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PERMIT AMENDMENT APPLICATION

UNDER THE BRITISH COLUMBIA *MINES ACT*

MOUNT POLLEY MINE

RETURN TO FULL OPERATIONS

PREPARED FOR

THE MINISTRY OF ENERGY AND MINES

PREPARED BY

MOUNT POLLEY MINING CORPORATION

NOVEMBER 6, 2015

EXECUTIVE SUMMARY

Mount Polley Mine is a copper and gold mine owned by Imperial Metals Corporation (Imperial) and operated by Mount Polley Mining Corporation (MPMC). The site is located 56 km northeast of Williams Lake, British Columbia.

On August 4, 2014, a breach occurred in the Perimeter Embankment of the Tailings Storage Facility (TSF). The breach released tailings, water and embankment materials to the downstream environment. These materials entered Hazeltine Creek, Polley Lake and Quesnel Lake. The width of the breach was about 100 metres (m), although damage occurred to approximately 400 m of the Perimeter Embankment.

The Ministry of Environment (MoE) issued MPMC Pollution Abatement Order 107461, dated August 5, 2014, ordering MPMC deal with the environmental impacts of the breach. The short-term environmental emergency response addressed health and safety concerns, containment to prevent further release of materials from the TSF, water quality monitoring, cleanup of woody debris on Quesnel Lake, lowering of the Polley Lake water level (which had been increased by the event), assessment of the Polley Lake sediment plug stability, and implementation of sediment and erosion control measures in Hazeltine Creek.

Pre-breach, mine contact water was stored in the TSF or open pits per Section 2.4 of Permit 11678 held by MPMC, issued under provisions of the *Environmental Management Act* (EMA). Post-breach, site water management was modified to direct all mine contact water to the Springer Pit. A Temporary Upstream Rockfill Berm was constructed within the TSF breach area to retain tailings solids during situations where low flows of water could occur. The Temporary Upstream Rockfill Berm was not a water impounding structure, and so had no filter to contain fine tailings particles. An alternative method was, therefore, required to prevent further loss of mine contact water and tailings from the TSF during the 2015 freshet.

Golder Associates Ltd. (Golder) was retained by MPMC to provide design, engineering and construction monitoring services for a breach repair to store 2.1 million (M) cubic meters (m^3) of potential mine contact water runoff volume (calculated for a 1-in-200 year freshet event and an assumed effective date of April 2015). This 2015 Freshet Embankment breach repair was designed to incorporate a cut-off wall. MPMC was issued a *Mines Act* Permit M-200 amendment on December 17, 2014, *Approving TSF Breach Repair and Perimeter Embankment Buttress Design for 2015 Freshet*, to perform this work. Construction materials were placed through winter by MPMC, with a Cutter-Soil-Mixing (CSM) Contractor retained by MPMC for installation of a cut-off wall before 2015 freshet.

On January 12, 2015, MPMC applied for Permit M-200 and Permit 11678 amendments to allow return to restricted operations at the Mount Polley Mine, with tailings being deposited in the Springer Pit. A revised application was submitted March 20, 2015, incorporating screening comments from the MoE, the MEM and First Nations, and permit amendments were received on July 9, 2015. The approved restricted restart allows milling for the period of one year, up to a maximum throughput of 4,000,000 tonnes (t) of ore (approximately half the pre-tailings dam failure annual throughput). Mill operations restarted on August 4, 2015.

Currently, the TSF is not permitted to store site contact water and no permitted water discharge is in place following the tailings dam failure. All contact water is currently directed to, and stored in, the Springer Pit. The Springer Pit has a finite capacity, necessitating implementation of a short-term water discharge strategy. On July 16, 2015, MPMC submitted a permit amendment application to the MoE to amend Permit 11678 to allow short-term (maximum two years) discharge of site contact water to Quesnel Lake via Hazeltine Creek, which is currently not fish-bearing and is undergoing rehabilitation following the tailings dam failure. MPMC has

installed all required pipelines, diffusers, and water treatment plant infrastructure (this was completed prior to October 30, 2015, as required by Permit M-200), and the Permit 11678 amendment to commence discharging is anticipated to be received from the MoE in early November 2015.

MPMC is also taking steps to develop a long-term water management strategy; the July 9, 2015 Permit 11678 amendment requires submission of a draft Technical Assessment Report for this long-term water management strategy by June 30, 2016 and a draft schedule of consultation meetings for development of this strategy was submitted to the MoE on September 30, 2015. In parallel with implementation of a short-term water management plan and development of a long-term water management plan for the Mount Polley Mine, MPMC plans to apply for a Permit M-200 amendment in 2015, prior to the December 17, 2015 expiry of the current Permit M-200 condition for use of the TSF for management of 2015 freshet, to allow temporary contingency water storage in the TSF to manage 2016 freshet flows.

Following a 2014/2015 site investigation program designed and supervised by Golder and executed by MPMC, stability analyses were updated for the TSF. MPMC submitted a Permit M-200 amendment application for completion of additional buttressing activities for the Main and Perimeter Embankments to the MEM on July 31, 2015. This permit amendment was received from the MEM on October 22, 2015, and buttressing work is incorporated in mine planning.

No permits for operation beyond the one year restricted operations period are in place, and the *Mine Reclamation and Closure Plan Update 2015*, submitted to the MEM on September 30, 2015, assumed closure following the completion of the milling of 4,000,000 t of ore within the one year restricted operations period as currently authorized. Identified ore reserves indicate approximately ten more years of viable mine life, with this Application (Mount Polley Mine Return to Full Operations Permit M-200 amendment application), presenting a four year plan for the development of the Phase 4 Cariboo-Springer Pit and tailings deposition in the TSF.

MOUNT POLLEY MINING CORPORATION

MOUNT POLLEY MINE

RETURN TO FULL OPERATIONS

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LIST OF ABBREVIATIONS

ABA	Acid-Base Accounting
AERR	Annual Environmental and Reclamation Report
ARD	acid rock drainage
ARO	Asset Retirement Obligation
BAP	Best Applicable Practice
BAT	Best Available Technology
CCS	Central Collection Sump
CSM	Cutter-Soil-Mixing
EMA	Environmental Management Act
Golder	Golder Associates Ltd.
ha	hectares
HDPE	high-density polyethylene
Imperial	Imperial Metals Corporation
M	million
m^3	cubic metres
MAC	Mining Association of Canada
masl	metres above sea level
MEM	Ministry of Energy and Mines
MoE	Ministry of Environment
MPMC	Mount Polley Mining Corporation
NAG	non-acid-generating
OMS	Operation, Maintenance and Surveillance
PAG	potentially-acid-generating
PETBP	Perimeter Embankment Till Borrow Pond
QPO	Quantitative Performance Objective
SERDS	Southeast Rock Dump Site
SRK	SRK Consulting
t	tonne(s)
tpd	tonnes per day
TSF	Tailings Storage Facility
TSM	Towards Sustainable Mining

Important Note:

Background information on the Mount Polley Mine, including site history, pre-breach operations and site water management is included in the documents supporting this Application; information provided in this Application assumes reader familiarity with the Mount Polley Mine operation, both pre- and post-breach, and refers to information in these complementary documents for provision of background and supporting information.

Additionally, as further described in this document, this Application, while identifying the importance of site water management at Mount Polley Mine Site, limits the description of site water management plans to those impacted by the return to full operations proposed herein. Site water management planning is to be discussed and developed in parallel, but independently to, this Application. This parallel approach in regards to permitting has been developed in partnership with, and is understood to be acceptable to, regulators, First Nations and stakeholders after extensive review and discussion.

1 INTRODUCTION

On January 12, 2015, Mount Polley Mining Corporation (MPMC) applied for Permit M-200 and Permit 11678 amendments to allow return to restricted operations at the Mount Polley Mine, with tailings being deposited in the Springer Pit. A revised application was submitted March 20, 2015, incorporating screening comments from the Ministry of Environment (MoE), the Ministry of Energy and Mines (MEM) and First Nations, and permit amendments were received on July 9, 2015. The approved restricted restart allows milling for the period of one year, up to a maximum throughput of 4,000,000 tonnes (t) of ore (approximately half the pre-tailings dam failure annual throughput). Mill operations restarted on August 4, 2015.

Currently, the tailings storage facility (TSF) is not permitted to store site contact water and no permitted water discharge is in place following the tailings dam failure. All contact water is currently directed to, and stored in, the Springer Pit. The Springer Pit has a finite capacity, necessitating implementation of a short-term water discharge strategy. On July 16, 2015, MPMC submitted a permit amendment application to the MoE to amend Permit 11678 to allow short-term (maximum two years) discharge of site contact water to Quesnel Lake via Hazeltine Creek, which is currently not fish-bearing and is undergoing rehabilitation following the tailings dam failure. MPMC has installed all required pipelines, diffusers, and water treatment plant infrastructure (this was completed prior to October 30, 2015, as required by Permit M-200), and the Permit 11678 amendment to commence discharging is anticipated to be received from the MoE in early November 2015.

MPMC is also taking steps to develop a long-term water management strategy; the July 9, 2015 Permit 11678 amendment requires submission of a draft Technical Assessment Report for this long-term water management strategy by June 30, 2016 and a draft schedule of consultation meetings for development of this strategy was submitted to the MoE on September 30, 2015. In parallel with implementation of a short-term water management plan and development of a long-term water management plan for the Mount Polley Mine, MPMC plans to apply for a Permit M-200 amendment in 2015, prior to the December 17, 2015 expiry of the current Permit M-200 condition for use of the TSF for management of 2015 freshet, to allow temporary contingency water storage in the TSF to manage 2016 freshet flows.

