TECHNICAL REPORT ON THE MINERAL RESERVE UPDATE AT THE GIBRALTAR MINE

BRITISH COLUMBIA, CANADA

QUALIFIED PERSON:
Richard Weymark, P.Eng., MBA

Effective date: November 6, 2019

Report date: November 6, 2019

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SUMMARY

SECTION 1: SUMMARY

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1.1 Introduction

The purpose of this report is to update the mineral reserves at Gibraltar as a result of mining depletion since 2015, resource model updates resulting from incremental infill drilling, and an updated long range mine plan based on current Gibraltar costs and demonstrated performance.

The resource and reserve estimation was completed by Taseko and Gibraltar Mine staff under the supervision of Richard Weymark, P. Eng., Chief Engineer, Taseko and a Qualified Person under National Instrument 43-101.

All costs are in Canadian dollars (C$) and units are imperial unless stated otherwise.

1.2 Property Location & Description

The Gibraltar open pit mine and related facilities are located 65 km north of the town of Williams Lake and are centred at latitude 52º 30'N and longitude 122º 16'W in the Cariboo Mining Division. Williams Lake is approximately 590 km north of Vancouver, British Columbia. A location map is provided in Figure 1.1.

The Gibraltar Mine consists of The Gibraltar Mine consists of 212 mineral claims comprising 19,815 hectares and 32 mining leases comprising 2,275 hectares.

1.2 Property Location & Description – *Cont'd*

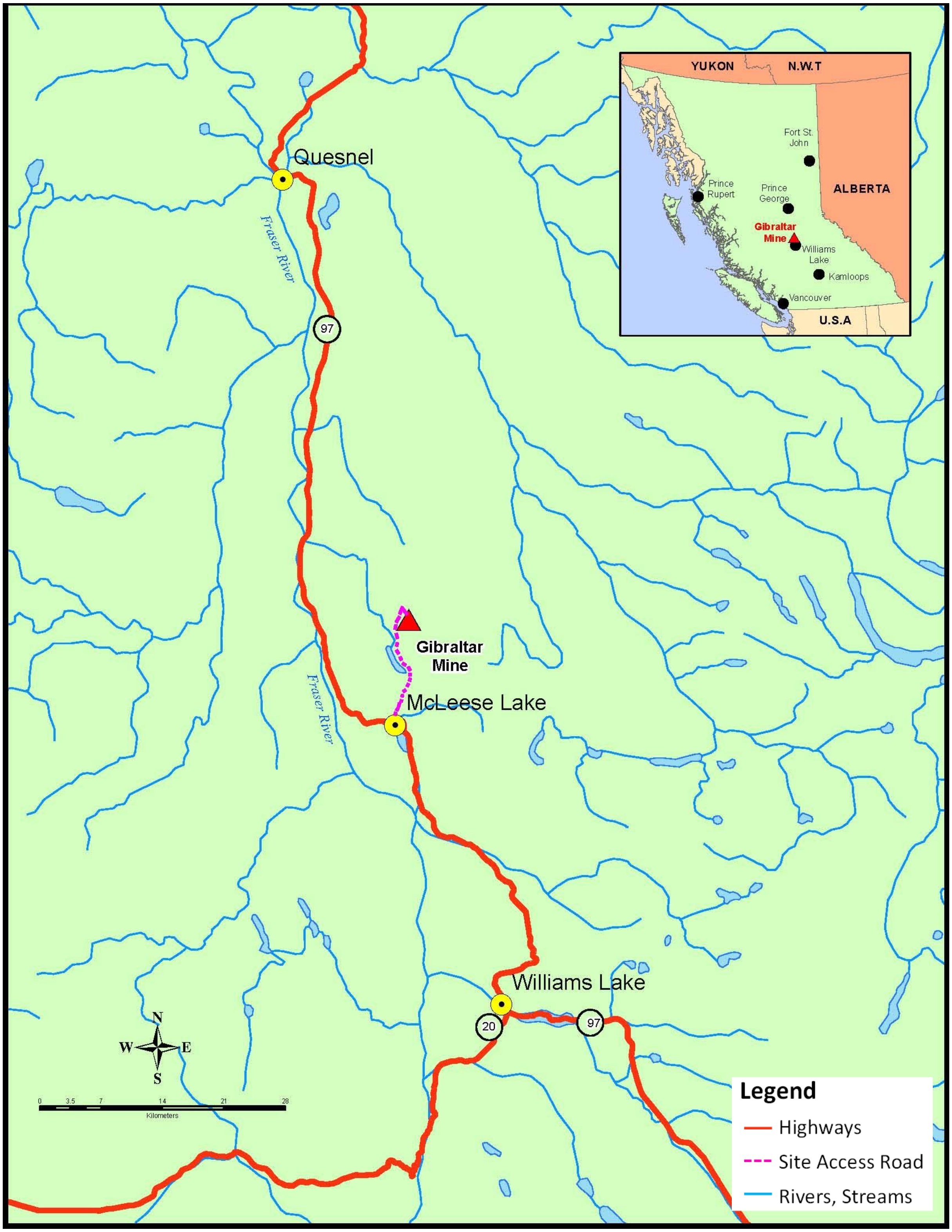

Figure 1.1: Location Map

1.2 Property Location & Description – *Cont'd*

The current mine site configuration is shown in Figure 1.2, looking north.

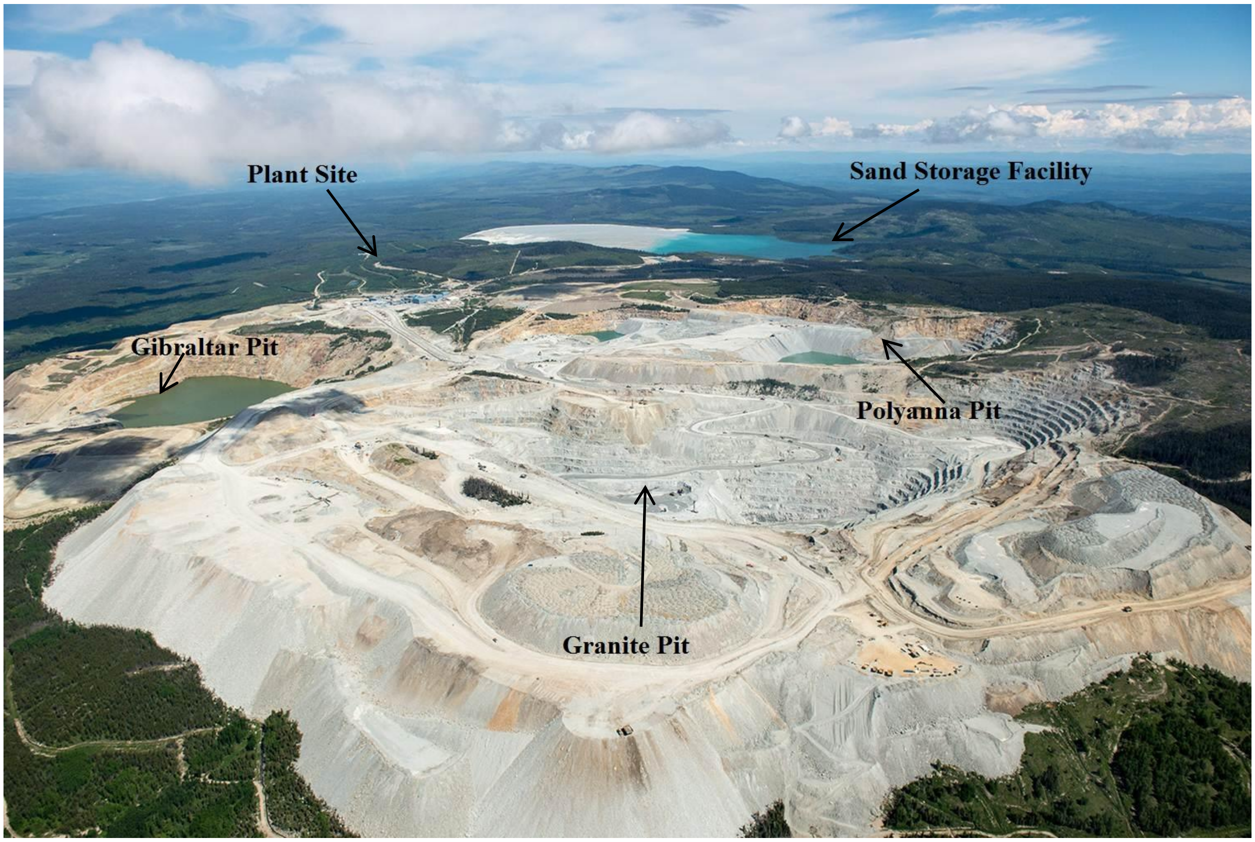

Figure 1.2: Mine Site Configuration

1.3 History

In 1964, Gibraltar Mines Ltd. (Gibraltar) acquired a group of claims in the McLeese Lake area from Malabar Mining Co. Ltd.

Canadian Exploration Limited (Canex), at that time a wholly-owned subsidiary of Placer Development (Placer), and Duval Corporation (Duval) had also been exploring on claims known as the Pollyanna Group which they had acquired adjacent to Gibraltar's claims. In 1969 Canex and Duval optioned the Gibraltar property. In 1970 Canex acquired Duval's remaining interest to hold both properties.

Placer began construction of the mine in October 1970. The concentrator commenced production on March 8, 1972 and was fully operational by March 31, 1972.

In October 1996, Westmin Resources Limited (Westmin) acquired 100% control of Gibraltar and in December 1997, Boliden Limited acquired Westmin. In March 1998, Boliden announced that it would cease mining operation at Gibraltar Mine at the end of 1998.

Taseko acquired its’ interest in the assets of Gibraltar in a transaction with Boliden in July 1999. After a period of care and maintenance, mining operations recommenced in May 2004. Milling production began in October of that year.

On March 31, 2010, the Company established a joint venture with Cariboo Copper Corp. (“Cariboo”) over the Gibraltar mine, whereby Cariboo acquired a 25% interest in the mine and Gibraltar retained a 75% interest.

Gibraltar increased design mill capacity to 55,000 tons per day in 2011.

Gibraltar increased design mill capacity to 85,000 tons per day in 2013 through installation of a complete independent second bulk concentrator and a stand-alone Molybdenum Separation Plant.

Total production since 1972 is 600M tons of ore producing 3.2 billion pounds of copper in concentrate, 100 million pounds of cathode copper and 37 million pounds of molybdenum.

The current plant site configuration is shown in Figure 1.3

1.3 History – *Cont'd*

Figure 1.3: Plant Site Configuration

1.4 Geology & Deposit

The Gibraltar deposits are hosted by the upper Triassic Granite Mountain batholith, located within a wedge of Mesozoic and Palaeozoic rocks bounded on the west by the Fraser Fault system and on the east by the Pinchi Fault system. The Granite Mountain Batholith is a composite body consisting of three major phases, Border Phase diorite, Mine Phase tonalite, and Granite Mountain trondjhemite. Contacts between the major phases are gradational over widths ranging from two metres to several hundred metres. The regional deformation was accompanied by localized metasomatic alteration and associated sulphide deposition that led to the concentration of copper mineralization in specific areas of the batholith.

There are currently five defined mineralized zones on the Gibraltar Mine property. They are the Pollyanna, Granite, Gibraltar, Connector, and Extension zones. They occur within the Granite Mountain batholith in a broad zone of shearing and alteration. These bodies have the characteristic large diffuse nature of porphyry-type mineralization. Pyrite and chalcopyrite are the principal primary sulphide minerals. Small concentrations of other sulphides are present in the Gibraltar ores with molybdenite being a minor but economically important associate of chalcopyrite in the Pollyanna, Granite, and Connector deposits.

1.5 Mineral Processing and Metallurgical Testing

Sulphide ore from the Gibraltar deposits has been processed on-site since 1972 and run of mine oxide ore has been leached since 1986. The mineral reserves referred to in this report are contained within zones which have been significantly mined, with the exception of the Extension Zone. Metallurgical testing associated with the Extension Zone returned results consistent with the larger ore body.

The basis for predictions of copper concentrate flotation recovery is plant performance data from both of the existing concentrators based on sulphide and oxide content. Copper recovery averages 86% over the operating period of the reserves.

Molybdenum recovery predictions are based on the average bulk flotation circuit molybdenum recovery, combined with locked cycle testing of molybdenum recovery from the bulk concentrate. The overall molybdenum recovery is predicted to be 50% for the remaining reserves.

The predictions of copper cathode produced from heap leaching and subsequent solvent extraction is based upon historical recovery to cathode. Historical recovery to cathode is 50% of placed copper mass.

1.6 Mineral Resource & Reserve Estimate

(a) Resource Estimate

The resource block model for the entire Gibraltar deposit has been updated in 2019 from that used for the previous Technical Report (Technical Report on the Reserve Update at the Gibraltar Mine, June 15, 2015) to include all applicable drilling up to the effective date of this report. MineSight®, an industry standard in geologic modeling and mine planning software has been used to perform the 3D block modeling, validation and resource estimate.

The block model is divided into 10 domains based on faulting and resultant changes in mineralization and also incorporates overburden, leach cap, oxide, supergene and hypogene zones. Compositing has been done on 12.5’ fixed length intervals while honoring both the zone and domain boundaries. Block dimension are 50’x50’x50’ to approximate the selective mining unit currently in use at Gibraltar. Block volumes in all in-situ rock domains use a tonnage factor of $12ft^3$/ton.

Interpolation of total copper (TCu), Molybdenum (Mo) and acid soluble copper (ASCu) is done by the four methods; NN, ID3, ID5, and OK in three passes based on the variogram parameters. The appropriate interpolation method was selected based on the best fit by zone and domain after reviewing the model validation analyses for all methods. TCu estimation is ID3 for all domains except one where OK has been implemented. ASCU is interpolated using OK for all domains, and Mo uses both OK and ID5 depending on the domain.

Block model validation has been completed by a review and comparison of the mean grades in each zone and domain with those of the de-clustered composite data (Nearest Neighbour interpolation). Further validation includes comparison of the tonnage-grade curves, swath plots and visual comparisons of the modelled grades with the original assay data on section and in plan. Validation of the chosen interpolation methods indicate that the modeled block grades match the data well with no indication of bias in the global resource.

Delineated mineralization of the Gibraltar Deposits is classified as a resource according to the definitions in National Instrument 43-101 and CIM (2014). To be classed as Measured, the block must be interpolated in the first pass, have an average distance to the composites less than that specified for each domain and meet the domain specific composite restrictions. Similarly, to be classified as Indicated, the block must be interpolated in the second pass, have an average distance to the composites less than that specified for each domain and meet the domain specific composite restrictions. All other blocks interpolated with a TCu grade are defined as Inferred.

Measured and indicated mineral resources total 1.1 billion tons with a copper equivalent grade of 0.26%.

1.6 Mineral Resource & Reserve Estimate – *Cont'd*

(a) Resource Estimate – *Cont'd*

The resources presented in Table 1.1 are constrained by a pit shell derived using US $3.25/lb copper, US $12.00/lb molybdenum and an exchange rate of US $0.80: CDN $1.00.

Table 1.1: Gibraltar Mineral Resources

Gibraltar Mine Mineral Resource with an Effective date December 31, 2018				
Category	Tons (millions)	Cu (%)	Mo (%)*	Cu Eq. (%)**
Measured	806	0.25	0.008	0.27
Indicated	303	0.23	0.007	0.24
M&I	1,109	0.25	0.007	0.26
Inferred	59	0.21	0.004	0.22

*Molybdenum grade is reflective of sulphide resources only.
**Copper Equivalent is calculated using the following formula:

$$\frac{Sulphide\ tons \times Cu\% \times 86\%\ recovery \times \$3.10/lb\ Cu + Sulphide\ tons \times Mo\% \times 50\%\ recovery \times \$12.00/lb\ Mo + Oxide\ tons \times ASCu\% \times 50\%\ recovery \times \$3.10/lb\ Cu}{Total\ tons \times 86\%\ recovery \times \$3.10/lb\ Cu}$$

1.6 Mineral Resource & Reserve Estimate – *Cont'd*

(b) Reserve Estimate

Proven and probable sulphide mineral reserves total 594 million tons with a copper equivalent grade of 0.27%.

The reserves are based on a pit design utilizing recommended and historical pit slopes, a block model updated to include additional drilling performed since 2015, and current costs and operating performance to the effective date of this report under a long term commodity price regime. The mineral reserve pit design is based on metal prices of US$2.75/lb for copper, US$8.00/lb for molybdenum, and a foreign exchange of US$0.80 per CDN dollar.

The detailed long range mine plan maximizes profitability on a cost per ton milled basis supported by a cut-off grade of 0.15% Cu. The resulting sulphide and oxide mineral reserves are shown in Tables 1.2 and 1.3.

1.6 Mineral Resource & Reserve Estimate – *Cont'd*

(b) Reserve Estimate – *Cont'd*

Table 1.2: Gibraltar Sulphide Mineral Reserves

Gibraltar Mine Sulphide Mineral Reserves as of December 31, 2018 at 0.15% Copper Cut-off					
Pit	Category	Tons (millions)	Cu (%)	Mo (%)	* Cu Eq. (%)
Granite	Proven	42	0.27	0.008	0.29
	Probable	1	0.21	0.004	0.22
	Subtotal	44	0.27	0.008	0.29
Pollyanna	Proven	75	0.24	0.007	0.25
	Probable	1	0.23	0.007	0.25
	Subtotal	75	0.24	0.007	0.25
Connector	Proven	156	0.25	0.010	0.27
	Probable	7	0.22	0.007	0.23
	Subtotal	163	0.25	0.010	0.27
Gibraltar	Proven	146	0.25	0.008	0.26
	Probable	112	0.23	0.008	0.25
	Subtotal	258	0.24	0.008	0.26
Extension	Proven	50	0.33	0.002	0.34
	Probable	1	0.26	0.001	0.26
	Subtotal	51	0.33	0.002	0.33
Ore Stockpiles		3	0.19	0.008	0.21
	Total	594	0.25	0.008	0.27

*Copper Equivalent is based on an 86% copper recovery, US$3.10/lb copper price, 50% molybdenum recovery and a US$12.00/lb molybdenum price.

The mineral reserves presented in Table 1.2 are contained within the mineral resources shown in Table 1.1. The oxide reserves are in addition to the sulphide reserves stated in Table 1.2 but contained within the resource stated in Table 1.1.

1.6 Mineral Resource & Reserve Estimate – *Cont'd*

(b) Reserve Estimate – *Cont'd*

Table 1.3: Oxide Mineral Reserves

Gibraltar Mine Oxide Mineral Reserves as of December 31, 2018 at 0.10% ASCu Cut-off			
Pit	Category	Tons (millions)	ASCu (%)
Granite	Proven	-	-
	Probable	0	0.11
	Subtotal	0	0.11
Pollyanna	Proven	0	0.12
	Probable	1	0.12
	Subtotal	1	0.12
Connector	Proven	1	0.16
	Probable	14	0.15
	Subtotal	15	0.15
Gibraltar	Proven	0	0.17
	Probable	1	0.19
	Subtotal	1	0.19
	Total	17	0.15

1.7 Mining Method

The Gibraltar deposits have been developed using open pit mining methods since the commencement of mining on site in 1971. The mine supplies the two concentrators with a design capacity of 85,000 tons/day. This updated reserve estimate supports an operations period of 19 years.

Current and future mining operations will be carried out utilizing conventional open pit mining equipment. The waste and ore are mined utilizing four electric blast hole drills, five electric rope shovels, two large front end loaders and 30 haul trucks.

The main mining fleet is supported by a fleet of ancillary equipment including track dozers, wheel loaders, motor graders as well as sand and water trucks. The reserve mine plan does not require the purchase of any additional mine production equipment.

The final configuration of the pits and dumps at the end of 19 years is represented in Figure 1.4.

1.7 Mining Method – *Cont'd*

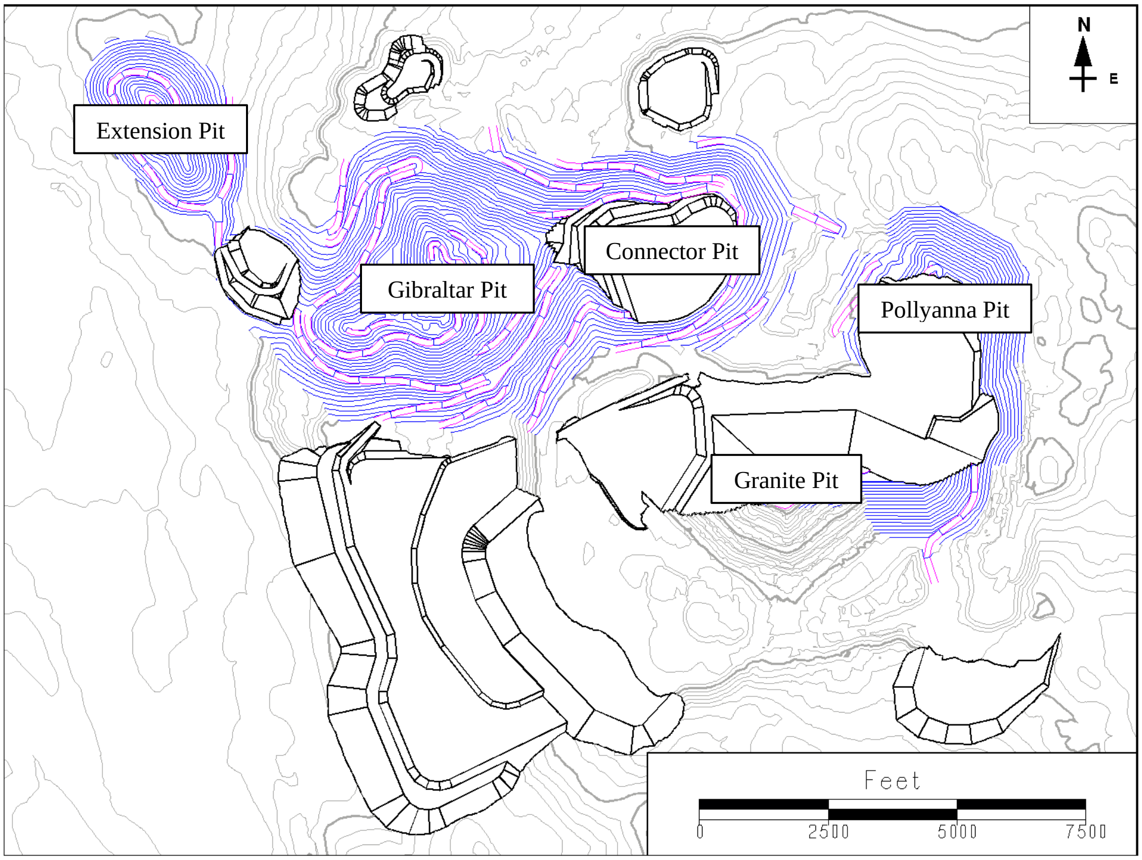

Figure 1.4: Ultimate Designed Pits and Dumps

1.7 Mining Method – *Cont'd*

The graph presented in Figure 1.5 shows the proposed pit sequence and percentage of total ore being milled from each pit in any given year.

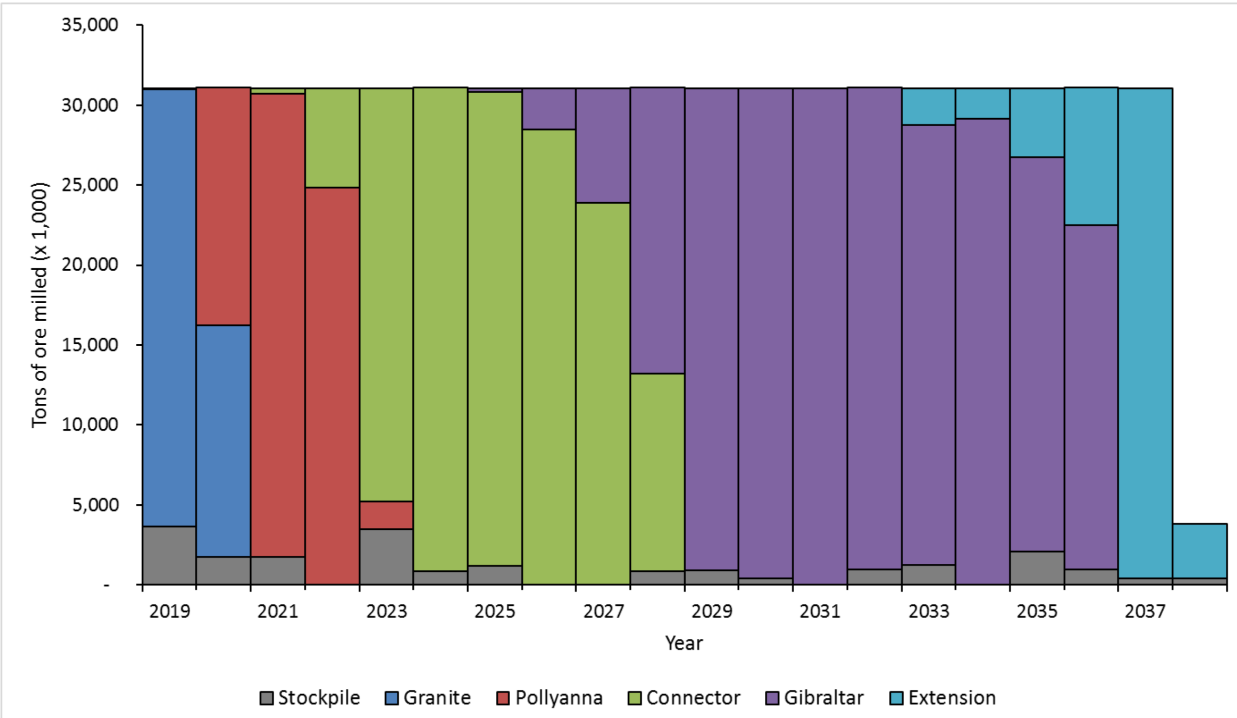

Figure 1.5: Ore Milled from each Pit by Year

The strip ratio over the 19 year operating period will average 1.9. While the annual strip ratio generally decreases with time, the strip ratio will vary and be managed over the course of the mine life based on exchange rates, commodity prices, and grade distribution during annual and mid-range mine planning process to optimize the economic performance of the operation.

1.8 Recovery Methods

The processing facilities at Gibraltar Mine consist of two separate bulk sulphide concentrators, a dedicated molybdenum flotation plant, and a series of leach piles which feed a solvent extraction and electrowinning (SX/EW) facility.

Run of mine ore is fed to the two sulphide concentrators in parallel at a combined design rate of 85,000 t/day. These two bulk concentrators, while differing in size, follow the same process path. Ore is fed to primary crushing with the product reporting to a closed circuit SAG/Ball comminution stage. Ground ore is processed through a rougher flotation stage. Tailings from the rougher flotation stage are pumped to a storage facility, while the concentrate is reground and processed through two further cleaner flotation stages. Final bulk concentrate contains both copper and molybdenum values.

The bulk concentrate from both facilities is combined and processed through a single molybdenum flotation plant. The bulk concentrate is floated in a rougher stage which depresses the copper minerals and selectively recovers molybdenum. The underflow from this plant is the site's final copper concentrate. This copper concentrate is dewatered and shipped in bulk to market. The rougher concentrate is reground and processed through two further cleaner flotation stages. Molybdenum final concentrate from this plant is dewatered and bagged, and subsequently shipped to market.

Oxide ore from the mine is delivered to oxide leach dumps. The SX/EW plant is designed to extract copper from the pregnant leach solutions (PLS) collected from the site's leach dumps. Acidic solution is passed through the leach pile and extracts copper in the form of copper ions in the PLS. This copper laden solution is delivered to the SX/EW plant via collection ditches, ponds and pumping where required. The process takes PLS and selectively extracts the copper ions in solvent extraction mixer-settlers. The copper is transferred from this acid solution to an organic phase and finally to a clean electrolyte. The electrolyte is filtered and heated before being passed through the electrowinning cells where the copper is plated out on stainless steel cathodes. The resultant high quality cathode copper is bundled and sold. The barren solution leaving the plant, raffinate, is pumped back to leach additional copper from the leach piles.

1.9 Project Infrastructure

Sufficient electricity is currently supplied by the British Columbia Hydro and Power Authority to maintain operations at greater than design capacity.

Natural gas is provided by Fortis BC.

Fresh water is pumped from deep wells on the mine site. Process facilities will continue to operate using reclaimed water from the existing tailings storage facility.

Water currently stored in the Pollyanna Pit will be pumped to Granite Pit starting in 2020. A bulk dewatering system will be used to pump the free water followed by a series of wells used to dewater rock fill. Water currently stored in the Gibraltar Pit will be transferred to the completed Granite pit starting in early 2024. This will require the construction of a bulk pit dewatering system.

Relocation of the in-pit crusher feeding concentrator 1 will need to be completed in 2023 prior to starting phase 2 of the Connector Pit.

With the current design parameters and tailings deposition plan, the tailings facility footprint will accommodate tailings storage until at least 2033. Starting in 2034 tailings will be deposited in Granite Pit.

Copper concentrate produced at Gibraltar Mine is trucked to the Macalister rail siding on the Canadian National Rail (CN) line, 26 kilometers south west of the Gibraltar Mine site. Gibraltar owns the buildings and a portion of the land upon which the siding is located and has an agreement in place for the use of CN-owned siding materials.

1.10 Market Studies & Contracts

Gibraltar's copper concentrate has a nominal 28.5% copper grade and includes silver as a by-product with no significant deleterious elements. Because of the quality of the Gibraltar concentrate, it is highly attractive to a large array of smelters globally and, as such, offtake sales agreements command a premium price significantly above industry norms.

Gibraltar's copper concentrate is currently sold under arrangements with MRI Trading AG of Switzerland and Cariboo Copper Corp. which owns 25% of the Gibraltar Mine. Gibraltar also has the ability to sell concentrate on the spot market.

Gibraltar's molybdenum concentrate has a nominal grade of 48% molybdenum and 1.5% copper which is industry standard grade. Production is currently sold under arrangements with Langeloth Metallurgical Company, LLC (Subsidiary of Centerra Gold Inc.) and to Cariboo Copper Corp.

Gibraltar copper cathode is nominally 99.9%+ pure copper. There are no current offtake agreements for copper cathode. Based on past experience, the forecast production is expected to result in a readily marketable product.

Concentrate handling contracts and those for operating supplies are renewed or replaced within time frames and conditions of normal industry standards.

1.11 Environmental, Permitting, Social and Community Impact

All material regulatory authorizations and permits are in place to extract the reserves described in this report with the exception of:

A small extension of lease boundary to include the Extension Pit.

Periodic amendments of PE-416 and M-40 for pit wall pushbacks, water discharge, and waste rock and tailings storage.

Other permit considerations include approvals required for route changes to the access road, hydro transmission line, natural gas line, and water discharge pipeline in order to complete development of the Extension Pit which is scheduled to start in 2032. Approvals will be sought as required.

1.12 Capital and Operating Cost Estimate

As the majority of the mine's facilities are in place and operating, the only capital requirements are for:

- Recommissioning of the SXEW plant,
- Bulk pit dewatering,
- Specific tailings, water treatment and water discharge related activities,
- Relocation of the in-pit crusher/conveyor system and electrical substation,
- Realignment of the site access road and utility lines, and
- General sustaining capital to maintain the integrity of the mining and processing equipment.

(a) Capital Costs

The site capital requirements over the next 19 years are summarized in Table 1.4.

Table 1.4: Capital Cost Summary

Area	Total Capital ($M)
Process Improvements	2
Bulk Pit Dewatering	24
Tailings and Water Treatment	34
Crusher & Substation Relocation	43
Road and Utility Realignment	6
General Sustaining	176
Total	285

1.12 Capital and Operating Cost Estimate – *Cont'd*

(b) Operating Cost

The operating costs for general and administration, mining and processing supporting the reserve are based on Gibraltar's past cost performance and years of experience. These costs are not adjusted for escalation or exchange rate fluctuations.

Average unit operating costs are summarized in Table 1.5:

Table 1.5: Site Operating Cost Summary

Area	Life of Mine Cost
Mine cost/ton milled	$5.49
Processing cost/ton milled	$4.20
General and Admin cost/ton milled	$0.90
Total Operating cost/ton milled	$10.59

Table 1.6: Mining Costs

Activity	Cost
Drilling	$0.10 / ton drilled
Blasting	$0.33 / ton blasted
Loading	$0.23 / ton moved
Hauling	$0.69 / ton moved
Utility & General	$0.45 / ton mined
Total Mining Cost	$1.84 / ton mined

1.13 Economic Analysis

The reserves are supported under current cost and performance assumptions and a long-term commodity price regime. A discounted net present value (NPV) cashflow model with an effective date of December 31, 2018 is used for the valuation basis.

Using long term street consensus copper pricing as of June 2019 as the base case, Table 1.6 demonstrates the sensitivity of Gibraltar current economics to changes in commodity prices without consideration of further success in current recovery and productivity initiatives.

Table 1.7: Economic Sensitivity

After-Tax 75% Basis NPV @ 8% (C$ Millions)					
Variable	-10%	-5%	Base	+5%	+10%
Cu Price	490	620	750	870	990
Mo Price	730	740	750	760	760
FX	500	620	750	870	990
Op Cost	940	840	750	650	550
Cap Cost	750	750	750	740	740

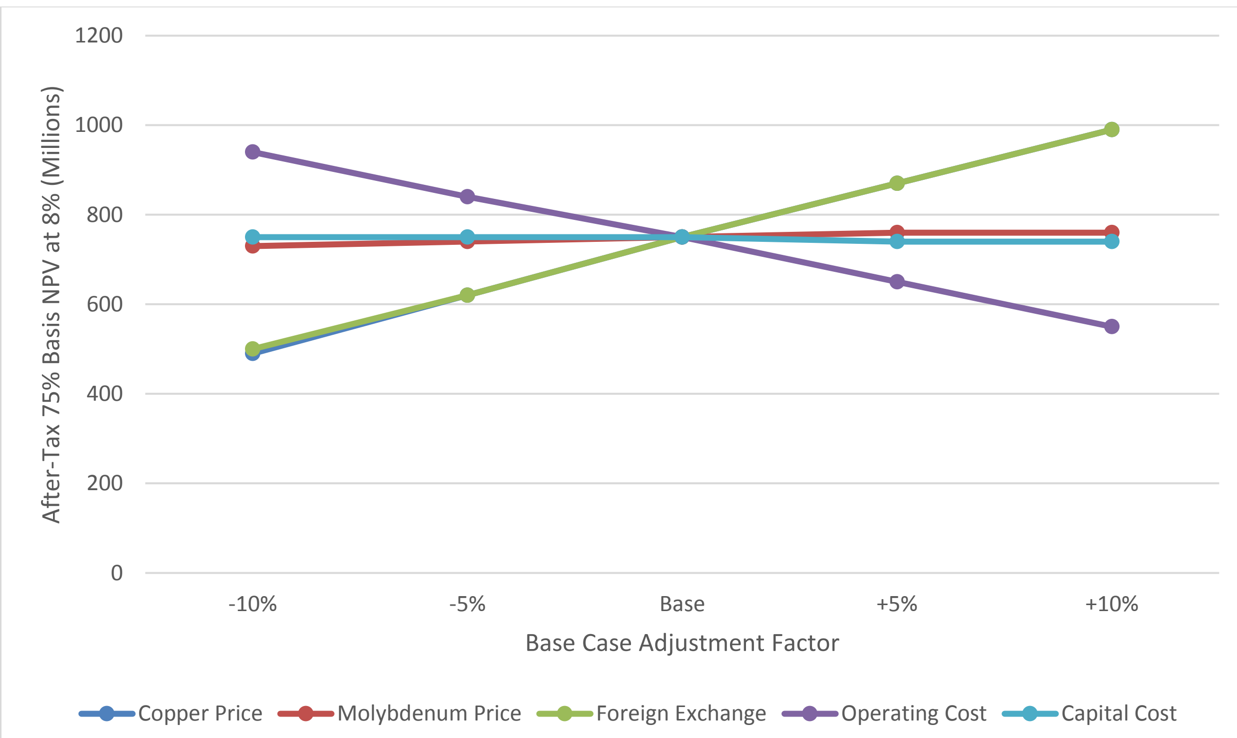

Figure 1.6: Economic Sensitivity

1.14 Conclusions and Recommendations

Proven and probable mineral reserves total 594 million tons grading 0.27% Cu Eq. The reserve pit design is based on a copper price of US$2.75/lb, molybdenum price of US$8.00/lb, exchange rate of US$0.80:CDN$1.00, and a 0.15% Cu cut-off.

In addition to the sulphide reserves, oxide reserves total 17 million tons grading 0.15% AsCu (acid soluble copper).

The sulfide and oxide reserves are contained within a mineral resource of 1,109 million tons grading 0.26% Cu Eq.

The mineral reserve supports 19 years of operation at a design milling rate of 85,000 tons per day with average annual production of approximately 136 million pounds of copper and 2.5 million pounds of molybdenum. The average strip ratio is 1.9:1.

The reserves are based on a pit design utilizing recommended and historical pit slopes and a block model updated to include data produced from drilling programs up to the effective date of this report.

In the author's opinion the geological data, and the mining, processing, cost, and marketing assumptions used are appropriate for purposes of defining and demonstrating resources and reserves as prescribed by National Instrument 43-101.

The mineral reserves and selected cut-off grade are based on a long-term commodity price regime and current site cost and performance data.

Gibraltar is pursuing initiatives to improve recovery, concentrator throughput, and mine cost and productivity. Continued improvement in any or all of these areas will have not only positive economic implications but could increase the size of the reserve pits under current commodity assumptions and/or impact the optimum cut-off grade. These initiatives should be continued and the results incorporated in reserve updates as appropriate.

SECTION 2

INTRODUCTION

SECTION 2: INTRODUCTION

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2.1 Introduction

This technical report has been prepared for Taseko Mines Limited. Taseko Mines Limited was incorporated on April 15, 1966, pursuant to the Company Act of the Province of British Columbia. This corporate legislation was superseded in 2004 by the British Columbia Business Corporations Act which is now the corporate law statute that governs Taseko.

The following is a list of the Company's principal subsidiaries:

	Jurisdiction of Incorporation	Ownership
Gibraltar Mines Ltd. [1]	British Columbia	100%
Aley Corporation	British Columbia	100%
Yellowhead Mining Inc.	British Columbia	100%
Florence Copper Inc. [2]	Nevada	100%

1. Taseko owns 100% of Gibraltar Mines Ltd, which in turn owns 75% of the Gibraltar Joint Venture

2. Taseko owns 100% of Curis Resources Ltd, which owns 100% of Curis Holdings (Canada) Ltd which owns 100% of Florence Copper Inc.

Taseko Mines Limited owns 100% of the New Prosperity Project and Gibraltar Mines Ltd. owns 100% of the Harmony Gold Project.

On March 31, 2010, the Company established a joint venture with Cariboo Copper Corp. ("Cariboo") over the Gibraltar mine, whereby Cariboo acquired a 25% interest in the mine and Gibraltar retained a 75% interest. On November 20, 2014, the Company acquired a 100% interest in the Florence Copper Project though the acquisition of Curis Resources Ltd. On February 15, 2019, the company acquired a 100% interest in Yellowhead Mining Inc.

The head office of Taseko is located at 15th Floor, 1040 West Georgia Street, Vancouver, British Columbia, Canada V6E 4H1, telephone (778) 373-4533, facsimile (778) 373-4534. The Company's legal registered office is in care of its Canadian attorneys McMillan LLP, Suite 1500, 1055 West Georgia Street, Vancouver, British Columbia, Canada V6E 4N7, telephone (604) 689-9111, facsimile (604) 685-7084.

This report has been prepared to document the News Release dated November 6, 2019 in the format prescribed in National Instrument 43-101, Form 43-101F1.

The purpose of this report is to quantify the impact on the mineral reserves at Gibraltar of an updated long range mine plan based on current mining costs and demonstrated mill performance as well as additional drilling completed since 2015.

2.1 Introduction – *Cont'd*

The information, conclusions, opinions, and estimates contained herein are based on:

- information available to Taseko at the time of preparation of this report,
- assumptions, conditions, and qualifications as set forth in this report, and,
- data, reports, and opinions supplied by Taseko and other third party sources listed as references.

The Qualified Person (author) responsible for the content of this report is Richard Weymark, P.Eng.

Mr. Weymark has supervised the preparation of this report, reviewed the methods used to determine grade and tonnage in the geological model, and reviewed the long range mine plan and capital and operating cost estimates. He has direct knowledge of the Gibraltar mine site, having been employed by Taseko Mines since July 2018, and visited the site most recently on June 4th and 5th, 2019. Mr. Weymark's current position is Chief Engineer, Taseko.

SECTION 3

RELIANCE ON OTHER EXPERTS

SECTION 3: RELIANCE ON OTHER EXPERTS

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3.1 Reliance on Other Experts

Standard professional procedures have been followed in the preparation of this Technical Report. Data used in this report has been verified where possible and the author has no reason to believe that data was not collected in a professional manner and no information has been withheld that would affect the conclusions of this report.

The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to Taseko as of the effective date of this report, and
- Assumptions, conditions, and qualifications as stated in this report.

For the purposes of this report, the author has relied on title and property ownership provided by the B.C Ministry of Energy, Mines and Petroleum Resources as of August 31, 2019.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

SECTION 4

PROPERTY DESCRIPTION AND LOCATION

SECTION 4: PROPERTY DESCRIPTION AND LOCATION

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4.1 Property Description and Location

The Gibraltar open pit mine and related facilities are located 65 km north of the town of Williams Lake and are centred at latitude 52°30’N and longitude 122°16’W in the Cariboo Mining Division. Williams Lake is approximately 590 km north of Vancouver, British Columbia.

The Gibraltar Mine is held in an unincorporated joint venture between Gibraltar Mines Ltd. (75%) and Cariboo Copper Corporation (25%). Gibraltar Mines Limited (FMC 141999), is the operator of the joint venture and holds registered title to the mineral claims and leases.

The Gibraltar Mine consists of 212 mineral claims comprising 19,815 hectares and 32 mining leases comprising 2,275 hectares as summarized in Table 4.1 and shown in Figure 4.1.

Table 4.1: Mineral Titles

Tenure Type	Number	Area (ha)
Claims	212	19,815
Leases	32	2,275
Total	244	22,090

The mining leases were extended for 30 years in 1992 and rent is paid annually, and these are all currently in good standing. All mineral claims are in good standing. There are four parcels of fee simple land.

Details of each claim and lease are provided in Tables 4.2 and 4.3 respectively.

Gibraltar is not subject to any external royalties.

Permits required to conduct the work proposed for the property and environmental liabilities with respect to reclamation and bonding are discussed under Item 20.

