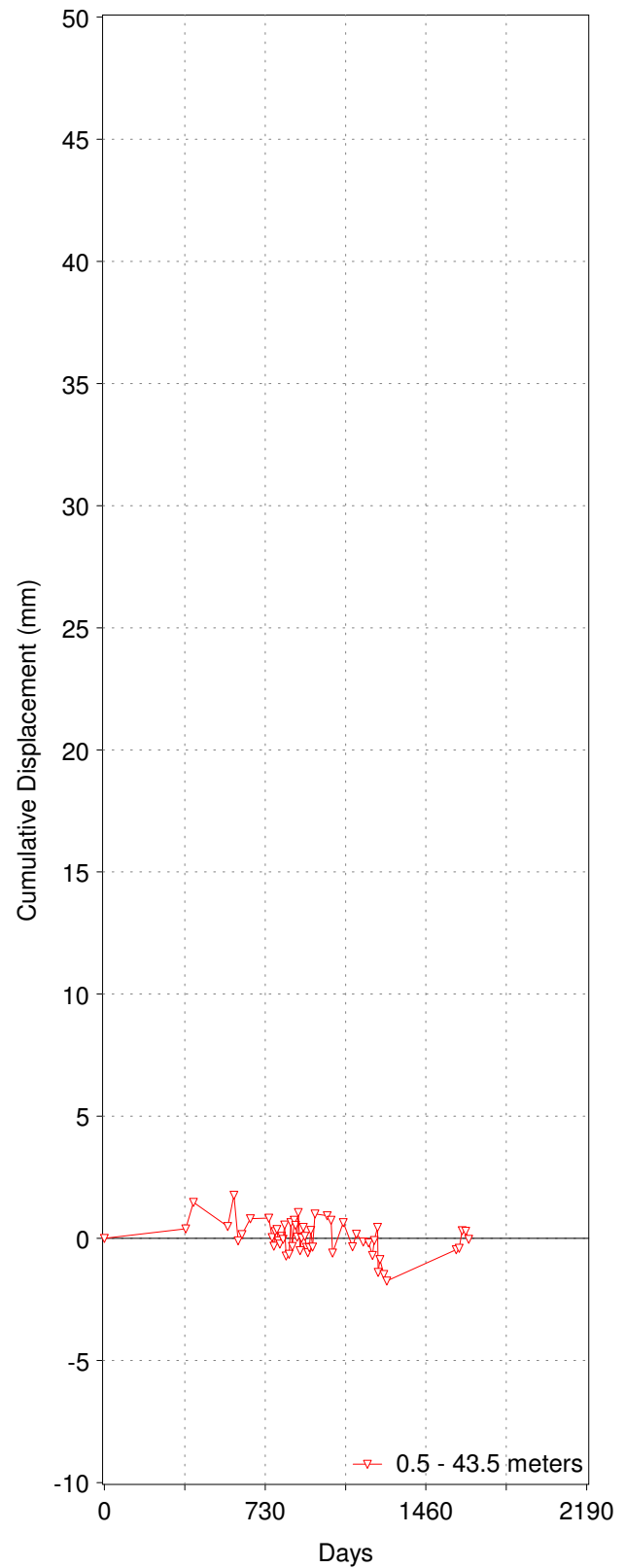
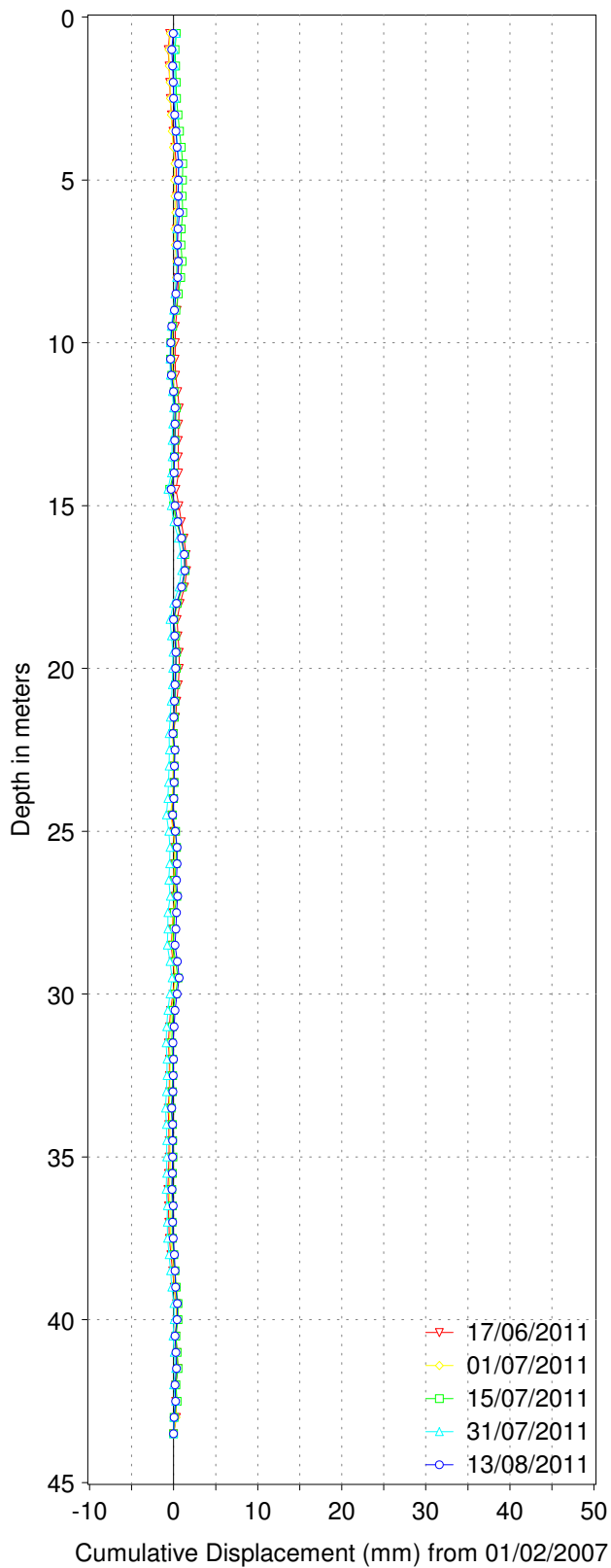
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Mt. Polley

Cumulative & Time Displacement

SI06-01

B-Axis



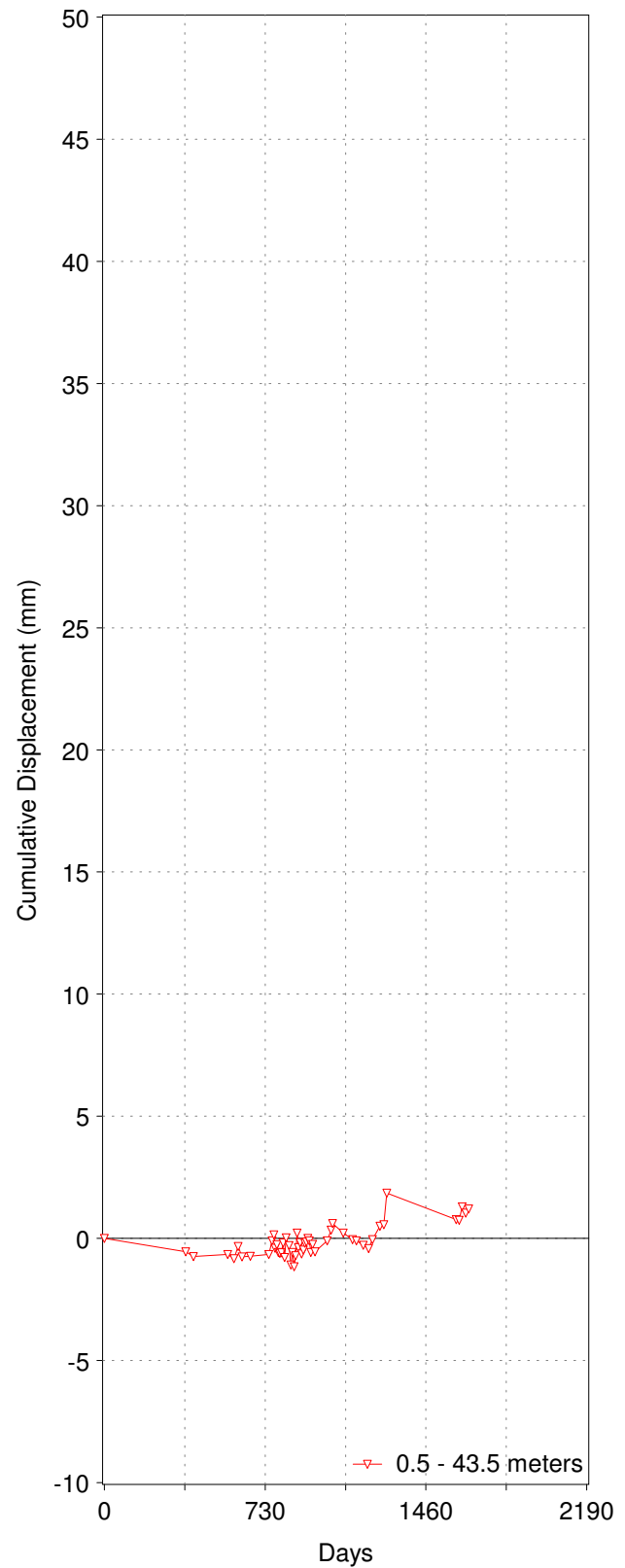
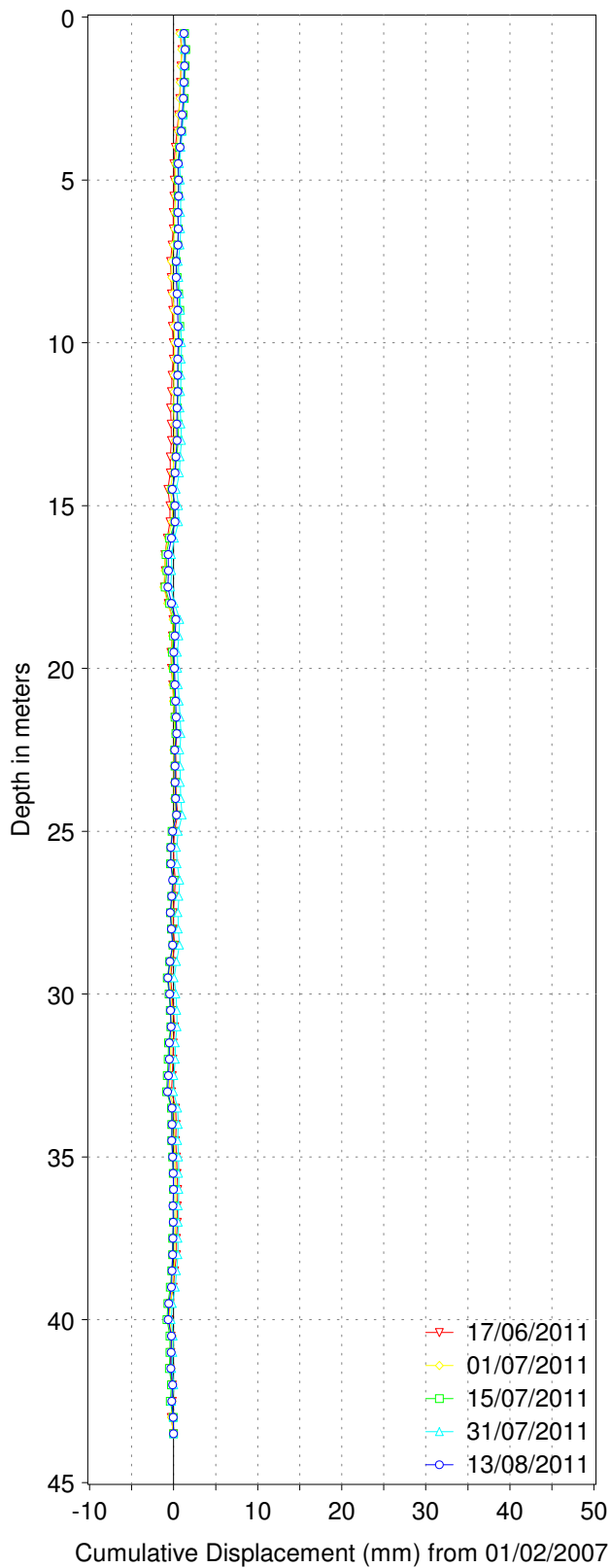
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Mt. Polley

Cumulative & Time Displacement

SI06-01

AB-Axis



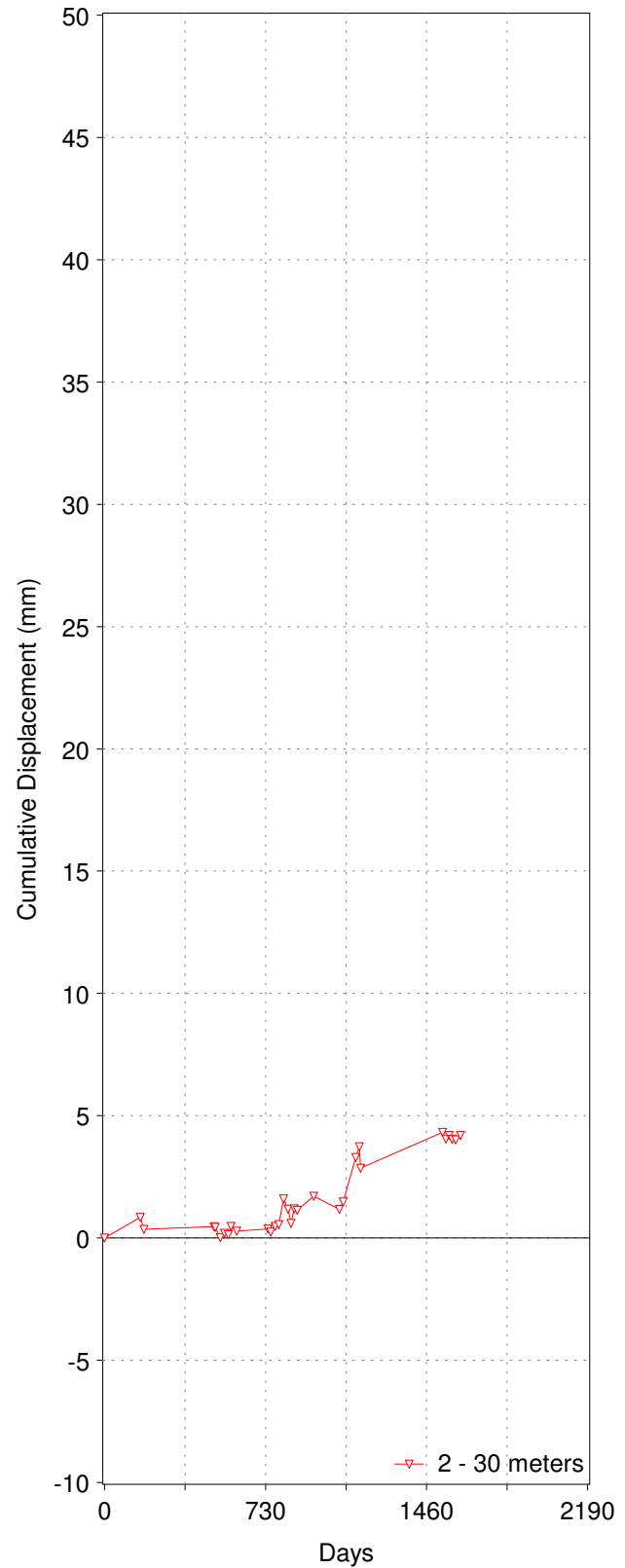
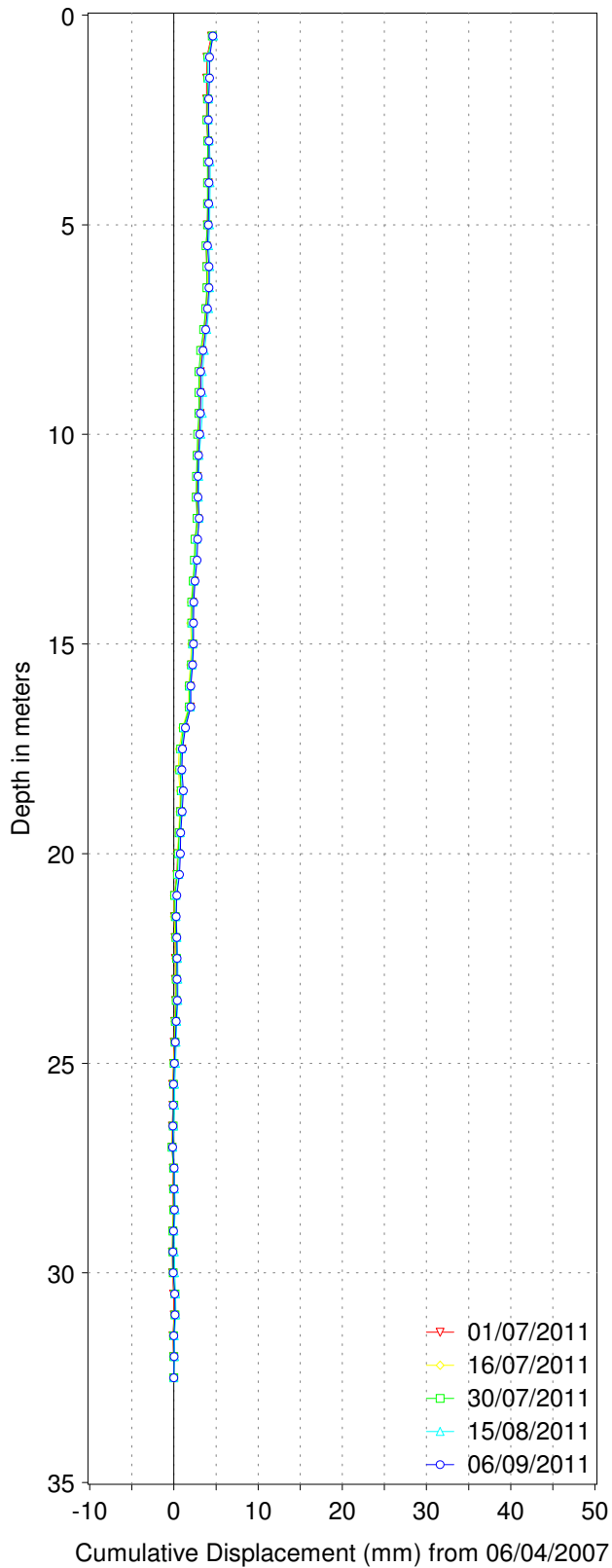
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Mt. Polley

