Palmarejo Operations
Mexico
Technical Report Summary

Prepared for:
Coeur Mining, Inc.

Report current as at:
December 31, 2021

Prepared by:
Mr. Christopher Pascoe, RM SME
Mr. Miller O'Prey, P. Geo.
Mr. Peter Haarala, RM SME
Mr. Joseph Ruffini, RM SME

Date and Signature Page

The following Qualified Persons, who are employees of Coeur Mining, Inc. or its subsidiaries, prepared this technical report summary, entitled "Palmarejo Operations, Mexico, Technical Report Summary" and confirm that the information in the technical report summary is current as at December 31, 2021 and filed on February 16, 2022.

/s/ Christopher Pascoe

Christopher Pascoe, RM SME

/s/ Miller O'Prey

Miller O'Prey, P. Geo.

/s/ Peter Haarala

Peter Haarala, RM SME

/s/ Joseph Ruffini

Joseph Ruffini, RM SME

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1.0 EXECUTIVE SUMMARY

1.1 Introduction

Mr. Christopher Pascoe, RM SME, Mr. Miller O'Prey, P. Geo., Mr. Peter Haarala, RM SME, and Mr. Joseph Ruffini, RM SME, prepared a technical report summary (the Report) for Coeur Mining, Inc. (Coeur), on the Palmarejo Operations (the Palmarejo Operations or the Project), located in Mexico.

Coeur's wholly-owned subsidiary, Coeur Mexicana S.A. de C.V. (Coeur Mexicana) is the operating entity.

1.2 Terms of Reference

The Report was prepared to be attached as an exhibit to support mineral property disclosure, including mineral resource and mineral reserve estimates, for the Palmarejo Operations in Coeur's Form 10-K for the year ended December 31, 2021.

Mineral resources and mineral reserves are reported for the Guadalupe, Independencia, and La Nación underground mines.

Unless otherwise indicated, all financial values are reported in United States (US) currency (US$) including all operating costs, capital costs, cash flows, taxes, revenues, expenses, and overhead distributions. Unless otherwise indicated, the metric system is used in this Report. Mineral resources and mineral reserves are reported using the definitions in Item 1300 of Regulation S–K (17 CFR Part 229) (SK1300) of the United States Securities and Exchange Commission. Illustrations, where specified in SK1300, are provided in the relevant Chapters of report where that content is requested. The Report uses US English.

1.3 Property Setting

The Palmarejo Operations are located approximately 420 km by road southwest of the city of Chihuahua, in the state of Chihuahua in northern Mexico.

Access to the Palmarejo Operations is from the city of Chihuahua, in the state of Chihuahua, Mexico, via paved Highways 16 and 127 to the town of San Rafael. From San Rafael, travel is by gravel road through Temoris to the town of Palmarejo, which is directly adjacent to the processing plant. Access from Temoris to the Palmarejo Operations is along 35 km of company-maintained gravel road, an extension of Highway 127 that continues on through to Chínipas.

An airstrip services light aircraft located at the Palmarejo Operations site.

The climate is moderate. Rainfall occurs mainly in the summer and fall months (August through to the end of October). Mining operations are conducted year-round. All anticipated exploration activities can be conducted year-round.

The surface elevation above the Palmarejo deposit is about 1,150 masl, and the surface elevation of the Guadalupe and Independencia deposits is about 1,300 masl. Hills are typically densely vegetated, steep-sided slopes with local stands of cacti. Conifers occur at high elevations, while oak trees, cacti, and thorny shrubs dominate the vegetation at low levels. Local ranchers and farmers graze cattle and grow corn and other vegetables on small-scale plots.

1.4 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

The Palmarejo Operations consist of 71 mining concessions (27,227 ha). The Guadalupe Complex mining operations are within concessions 188817 and 186009. The Independencia Complex mining operations are within concessions 186009 and 243762. The La Nación Complex mining operations are within concessions 221490 and 243762.

Coeur has occupancy agreements in place with selected ejidos for exploitation or exploration purposes, collectively covering an area of 15,111.19 ha. Water rights currently held or in the process of being acquired are believed to be sufficient to support the LOM plan.

There are numerous net smelter return (NSR) royalties that cover the Palmarejo Operations area, which range from 1–3% depending on the royalty agreement. The majority of the royalties are not payable under the LOM plan envisaged in this Report.

A Gold Purchase and Sale Agreement (the Agreement) was entered into by and among Coeur Mexicana, Franco-Nevada (Barbados) Corporation (Franco–Nevada), Ocampo Resources Inc., and Ocampo Services Inc., whereby Coeur Mexicana agreed to sell to Franco–Nevada 50% of the refined gold produced from selected mining concessions at a gold price of $800/oz, in consideration of Franco–Nevada providing investment capital for Project development. The initial term of the Agreement (which became effective in August 2016) is 40 years. This Agreement encumbers a large portion of the mining concessions owned or controlled by Coeur Mexicana in the Palmarejo Operations area.

1.5 Geology and Mineralization

The deposits within the Palmarejo Operations area are considered to be examples of epithermal deposits displaying both intermediate- and low-sulfidation features.

The Sierra Madre Occidental (SMO) is a large siliceous igneous province that records extensive arc volcanism spanning the Paleocene to Miocene. Vein and fault hosted epithermal deposits in the SMO were generated during arc-related volcanic activity.

The two main mining districts within the Project area are the Palmarejo and Guazapares districts. The Palmarejo district is underlain principally by shallow-dipping andesitic volcaniclastic rocks and flows, containing at least one mafic volcanic (basaltic) horizon, that are cut by rhyolite dikes and domes of late Oligocene to early Miocene age. The Guazapares district includes andesite, volcaniclastic sedimentary units, and dacitic to rhyolitic intrusions, including domes that are roughly synchronous with mineralization.

Within the Palmarejo district, several common structural styles of ore controls are apparent that localize orebodies, or individual ore-shoots within them. Most of these consist of early-formed internal heterogeneities in fault geometries (bends, steps, branches, etc.), which are areas of high permeability-porosity that localize fluids and ore-shoots. Classic extensional fault relays at en-echelon steps in the normal fault system occur along the Guazapares–La Union fault corridor in the Guazapares district.

Mineralization exhibits vertical and lateral zoning and occurs along the principal northwest-trending faults in the two districts and is largely confined to fault-hosted veins. The largest deposits typically occur on the faults that have the greatest displacement and strike length. Vein systems are typically silver-rich, although differing Ag:Au ratios are noted between different deposits and at different elevations within deposits.

Silver–gold deposits within the Palmarejo district are characterized by pervasive silicification, quartz-filled breccias, and sheeted veins. Multiple stages of mineralization produced several phases of silica, ranging from chalcedony to comb quartz, and typically two periods of silver–gold mineralization. This strongly-zoned mineralization is characterized by pyrite, sphalerite, galena, and argentite (acanthite) deposited within the quartz vein/breccias at lower elevations and higher-grade precious-metals mineralization with fine grained, black, silver-rich sulfide bands or breccia-infill in the upper portions of the structures.

Silver–gold deposits within the Guazapares district are characterized by multi-phase quartz veins, quartz + carbonate + pyrite veinlet stockworks, silicified hydrothermal breccias, and quartz-filled expansion breccias. Three distinct styles of mineralization are identified: high-grade vein systems, sheeted vein/stockwork/fracture complexes, and volcanic dome complexes. The principal sulfide minerals within the veins include sphalerite and argentite, with pyrite being less abundant. Gold-rich veins have pyrite and traces of chalcopyrite as the principal sulfide minerals, and often represent the deeper portions of the silver-rich vein systems.

1.6 History and Exploration

Artisanal mining activity in the Project area commenced in the 1600s. The following companies are known to have had involvement in the Project area, prior to Coeur's Project interest: Palmarejo Mining Co., Palmarejo and Mexican GoldFields, Ltd., Minas Huruapa, S.A. de C.V., Kalahari Resources, Silver Standard Resources Inc., Alaska-Juneau Mining Company, American Smelting and Refining Company, Earth Resources Company, Industrias Peñoles, Consejo de Recursos Minerales, Noranda Exploration Inc., Kennecott Utah Copper Corp., War Eagle Mining Company Inc., Bolnisi Gold NL (Bolnisi Gold), Mexoro Minerals Ltd. (Mexoro), Palmarejo Silver and Gold Co., and Paramount Gold and Silver Corporation (Paramount). Small-scale underground mining was conducted by various companies from the 1880s to about 1968. Modern exploration activities included sampling of accessible workings; surface mapping and sampling; trenching; grid-based geochemical sampling; ground magnetic and induced polarization (IP) geophysical surveys; air-track, reverse circulation (RC) and core drilling; metallurgical testing; shortwave infrared (SWIR) spectral measurements; and mineral resource and mineral reserve estimation.

Coeur acquired an initial interest in what is now a portion of the Project in 2008 and acquired an adjacent land. Since then, Coeur has conducted geological mapping and sampling; two helicopter-borne magnetic surveys; a helicopter-borne Z-axis Tipper electromagnetic (ZTEM) and magnetic survey; core drilling; metallurgical testwork; Mineral Resource and Mineral Reserve estimates; and mining activities.

Mining at the Palmarejo open pit mine and underground mines began in 2008 and milling operations and metal recovery commenced in 2009, ramping up to full capacity in 2010. Open pit mining operations ceased in 2016. Operations began at the Guadalupe underground mine in 2014, at the Independencia underground mine in 2016 and at the La Nación underground mine in 2019. All three operations are ongoing at the Report date.

A large part of the land package has still to receive the detailed geological field work necessary to define drill programs and remains prospective.

1.7 Drilling and Sampling

Drilling completed on the Project includes air track, RC, and core drilling, totaling 4,284 drill holes (1,189,478 m). Approximately 93% of all drilling completed to date at the Project has been core drilling. There are 1,388 drill holes (395,996 m) supporting the mineral resource estimates for the Guadalupe deposits, 631 drill holes (240,571 m) supporting the mineral resource estimates for the Independencia deposits, and 261 drill holes (105,765 m) supporting the mineral resource estimate for the La Nación deposits.

Drilling that is excluded from estimation support includes historic RC; core drilling from the Mexoro and Paramount drill programs is generally not used; and underground channel samples and grade control drilling are excluded from estimation; however, these data support geological interpretations.

Depending on the drill program, geological data collected from drill hole logging included stratigraphy, vein orientation, and mineralized zones and a detailed descriptive log including rock type, alteration, structure, mineralization, and vein density/percentage. In addition, geotechnical data such as core recovery, rock quality designation (RQD), fracture density and other parameters used to calculate the rock mass rating (RMR). Digital photographs of wet core are taken and archived before the core is cut and sampled.

Collar survey methods varied, depending on drill campaign, operator, and district, and included, for surface drill holes, hand-held global positioning system (GPS) receivers and high-precision differential GPS survey instruments. Underground collars are surveyed by a mine surveyor using a total station instrument. Downhole survey methods also varied, depending on drill campaign, operator, and district. Instrumentation, where known, included Reflex EZ-shot, Reflex non-magnetic one-shot, and Devishot non-magnetic multi-shot tools. Measurements were taken at 25–50 m, depending on the drill campaign.

Almost all underground drilling was completed as fans of drill holes, meaning that the reported mineralized intercepts are typically longer than the true thickness of the mineralization.

Core sampling intervals varied by operator, and ranged from 0.5–2 m. Sample lengths were variably adjusted to avoid sampling across geologic contacts and structures. Channel sampling of all active faces is completed on a daily basis; individual samples are between 0.5–2 m in length and are defined by changes in lithology or vein type.

Density data were primarily collected using water immersion methods, with the majority of the Coeur determinations performed on wax-coated core samples.

Independent primary and umpire laboratories used, where recorded in the database, include ALS laboratories in Chihuahua and Vancouver, Bureau Veritas (formerly Acme Analytical Laboratories), and SGS de Mexico, S.A. DE C.V. Durango, Mexico (SGS). These laboratories held accreditations for selected analytical techniques at the time used. The Palmarejo mine laboratory is used for underground and ore control sample preparation and analysis. The laboratory is not independent and is not accredited.

Sample preparation depended on the analytical laboratory used. Methods included drying; crushing to 70% passing 10 mesh, 70% passing 2 mm, 60% passing 2 mm; and pulverizing to 95% passing 150 mesh, 90% passing 106 µm, and 85% passing 75 µm.

Analytical methods used included:

- Gold: fire assay with gravimetric finish; fire assay with an atomic absorption finish; fire assay with inductively coupled plasma with atomic emission spectrophotometry (ICP-AES) finish;

- Silver: four-acid digestion with ICP-AES finish;
- Multi-element: 34 element ICP-AES.

Historically, the Mexoro and Paramount drill programs, depending on the program, inserted blanks, certified reference materials (standards), and duplicate samples into the sample stream for each sample batch, and selected samples were check assayed as part of their quality control (QC) procedures.

Coeur's QC protocols changed over time, but currently require insertions of blanks, standards, and duplicates. Pulp samples are currently submitted to Bureau Veritas for check analysis.

1.8 Data Verification

Data verification included internal and external database audits. Internal verification included: detailed review of all documentation and assay data related to each drill hole; drill hole collar audits; and QA/QC reports. External verification was completed by third-parties.

The QP personally completed QA/QC verification, participated in programs to verify drill data prior to mineral resource estimation, checked selected gold and silver assay data, conducted drill hole lockdown, including checks of assay certificates, collar and downhole surveys, geology, and QA/QC reports, and signed off on 2015–present definition drill holes and the 2021 drilling.

The QP is of the opinion that the data verification programs for Project data adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in mineral resource and mineral reserve estimation, and in mine planning.

1.9 Metallurgical Testwork

Independent metallurgical testwork facilities used over the Project life, where recorded, included SGS Laboratories, Durango, Mexico; SGS in Lakefield, Canada (SGS Lakefield), ALS, Kamloops, British Columbia, Canada; and Corporación Química Platinum S.A. de C.V. located in Silao, Guanajuato, Mexico. Palmarejo Operations have an on-site analytical and metallurgical laboratory that assays concentrates, in-process samples, and geological samples. The on-site metallurgical laboratory is used for testing flotation reagents, grind analysis, and process characterization of new ores. The on-site laboratories are not independent and are audited with third parties.

Initial testwork was conducted to support process plant design, assuming mill feed material was from open pit sources. Later testwork that focused on underground ores included mineralogical studies, multi-element ICP scans, whole-rock analyses, carbon and sulfur speciation analyses, comminution tests, timed grinding series, whole ore bottle roll cyanidation, rougher and bulk rougher flotation, tailing cyanidation, heavy liquid separation pre-concentration and silver deportment studies, and gravity separation tests. The later testwork was conducted using the existing Palmarejo plant criteria.

The LOM forecast average gold blended recovery is 90%. The LOM forecast average blended silver recovery is 82.5%.

The anticipated gold and silver recoveries are affected by alteration states. Highly oxidized material is not responsive to the flotation process. Highly oxidized ore will significantly affect recovery if blended at a high ratio. Ores with a high clay content increase slurry viscosity, which has a detrimental effect on precious metals recovery in flotation. No other deleterious elements are known from the processing perspective.

1.10 Mineral Resource Estimation

1.10.1 Estimation Methodology

Exploratory data statistics were compiled and compared for raw drill hole data, length weighted drill holes, composites, declustered composites, and capped declustered composites to ensure that the grade distribution and true mean of the system were documented and conserved through the estimation process.

The implicit modelling algorithm in Leapfrog Geo software was used to create 12 estimation domains through interpretation of relevant intervals of drill data, digitized mapping, and underground production data.

Density was estimated using inverse distance weighting to the second power (ID2).

Grade caps were determined using various methods such as histograms, probability plots and a metal loss calculation. Grade caps ranged from 100–3,500 g/t Ag and from 0.5–70 g/t Au, depending on estimation domain.

Core samples were composited at 2 m intervals by estimation domain for gold and silver except at Los Bancos, Zapata, and La Bavisa zones where composites include the entire thickness of the domain. This results in a single, variable length composite in each drill hole within the estimation domain.

Variogram searches were oriented along strike of the domains, with the major axis horizontal on-strike, the secondary axis down dip, and the minor axis across the width of the domain.

The various deposits were estimated using ordinary kriging (OK), with hard boundaries between geologic units. The enveloping disseminated domain was estimated using ID2. The search orientations were locally adjusted using dynamic anisotropy. The Guadalupe–La Bavisa zone was estimated using ID2. The parent block size was 2 x 25 x 25 m (X, Y, Z). Block models were sub-celled to a minimum of 1.0 x 2.5 x 2.5 m. Estimation took place in the parent cells, therefore, all sub-cells within a parent cell have the same grade. The maximum number of samples was optimized by minimizing kriging variance while maximizing slope of regression, while attempting to maintain some degree of localization to improve production reconciliation. Each domain was estimated with one set of search ranges in one pass to achieve the optimal number of samples, and to avoid estimation artifacts created when using a multiple-pass method. A high-grade search ellipse restriction was employed for the Independencia silver estimate, which applied the restriction at 75% of the capping value. Constant search volumes and number of samples were used for each domain. The block model was depleted using the in-situ variable, proportionally depleting from 100 (in situ) to 0 (completely mined).

The block models were validated using some or all of the following methods: visually by stepping through sections and comparing the raw drill data and composite data with the block values; comparison of model statistics to drill data; swath plots; and mill to model reconciliation.

Measured mineral resources are defined by proximity to ore control and production data. This limits the classification of measured mineral resources to the area around current mining where there is very good understanding of the deposit geometry and grade distribution. Indicated blocks were classified using a script and then manually modified using polygons (in the plane of the domain) based on geologic confidence. All remaining estimated material is classified as inferred.

For each resource estimate, an initial assessment evaluated likely infrastructure, mining, and process plant requirements; mining methods; process recoveries and throughputs; environmental, permitting, and social considerations relating to the proposed mining and processing methods, and proposed waste disposal, and technical and economic considerations in support of an assessment of reasonable prospects of economic extraction. Mineral resources are confined within conceptual underground mineable shapes.

The gold and silver prices used in resource estimation are based on analysis of three-year rolling averages, long-term consensus pricing, and benchmarks to pricing used by industry peers over the past year. The gold price forecast for the mineral resource estimate is US$1,700/oz and the silver price forecast is US$22/oz. The QP considers these prices to be reasonable.

The mineral resources are reported using a cut-off of 1.59 to 2.21 g/t gold equivalent (AuEq).

1.10.2 Mineral Resource Statement

Mineral resources are reported using the mineral resource definitions set out in SK1300 and are reported exclusive of those mineral resources converted to mineral reserves. The reference point for the estimate is in-situ. Estimates are reported on a 100% ownership basis. The mineral resources are current at December 31, 2021. Measured and indicated mineral resources are summarized in Table 1-1, and inferred mineral resources in Table 1-2.

The Qualified Person for the estimate is Mr. Joseph Ruffini, RM SME, a Coeur employee.

1.10.3 Factors That May Affect the Mineral Resource Estimate

Factors that may affect the mineral resource estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the gold cut-off grade; changes in local interpretations of mineralization geometry and continuity of mineralized zones; changes to geological and mineralization shape and geological and grade continuity assumptions; density and domain assignments; changes to geotechnical, mining and metallurgical recovery assumptions; changes to the input and design parameter assumptions for underground mine designs constraining the estimates; assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

Table 1-1: Summary of Gold and Silver Measured and Indicated Mineral Resource Statement as at December 31, 2021 (based on US$1,700/oz gold price and US$22/oz silver price)

Confidence Classification	Tonnes (kt)	Grade		Contained Ounces		Gold Equivalent Cut-off Grade (g/t AuEq)	Metallurgical Recovery	
		Ag (g/t)	Au (g/t)	Ag (koz)	Au (koz)		Ag (%)	Au (%)
Measured	3,353	133	1.81	14,373	195	1.59–2.21	81.9	93.1
Indicated	15,764	117	1.68	59,340	852	1.59–2.21	81.9	93.1
Total measured and indicated	***19,117***	***120***	***1.70***	***73,712***	***1,047***	***1.59–2.21***	***81.9***	***93.1***

Table 1-2: Summary of Gold and Silver Inferred Mineral Resource Statement as at December 31, 2021 (based on US$1,700/oz gold price and US$22/oz silver price)

Confidence Classification	Tonnes (kt)	Grade		Contained Ounces		Gold Equivalent Cut-off Grade (g/t AuEq)	Metallurgical Recovery	
		Ag (g/t)	Au (g/t)	Ag (koz)	Au (koz)		Ag (%)	Au (%)
Inferred	4,275	127	1.79	17,453	246	1.59–2.21	81.9	93.1

Notes to accompany mineral resource tables:

1. The mineral resource estimates are current as of December 31, 2021 and are reported using the definitions in SK1300.
2. The reference point for the mineral resource estimate is in situ. The estimate is current as at December 31, 2021. The Qualified Person for the estimate is Mr. Joseph Ruffini, RM SME, a Coeur employee.
3. Mineral resources are reported exclusive of the mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
4. The estimate uses the following key input parameters: Assumption of conventional longhole underground mining; gold price of US$1,700/oz, silver price of US$22/oz; reported above a variable gold equivalent cut-off grade that ranges from 1.59–2.21 g/t AuEq; metallurgical recovery assumption of 93.1% for gold and 81% for silver; variable mining costs that range from US$36.01–US$41.75/t, surface haulage costs of US$3.52/t, process costs of US$27.29/t, general and administrative costs of US$11.00/t, and surface/auxiliary support costs of US$3.19/t. Mineral resources exclude the impact of the Franco-Nevada gold stream agreement at Palmarejo in estimation.
5. Rounding of tonnes, grades, and troy ounces, as required by reporting guidelines, may result in apparent differences between tonnes, grades, and contained metal contents.

1.11 Mineral Reserve Estimation

1.11.1 Estimation Methodology

Mineral reserves were converted from measured and indicated mineral resources. Inferred mineral resources were set to waste. The mine plans assume underground mining using longhole open stoping using trackless equipment and cemented rock fill (CRF) backfill. Target mining rates are 150,000 t/month.

Deswik mine planning software was used for the mine design, 3D modeling, and interrogation of the 3D mining model against the block model. The surveyed "as-built" mining excavations were depleted from the designed solids and the resource block model. Mining, geotechnical, and hydrological factors were considered in the estimation of the mineral reserves, including the application of dilution and ore recovery factors.

Mining excavations (stopes and ore development) were designed to include mineralized material above the cut-off grade. These excavations were then assessed for economic viability. In addition to the mining cut-off grade, an incremental cut-off grade (excluding the mining cost) was calculated to classify mineralized material mined as a result of essential development to access higher-grade mining areas. Mineralized material below the incremental cut-off will be disposed of on surface in waste rock storage facilities (WRSFs) or will be used underground as backfill.

Gold equivalent cut-off grades were calculated for the deposits, with mineral reserves estimated and reported above this cut-off. Gold equivalent grades were calculated using the following formula:

$$AuEq = Au + Ag \times Au{:}Ag_{Value\ Ratio}$$

where AuEq, Au and Ag are the gold equivalent grade, gold grade, and silver grade, respectively, in g/t.

All mineral reserves are reported above a cut-off of 1.94 to 2.51 g/t AuEq (1.08 g/t AuEq for incremental development). One meter of dilution was applied to the hanging wall, and 0.5 m to the footwall. No dilution is assigned to ore development. No gold or silver grades were assigned to the rockfill (RF) dilution. To account for potential ore losses, a factor of 5% was applied to primary, secondary and longitudinal stopes and ore development.

The gold and silver prices used in reserve estimation are based on analysis of three-year rolling averages, long-term consensus pricing, and benchmarks to pricing used by industry peers over the past year. The gold price forecast for the mineral reserve estimate is US$1,400/oz and the silver price forecast is US$20/oz. The QP considers these prices to be reasonable.

1.11.2 Mineral Reserve Statement

Mineral reserves are reported using the mineral reserve definitions set out in SK1300. The reference point for the mineral reserve estimate is the point of delivery to the process plant. Mineral reserves are reported in Table 1-3 and are current as at December 31, 2021. Estimates are reported on a 100% ownership basis.

The Qualified Person for the estimate is Mr. Peter Haarala, RM SME, a Coeur employee.

Table 1-3: Summary Gold and Silver Proven and Probable Mineral Reserve Statement as at December 31, 2021 (based on US$1,400/oz gold price and US$20/oz silver price)

Mineral Reserve Classification	Tonnes (kt)	Grade		Contained Ounces		Gold Equivalent Cut-off Grade (g/t AuEq)	Metallurgical Recovery	
		Ag (g/t)	Au (g/t)	Ag (koz)	Au (koz)		Ag (%)	Au (%)
Proven	3,405	151	2.26	16,480	247	1.94–2.51	81.9	93.1
Probable	11,012	130	1.80	45,875	637	1.94–2.51	81.9	93.1
Total proven and probable	***14,418***	***135***	***1.91***	***62,355***	***884***	***1.94–2.51***	***81.9***	***93.1***

Notes to Accompany Mineral Reserves Table:

1. The Mineral Reserve estimates are current as of December 31, 2021 and are reported using the definitions SK1300.
2. The reference point for the mineral reserve estimate is the point of delivery to the process plant. The estimate is current as at December 31, 2021. The Qualified Person for the estimate is Mr. Peter Haarala, RM SME, a Coeur employee.
3. The estimate uses the following key input parameters: assumption of conventional underground mining; gold price of US$1,400/oz and silver price of US$20/oz; reported above a gold cut-off grade of 1.94–2.51 gold equivalent and an incremental development cut-off grade of 1.08 g/t AuEq; metallurgical recovery assumption of 93.1% for gold and 81.9% for silver; mining dilution assumes 1 meter of hanging wall waste dilution; mining loss of 5% was applied; variable mining costs that range from US$36.01–US$41.75/t, surface haulage costs of US$3.52/t, process costs of US$27.29/t, general and administrative costs of US$11.00/t, and surface/auxiliary support costs of US$3.19/t. Mineral reserves exclude the impact of the Franco-Nevada gold stream agreement at Palmarejo in estimation.
4. Rounding of tonnes, grades, and troy ounces, as required by reporting guidelines, may result in apparent differences between tonnes, grades, and contained metal contents.

1.11.3 Factors That May Affect the Mineral Reserve Estimate

Factors that may affect the mineral reserve estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the gold equivalent cut-off grade; changes in local interpretations of mineralization geometry and continuity of mineralized zones; changes to geological and mineralization shape and geological and grade continuity assumptions; density and domain assignments; changes to geotechnical, mining and metallurgical recovery assumptions; changes to the input and design parameter assumptions supporting for the mineable shapes constraining the estimates, including dilution forecasts; and assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

1.12 Mining Methods

The Guadalupe, Independencia, and La Nación mines use conventional underground mining methods and conventional equipment. The overall production rate is approximately 165,000 t/month. Operations commenced in 2008 from now-exhausted open pit sources, and underground mining, which is ongoing, started in 2014. Final design outlines for each of these mines can be found in Chapter 12.

Depending on the deposit, rock mass quality is variable from Poor to Good. Modifications based on variability and updated geotechnical models were made as the mines develop. The Palmarejo Operations technical services department maintains a Ground Control Management Plan that is overseen by the technical services department that is updated annually and provides mine personnel with operating, monitoring, and quality control/assurance guidance. The Ground Control Management Plan specifies ground support standards and identifies where and how they are applied in the mines.

Permeability of the volcanic rock units in all mines is low to very low. Persistent inflows are generally from larger fault structures where flows increase and decrease seasonally because of connections to the surface. Increases in persistent inflows currently are directly related to opening new developments laterally or ramping to lower levels. Water management consists of sumps and pumps, with water pumped to a water treatment plant on surface.

Primary access to the Guadalupe mine is from surface via two ramps. The West Decline and East Level are located 700 m north of the deposit in the hanging wall. A third portal for primary ventilation is the South Portal located in the deposit footwall approximately 2,200 m south–southeast from the main access portals. The West Decline serves as the primary access for haulage, while the East provides both haulage and support access. Both main ramps are used for primary ventilation intake while the main fans at South Portal are in operation. The South portal is used as a primary exhaust for the mine as well as secondary escapeway for extended work areas of Guadalupe and Animas. Two new developments at Zapata and Animas are underway as extensions of the Guadalupe mine. The material handling system uses a load-haul-dump (LHD) and truck transport system of ore loading and hauling to a surface interim stockpile. Ore is separated into stockpiles on surface to support blending prior to transport to the plant run-of-mine (ROM) stockpile. Waste from development is either directly transported from development to backfilling pockets in active stopes or stockpiled underground for later use as backfill. The mining methods used at Guadalupe include both transverse and longitudinal sublevel stoping.

Primary access to the Independencia mine is via two portals, the North and South, located approximately 270 m north of the main Guadalupe mine portals. Two declines provide access to the deposit and provide secondary intake (south) and primary exhaust ventilation (north) for the mine. Primary ventilation intake is from a vertical surface raise and fan system constructed in the La Nación workings and connected via dual ramps to the La Nación orebody. Mining methods used include both transverse and longitudinal sublevel stoping. The Independencia deposit is mined using similar equipment, personnel and mining methods as Guadalupe mine. Preliminary designs were completed for the development of the Hidalgo extension anticipated for production in 2023.

The La Nación mine is accessed from two levels, one from the south decline ramp access from Independencia, and the other from a footwall drive at the 1260 level. The two drifts provide access to the deposit along with primary intake and exhaust ventilation for both the La Nación and Independencia mines. The La Nación deposit is mined using similar equipment, personnel, and mining methods as the Guadalupe mine. However, much of the ore mining will be completed using longitudinal sublevel stoping due to the narrow width of the vein.

Backfill is a combination of cemented rock fill and straight waste fill.

Underground maintenance facilities in Guadalupe and Independencia support field and preventative maintenance activities. Primary maintenance is conducted in joint facilities located on surface between the mine portals and a large main facility located at the Palmarejo office and plant site. An additional facility is planned for construction in Zapata in 2023 to support ongoing operations. An explosives magazine located underground in Guadalupe also support Zapata and Animas, and a magazine in Independencia also supports La Nación.

The Palmarejo Operations have nine years of mine life remaining. The Guadalupe mine has a remaining nine-year mine life with the expansion components of Zapata and Animas. Independencia has a remaining nine-year mine life with expansions to the north and south and addition of the Hidalgo deposit. La Nación has five years of mine life remaining.

1.13 Recovery Methods

The process design was based on a combination of metallurgical test work, study designs and industry-standard practices, together with debottlenecking and optimization activities through the operational history of the plant since startup of operations in 2007. The design is conventional to the silver and gold industry and has no novel parameters. The plant is designed to operate 365 days per year at 91.3% availability. The plant design mill throughput is 6,000 t/day of ore with upgrades providing a nominal throughput up to 7,000 t/day.

The flow sheet consists of a standard crushing and grinding circuit (jaw crusher, semi-autogenous grind (SAG) mill and ball mill), followed by flotation circuit, where the flotation concentrate is directed to a sequence of clarification tanks and treated in agitated cyanidation tanks. Floatation tailings are directed to and treated in agitated cyanidation tanks. A Merrill Crowe circuit recovers gold and silver from the leachates of concentrate solution and tailings solution through a carbon-in-leach (CIL) absorption, desorption, recovery (ADR) system.

The average monthly electrical power consumption is 6,218 MWhrs at a cost of $0.081/kWhr. Power is supplied by the Federal Electricity Commission (CFE). The processing circuit uses approximately 6,650 m^3 of water daily; this consists of approximately 650 m^3 of fresh water from a local dam and the remaining 6,000 m^3 being water reclaimed from the tailings storage facility (TSF) and reused in the mill. Consumables used in processing include: xanthate; frother; Aerofloat 404; sodium cyanide; lime; flocculant; activated carbon; sodium hydroxide; hydrochloric acid; zinc; diatomaceous earth; neutralite; and liquid oxygen.

1.14 Infrastructure

The key infrastructure to support the LOM plan is in place. Facilities include: three operating underground mines; two shotcrete mixing plants; backfill cement mixing plant; water treatment plants and associated infrastructure; ROM pads; process plant; TSF and associated infrastructure; maintenance facilities; materials storage and laydown areas; various support facilities; electrical facilities including an emergency powerhouse; gravel airstrip; and a mine permanent camp and contractor facilities and kitchens.

The Palmarejo Operations currently maintain limited ROM stockpiles with multistage load-transport-feed sequencing to manage blending at the mine and plant.

A series of WRSFs is located at the currently closed Palmarejo open pit operation. No mine waste has been added to the WRSFs since 2015 when the pit was closed. The waste is currently being excavated and processed to support backfill operations underground.

The TSF, a zoned downstream earthfill dam, was constructed and commissioned in 2010. The facility has been raised through a series of stages with the current Stage 5 scheduled for completion in May 2022. The facility is projected to reach capacity in Q1 2023 at 15.4 Mm^3, by which time the operation will transition to disposal of tailings in the mined-out Palmarejo open pit.

The proposed TSF facility in the abandoned open pit will include an underdrain system in the abandoned underground mine below the pit, surface tailings discharge and pump-back systems, and a high compression thickener to provided high solids tails and increased water recovery.

The three primary water management structures located at the TSF are a freshwater diversion dam, freshwater diversion channel, and an environmental control dam. In 2016, a water treatment plant was constructed to treat and release excess water from the tailings pond. Groundwater from the underground mines is pumped to a surface treatment plant, from where it is cycled back to the underground mine and to the process plant.

Electrical power is supplied from the CFE grid, via a 66 km overhead 115 kV distribution line. Substations were constructed on the surface at the Guadalupe and Independencia mines, and underground at the La Nación mine. The estimated capacity for Guadalupe, Independencia, and La Nación complexes (at full production) is approximately 5.0 MW. An emergency powerhouse with 12 diesel generators (21.9 MW capacity) is located near the process plant and operates during main power outages.

1.15 Markets and Contracts

1.15.1 Market Studies

No market studies are currently relevant as the Palmarejo Operations consist of operating mines producing a readily-saleable commodity in the form of doré. Gold and silver are freely traded at prices that are widely known, and the prospects for the sale of any production are well understood.

Together with public documents and analyst forecasts, these data support that there is a reasonable basis to assume that for the LOM plan, that the key products will be saleable at the assumed commodity pricing.

Coeur sells its payable silver and gold production on behalf of its subsidiaries on a spot or forward basis, primarily to multi-national banks and bullion trading houses. Markets for both silver and gold bullion are highly liquid, and the loss of a single trading counterparty would not impact Coeur's ability to sell its bullion.

Coeur's strategy on hedging silver and gold is focused on providing downside protection. To accomplish that, the company may enter into derivative contracts to protect the selling price for a certain portion of the production if terms are attractive.

1.15.2 Commodity Pricing

Coeur uses a combination of historical and current contract pricing, contract negotiations, knowledge of its key markets from a long operations production record, short-term versus long-term price forecasts prepared by the company's internal marketing group, public documents, and analyst forecasts when considering long-term commodity price forecasts.

The long-term gold price forecasts are:

- Mineral reserves: $1,400 US$/oz;
- Mineral resources: $1,700 US$/oz;

The long-term silver price forecasts are:

- Mineral reserves: US$20/oz;

- Mineral resources: US$22/oz.

The price forecasts used in the cashflow analysis for gold vary from US$1,400/oz to US$1,750/oz and US$22/oz to $US24/oz for silver.

The QP considers these prices to be reasonable.

1.15.3 Contracts

Coeur Mexicana has contracts with one U.S.-based refiner and one Switzerland-based refiner that refine the Palmarejo Operations' doré bars into silver and gold bullion that meets benchmark standards set by the London Bullion Market Association.

Currently, there are contracts in place at the Palmarejo Operations to provide supply for all major commodities used in mining and processing, such as equipment vendors, power, explosives, cyanide, tire suppliers, raise boring, ground support suppliers and drilling contractors. The terms and rates for these contracts are within industry norms. These contracts are periodically put up for bid or negotiated to ensure the rates remain favorable to Coeur.

1.16 Environmental, Permitting and Social Considerations

1.16.1 Environmental Studies and Monitoring

Numerous baseline studies were performed in support of Project permitting. These included: air quality; weather; landscape; seismicity and natural hazards; groundwater and surface water quality; biodiversity, terrestrial and aquatic flora, and fauna; soils characteristic, uses, and potential use; noise and vibration; geochemical mineral waste characterization; archaeology/cultural heritage; and socioeconomics and cultural aspects.

Coeur Mexicana conducts routinary monitoring of physical and biological parameters required in the initial environmental impact statement (MIA) approval resolution and the MIA document itself. These include groundwater and surface water quality, air quality, emissions to the air, biodiversity, and water discharges.

1.16.2 Closure and Reclamation Considerations

Coeur conducts an annual review of its potential reclamation responsibilities companywide. A site-wide Closure Plan was prepared by Knight Piésold Consulting in December 2017. This document served as the base for closure and reclamation cost estimates prepared by KC Harvey Environmental in October 2021. The 2021 year-end closure assessment for final reclamation of the actual disturbance at the Palmarejo Operations, is estimated at US$40.6 M.

1.16.3 Permitting

Coeur Mexicana submitted its initial environmental impact statement (MIA) for Palmarejo in March 2008 (Palmarejo Phase 1) and received its first environmental authorization from SEMARNAT in May 2008. This first authorization was extended for an additional 6.5 years in 2017 and is valid for production through October 2023 followed by a two-year closure period. Coeur Mexicana filed for, and received, approval for a second environmental authorization in 2010; this authorization was extended for five additional years and is valid through November 2025.

Coeur Mexicana was granted full authorization for open pit and underground gold and silver mining activities within the areas outlined in the different MIAs. This includes permits for exploration, construction, and operation of the underground gold and silver mines, and land use/disturbance.

To cover the LOM, a new environmental authorization was requested of SEMARNAT on March 23, 2021, through the presentation of a Regional MIA (MIA-R). It is expected that the MIA-R will be approved in the first quarter of 2022. When approved the MIA-R will add 10 additional years to the current present environmental license, will consolidate 13 different authorizations under a single global license, and will include all future facilities and the mine development expected for the LOM in this Report.

1.16.4 Social Considerations, Plans, Negotiations and Agreements

Coeur actively engages the local community with cultural, social and economic programs divided into four main categories: local hiring and local purchases; house improvement program; social investment in vulnerable groups; and productive community programs. The surrounding communities are supportive of the Palmarejo Operations, and the employment and benefits that the mines provide.

1.17 Capital Cost Estimates

Capital cost estimates are at a minimum at a pre-feasibility level of confidence, having an accuracy level of ±25% and a contingency range not exceeding 15%. Capital costs are based on recent prices or operating data.

Capital expenditures consist largely of mining and processing equipment upgrades and replacement, capital leases, TSF construction and raises, small projects to support community or logistics, and general and administrative (G&A) support equipment, leases, and offices.

Capital expenditure for the LOM is estimated at US$167.0 M from January 1, 2022. Estimated capital expenditures are shown in Table 1-4.

1.18 Operating Cost Estimates

Operating cost estimates are at a minimum at a pre-feasibility level of confidence, having an accuracy level of ±25% and a contingency range not exceeding 15%.

Operating costs were developed based on historical cost performance and first principal calculations based on current commodity costs, labor rates, and equipment costs. The costs are provided for each major cost center: mining, processing, selling expense, and G&A. The total operating cost estimate includes all site costs, off-site costs associated with gold and silver metal sales, gold stream payments, and corporate overheads. The cost estimates are based on budgeted and expected LOM costs.

Operating expenditure for the LOM is estimated at US$1,500.3 M from January 1, 2022 to the planned end of the LOM in 2030. Operating costs are summarized in Table 1-5.

Table 1-4: Estimated Capital Expenditures by Year (US$ M)

Area	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Mine development	17.5	17.4	16.4	11.6	0.2	3.9	4.0	0.7	—	***71.7***
Infrastructure	3.2	2.0	3.3	2.3	0.5	2.8	1.3	0.4	—	***15.8***
Mobile equipment	5.2	5.2	6.5	6.5	5.3	5.3	—	—	—	***34.0***
GPE substation	1.8	2.5	—	—	—	—	—	—	—	***4.3***
Process equipment	—	—	—	—	—	—	—	—	—	***0.0***
Process sustaining capital	1.9	2.1	1.5	1.5	1.5	0.8	—	—	—	***9.2***
Mine & site capital	2.0	3.5	1.5	0.5	0.5	—	—	—	—	***8.0***
G&A & others	1.7	0.7	0.5	0.5	0.5	—	—	—	—	***3.9***
Tailings/water treatment	15.8	4.4	—	—	—	—	—	—	—	***20.1***
Total Capital Cost Estimate	***49.0***	***37.8***	***29.7***	***23.0***	***8.5***	***12.7***	***5.3***	***1.1***	—	***167.0***

Note: Numbers have been rounded.

Table 1-5: Operating Costs by Year (US$ M)

Operating Cost Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Underground mining	91.0	92.0	97.9	96.5	90.6	81.7	77.3	59.2	25.7	***711.8***
Surface haulage	5.7	5.9	5.9	6.0	6.0	5.7	5.5	4.8	2.8	***48.2***
Processing	59.3	59.7	63.6	64.3	61.8	60.2	56.5	44.7	19.9	***490.1***
General and administrative	27.6	27.6	28.4	28.9	28.1	28.3	26.6	21.3	10.0	***226.8***
Transportation, refining, and sales costs	2.9	3.0	3.0	3.0	2.8	2.9	2.6	2.4	0.8	***23.4***
Total Operating Costs	***186.5***	***188.3***	***198.8***	***198.7***	***189.2***	***178.8***	***168.6***	***132.3***	***59.2***	***1,500.3***

Note: Numbers have been rounded.

1.19 Economic Analysis

1.19.1 Forward-Looking Information Caution

Results of the economic analysis represent forward-looking information that is subject to several known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

Other forward-looking statements in this Report include, but are not limited to: statements with respect to future metal prices and concentrate sales contracts; the estimation of Mineral reserves and mineral resources; the realization of mineral reserve estimates; the timing and amount of estimated future production; costs of production; capital expenditures; costs and timing of the development of new ore zones; permitting time lines; requirements for additional capital; government regulation of mining operations; environmental risks; unanticipated reclamation expenses; title disputes or claims; and, limitations on insurance coverage.

Factors that may cause actual results to differ from forward-looking statements include: actual results of current reclamation activities; results of economic evaluations; changes in Project parameters as mine and process plans continue to be refined, possible variations in mineral reserves, grade or recovery rates; geotechnical considerations during mining; failure of plant, equipment or processes to operate as anticipated; shipping delays and regulations; accidents, labor disputes and other risks of the mining industry; and, delays in obtaining governmental approvals.

1.19.2 Methodology and Assumptions

Coeur records its financial costs on an accrual basis and adheres to U.S. Generally Accepted Accounting Principles (GAAP).

The economic analysis is reported on a 100% Project ownership basis.

The financial costs used for this analysis are based on the 2022 LOM budget model. The economic analysis assumes constant prices with no inflationary adjustments.

The mineral reserves support a mine life of nine years to 2030.

1.19.3 Economic Analysis

The NPV at a discount rate of 5% is US$229.5 M. As the cashflows are based on existing operations where all costs are considered sunk, considerations of payback and internal rate of return are not relevant.

A summary of the financial results is provided in Table 1-6. The active mining operation ceases in 2030. Closure costs are estimated to 2032; however, for presentation purposes, closure costs are shown in the annualized cashflow Table 19-2 as occurring between 2027–2030.

1.19.4 Sensitivity Analysis

The sensitivity of the Project to ± 20% changes in metal prices, grade, sustaining capital costs and operating cost assumptions was tested and can be seen in Table 1-7.

The Project is most sensitive to metal prices, less sensitive to grade, less sensitive to operating costs, and least sensitive to capital costs.

Table 1-6: Cashflow Summary Table

Item	Units	Value
Revenue		
Average gold price	US$/oz	1,644
Average silver price	US$/oz	22.56
Gross revenue	US$M	2,230.0
Operating Costs		
Mining	US$M	(760.0)
Processing	US$M	(490.1)
General and administrative	US$M	(226.8)
Smelting and refining	US$M	(23.4)
Total Operating Costs	*US$M*	*(1,500.3)*
Cash Flow		
Operating cash flow*	US$M	729.6
Capital expenditures	US$M	(167.0)
Reclamation	US$M	(40.6)
Total Pre-Tax Cash Flow (Net Cash Flow)	***US$M***	***522.0***
30% corporate income tax	US$M	(173.0)
7.5% special mining duty	US$M	(59.5)
0.5% extraordinary mining duty	US$M	(11.1)
Total After-Tax Cashflow (Net Cash Flow)	***US$M***	***278.4***
Total After-Tax NPV (5% Discount Rate)	***US$M***	***229.5***

Note: * Operating cash flow is inclusive of the Franco Nevada encumbrance. Numbers have been rounded.

Table 1-7: Sensitivity Analysis (US$ M)

Parameter	-20%	-10%	-5%	Base	5%	10%	20%
Metal price	-6.5	111.5	170.5	229.5	288.5	347.4	465.2
Operating cost	388.8	309.3	269.5	229.5	189.6	149.7	69.8
Capital cost	242.3	236.2	232.7	229.5	226.3	223.1	216.7
Grade	-0.1	114.8	172.2	229.5	286.9	344	458.3

Note: Numbers have been rounded. Base case is highlighted.

1.20 Risks and Opportunities

Factors that may affect the mineral resource and mineral reserve estimates were identified in Chapter 1.10 and Chapter 1.11.3 respectively and discussed in more detail in Chapter 11 and Chapter 12.

1.20.1 Risks

Other risks noted include:

- Commodity price increases for key consumables such diesel, electricity, tires, and other consumables would negatively impact the stated mineral reserves and mineral resources;
- Labor cost increases or productivity decreases could also impact the stated mineral reserves and mineral resources, or impact the economic analysis that supports the mineral reserves;
- Metallurgical recovery assumptions used in planning and operations are reasonable and based on historic performance. Any changes to metallurgical recovery assumptions could affect revenues and operating costs. This could also require revisions to cut-off grades and mineral reserve estimates;
- Geotechnical and hydrological assumptions used in mine planning are based on historical performance, and to date historical performance has been a reasonable predictor of current conditions. Any changes to the geotechnical and hydrological assumptions could affect mine planning, affect capital cost estimates if any major rehabilitation is required due to a geotechnical or hydrological event, affect operating costs due to mitigation measures that may need to be imposed, and impact the economic analysis that supports the mineral reserve estimates;
- The mineral resource and reserve estimates are sensitive to metal prices. Lower metal prices require revisions to the mineral resource estimates;
- Changes in climate could result in drought and associated potential water shortages that could impact operating cost and ability to operate;
- Assumptions that the long-term reclamation and mitigation of the Palmarejo Operations can be appropriately managed within the estimated closure timeframes and closure cost estimates;
- Political risk from challenges to:
    - Mining licenses;
    - Environmental permits;
    - Coeur’s right to operate;
- Changes to assumptions as to governmental tax or royalty rates, such as taxation rate increases or new taxation or royalty imposts.

1.20.2 Opportunities

Opportunities include:

- Conversion of some or all the measured and indicated mineral resources currently reported exclusive of mineral reserves to mineral reserves, with appropriate supporting studies;
- Upgrade of some or all the inferred mineral resources to higher-confidence categories, such that such better-confidence material could be used in mineral reserve estimation;
- Higher metal prices than forecast could present upside sales opportunities and potentially an increase in predicted Project economics;

- Ability to expand mineralization around known veins through exploration;
- Discovery and development of new exploration targets across the district;
- Potential to find or gain access to new mineralization that could be processed at the existing Palmarejo process facilities;
- Ability to add additional process plant throughput as additional mineral resources are converted to mineral reserves. Coeur Mexicana has a track record of success on this in recent years as the mill was originally designed for a larger open pit operation.

1.21 Conclusions

Under the assumptions in this Report, the operations evaluated show a positive cash flow over the remaining LOM. The mine plan is achievable under the set of assumptions and parameters used.

1.22 Recommendations

As the Palmarejo Operations consist of operating mines, the QPs have no material recommendations to make.

2.0 INTRODUCTION

2.1 Registrant

Mr. Christopher Pascoe, RM SME, Mr. Miller O'Prey, P. Geo., Mr. Peter Haarala, RM SME, and Mr. Joseph Ruffini, RM SME prepared a technical report summary (the Report) for Coeur Mining, Inc. (Coeur), on the Palmarejo Operations (the Palmarejo Operations or the Project), located in Mexico as shown in Figure 2-1.

Coeur's wholly-owned subsidiary, Coeur Mexicana S.A. de C.V. (Coeur Mexicana) is the operating entity.

2.2 Terms of Reference

2.2.1 Report Purpose

The Report was prepared to be attached as an exhibit to support mineral property disclosure, including mineral resource and mineral reserve estimates, for the Palmarejo Operations in Coeur's Form 10-K for the year ended December 31, 2021.

Mineral resources and mineral reserves are reported for the Guadalupe, Independencia, and La Nación underground mines.

2.2.2 Terms of Reference

The Palmarejo Operations consist of the Palmarejo processing facility; the Guadalupe underground mine, located about 8 km southeast of the Palmarejo mine; the Independencia underground mine, located approximately 800 m northeast of the Guadalupe underground mine, and the La Nación underground mine, located adjacent to the Independencia underground mine. The Guadalupe, Independencia, and La Nación underground mines are primarily silver and gold producers.

Mining commenced in 2008 from the Palmarejo open pit and underground mines. Milling operations and metal recovery began in 2009. Figure 2-2 shows the location of the current and mined-out open pits, and development prospects.

Unless otherwise indicated, all financial values are reported in United States (US) currency (US$) including all operating costs, capital costs, cash flows, taxes, revenues, expenses, and overhead distributions.

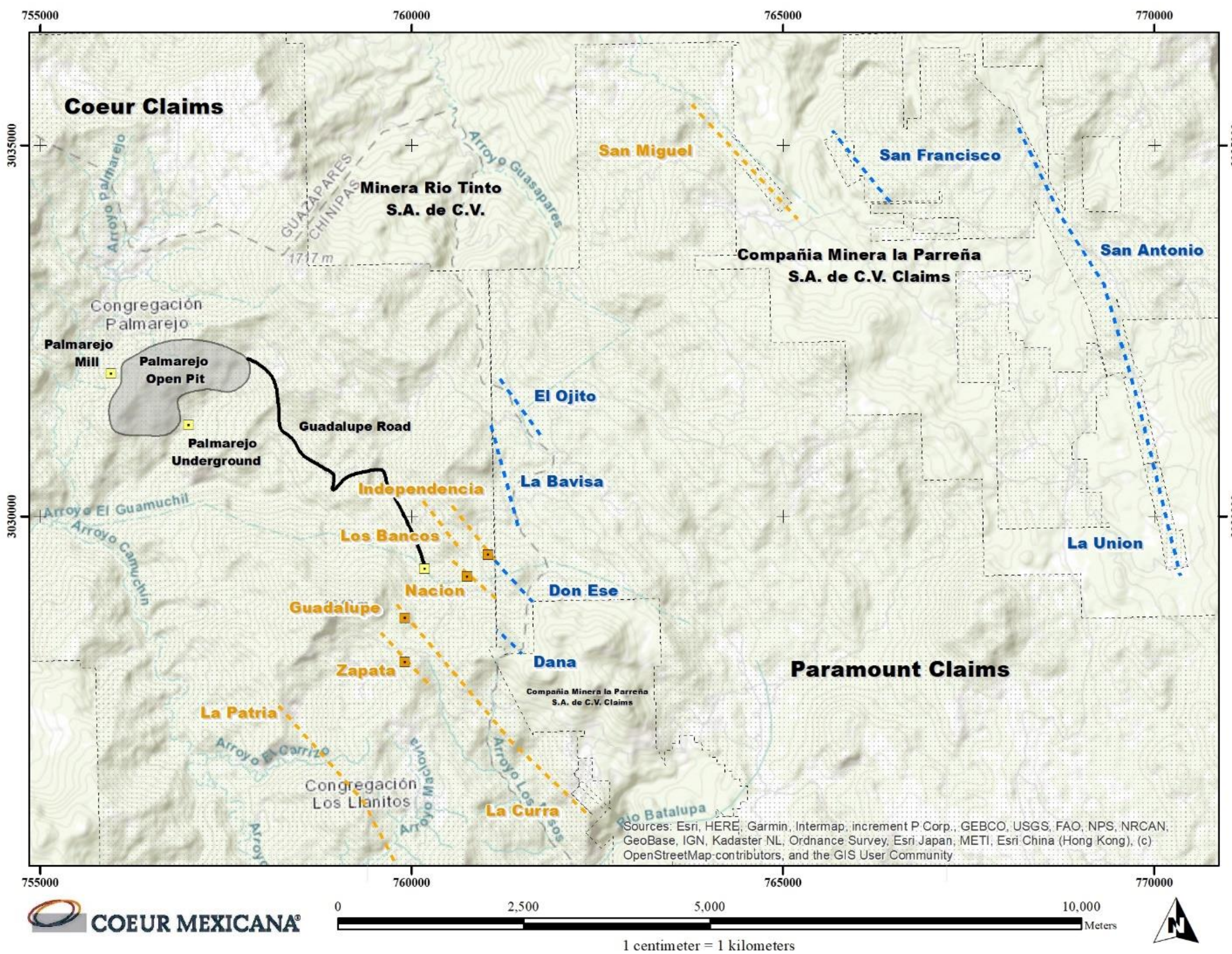
Unless otherwise indicated, the metric system is used in this Report. The Report uses US English.

Mineral resources and mineral reserves are reported using the definitions in Item 1300 of Regulation S–K (17 CFR Part 229) (SK1300) of the United States Securities and Exchange Commission. Illustrations, where specified in SK1300, are provided in the relevant Chapters of report where that content is requested.

Figure 2-1: Project Location Plan

Note: Figure prepared by Coeur, 2021. Large callout lower right represents zoomed in view of Project area

Figure 2-2: Mining Operations Layout Plan



Note: Figure prepared by Coeur, 2021.

2.3 Qualified Persons

The following Coeur employees serve as the Qualified Persons (QPs) for the Report:

- Mr. Christopher Pascoe, RM SME, Senior Director, Technical Services;
- Mr. Miller O'Prey, P. Geo., Director Exploration, Coeur Mexicana;
- Mr. Peter Haarala, RM SME, P.E., Senior Manager, Mine Planning;
- Mr. Joseph Ruffini, RM SME, Manager, Resource Estimation.

The QPs are responsible for, or co-responsible for, the Report Chapters set out in Table 2-1.

2.4 Site Visits and Scope of Personal Inspection

Mr. Pascoe most recently visited the operations from October 6–11, 2019. During his site visit, he reviewed geology, mine planning, and operations.

Mr. O'Prey has been employed at the Palmarejo Operations since 2014, and this onsite experience serves as his scope of personal inspection. In his current role, he provides oversight to ongoing exploration drilling programs and core logging/sampling procedures.

Mr. Haarala's most recent site visit was December 6–10, 2021. He has been employed at Coeur since May 2021. In his current role he is responsible for overseeing mine planning and designs for Coeur operations. During his site visit he reviewed mine operations, mine planning and design, mineral processing, and the overall Project area.

Mr. Ruffini's most recent site visit was from June 25 to July 1, 2021, where he reviewed the inputs, assumptions, and procedures that were used to produce the resource estimates. He also has direct experience working on the site as the Senior Resource Geologist from February 2017 to April 2019.

2.5 Report Date

Information in the Report is current as at December 31, 2021.

2.6 Information Sources and References

The reports and documents listed in Chapter 24 and Chapter 25 of this Report were used to support Report preparation.

2.7 Previous Technical Report Summaries

Coeur has not previously filed a technical report summary on the Project.

Table 2-1: QP Chapter Responsibilities

QP Name	Chapter Responsibility
Mr. Chris Pascoe	1.1, 1.2, 1.3, 1.4, 1.9, 1.13, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20, 1.21, 1.22; 2; 3; 4; 10; 14; 16; 17; 18; 19; 20; 21; 22.1, 22.2, 22.6, 22.10, 22.12, 22.13, 22.14, 22.15, 22.16, 22.17, 22.18; 23; 24; 25.
Mr. Peter Haarala	1.1, 1.2, 1.3, 1.11, 1.12, 1.14, 1.15, 1.16, 1.17, 1.18, 1.20, 1.22; 4; 7.3, 7.4; 12; 13; 15; 16; 17; 18; 22.1, 22.22.8, 22.9, 22.11, 22.12, 22.13, 22.14, 22.15, 22.17; 23; 24; 25
Mr. Miller O'Prey	1.1, 1.2, 1.5, 1.6, 1.7, 1.8, 1.20, 1.22; 2; 5; 6; 7.1, 7.2; 8; 9; 22.1, 22.3, 22.4, 22.5, 22.17; 23; 24; 25
Mr. Joseph Ruffini	1.1, 1.2, 1.5, 1.6, 1.7, 1.8, 1.20, 1.22; 2; 5; 6; 7.1, 7.2; 8; 9; 11; 22.1, 22.3, 22.4, 22.5, 22.17; 23; 24; 25

3.0 PROPERTY DESCRIPTION

3.1 Property Location

The Palmarejo Operations are located approximately 420 km by road southwest of the city of Chihuahua, in the state of Chihuahua in northern Mexico.

The centroid for the Project is 108º 21.8203’ W longitude and 27º 21.5547’ N latitude (760,781 mE, 3,028,984 mN) in the Universal Transverse Mercator (WGS 84), Zone 12R.

Centroid locations for the key Project components include in the Universal Transverse Mercator (WGS 84), Zone 12R:

- Palmarejo open pit (mined out): 108º 24.126’ W longitude and 27º 23.176’ N latitude (756,800 mE, 3,031,950 mN);
- Guadalupe: 108º 21.899’ W longitude and 27º 20.996’ N latitude (760,672 mE, 3,027,949 mN);
- Independencia: 108º 21.752’ W longitude and 27 º 22.078’ N latitude (760,873 mE, 3,029,953 m N);
- La Nación: 108º 21.809’ W longitude and 27º 21.591’ N latitude (760,797 mE, 3,029,051 mN).

