



MOUNT POLLEY MINING CORPORATION

A DIVISION OF IMPERIAL METALS CORPORATION
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October 18, 2012

Mr. George Warnock
Manager, Geotechnical Engineering
Ministry of Energy, Mines and Petroleum Resources
Suite 350 – 1011 4th Avenue
Prince George, British Columbia
V2L 3H9

Re: Geotechnical Inspection Report, September 24, 2012

George:

Enclosed is a copy of my response to your most recent Inspection Report for the period September 24, 2012. Please advise if you have any additional questions.

Best Regards,

A handwritten signature in blue ink, appearing to read 'Tim Fisch', with a stylized flourish at the end.

Tim Fisch
General Manager
Mount Polley Mining Corporation



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 Osborne, 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 Health 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.

OBSERVATIONS AND INSPECTION ORDERS

Location: Underground

Observations and Comments:

Most of the existing underground openings were inspected during the tour. No hazardous or unusual geotechnical conditions or areas of immediate concern were noted in the areas inspected. The support being installed is consistent with good engineering practices as well as generally accepted practices at mines in British Columbia. The installed ground support meets or exceeds the recommendations provided by the Mines Geotechnical Consultant (PB Hughes and Associates) in a report dated August 21, 2012. The one exception was a section of drift that had not been screened on account of plans to start an intersection at the location in the near future. No loose was identified in the unscreened area; however, a potential wedge formed by geological structure was noted. Deviating from the recommended ground support is acceptable where it is supported with site specific geotechnical observations and measurements; it is not evident that this occurred in this instance.

3.65m long rebar rockbolts are being installed as a matter of course in excavations with spans greater than 5m including intersections: We endorse the practice of using #7 bar for the 3.65m long bolts as an easy way of confirming that the correct length support is being installed.

The ground support is designed to deal with wedges formed by the common structures. PB Hughes and Associates recommended that “Should faults be encountered in development or stopes, detailed analysis should be carried out to ensure satisfactory ground support is installed to support the rock”. This is standard practice at Mines in British Columbia. It is understood that the Mount Polley staff are collecting information on geologic structure but not completing wedge analysis at this time. We recommend that the mine implement a program to identify and assess potential wedges formed by discrete or unusual geological structure.

Mount Polley geological staff are also completing rockmass classification. This information along with structural data will prove useful to optimize the ground support and safety as well as predict stope performance.

The Mine has implemented a quality control program for the ground support systems and bolt pull tests were recently completed. It is understood that only one bolt failed the testing; the full results of this work were not available at the time of our inspections. We endorse the practice of a quality control program that includes pull tests.

Suitable analysis of pit slope stability and rockfall has been completed for a temporary exploration portal. The headcover at the portal presently consists of steel arches with lagging; used tires have been placed on top of this structure to cushion any rockfall impact. The bench face immediately above the portal has been scaled, bolted, and slope mesh draped. Areas of ongoing rockfall were noted around several areas of the pit although only minor rockfall accumulation was noted on the benches above the portal. Tire walls have been placed in the bottom of the pit to help prevent rockfall from running out into operating areas. It is understood that a detailed pit slope stability and rockfall analysis has not been completed for the entire pit in recent years.

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
- Stopping 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.

Location: Springer Pit

Observations and Comments:

The Springer Pit utilizes either 12m or 24m high bench faces using a multi bench mining system. It is understood (although not confirmed) that the benches are designed to be either 8 or 12m wide. The Mine uses pre-shear holes on all its final walls; we noted that only about 10% of the ½ barrels from these blasts are still present on the final walls. Significant geologic structure is present that control bench stability; in some instances the benches are lost entirely due to structure, see Photo 1. In many cases there is crest breakback of between 2m and 5m due to structure, see Photo 2 and 3.

The geologic structure is resulting in rockfall; in some segments of the pit there is only isolated block fall, see Photo 3. In other areas of the pit there is more regular fall of rocks, see Photo 2. On occasion there are areas of rockfall that completely fill the bench, see Photo 4.

We walked the western and northeastern segments of the 1072 bench and made the following measurements:

- The western segment has 24m high bench faces. Bench width ranges from 14m to 7m (this indicates that there is up to 5m of crest breakback). The benches are generally clean with only isolated rockfall, see Photo 3. Rockfall was noted to have run out up to 12m from the toe; this indicates potential for rockfall to cascade over benches where the crest is lost.
- The northeastern segment has 12m high bench faces. Bench width ranges from 6.5 to 8.5m (this indicates that there is up to 1.5m of crest breakback assuming benches were planned to be 8m). Much small rockfall is present, see Photo 2, however the benches are not full and are still capable of catching rockfall. Rockfall was noted to have run out up to 8m from the toe; this indicates potential for rockfall to cascade over benches where crest breakback occurs.

The Phase 4 pushback for the Springer Pit has commenced. It is understood that ultimately the Springer Pit will incorporate the Caribou Pit. Material from the pushback is filling the upper benches of the existing pit. This will eventually create a situation where rockfall material may cascade down slope and potentially cause a hazard to those working below.

We reviewed the Mine's procedure for working around the toe of the wall. The procedures are considered good for routine work in the pit; however, in locations where there is an elevated rockfall hazard we recommend that site specific analysis and development of mitigative procedures be completed (e.g. northern corner of 1048 bench, highwall above southeast side of 1036 bench).

Inspection Orders:

Clean off rockfall accumulation in northern corner of 1048 bench, or otherwise address the rockfall hazard as per Section 6.23.2 of the Code.

