



**TECHNICAL REPORT ON THE MINERAL RESERVE UPDATE
AT THE GIBRALTAR MINE**

BRITISH COLUMBIA, CANADA

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SECTION 1
SUMMARY

SECTION 1: SUMMARY

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1.1 Introduction

The purpose of this report is to document an increase to the mineral reserves at the Gibraltar Mine. The increase to the mineral reserves is supported by increased long-term copper and molybdenum prices and an updated long-range mine plan. The reserve update incorporates updated capital and operating cost estimates, additional resource drilling and demonstrated operating performance as disclosed throughout this report.

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., MBA.

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 has visited the site on numerous occasions since then. Mr. Weymark's current position is Vice President, Engineering.

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 City 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 property consists of 32 mining leases covering 2,275 hectares, 215 mineral claims covering 21,425 hectares and 5 optioned claims covering 2,888 hectares.

The mine site configuration is shown in Figure 1-1, looking north.



Figure 1-1: 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 through upgrades to the concentrator and again to 85,000 tons per day in 2013 through installation of a complete independent second bulk concentrator with a stand-alone Molybdenum Separation Plant.

Total production since 1972 is 705M tons of ore producing 3,575 million pounds of copper in concentrate, 102 million pounds of cathode copper and 44 million pounds of molybdenum.

The current plant site configuration is shown in Figure 1-2

1.3 History – *Cont'd*



Figure 1-2: Plant Site Configuration

1.4 Geology & Deposit

The Gibraltar open pit mine is a calc-alkalic porphyry copper-molybdenum deposit entirely hosted by the Late Triassic Granite Mountain batholith, a component of the Quesnel volcanic arc terrane. The Granite Mountain batholith is a composite body consisting of three major phases; Border Phase diorite, Mine Phase tonalite, and Granite Mountain trondhjemite. Mineralization occurs predominantly in the Mine phase tonalite. Contacts between the major phases are gradational over widths ranging from two metres to several hundred metres.

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

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.

Copper ore at Gibraltar typically occurs in potassic and ankeritic hydrothermal mineral assemblages, as predominantly disseminated and vein-hosted chalcopyrite 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 85% over the operating period of the reserves.

Molybdenum recovery predictions are informed by historic test work and molybdenum plant production data. The overall molybdenum recovery is predicted to be 50% for the remaining reserves.

Predictions of copper cathode produced from heap leaching and subsequent solvent extraction are based on an economic assessment of recoverable copper using a kinetic leach curve and the oxide ore release schedule from the mine plan. Recovery of the placed oxide copper mass in the reserve to cathode is expected to be approximately 50%.

1.6 Mineral Resource & Reserve Estimate

(a) Resource Estimate

The resource block model for the entire Gibraltar deposit has been updated in 2021 from that used for the previous Technical Report (November 6, 2019) to include all available drilling up to the end of April 2021.

The block model is divided into 10 domains based on faulting and resultant changes in mineralization and also five zones representing overburden, leach cap, oxide, supergene and hypogene layers. 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 12ft³/ton with 15ft³/ton used for overburden and fill materials.

Interpolation has been done by inverse distance cubed (ID3) and ordinary kriging (OK) for TCu, by ID5 and OK for Mo and by OK for acid soluble copper (ASCu). In all cases interpolation is completed 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. Final interpolation methods for TCu and Mo vary by domain based on validation results. 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 Cu grades match the data well with no indication of bias in the global resource.

Resource classifications used in this study conform to the 2014 CIM Definition Standards. Classification is based on the interpolation pass of the TCu estimation. To be classed as Measured or Indicated, the block must be interpolated in the search ellipses defined for the first, and second passes respectively as well as 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.

A Lerchs-Grossman pit optimization was generated to constrain the resource within the block model based on measured and indicated resources only using metal prices of US\$3.50/lb Cu, US\$14.00/lb Mo at a foreign exchange rate of US\$0.80: C\$1.00. Recoveries of 85% and 40% are applied to TCu and Mo respectively. The Gibraltar mineral resources are summarized at the base case cut-off grade of 0.15% TCu in Table 1-1.

1.6 Mineral Resource & Reserve Estimate – *Cont'd*(a) Resource Estimate – *Cont'd*

Table 1-1: Gibraltar Mineral Resources

Gibraltar Mine Mineral Resources as of December 31, 2021 at 0.15% Copper Cut-off				
Category	Tons (millions)	TCu (%)	Mo (%)	Cu Eq. (%)
Measured	845	0.25	0.007	0.27
Indicated	370	0.23	0.007	0.25
Measured & Indicated	1,215	0.24	0.007	0.26
Inferred	78	0.22	0.004	0.23

1. Mineral Resources follow CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).
2. Mineral Resources are reported inclusive of Mineral Reserves.
3. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
4. The Mineral Resource has been confined by a “reasonable prospects of eventual economic extraction” pit using the following assumptions: Cu price of US\$3.50/lb, Mo price of US\$14.00/lb, exchange rate of US\$0.80=C\$1.00, metallurgical recoveries of 85% for TCu and 40% for Mo.
5. A tonnage factor of 12ft³/ton has been applied for rock and 15ft³/ton for overburden and fill.
6. Copper Equivalency based on US\$3.50/lb price and 85% metallurgical recovery for copper, and US\$13.00/lb price and 50% metallurgical recovery for molybdenum. CuEq can be calculated using the formula $CuEq\% = TCu\% + Mo\% \times 2.185$.
7. Numbers may not add due to rounding.

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

(b) Reserve Estimate

Mineral reserves are based on the mineral resources that are contained within the reserve pit design. The reserve pit design incorporates access ramps, sector-specific wall angles, practical mining development considerations and scheduling factors including intermediate phasing. The reserve pit design is based on metal prices of US\$3.05/lb for copper, US\$12.00/lb for molybdenum and a foreign exchange rate of US\$0.80: C\$1.00. The ultimate Reserve Pits are shown in Figure 1-3.

Reserve classifications conform to the 2014 CIM Definition Standards with Proven and Probable reserves derived from Measured and Indicated resources respectively. Reserves are reported using a 0.15% copper cut-off grade for sulphide ore and a 0.10% acid-soluble copper cut-off grade for oxide ore. The resulting sulphide and oxide mineral reserves are shown in Tables 1-2 and 1-3.

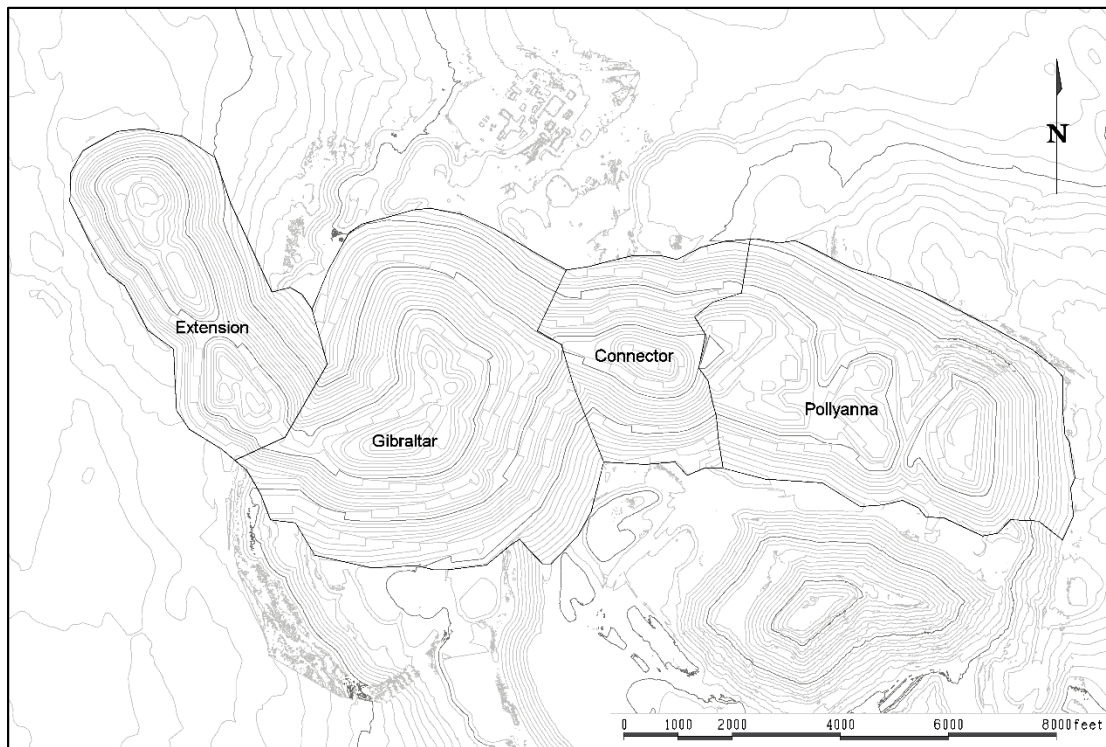


Figure 1-3: Ultimate Reserve Pits

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, 2021 at 0.15% Copper Cut-off				
Category	Tons (millions)	TCu (%)	Mo (%)	Cu Eq. (%)
Proven	509	0.25	0.008	0.27
Probable	191	0.23	0.008	0.24
Stockpile	6	0.18	0.007	0.20
Total	706	0.25	0.008	0.26

1. Mineral Reserves follow CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).
2. Sulphide Mineral Reserves are exclusive of Oxide Mineral Reserves and are contained within Mineral Resources.
3. Mineral Reserves are assumed to be extracted using open pit mining methods and are based on US\$3.05/lb Cu price, \$12.00/lb Mo price, exchange rate of US\$0.80=C\$1.00, metallurgical recoveries of 85% TCu and 40% Mo for sulphide ore and 50% ASCu for oxide ore.
4. A tonnage factor of 12ft³/ton has been applied for rock and 15ft³/ton for overburden and fill.
5. Copper Equivalency based on US\$3.50/lb price and 85% metallurgical recovery for copper, and US\$13.00/lb price and 50% metallurgical recovery for molybdenum. CuEq can be calculated using the formula $CuEq\% = TCu\% + Mo\% \times 2.185$.
6. Numbers may not add due to rounding.

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, 2021 at 0.10% ASCu Cut-off		
Category	Tons (millions)	ASCu (%)
Proven	1	0.15
Probable	16	0.15
Stockpile	0	0.15
Total	17	0.15

1. Mineral Reserves follow CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).
2. Oxide Mineral Reserves are exclusive of Sulphide Mineral Reserves and are contained within Mineral Resources.
3. Mineral Reserves are assumed to be extracted using open pit mining methods and are based on US\$3.05/lb Cu price, \$12.00/lb Mo price, exchange rate of US\$0.80=C\$1.00, metallurgical recoveries of 85% TCu and 40% Mo for sulphide ore and 50% ASCu for oxide ore.
4. A tonnage factor of 12ft³/ton has been applied for rock and 15ft³/ton for overburden and fill.
5. Numbers may not add due to rounding.

The mineral reserves presented in Tables 1-2 and 1-3 are mutually exclusive and are contained within the mineral resources stated in Table 1-1.

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 per day. This updated reserve estimate supports an operations period of 23 years at an average mining rate of 104 million tons per year and an average strip ratio of 2.4.

Mining operations are carried out utilizing conventional open pit mining equipment. Waste and ore are mined utilizing the current fleet consisting of five electric blast hole drills, four electric rope shovels, two large front end loaders and twenty-four haul trucks. In 2036 and 2037, four additional haul trucks and one additional drill will be added to the mining fleet.

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 graph presented in Figure 1-4 shows the proposed pit sequence and source of total ore milled by pit area in any given year.

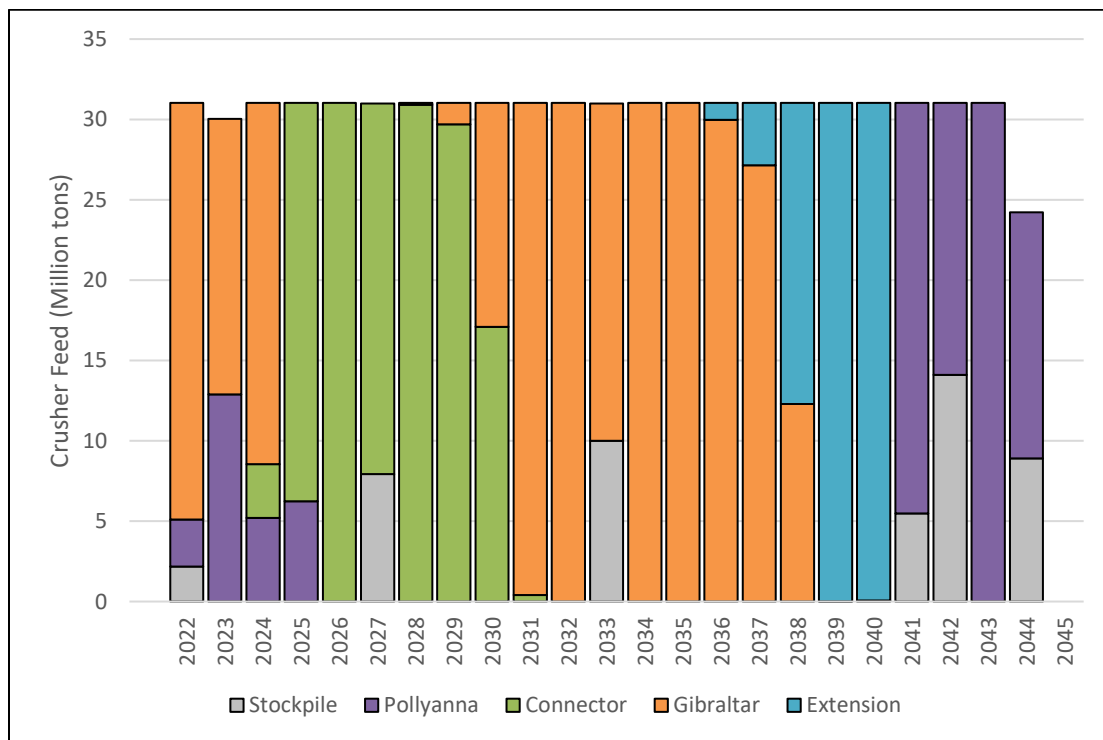


Figure 1-4: Ore Milled from each Pit by Year

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 oxide leach dumps 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 tons per 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 Tailings Storage Facility, while the concentrate is reground and upgraded 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 upgraded 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 dump 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 to market. The barren solution leaving the plant, raffinate, is pumped back to leach additional copper from the oxide leach dumps.

1.9 Project Infrastructure

The Gibraltar Mine is an established site with existing infrastructure and facilities that support the current operating activities including:

- Access to utilities that include electrical power, natural gas and domestic use water;
- Existing processing facilities to extract final saleable products from the sulphide and oxide ores;
- Waste storage facilities for mine waste rock and an existing Tailings Storage Facility (TSF);
- On-site support, maintenance and administration facilities;
- A comprehensive set of water management infrastructure covering water collection, storage and discharge at prescribed water quality requirements; and
- Concentrate handling facilities and existing off-site sale supply chains.

To support the reserves contemplated in this report, tailings produced from both concentrators will continue to be deposited in the TSF through 2038. 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, located at the west end of the facility, will be raised using cyclone underflow material until it reaches the ultimate height of the facility. Cyclone overflow and whole tailings are discharged towards the supernatant pond located at the east end of the facility. The East Saddle Dam and the future South Saddle Dam, both located at the east end of the facility, will be raised to contain the supernatant pond to the southeast using mechanically placed earth fill.

From 2039 to end of operations, thickened tailings will be discharged by gravity inside the mined-out Gibraltar and Extension Pits.

Mine waste will be stored in facilities located to the south and north of the planned pits and as backfill inside available mined-out areas. Overburden is segregated from the waste rock and stockpiled for reuse as a cover material for reclamation. Oxide ore will be placed in lifts on two existing leach dumps located to the east and west of the plant site. Temporary sulphide ore stockpiles are currently established near the primary crushers in order to provide operational flexibility to both mine and mill operations.

The in-pit primary crusher will be relocated in 2023 to allow complete mining of the Connector Pit. An in-pit electrical substation will also be relocated in 2023. The substation consists of electrical infrastructure and switchgear that feeds the overhead powerlines in the mine areas.

1.9 Project Infrastructure – Cont'd

In 2031 and 2032, the final 6 km of the site access road and a key utility corridor containing a 69 kV powerline, a 2" natural gas pipeline that supplies the mine and a water discharge pipeline will be relocated to allow mining in the western areas of Gibraltar Pit and in the Extension Pit.

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. The majority of Gibraltar's copper concentrate is sold under long-term offtake agreements. Thirty percent is sold to Cariboo Copper Corp. which owns 25% of the Gibraltar Mine, under a life of mine offtake contract. In the past, Gibraltar has sold approximately 50% of its concentrate production to metals traders under long-term contracts of up to five years. Any remaining amount of uncommitted copper production is sold on the spot market through a competitive tender process. Given Gibraltar's high copper concentrate quality and lack of impurities, it typically achieves significant discounts from annual copper TCRC benchmarks for copper production put out to tender.

Gibraltar's molybdenum concentrate has a nominal grade of 48% molybdenum and 3.0% copper. Molybdenum production is currently sold under a multi-year offtake arrangements through 2023.

Gibraltar copper cathode is nominally 99.9%+ pure copper. There are no current offtake agreements for copper cathode as none has been produced since 2015. 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.

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.

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

1.11 Environmental, Permitting, Social and Community Impact

Gibraltar Mine is located in the central interior of the Cariboo region. Predominant land uses in the vicinity of the mine include timber harvesting, agriculture, and recreation. Archaeological studies have been undertaken for the existing permit area and risks are well understood. Additional studies will be undertaken as required to support various permitting initiatives described in this report.

Gibraltar Mine operates under *Mines Act* Permit M-40 issued by the Ministry of Energy, Mines and Low Carbon Innovation (EMLI). Environmental protection programs at the mine are regulated through effluent permit PE-416 and air permit PA-1595, both of which are administered under the BC *Environmental Management Act*.

Amendments to the above permits will be required for the proposed pit, waste rock storage facility and TSF expansions as well as in-pit tailings deposition. An environmental assessment under the BC Environmental Assessment Act (2018) will not be triggered by the proposed expansions in this report. Approvals will also be required for route changes to the site access road and utility corridor.

Through operational priorities and programs, such as local hiring and procurement practices, Indigenous, stakeholder and community engagement, commitment to local charitable organizations, delivery of education and community programs and more, Gibraltar makes meaningful and lasting contributions to the economic and social well-being of the communities near the site.

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:

- Purchasing four additional haul trucks and one additional drill in 2036 and 2037,
- Recommissioning of the SX/EW plant in 2024,
- Relocating the in-pit primary crusher and mine area electrical substation in 2023,
- Realignment of the site access road and a utility corridor in 2031 and 2032,
- On-going activities required to sustain tailings deposition,
- Specific on-site water management upgrades over the next ten years including construction of a water treatment plant by mid-2023, and
- General sustaining capital to maintain the integrity of the mining and processing equipment.

(a) Capital Costs

The site capital requirements over the next 23 years are summarized in Table 1-4.

Table 1-4: Capital Cost Summary

Area	Total Capital (Millions)
Major Mining Equipment	\$41
Process Improvements	\$5
Crusher & Substation Relocation	\$43
Road and Utility Realignment	\$24
Tailings	\$135
Water Management & Treatment	\$35
General Sustaining	\$635
Total	\$917

Numbers may not add due to rounding.

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

(b) Operating Cost

Operating costs are based on Gibraltar's past performance and current operating expectations informed by many years of operating experience. These costs are in 2022 dollars and 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 1-5. A breakdown of mining costs by activity is provided in Table 1-6:

Table 1-5: Site Operating Cost Summary

Area	Life of Mine Cost
Mine cost/ton milled	\$5.91
Processing cost/ton milled	\$4.55
General and Admin cost/ton milled	\$1.00
Total Operating cost/ton milled	\$11.47

Numbers may not add due to rounding.

Table 1-6: Mining Costs

Activity	Cost
Drilling	\$0.11 / ton drilled
Blasting	\$0.33 / ton blasted
Loading	\$0.28 / ton moved
Hauling	\$0.64 / ton moved
Utility & General	\$0.46 / ton mined
Total Mining Cost	\$1.75 / ton mined

Numbers may not add due to rounding.

In addition to the on-site costs above, off-sites costs including concentrate transportation costs and smelter fees average US\$0.30 per pound of copper produced.

1.13 Economic Analysis

A discounted cashflow model has been prepared for the valuation of the mineral reserves that are supported by the mine schedule, metallurgical recoveries and cost discussed in this report. The valuation uses metal prices and a foreign exchange rate as shown in Table 1-7 based on Taseko's expectations informed by street consensus metal pricing as of Q1 2022, analyst research reports, peer comparisons and historical prices and rates. Results of the valuation are presented on a before-tax 100% basis, and for Taseko's 75% ownership on a before-tax and after-tax basis using a discount rate of 8% and with an effective date of December 31, 2021.

Table 1-7: Metal Pricing and Foreign Exchange Rate Used for Base Case Economic Analysis

	2022	2023	Long-Term
Copper Price	US\$4.25/lb	US\$3.90/lb	US\$3.50/lb
Molybdenum Price	US\$18.00/lb	US\$15.00/lb	US\$13.00/lb
Silver Price	US\$23.00/oz	US\$23.00/oz	US\$22.50/oz
Foreign Exchange	US\$0.77 : CAD\$1.00		

The before-tax cashflow for the Gibraltar Mine is summarized in Table 1-8. The resultant before-tax NPV is \$1.9 billion at a discount rate of 8%.

Table 1-8: Before-Tax Cashflow for Gibraltar Mine (100% Basis)

	Total (Millions)
Gross Revenue	\$14,360
Operating Costs	\$9,370
Operating Profit	\$4,980
Sustaining Capital Costs	\$920
Before-Tax Net Cash Flow	\$4,070

Numbers may not add due to rounding.

1.13 Economic Analysis – *Cont'd*

Cashflows for Taseko's 75% interest in Gibraltar Mine are summarized in Table 1-9. The resultant NPVs are \$1.4 billion on a before-tax basis and \$1.1 billion on an after-tax basis, both at a discount rate of 8%.

Table 1-9: After-Tax Cashflow for Taseko's 75% Interest in Gibraltar Mine

	Total (Millions)
Before-Tax Net Cash Flow (net Silver stream)	\$2,900
Taxes	\$650
After-Tax Net Cash Flow	\$2,250

Numbers may not add due to rounding.

1.14 Conclusions and Recommendations

Proven and probable mineral reserves total 706 million tons grading 0.26% CuEq. The reserves are based on a copper price of US\$3.05/lb, molybdenum price of US\$12.00/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 1,215 million tons grading 0.26% Cu Eq.

The mineral reserve supports 23 years of operation at a milling rate of 85,000 tons per day with average annual production of approximately 129 million pounds of copper and 2.3 million pounds of molybdenum. The average strip ratio is 2.4:1.

The reserves are based on a pit design utilizing recommended pit slopes and a block model updated to include data produced from drilling programs up to the end of April 2021. The mine plan maximizes profitability on a cost per ton milled basis, incorporating current costs and performance.

In the opinion of the Qualified Person, the geological data, resource modelling, mine plan, process assumptions, operating costs, 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 operating costs based on current operating expectations.

Gibraltar has a number of continuous improvement initiatives underway with focus areas that include improving productivity of the mining and processing equipment, improving the efficiency of the various unit operations and reducing operating costs. Continued improvement in any or all of these areas will have positive economic implications and 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 into operating practices and future 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 Company's principal subsidiaries are listed in Table 2-1.

Table 2-1: Principal Subsidiaries of Taseko Mines Limited

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

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

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

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 through the acquisition of Curis Resources Ltd. On February 15, 2019, the company acquired a 100% interest in Yellowhead Mining Inc. In addition to its subsidiaries, Taseko Mines Limited owns 100% of the New Prosperity Project.

On September 10, 2021, Taseko sold the Harmony gold project (Harmony), an exploration stage gold property, to JDS Gold Inc. (JDS). Taseko retained a 15% carried interest in JDS and a 2% net smelter return royalty on Harmony. Taseko has the right to terminate the agreement and revert to 100% ownership of Harmony in the event JDS does not achieve certain project development milestones and an IPO or other liquidity event within an agreed timeframe.

The head office of Taseko is located at 12th 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.

2.1 Introduction – *Cont'd*

The purpose of this report is to document an increase to the mineral reserves at the Gibraltar Mine as disclosed in the news release dated March 30, 2022. The increase to the mineral reserves is supported by increased long-term copper and molybdenum prices and an updated long-range mine plan. The reserve update incorporates updated capital and operating cost estimates, additional resource drilling and demonstrated operating performance as disclosed throughout this report.

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., MBA.

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 has visited the site on numerous occasions since then. Mr. Weymark's current position is Vice President, Engineering.

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 obtained from the Mineral Titles Online (MTO) system as of March 15, 2022 to confirm Taseko's internal tenure tracking system. MTO is an internet-based mineral title administration system maintained by the Mineral Titles Branch, Mines Competitiveness and Authorizations Division of the B.C Ministry of Energy, Mines and Low Carbon Innovation. This tenure information applies to Section 4.2 of the report.

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 City of Williams Lake and are centred at latitude 52°30'N and longitude 122°16'W (Figure 4-1) in the Cariboo Mining Division. Williams Lake is approximately 590 km north of Vancouver, British Columbia.

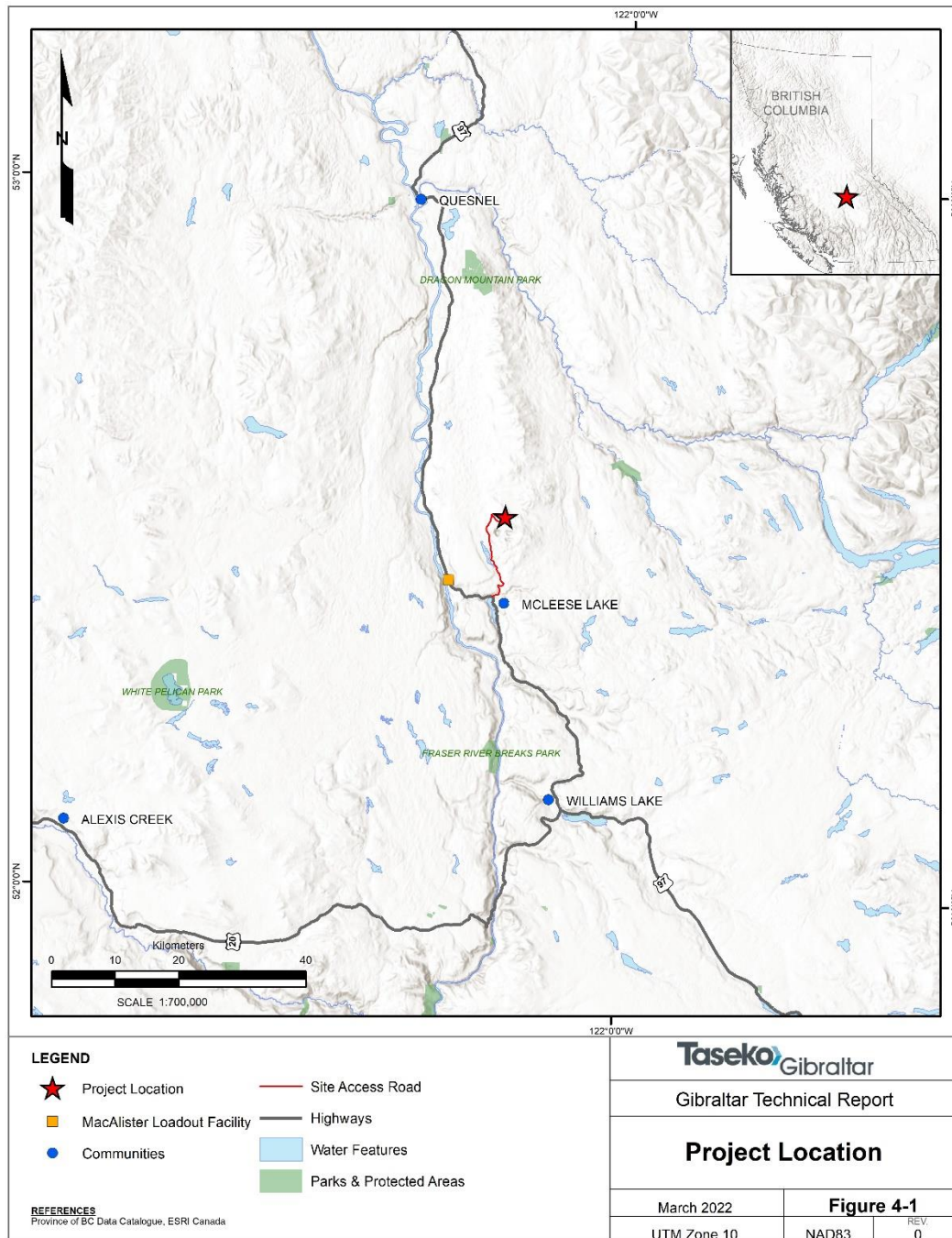


Figure 4-1: Location of Gibraltar Mine

4.2 Land Tenure

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 property consists of 32 mining leases covering 2,275 hectares, 215 mineral claims covering 21,425 hectares and 5 optioned claims covering 2,888 hectares as summarized in Table 4-1 and shown in Figure 4-2.

Table 4-1: Mineral Titles

Tenure Type	Number	Area (ha)
Leases	32	2,275
Claims	215	21,425
Optioned Claims	5	2,888
Total	252	26,588

The mining leases are valid until at least July 2023 as long as rental fees are paid annually. All mining leases and mineral claims are in good standing as of the effective date of this report. There are four parcels of fee simple land. Details of each lease and claim are provided in Tables 4-2 and 4-3 respectively.

In December 2020, Gibraltar Mines Ltd. entered into an option agreement granting Gibraltar the exclusive right and option to acquire a 100% title and interest in five additional mineral claims covering 2,888 hectares which are located northeast of the Gibraltar Mine. Collectively, these claims are known as the Copper King North (CKN) claims. Details of the optioned claims are provided in Table 4-4.

4.2 Land Tenure – *Cont'd*

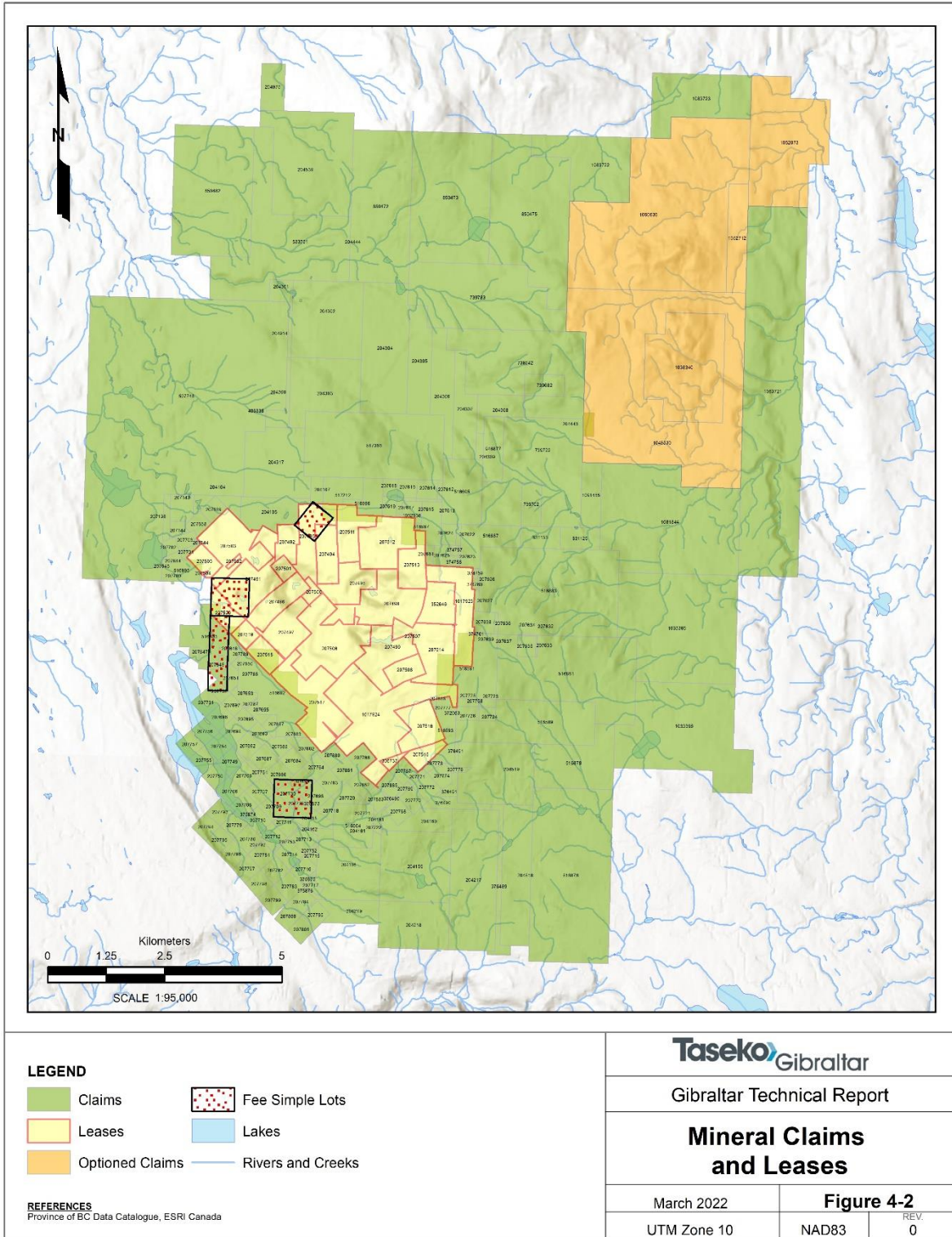


Figure 4-2: Mineral Claims and Mining Leases

4.2 Land Tenure – *Cont'd*

Table 4-2: Gibraltar Mining Leases

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
207512		Lease	1973/JUN/11	2022/JUN/11	109.0
352646		Lease	1997/JUN/25	2022/JUN/25	60.74
207491		Lease	1972/JUL/26	2022/JUL/26	116.03
207492		Lease	1972/JUL/26	2022/JUL/26	35.12
207493		Lease	1972/JUL/26	2022/JUL/26	82.26
207494		Lease	1972/JUL/26	2022/JUL/26	57.53
207495		Lease	1972/JUL/26	2022/JUL/26	69.07
207496		Lease	1972/JUL/26	2022/JUL/26	66.56
207497		Lease	1972/JUL/26	2022/JUL/26	73.56
207498		Lease	1972/JUL/26	2022/JUL/26	143.87
207499		Lease	1972/JUL/26	2022/JUL/26	95.11
207500		Lease	1972/JUL/26	2022/JUL/26	12.37
207501		Lease	1972/JUL/26	2022/JUL/26	16.85
207502		Lease	1972/JUL/26	2022/JUL/26	3.12
207503		Lease	1972/JUL/26	2022/JUL/26	119.47
207504		Lease	1972/JUL/26	2022/JUL/26	0.51
207505		Lease	1972/JUL/26	2022/JUL/26	28.72
207506		Lease	1972/JUL/26	2022/JUL/26	172.61
207507		Lease	1972/JUL/26	2022/JUL/26	0.06
207508		Lease	1972/JUL/26	2022/JUL/26	36.62
207515		Lease	1973/OCT/11	2022/OCT/11	28.34
207516		Lease	1973/OCT/11	2022/OCT/11	72.71
207517		Lease	1973/OCT/11	2022/OCT/11	152.04
207518		Lease	1973/OCT/11	2022/OCT/11	33.71
207519		Lease	1973/OCT/11	2022/OCT/11	20.46
207520		Lease	1973/OCT/11	2022/OCT/11	37.75
306737		Lease	1973/OCT/11	2022/OCT/11	8.81
207511		Lease	1972/OCT/23	2022/OCT/23	64.98
207513		Lease	1972/OCT/23	2022/OCT/23	58.56
207514		Lease	1972/OCT/23	2022/OCT/23	113.14
1017923		Lease	2013/MAR/19	2023/MAR/19	104.0
1017924		Lease	2013/MAR/19	2023/MAR/19	281.0