Cumulative & Time Displacement

SI06-02

A-Axis



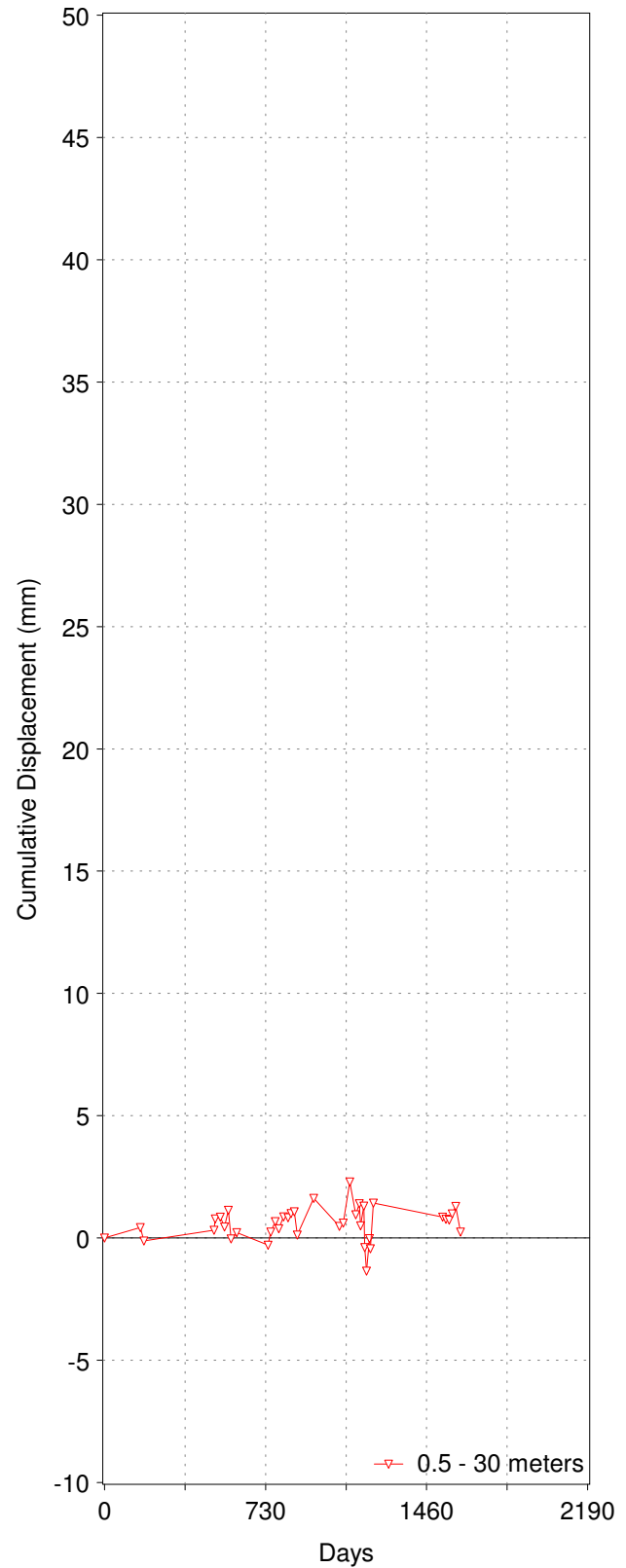
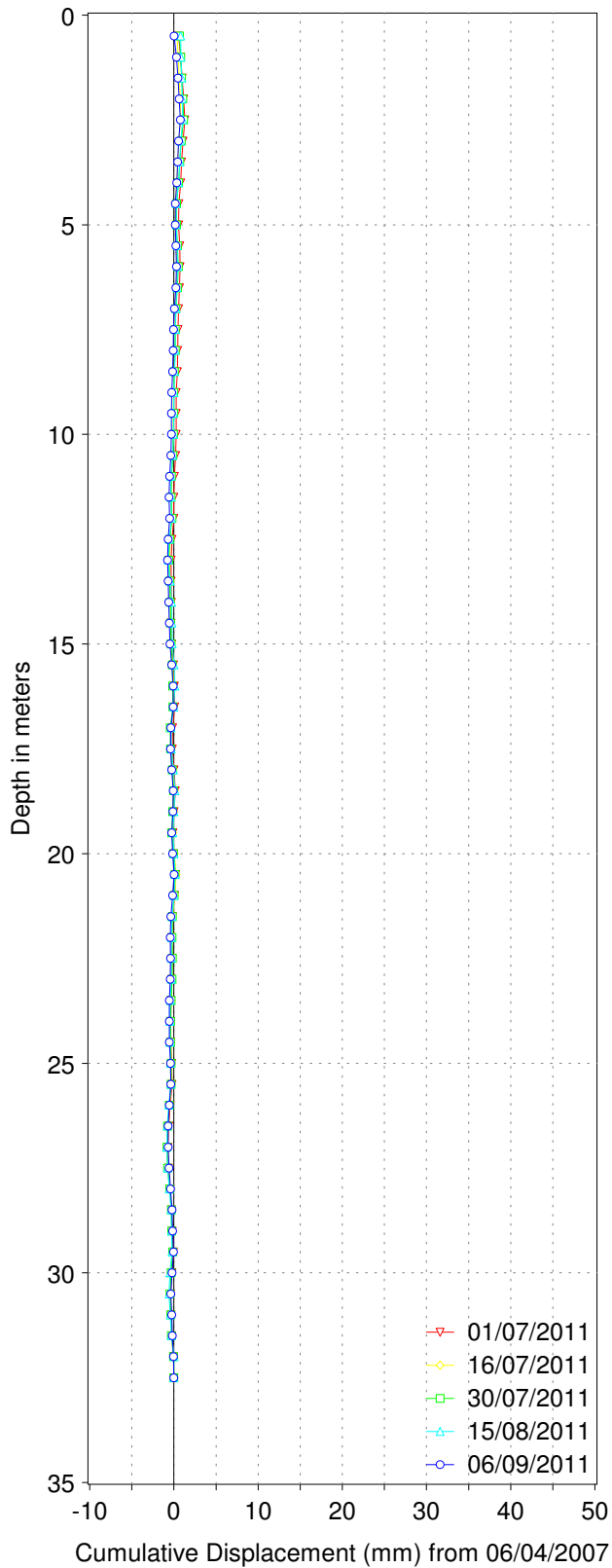
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Mt. Polley

Cumulative & Time Displacement

SI06-02

B-Axis



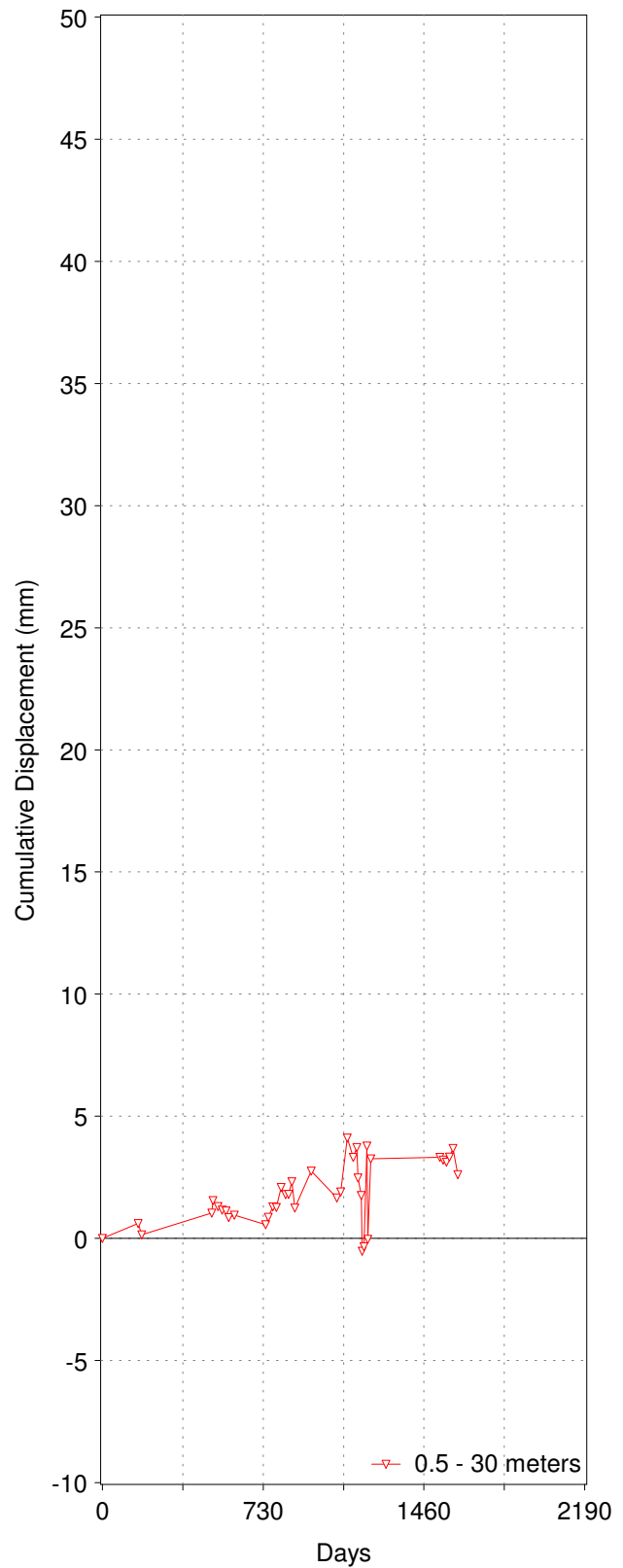
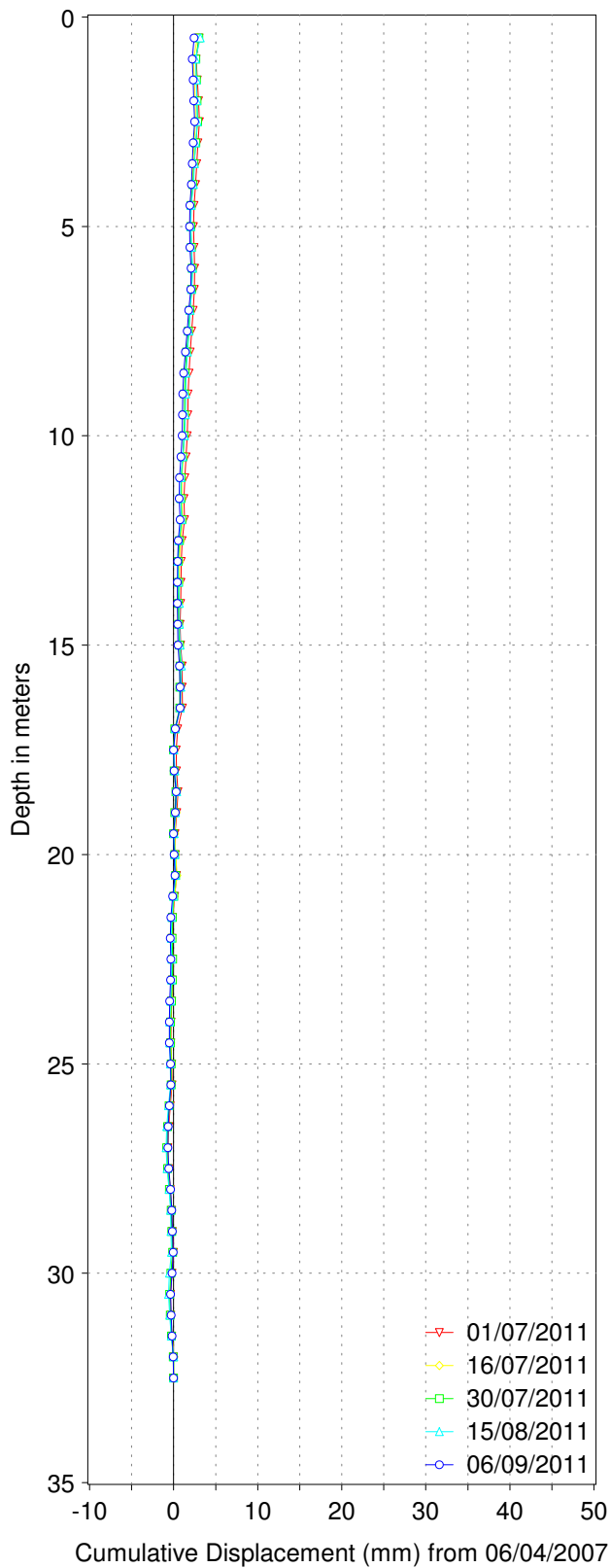
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Mt. Polley

Cumulative & Time Displacement

SI06-02

AB-Axis



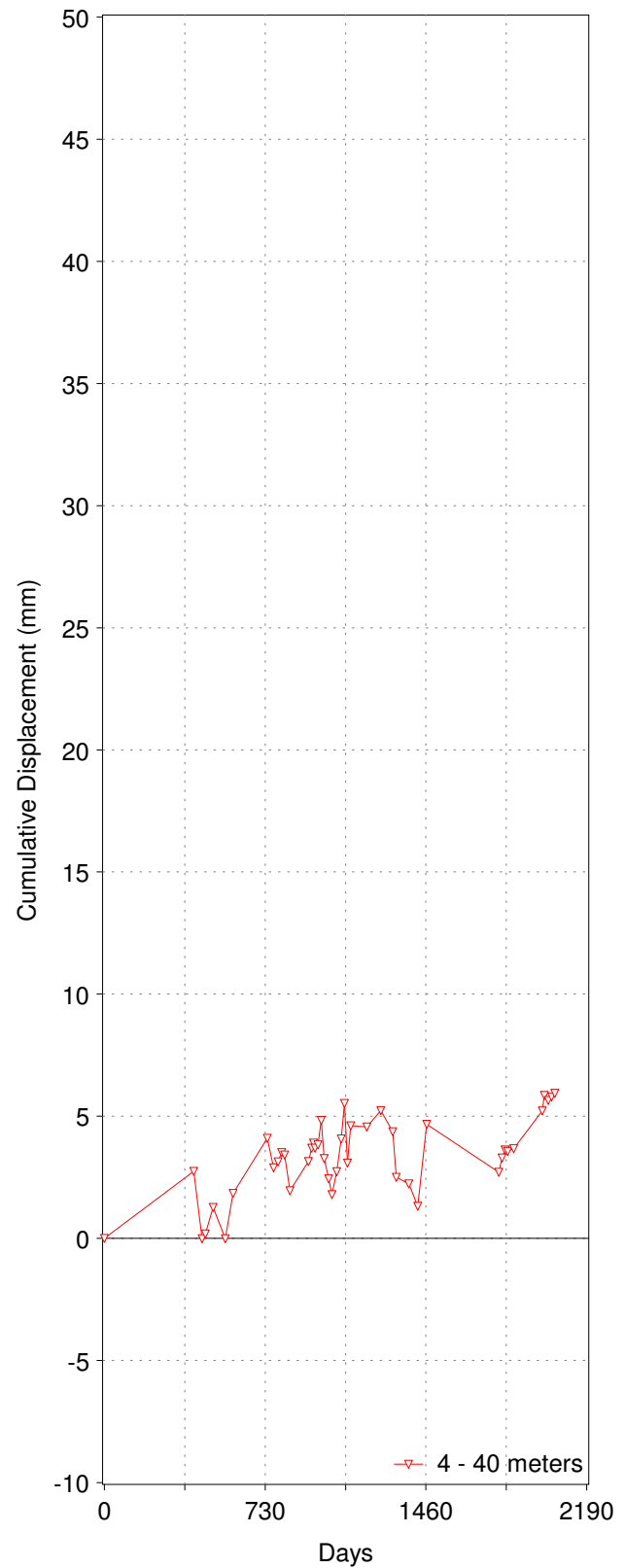
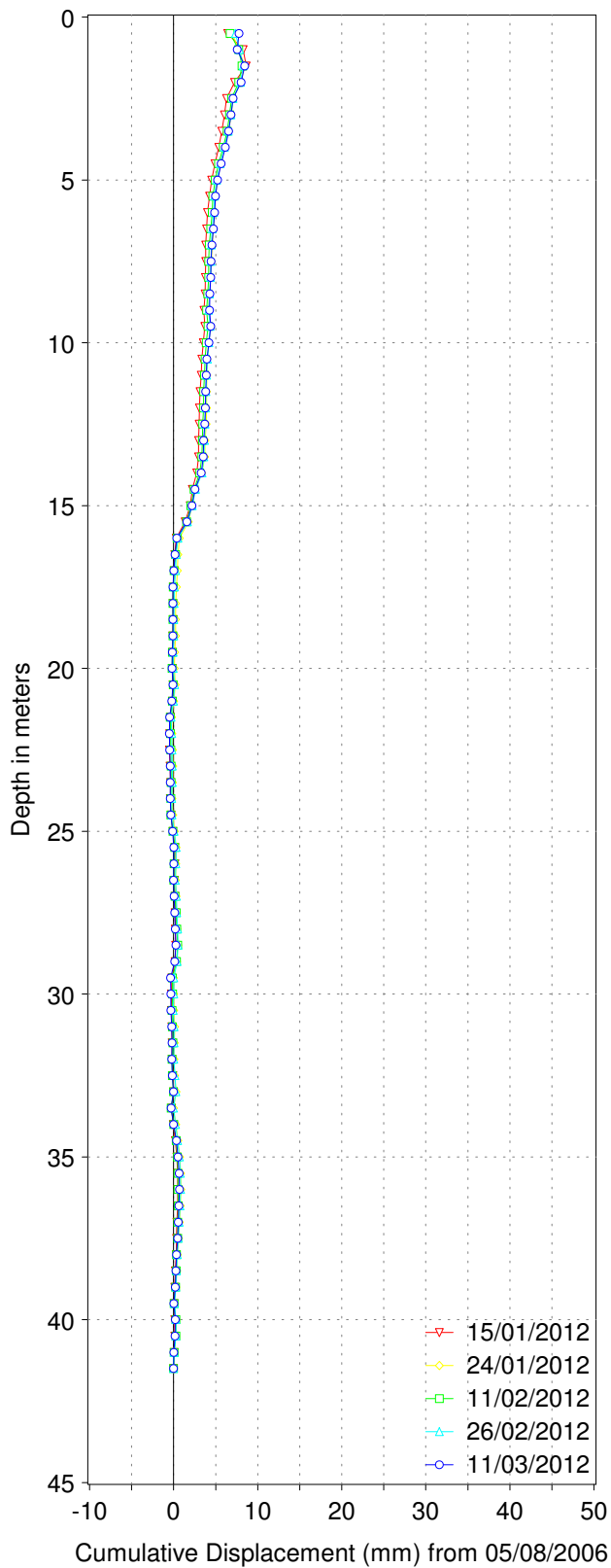
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Mt. Polley

