Fortuna Silver Mines Inc.: San Jose Mine, Oaxaca, Mexico

Technical Report
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1.1 Introduction

Fortuna Silver Mines Inc. (Fortuna) has compiled a Technical Report (the Report) on the San Jose Mine (the San Jose Project or the Project) located in Oaxaca, Mexico

The mineral rights of the San Jose Mine are held by Compania Minera Cuzcatlan S.A. de C.V. (Cuzcatlan). Cuzcatlan is a Mexican subsidiary that is 100 % indirectly owned by Fortuna and is responsible for running the underground silver-gold mine.

The Report discloses updated Mineral Resource and Mineral Reserve estimates for the Project.

Costs are in US dollars (US$) unless otherwise indicated.

1.2 Property description, location and access

The mine is located in the central portion of the state of Oaxaca, Mexico.

The San Jose Mine area is characterized by gently sloping hills and adjoining colluvial-covered plains. Elevations above mean sea level range from approximately 1,540 m to 1,675 m. The vegetation is grasslands and thornbush that are typical of dry savannah climates being temperate in nature with an average annual temperature of 19.5ºC. Mining operations are conducted on a year-round basis.

The mine site is 47 km by road south of the city of Oaxaca, which provides access to an international airport, and 0.8 km east of federal highway 175, the major highway between Oaxaca and Puerto Angel on the Pacific coast. The village of San Jose del Progreso is located 2 km to the southeast of the mine site.

1.3 Mineral tenure, surface rights and royalties

The Project consists of mineral rights for 22 mining concessions all located in the state of Oaxaca for a total surface area of approximately 47,844 hectares (ha). Tenure is held in the name of Cuzcatlan with all mining concessions having an expiry date beyond the expected mine life.

Cuzcatlan has signed 45 usufruct contracts, which have been registered before the National Agrarian Registry, with landowners to cover the surface area needed for the operation and tailings facilities.

The San Jose Mine is not subject to any back-in rights, liens, payments or encumbrances.

There are royalties attached to the mineral concessions, however, the only royalties that affect the Mineral Reserves and have been considered in the economic analysis are:

- A 1.5 % royalty to Maverix on the Reduccion Taviche Oeste concession.
- A 3 % royalty on the Progreso concession and a 1 % royalty the Reduccion Taviche Oeste concession payable to SGM.

1.4 History

The Project has a long history of small mining operations, dating from the 1850s.

Companies with involvement in the Project prior to Fortuna's interest include Pan American Silver, Minerales de Oaxaca S.A., and Continuum Resources Ltd. (Continuum). Work completed included surface and underground mapping, chip-channel sampling of the surface and underground workings, core drilling, and mining activities.

In November 2005, Fortuna reached an agreement with Continuum to earn a 70 % interest in Continuum's interests. Fortuna acquired a 100 % interest in the Project in 2009.

Work completed by Fortuna and Cuzcatlan since 2009 has included geological mapping, a remote-sensing-based geological study, airborne geophysical surveys (airborne magnetometric and gamma-ray spectrometry), fluid inclusion and petrographic studies, core and RC drilling, metallurgical testwork, mining studies, environmental baseline and supporting studies, social outreach, and underground mining activities.

Total production from the mine from September 2011 through December 31, 2023, is estimated as 66.8 Moz of silver and 457 koz of gold.

1.5 Geology and mineralization

The silver-gold deposit at the San Jose Mine is a typical low-sulfidation epithermal deposit.

The San Jose Mine area is underlain by a thick sequence of sub-horizontal andesitic to dacitic volcanic and volcaniclastic rocks of presumed Paleogene age. These units have been significantly displaced along major north and northwest-trending extensional fault systems with the precious metal mineralization being hosted in hydrothermal breccias, crackle breccias, and sheeted stockwork-like zones of quartz/carbonate veins emplaced within zones of high paleo permeability associated with the extensional structures.

The mineralized structural corridor extends for more than 3 km in a north-south direction and has been subdivided into the Trinidad deposit, San Ignacio and Victoria areas. The Mineral Resource and Mineral Reserve estimates discussed in this Report are located in the Trinidad deposit and Victoria areas.

The major mineralized structure in the Trinidad deposit area consists of a sheeted and stockwork quartz–carbonate vein system referred to as the main Stockwork Zone located between the primary Trinidad and Bonanza structures. In addition, several secondary vein systems are present locally in the hanging wall and footwall of the Trinidad and Bonanza structures.

The Victoria mineralized zone is located approximately 350 m east of the Trinidad vein and north of the current underground operations of the San Jose Mine. It is structurally related to the same extensional behavior that dominates the Trinidad deposit with a similar style of mineralization, corresponding to a low sulfidation epithermal deposit formed in a shallow crustal environment with a relatively low temperature resulting in the precipitation of silver and gold mineralization.

1.6 Drilling and sampling

As of June 30, 2023, the data cut-off date for estimation of Mineral Resources, a total of 1,460 drill holes totaling 463,774.55 m have been completed at the San Jose Mine, with the drilling being concentrated in the Trinidad deposit area and extensions to the south of the mineralized structural system.

Wide-spaced exploration drilling has also been completed in the San Ignacio area along the southern extension of the structurally controlled mineralized corridor and to the far north of the Trinidad deposit, as well as in the Victoria mineralized zone, Los Diaz, Maria and Taviche projects. All of the drilling was conducted using core drilling methods with the exception of 1,476 m of reverse circulation (RC) pre-collars in six of the 1,460 diamond drill holes.

A total of 1,110 core holes totaling 330,951.55 m have been drilled in the Trinidad deposit area and 205 holes totaling 75,229.25 m in the Victoria mineralized zone. In Trinidad, the majority of the holes have been drilled from east to west to crosscut the steeply east-dipping mineralized zone at high angles, whereas in the Victoria mineralized zone, the holes have been drilled from west to east from underground to intersect the subvertical Victoria main structure. Of the 1,315 holes, 320 have been drilled from the surface and the remainder from underground.

The core drilling typically commences with HQ-(63.5 mm diameter) core and continues to the maximum depth allowable based on the mechanical capabilities of the drill equipment. Once this point is reached or poor ground conditions are encountered the hole is cased and further drilling undertaken with smaller diameter drilling tools with the core diameter being reduced to NQ2 (50.6 mm) or NQ-size (47.6 mm) to completion of the hole. In the Trinidad deposit, five of the drill holes were further reduced to BQ-size (36.5 mm) diameter to complete the drill holes to the target depths. All the drilling completed in the project area has been carried out by contract drilling service companies. Ground conditions are generally good with core recovery averaging 99 %.

Surface drill hole collars were surveyed using differential global positioning system (GPS) and total station survey methods. Concrete monuments are constructed at each collar location recording the drill hole name, azimuth, inclination and total depth. At locations where the drill hole collar is located in a cultivated field, the collar monument is constructed approximately 50 cm below the actual surface.

Underground drill hole collars were surveyed using total station survey methods. Concrete monuments similar to those used for surface collars are constructed to mark the location with the drill hole name, azimuth, inclination and total depth recorded.

Down-hole surveys have been completed for 1,443 of the 1,460 drill holes completed as of the data cut-off date. For the 17 holes where downhole surveys are not recorded, all of which were drilled prior to 2007 with only three being drilled in the Trinidad deposit. The azimuth and dip orientation of these holes was recorded at the collar to account for drilling direction. The absence of downhole surveys in three of the 1,315 holes drilled at Trinidad and Victoria is not regarded as material to the Mineral Resource estimate.

Downhole surveys are typically completed at 50 m intervals although recent drill holes include downhole surveys at 10 m intervals until reaching 50 m depth and then at 50 m intervals thereafter. All downhole surveys have been carried out by the drilling contractor using Reflex electronic downhole survey tools.

As of the effective date of this Report, drilling has been conducted at the Trinidad deposit over a strike length of approximately 2,500 m and to depths exceeding 1,000 m from surface. Exploration drilling has generally increased in depth to the north. Drilling of the Victoria mineralized zone has been conducted over a strike length of approximately 1,700 m and covers a vertical extent of approximately 550 m, with upper holes intersecting the structure approximately 250 m below the surface.

The relationship between the sample intercept lengths and the true width of the mineralization varies in relation to the intersect angle between the steeply dipping zone of mineralized veins and the inclined nature of the diamond core holes. Calculated estimated true widths are always reported together with actual sample lengths by taking into account the angle of intersection between drill hole and the mineralized structure.

In 2018, all logging became digital, being incorporated daily into the Maxwell Datashed database system. Data were initially recorded using Excel templates, and later with the Maxwell LogChief application using essentially the same structure. Both input methods used picklists and data validation rules to ensure consistency between loggers. Separate pages were designed to capture metadata, lithology, alteration, minerals (sulfides, oxides, and limonite), structure (contacts, fractures, veins, and faults with attitudes to core axis). Intensity of alteration phases was recorded using a numeric 1 to 4 scale (weak, moderate, strong, complete).

Geotechnical logging consists of the collection of specified data fields including recovery percentage and rock quality designation (RQD) length. Joint filling and joint weathering were described. A tablet-based data entry program was developed by Cuzcatlan using the Maxwell LogChief software. Data checks are implemented into this program to prevent entry of erroneous data.

The sampling methodology, preparation, and analyses differ depending on whether it is drill core or a channel sample. All samples are collected by Cuzcatlan geological staff with sample preparation and analysis being conducted either at the onsite Cuzcatlan Laboratory or transported to the ALS Global preparation facility in Guadalajara prior to being sent on for analysis at their laboratory in Vancouver.

The Cuzcatlan Laboratory used since 2012 for assaying channel samples was accredited as a testing laboratory with the requirements of ISO/IEC 17025:2005 for sample preparation and assaying of silver and gold on March 2, 2018. Prior to this date, the laboratory was not certified. The Cuzcatlan Laboratory is not independent of Fortuna/Cuzcatlan.

The ALS Global Laboratory is an independent, privately-owned analytical laboratory group. The Vancouver laboratory holds ISO 17025 accreditation. The Mexican laboratory holds ISO 9001:2000 certification.

The SGS Laboratory used by Cuzcatlan as an umpire laboratory is an independent privately-owned analytical laboratory located in Durango, Mexico and holds ISO/IEC 17025:2005 accreditation for sample preparation and assaying.

Channel chip samples are generally collected from the face of newly exposed underground workings. The entire process is carried out under the mine geology department's supervision. Sampling is carried out at 3 m intervals within the drifts and stopes of all veins. The channel's length and orientation are identified using paint in the underground working and by painting the channel number on the footwall. The channel is typically approximately 20 cm wide and approximately 1 to 2 cm deep, with each individual sample preferably being no smaller than 0.4 m and no longer than 1.5 m.

Drill core is laid out for sampling and logging at the core logging facility at the camp. Sample intervals are marked on the core and depths recorded on the appropriate box. A geologist is responsible for determining and marking the drill core intervals to be sampled, selecting them based on geological and structural logging. The sample length must not exceed 2 m or be less than 20 cm.

All samples collected by Cuzcatlan are assayed by atomic absorption (AA) spectroscopy and by fire assay (FA) with gravimetric finish. For drill samples only, a full suite of trace elements is analyzed using an aqua regia digestion followed by inductively-coupled plasma (ICP) analysis. Assay results and certificates are reported electronically by e-mail. Since mid-2018, the onsite laboratory has also assayed channel samples and selected composites for fluorine using a selective ion electrode technique.

Bulk density samples have been primarily sourced from drill core with a limited number being sampled from underground workings. Bulk density measurements are performed at the ALS Global Laboratory in Vancouver using an industry-standard wax coated water immersion technique.

Sample collection and transportation of drill core and channel samples is the responsibility of and the Cuzcatlan mine geology and brownfields exploration departments and must follow strict security and chain of custody requirements established by Fortuna. Samples are retained in accordance with the Fortuna corporate quality assurance/quality control (QAQC) procedures.

Fortuna implemented a full QAQC program to monitor the sampling, sample preparation and analytical process for all drilling campaigns in accordance with its companywide procedures. The program involved the routine insertion of certified reference materials, blanks, and duplicates. Evaluation of the QAQC data indicates that the data are sufficiently accurate and precise to support Mineral Resource estimation.

1.7 Data verification

Data verification programs performed by the QPs on the data collected by Cuzcatlan are adequate to support Mineral Resource and Mineral Reserve estimation.

1.8 Mineral processing and metallurgical testing

Initial metallurgical test work was completed in support of pre-feasibility studies with Cuzcatlan continuing to build on this original work with additional tests to support operational requirements.

Work completed included whole rock analysis, Bond ball mill work index, grind calibration. rougher flotation test work with three stages of cleaning, locked cycle flotation test work and rougher kinetics flotation. Data was used to design the process plant, which has been in operation for 12 years, since 2011.

It is the opinion of the QP that the San Jose Mine has an extensive body of metallurgical investigation comprising several phases of testwork as well as an extensive history of treating ore at the operation since 2011. In the opinion of the QP, the San Jose metallurgical samples tested and the ore that is presently treated in the plant is representative of the material included in the life-of-mine plan (LOMP) in respect to grade and metallurgical response. In 2022, the geology department provided 25 samples from the Victoria mineralized zone for testing. The metallurgical recoveries obtained for silver head grades in the range of 120-160 g/t were 87.7-90.1% for gold (Au) and 88.1-89.7% for silver (Ag). Therefore, the samples exhibit a metallurgical recovery trend similar to the current operation within that range of Ag head grades. Additionally, mineralogy did not detect any mineral types different from those currently being processed at the Trinidad deposit.

Metallurgical recovery is estimated to be constant for the LOMP at 90.54 % for silver and 89.82 % for gold. Differences between vein systems are minimal with regard to recovery.

There is no indication that the characteristics of the material planned for mining will change and therefore the recovery assumptions applied for future mining are considered as reasonable for the LOMP.

Deleterious elements detected in ore in specific parts of the deposit have the potential to affect economics due to potential smelting penalties, including elevated levels of fluorine (>1,000 ppm). These levels have been considered in the financial analysis.

Iron-oxide minerals (hematite) have been identified in ore processed from mineralization associated with the highest levels of the mine. Elevated iron-oxide has been found to lower metallurgical recovery in the plant by approximately 5 %. Testwork is ongoing to optimize the plant to maximize recovery from this material that will potentially be processed in batches so as not to impact the recovery of sulfide ore.

1.9 Mineral Resources

Mineral Resource estimation involved the usage of drill hole and channel samples in conjunction with underground mapping to construct three-dimensional wireframes to define individual vein structures. Samples were selected inside these wireframes, coded, composited and top cuts applied if applicable. Boundaries were treated as hard with statistical and geostatistical analysis conducted on composites identified in individual veins. Silver and gold grades were estimated into a geological block model consisting of 4 m x 4 m x 4 m selective mining units (SMUs) representing each vein. All veins were estimated by ordinary kriging (OK) with risk analysis conducted by sequential Gaussian simulation. Estimated grades were validated globally, locally, visually, and (where possible) through production reconciliation prior to tabulation of Mineral Resources.

Resource confidence classification considers a number of aspects affecting confidence in the resource estimation including: geological continuity and complexity; data density and orientation; data accuracy and precision; grade continuity; and simulated grade variability. Mineral Resources were classified as Measured, Indicated and Inferred on a combination of the distance to the nearest sample, kriging efficiencies, and the slope of regression.

Mineral Resources are reported based on underground mining within mineable stope shapes based on actual operational costs and mining equipment sizes using silver equivalent grades in the block model calculated based on the projected long term metal prices and actual metallurgical recoveries experienced in the plant using the following formula:

$$Ag\ Eq\ (g/t) = Ag\ (g/t) + (Au\ (g/t)*((1{,}880/23.90)*(91/90))).$$

Mineral Resources are reported above a cut-off grade of 130 g/t Ag Eq based on operating costs of US$ 84.94/t comprised of US$ 38.31/t for mining, US$ 20.79/t for plant, and US$ 25.92 for all other costs including general services and administration, distribution, community and social relations.

By the application of a silver equivalent value taking into consideration the average metallurgical recovery and long-term metal prices for each metal, and the determination of a reasonable cut-off grade using actual operating costs, as well as the exclusion of Mineral Resources identified as being isolated or economically unviable using a floating stope optimizer, the Mineral Resources have 'reasonable prospects for eventual economic extraction'.

Mineral Resources exclusive of Mineral Reserves as of December 31, 2023, are reported in Table 1.1. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Mineral Resources are reported insitu, using the 2014 CIM Definition Standards. Eric Chapman P. Geo, a Fortuna employee, is the Qualified Person for the estimate.

Table 1.1 Mineral Resources as of December 31, 2023

Classification	Tonnes (000)	Ag (g/t)	Au (g/t)	Contained Metal	
				Ag (Moz)	Au (koz)
Measured	**45**	**141**	**1.09**	**0.2**	**2**
Indicated	**1,001**	**148**	**1.11**	**4.7**	**36**
Measured + Indicated	**1,046**	**147**	**1.11**	**5.0**	**37**
Inferred	**1,029**	**147**	**1.04**	**4.9**	**35**

Notes:

- Mineral Resources are reported insitu, using the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves.
- Mineral Resources are exclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves, do not have demonstrated economic viability.
- Mineral Resources are reported as of December 31, 2023.
- Mr. Eric Chapman, P. Geo., a Fortuna employee, is the Qualified Person for the estimate.
- Mineral Resources are reported based on underground mining within optimized stope designs using a cut-off grade of 130 g/t Ag Eq based on assumed metal prices of US$ 23.90/oz Ag and US$ 1,880/oz Au, estimated metallurgical recovery rates of 91 % for Ag and 90 % for Au (Ag Eq (g/t) = Ag (g/t) + (Au (g/t)*((1,880/23.90)*(91/90)), and an average mining cost of US$ 38.31/t, processing cost of US$ 20.79/t and other costs including general administrative & services and distribution of US$ 25.92.
- Mineral Resource tonnes are rounded to the nearest thousand.
- Totals may not add due to rounding.

Factors that may affect the estimates include metal price and exchange rate assumptions; changes to the assumptions used to generate the 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; variations in density and domain assignments; geometallurgical assumptions; changes to geotechnical, mining, dilution, and metallurgical recovery assumptions; changes to input and design parameter assumptions that pertain to the conceptual stope designs 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.

1.10 Mineral Reserves

Mineral Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were set to waste.

Mineral Reserves assume overhand cut and fill (OCF) or sublevel stoping (SLS) mining methods.

The overall mining recovery is approximately 92 % which takes into account the presence of pillars in wide veins and crown pillars for each main level of the mine.

Two sources of dilution were considered, operational dilution and mucking dilution. Operational dilution for OCF averages 13.4 % if a zero grade for the waste material is applied. In the case of SLS, the operation dilution averages 16.7 %. Mucking dilution was estimated as 1 % and applied to both mining methods.

Metal prices used for Mineral Reserve estimation were determined as of June 2023 by the corporate financial department of Fortuna based on market consensus.

Metallurgical recoveries were based on metallurgical testwork and operational results at the plant from July 2022 to June 2023.

Net smelter return (NSR) values were dependent on various parameters including metal prices, metallurgical recovery, price deductions, refining charges and penalties.

A breakeven cut-off grade was determined based on all variable and fixed costs applicable to the operation. These include exploitation and treatment costs, general expenses and administrative and commercialization costs (including concentrate transportation). The cut-off grade determination does not include costs associated with management fees, community support activities, institutional relations, capital expenditures, SG&A expenses, Brownfields exploration or closure costs., with the expectation that these costs will be covered by the operations cash flow or by Fortuna. The breakeven cut-off grade was determined to be 150 g/t Ag Eq for OCF and 132 g/t Ag Eq for SLS. For the Reduccion Taviche Oeste concession where an additional 2.5 % royalty is payable, the cutoff was 153 g/t Ag Eq cut-off for OCF and 135 g/t Ag Eq for SLS. For the Progreso mineral concession where a 3% royalty may be payable, the break-even cut-off grade would be increased to 154 g/t Ag Eq in OCF and 136 g/t Ag Eq in SLS.

SLS mining will be used for 82 % of the total Mineral Reserves with OCF mining representing the remainder.

Mineral Reserves as of December 31, 2023, are reported in Table 1.2. Mineral Reserves are reported at the point of delivery to the process plant, using the 2014 CIM Definition Standards. The Qualified Person for the estimate is Mr. Raul Espinoza, FAusIMM (CP), a Fortuna employee.

Table 1.2 Mineral Reserves as of December 31, 2023

Classification	Tonnes (000)	Ag (g/t)	Au (g/t)	Contained Metal	
				Ag (Moz)	Au (koz)
Proven	**37**	**172**	**1.23**	**0.2**	**1.5**
Probable	**695**	**155**	**0.97**	**3.5**	**21.7**
Proven + Probable	**733**	**156**	**0.98**	**3.7**	**23.1**

Notes:

- Mineral Reserves are reported at the point of delivery to the process plant using the 2014 CIM Definition Standards.
- Mineral Reserves are reported as of December 31, 2023.
- Mr. Raul Espinoza, FAusIMM (CP), a Fortuna employee, is the Qualified Person for the estimate.
- Mineral Reserves are reported based on underground mining within optimized stope designs using an NSR breakeven cut-off for cut and fill mining methods of US$ 96.54/t, equivalent to 150 g/t Ag Eq and an NSR breakeven cut-off for sublevel stoping mining methods of US$ 85.02/t, equivalent to 132 g/t Ag Eq. An additional 2.5 % royalty is applied to the cut-off for Mineral Reserves mined from the Reduccion Taviche Oeste concession and a 3.0 % royalty is applied to the cut-off for Mineral Reserves mined from the Progreso concession.
- Metal prices used in the NSR evaluation are US$ 23.90/oz for silver and US$ 1,880/oz for gold.

- Metallurgical recovery values used in the NSR evaluation are 90.5 % for silver and 89.8 % for gold based on actual plant recoveries.
- NSR values taking into account refining charges used in the estimation are US$ 20.08/oz for silver and US$ 1,586.16/oz for gold with the exception of material located in the Reduccion Taviche Oeste concession where NSR values are US$ 19.57/oz for silver and US$ 1,546.31/oz for gold and Progreso concession where NSR values are US$ 19.47/oz for silver and US$ 1,538.34/oz for gold.
- Costs used in NSR breakeven cut-off determination are US$ 49.83/t for cut and fill mining method; US$ 38.31/t for sublevel stoping mining method; US$ 20.79/t for processing; and US$ 25.92/t for other costs including distribution, general service and administration.
- Mining recovery is estimated to average 92 % and mining dilution is estimated at 17 %.
- Mineral Reserve tonnes are rounded to the nearest thousand.
- Totals may not add due to rounding.

1.11 Mining methods

Mining uses conventional underground methods, consisting of OCF and SLS.

Geotechnical recommendations used in the mine design are based on a combination of rock mass rating and geotechnical strength index data.

Water inflows are currently managed using five pumping stations installed at different levels of the mine. One future pumping station is planned for construction in 2024, in accordance with the LOMP requirements.

Mineral Reserves are estimated at 0.7 million tonnes as of December 31, 2023, which is sufficient for a one-year LOMP consisting of 350 days at an average mill throughput rate of 2,100 tonnes per day (tpd). Production in 2024 is estimated to be approximately 3.2 Moz of silver and 20 koz of gold based on an average head grade of 156 g/t Ag and 0.98 g/t Au. Mine life will be complete by the end of 2024 unless additional Mineral Reserves are discovered through exploration drilling or reduction in costs.

Access to the San Jose underground mine is from surface through a main ramp. The San Jose Mine has been designed with a separation of 100 m between levels primarily to limit blast vibration but also to assist with hanging wall and footwall stability.

Transportation of ore and waste is performed via trucks with a 14 m^3 and 7 m^3 of capacity through the main and secondary ramps.

The ventilation requirements for the mine to produce 2,100 tpd is 615,593 cfm. The ventilation system brings all the intake air through the main ramp and three main airway networks. Exhaust air is forced to the surface from inside the mine by three principal fans, two operating at 250,000 cfm and one at 120,000 cfm.

The mine uses two kinds of backfill; waste rock backfill generated during underground mining and paste fill.

The mobile equipment fleet is based on the current mining operations, which is known to achieve the production targets set out in the LOMP.

Mine infrastructure and supporting facilities are sufficient for the remaining LOMP.

1.12 Recovery methods

The process design is based on metallurgical testwork completed on samples from the deposit. The design and equipment are conventional.

The process plant design is split into four principal stages including: crushing; milling; flotation; and thickening, filtering and shipping. The plant has a 3,000 tpd throughput rate.

Energy requirements at the operation are provided by a State power line of 115 kV which supplies two power transformers of 7 to 8 MVA capacity.

The plant requires 2.7 m^3 of water to process one tonne of ore, of which 92 % comes from the recirculation process, and the remaining 8 % from the waste-water treatment plant in Ocotlan.

The plant uses conventional reagents, including a frother, collectors, flocculant and a depressor.

1.13 Project infrastructure

The mine has a relatively small surface footprint with the property boundary split into two parts, a north area covering the operational footprint, and a south area covering the area of the tailings storage facility.

Infrastructure consists primarily of the concentration plant, electrical power station, water storage facilities, filtered dry stack tailings facility, tailings dam, stockpiles, and workshop facilities, all connected by unsealed roads.

Additional facilities include offices, dining hall, laboratory, core logging and core storage warehouses.

All process buildings and offices for operating the mine have been constructed, with camp facilities not required due to the proximity of the site to urban areas.

The tailings facility is located approximately 1,500 m to the southwest of the concentration plant. The current dry stack tailings facility has a total capacity to 4,033,000 m^3, which is sufficient for the LOMP.

The mine currently has one waste stockpile used for storing waste material that could not be effectively disposed of underground. There is sufficient remaining capacity for LOMP requirements.

The mine currently has two ore stockpiles which store low-grade silver ore, or material pending evaluation (due to mixing of different ore types).

Tractor trailers that can transport two 25 t containers each are used to transport concentrate by road to the port of Veracruz in the State of Veracruz for subsequent shipping to purchasers in 400 to 600 t lots.

Power is provided to the mine from the main grid via a 115,000-volt circuit, as well as a secondary reserve power supply line, all managed by Federal Electricity Commission (CFE).

1.14 Market studies and contracts

Since the operation commenced commercial production in September 2011, a corporate decision was made to sell the concentrate on the open market. In order to get the best commercial terms for the concentrates, it is Fortuna's policy to sign contracts for periods no longer than one year. In 2023 Cuzcatlan agreed a short-term contract to sell concentrate to Trafigura PTE LTD (15,000 t) and Arrow Metals (15,000 t) for 12 months.

All commercial terms entered between the buyer and Cuzcatlan are regarded confidential but are considered to be within standard industry norms.

The QPs have reviewed the key input information and consider that the data reflect a range of analyst predictions that are consistent with those used by industry peers. Based on these sources, price projections are considered acceptable as consensus prices for use in mine planning and financial analyses for the San Jose Mine in the context of this Report.

A price estimate of US$23.90/oz for silver and US$1,880/oz for gold has been applied, based on mean consensus prices projected for 2024.

Cuzcatlan has used a Mexican peso exchange rate of 19 pesos to the US dollar for financial analysis purposes, which conforms with general industry-consensus.

Cuzcatlan has 14 major contracts for services relating to operations at the mine regarding: mining activities, ground support, raise boring, drilling, transportation, electrical installations, plant and mine maintenance, explosives and civil works. The costs of such contracts are accounted for in the capital and operating expenditure depending on work performed. Contracts are negotiated and renewed as needed. Contract terms are typical of similar contracts in Mexico that Fortuna is familiar with.

The QP has reviewed the information provided by Fortuna on marketing, contracts, metal price projections and exchange rate forecasts and notes that the information provided supports the assumptions used in this Report and is consistent with the source documents, and that the information is consistent with what is publicly available within industry norms.

1.15 Environmental studies and permitting

Numerous baseline and supporting studies were completed, covering areas including climate, air and water quality, hydrology, soil, flora, fauna, ecosystem characterization, identification of protected areas and archaeology.

No significant environmental risks were identified in the environmental baseline studies. During the operation stage, environmental risks and mitigation measures for the operation stage are determined on an annual basis.

Cuzcatlan has an environmental management and monitoring plan that includes follow-up on environmental programs for flora and fauna management, management of urban solid waste, special waste, hazardous waste, and mining waste, as well as a surface and groundwater monitoring plans, environmental noise monitoring, monitoring of the survival rate of flora included in reforestation programs, and a wildlife monitoring plan. Sustainability indicators have also been defined and their performance monitored monthly.

The mining operation has been developed in strict compliance with the Mexican regulations and permits required by the government agencies involved in the mining sector. In addition, all work follows the international quality and safety standards set forth under standards ISO 14001 and OHSAS 18000.

To the extent known, all permits that are required by Mexican law for the mining operation have been obtained. The tailings facility has sufficient storage capacity to support the currently reported Mineral Reserves and LOMP.

Cuzcatlan continues developing sustainable annual programs for the benefit of local communities, including educational, nutritional and economic programs. The social and environmental responsibilities support a good relationship between the company and local communities. This will aid the development and continuity of the mining operation and improve the standard of living and economies of local communities.

The mine plan anticipates closure of the operation in late 2024. The Company has assigned a dedicated team to review and update a multiyear progressive mine closure and monitoring plan with a current estimated budget of US$ 27 million, which will begin its implementation during 2024. Multiple considerations are being included such as closure-related technical studies and designs, remediation of affected areas, decommissioning and removal of infrastructure, landform reshaping, revegetation, and value-added activities for the communities associated with progressive closure, repurposing, and where appropriate, long-term monitoring and maintenance, whilst adhering to strict compliance with mine closure governmental regulations and high international standards.

1.16 Capital and operating costs

As the mine has entered its last planned year of operation, sustaining capital expenses such as mine development meters, infill drilling, mine equipment and other necessary expenses have been considered as part of operating costs and covered by the projected cash flow generation in 2024.

The projected operating costs are based on the LOMP mining and processing requirements for 2024, as well as historical information regarding performance, operational and administrative support demands.

Operating costs include site costs and operating expenses to maintain the operation. These operating costs are analyzed on a functional basis and the cost structure is not similar to the operating costs reported by the financial statements published by Fortuna Silver Mines Inc.

Site costs relate to activities performed on the property including mine, plant, indirect and distribution of the commercial products. Community relations and capital expenditure costs are projected to be covered by Cuzcatlan's cash flows in 2024. Brownfields explorations costs and closure costs sustained after mining activities have ceased are planned to be paid by Fortuna's cash flow from its four other operating mines.

Projected operating costs for the LOMP are detailed in Table 1.3.

Table 1.3 Summary of projected operating costs in 2024

Area	Units	Q1	Q2	Q3	Q4	Total
Mine	US$/t	60	56	43	39	48
Plant	US$/t	29	29	20	19	23
Indirect	US$/t	31	31	21	19	24
Distribution	US$/t	8	9	7	7	8
Community Relations	US$/t	5	6	4	3	4
Capital expenditure	US$/t	15	24	10	6	12
Total	**US$/t**	**148**	**155**	**104**	**93**	**120**

1.17 Economic analysis

Fortuna is using the provision for producing issuers, whereby producing issuers may exclude the information required under Item 22 for technical reports on properties currently in production and where no material production expansion is planned.

The global after-tax financial results exhibit a negative outcome when factoring in exploration costs and the total mine closure cost. However, the projected financial outcome for 2024, considering only operational costs, shows a positive result. Fortuna expresses its commitment to covering Brownfields exploration costs for 2024 and the subsequent expenses upon cessation of mining operations using funds derived from corporate profits. Given this, the QP believes it is reasonable to continue mining operations throughout the planned operational period in 2024 to alleviate the negative financial and social results of mine closure and support the current Mineral Reserve declaration under two assumptions:

- Fortuna will cover the mines Brownfields exploration and closure costs at the corporate level.
- Adequate financial support is secured from Fortuna's other mining units, which, as per plans, will be operational until 2035 and are expected to generate sufficient proceeds to cover closure costs at San Jose.

1.18 Conclusions

An economic analysis was performed in support of the estimation of Mineral Reserves that, when costs associated with Brownfields exploration and closure were excluded, demonstrated a positive cash flow that provides the QP reasonability to continue mining operations through the planned operational period in 2024 while a more detailed closure plan for the mine is prepared.

1.19 Risks and opportunities

Opportunities include:

- Improvements in mining productivity through optimizing the mining cycle. As shotcreting comprises a significant component of the mining cycle, tests are being done to reduce the curing time from three to two hours which would improve the mining cycle.
- Completing the raise bore initiatives currently underway in the central and northern zones of the Trinidad deposit. This will ensure 100 % air coverage throughout the remainder of the mine life.
- Definition of Mineral Reserves associated with higher-grade mineralization identified in the Victoria mineralized structure.
- Exploration potential exists for the Yessi vein, a new blind zone of alteration and brecciation that has been interpreted as striking northwest to southeast and intersecting the Victoria mineralized zone, where drilling has intercepted some high-grade gold and silver mineralization.

Risks include:

- On January 2, 2023, SEMARNAT served Cuzcatlan a resolution confirming the nullity of the previously granted 12-year EIA extension. Cuzcatlan challenged the annulment of the EIA via a nullity trial presented before the Federal Administrative Court in Mexico City on January 10, 2023. On October 30, 2023, the Mexican Federal Administrative Court ruled in favor of Cuzcatlan and re-instated the 12-year EIA. The decision of the Mexican Federal Administrative Court has been appealed and was admitted by the Collegiate Court in January 2024.

Cuzcatlan filed a response with the Collegiate Court in February 2024. A decision of the Collegiate Court is expected within the next six to 12 months. The permanent injunction that Cuzcatlan already has remains in effect.

- Metallurgical recovery could be lower than estimated in ore that is estimated to have an elevated iron oxide content, which represents approximately 30 % of the plant feed in the LOMP.

1.20 Recommendations

Recommendations for the next phase of work have been broken into those related to ongoing exploration activities and those related to additional technical and operational studies. Recommended work programs are independent of each other and can be conducted concurrently unless otherwise stated. The exploration-related programs are estimated at a total cost of US$3.94 million. The operational improvement studies are recommended to be conducted in-house and therefore do not involve a direct cost.

1.20.1 Exploration activities

- **Exploration of the Trinidad deposit.** It is recommended that Cuzcatlan continue to explore Trinidad central sector and exploration of the behavior of the Trinidad system at depth to investigate the potential for mineralization being hosted by the Mesoproterozoic basement. The program would involve the drilling of 3,300 m of core at an estimated cost of US$ 450,000.
- **Exploration of the Yessi vein.** It is recommended that Cuzcatlan continue to explore Yessi vein discovered in August 2023 to better define the geometry of the structures and establish the continuity in mineralization. Recommended drilling includes 4,000 m of core at an estimated cost of US$ 690,000.
- **Exploration of the Taviche Corridor**. An extensive and systematic field exploration program has been carried out since 2020 including a drone magnetometric assessment, structural analysis, fluid inclusion studies and detailed field work activities resulting in the definition of a first stage drilling program proposal including 4,600 m in 17 core holes over six structures with geological potential, including the San Juan, San Juan 2, Pastal, San Francisco, Consuelos and San Nicolas areas; at an estimated cost of US$ 1,500,000. The execution of this exploration program is dependent on obtaining the necessary permits from the government and may not be executed if such permits are denied.
- **Exploration of the Maria vein**. This vein was first explored in 2017 with 3 holes, defining the presence of a dilational region in the convergence of the Maria vein and the footwall of the Trinidad vein. It is recommended that Cuzcatlan continue to explore the possible kinematic indicators related to extension in the footwall of the Trinidad trend south of the current operations with the drilling of 1,500 m of core at an estimated cost of US$ 290,000.
- **Other exploration programs.** The Guila prospect, located on the Reduccion Tlacolula 2 concession of the San Jose mining property, has been identified as an area that has high potential for the discovery of epithermal veins based on detailed surface mapping. It is recommended that permits be obtained to allow targets to be drilled on this concession. If permits are obtained a drill program consisting of 9,000 m of core holes at an estimated cost of US$ 1,400,000 is recommended.