4.2 Land Tenure – *Cont'd*

Table 4-3: Gibraltar Mineral Claims

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
1083721	NE2	Claim	2021/AUG/17	2022/AUG/17	1002.4477
1083722	NE3	Claim	2021/AUG/17	2022/AUG/17	215.9917
1083723	NE4	Claim	2021/AUG/17	2022/AUG/17	215.9301
1091455	NE5	Claim	2022/JAN/27	2023/JAN/27	59.0000
1081844	NE1	Claim	2021/MAR/25	2024/MAR/25	609.7109
204104	HY 1	Claim	1978/MAY/01	2024/JUN/28	100.0
204105	HY 4	Claim	1978/MAY/01	2024/JUN/28	150.0
204107	HY 7	Claim	1978/MAY/01	2024/JUN/28	75.0
204115	TIM 1	Claim	1978/AUG/28	2024/JUN/28	50.0
204116	COLE 1	Claim	1978/AUG/28	2024/JUN/28	225.0
204159	GEOFF 1	Claim	1979/MAY/29	2024/JUN/28	225.0
204160	DOUG I	Claim	1979/JUN/26	2024/JUN/28	75.0
204161	RYAN I	Claim	1979/JUN/26	2024/JUN/28	25.0
204162	AARON I	Claim	1979/JUN/26	2024/JUN/28	25.0
204217	BARB I	Claim	1979/NOV/14	2024/JUN/28	300.0
204218	BRENT I	Claim	1979/NOV/14	2024/JUN/28	150.0
204219	JANIS I	Claim	1979/NOV/14	2024/JUN/28	75.0
204309	HY 17	Claim	1980/JUN/10	2024/JUN/28	50.0
204317	HY 3	Claim	1980/JUN/12	2024/JUN/28	225.0
204518	BRUCE I	Claim	1981/JUN/29	2024/JUN/28	300.0
204519	PAUL I	Claim	1981/JUN/29	2024/JUN/28	300.0
207143	TK 1	Claim	1990/AUG/23	2024/JUN/28	50.0
207144	TK 2	Claim	1990/AUG/24	2024/JUN/28	50.0
207198	TK 3	Claim	1990/SEP/12	2024/JUN/28	100.0
207612	GM 31	Claim	1964/MAR/02	2024/JUN/28	25.0
207613	GM 32	Claim	1964/MAR/02	2024/JUN/28	25.0
207614	GM 33	Claim	1964/MAR/02	2024/JUN/28	25.0
207615	GM 34	Claim	1964/MAR/02	2024/JUN/28	25.0
207616	GM 35	Claim	1964/MAR/02	2024/JUN/28	25.0
207617	GM 36	Claim	1964/MAR/02	2024/JUN/28	25.0
207618	GM 37	Claim	1964/MAR/02	2024/JUN/28	25.0
207619	GM 38	Claim	1964/MAR/02	2024/JUN/28	25.0

4.2 Land Tenure – *Cont'd*Table 4-3: Gibraltar Mineral Claims – *Cont'd*

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
207622	GM 49	Claim	1964/MAR/02	2024/JUN/28	25.0
207623	GM 50	Claim	1964/MAR/02	2024/JUN/28	25.0
207624	GM 51	Claim	1964/MAR/02	2024/JUN/28	25.0
207625	GM 52	Claim	1964/MAR/02	2024/JUN/28	25.0
207626	GM 59	Claim	1964/MAR/02	2024/JUN/28	25.0
207627	GM 60	Claim	1964/MAR/02	2024/JUN/28	25.0
207632	GM 65	Claim	1964/MAR/02	2024/JUN/28	25.0
207633	GM 66	Claim	1964/MAR/02	2024/JUN/28	25.0
207634	GM 67	Claim	1964/MAR/02	2024/JUN/28	25.0
207635	GM 68	Claim	1964/MAR/02	2024/JUN/28	25.0
207636	GM 69	Claim	1964/MAR/02	2024/JUN/28	25.0
207637	GM 70	Claim	1964/MAR/02	2024/JUN/28	25.0
207638	GM 71	Claim	1964/MAR/02	2024/JUN/28	25.0
207639	GM 72	Claim	1964/MAR/02	2024/JUN/28	25.0
207644	JAN NO. 5	Claim	1964/APR/10	2024/JUN/28	25.0
207645	JAN NO. 6	Claim	1964/APR/10	2024/JUN/28	25.0
207647	AL #2	Claim	1964/JUL/02	2024/JUN/28	25.0
207648	AL #3	Claim	1964/JUL/02	2024/JUN/28	25.0
207649	AL #4	Claim	1964/JUL/02	2024/JUN/28	25.0
207650	AL #5	Claim	1964/JUL/02	2024/JUN/28	25.0
207651	AL #6	Claim	1964/JUL/02	2024/JUN/28	25.0
207653	AL #8	Claim	1964/JUL/02	2024/JUN/28	25.0
207655	AL #10	Claim	1964/JUL/02	2024/JUN/28	25.0
207657	AL #12	Claim	1964/JUL/02	2024/JUN/28	25.0
207658	SUMMIT NO.7	Claim	1964/JUL/20	2024/JUN/28	25.0
207659	SUMMIT NO.8	Claim	1964/JUL/20	2024/JUN/28	25.0
207661	GM 104	Claim	1964/AUG/21	2024/JUN/28	25.0
207682	EV #9	Claim	1965/OCT/19	2024/JUN/28	25.0
207683	EV #10	Claim	1965/OCT/19	2024/JUN/28	25.0
207684	EV #11	Claim	1965/OCT/19	2024/JUN/28	25.0
207685	EV #12	Claim	1965/OCT/19	2024/JUN/28	25.0
207686	EV #13	Claim	1965/OCT/19	2024/JUN/28	25.0

4.2 Land Tenure – *Cont'd*Table 4-3: Gibraltar Mineral Claims – *Cont'd*

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
207687	EV #14	Claim	1965/OCT/19	2024/JUN/28	25.0
207692	EV #15	Claim	1966/JAN/17	2024/JUN/28	25.0
207693	EV #16	Claim	1966/JAN/17	2024/JUN/28	25.0
207694	EV #17	Claim	1966/JAN/17	2024/JUN/28	25.0
207695	EV #18	Claim	1966/JAN/17	2024/JUN/28	25.0
207696	EV #19	Claim	1966/JAN/17	2024/JUN/28	25.0
207697	EV #20	Claim	1966/JAN/17	2024/JUN/28	25.0
207698	BUD #5	Claim	1966/JAN/17	2024/JUN/28	25.0
207699	BUD #6	Claim	1966/JAN/17	2024/JUN/28	25.0
207700	IT NO. 1	Claim	1966/FEB/14	2024/JUN/28	25.0
207701	IT NO. 4	Claim	1966/FEB/14	2024/JUN/28	25.0
207702	IT NO. 5	Claim	1966/FEB/14	2024/JUN/28	25.0
207703	IT NO. 6	Claim	1966/FEB/14	2024/JUN/28	25.0
207704	IT NO. 8	Claim	1966/FEB/14	2024/JUN/28	25.0
207705	VAL NO.1	Claim	1966/MAR/19	2024/JUN/28	25.0
207706	VAL NO.2	Claim	1966/MAR/18	2024/JUN/28	25.0
207707	VAL NO.3	Claim	1966/MAR/18	2024/JUN/28	25.0
207708	VAL NO.4	Claim	1966/MAR/18	2024/JUN/28	25.0
207709	VAL NO.5	Claim	1966/MAR/18	2024/JUN/28	25.0
207710	VAL NO.6	Claim	1966/MAR/18	2024/JUN/28	25.0
207711	VAL NO.7	Claim	1966/MAR/18	2024/JUN/28	25.0
207712	VAL NO.8	Claim	1966/MAR/18	2024/JUN/28	25.0
207713	VAL NO.9	Claim	1966/MAR/18	2024/JUN/28	25.0
207714	VAL NO.10	Claim	1966/MAR/18	2024/JUN/28	25.0
207715	VAL NO.11	Claim	1966/MAR/18	2024/JUN/28	25.0
207716	VAL NO.12	Claim	1966/MAR/18	2024/JUN/28	25.0
207717	VAL NO.14	Claim	1966/MAR/18	2024/JUN/28	25.0
207718	VAL NO.19	Claim	1966/MAR/18	2024/JUN/28	25.0
207720	VAL NO.21	Claim	1966/MAR/18	2024/JUN/28	25.0
207721	VAL NO.22	Claim	1966/MAR/18	2024/JUN/28	25.0
207722	VAL NO.27	Claim	1966/MAR/18	2024/JUN/28	25.0
207723	FFE #13	Claim	1966/MAY/16	2024/JUN/28	25.0
207724	FFE #14	Claim	1966/MAY/16	2024/JUN/28	25.0
207725	FFE #15	Claim	1966/MAY/16	2024/JUN/28	25.0

4.2 Land Tenure – *Cont'd*Table 4-3: Gibraltar Mineral Claims – *Cont'd*

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
207726	FFE #16	Claim	1966/MAY/16	2024/JUN/28	25.0
207729	BUD 7	Claim	1966/JUN/14	2024/JUN/28	25.0
207730	BUD 8	Claim	1966/JUN/14	2024/JUN/28	25.0
207731	EV 21	Claim	1966/JUN/14	2024/JUN/28	25.0
207732	EV 22	Claim	1966/JUN/14	2024/JUN/28	25.0
207749	PINE TREE #1	Claim	1967/JUL/04	2024/JUN/28	25.0
207750	PINE TREE #2	Claim	1967/JUL/04	2024/JUN/28	25.0
207751	FLO #2 FR.	Claim	1967/AUG/03	2024/JUN/28	25.0
207752	FLO #3 FR.	Claim	1967/AUG/29	2024/JUN/28	25.0
207753	FLO #4 FR.	Claim	1967/AUG/29	2024/JUN/28	25.0
207754	PINE TREE #3	Claim	1967/SEP/06	2024/JUN/28	25.0
207755	PINE TREE #4	Claim	1967/SEP/06	2024/JUN/28	25.0
207756	PINE TREE #5	Claim	1967/SEP/06	2024/JUN/28	25.0
207757	PINE TREE #6	Claim	1967/SEP/06	2024/JUN/28	25.0
207758	CAROL #4 FR	Claim	1968/JUL/12	2024/JUN/28	25.0
207763	H.A. #1	Claim	1968/OCT/16	2024/JUN/28	25.0
207764	H.A. #2	Claim	1968/OCT/16	2024/JUN/28	25.0
207766	H.A. #4	Claim	1968/OCT/16	2024/JUN/28	25.0
207767	HAS 2	Claim	1968/OCT/16	2024/JUN/28	25.0
207768	HAS 12	Claim	1968/OCT/16	2024/JUN/28	25.0
207769	HAS 13	Claim	1968/OCT/16	2024/JUN/28	25.0
207770	HAS 14	Claim	1968/OCT/16	2024/JUN/28	25.0
207771	HAS 15	Claim	1968/OCT/16	2024/JUN/28	25.0
207772	HAS 16	Claim	1968/OCT/16	2024/JUN/28	25.0
207773	HAS 17	Claim	1968/OCT/16	2024/JUN/28	25.0
207774	HAS 18	Claim	1968/OCT/16	2024/JUN/28	25.0

4.2 Land Tenure – *Cont'd*Table 4-3: Gibraltar Mineral Claims – *Cont'd*

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
207776	HAS 20	Claim	1968/OCT/16	2024/JUN/28	25.0
207777	VE 21	Claim	1969/APR/28	2024/JUN/28	25.0
207779	VAL #37	Claim	1969/JUL/18	2024/JUN/28	25.0
207780	VAL #39	Claim	1969/JUL/18	2024/JUN/28	25.0
207781	VAL #41	Claim	1969/JUL/18	2024/JUN/28	25.0
207782	VAL #43	Claim	1969/JUL/18	2024/JUN/28	25.0
207783	VAL #45	Claim	1969/JUL/18	2024/JUN/28	25.0
207784	VAL #47	Claim	1969/JUL/18	2024/JUN/28	25.0
207785	VAL #49	Claim	1969/JUL/18	2024/JUN/28	25.0
207787	STU #2 FR.	Claim	1969/JUL/18	2024/JUN/28	25.0
207788	STU #3 FR.	Claim	1969/JUL/18	2024/JUN/28	25.0
207789	STU #4 FR.	Claim	1969/JUL/18	2024/JUN/28	25.0
207792	STU #6 FR.	Claim	1969/AUG/12	2024/JUN/28	25.0
207793	VAL #35	Claim	1969/AUG/12	2024/JUN/28	25.0
207794	VAL #36	Claim	1969/AUG/12	2024/JUN/28	25.0
207795	VAL #38	Claim	1969/AUG/12	2024/JUN/28	25.0
207796	VAL #40	Claim	1969/AUG/12	2024/JUN/28	25.0
207797	VAL #42	Claim	1969/AUG/12	2024/JUN/28	25.0
207798	VAL #44	Claim	1969/AUG/12	2024/JUN/28	25.0
207799	VAL #46	Claim	1969/AUG/12	2024/JUN/28	25.0
207800	VAL #48	Claim	1969/AUG/12	2024/JUN/28	25.0
207801	VAL #50	Claim	1969/AUG/12	2024/JUN/28	25.0
207844	IT 3	Claim	1971/APR/06	2024/JUN/28	25.0
207855	SAP #5 FR.	Claim	1972/JUN/21	2024/JUN/28	25.0
207880	HA #5	Claim	1974/MAY/23	2024/JUN/28	25.0
207881	HA #6	Claim	1974/MAY/23	2024/JUN/28	25.0
207882	VAL #23	Claim	1974/MAY/23	2024/JUN/28	25.0
207883	VAL #24	Claim	1974/MAY/23	2024/JUN/28	25.0
207885	VAL #26	Claim	1974/MAY/23	2024/JUN/28	25.0
372063	TM7	Claim	1999/SEP/28	2024/JUN/28	25.0
374757	HD1	Claim	2000/MAR/07	2024/JUN/28	25.0
374758	HD2	Claim	2000/MAR/07	2024/JUN/28	25.0
374759	HD3	Claim	2000/MAR/08	2024/JUN/28	25.0
374760	HD4	Claim	2000/MAR/08	2024/JUN/28	25.0

4.2 Land Tenure – *Cont'd*Table 4-3: Gibraltar Mineral Claims – *Cont'd*

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
374761	HD5	Claim	2000/MAR/10	2024/JUN/28	25.0
375873	HD 12	Claim	2000/APR/19	2024/JUN/28	25.0
375874	HD 13	Claim	2000/APR/18	2024/JUN/28	25.0
375875	HD 14	Claim	2000/APR/18	2024/JUN/28	25.0
375876	HD 15	Claim	2000/APR/18	2024/JUN/28	25.0
376489	HD 7	Claim	2000/MAY/05	2024/JUN/28	175.0
376490	HD 8	Claim	2000/MAY/03	2024/JUN/28	125.0
376491	HD 9	Claim	2000/MAY/01	2024/JUN/28	75.0
516589		Claim	2005/JUL/10	2024/JUN/28	236.238
516591		Claim	2005/JUL/10	2024/JUN/28	157.456
516593		Claim	2005/JUL/10	2024/JUN/28	59.062
516602		Claim	2005/JUL/10	2024/JUN/28	196.851
516603		Claim	2005/JUL/10	2024/JUN/28	98.403
516604		Claim	2005/JUL/10	2024/JUN/28	78.787
516605		Claim	2005/JUL/10	2024/JUN/28	117.999
516876		Claim	2005/JUL/11	2024/JUN/28	630.379
516878		Claim	2005/JUL/11	2024/JUN/28	177.208
516881		Claim	2005/JUL/11	2024/JUN/28	433.009
516883		Claim	2005/JUL/11	2024/JUN/28	531.226
516887		Claim	2005/JUL/11	2024/JUN/28	78.683
516995		Claim	2005/JUL/11	2024/JUN/28	39.351
516996		Claim	2005/JUL/11	2024/JUN/28	59.005
516997		Claim	2005/JUL/11	2024/JUN/28	59.01
517212		Claim	2005/JUL/12	2024/JUN/28	59.003
739702	GRANITE MOUNTAIN	Claim	2010/APR/03	2024/JUN/28	39.3347
739722	GRANITE 2	Claim	2010/APR/03	2024/JUN/28	393.2894
1052538		Claim	2017/JUN/14	2024/JUL/13	19.669
204300	HY 8	Claim	1980/JUN/10	2024/JUL/21	75.0
204301	HY 9	Claim	1980/JUN/10	2024/JUL/21	50.0
204303	HY 11	Claim	1980/JUN/10	2024/JUL/21	225.0
204304	HY 12	Claim	1980/JUN/10	2024/JUL/21	350.0
204305	HY 13	Claim	1980/JUN/10	2024/JUL/21	150.0
204306	HY 14	Claim	1980/JUN/10	2024/JUL/21	175.0

4.2 Land Tenure – *Cont'd*Table 4-3: Gibraltar Mineral Claims – *Cont'd*

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
204307	HY 15	Claim	1980/JUN/10	2024/JUL/21	150.0
204308	HY 16	Claim	1980/JUN/10	2024/JUL/21	100.0
204443	HY 19	Claim	1981/MAR/24	2024/JUL/21	50.0
204444	HY 20	Claim	1981/MAR/24	2024/JUL/21	50.0
204539	ZE 3	Claim	1981/AUG/17	2024/JUL/21	500.0
204914	HY 22	Claim	1985/JAN/02	2024/JUL/21	50.0
204975	ZE 7	Claim	1985/AUG/16	2024/JUL/21	50.0
406338	TK5	Claim	2003/OCT/19	2024/JUL/21	500.0
507748		Claim	2005/FEB/23	2024/JUL/21	1946.553
517366		Claim	2005/JUL/12	2024/JUL/21	412.925
533751	CU ACE NORTH 3	Claim	2006/MAY/08	2024/JUL/21	471.479
739682	CHRIS	Claim	2010/APR/03	2024/JUL/21	39.3135
739742	CHRIS 2	Claim	2010/APR/03	2024/JUL/21	393.1019
739783	CHRIS 3	Claim	2010/APR/03	2024/JUL/21	392.9831
850472		Claim	2011/APR/01	2024/JUL/21	412.4648
850473		Claim	2011/APR/01	2024/JUL/21	471.3488
850475		Claim	2011/APR/01	2024/JUL/21	491.0131
850482		Claim	2011/APR/01	2024/JUL/21	471.3729
204302	HY 10	Claim	1980/JUN/10	2024/JUL/22	300.0
831129		Claim	2010/AUG/05	2024/DEC/31	39.3406
831133		Claim	2010/AUG/05	2024/DEC/31	39.3406
946877		Claim	2012/FEB/07	2024/DEC/31	58.9876
1033395	GIB1	Claim	2015/JAN/15	2024/DEC/31	550.9501
1033396	GIB2	Claim	2015/JAN/15	2024/DEC/31	492.1496

Table 4-4: Claims Optioned by Gibraltar Mines Ltd.

Title #	Name	Type	Issue Date	Good To Date	Area (ha)
1038340	CKN	Claim	2015/SEP/02	2023/FEB/13	353.7852
1049530	CKN 2	Claim	2017/JAN/27	2023/FEB/13	1002.468
1052073	CKN 3	Claim	2017/MAY/19	2023/FEB/14	392.672
1052712	CKN 4	Claim	2017/JUN/23	2023/FEB/14	98.2127
1060636	CKN 5	Claim	2018/MAY/17	2023/FEB/14	1040.922

4.3 Royalties and Obligations

In order to acquire a 100% interest in the five optioned mineral claims described above, Gibraltar Mines Ltd. is required to perform certain exploration activity on the claims and make cumulative payments of \$270,000 by December 2023. Milestone payments of \$200,000 are required upon completion of a NI 43-101 mineral resource and \$500,000 in the event of a production decision on the relevant claims. Upon production from the claims, they are subject to a 2% NSR royalty which could be reduced to 0.5% NSR in exchange for a one-time payment of \$3 million. None of the Mineral Resources and Reserves that are the subject of this report are contained within the optioned claims.

Taseko has entered into a silver stream agreement with Osisko Gold Royalties Ltd. that applies to Taseko's 75% share of the silver production. The details of this agreement are discussed in Section 19 of this report. The Gibraltar property is not subject to any other royalties, back-in rights, payments or encumbrances.

4.4 Permits and Environmental Liabilities

Permits required to conduct the ongoing and proposed future work on the Gibraltar property are discussed in Section 20 of this report.

The Gibraltar property is subject to environmental liabilities related to the rehabilitation of past and present mining activities including exploration activity. Gibraltar has letters of credit and surety bonds totaling \$79 million serving as a reclamation and closure bond. Environmental reclamation is discussed further in Section 20.

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 and Infrastructure

The Gibraltar Mine is accessed by a 20 km paved road from the Village of McLeese Lake. McLeese Lake is located on Highway 97, 45 km north of the City of Williams Lake and 75 km south of the City of Quesnel. Daily flights are available into Williams Lake from Vancouver.

Potable and domestic use water is pumped from wells on the mine site. Process facilities operate using reclaimed water from the existing Tailings Storage Facility.

Gibraltar is connected to the provincial electrical grid by a 69 kV power line from the soda creek substation located between Williams Lake and McLeese Lake. Electricity is supplied by the British Columbia Hydro and Power Authority.

Fortis BC supplies natural gas to the site by underground pipeline.

A rail siding for the shipment of concentrate is in operation adjacent to Highway 97 at Macalister on the Canadian National Rail (CN) line to Vancouver, 9 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.

Gibraltar holds sufficient title for all mining and concentrator operations including tailings and waste disposal areas with the exception of a small extension of a lease boundary required to mine the full Extension Pit as discussed in Section 15 of this report.

5.2 Climate & Physiography

The Gibraltar mine lies in the Southern Fraser Basin in the rain shadow of the Coast and Cascade Mountains. Temperatures range from -30 to 30 °C. Annual precipitation is about 500 mm of which 32% falls as snow. Snow accumulation typically occurs from October to April reaching a peak in December/January with the freshet generally beginning in March and peaking in April. The rainy season typically occurs in June and July. Gibraltar operates year-round and is not subject to seasonal operations.

Elevation at the plant site is 1,125 m above sea level. The property is characterized by moderate topographical relief with elevations of 900 m to 1400 m above sea level with the highest areas located in the central area of the property and generally sloping to the west and east.

5.3 Local Resources

Accommodation for mine employees and supplies is available in the nearby communities of Williams Lake, Quesnel, and McLeese Lake. Gibraltar has an established workforce with 96% of mine employees living locally.

Gibraltar is located centrally between regional hubs in Prince George and Kamloops which are home to many suppliers, consultants, and contractors capable of servicing the mining industry. Any resources not available in these hubs would be available in Vancouver.

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 1,864 million pounds of copper in concentrate, 85 million pounds of cathode copper and 20 million pounds of molybdenum 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. The SX/EW plant was refurbished in 2006 and copper cathode production recommenced in 2007.

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 Taseko retained a 75% interest.

6.1 History – Cont'd

Mill capacity was increased 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.

The total production from restart in 2004 to December 31, 2021 was 369 million tons milled, producing 1,711 million pounds of copper in concentrate, 18 million pounds cathode copper and 25 million pounds of molybdenum.

SECTION 7
GEOLOGICAL SETTING AND MINERALIZATION

SECTION 7: GEOLOGICAL SETTING AND MINERALIZATION

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7.1 Introduction

The Gibraltar open pit mine is a calc-alkalic porphyry copper-molybdenum deposit entirely hosted by the Late Triassic Granite Mountain batholith, a component of the Quesnel volcanic arc terrane (van Straaten et al., 2020). The age, geologic setting and metal association of Gibraltar is typical of pluton-hosted porphyry Cu-Mo systems around the world, although it has a unique association of ore with ductile shear zones. Copper ore at Gibraltar typically occurs in potassic and ankeritic hydrothermal mineral assemblages, as predominantly disseminated and vein-hosted chalcopyrite mineralization.

7.2 Regional Geology

The Granite Mountain batholith that hosts the Gibraltar ore bodies occurs in a fault-bounded panel of Quesnel terrane rocks that project southward from the main part of this terrane, that are partially enveloped by rocks of the oceanic Cache Creek terrane that flank this panel to the east and south (Figure 7-1), (van Straaten et al., 2020). The Fraser Fault system bounds this fault panel to the west, and a sinistral offset of the Pinchi Fault system bounds it to the east. The Pinchi Fault that 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 a number of fault splays, including the Quesnel River Fault.

The Quesnel terrane is an approximately 30 km wide northwest-trending belt of rocks in the Gibraltar area that includes the Middle to Upper Triassic volcanic and sedimentary rocks of the Nicola Group, Late Triassic to Early Jurassic calc-alkaline and alkaline intrusions, and Lower to Middle Jurassic siliciclastic sedimentary rocks of the Dragan Mountain succession. The Cache Creek terrane envelops the Quesnel terrane rocks of the Granite Mountain fault panel to the east and south. The scattered exposures of the Cache Creek terrane that occur in the region include outcrops of chert, argillite, basalt, limestone, sandstone, gabbro, and serpentinite. Several tonalite, quartz diorite, and granodiorite intrusions cut the Cache Creek complex, including the Sheridan Creek stock at the south end of Granite Mountain. Unconsolidated Quaternary deposits and flat-lying basalt flows of the Chilcotin Group (Miocene-Pleistocene) underlie the area west of the Granite Mountain fault block. The Gibraltar region was 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

Foliation within the Granite Mountain batholith typically dips at moderate to gentle angles to the south and shows a general increase in intensity from north to south. Regional foliation trends 310° with subordinate strikes of 270° to 290° . Dips are southerly at 30° to 50° . A similar foliation is also present in adjacent rocks of the Nicola Group and the Sheridan Creek Stock, indicating a mid-Cretaceous or younger age of formation (Schiarizza 2015). Unexposed faults bound the Granite Mountain fault panel, to the east by a north-northwest striking offset of the terrane boundary fault, to the south by an east-striking south-dipping thrust or reverse fault, and to the west by north and north-northwest striking faults of the Fraser fault system.

7.2 Regional Geology – *Cont'd*

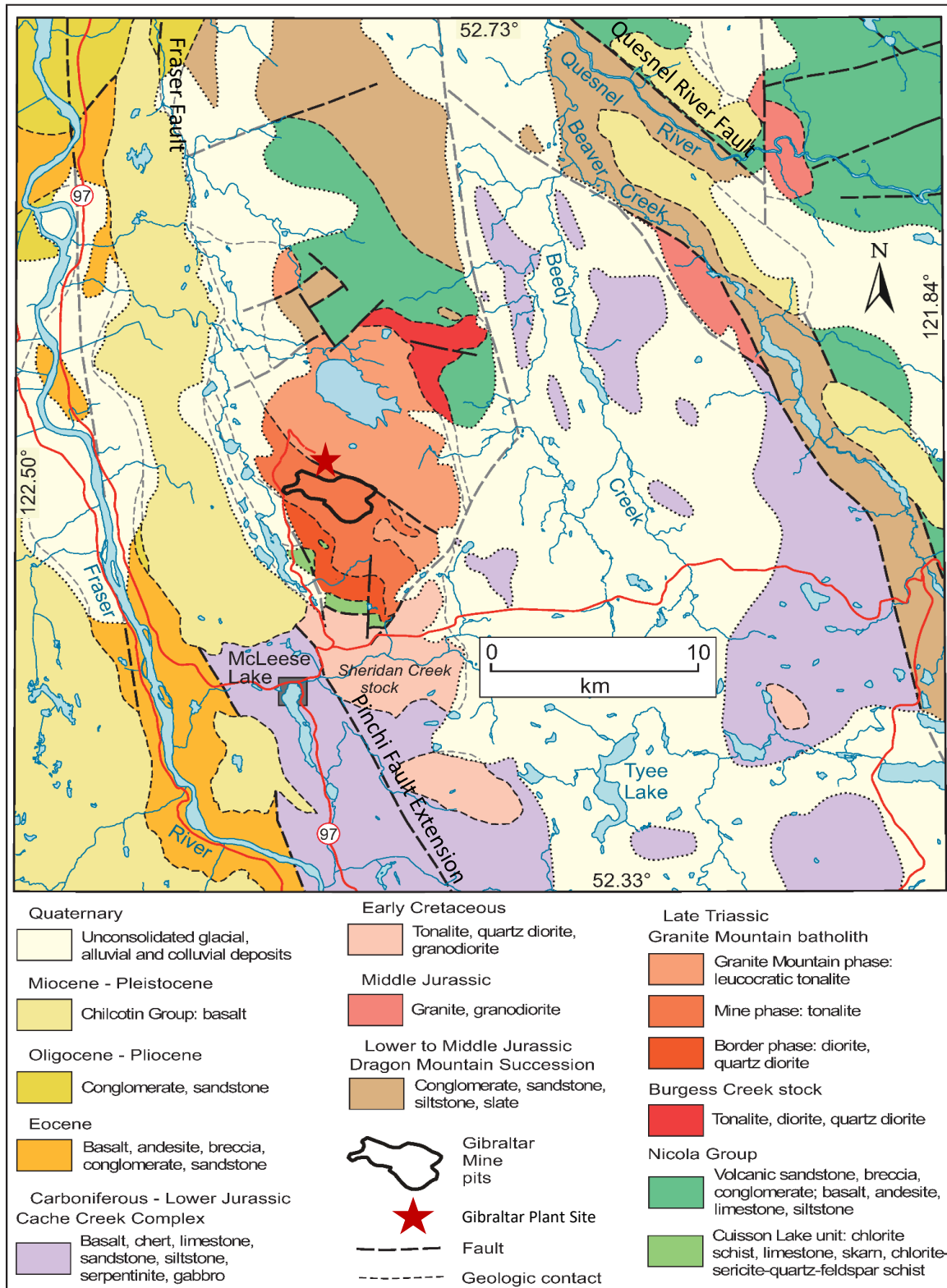


Figure 7-1: Regional Geology (Modified after van Straaten et al., 2020)

7.3 Local and Property Geology

The Granite Mountain batholith hosts the Gibraltar Cu-Mo deposits and mineralization occurs predominantly in the Mine phase tonalite. Mineralization is spatially associated with ductile shear zones that form two distinct east-west-oriented trends. The northern trend includes the Pollyanna, Connector, and Gibraltar deposits, and the southern trend includes the Granite and Extension deposits. Mining commenced in 1971 in the Gibraltar pit and expanded to the Gibraltar West (now known as Extension), Pollyanna, and Granite pits. Current mining is focussed on the Pollyanna and Gibraltar pits, with future mining projected in Connector, Gibraltar and Extension areas. Additional mineralized zones identified beyond the current mine plan include the TK Zinc zone to the west, the 98 Oxide zone to the east and the Sawmill zone to the south.

The main mineralized zones defined on the Gibraltar Mine property occur within the Granite Mountain Batholith in a broad zone of shearing and alteration. The batholith is a composite body consisting of three major phases, the Border phase diorite that hosts the Sawmill zone, the Mine phase tonalite that hosts the main deposits, and the generally barren to weakly mineralized Granite Mountain phase trondhjemite to the north of the Gibraltar and Pollyanna pits (Figure 7-2). Two volumetrically minor intrusive units also exist in the mine area, late leucocratic dikes of trondhjemite composition that occur in the Granite and Pollyanna pits, and a generally unaltered feldspathic tonalite unit that occurs southwest of the Granite pit. 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.

Main-mineral potassic and ankeritic hydrothermal mineral assemblages containing main-stage hydrothermal veins largely host the hypogene copper ore at Gibraltar. Late-mineral phyllic mineral assemblages containing late-stage hydrothermal veins commonly flank and partially overprint the ore zones. Early-mineral propylitic mineral assemblages containing early-stage hydrothermal veins are predominantly present farther away from the ore zones. Pre-mineral deuteric alteration (chlorite-epidote), and post-mineral greenschist metamorphic facies (chlorite-sericite) shear zones that lack sulfides and hydrothermal veins and are present farthest away from the ore zone (van Straaten et al., 2020). Texturally destructive matrix replacement occurs in late-mineral phyllic assemblages and strongly foliated chlorite and (or) sericite post-mineral alteration zones that are common throughout the property.

7.3 Local and Property Geology – *Cont'd*

Documentation of the geometry, relative timing, and kinematics of deformation structures at Gibraltar by early workers suggested that Gibraltar is a synkinematic porphyry system. However, more recent analysis and age dating suggests that deformation post-dates mineralization (van Straaten et al., 2020). The dominant tectonic foliation varies across the property, ranging from southwest-, to southeast-dipping. Major reverse shear zones that are several tens of metres wide and extend along strike for several kilometres are observed in all pits. Ductile reverse shear zones, such as the Granite Lake and Granite Creek faults, have a strong association with ore, and north- and northeast-dipping conjugate thrust faults are widespread. The Granite Lake fault, a ductile reverse shear zone, forms the lower ore boundary at Granite pit and appears to cause significant displacement of mineralization. Smaller scale imbricate thrust faults, spaced about 10–20 m apart and with the same attitude and shear sense as the Granite Lake shear zone, are common in Granite, Pollyanna, and the previously mined Gibraltar West pits. Imbricate thrusts are known to stack the ore, causing repetitions of ore with a minimum displacement of several tens of metres (Oliver, 2006). Dextral strike-slip fault zones strike northwest to north-northeast, are steeply dipping and crosscut all units including the ductile reverse shear zone structures.

Normal faults that offset the deposit strike north to northeast and dip 40–60° west to northwest are intensely fractured and weathered. For example, in the Granite pit, Fault 10 (oriented 200/44 WNW) is a low-angle normal fault that offsets the orebody and Granite Lake fault by at least 60–110 m. These extensional faults are more brittle in appearance than the dextral strike-slip faults and are interpreted to have formed at shallower crustal levels.

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*

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 with a large body of fairly uniform grade yet with a strong degree of internal planar control. The Gibraltar deposit 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*

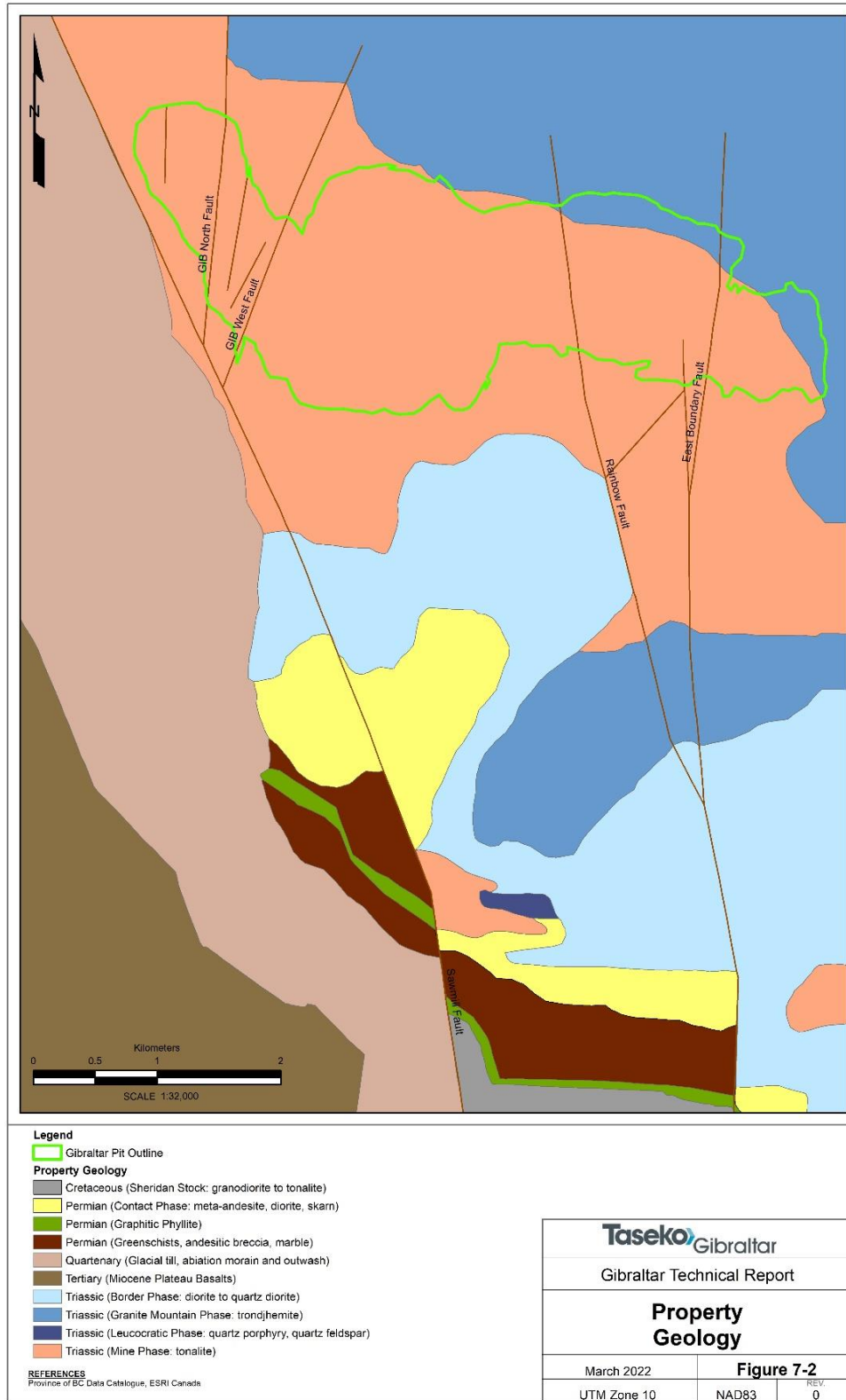


Figure 7-2: Property Geology

7.4 Mineralization

Primary hypogene copper mineralization in the form of disseminated and vein-hosted chalcopyrite predominates at Gibraltar. Minor bornite occurs typically in the east and northeast portions of the deposit. Molybdenite occurs mainly in quartz veins and fractures, and rarely as matrix disseminations. Sphalerite occurs in the Extension deposit, and is especially abundant in the TK Zinc zone farther west. Mineralization in the Granite, Pollyanna, and Connector deposits is hosted in massive to strongly foliated zones. In contrast, mineralization in the Gibraltar, Extension, and TK Zinc zones is almost entirely hosted in strongly foliated shear zones.