4.1 Property Description and Location – *Cont'd*

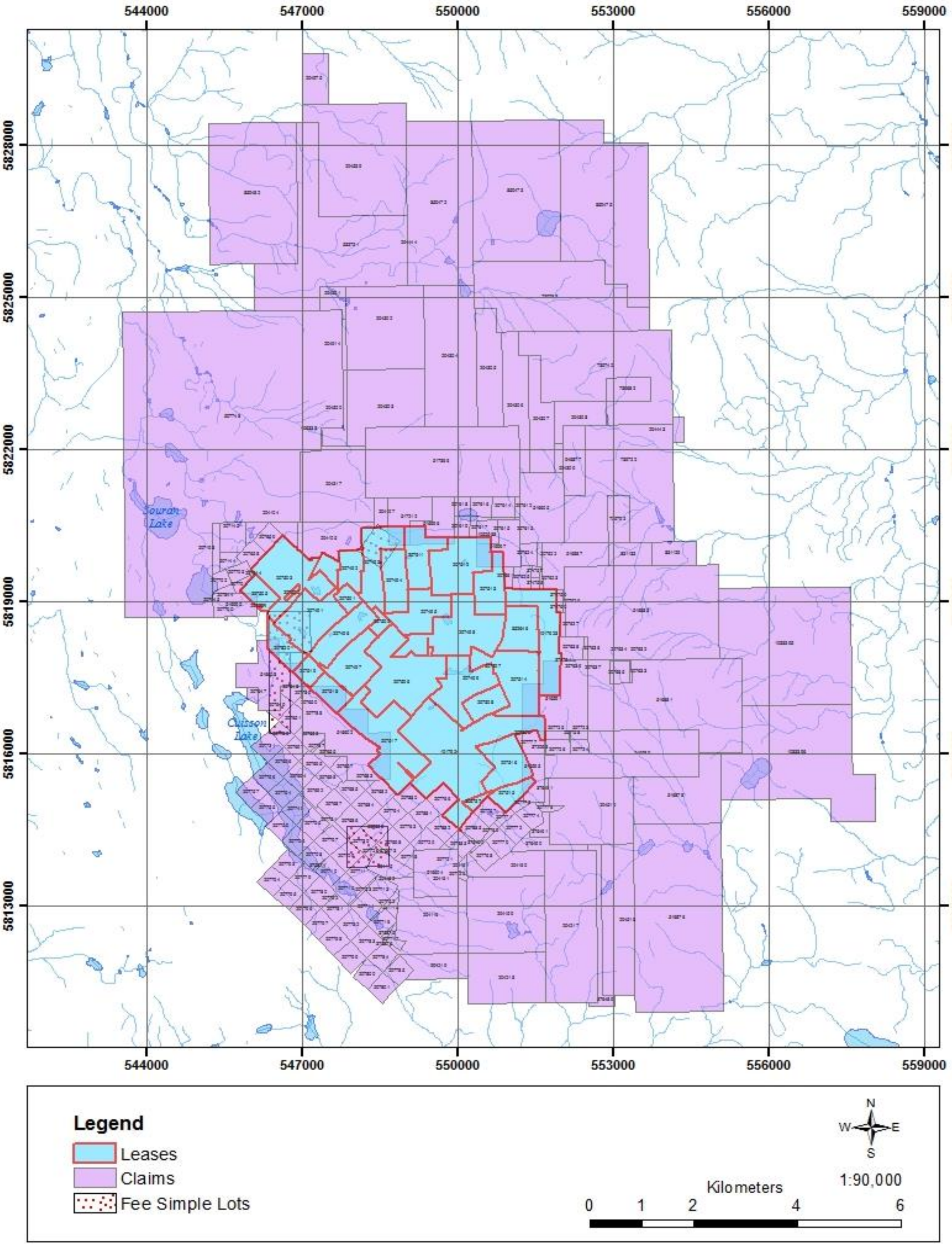

Figure 4.1: Mineral Claims and Leases

4.1 Property Description and Location – *Cont'd*

Table 4.2: Gibraltar Mineral Leases

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
1017923		Lease	2013/MAR/19	2020/MAR/19	104
1017924		Lease	2013/MAR/19	2020/MAR/19	281
207512		Lease	1973/JUN/11	2020/JUN/11	109
352646		Lease	1997/JUN/25	2020/JUN/25	60.74
207491		Lease	1972/JUL/26	2020/JUL/26	116.03
207492		Lease	1972/JUL/26	2020/JUL/26	35.12
207493		Lease	1972/JUL/26	2020/JUL/26	82.26
207494		Lease	1972/JUL/26	2020/JUL/26	57.53
207495		Lease	1972/JUL/26	2020/JUL/26	69.07
207496		Lease	1972/JUL/26	2020/JUL/26	66.56
207497		Lease	1972/JUL/26	2020/JUL/26	73.56
207498		Lease	1972/JUL/26	2020/JUL/26	143.87
207499		Lease	1972/JUL/26	2020/JUL/26	95.11
207500		Lease	1972/JUL/26	2020/JUL/26	12.37
207501		Lease	1972/JUL/26	2020/JUL/26	16.85
207502		Lease	1972/JUL/26	2020/JUL/26	3.12
207503		Lease	1972/JUL/26	2020/JUL/26	119.47
207504		Lease	1972/JUL/26	2020/JUL/26	0.51
207505		Lease	1972/JUL/26	2020/JUL/26	28.72
207506		Lease	1972/JUL/26	2020/JUL/26	172.61
207507		Lease	1972/JUL/26	2020/JUL/26	0.06
207508		Lease	1972/JUL/26	2020/JUL/26	36.62
207515		Lease	1973/OCT/11	2020/OCT/11	28.34
207516		Lease	1973/OCT/11	2020/OCT/11	72.71
207517		Lease	1973/OCT/11	2020/OCT/11	152.04
207518		Lease	1973/OCT/11	2020/OCT/11	33.71
207519		Lease	1973/OCT/11	2020/OCT/11	20.46
207520		Lease	1973/OCT/11	2020/OCT/11	37.75
306737		Lease	1973/OCT/11	2020/OCT/11	8.81
207511		Lease	1972/OCT/23	2020/OCT/23	64.98
207513		Lease	1972/OCT/23	2020/OCT/23	58.56
207514		Lease	1972/OCT/23	2020/OCT/23	113.14

4.1 Property Description and Location – *Cont'd*

Table 4.3: Gibraltar Mineral Claims

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
1052538		Claim	2017/JUN/14	2020/JUN/14	19.669
560525	GL-1A	Claim	2007/JUN/12	2021/JUN/12	315.0755
604694	GL2	Claim	2009/MAY/19	2021/MAY/19	177.2734
204104	HY 1	Claim	1978/MAY/01	2023/NOV/28	100
204105	HY 4	Claim	1978/MAY/01	2023/NOV/28	150
204107	HY 7	Claim	1978/MAY/01	2023/NOV/28	75
204115	TIM 1	Claim	1978/AUG/28	2023/NOV/28	50
204116	COLE 1	Claim	1978/AUG/28	2023/NOV/28	225
204159	GEOFF 1	Claim	1979/MAY/29	2023/NOV/28	225
204160	DOUG I	Claim	1979/JUN/26	2023/NOV/28	75
204161	RYAN I	Claim	1979/JUN/26	2023/NOV/28	25
204162	AARON I	Claim	1979/JUN/26	2023/NOV/28	25
204217	BARB I	Claim	1979/NOV/14	2023/NOV/28	300
204218	BRENT I	Claim	1979/NOV/14	2023/NOV/28	150
204219	JANIS I	Claim	1979/NOV/14	2023/NOV/28	75
204309	HY 17	Claim	1980/JUN/10	2023/NOV/28	50
204317	HY 3	Claim	1980/JUN/12	2023/NOV/28	225
204518	BRUCE I	Claim	1981/JUN/29	2023/NOV/28	300
204519	PAUL I	Claim	1981/JUN/29	2023/NOV/28	300
207143	TK 1	Claim	1990/AUG/23	2023/NOV/28	50
207144	TK 2	Claim	1990/AUG/24	2023/NOV/28	50
207198	TK 3	Claim	1990/SEP/12	2023/NOV/28	100
207612	GM 31	Claim	1964/MAR/02	2023/NOV/28	25
207613	GM 32	Claim	1964/MAR/02	2023/NOV/28	25
207614	GM 33	Claim	1964/MAR/02	2023/NOV/28	25
207615	GM 34	Claim	1964/MAR/02	2023/NOV/28	25
207616	GM 35	Claim	1964/MAR/02	2023/NOV/28	25
207617	GM 36	Claim	1964/MAR/02	2023/NOV/28	25
207618	GM 37	Claim	1964/MAR/02	2023/NOV/28	25
207619	GM 38	Claim	1964/MAR/02	2023/NOV/28	25
207622	GM 49	Claim	1964/MAR/02	2023/NOV/28	25
207623	GM 50	Claim	1964/MAR/02	2023/NOV/28	25
207624	GM 51	Claim	1964/MAR/02	2023/NOV/28	25

4.1 Property Description and Location – *Cont'd*

Table 4.4: Gibraltar Mineral Claims – *Cont'd*

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
207625	GM 52	Claim	1964/MAR/02	2023/NOV/28	25
207626	GM 59	Claim	1964/MAR/02	2023/NOV/28	25
207627	GM 60	Claim	1964/MAR/02	2023/NOV/28	25
207632	GM 65	Claim	1964/MAR/02	2023/NOV/28	25
207633	GM 66	Claim	1964/MAR/02	2023/NOV/28	25
207634	GM 67	Claim	1964/MAR/02	2023/NOV/28	25
207635	GM 68	Claim	1964/MAR/02	2023/NOV/28	25
207636	GM 69	Claim	1964/MAR/02	2023/NOV/28	25
207637	GM 70	Claim	1964/MAR/02	2023/NOV/28	25
207638	GM 71	Claim	1964/MAR/02	2023/NOV/28	25
207639	GM 72	Claim	1964/MAR/02	2023/NOV/28	25
207644	JAN NO. 5	Claim	1964/APR/10	2023/NOV/28	25
207645	JAN NO. 6	Claim	1964/APR/10	2023/NOV/28	25
207647	AL #2	Claim	1964/JUL/02	2023/NOV/28	25
207648	AL #3	Claim	1964/JUL/02	2023/NOV/28	25
207649	AL #4	Claim	1964/JUL/02	2023/NOV/28	25
207650	AL #5	Claim	1964/JUL/02	2023/NOV/28	25
207651	AL #6	Claim	1964/JUL/02	2023/NOV/28	25
207653	AL #8	Claim	1964/JUL/02	2023/NOV/28	25
207655	AL #10	Claim	1964/JUL/02	2023/NOV/28	25
207657	AL #12	Claim	1964/JUL/02	2023/NOV/28	25
207658	SUMMIT NO.7	Claim	1964/JUL/20	2023/NOV/28	25
207659	SUMMIT NO.8	Claim	1964/JUL/20	2023/NOV/28	25
207661	GM 104	Claim	1964/AUG/21	2023/NOV/28	25
207682	EV #9	Claim	1965/OCT/19	2023/NOV/28	25
207683	EV #10	Claim	1965/OCT/19	2023/NOV/28	25
207684	EV #11	Claim	1965/OCT/19	2023/NOV/28	25
207685	EV #12	Claim	1965/OCT/19	2023/NOV/28	25
207686	EV #13	Claim	1965/OCT/19	2023/NOV/28	25
207687	EV #14	Claim	1965/OCT/19	2023/NOV/28	25
207692	EV #15	Claim	1966/JAN/17	2023/NOV/28	25
207693	EV #16	Claim	1966/JAN/17	2023/NOV/28	25
207694	EV #17	Claim	1966/JAN/17	2023/NOV/28	25

4.1 Property Description and Location – *Cont'd*

Table 4.5: Gibraltar Mineral Claims – *Cont'd*

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
207695	EV #18	Claim	1966/JAN/17	2023/NOV/28	25
207696	EV #19	Claim	1966/JAN/17	2023/NOV/28	25
207697	EV #20	Claim	1966/JAN/17	2023/NOV/28	25
207698	BUD #5	Claim	1966/JAN/17	2023/NOV/28	25
207699	BUD #6	Claim	1966/JAN/17	2023/NOV/28	25
207700	IT NO. 1	Claim	1966/FEB/14	2023/NOV/28	25
207701	IT NO. 4	Claim	1966/FEB/14	2023/NOV/28	25
207702	IT NO. 5	Claim	1966/FEB/14	2023/NOV/28	25
207703	IT NO. 6	Claim	1966/FEB/14	2023/NOV/28	25
207704	IT NO. 8	Claim	1966/FEB/14	2023/NOV/28	25
207705	VAL NO.1	Claim	1966/MAR/19	2023/NOV/28	25
207706	VAL NO.2	Claim	1966/MAR/18	2023/NOV/28	25
207707	VAL NO.3	Claim	1966/MAR/18	2023/NOV/28	25
207708	VAL NO.4	Claim	1966/MAR/18	2023/NOV/28	25
207709	VAL NO.5	Claim	1966/MAR/18	2023/NOV/28	25
207710	VAL NO.6	Claim	1966/MAR/18	2023/NOV/28	25
207711	VAL NO.7	Claim	1966/MAR/18	2023/NOV/28	25
207712	VAL NO.8	Claim	1966/MAR/18	2023/NOV/28	25
207713	VAL NO.9	Claim	1966/MAR/18	2023/NOV/28	25
207714	VAL NO.10	Claim	1966/MAR/18	2023/NOV/28	25
207715	VAL NO.11	Claim	1966/MAR/18	2023/NOV/28	25
207716	VAL NO.12	Claim	1966/MAR/18	2023/NOV/28	25
207717	VAL NO.14	Claim	1966/MAR/18	2023/NOV/28	25
207718	VAL NO.19	Claim	1966/MAR/18	2023/NOV/28	25
207720	VAL NO.21	Claim	1966/MAR/18	2023/NOV/28	25
207721	VAL NO.22	Claim	1966/MAR/18	2023/NOV/28	25
207722	VAL NO.27	Claim	1966/MAR/18	2023/NOV/28	25
207723	FFE #13	Claim	1966/MAY/16	2023/NOV/28	25
207724	FFE #14	Claim	1966/MAY/16	2023/NOV/28	25
207725	FFE #15	Claim	1966/MAY/16	2023/NOV/28	25
207726	FFE #16	Claim	1966/MAY/16	2023/NOV/28	25
207729	BUD 7	Claim	1966/JUN/14	2023/NOV/28	25
207730	BUD 8	Claim	1966/JUN/14	2023/NOV/28	25

4.1 Property Description and Location – *Cont'd*

Table 4.6: Gibraltar Mineral Claims – *Cont'd*

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
207731	EV 21	Claim	1966/JUN/14	2023/NOV/28	25
207732	EV 22	Claim	1966/JUN/14	2023/NOV/28	25
207749	PINE TREE #1	Claim	1967/JUL/04	2023/NOV/28	25
207750	PINE TREE #2	Claim	1967/JUL/04	2023/NOV/28	25
207751	FLO #2 FR.	Claim	1967/AUG/03	2023/NOV/28	25
207752	FLO #3 FR.	Claim	1967/AUG/29	2023/NOV/28	25
207753	FLO #4 FR.	Claim	1967/AUG/29	2023/NOV/28	25
207754	PINE TREE #3	Claim	1967/SEP/06	2023/NOV/28	25
207755	PINE TREE #4	Claim	1967/SEP/06	2023/NOV/28	25
207756	PINE TREE #5	Claim	1967/SEP/06	2023/NOV/28	25
207757	PINE TREE #6	Claim	1967/SEP/06	2023/NOV/28	25
207758	CAROL #4 FR	Claim	1968/JUL/12	2023/NOV/28	25
207763	H.A. #1	Claim	1968/OCT/16	2023/NOV/28	25
207764	H.A. #2	Claim	1968/OCT/16	2023/NOV/28	25
207766	H.A. #4	Claim	1968/OCT/16	2023/NOV/28	25
207767	HAS 2	Claim	1968/OCT/16	2023/NOV/28	25
207768	HAS 12	Claim	1968/OCT/16	2023/NOV/28	25
207769	HAS 13	Claim	1968/OCT/16	2023/NOV/28	25
207770	HAS 14	Claim	1968/OCT/16	2023/NOV/28	25
207771	HAS 15	Claim	1968/OCT/16	2023/NOV/28	25
207772	HAS 16	Claim	1968/OCT/16	2023/NOV/28	25
207773	HAS 17	Claim	1968/OCT/16	2023/NOV/28	25
207774	HAS 18	Claim	1968/OCT/16	2023/NOV/28	25
207776	HAS 20	Claim	1968/OCT/16	2023/NOV/28	25
207777	VE 21	Claim	1969/APR/28	2023/NOV/28	25
207779	VAL #37	Claim	1969/JUL/18	2023/NOV/28	25
207780	VAL #39	Claim	1969/JUL/18	2023/NOV/28	25
207781	VAL #41	Claim	1969/JUL/18	2023/NOV/28	25
207782	VAL #43	Claim	1969/JUL/18	2023/NOV/28	25
207783	VAL #45	Claim	1969/JUL/18	2023/NOV/28	25
207784	VAL #47	Claim	1969/JUL/18	2023/NOV/28	25
207785	VAL #49	Claim	1969/JUL/18	2023/NOV/28	25
207787	STU #2 FR.	Claim	1969/JUL/18	2023/NOV/28	25

4.1 Property Description and Location – *Cont'd*

Table 4.7: Gibraltar Mineral Claims – *Cont'd*

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
207788	STU #3 FR.	Claim	1969/JUL/18	2023/NOV/28	25
207789	STU #4 FR.	Claim	1969/JUL/18	2023/NOV/28	25
207792	STU #6 FR.	Claim	1969/AUG/12	2023/NOV/28	25
207793	VAL #35	Claim	1969/AUG/12	2023/NOV/28	25
207794	VAL #36	Claim	1969/AUG/12	2023/NOV/28	25
207795	VAL #38	Claim	1969/AUG/12	2023/NOV/28	25
207796	VAL #40	Claim	1969/AUG/12	2023/NOV/28	25
207797	VAL #42	Claim	1969/AUG/12	2023/NOV/28	25
207798	VAL #44	Claim	1969/AUG/12	2023/NOV/28	25
207799	VAL #46	Claim	1969/AUG/12	2023/NOV/28	25
207800	VAL #48	Claim	1969/AUG/12	2023/NOV/28	25
207801	VAL #50	Claim	1969/AUG/12	2023/NOV/28	25
207844	IT 3	Claim	1971/APR/06	2023/NOV/28	25
207855	SAP #5 FR.	Claim	1972/JUN/21	2023/NOV/28	25
207880	HA #5	Claim	1974/MAY/23	2023/NOV/28	25
207881	HA #6	Claim	1974/MAY/23	2023/NOV/28	25
207882	VAL #23	Claim	1974/MAY/23	2023/NOV/28	25
207883	VAL #24	Claim	1974/MAY/23	2023/NOV/28	25
207885	VAL #26	Claim	1974/MAY/23	2023/NOV/28	25
372063	TM7	Claim	1999/SEP/28	2023/NOV/28	25
374757	HD1	Claim	2000/MAR/07	2023/NOV/28	25
374758	HD2	Claim	2000/MAR/07	2023/NOV/28	25
374759	HD3	Claim	2000/MAR/08	2023/NOV/28	25
374760	HD4	Claim	2000/MAR/08	2023/NOV/28	25
374761	HD5	Claim	2000/MAR/10	2023/NOV/28	25
375873	HD 12	Claim	2000/APR/19	2023/NOV/28	25
375874	HD 13	Claim	2000/APR/18	2023/NOV/28	25
375875	HD 14	Claim	2000/APR/18	2023/NOV/28	25
375876	HD 15	Claim	2000/APR/18	2023/NOV/28	25
376489	HD 7	Claim	2000/MAY/05	2023/NOV/28	175
376490	HD 8	Claim	2000/MAY/03	2023/NOV/28	125
376491	HD 9	Claim	2000/MAY/01	2023/NOV/28	75
516589		Claim	2005/JUL/10	2023/NOV/28	236.238

4.1 Property Description and Location – *Cont'd*

Table 4.8: Gibraltar Mineral Claims – *Cont'd*

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
516591		Claim	2005/JUL/10	2023/NOV/28	157.456
516593		Claim	2005/JUL/10	2023/NOV/28	59.062
516602		Claim	2005/JUL/10	2023/NOV/28	196.851
516603		Claim	2005/JUL/10	2023/NOV/28	98.403
516604		Claim	2005/JUL/10	2023/NOV/28	78.787
516605		Claim	2005/JUL/10	2023/NOV/28	117.999
516876		Claim	2005/JUL/11	2023/NOV/28	630.379
516878		Claim	2005/JUL/11	2023/NOV/28	177.208
516881		Claim	2005/JUL/11	2023/NOV/28	433.009
516883		Claim	2005/JUL/11	2023/NOV/28	531.226
516887		Claim	2005/JUL/11	2023/NOV/28	78.683
516995		Claim	2005/JUL/11	2023/NOV/28	39.351
516996		Claim	2005/JUL/11	2023/NOV/28	59.005
516997		Claim	2005/JUL/11	2023/NOV/28	59.01
517212		Claim	2005/JUL/12	2023/NOV/28	59.003
739702	GRANITE MOUNTAIN	Claim	2010/APR/03	2023/NOV/28	39.3347
739722	GRANITE 2	Claim	2010/APR/03	2023/NOV/28	393.2894
831129		Claim	2010/AUG/05	2023/DEC/16	39.3406
831133		Claim	2010/AUG/05	2023/DEC/16	39.3406
946877		Claim	2012/FEB/07	2023/DEC/16	58.9876
1033395	GIB1	Claim	2015/JAN/15	2023/DEC/16	550.9501
1033396	GIB2	Claim	2015/JAN/15	2023/DEC/16	492.1496
204300	HY 8	Claim	1980/JUN/10	2024/JAN/01	75
204301	HY 9	Claim	1980/JUN/10	2024/JAN/01	50
204302	HY 10	Claim	1980/JUN/10	2024/JAN/01	300
204303	HY 11	Claim	1980/JUN/10	2024/JAN/01	225
204304	HY 12	Claim	1980/JUN/10	2024/JAN/01	350
204305	HY 13	Claim	1980/JUN/10	2024/JAN/01	150
204306	HY 14	Claim	1980/JUN/10	2024/JAN/01	175
204307	HY 15	Claim	1980/JUN/10	2024/JAN/01	150
204308	HY 16	Claim	1980/JUN/10	2024/JAN/01	100
204443	HY 19	Claim	1981/MAR/24	2024/JAN/01	50

4.1 Property Description and Location – *Cont'd*

Table 4.9: Gibraltar Mineral Claims – *Cont'd*

TITLE #	NAME	TYPE	ISSUE DATE	GOOD TO DATE	AREA (HA)
204444	HY 20	Claim	1981/MAR/24	2024/JAN/01	50
204539	ZE 3	Claim	1981/AUG/17	2024/JAN/01	500
204914	HY 22	Claim	1985/JAN/02	2024/JAN/01	50
204975	ZE 7	Claim	1985/AUG/16	2024/JAN/01	50
406338	TK5	Claim	2003/OCT/19	2024/JAN/01	500
507748		Claim	2005/FEB/23	2024/JAN/01	1946.553
517366		Claim	2005/JUL/12	2024/JAN/01	412.925
533751	CU ACE NORTH 3	Claim	2006/MAY/08	2024/JAN/01	471.479
739682	CHRIS	Claim	2010/APR/03	2024/JAN/01	39.3135
739742	CHRIS 2	Claim	2010/APR/03	2024/JAN/01	393.1019
850482		Claim	2011/APR/01	2024/JAN/01	471.3729
739783	CHRIS 3	Claim	2010/APR/03	2024/JAN/18	392.9831
850473		Claim	2011/APR/01	2024/JAN/18	471.3488
850472		Claim	2011/APR/01	2024/JAN/19	412.4648
850475		Claim	2011/APR/01	2024/JAN/19	491.0131

SECTION 5

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

SECTION 5: ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

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5.1 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Gibraltar Mine is easily accessed by a paved road that joins Highway 97 at the Village of McLeese Lake.

The property is characterized by moderate topography with relief of 200 m. Elevation at the plant site is 1,128 m above sea level.

Climatic conditions are typical of central British Columbia with a temperature range of +30^{o}C to -40^{o}C. Annual precipitation is 50 cm with approximately 35% falling as snow.

Accommodation for mine employees and supplies is available in the nearby communities of Williams Lake, Quesnel, and McLeese Lake. Williams Lake is serviced by daily flights from Vancouver.

Gibraltar holds sufficient title for mining and concentrator operations including tailings and waste disposal areas with the exception of a small extension of a lease boundary that is required to mine the full Extension pit.

Potable and domestic use water is pumped from deep wells on the mine site. Process facilities will continue to operate using reclaimed water from the existing tailings storage facility.

Electricity is supplied by the British Columbia Hydro and Power Authority.

Natural gas is provided by Fortis BC.

A siding for the shipment of concentrate is in operation adjacent to Highway 97 at Macalister on the Canadian National Rail (CN) line to Vancouver, six km north of McLeese Lake. Gibraltar owns the buildings and a portion of the land upon which the siding is located and has an agreement in place for the use of CN-owned siding materials.

SECTION 6

HISTORY

SECTION 6: HISTORY

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6.1 History

In 1964, Gibraltar Mines Ltd. (Gibraltar) acquired a group of claims in the McLeese Lake area from Malabar Mining Co. Ltd.

Canadian Exploration Limited (Canex), at that time a wholly-owned subsidiary of Placer Development (Placer), and Duval Corporation (Duval) had also been exploring on claims known as the Pollyanna Group which they had acquired adjacent to Gibraltar's claims. In 1969 Canex and Duval optioned the Gibraltar property. In 1970 Canex acquired Duval's remaining interest to hold both properties.

Placer began construction of the mine in October 1970. The concentrator commenced production on March 8, 1972 and was fully operational by March 31, 1972.

In October 1996, Westmin Resources Limited (Westmin) acquired 100% control of Gibraltar and in December 1997, Boliden Limited acquired Westmin. In March 1998, Boliden announced that it would cease mining operation at Gibraltar Mine at the end of 1998.

The total production history, to the end of 1998, amounted to 1,860 million pounds of copper in concentrate, 20 million pounds of molybdenum and 85 million pounds of cathode copper from 336 million tons milled.

Taseko acquired its' interest in the assets of Gibraltar in a transaction with Boliden in July 1999. After a period of care and maintenance, mining operations recommenced in May 2004. Milling production began in October of that year.

Copper cathode production recommenced in January 2006.

Taseko increased mill capacity to 55,000 tons per day in 2011 through installation of a new 34' diameter SAG mill, conversion of the rod and ball mill circuit to ball mill grinding only, replacement of rougher flotation cells with large state of the art tank cells, installation of a new primary crusher, regrind mill, tailings pumping system and concentrate filter, replacement of the cleaner flotation cells, and a direct feed system for the SAG mill.

On March 31, 2010, the Company established a joint venture with Cariboo Copper Corp. ("Cariboo") over the Gibraltar mine, whereby Cariboo acquired a 25% interest in the mine and Gibraltar retained a 75% interest.

6.1 History – *Cont'd*

Taseko increased mill capacity to 85,000 tons per day in 2013 through installation of a complete independent second bulk concentrator and a stand-alone Molybdenum Separation Plant. The second bulk concentrator circuit has a nameplate capacity of 30,000 tons per day and consists of a 34' diameter SAG mill, a 20' diameter ball mill, rougher flotation tank cells, a regrind circuit and a two stage cleaner circuit. The Molybdenum Separation Plant processes the bulk concentrate produced in both of the site's concentrators and produces separate molybdenum and copper concentrates via a four stage differential flotation process.

Total production between restart in 2004 and December 31, 2018 was 280 million tons milled, producing 1,350 million pounds of copper in concentrate, 18 million pounds cathode copper and 18 million pounds of molybdenum.

SECTION 7

GEOLOGICAL SETTING AND MINERALIZATION

SECTION 7: GEOLOGICAL SETTING AND MINERALIZATION

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7.1 Introduction

The regional, local and property geology are stated in the report titled "Technical Report on the Gibraltar Mine, British Columbia" by James W. Hendry, P.Eng., and C. Stewart Wallis, P.Geo., dated March 23, 2005, which is filed on www.sedar.com. The description is summarized here.

7.2 Regional Geology

The Granite Mountain Batholith, which is the host for the Gibraltar ore bodies, is located within a wedge of Mesozoic and Palaeozoic rocks bounded on the west by the Fraser Fault system and on the east by the Pinchi Fault system (Figure 7-1). The Pinchi Fault system, which marks the boundary between the Cache Creek and the Quesnel terrane to the east, lies about 15 to 20 km east of Granite Mountain where it is represented by an unknown number of fault splays, including the Quesnel Fault.

The oldest rocks in the area are mainly andesitic to basaltic flows and associated volcanoclastic materials of the Permian Cache Creek Group that have been regionally metamorphosed into a complex suite of greenschist facies rocks that have been intruded by the late Triassic to Early Jurassic Granite Mountain Batholith and the Cretaceous Sheridan Stock. The batholith is a zoned, peraluminous, subalkaline body with a hybrid border, a tonalite central phase and a trondhjemite northern phase. The Sheridan Stock is composed of tonalite and dioritic to granodioritic rocks. The Gibraltar deposits are hosted by the upper Triassic Granite Mountain batholith.

The regional deformation was accompanied by localized metasomatic alteration and associated sulphide deposition that led to the concentration of copper mineralization in specific areas of the batholith.

Regional foliation trends 310° with subordinate strikes of 270° to 290°. Dips are southerly at 30° to 50°. Bedded rocks of the Cache Creek Group and the major phases of the batholith have a similar strike and dip.

The area has been intensely glaciated and most of the bedrock is covered by lodgement till, accompanied in places by ablation moraine and glaciofluvial deposits.

7.2 Regional Geology – *Cont'd*

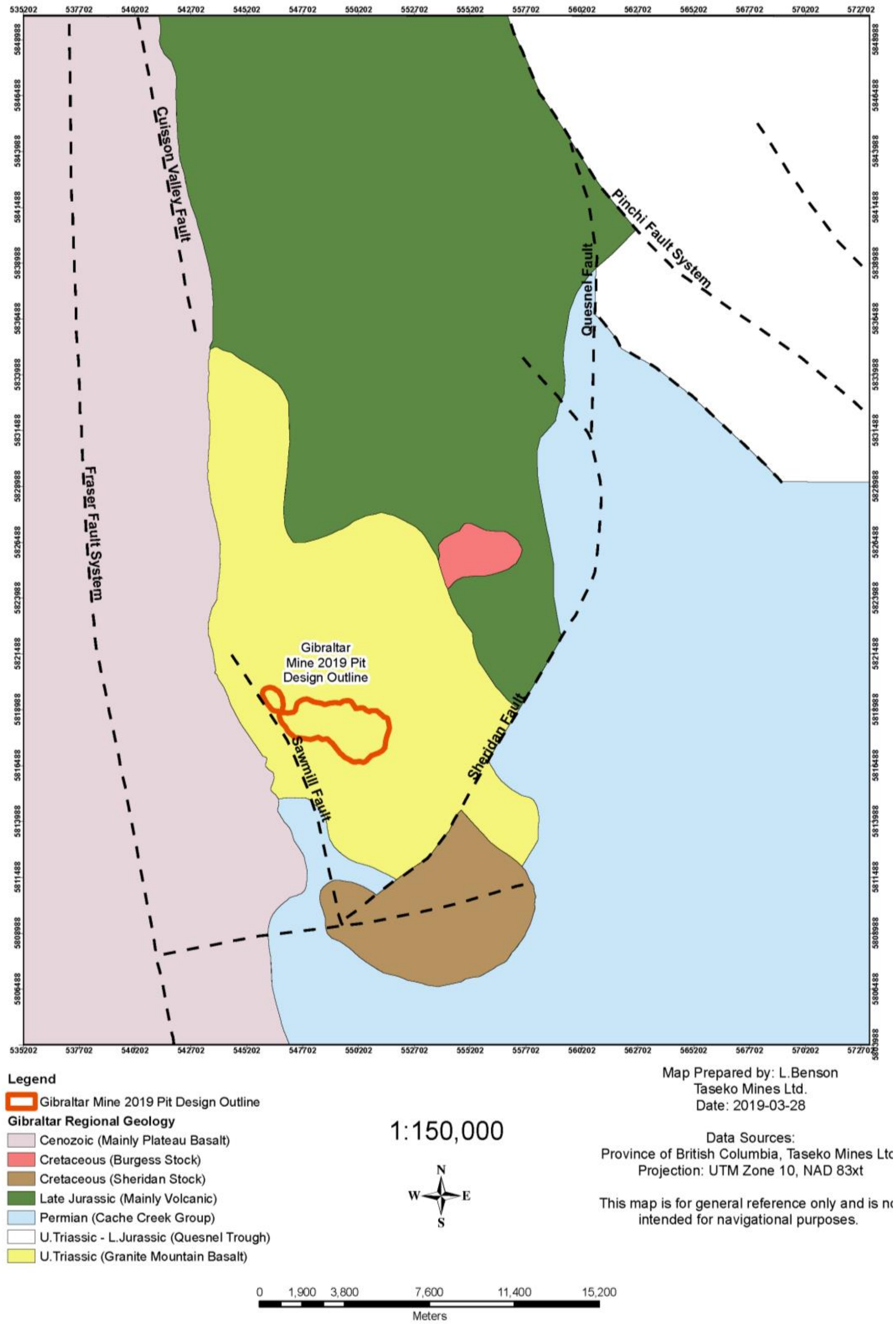

Figure 7.1: Regional Geology

7.3 Local and Property Geology

The Gibraltar deposits are hosted by the upper Triassic Granite Mountain batholith (Figure 7-2). The batholith and adjacent Cache Creek Group rocks exhibit penetrative foliation and are regionally metamorphosed to the upper greenschist facies. Ore mineralization occurred during a later stage of regional deformation and metamorphism.

There are currently five defined mineralized zones on the Gibraltar Mine property. They are: Pollyanna, Granite, Gibraltar, Connector, and Extension zones. They occur within the Granite Mountain Batholith in a broad zone of shearing and alteration.

The Granite Mountain Batholith is a composite body consisting of three major phases, Border Phase diorite, Mine Phase tonalite, and Granite Mountain trondjhemite. These and a minor late leucocratic phase of trondjhemitic composition, all occur on the mine property.

Contacts between the major phases are gradational over widths ranging from two metres to several hundred metres. Leucocratic phase contacts are either sharp or gradational over widths of less than a metre.

The regional deformation was accompanied by localized metasomatic alteration and associated sulphide deposition that led to the concentration of copper mineralization in specific areas of the batholith. Pyrite and chalcopyrite are the principal primary sulphide minerals of the Gibraltar deposits. Molybdenite is a minor, but economically important associate of chalcopyrite in the Pollyanna, Granite, Gibraltar and Connector deposits.

Within the presently known Gibraltar ore bodies, four major structural hosts for copper mineralization have been recognized:

- discrete lamellae of chlorite and/or sericite occurring as penetrative foliation structures,
- complex sets of sheeted shear veins, collectively referred to as oriented stockworks,
- shear zones, consisting almost entirely of alteration minerals,
- gangue dilation veins composed mainly of quartz gangue

Two major ore structure orientations have been recognized; the Sunset and Granite Creek systems. Ore host structures of the Sunset system are mainly shear zones, with minor development of stockworks and associated foliation lamellae whereas oriented stockworks with associated pervasive foliation lamellae predominate in the Granite Creek system.

7.3 Local and Property Geology – *Cont'd*

The Gibraltar deposits can be classified according to structural system, and in mine terminology are referred to as porphyry ores, and shear zone ores. Granite Creek systems provide the major porphyry ore structures of Pollyanna and Granite Zones.

These bodies have the characteristic large diffuse nature of porphyry-type mineralization but retain the Granite Creek structural orientation along outside boundaries. The Gibraltar and Extension deposits are contained within the Reverse Sunset, a large complex shear zone. These deposits are long and narrow, with sharp ore-waste cut-offs and internally they are intricately folded. The Gibraltar deposit is essentially a system of interconnected Sunset zones which create a large body of fairly uniform grade yet maintain a strong degree of internal planar control. The Gibraltar Zone is considered to be a transition between porphyry and shear zone ore. The Connector Zone is a combination of Gibraltar (Sunset type ore) and Pollyanna (porphyry type ore) mineralization connecting the northern part of the Gibraltar and Pollyanna systems.

7.3 Local and Property Geology – *Cont'd*

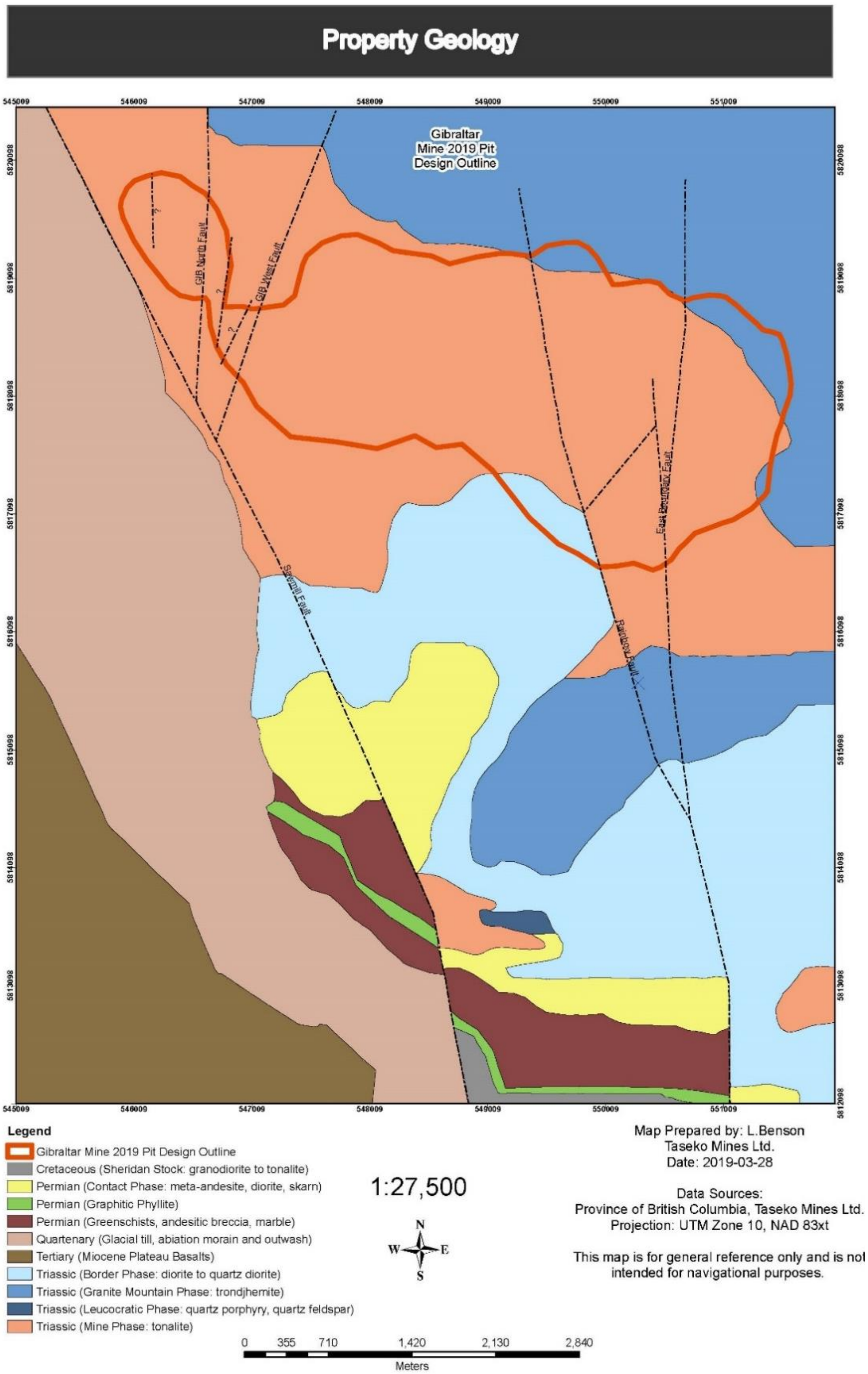

Figure 7.2: Property Geology

7.4 Mineralization

The “Mineralization” of the Granite, Pollyanna, and Connector deposits is generally described in a report titled “Technical Report on the Gibraltar Mine, British Columbia” by James W. Hendry, P.Eng., and C. Stewart Wallis, P.Geo., dated March 23, 2005, which is filed on www.sedar.com.

The “Mineralization” of the Gibraltar Extension is generally described in a report titled “Technical Report on the 105 Million Ton Increase in Mineral Reserves at the Gibraltar Mine, British Columbia” by Scott Jones, P.Eng., dated January 23, 2009, which is filed on www.sedar.com.

Pyrite and chalcopyrite are the principal primary sulphide minerals of the Gibraltar deposits. Fine-grained chalcopyrite, generally barely visible without magnification, accounts for 60 percent of the copper content and constitutes the single most important form of copper mineralization. Most of this fine fraction is dispersed within the phyllosilicate foliation lamellae and forms the uniformly distributed grades of the Gibraltar porphyry-type ores. Coarser grained chalcopyrite usually occurs in quartz veins and shear zones. Pyrite mineralization generally shows some degree of segregation from chalcopyrite and, in the Pollyanna and Granite deposits, pyrite forms a halo or blanket of waste material above and away from the orebody. Large-scale pyrite zoning is also evident in the Gibraltar deposit but without the formation of a separate halo. The Connector Zone displays mineralization features similar to both the Gibraltar and Pollyanna Zones. In the Gibraltar and Extension Zones, pyrite is closely associated with the ore, often as massive zones 3 m to 7 m thick.

Small concentrations of other sulphides are present in the Gibraltar ores. Bornite, associated with magnetite and chalcopyrite, occurs along the low sulphur extremities of the Pollyanna deposit. Molybdenite is a minor but economically important associate of chalcopyrite in the Pollyanna, Granite, and Connector deposits. Small zones of molybdenum mineralization as molybdenite also occur in Gibraltar but are virtually absent in the Extension Zone. Sphalerite is present in the Gibraltar Zone and particularly abundant in parts of the Extension Zone. Both of these deposits also have elevated silver concentrations associated with copper mineralization. The above relationships suggest a metal zonation from Pollyanna to the Extension Zone that involves a westerly decrease of molybdenum and a corresponding increase of zinc and silver.

7.4 Mineralization – *Cont'd*

There is a close spatial relationship between sulphide mineralization and alteration in the Gibraltar deposits. The principal alteration minerals are chlorite, sericite, epidote, carbonate and quartz. Ore grade mineralization is associated mainly with sericite and chlorite. Epidote and the carbonate minerals are not common associates of strong sulphide mineralization. Quartz is common throughout the alteration sequence as both a relict host rock mineral and an introduced mineral.

Most of the Tertiary weathering surface has been removed during the periods of Pleistocene glaciation. The present zone of oxidation and leaching for the Gibraltar deposits is confined to the upper 1 m to 3 m of the bedrock surface (although there are structural controls that allowed groundwater to create limited zones of oxidation at depths up to 100 m) except for the Gibraltar and Connector zones which are capped by an extensive blanket of oxidized minerals and supergene enrichment, interpreted to be a remnant of a pre-glacial, or interglacial, period of weathering. In both deposits, the extent of supergene enrichment has been determined largely by the pyrite concentration in the zone of oxidation. Supergene enrichment occurs directly beneath the leach cap, forming a blanket-like zone about 15 m to 30 m thick containing the supergene copper minerals chalcocite, digenite and covellite.

SECTION 8

DEPOSIT TYPE

SECTION 8: DEPOSIT TYPE

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8.1 Deposit Type

The Gibraltar Mine Porphyry belongs to the Calc-Alkaline suite of rocks that are host to other BC producing or past producing porphyries. These include the Brenda Mine, Highland Valley Copper, Mount Polley and others located within the Cordillera of British Columbia.

The host rocks for the above BC porphyries are components of the Intermontane Superterrane made up of both ocean basin assemblages and offshore island arc rocks that came together in late Paleozoic time. Later subduction may have been responsible for the formation of the island arcs assemblages. Many porphyry deposits are closely related to consuming-margin, island arc processes. The late Triassic to Jurassic intrusive activity is synchronous with regional deformation and metamorphism during terrane accretion.

The Pollyanna, Granite and Connector deposits are referred to at the mine as porphyry ores due in part to their large size and diffuse nature of mineralization. In contrast, the Extension deposit is considered shear ore, and the Gibraltar deposit as transitional between the two types consisting of a series of interconnected planar zones that form a large body of fairly uniform grade. Exploration of the Pollyanna, Granite, Connector and Gibraltar deposits has used well established features of these deposits such as the fairly uniform southerly dip of the mineral zones and offsets by a series of northerly trending, generally steeply west dipping faults to guide hole placements.

SECTION 9

EXPLORATION

SECTION 9: EXPLORATION

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9.1 Exploration

The following is a description of material exploration conducted on the Gibraltar property since 2000.

A property-scale Induced Polarization ("IP") geophysical survey was designed and initiated in August 2000. Field activities included 237 kilometres of line cutting and some 220 km of IP survey. Several deposit scale anomalies external to current reserves were identified and drill tested in 2003 as described in a report titled "Technical Report on the Gibraltar Mine, British Columbia" by James W. Hendry, P.Eng., and C. Stewart Wallis, P.Geo., dated March 23, 2005, which is filed on www.sedar.com.

In 2011 Gibraltar Mines Ltd. had an airborne ZTEM electromagnetic and magnetic survey flown over its then existing claims surrounding the Gibraltar mine. A total of some 690 line kilometres of Z-Axis Tipper electromagnetic and magnetic data was collected. An assessment report titled "An Assessment Report On Airborne Z-Axis Tipper Electromagnetic & Magnetic Survey, Gibraltar Mines, Cariboo Mining Division, British Columbia" was prepared in April 2011 by Peter E. Walcott & Associates Limited of Vancouver for Gibraltar Mines Ltd. which is filed as BC Geological Assessment Report 32225 on ARIS (Assessment Report Indexing System) on www.gov.bc.ca.

In 2015 a ground magnetometer survey was performed over 36.6 line kilometres on four mineral claims. The work and results are described in a report titled "Assessment Report on 2015 Exploration Ground Mag Survey" which was authored in October 2015 by Scott Smith (Gibraltar Mines Ltd.) and filed as BC Geological Assessment Report 35602 on ARIS (Assessment Report Indexing System) on www.gov.bc.ca.

As well in 2015 one exploration diamond drill hole northwest of the current Extension Resource was drilled to a total depth of 2507' (764.1m). The work and results are described in a report titled "Assessment Report on 2015 Exploration Diamond Drill Hole" which was authored in February 2016 by Scott Smith (Gibraltar Mines Ltd.) and filed as BC Geological Assessment Report 35944 on ARIS (Assessment Report Indexing System) on www.gov.bc.ca.

An additional 10 diamond drill holes, totalling 19165' (5843.0m), were drilled between November 2016 and February 2017 as follow-up to the 2015 program. This program was successful in confirming the presence of porphyry style mineralization along strike of the GibW / Extension zone. The exploration results received expanded the known mineralization to the west, northwest and at depth. The work and results are described in a report titled "Assessment Report on the 2016 GibNW Exploration Program" which was authored in March 2017 by Chris Gallagher (Terralogic Exploration Inc for Gibraltar Mines Ltd) and filed as BC Geological Assessment Report 36493 on ARIS (Assessment Report Indexing System) on www.gov.bc.ca.

9.1 Exploration – *Cont'd*

In 2017 two geophysical surveys were conducted over the Gibraltar NW area by Walcott & Associates. The first consisted of an airborne magnetics survey flown over the property. The survey covered a total of 346 line-km flown along northeast orientated lines at 100 m spacings. The second survey consisted of a ground IP survey that covered a total of 41.5 line-km along 11 north-easterly orientated lines with spacing between 200 and 400m.