Cumulative & Time Displacement

SI06-03

A-Axis



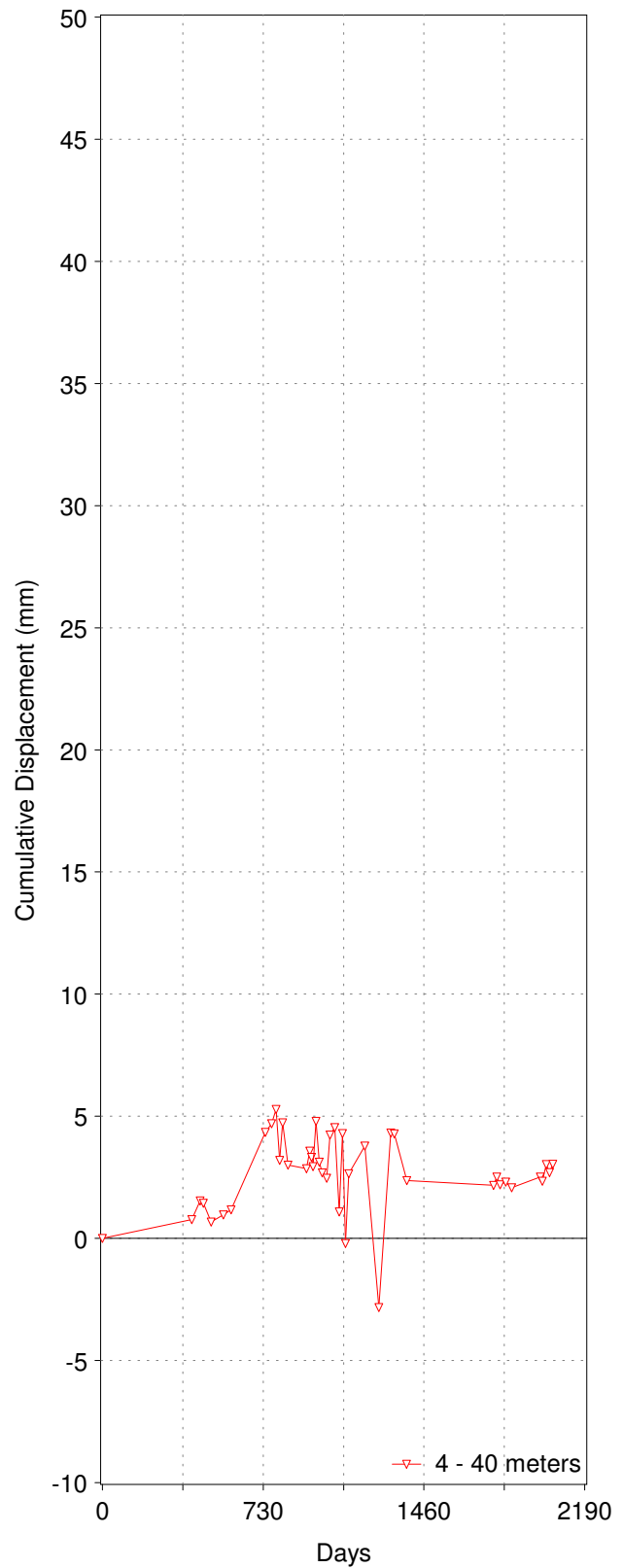
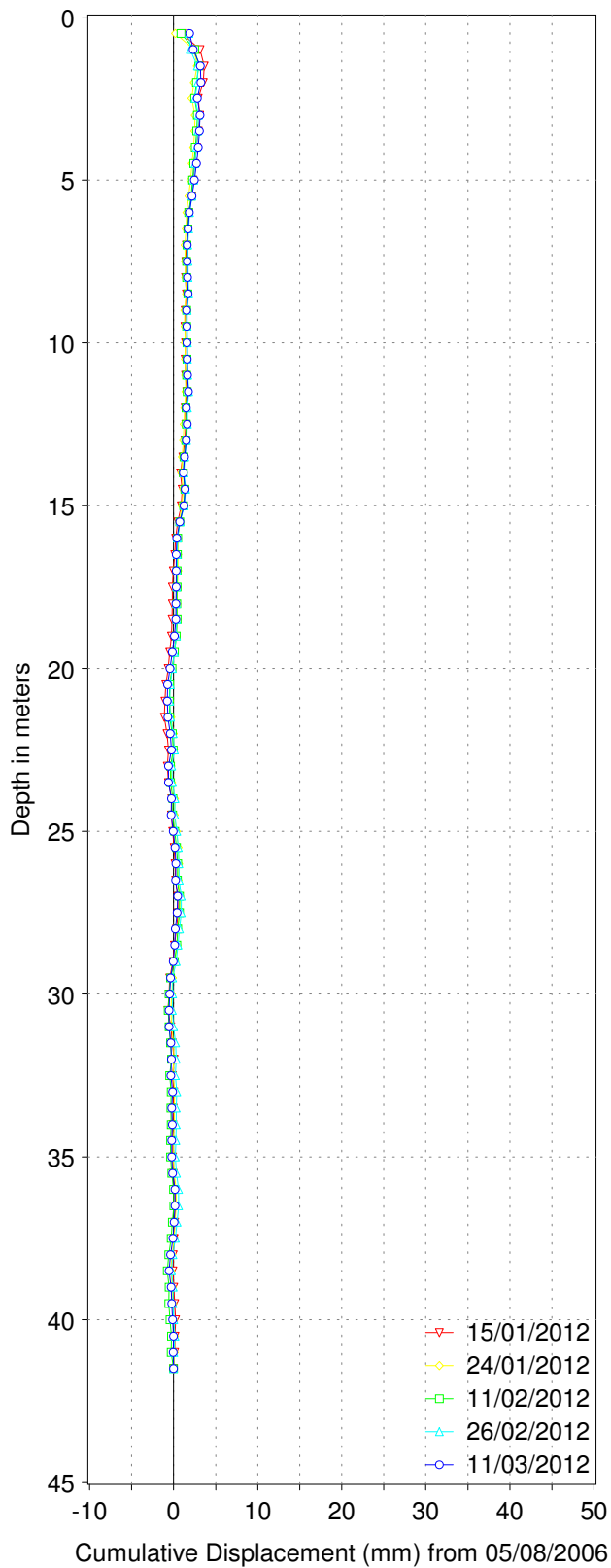
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Mt. Polley

Cumulative & Time Displacement

SI06-03

B-Axis



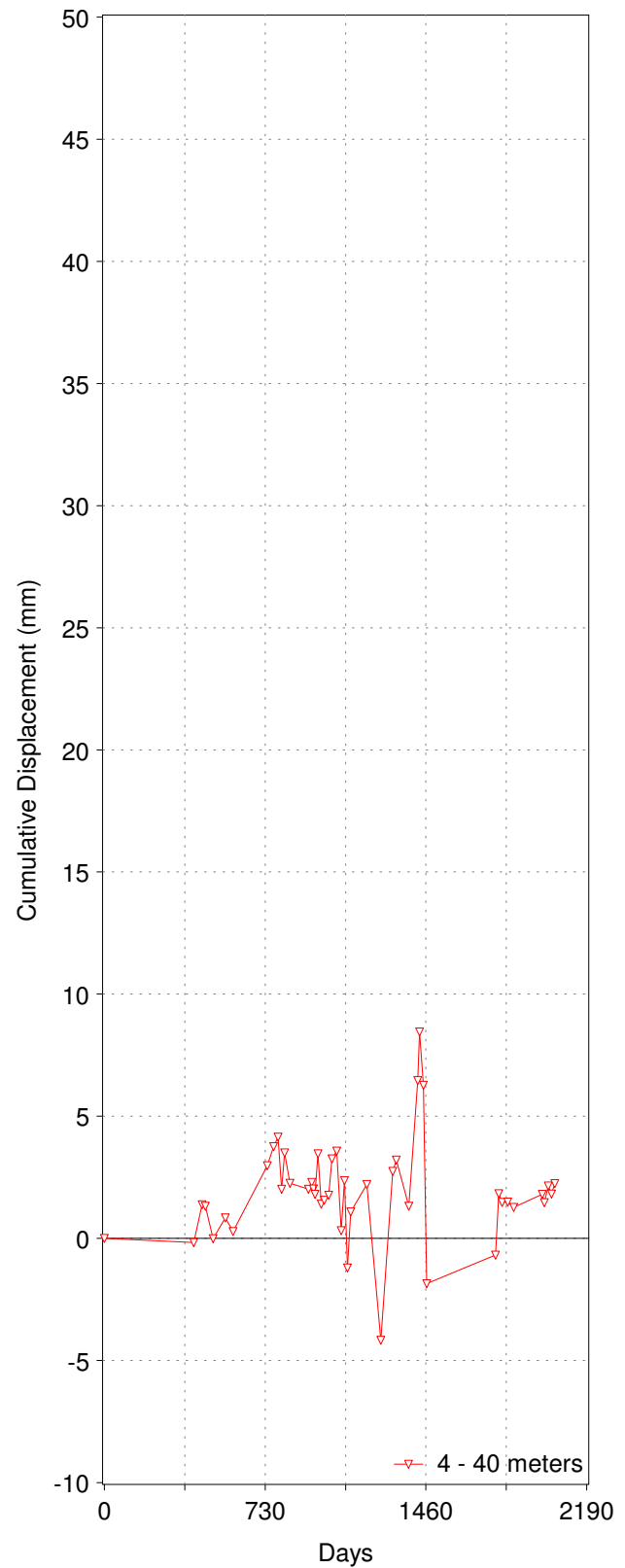
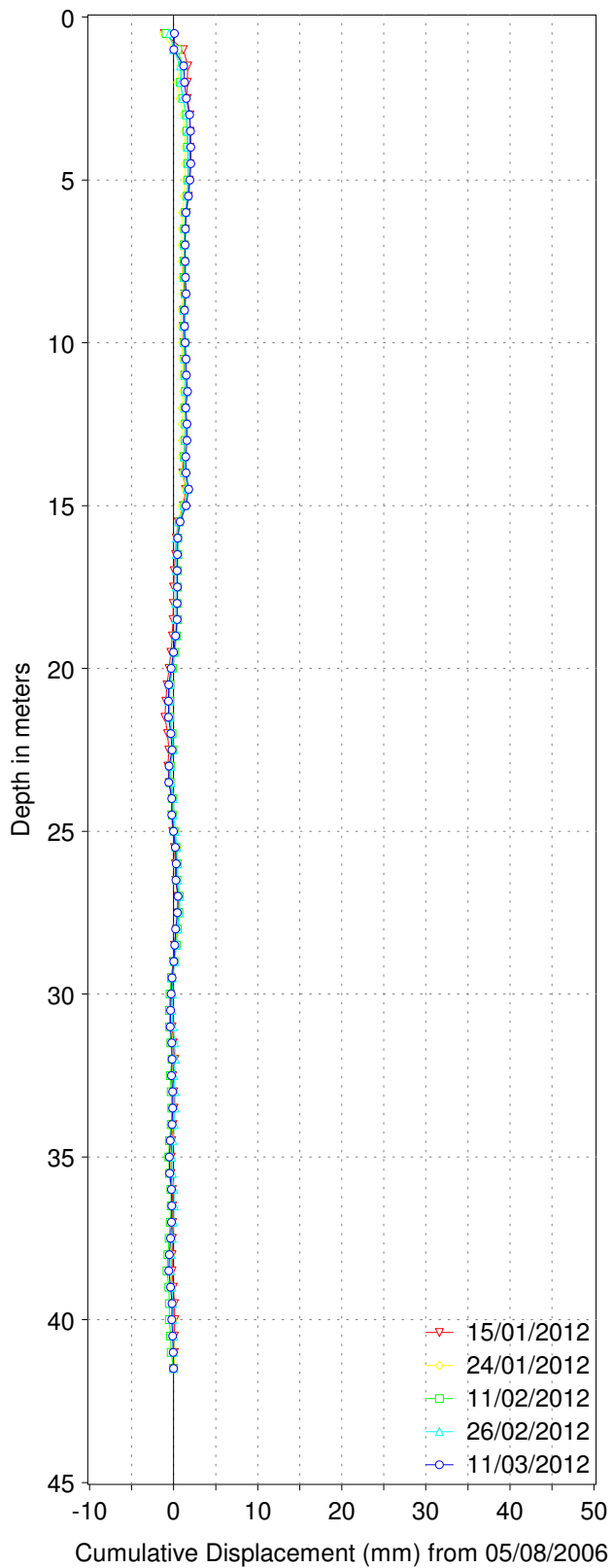
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Mt. Polley

Cumulative & Time Displacement

SI06-03

AB-Axis



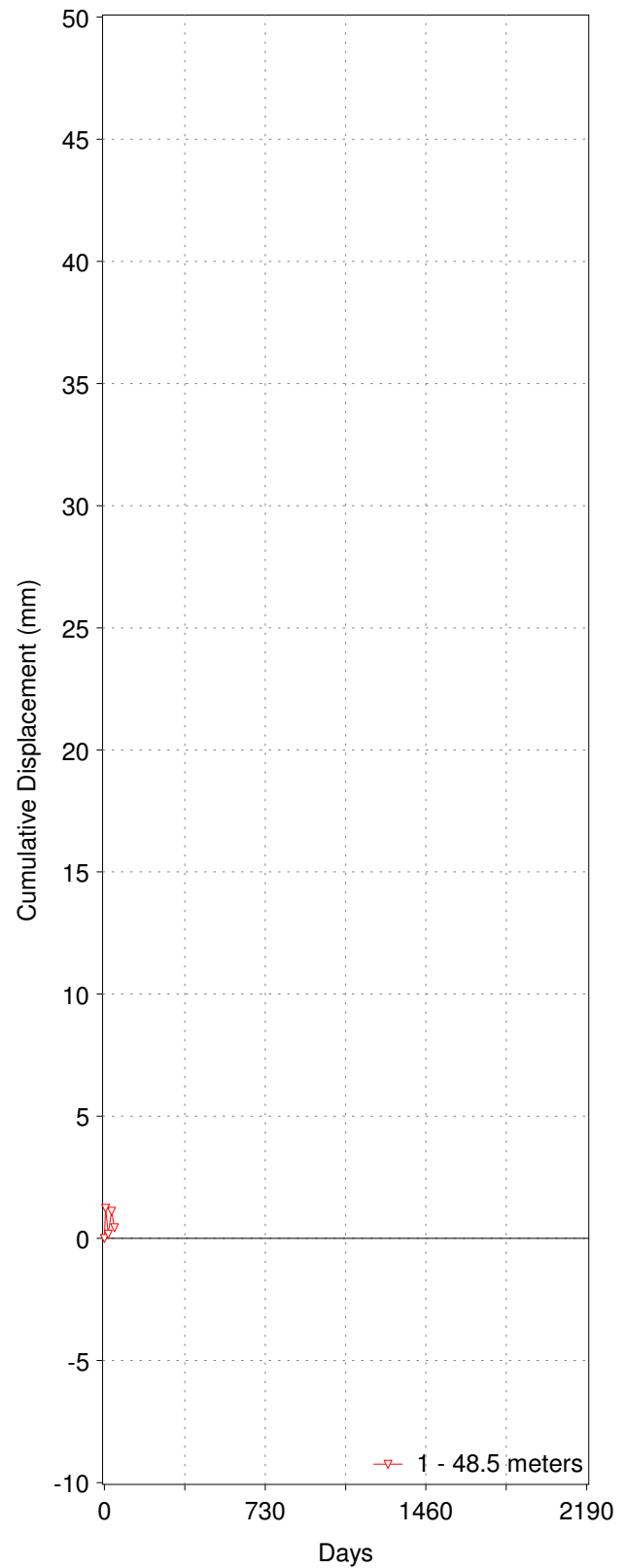
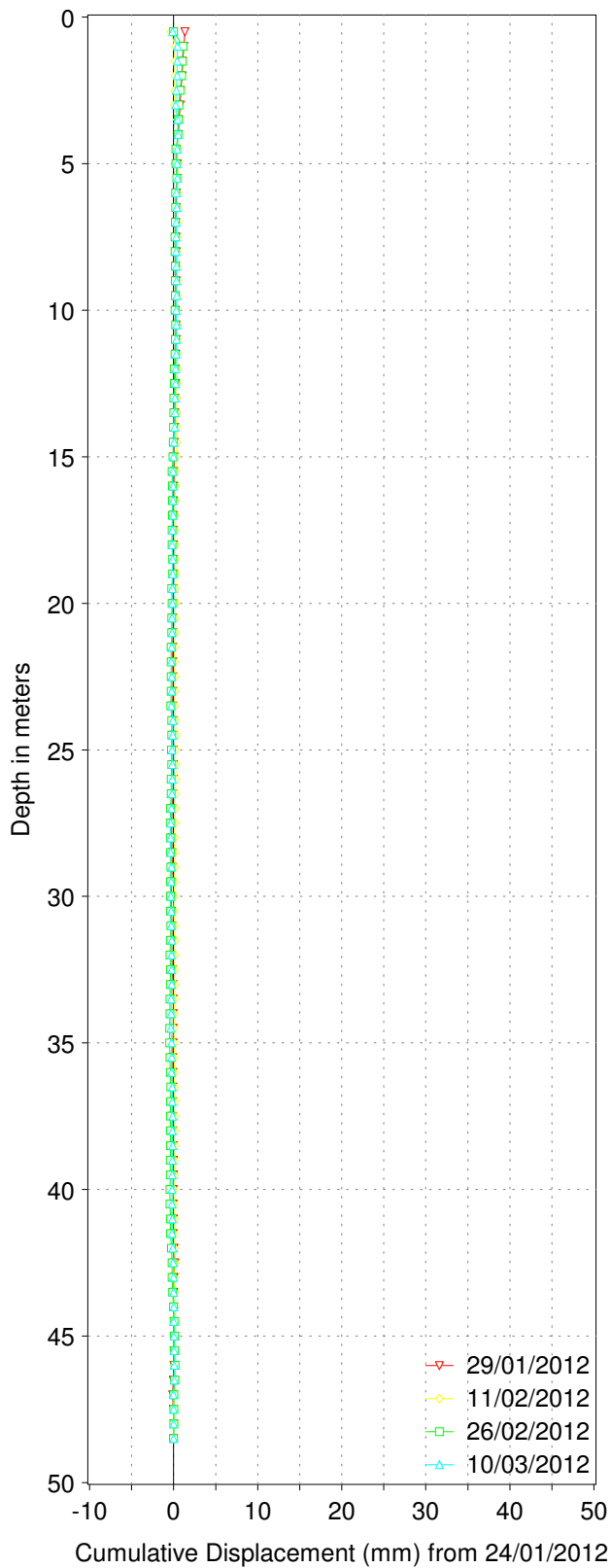
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Mt. Polley

Cumulative & Time Displacement

SI11-01

A-Axis



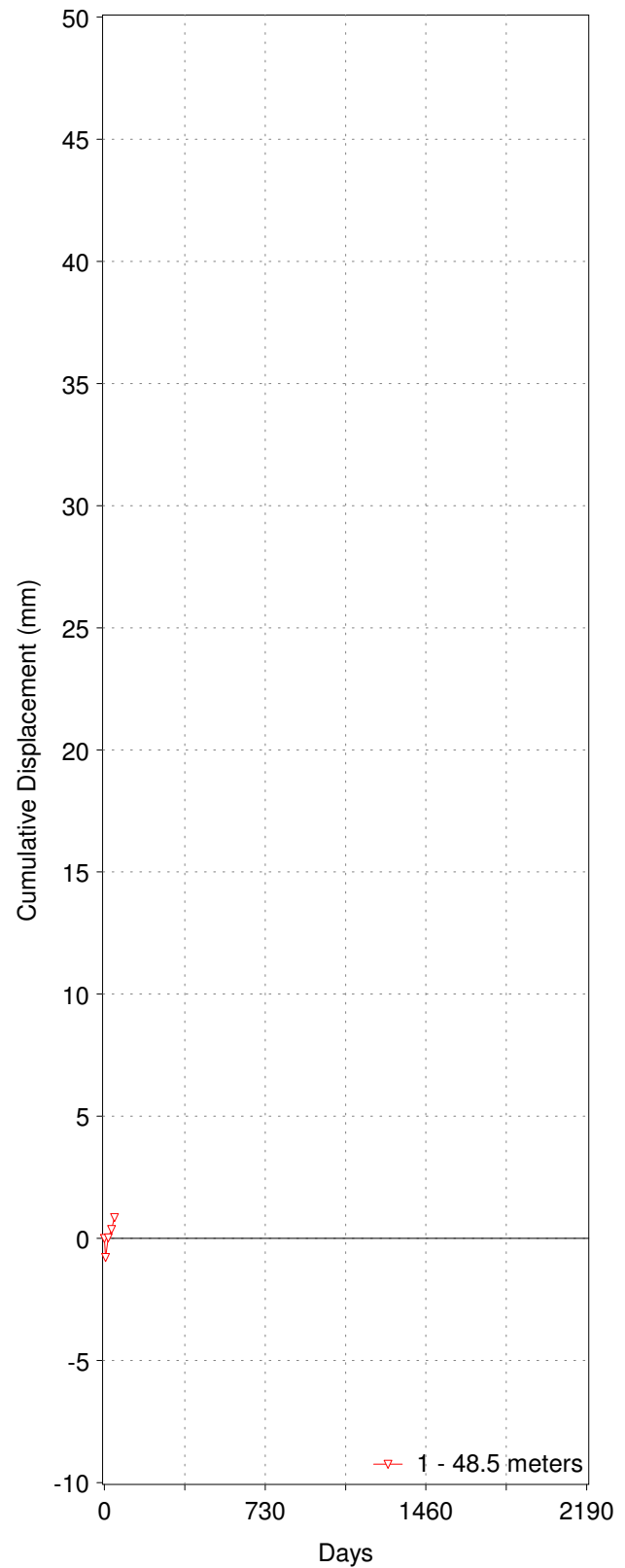
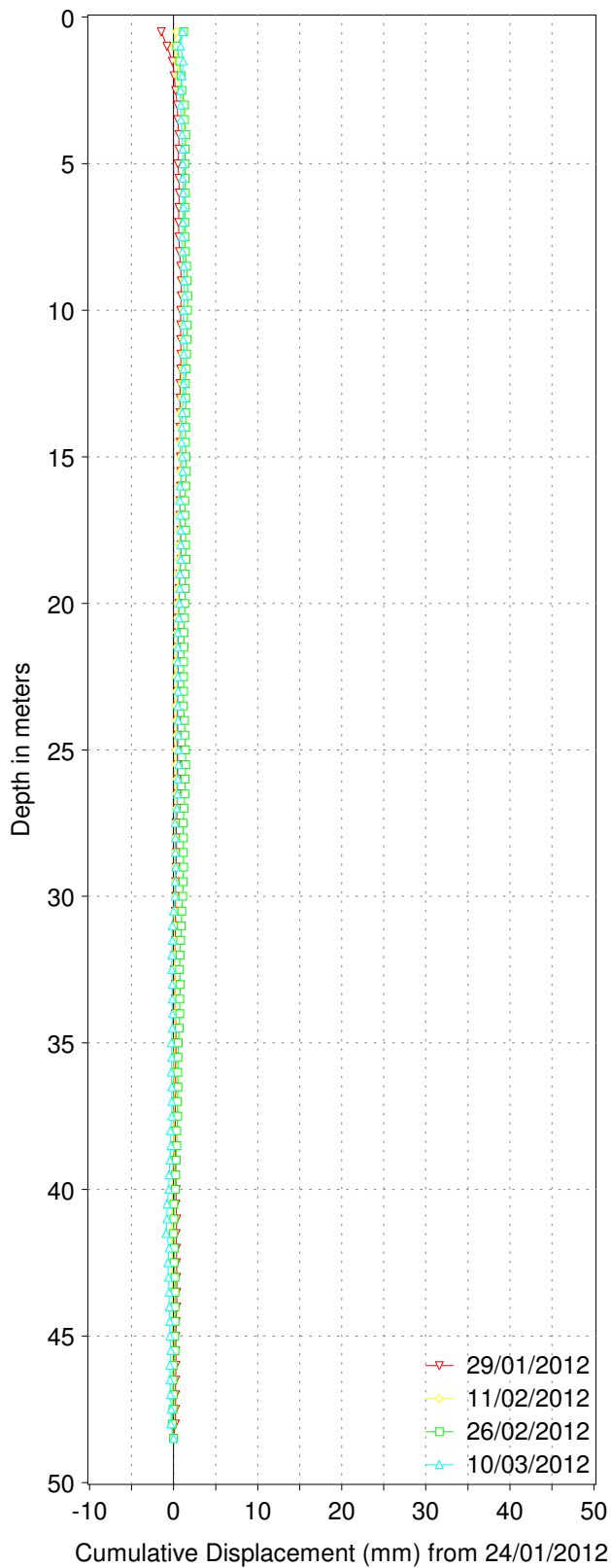
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Mt. Polley