The Project falls within the Instituto de Naciónal de Estadística, Geografía y Informática (INEGI) Ciudad Obregón geological sheet (G12-3) and the INEGI Guadalupe Victoria (G12B28), Chínipas de Almada (G12B38), Temoris (G12B39), Milpillas (G12B48), and the Cieneguita Lluvia de Oro topographic maps.

3.2 Ownership

The Project is held in the name of Coeur’s wholly-owned subsidiary, Coeur Mexicana.

3.3 Mineral Title

The Palmarejo Operations consist of 71 mining concessions (27,227 ha). A summary of the claims is provided in Table 3-1: Mineral Tenure Summary Table, and an overall tenure location plan provided in Table 3-2. Claim details are provided in Appendix A. A map showing name, ID, and other details of the mineral tenures as well as the location of the mining complexes is also provided in Appendix A.

Locations of the areas that have current mineral resource estimates are shown in Figure 3-2. Detailed maps are provided in Appendix A. The Guadalupe Complex mining operations are within concessions 188817 and 186009. The Independencia Complex mining operations are within concessions 186009 and 243762. The La Nación Complex mining operations are within concessions 221490 and 243762.

As per Mexican requirements for grant of tenure, the mining concessions were surveyed on the ground by a licensed surveyor. Required payments for the concessions were made as required. Statutory reporting obligations were met as required.

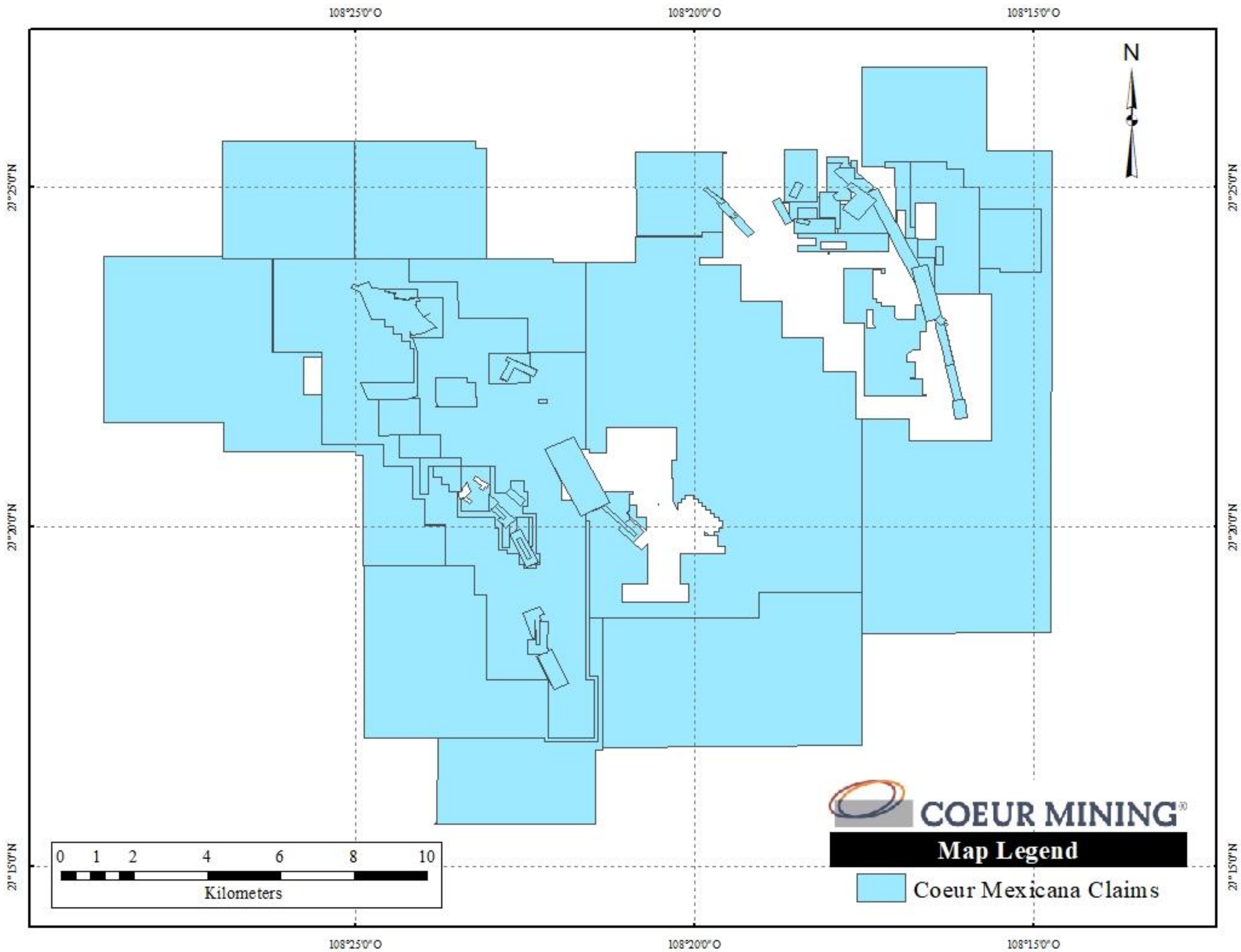
Table 3-1: Mineral Tenure Summary Table

Nº	Concession Name	Title Nº	Valid Through	Area (ha)	Holder	Royalty
1	Ampl. Trogan Oeste	225223	4/8/2055	1,699.99	Coeur Mexicana	N/A
2	Ampliación Trogan	224118	7/4/2055	703.2318	Coeur Mexicana	N/A
3	Caballero Azteca	209975	30/08/2049	5.051	Coeur Mexicana	N/A
4	Carmelita	209976	30/08/2049	5.343	Coeur Mexicana	N/A
5	El Risco	210163	9/9/2049	24	Coeur Mexicana	N/A
6	La Aurelia	209541	2/8/2049	10	Coeur Mexicana	N/A
7	La Buena Fe	188820	28/11/2040	60	Coeur Mexicana	N/A
8	La Buena Fe Norte	226201	28/11/2055	98.0878	Coeur Mexicana	N/A
9	La Estrella	189692	4/12/2040	59.5863	Coeur Mexicana	N/A
10	La Mexicana	212281	28/09/2050	142.141	Coeur Mexicana	N/A
11	La Moderna	225574	22/09/2055	75.8635	Coeur Mexicana	N/A
12	Lezcura	210479	7/10/2049	14.5465	Coeur Mexicana	N/A
13	Los Tajos	186009	13/12/2039	2.7043	Coeur Mexicana	N/A
14	Maclovia	167282	29/10/2030	6	Coeur Mexicana	N/A
15	Nueva Patria	167281	29/10/2030	11	Coeur Mexicana	N/A
16	Palmarejo	164465	8/5/2029	52.0755	Coeur Mexicana	N/A
17	Patria Vieja	167323	2/11/2030	4	Coeur Mexicana	N/A
18	Reyna De Oro	198543	29/11/2043	27.1791	Coeur Mexicana	2% NSR
19	San Carlos	188817	28/11/2040	160	Coeur Mexicana	N/A
20	San Juan De Dios	167322	2/11/2030	23	Coeur Mexicana	N/A
21	Santo Domingo	194678	6/5/2042	15.3737	Coeur Mexicana	N/A
22	Tres De Mayo	187906	21/11/2040	39.8582	Coeur Mexicana	2% NSR
23	Trogan	221490	18/02/2054	3,844.54	Coeur Mexicana	N/A
24	Trogan Fracción	221491	18/02/2054	7.9682	Coeur Mexicana	N/A
25	Trogan Norte 1	225278	11/8/2055	1,024.00	Coeur Mexicana	N/A
26	Trogan Norte 2	225279	11/8/2055	1,019.22	Coeur Mexicana	N/A
27	Trogan Oeste	225308	15/08/2055	2,699.07	Coeur Mexicana	N/A
28	Unificación Guerra Al Tirano	170588	1/6/2032	27.4471	Coeur Mexicana	2% NSR
29	Unificación Huruapa	195487	13/09/2039	213.7755	Coeur Mexicana	N/A
30	Victoria	210320	23/09/2049	76.0883	Coeur Mexicana	N/A
31	Virginia	214101	9/8/2051	12.0906	Coeur Mexicana	N/A
32	El Rosario	185236	13/12/2039	10.9568	Coeur Mexicana	N/A
33	La Curra	222319	24/06/2054	37.6593	Coeur Mexicana	N/A
34	La Currita	223292	24/11/2054	13.6805	Coeur Mexicana	N/A
35	Sulema No. 2	191332	18/12/2041	15.828	Coeur Mexicana	N/A
36	Ampliación La Buena Fe	209648	2/8/2049	40.8701	Coeur Mexicana	N/A

Nº	Concession Name	Title Nº	Valid Through	Area (ha)	Holder	Royalty
37	El Carmen	166426	3/6/2030	59.0864	Coeur Mexicana	N/A
38	El Rosario	166430	3/6/2030	14	Coeur Mexicana	N/A
39	Empalme	166423	3/6/2030	6	Coeur Mexicana	N/A
40	Guadalupe De Los Reyes	172225	26/10/2033	8	Coeur Mexicana	N/A
41	Las Tres B.B.B.	166427	3/6/2030	23.001	Coeur Mexicana	N/A
42	Las Tres S.S.S.	166429	3/6/2030	19.1908	Coeur Mexicana	N/A
43	San Juan	166402	3/6/2030	3	Coeur Mexicana	N/A
44	San Luis	166422	3/6/2030	4	Coeur Mexicana	N/A
45	San Miguel	166401	3/6/2030	12.9458	Coeur Mexicana	N/A
46	Sangre De Cristo	166424	3/6/2030	41	Coeur Mexicana	N/A
47	Santa Clara	166425	3/6/2030	15	Coeur Mexicana	N/A
48	Swanwick	166428	3/6/2030	70.1316	Coeur Mexicana	N/A
49	Constituyentes 1917	199402	18/04/2044	66.2411	Coeur Mexicana	1% NSR
50	Montecristo	213579	17/05/2051	38.056	Coeur Mexicana	1% NSR
51	Montecristo Fraccion	213580	17/05/2051	0.2813	Coeur Mexicana	1% NSR
52	Montecristo Ii	226590	1/2/2056	27.1426	Coeur Mexicana	1% NSR
53	Santa Cruz	186960	16/05/2040	10	Coeur Mexicana	3% NSR
54	Elyca	179842	16/12/2036	10.0924	Coeur Mexicana	N/A
55	Ampl. San Antonio	196127	22/09/2042	20.9174	Coeur Mexicana	2% NSR
56	Cantilito	220788	6/10/2053	37.035	Coeur Mexicana	2% NSR
57	Guazapares	209497	2/8/2049	30.9111	Coeur Mexicana	2% NSR
58	Guazapares 1	212890	12/2/2051	451.9655	Coeur Mexicana	2% NSR
59	Guazapares 2	226217	1/12/2055	404.0016	Coeur Mexicana	2% NSR
60	Guazapares 3	211040	23/03/2050	250	Coeur Mexicana	2% NSR
61	Guazapares 4	223664	1/2/2055	63.9713	Coeur Mexicana	2% NSR
62	Guazapares 5	213572	17/05/2051	88.8744	Coeur Mexicana	2% NSR
63	San Antonio	204385	12/2/2047	14.8932	Coeur Mexicana	2% NSR
64	San Antonio	222869	13/09/2054	105.1116	Coeur Mexicana	2% NSR
65	San Francisco	191486	18/12/2041	38.1598	Coeur Mexicana	2% NSR
66	Vinorama	226884	16/03/2056	474.222	Coeur Mexicana	2% NSR
67	Guazapares	232082	17/05/2057	4,242.12	Coeur Mexicana	N/A
68	Temoris Centro Fracc. 1	243762	17/05/2057	4,940.20	Coeur Mexicana	N/A
69	Temoris Centro Fracc. 2	243763	17/05/2057	2,380.00	Coeur Mexicana	N/A
70	Temoris Centro Fracc. 6 R1a	243767	17/05/2057	956.201	Coeur Mexicana	N/A
71	Temoris Fraccion 4	229553	17/05/2057	18.6567	Coeur Mexicana	N/A
				27,226.65		

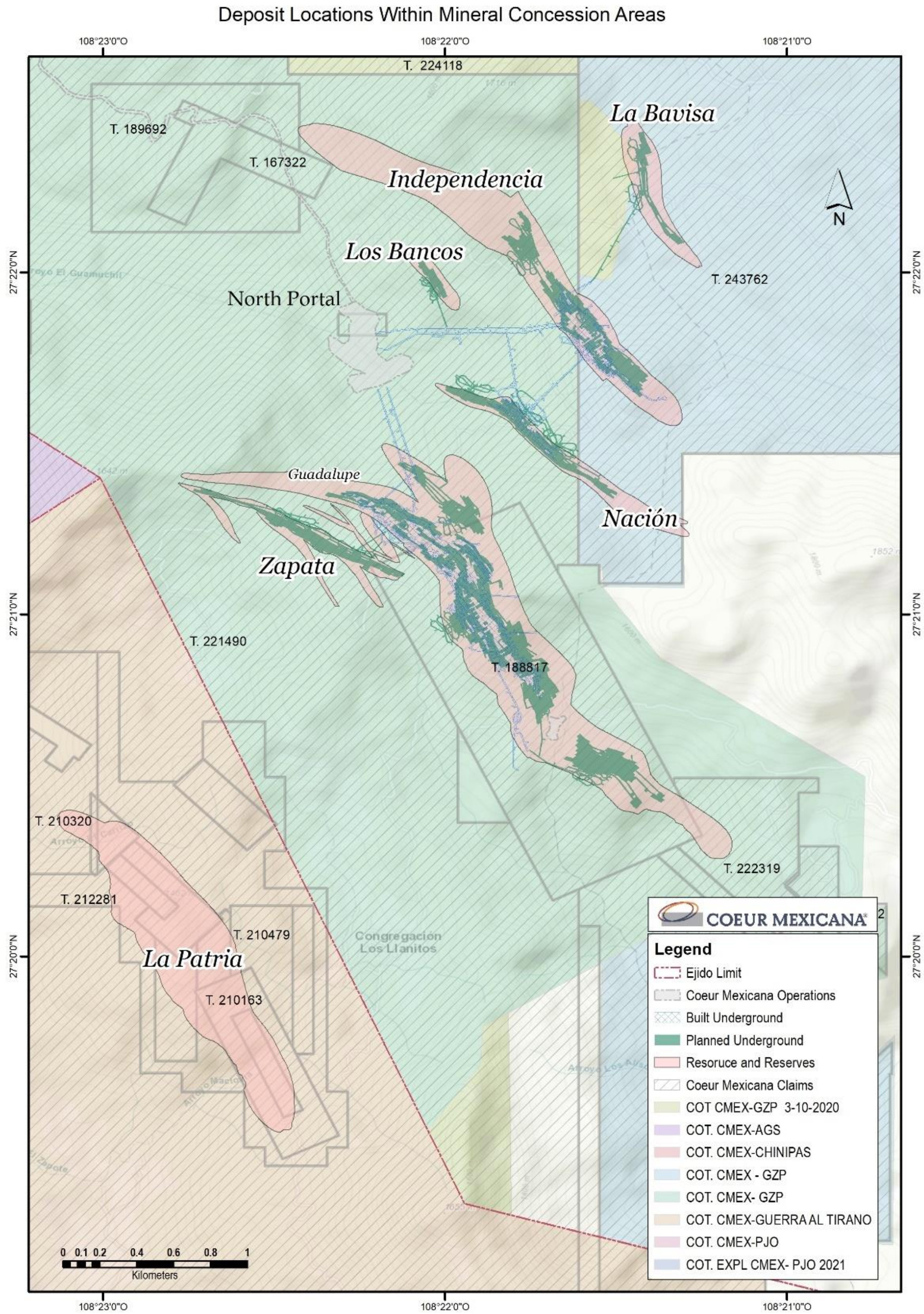
Note: dates use month/day convention. N/A = not applicable

Figure 3-1: Mineral Tenure Location Map



Note: Figure prepared by Coeur, 2021.

Figure 3-2: Deposit Locations Within Mineral Concession Areas



Note: Figure prepared by Coeur, 2021.

3.4 Surface Rights

Coeur has occupancy agreements in place with selected ejidos for exploitation or exploration purposes (Table 3-2), collectively covering an area of 15,111.19 ha (Figure 3-3).

3.5 Water Rights

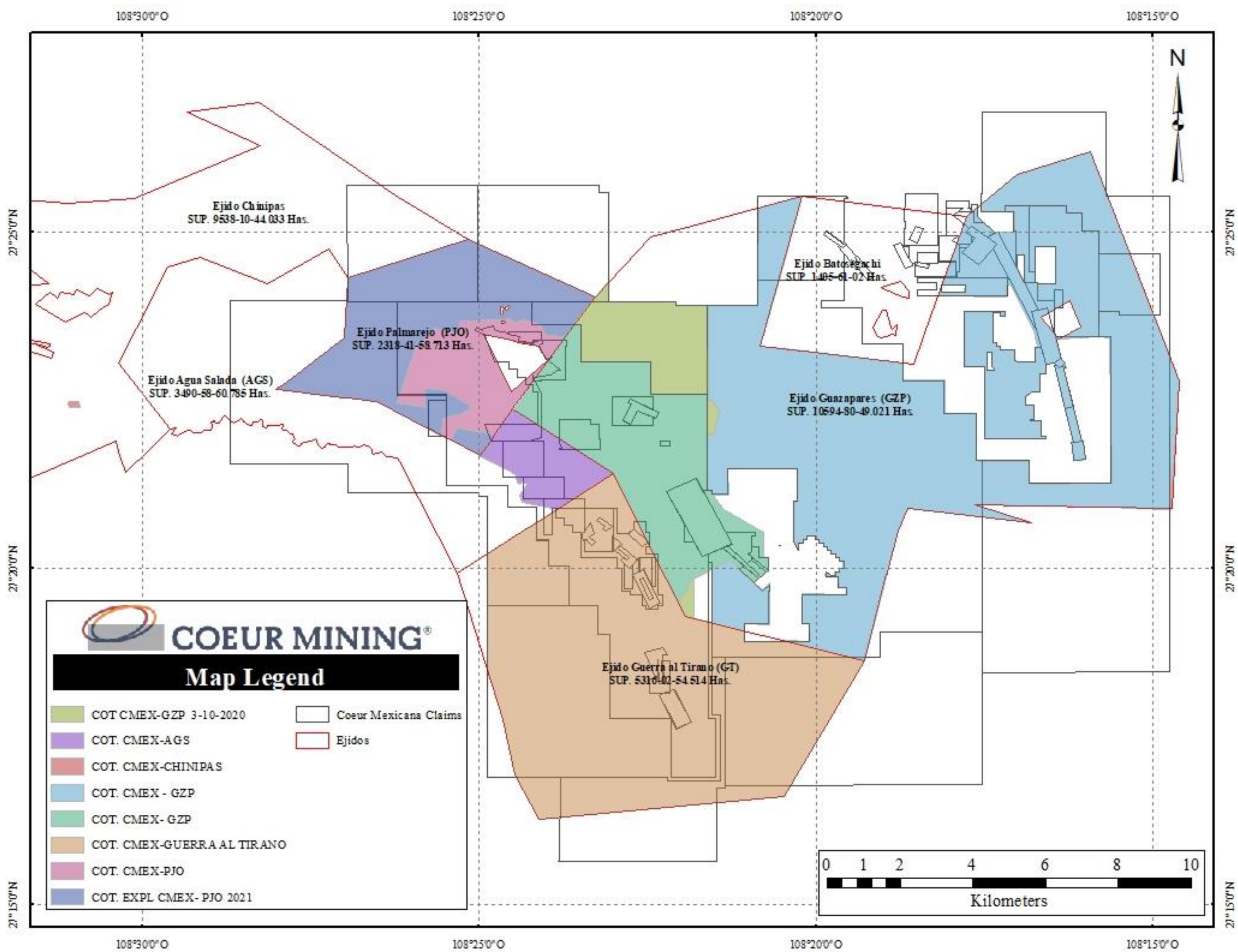
Water rights supporting exploration, mining, and processing activities are summarized in Table 3-3.

Table 3-2: Key Surface Rights Agreements

Eijido	Purpose	Area (ha)	Fees	Agreement Duration	Comment
Agua Salada	Exploration, exploitation and beneficiation	443.4	Annual 765,000 (MXN$)	25 years, from November 20, 2013; option to extend for an additional five years	Five scholarships to a maximum of MXN$50,000 to children of members of the ejido
Chínipas	Water pumping station and associated infrastructure	7.8	Annual 24,000 (US$)	11 years, from October 15, 2012; option to extend for an additional 11 years	Five higher-education scholarships to a maximum of MXN$50,000 to children of members of the ejido. It also provides for a contribution of MXN$120,000 annually towards meal programs for senior citizens of the ejido. Payments subject to annual adjustment for CPI
Guazapares	Exploration, exploitation and beneficiation	1,830.6	Annual 15,432,000 (MXN$) adjusted for CPI annually	25 years, from October 20, 2013; option to extend for an additional five years	Five higher-education scholarships to a maximum of MXN$50,000 to children of members of the ejido. It also provides for a contribution of MXN$120,000 annually towards meal programs for senior citizens of the ejido and an additional MXN$120,000 annually towards school infrastructure. Payments subject to annual adjustment for CPI
Guazapares	Exploration and the installation of ventilation infrastructure	1,778.9	One-time rent 595,000 (MXN$)	10 years, from March 29, 2015	Nominal payments made for any surface disturbance to the ejido and any affected ejiditario on a unit cost basis per drill pad, trench and meter of road construction. Nominal payments subject to annual adjustment for CPI
Guazapares	Exploration and installation of ventilation infrastructure	5,203.0	One-time rent 595,000 (MXN$)	10 years, from March 29, 2015	Nominal payments made for any surface disturbance to the ejido and any affected ejiditario on a unit cost basis per drill pad, trench, and meter of road construction.

Eijido	Purpose	Area (ha)	Fees	Agreement Duration	Comment
					Nominal payments subject to annual adjustment for CPI
Palmarejo	Exploration, exploitation, and beneficiation	657.5	Annual 7,200,000 (MXN$) adjusted for CPI annually	17 years, from October 16, 2013; option to extend for an additional five years	Five higher-education scholarships to a maximum of MXN$50,000 to children of members of the ejido
Guerra Al Tirano	Exploration, exploitation, and beneficiation	5,190.39	One-time rent 1,500,000 (MXN$)	10 years, from March 12, 2017	Nominal payments made for any surface disturbance to the ejido and any affected ejiditario on a unit cost basis per drill pad, trench and meter of road construction. Nominal payments subject to annual adjustment for CPI

Figure 3-3: Surface Rights Plan



Note: Figure prepared by Coeur, 2021.

Table 3-3: Key Water Rights

Permit/Concession	Dates (from–to)	Comments
03CHI141177/10EBDL16	July 30, 2015 to July 30, 2025	Tailings dam permit for leased area of 42,613.49 m^2
03CHI140198/10EDDL13	April 2009 to April 2024	Water treatment plant 1 discharge permit for 34,700 m^3 per year
03CHI140900/10ERDL15	November 17, 2012 to November 17, 2022	Water treatment plant 2 discharge permit for 37,230 m^3 per year
03CHI156149/10EMDA17	June 10, 2017 to June 10, 2027	Groundwater concession, Palmarejo water well
03CHI140154/10FAGC10	September 18, 2009 to September 18, 2029	Infiltration gallery (tunnel) at Chínipas River riverbed, facility within Federal Area, occupation permit of 1,100 m^2
03CHI141257/10FDDL16	March 2, 2016 to March 2, 2026	Water treatment plant at tailings storage facility discharge permit for 2,628,000 m^3 per year
03CHI155096/10FBDA15	November 16, 2014 to November 16, 2034	Concession for the extraction of 100,000 m^3 per year of surface water.
03CHI141394/10EDD17	December 8, 2016 to December 8 2026	Federal Area 1630; concessional area of 4,302.066 m^2
03CHI141393/10EDD17	December 8, 2016 to December 8 2026	Federal Area 1644; concessional area of 28,969.965 m^2
CHI818344	December 21, 2020 to December 21, 2050	Federal Area 1654; concessional area of 3,114.020 m^2
03CHI141395/10EDD17	December 8, 2016 to December 8, 2026	Federal Area 1647; concessional area of 469.15 m^2
03CHI141396/10EDDL17	December 8, 2016 to December 8, 2026	Federal Area 1645; concessional area of 10,673.206 m^2
03CHI141392/10EDD17	December 8, 2016 to December 8, 2026	Federal Area 1631; concessional area of 670.649 m^2
03CHI141391/10EDDL17	December 8, 2016 to December 8, 2026	Federal Area 1641; concessional area of 2,518.924 m^2
03CHI141390/10EDD17	December 8, 2016 to December 8, 2026	Federal Area 1642; concessional area of 2,148.414 m^2
CHI832319	October 2, 2014 to October 2, 2024	Federal Area 1885; concessional area of 442,641 m^2
03CHI141176/10EBDL15	May 20 2016 to May 20 2026	Environmental control dam, permit for leased area of 45,865.87 m^2
03CHI800002/10FPGC10	February 22 2010 to February 22 2029	Water extraction permit of 2,000,000 m^3 per year at infiltration gallery, Chínipas River.
8120017	April 16 2021 to April 16 2031	Federal Area 1649; concessional area of 3,211.45 m^2

Permit/Concession	Dates (from–to)	Comments
No Concession title 3, Tillage water	Indefinite	Extraction groundwater at Guadalupe
No Concession title 4, Tillage water	Indefinite	Extraction groundwater at Independencia

3.6 Royalties

3.6.1 Franco-Nevada

On 2 October 2014, a Gold Purchase and Sale Agreement (the Agreement) was entered into by and among Coeur Mexicana, Franco-Nevada (Barbados) Corporation (Franco–Nevada), Ocampo Resources Inc., and Ocampo Services Inc., whereby Coeur Mexicana agreed to sell to Franco–Nevada 50% of the refined gold produced from selected mining concessions at a gold price of $800/oz, in consideration of Franco–Nevada providing investment capital for Project development.

The initial term of the Agreement (which became effective in August 2016) is 40 years. This Agreement encumbers all mining concessions owned or controlled by Coeur Mexicana except for the El Rosario (185236), La Curra (222319), La Currita (223292) and Sulema No. 2 (191332) mining concessions and the mining concessions acquired from Paramount. There is also an area of interest (AOI), whereby any mining concessions acquired within the boundaries of the AOI are subject to the terms of the Agreement. The AOI boundary generally follows the exterior boundary of Agrupamiento Unificación Huruapa.

This royalty is included in the LOM cashflow analysis.

3.6.2 Minera Azteca

On 10 October 2011, Coeur Mexicana purchased the Unificación Guerra al Tirano (170588), Reyna de Oro (198543), and Tres de Mayo (187906) mining concessions from Minera Azteca de Oro y Plata S.A. de C.V. (Minera Azteca). Minera Azteca reserved a 2% net smelter returns royalty (NSR) on production, as defined in the agreement, of all gold and silver mined and produced from these three mining concessions. Coeur Mexicana may re-acquire, at any time, up to 75% of the NSR (i.e., 1.5%), at a fixed price of US$50,000 per one-tenth of every 1%. The maximum re-purchase price of this NSR is US$750,000. Currently, there are no mineral resources or mineral reserves associated with this royalty.

3.6.3 Hernández and Gomez

Pursuant to a Convenio (Paramount Mexico Royalty Agreement) by and among Isidro Hernández Pompa and wife (Hernández), Victor Manuel Gomez Fregoso (Gomez), and Paramount Mexico, dated December 8, 2009, a 1% NSR was granted to Hernández and Gomez, over the Constituyentes 1917 (199402), Montecristo (213579), Montecristo Fraccion (213580), and Montecristo II (226590) mining concessions.

Coeur Mexicana (as successor to Paramount Mexico) may purchase this NSR from the Royalty Holders at any time for US$450,000 plus value-added tax (IVA). Under the terms of the Paramount Mexico Royalty Agreement, Coeur Mexicana (as successor to Paramount Mexico) has a US$190,000 credit against future NSR payments, if any, which may be realized by withholding 50% of the quarterly NSR payments Hernández and Gomez would have otherwise received. Alternatively, Coeur Mexicana (as successor to Paramount Mexico) may apply the US$190,000 credit to the US$450,000 NSR royalty purchase price. Currently, there are no mineral resources or mineral reserves associated with this royalty.

3.6.4 Rascón

The Santa Cruz (T-186960) concession is subject to a 3% NSR royalty payable to Mr. Luis Alberto Rascón Herrera. The NSR royalty can be purchased at any time, upon the payment of US$200,000 plus value-added tax. Currently, there are no mineral resources or mineral reserves associated with this royalty.

3.6.5 Minera Río Tinto and Astorga

The San Antonio (T-222869), San Antonio (T-204385), Ampl. San Antonio (T-196127) concessions are subject to a 0.5% NSR payable to Minera Río Tinto, S.A. de C.V. (Minera Río Tinto) and a 1.5% NSR payable to Mr. Rafael Fernando Astorga Hernández. Currently, there are no mineral resources or mineral reserves associated with this royalty.

3.6.6 Minera Río Tinto and Ayub

The Guazapares (T-209497), Guazapares 1 (T-212890), Guazapares 2 (T-226217), Guazapares 3 (T-211040), Guazapares 4 (T-223664), Guazapares 5 (T- 213572), Cantilito (T-220788), and Vinorama (T-226884) concessions are subject to a 2% NSR payable to Minera Río Tinto and Mr. Mario Humberto Ayub Touché. Currently, there are no mineral resources or mineral reserves associated with this royalty.

3.6.7 Minera Río Tinto and Rachasa

The San Francisco (T-191486) concession is subject to a 0.5% NSR payable to Minera Río Tinto and a 1.5% NSR payable to Minera Rachasa, S.A. de C.V. (Rachasa). Currently, there are no mineral resources or mineral reserves associated with this royalty.

3.6.8 Mexican Mining Taxes

Mexican mining taxes include the following:

- Special Mining Duty (tax) of 7.5% (Derecho Especial Sobre Mineria) applied to income from mining activities. The tax is calculated on the basis of earnings before interest, income taxes, depreciation, and amortization (i.e., EBITDA);
- Extraordinary Mining Duty (tax) of 0.5% (Derecho Extraordinario Sobre Mineria) applied to all revenue from the gold and silver produced.

Both of these taxes are assumed to be deductible against income before the calculation of corporate income tax.

3.7 Encumbrances

3.7.1 Permitting Requirements

The environmental permitting process in Mexico requires the presentation of two different documents at the federal level: an Environmental Impact Statement (MIA in the Spanish acronym) and a Land Use Change (CUS in the Spanish acronym). These documents are reviewed by Mexico's environmental authority, Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT). In addition, authorization from Mexico's water authority CONAGUA (Comisión Naciónal del Agua) is needed for water use, effluent discharge, and for the construction of facilities in federal watersheds.

To cover the life-of-mine (LOM), a new environmental authorization was requested of SEMARNAT on March 23, 2021, through the presentation of a Regional MIA (MIA-R). A MIA-R is a preventive instrument that defines the environmental and social effects of a project of regional extension which includes several watersheds and different towns or communities. The MIA-R is SEMARNAT's preferred instrument for large-scale mining projects.

Additional information on permitting is provided in Chapter 17.

3.7.2 Permitting Timelines

In late July 2021, SEMARNAT requested additional information on the MIA-R document; this information was provided by Coeur on August 10, 2021. It is expected that the MIA-R will be approved in the first quarter of 2022. When granted, it will add 10 years to the current environmental license and will consolidate all existing authorizations under a single global license. The MIA-R will also include the new facilities and mine development expected for the LOM plan presented in this Report.

No special conditions are anticipated to be imposed in the approval of the MIA-R.

3.7.3 Violations and Fines

There are no major violations or fines as understood in the United States mining regulatory context that have been reported for the Palmarejo Operations.

3.8 Significant Factors and Risks That May Affect Access, Title or Work Programs

To the extent known to the QP, there are no other known significant factors and risks that may affect access, title, or the right or ability to perform work on the properties that comprise the Palmarejo Operations that are not discussed in this Report.

4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 Physiography

The Palmarejo Operations are located on the western flank of the Sierra Madre Occidental, a mountain range that comprises the central spine of northern Mexico.

The elevation at Palmarejo is about 1,150 masl, and the elevation at Guadalupe and Independencia is about 1,300 masl.

Hills are typically densely vegetated, steep-sided slopes with local stands of cacti. Conifers occur at high elevations, while oak trees, cacti, and thorny shrubs dominate the vegetation at low levels.

Local ranchers and farmers graze cattle and grow corn and other vegetables on small-scale plots.

4.2 Accessibility

Access to the Palmarejo Operations is from the city of Chihuahua, in the state of Chihuahua, Mexico, via paved Highways 16 and 127 to the town of San Rafael. From San Rafael, travel is by gravel road through Temoris to the town of Palmarejo which is adjacent to the processing plant. Access via Temoris is along 35 km of company-maintained gravel road, an extension of Highway 127 that continues on through to Chínipas. The majority of the supplies and personnel are transported via this road from Chihuahua to the site. Total driving time from Chihuahua is approximately seven hours.

Access to the individual mines and local exploration sites is via a company-controlled road approximately 10 km from the process plant.

The Chihuahua–Pacifico rail service operates between Chihuahua and Los Mochis (Topolobampo seaport) on the northwest coast of Mexico. A passenger train operates weekly, and one freight train operates daily between these cities with nearest stop in Estación Temoris. The Estación Temoris railway station is located 10 km south of Temoris.

An airstrip services light aircraft located at the Palmarejo site.

4.3 Climate

The climate is moderate, with average maximum and minimum temperatures at 34° C and 5° C, respectively. Rainfall occurs mainly in the summer and fall months (August through to the end of October), with average annual precipitation of 620 mm (McCullagh and Hall, 2014).

Mining operations are conducted year-round. All anticipated exploration activities can be conducted year-round.

4.4 Infrastructure

Local and regional (state) contractors and vendors provide most of the services required to support the Palmarejo Operations.

The area around the Palmarejo Operations has moderately well-developed infrastructure and a local workforce familiar with mining operations. Four to five thousand inhabitants reside within a one-hour drive, on all-weather compacted dirt roads (Skeet, 2004). Chínipas and Temoris are the two nearest towns. The small village of Palmarejo lies immediately northwest of the Palmarejo mine. Many of the employees live in these three communities.

Electrical power is supplied by the Federal Electricity Commission (CFE).

Water is sourced from the tailings storage facility (TSF), the Chínipas River, or is purchased from local municipalities.

The Palmarejo Operations currently have all infrastructure in place to support mining and processing activities (see also discussions in Chapter 13, Chapter 14, and Chapter 15 of this Report). These Report chapters also discuss water sources, electricity, personnel, and supplies.

5.0 HISTORY

5.1 Project Ownership History

The current Project is managed through Coeur's wholly-owned subsidiary Coeur Mexicana S.A. de C.V. This Project was acquired through a combination of mergers and acquisitions starting in 2007.

From 2003 to 2007, Planet Gold S.A.de C.V. (Planet Gold), Bolnisi Gold NL's operating company, held a majority interest in Palmarejo Silver and Gold Co., which held concessions over the Palmarejo mine, Guadalupe and Independencia Oeste deposits, and surrounding mineral concessions,

Paramount Gold and Silver Corp. (Paramount) held the San Miguel project, which included the Independencia Este, La Union Sur, San Miguel, and San Francisco deposits and prospects and surrounding mineral concessions through its operating subsidiaries, Paramount Gold de Mexico S.A. de C.V. (Paramount Mexico) and Minera Gama S.A. de C.V. (Minera Gama). Coeur acquired Paramount in 2015. In November 2015, Minera Gama was merged into Paramount Mexico and in October 2016, the combined Paramount Mexico was merged and incorporated into Coeur Mexicana.

5.2 Exploration and Development History

The Palmarejo Operations are located in the Temoris and Guazapares mining districts. Silver and gold production from these districts, though poorly documented, has a long, intermittent history dating from at least Spanish colonial exploitation beginning in the 1620s. Over the 400-year mining history, there has been consolidation and renaming of many of the key areas. These are summarized in Table 5-1, which provides the historical names and the names that Coeur currently uses for the areas.

A summary of the Project exploration and development history is provided in Table 5-2.

Table 5-1: Project Nomenclature Over Time

Area	District	Deposit	Deposit
Palmarejo Operations	Palmarejo District	Palmarejo	La Blanca
			La Prieta
		Guadalupe	Guadalupe
			La Curra
			La Currita
			Zapata
			Las Animas
			La Patria
		Independencia	Independencia
			La Bavisa
			Hidalgo
		La Nación	La Nación
			Los Bancos
	Guazapares District	San Miguel	San Miguel
		Guazapares	La Union
			San Jose
			San Luis
			San Antonio
			Monte Cristo
			Sangre de Cristo
			San Francisco
			Canutillo

Table 5-2: Exploration and Development History Summary Table

Company	Year	Comment
Early artisanal mining, including by the Spanish	1620s to circa 1886	Intermittent small-scale production. Stamp mill constructed at Palmarejo mine in 1881.
Palmarejo Mining Co; later renamed Palmarejo and Mexican GoldFields, Ltd. (Palmarejo and Mexican GoldFields)	1886–1910	Purchased Palmarejo mine. Constructed a mill located two miles east of Chínipas, an aqueduct for power, and a railroad from the mine site to the mill. Mining activity halted by Mexican Revolution.
Unknown	Unknown	Historic reports of mining at Guadalupe suggest that approximately 3,700 t grading 458 g/t Ag were mined from the deposit.

Company	Year	Comment
American Smelting and Refining Company	1950s	Reportedly drilled 15 core holes in the San Luis and San Jose Mine areas. No drill data available.
Hilos de Plata	1957	Restarted the San Luis mine.
Alaska-Juneau Mining Company	1958–1968	Evaluated the San Luis mine. Mining operations accessed via a 270 m inclined shaft, with the gold-silver ore processed in a 150 tons-per-day flotation mill. No production records located to date.
Earth Resources Company and Industrias Peñoles	1975–1976	Joint venture over concessions in the Guazapares district. Sampled the most accessible workings; conducted grid-based geochemical sampling; completed 39 short air-track holes (944 m) with poor sample recovery; metallurgical testwork; resource estimation.
Minas Huruapa, S.A. de C.V.	1979–1992	Restarted operations at Palmarejo mine. Available records show production of 168,352 t grading 297 g/t Ag and 1.37 g/t Au.
Consejo de Recursos Minerales	1985–1988	District-scale sampling of underground workings in the Guazapares district.
Unknown	1985–1998	La Currita mine, located along the southeast extension of the Guadalupe area, produced at a rate of about 100 tons per day
Noranda Exploration Inc.	1990s	Optioned concessions in the Guazapares district.
Kalahari Resources	1991	Exploration drilling at La Currita; number and type of drill holes unknown.
War Eagle Mining Company Inc.	1991–2002	Completed 50 drillholes within the Guazapares 4 concession (Agrupamiento San Francisco) and on ground adjacent to that concession. No data available.
Kennecott Utah Copper Corp.	1994–2000	Acquired the Sangre de Cristo property in July 1994, and conducted surface and underground sampling, drilled 12 reverse circulation (RC) holes (2,268 m). Limited data available.
Silver Standard Resources Inc.	1998	Exploration drilling at La Currita; number and type of drill holes unknown.
Bolnisi	2003–2007	Reconnaissance surface mapping and underground mapping; collection of 286 underground channel samples from the 6, 7, and 8 levels of the historic La Prieta workings; collected 79 channel samples from underground workings in nine prospect areas; excavation of 180 trenches (totaling 3,960 m) over selected exploration targets; RC and core drill testing of selected exploration targets totaling 1,135 drill holes (246,830.9 m); collection of shortwave infrared (SWIR) spectral measurements; trace-element study to evaluate vertical and lateral zoning of major and trace elements in the mineralized shoots at Palmarejo and Guadalupe; Mineral Resource estimates; baseline and supporting environmental studies
Mexoro Minerals Ltd.	2006–2007	Geological mapping of San Francisco area; collected 398 rock-grab, rock-channel, and rock-chip samples of accessible workings and surface exposures of veins and silicification; 31 core holes (4,682 m) at San Francisco, primarily at Canutillo and surrounding areas

Company	Year	Comment
Garibaldi Resources Corp.	Unknown, pre-2009	Field reconnaissance, geologic mapping, and sampling of surface exposures and old workings in the Temoris area to define drill targets
Paramount	2006–2015	Surface geologic mapping and sampling, mapping, and sampling of accessible underground workings; 92 trenches (4,851 m); ground magnetic and induced polarization (IP) geophysical surveys; RC (59 drillholes, 13,332m) and core drilling (569 drillholes, 160,837m); Mineral Resource estimates; preliminary economic assessment (PEA) mostly relating to deposits within the Guazapares district. Coeur does not consider any of these estimates or the PEA to be current and does not report any resources for deposits within the Guazapares district.
Coeur Mexicana/Coeur	2007–date	Acquired property interests of Bolnisi and Paramount; conducted helicopter-borne magnetic surveys; helicopter-borne Z-axis Tipper electromagnetic (ZTEM) and magnetic survey; reviews of available geophysical data sets; geological mapping; core and RC drilling; metallurgical testwork; Mineral Resource and Mineral Reserve estimates; mining studies; permitting activities; baseline and supporting environmental studies. Mining at the Palmarejo open pit and underground mines began in 2008 and milling operations and metal recovery commenced in 2009, ramping up to full capacity in 2010. In late 2014, production commenced from the Guadalupe underground mine. In late 2016, production commenced from the Independencia underground mine. Open pit and underground mining operations from the Palmarejo deposit ceased in 2016. Underground mining from the La Nación deposit commenced in 2019.

6.0 GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1 Deposit Type

The deposits within the Palmarejo Operations area are considered to be examples of epithermal deposits displaying both intermediate- and low-sulfidation features.

Epithermal mineralization is associated with hydrothermal activity related to volcanism or the resulting geothermal activity of circulating meteoric waters at relatively shallow depths and low temperatures. Precious metal epithermal deposits may exhibit various styles of mineralization with the level of sulfidation state (high, intermediate, or low-sulfidation) referring only to sulfide mineralogy. At Palmarejo the mineralization commonly takes the form of quartz–calcite veins or quartz vein breccias. Mineralization is typically zoned with silver dominant mineralization in the upper parts of the system transitioning to more gold dominant and eventually base metal dominant at depth.

6.2 Regional Geology

The basement rocks to the Sierra Madre Occidental consist of Precambrian, Paleozoic, and Mesozoic rocks locally exposed in deeply-incised canyons.

The Sierra Madre Occidental hosts sequences of volcanic and plutonic rocks that are believed to reflect calc-alkaline, subduction-related, continental arc magmatism active from the Late Cretaceous-early Tertiary to the end of the Oligocene. These sequences are divided into the Lower Volcanic Complex or Lower Volcanic Series, which consists of over 2,000 m of predominantly andesitic volcanic rocks with a few interlayered ash flows and related hypabyssal intrusions, and the Upper Volcanic Series, with >1,000 m of rhyolitic ignimbrites and flows with subordinate andesite, dacite, and basalt that unconformably overlie the Lower Volcanic Complex and were formed by a series of caldera eruptions. Some altered acidic intrusive bodies, often associated with mineralization, may be related to early phases of this upper sequence.

The Sierra Madre Occidental hosts gold–silver districts along its entire length in at least four wide, northwest-trending structural belts. Vein and fault hosted epithermal deposits range in age from 42–18 Ma. Pre-30–32 Ma veins, dikes and extensional faults typically trend northeast and reflect the period when the volcanic arc was in contraction during the early Tertiary. Post-30 Ma veins, faults and dikes typically trend northwest and reflect the period when the volcanic arc migrated back toward the current Pacific coast.

6.3 Local Geology

The two main mining districts within the Project area are the Palmarejo and Guazapares districts.

6.3.1 Lithologies

Weakly propylitically-altered andesitic rocks with lesser amounts of rhyodacitic volcanic tuffs and related hypabyssal intrusions of the Lower Volcanic Complex cover the lower elevations of the Palmarejo Operations area. In the Guazapares mining district, the lowest exposed unit of the Lower Volcanic Complex consists of rhyolitic flows and related shallow intrusions, volcaniclastic units, including siltstones and fine-grained sandstones. This unit is overlain by andesitic flows and epiclastic rocks with related andesitic porphyry intrusions.

Cliff-forming rhyolitic ignimbrites of the Upper Volcanic Series are generally unmineralized and are well exposed in the eastern and southern parts of the Project area or along higher ridge tops. Miocene basaltic andesites and basalts locally overlie the Upper Volcanic Series immediately west of the San Miguel area.

Geology maps of the general Project area are provided in Figure 6-1, and Figure 6-2, a geological cross-section through the central Palmarejo area is included in Figure 6-3 and a stratigraphic column in Figure 6-4.

6.3.2 Structure

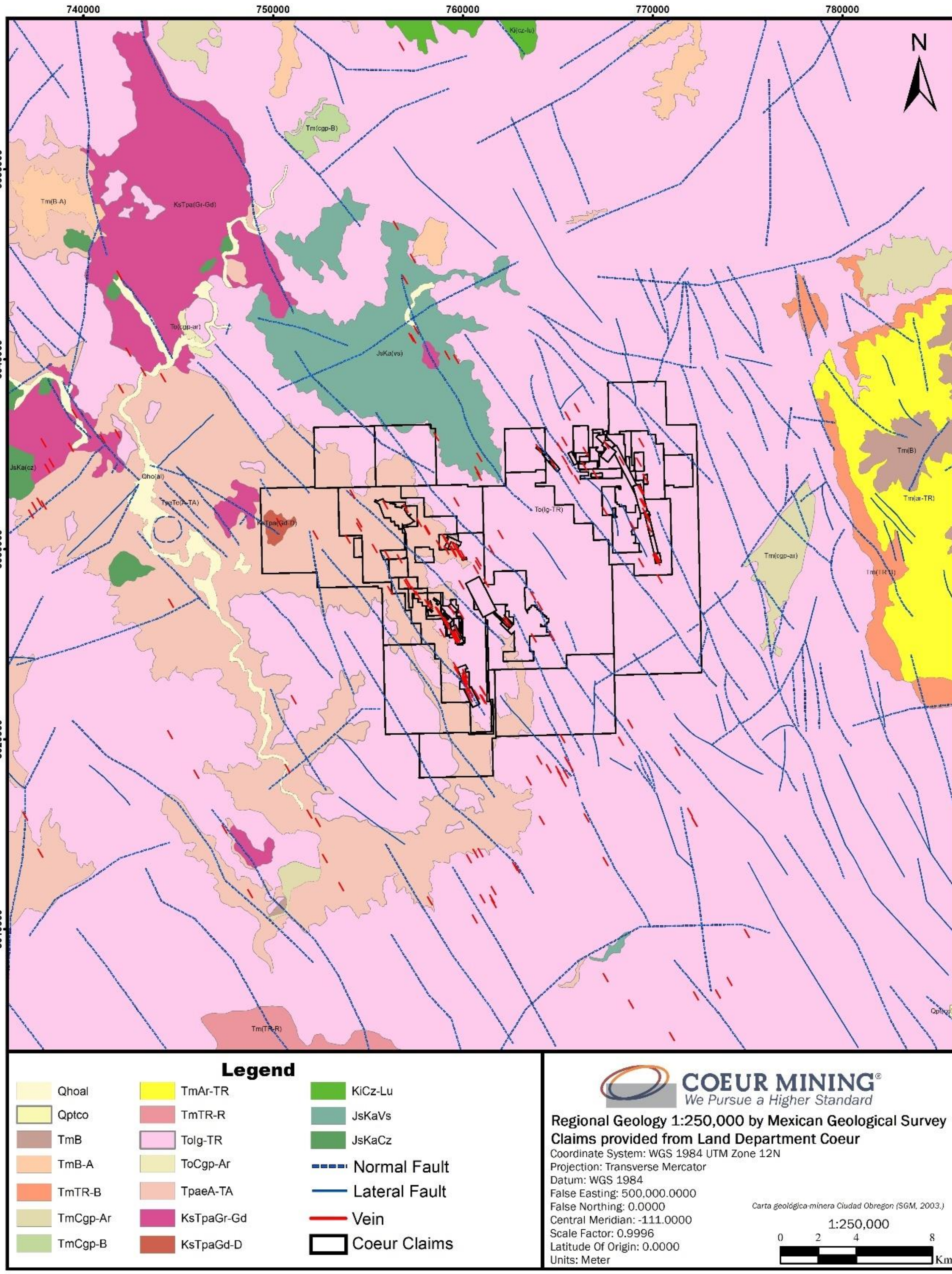
6.3.2.1 Palmarejo District

Within the Palmarejo district, the principal mineralized structures form part of a large sigmoidal network of faults both along strike and down dip with orebodies typically located at structural intersections. These are areas of high permeability-porosity that localize fluids and ore-shoots and are often associated with the development of sets of sheeted quartz extension veins that expand mineralized zones where they are silver–gold bearing.

Mineralized structures occur:

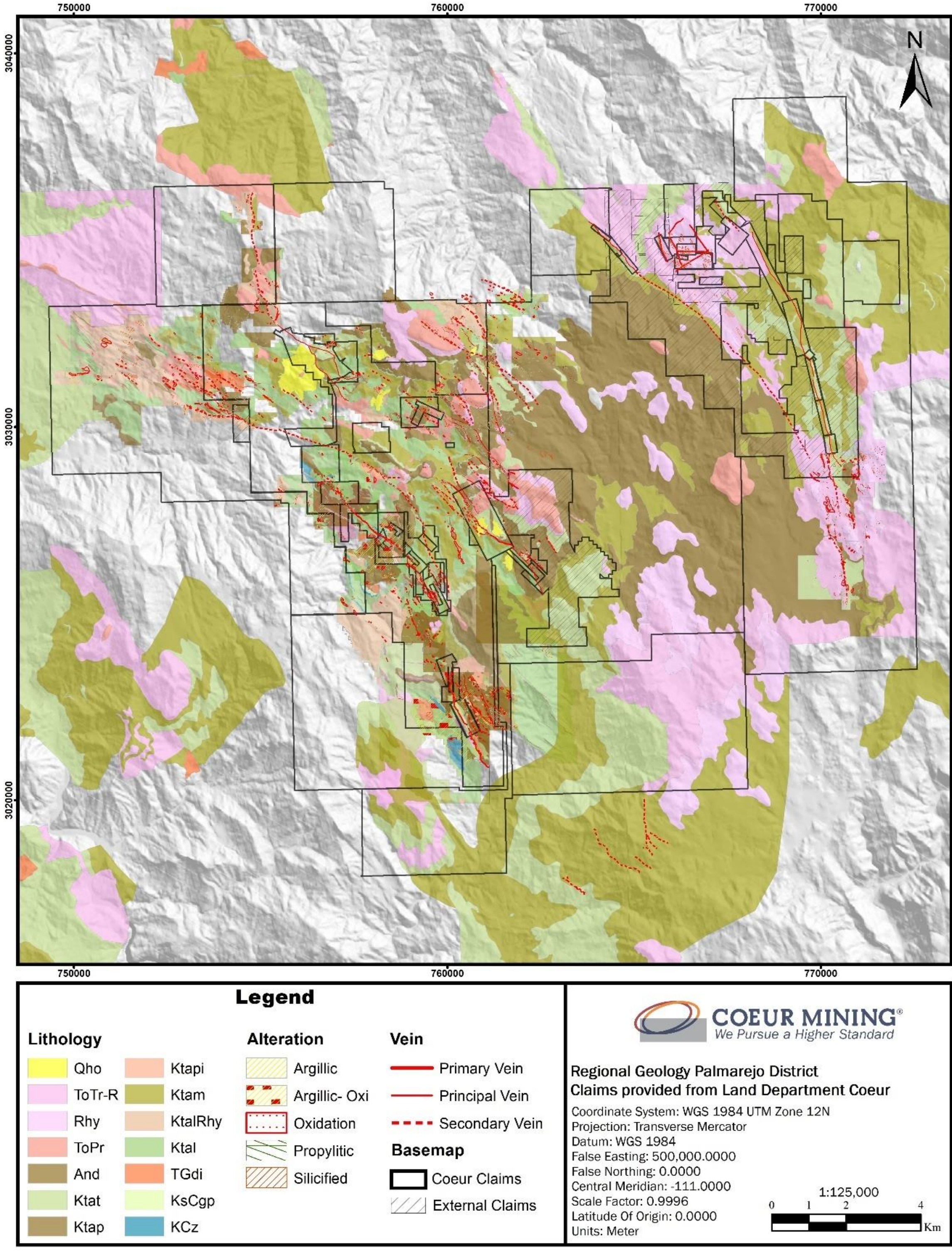
- In intersections between faults, especially at fault tips, where curved faults have linked to form rhombic intersections in plan view (e.g., steeply-plunging main ore-shoots at Palmarejo, Clavo 76);
- At curves and bends in faults, where what were originally separate fault segments may have joined, multiple veins often diverge from such bends forming wider ore zones (e.g., southeastern sectors of the Guadalupe mine);
- Where minor faults splay off the principal faults. These also occur at bends or steps in the main fault; the minor fault may accommodate some of the displacement around the irregularities (Guadalupe footwall and hanging wall veins);
- Where faults pass across or abut against more competent units (andesite and basalt at Palmarejo, rhyolite dome and hanging wall andesite at Guadalupe), resulting in a steepening of the fault surface that may allow greater dilation;
- At downward en-echelon steps and splays in the fault system (normal fault relays), which are associated with steepening and refraction across units of varying competency, a setting that hosts much of the ore at Guadalupe.

Figure 6-1: Regional Geology Map



Note: Figure prepared by Coeur, 2021.

Figure 6-2: Project Geology Map



Note: Figure prepared by Coeur, 2021.

Figure 6-3: Geologic Cross-Section

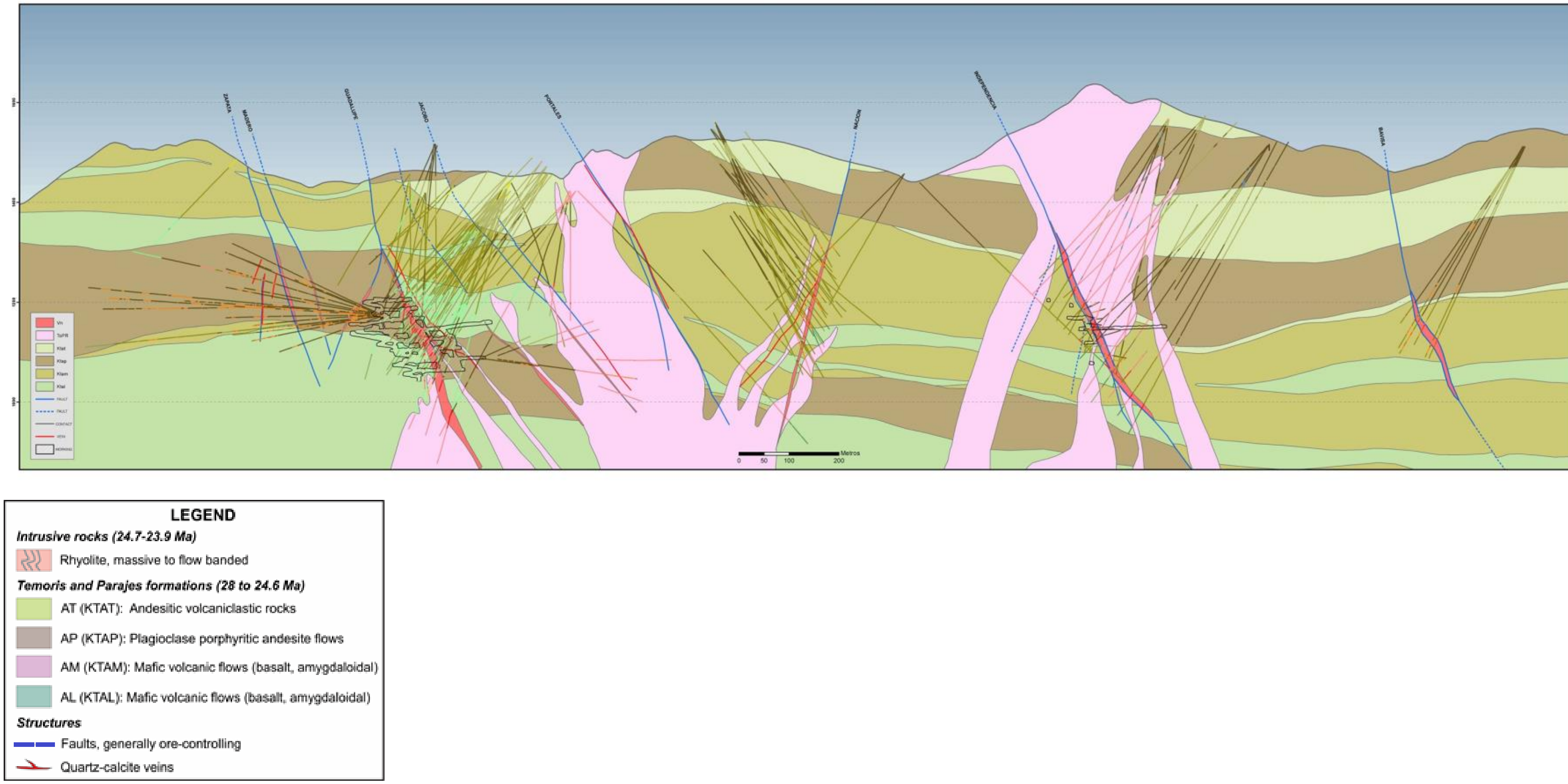
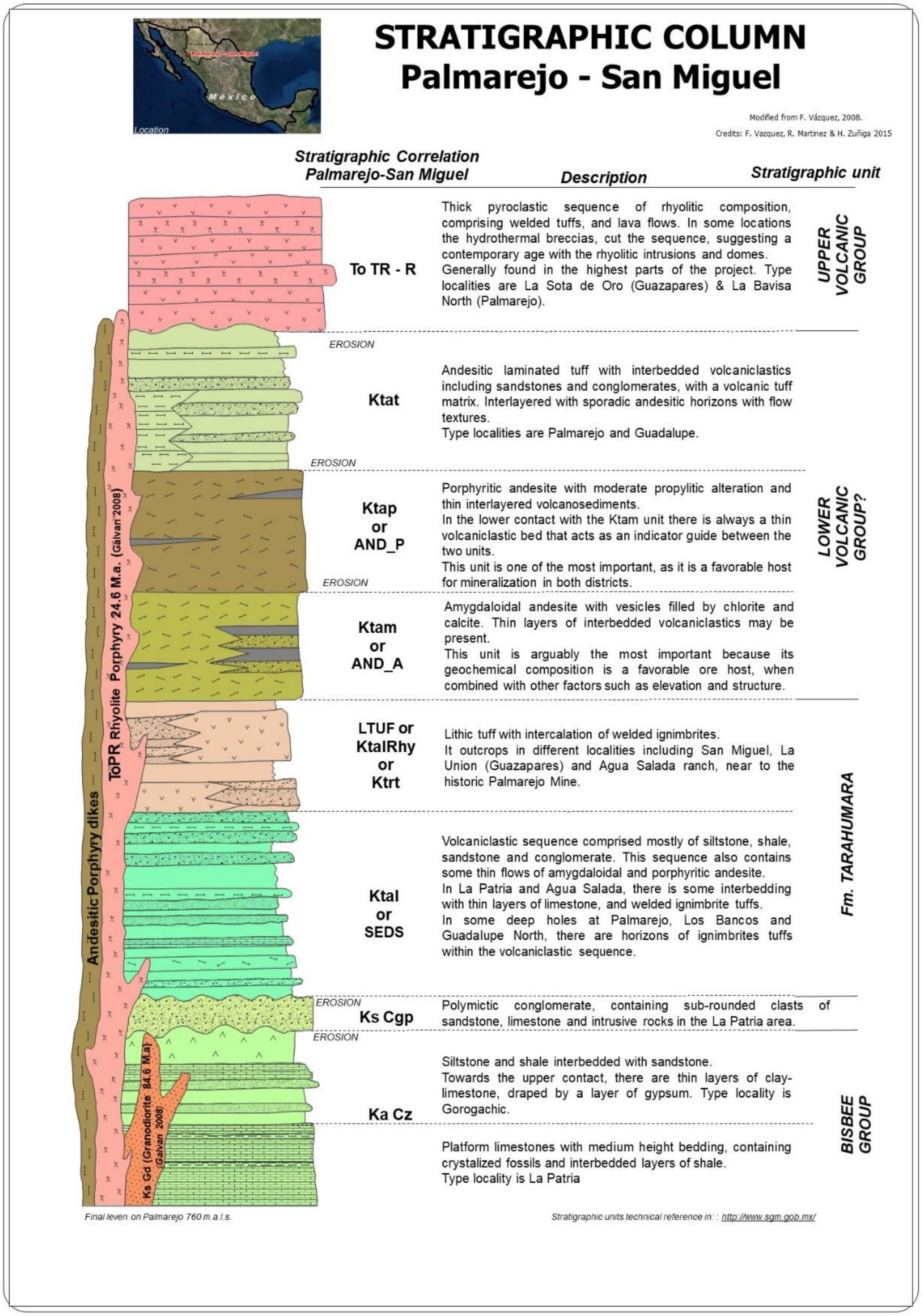


Figure 6-4: Stratigraphic Column



Note: Figure prepared by Coeur, 2021.