- This area was cleared off and loaded out using an excavator on October 8, 2012.

Within 15 Days the Mine shall submit an analysis of the rockfall hazard from highwall above the southeast side of the 1036 bench where benches have been lost and highwall is effectively greater than 36m.

- This area of the Springer pit will be reviewed on the October 24 site visit by Al Chance of Golder Associates, with any resulting alterations to their current design parameter recommendations incorporated into pit designs. A table summarizing pit design parameters currently recommended by Golder is included below. These parameters reflect observations and updates by Golder as recent as September 2011.*

Pit	Wall (azimuths)	Bench Height	Inter-Ramp Angle	Berm Width	Face Angle
Springer Phase 3	West (170-0°)	12m double	46.6°	11.5m	65°
	East/South (0-170°)	12m single	43.0°	8.5m	70°

- In the meantime, mining of this area continues as normal on the 1024 bench. Completion of mining in this area on the 1024 bench will provide two regular catch benches below the area where the face has been mined back to the structural plane from 1048 to 1084. This catchment is deemed sufficient to continue operations under normal procedures for operating under high walls. These procedures were developed in response to a request from George Warnock after his site visit on April 12, 2012. The procedures were reviewed and accepted by Mr. Warnock.*
- A 30m wide catch bench exists in the Springer Phase 3 design on the 1000 bench. The purpose of this bench is to provide a buffer from spill rock from the Cariboo/Phase 4 pushback, however it will also serve to provide extra catchment should similar geological behavior manifest on the 1036/1024/1000 bench faces (currently the 1036 bench face is not behaving as the 1048/1060 bench faces did).*
- Future pit designs will be examined in an attempt to avoid the 353 degree dip direction of this joint plane.*
- Pre-shear wall control drilling is designed vertically targeting the toe of the bench, and thus the visibility of half barrels in the upper portions of the bench face (or lack of visibility), does not reflect an over break in the crest.*

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:

- 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.*
- If proposed, provide details of proposed multiple bench system of mining as per Section 6.23.2 of the code.*
- 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 indicators 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.

We reviewed the Operation, Maintenance and Surveillance Manual prepared for the TSF by Knight Piesold in March 2010. This document is considered satisfactory but somewhat out of date in light of the recent dam construction and change of engineer or record from KP to AMEC. It is understood that the Mine in consultation with AMEC are revising this document, and will submit to EMNG in the near future.

Inspection Orders:

None

CLOSURE

Under Section 15 (6) of the Mines Act, a written response is required from the Mine Manager within 15 days of the receipt of this Inspection Report. In addition, Section 30 (1) of the Mines Act requires this Inspection Report to be posted in a conspicuous location at the mine site for 30 days.

Please feel free to contact the undersigned with any questions or comments.

Michael Cullen



Michael Cullen, P. Eng.
for
Ministry of Energy, Mines and Natural Gas

Signature

Dated: October 3, 2012

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 3: South side of 1072 Bench. Crest break back on geologic structure locally reduces bench width from the planned 12m down to 7m. Note only isolated rockfall blocks.



Photo 4: Accumulation of rockfall on 1048 bench poses a rockfall hazard to persons below. Note that drillers were recently working within about 12m of the toe and a pipe line is located along the toe on 1024 bench.



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

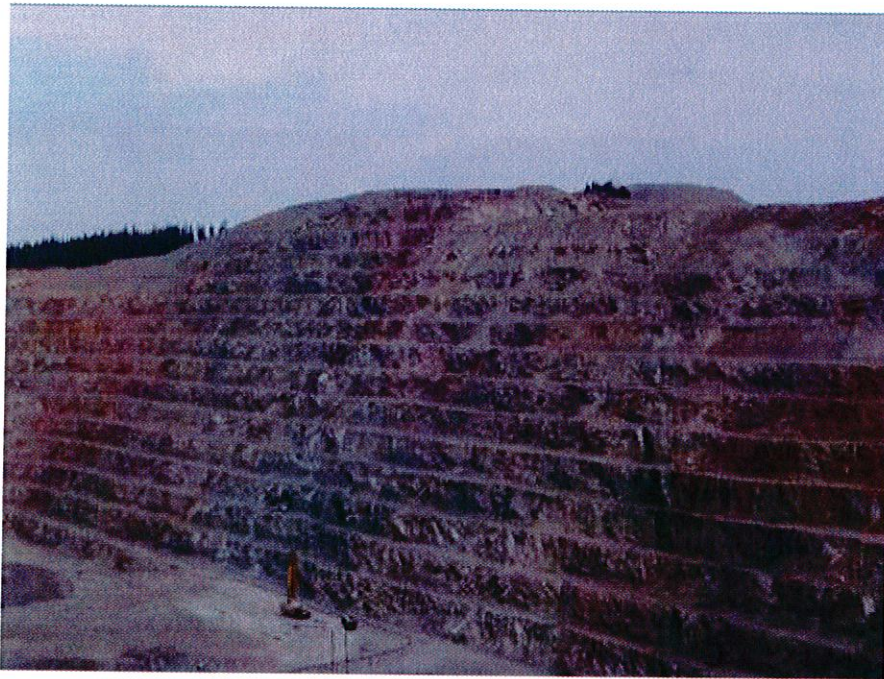


Photo 6: TSF. Stage 8 till and filter construction. To facilitate compaction till is placed at 2:1 slope beyond line then trimmed back.