1.20.2 Technical and operational studies

- **Delineation (infill) drilling**. It is recommended that Cuzcatlan continue the delineation drilling from underground of the Trinidad deposit and Victoria mineralized zone. A total of 20,600 m of core drilling is recommended at a budgeted cost of US$ 2,200,000.
- **Assess the mining potential of the Victoria mineralized zone**. A detailed evaluation is recommended to determine the economic viability of accessing and mining the higher-grade zones of the Victoria mineralized structure. This will be completed utilizing the operations resources and part of normal operating cost.
- **Bulk density measurements**. It is recommended that the number of bulk density measurements be increased in secondary veins. If sufficient measurements are obtained, bulk density can be estimated rather than the presently used density assignment methodology.
- **Mining method.** As part of the continuous improvement initiatives to reduce mining cost and to increase mine productivity, it is recommended to continue with the mining evaluation and geomechanical conditions for each stope, considering the possibility of increasing the mining height using the SLS method from 20 m to 25 m where possible.
- **Mining dilution**. The mine should continue enhancing its blasting practices to minimize excessive host rock over breaking, which can lead to increased unplanned dilution.
- **Optimization of plant based on metallurgical testwork results for mineralization located in the upper levels of the mine**. The operation has identified a decrease in metallurgical recovery by approximately 5 % associated with mineralization from the upper levels of the mine, which recent mineralogical analysis indicates is related to the presence of hematite (iron-oxide). Additional metallurgical testwork has been initiated with results expected by the end of March 2024. Based on these results, it is recommended that the processing methodology is optimized to maximize metallurgical recovery by processing this mineralized material in batches. The budgeted cost of these tests is US$ 10,000.

2 Introduction

2.1 Report purpose

This Technical Report (the Report) on the San Jose Mine in Oaxaca, Mexico (the San Jose Mine or the Project), has been prepared by Mr Eric Chapman, P. Geo., Mr Paul Weedon, MAIG, Mr Raul Espinoza, FAusIMM (CP), Mr Veillette, P. Eng., and Ms Gonzalez, MMSA (QP), for Fortuna Silver Mines Inc. (Fortuna) in accordance with the disclosure requirements of Canadian National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (NI 43-101). The Report discloses updated Mineral Resource and Mineral Reserve estimates for the San Jose Mine.

The mineral rights of the San Jose Mine are held by Compania Minera Cuzcatlan S.A. de C.V. (Cuzcatlan). Cuzcatlan is a Mexican subsidiary that is 100 % indirectly owned by Fortuna and is responsible for operating the San Jose Mine.

2.2 Qualified persons

The following Qualified Persons are responsible for Report preparation:

Mr. Eric Chapman, P. Geo. Senior Vice President of Technical Services - Fortuna Silver Mines Inc.

Mr. Paul Weedon, MAIG, Senior Vice President of Exploration - Fortuna Silver Mines Inc.

Mr. Raul Espinoza, FAusIMM (CP), Director of Technical Services Fortuna Silver Mines Inc.

Mr. Mathieu Veillette, P.Eng., P.E., Director, Geotechnical, Tailings and Water – Fortuna Silver Mines Inc.

Ms. Patricia Gonzalez, MMSA (QP), Director of Operations – Compania Minera Cuzcatlan S.A. de C.V.

2.3 Scope of personal inspection

Mr. Eric Chapman has visited the property on multiple occasions since 2011, most recently from November 14 to 15, 2023. During his site visits, Mr. Chapman has reviewed data collection, drill core, storage facilities, database integrity, procedures, and geological model construction. Discussions on geology and mineralization were held with Cuzcatlan personnel, and field site inspections were performed including a review of underground geology of the Trinidad Deposit, and inspection of operating drill machines. He worked with site geological personnel reviewing aspects of data storage (database) and analytical quality control.

Mr. Paul Weedon has visited the mine on multiple occasions, most recently from August 11 to 13, 2023. During these visits, Mr. Weedon has reviewed drilling performance, sample and data collection, site QAQC records and geological model development for the San Jose Mine mineralization.

Mr. Raul Espinoza conducted a site visit to the property on December 4 to 6, 2023. During this visit Mr. Espinoza reviewed current mining methods, road access, and discussed the Mineral Reserve estimation methodology, operating and capital expenditure requirements with Cuzcatlan personnel.

Mr. Mathieu Veillette most recently visited the property from October 31 to November 2, 2023, where he performed a field visit on the partially closed downstream raised conventional tailings facility, dry stack tailings facility, waste dumps and water management facilities. He also reviewed and discussed with site personnel designs and procedures for the tailings facilities, waste dumps, geotechnical models, water balance and closure plan.

Ms. Patricia Gonzalez has been continuously employed by Cuzcatlan since 2011, occupying various supervisory roles at the San Jose Mine operations including plant superintendent. Ms. Gonzalez reviews daily reports detailing metallurgical performance as well as the monthly and quarterly metallurgical balance. Ms. Gonzalez is also responsible for reviewing and approving any adjustments to the process design or metallurgical testwork programs while her day-to-day activities include verifying plant operations, overseeing installation of new equipment, fine-tuning the current operational strategy, and discussing aspects of mineralogy, lithology and operational issues with the site staff.

Ms. Gonzalez also works closely with the relevant departments to execute the necessary environmental and community programs as part of Fortuna's Environmental, Social, and Governance (ESG) criteria.

2.4 Effective dates

The Report has a number of effective dates, as follows:

- June 30, 2023: date of database cut-off for assays used in the Mineral Resource estimate for the San Jose Mine.
- December 31, 2023: date of the Mineral Resource and Mineral Reserve estimate for the San Jose Mine, taking into account production related depletion to this date.
- December 31, 2023: date to which drilling has been reported.

The overall effective date of the Report is the date of the most recent supply of information on the ongoing drilling program, and the date of the Mineral Resource and Mineral Reserve estimates, being December 31, 2023.

2.5 Previous technical reports

Fortuna has previously filed technical reports on the San Jose Mine, listed in reverse chronological order:

- Chapman, E.N., & Sinuhaji, A., 2019. Technical Report on the San Jose Mine, Oaxaca, Mexico, prepared for Fortuna Silver Mines Inc., effective date 22 February 2019.
- Chapman, E.N., & Gutierrez, E., 2017. Amended Technical Report on the San Jose Property, Oaxaca, Mexico, prepared for Fortuna Silver Mines Inc., effective date 20 August 2016.
- Chapman, E.N., & Kelly, T.E.M., 2013b. Technical Report on the San Jose Property, Oaxaca, Mexico, prepared for Fortuna Silver Mines Inc., effective date 22 November 2013.

- Chapman E.N., & Kelly, T.E.M., 2013a. Technical Report on the San Jose Property, Oaxaca, Mexico, prepared for Fortuna Silver Mines Inc., effective date 22 March 2013.
- Bow, C.S., Chlumsky, G., & Milne, S., 2010. NI-43-101 Technical Report: San Jose Silver Project, Oaxaca, Mexico. Technical report prepared by Chlumsky, Armbrust & Meyer LLC (CAM) for Fortuna Silver Mines Inc., effective date 31 March 2010.
- Lechner, M., & Earnest, D., 2009. Mineral Resource Estimate, Trinidad Deposit, San Jose Project, Oaxaca, Mexico. Technical report prepared by Resource Modeling Inc. and Resource Evaluation Inc., for Fortuna Silver Mines Inc., effective date 10 December 2009.
- Hester, M., & Ray, G., 2007. Geology, Epithermal Silver-Gold Mineralization and Mineral Resource Estimate at the San Jose Mine Property, Oaxaca, Mexico. Technical report prepared by Independent Mining Consultants Inc. (IMC), for Fortuna Silver Mines Inc., effective date 31 March 2007.
- Ray, G., 2006. Geology and Epithermal Silver-Gold Mineralization at the San Jose and the Taviche Properties, Oaxaca, Mexico. Technical report prepared for Fortuna Silver Mines Inc., effective date 12 March 2006.

A technical report was filed by Continuum Resources Ltd (Continuum) in 2004:

- Osterman, C., 2004. Geology and Silver-Gold Mineralization at the San Jose Mine and the Taviche Mining District, Oaxaca, Mexico. Technical Report prepared for Continuum Resources, effective date 2 December 2004

2.6 Information sources and references

The main information source referenced in this Report is the 2019 technical report:

- Chapman, E.N., & Sinuhaji, A., 2019. Technical Report on the San Jose Mine, Oaxaca, Mexico, prepared for Fortuna Silver Mines Inc., effective date 22 February 2019.

Additional information was obtained from site personnel including mine planning from Jose Luis Solorzano (Technical Services Manager), mine geology from Jose Blanco (Manager of Mine Geology), exploration from Alejandro Chavez (Director of Brownfields Exploration), metallurgical input from Aldo Curiel (Plant Superintendent), legal from Lucia Hurtado (Director, Legal), social, environmental and permitting guidance from Cristina Rodriguez (Director of Sustainability).

Some of the more commonly used acronyms used in the Report are detailed in Table 2.2.

Table 2.1 Acronyms

Acronym	Description	Acronym	Description
Ag	silver	Moz	million troy ounces
Ag Eq	silver equivalent	MVA	megavolt ampere
Au	gold	MXN$	Mexican pesos
cfm	cubic feet per minute	NI	National Instrument
cm	centimeters	nm	nanometers
COG	cut-off grade	NPV	net present value
Cu	copper	NSR	net smelter return
CV	coefficient of variation	OK	ordinary kriging
dmt	dry metric tonne	oz	troy ounce
g	grams	ppm	parts per million
g/t	grams per metric tonne	Pb	lead
ha	hectare	QAQC	quality assurance/quality control
hp	horsepower	QQ	quantile-quantile
kg	kilogram	RMR	rock mass rating
kg/t	kilogram per metric tonne	RQD	rock quality designation
km	kilometer	SD	standard deviation
koz	thousand troy ounces	SMU	selective mining unit
kPa	kilopascal	t	metric tonne
kV	kilovolt	t/m^3	metric tonnes per cubic meter
kVA	kilovolt ampere	tpd	metric tonnes per day
l	liter	yd	yard
IDW	inverse distance weighting	yr	year
LOMP	life-of-mine plan	Zn	zinc
m	meter	U$S/t	United States dollar per metric tonne
mm	millimeter	US$/g	US dollar per gram
Ma	millions of years		
masl	meters above sea level		

3 Reliance on Other Experts

The QPs have not independently reviewed ownership of the San Jose Mine and any underlying agreements, mineral tenure, surface rights, or royalties. The QPs have fully relied upon, and disclaim responsibility for, information derived from Fortuna and legal experts retained by Fortuna for this information through the following documents:

- Rodriguez-Matus and Feregrino Lawyers, 2024: Title Opinion Re: Mining Concessions San Jose Mine. Opinion prepared for Fortuna Silver Mines Inc. and Compania Minera Cuzcatlan, S.A. de C.V. dated February 7 2024.
- Hurtado, 2024: Surface Rights and Environmental Liabilities of Compania Minera Cuzcatlan, S.A. de C.V. as of January 31, 2024. Internal memorandum prepared for Fortuna Silver Mines Inc., dated February 7, 2024.

This information is used in Section 4 of the Report. The information is also used in support of the Mineral Resource estimate in Section 14, the Mineral Reserve estimate in Section 15, and the financial analysis in Section 22.

4 Property Description and Location

The San Jose Mine is located in the central portion of the state of Oaxaca, Mexico at latitude 16⁰41'39.10" N, longitude 96⁰42'06.32" W; UTM coordinates NAD27, UTM Zone 14N: 745100E, 1846925N.

The mine site is 47 km by road south of the city of Oaxaca and 0.8 km east of federal highway 175, the major highway between Oaxaca and Puerto Angel on the Pacific coast. The village of San Jose del Progreso is located 2 km to the southeast of the mine site. The nearest commercial center is the town of Ocotlan de Morelos, located approximately 12 km north of the mine site (Figure 4.1).

Figure 4.1 Map showing the location of the San Jose Mine

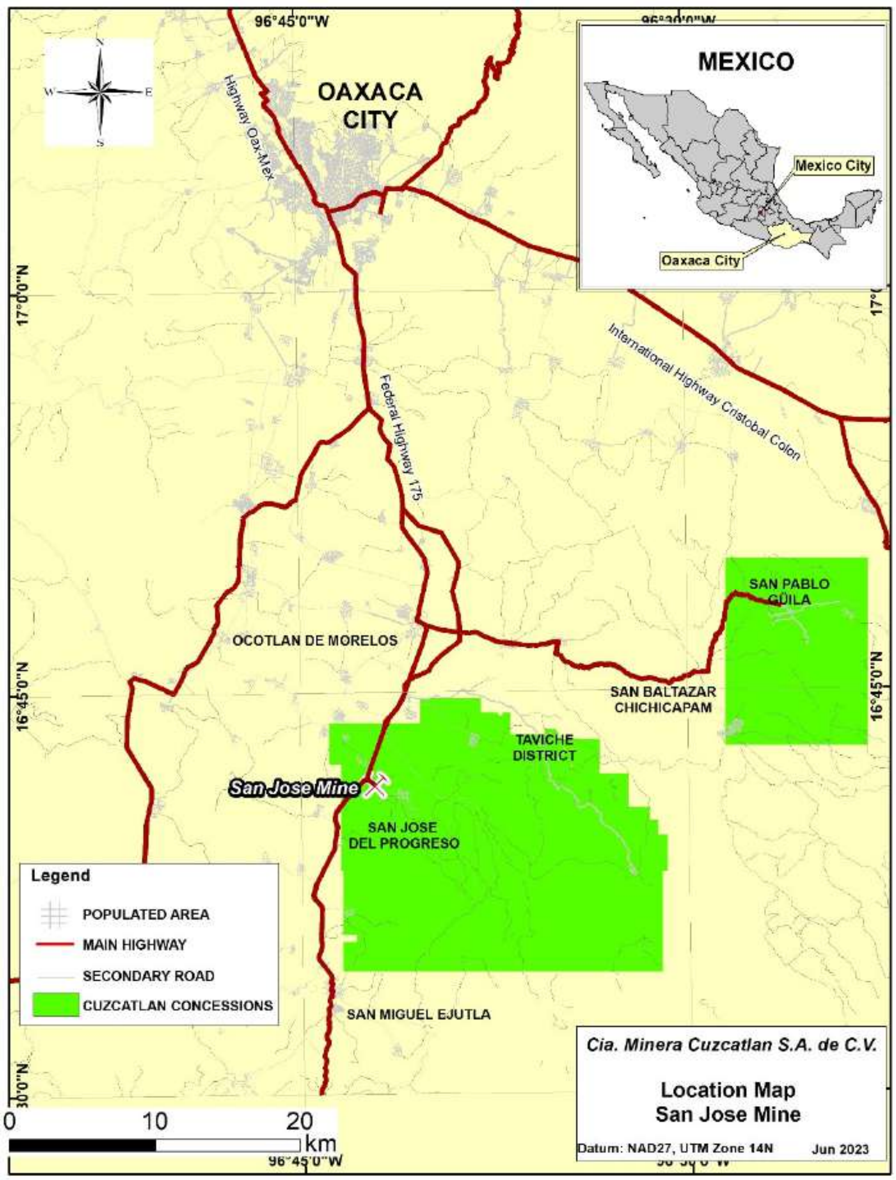


Figure prepared by Cuzcatlan, 2023

4.1 Mineral tenure

Fortuna acquired a 100 % interest in the San Jose Mine in 2009. The property comprises mining concessions; surface rights; a permitted 3,000 tpd flotation plant; connection to the national electric power grid; as well as permits for the infrastructure necessary to sustain mining operations.

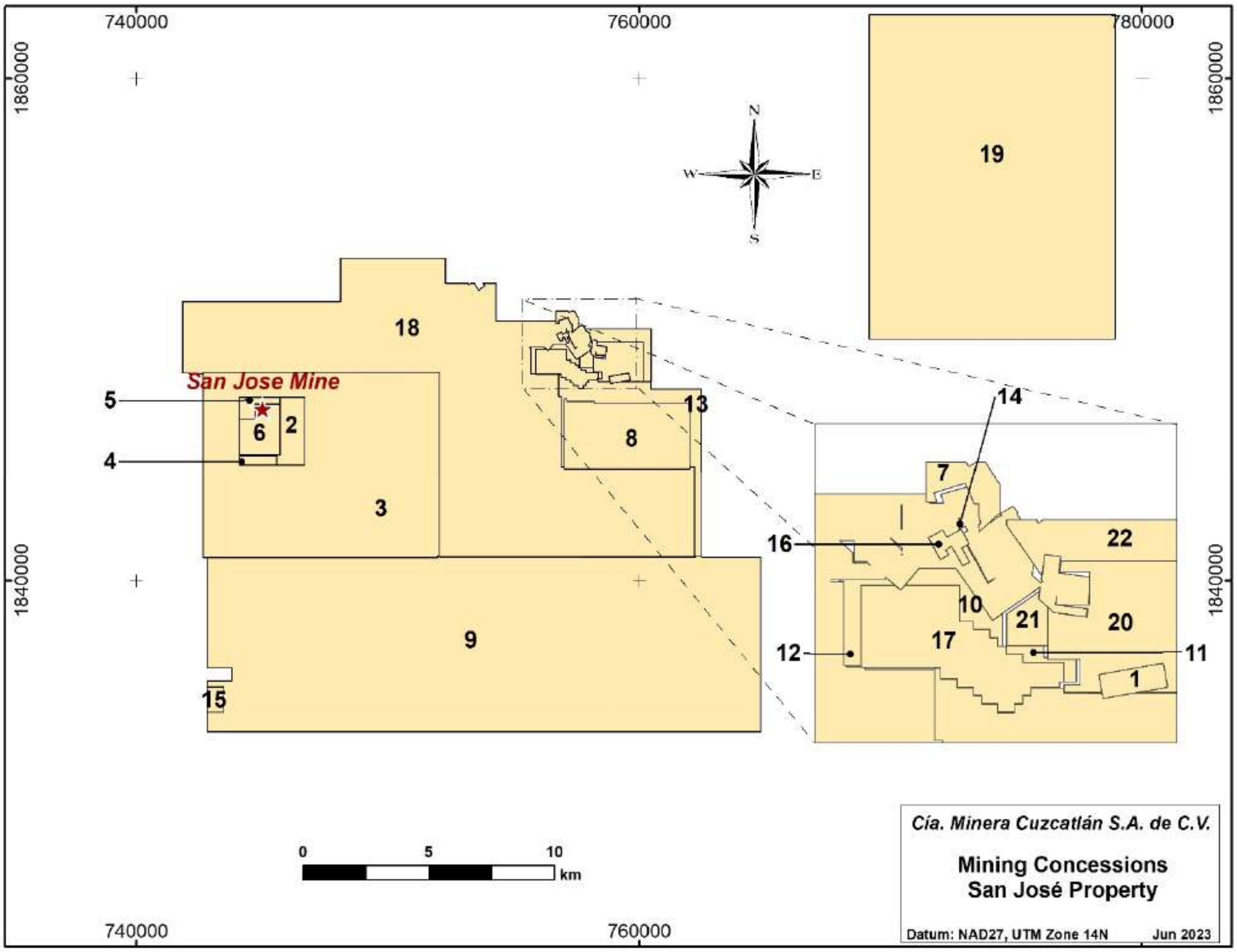
4.1.1 Mining claims and concessions

The San Jose Mine consists of mineral rights over 22 mining concessions for a total surface area of approximately 47,844 hectares (ha). A list of the mining concessions showing the names, areas in hectares, and title details are presented in Table 4.1 with their location shown in Figure 4.2. A six-monthly payment to Direccion General De Minas (DGM) is required to maintain the concessions. These payments have been met and are current.

Table 4.1 Mineral concessions owned by Cuzcatlan

No.	Concession Name	Title	Expiry date (D/M/Y)	Municipality	Area (ha)*
1	Mioxa Uno	179969	22/03/2037	San Miguel Tilquiapam	24.00
2	Progreso III	215254	13/02/2052	San Jose del Progreso	283.39
3	Reduccion Taviche Oeste	215542	04/03/2052	San Jerónimo Taviche	6,254.00
4	Progreso II	217624	05/08/2052	San Jose del Progreso	53.88
5	Progreso II Bis	217625	05/08/2052	San Jose del Progreso	80.73
6	Progreso	217626	05/08/2052	San Jose del Progreso	284.00
7	Hueco	221461	12/02/2054	San Jerónimo, Taviche	41.78
8	El Pochotle	224956	27/06/2055	San Jerónimo, Taviche	1,313.00
9	Los Ocotes	235074	23/11/2056	Ejutla de Crespo	15,076.52
10	Bohemia Uno	229343	10/04/2057	San Jerónimo, Taviche	30.09
11	Bohemia Dos	229344	10/04/2057	San Jerónimo, Taviche	13.61
12	Bohemia Tres	231370	11/02/2058	San Jerónimo, Taviche	24.15
13	Victoria	231995	02/06/2058	San Jerónimo Taviche	643.86
14	Bohemia Cuatro	232329	28/07/2058	San Jerónimo Taviche	0.04
15	Los Ocotes Cinco Fracción I	235699	15/02/2060	Ejutla de Crespo	65.16
16	Cuzcatlan	237918	29/06/2061	San Jerónimo Taviche	11.39
17	Unificacion Cuzcatlan 5	241696	02/12/2053	San Jerónimo, Taviche	198.16
18	Reduccion Unificacion Cuzcatlan 4	247050	16/01/2073	San Jerónimo, Taviche + 11 others	10,318.05
19	Reducción Tlacolula 2	233392	21/11/2057	San Baltazar Chichicapam + 4 others	12,642.00
20	La Voluntad	218976	27/01/2053	San Jerónimo, Taviche	279.04
21	Bonita Fraccion I	218977	27/01/2053	San Jerónimo, Taviche	26.14
22	Bonita Fraccion II	218978	27/01/2053	San Jerónimo, Taviche	181.19
Total					**47,844.20**
*Areas rounded to two decimal places; total may differ from exact due to rounding process.					

Figure 4.2 Location of mining concessions at the San Jose Property



Note: Numbers represent concessions detailed in Table 4.1
Figure prepared by Cuzcatlan, 2023

As of December 31, 2023, the only concessions that contain Mineral Resources or Mineral Reserves are Progreso (No.6), Progreso II Bis (No.5), and Reduccion Taviche Oeste (No. 3).

4.2 Surface rights

Cuzcatlan has signed 45 usufruct contracts, which have been registered before the National Agrarian Registry, with landowners to cover the surface area needed for the operation and tailings facilities (Table 4.2). The surface area can be divided into two parts, a north area covering the operational footprint (54.58 ha), and a south area covering the area of the tailings storage facility (69.69 ha).

Cuzcatlan has also entered into usufruct agreements (Not-Assigned Usufruct Agreements), regarding two parcels totaling 2.58 ha which are valid and binding but do not have a parcel certificate and have not been duly assigned to their respective titleholders before the National Agrarian Registry.

Table 4.2 Usufruct contracts registered by Cuzcatlan for land usage at San Jose

No.	Parcel No	Landowner	Area (ha)	Type of contract	Parcel Cert.	Date Registered (D/M/Y)	Contract length (yrs)
North (Mine area)							
1	1837	Ciriaco Torres Hernandez	2.50	Usufruct	177308	12/03/10	30
2	1441	Ricardo Ibarra Bosques	0.91	Usufruct	139851	28/01/10	30
3	1442	Ricardo Ibarra Bosques	1.74	Usufruct	139852	28/01/10	30
4	1467	Ricardo Ibarra Bosques	2.53	Usufruct	139850	28/01/10	30
5	1468	Vitaliano Munoz Rivera	2.47	Usufruct	107708	23/03/09	30
6	1475	Asuncion Gonzalez	4.12	Usufruct	178674	23/03/09	30
7	1836	Ubaldo Dionicio Ramirez	1.82	Usufruct	176683	28/10/10	30
8	1848	Valentin Dionicio Perez	0.79	Usufruct	176990	28/10/10	30
9	1558	Jose Dionicio Perez	0.37	Usufruct	176659	28/10/10	30
10	1649	Aristeo Gregorio Dionisio Perez	0.45	Usufruct	176656	28/10/10	30
11	1650	Vicente Emilio Dionicio Perez	0.55	Usufruct	176657	28/10/10	30
12	1840	Ubaldo Dionicio Ramirez	0.56	Usufruct	176685	28/10/10	30
13*	1839	Nolberta Sanchez	2.20	Usufruct	177255	28/10/10	10
14	815	Fermin Delfino Ruiz	0.30	Usufruct	106628	28/10/10	30
15	1496	Olga Delfina Gonzalez Porras	0.86	Usufruct	176739	28/10/10	10
16	1495	Melecio Guadalupe Arrazola	0.77	Usufruct	176598	16/02/09	30
17	1492	Juan Sabas Arrazola Gopar	0.61	Usufruct	176601	16/02/09	30
18	1489	Mario Guadalupe Arrazola Gopar	0.64	Usufruct	176603	16/02/09	30
19	1436	Luis Munos Rivera	1.79	Usufruct	1044291	11/12/18	30
20**	1443	Teodulfo Roman Vazquez	2.94	Usufruct	197698	25/08/21	10
21	1456	Martin Abelino Arango Merida	8.21	Usufruct	106845	20/04/09	30
22	1459	Joel Ramon Arango Merida	4.75	Usufruct	107368	23/03/09	30
23	1480	Ciriaco Torres Hernandez	1.87	Usufruct	177301	09/12/08	30
24	1509	Agustin Moises Sanchez Perez	1.20	Usufruct	206830	18/12/14	30
25	1498	Benedicto Fermin Gopar Ruiz	5.20	Usufruct	176772	20/02/18	30
26	1854	Pablo Ciriaco Ruiz	4.43	Usufruct	188870	06/08/19	19
South (Tailings storage facility)							
1	1516	Sixto Juan Sanchez	0.10	Usufruct	177247	29/05/14	12
2	1517	Pablo Ciriaco Gopar Ruiz	11.83	Usufruct	176783	23/03/09	30
3	1518	Agustin Rodrigo Sanchez Munoz	1.68	Usufruct	177260	10/06/09	30
4	1525	Fillberto Timoteo Ruiz Hernandez	3.59	Usufruct	177229	18/12/14	30
5	1526	German Martinez Arrazola	0.54	Usufruct	176915	28/01/10	30
6	1576	Eusebio Victor Martinez	2.87	Usufruct	176906	28/01/10	30
7	1579	Juan Arango	6.00	Usufruct	210567	15/08/17	10
8	1586	Benedicto Fermin Gopar Ruiz	8.06	Usufruct	176771	28/01/10	30
9	1587	Lilia Gopar Carreno	1.75	Usufruct	178700	16/02/09	30
10	1588	German Martinez Arrazola	0.77	Usufruct	176912	28/01/10	30
11	1593	Gonzalo Gopar Arango	2.50	Usufruct	176770	28/01/10	30
12*	1616	Flora Maria Rodriguez Sanchez	4.66	Usufruct	177192	23/02/10	20
13*	1617	Flora Maria Rodriguez Sanchez	6.89	Usufruct	177193	22/02/10	20
14	1625	Ciriaco Torres Hernandez	2.00	Usufruct	177307	29/05/14	15
15	1646	Bernardo Lopez Lopez	9.01	Usufruct	176871	28/01/10	30
16	1828	Diomedes Didimo Vasquez Sanchez	1.25	Usufruct	177436	29/09/15	30
17	1519	Laudelino Fermin Arrazola Gopar	1.72	Usufruct	178697	14/08/17	30
18	1508	German Martinez Arrazola	2.04	Usufruct	176917	14/08/17	30
19	1520	Aquilino Vasquez	2.43	Usufruct	177477	14/08/17	30

* The usufruct amendment agreements of parcels 1839, 1496, 1616 and 1617 are in the process of registration at the National Agrarian Registry.

** An extension agreement of parcel 1443 was executed with Teodulfo Román Vázquez on August 25, 2021, for an additional term of 10 years and is currently in the process of registration at the National Agrarian Registry.

4.3 Royalties

The San Jose Mine is not subject to any back-in rights, liens, payments or encumbrances. The mineral tenure is subject to the following royalties:

- Royalty agreement between Cuzcatlan and Beremundo Tomas de Aquino Antonio dated July 1, 2007, granting a 1 % net smelter return (NSR) royalty to a maximum of US$ 800,000 in regard to the mining concession "El Pochotle" listed as number 8 in Table 4.1. To date no mineralized material has been extracted from the El Pochotle concession and no Mineral Resources or Mineral Reserves have been identified on the El Pochotle concession. Cuzcatlan has a buyout provision whereby the company can purchase this royalty right for US$ 200,000.
- Royalty agreement between Cuzcatlan and Underwood y Calvo Compania, S.N.C dated June 22, 2006, granting a 1 % NSR royalty to a maximum of US$ 2,000,000 with regards to the mining concessions "La Voluntad", "Bonita Fraccion I" and "Bonita Fraccion II" listed as numbers 20 to 22 in Table 4.1. To date no mineralized material has been extracted from these concessions and no Mineral Resources or Mineral Reserves have been identified in the concessions. Cuzcatlan has a buyout provision whereby the company can purchase this royalty right for US$400,000.
- Royalty agreement between Cuzcatlan and Pan American Silver dated January 30, 2013, granting a 1.5 % NSR royalty to Plata Panamericana S.A. de C.V., which was subsequently transferred to Maverix Minerals Inc., and a 1 % NSR royalty to the Mexican Geological Service (SGM) as a Discovery Royalty in regards to the mining concession "Reduccion Taviche Oeste", listed as number 3 in Table 4.1.
- Royalty agreement between Cuzcatlan and Geometales de Norte, S.A. de C.V. dated July 31, 2017, granting a 2 % NSR royalty with regards to the mining concession "Reduccion Tlacolula 2", listed as number 19 in Table 4.1. Cuzcatlan has the right to purchase 50 % of the royalty for US$ 1,500,000.
- Royalty agreement between Cuzcatlan and the SGM dated March 18, 2022, granting a 3 % NSR royalty with regards to the mining concession "Progreso", listed as number 6 in Table 4.1.

Royalties held by SGM on the Hueco, La Voluntad and Unificacion Cuzcatlan 5 concessions are disputed by Fortuna on the basis that there was no legal basis for the creation of such royalties, and they were invalidly created. No ore is currently being extracted from these concessions and no legal action has been initiated by SGM.

Royalties that affect the Mineral Reserves and are included in the economic analysis are:

- A 1.5 % royalty to Maverix on the Reduccion Taviche Oeste concession.
- A 3 % royalty on the Progreso concession and a 1 % royalty the Reduccion Taviche Oeste concession payable to SGM.

4.3.1 Mexico Mining Tax

On January 1, 2014, a Tax Reform package (the Reform), as presented by the Executive Branch of the Mexican government, came into force. Under the Reform, the following taxes are applicable to the San Jose Mine:

- Special Mining Fee. This is a 7.5 % royalty on earnings before interest and taxes (EBIT), which covers income minus producing costs, however, some costs will no longer be deductible.
- Extraordinary Mining Fee, consisting of a 0.5 % rate for companies producing gold, silver and platinum. This fee is based on the gross revenues derived from the sales of these metals.

The taxes are calculated at year-end with Cuzcatlan paying an average of 40 million Mexican pesos per year since 2014. A proportion of exploration expenses can be deducted from these taxes based on approved accounting methods.

4.4 Environmental aspects

The San Jose del Progreso area has a long history of mining activity, including small-scale and artisan operations dating back to the 1800s. There is an expectation that some environmental damage will have resulted from these activities.

4.4.1 Term extension of EA 1731-2009

After a request for the extension of the EIA was submitted to SEMARNAT in May 2021, the authority granted a 12-year extension of the EIA, and formally notified Cuzcatlan on December 16, 2021. The EIA expires on December 17, 2033.

Despite the above, on January 28, 2022, the Company received a notice (the Notice) from SEMARNAT that advised that it had made a typographical error in the extension to the term of the EIA and that the correct term is two years.

On February 3, 2022, Cuzcatlan initiated legal proceedings in the Federal Court to challenge and revoke the typographical error and to reconfirm the 12-year extension period granted by SEMARNAT in December 2021.

On October 24, 2022, the Mexican Federal Administrative Court resolved the nullity trial in favor of Cuzcatlan and re-confirmed the term of the EIA for a period of 12 years.

On January 2, 2023, SEMARNAT served Cuzcatlan with a resolution which annulled the EIA extension and stated that it was reassessing the 12-year EIA extension.

Cuzcatlan challenged the annulment of the EIA via a nullity trial presented before the Federal Administrative Court in Mexico City on January 10, 2023. Cuzcatlan obtained provisional and permanent injunctions from the Court which allowed the San Jose Mine to continue to operate under the terms of the 12-year EIA. On October 30, 2023, Fortuna announced that the Federal Administrative Court had ruled in favor of Cuzcatlan and re-instated the 12-year EIA for the San Jose Mine.

The decision of the Mexican Administrative Court has been appealed and was admitted by the Collegiate Court in January 2024. Cuzcatlan filed a response with the Collegiate Court in February 2024. A decision of the Collegiate Court is expected within the next six to 12 months. The permanent injunction that Cuzcatlan already has remains in effect.

4.4.2 Mine closure

Cuzcatlan has an environmental commitment related to the remediation of the current mining facilities located on the Progreso and Reduccion Taviche Oeste concessions. Cuzcatlan is to set aside US$ 6.5 million to cover remediation and closure requirements. These programs are ongoing with funds assigned to various projects on an annual basis. Further details of the mine closure plan are included in Section 20.

4.4.3 Other risks or liabilities

Cuzcatlan has no knowledge of any further material risks or material environmental liabilities related to any of the other concessions connected with the Project.

Section 20 provides additional information on the environmental status of the operation.

4.5 Permits

To the extent known, all permits that are required by Mexican law for the mining operation have been obtained (see discussion in Section 20).

4.6 Comment on Section 4

In the opinion of the QPs:

- Fortuna was provided with a legal opinion that supported that the mining concessions held by Cuzcatlan for the San Jose Mine are valid and that Fortuna has a legal right to mine the deposit.
- Fortuna was provided with an internal legal memorandum that supported that the surface rights held by Cuzcatlan for the San Jose Mine are in good standing. The surface rights are sufficient in area for the mining operation infrastructure and tailings facilities.
- Fortuna was provided with a legal opinion that outlined royalties payable for the concessions held by Cuzcatlan.
- The San Jose Mine is in full compliance with all material environmental laws and continues to operate under the terms of the EIA that was approved on December 17, 2021.

Fortuna advised the QPs that to the extent known, there are no other significant factors and risks that may affect access, title or right or ability to perform work at the mine. The information discussed in this section supports the declaration of Mineral Resources. Mineral Reserves and the development of a mine plan with an accompanying financial analysis.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Access

The San Jose Mine is located 0.8 km east of Mexico federal highway 175, the major highway between Oaxaca and Puerto Angel on the Pacific coast. The mine is 47 km, or one hour by road from the city of Oaxaca, which provides access to an international airport. Ocotlan, a town of approximately 10,000 people and the nearest commercial center, is located 12 km to the north of the San Jose Mine along highway 175. The mine site is situated 2 km to the northwest of San Jose del Progreso, a village of approximately 2,500 people. Access within the concessions is achieved via a network of unsealed roads and farm tracks.

5.2 Climate

The local climate in the San Jose Mine area is temperate with temperatures generally ranging from 9ºC to 31ºC with an average annual temperature of 19.5ºC. The lowest temperature recorded in the Project area was 4.1ºC in the month of January. The highest temperature recorded was 35.4ºC in April. Average annual precipitation in the Project area ranges from 500 mm to 750 mm, with nearly all rain occurring from April to October.

Mining operations are conducted on a year-round basis.

5.3 Topography, elevation and vegetation

The San Jose Mine area is characterized by gently sloping hills and adjoining colluvial-covered plains.

Elevations above mean sea level range from approximately 1,540 m to 1,675 m.

The vegetation is grasslands and thornbush that are typical of dry savannah climates.

5.4 Infrastructure

The operation has a relatively small surface infrastructure consisting primarily of the concentration plant, electrical power station, water storage facilities, filtered dry stack tailings facility, tailings dam, stockpiles, and workshop facilities, which are connected by unsealed roads. Additional structures located within the Project area include offices, dining hall, laboratory, core logging and core storage warehouses. The tailings storage facility is located approximately 1,500 m to the southwest of the concentration plant.

Experienced underground miners live in the nearby towns of Ocotlan and Oaxaca in addition to other local towns in the district and are transported to the property by bus.

Water for the process plant and mining operations is primarily sourced via recirculation activities, and where top up is required, from the tailings storage facility.

The mine facilities are connected to the main electrical power supply managed by the Federal Electricity Commission, which supplies sufficient power for the operation. The mine also has a secondary power line in case of power failure in the main line.

More detailed information regarding the Project infrastructure is provided in Section 18.

5.5 Sufficiency of surface rights

The San Jose Mine infrastructure has a compact layout footprint as detailed in Section 18 of this Report. The mine's processing facility and supporting infrastructure is located well within the area of surface rights and mineral tenure owned by Cuzcatlan.