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 deposits. In the Gibraltar and Extension, 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. Sphalerite is present in the Gibraltar deposit and particularly abundant in parts of the Extension. 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. Overall, in terms of large-scale metal zonation Gibraltar ranges from $\text{Cu}\pm\text{Mo}$ in the east to $\text{Cu}\pm\text{Zn}$ towards the west.

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.

Supergene mineralization and secondary enrichment occurs to varying degrees in the Gibraltar and Connector deposits and is interpreted to be a remnant of a pre- or inter-glacial period of weathering (Bysouth et al., 1995). Supergene enrichment is best developed in close association with pyrite-rich ore (> 3% pyrite). Supergene enrichment occurs directly beneath a leach cap, forming a blanket-like zone about 15 m to 30 m thick containing the supergene copper minerals chalcocite, digenite and covellite. Episodes of Pleistocene glaciation removed most of the Tertiary weathering surface elsewhere. The present zone of oxidation and leaching in other areas is generally confined to the upper 1 m to 3 m of the bedrock surface. Limited zones of oxidation may also occur to depths up to 100 m where structural controls have facilitated significant groundwater percolation.

SECTION 8
DEPOSIT TYPE

SECTION 8: DEPOSIT TYPE

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8.1 Deposit Type

The Gibraltar open pit mine is a calc-alkalic porphyry copper-molybdenum deposit entirely hosted by the Late Triassic Granite Mountain batholith. This pluton occurs in a fault-bounded panel of Quesnel terrane rocks that are partially enveloped by rocks of the oceanic Cache Creek terrane (van Straaten et al., 2020). The oceanic Cache Creek terrane that occurs to the west and the Quesnel volcanic arc terrane are part of the accretion-subduction complex that was responsible for generating the Granite Mountain batholith and other Late Triassic plutons such as the Guichon Creek batholith that hosts the Highland Valley porphyry Cu-Mo deposits located 250 km to the south-southeast.

Gibraltar is similar in age, geologic setting and metal association to the Highland Valley deposits, and together they define an important Late Triassic calc-alkaline intrusive and porphyry Cu-Mo mineralization event within the western part of the Quesnel terrane. Despite similarities to Highland Valley and typical pluton-hosted porphyry Cu-Mo systems around the world, the Gibraltar deposit is unique for its association of ore with ductile shear zones and the alteration assemblages associated with mineralization. Significant post-mineral deformation is evident at Gibraltar, including mid-Cretaceous to Eocene greenschist-facies reverse shear zones and faults (van Straaten et al., 2020).

Mineralization in the Pollyanna, Granite, and Connector deposits is hosted in massive to strongly foliated zones. In contrast, mineralization in the Extension deposit is almost entirely hosted in strongly foliated shear zones. At Gibraltar mine, the Granite, Pollyanna and Connector deposits have been described as “porphyry-type ore”, the Extension deposit as “shear zone ore,” and Gibraltar as intermediate between the two (Bysouth et al., 1995).

Exploration techniques for discovering and defining mineralization at Gibraltar include; core drilling, rotary drilling, induced polarization (IP) geophysical surveys, and surface geochemical sampling. Recognition and understanding of the geological and structural features of the Pollyanna, Granite, Connector and Gibraltar deposits, such as the southerly dip of the mineralized zones, and offsets by a series of northerly trending, generally steeply west-dipping faults, has been successfully used to guide drillhole placement and exploration of these deposits.

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 km of line cutting and some 220 line-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-km 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 (Walcott) 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-km 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.

As well in 2015 one exploration diamond drill hole northwest of the current Extension Resource was drilled to a total depth of 2507 ft (764.1 m). 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.

An additional 10 diamond drill holes, totalling 19,165 ft (5843.0 m), were drilled between November 2016 and February 2017 as follow-up to the 2015 drill program. This program was successful in confirming the presence of porphyry style mineralization along strike of the 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.

9.1 Exploration – Cont'd

In 2017 two geophysical surveys were conducted over the Extension area by Walcott. 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 400 m.

The collected data was used to target a diamond drill program which consisted of two exploration diamond drill holes totaling 3941 ft (1201.4 m) 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.

In 2021 a program targeting the porphyry core with deep-penetrating geophysical surveys was completed by Quantec Geosciences Ltd. (Quantec), who conducted 23.7 line-km of IP and 27.1 km of magnetotelluric surveys on four lines. This survey is described further in report titled “Assessment Report on the 2021 Titan Induced Polarization/ Magnetotelluric Survey Performed on the Gibraltar Mine Property” by Geoff Newton January 2022, and filed as BC Geological Assessment Report 39631 on ARIS.

Walcott extended the Quantec survey with 19.7 line-km of IP on four lines to follow-up on the anomalies noted in the Copper King North (CKN) area for the purpose of drill targeting. TerraLogic collected 1,201 soil samples on a 400 m by 50 m grid in the CKN area in 2021 as further refinement to the drill targeting in this area.

Exploration comprised 40% of the footage completed in the 2021 drill program. Six exploration holes totalling 7,998 ft were completed in 2021; three holes in the CKN area (CKN21-001 through CKN21-003) on geophysical and geochemical anomalies, two holes in the Gunn area (2021-005 and 2021-006), and one hole in the 98 Oxide area (2021-007). These holes are described further in Section 10.8.

SECTION 10
DRILLING

SECTION 10: DRILLING

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10.1 Introduction

Extensive drilling has taken place on the Gibraltar Mine property in 49 of the last 57 years. This drilling has been used to explore, delineate and define the resources and reserves of the Gibraltar copper-molybdenum deposits. Of the 2,526 holes and 1.5 million feet drilled, 47% of the holes and 56% 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 model grades used in the mineral resource and reserve estimates as 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, are outside the modeled resource area or were unavailable at the time the resource model was generated. A plan of drillhole locations by area is illustrated in Figure 10-1.

10.1 Introduction – *Cont'd*

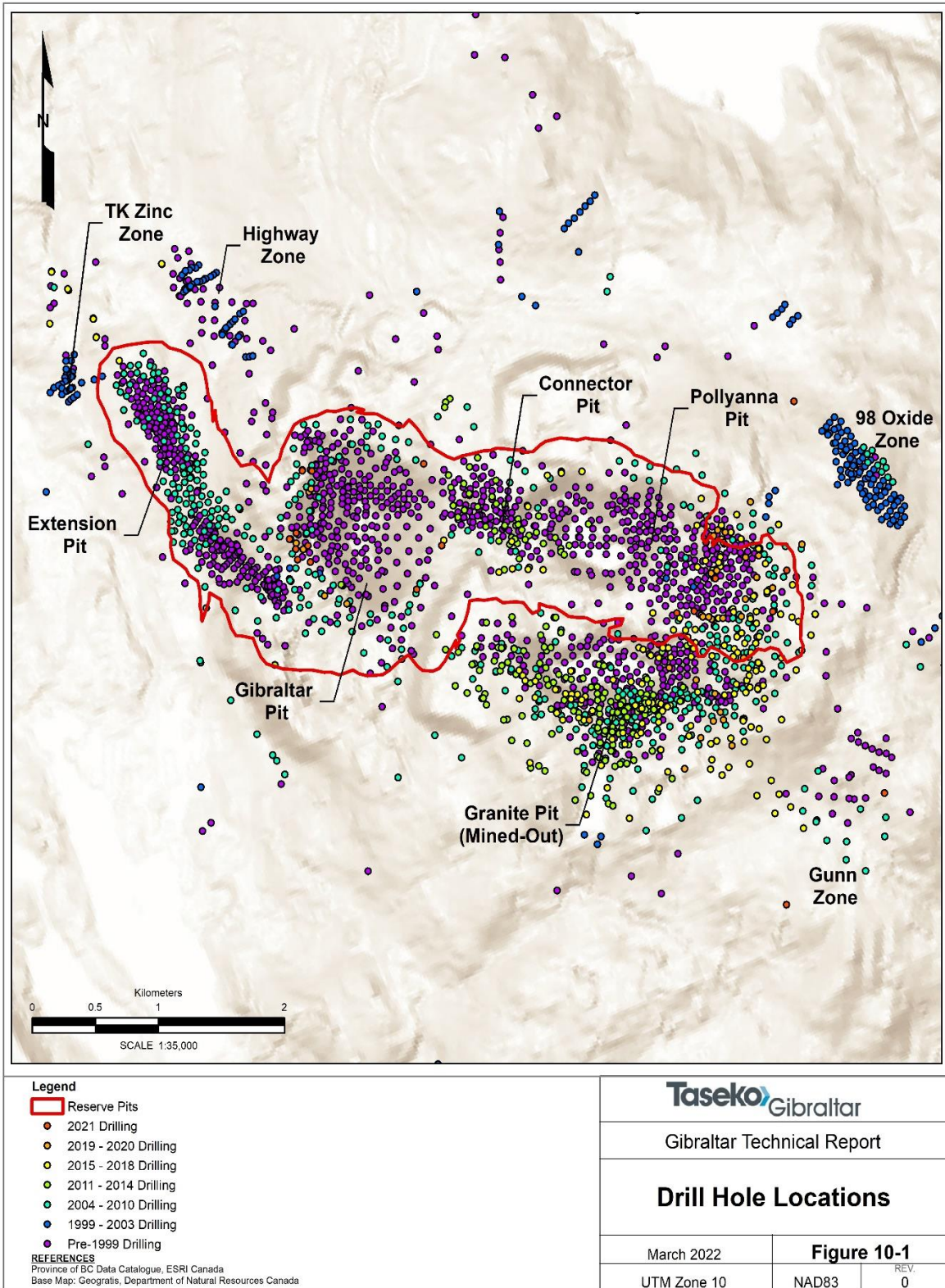


Figure 10-1: Drill Hole Locations by Area

10.1 Introduction – *Cont'd*

Table 10-1: Drilling Summary by Area & Year Intervals for Holes on the Property

Area	1965-1998		1999-2010		2011-2018		2019-2020		2021		Total	
	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)
Gibraltar	297	154,578	84	81,224	4	2,227	6	5,695	11	6,797	402	250,521
Extension	272	156,454	130	110,977	13	25,614	0	0	0	0	415	293,045
Granite	226	108,850	169	136,909	268	179,950	11	7,307	0	0	674	433,015
Pollyanna	225	111,630	70	55,138	44	33,784	18	15,512	5	5,353	362	221,417
Connector	126	66,518	14	12,118	49	47,937	0	0	0	0	189	126,573
Other	222	87,246	248	140,614	8	10,206	0	0	6	7,998	484	246,064
Total	1,368	685,276	715	536,980	386	299,718	35	28,514	22	20,148	2,526	1,570,635

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

Area	1965-1998		1999-2010		2011-2018		2019-2020		Total	
	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)	Holes	Length (ft)
Gibraltar	295	153,435	84	81,224	1	2,077	6	5,695	386	242,431
Extension	242	150,113	130	110,977	13	25,614	0	0	385	286,704
Granite	222	107,650	168	136,109	239	161,380	11	7,307	640	412,445
Pollyanna	225	111,630	65	52,197	39	33,434	18	15,512	347	212,773
Connector	126	66,518	14	12,118	49	47,937	0	0	189	126,573
Other	55	27,834	225	133,354	8	10,206	0	0	288	171,394
Total	1,165	617,180	686	525,979	349	280,648	35	28,514	2,235	1,452,320

10.2 Pre-1999 Drilling

The first recorded drilling took place in the area of exposed surface mineralization in Gibraltar West in 1965, followed shortly thereafter by Gibraltar East (Gibraltar pit). Initial discovery of the Granite and Pollyanna deposits was by drilling in September and October of 1967. From 1965 through 1971, drilling totalled 286,718 feet in 596 holes in annual drill programs by various project operators with an average length of 480 feet per hole. Ranked in descending order of footage drilled, this work focussed on Gibraltar, Granite, Gibraltar West, Connector and Pollyanna. The first drilling on peripheral prospects Gunn, Sawmill, KV and Pothole was also in 1967, followed by Highway in 1969 and Water Tank in 1970. As the primary focus shifted to mine development and the start of operations in 1971, 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 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. The extensive footage completed in the 2003 program took place in several broad areas around the property. All cores from this period were drilled NQ size, except four HQ core size monitoring wells. Holes from this period averaged 530 feet in length.

Vertical drilling comprised 90% of holes with the remaining holes drilled at an inclination of –45 degrees to the northeast. No downhole surveying was performed. The 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, 492 holes added a further 418,106 feet; the bulk of the drilling took place in large programs in 2006 through 2008 and 2010. A significant amount of this drilling took place at Granite, Extension (formerly known as Gibraltar West), Gibraltar, Pollyanna and Connector deposits. Additional drilling also took place in the Gunn, 98 Oxide and KV areas. 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, 197 holes drilled a total footage of 151,267 feet. 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: 148 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 101 production or water well percussion holes.

Twenty-two core holes were drilled vertically. The 74 non-vertical core holes drilled at a wide range of azimuths and inclinations ranged from -45 to -85 degrees. All percussion production and water well holes were drilled vertically except four inclined water wells 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 took place according to procedures outlined by Gibraltar's geotechnical consultant. Input of geotechnical information was directly into a Microsoft Access database at the mine at the time.

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

The 2015 to 2018 drilling comprised 189 holes and 148,451 feet of drilling 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 Extension, 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 core holes, plus 79 production and water well percussion holes.

All 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 percussion holes were typically drilled in-pit on active ramps as in previous years.

The core recovery of holes drilled in this period measured from 10,716 drill run intervals averaging 10 feet in length is 96% and the average RQD is 62%.

Geotechnical and geological core logging took place in a similar fashion to previous programs. Geotechnical core logging followed the procedures outlined by Gibraltar's geotechnical consultant. Geological logging followed internal guidelines, and this work took place in a secure facility at Gibraltar Mine. Categorization and/or quantification of all relevant mineralization, alteration, lithology and structural information was by entry directly into a digital database at the mine, followed by transmittal of this digital data to a SQL database in Vancouver.

10.7 2019 – 2020 Drilling

Thirty-five holes totalling 28,514 feet were drilled in 2019 and 2020 with an average length of 815 feet. Of this, 40% was drilled NQ core size, 31% HQ core size, 22% 5-inch diameter rotary and 9% was casing. The 2019 program targeted infill and production drilling in Granite and Pollyanna, while the 2020 program targeted production and infill drilling in Gibraltar and Pollyanna.

Resource holes were typically drilled NQ core size and geotechnical holes HQ core size. Exploration, definition and infill drilling comprised 64% of the total footage. The number of holes drilled in the various areas is as follows: 11 in Granite, 18 in Pollyanna, and 6 in Gibraltar. The number by primary purpose of these typically multi-purpose holes is, 11 exploration, delineation and infill core holes, 10 piezometer and monitoring core holes, plus 14 production and infill percussion holes.

Twenty-one non-vertical core holes were drilled from –40 to –80 degrees in inclination in a wide range of azimuths. All 14 production percussion holes were drilled vertically. As in previous programs, the AD series of percussion holes were typically drilled in-pit on active ramps.

The core recovery of holes drilled in this period measured from 1,305 drill run intervals averaging 10 feet in length is 96% and the average RQD is 66%.

Geotechnical and geological core logging took place in a similar fashion to previous programs. Geotechnical core logging followed the procedures outlined by Gibraltar's geotechnical consultant. Geological logging procedures followed internal guidelines, and this work took place in a secure facility at Gibraltar Mine. Categorization and/or quantification of all relevant mineralization, alteration, lithology and structural information was by entry directly into a digital database at the mine, followed by transmittal of this digital data to a SQL database in Vancouver.

10.7 2019 – 2020 Drilling – *Cont'd*

Table 10-3: 2019 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2019-001	57,369.5	48,407.0	4,361.0	1,258	Pollyanna E	Infill	270	-70
2019-002	55,905.6	48,795.8	3,900.8	1,299	Pollyanna	Infill	140	-80
2019-003	55,763.7	48,722.6	3,900.5	1,107			160	-50
2019-004	52,700.0	45,000.0	2,963.0	1,327	Granite	Infill	175	-40
AD19-01	56,100.3	45,301.4	3,898.8	100	Granite	Production	0	-90
AD19-02	55,927.4	45,075.3	3,901.8	580			0	-90
AD19-03	55,610.4	44,650.4	3,903.0	350			0	-90
AD19-04	55,804.1	47,593.8	4,187.8	800	Pollyanna	Production	0	-90
AD19-05	56,100.9	47,625.1	4,211.2	800			0	-90
AD19-06	56,189.4	45,113.5	3,799.6	500	Granite	Production	0	-90
AD19-07	55,950.0	45,750.0	3,748.5	400			0	-90
AD19-08	56,987.8	49,196.6	4,292.0	500	Pollyanna E	Production	0	-90
AD19-09	55,449.5	46,074.9	3,702.1	350	Granite	Production	0	-90
MW2019-01	55,214.2	43,872.9	4,100.7	1,027	Granite 6S	Piezometer	345	-60
MW2019-02	54,740.9	46,359.3	3,603.3	626	Granite 6N	Piezometer	235	-70
MW2019-03	56,578.3	47,679.5	4,211.1	1,007			202	-70
MW2019-04	58,104.6	49,513.9	4,408.6	1,042	Pollyanna E	Piezometer	255	-65
MW2019-05	56,733.7	50,524.7	4,402.5	1,467			215	-65

10.7 2019 – 2020 Drilling – *Cont'd*

Table 10-4: 2020 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2020-001	45,130.2	49,011.6	3,237.1	817	Gibraltar	Infill	75	-47
2020-002	46,306.4	47,695.2	3,450.2	858			10	-54
2020-003	45,245.0	50,431.2	3,446.4	1,008			62	-45
2020-004	56,946.7	48,659.1	4,200.3	1,237	Pollyanna PL2	Infill	279	-42
2020-005	56,675.3	48,112.4	4,202.8	1,317			297	-46
2020-006	55,577.1	47,642.6	4,148.7	937			50	-60
2020-007	55,730.3	47,643.1	4,150.8	1,007			78	-70
AD20-01	56,650.8	49,149.5	3,947.1	340	Pollyanna E	Production	0	-90
AD20-02	55,799.2	49,651.5	3,947.2	400			0	-90
AD20-03	55,899.5	49,799.2	3,948.3	250			0	-90
AD20-04	56,052.2	49,497.9	3,951.4	500			0	-90
AD20-05	56,100.1	49,748.0	3,947.9	250			0	-90
MW2020-01	56,430.0	44,481.1	4,019.8	1,040	Granite G6C	Infill	350	-60
MW2020-02	56,666.2	46,660.8	3,901.6	1,001	Pollyanna G7	Infill	225	-60
MW2020-03	44,944.2	49,156.2	3,311.9	1,004	Gibraltar	Infill	240	-75
MW2020-04	45,291.3	50,509.7	3,455.8	1,004			0	-80
MW2020-05	45,717.1	47,876.3	3,392.8	1,004			180	-75

10.8 2021 Drilling

The 2021 drill program comprised 22 holes totalling 20,148 feet with an average length of 916 feet. A listing of the collar coordinates, orientation, purpose and area drilled for these holes is in Table 10-5. A list of the significant assay intervals encountered in these holes is in Table 10-6. Of the footage drilled in 2021, 56% was NQ core size, 28% HQ core size, 8% 5-inch diameter rotary percussion and 8% was casing. Resource holes were typically drilled NQ core size and geotechnical holes were drilled HQ core size. Exploration, comprised 40% of the drilling, and delineation and infill drilling comprised 29% of the total footage, of which 11 holes were in Gibraltar and five in Pollyanna. The primary purpose of the 16 multi-purpose holes within the pit areas include four infill core holes, six piezometer core holes, plus six production and water well percussion holes.

All of the 16 core holes drilled non-vertically were from -50 to -75 degrees inclination in a wide range of azimuths, and all six production and water well percussion holes were drilled vertically. As in previous programs, the AD series of percussion 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 359 drill run intervals averaging 10 feet in length is 97% and the average RQD is 64%.

10.8 2021 Drilling – *Cont'd*

Table 10-5: 2021 Drill Hole Collar Locations & Orientations in Gibraltar Mine Grid

Hole	East-X	North-Y	Elev-Z	Length (ft)	Area	Purpose	Azimuth	Dip
2021-001	55,347.5	47,779.2	3,850.0	1,149	Pollyanna	Infill	0	-65
2021-002	55,876.0	48,600.6	3,766.3	1,139			330	-70
2021-003	45,327.1	48,700.1	3,249.5	809	Gibraltar	Infill	90	-70
2021-004	44,770.4	49,247.0	3,380.0	849			87	-47
2021-005	57,960.9	40,591.2	3,937.5	1,929	Gunn	Exploration	270	-80
2021-006	60,431.6	43,422.4	4,166.7	1,528			45	-65
2021-007	57,792.1	53,041.5	4,106.2	1,058	North Oxide	Exploration	45	-60
AD21-01	45,300.6	50,949.7	3,380.0	200	Gibraltar	Production	0	-90
AD21-02	45,050.9	50,949.5	3,400.9	200			0	-90
AD21-03	44,940.0	49,404.1	3,334.3	370			0	-90
AD21-04	44,940.6	49,009.8	3,294.8	350			0	-90
AD21-05	44,994.2	48,750.4	3,275.5	350			0	-90
AD21-06	45,250.3	49,100.2	3,239.5	400			0	-90
CKN21-001	72,808.0	67,598.0	3,786.0	1,027	Copper King North	Exploration	45	-75
CKN21-002	75,691.0	67,711.0	3,267.0	1,588			225	-50
CKN21-003	75,326.0	66,608.0	3,235.0	868			45	-50
MW2021-01	54,900.5	47,719.3	4,087.6	867	Pollyanna	Infill	44	-75
MW2021-02	48,204.5	51,215.1	3,791.8	1,139	Gibraltar	Infill	205	-55
MW2021-03	48,116.0	48,102.9	3,648.6	1,100			330	-65
MW2021-04	48,734.2	49,206.3	3,694.2	1,030			254	-75
MW2021-05	57,393.1	47,828.8	4,349.3	1,109	Pollyanna	Infill	270	-70
MW2021-06	57,728.0	48,856.7	4,365.1	1,089			270	-75

10.8 2021 Drilling – *Cont'd*Table 10-6: 2021 Drill Holes - Significant Assay Intervals¹

Area	Hole	From (ft)	To (ft)	Interval (ft)	Cu (%)	Mo (ppm)	Ag (g/t)	Zn (ppm)
Pollyanna	2021-001	119	179	60	0.23	59	0.4	31
		439	459	20	0.21	64	0.3	33
	2021-002	639	869	230	0.38	137	0.7	40
		889	919	30	0.46	970	1.1	156
		969	1,029	60	0.29	230	0.8	73
Gibraltar	2021-003	60	109	49	0.34	81	0.5	239
		219	239	20	0.21	37	1.5	189
		314	659	345	0.25	41	0.5	54
	2021-004	279	359	80	0.27	54	0.7	105
		429	459	30	0.23	80	0.5	82
		569	739	170	0.27	77	0.6	87
Gunn	2021-005	1,213	1,249	36	0.22	17	0.5	156
	2021-006	No significant interval						
98 Oxide	2021-007	Results Pending						
Pollyanna	MW2021-01	147	417	270	0.28	26	0.5	36
Gibraltar	MW2021-02	169	209	40	0.25	4	0.2	61
		389	429	40	0.32	6	0.7	52
		849	979	130	0.37	94	0.5	31
		1,009	1,059	50	0.39	526	0.6	28
	MW2021-03	700	740	40	0.21	57	0.3	42
		880	930	50	0.24	154	0.3	51
MW2021-04	No significant interval							
Pollyanna	MW2021-05	739	759	20	0.21	13	0.5	41
		939	1,109	170	0.31	99	0.7	47
	MW2021-06	154	229	75	0.21	173	0.9	127
Gibraltar	AD21-01	180	200	20	0.22	20		
	AD21-02	110	140	30	0.51	<10		
	AD21-03	60	160	100	0.24	67		
		180	210	30	0.22	70		
		240	270	30	0.28	83		
	AD21-04	180	300	120	0.21	75		
	AD21-05	No significant interval						
	AD21-06	50	110	60	0.32	42		
300		390	90	0.21	63			
Copper King North	CKN21-001	No significant interval						
	CKN21-002	No significant interval						
	CKN21-003	No significant interval						

¹ Significant interval defined as $\geq 0.2\%$ Cu over ≥ 20 ft.

10.9 Surveying

Surveying of final drill hole collar locations for all holes drilled since 1999 was 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 2021 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 frequency was increased to every 200 feet. Geotechnical drillhole surveys were taken more frequently, typically every 150 feet. Survey data were checked as to their validity and then 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.

10.10 Core Recovery

Regular measurement of RQD was on a drill run basis from the 1979 drill program onwards for cored drillholes. The measurement of core recovery was added to the geotechnical program in 1999. Overall drill run intervals average 10 feet in length with an average RQD of 60% for 83,843 intervals measured. The average core recovery in the 1999 through 2021 programs is 96% for the 62,168 drill runs measured. Approximately 45% of the intervals measured have 100% recovery. Table 10-7 summarizes the drill core recovery and RQD.

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	10,716	99,254	96	62
2019-2020	1,350	11,607	96	66
2021	1,134	11,332	98	71
Total	83,843	814,541	96	60

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

Figure 10-2 and Figure 10-3 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.

10.10 Core Recovery – *Cont'd*

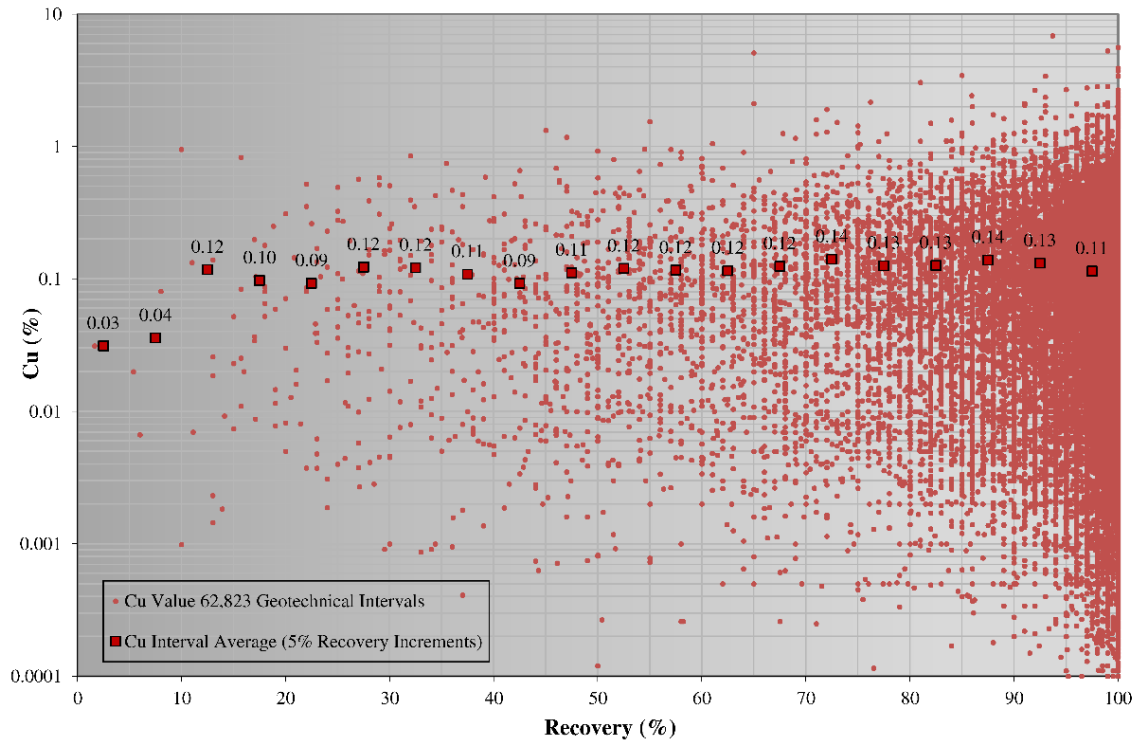


Figure 10-2: Drill Core Recovery Versus Copper Grade

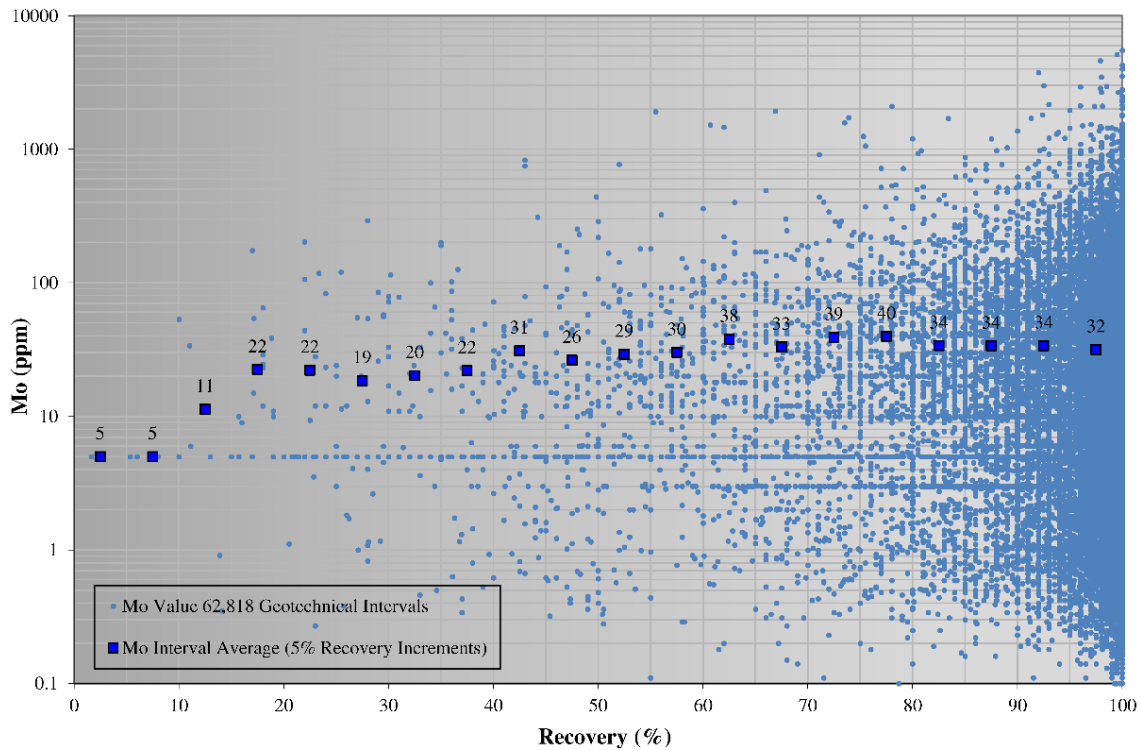


Figure 10-3: Drill Core Recovery Versus Molybdenum Grade

10.11 Cross Sections

Representative cross sections through the, Pollyanna, Connector, Gibraltar, and Extension zones are shown in Figures 10-4 through 10-7. These figures show material classification, ore boundaries and drillhole traces. Drillhole traces are shown within a viewing window of +/- 50 feet of the section.