Following a 2014/2015 site investigation program designed and supervised by Golder Associates Ltd. (Golder) and executed by MPMC, stability analyses were updated for the TSF. MPMC submitted a Permit M-200 amendment application for completion of additional buttressing activities for the Main and Perimeter Embankments to the MEM on July 31, 2015. This permit amendment was received from the MEM on October 22, 2015, and buttressing work is incorporated in mine planning.

No permits for operation beyond the one year restricted operations period are in place, and the *Mine Reclamation and Closure Plan Update 2015*, submitted to the MEM on September 30, 2015, assumed closure following the completion of the milling of 4,000,000 t of ore within the one year restricted operations period as currently authorized. Identified ore reserves indicate approximately ten more years of viable mine life, with this Application (Mount Polley Mine Return to Full Operations Permit M-200 amendment application), presenting a four year plan for the development of the Phase 4 Cariboo-Springer Pit and tailings deposition in the TSF.

The mine plan reflects a combination of the permitted one year restricted operations phase and a return to full operations (the latter of which is being applied for in this Application). The mine plan utilizes the available capacity of a fully repaired TSF which has been made operational to the 970 metres above sea level (masl) elevation. Should the TSF be made operational and raised in the area of the Freshet Embankment and around the existing embankments to an elevation of 970 masl (approximately the height of the existing embankment outside of the Freshet Embankment area), then a volume of 25,100,000 cubic metres (m^3) would be available for tailings storage. A document prepared by Golder, *Tailings Storage Facility Detailed Design to Elevation 970 m*, supporting the construction of the TSF to 970 masl is provided in support of this Permit M-200 amendment application.

The volume of a 970 masl TSF can accommodate approximately 33,900,000 t of tailings, or roughly four years of production at full production rates. This quantity of production would allow for the completion of the Phase 4 Cariboo-Springer Pit, which has been developed over the last three years of waste production. The Phase 4 Cariboo-Springer Pit contains approximately 27,000,000 t of reserves that will be processed for deposition in the TSF and/or stockpiled. The remaining capacity of the 970 masl TSF repair is consumed by a combination of Boundary Zone underground, Boundary Zone open pit, and stockpiled ore.

Under the mine plan, the mining of the Phase 4 Cariboo-Springer Pit is expected to be completed in the first quarter of 2019. In order to complete the Phase 4 Springer Pit, the contact water deposited into the Phase 3 Springer Pit will need to be removed prior to the first quarter of 2018 to facilitate removal of the tailings deposited during restricted operations. It is expected that tailings will be removed by a combination of hydraulic and conventional shovel-truck methods, and will be placed in the TSF.

This Application does not seek any permit amendment for long-term water discharge from the Mount Polley Mine. An update to the long-term site water management plan, specifically in regards to the discharge of mine contact water, will be pursued independently of, but in parallel with, this Application for return to full operations and as required by Permit M-200 and Permit 11678 conditions. A document outlining site water management during restricted operations, resumed (full) operations, closure and post-closure, prepared by Golder, *Mount Polley Mining Corporation Cariboo-Springer Pit Phase 4 Water Management Plan (TSF 970 m Design)*, is provided in support of this Application.

A formal update to the Reclamation and Closure Plan, reflecting closure of the Mount Polley Mine based on projected conditions of the site following the completion of the authorized activities under the restricted operations, was provided to the MEM as per condition E.1 of the July 9, 2015 amendment to Permit M-200. An updated document prepared by MPMC, *Mine Reclamation and Closure Plan Update November 2015*, is provided in support of this Application, and reflects projected conditions of the site following completion of the mine plan as outlined herein.

It is assumed in the mine plan in this Application that construction activities are completed and relevant permits have been received such that the TSF can be returned to operation on May 1, 2016. Should this not be the case, ore processing on site will cease as there will be no permitted tailings storage location available for use.

This return to full operations Application includes sections addressing: Mine Planning, including mining phases, material management, process water and tailings deposition; Site Water Management including short-term water management planning and long-term water management planning; Influence on Closure Plans, including disposal of PAG waste, NAG waste management, reclamation footprint and costing; and, Additional Considerations, including tailings management and Mount Polley Independent Expert Engineering Investigation and Review Panel Recommendations. For reference throughout this document, a site aerial identifying key mine site infrastructure is included as Figure 1.1.

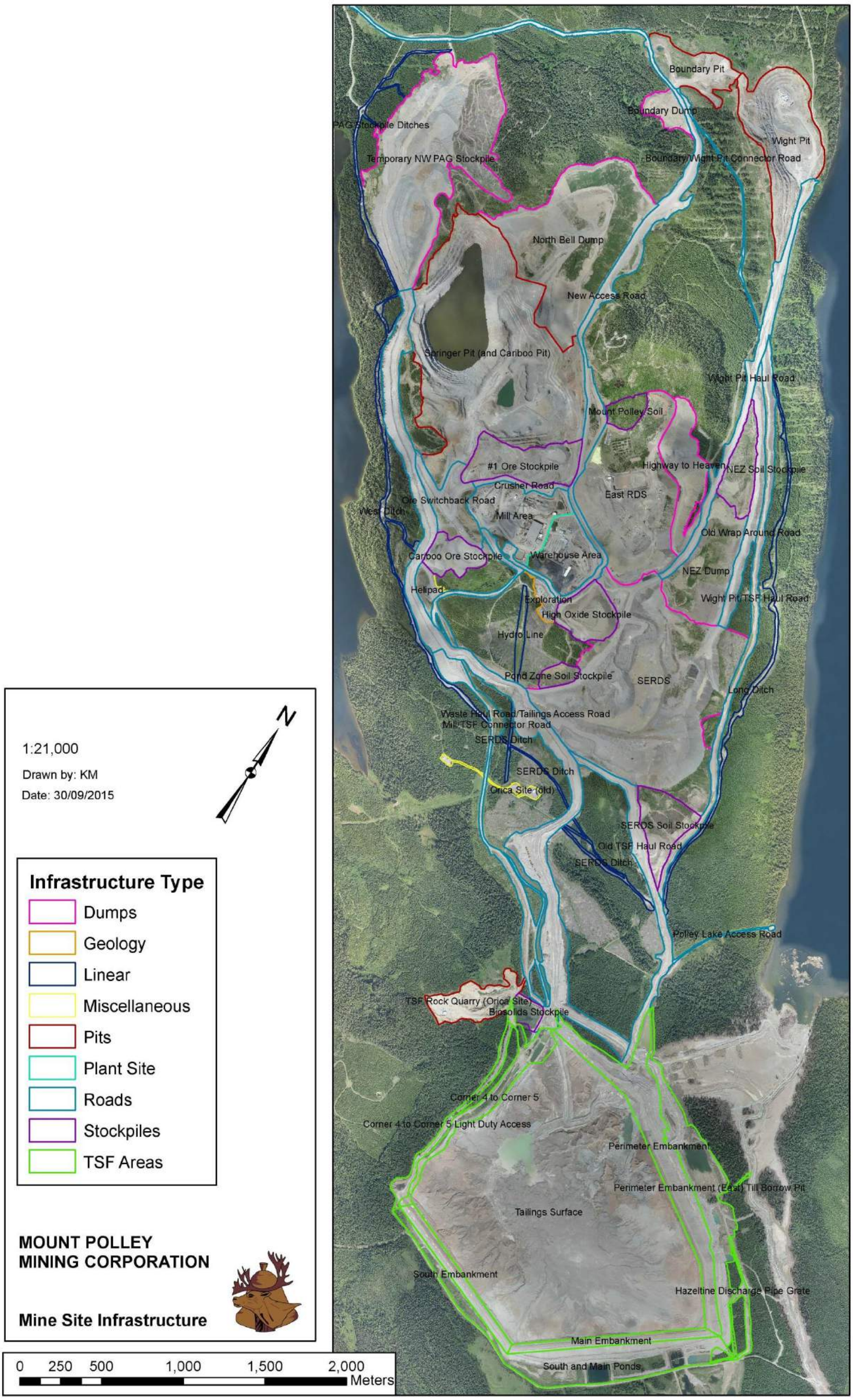

Figure 1.1: Mine Site Infrastructure

2 MINE PLAN

The Phase 4 Cariboo-Springer Pit contains approximately 27,000,000 t of reserves that will be processed for deposition in the TSF and/or stockpiled. The capacity of the 970 masl TSF repair is consumed by a combination of the processed portion of the Phase 4 Cariboo-Springer Pit (23,500,000 t) and material from the Boundary Zone underground, Boundary Zone open pit, ore stockpiles, and tailings re-handled from the Springer Pit (500,000t, 591,000t, 5,310,000t, and 4,000,000t, respectively).

Underground mining (portal located in the bottom of the Wight Pit) will be undertaken according to existing permits in the Boundary/Zuke Zones, generating an expected 500,000 t of ore feed over a 500 day period extending into early 2017. Potential extensions to the underground mine life are being investigated. Mining method and stope shapes will remain unchanged from currently permitted activities. Ore hauled out of the underground is dumped immediately at surface of the portal, and hauled by the open-pit fleet to the crusher.