Extension is the dominant form of tectonics across the Palmarejo Operations area and is characterized by listric normal faults, typically parallel to the regional trend of the Sierra Madre Occidental, striking north–south to north–northwest, with west–northwest-trending flexures, as well as dilation of west–northwest-trending fractures, caused by strike-slip faulting. Mineralization in the Palmarejo Operations is spatially associated with these faults, as well as with structural offshoots. Although referred to as faults and often mapped as single lines, these structures are a series of sub-parallel curved faults that make up a sigmoidal network. Several rhyodacitic dikes follow these fault zones and appear to be associated with mineralization (pre and syn).

Structural intersections and dilatational portions of fault zones, such as flexures, link veins in fault jogs, or stockwork tension veins favor development of mineralized shoots. Throughout the Palmarejo Operations, left-stepping (west–northwest) bends in the generally northwest-trending structures are particularly favorable sites for mineral shoot development. Increased normal fault displacement also appears to be important, and structures that have little normal fault displacement tend not to be well mineralized.

6.3.2.2 Guazapares District

Classic extensional fault relays at en-echelon steps in the normal fault system occur along the Guazapares–La Union fault corridor in the Guazapares district. The Guazapares structure has a strike length of about 8 km and is broken into segments by small-displacement, northeast-trending faults. A subparallel structure, the Batosegachi fault, lies about 3 km to the west of the Guazapares structure and hosts the San Miguel vein system. Right-handed en-echelon steps in the principal fault system are associated with the development of sheeted zones of northwest-trending extensional veining.

Faults within the district generally trend north–northwest, parallel to the regional trend of the Sierra Madre Occidental. Mineralization is spatially associated with these faults, as well as with structural offshoots. Similar to Palmarejo, these structures are actually a series of sub-parallel curved faults that form part of the sigmoidal network. As is seen at Palmarejo, rhyodacitic dikes follow these fault zones and appear to be associated with mineralization.

6.3.3 Alteration

Alteration zonation is apparent vertically along faults and surrounding vein systems in patterns that may aid in vectoring towards favorable structural settings and/or elevations. In surface exposures well above mineralization (70 to >150 m), faults are generally clay-altered, with white to red–brown oxide altered clay and gouge and are often recessively weathering. Locally, silicification affects gouge strands and the immediate wall rock with quartz veinlets typically present above more productive systems.

At greater depth and closer to productive veins (immediately surrounding veins and within tens of meters above veins along faults), alteration around quartz-dominant veins generally comprises pale grey to greenish, hard bleaching of wall rocks that can extend several meters from quartz veins.

Outcropping areas of adularia alteration are resistant to erosion and form ridges (e.g., Guadalupe South, Guazapares area veins). In areas of abundant late calcite and Fe-oxide veins, clay alteration overprints the earlier adularia-dominant alteration associated with the quartz vein silver–gold stages. This results in friable, clay-rich altered areas often internal to outer adularia altered areas around veins; these late clay assemblages are interpreted to be kaolinite–smectite-rich.

6.3.4 Mineralization

6.3.4.1 Palmarejo District

Mineralization in the district is largely blind with orebody tops 50–300 m below the current surface elevations. The major orebodies occur mainly at elevations of between 950–1300 m above sea level in the Guadalupe–Independencia area.

Mineralization within the Palmarejo district consists of epithermal, intermediate to low sulfidation, silver–gold vein and vein-breccia deposits that exhibit vertical and lateral zoning. Mineralization occurs along the principal northwest-trending faults and is largely confined to fault-hosted veins. The largest deposits occur on the faults that have the greatest displacement and strike length. Veins are polyphase and comprise generations of early quartz breccia with sphalerite-pyrite-galena dominant sulfide and silver–gold phases as disseminations and bands. Later vein generations include iron oxide and calcite fillings that overprint quartz breccia vein phases.

Veins, in most cases, are late in the fault history and are best developed in ore-shoots at structural intersections where dilation is greatest.

Silver–gold deposits in the Palmarejo district are characterized by pervasive silicification, quartz-fill expansion breccias, and sheeted veins. Multiple stages of mineralization produced several phases of silica, ranging from chalcedony to comb quartz, and typically two periods of silver–gold mineralization. This strongly-zoned mineralization is characterized by pyrite, sphalerite, galena, and argentite (acanthite) deposited within the quartz vein/breccias at lower elevations and higher-grade precious-metals mineralization with fine grained, black, silver-rich sulfide bands or breccia-infill in the upper portions of the structures. There is a general sense across the Palmarejo Operations that higher gold values occur deeper in the original mineral system, while richer silver values were deposited in the upper levels of these systems.

6.3.4.2 Guazapares District

The major structures that host the mineralized veins, stockworks, and breccias generally occur in propylitically altered andesite and to a lesser extent, in rhyodacitic volcanic tuffs and related hypabyssal intrusions of the Lower Volcanic Series. Contacts between andesitic and felsic sequences or within the more competent and brittle felsic sequences that allowed for development of through-going fractures are favorable locations. Dilational portions of the fault zones, such as flexures, link veins in fault jogs, and stockwork tension veins appear, at least locally, to preferentially accommodate development of higher-grade mineralized shoots.

Silver–gold mineralization, with variable but typically low amounts of lead and zinc, occurs within en echelon structural zones characterized by multi-phase quartz veining, quartz + carbonate + pyrite veinlet stockworks, silicified hydrothermal breccias, and quartz-filled expansion breccias.

Three distinct styles of mineralization are identified: high-grade vein systems, sheeted vein/stockwork/fracture complexes, and volcanic dome complexes:

- High-grade quartz + carbonate vein systems: trend north-northwest to northwest. These vein systems are typically silver-rich, with an Ag:Au ratio of 100:1. The principal sulfide minerals within the veins include sphalerite and argentite, with pyrite being less abundant. Gold-rich veins have pyrite and traces of chalcopyrite as the principal sulfide minerals, and often represent the deeper portions of the silver-rich vein systems:

- Sheeted vein/stockwork/fracture complexes: occur as wide zones with the potential for bulk mining. These broad zones include various thin quartz veins, quartz-veinlet stockworks, gouge/fault breccias, and fractures and also trend northwesterly. Silver and low levels of associated base metals tend to occur in the quartz veins at shallow depths, with potential for higher-grade gold mineralization at depth;
- Volcanic dome complexes are apparently controlled by the intersection of north-northwest- and east–northeast-trending structures. Intrusive dacitic to andesitic bodies are common and may be related to the volcanic dome complexes. Mineralization occurs in broad zones along the margin of the domes, typically as disseminated, low-grade gold, with alteration, zoning, and mineralization suggestive of a separate and later mineralizing event.

6.4 Property Geology

Geology descriptions are provided for the deposits that have current mineral resource estimates in this sub-section.

6.4.1 Guadalupe

The Guadalupe deposits include the principal Guadalupe deposit and a number of associated zones, the economically most important being Zapata and La Patria.

6.4.1.1 Deposit Dimensions

The principal Guadalupe deposit comprises 18 domains with a known strike extent of 4.0 km and a vertical extent of 500 m. Individual domains are typically between 1-6 m wide, but mineralization locally reaches 25 m wide in areas of structural intersections. The Zapata zone is located in the immediate footwall of the Guadalupe deposit and comprises 14 domains with a known strike length of 1.4 km that is open to the northwest. The La Patria zone is approximately 2 km southwest of Guadalupe and is a sub-parallel structure comprising 12 domains with a known strike length of 2 km. The individual domains at the Zapata and La Patria zones are typically narrower than those of the Guadalupe deposit.

6.4.1.2 Lithologies

Mineralization is preferentially hosted in a sequence of amygdaloidal andesites (Ktam) close to the base of the Lower Volcanic Group, particularly when in fault contact with younger volcaniclastics or rhyolite tuffs. Mineralization appears to be strongest when spatially associated with rhyolite dike/dome complexes.

6.4.1.3 Structure

Mineralized veins and breccias are located along a major northwest-trending structural corridor that can be traced for over 4 km along strike. The Guadalupe and La Patria deposits have an average dip of approximately -60° and -45° to the northeast, whereas Zapata typically dips -70°. Mapping by Stewart (2005) indicates both normal and strike-slip offsets along the fault, with vertical displacement estimated to be at least a few hundred meters (Davies, 2007). Secondary west–northwest- and north–northeast-trending structures were identified by surface mapping in the Guadalupe area (Laurent, 2004; Davies, 2007).

Both Guadalupe and La Patria crop out where a number of small, historic surface workings are located. Along the remaining extents, expressions are typically characterized by essentially barren, moderately to pervasively clay-altered wall rocks and laterally discontinuous quartz veins, with thicknesses ranging from millimeters to a few meters. Beneath the clay-rich upper zone, the breccia veins are spatially associated with quartz–carbonate–pyrite–sericite–clay–epidote–chlorite alteration in the wall rock.

6.4.1.4 Alteration

The Guadalupe vein system is surrounded by pale grey to greenish alteration that extends a few meters from veins but can widen to tens of meters where veins are more complex and ore controlling structures split into multiple strands. Hard adularia–quartz alteration is common around quartz-rich phases of the vein system. Greenish clays become more abundant towards surface, and in areas where late calcite veins are abundant, the latter likely overprints earlier adularia–quartz alteration phases with lower temperature clay assemblages.

6.4.1.5 Mineralization

In underground exposures mineralization occurs in polyphase veins, which display a typical paragenesis from multiple, early silver–gold-bearing quartz-rich phases of dominantly quartz breccia veins to later, often voluminous, calcite-dominant and iron oxide-bearing veins and fault fill phases that overprint and include early quartz phases as breccia fragments.

The early silver–gold-rich quartz vein phases comprise banded crustiform quartz vein fill, often with thin bands of dark gray to black sphalerite–pyrite–galena with silver–copper phases in higher-grade areas. These are variably brecciated by younger quartz phases that contain similar metal assemblages. Sulfides and silver–gold phases are disseminated in the breccia matrix with quartz, often as blebs, disseminations, and patches. Many of the higher-grade breccias are fine-grained; forming diffuse, now partially recrystallized 0.5–3 cm fragments of earlier quartz set in a matrix of chalcedonic to finely crystalline quartz. Layered breccias are locally developed, suggesting gravitational filling generated by fault displacement and hydrothermal brecciation.

The quartz-rich phases are locally overprinted by calcite. The calcite is multi-stage and forms crystalline massive to banded, crustiform vein fillings that incorporate breccia fragments of earlier, mineralized, quartz breccia vein material. The dark gray-brown color to the calcite may indicate a manganiferous or iron-bearing composition. Quartz fragments and lenses in the calcite filling are often oxidized. Silver–gold grades are typically diluted by areas of abundant calcite, with grades occurring primarily in quartz breccia fragments. Dissolution of calcite leads to formation of natural voids, particularly along the vein boundaries.

Higher-grade quartz veins locally splay off the main fault-vein system into the hanging wall in the areas of underground development, where they are less affected by later calcite–iron oxide phases and can be individually mined.

Brecciation and overprinting of vein phases by fault surfaces on the footwall of the vein system occurs in some areas.

Patterns of vein distribution that may aid in focusing ore-shoots, or higher-grade areas within larger ore-shoots, include:

- Irregularities in the strike of the vein sigmoids: bends to more northerly–north–northwesterly-trending in southern parts of the workings and east–west trends in northern parts of the workings may represent the linking segments of initially separate faults. As these splays diverge from the main vein system, the vein system locally widens. Local intersections of east–west and north–northwest-oriented segments are associated with widening of the vein system;

- Steepening and downward stepping/splitting of the fault system: this is most apparent where the hanging wall diverges away from the main fault, or where the fault zone steepens below rhyolite or andesite units.

Collectively, these irregularities and linking zones of fault sets aid in focusing wider segments of the Guadalupe vein system. Northwest trends (290 to 320º azimuth) are generally associated with the widest, higher-grade vein segments and may reflect the optimal orientation for dilation.

A geology map for Guadalupe is provided in Figure 6-5, and cross-sections through the Guadalupe and Zapata deposits are included as Figure 6-6 and Figure 6-7 respectively. A geology map for the La Patria area is shown in Figure 6-8 and a cross-section through the deposit in Figure 6-9.

6.4.2 Independencia

The Independencia deposits include the Independencia deposit and a number of associated zones, the economically most important being Hidalgo and La Bavisa.

6.4.2.1 Deposit Dimensions

The principal Independencia deposit consists of 12 domains with a known strike extent of 1.5 km and a vertical extent 400 m. Individual domains are typically between 1–4 m wide, but mineralization locally reaches 15 m wide in areas of structural intersections.

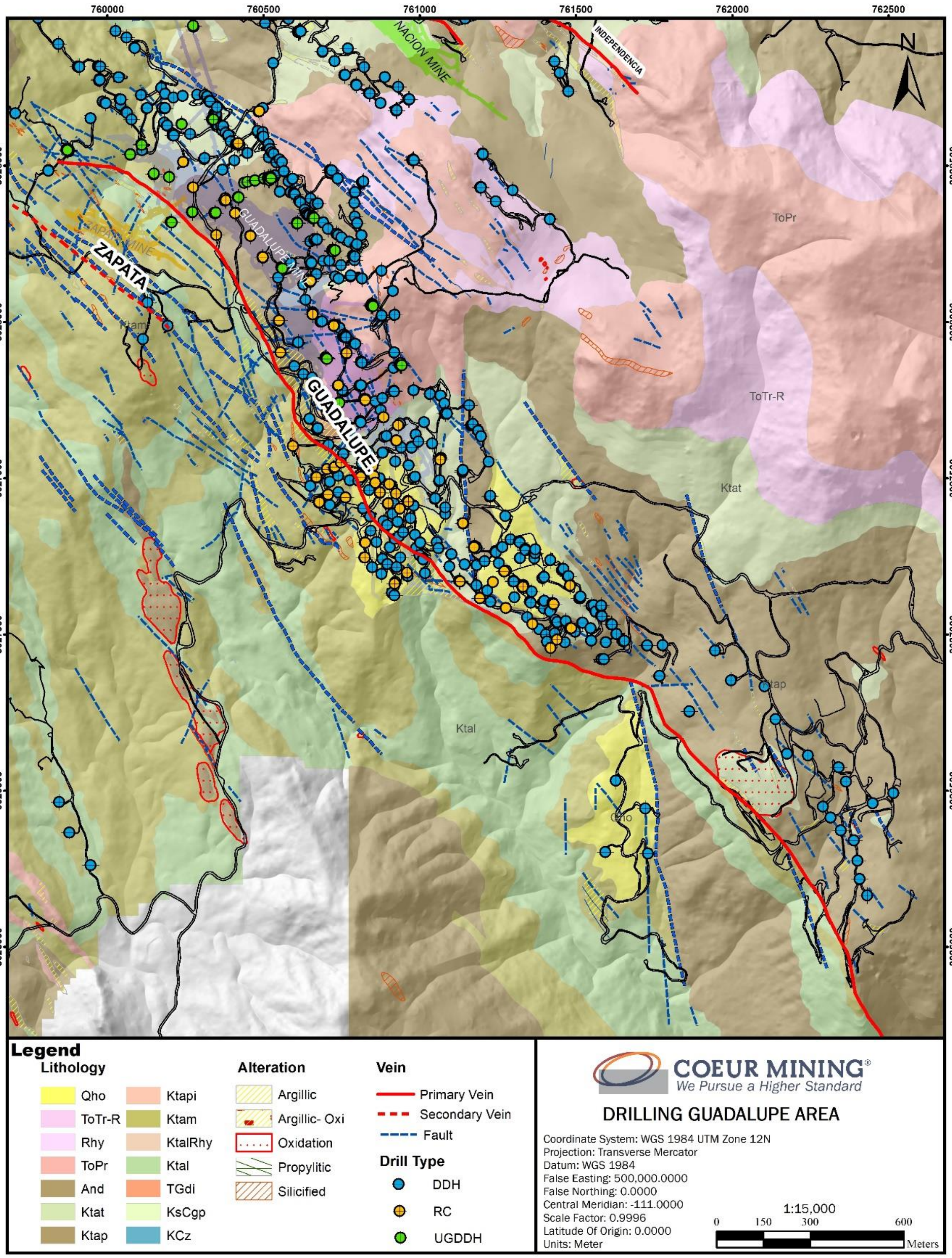
Individual domains at the Hidalgo and La Bavisa zones are typically narrower than at Independencia. The Hidalgo zone is located immediately northwest of the Independencia deposit and comprises seven domains with a known strike length of 1.5 km, remaining open to the northwest. The La Bavisa zone is approximately 1 km northeast of Independencia and is a sub-parallel structure comprising five domains with a known strike length of 1 km.

The Independencia deposit extends off the Project area to the southeast and appears to die out to the northwest as major displacement seems to have been transferred to the Hidalgo fault. Hidalgo remains open to the northwest and most recent drilling discovered a high-grade shoot at the presently known northwestern extent.

6.4.2.2 Lithologies

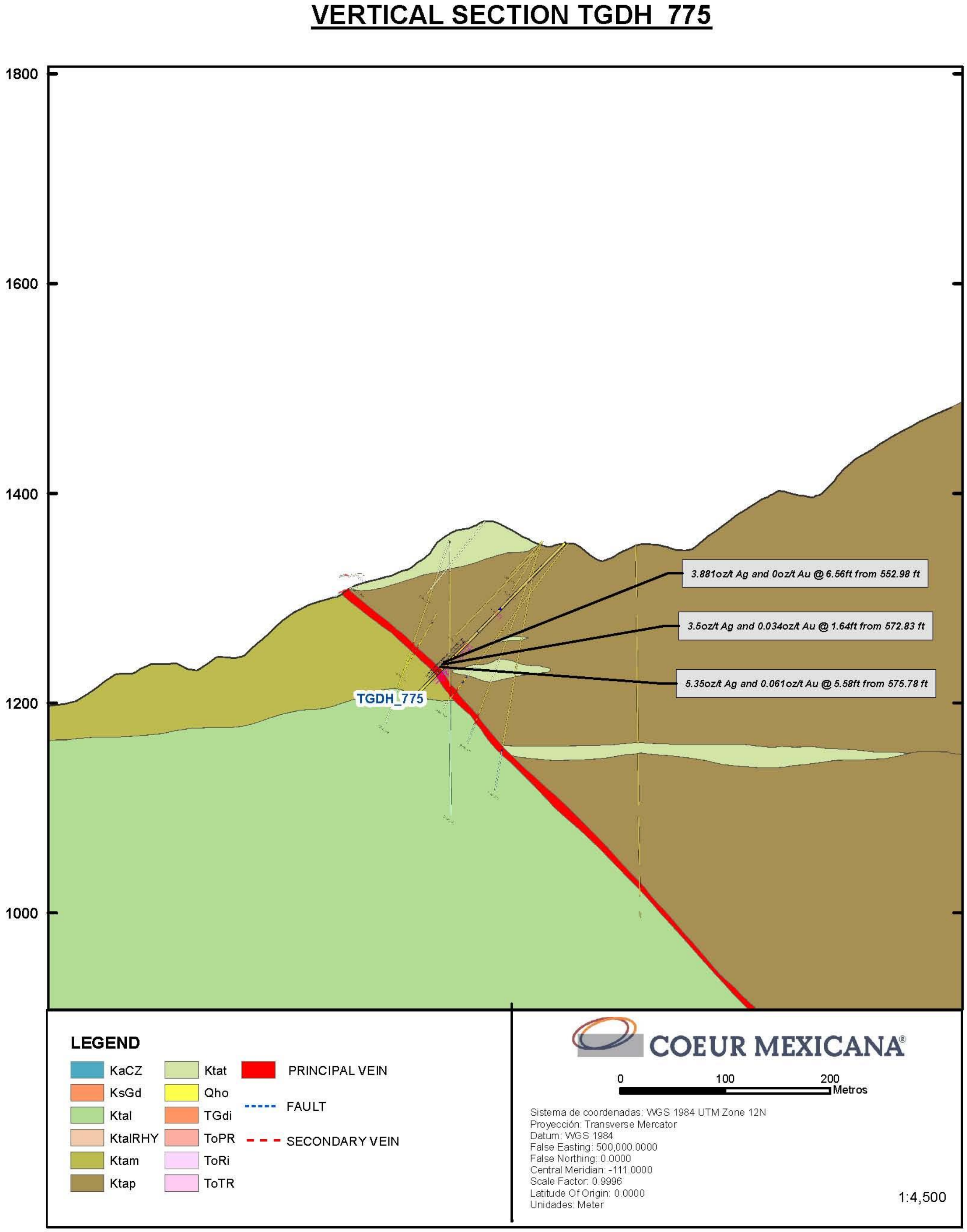
Similar to the Guadalupe deposits, mineralization is preferentially hosted in a sequence of amygdaloidal andesites (Ktam) close to the base of the Lower Volcanic Group, particularly when in faulted contact with younger volcaniclastics or rhyolite tuffs. Mineralization appears to be strongest when spatially associated with rhyolite dike/dome complexes. The role of syn-mineral rhyolitic dikes appears to be more important at Independencia.

Figure 6-5: Geology Map, Guadalupe



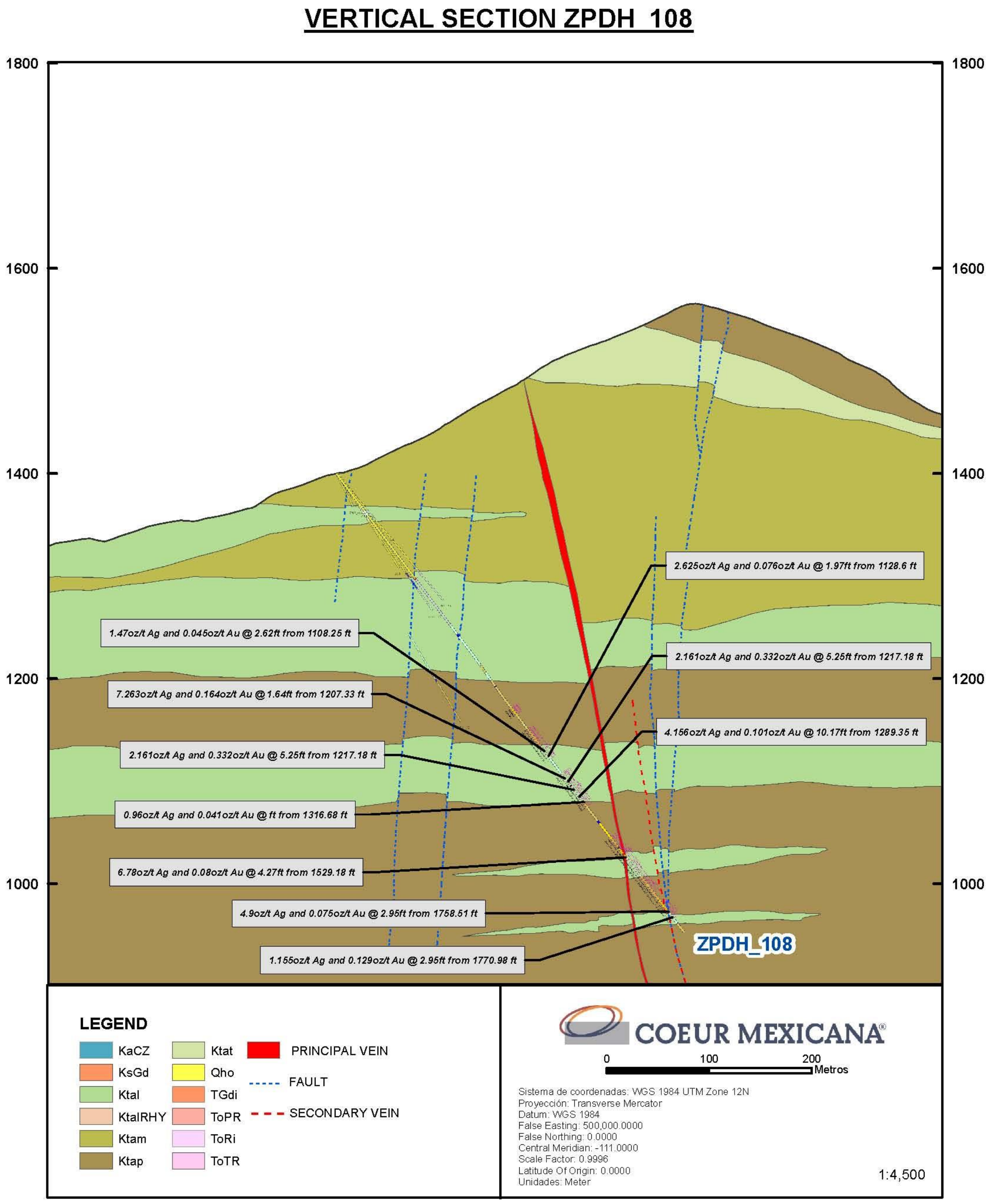
Note: Figure prepared by Coeur, 2021.

Figure 6-6: Geologic Cross-Section, Guadalupe



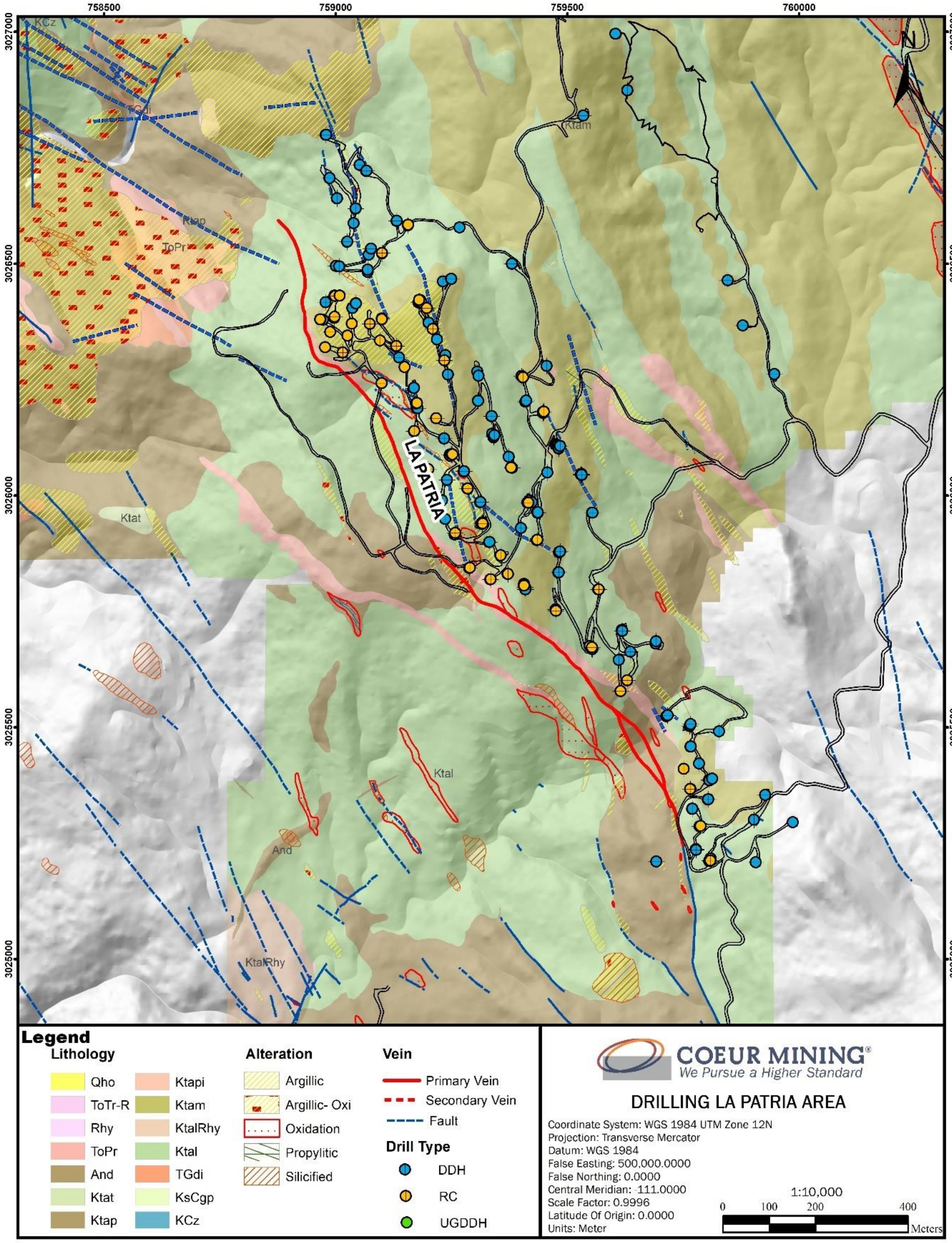
Note: Figure prepared by Coeur, 2021.

Figure 6-7: Geologic Cross-Section, Zapata



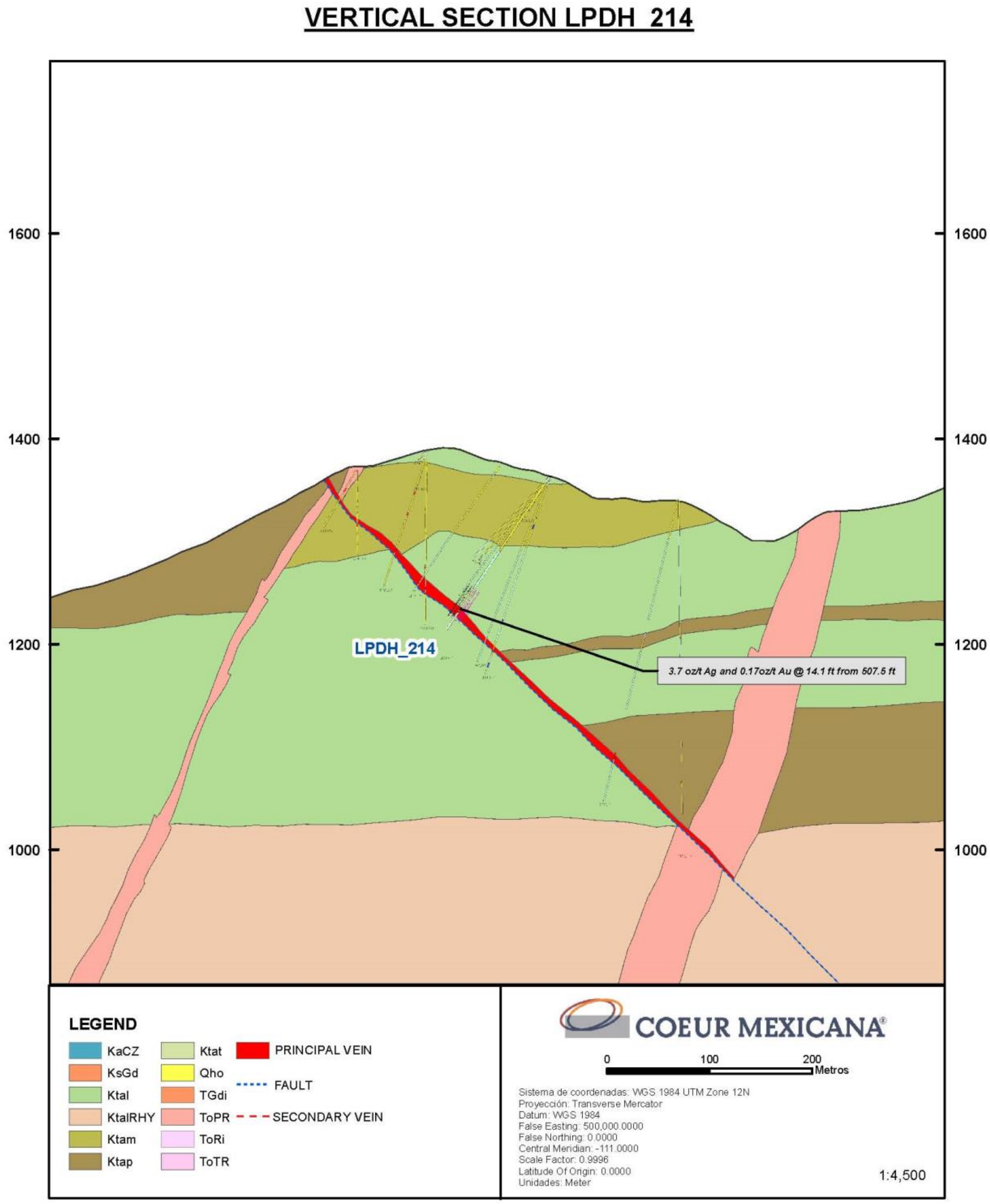
Note: Figure prepared by Coeur, 2021.

Figure 6-8: Geology Map, La Patria Zone



Note: Figure prepared by Coeur, 2021.

Figure 6-9: Geologic Cross-Section, La Patria



Note: Figure prepared by Coeur, 2021.

6.4.2.3 Structure

Faults are common within the Independencia fault-vein system, although many areas of late, iron-oxide breccia that have been classified as faults in mine mapping likely instead represent dissolution and hydrothermal breccias. Quartz veins locally have silicified cataclastic breccias on their margins that represent syn-vein fault surfaces overprinted by later breccia phases. Iron-oxide matrix breccias often contain fault strands that are late in the paragenetic history and may be present on vein and breccia margins with mine maps currently implying that most of the iron-oxide matrix breccias are fault related.

Fault surfaces are in general within, and parallel to, main vein strands or occur in wall rocks just beside the veins with northwest trends and steep dips. Some minor fault surfaces were observed to be oblique to the main vein, but these occur within the vein zone and may join, and not extend beyond the principal fault surfaces.

6.4.2.4 Alteration

Mineralized zones are typically surrounded by several meters to more than 15 m of alteration that varies in style and overall geotechnical competency.

In the northwestern sector of the vein system, a greenish alteration likely represents a combination of crystalline illite and adularia with disseminated pyrite. Adularia ± quartz is present and most abundant where the alteration is hardest (most competent) close to veins.

Younger clay phases have also developed along fractures, surrounding and affecting wall rock fragments within iron-oxide matrix breccias. To the southeast more pervasive alteration surrounds the mineralized zone with a higher kaolinite–smectite content.

6.4.2.5 Mineralization

Mineralization in the Independencia vein system is thickest where the zone trends northwest, thinning rapidly and dropping silver–gold grades to the north of the main ore-shoot, where the sigmoidal geometries result in pinching down and a change in strike to a more northerly trend. A second ore-shoot further north suggests the vein sigmoids result in a zone of opening and a change back to more favorable northwesterly trends. The lack of significant obliquely intersecting post-mineral faults, and the wholesale change in orientation of the Independencia structure suggest that these changes in vein thickness and orientation are primary, and not the result of post-mineral displacement on late faults that may offset or obliquely intersect the vein system.

Significant variations occur in vein style across the width of the vein. The highest-grade areas are associated with grey quartz breccia and veins that form the earliest vein phases. The veins consist of chalcedonic to crystalline quartz, and locally calcite ± probable adularia. Sulfide–silver phases form breccia fragments implying early deposition and brecciation, but the breccia matrix also contains disseminated silver-bearing minerals and sulfides indicating multiple phases of sulfide deposition. Quartz is locally partially recrystallized so that boundaries between quartz matrix and quartz in the diffuse sulfide-rich fragments are generally gradational, and the fragments themselves are sometimes poorly defined. Shallowly dipping, gravitational layering of breccias is locally apparent within otherwise steeply dipping veins, indicating significant, rapid brecciation events and fragment settling.

Quartz vein phases are overprinted by widespread, often voluminous younger calcite and iron-oxide matrix breccia phases. These later vein phases locally form much of the width of the Independencia vein system at its widest points (>10 m thick). Calcite phases may be intergrown with quartz phases forming alternating bands, and iron–manganese oxides occur as bands or fragments within the calcite.

Iron–manganese oxide matrix breccias are abundant in the Independencia orebody and form much of the southeast portions of the vein system. The combination of high clay and manganese content is associated with poor ground conditions and may also contribute to the lower process recoveries for ore from this area.

These calcite and iron oxide events (albeit with less manganese) are also present along much of the currently known extents of the Hidalgo zone but tend to be absent in the La Bavisa zone. Significantly more adularia locally occurs in the La Bavisa zone than occurs at any other deposit and is at least spatially related to significantly lower precious metal content.

The Independencia and Hidalgo structures are surrounded by a fringe of extensional quartz and calcite veinlets that trend northwest, generally parallel in strike, with, steep or opposing dips to the main fault–vein system. These seldom carry sufficient silver–gold grades and/or widths for mining in the current areas of development but have the potential to form broadened mineralized zones if quartz-rich varieties occur in high density with silver–gold phases.

A geology map is provided in Figure 6-10 and cross-sections through the Independencia and La Bavisa deposits are shown in Figure 6-11 and Figure 6-12 respectively.

6.4.3 La Nación

The La Nación deposits include the La Nación deposit and the Los Bancos zone.

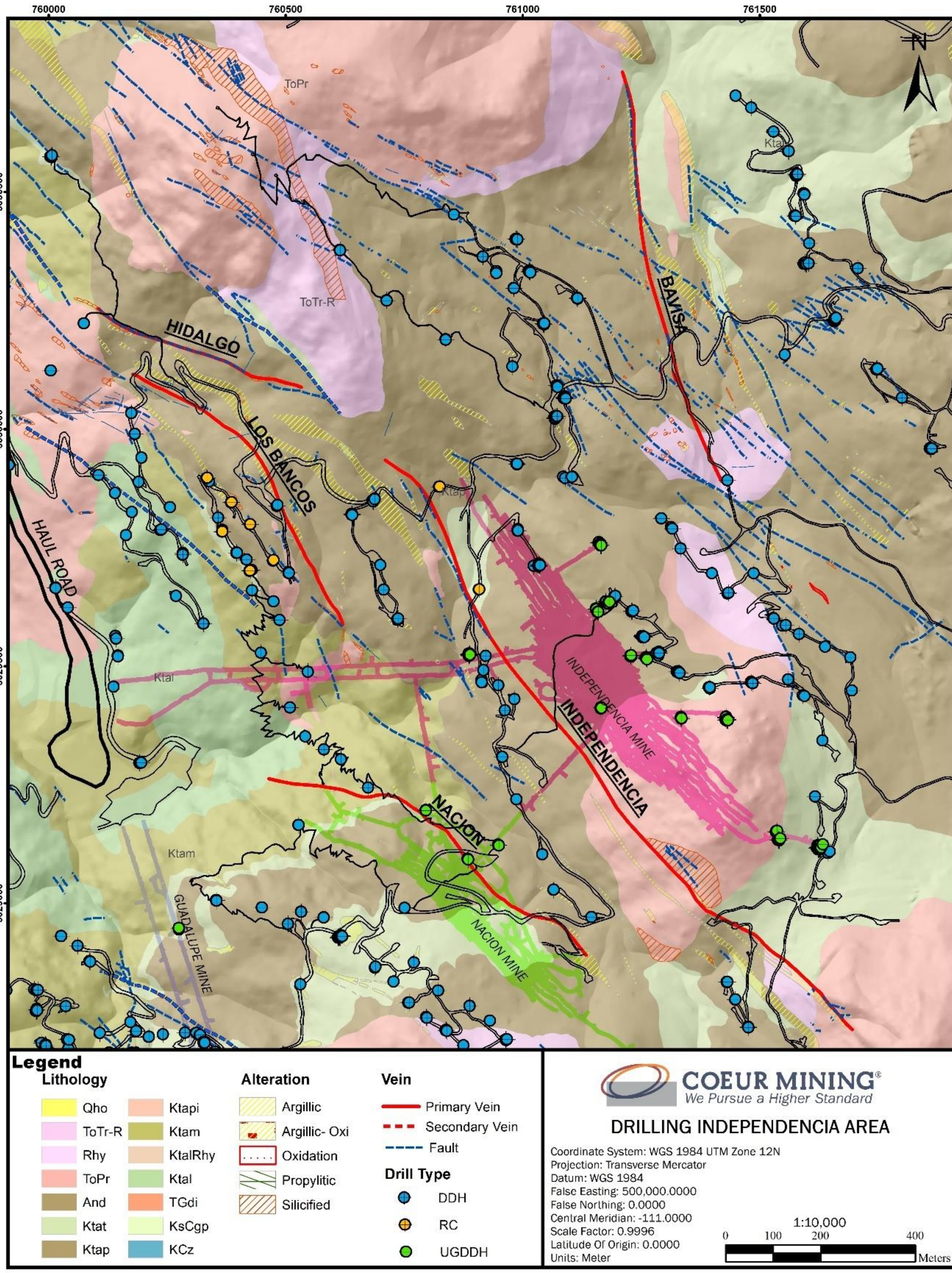
6.4.3.1 Deposit Dimensions

The La Nación deposit consists of six domains with a known strike extent of 1.5 km and a vertical extent of 250 m. Individual domains are typically between 1-4 m wide, but mineralization is locally 12 m wide in areas of structural intersections.

The Los Bancos zone is located to the approximately 400 m northwest of the La Nación deposit and comprises five domains with a known strike length of 400 m. The individual domains at the Los Bancos zones are much narrower than at La Nación.

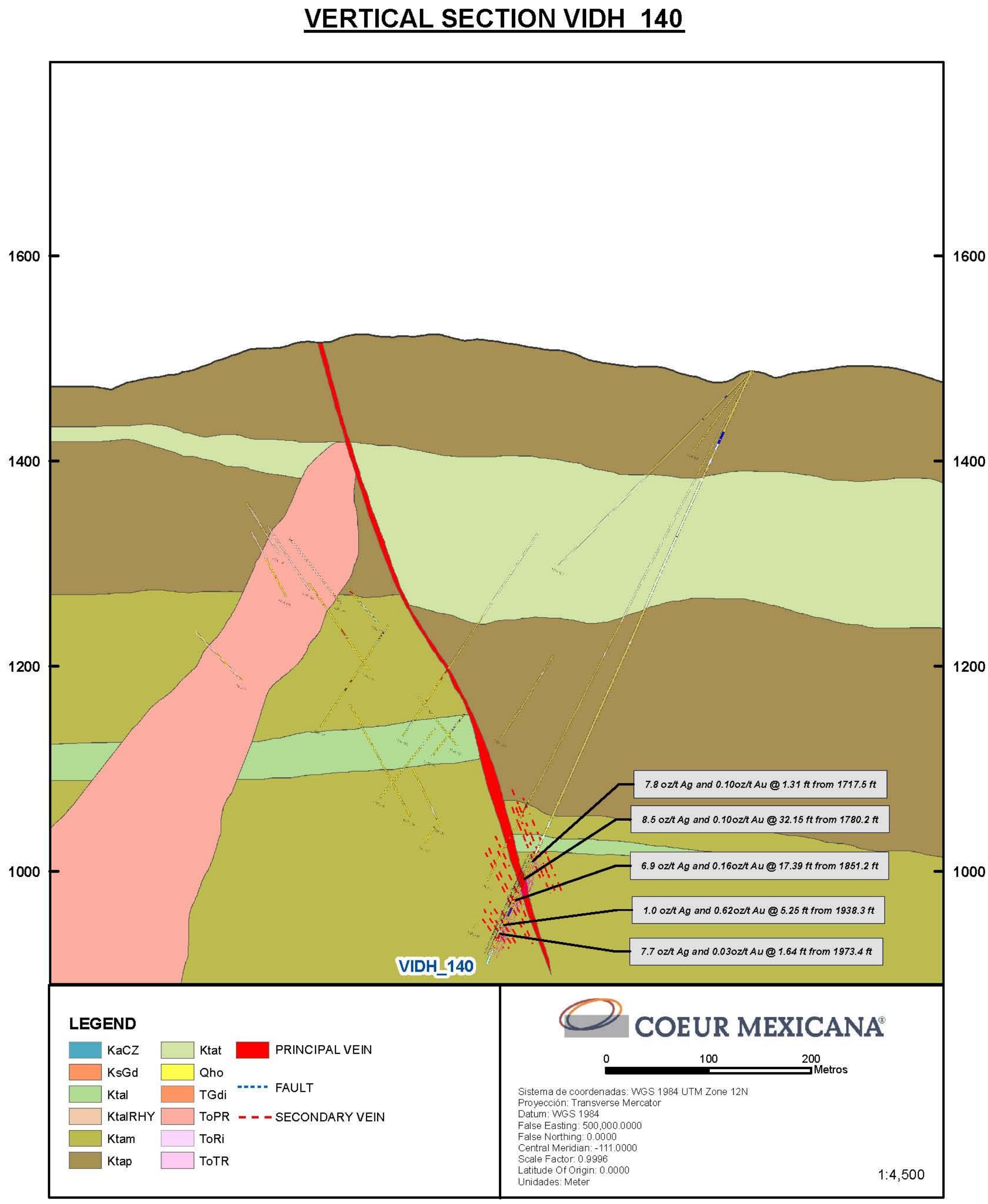
Both La Nación and Los Bancos are considered to be well constrained by drilling in both dip and strike extents and only limited infill drill programs are planned.

Figure 6-10: Geology Map, Independencia



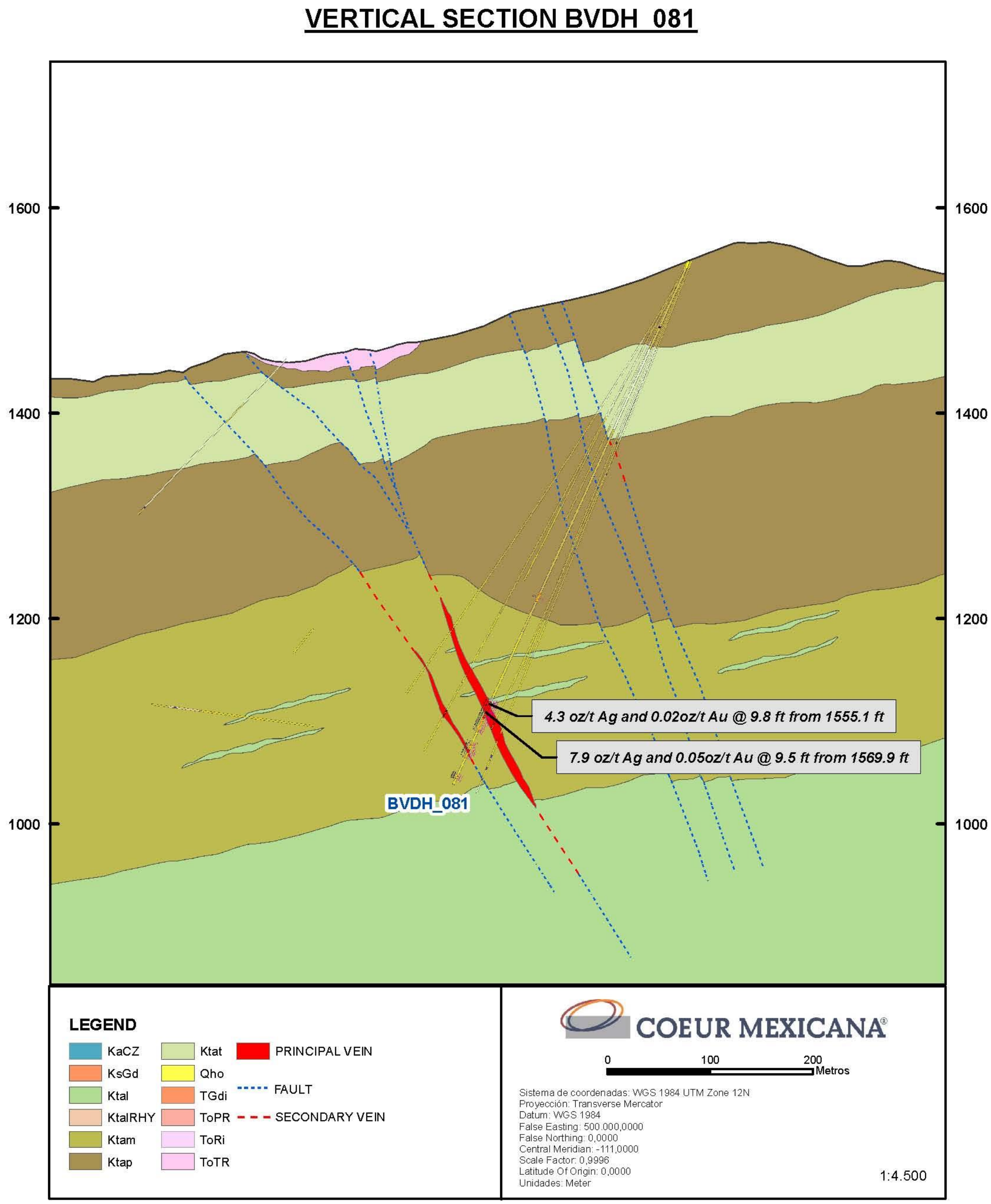
Note: Figure prepared by Coeur, 2021.

Figure 6-11: Geologic Cross-Section, Independencia



Note: Figure prepared by Coeur, 2021.

Figure 6-12: Geologic Cross-Section, La Bavisa



Note: Figure prepared by Coeur, 2021.

6.4.3.2 Lithologies

The geology surrounding the La Nación deposits is the same as that at the nearby, larger Independencia and Guadalupe deposits, and similar lithological controls on mineralization define the location of higher-grade, wider mineralization.

6.4.3.3 Structure

La Nación and Los Bancos form a northwest-trending and southwest-dipping fault–vein corridor that is subsidiary to, and between Independencia and Guadalupe. It is possible that at significant depth this vein corridor splays off the hanging wall of the Guadalupe fault system. Lithological offsets across the La Nación and Los Bancos fault–vein systems indicate normal displacement locally exceeding 100 m, which diminishes northward into the Los Bancos area.

Although La Nación and Los Bancos are separate veins, overall field relationships support a connection between them within the same fault corridor. These include the continuity of fault displacement between the two zones, and the continuity of intersections and exposures of north–northwest-trending faulting and adularia–silica alteration that forms ridges between La Nación and Los Bancos. The latter forms a prominent, resistant zone that is partially intruded by rhyolite dikes between the two areas.

As with other vein systems in the area, La Nación and Los Bancos may represent initially separate but now connected fault segments that had non-planar and locally curved geometry. Ore shoots, as in other local vein systems, occur in northwest-trending segments, consistent with formation during northeast–southwest regional extension that is also indicated on shear sense indicators and implies syn-vein extension in the vein system.

6.4.3.4 Alteration

Alteration at upper elevations in the La Nación area is dominated by clay assemblages. At lower elevations along the creek between La Nación and Los Bancos, while the structure is clay filled, rocks around it are resistant and are adularia–quartz altered based on K-feldspar (Na-cobaltinitrite) staining. Such patterns are visible in drill core, with a hard, gray-colored alteration noted in proximity to the veins.

Early adularia–quartz alteration may form a competent host for vein development, as opposed to clay-altered areas.

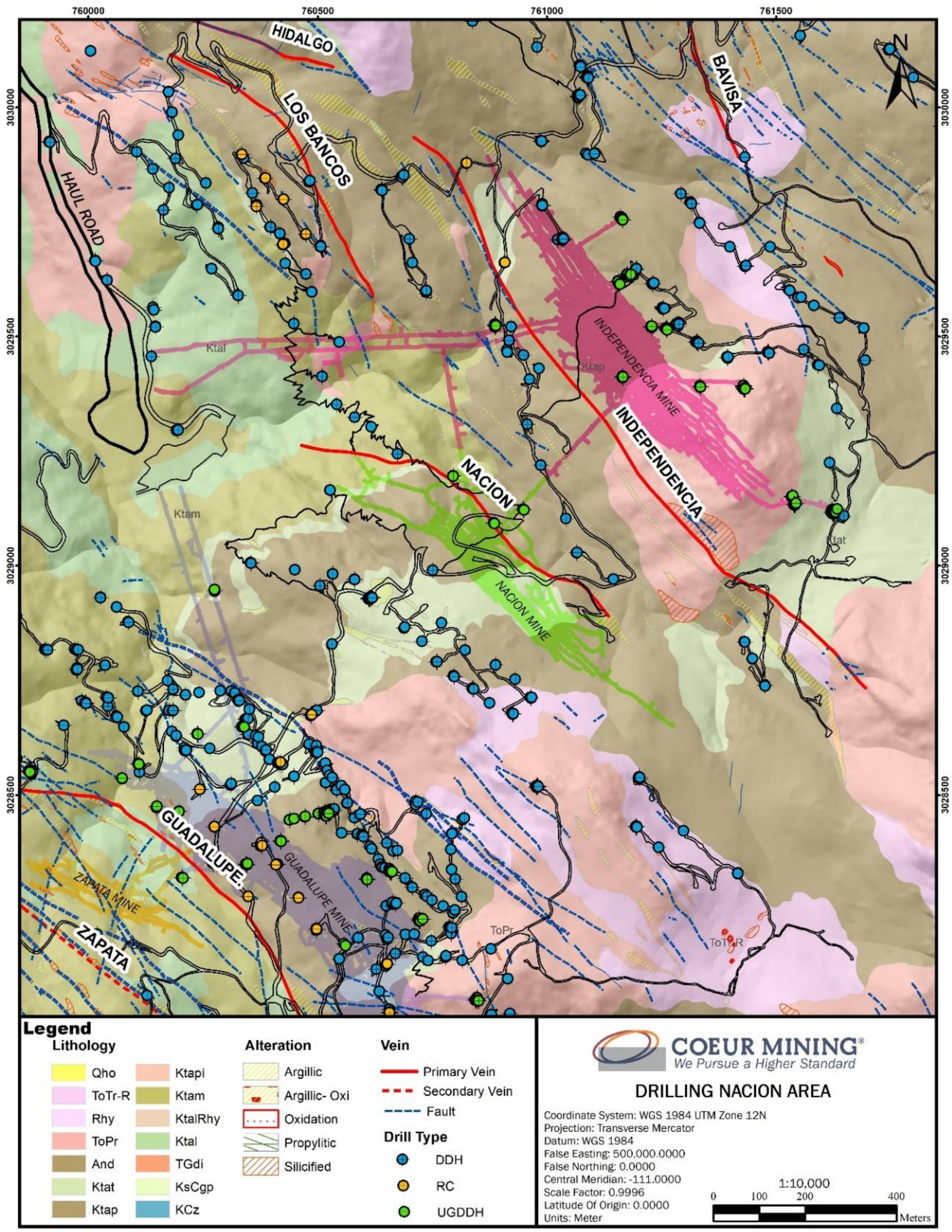
6.4.3.5 Mineralization

In the La Nación area, the best mineralized portions typically occur between elevations of 1050 m and 1200 m. Drilling in this area suggests that the vein system dips steeply to the southwest. Above the productive vein levels, the structure is present as a fault without significant vein development as in other vein systems in the area. Mineralization is best developed where the Ktam (amygdaloidal basalt) unit is present in the vein hanging wall, where the zone widens into multiple subparallel partially vein-filled faults defining a probable fault relay.

