# Technical Report on the
## Bolivian Operations of

**Ag-Mining Investments AB**
**(The Vendor)**

**and**

**Buckhaven Capital Corp.**
**(The Issuer)**

**Effective Date: March 17, 2020**
**Report Date: September 1, 2020**

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# 1 SUMMARY

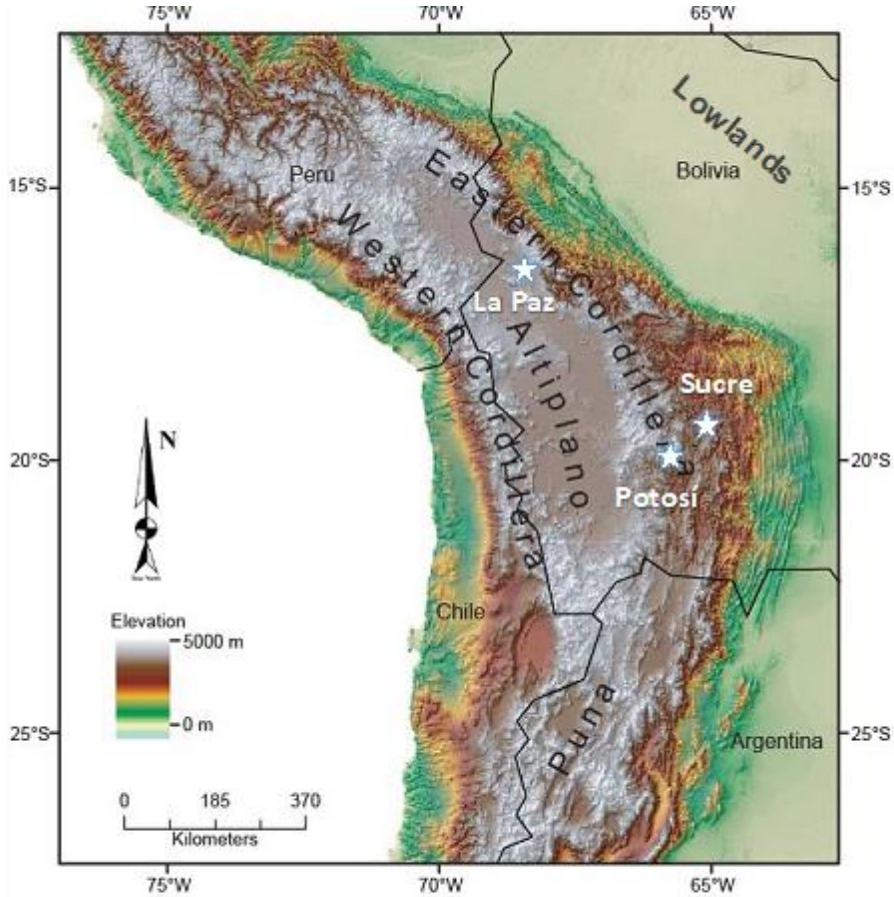
**Terms of Reference** - This technical report ("TR") was prepared for Ag-Mining Investments AB ("Ag-Mining", the "Vendor") and Buckhaven Capital Corp. ("Buckhaven", the "Issuer"), by qualified persons Donald J. Birak (Birak Consulting, LLC), Luis Oviedo Hannig (NCL) and Carlos Guzman Perez (NCL), to disclose scientific and technical information pertaining to Ag-Mining's wholly owned subsidiary, Empresa Minera Manquiri, S.A. ("EMMSA" or "Manquiri"). Manquiri is a precious metal mining and processing company based in Bolivia with offices in the capital city of La Paz and in Potosí. The Company also maintains an office in Oruro to manage oversight of the Cachi Laguna operations and regional exploration.

Through a letter of intent dated August 17, 2020, Buckhaven acquired the arm's length right to acquire Ag-Mining and its subsidiaries via a business combination. Buckhaven is a capital pool company and intends for the Proposed Acquisition to constitute the Qualifying Transaction of the Corporation as such terms is defined in the policies of the TSX Venture Exchange.

## 1.1 Location

Manquiri's Bolivian mining interests are located in the Altiplano of south-southwest Bolivia in the Department of Potosí (Figure 1.1). The nearest major city is Potosí - the capital city of the Department. Access to Potosí is by road or air to Sucre from either La Paz or Santa Cruz de la Sierra, then by paved road.

Figure 1.1: General Location Map of Bolivia




Manquiri's San Bartolomé surface mine and ore processing facilities are located to the south of the city, flanking the historic mining areas at Cerro Rico (Figure 4.2). Manquiri's other property interests - Tatasi-Portugalete, El Asiento and Cachi Laguna - also occur in the Department of Potosí (figures 4.2, 4.3. 4.4 and 4.5).

Site visits were conducted by the qualified persons on two separate occasions in February and March 2020.

## 1.2 Property Description and Ownership

All of Manquiri's mining rights and mineral resources and mineral reserves, cited in this technical report, are controlled under current agreements or contracts. Mining rights for San Bartolomé, Tatasi-Portugalete and El Asiento are held under agreements with Corporación Minera de Bolivia ("COMIBOL"), while those at Cachi Laguna are held under contract with RALP Compañía Minera, S.R.L. ("RALP"), a private Bolivian mining company (Section 4).

At Cachi Laguna, Manquiri has a contract with RALP, to purchase 108,000 of dry metric tonnes of precious metal-bearing material and to transport it to San Bartolomé for processing. RALP's mining rights were granted to it by COMIBOL. Due to its location within 50 km of the border with Chile, foreign companies or companies with foreign ownerships, like Manquiri, are not permitted to operate in the area (see Section 4 for further disclosure on Manquiri's contract with RALP).

## 1.3 Geology and Mineralization of the Projects

The mineral deposits at San Bartolomé are alluvial and colluvial, surficial accumulations of silver- and tin-bearing unconsolidated material, which were derived from erosion of Cerro Rico, a prominent +4,700 meter elevation mountain, and accumulated down-slope filling depressions, gullies and low-gradient areas. Locally they are called "pallacos" which also includes reworked Sn-bearing gravel deposits called "sucus" and "troceras". Asiento and Tatasi-Portugalete are man-made dumps ("desmontes" or "stockpiles") adjacent to underground mine portals of ancient and current mines. Only Cachi Laguna is an in situ silver and gold mineral deposit and is high sulfidation, epithermal in nature.

### *1.3.1 San Bartolomé*

The mineral deposits at Cerro Rico are the source of the San Bartolomé pallacos and are high sulfidation epithermal in character, composed of veins, stockworks, hydrothermal breccias and irregular bodies, hosted in a very altered resurgent dome of dacitic- to rhyodacitic-composition porphyritic intrusion emplaced in Middle Miocene time (approx. 14 mya).

The pallacos were derived from the erosion of the Cerro Rico hydrothermal ore deposit and were emplaced around the mountain crest by recent geologic processes. These deposits consist of an unsorted mixture of cobbles and boulders in a sandy clay matrix, accumulated down slope by colluvial and alluvial processes, filling depressions, gullies and low-gradient areas. They cover an area of over 5 $km^2$ in size. True thicknesses of the pallacos range from <1 m to nearly 75 m. The deposits have been grouped into three areas named Antuco (within the greater Diablo area), Huacajchi and Santa Rita. The primary rock source of silver content for pallacos is the mineralized, silicified wall rock adjacent to the veins and disseminations of Cerro Rico. Rock clasts are highly oxidized, variably silicified and mineralized with disseminated native silver, sulfosalts of silver, argentite, jarosite and psilomelane (Mn oxide). Pallacos grade from predominantly coarse, broken rock on the upper slopes into a mixture of coarse rock fragments in a sandy clay matrix down slope to more fine-grained material further downslope. The surface area of the current mineral resources is approximately 337 hectares.

### *1.3.2 El Asiento Dumps*

The source of the El Asiento dumps is the primary, hypogene polymetallic deposits hosted in folded and faulted sediments, intruded by dikes related to subvolcanic, dacitic, porphyry stocks. The sedimentary and intrusive rocks contain veins and occasional polymetallic stockworks (Ag-Zn-Pb). Some Ag-bearing, rosario-type veins and veinlets are documented, with tetrahedrite and galena mineralization. Years of operation generated dumps with exploitable mineral content within oxidized material. Because of oxidation, historic and current miners are not able to utilize the common flotation plants located in the region (which are designed for sulfide material). Metallurgically, these dumps are much more amenable to the relatively unique (in Bolivia) NaCN leaching circuit at San Bartolomé. The surface area encompassing the El Asiento dumps is approximately 100 hectares in size.

### *1.3.3 Tatasi-Portugalete Dumps*

The in situ source of the Tatasi-Portugalete dumps are high sulfidation, epithermal (hydrothermal) polymetallic deposits (Ag-Zn-Pb) related to volcanic domes and dikes intruded into a shale and quartz sandstone sequence, along with pyroclastic and lava flows. This volcanic-sedimentary sequence developed a radial fracture system, with hydrothermal alteration, containing veins, veinlets, stockworks and disseminations. The primary deposit is zoned vertically, with silver-rich upper levels grading into zinc-rich deeper levels. Years of operation generated dumps with exploitable mineral content within oxidized material. Because of oxidation, historic and current miners are not able to utilize the common flotation plants located in the region (which are designed for sulfide material). Metallurgically, these dumps are much more amenable to the NaCN leaching circuit at San Bartolomé. The surface area encompassing the Tatasi-Portugalete dumps is approximately 320 hectares in size.

### *1.3.4 Cachi Laguna In Situ Material*

The Cachi Laguna area, approximately 150 hectares in size, consists of a central, quartz latite porphyry dome, a massive rock as seen in drilling cores, while its surrounding area is characterized by lava and pyroclastic flows. An irregular breccia-like ring separates the dome from the flows sequence. Faults and other structures, of mainly NW-SE and NE-SW orientations, are common throughout the dome and were important for deposit emplacement in some cases, while in others lithology was the main control.

Mineralized bodies show three main styles: vuggy silica (Claudia Eugenia and Corona Bajo areas), hydrothermal breccias (scattered in all zones and related to the other types), and sulfidic inter-mineral breccias (Brecha Norte and Corona Alto). Twelve mineralized sectors have been discovered; all vertically elongated. Mineralized zones of stockworks and veins are also present, as well as of phreatomagmatic breccias.

## 1.4 History

Manquiri has a substantial history of silver exploration, development and production in Bolivia, commencing in 2008 at San Bartolomé and extending through the effective date of this technical report. Other than a short hiatus imposed by the novel coronavirus pandemic, production has been continuous since 2008. In years 2015 through 2017, Manquiri, under its prior corporate ownership, processed oxidized silver bearing material from purchased, external mining sources (the "compras") as disclosed in Section 6. This purchased material amounted to the following totals during year 2015 through 2017;

**Tonnes: 0.479 million tonnes**
**Average silver grade: 235 grams/tonne**
**Contained silver ounces: 3.642 million**

Since the 2018 acquisition by Ag-Mining, Manquiri continued to supplement its production feed to the San Bartolomé mill from other compras material prior to the effective date of this technical report, some of which contained significant amounts of gold (Section 6). The amount of Ag-Mining's historical (post-Coeur) production from compras amounted to the following:

| **Years** | **2018, 2019, 2020 (2020 = Jan and Feb)** | |
|---|---|---|
| **Tonnes Milled** | 723,541 | |
| **Average Silver Grade** | 275.4 | grams per tonne |
| **Average Gold Grade** | 3.10 | grams per tonne |
| **Contained Silver Ounces** | 5,439,819 | |
| **Contained Gold Ounces** | 8,000 | |
| **Average Silver Recovery (%)** | 85.8% | |
| **Average Gold Recovery (%)** | 90.3% | |

Since acquisition by Ag-Mining, Manquiri through the first two months of 2020, San Bartolomé's production tonnage from purchased materials ranged from 17.2% to 32.6% of annual, past production (Section 6, Table 6.3).

## 1.5 Status of Exploration, Development and Operations

### *1.5.1 San Bartolomé*

The San Bartolomé area has been extensively explored commencing in the late 1900's by ASARCO. Several sampling methods have been utilized to collect larger samples of the gravel-hosted ("pallacos") silver mineralization while maintaining the relative proportions of fine and coarse size fractions in the sample. These included hand-dug shafts/pits ("pozos") from which 1 $m^3$ and channel (30 cm x 30 cm x 1 m) samples were collected, surface channel samples taken from historic tin mining pit high walls, and channels taken from excavator/backhoe pits. Barber drilling was utilized to define the total thickness of the deposits due to the depth limitations of the other sampling methods (generally no more than 20 to 25 m). The qualified persons believe the methods employed were of general industry standards and have been and are suitable for exploration and evaluation of the current pallaco-hosted mineralization.

### *1.5.2 El Asiento and Tatasi-Portugalete*

Manquiri excavated trenches to obtain samples from historic mine dumps ("desmontes") in the El Asiento and Tatasi-Portugalete areas, obtaining 522 samples from 30 sites at El Asiento and 401 samples in 43 sites at Tatasi-Portugalete. An excavator was used to open 2.5 m x 1.2 m x variable depth pits. The qualified persons believe this sampling method is appropriate for the desmontes at both projects. The qualified persons recommend the use of similar techniques in the future evaluation of new desmontes that it may identify with future exploration.

Similar to the Company's rights at San Bartolomé, rights to explore, develop and exploit the desmontes at El Asiento and Tatasi-Portugalete were granted to the Company by COMIBOL and cover all the mineral resources and mineral reserves in those areas disclosed herein. Exploitation of other materials may require extensions of the current agreements with COMIBOL.

### *1.5.3 Cachi Laguna*

Manquiri has not conducted its own exploration of Cachi Laguna, but has been provided results from RALP, the owner, and past operators. Manquiri has rights with the owner to advise and monitor various activities, including exploration, at Cachi Laguna, and the qualified persons believe additional sources of in situ mineralization may be discovered with such work in the future. As an example, the drill holes completed in the Claudia-

Eugenia area were generally shallow (<100 meters downhole) but a few, deeper holes (>200 meters) encountered mineralization below the mineral resources and reserves disclosed herein, which the qualified persons believe are valid, future exploration targets. Manquiri's rights are currently limited to those defined under its contract with RALP (Section 4).

## 1.6 Development and Operations

Manquiri has continued to develop and produce from pallacos at San Bartolomé as it has since commencement of commercial production in 2008. These silver-bearing gravels require no pre-stripping and no new mine or process capital is required to achieve the production profile presented herein. The addition of other sources of mineralization, specifically from Tatasi-Portugalete and El Asiento, may require new work to access the various desmontes but do not appear to require significant new process capital investment. While Manquiri is able, under terms of its agreement with RALP, to supervise RALP's mine operations, production from the mineral reserves at Cachi Laguna does not require new mine or process capital investments by Manquiri. Extensions to the agreement with RALP may yield new metallurgical types of mineral reserves but, at this point in time, the qualified persons are not aware of any such potential and recommend that Manquiri conduct new metallurgical tests on any new mineralized material that is presented. In addition, the qualified persons recommend Manquiri monitor the amount of gold in any new material offered under future agreement(s) with RALP.

## 1.7 Mineral Resource Estimate

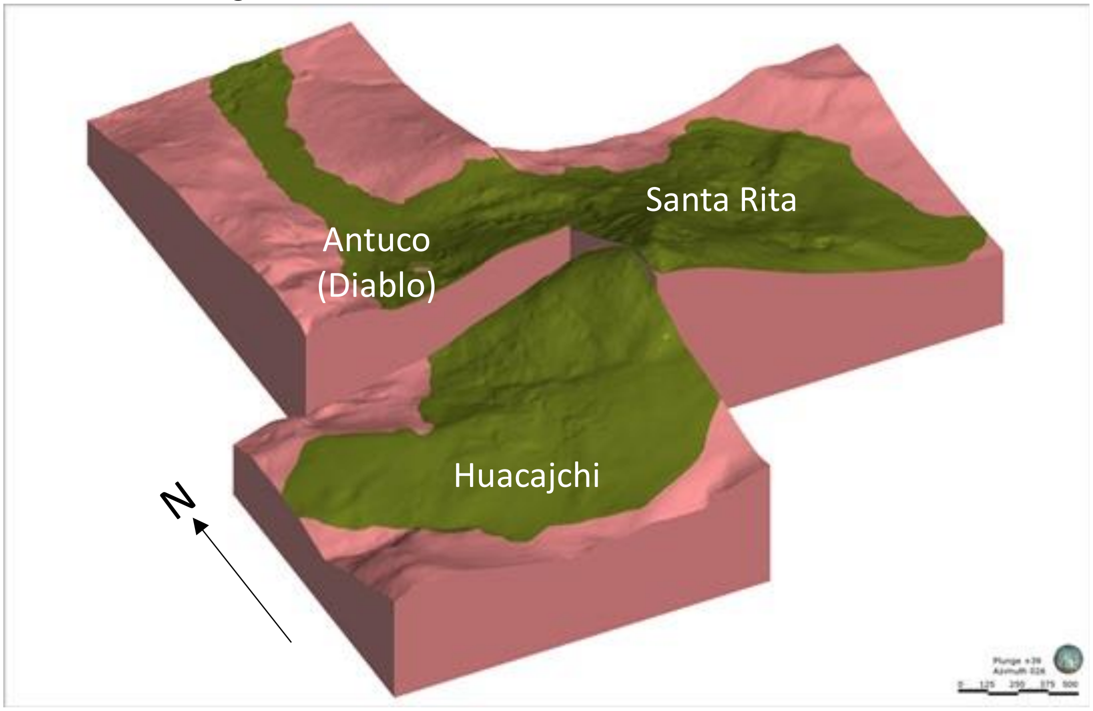
### *1.7.1 Pallacos Area.*

#### *1.7.1.1 Geological Model*

The mineral resources discussed herein are based on information from core, reverse circulation ("RC") drill holes stored in a secured central database and was evaluated using a geostatistical block modelling technique. Several techniques have been employed to ensure representative samples and adequately define the grade and tonnage of the ore. QA/QC programs were implemented by the prior owner and continue today.

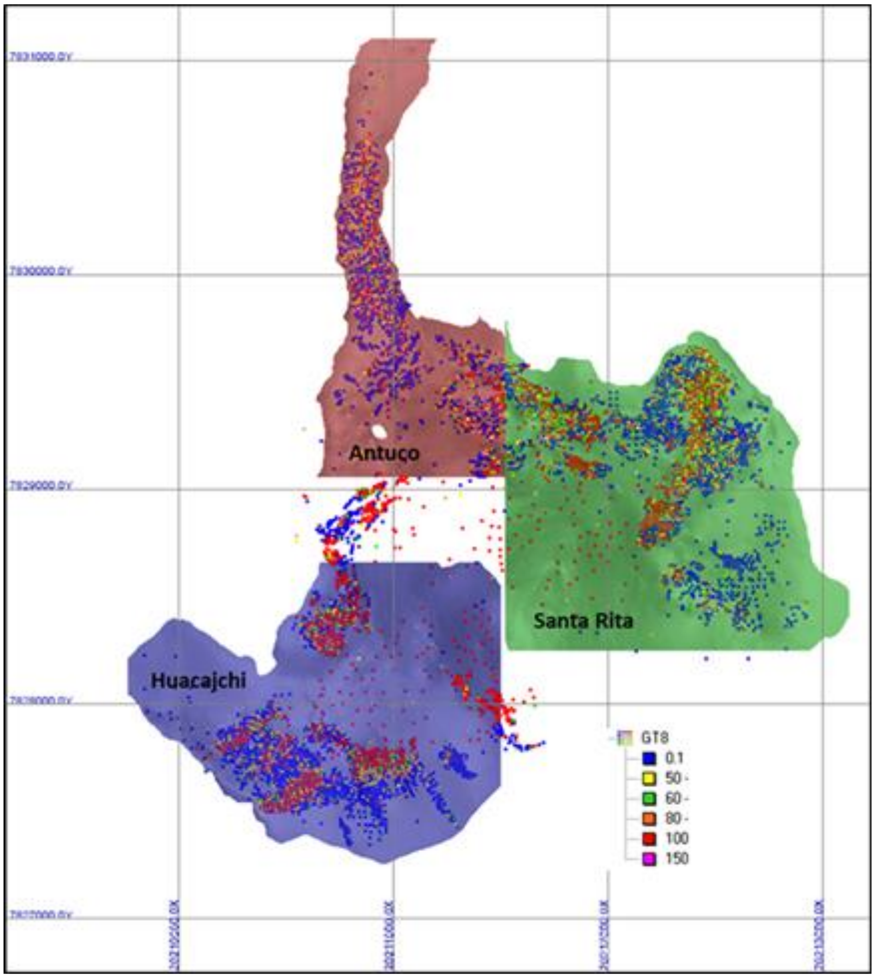
Wireframes that represent the mineralized bodies were created from the interaction of the actual surface and the hill basement that represent the proto Cerro Rico surface (Figure 1.2).

**Figure 1.2: Proto-surface of Cerro Rico and the Pallacos**




The basement or bedrock surfaces (bottom of the pallacos) is controlled by almost 3,000 base points coming from sample wells and drillings. The volume contained between these surfaces and the original topography corresponds to the Pallacos deposits and provides the limits for the block model definition (Figure 1.3).

**Figure 1.3: The three main Pallacos and samples used for delimitations of the wireframes**




### *1.7.1.2 Mineral Resource Estimation*

The silver mineral resources were estimated using ordinary kriging to interpolate Ag and Ag greater than 8 mesh (“GT8#”) grades, collected after a washing process to eliminate the fine fraction of the material as well as the clay content, in order to increase the silver grade and the metallurgical recovery of the plant. The weight reduction of the material after the washing process was also estimated, using Inverse Distance.

Three independent block models were created, one for each pallacos area. The obtained models were validated and considered adequate for mineral resource reporting according to NI 43-101 and CIM guidelines.

A mineral resource envelope was generated using Whittle Programming$^{TM}$ software with the following parameters:

**Table 1.1: Technical and Economic Parameters for Mineral Resource Whittle Runs – Pallacos Areas**

| Economic Parameters | Antuco [1] | Santa Rita | Huacajchi |
|---|---|---|---|
| Ag Ounce Price (US$/oz) | 19 | 19 | 19 |
| Au Ounce Price (US$/oz) | 1,500 | 1,500 | 1,500 |
| Ag Recovery | 90.0% | 90.0% | 90.0% |
| Mining cost (US$/t) | 3.50 | 3.50 | 3.50 |
| Transport (US$/t) | 3.25 | 1.98 | 1.51 |
| Washing (+8) (US$/t) | 0.18 | 0.18 | 0.18 |
| Process (US$/t) | 18.63 | 18.63 | 18.63 |
| Tails dam (US$/t) | 1.54 | 1.54 | 1.54 |
| G&A (US$/t) | 5.85 | 5.85 | 5.85 |
| Smelting ASAHI (US$/oz) | 0.33 | 0.33 | 0.33 |
| COMIBOL 4% (US$/oz) | 4.0% | 4.0% | 4.0% |
| Royalties 6% (US$/oz) | 6.0% | 6.0% | 6.0% |
| **Cutoff Grade (g/t Ag)** | **60.5** | **57.9** | **56.9** |

1. Antuco is part of the Diablo area.

The mineral resources inside the obtained enveloped are shown in Table 1.4, where they are consolidated with the other Manquiri areas reported on herein.

### *1.7.2 El Asiento, Tatasi-Portugalete Modelling*

The estimation procedure followed for the dumps in these projects is quite simple; Manquiri surveyed the areas, and the contour for each dump was produced. Volumes were calculated multiplying the area by the average height of each dump.

The volumetric method was used to calculate the specific gravity of the dumps. Seven samples were taken by Manquiri at Tatasi-Portugalete with a weighted average specific gravity (“SG”) of 1.78 t/m$^3$. In the case of El Asiento, eight measurements were taken with an average of 2.01 t/m$^3$. The use of an average value for Tatasi-Portugalete and one for El Asiento was adequate, due to the low dispersion of the measured values.

#### *1.7.2.1 Mineral Resource Estimation*

To estimate the grade of each dump, the weighted average of the sample’s grade and length was used. The mineral resource category was obtained using the average sample’s length of each dump to define a Measured slice, if the dump is higher, then another slice of the same thickness is defined for Indicated and the remaining, if any, classified as Inferred. Economic parameters to estimate the COG of these deposits are based on the current mining by Manquiri and are summarized in Table 1.2.

**Table 1.2: Technical and Economical Parameters Tatasi–Portugalete and El Asiento**

| Parameter | El Asiento | Tatasi - Portugalete |
|---|---|---|
| Ag Ounce Price (US$/oz) | 19.00 | 19.00 |
| Au Ounce Price (US$/oz) | 1,500.00 | 1,500.00 |
| Ag Recovery | 80.0% | 73.5% |
| Mining cost (US$/t) | 3.22 | 3.68 |
| Transport (US$/t) | 13.55 | 28.82 |
| Process (US$/t) | 18.63 | 18.63 |
| Additional Cn & Lime (US$/t) | 5.62 | 14.91 |
| Tails dam (US$/t) | 1.54 | 1.54 |
| G&A (US$/t) | 5.85 | 5.85 |
| Smelting ASAHI (US$/oz) | 0.33 | 0.33 |
| COMIBOL 4% (US$/oz) | 5.00% | 5.00% |
| Royalties 6% (US$/oz) | 6.00% | 6.00% |
| **Cutoff Grade (g/t Ag)** | **113.0** | **186.6** |

Mineral resources per Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") categories are summarized in tables 1.4 and 1.5 and in Section 14.

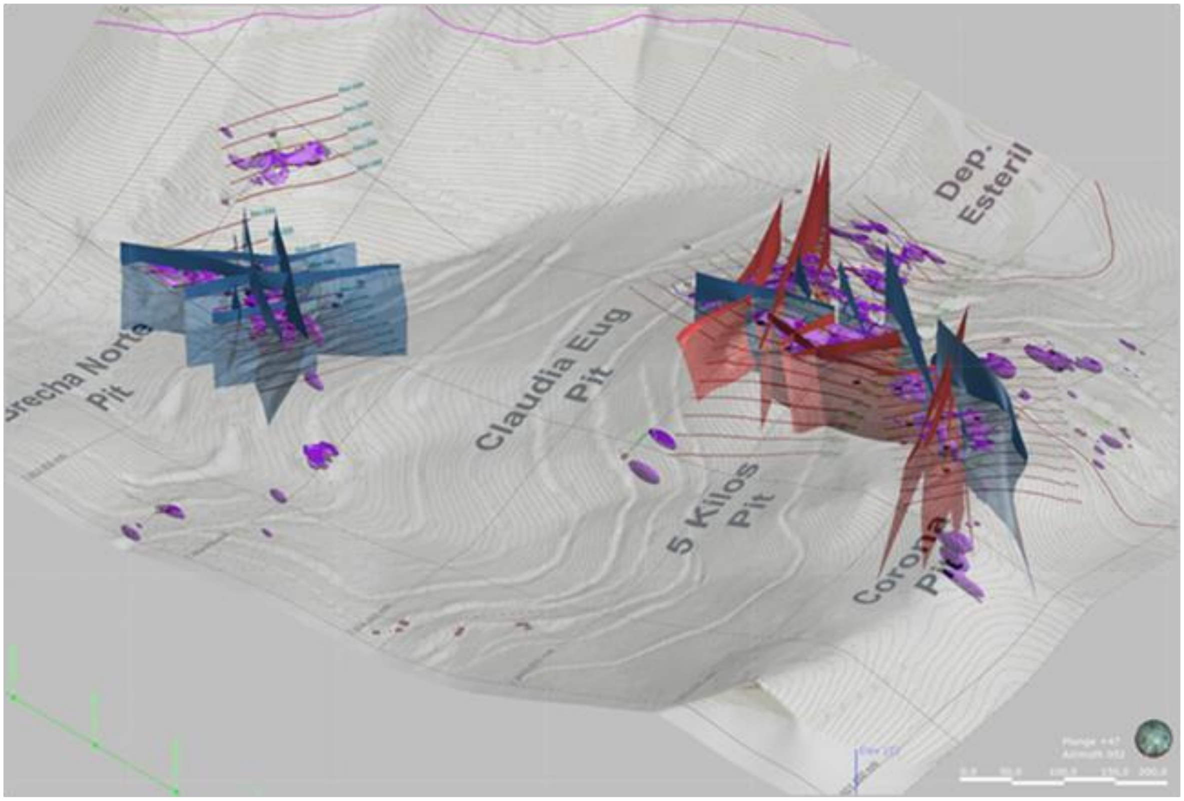
### *1.7.3 Cachi Laguna*

The estimation of mineral resources for Cachi Laguna was done using ordinary kriging and the geological solids modelled by NCL and Manquiri as solid boundaries to define the volume to estimate.

#### *1.7.3.1 Geological Interpretation and Modelling*

Manquiri's first lithology and mineral zone wireframes was interpreted from sets of geological sections in the different chosen sectors. These ore wireframes were updated in April and May 2020 based on surface geology, structural analysis, geological sections, Manquiri's wireframes, but mainly on drilling, channels and blastholes. Using available Ag assays, a good part of them corresponding to mined blastholes, new envelopes were generated from a 30 g/t Ag cutoff. Five mineralized zones were defined based on the preferential direction of the mineralized structures (Figure 1.4).

**Figure 1.4: Estimated areas, Structural Trends and Interpreted 30 ppm Ag Wireframes**




*1.7.3.2 Mineral Resource Estimation Cachi Laguna.*

The mineral resource model for Cachi Laguna was made using ordinary kriging with the geological solids as hard boundaries. Three kriging runs were made; for Measured, Indicated and Inferred resources.

Once the block model was validated, a mineral resource pit was generated using Whittle® software and the following parameters:

**Table 1.3: Technical and Economical Parameters – Cachi Laguna**

| Variable | Unit | Resource | Reserve |
|---|---|---|---|
| Ag Price | (US$/oz) | 19.00 | 17.00 |
| Au Price | (US$/oz) | 1500.00 | 1400.00 |
| Ag Recovery | (%) | 80.00 | 80.00 |
| Mining Cost | (US$/t) | 3.00 | 3.00 |
| Ore Add Mine Cost | (US$/t) | 2.34 | 2.34 |
| Transportation | (US$/t) | 31.58 | 31.58 |
| Process | (US$/t) | 18.63 | 18.63 |
| Add NaCN & Lime | (US$/t) | 6.10 | 6.10 |
| Tailings Dam | (US$/t) | 1.54 | 1.54 |
| G&A | (US$/t) | 5.85 | 5.85 |
| Smelting | (US$/oz) | 0.42 | 0.42 |
| Royalties | (US$/oz) | 6.00 | 6.00 |
| **Cutoff Grade** | **(g/t)** | **147.20** | **165.00** |

### *1.7.4 Mineral Resource Estimation Summary*

The following tables summarizes the mineral resources for the deposits disclosed herein. The qualified person for mineral resource estimation was Luis Oviedo.

**Table 1.4: Consolidated Mineral Resources – Inclusive of Mineral Reserves (March 17, 2020)**

| Mineral Resource Classification | Deposit | Tonnes (000's) | Average Silver Grade (g/t) | Contained Silver Ounces (000's) |
|---|---|---|---|---|
| Measured | San Bartolomé | 2,535,000 | 108 | 8,802,000 |
| | Tatasi-Portugalete | 183,000 | 323 | 1,900,000 |
| | El Asiento | 171,000 | 220 | 1,210,000 |
| | Cachi Laguna | 69,000 | 388 | 860,000 |
| | **Subtotal** | **2,958,000** | **134** | **12,773,000** |
| Indicated | San Bartolomé | 1,876,000 | 110 | 6,635,000 |
| | Tatasi-Portugalete | 79,000 | 323 | 820,000 |
| | El Asiento | 101,000 | 220 | 714,000 |
| | Cachi Laguna | 2,000.00 | 229 | 15,000 |
| | **Subtotal** | **2,058,000** | **124** | **8,184,000** |
| **Measured + Indicated** | San Bartolomé | 4,411,000 | 109 | 15,437,000 |
| | Tatasi-Portugalete | 262,000 | 323 | 2,721,000 |
| | El Asiento | 272,000 | 220 | 1,924,000 |
| | Cachi Laguna | 71,000 | 383 | 875,000 |
| | **Total** | **5,016,000** | **130** | **20,957,000** |
| Inferred | San Bartolomé | 1,317,000 | 109 | 4,615,000 |
| | Tatasi-Portugalete | 16,000 | 272 | 140,000 |
| | El Asiento | 87,000 | 228 | 637,000 |
| | Cachi Laguna | x | x | x |
| | **Total** | **1,420,000** | **118** | **5,392,000** |

Notes:

- The qualified person responsible for mineral resource estimation was Luis Oviedo Hannig.
- Notes from tables 14.14; 14.21, 14.22 and 14.34 are valid for this table.
- Mineral resource are reported for the following Ag Cut Off Grades: Huacajchi: 56.9g/t Antuco: 60.5 g/t, Santa Rita: 57.9 g/t, Tatasi-Portugalete: 186.6 g/t, EL Asiento: 113.0 g/t and Cachi Laguna 147.2 g/t
- Mineral resources are reported within a constraining pit shell developed using Whittle™ software, with the exception of Tatasi-Portugalete and El Asiento dumps. Assumptions include a metal price of US$19.00/oz for Ag.
- Assumptions include 100% mining recovery and variable process recoveries of 73.5% (Tatasi_Portugalete), 80% (El Asiento and Cachi Laguna) and 90% (San Bartolomé).
- Mineral resources are effective as of March 17, 2020, are inclusive of mineral reserves and are reported as "contained" and not factored for metallurgical recoveries.
- Mineral resource tonnes, average grades and contained ounces are rounded to an appropriate number of significant figures to reflect that they are estimates.

Subtracting the mineral reserves from the values in Table 1.4 yields the following remaining mineral resources (exclusive of mineral reserves):

**Table 1.5: Consolidated Mineral Resources – Exclusive of Mineral Reserves (March 17, 2020)**

| Mineral Resource Classification | Deposit | Tonnes (000's) | Average Silver Grade (g/t) | Contained Silver Ounces (000's) |
|---|---|---|---|---|
| Measured | San Bartolomé | 519,000 | 92 | 1,532,000 |
| | Tatasi-Portugalete | 23,000 | 219 | 162,000 |
| | El Asiento | 0 | 0 | 0 |
| | Cachi Laguna | 6,000 | 157 | 30,000 |
| | Subtotal | 548,000 | 98 | 1,724,000 |
| Indicated | San Bartolomé | 517,000 | 100 | 1,670,000 |
| | Tatasi-Portugalete | 2,000 | 180 | 12,000 |
| | El Asiento | 0 | | 0 |
| | Cachi Laguna | 0 | | 0 |
| | Subtotal | 519,000 | 101 | 1,682,000 |
| Measured + Indicated | San Bartolomé | 1,036,000 | 96 | 3,202,000 |
| | Tatasi-Portugalete | 25,000 | 216 | 173,000 |
| | El Asiento | - | - | - |
| | Cachi Laguna | 6,000 | 157 | 30,000 |
| | Subtotal | 1,068,000 | 99 | 3,406,000 |
| Inferred | San Bartolomé | 1,317,000 | 109 | 4,615,000 |
| | Tatasi-Portugalete | 16,000 | 272 | 140,000 |
| | El Asiento | 87,000 | 228 | 637,000 |
| | Cachi Laguna | - | - | - |
| | Subtotal | 1,420,000 | 118 | 5,391,000 |

Notes:

- The qualified person responsible for mineral resource estimation was Luis Oviedo Hannig.
- Notes from tables 14.14; 14.21, 14.22 and 14.34 are valid for this table.
- Mineral resource are reported for the following Ag Cut Off Grades: Huacajchi: 56.9g/t Antuco: 60.5 g/t, Santa Rita: 57.9 g/t, Tatasi-Portugalete: 186.6 g/t, EL Asiento: 113.0 g/t and Cachi Laguna 147.2 g/t
- Mineral resources are reported within a constraining pit shell developed using Whittle™ software, with the exception of Tatasi-Portugalete and El Asiento dumps. Assumptions include a metal price of US$19.00/oz for Ag.
- Assumptions include 100% mining recovery and variable process recoveries of 73.5% (Tatasi_Portugalete), 80% (El Asiento and Cachi Laguna) and 90% (San Bartolomé).
- Mineral resources are effective as of March 17, 2020, are exclusive of mineral reserves and are reported as "contained" and not factored for metallurgical recoveries.
- Mineral resource tonnes, average grades and contained ounces are rounded to an appropriate number of significant figures to reflect that they are estimates.

## 1.8 Mineral Reserve Estimation

Pit optimization, mine design and mine planning were applied to measured and indicated mineral resources. Inferred mineral resources were treated as waste. Cost estimates for the pit optimizations processes are based on current Manquiri experience, considering owner operated loading and support activities and local cooperatives ("cooperativas") contracted hauling to the mill. Metal prices, processing costs, refining costs and processing recoveries were provided by Manquiri. A summary of the input parameters used in the constraining Lerchs–Grossmann ("LG") pit shell is included in Table 1.5

**Table 1.6: Design Criteria (LG Optimization Parameters)**

| Item | Unit [1.] | Pallacos Areas [2.] | | | Cachi Laguna | Dumps and Stockpiles | |
|---|---|---|---|---|---|---|---|
| | | Antuco | Santa Rita | Huacajchi | | El Asiento | Tatasi-Portugalete |
| ***Metal Prices*** | | | | | | | |
| Silver | $/ounce | 17 | | | | | |
| Gold | | | | | 1,400 | | |
| ***Metallurgical Recoveries*** | | | | | | | |
| Silver | % | 90 | | | | | |
| Gold | | | | | 85 | | |
| Moisture | | 5 | | | | | |
| ***Operating Cost*** | | | | | | | |
| Waste | $/tonne | 3.50 | | | | Not applicable | |
| Ore | | 3.50 | | | 5.34 | 3.22 | 3.68 |
| Haulage | | 1.79 | 1.19 | 0.89 | 31.58 | 15.35 | 28.82 |
| Washing | $/tonne +8 Mesh | 0.18 | | | Not applicable | | |
| Processing | | 18.63 | | | | | |
| Additional NaCN & CaO | | 0 | 0 | 0 | 6.10 | 5.62 | 14.91 |
| Tailings Dam | | 1.54 | | | | | |
| G&A | | 5.85 | | | | | |
| ***Offsite Costs*** | | | | | | | |
| Smelting (ASAHI - Japan) | $/ounce | 0.33 | | | 0.42 | 0.33 | |
| ***Royalties*** | | | | | | | |
| COMIBOL | % NSR | 4 | | | 0 | 5 | |
| Government | % Net revenue | 6 | | | | | |
| ***Others*** | | | | | | | |
| Pit slope | Degrees | 45 | | | | | |
| Discount Rate | % | 9 | | | | | |

Notes to Table 1.6. [1] All costs and metal prices in US $. [2] Washing, processing, tailings, and G&A costs expressed as US$/tonne of +8 mesh material.

Due to the nature of the deposits and almost flat distributions of tonnes and grades, all block models have been considered as fully diluted and mineral reserve estimates did not consider any additional allowance for dilution and mine losses.

Internal cutoffs were calculated for all areas incorporating all operating costs except waste mining. The cutoff is applied to material contained within an economic pit shell / dump, where the decision to mine a given block was determined by the pit optimization and was applied to all the mineral reserve estimates, as detailed in Table 1.6.

**Table 1.7: Cutoff Grade by Area**

| **Area** | **Unit** | **Cutoff** |
|---|---|---|
| Pallacos | | |
| Antuco | Ag+8 (g/t) | 67.7 |
| Santa Rita | Ag+8 (g/t) | 64.8 |
| Huacajchi | Ag+8 (g/t) | 63.8 |
| Mining dumps | | |
| El Asiento | Ag (g/t) | 133.5 |
| Tatasi-Portugalete | Ag (g/t) | 216.5 |
| Cachi Laguna | Ag (g/t) | 165.0 |

### *1.8.1 Mineral Reserves Statement*

Mineral reserves are summarized in Table 1.8. The qualified person for mineral reserve estimation was Mr. Carlos Guzman, FAusIMM and CMC.

All modifying factors applied for the conversion of mineral resources into mineral reserves are at high level of certainty because of the operational expertise of Manquiri since 2018 and the reliability of technical and economic parameters obtained since then. Therefore, Measured Mineral Resources were converted into Proven Mineral Reserves and Indicated Mineral Resources into Probable Mineral Reserves. Inferred Mineral Resources were not converted into Mineral Reserves and instead treated as waste in the mine economics.

### Table 1.8: Mineral Reserves Statement (March 17, 2020)

| **Mineral Reserve Category** | **Area** | **Tonnes** | **Average Grade** | **Contained Ounces** |
|---|---|---|---|---|
| | | **(Kt / Kt+8)** | **Ag / Ag+8** | **Ag** |
| | | | **(g/t)** | **(koz)** |
| Proven Mineral Reserves | | | | |
| | Huacajchi | 427 | 108 | *1,481* |
| | Santa Rita | 1,134 | 115 | *4,185* |
| | Antuco | 455 | 109 | *1,590* |
| | El Asiento | 171 | 217 | *1,192* |
| | Tatasi-Portugalete | 160 | 338 | *1,736* |
| | Cachi Laguna | 63 | 410 | *834* |
| ***Total Proven Mineral Reserves*** | | ***2,409*** | ***142*** | ***11,018*** |
| Probable Mineral Reserves | | | | |
| | Huacajchi | 53 | 120 | *202* |
| | Santa Rita | 669 | 108 | *2,322* |
| | Antuco | 637 | 119 | *2,435* |
| | El Asiento | 101 | 220 | *715* |
| | Tatasi-Portugalete | 77 | 350 | *866* |
| | Cachi Laguna | 2 | 242 | *13* |
| ***Total Probable Mineral Reserves*** | | ***1,539*** | ***132*** | ***6,554*** |
| **Total Mineral Reserves (Proven and Probable)** | | | | |
| | Huacajchi | 480 | 109 | *1,684* |
| | Santa Rita | 1,803 | 112 | *6,507* |
| | Antuco | 1,091 | 115 | *4,025* |
| | El Asiento | 272 | 218 | *1,908* |
| | Tatasi-Portugalete | 237 | 342 | *2,602* |
| | Cachi Laguna | 65 | 406 | *847* |
| ***Total Mineral Reserves (Proven and Probable)*** | | ***3,948*** | ***138*** | ***17,572*** |

Notes to Accompany Mineral Reserves Estimate:

1. Mineral Reserves have an effective date of March 17, 2020 and were prepared by Mr. Carlos Guzman, FAusIMM, CMC, an employee of NCL.
2. Mineral Reserves are reported as constrained within Measured and Indicated pit designs and are supported by a mine plan featuring a constant throughput of 4,800 t/d rate, 326 d/y and variable cut-off per sector.
3. Mineral Reserves estimate is not inclusive of material that has been mined and put through the mill.
4. The pit designs and mine plan were optimized using the following economic and technical parameters: metal prices of US$17/oz Ag; metallurgical recoveries of 90% for pallacos areas, 80% for El Asiento, 74% for Tatasi-Portugalete and 80% for Cachi Laguna; with w+8 varying on a block-by-block basis for pallacos area; operating costs attributable for ore tonnes of US$29.45/t for Antuco, US$28.18/t for Santa Rita, US$27.72/t for Huacajchi, US$63.71/t for Cachi Laguna, US$47.83/t for El Asiento and US$72.37/t for Tatasi-Portugalete; smelting charge of US$0.33/oz Ag for pallacos and dumps, and US$0.42/oz Ag for Cachi Laguna; COMIBOL royalty on NSR basis of 4% for pallacos areas and 5% for dumps; government royalty of 6% on net revenue basis.; average pit slope angles of 45°; and an assumption of 100% mining recovery.

5. Tonnes, grades and costs for pallacos areas are reported as +8 mesh, corresponding to the plant feed after the washing stage.
6. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.
7. Tonnage measurements are in metric units. Silver grades are reported as grams per tonne. Contained silver ounces are reported as troy ounces.

### *1.8.2 Factors That May Affect the Mineral Reserve Estimate*

In the opinion of the qualified persons, the main factors that may affect the mineral reserves estimate are metallurgical recoveries and operating costs (fuel, energy and local *cooperativas* haulage cost).

The qualified persons note that the base price is the most important factor for revenue calculation, therefore a sensitivity analysis was carried out for Santa Rita and Antuco pit optimizations, as together represent 63% of the value of the project. For variations of the silver price in -20%/+20% the contained silver +8# varies from 71% to 119%, without affecting the Mineral Reserves estimate to any significant degree.

### *1.8.3 Mining Schedule.*

Mineral Reserves estimate is supported by a monthly mine schedule from March 2020 through September 2022. The schedule is based on process plant throughput of 4,800 t/d, considering 326 days per year, which gives a monthly constant throughput of 130.4kt, considering the following mining sequence:

- Cachi Laguna at variable rate from 4.0 kt/month to 9.0 kt/month from July 2020 through March 2021.
- El Asiento and Tatasi-Portugalete at 20kt/month each from March 2020.
- Pallacos areas at the difference from 130.4kt/month with the two above, considering the tonnage of +8 mesh. The sequence of Pallacos is starting together with Antuco and Santa Rita through September 2021, followed by Santa Rita alone and opening Huacajchi in May 2022.

## 1.9 Capital and Operating Costs and Economic Analysis

Capital costs are very low, as Manquiri's operations have been running for some time and most of the capital expenditure was made prior to the effective date of this TR. The remaining capital requirements are related to the expansion of the tailings dam;

estimated to be a total of US$2.8 M, to be spent at a rate of US$156 K per month for the first 17 months and the remaining US$148 K in month 18.

Operating costs were estimated mainly based on current figures for the ongoing operations and contracts with third parties and are summarized in the following table:

**Table 1-9: Operation Costs per Deposit.**

| ITEM | Antuco | Santa Rita | Huacajchi | Cachi Laguna | El Asiento | Tatasi |
|---|---|---|---|---|---|---|
| | Cost Per Tonne | | | | | |
| Mining cost | 3.50 | 3.50 | 3.50 | 3.00 | 3.22 | 3.68 |
| Ore additional mining cost | - | - | - | 2.34 | - | - |
| Transport US$/t-ROM | 1.79 | 1.19 | 0.89 | 31.58 | 13.55 | 28.82 |
| Transport US$/t+8 | 3.25 | 1.98 | 1.51 | - | - | - |
| Washing (+8) | 0.18 | 0.18 | 0.18 | - | - | - |
| Process | 18.63 | 18.63 | 18.63 | 18.63 | 18.63 | 18.63 |
| Additional Cn & Lime | - | - | - | 6.10 | 5.62 | 14.91 |
| Tails dam | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 |
| G&A | 5.85 | 5.85 | 5.85 | 5.85 | 5.85 | 5.85 |

Using the above given costs and the production schedule, the cash flow of the project and the associated NPV were calculated. For a 9% discount rate, the NPV reaches a value of US$ 40.2 million.

## 1.10 Other Observations

There are no other, material observations.

## 1.11 Qualified Persons' Conclusions and Recommendations

- Other than those disclosed in Section 4, the qualified persons are not aware of any other significant factors or risks that may affect access, title, or the right or ability of the Manquiri to perform work on the properties.
- Under its existing agreements with COMIBOL, Manquiri is permitted to explore, define and mine for new pallacos at San Bartolomé but has conducted little of its own exploration (Section 9) recently. A similar situation exists at Tatasi-Portugalete and El Asiento. At Cachi Laguna, Manquiri advises RALP, the project owner, on exploration and mining activities. The qualified persons recommend that, where feasible and in recognition of the relatively unique advantages the San Bartolomé process facilities present to continued acquisition of new oxidized sources of precious metal-bearing materials, that Manquiri continue to identify and evaluate such opportunities with the goal to define new mineral resources and mineral reserves.

- In the opinion of the qualified persons, the Company's personnel have used care in the collection, analyses and management of its exploration data (sections 11 and 12). The work presented herein suggests that, apart from minor to moderate concerns noted in Section 11, analytical results delivered by the laboratories used by Manquiri are free of apparent bias and can be used in current and future mineral resource estimation.
- The qualified persons believe that, despite minor amounts of identified errors, Manquiri's QA/QC programs (Section 12) and their results are acceptable and the resultant assay database is deemed adequate for mineral resource estimation. The qualified persons recommend increasing the insertion rate of standard reference material ("SRM"), the use of certified, commercial standards and the use of third-party, "umpire", laboratories to periodically confirm results from the San Bartolomé analytical facility. Furthermore, the qualified persons recommend that the Company review and update the historic assay and database protocols employed by the Company with the goal to train its employees on the rationale and use of such protocols to provide additional security and confidence in the integrity of its database. The qualified persons further recommend that Manquiri investigate the implementation of a commercial, relational database to store and secure its exploration and production database.
- The San Bartolomé mill laboratory has sufficient industry standard equipment and experienced personal to perform all of the metallurgical tests presented herein (Section 13). The qualified persons believe that the resultant metallurgical tests should give Manquiri sufficient initial information to determine the amenability of new material with the San Bartolomé mill. Nonetheless, the results in Table 13.1 demonstrate a fairly wide range of reagents used to achieve the reported recovery factors for silver. In addition, Table 13.2 show the comparable results from actual production of pallacos at San Bartolomé. Many of the test samples required similar amounts of reagents to those used in pallaco production. However, the range of silver test recoveries achieved, some of which required much higher quantities of reagents than the typical pallaco ore, suggest that blending of material from Tatasi-Portugalete and El Asiento may be required to achieve more predictable metal recoveries with less reagents.
- The qualified persons believe the metallurgical samples are representative of the various types and styles of mineralization referenced herein. Nonetheless, it is recommended that additional samples be collected routinely from all new material sources to allow for effective grade and metallurgical control before the material is processed. Care should be taken to separate visibly sulfidic material from oxidized material to ensure more consistent reagent consumption and metal recovery.

- The qualified persons recognize that Manquiri's production from purchased sources of mill feed has been a source of important cash flow. Such material, sourced from El Asiento, Tatasi-Portugalete and Cachi Laguna, now forms part of the current mine plan disclosed in this technical report. The qualified persons believe that the use of similar material should continue as long as metallurgical test work and production (including tailings) capacity and costs are favorable.
- The qualified persons believe that the methods used by Manquiri to define the mineralized deposits produced representative samples, adequately defined the deposits limits (surface extent and thickness) and allow collection of the necessary data to quantify and model the deposits.
- The drilling and samples taken by Manquiri, in general, meet the requirements of extraction, handling, marking, bagging, transport and storage of this report and are deemed acceptable for use in a resource estimation. Manquiri's personnel have used care in the collection and management of the field and assaying exploration data. Based on reports and data available, the qualified persons have no reason to doubt the reliability of exploration and production information provided by Manquiri.
- Manquiri's laboratory is certified in "Silver Determination in Doré Method" and in "Determination of Silver in Minerals Method (Atomic Absorption Spectroscopy)" by the IBMETRO; a Bolivian Metrology Institute that controls the Bolivian parameters.
- Despite minor to moderate concerns noted in Section 11, the QA/QC analysis suggests that silver grade analytical results delivered by Manquiri's laboratory are generally free of apparent bias and can be used in current and future mineral resource estimation.
- Not all samples prior to Manquiri's administration have a history of treatment and QA/QC, but have been validated for the most part by past reviewers and/or operators. Developing regular check sample campaigns is recommended, sending them to an independent, certified commercial (umpire) laboratory.
- The geology described in this report corresponds basically to the sources of the material that form the gravel and dump deposit, with the exception of the Cachi Laguna deposit.
- In the qualified persons' opinion, the models, the specific gravity, the statistical treatment, the validations and the estimations were completed according to industries standards.
- Mineral resource estimates and the modelling and estimation techniques were updated according to new parameters and methodology, with consistent results, useful for economic estimations. The estimates are effective as of March 17, 2020 and are reported as both "inclusive" and "exclusive" of mineral resources in sections 1 and 14. In San Bartolome and Cachi Laguna the block models were estimated in a

conventional geostatistical method, using Ordinary Kriging (OK), Nearest Neighbor (NN) and Inverse Distance (ID) depending on the deposit being estimated. The inventories are in tables 14.14 and 14.34. The qualified persons believe the mineral resources exclusive of mineral reserves in Table 14.37, especially the inferred components, have reasonable prospects of eventual economic extraction based on their similarities in geologic character to other material than has been processed at the San Bartolomé facility by Manquiri.

- In the case of El Asiento and Tatasi-Portugalete. Manquiri's procedures consisted of dense trench sampling in the surveyed dumps. The average length of the samples and the topography provided an approximate volume. A specific gravity of 1.78 t/m$^3$ was assigned according to average sample values. The mineral resource estimation is in chapter 14 and the inventories are in tables 14.1 and 14.22.
- Mineral reserves are summarized in Table 15.4 and have an effective date of 17 March 2020. In the opinion of the qualified persons, the main factors that may affect the mineral reserves estimate are metallurgical recoveries, operating costs and the base price. The mining cost estimates for the pit optimizations processes is based on current values practiced by Manquiri. The qualified persons note that the silver price is the most important factor for revenue calculation, therefore a sensitivity analysis was carried out for Santa Rita and Antuco pit optimizations, as together represent 63% of the value of the project. For variations of the silver price in -20%/+20% the contained silver +8 mesh varies from 71% to 119%, without affecting the mineral reserves estimate to any significant degree.
- The qualified persons note that, while gold has been recovered from Cachi Laguna materials, the amount of gold assay data in the Cachi Laguna database does not allow for the estimation of contained gold to be included in the mineral resources and mineral reserves, nor to be incorporated into the mine plane and cash flow models, reported herein. The qualified persons recommend that gold assays become routine at Cachi Laguna.
- The qualified persons recognize that Manquiri's historic production from purchased sources of mill feed has been a source of important cash flow. Part of this material is sourced from El Asiento, Tatasi-Portugalete and Cachi Laguna and now forms part of the current mine plan disclosed in this technical report. The qualified persons believe this should continue as long as metallurgy and production (including tailings) capacity is favorable.
- Manquiri has been producing and marketing doré continuously since commencement of commercial production at San Bartolomé. The qualified persons inspected Manquiri's refinery during their site visits and viewed the procedures to produce, weigh and assay the precious metal ingots and believes them and the general sales

terms to be reasonable. The qualified persons are not aware of any other significant contracts pertaining to mining or production at San Bartolomé, other than as disclosed in this TR.

- The qualified persons recommend that the Company consider additional work be conducted to increase the geologic confidence of the mineral resources in the Dumps and San Bartolomé areas (Section 26, Table 26.1), plus other work, altogether totaling US$600,000 to US$658,000.

## 1.12 Novel Coronavirus Pandemic

Due to the recent novel coronavirus pandemic and the resultant global travel restrictions, a third, planned site visit to some of the properties described herein was not possible. Those properties are Cachi Laguna, El Asiento and Tatasi-Portugalete. The restrictions imposed by the pandemic also affected operations at San Bartolomé which were suspended from March 24, 2020 through May 3, 2020, but otherwise have been continuous since 2008.

# 2 INTRODUCTION

This technical report ("TR") was prepared for Ag-Mining Investments AB (the "Vendor"), a private company ("Ag-Mining"), incorporated in Sweden and Buckhaven Capital Corp, ("Buckhaven", the "Issuer"), Ag-Mining owns 100% of Empresa Minera Manquiri S.A. ("Manquiri"). Through a letter of intent dated August 17, 2020, Buckhaven acquired the arm's length right to acquire Ag-Mining and its subsidiaries via a business combination. Buckhaven is a capital pool company and intends for the Proposed Acquisition to constitute the Qualifying Transaction of the Corporation as such terms is defined in the policies of the TSX Venture Exchange.

This TR was prepared to disclose scientific and technical details related Manquiri's precious metal mining and metal recovery operations in Bolivia. Manquiri was acquired by Ag-Mining from the prior owner, Coeur Mining, Inc. ("Coeur"). Sources of information used to prepare this TR include documents filed on www.sedar.ca, the Canadian System for Electronic Data Analysis and Retrieval, and EDGAR (https://www.sec.gov/edgar.shtml), the US Securities and Exchange Commission Electronic Data Gathering, Analysis, and Retrieval system of file storage, and other public documents filed by Coeur as well as the Ag-Mining's internal data and reports and site information gained during the Qualified Persons' site visits.

Qualified person Mr. Donald J. Birak, of Birak Consulting LLC, is a Registered Member of the Society for Mining, Metallurgy and Exploration ("SME") and Fellow of the Australasian Institute of Mining and Metallurgy ("AusIMM"). Mr. Birak is independent of both Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer") and has experience in exploration and mining operations in Bolivia. Mr. Birak was responsible for sections 2 through 6, section 13, sections 17 through 20, section 27 and jointly for sections 1, 7, 8 and 23 through 26 of this TR.

Qualified person Mr. Luis Oviedo Hannig, an employee of NCL Ingeniería y Construcción SpA ("NCL"), an independent mining consulting company with a primary offices in Santiago, Chile, is a registered professional geologist in Chile. Mr. Oviedo is independent of both Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer") and was responsible for sections 9 through 12, section 14, and jointly for sections 1, 7, 8 and 23 through 26 of this TR.

Qualified person Mr. Carlos Guzman Perez, an employee of NCL Ingenieria y Construcción SpA ("NCL"), an independent mining consulting company with a primary offices in Santiago, Chile, is a Fellow of the Australasian Institute of Mining and Metallurgy ("AusIMM"). Mr. Guzman is independent of both Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer") and was responsible for sections 15, 16, 21, 22 and jointly for sections 1, and 24 through 26 of this TR.

The qualified persons visited Manquiri's facilities in January and March of 2020. The initial site visit was conducted by Mr. Donald J. Birak, from January 28, through January 31, 2020. During the week of March 09, 2020, the NCL qualified persons Mr. Luis Oviedo Hannig and Mr. Carlos Guzman Perez conducted the second site visit.

# 3 RELIANCE ON OTHER EXPERTS

The qualified persons are not qualified to evaluate Ag-Mining's legal rights or tax and environmental obligations, related to the properties discussed in this TR, and have relied on Ag-Mining's experts with respect to the information presented in sections 4 and 20 of this TR. Specifically, the experts consulted were;

Mr. Humberto Rada - President of Manquiri,
Mr. Miguel Angel Torres – General Manager,
Mr. Dante Rodríguez – Director of Operations,
Mr. José Manuel Farfan – Manager of Public Relations and,
Mr. Rene Barahona – Process Manager

None of the listed experts cited in this Section 3 are qualified persons, as defined under Canadian National Instrument (NI) 43-101 and were not relied upon as such.

The qualified persons have relied upon title opinion obtained by the Vendor and prepared by its independent legal counsel, Fernando Aguirre, in a March 17, 2020 report entitled "Empresa Minera Manquiri S.A., Technical Report – Title Opinion, 2020" (Section 27).

# 4 PROPERTY DESCRIPTION AND LOCATION

## 4.1 Background

Ag-Mining acquired Manquiri, which controls the mining rights at San Bartolomé and is the owner of the San Bartolomé mining and ore processing facilities, by purchase from Coeur. Ag-Mining's acquisition was completed in February 2018 pursuant to the terms and conditions of a Stock Purchase Agreement dated December 22, 2017. The terms of the sale, in summary, are as follows:

On December 22, 2017, Ag-Mining and Coeur executed a Share Purchase Agreement (the "SPA"), by means of which Ag-Mining acquired all of the issued and outstanding shares of capital stock of Manquiri. The agreed purchase price for the transaction was divided in three components:

(i) a cash payment equal to the cash in balance as of the closing date,

(ii) a second cash payment for an amount equal to VAT refunds filed Manquiri before the closing date, and,

(iii) a perpetual Net Smelting Returns Royalty, of 2% of net revenues arising from the San Bartolomé facilities (the "NSR Agreement"). As in all stock transactions, Ag-Mining acquired all assets, rights and obligations of Manquiri as of the closing date. Coeur, as seller, issued a press release and also reported this transaction; please see: https://www.coeur.com/resources/news/nr_20171222.pdf.

On February 16, 2018, Ag-Mining and Coeur executed an Amendment to the Share Purchase Agreement, by means of which the parties amended and restated some of the definitions contained in the SPA, including among others, (i) the definition of "Ancillary Agreements" to include the following documents: Net Smelter Return Royalty Agreement, the Notes, the Guaranty Agreement, the Transition Services Agreement, and other as required at the Closing; (ii) the definition of "Net Smelter Returns Royalty Agreement"); (iii) the definition of "Note"; (iv) the definition of "Cash Amount" (the amount of cash of Manquiri at the Closing Date plus Value Added Tax Refunds), (v) the inclusion of Coeur's obligation to provide credit support in the form of a letter of credit to the local Bolivian bank for the term of 24 months after the Closing Date, and (vi) amendment to Exhibit D of the SPA regarding rules of Post-Closing Distributions.

On February 28, 2018 (the "Closing Date"), Ag-Mining and Coeur executed the closing documents. The Purchase Price (Cash Amount at the Closing Date) was of US$28,500,000 plus the Value Added Tax Refunds in the amount of US$14,100,000. Coeur, as seller, issued a press release and also reported this transaction; please see: https://www.coeur.com/_resources/news/nr_20180228.pdf.

On September 25, 2018, Ag-Mining and Coeur executed a First Letter Agreement by means of which the parties amended the Purchase Price to be (i) a cash payment of US$25,000,000 and (ii) the NSR Agreement. The Net Smelter Returns Royalty ("NSR") was retained by Coeur, however Coeur granted a grace period in order for the first NSR payment to be on October 15, 2019 (quarter from July to September 2019). The cash payment corresponding to the Value Added Tax Refund was terminated. As a condition for this amendment, Ag-Mining made an advance payment to Coeur of US$15,000,000 on the date of execution of such First Letter Agreement. Coeur, as seller, did not issue a press release regarding this amendment, but Coeur did report it in its 2018 Annual Report and in SEC Filings Form 8-K dated March 1, 2019.

On February 28, 2019, Ag-Mining and Coeur executed a Second Letter Agreement, by means of which Ag-Mining agreed to revised payment terms for the remaining cash balance of US$6,000,000 as follows: (i) US$2,000,000 on February 28, 2019, (ii) US$2,000,000 on March 31, 2019, and (iii) US$2,000,000 on April 30, 2019. Coeur gave an option to Ag-Mining to buy back the NSR until October 31, 2019 for US$4.75M. Ag-Mining fulfilled these payments in timely manner but decided not to exercise the option to buy the NSR. Coeur, as seller, reported this transaction in SEC Filings Form 8-K dated March 1, 2019 available on Coeur's website www.coeur.com.

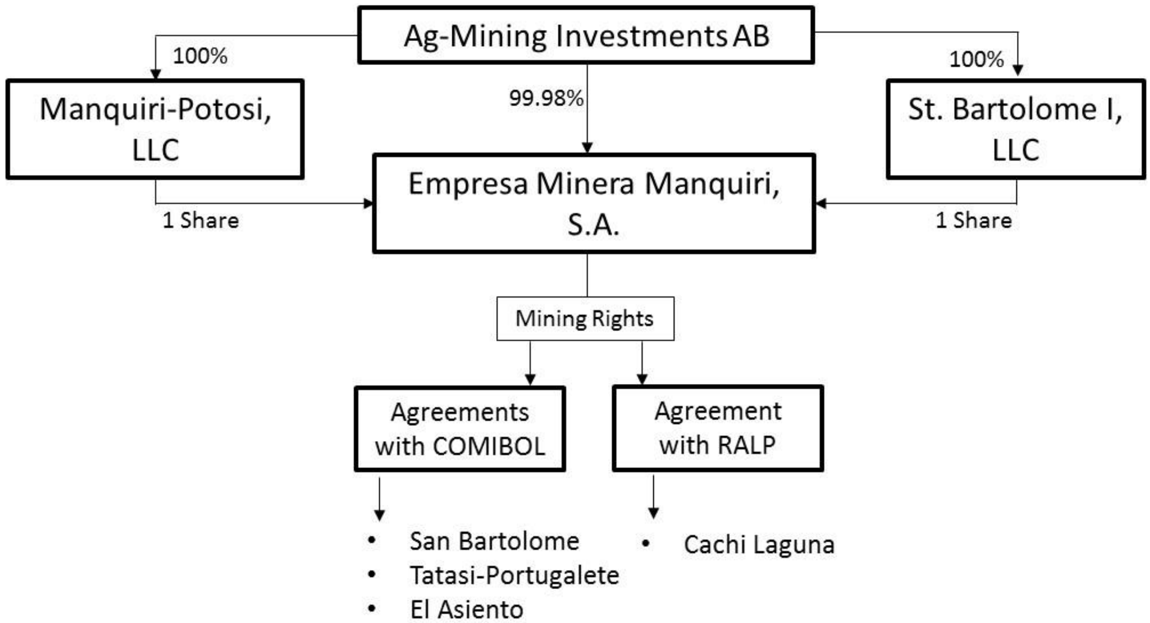
On December 3, 2019, Ag-Mining and Coeur executed an Assignment and Assumption Agreement of NSR Agreement in which Coeur agreed to grant Ag-Mining the option to buy and/or assign the NSR Agreement to Ag-Mining (or an affiliate of Ag-Mining). The parties agreed to a purchase price of US$4,370,000. Ag-Mining did not exercise this option and the NSR Agreement was restated.

On January 18, 2020, Ag-Mining paid to Coeur the corresponding amount equivalent to the NSR of the third quarter of 2019.

On January 29, 2020, Ag-Mining and Coeur executed a Net Smelter Returns Royalty Purchase Agreement by means of which Ag-Mining acquired the NSR Agreement for US$4,500,000, plus the amount corresponding to the NSR of January 2020.
Coeur did not issue a press release of the NSR purchase, but included this transaction in its 2019 Annual Report: please see Note 22 on page 108 of https://www.coeur.com/_resources/pdfs/2019-Annual-Report.pdf .

Subsequent to the acquisition from Coeur, Manquiri has made other acquisitions in Bolivia. Ag-Mining's business structure and mining interests in Bolivia are held as shown in the Figure 4.1.

**Figure 4.1: Business Structure and Mining Rights**



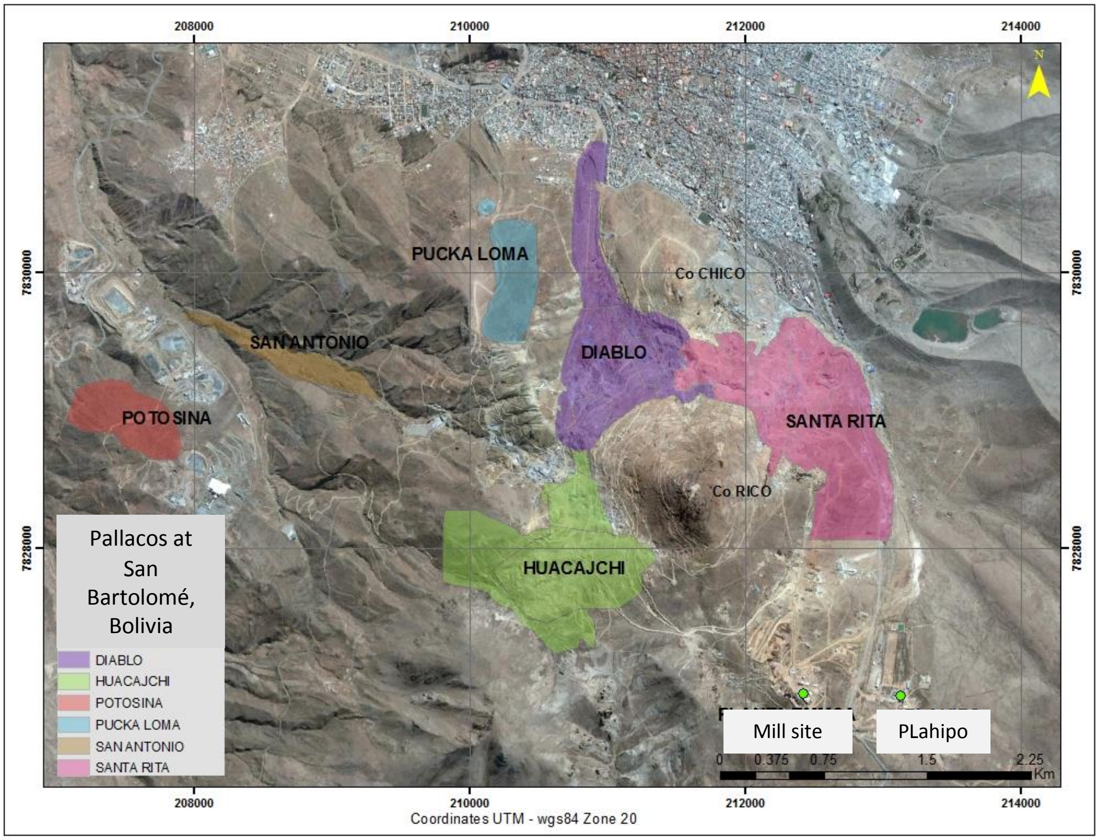

Through a letter of intent dated August 17, 2020, Buckhaven Capital Corp. ("Buckhaven") acquired the arm's length right to acquire Ag-Mining Investments AB ("Ag-Mining") via a business combination. Buckhaven is a capital pool company and intends for the Proposed Acquisition to constitute the Qualifying Transaction of the Corporation as such terms is defined in the policies of the TSX Venture Exchange (Buckhaven, 2020).