2.1 MINING PHASES

The mine plan reflects three general phases: the restricted operating period, the full operations period, and the pre-closure period. The restricted operating period extends from August 2015 to April 2016; full operations from May 2016 to the first quarter of 2019; and pre-closure is projected to be completed in the second quarter of 2020. Mining method will remain unchanged from currently permitted activities.

2.1.1 RESTRICTED OPERATIONS

From August 2015 through November 2015, processing has been, and will continue to be, completed on a week-on, week-off schedule targeting 20,000 t per day (tpd) on operating days (i.e., half capacity). Because of the challenges inherent with operating during the winter, processing under the restricted operations will transition to 24 hours per day, seven days per week, with a target daily throughput of 18,000 tpd from December 2015 through April 2016. Substantially weakened copper prices provide additional impetus to this revised operating regime, as revenues initially projected during restricted operations have diminished while fixed costs have not. The restricted operations period maximum permitted throughput of 4,000,000 t of ore is expected to be realized in April of 2016. This April 2016 completion date is two months earlier than the one-year deadline for

completion of restricted operations as included in the amended Permit 11678 and amended Permit M-200 (each as received on July 9, 2015). Under the amended Permit 11678 and amended Permit M-200 for restricted operations, production tonnages and timing of milling will be adjusted based on the filling of the Springer Pit in accordance with the considerations for potential groundwater exfiltration, which is projected to occur at 1,030 masl. Management of the Springer Pit lake requires the authorization of a short-term effluent discharge for the site.

It is assumed in this mine schedule that construction activities are completed and relevant permits have been received such that the TSF can be returned to operation on May 1, 2016. Should this not be the case, ore processing on site will cease as there will be no permitted tailings storage location available for use. Construction requirements at the TSF require a significant volume of non-acid-generating (NAG) material from the open pit in the form of buttress rock. To facilitate this, ore processed from January 2016 to April 2016 will be constituted primarily of stockpiled ore. Using stockpiled ore as the primary mill processing feed will enable almost the full capacity of the open pit haulage fleet to be utilized for hauling construction material to the TSF. Upon completion of the required raise under the 970 masl TSF design construction program, and renewed operation of the TSF, the mining fleet will return to normal mining activities, mining the Phase 4 Cariboo-Springer Pit at approximately 70,000 tpd.

2.1.2 FULL OPERATIONS

The return to full operations includes mining of the Phase 4 Cariboo-Springer Pit, mill throughput of 22,000 tpd, and is expected to be completed in the first quarter of 2019. In order to complete the Phase 4 Springer Pit, the contact water stored in the Phase 3 Springer Pit will need to be removed prior to the first quarter of 2018 to facilitate removal of the tailings deposited during restricted operations. It is expected that tailings will be removed by a combination of hydraulic and conventional shovel-truck methods, and will be re-handled for deposition in the TSF. The exact methodology will be heavily influenced by the speed at which free water can be removed from the Springer Pit as part of the site water discharge strategy. Additional options for storage of these tailings (i.e., comingling in dumps) will be investigated, implementation of which would result in additional capacity being realized in the 970 masl TSF for conventional slurry tailings disposal.

2.1.3 PRE-CLOSURE PERIOD

The pre-closure period is that when new mining has been completed and ore stockpiles are being milled while potentially-acid-generating (PAG) material is being re-handled into the Springer Pit for subaqueous storage. As the Phase 4 Springer-Cariboo Pit is exhausted, if the mine is to be prepared for closure and the Phase 5 Springer Pit is not pursued, then stockpile ore will be substituted for fresh pit ore. Mining of the Boundary Zone open pit will be undertaken at this time. PAG rock from the Temporary Northwest (NW) PAG Stockpile will be re-handled into the Springer Pit as haulage capacity allows, over a period of at least two years.

Figure 2.1.1 depicts the ore sources for the mine plan. Final Phase 4 Cariboo-Springer Pit and Boundary Pit configurations, presented against the existing site flyover, are included as Figure 2.1.2/2.1.3 and Figure 2.1.3/2.14, respectively.