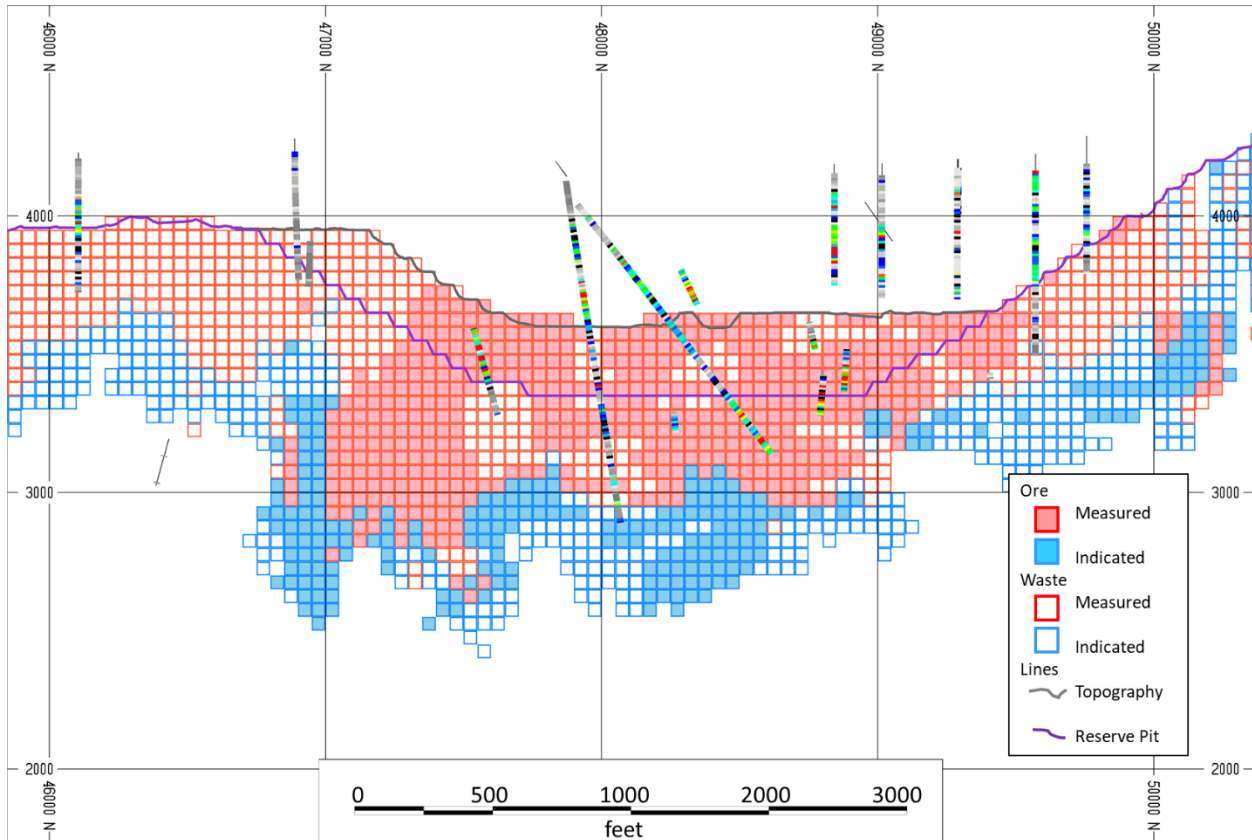


Figure 10-4: Pollyanna Cross Section 56,300 East

10.11 Cross Sections – *Cont'd*

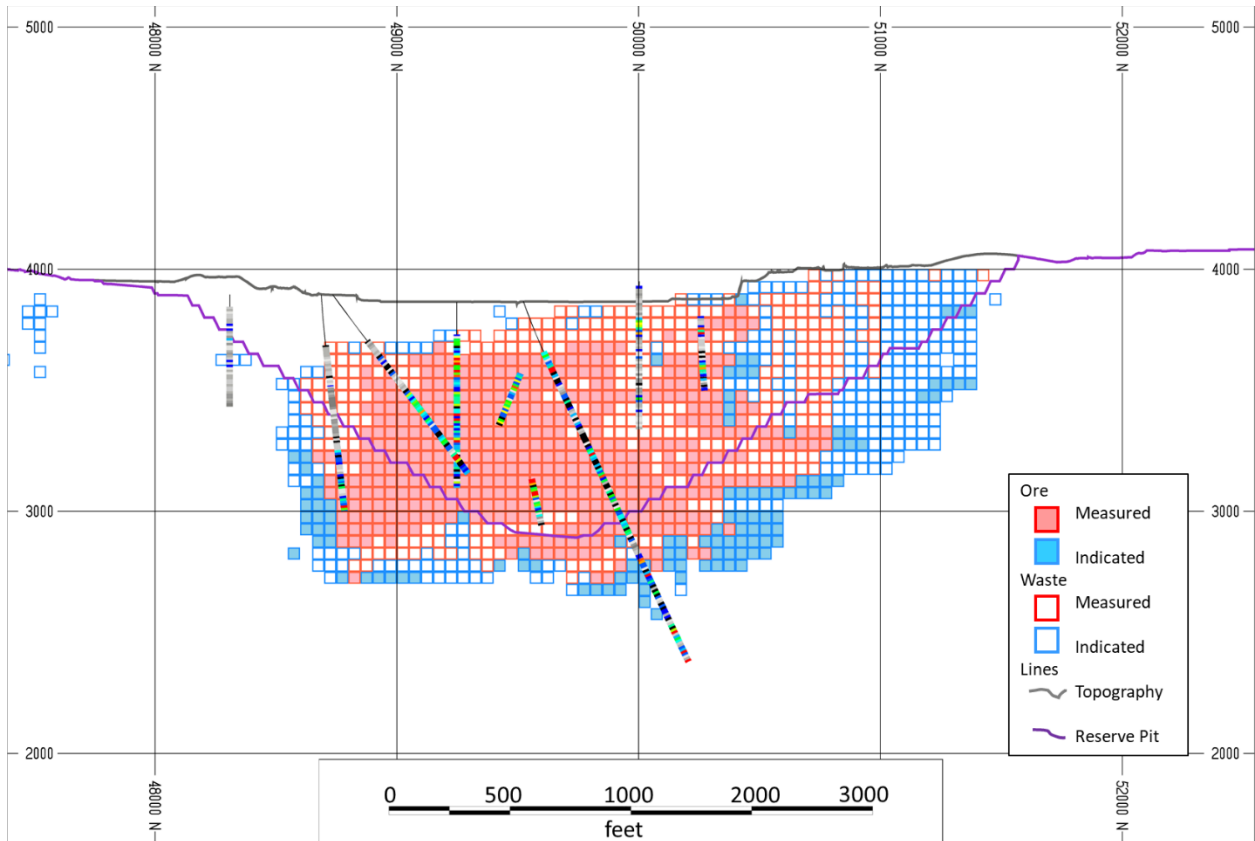


Figure 10-5: Connector Cross Section 51,000 East

10.11 Cross Sections – *Cont'd*

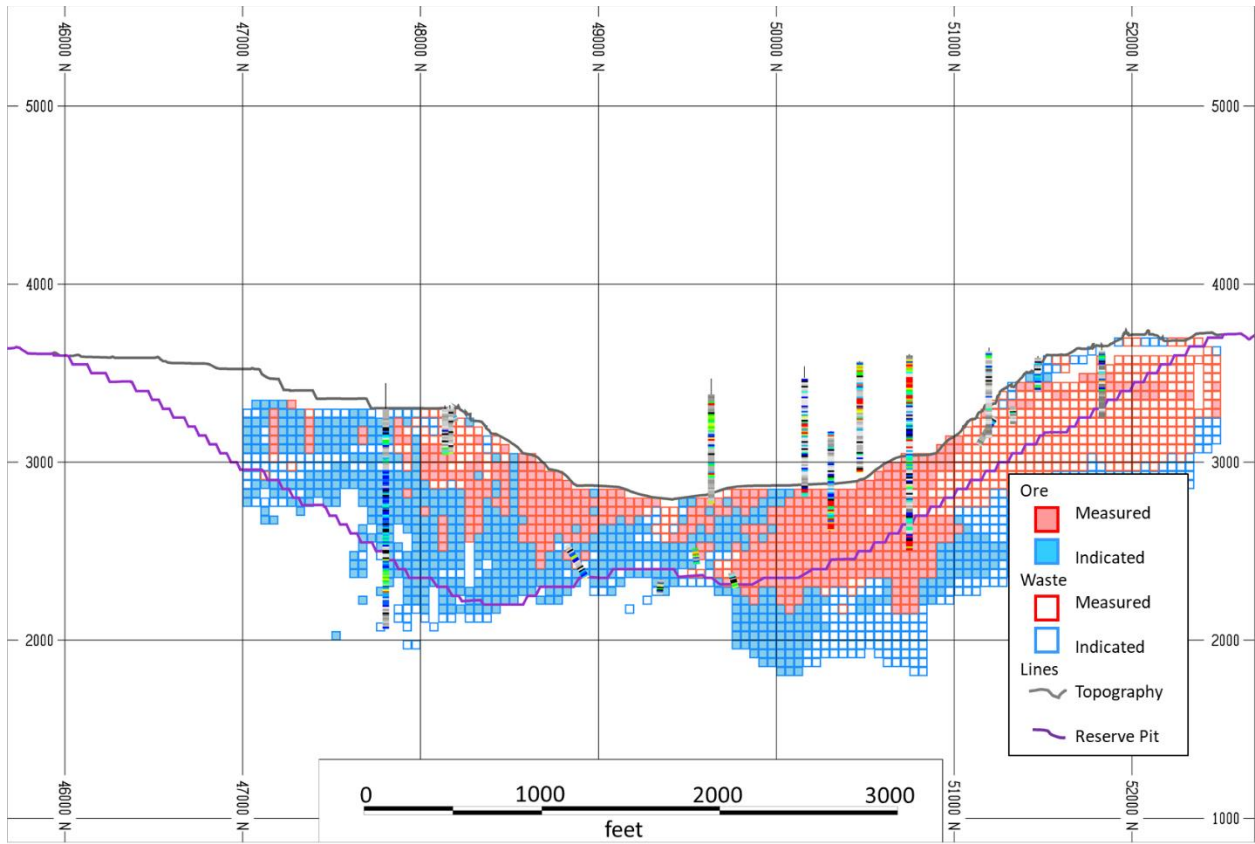


Figure 10-6: Gibraltar Cross Section 46,150 East

10.11 Cross Sections – *Cont'd*

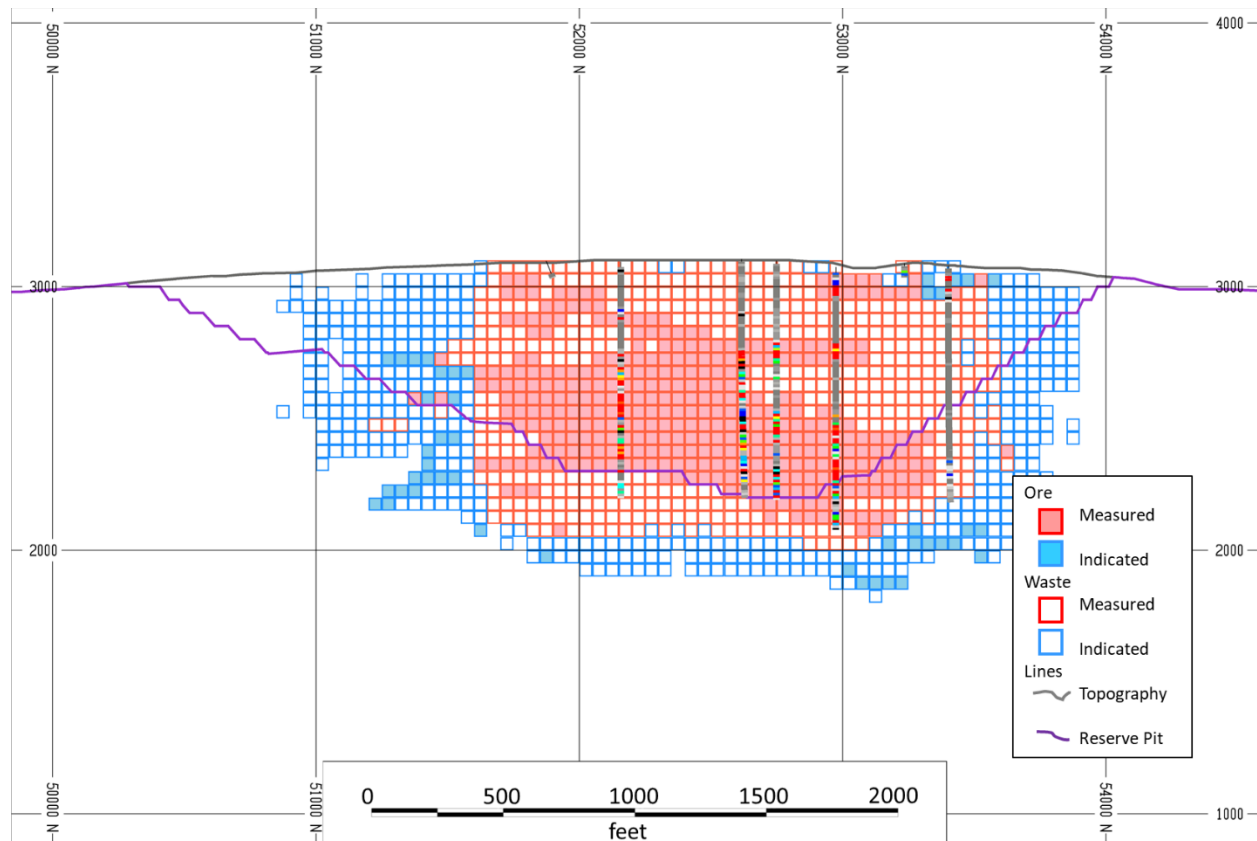


Figure 10-7: Extension Cross Section 41,150 East

10.12 Conclusions

The drilling and sampling programs at Gibraltar were carried out in a proficient manner consistent with industry standard practice. Core recovery is typically very good and averages over 96%. No significant factors of drilling, sampling, or recovery that impact the accuracy and reliability of the results were observed. The survey accuracy of the Gibraltar drill holes is acceptable, and they have been used to guide mining activities for many years.

The QP considers the drill programs to be reasonable and adequate for the purposes of mineral resource and reserve estimation.

SECTION 11
SAMPLE PREPARATION, ANALYSIS AND SECURITY

SECTION 11: SAMPLE PREPARATION, ANALYSIS AND SECURITY

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11.1 Introduction

Almost 140,000 samples have been taken for total copper analysis from drilling at Gibraltar since 1965. About 95% of these samples were also assayed for molybdenum, 51% for acid soluble copper, 51% for acid soluble iron, 47% for multi-element ICP and 38% 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 2021 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 Laboratories 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
2012-2019	ALS Minerals, Kamloops & Gibraltar Mine Lab	ALS Minerals, North Vancouver & Gibraltar Mine Lab	Bureau Veritas (Acme) Vancouver to 2017
2020-2021	Actlabs, Kamloops & Gibraltar Mine Lab	Actlabs, Ancaster & Gibraltar Mine Lab	

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 10 ft 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 are 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 using a hydraulic splitter by Taseko and Gibraltar personnel, predominantly from NQ core. A total of 10,836 Cu and Mo assays, as well as a number of additional precious metal and 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, predominantly NQ-sized core samples were mechanically split in half at the secure Gibraltar core logging facility by Gibraltar and Hunter Dickinson Services Inc. (HDSI) personnel. 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 digestion with AAS finish.

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

(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).

In 2006, a total of 8,537 samples were analyzed for total Cu, soluble Cu, Mo and Fe using the same digestion methods and analytical procedures described for the 2003 program (described in Section 11.3), performed 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 same digestion methods and analytical procedures described for the 2003 program. Gold analysis was performed by ALS Chemex on 60 samples using a standard lead collection 30 gram FA fusion with AAS finish.

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

(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 ft 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 (MoS₂) and iron (Fe) for 764 samples using the same digestion methods and analytical procedures described for the 2003 program with AAS finish. The mine laboratory processed 196 samples for total copper (Cu) and molybdenum (MoS₂) by using the same digestion methods and analytical procedures described for the 2003 program with AAS finish. Eco Tech analysed 12,900 samples for total copper, molybdenum plus an additional 26 multi-elements) using either the same digestion methods and analytical procedures described for the 2003 program 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 ft 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. Pulp samples from this and subsequent programs are retained at a warehouse in Surrey, 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 g 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.

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

(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 ft intervals with some exceptions to accommodate geologic boundaries.

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 Surrey, 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, achieved ISO 9001:2008 accreditation in 2011.

Total Cu, non-sulphide Cu and Mo (for Mo, selected samples only) were determined using the same digestion methods and analytical procedures described for the 2003 program. Total Cu was assayed using multi-acid digestion with AAS finish (Laboratory code: BOGA-22). Non-sulphide Cu was analyzed using 10% H₂SO₄ 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 ft 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 2011-2019 Sample Preparation and Analysis

(a) Introduction

During the period from 2011 through 2019, core samples of predominantly 10 foot lengths from NQ core were split in half using a mechanical splitter at the secure Gibraltar core logging facility within the fenced, gated, and access-controlled mine compound. Supervision of this work was by Gibraltar personnel and HDSI from 2011 to 2015, and then by TerraLogic Exploration Inc. from 2016 to 2019.

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 Surrey, BC.

(b) 2011

The core was split in half lengthwise using a mechanical splitter. Most of the core was sampled in 10 ft 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 coarse 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 RAB percussion holes for Cu and Mo analysis.

In 2011, sample preparation and analysis work were also performed by Stewart Group, 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 duplicate 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.

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

11.5 2011-2019 Sample Preparation and Analysis – *Cont'd*

(c) 2012-2015

The geologist responsible for logging the cored drill holes determined the sample intervals. Generally, these were chosen to coincide with the 10 ft drill runs; however, at times, marked variation in lithology, alteration, mineralization, structure or core recovery warranted deviation from 10 ft 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, 2015 and MW2014 completed in this program. Samples submitted to ALS included 8,645 regular mainstream core samples and 1,129 control samples.

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 (LIMS). 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 g 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 (pulp) 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 Surrey, BC.

11.5 2011-2019 Sample Preparation and Analysis – Cont'd

(c) 2012-2015 – Cont'd

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 $\geq 0.15\%$ 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 ft in depth down hole and any broad areas below that depth with $\geq 0.1\%$ Cu were analyzed by ALS method Cu-AA05, 5% sulphuric acid (H₂SO₄) 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)”.

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. In 2005, ALS Method ME-MS41L was used that had lower detection limits for some elements and included Pd and Pt.

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.

11.5 2011-2019 Sample Preparation and Analysis – Cont'd

(c) 2012-2015 – Cont'd

A total of 88 holes and 3,713 samples from AD, DWW and PW series RAB percussion drill holes from years 2012 through 2015 were used in the resource and reserve estimate and 26 holes were excluded. Drill cuttings were taken using a wet cyclone splitter in 10 ft 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.

(d) 2016-2019

Sample selection, sampling and splitting procedures for the 2016 through 2019 core drill program was 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 from 2016 through 2019. Drill holes were sampled top to bottom at a typical sample length of 10 ft with shorter sample intervals designed to define brittle structures and representative lithologies, alteration assemblages and mineralized zones. Select samples, approximately every 200', were sent for whole rock analysis and approximately every 500' were sent for specific gravity, density analysis. Standards, blanks and field duplicates were inserted into the sample sequence at regular intervals. Samples were split using a hydraulic splitter.

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, 2019 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.

11.5 2011-2019 Sample Preparation and Analysis – Cont'd

(d) 2016-2019 – Cont'd

Changes and additions to the 2015 through 2019 analytical protocols as compared to 2014 are as described below.

Only selected samples were analyzed for copper oxides by ALS method Cu-AA05, 5% sulphuric acid (H₂SO₄) leach followed by atomic absorption spectroscopy (AAS) finish.

Whole rock analysis was performed on samples at approximately 150 ft 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 2019 program. ALS whole rock package methods ME-ICP06, ME-MS81 and TOT-ICP-06 were performed.

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 Surrey, BC for long-term storage.

A total of 2,135 samples from 62 AD series RAB percussion drill holes from years 2015 through 2019 were used in the resource and reserve estimate and six RAB percussion holes from the DWW series 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.

11.6 2020-2021 Sample Preparation and Analysis

Gibraltar submitted drill core samples to Activation Laboratories Ltd. (Actlabs) facility in Kamloops, BC for sample preparation and for analysis at the Actlabs Ancaster, ON laboratory, in 2020 and 2021. Samples were securely delivered from the Mine to Actlabs by courier. These two facilities are ISO/IEC 17025 accredited. Samples were prepared in consultation with Actlabs using lab procedure RX1 which contains the following procedures:

- Weigh and Dry;
- Crush to >80% passing to 2 mm;
- Riffle split 250 g sub-sample;
- Pulverize sub-sample to >95% passing 150 mesh (105 µm);
- Cleaner sand between samples.

Figure 11-1 is an example of the sampling, sample preparation, security and analytical flow chart for the Gibraltar 2021 drill program.

After the completion of sample preparation and assay analysis, the coarse rejects and assay pulps are stored at Actlabs in Kamloops, BC. Upon completion of the 2021 analytical program Gibraltar drill core assay pulps from the 2020 through 2021 programs will be transferred to a company warehouse in Surrey, BC for long-term storage.

At Actlabs Ancaster laboratory, analytical method Ultratrace-1 AR ICP/MS, (AR-MS on the certificates of analysis, also known as Method UT-1-0.5 or Ultratrace-1), digestion of a 0.5 g sample is by AR at 90°C in a microprocessor controlled digestion block for 2 hours. Dilution and analysis of digested samples is by ICP-MS. One blank is run for every 68 samples. An in-house control is run every 33 samples. Digested standards are run every 68 samples. Analysis of a digestion duplicate occurs after every 15 samples. The instrument is recalibrated every 68 samples. Table 11-2 lists the elements analyzed and the detection limits of this method.

Analysis of drill core, was by the following assay methods at Actlabs, Ancaster:

- AR digestion ICP-MS Method UT-1 (AR-MS) 63 elements including Cu & Mo
(all samples submitted);
- AR digestion ICP-OES for Cu and/or Mo – Method 8-AR (Cu \geq 1,500 ppm by UT-1 and/or Mo \geq 150 ppm by UT-1);
- Fusion ICP-OES/MS Method 4LITHO for major and trace elements (selected samples)

11.6 2020-2021 Sample Preparation and Analysis – *Cont'd*

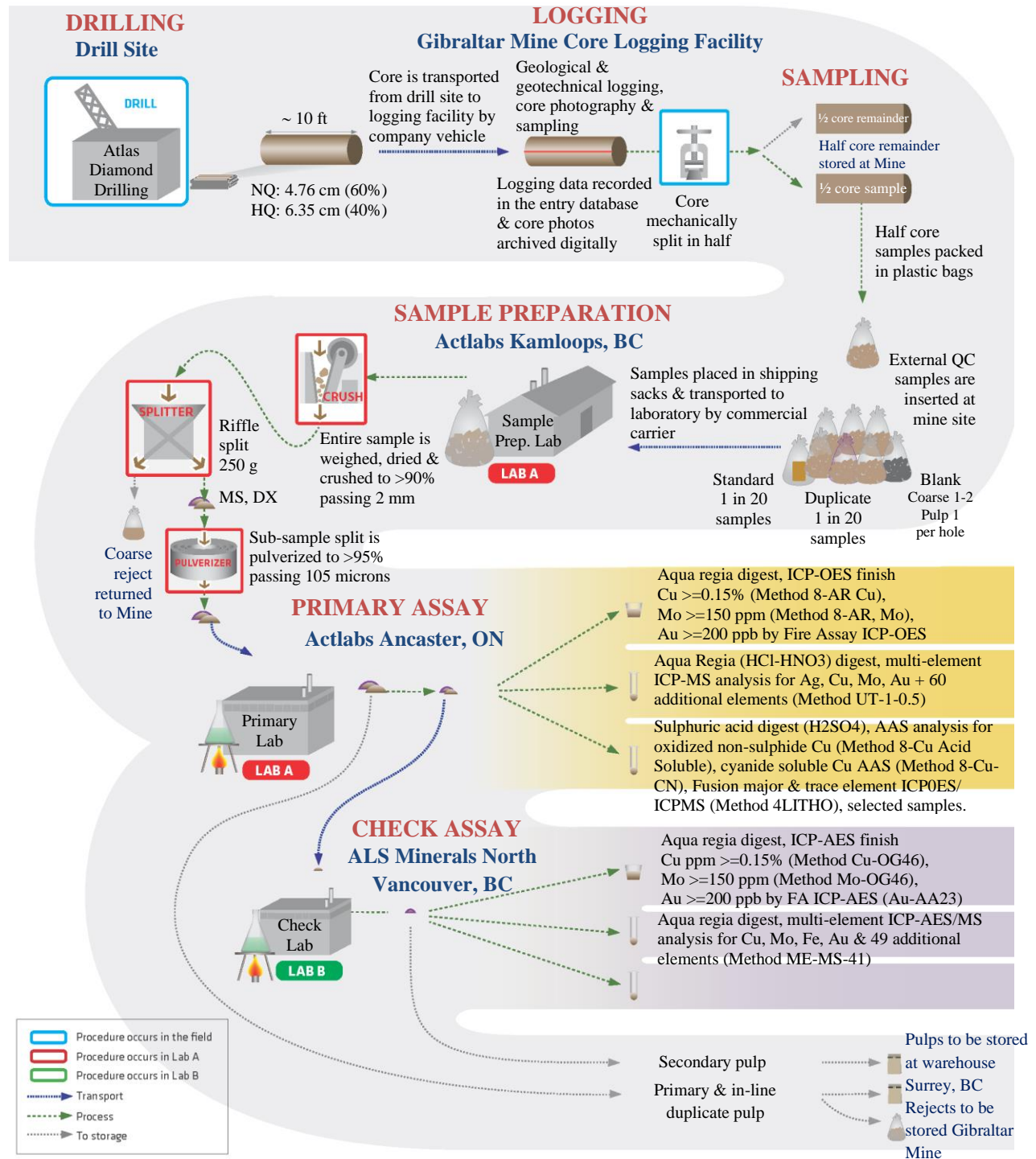


Figure 11-1: 2020-2021 Drill Core Sample Preparation and Analytical Flowchart

11.6 2020-2021 Sample Preparation and Analysis – *Cont'd*

Table 11-2: Analytical Method Aqua Regia Digest ICP-MS UT-1 (AR-MS) Elements & Limits

Element	Unit	Detection Limit	Upper Limit	Note	Element	Unit	Detection Limit	Upper Limit	Note
Ag	ppm	0.002	100	*	Mo	ppm	0.01	10,000	
Al	%	0.01	10	*	Na	%	0.001	5	*
As	ppm	0.1	10,000	*	Nb	ppm	0.1	500	*
Au	ppb	0.5	10,000	*↓	Nd	ppm	0.02	-	*
B	ppm	1	5,000	*	Ni	ppm	0.1	10,000	*
Ba	ppm	1	6,000	*	P	%	0.001	-	*
Be	ppm	0.1	1,000	*	Pb	ppm	0.01	10,000	*
Bi	ppm	0.02	2,000		Pr	ppm	0.1	-	
Ca	%	0.01	50	*	Rb	ppm	0.1	500	*
Cd	ppm	0.01	-		Re	ppm	0.001	100	
Ce	ppm	0.01	10,000	*	S	%	1	-	*
Co	ppm	0.1	5,000		Sb	ppm	0.02	500	
Cr	ppm	0.5	5,000	*	Sc	ppm	0.1	-	
Cs	ppm	0.02	-	*	Se	ppm	0.1	1,000	
Cu	ppm	0.01	10,000		Sm	ppm	0.1	100	*
Dy	ppm	0.1	-		Sn	ppm	0.05	200	*
Er	ppm	0.1	-		Sr	ppm	0.5	1,000	*
Eu	ppm	0.1	100	*	Ta	ppm	0.05	50	*
Fe	%	0.01	50	*	Tb	ppm	0.1	100	*
Ga	ppm	0.02	500	*	Te	ppm	0.02	500	
Gd	ppm	0.1	-		Th	ppm	0.1	200	*
Ge	ppm	0.1	500	*	Ti	ppm	0.001	-	*
Hf	ppm	0.1	500	*	Tl	ppm	0.02	500	*
Hg	ppb	10	10,000	*	Tm	ppm	0.1	-	
Ho	ppm	0.1	-		U	ppm	0.1	10,000	*
In	ppm	0.02	-		V	ppm	1	1,000	*
K	%	0.01	5	*	W	ppm	0.1	200	*
La	ppm	0.5	1,000	*	Y	ppm	0.01	-	*
Li	ppm	0.1	-		Yb	ppm	0.1	200	*
Lu	ppm	0.1	100	*	Zn	ppm	0.1	10,000	*
Mg	%	0.01	10	*	Zr	ppm	0.1	5,000	*
Mn	ppm	1	10,000	*					

Notes: * Element may only be partially extracted. ↓ Au from AR-MS for is information purposes, accurate Au assays require fire assay.

11.6 2020-2021 Sample Preparation and Analysis – *Cont'd*

A total of 173 samples were analyzed from five AD series RAB percussion holes drilled in 2020, and 153 samples were analyzed from six AD series holes drilled in 2021. Drill cuttings from these programs were sampled in the same manner as the 2012 through 2014 percussion holes, and the samples were prepared and analyzed at the mine laboratory using the method and procedures as described for the 2003 samples. The 2020 drill holes were included in the resource and reserve estimate, and the 2021 holes were not included, as they were drilled after the resource model was created.

11.7 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 Hunter Dickinson Services Inc. (HDSI) from 2005 through 2019 and Cohesion Consulting Group (CCG) in 2020 through 2021. HDSI & CCG 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 11-3 describes the QAQC sample types used in the 2014 to 2021 portion of the program.

A summary of mainstream (MS) and QAQC sampling for various years is shown in Table 11-4.

11.7 QAQC Program – *Cont'd*(a) Introduction – *Cont'd*

Table 11-3: QAQC Sample Types Used in the 2014-2021 Drill Programs

QC Code	Sample Type	Description	% of Total
MS	Regular Mainstream	<ul style="list-style-type: none"> Regular mainstream samples submitted for preparation and analysis at the primary laboratory. 	61%
ST or SD	Certified Reference Material (CRM) or Assay Standard	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Samples analyzed by more than one analytical method <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Certified pulverized material with no appreciable grade, or visibly barren crushed rock used to test for contamination 	2%

11.7 QAQC Program – *Cont'd*

(a) Introduction – *Cont'd*

Table 11-4: 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	968	25	21	14
2019	1,128	40	33	25
2020	1,264	62	52	35
2021	2,131	111	95	48
Total	139,633	9,131	4,767	1,742

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.

11.7 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 from 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 same digestion methods and analytical procedures described for the 2003 program but with an ICP-AES finish. Eco Tech Kamloops inter-laboratory duplicate analysis also used the same digestion methods and analytical procedures described for the 2003 program. 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.

11.7 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 same digestion methods and analytical procedures described for the 2003 program.

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 percussion 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 20th 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 20th sample is a reject duplicate on the original assay certificate. Standards continued to be inserted after every 19th mainstream sample, and blanks continued to be inserted approximately every 40th or 50th 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.

11.7 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.

11.7 QAQC Program – *Cont'd*

(f) 2015-2021 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 \pm 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 11-5: Control Samples Used in 2015-2021 Drill Programs

Control Sample	Times Used	Cu %	Mo ppm
CDN-CM-20	128	0.314	300*
CDN-CM-23	96	0.471	250
CDN-CM-31	244	0.082	90*
CDN-CM-35	223	0.248	290
CDN-CM-37	8	0.214	260*
Oreas-501b	78	0.258	97
Oreas-901	102	0.144	3.2
Oreas-902	28	0.308	12.6
CDN-BL-10	195	<i>0.0054</i>	<i>5.91</i>
Granite (Grey)	75	<i>0.0014</i>	<i>0.82</i>
Granite (Pink)	264	<i>0.0009</i>	<i>1.21</i>

* - Provisional value. Results by AR digestion. Values in italics for blanks based on results received.

11.7 QAQC Program – Cont'd

(f) 2015-2021 Drill Program QAQC – Cont'd

Standards – Cont'd

A total of 1,128 standard and blank control samples were submitted with regular mainstream samples in the 2015 through 2021 programs. Figure 11-2 is an example of a control chart for copper by ALS method OG46 (ALS) and 8-AR (Actlabs) for standard CDN-CM-35. These results, and the Cu results for the other standards, appear reasonable and all standards pass QAQC for Cu by OG-46 and 8-AR. Figure 11-3 is a standard control chart for CDN-CM-35 for molybdenum by assay methods OG-46 (ALS) and 8-AR (Actlabs). All the Mo results pass QAQC for this standard. The Mo results by the assay method for other standards plot closely around the round robin mean and support the veracity of the assay methods and results used in Mo determination. Figure 11-4 is a plot of copper acid soluble (H₂SO₄ digestion) oxide results for standard reference sample OREAS-901 by method Cu-AA05 (ALS) and 8-Cu-Acid (Actlabs). The results by AA05 trend somewhat below the mean, and the 8-Cu-Acid results cluster somewhat above the mean. This is likely due to slightly different digestion techniques used by the two laboratories. The results pass QAQC for this standard.

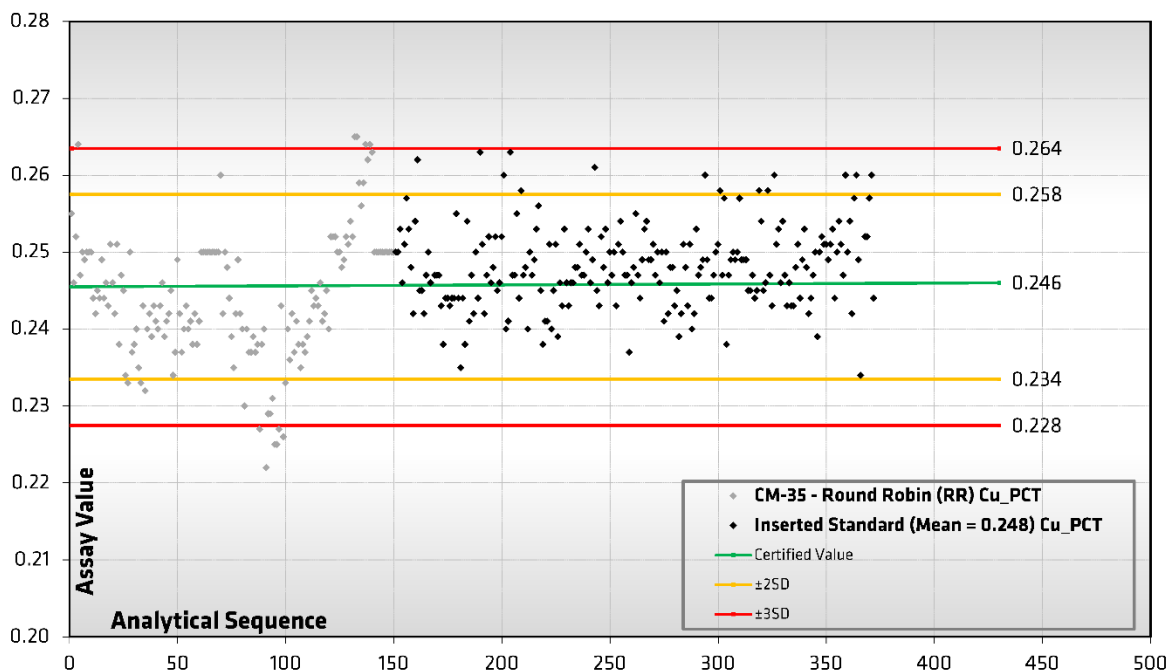


Figure 11-2: Copper (OG46 & 8-AR) Results – Standard Reference Sample CDN-CM-35

11.7 QAQC Program – Cont'd

(f) 2015-2021 Drill Program QAQC – Cont'd

Standards – Cont'd

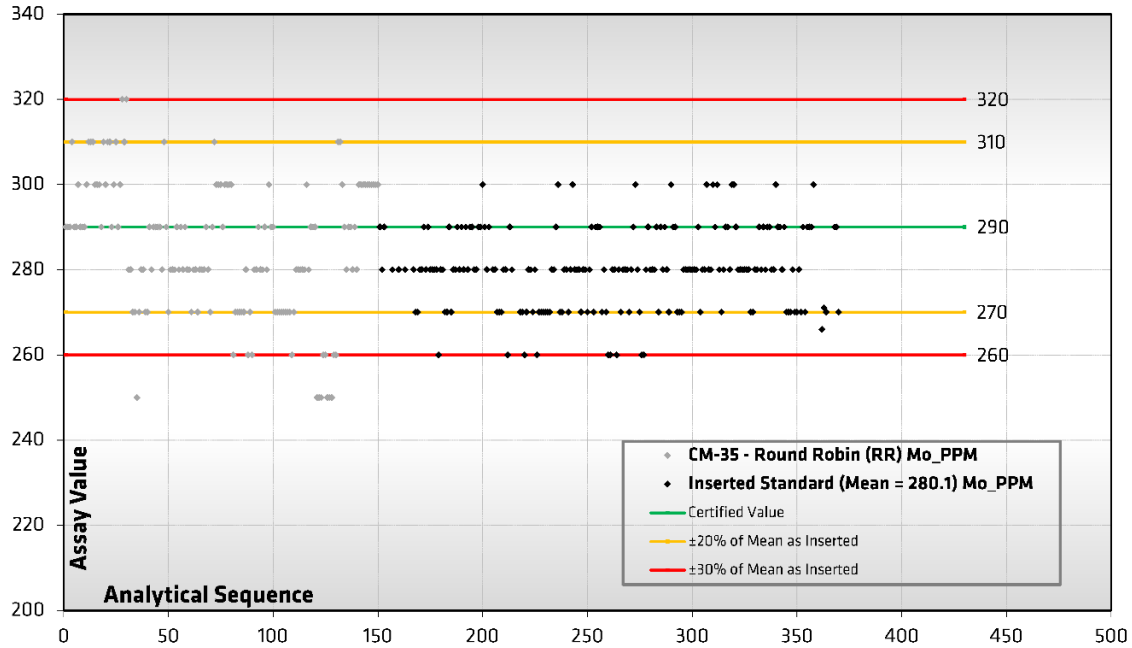


Figure 11-3: Molybdenum (OG46 and 8-AR) Results – Standard Reference Sample CDN-CM-35

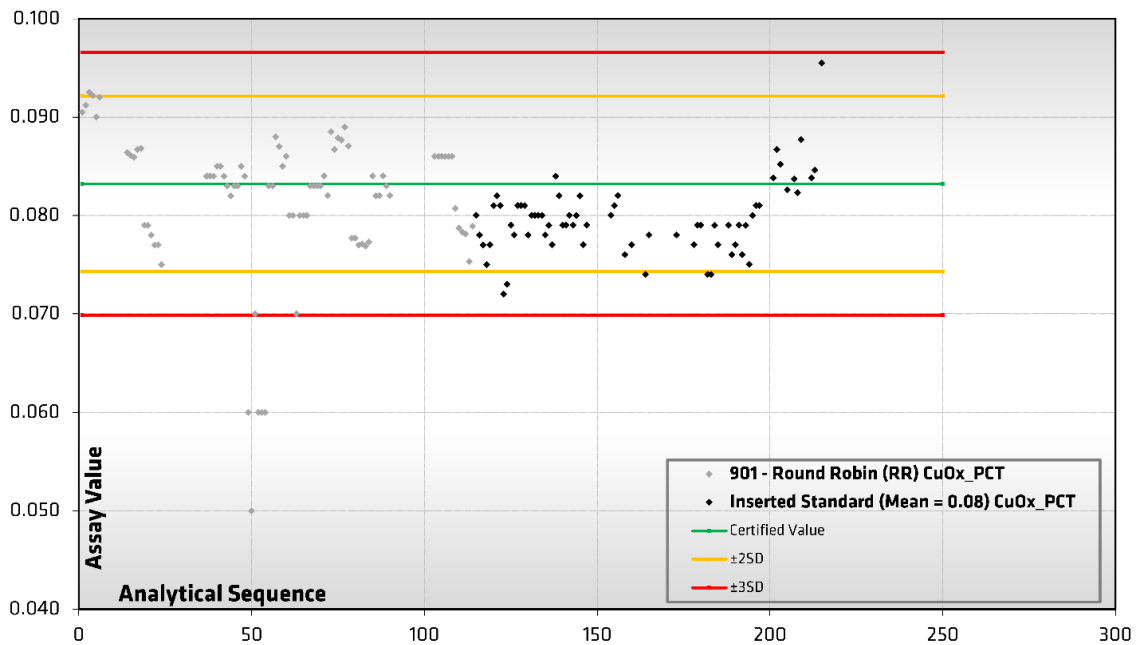


Figure 11-4: Copper Acid Soluble Results – Standard Reference Sample OREAS-901

11.7 QAQC Program – Cont'd

(f) 2015-2021 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 “Granite Pink” 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 420 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 2021 programs. This included 267 coarse crushed blanks (pink and grey granite) and 153 pulp blanks. The assay results for Cu and Mo of coarse blank “Granite Pink” are illustrated in Figures 11-5 and 11-6. 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.