Rhyolite dikes are common in the corridor close to the La Nación and Los Bancos structures, and directly intrude the structures hosting the vein systems in several areas, particularly in the Los Bancos area. These typically predate the vein development since they are affected by alteration and overprinted by veining but generally form a poor host to vein development. The largest dike, in the hanging wall of the structure in the Los Bancos area, continues up slope to the west of the vein and may feed the flow dome on the ridge top above.

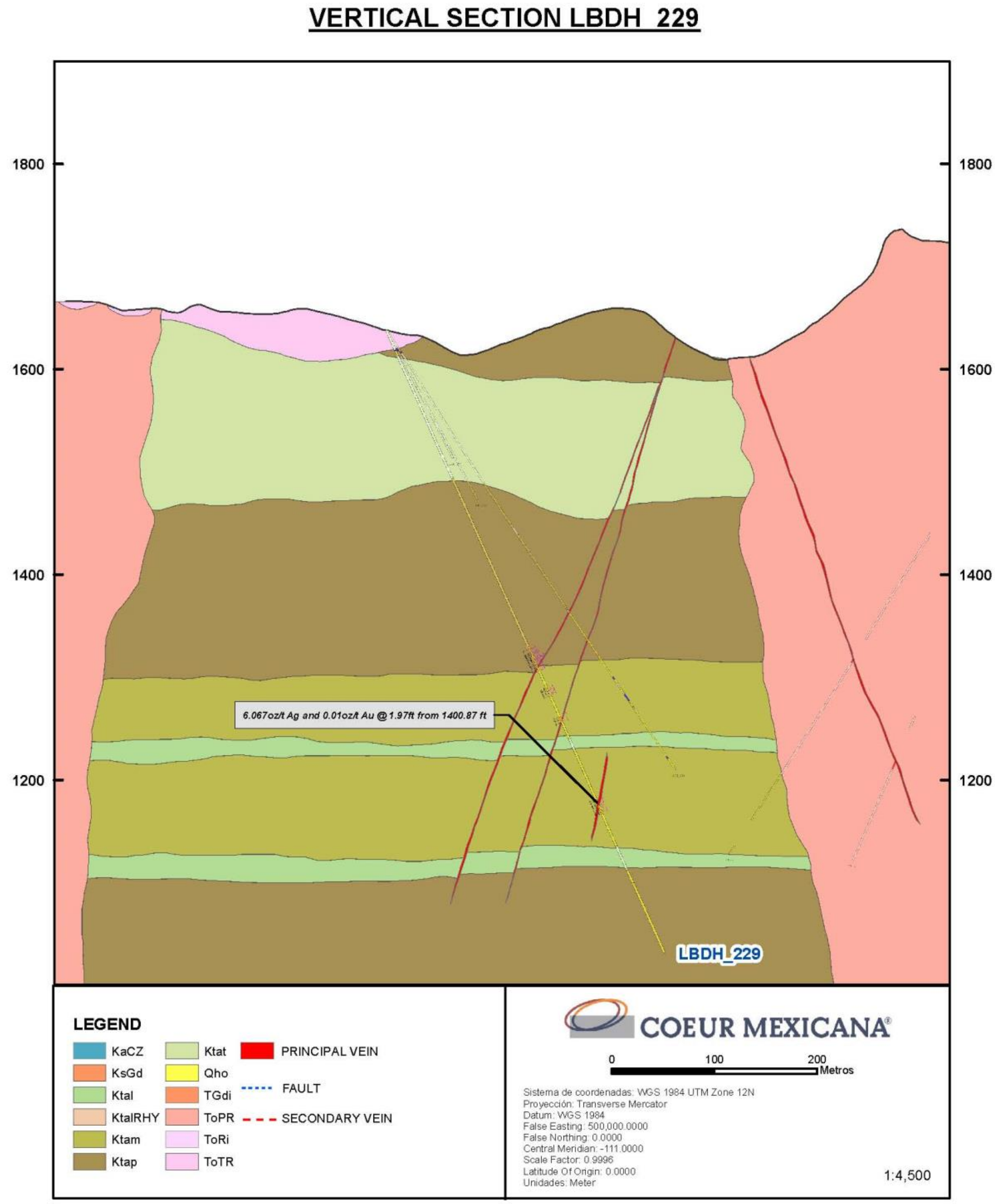
A geology map for La Nación is provided in Figure 6-13, and a cross-section is included as Figure 6-14.

Figure 6-13: Geology Map, La Nación



Note: Figure prepared by Coeur, 2021.

Figure 6-14: Geologic Cross-Section, La Nación



Note: Figure prepared by Coeur, 2021.

7.0 EXPLORATION

7.1 Exploration

7.1.1 Grids and Surveys

Coeur uses the UTM Zone 12 WGS-84 datum for the capture and projection of all geo-referenced data, including drill collars and surface/ trench sample locations.

Surface topography is based on a 1 m digital elevation model calculated from satellite imagery acquired in 2021 with a 0.5m pixel resolution. All surface drill collars are surveyed by a certified surveyor using a differential global positioning system (GPS) instrument. All underground mine workings and drill collars are surveyed with a total station instrument, from a fixed, georeferenced point on surface.

7.1.2 Geological Mapping

Exploration included geological mapping and sampling of known surface fault and vein occurrences, prospecting for new fault and vein occurrences and visible argillic alteration or "clay-blooms".

In 2014, Coeur commenced a detailed 1:1,000 scale field mapping campaign initially focused on the areas around the Independencia and Guadalupe deposits, with the aim of better understanding the geology and identifying new structural targets to drill test at depth. This program has now been extended to cover other areas of the Project and is ongoing at present. It will likely take several more years to complete coverage of the entire Project area.

The majority of new exploration targets, particularly in the Guadalupe–Independencia area, are typically blind as the surface elevations are above the known mineralized horizon; therefore, structures that show little surface indication of mineralization are considered drill targets if they are associated with a significant fault system and alteration at surface. Proximity to rhyolite dikes and dome complexes is also considered important.

All underground faces are mapped and sampled at 1:250 scale. The maps are then digitized for inclusion in the geological model.

7.1.3 Geochemistry

Although the surface geochemical expression of blind mineralization is typically subdued, rock sampling has indicated some correlation with certain elements, such as barium, antimony and certain clay assemblages including muscovite- sericite. Surface channel chip sampling is routine over areas of surface alteration, particularly related to northwest trending structures and brecciation.

In 2020 Coeur commenced a detailed soil sampling program over the Bavisa area. All samples were analyzed by modern ultra-low level inductively-coupled plasma (ICP) techniques and individual hypersprectral analytical methods, both completed by ALS Minerals. Preliminary results suggest that kaolinite crystallinity may be an important vector towards more prospective areas along mapped faults.

Limited trenching and associated trench mapping and sampling were completed in areas of poor outcrop exposure, specifically over portions of the La Patria, Guadalupe and La Union deposits.

A tire-mounted hydraulic backhoe with a 24-inch-wide bucket was used, and trenches were excavated approximately perpendicular to the structures. Excavation length was dependent on the suspected width of mineralization, topography, and local ground conditions. Trenches were dug as deep as the bedrock hardness would allow, generally to a depth of 1.5–2.5 m, rarely to 3.5 m. The endpoints and inflection points of all trenches were surveyed. All trenches were mapped for lithology, alteration, structural controls of mineralization, and oxidation, and sampled in detail.

Accessible underground workings have mostly been mapped and channel sampled throughout the Project area. Most legacy workings would require extensive rehabilitation to permit safe access and therefore have not been entered or sampled.

7.1.4 Geophysics

Paramount commissioned Quantec Geoscience USA Inc. to conduct ground magnetic and induced polarization (IP) geophysical surveys over selected target areas. The primary purpose of the IP survey was to map chargeability and conductor signatures to depths of 150 m or more with sufficient resolution to assist in the definition of drill targets. Lines were approximately east–west, with a line separation of 100–200 m and station intervals of 50 m. Ground magnetic data were collected on 72 lines using a 12.5 m station separation. Total coverage was approximately 255.5 line-km.

MPX Geophysics Ltd. (MPX) completed a helicopter-borne magnetic survey in 2012 on behalf of Coeur over the western Project area. Lines were flown east–west at 75 m spacing, with tie lines every 750 m. A total of 2,571.5 line-km were flown. In 2014, SRK reviewed the data collected (SRK, 2014), as part as a larger study, and concluded that the survey identified the location and along-strike continuity of faults.

In 2015, MPX completed a similar survey over the eastern Project area that was later merged with the 2012 dataset. A total of 6,823.5 line-km were flown along east-west lines at 200 m spacing, with tie-lines every 2 km. This survey highlighted the continuation of northwest-trending structures, and as well as the importance of long-lived northeast structures. These structures appear to act both as a focus for mineralization, when they intersect northwest structures, but also appear to offset mineralization.

In 2014, Geotech Ltd. flew a helicopter-borne Z-axis Tipper electromagnetic and magnetic survey over the western Project area. Lines were flown east-west at 200m spacing with tie lines every 2km. A total of 1,130 line-km were flown. Condor Consulting provided data interpretations. The electromagnetic data provide useful information on geology using resistivity contrasts, while magnetometer data provide additional information on geology and structure using magnetic susceptibility contrasts.

Exploration Information collected by Coeur is in line with standard industry practices for the exploration of epithermal precious metal deposits in a semi-arid climate.

As a result of the approximately 15 years of exploration at the Project, Coeur identified a number modifying factors that appear to be important in the generation of mineral deposits in the district. These include the presence of northwest trending structures with large displacements (whether they be mapped or interpreted from geophysical surveys), surficial areas of clay dominant alteration, favorable lithologies in the typical mineralized horizon, surface elevation to ensure preservation of the system and surface geochemical indicators. Coeur developed a detailed multi-layer GIS based analysis by giving different weightings to the individual characteristics. Targets are then defined and prioritized based on areas where there is the most superposition. Surface mapping and sampling of the individual targets is then completed to define areas/structures for initial drill testing. Results are included in the GIS project to update/ refine the different parameters used in the targeting exercise.

Vein patterns, particularly associated with extensional fault linkage features, steps, and bends, form prospective sites for ore shoot development where ore-hosting structures trend west-northwest to northwest in optimal extensional orientations, with ore thinning where more east-west and north–northwest trends are present.

Tracking of vein and fault patterns and stratigraphic offsets to trace the distribution of faults, along with assessing relative position in the system with associated alteration and stratigraphic position can aid in vectoring to target elevations and sites along prospective structures.

Given the geologically blind nature of the majority of new deposits, field mapping with surface geochemical sampling (rocks and soils) is considered to be the best methodology to develop high priority targets and define drill programs. Drilling remains the ultimate exploration technique to determine the economic viability of any target.

In the underground areas of the Independencia and Guadalupe mines, better definition of vein texture and breccia generations from core logging and underground development mapping have aided in the modeling of higher-grade textural types that can lead to efficiency in ore definition, stope design, and extraction.

7.1.5 Exploration Potential

A large part of the land package has still to receive the detailed geological field work necessary to define drill programs, including many of the targets identified in the GIS targeting exercise.

New targets developed for drill testing include the La Carmela area to the south of the Guazapares district, the Palmarejo North area located to the northwest of the legacy open pit operation and the southeastern projection of the La Patria zone.

7.2 Drilling

7.2.1 Overview

Drilling completed on the Project includes air track, RC, and core drilling, totaling 4,284 drill holes (1,189,478 m). Air track and RC drilling was employed in the early years of exploration (2009 and prior), with the exception of four RC drill holes completed in 2014. Approximately 93% of all drilling completed to date at the Project has been core drilling. Drilling is summarized in Table 7-1. A Project-wide drill collar location map is provided in Figure 7-1.

There are 1,388 drill holes (395,996 m) supporting the mineral resource estimates for the Guadalupe deposits (Table 7-2), 631 drill holes (240,571 m) supporting the mineral resource estimates for the Independencia deposits (Table 7-3), and 261 drill holes (105,765 m) supporting the mineral resource estimate for the La Nación deposits (Table 7-4). Locations of the drill holes on the individual deposits were included in the geologic maps for the deposits in Chapter 6.

7.2.2 Drilling Excluded for Estimation Purposes

Historic RC drilling may be used to inform exploration modeling and drill targeting but is not used for mineral resource estimates.

Core and RC drill data from the Mexoro and Paramount drill programs do not currently support mineral resource estimates, with the exception of the Independencia East area (core drilling only).

Underground channel samples and grade control drilling are excluded from mineral resource estimation; however, these data are used to support the geological interpretation.

7.2.3 Drill Methods

Where known, drill companies included G4 Forage Drilling of Val-d'Or, Quebec, Layne de Mexico S.A. de C.V., Dateline, S.A de C.V.; Major Drilling, S.A. de C.V.; Perforaciones Godbe de Mexico, S.A. de C.V., Jorder Lyons Drilling, Landdrill, Maza Diamond Drilling and Ingenieria, Excavaciones y Perforaciones de Palmarejo.

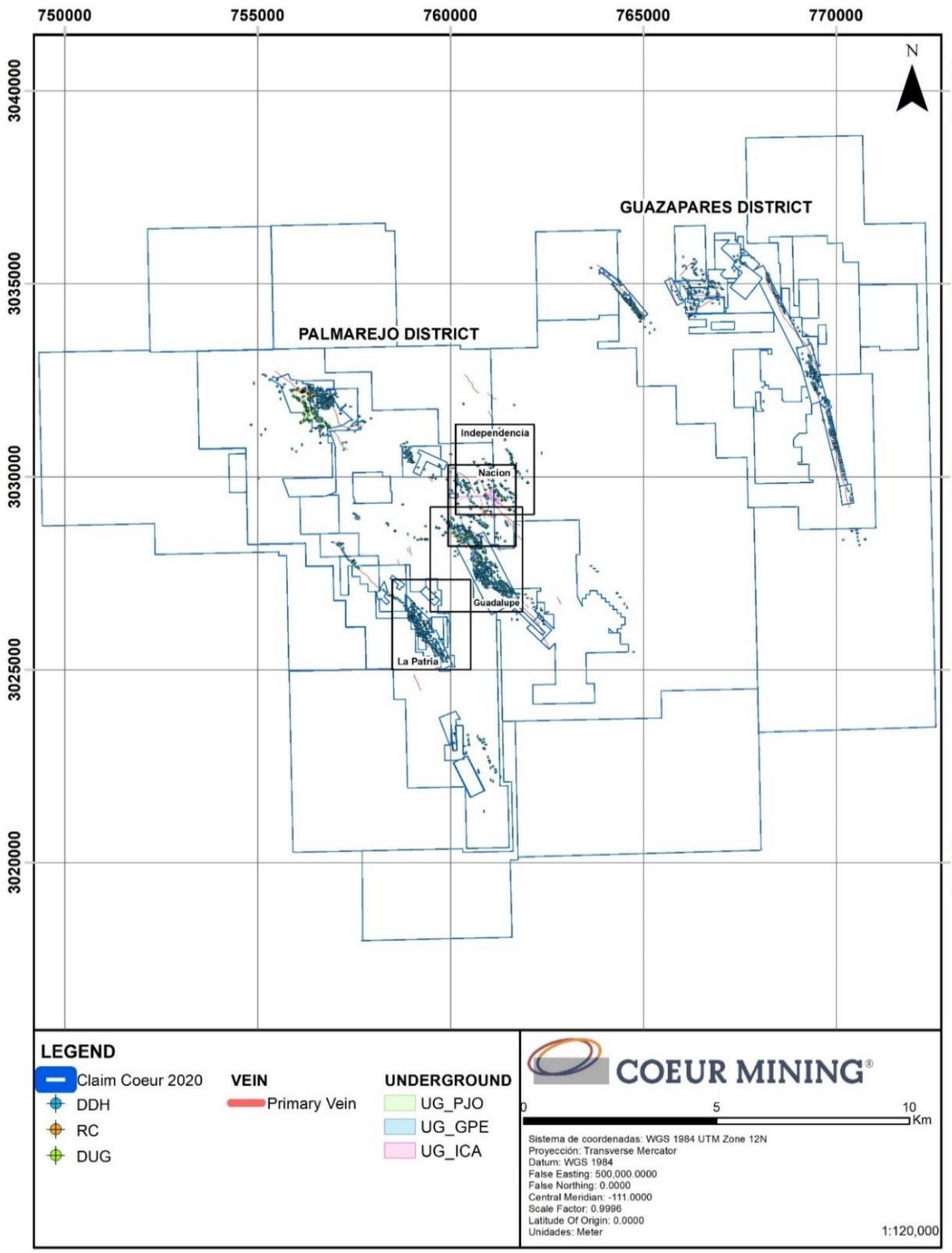
Rigs, where known, included a skid-mounted Atlas Copco CS1000 drill rig, track-mounted Atlas Copco CS1500 for core drilling, a Prospector W-750 RC drill, Drill Systems W-750 buggy-mounted all-terrain rig, Drill Systems track drill MPD-1500 all-terrain drill, CS-1000 skid-mounted wireline rig, Schramm-685 all-terrain rig, Prospector buggy-mounted all-terrain drill, Boyles 20 (B-20) skid-mounted wireline core-rig, Longyear 44, Boart Longyear 38, a skid-mounted Sandvik UDR 200 wireline core-rig, a track-mounted HTM-2500 core drill, a track-mounted Versa-1400 rig and various man-portable rigs such as the Mancore-600.

Table 7-1: Property Drill Summary Table

Company	Purpose	Year	Type	No. Drill Holes	Meters
Bolnisi	Exploration	2005	RC	24	2,874
Bolnisi	Exploration	2005	RC–core	4	547
Bolnisi	Exploration	2005	Core	31	5,817
Paramount	Exploration	2005	Core	9	183
Bolnisi	Exploration	2006	RC	142	27,569
Bolnisi	Exploration	2006	RC–core	3	865
Bolnisi	Exploration	2006	Core	64	17,707
Paramount	Exploration	2006	Core	50	7,022
Bolnisi	Exploration	2007	RC	100	24,407
Bolnisi	Exploration	2007	RC–core	4	1,411
Bolnisi	Exploration	2007	Core	92	36,304
Paramount	Exploration	2007	RC	2	515
Paramount	Exploration	2007	Core	106	20,807
Coeur	Exploration	2008	Core	53	19,409
Coeur	Infill	2008	Core	50	5,298
Coeur	Infill	2008	RC	41	280
Paramount	Exploration	2008	RC	3	753
Paramount	Exploration	2008	Core	55	19,218
Coeur	Exploration	2009	Core	76	23,944
Coeur	Infill	2009	Core	136	18,208
Coeur	Infill	2009	RC	157	4,450
Paramount	Exploration	2009	RC	1	250
Paramount	Exploration	2009	Core	24	8,505
Coeur	Exploration	2010	Core	80	24,840
Coeur	Infill	2010	Core	186	33,640
Paramount	Exploration	2010	RC	53	14,814
Paramount	Exploration	2010	Core	44	14,310
Coeur	Exploration	2011	Core	132	37,327
Coeur	Infill	2011	Core	182	43,305
Paramount	Exploration	2011	Core	105	27,897
Coeur	Exploration	2012	Core	146	58,375
Coeur	Infill	2012	Core	139	45,859

Company	Purpose	Year	Type	No. Drill Holes	Meters
Paramount	Exploration	2012	Core	106	31,715
Coeur	Exploration	2013	Core	192	35,970
Coeur	Infill	2013	Core	144	39,218
Paramount	Exploration	2013	Core	26	12,463
Coeur	Exploration	2014	Core	72	24,595
Coeur	Infill	2014	Core	102	25,403
Coeur	Infill	2014	RC	4	96
Paramount	Exploration	2014	Core	44	18,717
Coeur	Exploration	2015	Core	53	19,898
Coeur	Infill	2015	Core	28	14,438
Coeur	Exploration	2016	Core	62	22,922
Coeur	Infill	2016	Core	158	29,650
Coeur	Exploration	2017	Core	157	68,282
Coeur	Infill	2017	Core	111	23,392
Coeur	Exploration	2018	Core	99	40,267
Coeur	Infill	2018	Core	139	33,595
Coeur	Exploration	2019	Core	62	30,312
Coeur	Infill	2019	Core	81	29,941
Coeur	Exploration	2020	Core	74	40,428
Coeur	Infill	2020	Core	106	27,290
Coeur	Exploration	2021	Core	63	31,756
Coeur	Infill	2021	Core	107	42,421
Total				***4,284***	***1,189,478***

Figure 7-1: Property Drill Collar Location Map



Note: Figure prepared by Coeur, 2021.

Table 7-2: Drilling used in Mineral Resource Estimations, Guadalupe

Company	Purpose	Year	Type	No. Drill Holes	Meters
Bolnisi	Exploration	2005	RC	18	2,054
Bolnisi	Exploration	2005	RC–core	4	547
Bolnisi	Exploration	2005	Core	31	5,817
Bolnisi	Exploration	2006	RC	88	18,096
Bolnisi	Exploration	2006	RC–core	3	865
Bolnisi	Exploration	2006	Core	54	15,299
Bolnisi	Exploration	2007	RC	74	16,839
Bolnisi	Exploration	2007	RC–core	4	1,411
Bolnisi	Exploration	2007	Core	92	36,306
Coeur	Exploration	2008	Core	53	19,413
Coeur	Exploration	2009	Core	71	22,182
Coeur	Exploration	2010	Core	61	20,621
Paramount	Exploration	2010	Core	4	663
Coeur	Exploration	2011	Core	120	33,931
Coeur	Exploration	2012	Core	78	31,498
Coeur	Exploration	2013	Core	109	18,664
Coeur	Infill	2013	Core	21	5,916
Coeur	Infill	2014	Core	17	7,153
Coeur	Infill	2015	Core	25	11,657
Coeur	Infill	2016	Core	60	11,639
Coeur	Exploration	2017	Core	52	18,839
Coeur	Infill	2017	Core	49	9,718
Coeur	Exploration	2018	Core	70	25,844
Coeur	Infill	2018	Core	90	19,604
Coeur	Exploration	2019	Core	26	11,292
Coeur	Infill	2019	Core	35	9,676
Coeur	Exploration	2020	Core	11	4,493
Coeur	Infill	2020	Core	48	10,565
Coeur	Infill	2021	Core	20	5,394
Total				***1,388***	***395,996***

Table 7-3: Drilling used in Mineral Resource Estimations, Independencia

Company	Purpose	Year	Type	No. Drill Holes	Meters
Bolnisi	Exploration	2005	RC	18	2,054
Bolnisi	Exploration	2005	RC–core	4	547
Bolnisi	Exploration	2005	Core	31	5,817
Bolnisi	Exploration	2006	RC	88	18,096
Bolnisi	Exploration	2006	RC–core	3	865
Bolnisi	Exploration	2006	Core	54	15,299
Bolnisi	Exploration	2007	RC	74	16,839
Bolnisi	Exploration	2007	RC–core	4	1,411
Bolnisi	Exploration	2007	Core	92	36,304
Coeur	Exploration	2008	Core	53	19,409
Coeur	Exploration	2009	Core	71	22,182
Coeur	Exploration	2010	Core	61	20,620
Paramount	Exploration	2010	Core	4	663
Coeur	Exploration	2011	Core	120	33,931
Coeur	Exploration	2012	Core	78	31,498
Coeur	Exploration	2013	Core	109	18,664
Coeur	Infill	2013	Core	21	5,916
Coeur	Infill	2014	Core	15	7,096
Coeur	Infill	2015	Core	22	11,195
Coeur	Infill	2016	Core	60	11,639
Coeur	Exploration	2017	Core	52	18,839
Coeur	Infill	2017	Core	48	9,670
Coeur	Exploration	2018	Core	70	25,844
Coeur	Infill	2018	Core	87	19,306
Coeur	Exploration	2019	Core	25	10,971
Coeur	Infill	2019	Core	32	9,195
Coeur	Exploration	2020	Core	11	4,493
Coeur	Infill	2020	Core	48	10,565
Total				***1,355***	***388,927***

Table 7-4: Drilling used in Mineral Resource Estimations, La Nación

Company	Purpose	Year	Type	No. Drill Holes	Meters
Bolnisi	Exploration	2007	RC	20	5,741
Coeur	Exploration	2009	Core	5	1,762
Coeur	Exploration	2011	Core	2	1,073
Coeur	Exploration	2012	Core	11	6,021
Paramount	Exploration	2014	Core	8	4,723
Coeur	Exploration	2015	Core	51	19,121
Coeur	Infill	2015	Core	1	300
Coeur	Exploration	2016	Core	34	9,873
Coeur	Exploration	2017	Core	63	27,625
Coeur	Exploration	2018	Core	17	9,144
Coeur	Infill	2019	Core	49	20,382
Total				***261***	***105,765***

PQ-size (85 mm core diameter), HQ (63.5 mm) and NQ (47.6 mm) core is used for surface programs, with HQ and NQ used for underground. Core holes that are collared at the surface initially recover HQ or PQ core, unless the intersection of voids or downhole drilling problems were encountered, in which case the drillers reduce to NQ or HQ, respectively. Depending on the type of drill rig employed, it may be necessary to reduce to NQ at depth. Core tails, which were drilled when RC holes were terminated prematurely due to encountering groundwater and/or downhole problems, recovered NQ or HQ core.

Core barrels are a maximum of 3 m in length and reducing to 1.5 m in length near projected structures to ensure minimum deviation of the hole. RC drilling used 4.75-inch diameter bits. Current grade control drilling uses NQ or ATK diameter bits.

More recently, HQ3/NQ3 (or triple tube core barrels) has been used to ensure maximum core recovery. This is considered particularly important as ore zones in certain deposits/areas locally contain significant broken ground and also because of the risk of washing of fine gold present in the hematite matrix to quartz breccias, if drilling conditions were not optimal.

7.2.4 Logging

All drill core from the Mexoro program was digitally photographed and logged, and geotechnical data were gathered prior to sampling. No information on the logging protocols is available.

During all Paramount core drilling programs filled core boxes were removed from the drill site by company personnel and taken to a secure core logging and sampling facility that was rented in the village of Guazapares. At the facility, the core was cleaned, and the broken core pieces reassembled to a best fit and aligned in the boxes. Geotechnical data collected included core recovery and rock quality designation (RQD). Geological logging was originally completed on paper as a graphic log of stratigraphy, vein orientation, and mineralized zones and a detailed descriptive log including rock type, alteration, structure, mineralization, and vein density/percentage. Data were later entered into a proprietary database. Core was digitally photographed. An ASD FieldSpec 3 NIR spectrometer was used on selected drill core samples to identify alteration mineralogy.

For all Coeur programs, core is transported from the drill site to a logging facility, where the core is laid on wooden tables and pieced together by a geologist or technician, with any orientation mark facing up.

Geotechnical data collected includes core recovery, rock quality designation (RQD), fracture density and other parameters used to calculate the rock mass rating (RMR). Geological logging is completed directly into Coeur's acQuire database and includes a descriptive log recording rock type, alteration, structure, mineralization, and vein density/percentage.

An ASD FieldSpec 3 NIR spectrometer is used on selected core samples to identify alteration mineralogy.

Cut lines are traced along the core axis and sample intervals marked.

Digital photographs of wet core are taken and archived before the core is cut and sampled. A second photo of the half core is taken after cutting in order to clearly show the vein intercept angle. Individual photos are taken of all samples used for density calculations.

7.2.5 Recovery

Core recoveries in the Mexoro campaign averaged over 86% for all drill holes, with a high of 96% (Besserer, 2008).

Core recoveries during the different Paramount drill programs were typically greater than 90%, although they varied depending on the deposit or zone being drilled. For example, the San Miguel deposit typically had worse recoveries than the La Union zone.

Core recoveries during the different Coeur drill programs have improved over the life of the Project, partly due to improved drilling technologies, such as the introduction of triple tube core barrels and also because the drillers now have a better understanding of the geological conditions/ rock quality in different deposits/zones. Natural, open space voids are present in all areas, which can significantly complicate both drilling and mining operations. Coeur has worked extensively over the past few years to develop a better understanding of the location/causes of these voids to help guide drilling and mining decisions.

7.2.6 Collar Surveys

The drill hole collar coordinates and elevations for drilling completed in the Guazapares district were initially located using hand-held global positioning system (GPS) receivers in UTM coordinates, Zone 12, (NAD27 Mexico datum). Upon completion of drill holes in 2006 through part of the 2009 drilling program, the collars were resurveyed by contractor Lopez Olivas and

Associates of Hermosillo, Sonora, using a high-accuracy DGPS survey instrument. In 2009–2011 drill hole collars were surveyed by a Paramount technician using a DGPS Trimble Geo XT (GeoExplorer Series), with the collected data downloaded into the database by hand. Contractor Lopez Olivas and Associates resurveyed the 2010–2011 drill collars using two R3 and two Trimble 4600LS devices, and these data replaced those collected by the Paramount technician. Lopez Olivas and Associates completed all drill-hole collar surveys for the 2012–2014 drill holes.

Surface collar surveys for the current operations and Coeur drill holes are conducted using a differential GPS. Collars are usually not preserved because monuments are not built, and the marks are typically washed away by rain or covered when building access roads. Underground collars are surveyed by a mine surveyor using a total station instrument.

7.2.7 Down Hole Surveys

Layne completed down hole directional surveys on all core drill holes in the Guazapares district at approximately 50-m intervals. Initial drill holes were surveyed using a single-shot camera system. After November 2008, down hole surveys were completed with a Reflex EZ-shot single-shot digital survey tool.

Coeur has used a Reflex non-magnetic single-shot system or similar systems, and a “Devishot” non-magnetic multi-shot system instrumentation for downhole surveying.

Reflex system measurements were taken at 21 m and then approximately every 50 m to the bottom of the hole. Devishot measurements are taken at 21 m and then at approximately every 50 m and finally the bottom of the drill hole. Upon completion of the drillhole, multi-shot readings are taken every 25 m, so that they can be compared with the single-shot readings to ensure no significant differences.

Results from the downhole surveying show a minor increase in the hole dip due to the droop from the weight of the rods, especially in holes drilled to depths of 400 m or greater. Historically, the greatest change in dip and bearing has been found in drill holes that have drilled through workings, which often re-enter the footwall at a greater dip and slight change of bearing in a counter-clockwise direction.

7.2.8 Comment on Material Results and Interpretation

Almost all underground drilling has been completed as fans of drill holes, meaning that the reported mineralized intercepts are typically longer than the true thickness of the mineralization.

Drilling from surface is a mixture of fan drilling from certain platforms that permitted acceptable intercept angles both in strike and dip and drilling from individual platforms designed to intersect the structures as perpendicular as possible.

Drill protocols employed are in line with current industry best practices and the QP considers the quality of all data related to the core drilling programs to be appropriate for use in Mineral Resource estimates. Assay results from historic RC drilling, grade control drilling and underground sampling should not be used in mineral resource estimations.

7.3 Hydrogeology

Hydrogeology on site varies across different work areas. Overall, the site manages a significant negative water balance. Site water is primarily soured from the underground mines, but seasonal rain is also collected, and offsite sources provide additional water through a collection system located on within the Rio Fuerte drainage in Chínipas. The volcanic units hosting the deposits are of low permeability and low storage.

Mine dewatering is conducted using a sump-and-pump system with inflows limited to vertical development and early storage release. Local models have been developed to support mining at Guadalupe and Independencia. Additional groundwater modeling was completed from 2017–2019 to support tailing storage facility (TSF) permitting in the now abandoned Palmarejo pit and underground complex.

Monitoring consists of documenting outflows from the mines, groundwater levels in and around the tailings and plant site, and groundwater elevations in the TSF and freshwater storage ponds. Water discharged through the treatment plant is additionally tracked to support permit reporting requirements.

7.3.1 Groundwater Models

Global Resource Engineering Ltd. (GRE) prepared a hydrogeological model for the mine operations in 2017 and predicted that the largest inflows for Guadalupe will occur in year 2022 and result in a total flow of approximately 800 m^3/day. From Independencia the highest predicted flow was in 2021, of 2,600 m^3/day. No regional model has been constructed due to the nature of the volcanic geology. Quantification of overall water levels due to low permeability rock mass, structural complexity, and distances between mines, tailings, and pits will require more local models. See also discussion on water ingress in the mining operations in Chapter 13.

Groundwater models were developed by Golder Associates during 2017 and updated by Klohn Crippen in 2019 to support TSF permitting and development of an in-pit storage facility in the abandoned Palmarejo pit. This facility is scheduled to be in operation starting in 2023.

7.3.2 Water Balance

Water balance tracking and reports are maintained for mining, process, and permitting purposes. A preliminary water balance of local subsurface flow is not well developed or maintained since permeability and recharge are very low. Water balances for process and permitting actively track inflow related to rainfall and the process cycle to track water consumption and usage. Balances include and document outflows and transient flow at designated and permitted offsite discharge points where reporting to the Mexican environmental authority is required.

7.3.3 Comment on Results

The Project area lithologies are low permeability and low storage, resulting in most of the water being sourced from underground operations. Groundwater models were first developed in 2017 and used for Project permitting purposes.

The hydrological data and hydrogeological models developed from those data are suitable for use in mine planning.

7.4 Geotechnical

The geotechnical characterization of the rock mass is determined as part of the logging process during drilling of all core holes drilled as part of infill and exploration drilling on site. A standard operating procedure was developed to support this work using standard rock mass rating (RMR) following Bieniawski, 1973, which consists of measurement and qualification of mechanical and structural properties of the rock providing and quantified range between 0 and 100.

The host rock volcanic rocks in the and around the current active and exploration areas consist of Moderate to High quality ranging from 45 to 100 RMR. Due to alteration, structure, and brecciation the rock quality ranges from Poor to Moderate within the ore zones, generally ranging from 25 to 55 RMR with local variability ranging lower to <25 in areas of Independencia and La Nación.

For mine operations and design the RMR data were used to develop a geotechnical block model for each mining areas. This model is reconciled and updated with mapping and drilling data as the mines develop. For determining support options and requirements, the RMR values are consolidated into five types ranging from 1 (Very Good) to 5 (Poorest) with mandatory minimum support requirements attached to each type.

7.4.1 Sampling Methods and Laboratory Determinations

Core samples were collected and tested for intact rock strength for principal units within the orebody and probable development areas. Uniaxial compressive strength testing was conducted.

7.4.2 Comment on Results

Geotechnical data and geotechnical models developed from those data are suitable for use in mine planning.

8.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

8.1 Sampling Methods

8.1.1 Trenches

Trenches sampled in the Guazapares district were marked by the geologist, and the samples were collected from near the base of the trench wall. In rock that did not appear mineralized, the sample interval was two meters. In mineralized rock, the maximum sample interval was 1 m. Shorter intervals were often sampled in areas with prominent veining, old workings, or structural zones. Samples were cut with a pick as a continuous chip sample near the base of the trench wall.

8.1.2 RC Drilling

No information is available on the sampling methods for the Mexoro drill holes.

In the Paramount drill programs, RC holes were sampled at 1 m intervals. The entire sample interval was split at the drill site with a Gilson splitter into two samples. One sample was sent for assay, and the other was archived at a fenced compound operated by Paramount in Guazapares. Field duplicates were collected from the original 50% split, splitting it in half by pouring it over a Gilson-type splitter. Slurry was poured into a large strainer. The strained material and material remaining in the bucket were combined for a final primary sample.

RC drilling was a major part of the initial drilling campaigns prior to Coeur’s acquisition of Bolnisi. RC holes were sampled every 1.52 m down the hole. Holes drilled in greenfield areas were sampled along the entire length of the hole, while infill or closed spaced drilling was sampled every 1.52 m, through zones of suspected mineralization. Standard procedure was to only sample during dry drilling. Once water was encountered, the RC hole was terminated and continued with a core tail. Depth to groundwater was recorded by the supervising geologist.

The entire sample was collected in a cyclone and then released into a hopper and then into a Gilson-type riffle-type splitter. The sample was initially split so that half of the material was discarded. The remaining half was split in half again, and each of these quarter splits were poured directly from the splitter pans into buckets lined with sample bags. One of the one-quarter splits was used as the sample for assaying and the other one-quarter split was stored as an archive duplicate.

8.1.3 Core Drilling

Mexoro drill core was either cut or sawn in half, with one half of the core sent for geochemical analyses and assaying. No other information is currently available to Coeur.

For the Paramount drill programs, sample intervals were generally based on geologic contacts, alteration, and mineralization. The sample interval was typically about 1 m, with intervals ranging from 0.5–2 m, but rarely exceeding 1.5 m. Where a geologist interpreted that strongly mineralized zones could be present, sample breaks were made at significant changes, such as vein or breccia margins, which frequently resulted in intervals <1 m in length.

Core drilled by Coeur in the Palmarejo district is only sampled on intervals suspected to contain precious metal mineralization. Sample intervals are marked on the core and the intervals are assigned sample numbers. The sample lengths for wall rock average 1.5–2 m. Suspected mineralized zones were sampled at intervals averaging 0.5 m, prior to the acquisition of Bolnisi Gold, and 0.5–1.5 m following the acquisition. Sample length is adjusted to avoid sampling across geologic contacts and structures. The half of the core to the right of the orientation line is selected for assaying and placed in a numbered bag along with a sample tag. A duplicate tag is kept in a sample tag book and archived at the field office. The left side of the core is retained in core boxes in a secure facility on site. Poor RQD or recovery may necessitate sampling of the entire core. When core is very broken and cutting is not possible the samples are manually split though a homogenization and quartering process.

8.1.4 Production Sampling

Channel sampling of all active faces is completed on a daily basis. After thoroughly cleaning the face, the geologist delimits the channel across the face at waist height. Similar to sampling of drill core, individual samples are between 0.5–2 m in length and are defined by changes in lithology or vein type. A handheld saw is used to cut the top and bottom of the channel, with the material being removed by hammer and chisel, ensuring as complete and consistent sampling as possible. All information related to each sample is recorded in the acQuire database.

Underground mapping and sampling are used as part of the geological modeling process (shape designs) but are not used in mineral resource estimates.

8.2 Sample Security Methods

Samples are staged and prepared for shipment to the ALS preparation facility in Chihuahua. ALS collects the samples on site where they are reviewed by a laboratory representative and chain of custody is transferred. Chain-of-custody documentation is maintained throughout the shipping and receiving process. Samples typically reach the ALS facility the same day they leave site.

Drill core from sampled intervals of all deposits is stored in secure warehouses at the Palmarejo Operations. In recent years most drill core from mined-out deposits or mined-out portions of deposits has been discarded, with the exception of select drill holes kept for future reference. Drill core from non-sampled intervals is retained on site in an open-air environment if it is from unmined areas and is used for geotechnical purposes.

Drill core from programs completed by Paramount is currently stored either in a secure facility in Guazapares, for projects drilled within the Guazapares district or a similar facility located at the exploration office in Guadalupe.

8.3 Density Determinations

Paramount personnel collected bulk density measurements on half-core samples approximately 10 cm in length using water immersion methods. Prior to 2011, the core samples were uncoated. This changed in 2011 to wax coating samples due to the presence of natural cavities in veins and veinlets that host gold and silver mineralization. There are about 3,980 determinations available for the deposits in the Guazapares district. The bulk density in mineralization ranges from about 2.40–2.51 g/cm^3, and in waste ranges from approximately 2.37–2.48 g/cm^3.

The method used by Coeur for obtaining bulk density values for the Palmarejo Operations is the standard wax immersion method for determining the bulk density of fractured materials. This method was selected due to the porous and absorbent nature of some of the rocks and mineralized breccias. Measurements are taken on whole core samples typically between 10-15 cm in length. The method used is ASTM C914-09 (re-approved 2015), published by the American Society for Testing and Materials and obtained under license by Coeur.

Bulk density data have been collected by Coeur personnel over most years of exploration activity in the Palmarejo Operations area. Samples of all mineralized zones, structures, and lithologies are tested. The ASTM C914-09 (Reapproved 2015) test method covers the basic procedure for determining the bulk density and volume of fractured material. This test is applicable to all rock types, independent of the composition or method of formation. It is particularly suitable to determine the apparent density and volume of irregular shapes.

A summary of the available density data is provided in Table 8-1.

8.4 Analytical and Test Laboratories

The majority of the laboratories used over the long exploration and development history have not been recorded in the database.

The following laboratories have been used:

- ALS (formerly Chemex/ALS Chemex): used for the Mexoro 2006–2007 drill programs; used for all Paramount programs from 2006–2013; used for all Coeur drilling to date. ALS in Chihuahua (ALS Chihuahua) has been the primary sample preparation laboratory used by Coeur since 2005. ALS in Vancouver, Canada (ALS Vancouver) has been the primary analytical laboratory used by Coeur since 2005. Independent of Mexoro, Paramount and Coeur. ALS is ISO:9001:2000 accredited and holds ISO/IEC 17025:2005 accreditations for selected analytical techniques;
- Bureau Veritas (formerly Acme Analytical Laboratories): used for all Paramount programs from 2013–2015 and used as secondary laboratory for Coeur campaigns since 2013. Independent of Paramount and Coeur. Currently holds ISO/IEC 17025:2005 accreditations for selected analytical techniques;

Table 8-1: Density Data Supporting Mineral Resource Estimation

Deposit	Number of Determinations	Comment
Guadalupe	2,092	The mean density is 2.52 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.47 g/cm^3 and 2.53 g/cm^3. There is little variation in the dataset for each domain
Zapata	582	The mean density is 2.55 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.50 g/cm^3 and 2.61 g/cm^3. The higher values are related to sulfides in the high-density samples.
La Patria	459	The mean density is 2.52 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.47 g/cm^3 and 2.63 g/cm^3. The variation is related to voids/porosity for the low-density samples and sulfides in the high-density samples.
Independencia	2,176	The mean density is 2.50 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.32 g/cm^3 and 2.56 g/cm^3. The extreme values are related to voids/porosity for the low-density samples and sulfides in the high-density samples.
La Bavisa	373	The mean density is 2.57 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.55 g/cm^3 and 2.58 g/cm^3. There is very little variation in the dataset for each domain.
Hidalgo	429	The mean density is 2.54 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.51 g/cm^3 and 2.55 g/cm^3. There is very little variation in the dataset for each domain.
La Nación	634	The mean density is 2.54 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.52 g/cm^3 and 2.59 g/cm^3. The higher values are related to sulfides in the high-density samples.
Los Bancos	215	The mean density is 2.52 g/cm^3 for the total dataset, with the individual estimation domains varying between 2.49 g/cm^3 and 2.53 g/cm^3. There is very little variation in the dataset for each domain.
Total	6,960	The mean density is 2.52 g/cm^3 for the entire dataset, with the individual deposit averages varying between 2.50 g/cm^3 and 2.57 g/cm^3.

- SGS de Mexico, S.A. DE C.V. Durango, Mexico (SGS): used as secondary laboratory for Paramount programs from 2013–2015 and Coeur campaigns up to 2012. Independent of Paramount and Coeur. Currently holds ISO/IEC 17025:2005 accreditations for selected analytical techniques.

The Palmarejo mine laboratory is used for underground and ore control sample preparation and analysis. The laboratory is not independent and does not hold accreditations.

8.5 Sample Preparation

Sample preparation methods included:

- Chemex: Mexoro campaigns; drying, crushing to 70% passing 10 mesh, and pulverizing to 95% passing 150 mesh;
- Chemex: early Paramount and Coeur campaigns; drying, crushing to 60% passing 2 mm, and pulverizing to 90% passing 106 µm;
- Chemex: later Paramount campaigns; crushing to 60% passing 2 mm (Tyler 9 mesh) followed by grinding to 85% passing 75 µm;
- ALS Chemex, ALS Minerals, ALS Chihuahua: later Coeur campaigns; drying, crushing to better than 70% passing 2 mm; and pulverizing to 85% passing 75 µm.

The Palmarejo mine laboratory crushes and sieves to the same specifications as ALS Chihuahua and also follows QA/QC processes and procedures to confirm the quality of the sample preparation.

8.6 Analysis

Analytical methods used at Chemex, ALS Chemex, ALS Minerals, ALS Vancouver included:

- Gold and silver:
    - Mexoro campaigns: fire assay with gravimetric finish on 30 g samples; The lower detection limits were 0.05 g/t Au and 5 g/t Ag. Overlimits by fire assay;
    - Early Paramount campaigns: fire assay with gravimetric finish or fire assay with atomic absorption (AA) finish, with samples exceeding 3 g/t Au being re-analyzed. Protocol changes in 2009 to AA, with samples exceeding 10 g Au/t being re-analyzed by fire assay with gravimetric finish. The limit of the AA gold analyses that triggered re-assaying was lowered to 7 g/t Au in 2011;
    - Later Paramount and Coeur campaigns: fire assay with inductively coupled plasma with atomic emission spectrophotometry (ICP-AES) finish for gold. The detection limit was 0.001 g/t Au; the upper limit was 10 g/t Au, and the trigger limit for reanalysis is 8 g/t Au. Silver analyses were completed by four-acid digestion with an ICP-AES finish. Overlimits completed using a fire assay with a gravimetric finish;
- Multi-element suite: 34 element ICP-AES.

Gold analyses for the Paramount drill campaigns were completed by Acme using fire assay with AA finish. The detection limit was 0.002 g/t Au; the upper limit was 10 g/t Au, and the trigger limit for reanalysis was 8 g/t Au. Silver and other element analyses were completed using a 33-element ICP emission spectroscopy (ES) method. Fire assay with gravimetric finish was used for silver analysis if the overlimit value of 100 g/t Ag was reached.

The check assays conducted by Bureau Veritas on the Coeur campaigns consisted of gold analyses completed by fire assay with ICP-AES finish. Over limits were completed by fire assay fusion with gravimetric finish. Silver analyses were completed by four-acid digestion with ICP-AES finish.

SGS analyzed gold by fire assay with AA finish, with overlimit samples (>10 g/t Au) being reanalyzed by fire assay with gravimetric finish. Silver is analyzed by three-acid digestion, aqua regia digestion and ICP, or fire assay with gravimetric finish.

The mine laboratory uses fire assay with AA finish for gold and two-acid digestion with AA finish for silver.

8.7 Quality Assurance and Quality Control

8.7.1 Mexoro

Mexoro performed quality assurance/quality control (QA/QC) procedures, including the insertion of blanks, certified reference materials (standards), and duplicate samples into the sample stream for each sample batch, and analyses of selected samples were repeated. Mexoro's certified standards were obtained from Rocklabs Ltd. Mexoro requested that any batches falling outside a 5% deviation of the standards be re-analyzed.

8.7.2 Paramount

Paramount used 24 standards sourced from Rocklabs, Geostats Pty Ltd (Geostats) and CDN Resource Laboratories Ltd. Other QA/QC measures included the insertion of preparation blanks, preparation duplicates, rig duplicates and check assays.

8.7.3 Coeur

8.7.3.1 QA/QC

The QA/QC program for gold and silver assays has changed since Coeur implemented the program in 2003. Initially, the reference samples were inserted into the sample stream at a 1:200 ratio, whereby one reference sample was inserted for every 200 samples. Starting mid-2005, the proportion was increased to approximately 1:25, to ensure that every fire-assay furnace lot contained reference samples. In late 2007, the following protocols were implemented for exploration and development drilling: one reference standard is inserted for every 20 field samples; one blank sample is inserted for every 20 field samples; and, one field duplicate is collected for every 20 field samples. Additionally, 5% of the sample pulps are sent to a different laboratory for check analysis. In 2012, a new protocol for exploration and development was initiated: one standard and one blank for every 20 field samples, but one duplicate is collected for every 40 field samples.

In 2018, a new protocol for exploration and development drilling was implemented. Standards are selected to match the grade range of the sample of interest, i.e., high-grade standards are inserted into areas of probable high-grade sampling. A sequence of a fine and then a coarse blank is inserted into the sample stream after the mineralized structures to better understand contamination during preparation and analysis stages. Duplicate samples are inserted into areas of economic interest to assess analytical precision.

8.7.3.2 Reviews

Coeur uses the acQuire data management system to store and analyze QA/QC results as they are made available. Results are not released until QC has been completed and confirmed on each assay certificate.

QA/QC results are examined for each batch of assays received from the laboratory. Failures are defined for standards by the certified values provided by the certifying laboratory. A standard fails when the value exceeds or falls short of ± three standard deviations of the certified value. Prior to 2016, a blank failed when the value exceeded five times the lower detection limit of the assay method; in 2016, this was changed to 10 times the lower detection limit.

Failure of standard or blank samples requires re-submitting of pulps on either side of the failure, back to or up to the next passing standard or blank. The original results associated with the failure are entered into the acQuire database as rejected results. If the results from the re-analysis pass QA/QC, they are entered in the acQuire database, as approved. All sample re-runs are given precedence over the original results when used in resource estimation. If the re-run analysis also fails, the geologist may choose to send the samples to the secondary laboratory for a third analysis, or to accept the original results. Results are reviewed quarterly, and elements of the QC program are adjusted, as necessary.

8.7.3.3 Check Assays

Pulp samples are currently submitted to Bureau Veritas for check analysis. The samples are submitted in batches that contain multiple projects. The total sample count equates to a 10% check rate, which is acceptable per Coeur protocols. Gold and silver fire assays indicate low biases and acceptable correlation. Silver analyses by acid digestion indicates a positive bias towards the umpire laboratory, with acceptable correlation. Silver results by fire assay and gravimetric finish have excellent correlations and no significant biases. Prior to 2013 pulp samples were submitted to SGS following the procedures. No significant biases were identified in the results.

8.7.3.4 Down Hole Surveys

Downhole survey instruments are calibrated once a week at a fixed “borehole” constructed from a PVC pipe set in concrete. Six readings are taken per instrument and uploaded automatically into the acQuire database where the information is reviewed quarterly to ensure no instrument drift or bias over time.

8.7.3.5 Collar Surveys

At Guadalupe, Independencia, and La Nación, audits conducted by external, certified surveyors have not found any errors in the collar coordinates determined by Coeur personnel.

8.8 Database

Once collected, all data are entered into an acQuire database and all supporting digital documentation is securely stored on the Company's servers. The data are also exported into 3D modeling software for further understanding of the geology and mineral controls. The original physical documents for each drill hole are archived and stored in the Chihuahua or Palmarejo exploration offices.

A unique resource database was created in 2014 for those areas that Paramount was reporting Mineral Resource estimates. The databases were constructed from digital data provided by Paramount. Following the acquisition of Paramount, all information associated with the previous drilling campaigns was uploaded to the Coeur acQuire database, with adaptations made to the geology to be consistent with Coeur methodology. Detailed QA/QC review (and corrective actions if necessary) was completed for all the priority Paramount deposits/prospects near current mine infrastructure but remains to be completed for the remainder of the deposits in the Guazapares district.

8.9 Qualified Person's Opinion on Sample Preparation, Security, and Analytical Procedures

Sample collection, preparation, analysis and security for RC and core drill programs are in line with industry-standard methods for gold–silver deposits.

Drill programs included insertion of blank, duplicate, and standard reference material samples. QA/QC program results do not indicate any problems with the analytical programs.

Data are subject to validation, which includes checks on surveys, collar co-ordinates, and assay data. The checks are appropriate, and consistent with industry standards.

The QP is of the opinion that the quality of the gold and silver analytical data collected by Coeur and Paramount in the Palmarejo district are sufficiently reliable to support Mineral Resource estimation without limitations on Mineral Resource confidence categories.

Gold and silver analytical data collected by Paramount in the Guazapares district is not currently used to support Mineral Resource estimates and is still in the validation phase.

9.0 DATA VERIFICATION

9.1 Internal Data Verification

A detailed review of all documentation and assay data related to each drill hole is completed as part of the drill hole "lock down" procedure in acQuire. The final review is conducted and signed off by the QP once final assay results are available. A digital file of all supporting documentation for each drill hole is created and stored on Coeur's servers.

Coeur routinely conducts drill hole collar audits with an external, qualified surveyor with any discrepancies reviewed and corrected where necessary.

Downhole survey measurements are taken every 50 m as the drillhole advances and at final depth. Measurements are also taken every 25 m after completion of each drillhole. The latter measurements are considered highest priority for use in geological modeling and subsequent work, although these are compared against the 50 m measurements to ensure no significant deviation is occurring downhole. Survey instruments are also calibrated weekly using a fixed, surface structure with constant azimuth and dip. All measurements are imported to the Company's acQuire database.

Coeur monitors balance sensitivities on a daily basis with the use of metal bars with fixed weights. One reading is taken before any drill core is weighed and a second after. All data are imported to an acQuire database.

Coeur prepares quarterly QA/QC reports for internal review by the QP and personnel in the corporate Technical Services department. Any issues identified during this process are reviewed and the required corrective actions are taken. The QP routinely reviews on site procedures to ensure compliance with the company's protocols based on industry-accepted practices.

Prior to the involvement of the QP, the following checks were performed by Coeur personnel:

- Imported and conducted QA/QC on all assay data from 2008–2013;
- Quarterly QA/QC reports of gold and silver assay data in 2013;
- All geologic data logged and entered into acQuire from 2008–2013;
- Conducted a 10% check of gold and silver assays with an independent laboratory in 2013.

The Palmarejo Operations staff perform monthly, quarterly, and annual reconciliation evaluations. Results indicate that the tonnages and grades of the long-term model are controlled within acceptable limits.

The QPs requested that information, conclusions, and recommendations presented in the body of this Report be reviewed by Coeur experts or experts retained by Coeur in each discipline area as a further level of data verification. Checks completed by the subject matter experts could include cross-checks of data, checks on consistency of presentation of information between the different Report chapters, checks for data omissions, verification that any errors or inconsistencies identified during the reviews were either addressed or had mitigation planned, and checks on the applicability and appropriateness of the QP's opinions, interpretations, recommendations, and conclusions based on the subject matter experts' Project and discipline knowledge. Feedback from the subject matter experts was incorporated into the Report as required.

9.2 External Data Verification

External reviews of the Project were undertaken and are summarized in Table 9-1.

9.3 Data Verification by Qualified Person

The QP personally performed the following data verification:

- Imported and conducted QA/QC on all assay data from 2014–present;
- Quarterly QA/QC reports of gold and silver assay data from 2014–present;
- All geologic data logged and entered into acQuire from 2014–present;
- Conducted a 10% check of gold and silver assays with an independent laboratory from 2014–present;
- Participated in the 2021 database merge project to combine mine and exploration databases;
- Conducted drillhole lockdown, including checks of assay certificates, collar and downhole surveys, geology, and QA/QC reports that the QP signed off;
- Working at site of the Palmarejo Operation from 2014–present.

9.4 Qualified Person's Opinion on Data Adequacy

The process of data verification for the Project was performed by external consulting firms from 2005 to present, and by Coeur personnel, including the QP. The QP reviewed the appropriate reports. The QP considers that a reasonable level of verification has been completed, and that no material issues would have been left unidentified from the programs undertaken.

The QP is of the opinion that the data verification programs for Project data adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in mineral resource and mineral reserve estimation, and in mine planning.

Table 9-1: External Data Reviews

Company	Year	Note
Applied Geoscience LLC	2005–2008	Data reviewed included reference sample results, duplicate sample, duplicate assay results, and second-laboratory check assays. No major issues with the data were noted
Delve Consultants, LLC	2006–2009	Data review in support of technical reports on the Guazapares district area. No major issues with the data were noted
A.C.A. Howe International Limited	2008	Reviewed QA/QC data in support of a technical report. QC results indicated that there were no major problems with the accuracy and precision of the analyses, and the sampling and analytical protocols were appropriate. Collected witness samples. Gold and silver grades from this sampling were consistent with the grades returned from drill holes at San Miguel.
AMEC International (Chile) S.A	2008	Drill data and QA/QC review. No major issues with the data were noted.
Mine Development Associates	2011–2012	No major issues with the data were noted. Recommendations made on improvements to the QA/QC programs.
Metal Mining Consultants Inc.	2013–2014	The project data were considered acceptable for use in resource estimation.
KPMG	Pre 2016	Accounting firm reviewed assay data for select drill holes chosen by them at random as part of Coeur's general audit process required by its NYSE listing
Grant Thornton	2016 to date	Accounting firm reviewed assay data for select drill holes chosen by them at random as part of Coeur's general audit process required by its NYSE listing.

10.0 MINERAL PROCESSING AND METALLURGICAL TESTING

10.1 Test Laboratories

Independent metallurgical test work facilities used over the Project life included SGS Laboratories, Durango, Mexico; SGS in Lakefield, Canada (SGS Lakefield), ALS, Kamloops, British Columbia, Canada; and Corporación Química Platinum S.A. de C.V. located in Silao, Guanajuato, Mexico.

Palmarejo Operations have an on-site analytical and metallurgical laboratory that assays concentrates, in-process samples, and geological samples. The on-site metallurgical laboratory is used for testing flotation reagents, grind analysis, and process characterization of new ores. The on-site laboratories are not independent and are audited with third parties.

There is no international standard of accreditation provided for metallurgical testing laboratories or metallurgical testing techniques and selection of laboratories is based on experience and reputation within the industry.

10.2 Metallurgical Testwork

10.2.1 Historical Testwork

The focus of the historical test work was to obtain representative metallurgical samples; conduct mineralogy examinations; determine the most favorable processing routes; collect sufficient design information to select equipment that fit the preferred processing flow sheet; and provide guidance for operating performance.

Major testwork conducted included:

- Comminution: Bond work index (BWi) test work, unconfined compressive strength (UCS) testing, advanced media competency (AMC) testing, JK Drop weight (DWi) and Steve Morrell Pty Ltd (SMC) testing used for modeling.
- Flotation: conducted at batch scale on Palmarejo ores, followed by locked cycle testing, and finally, pilot plant scale tests to produce intermediate products for cyanidation of flotation concentrates and solutions for Merrill-Crow and electrowinning.
- Leaching: conducted to optimize reagent additions and define the plant extractions.

These parameters were used to construct the process plant as outlined in Chapter 14.

10.2.2 Guadalupe

Test programs were conducted from 2007–2014. These included mineralogical studies, whole ore bottle roll cyanidation, rougher flotation followed by tailing cyanidation, and gravity separation.

Electrum and native gold were the primary gold species. Acanthite, argentite, and native silver were the primary silver species. Sulfides included sphalerite, galena, chalcopyrite, chalcocite, enargite, bornite, and tennantite–tetrahedrite.