The collected data was used to target a diamond drill program which consisted of two exploration diamond drill holes totaling 3941' (1201.4m) again in the area northwest of the current Extension Resource. The work and results are described in a report titled "Assessment Report on the 2017 GibNW Exploration Program" which was authored in February 2018 by Alanna Ramsay (Terralogic Exploration Inc for Gibraltar Mines Ltd) and filed as BC Geological Assessment Report 37421 on ARIS (Assessment Report Indexing System) on www.gov.bc.ca.

SECTION 10

DRILLING

SECTION 10: DRILLING

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10.1 Introduction

Extensive drilling has taken place on the Gibraltar Mine property in 46 of the last 54 years. This drilling has been used to explore, delineate and define the resources and reserves of the Gibraltar copper-molybdenum deposits. Of the 2,467 holes and 1.5 million feet drilled, 45% of the holes and 55% of the footage has been completed since Taseko acquired the property from Boliden in 1999.

Drilling at Gibraltar provides significant geological, geotechnical, hydrological and metallurgical information for planning and is important for mine production and water management. A typical hole drilled serves multiple purposes. The results of the drill programs, in particular, the sampling, assaying and geological components, provide critical support for the block grades used in the mineral resource and reserve estimates described in Section 14.

A summary of drilling by area over significant intervals of the mine's history for the entire property is presented in Table 10.1. A similar summary for holes available for use in copper estimation in the current resource and reserve is provided in Table 10.2. Holes not used for resource and reserve estimation purposes are generally those for which there are no copper assays. A plan of drillhole locations in the main mining areas is illustrated in Figure 10.1.

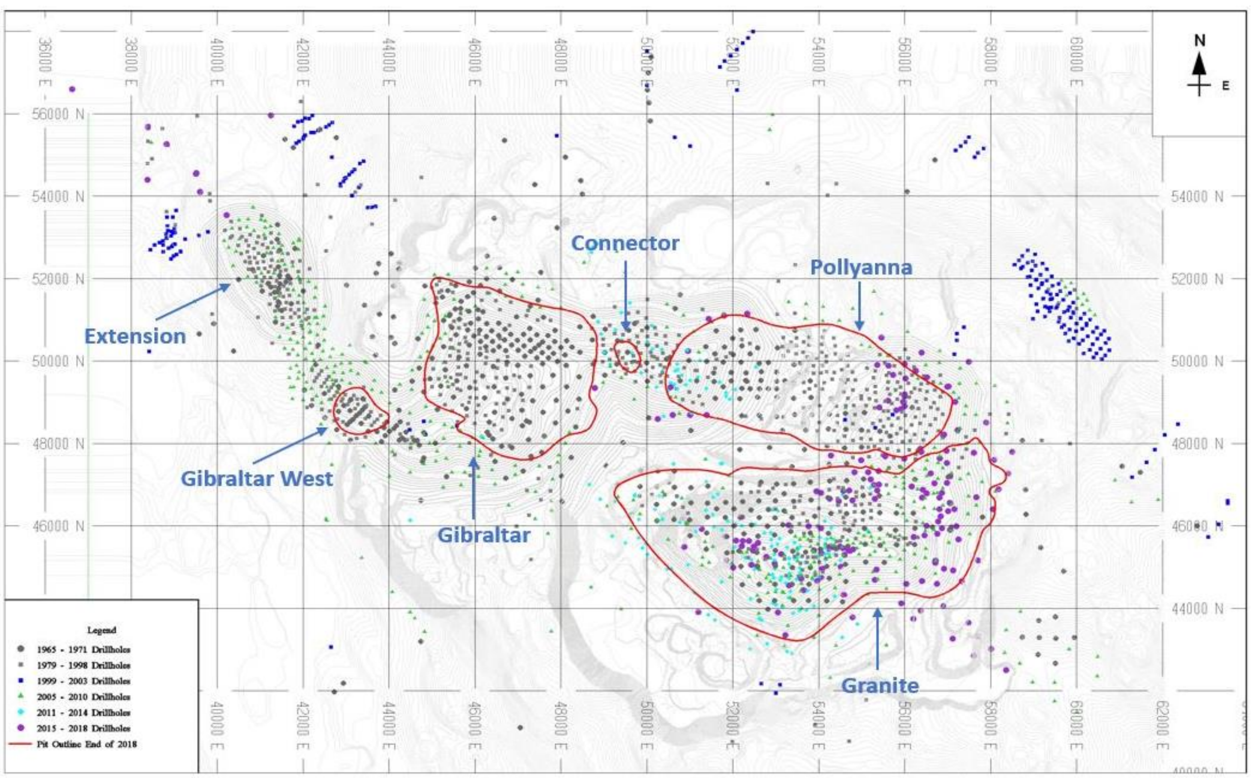

Figure 10.1: Drill Hole Locations in Gibraltar Mine Grid

10.1 Introduction – *Cont'd*

Table 10.1: Drilling Summary by Area & Year Intervals for Holes on the Property

Area	1965-1971		1978-1998		1999-2010		2011-2014		2015-2018		Total	
	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)
Gibraltar	180	101,344	117	53,234	84	81,224	4	2,227	0	0	385	238,029
Gibraltar West	112	42,496	160	113,958	130	110,977	0	0	13	25,614	415	293,045
Granite	127	71,481	99	37,369	169	136,909	146	107,135	120	72,025	661	424,918
Pollyanna	32	17,923	193	93,707	70	55,138	5	350	39	33,434	339	200,552
Connector	48	24,380	78	42,138	14	12,118	39	36,848	10	11,089	189	126,573
Other	97	29,094	125	58,152	248	140,614	1	3,917	7	6,289	478	238,066
Total	596	286,718	772	398,558	715	536,980	195	150,477	189	148,451	2,467	1,521,183

Note: For 12 early holes, HD-01 to HD11 and PP-25, no drilling year was recorded. They are from the period 1965-1971 in Table 10.1 and 10.2.

Table 10.2: Drilling Summary by Area & Year for Holes Used in the Resource & Reserve Estimate

Area	1965-1971		1978-1998		1999-2010		2011-2014		2015-2018		Total	
	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)
Gibraltar	176	99,310	116	52,999	81	80,740	1	2,077	0	0	374	235,126
Gibraltar West	78	35,020	155	111,959	127	110,680	0	0	8	16,939	368	274,598
Granite	121	69,534	99	37,369	165	135,993	127	96,828	105	62,301	617	402,025
Pollyanna	32	17,923	193	93,707	64	52,185	0	0	26	23,369	315	187,184
Connector	48	24,380	78	42,138	14	12,118	37	36,338	10	11,089	187	126,063
Other	46	21,169	75	39,970	239	139,657	1	3,917	7	6,289	368	211,002
Total	501	267,336	716	378,142	690	531,373	166	139,160	156	119,987	2,229	1,435,998

10.2 Pre-1999 Drilling

The first recorded drilling took place in the area of exposed surface mineralization in Gibraltar West in 1965. Gibraltar East (Gibraltar pit) was first drilled shortly thereafter. This was followed by the discovery of the Granite and Pollyanna deposits by drilling in September and October of 1967. From 1965 through 1971, 286,718 feet in 596 holes were completed in annual drill programs with an average length of 480 feet per hole. Ranked in descending order of footage drilled, the main focus of this work was on Gibraltar, Granite, Gibraltar West, Connector and Pollyanna. Peripheral prospects, including Gunn, Sawmill, KV and Pothole, were also first drilled in 1967, followed by Highway in 1969 and Water Tank in 1970. In 1971, with the primary focus shifted to mine development and the start of operations, core drilling was curtailed.

Drilling activities resumed in 1978 and continued annually to 1998, resulting in the completion of a further 398,558 feet in 772 additional holes averaging 515 feet in length. Ranked in descending order of footage drilled, this work focused on Gibraltar West, Pollyanna, Gibraltar, Connector and Granite. Additional drilling on the property led to the discovery of other prospects on the property including ZE in 1978, TK Zinc in 1991 and 98 Oxide in 1998. Mining operations at Gibraltar were halted in late 1998 due to low metal prices.

The dominant core size for this early diamond drilling was NQ (4.76 cm diameter) and most holes were drilled vertically (−90 degrees). No downhole surveying was performed.

Core recovery was not recorded prior to 1999; however, 21,675 rock quality designation measurements were recorded for an average RQD of 43% from 1979 through 1998.

10.3 1999 – 2003 Drilling

Taseko acquired Gibraltar in mid-1999 and by mine restart in 2004, added a further 223 holes and 118,874 ft of drilling to the mine database. Most of this footage was completed in the 2003 program which took place in several broad areas around the property. All cores from this period were drilled NQ size, except for four HQ core size monitoring wells. Holes from this period averaged 530 feet in length.

90% of holes were drilled vertically with the remaining holes drilled at an inclination of -45 degrees to the northeast. No downhole surveying was performed. 2,989 core recovery and RQD measurements were taken on drill runs averaging 10 feet in length. The average core recovery was 99% and RQD was 37% for this drilling.

Digital core photography became routine at Gibraltar in 2003. This practice has continued for all exploration and geotechnical core drilling at the mine since then.

10.4 2004 – 2010 Drilling

Mine operations resumed in 2004 after a 6-year hiatus. During this period from 2004 through 2010 a further 418,106 feet was drilled in 492 holes. A typical drill hole from this period was vertical, NQ core size and 850 feet in length. The 92 non-vertical holes from this period were drilled in wide variety of azimuths and orientations.

Core recovery was measured for 37,129 intervals averaging 10 feet in length for an average recovery of 96% and RQD of 69%. Of the total footage, 63% was drilled NQ core size. A total of 36 HQ and HQ3 core holes were also completed representing 6% of the total. In addition to that, ten 8-inch diameter percussion holes totaling 3,061 feet were drilled for other purposes. In 2009 and 2010, 28 AD series 5-inch diameter percussion rotary air blast (RAB) holes were drilled for a total of 7,040 feet. The AD series of holes were drilled in active mining areas, usually in-pit on ramps. They were completed using rapid RAB drilling and sampling techniques to ensure completion while avoiding conflict with ongoing mine operations.

Detailed geological and geotechnical logging were performed prior to sampling. The related logging data were entered into Access entry database at the mine and then transferred to the MineSight drill hole database at the mine and a SQL drillhole database in Vancouver.

10.5 2011 – 2014 Drilling

During this period, 150,477 feet was drilled in 195 holes. Almost 50% of the footage was for exploration, delineation and infill drilling. Drill holes from this period average 770 feet in length, with 40% of the footage drilled NQ core size, 23% HQ core size, 27% rotary and 6% casing. The number of holes drilled in the various areas is as follows: 146 in Granite, 39 in Connector, five in Pollyanna, four in Gibraltar and one in #4 dump. The number by primary purpose of these typically multi-purpose holes is: 63 exploration, delineation and infill, 22 geotechnical and 11 piezometer cored holes and 94 production and water well percussion holes.

A total of 27 core holes were drilled vertically. The 74 non-vertical core holes were drilled in a wide range of azimuths and range of inclinations from -45 to -85 degrees. All percussion production and water well holes were drilled vertically, except four holes that were drilled from -65 to -75 degrees at various azimuths.

The core recovery of holes drilled in this period measured from 8,850 drill run intervals averaging 10 feet in length is 97% and the average RQD is 68%.

Geotechnical core logging procedures were performed according to procedures outlined by Gibraltar's geotechnical consultant. All geotechnical information was entered directly into a Microsoft Access database at the mine.

Geological logging procedures follow internal guidelines designed in a secure facility at Gibraltar Mine to capture, categorize and/or quantify all relevant mineralization, alteration, lithology and structural information.

10.6 2015 – 2018 Drilling

A total of 189 holes and 148,451 feet of drilling was completed in this period with an average length of 785 feet. Of this, 62% was drilled NQ core size, 13% HQ core size, 21% rotary and 4% was casing. Resource holes were typically drilled NQ core size and geotechnical holes HQ core size. Exploration, delineation and infill drilling comprised 63% of the total footage. The number of holes drilled in the various areas is as follows: 120 in Granite, 39 in Pollyanna, 13 in Gibraltar West, 10 in Connector and 7 in the Gunn area just southeast of the Granite pit. The number by primary purpose of these typically multi-purpose holes is: 88 exploration, delineation and infill, 18 piezometer and 4 geotechnical cored holes, plus 79 production and water well percussion holes.

A total of 102 non-vertical core holes were drilled from -43 to -85 degrees inclination in a wide range of azimuths. Seven core holes and all production and water well percussion holes were drilled vertically. As in previous programs, the AD series of holes were typically drilled in-pit on active ramps and were completed using RAB drilling.

The core recovery of holes drilled in this period measured from 6,129 drill run intervals averaging 10 feet in length is 96% and the average RQD is 64%.

Geotechnical and geological core logging procedures were completed in a similar fashion to previous programs. Geotechnical core logging procedures were performed according to procedures outlined by Gibraltar's geotechnical consultant. Geological logging procedures follow internal guidelines and were performed in a secure facility at Gibraltar Mine. All relevant mineralization, alteration, lithology and structural information was captured, categorized and/or quantified and entered directly into a digital database at the mine. Digital data was transferred to a SQL database in Vancouver.

The purpose, area, coordinates, and orientations of holes drilled in 2015 through 2018 are shown in Tables 10.3 through 10.7.

10.6 2015 – 2018 Drilling – *Cont'd*

Table 10.3: 2015 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2015-001	40,212.4	53,530.4	3,043.5	2,507	Gibraltar W	Exploration	328	-66
AD15-01	54,054.7	45,327.8	3,200.1	450	Granite	Production	0	-90
AD15-02	51,268.1	45,923.0	3,252.7	300	Granite	Production	0	-90
AD15-03	51,797.7	45,734.2	3,204.0	500	Granite	Production	0	-90
AD15-04	52,371.9	45,627.7	3,203.0	300	Granite	Production	0	-90
AD15-05	52,065.2	45,636.9	3,206.0	400	Granite	Production	0	-90
AD15-06	52,575.4	45,580.8	3,199.6	300	Granite	Production	0	-90
AD15-07	52,219.8	45,632.8	3,204.1	350	Granite	Production	0	-90
AD15-08	52,204.6	45,507.5	3,204.9	350	Granite	Production	0	-90
AD15-09	53,882.9	45,399.2	3,201.2	450	Granite	Production	0	-90
AD15-10	52,461.2	45,403.2	3,184.8	275	Granite	Production	0	-90
AD15-11	52,776.5	45,240.0	3,149.6	300	Granite	Production	0	-90
AD15-12	53,040.4	43,893.3	3,700.4	745	Granite	Production	0	-90
AD15-13	50,837.6	46,181.1	3,299.2	200	Granite	Production	0	-90
AD15-14	50,936.4	46,052.4	3,299.4	200	Granite	Production	0	-90
AD15-15	51,003.7	45,925.5	3,300.3	200	Granite	Production	0	-90
DWW15-01	53,815.2	42,604.7	4,100.6	1,000	Granite	Dewatering	0	-90
DWW15-02	52,694.5	42,667.9	4,062.5	860	Granite	Dewatering	0	-90
DWW15-03	55,888.2	43,881.9	4,098.8	1,000	Granite	Dewatering	0	-90
DWW15-04	55,845.6	46,683.4	4,076.9	800	Granite	Dewatering	0	-90
DWW15-05	55,876.6	44,514.2	4,093.5	420	Granite	Dewatering	0	-90
DWW15-06	54,566.3	43,369.8	4,135.0	460	Granite	Dewatering	0	-90

10.6 2015 – 2018 Drilling – *Cont'd*

Table 10.4: 2016 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2016-001	56,362.7	43,941.4	4,102.5	563	Granite E	Geotech	320	-70
2016-002	57,656.6	46,691.9	4,533.9	968	Granite E	Geotech	250	-80
2016-003	57,320.2	44,657.7	4,318.8	738	Granite E	Geotech	160	-80
2016-004	54,779.5	43,783.8	4,077.6	1,003	Granite E	Geotech	143	-85
2016-005	55,986.4	47,622.7	4,188.2	1,597	Pollyanna	Infill	0	-60
2016-006	56,748.1	44,592.0	4,329.6	1,657	Granite E	Infill	315	-80
2016-007	56,906.2	48,211.2	4,271.1	1,217	Pollyanna	Infill	270	-60
2016-008	56,906.2	48,211.4	4,271.2	1,217	Pollyanna	Infill	295	-60
2016-009	56,354.7	47,862.5	4,194.3	1,323	Pollyanna	Infill	330	-82
2016-010	57,242.3	45,664.7	4,442.8	1,347	Granite E	Infill	315	-80
2016-011	56,419.3	46,876.0	4,278.1	1,837	Granite E	Infill	0	-70
2016-012	57,052.3	45,904.5	4,428.9	937	Granite E	Infill	310	-65
2016-013	55,340.7	44,939.1	3,798.2	872	Granite E	Infill	0	-65
2016-014	54,824.0	47,294.6	4,122.5	807	Granite E	Infill	180	-57
2016-015	54,076.5	44,954.3	3,448.9	857	Granite E	Infill	60	-70
2016-016	53,938.9	46,831.1	3,832.0	557	Granite E	Infill	0	-90
2016-017	53,757.5	45,987.2	3,565.3	837	Granite E	Infill	180	-60
2016-018	56,684.8	47,024.8	4,294.4	1,234	Granite E	Infill	15	-75
2016-019	53,292.0	46,018.8	3,519.9	697	Granite E	Infill	180	-55
2016-020	56,600.1	47,271.2	4,289.3	1,113	Granite E	Infill	0	-80
2016-021	56,373.1	47,784.8	4,195.6	1,347	Pollyanna	Infill	350	-50
2016-022	56,009.0	49,570.7	4,208.6	399	Pollyanna	Infill	0	-90
2016-023	56,009.0	49,570.7	4,208.6	737	Pollyanna	Infill	0	-90
2016-024	54,797.7	45,426.5	3,350.9	405	Granite E	Infill	0	-62
2016-025	52,485.1	45,497.1	3,148.2	307	Granite E	Infill	0	-70
2016-026	54,484.1	45,494.2	3,352.5	457	Granite E	Infill	0	-70
2016-027	54,043.0	45,940.8	3,563.6	707	Granite E	Infill	180	-60
2016-028	54,774.6	46,615.9	3,883.8	437	Granite E	Infill	0	-90
2016-029	54,325.5	45,473.0	3,337.9	579	Granite E	Infill	0	-90
2016-030	52,179.0	46,204.5	3,414.6	367	Granite E	Infill	0	-90
2016-031	54,225.1	45,485.1	3,300.1	427	Granite E	Infill	0	-75
2016-032	52,564.1	45,008.6	3,300.6	421	Granite E	Infill	0	-70
2016-033	52,560.9	44,999.2	3,300.8	560	Granite E	Infill	180	-75
2016-034	52,422.3	45,052.6	3,301.6	407	Granite E	Infill	0	-70
2016-035	52,421.5	45,050.8	3,301.7	407	Granite E	Infill	180	-75
2016-036	57,012.4	49,377.8	4,278.3	700	Pollyanna	Infill	356	-85

10.6 2015 – 2018 Drilling – *Cont'd*

Table 10.4: 2016 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid – *Cont'd*

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2016-037	55,534.2	47,679.2	4,116.4	752	Pollyanna	Infill	203	-75
2016-038	56,977.2	47,520.4	4,247.9	688	Pollyanna	Infill	160	-85
2016-039	56,886.2	48,188.8	4,270.3	942	Pollyanna	Infill	90	-85
2016-040	55,995.3	49,923.6	4,302.7	703	Pollyanna	Infill	340	-85
2016-E01	39,600.9	54,101.4	3,009.5	2,463	Gibraltar W	Infill	45	-75
2016-E02	39,506.1	54,560.6	2,961.7	1,663	Gibraltar W	Infill	45	-82
2016-E03	39,593.7	54,089.5	3,010.1	1,777	Gibraltar W	Infill	230	-80
2016-E04	38,376.0	54,392.0	2,902.1	2,087	Gibraltar W	Infill	50	-50
2016-E05	38,816.1	55,265.6	2,896.5	2,197	Gibraltar W	Infill	60	-55
2016-E01	39,600.9	54,101.4	3,009.5	2,463	Gibraltar W	Infill	45	-75
2016-E06	38,386.2	55,687.4	2,872.0	2,338	Gibraltar W	Infill	320	-65
2016-E07	39,512.8	54,546.2	2,962.1	1,907	Gibraltar W	Infill	105	-55
AD16-01	56,251.1	49,756.9	4,289.5	500	Pollyanna	Production	0	-90
AD16-02	55,722.5	49,659.0	4,213.7	400	Pollyanna	Production	0	-90
AD16-03	55,358.4	46,852.7	4,118.7	300	Granite	Production	0	-90
AD16-04	56,504.8	46,786.4	4,298.0	500	Granite	Production	0	-90
AD16-05	53,955.0	44,658.5	3,399.8	500	Granite	Production	0	-90
AD16-06	54,050.5	44,728.7	3,399.5	600	Granite	Production	0	-90
AD16-07	54,504.1	45,000.5	3,401.2	220	Granite	Production	0	-90
AD16-08	53,637.1	44,432.5	3,400.7	230	Granite	Production	0	-90
AD16-09	51,849.4	45,153.2	3,349.1	450	Granite	Production	0	-90
AD16-10	52,004.4	44,986.6	3,350.7	220	Granite	Production	0	-90
AD16-11	54,555.7	45,459.2	3,351.8	450	Granite	Production	0	-90
AD16-12	54,597.1	45,288.1	3,350.4	300	Granite	Production	0	-90
AD16-13	53,582.4	44,715.6	3,299.5	460	Granite	Production	0	-90
AD16-14	53,306.3	44,547.8	3,300.2	400	Granite	Production	0	-90
DWW16-01	55,499.4	45,776.9	3,453.5	750	Granite	Dewatering	0	-90
DWW16-02	38,001.0	26,001.0	1,001.0	900	Granite	Dewatering	0	-90
DWW16-03	38,002.0	26,002.0	1,002.0	900	Granite	Dewatering	0	-90
DWW16-04	38,003.0	26,003.0	1,003.0	360	Granite	Dewatering	0	-90
MW2016-041	58,501.2	47,793.0	4,456.2	902	Pollyanna	Piezometer	257	-65
MW2016-042	57,484.6	49,980.8	4,385.6	902	Pollyanna	Piezometer	195	-65
MW2016-043	55,448.9	50,568.8	4,382.0	903	Pollyanna	Piezometer	159	-65

10.6 2015 – 2018 Drilling – *Cont'd*

Table 10.5: 2017 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2017-001	58,349.1	42,493.0	4,021.2	967	Gunn	Exploration	0	-80
2017-002	57,599.5	42,841.0	3,996.0	837	Gunn	Exploration	15	-70
2017-003	58,002.8	43,006.9	3,992.8	907	Gunn	Exploration	0	-80
2017-004	56,027.7	44,588.8	4,135.6	1,517	Granite 6N	Delineation	0	-80
2017-005	57,689.6	43,313.2	4,033.7	857	Gunn	Exploration	0	-80
2017-006	57,112.8	43,261.3	4,117.5	1,014	Gunn	Exploration	0	-70
2017-007	57,119.8	44,918.4	4,337.3	804	Granite 6N	Delineation	0	-80
2017-008	56,895.7	44,044.9	4,171.3	867	Gunn	Exploration	0	-80
2017-009	57,474.0	43,647.3	4,100.0	840	Gunn	Exploration	120	-50
2017-010	57,599.5	47,766.8	4,404.8	1,226	Pollyanna E	Delineation	0	-90
2017-011	57,890.3	48,502.0	4,408.9	1,137	Pollyanna E	Delineation	0	-80
2017-012	57,194.2	45,991.4	4,451.2	967	Granite 6N	Delineation	0	-80
2017-013	57,227.8	48,316.0	4,351.3	1,267	Pollyanna E	Delineation	290	-65
2017-014	56,967.8	47,814.3	4,313.6	1,107	Pollyanna E	Delineation	0	-85
2017-015	54,566.6	44,325.3	3,800.5	567	Granite 6S	Infill	50	-65
2017-016	55,607.3	49,032.2	3,952.0	1,207	Pollyanna	Infill	180	-85
2017-017	56,392.3	44,660.3	4,262.7	807	Granite 6N	Delineation	0	-85
2017-018	55,995.3	49,185.7	3,950.6	797	Pollyanna	Infill	0	-85
2017-019	58,405.1	47,270.8	4,429.9	807	Pollyanna E	Delineation	15	-85
2017-020	55,900.1	48,833.6	3,926.0	1,157	Pollyanna	Infill	90	-55
2017-021	58,073.3	47,601.0	4,426.0	1,247	Pollyanna E	Delineation	0	-85
2017-022	55,911.5	44,115.7	4,099.2	867	Granite 6N	Delineation	0	-80
2017-023	55,988.7	49,135.3	3,950.2	1,107	Pollyanna	Infill	180	-75
2017-024	56,384.2	50,196.7	4,344.6	887	Pollyanna W	Delineation	0	-80
2017-025	56,158.7	46,949.0	4,048.7	1,077	Granite 6N	Delineation	92	-55
2017-026	56,910.8	44,954.1	4,350.7	1,407	Granite 6N	Delineation	270	-75
2017-027	54,683.5	45,411.8	3,350.6	757	Granite 6S	Delineation	184	-55
2017-028	52,327.6	51,148.3	4,084.2	907	Connector	Infill	180	-50
2017-029	54,721.3	45,393.4	3,351.3	727	Granite 6S	Delineation	138	-50
2017-030	51,790.7	51,091.4	4,047.3	1,337	Connector	Infill	178	-50
2017-031	51,387.8	48,683.9	3,914.1	1,007	Connector	Infill	4	-75
2017-032	51,432.7	51,022.7	4,013.2	1,007	Connector	Infill	180	-55
2017-033	50,999.9	48,687.1	3,893.9	1,047	Connector	Infill	28	-85
2017-034	50,550.3	49,362.4	3,901.1	1,257	Connector	Infill	60	-61
2017-035	50,591.7	48,686.2	3,893.6	1,207	Connector	Infill	0	-80
2017-036	50,949.4	50,236.3	3,879.0	907	Connector	Infill	190	-80
2017-037	48,786.3	49,339.8	3,705.7	1,207	Connector	Infill	0	-70

10.6 2015 – 2018 Drilling – *Cont'd*

Table 10.5: 2017 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid – *Cont'd*

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2017-038	50,242.8	48,593.3	3,885.7	1,206	Connector	Infill	0	-67
2017-E01	38,383.5	55,670.5	2,872.5	2,047	Gibraltar NW	Exploration	90	-85
2017-E02	39,505.6	54,543.0	2,964.2	678	Gibraltar NW	Exploration	320	-80
2017-E03	39,503.2	54,540.9	2,962.2	2,008	Gibraltar NW	Exploration	310	-80
2017-E04	36,614.4	56,595.7	2,857.5	2,125	Gibraltar NW	Piezometer	45	-65
2017-E05	41,246.1	55,958.5	3,020.6	1,817	Gibraltar NW	Piezometer	50	-55
AD17-01	55,615.9	49,882.0	4,202.1	350	Pollyanna	Production	0	-90
AD17-02	55,139.3	47,300.5	4,107.7	60	Granite	Production	0	-90
AD17-03	55,201.1	47,124.0	4,118.9	450	Granite	Production	0	-90
AD17-04	55,395.9	46,995.3	4,120.2	300	Granite	Production	0	-90
AD17-05	54,275.5	47,700.1	4,085.2	350	Granite	Production	0	-90
AD17-06	55,359.9	49,900.9	4,151.5	60	Pollyanna	Production	0	-90
AD17-07	54,976.4	47,589.8	4,092.3	400	Granite	Production	0	-90
AD17-08	55,386.2	47,324.3	4,103.6	400	Granite	Production	0	-90
AD17-09	55,302.0	46,649.0	3,899.0	200	Granite	Production	0	-90
AD17-10A	56,700.0	45,151.0	4,300.0	50	Granite	Production	0	-90
AD17-10B	56,718.0	45,143.0	4,300.0	50	Granite	Production	0	-90
AD17-10C	56,700.0	45,100.0	4,300.0	550	Granite	Production	0	-90
AD17-11	56,754.0	45,805.0	4,299.0	140	Granite	Production	0	-90
AD17-12	56,855.0	45,939.0	4,299.0	650	Granite	Production	0	-90
AD17-13	54,700.0	46,850.0	3,905.0	250	Granite	Production	0	-90
AD17-14	54,561.0	46,845.0	3,901.0	200	Granite	Production	0	-90
AD17-15	54,046.0	46,796.0	3,848.0	250	Granite	Production	0	-90
AD17-16	54,249.0	46,649.0	3,851.0	300	Granite	Production	0	-90
AD17-17	54,462.0	46,596.0	3,851.0	300	Granite	Production	0	-90
AD17-18	56,768.0	46,100.0	4,298.0	700	Granite	Production	0	-90
AD17-19	57,055.0	47,199.0	4,299.0	380	Granite	Production	0	-90
AD17-20	56,830.0	46,229.0	4,297.0	500	Granite	Production	0	-90
AD17-21	57,046.0	46,555.0	4,298.0	120	Granite	Production	0	-90
AD17-22	56,972.0	47,033.0	4,300.0	420	Granite	Production	0	-90
DWW17-01	51,273.7	45,523.6	3,349.8	400	Granite	Dewatering	0	-90
MW2017-01	50,862.1	45,481.8	3,591.3	846	Granite	Piezometer	135	-70
MW2017-02	51,187.4	43,900.8	4,081.9	1,277	Granite	Piezometer	60	-70
MW2017-03	53,215.5	43,344.2	3,902.4	1,067	Granite	Piezometer	0	-70
MW2017-04	55,299.2	44,686.9	3,848.2	1,027	Granite	Piezometer	330	-70
MW2017-05	58,045.0	46,397.6	4,501.8	1,100	Granite 6N	Piezometer	290	-43
MW2017-06	57,697.7	45,162.4	4,436.9	1,500	Granite 6N	Piezometer	280	-45

10.6 2015 – 2018 Drilling – *Cont'd*

Table 10.5: 2017 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid – *Cont'd*

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
MW2017-07	56,195.5	43,745.3	4,102.6	1,500	Granite 6N	Piezometer	330	-45
MW2017-08	56,475.7	47,176.5	4,000.8	890	Granite 6N	Piezo/metallurgy	195	-85
MW2017-09	54,583.9	44,324.6	3,798.1	907	Granite 6S	Piezometer	310	-75

Table 10.6: 2018 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2018-001	55,995.2	48,899.8	3,901.6	876	Pollyanna	Infill	90	-55
2018-002	56,980.9	49,366.0	4,278.4	1,085	Pollyanna	Infill	270	-50
2018-003	56,246.5	49,756.4	4,288.4	1,501	Pollyanna	Infill	180	-60
AD18-01	56,800.5	46,682.8	4,249.8	450	Granite	Production	0	-90
AD18-02	56,859.9	46,796.9	4,249.7	450	Granite	Production	0	-90
AD18-03	57,001.5	46,349.5	4,152.1	420	Granite	Production	0	-90
AD18-04	57,050.9	46,549.9	4,150.5	350	Granite	Production	0	-90
AD18-05	56,799.8	46,399.1	4,150.1	320	Granite	Production	0	-90
AD18-06	57,150.1	46,400.3	4,149.7	300	Granite	Production	0	-90
AD18-07	56,398.5	46,683.9	4,099.2	250	Granite	Production	0	-90
AD18-08	55,401.8	48,872.6	3,902.3	300	Pollyanna E	Production	0	-90
AD18-09	56,451.6	45,760.6	3,899.8	500	Granite	Production	0	-90
AD18-10	55,800.4	48,800.2	3,901.3	200	Pollyanna E	Production	0	-90
AD18-11	55,949.5	49,001.3	3,899.8	200	Pollyanna E	Production	0	-90
AD18-12	57,167.7	49,005.9	4,305.1	300	Pollyanna E	Production	0	-90
AD18-13	56,510.8	49,600.1	4,281.9	400	Pollyanna E	Production	0	-90
AD18-14	56,498.4	45,999.5	3,894.9	300	Granite	Production	0	-90
AD18-15	56,200.5	45,724.2	3,897.1	500	Granite	Production	0	-90
DWW18-01	57,901.0	47,700.3	4,430.8	500	Granite	Dewatering	0	-90
MW2018-01	58,176.6	46,885.2	4,455.7	847	Granite 6N	Piezometer	260	-65
MW2018-02	56,813.1	47,636.0	4,200.0	987	Pollyanna E	Piezometer	180	-65
MW2018-03	55,279.3	46,985.1	3,997.6	902	Granite 6N	Piezometer	240	-65

10.7 Surveying

Final collar locations for all holes drilled since 1999 were surveyed by mine survey staff in the mine coordinate system after completion of the holes. Drillhole coordinate and orientation data for holes drilled prior to 1999 are largely derived from the digital records of previous mine operators. In a few instances, drill collar coordinates are from hard copy drill logs retrieved from the Gibraltar mine vault. The survey accuracy of these holes is acceptable, and they have been used to guide mining activities for many years.

A Reflex EZ-Shot tool was used to take downhole orientation surveys starting in mid-2007 and continuing through the 2018 drill programs. Prior to 2018, surveys of resource holes were taken below the casing, every 300 to 500 feet thereafter and again at the bottom of the hole. In 2018 the survey spacing was increased to every 200 feet. Geotechnical drillhole surveys were taken more frequently, typically every 150 feet. Survey data were entered into the drill hole database upon receipt.

The following single shot, magnetic instruments were used prior to the implementation of the Reflex EZ-Shot tool: Sperry Sun (holes 2006-074 to 2007-151), Pajari Tropari (holes 2006-001 to 2006-072). No records of downhole surveys were found for holes drilled prior to 2006.

10.8 Core Recovery

RQD was regularly measured on a drill run basis from the 1979 drill program onwards for cored drillholes. Core recovery measurements were added to the geotechnical program in 1999. Overall drill run intervals average 10 feet in length with an average RQD of 60% for 76,772 intervals measured. The average core recovery in the 1999 through 2018 programs is 96% for the 55,000 drill runs measured. Approximately 46% of the intervals measured have 100% recovery. Table 10.8 summarizes the drill core recovery and RQD.

Figures 10.1 and 10.2 illustrate the relationships between recovery and copper grade as well as recovery and molybdenum grade respectively. No significant bias between assay grade and recovery is apparent, although a small number of samples with very low recoveries have lower than average grades.

Table 10.7: Drill Core Recovery & RQD Summary

Year Range	Intervals Measured	Length of Intervals (ft)	Recovery Average (%)	RQD Average (%)
1979-1998	21,675	218,924	*	43
1999-2003	2,989	29,997	99	37
2004-2010	37,129	364,159	96	69
2011-2014	8,850	79,268	97	68
2015-2018	6,129	54,364	96	64
Total	76,772	746,712	96	60

* No RQD measurements were recorded prior to 1979. No recovery measurements were recorded prior to 1999.

10.8 Core Recovery – *Cont'd*

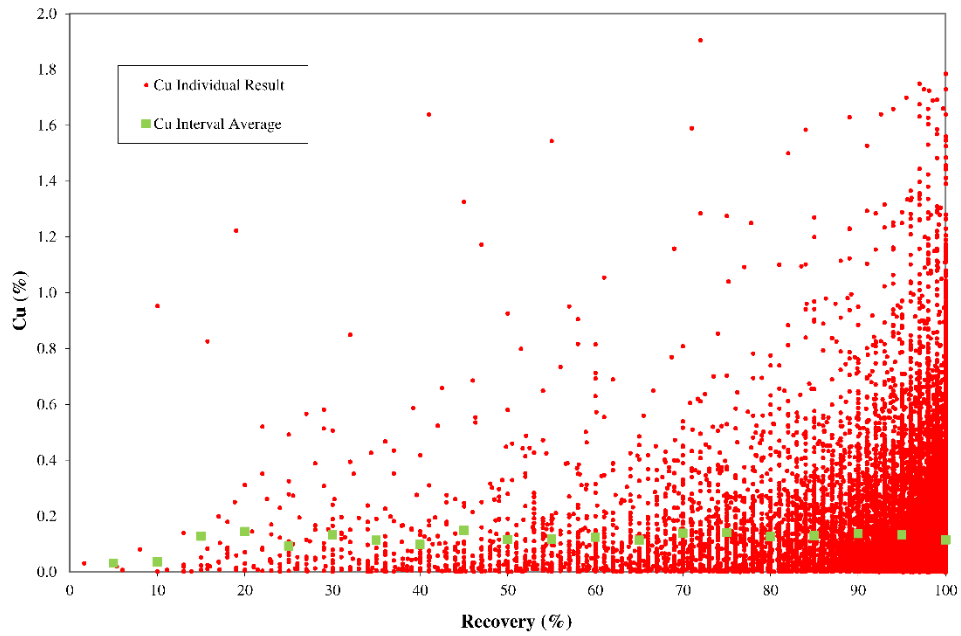

Figure 10.2: Drill Core Recovery Versus Copper Grade

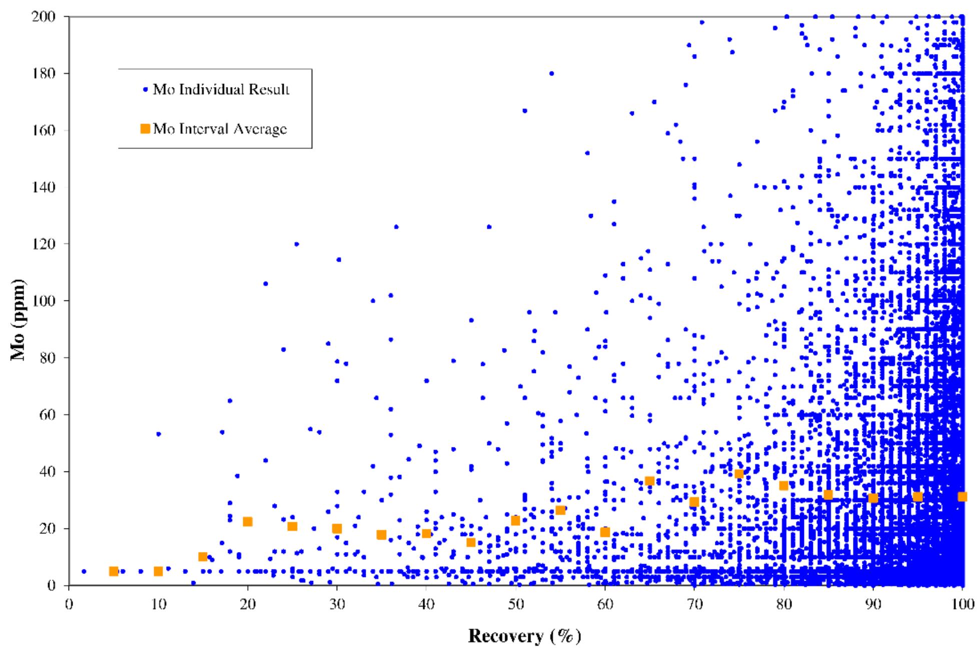

Figure 10.3: Drill Core Recovery Versus Molybdenum Grade

10.9 Cross Sections

Representative cross sections through the Granite, Pollyanna, Connector, Gibraltar, and Extension zones are shown in Figures 10-4 through 10-8. These figures show material classification, ore boundaries and drillhole traces. The drillhole traces represent a viewing window +/- 50 feet of the section.