5.6 Comment on Section 5

In the opinion of the QPs, the existing infrastructure, availability of staff, the existing power, water, and communications facilities, the methods whereby goods are transported to and from the mine site, and any planned modifications or supporting studies are well-established and understood by Fortuna, and support the declaration of Mineral Resources and Mineral Reserves and the proposed mine plan.

There are sufficient mineral tenure and surface rights held to support the life-of-mine plan (LOMP) and mining operations on a year-round basis.

6 History

6.1 Ownership history

The San Jose Mine is located in the Taviche Mining District of Oaxaca, Mexico. The earliest recorded activity in the San Jose del Progreso area dates to the 1850s when mines were exploited on a small scale by the local hacienda (Alvarez, 2009). By the early 1900s, a large number of silver- and gold-bearing deposits were being exploited in the San Jeronimo Taviche and San Pedro Taviche areas, aided by a new mining law enacted in 1892 and with support from foreign investment capital (Carranza Alvarado et al, 1996). Mining activity in the district diminished drastically with the onset of the Mexican Revolution in 1910, only to resume sporadically in the 1920s. Mining in the San Jose area was re-activated on a small scale in the 1960s and again in 1980 when the San Jose Mine was acquired by Ing. Ricardo Ibarra. The mine was worked intermittently by Ibarra through his company Minerales de Oaxaca S.A. (MIOXSA) through to the end of 2006 when the property was purchased by Compania Minera Cuzcatlan S.A. de C.V., a Mexican-registered company owned jointly by Fortuna and Continuum Resources Ltd. (Continuum).

6.2 Exploration history

In 1999, the property was optioned by Pan American Silver and five core drill holes totaling 1,093.5 m were completed in the San Jose vein system. Three of the drill holes were located in the vicinity of the Trinidad shaft and two were located along the southern extension of the vein system in the San Ignacio area. Two of the three drill holes located in the vicinity of the Trinidad shaft intercepted strong silver and gold mineralization over drill hole intervals ranging from 2.7 m to 25.6 m. The two drill holes located in the San Ignacio area intercepted low to moderate grade silver-gold mineralization over narrow to moderate vein widths.

In March 2004, Continuum, an exploration company based in British Columbia, Canada, completed an option agreement with MIOXSA covering 19 concessions in the San Jose and San Jeronimo Taviche areas. Continuum conducted extensive chip-channel sampling in the underground workings of the Trinidad deposit as well as 15 surface core drill holes totaling 4,877 m. Thirteen of the drill holes were located in the Trinidad area and two were located in the San Ignacio area. Nine of the 13 drill holes completed in the Trinidad area intersected moderate to strong silver–gold mineralization over significant vein widths. The two drill holes in the San Ignacio area intercepted low-grade silver–gold mineralization over narrow widths.

In November 2005, Fortuna reached an agreement with Continuum to earn a 70 % interest in Continuum's interests in the properties optioned from MIOXSA and assumed project management.

During 2006, Fortuna completed 38 core drill holes totaling 12,182 m in the San Jose project area with 25 of the drill holes located in the Trinidad zone and 13 of the drill holes located in the San Ignacio area. In November 2006, Fortuna and Continuum purchased a 100 % interest in the properties from MIOXSA and simultaneously restructured their joint operating agreement to a 76 % interest for Fortuna and a 24 % interest for Continuum.

During 2007, Fortuna (operating as Cuzcatlan) drilled 66 core drill holes totaling 26,586 m and in 2008/early 2009 Cuzcatlan completed 112 core drill holes totaling 32,915 m. In

March 2009, Fortuna completed the acquisition of all issued and outstanding shares of Continuum, resulting in a 100 % ownership of the San Jose Project.

Since 2009, an additional 1,212 drill holes totaling 383,163 m have been completed in the San Jose concessions from both surface and underground drill stations.

6.3 Production history

From 1980 through 2004, production by MIOXSA was intermittent and came primarily from existing stopes and from development of the fourth and fifth levels of the San Jose Mine. In 2005 and 2006, the sixth level was developed and mined with grades reported to range between 350 to 500 g/t Ag and 1.8 to 3.5 g/t Au. The mineralization was mined primarily from the Bonanza and Trinidad veins and extracted at rates of approximately 100 tpd through the Trinidad shaft. The 4 m by 4 m Trinidad shaft is developed to a depth of 180 m from the surface although no horizontal development had taken place on the seventh level. The principal mining method used by MIOXSA was shrinkage stoping. The mineralized material was processed at a small crushing and flotation plant in San Jeronimo de Taviche, located approximately 19 km by paved and gravel roads from the San Jose Mine. The majority of the workers in the mine and plant were from the San Jeronimo de Taviche area. High-grade concentrates were shipped by 30 t capacity trucks to the MET-MEX Penoles smelter at Torreon, Coahuila, Mexico. Concentrate grades typically ranged from 9,000 g/t to 12,000 g/t Ag and 100 g/t to 140 g/t Au (Alvarez, 2009). Reliable estimates of the total production during MIOXSA's tenure are not available.

6.3.1 Cuzcatlan

Commercial production commenced under the management of Cuzcatlan on September 1, 2011 (Fortuna, 2011). A summary of total production figures by year from September 2011 through December 31, 2023, is detailed in Table 6.1.

Table 6.1 Production figures during Cuzcatlan management of the San Jose Mine

Production	2011*	2012	2013	2014	2015	2016	2017	2018	2019
Ore processed (t)	125,301	369,022	456,048	676,959	717,505	905,467	1,070,791	1,040,478	1,068,722
Head grade Ag (g/t)	144	188	194	226	234	228	238	260	252
Head grade Au (g/t)	1.36	1.74	1.46	1.72	1.83	1.72	1.77	1.75	1.57
Production Ag (oz)	490,555	1,949,178	2,527,203	4,396,760	4,928,893	6,124,235	7,526,555	7,979,634	7,868,478
Production Au (oz)	4,622	17,918	19,031	33,496	38,526	46,018	55,950	53,517	48,880
* Commercial production commenced in September 2011									

Production	2020	2021	2022	2023	Total
Ore processed (t)	934,381	1,041,154	1,029,590	930,200	**10,365,618**
Head grade Ag (g/t)	224	209	191	171	**220**
Head grade Au (g/t)	1.38	1.29	1.14	1.06	**1.51**
Production Ag (oz)	6,165,606	6,425,029	5,762,562	4,656,631	**66,801,319**
Production Au (oz)	37,805	39,406	34,124	28,559	**457,852**

7 Geological Setting and Mineralization

7.1 Regional geology

The San Jose Mine is hosted by an andesitic to dacitic effusive volcanic sequence of presumed Paleogene age. Further to the east, these andesites and dacites are overlain by silicic crystalline and lithic tuffs and ignimbrites corresponding to the Mitla Tuff Formation of Miocene age. These Cenozoic volcanic sequences overlie two distinct tectonostratigraphic terranes or crustal blocks: the Oaxaca or Zapoteco terrane and the Cuicateco or Juarez terrane. The Oaxaca terrane is characterized by granulite-facies metamorphic basement of Grenvillian age overlain by Paleozoic and Mesozoic sedimentary sequences. The Juarez terrane is a west-dipping fault-bounded prism of strongly deformed Jurassic and Cretaceous oceanic and arc volcanic rocks that structurally overlies the Maya terrane and underlies the Oaxaca terrane (Martinez-Serrano et al, 2008).

The Cenozoic volcanic rocks hosting the San Jose Mine are interpreted to be related to subduction along the predominantly convergent southern Mexico plate boundary with the volcanic sequence having been deposited approximately contemporaneous with the initial volcanic events of the Trans-Mexican Volcanic Belt (Figure 7.1).

Figure 7.1 Map of Oaxaca state showing approximate distribution of Cenozoic volcanic rocks and underlying tectonostratigraphic terranes

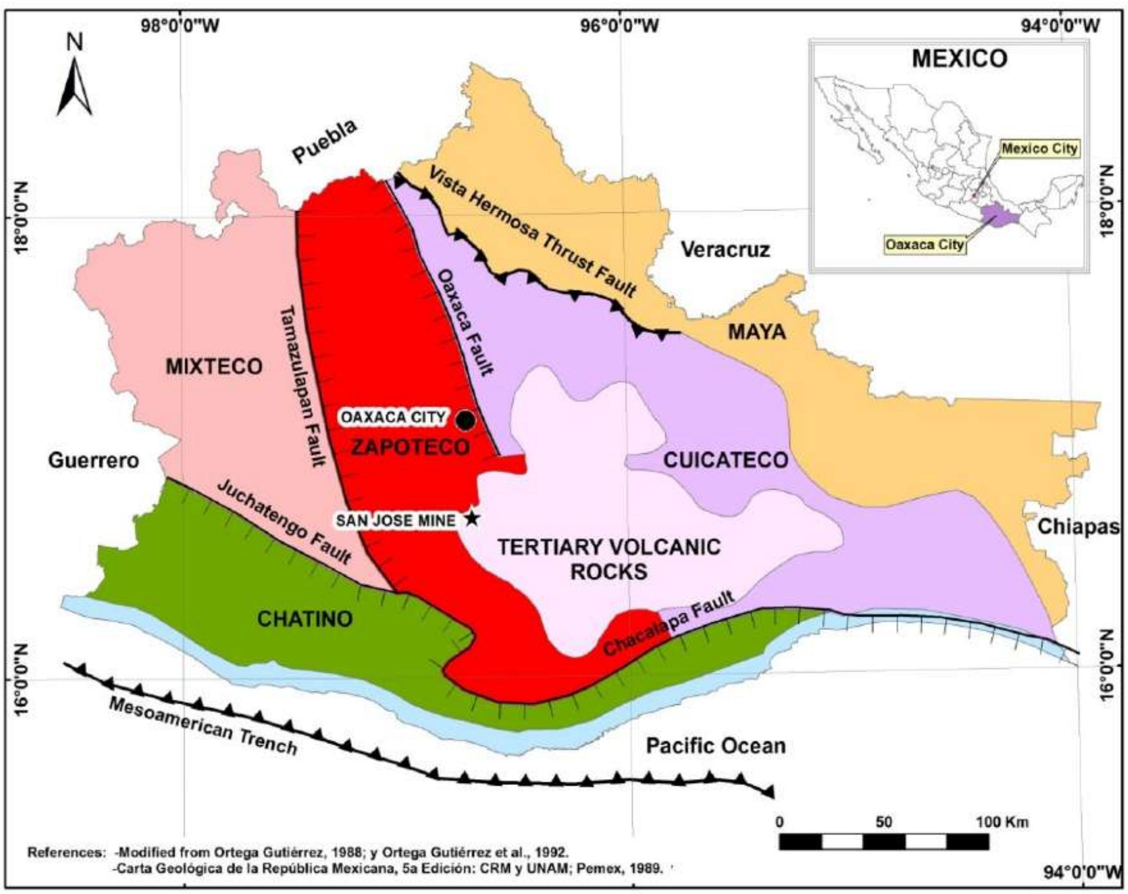


Figure prepared by Cuzcatlan, 2015 after Ortega-Gutierrez (1988) and Ortega-Gutierrez et al. (1992).

7.2 Local geology

The San Jose Mine area is underlain by a thick sequence of presumed Paleogene-age andesitic to dacitic volcanic and volcaniclastic rocks, which in turn, discordantly overlie units ranging from orthogneisses and paragneisses of Mesoproterozoic age, limestones and calcareous sedimentary rocks of Cretaceous age and continental conglomerates of the Early Tertiary Tamazulapan Formation (Figure 7.2; Dickinson and Lawton, 2001; Sanchez Rojas et al., 2003; Martinez-Serrano et al., 2008). In the Taviche area, the Paleogene-age volcanic rocks are intruded by granodiorite to diorite stocks of possible Neogene age.

Figure 7.2 Local geology of the San Jose Mine area

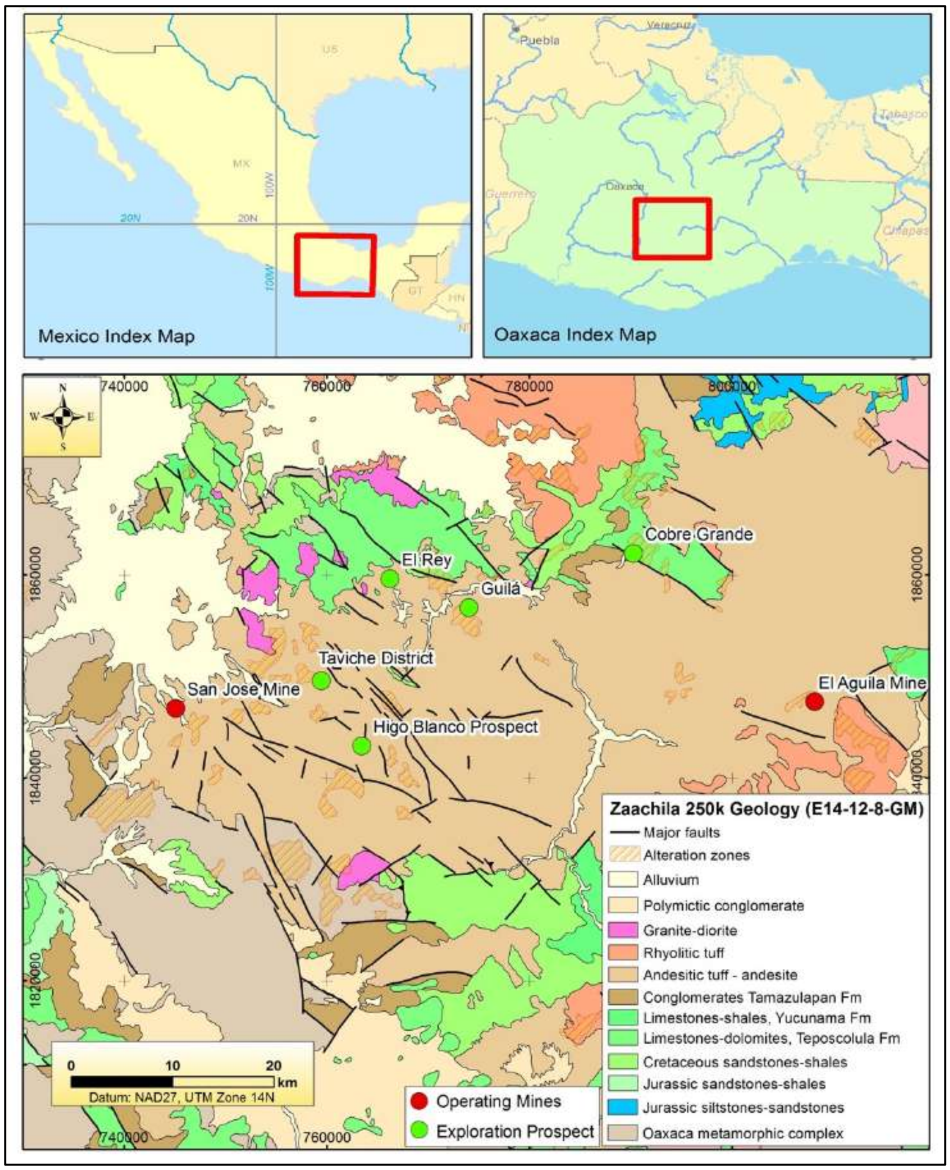
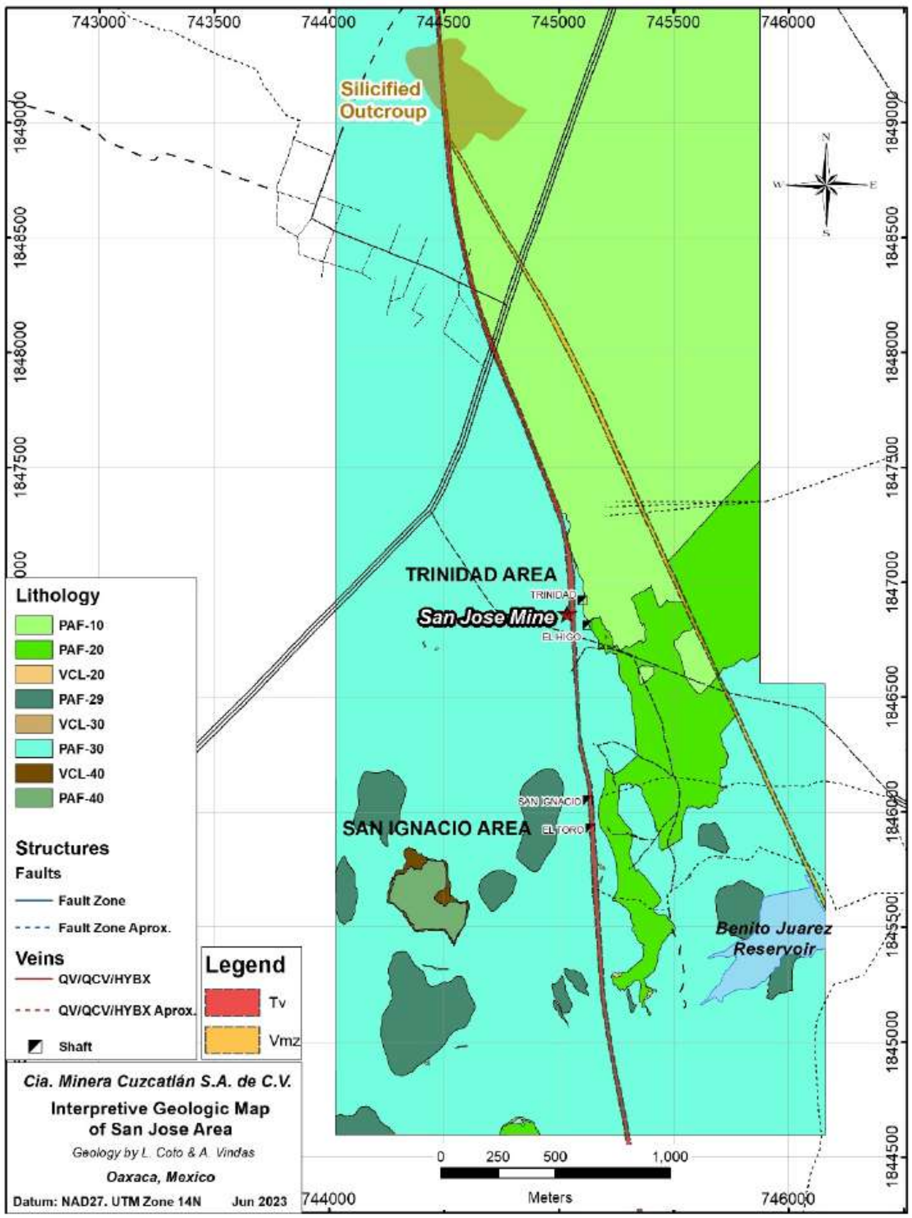


Figure prepared by Cuzcatlan, 2019, adapted from Sanchez Rojas et al. (2003).
Note: Not all exploration targets and mines shown are owned by Fortuna.

7.3 Project geology

The San Jose Mine area is underlain by a thick sequence of sub-horizontal andesitic to dacitic volcanic and volcaniclastic rocks of presumed Paleogene age (Figure 7.3). These units have been significantly displaced along major north- and northwest-trending extensional fault systems with the precious metal mineralization being hosted in hydrothermal breccias, crackle breccias, and sheeted stockwork-like zones of quartz–carbonate veins emplaced within zones of high paleo-permeability associated with the extensional structures.

Figure 7.3 Geology of the San Jose Mine area



Note: Lithology code detailed in Figure 7.4

7.3.1 Stratigraphy

A detailed stratigraphic section of the volcanic and volcaniclastic units present in the San Jose Mine area has been developed through surface mapping and detailed drill core logging of (Figure 7.4).

Figure 7.4 Stratigraphic column of the San Jose Mine area

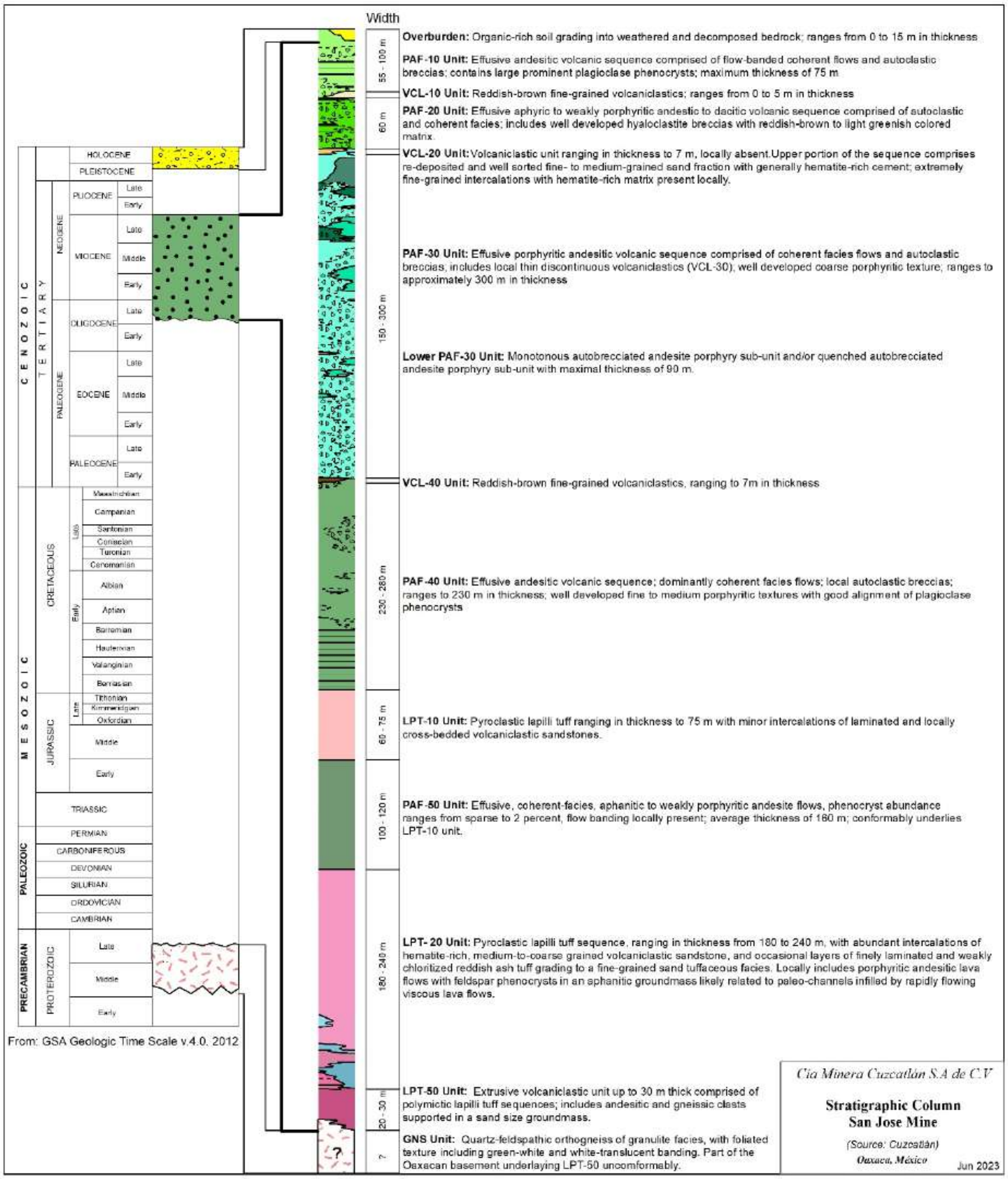


Figure prepared by Cuzcatlan, 2023

In general, the upper 650 to 700 m of the volcanic sequence is characterized by a series of distinct effusive andesitic to dacitic lava flow units intercalated with thin but laterally extensive horizons of reddish-brown to grayish-brown volcaniclastic rocks. The andesitic to dacitic flow rocks comprise coherent and autoclastic facies with classic volcanic textures indicating sub-aerial to subaqueous deposition of the flow units. Poorly-sorted monomictic to polymictic autobreccias are commonly present at the base of the flow units and grade upward to jigsaw-fit breccias and fractured coherent facies lava flows. Flow foliations are commonly observed in coherent facies lavas and generally are subhorizontal to moderately inclined in orientation. Well preserved hyaloclastite breccias and in situ hyaloclastites are present throughout the effusive sequence, having been formed by the non-explosive fracturing and disintegration of quenched lavas emplaced into subaqueous settings. Blocky clasts with curviplanar surfaces and chloritized clast margins after glass are commonplace in the hyaloclastites. Thin reddish-brown to grayish-brown stratified volcaniclastic units present between the major flow units and locally within the PAF-30 unit are interpreted to be the re-sedimented fines of the hyaloclastite breccias.

The lower 250 to 300 m of the volcanic sequence is characterized by intercalated pyroclastic deposits, stratified volcaniclastic sedimentary rocks, and locally coherent lava flow facies.

The top of the metamorphic basement unconformably underlying the Tertiary volcanic sequence has been intercepted in the footwall of the Trinidad vein at an elevation of approximately 600 masl, by two drill holes in the far north of the Trinidad deposit and in the hanging wall with one drill hole at elevation 455 masl. Regionally, the metamorphic basement consists of a quartz-feldspathic orthogneiss of granulite facies (Ortega Gutiérrez, 1981; Mora et al., 1986; and Consejo de Recursos Minerales, 1996). A detailed petrographic analysis of the rocks comprising this unit at the San Jose Mine was carried out in 2022 and indicated an amphibolite facies meta-granite of quartz-feldspathic affinity (Brandt Engineering & Microanalysis, 2022).

7.3.2 Structural geology

The San Jose Mine is located at the southern edge and western side of the long-lived regional Oaxaca fault and graben (Eocene to present day), which was reactivated as a strong range boundary graben fault in the Oligocene–Miocene (Albinson, 2018). The kinematic interpretation for the deposit is linked to a hybrid extensional shear zone defining extensional veins in a conjugate array related to left lateral shearing with right-stepping structures prone to generating dilation zones. The kinematic model defines the precious metal mineralization to be hosted by a steeply east-dipping, north- to north–northwesterly-trending structural corridor.

Silver and gold mineralization in the Trinidad deposit is hosted by steeply-dipping hydrothermal breccias, crackle breccias and quartz–carbonate veins emplaced along north- and northwest-trending, east–northeast-dipping, anastomosing brittle fault structures. These dominantly dip-slip fault structures crosscut the sub-horizontal effusive flow and pyroclastic units, producing cumulative displacements ranging to greater than 300 m between the footwall and the hanging wall of the mineralized structural corridor. Dilational zones occurring at high angles to the dominantly dip-slip displacement vectors of the principal extensional fault systems are favored sites for vein or stockwork vein emplacement.

Within the mineralized structural corridor, fault zones are commonly extensively brecciated and seamed by fault gouge. Locally these zones are strongly silicified and commonly display evidence of repeated brecciation and re-cementing. Northeast-trending post-mineral cross-faulting is present locally with apparent sinistral displacement. In the hanging wall of the mineralized structural corridor, small-scale block faulting is evidenced by the clear displacement of the reddish-brown volcaniclastic marker units.

7.4 Description of mineralized zones

Precious metal mineralization at the San Jose Mine is hosted by hydrothermal breccias, crackle breccias, quartz–carbonate veins and zones of sheeted and stockwork-like quartz–carbonate veins emplaced along steeply-dipping north- and north–northwest-trending fault structures.

The mineralized structural corridor extends for greater than 3 km in a north–south direction (Figure 7.3) and has been divided into two sectors. The Trinidad deposit area is located between 1846500N and 1847800N, and the San Ignacio area is located between 1845000N and 1846500N. The Victoria mineralized zone is located approximately 350 m to the east of the Trinidad deposit.

According to a fluid inclusion and petrographic study conducted by Albinson (2018), four main vein formation stages can be identified in the district:

- **Stage 1.** Early barren vein and black breccia defined by rounded to subangular fragments in a finely-ground matrix of mylonitic character and fault-like fabric. Most of the fragments consist of crystalline and jigsaw quartz with subordinate fragments of adularia, calcite and wall-rock andesite. The rounded character of most of the fragments suggests explosive/diatreme fluidization processes. The extensive brecciation at this stage indicates that a primitive structure was followed by a protracted structural history which brecciated, silicified, and sealed the original precursor vein material and breccias. Fluid inclusion determinations define consistently low temperature quartz <200°C and low salinities <1.0 wt% NaCl.
- **Stage 2.** Consists of multistage, banded quartz–adularia–calcite–sulfides. This stage represents the main mineralizing event in the district and consists of multiple complex sub-stages of adularia, and coarse quartz cemented by later jigsaw quartz with sulfides. The multistage banding is considered a consequence of "crack and seal" processes with coarse crystalline quartz reflecting sluggish deposition of prismatic quartz during sealing periods and jigsaw quartz or finer crystalline quartz reflecting sudden opening, more vigorous fluid flow accompanied or not by boiling, supersaturation of silica and deposition of originally amorphous silica or finer crystalline quartz and metallic load. The fluid inclusion analysis for this stage involves a zonation evolution in which the lowest temperatures and salinities manifest upwards towards the historic near-surface Trinidad and San Ignacio sectors with <250°C and under 2.0 wt% NaCl. The higher salinities are confined to the mid and deep Trinidad orebodies indicating, although not conclusively, possible feeder zones in the deep Trinidad vein north and south sectors.
- **Stage 3.** Comprises barren coarsely crystalline quartz and some adularia as a multistage crack and seal sequence. In some cases, this sequence can host scarce sulfides in earlier bands meaning there is a possible transition between stages 2 and 3. The fluid inclusion analysis for this stage consists of temperatures below 250°C and under 3.0 wt % NaCl.
- **Stage 4.** Consists of barren, mostly white and blocky calcite that occur as dog-tooth crystals in vugs, or as crosscutting veinlets in the earlier vein stages. Stage 4

calcite is consistent at a very low temperature (<200°C) and for the most part does not host measurable fluid inclusions. Salinities are consistently under 1.0 wt% NaCl.

7.4.1 Trinidad deposit

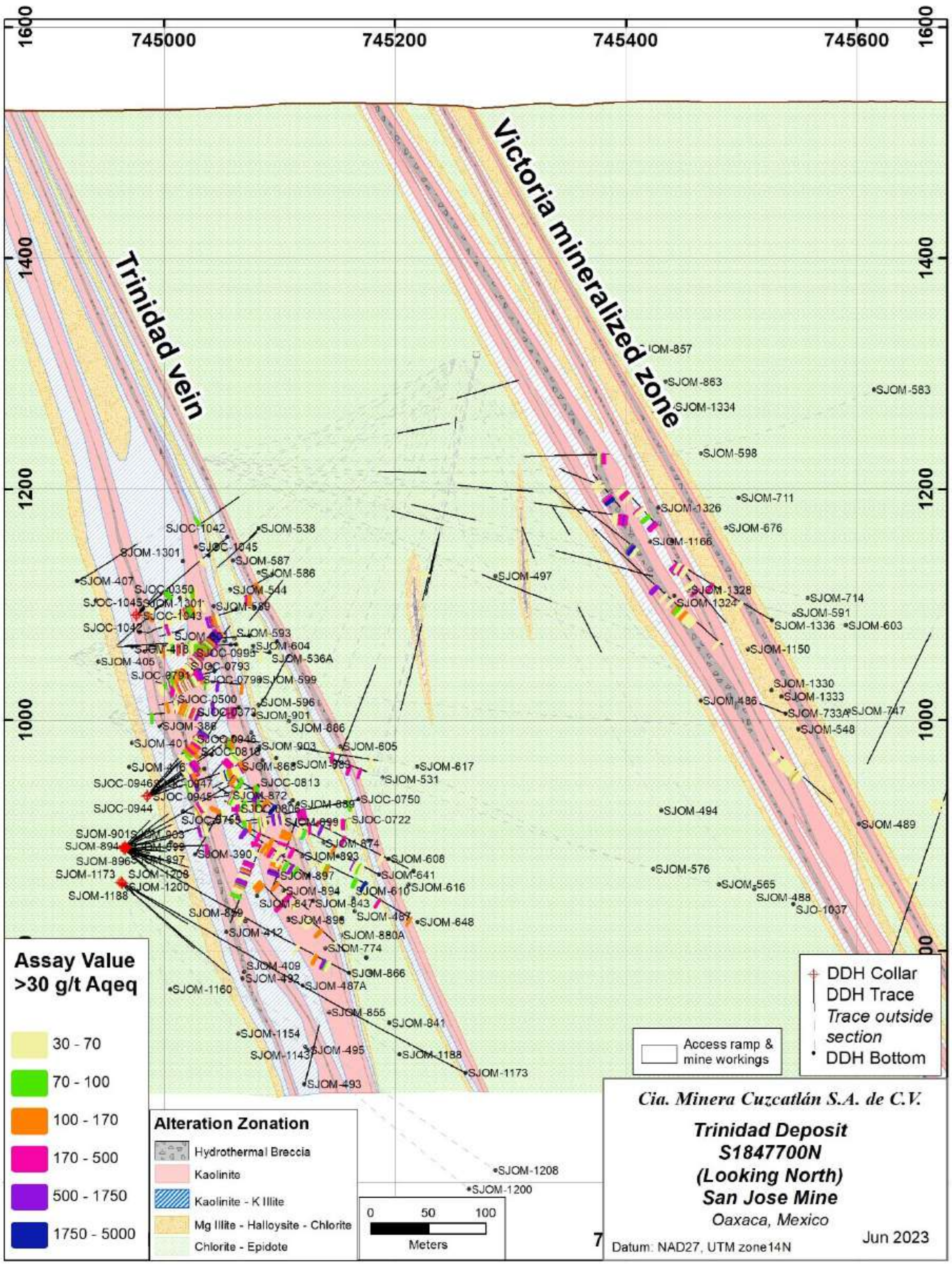
The major mineralized structures or vein systems recognized in the Trinidad deposit area are the Trinidad and Bonanza structures and the Stockwork Zone. In addition to the major mineralized structures, secondary vein systems are present between the Trinidad and Bonanza systems and locally in the hanging wall to the Bonanza system and also in the footwall to the Trinidad system. To-date, drilling has defined the Trinidad and Bonanza mineralized structures over a strike length of approximately 1,300 m and to depths exceeding 600 m from the surface, with average thicknesses of the veins ranging from 1.5 m up to 50 m in some areas of the main Stockwork Zone.

Acanthite and silver-rich electrum are the primary silver- and gold-bearing minerals in the Trinidad Deposit. These minerals, together with pyrite, are discontinuously interlayered with distinctively banded crustiform- and colloform-textured quartz, calcite and locally adularia. Classic ginguro textures are present locally in the mineralized quartz–carbonate veins and hydrothermal breccias, with a close spatial and genetic association between the acanthite and the silver- and gold-bearing electrum. The total sulfide content of the mineralized structures is generally low, ranging from less than one volume percent to five volume percent of the rock in the upper portion of the deposit and grading to somewhat higher sulfide contents at depth with the gradual introduction of sphalerite, galena and chalcopyrite. Sphalerite is typically pale yellow–brown in color, being of the low iron variety.

Principal gangue minerals are quartz and calcite, locally accompanied by iron or iron/magnesium-bearing carbonates. Amethyst and chalcedonic quartz are commonly present as late infillings of the veins and hydrothermal breccias. Pale greenish-colored fluorite is locally present as vein and breccia fillings.

Hydrothermal alteration at the Trinidad deposit is characterized by a well-developed alteration zonation with kaolinite being present in the mineralized zones grading outwards to kaolinite–illite, illite, and illite–smectite–chlorite assemblages. Locally iron-carbonates and iron/magnesium-carbonates are also present as a halo to the mineralized zones. Regionally, the andesitic volcanic and volcanoclastic units are weakly to moderately propylitically altered to epidote–chlorite–smectite assemblages (Figure 7.5).

Figure 7.5 Trinidad and Victoria alteration assemblages and zonation



Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

Trinidad vein system

The Trinidad vein system (Tv) is emplaced in the footwall fault zone of the extensional system hosting the mineralized vein systems at the San Jose Mine. The Trinidad vein system strikes 355 degrees and dips 70 to 80 degrees to the east–northeast. The vein system ranges from less than one meter to locally over 15 m in true width, with higher grade mineralization generally being present in zones with greater widths. Significant portions of the Trinidad structure are characterized by late, black matrix, silicified fault breccias with only trace to weak mineralization. Combined copper, lead and zinc values are generally less than one percent, but locally higher concentrations are present. At approximately 1,100 masl in the central portion of the Trinidad deposit, four drill holes intercepted higher-grade base metal mineralization. Fault gouge seams are commonplace at the footwall and hanging wall of the Trinidad vein system. The Trinidad hanging wall splays and the Trinidad footwall veins are considered to be part of the Trinidad mineralized structure.