Of the methods tested, the best results were achieved by flotation followed by tailing leaching. Whole ore cyanidation was shown to be less suitable because of lower recoveries. The poorest overall recovery was found with the gravity concentrate method.

The 2013 flotation test results indicated that the Guadalupe ore sample achieved an average gold and silver recovery of 80.4% and 78.3%. Flotation, followed by tails leaching results, indicates that gold and silver recoveries could be improved. The achieved overall recoveries were 94.8% and 95.6%, respectively.

The 2014 test work on Guadalupe North ores were amenable direct agitated cyanidation treatment at nominal P80 = 75 µm feed size with minor conversion of plant parameters required with the transition for Palmarejo ore to Guadalupe. Gold and silver recoveries tended to increase with increasing grade. Gold and silver recoveries were improved significantly after flotation tailings were subjected to whole cyanidation. Global Gold laboratory recoveries for flotation/tailings cyanidation unadjusted for plant solution losses ranged from 94.2% to 98.1% and averaged 95.7%. Global Silver laboratory recoveries for flotation/tailings cyanidation unadjusted for plant solution losses ranged from 93.6% to 97.2% and averaged 97.2%.

10.2.3 Independencia

Testwork on the Independencia Oeste and Este deposits was conducted from 2014–2015. Work completed included mineralogy, multi-element ICP scan, whole-rock analyses, and carbon and sulfur speciation analyses, BWi, timed grinding series, bulk rougher flotation tests, and bottle roll tests, matching Palmarejo plant specifications.

Independencia Oeste mineralization was found to contain 68% silver–copper sulfide, 19% acanthite/argentite, 6% native silver/electrum, 5% silver–copper–arsenic sulfide, and the remaining 2% comprises various sulfides. The BWi was estimated to be 16.4 kWh/t. This value was considered to be moderate to hard for ball milling and within the operating capabilities of the Palmarejo grinding circuit. The master composite flotation test recovered 90% of the silver and 89% of the gold into a bulk concentrate that pulled 21% of the initial mass. Duplicate bottle roll cyanidation leach tests averaged 81% silver and 86% gold extraction in solution. As is common for cyanidation, silver leached slower than gold.

Independencia Este flotation test results showed the mass pulls were generally 15–23%; silver recoveries were variable. Flotation response demonstrated that flotation could separate silver and gold into a rougher concentrate with low concentrate to bulk ore ratios. The kinetic extraction curves from the bottle roll tests demonstrated typical rapid gold extraction and slower silver extraction. Cyanidation extraction values were better than the flotation lab results. This observation agreed with similar test results using both flotation and cyanidation for the Independencia master composite. Composites responded well to bulk conventional flotation treatment at a P80 minus 106 µm feed size. Combined (flotation + tailings cyanidation) proved to be more effective on recoveries above recoveries obtained by separate whole ore cyanidation or flotation circuits. Leach cyanide consumption rates were low on flotation tailings.

10.2.4 La Nación

Testwork was performed in 2016–2019, on samples from the La Nación, La Nación Central, and La Nación Sur areas, using the Palmarejo plant specifications and mineralogy, bottle roll tests, head analysis, multi-element ICP scan and carbon sulfur speciation analyses, and whole ore cyanidation tests were performed.

The La Nación composites tested in 2016 were amenable to whole ore milling cyanidation treatment with respect to gold recovery but were more varied with respect to silver extraction and recovery. Silver solution extraction rates were slower than for gold.

La Nación composites tested in 2017 were amenable to whole ore milling cyanidation treatment with respect to gold recovery. Gold leach rates were generally rapid and substantially peaked the first eight hours of leaching. Gold in solution obtained from the 72-hour leach tests ranged from 81.0–99.8% and averaged 94.3%. Composites were more varied with respect to silver extraction in solution by whole ore milling cyanidation. Silver extractions obtained from the 72-hour leach tests ranged from 43.6–96.6% and averaged 86.0%. Whole ore leaching cyanide consumptions were generally high and ranged from 2.8–4.0 kg/t NaCN ore (3.42 kg/t NaCN ore, avg.) for the 72-hour tests. No strong evidence of the high cyanide consumption was related to sulfide content in the evaluated composites. pH control lime requirements were low and averaged 1.08 kg/t ore.

Tests on material from La Nación Central and Sur were conducted in 2019. Eight size fractions from La Nación Central were subject to mineralogical study. The predominant silver mineral in each of the size fractions was argentite, with small quantities of stromeyerite and native silver. Argentite was primarily associated with quartz in each of the size fractions. Silver liberation was not detected in the size fractions >37 µm. Gold was found only in the 44 and 53 µm size fractions, as electrum associated with quartz with a size of <1 µm.

Mineralogy test work on La Nación Sur composites was performed on eight size fractions. The predominant silver mineral in each of the size fractions was argentite. The argentite was primarily associated with quartz with less than 10% associated with pyrite in the coarse size fractions. Liberation was relatively low in the coarse fractions (<5% liberated in particle sizes >53 µm). The liberation increased with reducing particle size with a 70% liberation in the +37-micron size fraction and 98% liberation in the -37 µm fraction. Gold was found only in the +74 and +53 µm size fractions in the form of electrum associated with quartz with a size of <2 µm.

The manganese minerals psilomelane and coronadite were present throughout all size fractions at La Nación Central and Sur. These minerals can potentially lead to lower silver recovery. Sulfide minerals present in minor quantities included galena, sphalerite, and covellite.

10.2.5 2020–2021 Testwork

10.2.5.1 Tailings Pre-Concentration

A sample from the Palmarejo milling circuit tails stream was submitted to SGS Lakefield for bulk mineralogy, heavy liquid separation preconcentration and silver deportment studies in early 2020. The flotation tails sample contained a relatively high grade at 1.64 g/t Au and 45.6 g/t Ag. Bulk mineralogy was completed using quantitative evaluation of minerals by scanning electron microscopy (QEMSCAN) analysis and supported by X-ray diffraction analysis. The primary minerals were quartz and calcite, with minor amounts of potassium feldspar, clays, iron oxides and trace amounts of dolomite, chlorite.

Results from the preconcentration showed that it would not be an effective method.

The microscopic silver examination of the tails composite sample showed 49.1% of the silver being liberated, 37.6% exposed and 13.2% locked. The primary silver minerals were acanthite, naumannite and jalpaite with minor amounts of electrum, aguilarite, native silver and others. The exposed and locked silver minerals were primarily associated with quartz with moderate amounts associated with lead oxide, and minor amounts associated with willemite, iron oxide, dolomite, and calcite.

10.2.5.2 Solid-Liquid Separation and Rheology Testing of Leach Circuit Tails Sample

A tails slurry sample from the Palmarejo circuit was submitted for solid–liquid separation, rheology testing, and counter-current decantation washing modeling as part of 2020 testwork conducted by SGS Lakefield. Flocculant scoping tests were performed to match flocculant to sample recovery and thickening/clarification results. Additional dynamic tests were conducted to compare outcomes. Even at higher flocculant dosage the current flocculant could not achieve similar clarity or comparable total suspended solids levels. Other competitive flocculants were tested with variable dosage to test dosage to overflow total suspended solids rates. The solution densities on the underflow and yield stress were also calculated and tracked during the process providing results ranging from 57.1–58.2% solids depending on solids loading and residence time.

The critical solids density was calculated to be approximately 54% solids at a shear stress of 40Pa under unsheared flow conditions and 15 Pa under sheared conditions.

The resulting samples following the previous testwork were used to for various counter-current decantation modeling scenarios, using fixed parameters of cyanide leached discharge at 42% solids, silver and gold tenor in feed solution at 26 mg/L and 1.3mg/L, underflow on thickener at 55% solids, and perfect mixing at each wash stage. The results showed that the best response was achieved using a tested market flocculant at fixed dosage. Underflow slurry characteristics were within specifications for pumping.

10.3 Recovery Estimates

Current recovery estimates for each deposit are summarized in Table 10-1.

The LOM forecast average gold blended recovery is 90%. The LOM forecast average blended silver recovery is 82.5%.

Table 10-1: LOM Metallurgical Recovery Forecasts

Deposit	Forecast LOM average Au Recovery (%)	Forecast LOM average Ag Recovery (%)
Guadalupe	88.0	80.0
Independencia Oeste	91.0	77.0
Independencia Este	90.0	57.0
La Nación	90.0	83.0
Los Bancos	93.5	84.5
Zapatas	90.0	84.0
La Baviza	89.0	80.0

10.4 Metallurgical Variability

Samples selected for metallurgical testing were representative of the various locations, ore types, and minerology. Additional samples were selected at periods during mining to test or reconcile results. Individual and composite tests were selected and taken to provide sufficient sample mass.

10.5 Deleterious Elements

The anticipated gold and silver recoveries could be affected by alteration states. Highly oxidized material is not responsive to the flotation process. Highly oxidized ore will significantly affect recovery if blended at a high ratio. Ores that have a high clay content increase slurry viscosity, which has a detrimental effect on precious metals recovery in flotation.

No other deleterious elements are known from the processing perspective.

10.6 Qualified Person’s Opinion on Data Adequacy

Industry-standard studies were performed as part of process development and initial plant designs. Subsequent production experience and focused investigations, as well as marketing requirements, have guided process improvements and changes.

Testwork programs, both internal and external, continue to be performed to support current operations and potential improvements.

Current metallurgical test work confirms the material to be mined as having similar response to the flotation-leach process as historically mined ores. Metal recovery assumptions are derived from past performance of the plant.

The QPs reviewed the information compiled by Coeur, as summarized in this Chapter, and performed a review of the reconciliation data available to verify the information used in the LOM plan.

Based on these checks, in the opinion of the QPs the metallurgical testwork results and production data support the estimation of mineral resources and mineral reserves and can be used in the economic analysis.

11.0 MINERAL RESOURCE ESTIMATES

11.1 Introduction

Mineral Resources are estimated for the following deposits. The database closeout date for all estimates was July 13, 2021.

- Guadalupe: Main, Zapata, and La Patria Zones;
- Independencia: Main, La Bavisa, and Hidalgo Zones;
- La Nación: Main Zone and Los Bancos Zone.

11.2 Exploratory Data Analysis

Composites exhibit near log normal distributions. Statistics were compiled and compared for raw drill hole data, length weighted drill holes, composites, declustered composites, and capped declustered composites to ensure that the grade distribution and true mean of the system were documented and conserved through the estimation process. The coefficient of variation was analyzed to determine if domaining produced sufficient stationarity for the estimate.

11.3 Geological Models

Mineralization is hosted in primary northwest-trending, northeast- and southwest-dipping structures, and secondary diverging structures. The main mineralization type is defined by epithermal quartz vein breccias surrounded by a low-grade halo, consisting of various types of mineralized structures including discontinuous splays and vein arrays. Many of the deposits consist of various anastomosing quartz vein breccias with a sigmoidal geometry. There is also a broad geotechnical domain, used to estimate rock mass rating, or RMR.

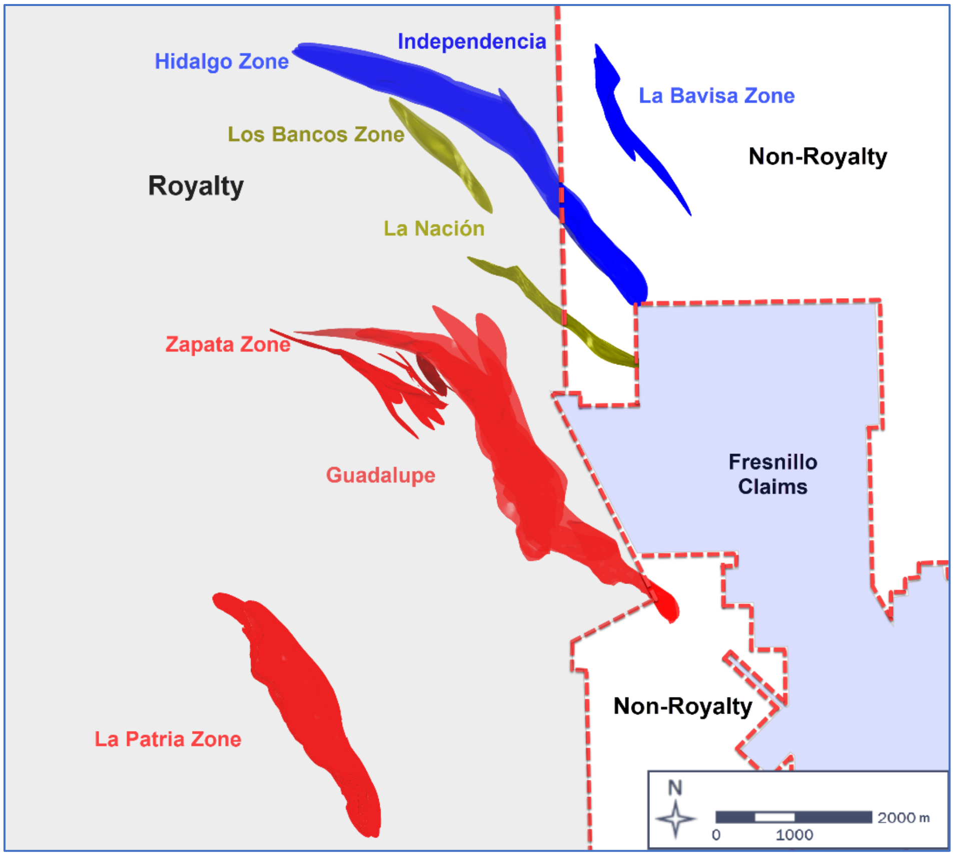
A plan view, showing the estimation domains, with royalties applicable to each model, is provided in Figure 11-1.

The implicit modelling algorithm in Leapfrog Geo software was used to create all the estimation domains through interpretation of relevant intervals of drill data, digitized mapping, and underground production data.

11.4 Density Assignment

The density determinations discussed in Chapter 8.3 were used in interpolation. Density was estimated using inverse distance weighting to the second power (ID2).

Figure 11-1: Palmarejo Operations with Royalty and Claims Zones Plan View



Note: Figure prepared by Coeur, 2021.

11.5 Grade Capping/Outlier Restrictions

Caps for each estimation domain were determined using various methods such as histograms, probability plots and a metal loss calculation. Histograms and probability plots were examined for changes in slope and data distribution, while metal loss was calculated to keep the effect of capping to a maximum metal loss of 10%. The ranges of applied capping values are provided in Table 11-1. Grade caps ranged from 100–3,500 g/t Ag and from 0.5–70 g/t Au, depending on estimation domain.

Table 11-1: Silver and Gold Cap Values per Estimation Domain

Estimate	Ag (g/t)	Au (g/t)
Guadalupe; Main Zone	200–4,000	4–70
Guadalupe; Zapata Zone	100–900	2–14
Guadalupe; La Patria Zone	100–1,000	2–25
Independencia; Main Zone	300–2,000	1–70
Independencia; La Bavisa Zone	100–500	1–5
Independencia; Hidalgo Zone	250–1,000	3.5–10
La Nación; Main Zone	200–1,200	2–20
La Nación; Los Bancos Zone	200–1,000	0.5–5

11.6 Composites

Core samples were composited at 2 m intervals by estimation domain for gold and silver. The composite length was chosen as one of the most common sample lengths and reduces the amount of sample splitting during the compositing process. Unsampled intervals were given a value of 0.001 ppm, as these intervals were deemed to be waste by the logging geologist and were not assayed. Composites were broken at domain boundaries, and composites <2 m at boundaries were distributed to the other composites within the domain. Natural rock caverns and drill intervals with no recovery, logged as “voids”, were omitted from the estimate.

Los Bancos, Zapata, and La Bavisa zones are full thickness composites within the domain. This resulted in a single variable length composite per drill hole within the estimation domain. This method of compositing is useful for discrete planar deposits of relatively consistent and narrow width, as it allows for the execution of a two-dimensional estimate.

11.7 Variography

Variogram searches were oriented along strike of the domains, with the major axis horizontal on-strike, the secondary axis down dip, and the minor axis across the width of the domain. Silver and gold variograms for each of the 12 estimation domains were created. Orthogonal variograms were fitted for gold and silver, consisting of three variograms oriented along the anisotropy. Downhole variograms were also fitted to provide the nugget. Where orthogonal variograms were not possible, omni-directional variograms were used.

Two and three structure, general relative, pairwise relative, and semi-variogram models were fitted to the experimental variograms. The Guadalupe–La Bavisa zone does not employ variography as it was estimated using ID2.

11.8 Estimation/interpolation Methods

The various deposits were estimated using ordinary kriging (OK), with hard boundaries between geologic units. The enveloping disseminated domain was estimated using ID2. Search orientations were locally adjusted using dynamic anisotropy. The Guadalupe–La Bavisa zone was estimated using ID2.

Block models were constrained using the estimation domains. Models were rotated in two dimensions to represent the general strike and dip of the deposits. The parent block size was 2 x 25 x 25 m (X, Y, Z). The block size was based on the minimum mining width, composite length, and the average drill spacing of 40–50 m in the Y–Z plane. The block size was generally selected as one-half to one-third of the drill spacing. To provide a volumetric fit when filling the wireframes, the block models were sub-celled to a minimum of 1.0 x 2.5 x 2.5 m. Estimation took place in the parent cells, therefore, all sub-cells within a parent cell have the same grade. The estimation used a discretization grid of 1 x 5 x 5, which was based on the discrete dimensions in the X direction, and that a discretization of >5 in the Y and Z dimensions was inefficient and did not improve the block variance.

The full thickness model parent block size was set to the variable width of the vein in the X-dimension, and 30 x 30 m in the Y–Z dimensions. These models are not sub-celled and use a discretization grid of 1 x 3 x 3 m.

The search parameters for the estimate are summarized in Table 11-2. The maximum number of samples was optimized by minimizing kriging variance while maximizing slope of regression, while attempting to maintain some degree of localization to improve production reconciliation. Each domain was estimated with one set of search ranges in one pass to achieve the optimal number of samples, and to avoid estimation artifacts created when using a multiple-pass method.

A high-grade search ellipse restriction was employed for the Independencia silver estimate, which applied the restriction at 75% of the capping value. Constant search volumes and number of samples were used for each domain.

The block model was depleted using the in-situ variable, proportionally depleting from 100 (in situ) to 0 (completely mined).

11.9 Validation

The grade estimates were validated visually by stepping through sections and comparing the drill data and composites with the block values. Local bias validation was completed using swath plots. Reconciliation factors for mill to model reconciliation were used for global bias validation, as well as to drive iterative improvements in the estimation parameters. Geologic interpretation was validated and improved through underground mapping, channel sampling, and ore control drilling.

Table 11-2: Search Parameters by Zone and Variable

	Variable	Ellipse Ranges (m)			Sample Count		Discretization			Max Samples per Drill Hole
		X	Y	Z	Min	Max	X	Y	Z	
Guadalupe; Main Zone	Ag	250-200	200-100	30	9	12	1	5	5	3
	Au	200	100	30	9	15	1	5	5	3
	Density	500	500	500	2	5	1	5	5	—
Guadalupe; Zapata Zone	Ag	130	80	30	6	12	1	3	3	—
	Au	130	80	30	6	12	1	3	3	—
	Density	250	200	100	3	6	1	3	3	—
Guadalupe; La Patria Zone	Ag	150	100	30	9	15	1	5	5	3
	Au	150	100	30	9	15	1	5	5	3
	Density	500	500	500	2	5	1	5	5	—
Independencia; Main Zone	Ag	200	100	30	9	15	1	5	5	3
	Au	200	100	30	9	15	1	5	5	3
	Density	1,000	600	300	2	5	1	5	5	—
Independencia; La Bavisa Zone	Ag	150	100	30	3	9	1	3	3	—
	Au	150	100	30	3	9	1	3	3	—
	Density	200	150	50	3	5	1	3	3	—
Independencia; Hidalgo Zone	Ag	200	100	30	9	15	1	5	5	3
	Au	200	100	30	9	15	1	5	5	3
	Density	1,000	600	300	2	5	1	5	5	—
La Nación; Main Zone	Ag	150	100	30	3	9	3	1	3	—
	Au	150–250	100–150	30	3-6	9-12	3	1	3	—
	Density	200	150	50	3	6	3	1	3	—
La Nación; Los Bancos Zone	Ag	100	80	30	3	6	3	1	3	—
	Au	130	80	30	3	6	3	1	3	—
	Density	150	150	150	3	6	3	1	3	—

11.10 Confidence Classification of Mineral Resource Estimate

11.10.1 Mineral Resource Confidence Classification

The classification is based primarily on the data spacing and geological confidence. To estimate a block, a minimum of nine samples from at least three separate drill holes must be consulted, or for the full thickness models three composites from three separate drillholes. The confidence classifications are summarized in Table 11-3. An example showing the confidence classifications in Guadalupe domain 100 is provided in Figure 11-2.

The measured classifications are based on proximity to ore control and production data. This limits the classification of measured material to the area around current mining where there is a very good understanding of the deposit geometry and grade distribution.

Indicated blocks were classified using a script and then manually modified using polygons (in the plane of the domain) based on geologic confidence.

All remaining estimated material is classified as inferred, as the geological solids are considered conservative and do not extrapolate unsupported distances beyond or between data points.

Classification distances are based on variable grade continuity for each zone quantified with variography.

11.10.2 Uncertainties Considered During Confidence Classification

Following analysis that classified the mineral resource estimates into the measured, indicated, and inferred confidence categories, uncertainties regarding sampling and drilling methods, data processing and handling, geological modelling, and estimation were incorporated into the classifications assigned. The areas with the most uncertainty were assigned to the inferred category, and the areas with fewest uncertainties were classified as measured.

11.11 Reasonable Prospects of Economic Extraction

11.11.1 Input Assumptions

For each resource estimate, an initial assessment was undertaken that assessed likely infrastructure, mining, and process plant requirements; mining methods; process recoveries and throughputs; environmental, permitting, and social considerations relating to the proposed mining and processing methods, and proposed waste disposal, and technical and economic considerations in support of an assessment of reasonable prospects of economic extraction.

Mineral resources are confined within conceptual mineable shapes that use the assumptions in Table 11-4.

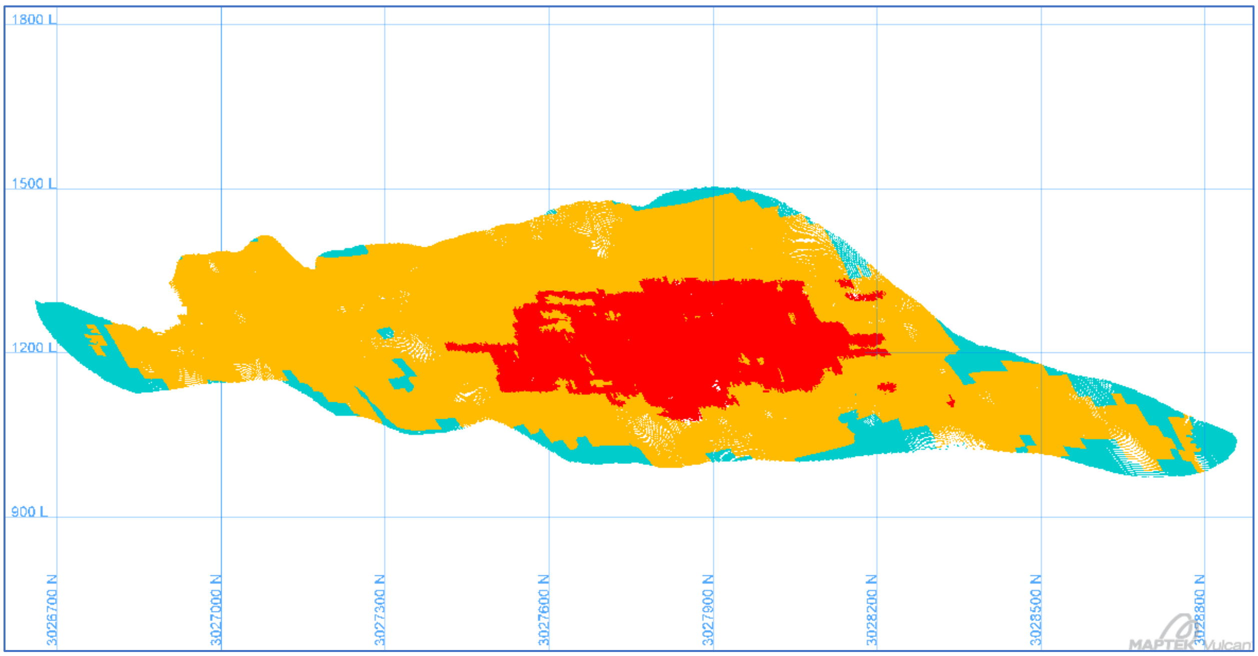
Table 11-3: Confidence Category Assignments

Deposit	Confidence Classification	Criteria
Guadalupe; Main Zone	Measured	Based on volumetric control derived from grade control mapping, i.e., if a block is within 5 m of grade control data; and if the block was first classed as indicated
	Indicated	If the average sample distance is ≤60 m; and if the closest sample is within 45 m; and if the estimate uses at least three drill holes
	Inferred	Remaining estimated material
Guadalupe; Zapata Zone	Measured	N/A
	Indicated	If the average sample distance is ≤70 m; and if the estimate uses at least three drill holes
	Inferred	Remaining estimated material
Guadalupe; La Patria Zone	Measured	N/A
	Indicated	If the average sample distance is ≤60 m; and if the estimate uses at least three drillholes
	Inferred	Material within a central corridor in which the historic drillholes have been sufficiently validated with a modern drill campaign
Independencia; Main Zone	Measured	Based on volumetric control derived from grade control mapping, i.e., if a block is within 3 m of grade control data; and if the block was first classed as indicated
	Indicated	If the average sample distance is ≤60 m; and if the closest sample is within 45 m; and if the estimate uses at least three drill holes
	Inferred	Remaining estimated material
Independencia; La Bavisa Zone	Measured	N/A
	Indicated	If the average sample distance is ≤60 m; and if the estimate uses at least three drill holes
	Inferred	Remaining estimated material
Independencia; Hidalgo Zone	Measured	N/A
	Indicated	If the average sample distance is ≤60 m; and if the closest sample is within 45 m; and if the estimate uses at least three drill holes
	Inferred	Remaining estimated material
La Nación; Main Zone	Measured	Based on volumetric control derived from grade control mapping, i.e., if a block is within 5 m of grade control data; and if the block was first classed as Indicated
	Indicated	If the average sample distance is ≤75 m; and if the closest sample is within 45 m; and if the estimate uses at least three drill holes
	Inferred	Remaining estimated material
	Measured	N/A

Deposit	Confidence Classification	Criteria
La Nación; Los Bancos Zone	Indicated	If the average sample distance is ≤55 m; and if the estimate uses at least three drill holes
	Inferred	Remaining estimated material

Note: NA = not applicable

Figure 11-2: Example Confidence Classification, Guadalupe Main Deposit (domain 100)



Note: Figure prepared by Coeur, 2021. Red is measured, orange is indicated, and blue is inferred. Section looks west.

Table 11-4: Underground Mineable Shape Input Assumptions

Parameter	Units	Range (from–to)
Gold price	$/oz	1,700
Silver price	$/oz	22
Gold mining duty & refining cost	$/oz Au	0.491
Silver mining duty & refining cost	$/oz Ag	0.491
Gold recovery	%	93.1
Silver recovery	%	81.9
Gold payable	%	99.88
Silver payable	%	99.86
Au:Ag value ratio	Au:Ag	89.86
Mine cost	$/t	36.01–41.75
Surface mineralized material haulage	$/t	3.52
Process	$/t	27.29
G&A	$/t	11.00
Support, aux equipment	$/t	3.19
AuEq cut-off grade	g/t	1.59-2.21

11.11.2 Commodity Price

The gold and silver prices used in resource estimation are based on analysis of three-year rolling averages, long-term consensus pricing, and benchmarks to pricing used by industry peers over the past year. The estimated timeframe used is the eight-year LOM that supports the mineral reserves estimates. The gold price forecast for the mineral resource estimate is US$1,700/oz and the silver price is US$22/oz. The QP reviewed the forecasts as outlined in Chapter 16.

11.11.3 Cut-off

The mineral resources are reported using a cut-off of 1.59 to 2.21 g/t gold equivalent (AuEq). Gold equivalent cut-off grades were calculated for the deposits, with mineral resources estimated and reported above this cut-off. The AuEq cut-off was calculated as follows:

$$AuEq_{Cutoff} = \frac{Mining + Processing + G\&A}{Gold\ Price - Refining\ Cost} \times Gold\ \%\ Recovery\ \times Gold\ \%\ Payable$$

Where mining, processing and G&A are costs expressed as US dollars per tonne, and gold price and refining costs are expressed as US dollars per troy ounce. The payability refers to the percentage of metal payable after refining.

A gold:silver value ratio was used to convert silver grades to gold equivalent grades and is calculated using the following formula:

$$Au{:}Ag_{Value\ Ratio} = \frac{(Gold\ Price - Refining\ Cost) \times Gold\ \%\ Recovery\ \times Gold\ \%\ Payable}{(Silver\ Price - Refining\ Cost) \times Silver\ \%\ Recovery \times Silver\ \%\ Payable}$$

Gold equivalent grades were calculated using the following formula:

$$AuEq = Au + Ag \times Au{:}Ag_{Value\ Ratio}$$

where AuEq, gold and silver are the gold equivalent grade, gold grade, and silver grade, respectively, in g/t.

The input parameters to the cut-off grades and the resulting grade cut-off for mineral resources reporting was provided in Table 11-4.

11.11.4 QP Statement

The QP is of the opinion that any issues that arise in relation to relevant technical and economic factors likely to influence the prospect of economic extraction can be resolved with further work. The mineral resource estimates are performed for deposits that are in a well-documented geological setting. Coeur is very familiar with the economic parameters required for successful operations in the Palmarejo area; and Coeur has a history of being able to obtain and maintain permits, social license and meet environmental standards. There is sufficient time in the four-year timeframe considered for the commodity price forecast for Coeur to address any issues that may arise, or perform appropriate additional drilling, testwork and engineering studies to mitigate identified issues with the estimates.

11.12 Mineral Resource Statement

Mineral resources are reported using the mineral resource definitions set out in SK1300 and are reported exclusive of those mineral resources converted to mineral reserves. The reference point for the estimate is in situ.

Measured and indicated mineral resources are summarized in Table 11-55 and inferred mineral resources in Table 11-66. Mineral resources are current at December 31, 2021.

The Qualified Person for the estimate is Mr. Joseph Ruffini, RM SME, a Coeur employee.

Table 11-5: Gold and Silver Measured and Indicated Mineral Resource Statement as at December 31, 2021 (based on US$1,700/oz gold price and US$22/oz silver price)

Zone/Deposit	Mineral Resource Classification	Tonnes (kt)	Grade		Contained Ounces		Gold Equivalent Cut-off Grade (g/t AuEq)	Metallurgical Recovery	
			Ag (g/t)	Au (g/t)	Ag (koz)	Au (koz)		Ag (%)	Au (%)
Guadalupe	Measured	2,580	116	1.74	9,625	144	1.62–2.21	81.9	93.1
	Indicated	9,519	102	1.92	31,241	586	1.62–2.21	81.9	93.1
	Subtotal measured and indicated	*12,099*	*105*	*1.88*	*40,867*	*731*	*1.62–2.21*	*81.9*	*93.1*
Independencia	Measured	588	189	2.19	3,578	41	1.64–1.71	81.9	93.1
	Indicated	5,075	127	1.33	20,794	217	1.64–1.71	81.9	93.1
	Subtotal measured and indicated	*5,664*	*134*	*1.42*	*24,373*	*258*	*1.64–1.71*	*81.9*	*93.1*
La Nación	Measured	185	197	1.59	1,169	9	1.59–1.63	81.9	93.1
	Indicated	1,171	194	1.30	7,304	49	1.59–1.63	81.9	93.1
	Subtotal measured and indicated	*1,355*	*194*	*1.34*	*8,473*	*58*	*1.59–1.63*	*81.9*	*93.1*
Total measured and indicated mineral resources	***Total Measured***	***3,353***	***133***	***1.81***	***14,373***	***195***	***1.59–2.21***	**81.9**	**93.1**
	Total Indicated	***15,764***	***117***	***1.68***	***59,340***	***852***	***1.59–2.21***	**81.9**	**93.1**
	Total measured and indicated	***19,117***	***120***	***1.70***	***73,712***	***1,047***	***1.59–2.21***	***81.9***	***93.1***

Table 11-6: Gold and Silver Inferred Mineral Resource Statement at December 31, 2021 (based on US$1,700/oz gold price and US$22/oz silver price)

Zone/Deposit	Mineral Resource Classification	Tonnes (kt)	Grade		Contained Ounces		Gold Equivalent Cut-off Grade (g/t AuEq)	Metallurgical Recovery	
			Ag (g/t)	Au (g/t)	Ag (koz)	Au (koz)		Ag (%)	Au (%)
Guadalupe	Inferred	1,469	102	2.42	4,798	114	1.62–2.21	81.9	93.1
Independencia	Inferred	2,400	130	1.40	10,048	108	1.64–1.71	81.9	93.1
La Nación	Inferred	406	200	1.81	2,607	24	1.59–1.63	81.9	93.1
Total inferred mineral resource	***Inferred***	***4,275***	***127***	***1.79***	***17,453***	***246***	***1.59–2.21***	***81.9***	***93.1***

Notes to accompany mineral resource tables:

1. The mineral resource estimates are current as of December 31, 2021 and are reported using the definitions in Item 1300 of Regulation S–K (17 CFR Part 229) (SK1300).
2. The reference point for the mineral resource estimate is in situ. The estimate is current at December 31, 2021. The Qualified Person for the estimate is Mr. Joseph Ruffini, RM SME, a Coeur employee.
3. Mineral resources are reported exclusive of the mineral resources converted to mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
4. The estimate uses the following key input parameters: Assumption of conventional longhole underground mining; gold price of US$1,700/oz, silver price of US$22/oz; reported above a variable gold equivalent cut-off grade that ranges from 1.59–2.21 g/t AuEq; metallurgical recovery assumption of 93.1% for gold and 81% for silver; variable mining costs that range from US$36.01–US$41.75/t, surface haulage costs of US$3.52/t, process costs of US$27.29/t, general and administrative costs of US$11.00/t, and surface/auxiliary support costs of US$3.19/t. Mineral resources exclude the impact of the Franco-Nevada gold stream agreement at Palmarejo in estimation.
5. Rounding of tonnes, grades, and troy ounces, as required by reporting guidelines, may result in apparent differences between tonnes, grades, and contained metal contents.

11.13 Uncertainties (Factors) That May Affect the Mineral Resource Estimate

Factors that may affect the mineral resource estimates include:

- Metal price and exchange rate assumptions;
- Changes to the assumptions used to generate the gold equivalent grade cut-off grade;
- Changes in local interpretations of mineralization geometry and continuity of mineralized zones;
- Changes to geological and mineralization shape and geological and grade continuity assumptions;
- Density and domain assignments;
- Changes to geotechnical, mining, and metallurgical recovery assumptions;
- Changes to the input and design parameter assumptions that pertain underground mining designs that constrain the estimates;
- Assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

12.0 MINERAL RESERVE ESTIMATES

12.1 Introduction

Mineral reserves are estimated at Guadalupe, Independencia, and La Nación mines (Figure 12-1 to Figure 12-9). All estimates envisage underground mining methods. Mineral reserves were converted from measured and indicated mineral resources. Inferred mineral resources were set to waste. The mine plans assume underground mining using longhole open stoping using trackless equipment and cemented rock fill (CRF) backfill. Target mining rates are 150,000 t/month.

12.2 Development of Mining Case

The mineral reserve estimate is based on the following inputs and considerations:

- Mineral resource block model, with estimated tonnage, gold, and silver grades;
- Cut-off grade calculations;
- Stope and development designs;
- Geotechnical and hydrogeological information;
- Estimates for mining recovery and dilution;
- Depletion from previous mining;
- Consideration of other modifying factors.

Deswik mine planning software was used for the mine design, 3D modeling, and interrogation of the 3D mining model against the block model.

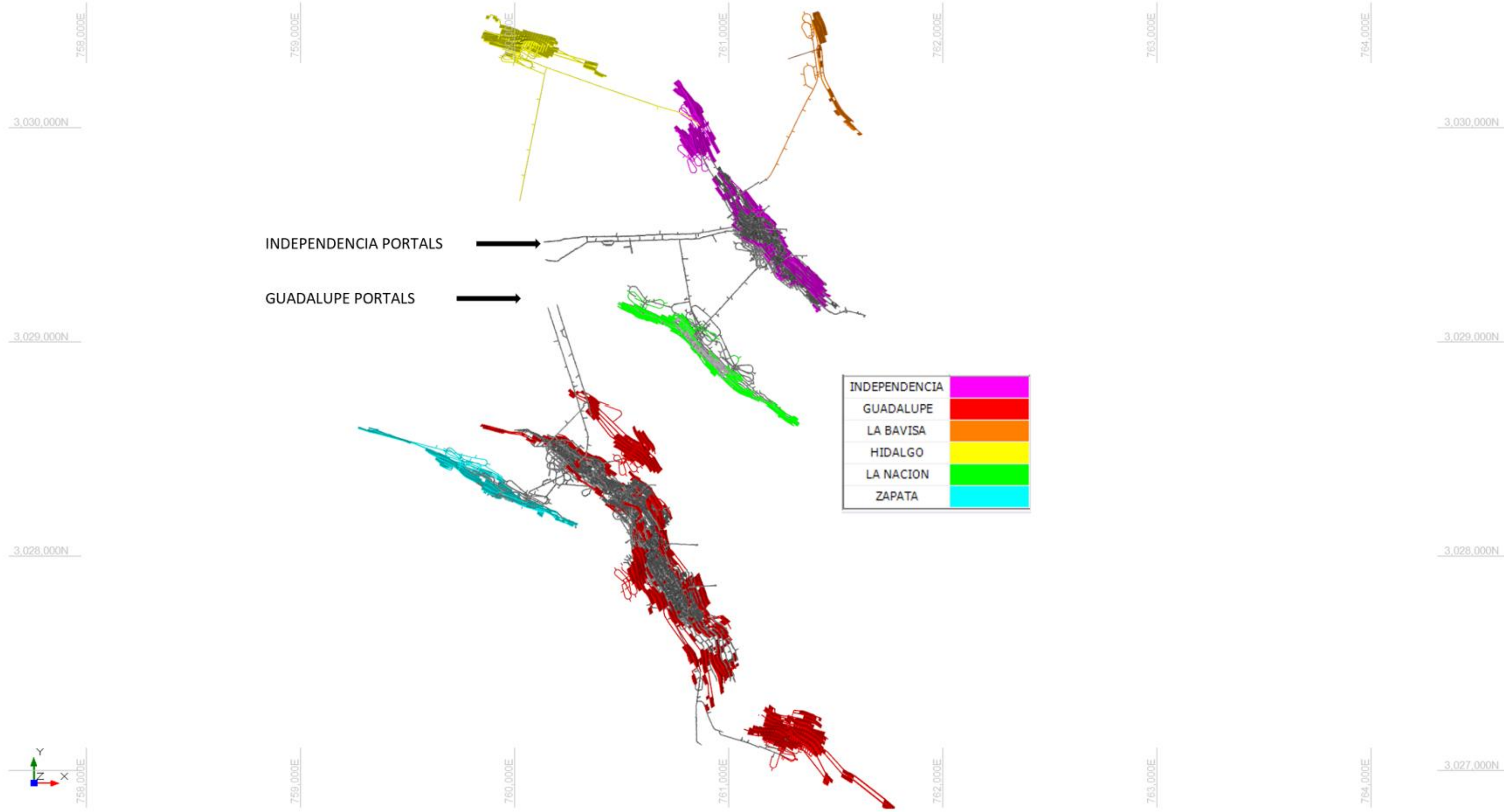
The surveyed “as-built” mining excavations were depleted from the designed solids and the resource block model.

Mining, geotechnical, and hydrological factors were considered in the estimation of the mineral reserves, including the application of dilution and ore recovery factors.

12.3 Designs

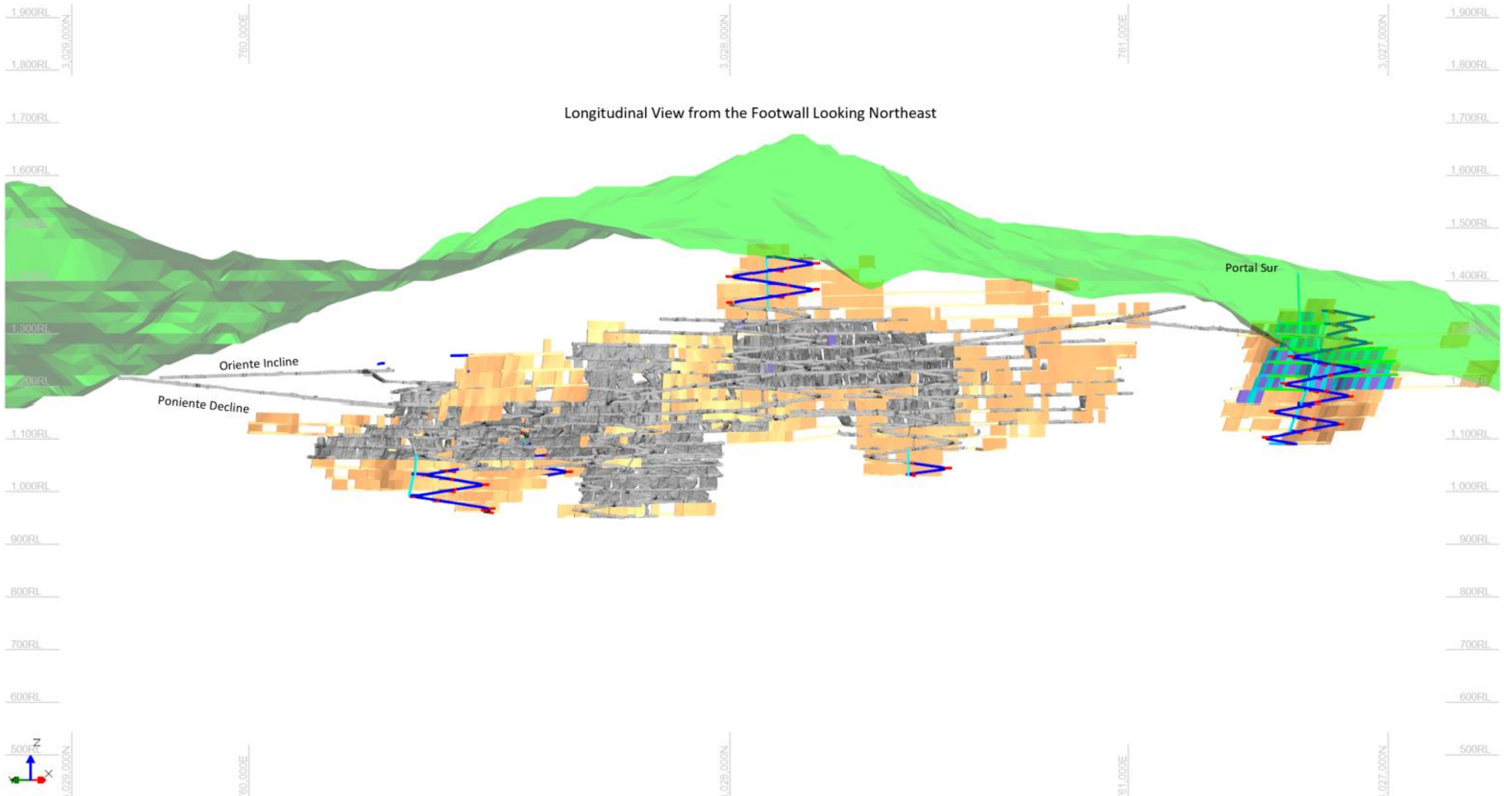
Mining excavations (stopes and ore development) were designed to include mineralized material above the cut-off grade. These excavations were then assessed for economic viability. In addition to the mining cut-off grade, an incremental cut-off grade (excluding the mining cost) was calculated to classify mineralized material mined as a result of essential development to access higher grade mining areas. Mineralized material above this cut-off grade will add value, and is therefore, included as process plant feed. Mineralized material below the incremental cut-off will be disposed of on surface in waste rock storage facilities (WRSFs) or will be used underground as backfill.

Figure 12-1: Deposit Layout Plan



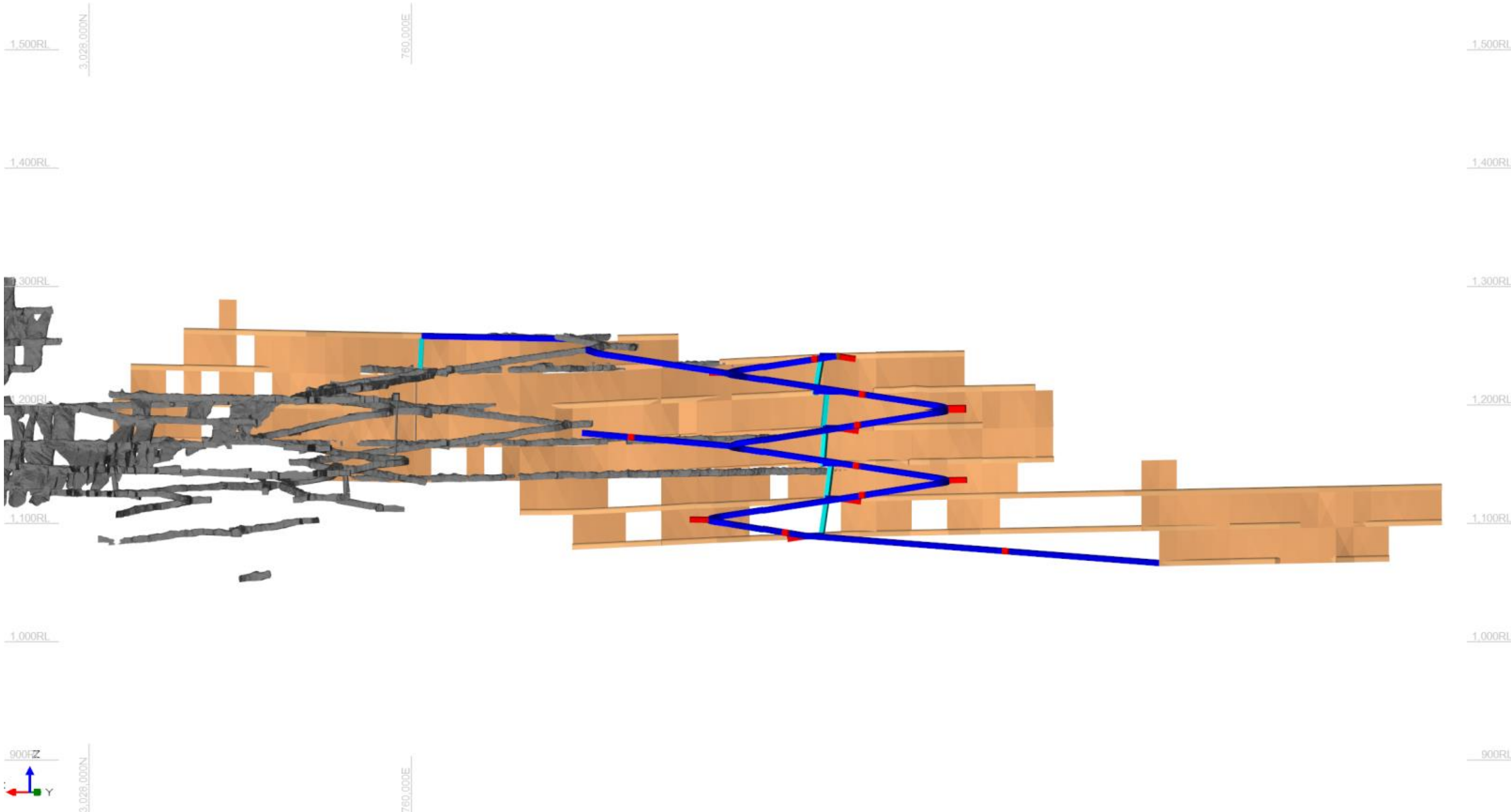
Note: Figure prepared by Coeur, 2021.

Figure 12-2: Guadalupe Looking Northeast



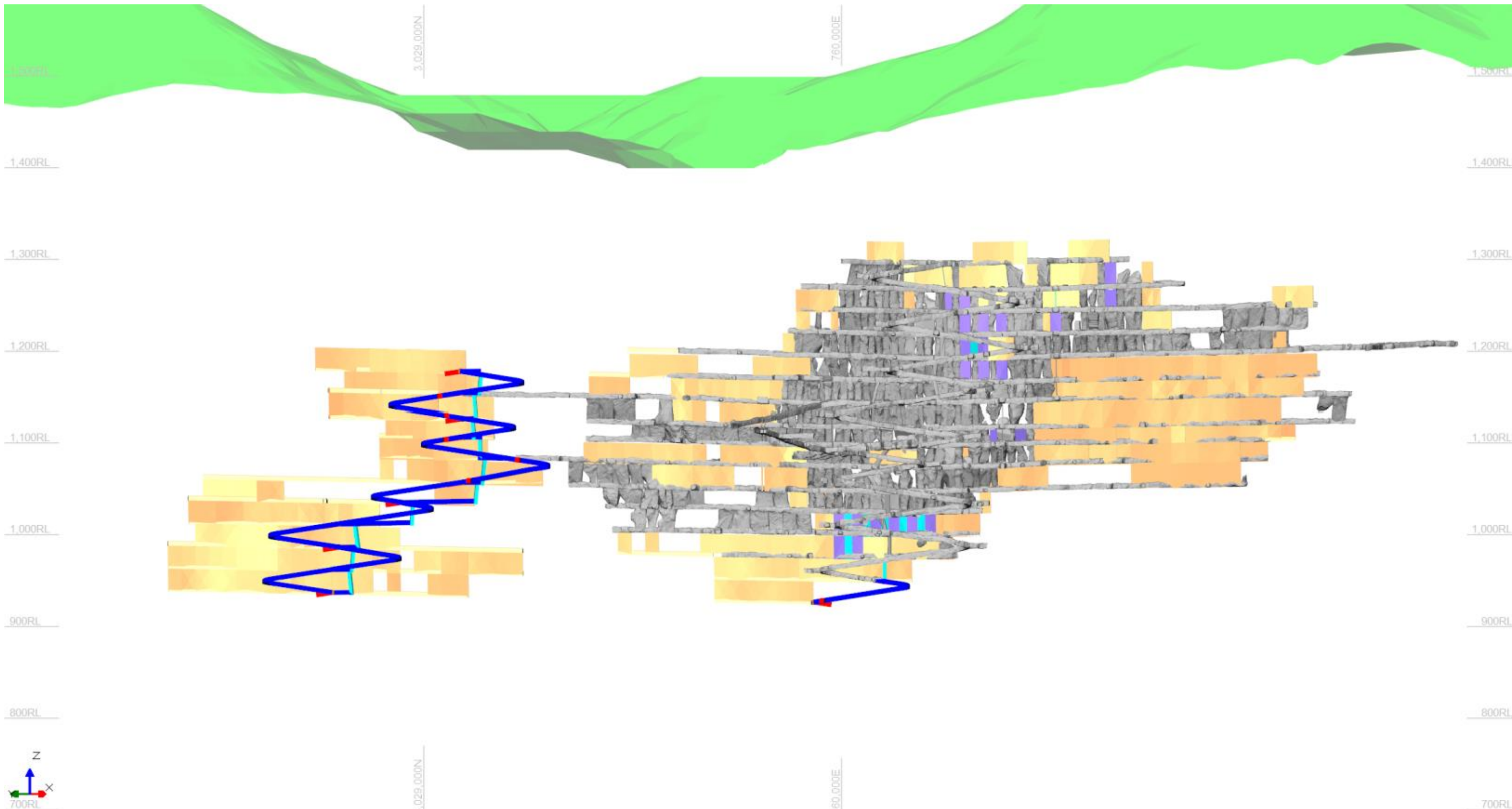
Note: Figure prepared by Coeur, 2021. Legend key included as Figure 12-9.