### *4.1.1 San Bartolomé*

San Bartolomé is an operating mine recovering silver from mineralized gravel ("pallacos"), which mantle the flanks of Cerro Rico; a prominent, +4,800 meter-elevation peak located just south of the city of Potosi, Tomás Frías province, Department of Potosí, Bolivia (Figure 4.2). Access to San Bartolomé is by paved and well-travelled gravel roads leading from the city.

Mining operations and ore processing and related facilities encompass an area of nearly 1,817.6 hectares. The Bolivian national mining company, Corporación Minera de Bolivia (COMIBOL), is the underlying owner of all the mining rights relating to San Bartolomé.

**Figure 4.2: Location of San Bartolomé (Around Cerro Rico)**




The crest of Cerro Rico is 19º 35' 24"S latitude and 65º 46' 09"W longitude.

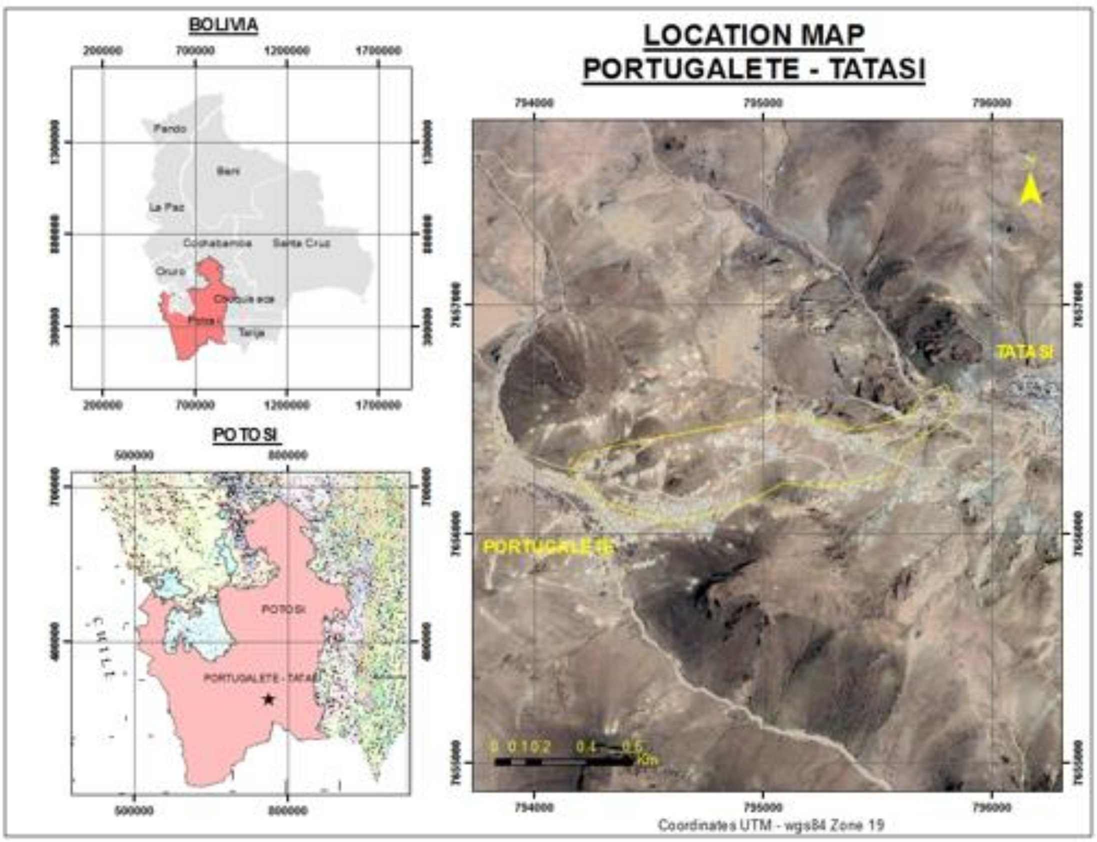
The pallacos are located in 3 areas with a surface area of approximately 337 hectares in size encompassing the current mineral resources. The pallacos surround Cerro Rico, extending from near its peak northward nearly 3 km to the outskirts of Potosi, eastward 1.5 km to Highway 1, and up to 3 km southward and westward. The pallacos have been divided into several sectors: Huacajchi, Santa Rita, and Diablo (includes Antuco) and Puka Loma (sections 14 and 15). No part of the deposits is further than 3 km from the paved highway which passes around the eastern toe of Cerro Rico from Potosi south to Tarija. Manquiri's ore processing facilities and tailings impoundment lie to the southeast of Cerro Rico and are easily accessed by paved and gravel roads.

### *4.1.2 El Asiento and Tatasi-Portugalete*

Since the acquisition of Manquiri from Coeur, Ag-Mining has been supplementing mill feed from the mine with other sources of oxidized material from various mining operations in the region. By and large, the operators of the other sites are recovering metals from sulfide-rich ores via underground mining and sale of concentrates to COMIBOL. The oxidized portions of these other mines cannot be viably processed in the same facilities. Manquiri's cyanide leach facilities at San Bartolomé are better suited to process such oxidized materials. Two such oxidized opportunities, recently secured by Manquiri, are the Tatasi-Portugalete and El Asiento projects (figures 4.3 and 4.4) also located in the department of Potosí, Bolivia. Exclusive mining rights are in place between Manquiri and COMIBOL, similar to those. A 5% gross royalty is held by COMIBOL on both properties.

The mining rights held by Manquiri are for mining, transport and processing of historic mining dumps and stockpiles (“desmontes”) distributed around the Tatasi-Portugalete and El Asiento properties; similar to the rights Manquiri holds at San Bartolomé.

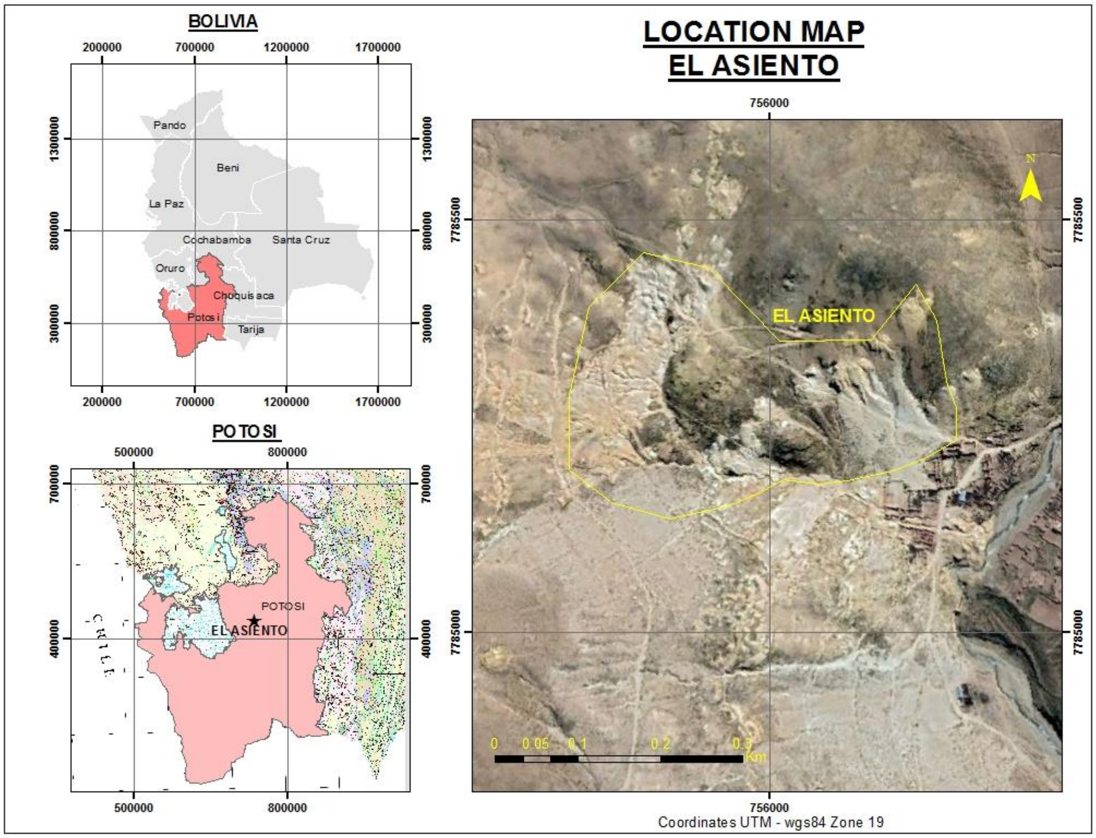
**Figure 4.3: Location of Tatasi-Portugalete**




The approximate center of Tatasi-Portugalete is 21º 10’ 18”S latitude and 66º 09’ 22”W longitude.

The dumps at Tatasi-Portugalete, outlined in yellow in Figure 4.3, are enclosed in an area measuring  approximately 320 hectares in size.

**Figure 4.4: Location of El Asiento**




The approximate center of El Asiento is 20º 00' 46"S, latitude and 66º 33' 17"W longitude.

The dumps at El Asiento, outlined in yellow on Figure 4.4, are enclosed in an area measuring approximately 100 hectares in size.

### *4.1.3 Cachi Laguna*

An exclusive mineral purchase contract is in place between Manquiri and RALP Compañía Minera, S.R.L., a private, Bolivian mining company ("RALP"). The property is located in the department of Potosí, Bolivia, near the border with Chile (Figure 4.5). The contractual rights held by Manquiri are for processing of 108,000 tonnes of silver- and gold-bearing material being mined by RALP. As the effective date of this TR, 98,000 tonnes of material remains to be mined and delivered. The current contract replaces the prior contract between Manquiri and RALP executed 07-June-2017.

General terms of the current contract are as follows:

- Executed 21-September-2019,
- 15-month term (to 21-December 2020) with extension provisions.

  - RALP will mine and deliver the material to San Bartolomé in lots of 80 to 140 dry tonnes,
  - Manquiri has rights to supervise all of RALP's mining and transport activities,
  - Material delivered to San Bartolomé and weighed on certified scales (IBMETRO Bolivia certified),
  - Minimum silver grade of 320 g/t,
  - Advance payment by Manquiri 3.0 M BOB (Bolivianos) with allowance made for operating expenses,
- Net payments to RALP based on the following formula,

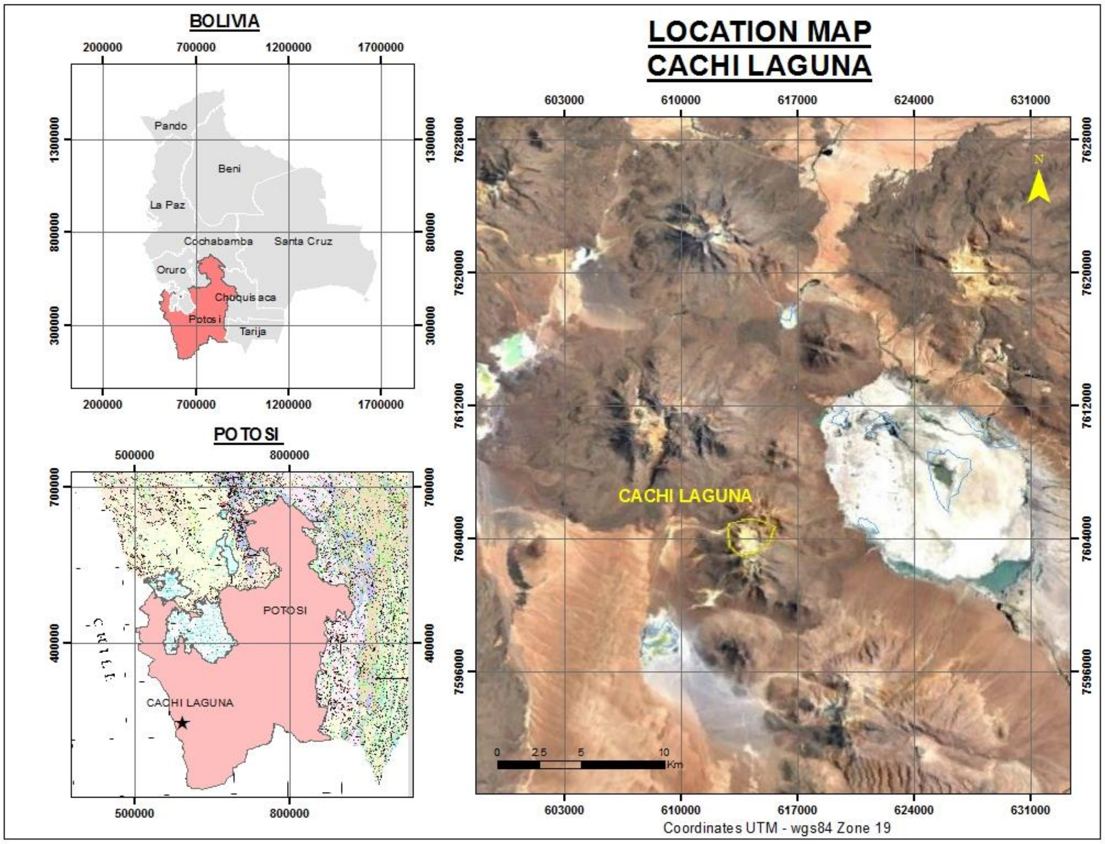
  Net US$ per tonne of material = [((A * B)*.0322)*C]-D

  Where:

  A = Ag head grade in grams per tonne – variable (in ranges)
  B = Ag price in US$ per troy ounce – contractually fixed at $15
  C = Metallurgical recovery – contractually fixed at 80%
  D = Allowable discounts – variable based on head grade

| | | | |
|---|---|---|---|
| Ag grade (g/t) ranges: | >=320, <400 | Discounts (US$/t): | $31.58 |
| | >=400, <450 | | $46.52 |
| | >=450, <500 | | $55.92 |
| | >=500, <550 | | $65.32 |
| | >=550. <600 | | $74.72 |
| | >=600 | | $84.12 |

**Figure 4.5: Location of Cachi Laguna**




The approximate center of Cachi Laguna is 21° 40' 47"S latitude and 67° 53' 42"W longitude.

The land held by RALP, enclosing the Cachi Laguna deposit is approximately 150 hectares in size (yellow outline in Figure 4.5).

## 4.2 Mining Laws of Bolivia

All minerals in Bolivia are property of the Bolivian people and are managed by the State. Up to the early 2000's the process to acquire or establish mineral concessions was available to national and international entities, subject to payment of the annual patents (fees). Mining regulations have undergone several changes, culminating with Mining and Metallurgy Law 535 (Ley de Minería y Metalurgia) enacted in May 2014. Some of the important aspects of Law 535 are:

Structure of Law 535

(The Law has 246 articles divided in seven main Titles and Final Provisions):

1. General Rules: purpose; principles; fundamental provisions; mining entities.

2. Structure of the State Mining Sector: institutions and companies; policies and control; mining regulatory authority; state companies; service, research and other controlling entities; promotion.
3. Mining Rights and Extinction.
4. Mining Contracts.
5. Regulations for change (substitution-migration) to new regime (contracts).
6. Prior Consultation and Environmental Rules.
7. Mining Royalties and Patents.

<u>General features from private companies' perspective</u>

1. Existing concessionaires must apply-migrate for a substitute administrative contract to be signed with the regulatory authority Autoridad Jurisdiccional Adminstrativa Minera ("AJAM"). Current mining rights continue in effect under Special Temporary Authorizations ("ATEs" ) until substitute contract comes into effect.
2. New rights on free areas can be obtained by filing for similar contract with AJAM. Restrictions for foreigners continue to apply when mining areas are within 50 kilometers of the international borders (rights can be granted if approved by Congress). Existing joint venture agreements between foreign companies and Bolivians who hold mining concessions will be recognized subject to compliance with formalities under the law.
3. Contracts do not grant title on unexploited reserves only right to explore, exploit, industrialize and sell. Information on reserves can only be used for stock market and financing purposes. Contractors acquire full title to production.
4. Land rights are separate from mining rights.
5. Contractual rights cannot be transferred or assigned, though contractor can execute association agreements (similar to Joint Venture Agreements) with third mining parties.
6. Economic Social Function and Interest is to be met.
7. Every mining contractor must count with and perform a Development and Investment Plan. For substitute contracts a description of current activities and the Plan for the future are to be presented. Plans are flexible and subject to modification over time.
8. Rights to profits remittance abroad are under the law.
9. Guarantees of protection.
10. New administrative contracts (not those for substitution) are subject to prior consultation to Indigenous Peoples Nations and Peasant Communities.

11. Specific exploitation contracts are subject to public consultation to affected population, as part of filing and processing environmental licenses.
12. All private mining operators must be registered as mining companies with the Commercial Registry.
13. Producers of concentrates must first offer their production for sale to state refineries if existing; if not, then to private refineries; if none exist right to export. Local sales agreements must be under common market terms. If no agreement is reached, right to export exists.

Specific rules on Administrative Mining Contracts

1. Substituting concessions and for new Administrative Mining Contracts, applications to obtain new free areas as defined in the law.
2. Term: thirty years which, when justified, can be extended for another thirty years.
3. Congressional Approval: Only for new contracts. Not needed for current contracts.
4. Form: Public deeds executed before Notary Public.
5. Compulsory registration with Mining Registry. Real Estate Registry and recording with Commercial Registry not required.
6. Maximum area for new contracts: 250 quadrants (1 quadrant = 25 hectares). Contracts by substitution of existing concessions are not covered by restriction.
7. Termination: contracts can only be terminated by the Mining Authority if Economic Social Interest is not met. This means more specifically: breach in initiating activities under corresponding Plan for more than one year or abandonment of the activity for more than six months, except in cases of force majeure (as widely defined in the law).
8. Contractor must comply with all other applicable laws and regulations: taxation, environment, industrial security, labor, social security, etc. Sanctions for breach thereof are those defined in the laws and regulations governing such obligations and do not constitute a cause for termination of the administrative mining contract.

New Association Agreements

1. COMIBOL and other state mining companies can sign Association Agreements with private companies or cooperatives.
2. Cooperatives cannot sign Association Agreements with private companies.
3. Minimum participation of COMIBOL: 55% of profits for future contracts.

4. Public bidding or direct invitation procedures to apply.
5. Provisions similar to the existing Joint Venture Agreements.
6. Private mining companies between themselves or with mining cooperatives can sign Association Agreements, similar to existing Joint Venture Agreements. Terms are to be negotiated. Term depends on the project taking into account the term of the main Administrative Mining Contract.

Manquiri's agreements with COMIBOL are pre-existing and not subject to the new terms referenced herein.

Licenses and other Substitutions

1. To conduct only exploration activities any mining company or cooperative can apply for an Exploration License before the Regulatory Authority. Maximum term: five years. The exploration company has a preferential right to apply for administrative mining contract.
2. Separate refining or smelting activities will require a License from the Regulatory Authority. Existing operations must file for a License.
3. All internal and external traders (including mining companies, for control and export purposes) require License and/or registration with the SENARECOM (entity entrusted with the registration and control of trading and of payment of royalties).
4. The draft law provides a number of other rules dealing with obligations of adjustment (change) to administrative mining contracts of other special or specific cases of mining concessionaires.
5. The use of water will require an approval by the competent authority.

Additional Rules

1. Law No. 403 which has provided for the reversion of private mining concessions in case of lack of activity will continue in effect. In respect of each specific concession, the law will no longer apply as from the moment the application for the substitute administrative mining contract has been filed and initially approved for processing.
2. As a practical matter to avoid the risk of reversion, filings for change of concessions into administrative mining contracts should be made as soon as the six months period is opened by Regulatory Authority.
3. Current concessionaires, who are individuals, in order to qualify for change into contract, must incorporate a commercial entity, with parallel adjustment of joint venture agreements or similar it may have signed with private companies or third parties.

Under the new mining laws, Manquiri's rights to the properties disclosed in this TR are held by contracts/agreements. Under the new laws, concessions were required to be converted to contracts/agreements with COMIBOL and is applicable to San Bartolomé, El Asiento and Tatasi-Portugalete. Furthermore, foreign corporations, or Bolivian Corporations owned by foreign entities (like Manquiri), are not permitted to hold mineral concessions or operate within 50 km of the country border, which applies to the Cachi Laguna area, under the RALP contract/agreement. Terms of Manquiri's contracts/agreements with COMIBOL at San Bartolomé, Tatasi-Portugalete, and El Asiento and with RALP, a private Bolivian company, at Cachi Laguna are shown in Table 4.1.

**Table 4.1**. **General terms of Manquiri's Contracts/Agreements**

| Document | Date of Document | Area | Term |
|---|---|---|---|
| Mining Rights granted by COMIBOL: Mining Lease Agreement No. 114/2001 | July 24, 2001. | Pallacos and Desmontes | 25 years |
| Mining Rights granted by COMIBOL: Transitory Work Continuity Permit RES: GTOP-0012/2017 | January 10, 2017 | Pallacos: Huacajchi and Santa Rita | Indefinite until execution of Mining Production Agreement according to Law 845 |
| Mining Rights granted by COMIBOL: Transitory Work Continuity Permit RES: GTOP-350/2019 | September 20, 2019 | Pallacos: Antuco or Diablo | Indefinite until execution of Mining Production Agreement according to Law 845 |
| Mining Rights granted by COMIBOL: Transitory Work Continuity Permit RES: GTOP-002/2020 | March 17, 2020 | El Asiento | Indefinite until execution of Mining Production Agreement according to Law 845 |
| Mining Rights granted by COMIBOL: Transitory Work Continuity Permits RES: GTOP-003/2020 | March 17, 2020 | Tatasi-Portugalete | Indefinite until execution of Mining Production Agreement according to Lay 845 |
| Agreement for the purchase of minerals with Ralp Compañia Minera SRL | September 21, 2019 | Cachi Laguna | 15 months with extension provisions or 108,000 Tonnes |

## 4.3 Royalties and Taxes

In Bolivia, all corporate entities are required to pay a 25% tax on net profits, plus, in the case of mining companies, an additional special mining tax of 12.5%, thus totaling 37.5% on net profits on mining companies. This special mining tax is reduced to 7.5% for companies who produce metal or doré bars, as is the case for Manquiri. Therefore, Manquiri's total corporate tax on net profits is 32.5%. Under Law 843, a Surtax of 25% applies to mining company income after allowable deductions for accumulated investments in exploration, process facilities and environmental costs. Using the allowable deductions, Manquiri has not been subject to the Surtax.

Income or profit remitted abroad to a foreign beneficiary without domicile in Bolivia is subject to a 12.5% remittance tax. Income remittances from Manquiri to AG Mining Inc. are not taxable under the current framework of an International Treaty to Avoid Double Taxation between Bolivia and Sweden.

Royalties are paid to Servicios de Impuestos Nacionales (the National Tax Service), which are distributed between the state (85%) and the municipality (15%). Royalties are calculated on the gross value of sales, which results from multiplying the weight of fine content or metal by the official quotation published twice a month by the Bolivian Mining Ministry (the first quotation is issued on the first labor day of each month, and is valid for the first half of such month, and the second quotation is issued mid-month until the end of such month). These quotations are based on the average price of the previous 15 days issued by the London Bullion Market Association. Royalties are subject to payment upon exports and the official percent to be applied fluctuates depending on the metal price as follows:

- Ag price > USD$8.00 per ounce, the percent is 6%
- Ag price >= USD$4.00 through USD$8.00 per ounce, the percent is 0.75% *Ag price
- Ag price < USD$4.00, the percent is 3%

and,

- Au price > USD$700 per ounce, the percent is 7%
- Au price >= USD$400 through USD$700, the percent is 0.01% *Au price
- Au price < USD$400, the percent is 4%

An annual fee is also payable as a requirement to continue holding rights. The fee amount depends on whether the right is for an exploration license or for an administrative contract for mining development. It is also calculated on the size of the area under license or contract and for each square (cuadrícula) of 25 hectares.

**Table 4.2: Annual Fees (US$) (per Law 535)**

| Activity | Unit Area | Base Fee | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|
| Prospecting and Exploration | Per Square (25 ha each) | $46.69 | $52.44 | $53.87 | $55.02 |
| Aerial Exploration | Per permit | $7,183.90 | $8,067.81 | $8,290.08 | $8,467.81 |
| Exploitation | 1 to 30 Squares | $57.47 | $64.51 | $66.37 | $67.67 |
| | 31 to 40 | $71.83 | $80.74 | $82.90 | $84.62 |
| | >= 40 | $86.20 | $96.83 | $99.42 | $101.58 |

Total, annual holding costs and fees in Table 4.2 are paid annually, depending on the work.

## 4.4 Environmental Liabilities

The qualified person(s) are not aware of any material environmental liabilities related to the properties other than those disclosed in Section 20.

## 4.5 Permits Required to Conduct Work

Exploration permits are granted by AJAM (Section 4.2) and allow the permit holder to conduct exploration and mining activities. Manquiri has obtained permits to conduct its exploration and mining activities as described in this Technical Report.

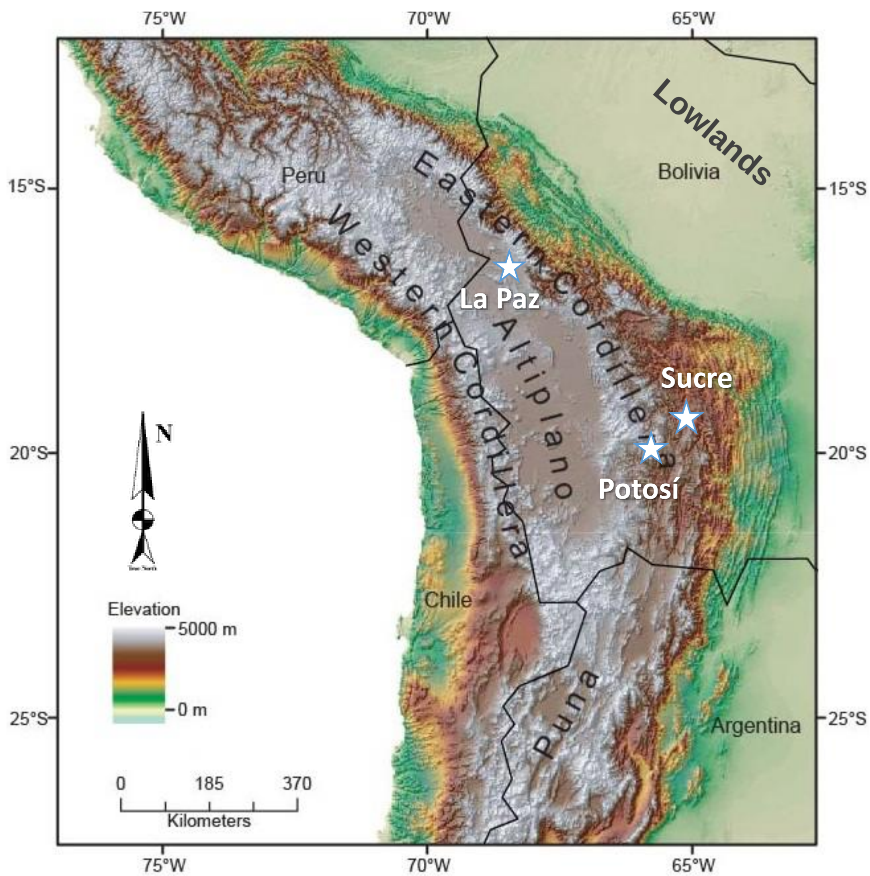
## 4.6 Qualified Person's Comments

Other than those disclosed in this Section 4, the qualified persons are not aware of any other significant factors or risks that may affect access, title, or the right or ability of the Manquiri to perform work on the properties. The qualified persons are not qualified to assess the Manquiri's legal rights to mine and process materials from the Properties and have relied upon public and private information provided by Ag-Mining and Manquiri to prepare the disclosure in this Section 4. Manquiri provided property title opinion from an independent, Bolivian counsel (Aguirre, 2020, Section 2 and Section 27).

## 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Bolivia is one of two land-locked countries, along with Paraguay, in South America. It contains several distinct geographic regions starting with the Cordillera Occidental (Western Cordillera) on the western margin of the country, the Altiplano (high plain), the Cordillera Oriental (Eastern Cordillera) and the Lowlands covering the eastern portion of the country (Fig. 5.1).

**Figure 5.1: Major Geographic Regions of Bolivia**




(Source: http://www.optics.rochester.edu/workgroups/cml/opt307/spr12/nandini/image/Andes%20plateau%20map.jpg)

The San Bartolomé mine and mill complex is located within the Cordillera Oriental, a set of parallel mountain ranges emplaced on the eastern and north eastern margin of the Andes. The Cordillera Oriental is formed by the Central Andean fold and thrust belt (https://en.wikipedia.org/wiki/Cordillera_Oriental_(Bolivia). Elevations on the property range from 3,900 to 4,100 meters with moderate relief.

Accessibility to Potosí is very good via air and paved roads from various major communities. Daily airline flights connect the cities of La Paz, the administrative capital of Bolivia, with Sucre, the constitutional capital (Fig. 5.1). From Sucre, the Property can be reached by 129 km of paved Highway 5.

Vegetation in the region consists largely of grasses, shrubs and low, clumpy herbaceous plants. Alpacas, llamas, vicuñas and guanacos are common in the area and the Property and the local population herds both llamas and alpacas for food and wool. Rainfall in the area is sparse with average annual temperatures from 8 to 11 degrees Celsius (https://en.wikipedia.org/wiki/Puna_grassland#Dry_Puna_.28Central_Andean_dry_puna.29).

Potosí is the nearest, large city, with over 140,000 residents (2020 estimated data - http://worldpopulationreview.com/countries/bolivia-population/cities/) with ready access to the Property. Mining at Potosí began at Cerro Rico (the "Rich Hill") in mid 1500's producing silver, tin, lead and zinc from veins and replacement bodies in a volcanic dome complex and continues to this day. As a result, many residents of Potosí are employed in mines, providing a potential source of workers and services.

Typically, mining, ore processing and tailings operations can proceed throughout the year. Ore processing is conducted at Manquiri's facilities on the southeast side of Cerro Rico. Tailings are pumped to impoundment facilities southeast of the mill. Power and water, for ore processing activities, is available at the Property. Water has not been a concern at the Property though the greater Potosí area experienced a drought in 2016 and 2017. Water is sourced from local sources (Section 18).

Overall, the geography, climate and natural resources of the Property and Potosí region do not pose any unusual challenges to Manquiri's current future activities. The climate is generally conducive to year-round mineral exploration activities. Manquiri provides on-site medical monitoring for signs of altitude sickness in its employees and visitors.

# 6 HISTORY

Coeur held mining rights through agreements with COMIBOL and several mining cooperatives to the San Bartolomé open pit silver mine via its wholly owned subsidiary, Empresa Minera Manquiri S.A. (“Manquiri”). The mine and associated milling operation had been in production since 2008. Coeur sold Manquiri to Ag-Minerals in 2018 (Section 4). Prior to Manquiri, there was no silver production from the San Bartolomé gravel-hosted deposits around the summit of Cerro Rico though some tin (Sn) was recovered by local miners from similar materials (Bartos, 2000).

## 6.1 Historic Exploration

### *6.1.1 San Bartolome*

Prior to the activities of Coeur and its agents, there was little exploration or evaluation of the unconsolidated, gravel-like silver and tin bearing surficial materials, or “pallacos”, around the crest of Cerro Rico at San Bartolomé. The idea to recover silver from the unconsolidated materials was first proposed by Asarco in 1995 (Bartos, 2000). Coeur reported the following historic information (Tyler and Mondragon, 2015):

> *“Asarco began evaluating the gravel deposits in 1995 by channel sampling the steep faces that were created during hydraulic mining for tin. This work identified the Huacajchi deposit as a potentially high-grade silver deposit. Samples from this phase of the work were screened and various size fractions were assayed. This work demonstrated that the cobbles in the gravel contained significantly more silver than the finer matrix material. After negotiations, Asarco acquired the Huacajchi property, and in 1996 a reverse circulation drilling (RC) program of 35 holes totaling 1,400 m was completed. This drilling roughly defined the volume of the deposit and gave an early indication of the distribution of silver.”*
>
> *“Given the relatively thin nature of the deposit, uncertainties about the reliability of the RC drilling and the availability of experienced miners in the area, it was decided to excavate hand-dug prospect shafts (pozos) as a means of obtaining bulk samples for grade determination and metallurgical testing. These workings were dug at the locations of 32 of the 35 RC drill holes as a test of the effectiveness of RC drilling for grade determination. The maximum depth of the shafts was 12 m, and a cubic meter of sample was collected per meter of depth. This work was completed in early 1997.”*
>
> *“Nominal sample spacing of either RC holes or shafts was 150 m. Infill shaft sinking on 75 m centers followed. There were 54 shafts and 35 drill holes at 70 sites within the Huacajchi deposit. Extensive assaying and metallurgical test work were carried out on the samples from the shafts, including screen assay analyses, crushing, grinding and settling tests and cyanide leach tests. In addition to the Huacajchi deposit, Asarco explored the Diablo and Santa Rita deposits in 1997 and early 1998. Asarco completed 14 shafts and nine channels in the Diablo Norte area. At Santa Rita, a total of 37 shafts and 25 channels were completed.”*

During its tenure at San Bartolomé, Coeur conducted various types of exploration designed to find, define and expand gravel-hosted silver mineralization (Tyler and Mondragon, 2015; Section 10, Table 10.1). Coeur utilized industry standard methods such as reverse circulation (RC) drilling (conventional, without center-return percussion hammers), Barber drilling (dual rotary heads), hand dug pits ("pozos"), track-mounted excavator trenches and surface channels (Section 27).

Coeur found that, due to the highly unsorted nature of the pallacos, which consisted of a wide range of material sizes, hand-dug pozos and excavator cuts were the most effective means to obtain reliable bulk samples to evaluate and define the mineral potential of the pallacos at San Bartolomé. Techniques that used percussion, like RC drilling, would break down the larger, preferentially mineralized gravel fragments. It was recognized early in the project's history, that the preferentially mineralized, coarser-grained fragments could be separated from the less well-mineralized fine fragments, this giving a more reliable sample for geochemical analyses. Barber techniques suffered poor penetration rates due to the presence of very hard, silicified fragments in the pallacos.

As reported by Tyler and Mondragon (2015), over 1,000 pits, trenches and channels were cut into the pallacos and desmontes at San Bartolomé. Manquiri has continued this type of exploration and sampling since its acquisition by Ag-Mining. An example of the excavator trench method for collecting samples is shown in Figure 6.1.

**Figure 6.1: Historic Trench Sampling at San Bartolomé**


The historic work referenced herein formed the basis for the initial and subsequent historic mineral resource estimation at San Bartolomé. During its operations, Coeur made additional pozos and used similar methods to collect samples from new sites. The qualified person, responsible for this Section 6, was responsible for exploration for the Coeur from 2004 through 2013, including those at San Bartolomé. Similar trenching and sampling activities are conducted to this day at San Bartolomé.

#### *6.1.2 Other Areas*

The qualified persons were made aware of some, limited historic exploration at Cachi Laguna, conducted by a joint venture ("EMICRUZ") between Rio Tinto Zinc ("RTZ") and Comsur, but did not have access to that information. A database prepared by Rio Tinto, from year 1996-97, was recovered and used in the modeling and resource estimation of the project.

Otherwise, there are no known, public records of past exploration work conducted on Tatasi-Portugalete, El Asiento or Cachi Laguna.

### 6.2 Historic Mineral Resources and Mineral Reserves

San Bartolomé - Over the years of its operation, Coeur reported annual updates to the mineral resources and mineral reserves of San Bartolomé. The most recent Technical Report (Tyler and Mondragon, 2015), as filed on Sedar.com, was dated December 31. 2014 (the Effective Date) and disclosed the following information (tables 6.1, 6.2).

**Table 6.1: Historic Mineral Resources and Mineral Reserves (2014)**

| Classification | Tonnes (000's) | Average Silver Grade (g/t) | Contained Silver Ounces (000's) |
|---|---|---|---|
| **Mineral Reserves** | | | |
| Proven | 1,094 | 93.5 | 3,287 |
| Probable | 12,099 | 109.8 | 42,724 |
| Total | 13,193 | 108.5 | 46,011 |
| **Mineral Resources (In addition to mineral reserves)** | | | |
| Measured | 0 | 0 | 0 |
| Indicated | 6,380 | 65.5 | 13,445 |
| Subtotal | 6,380 | 65.5 | 13.445 |
| Inferred | 60 | 57.5 | 111 |

- Source: Tyler and Mondragon (YE 2014) Technical Report filed Feb. 18, 2015, www.sedar.ca
- Mineral resources were reported as in addition to mineral reserves
- Pit-constrained
- US$19/ounce silver price used for mineral reserve estimation, US$22/ounce for mineral resources estimation
- g/t – grams per tonne (metric)

The most recent NI 43-101 technical report on San Bartolomé was filed on SEDAR, effective at year-end 2014 (Tyler and Mondragon, 2015). However, subsequent to the year-end 2014, Coeur disclosed mineral reserves and additional mineralized material for San Bartolomé in its annual, year-end US SEC Form 10-Ks; the last of which applied to year-end 2017 (Coeur, 2017; Table 6.2).

**Table 6.2: Historic Mineral Reserves and Mineralized Material (2017)**

| Classification | Tons (short 000's) | Silver Grade (ozs/t) | Contained Silver Ounces (000's) |
|---|---|---|---|
| **Mineral Reserves** | | | |
| Proven | 1,640 | 2.52 | 4,429 |
| Probable | 162 | 2.98 | 482 |
| Total | 1,802 | 2.55 | 4,911 |
| **Mineralized Material** | | | |
| Not classified | 4,106 | 3.41 | 14,001 |

- Source: December 31, 2017, Coeur Mining Inc. US SEC Form 10-K, (imperial units)
- Mineralized material (US SEC term) is equal to the sum of additional measured and indicated mineral resources (inferred was not permitted to be reported within mineralized material), this term has been recently replaced with the term mineral resources under the new US SEC regulation S-K 1300
- Mineralized material figures cited were reported as "exclusive of" mineral reserves; contained silver ounces not reported but were calculated by D.J. Birak herein (qualified person) as "Reported tons x Reported grade"
- ozs/t - troy ounces per short ton (imperial)
- US$17.5/ounce silver was used in estimation of mineral resources

**Other areas** - There are no known records of mineral resources or mineral reserves for dumps at Tatasi-Portugalete, El Asiento or Cachi Laguna. However, Arce (2007, page 53) reported a 1992 estimated range of mineral resources for the in situ source of the dumps at Tatasi-Portugalete of 4 to 17 M tonnes grading 200 to 300 g/t Ag for an estimated range of 25.8 to 164.2 million contained silver ounces and for the in situ source of the El Asiento dumps (Arce 2007, pg 201) of 80 to 100 m tonnes grading approximately 80 g/t Ag and 1.5 g/t Au (not compliant with NI 43-101). Other than as reported herein (Section 14) there are no known historical, NI 43-101 compliant, mineral resource estimates for the Other Areas.

The historic mineral resources and mineral reserves disclosed in this Section 6 used categories consistent with Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") standards and the qualified persons have included them in this TR for completeness purposes. Neither the qualified persons nor the Issuer are treating the historical estimates herein as current mineral resources or mineral reserves. The qualified persons have not done sufficient work to validate the key assumptions, parameters, and methods used to prepare the historical estimates.

## 6.3 Historic Mining and Mineral Processing

San Bartolomé - Coeur conducted mining and mineral processing at the Property continuously from 2008 through 2017 and disclosed its results in its annual filings with the US SEC and in various NI 43-101 Technical Reports (Table 6.3).

**Table 6.3: Historic San Bartolomé Mill Production**

(Pre-effective date of this technical report)

| Yearly Data | 2020 (Jan - Feb) | 2019 | 2018 | 2017 - 2008 (Coeur Data) |
|---|---|---|---|---|
| **Total Material Processed** | | | | |
| Tonnes milled | 260,399 | 1,511,774 | 1,375,054 | 13,604,168 |
| Average silver grade (grams/tonne) | 141.1 | 122.4 | 120.8 | 131.3 |
| Silver recovery (%) | 91.4% | 88.2% | 86.9% | 89.2% |
| Silver production (ounces) | 1,079,357 | 5,246,367 | 4,641,882 | 57,168,296 |
| Average gold grade (grams/tonne) | 3 | 4 | 2 | - |
| Gold recovery (%) | 96 | 90 | 85 | - |
| Gold production (ounces) | 1,541 | 3,537 | 2,922 | - |
| **San Bartolomé Pallacos Processed** | | | | |
| Tonnes milled | 175,465 | 1,110,353 | 1,137,868 | 13,604,168 |
| Average silver grade (grams/tonne) | 86.0 | 74.5 | 80.1 | 131.3 |
| Silver recovery (%) | 95.4% | 91.3% | 90.0% | 89.2% |
| Silver production (ounces) | 462,613 | 2,428,149 | 2,637,025 | 57,168,296 |
| **Other Materials Processed (purchased)** | | | | |
| Tonnes milled | 84,934 | 401,421 | 237,186 | Not itemized |
| Average silver grade (grams/tonne) | 254.9 | 254.8 | 316.4 | |
| Silver recovery (%) | 88.59 | 85.69 | 83.09 | |
| Silver production (ounces) | 616,744 | 2,818,217 | 2,004,858 | |
| Average gold grade (grams/tonne) | 3.37 | 4.17 | 1.75 | |
| Gold recovery (%) | 96.00 | 90.00 | 85.00 | |
| Gold production (ounces) | 1,541 | 3,537 | 2,922 | |

**Notes:**

The information presented are net of refinery losses and inventory adjustments.

Annual information from 2008 through 2017 taken from Coeur annual reports and Tyler and Mondragon technical report (2015).

**Manquiri records indicate from 0.9 to 1.6 M ontained silver ounces were produced annually from purchased materials during 2015 through 2017. None in prior years. The 3-year total was 0.479 M tonnes grading 235 g/t Ag containing 3.642 M Ag ounces**

Imperial units reported by Coeur converted to metric: 1 troy ounce/short ton (oz/t) = 34.286 grams/tonne, 1 ton = 0.9072 tonnes.

Manquiri's production from "Other Materials", was achieved from purchased materials, some of which was material from Cachi Laguna. Manquiri records indicate that 0.479 M tonnes of purchased material – referred to as "compras" – grading 235 silver g/t and containing 3.642 M silver ounces was processed in the period 2015 through 2017. The qualified persons viewed the purchased material stockpiled at San Bartolomé crusher site during the first site visit.

Other areas - There no known, public records of past production from the dumps at Tatasi-Portugalete, El Asiento or from the in situ deposit at Cachi Laguna.

**Qualified Persons' Opinions**

The qualified persons recognize that Manquiri's historic production from purchased sources of mill feed ("compras") has been a source of important cash flow. The qualified persons believe this should continue as long as metallurgy and production (including tailings) capacity is favorable.

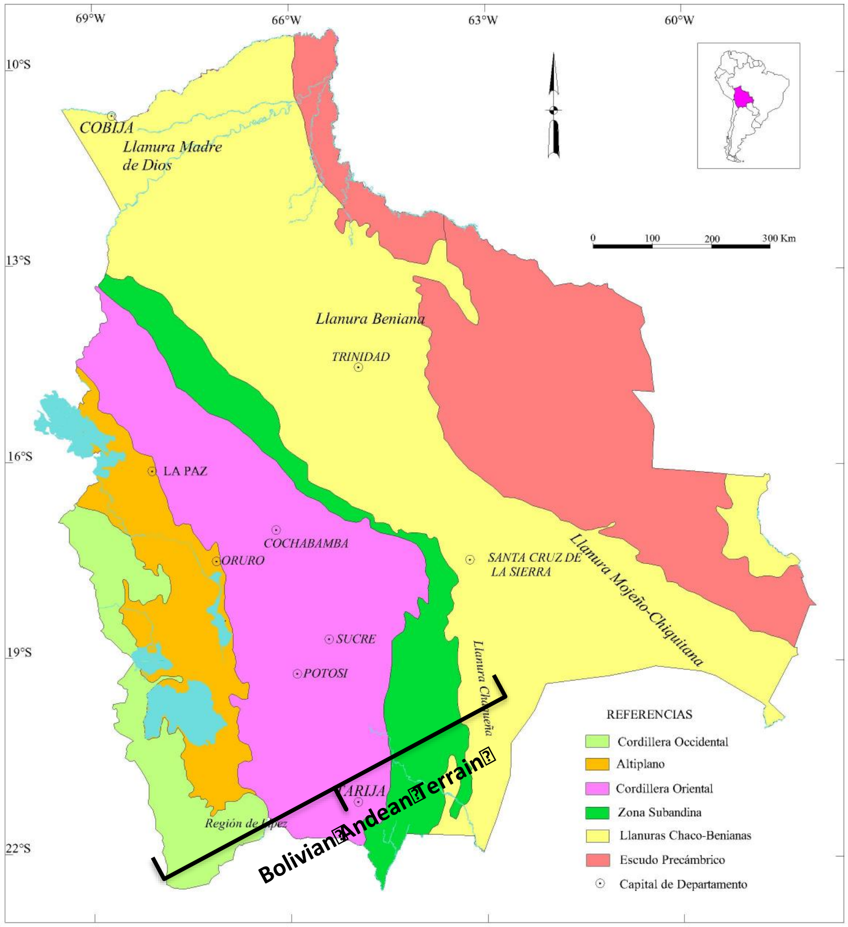
# 7 GEOLOGICAL SETTING AND MINERALIZATION

## 7.1 Regional Geology

Bolivia consists of six, distinct physiographic provinces. From west to east, they are termed the Cordillera Occidental (Western Cordillera), Altiplano (High Plain), Cordillera Oriental (Eastern Cordillera), Subandean, Chaco-Beni Plain and Precambrian provinces (Arce, 2007a). Two, prominent northwest trending mountain ranges, the Cordillera Occidental and Cordillera Oriental, separated by the Altiplano (Figure 7.1) trend northwesterly across the country. Together, with the Subandean province, they form the Bolivian Andean Terrain (Figure 7.2), cover over 40% of the surface area of Bolivia and are the source of most historic and current mineral production (Arce, 2007a).

The Cordillera Oriental province, in which the Property is located, is underlain by a thick sequence of intensely folded, lower Paleozoic-aged, marine clastic sedimentary rocks overlain by Cretaceous to lower Tertiary, continental sedimentary rocks, un-deformed late Tertiary, unconsolidated, continental sediments and upper Oligocene to Pliocene intrusive and volcanic rocks. The Paleozoic rocks were deformed by late-Paleozoic-aged compression to form a northwest trending belt of tight folds and thrusts. The Mesozoic rocks were also folded like the underlying Paleozoic rocks, though into more gentle, open folds with shallow plunges, during a subsequent event in the late Mesozoic Andean event compression (Arce and Goldfarb, 2009b).

**Figure 7.1: General Geology of Bolivia**
(modified from Arce and Goldfarb, 2009b)




The Bolivian Andean Terrain hosts the major share of the metalliferous deposits of Bolivia, including the Manquiri's mineral interests.

## 7.2 District and Property Geology

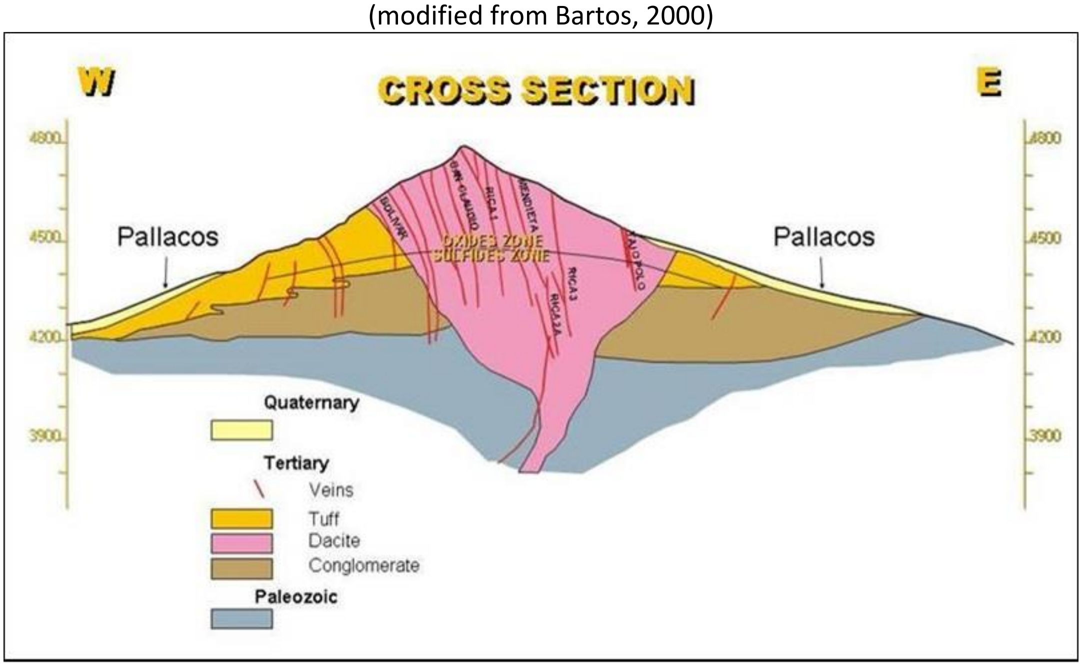
### *7.2.1 San Bartolome*

Cerro Rico is one of the world's largest silver deposits and has been mined since the late 1500's for precious and base metals (sixteenth century for silver, and for tin and zinc during the twentieth century (Tyler and Mondragon, 2015). The deposit is high-sulfidation epithermal in character with base and precious metal mineralization in disseminations, stockworks, breccias and veins form transecting a dacitic dome and its underlying tuff ring and explosion breccia (Cunningham, 1996). Vuggy silica textures, derived from acid leaching of the host rock feldspar minerals, is evident in the larger fragments of the gravel and in exposures in the upper elevations of Cerro Rico. Erosion of the vein system, shown schematically in Figure 7.2 (Bartos, 2000), deposited mineralized material as a thin mantle or covering around the mountain. Bartos (2000) further describes the Cerro Rico mineral system as follows:

> *"The district can be generalized as a shallow-level, single-phase, funnel-shaped, dacite porphyry stock intruding a >400-m-thick section of Miocene air-fall tuffs, volcanic breccias, and water lain sediments called the Cerro Rico Series. Cunningham et al. (1996) interpreted the basal portion of the Cerro Rico Series (Pailaviri Formation) as a phreatomagmatic explosion breccia; this is overlain by the Caracoles Formation, which they interpreted as a tuff ring with associated ephemeral lake deposits. The dacite porphyry stock, dated at 13.8 Ma by Cunningham et al. (1996), appears to have been intruded in the crater wall separating the two members of the Caracoles Formation."*

The hydrothermal mineral system at Cerro Rico is zoned with a core of cassiterite ($SnO_2$), wolframite (Fe,$MnWO_4$), bismuthinite ($Bi_2S_3$), and arsenopyrite (FeAsS) mantled by a zone of sphalerite (Zn,FeS), galena (PbS), and lead and silver sulfosalt minerals. Both the central dacite dome and the overprinted ore mineral system believed to have been derived from a larger magmatic hydrothermal source at depth (Tyler and Mondragon, 2014). The dome was repeatedly fractured by a north-northwest-trending fault system. Mineralization and alteration occurred within about 0.3 MYA of dome emplacement at 14 my (Cunningham et al., 1991). As a result of this mineral assemblage, the pallacos at San Bartolomé contain tin in addition to silver; preferentially in the fine size fractions.

**Figure 7.2: Cerro Rico Geologic Cross Section**
(modified from Bartos, 2000)




The pallacos are located in 3 areas with X, Y (plan) and Z (vertical) dimensions of: Huacajchi 1.2 km x 1.6 km x 0.02 km, Santa Rita 1.3 km x 1.3 km x 0.02 km and Antuco 2 km x 0.6 km x 0.02 km.

### 7.2.2 *El Asiento.*

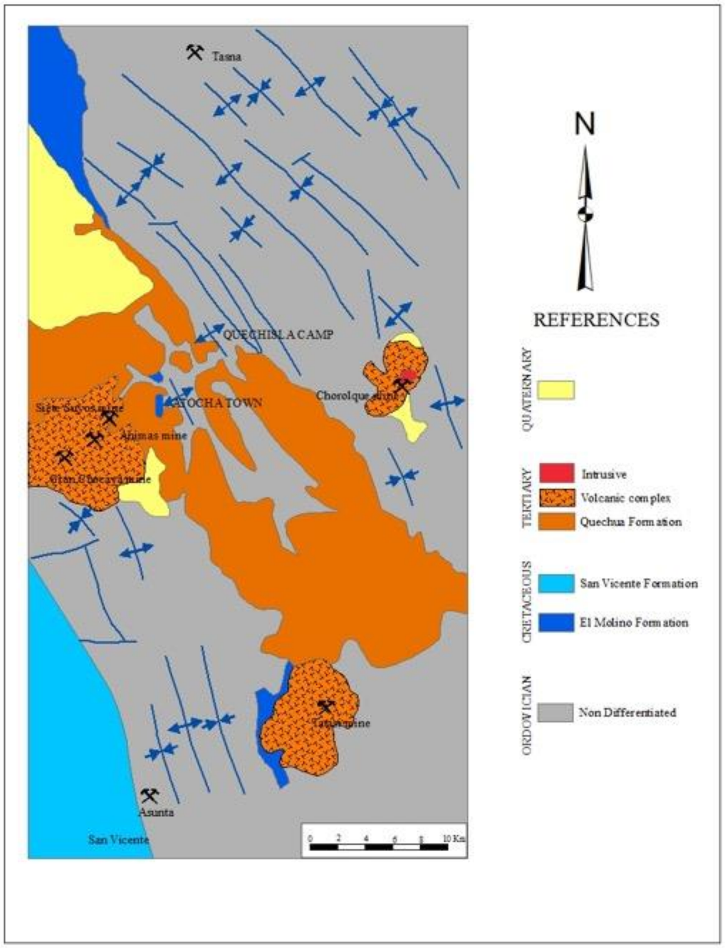
The source deposits for the El Asiento dumps are epithermal polymetallic deposits hosted in Silurian sandstone and shale, elongated and folded in a NNW-SSE to NNE-SSW direction, and faulted in multiple directions with different stress types, as well as dacitic tuffs to the SW, along with apical dike intrusions related to Miocene subvolcanic stocks of sericitized and tourmalinized dacitic porphyries (Figure 7.3). These intrusions contain veins and occasionally polymetallic stockworks (Zn-Pb; Ag-Sb; Au/Sn) structurally controlled by N-S longitudinal faulting related to Cenozoic-aged, regional tectonics together with an intermediate to felsic intrusive phase. In the upper part they present colloidal cassiterite and iron oxides (hematite, jarosite, goethite), as well as gangue minerals barite, quartz and alunite. Rosario-type veins and veinlets are observed in the tunnels, with tetrahedrite and galena mineralization along with quartz and pyrite as gangue. Prior, historic operations generated dumps with exploitable mineral contents of dacitic rock with mild argillic (60%), advanced argillic (25%) and sericitic (15%) alteration. Filler veinlets containing Fe oxides can be discerned, varying from 0.1 to 0.5 cm. In addition, the central area contains disseminated pyrite (1-2%), and other sulfides in a smaller proportion. The dumps are enclosed in an area measuring approximately 100 hectares in size.

### 7.2.3 *Tatasi-Portugalete*

The source deposits for the Tatasi dumps are epithermal, polymetallic deposits (Ag-Pb-Zn) related to a Middle Miocene-aged volcanic caldera (15.2 + 0.25 ma) characterized by a volcanic complex of domes and dikes of dacitic to andesitic composition intruding a sedimentary sequence of Ordovician shales and quartz sandstones and Cretaceous limestone, marl, and sandstones, along with pyroclastic and lava flows (Figure 7.4). This complex has developed a system of radial, shear and tensional fractures, as well as hydrothermal alterations with silicification, criticization, argillization and propylitization halos containing veins, veinlets, stockworks and dissemination zones.

Rosario-type veins fill shear and tension fractures and relate locally to stockworks and bonanza zones. Veins are irregularly distributed both longitudinally and transversely within the igneous complex, containing galena, argentiferous sphalerite, sphalerite, silver sulfosalts, cassiterite, jamesonite, stannite, pyrite, marcasite, chalcopyrite and small amounts of pyrargyrite, argentite and native silver. Siderite, quartz and alunite are gangue minerals. The deposit presents a vertical zonation, with silver-rich upper levels gradating to zinc-rich deeper levels.

**Figure 7.3: Tatasi-Portugalete Area Geology**
(from Arce, 2007a).




Prior operator operations generated dumps with exploitable mineral contents in dacitic rock with sericitic (70%), silicic (20%) and argillic (10%) alterations. Veins contain galena, sphalerite, acanthite and pyrite mineralization. In the Portugalete area, dumps are made up of highly oxidized dacitic rock fragments (clay matrix scattered with pyrite nodules) with argillic (75%), sericitic (20%) and siliceous (5%) alteration. Mineralization occurs in veinlets and disseminated, containing Fe oxides, limonite, hematite, goethite and jarosite, in addition to sulfides such as galena, pyrite, sphalerite and acanthite(?). The dumps are enclosed in an area of approximately 320 hectares.

### *7.2.4 Cachi Laguna*

Cachi Laguna is high sulfidation, epithermal precious metal deposit hosted in a 40 $km^2$-sized volcanic dome located on top of a prominent stratovolcano within the extensive Pastos Grandes volcanic caldera of Pliocene age (5-7 ma). The volcano is an assemblage of lava flows and breccias of dacitic and andesitic composition with the Cachi Laguna porphyry dome towards the west (Figure 7.5). The following geological framework are based on Sillitoe (1996) and RALP internal reports (Peñafiel and Montecinos, 2017).

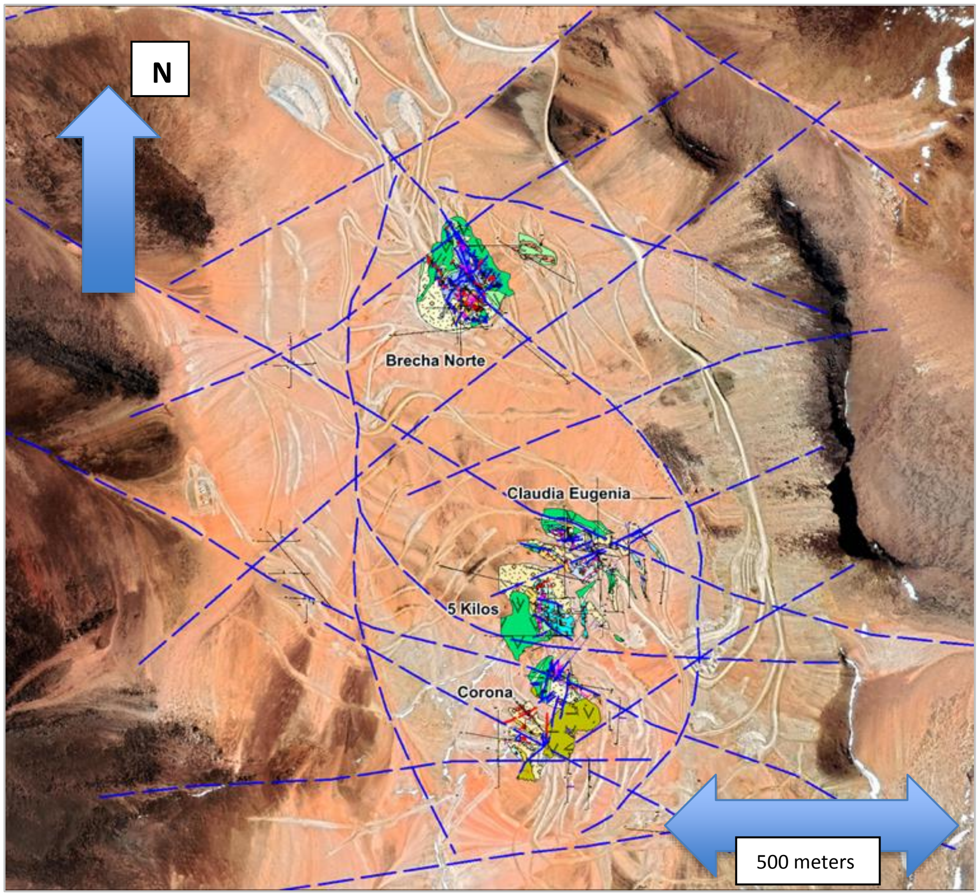
**Figure 7.4: Cachi Laguna Project Location within the Pastos Grandes Caldera**


Mineralization in the main Cachi Laguna area is related to the quartz latite porphyry dome - a massive flow-foliated homogeneous rock as seen in drill core - while its southern zone is characterized by lava and pyroclastic flows (Figure 7.6). An irregular breccia-like ring has been mapped surrounding the dome and separating it from the flows sequence. The breccia contains mainly flow-foliated porphyry clasts in a dark rock matrix. A series of dikes cut the breccia and the adjacent porphyry.

Breccias and porphyry appear to be gradational in some areas. Breccia formation clearly predates alteration and mineralization and is interpreted to be phreatic in origin from ingress of water into the steam flow sequence during dome development. Similar breccias are common in peripheral areas and within the dome.

Faults and lineaments, trending mainly NW-SE and NE-SW throughout the dome, were important for deposit emplacement, such as the structurally controlled Brecha Norte, as well as at Claudia Eugenia, 5 Kilos and Corona (Figure 7.7).

**Figure 7.5: Cachi Laguna Structural Map with Deposit Locations**




### *7.2.4.1 Brecha Norte Geology*

The Brecha Norte deposit is located in the northern part of the district at a structural intersection and the contact between the stratovolcano and the dome. Structural controls are mainly provided by NE-SW faults, while a NW-SE set is believed to be related to movement along the dome-stratovolcano contact. Breccias, of possible phreatic origin and hosting the main mineralization, are related to these faults and their intersection (Figure 7.9) and provide a certain lithological control, for both oxide and sulfide zones. These are clast-supported breccias comprised of monomictic clasts of quartz latite porphyry or, occasionally, dacitic-andesitic lavas, cemented by a matrix of rock powder, locally replaced by alunite, jarosite, dark silica and occasional sulfides, mainly in the NE-fractured areas.

Argillic alterations dominate the deposit thanks to these faults, evidenced by the occurrence of silicification and quartz-alunite in the mineralized breccias, and grading to propylitic towards the periphery (Figure 7.8).

**Figure 7.6: Brecha Norte Geology**

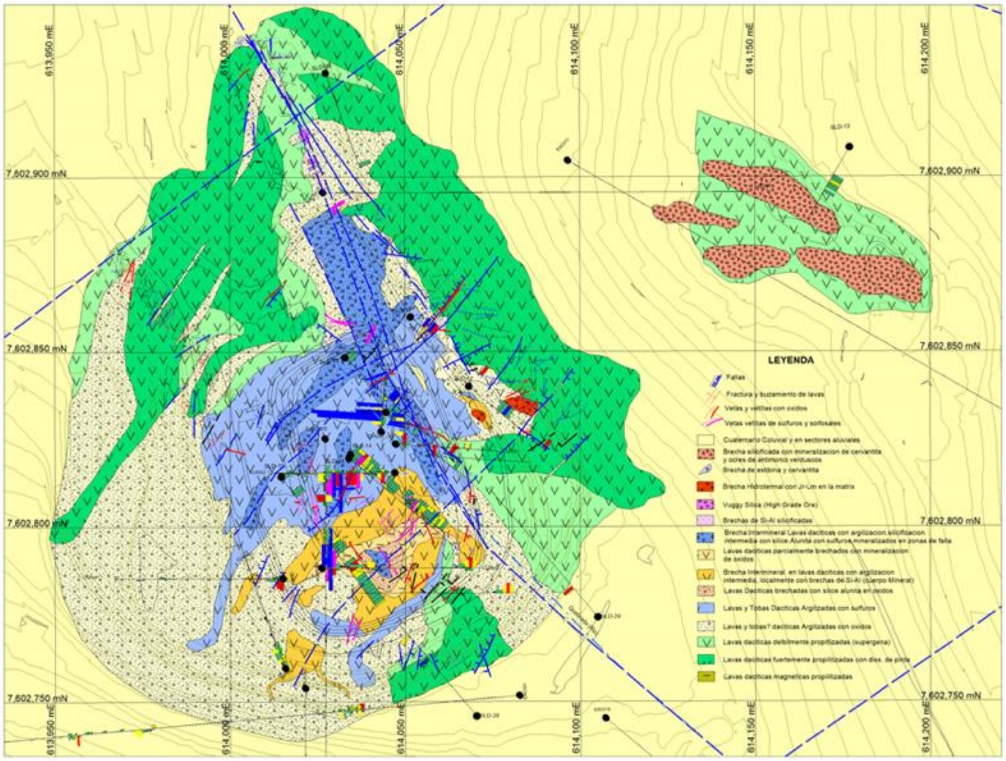



**Figure 7.7: Looking East at the Brecha Norte Pit**


## *7.2.4.2 Claudia-Eugenia Pit Geology*

The Claudia-Eugenia deposit was emplaced in a vuggy silica alteration zone within dacitic lavas, with additional presence of breccias towards the sides and jarosite-limonite veinlets sectors. This deposit has developed sigmoidal zones of vuggy silica (Figure 7.11) at the intersection of NW-SE and main NNW-SSE faults, flanked by the dacitic lavas with siliceous, argillic and propylitic alterations (Figure 7.10). Mineralization is then structurally and lithologically controlled.