Cumulative & Time Displacement

SI11-01

B-Axis



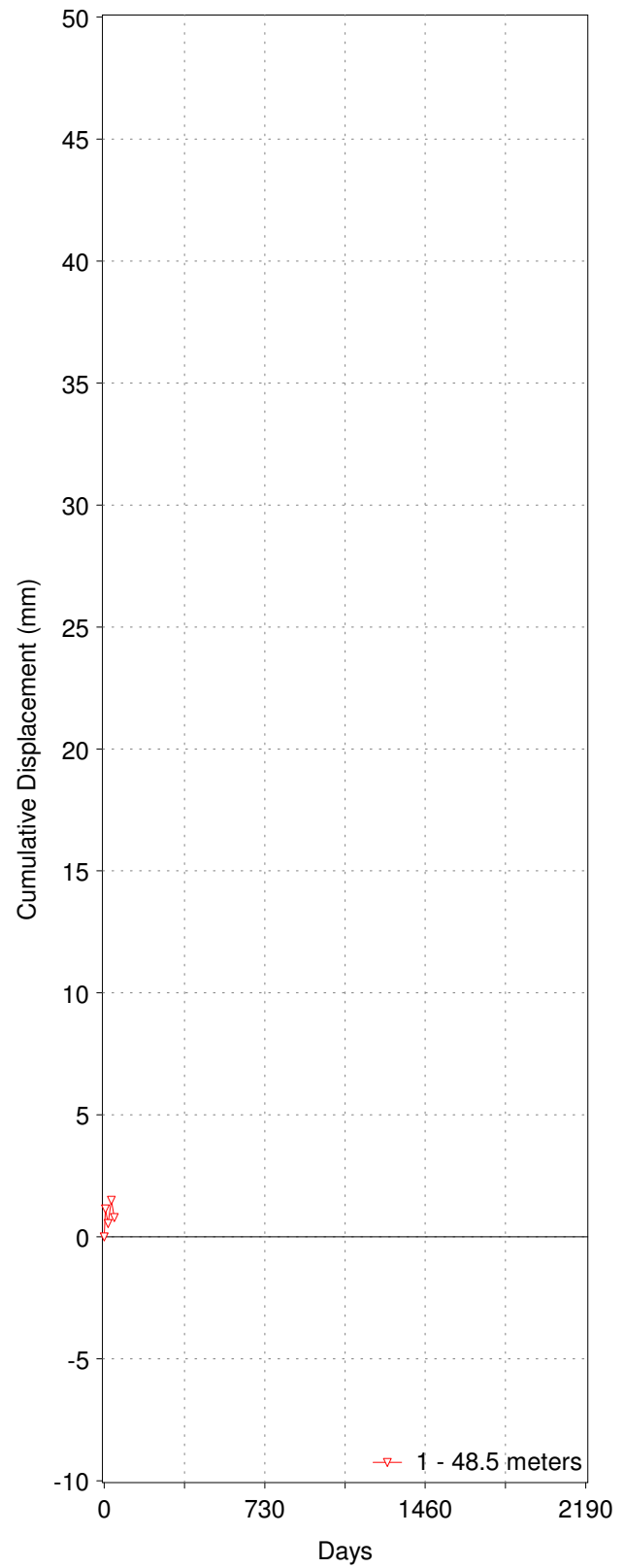
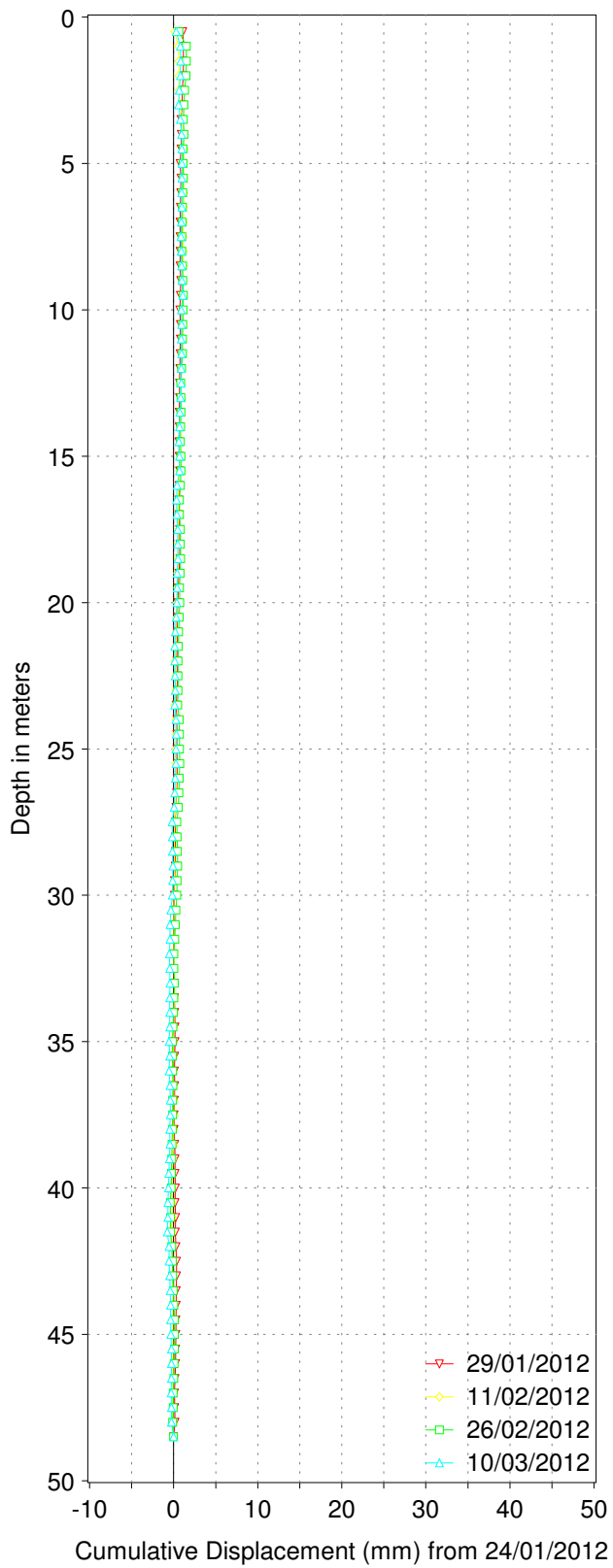
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Mt. Polley

Cumulative & Time Displacement

SI11-01

AB-Axis



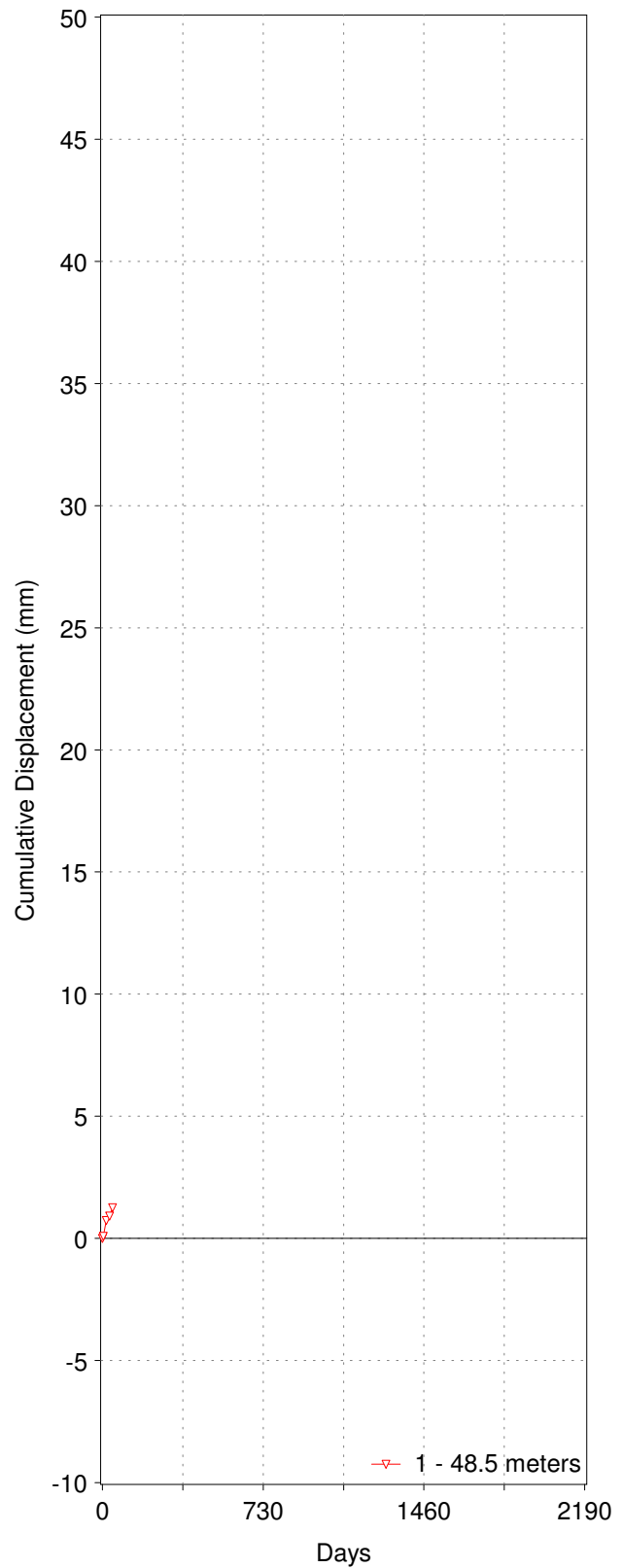
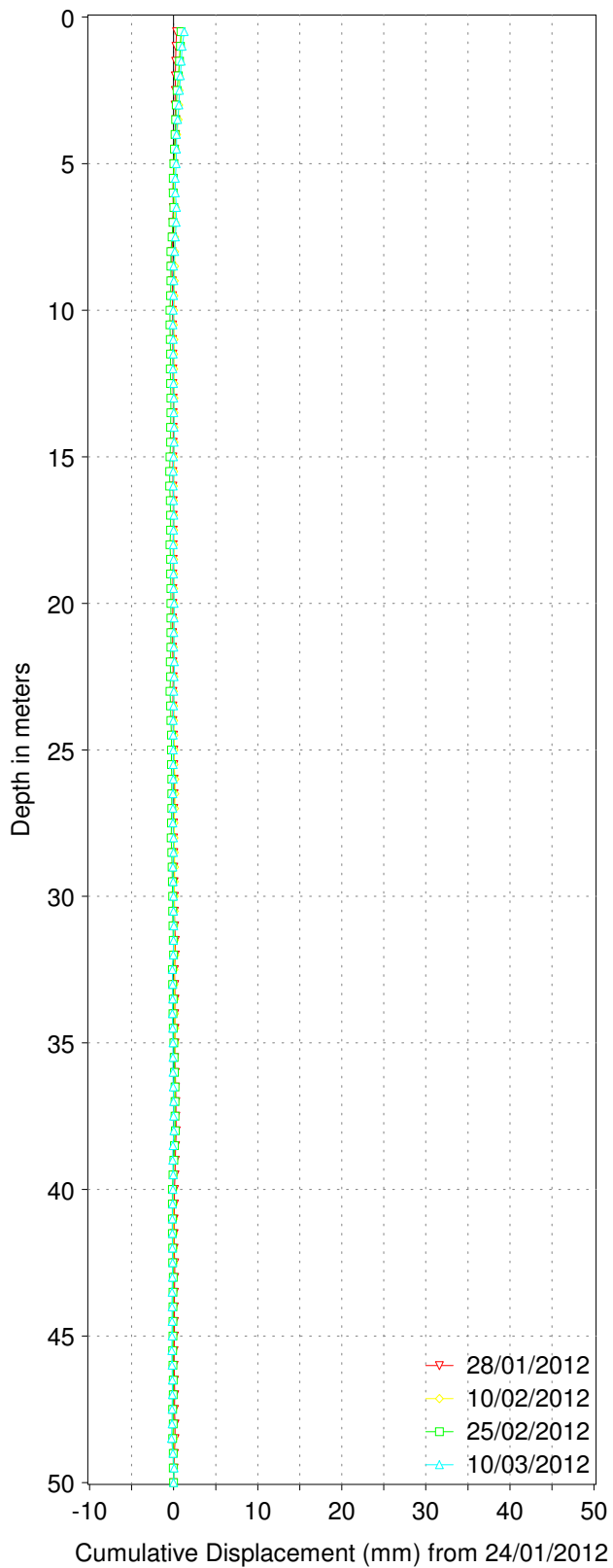
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Mt. Polley

Cumulative & Time Displacement

SI11-02

A-Axis



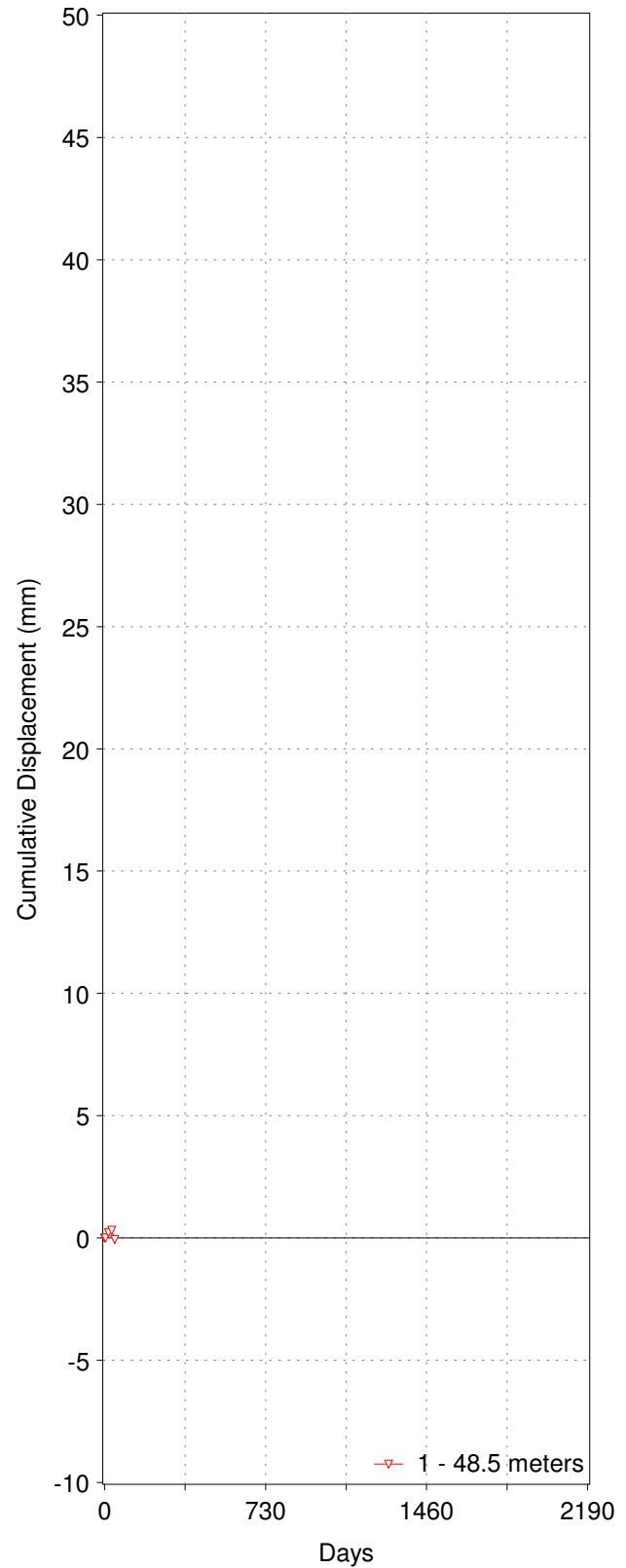
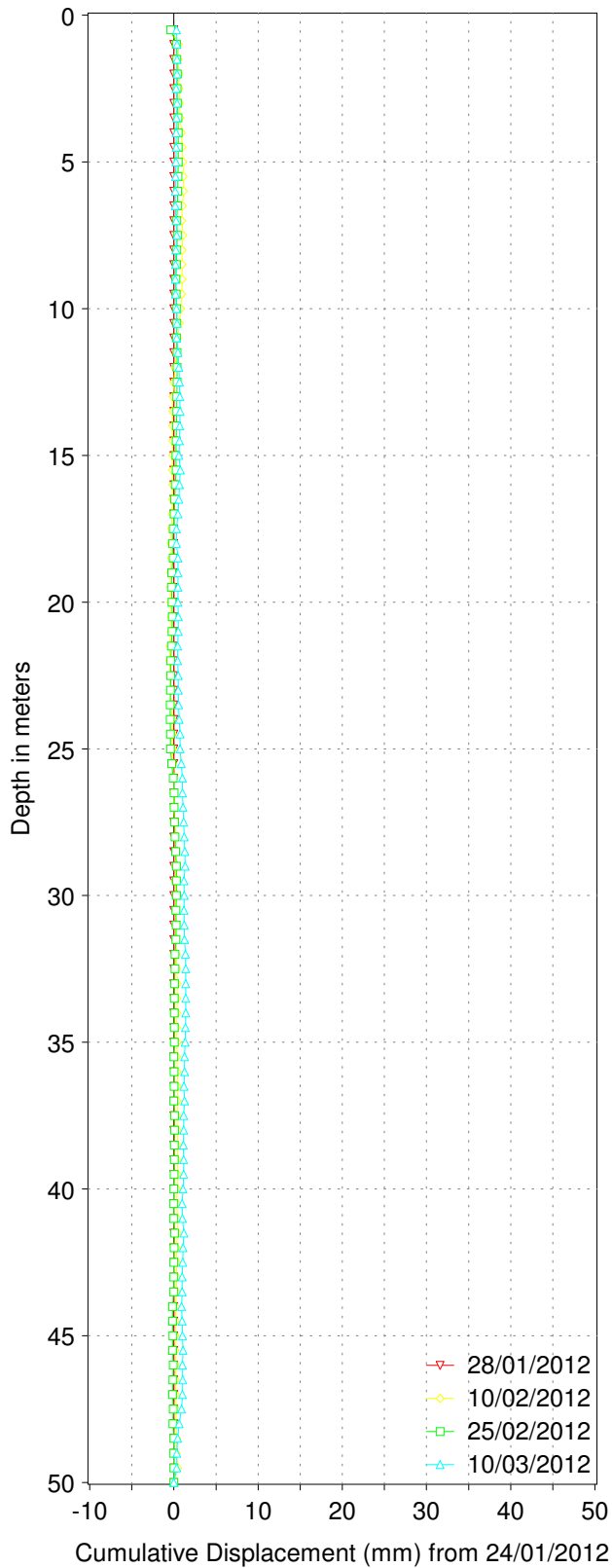
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Mt. Polley