Figure 12-3: Zapata Looking South



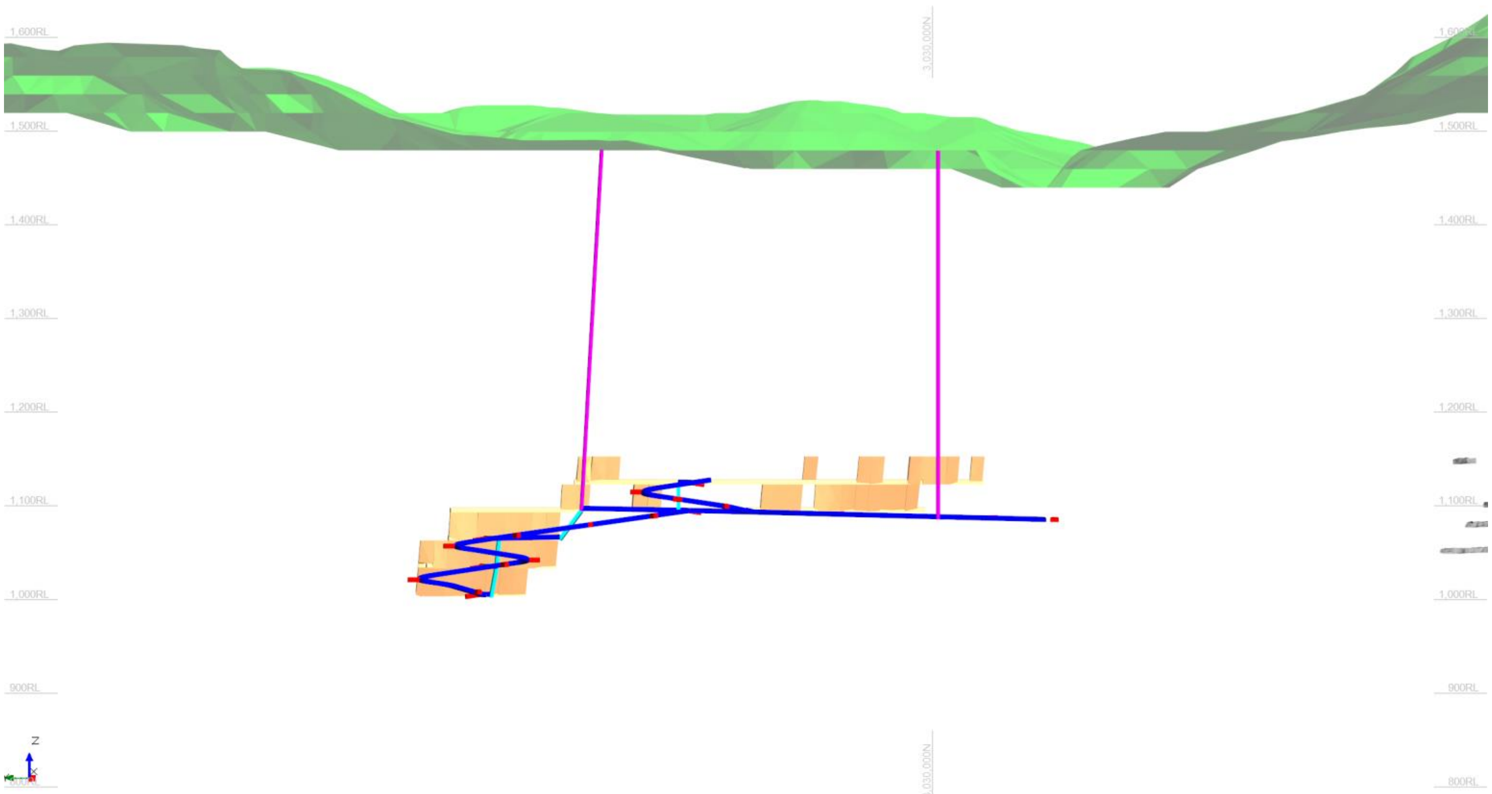
Note: Figure prepared by Coeur, 2021. Legend key included as Figure 12-9

Figure 12-4: Independencia Looking Northeast



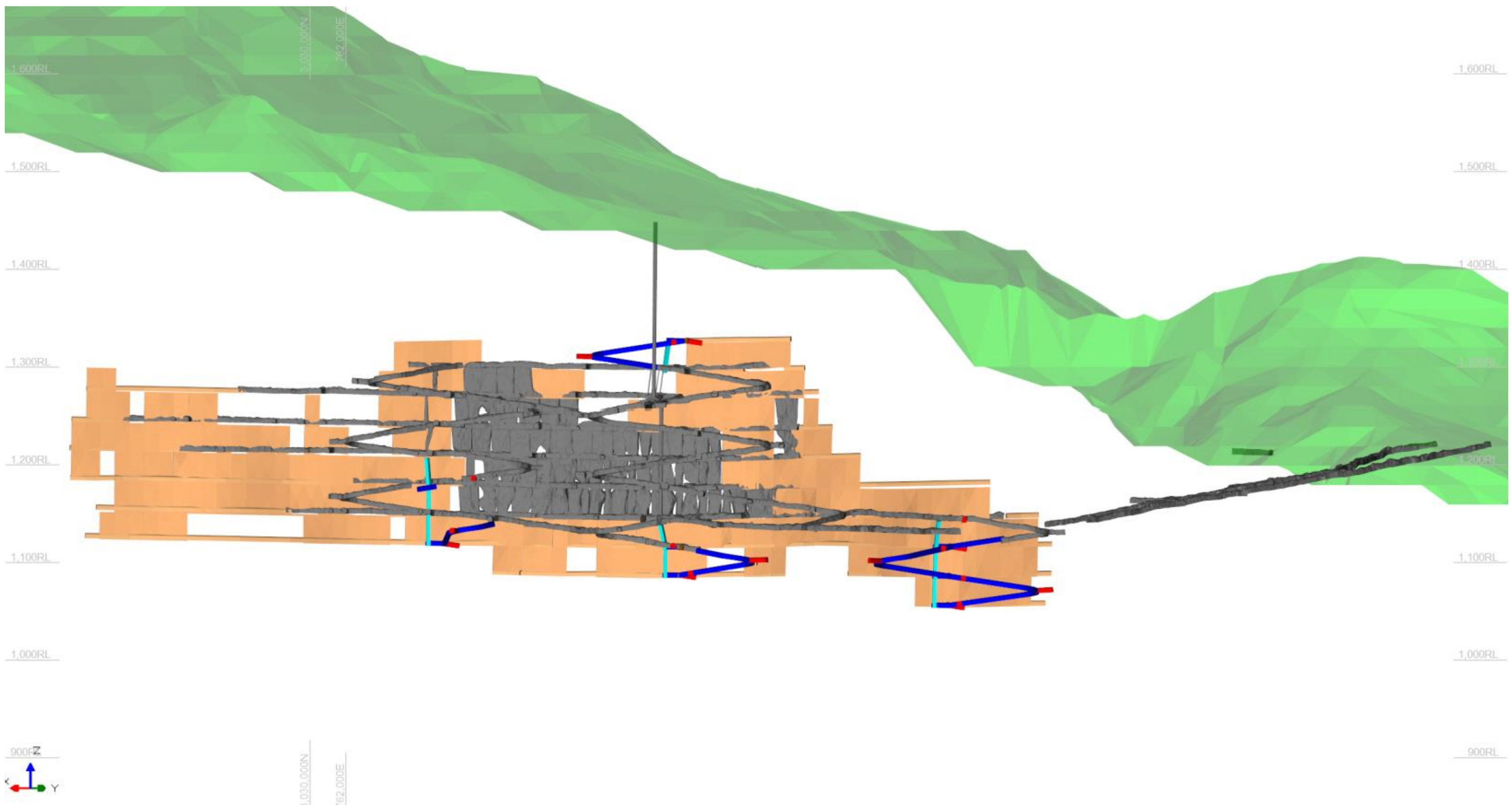
Note: Figure prepared by Coeur, 2021. Legend key included as Figure 12-9

Figure 12-5: La Bavisa Looking Northeast



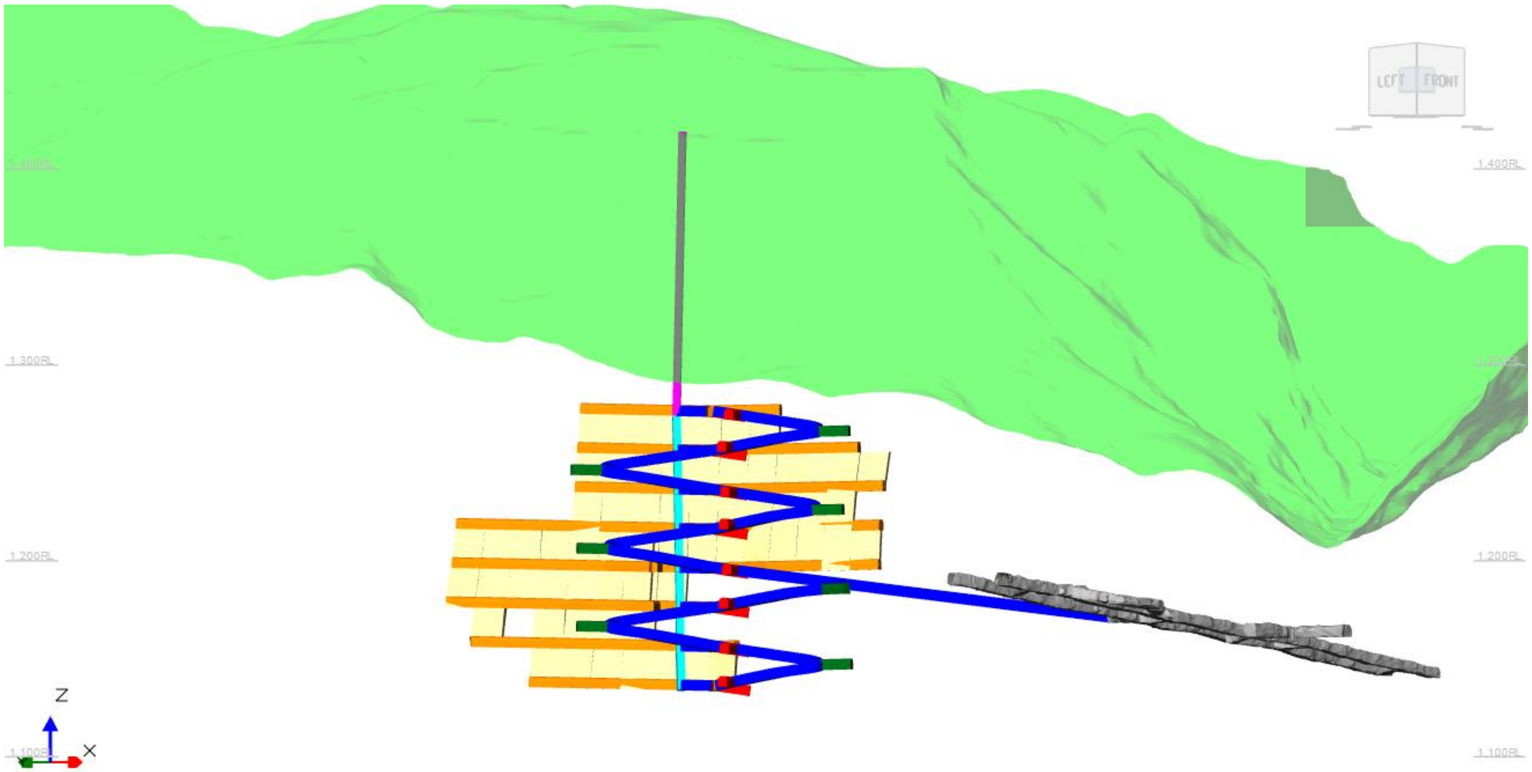
Note: Figure prepared by Coeur, 2021. Legend key included as Figure 12-9

Figure 12-6: La Nación Looking Southwest



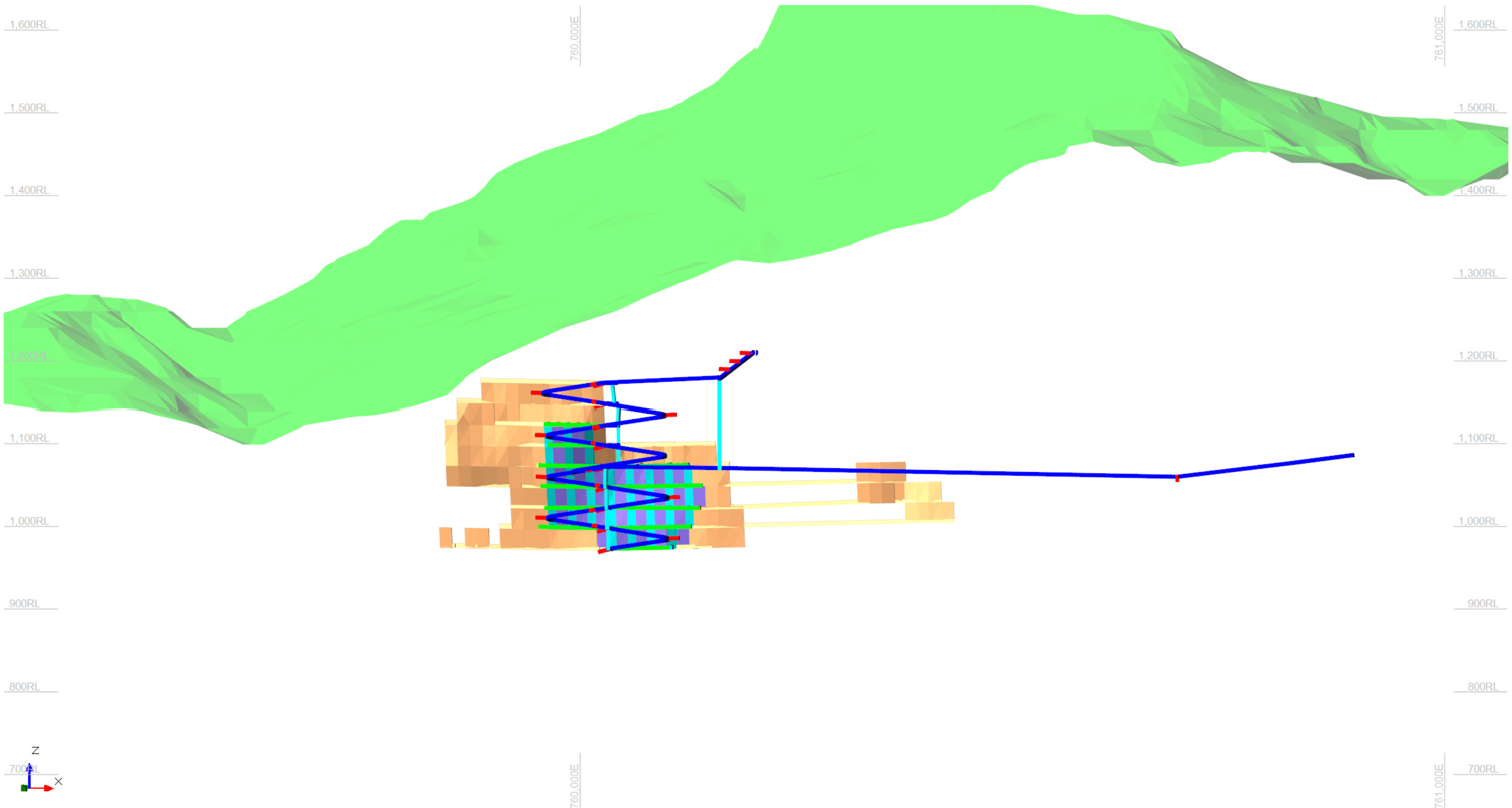
Note: Figure prepared by Coeur, 2021. Legend key included as Figure 12-9

Figure 12-7: Los Bancos Looking Northeast



Note: Figure prepared by Coeur, 2021. Legend key included as Figure 12-9

Figure 12-8: Hidalgo Looking Northeast



Note: Figure prepared by Coeur, 2020. Legend key included as Figure 12-9.

Figure 12-9: Mine Layout Legend Key

Note: Figure prepared by Coeur, 2021.

All designed excavations in the Mineral Reserve meet or exceed the cut-off grade. However, other costs not included in the cut-off grade calculation, will be incurred, such as costs related to capital development, underground infrastructure installations, capital equipment purchases, and sustaining capital. In addition to these costs, there are taxes and royalties that are payable based on net income.

The resulting mine plan was analyzed in a financial model and is economically viable.

12.4 Input Assumptions

Stope designs were generated for the planned mining methods using the cut-off grade to target material for inclusion. Stope designs were completed using the Deswik Stope Optimizer software. Centerlines representing ore development drives were digitized to represent ore development and were used to create a 3D solid model. The stope solids were cut using the ore development solids, using Boolean routines in the planning software. The resulting 3D model formed the basis of the mineral reserve estimate.

Gold equivalent (AuEq) cut-off grades were calculated for the deposits, with mineral reserves estimated and reported above this cut-off. The AuEq cut-off was calculated as follows:

$$AuEq_{Cutoff} = \frac{Mining + Processing + G\&A}{Gold\ Price - Refining\ Cost} \times Gold\ \%\ Recovery\ \times Gold\ \%\ Payable$$

where mining, processing and G&A are costs expressed as US$ per tonne, and gold price and refining costs are expressed as US$ per troy ounce and do not reflect the realized gold price from the Franco-Nevada royalty. The payability refers to the percentage of metal payable after refining.

A gold:silver value ratio was used to convert silver grades to gold equivalent grades and is calculated using the following formula:

$$Au{:}Ag_{Value\ Ratio} = \frac{(Gold\ Price - Refining\ Cost) \times Gold\ \%\ Recovery\ \times Gold\ \%\ Payable}{(Silver\ Price - Refining\ Cost) \times Silver\ \%\ Recovery \times Silver\ \%\ Payable}$$

Gold equivalent grades were calculated using the following formula:

$$AuEq = Au + Ag \times Au{:}Ag_{Value\ Ratio}$$

where AuEq, Au and Ag are the gold equivalent grade, gold grade, and silver grade, respectively, in g/t.

The input parameters to the cut-off grades and the resulting grade cut-off for Mineral Reserves reporting is provided in Table 12-1.

12.5 Ore Loss and Dilution

The following sources of dilution were identified:

- Overbreak into the hanging wall or footwall rocks following drilling and blasting operations;
- Rock failures (slough) from rock walls adjacent to the stope boundaries as a result of weak rock mass characteristics;
- Unconsolidated rockfill (backfill) from over mucking into the stope floor.

Operational experience shows that dilution from the cemented rockfill (CRF) material is negligible, and this has not been considered as a dilution source.

Ore dilution factors to account for overbreak and wall slough (waste rock dilution) from the hanging wall and footwall surfaces were estimated based on the consideration of geotechnical information and stope reconciliations and were applied to stope shapes in the stope optimization software. One meter of dilution was applied to the hanging wall, and 0.5 m to the footwall. No dilution is assigned to ore development. No gold or silver grades were assigned to the rockfill (RF) dilution.

CRF and RF are used to backfill mined-out stopes in order to enhance ore recovery, provide mine stability, and eliminate the need for permanent ore pillars to be left.

Ore losses can occur during mining as a result of:

- Stope under-break and unrecoverable bridging;
- Unrecovered ore stocks due to flat dipping footwalls and stope draw point geometry;
- Misclassification of material resulting in ore hauled inadvertently to waste dumps; and
- Abandoned ore stocks due to excessive dilution from stope wall failures.

To account for potential ore losses, a factor of 5% was applied to primary, secondary, and longitudinal stopes, and ore mine development.

Table 12-1: Input Parameters to Cut-off Grade Determination, Mineral Reserves

Parameter	Units	Value/Value Range (from/to)
Gold price	$/oz	1,400
Silver price	$/oz	20.00
Gold mining duty and refining cost	$/oz Au	0.491
Silver mining duty and refining cost	$/oz Ag	0.491
Gold recovery	%	93.1
Silver recovery	%	81.9
Gold payable	%	99.88
Silver payable	%	99.86
Au:Ag value ratio	Au:Ag	81.59
Mining cost	$/t	36.01–41.75
Surface ore haulage	$/t	3.52
Processing	$/t	27.29
G&A	$/t	11.00
Other	$/t	3.19
AuEq cut-off grade	g/t	1.94–2.51
Marginal development AuEq cut-off grade	g/t	1.08

12.6 Commodity Price

The gold and silver prices used in mineral reserve estimation are based on analysis of three-year rolling averages, long-term consensus pricing, and benchmarks to pricing used by industry peers over the past year. The estimated timeframe used is the nine-year LOM that supports the mineral reserves estimates. The gold price forecast for the mineral resource estimate is US$1,400/oz, and the silver price forecast is US$20/oz. The QP reviewed the forecast as outlined in Chapter 16.

12.7 Mineral Reserve Statement

Mineral reserves are reported using the mineral reserve definitions set out in SK1300. The reference point for the mineral reserve estimate is the point of delivery to the process plant. Mineral reserves are reported in Table 12-2. Mineral reserves are current at December 31, 2021. Estimates are reported on a 100% basis.

The Qualified Person for the estimate is Mr. Peter Haarala, RM SME.

Table 12-2: Gold and Silver Proven and Probable Mineral Reserve Statement as at December 31, 2021 (based on US$1,400/oz gold price and US$20/oz silver price)

Zone/Deposit	Mineral Reserve Classification	Tonnes (kt)	Grade		Contained Ounces		Gold Equivalent Cut-off Grade (g/t AuEq)	Metallurgical Recovery	
			Ag (g/t)	Au (g/t)	Ag (koz)	Au (koz)		Ag (%)	Au (%)
Guadalupe	Proven	2,005	120	2.09	7,736	135	1.97–2.51	81.9	93.1
	Probable	6,527	121	1.82	25,412	381	1.97–2.51	81.9	93.1
	Subtotal proven and probable	*8,532*	*121*	*1.88*	*33,147*	*516*	*1.97–2.51*	*81.9*	*93.1*
Independencia	Proven	1,044	190	2.68	6,377	90	1.99–2.07	81.9	93.1
	Probable	3,551	137	1.76	15,588	201	1.99–2.07	81.9	93.1
	Subtotal proven and probable	*4,595*	*149*	*1.97*	*21,965*	*291*	*1.99–2.07*	*81.9*	*93.1*
La Nación	Proven	357	206	1.96	2,367	22	1.94–1.98	81.9	93.1
	Probable	934	162	1.81	4,876	54	1.94–1.98	81.9	93.1
	Subtotal proven and probable	*1,291*	*175*	*1.85*	*7,242*	*77*	*1.94–1.98*	*81.9*	*93.1*
Total proven and probable mineral reserves	***Total proven***	***3,405***	***151***	***2.26***	***16,480***	***247***	***1.94–2.51***	**81.9**	**93.1**
	Total probable	***11,012***	***130***	***1.80***	***45,875***	***637***	***1.94–2.51***	**81.9**	**93.1**
	Total proven and probable	***14,418***	***135***	***1.91***	***62,355***	***884***	***1.94–2.51***	**81.9**	**93.1**

Notes to Accompany Mineral Reserves Table:

1. The Mineral Reserve estimates are current as of December 31, 2021 and are reported using the definitions in Item 1300 of Regulation S–K (17 CFR Part 229) (SK1300).
2. The reference point for the mineral reserve estimate is the point of delivery to the process plant. The estimate is current as at December 31, 2021. The Qualified Person for the estimate is Mr. Peter Haarala, RM SME, a Coeur employee.

3. The estimate uses the following key input parameters: assumption of conventional underground mining; gold price of US$1,400/ oz and silver price of US$20/oz; reported above a gold cut-off grade of 1.94–2.51 gold equivalent and an incremental development cut-off grade of 1.08 g/t AuEq; metallurgical recovery assumption of 93.1% for gold and 81.9% for silver; mining dilution assumes 1 meter of hanging wall waste dilution; mining loss of 5% was applied; variable mining costs that range from US$36.01–US$41.75/t, surface haulage costs of US$3.52/t, process costs of US$27.29/t, general and administrative costs of US$11.00/t, and surface/auxiliary support costs of US$3.19/t. Mineral reserves exclude the impact of the Franco-Nevada gold stream agreement at Palmarejo in estimation.
4. Rounding of tonnes, grades, and troy ounces, as required by reporting guidelines, may result in apparent differences between tonnes, grades, and contained metal contents.

12.8 Uncertainties (Factors) That May Affect the Mineral Reserve Estimate

Factors that may affect the Mineral Reserve estimates include:

- Commodity prices: the mineral reserve estimates are most sensitive to metal prices. Coeur's current strategy is to sell most of the metal production at spot prices, exposing the company to both positive and negative changes in the market, both of which are outside of the company's control. Gold is subject to a streaming agreement with Franco-Nevada where 50% of the gold ounces produced from a portion of the Project are sold to Franco-Nevada at US$800/oz;
- Metallurgical recovery: long term changes in metallurgical recovery could also have an impact on the mineral reserve estimates. For example, a 10% change in metallurgical recovery has approximately the same impact as a 10% change in metal prices. However, the metallurgy is well understood, and as a result, the mineral reserve estimates are considered to be less sensitive to long-term factors affecting metallurgical recovery, compared to the sensitivity to metal prices, which tend to have greater variances;
- Mining method will change from transverse to longitudinal longhole stoping over time as narrower portions of veins are mined which could result in higher cost, lower productivities and higher dilution quantities which can impact grade. All of these factors could impact cut-off grades, reserve estimates and economics;
- Operating costs: higher or lower operating costs than those assumed could also affect the mineral reserve estimates. While the trend over 2014 to 2020 showed operating cost reductions at the Palmarejo Operations, this trend could reverse and costs could increase over the life of the Project, due to factors outside of the company's control. However, of the factors discussed in this section, the QP considers the mineral reserve to be least sensitive to changes in operating costs;
- Dilution: additional dilution has the effect of increasing the overall volume of material mined, hauled and processed. This results in an increase in operating costs and could result in mineral reserve losses if broken stocks are diluted to the point where it is uneconomic to muck, haul, and process the material and the broken stocks are abandoned. The operations have developed a number of methods to control dilution, including the installation of stope support, a flexible mine plan with the ability to limit stope wall spans, and good development practices that avoid undercutting the stope hanging wall. To assist in these efforts, site geotechnical reviews are regularly completed by external consultants, and a geotechnical engineer is employed by the mine. In the opinion of the QP, sufficient controls are in place at the Palmarejo Operations to manage dilution, and the risk of material changes to the mineral reserve from dilution above the amounts used in the mineral reserve estimate is low.
- Geotechnical: geotechnical issues could lead to additional dilution, difficulty accessing portions of the ore body, or sterilization of broken or in situ ore. In addition to the controls discussed in the dilution section there are significant management controls in place to effectively mitigate geotechnical risks. Designed openings are evaluated for stability using

the Modified Stability Graph method. There is regular underground geotechnical mapping, and comprehensive geotechnical reviews are held on a weekly basis. The QP considers that sufficient controls are in place at the Palmarejo Operations to effectively manage geotechnical risk, and the risk of significant impact on the mineral reserve estimate is low.

- Hydrogeological: unexpected hydrogeological conditions could cause issues with access and extraction of areas of the Mineral Reserve due to higher than anticipated rates of water ingress. The QP considers the risk of encountering hydrogeological conditions that would significantly affect the mineral reserve estimate is low.
- Geological and structural interpretations: changes in the underlying geology model including changes in local interpretations of mineralization geometry and continuity of mineralized zones, changes to geological and mineralization shape and geological and grade continuity assumptions, and density and domain assignments could result in changes to the geology model upon which mineral reserve estimate is based.
- Permitting and social license: inability to maintain, renew, or obtain environmental and other regulatory permits, to retain mineral and surface right titles, to maintain site access, and to maintain social license to operate could result in the inability to extract some or all of the mineral reserves.

13.0 MINING METHODS

13.1 Introduction

The Guadalupe, Independencia and La Nación mines use conventional underground mining methods and conventional equipment. The overall production rate is approximately 165,000 t/month.

13.2 Geotechnical Considerations

The Palmarejo Operations technical services department maintains a Ground Control Management Plan that is updated annually and serves to provide mine personnel with operating, monitoring, and quality control/assurance guidance. The Ground Control Management Plan specifies ground support standards and identifies where there are applicable in the mines.

13.2.1 Guadalupe

Golder Associates (Golder) performed a geotechnical assessment of the mine area in 2011 and provided guidance on developing RMR logging procedures and calculated rock mass rating (RMR_{76}). Most of the rock types show similar RMR_{76} values, with the bulk of the values in the range of 40–60, or a "Fair" rock quality.

Ingeroc SpA of Chile (Ingeroc) was commissioned in 2015 to perform additional geotechnical characterizations and provide onsite engineering support. Starting in 2017, this was replaced with an inhouse geotechnical team to support onsite engineering, planning and operations.

Pakalnis and Associates of Canada performed geotechnical design and operations reviews from 2011–2019. In 2019, Ingeroc was contracted to provide operations support with biannual reviews.

Due to highly variable rock mass quality and the intersection of dissolution voids during early development and operations, a geotechnical block model was developed in 2018. This model is continually updated with infill drilling and development mapping to support geotechnical design and mine planning. The model provides RMR ranges demarcated by six quality types which are then matched to minimum support requirements as part of the design and planning process. These ranges are represented by color coded blocks in a three-dimensional computer model and documented in the Ground Control Management Plan, matching minimum ground support requirements to the material classification.

Initial stope dimensions were developed using the Modified Stability Graph method, which predicts equivalent linear overbreak slough values (Pakalnis, 2016). Modifications based on variability and update geotechnical models were made as the mine developed. Updated designs are modelled using two and three-dimensional numerical simulation software to provide final design for each access and stope.

Based on the calculated modified stability number (N') values, the majority of the planned stope surfaces at Guadalupe are estimated to have equivalent linear overbreak slough values of <1.0 m for unsupported stope hanging wall surfaces and <0.5 m for unsupported stope footwall surfaces for stope spans of up to 14 m along strike. Primary and secondary stope spans range from 10–14 m, and longitudinal stopes can range from 14 m along strike up to 20 m, depending on vein dimensions, structural interpretation, and rock quality locally.

Standard ground support initially consisted of pattern welding wire mesh pinned by rock bolting. With advanced development, and installation of a modernized shotcrete plant in 2020, fibercrete and bolting is currently replacing bolts and mesh in areas of higher quality rock. In poor ground, hanging wall support, or at intersections, the option of 6 m length cable bolts is available and installed in addition to shotcrete and mesh.

The most recent geotechnical review was conducted in June 2021 to review updated support methods, maximum allowable stable stope spans, mining sequence, and overall mine stability.

13.2.2 Independencia

Pakalnis provided geotechnical inputs for startup design and operation from 2015–2019 with Ingeroc providing ongoing operational review support from 2019 to present. A geotechnical model was developed in 2017 due to poorer overall rock quality encountered in Independencia versus earlier development in Guadalupe.

Most stope surfaces at Independencia were designed to have equivalent linear overbreak slough values of <1.0 m for unsupported stope hanging wall surfaces, and <0.5 m for unsupported stope footwall surfaces. Rock quality in Independencia is considered to range between very low to moderate quality with variability requiring local changes to design to maintain stability. Similar support methods are available between mines following range classification as outlined in the Ground Control Management Plan that covers the operation. Common to Independencia, areas of Very Poor-quality rock typically require installation of horizontal steel spilling bars in advance of development for perimeter control, followed by reinforced shotcrete arches in addition to typical mesh and bolting standard support.

The most recent geotechnical review was conducted in June 2021 to review updated support methods, maximum allowable stable stope spans, mining sequence, and overall mine stability.

13.2.3 La Nación

The geotechnical conditions at La Nación are classified with rock qualities ranging from Poor to Good. Conditions are similar to Guadalupe with most geotechnical concerns controlled by structure versus Poor rock quality. Pakalnis (2017) provided guidance and approval to increase stope heights from 20 m in Guadalupe and Independencia to 25 m in La Nación based on the orebody geometry and rock quality. This increase in stope height was implemented, and extraction has been proven effective.

Based on the calculated N' values, stopes at La Nación were designed initially to have equivalent linear overbreak slough values of <1.0 m for unsupported stope hanging wall faces. Transverse stopes have a maximum primary/secondary exposure of 20 m for ore with >55% RMR, and a maximum hanging wall exposure of 32 m for hanging wall material with >65% RMR. Longitudinal stoping has a maximum hanging wall exposure of 32 m for hanging wall material with >65% RMR.

Similar methods of support are available to La Nación as other areas of operation following the Ground Control Management Plan released in 2016 and updated annually.

The most recent geotechnical review was conducted in June 2021 to review updated support methods, maximum allowable stable stope spans, mining sequence, and overall mine stability.

13.3 Hydrogeological Considerations

13.3.1 Guadalupe

Permeability of the volcanic rock units in all mines is low to very low. Persistent inflows generally occur within larger fault structures. Flows increase and decrease seasonally if the structure is connected to the surface. Access ramps encountered significant water inflows from these structural features during early development; however, over time, inflows into the mine have diminished as local storage is removed. Increases in flow currently are directly related to opening new developments laterally or ramping downward to lower levels. A primary sump and pumping station is located on the 1,140 m level and fed by a series of level and ramp sumps that allow final settling before pumping from the mine to the water treatment plant on surface.

GRE prepared a hydrogeological model for the operations in 2017. The largest predicted inflows for Guadalupe will occur in year 2022 and result in a total flow of approximately 800 m^3/day coinciding with the maximum lateral development of new mines at Animas and Zapata. Through 2021, flows are matching predicted values.

13.3.2 Independencia

Water inflows tend to occur mainly where the development intersects larger scale structures, such as faults and shear zones. These structures are typically located in the footwall accesses and ore zones with generally higher flows than other mines due to the higher degree of brittle fracture and permeability along structures. Initial development encountered highest flows that diminished over time as local storage is drained. Outside of structures, similar host rock types of low overall permeability and storage to Guadalupe are present.

The primary sump and a pumping station is located on the 1090 m level to manage these inflows from satellite sumps and pumping systems located on various levels. The central pump station sends the water from settling sumps to the water treatment plant on surface for further sediment removal.

GRE prepared a hydrogeological model for the mine in 2017 with the highest predicted flow expected to be in 2021 of 2,600 m^3/day. Actual water inflows in 2021 were slightly off the predicted flow estimate with a peak at 2,100 m^3/day. This may increase through to 2023 with the development of the lower levels and Independencia and access development laterally to the north for the Hidalgo mine.

13.3.3 La Nación

La Nación is located midway between the Guadalupe and Independencia mines. Hydrological conditions in the mine were affected by the development and dewatering of the two adjacent mines. Zones of intermediate inflow into the mine were intercepted along structures similar to those encountered in both Guadalupe and Independencia, but at much lower rates. This had little effect on mine development rates. Mine dewatering in the area is accomplished using satellite sumps on each level that drain down to the 1140 m level entry ramp access. Water collected from the 1140 m level sump is drained back to the primary sump and pump station on the 1090 m level in Independencia for transfer to the water treatment plant.

13.4 Operations

13.4.1 Guadalupe

Primary access to the Guadalupe mine is from surface via two ramps. The West (Poniente) Decline and East (Oriente) Level are located 700 m north of the deposit in the hanging wall. A third portal for primary ventilation is the South Portal (Portal Sur) which is situated on the southern strike extent of the the deposit footwall approximately 2,200 m south–southeast from the main access portals. The West Decline serves as the primary access for haulage, while the East provides both haulage and support access. Both main ramps are used for primary ventilation intake while the main fans at South Portal are in operation. When the South Portal fans are down for maintenance, a secondary system is engaged providing intake on the East and exhaust on the South and West. The South portal is used as a primary exhaust for the mine as well as secondary escapeway for extended work areas of Guadalupe and Animas.

Two new developments at Zapata and Animas are underway as extensions of the Guadalupe mine. The Zapata deposit is located approximately 250 m from the footwall of Guadalupe. Two accesses have been developed to connect the Guadalupe ramp system to the Zapata ramp system. First ore development from Zapata was in 2021. The Animas extension is located at the far south end of the Guadalupe mine and is accessed via a single ramp. Development will have extended to first ore in late 2021. Ventilation and secondary egress will be provided via a ventilation raise to surface and an escapeway.

Mine access drifts were advanced through the ore structure and into the footwall where ramps were developed for vertical access to the level footwall drives. The access ramps are designed at 5.5 m high x 5.0 m wide and have been driven at 15% grades.

Key input parameters to the mine design include mechanized diesel and electric drill, load, and haulage systems. A preliminary production rate of 150,000 t/month was increased to 165,000 t/month in 2021 with the development of new orebodies and accelerated development rates. The material handling system uses a load-haul-dump (LHD) and truck transport system of ore loading and hauling to an interim surface stockpile. Ore is separated at surface into stockpiles to support blending prior to transport to the plant run-of-mine (ROM) stockpile. Waste from development is either directly transported from development to backfilling pockets in active stopes or stockpiled underground for later use as backfill.

Mining methods used at Guadalupe include both transverse and longitudinal sublevel stoping. The operation has changed from principally transverse longhole stoping from startup in 2014 where veins were wider to narrow vein longitudinal stoping in 2021. The continuous nature of the mineralized zones, significant orebody thickness, favorable deposit geometry and generally good ground conditions resulted in productive longhole stoping with low costs.

Access to transverse stoping areas is via footwall drives developed parallel to the orebody strike. Drawpoints are developed perpendicular to the footwall sublevels to access the stopes. A sequence of primary and secondary stopes is developed and extracted in sequence along strike of the vein. The primary stopes (roughly 10 m of strike) are excavated and backfilled with cemented backfill providing pillar support for the extraction of the secondary. The secondaries are then backfilled with waste to support ramping up to the next level. Access to longitudinal stopes is along and within the ore zones where drifts are driven along strike within the vein and extraction is in sequence from level to level in 15–20 m increments depending on ground conditions. The open stope is backfilled, and the extraction continues in sequence. Level or stope heights in Guadalupe are generally 20 m.

Lateral development is completed using conventional mechanized drilling and blasting methods. Drift rounds are drilled using twin boom, electric/hydraulic drill jumbos. Ground support is installed using mechanical/electrical bolting machines and (when required) shotcrete is applied with a shotcrete machine. Mine services (air, water, compressed air, electrical and communication cables) are extended to the working areas.

Longhole production drilling of stopes is completed using electric/hydraulic vertical hammer drill rigs. Production drilling is mainly done in pattern format in a down dip configuration, with the holes drilled parallel to the dip of the orebody.

13.4.2 Independencia

The North and South declines provide access to the deposit and provide secondary intake (south) and primary exhaust ventilation (north) for the mine. The access ramps are designed at 5.5 m high x 5.0 m wide and have been driven at a grade of -15%. Primary ventilation intake is from a vertical surface raise and fan system constructed in the La Nación Mine and connected via dual ramps to the La Nación orebody on the 1140 and 1260 levels.

The design philosophy and key mine design parameters for the Independencia mine are similar to those described for the Guadalupe mine. Mine access drifts were advanced through the ore structure and into the footwall where ramps were developed for vertical access to the level footwall drives. The access ramps were designed at 5.5 m high x 5.0 m wide and were driven at 15% grade. Starting in 2021, ramps and accesses were reduced to 5.3 x 5.0 m to provide support for increased development rates and reduced unit costs.

Mining methods used at Independencia include both transverse and longitudinal sublevel stoping. The operation transitioned from principally transverse longhole stoping from startup in 2016 where veins were wider to narrow vein longitudinal stoping in 2021. Due to the sinusoidal nature of the mineralized zones, reduced orebody thickness, and generally poorer ground conditions, productive longhole stoping has been achieved, but at higher costs due to slower development and mining rates and increased support requirements. Stope and level heights in Independencia are 20 m.

Preliminary designs were completed for the development of the Hidalgo extension anticipated for production in 2023. The plans call for dual access ramps, one from Independencia along the north extension and the second located from surface approximately 200 m north of Independencia north portal. Current designs are in conceptual, with final designs to be completed in early 2022.

13.4.3 La Nación

The mine can be accessed from two levels, one from the south decline ramp access on the 1140 level from Independencia, and the other from the footwall drive at the 1260 level.

The two drifts provide access to the deposit along with primary intake and exhaust ventilation for both the La Nación and Independencia mines. The access ramps are designed at 5.5 m high x 5.0 m wide with a gradient of 2%. The access ramps from Independencia are connected via a spiral ramp developed in the footwall of the La Nación orebody to connect the lower and upper part of the orebody and access to the sublevels.

The La Nación deposit is mined using similar equipment, personnel, and mining methods as the adjacent Independencia and Guadalupe mines. Much of the ore mining will be completed using longitudinal sublevel stoping due to the narrow width of the vein. Mine level and stope heights were increased to 25 m following a rock mechanics study supporting increasing the stope heights.

13.5 Backfill

Primary stopes as extracted using transverse sublevel method are filled with cemented rock fill once the ore is drilled, blasted, and extracted. The cemented rock fill is produced on surface directly from a 3000 t/d mixing plant and hauled underground to the stope location. The majority of cemented backfill is used specifically for this method with secondary placement required for sill pillars and curtains where longitudinal retreat extraction method is applied. Sill pillars require the backfill of cemented fill along the entire length of the sublevel. All three active mines have completed sill pillars within the vertical profile of the orebody.

Curtains are designed and backfilled in those areas where longitudinal retreat mining requires the installation of a curtain to allow backfilling of the stope prior to continuing stope extraction. This curtain is required every 15–25 m depending on the design span distance as determined from a calculated hydraulic radius. In areas where the Avoca method is applied, cemented backfill is limited or not required.

Waste rock backfill from development mining is the principal backfill for secondary transverse stopes and for longitudinal stopes. In most cases, the rock fill is loaded on to trucks from waste development headers outside the orebody and delivered directly to the stope. Extra material is stored underground on previously-mined levels to be used later where needed.

13.6 Ventilation

13.6.1 Guadalupe

The primary ventilation system is powered by two 224 kW central fans located at the South Portal. A second set of fans is installed in the East Portal for contingency and are only activated when the primary is down. When the central fans are active, air is drawn from the East and West portals and vented out the South portal directing air from north to south along the length of the orebody. Secondary ventilation is directed through booster fans installed on levels and directed through sublevel raises vertically and laterally along horizontal drives to the work areas. Vertical raises are installed level to level using a raisebore.

The capacity of the primary ventilation circuit is approximately 250 m^3/sec.

13.6.2 Independencia

The primary ventilation fans consist of two 224 kW fresh air intake fans installed in a ventilation bypass drift developed in the South ramp, and two 224 kW fans installed on the 1260 level in La Nación that pull air from a raisebored shaft connected to surface. The North portal provides a single exhaust exit from the mine for both intake points. Additional booster fans are installed underground to direct intake air to the active mining blocks. Ventilation raises are developed by longhole drill and blast methods or bored with a raisebore machine.

The capacity of the primary ventilation circuit is approximately 300 m^3/sec when three of the four primary fans are operating.

13.6.3 La Nación

The mine ventilation is designed and configured to support both Independencia and La Nación. Two access drifts developed from the Independencia mine provide exhaust routes from the mine. A vertical raise was constructed from the lower 1140 level through to surface as part of early development to support ventilation for the entire mine. The main fans are located on the 1260 level and consist of two 224 kW fans in parallel. During the early stages of development and operation, a single fan is in operation. As both La Nación and Independencia mature, and mining distances increase the second fan will be brought online.

13.7 Blasting and Explosives

Longhole drilling of stope production holes are completed using electric/hydraulic downhole hammer drills. Drill and blast design is customized to match individual conditions found in each stope and development headings. Blasting is conducted using controlled spacing and timing method via a central electronic timing and detonation system.

13.8 Underground Sampling and Production Monitoring

Preliminary in situ channel sampling is conducted across the vein intercepts by the geologists to support preliminary ore control. Follow-up samples are taken during and post extraction from individual stope stockpiles on surface to support blending and reconciliation with the plant on a continuous basis as part of day-to-day operations.

13.9 Infrastructure Facilities

Infrastructure for the operation is discussed in Chapter 15. All underground operations share the same surface infrastructure excluding stockpiles and compressed air and ventilation systems.

Underground maintenance facilities in Guadalupe and Independencia support field and preventative maintenance activities. Primary maintenance is conducted in joint facilities located on surface between the mine portals and a large main facility located at the Palmarejo office and plant site. An additional facility is planned for construction in Zapata in 2023 to support ongoing operations.

Underground magazines in Guadalupe support Zapata and Animas, and in Independencia support La Nación.

13.10 Production Schedule

The Palmarejo Operations have nine years of mine life remaining overall. The Guadalupe mine has a remaining nine-year mine life with the expansion components of Zapata and Animas. Independencia has a remaining nine-year mine life with expansions to the north and south and addition of the Hidalgo deposit. La Nación has five years of mine life remaining.

A production schedule is provided in Table 13-1.

13.11 Equipment

The equipment listed in Table 13-2 is shared between the three underground mines.

Surface mining equipment consists of trucks, loaders, drills, and dozers. Some ex-open pit equipment is used for ore haulage from the underground mines to the ROM pad; as well as ore blending, backfill operations, road construction, and road maintenance. The main surface equipment assets are listed in Table 13-3.

The equipment on site is sufficient to meet LOM plan requirements.

13.12 Personnel

Mining operations are forecast to employ approximately 330 persons over the LOM.

Table 13-1: Production Schedule

	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	LOM
Underground Guadalupe											
Ore mined	kt	941	962	940	983	1,251	1,329	1,226	681	218	8,532
Silver grade mined	g/t	118.5	126.1	98.6	116.4	115.2	123.4	121.4	146.2	157.5	120.8
Gold grade mined	g/t	1.9	2.0	1.6	1.9	2.0	2.2	2.0	1.6	0.3	1.9
Silver contained metal	koz	3,583	3,903	2,980	3,679	4,637	5,273	4,786	3,199	1,106	33,147
Gold contained metal	koz	57	61	49	60	79	92	80	34	2	516
Vent Rise	m	386	275	168	128	—	—	—	—	—	957
Meters capital cost	m	3,180	2,791	2,140	1,985	—	185	—	—	—	10,280
Meters operating cost waste	m	1,157	1,091	1,773	937	848	673	145	—	—	6,625
Meters operating cost ore	m	2,909	4,094	3,630	3,513	2,687	1,570	249	—	—	18,652
Waste mined	kt	303	266	267	197	63	63	13	—	—	1,171
Underground Independencia											
Ore mined	kt	547	516	561	795	511	435	405	573	251	4,595
Silver grade mined	g/t	176.2	155.0	148.7	138.1	131.6	143.9	141.6	158.7	140.5	148.7
Gold grade mined	g/t	2.5	2.1	2.1	1.9	2.1	2.1	1.7	1.5	1.6	2.0
Silver contained metal	koz	3,102	2,570	2,680	3,532	2,164	2,015	1,845	2,923	1,135	21,965
Gold contained metal	koz	43	35	38	49	34	29	22	27	13	291
Vent Rise	m	21	141	271	151	-	394	515	36	—	1,528
Meters capital cost	m	856	2,662	2,982	1,608	63	836	1,012	212	—	10,230
Meters operating cost waste	m	396	414	497	1,043	352	95	522	51	—	3,369
Meters operating cost ore	m	834	1,422	2,539	2,781	748	959	1,260	590	—	11,133
Waste mined	kt	86	202	230	171	26	77	124	19	—	934
Underground La Nación											
Ore mined	kt	313	326	410	156	86	—	—	—	—	1,291
Silver grade mined	g/t	141.2	187.5	200.2	182.9	108.8	—	—	—	—	174.5

	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030	LOM
Gold grade mined	g/t	1.5	2.1	2.2	1.6	0.7	—	—	—	—	1.9
Silver contained metal	koz	1,420	1,967	2,641	914	300	—	—	—	—	7,242
Gold contained metal	koz	15	22	29	8	2	—	—	—	—	77
Vent Rise	m	247	30	—	—	—	—	—	—	—	278
Meters capital cost	m	1,543	189	—	—	—	—	—	—	—	1,732
Meters operating cost waste	m	453	81	—	—	—	—	—	—	—	534
Meters operating cost ore	m	1,992	422	—	—	—	—	—	—	—	2,414
Waste mined	kt	146	19	—	—	—	—	—	—	—	165
Underground Total											
Ore mined	kt	1,801	1,804	1,911	1,934	1,848	1,765	1,632	1,253	470	14,418
Silver grade mined	g/t	140.0	145.5	135.1	130.7	119.5	128.5	126.4	151.9	148.4	134.5
Gold grade mined	g/t	2.0	2.0	1.9	1.9	1.9	2.1	1.9	1.5	1.0	1.9
Silver contained metal	koz	8,106	8,440	8,301	8,126	7,100	7,288	6,631	6,122	2,241	62,355
Gold contained metal	koz	116	118	117	118	115	122	102	62	15	884
Vent Rise	m	654	446	439	279	-	394	515	36	—	2,763
Meters capital cost	m	5,578	5,641	5,122	3,593	63	1,021	1,012	212	—	22,242
Meters operating cost waste	m	2,006	1,586	2,270	1,980	1,200	768	667	51	—	10,529
Meters operating cost ore	m	5,734	5,938	6,169	6,294	3,435	2,530	1,510	590	—	32,199
Waste mined	kt	534	487	496	368	89	140	137	19	—	2,270

Note: numbers have been rounded.

Table 13-2: Underground Mining Equipment

Equipment Type	Make/Model	Peak Number
Wheel loader	Caterpillar R1700G, R1600G, R1700K; Sandvik Toro 006, Toro 1400; Atlas Copco ST1030	21
Articulated truck	Caterpillar AD45B, AD30; Sandvik T40D;	19
Mine truck	Atlas Copco MT42	4
Boltecs	Atlas Copco B235, Boltecs	11
Boltmaster	Atlas Copco RDH, 200EH	1
Drills	Atlas Copco 1254, M4CITH, J281, J282, S1D; Redpath 40S; Boart Longyear Stope Mate; Termite AQTK; Ingetrol 60E, 75E, Minitroner	22
Cabletec	Atlas Copco Cabletec LC	2
ANFO	Getman A64; RDH 150H	5
Concrete/shotcrete	EJC concrete mixer, 415; RDH 600R; Normet LF600, SB307, BS7622; Kubota; Transcrete P20 pump;	21
Auxiliary (pallet, scissor, utili lifts)	Getman A64; Marcotte M40; RDH 600R; Normet MF540	12
Motor grader	Caterpillar 120K	1
Telehandler	Caterpillar TL1255, TL1255D	11
Backhoe loader	Caterpillar 430D, 450E, 420F	
Lube truck	Getman A64; RDH	3
Pallet handler	Getman A64	1
Forklift	Caterpillar R80T	1

Table 13-3: Surface Mining Equipment

Item	Manufacturer	Model	Number
Loader	Caterpillar	988H	2
Loader	Caterpillar	992G, 992K	3
Truck	Caterpillar	777F	11
Truck	Caterpillar	740E	4
Water Truck	Caterpillar	770F	1
Lube Truck	Caterpillar	725E	1
Grader	Caterpillar	140H, 140M, 14H	3
Excavator	Caterpillar	315D, 330D, 336D2, 365C	4

Item	Manufacturer	Model	Number
Dozer	Caterpillar	D10T, D4G, D5K2, D9T	7
Compactor	Caterpillar	CS536D, E	2
Integrated Tool Carrier	Caterpillar	IT62H	1
Mobile Crusher	Metso	LT106	2
Backhoe Loader	Caterpillar	420F2	2
Drill	Atlas Copco	CM780	1
Telehandler	Caterpillar, JCB	Various models	5
Forklift	Caterpillar	DP40K, P5000	3

14.0 RECOVERY METHODS

14.1 Process Method Selection

The process design is based on a combination of metallurgical test work, study designs and industry-standard practices, together with debottlenecking and optimization activities through the operational history of the plant since operations startup in 2007. The design is conventional to the silver and gold industry and has no novel parameters.

14.2 Process Plant

The processing plant is located immediately south and overlooks the village of Palmarejo at an elevation of approximately 880 m. The plant is designed to operate 365 days per year at 91.3% availability. The plant design mill throughput is 6,000 t/day of ore with upgrades providing a nominal throughput up to 7,000 t/day.

14.3 Flowsheet

A schematic of the flowsheet is provided as Figure 14-1.

14.4 Plant Operations

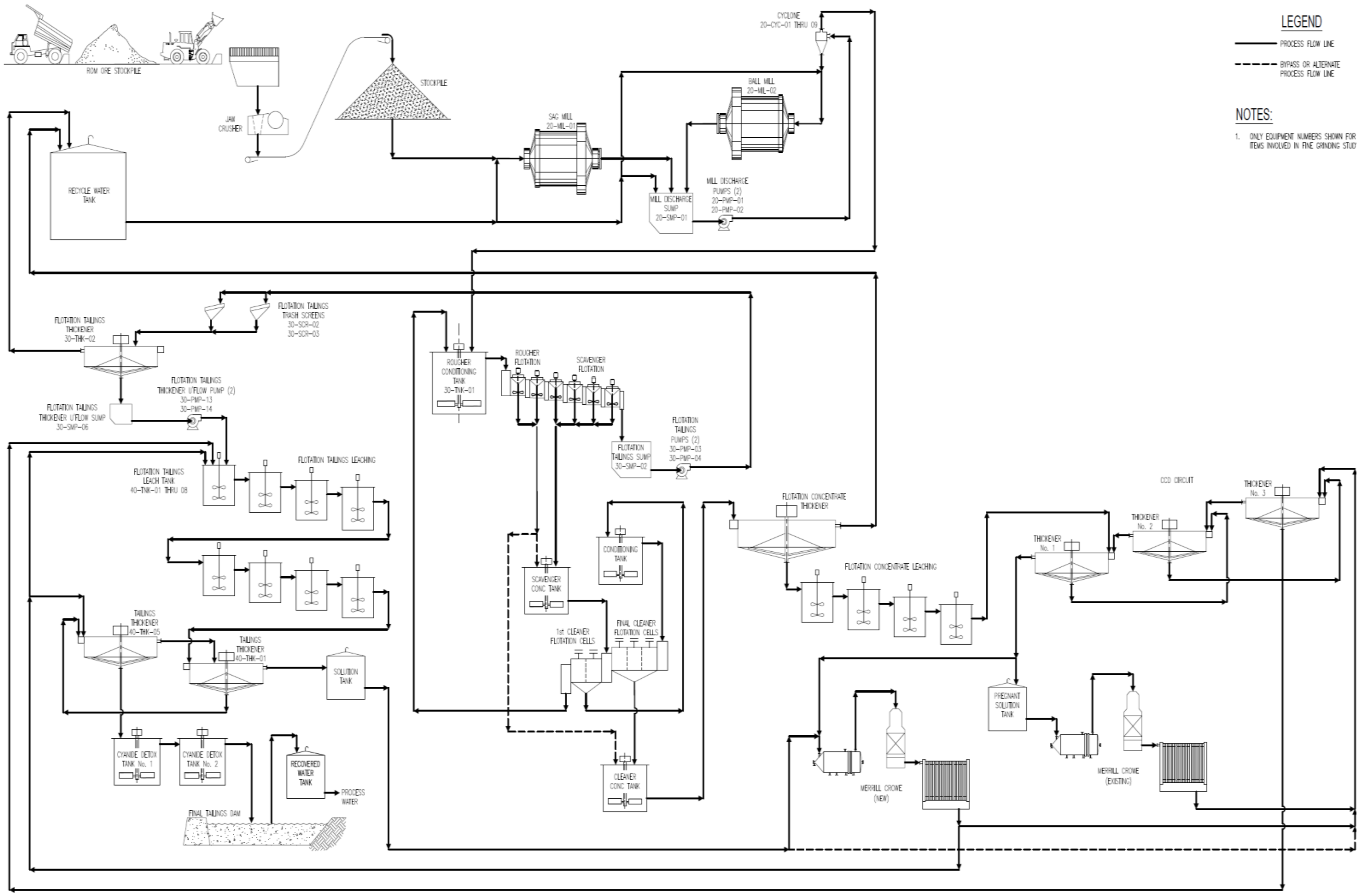
The flow sheet consists of a standard crushing and grinding circuit (jaw crusher, semi-autogenous grind (SAG) mill and ball mill), followed by flotation circuit, where the flotation concentrate is directed to a sequence of clarification tanks then to agitated cyanidation tanks. Floatation tailings are directed to and treated in agitated cyanidation tanks. A Merrill Crowe circuit is used to recover gold and silver from the leachates of concentrate and tailings solutions through a carbon in leach (CIL)- absorption, desorption, recovery (ADR) system.

14.4.1 Crushing

Ore is delivered from the underground mines to a ROM stockpile located adjacent to the primary crusher area and feed to the primary crusher dump hopper. The dump hopper has a fixed grizzly on top with an approximate opening of 51 cm and an apron feeder at the discharge. The ROM is fed with a front-end loader with secondary breakage using a rockhammer for oversize to the crusher. The primary crusher is a Nordberg C-140 jaw crusher with an approximate opening of 1.1 m x 1.4 m capable of handling 350 t/hr at a 12.7 cm close side setting.

Crushed ore is discharged vertically from the jaw crusher onto a conveyor and delivered to a 1,250-t capacity interim coarse ore stockpile. Two variable vibrating feeders reclaim the crushed ore through a vertical feed onto a belt conveyor for delivery to the SAG mill for grinding.

Figure 14-1: Process Flowsheet



Note: Figure prepared by Coeur, 2021.

14.4.2 Grinding

Coarse ore from the primary crusher is directly fed to the grinding circuit from the interim crushed ore stockpile. The grinding circuit consists of a SAG mill and a ball mill operating in a circuit with a series of cyclones for classification and passing to flotation or return to grind. Both mills are 6.7 m in diameter and 7.5 m long equipped with 2,500 kW motors. The grinding circuit feed and product is controlled and varied depending on ore type and blend from the mines.

The cyclone battery consists of nine 203 cm Krebs cyclones with an apex opening of 10.8 cm and vortex opening of 15.2 cm. Cyclone operational pressure is maintained in a range from 96–110 kPa. The cyclone battery underflow reports to the ball mill to maintain a recirculating load to have better control of the flotation feed size, while the cyclone overflow reports to flotation.

14.4.3 Flotation

The ball mill cyclone overflows at a nominal P80 minus 75 µm in size with a pulp density of 30% solids flows by gravity to the rougher flotation conditioner tank, where the slurry is conditioned with Aero 404 and potassium amyl xanthate (PAX). The conditioner tank overflows to feed a bank of five 100 m^3 capacity rougher flotation cells. Rougher flotation occurs at the first bank of two tank cells, and scavenger flotation occurs sequentially down the bank. Frother and PAX are added to rougher feed and during the scavenging flotation.

Rougher flotation concentrates report either to the cleaner concentrate tank, where they are combined with the cleaner concentrate, or to the scavenger concentrate tank, where they are combined with the scavenger concentrate. Scavenger concentrate reports to a bank of two 17 m^3 capacity cells where the first cleaner stage is provided. The first cleaner concentrate reports to a conditioning tank for additional reagents adjustment, and then flows to a bank of three 17 m^3 capacity cells, where the final cleaner flotation is obtained. The final cleaner concentrate is pumped to the concentrate thickener for dewatering. The concentrate thickener overflow reports to the grinding circuit as recycled water. The thickener underflow, at approximately 65% solids, is pumped to the concentrate leach circuit for intense cyanide mixing and agitation. The blended solution is passed to the clarifiers for final processing as discussed in Chapter 14.4.4.

Cleaner flotation tailings are recycled to the rougher flotation conditioner tank or alternatively to the 3rd rougher cell for additional treatment.

Flotation underflow is transferred to a thickener for dewatering with the fluid overflow reporting back to the grinding circuit as recycled water. Thickener underflow, at approximately 60% solids, is transferred to an agitated leach circuit for cyanide leaching and dissolution of residual gold and silver values to be recovered in the ADR circuit discussed in Chapter 14.4.6.

14.4.4 Flotation Concentrate Leaching

The concentrate leaching circuit is located in the leaching/recovery area of the mill facilities and is comprised of four agitated leach tanks, each with a nominal capacity of 200 $m^{3,}$ providing a total average leaching time of roughly 48 hours.

Thickened flotation concentrate is diluted from 65% solids to approximately 50% solids and sodium cyanide solution is added to maintain a concentration of 10 g/L NaCN. The plant switched from air injection using compressors prior to 2019 to liquid oxygen which is injected into the concentrate solution to enhance the silver-CN bonding process at lower cyanidation rates resulting in lower cyanide consumption and reduced power.

The mixed concentrate is pumped from the concentrate leach circuit to a triple stage countercurrent clarification (CCD) circuit to recover the gold and silver bonded to the cyanide in solution. Each stage consists of a high-rate, 9.0 m diameter clarifier-thickener and an inter-stage mixing tank to enhance washing efficiency. Pregnant solution containing the recoverable metal is collected from the overflow at the first CCD thickener. This solution is pumped to the pregnant solution tank for delivery to the Merrill Crowe circuit at the refinery building for metal extraction. Thickened underflow from the final CCD thickener is pumped to an agitated leach circuit with the flotation underflow for additional leaching and potential recovery of residual metal values.

14.4.5 Flotation Tailings Leaching

The flotation tailings leaching circuit is also located in the leaching/recovery area of the mill facilities.

The leach circuit comprises a total of eight leach tanks. The tanks each have different capacities, ranging from 2,000 m^3 to 1,162 m^3 for tanks No. 1 and No. 8, respectively, providing an overall retention time of 24 hours.

Activated carbon is introduced to the last four tanks of the circuit (tanks 4 to 8) with the main objective of capture dissolved gold and silver values content in solution before it is transferred to the final tailing thickener. The loaded carbon is washed, bagged, and shipped to an outside refinery facility for processing.

Thickened flotation tails are pumped to the tailings leach circuit. The slurry is combined with the concentrate leached residue; the slurry is diluted to approximately 42% solids, and the sodium cyanide solution and lime slurry are added along with injected oxygen through the agitator shafts in Tank No. 1 and compressed air for tanks No. 2, No. 3, No. 4, No. 5 and No. 7.

Liquid oxygen is injected in tank No. 1. The liquid oxygen has proven success enhancing silver-cyanide leaching reaction resulting in additional silver values extraction and a significant cyanide consumption reduction. The leaching circuit tailings slurry is transferred to the cyanide detoxification circuit.

14.4.6 Carbon Desorption

This circuit was re-introduced the second quarter of 2018. Prior to this the carbon was shipped to external refineries from 2016–2018. The circuit was upgraded with an ADR stripping circuit to support recovery improvement efforts on the flotation tailings circuit.

14.4.7 Carbon Regeneration

As part of the carbon desorption and ADR project in 2018, a carbon regeneration furnace was added to reduce carbon consumption by reactivating stripped carbon. This system was active through 2021.

14.4.8 Merrill Crowe and Refining

Pregnant solution from the flotation concentrate leach CCD first thickener overflow is pumped to one of three batch solution tanks, and then pumped to the primary Merrill Crowe system. The primary Merrill Crowe circuit capacity is 83 m^3/hr.

A secondary Merrill Crowe unit handles low-grade pregnant solution from the floatation tailings leach circuit. The final tailings thickener overflow is the source of this low-grade pregnant solution, which is pumped throughout the secondary Merrill Crowe circuit. The secondary Merrill Crowe circuit has a capacity of 175 m^3/hr. The secondary Merrill Crowe system was designed to handle higher grade pregnant solution from the flotation concentrate leach CCD circuit.

In the Merrill Crowe process, total suspended solids are first removed from the pregnant solution using a series of clarification filters. The clarified pregnant solution is routed to a deaeration tower to impact a bed of high-surface area plastic tower packing. As the solution travels down the packing, dissolved oxygen is removed from the solution and routed through the vacuum system piping to the vacuum pump, and then to the atmosphere. The dissolved oxygen is removed to a concentration of approximately to <0.7 ppm. Once the pregnant solution has been clarified and de-aerated, it is ready for precious metal precipitation by zinc cementation. The precipitated gold and silver resulting from the zinc cementation reactions are routed to the precipitate filters. The spent solution is pumped back to different points of the flotation tailings leaching circuit and/or the concentrate leach circuit for slurry washing and dilution.