Since late 2017, it has been observed that fluorine levels are not consistent throughout the Trinidad vein, with levels varying from 500 ppm in the central and lower portions of the vein system to above 5,000 ppm and even 10,000 ppm in certain areas in the north. High fluorine concentrations are generally, but not always, related to low silver–gold mineralization, and are thought to be related to a late stage of mineralization. Stopes where the highest fluorine levels have been encountered include J, R, S, G1 and the northern part of H1, located between elevations 1000 to 1300 masl.

Bonanza vein system

The Bonanza vein system (Bv) is emplaced in the hanging wall zone of the structural corridor hosting the mineralized vein systems in the Trinidad deposit. The Bonanza vein system generally strikes 350 degrees and dips steeply to sub-vertical to the east. The Paloma vein (Pv) is considered to be part of the Bonanza vein system. Mineralization within the Bonanza vein system is present in the form of shoots plunging shallowly to moderately to the north-northwest, reflecting the dominant dip-slip movement of the controlling fault structures. Combined copper, lead and zinc values for the Bonanza vein range from negligible in the upper portions of the vein system to approximately 0.1 to 0.5 % at depth.

Stockwork Zone

The main Stockwork Zone (Swk) is located between 1846425N to 1847825N and 1,460 masl to 800 masl, being situated in an extensional environment between the principal Bonanza and Trinidad structures. The main Stockwork Zone is present over 1,400 horizontal meters and 660 vertical meters being elliptical in shape, with a variable thickness ranging up to 75 m. Two cross-cutting faults have created a minor displacement of the Stockwork Zone resulting in the mineralization being modeled via southern, central and northern portions.

The primary silver-bearing mineral in the main Stockwork Zone is acanthite, usually in association with traces of pyrite. Secondary minerals accompanying the acanthite are silver-rich electrum, fine-grained galena, sphalerite, chalcopyrite and gangue minerals including hyaline quartz, white quartz, and calcite, together with minor concentrations of adularia and fluorite.

In addition to the main Stockwork Zone, exploration has identified the Stockwork 2 (Swk2), Stockwork 3 (Swk3) and Stockwork 4 (Swk4) zones, located in the north of the Trinidad deposit area between the Trinidad and Bonanza veins. Definition drilling has demonstrated that the Stockwork 2 and Stockwork 3 zones are similar to the main Stockwork Zone and appear to be interconnected.

Fortuna vein system

The Fortuna vein (Fv) strikes north–south and, in contrast to the other major veins in the Trinidad deposit, dips steeply to the west. The Fortuna vein has been extensively mined on levels 2, 3 and 4 of the historic mine workings with vein widths ranging from approximately 2 to 5 m.

Other Trinidad vein systems

A number of other veins have been intersected by exploration and definition drilling, as well as contributed to production. These include the Bonanza Hangingwall (Bhws), Trinidad Footwall (Tfw), Trinidad Footwall 2 (Tfw2), Trinidad Footwall 3 (Tfw3), Trinidad Hanging Wall (Thws4), and Paloma veins.

The Bonanza Hangingwall vein is located in the southern part of the Trinidad deposit, being a splay and closely connected to the Bonanza vein, with a strike of 323 degrees and a dip of 80 degrees. The mineralized structure is generally narrow in nature, from about 1 to 6 m in width and extending for over 400 m along strike between elevations 950 to 1,210 masl. This vein has been mined in conjunction with the Bonanza vein since 2015.

The Trinidad Footwall vein is located in the footwall of the central–southern portion of the Trinidad vein, being generally connected and no more than 20 m west of the main structure. The vein has a strike of 355 degrees and a dip of 85 degrees to the east and can reach 10 m in thickness. The vein is approximately 200 m in strike length and extends for approximately 120 m down dip between the 1,400 and 1,280 masl. This vein has been mined in conjunction with the Trinidad vein since 2016.

The Trinidad FW2 vein is located in the northern part of the Trinidad deposit, being a splay of the Trinidad vein at depth, striking 337 degrees and dipping 80 degrees. The mineralized structure is narrow, being generally 1 to 2 m in width with a strike length of 400 m and extends for almost 500 m down dip between elevations 1,480 to 1,000 masl.

The Trinidad FW3 vein is also located in the northern part of the Trinidad deposit, being a splay of the Trinidad vein at depth with a strike of 332 degrees and dip of 82 degrees. The structure is narrow, ranging from approximately 1 to 3 m in width, extending for 430 m along strike and is present between 1,480 to 1,000 masl.

The Trinidad Hangingwall vein is located in the central part of the Trinidad deposit, being a splay of the Trinidad vein at upper levels and having a strike of 345 degrees and dip of 80 degrees. The mineralized structure varies between 1 and 6 m in width and extends for 160 m along strike between elevations 1,380 to 1,200 masl.

7.4.2 Victoria mineralized zone

The Victoria mineralized zone is located approximately 350 m east of the Trinidad vein and north of the current underground operations of the San Jose Mine. It is structurally related to the same extensional regime that dominates the Trinidad deposit with a similar style of mineralization, corresponding to a low sulfidation epithermal deposit formed in a shallow crustal environment with a relatively low temperature resulting in the precipitation of silver and gold mineralization. Formation temperatures are believed to be on average less than 250°C with salinities less than 1.8 %wt NaCl. Mineralization is hosted in breccias and quartz–carbonate veinlets with a general northwesterly direction and an approximate dip of 70 degrees to the northeast. The dominant alteration within the structural system is argillic, grading to propylitic towards the periphery. The hosting lithology is related to effusive volcanoclastic facies and flows of andesitic/dacitic rocks possibly of Paleogene age.

The Victoria mineralized zone was discovered in early 2015 during a drilling campaign directed towards the north of the Trinidad deposit to investigate potential mineralization at the 1,300 m elevation. Two drill holes intersected silver equivalent values of interest related to the Victoria main structure. In the second half of 2015, an initial program of exploration test drilling was conducted that targeted the Victoria mineralized zone, consisting of six drill holes.

In 2016, a second program of drilling was conducted to further delineate the extent of mineralization of the Victoria mineralized zone and, based on the positive results, additional exploration drilling has been conducted since 2017 to support Mineral Resource estimation.

As of the effective date of this Report, the Victoria mineralized zone has been defined over a strike length of 1,700 m and is known to dip over a vertical depth of approximately 550 m between the elevations of 1,350 masl to 800 masl. Vein thickness ranges from 0.1 m up to 13.5m.

Victoria main structure

The Victoria main structure (Vmz) is defined by a series of veins and veinlets, being structurally controlled over a broad zone of approximately 100 m. The mineralized part of the system is comprised primarily of quartz-adularia-calcite-sulfides with low to medium concentrations of base metals being predominately sphalerite and fine-grained chalcopyrite. There is a strong correlation between gold–silver mineralization and the presence of calcite, a similar relationship that was observed in the upper levels of the Trinidad vein. Three mineralization stages have been identified in the Victoria main structure.

- Stage 1 is characterized by narrow black breccias perpendicular to the mineralized zone and are thought to act as the principal structural controls.
- Stage 2 is related to high-temperature calcite (260 °C to 280 °C), the presence of sulfides in the upper levels of the mineralized zone and is associated with precious metals. Highly carbonatized wall rock suggests a peripheral style of mineralization.
- Stage 3 is related to the presence of barren multistage crack and seal quartz and is poorly understood. Stage 4 mineralization, present in the Trinidad deposit, is not observed in the Vmz.

The Vmz has been intersected the most out of the identified structures of Victoria mineralized zone, with exploration drill programs carried out since 2019 establishing the controls on mineralization and further defining the vertical and lateral extent of the silver–gold mineralization continuity.

Victoria hangingwall 1, 2 and 3 veins

The Victoria hangingwall 1, 2, and 3 veins (Vhw1, Vhw2, and Vhwz3) are sub-parallel tensional splays consisting of veins/veinlets related to a graben-like downthrown block to the east of the Victoria main structure. The dominant alteration style is propylitic, with the mineralization style being the same as that observed in the Victoria main structure.

Geologic sections

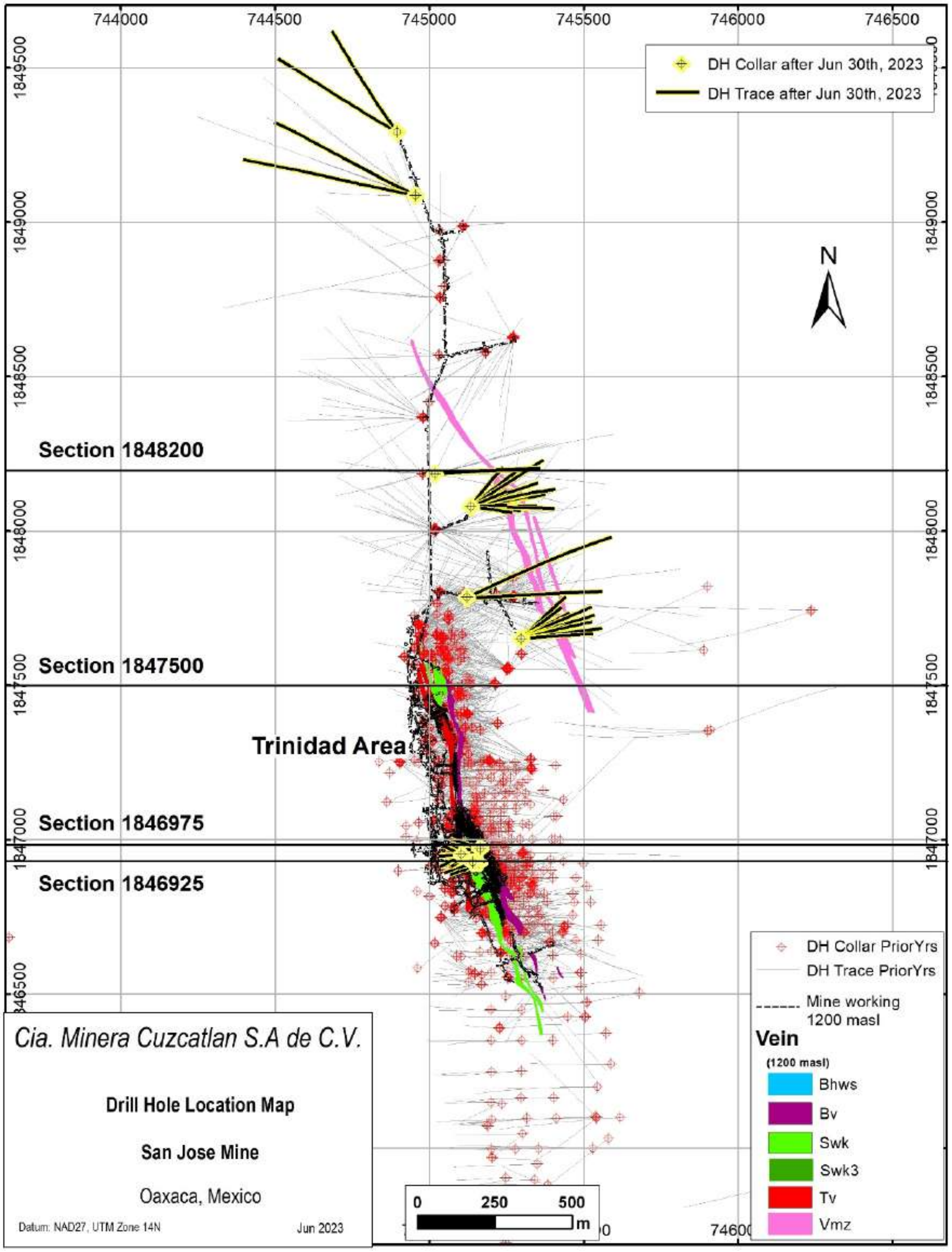
A representative series of sections displaying the geological interpretation of the Trinidad deposit are presented in Figures 7.7 to 7.9 and of the Victoria mineralized zone in Figure 7.10. A plan view showing the location of the sections is provided in Figure 7.6. Silver equivalent (Ag Eq) values shown in the cross sections have been estimated at a gold to silver ratio of 76, based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au.

Longitudinal isograde sections for the Trinidad, Bonanza, Stockwork, and Victoria main structure are presented in Figures 7.11 to 7.14, respectively.

7.5 Comment on Section 7

In the opinion of the QPs, knowledge of the Trinidad deposit and Victoria mineralized zone, the settings, lithologies, and structural and alteration controls on mineralization is sufficient to support Mineral Resource and Mineral Reserve estimation.

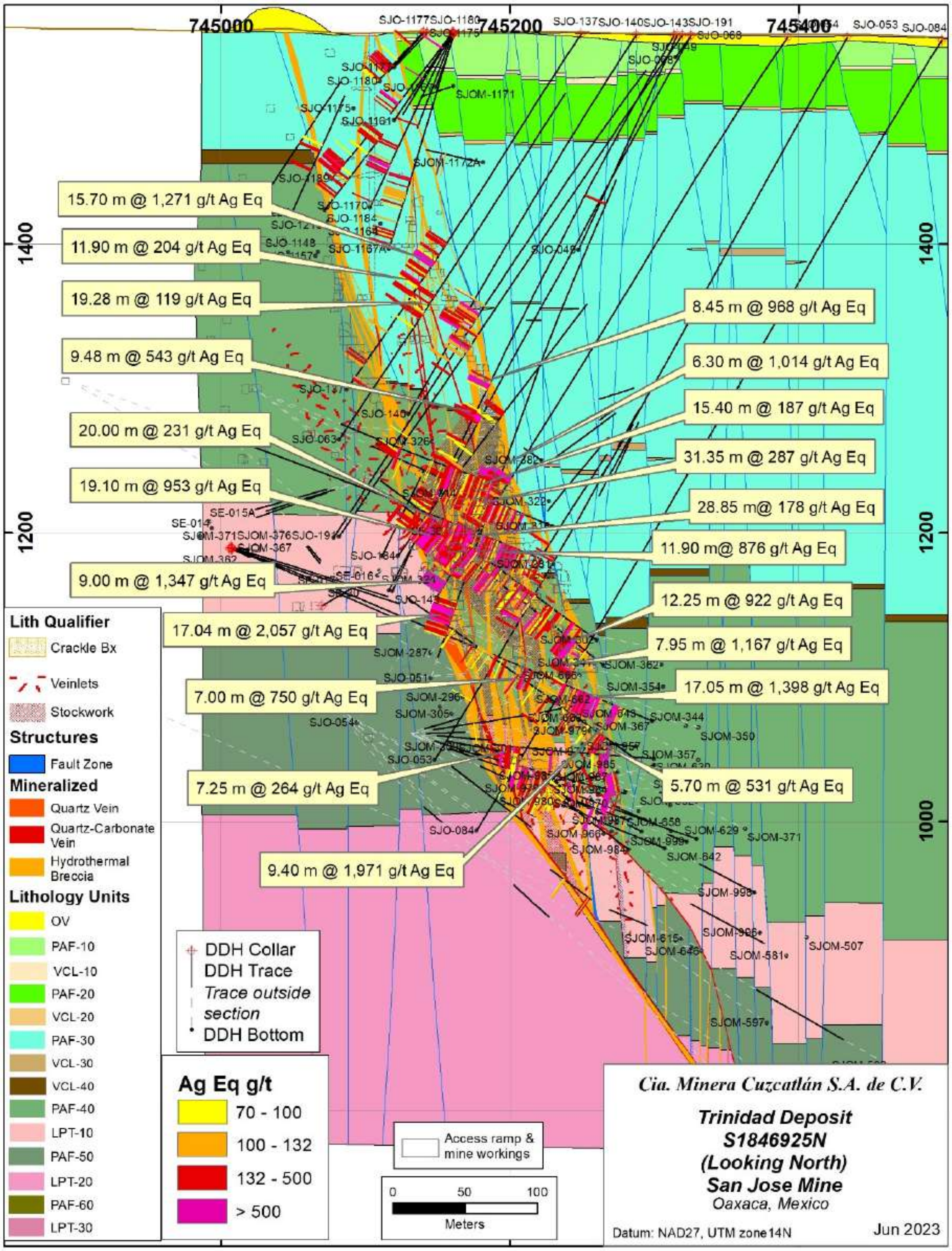
Figure 7.6 Plan map showing location of resource drilling and orientation of sections



Footnote on veins: Bhws = Bonanza hangingwall; Bv = Bonanza; Swk = Stockwork; Swk3 = Stockwork 3; Tv = Trinidad; Vmz = Victoria mineralized vein

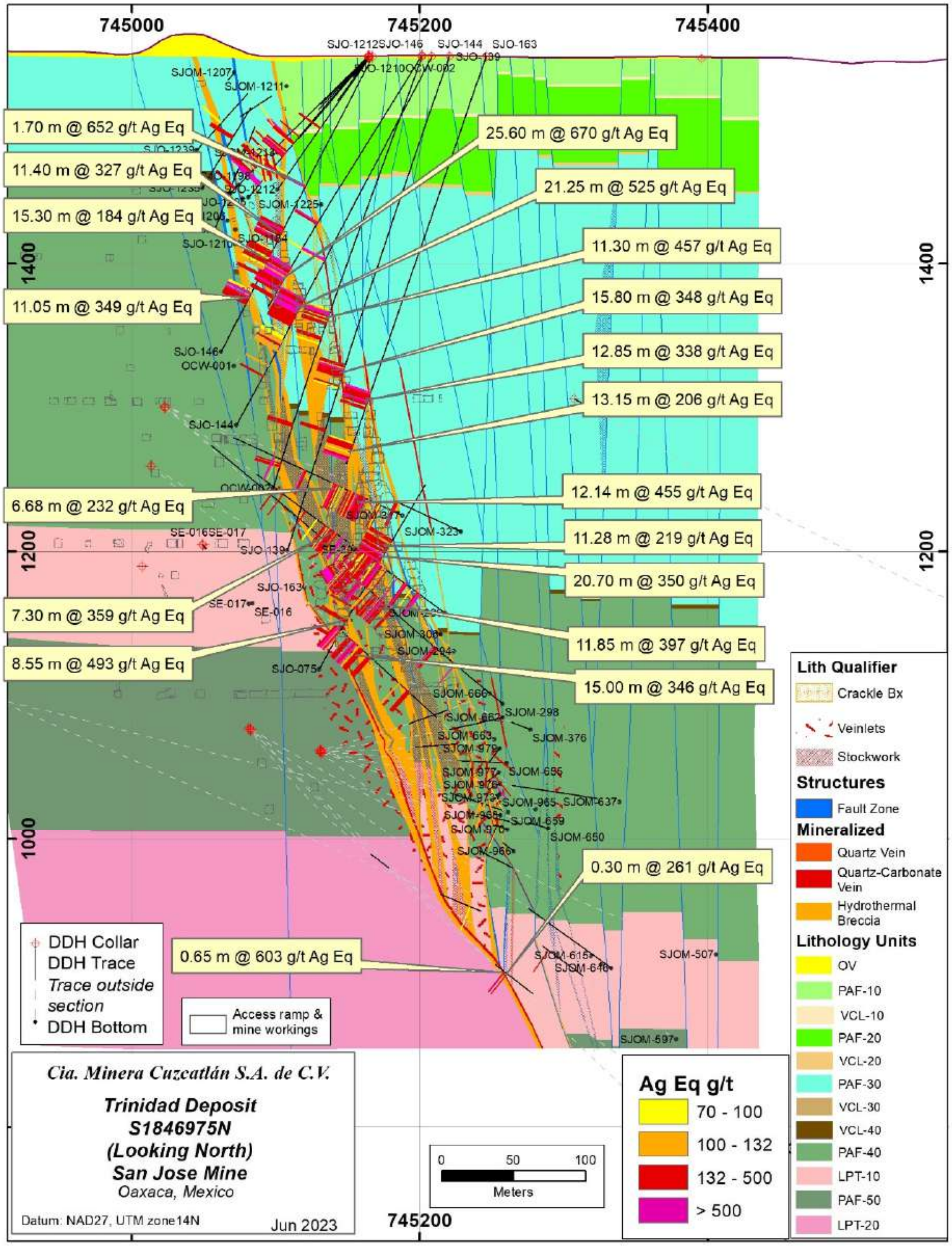
Data cut-off date for Mineral Resource and Mineral Reserve estimation is June 30, 2023

Figure 7.7 Section displaying lithology along 1846925N



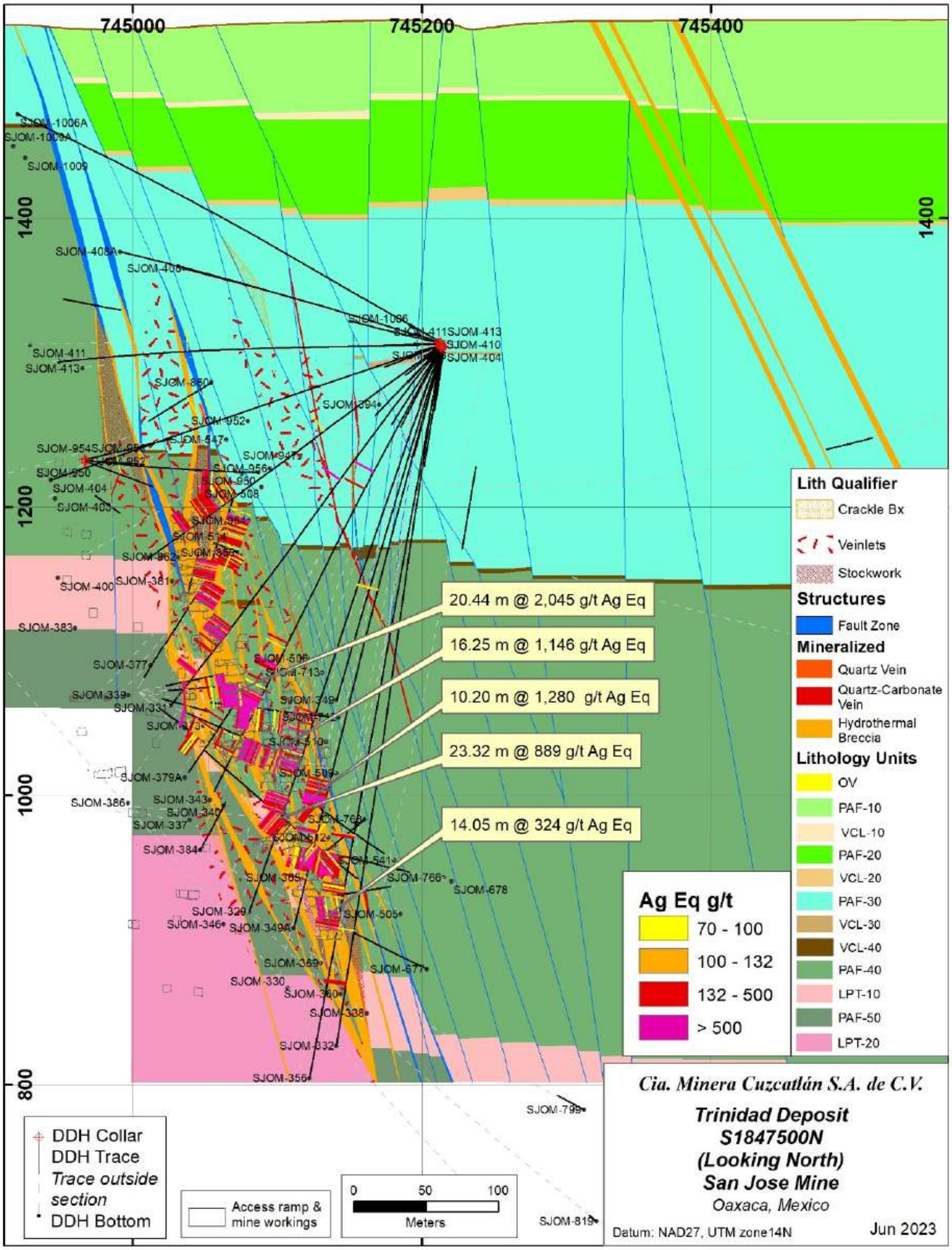
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au
Lithology units detailed in stratigraphic column Figure 7.4

Figure 7.8 Section displaying lithology along 1846975N



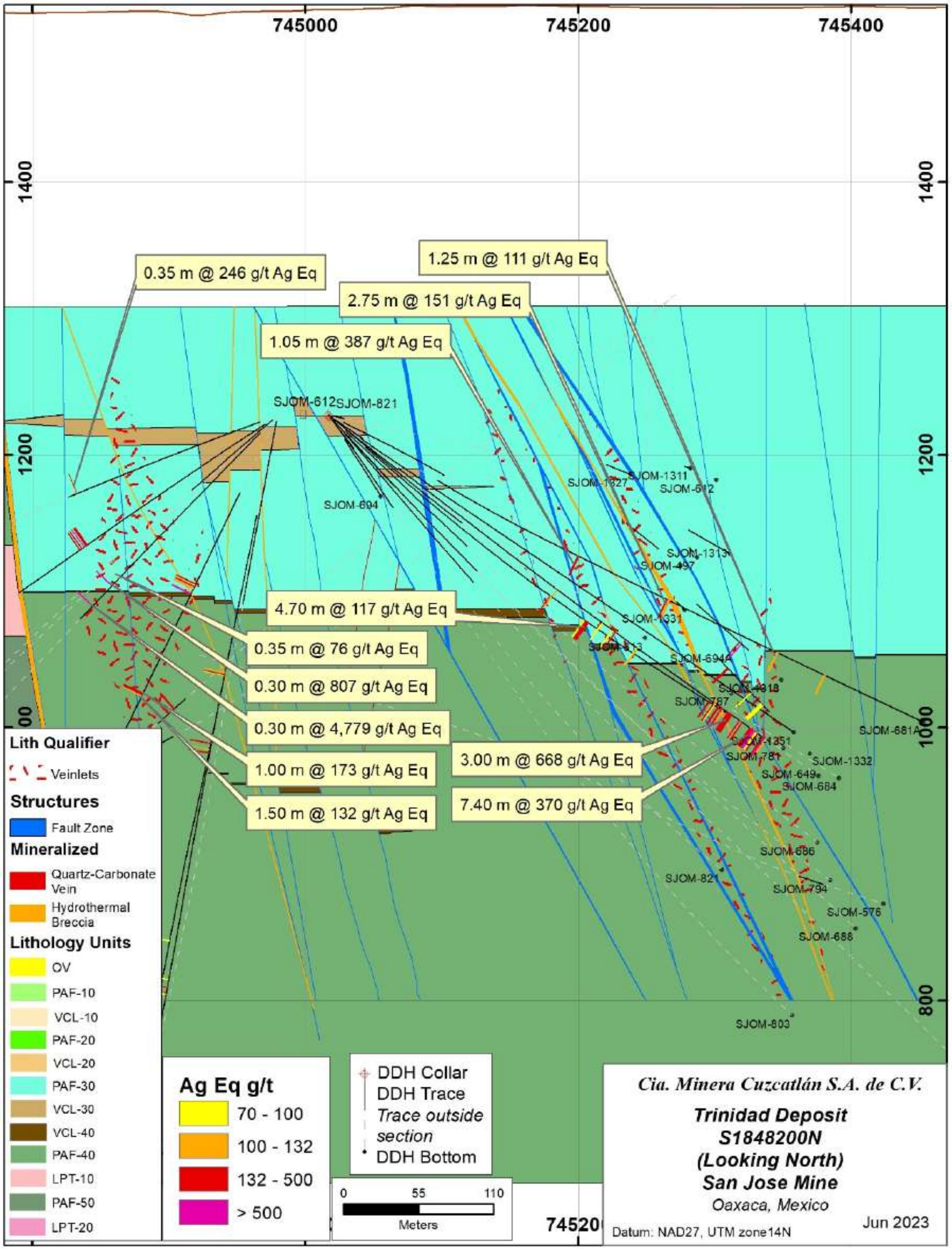
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au
Lithology units detailed in stratigraphic column Figure 7.4

Figure 7.9 Section displaying lithology along 1847500N



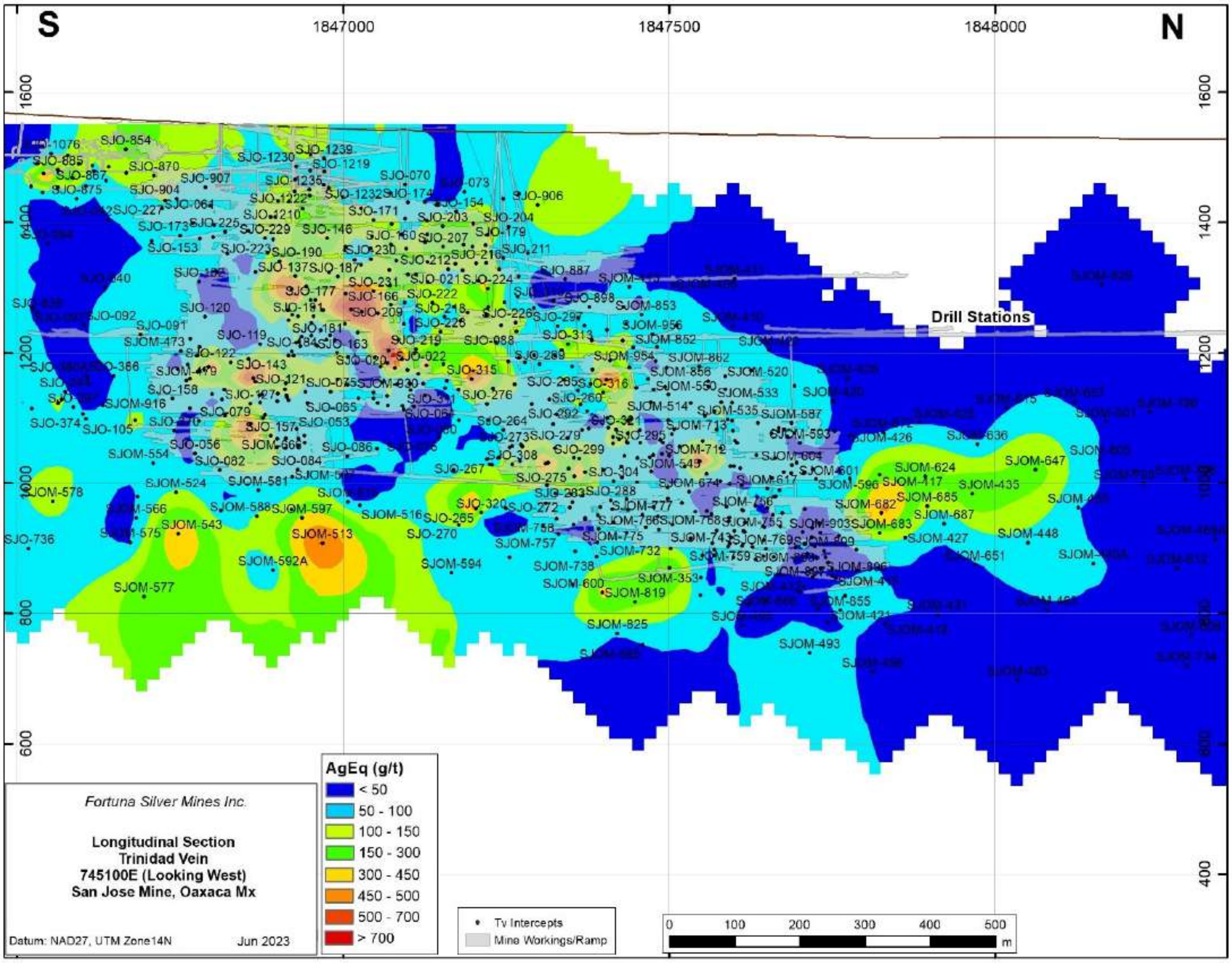
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au
Lithology units detailed in stratigraphic column Figure 7.4

Figure 7.10 Section displaying lithology along 1848200N



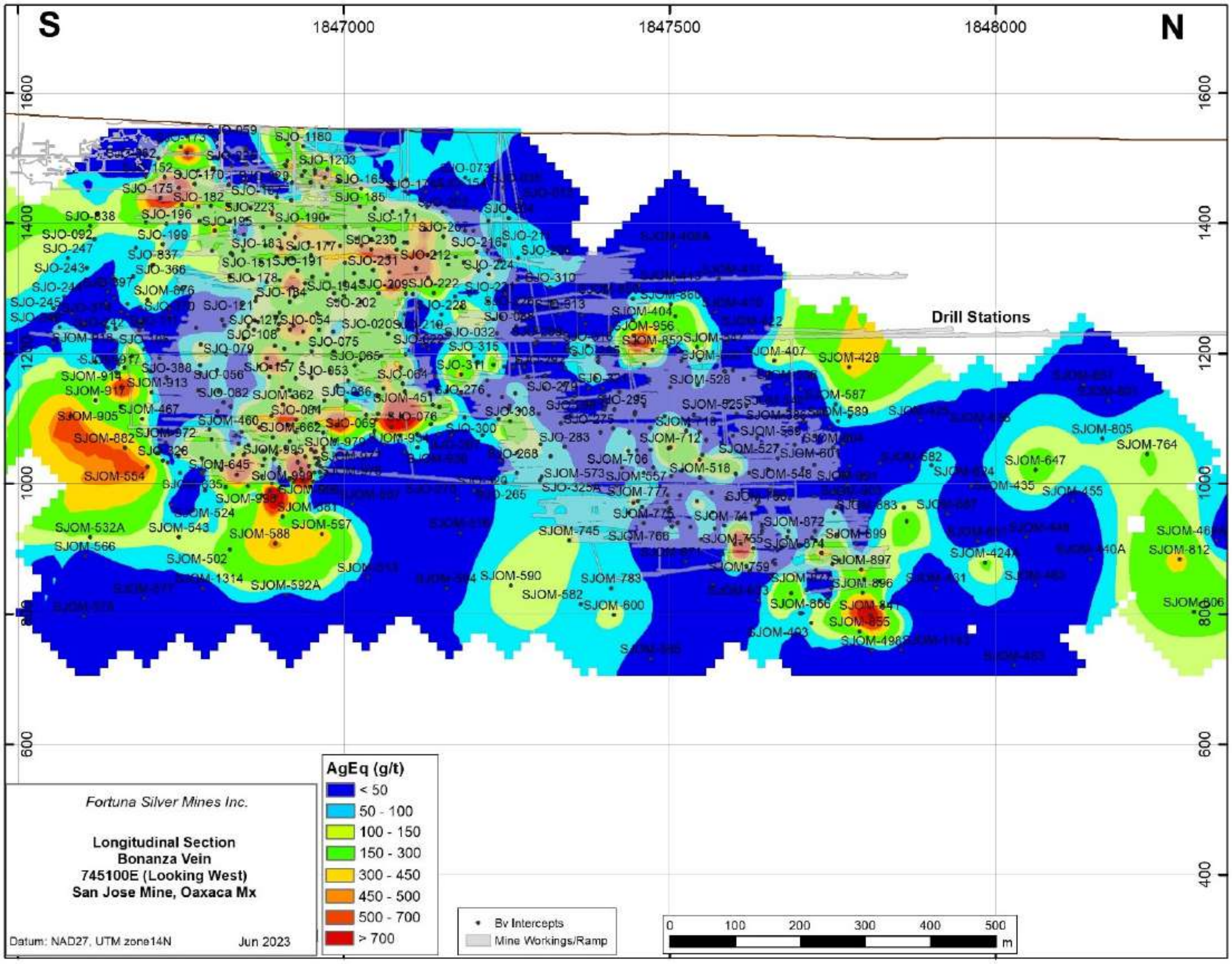
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au
Lithology units detailed in stratigraphic column Figure 7.4