Cumulative & Time Displacement

SI11-02

B-Axis



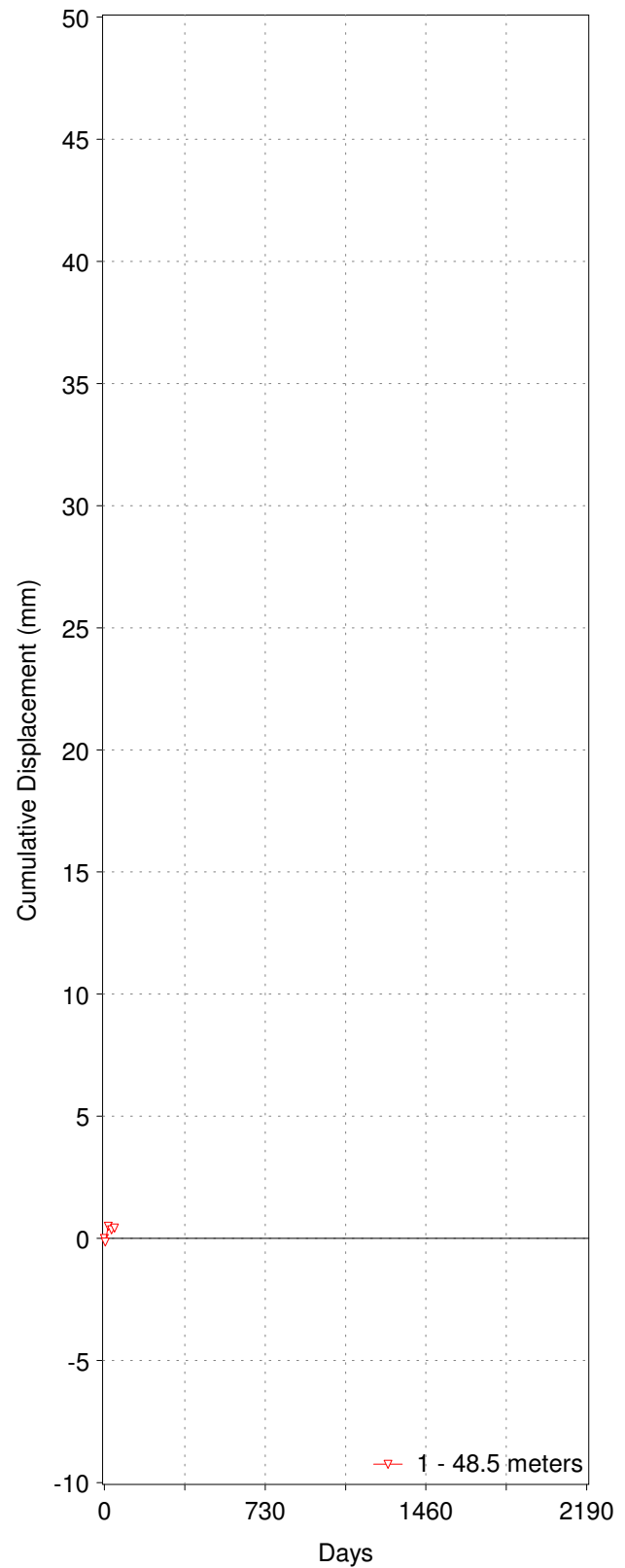
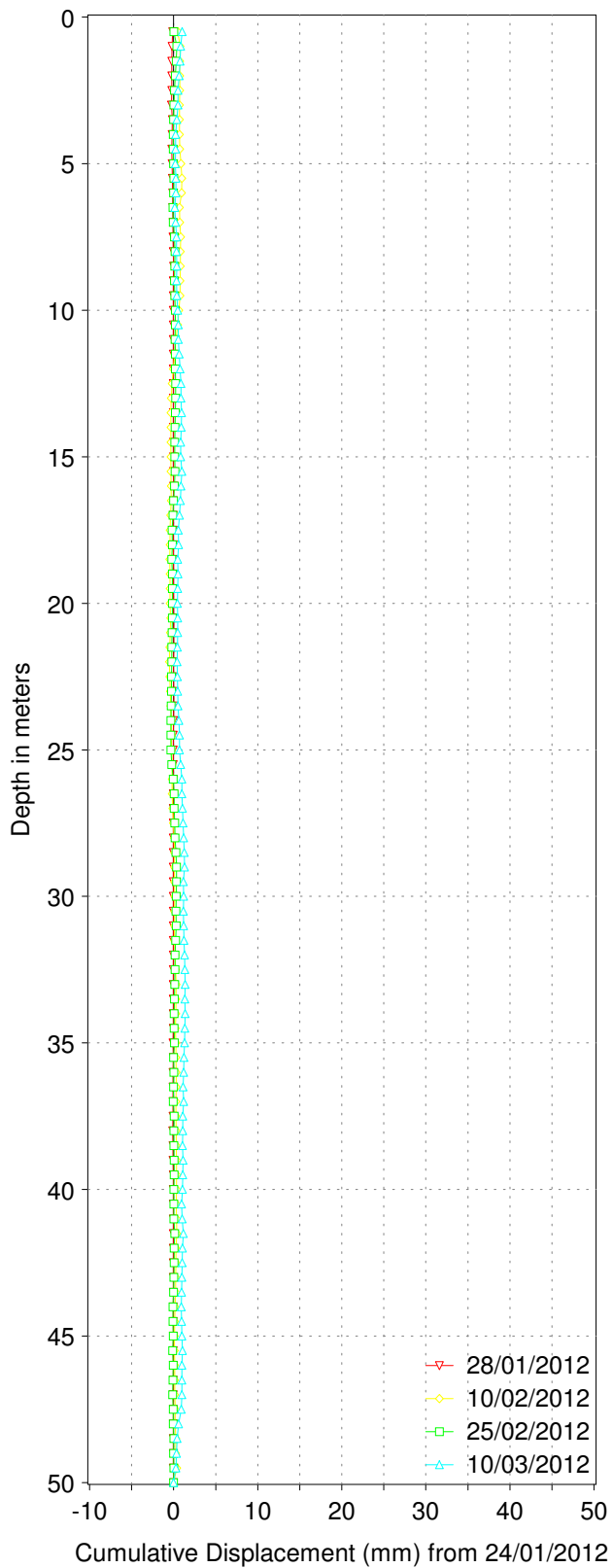
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Mt. Polley

Cumulative & Time Displacement

SI11-02

AB-Axis



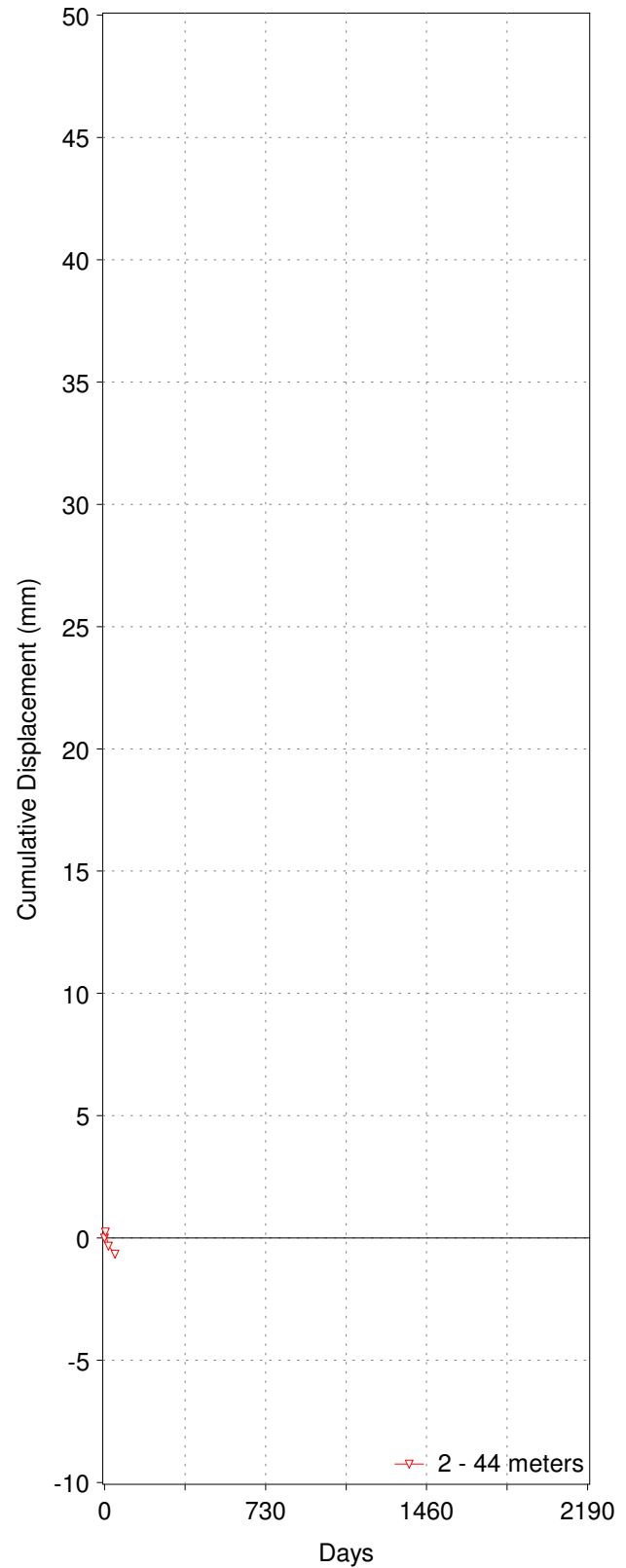
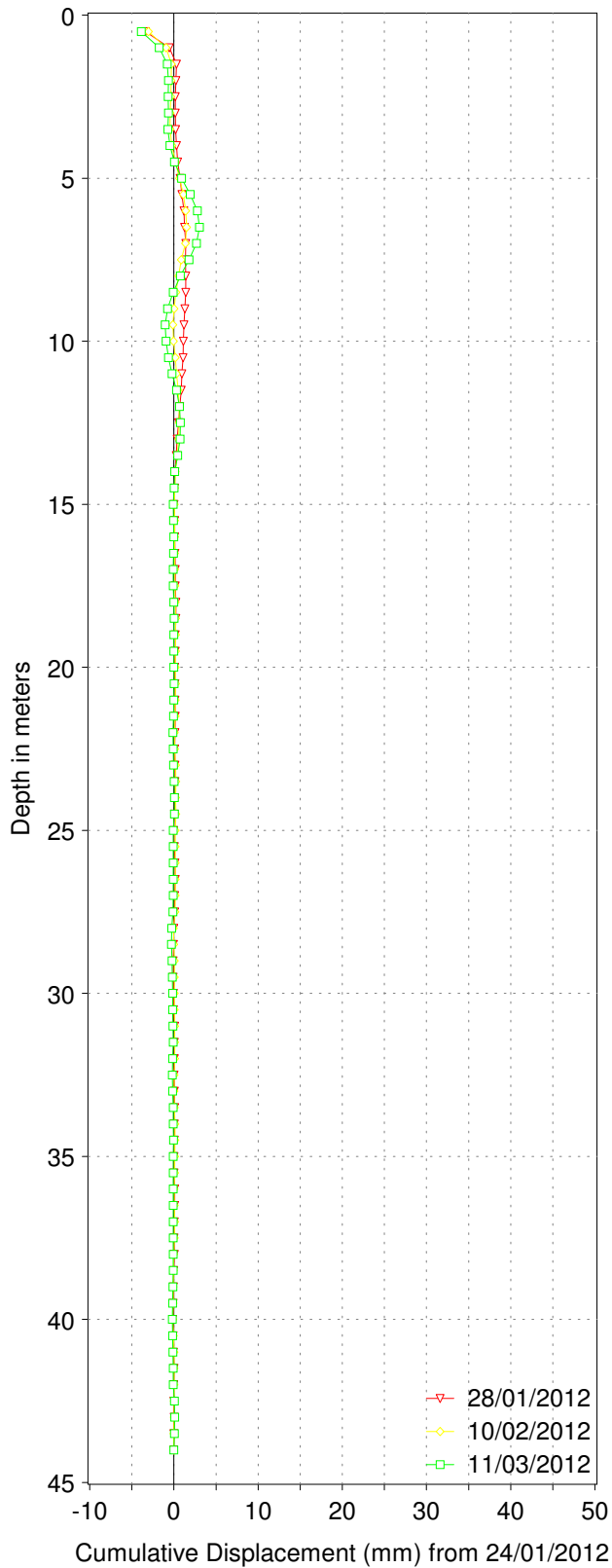
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Mt. Polley

Cumulative & Time Displacement

SI11-04

A-Axis



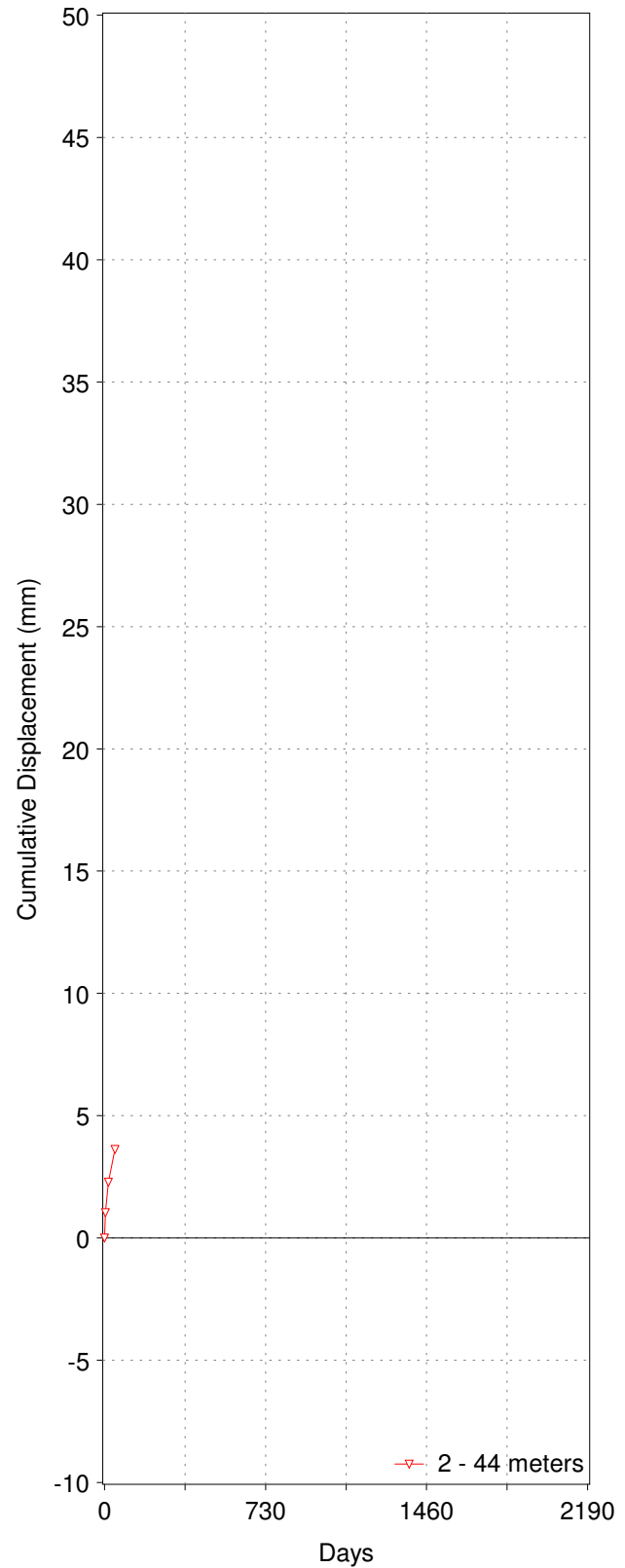
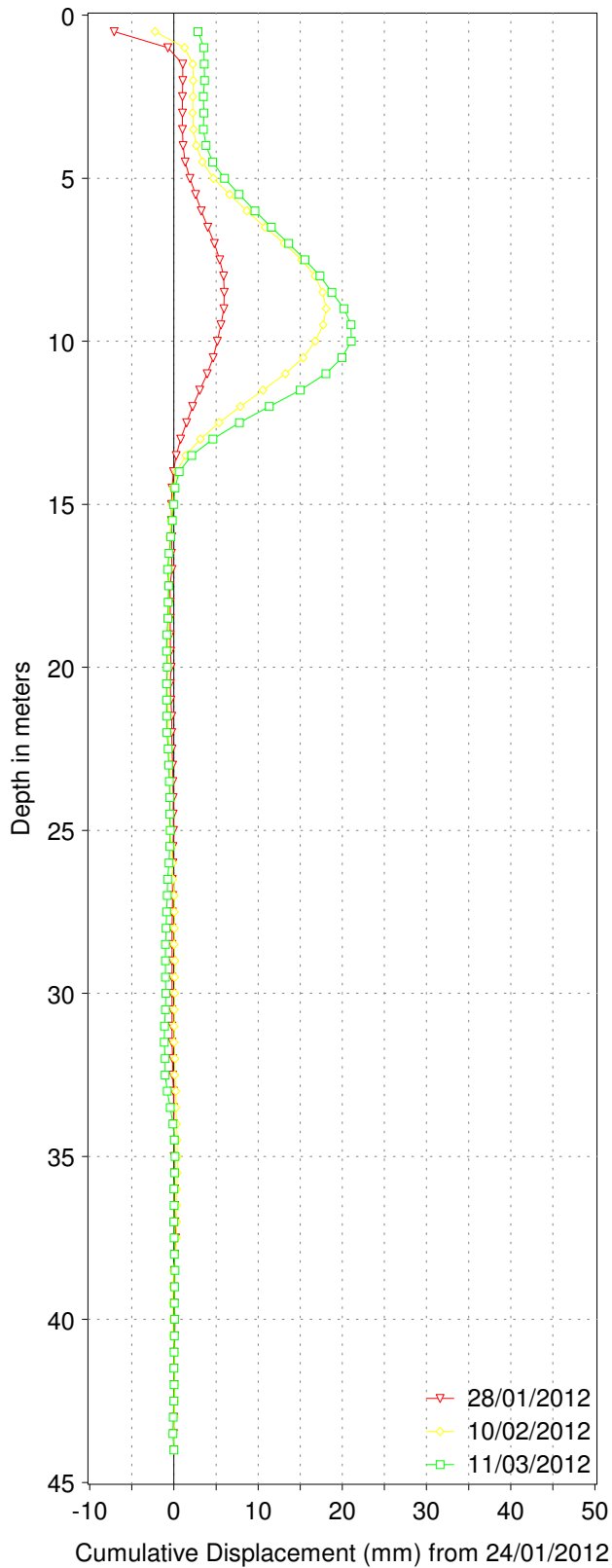
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Mt. Polley