11.7 QAQC Program – *Cont'd*

(f) 2015-2021 Drill Program QAQC – *Cont'd*

Blanks – *Cont'd*

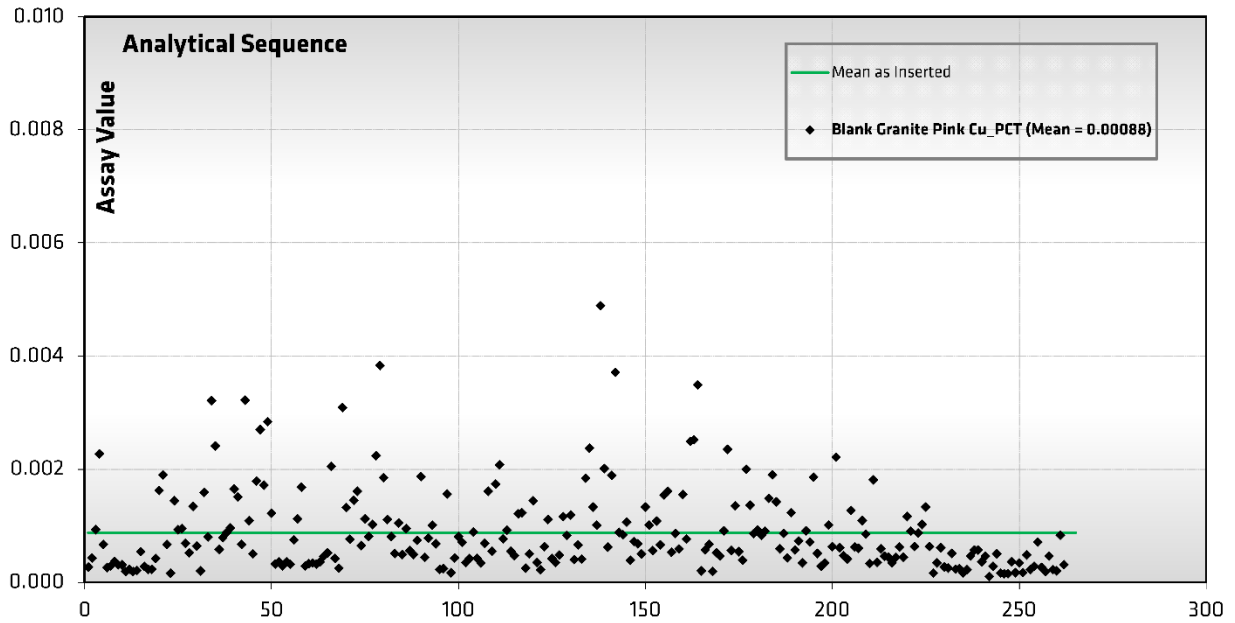


Figure 11-5: Copper Results – Blank Granite (Pink)

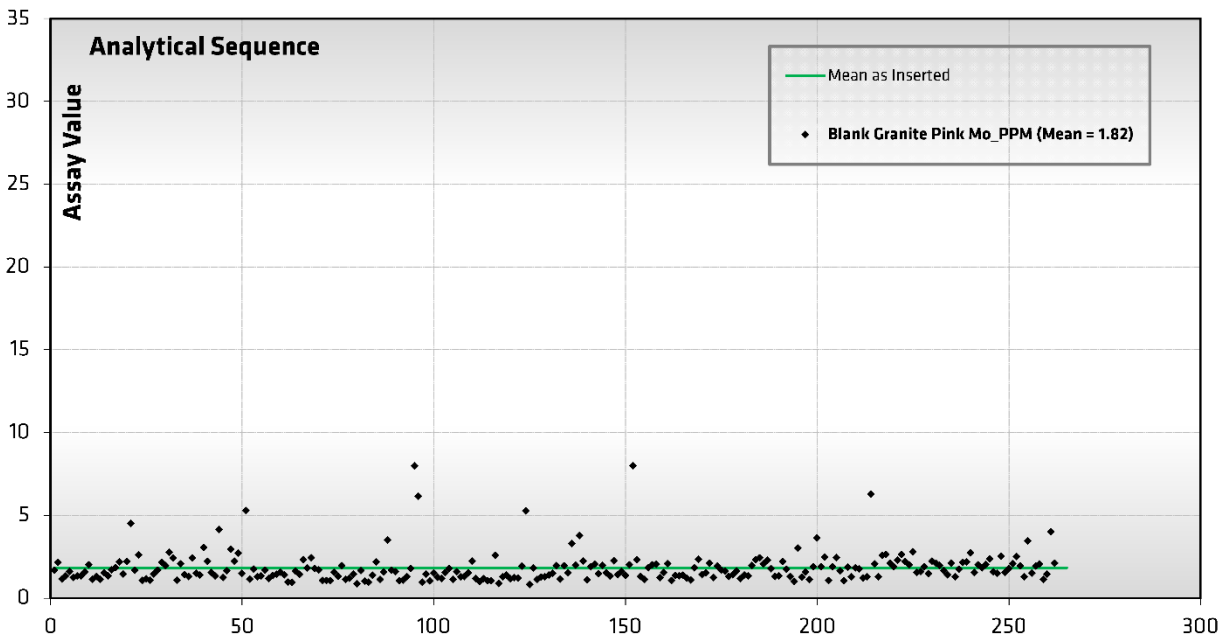


Figure 11-6: Molybdenum Results – Blank Granite (Pink)

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

Figure 11-7 illustrates the regular mainstream and duplicate sample processing sequence for typical duplicate and corresponding mainstream samples in flow chart format. A total of 847 duplicates (QC code DX) were prepared and assayed in-line by ALS Minerals in 2015 through 2019, and Actlabs 2020 through 2021. 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, all original assay pulps, including the DP duplicates, are returned to the Surrey warehouse. The DP duplicates are stored there pending shipment to the check laboratory for assay analysis. Inter-laboratory duplicates from the 2018 through 2021 programs are pending delivery to the check assay laboratory as of the effective date of this report.

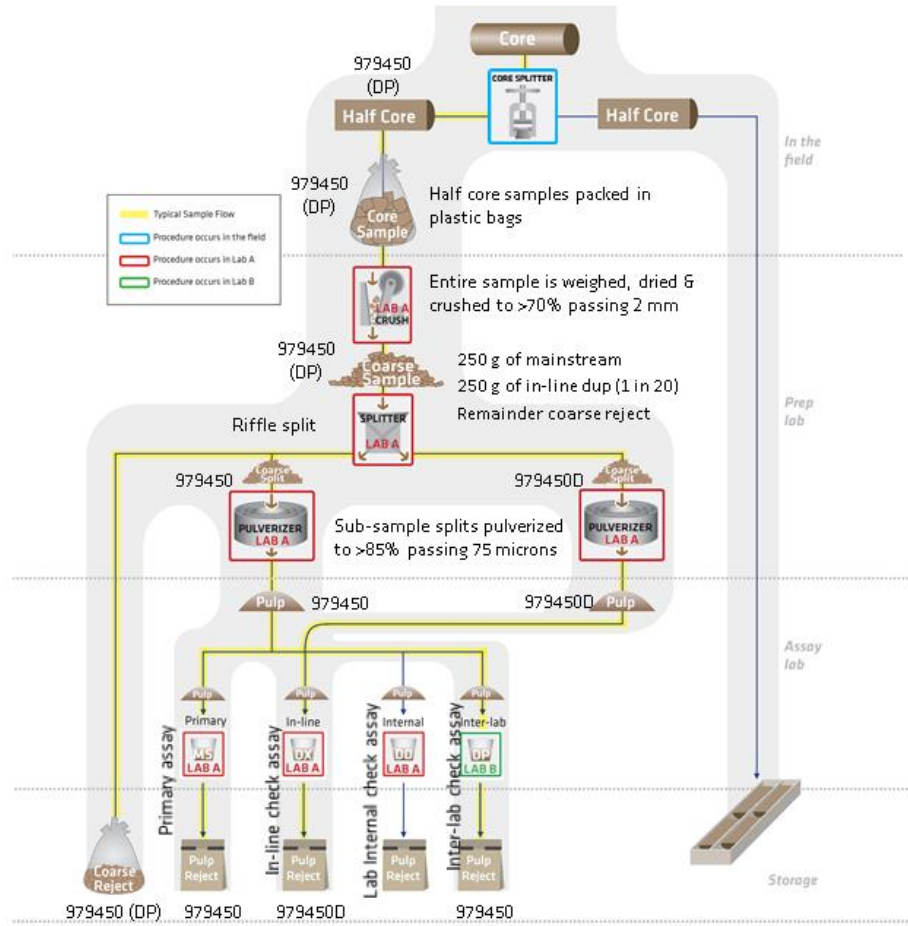
11.7 QAQC Program – *Cont'd*(f) 2015-2021 Drill Program QAQC – *Cont'd*Duplicates – *Cont'd*

Figure 11-7: Duplicate Sample 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, and Actlabs methods AR-MS and Cu-8-AR and Mo-8-AR respectively, because of the over-range triggers. Similarly, a number of samples were also analysed for gold by both ME-MS41 and Au-AA23 (ALS) and AR-MS and 1A2 (Actlabs).

The inline reject duplicate Cu and Mo pairs match very well, as do the Cu method duplicates and the Cu inter-laboratory pulp duplicates. Molybdenum analysis by multi-element methods (ME-MS41 and AR-MS) were found to consistently return lower results than single element methods (Mo-OG46 and Mo-8-AR) performed on samples ≥ 150 ppm since 2012. Therefore, the single element analytical methods are preferred for accurate Mo determination where multi-element methods return values ≥ 150 ppm.

11.7 QAQC Program – Cont'd

(f) 2015-2021 Drill Program QAQC – Cont'd

Duplicates – Cont'd

Gold results by Au-AA23 or 1A2 are clearly superior to those by ME-MS41 or AR-MS, however the impact of this at Gibraltar is negligible due to the typically very low gold grades encountered and because gold is not modeled or reported within the resource and reserve estimates.

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 239 samples from the 2018 through 2021 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 11-8 through 11-16.

11.7 QAQC Program – *Cont'd*

(f) 2015-2021 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

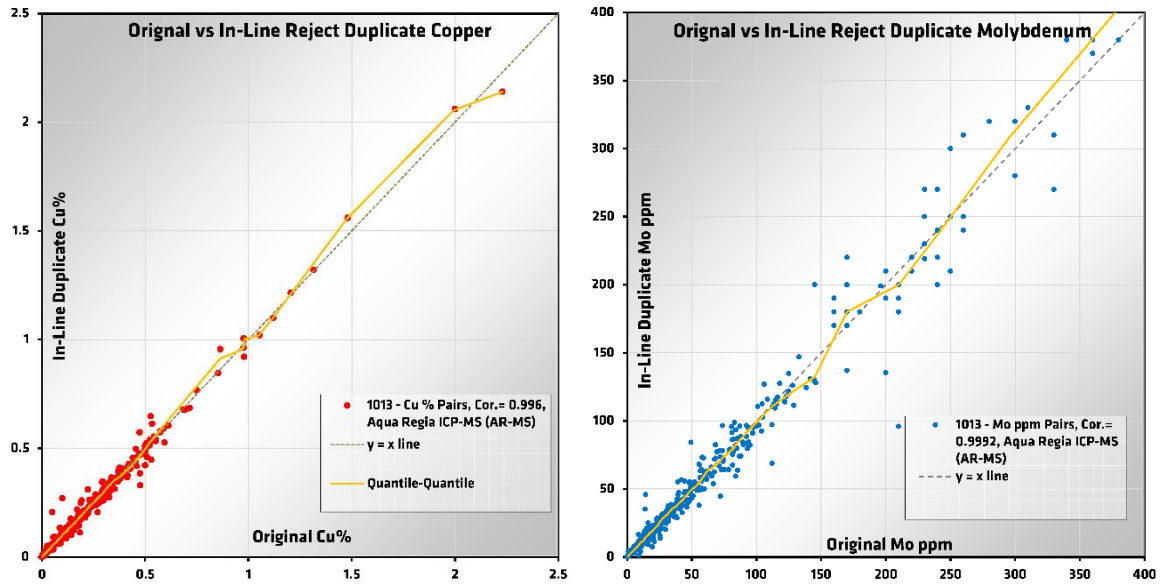


Figure 11-8: Intra-Laboratory In-Line Duplicate Charts Copper & Molybdenum – Normal

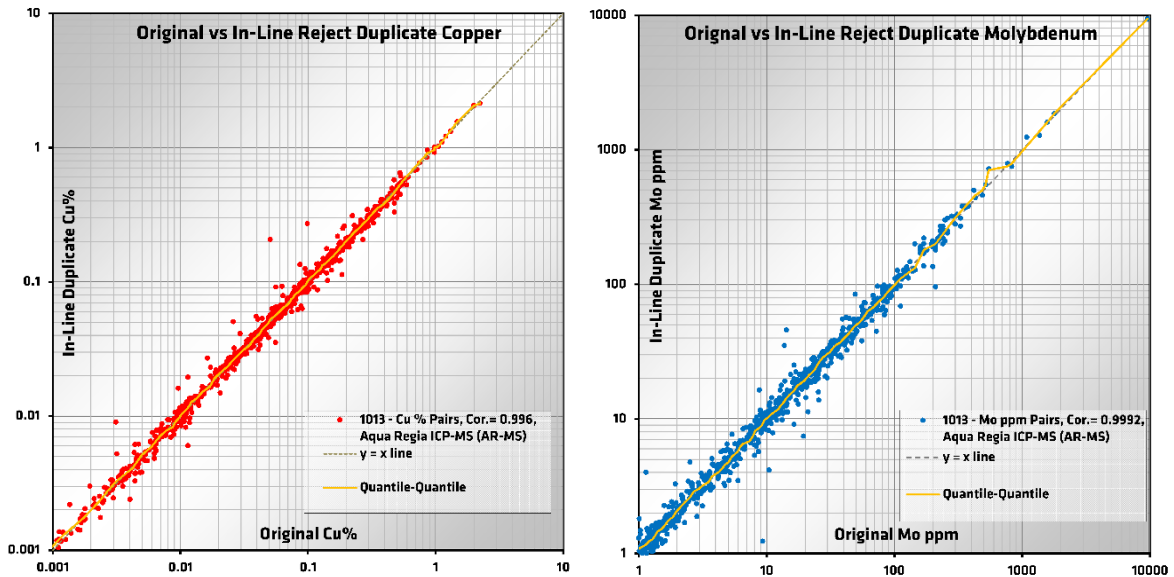


Figure 11-9: Intra-Laboratory In-Line Duplicate Charts Copper & Molybdenum – Log

11.7 QAQC Program – *Cont'd*

(f) 2015-2021 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

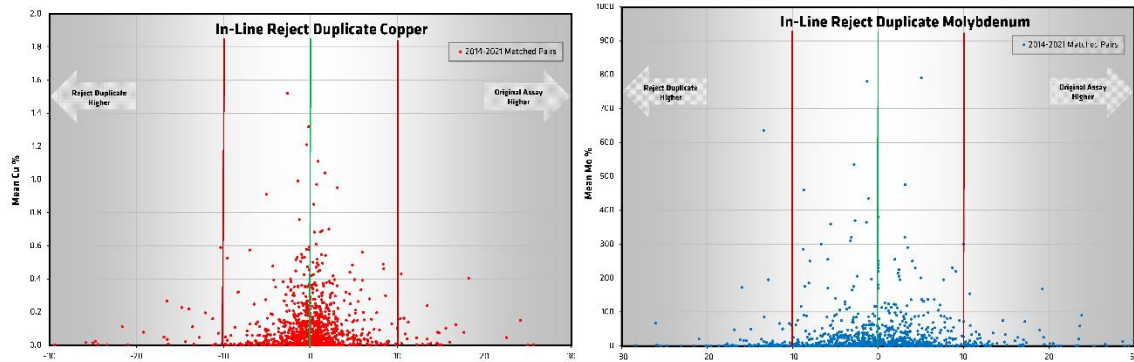


Figure 11-10: Intra-Laboratory In-Line Duplicate Charts Copper & Molybdenum – Mean % Difference

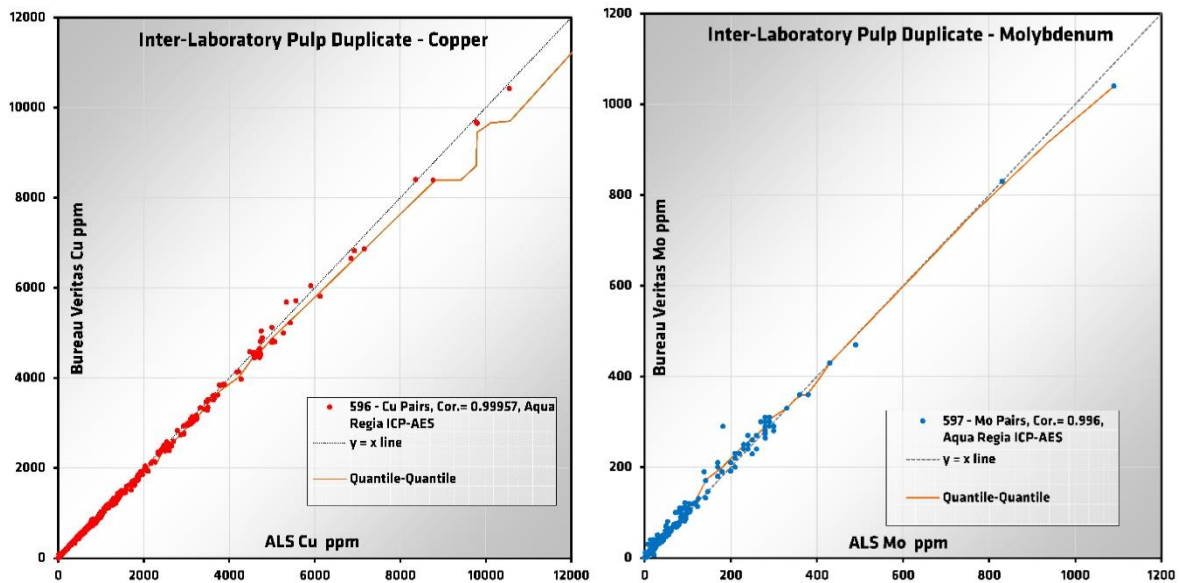


Figure 11-11: Inter-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Normal

11.7 QAQC Program – *Cont'd*

(f) 2015-2021 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

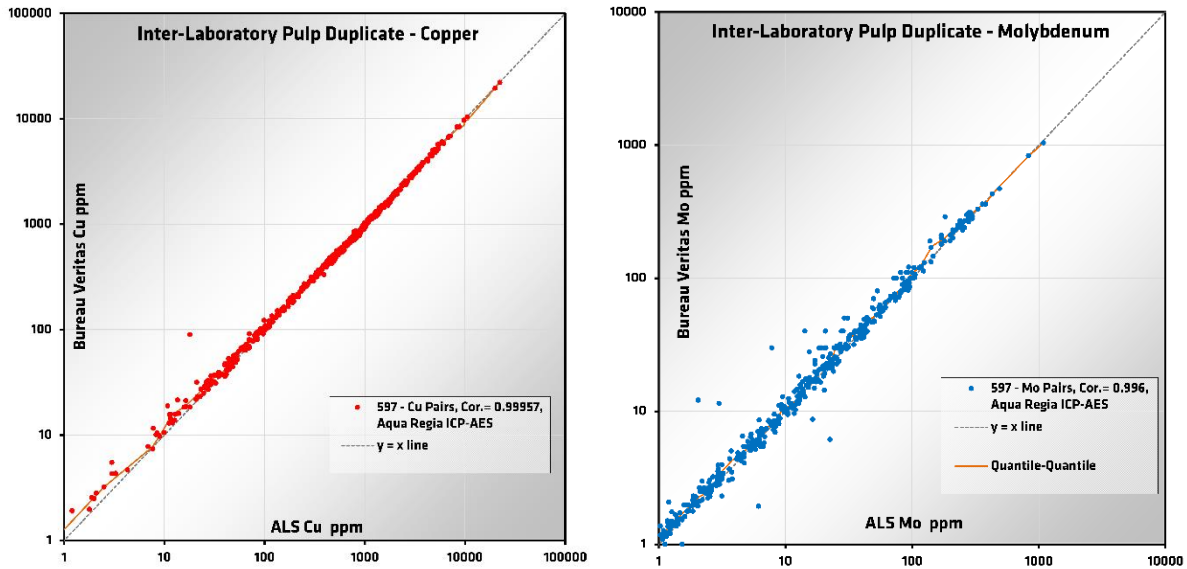


Figure 11-12: Inter-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Log

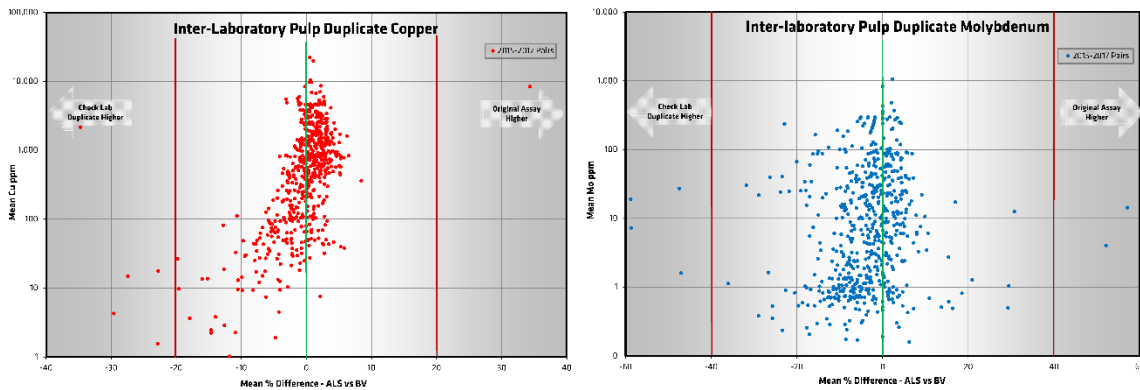


Figure 11-13: Inter-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Mean % Difference

11.7 QAQC Program – *Cont'd*

(f) 2015-2021 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

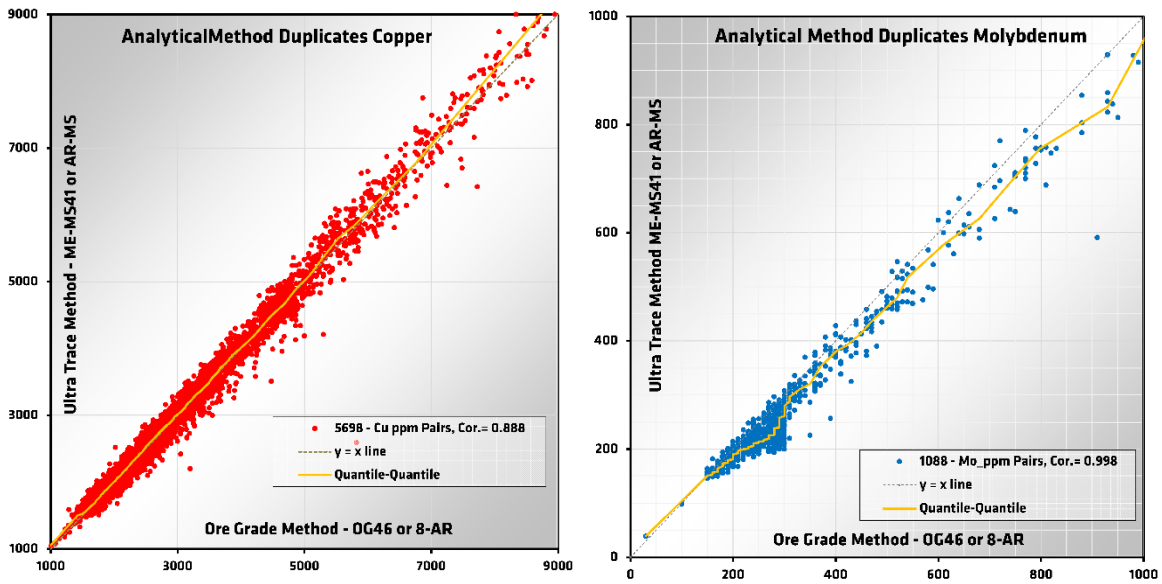


Figure 11-14: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Normal

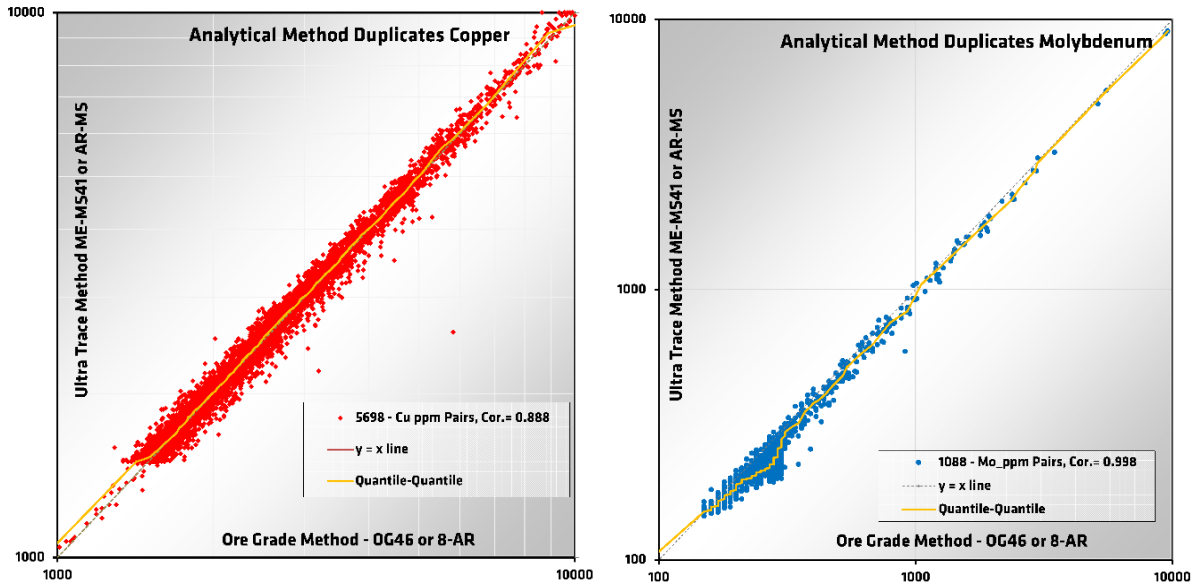


Figure 11-15: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Log

11.7 QAQC Program – *Cont'd*

(f) 2015-2021 Drill Program QAQC – *Cont'd*

Duplicates – *Cont'd*

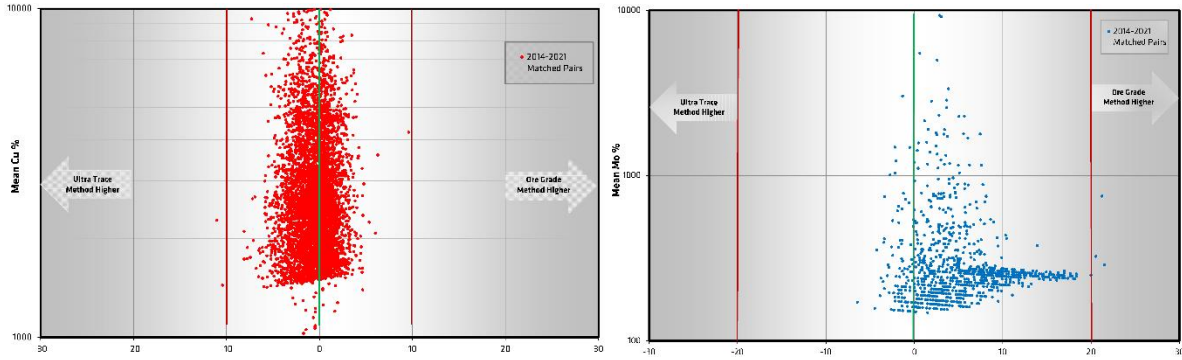


Figure 11-16: Intra-Laboratory Pulp Duplicate Charts Copper & Molybdenum – Mean % Difference

11.8 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 2019 drill program, 122 samples from 60 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).

In the 2020 and 2021 programs, 45 samples from 21 drill holes from a broad range of rock types and areas were measured for density at Actlabs Kamloops laboratory by gravimetric wax encapsulation water immersion method (Actlabs method OA-GRA09a).

Table 11-6 is a summary of the density results from these programs by deposit area.

Table 11-6: 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	33	2.65	2.72	2.71	2.78
Extension	408	2.27	2.76	2.76	3.62
Granite	94	2.60	2.72	2.73	3.03
Gunn	12	2.57	2.66	2.66	2.77
Pollyanna	65	2.56	2.72	2.72	2.95

SECTION 12
DATA VERIFICATION

SECTION 12: DATA VERIFICATION

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12.1 Introduction

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 industry standard 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. (TerraLogic) from 2015 to 2021). 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 by HDSI (2011 to 2019), and Cohesion Consulting Group (2020 and 2021). 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 tables and charts to monitor the standard results, identify failures and request re-analysis where necessary;
- Generate blank monitoring tables and charts to identify potential contamination;
- Generate duplicate monitoring tables and 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.

In 2020, analytical data for the AD series of RAB drill holes from 2009 through 2019 was reviewed by the geological team at the mine. A number of incorrectly converted Mo results from 2009 through 2013 were corrected, and several missing Mo, acid soluble Cu, cyanide soluble Cu, and acid soluble Fe results were added for the 2014 through 2019 holes.

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 from 1999 to 2017, 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 deposit 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 both copper and molybdenum 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 Richard Weymark, P.Eng. dated November 6, 2019. The performance of the copper flotation recovery and molybdenum recovery models were validated against recent production data from 2015 to 2021. The predicted versus actual recoveries over the seven-year production period correlated well supporting continued use of the models.

The copper concentrate flotation recovery model was developed using 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, which has been incorporated into the block model to facilitate a block-by-block recovery prediction for the reserve, is the minimum of:

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

Informed by historic test work and plant production data, a total molybdenum recovery of 50% is used to predict recoverable pounds of molybdenum from the reserve.

Predictions of copper cathode produced from leaching and subsequent solvent extraction are based on an economic assessment of recoverable copper using a kinetic leach curve developed from historic production data in conjunction with the copper oxide ore release schedule from the mine plan. This assessment indicates approximately 50% of the placed oxide copper mass in the reserve is economically recoverable to cathode.

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 2021 from that used for the previous Technical Report (November 6, 2019) to include all available drilling up to the end of April 2021. Drilling since 2018 and updated statistical analyses are summarized in this report. The block modeling, validation and resource estimate, have been performed using MineSight®, an industry standard software package used for geologic modeling and mine planning. 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 effects associated 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 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.

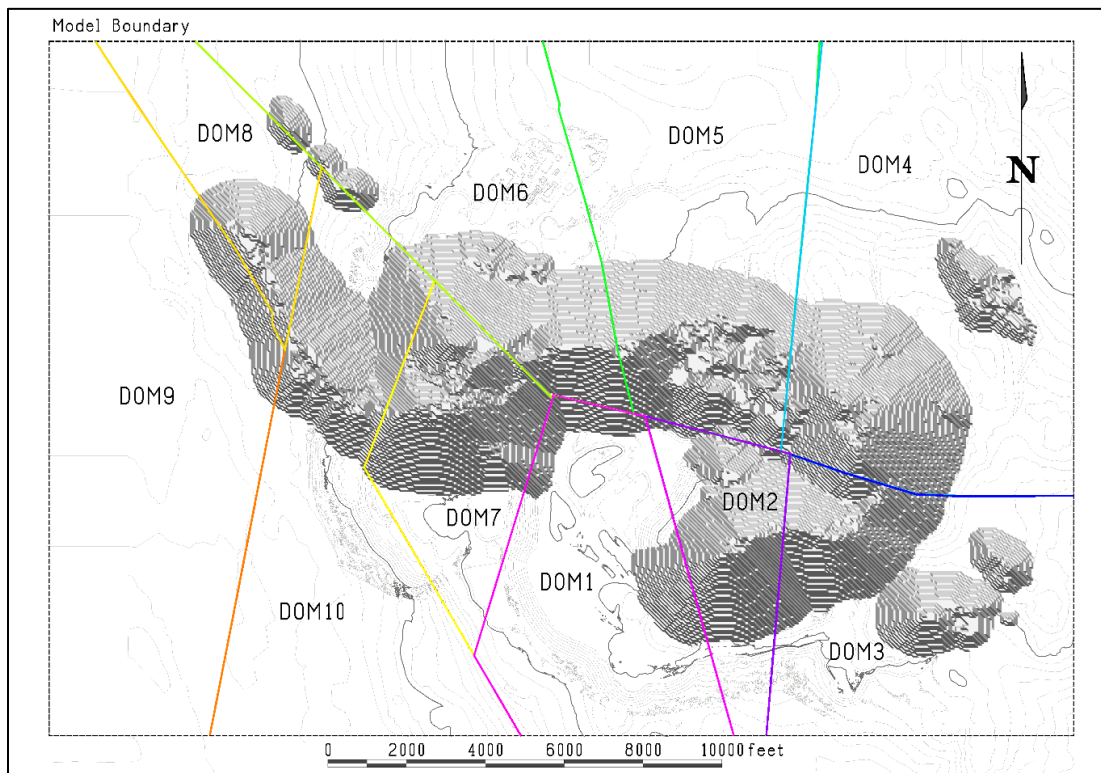


Figure 14-1: Plan View of Domain Boundaries and Resource Pit

14.3 Zone Definition

Zoning of the deposit has been modeled by creating sub-horizontal 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 (CV) 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. The difference in weighted mean grades between the assays and composites is negligible except for a few domains in the oxides for ASCu where the number of samples is very small. Therefore, in the opinion of the QP the results show that there is no bias introduced due to compositing.

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

Table 14-1: Assay and Composite Mean Grades by Zone and Domain

Model Item	Zone	Source	Parameter	Domain									
				TCU-1	TCU-2	TCU-3	TCU-4	TCU-5	TCU-6	TCU-7	TCU-8	TCU-9	TCU-10
TCu	Sulfide	Assay	# Samples	10,022	20,101	14,519	21,896	11,835	14,581	15,963	13,804	4,819	12,970
			Mean Grade (%)	0.111	0.165	0.121	0.126	0.173	0.142	0.190	0.170	0.042	0.153
			CV	1.434	1.040	1.320	1.168	0.981	1.298	0.912	1.909	2.884	1.577
		Composite	# Samples	6,724	14,270	10,005	15,776	8,825	10,181	10,481	9,659	3,544	8,624
Mean Grade (%)	0.112		0.165	0.121	0.126	0.173	0.142	0.190	0.170	0.042	0.153		
CV	1.376		0.967	1.221	1.044	0.906	1.180	0.829	1.696	2.378	1.331		
Mean Grade Difference(%)			-0.1%	-0.1%	0.0%	0.1%	0.2%	0.1%	0.0%	0.0%	0.1%	0.1%	
Mo (%)	Sulfide	Assay	# Samples	9,914	18,809	13,508	21,518	11,677	13,347	14,560	13,525	4,808	11,512
			Mean Grade (%)	0.003	0.005	0.003	0.004	0.006	0.005	0.005	0.001	0.001	0.002
			CV	2.248	2.206	2.132	2.383	2.479	3.846	1.732	2.886	3.273	2.824
		Composite	# Samples	6,649	13,313	9,241	15,519	8,742	9,366	9,511	9,419	3,521	7,475
Mean Grade (%)	0.003		0.005	0.003	0.005	0.006	0.005	0.005	0.001	0.001	0.002		
CV	1.996		1.853	1.808	2.018	1.978	3.307	1.469	2.276	2.700	2.179		
Mean Grade Difference(%)			-0.3%	-0.3%	-0.1%	0.1%	-0.6%	0.2%	-0.4%	0.0%	0.0%	-0.5%	
ASCu (%)	Oxide	Assay	# Samples	65	42	289	1,009	125	958	158	42	7	14
			Mean Grade (%)	0.025	0.057	0.043	0.066	0.079	0.128	0.091	0.021	0.041	0.066
			CV	1.240	0.792	1.169	1.480	0.895	1.149	1.040	1.838	1.209	1.274
		Composite	# Samples	44	35	200	834	106	741	109	29	5	12
Mean Grade (%)	0.025		0.057	0.044	0.066	0.079	0.128	0.091	0.021	0.036	0.061		
CV	1.131		0.682	1.106	1.387	0.834	1.063	0.930	1.545	1.159	1.133		
Mean Grade Difference(%)			-0.2%	-0.2%	0.2%	-2.0%	0.8%	0.2%	-0.1%	0.2%	0.0%	13.3%	

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 have been completed throughout the entire directional sphere, with the geologic and structural controls also used to define the variograms and anisotropy used for the search ellipses. 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.