**Figure 7.8: Claudia Eugenia (N) and 5 Kilos (SW) Geology**

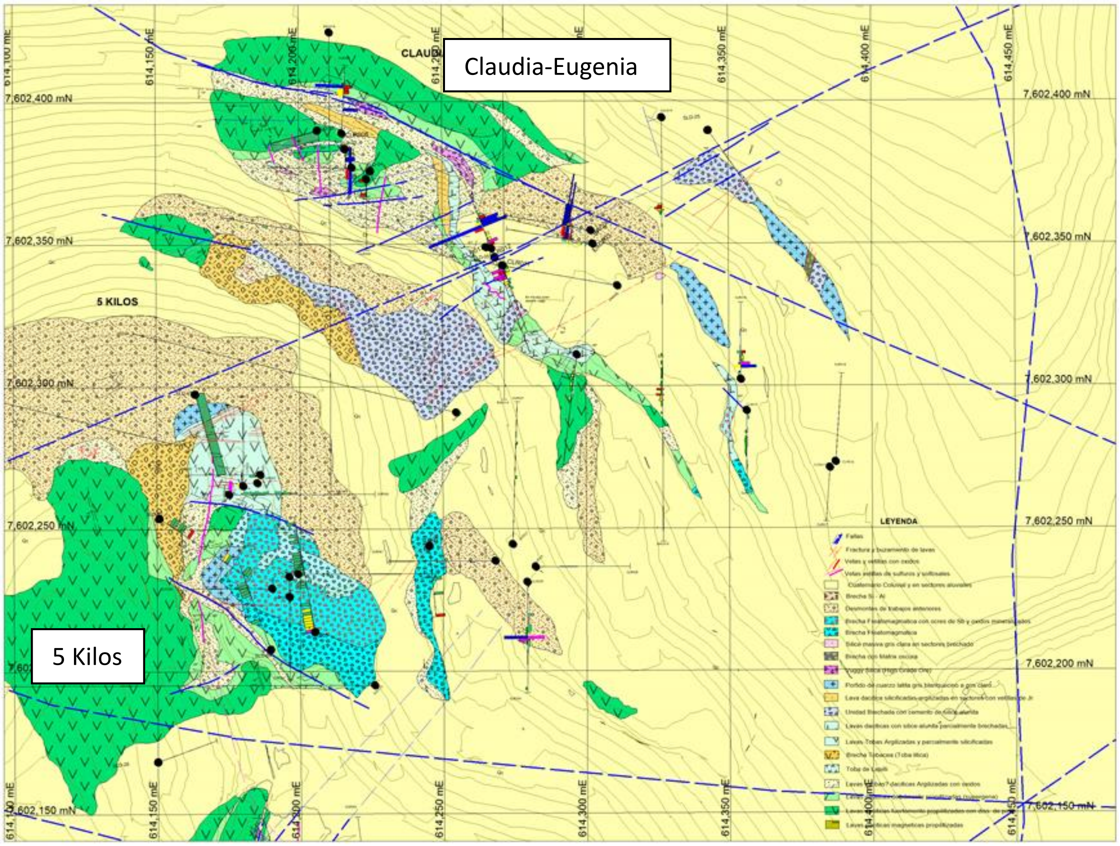
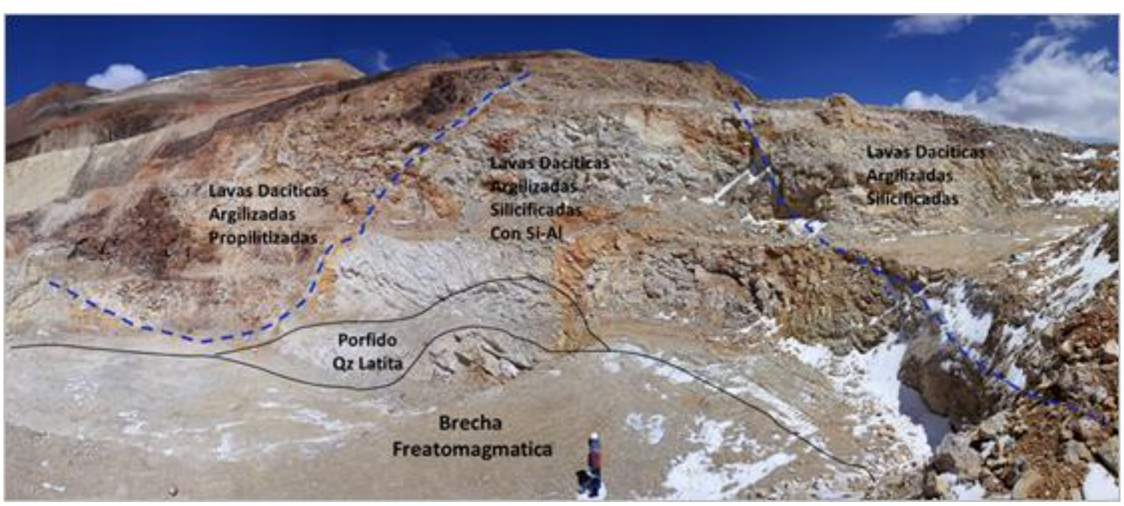


**Figure 7.9: View to the Southeast of the Claudia Eugenia Pit showing vuggy silica with variable thicknesses in sigmoidal loops**


### *7.2.4.3 5 Kilos Pit Geology*

The 5 Kilos deposit is emplaced in a phreatomagmatic breccia within argillized tuffs and/or lavas, overlaid by dacitic lavas with siliceous, argillic and propylitic alterations. The quartz latite porphyry dome was cut by the breccia in the central part (Figure 7.12), with related silicification and argillization grading to quartz-alunite alteration towards the upper part. Mineralization is lithologically controlled.

**Figure 7.10: View of the 5 Kilos Pit to the West**



### *7.2.4.4 Corona Alto and Corona Bajo*

Corona mineralization was emplaced below dacitic-andesitic lavas, volcano-sedimentary rocks, and propylitic magnetic lavas at the top (figures 7.12 and 7.13). Alteration grades towards the center (Corona Bajo) from propylitic, argillic phases, silicification, vuggy silica to massive silica alterations (Figure 7.14); the latter two of which host most of the precious metal mineralization.

**Figure 7.11: Corona Alto (S) and Corona Bajo (N) Geology**

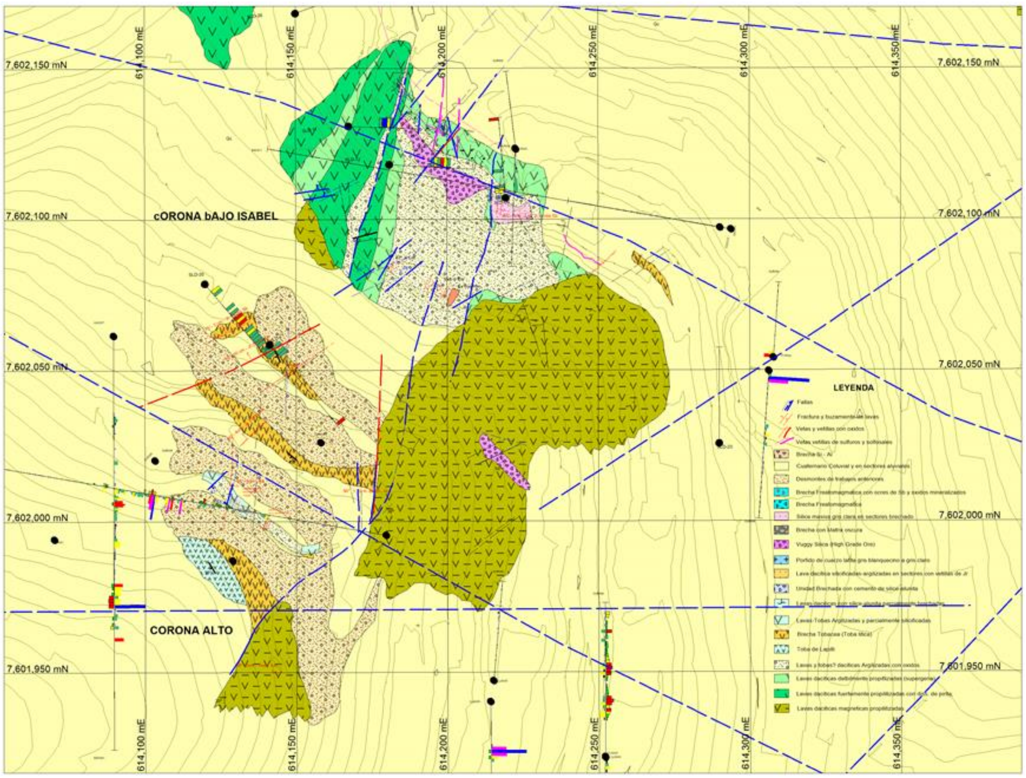



**Figure 7.12: View of the Corona Bajo and Corona Alto areas to the SW**

# 8 DEPOSIT TYPES

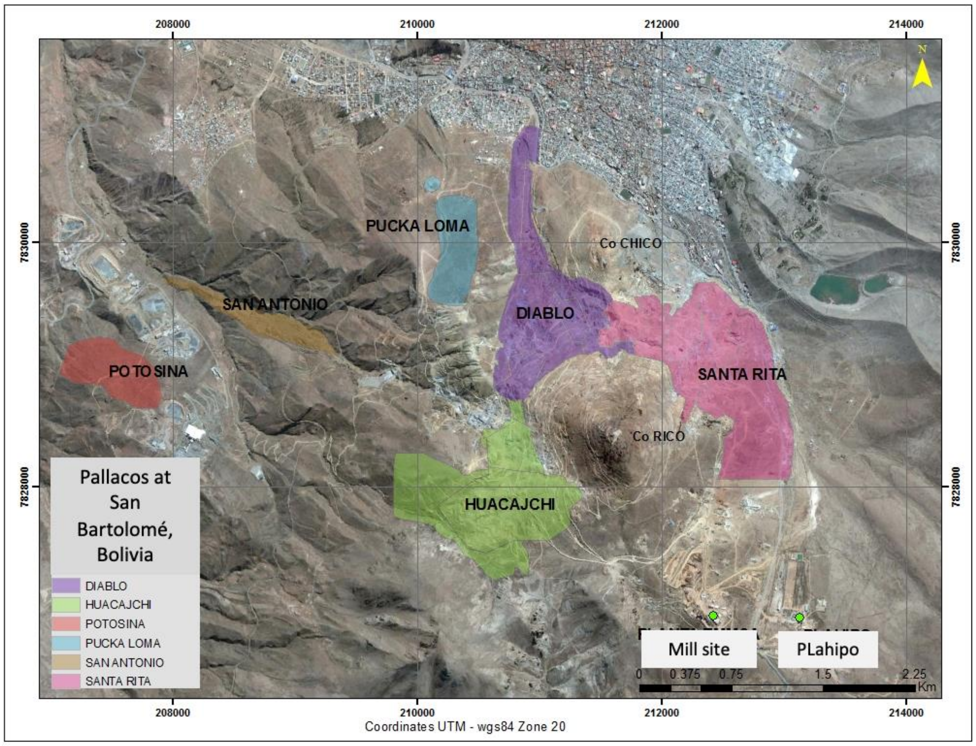
Bolivia is a major source of silver production, ranking 6th in the world in 2018 with 39.9 million troy ounces of production (The Silver Institute, 2018) including production the San Bartolomé mine at Potosí. Cunningham et al (1996) reported that the silver deposits at Cerro Rico were the largest in the world. Mineralization was produced numerous underground mines exploiting high sulfidation, epithermal veins and disseminations. Along with silver, Cerro Rico produced tin and zinc and lesser amounts of copper and lead. Initial mining commenced in the mid 16th century and continues both underground and on surface to this day. Epithermal mineral deposits are a specific type of hydrothermal ("hot water") deposit commonly formed within volcanic settings (John et. al., 2010). The term high sulfidation refers to a subset of epithermal mineral deposits (Corbett, 2002).

The San Bartolomé pallaco deposits are Quaternary-aged placer-like deposits consisting of an unsorted mixture of cobbles and boulders in a sandy clay matrix, originated from the erosion of the primary Cerro Rico outcrops and accumulated down slope by colluvial and alluvial processes, filling depressions, gullies and low-gradient areas. In this sense, the rock fragments are like the nuggets in a placer deposit, hence the analogy.

Manquiri's mining rights at El Asiento and Tatasi-Portugalete are the man-made dumps (also referred to as "desmontes") of oxidized material, situated adjacent to underground mine portals. The materials stockpiled by past operators was lower grade than the primary, sulfidic ores mined by those same past operators. The combination of lower grade and oxidized nature made those materials unfeasible to process. The cyanidation mill circuit at San Bartolomé is relatively unique on the region and better-suited for such materials (similar to the pallacos at San Bartolomé).

The Cachi Laguna deposit is a classic, Tertiary-aged, high sulfidation, epithermal system (veins, disseminations, silica stockworks, mineralized hydrothermal breccias), related to subvolcanic events in a caldera and dome environment (Sillitoe, 1996).

**Figure 8.1: Pallacos at San Bartolomé**
(flanking Cerro Rico)




## 8.1 Basis for Exploration

Exploration at San Bartolomé is conducted infrequently to define material for planned production. There has been no significant exploration for new pallacos at San Bartolomé since at least 2011 during the trenching at Puka Loma (mined out) located to the west of Antuco. When conducted, the methods employed are similar to those disclosed in sections 6 and 9.

Similarly, Manquiri has not conducted its own exploration at the other properties, except to verify tonnes, grades and metallurgical character of the material for which it has mining rights.

# 9 EXPLORATION

## 9.1 Manquiri's Exploration at San Bartolomé

Coeur Mining, Inc. conducted exploration work during its tenure at San Bartolomé as reported by Tyler and Mondragon (2015) and described in Section 4. Since acquisition, Ag-Mining, via Manquiri, has conducted similar exploration practices as reported in this Section 9, though mainly to define known pallaco-type deposits.

## 9.2 Exploration at Tatasi-Portugalete, El Asiento

Due to the nature of these deposits and the fact that they have already been sampled and estimated in the best possible way according to their composition and geometry, as described in section 7; there is no further exploration to do in these deposits.

## 9.3 Cachi Laguna

Manquiri's rights to the property are described in Section 4. Under its contract with RALP, the owner, Manquiri advises RALP with respect to exploration and sampling programs on the project.

## 9.3 Qualified Persons' Comments

Under its existing agreements with COMIBOL, Manquiri is permitted to explore, define and mine for new pallacos at San Bartolomé but has not conducted any of its own exploration since the Effective Date of this technical report. A similar situation exists at Tatasi-Portugalete and El Asiento. At Cachi Laguna, Manquiri advises RALP, the project owner, on exploration and mining activities.

The qualified persons believe the historical exploration data at San Bartolomé has been shown, by mining and milling results, to be reliable for mineral resource estimate. Similar methods have been employed by Manquiri since acquisition by Ag-Mining and the qualified persons recommend that such methods continue in any new exploration work at San Bartolomé, particularly on any further evaluation of inferred mineral resources (Section 14).

# 10 DRILLING

## 10.1 San Bartolomé Drilling and Related Samples

This information is partially extracted from the NI 43-101 technical reports by Coeur (Tyler and Mondragon, 2015 and Birak and Blair, 2012), when almost the total of the drilling work was done: *“Several techniques have been employed to ensure accurate sampling and to adequately define the grade and tonnage of mill feed. These not only include actual drilling, but also alternative methods which allow collection of larger samples which maintain the relative proportions of fine and coarse fractions in the collected sample”.*

San Bartolomé is, by far, the most important source of silver production for Manquiri; historically and as estimated herein. Because of the heterogenous mature of the gravel-hosted silver mineralization at San Bartolomé, drilling makes up less than 14% of all sampling methods (Table 10.1) used in the estimation of mineral resources. Early in the mine’s history, it was determined that industry-typical drilling methods would not provide reliable samples to be used in mineral resource estimation. In comparison to other types of in-situ precious metal deposits, geology plays an indirect role in the formation of the pallacos deposits at San Bartolomé. Characteristics such as distance from the source of the gravels, pre-pallaco topography and primary characteristics of the source hypogene deposits – the in situ high sulfidation veins, stockworks and bodies – are the characteristics that ultimately determine whether the pallacos contain silver in minable amounts.

Due to the heterogeneous nature of the mineralization at San Bartolomé, the drill samples made by the prior owners were not effective on pallacos due to the skewed grade distribution to the coarse size components of the pallacos.

The extensive amount of sampling conducted by the prior owner was incorporated into the new mineral resource model disclosed in Section 14. new sampling, for grade control and short term mine planning has been conducted by Manquiri since acquisition by Ag-Mining.

**Table 10.1: Number of Samples Included in the Database**

| | Sector | | |
|---|---|---|---|
| | Huacajchi | Santa Rita | Diablo (Antuco) |
| ALL TYPES | 7,993 | 11,941 | 9,794 |

*Hand-Dug Holes (Pozo Channel and 1 $m^3$ Pozos)*

One by one meter sized vertical shafts were dug to a maximum depth of 25 m. Each one-meter interval was either collected as a one cubic meter sample (approx. 2.0 tonnes) or a 30 cm x 30 cm x 1 m channel sample (approx. 200 kg) which was taken from one wall of the hole. In addition to silver grade data, each 1 $m^3$ sample also yielded a measured bulk density of the pallacos. Several hundred individual bulk-density determinations from these samples support the geologic and density model cited herein. Most of the original Asarco drill holes were twinned using this method.

*Excavator Holes (Pozos)*

Sampling in areas with adequate road access has been accomplished by using a backhoe or hydraulic excavator to dig pits to expose a vertical face from which a standard 30 cm x 30 cm x 1 m channel sample can be manually collected. The depth of pallacos, which can be safely sampled by this method, was generally limited to <10 m on level ground. However, depths exceeding 20 m have been sampled in areas with favorable topography and/or the presence of historic tin-mining pit high walls. This was accomplished by digging the pit to the top of the interval to be sampled and using the excavator bucket to remove a cubic meter of material below that level.

*Channel Samples (Surface Channel)*

Hydraulic mining activities, particularly in the Santa Rita and Diablo areas, have left numerous near-vertical to vertical cliff faces in pallacos. Standard 30 cm x 30 cm x 1 m channel samples were collected from many of these exposures. The face is first cleaned by removing loose material and then a channel is cut starting at the base of the cliff. Channels were hand-cut using a pick. When a large cobble/boulder was encountered, it was marked to indicate the portion within the channel volume, removed and the appropriate portion was chipped off and added to the sample. Surface-channel samples were processed using the same methodology as channel samples. Each excavation was located on the topographic map and a detailed lithologic log was generated as samples are collected.

All of the sampling methods are considered and utilized as drill holes. The five methods yielded only three sample types: 1) rotary drill samples of variable size depending on recovery (ranging from < 1 kg to over 100 kg); 2) standard volume channel samples yielding 100% recovery (approx. 200 kg); and, 3) standard volume one cubic meter samples also yielding 100% recovery (approx. 2 ton). They were all collected over the same 1 m sample interval.

It was determined that one cubic meter, hand-dug pozos yield the most representative samples and have the advantage of producing a larger sample unaltered by the mechanical action of drilling. Such samples yield both density and particle-size distribution data. Neither of these parameters can be collected from drill samples. However, the pozos are typically slow to excavate. On average, a two-man crew can advance a hand-dug hole only one meter per day. Their penetration depth is also limited to 20 to 25 m depending on ground conditions and safety concerns. As a result, many of these pozos did not reach bedrock and, therefore did not sample the entire thickness of pallacos. Sample size was an added disadvantage because reducing such a large sample to extract an assay-sized split is an onerous task. Adopting the channel-sampling method resolved the large sample size problem, but the limited depth of penetration remained.

The geologic character of the pallaco-hosted mineralization and the ruggedness of the terrain present some challenges for obtaining representative samples for assay. Sampling procedures have been carefully designed to assure collection of good quality samples which are representative of the larger volume of mineralization. All the sampling methods used on the San Bartolomé Project, with the exception of drilling, yield nearly 100% recovery from the volume sampled. Drill-hole samples are potentially less representative due to lower overall recovery. The ASARCO samples have been included in the database only when other, more reliable samples are not available. Twinning of Barber drill holes with hand-dug pozos indicates that this method yields representative samples comparable to the larger samples.

The qualified persons believe that the methods used to define the mineralized deposits produced representative samples, adequately defined the deposits limits (surface extent and thickness) and allow collection of the necessary data to quantify and model the deposits.

## 10.2 Cachi Laguna

### *10.2.1 Cachi Laguna Diamond Drilling*

EMICRUZ drilled a total of 82 holes, of which 61 were from RC (reverse circulation) and 21 from DDH (diamond drill holes) in years 1995-96. The average depth penetration of the RC drill holes was short (between 85 to 90 m) while the DDH were deeper at an average of 220 m and some reached 400 meters. No records of the EMICRUZ drill sample program were available for inspection.

In 2018, Manquiri completed 2,500 meters of coring in 29 drill holes with the following procedures:

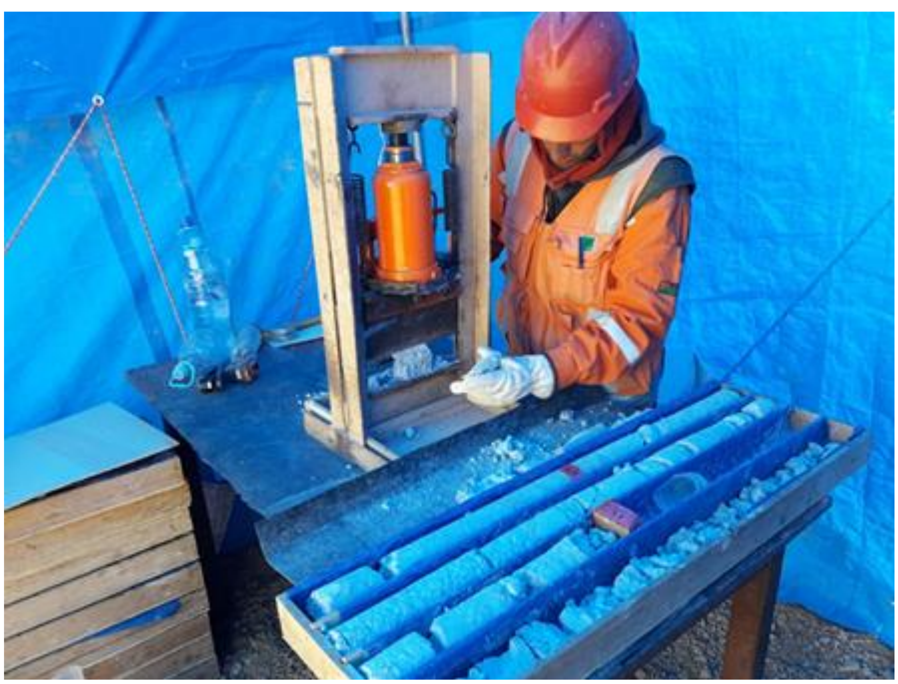
- Before sampling the cores, the geological and geotechnical data is collected from the cores to be sampled and then photos before they are cut and sampled (Figure 10.4).

**Figure 10.1: Core Samples and Log**

- The core obtained was 3 m in length and was taken directly to the wooden boxes in sections of approximately 1 m (Figure 10.4).

- Once the pictures were taken, the boxes were passed to the manual core splitter, (Figure 10.5 shows an example of such a splitter).

**Figure 10.2: Manual Core Cutter**



- Before starting the cut of the cores, the cutter typically cleans the box where the sample falls to avoid any contamination.

- The core is cut in half every 1.5 m. in length, the geologist mark half of the core to be cut according to the representativity of the sample.

- Each 1.5 m section represents a sample; it is packed in a bag that contains a label with the drill number and the corresponding depth section. This bag is sent to the laboratory for its corresponding analysis.

- The other cut portion is accommodated again in the wooden boxes, taking care to place it in the same position that was found before starting the cut of the core. Later this box is stored in an appropriate wardrobe consigned for each hole.

- Then the labeling is noted in the check book, that contains: name of the project, name of the hole, section of the sampled drill, date, analysis to be carried out in this case, Ag-Au, and then staples the sampling bag, the drill number and the section that has been sampled are also placed in the plastic bag.

- The samples are weighed and packed in jute bags for shipment to the laboratory

- Transport is carried out by authorized personnel. Currently they send the samples in vans or pickups, depending on sample size and quantity.

- Sample submission form for reception in the laboratory with all the data described above.

- Rejects are collected from the laboratories and stored in appropriate places for later use. The reception of the rejects is done with a laboratory form indicating the data of the boreholes with their respective characteristics of each drill.

- The transfer to the project warehouses was carried out and kept in custody in safe places where the samples cannot deteriorate.

Reporting of analytical results from the laboratory is in two PDF formats with the signatures of the managers and in excel format; the latter to permit them to be incorporated into the database. The head of the project is the responsible for receiving the results of the analyzes and then send to the geologists for treatment.

The database is made in excel and kept in a database and sent to the person responsible for the project for safekeeping and processing.

In the same way, the database will be on a computer used by the responsible and the responsible geologists to avoid information outflow.

The samples are currently being sent to either the Manquiri mill site laboratory or the ALS (a global, commercial analytical services company) laboratory in Oruro.

### *10.2.2 Cachi Laguna Blastholes*

The blasthole drilling equipment is not designed to adequately sample debris and is basically designed to perform blast drilling, to avoid this a larger collector was manufactured making the sample gather in a larger cone causes a good amount of sample of approximately 40 to 50 Kilos to be collected, making a more representative sample.

The location of the drill mesh marked on the ground by topography. The ground was cleaned in the area of the drill to be drilled to avoid having fill material that could contaminated the drilling.

For the collection of the sample and to avoid contact of the sample with the ground where the well is drilled, a splitter according to the disposition of the drilling machine. Figure 10.6.

**Figure 10.3: Drill Machine and Splitter**

The amount of sample obtained, above the over-drill, in the 5 m deep hole, it is approximately 50 kilos depending on the rock to be drilled.

Once the sample has been collected from the drill, it is passed through a riffle splitter and then quartered (Figure 10.7).

**Figure 10.4: Homogenization and Quartering**

Quartering is performed to reduce the sample size to approximately 20 to 25 kg, depending on the quantity of sample. Two 2 samples are collected; one is bagged to transport to the laboratory and a second sample is retained for future analyses.

Samples for analysis and archive are collected into bags of 40 x 60 cm, weighing approximately 300 grams. If the sample is small, a second quartering of the rejects is performed. Once the sample is bagged, sample logs are prepared.

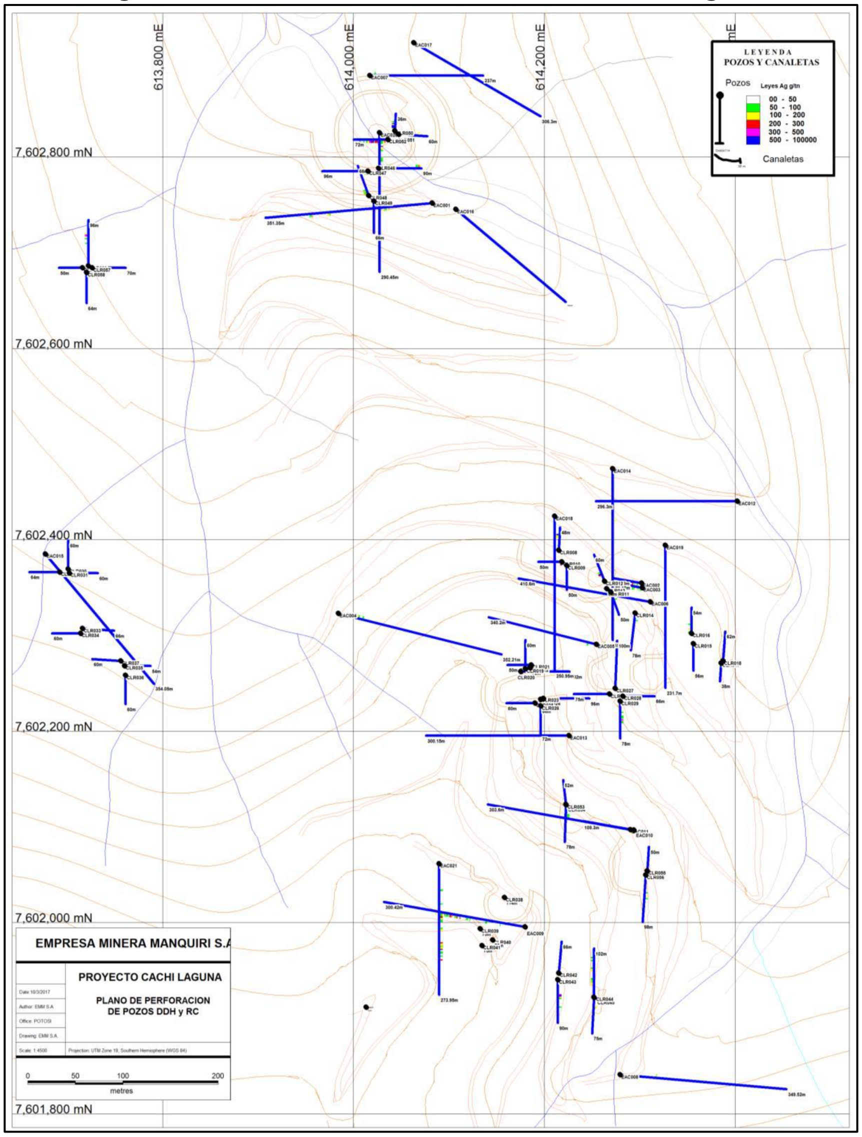
The log has information on; the number of the hole, the area to which it belongs, the elevation of the hole and sampling date. Once the log is completed, a label is placed in the bag and affixed to the outside of the bag. Each bag is labelled with the bag number, the screened size, the number of samples in each bag and the area from which it was obtained. Then the bags are sent to the laboratory.

Sample transportation is carried out by authorized personnel. Each sample shipment has a list of the samples that are being sent, to control the samples sent to the laboratories (Figure 10.8).

**Figure 10.5: Sample Transportation.**

Based on the results obtained, together with prior results, estimates of mineral resources were made in various sectors shown in Figure 10.9. The areas of Brecha Norte, Claudia Eugenia, 5 Kilos and Corona areas were evaluated, the 5 kilos area and Claudia Eugenia were the object of more work, currently by the RALP Company for the exploitation and subsequent sale of the mineral. Manquiri also carried out sampling works in these 2 main sectors, which confirm the mineralization and designs pit for exploitation. Although these 2 sectors are important, the North Breccia sector has greater potential, so the pit design has a greater depth than the other sectors. In addition, there are other sectors which may present opportunities to find and define new mineralization based on the fact that some deeper holes intersected mineralization below the level of the current mineral resources reported in this technical report (Section 14).

**Figure 10.6: Rio Tinto DDH and RC Holes - Cachi Laguna**




### *10.2.3 Historic Sampling Summary*

No data collected prior to 1996, was available (from the activities of EMICRUZ). From 1996, sampling work done on the central Cachi Laguna area suggests that mineralization of precious mineral metals occurs in a series of bodies, usually domes surface restricted with high precious metal grades, especially silver with values in excess of 1000 g/t (Sillitoe, 1996).

EMICRUZ (RTZ and Comsur joint venture company) drilled, in 1996 a total of 82 wells, of which 61 were from RC (reverse circulation) and 21 from DDH (diamond core) fig. 13, the average drilling of the RC drills were short between 85 to 90 m and the DDH drills were deeper at an average of 220 m, some of which reached 400 meters.

Using the EMICRUZ information, RALP carried out its own exploitation programs.  Then in 2018, Manquiri carried a 2,500 meter of 29 DDH drill hole, and more than 67mil meters of blast hole programs.

### 10.3 Qualified Persons' Comments

The sampling methods and samples taken by Manquiri in general meet industry standards for collection, handling, marking, bagging, transport and storage and are suitable for use in mineral resource estimation. The samples collected prior to Manquiri's involvement do not have a documented history of collection and treatment and QA/QC and, therefore, use of these samples was taken with caution though validated, to some measure, by subsequent production.

# 11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

## 11.1 The Prior Owner's Methods

The sample preparation procedures employed followed those normally used in the mineral exploration industry (Tyler and Mondragon, 2015 and Birak and Blair, 2012).

## 11.2 Ag-Mining's Methods

The sample execution and preparation procedures employed Manquiri are similar to those of the prior owner and are summarized as follows:

- Design of the sampling mesh, given by the orientation and length of the sampling lines and by the distance between them and the fixed length of the individual samples. Normally, the fixed length of the samples was 2 m, but this varied depending on the presence of specific geological features; such as the occurrence of veins, areas of veinlets adjacent to the veins or well delimited bodies
- The type of sampling and approximate weight of each of the samples obtained were determined based on the road infrastructure of the area of interest. In sampling areas with access roads, was no problem implementing gutter sampling and obtaining samples of around 8 kg. In sampling areas that do not have access, a sampling in channels can be planned, but the weight of the channel should not exceed 5 kg, which should be achieved through careful quartering.
- Once the type of sampling and the approximate weight of the sample to be obtained have been determined, a cleaning plan must be drawn up for the areas to be sampled. This can be done either with heavy equipment depending on the sector to be cut, whether they are roads or inaccessible sectors to heavy equipment, otherwise cleaning will be done manually with a pick and shovel.
- Before marking the samples, the superficial part of the area to be sampled was cleaned, removing all the part that is possibly percolated from the fresh rock.

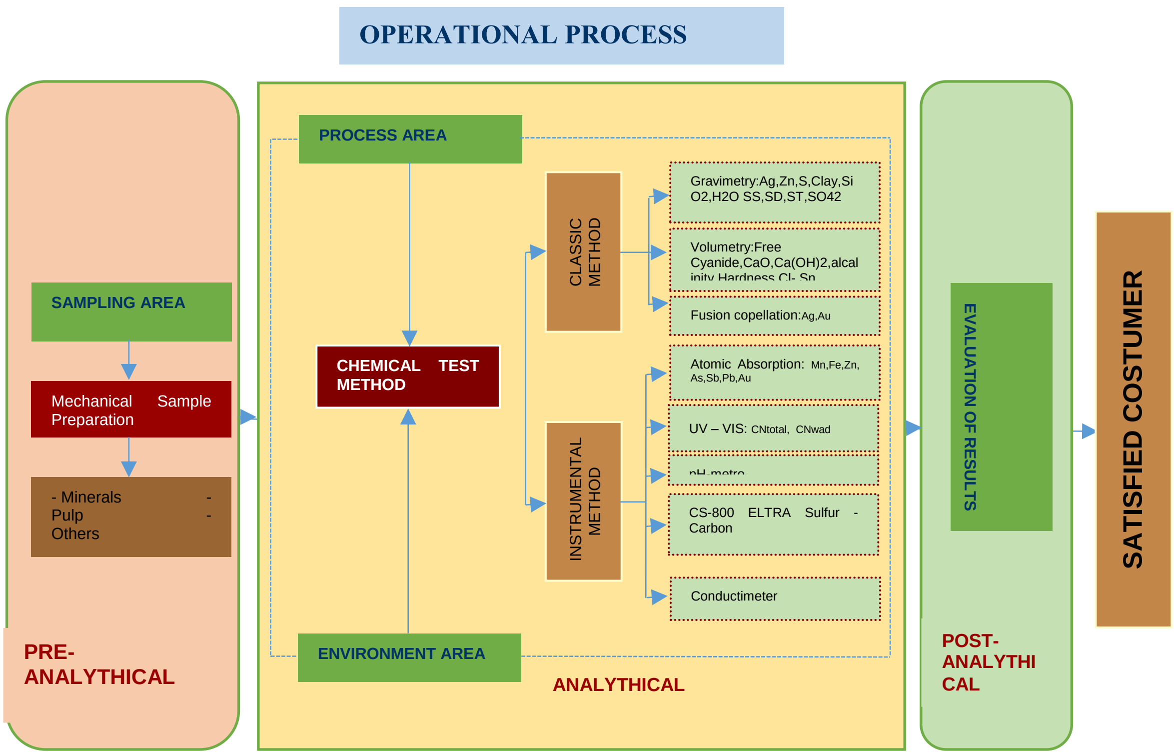
## 11.3 Manquiri Laboratory

The following is the sample flow in the Manquiri-owned laboratory:

- The sample is received in the sampling area.
- Sample preparation is carried out with crushing and respective quartering until 500 gr is obtained. This sample is pulverized at a particle size of 200 µm for adequate acid digestion.

- The sample is entered into the analysis area identifying the requested method (Classic or Instrumental) complying with QA / QC - Laboratory protocols.
- The respective report is generated.

**Figure 11.1: Manquiri Sample Flow**




The following types of analysis are carried out in the Manquiri chemical laboratory (Table 11.1)

## Table 11.1: Tests by Manquiri's Laboratory

| N° | Assay Method | Reference Method | Matrix | Measurement Range | Number of Samples | Results Delivery Time | Sample Quantity and Presentation |
|---|---|---|---|---|---|---|---|
| 1 | Silver in Dore Method - Gravimetric Method (Fire Assay) | LQM-PRO-18N (Based on AS50062-2002 with validated modifications) | Doré | 98,92% - 99,90% | 3/day | 12 hours | Quantity greater than 10 g in pin shape or chips in coded envelope |
| 2 | Gold determination in Dore - Gravimetric Method (Fire Assay) | LQM-PRO-24 (Based on ISO 11426-2014 with validated modifications) | Doré | 10,4% - 44,1% | 3/day | 13 hours | Quantity greater than 10 g in chips in coded envelope |
| 3 | Determination of free cyanide in waters - Method titulación (titration) | Volumetry | Waters | 20mg/L - 5000mg/L | 50/day | 12 hours | 500 ml in closed bottle |
| 4 | Silver determination in ore | Atomic Absorption | Minerals | 1g/t - 800g/t | 40/day | 24 hours | 200 g. pulverized at 140 - 170 mesh |
| 5 | Sulphur determination in ore | Gravitrometry-ELTRA Instrumentation | Minerals | 0,05% - 15% | 60/day | 12 hours | 50 g. pulverized at 140 - 170 mesh |
| 6 | Tin determination in Ore | Volumetry | Minerals | 0,05% - 20% | 30/day | 24 hours | 50 g. pulverized at 140 - 170 mesh |
| 7 | Determination of lime (CaO) using Volumetric Method) | Chemical Analysis ISBN-980-06-2968-8 | Limestones | 5% - 90% | 20/day | 10 hours | 100 g. pulverized at 140 - 170 mesh |
| 8 | Determination of clays/fines in pulp | Sedimentation | Pulps-Minerals | 1% - 50% | 8/day | 12 hours | 300g. pulverized at 140 - 170 mesh |
| 9 | Sample Humidity determination | Gravimetry | Minerals-Precipitate | 1% - 99% | 10/day 40/day | 24 hours | 300g. 5000g |
| 10 | Silver and Gold in Ore determination | Fire Assay | Minerals | 0,1% - 99% 0,0001% - 0,5% | 15/day 15/day | 24 hours | 200g. pulverized at 140 - 170 mesh |
| 11 | Total Silver in Cyanized samples determination | Atomic Absorption Spectroscopy | Cyanized Solutions | 0,01mg/L - 6mg/L | 40/day | 24 hours | 500ml in sealed bottle |
| 12 | Soluble Silver in Ore Determination, cyanide leaching | Atomic Absorption Spectroscopy | Minerals | 0,01mg/L - 6mg/L | 15/day | 24 hours | 200g. pulverized at 140 - 170 mesh |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 13 | Zn, Pb, Fe, Cu Determination Zn, Pb, Fe, Cu, in ore samples | Atomic Absorption Spectroscopy | Minerals | 0,01mg/L - 8mg/L | 40/day | 12 hours | 200 g. pulverized at 140 - 170 mesh |
| 14 | pH Determination, electrometric method | Potenciometría (Potentiometry) | Waters | 1,0 - 14,0 | 40/day | 5 hours | 200ml in sealed bottle |
| 15 | Conductivity | Standard methods | Waters | 50µS/cm - 20mS/cm | 30/day | 5 hours | 1000ml in sealed bottle |
| 16 | Determination of metal weights in water (Cu, Fe, Pb, Zn) | Standard methods | Waters | 0,01mg/L - 5,0mg/L | 30/day | 24 hours | 1000ml in sealed bottle |

Recently the laboratory facilities and equipment were expanded, including the sampling room, crushers and ovens, tray trolleys and FLSMIDTH vibrating pulverizer (2 units), Donaldson dust collector (1 unit) and sample delivery room.

In the instrumental area, there are two atomic absorption spectrophotometer (“AA”) analytical units, which offer a coordinated method of providing services, consumables and software that significantly improve the efficiency and productivity of the laboratory.

Two AA machines, with 8 hollow cathode lamps, were purchased allowing different analyzes to work in parallel (Figure 11.2).

**Figure 11.2: Atkin Absorption Systems, Perkin Elmer PinAAcle and AAnalyst 900**

There are two Morgan Materials furnaces in the melting area. This equipment is manufactured with the purpose of melting the sample achieving Ag - Pb alloys, later evaporating the lead leaving only the silver – gold. These furnaces are connected to the lead collector.

**Figure 11.3: Donaldson Lead Collector**

The laboratory has a micro balance, which can weigh samples with up to 7-digit accuracy. The test capacity is 100 samples of gold in minerals per shift (8 hours).

The Manquiri laboratory has an accreditation in “Silver Determination in Dore Method”, which is accredited by IBMETRO (Bolivian Metrology Institute) for the measurement range of 98.92% - 99.90%. "Gold Determination in Dore - Gravimetric Method", which is accredited by IBMETRO for the measurement range of 10.4 g / t - 44.1 g/t.

The Manquiri laboratory also has accreditation, by IBMETRO in "Determination of Silver in Minerals Method (Atomic Absorption Spectroscopy)" in the ranges of 0.5 g / t - 1000 g / t.

### 11.4 Sample Security

Once Manquiri's operations began under the ownership of Ag-Mining, the sample preparation facility was relocated to Manquiri's Plahipo administrative-office complex. This is a secure, fenced compound guarded at all times by Manquiri security personnel. Sample collection and preparation, today and since 2009, has been done by Manquiri personnel exclusively, following normal industry standard procedures.

### 11.5 Qualified Persons' Comments

During the initial site visit, the qualified persons inspected the Company's pallacos sampling at Bartolomé and found it to be consistent with past practices employed at San Bartolomé and within general industry standards. During second site visit, the Manquiri-owned sample preparation, laboratory and mill facilities were viewed and found to be clean and tidy and the equipment is well-maintained.

In the opinion of the qualified persons, Company's personnel have used care in the collection and management of the field and assaying exploration data. Based on reports and data available, the qualified persons have no reason to doubt the reliability of exploration and production information provided by Manquiri. The reports and analytical results suggest that, apart from minor to moderate concerns noted in Section 11, analytical results delivered by the laboratories used by Manquiri are free of apparent bias and can be used in current and future mineral resource estimation.

# 12 DATA VERIFICATION

## 12.1 Verification by Manquiri

The exploration and production work completed by Manquiri is conducted using documented procedures and involved verification and validation of exploration and production data, prior to consideration for geological modelling and mineral resource estimation. During sampling, experienced geologists implemented industry standard measures designed to ensure the consistency and reliability of the data. QA/QC failures are routinely investigated and appropriate actions are taken when necessary, including requesting re-assaying of certain batches of samples.

## 12.2 Verification by the Qualified Persons

In accordance with National Instrument 43-101, the qualified persons visited the Ag-Mining properties in January and March 2020, accompanied by Manquiri personnel. During the visits, all aspects that could affect materially the integrity of the samples and sampling databases (core logging, sampling, and database management) were reviewed with Ag-Mining staff. The qualified persons were able to interview staff to ascertain exploration procedures and protocols.

The qualified persons toured the San Bartolomé area and observed the Mill, the refinery, samples and field locations status of the demarcations, and examined log from a number of drill holes, finding that the logging information accurately reflects actual models. The lithology and grade contacts checked by the qualified persons match the information reported in the core logs and data base.

Mr. Luis Oviedo, qualified person on behalf of NCL, reviewed the drill hole databases and QA/QC for the preparation of this technical report and concluded that it is adequate to produce the block models, tonnage and grade evaluations to a satisfactory degree.

The qualified persons, employed by NCL, also completed statistical comparisons of the block models' global grade against the informing drilling data and visually compared on plans and sections the block models against the informing samples to confirm that the estimations are generally an adequate representation of the distribution of the silver mineralization.

## 12.3 QA/QC (Quality Assurance/Quality Control)

### *12.3.1 San Bartolomé Pallacos (Antuco, Huacajchi and Santa Rita)*

The analytical quality control programs implemented for San Bartolomé (Cerro Rico) since 2016 involve the use of field (DUP), preparation (A-B) and pulp (A-A) duplicates for precision analyses, standard reference materials (SRM) for accuracy analyses and coarse blanks (BL) for contamination analyses. These are inserted among regular samples submitted for silver assaying and then sent to Manquiri's plant laboratory. No control samples were sent to an external laboratory.

It is important to point out that the resource estimation database contains pre-2016 samples (approximately 35% of the database) for which no QA/QC data program was available. However, Tyler and Mondragon (2015) addressed most of the work done before 2016, including the review and validation of the control program for the majority of historical samples. Table 12.1 lists the QA/QC programs of San Bartolome since 2016.

**Table 12.1: San Bartolomé QA/QC Programs**

| Period | Project | Regular Samples | Control Samples | Total Samples | Control % |
|---|---|---|---|---|---|
| 2016-2019 | Antuco | 10,740 | 3,725 | 14,465 | 25.8% |
| | Huacajchi | 2,443 | 874 | 3,317 | 26.3% |
| | Santa Rita | 9,793 | 3,453 | 13,246 | 26.1% |
| | **Total** | **22,976** | **8,052** | **31,028** | **26.0%** |
| 2019-2020 | Antuco | 1,152 | 200 | 1,352 | 14.8% |
| | Huacajchi | 981 | 202 | 1,183 | 17.1% |
| | Santa Rita | 1,639 | 327 | 1,966 | 16.6% |
| | **Total** | **3,772** | **729** | **4,501** | **16.2%** |

Manquiri's laboratory production QA/QC database reveals that Antuco, Huacajchi and Santa Rita were sampled consistently, in numerous small batches, throughout the 5-year period in study, and in an alternate (and sometimes parallel) way. They were also controlled and analyzed similarly, as control percentages in Table 12.1 demonstrate. For these reasons, and considering that the three projects are adjacent and contain basically the same ore type, going forward their results will be reviewed together as one project with a single long-term sampling campaign.

Additionally, for the following analysis, only run-of-mine (ROM) and "washed" samples (GT8, without the fine portion) and their corresponding control samples will be considered. These are the ones used for resource estimation and comprise the majority of assayed samples. Despite the differences between both sample types, they will be presented as one dataset, given that they show very similar results when tested separately, and also to limit this chapter's extension.

It should also be noted from Table 12.1 that in mid-2019 Manquiri made a decision to lower the insertion rate of QA/QC samples, bringing the overall control percentage from 26% to 16%. The qualified persons believe this was a reasonable change and more in line with an industry standard QA/QC program. As stated, however, the results from both periods will be reviewed together.

*12.3.1.1 Standard Reference Material (SRM) Analysis*

Silver SRMs were provided by Target Rocks (Peru), with samples of 3 types (low, medium and high grade), inserted at an approximate rate of 1 every 20 samples from 2016 to mid-2019 (1 in every 60 samples for each type) and since then adjusted to approximately 1 every 40 samples (1 in every 120 samples for each type). The SRMs were prepared and packaged by Target Rocks, no source rock specified, and analyzed in a round robin program arranged by Smee & Associates Consulting Ltd (Canada), in order to obtain its best value (BV). Table 12.2 summarizes control program information for inserted SRMs.

**Table 12.2: SRM Information Summary for San Bartolomé**

| **Year** | **MQR-01 58.6 g/t Ag** | **MQR-02 120.8 g/t Ag** | **MQR-03 215 g/t Ag** | **SRM %** |
|---|---|---|---|---|
| 2016 | 203 | 211 | 22 | 4.7% |
| 2017 | 150 | 144 | 140 | 4.9% |
| 2018 | 147 | 142 | 152 | 5.0% |
| 2019-1 | 60 | 55 | 51 | 5.1% |
| **Total** | **560** | **552** | **365** | **4.9%** |
| 2019-2 | 20 | 23 | 23 | 2.5% |
| 2020 | 10 | 6 | 7 | 2.4% |
| **Total** | **30** | **29** | **30** | **2.5%** |

The qualified persons' SRM review began with a "mistake analysis", which consists in removing samples with values that exceed a window of ±3 standard deviations (SD) of each assayed SRM dataset. Mistakes should remain below 5% of all samples. Next is a direct comparison of the average (AV) of the filtered dataset against the best value (BV) of the SRM by calculating the bias (AV/BV-1), which should not exceed ±5% (with an extreme tolerance of ±10%). Finally, Shewart control charts are constructed, plotting a time series of the SRM values against acceptability (precision) windows of BV±2*SD / BV±3*SD (round robin SD). Assay values surpassing these windows are considered outliers and should remain below 5% of all samples (with an extreme tolerance of 10%), especially in the case of the outermost windows.

Table 12.3 sums the SRM analysis for San Bartolomé, and Figures 12.1, 12.2 and 12.3 present Shewart charts for each SRM type:

Table 12.3: SRM Analysis for San Bartolomé

| SRM Type | SRM Assays | Mistakes (Acceptable <5%) | | BV g/t Ag | AV g/t Ag | Bias (Acceptable <5%) | Outliers (Acceptable <5%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | BV±2*SD | | BV±3*SD | |
| | | # | % | | | | # | % | # | % |
| MQR-01 | 590 | 8 | 1.4% | 58.60 | 57.98 | -1.1% | 34 | 5.8% | 7 | 1.2% |
| MQR-02 | 392 | 9 | 2.3% | 120.80 | 120.58 | -0.2% | 19 | 5.0% | 3 | 0.8% |
| MQR-03 | 395 | 5 | 1.3% | 215.00 | 218.13 | 1.5% | 7 | 1.8% | 0 | 0.0% |

Figure 12.1: MQR-01 Standard Shewart Chart for San Bartolomé

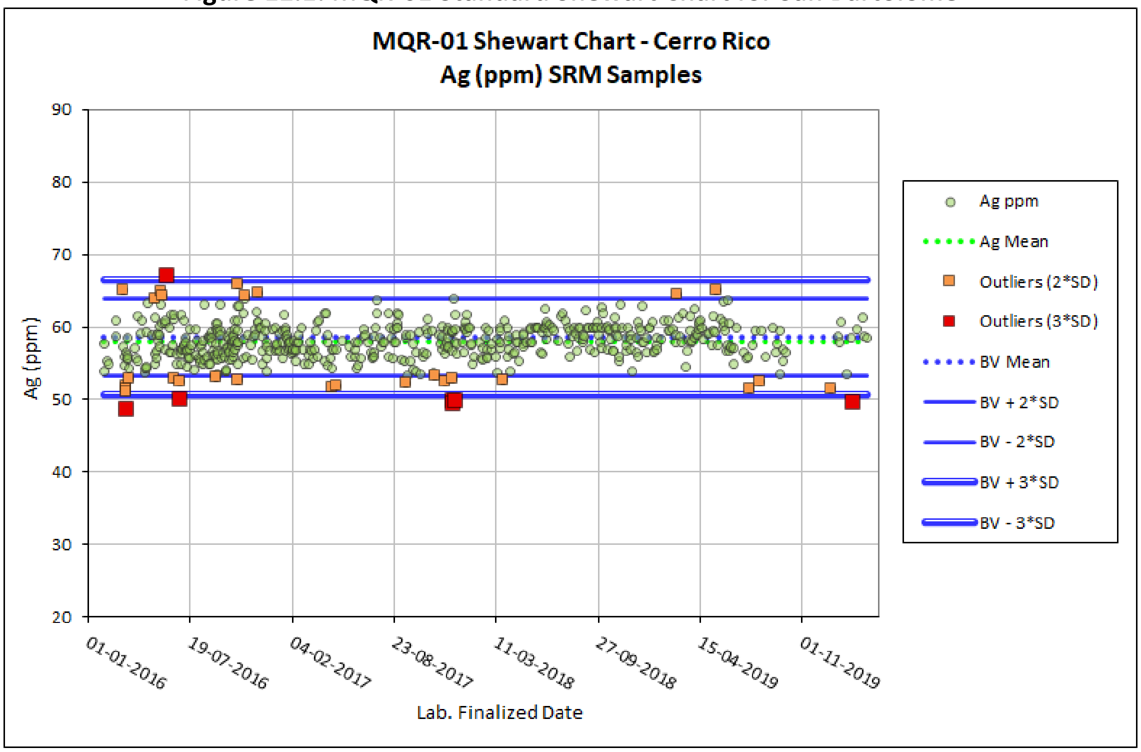


**Figure 12.2: MQR-02 Standard Shewart Chart for San Bartolomé**

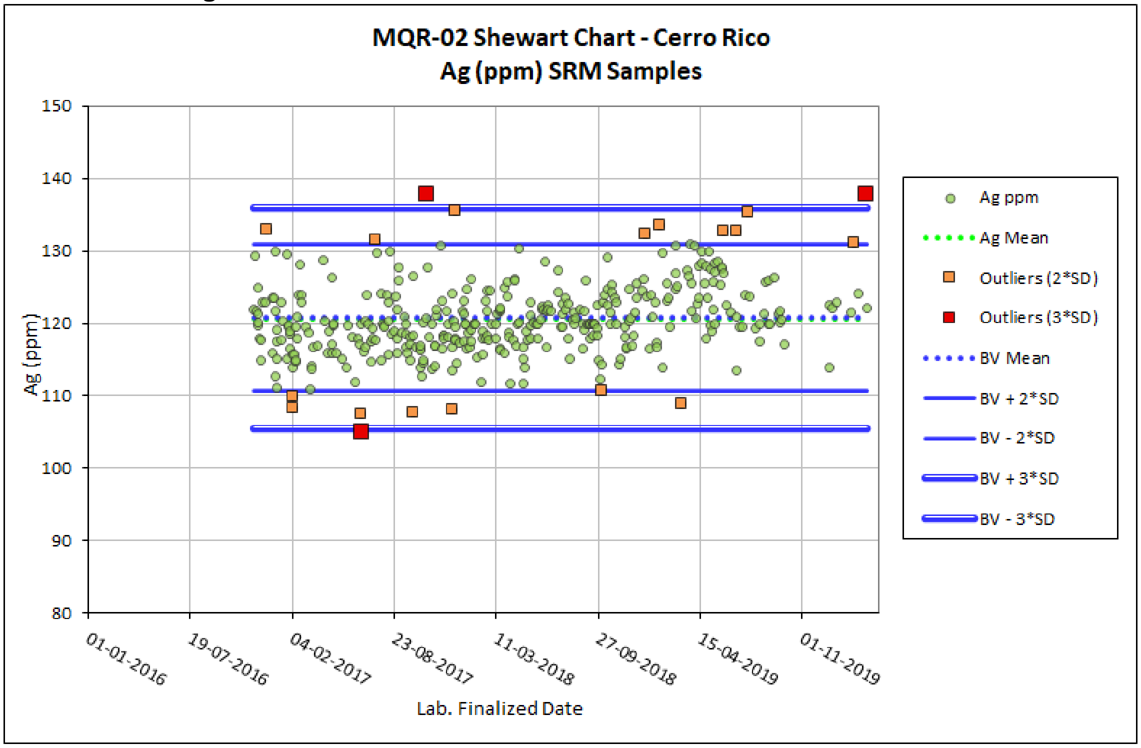
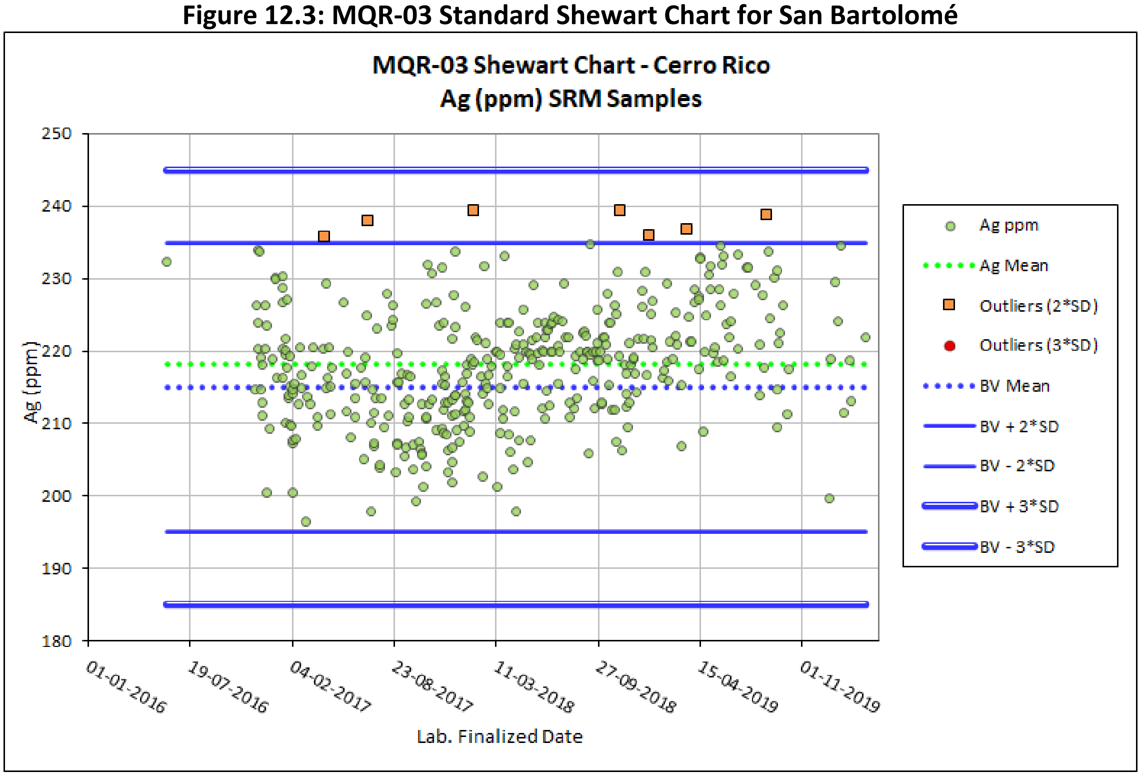



**Figure 12.3: MQR-03 Standard Shewart Chart for San Bartolomé**




All standards generally performed within acceptability limits and show no significant bias. Note that the MQR-02 standard analysis (Table 12.3) contains fewer total samples than the actual inserted samples (Table 12.2), represented in a gap throughout most of 2016 in Figure 10-2. This is because a different medium-grade SRM, averaging 100 g/t Ag, was used during this period for which no certificate is available. However, a basic statistical analysis of those 189 samples shows an acceptable distribution around its mean, with very few mistakes and a standard deviation analogous to the current MQR-02 standard. During that same period almost no high-grade SRMs were inserted, which explains a similar gap in Figure 12.3.

*12.3.1.2 Duplicate Sample Analysis*

Preparation (A-B) and pulp duplicate (A-A) samples were inserted at an approximate rate of 1 every 20 samples from 2016 to mid-2019 and since then adjusted to approximately 1 every 40 samples. On the other hand, field duplicates (DUP) were less frequently and irregularly inserted in each batch. Table 12.4 summarizes control program information for duplicate samples.

**Table 12.4: Duplicate Samples Information Summary for San Bartolomé**

| Year | A-A | A-B | DUP | SRM % |
|---|---|---|---|---|
| 2016 | 396 | 396 | 248 | 10.4% |
| 2017 | 442 | 440 | 200 | 12.2% |
| 2018 | 447 | 447 | 301 | 13.4% |
| 2019-1 | 154 | 154 | 105 | 12.6% |
| **Total** | **1,439** | **1,437** | **854** | **12.0%** |
| 2019-2 | 85 | 85 | 161 | 9.3% |
| 2020 | 22 | 22 | 7 | 5.4% |
| **Total** | **107** | **107** | **168** | **8.5%** |

The qualified persons' duplicate sample review begins with a relative error (RE) analysis, calculating the absolute percentage value of 2*(OA-DA)/(OA+DA), where OA refers to the original assay and DA to the duplicate assay values. Relative errors should generally remain below 30% for DUP pairs, 20% for A-B pairs and below 10% for A-A pairs. Next is the practical detection limit (PDL), obtained by plotting OA values against their corresponding RE and identifying the approximate value where low-grade assays curve upward approaching a vertical limit near the reported detection limit (RDL). This value is the PDL, which is generally slightly higher than the RDL and represents a more realistic detection limit, given the reduced precision of the analytical test at lower grades. Finally, duplicate pairs are validated following the hyperbolic method, plotting them against a hyperbolic function dependent on constants calculated from the PDL and the maximum tolerable RE for each duplicate type. This function acts as an acceptability boundary which, by design, compensates for higher RE at lower grades. Failed pairs should remain below 10% of all duplicate samples.

Table 12.5 sums up the duplicate sample analysis for San Bartolomé, and Figures 12.4, 12.5 and 12.6 present validation plots for each duplicate type:

**Table 12.5: Duplicate Sample Analysis for San Bartolomé**

| Duplicate Type | Duplicate Pairs | AV g/t Ag | | Deviation (Acceptable <5%) | Failed Pairs (Acceptable <10%) | |
|---|---|---|---|---|---|---|
| | | Orig. | Dup. | | # | % |
| DUP | 947 | 78.61 | 79.36 | **0.9%** | 353 | **37.3%** |
| A-B | 1,452 | 80.82 | 80.38 | **-0.6%** | 468 | **32.2%** |
| A-A | 1,381 | 80.17 | 79.52 | **-0.8%** | 91 | **6.6%** |

**Figure 12.4: DUP Samples Validation Plot for San Bartolomé**

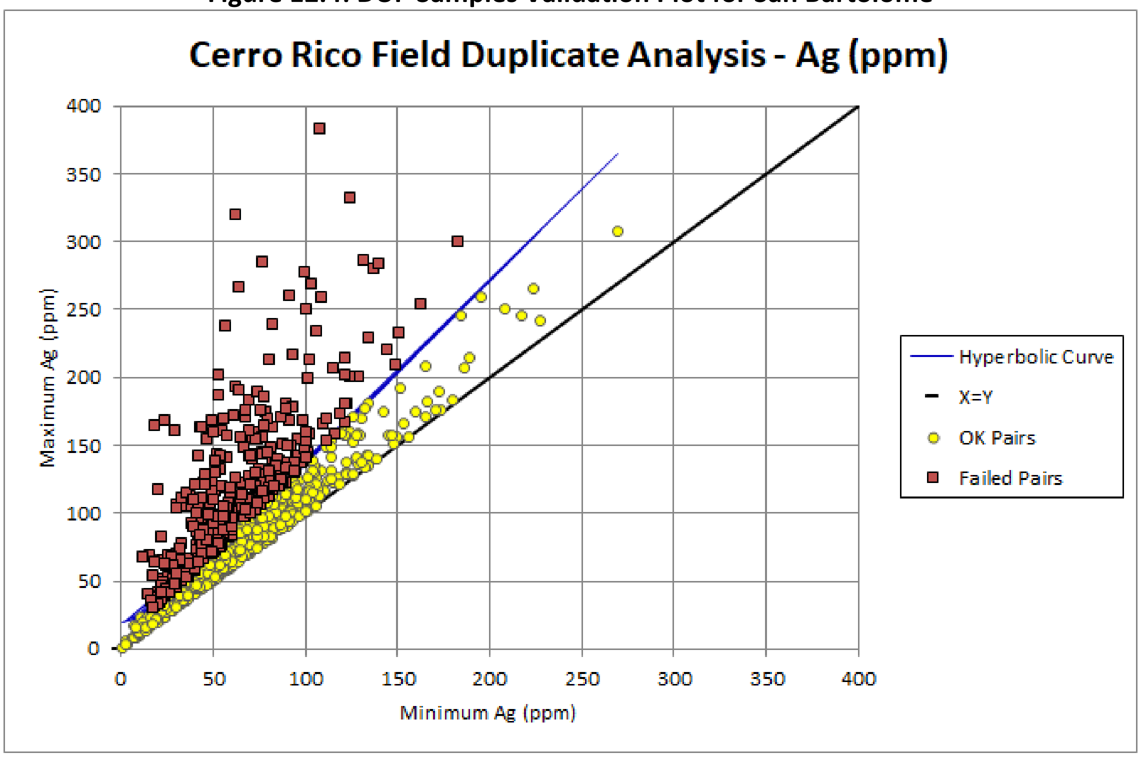


**Figure 12.5: A-B Samples Validation Plot for San Bartolomé**

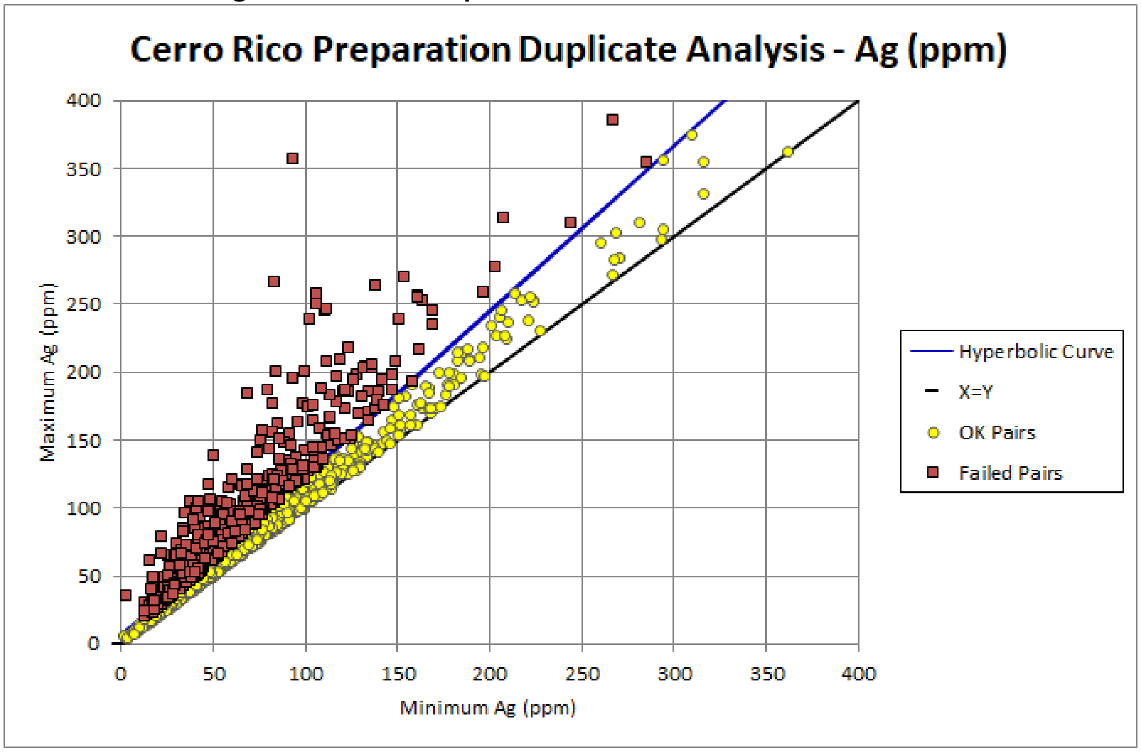
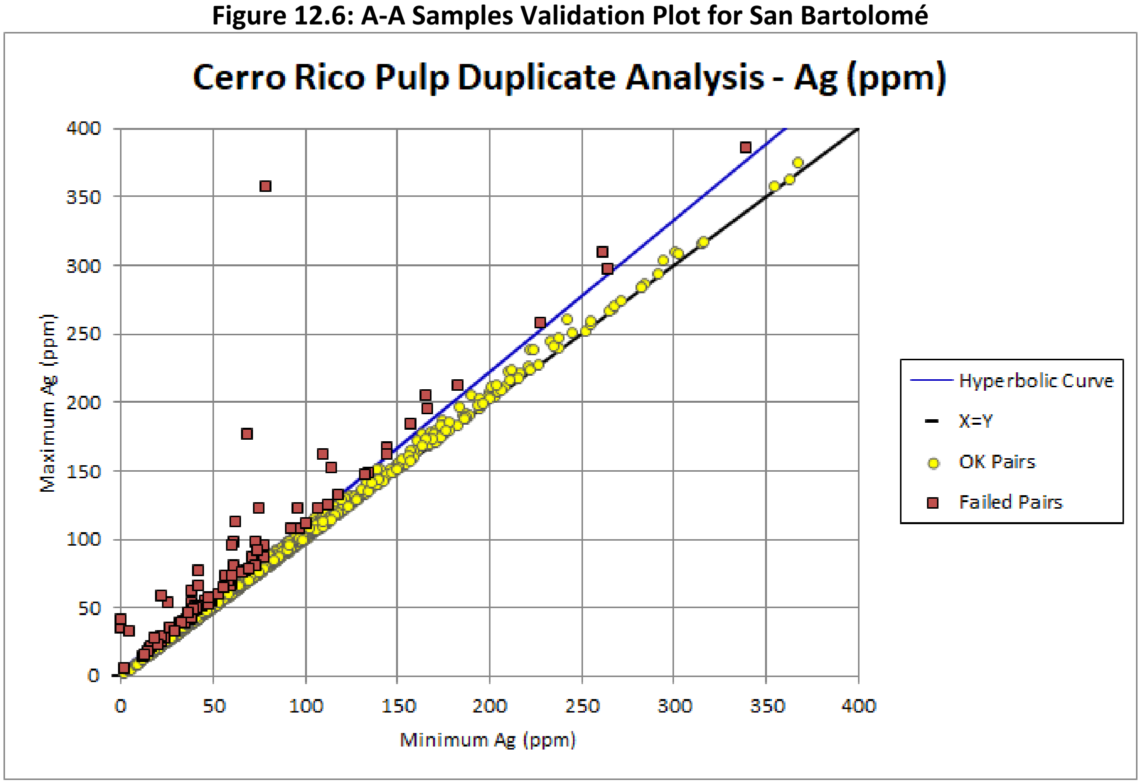



**Figure 12.6: A-A Samples Validation Plot for San Bartolomé**




Field and preparation duplicates display considerably high percentages of failed pairs, well past the acceptability limits of a conventional duplicate sample analysis, with field duplicates failing more than preparation duplicates. Contrarily, pulp duplicates present a reasonable percentage of failed pairs and are very much acceptable from a conventional duplicate analysis perspective. In addition, there are no significant deviations when comparing silver grade averages of all duplicate types against their original samples (Table 12.5), meaning there is no apparent systematic error that could explain the high numbers of failed pairs.

