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MINISTRY OF ENERGY, MINES and NATURAL GAS
Mines and Mineral Resources Division

REPORT OF GEOTECHNICAL INSPECTOR

(Issued pursuant to Section 15 of the Mines Act)

Name of Property:	Mount Polley Mine	**Permit No.: M-200**
Mine Manager:	Tim Fisch	
Company:	Mount Polley Mining Corporation	
Address:	PO Box 12, Likely BC, V0L 1N0	
Persons Contacted:	Luke Moger, Wally Renie, James Oborne, Dave Carpenter, Ross Hollinger, Fred Chuoy	
Copies To:	Al Hoffman, Chief Inspector of Mines Diane Howe, Deputy Chief Inspector of Mines Stephen Rothman, Health & Safety Inspector George Warnock, Manager, Geotechnical Engineering	
Date of Inspection:	September 24, 2012	

Introduction

An inspection of the Mount Polley Mine was conducted on September 24, 2012 by Michael Cullen, P.Eng of Michael Cullen Geotechnical Ltd. Mr. Cullen completed this inspection on behalf of the Ministry of Energy, Mines and Natural Gas (EMNG).

The purpose of this inspection was as follows:

- To assess if the Mine is meeting the intent of the geotechnical requirements of the Heath Safety and Reclamation Code for Mines in British Columbia.
- To assess if the Mine is meeting the intent of geotechnical conditions in Permit M-200.
- To assess if geotechnical practices at the Mine are consistent with generally accepted engineering practices at mines in British Columbia.
- To identify potential ground stability hazards or concerns at the Mine.
- To provide general comment on geotechnical conditions at the mine.

The inspection included the tailings storage facility, waste rock dump, Springer Open Pit, and Boundary Zone Underground which is currently operating under an MX exploration permit. A close out meeting was held following the inspection with Luke Moger and Wally Renie.

We reviewed the document "Boundary Zone Underground Project" prepared by Imperial Metals Ltd., dated August 23, 2012. This document provides details of the following:

- Development dimensions and development ground support
- Stoping method (long hole with cemented rock fill), stope size and stope ground support. Once blasting commences stopes will become non man entry.
- Supporting geotechnical information for the excavation sizes and support.

The submitted documents are in conformance with the requirements of the Health Safety and Reclamation Code for Mines in British Columbia as well as generally accepted engineering practices at mines in British Columbia.

Inspection Orders:

Ground support for man entry excavations shall follow the recommendation of a qualified engineer.

The geotechnical basis for the mine design shall be continually updated to reflect significant geologic structures, changes in rockmass conditions, and changes in the mine design. This information shall be kept on site, available for inspection at anytime.

Prior to commencing production mining the Mine shall complete a detailed assessment of pit slope stability and rockfall hazard to the portal area and infrastructure located within the pit. Details of pit slope monitoring to be completed during portal operation should be provided.

Location: Waste Rock Dump

Observations and Comments:

Waste rock dumping was observed on an active dump. No immediate hazardous or unusual geotechnical conditions or areas of concern were noted in the areas inspected. However, we did note that the truck was very close to the berm when signaled by the dozer operator to stop and dump.

The Mine reports that it now has wireline monitoring instrumentation on hand in the event that there are any stability concerns on the dumps.

Based on inspection observations and review of Mine documents we conclude that the WRD is being constructed and operated in general conformance with conditions in Permit M-200, the Health Safety and Reclamation Code for Mines in British Columbia, as well as generally accepted practices at mines in British Columbia.

Inspection Orders:

None.

Within 60 days the Mine shall submit a pit slope design report to the Chief Inspector for the Springer Pit pushback. The report shall address the following:

1. *Provide recommendations that ensure that the final width of all catchment benches are 8m as per Section 6.23.2 of the code. Note that the 8m requirement does not apply to regular benches; however these must still be maintained to prevent accumulation of rockfall that creates a downslope hazard.*
2. *If proposed, provide details of proposed multiple bench system of mining as per Section 6.23.2 of the code.*
3. *Address safety concerns associated with pushback material filling the benches of the operating pit as per Section 6.23.2 of the code*

Location: C2 and Boundary Zone Pits

Observations and Comments:

Work has not yet commenced on these pits.

Inspection Orders:

Prior to commencing production in these pits the Mine shall submit a pit slope design report to the Chief Inspector.

Location: Tailings Storage Facility

Observations and Comments:

The Stage 8 dam raise to elevation 963.5m was underway at the time of this inspection. EMNG has previously reviewed and accepted the designs for this lift. We reviewed placement procedures for the till core and filters, see Photo 6. We also observed sand cell construction on the upstream side of the west dam and discussed the problems and potential impacts of limited sand placement on the central dam due to gravity placement limitation, it is understood that the Mine's consultants (AMEC) will be reviewing. We also inspected the keyway tie in on the South Dam. All construction appears to be well done. A quality control and quality assurance program is in place and it is understood that there have been no significant issues. The Mine reports that instrumentation has responded as expected during construction. It was noted that some of the instrumentation is not well protected from potential construction equipment damage and recommend that this be remedied.

It is understood that the Mine is in the process of preparing a design to increase the elevation of Stage 8 and that this will be submitted to EMNG in the near future.

An inspection around the dams revealed no indictors of instability and no significant seepage on the face or toe of the dams.

The Mine is reminded that the TSF and associated water management facilities are to be operated and monitored in accordance with the recommendations prepared by the design engineers. Also, an as built report for Stage 8 construction and a yearly safety inspection report is to be submitted to the Chief Inspector by March 2013.

Photo 1: Springer Pit. Benches lost entirely above 1036 bench due to adverse geologic structure. Note that drilling was recently completed 12 m from the toe and that minor rockfall has run out as far as these holes.

Photo 2: Northeast side of 1072 Bench. Crest break back has resulted in almost 50% of bench having a width less than 8m. Note that much rockfall is present but benches are not full.

Photo 5: Material from push back is progressively filling upper benches resulting in loss of rock fall catchment and rock cascading down pit.

Photo 6: TSF. Stage 8 till and filter construction. To facilitate compaction till is placed at 2:1 slope beyond line then trimmed back.