Figure 7.11 Longitudinal section of Trinidad vein displaying Ag Eq isogrades



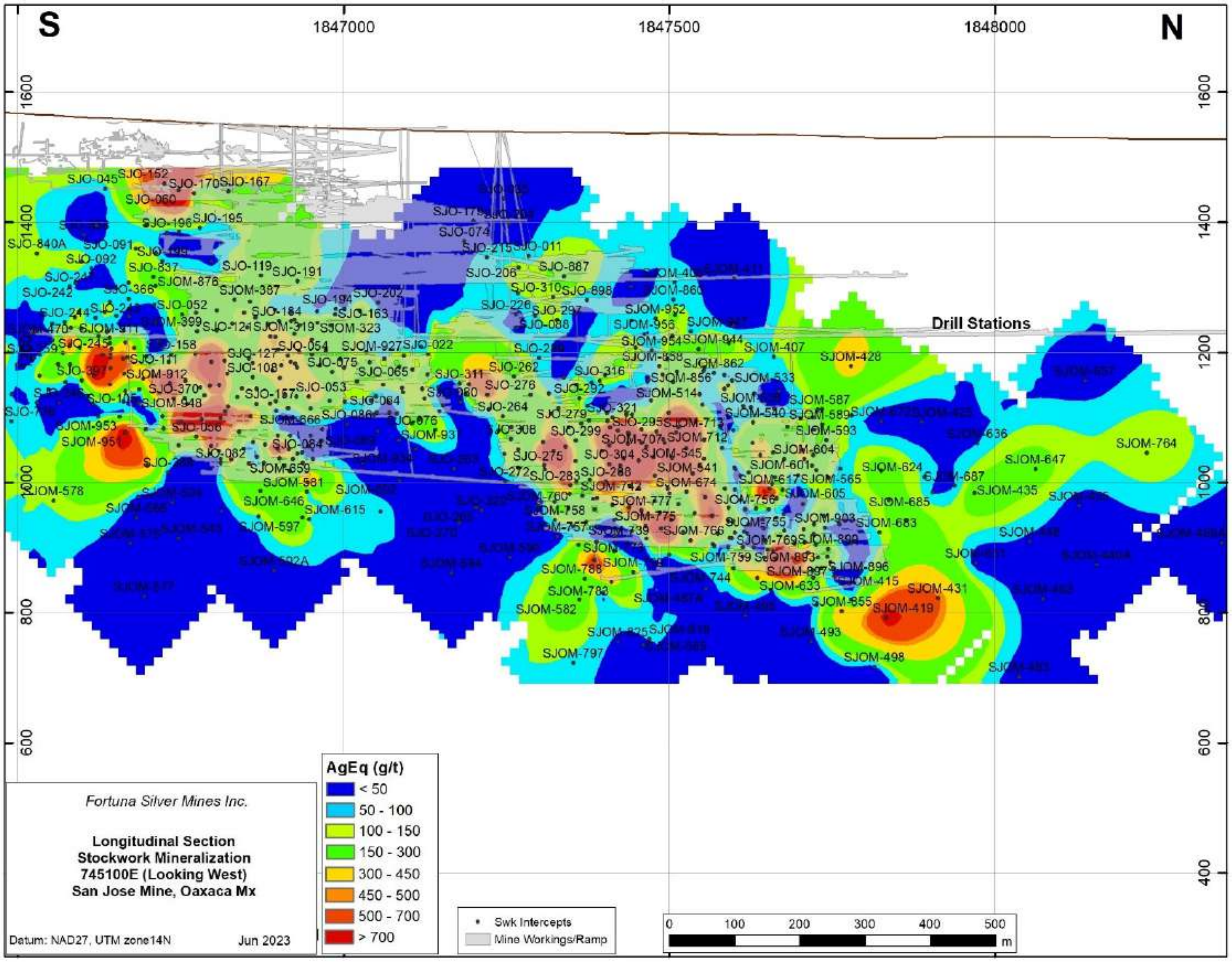
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

Figure 7.12 Longitudinal section of Bonanza vein displaying Ag Eq isogrades



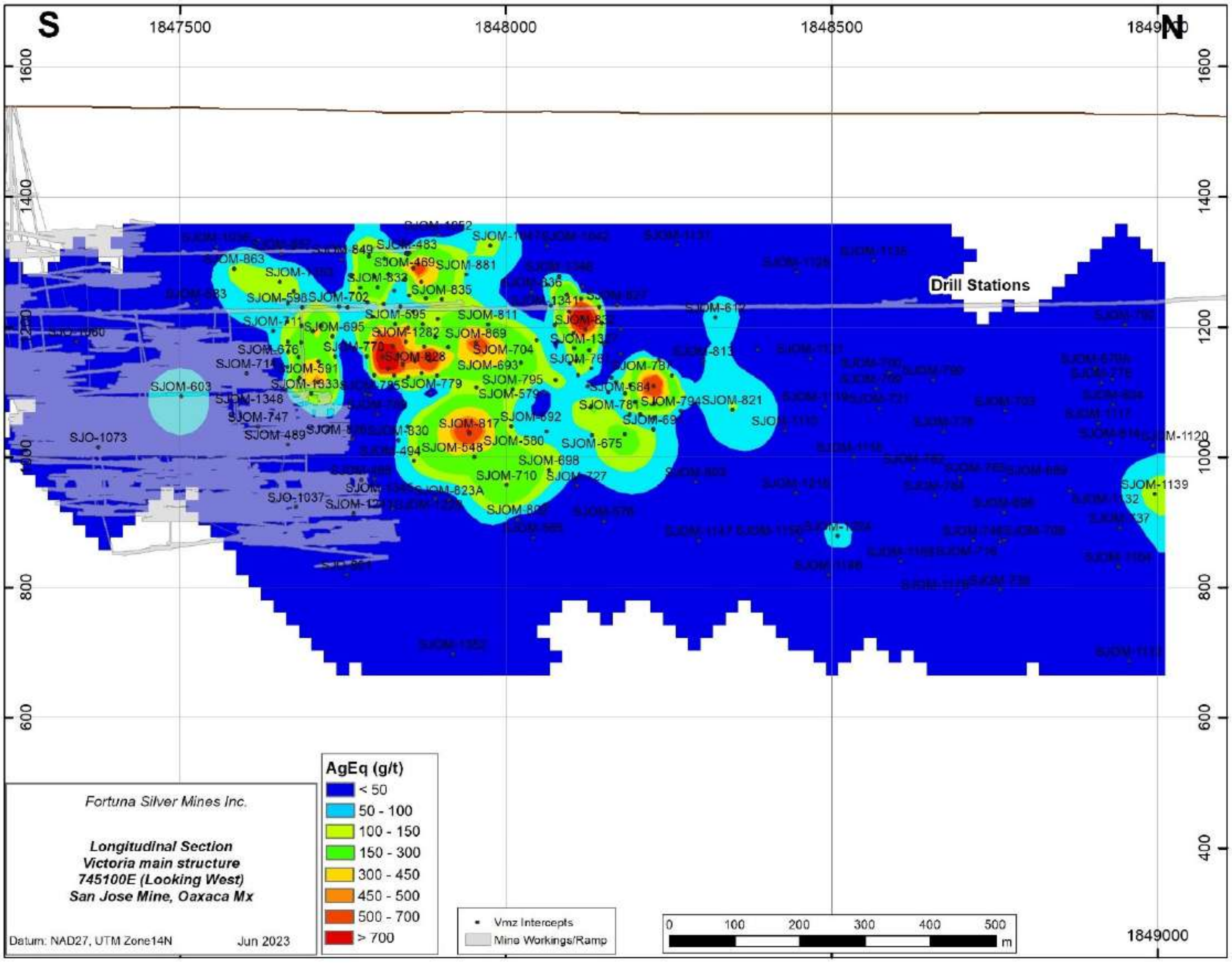
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

Figure 7.13 Longitudinal section of Stockwork mineralization Zones displaying Ag Eq isogrades



Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

Figure 7.14 Longitudinal section of Victoria main structure displaying Ag Eq isogrades



Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

8 Deposit Types

8.1 Mineral deposit type

The silver-gold deposits at the San Jose Mine are typical of low-sulfidation epithermal deposits according to the classification of Corbett (2002), having formed in a relatively low temperature, shallow crustal environment (Figure 8.1).

Figure 8.1 Classification of epithermal and base metal deposits

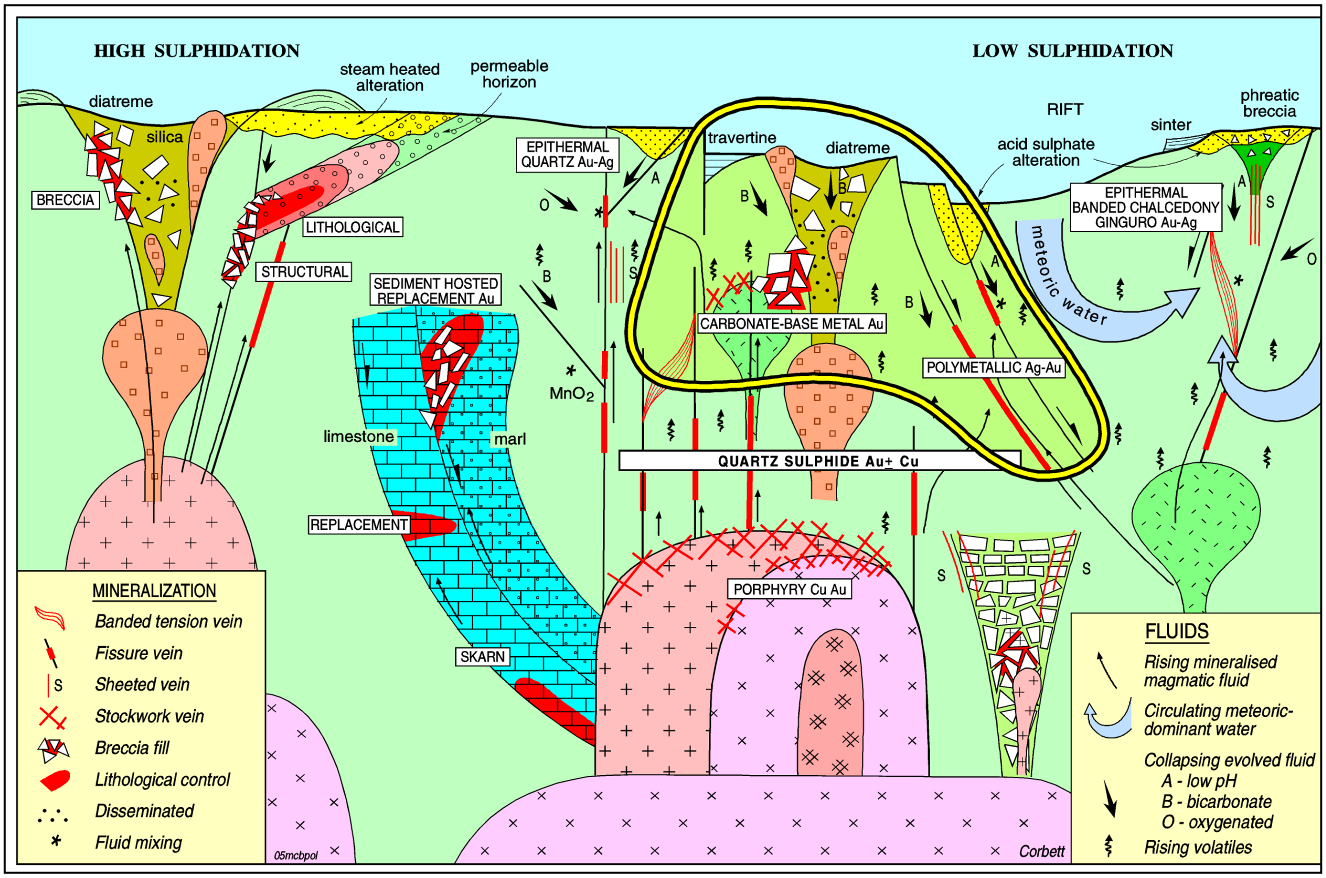


Figure prepared by Cuzcatlan, 2023, from Corbett (2002)

The deposits are characterized by structurally-controlled hydrothermal breccias, crackle breccias and quartz–carbonate veins hosting silver–gold mineralization plus trace to minor base metal mineralization. The Trinidad deposit is similar to the Fresnillo silver deposit in Zacatecas, Mexico and to precious metal deposits located in the Altiplano Province of Southern Peru (Caylloma, Arcata, Pallancata deposits). Geologic characteristics of the Trinidad deposit and Victoria structure are summarized in Table 8.1.

Table 8.1 Trinidad deposit and Victoria mineralized zone characteristics

Characteristic	Description
Deposit Type	Rift low sulfidation adularia-sericite epithermal deposit
Regional Tectonic Setting	Extensional continental margin-arc terrain
Local Tectonic Setting	Extensional fault system with plus 300 m normal displacement
Host Rocks	Andesitic to dacitic subaerial to subaqueous lava flows
Host Rock Age	Paleogene (?)
Deposit Style	Quartz-carbonate veins, hydrothermal breccias, crackle breccias, sheeted and stockworked vein zones
Regional Alteration	Regional propylitic alteration (chlorite > epidote)
Deposit-scale Alteration	Well crystallized kaolinite in mineralized zones grading outward to kaolinite-illite, illite and illite-smectite-chlorite assemblages; Fe- and Fe/Mg carbonates are present locally haloing the mineralization
Main Metals	Ag, Au
Minor Metals	Zn, Pb, Cu, Sb
Main Sulfide Species	Pyrite, Acanthite (Argentite), Low Fe Sphalerite, Galena, Chalcopyrite
Silver-bearing Species	Acanthite (Argentite), silver-rich electrum
Gold-bearing Species	Silver-rich Electrum
Ag/Au Ratio	Ranges from approximately 50 to 200 Ag to 1 Au
Gangue Minerals	Quartz, Calcite, Fe- and Fe/Mg carbonates, Mn Silicates and Carbonates
Deposit Type Examples	Fresnillo, Mx; Altiplano Province of Southern Peru (Caylloma, Arcata, Pallancata)

8.2 Exploration model

The San Jose Mine is located within the Del Sur crustal block of southern Mexico (Dickinson and Lawton, 2001). Oligocene to Pliocene-age andesitic to dacitic volcanic rocks disconformably overlie Mesoproterozoic-age basement rocks comprised of orthogneisses and paragneisses that were stranded in their present positions when the South America continent pulled away from the North America continent during the Middle Mesozoic breakup of Pangea. Epithermal-style alteration and mineralization are widespread within the Middle to Late Tertiary volcanic package exposed throughout the central portion of the state of Oaxaca. Host structures to the mineralization are normal faults and subsidiary structural features common to extension-related pull-apart basins (Corbett, 2006) as illustrated in Figure 8.2.

Figure 8.2 Exploration model: extension-related pull-apart basins

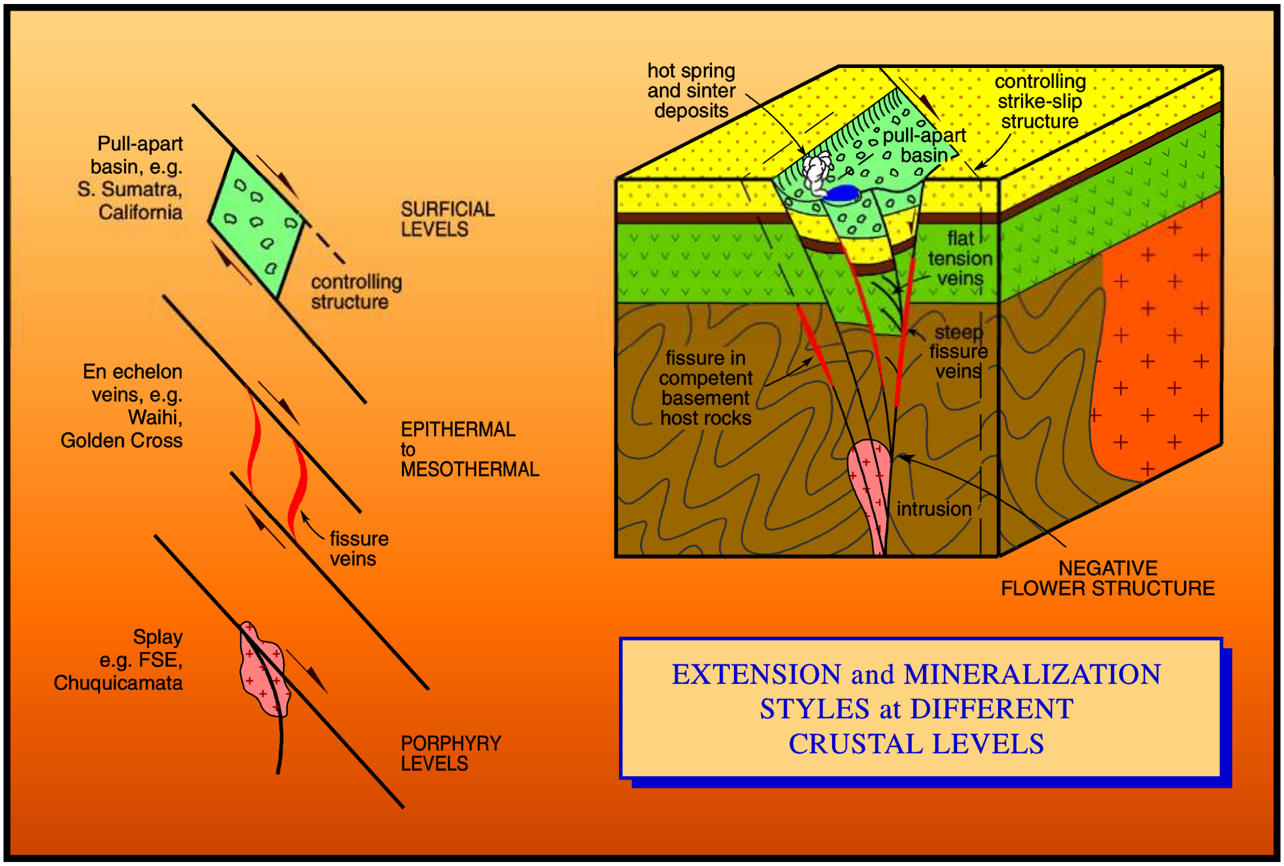


Figure prepared by Cuzcatlan, 2023, from Corbett (2006)

8.3 Comment on Section 8

The San Jose Mine is considered an example of a low sulfidation epithermal-style deposit, based on the following:

- Low sulfidation adularia-sericite epithermal environment.
- Mineralization characterized by the presence of quartz-carbonate veins, hydrothermal breccias, crackle breccias, sheeted and stockworked vein zones.
- Alteration characterized by the presence of kaolinite in mineralized zones grading outward to kaolinite–illite, illite and illite–smectite–chlorite assemblages.
- Gold–silver mineralization present in the form of acanthite (argentite) and silver-rich electrum.
- Sulfides present in the form of pyrite, acanthite (argentite), low Fe sphalerite, galena and chalcopyrite.

Understanding of the geological setting of and model concept for the San Jose system is adequate to provide guidance for mining and ongoing exploration activities.

9 Exploration

The Project area has a long history of exploitation although formal exploration programs were not conducted in the area until 1999. Several exploration programs have since been conducted by Pan American Silver, Continuum, and most recently Fortuna/Cuzcatlan.

9.1 Exploration conducted by Pan American Silver

In 1999, the San Jose Project was optioned by Pan American Silver (Pan American). Surface and underground mapping and sampling were carried out by Pan American and five diamond drill holes totaling 1,093.5 m were completed in the San Jose system.

9.2 Exploration conducted by Continuum

In March 2004, Continuum completed an option agreement with MIOXSA covering 19 concessions in the San Jose and San Jeronimo Taviche areas. Continuum completed detailed mapping and chip-channel sampling of the surface and of the existing underground workings in the Trinidad area followed by the completion of 15 surface core drill holes totaling 4,876.55 m.

9.3 Exploration conducted by Cuzcatlan

Since 2007, the principal exploration activities conducted include the following:

- Geophysics.
- Fluid inclusion and petrographic studies.
- Terraspec analysis.
- Geological mapping.
- Drilling (described in Section 10).
- Metallurgical testwork (described in Section 13).
- Advanced spaceborne thermal emission and reflection radiometer (ASTER) study.

9.3.1 Geophysics

During the first half of 2017, Cuzcatlan signed an agreement with the Servicio Geológico Mexicano to carry out a high resolution airborne magnetometric and gamma-ray spectrometric study to define magnetic corridors that could represent alteration paths for mineral exploration. The survey covered an area of 132 km² consisting of 80 east–west-oriented survey lines distributed 200 m apart, and perpendicular to the general trend of the Trinidad system; and five north–south control lines, taken 2 km apart. Data were used in the Leapfrog 3D modeller software to identify generative exploration targets.

A detailed magnetometric study was carried out from 2019 to 2020 in the Taviche district to detect and determine structural lineaments using a drone and an EM DRONEmag ™, ultra light-weight potassium magnetometer and a magnetometer GSM-19. A survey over 900 km was performed along cumulate lines oriented NE45°SW with a separation of 50 m adding orthogonal secondary lines. The information has been used to improve the structural model of the district to identify prospects that may warrant drilling.

9.3.2 Fluid inclusion and petrographic studies

A petrographic and microprobe study was carried out by Microscopía Electrónica y Aplicaciones en el Perú S.A.C. (MyAP), during 2014. The study involved the petro-mineragraphic micro-analysis of 32 samples from the Trinidad deposit to determine textural relationships between mineral assemblages. The analysis defined low to intermediate sulfidation mineralization of quartz–adularia–carbonates (dolomite–calcite). The economic mineralization is related to acanthite–electrum–sphalerite–pyrite–galena–chalcopyrite and in minor proportions, native silver-argentite–polybasite–jalpaite. The gangue minerals are mostly quartz, carbonates, adularia and traces of fluorite and zeolites.

In the first half of 2018, Cuzcatlan hired an external consultant to perform a combined fluid inclusion and petrographic study using optical microscopy on the mineralization and gangue mineralogy and textures. A second study aim was a preliminary reconstruction of vein stratigraphy and of paleo-water tables during vein formation. The program involved the analysis of 69 samples and reinterpretation of 150 previously taken samples by fluid inclusion analysis. The final conclusions to the report (Albinson, 2018) identified four mineralization stages which reflect a protracted hydrothermal history of the veins in the district (refer to summary in Section 7.4.1). The second paragenetic stage represents the main mineralizing event responsible for high-grade mineralization in the vein systems. The periodic influx of high and low temperature fluids in stage 2 with high salinities is closely associated with base metal and precious metal mineralization. The conclusions are considered important in helping to identify potential exploration areas within the San Jose Project.

9.3.3 Terraspec analysis

The Terraspec Halo™ equipment is a near infra-red (NIR) and short wave infra-red (SWIR) frequency spectrometer operating between 300 and 2,400 nm and allows the identification of alteration minerals (e.g., clay minerals, white micas, chlorites and carbonates) in real time.

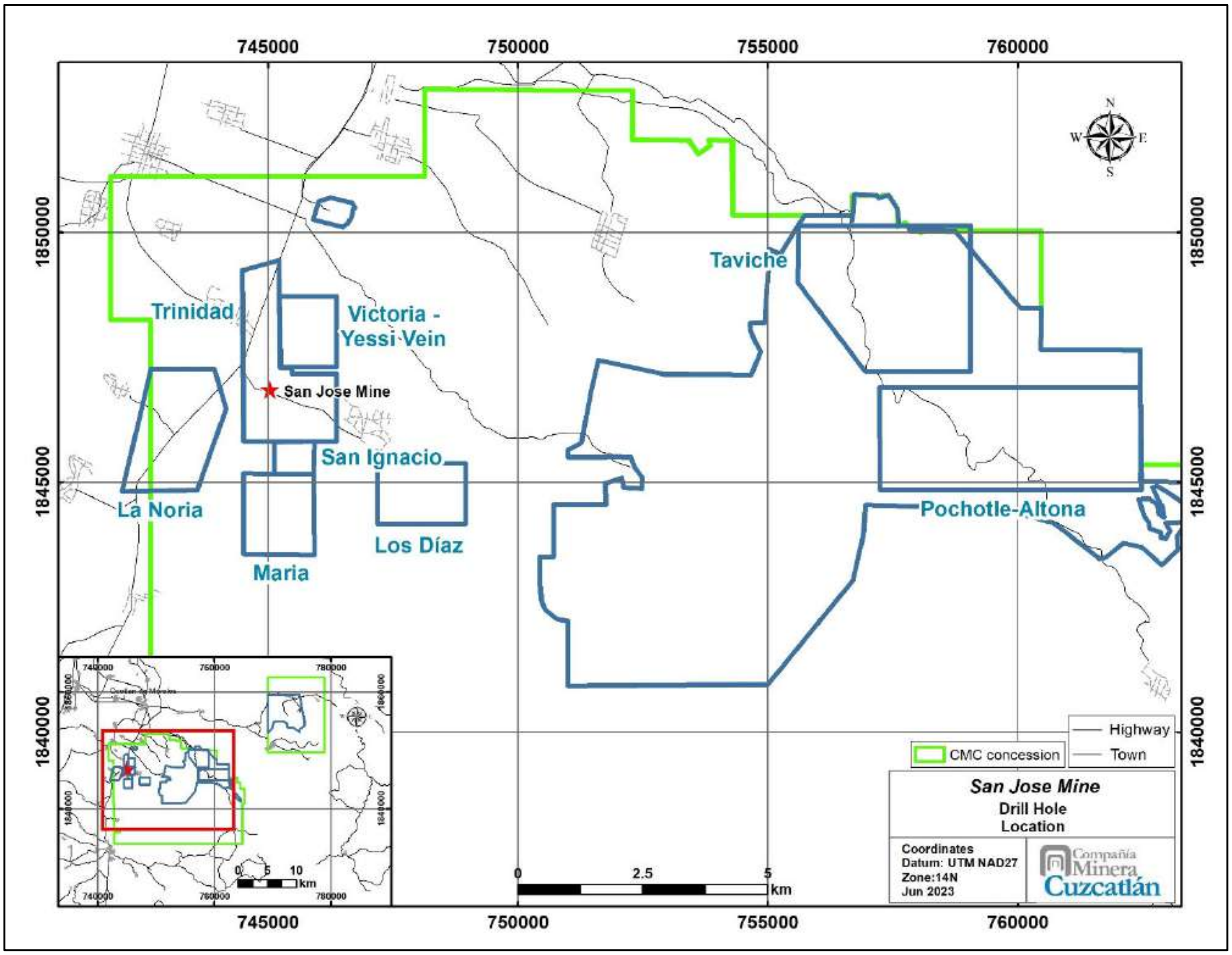
The procedure for alteration analysis of drill core is being carried out in two phases. Firstly, new core that is generated during ongoing drilling campaigns is analyzed, after being logged and marked for geochemical sampling. The second phase involves the analysis of old core obtained from previous drilling campaigns prior to the acquisition of the equipment. In both cases the process involves taking a reading from the core every 5 m using a calibrated hand-held device, or when an interval has been marked for geochemical sampling. Once all the readings for a hole have been obtained, the information is loaded into the database and spectral log reports are generated for each hole.

Terraspec analysis to measure alteration minerals in the San Jose deposit began in August 2014 and became part of the systematic logging of all exploration drill holes. Holes drilled prior to this date have been analyzed for alteration at a rate of 8,000 meters per year. As at the effective date of this Report, alteration analysis has been completed on 57 % of the total holes drilled.

9.3.4 Geological mapping

Surface mapping, at a scale ranging from 1:1,000 to 1:5,000, has identified numerous satellite systems within the Project area that at surface display potential for mineralization. The location of the various exploration programs conducted by Cuzcatlan is displayed in Figure 9.1 and includes mapping of the San Ignacio, Taviche (including El Rancho, El Pochotle, La Altona), La Noria, Maria, Los Diaz, and Victoria areas.

Figure 9.1 Map showing location of exploration programs conducted by Cuzcatlan at the San Jose Mine



San Ignacio

The San Ignacio area is located 0.8 km south of the San Jose Mine and is characterized by the presence of historical mining infrastructure connected to the north by old shallow workings of the El Higo and La Santisima Trinidad mines, which represent the former San Jose Mine at elevations 1,500 masl to 1,600 masl. Previous geological studies have been conducted in the San Ignacio area, as detailed in a technical paper published by the Consejo de Recursos Minerales (1982). Underground mapping and sampling of historic mining areas of the San Ignacio area has not been possible due to accessibility issues.

During 2009, Cuzcatlan conducted a detailed surface mapping and sampling campaign in an area covering 800 m by 150 m, resulting in the detailed description of the lithostratigraphic effusive units of the San Jose deposit (Section 7.3.1). The work also provided definition of the structural controls of the Trinidad system to the south of the San Jose Mine as a complex family of predominantly north–south-oriented subparallel veins, a northwest-trending secondary vein system, and a northeast-trending post-mineralized fault system. The sampling program returned irregular gold and silver anomalies throughout the system.

The fluid inclusion analysis conducted by Albinson (2018) in conjunction with the geological mapping resulted in the conclusion that the San Ignacio veins located near surface represent the geological level corresponding to possible roots or distal positions in the epithermal system, having precipitated in temperatures below 250°C and low salinities (<3 wt% NaCl equivalent). An increase in the base metal content of the veins was observed.

Taviche

The Taviche area is located 13 km northeast of the San Jose Mine and is the oldest historic mining district in the vicinity of the current operations. Mining activity conducted during the 19th and 20th centuries exploited high-grade, shallow mineralization from mines such as San Juan and Conejo Blanco.

Despite the fact that several local geological-mining reports were completed during the 20th century, no systematic exploration campaigns were recorded in the area until 2011 when exploration efforts were conducted in the El Rancho area with a mapping at a scale of 1:2,000 and sampling program that covered 238 ha. This program allowed Cuzcatlan to justify an exploration drill program that was completed in the last half of 2011.

During 2012, a detailed mapping (1:1,000 scale) and sampling campaign covering 1,561 ha was conducted by Cuzcatlan defining a northwest–southeast-trending structural corridor named El Pastal-Baldomero, which extended over 3 km. The programs identified the El Pastal, Baldomero, La Altona, El Pochotle, La Esperanza and La Republica veins. From this field work a drilling program was completed to assess the La Altona and El Pochotle veins in the second half of 2012.

Since 2022 a systematic mapping process has been completed following recommendations derived from geophysical assessment, structural and lithological interpretations. The San Juan, El Pastal, San Francisco and La Escuadra areas are being considered for drill testing.

La Noria

The La Noria prospect is located 2 km west of the San Jose Mine and is related to a north–south-trending structural system of anastomosing veins subparallel to the Trinidad system. Exploration conducted by Pan American in late 2006 supported a preliminary drill program conducted in 2007. The Pan American sampling program involved the collection of 80 surface samples. In late 2014 and early 2015, Cuzcatlan followed this initial work with a detailed mapping and sampling program covering 539 ha, taking 343 chip samples for geochemical analysis and 715 samples for alteration analysis. This work led to targeted exploration drilling conducted by Cuzcatlan in late 2015 and 2016. This project defined discontinuous narrow structures but did not identify economically viable mineralization.

Maria

The Maria area is located 2.5 km south of the San Jose Mine and forms the southern continuity of the Trinidad structural system. Maria is interpreted as an area of potential anastomosed tensional structures acting as kinematic indicators in the footwall of the Trinidad vein. Historical mine workings are present at the Santa Maria shaft and associated waste dumps that contain anomalous levels of zinc, lead, silver, and copper. A systematic mapping and sampling program conducted by Cuzcatlan in 2013 identified the southern extension of the Trinidad system to the El Portillo Mine (including Maria) as a strategic target with the potential for mineralization. In 2017 Maria was drilled by Cuzcatlan to test for mineralization at the confluence of the Maria and Trinidad veins. Results of the drilling defined possible dilation jogs at the junction of the Maria-Trinidad structures with two holes intersecting narrow but economic grades. A further drill program planned for 2024 will test the possible extension of mineralization from the junction of these veins to the north.

Los Diaz

The potential of the Los Díaz area emerged from data evaluation based on the analysis of geophysics and structural interpretations. The Trinidad deposit is located in the eastern margin of a high magnetic susceptibility anomaly and Los Díaz represents a similar structural environment with the intersection of two regional systems. A drilling program was undertaken in 2020 to test for possible mineralization in this region. The program confirmed a domain of felsic dikes trending NW as well as discontinuous veinlets but with no significant results. Additional assessments are planned for 2024 including high-resolution ground geophysics to determine the possible structural relationship of Los Diaz to the Victoria mineralized zone.

Victoria mineralized zone

The Victoria mineralized zone was interpreted at depth based on the location of a silicified outcrop to the north of the Trinidad deposit where the Trinidad vein is thought to converge with a north–northwest-trending fault system associated with the Victoria mineralized zone. Exploration focused on drilling from underground stations located in the Trinidad deposit eastwards to intersect mineralization associated with the Victoria mineralized zone. The Victoria zone is discussed in more detail in Section 7.4.2.

Yessi vein

During an infill drilling campaign conducted in August 2023, a new blind zone of alteration and brecciation was identified, resulting in the intersection of mineralization approximately 200 m further to the east of the Victoria mineralized zone. Three holes initially intersected high-grade mineralization and four additional holes have been completed to assist with interpreting its geometry and extent. Interpretative work supported by additional drilling to better define the geometry and character of the Yessi vein, and its relationship to the regional structural architecture was underway as at the effective date of this Report. Initial interpretative work suggests the Yessi vein forms part of the wider San Jose scale reidal system and may represent an R' structure.

9.3.5 ASTER study

In September 2018, Cuzcatlan signed a contract with International Natural Resources Development to perform a district-scale remote-sensing based geological study. The study was performed to potentially identify or extend the known hydrothermal alteration extents in the district using ASTER satellite imagery. The ASTER analysis resulted in the mapping of significant zones of advanced argillic alteration which represent medium to long-term generative targets for potential mineralized systems beyond the influence of the Trinidad deposit.

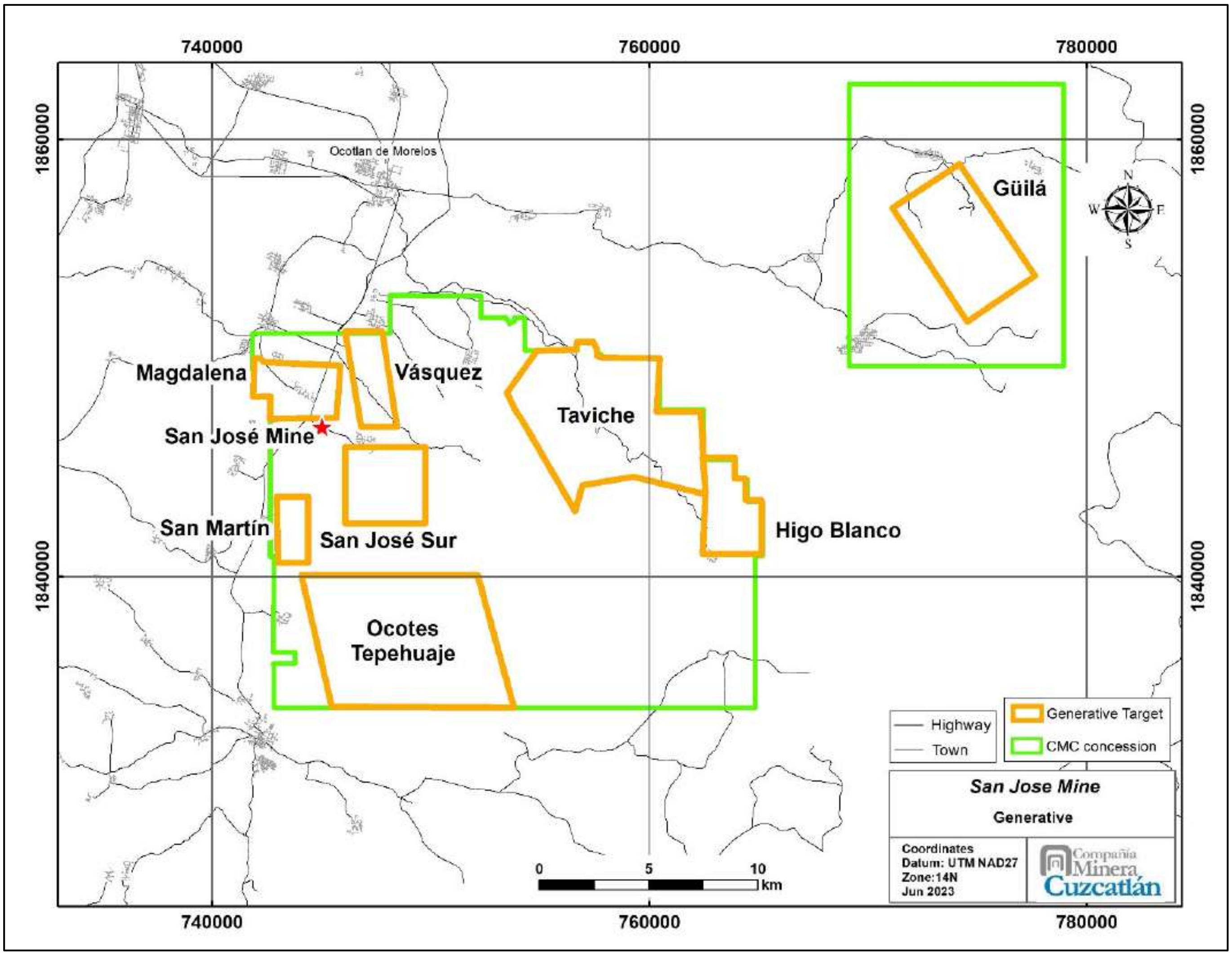
9.4 Exploration potential

There is potential for additional mineralization to be discovered in the San Jose Mine area. Cuzcatlan identified an exploration portfolio pyramid in order of available information:

- **First pass generative:** Prospects defined using indirect tools such as the district ASTER analysis, including San Jose Sur, Los Vásquez, Ocotes Tepehuaje (Figure 9.2). Proposed exploration would consist of surface mapping and sampling, dependent on the acquisition of surface access rights.