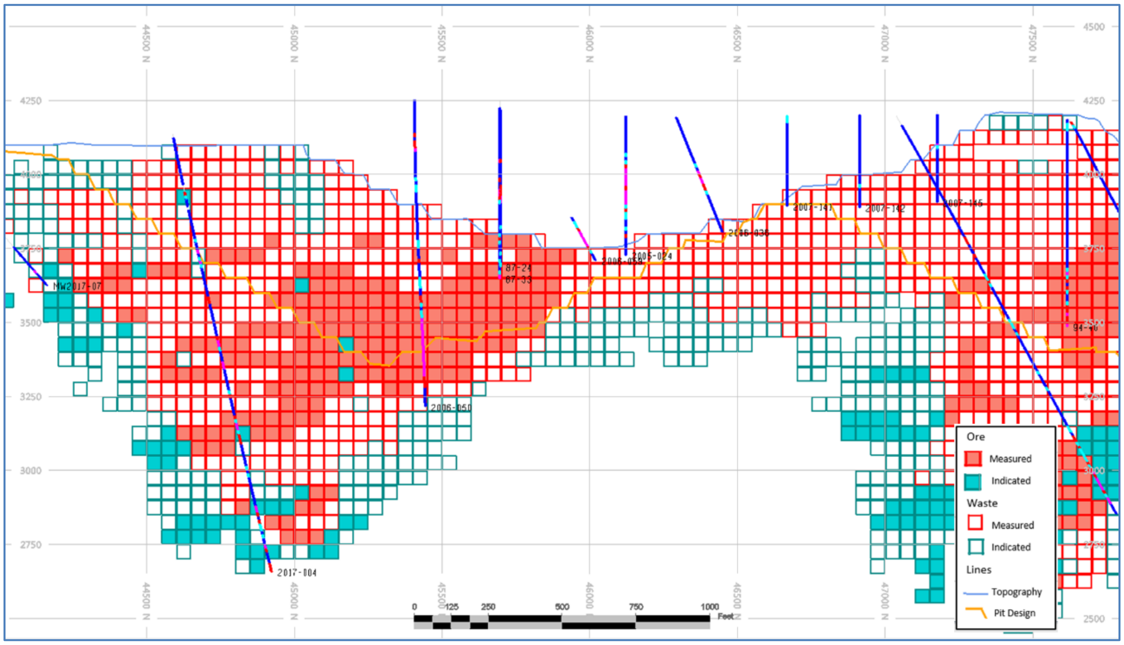

Figure 10.4: Granite Cross-Section 56,000 East

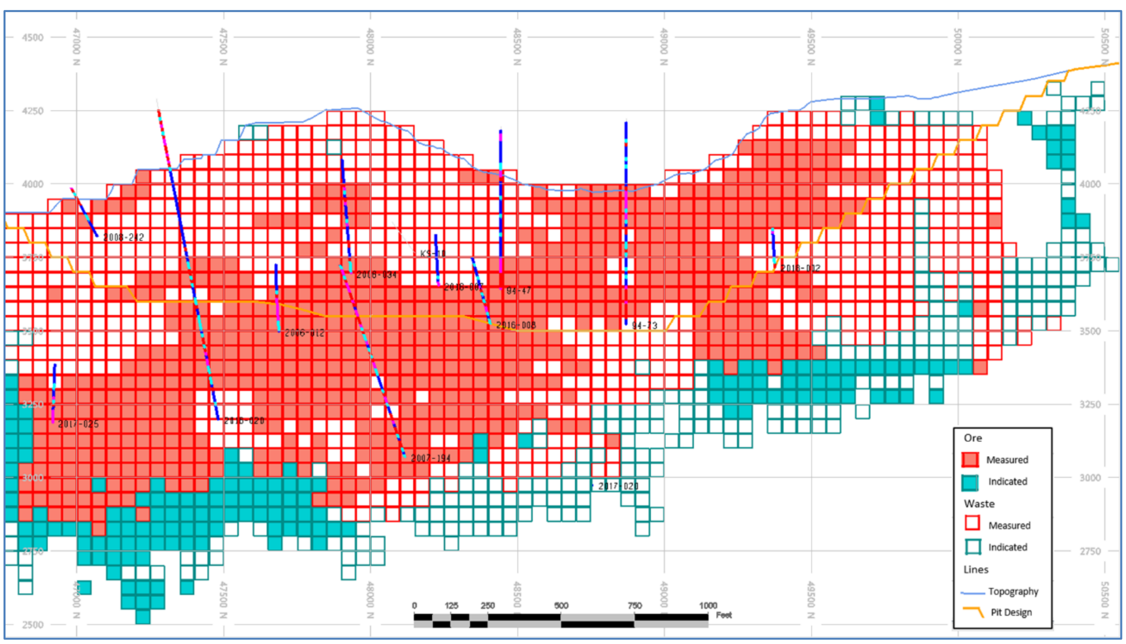

Figure 10.5: Pollyanna Cross-Section 56,600 East

10.9 Cross Sections – *Cont'd*

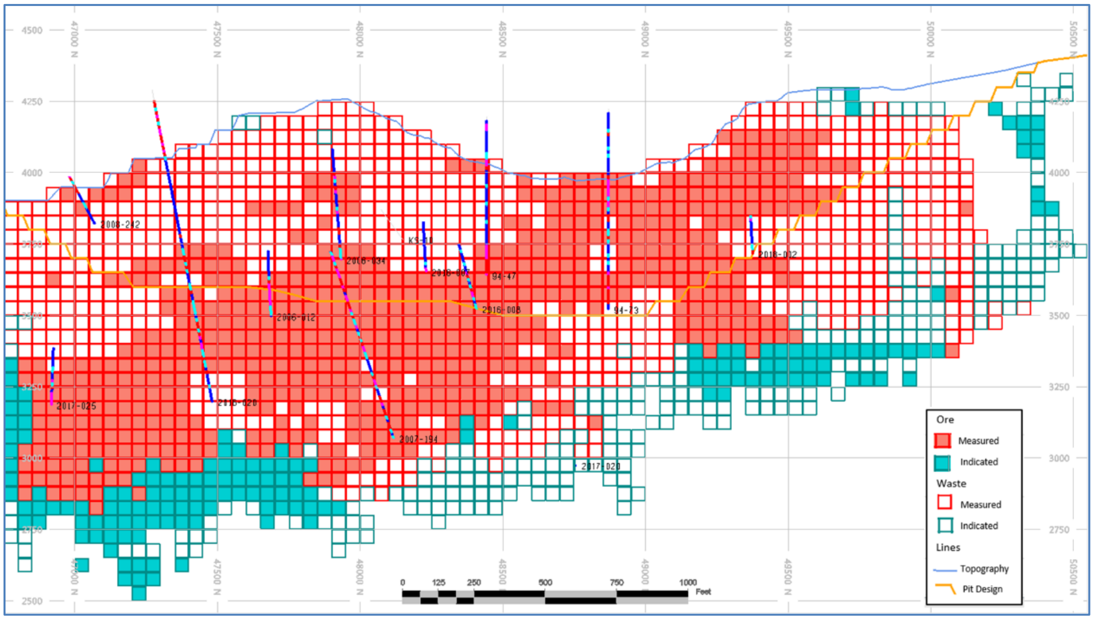

Figure 10.6: Connector Cross Section 50,900 East

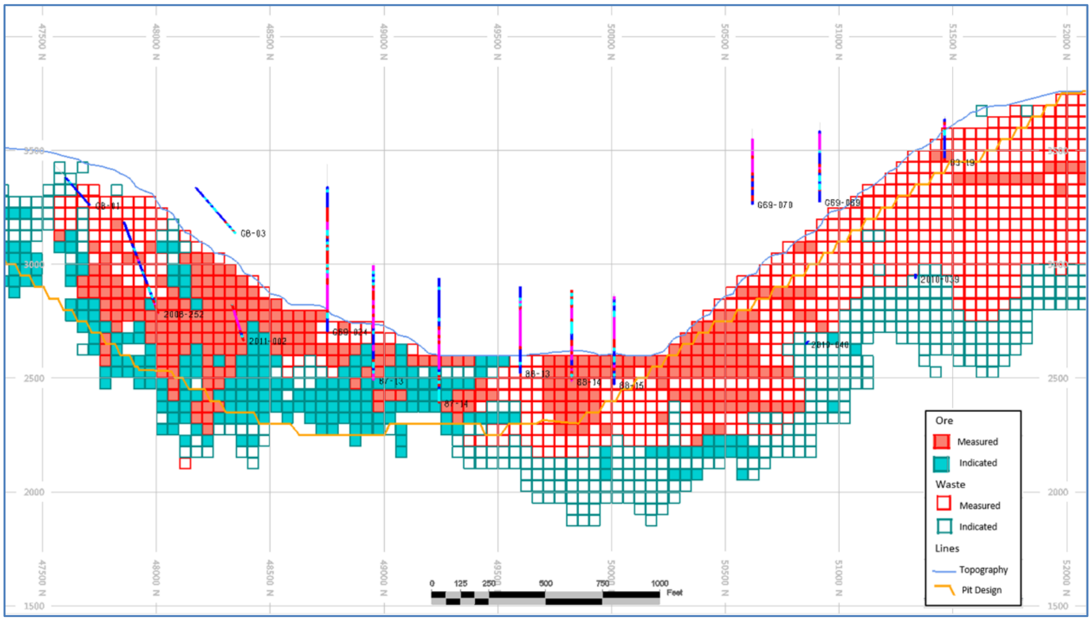

Figure 10.7: Gibraltar Cross Section 46,500 East

10.9 Cross Sections – *Cont'd*

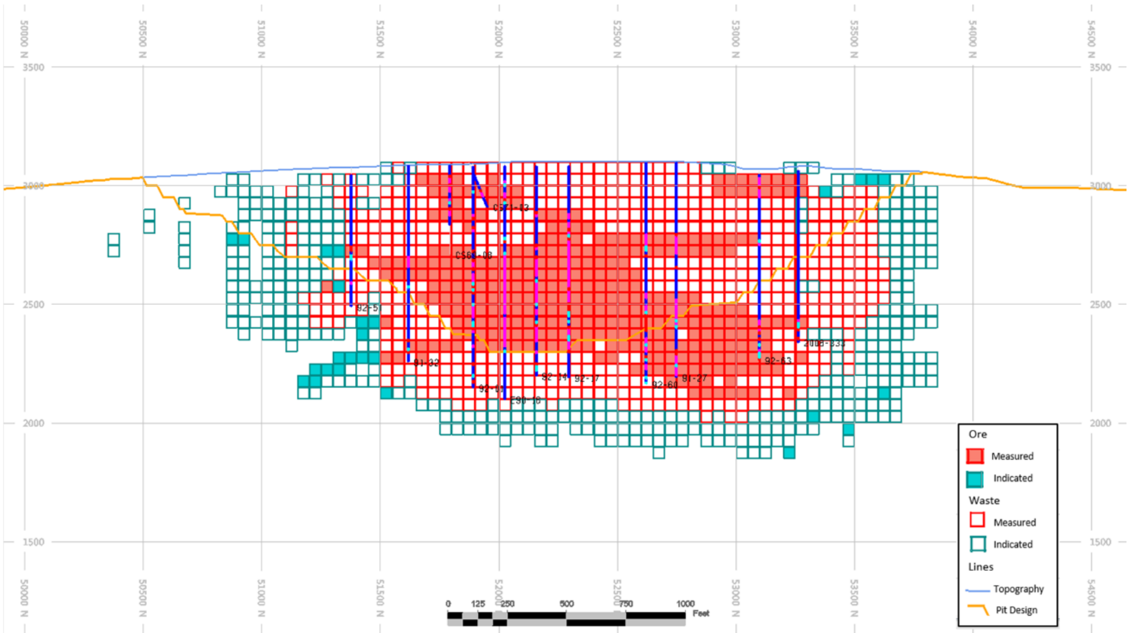

Figure 10.8: Extension Cross Section 41,200 East

SECTION 11

SAMPLE PREPARATION, ANALYSIS AND SECURITY

SECTION 11: SAMPLE PREPARATION, ANALYSIS AND SECURITY

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11.1 Introduction

Over 135,000 samples have been taken for total copper analysis from drilling at Gibraltar since 1965. About 95% of these samples were also assayed for molybdenum, 52% for acid soluble copper, 50% for acid soluble iron, 46% for multi-element ICP and 36% for gold. Essentially all rock drilled and recovered is sampled in 10 ft intervals. Occasionally, shorter or longer sample intervals are taken in areas of geologic interest or recovery differences. Unconsolidated overburden material, where it exists, is generally not recovered by core drilling and therefore not usually sampled.

From discovery in 1965 through mine start-up in 1971, and since mine re-start in 2004, 93% of the assays on drill samples were performed by reputable, independent third-party analytical laboratories. Mine laboratory personnel performed all drill sample analyses during the active mining years from 1979 to 1998 and in the large 2003 program prior to mine re-start. Analyses by the independent commercial laboratories from 2005 through 2018 represent 90% of the total assays for this period. The overall percentage of assays used in the resource/reserve that were done by the Gibraltar Mine laboratory is approximately 38%.

The well-documented sample preparation, security and analytical procedures used on the Gibraltar drill programs since 1999 were carried out in an appropriate manner consistent with common industry practice. These results and the results from the historical programs prior to that year are supported by many years of mine production. A significant amount of due diligence and analytical QAQC for copper and molybdenum has been completed on the samples that were used in the current mineral resource/reserve estimate. The quality of the work performed on the digital database provides confidence that it is of good quality and acceptable for use in geological and resource modelling of the Gibraltar deposits.

A summary of sample preparation and assay laboratories used in the Gibraltar drill hole sampling and analytical programs since inception is listed in Table 11.1.

11.1 Introduction – *Cont'd*

Table 11.1: Summary of Sample Preparation and Assay Laboratories

Year	Sample Preparation Lab	Primary Assay Lab	Check Assay Lab
1965-1966	Laboratories unknown		
1967-1968	Coast Eldridge, ISL Laboraties Ltd. Vancouver, & laboratories unknown		Warnock Hersey (1970), Vancouver & Laboratories unknown
1969	Bondar-Clegg & Co. Ltd., North Vancouver J.R. Williams & Sons Ltd., Warnock Hersey Vancouver & laboratories unknown		
1970	Loring Lab., Calgary, Canex Lab., Warnock Hersey Vancouver & laboratories unknown		
1971	Loring Lab., Calgary, Canex Lab., Vancouver & laboratories unknown		
1979-1998	Gibraltar Mine Lab. at Gibraltar Mine		Gibraltar Mine Lab (1982-1998), Vangeochem Lab Limited (1990-1992), Bondar Clegg (1992), Min-En Labs, North Vancouver (1995-1998)
1999	Assayers Canada, Vancouver		
2000	G & T Metallurgical, Kamloops	G & T Metallurgical, Kamloops & Assayers Canada, Vancouver	Assayers Canada, Vancouver
2003	Gibraltar Mine Lab. at Gibraltar Mine		Assayers Canada and IPL, Vancouver
2005	ALS Chemex, North Vancouver		Assayers Canada, Vancouver
2006	Assayers Canada, Vancouver & ALS Chemex, North Vancouver, Gibraltar Mine Lab		Acme Labs, Vancouver & Eco Tech, Kamloops
2007	Eco Tech, Kamloops, ALS Chemex, North Vancouver, Gibraltar Mine Lab, and G&T Metallurgical, Kamloops		
2008	Acme Labs, Vancouver & Eco Tech, Kamloops		Eco Tech, Kamloops
2009	Gibraltar Mine Lab. at Gibraltar Mine		
2010-2011	Stewart Group (Eco Tech) Kamloops & Gibraltar Mine Lab		Stewart Group (Eco Tech) Kamloops & Acme Labs Vancouver
2012-2018	ALS Minerals, Kamloops & Gibraltar Mine Lab	ALS Minerals, North Vancouver & Gibraltar Mine Lab	Bureau Veritas (Acme) Vancouver

11.2 1965-1998 Samples

Prior to 1982, most of the core was split in half; one half was taken as an assay sample and the other half was stored on site. From 1982 to 1998, whole core was sampled at ten-foot intervals except a four inch character sample that was retained.

Prior to 1999, a total 58,394 samples were collected and assayed for total copper. Additional analyses were performed including: 52,565 molybdenum assays, 16,302 sulphuric-acid leachable copper assays (CuAS), 56 cyanide leachable copper assays (CuCN), 9,845 silver assays, 8,230 zinc assays, 6,527 acid soluble iron assays and 600 gold assays. Only 10 samples were analyzed for multi-element ICP analyses during this period.

A large repository of information in hard copy format documenting the pre-1999 Gibraltar exploration, development and mining programs was stored in the Gibraltar Mine vault. This included original documents, photocopies, print-outs and plots of logs, assay certificates, plans, sections, diagrams and figures from historical geology, drilling, mining and engineering work. In late 2013 these documents were scanned and digitized. Information for 1,285 pre-1999 drill holes was located in these archives and subjected to validation and verification procedures. Information supporting the historical drill holes varied in format and quality. Typical drill logs from this era are hand-written or typed, with the hole number, location, orientation, geological, sampling and assay information combined in a single document. Assay certificates from this period are also either hand-written or typed, and in addition to the sample number and assay results, typically record the laboratory name and date of analysis.

Drill data for 83 drill holes representing about 5% of the total holes from this period were not located in the archives. The data for these holes is derived from a pre-1999, digital compilation of previous mine operators. There are no records of the sample preparation and assay methods employed prior to 1979 and only about 13% of original laboratory assay certificates from the era prior to mine start-up in 1971 are still available.

Gibraltar laboratory personnel performed the sample preparation and analytical work for exploration and development drilling on the project from 1979 through 1998. The Gibraltar laboratory analytical method descriptions and assay certificates for this period are well documented. Outside laboratories Vangeochem Lab Limited (1990-1992) and Min-En Labs, of Vancouver (1995-1998) and Bondar Clegg (1992) of North Vancouver, BC performed copper check assay work on Gibraltar drill core during this period, as well as a few silver, gold and zinc single element assays and a small number of multi-element assays.

11.3 1999-2003 Sample Preparation and Analysis

In the years from 1999 through 2003, core samples were mechanically split in half at the secure Gibraltar core logging facility by Taseko and Gibraltar personnel, predominantly from NQ core. A total of 10,836 Cu and Mo assays, as well as a number of addition precious metal, multi-element assays were performed on the regular samples and 3,404 control samples were analyzed. No analyses were performed on the four water well holes drilled in 2004.

Assayers Canada in Vancouver performed the sample preparation and analytical work on the 311 samples from the 1999 program in 2000. Samples were dried, crushed and then a 200 g sub-sample was taken and ring-pulverized to 90% passing 150 mesh. Cu, Mo and 29 additional elements were analyzed by Aqua Regia digestion Inductively Coupled Plasma – Atomic Emission Spectroscopy (ICP-AES) methods to a lower detection limit (LDL) of 1 ppm and 2 ppm respectively. The three values that exceeded 10,000 ppm Cu were re-run by Aqua Regia (AR) digestion with Atomic Absorption Spectroscopy finish (AAS). Gold was determined on the samples by Fire Assay (FA) fusion AAS finish to a 1 ppb LDL.

In 2000, G & T Metallurgical Services Ltd of Kamloops, BC performed preparation on 115 samples and assays for: Cu by AR digestion, Cu by acid soluble digestion, Mo by AR digestion, Fe total, Fe acid soluble by AR digestion and Fe pyrite. The finish on these methods and the digestion and finish methods for Fe total and Fe pyrite are not listed on the G & T certificates. Assayers Canada provided the ICP-AES multi-element results in 2000 using the same method as in 1999.

In 2003, the mine laboratory personnel performed most of the analytical work. A total of 10,410 samples were analyzed for Cu and Mo, 4,440 were analyzed for Ag and 4,371 for Zn. These elements were determined using the Gibraltar Mine Laboratory digestion method (HNO3/KClO3 + AlCl3/HCl) with an AAS finish. All samples were also analyzed for non-sulfide (acid soluble) copper with sulphuric acid (H2SO4) digestion and AAS finish. QAQC procedures used at the mine laboratory are as follows: AAS absorbance checked on reference solutions at each calibration, use of random rather than uniform weights, coarse reject re-split and analysis on every 20th sample, insertion of 1 known standard in each set of 20 mainstream assays, 1 blind standard in each set of mainstream assays, 1 reagent blank run daily, solution standards run routinely, every 10th sample is sent to an outside laboratory for re-analysis.

11.3 1999-2003 Sample Preparation and Analysis – *Cont'd*

Of the mainstream samples from 2003, 4,251 were selected for Au assay, 1,556 for Ag assay, 588 for Re assay, 17 for Pt and Pd assay and 3 for Rh assay all by FA-AAS at Assayers Canada. An additional 786 samples were analyzed by Assayers Canada by AR-AAS for Cu and Mo, FA-AAS for Au and 4 acid (HNO3, HClO4, HF and HCl) ICP-AES for 24 elements including Cu and Mo. A further 442 samples were sent to IPL laboratory in Richmond, BC for additional inter-laboratory duplicate check assays of 30 elements, including Cu and Mo by 4 acid ICP-AES and for Au by FA-AA.

11.4 2005-2010 Sample Preparation and Analysis

(a) Introduction

During the period from 2005 through 2010, core samples were mechanically split in half at the secure Gibraltar core logging facility by Gibraltar and HDSI personnel, predominantly from NQ core. A total of 39,371 Gibraltar drill samples were analyzed for Cu and Mo at a number of reputable independent commercial laboratories and the mine laboratory. About 70% of these samples were also analyzed for up to 32 multiple elements. In addition, 6,724 control samples were analyzed during this period.

(b) 2005

The 2005 drill core samples were analyzed by ALS Chemex in North Vancouver. A total of 2,148 core samples were analyzed for Cu and Mo using a four acid (HF-HClO4-HNO3–HCl) digestion with AAS finish.

(c) 2006

In 2006, 8,637 half core samples were mechanically split from the NQ core. These samples had an average length of 10 ft (3 m) and average weight of 7 kilograms. At the Gibraltar core logging facility, 1,856 control samples were inserted with the regular samples.

Sample analyses were completed by three laboratories. Assayers Canada in Vancouver performed 44% of this work, ALS Chemex in North Vancouver did 55% and the mine laboratory did 1%.

Assayers Canada held Certificates of Laboratory Proficiency from the Standards Council of Canada for precious and base metals analysis as well as ISO 9001:2008. Assayers Canada was acquired by the SGS Group in 2010.

Sample preparation consisted of weighing, drying and crushing the entire sample to >70% passing 2 mm (10 mesh) and then pulverizing a 250 g split to >85% passing 75 micron (200 mesh).

11.4 2005-2010 Sample Preparation and Analysis – *Cont'd*

(c) 2006 – *Cont'd*

In 2006, a total of 8,537 samples were analyzed for total Cu, soluble Cu, Mo and Fe using the Gibraltar Mine digestion method by Assayers Canada (3,824 samples) and ALS Chemex (4,713 samples). Of these, 784 samples were selected for multi-element assay using AR digestion and ICP-AES finish, which were also performed by Assayers Canada (381 samples) and ALS Chemex (403 samples). In addition, 159 samples for total copper, copper oxides and MoS2 were analyzed by the mine laboratory using the Gibraltar Mine digestion and AAS finish. Gold analysis was performed by ALS Chemex on 60 samples using a standard lead collection 30 gram FA fusion with AAS finish.

(d) 2007

In 2007, 13,950 half core samples were mechanically split from 153 holes and 2,022 control samples inserted. The samples averaged 10 feet in length. Sample preparation consisted of weighing, drying and crushing the entire sample to >70% passing 2 mm (10 mesh) and then pulverizing a 250 g split to >95% passing 106 micron (150 mesh).

Analytical work was completed by three laboratories: Eco Tech of Kamloops performed 92% of the work, ALS Chemex of North Vancouver 6%, a small number of samples representing 2% of the total were analyzed by the mine laboratory.

ALS Chemex determined total copper (Cu), molybdenum (MoS_2) and iron (Fe) for 764 samples using the Gibraltar Mine digestion with AAS finish. The mine laboratory processed 196 samples for total copper (Cu) and molybdenum (MoS_2) by using the Gibraltar mine digestion method with AAS finish. Eco Tech analysed 12,900 samples for total copper, molybdenum plus an additional 26 multi-elements) using either the Gibraltar Mine digestion with AAS finish or AR digestion with an ICP-AES finish. G & T Metallurgical Services determined total copper for 90 samples (from one metallurgical hole).

Non-sulphide (acid soluble) copper analysis (CuAS) of 8,845 samples was determined at various laboratories using dilute sulphuric acid leach with AAS finish.

A total of 12,893 samples from drillhole 2007-098 through 2007-241 were also assayed for gold by 30 gram lead collection FA fusion with AAS finish.

11.4 2005-2010 Sample Preparation and Analysis – *Cont'd*

(e) 2008

The 10,429 half core samples taken in 2008 averaged 10 feet in length. Sample analyses were performed mainly by Acme Labs in Vancouver (99.5%) and secondly by Eco Tech in Kamloops (0.5%). Acme Labs of Vancouver was an ISO 9001:2008 certified laboratory at the time.

The half-core samples were prepared at the respective laboratories using similar specifications. The entire sample was dried, and crushed to 70% passing 2 mm (10 mesh). A 250 gram split was then taken and pulverized to 95% passing 106 microns (150 mesh). The coarse reject samples were returned to the Gibraltar mine after analysis for long term storage. The pulp samples are retained at a warehouse in Langley, BC.

A total of 10,370 samples were analyzed for Cu and Mo plus 32 additional elements by Acme Labs using AR digestion with an ICP-MS finish (Acme Code: Group 7AX); 59 samples from hole 2008-242 were analyzed for Cu, Mo and 26 additional elements by Eco Tech using multi-acid digestion with ICP-AES finish. These samples also were analyzed for non-sulfide copper with a 1 gram sample leached in 30 ml 10% sulphuric acid with ICP-ES finish (Acme Code: Group 8 CuO). In addition, these samples were assayed for gold using 30 gram lead collection FA with ICP-AES finish (Acme Code: Group 3B).

(f) 2009

In 2009, 84 samples were taken from three AD series rotary air blast (RAB) percussion holes. Subinterval samples were taken from the RAB cuttings as drilling progressed. They were mixed and a portion of this material was taken for the assay sample which was sent to the mine bucking room to be dried and pulverized. The samples were then analyzed for total Cu, acid soluble Cu, Mo, and acid soluble Fe at the mine laboratory using the same digestion methods and analytical procedures described for the 2003 program.

(g) 2010

A total of 3,502 core samples and 707 control samples were taken in the 2010 drill program for sample preparation and analysis. The core was split in half lengthwise using a mechanical splitter. Most of the core was sampled in 10 foot intervals with some exceptions to accommodate geologic boundaries.

11.4 2005-2010 Sample Preparation and Analysis – *Cont'd*

(g) 2010 – *Cont'd*

The drill core was boxed at the drill rig and transported by the company truck to the secure logging facility at the Gibraltar mine. The remaining core after sampling was stored in a secure facility at the mine. The 621 samples from the AD series of rotary air blast (RAB) percussion holes were prepared and analyzed at the Gibraltar laboratory as described for the 2003 program. As in 2009, subinterval samples were taken from the RAB cuttings as drilling progressed. These sub-samples were mixed and a portion was taken for assay.

In 2010, sample preparation and analyses of the core samples was performed by Stewart Group (formerly Eco Tech), Kamloops.

Samples were weighed, dried and crushed to 70% passing 2 mm (10 mesh), then split 250 gram sub-samples were taken. The 250 gram sub-samples were pulverized to 95% passing 106 microns (150 mesh). Coarse rejects were stored at the Gibraltar mine. The pulps after assay were returned and are stored at a warehouse in Langley, BC.

A total of 3,502 mainstream samples, in-line 200 duplicates, 199 standards and 93 blanks were analyzed by Stewart Group, Kamloops at the same time as the mainstream samples. Stewart Group in Kamloops, formerly Eco Tech Laboratory Ltd., achieved ISO 9001:2008 accreditation in 2011.

Total Cu, non-sulphide Cu and Mo (for Mo, selected samples only) were determined using the Gibraltar Mine digestion methods. Total Cu was assayed using multi-acid digestion with AAS finish (Laboratory code: BOGA-22). Non-sulphide Cu was analyzed using 10% H_2SO_4 leach with AAS finish (Laboratory code: BOGA-23). Total Mo (selected samples only) was determined using multi-acid digestion with AAS finish (Laboratory code: BOGA-37). All the samples were also determined for Cu, Mo and 33 additional elements using AR digestion with ICP-AES finish (Laboratory code: AR/ES).

The 621 samples from 25 RAB AD series percussion drill holes from the 2010 program were also used in the resource and reserve estimates. The drill cuttings were taken using a wet cyclone splitter in 10 foot intervals. The samples were sent to the bucking room at the mine laboratory to be dried and pulverized. Analyses for total Cu, acid soluble Cu, total Mo and acid soluble Fe were performed at the mine laboratory using the method and procedures as described for the 2003 samples.

11.5 2011-2018 Sample Preparation and Analysis

(a) Introduction

During the period from 2011 through 2018, core samples of predominantly 10 foot lengths from NQ core were mechanically split in half at the secure Gibraltar core logging facility within the fenced, gated, and access-controlled mine compound. This work was supervised by both Gibraltar personnel and HDSI from 2011 to 2014 and TerraLogic Exploration Inc. from 2015 to 2018.

The drill core was boxed at the drill rig and transported by the company truck to the logging facility at the Gibraltar mine. The remaining core after sampling was stored in a secure facility at the mine. Coarse rejects were stored at the Gibraltar mine and sample pulps after assay were returned and are stored at the secure warehouse at Langley, BC.

(b) 2011

The core was split in half lengthwise using a mechanical splitter. Most of the core was sampled in 10 foot intervals with some exceptions to accommodate structural and lithological changes. A total of 1,174 core samples were taken in 2011 drill program and in addition, 65 duplicates (in-line duplicates) were taken from course reject. 77 reference materials (standards) and 17 blanks were also applied for external QAQC purposes. Of the blanks, 6 were coarse (3 cm) granite blanks and 11 were pulp blanks (CDN-BL-7). A total 266 samples were also taken from AD and PW series percussion holes for Cu and Mo analysis.

In 2011, sample preparation and analysis work were also performed by Stewart Group (formerly Eco Tech), Kamloops. Entire samples were weighed, dried and crushed to 70% passing 10 mesh (10 mm), then split to 250 gram sub-samples. The 250 gram sub-samples were pulverized to 85% passing 200 mesh (75 µm). A total of 1,174 mainstream samples were analyzed by Stewart Group.

Total Cu, non-sulphide Cu and selected Mo were assayed using the Stewart Group base metal assay method by AR digestion with AAS finish (Lab code: BM2/A). All the samples were also determined for Cu, Mo and 43 additional elements using AR digestion with ICP-MS finish (Lab code: AR/UT). In-line duplicates check samples were analyzed at Stewart Group using the same methods. The original pulps corresponding to the 65 in-line duplicate samples were forwarded to Acme Labs in Vancouver for check assay purposes. In late 2011 the Stewart Group, including the laboratory in Kamloops, was purchased by ALS Minerals.

11.5 2011-2018 Sample Preparation and Analysis – *Cont'd*

(b) 2011 – *Cont'd*

The 266 samples from the seven AD series 2011 RAB percussion drill holes were used in the resource and reserve estimate. Sample collection, preparation and analysis was the same as for the 2010 percussion drill hole samples.

(c) 2012-2014

Sample intervals from cored drill holes were determined by the geologist responsible for logging the hole. Generally these were chosen to coincide with the 10 foot drill runs; however, at times, marked variation in lithology, alteration, mineralization, structure or core recovery warranted deviation from 10 foot sample intervals. Sample tickets were inserted into the core box by the geologist at the start of each sample interval and the sample number was recorded on the box in the same location in black permanent marker; sample numbers and footages were recorded in a dedicated table within the database.

All core boxes were clearly marked with sample tags and on occasion with special splitting instructions. Core was mechanically split into two halves lengthwise with hydraulic core splitters. One half of the core was bagged for assay, including the sample tag, and the remaining half core was placed back into the core boxes. Core splitters were instructed to clean their machines between each sample run in order to prevent potential cross-contamination between samples.

ALS Minerals performed the sample preparation and analytical work on half core samples from the 82 exploration and geotechnical holes prefixed with 2012, 2013, 2014 and MW2014 completed in this program. Samples submitted to ALS included 8,359 regular mainstream core samples and 1,116 control samples.

11.5 2011-2018 Sample Preparation and Analysis – *Cont'd*

(c) 2012-2014 – *Cont'd*

Samples were shipped by commercial carrier from the Gibraltar mine to the ALS laboratory in Kamloops, BC for preparation under method code PREP-31. Upon receipt in Kamloops, samples were checked against the shipment notice, bar-coded and scanned into the ALS laboratory information management system. Each sample was weighed, dried at a maximum of 120 degrees Celsius, crushed to better than 70% passing 2 mm and divided using a riffle splitter to obtain a 250 gram sub-sample which was then pulverized to better than 85% passing 75 microns. For all samples marked "DX", ALS took a second 250 gram split from the coarse reject and prepared another pulp for analysis in-line with the regular samples, blanks and standards of each batch. Pulverized samples (pulps) were shipped by commercial carrier to ALS Minerals laboratory in North Vancouver, BC for assay analysis. The coarse rejects of the samples from this series were returned to the Gibraltar mine after completion of sample preparation and analytical work. The assay pulps were retrieved after analysis and are stored at a secure warehouse in Langley, BC.

Assay analysis of exploration and geotechnical drill core samples was performed by ALS Minerals at their ISO 9001:2008 registered and ISO 17025:2005 accredited laboratory in North Vancouver, BC. All regular mainstream samples, in-line duplicates, standards and blanks were analyzed by ALS ultra-trace method ME-MS41 with Aqua Regia (HNO3-HCl) digestion of a 0.5 gram aliquot followed by a combined inductively coupled atomic emission spectroscopy (ICP-AES) and mass spectrometry (ICP-MS) finish to determine Cu, Mo, Fe, Au and 47 additional elements. Aqua Regia (AR) dissolves most base metals including the copper sulphide, copper oxide and molybdenum sulphide minerals typically recovered at Gibraltar. Other more resistate minerals are not digested significantly by this leach and many silicates and oxides are only slightly, to moderately attacked, depending on the degree of alteration. Total copper (CuT%) was determined by ALS ore grade method (ME-OG46) using Aqua Regia digestion of an 0.4 gram aliquot followed by ICP-AES or AAS finish for all samples that returned values ≥0.15% Cu by method ME-MS41. Similarly, total molybdenum (Mo %) was determined by method ME-OG46 for all samples that returned ≥150 ppm Mo by method ME-MS41. This was changed from the 300 ppm Mo threshold which was used in 2012, 2013 and part of 2014. All core samples that are ≤600 feet in depth down hole and any broad areas below that depth with ≥0.1% Cu were analyzed by ALS method Cu-AA05, 5% sulphuric acid (H_2SO_4) leach followed by atomic absorption spectroscopy (AAS) finish. This leach dissolves the copper oxide minerals of interest at Gibraltar. ALS assay certificates for method ME-MS41 note that although the AR digestion typically dissolves most of the Au present, "Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5 gram)".

11.5 2011-2018 Sample Preparation and Analysis – *Cont'd*

(c) 2012-2014 – *Cont'd*

To determine the higher Au values with better accuracy, all samples ≥200 ppb Au by method ME-MS41, were determined by ALS method Au-AA23 using a Fire Assay Fusion followed by AAS finish. The 51 elements determined by ME-MS41 include: Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe Ga, Ge, Hf, Hg, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn and Zr.

ALS Minerals in North Vancouver is registered for ISO 17025:2005; in particular these certificates apply to mineral analysis by ALS methods OG46 and ME-MS41 for the determination of Cu and Mo performed on the Gibraltar samples in the 2012 through 2014 drill programs.

A total of 71 holes and 3,184 samples from RAB percussion drill holes prefixed by AD, DWW and PW from years 2012 through 2014 were used in the resource and reserve estimate and 20 holes were excluded. Drill cuttings were taken using a wet cyclone splitter in 10 foot intervals. The samples were sent to the bucking room at the mine laboratory to be dried and pulverized. Analyses for total Cu, acid soluble Cu, total Mo and acid soluble Fe were performed at the mine laboratory using the method and procedures as described for the 2003 samples.

11.5 2011-2018 Sample Preparation and Analysis – *Cont'd*

(d) 2015-2018

Sample selection, sampling and splitting procedures for the 2015 through 2018 core drill programs were essentially the same as for the 2012 through 2014 programs. TerraLogic geological consultants assumed responsibility for the exploration drill core logging and sampling programs at Gibraltar Mine in 2014. Figure 11.1 is a sample preparation and analytical flow chart for the exploration and geotechnical series of drill holes.

Sample preparation and analysis was performed by the ALS Minerals laboratories in Kamloops and North Vancouver respectively. Analysis included 11,254 core samples from the 107 exploration and geotechnical holes prefixed with 2015, 2016, 2017, 2018 and MW that were used in resource and reserve modeling. Sample preparation and analytical procedures were performed on the core and 1,473 accompanying control samples in essentially the same manner as described for the 2012 through 2014 programs. Some additional analytical procedures were added to selected samples from these programs for geochemical and geological characterization.

ALS Minerals Kamloops sample preparation facility is ISO 17025:2005 certified and ALS Minerals laboratory in North Vancouver, BC is ISO 9001:2015 registered and ISO/IEC 17025:2017 certified. This accreditation also applies to mineral analysis by ALS methods OG46 and ME-MS41 for the determination of Cu and Mo performed on the Gibraltar samples in the 2015 through 2018 drill programs.

Changes and additions to the 2015 through 2018 analytical protocols as compared to 2014 are as follows.

Only selected samples were analyzed for copper oxides by ALS method Cu-AA05, 5% sulphuric acid (H_2SO_4) leach followed by atomic absorption spectroscopy (AAS) finish.

Whole rock analysis was performed on samples at approximately 150 feet intervals downhole in all exploration and geotechnical drill holes starting in late 2016. This included 499 samples from 70 holes from hole 2016-036 to the end of the 2018 program. ALS whole rock package methods ME-ICP06, ME-MS81 and TOT-ICP-06 were performed.

11.5 2011-2018 Sample Preparation and Analysis – *Cont'd*

(d) 2015-2018 – *Cont'd*

The whole rock samples were analyzed for the 13 major oxides by lithium metaborate/lithium tetraborate (LiBO2/Li2B4O7) fusion of a 2 g sample with an ICP-AES finish. The oxides determined include: Al2O3, BaO, CaO, Cr2O3, Fe2O3, K2O, MgO, MnO, Na2O, P2O5, SiO2, SrO and TiO2 (ME-ICP06), as well as loss on ignition (LOI) of a 1 g sample at 1000 degrees Celsius, (OA-GRA05) and a total determination (ICP-06), all recorded in percent concentration. These same samples were also analyzed for 30 elements by lithium borate fusion of a 2 g sample with an ICP-MS finish (ME-MS81). Elements analyzed include: Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sm, Sn, Sr, Ta, Tb, Th, Tm, U, V, W, Y, Yb and Zr, all recorded in ppm concentration.

In addition to whole rock analysis, 32 samples from seven of these holes were analyzed for carbonate carbon (C) and carbon dioxide (CO2) by acidification of a 0.1 g sample in perchloric acid (HClO4) and determination in a CO2 coulometer, recorded in percent concentration (C-GAS05).

The disposition of the coarse rejects and assay pulps from the drill core samples analyzed by ALS is the same as the pre-2015 drill programs. The coarse rejects were returned to the Gibraltar mine and the assay pulps were shipped to secure warehouse in Langley, BC for long-term storage.

A total of 2,248 samples from 68 AD series RAB percussion drill holes from years 2015 through 2018 were used in the resource and reserve estimate. Twelve percussion holes from the DWW series of percussion holes were excluded. Drill cuttings were sampled in the same manner as the 2012 through 2014 percussion holes and samples and were prepared and analyzed at the mine laboratory using the method and procedures as described for the 2003 samples.

11.5 2011-2018 Sample Preparation and Analysis – *Cont'd*

(d) 2015-2018 – *Cont'd*

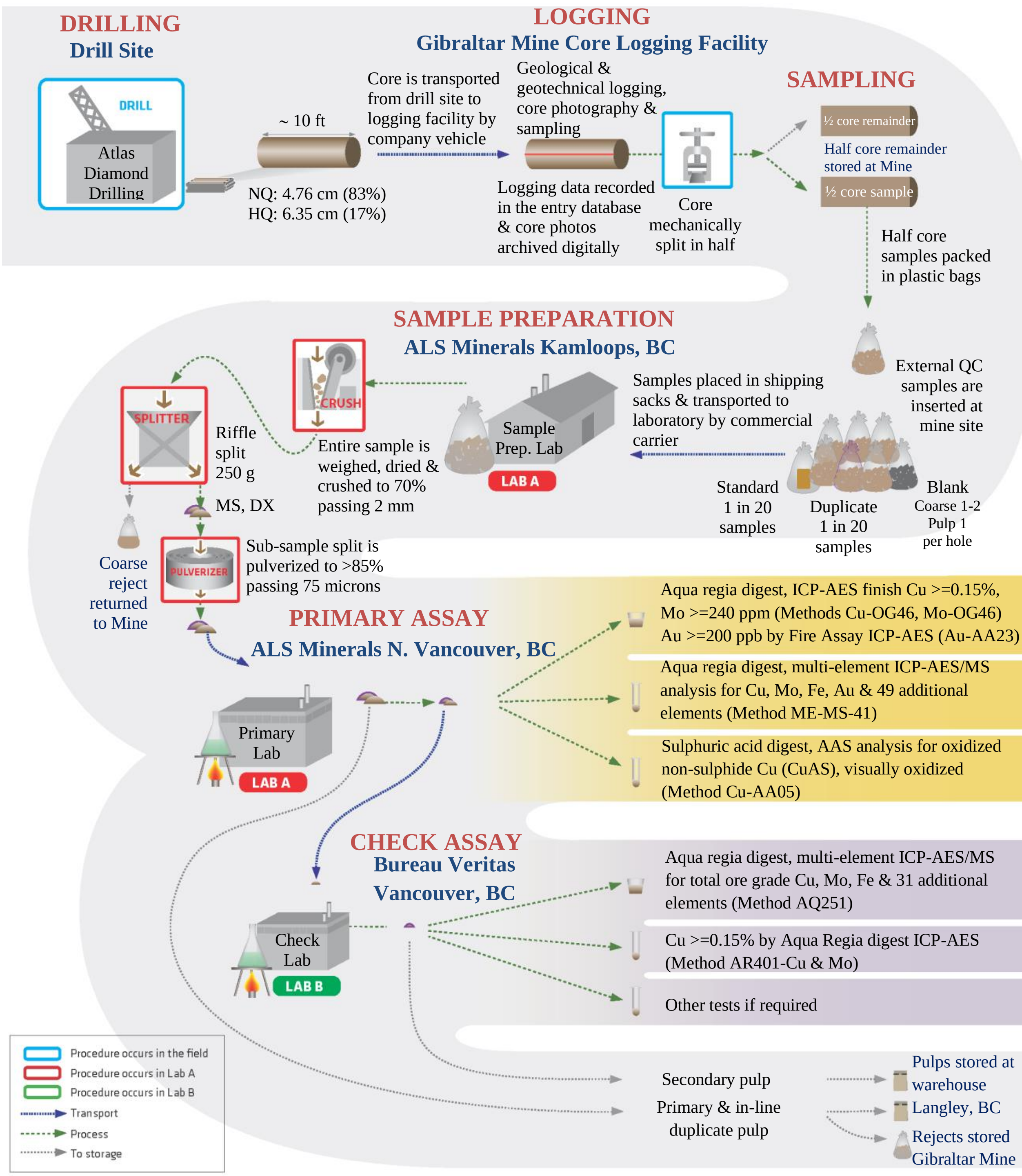

Figure 11.1: 2015-2018 Drill Core Sample Preparation and Analytical Flowchart

11.6 QAQC Program

(a) Introduction

Taseko Mines Limited and Gibraltar Mines Ltd. have maintained an effective quality assurance and quality control (QAQC) program consistent with industry best practices since 2003. This program is in addition to the QAQC procedures used internally by the analytical laboratories. The QAQC program has been subject to independent review by HDSI from 2005 through 2018. HDSI provided ongoing monitoring and timely reporting of the performance of control samples, including inserted standards, blanks and duplicates, in the sampling and analytical program. The results of this program indicate that analytical results are of a high quality suitable for use in detailed modelling, resource and reserve evaluation studies.

Table 11.2 describes the QAQC sample types used in the 2014 to 2018 portion of the program.

A summary of mainstream (MS) and QAQC sampling for various years is shown in Table 11.3.

11.6 QAQC Program – *Cont'd*

(a) Introduction – *Cont'd*

Table 11.2: QAQC Sample Types Used in the 2014-2018 Drill Program

QC Code	Sample Type	Description	% of Total
MS	Regular Mainstream	• Regular mainstream samples submitted for preparation and analysis at the primary laboratory.	61%
ST SD	Certified Reference Material (CRM) or Assay Standard	• Mineralized material in pulverised form with a known concentration and distribution of element(s) of interest. Inserted at primary laboratory (ST) and check laboratory (SD) • Randomly inserted using pre-numbered sample tags	5%
DP or DX	Duplicate or Replicate	• An additional duplicate split taken from the remaining sample material for re-analysis. Two types were used in this program. • In-line, intra-laboratory (DX) duplicates split from the coarse reject are pulverized and analyzed at the same time as regular samples. • Inter-laboratory duplicates (DP) are the original assay pulps analyzed at a second (check) laboratory • Random selection using pre-numbered sample tags	8%
MS	Assay Method Duplicates	• Samples analyzed by more than one analytical method ○ Cu by ME-MS41 & OG46 (4,710 duplicates) ○ Mo by ME-MS41 & OG46 (999 duplicates) ○ Au by ME-MS41 & Au-AA23 (577 duplicates) • Non-random selection, based on assay results received	25% 6% 3%
BL	Blank	• Certified pulverized material with no appreciable grade, or visibly barren crushed rock used to test for contamination	2%

11.6 QAQC Program – *Cont'd*

(a) Introduction – *Cont'd*

Table 11.3: QAQC Sample Summary All Years on the Property

Year	MS	DP/DX	ST/SD	BL
Pre-1999	58,394	1,258	-	-
1999	311	9	10	-
2000	115	0	0	-
2003	10,410	2,328	1,057	-
2005	2,148	109	278	64
2006	8,637	810	700	346
2007	13,950	949	727	346
2008	10,429	848	560	244
2009	84	0	0	0
2010	4,123	415	199	93
2011	1,440	65	77	17
2012	1,975	87	42	18
2013	5,371	408	201	80
2014	4,197	429	208	114
2015	775	30	10	3
2016	5,529	534	234	141
2017	6,254	614	263	154
2018	944	25	21	14
Total	135,086	8,918	4,587	1,634

QAQC codes are described in Table 11.2.

(b) 1965-1998 Drill Programs QAQC

The extent of any QAQC programs from the historical drilling programs prior to 1982 is unknown. At least 1,145 samples from the 1982 to 1998 drill programs were check assayed for total copper, as reported on Gibraltar mine and commercial laboratory assay certificates from that period. The bulk of these duplicate sample results are from the 1995 through 1998 programs. Outside laboratories participating in the copper check assay programs include Vangeochem Lab Limited (1990-1992) and Min-En Labs, both of Vancouver (1995-1998), and Bondar Clegg (1992) of North Vancouver, BC.

11.6 QAQC Program – *Cont'd*

(c) 1999-2003 Drill Programs QAQC

In 1999 and 2000, Gibraltar submitted a number of duplicate samples for Cu, Mo and Fe ICP inter-laboratory duplicate checks analysis at Assayers Canada.

Regular mainstream analysis took place at the Gibraltar Laboratory in 2003. A total of 1,057 standards, including blind standards were inserted for monitoring purposes. The Gibraltar laboratory also analyzed 1,120 duplicates form the original sample pulps and coarse reject material. Assayers Canada in Vancouver and International Plasma Laboratories (IPL) in Richmond, BC participated in the analysis of the 1,208 inter-laboratory duplicate samples in 2003.

(d) 2005-2011 Drill Programs QAQC

For the 2005 drill program, 209 standards and 104 blanks were inserted for external QAQC purposes. Control samples analyzed by Assayers Canada included 109 duplicates, 278 standards and 64 blanks.

In 2006, 700 standards were inserted into the sample stream approximately one in every ten samples. Eight internal Gibraltar assay standards, (A, C, E, L1, L 0, Lot1, Lot4 and PC1) and 2 commercial standards (CGS-8 and CGS-12) were used for external laboratory QAQC purposes. In addition, 346 barren sand blanks were inserted to monitor for contamination and 810 duplicate samples were applied and analyzed by the check laboratories (Acme in Vancouver and Eco Tech in Kamloops). Duplicate check assays performed by Acme Labs in Vancouver were completed using the Gibraltar Mine digestion method with an ICP-AES finish. Eco Tech Kamloops inter-laboratory duplicate analysis used the Gibraltar Mine digestion method. Acme Labs of Vancouver was an ISO 9001:2008 certified laboratory.

For the 2007 and 2008 core drilling programs a standard was inserted after every 19th mainstream sample, so that every 20th result on the original assay certificate was a standard. A coarse reject duplicate split was taken from every 20th original sample 10 samples after every standard in the sampling sequence and sent to a second laboratory for analysis along with a suitable number of standards. Samples of coarsely crushed grey granitic landscape rock were inserted after every 40th sample as blanks.

11.6 QAQC Program – *Cont'd*

(d) 2005-2011 Drill Programs QAQC – *Cont'd*

During the 2007 drill program, 727 standards, 346 blanks and 949 coarse reject duplicates were inserted for QAQC purposes. Inter-laboratory duplicate checks (710 coarse reject duplicates and 40 standard duplicates) were performed by Acme Labs in Vancouver using AR digestion with ICP-AES finish. Eco Tech in Kamloops analyzed 199 duplicates, including 10 of these Acme samples (9 coarse reject duplicates and 1 standard duplicate) using the Gibraltar Mine digestion.

In the 2008 drill program, 560 standards and 244 blanks inserted at the same rate as in 2007, and 563 duplicates, including 550 coarse reject duplicates and 13 standard duplicates. Inter-laboratory duplicate check analysis on the regular samples for copper, molybdenum and an additional 26 elements was performed by Eco Tech in Kamloops using AR digestion with ICP-AES finish. These duplicates were also assayed for gold by Eco Tech using 30 gram lead collection FA fusion with AAS finish.

No control samples were inserted with the 84 samples from the 2009 RAB drilling program.

For the 2010 and subsequent core drilling programs, the QAQC protocol for duplicates was modified to include an inter-laboratory pulp duplicate and an inline coarse reject duplicate. These two types of duplicates were taken from the same sample interval every 20^{th} original sample. The pulp duplicate was analyzed at the check laboratory and the coarse reject duplicate was analyzed inline with the mainstream samples at the primary laboratory so that every 20^{th} sample is a reject duplicate on the original assay certificate. Standards continued to be inserted after every 19^{th} mainstream sample, and blanks continued to be inserted approximately every 40^{th} or 50^{th} sample. From year 2010 through subsequent programs, pulp blanks were included along with the coarse blanks submitted to the primary analytical laboratory.