Errors during sample preparation and analysis are unlikely as well; given that preparation and pulp duplicates for San Bartolome and other projects developed by Manquiri are prepared at Plahipo and delivered to the mill laboratory, with the same protocols and security conditions and that some of these other projects, alternately assayed with San Bartolome samples using similar control measures (e.g., Cachi Laguna), display acceptable results for the three types of silver grade duplicates.

The most reasonable explanation for the observed discrepancies might come from the pallacos and its sampling method. It is certainly possible that the large volume of pallacos samples, containing differently sized boulders of mixed sources with varying silver values, could result in high grade variability even within the sample; variability that would decrease with each sample split, as evidenced in the decrease of failed pairs from field to preparation duplicates and especially from preparation to pulp duplicates.

If we take this explanation into account, it follows that evaluating pallacos duplicates with the acceptability limits designed for conventional-type deposits is simply not possible. Considering the accumulated knowledge of the San Bartolome site and that it's been reliably producing for some time, along with the fact that there is no standard case to compare to, then the only conditions that will be required for pallacos duplicates acceptability are two: Ruling out systematic error, which has been done, and ruling out random failure chance, which can be confirmed too after verifying that failed pair percentages for field and preparation duplicates are reasonably below 50% (Table 12.5).

*12.3.1.3 Blank Sample Analysis*

Coarse blanks (BL) were used in the form of very low-grade samples obtained from unmineralized Huacajchi tuff from Cerro Huacajchi (Tyler and Mondragon, 2015), with non-certified values that range from 1 to 3 g/t Ag on average. These samples, therefore, are not actual blanks because their grades rarely drop below the reported detection limit (RDL), but they are reasonably close to that limit to accept them as such. Blanks were systematically inserted at the beginning of every batch and seldomly between regular samples, usually following an SRM. Table 12.6 summarizes control program information for blank samples:

**Table 12.6: Blank Samples Information Summary for San Bartolomé**

| Year | BL | BL % |
|---|---|---|
| 2016 | 1,138 | 11.4% |
| 2017 | 753 | 8.5% |
| 2018 | 656 | 7.3% |
| 2019-1 | 262 | 8.0% |
| **Total** | **2,809** | **9.1%** |
| 2019-2 | 186 | 5.2% |
| 2020 | 50 | 5.3% |
| **Total** | **236** | **5.2%** |

The qualified persons' blank sample review is done by plotting a time series of blank assay values against an acceptability limit of 3-5 times the RDL. As with SRMs, outliers should remain below 5% of all samples. In case of elevated outlier percentages, blank assay values are plotted against their corresponding previous sample values in an RMA regression, looking for a correlation (high $R^2$ value) that would imply systematic error and thus contamination during sample preparation (coarse blanks) or assaying (fine blanks).

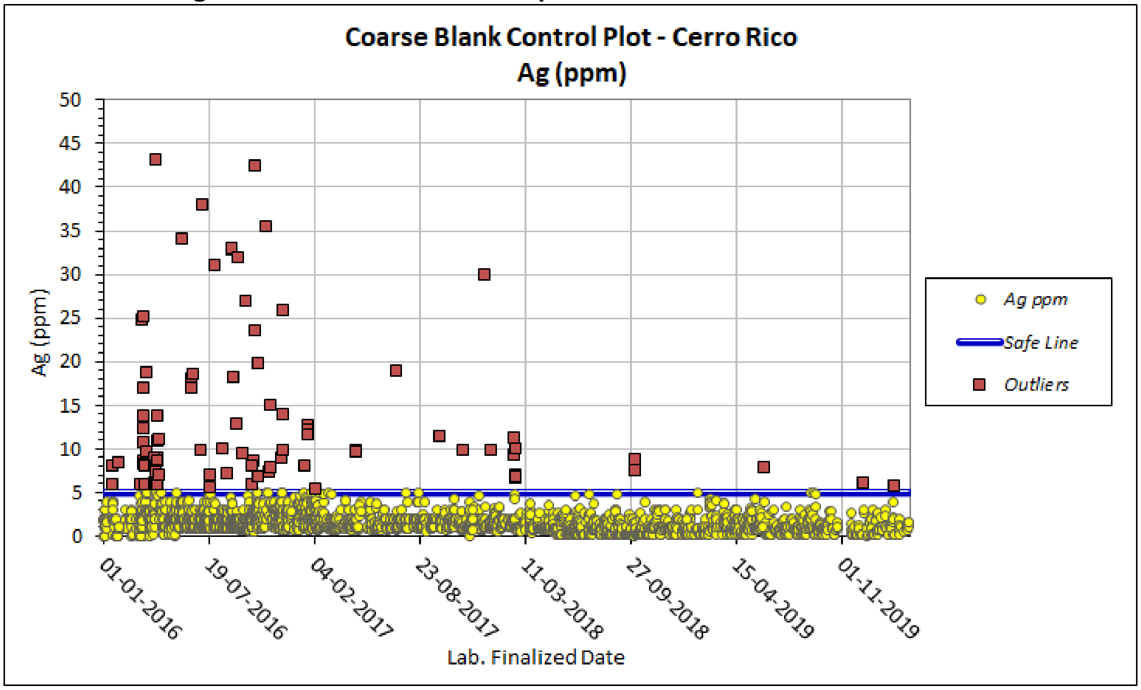
Manquiri's blank material was chosen to meet a 5*RDL condition for the AA62 method (RDL = 1 g/t Ag) used at the time by ALS (Tyler and Mondragon, 2015), resulting in a 5 g/t Ag acceptability limit. Manquiri's current AAS method has an RDL of 0.5 g/t Ag, which means that, should the same 5*RDL condition be applied, the new acceptability limit would be 2.5 g/t Ag. However, given that the source rock from which blanks are obtained remains the same, lowering that limit would turn into outliers numerous samples that were previously not, making it then necessary to maintain the previous acceptability limit of 5 g/t Ag for this analysis.

Table 12.7 and Figure 12.7 sum up the blank sample analysis for San Bartolomé:

**Table 12.7: Blank Sample Analysis for San Bartolomé**

| Blank Assays | Outliers (Acceptable <5%) | |
|---|---|---|
| | # | % |
| 3,039 | 92 | **3.0%** |

**Figure 12.7: Coarse Blank Samples Control Plot for San Bartolomé**




Coarse blanks are mostly within the acceptability limit, with a higher number of outliers and grades during 2016 (but still within acceptable limits) progressively decreasing towards the present. There are no apparent signs of contamination, and the progression to slightly lower grades could be the result of a lithological transition towards less altered Huacajchi tuff.

### *12.3.2 El Asiento and Tatasi-Portugalete Dumps*

The analytical QA/QC programs implemented for these projects involve the use of field (DUP), preparation (A-B) and pulp (A-A) duplicates for precision analyses, standard reference materials (SRM) for accuracy analyses and coarse blanks (BL) for contamination analyses. These are inserted among regular samples submitted for silver assaying and then sent to Manquiri's plant laboratory. No control samples were sent to an external laboratory. Table 12.8 sums up the QA/QC programs of each project:

**Table 12.8: El Asiento and Tatasi Portugalete QA/QC Programs**

| Project | Period | Regular Samples | Control Samples | Total Samples | Control % |
|---|---|---|---|---|---|
| El Asiento | Apr-May 2019 | 246 | 79 | 325 | 24.3% |
| | Jul-Aug 2019 | 362 | 56 | 418 | 13.4% |
| Tatasi-Portugalete | Jan-Feb 2020 | 413 | 100 | 513 | 19.5% |

As previously stated, in mid-2019 Manquiri made a decision to lower the insertion rate of control samples, which explains the difference in control percentages between El

Asiento's first and second periods in Table 12.8. For statistical purposes however, the results from both periods will be reviewed together.

It should also be noted from Table 12.8 that even though general control sample percentages are acceptable, actual sample amounts are very low, especially when separating them by type and then by subtype. This situation leads to uncertainty when control sample analyses yield unacceptable percentages, given that a single outlier can take the small datasets past acceptability limits; an issue that will be often illustrated throughout the review of these QA/QC programs.

*12.3.2.1 Standard Reference Material (SRM) Analysis*

Silver SRMs were provided by Target Rocks (Peru), with samples of 3 types (low, medium and high grade), inserted at a rate of 1 every 21 samples for El Asiento's first period (1 in every 63 samples for each type) and 1 every 42 samples for El Asiento's second period and Tatasi-Portugalete (1 in every 126 samples for each type). The SRMs were prepared and packaged by Target Rocks, no source rock specified, and analyzed in a round robin program arranged by Smee & Associates Consulting Ltd (Canada), in order to obtain its best value (BV). Table 12.9 summarizes control program information for inserted SRMs.

**Table 12.9: SRM Information Summary for El Asiento and Tatasi-Portugalete**

| Project | Period | MQR-01 58.6 g/t Ag | MQR-02 120.8 g/t Ag | MQR-03 215 g/t Ag | SRM % |
|---|---|---|---|---|---|
| El Asiento | Apr-May 2019 | 6 | 6 | 6 | 5.5% |
| El Asiento | Jul-Aug 2019 | 1 | 4 | 5 | 2.4% |
| Tatasi-Portugalete | Jan-Feb 2020 | 4 | 3 | 5 | 2.3% |

For methodology details, refer to section 12.3.1.1. Shewart charts are unnecessary in these cases given the low quantity of samples. Table 12.10 and 12.11 sum up the SRM analysis for each project:

**Table 12.10: SRM Analysis for El Asiento**

| SRM Type | SRM Assays | Mistakes (Acceptable <5%) | | BV Ag g/t | AV Ag g/t | Bias (Acceptable <5%) | Outliers (Acceptable <5%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | BV±2*SD | | BV±3*SD | |
| | | # | % | | | | # | % | # | % |
| MQR-01 | 7 | 0 | 0.0% | 58.60 | 57.49 | -1.9% | 1 | 14.3% | 1 | 14.3% |
| MQR-02 | 10 | 0 | 0.0% | 120.80 | 122.67 | 1.5% | 0 | 0.0% | 0 | 0.0% |
| MQR-03 | 11 | 0 | 0.0% | 215.00 | 220.50 | 2.6% | 2 | 18.2% | 0 | 0.0% |

**Table 12.11: SRM Analysis for Tatasi-Portugalete**

| SRM Type | SRM Assays | Mistakes (Acceptable <5%) | | BV Ag g/t | AV Ag g/t | Bias (Acceptable <5%) | Outliers (Acceptable <5%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | BV±2*SD | | BV±3*SD | |
| | | # | % | | | | # | % | # | % |
| MQR-01 | 4 | 0 | 0.0% | 58.60 | 54.63 | -6.8% | 1 | 25.0% | 0 | 0.0% |
| MQR-02 | 3 | 0 | 0.0% | 120.80 | 123.95 | 2.6% | 0 | 0.0% | 0 | 0.0% |
| MQR-03 | 5 | 0 | 0.0% | 215.00 | 207.77 | -3.4% | 1 | 20.0% | 1 | 20.0% |

Standards from both projects show mostly acceptable results, with only one slightly biased case (MQR-01 in Table 12.11) and two seemingly low precision cases (MQR-01 in Table 12.10 and MQR-03 in Table 12.11), all due to one anomalous sample within each standard. These are clear examples of the issue of working with small datasets, which means that there is no certainty if there is in fact a problem with any of the ambiguous standards.

*12.3.2.2 Duplicate Sample Analysis*

Preparation (A-B) and pulp duplicate (A-A) samples were inserted at a rate of 1 every 21 samples for El Asiento's first period and 1 every 42 samples for El Asiento's second period and Tatasi-Portugalete. Field duplicates (DUP) were irregularly inserted in both projects, less frequently at El Asiento and much more frequently at Tatasi-Portugalete, the latter with a mean rate of 1 every 10 samples. Table 12.12 summarizes control program information for duplicate samples:

**Table 12.12: Duplicate Samples Information Summary for El Asiento and Tatasi-Portugalete**

| Project | Period | A-A | A-B | DUP | SRM % |
|---|---|---|---|---|---|
| El Asiento | Apr-May 2019 | 15 | 15 | 6 | 11.1% |
| | Jul-Aug 2019 | 9 | 9 | 11 | 6.9% |
| Tatasi-Portugalete | Jan-Feb 2020 | 12 | 12 | 49 | 14.2% |

For methodology details, refer to section 12.3.1.2. Table 12.13 and 12.14 sum up the duplicate sample analysis for each project, and Figures 12.8, 12.9 and 12.10 present validation plots for each duplicate type and project.

**Table 12.13: Duplicate Sample Analysis for El Asiento**

| Duplicate Type | Duplicate Pairs | AV Ag g/t | | Deviation (Acceptable <5%) | Failed Pairs (Acceptable <10%) | |
|---|---|---|---|---|---|---|
| | | Orig. | Dup. | | # | % |
| DUP | 17 | 221.24 | 211.84 | -4.2% | 9 | 52.9% |
| A-B | 24 | 229.25 | 193.36 | -15.7% | 9 | 37.5% |
| A-A | 23 | 228.58 | 215.58 | -5.7% | 3 | 13.0% |

**Table 12.14: Duplicate Sample Analysis for Tatasi-Portugalete**

| Duplicate Type | Duplicate Pairs | AV Ag g/t | | Deviation (Acceptable <5%) | Failed Pairs (Acceptable <10%) | |
|---|---|---|---|---|---|---|
| | | Orig. | Dup. | | # | % |
| DUP | 49 | 242.41 | 216.06 | -10.9% | 19 | 38.8% |
| A-.B | 12 | 243.54 | 245.96 | 1.0% | 7 | 58.3% |
| A-A | 12 | 243.54 | 241.54 | -0.8% | 2 | 16.7% |

**Figure 12.8: DUP Samples Validation Plot for El Asiento and Tatasi-Portugalete**

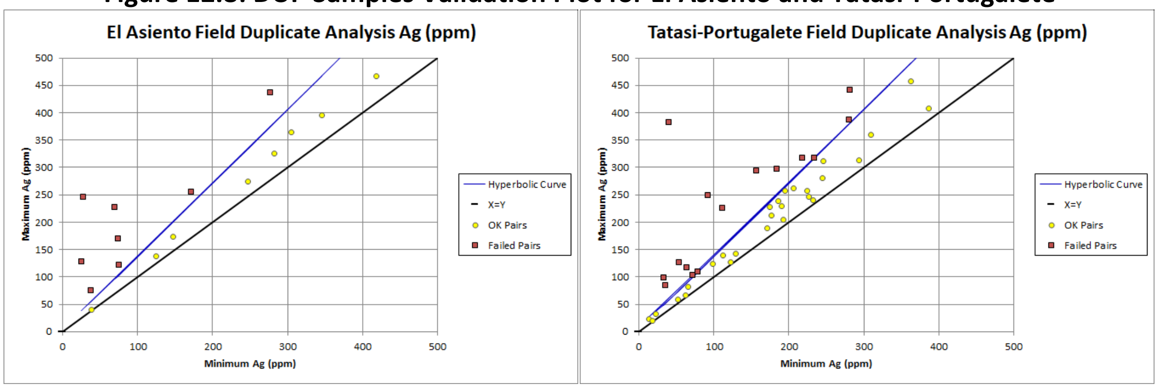



**Figure 12.1: A-B Samples Validation Plot for El Asiento and Tatasi-Portugalete**

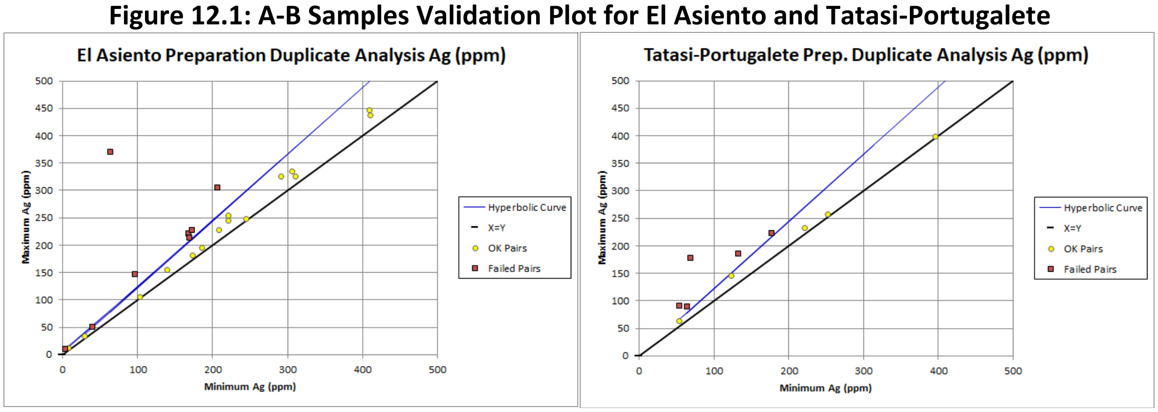
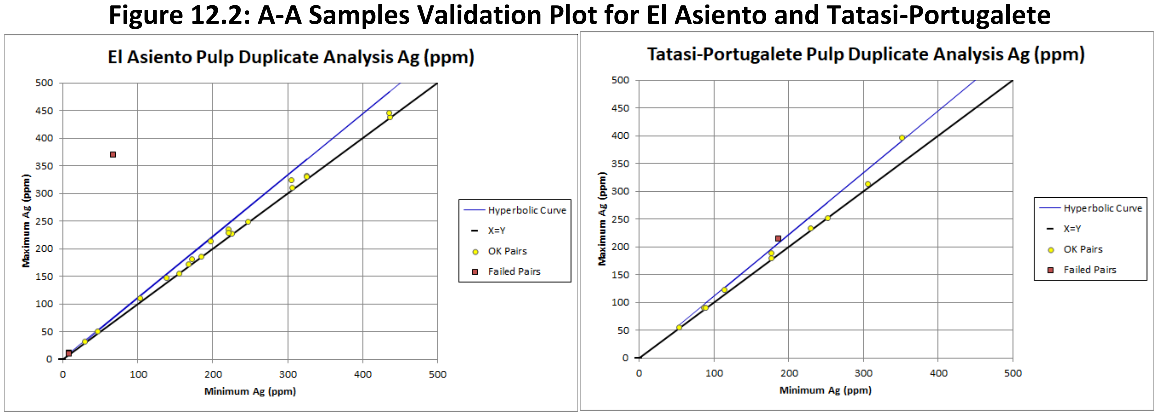



**Figure 12.2: A-A Samples Validation Plot for El Asiento and Tatasi-Portugalete**



Field and preparation duplicates from both projects display high percentages of failed pairs, while pulp duplicates present slightly past but still acceptable percentages. In the same line, deviations are acceptable for pulp duplicates, and vary depending on the project for field and preparation duplicates. Again, this is partly due to one or two anomalous samples getting the small dataset past acceptability limits.

However, given that failed pairs are still too many to be explained by the dataset size, another issue will be explored that could be adding uncertainty to these results, and it is related to the deposit type. In similar fashion to the pallacos case, dumps are waste material comprised of a mix of rock fragments in a fine matrix, with varying silver and other metallic ore values, all of which could lead to samples with high grade variability tending to lower values with each split. Field duplicates of Tatasi-Portugalete support this argument to some extent, being the only set of duplicates with enough pairs to make somewhat valid assumptions, as they seem to reproduce the failure percentages of the pallacos field duplicates (Table 12.14, compare with Table 12.5).

Unfortunately, in this case it is not possible to rule out sampling or assaying errors through data analysis. For example, there's a slight but noticeable tendency towards negative deviations in duplicate sample averages, especially at El Asiento (Table 12.13), which can't be explained due to the low number of samples. Nevertheless, Manquiri's sample preparation and assaying protocols have been validated for other Manquiri projects, which makes the possibility of human error less likely.

Despite all these arguments, it is still not possible to confidently validate the results of field and preparation duplicates for these projects, as they can't meet the two acceptability requirements (refer to discussion in section 12.3.1.2) that were established in the pallacos case: Ruling out systematic error, due to low number of samples, and ruling out random failure chance, due to at least one case in each project of failed pair percentages of around 50%.

*12.3.2.3 Blank Sample Analysis*

Coarse blanks (BL) were used in the form of very low-grade samples obtained from unmineralized Huacajchi tuff from Cerro Huacajchi (Tyler and Mondragon, 2015), with non-certified silver values that range from 1 to 3 g/t on average. These samples, therefore, are not actual blanks because their grades rarely drop below the reported detection limit (RDL), but they are reasonably close to that limit to accept them as such. Blanks were inserted at a rate of 1 every 21 samples for El Asiento's first period and 1 every 42 samples for El Asiento's second period and Tatasi-Portugalete, usually at the beginning of every batch and, between regular samples, following an SRM. Table 12.15 summarizes control program information for blank samples:

**Table 12.15: Blank Samples Information Summary for El Asiento and Tatasi-Portugalete**

| Project | Period | BL | BL % |
|---|---|---|---|
| El Asiento | Apr-May 2019 | 25 | 7.7% |
| | Jul-Aug 2019 | 17 | 4.1% |
| Tatasi-Portugalete | Jan-Feb 2020 | 12 | 2.9% |

For methodology details, refer to section 12.3.1.3. Contamination control charts are unnecessary in these cases given the low quantity of samples and overall favorable results. Table 12.16 sums up the blank sample analysis for each site.

**Table 12.16: Blank Sample Analysis for El Asiento and Tatasi-Portugalete**

| Project | Blank Assays | Outliers (Acceptable <5%) | |
|---|---|---|---|
| | | # | % |
| El Asiento | 42 | 0 | **0.0%** |
| Tatasi-Portugalete | 15 | 0 | **0.0%** |

Coarse blanks from both projects show acceptable results, with no apparent signs of contamination.

### *12.3.3 Cachi Laguna Project*

The analytical QA/QC programs implemented for Cachi Laguna since 2017 involve the use of field (DUP), preparation (A-B) and pulp (A-A) duplicates for precision analyses, standard reference materials (SRM) and check samples (CHD) for accuracy analyses and coarse blanks (BL) for contamination analyses. These are inserted among regular samples submitted for silver assaying and then sent to Manquiri's plant laboratory. In the case of check samples, these were sent to ALS with Manquiri serving as the umpire laboratory.

It is important to point out that the resource estimation database contains pre-2017 samples (approximately 10% of the samples effectively used for estimation) for which no QA/QC data program was available. These are historical drill hole and channel samples developed by companies EMICRUZ and RALP, before the latter's contract with Manquiri. According to Peñafiel and Montecinos (2017), Manquiri developed some channels of their own in 2016 to verify the historical data, with favorable results. Further drill holes and channels, several of which are included in this analysis, have confirmed the project's silver resources. Furthermore, given that a good part of the mineralized sites in Cachi Laguna have been under operation for some time, it's reasonable to assume that historical data, despite the lack of QA/QC programs, is fairly accurate. Table 12.17 sums up the QA/QC program of Cachi Laguna since 2017:

**Table 12.17: Cachi Laguna QA/QC Program**

| Period | Regular Samples | Control Samples | Total Samples | Control % |
|---|---|---|---|---|
| 2017-2019 | 12,344 | 2,878 | 15,222 | **18.9%** |
| 2019-2020 | 4,505 | 538 | 5,043 | **10.7%** |

This program is Manquiri's laboratory standard practice for sample analysis and does not include check sample or field duplicate amounts, given that these were not regularly inserted or solicited by RALP's personnel. Available check samples were seemingly part of RALP's evaluation campaign of Manquiri's laboratory against the, until then, current laboratory, ALS. Field duplicates, on the other hand, were very seldomly inserted and sent in separate special batches for analysis during the first two years, and then they were not considered anymore.

Manquiri's laboratory production QA/QC database reveals that Cachi Laguna's five mineralized sites (Brecha Norte, Claudia Eugenia, 5 Kilos and Corona Alto/Bajo) were developed consistently, in numerous small batches, throughout the 3-year period in study, and in an alternate (and sometimes parallel) way. They were also controlled and analyzed similarly. For these reasons, and considering that the five projects are reasonably adjacent and share similar characteristics, going forward their results will be reviewed together as one project with a single long-term sampling campaign.

Samples from Cachi Laguna include blastholes, drill holes and channel samplings, with blastholes being the largest database component (approximately 85% of the samples effectively used for estimation). Despite the differences between the three sample types, they will be presented as one dataset in the following analysis, given that they show fairly similar results when tested separately, and also to limit this chapter's extension.

Additionally, it is important to mention that this review will only consider silver assays. Even though some mineralized sites at Cachi Laguna contain economic gold resources and a that moderate number of samples have been assayed for gold, the QA/QC program never considered gold assays, except for a small amount of check samples and field duplicates, which are unfortunately not enough for proper review and validation.

As previously stated, in mid-2019 Manquiri made a decision to lower the insertion rate of control samples, which explains the difference in control percentages between the first and second periods in Table 12.17, with no effect in the results. For statistical purposes, however, both periods will be reviewed together. It is also worth mentioning that there is a 7-month gap in the data, from February 2019 to September 2019, where no samples were sent for analysis due to contractor changes.

*12.3.3.1 Check Sample Analysis*

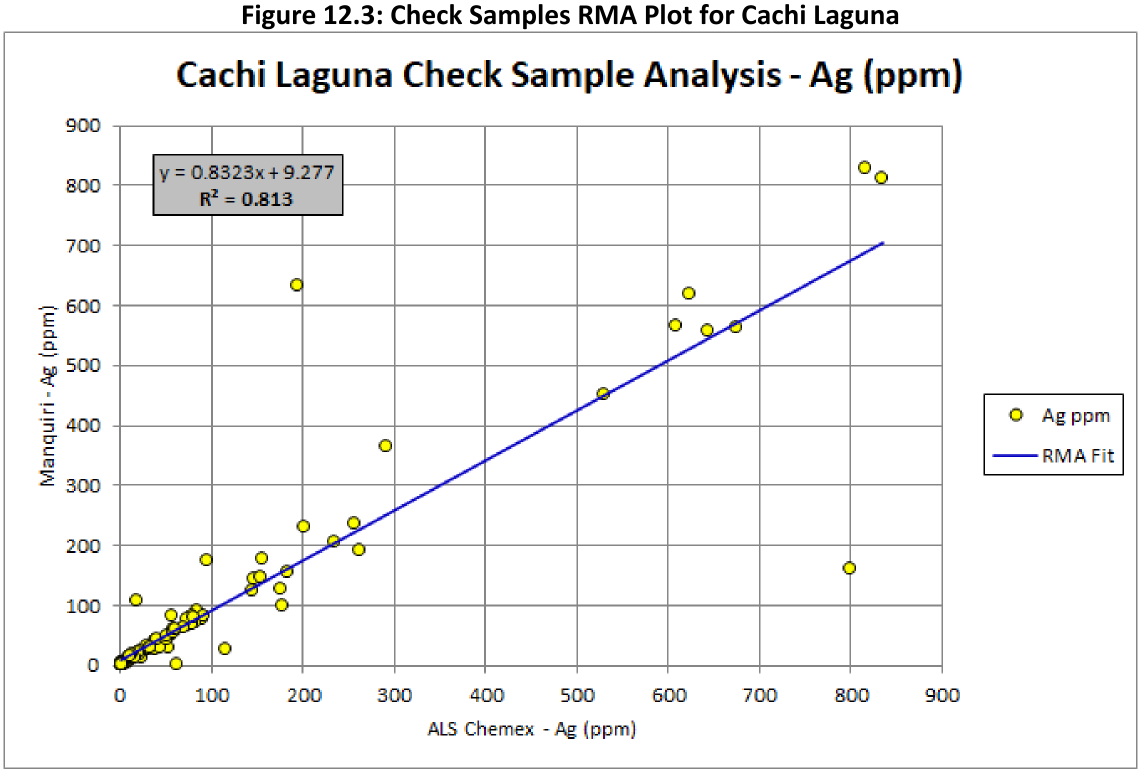
Check samples, consisting of field duplicate pairs, were seemingly part of an evaluation initiative on RALP's part of Manquiri's laboratory, as already mentioned. The uncertainty comes from a lack of information related to the development of this sampling campaign. The campaign results are available however, and they include some standards and blanks as controls, which is good industry practice. The main laboratory at the time was ALS.

The qualified persons' check sample review is done through reduced major axis (RMA) regression plots and their main statistical parameters: Coefficient of determination ($R^2$), which should approximate 1 to be acceptable, and slope (RMAS), allowing for the bias percentage calculation (1-RMAS), which should approximate 0 to be acceptable. Table 12.18 and Figure 12.11 present results for check samples:

**Table 12.18: Check Sample Analysis for Cachi Laguna**

| Check Samples | Duplicate Pairs | AV g/t Ag | | Deviation (Acceptable <5%) | $R^2$ |
|---|---|---|---|---|---|
| | | Orig. | Dup. | | |
| MAR 01-16 | 107 | 96.82 | 89.86 | **-7.2%** | **0.813** |

**Figure 12.3: Check Samples RMA Plot for Cachi Laguna**




This campaign shows sufficiently good accuracy considering the not as high number of samples, with an acceptable correlation evidenced in the $R^2$ value and a slightly over the limit but still acceptable negative deviation (Table 12.18). As illustrated in the Dumps case, here too the difference between being within or exceeding the acceptability deviation limit is a single sample. Standards and blanks included in this campaign (not presented in this section), despite their low amounts, also show acceptable results.

As previously discussed, some of these samples include gold assays, but there are not enough for a proper analysis. A quick comparison of the results, however, seems to show a moderate to poor correlation between pairs, which reinforces the necessity for a gold QA/QC program.

*12.3.3.2 Standard Reference Material (SRM) Analysis*

Silver SRMs were provided by Target Rocks (Peru), with samples of 3 types (low, medium and high grade), inserted at an approximate rate of 1 every 21 samples from 2017 to mid-2019 (1 in every 63 samples for each type) and since then adjusted to approximately 1 every 42 samples (1 in every 126 samples for each type). The SRMs were prepared and packaged by Target Rocks, no source rock specified, and analyzed in a round robin program arranged by Smee & Associates Consulting Ltd (Canada), in order to obtain its best value (BV). Table 12.19 summarizes control program information for inserted SRMs.

**Table 12.19: SRM Information Summary for Cachi Laguna**

| Year | MQR-01 58.6 g/t Ag | MQR-02 120.8 g/t Ag | MQR-03 215 g/t Ag | SRM % |
|---|---|---|---|---|
| 2017 | 60 | 49 | 44 | 4.6% |
| 2018 | 174 | 171 | 173 | 4.6% |
| 2019-1 | 23 | 21 | 20 | 4.7% |
| **Total** | **257** | **241** | **237** | **4.6%** |
| 2019-2 | 28 | 18 | 9 | 2.2% |
| 2020 | 26 | 21 | 18 | 2.3% |
| **Total** | **54** | **39** | **27** | **2.3%** |

For methodology details, refer to section 12.3.1.1. Table 12.20 sums up the SRM analysis for Cachi Laguna, and Figures 12.12, 12.13 and 12.14 present Shewart charts for each SRM type.

**Table 12.20: SRM Analysis for Cachi Laguna**

| SRM Type | SRM Assays | Mistakes (Acceptable <5%) | | BV g/t Ag | AV g/t Ag | Bias (Acceptable <5%) | Outliers (Acceptable <5%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | BV±2*SD | | BV±3*SD | |
| | | # | % | | | | # | % | # | % |
| MQR-01 | 294 | 9 | 3.1% | 58.60 | 58.32 | **-0.5%** | 31 | **10.9%** | 12 | **4.2%** |
| MQR-02 | 266 | 6 | 2.3% | 120.80 | 119.63 | **-1.0%** | 15 | **5.8%** | 4 | **1.5%** |
| MQR-03 | 253 | 5 | 2.0% | 215.00 | 217.71 | **1.3%** | 6 | **2.4%** | 1 | **0.4%** |

**Figure 12.4: MQR-01 Standard Shewart Chart for Cachi Laguna**

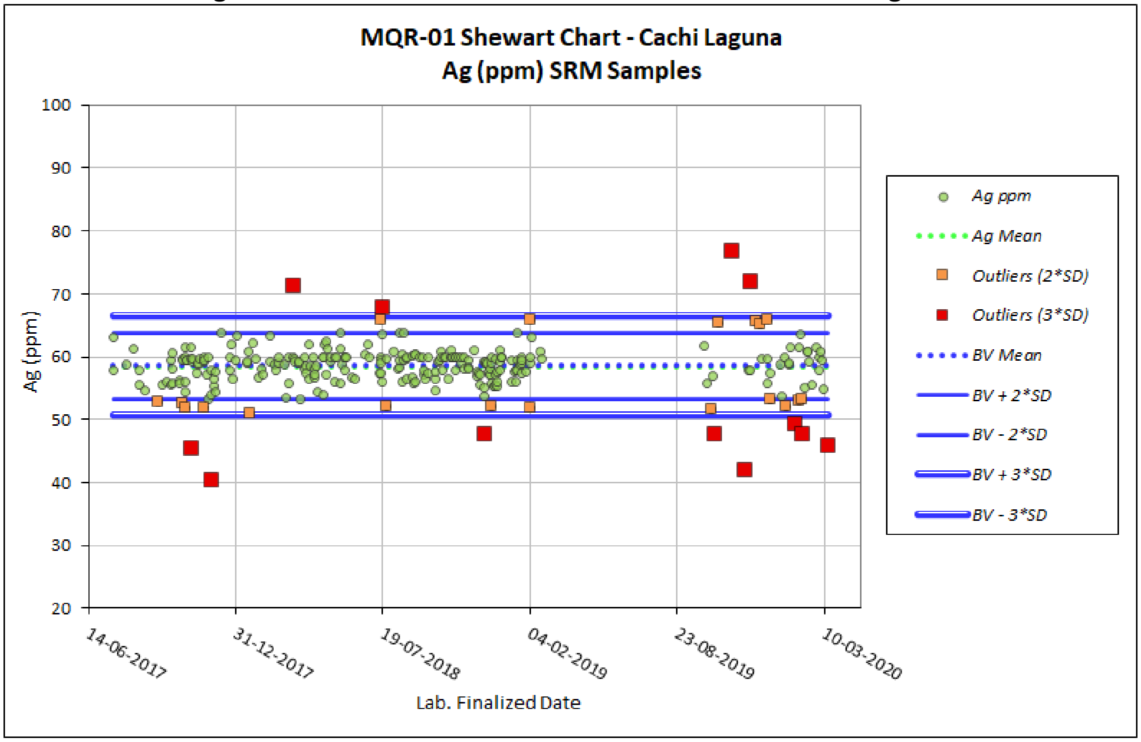



**Figure 12.5: MQR-02 Standard Shewart Chart for Cachi Laguna**

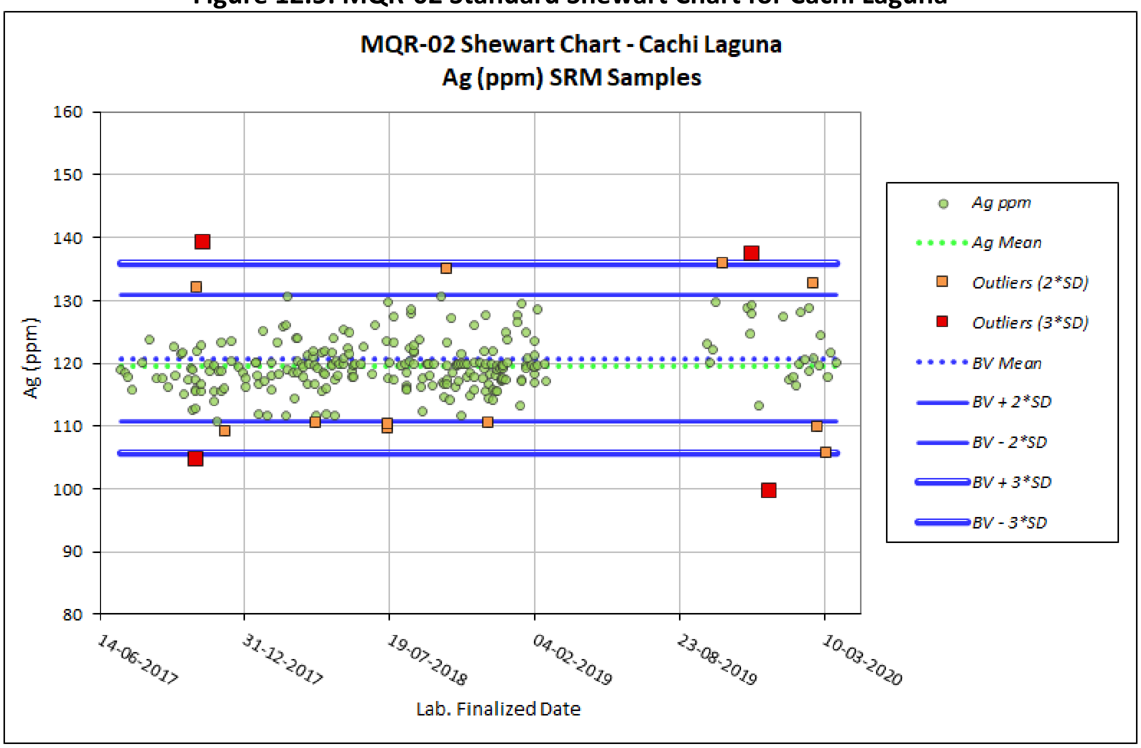
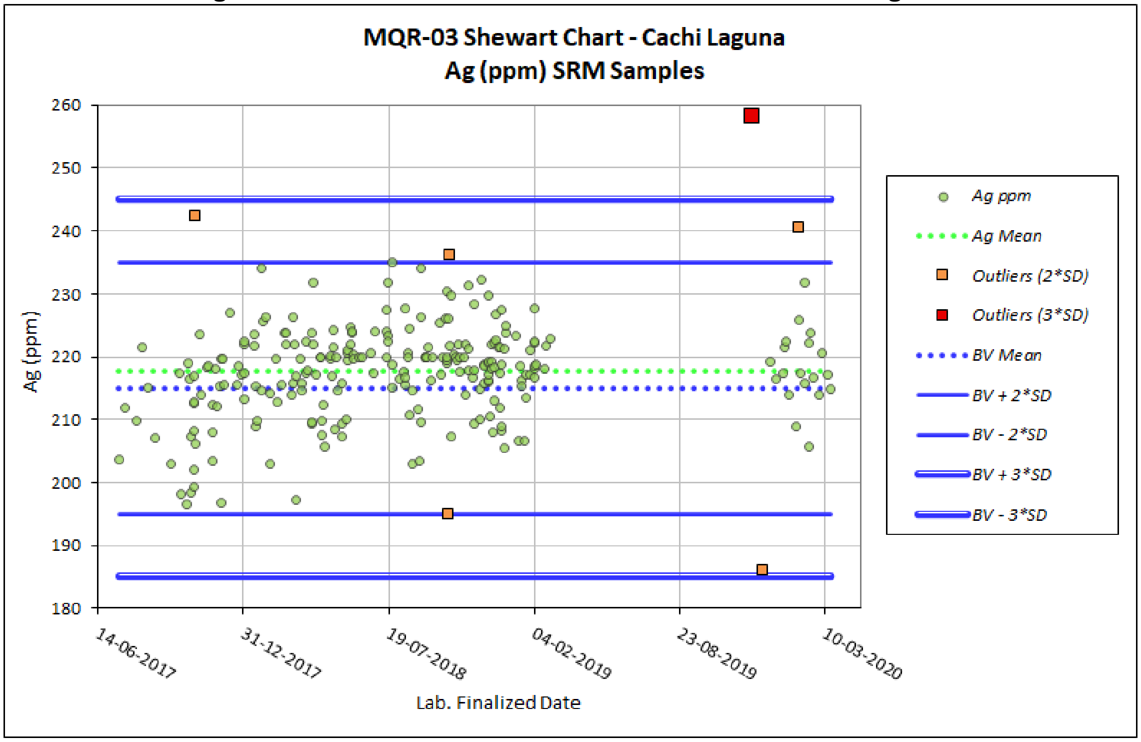


**Figure 12.6: MQR-03 Standard Shewart Chart for Cachi Laguna**




All standards are generally within acceptability limits and show no significant bias. However, in the beginning of the second period (corresponding to the reactivation of operations), there is a noticeable increment of anomalous values for every SRM type, evidenced in the corresponding Shewart charts. This behavior has no clear explanation, given that it is not reproduced in blank samples (Figure 12.18) and that it seems to diminish or disappear as more SRMs are assayed. It is likely that this is just a temporary anomaly due to potential mishandling or misplacement of SRMs during insertion or assay. It should be noted, nonetheless, that Manquiri has protocols in place for handling analytical results on standards that exceed acceptable limits, which usually lead to reanalysis of anomalous batches. The qualified persons verified that several reanalysis campaigns took place during this period.

### *12.3.3.3 Duplicate Sample Analysis*

Preparation (A-B) and pulp duplicate (A-A) samples were inserted at an approximate rate of 1 every 21 samples from 2017 to mid-2019 and since then adjusted to approximately 1 every 42 samples. On the other hand, field duplicates (DUP) were less frequently and irregularly inserted in each batch. Table 12.21 summarizes control program information for duplicate samples:

**Table 12.21: Duplicate Samples Information Summary for Cachi Laguna**

| Year | A-A | A-B | SRM % |
|---|---|---|---|
| 2017 | 131 | 131 | 7.9% |
| 2018 | 431 | 431 | 8.1% |
| 2019-1 | 53 | 52 | 8.1% |
| **Total** | **615** | **614** | **8.1%** |
| 2019-2 | 58 | 58 | 5.1% |
| 2020 | 67 | 67 | 4.9% |
| **Total** | **125** | **125** | **5.0%** |

For methodology details, refer to section 12.3.1.2. Table 12.22 sums up the duplicate sample analysis for Cachi Laguna, and Figures 12.15, 12.16 and 12.17 present validation plots for each duplicate type:

**Table 12.22: Duplicate Sample Analysis for Cachi Laguna**

| Duplicate Type | Duplicate Pairs | AV g/t Ag | | Deviation (Acceptable <5%) | Failed Pairs (Acceptable <10%) | |
|---|---|---|---|---|---|---|
| | | Orig. | Dup. | | # | % |
| DUP | 195 | 401.44 | 412.64 | **2.8%** | 16 | **8.2%** |
| A-B | 722 | 92.919 | 93.910 | **1.1%** | 59 | **8.2%** |
| A-A | 740 | 93.305 | 93.827 | **0.6%** | 39 | **5.3%** |

**Figure 12.7: DUP Samples Validation Plot for Cachi Laguna**

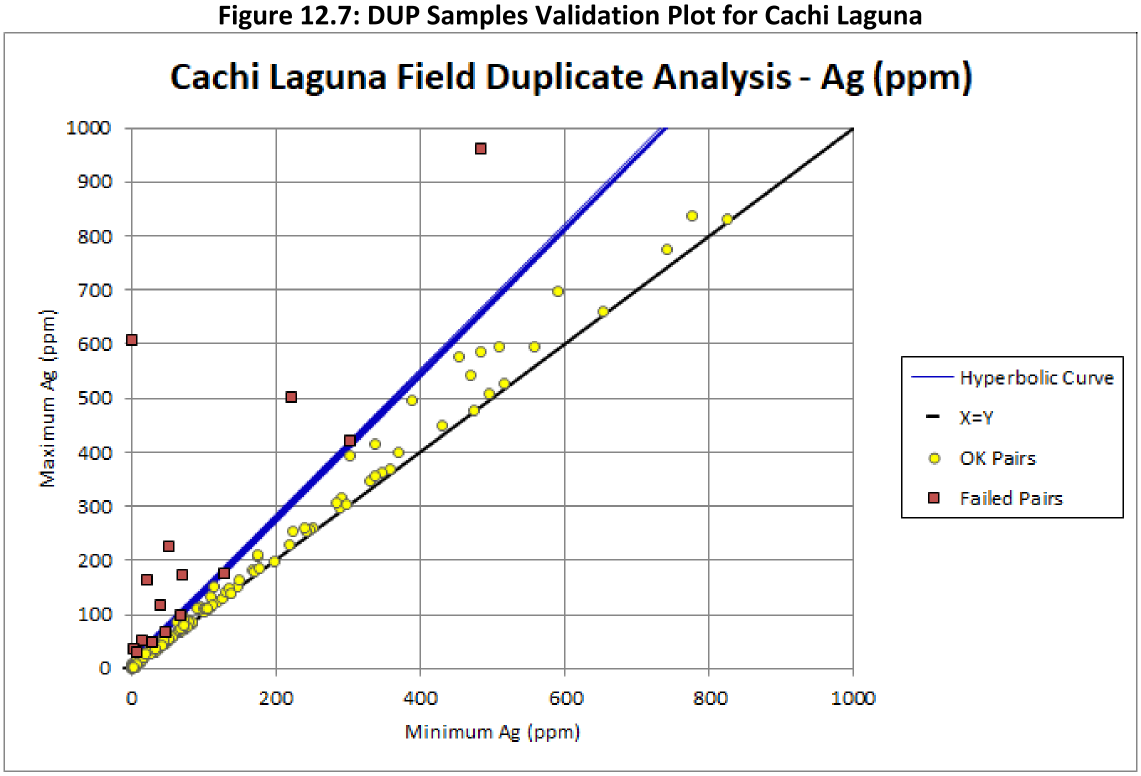


**Figure 12.8: A-B Samples Validation Plot for Cachi Laguna**

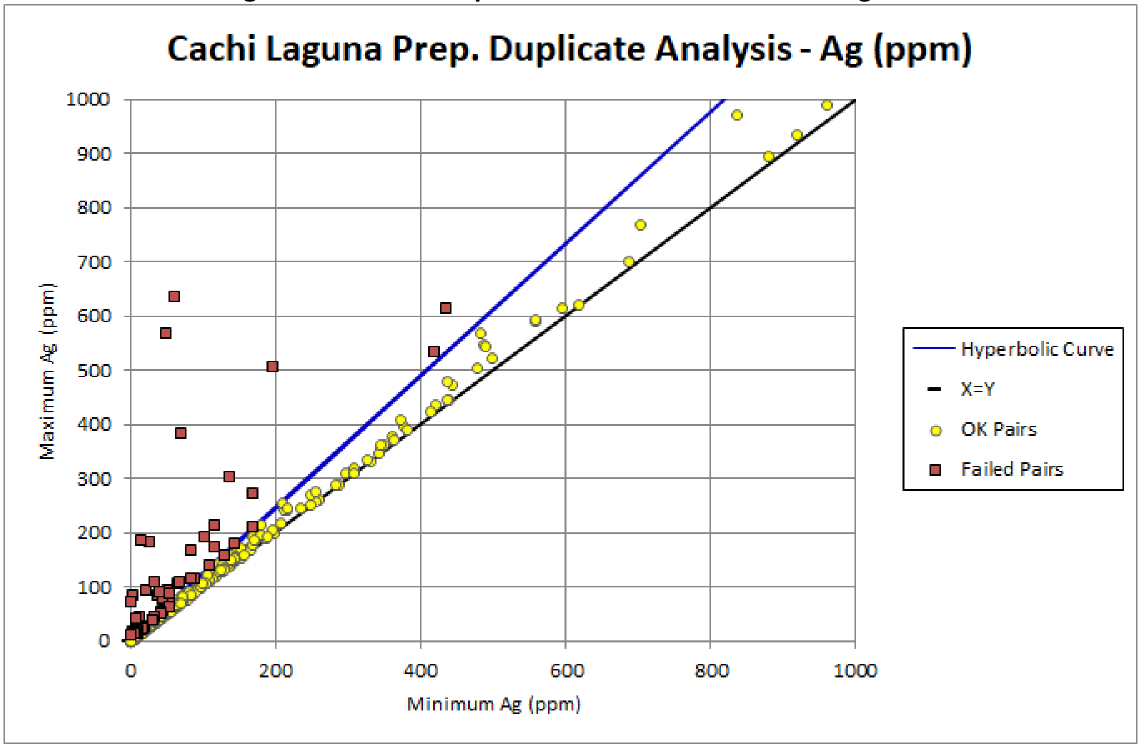
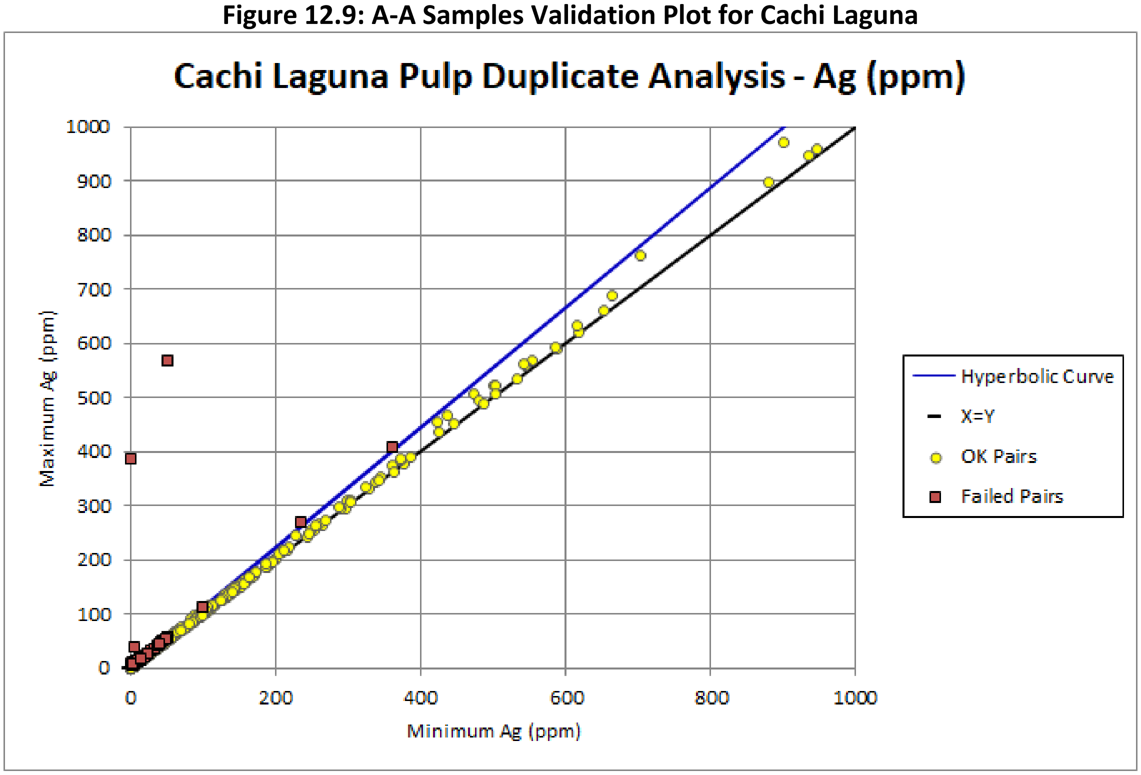



**Figure 12.9: A-A Samples Validation Plot for Cachi Laguna**




All duplicate types are generally within acceptability limits and show no significant bias. Field duplicates, as already mentioned, were not consistently inserted and only during the first two years of operation, which explains their lower sample amount (Table 12.22). Additionally, as is the case with check samples (refer to section 12.3.3.1), some field duplicates include gold assays, but there are not enough for a proper analysis. A quick review of the results, however, seems to show a high number of failed pairs, which again reinforces the necessity for a gold QA/QC program.

### *12.3.3.4 Blank Sample Analysis*

Coarse blanks (BL) were used in the form of very low-grade samples obtained from unmineralized Huacajchi tuff from Cerro Rico (Tyler and Mondragon, 2015), with non-certified values that range from 1 to 3 g/t Ag on average. These samples, therefore, are not actual blanks because their grades rarely drop below the reported detection limit (RDL), but they are reasonably close to that limit to accept them as such. Blanks were inserted at a rate of 1 every 21 samples (occasionally 1 every 11 samples) from 2017 to mid-2019 and since then adjusted to a more irregular rate with occasional regularity of 1 every 42 samples, usually at the beginning of every batch and, between regular samples, following an SRM and sometimes a duplicate sample. Table 12.23 summarizes control program information for blank samples.

**Table 12.23: Blank Samples Information Summary for Cachi Laguna**

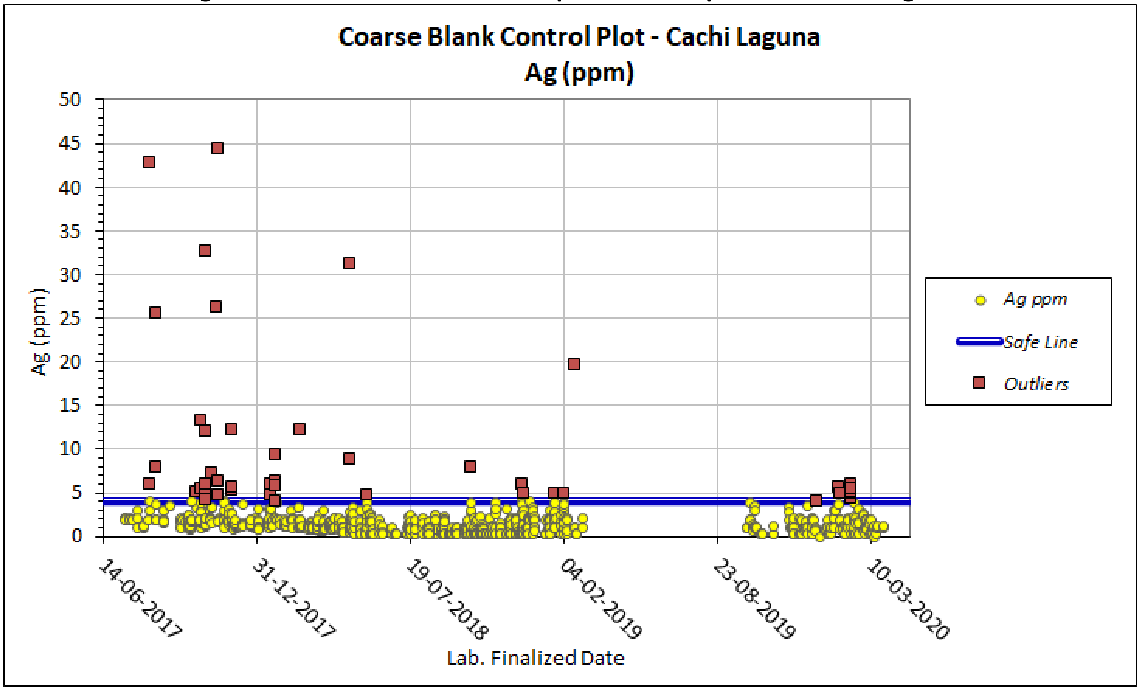
| Year | BL | BL % |
|---|---|---|
| 2017 | 243 | 7.3% |
| 2018 | 626 | 5.9% |
| 2019-1 | 79 | 6.1% |
| **Total** | **948** | **6.2%** |
| 2019-2 | 80 | 3.5% |
| 2020 | 94 | 3.4% |
| **Total** | **174** | **3.5%** |

For methodology details, refer to section 12.3.1.2. Table 12.24 and Figure 12.18 sum up the blank sample analysis for Cachi Laguna:

**Table 12.24: Blank Sample Analysis for Cachi Laguna**

| Blank Assays | Outliers (Acceptable <5%) | |
|---|---|---|
| | # | % |
| 1,119 | 44 | **3.9%** |

**Figure 12.10: Coarse blank samples control plot for Cachi Laguna**




Coarse blanks are mostly within the acceptability limit, with a higher number of outliers and grades during 2017 (but still within acceptable limits) progressively decreasing towards the present. There are no apparent signs of contamination, and the progression to slightly lower grades could be the result of a lithological transition towards less altered Huacajchi tuff.

### *12.3.4 Qualified Persons' Comments and Recommendations*

San Bartolomé QA/QC programs and their results, despite some previously addressed issues, are acceptable, and its silver assay database is deemed adequate for mineral resource estimation. The qualified persons offer the following comments and recommendations:

- SRM analysis shows almost complete coverage with very good accuracy and precision, represented by low bias values and outlier percentages respectively.

- Pulp duplicate analysis shows very good precision, while preparation and field duplicates, despite exceeding conventional acceptability limits, are considered of acceptable precision when taking into account the potential grade variability of the pallacos deposit type. Developing a check sample campaign is recommended to further verify these results through an independent, certified commercial (umpire) laboratory.

- Blank sample analysis, despite the sole use of low-grade rock samples instead of certified blanks, shows no apparent contamination. Acquiring or preparing certified blanks (fine and coarse) and inserting them systematically following industry standard QA/QC protocols is recommended.

- No check samples are available. Developing limited but regular check sample campaigns of different duplicate types is recommended, sending them to an independent, certified commercial (umpire) laboratory.

El Asiento and Tatasi-Portugalete QA/QC programs and their results present some issues that could be mitigated with additional sampling. However, given that these are not conventional deposits and that they are not going to be estimated in the traditional sense (e.g., kriging), being based instead on weighted averages, their silver assay databases can be deemed sufficiently adequate for this type of mineral resource estimation. The qualified persons offer the following comments and recommendations:

- SRM analysis shows acceptable accuracy and precision, though with moderate uncertainty given the low amount of control samples in both projects. Developing new sampling campaigns and increasing the SRM insertion rates to pre-2019 percentages is recommended.

- Pulp duplicate analysis shows marginally acceptable precision, while preparation and field duplicates, which exceed minimal acceptability conditions, are considered of lesser precision due to the uncertainty caused by the low number of samples, even after taking into account the potential grade variability of the Dumps deposit type. Developing new sampling campaigns and increasing the duplicate sample insertion rates to pre-2019 percentages is recommended, and/or a check sample campaign to further verify these results through an independent, certified commercial (umpire) laboratory.

- Blank sample analysis, despite the sole use of low-grade rock samples instead of certified blanks, shows no apparent contamination. Acquiring or preparing certified blanks (fine and coarse) and inserting them systematically following industry standard QA/QC protocols is recommended.

- No check samples are available. Developing limited but regular check sample campaigns of different duplicate types is recommended, sending them to an independent, certified commercial (umpire) laboratory.

Cachi Laguna QA/QC programs and their results, despite very minor issues, are acceptable, and its silver assay database is deemed adequate for mineral resource estimation. On the other hand, gold assays have basically not been controlled, which means that any estimation performed with this database should be considered as merely referential and not be categorized as resources. The qualified persons offer the following comments and recommendations:

- SRM analysis shows very good accuracy and precision, represented by low bias values and outlier percentages respectively.

- Duplicate analysis shows very good precision, despite the relatively low amount of field duplicates in comparison to pulp and preparation duplicates. Returning to a regular insertion rate of field duplicates is recommended.

- Blank sample analysis, despite the sole use of low-grade rock samples instead of certified blanks, shows no apparent contamination. Acquiring or preparing certified blanks (fine and coarse) and inserting them systematically following industry standard QA/QC protocols is recommended.

- Check sample analysis shows sufficiently good accuracy. Developing limited but regular check sample campaigns of different duplicate types is recommended, sending them to an independent, certified commercial (umpire) laboratory.

- In order to properly evaluate economic gold resources, developing a QA/QC program for future gold assays is an imperative. The qualified persons recommended that this program should include, where available, check samples taken from pulps with gold assays in the current database, to verify their results.

## 13 MINERAL PROCESSING AND METALLURGICAL TESTING

The San Bartolomé ore processing facility, situated Manquiri on the south east side of Cerro Rico, has been in continuous operation since commissioning by the Coeur. The facility includes metallurgical testing and analytical services for the San Bartolomé mine as well as for the other sources of mill feed from El Asiento, Tatasi-Portugalete, and Cachi Laguna and evaluation of new opportunities identified by the Company. Section 17 presents the flow of ore processing at San Bartolomé.

### 13.1 San Bartolomé Metallurgical Testing

Manquiri operates the San Bartolomé mil in manner consistent with that of Coeur. No new metallurgical tests have been performed recently for the pallaco material.

### 13.2 New Metallurgical Testing

Manquiri has conducted metallurgical tests on the new sources of mill feed identified in this TR. These tests consisted of bench-scale analyses to determine recovery rates of precious metals and consumption of various reagents of which sodium cyanide (NaCN) and lime (CaO) are most important. In general, all of the samples collected from El Asiento, Tatasi-Portugalete and Cachi Laguna were deemed compatible with the current mill processes though have yielded variable test results which may require some of the material to be blended with more amenable material to achieve satisfactory recoveries of precious metals. Table 13.1 lists the metallurgical results obtained from 16 samples collected.

**Table 13.1: Metallurgical Results from New Material Sources**

| Project | Silver (grades in grams per tonne) | | | | Reagent Consumption | | Other Elements | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Test Number | Head Grade | Tails Grade | % Recovery | Lime Kg/t | NaCN Kg/t | Au g/t | S % | Sn % | As % | Pb % | Zn % | Cu % | Fe % |
| El Asiento | MET-597 | 313.54 | 220.84 | 29.57 | 3.33 | 3.08 | 1.21 | 1.59 | 0.18 | 0.59 | 0.62 | 0.01 | 0.01 | 12.11 |
| | MET-598 | 403.77 | 132.97 | 67.07 | 2.65 | 2.92 | 1.19 | 1.13 | 0.11 | 0.07 | 0.53 | 0.01 | 0.01 | 5.98 |
| | MET-599 | 176.52 | 42.63 | 75.85 | 6.15 | 2.95 | 0.42 | 0.6 | 0.04 | 0.43 | 0.14 | 0.01 | 0.01 | 7.58 |
| | MET-600 | 328.89 | 90.00 | 72.64 | 6.00 | 3.76 | 0.47 | 1.2 | 0.06 | 0.71 | 0.24 | 0.01 | 0.01 | 6.12 |
| | MET-601 | 284.90 | 92.92 | 67.39 | 9.43 | 6.25 | 1.05 | 5.46 | 0.02 | 0.07 | 0.15 | 0.01 | 0.04 | 8.08 |
| | MET-602 | 315.78 | 83.21 | 73.65 | 13.10 | 4.70 | 1.41 | 1.67 | 0.03 | 0.39 | 0.22 | 0.01 | 0.01 | 7.45 |
| | MET-603 | 314.92 | 233.57 | 25.83 | 13.43 | 4.41 | 1.94 | 7.27 | 0.04 | 0.49 | 0.21 | 0.01 | 0.01 | 8.5 |
| | MET-604 | 146.84 | 100.00 | 31.90 | 3.75 | 3.15 | 0.66 | 2.24 | 0.03 | 0.3 | 0.12 | 0.01 | 0.01 | 5.75 |
| | Composite | 285.43 | 91.12 | 68.08 | 8.95 | 3.14 | 0.66 | 2.24 | 0.03 | 0.3 | 0.12 | 0.01 | 0.01 | 5.75 |
| Tatasi-Portugalete | MEC-727 | 306.32 | 146.34 | 52.23 | 6.76 | 39.39 | 0 | 2.68 | 0.01 | Not Determined | 2.16 | 0.22 | 0.01 | 6.76 |
| | MEC-728 | 293.7 | 95.37 | 67.53 | 7.06 | 18.55 | 0 | 1.67 | 0.01 | | 1.52 | 1.55 | 0.03 | 6.94 |
| | MEC-729 | 268.84 | 155.56 | 42.14 | 7.06 | 80.80 | 0 | 6.74 | 0 | | 1.95 | 1.04 | 0.03 | 8.44 |
| | MEC-730 | 256.46 | 135.99 | 46.97 | 8.59 | 56.92 | 0 | 3.38 | 0.01 | | 1.85 | 0.42 | 0.01 | 8.49 |
| | MEC-731 | 309.62 | 180.12 | 41.83 | 9.33 | 80.48 | 0 | 7.78 | 0.01 | | 1.32 | 0.43 | 0.01 | 5.32 |
| | MEC-732 | 216.34 | 103.44 | 52.19 | 8.00 | 100.00 | 0 | 5.67 | 0.01 | | 2.87 | 3.78 | 0.02 | 3.38 |
| | MEC-733 | 319.36 | 117.65 | 63.16 | 3.52 | 15.70 | 0 | 1.48 | 0.01 | | 2.02 | 0.14 | 0.01 | 5.06 |
| | MEC-734 | 235.51 | 115.12 | 51.12 | 4.73 | 23.88 | 0 | 2.43 | 0.01 | | 3.17 | 0.14 | 0.01 | 5.08 |
| | Composite | 238.92 | 111.17 | 53.47 | 7.33 | 50.17 | 0 | 3.31 | 0.09 | | 2.04 | 0.94 | 0.03 | 5.97 |
| Cachi Laguna | With $O_2$ | 551.69 | 154.81 | 71.94 | 6.01 | 13.59 | 0.43 | 2.11 | 1.29 | Not Determined | 12.89 | 0.06 | 0.18 | 3.07 |
| | Without $O_2$ | 551.69 | 147.06 | 73.34 | 5.60 | 13.56 | 0.43 | 2.11 | 1.29 | | 12.89 | 0.06 | 0.18 | 3.07 |

In comparison, metallurgical performance for the pallacos from San Bartolomé are shown in Table 13.2.

**Table 13.2: San Bartolomé Actual Metallurgical Data (Pallacos)**

| Time Period | Head Grade (Ag g/t) | Tails Grade (Ag g/t) | Recovery (%) | CaO (kg/t) | NaCN (kg/t) |
|---|---|---|---|---|---|
| 2020 (Quarter 1) | 84.6 | 4.4 | 94.8 | 4.58 | 1.73 |
| 2019 | 74.6 | 6.6 | 91.8 | 4.99 | 1.63 |
| 2018 | 80.9 | 8.7 | 89.2 | 5.00 | 1.45 |

## 13.3 Metallurgical Test Procedures

The following, standard procedures were used on the new sources of mill feed to determine amenability with the San Bartolomé processing plant.

1. Sample weights and other pertinent details recorded.
    a. Maximum sample weight was 20 kg.
2. All simple crushed in a jaw crusher (chancador) to reduce the sample particle size to <3 mesh (<7mm).
3. Roll crush to 2 to 4 mm particle size.
4. Pulverize to <2.2 mm (8 mesh).
5. Split approximately 1,500 g.
6. Add water to achieve approximately 68% solids (approximately 700 cc).
7. Lime to achieve pH of 11.
8. NaCN to the pulp of 2,000 mg/l.
9. Agitate and collect samples at 24, 48 and 72 hours for analysis of the solids and liquid.

In addition to the bench-scale test procedures, Manquiri also analyzes the test samples to determine geochemical characteristics; especially those that could affect metal recovery and reagent consumption (i.e. base metals, sulfur, antimony and arsenic). In the oxidized material, which Manquiri has processed (pallacos and some of the past production from purchased materials (Section 6). These deleterious components are normally not an impediment; in transitional and sulfidic materials, such elements may be a concern.