- **Second pass generative:** Prospects are based on areas with mining history, significant alteration footprints, or previous inconclusive studies. The San Martin de los Cansecos area is representative of this category (Figure 9.2).
- **Opportunity:** Prospects that require the acquisition of surface access rights are assigned to an opportunity fund. These include the Guila prospect area with the potential for discovery of new veins and mineralization associated with rhyolitic domes in the district (Figure 9.2). This fund also includes exploration activities in the Taviche corridor.
- **Priority Drilling:** These targets are based close to the mine infrastructure with potential of economic mineralization. These targets are generated from geological assessments considering structural and alteration interpretations as well as lithological features and extrapolation of geochemical data from known Inferred Resource regions. The Yessi vein target is an example of this criterion having been prioritized for further exploration.

Figure 9.2 Map showing location of generative exploration programs



9.5 Comment on Section 9

In the opinion of the QP:

- The mineralization style and setting of the San Jose Mine area is sufficiently well understood to support Mineral Resource and Mineral Reserve estimation.
- Exploration methods are consistent with industry practices and are adequate to support continuing exploration and Mineral Resource estimation.
- Exploration results support the current interpretation of the geological setting and mineralization.
- A number of prospect areas have been identified that may result in discoveries of additional mineralization or extensions to known mineralized zones.

10 Drilling

10.1 Introduction

As of June 30, 2023, the data cut-off date, a total of 1,460 drill holes totaling 463,774.55 m have been successfully completed at the San Jose Mine (Table 10.1, Figure 10.1) with the drilling being concentrated in the Trinidad deposit. Wide-spaced exploration drilling has also been completed in the San Ignacio area along the southern extension of the structurally controlled mineralized corridor (south of 1846500N), and to the far north of the Trinidad deposit beyond 1847800N, as well as in the Victoria mineralized zone.

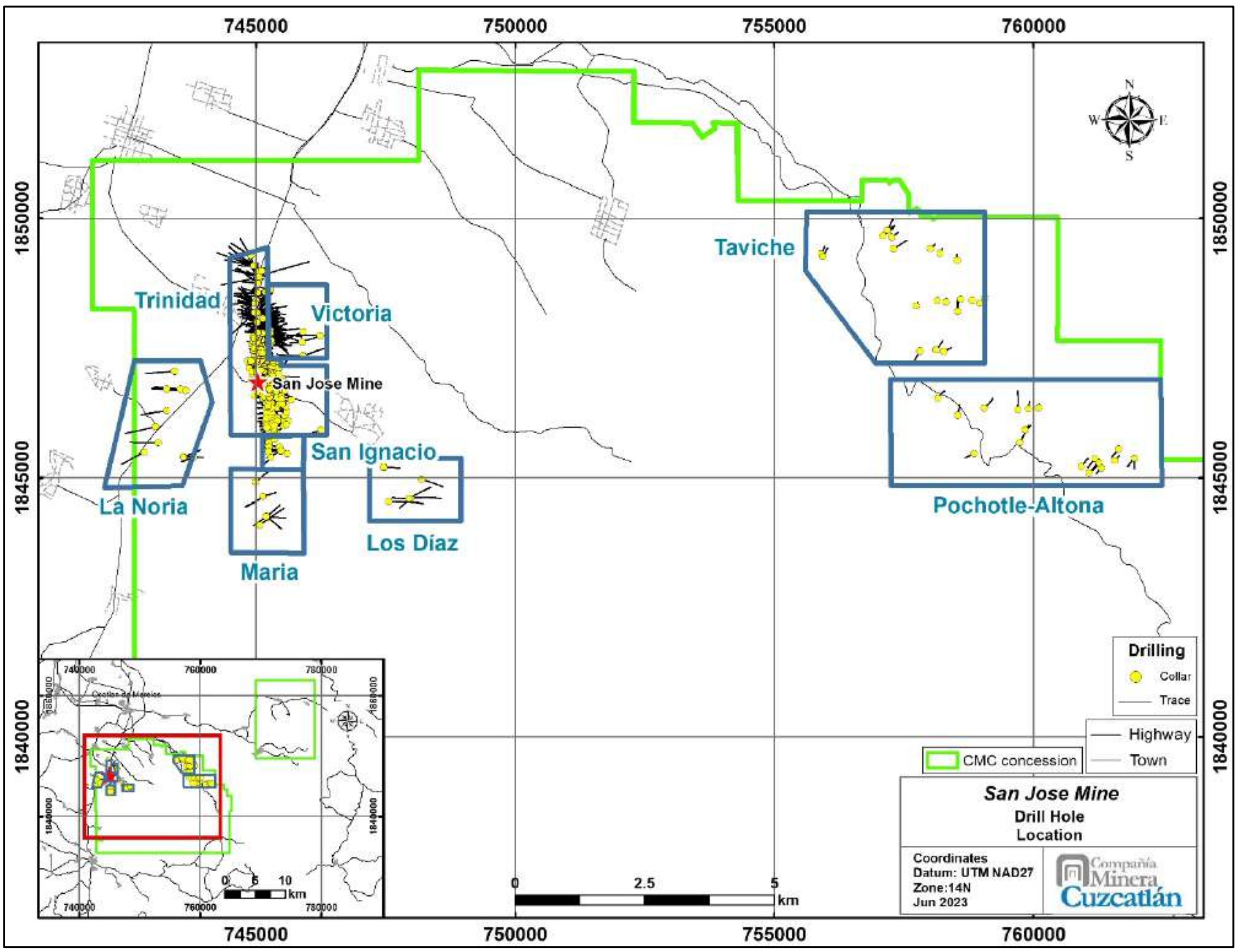
Table 10.1 Drilling by company and period at the San Jose Mine

Company	Area	Year	No. of Drillholes	Meters
Pan American	San Ignacio	2001	2	242.00
	Trinidad	2001	3	851.50
Continuum	San Ignacio	2004	2	506.85
	Trinidad	2004	11	3,612.15
		2005	2	757.85
	Taviche	2004	2	779.30
		2006	10	2,179.40
Cuzcatlan	El Rancho	2011	9	2,621.90
	San Ignacio	2006	13	3,790.30
		2007	23	8,910.20
		2011	17	8,307.25
		2012	9	3,970.60
		2018	4	2,613.75
		2019	2	950.35
		2021	5	1,855.95
	Trinidad	2006	25	8,392.10
		2007	43	17,675.85
		2008	108	31,504.00
		2009	4	1,410.50
		2012	15	8,574.30
		2013	66	27,462.35
		2014	90	35,955.65
		2015	78	24,820.95
		2016	87	25,030.95
		2017	82	23,841.10
		2018	95	31,905.30
		2019	73	16,160.10
		2020	100	16,615.30
		2021	90	14,120.75
		2022	133	30,663.50
		2023	5	3,592.45
	Taviche	2011	10	2,552.95
	El Pochotle	2012	11	3,387.05
	La Altona	2012	3	1,040.35
	La Noria	2015	1	743.75
		2016	9	5,414.95
		2020	3	1,417.65
	Maria Vein	2017	3	1,672.05
	Victoria	2015	6	3,613.20
		2016	9	5,588.25

Company	Area	Year	No. of Drillholes	Meters
		2017	23	11,737.45
		2018	31	15,291.05
		2019	7	3,657.25
		2020	1	618.30
		2021	9	3,546.00
		2022	64	16,857.25
		2023	55	14,320.50
	Los Diaz	2020	4	2,494.55
		2021	3	2,142.60
Totals		2001–2023*	1,460	463,774.55

* As of June 30, 2023 – Database cut-off date for Mineral Resource and Mineral Reserve estimation.
Drilling completed after June 30, 2023 has been reported in Section 10.3 for completeness.
The above does not include 59 drill holes totaling 7,060.85 m that were aborted and redrilled due to poor ground conditions and five drill holes totaling 1,162.25 m that were drilled for services.

Figure 10.1 Drill hole location map for the San Jose Mine



Of the areas drilled, sufficient continuity of mineralization has only been encountered in the Trinidad deposit area and the Victoria mineralized zone to support the estimation of Mineral Resources.

A total of 1,110 core holes totaling 330,951.55 m have been drilled in the Trinidad deposit area and 205 holes totaling 75,229.25 m in the Victoria mineralized zone (Figure 10.1). In Trinidad, the majority of the holes have been drilled from east to west to crosscut the steeply east-dipping mineralized zone at high angles, whereas in the Victoria mineralized zone, the holes have been drilled from west to east from underground to intersect the subvertical Victoria main structure. Of the 1,460 holes, 465 have been drilled from the surface and the remainder from underground.

All of the drilling was conducted by core drilling methods with the exception of 1,476 m of reverse circulation (RC) pre-collars in six of the 1,460 core drill holes.

The core drilling typically commences with HQ (63.5 mm core diameter) core and continues to the maximum depth allowable based on the mechanical capabilities of the drill equipment. Once this point is reached or poor ground conditions are encountered the hole is cased and further drilling undertaken with smaller diameter drilling tools with the core diameter being reduced to NQ2 (50.6 mm) or NQ (47.6 mm) size to completion of the hole (Table 10.2). In the Trinidad deposit, five of the drill holes were further reduced to BQ (36.4 mm) size to complete the drill holes to the target depths. All the drilling completed has been carried out by contract drilling service companies. PQ (85 mm) size drill core is related to the drilling of the first 100 to 200 m from surface, where rock can be brittle or highly weathered. Once rock conditions improve the hole is protected with a casing allowing the reduction to HQ or NQ diameter.

Table 10.2 Drilling by core diameter size

Meters drilled by area	Core Size Diameter						
	PQ (85 mm)	HQ (63.5 mm)	NQ2 (50.6 mm)	NQ (47.6 mm)	BQ (36.4 mm)	RCD# (Precollar)	TOTAL
El Pochotle		3,387.05					**3,387.05**
El Rancho		2,621.90					**2,621.90**
La Altona		941.5		98.85			**1,040.35**
La Noria	544.9	4,751.60		2,231.25	48.6		**7,576.35**
Maria vein		1,469.10		202.95			**1,672.05**
San Ignacio	206.05	20,795.65	10.2	10,135.35			**31,147.25**
Trinidad*	817.25	182,385.80	6,036.25	139,029.60	767.3	1,475.6	**330,511.80**
Taviche		5,511.65					**5,511.65**
Victoria	42.1	30,957.00		43,312.75	477.4		**74,789.25**
Los Diaz	682.9	2,633.30		1,320.95			**4,637.15**
TOTAL	**2,293.20**	**255,454.55**	**6,046.45**	**196,331.70**	**1,293.30**	**1,475.60**	**462,894.80**

*879.75 m of historical core has no core size recorded.
#Reverse circulation drilling.

10.2 Drilling Campaigns

10.2.1 Pan American campaign (2001)

Of the five drill holes drilled by Pan American in 2001, three of the drill holes were located in the Trinidad deposit area and two were located along the southern extension of the vein system in the San Ignacio area. Two of the three drill holes located in the vicinity of the Trinidad shaft intercepted strong silver and gold. The two drill holes located in the San

Ignacio area intercepted weak to moderate grade silver–gold mineralization over narrow to moderate vein widths.

10.2.2 Continuum campaigns (2004 to 2006)

Between 2004 and 2006 Continuum drilled a total of 27 surface core holes. Thirteen of the drill holes were located in the Trinidad deposit area, two were located in the San Ignacio area, and 12 were in the Taviche area. Nine of the 13 drill holes completed in the Trinidad area intersected moderate to strong silver–gold mineralization over significant widths. The two drill holes in the San Ignacio area and 12 holes in the Taviche area intercepted low-grade silver–gold mineralization over narrow widths.

10.2.3 Cuzcatlan campaigns (2006 to 2023)

Drilling conducted in 2006

During 2006, Cuzcatlan completed the drilling of 38 core holes, with 25 of the drill holes being located in the Trinidad deposit area and 13 in the San Ignacio area. The drilling in the Trinidad deposit area confirmed the results of the prior drilling and expanded the mineralization along strike and to depth. Drilling in the San Ignacio area identified significant zones of silver–gold mineralization over generally narrow vein widths.

Drilling conducted in 2007

During 2007, Cuzcatlan completed 66 core holes. Forty-three of the drill holes were located in the Trinidad Deposit area and 23 drill holes in the San Ignacio area. Drilling in the Trinidad deposit continued to confirm the potential and further expand the mineralization along strike to the south and at depth. Three-dimensional modeling and evaluation of the drilling results in the Trinidad deposit indicated that additional infill drilling would be required in order to potentially support conversion of Inferred Mineral Resources to the Indicated Mineral Resource classification.

Drilling conducted in 2008–2009

Based on the combined results of the drilling completed in the Trinidad deposit through 2007 and on the results of deposit evaluation, an infill drill program was designed and carried out to potentially support conversion of a majority of the Inferred Mineral Resources above the 1,300-meter elevation to Indicated Mineral Resources. During 2008 and early 2009, Cuzcatlan completed a total of 112 drill holes with the majority of the drilling being directed towards the upper portions of the Trinidad deposit. The results of the infill drilling confirmed the presence of high-grade silver–gold mineralization in the Trinidad deposit and led to the development of a detailed geological and mineralization model of the deposit. All work was supervised directly by Cuzcatlan and Fortuna. Drilling activities were carried out by contractors; Construccion, Arrendamiento de Maquinaria y Minera, S.A. de C.V. and by Rodio Swissboring Mexico, S.A. de C.V.

Drilling conducted in 2011

During 2011, Cuzcatlan completed 17 core holes to the south of the Trinidad deposit area in the San Ignacio area. While some of these drill holes encountered mineralized intervals, it was recommended that additional drilling be conducted in this area in order to demonstrate mineralization continuity.

Cuzcatlan also completed 10 core holes at El Rancho and 10 core holes at Taviche based on promising surface mapping. The drilling failed to identify significant mineralization.

Drilling conducted in 2012

During 2012, Cuzcatlan completed 16 drill core holes in the northern part of the Trinidad deposit area as well as nine drill holes in the San Ignacio area. Drilling completed in the

Trinidad deposit was successful in demonstrating the extension of significant silver and gold mineralization to the north and to depth and resulted in the continuation of the drill program into 2013. Underground drilling commenced at the end of 2012 with the completion of a single drill hole intersecting the main Stockwork Zone.

Cuzcatlan also completed the drilling of several prospect areas including El Pochotle (11 core holes) and La Altona (three core holes). Both programs failed to identify any significant intervals of mineralization.

Drilling conducted in 2013–2014

During 2013 and 2014, Cuzcatlan focused on further exploring and defining the Trinidad deposit by completing 155 drill holes. Surface and underground exploration drilling focused on expanding the extent of mineralization to the north. Underground infill drilling focused on potentially upgrading Inferred Mineral Resources to higher confidence categories and refining geological interpretations in the main Stockwork Zone.

Drilling conducted in 2015–2016

From January 2015 to the end of 2016, Cuzcatlan completed 166 drill holes in the Trinidad deposit. Surface and underground exploration drilling focused on expanding the Trinidad deposit extents. Underground infill drilling focused on providing support for upgrading Inferred Mineral Resources to higher confidence categories and refining geological interpretations in the Stockwork Zone and in the north of the Trinidad deposit.

Cuzcatlan also began an exploration drill program focusing on the Victoria mineralized zone to the east of the Trinidad deposit. Drilling of seven core in 2015 and nine core holes in 2016, was conducted from underground chambers located near the Trinidad deposit. Mineralized intervals were encountered in the majority of the drill holes indicating follow-up drilling was required to define the potential of this new vein system.

In late 2015 and in 2016, Cuzcatlan also tested the La Noria prospect completing 10 core holes.

Drilling conducted in 2017-2018

From January 2017 to June 30, 2018, Cuzcatlan completed 141 drill core holes in the Trinidad deposit area. Exploration continued to the far north of the deposit and at depth below the currently defined Trinidad central area. Infill drilling focused on defining the mineralization in the Stockwork 2 and Stockwork 3 zones.

Drilling of the Victoria mineralized zone continued with 36 core holes being drilled from underground and focused on expanding the preliminary defined area of mineralization and attempting to establish geological and mineralized continuity between drill holes.

Additional prospects were also drilled on the San Jose Project area during this period, including four core holes at San Ignacio and three core holes at the Maria vein. Silver–gold mineralization at San Ignacio is related to narrow zones in the continuity of the stockwork at the south sector of the mine with irregular distribution and variable results between the elevations 1,080 masl to 1,200 masl. Mineralization at Taviche and Maria is related to base metals with silver anomalies in narrow and irregular veinlets and breccias.

Drilling conducted in 2019-2023

For the period from July 1, 2018, to December 31, 2023, Cuzcatlan drilled 651 core holes.

During the second half of 2018 to December 31, 2023 the drilling programs were focused on exploring the continuity of the mineralization in the far north of the deposit, testing the continuity of the Trinidad system considering the influence of the plunge of the mineralization dipping to the north as well as the projection of the silicified outcrop which is believed to be the convergence point of the Victoria mineralized zone and the Trinidad system. The exploration in the north and central sectors of the Victoria mineralized zone continued with 177 core holes focused on testing the expansion of the mineralization to the north and south.

During the second half of 2018, additional exploration was conducted on the south deep sector of the Trinidad system to test the continuity of the mineralization in the southern extension of the Stockwork structure.

During 2019, exploration drilling resulted in the definition of a shallower northern extension of the mineralization on the periphery of the Trinidad system between the coordinates 1847200N and 1847400N and above 1,300 masl.

During 2020, data reviews and geophysical assessments identified a potential south extension of the regional structure related to the projection of the Trinidad system merging with the Los Diaz area. The area was tested by seven core holes.

During the 2023 infill drilling campaign, a new blind zone of alteration and brecciation was intersected approximately 200 me further to the east of the Victoria mineralized zone and subsequently named the Yessi vein. Three core holes initially defined high-grade mineralization and four additional holes were drilled to assist with interpreting its geometry and extent.

10.3 Drilling conducted post database cut-off date

As of the effective date of this Report an additional 37 exploration core drill holes totaling 10,194.1 m were completed after the June 30, 2023, database cut-off date. All drilling was carried out from underground drill stations with the exception of three holes. Assay results for intercepts of interest are summarized in Table 10.3. Thirteen of the exploration drill holes targeted the Trinidad deposit, 17 targeted the Victoria mineralized zone, and seven targeted the Yessi vein. All drill holes are located beyond the current Mineral Resource estimate boundary.

Table 10.3 Drill intervals in the Trinidad deposit and Victoria mineralized zone encountered post data cut-off date

Hole ID	Easting	Northing	Elevation	Azimuth (°)*	Dip (°)*	From (m)	To (m)	Drilled Interval (m)	ETW** (m)	Ag (g/t)	Au (g/t)
SJOM-1379	745296.9	1847651.9	1238.4	70.9	27.0	84.00	93.73	9.73	9.50	125	0.80
SJOM-1380	745296.5	1847652.2	1235.8	52.5	-37.7	160.45	164.45	4.00	2.20	138	1.10
SJOM-1381	745192.5	1847930.0	1235.3	81.1	-37.6	167.00	174.82	7.82	3.80	102	0.80
SJOM-1383	745192.7	1847929.5	1235.3	81.1	-37.6	170.55	178.24	7.69	3.80	31	0.28
SJOM-1384	745296.5	1847651.9	1235.8	54.7	-42.3	210.00	215.00	5.00	2.90	11	0.10
SJOM-1385	745192.3	1847931.8	1235.4	56.7	-32.4	130.18	135.47	5.29	3.10	162	1.13
SJOM-1386	745192.3	1847931.5	1235.2	51.6	-26.8	118.15	122.65	4.50	3.02	60	0.43
SJOM-1387	745297.9	1847649.5	1236.5	100.6	-12.1	233.40	325.20	91.8	18.00	161	1.30
SJOM-1389	745192.4	1847931.5	1235.2	54.4	-39.0	152.26	158.17	5.91	2.98	109	1.00
SJOM-1390	744959.5	1847791.0	846.9	74.7	-32.8	no significant intervals					
SJOM-1391	745297.9	1847649.5	1236.2	100.9	-20.2	155.45	162.40	6.95	4.18	41	0.17
						337.15	345.00	7.85	1.20	386	3.13
SJOM-1392	745192.2	1847932.5	1235.3	43.8	-31.2	135.62	142.40	6.78	3.85	36	0.32
SJOM-1393	744959.4	1847790.5	846.9	89.3	-32.5	no significant intervals					
SJOM-1395	745191.4	1847933.0	1235.5	37.0	-29.7	223.22	226.50	3.28	2.17	34	0.29
SJOM-1396	745298.0	1847649.4	1236.8	101.9	-2.6	272.12	276.00	3.88	1.00	64	0.49
SJOM-1397	744959.5	1847791.1	846.9	66.8	-34.5	149.00	151.80	2.8	3.00	0	2.10
SJOM-1398	745192.7	1847929.9	1236.2	91.5	-0.9	No significant intervals					

Hole ID	Easting	Northing	Elevation	Azimuth (°)*	Dip (°)*	From (m)	To (m)	Drilled Interval (m)	ETW** (m)	Ag (g/t)	Au (g/t)
SJOM-1399	745298.0	1847649.4	1237.4	104.0	8.4	133.95	140.65	6.7	5.01	64	0.63
SJOM-1400	745192.7	1847929.9	1235.3	88.8	-38.5	No significant intervals					
SJOM-1401	745192.6	1847930.1	1235.3	87.8	-40.5	202.45	211.11	8.66	3.59	9	0.11
SJOM-1402	745010.6	1847738.4	834.2	46.1	8.0	97.65	101.45	3.80	3.50	160	0.88
SJOM-1403	745192.4	1847930.5	1236.1	73.4	-4.4	93.05	95.35	2.30	2.05	10	0.15
SJOM-1405	745192.3	1847930.6	1235.4	68.9	-45.0	no significant intervals, hole abandoned					
SJOM-1406	745011.8	1847737.8	833.8	72.4	-5.8	116.35	119.50	3.15	3.06	2,628	13.12
SJOM-1407	745010.7	1847739.5	833.9	26.3	-3.7	No significant intervals					
SJOM-1409	745192.4	1847931.2	1235.0	60.1	-45.0	304.60	312.30	7.70	4.25	83	0.54
SJOM-1410	745011.7	1847738.1	834.3	63.6	7.3	97.90	104.95	7.05	7.01	362	2.13
SJOM-1411	745011.8	1847737.8	834.2	86.5	4.8	36.30	39.15	2.85	2.83	11	0.05
SJOM-1412	745192.3	1847932.4	1235.8	47.2	-13.9	No significant intervals					
SJOM-1413	745011.8	1847737.6	833.7	88.8	-17.5	123.90	124.25	0.35	0.35	184	1.06
SJOM-1414	745192.0	1847932.6	1235.0	44.2	-45.1	216.00	217.46	1.46		114	1.03
SJOM-1382	744901.9	1849292.9	1252.9	74.3	-5.8	No significant intervals					
SJO-1388	745794.9	1847115.8	1545.2	249.9	-44.8	No significant intervals					
SJO-1394	745990.5	1846953.0	1549.1	230.7	-55.6	No significant intervals					
SJOM-1404	745298.0	1847649.2	1236.6	108.7	-8.0	286.20	286.70	0.50	0.10	109	1.00
						308.85	309.60	0.75	0.15	138	1.11
						325.95	326.60	0.65	0.15	68	0.34
						372.25	372.95	0.70	0.15	69	0.46
						386.20	386.90	0.70	0.15	189	0.88
						390.10	391.00	0.90	0.20	41	0.43
SJOM-1408	745297.895	1847649.45	1236.14	106.4844	-22.5	351.15	352.00	0.85	0.20	46	0.50
						352.75	354.00	1.25	0.30	43	0.57
						355.35	356.20	0.85	0.21	68	0.78
						359.20	364.45	5.25	1.30	57	0.61
						369.10	370.10	1.00	0.25	59	0.39
						370.85	371.35	0.50	0.13	204	1.71
						372.75	373.85	1.10	0.30	77	0.60
						376.10	377.75	1.65	0.40	56	0.54
						379.40	381.30	1.90	0.50	99	0.86
						385.25	386.70	1.45	0.40	48	0.39
						390.50	402.20	11.70	2.95	131	1.11
						406.65	407.95	1.30	0.35	140	1.24
						413.30	414.25	0.95	0.24	44	0.55
						415.75	420.60	4.85	1.20	142	1.13
						424.50	430.00	5.50	1.40	140	1.05
						439.50	441.55	2.05	0.50	102	1.07
						444.45	446.00	1.55	0.40	62	0.67
						451.55	452.90	1.35	0.35	51	0.52
						471.25	472.30	1.05	0.25	276	2.40
						473.35	475.00	1.65	0.40	60	0.49
SJOM-1366A	745297	1847650	1236	95.09	-27.91	324.70	325.25	0.55	0.15	63	0.47
						326.50	330.00	3.50	0.75	2	0.59
						340.60	341.80	1.20	0.25	43	0.36
						365.00	368.75	3.75	0.80	64	0.58
						381.50	382.75	1.25	0.30	139	0.03
						446.30	448.75	2.45	0.50	41	0.40
						459.65	460.85	1.20	0.30	64	0.58
						461.75	462.25	0.50	0.10	58	0.52
						464.10	465.70	1.60	0.35	195	1.58
						486.30	487.20	0.90	0.60	223	1.70
						539.70	540.05	0.35	0.10	40	0.50
						542.55	543.00	0.45	0.10	123	1.13
						557.00	557.35	0.35	0.10	123	1.57
						568.00	568.70	0.70	0.15	50	0.61
						573.45	575.40	1.95	0.40	90	0.83

Hole ID	Easting	Northing	Elevation	Azimuth (°)*	Dip (°)*	From (m)	To (m)	Drilled Interval (m)	ETW** (m)	Ag (g/t)	Au (g/t)
						582.85	584.35	1.50	0.30	83	0.82
						586.30	586.85	0.55	0.10	224	1.52
						587.80	589.10	1.30	0.30	255	1.85
						590.25	592.50	2.25	0.50	67	0.72
						595.80	596.10	0.30	0.05	157	1.71
						596.50	597.60	1.10	0.25	62	0.70
						599.35	601.90	2.55	0.55	102	0.75
						602.80	603.25	0.45	0.10	62	0.56
						606.55	607.30	0.75	0.15	58	0.49
						607.65	608.10	0.45	0.10	199	1.44
						609.00	609.75	0.75	0.15	193	1.27
						617.10	617.55	0.45	0.10	235	2.15
						618.30	618.70	0.40	0.10	57	0.51
						621.05	621.40	0.35	0.10	132	1.34
						623.80	625.00	1.20	0.65	99	0.83
						626.15	626.60	0.45	0.10	45	0.36
						627.15	627.60	0.45	0.10	64	0.66
						636.40	640.55	4.15	0.90	166	1.24
						641.45	643.45	2.00	0.40	216	1.65
						649.15	649.55	0.40	0.10	110	1.14
						685.35	685.70	0.35	0.24	221	1.88

*Azimuth and dip values taken at collar location
**ETW = estimated true width

10.4 Geological and geotechnical logging procedures

Cuzcatlan has a standardized rock unit classification scheme, logging procedures, and log sheet structure that were used throughout the logging of all Cuzcatlan drill holes up until 2017. The system used paper forms, and the data was subsequently entered into an Excel template. Geological logging took place after the core was sampled, to take advantage of the flat sawed surface. Rock types and structure were recorded with alphanumeric codes, whereas alteration, veinlets, minerals, and oxidation were recorded by a 1 to 3 scale (weak, moderate, strong). A core library was developed to illustrate all rock and alteration types.

In 2018 all logging became digital, being incorporated daily into the Maxwell Datashed database system. Data were recorded initially with Excel templates, and later with the Maxwell LogChief application using essentially the same structure. Both input methods used pick-lists and data validation rules to ensure consistency between loggers. Separate sheets were designed to capture metadata, lithology, alteration, minerals (sulfides, oxides, and limonite), structure (contacts, fractures, veins, and faults with attitudes to core axis). Intensity of alteration phases was recorded using a numeric 1 to 4 scale (weak, moderate, strong, complete).

Geotechnical logging consists of the collection of specified data fields including: recovery percentage and rock quality designation (RQD) length. Joint filling and joint weathering are described as part of geological logging. A tablet-based data entry program was developed by Cuzcatlan using the Maxwell LogChief software. Data checks are implemented into this program to prevent erroneous data entry.

Once geological and geotechnical logging were complete and intervals were marked on the core for geochemical analysis an evaluation of alteration minerals was conducted using Terraspec Halo equipment. The process involved taking a reading from the core every 5 m using a calibrated hand-held device, or when an interval had been marked for geochemical sampling. Once all the readings for a drill hole were obtained, the information was loaded into Datashed, and spectral log reports generated for each drill hole.

10.5 Drill core recovery

Core recovery for the drilling completed to-date in the Trinidad deposit and Victoria mineralized zone where Mineral Resources have been estimated averages 98 % (Figure 10.3). Core recovery within the mineralized zones is generally high due to the association of silicification and carbonatization with the mineralizing processes.

Figure 10.2 Graph of core recovery of Trinidad Deposit and Victoria mineralized zone

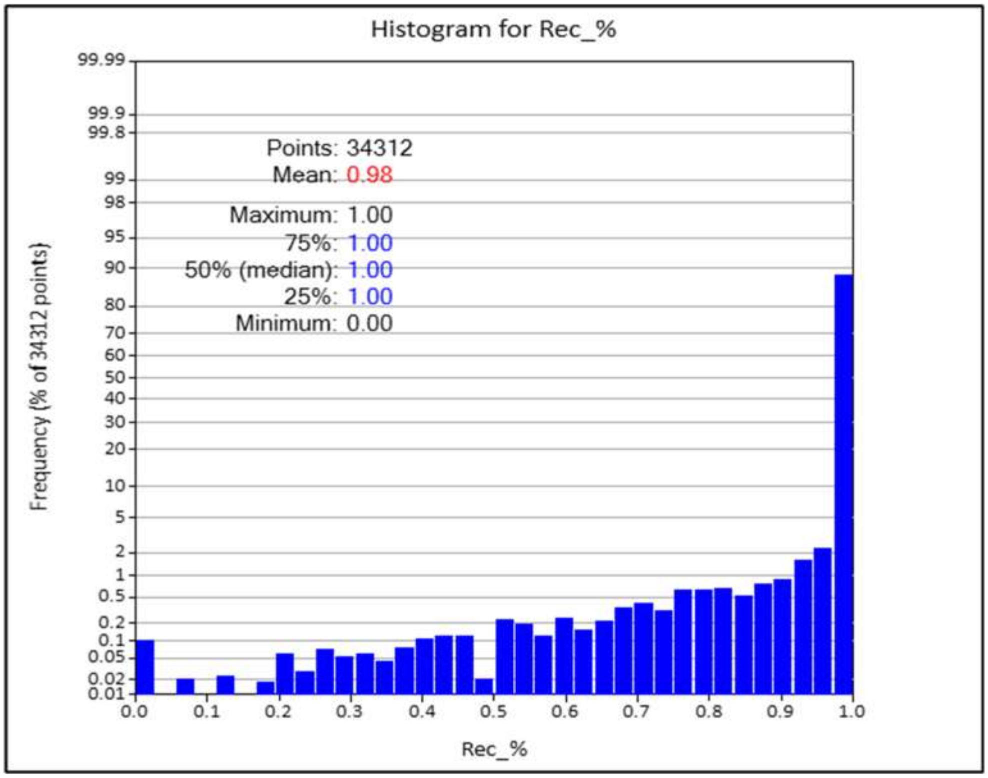


Figure prepared by Cuzcatlan, 2023

10.6 Extent of drilling

To-date, drilling has been conducted at the Trinidad deposit over a strike length of approximately 3,000 m and to depths exceeding 1,000 m from surface, identifying mineralization over a strike length of 1,400 m and 800 m down dip. Exploration drilling has generally increased in depth to the north.

Drilling of the Victoria mineralized zone has been conducted over a strike length of approximately 2,300 m and covers a vertical extent of approximately 700 m, with upper holes intersecting the structure at least 250 m below the surface.

The extent of drilling of the San Ignacio area continues directly to the south of the Trinidad deposit and has been conducted over a strike length of approximately 1,000 m and to depths of up to 500 m from surface.

10.7 Drill hole collar surveys

Surface drill hole collars were surveyed using differential global positioning system (GPS) and total station survey methods. Concrete monuments are constructed at each collar location recording the drill hole name, azimuth, inclination and total depth. At locations where the drill hole collar is located in a cultivated field, the collar monument is constructed approximately 50 cm below the actual surface.

Underground drill hole collars were surveyed using total station survey methods. Concrete monuments similar to those used for surface collars are constructed to mark the location with the drill hole name, azimuth, inclination and total depth recorded.

10.8 Downhole surveys

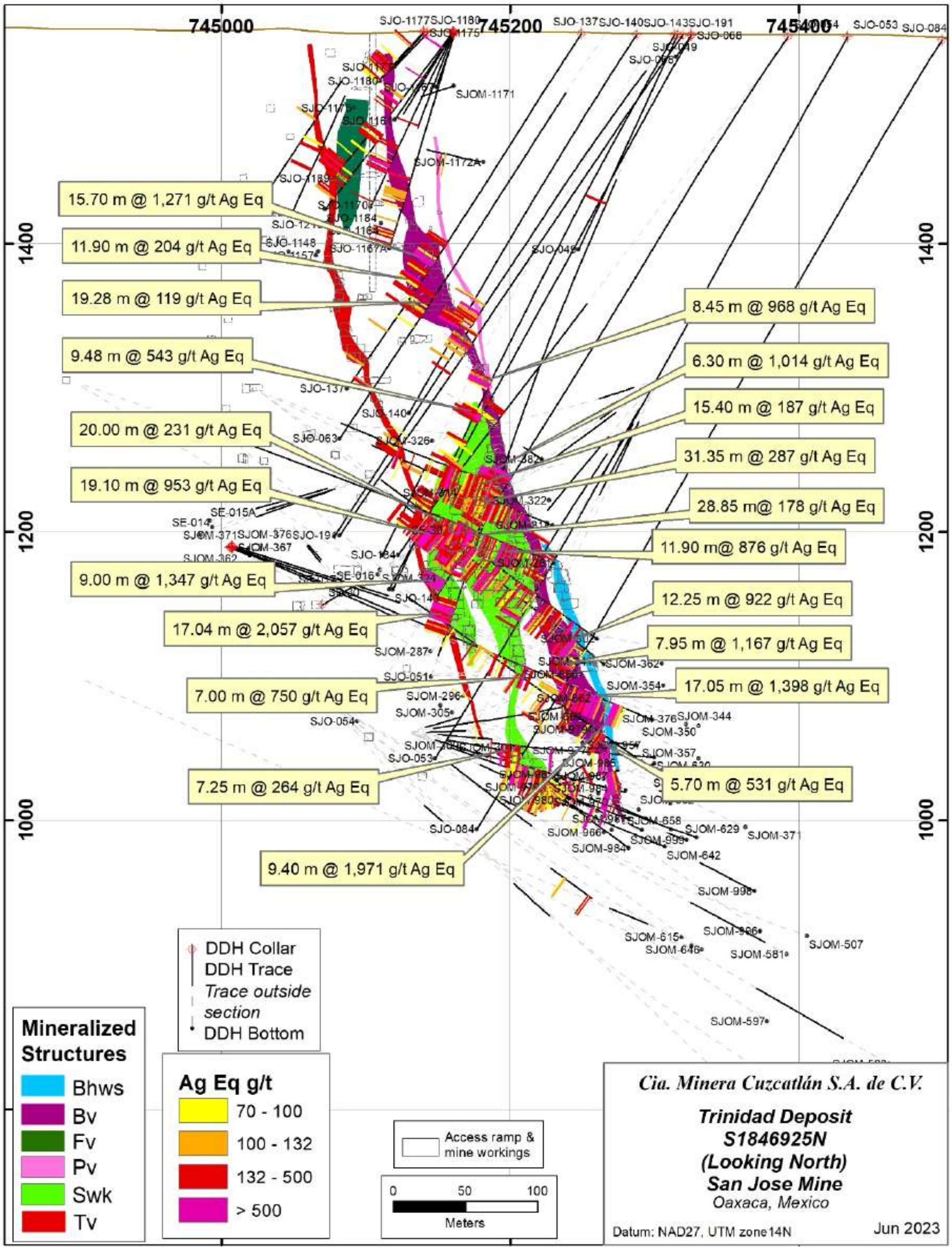
Down-hole surveys were completed for 1,443 of the 1,460 drill holes completed as of the database cut-off date. For the 17 holes where downhole surveys are not recorded, all of which were drilled prior to 2007, only three are within the Trinidad deposit area. The azimuth and dip orientation of these holes was recorded at the collar to account for drilling direction. The absence of downhole surveys in three of the 1,315 holes drilled at Trinidad and Victoria is not regarded as material to the Mineral Resource estimate.