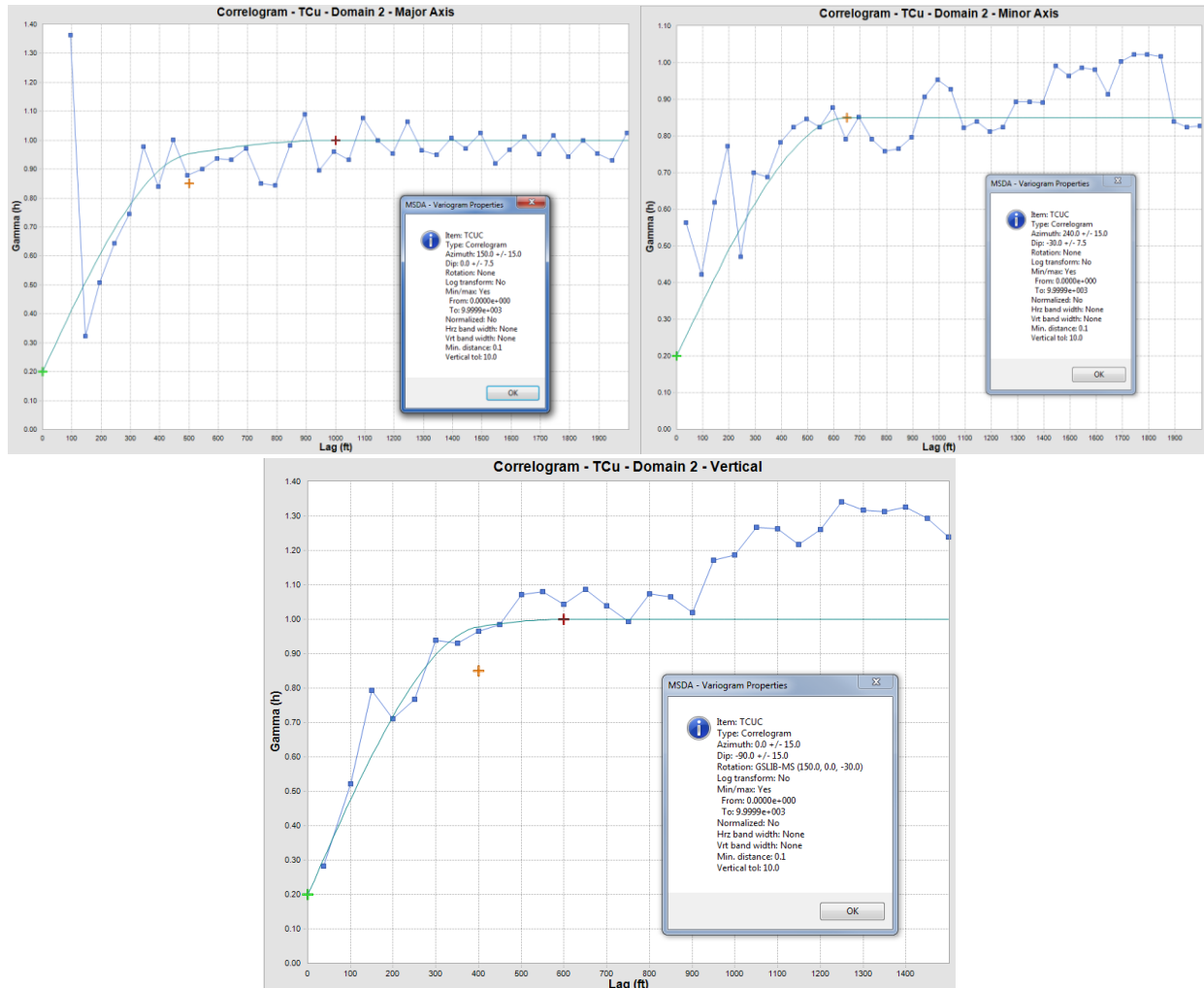


Figure 14-2: Variogram Model for TCu for Domain 2

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 has been done by inverse distance cubed (ID3) and ordinary kriging (OK) for TCu, by ID5 and OK for Mo and by OK for acid soluble copper (ASCu). In all cases interpolation is completed 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. Final interpolation methods for TCu and Mo vary by domain based on validation results.

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

14.6 Block Model Interpolation – *Cont'd*

Table 14-9: Search Distances – ASCu

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

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 12ft³/ton. Tonnage factor for overburden and fill are 15ft³/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 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 2021 is used to limit the blocks reported.

Table 14-11: Summary of Model and De-Clustered Composite (NN) Mean Grades

Model Item	Zone	Source	Domain										
			1	2	3	4	5	6	7	8	9	10	ALL
TCu	Sulfide	# Blocks	48,425	101,543	82,369	120,163	79,548	127,560	68,386	50,504	13,707	31,994	724,199
		NN	0.099	0.137	0.111	0.112	0.152	0.118	0.193	0.122	0.049	0.154	0.129
		TCU	0.102	0.136	0.110	0.112	0.154	0.119	0.194	0.121	0.054	0.154	0.129
		Difference (%)	2.6%	-0.2%	-0.3%	0.2%	1.2%	0.4%	0.9%	-0.9%	7.8%	-0.2%	0.4%
TCu	Oxide	# Blocks	303	13	1,714	2,595	667	4,080	1,725	900	405	5,173	17,575
		NN	0.044	0.082	0.054	0.112	0.097	0.116	0.098	0.028	0.027	0.056	0.082
		TCU	0.044	0.087	0.055	0.111	0.101	0.120	0.102	0.036	0.027	0.057	0.084
		Difference (%)	1.1%	5.4%	3.1%	-0.8%	3.9%	3.5%	4.1%	21.4%	-3.0%	3.0%	2.7%
Mo	Sulfide	# Blocks	48,425	101,542	81,734	98,224	78,253	114,064	66,534	44,233	11,231	31,693	675,933
		NN	0.0027	0.0051	0.0029	0.0043	0.0061	0.0055	0.0052	0.0010	0.0011	0.0020	0.004
		MO	0.0028	0.0050	0.0029	0.0043	0.0059	0.0051	0.0052	0.0010	0.0011	0.0020	0.004
		Difference (%)	3.9%	-0.4%	-0.7%	0.0%	-2.4%	-8.0%	0.0%	-1.0%	-1.8%	1.5%	-1.9%
ASCu*	Oxide	# Blocks	302	9	1,698	2,589	589	3,974	1,661	898	405	5,126	17,251
		NN	0.016	0.048	0.026	0.065	0.076	0.080	0.053	0.008	0.005	0.010	0.043
		ASOK	0.016	0.057	0.025	0.060	0.079	0.083	0.050	0.009	0.006	0.010	0.042
		Difference (%)	1.9%	16.3%	-5.7%	-8.6%	4.8%	4.0%	-6.2%	11.0%	5.3%	-7.3%	-1.2%

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

The Nearest Neighbour (NN) interpolation has been corrected for the volume-variance effect by the Indirect lognormal Correction (ILC) method (Nearest Neighbour Corrected or NNC). 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.

14.8 Block Model Validation – *Cont'd*

Grade-tonnage curves are used to validate the model by comparison of the Nearest Neighbor (NN) and the Nearest Neighbor Corrected (NNC) to the estimated grades by ID3, ID5 or Ordinary Kriging depending on the metal and the method used within the domain. Figures 14-3 through 14-5 illustrate this comparison for Total Copper (TCu), Molybdenum (Mo) and Acid Soluble Copper (ASCu) respectively.

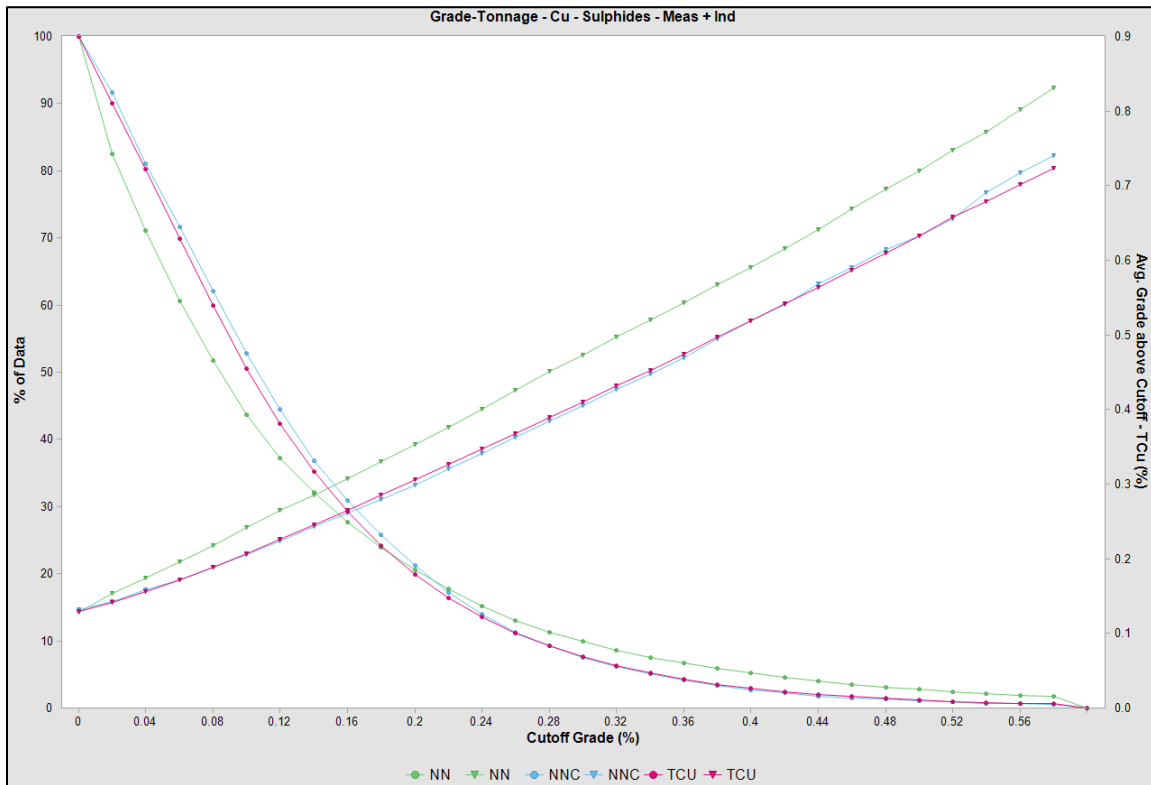


Figure 14-3: Grade-Tonnage Curve Comparison – TCu

14.8 Block Model Validation – *Cont'd*

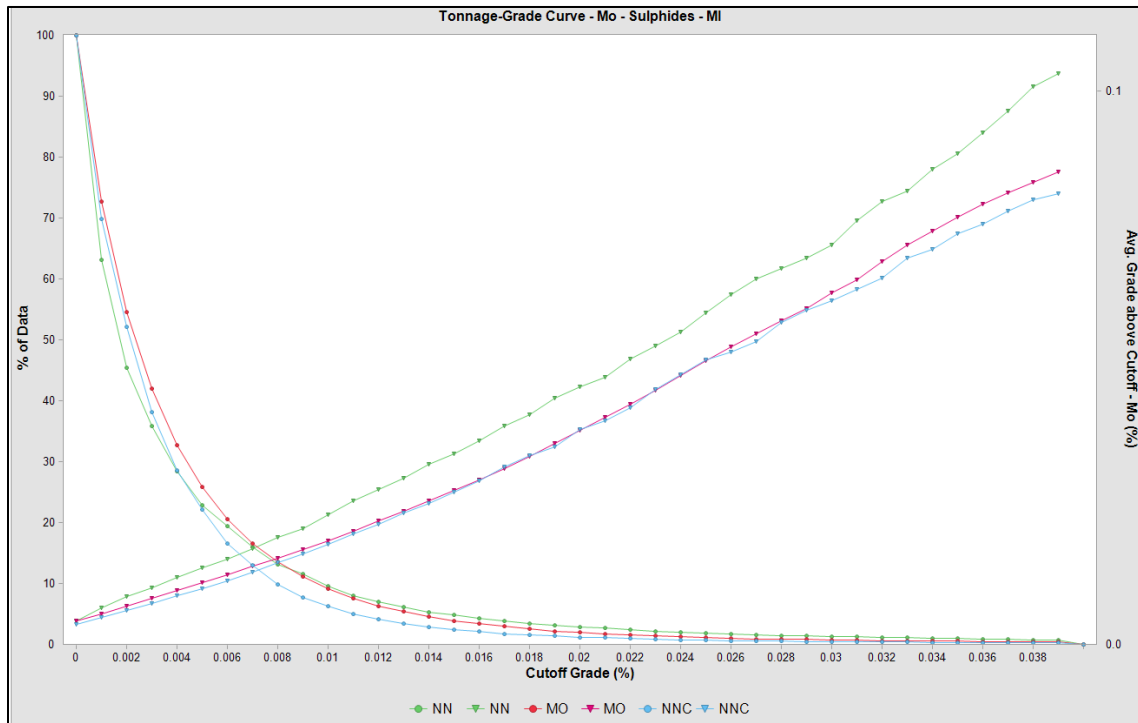


Figure 14-4: Grade-Tonnage Curve Comparison – Mo

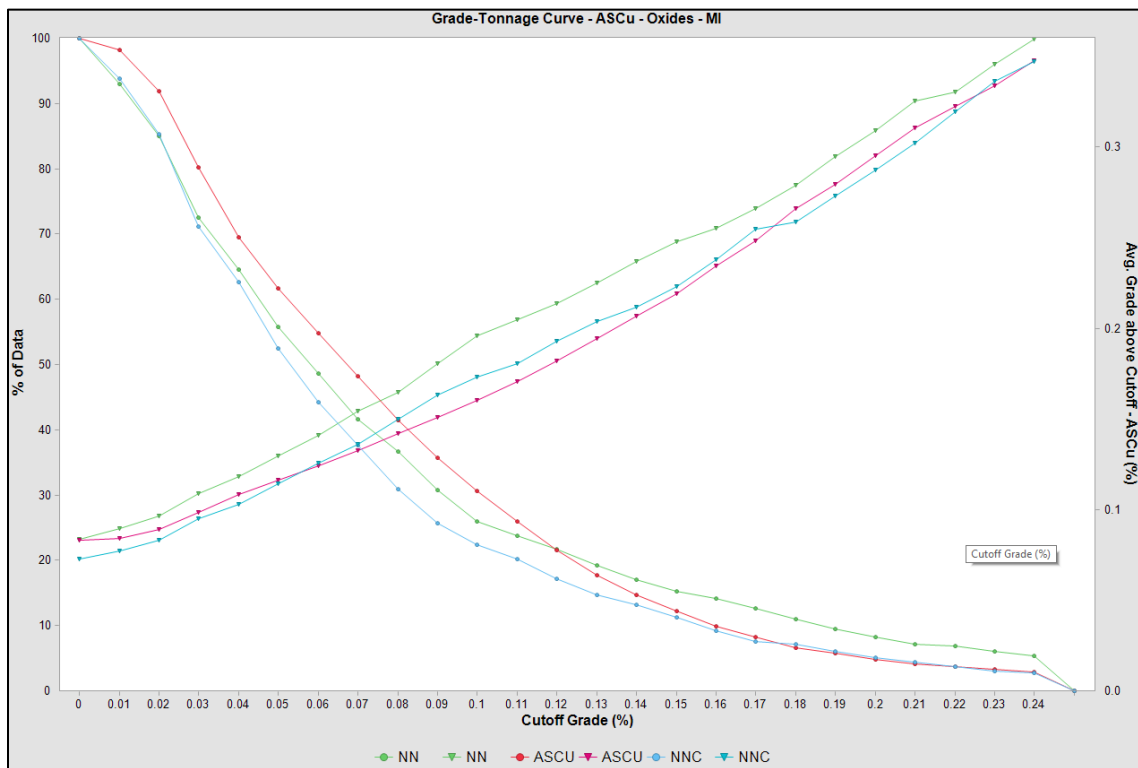


Figure 14-5: Grade-Tonnage Curve Comparison – ASCu

14.8 Block Model Validation – *Cont'd*

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 in order to show that there is no spatial bias between the model and the de-clustered composites.

Figures 14-6 through 14-8 show the swath plots for each zone using 100-foot wide vertical slices and 50-foot wide horizontal slices.

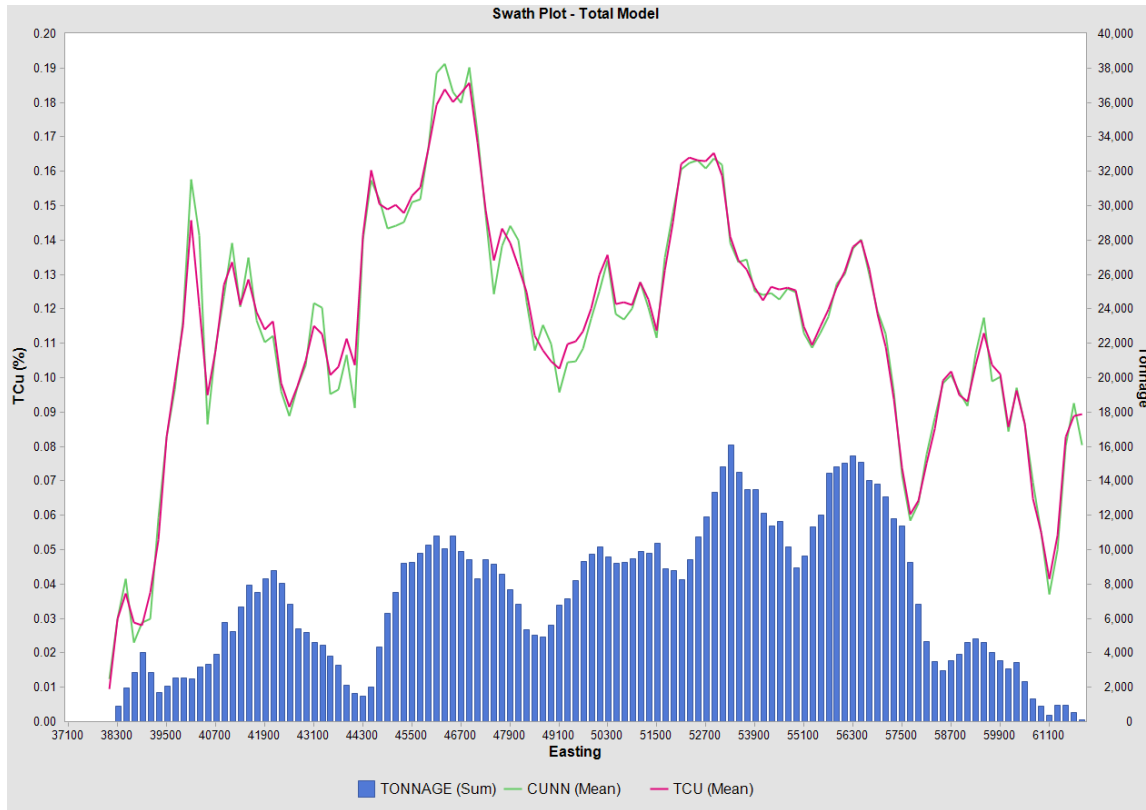


Figure 14-6: Swath Plot of TCU – M+I in Sulfides – Eastings

14.8 Block Model Validation – *Cont'd*

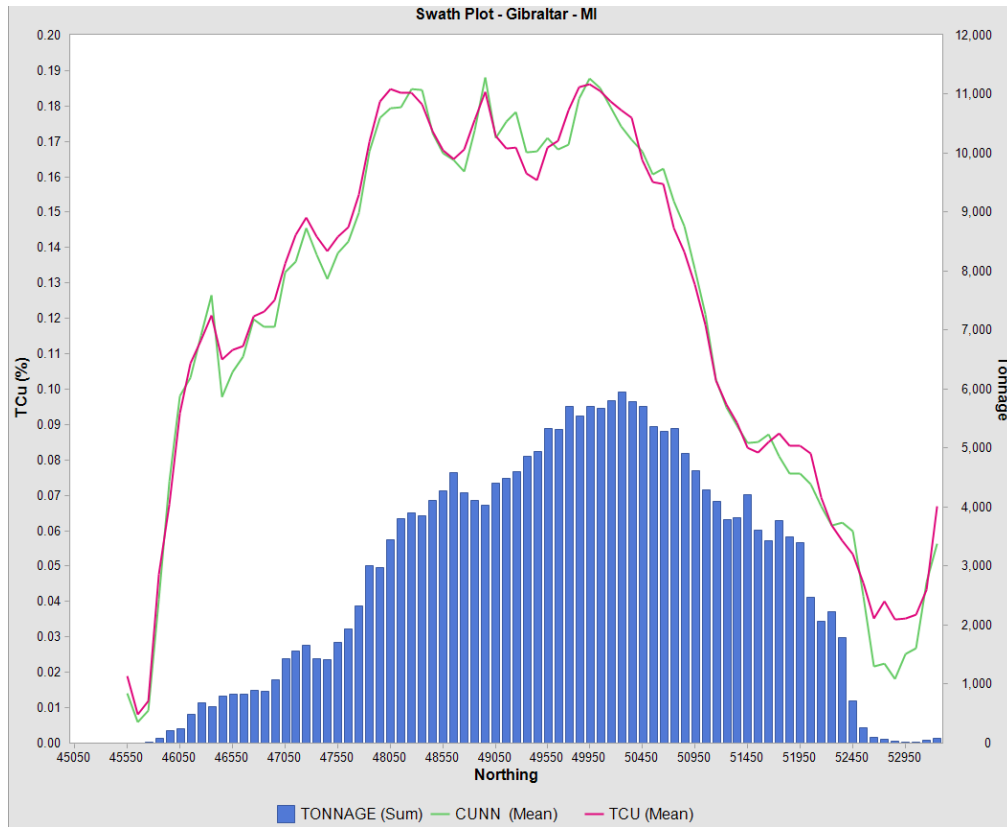


Figure 14-7: Swath Plot of TCU – M+I in Sulfides – Northings

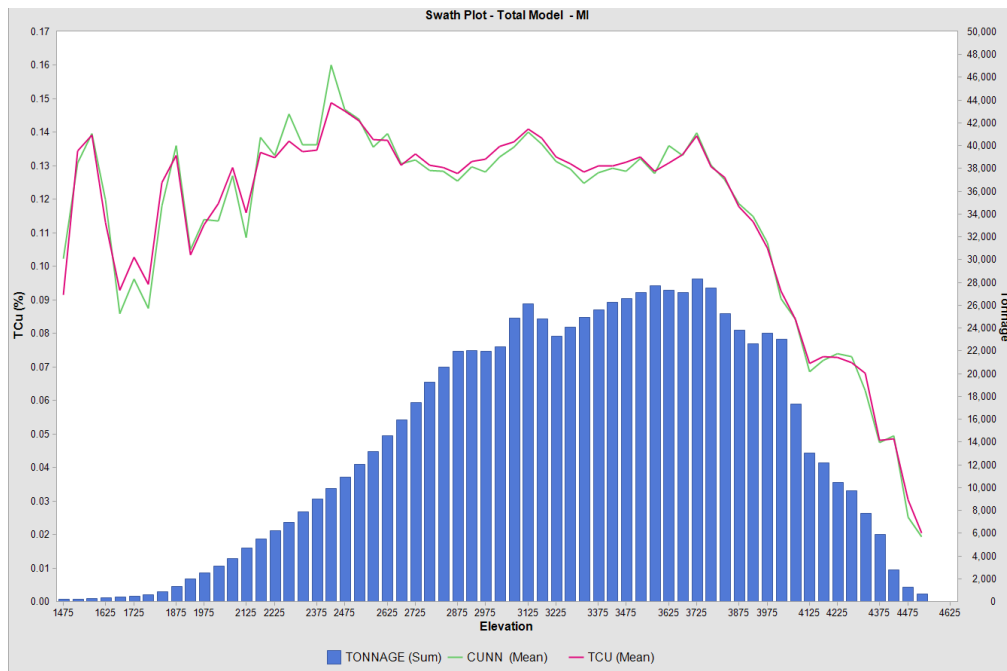


Figure 14-8: Swath Plot of TCU – M+I in Sulfides – Elevation

14.8 Block Model Validation – *Cont'd*

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 Gibraltar, Pollyanna, 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 2021) only are plotted, with the Resource pit shown in black.

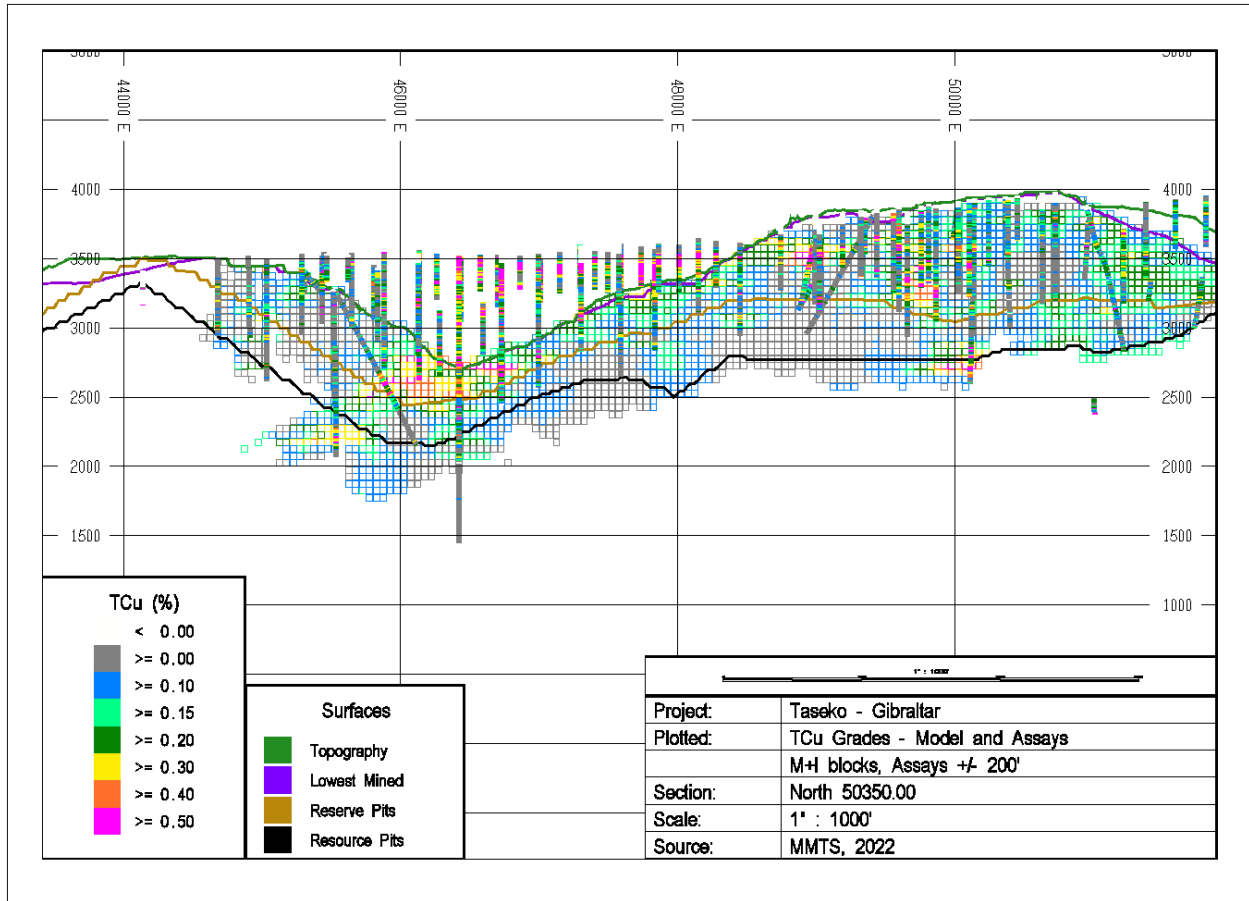


Figure 14-9: Visual Validation of TCu Grades at Section 50350N in Gibraltar and Connector Pit Areas

14.8 Block Model Validation – *Cont'd*

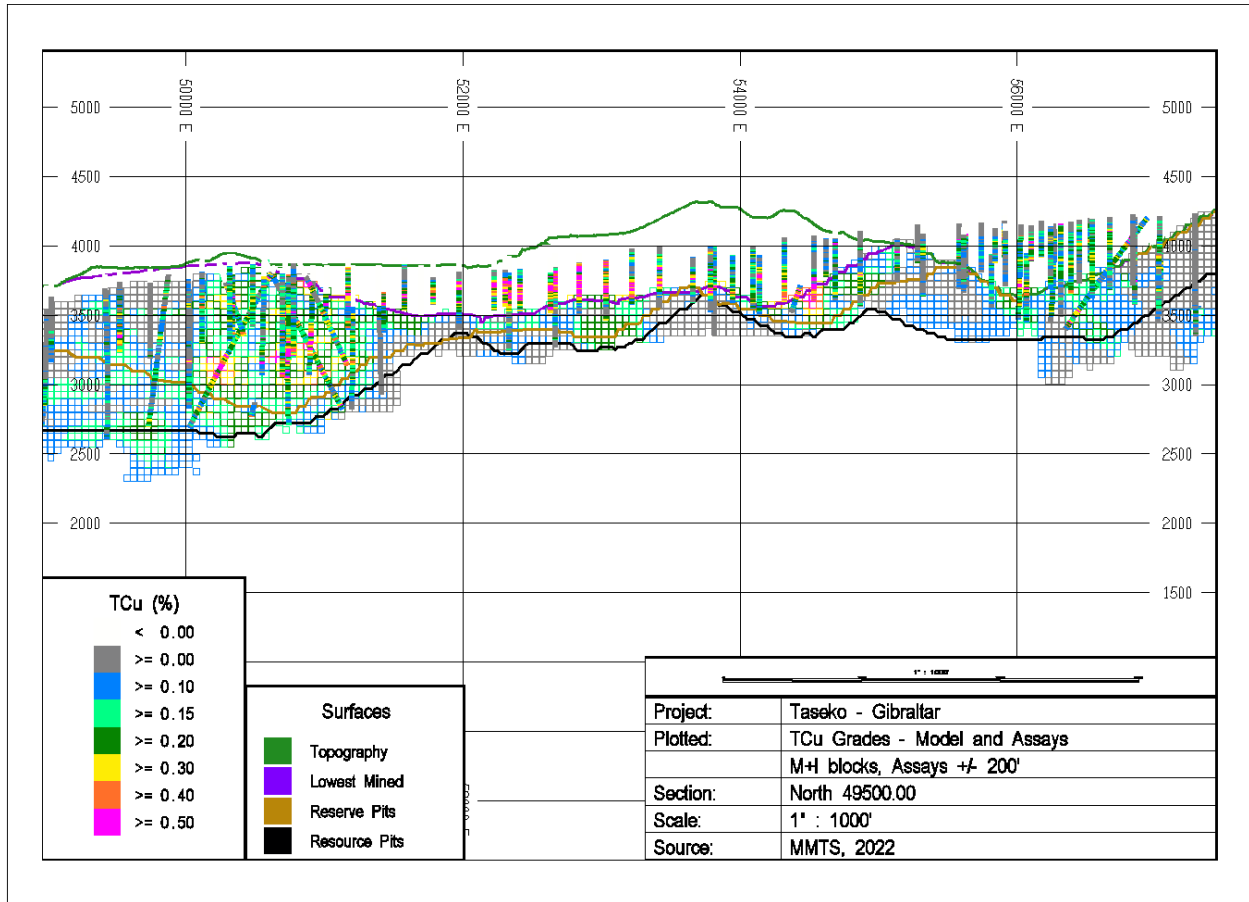


Figure 14-10: Visual Validation of TCU Grades at Section 44600N in Pollyanna and Connector Pit Areas

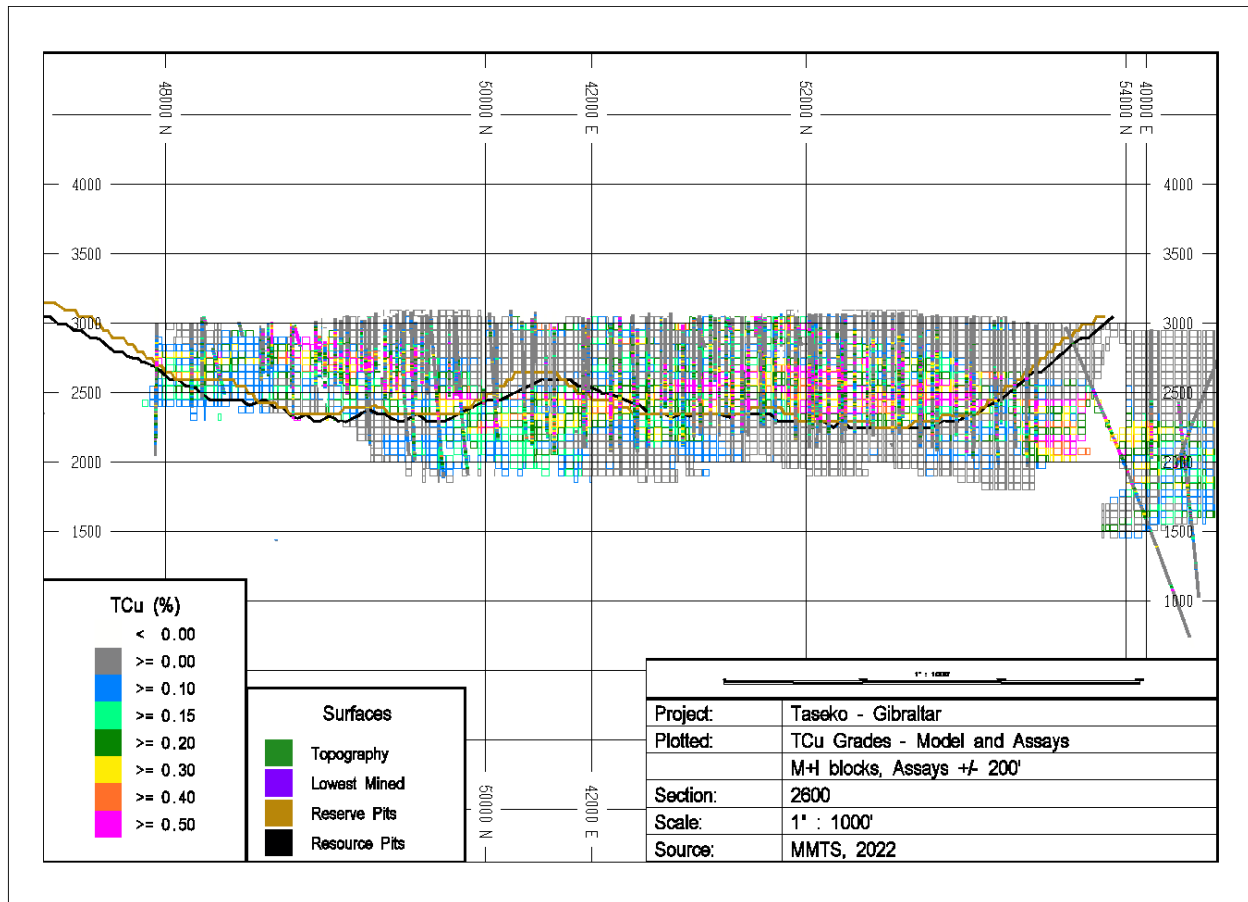
14.8 Block Model Validation – *Cont'd*

Figure 14-11: Visual Validation of TCU Grades at Long Section through Extension Pit Area 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 QP is of the opinion that the block model and methodology are reasonable for estimating resources.