The precipitate produced by Merrill Crowe is dried in two electrical dryer ovens before being smelted in a 600 kg/hr capacity electric induction furnace and poured into 30 kg doré ingots. Dore ingots are shipped directly to an offsite refinery.

14.4.9 Cyanide Detoxification

Flotation tailings leaching slurry at approximately 48% solids is transferred to a tailings thickener for water and cyanide recovery purposes, prior to delivery to the cyanide detoxification circuit. Thickener overflow is pumped to the secondary Merrill Crowe circuit or recycled back to the leaching circuit, while the thickened underflow is pumped to two 534 m^3 capacity agitated tanks in series for detoxification.

The final tailings detoxification circuit is based on the use of trademarked cyanide destruction reagents and oxygen for neutralization of slurry prior to final thickening and disposal in the tailing's facility.

14.5 Equipment Sizing

The equipment is sized for a design plant throughput of 5,500–7,000 t/d mill feed. Variability is built into the design to address ranges of grade and grind indices.

The major equipment list is provided in Table 14-1.

14.6 Power and Consumables

The average monthly electrical power consumption is 6,218 MWhrs at a cost of $0.081/kWhr. Power is supplied by the Federal Electricity Commission (CFE).

The processing circuit cycles approximately 6,650 m^3 of water daily; this consists of approximately 650 m^3 of fresh water from a local dam and the remaining 6,000 m^3 being water reclaimed from the TSF and reused in the mill.

The consumables used in the process include:

- Xanthate;
- Frother;
- Aerofloat 404;
- Sodium cyanide;
- Lime;
- Flocculant;
- Activated carbon;
- Sodium hydroxide;
- Hydrochloric acid;
- Zinc;
- Diatomaceous earth;
- Neutralite;
- Liquid oxygen.

14.7 Personnel

The personnel requirements in the process plant for the LOM total 128.

Table 14-1: Major Equipment List

Area	Equipment
Primary crusher	Jaw crusher is a Nordberg C-140 (350 t/hr)
Grinding area	Allis Chalmer SAG and Ball mills, 6.7 m in diameter and 7.5 m length (250 t/hr)
Classification area	Cyclone battery consists of nine 203cm Krebs cyclones
Flotation area	Six 100 m^3 capacity tank cells. Rougher flotation occurs at the first bank of two tank cells, and scavenger flotation occurs sequentially down the bank. The cleaners bank consists of two 17 m^3 capacity cells where the first cleaner stage is provided. Then the first cleaner concentrate reports to a conditioning tank for additional reagents adjustment, and then flows to a bank of three 17 m^3 capacity cells
Flotation concentrate leaching	The leach area is comprised of four agitation leach tanks for flotation concentrate, each with a nominal capacity of 200 m^3. Leached slurry from the concentrate leach circuit is then pumped to a triple-stage countercurrent decantation circuit. Each stage consists of a high rate, 9.0 m diameter clarifier
Flotation tailings leaching	The leach circuit comprises a total of eight leach tanks. The tanks each have different capacities, ranging from 2,000 m^3 to 1,162 m^3 for tanks No. 1 and No. 8, respectively. Leached slurry from the tailing leach circuit is then pumped to a double stage countercurrent decantation. Each stage consists of a high rate, 23.0 m diameter clarifier (thickener)
ADR circuit	The ADR comprises an acid wash column, elution column, and regeneration kiln, for process 4 of carbon tons per cycle.
Merrill Crowe	Pregnant solution from the flotation concentrate leach countercurrent decantation is pumped to a Merrill Crowe system (#1) at a flow rate ranging from 85–92 m^3/hr. Pregnant solution from the flotation tailing leach countercurrent decantation is pumped to a second Merrill Crowe system (#2), at a flow rate ranging from 285–295 m^3/hr.
Cyanide detoxification	Thickened underflow is pumped to two 534 m^3 capacity agitated tanks in series

15.0 INFRASTRUCTURE

15.1 Introduction

Infrastructure to support operations is in place, and includes:

- Three operating underground mines:
    - Underground ventilation systems, including ventilation fans, raises, primary bulkheads, airlock doors and booster fans;
    - Settling sumps and primary pump stations;
    - Blasting agent and explosives magazines;
    - Electrical substations and switch gears;
    - High and low voltage electrical cabling;
    - Mine communications system leaky feeder and fiber optic;
    - Cabling for central blasting system;
    - Underground lunchrooms and portable refuge stations;
    - Underground maintenance facilities (electrical and equipment);
    - Secondary egress raises with ladders;
    - Mine services (piping for dewatering, process water and compressed air);
    - Compressed air plant;
- Two shotcrete mixing plants;
- Backfill cement mixing plant;
- ROM pads at the mine portal areas and plant;
- Process plant;
- TSF and associated tailings pipelines, pumps and tailings water return infrastructure;
- Heavy and lift vehicle maintenance facilities (underground and surface);
- Materials storage areas and laydown facilities;
- Various support facilities including warehouse, administration, contractor and temporary offices, raw water storage, fuel storage, core processing facilities, clinic and emergency response facilities, gatehouse, change rooms, personnel training facilities, information technology (IT) communications setups and towers, environmental monitoring facilities, sewage treatment plants, and reagents shed;

- Electrical substations and power transmission lines, including an overhead high voltage power line from the main substation near the Palmarejo process plant to the Guadalupe substation and associated electrical substations and switch gear;
- Emergency powerhouse with 12 diesel generators;
- Gravel airstrip;
- Water treatment plant;
- Water pipelines and pumping stations;
- Mine permanent camp and contractor facilities and kitchens.

An infrastructure layout map is provided as Figure 15-1.

15.2 Roads and Logistics

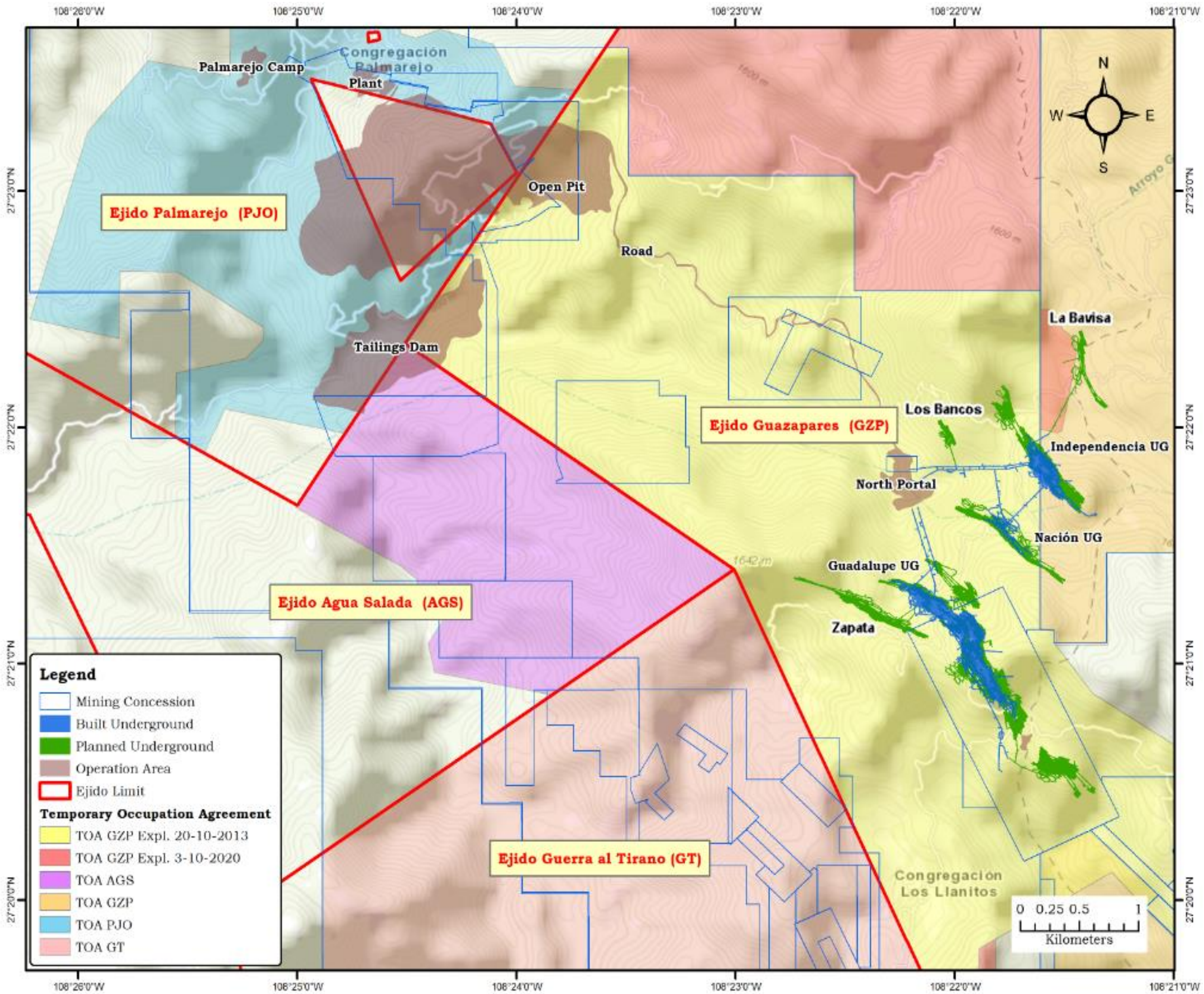
Road access to the operations is discussed in Chapter 4.2.

The state road between San Rafael and Palmarejo was upgraded in late 2007 for the mobilization of equipment and construction materials. Coeur Mexicana maintains this road on an on-going basis to support majority of logistic material delivery to support operations along this route. A secondary poorly maintained route exists to the west through Chínipas to the state of Sonora, which provides limited access for material and site personnel. Coeur also constructed and maintains the access/ore haulage road from the Guadalupe and Independencia portals to the Palmarejo process plant. The road allows CAT 777F haul truck transit used as primary transport or ore from the mine portals to the ROM stockpiles located at the process plant.

15.3 Stockpiles

The Palmarejo Operations currently maintain limited ROM stockpiles with multistage load-transport-feed sequencing to manage blending at the mine and plant. A set of stockpiles are located at the mine portals at Independencia and Guadalupe. And larger pad areas are located to the south of the primary crusher at the plant site.

Figure 15-1: Infrastructure Layout Plan



Note: Figure prepared by Coeur, 2020.

15.4 Waste Rock Storage Facilities

A series of WRSFs are located at the currently closed Palmarejo open pit operation. No mine waste has been added to the WRSFs since 2015 when the pit was closed. Waste is currently being excavated and processed to support backfill operations underground. Following the current LOM underground plan these WRSFs will continue to be excavated to support waste rock and cemented backfill requirements underground and surface projects, including tailings raises, road works, and various civil projects to support on-going operations.

15.5 Tailings Storage Facilities

The TSF was constructed and commissioned in 2010. It is a zoned downstream earthfill dam with progressively coarser fill zones to reduce seepage and facilitate seepage collection with the finest zone adjacent to the upstream slope and the coarsest zone adjacent to the downstream slope. The upstream slope is constructed at 2H:1V and lined with a high-density polyethylene geomembrane and keyed into the foundation materials. The downstream slope is also 2H:1V. Instrumentation installed include vibrating wire piezometers, vibrating wire settlement plates, and survey prisms. The facility has been raised through a series of stages with the current Stage 5 scheduled for completion in May, 2022. An emergency spillway was constructed in mid-2021 to support final design and closure requirements.

The initial stage created a crest elevation of 790 m and was raised to 818 m in four stages using the downstream construction method. The fifth stage is currently being constructed to raise the crest elevation to 823 m in three stages (5a, 5b, and 5c) using a modified-centerline construction method. The facility is projected to reach capacity in Q1 2023 at a capacity of 15.4 Mm^3, by which time the operation will transition to disposal of tailings in the mined-out Palmarejo open pit. A follow-up design of Stage 6 was completed to support a 1.5 m raise and eight months of storage capacity as contingency to support this transition.

The proposed TSF facility in the abandoned open pit will include an underdrain system within the abandoned underground below the pit, surface tailings discharge and pump-back systems, and a high compression thickener to provided high solids tails and increased water recovery.

15.6 Water Management Structures

The three primary water management structures located at the TSF are a freshwater diversion dam, freshwater diversion channel, and an environmental control dam.

The freshwater diversion dam is a zoned earthfill dam constructed to divert a large drainage around the tailings basin and provide limited permitted water support to the plant. A bituminous geomembrane is installed on the upstream face of the freshwater diversion dam as erosion protection and seepage control. Construction of the freshwater diversion dam was completed in 2009 and filling of the freshwater diversion dam basin commenced immediately thereafter.

The freshwater diversion channel was constructed to convey stormwater from the freshwater diversion dam basin around the tailings pond to the environmental control dam basin located downstream of the tailings facility. Construction of the freshwater diversion channel was completed in 2009–2010. The channel apex is located approximately 10 m below the top of the freshwater diversion dam to accommodate and control flood release during heavy rain events.

The environmental control dam is a roller-compacted concrete dam constructed to provide a single collection and discharge location for all potentially impacted flow from the diversion and lateral streams entering the basin. The dam was designed as an overtopping structure with a stepped spillway constructed on the downstream face under high flow conditions. The facility is managed dry during most of the year with underflow pipe to manage and release smaller flows and maintain flow through within the basin. Construction of the environmental control dam was completed in June 2009. Since the dam was constructed, flow over the environmental control dam spillway has occurred serval times periodically during the wet season. Since 2018, the underflow drain has remained open to eliminate long term storage and limit the topping to a single event.

In 2016, a water treatment plant was constructed to treat and release excess water from the tailings pond. A water discharge permit obtained from the Mexican National Water Regulatory Agency (CONAGUA) allows discharge of a maximum of 2.0 Mm^3/a of treated water into a downstream creek. The water treatment system can treat the outstanding water over balance in the TSF and comply with water quality requirements as per the CONAGUA permit.

Groundwater from the underground mines is collected in level sumps constructed in the underground mines. The collected water is drained and pumped to central collection sumps in each mine to allow suspended solids to settle before it is pumped to a surface treatment plant, constructed in 2019, for further clarification. The water is then cycled both back to the underground mine to support operations, and to the plant, via a pipeline constructed in 2020, to support process at the plant.

15.7 Water Supply

Water for the process facilities is obtained from a variety of sources. Reclaimed water from the wet tailings including underflow collection is recycled back to the plant from the TSF. When needed, additional make-up water is pumped from the underground mines, additional subsurface sources from areas wells, limited permit options from the freshwater diversion dam, and a pump station located at the Chínipas River.

Domestic use water is purchased from local municipalities or is trucked to site from various stations that hold water sourced from the Chínipas River. All gray water is stored and blended for use in the process cycle at the plant.

15.8 Camps and Accommodation

The mine camp facilities and kitchen support the requirements of the workforce. Contractors and employees live at the camp while working on site. The camp has a capacity of 532 beds. Satellite camp complexes accommodate housekeeping, security, and kitchen staff with a capacity of 126 beds.

15.9 Power and Electrical

The main substation for the Palmarejo Operations has a 115 kV/13.8 kV transformer, with capacity of 20/25 mVA (one in back up). The system includes a 66 km overhead 115 kV distribution line ceded to the CFE that was built in 2009. The process plant and all other electrical loads are connected to this grid. The overall power requirement for the operation is 18 MW, and the maximum capacity of the current infrastructure is 21 MW.

A 5.9 km-long power line is in place from the main substation to the Guadalupe and Independencia mines, with capacity for 115 kV, although it is currently operating on 13.8 kV. This infrastructure will allow for power capacity expansion in the future. Substations have been constructed on the surface at the Guadalupe and Independencia mines, and underground at the La Nación mine. The estimated capacity for Guadalupe, Independencia, and La Nación complexes (at full production) is approximately 5.0 MW.

An emergency powerhouse is located near the process plant and contains 12 diesel generators that operate during main power outages. The total installed emergency power capacity is 21.9 MW, which is sufficient for LOM requirements.

16.0 MARKET STUDIES AND CONTRACTS

16.1 Markets

No market studies are currently relevant as the Palmarejo Operations consist of operating mines producing a readily-saleable commodity in the form of doré. Gold and silver are freely traded, at prices that are widely known, and the prospects for the sale of any production are well understood.

Together with public documents and analyst forecasts, these data support that there is a reasonable basis to assume that for the LOM plan, that the key products will be saleable at the assumed commodity pricing.

There are no agency relationships relevant to the marketing strategies used.

Product valuation is included in the economic analysis in Chapter 19 and is based on a combination of the metallurgical recovery, commodity pricing, and consideration of processing charges.

Coeur sells its payable silver and gold production on behalf of its subsidiaries on a spot or forward basis, primarily to multi-national banks and bullion trading houses. Markets for both silver and gold bullion are highly liquid, and the loss of a single trading counterparty would not impact Coeur's ability to sell its bullion.

Coeur's strategy on hedging silver and gold is focused on providing downside protection. To accomplish that, the company may enter into derivative contracts to protect the selling price for a certain portion of the production if terms are attractive.

To mitigate the risks associated with gold and silver price fluctuations, Coeur may enter into option contracts to hedge future production. Coeur is targeting to hedge up to 50% of expected gold production through 2021 and 2022 and may in the future layer on additional hedges as circumstances warrant.

16.2 Commodity Price Forecasts

Coeur uses a combination of analysis of three-year rolling averages, long-term consensus pricing, and benchmarks to pricing used by industry peers over the past year, when considering long-term commodity price forecasts.

Higher metal prices are used for the mineral resource estimates to ensure the mineral reserves are a sub-set of, and not constrained by, the mineral resources, in accordance with industry-accepted practice.

The long-term gold price forecasts are:

- Mineral reserves: US$1,400 US$/oz;
- Mineral resources: US$1,700 US$/oz;

The long-term silver price forecasts are:

- Mineral reserves: US$20.00/oz;
- Mineral resources: US$22.00/oz.

The price forecasts used in the cashflow analysis for gold vary from US$1,400/oz to US$1,750/oz and US$22/oz to $US24/oz for silver.

All commodity prices are advised by the corporate investment committee and revised as necessary throughout the budget and forecast process. This guidance is used to keep all sites using the same basis for revenue. The sites do not advise prices or deviate from the prices provided.

16.3 Contracts

The Palmarejo Operations produce silver and gold doré, which is transported from the mine site to the refinery by a secure transportation provider. The transportation cost consists of a fixed charge plus a liability charge based on the declared value of the shipment and is approximately $0.065/oz of doré shipped.

Coeur Mexicana has contracts with one U.S. based refiner and one Switzerland-based refiner, which refine the Palmarejo Operations' doré bars into silver and gold bullion. The bullion meets certain benchmark 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 these contracts include:

- A treatment charge based on the weight of the doré bars received at the refinery;
- A metal return percentage applied to recoverable gold;
- A metal return percentage applied to recoverable silver;
- Penalties charged for deleterious elements contained in the doré bars. The total of these charges can range from $0.30–$0.40/oz doré.

Currently, there are contracts in place at the Palmarejo Operations to provide supply for all major commodities used in mining and processing, such as equipment vendors, power, explosives, cyanide, tire suppliers, raise boring, ground support suppliers and drilling contractors. The terms and rates for these contracts are within industry norms. These contracts are periodically put up for bid or negotiated to ensure the rates remain favorable to Coeur.

16.4 QP Statement

For the purposes of the gold and silver price forecasts used in the mineral resource and mineral reserve estimates, the QPs reviewed the corporate pricing provided by Coeur, and accepted these prices as reasonable. The reviews included checking the pricing used in technical reports recently filed with Canadian regulatory authorities, pricing reported by major mining company peers in recent public filings, the current spot gold and silver pricing, and three-year trailing average pricing.

The US$1,400/oz Au and US$20/oz Ag prices are considered to be a reasonable forecast for the nine-year mine life envisaged in the mine plan. The US$1,700/oz Au and US$22/oz Ag mineral resource price is, as noted, selected to ensure that the mineral reserves are a subset of the mineral resources and assume that there is sufficient time in the nine-year mine life forecast for the mineral reserves for the mineral resources to potentially be converted to mineral reserves.

Overall, the QPs conclude that there is sufficient time in the nine-year timeframe considered for the commodity price forecasts for Coeur to address any issues that may arise, or perform appropriate additional drilling, testwork and engineering studies to mitigate identified issues with the estimates or upgrade the confidence categories that are currently assigned.

17.0 ENVIRONMENTAL STUDIES, PERMITTING, AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS

17.1 Introduction

The environmental permitting process in Mexico requires the presentation of two different documents at the federal level: an Environmental Impact Statement (MIA in the Spanish acronym) and a Land Use Change (CUS in the Spanish acronym). These documents are reviewed and approved by Mexico's environmental authority SEMARNAT. In addition, authorization from CONAGUA is needed for water use, effluent discharge, and for the construction of facilities in federal watersheds.

17.2 Baseline and Supporting Studies

Baseline studies and monitoring reports were required for each mine permit obtained.

Several environmental studies were completed in support of permitting activities. These studies included:

- Air quality;
- Weather;
- Landscape;
- Seismicity and natural hazards;
- Groundwater and surface water quality;
- Biodiversity, terrestrial and aquatic;
- Soils characteristic, uses, and potential use;
- Noise and vibration;
- Geochemical mineral waste characterization;
- Archaeology/cultural heritage;
- Socioeconomics and cultural aspects.

17.3 Environmental Considerations/Monitoring Programs

Coeur Mexicana conducts routine monitoring of physical and biological parameters required in the MIA approval resolution and the MIA document itself. These include groundwater and surface water quality, air quality, emissions to the air, biodiversity, water discharges, etc. Results from these monitoring activities are presented to the authorities through their official digital platform.

As part of the environmental management program of the Palmarejo Operations, there is a continuous evaluation of the acid rock drainage (ARD) potential for waste rock and tailings in the extraction process. The initial ARD testing by Environmental Geochemistry International Pty Ltd. in 2005 indicated a very low ARD potential for waste rock and tailings.

In 2012, a long-term humidity cell test was conducted on composite tailings samples to assess the potential for the generation of acid. Results from testing conclusively indicate that pre-2012 tailings deposited in the TSF will not present problems with acid generation. Additional studies conducted in 2016 and 2017 indicate that the potential for acid generation of the tailings in the TSF is low and that the tailings are essentially anoxic and incapable of oxidizing while inundated with water.

In November 2017, Knight Piésold collected samples from tailings and waste rock as part of their Site Wide Closure Plan, including samples from Guadalupe and Independencia. From their study, Knight Piésold concluded that the samples collected are not potentially acid generating nor metal leaching and do not pose a threat to the environment.

Coeur continuously updates the information with data from the material mined from the underground operations. Concurrent sampling and paste pH testing of the underground works at Guadalupe and Independencia support the absence of ARD and the strong neutralization potential of the waste rock.

Wildlife and biodiversity monitoring is conducted by CIMA Consultores, a Chihuahua-based consulting firm, four times during the year. The most recent study was conducted in August and reported on September 2021.

17.4 Closure and Reclamation Considerations

The SEMARNAT Environmental and Forestry Authorizations for the Project and NOM-141-SEMARNAT-2003 requires a restoration and monitoring program for mining areas that will recover the soil for landscape restitution and restore pre-mining land-use and ecosystem conditions.

Coeur conducts an annual review of its potential reclamation responsibilities company wide. A site-wide Closure Plan was prepared by Knight Piésold Consulting in December 2017. This document served as the base for potential closure and reclamation cost estimation, prepared by KC Harvey Environmental in October 2021. The 2021 year-end closure assessment for the actual disturbance for final reclamation at the Palmarejo Operations, is estimated at US$40.6 M.

17.5 Permitting

17.5.1 Environmental Impact Statements

Coeur Mexicana submitted its initial MIA for Palmarejo in March 2008 (Palmarejo Phase 1) and received its first environmental authorization from SEMARNAT in May 2008 for a period of 13 years (including 11 years of operation and two years for closure and reclamation). This authorization covered the Palmarejo Phase 1 project that included all production facilities (process plant, tailings area, most waste deposits, open pit and underground facilities), for a total of 378 ha. Under the first environmental license, Coeur was authorized to operate Palmarejo until May 2017, followed by two years of reclamation activities until May 2019. This first authorization was extended for an additional 6.5 years in 2017 and is valid for production through October 2023 followed by a two-year closure period.

Coeur Mexicana filed for, and received, approval for a second environmental authorization (Palmarejo Phase 2) for an additional 290.34 ha, which was issued in 2010 for 10 years, ending in December 2020. This authorization was extended for five additional years and is valid through November 2025.

Coeur Mexicana submitted separate MIAs for some aspects of the Palmarejo Operations, including:

- Development of the Guadalupe and Independencia mines for an additional 43.93 ha, expiring on November 2023 plus the closure stage;
- Construction of a haul road between Palmarejo and Guadalupe covering 4.38 ha, expires November 2027;
- The power line and electric substation for Guadalupe, covering 6.47 ha, expires October 2025;
- The Guadalupe and Independencia South Portal, expires June 2027;
- Water treatment plant, expires May 2023;
- Los Gavilanes–El Guamuchil aqueduct, expires December 2028.

As noted in Chapter 3.7.1, Coeur has initiated the process of obtaining an MIA-R. In late July 2021, SEMARNAT requested additional information to the MIA-R document. This was supplied by Coeur on August 10, 2021. It is expected that the MIA-R will be approved in the first quarter of 2022. When approved the MIA-R will add 10 additional years to the current present environmental license, will consolidate 13 different authorizations under a single global license, and will include all new facilities and mine development expected for the LOM in this Report.

17.5.2 Change in Land Use Authorizations

Following the acceptance of the various MIAs, a vegetation disturbance permit or change in land use authorization (Cambio de Uso de Suelo, or CUS) was applied for. The original Palmarejo Phase I CUS was approved in 2008 for a period of 10 years, and then extended in 2016 for five additional (Dec 2021) years covering 327.3 ha for land disturbance. Concurrently, Palmarejo Phase II has a CUS approval for 290.34 ha, granted in 2010 for a seven-year period, extended for additional 3.5 years until December 2021. To date, the Project has CUS approval for mining activities over a total of 723 ha, including 668 ha for Palmarejo, 43 ha for Guadalupe, and 12 ha for other related facilities. The operations also have CUS approval for 3.8 ha for exploration activities at La Patria.

The Phase I MIA and corresponding CUS authorizations were extended by SEMARNAT through a relatively simple notification procedure for additional time equivalent to one-half of the initial authorized period. In the case of Palmarejo Phase I MIA, this represents 6.5 years of additional environmental authorization, starting May 2019.

The CUS is an authorization to clear natural vegetation and within the Phase I and Phase II areas, required areas were cleared during the construction phase. There is no need to further extend these authorizations. If additional land disturbance for mining activities is required, it can be added through a new CUS request. Payment to the Forestry Fund, in accordance with the additional disturbance, would be required.

17.5.3 Current Permits

Coeur Mexicana was granted full authorization for open pit and underground gold and silver mining activities within the areas outlined in the different MIAs. This includes permits for exploration, construction, and operation of the underground gold and silver mines, and land use/disturbance permits. The key authorizations and their terms are summarized in Table 17-1. The authorizations required for production are in good standing.

Current permitting includes the cyanide leaching process, refining and cyanide detoxification of the tailings prior to TSF discharge. In 2012, SEMARNAT set a specific limit for cyanide concentrations in the tailings disposed in the TSF; this limit is consistent with other Coeur operations at 50 ppm weakly acid-dissociable cyanide. Coeur continues to meet the standards recommended in the International Cyanide Management Code.

All MIAs will expire prior to the planned end of mine life except one, “MIA Culvert extension at GPE”. Coeur is in the process of obtaining a new environmental license, MIA-R (refer to discussion in Chapter 17.5.1), to cover the remining LOM.

17.6 Social Considerations, Plans, Negotiations and Agreements

Coeur actively engages with the local community with a series of cultural social and economic programs divided into four main categories:

- Local hiring and local purchases: through the apprentice program, local youth are trained for different job opportunities and several of the apprentices are hired by the company. Priority is given to local providers and contractors;
- House improvement program: the community relations group together with the projects department has developed the house improvement program that consists of community house roof and floor repair, installation of rainwater collection systems, backyard vegetable gardens, fruit tree donations, and hen coops for egg supply;
- Social investment in vulnerable groups: families with vulnerable members are supported through a series of social programs: a) the 65+ program for vulnerable elderly through the sale of scrap metal, b) grocery donation programs;
- Productive community programs: a) handcrafted soap and shampoo, b) herbs and medicinal plants/ointments and creams.

The surrounding communities are supportive of the Palmarejo Operations, and the employment and benefits that the mines provide.

Table 17-1: Granted Authorizations

Authorization Name	Granting Authority	Date Granted	Term Granted	Comment
MIA Palmarejo I	SEMARNAT	23-May-06	29-Oct-25	Extended for 7.5 years. Production until May 29, 2023, followed by closure period up to Oct 29, 2025.
CUS Palmarejo I	SEMARNAT	14-Jul-08	31-Dec-21	
MIA Palmarejo II	SEMARNAT	7-Dec-10	16-Nov-25	Extended for 5 years. Operative until Nov 16th 2023 plus 2 year closure up to Nov 16 2025
CUS Palmarejo II	SEMARNAT	3-Nov-10	03-Nov-21	
MIA Guadalupe I	SEMARNAT	24-Sep-10	26-Nov-23	Plus 2 years of closure stage.
CUS Guadalupe I	SEMARNAT	26-Nov-10	26-Nov-19	No extension required. No additional soil use changes necessary.
CUS Guadalupe II	SEMARNAT	27-Feb-13	16-Apr-17	No extension required. No additional soil use changes necessary.
MIA Hauling Road I	SEMARNAT	30-May-11	11-Jan-15	New MIA approved on 11 Nov 2015 for hauling road expansion.
CUS Hauling Road I	SEMARNAT	11-Jul-11	11-Jul-16	No extension required
CUS Hauling Road II	SEMARNAT	8-May-14	8-May-16	No extension required
MIA WTP FTD	SEMARNAT	31-May-13	31-May-23	Authorization for PTAR 3 operation, located at FTD, not included in previous MIAs
MIA ICA/GPE S Portal	SEMARNAT	4-Mar-16	16-Jun-27	
CUS ICA/GPE S Portal	SEMARNAT	16-Jun-16	16-Jun-26	
MIA Power Line GPE	SEMARNAT	19-Mar-15	15-Oct-25	
CUS Power Line GPE	SEMARNAT	23-Jun-15	15-Oct-17	No extension required
MIA Water line Gavilanes-Guamuchil	SEMARNAT	5-Dec-08	5-Dec-28	
MIA Borrow Materials Area	SEMARNAT	6-Feb-18	6-Feb-22	3.5 ha), to use in FTD Stage 5 construction in 2018. No extension required.
CUS Borrow Materials Area	SEMARNAT	8-Aug-18	8-Aug-22	
MIA PJO-GPE Hauling Road Expansion	SEMARNAT	11-Nov-15	19-Nov-27	
CUS PJO-GPE Haul Road Expansion	SEMARNAT	13-Aug-18	13-Aug-21	No extension required

MIA Deposit dredged material from ECD	SEMARNAT	10-Apr-18	10-Apr-28	Material dredged from environmental control dam and freshwater diversion channel stabilization
CUS Deposit dredged material from ECD	SEMARNAT	13-Aug-18	13-Aug-21	No extension required
MIA Culvert extension at GPE	SEMARNAT	6-Jun-18	6-Jun-48	
CUS Culvert extension at GPE	SEMARNAT	28-Aug-18	28-Aug-20	No extension required
CUS Spillway construction	SEMARNAT	30-Apr-19	30-Apr-20	No extension required
CUS modification for Spillway	SEMARNAT	30-Apr-19	30-Apr-20	No extension required
Water extraction permit, location change	CONAGUA	16-Nov-14	16-Nov-34	Water extraction license modification, relocation from environmental control dam embankment to freshwater dam embankment.
Water well	CONAGUA	9-Jun-17	9-Jun-27	Water extraction license for 189,216 m^3/year. Valid for 10 years.
Water discharge permit, PTAR 3	CONAGUA	25-Feb-16	25-Feb-26	Discharge permit for Palmarejo tailings area, water treatment plant PTAR3. Authorized discharge volume: 2,628,000 m^3/year
Water discharge permit, PTAR 1	CONAGUA	28-Jan-09	28-Jan-24	water treatment plant authorized discharge volume: 34,700 m^3/year
Water discharge permit, PTAR 2	CONAGUA	3-Aug-12	3-Aug-22	Water treatment plant authorized discharge volume: 37,250 m^3/year
Explosive use and storage	SEDENA	1-Jan-21	31-Dec-22	Secretaria de la Defensa Naciónal (SEDENA) Permit # 4361-Chih.
Sanitary Landfill	SEDUE	23-Apr-19	30-Apr-24	Secretaría de Desarrrollo Urbano y Ecológico (SEDUE)

Note: Acronyms used in table: MIA: Manifestación de Impacto Ambiental or Environmental Impact Statement; CUS: Cambio de uso del suelo or soil change use for vegetation clearing; GPE: Guadalupe mine; ICA: Independencia mine; FTD: Final tailings dam

Coeur Mexicana received the distinguished Social Responsibility Award from the Mexican Center of Philanthropy-CEMEFI on February 26, 2021. This award is bestowed on companies that have demonstrated a commitment to promoting social responsibility within the company as well as in the communities in which the company operates. This is the 11th year that Coeur Mexicana was an award recipient.

17.7 Qualified Person's Opinion on Adequacy of Current Plans to Address Issues

Based on the information provided to the QP by Coeur (see Chapter 25), there are no material issues known to the QP that will require mitigation activities or allocation of remediation costs in respect of environmental, permitting, closure or social license considerations beyond what is included in the existing plans. Currently Coeur Mexicana is a mature mining operation that has demonstrated its ability to maintain environmental compliance, attain permits in a timely manner and has a strong social license to operate within its local communities.

18.0 CAPITAL AND OPERATING COSTS

18.1 Introduction

Capital and operating cost estimates are at a minimum at a pre-feasibility level of confidence, having an accuracy level of ±25% and a contingency range not exceeding 15%.

18.2 Capital Cost Estimates

18.2.1 Basis of Estimate

Major LOM capital costs include, but are not limited to mine development, plant expansions or upgrades, equipment replacement, and tailings storage.

Capital costs are based on recent prices or operating data. No allowance for contingency is included.

The basis of the capital estimates is derived from expected equipment needs and Project plans and is determined with the assistance of vendor and contractor quotes, previous buying experience and/or experience with construction of similar projects using Owner equipment and labor. The capital cost estimate includes consideration of historical capital cost estimates reconciled where Owner equipment and labor are used.

Capital expenditures consist largely of mining and processing equipment upgrades and replacement, capital leases, TSF construction and raises, small projects to support community or logistics, and general and administrative (G&A) support equipment, leases, and offices. Capital costs are split into:

- Sustaining capital: Costs support the existing LOM plan.
- Non-sustaining capital: Costs are for a long-term structure or external project that does not necessarily relate directly to the mine plan. Non-sustaining capital allocations include TSF raises and closure costs, as well as community support projects.

Labor assumptions for capital projects are based on third-party contractor costs, internal employee wage rates plus benefits, or a combination of the two where combined support is required.

Material costs are based on current prices for consumables without market or inflation rate assumed.

Owner labor costs to support mechanical rebuilds or internal projects that are included in capital costs at operating rates. Where the labor is to be provided by a contracted entity, contractor labor costs are included in the estimate.

Mine capital costs are estimated based on historic and reconciled Owner operating cost-plus adjustments. Rebuilds and equipment replacement costs are estimated based on current material and part costs. Major mine equipment fleet replacements are assumed to be conducted on an as-needs basis, depending on equipment condition, utilization, and hours. A capital cost of US$167.0 M is estimated for the LOM.

A major sustaining capital cost at Palmarejo is underground development for a LOM total of US$71.1 M.

Process capital costs include estimates of approximately US$2.7 M plus another average of US$1.5 M per year for process sustaining capital for a total of US$9.2 M. The LOM mobile equipment capital is estimated at US$34.0 M. The TSF and in-pit tailing disposal facilities have US$20.1 M estimated capital spend remaining over the Project life.

General and administrative capital costs average US$0.7 M per year in sustaining capital costs. Total general and administrative capital costs are US$3.9 M over the LOM.

The total reclamation and closure capital cost is estimated at US$40.6 M, with costs spread over the last four years of mine life.

18.2.2 Capital Cost Summary

Capital expenditure for the LOM is estimated at US$167.0 M from January 1, 2022. Estimated capital expenditures are shown in Table 18-1.

18.3 Operating Cost Estimates

18.3.1 Basis of Estimate

Operating costs were developed based on historical cost performance and first principal calculations based on current commodity costs, labor rates, and equipment costs. The costs are provided for each major cost center: mining, processing, selling expense, and G&A. The total operating cost estimate includes all site costs, off-site costs associated with gold and silver metal sales, gold stream payments, and corporate overheads. The cost estimates are based on budgeted and expected LOM costs.

Mine operating costs are estimated by area, based on an average mining rate of approximately 5,000 t/d. Mine and transport unit costs are estimated at US$53.80/t milled.

Processing costs include all activities related to crushing, grinding, flotation concentrate and tailings leaching, carbon elution and regeneration, cyanide destruction, electrowinning and refining, tailings storage facility, water reclaim, reagent systems, and the metallurgical laboratory. Processing costs are modelled as variable and period costs. Variable costs are costs that change with throughput rate, consisting largely of consumables/supplies and power costs, as well as maintenance and other allocations. Period costs are time related costs incurred regardless of production, including labor, contractors, and a portion of maintenance and other distributed costs. Total process costs vary year over year depending on the operational plan. The process operating cost is estimated to average US$34.05/t milled over the process LOM.

Table 18-1: Estimated Capital Expenditures by Year (US$ M)

Area	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Mine development	17.5	17.4	16.4	11.6	0.2	3.9	4.0	0.7	—	***71.7***
Infrastructure	3.2	2.0	3.3	2.3	0.5	2.8	1.3	0.4	—	***15.8***
Mobile equipment	5.2	5.2	6.5	6.5	5.3	5.3	—	—	—	***34.0***
GPE substation	1.8	2.5	—	—	—	—	—	—	—	***4.3***
Process equipment	—	—	—	—	—	—	—	—	—	***0.0***
Process sustaining capital	1.9	2.1	1.5	1.5	1.5	0.8	—	—	—	***9.2***
Mine & site capital	2.0	3.5	1.5	0.5	0.5	—	—	—	—	***8.0***
G&A & others	1.7	0.7	0.5	0.5	0.5	—	—	—	—	***3.9***
Tailings/water treatment	15.8	4.4	—	—	—	—	—	—	—	***20.1***
Total Capital Cost Estimate	***49.0***	***37.8***	***29.7***	***23.0***	***8.5***	***12.7***	***5.3***	***1.1***	—	***167.0***

Note: Numbers have been rounded.

Infrastructure and other distributable costs such as power, light vehicles, maintenance, fuel, travel, and camp are distributed through the mining, processing, and site general costs as applicable.

General and administrative costs are modelled as period costs. These include period costs for administrative labor and supplies costs, information technology services, health and safety, environmental, security, supply chain, and accounting costs. Total G&A costs vary year over year depending on the operational plan. The G&A cost is projected to average $11.37/t milled.

General and administrative costs are modelled as period costs. These include period costs for administrative labor and supplies costs, information technology services, health and safety, environmental, security, supply chain, and accounting costs. Total G&A costs vary year over year depending on the operational plan. The G&A cost is projected to average US$15.76/t milled.

Selling expenses include treatment and refining costs of the doré and product transport from site to refinery for a LOM total of US$23.4 M for an average of US$0.44/oz Ag.

18.3.2 Operating Cost Summary

Operating expenditure for the LOM is estimated at $US1,500.3 M from January 1, 2022 to forecast end of the LOM in 2030.

Operating costs are summarized in Table 18-2.

Table 18-2: Operating Costs by Year (US$ M)

Operating Cost Type	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Underground mining	91.0	92.0	97.9	96.5	90.6	81.7	77.3	59.2	25.7	***711.8***
Surface haulage	5.7	5.9	5.9	6.0	6.0	5.7	5.5	4.8	2.8	***48.2***
Processing	59.3	59.7	63.6	64.3	61.8	60.2	56.5	44.7	19.9	***490.1***
General and administrative	27.6	27.6	28.4	28.9	28.1	28.3	26.6	21.3	10.0	***226.8***
Transportation, refining, and sales costs	2.9	3.0	3.0	3.0	2.8	2.9	2.6	2.4	0.8	***23.4***
Total Operating Costs	***186.5***	***188.3***	***198.8***	***198.7***	***189.2***	***178.8***	***168.6***	***132.3***	***59.2***	***1,500.3***

Note: Numbers have been rounded.

18.4 QP Statement

Capital and operating cost estimates are at a minimum at a pre-feasibility level of confidence, having an accuracy level of ±25% and a contingency range not exceeding 15%. The estimate accuracies and ranges comply with the stated accuracy and contingency ranges required to meet a pre-feasibility level of study under SK1300. The QPs considered the risks associated with the engineering estimation methods used when stating the accuracy and contingency ranges and preparing the cost estimate forecasts.

The capital and operating cost estimates are presented for an operating mine, with an 11 year production history. Analogues to prior similar environments are not relevant to the Palmarejo Operations given the production history and that the mine was in production as at year-end December 31, 2021.

19.0 ECONOMIC ANALYSIS

19.1 Forward-looking Information Caution

Results of the economic analysis represent forward- looking information that is subject to several known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented here.

Other forward-looking statements in this Report include, but are not limited to: statements with respect to future metal prices and concentrate sales contracts; the estimation of mineral reserves and mineral resources; the realization of mineral reserve estimates; the timing and amount of estimated future production; costs of production; capital expenditures; costs and timing of the development of new ore zones; permitting time lines; requirements for additional capital; government regulation of mining operations; environmental risks; unanticipated reclamation expenses; title disputes or claims; and, limitations on insurance coverage.

Factors that may cause actual results to differ from forward-looking statements include: actual results of current reclamation activities; results of economic evaluations; changes in Project parameters as mine and process plans continue to be refined, possible variations in mineral reserves, grade or recovery rates; geotechnical considerations during mining; failure of plant, equipment or processes to operate as anticipated; shipping delays and regulations; accidents, labor disputes and other risks of the mining industry; and, delays in obtaining governmental approvals.

19.2 Methodology Used

Coeur records its financial costs on an accrual basis and adheres to U.S. Generally Accepted Accounting Principles (GAAP).

The financial costs used for this analysis are based on the 2022 LOM budget model, which was built on a zero-based budgeting process that was validated through a historical cost comparison from the previous financial year. All the figures in this section are LOM averages and may vary from year to year depending on capital and production needs.

The gold price used in the financial analysis varies from US$1,750 to $1,400/oz Au and the silver price varies from US$24.00 to $22.00/oz Ag.

19.3 Financial Model Parameters

19.3.1 Mineral Resource, Mineral Reserve, and Mine Life

The mineral resources are discussed in Chapter 11, and the mineral reserves in Chapter 12.

The mineral reserves support a mine life of nine years to 2030.

19.3.2 Metallurgical Recoveries

Forecast metallurgical recoveries are provided in Chapter 10.

19.3.3 Smelting and Refining Terms

Smelting and refining terms for the gold concentrates are outlined in Chapter 16.

19.3.4 Metal Prices

Metal price assumptions are provided in Chapter 16.

19.3.5 Capital and Operating Costs

Capital and operating cost forecasts price assumptions are outlined in Chapter 18.

19.3.6 Working Capital

Working capital is based upon historical trends for movement in payables and receivables. This is adjusted year over year for changes in spending levels. Inventory movement is also adjusted annually for production levels. In future years the working capital is adjusted from recent historical values based upon the timing of the remaining mine life.

19.3.7 Taxes and Royalties

Royalties are discussed in Chapter 3.7. The Franco-Nevada agreement is included in the cashflow analysis. No other royalties are included in the cashflow analysis as there are no mineral resources or mineral reserves within the other royalties referenced in Chapter 3.7.

The economic model includes the Extraordinary Mining duty of 0.5% applied to all metal sales, and the Special Mining Duty of 7.5% applied to the pre-tax cash flow.

The income tax rate is 30%.

19.3.8 Closure Costs and Salvage Value

The 2021 year-end closure assessment for the actual disturbance for final reclamation at the Palmarejo Operations, is estimated at US$40.6 M and is discussed in Chapter 17.4.

No salvage value is assumed or included in the economic analysis.

19.3.9 Financing

The economic analysis is reported on a 100% Project ownership basis.

19.3.10 Inflation

The economic analysis assumes constant prices with no inflationary adjustments.

19.4 Economic Analysis

The NPV 5% is US$229.5 M.

As the cashflows are based on existing operations where all costs are considered sunk to December 31, 2021, considerations of payback and internal rate of return are not relevant.

A summary of the financial results is provided in Table 19-1. An annualized cashflow statement is provided in Table 19-2.

The active mining operation ceases in 2030; however, closure costs are estimated to be paid out the last four years of operation for the purposes of the financial model.

19.5 Sensitivity Analysis

The sensitivity of the Project to ± 20% changes in metal prices, grade, sustaining capital costs and operating cost assumptions was tested and can be seen in Table 19-3.

The Project is most sensitive to metal prices, less sensitive to grade, less sensitive to operating costs, and least sensitive to capital costs.

Table 19-1: Cashflow Summary Table

Item	Units	Value
Revenue		
Average gold price	US$/oz	1,644
Average silver price	US$/oz	22.56
Gross revenue	US$M	2,230.0
Operating Costs		
Mining	US$M	(760.0)
Processing	US$M	(490.1)
General and administrative	US$M	(226.8)
Smelting and refining	US$M	(23.4)
Total Operating Costs	*US$M*	*(1,500.3)*
Cash Flow		
Operating cash flow*	US$M	729.6
Capital expenditures	US$M	(167.0)
Reclamation	US$M	(40.6)
Total Pre-Tax Cash Flow (Net Cash Flow)	***US$M***	***522.0***
30% corporate income tax	US$M	(173.0)
7.5% special mining duty	US$M	(59.5)
0.5% extraordinary mining duty	US$M	(11.1)
Total After-Tax Cashflow (Net Cash Flow)	***US$M***	***278.4***
Total After-Tax NPV (5% Discount Rate)	***US$M***	***229.5***

Note: * Operating cash flow is inclusive of the Franco Nevada encumbrance. Numbers have been rounded.

Table 19-2: Annualized Cashflow (2022–2030)

Item	Units	2022	2023	2024	2025	2026	2027	2028	2029	2030
Revenue										
Gross revenue*	US$M	306.7	315.6	302.3	284.3	268.8	271.9	239.6	186.9	53.9
Operating Costs										
Mining	US$M	(96.7)	(97.9)	(103.8)	(102.4)	(96.5)	(87.4)	(82.9)	(63.9)	(28.4)
Processing	US$M	(59.3)	(59.7)	(63.6)	(64.3)	(61.8)	(60.2)	(56.5)	(44.7)	(19.9)
General and administrative	US$M	(27.6)	(27.6)	(28.4)	(28.9)	(28.1)	(28.3)	(26.6)	(21.3)	(10.0)
Smelting and refining	US$M	(2.9)	(3.0)	(3.0)	(3.0)	(2.8)	(2.9)	(2.6)	(2.4)	(0.8)
Total operating costs	US$M	(186.5)	(188.3)	(198.8)	(198.7)	(189.2)	(178.8)	(168.6)	(132.3)	(59.2)
Cash Flow										
Operating cash flow	US$M	120.2	127.3	103.5	85.6	79.6	93.1	71.0	54.6	(5.3)
Capital expenditures	US$M	(49.0)	(37.8)	(29.7)	(23.0)	(8.5)	(12.7)	(5.3)	(1.1)	
Reclamation	US$M						(10.0)	(10.0)	(10.0)	(10.6)
Total pre-tax cash flow (net cash flow)	US$M	71.2	89.6	73.7	62.6	71.1	70.4	55.7	43.6	(15.9)
30% corporate income tax	US$M	(28.6)	(29.6)	(23.8)	(20.9)	(19.6)	(22.7)	(16.3)	(11.6)	—
7.5% special mining duty	US$M	(9.5)	(10.1)	(8.4)	(7.0)	(6.6)	(7.5)	(5.8)	(4.5)	—
0.5% extraordinary mining duty	US$M	(1.5)	(1.6)	(1.5)	(1.4)	(1.3)	(1.4)	(1.2)	(0.9)	(0.3)
Total after-tax cashflow (net cash flow)	***US$M***	***31.6***	***48.2***	***40.0***	***33.3***	***43.7***	***38.8***	***32.3***	***26.5***	***(16.2)***

Note: * Gross revenue includes Franco-Nevada encumbrance. Numbers have been rounded.

Table 19-3: Sensitivity Analysis (US$ M)

Parameter	-20%	-10%	-5%	Base	5%	10%	20%
Metal price	-6.5	111.5	170.5	229.5	288.5	347.4	465.2
Operating cost	388.8	309.3	269.5	229.5	189.6	149.7	69.8
Capital cost	242.3	236.2	232.7	229.5	226.3	223.1	216.7
Grade	-0.1	114.8	172.2	229.5	286.9	344	458.3

Note: Numbers have been rounded. Base case is highlighted.

20.0 ADJACENT PROPERTIES

This Chapter is not relevant to this Report.

21.0 OTHER RELEVANT DATA AND INFORMATION

This Chapter is not relevant to this Report.

22.0 INTERPRETATION AND CONCLUSIONS

22.1 Introduction

The QPs note the following interpretations and conclusions within their areas of expertise, based on the review of data available for this Report.

22.2 Mineral Tenure, Surface Rights, Water Rights, Royalties and Agreements

Coeur's wholly-owned subsidiary, Coeur Mexicana, as the operating entity.

The Palmarejo Operations consist of 71 mining concessions (27,227 ha).

Coeur has occupancy agreements in place with selected ejidos for exploitation or exploration purposes, collectively covering an area of 15,111.19 ha.

Water rights held are sufficient to support the LOM plan.

There are numerous net smelter return (NSR) royalties that cover the Palmarejo Operations area and range from 1–3% depending on the royalty agreement. The majority of the royalties are not payable under the LOM plan envisaged in this Report.

Coeur Mexicana agreed to sell to Franco–Nevada 50% of the refined gold produced from selected mining concessions at a gold price of $800/oz, in consideration of Franco–Nevada providing investment capital for Project development. The Agreement has a 40-year term, starting in 2016.

22.3 Geology and Mineralization

The deposits within the Palmarejo Operations area are considered to be examples of epithermal deposits displaying both intermediate- and low-sulfidation features.

The geological understanding of the settings, lithologies, and structural and alteration controls on mineralization is sufficient to support estimation of mineral resources.

22.4 Exploration, Drilling, and Sampling

The exploration programs completed by Coeur to date and predecessor companies are appropriate for the mineralization styles.

The quantity and quality of the lithological, collar and down hole survey data collected in the exploration program completed are sufficient to support mineral resource estimation. No drilling, sampling, or core recovery issues that could materially affect the accuracy or reliability of the core samples have been identified.

The collected sample data adequately reflect deposit dimensions, true widths of mineralization, and the deposit style.

Sampling is representative of the gold and silver values, reflecting areas of higher and lower grades.

The independent analytical laboratories used by Coeur and predecessor companies, where known, are accredited for selected analytical techniques.

Sample preparation used procedures and protocols that are/were standard in the industry and has been adequate throughout the history of the Project. Sample analysis uses procedures that are standard in the industry.

The QA/QC programs adequately address issues of precision, accuracy and contamination, and indicate that the analytical results are adequately accurate, precise, and contamination free to support mineral resource estimation.

The sample preparation, analysis, and security procedures are adequate for use in the estimation of mineral resources.

22.5 Data Verification

The QP undertook QA/QC verification, participated in programs to verify drill data prior to mineral resource estimation, checked selected gold and silver assay data, conducted drill hole lockdown, including checks of assay certificates, collar and downhole surveys, geology, and QA/QC reports, and signed off in 2014–present definition drill holes and the 2021 drilling.

The QP is of the opinion that the data verification programs for Project data adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in mineral resource and mineral reserve estimation, and in mine planning.

22.6 Metallurgical Testwork

Metallurgical testwork was conducted by reputable laboratories and is supported by nearly a decade of production data. Test results were used as a guideline for plant design. Metallurgical testing results were consistent in the recommended methods of process design, extraction and recovery estimates.

Recovery factors estimated are based on appropriate metallurgical test work and confirmed with production data. Recovery factors are appropriate to the mineralization types and the selected process route. The LOM forecast average gold blended recovery is 90%. The LOM forecast average blended silver recovery is 82.5%.

Based on extensive operating experience and testwork, there are no known processing factors of deleterious elements that could have a significant effect on the economic extraction of the mineral reserve estimates.

22.7 Mineral Resource Estimates

The mineral resource estimate is reported using the mineral resource definitions set out in SK1300 and are reported exclusive of those mineral resources converted to mineral reserves. The reference point for the estimate is in situ. The estimate is current at December 31, 2021.

The estimate is primarily supported by core drilling. The estimate was constrained using reasonable prospects of economic extraction that assumed longhole stoping underground mining methods.

Factors that may affect the mineral resource estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the gold cut-off grade; changes in local interpretations of mineralization geometry and continuity of mineralized zones; changes to geological and mineralization shape and geological and grade continuity assumptions; density and domain assignments; changes to geotechnical, mining and metallurgical recovery assumptions; changes to the input and design parameter assumptions for the underground mine designs constraining the estimates; assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

22.8 Mineral Reserve Estimates

The mineral reserve estimate is reported using the mineral reserve definitions set out in SK-1300. The reference point for the estimate is the point of delivery to the process facilities. Mineral reserves are current at December 31, 2021.

Mineral reserves were converted from measured and indicated mineral resources. Inferred mineral resources were set to waste. The mine plans assume underground mining using longhole open stoping using trackless equipment and cemented rock fill backfill. Target mining rates are 150,000 t/month.

Factors that may affect the mineral resource estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the gold cut-off grade; changes in local interpretations of mineralization geometry and continuity of mineralized zones; changes to geological and mineralization shape and geological and grade continuity assumptions; density and domain assignments; changes to geotechnical, mining and metallurgical recovery assumptions; changes to the input and design parameter assumptions that pertain to the assumptions for the mineable shapes constraining the estimates; and assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

22.9 Mining Methods

The Palmarejo Operations use conventional underground equipment and mining methods. The underground operations have been active since 2014.

Geotechnical conditions are reasonably understood. Depending on the deposit, rock mass quality is variable, and ranges from Poor to Good. Modifications based on variability and update geotechnical models were made as the mines developed.

There are few hydrogeological aspects to be considered beyond natural inflow of water to the workings. The permeability of the volcanic rock units in all mines is low to very low.

Stoping and cemented rock backfill mining methods were selected and implemented based on the orebody location, ground conditions and geological settings. Mining design assumptions for each mining region are typically standardized for each area and mining method assumed.

Ventilation is provided by fans and ventilation raises.

Backfill is a combination of CRF and straight waste fill.

The Palmarejo Operations have nine years of mine life remaining. The Guadalupe mine has a remaining nine-year mine life with the expansion components of Zapata and Animas. Independencia has a remaining nine-year mine life with expansions to the north and south and addition of the Hidalgo deposit. La Nación has five years of mine life remaining.

22.10 Recovery Methods

The process plant design was based on a combination of metallurgical testwork, study designs and industry standard practices, together with debottlenecking and optimization activities once the mill was operational. The design is conventional to the gold industry and has no novel parameters.

22.11 Infrastructure

All major infrastructure required to support operations has been constructed and is operational. Facilities include: three operating underground mines; two shotcrete mixing plants; backfill cement mixing plant; water treatment plants and associated infrastructure; ROM pads; process plant; TSF and associated infrastructure; maintenance facilities; materials storage and laydown areas; various support facilities; electrical facilities including an emergency powerhouse; gravel airstrip; and a mine permanent camp and contractor facilities and kitchens.

The Palmarejo Operations currently maintain limited ROM stockpiles. Waste is currently excavated from the WRSFs around the former open pit and used underground as backfill.

The TSF, a zoned downstream earthfill dam, is projected to reach capacity in Q1 2023 at a capacity of 15.4 Mm^3, by which time the operation will transition to disposal of tailings in the mined-out Palmarejo open pit.

Water treatment plants treat water pumped from underground to the surface, and water from the tailings pond.

Electrical power is supplied by the Mexican grid. A backup power generating facility is on site.

Water for the process facilities is obtained from a variety of sources, including wet tailings, the underground mines, additional subsurface sources from areas wells, limited permit options from the freshwater diversion dam, and a pump station located at the Chínipas River.

22.12 Market Studies

Coeur sells its payable silver and gold production on behalf of its subsidiaries on a spot or forward basis, primarily to multi-national banks and bullion trading houses. Markets for both silver and gold bullion are highly liquid, and the loss of a single trading counterparty would not impact Coeur's ability to sell its bullion.

To mitigate the risks associated with gold and silver price fluctuations, Coeur may enter into option contracts to hedge future production.

Coeur uses a combination of analysis of three-year rolling averages, long-term consensus pricing, and benchmarks to pricing used by industry peers over the past year, when considering long-term commodity price forecasts.

Higher metal prices are used for the mineral resource estimates to ensure the mineral reserves are a sub-set of, and not constrained by, the mineral resources, in accordance with industry-accepted practice.

Coeur Mexicana has contracts with one U.S. based refiner and one Switzerland-based refiner, which refine the Palmarejo Operations' doré bars into silver and gold bullion that meet certain benchmark standards set by the London Bullion Market Association.

Currently, there are contracts in place at the Palmarejo Operations to provide supply for all major commodities used in mining and processing, such as equipment vendors, power, explosives, cyanide, tire suppliers, raise boring, ground support suppliers and drilling contractors. The terms and rates for these contracts are within industry norms. These contracts are periodically put up for bid or negotiated.