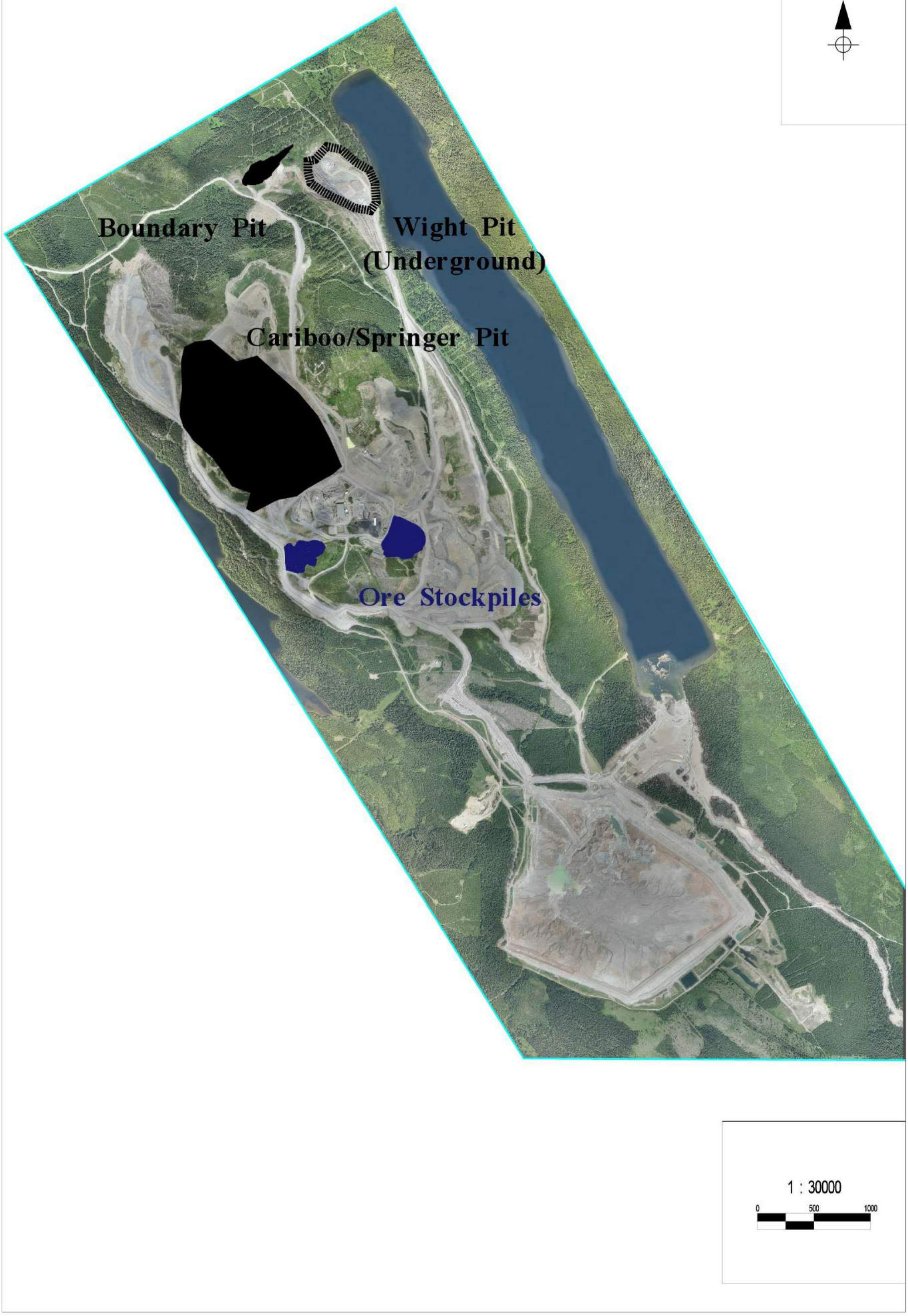

Figure 2.1.1: Mine Plan Ore Sources

Figure 2.1.2: Existing Cariboo-Springer Pit Configuration

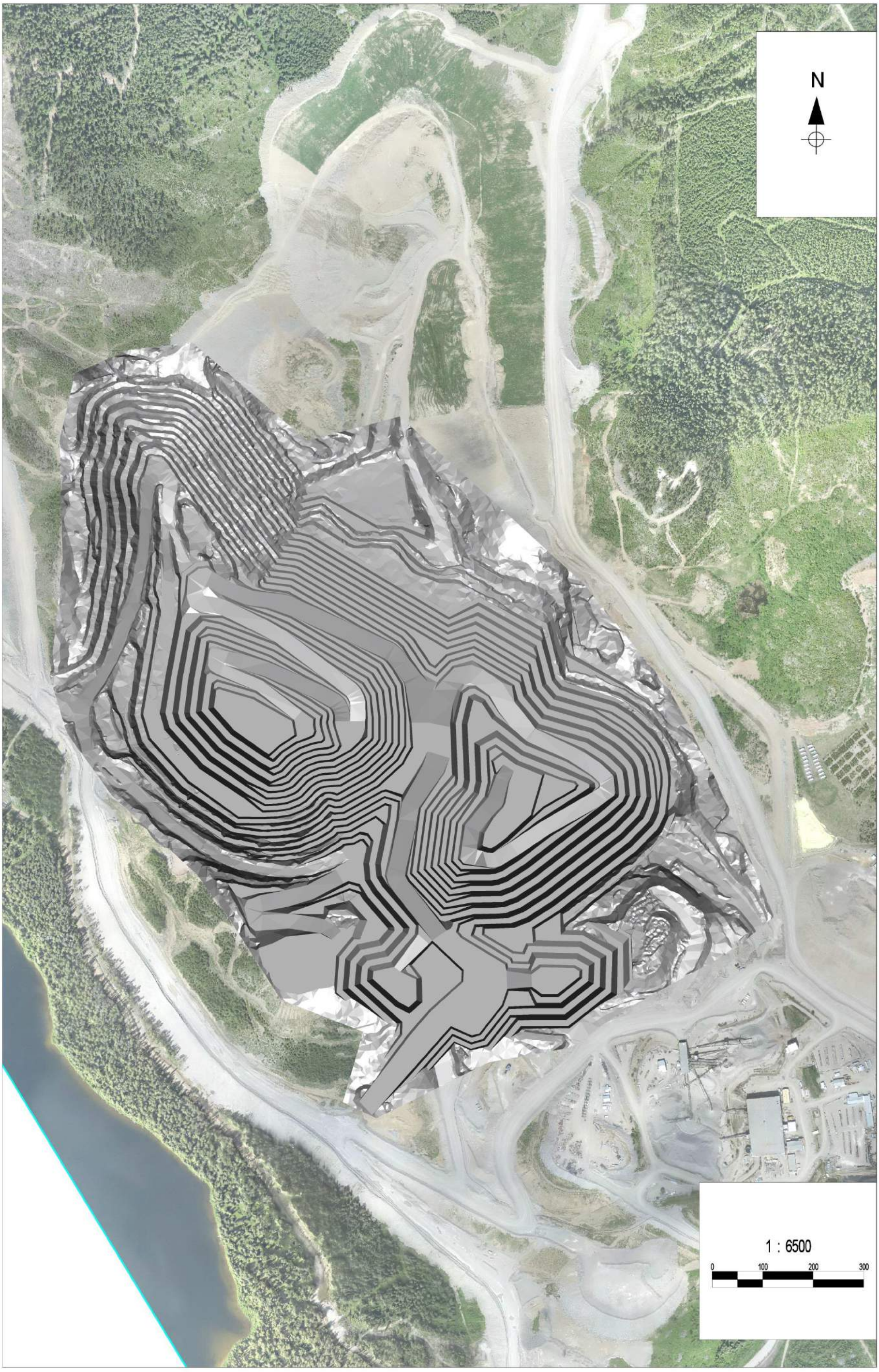

Figure 2.1.3: Final Phase 4 Cariboo-Springer Pit Configuration

Figure 2.1.4: Existing Boundary Pit Configuration

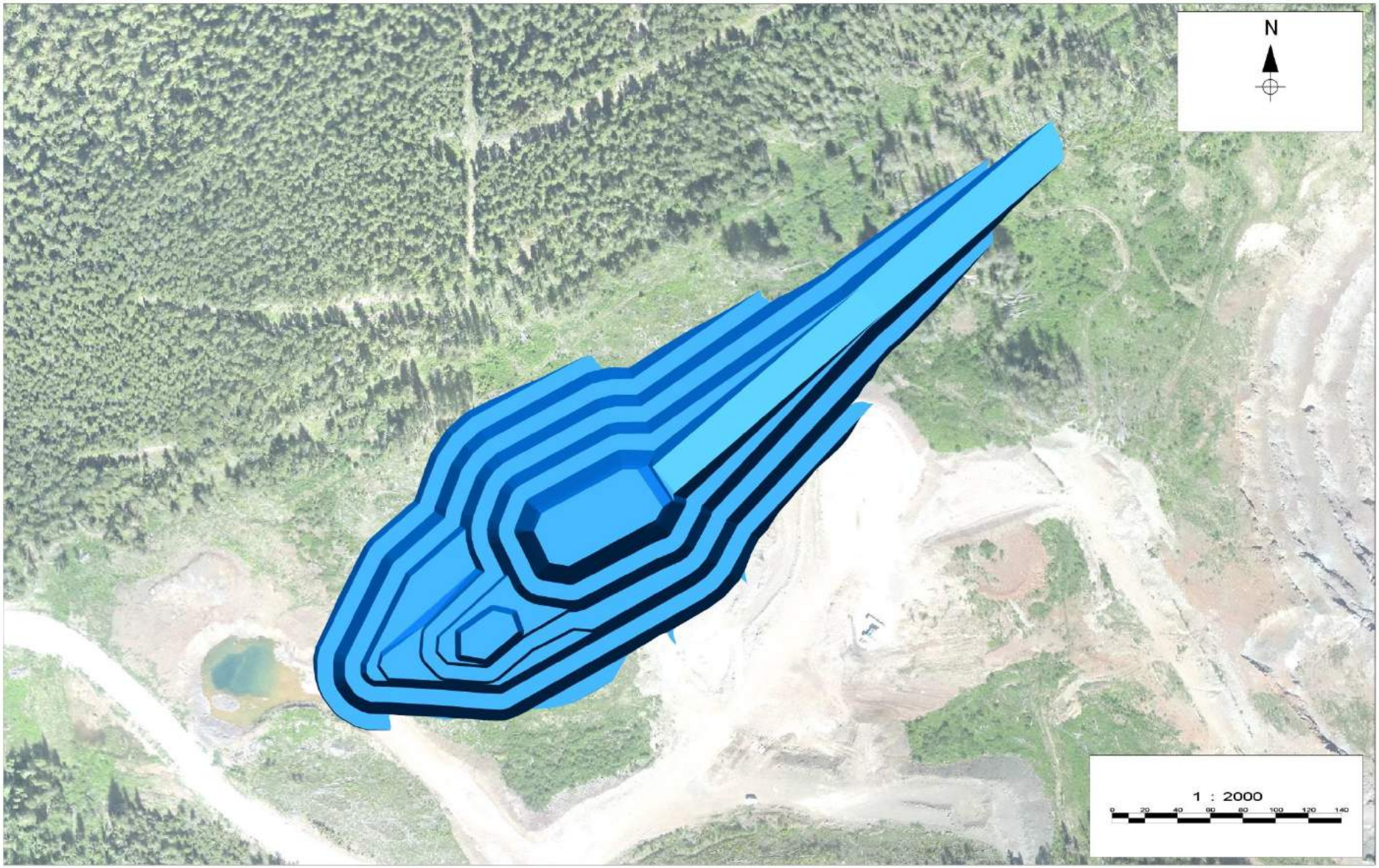

Figure 2.1.5: Final Boundary Pit Configuration

2.2 MATERIAL MANAGEMENT

NAG waste rock mined under operating conditions will be either placed at the Southeast Rock Dump Site (SERDS) or, alternatively, used for on-site projects or as buttress materials around the TSF. PAG waste rock will continue to be characterized according to the current Acid-Base Accounting (ABA) sampling regime, and placed on the Temporary NW PAG Stockpile before being re-handled into the pits at the end of the mine life.

The exact amount of stockpiled ore milled during the pre-closure period will depend on the volume available in the 970 masl TSF and the amount of stockpile ore which is generated prior to this point. It is currently expected that 5,310,000 t of stockpile ore will be milled (with approximately 6,000,000 t remaining in stockpiles); although this scheduling would be re-evaluated based on material management requirements and economic considerations in a closure condition. As required by the July 9, 2015 Permit M-200 amendment condition, MPMC retained SRK Consulting (SRK) to conduct an assessment of metal leaching and acid rock drainage (ARD) potential from ore stockpiles; a copy of this report is included as Appendix C of the *Mine Reclamation and Closure Plan Update November 2015*, which forms part of this Application submission.

A summary of expected quantities of different material types generated and handled during the mine life is provided in Table 2.2.1. Dump locations are shown in Figure 2.2.1.

Table 2.2.1 Mine plan material tonnages

Material Type	**Quantity**
NAG Waste	40,000,000 t
PAG Waste Rehandled at Closure	24,250,000 t*
New Ore Stockpiled	3,550,000 t
Tailings Moved from Springer Pit to TSF	4,000,000 t**
Ore Direct to Mill from Pits and Underground	24,600,000 t**
Stockpile Ore Processed Over Entire Period	5,310,000 t**
Total Ore Processed	**29,910,000t**

*includes PAG generated from restricted operations and return to full operations
**denotes material to be deposited in the TSF for the 970 masl configuration