Downhole surveys are typically completed at 50 m intervals although recent drill holes include downhole surveys at 10 m intervals until reaching 50 m depth and then at 50 m intervals thereafter. All downhole surveys have been carried out by the drilling contractor using Reflex electronic downhole survey tools.

10.9 Drill sections

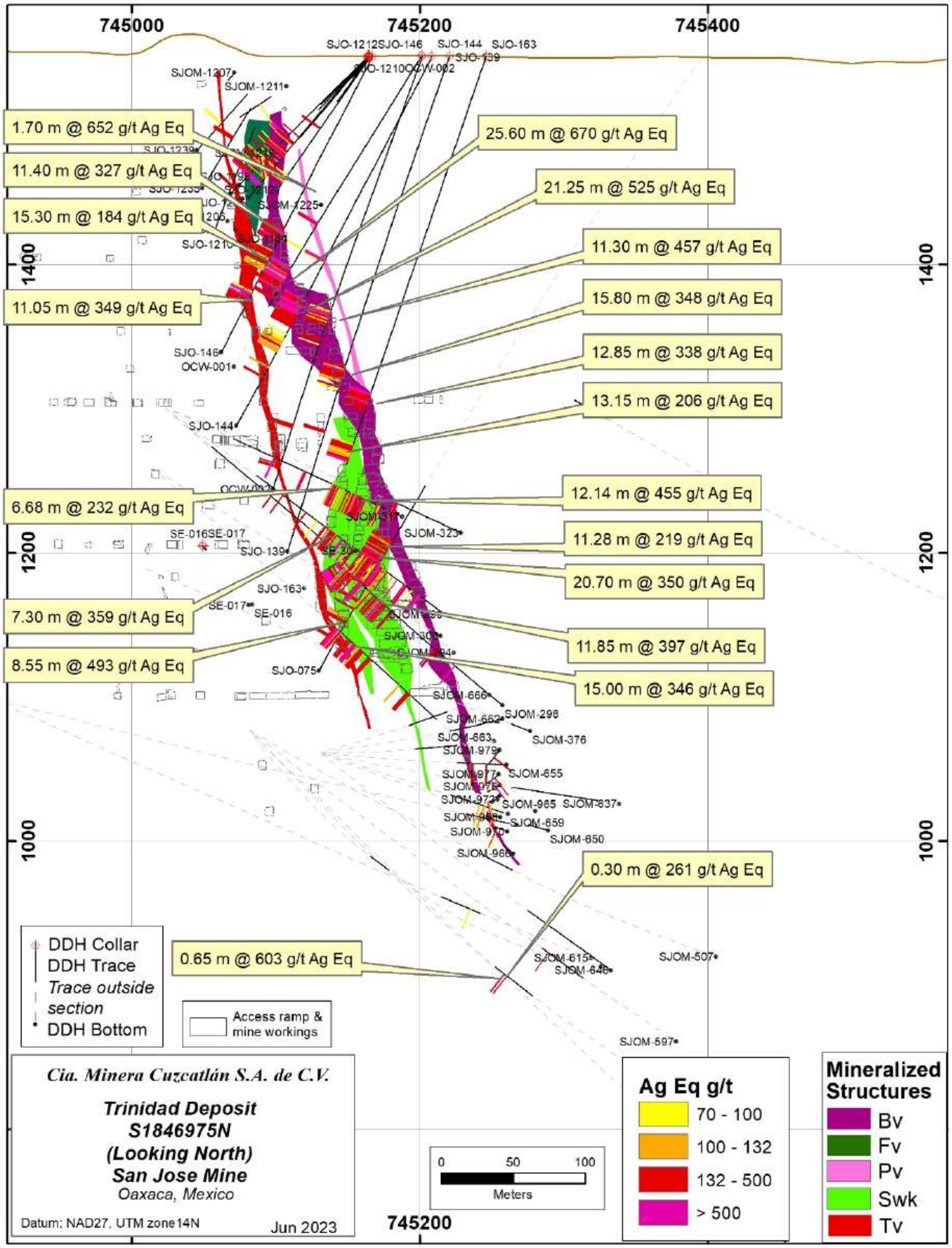
Representative drill sections displaying the mineralized interpretation of the Trinidad deposit are displayed in Figures 10.3 to 10.6. A plan view showing the location of the sections is provided in Figure 7.6.

Figure 10.3 Section displaying mineralization along 1846925N



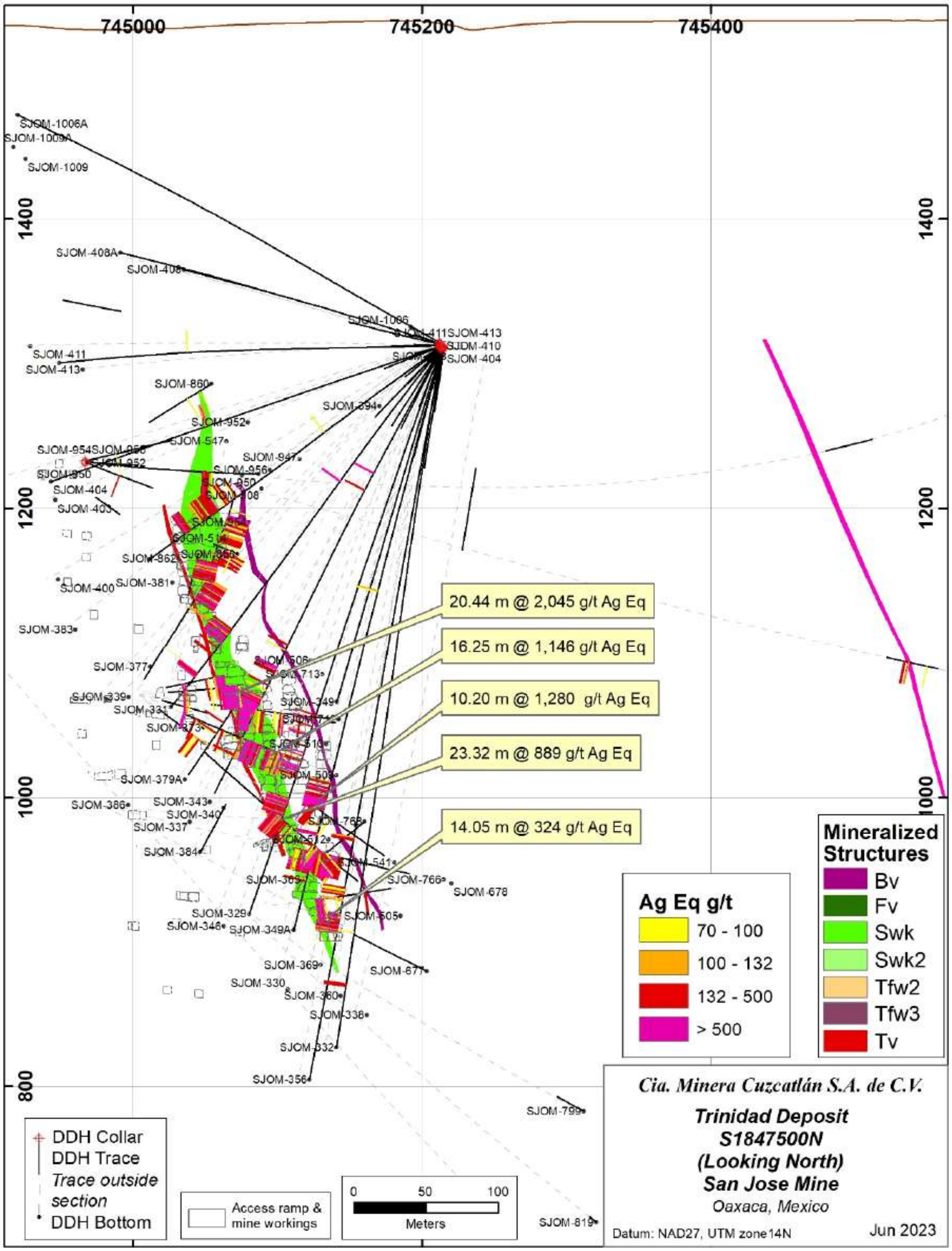
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

Figure 10.4 Section displaying mineralization along 1846975N



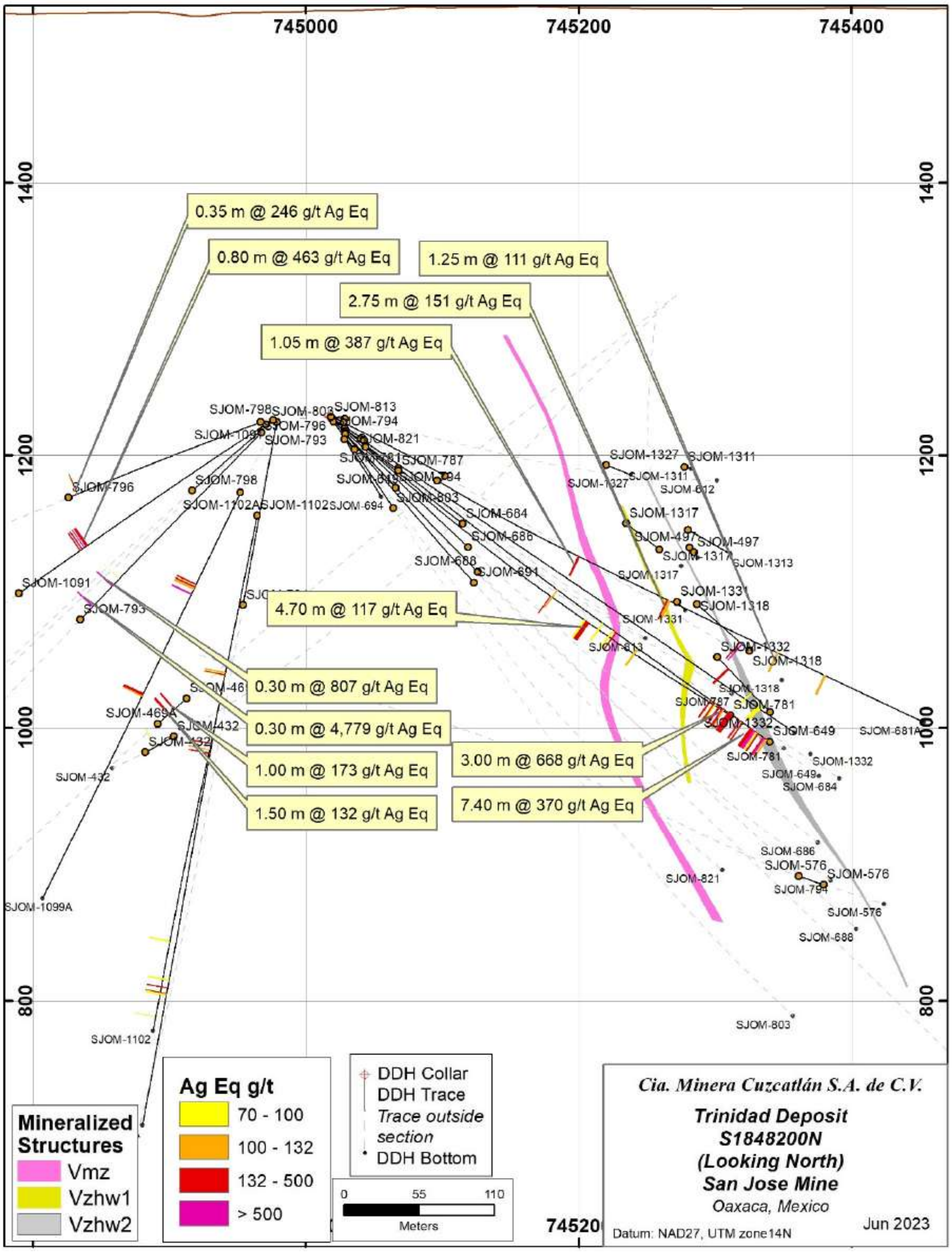
Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

Figure 10.5 Section displaying mineralization along 1847500N



Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

Figure 10.6 Section displaying mineralization along 1848200N



Silver equivalent calculated using a gold to silver ratio of 76:1 based on metal prices of US$ 1,600/oz Au and US$ 21/oz Ag and metallurgical recoveries of 92 % for Ag and 91 % for Au

10.10 Sample length versus true thickness

The relationship between the sample intercept lengths and the true width of the mineralization varies in relation to the intersect angle between the steeply-dipping zone of mineralized veins and the inclined nature of the diamond core holes. Calculated estimated true widths (ETWs) are always reported together with actual sample lengths by taking into account the angle of intersection between drill hole and the mineralized structure. Exaggeration of the true width of the mineralization does not occur during modeling as the actual vein contacts are modeled in three-dimensional space to create vein solids that are subsequently used to constrain estimation of Mineral Resources.

10.11 Summary of drill intercepts

Table 10.4 provides a list of typical drill hole intercepts encountered at the San Jose Mine. It should be noted that the intervals listed are a subset for reference purposes only and do not represent the total mineralized intervals encountered from the 1,460 drill holes drilled at the San Jose Mine. The intervals in Table 10.4 are summarized from press releases detailing the most relevant exploration results reported by Fortuna since 2008.

Table 10.4 Example of typical drill results at the Trinidad Deposit and Victoria mineralized zone

Hole ID	Easting	Northing	Elevation	Azimuth (°)*	Dip (°)*	From (m)	To (m)	Int. (m)	ETW** (m)	Ag (g/t)	Au (g/t)
SJO-119	745300	1846875	1546	270	-60	227	235.4	8.4	4.9	229	2.03
SJO-211	745204	1847250	1538	270	-50	210.75	212.5	1.75	1.2	142	1.4
						218.4	219.4	1	0.7	184	0.81
SJO-261	745331	1847232	1539	290	-65	510.45	528.65	18.2	10.7	241	1.57
						549.55	553.7	4.15	2.4	1,370	7.89
SJO-288	745330	1847261	1539	303	-64	551.85	591.1	39.25	19.3	736	4.76
						596.7	602.8	6.1	3	529	4.69
SJO-295	745329	1847262	1539	303	-58	515	523.8	8.8	5.9	1,240	6.94
						533.2	544	10.8	7.2	731	3.84
SJOM-335	745243	1847557	1312	296	-72	419	425.3	6.3	3.7	3,511	15.04
including						420.05	421.7	1.65	1	12,249	51.89
						439.2	454.7	15.5	9.1	474	2.54
						495.5	498	2.5	1.5	151	0.76
SJOM-390	745244	1847558	1312	304	-56	397.7	410.15	12.45	6.3	128	0.65
						413.85	421.9	8.05	4	636	2.93
SJOM-400	745205	1847509	1311	298	-28	297.8	299.1	1.3	1	78	0.41
SJOM-406	745206	1847507	1313	270	0	No significant mineralized intervals					
SJOM-513	745082	1846785	1076	42	-35	304.85	305.5	0.65	0.5	462	1.95
						307.85	308.15	0.3	0.2	188	1.02
SJOM-591#	745033	1847800	1226	106	-14	426.8	434.5	7.7	4.1	247	1.81
including						428	429.1	1.1	0.6	373	2.31
						433.2	433.5	0.3	0.2	2,860	22.8
SJOM-649#	745018	1848185	1228	85	-37	350	396	46	21	153	0.88
including						383	390.4	7.4	3.6	281	1.24
						394.5	396	1.5	0.7	918	6.29
						409.5	414.3	4.8	2.2	230	1.45
SJOM-684#	745018	1848184	1228	73	-38	194.6	202.2	7.6	3.7	1,106	6.34
SJO-1027#	745889	1847614	1537	264	-75	652.70	655.55	2.85	2.2	51	0.83
SJOM-1036#	745299	1847599	1316	110	5	163.00	164.60	1.60	1.0	47	0.58
						194.30	195.50	1.20	0.8	104	0.89
SJOM-1047#	745022	1848004	1228	97	27	217.00	217.50	0.50	0.4	228	1.08
						230.40	232.10	1.70	1.5	163	1.77
SJO-1053#	745902	1847352	1544	268	-45	630.20	634.30	4.10	1.5	290	2.00
including						631.50	633.20	1.70	0.6	691	4.78

Hole ID	Easting	Northing	Elevation	Azimuth (°)*	Dip (°)*	From (m)	To (m)	Int. (m)	ETW** (m)	Ag (g/t)	Au (g/t)
SJOM-1065	745018	1848004	1226	281	-62	112.70	113.30	0.60	0.3	50	0.50
						118.40	120.40	2.00	1.0	136	1.38
						237.45	237.75	0.30	0.2	39	0.41
						271.30	276.75	5.45	2.8	98	0.49
including						272.35	275.00	2.65	1.4	146	0.72
SJOM-1070A	745016	1848008	1227	296	-27	153.60	160.55	6.95	4.0	77	0.38
including						153.60	154.80	1.20	0.7	248	1.06
						228.40	230.50	2.10	1.2	243	0.82
SJOM-1088	745017	1848007	1226	287	-39	148.00	148.75	0.75	0.6	72	0.02
						155.70	156.35	0.65	0.5	58	0.45
						159.90	161.05	1.15	0.9	43	0.39
						162.50	168.40	5.90	4.6	245	1.41
						251.10	252.40	1.30	1.0	127	0.80
SJOM-1091	744978	1848186	1228	276	-32	168.20	171.30	3.10	1.7	506	261
						172.90	173.40	0.50	0.3	146	0.96
						174.65	175.10	0.45	0.2	275	1.30
						225.95	226.90	0.95	0.5	44	0.35
SJO-1093	745225	1846390	1573	273	-64	19.15	21.75	2.60	1.0	101	1.30
SJO-1096	745383	1845880	1574	269	-61	224.05	226.65	2.60	1.8	178	1.21

Collar coordinates rounded to nearest meter
*Azimuth and dip values taken at collar location
**ETW = Estimated True Width
[#]Holes targeting the Victoria mineralized zone

10.12 Comment on Section 10

The QP has the following observations and conclusions regarding drilling conducted at the Project since 2001:

- Data were collected using industry standard practices.
- Drill orientations are appropriate to the orientation of the mineralization for the bulk of the area where Mineral Resources have been estimated (see Section 7.5 and Section 10.9 for representative cross-sections showing geology and mineralization, respectively).
- Core logging meets industry standards for exploration of epithermal-style deposits. Geotechnical logging is sufficient to support Mineral Resource estimation.
- Collar surveys have been performed using industry-standard instrumentation.
- Downhole surveys performed during the drill programs have been performed using industry-standard instrumentation.
- Drilling information is sufficient to support Mineral Reserve and Mineral Resource estimates.

There are no drilling, sampling or recovery factors that could materially impact the accuracy and reliability of the results known to the QP that are not discussed in the Report.

11 Sample Preparation, Analyses, and Security

All samples are collected by geological staff of Cuzcatlan with sample preparation and analysis being conducted at the Cuzcatlan on-site laboratory (Cuzcatlan Laboratory; channel samples taken after February 2012 and infill and exploration drill core after April 23, 2018, and July 20, 2020, respectively). Prior to the Cuzcatlan Laboratory achieving analytical accreditations, drill core was transported to the ALS Global preparation facility in Guadalajara before being sent for analysis at their laboratory in Vancouver (all exploration drill core, channel samples taken prior to February 2012, and infill drill core and exploration drill core prior to April 23, 2018, and March 5, 2020, respectively). The Cuzcatlan Laboratory was awarded ISO certification as detailed in Section 11.3 on March 3, 2018. Pulp splits and preparation duplicates, along with reference standards and blanks are routinely sent to the ISO-certified ALS Global preparation and analytical facilities in Guadalajara and Vancouver respectively, in order to monitor the performance of the Cuzcatlan Laboratory.

11.1 Sample preparation prior to dispatch of samples

11.1.1 Channel chip sampling

Channel chip samples are generally collected from the face of newly-exposed underground workings. The entire process is carried out under the mine geology department's supervision.

The location of each channel sample is determined using a compass and tape measure relative to a survey reference point determined at approximately 9 m intervals using total station equipment. Samplers measure the azimuth and distance from the underground survey reference point to the location of the channel. The channel distance information is recorded and used in conjunction with underground surveys so as to determine the starting coordinates of the channel. Each channel is not individually surveyed, and the present methodology means the further the channel is from the survey reference point the greater the potential for spatial error.

Sampling is carried out at 3 m intervals within the drifts and stopes of all veins. The channel's length and orientation are identified using paint in the underground working and by painting the channel number on the footwall. The channel is approximately 20 cm wide and approximately 1 to 2 cm deep, with each individual sample preferably being no smaller than 0.4 m and no longer than 1.5 m.

The area to be sampled is washed down to provide a clean view of the vein. The channel is sampled by taking a succession of chips in sequence from the hanging wall to the footwall perpendicular to the vein based on geology and mineralization.

Samples, comprised of fragments, chips and mineral dust, are extracted using a chisel and hammer, along the channel's length on a representative basis. For veins with narrow or reduced thickness (<0.20 m), the channel depth is increased thus allowing the minimum sample mass (5 kg) to be collected.

Sample collection is normally performed by two samplers, one using the hammer and chisel, and the other holding the receptacle (cradle), to collect rock and ore fragments. The cradle consists of a sack, with the mouth kept open by a wire ring. Fragments greater than 6 cm in diameter are not accepted.

The obtained sample is deposited in a plastic sample bag with a sampling card and the assigned sample ID. The sampling equipment is then washed prior to the collection of the next sample. Once all the samples in the channel have been collected the sample bags are transported to the surface and sorted with quality control samples being inserted at industry standard insertion rates prior to delivery to the Cuzcatlan Laboratory.

11.1.2 Core sampling

Drill core is laid out for sampling and logging at the core logging facility at the camp. Sample intervals are marked on the core and depths recorded on the appropriate box.

A geologist is responsible for determining and marking the drill core intervals to be sampled, selecting them based on geological and structural logging. The sample length must not exceed 2 m or be less than 20 cm.

Splitting of the core is performed by diamond saw. The geologist carefully determines the line of cutting, in such a way that both halves of the core are representative. The core cutting process is performed in a separate building adjacent to the core logging facilities. Water used to cool the saw is not re-circulated but stored in a tank to allow any fines to settle before final disposal.

Once the core has been split, half the sample is placed in a sample bag. A sampling card with the appropriate information is inserted with the core.

11.1.3 Bulk density determination

Bulk density samples have been primarily sourced from drill core (5,403 measurements as of June 30, 2023) with a limited number being sampled from underground workings.

Bulk density measurements are performed at the ALS Global Laboratory in Vancouver using the OA-GRA08 methodology. This test consists of coating the core sample in paraffin wax, measuring the sample weight in air then suspending the sample in water and measuring the weight again. The bulk density is calculated using the following equation:

$$\text{Bulk density} = \frac{\Delta}{B - C - [(B - A) / Dwax]}.$$

Where

A = weight of sample in air

B = weight of waxed sample in air

C = weight of waxed sample suspended in water

D = density of wax

Results of this analysis are included in Section 14.8 of this Report.

11.2 Dispatch of samples, sample preparation, assaying and analytical procedures

11.2.1 Sample dispatch

Following the sawing of drill core or the collection of chip fragments underground (described above) samples were placed in polyethylene sample bags with a sample tag detailing a unique sample identifier. The same sample identifier is marked on the outside of the bag and it is sealed with a cable tie. Secured sample bags are then placed in rice sacks. Samples are delivered each day to the Cuzcatlan Laboratory for preparation and analysis.

Prior to the certification of the Cuzcatlan Laboratory, samples of drill core were placed in rice sacks labeled with the company name, number of samples contained in the sack and the sample number sequence. The rice sacks with the samples were then sealed with double cable ties and stored in a secure, dry and clean location. The rice sacks were subsequently transported by authorized company personnel to commercial freight shipment offices in Oaxaca for air transport to the ALS Global sample preparation facility in Guadalajara, Jalisco, Mexico.

11.2.2 Sample preparation

Cuzcatlan Laboratory

Upon receipt of a sample batch the laboratory staff immediately verifies that sample bags are sealed and undamaged. Sample numbers and IDs are checked to ensure they match that as detailed in the submittal form provided by the geology department. If any damaged, missing, or extra samples are detected, the sample batch is rejected, and the geology department is contacted immediately to investigate and resolve the discrepancy. If the sample batch is accepted the samples are sequentially coded and registered as received.

Accepted samples are then transferred to individual stainless-steel trays that have a maximum capacity of 7 kg, with their corresponding sample IDs for drying. If the sample is excessively wet a little water is used to clean out the inside of the sample bag and ensure all fines are collected in the metal trays. The trays are placed on a trolley then placed into an electric furnace oven for 2 to 4 hours at a temperature of 100 to 118°C until the sample weight is constant.

Once samples have been dried, they are transferred to a separate ventilated room for crushing. The operator checks the samples received match those on the submittal form before each sample is fed into a terminator crusher in turn to reduce the original particle size so that 75 % passes a 10-mesh sieve size (2 mm). The sample may have to be put through the crusher twice if the required particle size is not achieved on the first pass. The crushing equipment is cleaned using compressed air and a barren quartz flush after each sample.

Once the sample has been crushed it is homogenized and reduced in size to approximately 1,000 g using a single-tier Jones riffle splitter. The reduced sample is returned to the sampling tray for pulverizing whereas the coarse reject material is returned to a labeled sample bag and temporarily placed in a separate storage room for transferal to the long-term storage facilities.

Crushed samples are pulverized using a Rocklab standard LM2 disc mill so that 85 % of particles pass a 200-mesh sieve size. The pulverized sample is then homogenized by placing it in the center of a 40 cm x 50 cm rubber mat and lifting opposite corners five times each. The pulp sample is carefully placed in an envelope along with the sample ID label. Envelopes are taken to the balance room where they are checked to ensure the samples registered as having been received and processed match those provided in the envelopes.

ALS Global Laboratory

All exploration core samples were sent to the ALS Global sample preparation facility in Guadalajara, Mexico until March 5, 2020, after which they were sent to the certified Cuzcatlan Laboratory starting on July 20, 2013, when the next drill program commenced.

Upon arrival, a notification of sample reception was transmitted to Cuzcatlan, and the samples entered into the laboratory sample management system. Following drying, the samples were weighed, and the entire sample crushed to a minimum of 70 % passing a 10-mesh sieve size. The crushed sample was then reduced in size by passing the entire sample through a riffle splitter until a 250 g split was obtained. The 250 g split was then pulverized to a minimum of 85 % passing a 200-mesh sieve size. The pulverized samples were subsequently grouped by sample lot and shipped by commercial air freight to ALS Global's analytical facility in Vancouver, British Columbia for analysis.

11.2.3 Sample analysis

Cuzcatlan Laboratory

Upon receipt of samples in the analytical laboratory, all pulps are re-checked to ensure they match the list in the submittal form. Two samples from the pulp envelope are then taken. One sample is analyzed using atomic absorption (AA) spectroscopy and the other by fire assay (FA) with gravimetric finish. Atomic absorption results are recorded when silver grades are less than 500 g/t or when gold grades are less than 6.5 g/t, otherwise the gravimetric results are recorded.

For the AA finish, 2 g of the pulp is weighed and added to a beaker, along with 40 ml of hydrochloric acid, 10 ml of nitric acid, and 10 ml of perchloric acid and heated gently at 90–100 °C until all the sample is digested. It is then cooled before the volume is increased with distilled water to approximately 200 ml prior to analysis by atomic absorption. Two machines are used, one calibrated for gold and one for silver.

The above process is equivalent to the ALS Global OG62, four acid digestion with atomic absorption spectroscopy (AAS) finish.

For the FA with gravimetric finish, 30 g of the pulp is weighed and added to a crucible, along with 150 g of flux. The material is then carefully homogenized before being covered by a thin layer of borax.

The mixture is placed in a preheated oven at 1,050°C ± 5°C for 40 to 45 minutes. Once the crucibles have cooled the slag material is separated and discarded with the remaining material being transferred to a ceramic cup and placed in an oven at a temperature of 950 °C ± 2°C before it is reduced to 849 °C ± 2°C for 30 minutes in order to evaporate any lead and leave behind a clean doré (Ag/Au).

The doré is carefully weighed on a micro balance before being transferred to a ceramic cup and dilute nitric acid added until 25 to 75 % of the crucible is filled. The ceramic pots are placed in an oven for approximately 30 minutes at 110 °C ± 10°C. The pots are removed from the oven and the silver nitrate solution is decanted leaving the gold. The remaining gold is washed with dilute (4 %) ammonium hydroxide and then rinsed with distilled water. The calcined crucibles containing the gold are placed into an oven for 10 to 15 seconds at a temperature of 800 °C. Finally, the crucibles are removed from the oven, cooled and the gold weighed on a microbalance. The gold and silver contents are calculated using these weights.

The above process is the equivalent of the ALS Global Method ME-GRA21 (fire assay charge with gravimetric finish).

Fluorine has been analyzed at the Cuzcatlan Laboratory since mid-2018. As assaying for fluorine was not conducted prior to 2018, the geology department selects drill holes for assaying that represent areas planned for mining in the near future. Sampling consists of making a composite of multiple pulp samples that represent the full thickness of mineralization for each hole. The composite is then dried for an hour at 105 °C, weighed, with 0.5 ± 0.01 g placed in a zirconium crucible. Approximately 4 ± 0.1 g of sodium peroxide and 1 ± 0.1 g of sodium carbonate are added to the crucible and homogenized with a glass rod. Next, approximately 1 g of sodium peroxide is added, forming a cover to the mixture prior to being placed in an oven at approximately 750 ° C ± 50 ° C until the liquid becomes a deep red color, which is indicative that the sample has melted prior to shaking until total dissolution and allowing to cool to room temperature and the sample solidifies.

The crucible with its contents is then placed in a 300 ml beaker with 80 ml of deionized water, where the solids inside the zirconium crucible are dissolved and the solution cooled to room temperature before being transferred to a 250 ml graduated flask and left to rest for approximately 12 hours.

A 25 ml aliquot is then taken of the sample and poured into a 100 ml flask, with care taken not to extract sediment. Bromothymol blue is added along with a 25 % HCl solution, 50 ml of a buffer solution and deionized water. Finally, the contents of the flask are poured into a plastic cup and fluorine levels are analyzed using a selective ion electrode, based on the calibration curve technique.

ALS Global

Upon arrival at ALS Global's analytical facility in Vancouver, British Columbia, the sample identity data were entered into the company's laboratory information management system). Analysis consists of the following procedures:

- Homogenization and splitting of the samples.
- Analysis for silver by ALS-Global Method ME-ICP41 – aqua regia digestion and inductively coupled plasma (ICP)-atomic emission spectroscopy (AES) finish.
- For samples where silver ICP analysis exceeded 100 ppm the samples were rerun by ALS Global Method Ag-GRA21 – 30 g fire assay charge with gravimetric finish.
- Fire assay for gold by ALS Global Method Au-AA23 – 30 g fire assay charge with AAS finish.
- For samples where gold AAS analysis exceeded 10 ppm the samples were rerun by ALS Global Method Au-GRA21 – 30 g fire assay charge with gravimetric finish.
- Analysis for 34 other elements by ALS-Global Method ME-ICP41 – aqua regia digestion and ICP-AES finish.
- For samples where lead and zinc ICP analysis results exceeded 10,000 ppm (1.0 %), the samples were re-run by ALS-Global Method PB-AA46 and Method ZN-AA46 - aqua regia digestion and AAS finish.

All laboratory internal quality control results are reported on the laboratory assay certificates. Sample pulps and rejects were temporarily stored by ALS Global for later shipment back to the San Jose Mine site.

11.3 Laboratory accreditation

The onsite laboratory used by Cuzcatlan since 2012 for assaying channel samples was accredited as a testing laboratory having been assessed by the Standards Council of Canada

(SCC) and found to conform with the requirements of ISO/IEC 17025:2005 for sample preparation and assaying of silver and gold with accreditation awarded on March 2, 2018. Prior to this, the laboratory was not certified. The Cuzcatlan Laboratory is not independent of Cuzcatlan or Fortuna.

The ALS Chemex laboratory used by Cuzcatlan (renamed to ALS Global) for the submission of drill core up until March 5, 2020, and as an umpire laboratory, is an independent, privately-owned analytical laboratory group. The Vancouver laboratory holds ISO 17025 accreditation. The Mexican laboratory holds ISO 9001:2000 certification.

The SGS Laboratory used by Cuzcatlan as an umpire laboratory for drill core is located in Durango, being an independent and privately owned analytical laboratory group. The Durango laboratory holds ISO/IEC 17025:2005 accreditation for sample preparation and assaying.

Pan American and Continuum used the same ALS Chemex Laboratory for assaying drill core as Cuzcatlan. Data obtained from the Pan American and Continuum programs represents less than 2 % of all information collected as of the effective date of this Report.

11.4 Sample security and chain of custody

Sample collection and transportation of drill core and channel samples is the responsibility of the Cuzcatlan exploration and mine geology departments.

Exploration core boxes are sealed and carefully transported to the core logging facilities located adjacent to the mine offices where there is sufficient room to layout and examine several holes at a time. Once logging and sampling have been performed, the core is transferred to the permanent storage facility at the mine site. The onsite storage facility is dry and well illuminated, with metal shelving. Core is stored chronologically, and location plans of the warehouse provide easy access to all core collected by Cuzcatlan.

The drill core from the infill drilling program is stored in the same warehouse as the exploration core. The storage facility is managed by the Cuzcatlan geology department, and any removal of material must receive their approval.

Coarse reject material from exploration and infill drill core is presently being stored securely in a separate warehouse. Pulps from the exploration and infill drill programs are stored in a secure and dry pulp storage facility.

Coarse reject material from channel samples is collected from the Cuzcatlan Laboratory every day and stored in a storage facility located in a secure building half a kilometer from the main operation. Pulps of channel samples analyzed by ALS Global are also stored in the same storage facility as the coarse reject material. Pulps of channel samples analyzed by the Cuzcatlan Laboratory are stored in a secure storage facility at the operation.

Samples are retained in accordance with the Fortuna corporate sample retention policy. All drill core and coarse rejects and pulps from the drill core are stored indefinitely and only disposed of through an official confirmation process submitted by Cuzcatlan and confirmed by Fortuna's SVP of Technical Services and the SVP of Exploration. Disposal of coarse rejects from surface samples is performed after 90 days and is controlled by the exploration department. Disposal of coarse rejects from underground channel samples is performed after 90 days and is the responsibility of the Geology Superintendent.

11.5 Quality control measures

The implementation of a quality assurance/quality control (QAQC) program is a current standard industry practice and involves establishing appropriate procedures and the routine insertion of certified reference material (CRMs), blanks, and duplicates to monitor the sampling, sample preparation and analytical process. Analysis of QC data is completed to assess the reliability of sample assay data and the confidence in the data used for the estimation.

Pan American and Continuum did not insert QC samples during their drill programs. To verify the Continuum results, Fortuna submitted 42 samples representing 14 % of the total assessed samples for re-analysis, consisting of 23 pulp duplicates and 19 field duplicates (quarter core taken of the remaining half core). The results were independently reviewed by third-party consultants Resource Modeling Inc. (RMI) who concluded that "*there was no significant bias between the original Continuum assays and the 42 check assays*" (Lechner & Earnest, 2009). The QP agrees with this conclusion. The Pan American and Continuum drilling represents less than 2 % of the total samples assayed at the San Jose Mine, with Cuzcatlan responsible for assaying the remaining 98 %.

Cuzcatlan routinely inserts certified CRMs, blanks, field, preparation (coarse reject) and pulp duplicates to the Cuzcatlan and ALS Global laboratories.