In the 2010 drill program, 199 standards, 93 blanks, 200 inline duplicates and 215 coarse reject duplicates were inserted. The inter-laboratory duplicates included 194 of the in-line duplicates plus 6 mainstream samples and 15 standards. They were assayed by Acme Labs using AR digestion with ICP-AES finish.

For the 2011 drilling program, 77 standards, 17 blanks, 6 and inline duplicates were analyzed at the Stewart Group laboratory in Kamloops. No inter-laboratory duplicates were performed that year.

11.6 QAQC Program – *Cont'd*

(e) 2012-2014 Drill Program QAQC

In the 2012 core drilling program, 42 standards, 18 blanks, 42 inline coarse reject duplicates were analyzed at the primary laboratory ALS and 45 pulp duplicates were analyzed at check laboratory Acme Analytical Laboratories in Vancouver, BC by method AQ270, Aqua Regia digestion followed by a combined ICP-AES, ICP-MS finish for Cu, Mo and 32 additional elements.

QAQC samples submitted during the 2013 core drilling program included, 201 standards, 80 blanks and 198 inline duplicates were analyzed at primary laboratory ALS. The 210 pulp duplicates were analyzed at check laboratory Acme using the same analytical method as 2012.

The 2014 core drilling QAQC program consisted of 208 standards, 114 blanks and 213 inline coarse reject duplicates analyzed at ALS. A total of 216 duplicates were analyzed at Acme using the same method as 2012 and 2013. Bureau Veritas Commodities Canada Ltd. took over Acme Labs in 2013.

Additionally, the samples analysed for Cu and Mo by both ALS methods ME-MS41 and Cu-OG46 and Mo-OG46 respectively were compared, as were the 12 samples analysed by ME-MS41 and Au-AA23 for Au.

No QAQC was performed on the RAB percussion holes drilled in 2012 through 2018.

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC

Standards

Assay results for copper and molybdenum of inserted standards were controlled based on limits determined from round-robin analysis at a number of independent commercial laboratories using the following criteria:

Mean ± 3 Standard Deviations define the Control Limits

A standard is deemed to have failed when the result falls outside the control limits for the element of interest. The laboratory is notified and the affected range of the samples is re-run for that element until the included standard passes (falls within the control limits). The data from the affected range is then replaced by the data that has passed QC. Standards were inserted by geologists at the logging facility at a rate of 1 in 20 regular samples by the use of pre-numbered sample tags. Standards were selected based on the anticipated grade range of the surrounding regular samples.

Table 11.4: Control Samples Used in 2015-2018 Drill Programs

Control Sample	Times Used	Cu %	Mo ppm
CDN-CM-20	96	0.314	300*
CDN-CM-23	61	0.471	250
CDN-CM-31	153	0.082	90*
CDN-CM-35	130	0.248	290
Oreas-501b	32	0.258	97
Oreas-901	43	0.144	3.2
Oreas-902	13	0.308	12.6
CDN-BL-10	117	0.0056	5.78
Granite (Grey)	15	0.0014	0.64
Granite (Pink)	180	0.0010	1.78

* - Provisional value. Values in italics for blanks are based on results received.

A total of 528 standards were submitted in the 2015 through 2018 programs. Figure 11.2 is an example of a control chart for copper by ALS method Cu-OG46 for standard CDN-CM35. These results and the Cu results for the other standards appear reasonable and all standards pass QAQC for Cu by OG-46. Figure 11-3 is a standard control chart for CDN-CM-35 for molybdenum by ALS assay method OG-46. All the Mo results pass QAQC for this standard. The Mo results by method OG46 for other standards plot closely around the round robin mean and support the veracity of the ALS OG46 method and results used in Mo determination.

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Standards – *Cont'd*

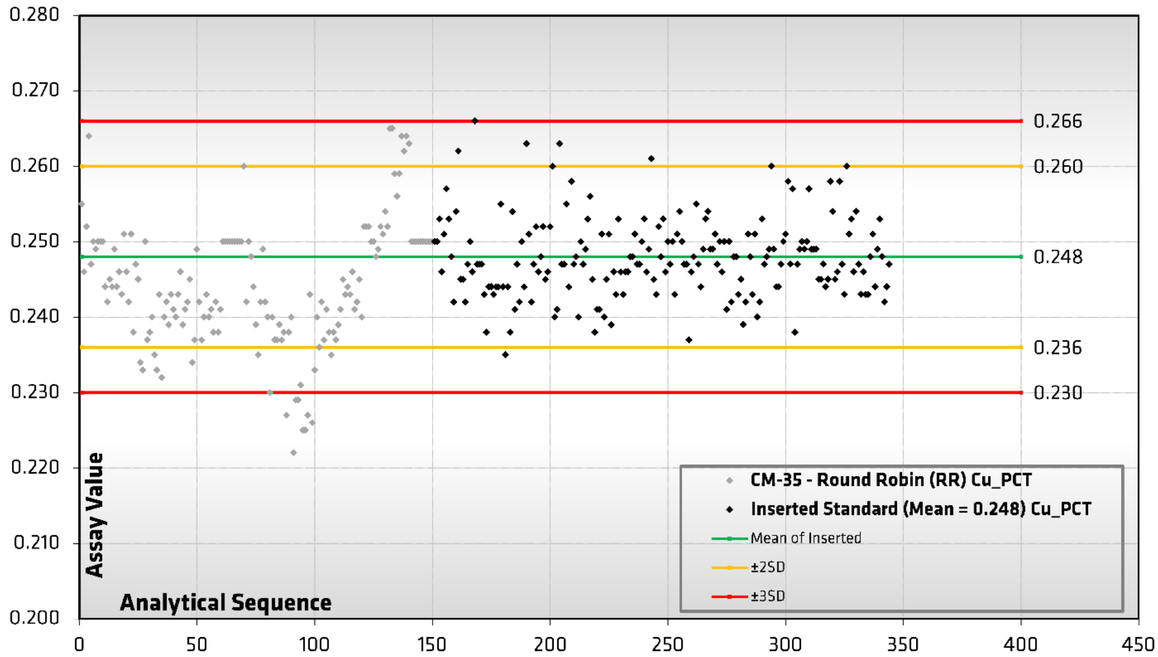

Figure 11.2: Copper (OG46) Results – Standard Reference Sample CDN-CM-35

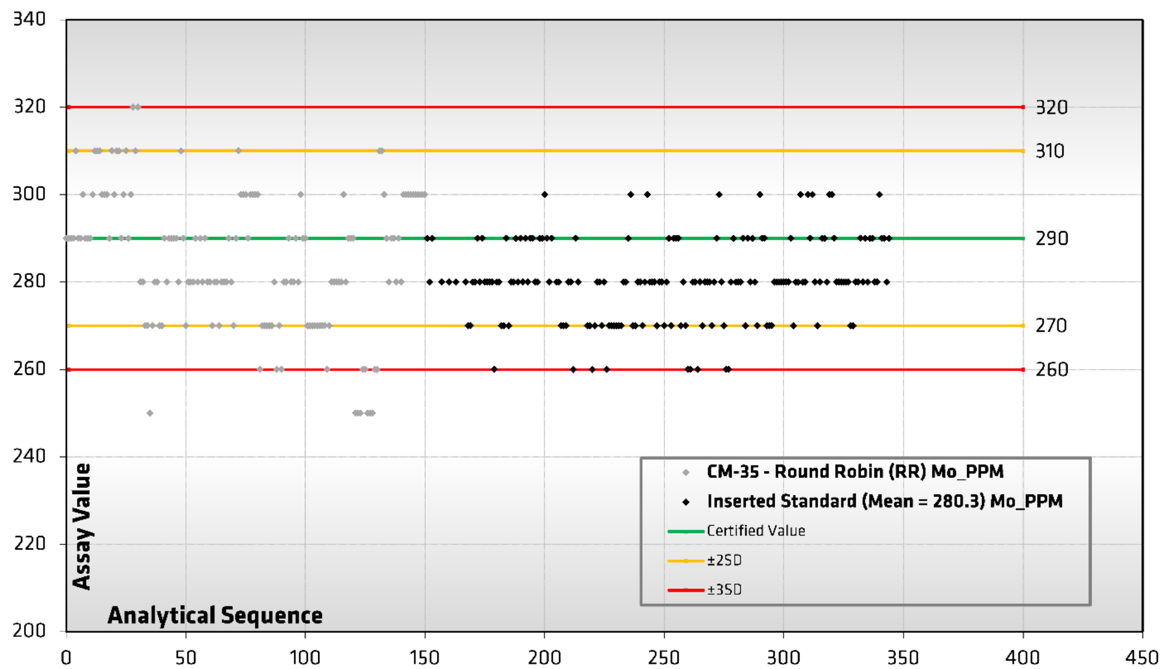

Figure 11.3: Molybdenum Results – Standard Reference Sample CDN-CM-35

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Blanks

Blanks were used to test for contamination during sampling, sample preparation and analysis. Based on the results received from the blank samples inserted during this program, there is no evidence that any significant contamination or cross-contamination has taken place in these materials. None of the pulp blanks or coarse granitic material inserted in this program returned appreciable quantities of Cu or Mo.

Pulverized (pulp) and coarse field blanks were inserted at the core logging facility. The pulp blank used is BL-10 from CDN Resource Laboratories. It is certified for low levels of Au, Pt and Pd. They are not certified for copper or molybdenum, however they are homogenous and have been analyzed numerous times at several laboratories, consistently returning low results for both of these elements. The coarse gravel-size (1 to 2 cm) field blanks labelled “Granite” and “Granite2” are grey granitic commercial landscape rock and pink granitic bulk commercial aggregate material, respectively. They are also not certified, however, they are visually barren of sulphide minerals, relatively homogeneous and have also been assayed numerous times at several analytical laboratories. Results received for these materials are consistently low in copper and molybdenum grades. Both the CDN pulp blanks and coarse granitic samples were deemed suitable for use in the analytical process to test for possible contamination and/or cross-contamination.

A total of 312 external control samples, with copper and molybdenum grades low enough to be considered nominally blank, as compared to typical Gibraltar ore material, were inserted during sampling at the Gibraltar core logging facility to monitor for possible contamination in the 2015 through 2018 programs. This included 195 coarse crushed blanks (pink and grey granite) and 117 pulp blanks. The assay results for Cu and Mo of coarse blank pink granite are illustrated in Figures 11.4 and 11.5. Coarse blanks accompanied the original mainstream core samples through sample preparation and analytical process. There is no indication of any significant contamination of Cu or Mo that has affected these or any of the other blank samples submitted during this program.

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Blanks – *Cont'd*

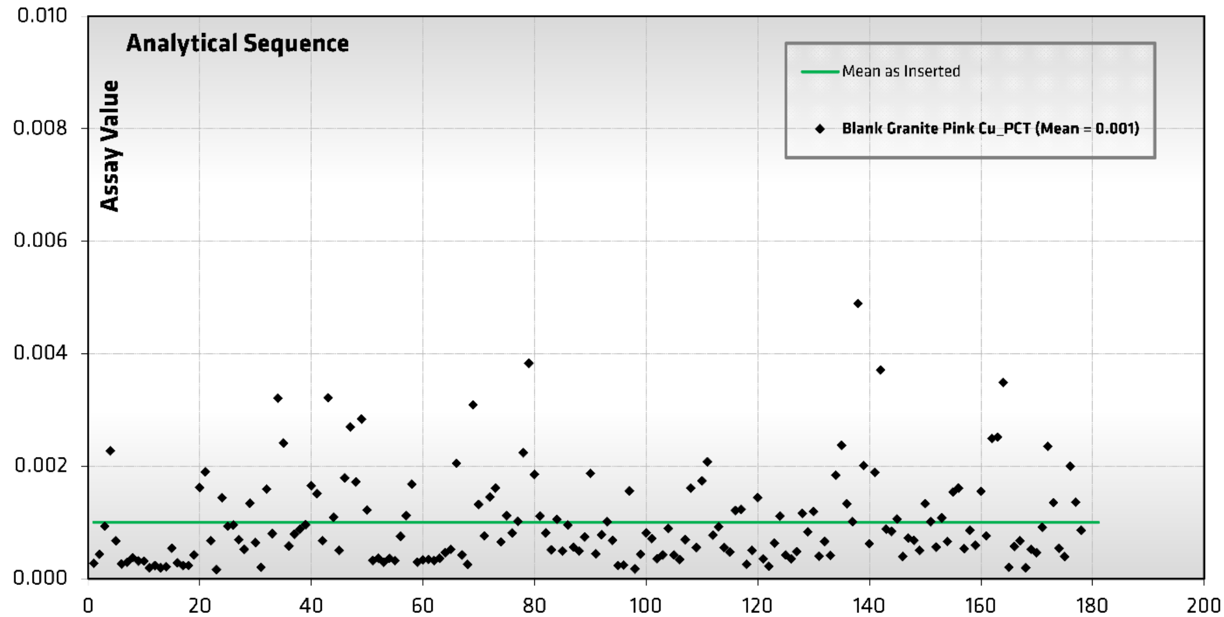

Figure 11.4: Copper Results – Blank Granite (Pink)

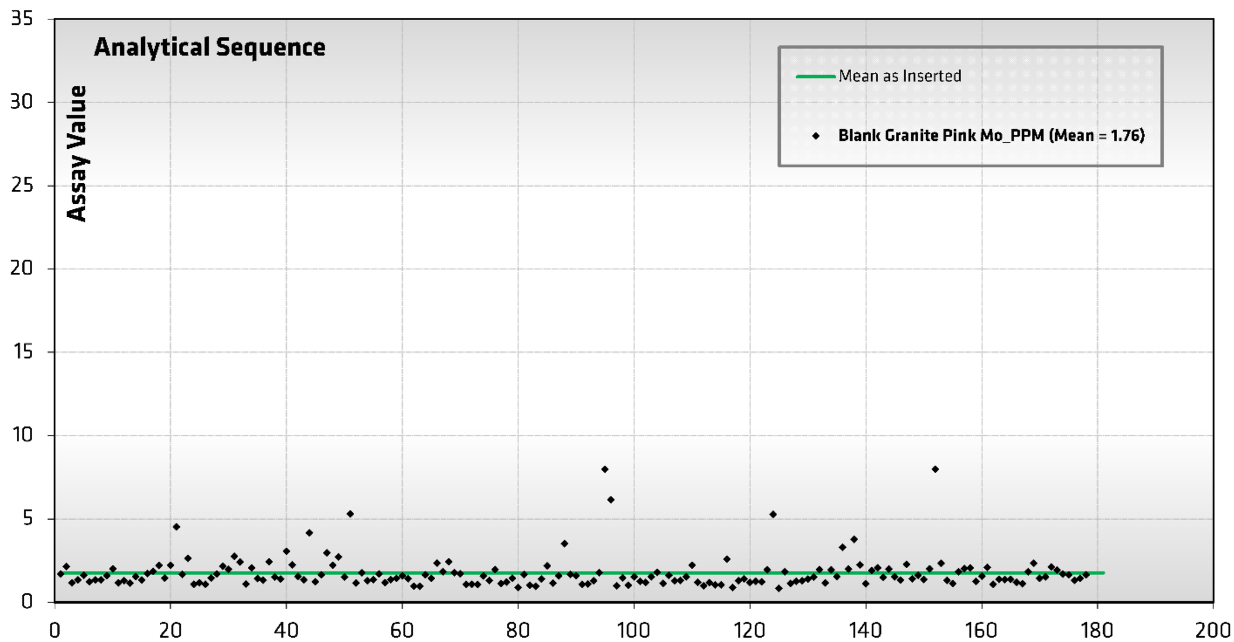

Figure 11.5: Molybdenum Results – Blank Granite (Pink)

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates

Figure 11.6 illustrates the regular mainstream and duplicate sample processing sequence for typical duplicate and corresponding mainstream samples in flow chart format. A total of 633 duplicates (QC code DX) were prepared and assayed in-line by ALS Minerals in 2015 through 2018. DX type duplicates are prepared from a second 250 gram split riffled from the coarse reject, pulverized and analysed within the regular mainstream sample stream and reported on the same assay certificate at the primary laboratory. DP designated samples correspond with the same assay interval as the DX duplicates but are destined for inter-laboratory check assay. The samples are from the same intervals as the primary or first split taken above that are assayed as regular samples at the primary assay laboratory. Upon completion of QAQC at the primary assay laboratory, the DP duplicates, represented by the original assay pulps, are sent to the check laboratory for assay analysis.

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

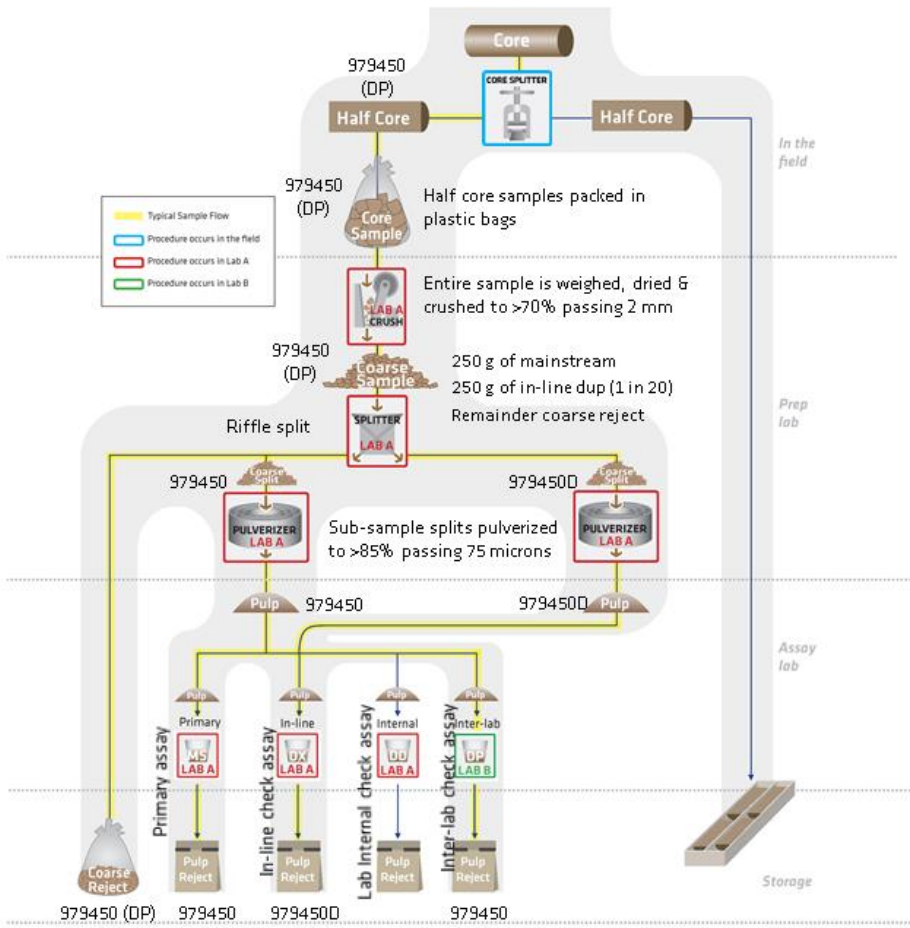

Figure 11.6: Duplicate Sample Processing Flowchart

A large number of samples have been analysed for Cu and Mo by ALS methods ME-MS41 and Cu-OG46 and Mo-OG46 respectively because of the overlimit triggers. Similarly, a number of samples were also analysed for gold by both ME-MS41 and Au-AA23.

The inline reject duplicate Cu and Mo pairs match very well, as do the Cu method duplicates and the Cu inter-laboratory pulp duplicates. The Mo method duplicate and inter-laboratory duplicates show a consistent bias. This behaviour in the results confirms the suspicion that the Mo by ALS method ME-MS41 may be somewhat low. The impact of this low Mo behaviour has been ameliorated by the use ALS assay grade method Mo-OG46 for molybdenum on all samples reporting >150 ppm Mo by method ME-MS41.

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

Gold results by Au-AA23 are clearly superior to those by ME-MS41, however the impact of this at Gibraltar is negligible due to the typically very low gold grades encountered.

Analysis of inter-laboratory duplicate samples from the 2015 through 2017 core drilling programs was performed by the Bureau Veritas laboratory in Vancouver, BC using method AQ251-EXT. In this method a 15 g sample is digested in Aqua Regia and Cu, Mo, Au and 50 additional elements are determined by ICP-AES/MS. Samples with Cu grades >0.15% were reanalyzed by Bureau Veritas by copper and molybdenum assay method AR401, AR digestion of a 1 g sample followed by an AAS finish. Bureau Veritas Vancouver is an ISO17025:2005 and ISO 9001:2015 accredited laboratory.

Analytical work on 27 samples from the 2018 inter-laboratory duplicate program is pending at the time of this report.

The inline intra-laboratory coarse reject duplicate, inter-laboratory pulp duplicate and analytical method duplicate results from recent core drilling programs are illustrated in a series of normal and log scale scatterplots and mean percent difference plots for copper and molybdenum in Figures 11.7 through 11.15.

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

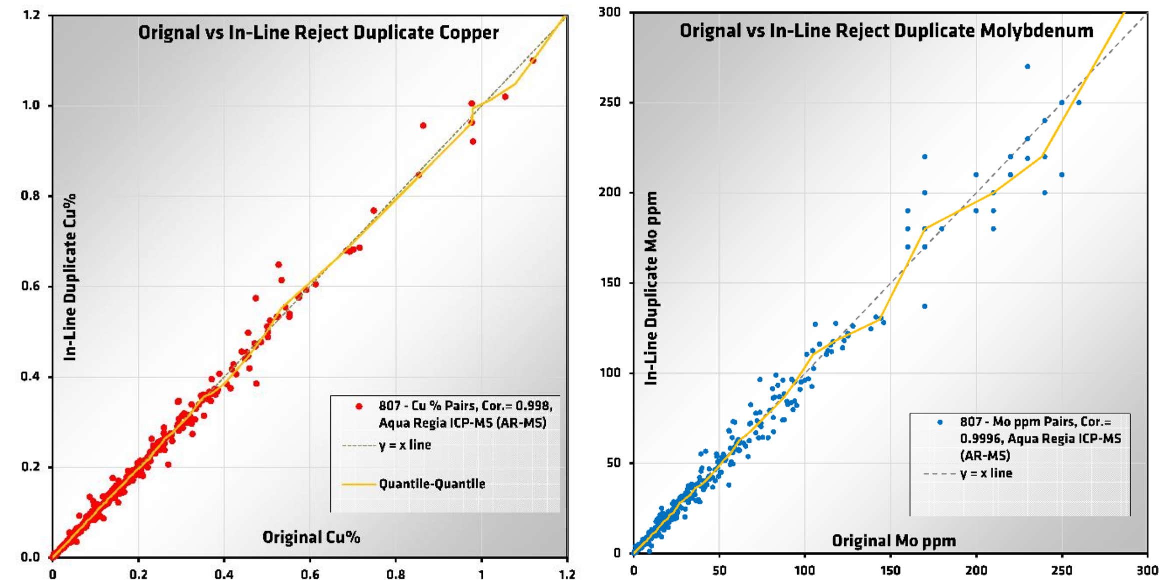

Figure 11.7: Intra-Laboratory In-Line Duplicate Charts Copper & Molybdenum – Normal

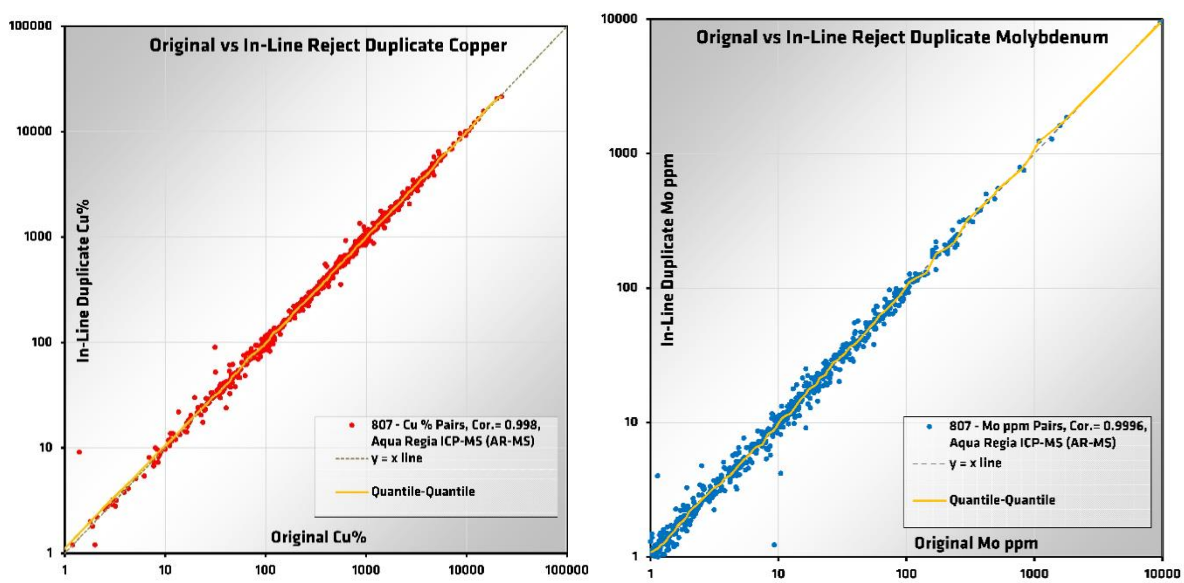

Figure 11.8: Intra-Laboratory In-Line Duplicate Charts Copper & Molybdenum – Log

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

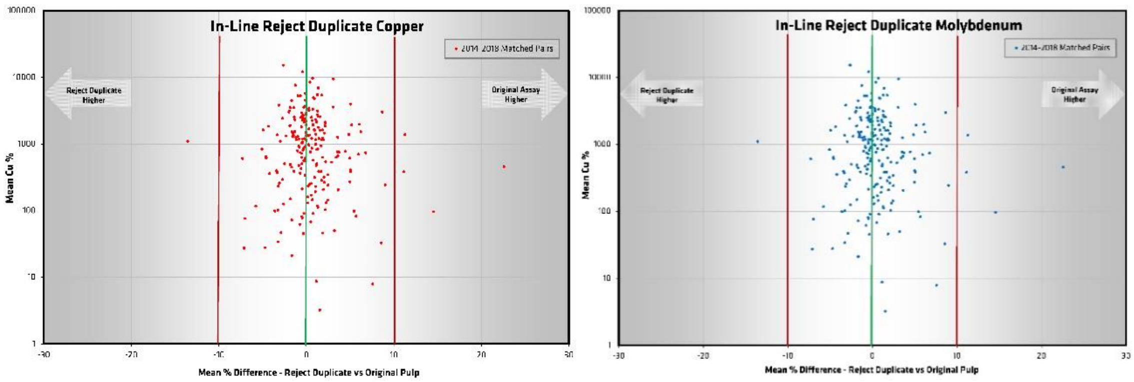

Figure 11.9: Intra-Laboratory In-Line Duplicate Charts Copper & Molybdenum – Mean % Difference

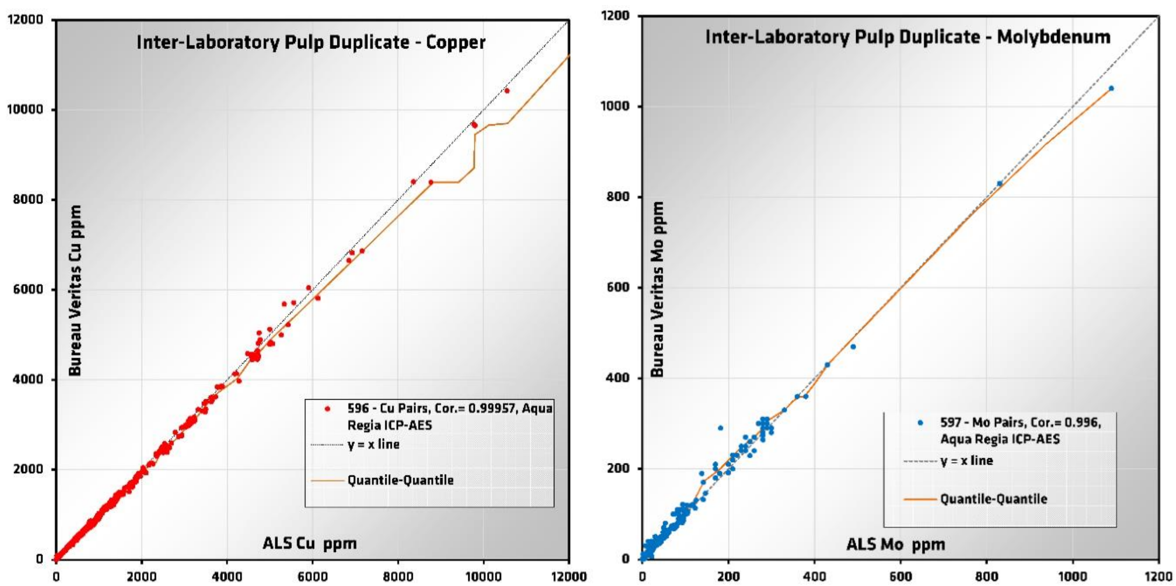

Figure 11.10: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Normal

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

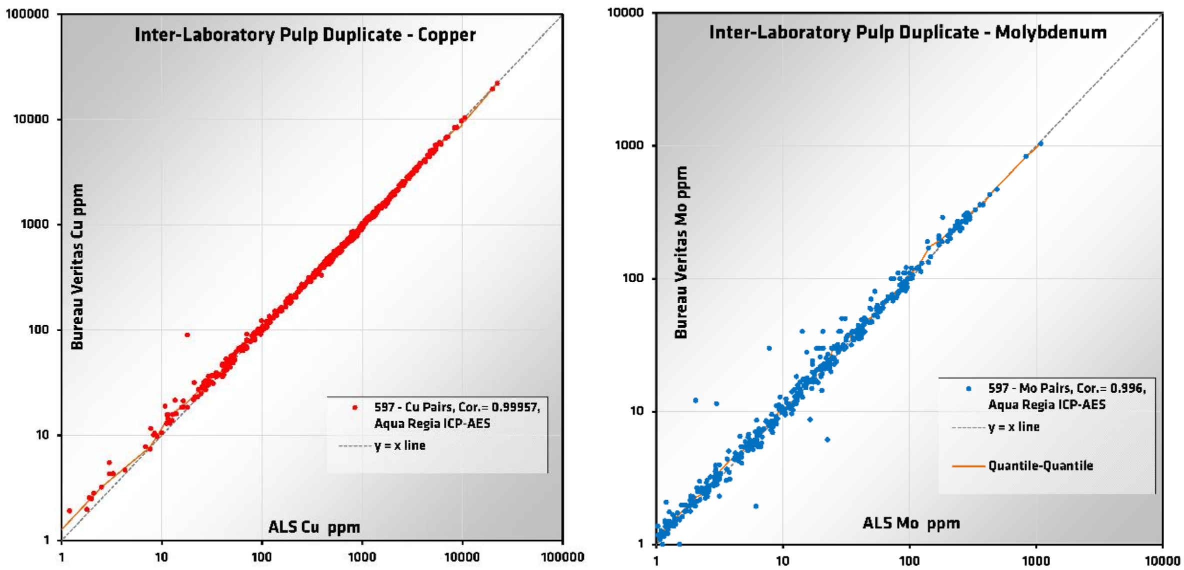

Figure 11.11: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Log

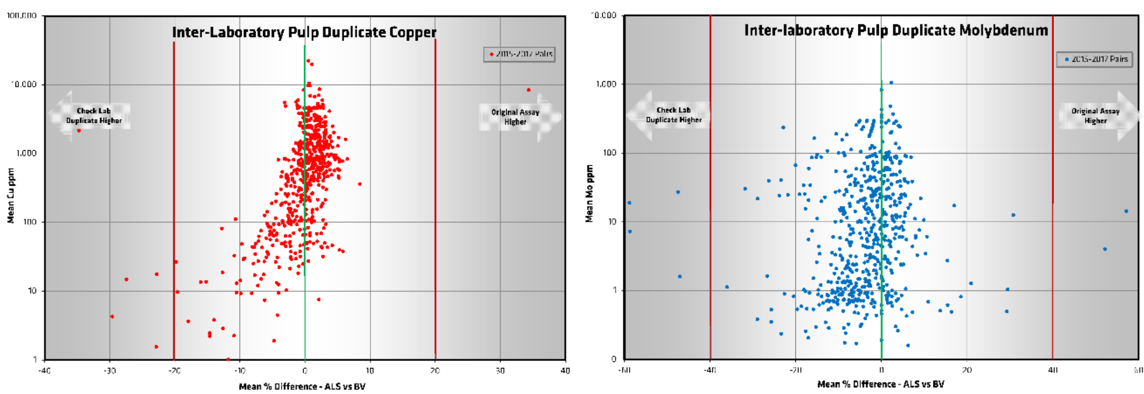

Figure 11.12: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Mean % Difference

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

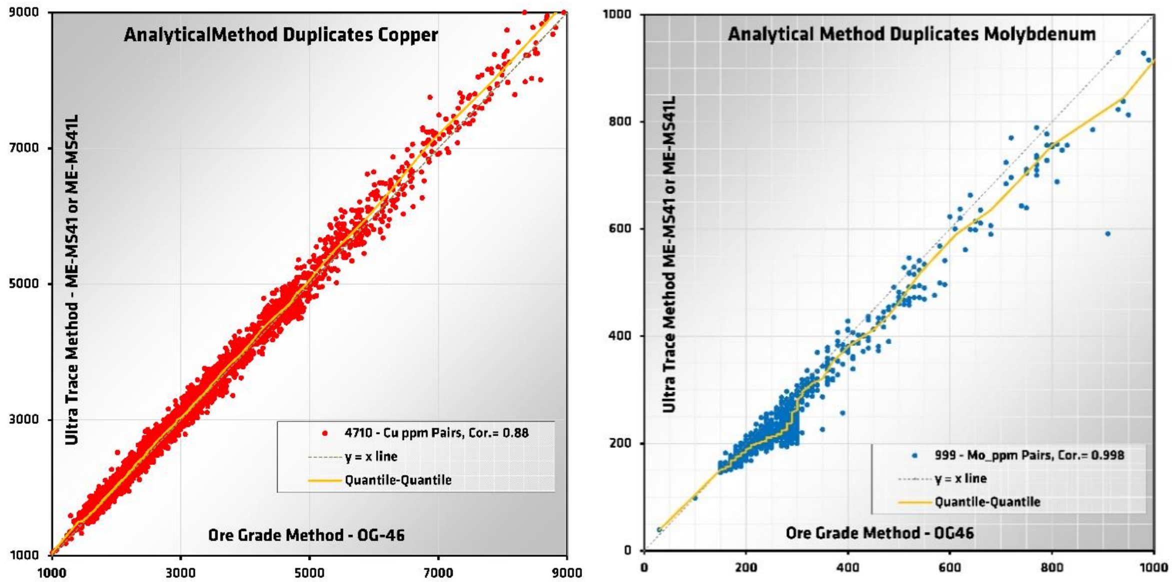

Figure 11.13: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Normal

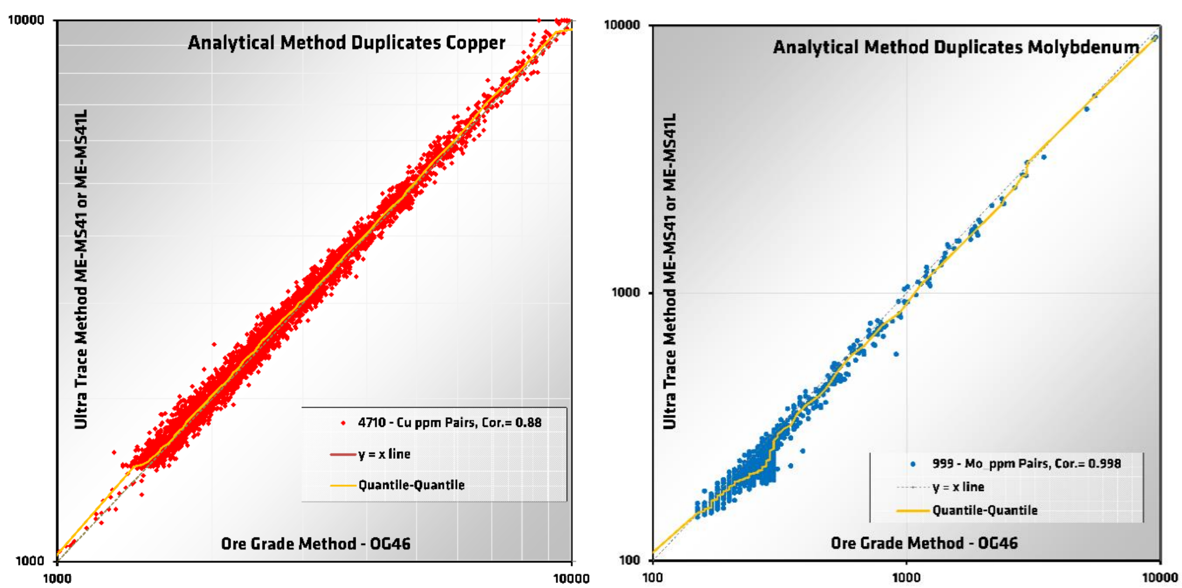

Figure 11.14: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Log

11.6 QAQC Program – *Cont'd*

(f) 2015-2018 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

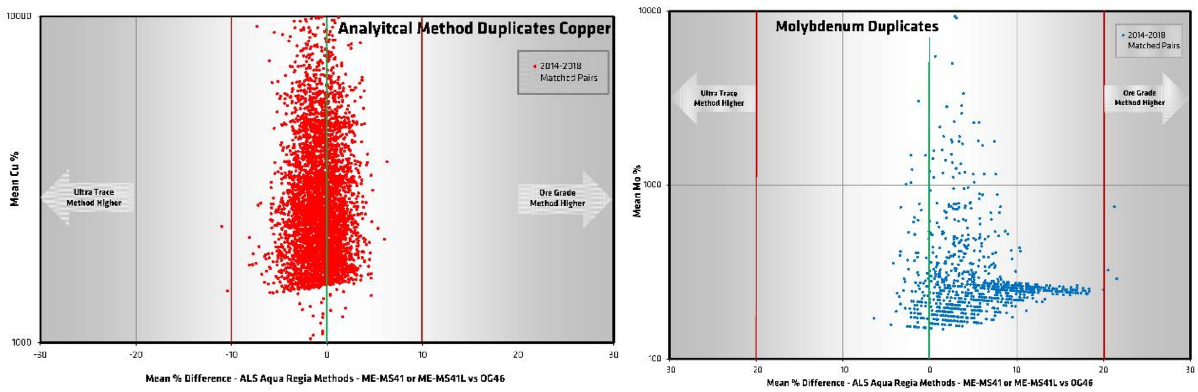

Figure 11.15: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Mean % Difference

11.7 Density Data

A total of 511 bulk density (specific gravity) measurements were taken at the Gibraltar core logging facility in 2008 and 2011 using a water immersion method on dry whole core samples according to the following formula.

$$\text{Density} = \text{Mass in Air} / (\text{Mass in Air} - \text{Mass in Water})$$

Measurements were made at approximately 100 ft intervals down hole within continuous rock units. Rocks chosen for analysis were typical of the surrounding rock. Where the sample selection point occurred in a section of missing core, or poorly consolidated material unsuitable for measurement, the nearest intact piece of core was measured instead.

From late 2016 to the end of the 2018 drill program, 109 samples from 53 drill holes from a broad range of rock types and areas were measured for density at ALS laboratory in North Vancouver BC using a gravimetric water immersion method (ALS method OA-GRA08).

Table 11.5 is a summary of the density results from these two programs by deposit area.

Table 11.5: Bulk Density Summary by Area

Zone	No.	Min	Median	Mean	Max
Connector	20	2.63	2.70	2.71	2.84
Deep Southwest	37	2.70	2.74	2.75	2.86
Gibraltar	21	2.66	2.71	2.71	2.77
Extension	408	2.27	2.76	2.76	3.62
Granite	87	2.63	2.68	2.69	3.03
Gunn	12	2.57	2.66	2.66	2.77
Pollyanna	20	2.63	2.68	2.69	2.87

SECTION 12

DATA VERIFICATION

SECTION 12: DATA VERIFICATION

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12.1 Introduction

Richard Weymark, P.Eng., Chief Engineer of Taseko Mines Limited, a QP of Gibraltar Mines Ltd. and responsible for the current resource and reserve estimates visited Gibraltar Mine on June 4th and 5th, 2019. A significant amount of due diligence, verification and analytical QAQC for copper and molybdenum has been completed on the samples that were used as a basis for this report. The author is of the opinion that these procedures are consistent with industry best practices and acceptable for use in geological, resource and reserve modelling.

12.2 Data Environment

All drill logs collected on the project site have been compiled in a relational database with tables that are compatible with typical mining exploration software programs. Drillhole logging information has been entered by geological and technical personnel from Gibraltar and third-party consultants (Hunter Dickinson Services Inc. (HDSI) from 2011 to 2014 and TerraLogic Exploration Inc. from 2015 to 2018). Drill core logging and data entry was performed using specialized drill logging software at the secure core logging facility at the mine complex. Core logging computers were synchronized on a routine basis with a file server in the site geology office. Primary validation of Gibraltar exploration drill data occurred through standardized data entry modules and error trapping procedures built into the programs.

The digital data was compiled, merged with the analytical results, and reviewed for QAQC. Verification and validation took place at the mine site and at consultant offices. At the mine, the geologist responsible for each drillhole reviews the digitally entered geology, sample and field log data. The merged sample logs and analytical results were also reviewed by site personnel and, if necessary, checked against the drill core or core photographs. Core photographs were transferred to the file server in the mine geology office.

Corrections to the logs, if necessary, were done by the site geological team. Analytical re-runs, if required, were submitted to the analytical laboratories and corrections were made at consultant offices and transferred to mine geology and engineering staff. Compiled field logs, data tables and analytical results are exported to the mine engineering office and for use resource/reserve modeling on a regular basis.

12.3 Data Processing

Project data was processed so that it could be assessed with respect to ongoing requirements for timely disclosure of material information by management. In this regard, compiled drill data and assay results were made available to management, the technical team and project consultants advancing the project, immediately after the initial error trapping and analytical QAQC appraisal processes are completed, provided there were no significant concerns. The data was then subjected to more extensive, long-term validation, verification, QAQC, and error correction processes. The findings of these long-term reviews were assessed as to their impact on previous disclosures (if any) and the necessity for further disclosure if there is a material change. There are no known outstanding QAQC issues with respect to the drillhole information used in the resource and reserve estimates.

12.4 Data Verification

The pre-2006 database used in the reserve estimate was compiled by Gibraltar staff over a number of years. In early 2005, the resource drilling information was reviewed by Roscoe Postle Associates Inc. (RPA) and this is described in the data verification section of the "Technical Report on the Gibraltar Mine, British Columbia" by James W. Hendry, PEng, and C. Stewart Wallis, PGeo of RPA, dated March 23, 2005 and filed on www.sedar.com. RPA did not identify any significant concerns with the data.

For the 2006 through 2018 drill programs, maintenance and updating of the Gibraltar drillhole database also included the following verification and validation work:

- Generate external QAQC charts to monitor the standard results, identify failures and request re-analysis where necessary;
- Generate blank monitoring charts to identify potential contamination;
- Generate duplicate monitoring charts to monitor assay repeatability;
- Correct mis-labels, mis-entries and other errors found.

In August and September 2008, portions of the 2007 and 2008 drillhole database were manually verified. Approximately 160,000 assay records for Cu, CuAS, Mo, Fe, Au and Zn were checked for 25,000 assay intervals from 230 drillholes against the assay certificates from the analytical laboratories. A low number of minor discrepancies were encountered. They were essentially of two types: rounding errors in the third and fourth decimal places and issues with analytical QAQC re-runs that were still in progress at the time of verification. The effect of the rounding errors was deemed to be insignificant. QAQC corrections were applied as necessary.

12.4 Data Verification – *Cont'd*

In 2010, the Cu, CuAS, Mo, Fe and Zn assay values from 34 drill holes from 2010-003 through 2010-041, where the copper value exceeded 0.20% were checked. A total of the 445 intervals were validated, or about 15% of the 2,880 samples assayed. This was done by manually checking the digital data values against the assay certificates. No errors or discrepancies were found.

12.5 Comparison of AD Percussion Holes and Core Holes

Moose Mountain Technical Services compared the copper and molybdenum assays of rotary air blast percussion (RAB) drilling of 65 AD and 3 PW series holes with the cored diamond drill holes and the estimated block grades in 2014. Mean grades, cumulative probability plots and histograms (grade-tonnage curves) were compared in this study. Based on the statistical analysis presented, it was concluded that the AD and PW holes have no bias and require no correction; therefore they can be used in resource block model updates.

12.6 Data Verification of Historical Records

In late 2013, Gibraltar requested HDSI to conduct a review of the historical data within the drillhole database. A complete set of original historical drilling records in the form of hard copy documents was retrieved from the mine vault in December 2013. These documents were inventoried and shipped for scanning, keypunching, validation and verification. The new entries from the historical core drilling were compared with a pre-existing dataset in use at the mine for a number of years. The historical records in the drillhole database were largely based on a data set received by Taseko from Boliden in 1999. It had also been re-compiled and significantly updated by Taseko in 1999 and 2000 and has been maintained by consultants on behalf of Gibraltar since then.