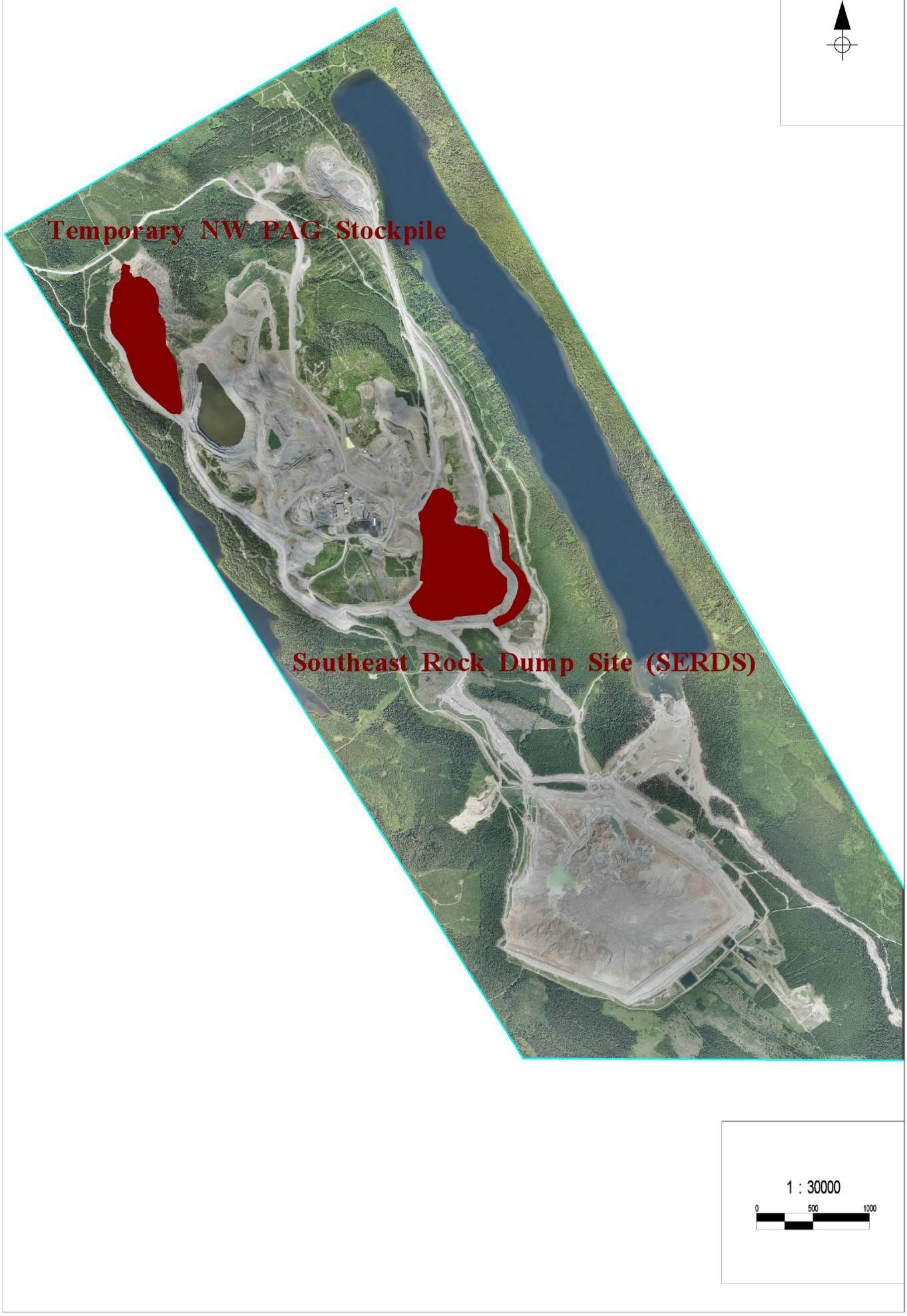

Figure 2.2.1: Dump Locations

2.3 PROCESS WATER

For the resumption of full operations, the TSF is assumed to be operational in May 2016, with tailings deposition in the Springer Pit ceasing and deposition in the TSF commencing.

2.3.1 RESTRICTED OPERATIONS

Process water for the Mill is sourced primarily from the Central Collection Sump (CCS), which receives water from a variety of locations depending upon the season and site water management conditions. Water is pumped from the CCS to the Booster Station and from the Booster Station to the Mill process water tank. From the Mill process water tank, water required for process is be directed to the Mill, with surplus water reporting to the tailings line and, ultimately, to the Springer Pit.

Pumping capacity is available in the Springer Pit to provide sufficient water to the CCS as required to continually supply the Mill and to provide raw feed water for the water treatment plant installed as part of the short-term water management plan.

Active mining of the Cariboo Pit will require the continued draw-down of the water stored therein. This water may be used to supplement process water for milling operations, and will ultimately be directed to the Springer Pit.

2.3.2 FULL OPERATIONS

During full operations, the Mill process water source will transition from the CCS to the TSF reclaim barge, the latter of which will be re-installed in the TSF. Both the CCS and the TSF reclaim barge would receive water from a variety of locations depending upon the season and site water management conditions. Water would be pumped from the CCS or TSF reclaim barge to the Booster Station and from the Booster Station to the Mill process water tank. From the Mill process water tank, any water required for the process will be directed to the Mill, with surplus water reporting to the tailings line, and ultimately, to the TSF.

A minimum TSF pond volume of one million m^3 will be targeted for the operation of reclaim pumps for processing requirements. The TSF Operation,

Maintenance and Surveillance (OMS) Manual will be updated to reflect this revised process water infrastructure configuration.

Further detail on water management through the restricted and resumed (full) operations phase is provided in the *Mount Polley Mining Corporation Cariboo-Springer Pit Phase 4 Water Management Plan (TSF 970 m Design)*, which forms part of this Application submission.

2.4 TAILINGS DEPOSITION

Currently, a 24" high-density polyethylene (HDPE) conveys tailings by gravity from the Mill to the Springer Pit. For a return to full operations with deposition in the TSF, a 24" HDPE tailings pipe will be re-installed from the Mill to the TSF along the previous (pre-tailings dam failure) configuration. The tailings line will be placed on a continuous downhill gradient, allowing for gravity conveyance of tailings from the Mill to the TSF. The containment ditch and inspection route along the pipe alignment will be maintained, including sufficient containment and conveyance for spills or leaks from the tailings line. The TSF OMS Manual will be updated to reflect this revised tailings deposition infrastructure configuration.

Details of the TSF tailings deposition planning through operations is provided in the *Mount Polley Mine Tailings Storage Facility Detailed Design to Elevation 970 m*, which forms part of this Application submission.

3 SITE WATER MANAGEMENT

Following the tailings dam failure, MPMC has no permitted discharge, and all contact water is being stored in the Springer Pit. However, the mine site continues to have a positive water balance and the Springer Pit has a finite capacity. Golder estimates that once the pit water elevation reaches approximately 1,030 masl, the water will exfiltrate to the groundwater and discharge towards Bootjack Lake. At 1,050 masl the Springer Pit will overflow. There is, therefore, some urgency to developing a system for treatment and discharge of site contact water. For this reason, MPMC has applied for an amendment to Permit 11678 (along with the required supporting permits and authorizations) for a short-term water discharge to be utilized in the interim, while consultation and planning is carried out to develop a long-term water management strategy.

3.1 SHORT-TERM WATER MANAGEMENT PLANNING

On July 16, 2015, MPMC applied to the MoE for an amendment to Permit 11678 to allow short-term (maximum two year) discharge of treated mine effluent to Quesnel Lake via the Hazeltine Creek channel which has been constructed and armoured, but is not appropriately rehabilitated to allow return of fish to the system (i.e., is not fish bearing).

The proposed short-term water management plan is to direct mine contact water to the Perimeter Embankment Till Borrow Pond (PETBP), primarily by pumping water from the Springer Pit to the West Ditch (which has been armoured to reduce erosion). The West Ditch gravity feeds to the CCS (via the SERDS Ditch), and the CCS will be allowed to gravity flow to the PETBP. This water will then undergo suspended solids removal using Veolia ACTIFLO® water treatment technology prior to discharge to upper Hazeltine Creek and conveyance in the reconstructed, non-fish bearing, Hazeltine creek channel. In lower Hazeltine Creek, the water will be transferred into Quesnel Lake from Hazeltine Creek Pond #1 via intake structures that feed two pipelines with diffusers. The planned water discharge will have flow rates of up to 0.3 m^3/s, be continuous (year-round), and be operational for a maximum of two years, during which time the long-term strategy is planned to be implemented.

Construction of required pipelines and diffusers, and procurement of water treatment infrastructure was completed prior to October 30, 2015, as required by the July 9, 2015 Permit M-200 amendment. It is anticipated that an amended effluent permit from MoE will be received in early November, allowing discharge to commence.

3.2 LONG-TERM WATER MANAGEMENT PLANNING

As noted above, MPMC is developing a long-term water management strategy in parallel with implementation of the short-term water management plan, the latter of which will only be operational for a maximum of two years. MPMC is required by the MoE under Permit 11678 to complete a draft Technical Assessment Report for a long-term water management plan by June 30, 2016.

Given that this long term water management plan is currently under development and continued consultation is required, MPMC has made some preliminary assumptions to allow predictions of long-term effluent quality and quantity for closure. It is anticipated that this long term water management plan will be adjusted through the consultation and regulatory review process. The preferred option for closure is to have passive treatment systems distributed around the site, such that there will be minimal operation and maintenance requirements, and water will flow back into its pre-mining watercourse and/or watershed.

For the mine plan, the Springer Pit will be dewatered progressively over time to reduce surplus water storage on site, to facilitate the transfer (either as slurry or as mined tailings) of the tailings which have been deposited in the Springer Pit during restricted operations to the TSF, and to facilitate mining of the Phase 4 Cariboo-Springer Pit. Tailings transfer to the TSF (~4,000,000t) is scheduled to occur between the fourth quarter of 2017 and third quarter of 2018. During resumed operations in the Phase 4 Cariboo-Springer Pit, groundwater and runoff inflow will be managed to facilitate mining objectives.