## 13.4 Qualified Persons' Comments

The qualified persons believe the metallurgical samples are representative of the various types and styles of mineralization referenced herein. Nonetheless, it is recommended that additional samples be collected routinely from all new material sources to allow for effective grade and metallurgical control before the material is processed. Care should be taken to separate visibly sulfidic material from oxidized material to ensure more consistent reagent consumption and metal recovery.

The qualified persons recognize that Manquiri's production from purchased sources of mill feed has been a source of important cash flow. Such material, sourced from El Asiento, Tatasi-Portugalete and Cachi Laguna, now forms part of the current mine plan disclosed in this technical report. The qualified persons believe that the use of similar material should continue as long as metallurgical test work and production (including tailings) capacity and costs are favorable.

# 14 MINERAL RESOURCE ESTIMATES

Several block models were prepared as part of the mineral resource estimation for the San Bartolome Project, and for Tatasi-Portugalete, El Asiento and Cachi Laguna. This section describes the process followed for each of them independently.

The mineral resource estimation was divided in three groups of deposits:

- San Bartolome Area: Pallacos deposits, divided in three areas, Antuco (formerly part of Diablo Norte), Santa Rita and Huacajchi, located close to the processing plant and part of the ongoing mining activities by Manquiri. Three block models were created for this area, one for each deposit.

- Tatasi-Portugalete and El Asiento: These are dumps from old mines in the area and not in situ deposits.

- Cachi Laguna: The Cachi Laguna area is formed by a series of veins and mineralized structures and was estimated as an independent unit.

Attending to the different nature of the above-mentioned deposits, three estimation approaches were followed, as described ahead in this section.

## 14.1 Pallacos Area

### *14.1.1 Geological Interpretation and Modeling*

Three geological models were developed by Manquiri in Leapfrog Geo™ software for the San Bartolomé pallacos areas: Antuco, Huacajchi and Santa Rita. Due to the nature of these deposits, the modelling process was based on more or less hard limits, the current surface topography and the bedrock or basement.

The NCL qualified persons checked current topography for consistency (as of February 29th, 2020; Figure 14.1) and the original one (before pit development on the mountain flanks), using all available tools and data, such as topographic delineation, sample pits/trenches/pozos and drilling, maps and political limits, among others, and they show a good fit. This means that topographies are up-to-date and built with the most modern methods.

**Figure 14.1: Current San Bartolomé Topography**

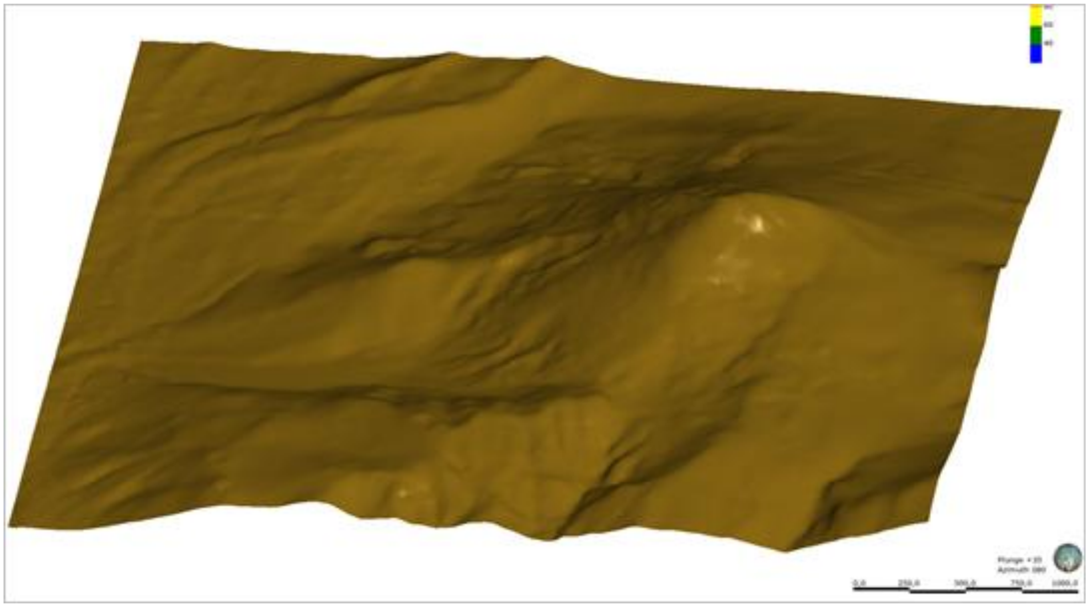
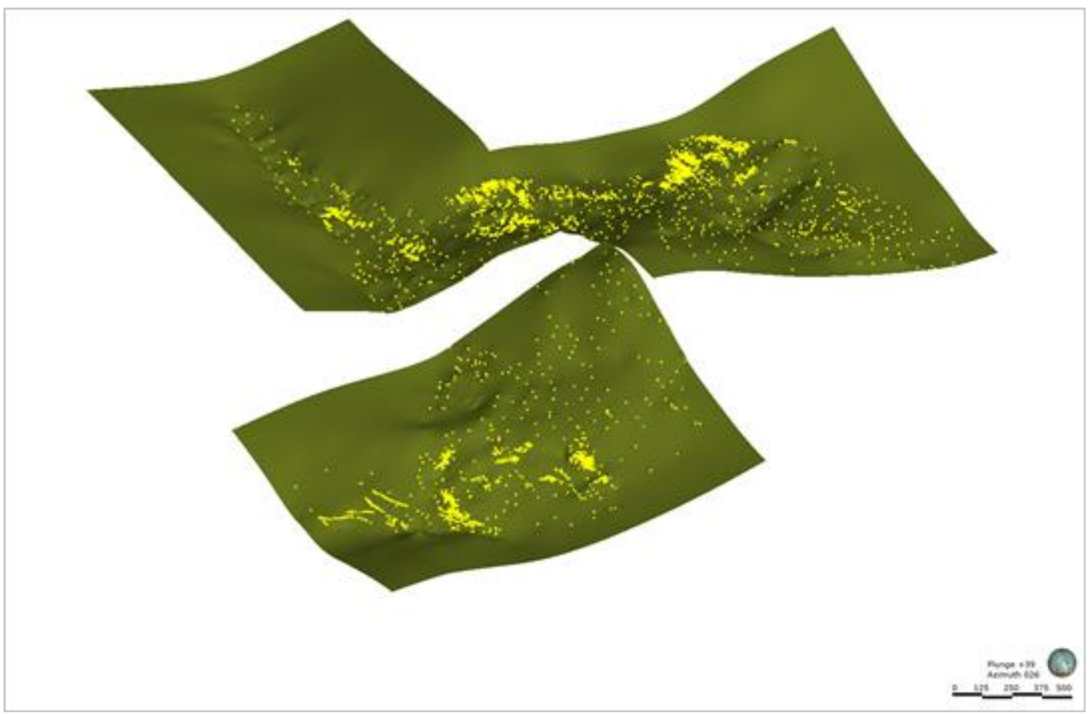
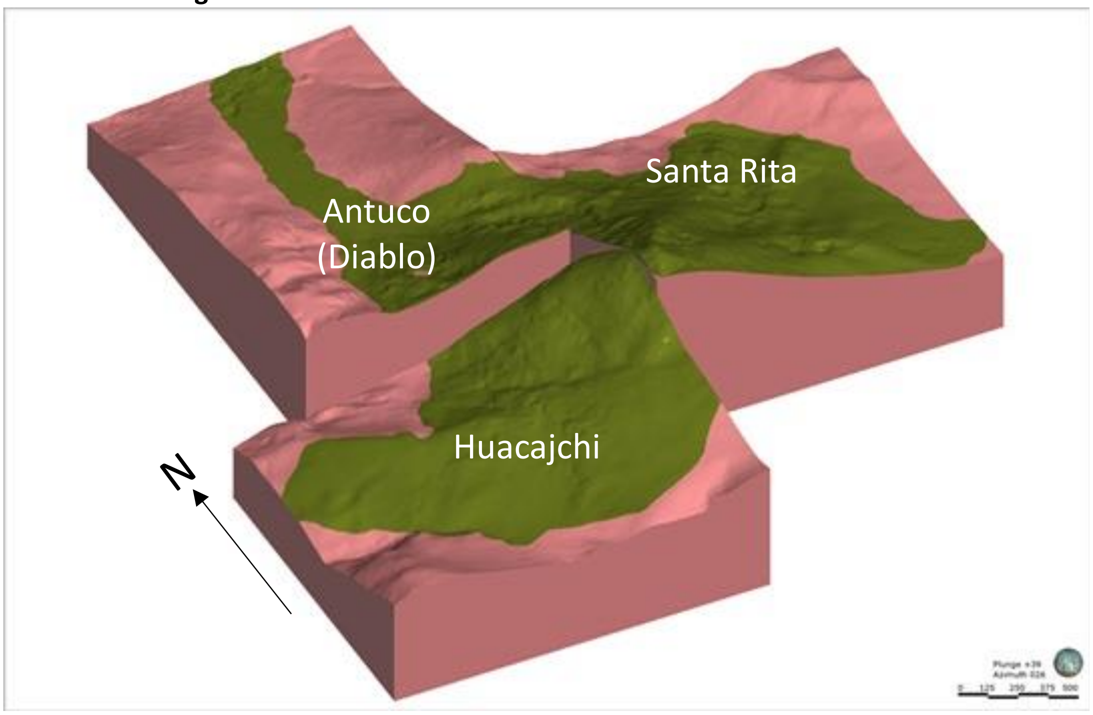


**Figure 14.2: San Bartolomé Bedrock Surfaces Interpolated from Base Points (yellow)**



The basement surface (bottom of the pallacos) is controlled by almost 3,000 data points coming from the various sample sites (Figure 14.2). The volume contained between these surfaces and the original topography corresponds to the pallacos deposits and provides the limits for the block model definition (Figure 14.3).

**Figure 14.3: San Bartolomé Pallacos and Bedrock Wireframes**




Figures 14.4 and 14.5 show cross-sections of the Antuco model, depicting the resulting pallacos and bedrock wireframes.

**Figure 14.4: Transverse Cross-Section through Antuco Pallacos and Bedrock Wireframes**
(Looking south, 182°)

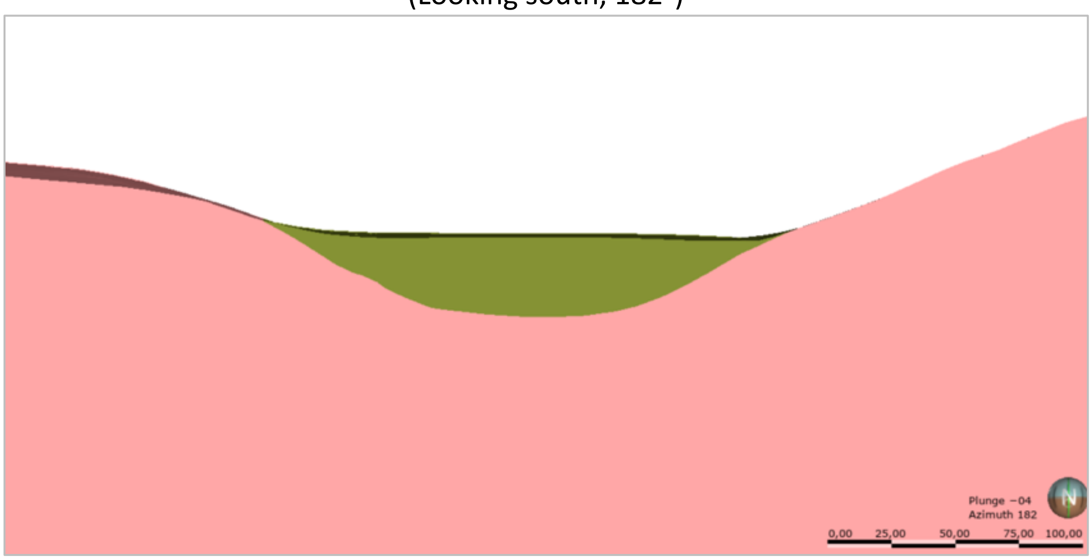
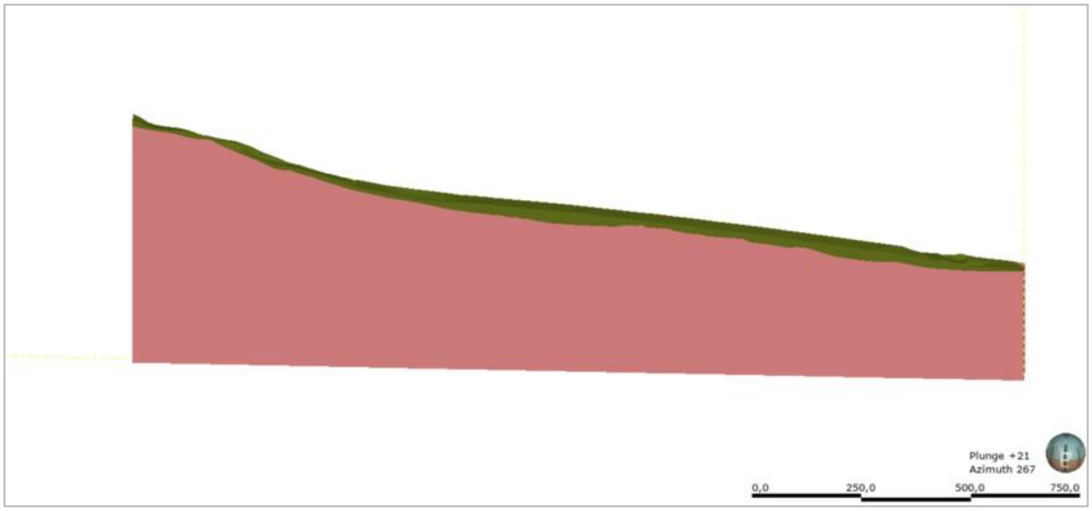
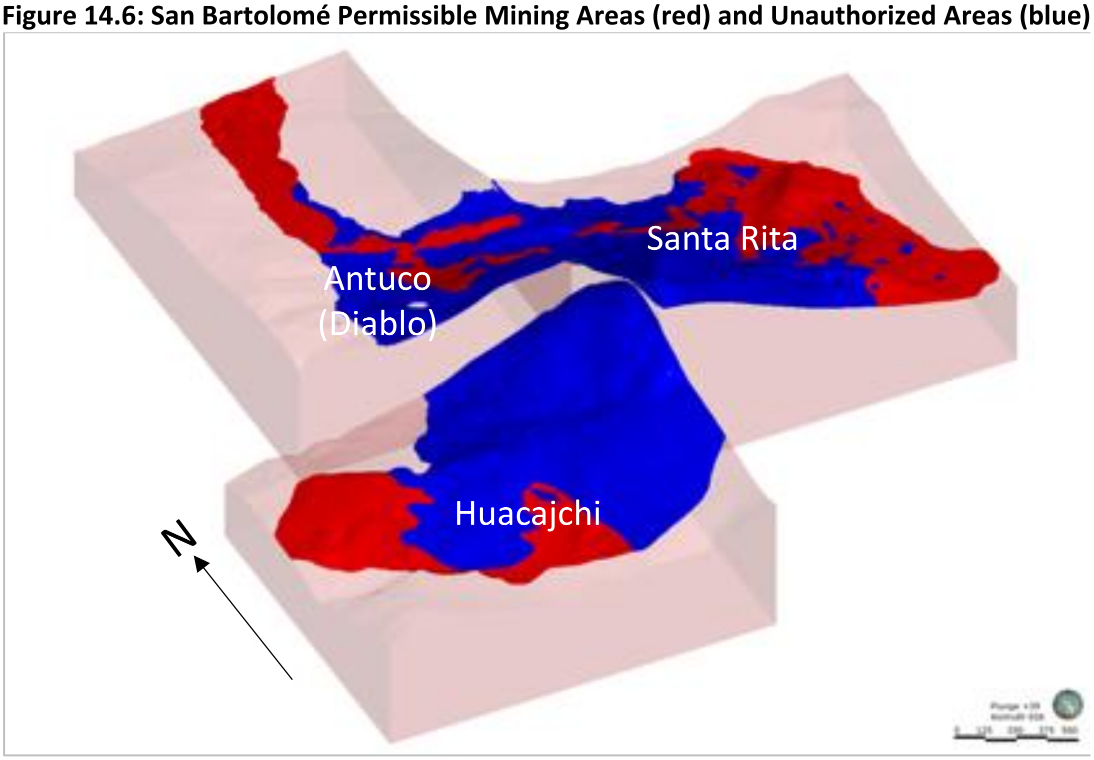


**Figure 14.5: Longitudinal Cross-Section through Antuco Pallacos and Bedrock Wireframes** (looking west 267º)




Subsequently, and due to legal, operative and logistical considerations (4,400 m operation height limit and existing mines, dumps, roads, etc.), a boundary was generated to delineate permissible mining areas within the pallacos (Figure 14.6).

**Figure 14.6: San Bartolomé Permissible Mining Areas (red) and Unauthorized Areas (blue)**




The block models to estimate the in situ mineral resources were generated inside the solids shown in figure 14.3 which include all the pallaco explored area.

### *14.1.2 Assay Data*

The database for the pallacos areas is composed of data collected by Asarco, Coeur and Manquiri. As mentioned in Coeur's NI 43-101 report: *"The Asarco data was validated to the extent possible and the Coeur data was collected using a standardized sampling and preparation protocol*". The protocol used by Coeur is described in the technical report by Tyler and Mondragon (2015) and the one used by Manquiri in Sections 11 and 12 of this document. The project's database for the pallacos area includes all exploration data collected until this report's effective date as well as the blastholes sampled during the exploitation by Manquiri. The following table shows the detail of the sample database used for the resource estimation for each sector of the pallacos area.

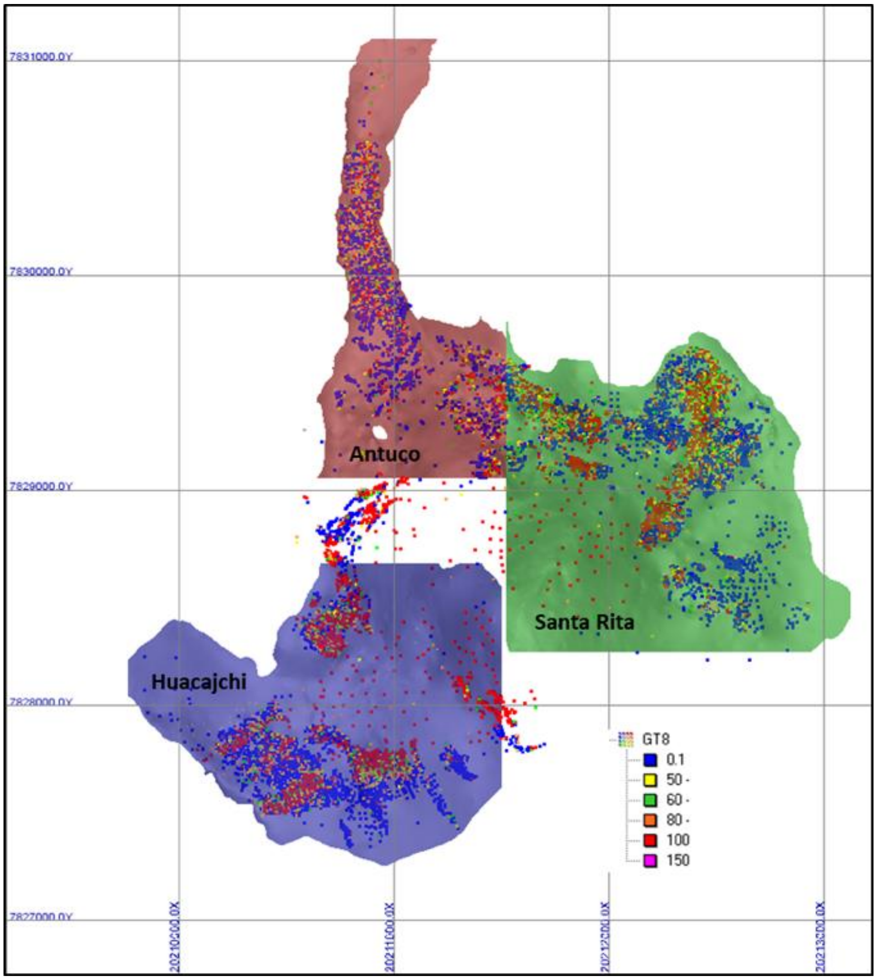
**Table 14.1: Summary of Sample Total – Pallacos**

| Samples | Number |
|---|---|
| # of drill holes | 29,939 |
| Drilled meters | 152,301 |
| Total samples Ag +8 mesh | 34,116 |
| Total samples Ag ROM | 26,918 |

Two silver grades were estimated for each of the deposits of the pallacos area: Ag ROM and Ag +8 mesh; been the first the grade of the Run-of-Mine (ROM) material and the second the grade of the ROM material after the washing process and the one representing the material to be fed to the mill. Additionally, the percentage of the ore (in weight) after the washing process was estimated.

As mentioned, there are several types of samples involved in the estimation process. The following map (Figure 14.7) shows the different types of samples used in the estimation of mineral resources.

**Figure 14.7: Sample Distribution and Sample Types**




*14.1.3 Block Models Dimensions.*

Three, independent block models were created, one for each of the above-mentioned sectors (Huacajchi; Santa Rita and Antuco). Block sizes were the same for all sectors: 7.0 m x 7.0 m x 5.0 m.

The following Table 14.2 shows the characteristics of the block models.

**Table 14.2: Block Models Dimensions – Pallacos Areas**

| Huacajchi | | | | |
|---|---|---|---|---|
| **Axis** | **Origin** | **N° of Blocks** | **Block Size** | **Extension (m)** |
| **X** | 20,209,764 | 316 | 7 | 2,212 |
| **Y** | 7,827,160 | 243 | 7 | 1,701 |
| **Z** | 3,896 | 196 | 5 | 980 |
| **Rotation** | 0 | | | |
| **Santa Rita** | | | | |
| **Axis** | **Origin** | **N° of Blocks** | **Block Size** | **Extension (m)** |
| **X** | 20,211,520 | 228 | 7 | 1,596 |
| **Y** | 7,828,255 | 220 | 7 | 1,540 |
| **Z** | 3,900 | 197 | 5 | 985 |
| **Rotation** | 0 | | | |
| **Antuco** | | | | |
| **Axis** | **Origin** | **N° of Blocks** | **Block Size** | **Extension (m)** |
| **X** | 20,210,302 | 174 | 7 | 1,218 |
| **Y** | 7,829,060 | 293 | 7 | 2,051 |
| **Z** | 3,860 | 114 | 5 | 570 |
| **Rotation** | 0 | | | |

The regular blocks models were used to create a percentage block model, where the percentage of each block inside the estimation solids is stored for mineral resource and reserve estimation.

### *14.1.4 Specific Gravity Data.*

Specific gravity values were assigned to each block using the three dimensional solids of the geological domains, maintaining the procedure defined by Coeur which has been successfully verified during the exploitation by Coeur and Manquiri. These solids are created combining the 2D domains outlines with the surfaces determined for topography and bedrock. The solids obtained are then assigned with a rock code and a specific gravity value.

Per Tyler and Mondragon (2015): "*During the original (pre-2007) exploration program, a total of 1,906 density determinations were taken from one-cubic meter samples. The most recent exploration sampling (2010 to present) produced 1,210 additional density determinations which confirm the original average density used in the resource model.*"

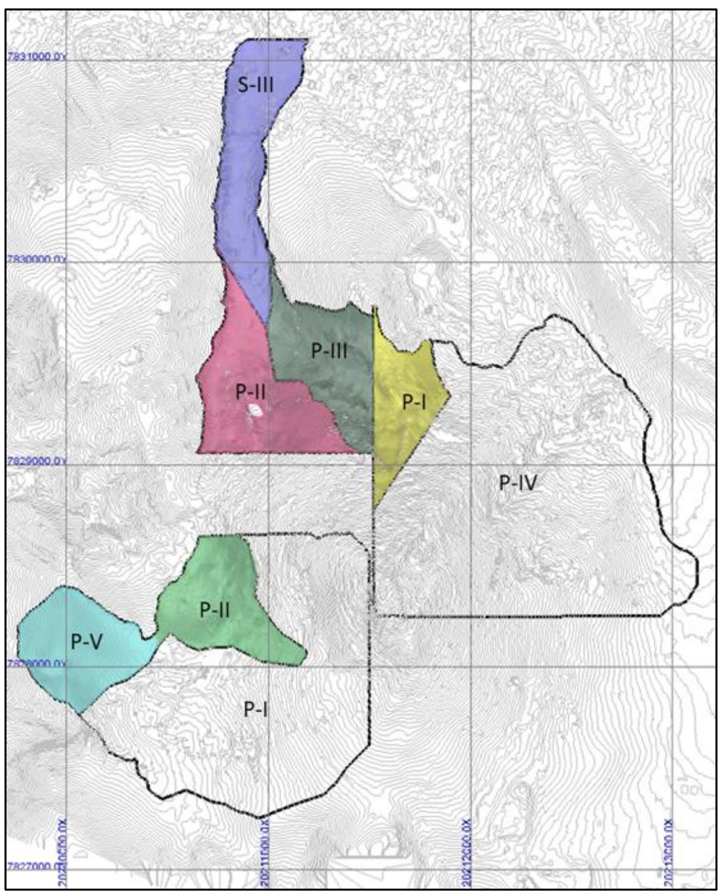
The geological domains and their specific gravity values are shown in the following table, where values for screened and ROM ore are displayed.

**Table 14.3: Specific Gravity Values – Pallacos Areas**

| Deposit | Domain | Specific Gravity | |
|---|---|---|---|
| | | Screened Ore | ROM Ore |
| | | (t/m3) | |
| Huacajchi | P-I | 2.08 | 2.08 |
| | P-II | 2.04 | 2.04 |
| | P-V | 2.23 | |
| | P-VI | 1.5 | |
| Santa Rita | P-I | 2.02 | 1.89 |
| | P-IV | 2.02 | 1.63 |
| | P-VI | 2.02 | |
| Antuco | P-II | 1.61 | 1.61 |
| | P-III | 1.87 | 1.84 |
| | S-III | 1.98 | |

The following figure shows the solids defining the specific gravity domains mentioned in table 14.3.

**Figure 14.8: Three-D Solids – Specific Gravity Domains – Pallacos Areas**



Due to the nature of the pallaco deposits, specific gravity varies significantly at a local scale and therefore the density of the mined ore varies. Manquiri maintains constant monitoring of the specific gravity of the mined ore, through reconciliations of production data and the haulage payment to the small contractors of the mines.

### *14.1.5 Statistical Analysis.*

All samples were coded according to the position of their block centroids and the solid of each estimation area and statistics for Ag ROM ("run of mine"), Ag GT8 ("greater than 8 mesh") and W ("weight") calculated. No compositing was done and samples were used as they are in the database.

Figures obtained are summarized in the following table:

**Table 14.4: Sample Statistics – Pallacos**

| Area | Grade | N° Samples | Min | Max | Average | STD | CV |
|---|---|---|---|---|---|---|---|
| Huacajchi | AG GT8 | 7,824 | 0.00 | 761.6 | 118.6 | 78.37 | 0.66 |
| | AG ROM | 6,503 | 0.01 | 999.0 | 98.5 | 85.77 | 0.87 |
| | W GT8 | 719 | 0.00 | 96.6 | 60.9 | 14.48 | 0.24 |
| Santa Rita | AG GT8 | 13,268 | 1.00 | 846.2 | 95.8 | 70.76 | 0.74 |
| | AG ROM | 9,876 | 0.00 | 1573.4 | 85.4 | 77.24 | 0.90 |
| | W GT8 | 1,978 | 0.00 | 98.6 | 57.6 | 13.02 | 0.23 |
| Antuco | AG GT8 | 10,725 | 0.00 | 778.4 | 96.4 | 56.86 | 0.59 |
| | AG ROM | 8,890 | 0.00 | 1501.9 | 81.8 | 70.61 | 0.86 |
| | W GT8 | 1,181 | 0.00 | 100.0 | 57.6 | 16.31 | 0.28 |

**RC versus Channel Samples** - Before the grade estimation process, an analysis of the Reverse Circulation (RC) versus Channel samples was done, to explore the compatibility of the information of both types of samples. To do this, an analysis of sample pairs closer than 10 meters was done. QQ Plots of the silver grade for each one of the estimation sectors were prepared. No major differences between these sample types were identified and it was concluded that there are no problems in using the whole population of samples together for grade interpolation purposes.

**Outliers -** The sample distributions show low variability for all sectors and grade types; nevertheless; the presence of some outliers was identified in all populations. Log probability plots were prepared for all sectors and variables to interpolate and used to identify the anomalous samples at the upper end of the distributions.

The following table shows the outliers limits per variable and pallaco sector.

**Table 14.5: Outliers Limits – Pallaco Areas**

| Area | Ag ROM (g/t) | Ag Gt8 (g/t) | W Gt8 (%) |
|---|---|---|---|
| | Capping | Capping | Capping |
| Huacajchi | 600 | 580 | 85 |
| Santa Rita | 500 | 600 | 90 |
| Antuco | 650 | 350 | 85 |

*14.1.6 Variography.*

Before to the calculation of the variograms for the different variables to estimate, a visual inspection of the sample distribution and their grade values was done. Experience from the ongoing exploitation and from previous studies was also reviewed before the mathematical analysis. The steepest down-slope direction is, in most of the times, the most obvious direction to consider as the main grade trend.

Even considering the particular geometry of the pallacos deposits, downhole correlograms were calculated in order to obtain the nugget effect for all variables. Stable correlograms were obtained for Ag and Ag GT8. Parameters for the adjusted correlograms are shown in the following table:

**Table 14.6: Experimental Correlograms Models**

| Area | Nugget | 1st Structure | | | | 2nd Structure | | | | 3rd Structure | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sill1 | Range (m) | | | Sill2 | Range (m) | | | Sill3 | Range (m) | | |
| | | | X' | Y' | Z' | | X' | Y' | Z' | | X' | Y' | Z' |
| Huacajchi | 0 | 0.45 | 18 | 14 | 7 | 0.30 | 35 | 60 | 90 | 0.25 | 350 | 100 | 90 |
| Santa Rita | 0 | 0.50 | 11 | 5 | 10 | 0.25 | 22 | 10 | 10 | 0.25 | 180 | 150 | 40 |
| Antuco | 0 | 0.85 | 7 | 6 | 7 | 0.15 | 45 | 45 | 30 | | | | |

The above-mentioned correlograms were used to estimate Ag and Ag GT8 grades.

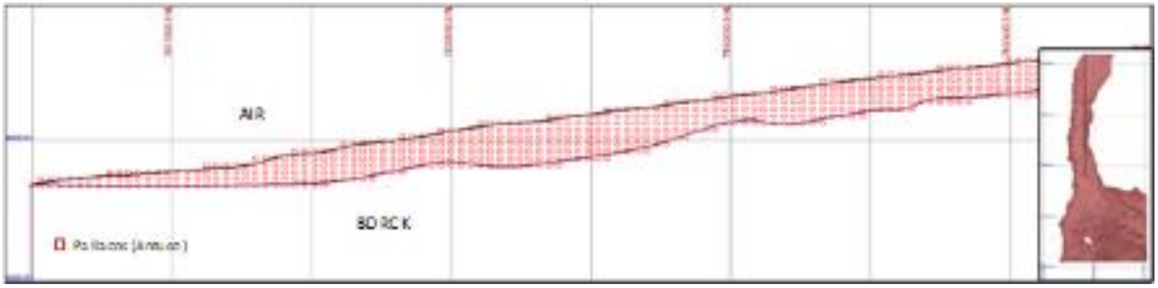
*14.1.7 Geological Model Coding.*

Blocks in the model were coded using the geological solids described in point 14.1.2. A percentage model was used, where the percentage of each block inside the solids is stored for further tonnage calculations.

All blocks outside the geological solids and below the surface topography were coded as waste rock.

A validation of the correctness of the rock coding was done, checking some sections and plans on screen. Figure 14.9 shows an E-W section, with the solid's contour and the block model.

**Figure 14.9: Geological Model – Section A-A´ – Pallacos Areas (looking east)**




### *14.1.8 Kriging Plans*

Once the correlograms were calculated and adjusted for each population, grade values for Ag and Ag GT8 were estimated using Ordinary Kriging, attending to the nature of the deposit and the data availability. The kriging was done using the software Gems. W values were interpolated using Inverse Distance to the power of two (ID2).

Three kriging plans were defined, to be executed in sequential order. The general concept is to "fill" the grades model, starting with a restrictive estimation plan, which considers only interpolation between drill holes, separated distances below the equivalent of 85% of the variogram sill. Then, the following plans increase the search distance and release other restriction gradually, until the estimation is complete.

In Antuco and Santa Rita, some blocks in the outer extreme of the solids remained not estimated after the third run, so a fourth run was done with an extremely large search radio, just to ensure that all blocks inside the estimation solids are filled with a grade value.

The distance, where the correlogram reaches the value equivalent to 85% of the sill, is called $D_{85}$, and is used as a referential value to the different kriging plans.

The geometric parameters of the estimation of each kriging plan are shown in Table 14.7.

**Table 14.7: Kriging Plan Parameters – Pallacos Areas**

| Estimation Plan | Run 1 | Run 2 | Run 3 | Run 4 |
|---|---|---|---|---|
| Min N° of Samples | 6 | 6 | 1 | 1 |
| Max N° of Samples | 18 | 18 | 18 | 18 |
| Min N° of Octants with inf. | 3 | 3 | 1 | 1 |
| Max N° Sample per octant | 3 | 3 | 1 | 1 |
| Search Range | $D_{85}$ | 2 x $D_{85}$ | 4 x $D_{85}$ | 1000 |

Each population of blocks was estimated with samples of the same population.

The utilized $D_{85}$ for each population are shown in Table 14.8. It can be noted that anisotropic search was used for all estimation units:

**Table 14.8: $D_{85}$ per Direction and Population (m)**

| Area | $D_{85}$ - X | $D_{85}$ - Y | $D_{85}$ - Z |
|---|---|---|---|
| Huacajchi | 65 | 80 | 45 |
| Santa Rita | 12 | 50 | 20 |
| Antuco | 14 | 20 | 20 |

### *14.1.9 Grade Estimation Results.*

Table 14.9 summarizes the number of blocks estimated in each kriging pass per kriging domain.

**Table 14.9: Estimation Results – Pallacos Areas**

| AG | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sector | Total Nº Blocks | Estimated in 1st Pass | | Estimated in 2st Pass | | Estimated in 3st Pass | | Estimated in 4st Pass | | Total | |
| | | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated |
| Huacajchi | 139,834 | 88,104 | 63% | 34,622 | 25% | 17,108 | 12% | | 0% | 139,834 | 100% |
| Santa Rita | 168,957 | 41,699 | 25% | 37,135 | 22% | 89,833 | 53% | 290 | 0% | 168,957 | 100% |
| Antuco | 76,868 | 13,277 | 17% | 19,351 | 25% | 43,276 | 56% | 964 | 1% | 76,868 | 100% |
| Total | 385,659 | **143,080** | **37%** | **91,108** | **24%** | **150,217** | **39%** | **1,254** | **0%** | **385,659** | **100%** |

| AG_GT8 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sector | Total Nº Blocks | Estimated in 1st Pass | | Estimated in 2st Pass | | Estimated in 3st Pass | | Estimated in 4st Pass | | Total | |
| | | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated |
| Huacajchi | 139,834 | 72,369 | 52% | 25,245 | 18% | 42,220 | 30% | | 0% | 139,834 | 100% |
| Santa Rita | 168,957 | 49,697 | 29% | 30,851 | 18% | 66,006 | 39% | 22,403 | 13% | 168,957 | 100% |
| Antuco | 76,868 | 21,324 | 28% | 15,994 | 21% | 38,461 | 50% | 1,089 | 1% | 76,868 | 100% |
| Total | 385,659 | **143,390** | **37%** | **72,090** | **19%** | **146,687** | **38%** | **23,492** | **6%** | **385,659** | **100%** |

| W_GT8 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sector | Total Nº Blocks | Estimated in 1st Pass | | Estimated in 2st Pass | | Estimated in 3st Pass | | Estimated in 4st Pass | | Total | |
| | | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated | N° of Blocks | % Estimated |
| Huacajchi | 139,834 | 14,119 | 10% | 44,639 | 32% | 81,076 | 58% | | 0% | 139,834 | 100% |
| Santa Rita | 168,957 | 5,102 | 3% | 12,372 | 7% | 120,294 | 71% | 31,189 | 18% | 168,957 | 100% |
| Antuco | 76,868 | 1,761 | 2% | 2,813 | 4% | 60,786 | 79% | 11,508 | 15% | 76,868 | 100% |
| Total | 385,659 | **20,982** | **5%** | **59,824** | **16%** | **262,156** | **68%** | **42,697** | **11%** | **385,659** | **100%** |

### *14.1.10 Classification of Mineral Resources.*

Mineral resource classification has been done according to CIM Guidelines and conditioned by the number and location of samples in the neighborhood of each block. A three-pass scheme was used to classify mineral resources.

> The 1$^{st}$ pass classification generates block estimates using a minimum of two drill intercepts, both within distances shorter than the $D_{85}$ (distance corresponding to

the point where the correlogram reaches 85% of the variogram sill). Pass 1 generates measured resources.

The 2nd pass maintains the restriction of the number of drill intercepts, but enlarges the search range by twice the $D_{85}$. Pass 2 generates Indicated resources.

The 3rd pass extends the search radius to 4 times the $D_{85}$ and reduces the number of drill holes within this range to one, generating Inferred Resource.

A 4th pass was added using a very large search radio, in order to ensure that all the blocks inside the geological model are estimated. This pass did not generate compliant mineral resources but allows for a qualified view of future potential mineralized rock (that would require additional work to produce mineral resources).

Taking these criteria into account, the categorization of resources has been done according to Table 14.10.

**Table 14.10: Kriging Runs and Mineral Resource Classification**

| N° Kriging | Search Range | N° Intercepts | Classification |
|---|---|---|---|
| 1 | $D_{85}$ | 2 | Measured |
| 2 | 2 x $D_{85}$ | 2 | Indicated |
| 3 | 4 x $D_{85}$ | 1 | Inferred |
| 4 | 1000 m | 1 | Potentially |

A classification code was added to the block model. The codes utilized to this model are: 1, Measured; 2 Indicated; 3 Inferred and 4 Potentially mineralized rock.

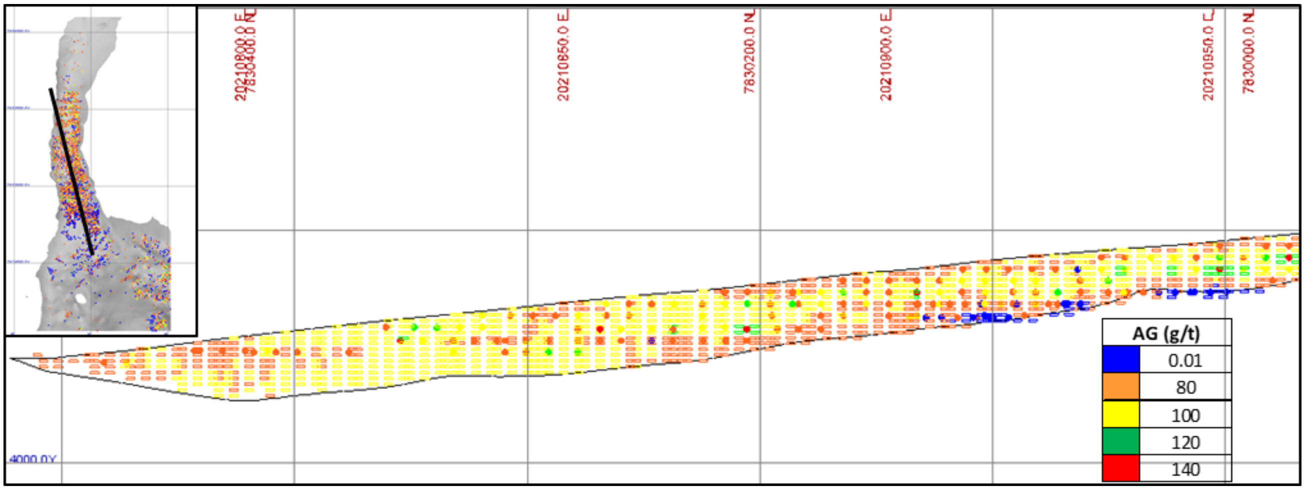
### *14.1.11 Mineral Resource Model Validation.*

Three validation exercises were done in order to ensure the quality of the generated block model, as discussed in this chapter. The results of these validations are presented below.

#### *14.1.11.1 Visual Validation*

A visual inspection on screen of several plan views and vertical sections of the block model was done and the grades of the blocks and the drill holes have been compared. Also, the resource classification was analyzed comparing the existing information. As an example, the results of this validation are presented in Figures 14.10.

**Figure 14.10: Block Model Visual Validation – Ag GT8 – Section YY - Antuco (looking east)**




The grades of composites and blocks have been compared statistically. Tables 14.11 and 14.12 present a comparison of the basic statistic of composites and blocks per area. Also included in the comparative table are the declustered grades, obtained through the technique of nearest neighbors.

**Table 14.11: Statistical Validation – Blocks versus Samples Ag – Pallaco Areas**

| Sector | Data Type | N° Samples | Min (g/t) | Max (g/t) | Average (g/t) | STD | C.V. |
|---|---|---|---|---|---|---|---|
| Huacajchi | Kriged Blocks | 139,834 | 4.88 | 545.5 | 101.4 | 74.5 | 0.73 |
| | NN Blocks | 139,834 | 0.01 | 600.0 | 101.3 | 103.8 | 1.02 |
| | Samples | 5,035 | 0.01 | 600.0 | 90.2 | 75.0 | 0.83 |
| Santa Rita | Kriged Blocks | 146,554 | 8.10 | 392.0 | 77.8 | 47.2 | 0.61 |
| | NN Blocks | 146,554 | 0.80 | 500.0 | 76.2 | 68.9 | 0.90 |
| | Samples | 7,231 | 0.80 | 500.0 | 83.4 | 65.3 | 0.78 |
| Antuco | Kriged Blocks | 75,779 | 5.42 | 339.3 | 68.5 | 27.0 | 0.39 |
| | NN Blocks | 75,779 | 0.00 | 650.0 | 68.4 | 56.7 | 0.83 |
| | Samples | 4,450 | 0.00 | 650.0 | 73.3 | 59.7 | 0.82 |

**Table 14.12: Statistical Comparison – Blocks versus Samples Ag GT8 – Pallacos Areas**

| Sector | Data Type | N° Samples | Min (g/t) | Max (g/t) | Average (g/t) | STD | C.V. |
|---|---|---|---|---|---|---|---|
| Huacajchi | Kriged Blocks | 139,834 | 3.77 | 580.0 | 146.6 | 114.8 | 0.78 |
| | NN Blocks | 139,834 | 0.01 | 580.0 | 147.8 | 140.9 | 0.95 |
| | Samples | 7,305 | 0.01 | 580.0 | 114.0 | 73.7 | 0.65 |
| Santa Rita | Kriged Blocks | 146,554 | 3.89 | 432.8 | 92.0 | 49.7 | 0.54 |
| | NN Blocks | 146,554 | 1.00 | 600.0 | 89.4 | 68.9 | 0.77 |
| | Samples | 11,469 | 1.00 | 600.0 | 96.7 | 64.6 | 0.67 |
| Antuco | Kriged Blocks | 75,779 | 4.29 | 307.7 | 87.7 | 29.5 | 0.34 |
| | NN Blocks | 75,779 | 0.01 | 350.0 | 88.3 | 51.8 | 0.59 |
| | Samples | 6,725 | 0.01 | 350.0 | 92.1 | 48.9 | 0.53 |

From tables 14.11 and 14.12 it was concluded that the estimation generates robust results, from a statistical point of view, showing no global bias.

*14.1.11.3 Trend Analyses.*

For trend analyses, the block models were divided in slices of 100 meters in the North-South direction, 80 meters in the East-West direction and 20 meters in vertical. The mean and the declustered mean of the samples have been compared with the block results. In order to decluster the samples, the method of nearest neighbor was used, introducing a third figure in the analysis. The following figures show, as an example, the graphs for Ag-GT8 for Santa Rita in the three directions analyzed. Graphs (Swath Plots) include the number of samples per slice as a graph bar to show the information density per slice.

**Figure 14.11: East-West Trend Analysis – Ag GT8 – Santa Rita**

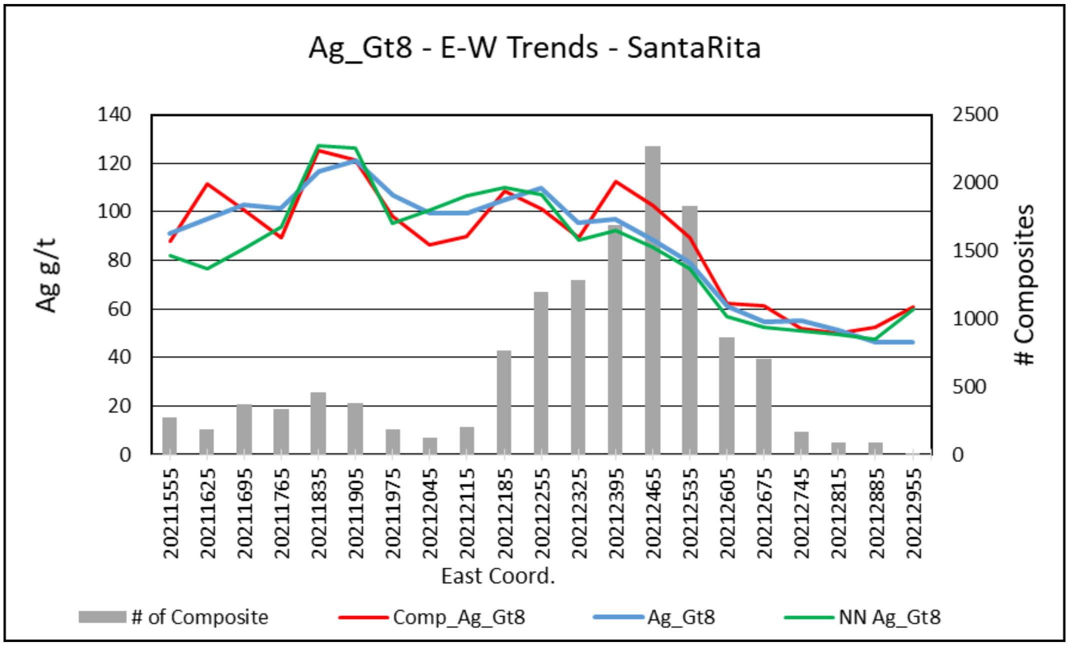



**Figure 14.12: North-South Trend Analysis – Ag GT8 – Santa Rita**

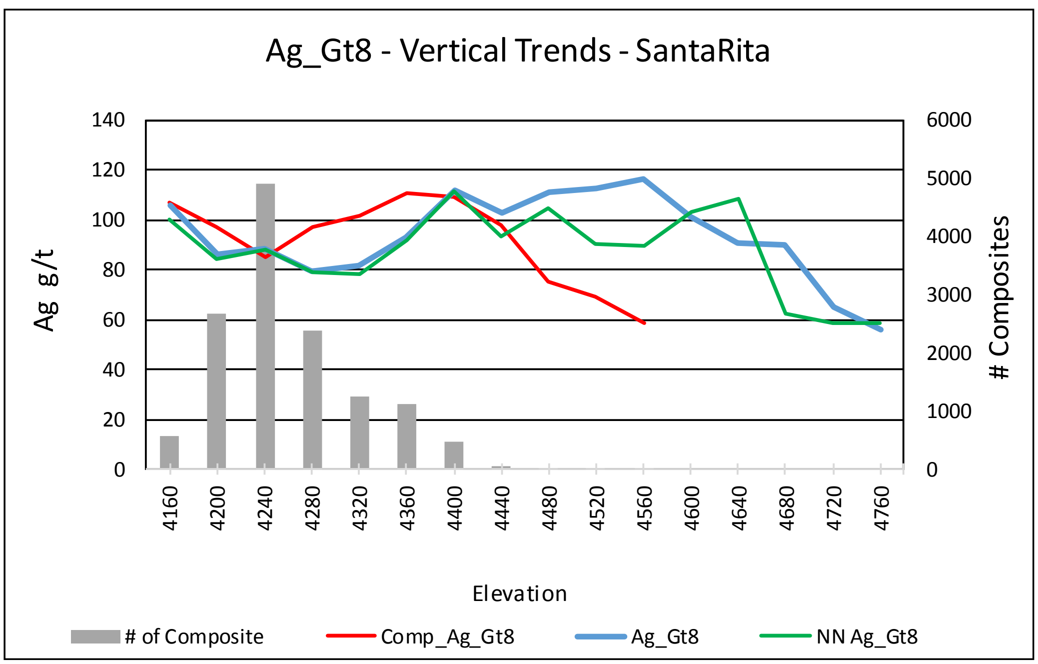
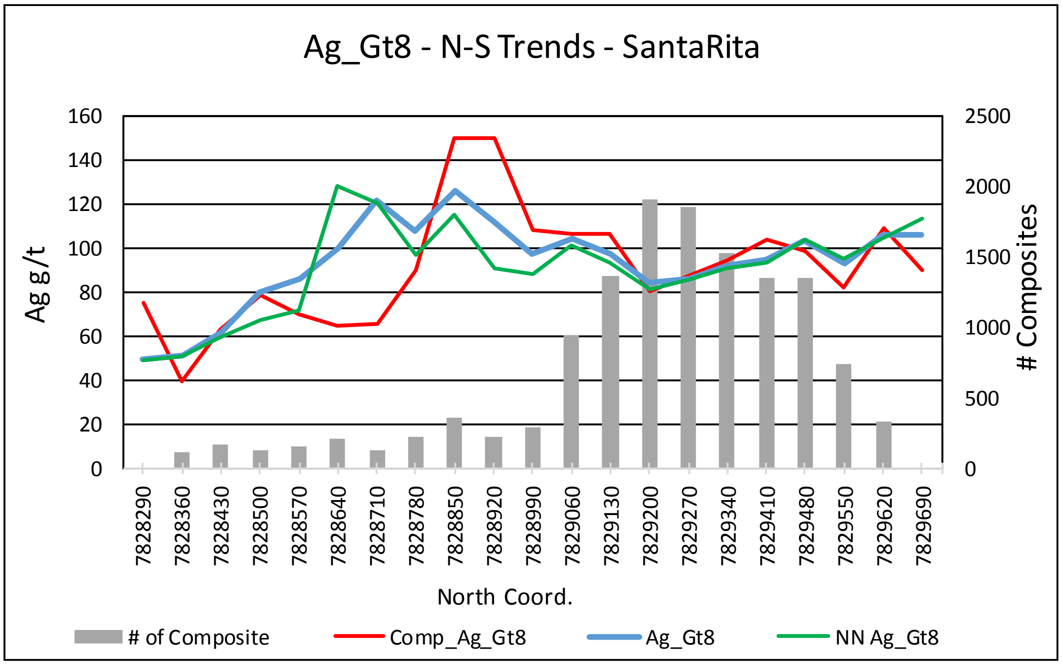


**Figure 14.13: Vertical Trend Analysis – Ag GT8 – Santa Rita**




The same analysis was made for the rest of the variables and pallaco areas and, in general, the estimated mean behaves in a satisfactory way, similarly with the declustered mean. An excessive smoothing is not observed.

From all the validations performed to the pallacos models, it is concluded that the estimated grades preserve the characteristic of the mean grade, global variability and tendencies of the original samples and that they are representative of the deposits.

### *14.1.12 Reasonable Prospects for Eventual Economic Extraction*

The CIM Definition Standards for Mineral Resources and Mineral Reserves (May 2014) establish a Mineral Resource as:

*"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."*

The above definition normally implies that there exists some quantity of material that meets a defined economic threshold and that the Mineral Resources are reported at an adequate cutoff Grade (COG) that considers the defined technical-economic scenario assumed for the project. It must be clarified that Mineral resources are not Mineral Reserves, as they haven't demonstrated their economic viability yet.

Once the block models for pallacos were finished and validated, Whittle pits were run using the technical parameters in Table 14.13.

**Table 14.13: Technical and Economic Parameters for Whittle Runs – Pallacos Areas**

| Economical Parameters | Antuco | Santa Rita | Huacajchi |
|---|---|---|---|
| Ag Ounce Price (US$/oz) | 19 | 19 | 19 |
| Au Ounce Price (US$/oz) | 1,500 | 1,500 | 1,500 |
| Ag Recovery | 90.0% | 90.0% | 90.0% |
| Mining cost (US$/t) | 3.50 | 3.50 | 3.50 |
| Transport (US$/t) | 3.25 | 1.98 | 1.51 |
| Washing (+8) (US$/t) | 0.18 | 0.18 | 0.18 |
| Process (US$/t) | 18.63 | 18.63 | 18.63 |
| Tails dam (US$/t) | 1.54 | 1.54 | 1.54 |
| G&A (US$/t) | 5.85 | 5.85 | 5.85 |
| Smelting ASAHI (US$/oz) | 0.33 | 0.33 | 0.33 |
| COMIBOL 4% (US$/oz) | 4.0% | 4.0% | 4.0% |
| Royalties 6% (US$/oz) | 6.0% | 6.0% | 6.0% |
| **Cutoff (g/t Ag)** | **60.5** | **57.9** | **56.9** |

The above-mentioned parameters are based on the ongoing pallacos operation and are considered representative for Resource definition.

### *14.1.13 Other Considerations and Criteria Used for the Optimization Process.*

Manquiri defined a restriction polygon for each sector. These polygons include restrictions due to the following conditions: mined areas, bedrock outcrops, train lines and small miners' infrastructure, power and water lines and other surface features that are uneconomic to be removed. The surface polygons representing these areas were provided by Manquiri and are shown in the following figures:

**Figure 14.14: Mineable Area – Antuco.**

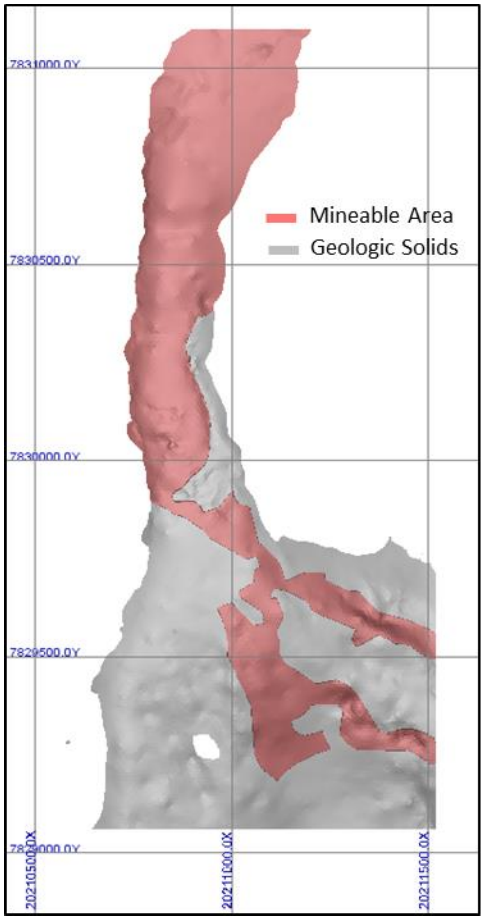



**Figure 14.15: Mineable Area – Santa Rita**

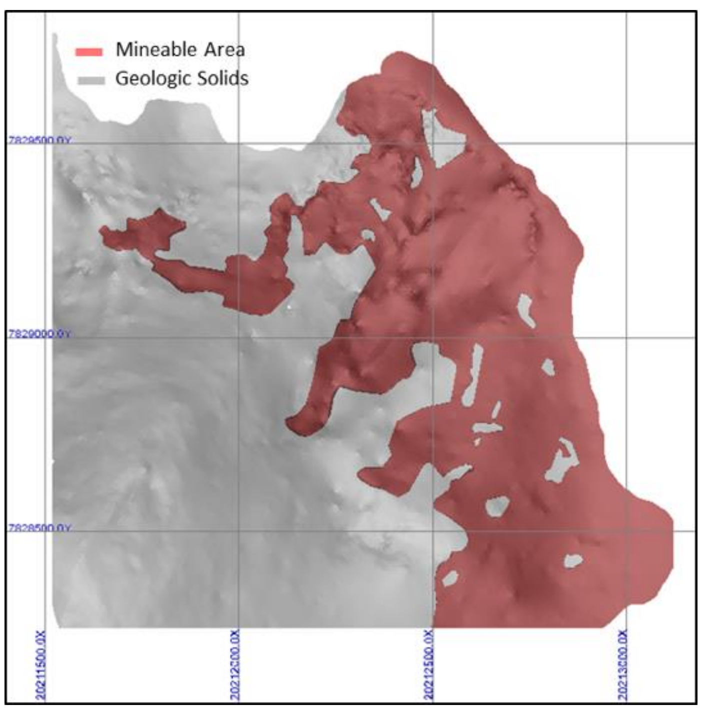
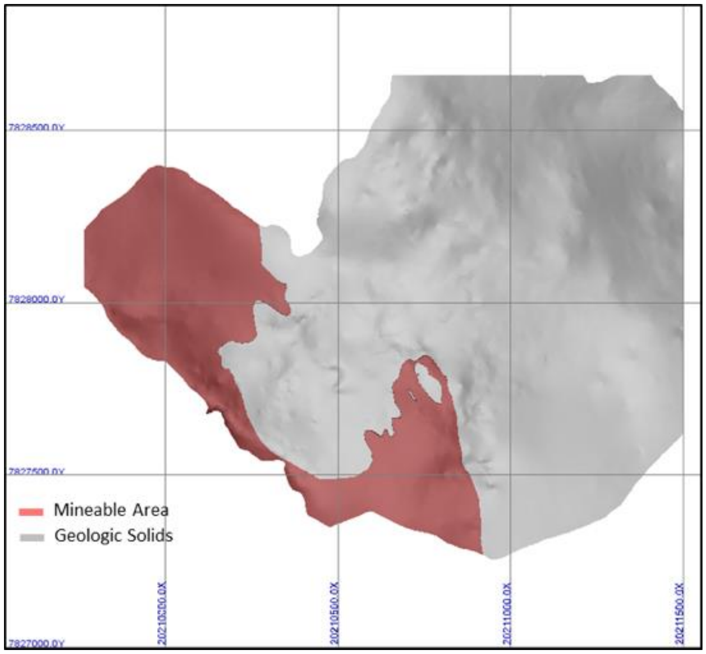


**Figure 14.16: Mineable Area – Huacajchi**




For optimization purposes, these areas were considered as solid boundaries and the optimization runs blocked to move any block outside them.

Additional to the "mineable areas" restriction, the following considerations were made before the optimization runs:

- All material outside the geological zones is considered as waste, at zero grade.
- Measured, Indicated and Inferred categories were considered as valuable.
- No dilution was added during the optimization process, attending to the nature of the pallacos deposits, ongoing experience by Manquiri and the mining technique utilized.
- Using the technical economical parameters described above, the following are the cutoff grade values for each pallacos area, expressed in Ag GT8 grade, as this is the variable of the ore fed to the processing plant.

| | |
|---|---|
| Antuco: | 60.5 g/t Ag GT8 |
| Santa Rita: | 57.9 g/t Ag GT8 |
| Huacajchi: | 56.9 g/t Ag GT8 |

### 14.1.14 *Mineral Resource Estimate.*

The envelopes from the optimization runs were used to calculate the resource for each of the pallacos sectors. Table 14.14 summarizes the Resource for each area per category, using the above-mentioned COG values.

**Table 14.14: Resource per Category – Pallacos Areas**

| Sector | Measured | | Indicated | | Measured + Indicated | | | Inferred | |
|---|---|---|---|---|---|---|---|---|---|
| | W+8 | Ag GT8 | W+8 | Ag GT8 | W+8 | Ag GT8 | Ag_GT8 | W+8 | Ag GT8 |
| | t | g/t | t | g/t | t | g/t | oz | t | g/t |
| **Huacajchi** | 497,000 | 106 | 73,000 | 112 | 570,000 | 107 | 1,955,445 | 2,000 | 88 |
| **Santa Rita** | 1,438,000 | 111 | 1,018,000 | 106 | 2,456,000 | 109 | 8,595,949 | 366,000 | 99 |
| **Antuco** | 599,000 | 105 | 785,000 | 116 | 1,384,000 | 111 | 4,946,769 | 949,000 | 113 |
| **Total** | 2,535,000 | 108 | 1,876,000 | 110 | 4,411,000 | 109 | 15,427,506 | 1,317,000 | 109 |

Notes:

- Mineral resources are reported within a constraining pit shell developed using Whittle™ software. Assumptions include a metal price of US$19.00/oz for Ag and process recoveries of 90% for Ag US$ 3.50/t of mining. US$18.63/tonne for processing, and US$ 5.85/t G&A.
- Assumptions include 100% mining recovery.
- Quantities and grades in a mineral resource estimate are rounded to an appropriate number of significant figures to reflect that they are approximations.

The following figures show the resultant pit envelopes for each pallacos area.

**Figure 14.17: Resource Pit and Ag GT8 Block Model – Antuco (looking east)**

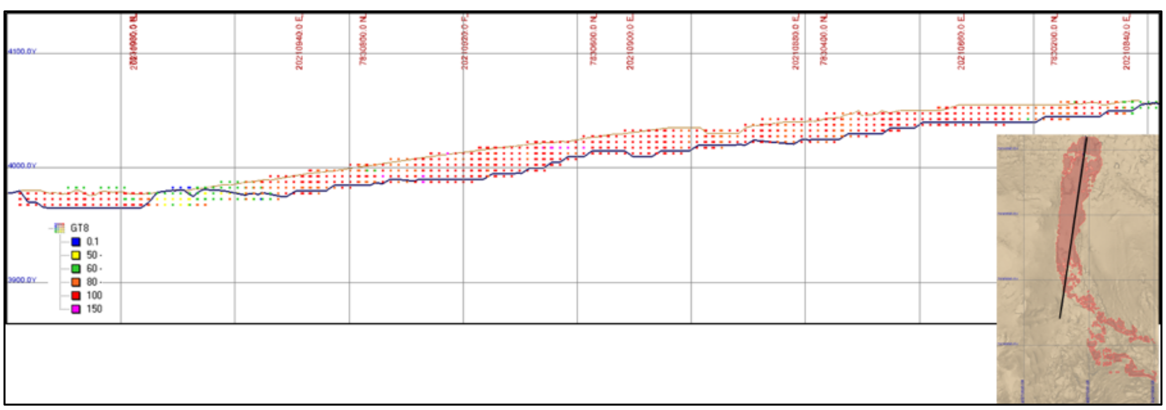


**Figure 14.18: Resource Pit and Ag GT8 Block Model – Santa Rita (looking southeast)**

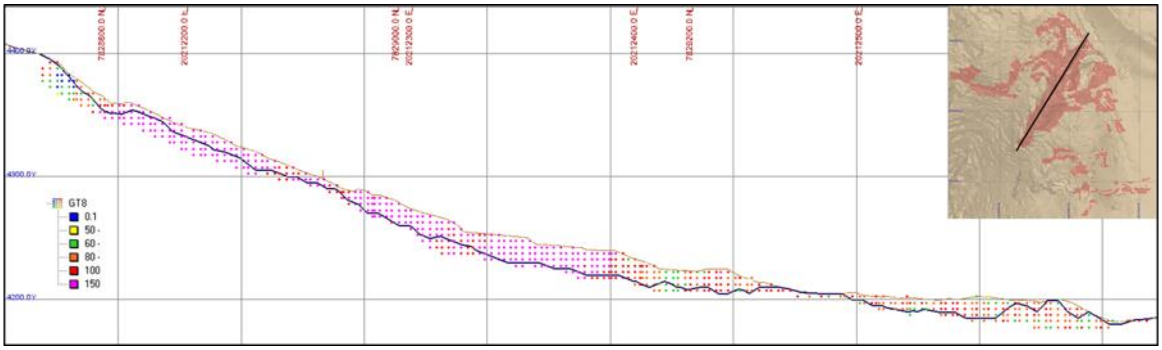
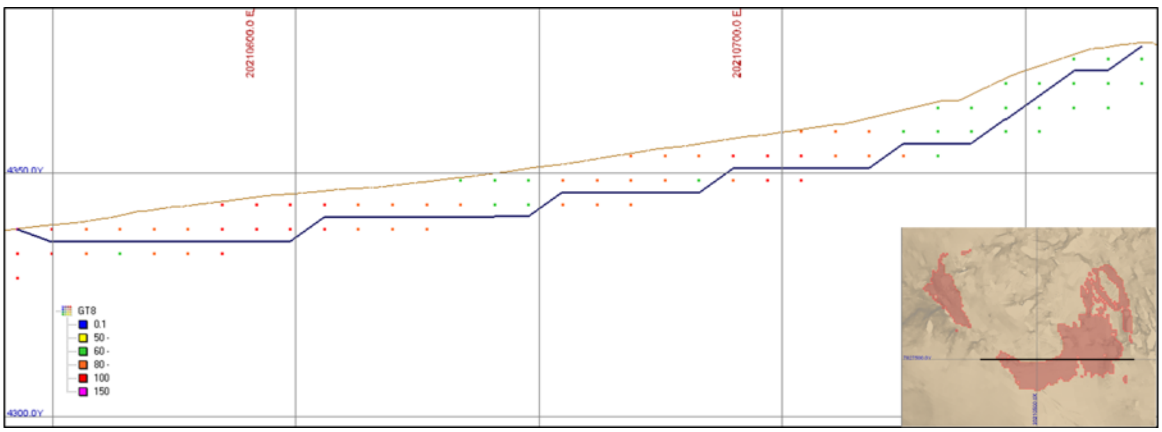



**Figure 14.19: Resource Pit and Ag GT8 Block Model – Huacajchi (looking north)**




### *14.1.15 Reporting Sensitivity*

The following three tables show the sensitivity of the pallacos mineral resource estimate to variations in the Ag GT8 cutoff (COG) grade, highlighting the base case COG for each pit. It can be noted from these tables that there is very little low-grade tonnage inside the pits.