Documentation from 1,340 holes representing 682,289 feet of historical core drilling was subject to digitization, validation and verification in this process, in addition to 187,755 historical blastholes. The available documents were scanned into a digitally retrievable format and the underlying data was keypunched and imported into a SQL database for comparison with the pre-existing compilations. Data entry of assay records for 1,203 historical drill holes was performed on drilling from the years 1965 to 1998. A further 55 drillholes from this era were verified as being un-assayed. Records for 83 drillholes could not be located in the archives of the mine vault and were not verified. Upon completion of this process, the final compilation was exported to the Gibraltar engineering and geological team for mine planning and resource/reserve estimation.

In this process, 95% of the historical drillholes, were re-keypunched, validated, verified and compared with the earlier compilations. In particular, the re-entered assay records of 58,220 sample intervals were compared with the historical versions. This double-entry data verification exercise provides a robust check on the veracity of the Gibraltar drillhole dataset that is impartial and independent of the original sources.

12.7 Summary

The results of the extensive verification process including: monitoring of control samples since 2003, comparison of duplicate assay analysis at a number of reputable independent laboratories since 1999, data verification programs completed in 2005, 2008, 2010 and 2014, indicates that it is of good quality and acceptable for use in geological, resource and reserve modeling.

SECTION 13

MINERAL PROCESSING AND METALLURGICAL TESTING

SECTION 13: MINERAL PROCESSING AND METALLURGICAL TESTING

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13.1 Mineral Processing and Metallurgical Testing

Sulphide ore from the Gibraltar deposits has been processed in the on-site concentrator since 1972 and run of mine oxide ore has been leached since 1986. The mineral reserves referred to in this report are contained within zones which have been significantly mined, with the exception of the Extension Zone. Metallurgical testing associated with the Extension Zone has been discussed in a previous technical report titled "Technical Report on the 105 Million Ton Increase in Mineral Reserves at the Gibraltar Mine, British Columbia, Canada" by Scott Jones, P.Eng, dated January 23, 2009, filed on www.sedar.com and is an extension of the existing mined pits. The test work conducted on the Extension Zone returned results consistent with the larger orebody. As such it has not been considered necessary to perform specific additional metallurgical testing.

The basis for predictions of copper concentrate flotation recovery is actual plant performance data from both of the existing concentrators. This data has been modelled such that the total copper (TCu) and oxide copper (ASCu) mineral content in the feed can be used to predict recoveries. This recovery model was incorporated into the block model. This in turn resulted in a block by block recovery prediction for the reserves. The recovery model used is the minimum of:

$$0.9 - 0.7\left(\frac{ASCu}{TCu}\right),\ or,\ 1 - \left(\frac{0.03}{TCu}\right)$$

The basis of the predictions of molybdenum concentrate flotation recovery remains unchanged from the previous technical report titled "Technical Report on the Mineral Reserve Update at the Gibraltar Mine, British Columbia, Canada" by Scott Jones, P. Eng, dated June 15, 2015. Tests completed by G&T Metallurgical Services in 2011 utilized a bulk copper concentrate collected from the operating Gibraltar circuit. The bulk concentrate slurry contained 28.6% copper and 0.5% molybdenum by weight. Overall, molybdenum recovery from the bulk concentrate is in the range of 90-93% at a final molybdenum grade of >50% in closed circuit cleaner locked cycle tests. When the predicted molybdenum recovery from the G&T Metallurgical services work is applied to the average bulk flotation circuit molybdenum recovery, values in excess of the 50% overall molybdenum recovery are predicted. This supports the molybdenum recovery of 50 % used in economic calculations.

The predictions of copper cathode produced from heap leaching and subsequent solvent extraction is based upon historical recovery to cathode. Historical recovery to cathode is 50% of placed copper mass.

SECTION 14

MINERAL RESOURCE ESTIMATE

SECTION 14: MINERAL RESOURCE ESTIMATE

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14.1 Introduction

The resource block model for the entire Gibraltar deposit has been updated in 2018 from that used for the previous Technical Report (Technical Report of June 11, 2015) to include all applicable drilling up to the effective date of this report.

Drilling since the 2014 and updated statistical analyses are presented. MineSight®, an industry standard in geologic modeling and mine planning software has been used to perform the block modeling, validation and resource estimate. The three-dimensional model has block dimension of 50'x50'x50', to approximate the selective mining unit currently in use at Gibraltar.

Grades have been interpolated to the blocks for Total Cu (TCu), Acid Soluble Copper (ASCU) and Molybdenum (Mo), with the final grade assignment interpolation method defined by validation through comparisons with Nearest Neighbor (NN) estimates, corrected for volume-variance effect associate with the block size.

14.2 Domain Definition

The Model is divided into 10 domains based on faulting and changes in mineralization due to fault sets. Contact plots and analysis of changes in grade across the boundaries in section and plan have also been used to aid in determining necessary domain boundaries and locations.

The domains are illustrated in Figure 14.1 with the Resource Pit surface also illustrated. Note that Domains 7 through 10 are given "firm" boundaries, due to the gradational nature of changes in mineralization in these areas. These firm boundaries extend 250' each side of the center of the original domain boundary, creating a corridor from which composites from neighboring domains may be used for interpolation and resource classification.

14.2 Domain Definition – *Cont'd*

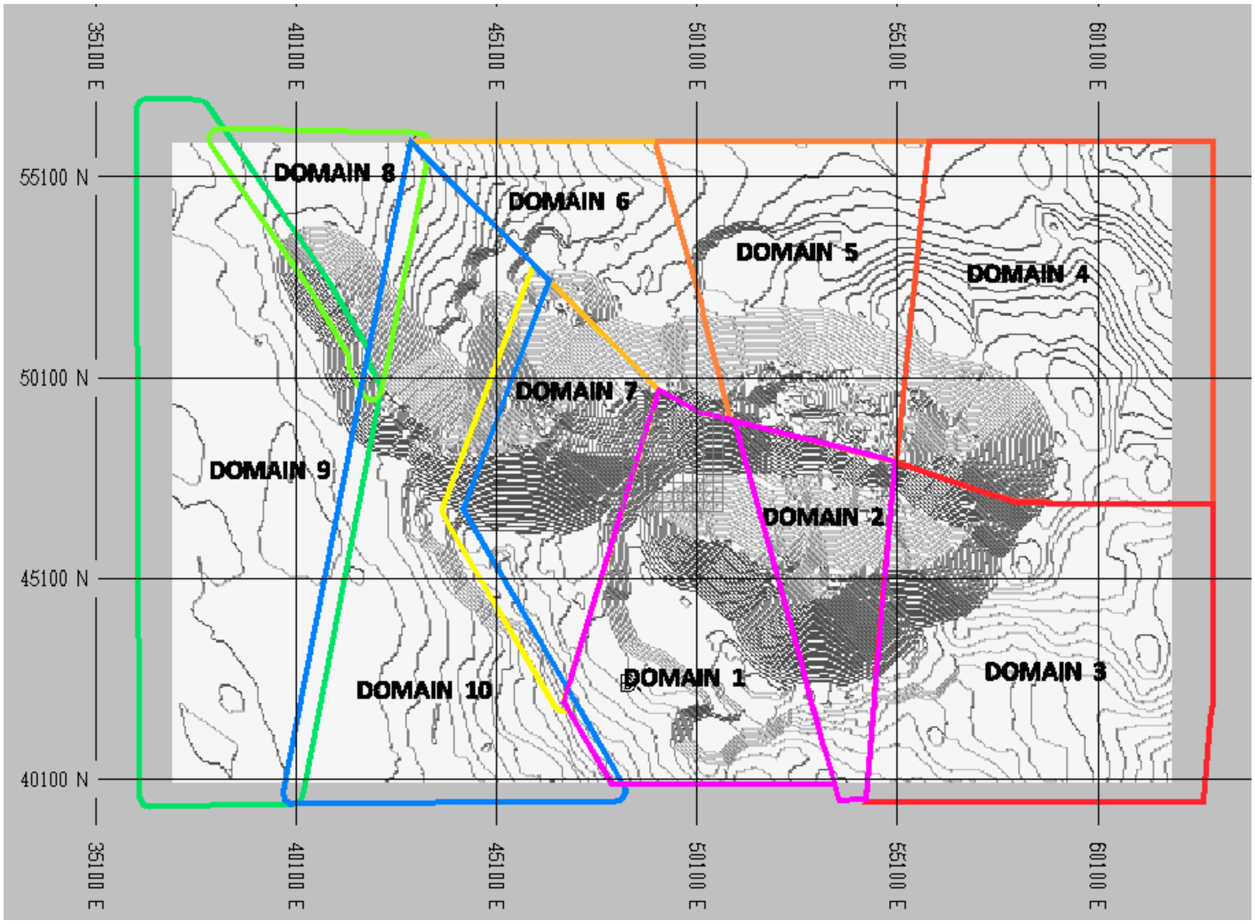


Figure 14.1: Plan View of Domain Boundaries and Resource Pit

14.3 Zone Definition

Zoning of the deposit has been modeled by creating generally flat-lying surfaces to denote the bottom of each zone layer, and includes: overburden, leach cap, oxide, supergene and hypogene layers. The location of these surfaces is based on interpretation of the assay data in section and plan.

14.4 Exploratory Data Analysis – Assays and Composites

Exploratory Data Analysis of the assay data included contact plots, assay statistics and interpretation of grade changes to help define the boundaries of the domains and zones. Cumulative probability plots (CPP) using the assay data are created to ensure lognormal distribution is an appropriate assumption, and to define any necessary capping during variography and interpolation.

Compositing has been done on 12.5’ fixed length intervals while honoring both the Zone and Domain boundaries. Intervals less than half the composite length have been added to the interval above. Comparisons of weighted mean grades has been done for each zone and domain to ensure that compositing has been accomplished correctly and also to ensure the Coefficient of Variation (C of V) is appropriate for linear estimation methods. Table 14.1 summarizes the mean grade comparison of assays and composites by zone and domain for the main ore bearing zones of each interpolated mineral.

14.4 Exploratory Data Analysis – Assays and Composites – *Cont'd*

Table 14.1: Assay and Composite Mean Grades by Zone and Domain

				Domain									
Model Item	Zone	Source	Parameter	1	2	3	4	5	6	7	8	9	10
TCu	Sulfide	Assay	Mean Grade (%)	0.111	0.165	0.121	0.125	0.173	0.141	0.191	0.170	0.042	0.156
			C of V	1.437	1.046	1.314	1.182	0.981	1.299	0.914	1.908	2.884	1.569
		Composite	Mean Grade (%)	0.111	0.165	0.121	0.125	0.173	0.141	0.191	0.170	0.042	0.157
			C of V	1.382	0.973	1.214	1.054	0.906	1.181	0.831	1.694	2.378	1.340
		Mean Grade Difference(%)		-0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	-0.6%
Mo (%)	Sulfide	Assay	Mean Grade (%)	0.003	0.006	0.003	0.004	0.006	0.005	0.005	0.001	0.001	0.002
			C of V	2.300	2.321	2.137	2.400	2.479	3.850	1.729	2.886	3.273	2.841
		Composite	Mean Grade (%)	0.003	0.006	0.003	0.005	0.006	0.005	0.005	0.001	0.001	0.002
			C of V	2.045	2.011	1.815	2.024	1.978	3.311	1.469	2.276	2.700	2.193
		Mean Grade Difference(%)		0.0%	-0.3%	0.0%	-0.5%	0.2%	-0.4%	0.0%	0.0%	-0.5%	-0.1%
ASCu (%)	Oxide	Assay	Mean Grade (%)	0.025	0.060	0.043	0.067	0.079	0.128	0.091	0.021	NA	NA
			C of V	1.240	0.792	1.169	1.474	0.895	1.149	1.040	1.838	1.209	1.274
		Composite	Mean Grade (%)	0.025	0.061	0.044	0.066	0.079	0.128	0.091	0.021	NA	NA
			C of V	1.131	0.703	1.106	1.387	0.834	1.063	0.930	1.545	1.159	1.133
		Mean Grade Difference(%)		-0.2%	-1.1%	-2.0%	1.3%	0.2%	-0.1%	0.2%	0.0%	NA	NA

Based on the CPP plots of assays and composites, the composites have been restricted during interpolation as indicated in Table 14.2. Grades above the indicated values have the search distance restricted to one block width (50') during interpolation.

Table 14.2: Outlier Restriction Values of Composites During Interpolation

Capped Item	Domain – Sulfides					
	1	5	6	7	8	10
Mo (%)	0.07	0.18	0.40	0.10	0.07	0.07
	All Domains – Sulfides					
ASCu (%)	0.55					

14.5 Variography

Variograms are completed for each domain at 30-degree azimuth intervals and 15-degree plunges over the entire directional sphere. The resulting variogram parameters are given in Table 14.3 through 14.5 for TCu, Mo and ASCu respectively. Note that the Rotation is given as ROT=Rotation of the azimuth from north of the major axis, DIPN=Plunge of the major axis in the ROT direction, DIPE=Plunge of the minor axis as an east axis (down is negative).

Table 14.3: Variogram Parameters – TCu

Domain	Rotation (GSLIB-MS)		Axis	Nugget	Total Sill	Sill1	Sill2	Range1	Range2
1	ROT	120	Major	0.2	1	0.8	0	1000	1000
	DIPN	0	Minor					400	400
	DIPE	0	Vert					700	700
2	ROT	150	Major	0.2	1	0.65	0.15	500	1000
	DIPN	0	Minor					650	3000
	DIPE	-30	Vert					600	3000
3	ROT	120	Major	0.1	1	0.9	0	900	900
	DIPN	0	Minor					900	900
	DIPE	-15	Vert					350	350
4	ROT	120	Major	0.3	1	0.7	0	1100	500
	DIPN	0	Minor					650	650
	DIPE	-30	Vert					550	550
5	ROT	120	Major	0.1	1	0.9	0	1400	1400
	DIPN	0	Minor					750	750
	DIPE	-15	Vert					300	300
6	ROT	240	Major	0.5	1	0.5	0	1100	1100
	DIPN	-15	Minor					900	900
	DIPE	0	Vert					700	700
7	ROT	120	Major	0.3	1	0.7	0	700	700
	DIPN	-15	Minor					700	700
	DIPE	-30	Vert					300	300
8	ROT	330	Major	0.4	1	0.6	0	1000	1000
	DIPN	-15	Minor					700	700
	DIPE	0	Vert					250	250
9	ROT	330	Major	0.2	1	0.8	0	900	900
	DIPN	0	Minor					600	600
	DIPE	15	Vert					150	150
10	ROT	330	Major	0.5	1	0.5	0	850	850
	DIPN	0	Minor					250	250
	DIPE	15	Vert					450	450

14.5 Variography – *Cont'd*

Table 14.4: Variogram Parameters – Mo

Domain	Rotation (GSLIB-MS)		Axis	Nugget	Total Sill	Sill1	Sill2	Range1	Range2
1	ROT	120	Major	0.4	1	0.6		1000	1000
	DIPN	-15	Minor					450	450
	DIPE	15	Vert					300	300
2	ROT	90	Major	0.4	1	0.6		1000	1000
	DIPN	0	Minor					800	800
	DIPE	0	Vert					400	400
3	ROT	180	Major	0.5	1	0.5		900	900
	DIPN	-15	Minor					600	600
	DIPE	0	Vert					250	250
4	ROT	150	Major	0.4	1	0.5	0.1	300	2000
	DIPN	0	Minor					200	2000
	DIPE	-15	Vert					200	2000
5	ROT	150	Major	0.4	1	0.5	0.1	600	600
	DIPN	0	Minor					250	2000
	DIPE	0	Vert					200	2000
6	ROT	150	Major	0.4	1	0.4	0.2	300	900
	DIPN	0	Minor					500	3000
	DIPE	-15	Vert					120	3000
7	ROT	120	Major	0.5	1	0.2	0.3	350	350
	DIPN	-30	Minor					200	3000
	DIPE	-30	Vert					300	300
8	ROT	300	Major	0.6	1	0.4		400	400
	DIPN	0	Minor					300	300
	DIPE	30	Vert					50	50
9	ROT	300	Major	0.6	1	0.3	0.1	200	1100
	DIPN	0	Minor					200	200
	DIPE	30	Vert					50	2000
10	ROT	330	Major	0.5	1	0.5		300	300
	DIPN	0	Minor					300	300
	DIPE	30	Vert					250	250

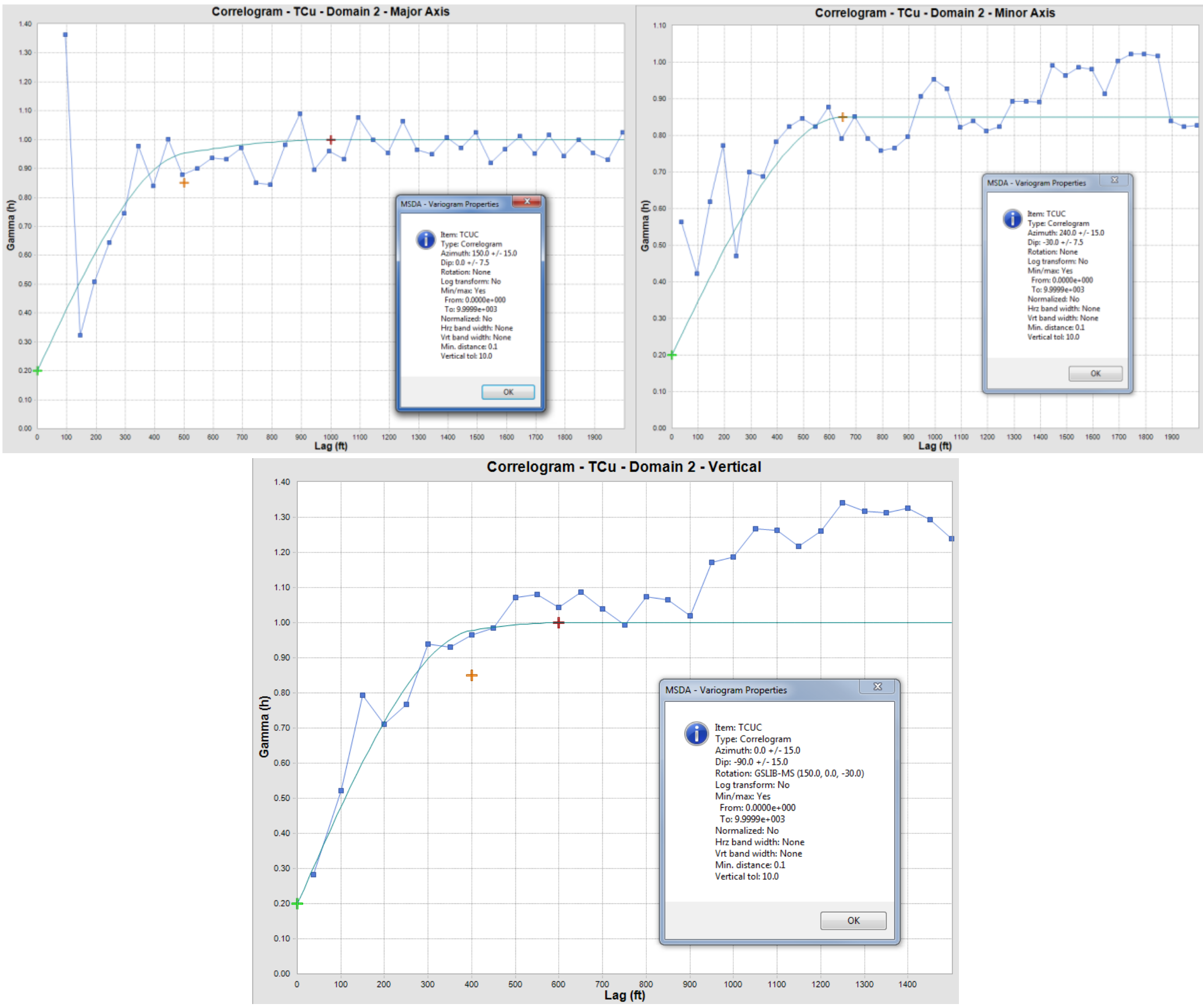
Table 14.5: Variogram Parameters – ASCu

Domain	Rotation (GSLIB-MS)		Axis	Nugget	Total Sill	Sill1	Range1
All	ROT	210	Major	0.2	1	0.8	500
	DIPN	-15	Minor				450
	DIPE	0	Vert				150

14.5 Variography – *Cont'd*

An example of the Variogram Model for TCu in Domain 2 in each of the three ellipsoidal directions is illustrated in Figure 14.2 below.

Figure 14.2: Variogram Model for TCu for Domain 2



14.6 Block Model Interpolation

The block model limits and block size are as given in Table 14.6.

Table 14.6: Block Model Limits (in feet)

Direction	Minimum	Maximum	Block Dimension	# of Blocks
Easting	36,000	62,000	50’	520
Northing	40,000	57,600	50’	352
Elevation	600	4650	50’	81

Interpolation of TCu, Mo and ASCu is done by the four methods mentioned previously (NN, ID3, ID5, and OK) in three passes based on the variogram parameters. Interpolation is restricted by the geologic boundaries, with composites and block codes required to match within each domain and zone. The interpolation method used for the 18B resource model was chosen based on the best fit by zone and domain, after reviewing the model validation analyses for all methods. TCu estimation is ID3 for all domains except domain 8 where OK has been implemented. ASCU is interpolated using OK for all domains, and Mo uses both OK and ID5 depending on the domain.

14.6 Block Model Interpolation – *Cont'd*

Search distances for each metal and domain are summarized in the Tables below:

Table 14.7: Search Distances – TCu

Domain	Rotation (GSLIB-MS)		Axis	Search Distances (ft.)		
				Pass 1	Pass 2	Pass 3
1	ROT	120	Major	500	750	1000
	DIPN	0	Minor	200	300	400
	DIPE	0	Vert	350	525	700
2	ROT	150	Major	500	750	1000
	DIPN	0	Minor	325	488	650
	DIPE	-30	Vert	300	450	600
3	ROT	120	Major	450	675	900
	DIPN	0	Minor	450	675	900
	DIPE	-15	Vert	175	263	350
4	ROT	120	Major	550	825	1100
	DIPN	0	Minor	325	488	650
	DIPE	-30	Vert	275	413	550
5	ROT	120	Major	700	1050	1400
	DIPN	0	Minor	375	563	750
	DIPE	-15	Vert	150	225	300
6	ROT	240	Major	550	825	1100
	DIPN	-15	Minor	450	675	900
	DIPE	0	Vert	350	525	700
7	ROT	120	Major	350	525	700
	DIPN	-15	Minor	350	525	700
	DIPE	-30	Vert	150	225	300
8	ROT	330	Major	500	750	1000
	DIPN	-15	Minor	350	525	700
	DIPE	0	Vert	125	188	250
9	ROT	330	Major	450	675	900
	DIPN	0	Minor	300	450	600
	DIPE	15	Vert	75	113	150
10	ROT	330	Major	400	600	800
	DIPN	0	Minor	125	188	250
	DIPE	15	Vert	225	338	450

14.6 Block Model Interpolation – *Cont'd*

Table 14.8: Search Distances – Mo

Domain	Rotation (GSLIB-MS)		Axis	Search Distances (ft.)		
				Pass 1	Pass 2	Pass 3
1	ROT	180	Major	500	750	1000
	DIPN	-15	Minor	225	337.5	450
	DIPE	15	Vert	150	225	300
2	ROT	90	Major	500	750	1000
	DIPN	0	Minor	400	600	800
	DIPE	0	Vert	200	300	400
3	ROT	180	Major	450	675	900
	DIPN	-15	Minor	300	450	600
	DIPE	0	Vert	125	187.5	250
4	ROT	150	Major	150	225	300
	DIPN	0	Minor	100	150	200
	DIPE	-15	Vert	100	150	200
5	ROT	150	Major	300	450	600
	DIPN	0	Minor	125	187.5	250
	DIPE	0	Vert	100	150	200
6	ROT	150	Major	450	675	900
	DIPN	0	Minor	250	375	500
	DIPE	-15	Vert	60	90	120
7	ROT	120	Major	175	262.5	350
	DIPN	-30	Minor	100	150	200
	DIPE	-30	Vert	150	225	300
8	ROT	300	Major	200	300	400
	DIPN	0	Minor	150	225	300
	DIPE	30	Vert	25	37.5	50
9	ROT	300	Major	100	150	200
	DIPN	0	Minor	100	150	200
	DIPE	30	Vert	25	37.5	50
10	ROT	330	Major	150	225	300
	DIPN	0	Minor	150	225	300
	DIPE	30	Vert	125	187.5	250

Table 14.9: Search Distances – Mo

Domain	Rotation (GSLIB-MS)		Axis	Search Distances (ft.)		
				Pass 1	Pass 2	Pass 3
All	ROT	210	Major	250	375	500
	DIPN	-15	Minor	225	337.5	450
	DIPE	0	Vert	25	37.5	50

14.6 Block Model Interpolation – *Cont'd*

The number of composites used in each of the three-pass interpolation is also varied, as given in the table below.

Table 14.10: Composite Restriction during Interpolation

Metal	Parameter	Pass 1	Pass 2	Pass 3
TCu, Mo	Min # Comps	8	8	4
	Max # Comps	16	16	24
	Max / Hole	4	4	4
	Max / Quad	2	2	n/a
ASCu	Min # Comps	8	8	4
	Max # Comps	16	16	24
	Max / Hole	4	4	4
	Max / Quad	4	4	n/a

14.7 Bulk Density

Block volumes in all in-situ rock domains are converted to tonnage using a tonnage factor of $12ft^3$/ton. Tonnage factor for overburden and fill are $15ft^3$/ton. Specific gravity determinations were carried out at the mine for ore and waste samples in the early years of production and have proven reliable over the mine's operating history.

14.8 Block Model Validation

Block model validation has been completed by a review and comparison of the mean grades in each zone and domain with those of the de-clustered composite data (Nearest Neighbour interpolation). Further validation includes comparison of the Tonnage-Grade Curves, swath plots, and on visual comparisons of the modelled grades with the original assay data in section and in plan.

Table 14.11 summarizes the comparison of grades by Domain for the Measured + Indicated material in the sulfides zone for TCu and Mo, and within the leach cap and oxide zones for AsCu. The topography at December 2018 is used to limit the blocks reported.

Table 14.11: Summary of Model and De-Clustered Composite (NN) Mean Grades

			Domain										
Model Item	Zone	Source	1	2	3	4	5	6	7	8	9	10	ALL
TCu	Sulfide	NN	0.099	0.137	0.113	0.113	0.153	0.119	0.194	0.122	0.054	0.156	0.130
		model	0.101	0.137	0.112	0.112	0.154	0.119	0.196	0.121	0.054	0.154	0.130
		Difference(%)	2.8%	-0.2%	-0.4%	-0.4%	1.0%	0.3%	0.8%	-1.1%	-1.1%	-1.4%	0.2%
Mo	Sulfide	NN	0.0027	0.0044	0.0028	0.0042	0.0056	0.0053	0.0048	0.0010	0.0016	0.0022	0.004
		model	0.0028	0.0045	0.0028	0.0042	0.0054	0.0049	0.0049	0.0010	0.0011	0.0020	0.004
		Difference(%)	5.0%	1.8%	-2.5%	0.2%	-3.5%	-8.6%	0.8%	-1.0%	-48.6%	-13.1%	-6.8%
ASCu*	Oxide	NN	0.016	0.049	0.026	0.066	0.076	0.080	0.054	0.008	0.006	0.010	0.043
		model	0.016	0.068	0.025	0.060	0.079	0.083	0.051	0.009	0.006	0.010	0.042
		Difference(%)	1.9%	27.8%	-5.7%	-8.8%	4.8%	4.0%	-6.3%	12.0%	3.4%	-7.3%	-1.1%

* Large differences in AsCu for Domain 2 are due to very few oxide samples in this domain

The Nearest Neighbour (NN) interpolation has been corrected for the volume-variance effect by the Indirect lognormal Correction (ILC) method. This method uses the block variance, mean grade and Coefficient of Variation (CV) to adjust the variance of the de-clustered composite data (the NN interpolation) to account for the block size, thereby theoretically smoothing the data to the selective mining unit (block) size.

The swath plots compare the grade estimated by ID3 or Ordinary Kriging for TCu (depending on the method used within the domain) to the grade of the blocks estimated by the Nearest Neighbour (NN) and Nearest Neighbour Corrected (NNC) methods.

Figures 14.3 through 14.5 show the swath plots for each zone using 100-foot wide vertical slices and 45-foot wide horizontal slices.

14.8 Block Model Validation – *Cont'd*

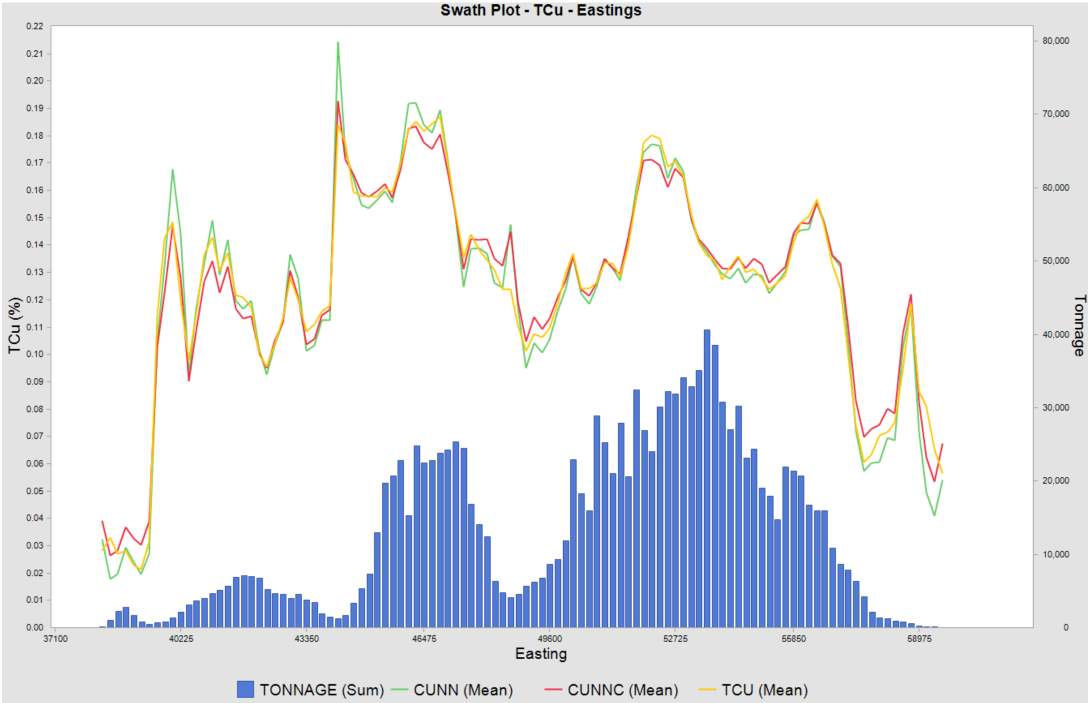


Figure 14.3: Swath Plot of TCu – M+I in Sulfides – Eastings

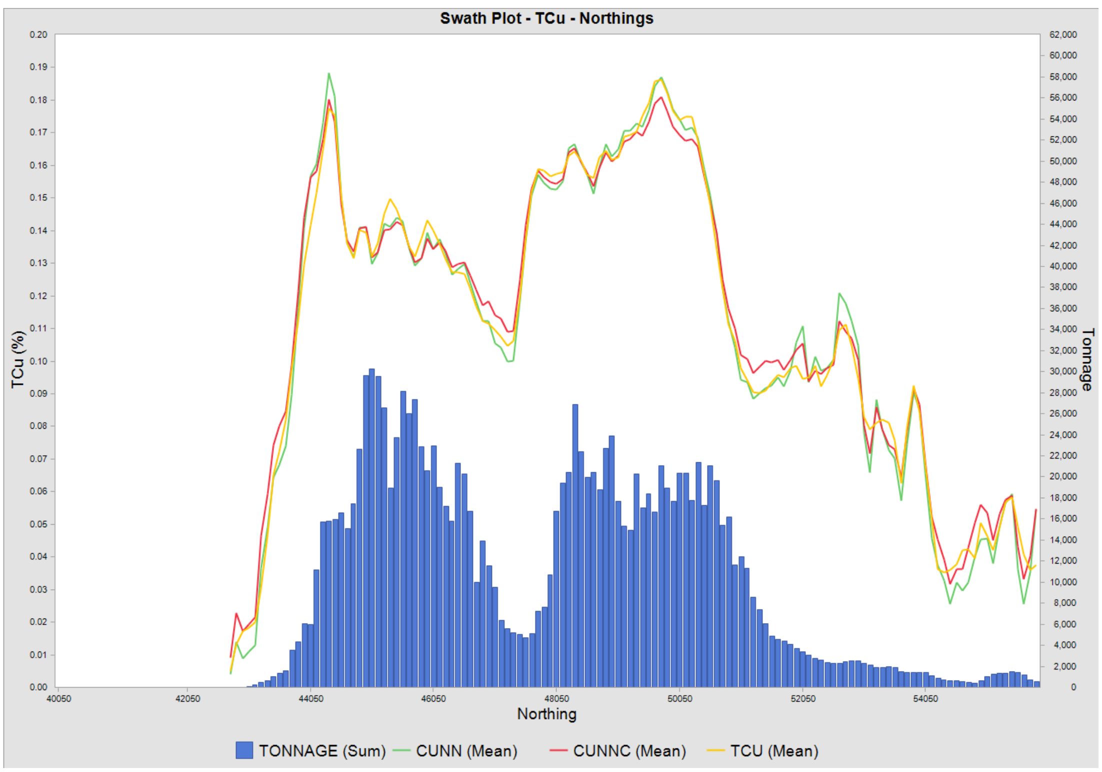


Figure 14.4: Swath Plot of TCu – M+I in Sulfides – Northings

14.8 Block Model Validation – *Cont'd*

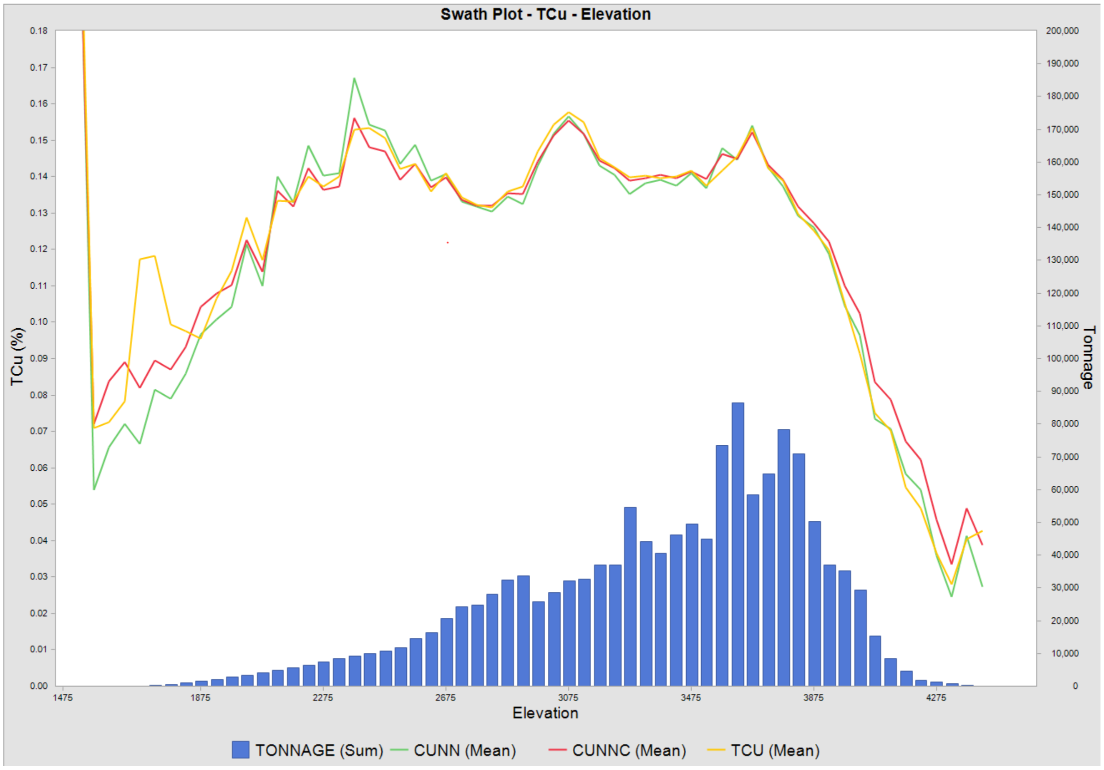


Figure 14.5: Swath Plot of TCu – M+I in Sulfides – Elevation

Grade-tonnage curves are used to validate the model by comparison of the Nearest Neighbor (NN) and the Nearest Neighbor Corrected (NNC) to the interpolated grade. Figures 14.6 through 14.8 illustrate this comparison for Total Copper (TCU), Molybdenum (Mo) and Acid Soluble Copper (ASCu) respectively.

14.8 Block Model Validation – *Cont'd*

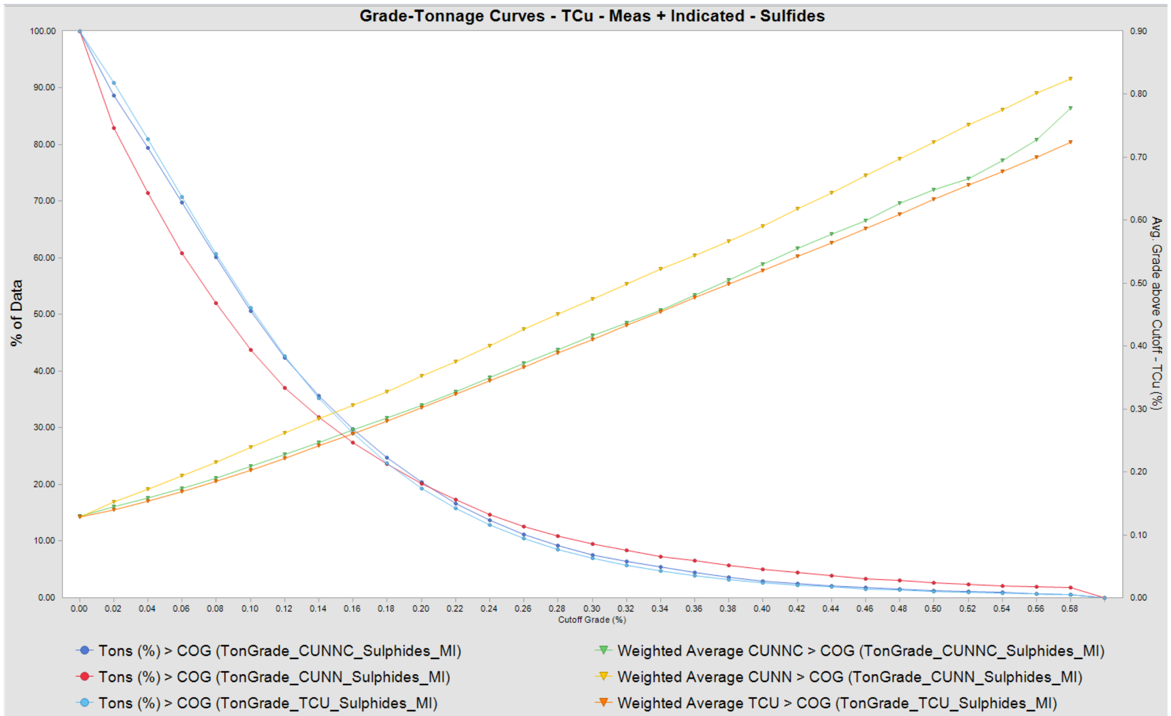


Figure 14.6: Grade-Tonnage Curve Comparison – TCu

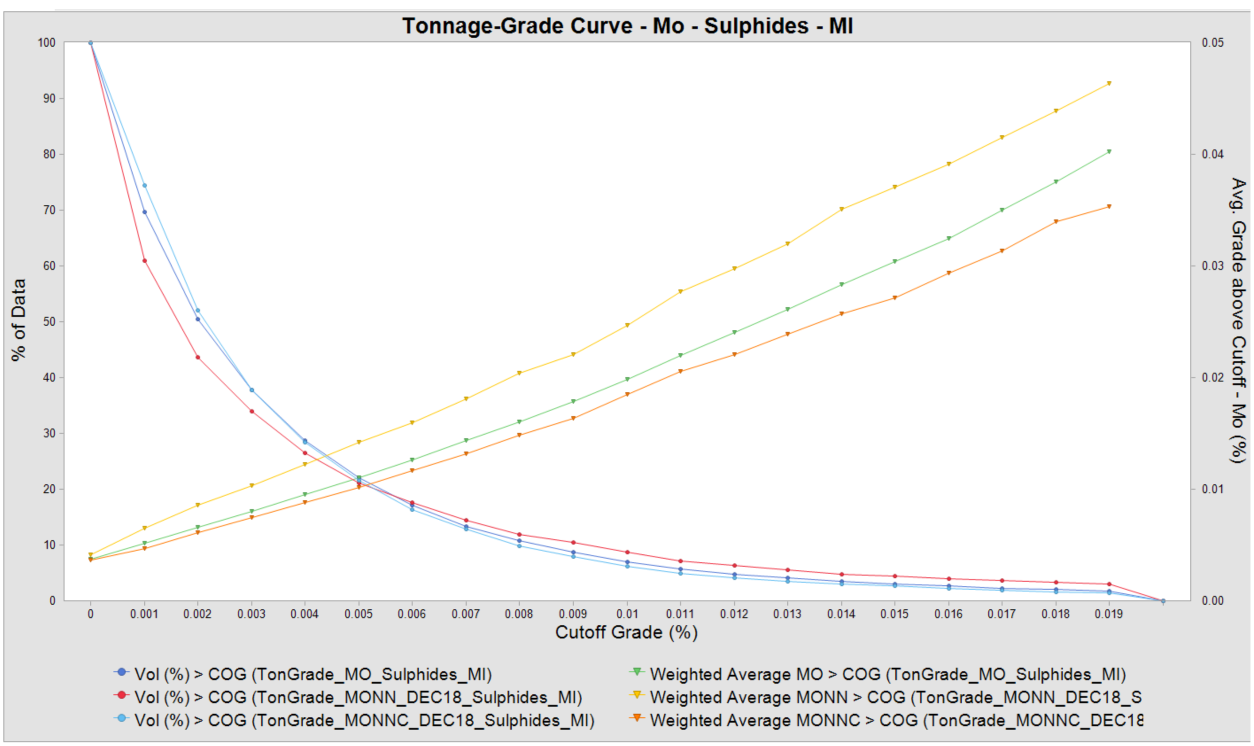


Figure 14.7: Grade-Tonnage Curve Comparison – Mo

14.8 Block Model Validation – *Cont'd*

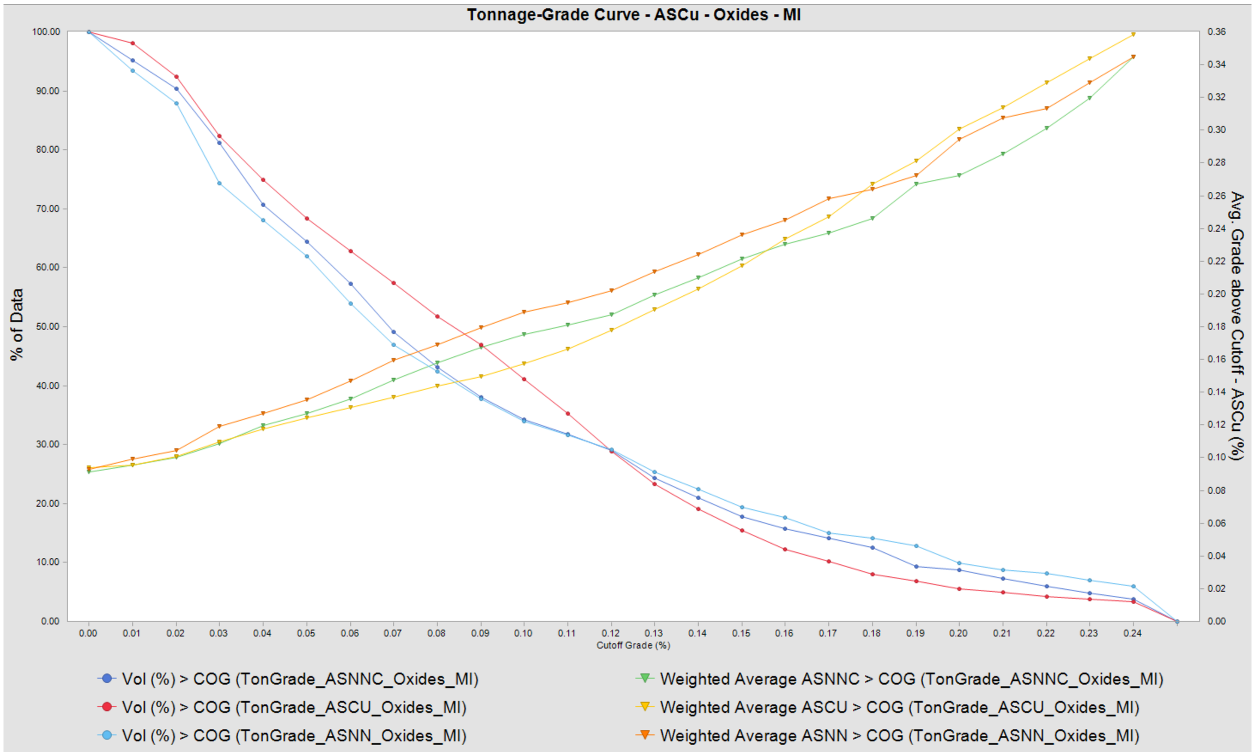


Figure 14.8: Grade-Tonnage Curve Comparison – ASCu

Visual validation is completed through inspection of sections and plans as well as three dimensional plots of block grades and classification. Figures 14.9 through 14.11 illustrate a comparison of the TCu modelled and assayed grades for Granite, Connector and Extension pit areas respectively. Projection of the drill holes is 100' from the plotted section. Blocks below the current topography (end of December 2018) only are plotted, with the Resource pit shown in black.