Due to large freshet volumes, it will be necessary to utilize the TSF for temporary detention; however, a principal objective of the water management plan is not to accumulate water on site, and to not carry over water year-to-year. Golder was retained to model water management over the course of the restricted operations, return to full operations and into closure. Modelling completed for the mine plan indicates that, under average climate conditions, the peak TSF free water volume is within the normal operating range, and is not projected to exceed 1.5 million (M) m^3 (including the one Mm^3 minimum operating volume). This increases to a peak volume of 2.0 Mm^3 in the 1-in-10 wet year freshet and a peak volume of 3.3 Mm^3 in the 1-in-200 wet year freshet. To allow temporary detention of freshet volumes in the TSF, MPMC will be pursuing a Permit M-200 amendment.

Further detail on water management through the restricted operations, resumed (full) operations phase and into closure is provided in the *Mount Polley Mining Corporation Cariboo-Springer Pit Phase 4 Water Management Plan (TSF 970 m Design)*, which forms part of this Application submission.

4 INFLUENCE ON EXISTING CLOSURE PLANS

MPMC submitted a Mine Reclamation and Closure Update on September 30, 2015, reflecting projected site conditions at the end of the permitted return to restricted operations. MPMC has reviewed the projected site conditions at the end of operations, as outlined in this Application, and provided a *Mine Reclamation and Closure Plan Update November 2015* document in support. Key points from this updated submission are highlighted below.

4.1 LONG-TERM DISPOSAL OF PAG ROCK

Currently, the total quantity of PAG rock which is projected to be generated under the restricted operations is 18,500,000 t. Conditions of Permit M-200 limit the total authorized mass to this same figure. If completed, this mine plan (combination of restricted operations and full operations) would result in a total of 24,250,000 t of PAG stored in the Temporary NW PAG Stockpile at closure. This mass of rock does not significantly increase the relative (disturbance) size of the Temporary NW PAG Stockpile, with the disturbance footprint reporting to existing mine contact water collection systems

Current permits require that this material be re-handled for subaqueous disposal at the closure of the mine to prevent the onset of acid generation. Estimated average onset times for potential acid generation of this rock, due to the high carbonate content of the rock, are in the order of 100 years and greater. PAG rock, stored in the Temporary NW PAG Stockpile, has been in place for between one (1) and four (4) years. Accordingly, there is no current requirement to move the stockpiled material; however, it must be ensured that sufficient space does remain on site for the subaqueous disposal of this material prior to closure: the planned disposal location for this material being the Springer Pit. For the subaqueous disposal of PAG rock, water would need to be removed from the Springer Pit, with or without the return to a full operating condition. As such, management of water accumulation in the Springer Pit is required to be addressed through contact water discharge from site.

The lake which will form in the current configuration of the Springer Pit, realized during pit outflow at the 1,050 masl elevation, has a calculated submerged volume of approximately 14,800,000 m^3. The stockpile of PAG rock at the completion of restricted operations is projected to be 18,500,000 t, and would require approximately 9,250,000 m^3 of volume. The total volume of placed tailings (including interstitial water) in the Springer Pit, if the full 4,000,000 t of material is milled under this restricted operating scenario, would amount to roughly 2,900,000 m^3. In the scenario that the mine did not

operate past the restricted operations phase, and tailings were not mined from the Springer Pit, the volume of deposited tailings, combined with the required storage volume for the projected Temporary NW PAG Stockpile (9,250,000 m^3), would result in a total required storage volume of 12,150,000 m^3. With an available storage volume of 14,800,000 m^3 in the Springer Pit below the 1,050 masl spill elevation, this would result in an available water storage volume of 2,650,000 m^3 above the PAG rock; enough to ensure that the rock is fully submerged as planned in a site closure scenario.

If the mine plan outlined in this Application was pursued to completion, the total PAG storage required would increase to 24,250,000t, or 12,125,000m^3. If the volume of PAG material projected to be generated upon completion of the mine plan were to be backhauled to the Phase 4 Springer Pit, the final elevation of the PAG would be 1,028 masl. With the final spill elevation at 1,050 masl, this would ensure that rock is fully submerged as planned in a site closure scenario.

PAG rock will gradually be deposited into the Springer Pit upon the completion of open-pit mining activities. Upon deposition of the PAG material, dewatering of the Springer Pit will cease, and water will be allowed to accumulate. Under normal filling conditions, the PAG material would not be fully submerged until post-closure; however, this aspect of water management may be refined to meet site water management (quality and quantity) objectives. Phase 4 Cariboo-Springer Pit water dewatering and filling modelling is included in *Mount Polley Mining Corporation Cariboo-Springer Pit Phase 4 Water Management Plan (TSF 970 m Design)*, provided in support of this Application.

Figure 4.1.1 depicts the projected final configuration of the Temporary NW PAG Stockpile.

4.2 NAG WASTE MANAGEMENT

Expected production rates, as outlined in this Application, would generate approximately 40,000,000t of NAG rock. Of this waste rock, a significant, amount would be used in the buttressing and raising of the TSF, with surplus or unsuitable rock being placed in either the SERDS, or to continue the development of the previously permitted Tailings Dam Access Road (TDAR). This mass of rock does not significantly increase the relative size of the SERDS. For any of the projected NAG waste rock dump locations (SERDS, TSF or TDAR), material would be stored within disturbance footprint reporting to mine contact water collection systems. Figure 4.2.1 depicts the projected final configuration of the SERDS.