**Table 14.15: Sensitivity of the Mineral Resource to Changes in the Cutoff Grade - Huacajchi.**

| Cut Off (g/t Ag GT8) | Measured | | Indicated | | Measured + Indicated | | Inferred | |
|---|---|---|---|---|---|---|---|---|
| | W+8 | Ag GT8 | W+8 | Ag GT8 | W+8 | Ag GT8 | W+8 | Ag GT8 |
| | t | g/t | t | g/t | t | g/t | t | g/t |
| 150 | 63,048 | 174.4 | 12,022 | 176.1 | 75,070 | 174.7 | | 0 |
| 120 | 139,581 | 152.2 | 27,953 | 153.6 | 167,534 | 152.4 | 258 | 128.4 |
| 100 | 221,819 | 136.1 | 37,024 | 142.7 | 258,843 | 137.0 | 474 | 118.4 |
| 80 | 377,181 | 116.9 | 50,710 | 128.3 | 427,891 | 118.3 | 1,167 | 99.3 |
| 70 | 469,887 | 108.6 | 71,242 | 113 | 541,129 | 109.2 | 2,218 | 87.6 |
| 60 | 496,911 | 106.4 | 73,008 | 111.9 | 569,919 | 107.1 | 2,222 | 87.5 |
| 58 | 497,011 | 106.4 | 73,008 | 111.9 | 570,019 | 107.1 | 2,222 | 87.5 |
| 56.9 | 497,252 | 106.4 | 73,008 | 111.9 | 570,260 | 107.1 | 2,222 | 87.5 |
| 50 | 497,420 | 106.4 | 73,133 | 111.8 | 570,553 | 107.1 | 2,222 | 87.5 |
| 40 | 497,420 | 106.4 | 73,133 | 111.8 | 570,553 | 107.1 | 2,222 | 87.5 |
| 0 | 497,420 | 106.4 | 73,133 | 111.8 | 570,553 | 107.1 | 2,222 | 87.5 |

**Table 14.16: Sensitivity of the Mineral Resource to Changes in the Cutoff Grade – Santa Rita**

| Cut Off (g/t Ag GT8) | Measured | | Indicated | | Measured + Indicated | | Inferred | |
|---|---|---|---|---|---|---|---|---|
| | W+8 | Ag GT8 | W+8 | Ag GT8 | W+8 | Ag GT8 | W+8 | Ag GT8 |
| | t | g/t | t | g/t | t | g/t | t | g/t |
| 150 | 261,014 | 189.1 | 156,587 | 177.7 | 417,601 | 184.8 | 29039 | 193.4 |
| 120 | 429,937 | 167.2 | 310,853 | 156.6 | 740,790 | 162.8 | 61528 | 161.3 |
| 100 | 650,014 | 147.6 | 433,009 | 143.3 | 1,083,023 | 145.9 | 124771 | 134.8 |
| 80 | 1,062,389 | 124.9 | 693,573 | 122.9 | 1,755,962 | 124.1 | 255,955 | 111.4 |
| 70 | 1,270,874 | 116.8 | 874,197 | 113.1 | 2,145,071 | 115.3 | 329,320 | 103.4 |
| 60 | 1,396,526 | 112.2 | 990,888 | 107.5 | 2,387,414 | 110.2 | 357,231 | 100.4 |
| 57.9 | 1,410,337 | 111.6 | 1,001,165 | 107 | 2,411,502 | 109.7 | 360,350 | 100 |
| 57 | 1,419,669 | 111.3 | 1,005,685 | 106.8 | 2,425,354 | 109.4 | 362,329 | 99.8 |
| 50 | 1,453,510 | 110 | 1,028,452 | 105.6 | 2,481,962 | 108.2 | 369,459 | 98.9 |
| 40 | 1,487,777 | 108.5 | 1,032,909 | 105.3 | 2,520,686 | 107.2 | 372,432 | 98.5 |
| 0 | 1,494,090 | 108.2 | 1,033,017 | 105.3 | 2,527,107 | 107.0 | 373,888 | 98.3 |

**Table 14.17: Sensitivity of the Mineral Resource to Changes in the Cutoff Grade – Antuco**

| Cut Off (g/t Ag GT8) | Measured | | Indicated | | Measured + Indicated | | Inferred | |
|---|---|---|---|---|---|---|---|---|
| | W+8 | Ag GT8 | W+8 | Ag GT8 | W+8 | Ag GT8 | W+8 | Ag GT8 |
| | t | g/t | t | g/t | t | g/t | t | g/t |
| 150 | 11,327 | 162.7 | 45,618 | 164.1 | 56,945 | 163.8 | 146554 | 175.9 |
| 120 | 137,695 | 133.1 | 314,690 | 136.6 | 452,385 | 135.5 | 275593 | 156 |
| 100 | 333,891 | 119.3 | 598,822 | 124.1 | 932,713 | 122.4 | 560131 | 132.4 |
| 80 | 520,796 | 108.9 | 751,791 | 117.7 | 1,272,587 | 114.1 | 813,843 | 119.2 |
| 70 | 595,660 | 104.7 | 780,588 | 116.1 | 1,376,248 | 111.2 | 939,887 | 113.4 |
| 60.5 | 598,732 | 104.5 | 783,750 | 115.9 | 1,382,482 | 111.0 | 946,614 | 113.1 |
| 58 | 598,773 | 104.5 | 783,798 | 115.9 | 1,382,571 | 111.0 | 948,570 | 113 |
| 57 | 598,785 | 104.5 | 783,842 | 115.9 | 1,382,627 | 111.0 | 948,585 | 112.9 |
| 50 | 599,113 | 104.5 | 784,840 | 115.8 | 1,383,953 | 110.9 | 948,827 | 112.9 |
| 40 | 599,148 | 104.5 | 784,840 | 115.8 | 1,383,988 | 110.9 | 949,062 | 112.9 |
| 0 | 599,156 | 104.5 | 784,840 | 115.8 | 1,383,996 | 110.9 | 949,573 | 112.9 |

## 14.2 Mining Dumps and Stockpiles

This section describes the mineral resource estimation process for the Tatasi-Portugalete and El Asiento projects.

The estimation procedure followed is quite simple, attending to the nature of the "deposits" to estimate and their scale, and is described as follows.

- Topographical Surveying and Volume Calculation

Manquiri surveyed the dumps using conventional techniques, and the contours for each dump was produced. Volumes were calculated multiplying the area by the average height. There is not a topographical survey of the ground conditions before the creation of the dumps, nevertheless the general topographical characteristics of the area, allow to a reasonable projection of it and an adequate estimation of the dumps' volume.

Height of each dump was measured and an average height calculated. This value was used in conjunction with the surveyed area to determine the volume of each dump.

- Specific Gravity measurements

The volumetric method was used to calculate the specific gravity of the dumps. Seven samples were taken by Manquiri at Tatasi-Portugalete as shown in the following table:

**Table 14.18: Specific Gravity Measurements – Tatasi-Portugalete**

| Sector | Dump Number | Weight (gr) | Volume (cm3) | Tare (gr) | Weight - Tare (gr) | Specific Gravity (g/cm3) |
|---|---|---|---|---|---|---|
| Tatasi | 1 | 18919 | 10287 | 642 | 18277 | 1.78 |
| Tatasi | 8 | 18994 | 10287 | 642 | 18352 | 1.78 |
| Tatasi | 13 | 19288 | 10287 | 642 | 18646 | 1.81 |
| Portugalete | 10 | 18886 | 10287 | 642 | 18244 | 1.77 |
| Portugalete | 12 | 19309 | 10287 | 642 | 18667 | 1.81 |
| Portugalete | 14 | 18467 | 10287 | 642 | 17825 | 1.73 |
| Portugalete | 17 | 18734 | 10287 | 642 | 18092 | 1.76 |
| | Weighted Average Specific Gravity | | | | | **1.78** |

In the case of El Asiento, eight measurements were taken, starting from two field samples. The following table shows the values obtained.

**Table 14.19: Specific Gravity Measurements – El Asiento**

| Sample Nº | Specific Gravity (g/cm3) |
|---|---|
| 1 | 1.81 |
| 2 | 1.87 |
| 3 | 1.93 |
| 4 | 1.91 |
| 5 | 2.02 |
| 6 | 2.11 |
| 7 | 2.22 |
| 8 | 2.17 |
| **Average** | **2.01** |

The qualified persons believe that the use of an average value for Tatasi-Portugalete and one for El Asiento was adequate, due to the low dispersion of the measured values.

- Grade Estimation and Resource Category

To estimate the grade of each dump, the weighted average of their samples was calculated, multiplying each sample's grade by its length, assigning one single grade value to each dump.

The mineral resource category was defined as follows:

**Measured:** Corresponds to the layer of the dump that is covered by the average deep of its samples.
**Indicated:** If the dump is deeper than the samples' average, then a second layer of the average deep sampled is classified as Indicated.
**Inferred:** Very few dumps are deeper than twice the samples' average, where this situation exits, the remaining material is classified as Inferred.

- Estimation of the Cutoff Grade

The following table shows the parameters used to estimate the COG and the results obtained for each sector.

**Table 14.20: Technical-Economical Parameters Tatasi – Portugalete and El Asiento**

| **Parameter** | **El Asiento** | **Tatasi - Portugalete** |
|---|---|---|
| Ag Ounce Price (US$/oz) | 19.00 | 19.00 |
| Au Ounce Price (US$/oz) | 1,500.00 | 1,500.00 |
| Ag Recovery | 80.0% | 73.5% |
| Mining cost (US$/t) | 3.22 | 3.68 |
| Transport (US$/t) | 13.55 | 28.82 |
| Process (US$/t) | 18.63 | 18.63 |
| Additional Cn & Lime (US$/t) | 5.62 | 14.91 |
| Tails damn (US$/t) | 1.54 | 1.54 |
| G&A (US$/t) | 5.85 | 5.85 |
| Smelting ASAHI (US$/oz) | 0.33 | 0.33 |
| COMIBOL 4% (US$/oz) | 5.00% | 5.00% |
| Royalties 6% (US$/oz) | 6.00% | 6.00% |
| **Cutoff (g/t Ag)** | **113.0** | **186.6** |

### *14.2.1 Mineral Resources Tatasi – Portugalete*

Twenty-one dumps were measured at Tatasi and 22 at Portugalete as part of this estimation. In total, 175 samples were taken for Tatasi and 225 for Portugalete. After the initial sampling, six dumps, numbers 4 and 11 of Tatasi and 5, 10, 11 and 15 at Portugalete, were discarded due to small size and/or low grade conditions and are not included in the Resource estimation.

Sample distribution in the dumps is reasonably regular for grade estimation, with the exception of Dump 19 of Tatasi, where the sampling is very uneven. This dump is the largest one and it has nine samples in total, ranging from 58 g/t to 326 g/t and an estimated tonnage of 143,817 tonnes, representing a relevant fraction of the total of Tatasi's inventory. Due to the sample distribution and irregularity of the grade values, this dump has been excluded from the resource estimation and it is recommended that Manquiri completes a regular sampling campaign and analyze the option of including part or the total of this dump in the future inventory.

**Mineral Resource Inventory**

Based on the above-described methodology and criteria, the mineral resource table for the Tatasi-Portugalete is shown as follows:

## Table 14.21: Tatasi-Portugalete Mineral Resources (COG = 186.6 g/t Ag)

| Sector | Dump Number | Area (m2) | Height (m) | Measured (t) | Indicated (t) | Measured + Indicated (t) | Ag (g/t) | Inferred (t) | Ag (g/t) |
|---|---|---|---|---|---|---|---|---|---|
| Tatasi | 1 | 994 | 1.93 | 3,412 | | 3,412 | 340 | | |
| Tatasi | 2 | 667 | 1.2 | 1,425 | | 1,425 | 201 | | |
| Tatasi | 3 | 531 | 1.93 | 1,827 | | 1,827 | 295 | | |
| Tatasi | 5 | 885 | 2.87 | 4,516 | | 4,516 | 210 | | |
| Tatasi | 6 | 833 | 3.65 | 5,412 | | 5,412 | 304 | | |
| Tatasi | 7 | 1,569 | 3.03 | 8,458 | | 8,458 | 306 | | |
| Tatasi | 8 | 2,067 | 2.54 | 9,351 | | 9,351 | 199 | | |
| Tatasi | 9 | 455 | 2.1 | 1,701 | | 1,701 | 243 | | |
| Tatasi | 12 | 2,386 | 2.1 | 2,667 | 2,667 | 5,334 | 217 | 3,585 | 217 |
| Tatasi | 14 | 1,281 | 3.47 | 7,798 | 120 | 7,918 | 217 | | |
| Tatasi | 15 | 970 | 6.09 | 5,331 | 5,180 | 10,511 | 227 | | |
| Tatasi | 20 | 1,082 | 3.5 | 1,701 | 1,701 | 3,402 | 192 | 3,338 | 192 |
| Portugalete | 1 | 1,291 | 2.44 | 5,617 | | 5,617 | 149 | | |
| Portugalete | 2 | 2,463 | 3.42 | 14,988 | | 14,988 | 434 | | |
| Portugalete | 3 | 4,564 | 8.34 | 35,294 | 32,496 | 67,790 | 391 | | |
| Portugalete | 7 | 3,708 | 6.24 | 15,841 | 15,841 | 31,682 | 308 | 9,504 | 308 |
| Portugalete | 8 | 116 | 2.78 | 575 | | 575 | 239 | | |
| Portugalete | 11 | 1,554 | 5.4 | 7,515 | 7,422 | 14,937 | 286 | | |
| Portugalete | 12 | 1,186 | 2.4 | 5,067 | | 5,067 | 198 | | |
| Portugalete | 13 | 627 | 2.56 | 2,852 | | 2,852 | 443 | | |
| Portugalete | 14 | 3,093 | 4.84 | 13,336 | 13,312 | 26,648 | 410 | | |
| Portugalete | 17 | 1,839 | 3.63 | 11,878 | | 11,878 | 373 | | |
| Portugalete | 18 | 999 | 4.49 | 7,980 | | 7,980 | 285 | | |
| Portugalete | 19 | 751 | 1.6 | 2,139 | | 2,139 | 282 | | |
| Portugalete | 20 | 1,525 | 2.31 | 6,263 | | 6,263 | 277 | | |
| | **TOTAL** | | | **183,000** | **79,000** | **262,000** | **323** | **16,000** | **272** |

**Notes:**

- Mineral resources are reported unconstrained using 100% mining recovery. Assumptions include a metal price of US$19.00/oz for Ag and process recoveries of 73.5% for Ag US$3.68/t of mining + US$28.82/t transport to plant. US$33.54/tonne for processing, and US$ 5.85/t G&A.
- Assumptions include 100% mining recovery.
- Quantities and grades in a mineral resource estimate are rounded to an appropriate number of significant figures to reflect that they are approximations.

### *14.2.2 Mineral Resources - El Asiento.*

General methodology to estimate Resources at El Asiento was similar to Tatasi-Portugalete. Results are summarized in the following table:

**Table 14.22: El Asiento Mineral Resources Inclusive Mineral Reserves (COG = 113.0 g/t Ag)**

| Dump Number | Area (m2) | Height (m) | Measured (t) | Indicated (t) | Measured + Indicated | Ag (g/t) | Au (g/t) | Inferred (t) | Ag (g/t) | Au (g/t) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 714 | 2.75 | 3,943 | | 3,943 | 169 | 0.06 | - | | |
| 2 | 2,036 | 1.36 | 5,537 | | 5,537 | 300 | 0.01 | - | | |
| 3 | 2,800 | 3.7 | 10,397 | 10,397 | 20,794 | 224 | 0.01 | - | | |
| 4 | 2,005 | 1.86 | 7,490 | | 7,490 | 154 | 0.02 | - | | |
| 5 | 6,782 | 10 | 33,761 | 33,761 | 67,522 | 231 | 0.44 | 68,457 | 231 | 0.44 |
| 6 | 316 | 2.67 | 1,690 | | 1,690 | 170 | 0.49 | - | | |
| 8 | 720 | 1.8 | 2,598 | | 2,598 | 228 | 0.81 | - | | |
| 9 | 1,520 | 8.13 | 8,260 | 8,260 | 16,520 | 224 | 1.44 | 8,257 | 224 | 1.44 |
| 10 | 353 | 2.71 | 1,921 | | 1,921 | 182 | 0.09 | - | | |
| 11 | 2,551 | 6.3 | 10,724 | 10,724 | 21,448 | 200 | 0.54 | 10,774 | 200 | 0.54 |
| 12 | 2,189 | 5.36 | 11,758 | 11,758 | 23,516 | 136 | 0.11 | - | | |
| 13 | 1,539 | 5.26 | 8,105 | 8,105 | 16,210 | 367 | 0.33 | - | | |
| 14 | 1,335 | 2.7 | 7,227 | | 7,227 | 220 | 0.1 | - | | |
| 15 | 2,205 | 4.54 | 10,042 | 10,042 | 20,084 | 198 | 0.01 | - | | |
| 16 | 1,435 | 2.26 | 6,499 | | 6,499 | 165 | 0.29 | - | | |
| 17 | 1,738 | 1.92 | 6,698 | | 6,698 | 152 | 0.13 | - | | |
| 18 | 2,230 | 3.84 | 8,979 | 8,211 | 17,190 | 192 | 0.22 | - | | |
| 19 | 1,122 | 2.67 | 6,003 | | 6,003 | 290 | 0.49 | - | | |
| 29 | 2,997 | 2.65 | 15,928 | | 15,928 | 240 | 0.7 | - | | |
| 30 | 807 | 2.18 | 3,522 | | 3,522 | 209 | 0.26 | - | | |
| **TOTAL** | | | **171,000** | **101,000** | **272,000** | **220** | **0.41** | **87,000** | **228** | **0.55** |

**Notes:**

- Mineral resources are reported unconstrained using 100% mining recovery. Assumptions include a metal price of US$19.00/oz for Ag and process recoveries of 80% for Ag US$ 3.22/t of mining plus US$ 13.55/t transport to plant. US$24.25/tonne for processing, and US$ 5.85/t G&A.
- No mine design restrictions were considered.
- Quantities and grades in a mineral resource estimate are rounded to an appropriate number of significant figures to reflect that they are approximations.

## 14.3 Cachi Laguna.

The estimation of mineral resources for Cachi Laguna was done using ordinary kriging and the geological solids modelled by NCL and Manquiri as solid boundaries to define the volume to estimate.

### *14.3.1 Geological Interpretation and Modelling*

Manquiri's lithology and mineral zone wireframes were modelled after the last drilling campaign of 29 short DDH drills (November 2018). This was interpreted from sets of geological sections in the different chosen sectors (Figures 14.20 and 14.21).

**Figure 14.20: Cachi Laguna Sections Position and Orientation**

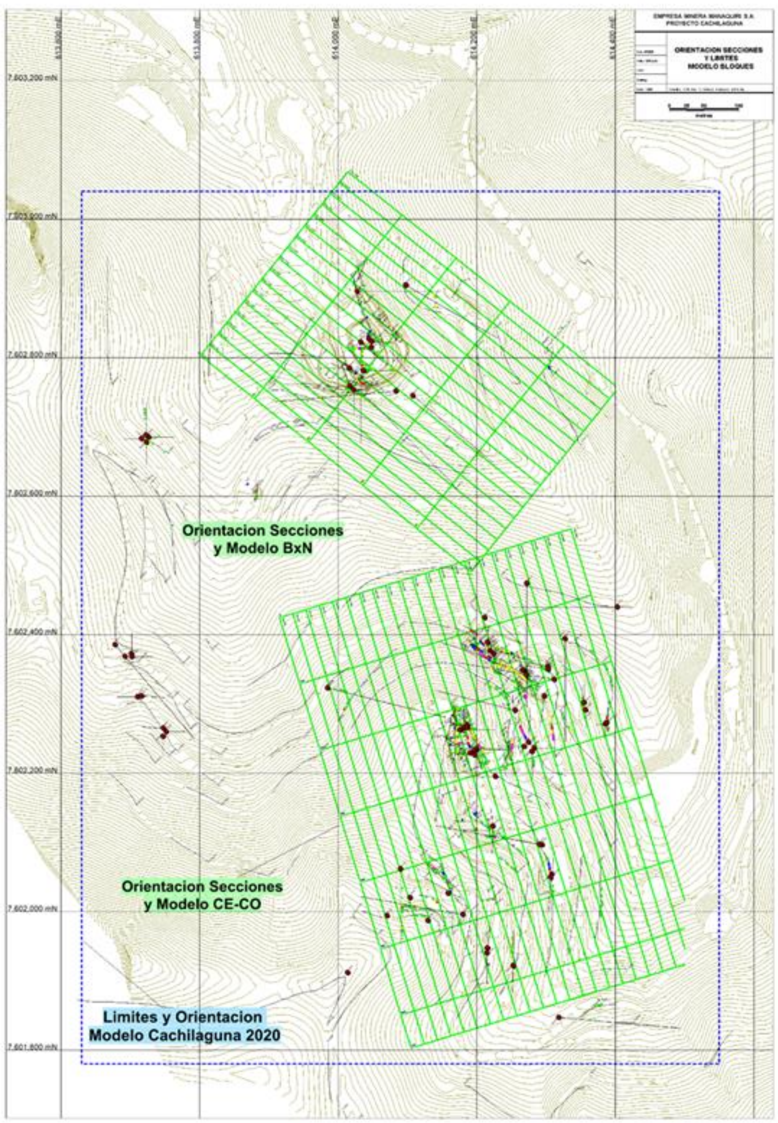
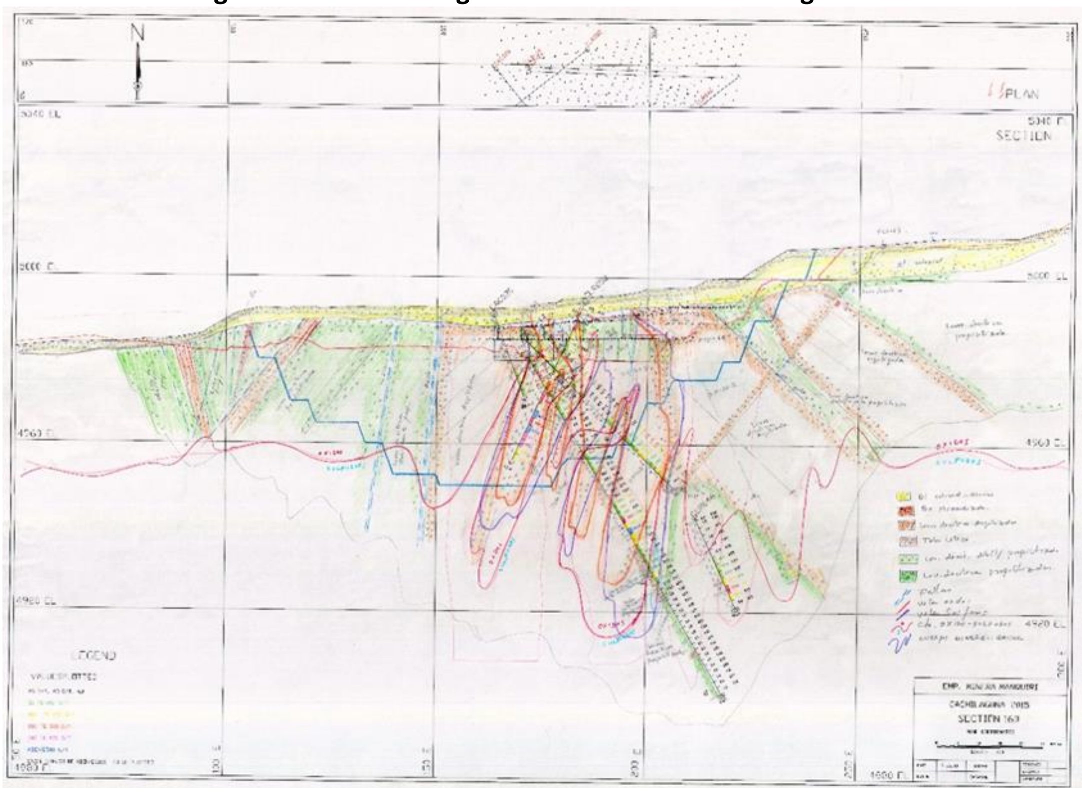
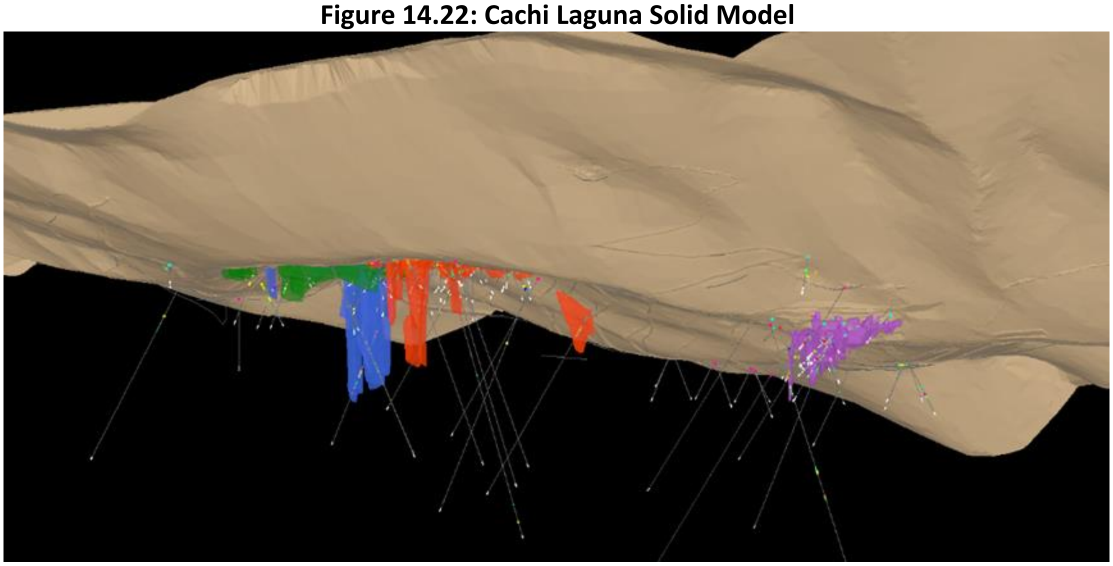


**Figure 14.21: Cachi Laguna Vertical Section Looking North**



The mineralized solids has been merged with the solid generated with the geological interpretation in sections and drills (Figure 14.22).

**Figure 14.22: Cachi Laguna Solid Model**



The ore wireframes were updated by NCL in April-May 2020, based on surface geology, structural analysis, geological sections and Manquiri's wireframes, and are supported mainly on drilling, channels and blastholes. Using available Ag assays, a good part of them corresponding to mined blastholes, new envelopes were generated for a 30 g/t Ag cutoff. Five mineralized zones were defined based on the preferential direction of the mineralized structures. (Figures 14.23, 14.24, 14.25 and 14.26).

**Figure 14.23: Cachi Laguna Interpreted Structural Model**

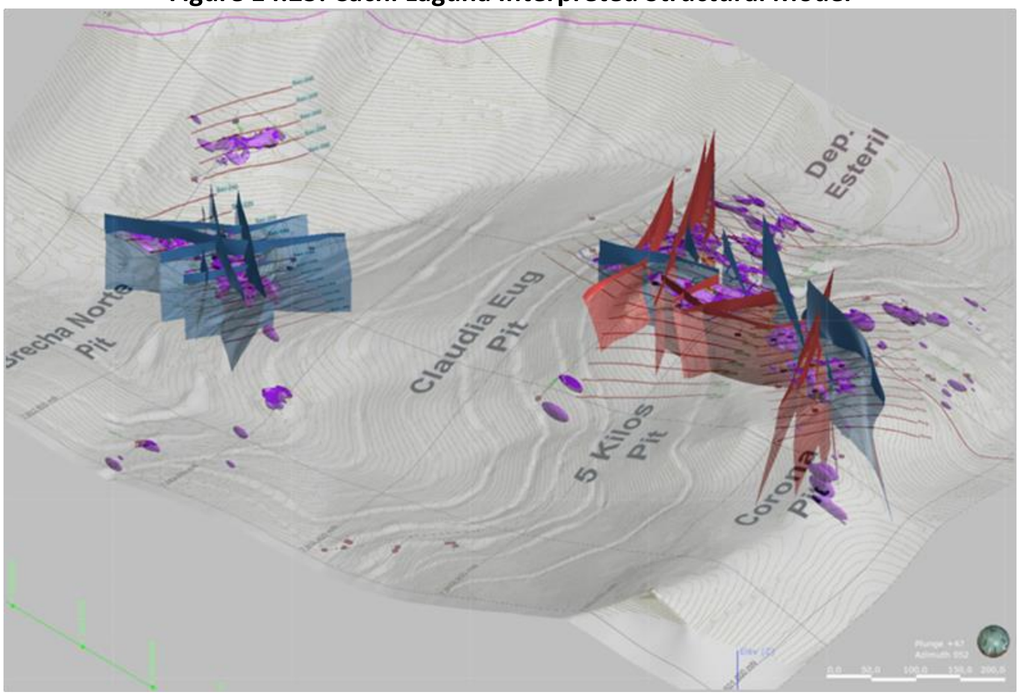



**Figure 14.24: Cachi Laguna Mineral Resource Model**

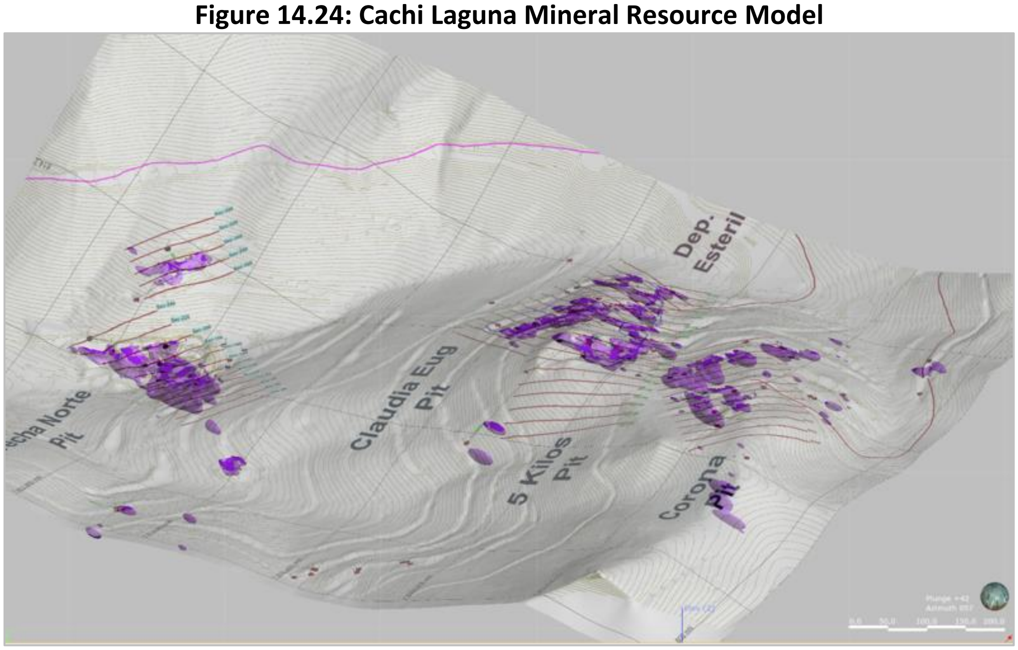


**Figure 14.25: Transverse Cross-Section through Brecha Norte Mineral Resource Model**

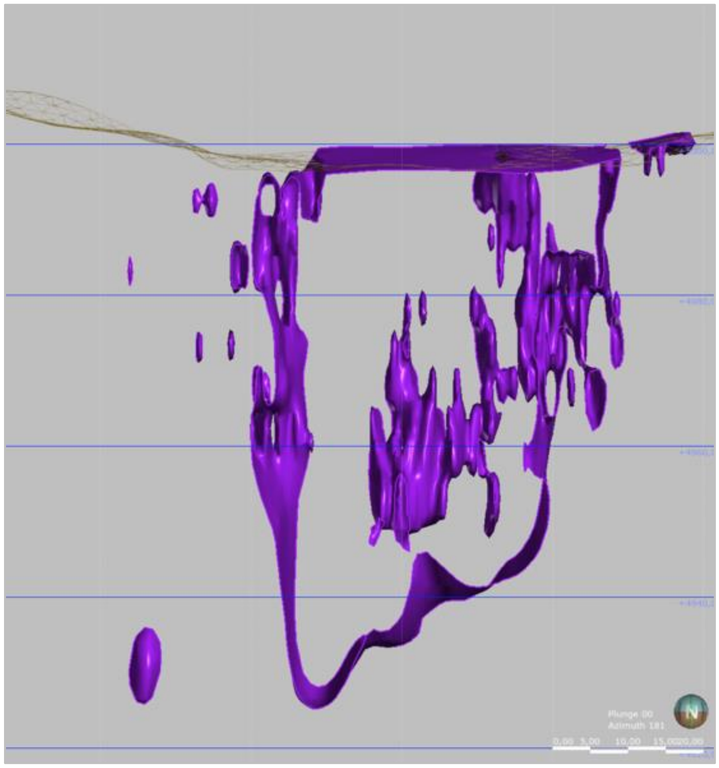
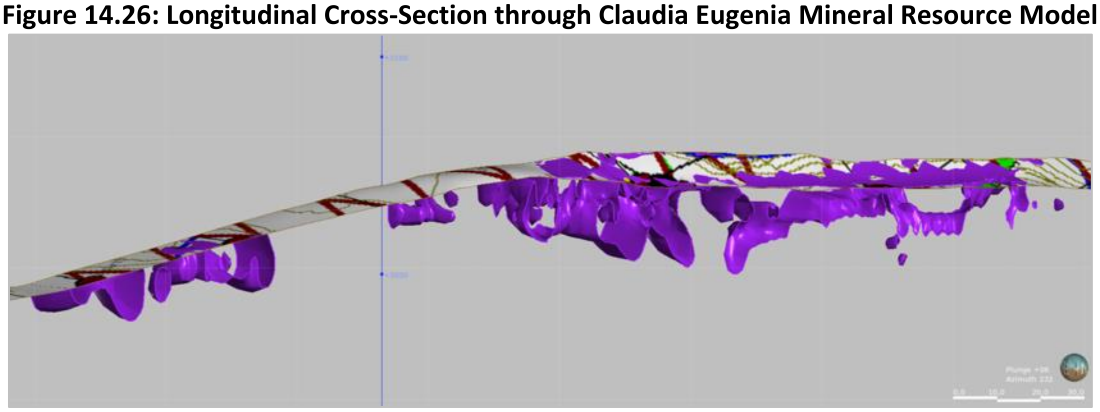


**Figure 14.26: Longitudinal Cross-Section through Claudia Eugenia Mineral Resource Model**



### *14.3.2 Assay data.*

As mentioned, the area has been explored using DDH and RC drillholes, as well as channels and lately, mining blastholes. The following table shows the available exploration data:

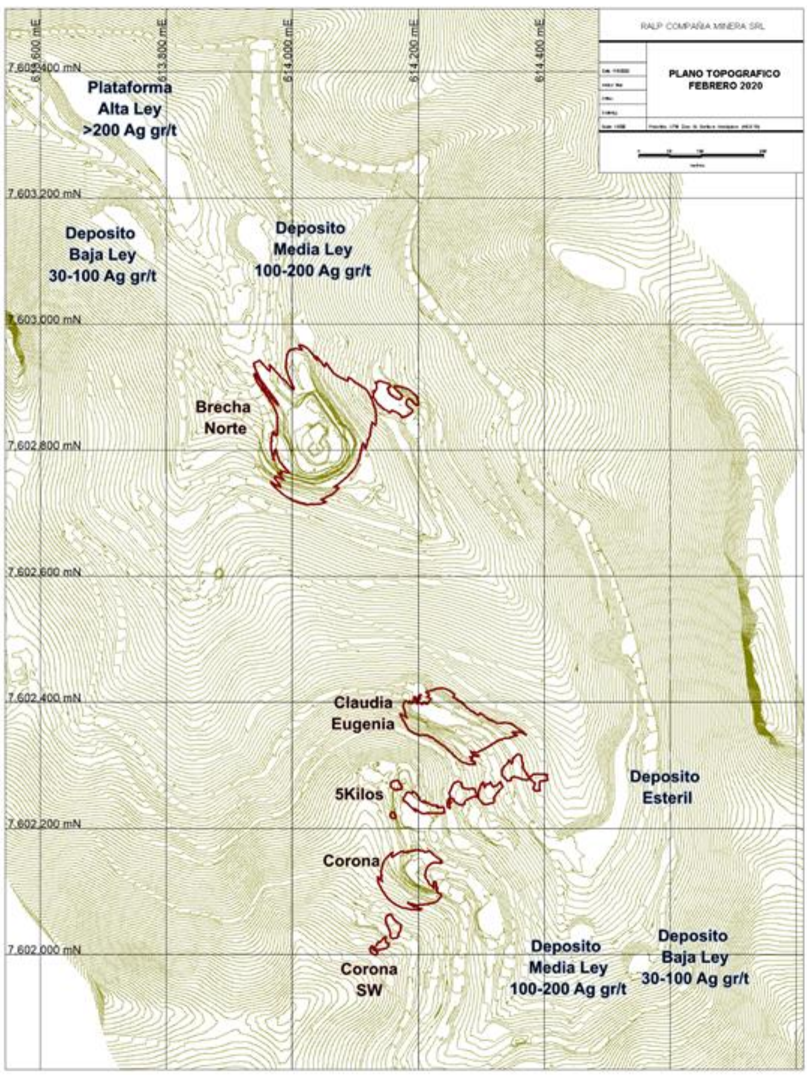
**Table 14.23: Cachi Laguna Exploration Data**

| | Exploration RTZ - 1997 | | | Infill 2017 - 2018 | Production 2017 - 2020 | Total |
|---|---|---|---|---|---|---|
| | DDH | RC | Channels | DDH | Blastholes | |
| # Boreholes | 21 | 61 | 271 | 29 | 14,965 | 15,347 |
| Drilled Meters | 5,911 | 4,806 | 14,623 | 1,370 | 67,368 | 94,078 |
| Total Ag Samples | 3,404 | 1,622 | 3,617 | 703 | 12,682 | 22,028 |
| Total Au Samples | 3,405 | 1,708 | 3,615 | 612 | 3,463 | 12,803 |

### *14.3.3 Surface Topography.*

Surface topography corresponds to the final position of the exploitation at the effective date of this report (February 29th, 2020) and is shown in the following figure, provided by Manquiri.

**Figure 14.27: Surface Topography – Cachi Laguna Area**



*14.3.4 Block Model Dimensions.*

One single block model was created for the complete area to be estimated. The following table shows the block model dimensions and relevant data:

**Table 14.24: Block Model Dimensions – Cachi Laguna**

| Direction | Min | Max | Extension (m) | Block Size (m) | N of Blocks |
|---|---|---|---|---|---|
| East | 613,630 | 614,550 | 920 | 2 | 460 |
| North | 7,601,780 | 7,603,040 | 1,260 | 2 | 630 |
| Elevation | 4,900 | 5,350 | 450 | 2.5 | 180 |

*14.3.5 Specific Gravity Data.*

Manquiri took nine samples for specific gravity measurement during December 2019 and January – February 2020. These samples were assayed using the Marcy method. The following table shows the results for the nine samples measured. Average value for the nine is 2.60 t/m$^3$, value that was used for the block model of the complete area.

**Table 14.25: Cachi Laguna Specific Gravity Samples**

| Min. Cachi Laguna | December | | January | | February | |
|---|---|---|---|---|---|---|
| Campaign | Date | t/m$^3$ | Date | t/m$^3$ | Date | t/m$^3$ |
| 1st | 10-Dec. | 2.59 | 8-Jan. | 2.57 | 6-Feb. | 2.62 |
| 2nd | 24-Dec. | 2.60 | 10-Jan. | 2.59 | 12-Feb. | 2.60 |
| 3rd | | | 19-Jan. | 2.62 | 24-Feb. | 2.63 |
| 4th | | | 25-Jan. | 2.58 | | |
| **Average** | | **2.60** | | **2.59** | | **2.62** |

*14.3.6 Statistical Analysis.*

Statistics were carried out for samples of all the areas to estimate as shown in the following table:

**Table 14.26: Statistics Cachi Laguna**

| Area | Grade | N° Samples | Min | Max | Average | STD | CV |
|---|---|---|---|---|---|---|---|
| 5 KILOS | AU GR | 225 | 0.002 | 7.53 | 0.117 | 0.539 | 4.594 |
| | AG GR | 1298 | 11.88 | 7503.52 | 136.689 | 316.95 | 2.319 |
| | S % | 102 | 1 | 8.46 | 4.521 | 1.509 | 0.334 |
| BRECHA NORTE | AU GR | 1642 | 0.01 | 72.83 | 1.256 | 3.563 | 2.836 |
| | AG GR | 6784 | 4.8 | 24018.68 | 281.991 | 983.611 | 3.488 |
| | S % | 1082 | 0.18 | 13.48 | 3.377 | 1.988 | 0.589 |
| BRECHA NORTE ESTE | AU GR | 4 | 0.01 | 0.01 | 0.01 | 0 | 0 |
| | AG GR | 560 | 1.99 | 1192.84 | 139.999 | 167.666 | 1.198 |
| | S % | 4 | 1.6 | 4.2 | 3.167 | 1.11 | 0.35 |
| CLAUDIA EUGENIA | AU GR | 1446 | 0.003 | 97.28 | 2.793 | 5.084 | 1.821 |
| | AG GR | 1560 | 5.98 | 5944.95 | 202.323 | 293.945 | 1.453 |
| | S % | 606 | 0.21 | 9.51 | 2.95 | 1.542 | 0.523 |
| CORONA | AU GR | 54 | 0.01 | 700.623 | 21.285 | 109.563 | 5.147 |
| | AG GR | 869 | 0.3 | 2553.87 | 223.109 | 271.668 | 1.218 |
| | S % | 32 | 0.4 | 8.82 | 2.932 | 2.255 | 0.769 |
| CORONA ESTE | AU GR | 8 | 0.01 | 0.02 | 0.013 | 0.005 | 0.359 |
| | AG GR | 257 | 4.5 | 1039 | 110.769 | 160.554 | 1.449 |
| | S % | 2 | 2.4 | 2.4 | 2.4 | 0 | 0 |
| CORONA OESTE | AU GR | 99 | 0.003 | 1.798 | 0.201 | 0.375 | 1.864 |
| | AG GR | 164 | 2.2 | 687.74 | 102.778 | 118.541 | 1.153 |
| | S % | 13 | 2.75 | 6.4 | 4.754 | 1.101 | 0.232 |

- Outliers

Values for the outliers' limits were defined from the log-probability curves of each area and are summarized in the following table:

**Table 14.27: Outliers Limits – Cachi Laguna**

| Area | Au (g/t) | Ag (g/t) | S (%) |
|---|---|---|---|
| 5 Kilos | 0.50 | 600 | 7.00 |
| Brecha Norte | 10.00 | 6,000 | 8.00 |
| Brecha Norte E | | 700 | |
| Claudia Eugenia | 25.00 | 1,100 | 6.50 |
| Corona | 700.00 | 1,000 | |
| Corona SE | | 400 | |
| Corona SW | 0.80 | 300 | |

### *14.3.7 Variography.*

Variograms were calculated for silver and gold (where Au is present) and theoretical models adjusted, as shown in the following tables:

**Table 14.28: Silver Variograms – Cachi Laguna**

| Area | Nugget | 1st Structure | | | | 2nd Structure | | | | ROT1 | ROT2 | ROT3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sill1 | Range (m) | | | Sill2 | Range (m) | | | | | |
| | | | X' | Y' | Z' | | X' | Y' | Z' | | | |
| 5 kilos | 0.05 | 0.88 | 17 | 9 | 14 | 0.07 | 40 | 54 | 15 | 60.4 | -5 | -8.7 |
| Brecha Norte | 0.16 | 0.79 | 10 | 11 | 13 | 0.05 | 60 | 38 | 35 | 4 | -18.7 | -23.9 |
| Bx Norte Este | 0.15 | 0.76 | 7 | 11 | 7 | 0.08 | 22 | 61 | 10 | 40 | 0 | 0 |
| Claudia Eugenia | 0.1 | 0.76 | 10 | 10 | 8 | 0.14 | 56 | 64 | 12 | 40 | -40 | 0 |
| Corona | 0.08 | 0.77 | 14 | 10 | 3 | 0.12 | 40 | 16 | 11 | 116.8 | 15.2 | 48.3 |
| Corona Este | 0.09 | 0.81 | 9 | 2 | 7 | 0.1 | 24 | 12 | 8 | -20 | 0 | 10 |
| Corona Oeste | 0.2 | 0.23 | 16 | 20 | 20 | 0.57 | 50 | 40 | 40 | 0 | 90 | -60 |

**Table 14.29: Gold Variograms – Cachi Laguna**

| Area | Nugget | 1st Structure | | | | 2nd Structure | | | | ROT1 | ROT2 | ROT3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sill1 | Range (m) | | | Sill2 | Range (m) | | | | | |
| | | | X' | Y' | Z' | | X' | Y' | Z' | | | |
| 5 kilos | 0.18 | 0.75 | 17 | 21 | 14 | 0.07 | 40 | 32 | 15 | 60.4 | -5 | -8.7 |
| Brecha Norte | 0.14 | 0.75 | 24 | 22 | 8 | 0.1 | 41 | 30 | 23 | 4 | -18.7 | -23.9 |
| Bx Norte Este | | | | | | | | | | | | |
| Claudia | 0.1 | 0.8 | 10 | 28 | 8 | 0.1 | 35 | 42 | 12 | 40 | -40 | 0 |
| Corona | 0.18 | 0.77 | 14 | 10 | 3 | 0.05 | 40 | 16 | 11 | 116.8 | 15.2 | 48.2 |
| Corona Este | | | | | | | | | | | | |
| Corona Oeste | | | | | | | | | | | | |

### *14.3.8 Kriging Plans*

The same kriging plans were used for Silver and Gold. Three runs were done per sector, using the estimation plans shown in the following table.

**Table 14.30: Kriging Plans – Cachi Laguna**

| Estimation Plan | Run 1 | Run 2 | Run 3 |
|---|---|---|---|
| Min N° of Samples | 8 | 6 | 2 |
| Max N° of Samples | 20 | 12 | 6 |
| Max per hole | 2 | 2 | 1 |
| Search Range | $D_{vario}$ | 2 x $D_{vario}$ | 4 x $D_{vario}$ |

Blocks with Silver values estimated in the first run were classified as Measured, in the second as Indicated and in the third as Inferred.

*14.3.9 Mineral Resource Model Validation.*

As in the pallacos areas, the resultant block model was validated using statistical and visual procedures. The following tables show the statistics for samples, NN model and OK model for Silver and Gold.

**Table 14.31: Block Model Validation Ag - Cachi Laguna**

| Area | N Blocks | N Samples | Mean Samples | Mean Block NN | Mean Block OK | CV Blocks |
|---|---|---|---|---|---|---|
| 5 Kilos | 7,078 | 1,298 | 121.89 | 110.3 | 101.69 | 0.637 |
| Brecha Norte | 21,499 | 6,784 | 256.38 | 199.84 | 224.13 | 1.562 |
| Brecha Norte E | 1,275 | 560 | 136.25 | 125.85 | 122.9 | 0.71 |
| Claudia Eugenia | 4,494 | | 192.9 | 170.61 | 164.37 | 0.824 |
| Corona | 1,768 | 869 | 213.72 | 214.32 | 215.87 | 0.711 |
| Corona SE | 757 | 257 | 95.55 | 97.8 | 99.55 | 0.458 |
| Corona SW | 3,414 | 164 | 91.53 | 104.45 | 99.4 | 0.41 |

**Table 14.32: Block Model Validation Au - Cachi Laguna**

| Area | N Blocks | N Samples | Mean Samples | Mean Block NN | Mean Block OK | CV Blocks |
|---|---|---|---|---|---|---|
| 5 Kilos | 4,982 | 225 | 0.067 | 0.08 | 0.041 | 1.624 |
| Brecha Norte | 11,444 | 1,642 | 1.081 | 0.275 | 0.458 | 1.645 |
| Brecha Norte E | | | | | | |
| Claudia Eugenia | 4,483 | 1,446 | 2.647 | 2.166 | 2.097 | 1.082 |
| Corona | 427 | 54 | 21.285 | 2.347 | 10.313 | 3.884 |
| Corona SE | 185 | 8 | 0.013 | 0 | 0.002 | 0.935 |
| Corona SW | 3,189 | 99 | 0.16 | 0.175 | 0.195 | 0.871 |

Additional to the statistical validation, a trend analysis was carried out for all the sectors. The following figures show, as an example, the results for Brecha Norte:

**Figure 14.28: East-West Trend Analysis – Ag – Brecha Norte**

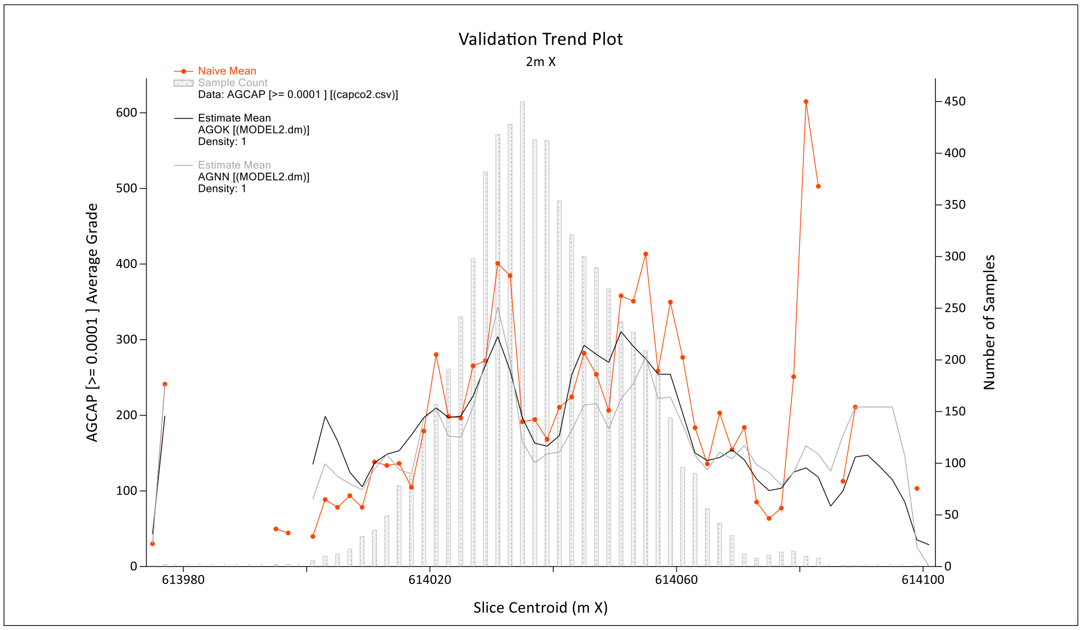
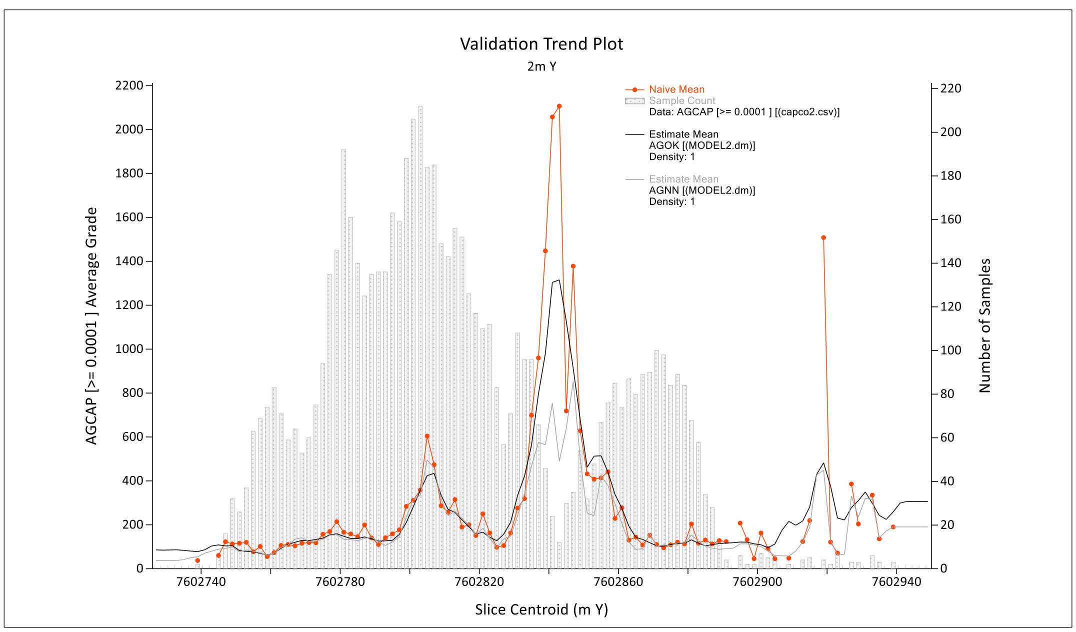
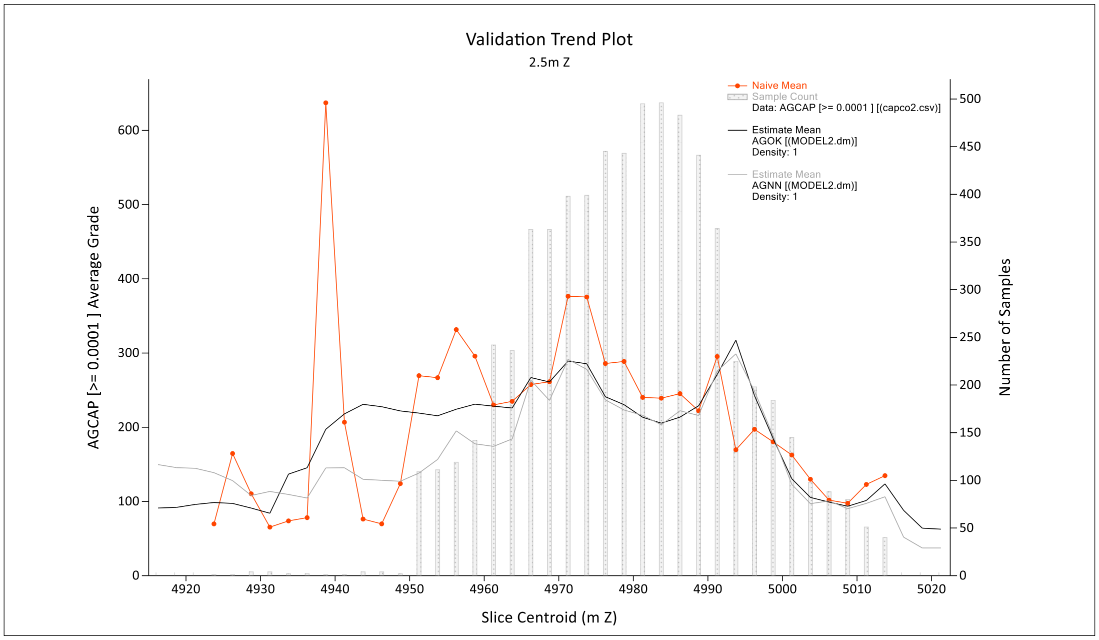



**Figure 14.29: North - South Trend Analysis – Ag – Brecha Norte**



## Figure 14.30: Elevation Trend Analysis – Ag – Brecha Norte




A visual inspection of the correlation between samples and block grades was done on screen. The following figures show some sections for the Ag model, as an example.

## Figure 14.31: Silver Grade – Block Model and Samples – Claudia Eugenia – North 7602380

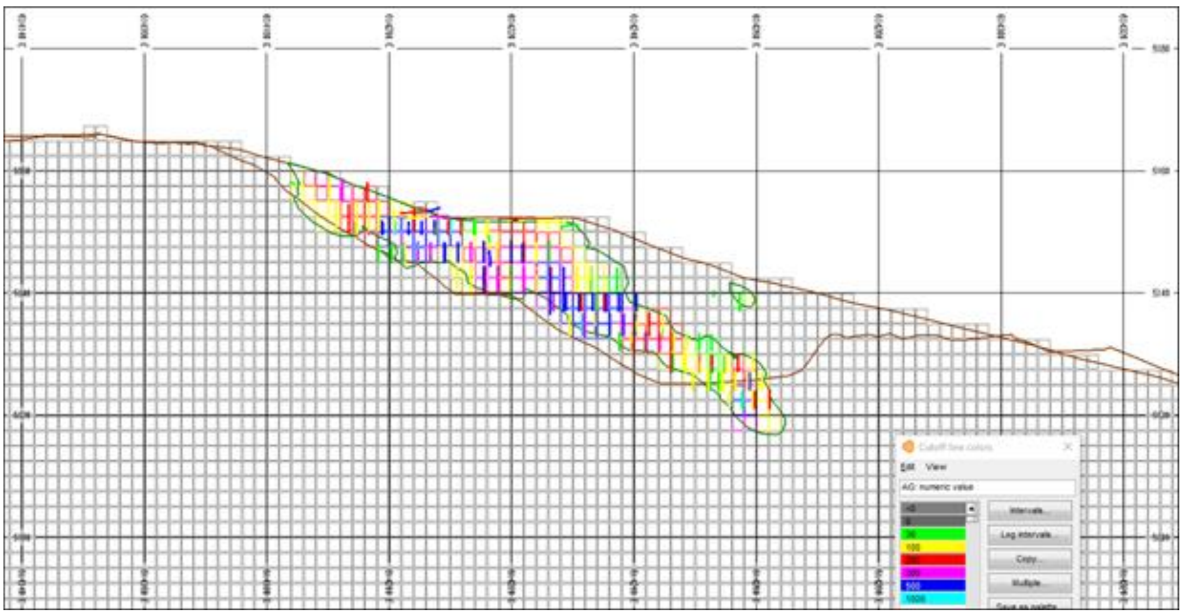
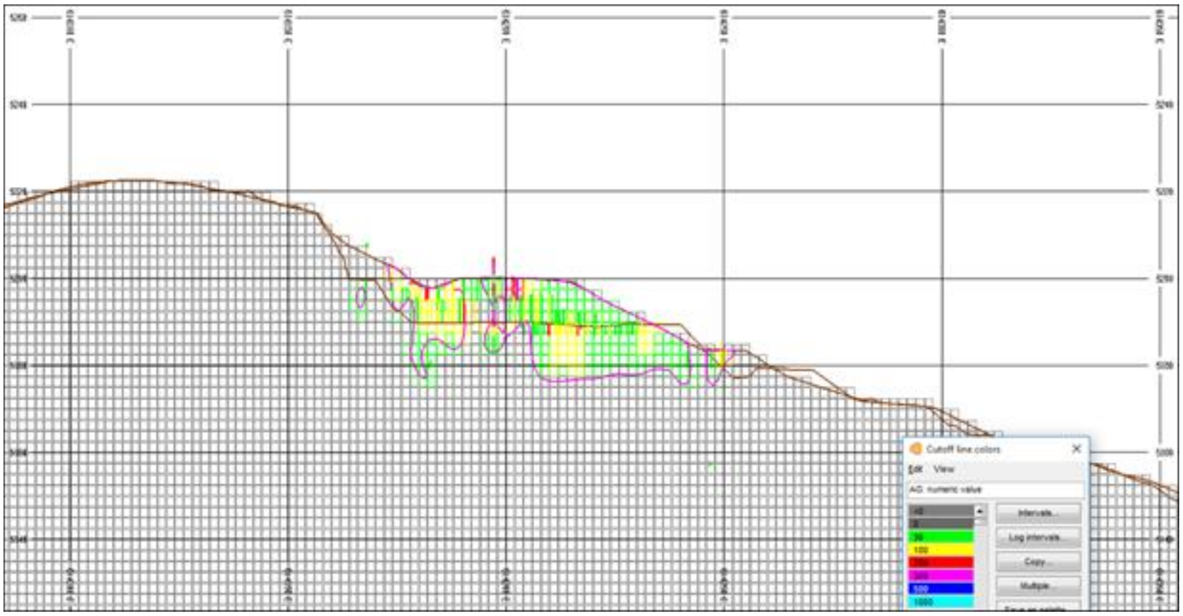


**Figure 14.32: Silver Grade – Block Model and Samples – 5 Kilos – North 7602226**



After the validation was carried out, the silver model was considered adequate for mineral resources reporting under NI 43-101. In the case of the gold estimation, the grade values obtained do not have the same level of support and data density and are not at the same level of confidence as the silver values and must be considered only as general information.

### *14.3.10 Reasonable Prospects for Eventual Economic Extraction*

Once the block model was validated, a Whittle envelope was generated using the following technical and economical parameters:

**Table 14.33: Technical Economical Data – Cachi Laguna**

| Variable | Unit | Resource | Reserve |
|---|---|---|---|
| Ag Price | (US$/oz) | 19.00 | 17.00 |
| Au Price | (US$/oz) | 1500.00 | 1400.00 |
| Ag Recovery | (%) | 80.00 | 80.00 |
| Mining Cost | (US$/t) | 3.00 | 3.00 |
| Ore Add Mine Cost | (US$/t) | 2.34 | 2.34 |
| Transport | (US$/t) | 31.58 | 31.58 |
| Process | (US$/t) | 18.63 | 18.63 |
| Add Cn & Lime | (US$/t) | 6.10 | 6.10 |
| Tailings Dam | (US$/t) | 1.54 | 1.54 |
| G&A | (US$/t) | 5.85 | 5.85 |
| Smelting ASAHI | (US$/oz) | 0.42 | 0.42 |
| Royalties | (US$/oz) | 6.00 | 6.00 |
| Cutoff Grade | (g/t) | 147.20 | 165.00 |

Figures from the table above are based on current values from the ongoing operations and contracts and are adequate for Mineral Resource and Mineral Reserve estimation.

### *14.3.11 Other Considerations and Criteria Used for the Optimization Process*

As mentioned above, the optimization process was carried out only considering Silver as a valuable product, the eventual Gold content was not used as the grade estimation is considered not solid enough for such purposes.

### *14.3.12 Mineral Resource Estimate*

The following table shows the results from the optimization process, using the cutoff grade shown in table 14.33.

**Table 14.34: Mineral Resource – Cachi Laguna – COG = 147.2 g/t Ag**

| | **Tonnage** | **Ag** |
|---|---|---|
| | **(t)** | **(g/t)** |
| Measured | 69,372 | 388 |
| Indicated | 1,977 | 229 |
| Meas + Ind | 71,350 | 383 |
| Inferred | - | - |

Notes:

- Mineral resources are reported within a constraining pit shell developed using Whittle™ software. Assumptions include a metal price of US$19.00/oz for Ag and process recoveries of 80% for Ag US$ 3.00/t of mining. US$ 31.58 transport, US$18.63/tonne for processing, and US$ 5.85/t G&A.
- Assumptions include 100% mining recovery.
- Quantities and grades in a mineral resource estimate are rounded to an appropriate number of significant figures to reflect that they are approximations.

#### *14.3.13 Reporting Sensitivity*

The following table shows the sensitivity of the Cachi Laguna mineral resource estimate to variations in the Ag cutoff (COG) grade, highlighting the base case COG. It can be noted from the table that there is a moderate sensitivity in the overall inventory to the cutoff grade.

**Table 14.35: Tonnage Grade curve – Cachi Laguna**

| | Measured | | Indicated | | Measured + Indicated | |
|---|---|---|---|---|---|---|
| **Cutoff** | **Tonnes** | **Ag** | **Tonnes** | **Ag** | **Tonnes** | **Ag** |
| (g/t) | (t) | (g/t) | (t) | (g/t) | (t) | (g/t) |
| 300 | 30,286 | 615 | 325 | 337 | 30,612 | 612 |
| 270 | 35,239 | 568 | 454 | 322 | 35,693 | 565 |
| 240 | 41,215 | 523 | 718 | 297 | 41,933 | 519 |
| 210 | 48,733 | 477 | 1,040 | 274 | 49,773 | 472 |
| 180 | 58,427 | 430 | 1,489 | 250 | 59,916 | 425 |
| 147.2 | 69,372 | 388 | 1,977 | 229 | 71,350 | 383 |
| 120 | 80,473 | 353 | 2,179 | 220 | 82,652 | 349 |
| 90 | 97,958 | 308 | 2,247 | 217 | 100,205 | 306 |
| 60 | 116,718 | 271 | 2,264 | 216 | 118,982 | 270 |
| 30 | 124,813 | 256 | 2,264 | 216 | 127,077 | 256 |
| 0 | 126,129 | 254 | 2,264 | 216 | 128,393 | 253 |

## 14.4 Integrated Mineral Resource Statement

The mineral resources estimated for the three working areas described above were integrated into tables 14.36 and 14.37.

The mineral resources in Tables 14.36 and 14.37 at El Asiento are contained in mine dumps built from material extracted from historic mining activities. The material in the dumps was placed on surface in an area that measures approximately 100 hectares in size. The Company has rights to access the land to remove, transport and process the El Asiento dumps at its San Bartolomé processing facilities under its agreements with COMIBOL.

The mineral resources in Tables 14.36 and 14.37 at Tatasi-Portugalete are contained in mine dumps built from material extracted from historic mining activities. The material in the dumps were place on surface in an area that measures 1.6 km east to west by 2.0 km north to south (320 hectares). The Company has rights to access the land to remove, transport and process the Tatasi-Portugalete dumps at its San Bartolomé processing facilities under its agreements with COMIBOL.

**Table 14.36: Integrated Mineral Resource Statement – Manquiri – Mineral Reserve Inclusive (March 17, 2020)**

| Mineral Resource Classification | Deposit | Tonnes (000's) | Average Silver Grade (g/t) | Contained Silver Ounces (000's) |
|---|---|---|---|---|
| Measured | San Bartolomé | 2,535,000 | 108 | 8,802,000 |
| | Tatasi-Portugalete | 183,000 | 323 | 1,900,000 |
| | El Asiento | 171,000 | 220 | 1,210,000 |
| | Cachi Laguna | 69,000 | 388 | 860,000 |
| | **Subtotal** | **2,958,000** | **134** | **12,773,000** |
| Indicated | San Bartolomé | 1,876,000 | 110 | 6,635,000 |
| | Tatasi-Portugalete | 79,000 | 323 | 820,000 |
| | El Asiento | 101,000 | 220 | 714,000 |
| | Cachi Laguna | 2,000.00 | 229 | 15,000 |
| | **Subtotal** | **2,058,000** | **124** | **8,184,000** |
| Measured+Indicated | San Bartolomé | 4,411,000 | 109 | 15,437,000 |
| | Tatasi-Portugalete | 262,000 | 323 | 2,721,000 |
| | El Asiento | 272,000 | 220 | 1,924,000 |
| | Cachi Laguna | 71,000 | 383 | 875,000 |
| | **Subtotal** | **5,016,000** | **130** | **20,957,000** |
| Inferred | San Bartolomé | 1,317,000 | 109 | 4,615,000 |
| | Tatasi-Portugalete | 16,000 | 272 | 140,000 |
| | El Asiento | 87,000 | 228 | 637,000 |
| | Cachi Laguna | 0 | 0 | - |
| | **Subtotal** | **1,420,000** | **118** | **5,392,000** |

Notes:

- The qualified person responsible for mineral resource estimation was Luis Oviedo Hannig.
- Mineral resource are reported for the following Ag Cutoff Grades: Huacajchi: 56.9g/t Antuco: 60.5 g/t, Santa Rita: 57.9 g/t, Tatasi-Portugalete: 186.6 g/t, EL Asiento: 113.0 g/t and Cachi Laguna 147.2 g/t
- Mineral resources are reported within a constraining pit shell developed using Whittle™ software, with the exception of Tatasi-Portugalete and El Asiento dumps. Assumptions include a metal price of US$19.00/oz for Ag.
- Assumptions include 100% mining recovery and variable process recoveries of 73.5% (Tatasi_Portugalete), 80% (El Asiento and Cachi Laguna) and 90% (San Bartolomé).
- Mineral resources are effective as of March 17, 2020, are inclusive of mineral reserves and are reported as "contained" and not factored for metallurgical recoveries.
- Mineral resource tonnes, average grades and contained ounces are rounded to an appropriate number of significant figures to reflect that they are estimates.

Subtracting the mineral reserves from the values in Table 14.36 yields the following remaining mineral resources (exclusive of mineral reserves):

**Table 14.37: Integrated Mineral Resource Statement – Manquiri – Mineral Reserve Exclusive (March 17, 2020)**

| Mineral Resource Classification | Deposit | Tonnes (000's) | Average Silver Grade (g/t) | Contained Silver Ounces (000's) |
|---|---|---|---|---|
| Measured | San Bartolomé | 519,000 | 92 | 1,532,000 |
| | Tatasi-Portugalete | 23,000 | 219 | 162,000 |
| | El Asiento | 0 | 0 | 0 |
| | Cachi Laguna | 6,000 | 157 | 30,000 |
| | **Subtotal** | **548,000** | **98** | **1,724,000** |
| Indicated | San Bartolomé | 517,000 | 100 | 1,670,000 |
| | Tatasi-Portugalete | 2,000 | 180 | 12,000 |
| | El Asiento | 0 | | 0 |
| | Cachi Laguna | 0 | | 0 |
| | **Subtotal** | **519,000** | **101** | **1,682,000** |
| **Measured + Indicated** | San Bartolomé | 1,036,000 | 96 | 3,202,000 |
| | Tatasi-Portugalete | 25,000 | 216 | 173,000 |
| | El Asiento | 0 | 0 | 0 |
| | Cachi Laguna | 6,000 | 157 | 30,000 |
| | **Subtotal** | **1,068,000** | **99** | **3,406,000** |
| Inferred | San Bartolomé | 1,317,000 | 109 | 4,615,000 |
| | Tatasi-Portugalete | 16,000 | 272 | 140,000 |
| | El Asiento | 87,000 | 228 | 637,000 |
| | Cachi Laguna | - | - | - |
| | **Subtotal** | **1,420,000** | **118** | **5,391,000** |

Notes:

- The qualified person responsible for mineral resource estimation was Luis Oviedo Hannig.
- Mineral resource are reported for the following Ag Cut Off Grades: Huacajchi: 56.9g/t Antuco: 60.5 g/t, Santa Rita: 57.9 g/t, Tatasi-Portugalete: 186.6 g/t, EL Asiento: 113.0 g/t and Cachi Laguna 147.2 g/t
- Mineral resources are reported within a constraining pit shell developed using Whittle™ software, with the exception of Tatasi-Portugalete and El Asiento dumps. Assumptions include a metal price of US$19.00/oz for Ag.
- Assumptions include 100% mining recovery and variable process recoveries of 73.5% (Tatasi_Portugalete), 80% (El Asiento and Cachi Laguna) and 90% (San Bartolomé).
- Mineral resources are effective as of March 17, 2020, are exclusive of mineral reserves and are reported as "contained" and not factored for metallurgical recoveries.