Cumulative & Time Displacement

SI11-04

B-Axis



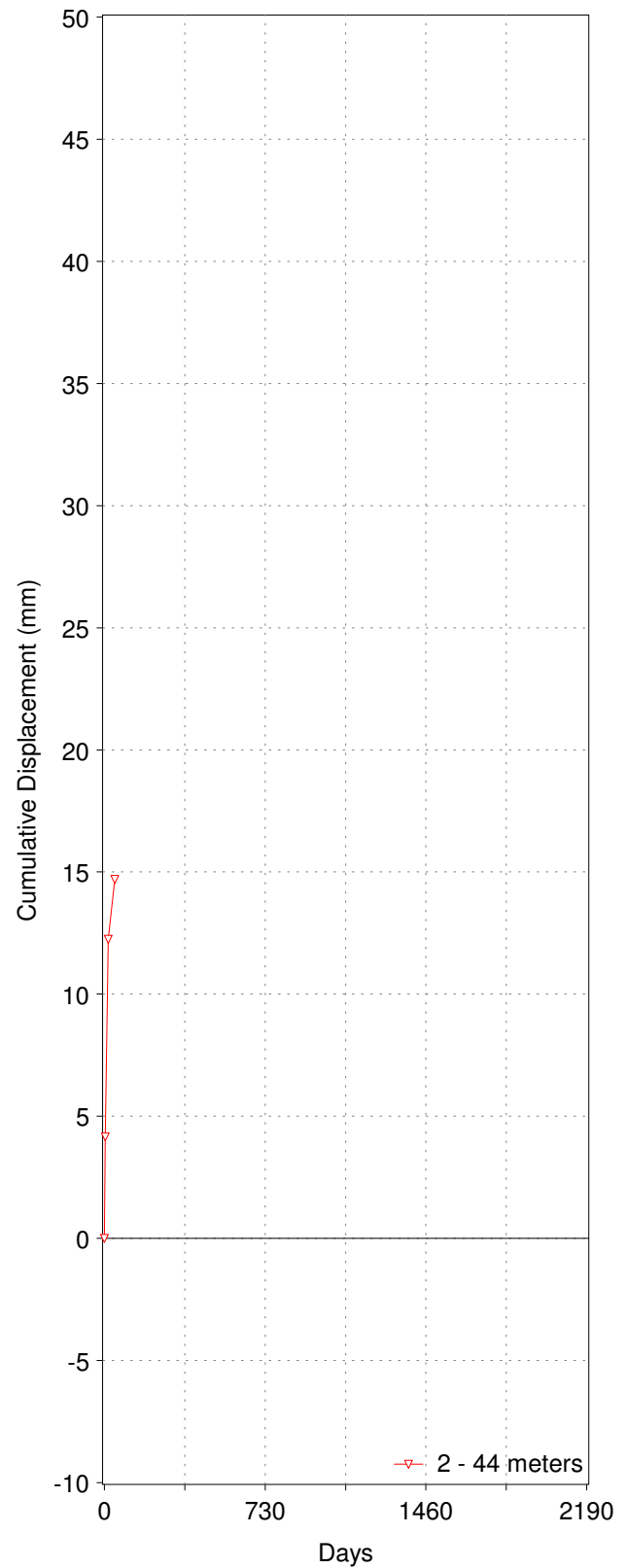
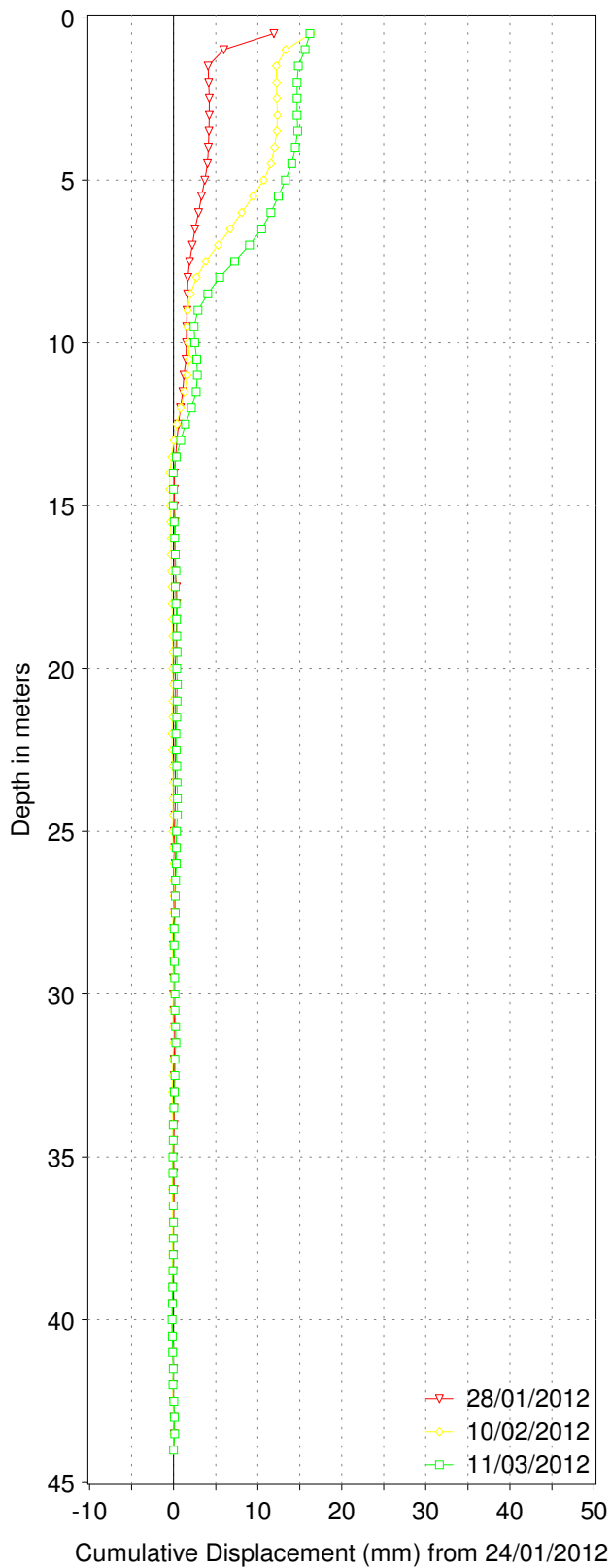
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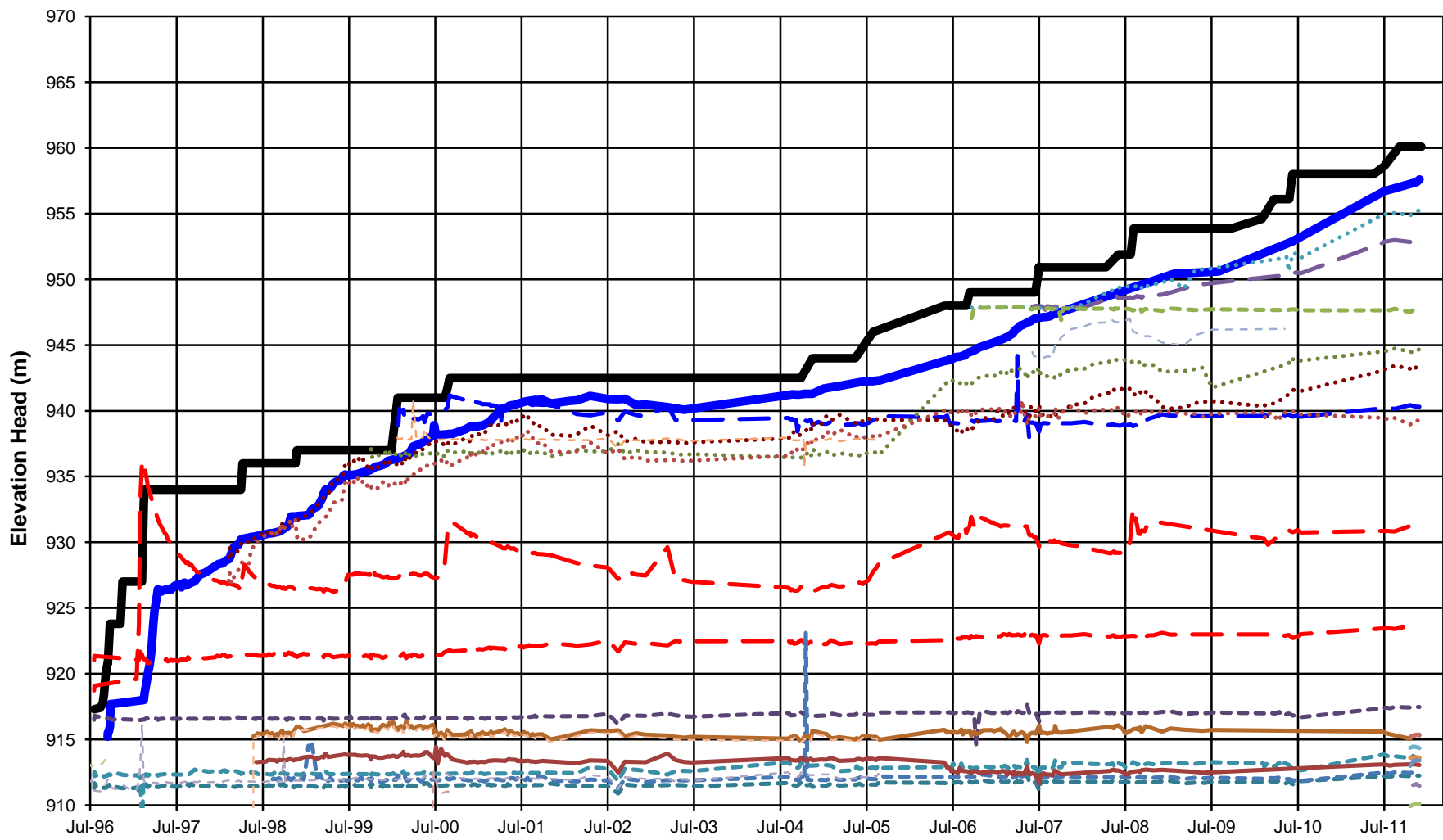
Cumulative & Time Displacement

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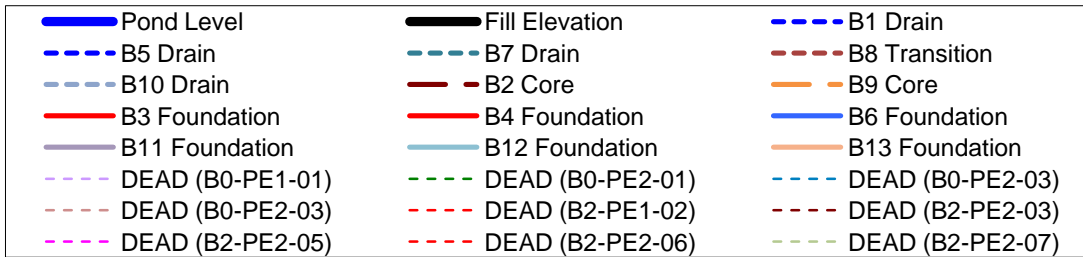
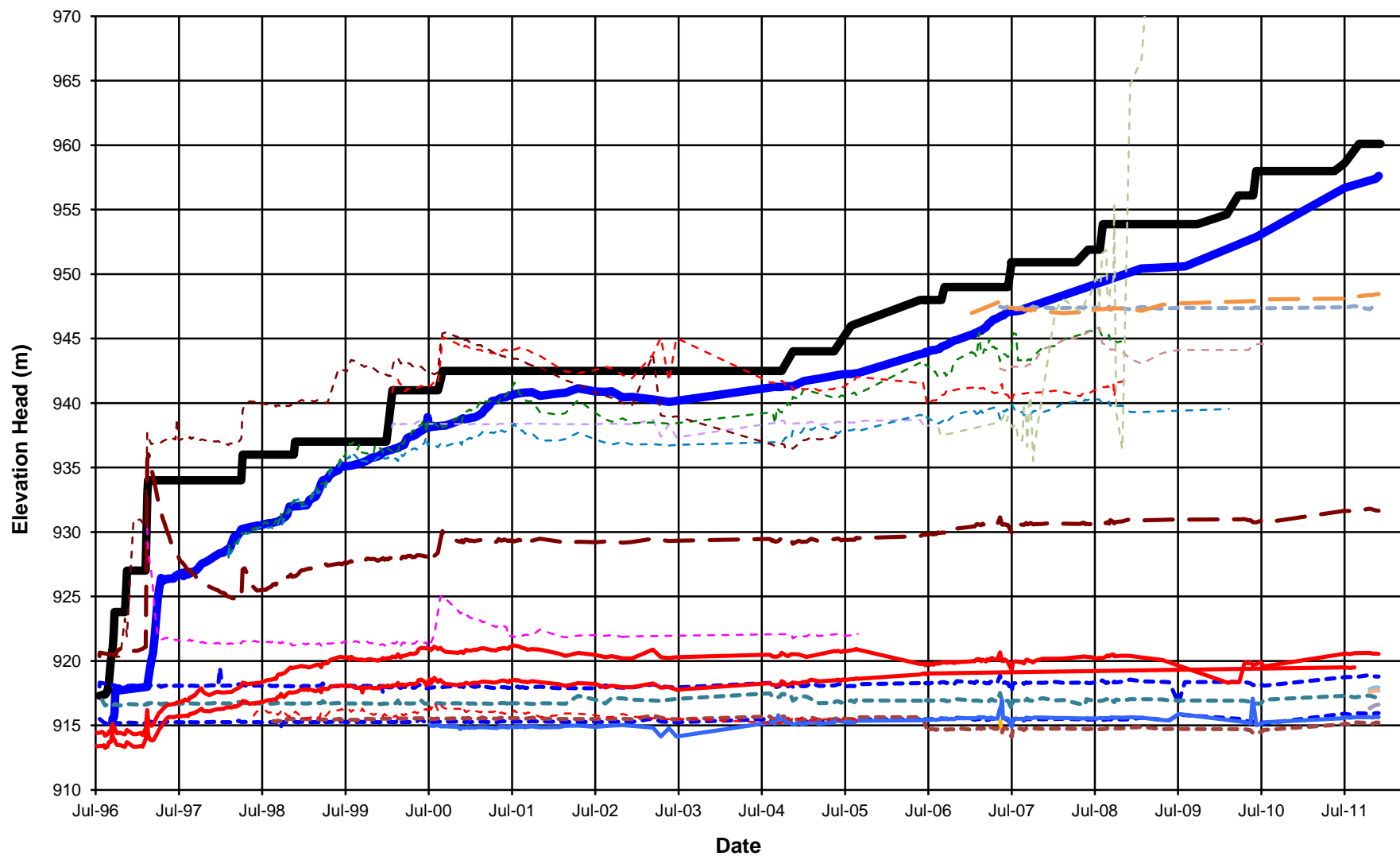


Vibrating Wire Piezometer Plots



— Pond Level	— Fill Elevation	— A01 Till Core
--- A02 Till Core	--- A04 Till Core	--- A14 Till Core
... A03 Tailings	... A05 Upstream Fill	... A12 Tailings
... A15 Upstream Fill	--- A06 Chimney Drain	--- A07 Foundation Drain
--- A10 Foundation Drain	--- A11 Drain	--- A13 Filter
— A08 Foundation	— A09 Foundation	— A16 Foundation
— A17 Foundation	— A18 Foundation	— A19 Foundation
— A20 Foundation	— A21 Foundation	--- DEAD (A0-PE1-01)
--- DEAD (A0-PE2-03)	--- DEAD (A2-PE1-03)	--- DEAD (A2-PE2-01)
--- DEAD (A2-PE2-02)	--- DEAD (A2-PE2-04)	--- DEAD (A2-PE2-06)

MOUNT POLLEY MINING CORPORATION		
MOUNT POLLEY MINE		
TAILINGS STORAGE FACILITY PLANE A PIEZOMETERS ELEVATION vs. TIME		
	PROJECT NO. VM00560	Date. 12/24/11
	REV. A	FIGURE A



MOUNT POLLEY MINING CORPORATION

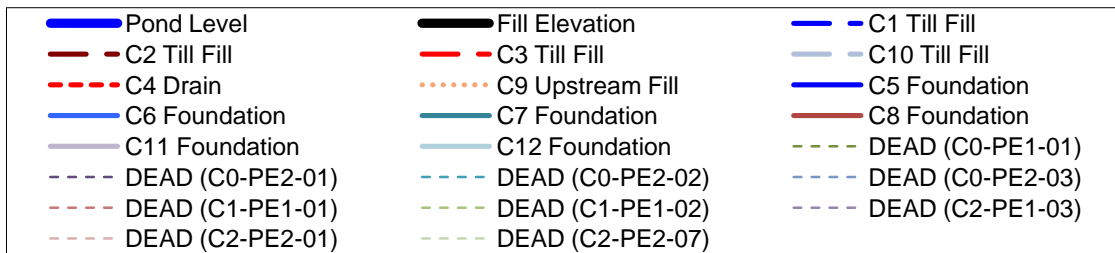
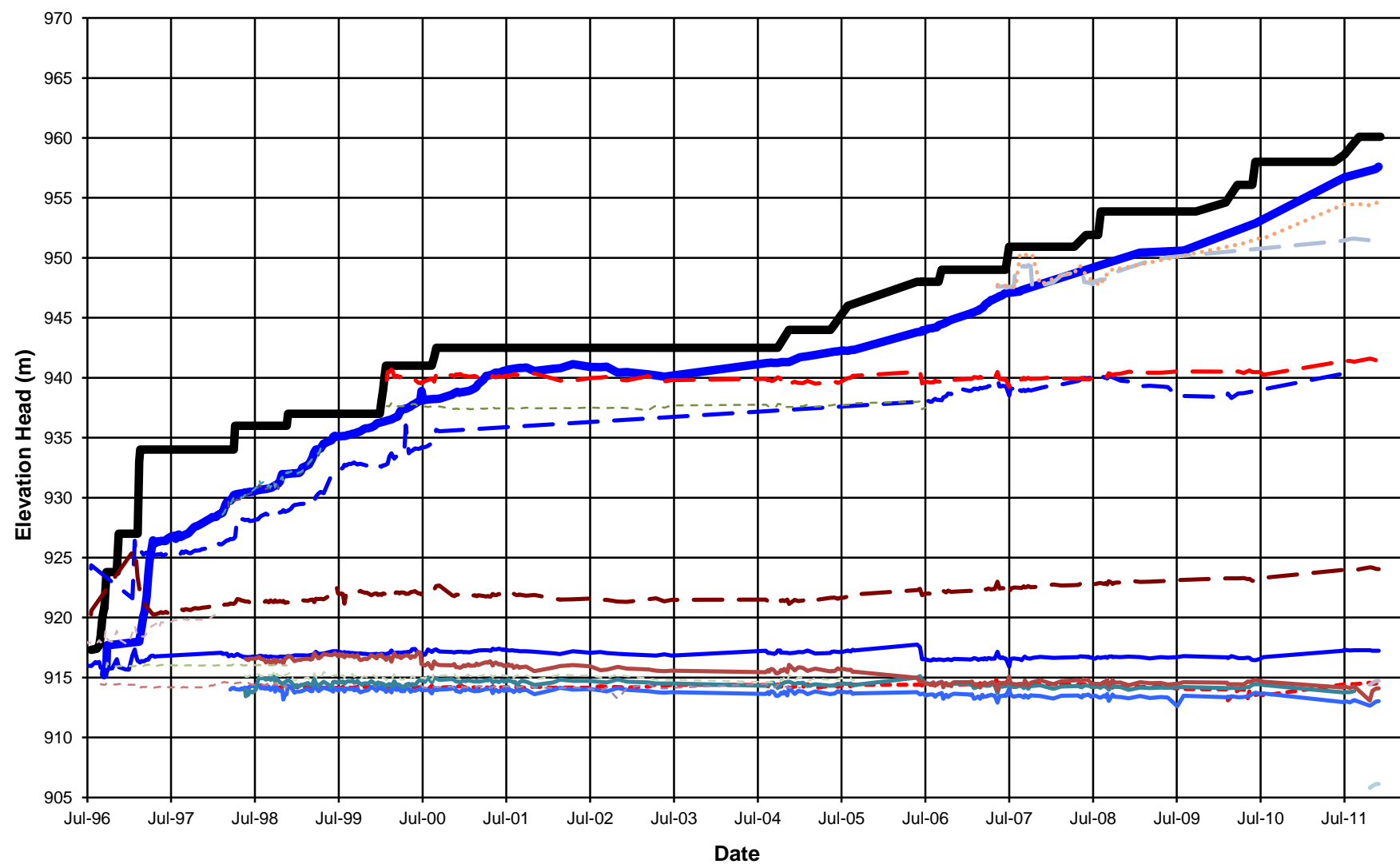
MOUNT POLLEY MINE