14.8 Block Model Validation – *Cont'd*

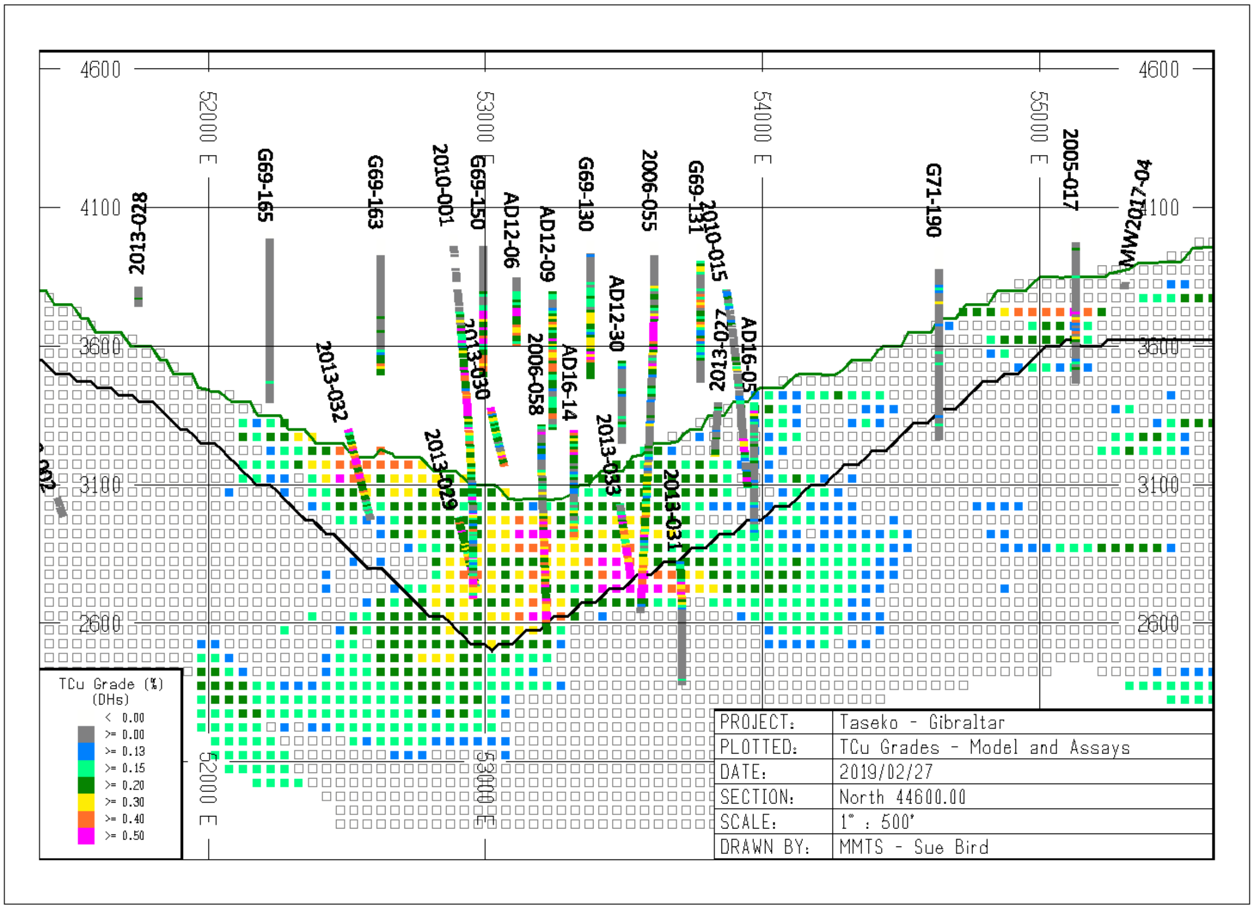


Figure 14.9: Visual Validation of TCu Grades at Section 44600N in Granite Pit Area with Resource Pit

14.8 Block Model Validation – *Cont'd*

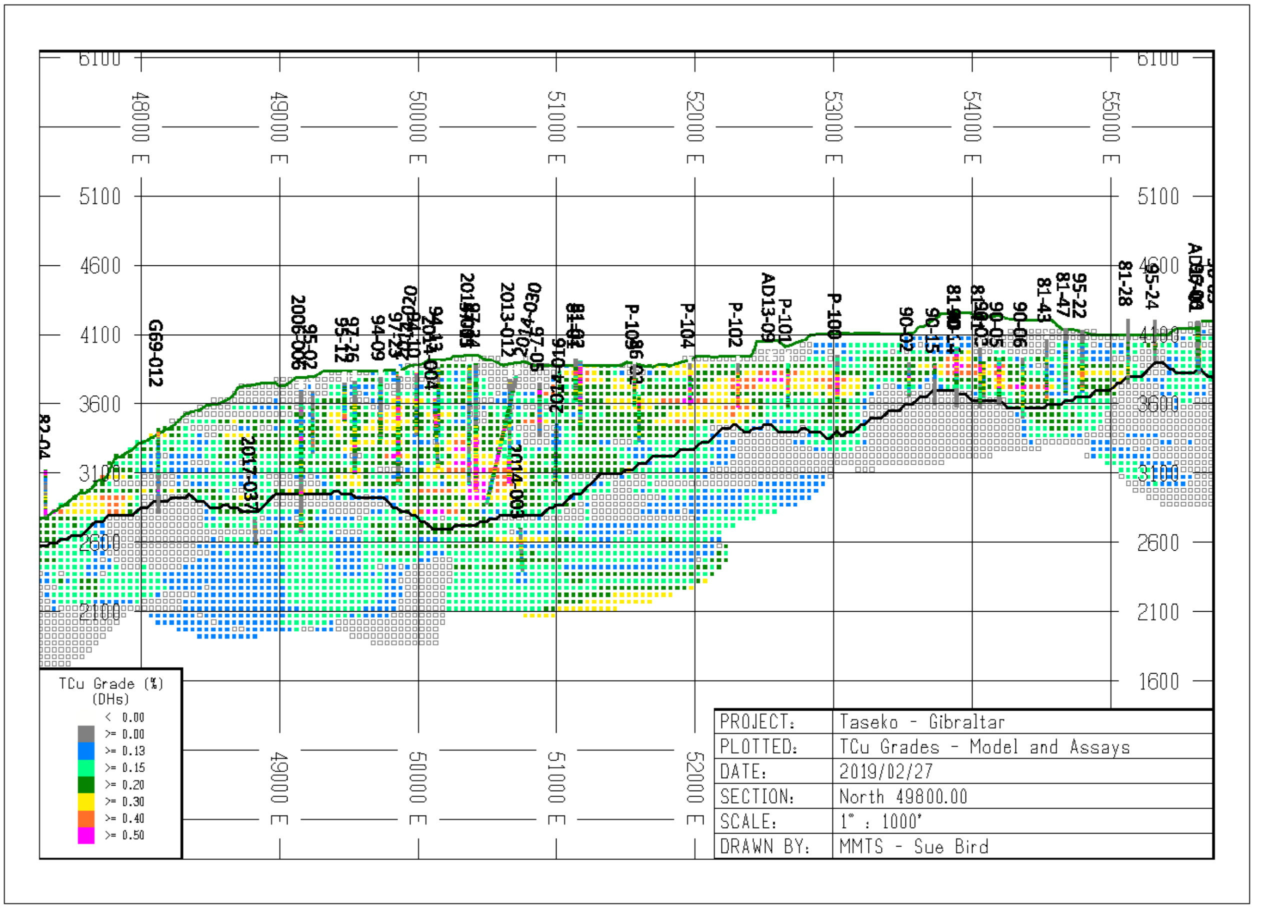


Figure 14.10: Visual Validation of TCu Grades at Section 49800N in Connector Pit Area with Resource Pit

14.8 Block Model Validation – *Cont'd*

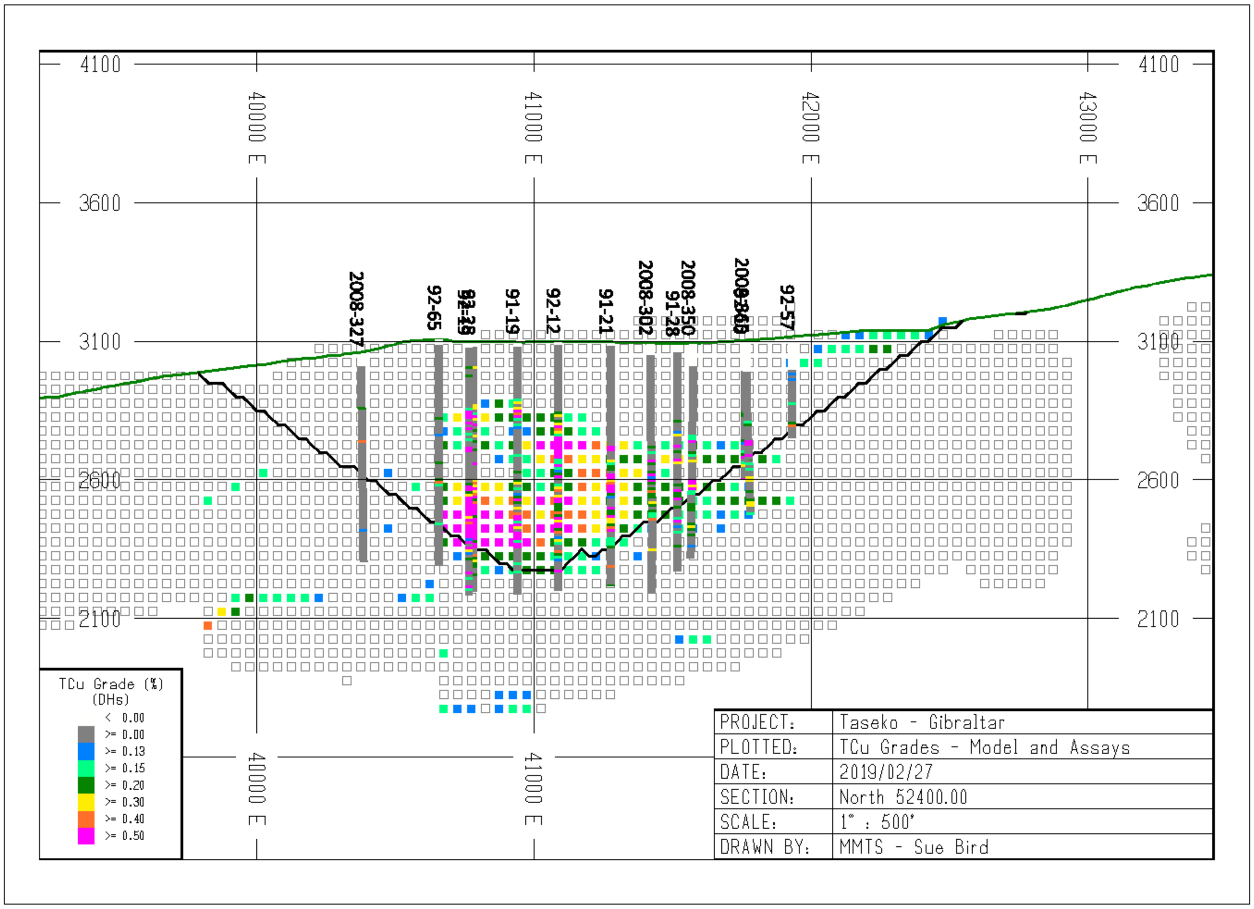


Figure 14.11: Visual Validation of TCu Grades at Section 52400N in Extension Pit Areas with Resource Pit

Validation of the chosen interpolation methods indicate that the modeled block Cu grades match the data well with no indication of bias in the global resource.

For all the validation exercises, the block model grade estimates appeared to be within an acceptable range. The author is of the opinion that the block model and methodology are reasonable for estimating resources.

14.9 Classification

Delineated mineralization of the Gibraltar deposits is classified as a resource according to the definitions in National Instrument 43-101 and CIM (2014). Classification is based on the Interpolation Pass, as summarized in Tables 14.7 through 14.9 as well as the restrictions summarized below in Table 14.11. To be classed as Measured, the block must be interpolated within the search ellipse defined for Pass 1, have an average distance to the composites less than that summarized below and meet the composite restrictions below. For Indicated, the block must be interpolated by Pass 2 and also met the criteria given in Table 14.11. All other blocks interpolated with a TCu grade are defined as Inferred.

Table 14.12: Classification Parameters

Domain	Measured				Indicated			
	Min.# Composite	Min.# Quadrants	Min.# # DHs	Average Distance	Min.# Composite	Min.# Quadrants	Min.# DHs	Average Distance
1	8	4	2	280	8	4	2	420
2	8	4	2	300	8	4	2	450
3	8	4	2	290	8	4	2	430
4	8	4	2	310	8	4	2	460
5	8	4	2	330	8	4	2	490
6	8	4	2	360	8	4	2	540
7	8	4	2	230	8	4	2	340
8	8	4	2	260	8	4	2	390
9	8	4	2	210	8	4	2	310
10	8	4	2	210	8	4	2	310

14.10 Mineral Resources

The current topography as of the end of December 31st, 2018 is used to update the model to the current status. The lowest mined out surface is used to create the fill solids and the blocks updated in density and the grades zeroed out above the lowest mined out surface.

A Lerchs-Grossman open pit design algorithm is used to define the potential economic limits of open pit mining. The Lerchs-Grossman pit is used to limit the resource to blocks within the pit shell. The input parameters for purposes of defining the resource shell are the same cost, recovery, and technical inputs used for the reserve shell but copper and molybdenum prices used are $3.25/lb and $12.00/lb respectively at an exchange rate of US$0.80/CDN$1.00.

The Gibraltar mineral resource as of December 31, 2018 is summarized in Table 14.12. The cut-off grades used are 0.15% total copper with an upper limit of 50% acid soluble copper for sulfide resources and 0.10% acid soluble copper for oxide resources. These cut-off grades are consistent with current mine practices and the reserves outlined in section 15. There are no known significant environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other factors that could materially affect the resource estimate.

Table 14.13: Gibraltar Total Mineral Resources

Gibraltar Mine Mineral Resource with an Effective date December 31, 2018				
Category	Tons (millions)	Cu (%)	Mo (%)*	Cu Eq. (%)**
Measured	806	0.25	0.008	0.27
Indicated	303	0.23	0.007	0.24
M&I	1,109	0.25	0.007	0.26
Inferred	59	0.21	0.004	0.22

*Molybdenum grade is reflective of sulphide resources only.
**Copper Equivalent is calculated using the following formula:

$$\frac{Sulphide\ tons \times Cu\% \times 86\%\ recovery \times \$3.10/lb\ Cu + Sulphide\ tons \times Mo\% \times 50\%\ recovery \times \$12.00/lb\ Mo + Oxide\ tons \times ASCu\% \times 50\%\ recovery \times \$3.10/lb\ Cu}{Total\ tons \times 86\%\ recovery \times \$3.10/lb\ Cu}$$

SECTION 15

MINERAL RESERVE ESTIMATE

SECTION 15: MINERAL RESERVE ESTIMATE

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15.1 Assumptions, Parameters and Methods

(a) Pit Size Determination

The extent of potential reserve pits are initially determined by application of the Lerchs-Grossmann “zero profit” technique. This methodology derives a series of nested pit shells, based on a series of consistent cost and recovery inputs but on a range of commodity price assumptions. The pit wall angles used are a simplified version of current and consultant-recommended wall angles for pit designs.

By increasing commodity prices in a stepwise fashion, the methodology incrementally expands the limits of each pit shell in all directions until the point where the net value of the last increment in each shell is zero. Pits are determined using measured and indicated resources only.

A preferred pit shell is selected by evaluating the derived nested pit shells on the basis of a number of metrics including supporting commodity price, rough cash flow, strip ratio, metal production, equipment requirements, and operating years. The pit shell selected is the reserve basis shell and is used as a guide to develop the detailed pit design.

The input parameters used to derive the reserve basis pit shell are detailed in Table 15.1. All costs are in Canadian dollars (C$) and units are imperial unless stated otherwise.

15.1 Assumptions, Parameters and Methods – *Cont'd*

(a) Pit Size Determination – *Cont'd*

Table 15.1: Lerchs-Grossmann Inputs

Copper Price	US $2.75/lb
Silver Price	US $16.50/troy oz
Molybdenum Price	US $8.00/lb
Exchange Rate	US $0.80 = CDN $1.00
Pit Rim Mining Cost – Fill	$1.14/ton mined
Pit Rim Mining Cost – Waste	$1.52/ton mined
Pit Rim Mining Cost – Oxide	$1.62/ton mined
Pit Rim Mining Cost – Ore	$1.50/ton mined
Bench Incremental Cost	$0.033/bench
Oxide Processing Cost	$1.50/ton of oxide
Sulphide Processing + G&A Cost	$5.05/ton of ore
Sustaining Capital	$0.15/ton mined
Copper cut-off grade	0.15% Cu
Copper Sulphide Recovery	85.5%
Silver in Copper Concentrate	0.002 troy oz per pound of copper
Molybdenum Recovery	40%
Copper Oxide Recovery	50% of acid soluble copper
Off-Property Costs	$0.47/lb Cu
Payable Copper in Concentrate	96.5%
Payable Silver in Concentrate	90%
Payable Molybdenum	98.5%
Overall Slopes	Range from 26 to 40 degrees

(b) Pit Design

Pit designs are based upon the selected Lerchs-Grossmann pit shell. Access ramps, sector-specific wall angles, practical mining development considerations and scheduling factors were incorporated into developing an ultimate pit design with intermediate phases.

Pit wall angles used in the pit designs are consistent with geotechnical consultant recommendations. The prescribed wall angles are determined from an analysis of wall conditions in previous pit stages and from an evaluation of regional structural trends in relation to wall orientation. Each pit is assessed independently and slope angles are evaluated in relation to the full-wall, inter-ramp and inter-berm wall zones. Table 15.2 details the inter-ramp wall angles used for the design of the Granite, Pollyanna, Connector, Gibraltar and Extension Pits.

15.1 Assumptions, Parameters and Methods – *Cont'd*

(b) Pit Design – *Cont'd*

Table 15.2: Design Inter-Ramp Wall Angles

Pit	Zone	Azimuth	Wall Angle
Granite	Rock	0^{o} to 360^{o}	37^{o}
	Unconsolidated	0^{o} to 360^{o}	26^{o}
Connector	Rock	0^{o} to 135^{o}	39^{o}
	Rock	135^{o} to 190^{o}	40^{o}
	Rock	190^{o} to 285^{o}	38^{o}
	Rock	285^{o} to 360^{o}	40^{o}
	Unconsolidated	0^{o} to 360^{o}	28^{o}
Pollyanna	Rock	0^{o} to 360^{o}	37^{o}
	Unconsolidated	0^{o} to 360^{o}	26^{o}
Extension	Rock	0^{o} to 360^{o}	39^{o}
	Unconsolidated	0^{o} to 360^{o}	28^{o}
Gibraltar	Rock	0^{o} to 50^{o}	39^{o}
	Rock	50^{o} to 115^{o}	34^{o}
	Rock	115^{o} to 360^{o}	39^{o}
	Unconsolidated	0^{o} to 360^{o}	28^{o}

The final pit design was reviewed and evaluated with respect to mining widths and access development. The pit design was found to meet good engineering practices and conform to historical operating performance at Gibraltar.

The ultimate pit outlines for the Granite, Connector, Gibraltar, Extension and Pollyanna pits are illustrated in Figure 15.1.

15.1 Assumptions, Parameters and Methods – *Cont'd*

(b) Pit Design – *Cont'd*

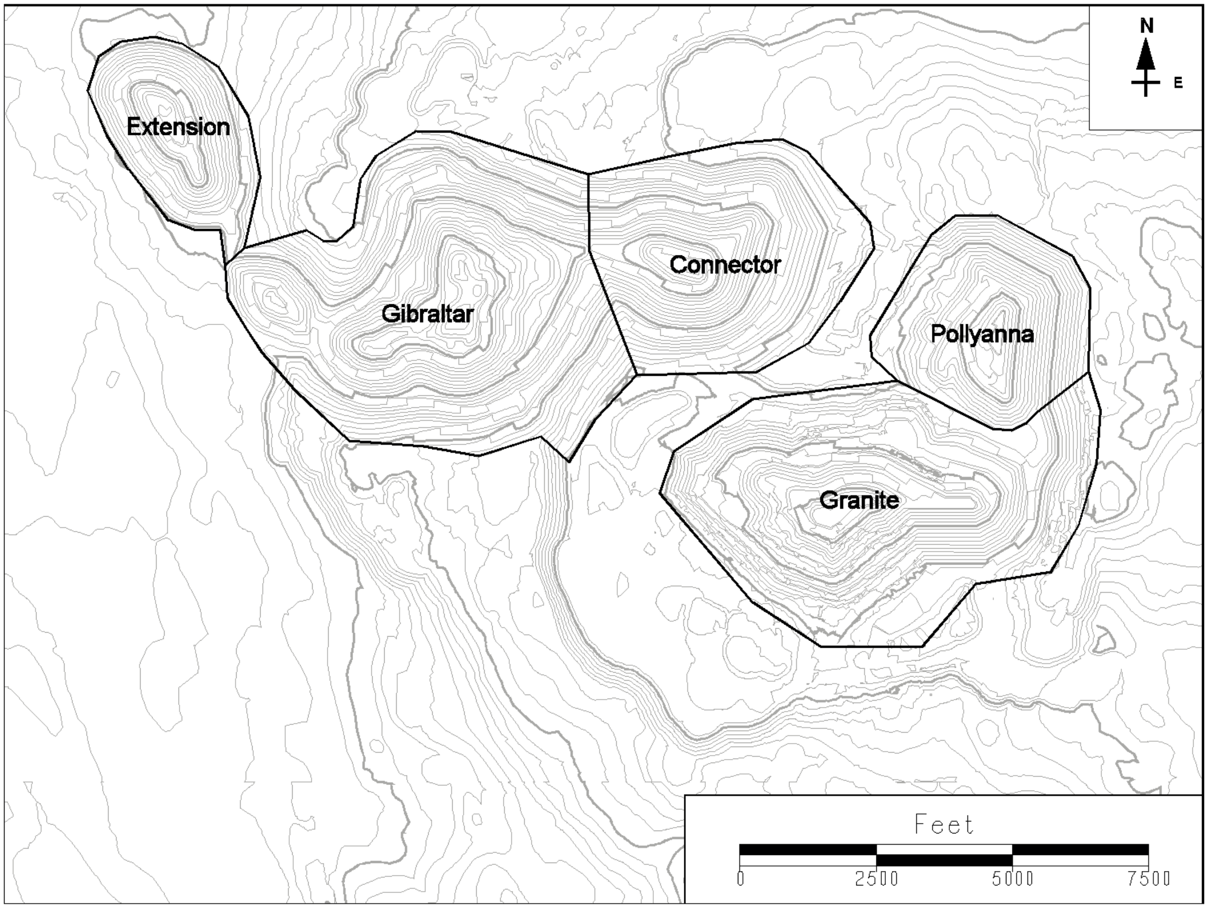

Figure 15.1: Ultimate Designed Pits

15.1 Assumptions, Parameters and Methods – *Cont'd*

(c) Cut-Off Grade

An optimum cut-off grade was selected by developing a series of mine schedules and corresponding cash flows at various cut-off grades within the detailed pit design. The cash flows were evaluated on the basis of annual cash flow, annual metal production, capital requirements, and NPV. The resulting cut-off grade used for sulphide ore is 0.15% copper with an upper limit of 50% acid soluble copper. The cut-off grade used for oxide ore is 0.10% acid soluble copper. In the opinion of the author, the current cut-off grade is appropriate based on forecast long range metal prices, capital and operating costs, and recovery.

(d) Mineral Reserves

Proven and Probable reserves are derived, from Measured and Indicated resources respectively, that are contained within the final pit design and are above the stated cut-off grades. Tables 15.3 and 15.4 summarize the proven and probable mineral reserves for sulphide and oxide ores at Gibraltar as of December 31, 2018.

Table 15.3: Gibraltar Sulphide Mineral Reserves

Gibraltar Mine Sulphide Mineral Reserves as of December 31, 2018 at 0.15% Copper Cut-off					
Pit	Category	Tons (millions)	Cu (%)	Mo (%)	* Cu Eq. (%)
Granite	Proven	42	0.27	0.008	0.29
	Probable	1	0.21	0.004	0.22
	Subtotal	44	0.27	0.008	0.29
Pollyanna	Proven	75	0.24	0.007	0.25
	Probable	1	0.23	0.007	0.25
	Subtotal	75	0.24	0.007	0.25
Connector	Proven	156	0.25	0.010	0.27
	Probable	7	0.22	0.007	0.23
	Subtotal	163	0.25	0.010	0.27
Gibraltar	Proven	146	0.25	0.008	0.26
	Probable	112	0.23	0.008	0.25
	Subtotal	258	0.24	0.008	0.26
Extension	Proven	50	0.33	0.002	0.34
	Probable	1	0.26	0.001	0.26
	Subtotal	51	0.33	0.002	0.33
Ore Stockpiles		3	0.19	0.008	0.21
	Total	594	0.25	0.008	0.27

*Copper Equivalent is based on an 86% copper recovery, US$3.10/lb copper price, 50% molybdenum recovery and a US$12.00/lb molybdenum price.

15.1 Assumptions, Parameters and Methods – *Cont'd*

(d) Mineral Reserves – *Cont'd*

Table 15.4: Oxide Mineral Reserves

Gibraltar Mine Oxide Mineral Reserves as of December 31, 2018 at 0.10% ASCu Cut-off			
Pit	Category	Tons (millions)	ASCu (%)
Granite	Proven	-	-
	Probable	0	0.11
	Subtotal	0	0.11
Pollyanna	Proven	0	0.12
	Probable	1	0.12
	Subtotal	1	0.12
Connector	Proven	1	0.16
	Probable	14	0.15
	Subtotal	15	0.15
Gibraltar	Proven	0	0.17
	Probable	1	0.19
	Subtotal	1	0.19
	Total	17	0.15

The mineral reserves presented in Tables 15.3 and 15.4 are contained within the mineral resources stated in Section 14 of this report.

It is the opinion of the author that the classification of Proven and Probable Mineral Reserves as estimated in Table 15.3 and Table 15.4 meets the definitions of Proven and Probable Mineral Reserves as stated by NI 43-101 and defined by the CIM Standards on Mineral Resources and Reserves Definitions and Guidelines.

15.2 Reconciliation of Reserves with Production

Production reconciliation with the reserve model has always been very good at Gibraltar.

Between 1971 and 2004 Gibraltar processed 322M tons of ore grading 0.37% Cu versus a mined reserve of 324M tons grading 0.36% Cu. This constitutes a variance of -0.5% and 3.3% for tons and copper grade respectively.

Since restart of milling operations in October of 2004 until December 31st 2018, a total of 284 million tons of ore grading 0.29% copper and 0.011% Mo was milled. The geological models forecast 270 million tons of ore grading 0.29% copper and 0.009% Mo from the mined volume. This constitutes a variance of 4.9% for tons, and a variance of -0.8% and 16.7% for copper and molybdenum grades respectively. The extra tons milled and marginally lower copper grade experienced are primarily due to a conscious decision during 2014 and 2015 to operate the mine at a lower cutoff grade. The variance between the modelled and actual grades for molybdenum are currently being investigated and may result in an opportunity to increase the modeled molybdenum grades.

15.3 Mineral Reserve Sensitivity to Mining, Metallurgical, Infrastructure, Permitting, and Other Relevant Factors

Gibraltar has been in production since the early 1970's. There is a lengthy record of performance data with respect to productivity, costs, and geotechnical performance. All material infrastructure is in place to support the current reserve.

All material regulatory authorizations and permits are in place to extract the reserves as described in this report with the exception of:

- A small extension of lease boundary to include the Extension Pit
- Periodic amendments of PE-416 and M-40 for pit wall pushbacks, water discharge, and waste rock and tailings storage

Other permit considerations may include approvals required for route changes to the access road, hydro transmission, natural gas line, and water discharge pipeline. No impediments to obtaining amendments, modifications or extensions to any of the required permits over the operating period of the reserves are anticipated.

While current and historical performance at Gibraltar provides solid support to the assumptions applied in this report, there are a number of risks that could have a material and adverse impact on the future operating performance at Gibraltar and the mineral reserves. These are outlined in Section 25.

SECTION 16

MINING METHOD

SECTION 16: MINING METHOD

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16.1 Introduction

The Gibraltar deposits have been developed using open pit mining methods since the commencement of mining on site in 1971. The Gibraltar, Pollyanna and Granite pits have been previously mined in several phases while the Connector and Extension areas have not yet been developed. The phasing of the pits and sequencing of the phases is designed and scheduled to achieve the overall goal of optimizing the economic performance of the operation over the operating period supported by the mineral reserves.

16.2 Geotechnical, Hydrological Considerations

Pit wall angles are based on historical operating experience and recommended inter-ramp wall angles provided by consultants. The wall angle recommendations are detailed in the Pit Design section of Section 15 of this report. Safety berm widths are designed to a minimum of 27 feet and the face angle between benches are designed at 65 or 70 degrees depending on the area. The overall pit slopes are adjusted by increasing or decreasing berm widths. Walls are generally single benched with a constant bench height of 50 feet except for pit bottoms in Granite and Pollyanna pits will be double benched to 100 feet in order to maximize ore recovered from these pits. An extra 60-foot-wide geotechnical safety berm has been included in several pit designs at various elevations based upon recommendations by Gibraltar’s geotechnical consulting engineers.

Ground water is controlled by perimeter and in-pit dewatering wells. Ground water is controlled for geotechnical stability as well as for improving operating conditions in the pit. Pumping infrastructure is currently in place and it will be advanced as mining areas expand throughout the mine life.

16.3 Mine Plan and Production Rates

The mine is planned to supply the two concentrators with a total of 85,000 tons/day. This updated reserve estimate supports an operations period of 19 years.

Concentrator feed is defined by an ore cut-off grade of 0.15% copper and capped by a 50% acid soluble copper constraint. A 0.10% acid soluble copper cut-off is used to define oxide ore for copper recovery via dump leaching and SXEW processing. Ore grading is performed based on assays received from blast hole drill cuttings and a minimum practical width for mining selectivity of 50 feet.

In this porphyry style ore body, copper grades gradually transition from high grades to lower grades and the effect of dilution is minimal. For planning purposes dilution is considered to be zero and this assumption is supported by historical reconciliations between reserves and mill head grades.

A number of constraints and objectives are used to develop an achievable, realistic mining schedule. These include:

- Backfilling of pits only after the reserve is depleted
- Constraining pit advances in accordance with reasonable mining rates
- Prioritizing certain pits and phases to advance or delay development waste mining
- Prioritizing the use of certain waste dumps to control the number of trucks required
- Targeting mining areas to control head grades
- Restricting mine productivity in certain areas based upon pit dewatering and conflicting phase advances

Over the operating period supported by the reserves, sulphide ore is mined at an average rate of 31 million tonnes per year at an average grade of 0.25% copper. Oxide ore is mined periodically through-out the schedule with 90% of the total 17 million tons coming from the Connector Pit.

The mine schedule initially mines the Granite Pit phases until 2020. Pollyanna pre-stripping begins in 2019 with ore being released in 2020 through to 2023. Connector pit pre-stripping begins in 2020 with ore being released in 2022 through to 2028. Stripping in the Gibraltar pit begins in 2024 with ore being released in 2026 through to 2036. The Extension Pit begins in 2032 and supplies ore to the mills from 2033 until 2038.

The graph presented in Figure 16.1 shows the proposed pit sequence and percentage of total ore being milled from each pit in any given year.

16.3 Mine Plan and Production Rates – *Cont'd*

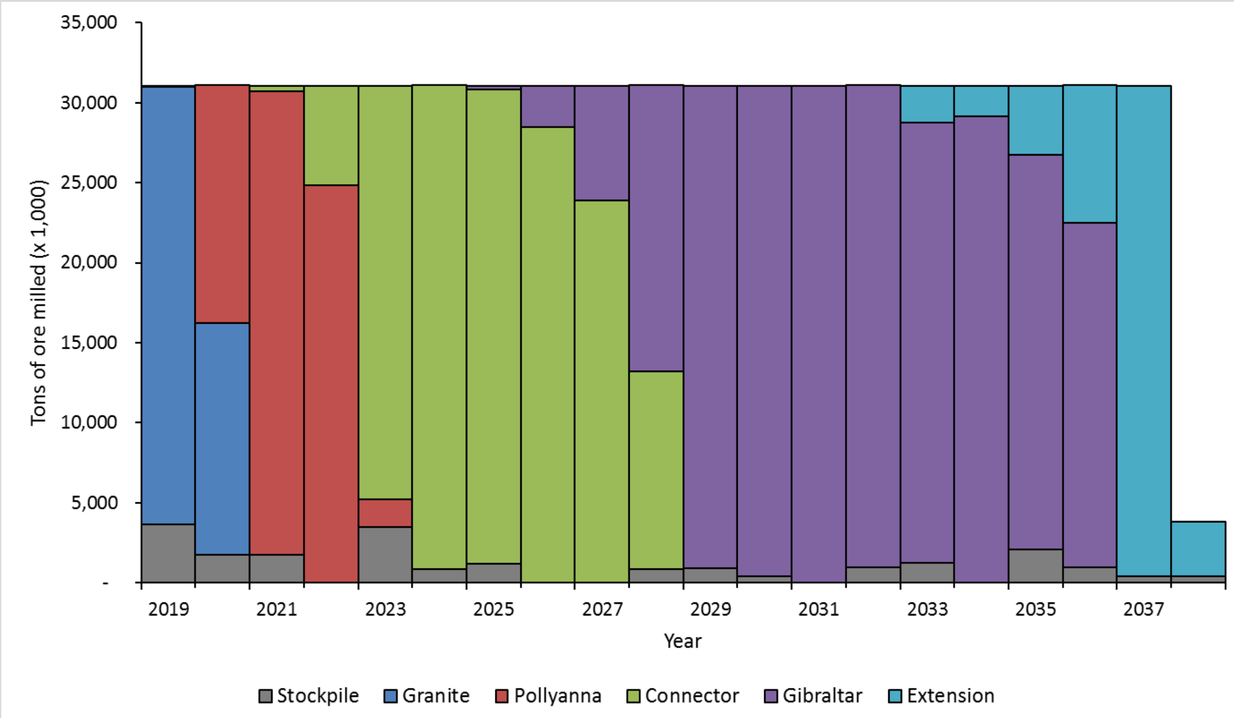

Figure 16.1: Location of Ore Milled

The strip ratio over the 19 year operating period will average 1.9, resulting in an average rate of 61 million tons of waste mined per year. While the annual strip ratio generally decreases with time, the strip ratio will vary and be managed over the course of the mine life based on exchange rates, commodity prices, and grade distribution during annual and mid-range mine planning process to optimize the economic performance of the operation.

Waste storage includes the backfilling of some pit phases after the area has been mined out. Surface dumps outside of mined pits are utilized when the haulage distance is shorter than backfilling or if no backfill dumps are available.

Surface and in-pit dumps were designed based on the volume of waste rock contained in the planned pits and have sufficient capacity to contain all of the waste material required by the mine plan. In-pit dumps were designed to create short hauling options for the mine schedule. The mining sequence and build-up of surface and backfill dumps are illustrated in the end of period plans shown in Figures 16.2 through 16.5.

16.3 Mine Plan and Production Rates – *Cont'd*

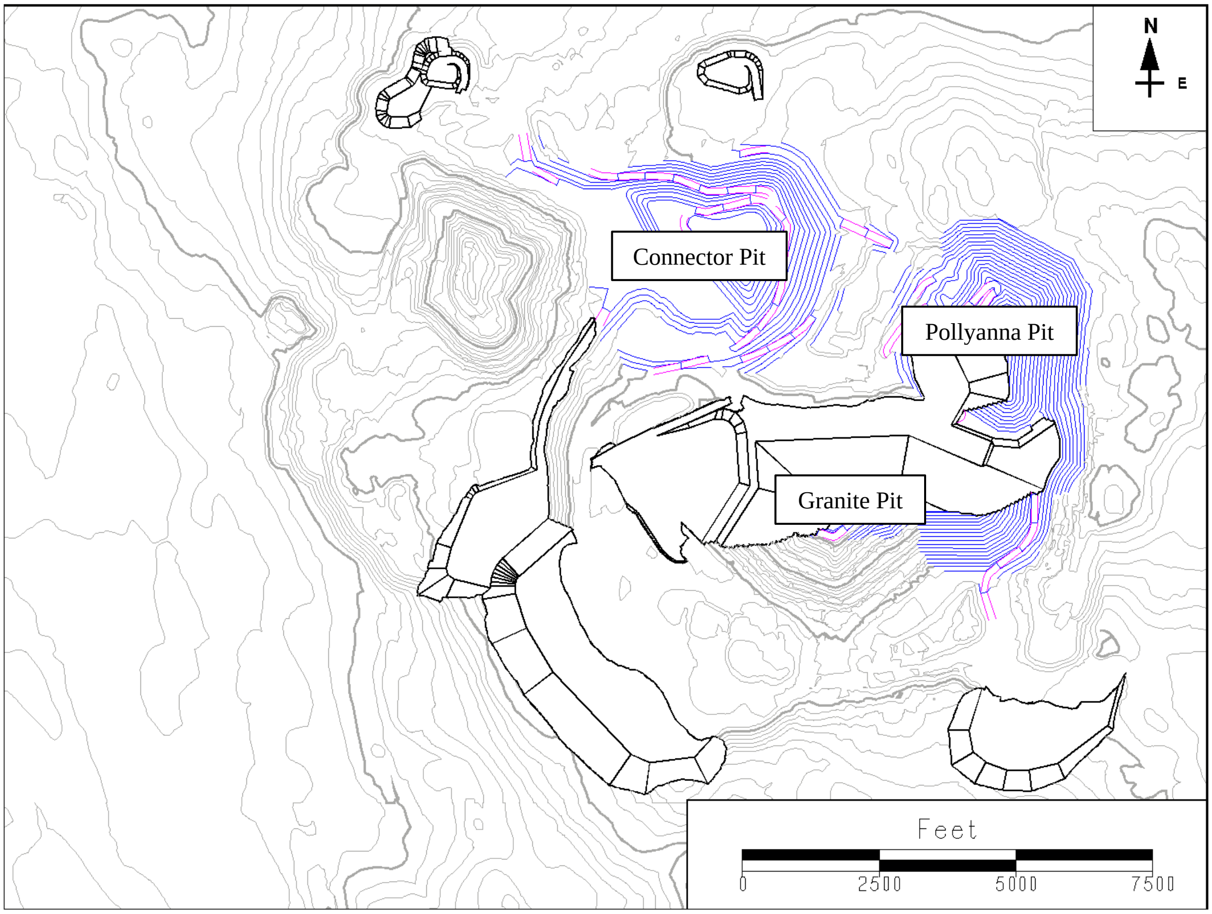

Figure 16.2: End of Period 2023 Plan

16.3 Mine Plan and Production Rates – *Cont'd*

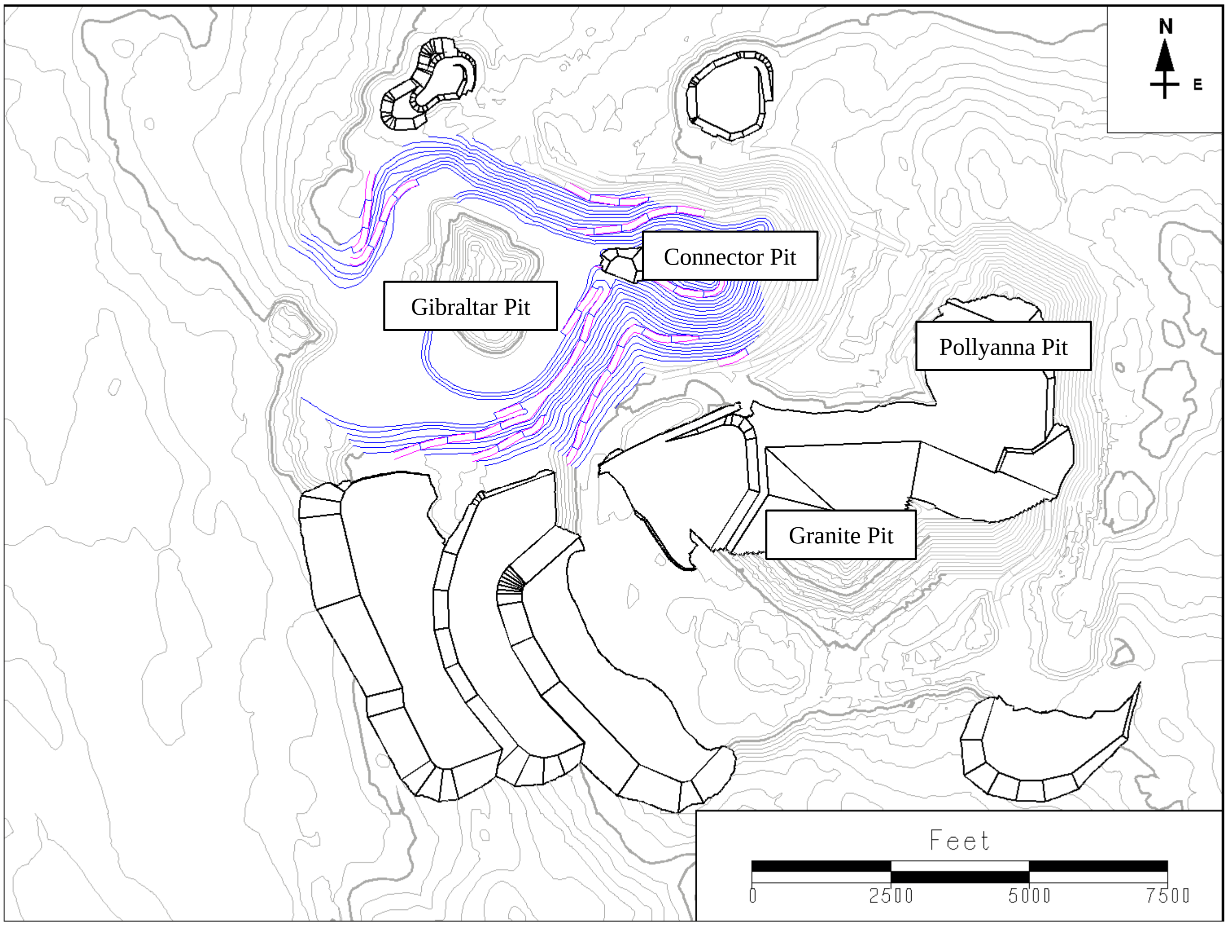

Figure 16.3: End of Period 2028 Plan

16.3 Mine Plan and Production Rates – *Cont'd*

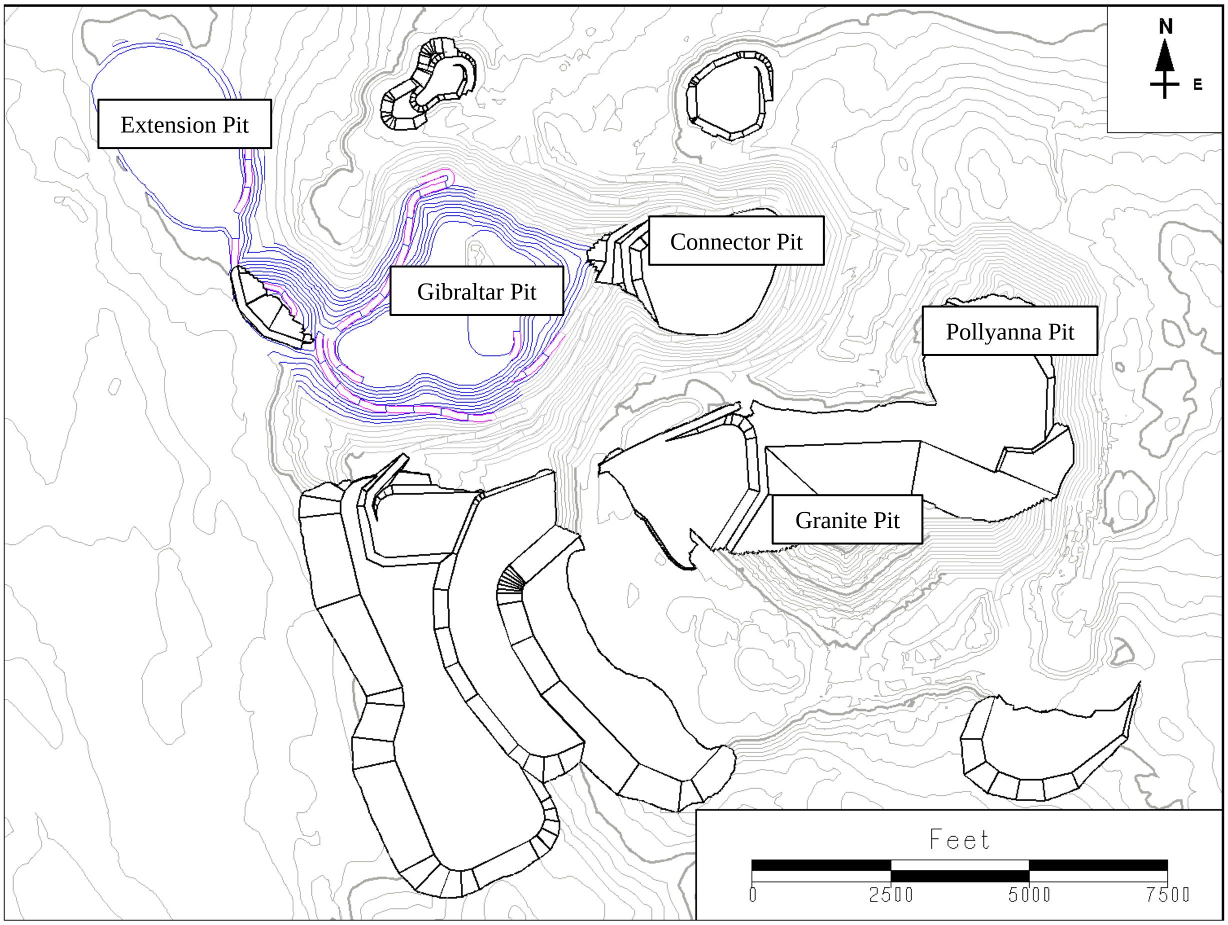

Figure 16.4: End of Period 2033 Plan

16.3 Mine Plan and Production Rates – *Cont'd*

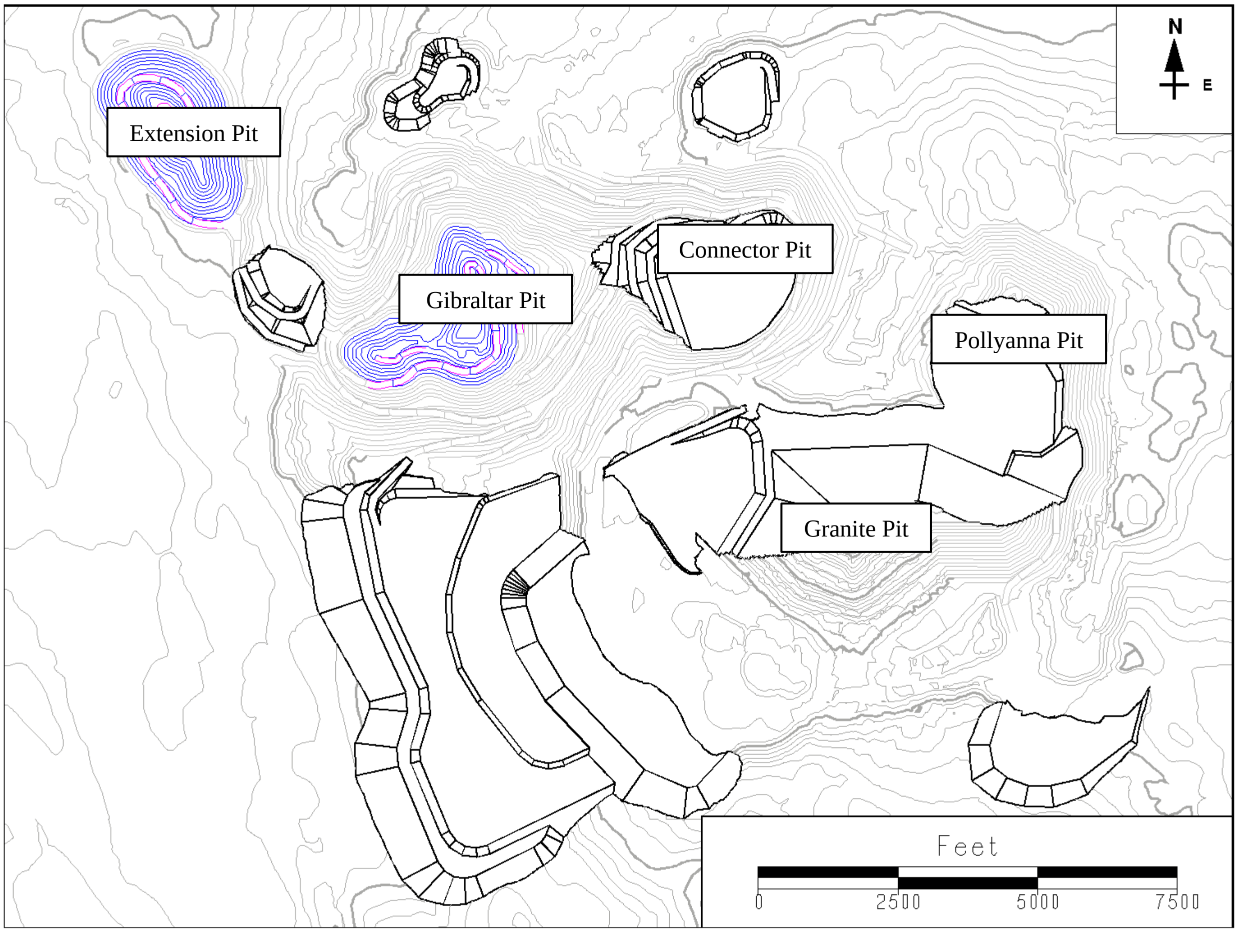

Figure 16.5: End of Mine Life Plan

Two major infrastructure relocations are associated with this mine schedule. The first is the movement of the crusher from the Granite Pit rim to the ramp exit on the west side of the Gibraltar Pit in 2023. The electrical substation currently located on the north rim of Granite Pit will also be moved in 2023. The portion of the mine access road and the utility lines affected by the extension pit will be relocated in 2031.