The mineral resources, exclusive of mineral reserves (Table 14.37) do not currently meet the economic and technical modifying factors, to permit them to be classified as mineral reserves. The qualified persons believe there are reasonable prospects for eventual economic extraction of some of those mineral resources especially, the inferred mineral resources, based upon their geologic and grade characteristics, which are similar to those of the mineral reserves itemized in Section 15. The qualified persons have included work recommendations in Section 26 to evaluate that potential.

## 14.5 General Considerations and Other Factors

Apart from the conditions identified in this report, and according to the available information, the qualified persons are not aware of other environmental, permitting, legal title, taxation, socio-economic or political factors that could affect materially the mineral resource estimate.

# 15 MINERAL RESERVE ESTIMATES

## 15.1 Mineral Resources Models

Mineral resources as described in Section 14 were classified as Measured, Indicated or Inferred. Pit optimization, mine design and mine planning were carried out using these Mineral Resources and did not include consideration of material classified as Inferred. Inferred Mineral Resources were treated as waste.

### *15.1.1 Pallacos Area*

A block size of 7.0 m E x 7.0 m N x 5.0 m RL was selected for the three block models of the pallacos areas (Huacajchi, Santa Rita and Antuco). The selected block size was based on the geometry of the domain interpretation and the data configuration.

The regular blocks models were used to create a percentage block model, where the percentage of each block inside the estimation solids is stored for Mineral Reserve estimation. Variables used from the block models were the following:

- Block percentage (%)
- Specific gravity (t/m$^3$)
- In-situ silver grade (g/t)
- W+8 (% - weight percentage of material +8 mesh)
- W+8 silver grade +8 mesh (g/t)
- Classification code (1-measured; 2-indicated; 3-inferred)

### *15.1.2 Mining Dumps and Stockpiles*

The mining dumps and stockpiles corresponding to Tatasi - Portugalete and El Asiento areas were surveyed by Manquiri and volumes were estimated by NCL. Specific gravities were assigned according to sample average values and 1.78 t/m$^3$ was considered for Tatasi – Portugalete and 2.01 t/m$^3$ to El Asiento.

Constant silver grades were assigned to each dump according to the available samples. Variables used from the resource estimation were the following:

- Volume estimation (%)
- Specific gravity (t/m$^3$)
- In situ silver grade (g/t)
- Classification code (1-measured; 2-indicated; 3-inferred)

### *15.1.3 Cachi Laguna*

A block size of 2.0 m E x 2.0 m N x 2.5 RL was selected for the Cachi Laguna. The selected block size was based on the geometry of the domain interpretation and the data configuration.

The regular blocks models were used to create a percentage block model, where the percentage of each block inside the estimation solids is stored for Mineral Reserve estimation. Variables used from the block models were the following:

- Block percentage (%)
- Specific gravity (t/$m^3$)
- In situ silver grade (g/t)
- In situ gold grade (g/t)
- Classification code (1-measured; 2-indicated; 3-inferred)

## 15.2 Supporting Assumptions

The mining cost estimates for the pit optimizations processes is based on current values practiced by Manquiri, considering owner operated loading and support activities and local *cooperativas* contracted hauling to the process plant. The metal prices, processing costs, refining costs and processing recoveries were provided to NCL by Manquiri.

A summary of the initial input parameters used in the constraining Lerchs–Grossmann ("LG") pit shell is included in Table 15.1.

**Table 15.1: Design Criteria (LG Optimization Parameters) [3.]**

| Item | Unit [1.] | Pallacos Areas [2.] | | | Cachi Laguna | Dumps and Stockpiles | |
|---|---|---|---|---|---|---|---|
| | | Antuco | Santa Rita | Huacajchi | | El Asiento | Tatasi-Portugalete |
| ***Metal Prices*** | | | | | | | |
| Silver | $/ounce | 17 | | | | | |
| Gold | | | | | 1,400 | | |
| ***Metallurgical Recoveries*** | | | | | | | |
| Silver | % | 90 | | | | | |
| Gold | | | | | 85 | | |
| Moisture | | 5 | | | | | |
| ***Operating Cost*** | | | | | | | |
| Waste | $/tonne | 3.50 | | | | Not applicable | |
| Ore | | 3.50 | | | 5.34 | 3.22 | 3.68 |
| Haulage | | 1.79 | 1.19 | 0.89 | 31.58 | 15.35 | 28.82 |
| Washing | $/tonne +8 Mesh | 0.18 | | | Not applicable | | |
| Processing | | 18.63 | | | | | |
| Additional NaCN & CaO | | 0 | 0 | 0 | 6.10 | 5.62 | 14.91 |
| Tailings Dam | | 1.54 | | | | | |
| G&A | | 5.85 | | | | | |
| ***Offsite Costs*** | | | | | | | |
| Smelting (ASAHI - Japan) | $/ounce | 0.33 | | | 0.42 | 0.33 | |
| ***Royalties*** | | | | | | | |
| COMIBOL | % NSR | 4 | | | 0 | 5 | |
| Government | % Net revenue | 6 | | | | | |
| ***Others*** | | | | | | | |
| Pit slope | Degrees | 45 | | | | | |
| Discount Rate | % | 9 | | | | | |

1. All costs and metal prices in US dollars
2. Washing, processing, tailings, and G&A costs expressed as US$/tonne of +8 mesh material
3. LG – Lerchs Grossman pit model software system

### *15.2.1 Geotechnical Considerations*

All areas considered for the Mineral Reserve estimate with open pit (pallacos areas and Cachi Laguna) are currently operating at stable geotechnical conditions. Same parameters as current open pits were considered and described in Table 15.2.

**Table 15.2: Mine Design Parameters**

| Parameter | Unit | Pallacos | Cachi Laguna |
|---|---|---|---|
| Haul road width | m | 6 | 8 |
| Haul road grade | % | 10 | 10 |
| Bench height | m | 5 | 5 |
| Batter angle | ° | 50° | 65° |
| Berm width | m | 2 | |
| Berm width every 15m (3 benches) | m | | 5 |
| Security berm width every 25m of pit wall | m | 5 | |
| Overall slope angle (pit optimization) | ° | 45 | 45 |

Economic dump areas at Tatasi-Portugalete and El Asiento will be fully reclaimed in 2 m slices in a top-down sequence. If internal operational slopes are required, the angle of repose of 37° will be considered.

### *15.2.2 Dilution and Mine Losses*

Due to the nature of the orebodies and almost flat distributions of tonnes and grades, all block models have been considered as fully diluted and Mineral Reserves estimate did not consider any additional allowance for dilution and mine losses.

### *15.2.3 Cutoff Grades*

Internal cut-offs were calculated for all areas incorporating all operating costs except waste mining. The cutoff is applied to material contained within an economic pit shell / dump where the decision to mine a given block was determined by the pit optimization and was applied to all the Mineral Reserve estimates, as detailed in Table 15.3.

**Table 15.3: Cutoff Grade by Area**

| Area | Unit | Cut-off |
|---|---|---|
| Pallacos | | |
| Antuco | Ag+8 (g/t) | 67.7 |
| Santa Rita | Ag+8 (g/t) | 64.8 |
| Huacajchi | Ag+8 (g/t) | 63.8 |
| Mining dumps | | |
| El Asiento | Ag (g/t) | 133.5 |
| Tatasi-Portugalete | Ag (g/t | 216.5 |
| Cachi Laguna | Ag (g/t | 165.0 |

## 15.3 Mineral Reserves Statement

Mineral Reserves are summarized in Table 15.4 and have an effective date of 28 February 2020. The qualified Person for the estimate was Mr. Carlos Guzman, FAusIMM and CMC, an NCL employee.

All modifying factors applied for the conversion of Mineral Resources into Mineral Reserves are at high level of certainty because of the operational expertise of Manquiri since 2018 and the reliability of technical and economic parameters obtained since then. Therefore, Measured Mineral Resources were converted into Proven Mineral Reserves and Indicated Mineral Resources into Probable Mineral Reserves. Inferred Mineral Resources were not converted into Mineral Reserves and instead treated as waste.

The mineral reserve estimate reported herein does not include material that has been mined and put through the mill.

**Table 15.4: Mineral Reserve Statement (March 17, 2020)**

| Mineral Reserve Category | Area | Tonnes (000's) | Average Silver Grade (g/t) | Contained Silver Ounces (000's) |
|---|---|---|---|---|
| Proven Mineral Reserves | | | | |
| | Huacajchi | 427 | 108 | *1,481* |
| | Santa Rita | 1,134 | 115 | *4,185* |
| | Antuco | 455 | 109 | *1,590* |
| | El Asiento | 171 | 217 | *1,192* |
| | Tatasi-Portugalete | 160 | 338 | *1,736* |
| | Cachi Laguna | 63 | 410. | *834* |
| ***Total Proven Mineral Reserves*** | | ***2,409*** | ***142*** | ***11,018*** |
| Probable Mineral Reserves | | | | |
| | Huacajchi | 53 | 120 | *202* |
| | Santa Rita | 669 | 108 | *2,322* |
| | Antuco | 637 | 119 | *2,435* |
| | El Asiento | 101 | 220 | *715* |
| | Tatasi-Portugalete | 77 | 350 | *866* |
| | Cachi Laguna | 2 | 242 | *13* |
| ***Total Probable Mineral Reserves*** | | ***1,539*** | ***133*** | ***6,554*** |
| **Total Mineral Reserves (Proven and Probable)** | | | | |
| | Huacajchi | 480 | 109 | *1,684* |
| | Santa Rita | 1,803 | 112 | *6,507* |
| | Antuco | 1,091 | 115 | *4,025* |
| | El Asiento | 272 | 218 | *1,908* |
| | Tatasi-Portugalete | 237 | 342 | *2,602* |
| | Cachi Laguna | 65 | 406 | *847* |
| ***Total Mineral Reserves (Proven and Probable)*** | | ***3,948*** | ***138*** | ***17,572*** |

Notes to Accompany Mineral Reserves Estimate:

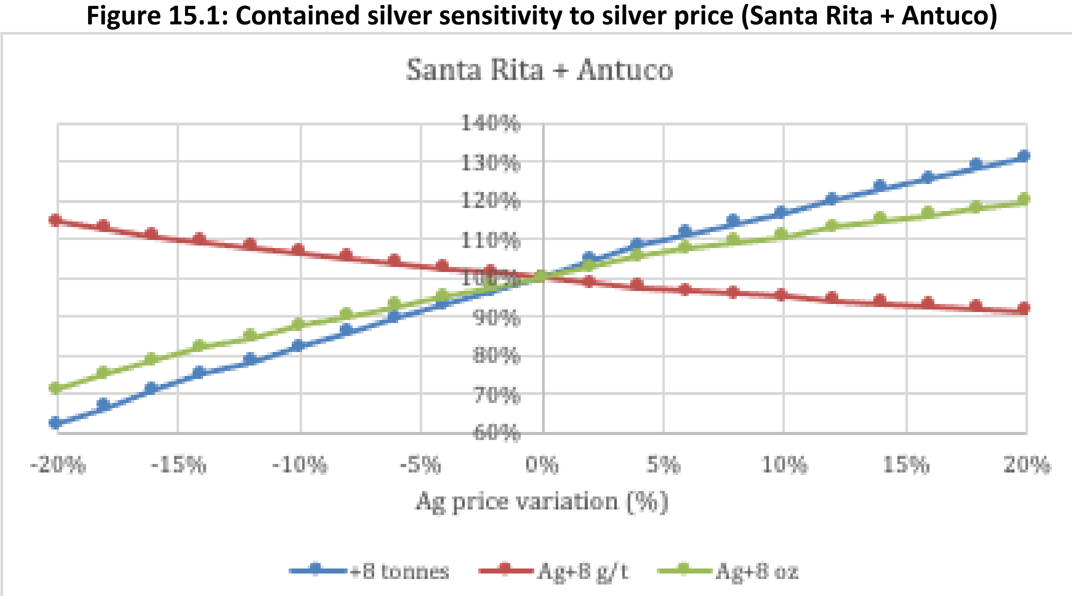
1. Mineral Reserves have an effective date of March 17, 2020 and were prepared by Mr. Carlos Guzman, FAusIMM, CMC, an employee of NCL.
2. Mineral Reserves are reported as constrained within Measured and Indicated pit designs and are supported by a mine plan featuring a constant throughput of 4,800 t/d rate, 326 d/y and variable cut-off per sector.
3. Mineral Reserves estimate is not inclusive of material that has been mined and put through the mill.
4. The pit designs and mine plan were optimized using the following economic and technical parameters: metal prices of US$17/oz Ag; metallurgical recoveries of 90% for pallacos areas, 80% for El Asiento, 74% for Tatasi-Portugalete and 80% for Cachi Laguna; with w+8 varying on a block-by-block basis for pallacos area; operating costs attributable for ore tonnes of US$29.45/t for Antuco, US$28.18/t for Santa Rita, US$27.72/t for Huacajchi, US$63.71/t for Cachi Laguna, US$47.83/t for El Asiento and US$72.37/t for Tatasi-Portugalete; smelting charge of US$0.33/oz Ag for pallacos and dumps, and US$0.42/oz Ag for Cachi Laguna; COMIBOL royalty on NSR basis of 4% for pallacos areas and 5% for dumps; government royalty of 6% on net revenue basis.; average pit slope angles of 45°; and an assumption of 100% mining recovery.
5. Tonnes, grades and costs for pallacos areas are reported as +8 mesh, corresponding to the plant feed after the washing stage.
6. Rounding as required by reporting guidelines may result in apparent summation differences between tonnes, grade and contained metal content.

7. Tonnage measurements are in metric units. Silver grades are reported as grams per tonne. Contained silver ounces are reported as troy ounces.

## 15.4 Factors That May Affect the Mineral Reserve Estimates

The qualified persons state that the factors that may affect the mineral reserves estimate are metal prices followed by metallurgical recoveries and operating costs (fuel, energy and local *cooperativas* haulage cost). The qualified person notes that the base metal price is the most important factor for estimation, therefore a sensitivity analysis was carried out for Santa Rita and Antuco pit optimizations, as together represent 63% of the value of the project (Figure 15.1). For variations of the silver price in -20%/+20% the contained silver +8 mesh varies from 71% to 119%, without affecting the mineral reserves estimate to any significant degree.

**Figure 15.1: Contained silver sensitivity to silver price (Santa Rita + Antuco)**



# 16 MINING METHODS

## 16.1 Pit Designs

Initial pit design considerations are included in Section 15.

### *16.1.1 Pallacos Areas*

Lerchs-Grossmann ("LG") nested pit shells using Whittle were generated for several revenue factors. The final pits designs for the three sectors were based on the economic shells obtained at revenue factor 1.0. The mine design parameters are summarized in Table 16.1.

A road width of 6 m was selected to accommodate 28 t trucks. NCL used a 10% road gradient which corresponds to the current successful applied criteria by Manquiri. The current mine plan is designed with 5 m benches and 2 m berms.

Additional 5 m wide safety berms were included in the design when the slope height exceeds 25 m.

**Table 16.1: Pallacos Mine Design Parameters**

| Parameter | Unit | Pallacos |
|---|---|---|
| Haul road width | m | 6 |
| Haul road grade | % | 10 |
| Bench height | m | 5 |
| Batter angle | degrees | 50 |
| Berm width | m | 2 |
| Security berm width<br>(every 25m of pit wall) | m | 5 |

**Figure 16.1: Pallacos Area Layout**

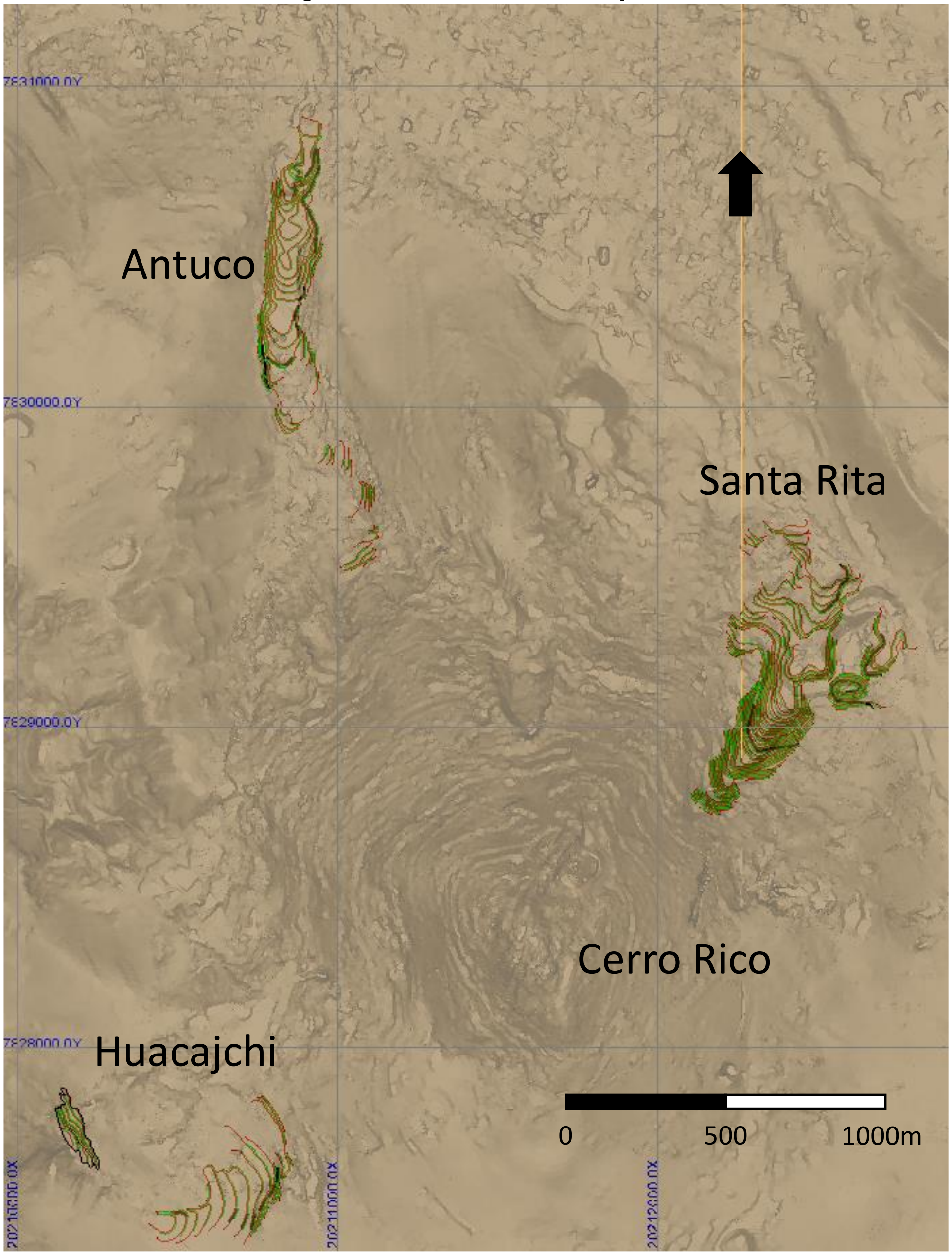


**Figure 16.2: Antuco Mine Design**

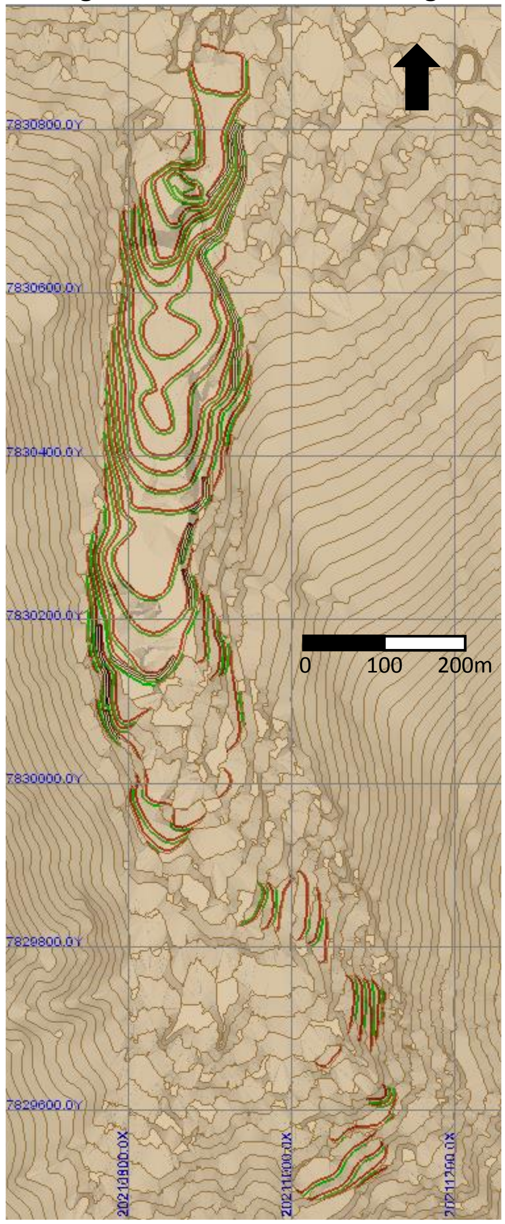


**Figure 16.3: Santa Rita Mine Design**

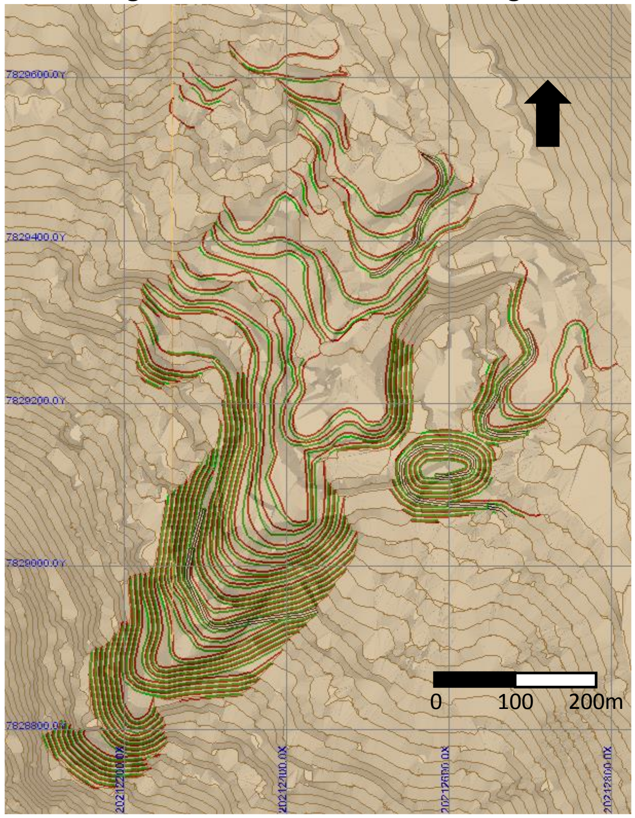
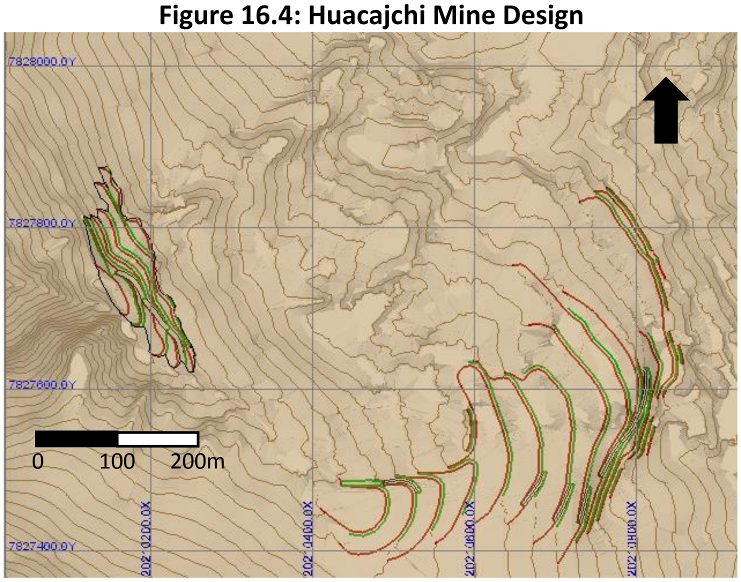



**Figure 16.4: Huacajchi Mine Design**



### *16.1.2 Mining Dumps and Stockpiles*

Dump areas at Tatasi-Portugalete and El Asiento with silver grades higher than the cut-offs detailed in Table 15.3 will be fully reclaimed in 2 m slices in a top-down sequence. If internal operational slopes are required, the angle of repose of 37° will be considered.

**Figure 16.5: El Asiento Mining Dumps**

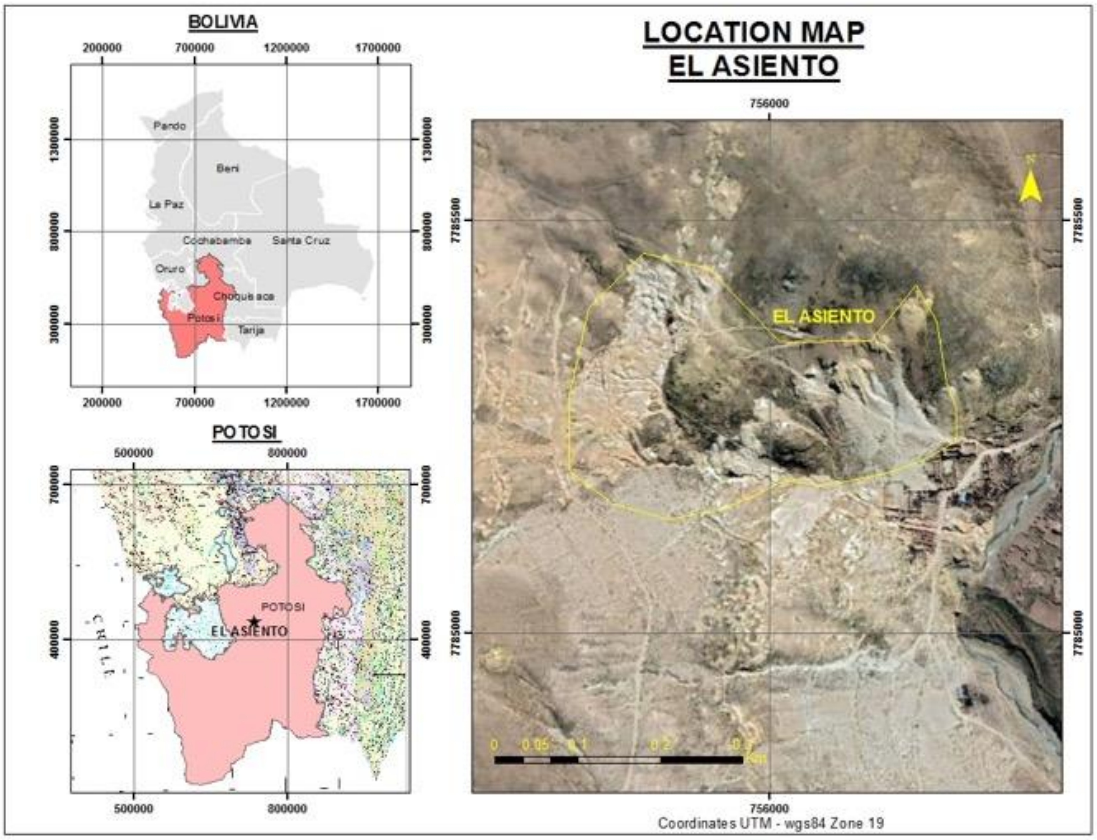
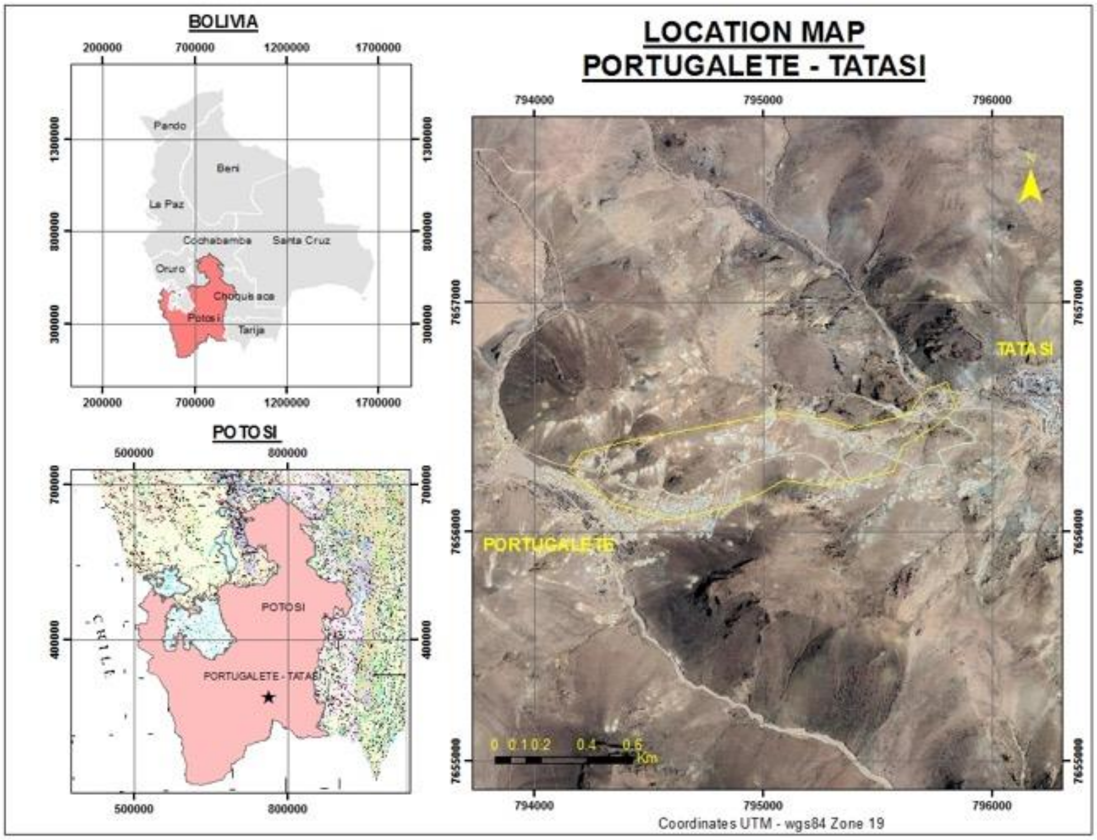


**Figure 16.6: Tatasi-Portugalete Mining Dumps**




### *16.1.3 Cachi Laguna*

Lerchs-Grossmann (LG) nested pit shells were generated for several revenue factors. The final pits designs for the several sectors were based on the economic shells obtained at revenue factor 1.0. The mine design parameters are summarized in Table 16.2. The results of the LG pits show six independent zones and pit designs were developed accordingly. Road widths of 8 m was selected to accommodate 20 t trucks. NCL used a 10% road gradient which corresponds to the current successful applied criteria by Manquiri. The current mine plan is designed with 5 m benches and 5 m berms every 3 mining benches (15 m).

**Table 16.2: Cachi Laguna Mine Design Parameters**

| Parameter | Unit | Cachi Laguna |
|---|---|---|
| Haul road width | m | 8 |
| Haul road grade | % | 10 |
| Bench height | m | 5 |
| Batter angle | degrees | 65 |
| Berm width (every 15m) | m | 5 |

**Figure 16.7: Cachi Laguna General Layout**

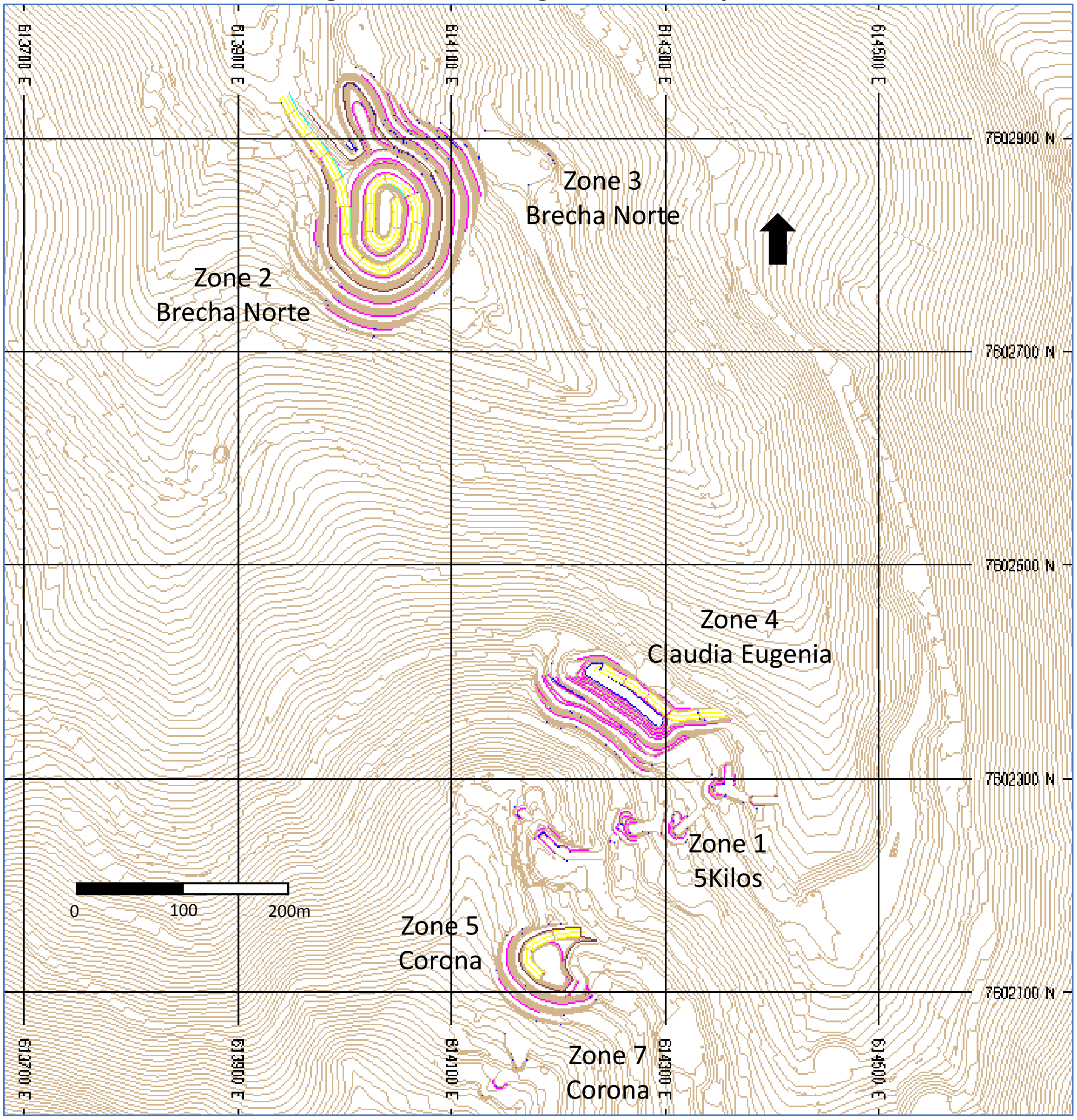


**Figure 16.8: Cachi Laguna “*Brecha Norte*” Zone**

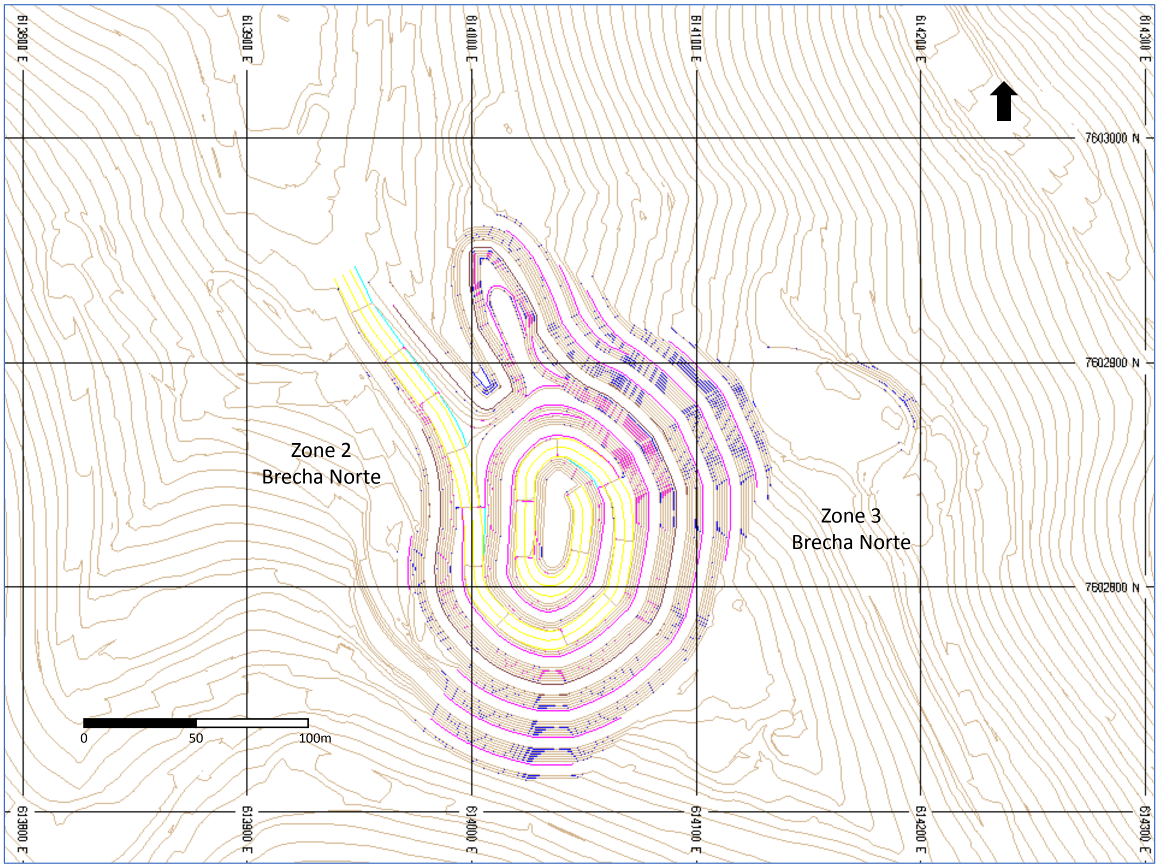
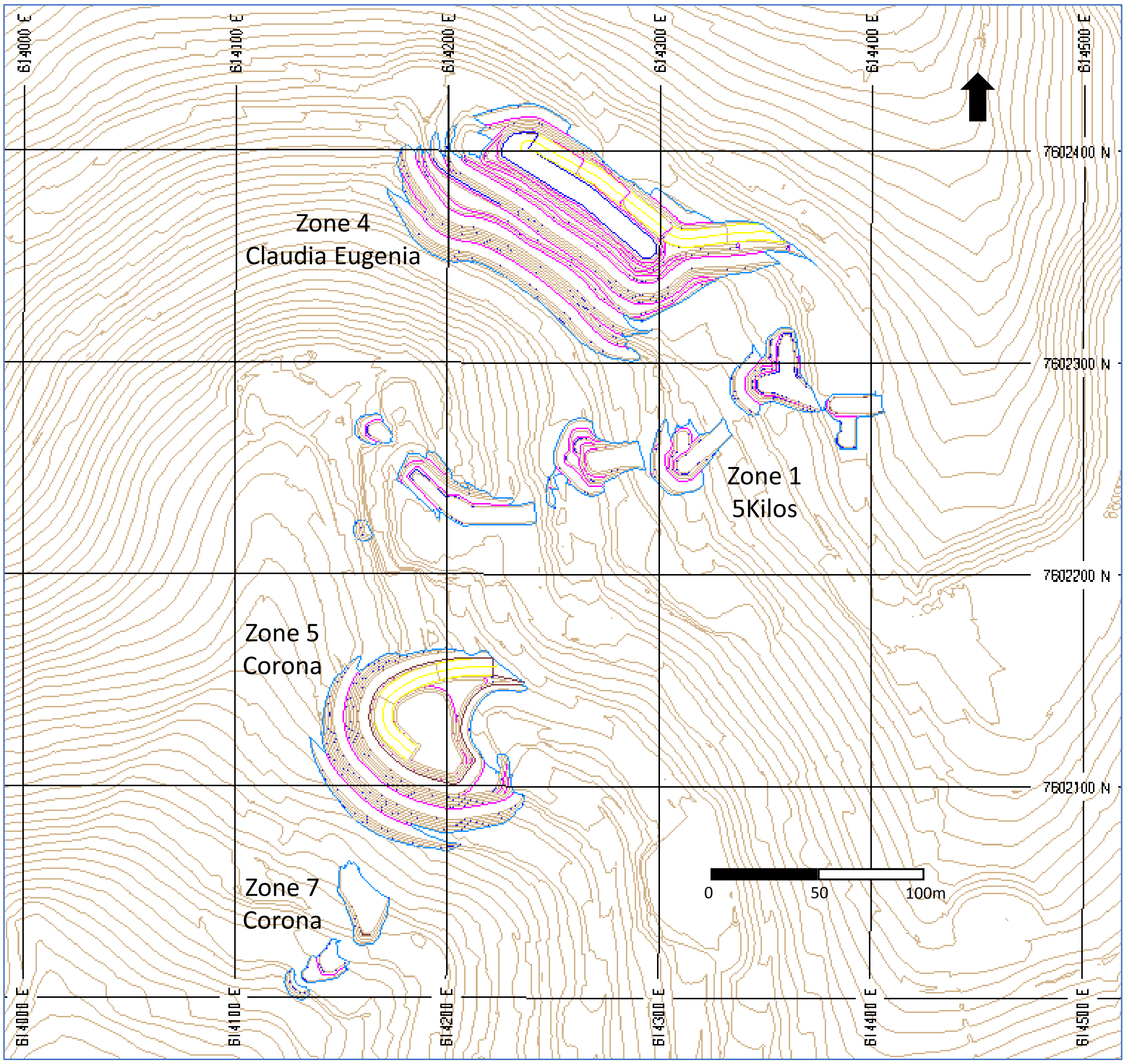


**Figure 16.9: Cachi Laguna Zones "*Claudia Eugenia – 5 Kilos - Corona*"**




## 16.2 Production Schedule

A mine production schedule was developed to show the ore tonnes, metal grades and total material by month, from March 2020 through September 2022 (total mine life of 2.5 years). The distribution of ore and waste contained in each of the mining area was used to develop the schedule.

NCL used an in-house developed system to evaluate several potential production mine schedules. The required monthly ore tonnes and user-specified total material movements are provided to the algorithm, which then calculates the mine schedule.

Several runs at various proposed total material movement rates were done to determine a good production schedule strategy. This program is not a simulation package, but a tool for calculation of the mine schedule for a given set of mining areas and constraints that must be set by the user.

The schedule is based on process plant throughput of 4,800 t/d, considering 326 days per year, which gives a monthly constant throughput of 130.4kt.

The considered general mining sequence was the following:

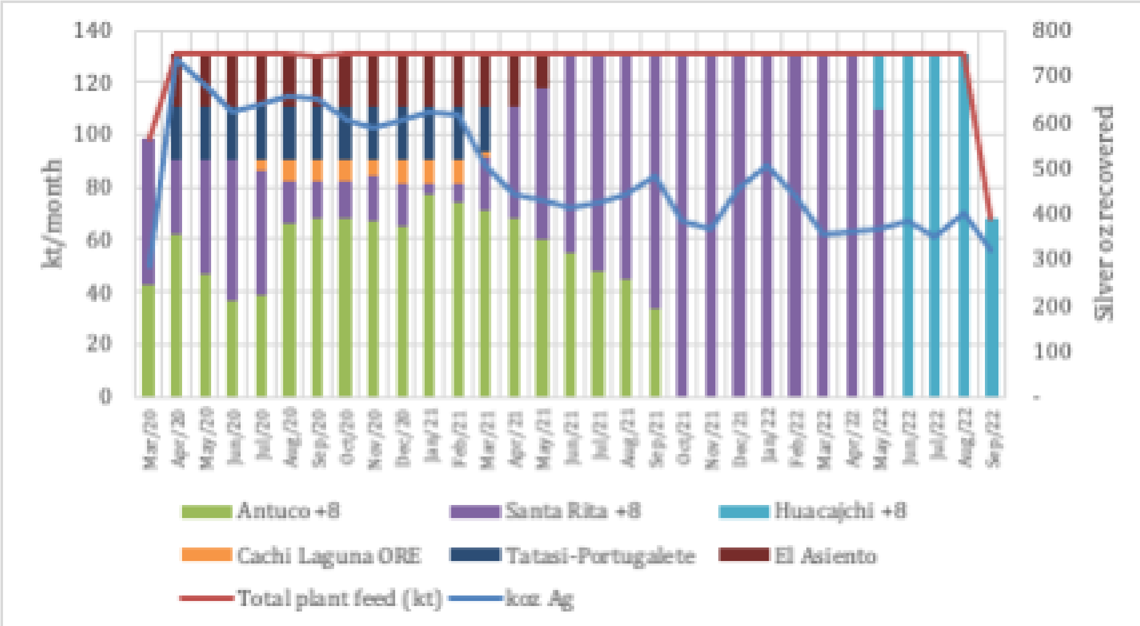
- Cachi Laguna at variable rate from 4.0 kt/month to 9.0 kt/month from July 2020 through March 2021.
- El Asiento and Tatasi-Portugalete at 20kt/month each from March 2020.
- Pallacos areas at the difference from 130.4kt/month with the two above, considering the tonnage of +8 mesh. The sequence of pallacos is starting together with Antuco and Santa Rita through September 2021, followed by Santa Rita alone and opening Huacajchi in May 2022.

Table 16.3 shows the yearly mine schedule summary by area and Figure 16.10 shows the monthly plant feed and recovered silver.

## Table 16.3: Mine Production Schedule – Yearly Summary

| Mine Schedule | | TOTAL | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Antuco TOTAL | kt | 2,331 | 1,055 | 1,276 | 0 |
| Antuco ROM | kt | 1,999 | 977 | 1,023 | 0 |
| Antuco +8 Mesh | kt | 1,091 | 561 | 531 | 0 |
| Grade Ag | g/t Ag | 114.7 | 109.2 | 120.6 | 0.0 |
| Recovery Ag | % | 90% | 90% | 90% | 0% |
| Product Ag | koz Ag | 3,623 | 1,771 | 1,851 | 0 |
| Santa Rita TOTAL | kt | 3,662 | 593 | 1,708 | 1,362 |
| Santa Rita ROM | kt | 3,011 | 474 | 1,434 | 1,103 |
| Santa Rita +8 Mesh | kt | 1,803 | 307 | 865 | 632 |
| Grade Ag | g/t Ag | 112.2 | 131.5 | 109.1 | 107.2 |
| Recovery Ag | % | 90% | 90% | 90% | 90% |
| Product Ag | koz Ag | 5,856 | 1,168 | 2,728 | 1,959 |
| Huacajchi TOTAL | kt | 849 | 0 | 0 | 849 |
| Huacajchi ROM | kt | 800 | 0 | 0 | 800 |
| Huacajchi +8 Mesh | kt | 480 | 0 | 0 | 480 |
| Grade Ag | g/t Ag | 109.2 | 0.0 | 0.0 | 109.2 |
| Recovery Ag | % | 90% | 0% | 0% | 90% |
| Product Ag | koz Ag | 1,515 | 0 | 0 | 1,515 |
| **Total Pallacos TOTAL** | **kt** | **6,842** | **1,648** | **2,984** | **2,211** |
| **Total Pallacos ROM** | **kt** | **5,810** | **1,451** | **2,456** | **1,903** |
| **Total Pallacos +8 Mesh** | **kt** | **3,374** | **868** | **1,395** | **1,111** |
| **Grade Ag** | **g/t Ag** | **112.6** | **117.1** | **113.4** | **108.1** |
| **Recovery Ag** | **%** | **90%** | **90%** | **90%** | **90%** |
| **Product Ag** | **koz Ag** | **10,994** | **2,940** | **4,580** | **3,475** |
| Cachi Laguna TOTAL | kt | 779 | 686 | 93 | 0 |
| Cachi Laguna ORE | kt | 65 | 44 | 20 | 0 |
| Grade Ag | g/t Ag | 405.9 | 367.0 | 490.3 | 0.0 |
| Recovery Ag | % | 80% | 80% | 80% | 0% |
| Product Ag | koz Ag | 678 | 420 | 258 | 0 |
| Tatasi-Portugalete | kt | 237 | 180 | 57 | 0 |
| Grade Ag | g/t Ag | 341.7 | 370.7 | 249.8 | 0.0 |
| Recovery Ag | % | 73.5% | 73.5% | 73.5% | 0.0% |
| Product Ag | koz Ag | 1,912 | 1,577 | 335 | 0 |
| El Asiento | kt | 272 | 180 | 92 | 0 |
| Grade Ag | g/t Ag | 217.9 | 242.5 | 169.9 | 0.0 |
| Recovery Ag | % | 80% | 80% | 80% | 0% |
| Product Ag | koz Ag | 1,526 | 1,123 | 403 | 0 |
| **TOTAL** | **kt** | **3,948** | **1,272** | **1,565** | **1,111** |
| **Grade Ag** | **g/t Ag** | **138.4** | **179.5** | **126.6** | **108.1** |
| **Recovery Ag** | **%** | **86.0%** | **82.6%** | **87.5%** | **90.0%** |
| **Product Ag** | **koz Ag** | **15,110** | **6,059** | **5,576** | **3,475** |

**Figure 16.10: Plant Feed and Silver Production by month**




## 16.3 Mining Strategy

The mining strategy adopted by Manquiri is a mixed between an owner operation and contracted:

- In the pallacos areas Manquiri operates the loading with owned excavators of 2.4 / 2.6 m$^3$ and auxiliary operations (bulldozers and motor graders) and the hauling of the ore to the plant is contracted with 24 tonnes conventional trucks operated by local "cooperativas". The re-handling at the plant area is owner operated with front-end-loaders of 3.4 / 4.2 m$^3$ and 24 tonnes trucks.
- All mining activities at Cachi Laguna are contracted, except for the drilling.
- At the mining dumps at Tatasi-Portugalete and El Asiento, the mining activities are fully contracted.

**Table 16.4** shows the available mining equipment per the different mining areas.

**Table 16.4: Available Mining Equipment per Area**

| Equipment | unit | Pallacos (capacity/# of units) | | Cachi Laguna (capacity/# of units) | | Mining dumps (capacity/# of units) | |
|---|---|---|---|---|---|---|---|
| **Own Equipment** | | | | | | | |
| Excavators 330DL | $m^3$ | 2.4 | 3 | | | | |
| Excavators 336D2L | $m^3$ | 2.6 | 1 | | | | |
| Wheel Loader 962H | $m^3$ | 3.4 | 2 | | | | |
| Wheel Loader 966L | $m^3$ | 4.2 | 1 | | | | |
| Motor grades 14H | model | | 1 | | | | |
| Bulldozers D8T | model | | 2 | | | | |
| Drills Power Rock T35 | inches | | | 2 1/2 - 4" diameter | 1 | | |
| Trucks | tonne | 24 | 4 | | | | |
| **Contractors** | | | | | | | |
| Excavators 330D | $m^3$ | | | 2.4 | 1 | | |
| Excavators 320 | $m^3$ | | | 1.2 | 1 | 1.2 | 3 |
| Motor grades 140H | model | | | | 1 | | |
| Bulldozers D8R | model | | | | 1 | | |
| Bulldozers D7 | model | | | | 1 | | |
| Trucks | tonne | 24 | 76 | 20 | 10 | 28 | 50 |

## Qualified Persons' Comments

While the life of mine for the current pallacos at San Bartolomé is short (Table 16.3), the Company has been able to supplement mill feed from purchased materials and now from new material at El Asiento, Tatasi-Portugalete and Cachi Laguna.

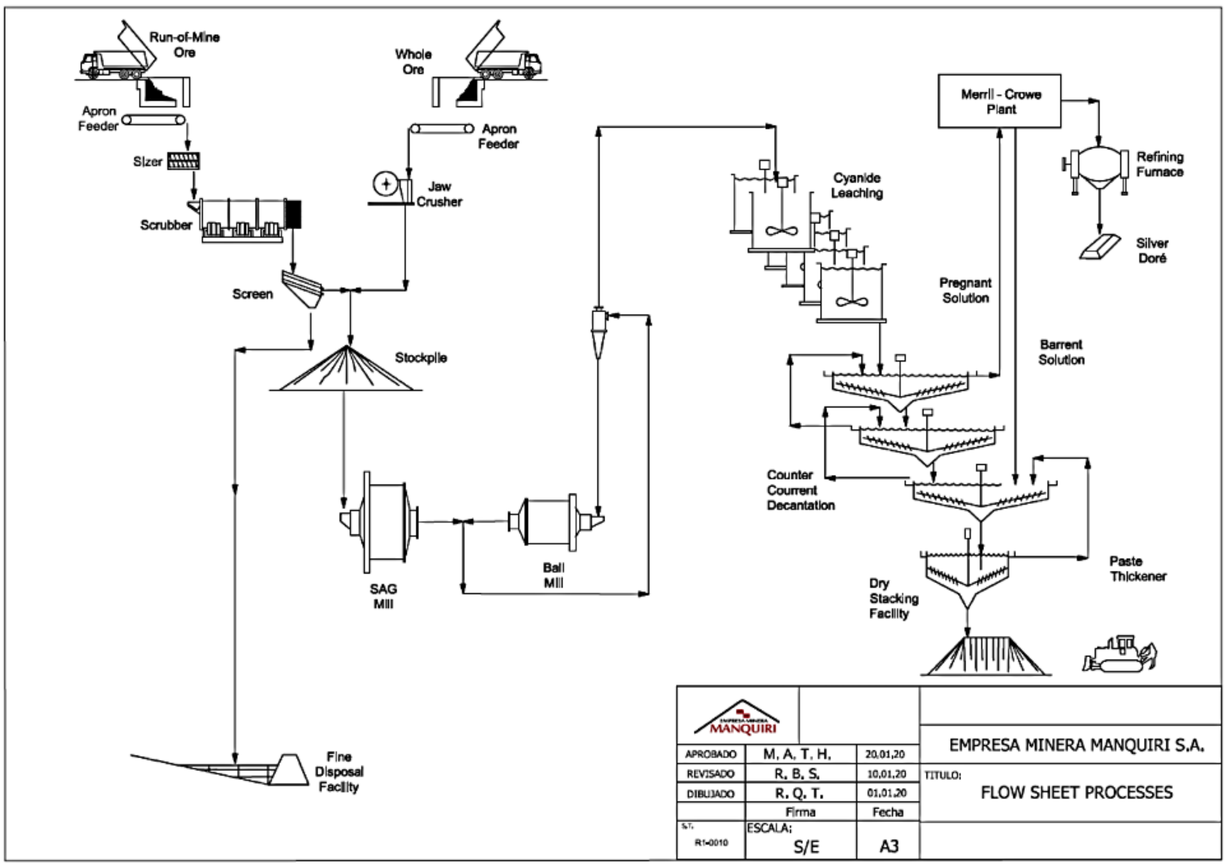
The qualified persons believe, given the amount of historic sulfide mining and processing that has taken place in the region and the lack of alternate oxide material processing capacity, which resulted in many oxidized dumps/stockpiles scattered thoughout the region, it is reasonable to expect that the Company will be able to source new metallurgically-suitable feed for the San Bartolomé mill. However, such potential new opportunities are not assured and the qualified persons have made no assumptions about their potential role in extending the life of San Bartolomé's operations.

## 17 RECOVERY METHODS

### 17.1 Processing Facility at San Bartolomé.

Manquiri operates the same ore processing facility that was built and commissioned by Coeur in 2008. Since acquisition by Ag-Mining, in 2018 and through the effective date of this TR, Manquiri has processed approximately 3.15 million tonnes of pallacos and purchased oxidized material at San Bartolomé (Section 6) with metal recovery ranging from 83% to 91% (Section 13). Figure 17.1 is a diagram of the ore flow through the mill. The mill was designed to process pallacos and desmontes at a rate of approximately 1.5 million tonnes per year (Tyler and Mondragon, 2015).

**Figure 17.1: Flow Diagram of the San Bartolomé Ore Processing Facility**




The plant (Figure 17.1) was designed to operate 24 hours a day, 365 days a year with 92% availability. At full, design capacity, the plant can process up to 4,800 tonnes/day. In addition to silver, smaller quantities of gold are also recovered from the leaching of the oxidized, silver-rich ores. Transitional and/or sulfidic material does not exist in the pallaco mineral resources but has been identified in some of the historical purchased materials. Depending on the metallurgical test results (Section 13) such materials may be blended with more oxidized material or rejected at the stockpile.

## 17.2 Mineral Processing Stages

Manquiri's San Bartolomé mill facility consists of several stages/steps. With the exception of process improvements described in this Section 17, the stages are the same as those built and operating by Manquiri since commencement of commercial production in 2008. The description herein is summarized from the most recent, technical report authored for Coeur by Tyler and Mondragon (2015).

- Washing, Screening and Crushing Stage

  *There are two separate ore types that are handled in the washing and crushing circuit; Whole Ore and Screened ore. Each type has a dedicated crushing circuit (Figure 17-1). The Whole Ore is either a) directly dumped from the mine into a feed bin or b) recovered from a stockpile by a front-end loader to a feed bin. The Whole Ore is then fed from the feed bin by an apron feeder to the jaw crusher to reduce the particle size to <76 mm. Following crushing, the ore is delivered by conveyor to the crushed ore stockpile.*

  *Screened ore is fed by an apron feeder to a sizer (a roll crusher) to reduces the particles to <10 cm. The material is then fed to a washing circuit consisting of a rotary drum washer and a triple deck, shaker screen. The undersized, screened material (< 8 mesh) are pumped to the fines disposal facility (FDF). The oversized, >8 mesh, fraction contains most of the contained silver within the mineral resources and mineral reserves disclosed in sections 14 and 15 and tin (which is not recovered) and then fed to a short-head cone crusher. The crushed product is combined with the middle deck oversize material (>2.4 mm to < 50 mm size) and conveyed to the crushed ore stockpile.*

- Grinding

  *Crushed ore is fed, with a front-end loader, to a bin which discharges to a conveying system. The conveyor feeds the crushed ore to a semi-autogenous grinding (SAG) mil which is ground to approximately 48 mesh. Grinding balls are added, as needed, to replace those consumed in the ore comminution process. Water and a lime (CaO) slurry are added at this stage. The lime slurry serves to maintain the proper pH of the feed to the leaching stage. The slurry discharging from the SAG mill flows onto a trommel screen. The screen removes the oversize material, which is returned to the SAG mill for regrinding.*

  *Undersized material from the SAG mill trommel screen flows into the grinding pump box, where it combines with the discharge from the ball mill. Water is added to the slurry in the pump box before it is pumped to a series of cyclones. The cyclone underflow is redirected the ball mill where the material is additionally milled to an 80.0% minus 75.0 microns (200 mesh) in size.*

  *The cyclone overflow slurry, with P80 of 75 micrometers, flows to a trash screen to collect all stray, non-ore particles such as pieces of metal, wood, rubber, etc. The cleaned slurry is then pumped to the NaCN (sodium cyanide leach circuit for silver removal.*

- Cyanide Leach and Counter Current Decantation

*Slurry form a cyclone overflow from the grinding circuit is passed over a trash screen and then to the cyanide leach circuit. The slurry is leached in a series of agitator tanks using NaCN and sparged, plant air. The leached slurry flows by gravity to the counter-current decantation (CCD) circuit for a separation of solids and liquids. The leached slurry is washed in the CCD process in which the underflow from each thickening tank is pumped to the next stage downstream while the solution overflowing each thickener is directed to the previous stage upstream – thus the term counter-current decantation. The CCD circuit yields two product streams: 1) the precious-metal bearing, pregnant solution and 2) the thickened slurry that contains the washed particles and a minute amount of metal values in solution. The first stream is gravity-fed to the pregnant solution tank of the Merrill-Crowe circuit for recovery of precious metals. The second stream is pumped to the paste thickener for dewatering and eventual disposal in the FDF.*

- Merrill-Crowe Plant and Smelting

*This stage consists of the 1) Merrill-Crowe and 2) Refinery areas.*

*In the Merrill-Crowe area the pregnant solution is pumped from the pregnant solution tank to a Merrill-Crowe processing circuit, which precipitates silver (and any other precious metals) from the pregnant solution using zinc dust, Merrill Crowe is commonly used in the mining industry for ores containing large quantities of silver. The pregnant solution, treated in this step, should not contain any particulate matter or any dissolved oxygen. In the first step of the Merrill-Crowe process, the pregnant solution passes, under pressure, through leaf-type clarifier filters to remove any fine particles that are contained in the solution until turbidity measures (NTU) less than 100 is achieved. After the solids have been removed, the clarified pregnant solution flows to a de-aeration tower. The clarified pregnant solution enters the upper portion of the deaeration tower, which is maintained at a negative pressure by a vacuum pump that continually withdraws air from the de-aerator. As the air is withdrawn, dissolved oxygen contained in the pregnant solution vaporizes and is removed. During the next stage of the process, the oxygen-free pregnant solution is drawn from the de-aeration tower by a pump, and zinc dust is injected into the suction line of the pump. The silver precipitates as soon as the zinc makes contact with the de-aerated pregnant solution.*

*Refinery Area – After addition of zinc, the silver precipitate slurry is pumped to plate-and-frame-type of precipitate filters to separate the liquid from the solids. The silver precipitate is retained on the filter cloths covering the plates. The precipitate filter filtrate, which is now a barren solution, flows to a barren solution tank. Ay San Bartolomé barren solution normally contains minimum silver values (< 1.0 ppm). The barren solution is pumped from the barren solution tank back to the CCD circuit to be used as washing solution for the leached slurry, also is used throughout the processing plant as process and gland seal water. At the end of the filtration cycle, the filter is opened and the semi-dry, caked material is manually removed and placed into pans for further processing. The pans containing filter cake are loaded into a dryer oven to evaporate the remaining water. The* *filter cake is then heated overnight to temperature ranging from 100 to 110$^{o}$ C. After the moisture is removed from the filter cake, the dry cake is ready for smelting to remove any remaining impurities in the precipitate, such as copper, excess zinc from the precipitate, lead, cadmium, and other base metals. The precipitate is then mixed with a combination of fluxes used to form a slag containing all the impurities extracted during the smelting process. The flux-precipitate mixture is placed in a smelting furnace and heated to approximately 1,250$^{o}$ C to form a molten mixture. The slag forms on the top of the molten mixture and the silver forms a molten mass at the bottom. The slag is then removed into metal pots, while the silver is poured into bar molds. The slag is allowed to cool and later reprocessed to concentrate and recover any remaining precious metals. The slag then is added back to the melting furnace for retreatment. The treated slag is periodically returned to the SAG mill. The metal that is poured into bar molds is called doré; mixture of silver, gold and minor amounts of remaining impurities. The doré bars are cooled, cleaned, weighed, sampled and stamped for identification, and placed in the vault awaiting shipment. Silver is analyzed to determine the grade before shipping.*

## 17.3 Manquiri Process Facilities Improvements (since acquisition)

Since acquisition Manquiri has made improvements to the ore processing facilities at San Bartolomé. The most significant was the addition of oxygen to the leaching circuit.

- Oxygen Injection

Manquiri test work in 2019, yielded improvements in metal recovery and NaCN consumption with the addition of oxygen into the leaching circuit. As a result, changes to the leaching circuit were made to add oxygen to tank 2 (Figure 17.1) in 2019. In January 2020, the ability to add oxygen to tank 3 was also added to the circuit. Data in Table 17.1 and Figure 17.2 shows the results of the addition of sparged oxygen into tanks 2 and 3.

**Table 17.1: Mill Production Data and Oxygen Addition**

| Time Period | Tonnes Processed | Ag Grade (g/t) | Sulfur (%) | Ag Recovery (%) | Oxygen Addition (kg/t) |
|---|---|---|---|---|---|
| August 2019 | 135,600 | 120.4 | 0.52 | 87.0 | 0.4 |
| September | 132,029 | 111.3 | 0.48 | 87.3 | 0.37 |
| October | 135,730 | 123.6 | 0.51 | 87.0 | 0.31 |
| November | 87,501 | 129.5 | 0.40 | 87.1 | 0.26 |
| December | 137,653 | 130.3 | 0.64 | 89.1 | 0.36 |
| January 2020 | 139,016 | 136.8 | 0.62 | 91.3 | 0.41 |
| February | 131,549 | 148.4 | 0.78 | 91.4 | 0.45 |

## 17.4 Power and Water Consumption

Tables 17.3.1 and 17.3.2 show the consumption of electrical power (kilowatt hours - kWh) and water (cubic meters), respectively, at the San Bartolomé processing plant (all figures rounded).

**Table 17.2: Electrical Power Consumption at San Bartolomé (kilowatt hours)**

| Month | Year | | | |
|---|---|---|---|---|
| | 2017 (preacquisition) | 2018 | 2019 | 2020 |
| January | 5,208 | 5,591 | 5,513 | 6,078 |
| February | 4,755 | 4,829 | 4,869 | 5,336 |
| March | 6,090 | 5,761 | 5,405 | |
| April | 6,221 | 4,602 | 5,321 | |
| May | 6,277 | 5,534 | 5,919 | |
| June | 5,988 | 5,741 | 5,246 | |
| July | 5,656 | 6,058 | 5,587 | |
| August | 5,656 | 5,716 | 6,021 | |
| September | 4,786 | 5,607 | 5,593 | |
| October | 4,480 | 5,853 | 5,762 | |
| November | 4,798 | 5,765 | 4,116 | |
| December | 4,974 | 4,936 | 5,754 | |

**Table 17.3: Water Consumption at San Bartolomé (cubic meters)**

| Month | 2017 (preacquistion) | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| January | 83,279 | 64,170 | 80,499 | 28,195 |
| February | 66,973 | 220,36 | 24,591 | 43,369 |
| March | 63,338 | 43,263 | 88,308 | |
| April | 64,461 | 209,99 | 115,360 | |
| May | 78,762 | 17,468 | 115,917 | |
| June | 91,216 | 22,054 | 63,738 | |
| July | 108,508 | 40,045 | 124,454 | |
| August | 70,584 | 37,114 | 72,924 | |
| September | 56,570 | 5,824 | 61,762 | |
| October | 58,558 | 119,180 | 129,002 | |
| November | 46,232 | 130,191 | 56,952 | |
| December | 57,740 | 94,566 | 102,807 | |

## 18 PROJECT INFRASTRUCTURE

The San Bartolomé operation, located on the southeast side of Cerro Rico, contains the full range facilities for ore processing and precious metal recovery, support services and staff offices. Bolivia Highway 1, a spur of the Pan American Highway, runs along the east side of Cerro Rico separating the mill and the tailings area.