**TAILINGS STORAGE FACILITY
PLANE B PIEZOMETERS
ELEVATION vs. TIME**



PROJECT NO.	Date.	REV.
VM00560	12/24/11	A

FIGURE B



MOUNT POLLEY MINING CORPORATION

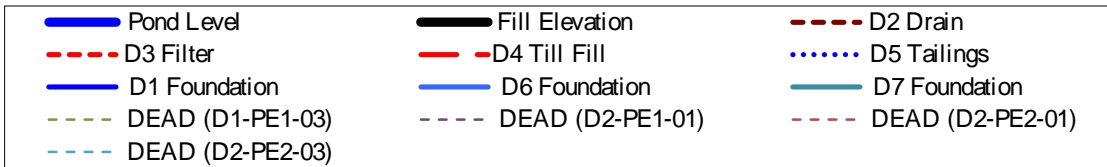
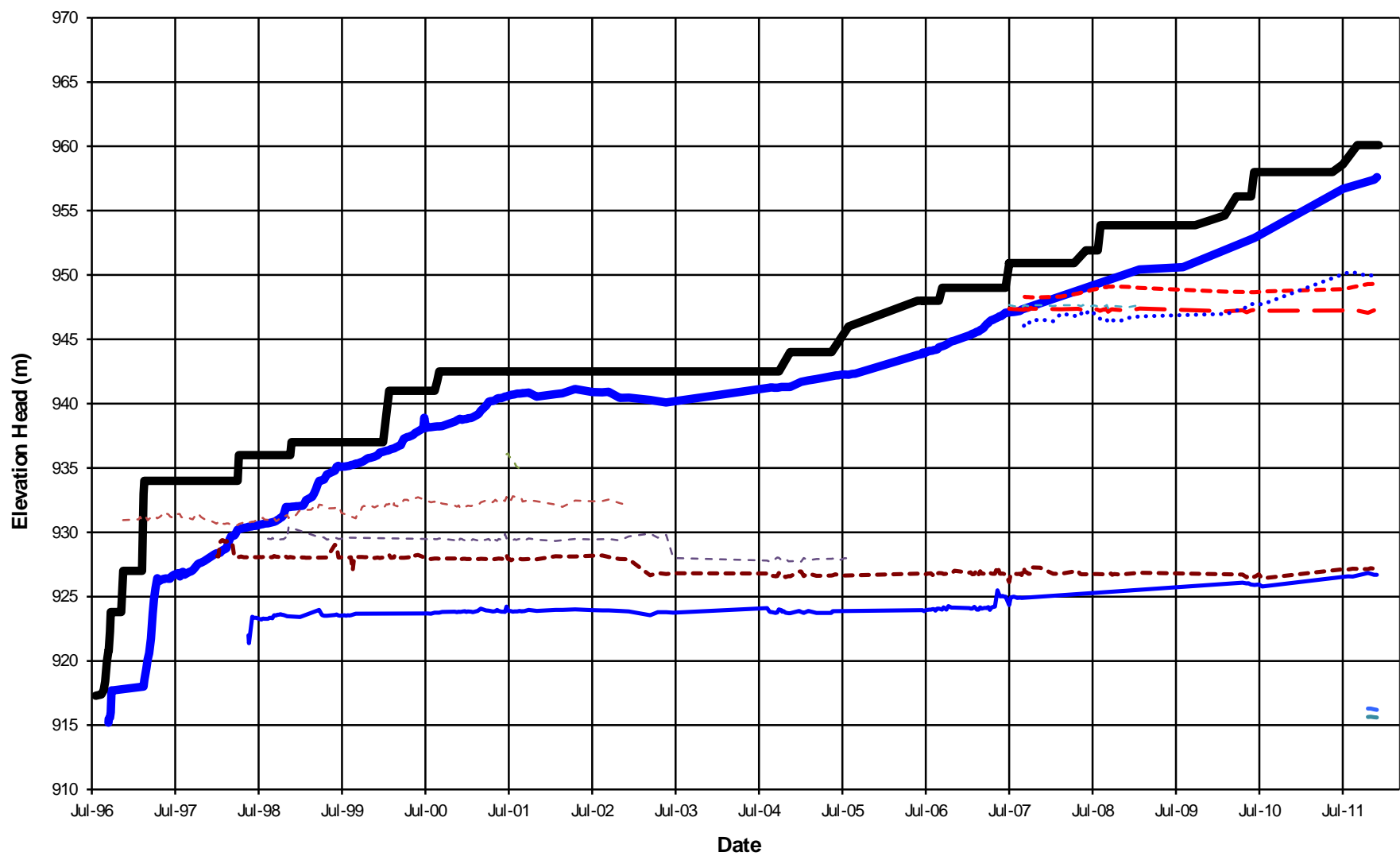
MOUNT POLLEY MINE

**TAILINGS STORAGE FACILITY
PLANE C PIEZOMETERS
ELEVATION vs. TIME**



PROJECT NO.	Date	REV.
VM00560	12/24/11	A

FIGURE C



MOUNT POLLEY MINING CORPORATION

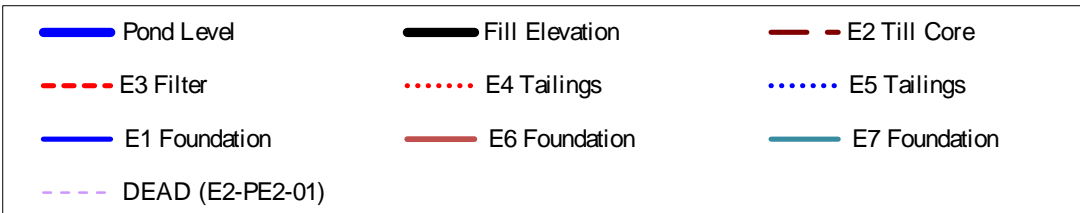
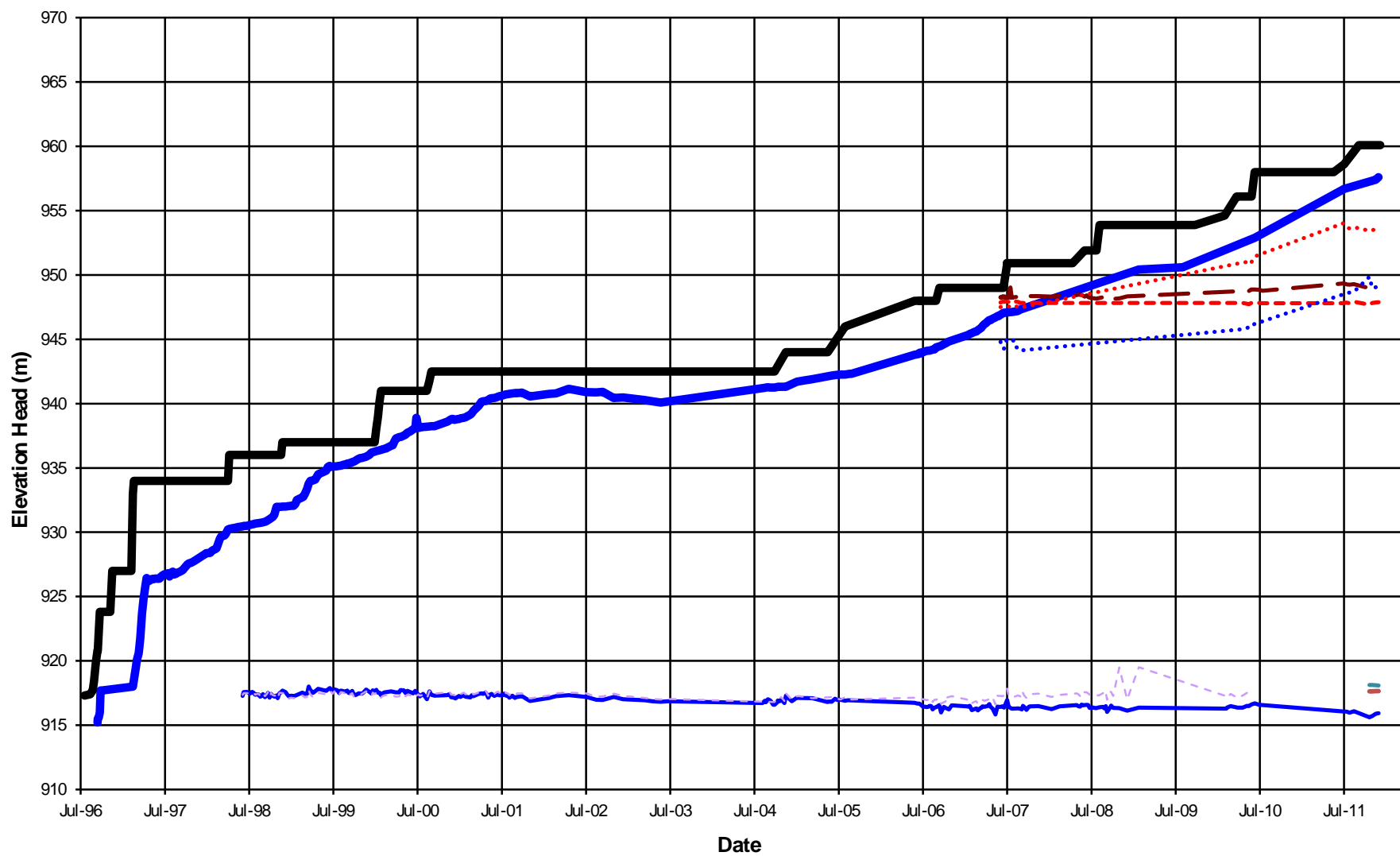
MOUNT POLLEY MINE

**TAILINGS STORAGE FACILITY
PLANE D PIEZOMETERS
ELEVATION vs. TIME**



PROJECT NO. VM00560	Date. 12/24/11	REV. A
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FIGURE D



MOUNT POLLEY MINING CORPORATION

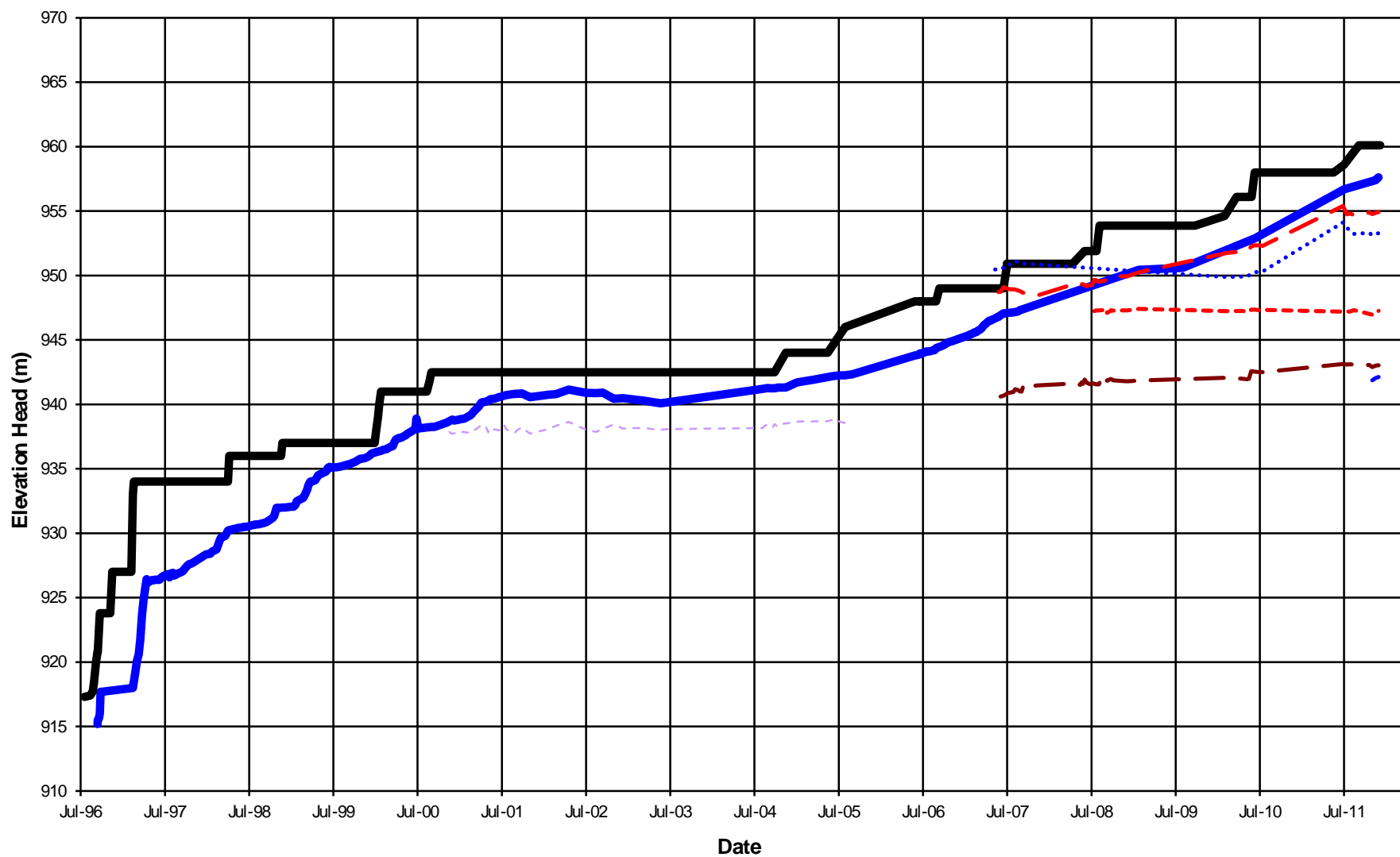
MOUNT POLLEY MINE

**TAILINGS STORAGE FACILITY
PLANE E PIEZOMETERS
ELEVATION vs. TIME**



PROJECT NO. VM00560	Date. 12/24/11	REV. A
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FIGURE E



— Pond Level — Fill Elevation ····· F1 Tailings
- - - F2 Till Core - - - F3 Till Core - . - . F4 Filter
— F5 Foundation - - - DEAD (F2-PE2-01)

MOUNT POLLEY MINING CORPORATION

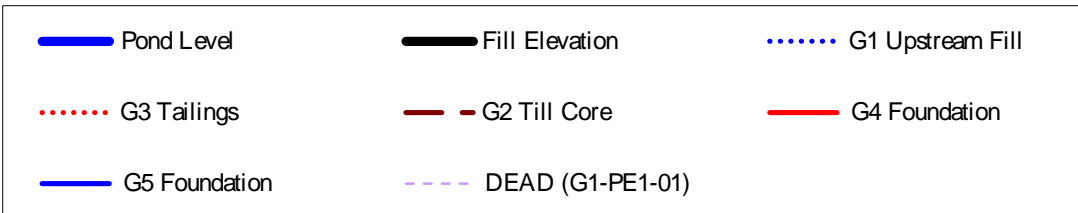
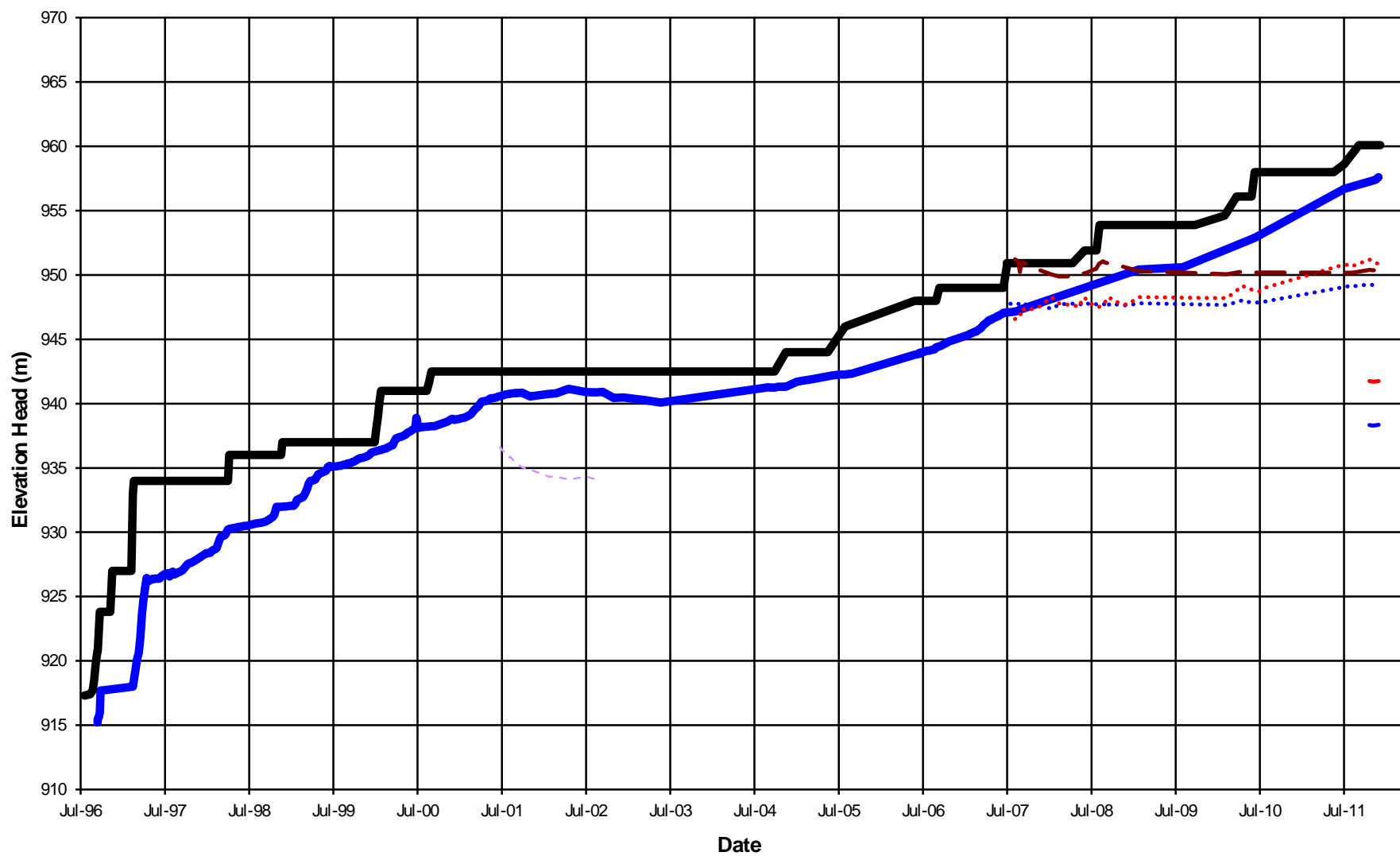
MOUNT POLLEY MINE

**TAILINGS STORAGE FACILITY
PLANE F PIEZOMETERS
ELEVATION vs. TIME**

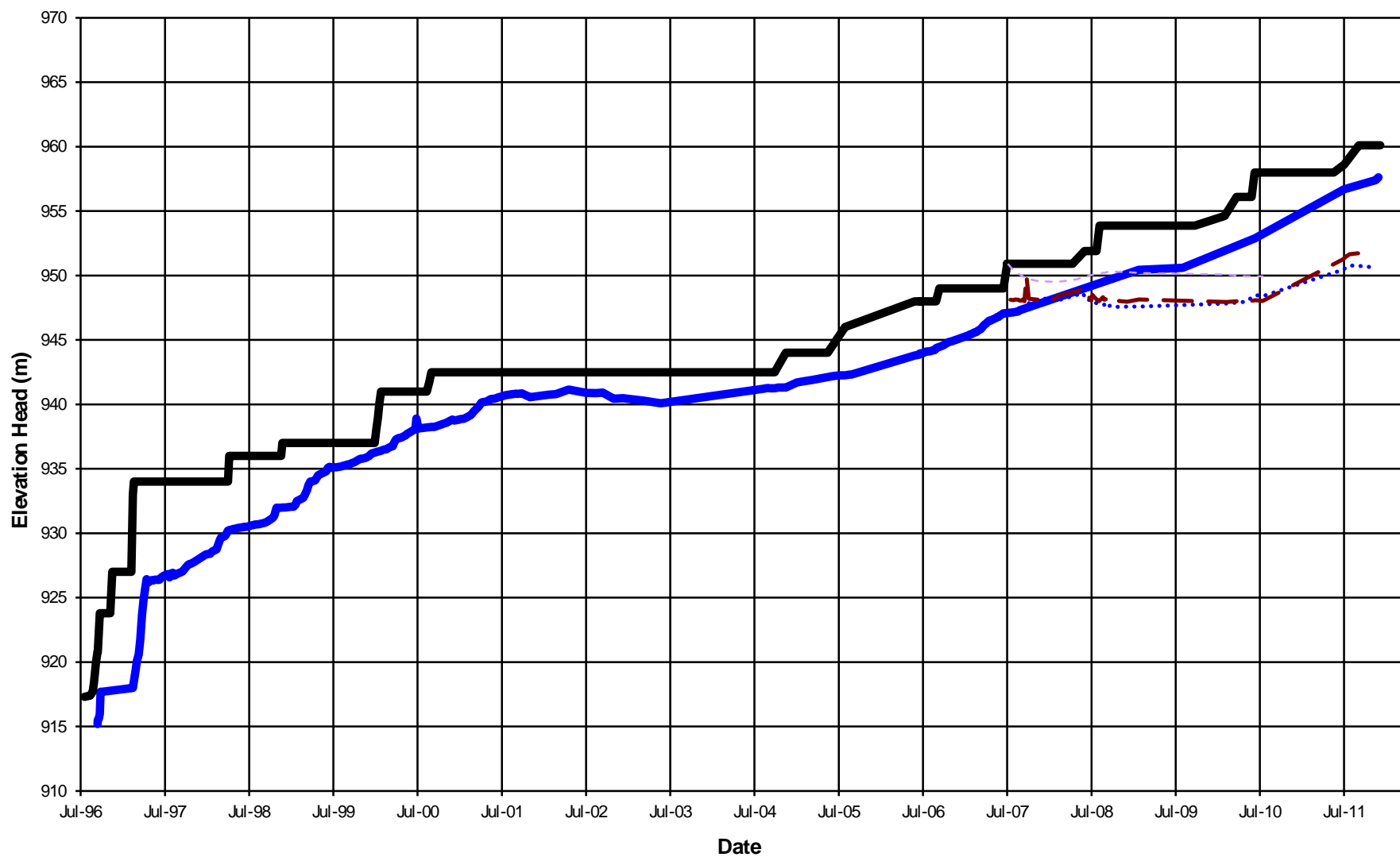


PROJECT NO. VM00560	Date. 12/24/11	REV. A
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FIGURE F