22.13 Environmental, Permitting and Social Considerations

Baseline studies and monitoring were required in support of Project permitting.

The 2021 year-end closure assessment for the actual disturbance for final reclamation at the Palmarejo Operations, is estimated at US$40.6 M.

All required local, state, and federal permits for operation have been issued. The authorizations required for production are in good standing.

Coeur initiated the process of obtaining an MIA-R. In late July 2021, SEMARNAT requested additional information to the MIA-R document. This was supplied by Coeur on August 10, 2021. It is expected that the MIA-R will be approved in the first quarter of 2022. When approved the MIA-R will add 10 additional years to the current present environmental license, consolidate 13 different authorizations under a single global license, and include all new facilities and mine development expected for the LOM in this Report.

Coeur actively engaged with the local community with a series of cultural, social, and economic programs. The surrounding communities are supportive of the Palmarejo Operations, and the employment and benefits that the mines provide.

Coeur Mexicana received the distinguished Social Responsibility Award from the Mexican Center of Philanthropy-CEMEFI on February 26, 2021, the eleventh time the company has been so recognized.

22.14 Capital Cost Estimates

Capital cost estimates are at a minimum at a pre-feasibility level of confidence, having an accuracy level of ±25% and a contingency range not exceeding 15%.

Capital expenditure for the LOM is estimated at US$167.0 M from January 1, 2022.

22.15 Operating Cost Estimates

Operating cost estimates are at a minimum at a pre-feasibility level of confidence, having an accuracy level of ±25% and a contingency range not exceeding 15%.

Operating expenditure for the LOM is estimated at $US1,500.3 M from January 1, 2022, to the end of the LOM in 2030.

22.16 Economic Analysis

The mineral reserves support a mine life of nine years to 2030.

The NPV at a discount rate of 5% is US$229.5 M. As the cashflows are based on existing operations where all costs are considered sunk, considerations of payback and internal rate of return are not relevant.

The sensitivity of the Project to changes in metal prices, mined grade, exchange rate, sustaining capital costs and operating cost assumptions was tested using a range of 20% above and below the base case values. The Project is most sensitive to metal price, less sensitive to grade, less sensitive to operating cost, and least sensitive to capital cost

22.17 Risks and Opportunities

Factors that may affect the mineral resource and mineral reserve estimates were identified in Chapter 11 and Chapter 12.

22.17.1 Risks

Other risks noted include:

- Commodity price increases for key consumables such diesel, electricity, tires and other consumables would negatively impact the stated mineral reserves and mineral resources;

- Labor cost increases or productivity decreases could also impact the stated mineral reserves and mineral resources, or impact the economic analysis that supports the mineral reserves;
- Mining method will change from transverse to longitudinal longhole stoping over time as narrower portions of veins are mined which could result in higher cost, lower productivities and higher dilution quantities which can impact grade. All of these factors could impact cut-off grades, reserve estimates and economics;
- Metallurgical recovery assumptions used in planning and operations are reasonable and based on historic performance. Any changes to metallurgical recovery assumptions could affect revenues and operating costs. This could also require revisions to cut-off grades and mineral reserve estimates;
- Geotechnical and hydrological assumptions used in mine planning are based on historical performance, and to date historical performance has been a reasonable predictor of current conditions. Any changes to the geotechnical and hydrological assumptions could affect mine planning, affect capital cost estimates if any major rehabilitation is required due to a geotechnical or hydrological event, affect operating costs due to mitigation measures that may need to be imposed, and impact the economic analysis that supports the mineral reserve estimates;
- The mineral resource and reserve estimates are sensitive to metal prices. Lower metal prices require revisions to the mineral resource estimates;
- Changes in climate could result in drought and associated potential water shortages that could impact operating cost and ability to operate;
- Assumptions that the long-term reclamation and mitigation of the Palmarejo Operations can be appropriately managed within the estimated closure timeframes and closure cost estimates;
- Political risk from challenges to:
    - Mining licenses;
    - Environmental permits;
    - Coeur’s right to operate;
- Changes to assumptions as to governmental tax or royalty rates, such as taxation rate increases or new taxation or royalty imposts.

22.17.2 Opportunities

Opportunities include:

- Conversion of some or all the measured and indicated mineral resources currently reported exclusive of mineral reserves to mineral reserves, with appropriate supporting studies;
- Upgrade of some or all the inferred mineral resources to higher-confidence categories, such that such better-confidence material could be used in mineral reserve estimation;

- Higher metal prices than forecast could present upside sales opportunities and potentially an increase in predicted Project economics;
- Ability to expand mineralization around known veins through exploration;
- Discovery and development of new exploration targets across the district;
- Potential to find or gain access to new mineralization that could be processed at the existing Palmarejo process facilities;
- Ability to add additional process plant throughput as additional mineral resources are converted to mineral reserves. Coeur Mexicana has a track record of success on this in recent years as the mill was originally design for a larger open pit operation.

22.18 Conclusions

Under the assumptions in this Report, the operations evaluated show a positive cash flow over the remaining LOM. The mine plan is achievable under the set of assumptions and parameters used.

23.0 RECOMMENDATIONS

As the Palmarejo Operations consist of operating mines, the QPs have no material recommendations to make.

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24.2 Abbreviations and Units of Measure

Abbreviation/Symbol	Term
'	minutes (geographic)
"	seconds (geographic)
#	number
%	percent
<	less than
>	greater than
µm	micrometer (micron)
g	gram
g/t	gram per tonne

Abbreviation/Symbol	Term
HQ	2.5 inch core size
in	inches
km	kilometer
koz	thousand ounces
kV	kilovolt
kW	kilowatt
kWhr	kilowatt hour
m	meter
Ma	million years ago
masl	meters above sea level
mesh	size based on the number of openings in one inch of screen
MW	megawatts
NQ	1.87 inch core size
º	degrees
oz	ounce/ounces (troy ounce)
pH	measure of the acidity or alkalinity of a solution
ppm	parts per million
PQ	3.35 inch core size
t/d	tons per day
t/day	Tons per day
t/hr	tons per hour
AA	atomic absorption spectroscopy
ARD	acid-rock drainage
AuEq	gold equivalent
CRF	cemented rock fill
DGPS	differential global positioning system
EIS	Environmental Impact Statement
GPS	global positioning system
ICP	inductively-coupled plasma
ICP ES	inductively-coupled plasma emission spectroscopy

Abbreviation/Symbol	Term
ICP-OES	inductively-coupled plasma optical emission spectrometry
ID2	inverse distance interpolation; number after indicates the power, e.g., ID2 indicates inverse distance to the 2nd power.
LOM	life-of-mine
NSR	net smelter return
OK	ordinary kriging
QA/QC	quality assurance and quality control
QP	Qualified Person
RC	reverse circulation
RMR	rock mass rating
ROM	Run-of-mine
RQD	rock quality designation
SAG	semi-autogenous grind

24.3 Glossary of Terms

Term	Definition
acid rock drainage/ acid mine drainage	Characterized by low pH, high sulfate, and high iron and other metal species.
adjacent property	A property in which the issuer does not have an interest; has a boundary reasonably proximate to the property being reported on; and has geological characteristics similar to those of the property being reported on
argillic alteration	Introduces any one of a wide variety of clay minerals, including kaolinite, smectite and illite. Argillic alteration is generally a low temperature event, and some may occur in atmospheric conditions
azimuth	The direction of one object from another, usually expressed as an angle in degrees relative to true north. Azimuths are usually measured in the clockwise direction, thus an azimuth of 90 degrees indicates that the second object is due east of the first.
ball mill	A piece of milling equipment used to grind ore into small particles. It is a cylindrical shaped steel container filled with steel balls into which crushed ore is fed. The ball mill is rotated causing the balls themselves to cascade, which in turn grinds the ore.
Bond work index	A measure of the energy required to break an ore to a nominal product size, determined in laboratory testing, and used to calculate the required power in a grinding circuit design.
bullion	Unrefined gold and/or silver mixtures that have been melted and cast into a bar or ingot.

Term	Definition
comminution/crushing/grinding	Crushing and/or grinding of ore by impact and abrasion. Usually, the word "crushing" is used for dry methods and "grinding" for wet methods. Also, "crushing" usually denotes reducing the size of coarse rock while "grinding" usually refers to the reduction of the fine sizes.
concentrate	The concentrate is the valuable product from mineral processing, as opposed to the tailing, which contains the waste minerals. The concentrate represents a smaller volume than the original ore
cut-off grade	The grade (i.e., the concentration of metal or mineral in rock) that determines the destination of the material during mining. For purposes of establishing "prospects of economic extraction," the cut-off grade is the grade that distinguishes material deemed to have no economic value (it will not be mined in underground mining or if mined in surface mining, its destination will be the waste dump) from material deemed to have economic value (its ultimate destination during mining will be a processing facility). Other terms used in similar fashion as cut-off grade include net smelter return, pay limit, and break-even stripping ratio.
cyanidation	A method of extracting gold or silver by dissolving it in a weak solution of sodium cyanide.
data verification	The process of confirming that data has been generated with proper procedures, has been accurately transcribed from the original source and is suitable to be used for mineral resource and mineral reserve estimation
decline	A sloping underground opening for machine access from level to level or from the surface. Also called a ramp.
density	The mass per unit volume of a substance, commonly expressed in grams/ cubic centimeter.
depletion	The decrease in quantity of ore in a deposit or property resulting from extraction or production.
development	Often refers to the construction of a new mine or; Is the underground work carried out for the purpose of reaching and opening up a mineral deposit. It includes shaft sinking, cross-cutting, drifting and raising.
dilution	Waste of low-grade rock which is unavoidably removed along with the ore in the mining process.
dip	
drift	A horizontal mining passage underground. A drift usually follows the ore vein, as distinguished from a crosscut, which intersects it.
easement	Areas of land owned by the property owner, but in which other parties, such as utility companies, may have limited rights granted for a specific purpose.
electrowinning.	The removal of precious metals from solution by the passage of current through an electrowinning cell. A direct current supply is connected to the anode and cathode. As current passes through the cell, metal is deposited on the cathode. When sufficient metal has been deposited on the cathode, it is removed from the cell and the sludge rinsed off the plate and dried for further treatment.
elution	Recovery of the gold from the activated carbon into solution before zinc precipitation or electro-winning.
encumbrance	An interest or partial right in real property which diminished the value of ownership, but does not prevent the transfer of ownership. Mortgages, taxes

Term	Definition
	and judgements are encumbrances known as liens. Restrictions, easements, and reservations are also encumbrances, although not liens.
exploration information	Geological, geophysical, geochemical, sampling, drilling, trenching, analytical testing, assaying, mineralogical, metallurgical, and other similar information concerning a particular property that is derived from activities undertaken to locate, investigate, define, or delineate a mineral prospect or mineral deposit
feasibility study	A feasibility study is a comprehensive technical and economic study of the selected development option for a mineral project, which includes detailed assessments of all applicable modifying factors, as defined by this section, together with any other relevant operational factors, and detailed financial analysis that are necessary to demonstrate, at the time of reporting, that extraction is economically viable. The results of the study may serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. A feasibility study is more comprehensive, and with a higher degree of accuracy, than a pre-feasibility study. It must contain mining, infrastructure, and process designs completed with sufficient rigor to serve as the basis for an investment decision or to support project financing.
flotation	Separation of minerals based on the interfacial chemistry of the mineral particles in solution. Reagents are added to the ore slurry to render the surface of selected minerals hydrophobic. Air bubbles are introduced to which the hydrophobic minerals attach. The selected minerals are levitated to the top of the flotation machine by their attachment to the bubbles and into a froth product, called the "flotation concentrate." If this froth carries more than one mineral as a designated main constituent, it is called a "bulk float". If it is selective to one constituent of the ore, where more than one will be floated, it is a "differential" float.
flowsheet	The sequence of operations, step by step, by which ore is treated in a milling, concentration, or smelting process.
footwall	The wall or rock on the underside of a vein or ore structure.
frother	A type of flotation reagent which, when dissolved in water, imparts to it the ability to form a stable froth
gravity separation	Exploitation of differences in the densities of particles to achieve separation. Machines utilizing gravity separation include jigs and shaking tables.
hanging wall	The wall or rock on the upper or top side of a vein or ore deposit.
indicated mineral resource	An indicated mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The term adequate geological evidence means evidence that is sufficient to establish geological and grade or quality continuity with reasonable certainty. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.
inferred mineral resource	An inferred mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The term limited geological evidence means evidence that is only sufficient to establish that geological and grade or quality continuity is more likely than not. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant

Term	Definition
	technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. A qualified person must have a reasonable expectation that the majority of inferred mineral resources could be upgraded to indicated or measured mineral resources with continued exploration; and should be able to defend the basis of this expectation before his or her peers.
internal rate of return (IRR)	The rate of return at which the Net Present Value of a project is zero; the rate at which the present value of cash inflows is equal to the present value of the cash outflows.
liberation	Freeing, by comminution, of particles of specific mineral from their interlock with other constituents of the ore.
life of mine (LOM)	Number of years that the operation is planning to mine and treat ore, and is taken from the current mine plan based on the current evaluation of ore reserves.
locked cycle flotation test	A standard laboratory flotation test where certain intermediate streams are recycled into previous separation stages and the test is repeated across a number of cycles. This test provides a more realistic prediction of the overall recovery and concentrate grade that would be achieved in an actual flotation circuit, compared with a simpler batch flotation test.
measured mineral resource	A measured mineral resource is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The term conclusive geological evidence means evidence that is sufficient to test and confirm geological and grade or quality continuity. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit.
merger	A voluntary combination of two or more companies whereby both stocks are merged into one.
Merrill-Crowe (M-C) circuit	A process which recovers precious metals from solution by first clarifying the solution, then removing the air contained in the clarified solution, and then precipitating the gold and silver from the solution by injecting zinc dust into the solution. The valuable sludge is collected in a filter press for drying and further treatment
mill	Includes any ore mill, sampling works, concentration, and any crushing, grinding, or screening plant used at, and in connection with, an excavation or mine.
mineral reserve	A mineral reserve is an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted. The determination that part of a measured or indicated mineral resource is economically mineable must be based on a preliminary feasibility (pre-feasibility) or feasibility study, as defined by this section, conducted by a qualified person applying the modifying factors to indicated or measured mineral resources. Such study must demonstrate that, at the time of reporting, extraction of the mineral reserve is economically viable under reasonable investment and market assumptions. The study must establish a life of mine

Term	Definition
	plan that is technically achievable and economically viable, which will be the basis of determining the mineral reserve. The term economically viable means that the qualified person has determined, using a discounted cash flow analysis, or has otherwise analytically determined, that extraction of the mineral reserve is economically viable under reasonable investment and market assumptions. The term investment and market assumptions includes all assumptions made about the prices, exchange rates, interest and discount rates, sales volumes, and costs that are necessary to determine the economic viability of the mineral reserves. The qualified person must use a price for each commodity that provides a reasonable basis for establishing that the project is economically viable.
mineral resource	A mineral resource is a concentration or occurrence of 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 economic extraction. The term material of economic interest includes mineralization, including dumps and tailings, mineral brines, and other resources extracted on or within the earth's crust. It does not include oil and gas resources as defined in Regulation S-X (§210.4-10(a)(16)(D) of this chapter), gases (e.g., helium and carbon dioxide), geothermal fields, and water. When determining the existence of a mineral resource, a qualified person, as defined by this section, must be able to estimate or interpret the location, quantity, grade or quality continuity, and other geological characteristics of the mineral resource from specific geological evidence and knowledge, including sampling; and conclude that there are reasonable prospects for economic extraction of the mineral resource based on an initial assessment, as defined in this section, that he or she conducts by qualitatively applying relevant technical and economic factors likely to influence the prospect of economic extraction.
modifying factors	The factors that a qualified person must apply to indicated and measured mineral resources and then evaluate in order to establish the economic viability of mineral reserves. A qualified person must apply and evaluate modifying factors to convert measured and indicated mineral resources to proven and probable mineral reserves. These factors include, but are not restricted to: mining; processing; metallurgical; infrastructure; economic; marketing; legal; environmental compliance; plans, negotiations, or agreements with local individuals or groups; and governmental factors. The number, type and specific characteristics of the modifying factors applied will necessarily be a function of and depend upon the mineral, mine, property, or project.
net present value (NPV)	The present value of the difference between the future cash flows associated with a project and the investment required for acquiring the project. Aggregate of future net cash flows discounted back to a common base date, usually the present. NPV is an indicator of how much value an investment or project adds to a company.
net smelter return royalty (NSR)	A defined percentage of the gross revenue from a resource extraction operation, less a proportionate share of transportation, insurance, and processing costs.
open pit	A mine that is entirely on the surface. Also referred to as open-cut or open-cast mine.

Term	Definition
open stope	In competent rock, it is possible to remove all of a moderate sized ore body, resulting in an opening of considerable size. Such large, irregularly-shaped openings are called stopes. The mining of large inclined ore bodies often requires leaving horizontal pillars across the stope at intervals in order to prevent collapse of the walls.
ounce (oz) (troy)	Used in imperial statistics. A kilogram is equal to 32.1507 ounces. A troy ounce is equal to 31.1035 grams.
plant	A group of buildings, and especially to their contained equipment, in which a process or function is carried out; on a mine it will include warehouses, hoisting equipment, compressors, repair shops, offices, mill or concentrator.
portal	The surface entrance to a tunnel or adit
preliminary feasibility study, pre-feasibility study	A preliminary feasibility study (prefeasibility study) is a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a qualified person has determined (in the case of underground mining) a preferred mining method, or (in the case of surface mining) a pit configuration, and in all cases has determined an effective method of mineral processing and an effective plan to sell the product. A pre-feasibility study includes a financial analysis based on reasonable assumptions, based on appropriate testing, about the modifying factors and the evaluation of any other relevant factors that are sufficient for a qualified person to determine if all or part of the indicated and measured mineral resources may be converted to mineral reserves at the time of reporting. The financial analysis must have the level of detail necessary to demonstrate, at the time of reporting, that extraction is economically viable
probable mineral reserve	A probable mineral reserve is the economically mineable part of an indicated and, in some cases, a measured mineral resource. For a probable mineral reserve, the qualified person's confidence in the results obtained from the application of the modifying factors and in the estimates of tonnage and grade or quality is lower than what is sufficient for a classification as a proven mineral reserve, but is still sufficient to demonstrate that, at the time of reporting, extraction of the mineral reserve is economically viable under reasonable investment and market assumptions. The lower level of confidence is due to higher geologic uncertainty when the qualified person converts an indicated mineral resource to a probable reserve or higher risk in the results of the application of modifying factors at the time when the qualified person converts a measured mineral resource to a probable mineral reserve. A qualified person must classify a measured mineral resource as a probable mineral reserve when his or her confidence in the results obtained from the application of the modifying factors to the measured mineral resource is lower than what is sufficient for a proven mineral reserve.
propylitic	Characteristic greenish color. Minerals include chlorite, actinolite and epidote. Typically contains the assemblage quartz–chlorite–carbonate
proven mineral reserve	A proven mineral reserve is the economically mineable part of a measured mineral resource. For a proven mineral reserve, the qualified person has a high degree of confidence in the results obtained from the application of the modifying factors and in the estimates of tonnage and grade or quality. A proven mineral reserve can only result from conversion of a measured mineral resource.

Term	Definition
qualified person	A qualified person is an individual who is a mineral industry professional with at least five years of relevant experience in the type of mineralization and type of deposit under consideration and in the specific type of activity that person is undertaking on behalf of the registrant; and an eligible member or licensee in good standing of a recognized professional organization at the time the technical report is prepared. For an organization to be a recognized professional organization, it must: (A) Be either: (1) An organization recognized within the mining industry as a reputable professional association, or (2) A board authorized by U.S. federal, state or foreign statute to regulate professionals in the mining, geoscience or related field; (B) Admit eligible members primarily on the basis of their academic qualifications and experience; (C) Establish and require compliance with professional standards of competence and ethics; (D) Require or encourage continuing professional development; (E) Have and apply disciplinary powers, including the power to suspend or expel a member regardless of where the member practices or resides; and; (F) Provide a public list of members in good standing.
raise	A vertical or inclined underground working that has been excavated from the bottom upward
reclamation	The restoration of a site after mining or exploration activity is completed.
refining	A high temperature process in which impure metal is reacted with flux to reduce the impurities. The metal is collected in a molten layer and the impurities in a slag layer. Refining results in the production of a marketable material.
rock quality designation (RQD)	A measure of the competency of a rock, determined by the number of fractures in a given length of drill core. For example, a friable ore will have many fractures and a low RQD.
royalty	An amount of money paid at regular intervals by the lessee or operator of an exploration or mining property to the owner of the ground. Generally based on a specific amount per tonne or a percentage of the total production or profits. Also, the fee paid for the right to use a patented process.
run-of-mine	A term used to describe ore of average grade for the deposit, typically used for the ore pile adjacent the process plant.
semi-autogenous grinding (SAG)	A method of grinding rock into fine powder whereby the grinding media consists of larger chunks of rocks and steel balls.
shaft	A vertical or inclined excavation for the purpose of opening and servicing a mine. It is usually equipped with a hoist at the top, which lowers and raises a conveyance for handling men and material
specific gravity	The weight of a substance compared with the weight of an equal volume of pure water at 4°C.
stope	An excavation in a mine, other than development workings, made for the purpose of extracting ore.
strike length	The horizontal distance along the long axis of a structural surface, rock unit, mineral deposit or geochemical anomaly.

Term	Definition
sublevel stoping	A large-scale open stoping method. Access is provided to the ore body at various sub-intervals between the main haulage levels to drill and blast the intervening ore
tailings	Material rejected from a mill after the recoverable valuable minerals have been extracted.
uniaxial compressive strength	A measure of the strength of a rock, which can be determined through laboratory testing, and used both for predicting ground stability underground, and the relative difficulty of crushing.

25.0 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

25.1 Introduction

The QPs fully relied on the registrant for the guidance in the areas noted in the following sub-sections. As the operations have been in production for 11 years, the registrant has considerable experience in this area.

The QPs took undertook checks that the information provided by the registrant was suitable to be used in the Report.

25.2 Macroeconomic Trends

- Information relating to inflation, interest rates, discount rates, taxes.

This information is used in the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.3 Markets

- Information relating to market studies/markets for product, market entry strategies, marketing and sales contracts, product valuation, product specifications, refining and treatment charges, transportation costs, agency relationships, material contracts (e.g. mining, concentrating, smelting, refining, transportation, handling, hedging arrangements, and forward sales contracts), and contract status (in place, renewals).

This information is used when discussing the market, commodity price and contract information in Chapter 16, and in the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.4 Legal Matters

- Information relating to the corporate ownership interest, the mineral tenure (concessions, payments to retain, obligation to meet expenditure/reporting of work conducted), surface rights, water rights (water take allowances), royalties, encumbrances, easements and rights-of-way, violations and fines, permitting requirements, ability to maintain and renew permits

This information is used in support of the property ownership information in Chapter 3, the permitting and closure discussions in Chapter 17, and the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.5 Environmental Matters

- Information relating to baseline and supporting studies for environmental permitting, environmental permitting and monitoring requirements, ability to maintain and renew permits, emissions controls, closure planning, closure and reclamation bonding and bonding requirements, sustainability accommodations, and monitoring for and compliance with requirements relating to protected areas and protected species.

This information is used when discussing property ownership information in Chapter 3, the permitting and closure discussions in Chapter 17, and the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.6 Stakeholder Accommodations

- Information relating to social and stakeholder baseline and supporting studies, hiring and training policies for workforce from local communities, partnerships with stakeholders (including national, regional, and state mining associations; trade organizations; fishing organizations; state and local chambers of commerce; economic development organizations; non-government organizations; and, state and federal governments), and the community relations plan.

This information is used in the social and community discussions in Chapter 17, and the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.7 Governmental Factors

- Information relating to taxation and royalty considerations at the Project level, monitoring requirements and monitoring frequency, and bonding requirements.

This information is used in the economic analysis in Chapter 19. It supports the mineral resource estimate in Chapter 11, and the mineral reserve estimate in Chapter 12.

25.8 Internal Controls

25.8.1 Exploration and Drilling

Internal controls are discussed where required in the relevant chapters of the technical report summary. The following sub-sections summarize the types of procedures, protocols, guidance and controls that Coeur has in place for its exploration and mineral resource and reserve estimation efforts, and the type of risk assessments that are undertaken.

Coeur has the following internal controls protocols in place for exploration data:

- Written procedures and guidelines to support preferred sampling methods and approaches; periodic compliance reviews of adherence to such written procedures and guidelines;
- Maintenance of a complete chain-of-custody, ensuring the traceability and integrity of the samples at all handling stages from collection, transportation, sample preparation and analysis to long-term sample storage;

- Geological logs are checked and verified, and there is a physical sign-off to attest to the validation protocol required;
- Quality control checks on collar and downhole survey data for errors or significant deviations;
- Appropriate types of quality control samples are inserted into the sample stream at appropriate frequencies to assess analytical data quality;
- Third-party fully certified labs are used for assays used in public disclosure or resource models
- Regular inspection of analytical and sample preparation facilities by appropriately experienced Coeur personnel;
- QA/QC data are regularly verified to ensure that outliers sample mix-ups, contamination, or laboratory biases during the sample preparation and analysis steps are correctly identified, mitigated or remediated. Changes to database entries are required be documented;
- Database upload and verification procedures to ensure the accuracy and integrity of the data being entered into the Project database(s). These are typically performed using software data-checking routines. Changes to database entries are required to be documented. Data are subject to regular backups.

25.8.2 Mineral Resource and Mineral Reserve Estimates

Coeur has the following internal controls protocols in place for mineral resource and mineral reserve estimation:

- Prior to use in mineral resource or mineral reserve estimation, the selected data to support estimation are downloaded from the database into a project file and reviewed for improbable entries and high values;
- Written procedures and guidelines are used to support estimation methods and approaches;
- Completion of annual technical statements on each mineral resource and mineral reserve estimate by qualified persons. These technical statements include evaluation of modifying and technical factors, incorporate available reconciliation data, and are based on a cashflow analysis;
- Internal reviews of block models, mineral resources and mineral reserves using a “layered responsibility” approach with Qualified Person involvement at the site and corporate levels;

25.8.3 Risk Assessments

Coeur has established mine risk registers that are regularly reviewed and maintained. The registers record the risk type, the nature of the impact if the risk occurred, the frequency or probability of the risk occurrence, planned mitigation measures, and record of progress of the mitigation undertaken. Risks are removed from the registers if mitigation measures are successful or added to the registers as a new risk is recognized.

Other risk controls include aspects such as:

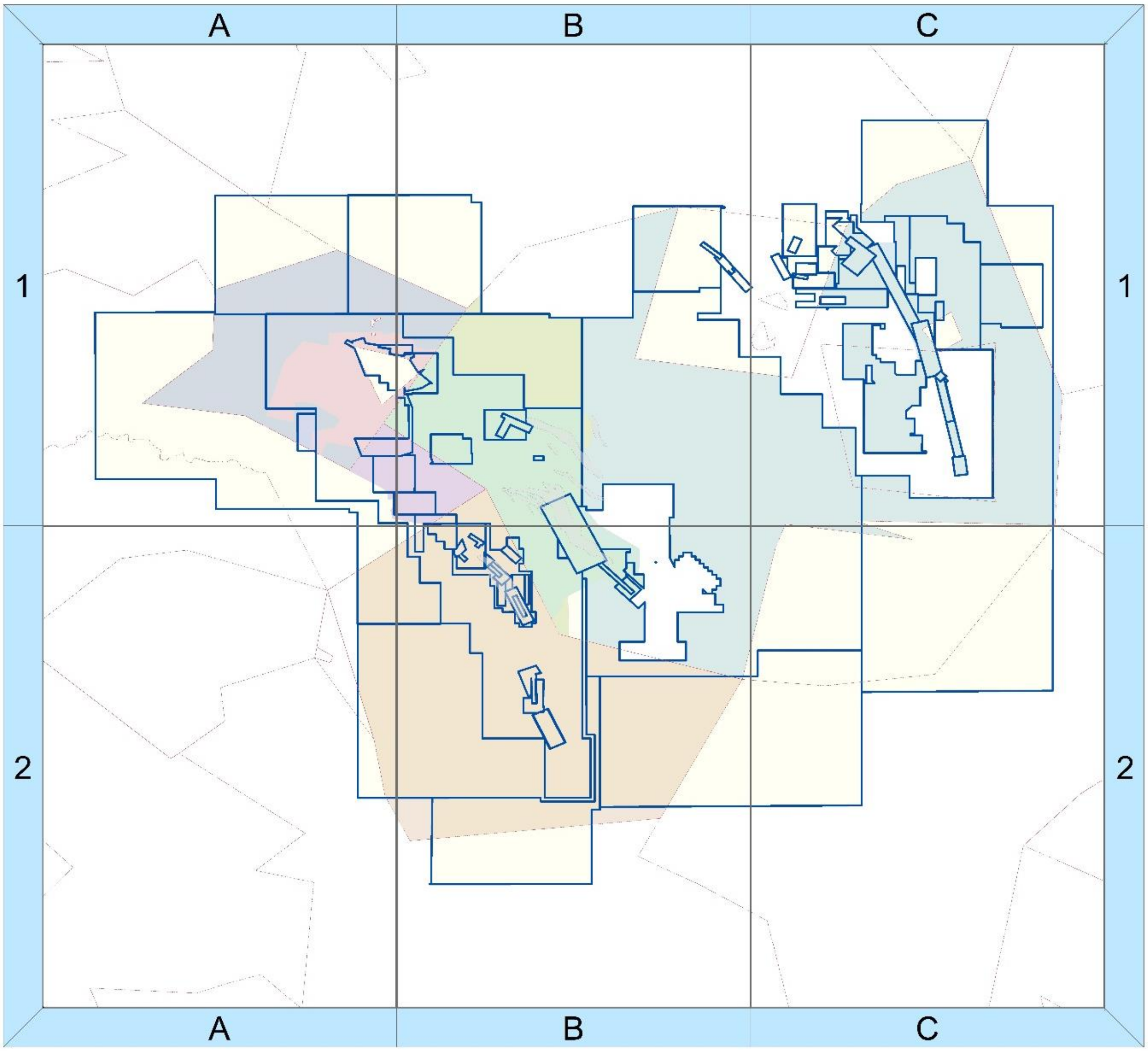
- Active monitoring programs such as mill performance, geotechnical networks, water sampling, waste management;
- Regular review of markets, commodity and price forecasts by internal specialists; reviews of competitor activities;
- Regular reviews of stakeholder concerns, accommodations to stakeholder concerns and ongoing community consultation;
- Monitoring of key permits and obligations such as tenures, surface rights, mine environmental and operating permits, agreements and regulatory changes to ensure all reporting and payment obligations have been met to keep those items in good standing.

APPENDIX A

No.	Title No.	Concession Name	Owner/Parties	Type	Expiry Date	Hectares	Acres	Annual Holding Costs	Royalty	Group
1	164465	Palmarejo	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2029-05-08	52.0755	128.681	$18,320.00	N/A	Huruapa
2	167281	Nueva Patria	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-10-29	11.0000	27.181	$3,870.00	N/A	Huruapa
3	167282	Maclovia	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-10-29	6.0000	14.826	$2,110.00	N/A	Huruapa
4	167322	San Juan de Dios	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-11-02	23.0000	56.834	$8,092.00	N/A	Huruapa
5	167323	Patria Vieja	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-11-02	4.0000	9.884	$1,408.00	N/A	Huruapa
6	170588	Unificación Guerra al Tirano	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2032-06-01	27.4471	67.823	$9,656.00	2%NSR	Huruapa
7	185236	El Rosario	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2039-12-13	10.9568	27.075	$3,854.00	N/A	Huruapa
8	186009	Los Tajos	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2039-12-13	2.7043	6.682	$952.00	N/A	Huruapa
9	187906	Tres de Mayo	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2040-11-21	39.8582	98.491	$14,022.00	2%NSR	Huruapa
10	188817	San Carlos	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2040-11-28	160.0000	395.367	$56,288.00	N/A	Huruapa
11	188820	La Buena Fe	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2040-11-28	60.0000	148.263	$21,108.00	N/A	Huruapa
12	189692	La Estrella	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2040-12-04	59.5863	147.240	$20,962.00	N/A	Huruapa
13	191332	Sulema No. 2	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2041-12-18	15.8280	39.112	$5,568.00	N/A	Huruapa
14	194678	Santo Domingo	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2042-05-06	15.3737	37.989	$5,408.00	N/A	Huruapa
15	195487	Unificación Huruapa	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2039-09-13	213.7755	528.249	$75,206.00	N/A	Huruapa
16	198543	Reyna de Oro	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2043-11-29	27.1791	67.161	$9,562.00	2%NSR	Huruapa
17	209541	La Aurelia	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-08-02	10.0000	24.710	$3,518.00	N/A	Huruapa
18	209648	Ampliación La Buena Fe	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-08-02	40.8701	100.992	$14,378.00	N/A	Huruapa
19	209975	Caballero Azteca	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-08-30	5.0510	12.481	$1,776.00	N/A	Huruapa
20	209976	Carmelita	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-08-30	5.3430	13.203	$1,880.00	N/A	Huruapa
21	210163	El Risco	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-09-09	24.0000	59.305	$8,444.00	N/A	Huruapa
22	210320	Victoria	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-09-23	76.0883	188.018	$26,768.00	N/A	Huruapa
23	210479	Lezcura	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-10-07	14.5465	35.945	$5,118.00	N/A	Huruapa
24	212281	La Mexicana	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2050-09-28	142.1410	351.237	$50,006.00	N/A	Huruapa
25	214101	Virginia	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2051-08-09	12.0906	29.876	$4,254.00	N/A	Huruapa
26	221490	Trogan	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2054-02-18	3,844.5413	9,500.031	$1,352,510.00	N/A	Huruapa
27	221491	Trogan Fracción	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2054-02-18	7.9682	19.690	$2,804.00	N/A	Huruapa
28	222319	La Curra	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2054-06-24	37.6593	93.058	$13,248.00	N/A	Huruapa
29	223292	La Currita	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2054-11-24	13.6805	33.805	$4,812.00	N/A	Huruapa

No.	Title No.	Concession Name	Owner/Parties	Type	Expiry Date	Hectares	Acres	Annual Holding Costs	Royalty	Group
30	224118	Ampliación Trogan	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-04-07	703.2318	1,737.717	$247,396.00	N/A	Huruapa
31	225223	Ampl. Trogan Oeste	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-08-04	1,699.9939	4,200.760	$598,058.00	N/A	Huruapa
32	225278	Trogan Norte 1	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-08-11	1,024.0000	2,530.349	$360,244.00	N/A	Huruapa
33	225279	Trogan Norte 2	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-08-11	1,019.2222	2,518.543	$358,562.00	N/A	Huruapa
34	225308	Trogan Oeste	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-08-15	2,699.0748	6,669.533	$949,534.00	N/A	Huruapa
35	225574	La Moderna	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-09-22	75.8635	187.462	$26,688.00	N/A	Huruapa
36	226201	La Buena Fe Norte	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-11-28	98.0878	242.379	$34,508.00	N/A	Huruapa
37	166401	San Miguel	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	12.9458	31.990	$4,554.00	N/A	None
38	166402	San Juan	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	3.0000	7.413	$1,056.00	N/A	None
39	166422	San Luis	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	4.0000	9.884	$1,408.00	N/A	None
40	166423	Empalme	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	6.0000	14.826	$2,110.00	N/A	None
41	166424	Sangre De Cristo	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	41.0000	101.313	$14,424.00	N/A	None
42	166425	Santa Clara	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	15.0000	37.066	$5,278.00	N/A	None
43	166426	El Carmen	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	59.0864	146.005	$20,786.00	N/A	None
44	166427	Las Tres B.B.B.	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	23.0010	56.836	$8,092.00	N/A	None
45	166428	Swanwick	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	70.1316	173.298	$24,672.00	N/A	None
46	166429	Las Tres S.S.S.	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	19.1908	47.421	$6,752.00	N/A	None
47	166430	El Rosario	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2030-06-03	14.0000	34.595	$4,926.00	N/A	None
48	172225	Guadalupe De Los Reyes	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2033-10-26	8.0000	19.768	$2,814.00	N/A	None
49	179842	Elyca	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2036-12-16	10.0924	24.939	$3,550.00	N/A	None
50	186960	Santa Cruz	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2040-05-16	10.0000	24.710	$3,518.00	3%NSR	None
51	199402	Constituyentes 1917	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2044-04-18	66.2411	163.685	$23,304.00	1%NSR	None
52	213579	Montecristo	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2051-05-17	38.0560	94.038	$13,388.00	1%NSR	None
53	213580	Montecristo Fraccion	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2051-05-17	0.2813	0.695	$98.00	1%NSR	None
54	226590	Montecristo II	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2056-02-01	27.1426	67.071	$9,548.00	1%NSR	None
55	191486	San Francisco	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2041-12-18	38.1598	94.295	$13,424.00	2%NSR	None
56	196127	Ampl. San Antonio	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2042-09-22	20.9174	51.688	$7,358.00	2%NSR	None
57	204385	San Antonio	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2047-02-12	14.8932	36.802	$5,240.00	2%NSR	None
58	209497	Guazapares	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2049-08-02	30.9111	76.383	$10,874.00	2%NSR	None
59	211040	Guazapares 3	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2050-03-23	250.0000	617.761	$87,950.00	2%NSR	None
60	212890	Guazapares 1	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2051-02-12	451.9655	1,116.827	$159,002.00	2%NSR	None
61	213572	Guazapares 5	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2051-05-17	88.8744	219.613	$31,266.00	2%NSR	None

No.	Title No.	Concession Name	Owner/Parties	Type	Expiry Date	Hectares	Acres	Annual Holding Costs	Royalty	Group
62	220788	Cantilito	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2053-10-06	37.0350	91.515	$13,028.00	2%NSR	None
63	222869	San Antonio	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2054-09-13	105.1116	259.735	$36,978.00	2%NSR	None
64	223664	Guazapares 4	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-02-01	63.9713	158.076	$22,506.00	2%NSR	None
65	226217	Guazapares 2	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2055-12-01	404.0016	998.306	$142,128.00	2%NSR	None
66	226884	Vinorama	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2056-03-16	474.2220	1,171.823	$166,832.00	2%NSR	None
67	229553	Temoris Fracción 4	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2057-05-17	18.6567	46.102	$6,564.00	N/A	None
68	232082	Guazapares	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2057-05-17	4,242.1190	10,482.463	$1,492,378.00	N/A	None
69	243762	Temoris Centro Fracc. 1	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2057-05-17	4,940.1997	12,207.451	$1,737,962.00	N/A	None
70	243763	Temoris Centro Fracc. 2	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2057-05-17	2,380.0000	5,881.085	$837,284.00	N/A	None
71	243767	Temoris Centro Fracc. 6 R1A	Coeur Mexicana, S.A. de C.V.	Concesión Minera	2057-05-17	956.2010	2,362.815	$336,392.00	N/A	None
	Totals					27,226.6466	67,278.24	$9,578,336.00		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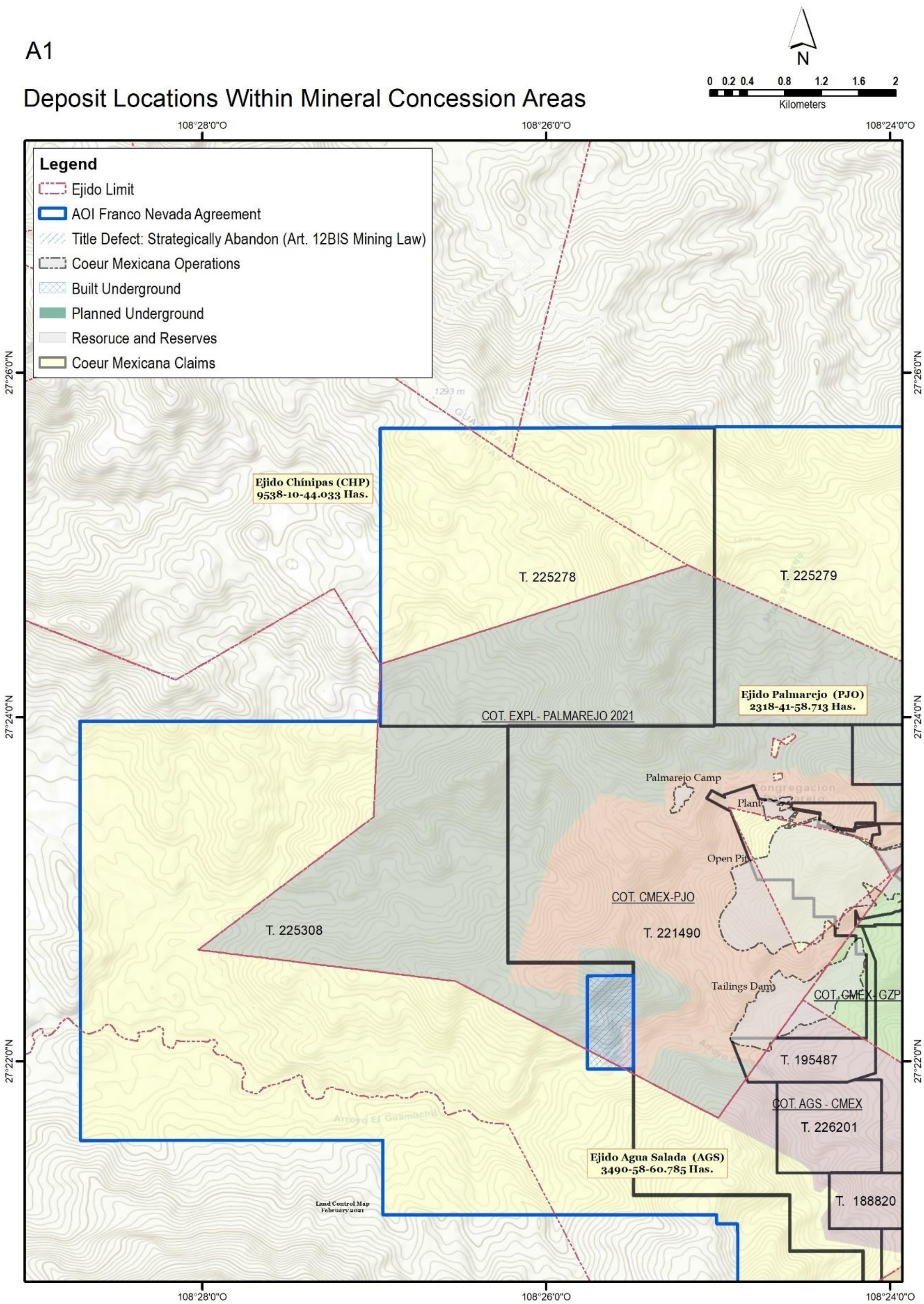
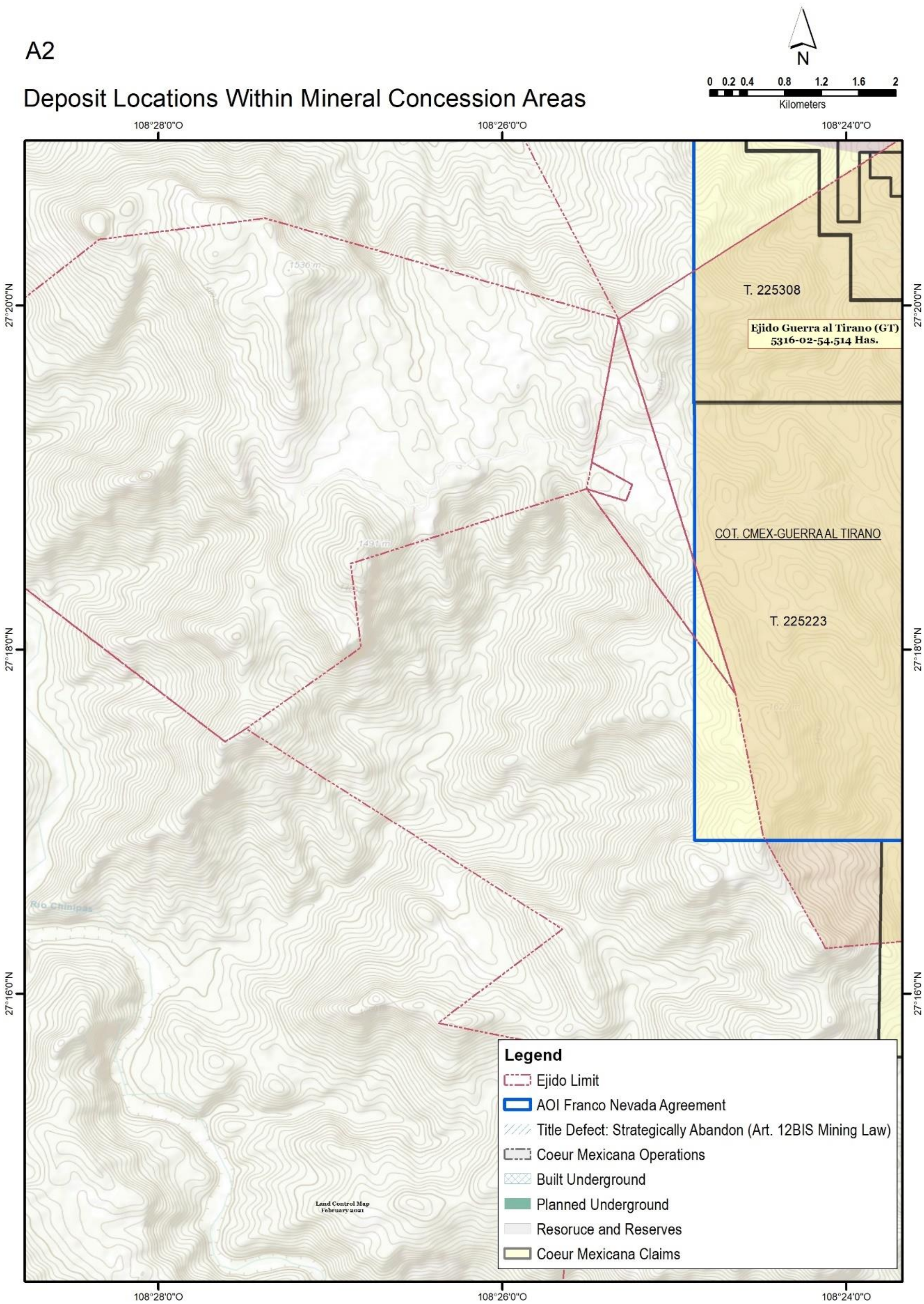
A1

Deposit Locations Within Mineral Concession Areas



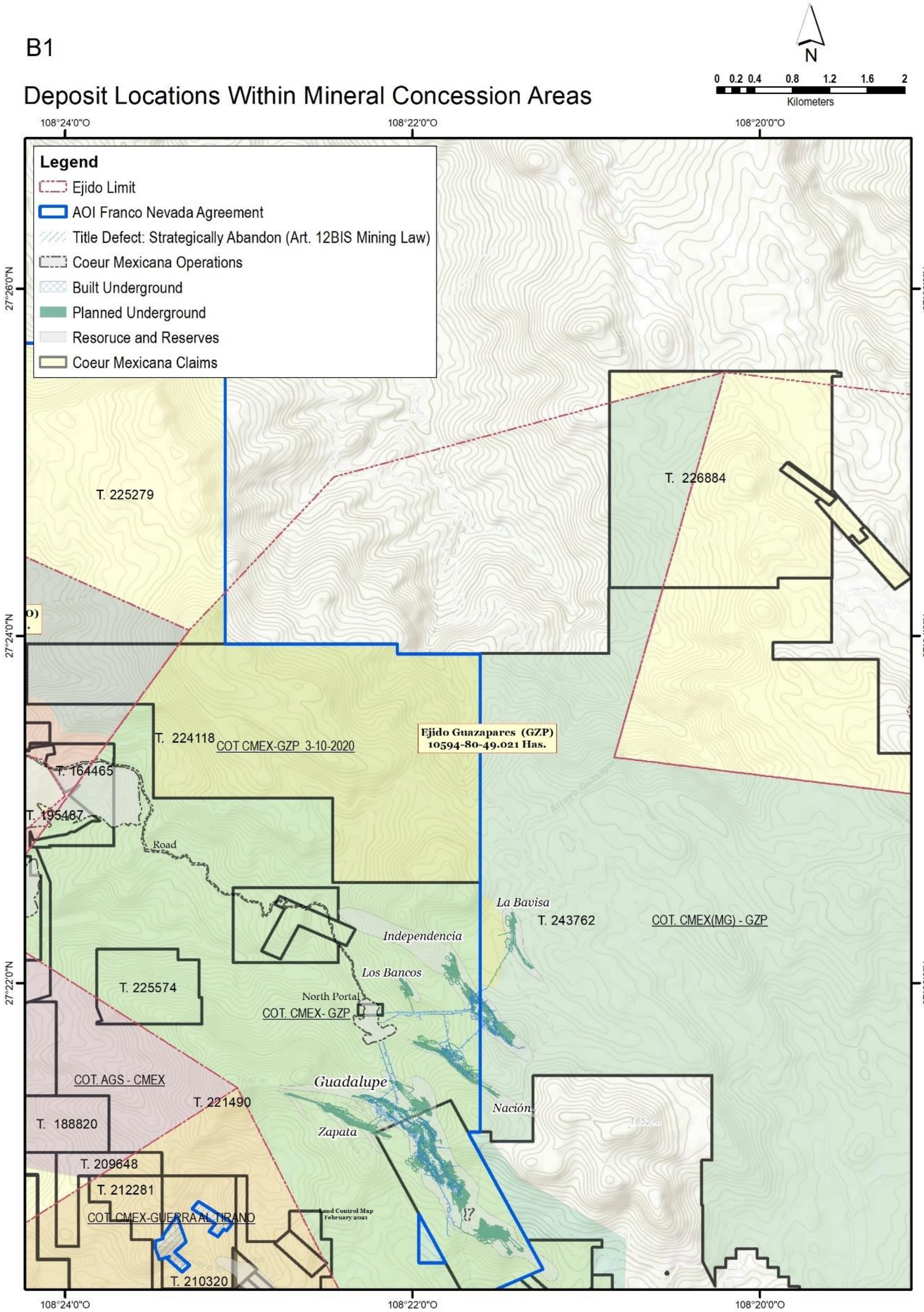
A2

Deposit Locations Within Mineral Concession Areas



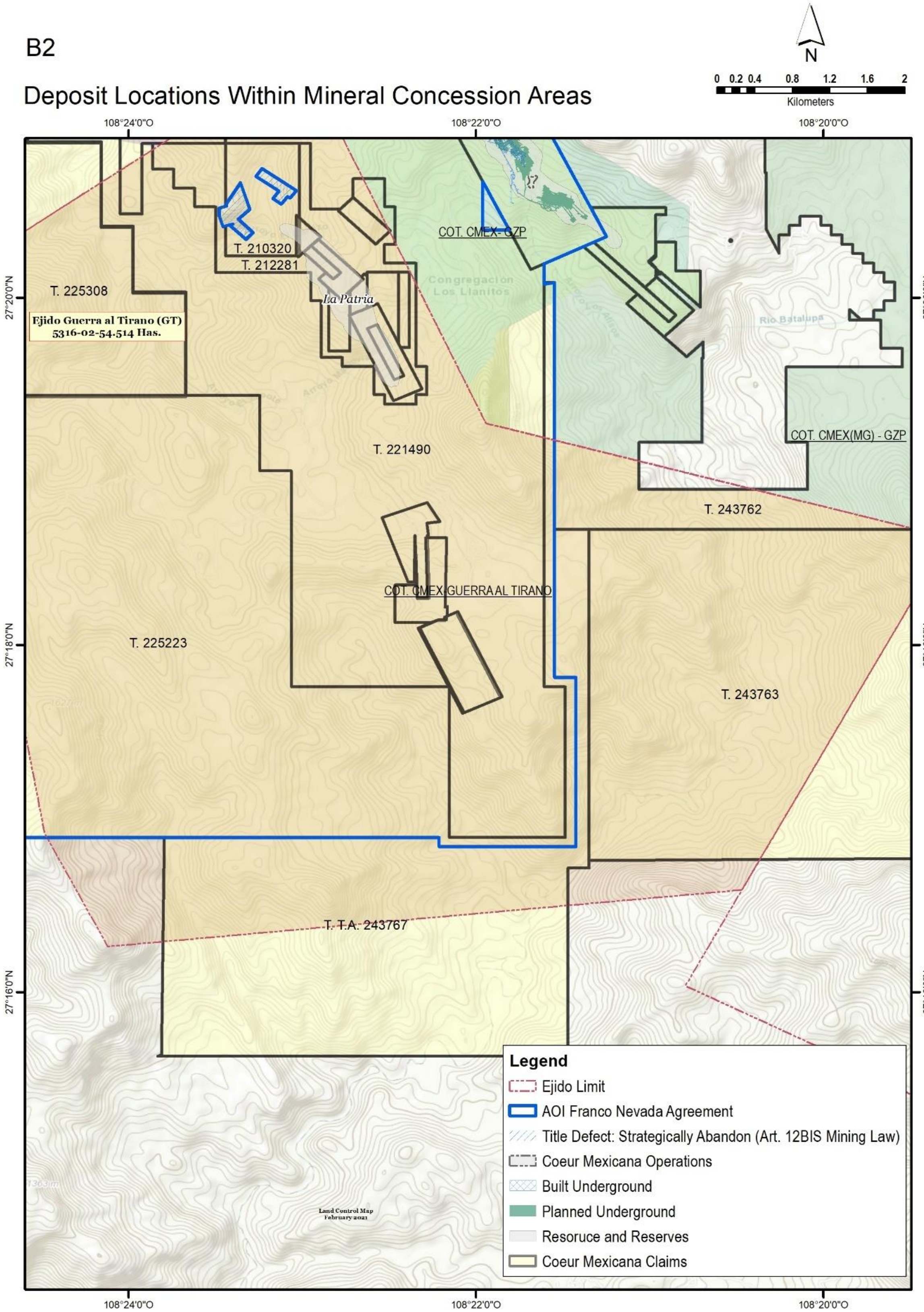
B1

Deposit Locations Within Mineral Concession Areas



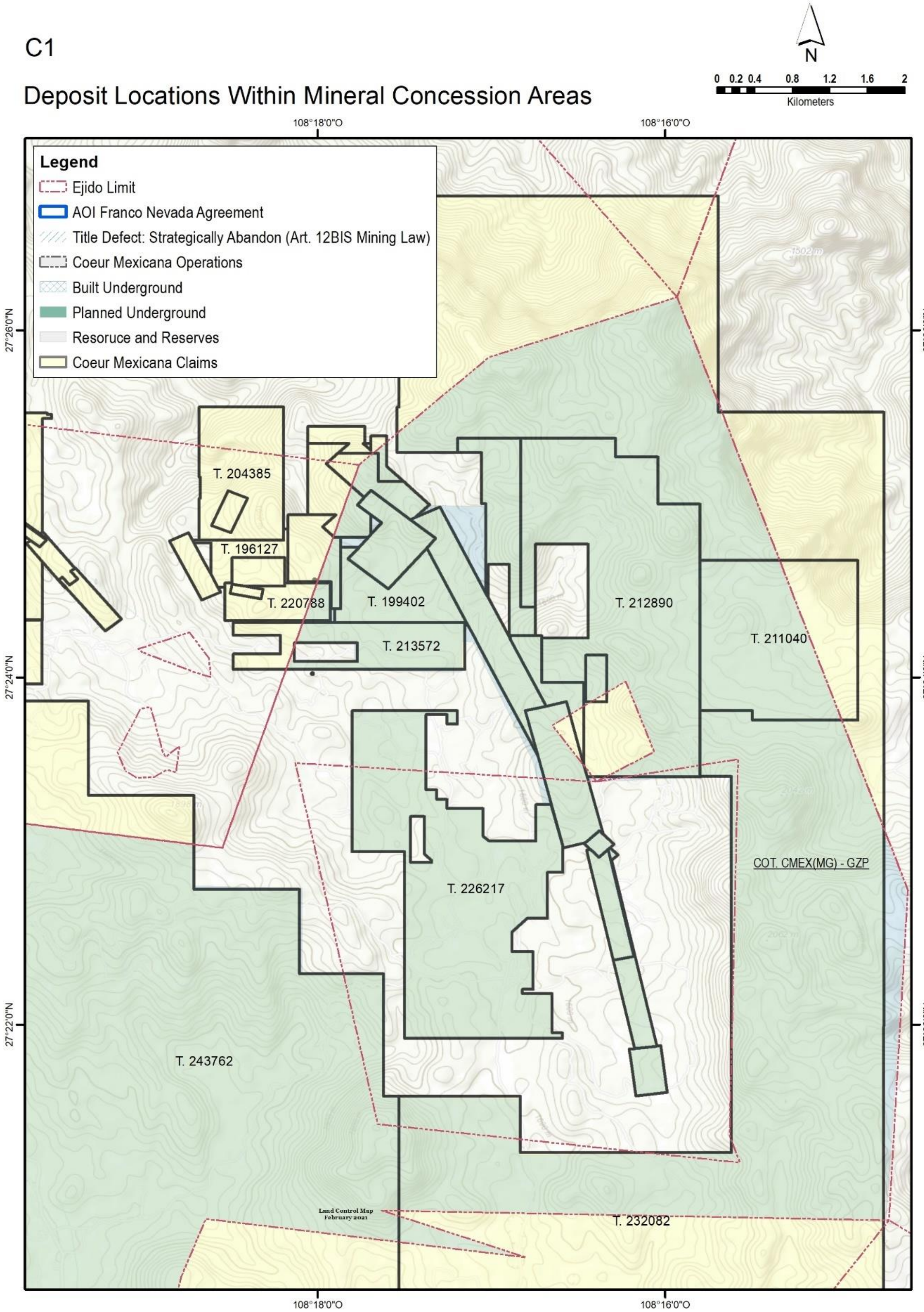
B2

Deposit Locations Within Mineral Concession Areas



C1

Deposit Locations Within Mineral Concession Areas



C2

Deposit Locations Within Mineral Concession Areas