### 18.1 Ore Processing and Metal Recovery

Ore is processed at a facility built by Coeur in 2007-2008 at a rate 1.5 to 1.6 million tonnes per year. The mill circuit is described in more detail in Section 17. The final product from the mill is silver doré cast into rectangular ingots of about 3,250 troy ounces each (approx. 100 kgs) of approximately 99.8 fine silver (Figure 18.1). The addition of other mill feed sources to the San Bartolomé mill, on a batch basis, has yielded recovery of a small amount of gold in some of the silver ingots.

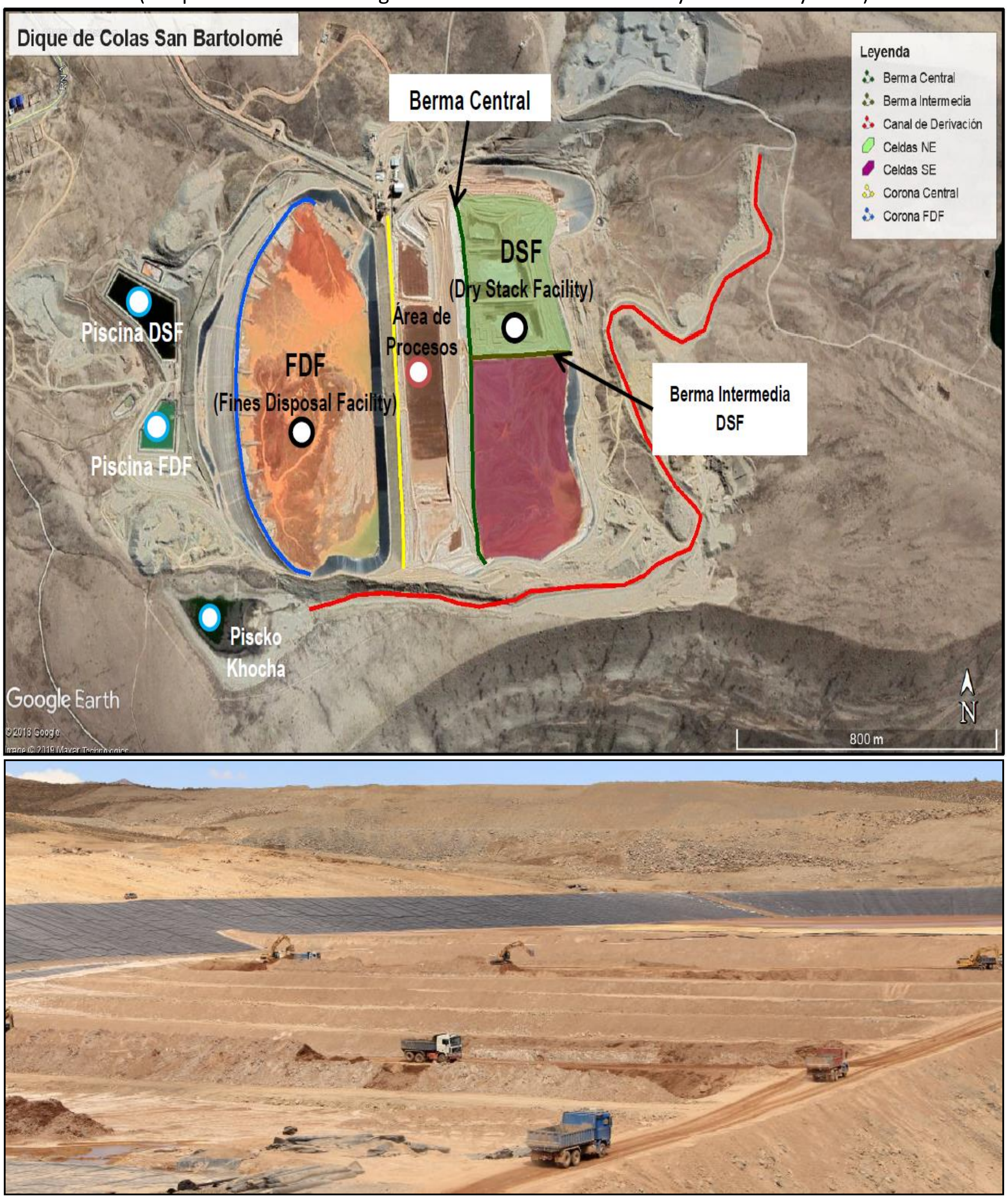
**Figure 18.1: Pouring Silver Ingots at San Bartolomé**
(January 2020)

## 18.2 Tailings

A three-stage tailings impoundment, commissioned in 2008 (Coeur, 2015), serves to store both dry and wet tailings from the mill. The stages are fines disposal (FDF), dry-stack facility (DSF) and water recovery operations and are located about 2 km to the southeast of the mill (Figure 18.2).

**Figure 18.2: San Bartolomé Tailings Facility**

(“Dique de Colas” is tailing dam. bottom view is of the dry stack facility - DSF)



The FDF holds slurry from mill feed that has been crushed and screened, but not leached, to remove -8 mesh (2.38 mm, 2,380 microns) material. This undersized material contains most of the tin (Sn), some silver and gangue. The FDF is fully lined and is a "zero-discharge" facility. It is designed to also hold storm water and leads to a separate water impoundment to provide water to the mill as needed.

DSF is used to store tailings, in slurry form, from the counter-current decantation (CDD) leach processing of ore crushed and screened to +8 mesh (the oversized material). The oversized material contains most of the recoverable silver. The DSF is also fully lined. Before entering the DSF, the slurry is thickened to paste consistency, pumped to a pressure filter system to remove all but about 10% moisture then conveyed to the DSF.

### 18.3 Water

Manquiri obtains water from local sources, the rights for which are held and granted from Administración Autónoma para Obras Sanitarias Potosí ("AAPOS"), the local water administrative service department. Manquiri purchases the water from AAPOS for US$1.00/1 m3 (US$1/1,000 liters). Its annual usage in 2019 was x liters/month. During the dry season of August through October, Manquiri has obtained water from local suppliers to supplement the AAPOS feed.

### 18.4 Power

Electrical power requirements are met by purchase from a local utility company Servicios Electricos Potosí Sociedad Anonima ("SEPSA") in Potosí. The incoming rate is 69 kV.

### 18.5 Analytical Services

Manquiri has a laboratory to process and analyze mine, exploration, metallurgical and doré samples. Samples from the mine are first processed at Plahipo then delivered to the assay laboratory for final preparation and analyses. The analytical facilities consist of industry-standard equipment and processes including drying, comminution, fire and wet chemical analyses and metallurgical testing (NaCN leaching) to support all of Manquiri's exploration, mining and processing activities.

### 18.6 Offices

Manquiri has offices to serve its staff located on the east side of the paved highway 1 in an area referred to as "Plahipo" (**Pl**anta **Hi**drometalurgía de **Po**tosí; *Hydrometallurgical Plant of Potosí*) in facilities COMIBOL previously operated to support a small heap leaching facility nearby. In addition to the offices currently occupied by Manquiri staff, there is a comedor (dining room) and preparation equipment to process exploration and grade control samples collected at the mine.

## 18.7 Obstacles

Due to proximity to the city of Potosí and various Cooperative underground mining operations, Manquiri’s mining and transport operations face local obstructions in the form of buildings, traffic, power and water lines, historic mine buildings, etc. To-date, the Qualified Persons are not aware of any significant impediments to Manquiri ’s operations at San Bartolomé from such obstacles.

Additional obstacles are restrictions imposed by the government on mining by Manquiri above 4400 meters elevation; a restriction that was enacted during the prior owners’ activities. None of Manquiri’s current mineral resources or mineral reserves lie above 4400 meters elevation.

# 19 MARKET STUDIES AND CONTRACTS

## 19.1 Metal Production and Sales

The San Bartolomé mill produces silver doré, which is transported from the processing plant to a US-based refinery by a secure transportation provider. The transportation cost equates to approximately $0.16 per ounce of material shipped. Under sales and refining agreement, the refiner produces silver bullion that meets standards set by the London Bullion Market Association, which regulates the acceptable requirements for bullion traded in the London precious metals markets. The terms of this contract include (i) a treatment charge based on the weight of the doré bars received at the refinery, (ii) a metal return percentage applied to recoverable silver and (iii) penalties charged for deleterious elements contained in the doré bars. The total of these charges can range from $0.29 to $0.30 per ounce based on the silver grades of the doré bars. Manquiri collects a sample of the doré and produces the initial assay at its San Bartolomé mil laboratory. If the doré bars contains payable gold, at the customers option, an additional US $0.12 per ounce of silver in the doré bars is charged. Given the high purity of the doré bars produced by the mine, penalties for deleterious elements are not a significant factor.

In addition to the contracted terms, Manquiri may experience other losses in the refining process such as: loss of precious metals during the doré melting process and differences between doré assays produced at San Bartolomé and at the refinery. These other losses may be due to the composition of the doré bars, the operating performance of the refinery and differences in assaying techniques used by the two parties and generally range from 0.05% to 0.10% of the silver ounces contained in the shipped doré bars. The final product, shipped from Manquiri, consists of doré ingots weighing approximately 100 kg each. In general, depending on the ore source, the ingots contain approximately 99.9% silver and 0.1% gold. Upon settlement of the doré specifications, Manquiri sells its payable silver and gold production to the refinery, or on the open market, at prevailing market prices over of period of days agreed to between the two parties.

## 19.2 Other Contracts

Manquiri has other contracts in place at San Bartolomé, notably contracted third party ore haulage providers and water as discussed in sections 4, 16 and 18. In addition, Manquiri has a silver doré refining contract with ASAHI Refining USA, executed in 2019. The salient aspects of this contract are as follows:

- Costs, in US$ per troy ounce, were quoted for doré with and without gold. Except for a minor amount of gold recovered from Cachi Laguna and El Asiento, the majority of the doré refined is silver.
- Costs include charges for Weighing, Splitting, Recovery, Treatment, Transportation, Analytical.
- Costs per troy ounce total

US$0.46 for doré with gold
US$0.32 for doré without gold

## 19.3 Qualified Persons' Comments

Manquiri has been producing and marketing doré since 2009. Agreements with refiners have been established since that time. The qualified persons inspected Manquiri's doré recovery facilities (Figure 18.1) during the 2020 site visits and viewed the procedures to produce, weigh and assay the precious metal ingots and believes them and the general sales terms to be reasonable.

The Company's rights to mine and process material from San Bartolomé, El Asiento and Tatasi-Portugalete are held by contracts/agreements with COMIBOL with terms described in Section 4. The Company's rights to remove and process material from Cachi Laguna are covered under separate contract with the owner, RALP, with terms described in Section 4.

Other than those disclosed in this technical report, the qualified persons are not aware of any other significant contracts pertaining to the Company's mining or milling production at San Bartolomé.

# 20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

## 20.1 San Bartolomé

The San Bartolomé operation has an approved reclamation and closure plan. The baseline environmental baseline (the "ALBA") has been prepared in compliance with the Bolivian Environmental Regulations in order to obtain an Environmental License (Permit) for the San Bartolomé project.

The project utilizes conventional surface mining methods to extract colluvial, and alluvial materials mine dumps, oxide and sulfide tailings and other materials named pallacos and sucus and troceras (collectively, the "pallacos"), which have been identified in the Huacajchi, Santa Rita, Diablo (Norte and Sureste areas – now referred to as Antuco). During the design phase of the project, Manquiri considered various alternatives to the location of the processing plant, the crushing and grinding circuits, the leaching circuit and the tailings storage facilities that comprise the metallurgic concentration circuit, based on technical, social, economic and environmental criteria.

The San Bartolomé mine has a fully engaged management team at the site that address proactive mining and processing concerns and potential environmental and community impacts of mining and processing of silver ores at the mine. The environmental and community social responsibility involvement is fully supported by Ag-Mining.

The operation utilizes a tailing facility designed to maximize water efficiency and minimize long-term environmental impacts by creating a highly concentrated tailing (Figure 20.1). The low level of water concentrated in the tailings provides maximum structural stability, a critical component to site closure. The site is further improving water efficiency and tailings storage capacity by optimizing the current tailings filtration system that is removing more water from the tailing and improve the dry stack facility in permanent basis.

The San Bartolomé reclamation and closure plan, approved and accepted by the government includes remediation and removal of permitted facilities. This includes closure of the plant and tailings facility. The closure cost is reviewed annually by the site engineers and environmental staff. The full life of mine closure cost for the San Bartolomé project was estimated to be $19.9 million in 2019.

Because of the long mining history in Potosí, which dates back to the mid-sixteenth century, together with the National Monument status of Cerro Rico and World Heritage designation for the city of Potosí, the social aspects of the San Bartolomé project are of a high importance.

**Jesus de Machaca Ayllu Indigenous Community** - In 2004, Manquiri acquired the surface rights to the area where the process plant and tailings facilities have been installed from the Jesus de Machaca Ayllu indigenous community. According to Bolivian law, land pertaining to indigenous communities cannot be sold or transferred, but it can be expropriated for purposes in the national interest, such as mining projects. Consequently, Manquiri negotiated the expropriation of certain surface rights pertaining to the Jesus de Machaca community. A general agreement was first reached with the community (which consists of about 170 family members) as well as individual agreements that were negotiated with the most highly impacted members of the community. In addition to monetary payments, Manquiri has provided assistance to the communities including improving local health awareness (developed from pre-site baseline data) and education focused on overall community sustainability. Examples of such assistance projects are the Lakachaka Tourist Complex, or the Fish Farms and Greenhouses funded through the Indigenous Development Plan or “PDO”.

In order to address the local social needs and demands, Manquiri has established the PDO program in strategic alliance with the Ayllu Jesus de Machaca with the goal of meeting four basic tenants of community and social responsibility; Education, Nutrition, Housing and Healthcare. Current additional key projects in parallel to PDO include developing the 138 Colonial Portals Restoration program (Figure 20.2) and the Silversmith School at Potosi City.

**Figure 20.1: Colonial Shelter and Portal Restored by Manquiri**

(Shelter on left, portal on right)

**Environmental Permits Required** - Manquiri permitting application consisted of two documents. The Auditoria Ambiental de Línea Base (ALBA, or Environmental Baseline Audit) describes all the pre-existing environmental liabilities in the project area. At San

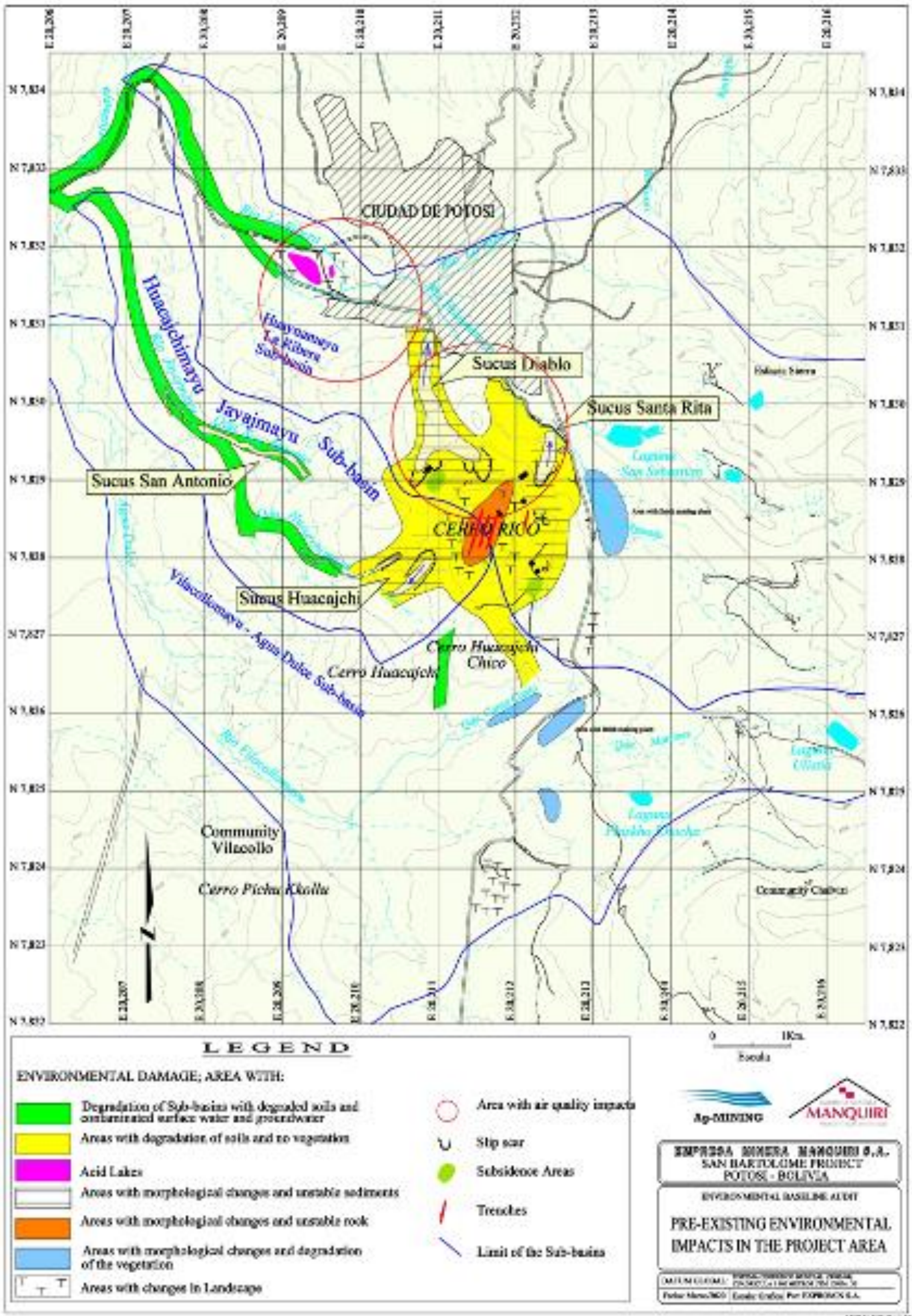
Bartolomé, due to the effects of over 450 years of uninterrupted mining, the impacts to the environment have been severe. Under Bolivian law, Ag Mining is not responsible for pre-existing environmental liabilities identified in the ALBA.

The second permitting application document is the Estudio de Evaluación de Impacto Ambiental (EEIA, or Environmental Impact Study), which describes the San Bartolomé Project and its impact on the area and the local communities. The EEIA describes the project in detail including operating parameters, flows, equipment, tailings facilities, mine plans, reclamation plans, chemicals, chemical spill plans, and other parameters as defined in 2004. An environmental protection plan and a reclamation plan for the operation were included. All of the assumptions and assertions are supported by engineering analyses that are part of the EEIA document. On June 21, 2004 the Bolivian Government issued the Environmental License (Licencia Ambiental) and Hazardous Materials Permit for the Project based on information contained in the EEIA and ALBA. The Environmental License and the associated Hazardous Materials Permit are the only permits required for the project operations and were in good standing as of the Effective Date of this TR.

The Environmental License for the San Bartolomé project contains a 20 biannual environmental monitoring reports and 14 annual environmental monitoring reports. Reporting requirements are submitted twice each year until the second half of 2015, since the first half of 2016 are submitted annually due to changes in the Bolivia legislation. The site Environmental License was reviewed by the primary Bolivian government environmental agencies that regulate mining impacts in 2011 and the license was recertified on December 7 of 2011. Currently, Manquiri submits annual reports which contains environmental monitoring tasks as it is specified in the Environmental Management Plan (Plan de Aplicación y Seguimiento Ambiental, “PASA”). The purpose of the reports is to provide results of environmental monitoring to demonstrate compliance with the Environmental Protection and Mitigation Program (Programa de Prevención y Mitigación (“PPM”) for the operation of the plant, tailings facility, and mining operations.

**Environmental Liabilities** - Many historic environmental liabilities as well as numerous active sources of environmental degradation are evident in the Cerro Rico area, most of which pre-date San Bartolomé operations by centuries. Pre-existing environmental liabilities are characterized by the contamination and/or elimination of soils and vegetation around Cerro Rico as a result of more than 450 years of mining activity. The environment around Cerro Rico is one of arid, high elevation with a thin soil cover which supports only sparse vegetation. Figure 20.3 shows the extent of pre-existing environmental impacts of the San Bartolomé project area. The extent, number, and impact of historic mine portals, dumps, surface workings, treatment facility locations and access roads are shown. These areas and the associated impacts were clearly characterized in the Baseline Environmental Report (“ALBA”). The ALBA documented that these conditions are legacy issues – prior to the activities of Manquiri. Nonetheless, Manquiri conducts sampling and reporting of impacts to the San Bartolomé operation from adjacent small mines or waste dumps and reports this information as a part of the environmental management of the San Bartolomé mine.

**Figure 20.2: Pre-existing Environmental Impacts of Historic Mining at Cerro Rico**



## 20.2 El Asiento, Tatasi-Portugalete, Cachi Laguna

As described in Section 4, the San Bartolomé operation has been supplementing mill feed from the pallacos with other sources of oxidized material from various mining operations. Two such oxidized opportunities, recently secured by Manquiri from COMIBOL, are El Asiento and Tatasi-Portugalete. In addition, Manquiri's interest in Cachi Laguna was acquired under contract with RALP (Section 4). The oxidized portions of these other ores can be processed in the Manquiri's cyanide leach facilities at San Bartolomé. All of Manquiri's activities at El Asiento, Tatasi-Portugalete and Cachi Laguna are conducted under the current environmental licenses of Manquiri, or RALP - for Cachi Laguna, which consider the removal of the dumps and ores and their transportation to Manquiri´s facilities under Special Environmental Permits.

## 20.3 Closure Plan

In 2017, Manquiri updated its environmental closure plan for the San Bartolomé site. The plan was prepared for Manquiri by MINCO, an independent mining and engineering consultant group based in La Paz, BO (www.minco.com.bo). The updated plan, "*Actualización del Plan de Cierre y Rehabilitación del Área"* (the "PCRA") was prepared for Manquiri and Coeur.

The PCRA is valid and was formulated to address six objectives:

- Identify and characterize the actual components of the San Bartolomé mining operation (Identificar y caracterizar los componentes actuales de la operación minera San Bartolomé);
- Identify and describe the final closure and restoration activities for the various parts of the San Bartolomé operation at the end of the life of mine, taking into account closure of each component or area and assumed commitments in the Enviromental License and environmental risks of eash site *(Identificar y describir las actividades de cierre y rehabilitación definitiva para los componentes del proyecto San Bartolomé al final de la vida útil, tomando en cuenta objetivos específicos de cierre en cada componente o área; además tomando en cuenta compromisos asumidos en la Licencia Ambiental y los riesgos ambientales de cada sitio)*;
- Identify and describe activities completed during operations and those that will be completed before the end of the useful mine life *(Identificar y describir las actividades ejecutadas de cierre y rehabilitación progresiva simultánea al desarrollo de la actividad minera para los componentes que ya no están en operación y aquellos componentes que concluirán sus actividades antes de la vida útil de la mina)*;
- Develop and formulate final completion criteria, describe the criteria to facilitate that will allow execution of the Abandonment Stage (that involves the closure and post-closure of the San Bartolomé Project in full compliance with Bolivian legislation and policies of Manquiri *(Desarrollar y formular criterios de finalización. Es decir,*

*describir los criterios que permitirán ejecutar la Etapa de Abandono que involucra el cierre y post cierre del Proyecto San Bartolomé en completa conformidad con la legislación Boliviana y las políticas de MANQUIRI S.A. y COEUR)*;

- Identify the destinations of the different components or part of them in the environmental legal framework and taking into account commitments in the area of Corporate Social Responsibility *(Identificar los destinos de los diferentes componentes o de parte de los mismos en el marco legal ambiental y tomando en cuenta compromisos del área de Responsabilidad Social Empresarial)* and,
- Produce a closure budget for the San Bartolomé mining operation based on the closing and post-closing activities of the PCRA (Elaborar un presupuesto de cierre para la operación minera San Bartolomé con base a las actividades de cierre y post-cierre del PCRA).

Spanish text of the PCRA provision are shown in *Italics* and were translated to English by D. J. Birak (qualified person).

The estimated closure cost to comply with the PCRA has been estimated at US$23.6 million based on costs in Bolivianos (“BOB”) and a fixed exchange rate of 6.96 BOB to $1 US. Closure (and estimated salvage) costs were incorporated in the Economic Analysis herein (Section 22).

**Qualified Persons’ Comments**

The San Bartolomé operation has been in continuous operation since 2008. The qualified persons are not aware of any other requirements with respect to environmental, community of social topics that could affect the continuation of mine and mill operations, other than those disclosed in this TR.

Manquiri’s operations at El Asiento and Tatasi-Portugalete are solely focused on historic mine dumps/stockpiles and the removal and transport of them to San Bartolomé for processing. The tails from those dumps are being placed in the San Bartolomé tailings facility. In so doing, the qualified persons believe this action will be beneficial to the local environment, much like the company’s activities at San Bartolomé., by removing historic dumps and recontouring and revegetating land under the dumps. Similarly, tails from processing of Cachi Laguna material are also stored in the San Bartolomé tailings facility.

# 21 CAPITAL AND OPERATING COSTS

The capital and operating cost estimates were developed in United States Dollars (US$) and are strongly based on the ongoing operations by Manquiri. All costs are estimated as of the Effective Date of this Technical Report. All cost projections are presented on a nominal dollar basis.

## 21.1 Capital Costs

The majority of the required investments to run Manquiri's operations are already made, as processing facilities, mining equipment and internal roads, offices and general infrastructure.

The remaining capital requirements are related with the expansion of the tailings dam wall and needs to be in place by the beginning of 2022. Current estimation by Manquiri for this concept is a total of US$ 2.8 million, to be spent at a rate of US$ 156,000 for 17 months and the remaining US$ 148,000 in month 18.

A salvage value of US$ 5.0 million have been estimated by Manquiri for all installed processing facilities and mobile equipment. This value has been considered at the end of the life of mine.

## 21.2 Operating Costs

Operating costs in this report were obtained from the ongoing operations by Manquiri and were reviewed by NCL for use. They include the figures from the own operations at pallacos mines and the contracts with the local Cooperativas for transportation of the ore from pallacos, Cachi Laguna and El Asiento and Tatasi-Portugalete to the processing plant.

Details of the costs for each one of the deposits has been given in the previous sections of this report and are summarized in the following Table 21.1.

**Table 21.1: Operation Costs per Deposit.**

| Costs | Antuco | Santa Rita | Huacajchi | Cachi Laguna | El Asiento | Tatasi |
|---|---|---|---|---|---|---|
| | Cost Per Tonne | | | | | |
| Mining cost | 3.50 | 3.50 | 3.50 | 3.00 | 3.22 | 3.68 |
| Ore additional mining cost | - | - | - | 2.34 | | |
| Transport US$/t-ROM | 1.79 | 1.19 | 0.89 | 31.58 | 13.55 | 28.82 |
| Transport US$/t+8 Mesh | 3.25 | 1.98 | 1.51 | - | - | - |
| Washing (+8 mesh) | 0.18 | 0.18 | 0.18 | - | - | - |
| Process | 18.63 | 18.63 | 18.63 | 18.63 | 18.63 | 18.63 |
| Additional CN & Lime | - | - | - | 6.10 | 5.62 | 14.91 |
| Tails dam | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 |
| G&A | 5.85 | 5.85 | 5.85 | 5.85 | 5.85 | 5.85 |

The following comments can be made in relation with Table 21.1 data:

- Pallacos

Pallacos require an additional stage of washing before feeding the mill for removing the clays to improve plant performance and increase the grade. The washing cost corresponds to US$0.18/t+8#.

- Cachi Laguna

Processing cost of Cachi Laguna's ore is affected by additional Cyanide and Lime consumption with respect to pallacos ore.

The transport to the plant cost is based on ongoing contracts which are based on the Ag grade as shown in Table 21.2.

**Table 21.2: Cachi Laguna Cost vs Ag Grade**

| Ag grade (g/t) ranges: | | Cost |
|---|---|---|
| Min (>=) | Max (<) | US$/t |
| 320 | 400 | 31.58 |
| 400 | 450 | 46.52 |
| 450 | 500 | 55.92 |
| 500 | 550 | 65.32 |
| 550 | 600 | 74.72 |
| 600 | | 84.12 |

The current contract established with RALP considers the share of the total sales in equal parts, therefore a cost of US$ 8.5/oz silver has been considered for Cachi Laguna.

- El Asiento and Tatasi-Portugalete

Same as Cachi Laguna's ore, production from El Asiento and Tatasi-Portugalete is affected by additional Cn and Lime consumption with respect to pallacos.

- General & Administrative

G&A cost of US$ 5.85 /t processed ore (+8# for pallacos) consider the administrative costs of the mines, process plant, laboratories and warehouse and senior administration of the Manquiri's operations.

# 22 ECONOMIC ANALYSIS

The economic analysis is based on the estimated Capex and Opex and revenue calculated thereof. This section presents the projects revenues and economic analysis.

As NCL is not a financial advisor, after-tax figures should be confirmed with a recognized tax expert. Sensitivities based on commodity price, operating cost and capital expenditures variation are highlighted in Section 22.5

Production schedule and cash flow forecast were developed on a monthly basis for the period from March 2020 through September 2022 (total mine life of 2.5 years) and presented on an annual basis herein.

This exercise calculates and after-tax NPV9% of US$ 40.2 million at a US$ 17.0/oz silver price. Since the analysis is based on a cash flow estimate, it should be expected that actual economic results may vary from these results.

## 22.1 Cash Flow Modelling.

NCL has estimated the Project's net present value based on a discounted cash flow model, which uses mine production schedule, silver grades, estimated silver recoveries, and capital and operating costs as input, to calculate Project's NPV.

Ag-Mining acquired Manquiri in February 2018. Currently the company has approximately US$ 82.7 million in accumulated losses, which would allow, considering the estimated flows from the mining plan, to be exempt from taxes for the evaluation period.

## 22.2 Financial Model Parameters.

### *22.2.1 Operational and Off Site costs*

Economic parameters used for the evaluation are shown in Table 22.1 and Table 22.2, separated in "On Site" and "Off Site" values.

**Table 22.1: Economic Parameters – On Site Values**

| | | | |
|---|---|---|---|
| ***Metals Production*** | | | |
| **Silver Recovery** | | | |
| Pallacos | | 90.0% | |
| Tatasi-Portugalete | | 73.5% | |
| El Asiento | | 80.0% | |
| Cachi Laguna | | 80.0% | |
| ***Price*** | | | |
| Silver | | 17.00 | US$/oz |
| ***Operating Costs*** | | | |
| **Mining** | | | |
| Pallacos | | 3.50 | US$/t-mined |
| Tatasi-Portugalete | | 3.68 | US$/t-mined |
| El Asiento | | 3.22 | US$/t-mined |
| Cachi Laguna | | | |
| | Waste | 3.00 | US$/t-waste |
| | Ore | 5.34 | US$/t-ore |
| **Hauling** | | | |
| Antuco | | 1.79 | US$/t-ROM |
| Santa Rita | | 1.19 | US$/t-ROM |
| Huacajchi | | 0.89 | US$/t-ROM |
| Tatasi-Portugalete | | 28.82 | US$/t-ROM |
| El Asiento | | 13.55 | US$/t-ROM |
| Cachi Laguna | | Variable (*) | US$/t-ROM |
| **Processing** | | | |
| Washing | | | |
| Pallacos | | 0.18 | US$/t+8 |
| Process | | 18.63 | US$/t-processed |
| Additional Cyanide & Lime | | | |
| Tatasi-Portugalete | | 14.91 | US$/t-processed |
| El Asiento | | 5.62 | US$/t-processed |
| Cachi Laguna | | 6.10 | US$/t-processed |
| Tails dam | | 1.54 | US$/t-processed |
| **General and Administrative** | | | |
| G&A | | 5.85 | US$/t-processed |

(*) Hauling cost for Cachi Laguna includes the payment to RALP and is variable as a function of the Ag grade, as detailed in Section 4 of this report.

**Table 22.2: Economic Parameters – Off Site Values**

| | | |
|---|---|---|
| ***Off Site Costs*** | | |
| **Smelting** | | |
| Pallacos | 0.33 | US$/oz Ag |
| Mining Dumps | 0.33 | US$/oz Ag |
| Cachi Laguna | 0.42 | US$/oz Ag |
| **Royalties** | | |
| COMIBOL | | |
| Pallacos | 4.0% | NSR basis |
| Mining Dumps | 5.0% | NSR basis |
| Cachi Laguna | 0.0% | NSR basis |
| Government Royalty | | |
| Silver | 6.0% | Revenue basis |
| Gold | 7.0% | Revenue basis |
| ***Income Taxes*** | 32.5% | |
| ***Discount Rate*** | 9% | |

### *22.2.2 Other Non-Operational Costs*

Manquiri provided additional non-operational costs of US$ 6.0 million, divided into US$ 4.3 million for exploration and metallurgical tests planned to be incurred during the evaluation period and US$ 1.7 million for asset procurement obligation accretion.

### *22.2.3 Reclamation*

As described in Section 20.3 the cost of the closure plan has been estimated by Manquiri as US$ 23.6 million and the expenditure is from 2020 through 2026.

Additionally, an allowance of US$ 4.0 million for payment of severance was considered at the end of the evaluation period.

### *22.2.4 Depreciation and Amortization*

Total value suitable for depreciation and amortization purposes, as of March 2020, amounts to US$ 41.4 million and the calculation on a period basis was based as the relation between the plant feed of each period and the total plant feed.

### *22.2.5 Tax Rate and Accumulated Losses*

As described is Section 4.3, Manquiri's total corporate tax on net profits is 32.5%, but because of previous operations there are US$ 82.7 million in accountable cumulative losses, which together with depreciation and amortization can be deducted from the net income, resulting on negative net profits for all the periods through the life of mine.

*22.2.6 Capital Costs*

As described in Section 21.1 the required capital cost correspond to US$ 2.8 million for the tailings dam expansion and the expenditure is planned during 2020 and 2021.

A salvage value of US$ 5.0 million have been estimated by Manquiri for all installed processing facilities and mobile equipment. This value has been considered at the end of the evaluation period.

## 22.3 Production and Revenue.

Consolidated total silver production and revenue obtained from the mine plan and the above given technical and economic data are summarized in the following table. The yearly production plan is shown in table 22.4

**Table 22.3: Production and Revenue**

| Item | Unit | Value |
|---|---|---|
| Plant feed | Kt | 3,948 |
| Silver Produced | Moz | 15.11 |
| Revenue | MUS$ | 256.9 |

**Table 22.4: Yearly Production**

| Mine Schedule | | TOTAL | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Plant Feed | kt | 3,948 | 1,272 | 1,565 | 1,111 |
| Grade Ag | g/t Ag | 138.4 | 179.5 | 126.6 | 108.1 |
| Recovery Ag | % | 86.0% | 82.6% | 87.5% | 90.0% |
| Product Ag | koz Ag | 15,110 | 6,059 | 5,576 | 3,475 |

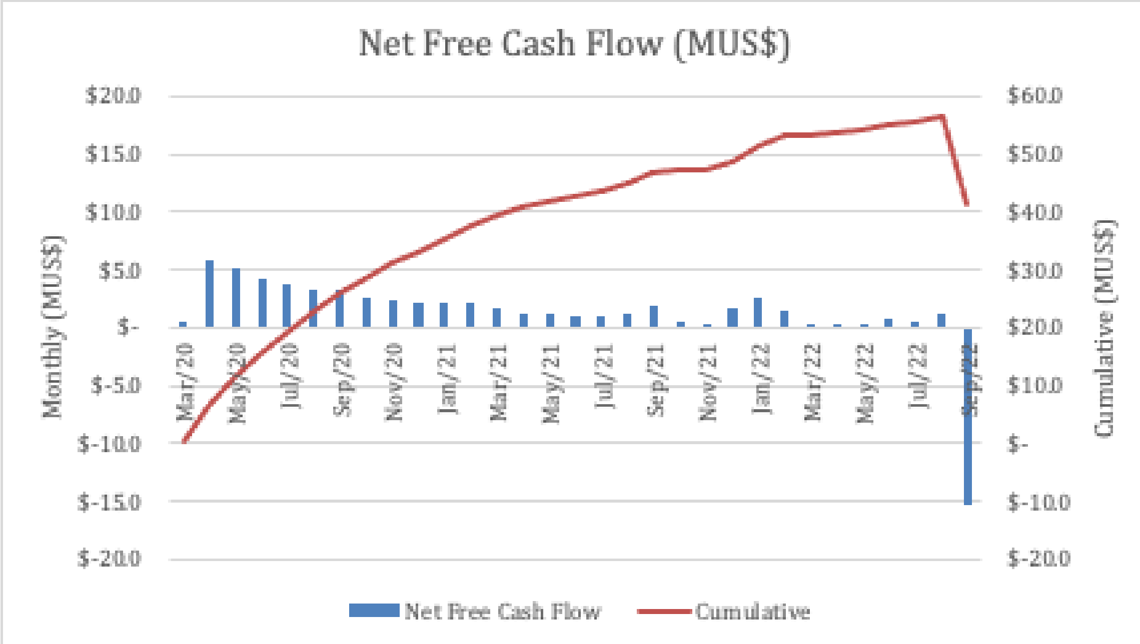
## 22.4 Cash Flow

A monthly cash flow model was generated and later integrated into a yearly basis, that is shown in the following Table 22.5 and Figure 22.1. The big negative value observed in the last month of the evaluation period (September 2022) is driven by the remaining closure cost through 2026.

**Table 22.5: Yearly Cash Flow – Undiscounted**

| | | Total | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Net Free Cash Flow | US$ | $ 41,268 | $ 33,213 | $ 15,694 | $ -7,639 |
| Cumulative | US$ | | $ 33,213 | $ 48,907 | $ 41,268 |

**Figure 22.1: Monthly and Cumulative NPV**




Applying a 9% discount rate to the NPV figures shown above, the discounted NPV (9%) reaches to US$ 40.2 million. No internal rate of return (IRR) was calculated as Manquiri is currently in operation and no initial capital cost is required. The yearly economic model is shown in Table 22.6.

**Table 22.6: Yearly Economic Model**

| | | TOTAL | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| ***Metals Production*** | | | | | |
| **Silver** | | | | | |
| TOTAL Silver | koz Ag | 15,110 | 6,059 | 5,576 | 3,475 |
| | | | | | |
| ***Revenue*** | | | | | |
| Silver | US$'000 | $ 256,864 | $ 103,002 | $ 94,795 | $ 59,068 |
| TOTAL Revenue | US$'000 | $ 256,864 | $ 103,002 | $ 94,795 | $ 59,068 |
| | | | | | |
| ***Operating Costs*** | | | | | |
| **Mining** | | | | | |
| TOTAL Mining | US$'000 | $ 28,184 | $ 9,170 | $ 11,278 | $ 7,737 |
| **Hauling** | | | | | |
| TOTAL Hauling | US$'000 | $ 14,069 | $ 4,812 | $ 5,859 | $ 3,399 |
| **Processing** | | | | | |
| TOTAL Processing | US$'000 | $ 91,455 | $ 33,346 | $ 35,498 | $ 22,611 |
| **General and Administrative** | | | | | |
| TOTAL G&A | US$'000 | $ 23,108 | $ 7,445 | $ 9,159 | $ 6,504 |
| | | | | | |
| TOTAL OPERATING COST | US$'000 | $ 156,817 | $ 54,773 | $ 61,793 | $ 40,250 |

| | | TOTAL | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|
| Cash Cost | US$/oz Ag | 10.4 | 9.0 | 11.1 | 11.6 |
| ***Operating Cash Flow*** | | | | | |
| TOTAL OPERATING CASH FLOW | US$'000 | $ 100,048 | $ 48,229 | $ 33,001 | $ 18,818 |
| ***Off Site Costs*** | | | | | |
| **Smelting** | | | | | |
| TOTAL Smelting | US$'000 | $ 5,047 | $ 2,037 | $ 1,863 | $ 1,147 |
| **Royalties** | | | | | |
| TOTAL Royalties | US$'000 | $ 24,984 | $ 10,133 | $ 9,132 | $ 5,719 |
| TOTAL Off Site Costs | US$'000 | $ 30,031 | $ 12,170 | $ 10,996 | $ 6,866 |
| ***Other Expenses*** | | | | | |
| TOTAL Other Expenses | US$'000 | $ 5,968 | $ 1,283 | $ 3,438 | $ 1,247 |
| ***Net Revenue*** | | | | | |
| TOTAL Net Revenue | US$'000 | $ 220,865 | $ 89,549 | $ 80,361 | $ 50,955 |
| ***Total cost per ounce, including refining & royalty*** | | | | | |
| Total cost per ounce, including refining & royalty | US$/oz Ag | 12.8 | 11.3 | 13.7 | 13.9 |
| ***Total Gross Margin*** | US$'000 | $ 64,049 | $ 34,776 | $ 18,568 | $ 10,705 |
| ***Reclamation*** | US$'000 | $ 24,981 | $ 627 | $ 1,010 | $ 23,344 |
| ***EBITDA*** | US$'000 | $ 39,068 | $ 34,149 | $ 17,558 | $ -12,639 |
| ***Depreciation & Amortization*** | US$'000 | $ 41,404 | $ 13,374 | $ 17,165 | $ 10,865 |
| ***EBIT*** | US$'000 | $ -2,336 | $ 20,775 | $ 393 | $ -23,504 |
| ***Interests on debt*** | US$'000 | $ - | | | |
| ***EBT*** | US$'000 | $ -2,336 | $ 20,775 | $ 393 | $ -23,504 |
| ***Taxes*** | US$'000 | $ - | $ - | $ - | $ - |
| ***Net Earnings*** | | $ -2,336 | $ 20,775 | $ 393 | $ -23,504 |
| ***CASH FLOW*** | | $ 39,068 | $ 34,149 | $ 17,558 | $ -12,639 |

| | | |
|---|---|---|
| ***Net Capex*** | | |
| Capex | US$'000 | $ - |

| | | | TOTAL | | 2020 | | 2021 | | 2022 |
|---|---|---|---|---|---|---|---|---|---|
| Sustaining | US$'000 | $ | 2,800 | $ | 936 | $ | 1,864 | $ | - |
| Salvage Value | US$'000 | $ | -5,000 | $ | - | $ | - | $ | -5,000 |
| TOTAL Capex | US$'000 | $ | -2,200 | $ | 936 | $ | 1,864 | $ | -5,000 |
| | | | | | | | | | |
| All in sustaining cost (AISC) | US$/oz Ag | | 14.3 | | 11.5 | | 14.2 | | 19.2 |
| | | | | | | | | | |
| ***Net Free Cash Flow (yearly & cumulative)*** | | | | | | | | | |
| Net Free Cash Flow | US$'000 | $ | 41,268 | $ | 33,213 | $ | 15,694 | $ | -7,639 |
| Cumulative | US$'000 | | | $ | 33,213 | $ | 48,907 | $ | 41,268 |
| | | | | | | | | | |
| ***Net Present Value (NPV)*** | | | | | | | | | |
| Discount rate | | | | | | | | | |
| 0% | | $ | 41,268 | | | | | | |
| 5% | | $ | 40,684 | | | | | | |
| 9% | | $ | 40,195 | | | | | | |

## 22.5 Sensitivity Analysis.

NPV sensitivity analyses have been performed for changes in silver price, capital and operating costs, royalties, metallurgical recovery and changes to discount rate.

No sensitivity was performed to the internal rate of return (IRR) as Manquiri is currently in operation and no initial capital cost is required.

All changes were considered as ±25% from the Base Case situation, every 5%. For discount rate, NPVs had been calculated for 0%, 5% and 9%. Results from the sensitivities are summarized in the following tables:

**Table 22.7: Sensitivity Analysis; Silver Price and Operative Cost**

| NPV (MUS$) | | METAL PRICES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | US$ 40.2 M | -25% | -20% | -15% | -10% | -5% | 0% | 5% | 10% | 15% | 20% | 25% |
| OPEX | -25% | 21.6 | 32.1 | 42.6 | 53.1 | 63.5 | 74.0 | 84.5 | 94.9 | 100.2 | 89.2 | 59.0 |
| | -20% | 14.9 | 25.4 | 35.8 | 46.3 | 56.8 | 67.2 | 77.7 | 88.2 | 98.6 | 97.1 | 79.9 |
| | -15% | 8.1 | 18.6 | 29.1 | 39.5 | 50.0 | 60.5 | 70.9 | 81.4 | 91.9 | 100.7 | 92.8 |
| | -10% | 1.4 | 11.8 | 22.3 | 32.8 | 43.2 | 53.7 | 64.2 | 74.7 | 85.1 | 95.6 | 99.6 |
| | -5% | -5.4 | 5.1 | 15.5 | 26.0 | 36.5 | 47.0 | 57.4 | 67.9 | 78.4 | 88.8 | 99.3 |
| | 0% | -12.2 | -1.7 | 8.8 | 19.3 | 29.7 | 40.2 | 50.7 | 61.1 | 71.6 | 82.1 | 92.5 |
| | 5% | -18.9 | -8.4 | 2.0 | 12.5 | 23.0 | 33.4 | 43.9 | 54.4 | 64.8 | 75.3 | 85.8 |
| | 10% | -25.7 | -15.2 | -4.7 | 5.7 | 16.2 | 26.7 | 37.1 | 47.6 | 58.1 | 68.6 | 79.0 |
| | 15% | -32.4 | -22.0 | -11.5 | -1.0 | 9.4 | 19.9 | 30.4 | 40.9 | 51.3 | 61.8 | 72.3 |
| | 20% | -39.2 | -28.7 | -18.3 | -7.8 | 2.7 | 13.2 | 23.6 | 34.1 | 44.6 | 55.0 | 65.5 |
| | 25% | -45.9 | -35.5 | -25.0 | -14.5 | -4.1 | 6.4 | 16.9 | 27.3 | 37.8 | 48.3 | 58.7 |

**Table 22.8: Sensitivity Analysis; Silver Price and Recovery**

| NPV (MUS$) | | METAL PRICES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | US$ 40.2 M | -25% | -20% | -15% | -10% | -5% | 0% | 5% | 10% | 15% | 20% | 25% |
| RECOVERIES | -25% | -50.3 | -42.5 | -34.6 | -26.8 | -18.9 | -11.1 | -3.2 | 4.6 | 12.5 | 20.4 | 28.2 |
| | -20% | -42.7 | -34.3 | -25.9 | -17.6 | -9.2 | -0.8 | 7.6 | 15.9 | 24.3 | 32.7 | 41.1 |
| | -15% | -35.1 | -26.2 | -17.3 | -8.4 | 0.5 | 9.4 | 18.3 | 27.2 | 36.1 | 45.0 | 53.9 |
| | -10% | -27.4 | -18.0 | -8.6 | 0.8 | 10.3 | 19.7 | 29.1 | 38.5 | 48.0 | 57.4 | 66.8 |
| | -5% | -19.8 | -9.8 | 0.1 | 10.1 | 20.0 | 29.9 | 39.9 | 49.8 | 59.8 | 69.7 | 79.7 |
| | 0% | -12.2 | -1.7 | 8.8 | 19.3 | 29.7 | 40.2 | 50.7 | 61.1 | 71.6 | 82.1 | 92.5 |
| | 5% | -4.5 | 6.5 | 17.5 | 28.5 | 39.5 | 50.4 | 61.4 | 72.4 | 83.4 | 94.4 | 100.0 |
| | 10% | 3.1 | 14.6 | 26.1 | 37.7 | 49.2 | 60.7 | 72.2 | 83.7 | 95.2 | 98.9 | 82.5 |
| | 15% | 10.7 | 22.8 | 34.8 | 46.9 | 58.9 | 70.9 | 83.0 | 95.0 | 98.6 | 80.0 | 39.3 |
| | 20% | 18.4 | 30.9 | 43.5 | 56.1 | 68.6 | 81.2 | 93.8 | 99.2 | 80.7 | 38.2 | -11.8 |
| | 25% | 26.0 | 39.1 | 52.2 | 65.3 | 78.4 | 91.4 | 100.6 | 84.5 | 41.0 | -10.9 | -67.6 |

**Table 22.9: Sensitivity Analysis; Silver Price and Royalties**

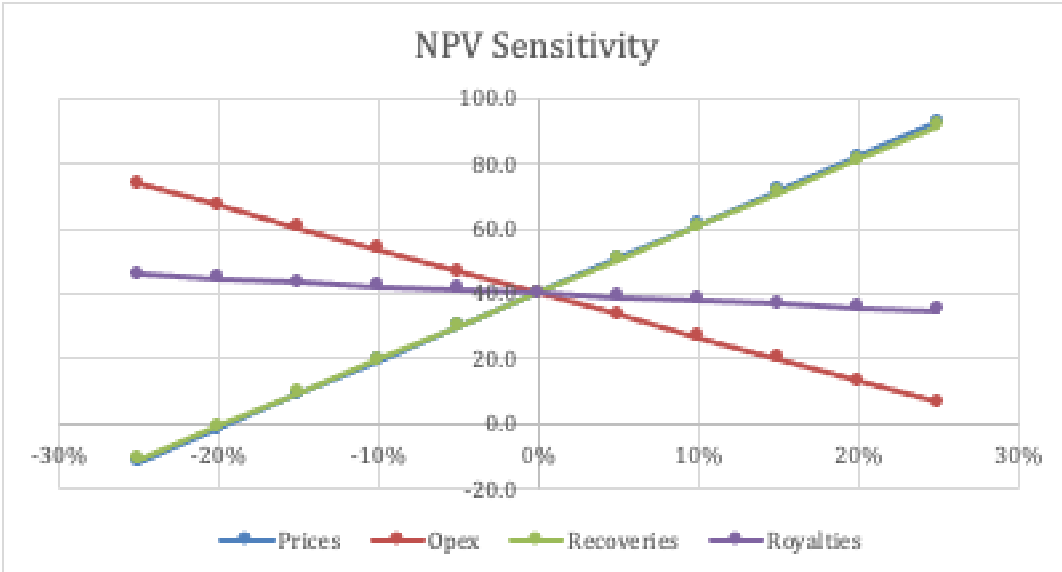
| NPV (MUS$) | | METAL PRICES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | US$ 40.2 M | -25% | -20% | -15% | -10% | -5% | 0% | 5% | 10% | 15% | 20% | 25% |
| ROYALTIES | -25% | -8.0 | 2.7 | 13.5 | 24.2 | 35.0 | 45.7 | 56.5 | 67.2 | 78.0 | 88.7 | 99.4 |
| | -20% | -8.8 | 1.9 | 12.5 | 23.2 | 33.9 | 44.6 | 55.3 | 66.0 | 76.7 | 87.4 | 98.1 |
| | -15% | -9.7 | 1.0 | 11.6 | 22.2 | 32.9 | 43.5 | 54.1 | 64.8 | 75.4 | 86.1 | 96.7 |
| | -10% | -10.5 | 0.1 | 10.7 | 21.2 | 31.8 | 42.4 | 53.0 | 63.6 | 74.1 | 84.7 | 95.3 |
| | -5% | -11.3 | -0.8 | 9.7 | 20.2 | 30.8 | 41.3 | 51.8 | 62.3 | 72.9 | 83.4 | 93.9 |
| | 0% | -12.2 | -1.7 | 8.8 | 19.3 | 29.7 | 40.2 | 50.7 | 61.1 | 71.6 | 82.1 | 92.5 |
| | 5% | -13.0 | -2.6 | 7.9 | 18.3 | 28.7 | 39.1 | 49.5 | 59.9 | 70.3 | 80.8 | 91.2 |
| | 10% | -13.8 | -3.4 | 6.9 | 17.3 | 27.6 | 38.0 | 48.4 | 58.7 | 69.1 | 79.4 | 89.8 |
| | 15% | -14.6 | -4.3 | 6.0 | 16.3 | 26.6 | 36.9 | 47.2 | 57.5 | 67.8 | 78.1 | 88.4 |
| | 20% | -15.4 | -5.2 | 5.1 | 15.3 | 25.6 | 35.8 | 46.1 | 56.3 | 66.6 | 76.8 | 87.1 |
| | 25% | -16.2 | -6.1 | 4.1 | 14.3 | 24.5 | 34.7 | 44.9 | 55.1 | 65.3 | 75.5 | 85.7 |

**Table 22.10: Sensitivity Analysis; Silver Price and Discount Rate**

| **Financial Model** | **NPV (US$M)** |
|---|---|
| | |
| $NPV_0$ Free Cash flow | US$ 41.3 M |
| $NPV_5$ Free cash flow | US$ 40.7 M |
| $NPV_9$ Free cash flow | US$ 40.2 M |

The following spider diagram shows graphically the sensitivities resultant from the analysis.

**Figure 22.2: Spider Diagram – Sensitivity Analysis**




As expected, the most relevant variables in the sensitivities are silver price and metallurgical recovery. A 15% reduction in the silver price produces a 78% reduction on NPV and a reduction of 15% in recovery generates a 77% reduction on NPV. The impact in the opposite case is similar.

## 23 ADJACENT PROPERTIES

The qualified persons state that no information from any adjacent property was used in the preparation of this TR nor in the estimation of mineral resources or mineral reserves disclosed herein.

# 24 OTHER RELEVANT DATA AND INFORMATION

Other than as disclosed herein, there are no other relevant data and information.

## 25 INTERPRETATION AND CONCLUSIONS

The qualified persons were retained by Manquiri to visit San Bartolomé mining and extraction plant complex, inspect the project, review and audit the data and estimate the mineral resources and mineral reserves and prepare the financial model herein. The qualified persons examined the different sources of input information: raw data (QA/QC), exploration, geology and mineral modeling estimation units.

The purpose of the investigation was to estimate the mineral resource, updating the 2018 block model, in compliance with generally recognized industry best practices and report them according to Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves (May 2014).

The qualified persons carried out a mineral resource and reserves estimation for San Bartolomé, El Asiento, Tatasi-Portugalete and Cachi Laguna, resulting in the estimation of Measured, Indicated and Inferred Resources. Resultant figures were as contained inside an optimized pit envelope and then applied the appropriate modifying factors to the mineral resources to produce the mineral reserves for all four areas.

Total mineral resources (inclusive of mineral reserves) for all four areas are:
2.96 Mt grading 134 g/t Ag (12.8 Moz) of measured,
2.06 Mt grading 124 g/t Ag (8.2 Moz) of indicated and
1.42 Mt with 118 g/t (5.4 Moz) of inferred resources.

Total mineral reserves for all four areas are:
2.40 Mt grading 142 g/t Ag (11Moz) proven,
1.54 Mt grading 133 g/t Ag (6.6 Moz) probable.

Mineral resources exclusive of mineral reserves for all four areas are:
0.548 Mt grading 98 g/t Ag of measured,
0.519 Mt grading 101 g/t Ag of indicated and
1.420 Mt grading 118 g/t Ag of inferred.

For the analyzed scenario, the project's NPV at a 9% discount rate reaches US$40.2 million.

Other than disclosed in this technical report, the qualified persons are not aware of any other significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in Manquiri's projects presented herein.

### 25.1 San Bartolomé

The technical information on pallacos attests to the high overall quality of the exploration and design work completed by Manquiri's personnel. The qualified persons examined the data, the exploration, and the geology modelling and produced the mineral resource estimates of pallacos. On the basis of this work, the qualified persons believe that the model and mineral resource and reserve estimates are appropriately categorized and free of material errors.

The pallacos mineral resource estimates are shown in tables 14.36 and 14.37. The mineral resources exclusive of mineral reserves are 0.52 Mt grading 92 g/t Ag measured, 0.52 Mt grading 100 g/t Ag indicated, totaling 1.03 Mt grading 96 g/t Ag (measured plus indicated resources), and 1.32 Mt grading 109 g/t inferred resources. The total mineral reserves are 3.9 Mt, at 138 g/t Ag, for a total of 17.6 M contained silver ounce.

## 25.2 El Asiento-Tatasi-Portugalete

The qualified persons examined the data, the exploration, and the geology modelling and produced the mineral resource estimates for these 3 projects. On the basis of this work, the qualified persons believe that the model and mineral resource and reserve estimates are appropriately categorized and free of material errors.

The mineral resource estimation for Tatasi-Portugalete (tables 14.36 and 14.37), exclusive of mineral reserves, yielded 23,000 tonnes of measured grading 219 g/t Ag, 2,000 tonnes of indicated, grading 180 g/t Ag plus 16,000 tonnes grading 272 g/t Ag of Inferred.

The mineral resource estimation for El Asiento (tables 14.36 and 14.37), exclusive of mineral reserves, yielded 87,000 tonnes grading 228 g/t Ag of inferred.

The total mineral reserves for Tatasi-Portugalete are 237 ktonne (proven plus probable) grading 342 g/t Ag (2.6 Moz). Total mineral reserves for El Asiento are 272 ktonne grading 218 g/t Ag (1.9 Moz).

## 25.3 Cachi Laguna

The qualified persons examined the data, the exploration and the geology modelling and produced the mineral resource estimate for Cachi Laguna. On the basis of this work, the qualified persons believe the models and mineral resources presented herein are appropriately categorized and free of material errors.

The qualified persons and Manquiri’s engineers and geologists estimated the mineral resource and reserves by updating the Company’s internal 2019 block model, in compliance with generally recognized industry best practices and report them according to Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves.

Cachi Laguna mineral resources (tables 14.36 and 14.37), exclusive of mineral reserves are 6,000 tonnes, grading 157 g/t Ag of measured. The total mineral reserves are 65,000 tonnes grading 406 g/t Ag for a total of 847 koz proven plus probable.

## 26 RECOMMENDATIONS

In general, the four mineral deposits have special conditions and the exploration possibilities depend basically on contract conditions. In particular, contract extensions would be needed to define new mineral resources and mineral reserves at Cachi Laguna (under the Ralp Agreement).

Nevertheless, there are opportunities to expand the mineral resources, upgrade the geologic confidence and address the technical and economic aspects necessary to convert mineral resource to mineral reserves. For instance, in the case of El Asiento, Dump 5 is very important in the mineral resources estimation and it is necessary to sample on a denser grid. Other opportunities exist at San Bartolomé to increase and upgrade the projects mineral resources exclusive of mineral reserves (Table 14.37) especially the inferred component which currently stands at over 1.3 m tonnes grading 109 g/t Ag.

### 26.1 Recommended Exploration Program

The following table shows the detail of the exploration cost estimation for El Asiento, Tatasi-Portugalete and San Bartolome. No exploration expenditure is considered for Cachi Laguna, as it belongs to a different company. With regard Cachi Laguna, the qualified persons did not incorporate any of the owner's gold assays in the estimation of mineral resources due to an insufficient number of gold assays in the database. However, the Company may wish to consider funding independent, certified analytical work to lend confidence in, and expand, Ralp's gold assay data base. No estimate of funding for such work is included herein.

**Table 26.1: Estimated Exploration Costs (US$)**

| | Work | Costs ($US) |
|---|---|---|
| Dumps Areas | **Objective 1 - Exploration & Data Collecting** | |
| | 100 infill backhoe trenches at the dumps at $US 100 unit cost | 13,000 |
| | Sample analyses at $US 30 unit cost | |
| | **Objective 2 - Geological Modeling** | |
| | Upgrade inferred mineral resources confidence - construction of the new model and update resource estimation model | 100,000 |
| | **Objective 3 – Metallurgical testing at the San Bartolomé laboratory** | |
| | Approximately 500 new samples at all deposits | 30,000 |
| | Metallurgical testing – costs $US 60 unit cost | |
| | New equipment for San Bartolome Lab | 100,000 |
| | **Subtotal Objectives 1, 2 and 3** | **243,000** |
| San Bartolome Area | **Objective 4 - Exploration & Data Collecting** | |
| | 800 infill backhoe trenches grid at US$ 100 cost | 104,000 |
| | Sample and analysis at US$ 30 cost | |
| | Bulk Sampling Tests | 75k to 125k |
| | **Subtotal Objective 4** | **179k to 229k** |
| | **Objective 5 - Geological Modeling** | |
| | Upgrade mineral resources confidence with new data - new geological model and new mineral resource model | **100,000** |
| | | |
| | **Subtotal – Objective 5** | **279k to 329k** |
| Summaries | | |
| | **Total Objectives 1, 2, 3, 4 and 5** | **522k to 572k** |
| | | |
| | **Contingency at 15%** | **78.3k to 85.8k** |
| | | |
| | **Grand Total Exploration and Metallurgy** | **600.3k to 657.8k** |

The five objectives in Table 26.1 are recommendations to expand and enhance the confidence in the mineral resources exclusive of mineral reserve in a single phase, total work program - without one objective being contingent upon another.

The Company has provided for more than US$4 M budget funding to cover future exploration and metallurgy work, sufficient to fund the recommended program shown in Table 26.1. This leaves additional financial resources to expand the programs or conduct new exploration on new opportunities that may arise from the Company's regional investigations – especially for additional, oxide dumps in the region.

Though the qualified persons have no reason to doubt the effectiveness of the Company's internal, metallurgical testing capabilities, the Company may wish to outsource new metallurgy tests to an Independent, commercial service which could increase the costs shown in Table 26.1.

## 26.2 Qualified Person's Opinions and Recommendations

The qualified persons were retained by Ag-Minerals to visit and inspect the Bolivian Operations of the Company's Bolivian subsidiary (Manquiri) review and audit the data, estimate the Mineral Resource and Reserves and the mining, metallurgy and financial aspects of the deposits. The qualified persons examined the different sources of input information: raw data (QA/QC), exploration, geology and mineral modelling estimation units.

The technical information attests to the high, overall quality of the exploration and design work completed by the Manquiri personnel to date. The qualified persons examined the data, the exploration processes, and the geology modelling and produced the mineral resources, mineral reserves and mining. On the basis of this work, the models summarized herein are appropriately categorized and free of material errors.

There are some areas, in particular Cachi Laguna and El Asiento, where some anomalous gold have been reported. However, due to the paucity of reliable gold analyses at these two projects, the qualified persons excluded gold from the estimation of mineral resources. Nevertheless, it is recommended that Manquiri consider expanding and improving the amount and analytical reliability of gold analyses at Cachi Laguna and El Asiento to allow for the incorporation of gold analyses into future mineral resource estimation. No costs have been estimated for additional analytical work though the Company has provided sufficient budgetary resources to expand on the recommendations herein.

The qualified persons understand that Manquiri continues to seek opportunities to obtain and/or develop new sources of feed amenable with the San Bartolomé processing facility. Given the advantages that San Bartolomé presents to the Company for processing such new, non-refractory materials, the qualified persons recommend that the Company continue the search as a means to extend the useful life of San Bartolomé as long as the Company can demonstrate favorable metallurgical and cost parameters.

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# 28 SIGNATURE PAGES AND CERTIFICATES OF QUALIFIED PERSONS

**CERTIFICATE OF QUALIFIED PERSON**

**Donald J. Birak**

2142 E. Sundown Dr., Coeur d'Alene, ID, 83815, USA

I, Donald J. Birak, do hereby certify that:

- This certificate applies to the Technical Report entitled "Technical Report on the Bolivian Operations of Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer"), effective March 17, 2020 and dated September 1, 2020, prepared for the Vendor and the Issuer.
- I am an independent Consulting Geologist. I hold a Master of Science degree in Geology from Bowling Green State University, Ohio, USA.
- I am a Registered Member of the Society for Mining, Metallurgy and Exploration ("SME", Registered Member #260700) and a Fellow of the Australasian Institute of Mining and Metallurgy ("AusIMM", Fellow #209622). I have practiced mining and exploration geology for over 41 years.
- From February 2004 through September 2013, I was Senior Vice President of Exploration for Coeur Mining, Inc. ("Coeur") and was a consultant to Coeur from October 2013 through December 2013. During my tenure, Coeur's wholly-owned subsidiary Empresa Minera Manquiri ("Manquiri") operated the San Bartolomé mine in Potosí, Bolivia, which is a part of this Technical Report, and I had visited and worked on the San Bartolomé property various times for Coeur.
- I am independent of both Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer"), as described in Section 1.5 of NI 43-101.
- I recently visited the properties and facilities referenced in this Technical Report during the period January 28, 29, 30 and 31, 2020.
- I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I am a "qualified person" for the purposes of NI 43-101.
- I am responsible for sections 2 through 6, sections 13, 17 through 20, section 27,and jointly responsible for sections 1, 7, 8, and 23 through 26 of this Technical Report.
- I have read NI 43-101 including Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
- At the effective date of the Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Dated this 1st day of September, 2020.

*signed and sealed*

**Donald J. Birak,** Registered Member, SME #RM 260700 and Fellow, AusIMM #209622

**CERTIFICATE OF QUALIFIED PERSON**

**Luis Oviedo Hannig**

Máximo Jeria 625, Ñuñoa, Santiago de Chile

I, Luis Oviedo H., do hereby certify that:

- This certificate applies to the Technical Report entitled "Technical Report on the Bolivian Operations of Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer"), effective March 17, 2020 and dated September 1, 2020, prepared for the Vendor and the Issuer.
- I am an independent Consulting Geologist.
- I hold a degree in Geology from Universidad de Chile, Santiago, Chile
- I am a Registered Member of the Colegio de Geologos de Chile, the Instituto de Ingenieros de Mina de Chile and member of the Comisión Chilena de Recursos y Reservas de Chile ("CCRR", Registered Member #013).
- I have practiced mining and exploration geology for over 42 years. I have been directly involved in resource estimates for all types of mines, audits, half-lives and technical reports of resources for stock exchanges and financial institutions in Canada, Chile, Peru, Ecuador and Colombia.
- I am a "qualified person" as that term is defined in NI 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101"), JORC and other stock exchanges in the world.
- I am independent of the both Ag-Mining Investments AB (the "Vendor") and the Buckhaven Capital Corp. (the "Issuer"), as described in Section 1.5 of NI 43-101, and have had no prior involvement with the properties.
- I visited the Property and facilities referenced in this Technical Report on March 9, 10, 11 and 12, 2020.
- I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I am a "qualified person" for the purposes of NI 43-101.
- I am responsible for sections 9 through 12, section 14 and jointly responsible for sections 1, 7, 8 and 23 through 26 of this Technical Report.
- I have read NI 43-101 including Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
- At the effective date of the Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Dated this 1th day of September, 2020.

*signed and sealed*

**Luis Oviedo Hannig,** Geologist, Registered Member, CCRR 013

**CERTIFICATE OF QUALIFIED PERSON**
**Carlos Guzmán**

General del Canto 230, office 401, Providencia, Santiago, Chile

I, Carlos Guzmán, do hereby certify that:

- This certificate applies to the Technical Report entitled "Technical Report on the Bolivian Operations of Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer"), effective March 17, 2020 and dated September 1, 2020, prepared for the Vendor and the Issuer.
- I am employed as the Principal/Project Director with NCL SpA, located at General del Canto 230, Office 401, Providencia, Santiago, Chile.
- I graduated from the Universidad of Chile as a mining engineer in 1995.
- I am a registered member with the Comision Calificadora de Competencias en Recursos y Reservas Mineras (CMC #0119) and a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM #229036).
- I have practiced my profession for 25 years since graduation.
- My relevant experience for the purpose of the technical report is:

  Review and report as a consultant on numerous exploration, mining operation and projects around the world for due diligence and regulatory requirements. I have extensive experience in mining engineering. I have worked on mining engineering assignments
- I am independent of both Ag-Mining Investments AB (the "Vendor") and Buckhaven Capital Corp. (the "Issuer"), as described in Section 1.5 of NI 43-101 and have had no prior involvement with the properties.
- I visited the Property and facilities on March 9, 10, 11 and 12, 2020.
- I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I am a "qualified person" for the purposes of NI 43-101.
- I am responsible for sections 15, 16, 21 and 22 and jointly responsible for sections 1, 24 through 26 of this Technical Report.
- I have read NI 43-101 including Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
- At the effective date of the Technical Report, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Dated this 1st day of September, 2020.

*signed and sealed*

**Carlos Guzmán**

Principal / Project Director NCL Spa Registered Member CMC #0119 and Fellow, AusIMM #229036