14.9 Classification

Resource classifications used in this study conform to the 2014 CIM Definition Standards:

Mineral Resource

*A Mineral **Resource** is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.*

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Measured Mineral Resource

*A **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.*

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

Indicated Mineral Resource

*An **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.*

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

14.9 Classification – *Cont'd****Inferred Mineral Resource***

An ***Inferred Mineral Resource*** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An *Inferred Mineral Resource* has a lower level of confidence than that applying to an *Indicated Mineral Resource* and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of *Inferred Mineral Resources* could be upgraded to *Indicated Mineral Resources* with continued exploration.

Classification is based on the interpolation pass of the TCu estimation, as summarized in Tables 14-7 as well as the restrictions summarized below in Table 14-12. 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 meet the criteria given in Table 14-12. 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 (ft)	Min.# Composite	Min.# Quadrants	Min.# DHs	Average Distance (ft)
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 Reasonable Prospects of Eventual Economic Extraction

In order to meet the requirements of NI 43-101 with respect to reasonable prospects of eventual economic extraction, by open pit mining methods, a Lerchs-Grossman pit optimization was generated to constrain the resource within the block model. Positive value was constrained to the measured and indicated resources only and the resource model was updated to reflect current topography and backfilled areas as of December 31st, 2021. Metal prices used were US\$3.50/lb Cu, US\$14.00/lb Mo at a foreign exchange rate of US\$0.80: C\$1.00. Recoveries of 85% and 40% are applied to TCu and Mo respectively. No allowances were made for mining losses and dilution.

Combined processing and G&A costs were set at C\$5.19/t milled. Pit rim mining costs were set to C\$1.75/t mined for ore and waste with a bench increment of C\$0.033/t mined below the 4000 elevation. Offsite cost allowances of US\$0.45/lb for copper and US\$1.95/lb for molybdenum were subtracted from the metal prices. Overall pit slopes of 35 degrees were used and reflect an average of the pit slopes recommended across all pit areas discussed in Section 15.

14.11 Mineral Resource Estimate

The Gibraltar mineral resource estimate is summarized in Table 14-13 at a range of cut-off grades with the base case cut-off grade of 0.15% TCu highlighted. The base case cut-off grade matches the cut-off grade used to define the reserves and is consistent with current operating practices at the mine.

Table 14-13: Gibraltar Mine Mineral Resources

Gibraltar Mine Mineral Resources as of December 31, 2021					
Category	Cut-off (%TCu)	Tons (millions)	TCu (%)	Mo (%)	Cu Eq. (%)
Measured	0.30	181	0.41	0.010	0.43
	0.25	303	0.36	0.009	0.38
	0.20	514	0.30	0.008	0.32
	0.15	845	0.25	0.007	0.27
	0.10	1,272	0.21	0.006	0.22
Indicated	0.30	52	0.41	0.009	0.42
	0.25	100	0.34	0.008	0.36
	0.20	195	0.28	0.008	0.30
	0.15	370	0.23	0.007	0.25
	0.10	601	0.19	0.006	0.20
Measured and Indicated	0.30	232	0.41	0.010	0.43
	0.25	403	0.35	0.009	0.37
	0.20	709	0.30	0.008	0.31
	0.15	1,215	0.24	0.007	0.26
	0.10	1,872	0.20	0.006	0.22
Inferred	0.30	8	0.39	0.007	0.40
	0.25	17	0.33	0.006	0.34
	0.20	36	0.27	0.005	0.28
	0.15	78	0.22	0.004	0.23
	0.10	159	0.17	0.003	0.18

1. Mineral Resources follow CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).
2. Mineral Resources are reported inclusive of Mineral Reserves.
3. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
4. The Mineral Resource has been confined by a “reasonable prospects of eventual economic extraction” pit using the following assumptions: Cu price of US\$3.50/lb, Mo price of US\$14.00/lb, exchange rate of US\$0.80=C\$1.00, metallurgical recoveries of 85% for TCu and 40% for Mo.
5. A tonnage factor of 12ft³/ton has been applied for rock and 15ft³/ton for overburden and fill.
6. Copper Equivalency based on US\$3.50/lb price and 85% metallurgical recovery for copper, and US\$13.00/lb price and 50% metallurgical recovery for molybdenum. CuEq can be calculated using the formula $CuEq\% = TCu\% + Mo\% \times 2.185$.
7. Numbers may not add due to rounding.

14.11 Mineral Resource Estimate – *Cont'd*

Mineral Resources reported in Table 14-13 are reported inclusive of those Mineral Resources converted to Mineral Reserves. Mineral Resources that are not converted to Mineral Reserves do not have demonstrated economic viability.

It is the opinion of the QP that the classification of Mineral Resources as presented in Table 14-13 meet the definitions of Measured, Indicated and Inferred Mineral Resources as stated by the CIM Definition Standards for Mineral Resources and Mineral Reserves (2014) that are incorporated by reference into NI 43-101.

14.12 Factors That Could Affect the Mineral Resource Estimate

Current and historical performance at Gibraltar provide solid support to the assumptions applied in this report, there are a number of factors that could have a material and adverse impact on the Mineral Resource estimate including but not limited to assumptions used in generating the LG pit shell: metal price assumptions, foreign exchange rates, pit slope angles, metallurgical recoveries, and mining, process and offsite cost assumptions. Risks associated with these factors are outlined in Section 25.

The QP is not aware of any significant environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other factors that could materially affect the resource estimate other than normal risks faced by mining projects in British Columbia.

Any material changes in quantity of mineral reserves, mineral resources, grade, or density may affect the economic performance of a property. Fluctuation in metal or commodity prices, results of additional drilling, metallurgical performance, receipt of new information, and the evaluation of mine plans subsequent to the date of any estimate may require revision of such mineral resources and may be materially affected by mining, infrastructure, permitting difficulties or other relevant factors.

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 maximum reserve pit extents are initially determined by application of the Lerchs-Grossmann “zero profit” technique. This methodology derives a series of nested pit shells, based on a consistent cost and recovery inputs over a range of commodity price assumptions.

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, undiscounted cash flow, strip ratio, metal production, equipment requirements, and operating life. 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 described in Table 15-1. All costs are in Canadian dollars (C\$) and units are imperial unless stated otherwise.

Pit rim reference elevations and pit rim ore mining cost are varied by area to account for topographical relief across the site and distance to the primary crushers.

15.1 Assumptions, Parameters and Methods – *Cont'd*(a) Pit Size Determination – *Cont'd*

Table 15-1: Lerchs-Grossmann Inputs

Copper Price	US \$3.05/lb
Molybdenum Price	US \$12.00/lb
Exchange Rate	US \$0.80 = CDN \$1.00
Pit Rim Mining Cost – Fill	\$1.18/ton mined
Pit Rim Mining Cost – Waste	\$1.64/ton mined
Pit Rim Mining Cost – Oxide	\$1.84/ton mined
Pit Rim Mining Cost – Ore	\$1.63 to \$2.18/ton mined
Bench Incremental Cost	\$0.033/bench
Oxide Processing Cost	\$2.85/ton of oxide
Sulphide Processing + G&A Cost	\$5.19/ton of ore
Sustaining Capital	\$0.15/ton mined
Copper cut-off grade	0.15% Cu
Copper Sulphide Recovery	85.0%
Molybdenum Recovery	40%
Copper Oxide Recovery	50% of acid soluble copper
Off-Property Costs	US \$0.35/lb Cu
Payable Copper in Concentrate	96.4%
Payable Molybdenum	98.5%
Overall Slopes	Range from 29 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.

Wall angles used in the pit designs are consistent with geotechnical consultant recommendations. 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 Reserve 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
Pollyanna	Rock	355° to 50°	37°
	Rock	50° to 140°	28-36°*
	Rock	140° to 260°	37°
	Rock	260° to 335°	40°
	Unconsolidated	0° to 360°	26°
Connector	Rock	0° to 135°	39°
	Rock	135° to 190°	40°
	Rock	190° to 285°	38°
	Rock	285° to 360°	40°
	Unconsolidated	0° to 360°	28°
Gibraltar	Rock	290° to 75°	34°
	Rock	75° to 160°	37°
	Rock	160° to 290°	40°
	Unconsolidated	0° to 360°	26°
Extension	Rock	340° to 130°	40°
	Rock	130° to 190°	43°
	Rock	190° to 280°	45°
	Rock	280° to 340°	43°
	Unconsolidated	0° to 360°	26°

* East wall of Pollyanna Pit is a transitional zone and uses a variable slope

The ultimate reserve showing the Pollyanna, Connector, Gibraltar and Extension pit areas is illustrated in Figure 15-1.

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

(b) Pit Design – *Cont'd*

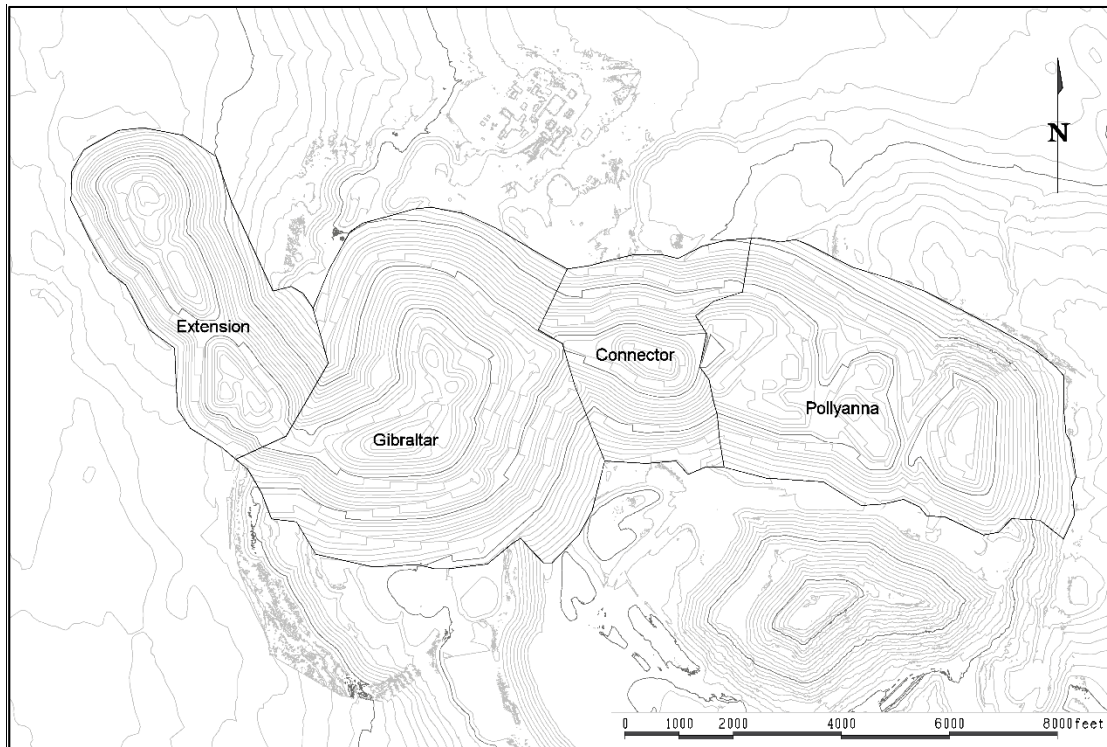


Figure 15-1: Ultimate Designed Pits

(c) Cut-Off Grade

The cut-off grade used for sulphide ore is 0.15% copper with an upper limit of 50% acid soluble copper. This conforms with current operating practices at the mine.

To validate the existing cut-off grade, the material contained in the reserve pits was evaluated over a range of potential cut-off grades. Costs and revenues were estimated using the same inputs from the Lerchs-Grossman analysis described above for each potential cut-off grade scenario. Results were evaluated using a variety of economic criteria such as total undiscounted net cash flow, annual operating net cash flow, resultant mine life and NPV. The study found that the cut-off grade of 0.15% copper is appropriate.

The cut-off grade used for oxide ore is 0.10% acid soluble copper.

In the opinion of the QP, the current cut-off grades are appropriate based on forecast long range metal prices, capital and operating costs, and recovery.

15.2 Mineral Reserves

Reserve classifications used in this study conform to the 2014 CIM Definition Standards:

***Modifying Factors** are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.*

*A **Mineral Reserve** is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.*

The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.

The public disclosure of a Mineral Reserve must be demonstrated by a Pre-Feasibility Study or Feasibility Study.

Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proven Mineral Reserves. A Probable Mineral Reserve has a lower level of confidence than a Proven Mineral Reserve.

*A **Probable Mineral Reserve** is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Reserve.*

*A **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.*

In order to meet the requirements of NI 43-101 with respect to determining the economically mineable part of the resource, an LG shell was determined through the process discussed in section 15.1. This shell formed the basis for the detailed pit design, scheduling of the mine and the development of a cash flow. As documented throughout this report, there is adequate information on mining, processing, metallurgical, economic, and other relevant modifying factors that demonstrate, at the time of reporting, that economic extraction is justified.

15.2 Mineral Reserves – *Cont'd*

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 Mine as of December 31, 2021.

Table 15-3: Gibraltar Mine Sulphide Mineral Reserves

Gibraltar Mine Sulphide Mineral Reserves as of December 31, 2021 at 0.15% Copper Cut-off					
Pit	Category	Tons (millions)	TCu (%)	Mo (%)	* Cu Eq. (%)
Pollyanna	Proven	93	0.24	0.008	0.25
	Probable	27	0.21	0.007	0.22
	Subtotal	120	0.23	0.008	0.25
Connector	Proven	159	0.25	0.010	0.27
	Probable	7	0.22	0.007	0.23
	Subtotal	167	0.25	0.010	0.27
Gibraltar	Proven	173	0.24	0.008	0.26
	Probable	149	0.23	0.008	0.24
	Subtotal	322	0.24	0.008	0.25
Extension	Proven	84	0.31	0.002	0.32
	Probable	8	0.25	0.002	0.26
	Subtotal	92	0.31	0.002	0.31
Ore Stockpiles		6	0.18	0.007	0.20
Total		706	0.25	0.008	0.26

1. Mineral Reserves follow CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).
2. Sulphide Mineral Reserves are exclusive of Oxide Mineral Reserves and are contained within Mineral Resources.
3. Mineral Reserves are assumed to be extracted using open pit mining methods and are based on US\$3.05/lb Cu price, \$12.00/lb Mo price, exchange rate of US\$0.80=C\$1.00, metallurgical recoveries of 85% TCu and 40% Mo for sulphide ore and 50% ASCu for oxide ore.
4. A tonnage factor of 12ft³/ton has been applied for rock and 15ft³/ton for overburden and fill.
5. Copper Equivalency based on US\$3.50/lb price and 85% metallurgical recovery for copper, and US\$13.00/lb price and 50% metallurgical recovery for molybdenum. CuEq can be calculated using the formula $CuEq\% = TCu\% + Mo\% \times 2.185$.
6. Numbers may not add due to rounding.

15.2 Mineral Reserves – *Cont'd*

Table 15-4: Gibraltar Mine Oxide Mineral Reserves

Gibraltar Mine Oxide Mineral Reserves as of December 31, 2021 at 0.10% ASCu Cut-off			
Pit	Category	Tons (millions)	ASCu (%)
Connector	Proven	1	0.16
	Probable	14	0.15
	Subtotal	15	0.15
Gibraltar	Proven	0	0.14
	Probable	2	0.17
	Subtotal	2	0.17
Ore Stockpiles		0	0.15
Total		17	0.15

1. Mineral Reserves follow CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).
2. Oxide Mineral Reserves are exclusive of Sulphide Mineral Reserves and are contained within Mineral Resources.
3. Mineral Reserves are assumed to be extracted using open pit mining methods and are based on US\$3.05/lb Cu price, \$12.00/lb Mo price, exchange rate of US\$0.80=C\$1.00, metallurgical recoveries of 85% TCu and 40% Mo for sulphide ore and 50% ASCu for oxide ore.
4. A tonnage factor of 12ft³/ton has been applied for rock and 15ft³/ton for overburden and fill.
5. Numbers may not add due to rounding.

The mineral reserves presented in Tables 15-3 and 15-4 are mutually exclusive and are contained within the mineral resources stated in Section 14 of this report.

It is the opinion of the QP that the classification of- Mineral Reserves as presented in Tables 15-3 and Table 15-4 meet the definitions of Proven and Probable Mineral Reserves as stated by the CIM Definition Standards for Mineral Resources and Mineral Reserves (2014) that are incorporated by reference into NI 43-101.

15.3 Reconciliation of Reserves with Production

Production at Gibraltar has historically reconciled well with the reserve model.

Between 1971 and 2004 Gibraltar mined 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 2021, a total of 363 million tons of ore grading 0.29% copper and 0.010% Mo was mined. The geological models forecast 356 million tons of ore grading 0.28% copper and 0.009% Mo from the mined volume. The ore mined includes 6 million tons of modeled waste that was mined as ore in 2014 during a transitional period when the cut-off grade was lowered from 0.20% to 0.15% copper. After adjusting for these tons, the mined ore results in a variance of 0.4% for tons, and a variance of 2.3% and 10.2% for copper and molybdenum grades respectively.

15.4 Factors That Could Affect the Mineral Reserve Estimate

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.

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, truck and shovel mining methods since 1971. To date, mining has progressed in several phases in the Gibraltar, Pollyanna, and Granite pits with future mining to continue in the Pollyanna and Gibraltar pits as well as the currently undeveloped Connector and Extension pit areas.

Mining operations supply 85,000 tons per day of ore at an average head-grade of 0.25% copper to two primary crushers which in-turn feed the two concentrators as discussed in Section 17. During the 23-year mine life, a total of 699 million tons of sulphide ore, 17 million tons of oxide ore and 1,667 million tons of waste will be mined from the reserve pits at a strip ratio of 2.4. An additional 6 million tons of stockpiled ore will be processed.

For strategic and operational reasons surplus ore is stockpiled at various times during the mine life and for various amounts of time prior to processing. Waste rock is stored in various waste rock storage facilities next to the pits, as well as in previously mined pits after mining of those pits is complete. Suitable overburden waste is salvaged and stored separately for use in reclamation. Ore and waste stockpiles are discussed further in Section 18 of this report.

16.2 Pit Design

The pit designs are based on the selected Lerchs-Grossmann pit shell described in Section 15 of this report. Access ramps, sector-specific wall angles, practical mining development considerations and scheduling factors were incorporated into developing the ultimate pits and a number of intermediate phases to facilitate mine scheduling.

Pit slope designs are based on recommendations from geotechnical consultants and historical operating experience. All the pits in the reserve plan are designed with a bench height of 50 ft, a bench face angle of 65 degrees. Safety berms are a minimum of 27 ft wide and are increased to achieve inter-ramp wall angles presented in Section 15 of this report. Haul ramps or 60 ft wide geotechnical safety berms are included every 350 vertical feet or 7 benches are included to provide additional catchment and break-up large pit walls.

Haul roads are designed 120 ft wide to allow for double-lane haulage with allowances for berms and ditches. Single-lane, 90 ft wide roads are used to maximize ore extraction and mining width at pit bottoms. Road grades are limited to 10% with flat switchbacks.

16.3 Mine Dewatering

Ground water is controlled by a combination of perimeter wells surrounding the active pits, in-pit dewatering wells and horizontal drains within the pit walls. This dewatering promotes geotechnical stability as well as for improving operating conditions in the pit. Pumping infrastructure is currently in place in the Pollyanna and Gibraltar Pits and will be advanced as mining areas extend into other areas throughout the mine life.

A bulk dewatering program is currently underway to relocate water stored in Gibraltar Pit to the mined-out Granite Pit. This will maintain water levels below active mining benches. Pumping will be complete by 2023.

16.4 Dilution, Ore Loss and Selectivity

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. Operational ore control is established from assays of blast-hole drill cuttings and a minimum selective mining unit of 50 ft which corresponds with the block model dimensions. Dilution and ore loss assumptions are supported by historical reconciliations between the reserve block model and ore mined as discussed in Section 15.

Although not relied upon for the reserve, Gibraltar has been trialing the ShovelSense system by MineSense to evaluate if improvements in ore control can be achieved. The sensor-based ore sorting system has been operating on one of Gibraltar's shovels since April 2021 to evaluate the impact on in-mine ore recovery and dilution.

16.5 Production Schedule

The ultimate reserve pits discussed in Section 15 of this report have been scheduled to optimize the economic performance of the operation over the mine life. A number of constraints and objectives are used to develop an achievable, realistic mining schedule. These include:

- Constraining pit advances in accordance with reasonable mining rates
- Prioritizing certain pits and phases to advance or delay waste mining
- Prioritizing the use of certain waste storage locations to control the number of trucks required
- Targeting mining areas to control head grades
- Backfilling of individual pits only after mining within each pit is complete
- Provision of suitable mined-out area for in-pit tailings deposition

The reserve mine plan begins with mining already underway in the Pollyanna and Gibraltar pits. In 2023 mining will begin in the Connector pit, and in the following year activity in the Gibraltar Pit will cease temporarily. In 2025, mining in the Pollyanna pit will also cease temporarily. Connector pit will be the sole focus of mining activity from 2026 until 2028 when mining of the Gibraltar pit will restart. The Connector pit will be exhausted in 2031 and the Gibraltar pit will continue to be mined until 2038. The Extension pit and the remainder of the Pollyanna pit will be mined from 2036 to 2040 and 2040 to 2044 respectively. The sulphide ore release by area is shown in Figure 16-1.

The average mining rate over the operating life is 104 million tons per year. Sulphide ore moved (including stockpile rehandle) averages 33 million tons per year. Oxide ore is mined sporadically throughout the schedule with 90% of the total 17 million tons coming from the Connector Pit between 2024 and 2027. A summarized production schedule is provided in Table 16-1. Period plots illustrating mining progression are shown in Figures 16-2 through 16-5.

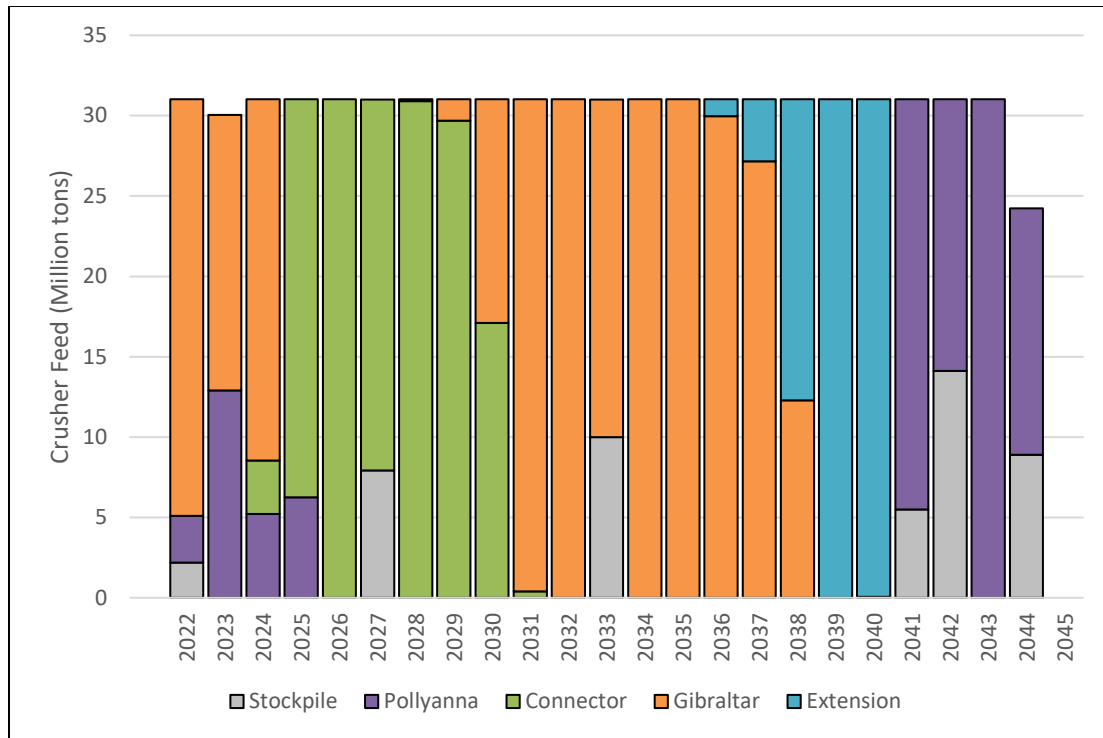
16.5 Production Schedule – *Cont'd*

Figure 16-1: Crusher Feed by Pit

Table 16-1: Production Schedule

Project Period		2022 - 2026	2027 - 2031	2032 - 2036	2037 - 2041	2042 - 2044	Grand Total
Tons Mined	(M ton)	540	530	520	550	240	2,380
Strip Ratio	(w:o)	2.5	2.4	2.2	2.4	2.7	2.4
Ore Milled	(M ton)	154	155	155	155	86	706
Cu Head Grade	(% Cu)	0.24	0.24	0.24	0.28	0.21	0.25
Mo Head Grade	(% Mo)	0.008	0.009	0.010	0.004	0.007	0.008
Cu Recovery	(% Cu)	84	85	86	84	85	85
Mo Recovery	(% Mo)	50	50	50	50	50	50
Copper in Concentrate	(M lbs)	630	630	650	730	310	2,950
Mo in Concentrate	(M lbs)	12	14	15	6	6	53
Copper Cathode	(M lbs)	10	15	2	-	-	27

Numbers may not add due to rounding.

16.5 Production Schedule – *Cont'd*

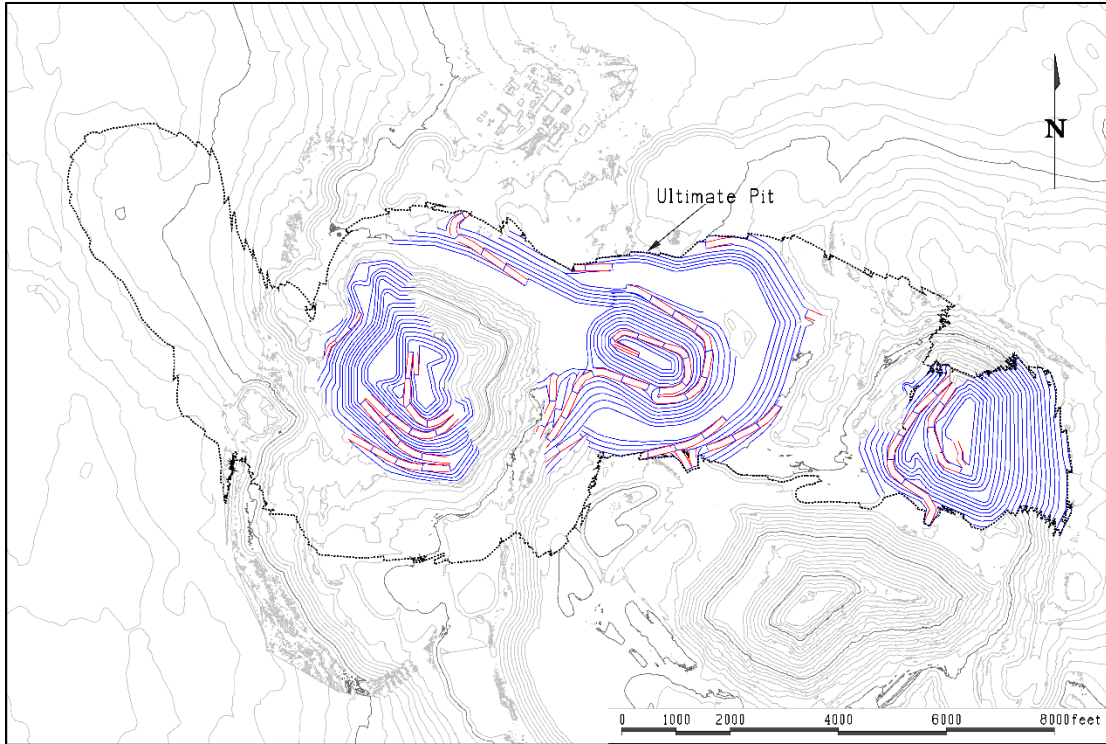


Figure 16-2: End of 2026

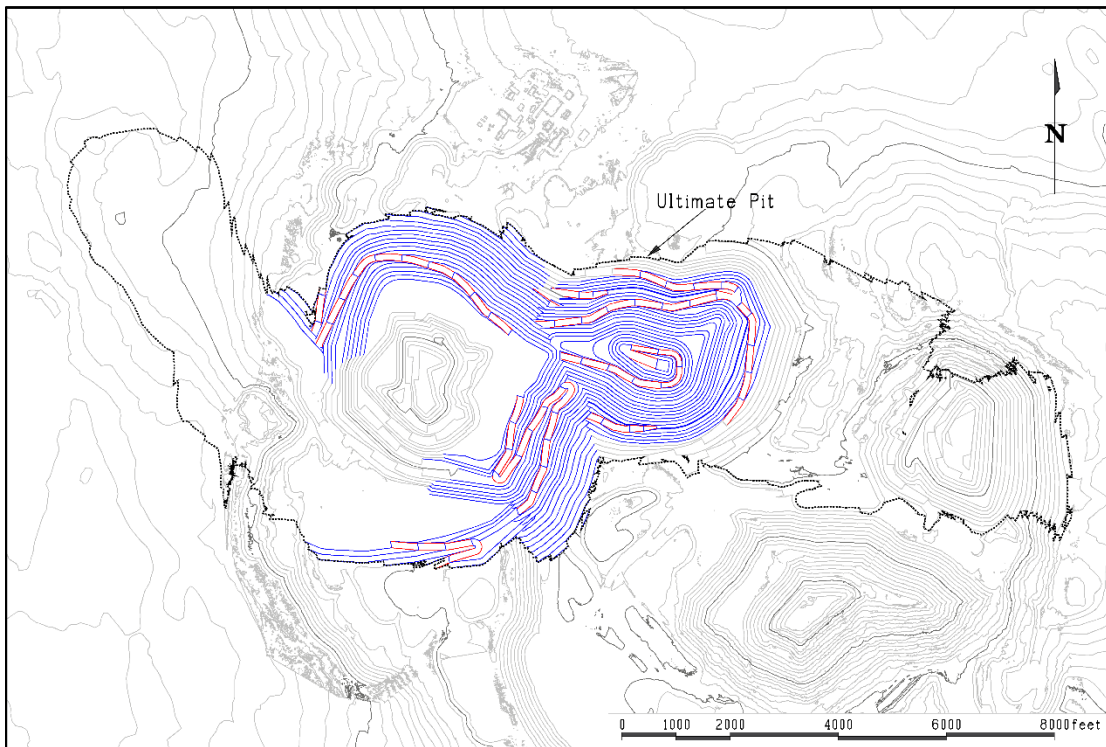


Figure 16-3: End of 2031

16.5 Production Schedule – *Cont'd*

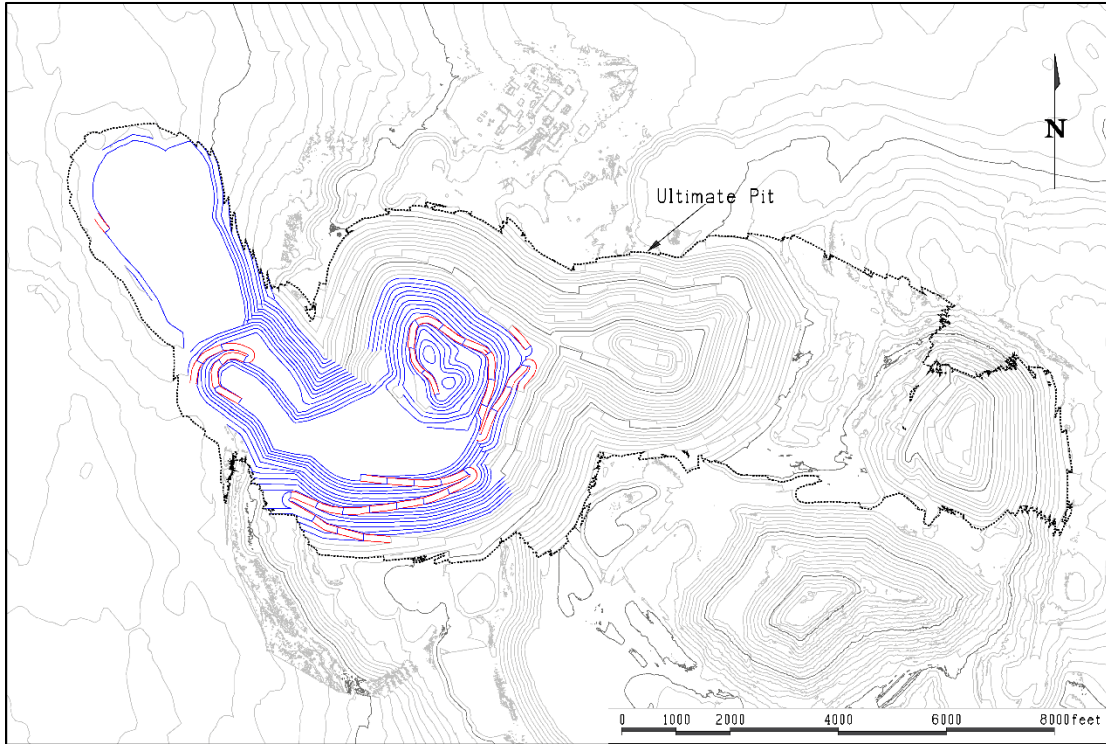


Figure 16-4: End of 2036

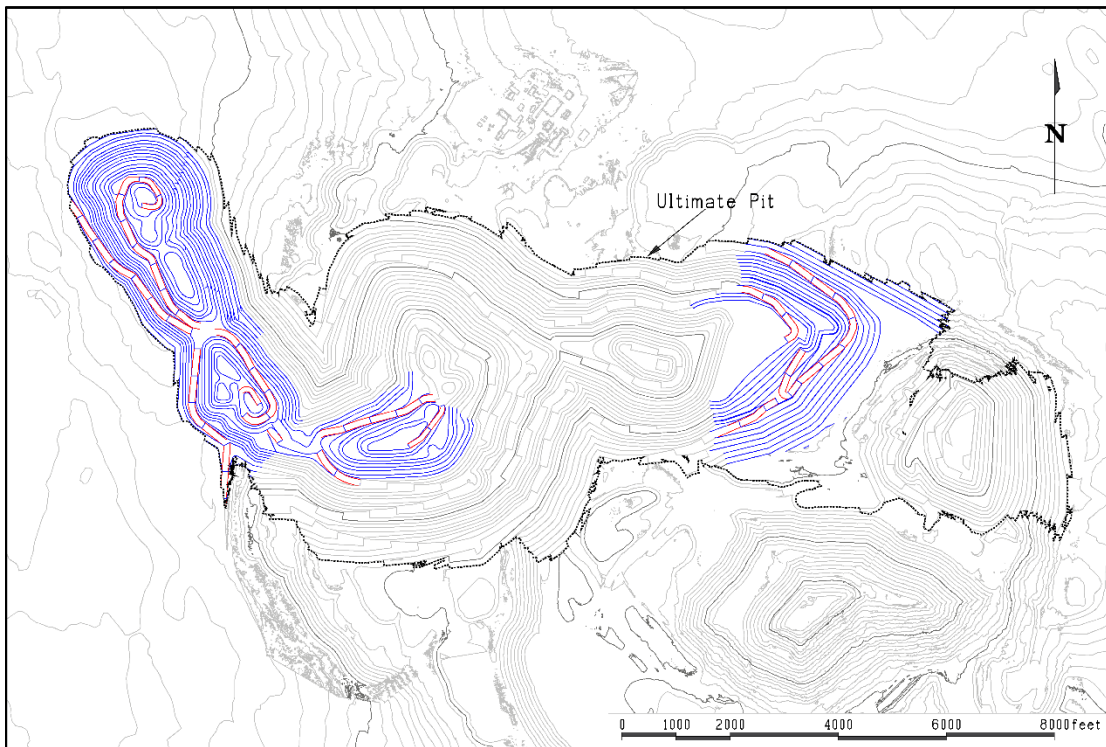


Figure 16-5: End of 2041

16.5 Production Schedule – *Cont'd*

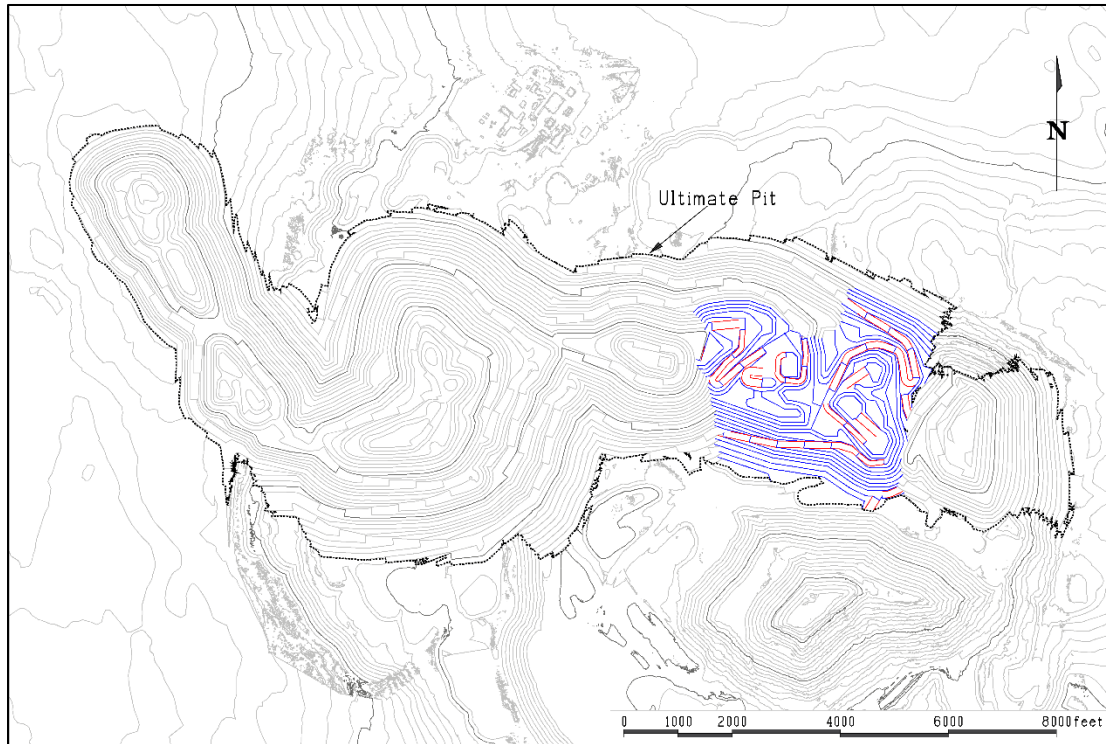


Figure 16-6: End of 2044

16.6 Major Mine Equipment

Mining operations are carried out utilizing conventional open pit mining equipment. Production fleet requirements have been estimated using industry standard productivity calculations informed by recent operating performance from Gibraltar. Waste and ore are mined utilizing the current fleet consisting of five electric blast hole drills (12¼" – 13¾" bits), four electric rope shovels (1 x 56yd³, 2 x 58yd³, 1 x 44yd³), two 30yd³ front end loaders and twenty-four 320-ton haul trucks. In 2036 and 2037, four additional haul trucks and one additional drill will be added to the mining fleet.