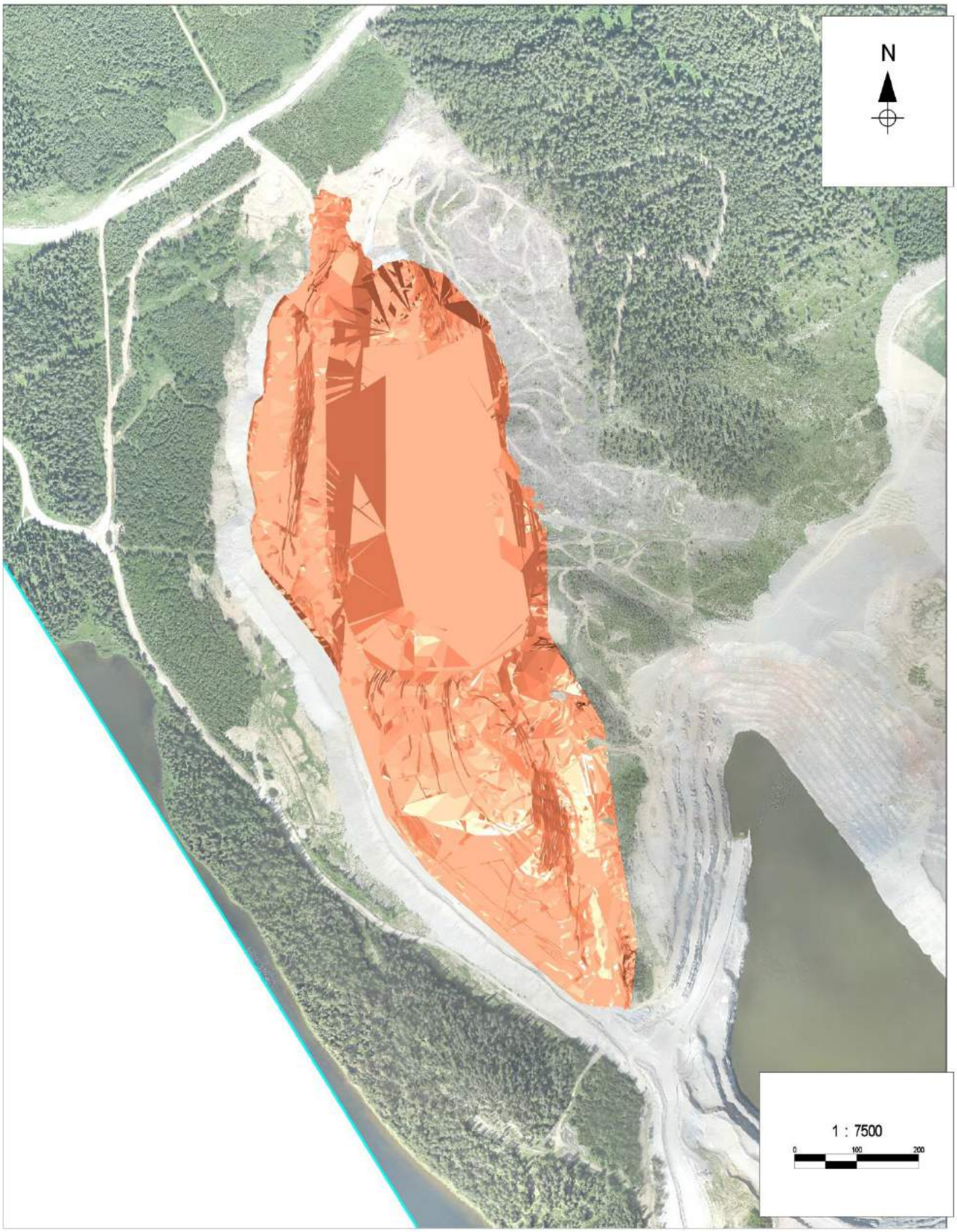

Figure 4.1.1: Final Temporary NW PAG Stockpile Configuration

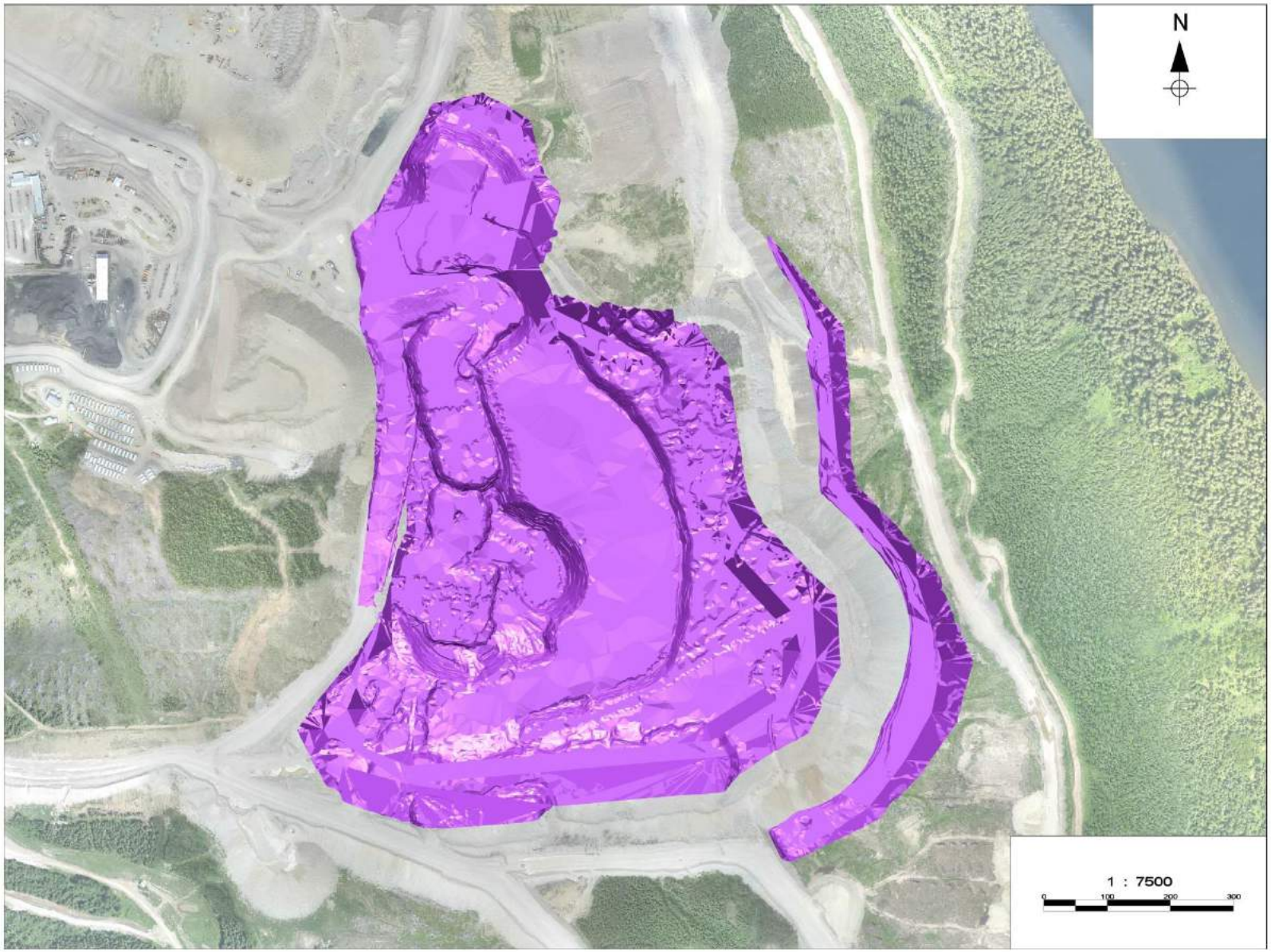

Figure 4.2.1: Final SERDS Configuration

4.3 RECLAMATION FOOTPRINT

Due to the relatively low volumes of rock outlined in this plan, and the established nature of the pits, waste dumps and TSF at the Mount Polley Mine, the changes to the reclamation footprint are not significant. The current disturbance footprint of the mine is 1,245.43 hectares (ha), with 76.76 ha currently undergoing progressive reclamation. The projected closure footprint for the mine plan is 1,277.02 ha, a total increase of 31.59 ha over the existing site footprint; 89.55 ha of the closure footprint is projected to form lakes (Boundary Pit, Phase 4 Cariboo-Springer Pit, Wight Pit and TSF Pond). An additional 7.07 ha may be disturbed for the TDAR construction, which is permitted, but construction of which will depend on haulage efficiencies and economics realized by MPMC.

Details on reclamation and closure planning are included in the *Mine Reclamation and Closure Plan Update November 2015*, provided in support of this Application, and reflecting projected conditions of the site following completion of the proposed mine plan. Changes in disturbed areas realized as part of this mine plan are summarized in Table 4.3.1.

Table 4.3.1: Changes in Disturbance Areas

Area Type	Current Area (ha)	Closure Area (ha)	Change in Area (ha)	Change in Area (Unit, ha)	
Dumps					
North Bell Dump	62.54	54.35	-8.19	Springer Pit	-8.19
SERDS	109.45	110.45	1.00	SERDS Stockpile	0.71
				New disturbed area	**0.29**
Temporary NW PAG Dump	78.50	81.11	2.61	**New disturbed area**	**2.61**
Pits					
Boundary Pit	12.17	15.28	3.11	**New disturbed area**	**3.11**
Springer Pit	128.58	178.50	49.92	#1 Stockpile	14.45
				North Bell Dump	8.19
				Ore Switchback Road	0.37
				West Haul Road	1.33
				New disturbed area	**25.58**
Stockpiles					
#1 Stockpile	17.10	2.85	-14.25	Springer Pit	-14.45
				Crusher Road	0.20
SERDS Soil Stockpile	11.86	11.15	-0.71	SERDS	-0.71
Roads					
Crusher Road	2.31	2.11	-0.20	#1 Stockpile	-0.20
Ore Switchback Road	11.69	11.32	-0.37	Springer Pit	-0.37
West Haul Road	71.34	70.01	-1.33	Springer Pit	-1.33

Table 4.3.2 outlines current disturbed and reclaimed areas (organized by individual feature and disturbance type), and also includes the projected closure areas at the completion of the activities as outlined in the mine plan.

Table 4.3.2: Reclamation Areas

Area	End Land Use	Existing Area	Closure Area	Reclaimed Area (Recountontoured)	Lake Area	Remaining Area
		(ha)	(ha)	(ha)	(ha)	(ha)
Dumps						
~~Bell Dump~~	Wildlife/Forestry	-	-	-	-	-
Boundary Dump	Wildlife/Forestry	5.35	5.35	4.70	-	0.65
East RDS	Wildlife/Forestry	51.33	51.33	6.09	-	45.24
Highway to Heaven	Wildlife/Forestry	16.45	16.45	6.58	-	9.87
NEZ Dump	Wildlife/Forestry	23.03	23.03	5.13	-	17.90
North Bell Dump	Wildlife/Forestry	62.54	***54.35***	26.97	-	27.38
SERDS	Wildlife/Forestry	109.45	***110.45***	-	-	110.45
Temporary NW PAG Stockpile	Wildlife/Agroforestry	78.50	***81.11***	-	-	81.11
Total		**346.65**	**342.07**	**49.47**	**-**	**292.60**
Pits						
Boundary Pit	Pit Walls/Lake	12.17	***15.28***	-	6.37	8.91
~~C2 Pit~~	N/A	-	-	-	-	-
~~Caribou Pit~~	N/A	-	-	-	-	-
~~Pond Zone Pit~~	N/A	-	-	-	-	-
TSF Quarry	Pit Walls/Lake	11.25	11.25	-	-	11.25
~~SEZ Pit~~	N/A	-	-	-	-	-
Springer Pit	Pit Walls/Lake	128.58	***178.50***	-	49.69	128.81
Wight Pit	Pit Walls/Lake	38.66	38.66	-	1.46	37.20
Total		**190.66**	**243.69**	**-**	**57.52**	**186.17**
Stockpiles						
#1 Stockpile	Wildlife/Forestry	17.10	***2.85***	-	-	2.85
Biosolids	Wildlife/Forestry	2.79	2.79	-	-	2.79
High Ox Stockpile	Wildlife/Forestry	10.40	10.40	-	-	10.40
Mount Polley Soil	Wildlife/Forestry	4.17	4.17	-	-	4.17
NEZ Soil	Wildlife/Forestry	9.52	9.52	-	-	9.52
Ore Stockpile	Wildlife/Forestry	7.17	7.17	-	-	7.17
Pond Zone	Wildlife/Forestry	2.81	2.81	-	-	2.81
SERDS Soil Stockpile	Wildlife/Forestry	11.86	***11.15***	-	-	11.15
Tailings Soil	Wildlife/Forestry	2.95	2.95	-	-	2.95
Total		**68.77**	**53.81**	**-**	**-**	**53.81**
Roads						
Boundary/Wight Pit Connector Road	Wildlife/Forestry	1.69	1.69	-	-	1.69
Crusher Road	Wildlife/Forestry	2.31	***2.11***	-	-	2.11
Mill/TSF Connector Road	Wildlife/Forestry	17.33	17.33	-	-	17.33
New Access Road	Wildlife/Forestry	29.21	29.21	-	-	29.21
~~Old Mine Access Road (Bootjack) - Mine Component~~	N/A	-	-	-	-	-
~~Old Pond Zone Road~~	N/A	-	-	-	-	-
Old Tailings Haul Road	Wildlife/Forestry	12.47	12.47	-	-	12.47
Old Wraparound Road	Wildlife/Forestry	11.16	11.16	-	-	11.16
Ore Switchback Road	Wildlife/Forestry	11.69	***11.32***	-	-	11.32
Polley Lake Access Road	Access Road	0.71	0.71	-	-	0.71
Waste Haul Road	Access Road	71.34	**70.01**	1.81	-	68.20
Wight Pit Haul Road	Access Road	14.40	14.40	-	-	14.40
Wight Pit/Tailings Road	Access Road	17.75	17.75	-	-	17.75
Total		**190.06**	**188.16**	**1.81**	**-**	**186.35**
TSF						
Corner 4 to Corner 5	Wildlife	11.34	11.34	-	-	11.34
Corner 4 to Corner 5 Light Duty Access Road	Access Road	5.71	5.71	-	-	5.71
East Till Borrow	Wildlife/Agroforestry	27.56	27.56	-	-	27.56
Hazeltine Discharge Pipe Grade	Wildlife/Forestry	6.86	6.86	-	-	6.86
Main Embankment	Access Road	7.88	7.88	-	-	7.88
Perimeter Embankment	Access Road	33.21	33.21	-	-	33.21
South Embankment	Access Road	8.03	8.03	-	-	8.03
Southeast Till Borrow	Wildlife/Agroforestry	26.27	26.27	23.95	-	2.32
~~Tailings Pipe Grade~~	N/A	-	-	-	-	-
TSF - South and Main Ponds	Wildlife/Agroforestry	32.62	32.62	-	-	32.62
TSF - Southwest Pond	Wildlife/Agroforestry	3.83	3.83	-	-	3.83
TSF Surface	Wildlife - Forested Wetland	213.53	213.53	-	32.03	181.50
Total		**376.84**	**376.84**	**23.95**	**32.03**	**320.86**
Miscellaneous						
Geology Area	Wildlife/Forestry	2.83	2.83	-	-	2.83
Helipad	Wildlife/Forestry	3.13	3.13	1.53	-	1.60
Hydro Line	Wildlife/Forestry	3.29	3.29	-	-	3.29
Long Ditch	Watercourse	8.84	8.84	-	-	8.84
Mill Area	Wildlife/Forestry	21.35	21.35	-	-	21.35
~~Northwest PAG Ditch~~	N/A	-	-	-	-	-
~~Old Dispatch~~	N/A	-	-	-	-	-
Old Orica Sites	Wildlife/Forestry	1.87	1.87	-	-	1.87
South SERDS Ditch	Watercourse	2.74	2.74	-	-	2.74
Warehouse Area	Wildlife/Forestry	14.01	14.01	-	-	14.01
West Ditch	Watercourse	14.39	14.39	-	-	14.39
Total		**72.45**	**72.45**	**1.53**	**-**	**70.92**
	Total:	**1,245.43**	**1,277.02**	**76.76**	**89.55**	**1,110.71**