Water in Pollyanna Pit will be pumped to Granite Pit starting in 2020 through 2023. Water currently stored in Gibraltar Pit will be pumped to Granite Pit beginning in 2024 and continues for three years. This will enable maintenance of water levels well ahead of active mining levels in the Gibraltar Pit. Beginning in 2029 and through the end of the operational life, water that has been stored in Granite Pit will be pumped to the mill as process water where it will eventually arrive in the TSF in order to maintain water levels in that facility.

16.4 Mining Fleet and Equipment

Current mining operations are carried out utilizing conventional open pit mining equipment. The waste and ore are mined utilizing five electric blast hole drills (12¼” – 13¾” bits), four electric rope shovels (1 x 56yd^3, 2 x 58yd^3, 1 x 44yd^3), two 30yd^3 front end loaders and 30 haul trucks. The truck fleet is comprised primarily of 24 320 ton trucks but includes 6 240 ton units. Truck requirements vary between 24 and 30 with the 240 ton fleets parked when not required. The main mining fleet is supported by a fleet of ancillary equipment including track dozers, wheel loaders, motor graders as well as sand and water trucks. The reserve mine plan does not require the purchase of any additional mine production equipment.

SECTION 17

RECOVERY METHOD

SECTION 17: RECOVERY METHOD

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17.1 Introduction

Sulphide ore is processed at a design rate of 85,000 t/day through two bulk concentrators to produce a concentrate which contains copper, silver and molybdenum values. The bulk concentrate from both facilities is combined and processed through a single molybdenum flotation plant. The molybdenum concentrate from this plant is dewatered and bagged, and subsequently shipped to market. The underflow from this plant is the final copper concentrate which includes silver as a by-product. The copper concentrate is dewatered and shipped in bulk to market.

A solvent extraction and electrowinning plant processes leachate from oxide waste dumps to produce a copper cathode product. This system is operated intermittently as conditions allow.

All processes used at Gibraltar are themselves industry standard for the mineralization found in the ore body. Likewise, unit operations and selected process equipment falls within industrial design and application norms. The historical performance of the Gibraltar facilities is consistent with the amenability of this mineralization to these processes.

17.2 Bulk Concentrator #1

Gibraltar sulphide ore is processed through a single stage of crushing using a 60x89 gyratory crusher. This crusher produces a 6 inch minus product which is conveyed to a coarse ore stockpile. Material is drawn from the coarse ore stockpile using apron feeders and a conveyor belt to feed a 34 foot diameter, 13,000 Hp Semi-Autogeneous Grinding (SAG) mill. SAG mill discharge is screened with the oversize returning via conveyor belt to the feed of the mill. Undersize material, consisting of 0.5 inch minus, is then pumped to a distributor where six 13.5 foot diameter, 2500 Hp ball mills are operated in closed circuit with hydrocyclones to produce a minus 350 micron product used to feed the flotation circuit. Design mill throughput is 55,000 t/day.

Flotation feed is pumped to two parallel rougher flotation circuits, each consisting of five 160m^3 flotation vessels. Flotation tailings are then pumped to a storage facility. Rougher concentrate from the parallel circuits is combined and then classified through hydrocyclones. The hydrocyclones produce a fine overflow which characteristically has an 80% passing size of 44 microns. This overflow is pumped to the first cleaner flotation stage. Coarse cyclone underflow reports to a 1,500 Hp Vertimill operating in regrind service. Vertimill discharge is returned to the same pump as the rougher concentrate and fed to the regrind hydrocyclones in a closed loop arrangement.

The first stage cleaner flotation circuit consists of ten 20 m^3 flotation cells. Concentrate from the first stage of cleaning flotation reports to a second stage of flotation cleaning. Flotation tailings from the first cleaner flotation stage are returned to the head of the rougher flotation circuit in a closed loop manner.

The second cleaner flotation circuit consists of three flotation columns, two of which are in service at any given time. Concentrate from the second cleaner flotation stage is pumped to the bulk concentrate thickener. Flotation tailings from the second stage cleaner flotation circuit are fed to a cleaner scavenger flotation circuit consisting of two 20 m3 flotation cells. Tailings from this cleaner scavenger stage are fed to the first cleaner flotation stage, while concentrate is fed to the second cleaner flotation stage.

17.3 Bulk Concentrator #2

Gibraltar sulphide ore is processed through a single stage of crushing using a 54x74 gyratory crusher. This crusher produces a 6 inch minus product which is conveyed to a coarse ore stockpile. Material is drawn from the coarse ore stockpile using apron feeders and a conveyor belt to feed a 34 foot diameter, 13,000 Hp Semi-Autogeneous Grinding (SAG) mill. SAG mill discharge is screened with the oversize returning via conveyor belt to the feed of the mill. Undersize material, consisting of 0.5 inch minus, is then pumped to a distributor where a single 20 foot diameter 8,500 Hp ball mill is operated in closed circuit with hydrocyclones to produce a minus 350 micron product used to feed the flotation circuit. Design mill throughput is 30,000 t/day.

Flotation feed is pumped to single rougher flotation line, consisting of six 160m^3 flotation vessels. Flotation tailings are then pumped to a storage facility. Rougher concentrate from this circuit is then classified through hydrocyclones. The hydrocyclones produce a fine overflow which characteristically has an 80% passing size of 44 microns. This overflow is pumped to the first cleaner flotation stage. Coarse cyclone underflow reports to a 1,500 Hp Metso Vertimill operating in regrind service. Vertimill discharge is returned to the same pump as the rougher concentrate and fed to the regrind hydrocyclones in a closed loop arrangement.

The first stage cleaner flotation circuit consists of six 20 m^3 flotation cells. Concentrate from the first stage of cleaning flotation reports to a second stage of flotation cleaning. Flotation tailings from the first cleaner flotation stage are returned to the head of the rougher flotation circuit in a closed loop manner.

The second cleaner flotation circuit consists of one flotation column. Concentrate from the second cleaner flotation stage is pumped to the bulk concentrate thickener. Flotation tailings from the second stage cleaner flotation circuit are fed to a cleaner scavenger flotation circuit consisting of two 20 m^3 flotation cells. Tailings from this cleaner scavenger stage are fed to the first cleaner flotation stage, while concentrate is fed to the second cleaner flotation stage.

17.4 Molybdenum Flotation Facility

Concentrate from both concentrator #1 and #2 is combined in the bulk thickener where it is partially dewatered. This thickened concentrate is pumped to a dedicated molybdenum flotation facility where copper minerals are depressed and molybdenum is selectively separated into a flotation concentrate.

Thickened bulk concentrate is conditioned with flotation reagents and water is added to achieve a target flotation density. Rougher flotation is conducted in five 10 m^3 flotation vessels. Rougher underflow material is pumped to a dedicated copper concentrate thickener and subsequently filtered to reduce moisture and is then shipped to market. Rougher concentrate is pumped to a hydrocyclone where fine overflow material is further processed in a first stage of flotation cleaning. Coarse underflow is delivered to a M100 Isamill for regrinding. Isamill discharge is delivered to the same hydrocyclone as rougher concentrate in a closed loop manner.

Reground rougher concentrate has an 80% passing size of 35 microns and is pumped to a first cleaner flotation stage consisting of six 5 m^3 flotation vessels. Two of these cells may be configured in a conventional first cleaner scavenger configuration or the entire bank can be used in first cleaner service. Tailings from this first cleaner/cleaner scavenger circuit are returned to the head of the rougher flotation circuit in a closed circuit fashion. First cleaner concentrate is delivered to a second flotation cleaning stage consisting of two parallel flotation columns. One of these columns is in service at a time with the other acting as an in-line spare. Underflow from the second cleaner flotation column are returned to the head of the first cleaner circuit in a closed circuit fashion.

Second cleaner concentrate is pumped to a dedicated molybdenum concentrate thickener, and then stored in an agitated stock tank. This agitated stock tank in turn feeds a vacuum drum single drum filter for further dewatering. Dewatered molybdenum concentrate is fed to a thermal dryer and stored in a concentrate silo. Dry molybdenum concentrate is packaged in 2 tonne bags and shipped by truck to buyers in Vancouver, British Columbia.

17.5 Copper Concentrate Dewatering and Shipment

Molybdenum rougher underflow material is pumped to a dedicated copper concentrate thickener. Thickened copper concentrate is pumped to a stock tank and then filtered using 2 Vertical Plate Airblow (VPA) pressure filters. Copper concentrate is stored in bulk in a covered shed at the mine site. Concentrate is shipped 26 km from the mine site via truck to a storage shed on the rail siding at Macalister. The concentrate is then loaded into railcars for shipment to market, predominantly via seaborne shipping through Vancouver, British Columbia

17.6 Oxide Ore Processing

Oxide ore from the mine is delivered to oxide leach dumps and heap pads. The Solvent Extraction and Electrowinning (SX/EW) plant is designed to extract copper from the pregnant leach solutions (PLS) collected from the site's leach dumps and heap leach pad. Copper is extracted from the copper oxide ores by using a grid solution system to deliver an acid containing stream from the plant called raffinate to the leach dumps and heaps. As this acidic material passes through the leach heap, it extracts copper in the form of copper ions in this pregnant leach solution.

The PLS is delivered to the SX/EW plant via collection ditches, ponds and pumping where required. The process takes PLS and extracts the copper ions in three extraction mixer-settlers. The copper is extracted via a liquid ion-exchange reagent carried in kerosene. A chemical reaction selectively causes the copper to transfer to the organic phase. The loaded organic phase is separated and flows to a strip mixer-settler where the copper is transferred from the organic to the electrolyte. The electrolyte is filtered and heated before being passed through the electrowinning cells where the copper is plated out on stainless steel cathodes. Once a sufficient amount of copper has plated out of solution, the cathodes are removed from the cells, washed, and the copper sheets mechanically harvested. The resultant high quality cathode copper is bundled and sold.

The barren solution leaving the plant, raffinate, is pumped back to leach additional copper from the stacked ore.

The SX/EW facility has been placed in care and maintenance since 2015 due to depleted leach dumps and limited fresh oxide ore feed from the mining activity. The plant will be restarted in 2023 when sufficient oxide ore is mined to justify its operation.

17.7 Flotation Tailings Storage

Tailings from the two bulk concentrators are pumped independently to a Tailings Storage Facility (TSF) approximately 3.5 km north of the plant site. The tailings impoundment began operation in 1972 and is bounded on the north and south sides by natural valley walls and has two embankment structures on the east and west sides of the facility.

The main embankment, on the west side of the facility, consists of a 120m high cyclone sand embankment known as the Cyclone Sand Dam (CSD) as well as the 20m high North Earthfill Dam (NED). The east side of the facility is contained via a 35m high conventional water retaining dam structure known as the East Saddle Dam (ESD).

Tailings deposition methodology utilizes cyclone underflow material to stack dewatered coarse tailings between the main embankment and the supernatant pond with the cyclone overflow fines and whole tailings being discharged towards the pond. The toe of the stack is set back 500 ft along the crest of the CSD and 200 to 300 ft along the NED and the downstream slope is shaped with dozers to 4% near the NED and 10% near the CSD as per design. This methodology ensures that large beach areas are maintained as well as minimizing both the footprint of the storage facility and the ultimate height of the retaining embankments.

A floating pump-house is used to reclaim process water from the tailings facility for re-use in the site facilities. Surface water runoff is diverted around the operational facility where practicable, while contact and seepage water is collected and returned to the supernatant pond. Limited supernatant pond water is discharged under permit to the Fraser River.

The design, operation, function, and monitoring of the facility are compliant with Ministry of Environment and Ministry of Mines Permits. These permits also detail the requirements for the post closure activities.

The Gibraltar Mines Tailings Management System (TMS) is part of the site's over arching Environmental Management System. The TMS includes a Tailings Storage Facility Operation, Maintenance, and Surveillance Manual, which outlines roles and responsibilities, and the requirements to ensure safe operation of the facility. The TMS also includes a TSF Emergency Preparedness Plan as part of the overall site Emergency Response Plan. The Gibraltar TSF has several layers of oversight in place including an internal TSF Qualified Person, an external Engineer of Record (EOR), an Independent Tailings Review Board (ITRB) as well as corporate and regulatory oversight.

Trained operators and technical staff monitor the facility on an ongoing basis to ensure that deposition practices are consistent with the operational intent, water seepage and flow are controlled and characterised, and that the geotechnical state of the facility is within design intent.

17.7 Flotation Tailings Storage – *Cont'd*

Annual Dam Safety Inspections and monthly visits, typically ten or more times per year, are performed by the EOR to review ongoing activity and performance of the TSF. A Dam Safety Review is conducted by an independent third-party geotechnical engineer every 5 years, the most recent was completed in 2016. The ITRB meets annually to review the facility performance and status.

These practices are conformant with the requirements of the Health, Safety and Reclamation Code for Mines in British Columbia and consistent with guidelines from the Canadian Dam Association.

Post-closure plans call for surface drainage collection and water treatment for mine area contact water, followed by discharge to the environment as well as untreated discharge to the environment for tailings supernatant water.

17.8 Energy, Water and Process Minerals

The energy, water, and process material required to support continued operations into closure are currently in place. Process water at site is provided through a reclaim water system that pumps tailings supernatant water to site facilities. Domestic use water is source from a set of wells on the mine property. Energy requirements are serviced by existing grid power infrastructure. Process materials are readily available and currently supplied via contract to site. Alternative suppliers of process materials are also available.

17.9 Recoverability

Given that the Gibraltar mine was first placed in operation in 1972, a well-developed understanding of the orebody, mineralization, and recovery response exists. A discussion of recoverability can be found in Section 13.

SECTION 18

PROJECT INFRASTRUCTURE

SECTION 18: PROJECT INFRASTRUCTURE

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18.1 Project Infrastructure

Sufficient electricity is currently supplied by the British Columbia Hydro and Power Authority to maintain operations at greater than design capacity throughput of 85,000 tpd.

Natural gas is provided by Fortis BC.

Fresh water is pumped from deep wells on the mine site for domestic use. Process facilities will continue to operate using reclaimed water from the existing tailings storage facility.

Water currently stored in the Pollyanna Pit will be pumped to Granite Pit starting in 2020. A bulk dewatering system will be used to pump the free water above the 3700 elevation followed by a series of wells used to dewater rock fill located inside the previously mined pit. Water currently stored in the Gibraltar Pit will be transferred to the completed Granite Pit starting in 2024. This will require the construction of a bulk pit dewatering system.

Relocation of the in-pit crusher feeding concentrator 1 will need to be completed in 2023 prior to starting phase 2 of the Connector Pit. Additionally, an electrical substation used for distributing power to the pit areas will need to be relocated at the same time.

With the current design parameters and tailings deposition concept and plan the current facility footprint will accommodate approximately 500M tons of additional storage, sufficient for processing through 2033. Starting in 2034, a total of 130M tons of tailings will be deposited in the mined out Granite Pit. Starting in 2029, excess water stored in Granite Pit will be directed to the TSF via the mill and discharged.

Copper concentrate produced at Gibraltar is trucked to the Macalister rail siding on the Canadian National (CN) rail line, 26 kilometers south west of the Gibraltar site. Gibraltar owns the buildings and a portion of the land upon which the siding is located and has an agreement in place for the use of CN-owned siding materials.

From Macalister the concentrate is transported by rail 600 kilometers to Vancouver Wharves owned and operated by Kinder Morgan in North Vancouver. From there it is loaded onto ships for transport to various smelters world-wide.

SECTION 19

MARKET STUDIES AND CONTRACTS

SECTION 19: MARKET STUDIES AND CONTRACTS

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19.1 Market Studies and Contracts

Copper is a key commodity used extensively for all urban and industrial development and will continue to be so for the foreseeable future. Most industry experts believe the long-term fundamentals of the copper market are strong. While the price of copper has been relatively volatile over the past five years, the overall market supply and demand fundamentals have improved and there is an expectation that the market will shift from a balanced market to a deficit. Lower copper pricing over the past number of years has resulted in mining companies investing less in development projects, leaving a gap in the global project pipeline. With very few new major copper mines currently under construction, existing mines depleting and global demand for copper growing, a significant copper deficit is projected over the next three to five years.

Gibraltar's copper concentrate has a nominal 28.5% copper grade and includes silver as a by-product with no significant deleterious elements. Because of the quality of the Gibraltar concentrate, it is highly attractive to a large array of smelters globally and, as such, offtake sales agreements command a premium price significantly above industry norms.

Gibraltar's copper concentrate is currently sold under arrangements with MRI Trading AG of Switzerland and Cariboo Copper Corp. which owns 25% of the Gibraltar Mine. Gibraltar also has the ability to sell their concentrate on the spot market.

Gibraltar's molybdenum concentrate has a nominal grade of 48% molybdenum and 1.5% copper which is industry standard grade. Production is currently sold under arrangements with Langeloth Metallurgical Company, LLC (Subsidiary of Centerra Gold Inc.) and to Cariboo Copper Corp.

Gibraltar copper cathode is nominally 99.9%+ pure copper. There are no current offtake agreements for copper cathode. Based on past experience, the forecast production is expected to result in a readily marketable product.

Concentrate handling contracts for trucking, rail, and port handling services are renewed or replaced within time frames and conditions of normal industry standards.

Contracts for operating supplies such as fuel, grinding media, reagents, explosives, tires are renewed or replaced within time frames and conditions of normal industry standards.

SECTION 20

ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

SECTION 20: ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

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20.1 Environmental Studies, Permitting and Social or Community Impact

The Gibraltar mine has operated since 1972 from four open pits. Waste rock dumps have been developed in various areas adjacent to the open pits and tailings has been deposited in an impoundment area located about three km north of the mill.

There are three major permits in effect at Gibraltar Mine. These are:

- Effluent permit (PE-416)
- Mines Act permit (M-40)
- Air Emissions permit (PA-01595)

The Effluent permit (PE-416) is issued by the BC Ministry of Environment under the provisions of the Environmental Management Act. It authorizes the discharge of water to the Fraser River, discharge of tailings to the tailings storage facility and movement of water around the site including discharge of water to pits. It was last amended on March 18, 2019.

The Mines Act permit (M-40) is issued by the BC Ministry of Energy, Mines and Petroleum Resources under the provisions of the Mines Act. It authorizes the mining operation and tailings storage facility deposition method. It also deals with reclamation liabilities, closure cost estimates and bonding. It was last amended February 4, 2019. The reclamation and closure plan includes site decommissioning, water management, and revegetation to meet end land use objectives. In 2017, a decommissioning plan provided an assessment of the costs of closure based on a 5 year mine plan. Closure costs were estimated to be $41 million. Gibraltar has $40 million held in a Qualified Environmental Trust fund with the BNS Trust Company and $10 million letter of credit with CIBC, totalling $50 million serving as a reclamation and closure bond.

The Air Emissions permit (PA-01595) is issued by the BC Ministry of the Environment under the provisions of the Environmental Management Act. This permit was last amended February 7, 2013. It authorizes the discharge of particulate matter from the crushers, fine ore stockpile, the concentrate dryer and various vents.

All material regulatory authorizations and permits are in place to extract the reserves described in this report with the exception of:

- A small extension of lease boundary to include the full Extension Pit
- Periodic amendments of PE-416 and M-40 for pit wall pushbacks, water discharge, and waste rock and tailings storage

20.1 Environmental Studies, Permitting and Social or Community Impact – *Cont'd*

Other permit considerations include approvals required for route changes to the access road, hydro transmission line, natural gas line, and water discharge pipeline in order to complete development of the Extension pit which is scheduled to start in 2032. Approvals will be sought as required.

In 2002, Gibraltar and the Cariboo Regional District agreed to develop a landfill site on waste dumps in an area that would not be needed for the future operation of the mine. The landfill will provide reclamation credits to the land it occupies. Construction of the landfill was initiated in June 2003 and operations began in October 2003.

SECTION 21

CAPITAL AND OPERATING COSTS

SECTION 21: CAPITAL AND OPERATING COSTS

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21.1 Capital Costs

As the majority of the mine's facilities are in place and operating, the only capital requirements are for:

- Recommissioning of the SXEW plant,
- Bulk pit dewatering,
- Specific tailings, water treatment and water discharge related activities,
- Relocation of the in-pit crusher/conveyor system and electrical substation,
- Realignment of the site access road and utility lines, and
- General sustaining capital to maintain the integrity of the mining and processing equipment.

The site capital requirements over the next 19 years are summarized in Table 21.1. (All costs are in Canadian dollars unless otherwise stated.)

Table 21.1: Capital Cost Summary

Area	Total Capital ($M)
Process Improvements	2
Bulk Pit Dewatering	24
Tailings and Water Treatment	34
Crusher & Substation Relocation	43
Road and Utility Realignment	6
General Sustaining	176
Total	285

The SXEW plant is scheduled to re-enter production after seven years of being on care and maintenance. The cost of restarting the facility is estimated at $2 million in 2023.

Dewatering the Gibraltar pit and pumping the water to the mined out Granite pit is estimated to cost $10 million for new pumps, pipe and related equipment. The operating cost of this system has also been capitalized and is estimated to cost a total of $5 million spread over three years. Dewatering of the Pollyanna pit is estimated to cost $6 million. Dewatering Granite Pit in anticipation for tailings disposal is expected to require $3 million.

21.1 Capital Costs – *Cont'd*

The tailings capital costs include required upgrades to the seepage return pumping system, general engineering and design activities, and spillway construction on one of the embankments. The main embankment structure at Gibraltar is constructed from cycloned sand and, as a result, the majority of the costs associated with this embankment are included in operating costs. The tailings pumping systems will be reconfigured in 2033 to allow deposition of tailings in Granite Pit. This includes $10 million for new pipelines and booster pumps for Mill 1.

A water treatment plant will be added in 2021 in order to treat and discharge excess water currently stored on site. The cost of the water treatment plant is $15 million plus $2 million for upgrades to the water discharge pipeline.

$40M in capital costs are incurred in years 2021-2023 to account for movement of the in pit crusher and overland conveyor from its current location, east of Gibraltar pit to between the Extension and Gibraltar pits. The relocation of the pit electrical substation will also take place in this timeframe at a cost of $4 million. The relocation of the portion of the mine access road and the utility services that runs through the extension pit will take place in 2031 at a cost of $6 million.

General sustaining capital for the mine and mill is $0.15/ton mined, based on experience and expected equipment replacement schedules. Sustaining capital decreases steadily from $0.15/ton to zero over the last 10 years of the mine plan.

21.2 Operating Costs

The total operating costs for general and administration, mining and processing are based on Gibraltar's past cost performance and years of experience. The average costs for mining, processing, and general and administrative are discussed separately in the following sections. These costs are not adjusted for escalation or exchange rate fluctuations. (All costs are in Canadian dollars unless otherwise stated.)

Average unit operating costs are summarized in Table 21.2.

Table 21.2: Site Operating Cost Summary

Area	Life of Mine Cost
Mine cost/ton milled	$5.49
Processing cost/ton milled	$4.20
General and Admin cost/ton milled	$0.90
Total Operating cost/ton milled	$10.59

21.3 Mining Operating Costs

The mining costs are based on the activity rates shown in Table 21.3 which include both operating and maintenance costs. The haulage costs vary based on fixed hourly operating costs and haulage productivities for each period in the mine schedule. The truck productivities reflect historical performance at Gibraltar and the haulage profiles scheduled in each year of the mine plan.

Table 21.3: Mining Costs

Activity	Cost
Drilling	\$0.10 / ton drilled
Blasting	\$0.33 / ton blasted
Loading	\$0.23 / ton moved
Hauling	\$0.69 / ton moved
Utility & General	\$0.45 / ton mined
Total Mining Cost	\$1.84 / ton mined

21.4 Processing Operating Cost

Sulphide ore processing costs are \$4.10 per ton milled and include the cost of copper and molybdenum concentrate production and tailings disposal. Additionally, the SXEW plant operates for 5 years starting in 2023 and a water treatment plant begins operation in 2022. The cost of operating these facilities is \$1.84 per pound of cathode and \$0.03 per ton milled respectively.

21.5 General Administration Operating Costs

The general and administration operating costs are made up of costs associated with mine engineering and geology, environmental monitoring, supply chain, human resources and administrative services. The majority of these costs are fixed and are based on recent Gibraltar performance.

21.6 Offsite Operating Costs

Offsite costs are based on current and anticipated contract terms for transportation, treatment and refining costs. The average offsite costs over the operating period is US \$0.36 per pound of copper produced.

SECTION 22

ECONOMIC ANALYSIS

SECTION 22: ECONOMIC ANALYSIS

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22.1 Economic Analysis

(a) Introduction

The reserves are supported under the cost and performance data presented in the previous sections of this report. Metal prices are based on street consensus metal pricing as of June 2019 as shown in Table 22.1. A discounted net present value (NPV) cashflow model with an effective date of December 31, 2018 is used for the valuation basis. Results of the valuation are presented on a pre-tax 100% basis and for Taseko's 75% ownership on a pre-tax and after-tax basis.

Table 22.1: Street Consensus Metal Pricing

Metal Prices	2019	2020	LT
Copper Price (US$/lb)	$3.00	$3.00	$3.10
Molybdenum Price (US$/lb)	$12.00	$12.00	$12.00
FX (US$:C$)[1]	0.77	0.77	0.77

[1] Based on Bloomberg mean long term foreign exchange

22.1 Economic Analysis – *Cont'd*

(b) Silver Stream

In 2017 Taseko entered into a streaming agreement with Osisko Gold Royalties Ltd ("Osisko") for Taseko's 75% share of payable silver production from the Gibraltar Mine. Under the terms of the agreement, Taseko delivers 100% of its share of Gibraltar Mine payable silver production until 5.9 million ounces have been delivered. After that threshold has been met, 35% of Taseko's share of all future silver production will be delivered to Osisko. Osisko pays US$2.75 per ounce for all the silver deliveries made under the contract.

(c) Taxes

Profit at Gibraltar is subject to BC Mineral taxes, as well as federal and provincial corporate income taxes.

Mineral Tax

BC Mineral taxes are assessed under a two part system, made up of Net Current Proceeds Tax and Net Revenue Tax. Net Current Proceeds Tax applies at a rate of 2% to operating cash flow from production. This tax applies until the producer has recovered its capital investment and a reasonable rate of return, at which time the Net Revenue Tax will apply at a rate of 13%. The total tax collected under both Net Revenue Tax and Net Current Proceeds Tax will not exceed 13%. BC Mineral taxes are deductible against corporate income taxes.

Income Taxes

Gibraltar is currently subject to federal and provincial corporate tax rates of 15% and 12% respectively for a combined rate of 27%. Historically (since 2011), the combined tax rate has varied between 27.5% and 25%. It is reasonable to expect that variability within this range will occur in the future.

Combined with BC Mineral taxes, and assuming current federal and provincial tax rates remain in force, the total tax rate to be applied on Gibraltar income will increase from 2% to approximately 36.5% over the operating period of the reserves.

Ownership of the mine is currently subject to a joint venture agreement between Gibraltar Mines Ltd. (75%) and Cariboo Copper Corp. (25%). Taxes are paid by each joint venture partner based on their respective share of mine revenues and costs. As of December 31, 2018, Gibraltar Mines Ltd. had approximately $212 million of loss carry-forwards and other tax pools which are available to apply against its 75% share of taxable income in future years.

22.1 Economic Analysis – *Cont'd*

(d) Economic Valuation

The economic valuation for Gibraltar Mine is presented in Tables 22.2 and 22.3.

Table 22.2: Economic Valuation for Gibraltar Mine (100% Basis)

	Value (C$)
Gross Revenue	$11.0 billion
Cost to Concentrate	$6.3 billion
Off-Site Costs	$1.2 billion
Total Capital Costs	$0.3 billion
Pre-Tax Net Cash Flow	$3.2 billion
Pre-Tax NPV at 8%	$1.4 billion

Table 22.3: Economic Valuation for Taseko's 75% Interest in Gibraltar Mine

	Value (C$)
Pre-Tax Net Cash Flow (net silver stream)	$2.3 billion
Pre-Tax NPV at 8%	$1.0 billion
Total Tax	$0.7 billion
After-Tax Net Cash Flow	$1.6 billion
After-Tax NPV at 8%	$0.75 billion

22.1 Economic Analysis – *Cont'd*

(e) Sensitivity Analysis

Table 22.4 demonstrates the sensitivity of Gibraltar's economics to changes in metal prices.

Table 22.4: Economic Sensitivity

After-Tax 75% Basis NPV @ 8% (C$ Millions)					
Variable	-10%	-5%	Base	+5%	+10%
Cu Price	490	620	750	870	990
Mo Price	730	740	750	760	760
FX	500	620	750	870	990
Op Cost	940	840	750	650	550
Cap Cost	750	750	750	740	740

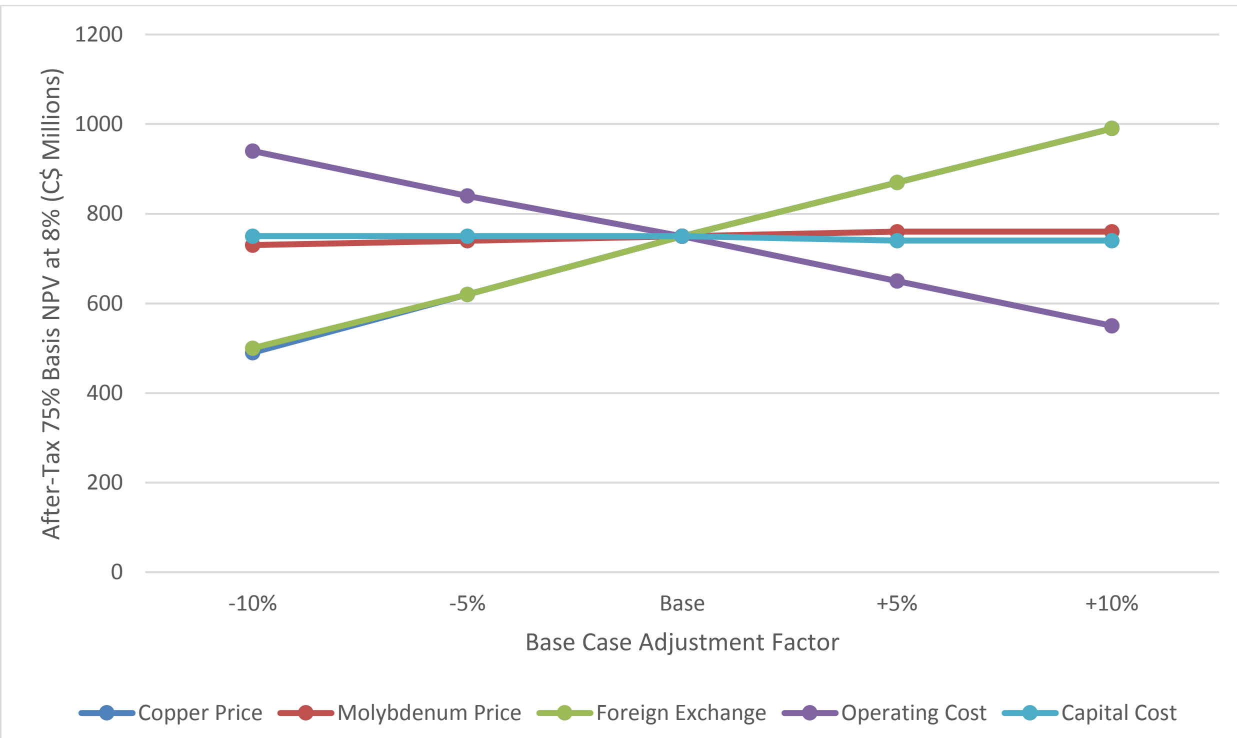

Figure 22.1: Economic Sensitivity

SECTION 23

ADJACENT PROPERTIES

SECTION 23: ADJACENT PROPERTIES

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23.1 Adjacent Properties

There are no adjacent properties as defined by NI 43-101.

SECTION 24

OTHER RELEVANT DATA AND INFORMATION

SECTION 24: OTHER RELEVANT DATA AND INFORMATION

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24.1 Other Relevant Data and Information

In the opinion of the author, there is no additional information necessary in order to make the technical report understandable and not misleading beyond that included in this report.

SECTION 25

INTERPRETATION AND CONCLUSIONS

SECTION 25: INTERPRETATION AND CONCLUSIONS

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25.1 Introduction

Proven and probable mineral reserves total 594 million tons grading 0.27% CuEq. The reserves are based on a copper price of US$2.75/lb, molybdenum price of US$8.00/lb, exchange rate of US$0.80:CDN$1.00, and a 0.15% Cu cut-off.

In addition to the sulphide reserves, oxide reserves total 17 million tons grading 0.15% AsCu (acid soluble copper).

The reserves are contained within a measured and indicated mineral resource of 1,109 million tons grading 0.26% Cu Eq.

The mineral reserve supports 19 years of operation at a milling rate of 85,000 tons per day with average annual production of approximately 136 million pounds of copper and 2.5 million pounds of molybdenum. The average strip ratio is 1.9:1.

The reserves are based on a pit design utilizing recommended and historical pit slopes and a block model updated to include data produced from drilling programs up to the effective date of this report. The detailed long range mine plan maximizes profitability on a cost per ton milled basis, incorporating current costs and performance.

In the author's opinion the geological data, and the mining, processing, cost, and marketing assumptions used are appropriate for purposes of defining and demonstrating resources and reserves as prescribed by National Instrument 43-101.

As with any mining operation there are a number of risks that may have a material and adverse impact on the future operating performance at Gibraltar and could cause the operating and financial performance to differ materially from the assumptions used in this report that form the basis for resources and reserves.

25.2 Volatility in Metals Prices

The profitability of the Gibraltar mine is directly related and sensitive to the market price of copper, and molybdenum. Metal prices may fluctuate widely and are affected by numerous factors beyond the Company's control, including global supply and demand, expectations with respect to the rate of inflation, the exchange rates of the United States dollar to other currencies, interest rates, forward selling by producers, production and cost levels in major producing regions, global or regional political, economic or financial situations and a number of other factors such as the sale or purchase of commodities by various commodity traders, production costs of major mineral producing countries and the cost of substitutes.

25.3 Increased Costs Could Affect Profitability

The cash cost of production is subject to variation from one year to the next due to a number of factors, such as changing strip ratios, ore grade, metallurgy, cost of supplies and services (for example, electricity and fuel) and the exchange rate of supplies and services denominated in foreign currencies. If these costs used in connection with the Company's operations were to increase significantly, and remain at such levels for a substantial period, the Company's cash flows from operations may be negatively affected. The Company prepares estimates of future production and unit cash costs of production annually. No assurance can be given that such estimates will be achieved. Failure to achieve production or cost estimates or material increases in operating or capital costs could have an adverse impact on the Company's future cash flows, profitability, results of operations and financial condition.

25.4 Exchange Rate Risk

The Company is subject to currency exchange rate risk because prices of copper and molybdenum are denominated in United States dollars and, accordingly, the Company's revenues will be received in United States dollars. The Company's expenses are almost entirely denominated in Canadian dollars. The Company currently does not engage in foreign exchange hedging. Any strengthening in the Canadian dollar will negatively impact the profitability of the Company's mining operations.

25.5 Regulatory Risks

The operation of Gibraltar may require licenses and permits from various governmental authorities. There can be no assurances that Gibraltar will be able to obtain all necessary licenses and permits that may be required to carry out all planned development and operations.

25.6 General Mining Risks

Typical mining risks also include adverse geological or ground conditions, adverse weather conditions, potential labour problems, and availability and cost of equipment procurement and repairs.

25.7 Environmental Considerations

The estimation of the existing reclamation liability related to the Gibraltar Mine is not free from uncertainty. Mining always entails risks of spills, pollution, reclamation, and other liabilities and obligations, which like other mining companies, may adversely affect Gibraltar. If these challenges are not properly assessed or if rules become more onerous, Gibraltar could be materially adversely affected.

SECTION 26

RECOMMENDATIONS

SECTION 26: RECOMMENDATIONS

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26.1 Recommendations

Gibraltar has been in production since the early 1970's and extensive exploration and engineering studies have been undertaken over the years. The geology is well understood and there is a lengthy record of performance data with respect to productivity, costs, and geotechnical performance.

The mineral reserves and selected cut-off grade are based on a long term commodity price regime and current site cost and performance data with no consideration for the future success of current productivity and recovery improvement initiatives.

Current initiatives to improve recovery in the bulk concentrators relative to reserve basis recovery include blending mine ore to specified metal and mineralogical content prior to processing to minimize the rate of variability of feed characteristic changes and an increased focus on improving molybdenum concentrate flotation recovery.

Gibraltar has demonstrated the ability to process higher tonnage than design capacity through the concentrators. Initiatives focused on achieving predictable higher throughput based on ore hardness would enable scheduling the milling of incremental ore with existing mine capacity or acceleration of the mine plan with an increase in mine capacity as required. Also, the ore in the western part of the deposit is measurably softer than that currently being mined and presents a significant opportunity for increased throughput.

Current mining productivity initiatives, in concert with the scheduled retirement of the smaller trucks in the current fleet should result in higher productivity and correspondingly lower mining unit costs.

Drilling initiatives focusing on continued definition drilling within the mine production plan areas have the potential to upgrade inferred mineral resources to indicated or higher and will infill gaps and extend drilling at depth. As the mine plan calls for the backfilling of some pit phases with waste rock after being mined out, it is important that these areas are explored prior to negatively impacting future expansion potential.

Continued improvement in any or all of these areas will have not only positive economic implications but could increase the size of the reserve pits under current commodity assumptions and/or impact the optimum cut-off grade. These initiatives should be continued and the results incorporated in reserve updates as appropriate.

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REFERENCES

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Richard Weymark, P.Eng., MBA
15th Floor, 1040 West Georgia Street
Vancouver, BC V6E 4H1

I, Richard Weymark, P.Eng., MBA, of Vancouver, British Columbia, hereby certify that:

a) I am an employee of Taseko Mines Ltd., with a business office at 15th Floor, 1040 West Georgia Street, Vancouver, British Columbia. In my position as Chief Engineer, Engineering, on behalf of Taseko Mines Limited, I authored this technical report on the mineral reserves at the Gibraltar Mine.

b) This certificate applies to the technical report titled "Technical Report on the Mineral Reserve Update at the Gibraltar Mine, British Columbia, Canada", dated November 6, 2019 which has an effective date of November 6, 2019.

c) I am a graduate of the University of British Columbia in Vancouver, B.C. (B.A.Sc. in Mining Engineering). I have practiced my profession for 11 years since graduation in 2008, in various roles, including supervisory positions, overseeing mine design and planning, resource and reserve estimation, open pit operations, business improvement, tailings dam construction, cost estimation, environmental assessment and project evaluation aspects. I am a member in good standing of Engineers and Geoscientists British Columbia, license number 46355. As a result of my experience and qualifications, I am a qualified person as defined in National Instrument 43 – 101 *Standards of Disclosure for Mineral Projects* ("NI 43 – 101").

d) My most recent personal inspection of the property was on June 4th and 5th, 2019.

e) I am responsible for the compilation of all sections of this report.

f) I am not independent of Taseko Mines Limited.

g) I have read National Instrument 43-101 and the Technical Report has been prepared in compliance with this Instrument.

h) I, as of the date of the certificate and to the best of my knowledge and information, believe the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Signed at Vancouver, British Columbia on the 6th day of November, 2019.

"Signed and Sealed"

Richard Weymark, P.Eng., MBA