The primary mining fleet is supported by an existing fleet of ancillary equipment including track dozers, wheel loaders, motor graders as well as sand and water trucks.

SECTION 17
RECOVERY METHOD

SECTION 17: RECOVERY METHOD

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17.1 Introduction

Sulphide ore is processed at a rate of 85,000 tons per day through two bulk concentrators to produce a concentrate which contains copper, molybdenum and silver values. The bulk concentrate from both facilities is combined and processed through a single molybdenum flotation plant where molybdenum is separated from the copper via selective flotation. 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 fall 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 6.5-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-horsepower Semi-Autogeneous Grinding (SAG) mill. SAG mill discharge is screened at an aperture size of 0.5-inches, with the oversize returning via conveyor belt to the feed of the mill. The undersize material is subsequently pumped to a distributor where six 13.5-foot diameter, 2500-horsepower ball mills are operated in closed circuit with hydrocyclones to produce a minus 350-micron product used to feed the flotation circuit.

Flotation feed is pumped to two parallel rougher flotation circuits, each consisting of five 160m³ flotation vessels. Flotation tailings are then pumped to a Tailings Storage Facility. Rougher concentrate from the parallel circuits is combined and then classified through hydrocyclones. The hydrocyclones produce a fine overflow which typically has a 70% passing size of 44 microns. This overflow is pumped to the first cleaner flotation stage. Coarse cyclone underflow reports to a 1,250-horsepower vertical stirred mill operating in regrind service. Regrind mill 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 20m³ 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 typically 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 20m³ flotation cells. Underflow from this cleaner scavenger stage are fed to the first cleaner flotation stage, while concentrate is either fed to the second cleaner flotation stage or sent directly to the bulk concentrate thickener based on an assessment of the copper concentrate grade.

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 6.5-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-horsepower Semi-Autogeneous Grinding (SAG) mill. SAG mill discharge is screened at an aperture size of 0.5-inches with the oversize returning via conveyor belt to the feed of the mill. The undersize material is subsequently pumped to a distributor where a single 20-foot diameter 8,500-horsepower ball mill is operated in closed circuit with hydrocyclones to produce a minus 350-micron product used to feed the flotation circuit.

Flotation feed is pumped to single rougher flotation line, consisting of six 160m³ flotation vessels. Flotation tailings are then pumped to a Tailings Storage Facility. Rougher concentrate from this circuit is then classified through hydrocyclones. The hydrocyclones produce a fine overflow which typically has a 70% passing size of 44 microns. This overflow is pumped to the first cleaner flotation stage. Coarse cyclone underflow reports to a 1,250-horsepower vertical stirred mill operating in regrind service. Regrind mill 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 20m³ 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 20m³ flotation cells. Underflow from this cleaner scavenger stage are fed to the first cleaner flotation stage, while concentrate is fed to the second cleaner flotation stage or sent directly to the bulk concentrate thickener based on an assessment of the copper concentrate grade.

17.4 Molybdenum Flotation Facility

Concentrate from Bulk Concentrator #1 and #2 is combined in the bulk concentrate 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.

The thickened bulk concentrate's pH is modified using sulphuric acid, then is subsequently conditioned with flotation reagents and water to achieve target flotation density. Rougher flotation is conducted in five 10m³ 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 hydrocyclones where fine overflow material is recombined with coarse underflow material that has passed through a M100 regrind Isamill.

The recombined rougher concentrate typically has an 80% passing size of 35-microns and is fed to a first cleaner flotation stage consisting of six 5m³ 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. Underflow from this first cleaner/cleaner scavenger circuit are returned to the head of the rougher flotation circuit in a closed circuit fashion. Concentrate produced from the first cleaner 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 is 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 metric tonne bags and shipped off-site by truck to buyers.

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. 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. Copper is extracted from the copper oxide ore by using a grid solution system to deliver an acid containing stream from the plant called raffinate to the leach dumps. As this acidic material passes through the leach dump, 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 pumps 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 2024 when sufficient fresh oxide ore is mined and placed on the dumps 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. Details on the TSF can be found in Section 18.

17.8 Energy, Water and Process Materials

The energy, water, and process material required to support continued operations into closure are currently in place.

Energy requirements (electricity, natural gas) are delivered to the mine by regional utility providers as discussed in Section 5 and delivered to the process facilities via existing on-site infrastructure.

Process water at site is recycled from the TSF through use of a floating pump-house. Additional makeup water is available from a variety of sources on-site including water stored in mined-out pits and the capture of surface contact water collected from the site. Further details on site water management can be found in Section 20.

Process materials are readily available in the region with existing contracts in-place and alternative suppliers 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 Introduction

The Gibraltar Mine is an established site with existing infrastructure and facilities that support the current operating activities. These include:

- Site utilities including sufficient electrical capacity to maintain operations at the design throughput of 85,000 tons per day supplied by the British Columbia Hydro and Power Authority; a natural gas connection provided by Fortis BC; and fresh water pumped from deep wells on the mine site for domestic use.
- Processing facilities including two primary crushers located in the mine area, associated conveyors, two concentrator buildings, a molybdenum plant and an on-site concentrate storage area
- Waste storage facilities including mine waste rock storage and an existing Tailings Storage Facility.
- On-site support infrastructure including maintenance shops, warehouse facilities, safety and security facilities, administration buildings, explosives storage magazines, on-site power distribution and on-site road networks for both light and heavy-duty vehicles.
- A system of water collection and management infrastructure to capture and store site contact water in the TSF supernatant pond and the mined-out Granite Pit, as well as a fully permitted discharge system used to discharge water that meets prescribed water quality guidelines to the Fraser River.
- Concentrate handling facilities that include a rail siding and concentrate loadout along the Canadian National (CN) rail line 26 km from the mine site in Macalister BC where concentrate is shipped by rail to the Port of Vancouver and loaded onto ships for transportation to smelters located world-wide.

Except where discussed in the following sections, these facilities are expected to support the continued operations envisioned in this report.

18.2 Tailings Storage Facility

Tailings produced from both concentrators will continue to be deposited in the Tailings Storage Facility (TSF) located approximately 3.5 km north of the plant site through 2038. 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 design and function of the TSF are discussed below with operational controls and monitoring of the facility discussed in Section 20 of this report.

The main embankment, on the west side of the facility, consists of a 120 m high cyclone sand embankment known as the Cyclone Sand Dam (CSD) as well as the 20 m high North Earthfill Dam (NED). The supernatant pond is located at the east end of the facility and is retained by a 35 m high conventional water retaining dam known as the East Saddle Dam (ESD). Current tailings deposition methodology utilizes cyclone underflow material to stack dewatered coarse tailings between the main embankment and the supernatant pond. Cyclone overflow and whole tailings are discharged towards the supernatant pond.

Starting in 2028, the CSD will be raised using cyclone underflow material until it reaches the ultimate height of the facility. The ESD will be raised and a new saddle dam, the South Saddle Dam (SSD) will be constructed to contain the supernatant pond to the southeast. These facilities will be constructed using mechanically placed earth fill.

A floating pump-house is used to reclaim process water from the supernatant pond for re-use in the concentrators. Surface water runoff is diverted around the operational facility where practicable, while contact and seepage water is collected and returned to the supernatant pond. A minimal supernatant pond will be maintained to minimize the amount of dam construction required with excess supernatant water in the TSF pond currently being transferred to the mined-out Granite Pit or discharged off-site as discussed in Section 20.

From 2039 to end of operations, thickened tailings will be discharged by gravity inside the mined-out Gibraltar and Extension Pits. Thickening the tailings will reduce the quantity of reclaim water pumped from the base of the pits back to the concentrators. Water collected in the pits due to precipitation and seepage inflows, and released from tailings during consolidation, will be collected and returned to the concentrators for re-use with excess water stored in-pit or discharged off-site as required. Water treatment and discharge is discussed further in Section 20.

18.3 Water Treatment Plant

A water treatment plant is being permitted and expected to be built and operational by mid-2023. Water treatment and discharge is discussed further in Section 20.

18.4 Mine Waste Rock Storage Facilities

Mine waste will be stored in facilities located to the south and north of the planned pits and as backfill inside the mined-out Pollyanna and Connector pit areas. Overburden is segregated from the waste rock and stockpiled for reuse as a cover material for reclamation. Waste rock and overburden storage facilities are constructed in accordance with geotechnical recommendations which are developed prior to their construction. Where storage facilities are constructed in lifts, overall slopes of 2:1 (H:V) are used.

18.5 Oxide Ore Leach Dumps

Oxide ore will be placed in lifts on two existing leach dumps located to the east and west of the plant site. Leach dumps will be developed in accordance with geotechnical recommendations, the oxide ore release schedule from the mine plan and in a manner conducive to leaching operations. Existing infrastructure including ditches, ponds and pump systems will be reused for collecting the leachate solution and delivering it to the SX/EW plant.

18.6 Sulphide Ore Stockpiles

Temporary sulphide ore stockpiles are currently established near both crusher locations in order to provide operational flexibility to both mine and mill operations. This practice will continue throughout the mine life. A strategic stockpile containing up to 30 million tons of sulphide ore will be constructed between 2035 and 2038. The stockpile will be reclaimed and processed from 2041 to 2044.

18.7 Infrastructure Relocation

Crusher 1, the in-pit primary crusher feeding Concentrator 1, will be relocated in 2023 to allow complete mining of the Connector Pit. The crusher and a significant portion of the overland conveyor are currently located inside of the pit footprint and will be relocated to an area southwest of the plant site near Crusher 2. Engineering and design work for the crusher move are currently underway. Construction of the new crusher station and supporting mechanical and electrical systems will occur in 2022 and 2023 with the relocation of the crusher itself scheduled to occur mid-2023.

An in-pit electrical substation will also be relocated in 2023. The substation consists of electrical infrastructure and switchgear that feeds the overhead powerlines in the mine areas. Like the in-pit crusher, it is currently located inside the Connector Pit footprint and must be moved to allow mining in this area. The substation will be relocated to an area southeast of Crusher 2.

In 2031 and 2032, the final 6 km of the site access road and a key utility corridor will be relocated to allow mining in the western areas of Gibraltar Pit and in the Extension Pit. The utility corridor includes the 69 kV powerline, a 2" natural gas pipeline that supplies the mine and a water discharge pipeline.

SECTION 19
MARKET STUDIES AND CONTRACTS

SECTION 19: MARKET STUDIES AND CONTRACTS

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19.1 Market Studies

Copper is a key commodity used extensively for all urban and industrial development and is integral to the low carbon economy. Lower copper pricing from 2015 to 2020 resulted in a lack of investment in copper development projects. With development timelines stretched due to geopolitical issues, permitting delays and recent global supply chain disruptions, there are few new major mines expected to begin production in the near to medium-term. This lack of new copper production, combined with global copper demand growth, could result in a significant supply/demand deficit over the next three to five years and pricing well above the current long-term consensus price.

For evaluating the project, Taseko has relied on commodity pricing as discussed in Section 22 of this report.

19.2 Concentrate Specifications & Sales Contracts

Gibraltar's copper concentrate has a nominal 28.5% copper grade and includes silver as a by-product with no significant deleterious elements. The majority of Gibraltar's copper concentrate is sold under long-term offtake agreements. Thirty percent is sold to Cariboo Copper Corp. which owns 25% of the Gibraltar Mine, under a life of mine offtake contract. In the past, Gibraltar has sold approximately 50% of its concentrate production to metals traders under long-term contracts of up to five years. Any remaining amount of uncommitted copper production is sold on the spot market through a competitive tender process. Given Gibraltar's high copper concentrate quality and lack of impurities, it typically achieves significant discounts from annual copper TCRC benchmarks for copper production put out to tender.

Gibraltar's molybdenum concentrate has a nominal grade of 48% molybdenum and 3.0% copper. Molybdenum production is currently sold under a multi-year offtake arrangements through 2023.

Gibraltar copper cathode is nominally 99.9%+ pure copper. There are no current offtake agreements for copper cathode as cathode has not been produced since 2015. Cathode copper will be produced starting in 2024 once sufficient oxide ore has been mined and processed via the SX/EW process. Based on past experience, the forecasted production is expected to result in a readily marketable product.

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

19.3 Silver Stream Agreement

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. Under the original agreement, Osisko paid US\$2.75 per ounce for all the silver deliveries made under the contract however in 2020 this was subsequently reduced to zero.

As of December 31, 2021, Taseko has delivered 0.9 million ounces under the agreement and expects to have delivered 5.9 million ounces by early 2041.

19.4 Hedging

Taseko employs a hedging strategy for its share of Gibraltar production to mitigate short-term declines in copper price and other key inputs. The Company’s copper hedging strategy is to secure a minimum price for a significant portion of copper production. The amount and duration of hedge positions are based on an assessment of business-specific risk elements, committed capital programs and the copper pricing outlook.

As of the effective date of this report, there are no hedging programs in place beyond one year or that fix forward prices and therefore hedging is not material to the life-of-mine reserve that is the subject of this report.

19.5 Operating Supply Contracts

Contracts for operating supplies such as fuel, grinding media, reagents, explosives, tires and contract services are renewed or replaced within time frames and conditions of normal industry standards. Currently there are no anticipated impediments to renewing existing material contracts at prevailing market rates.

19.6 Comments on Section 19

The qualified person has reviewed the marketing and commodity price information and confirms that it is suitable for use in the economic analysis presented in Section 22 of this report.

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 Setting

Gibraltar Mine is located within the Cuisson Creek watershed in the central interior of the Cariboo region. In general, the Cuisson Creek watershed is dominated by upland coniferous forests. The most common large mammals in the general vicinity of the operational area include mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), black bear, (*Ursus arctos*), moose (*Alces alces*), grey wolf (*Canis lupus*), and cougar (*Felis concolor*). Annual game camera monitoring indicates that wildlife make use of areas in and around the Gibraltar Mine property.

Predominant land uses in the vicinity of the mine include timber harvesting, agriculture, and recreation. Archaeological studies have been undertaken for the existing permit area and risks are well understood. Additional studies will be undertaken as required to support various permitting initiatives described in this report.

20.2 Environmental Management System

An environmental management system (EMS) in place for operations, which includes associated plans, procedures, policies, guidelines, auditing, and compliance. The EMS and environmental management plans (EMPs) were developed based on an adaptive management strategy that requires periodical reviews of the EMPs, mitigation measures, and efficacies, to determine whether the regulatory requirements and environmental commitments are being met. This adaptive management strategy has undergone extensive regulatory and stakeholder consultation which is an important component of the EMS. The EMS and EMPs will be updated as required to incorporate relevant changes to the Gibraltar Mine discussed in this report.

20.3 Tailings Management Systems

Tailings Storage Facility design and operational factors are discussed in Section 18 of this report. The design, operation, function, and monitoring of the facility are managed through the Gibraltar Mines Tailings Management System (TMS) to ensure the safe operation of the facility and compliance with relevant Permits. The TMS is part of the site's overarching Environmental Management System (EMS) and includes a Tailings Storage Facility Operation, Maintenance, and Surveillance Manual (OMS), 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.

Annual Dam Safety Inspections and regular 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 2021. The ITRB meets annually to review the facility performance and status.

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

20.4 Water Management, Treatment & Discharge

Contact water from across the Gibraltar site and facilities is captured and contained by a surface drainage water collection system (SDCS) along down gradient extents of the operating footprint. The collected water is then stored within inactive pits or pumped to the tailings pump box where it is treated with lime and pumped to the TSF where it is recirculated to the mill for reuse.

Water stored in the TSF and Gibraltar Pit is currently being pumped to the mined-out Granite Pit while work progresses on nitrate treatment which will allow discharge to the Fraser River to recommence. In addition, a water treatment plant is being permitted and expected to be built and operational by mid-2023 that will allow more excess water to be discharged offsite.

20.5 Permitting

Gibraltar Mine operates under *Mines Act* Permit M-40 issued by the Ministry of Energy, Mines and Low Carbon Innovation (EMLI). Permit conditions align with requirements of the *Health, Safety and Reclamation Code for Mines in British Columbia* and ensures:

- Maintenance of the long-term stability of all surfaces and structures;
- The establishment of self-sustaining vegetation;
- Progressive reclamation toward approved end land uses;
- Soils are recovered for use in reclamation activities;
- Prevention of the establishment invasive plant species; and
- Establishment and maintenance of self-sustaining water management structures.

Environmental protection programs at the mine are regulated through effluent permit PE-416 and air permit PA-1595, both of which are administered under the BC *Environmental Management Act*. Water quality is also regulated by the *Fisheries Act* Metal and Diamond Mining Effluent Regulations (MDMER).

Amendments to the above permits will be required for the proposed pit, waste rock storage facility and TSF expansions as well as in-pit tailings deposition. An environmental assessment under the BC *Environmental Assessment Act* (2018) will not be triggered by the proposed expansions in this report.

Approvals will also be required for route changes to the site access road and a utility corridor containing several individual utility lines as discussed in Section 18.

20.6 Social and Community

(a) Communities

The Gibraltar Mine is located approximately 65 kilometers north of Williams Lake, and approximately 20 kilometers north of the community of McLeese Lake in the Cariboo Region of British Columbia. Other towns in the area include Quesnel, Lac La Hache, 100 Mile House, and the smaller communities of Macalister and Soda Creek. Through operational priorities and programs, such as local hiring and procurement practices, Indigenous, stakeholder and community engagement, commitment to local charitable organizations, delivery of education and community programs and more, Gibraltar makes meaningful and lasting contributions to the economic and social well-being of the communities.

(b) Indigenous Groups

Gibraltar is situated in the traditional territories of Xatśúll (Soda Creek) First Nation and ʔEsdilagh (Alexandria) First Nation.

Xatśúll First Nation is the northern-most community of the Secwépemc people in British Columbia, and has two reserves proximal to the mine site: Soda Creek 1, 30 kilometers south, and Deep Creek 2, 40 kilometers south.

Xatśúll First Nation belongs to the Northern Shuswap Tribal Council, also known as the Northern Secwépemc te Qelmucw (“NStQ”). Xatśúll is a signatory to a 2014 Economic and Community Development Agreement (ECDA) with the Province of British Columbia that provides for annual revenue sharing payments. In addition, Gibraltar Mine signed a Participation and Cooperation Agreement with Xatśúll in July 2015. The parties through the implementation committee, have worked collaboratively and established a positive and respectful relationship.

ʔEsdilagh First Nation reserve lands are also proximal to the Gibraltar mine site, the closest being Alexandria 12 which is uninhabited and neighbours the mine site to the west. Alexandria 3 is located 12 km northwest of Gibraltar Mine on the west side of the Fraser River, between Williams Lake and Quesnel. In March 2020 ʔEsdilagh and the Province of British Columbia signed an Economic and Community Development Agreement (ECDA).

20.6 Social and Community – Cont'd

(b) Indigenous Groups – Cont'd

In addition, Gibraltar has a long-standing positive relationships with the Williams Lake First Nation (WLFN). In December 2021, the parties renewed a Participation and Cooperation Agreement that was originally developed and signed in April 2013. The parties are committed to working together in the interest of achieving environmentally responsible and economically beneficial mine development, enhancing understanding, communication and cooperation, advancing employment and contracting opportunities for WLFN members, as well as education, training, and community development initiatives.

(c) Community Engagement

To ensure Indigenous and local communities have the opportunity to meaningfully participate in all phases of the mining process, and share in the benefits of mineral development, Gibraltar engages with communities of interest throughout the mining life cycle.

The objectives of stakeholder engagement programs are to:

- advise residents of nearby communities and other regional interests about Gibraltar permits, programs and other activities being undertaken at site;
- provide information about Gibraltar, including potential environmental, social and operational effects, proposed mitigation and environmental safeguards;
- allow Gibraltar to better understand and address stakeholder priorities and concerns with respect to mine operations;
- facilitate economic and other opportunities associated with Gibraltar for local residents, communities and companies.

Through various engagement initiatives, Gibraltar demonstrates its commitment and responsiveness to stakeholder priorities and concerns, provides meaningful benefits and opportunities to local residents, businesses, and energizes the British Columbia and regional Cariboo economies.

20.7 Closure and Reclamation

The primary objective of the reclamation program is to limit impacts on downstream terrestrial and aquatic resources. Where it does not conflict with the primary objectives, disturbed land surfaces and watercourses will be reclaimed to establish wildlife habitat, through the establishment of forest cover values and open forage areas. The diversity of wildlife habitat types will enable future use by recreational hunters, and use by Indigenous people for traditional hunting, trapping, and gathering purposes. In addition, cattle grazing occurs from spring to late fall around the perimeter of the mine area and grazing use on the mine site post-closure may be expected, therefore, open forage areas also support summer grazing use.

Reclamation plans are developed and submitted as required every five years based on the site operating plans. Through this process, specific end-use objectives are reviewed, specific reclamation activities are identified, and conceptual closure costs are calculated.

Gibraltar has letters of credit and surety bonds totaling \$79 million serving as a reclamation and closure bond. If required, the reclamation bond will be updated according to the closure costs of the proposed expansions.

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 currently in place and operating, the only capital requirements are for:

- Purchasing four additional haul trucks and one additional drill that are required to support the scheduled mining rates. These units will be added in 2036 and 2037, and are assumed to be of the same nominal size and class as the existing fleets.
- Restarting the SX/EW plant in 2024 after being on care and maintenance for eight years. The cost of restarting the facility includes specific equipment refurbishment and upgrades, general plant recommissioning and reagent first fills.
- Relocating the in-pit primary crusher and a mine-area electrical substation outside of the planned Connector Pit. Construction of the new crusher station and supporting mechanical and electrical systems will occur in 2022 and 2023 with the relocation of the crusher itself scheduled to occur mid 2023.
- Relocating a portion of the mine access road and utility services that run through the Gibraltar and Extension pits will take place in 2031 and 2032.
- Ongoing activities to sustain tailings deposition including raises of the earthfill embankments at the east end of the TSF, upgrades to the seepage pumpback system at the main embankment and establishing in-pit tailings deposition starting in 2039.
- On-site water management upgrades including extension of the Gibraltar Pit pumping system in 2022, staged construction of a water treatment plant in 2022 to 2024, and expansion of the surface drainage water collection system (SDCS) in 2027 and 2032 required to support waste storage facility expansions.
- General sustaining capital to maintain the integrity of the mining and processing equipment including capital replacements for major mining equipment and capitalized component replacements.

21.1 Capital Costs – Cont'd

The site capital requirements over the next 23 years are summarized in Table 21-1.

These costs are in 2022 dollars and are not adjusted for escalation or exchange rate fluctuations. (All costs are in Canadian dollars unless otherwise stated.)

Table 21-1: Capital Cost Summary

Area	Total Capital (Millions)
Major Mining Equipment	\$41
Process Improvements	\$5
Crusher & Substation Relocation	\$43
Road and Utility Realignment	\$24
Tailings	\$135
Water Management & Treatment	\$35
General Sustaining	\$635
Total	\$917

Numbers may not add due to rounding.

21.2 Operating Costs

Operating costs are based on Gibraltar's past performance and current operating expectations informed by many years of operating experience. The average costs for mining, processing, and general and administrative are discussed separately in the following sections. These costs are in 2022 dollars and 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	\$5.91
Processing cost/ton milled	\$4.55
General and Admin cost/ton milled	\$1.00
Total Operating cost/ton milled	\$11.47

Numbers may not add due to rounding.

The basis for the mining, processing and G&A operating costs are described in the following sections.

(a) Mining Operating Costs

The mining costs are based on the activity rates shown in Table 21-3 which include both operating and maintenance costs. This includes waste stripping costs that may be capitalized for accounting purposes. The haulage costs vary based on a fixed hourly operating cost 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	\$0.11 / ton drilled
Blasting	\$0.33 / ton blasted
Loading	\$0.28 / ton moved
Hauling	\$0.64 / ton moved
Utility & General	\$0.46 / ton mined
Total Mining Cost	\$1.75 / ton mined

Numbers may not add due to rounding.

21.2 Operating Costs – Cont'd

(b) Processing Operating Cost

Sulphide ore processing costs average \$4.42 per ton milled and include the cost of copper and molybdenum concentrate production and tailings disposal. Milling costs are varied by pit area to account for variability in ore hardness. Additionally, the SX/EW plant operates for 9 years starting in 2024 and a water treatment plant begins operation in 2023. The cost of operating these facilities is \$2.54 per pound of cathode and \$0.04 per ton milled respectively.

(c) 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. These costs are based on recent Gibraltar performance.

(d) Offsite Operating Costs

Offsite costs are based on current and anticipated contract terms for transportation costs and smelter fees. The average offsite costs over the operating period is US \$0.30 per pound of copper produced.

SECTION 22
ECONOMIC ANALYSIS

SECTION 22: ECONOMIC ANALYSIS

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22.1 Economic Analysis

(a) Introduction

A discounted cashflow model has been prepared for the valuation of the mineral reserves based on the mine schedule, metallurgical recoveries and cost assumptions discussed in the previous sections of this report. The valuation uses metal prices and a foreign exchange rate as shown in Table 22-1 based on Taseko's expectations informed by street consensus metal pricing as of Q1 2022, analyst research reports, peer comparisons and historical prices and rates. Results of the valuation are presented on a before-tax 100% basis, and for Taseko's 75% ownership on a before-tax and after-tax basis using a discount rate of 8% and with an effective date of December 31, 2021. All values are in Canadian dollars unless otherwise noted.

Table 22-1: Metal Pricing and Foreign Exchange Rate Used for Base Case Economic Analysis

	2022	2023	Long-Term
Copper Price	US\$4.25/lb	US\$3.90/lb	US\$3.50/lb
Molybdenum Price	US\$18.00/lb	US\$15.00/lb	US\$13.00/lb
Silver Price	US\$23.00/oz	US\$23.00/oz	US\$22.50/oz
Foreign Exchange	US\$0.77 : CAD\$1.00		

22.1 Economic Analysis – Cont'd

(b) Treatment of Silver in Analysis

As discussed in Section 19, Taseko entered into a streaming agreement with Osisko Gold Royalties Ltd. Deductions for silver revenue under the terms of the streaming agreement are reflected in the cashflow and NPV calculations pertaining to Taseko's 75% interest in Gibraltar Mine.

(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 prescribed 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 income tax rate of 27%.

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 and after deductions for available loss and other carryforward tax pools and financing and other administrative costs incurred directly by the joint venture partner.

22.1 Economic Analysis – *Cont'd*

(d) Economic Valuation

The before-tax cashflow for the Gibraltar Mine is presented in Table 22-2. The resultant before-tax NPV is \$1.9 billion at a discount rate of 8%.

Table 22-2: Before-Tax Cashflow for Gibraltar Mine (100% Basis)

Project Period		2022 - 2026	2027 - 2031	2032 - 2036	2037 - 2041	2042 - 2044	Grand Total
Copper Production	(M lbs)	640	640	650	730	310	2,980
Molybdenum Production	(M lbs)	12	14	15	6	6	53
Gross Revenue	(C\$ M)	3,240	3,100	3,170	3,370	1,480	14,360
Operating Costs	(C\$ M)	2,060	2,100	2,060	2,140	1,010	9,370
Operating Profit	(C\$ M)	1,180	1,000	1,110	1,230	470	4,980
Sustaining Capital	(C\$ M)	240	200	240	220	20	920
Net Cash Flow	(C\$ M)	940	800	860	1,010	450	4,070

Numbers may not add due to rounding.

Cashflows for Taseko's 75% interest in Gibraltar Mine are presented in Table 22-3. The resultant NPVs are \$1.4 billion on a before-tax basis and \$1.1 billion on an after-tax basis, both at a discount rate of 8%.

Table 22-3: After-Tax Cashflow for Taseko's 75% Interest in Gibraltar Mine

Project Period		2022 - 2026	2027 - 2031	2032 - 2036	2037 - 2041	2042 - 2044	Grand Total
Net Cash Flow (net Silver stream)	(C\$ M)	680	570	600	710	330	2,900
Taxes	(C\$ M)	100	120	140	190	100	650
After-Tax Net Cash Flow	(C\$ M)	570	450	470	520	230	2,250

Numbers may not add due to rounding.

22.1 Economic Analysis – *Cont'd*

(e) Sensitivity Analysis

An analysis was performed to demonstrate the sensitivity of the valuations to fluctuations in metal prices, foreign exchange rate, head grades, operating costs and capital costs. These results are shown in Table 22-4 on a before-tax 100% basis and in Table 22-5 on a after-tax 75% basis. Project economics are most sensitive to copper price, foreign exchange rate, copper grade and operating cost while being relatively insensitive to molybdenum price, molybdenum grade and sustaining capital costs.

Table 22-4: Before-Tax Economic Sensitivity

Before-Tax, 100% Basis NPV @ 8%					
Copper Price¹					
Price (US\$/lb)	\$3.00	Base	\$4.00	\$4.50	\$5.00
NPV (C\$ M)	870	1,900	2,610	3,480	4,350
Molybdenum Price¹					
Price (US\$/lb)	\$8.00	\$10.00	Base	\$15.00	\$20.00
NPV (C\$ M)	1,720	1,780	1,900	1,950	2,120
Foreign Exchange Rate					
US\$: CAD\$	0.71	0.74	Base	0.80	0.83
NPV (C\$ M)	2,430	2,150	1,900	1,650	1,430
Copper Grade					
Vs. Base Case	-10%	-5%	Base	+5%	+10%
NPV (C\$ M)	1,320	1,610	1,900	2,190	2,480
Molybdenum Grade					
Vs. Base Case	-10%	-5%	Base	+5%	+10%
NPV (C\$ M)	1,860	1,880	1,900	1,920	1,940
Operating Costs					
Vs. Base Case	-20%	-10%	Base	+10%	+20%
NPV (C\$ M)	2,790	2,340	1,900	1,450	1,010
Sustaining Capital Costs					
Vs. Base Case	-20%	-10%	Base	+10%	+20%
NPV (C\$ M)	1,990	1,940	1,900	1,850	1,800

¹Metal prices applied to all years and do not reflect variable metal prices used in Base Case

22.1 Economic Analysis – *Cont'd*(e) Sensitivity Analysis – *Cont'd*

Table 22-5: After-Tax Economic Sensitivity

After-Tax, 75% Basis NPV @ 8%					
Copper Price¹					
Price (US\$/lb)	\$3.00	Base	\$4.00	\$4.50	\$5.00
NPV (C\$ M)	540	1,090	1,430	1,840	2,260
Molybdenum Price¹					
Price (US\$/lb)	\$8.00	\$10.00	Base	\$15.00	\$20.00
NPV (C\$ M)	1,000	1,030	1,090	1,110	1,190
Foreign Exchange Rate					
US\$: CAD\$	0.71	0.74	Base	0.80	0.83
NPV (C\$ M)	1,350	1,210	1,090	970	860
Copper Grade					
Vs. Base Case	-10%	-5%	Base	+5%	+10%
NPV (C\$ M)	810	950	1,090	1,230	1,370
Molybdenum Grade					
Vs. Base Case	-10%	-5%	Base	+5%	+10%
NPV (C\$ M)	1,070	1,080	1,090	1,100	1,110
Operating Costs					
Vs. Base Case	-20%	-10%	Base	+10%	+20%
NPV (C\$ M)	1,510	1,300	1,090	870	630
Sustaining Capital Costs					
Vs. Base Case	-20%	-10%	Base	+10%	+20%
NPV (C\$ M)	1,120	1,100	1,090	1,070	1,060

¹Metal prices applied to all years and do not reflect variable metal prices used in Base Case

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 706 million tons grading 0.26% CuEq. The reserves are based on a copper price of US\$3.05/lb, molybdenum price of US\$12.00/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 1,215 million tons grading 0.26% Cu Eq.

The mineral reserve supports 23 years of operation at a milling rate of 85,000 tons per day with average annual production of approximately 129 million pounds of copper and 2.3 million pounds of molybdenum. The average strip ratio is 2.4:1.

The reserves are based on a pit design utilizing recommended pit slopes and a block model updated to include data produced from drilling programs up to the end of April 2021. The mine plan maximizes profitability on a cost per ton milled basis, incorporating current costs and performance.

In the opinion of the Qualified Person, the geological data, resource modelling, mine plan, process assumptions, operating costs, 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. Most of the Company's expenses are denominated in Canadian dollars. Any strengthening in the Canadian dollar will negatively impact the profitability of the Company's mining operations. The Company does not have any foreign exchange hedging programs in place.

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.

Gibraltar strives for top-tier performance and therefore continuously evaluates emerging technologies and opportunities to improve operating performance. Gibraltar has a number of continuous improvement initiatives underway with focus areas that include improving productivity of the mining and processing equipment, improving the efficiency of the various unit operations and reducing operating costs. Initiatives that demonstrate value could result in reduced unit cost per pound of copper relative to the assumptions used in this report.

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 incrementally lower-grade 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 areas mined since 2004 and presents a significant opportunity for increased throughput.

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, will infill gaps and will extend drilling at depth. As the mine plan calls for the backfilling of some pit phases with waste rock and tailings after being mined out, it is important that these areas are explored prior to negatively impacting future expansion potential.

Exploration work including geophysical surveys, geochemical sampling and field mapping should continue in order to identify potential drill targets with the goal of adding to the Mineral Resource at Gibraltar.

Continued improvement in any or all of these areas will have positive economic implications and 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 into operating practices and future reserve updates as appropriate.

SECTION 27
REFERENCES

SECTION 27: REFERENCES

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27.1 References

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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 12th Floor, 1040 West Georgia Street, Vancouver, British Columbia. In my position as Vice President, 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 March 30, 2022 which has an effective date of March 15, 2022.
- 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 14 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. 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 from November 23rd to 25th, 2021.
- 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 30th day of March, 2022.

“Signed and Sealed”

Richard Weymark, P.Eng., MBA