Notes: ***Bold Italics*** indicates a change in disturbed area (increase or decrease) between current and projected closure areas.
All of these areas are as per May 27, 2015 Drone Survey.
Areas considered part of the tailings dam failure remediation are not included.
Wildlife includes secondary end landuses associated with wildlife (hunting, trapping, etc.)

4.4 COSTING

Areas outlined in in Section 4.3, as updated on an annual basis, are used in the development of an Asset Retirement Obligation (ARO) calculation for the Mount Polley Mine (also updated an annual basis). Costing for reclamation of disturbed areas is calculated for cases using 'internal' (i.e., MPMC equipment and operators) and 'external' (i.e., contractor equipment and operators) scenarios. Reclamation costing considers re-sloping of disturbed areas, soil application, soil surface preparation, re-vegetation and lump sum closure items such as sealing of underground openings and construction of fences and spillway structures. Reclamation costing is combined with closure-scenario liabilities for re-handling of PAG materials for subaqueous disposal, and submitted to the MEM as part of the Annual Environmental and Reclamation Report (AERR), copies of the AERR also provided to the MoE and First Nations and publically available to stakeholders. The provided reclamation and PAG re-handle information is used in the calculation of bonding requirements required for the Mount Polley Mine, as set by the MEM.

For projected site conditions at closure, costing does not include reclamation work for Hazeltine Creek as this is part of independent liability calculations. Table 4.4.1 provides a summary of the 'internal' and 'external' reclamation costs for closure after completion of the mine plan as outlined in this Application.

Table 4.4.1: Reclamation Costing Summary

Reclamation Costing Scenario	Site Reclamation	PAG Re-handling
'Internal'	$8,000,000	$12,125,000
'External'	$8,800,000	$12,125,000

5 ADDITIONAL CONSIDERATIONS

Open pit reserves exist at Mount Polley beyond the Phase 4 Cariboo-Springer Pit. These reserves have not, however, been included in the mine plan included in this Application because the storage of the tailings generated by the remaining reserve base would require additional storage in the TSF beyond the 970 masl design capacity. Relevant permits for this mining and tailings management will be sought when sufficient planning and engineering has been completed. Should such permits be sought and received prior to the capacity of the 970 masl TSF design capacity being consumed, it is possible that some of the capacity inside the 970 masl TSF design could be used to store tailings generated from processing Phase 5 Cariboo-Springer Pit ore, with processing of the stockpile ore being deferred to the then-revised end of mine life.

5.1 TAILINGS MANAGEMENT

MPMC retained Golder to complete a review of tailings management for the Mount Polley Mine as part of the evaluation process for the proposed return to full operations. Golder completed a site and methodology scoping exercise reviewing best available technology (BAT) and best applicable practice (BAP) for tailings management for the Mount Polley Mine. This study considered both the return to full operations outlined in this Application and the additional reserves as discussed above. This study recommended use of the existing TSF with conventional slurry deposition for continued operation at the Mount Polley Mine in both the return to full operations and for future development of the approximately ten year reserve base. This document, *Mount Polley Mine Tailings Storage Facility Life of Mine Feasibility Study* is provided in support of this Application.

5.2 MOUNT POLLEY INDEPENDENT EXPERT ENGINEERING INVESTIGATION AND REVIEW PANEL RECOMMENDATIONS

The MEM has indicated to MPMC through a letter, *Re: Consideration of Expert Review Panel Report Recommendations*, dated October 14, 2015, that, as part of the anticipated application for a return to full operations with tailings deposition in the TSF, it was the MEM's expectation that, "MPMC and Golder Associates Ltd. will consider and fully address recommendations 1 through 5 of the ERP [Mount Polley Independent Expert Engineering Investigation and Review Panel Recommendations] in the updated design and *Mines Act* permit amendment application." Included below is a discussion of these recommendations:

1) To implement BAT using a phased approach

As part of the feasibility study completed by Golder, a review of BAT was completed, and is presented in the *Mount Polley Mine Tailings Storage Facility Life of Mine Feasibility Study*, provided in support of this Application.

Conclusions from the feasibility study, including the review of BAT, were used in the detailed design of the 970 masl TSF, and are presented in the *Tailings Storage Facility Detailed Design to Elevation 970 m*, provided in support of this Application.

2) To improve corporate governance

MPMC is a member of the Mining Association of Canada (MAC), and participates in the Towards Sustainable Mining (TSM) program. TSM is the MAC's (and as a member, MPMC's) commitment to responsible mining. It is a set of tools and indicators to drive performance and ensure that key mining risks are managed responsibly at facilities.

Following the tailings dam failure, MPMC reviewed its TSM assessment for tailings management and had its first external verification completed on 2013 TSM self-reporting. External verification completed in 2015 based on the 2013 internal report verified Level 'A' across all indicators for tailings management. Level 'A' is defined as: "systems/processes, in conformance the tailings management framework as presented in MAC's *A Guide to the Management of Tailings Facilities* are development and implemented". Across the tailings management indicators, Level 'A' is used to represent effective implementation of TSM.

3) To expand corporate design commitments

a. A detailed evaluation of all potential failures modes and management scheme for all residual risk.

An evaluation of failures modes has been performed, and is as included in the feasibility study and detailed design documents provided in support of this Application.

b. Detailed cost/benefit analyses of BAT tailings and closure options so that economic effects can be understood, recognizing that the results of the cost/benefit analyses should not superseded BAT safety considerations.

Cost/benefit analyses of BAT tailings and closure options have been performed, and are as included in the feasibility study and detailed design documents provided in support of this Application.

c. A detailed declaration of Quantitative Performance Objectives (QPOs).

QPOs have been included within the design criteria evaluated and are included in the feasibility study and detailed design documents provided in support of this Application.

4) To enhance validation of safety and regulation of all phases of a TSF (utilization of Independent Tailings Review Boards)

MPMC has an active Independent Engineering Review Panel. Reports from the MPMC Independent Engineering Review Panel are shared with regulators, First Nations and stakeholders.

5) To strengthen current regulatory operations

MPMC notes that this condition pertains to regulatory operations, but confirms that the review of potential failures modes associated with undrained shear failure of silt and clay foundations, water balance adequacy and filter adequacy have been reviewed as part of the feasibility and detailed design of the TSF, and in water management planning.

In support of this Application, MPMC refers to the following documents that have been prepared by MPMC and Golder:

- Mount Polley Mine Tailings Storage Facility Detailed Design to Elevation 970 m
- Mount Polley Mining Corporation Cariboo-Springer Phase 4 Water Management Plan (TSF 970 m Design)
- Mine Reclamation and Closure Plan Update November 2015
- Mount Polley Mine Tailings Storage Facility Life of Mine Feasibility Design