MOUNT POLLEY MINING CORPORATION			
MOUNT POLLEY MINE			
TAILINGS STORAGE FACILITY PLANE G PIEZOMETERS ELEVATION vs. TIME			
	PROJECT NO.	Date.	REV.
	VM00560	12/24/11	A
FIGURE G			



— Pond Level
 — Fill Elevation
 H1 Tailings
 - - - H2 Till Core
 - - - DEAD (H2-PE2-02)

MOUNT POLLEY MINING CORPORATION

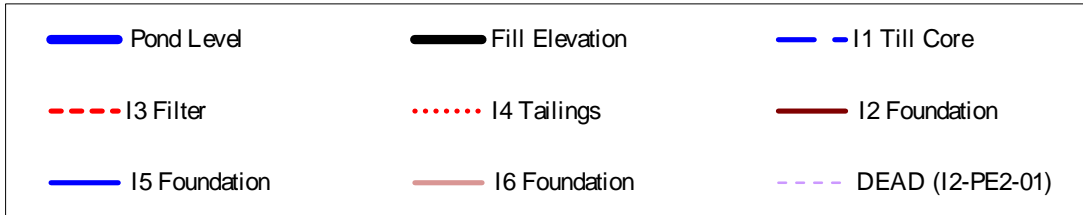
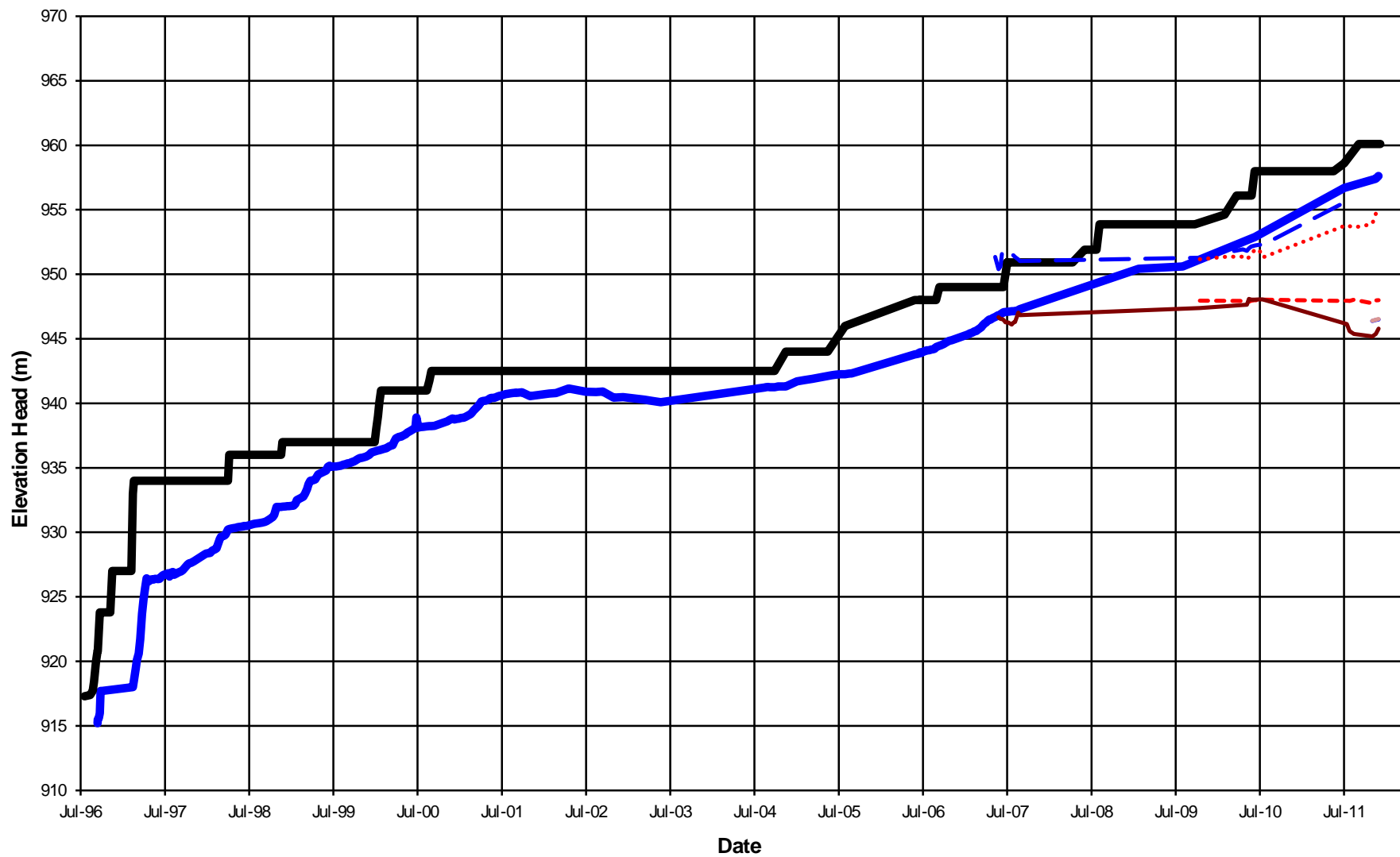
MOUNT POLLEY MINE

TAILINGS STORAGE FACILITY
 PLANE H PIEZOMETERS
 ELEVATION vs. TIME

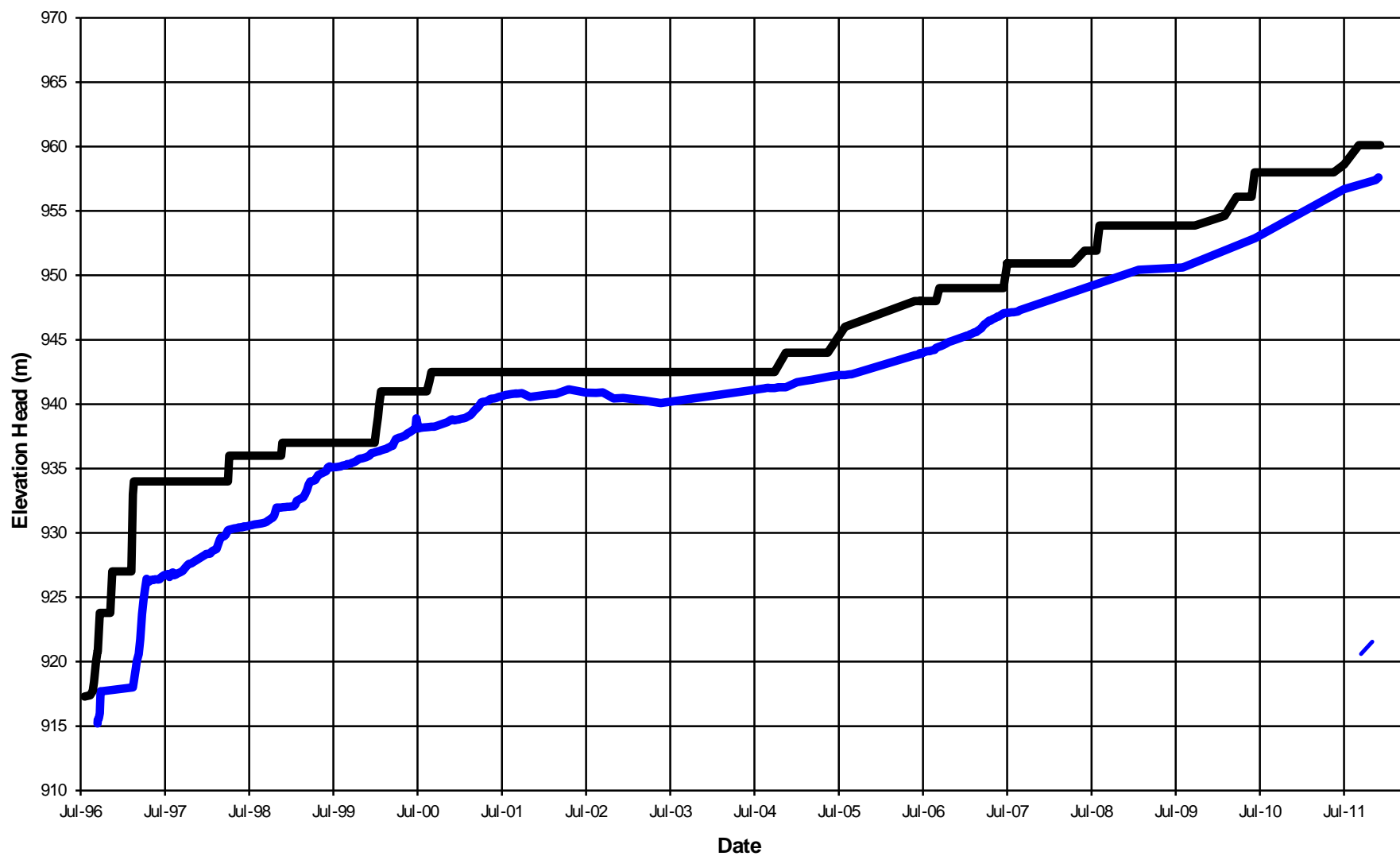



PROJECT NO.	Date.	REV.
VM00560	12/24/11	A

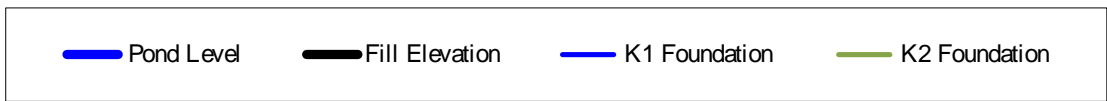
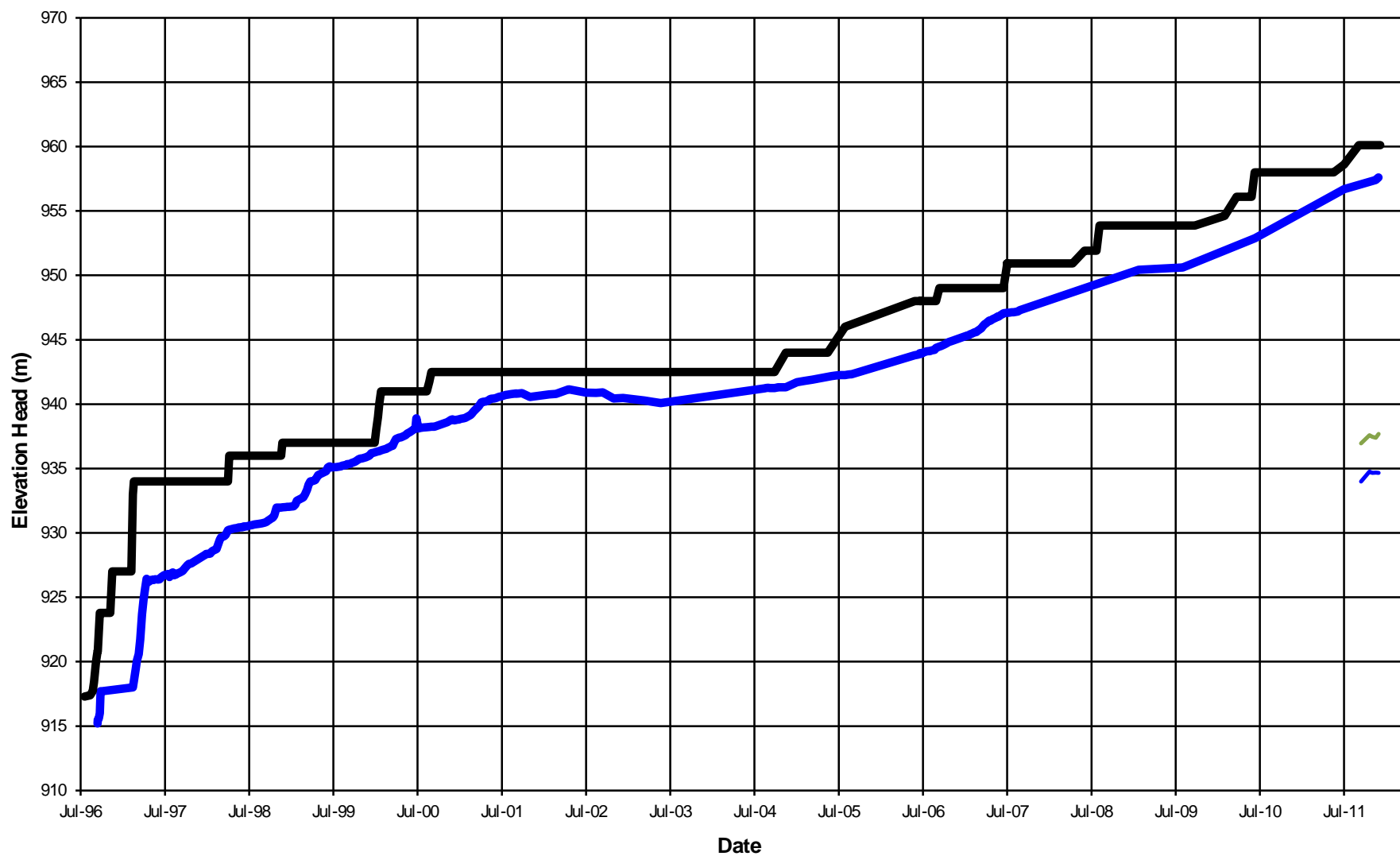
FIGURE H




MOUNT POLLEY MINING CORPORATION		
MOUNT POLLEY MINE		
TAILINGS STORAGE FACILITY PLANE I PIEZOMETERS ELEVATION vs. TIME		
	PROJECT NO. VM00560	Date. 12/24/11
	REV. A	
FIGURE I		



MOUNT POLLEY MINING CORPORATION			
MOUNT POLLEY MINE			
TAILINGS STORAGE FACILITY PLANE J PIEZOMETERS ELEVATION vs. TIME			
	PROJECT NO.	Date.	REV.
	VM00560	12/24/11	A
FIGURE J			



MOUNT POLLEY MINING CORPORATION			
MOUNT POLLEY MINE			
TAILINGS STORAGE FACILITY PLANE K PIEZOMETERS ELEVATION vs. TIME			
	PROJECT NO.	Date.	REV.
	VM00560	12/24/11	A
FIGURE K			



APPENDIX C
2011 CONSTRUCTION SEASON PHOTOS



Photo 1: Relocation of the diversion trench near corner 4.



Photo 2: Test pit conducted at the perimeter abutment.



Photo 3: Filter trench excavated along the perimeter abutment to tie into the existing trench.

Photo 4: Filter Trench being backfilled along the south embankment. Note the corrugated pipe placed to tie into existing drainage channel



Photo 5: Proof rolling, compacting the exposed core for Zone S placement.



Photo 6: Compacted and proof rolled abutment detail at the south abutment.



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 Prince George, BC, CANADA, V2N 2P9
 Tel. (250) 564-3243
 Fax. (250) 562-7045

Mount Polley Mine
 Tailings Storage Facility
 2011 Construction Photos

DATE PREPARED: March 2012
 SCALE: NTS
 PREPARED BY: P. O'Sullivan / D. Ostritchenko
 PROJECT No: KX04420 TASK 1

Photos 1 to 6

Taken: August 2011



Photo 7: Placement of drainage blanket at the south embankment

Photo 10: Survey stakes delineating drainage blanket placement area at the perimeter abutment.



Photo 8: Placement of Zone T material over the drainage blanket at the south abutment.

Photo 11: Placement of drainage blanket at the perimeter abutment.



Photo 9: Removing previously placed material at the perimeter embankment to expose competent native till.

Photo 12: Zone U comprised of NAG rockfill along the Main Embankment.



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Mount Polley Mine

Tailings Storage Facility
2011 Construction Photos

DATE PREPARED: March 2012

SCALE: NTS

PREPARED BY: P. O'Sullivan / D. Ostritchenko

PROJECT No: KX04420 TASK 1

Photos 7 to 11

Taken: August 2011



Photo 13: Looking northwest along the perimeter embankment (Zones U, S, F, T and C from left to right).

Photo 16: Surficial sampling of perimeter borrow pit.



Photo 14: Looking southeast along the perimeter embankment at the base of Zone U.

Photo 17: Overview of the secondary barge borrow pit, prior to sampling and removal of overburden.



Photo 15: Perimeter seepage pond discharge into the TSF.

Photo 18: Test pits perform at the barge borrow pit.




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Photo 19: Looking west along the south embankment during scarification of previously placed Zone S material.

Photo 22: Compaction of Zone S along the perimeter embankment with a 10 ton smooth drum vibratory compactor.



Photo 20: Placement of Zone S on the south embankment.

Photo 23: Shaping downstream toe of Zone S along the main embankment, and exposing previously placed Zone F.



Photo 21: Spreading Zone S material along the perimeter embankment.

Photo 24: Removing trimmed Zone S material.



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Mount Polley Mine
 Tailings Storage Facility
 2011 Construction Photos

DATE PREPARED: March 2012
 SCALE: NTS
 PREPARED BY: P. O'Sullivan / D. Ostritchenko
 PROJECT No: VM00560A

Photos 19 to 24

Taken: July to August 2011



Photo 25: Loading of Zone S material at the perimeter borrow pit.



Photo 26: Placement of Zone F material along the south embankment.



Photo 27: Shaping of Zone F material along the south embankment.

Photo 28: Embankment fill zones.



Photo 29: Poorly sorted Zone T material, with areas identified to be removed (south embankment).



Photo 30: Approved Zone T material (South Embankment). Note the freshly removed unacceptable fill – see Photo 29).




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Photo 31: Crushed Zone T material stock pile. This material was utilized for the majority of Zone T placement for the 2011 construction.

Photo 34: Surveying of compaction test location.



Photo 32: Haul trucks transporting Zone T and Zone C.


Photo 35: Compaction testing of Zone S, utilizing the MDI device.



Photo 33: Zone C placement along the south embankment.

Photo 36: Slope Inclinator reading in progress.



 AMEC Environment & Infrastructure 3456 Opie Crescent Prince George, BC, CANADA, V2N 2P9 Tel. (250) 564-3243 Fax. (250) 562-7045	Mount Polley Mine Tailings Storage Facility 2011 Construction Photos	DATE PREPARED: March 2012 SCALE: NTS PREPARED BY: P. O'Sullivan / D. Ostritchenko PROJECT No: VM00560A	Photos 31 to 36
			Taken: July to August 2011