The Cuzcatlan Laboratory has been the primary laboratory for assaying channel samples since February 2012 with the results of the inserted QC samples detailed below. Prior to this channel samples were sent to ALS Global together with appropriate numbers of CRMs, blanks, and duplicates, which indicated reasonable levels of accuracy, precision, and no contamination or sample switching issues. These results have not been detailed in this Report as they correspond to areas that have been mined out. Exploration and infill drill core is sent to the ALS Global Laboratory with accompanying CRMs, blanks and duplicates with the QC results presented in the following subsections.

Since April 2018, infill drill core has also been sent to the Cuzcatlan Laboratory (based on it attaining certification) for assaying silver and gold with the appropriate insertion of QC samples. Since July 20, 2020, exploration drill core has also been submitted to the Cuzcatlan Laboratory. Comment on the results to date for these inserted QC samples are detailed in the following subsections for completeness.

Quality control measures regarding fluorine levels are monitored internally by the Cuzcatlan Laboratory as of the effective date of this Report.

11.5.1 Certified reference material

CRMs are samples that are used to measure the accuracy of analytical processes and are composed of material that has been thoroughly analyzed to accurately determine its grade within known error limits. CRMs are inserted by the geologist into the sample stream, and the expected value is concealed from the laboratory, even though the laboratory will inevitably know that the sample is a CRMs of some sort. By comparing the results of a laboratory's analysis of a CRM to its certified value, the accuracy of the result is monitored.

CRMs have been used to assess the accuracy of the assay results from both the Cuzcatlan and ALS Global laboratories having been placed into the sample stream by Cuzcatlan geologists to monitor accuracy of the analytical process. CRM results are assessed at the operation on a monthly basis using time series graphs to identify trends or biases.

Cuzcatlan Laboratory

Thirty-two different CRMs have been used to monitor the Cuzcatlan Laboratory since February 2012 with the majority of CRMs (25 of the 32) generated from in-house coarse reject material and certified by CDN Resource Laboratories Ltd in Vancouver, Canada.

Channels

The Cuzcatlan Laboratory employs a three-acid digestion methodology with AAS for assaying silver, unless the grade is greater than 500 g/t Ag, in which case the sample is re-assayed by FA with a gravimetric finish. For gold, the sample is assayed using FA-AAS unless the gold greater is greater than 6.5 g/t Au, in which case the sample is re-assayed with a gravimetric finish.

Results for the CRMs submitted with the channel samples to the Cuzcatlan Laboratory are monitored on a continuous basis with a monthly report detailing results to management and actions taken if any issues are identified. In addition to statistical analysis, graphical analysis of the results is also conducted to assess trends and biases over time in the data.

Pass rates reported for CRMs submitted with channel samples since mining commenced to the data cut-off date for silver and gold values are regarded as acceptable. Two of the purchased CRMs failed to provide representative samples for the assaying process and submission ceased in favor of the in-house CRMs. The Cuzcatlan Laboratory had some initial issues with its protocols and equipment regarding gold assaying in the second half of 2012 and early 2013. The laboratory has been through several external audits culminating with its accreditation in 2018 and this work has resulted in continuous improvement in accuracy levels observed for gold grades.

Drill core

CRMs have been inserted at a submission rate of 1 in every 20 infill drill core samples and Brownfield's exploration drill core to the Cuzcatlan Laboratory since April 23, 2018, and July 20, 2020, respectively. Results for the CRMs submitted with the drill core samples are monitored on a continuous basis with a quarterly report detailing results to management and actions taken if any issues are identified. Pass rates reported for CRMs submitted with core samples for silver and gold values are regarded as acceptable.

ALS Global Laboratory

Drill core (exploration and infill-pre-July 2020 and April 2018, respectively) was sent to ALS Global for assaying. As described above, silver was assayed by ICP-AES, unless the grade was greater than 100 g/t Ag, in which case the sample was re-assayed by FA with a gravimetric finish.

CRMs to monitor the accuracy of silver assays have been submitted at a rate of approximately 1 in 20 samples, to assess the accuracy of assays obtained by both ICP-AES and FA with a gravimetric finish.

Silver accuracy levels of core samples sent to ALS Global were regarded as reasonable with CRMs for both methods returning pass rates greater than 96 %. This was despite many of the failures observed for the ICP-AES analysis being attributed to standard CDN-HC-2 which was thought to be inappropriate for ICP-AES analysis.

Gold is assayed by FA-AAS unless the gold concentration is greater than 10 g/t Au, in which case the sample is re-assayed by FA with a gravimetric finish.

CRMs to monitor the accuracy of gold assays were submitted at a rate of 1 in 19 samples primarily for assaying by FA-AAS and occasionally by FA with a gravimetric finish.

Gold accuracy levels of core samples sent to ALS Global were regarded as reasonable with CRMs for both methods returning pass rates greater than 95 %. It was noted that the CRMs that tended to fail at a higher rate were those inserted at the beginning of the monitoring program with results improving as time progressed.

11.5.2 Blanks

Field blank samples are composed of material that is known to contain grades that are less than the detection limit of the analytical method in use and are inserted by the geologist in the field. Blank sample analysis is a method of determining sample switching and cross-contamination of samples during the sample preparation or analysis processes. Cuzcatlan uses coarse marble sourced from a local quarry and provided by an external supplier as their blank sample material.

Cuzcatlan Laboratory

Channels

The analysis focuses on the submission of blanks at a submission rate of approximately one in 20 channel samples. Results of the blanks submitted indicate that cross contamination and mislabeling are not material issues at the Cuzcatlan Laboratory with pass rates greater than 99 %.

Drill core

For blanks submitted to the Cuzcatlan Laboratory with infill and exploration drill core samples since April 23, 2018, no failures for silver or gold (set at two times the lower detection limit) were detected, indicating that cross contamination and mislabeling are not material issues at the Cuzcatlan Laboratory.

ALS Global Laboratory

Blanks were submitted with core samples to the ALS Global Laboratory by Fortuna and Cuzcatlan covering all core submitted at a rate of one in 20 samples. A pass rate for blanks (set at two times the lower detection limit) of greater than 98 % was achieved for both silver and gold blank submissions. If two blanks failed in succession, all assay results for the batch were automatically reviewed and re-analyzed if deemed necessary. Blank results from ALS Global were regarded as acceptable indicating no significant sample switching or contamination.

11.5.3 Duplicates

The precision of sampling and analytical results can be measured by re-analyzing the same sample using the same methodology. The variance between the measured results is a measure of their precision. Precision is affected by mineralogical factors such as grain size and distribution and inconsistencies in the sample preparation and analysis processes. There are a number of different duplicate sample types which can be used to determine the precision for the entire sampling process, sample preparation, and analytical process. A description of the different types of duplicates used by Cuzcatlan is provided in Table 11.1.

Table 11.1 Duplicate types used by Cuzcatlan

Duplicate	Description
Field	Sample generated by another sampling operation at the same collection point. Includes a second channel sample taken parallel to the first or the second half of drill core sample and submitted in the same or separate batch to the same (primary) laboratory.
Preparation	Second sample obtained from splitting the coarse crushed rock during sample preparation and submitted in the same batch by the laboratory.

Duplicate	Description
Laboratory	Second sample obtained from splitting the pulverized material during sample preparation and submitted in the same batch by the laboratory.
Reject assay	Second sample obtained from splitting the coarse crushed rock during sample preparation and submitted blind to the same or different laboratory that assayed the original sample.
Duplicate assay	Second sample obtained from splitting the pulverized material during sample preparation and submitted blind at a later date to the same laboratory that assayed the original pulp.
Check assay	Second sample obtained from the pulverized material during sample preparation and sent to an umpire laboratory for analysis.

Numerous plots and graphs are used on a monthly basis to monitor precision and bias levels. A brief description of the plots employed in the analysis of Cuzcatlan duplicate data, is described below:

- Absolute relative difference (ARD) statistics: relative difference of the paired values divided by their average.
- Scatter plot: assesses the degree of scatter of the duplicate result plotted against the original value, which allows for bias characterization and regression calculations.
- Ranked half absolute relative difference (HARD) of samples plotted against their rank percent value.

Duplicates were submitted to both the Cuzcatlan Laboratory (with channel samples) and the ALS Global Laboratory (with drill core). The ALS laboratory also acts as the umpire laboratory, analyzing reject assays and check assays (pulps) from the Cuzcatlan Laboratory.

If both the original and duplicate result returned a value less than 10 times the detection limit, the result was disregarded for the ARD analysis due to distortion in the precision levels at very low grades close to the limits at which the instrumentation can measure. These very low values are not seen as material and can distort more meaningful results if they are not removed.

Cuzcatlan Laboratory

Channels

Cuzcatlan inserts field duplicates with channel samples as part of its QAQC program. Preparation and laboratory duplicates are inserted by the laboratory whereas reject assays and duplicate assays are inserted blind from the geology department. Check assays (both coarse rejects and pulps) from the Cuzcatlan Laboratory are sent to the certified laboratory of ALS Global to provide an external monitor of precision. CRMs and blanks are also submitted with the check assays to ensure the accuracy of the ALS results. HARD results for duplicates were used to assess the Cuzcatlan Laboratory.

In general precision levels are reasonable with the majority of HARD values being less than the accepted threshold value. However, field duplicate results are poor for both silver and gold. The operation has tested numerous practices to improve the sampling procedure, such as including: closer supervision of the sampling process; increasing the sampling mass; trying alternative sampling methods with limited success. In addition, several adjustments have been made by the laboratory to improve the gold analytical techniques with improvements seen over the years.

Duplicate coarse reject and pulps sent to an umpire laboratory indicate reasonable precision levels between laboratories, suggesting the issue with the field duplicates is not a Cuzcatlan

Laboratory issue. This was further confirmed by Cuzcatlan when a program of homogenizing and splitting field samples under controlled conditions in the laboratory prior to submission to the total sample stream returned reasonable precision levels.

Based on the above, the poor precision levels for the field duplicates have been attributed to the heterogeneous nature of the mineralization with the presence of a moderate to high nugget effect. It is worth noting that the results observed for the precision levels for the channel samples are similar to that for drill core, suggesting that sampling error is not the problem.

Drill core

A full array of duplicate samples has been used to assess precision levels in respect to drill core sample analysis at the Cuzcatlan Laboratory with number of duplicate submissions ranging from rate of approximately one in 20 for field duplicates to a rate of one in 40 for reject assays. Results are very similar to those described for the channel samples and confirm conclusions regarding precision levels.

ALS Global Laboratory

Cuzcatlan primarily relied on the insertion of field duplicates, reject assays (coarse rejects) and duplicate assays (pulps) to assess the precision of drill core results from the ALS Global laboratory. The operation also monitored the results of the in-house preparation and laboratory duplicates inserted by ALS.

Cuzcatlan regularly sends check assays (both coarse rejects and pulps) to the umpire laboratory, SGS, to provide an external monitor of precision. CRMs and blanks are also submitted with the check assays to monitor the accuracy of the SGS laboratory.

Precision results for exploration core samples evaluated by ALS Global, expressed as HARD are detailed in Table 11.8.

Precision results for exploration core samples demonstrate a high level of variability that is representative of the nature of mineralization with poor precision results for the field duplicates, reject assays and duplicate assays. However, it was discovered during an audit of the results that the exploration team had been tending to insert low-grade samples (<60 g/t Ag) and this has had a detrimental effect on the results. When higher-grade values are assessed the precision levels improve and are seen to be acceptable, which is reflected in the superior results observed for the samples assayed with a gravimetric finish.

Results from the SGS laboratory return similar precision levels suggesting the issue is not specific to ALS Global.

Precision levels of field duplicates for infill and exploration drill core samples submitted to ALS Global are regarded as poor. The results are indicative of the highly variable 'nuggety' nature of the mineralization that reduces precision levels. The operation has assessed the nugget effect by crushing and splitting the core to obtain a 'field split' prior to submission to ALS Global rather than using the other half of the core. Results indicate that precision is not an issue at the laboratory but is inherent in the sample and generated due to splitting of the core.

Cuzcatlan continues to monitor and attempt to improve the precision of the sampled drill core; however, the results indicate the difficulty the variable grades present for grade estimation, particularly for gold.

11.5.4 Conclusions regarding quality control results

Accuracy (CRM submission) and sample contamination/switching (blank submission) for both laboratories is reasonable, with the Cuzcatlan Laboratory making some significant improvements in its gold accuracy since 2013. Precision remains a problem with field duplicate results below the expected levels at both the ALS Global and Cuzcatlan laboratories. Precision levels for field duplicates have improved over time as the operation has worked hard at improving their sampling, preparation and analytical techniques but is still falling short of the target levels. The fact that both sample types (drill core and channels) return lower than expected precision results for field duplicates, along with the results of testing 'field splits', supports the theory that the style of mineralization is inherently variable and obtaining a large enough sample mass to counteract this variance is impractical. The failure to reproduce similar grades in the same sample does mean that there is a slightly higher level of uncertainty in the estimate, particularly for gold, and that some variation between the estimate and reality as reported in the reconciliation should be expected. However there does not appear to be a definitive bias to the results and the variation has been taken into account during Mineral Resource confidence classification.

11.6 Comment on Section 11

Implementation of a QAQC program is current industry practice and involves establishing appropriate procedures and the routine insertion of CRMs, blanks, and duplicates to monitor the sampling, sample preparation and analytical process. Fortuna implemented a full QAQC program to monitor the sampling, sample preparation and analytical process since taking control of the San Jose Project in 2006 in accordance with its companywide procedures. The program involved the routine insertion of CRMs, blanks, and duplicates. Evaluation of the QAQC data indicates that the data are sufficiently accurate and precise to support Mineral Resource estimation.

The style of mineralization does present problems primarily with precision levels due to the "nugget effect" and subsequently some variations between the estimate and reality can be expected on a local scale. The gold assays are likely to present the biggest variation and the operation must continue to improve the channel sampling process to improve repeatability to increase the confidence in the block model estimates and grade control grades.

It is the opinion of the QPs that the sample preparation, security, and analytical procedures used at the San Jose Mine for samples sent to both the ALS Global and Cuzcatlan laboratories have been conducted in accordance with acceptable industry CRMs, and that assay results generated following these procedures are suitable for use in Mineral Resource and Mineral Reserve estimation.

12 Data Verification

12.1 Introduction

12.1.1 Pan American and Continuum

Information regarding the verification of data conducted by Pan American and Continuum was not available for this Report.

Continuum results were verified by Fortuna with the resubmission of 42 samples representing 14 % of the total samples assayed, with no major differences noted between the results. The Pan American and Continuum drilling represents less than 2 % of the total samples assayed at the San Jose Mine, with Cuzcatlan responsible for assaying the remaining 98 %.

12.1.2 Cuzcatlan

Since taking ownership in 2009 Cuzcatlan mine site staff have adhered to a stringent set of procedures for data storage and validation, performing verification of its data on a monthly basis for all data relating to drilling and channel samples. The operation employs a Database Administrator who is responsible for oversight of data entry, verification and database maintenance.

Steps taken by the Qualified Persons to verify the data used in the Mineral Resource and Mineral Reserve estimation process and detailed in this Report include evaluation of the following areas:

- Database.
- Collars and down-hole surveys.
- Geological logs and assays.
- Geotechnical and hydrology.
- Metallurgical recoveries.
- Mineral Resource estimation.
- Mineral Reserve estimation
- Mine reconciliation.

12.2 Database

Prior to 2017, the Cuzcatlan data used for Mineral Resource estimation was stored in two SQL databases, one for storing channel data and the other for drill hole data. The databases were fully validated annually by Fortuna as part of the Mineral Resource estimation process.

In mid-2017, Cuzcatlan worked with staff from Maxwell Geoservice to transfer all information into the commercial SQL database system, Datashed, employing a dedicated Data Manager to oversee the data transfer. All data must pass a series of validation checks prior to being imported into Datashed.

In addition, an independent audit of the database is conducted every quarter by a dedicated Database Auditor. A report is filed listing any discrepancies and Cuzcatlan staff are required to make the necessary corrections.

A further preliminary validation of the database was performed by the Cuzcatlan geology department in June 2023 prior to usage for resource updating.

The database was then reviewed and validated by Mr. Alexander Delgado (MAusIMM) and Mr. Chapman. The data verification procedure involved the following:

- Evaluation of minimum and maximum grade values.
- Investigation of minimum and maximum sample lengths.
- Randomly selecting assay data from the database and comparing the stored grades to the original assay certificates.
- Assessing for inconsistencies in spelling or coding (typographic and case sensitivity errors).
- Ensuring full data entry and that a specific data type (collar, survey, lithology, and assay) is not missing.
- Assessing for sample gaps or overlaps.

No significant inconsistencies were discovered.

12.3 Collars and downhole surveys

Mr. Chapman checked randomly selected collar and downhole survey information for each campaign against source documentation. In addition, Mr. Chapman completed a comparison of the underground collar coordinates against the surveyed underground developments and drill stations. The wireframes showed a good correlation with collar locations recorded in the database.

Downhole surveys are taken using survey equipment such as Flexit or Reflex tools. A validation of the readings was performed by Mr. Chapman by randomly selecting readings taken from individual holes and assessing the level of deviation between successive data points. If significant discrepancies (e.g. > 15%) existed between data points, the information was flagged and follow up checks performed. Mr. Chapman is of the opinion that collar and downhole survey data has been determined using appropriate techniques and is suitable for usage in Mineral Resource and Mineral Reserve estimation.

12.4 Geological logs and assays

In early 2018 Cuzcatlan initiated the usage of the Maxwell LogChief software that supports the electronic collection of geological and geotechnical information in the field using a standardized system of drop-down menus to promote consistency. In addition, all information is electronically transferred to the database removing the risk of transcription errors.

For validation purposes, Mr. Weedon, during site visits, reviews the geological interpretation and drill core with Cuzcatlan exploration personnel.

Assays received by Cuzcatlan are reported in both portable document format (pdf) and Microsoft Excel format. Documents are compared and only imported into the database if they are in agreement. Importation is performed electronically without requiring transcription.

Assay data are verified using a full QAQC program including the insertion of CRMs, blanks and duplicates for assays reported by both Cuzcatlan and ALS Global laboratories. A full description of this program and its results is provided in Section 11.5.

To further verify the assay data, Mr. Chapman randomly selected assay data from the database and compared the assay results stored to that of the original assay certificates. Mr. Chapman is of the opinion that the geological and assay data stored in the database is representative of that reported from the laboratories and is suitable for usage in Mineral Resource and Mineral Reserve estimation.

12.5 Geotechnical and hydrogeology

Mr. Veillette has been providing technical support with respect to tailings and water management since September 2022. Mr. Veillette has assisted SRK consulting, the Engineer of Record (EoR), in the management of the tailings facilities and reviewed all technical documents related to tailings and water management. The San Jose Mine has a water balance with a closed circuit where effluent is not discharged and only water treatment water from the nearby community is used as required. As of the effective date of this Report, it is the opinion of Mr. Veillette that the partially closed tailings dam is well managed with approximately 2 m of freeboard below the spillway invert; and the dry stack is also well managed.

12.6 Metallurgical recoveries

A daily log is produced by Cuzcatlan staff that monitors the performance of the plant including the metallurgical recovery achieved for each metal produced. This daily log is supplemented with a monthly plant reconciliation report that reconciles the head grades with the concentrate and tailings grades to verify the recoveries being achieved at the operation. Ms. Gonzalez received a copy of the above information and used this data to check that the proposed metallurgical recoveries set out in this Report are achievable and reasonable.

Ms. Gonzalez is also responsible for reviewing and approving any adjustments to the process design or metallurgical testwork programs while her day-to-day activities include verifying plant operations, overseeing installation of new equipment, fine-tuning the current operational strategy, and discussing aspects of mineralogy, lithology and operational issues with the site staff.

In addition to reviewing daily plant performance, Ms. Gonzalez also conducted ongoing reviews of processing performance as part of her duties including:

- Review of monthly and quarterly metallurgical balance of the processing plant.
- Metallurgical testwork programs of drill core.
- Historical statistical processing plant performance.
- Mineralogical Studies.
- Overseeing installation of new plant equipment.
- Fine-tuning operational strategy.
- Discussing aspects of mineralogy, lithology and operational issues with site staff.

12.7 Mineral Resource estimation

The Mineral Resource estimation methodology followed by Cuzcatlan, as described in Sections 14 of this Report, is defined in Fortuna's MRMR procedural manual, which is based on CIM (2019) best practice guidelines.

Each step of the process is documented, and a checklist developed that is signed off by Cuzcatlan staff and Mr. Delgado.

Validation of data used in the estimates from Mr. Chapman includes the following reviews:

- Site visit to review core, underground workings and discuss estimation methodology.
- The database (as described above).
- Wireframe modeling to define geological, structural and mineralization domains.
- Statistical evaluation to confirm domaining is appropriate and adheres to the geological interpretation.
- Variographic analysis to confirm modeled variograms correspond to experimental variography.
- Cross validation and reconciliation results.
- Statistical checks on each field contained in the resource block model to confirm minimum/maximum values are not exceeded.
- Mineral Resource classification.
- Depletion of mined out and remnant/isolated blocks from the model.
- Reported Mineral Resources correspond with block model.

The QP is of the opinion that the Mineral Resource estimation was performed using standard industry practices and is suitable for usage in Mineral Reserve estimation.

12.8 Mineral Reserve estimation

The Mineral Reserve estimation methodology followed by Cuzcatlan, as described in Section 15 of this Report, is defined in Fortuna's MRMR procedural manual, which is based on CIM (2019) best practice guidelines.

Each step of the process is documented, and a checklist developed that is signed by Cuzcatlan staff and Mr. Espinoza.

Mr. Espinoza has visited the San Jose Mine several times during 2022 and 2023 to verify the mine infrastructure, mine operating practices, as well as the conditions of the rock mass for overhand cut and fill and sublevel longhole stoping as described in Section 16. Mr. Espinoza holds regular virtual meetings with the Cuzcatlan operations management and technical services to review operational results on a monthly basis. Additionally, he is responsible for peer reviewing any technical studies relating to operational improvements associated with the mining methods.

Other reviews made to support the Mineral Reserve estimation process at the San Jose Mine include:

- Ensuring all aspects of Mineral Reserve estimation and reporting adhere to Fortuna's "*Technical Information Policy*".
- Reviewing and confirming parameters used for NSR evaluation adhere to Fortuna's "*Procedure for NSR point value*".
- Reviewing and confirming parameters used for cut-off grade calculation adhere to Fortuna's "*Procedural Manual for COG determination*" and CIM best practices.
- Reviewing and confirming operational parameters used in the estimation of Mineral Reserves are based on current market and operational considerations and conform to CIM best practices.
- Reviewing historical mining dilution and recovery with Cuzcatlan technical services to verify parameters used in the estimation process are reasonable.
- Discussions regarding MSO optimization results with the Cuzcatlan technical services and mine operations departments.
- Reviewing various LOM scenarios and their operational applicability to determine the optimal LOM based on Fortuna's strategic goals.
- Review of monthly mine reconciliation results (see below).

12.9 Mine reconciliation

Cuzcatlan performs a reconciliation of the resource and reserve block model estimates against production following a corporate procedural manual on a monthly basis and reports these results to Fortuna. Mr. Chapman and Mr. Espinoza are responsible for reviewing and validating the results reported and ensuring any discrepancies greater than 15 % are investigated and reasons for the variation explained.

Historical mine reconciliation results indicate that the estimation methodology is reasonable, and production has reconciled well with the estimates throughout the history of production at the mine.

12.10 Site visits

The QPs performed site visits and personal inspections as outlined in Section 2.3 of the Report.

12.11 Comment on Section 12

The QPs are of the opinion that the data verification programs performed on the data collected from the mine are adequate to support the geological interpretations, the analytical and database quality, and Mineral Resource and Reserve estimation at the San Jose Mine and that, to the knowledge of the QPs there are no limitations on or failure to conduct such verification that would materially impact the results. This conclusion is based on the following:

- Site visits conducted by all QP's to review data and observe operational activities relating to their area of expertise at the mine.

- No material sample biases were identified from the QAQC programs. Analytical data that were considered marginal were accounted for in the resource classifications.
- Sample data collected adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits.
- Quarterly reviews of the database producing independent assessments of the database quality. No significant problems with the database, sampling protocols, flowsheets, check analysis program, or data storage were noted.
- Cuzcatlan compiles and maintains a relational database (Datashed) for the San Jose Mine which contains all collar, assay, density, survey and lithology information as well as all associated QAQC data.
- Drill hole and channel collar and downhole surveys are conducted using standard industry techniques.
- All geologic and assay data is electronically collected and imported into the database eliminating the potential for transcription errors.
- Geotechnical and hydrology data indicates that the mining method is suitable based on rock stability and the plant has sufficient access to water to meet its requirements.
- Metallurgical recoveries continue according to historical behavior.
- Metallurgical monitoring is conducted using tests, assays and mineralogical data.
- Drill data is verified prior to Mineral Resource estimation, by running a software program check.
- Mineral Resource estimation methodology is verified by Mr. Chapman with each stage being reviewed and checklists provided.
- Mineral Reserve estimation methodology is verified by Mr. Espinoza with each stage being reviewed and checklists completed.
- Monthly mine reconciliation reports monitor the performance of the resource and reserve block model estimates and indicate a high level of accuracy with production results typically within ±10 %.

13 Mineral Processing and Metallurgical Testing

Initial metallurgical test work to assess the optimum processing methodology for treating ore from the Trinidad deposit was conducted by METCON Research (METCON) in 2009 and reported in the prefeasibility study prepared by CAM (2010). The following provides a summary of the metallurgical work conducted and includes comments regarding the most recent studies and findings from the process plant.

13.1 Metallurgical tests

METCON completed testwork on 10 composite samples representing a variety of mineralization styles from the Trinidad deposit. The test work included the following:

- Whole rock analysis.
- Bond ball mill work index.
- Grind calibration.
- Rougher flotation test work with three stages of cleaning.
- Locked cycle flotation test work.
- Rougher kinetics flotation.

A summary of the relevant information obtained in respect to the above test work is detailed in the following subsections.

In 2022, 25 samples were tested to establish the metallurgical characteristics of the Victoria mineralized zone. Metallurgical recoveries obtained from samples with silver head grades ranging from 120 to 160 g/t were 87.74 to 90.11 % for gold and 88.13 to 89.71 % for silver. Based on the results, it was concluded that mineralization from Victoria follows the same metallurgical recovery trend as the current operation experiences. Additionally, mineralogical studies did not detect mineral types different from what is currently being processed from the Trinidad deposit.

13.1.1 Whole rock analysis

The whole rock analysis conducted on the variability composite samples showed that quartz is the main gangue mineral, and the samples are amenable to gold and silver recoveries by flotation CAM, 2010).

Cuzcatlan conducted additional whole rock analysis tests on more than 40 separate composites between September 2012 and June 2016. The tests provided similar results to the original 10 composites evaluated and confirmed that these were representative of the Trinidad deposit mineralization style.

13.1.2 Bond ball mill work index

. METCON performed the first Bond ball mill grindability testwork in 2009 as part of the prefeasibility study, obtaining values ranging between 14.35 and 19.20 kWh/t for the samples assessed. The upper value of 19.20 kWh/t was used for design purposes.

Cuzcatlan has conducted monthly Bond work index (BWi) tests since early 2012. In all cases, composite samples were sent to SGS Minerals Services, Durango and Mexican Geological Services, Oaxaca. Results range from 15.5 to 20.3 kWh/t, averaging 17.7 kWh/t.

The results of the test work indicate that the average BWi is lower than the plant design and should result in less power being required than was predicted. However, the results also show that there are some cases where the BWi is equal to the design so that the plant is prepared to treat all material without any process losses.

13.1.3 Locked cycle flotation

The METCON study included testing locked cycle flotation using two stages of grind on the composite samples. The conclusions of this study as summarized in the CAM (2010) prefeasibility study were as follows:

- The metallurgical data indicated that average concentrate grades of 74 g/t for gold and 6,676 g/t for silver may be produced on the composite sample using a two-stage grind process.
- Gold and silver average recoveries of approximately 90 % gold and 88 % silver may be produced on the composite sample.
- Iron contained in the precious metal concentrate impacts the precious metal concentrate grade.
- Further metallurgical testing should be conducted to study pyrite depression on the final precious metal concentrate.

Results obtained from the plant since 2012 are detailed in Table 13.1.

Table 13.1 Plant concentrate and recovery values since 2012

Composite period	Head Grade		Concentrate grade		Recovery	
	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (g/t)	Ag (%)	Au (%)
2012	188	1.74	6,284	57.77	87.52	86.79
2013	194	1.46	5,977	45.01	88.61	88.94
2014	226	1.72	6,833	52.06	89.40	89.52
2015	234	1.83	7,190	56.20	91.40	91.26
2016	228	1.72	7,906	59.41	92.36	92.07
2017	247	1.88	7,509	56.94	92.02	91.70
2018	260	1.75	8,685	58.25	91.75	91.56
2019	252	1.57	8,114	50.40	90.92	90.49
2020	224	1.38	6,491	39.80	91.52	91.34
2021	209	1.29	6,444	39.50	91.74	91.28
2022	191	1.14	5,673	33.60	91.35	90.40
2023	171	1.06	4,899	30.10	90.96	90.18

Results obtained from the plant are comparable to those used in the design process.

During 2021, detailed flotation tests were performed by the Cuzcatlan metallurgical department, where more representative samples were used to predict the metallurgical recovery for the 2022 and 2023 years. The average recovery results were 90.47 % gold and 91.30 % silver.

Operational results for 2022 and 2023 (Table 13.1) demonstrated sustained recoveries of 91 % for silver and 90 % for gold could be achieved, with these levels being confirmed from laboratory tests of representative samples taken from the mine. Current LOMP recoveries are forecast to be maintained at these levels.

Metallurgical recovery is found to vary according to the grade of material processed, with recovery of low-grade ore averaging 85 to 87 % whereas recovery of high-grade ores can be up to 94 %.

13.1.4 Thickening and Filtering

A further difference between the plant design and functionality has been in the amount of flocculent required for thickening and filtering process of the tailings and concentrate. The CAM (2010) prefeasibility study had recommended the usage of 40 g/t to 60 g/t of the reagent HychemAF304 for thickening of tailings to achieve solid content of 47 to 51 %. Cuzcatlan has performed the thickening of tailings using the reagent Magnafloc 336 at the lower concentrations of 15 g/t to 25 g/t and producing tailings with approximately 55 % solid content.

The reagent HychemAF304 (recommended at 25 g/t to 40 g/t concentrations) was also replaced with Magnafloc336 (5 g/t to 10 g/t concentrations) for thickening the concentrate with no detrimental effect to the solid content percentage. In this way the plant has made significant cost savings by reducing the quantity of flocculant used in the plant.

Section 17 includes additional information on the plant metallurgical recovery.

13.2 Deleterious elements

In late 2017 it was observed that levels of fluorine were increasing in the concentrate with the Cuzcatlan financial department reporting that penalties were occasionally being applied by the purchaser in accordance with the commercial terms.

Currently, it has been possible to reduce the concentration of this element by up to 50 percent. Therefore, the concentration observed in the final concentrate will be half of the concentration of fluorine fed into the plant and penalty payments are expected only on very high concentrations fed (>2,000 ppm F), based on the current sales contract. This penalty level is taken into account in the financial analysis that supports the Mineral Reserves estimate.

Silver minerals associated with hematite (iron-oxide) have been identified in ore processed from mineralization from the highest levels of the mine. The higher iron-oxide content is estimated to be present in 30 % of the mineralization planned for processing. Elevated iron-oxide content has been found to lower metallurgical recovery in the plant by approximately 5 %. Metallurgical testwork has been initiated to determine the optimized way to process this material to maximize recovery through processing in batches.

13.3 Comment on Section 13

It is the opinion of the QP that the San Jose Mine has an extensive body of metallurgical investigation comprising several phases of testwork as well as an extensive history of treating ore at the operation since 2011. In the opinion of the QP, the San Jose metallurgical samples tested and the ore that is presently treated in the plant is representative of the material included in the LOMP in respect to grade and metallurgical response. Metallurgical recovery is estimated to be constant for the LOMP at 90.54 % for silver and 89.82 % for gold. Differences between vein systems are minimal with regard to recovery.

Deleterious elements detected in ore in specific parts of the deposit have the potential to affect economics due to potential smelting penalties, including elevated levels of fluorine (>1,000 ppm) or metallurgical recovery, in the case of iron-oxide content. These levels have been considered in the financial analysis.

14 Mineral Resource Estimates

14.1 Introduction

The following chapter describes the Mineral Resource estimation methodology of the veins at the San Jose Mine. The Mineral Resource estimate discussed in this section relates to the Trinidad deposit and Victoria mineralized zone located between UTM coordinates 1846500N and 1847750N (Datum NAD 1927, UTM Zone 14N).

14.2 Disclosure

Mineral Resources were prepared by Jose Callirgos of Cuzcatlan under the technical supervision of Alexander Delgado (MAusIMM) with peer review by Eric Chapman (P. Geo.). Mr. Delgado and Mr. Chapman are Qualified Persons as defined in National Instrument 43-101, both being employees of Fortuna. Mineral Resources are estimated and reported as of June 30, 2023.

14.2.1 Known issues that materially affect Mineral Resources

Fortuna does not know of any issues that materially affect the Mineral Resource estimates. These conclusions are based on the following:

- **Environmental:** Cuzcatlan is in compliance with all material Environmental Regulations and Standards set in Mexican Law and has complied with all material laws, regulations, norms and standards at every stage of operation of the mine, as detailed in Section 20.
- **Permitting**: To the extent known, all permits that are required by Mexican law for the mining operation have been obtained.
- **Legal:** Cuzcatlan has represented that it is dealing with any legal matters that arise, as detailed in Section 4.4 of this Report and that currently the mine is operating according to all legal requirements.
- **Title**: Cuzcatlan has represented that the mineral and surface rights have secure title.
- **Taxation**: No known issues.
- **Socio-economic**: Cuzcatlan has represented that the operation has community support from the local town of San Jose del Progreso.
- **Marketing**: No known issues.
- **Political**: Cuzcatlan believes that the current government is supportive of the operation.
- **Other relevant issues**: No known issues.
- **Mining**: No known issues.
- **Metallurgical:** Cuzcatlan presently successfully treats ore extracted from the San Jose Mine in the onsite processing plant to produce a silver concentrate with gold credits. This work has been described in Section 13.
- **Infrastructure:** No known issues.

14.3 Assumptions, methods and parameters

The 2023 Mineral Resource estimates were prepared via ordinary kriging (OK) in veins associated with the Trinidad deposit and the Victoria mineralized zone (main vein) based on the following steps:

- Data validation as performed by Fortuna.
- Data preparation including importation to various software packages.
- Geological interpretation and modeling of mineralization domains.
- Coding of drill hole and channel data within mineralized domains.
- Sample length compositing of both drill holes and channel samples.
- Exploratory data analysis of the key constituents: silver, gold, lead, zinc, copper, fluorine and density.
- Analysis of boundary conditions.
- Declustering of key constituents.
- Analysis of extreme data values and application of top cuts.
- Variogram analysis and modeling of normal score distributed data.
- Determination of estimation and search parameters based on kriging neighborhood analysis (KNA).
- Estimation of silver, gold, lead, zinc, copper, fluorine grades by OK, IDW, and value assignment where insufficient samples are available for interpolation.
- Depletion of blocks identified as extracted or inaccessible.
- Classification of estimates with respect to 2014 CIM guidelines.
- Mineral Resource tabulation and reporting.
- Risk analysis of silver and gold estimates through conditional simulation.

14.4 Supplied data, data transformations and data validation

Cuzcatlan information used in the 2023 estimation is sourced from Maxwell's Datashed industry-standard database for the Project.

Supplied data included all information available as of June 30, 2023, and was provided by Cuzcatlan.

14.4.1 Data transformations

All data is stored using the same UTM coordinate system (NAD 1927, UTM Zone 14N) and the same unit convention. Transformations of the supplied drill hole and channel information, including assay grades, were not required.

14.4.2 Software

Mineral Resource estimates have used several software packages for undertaking modeling, statistical, geostatistical and grade interpolation activities. Wireframe modeling of the mineralized envelopes was performed in Leapfrog Geo version 2022.1. Data preparation, block modeling and grade interpolations were performed in Datamine RM version 1.6.75. Declustering, statistical and variographic analysis was performed in Supervisor version 8.15. Normal score transformations, sequential Gaussian simulation, and re-blocking of simulations for risk analysis were performed using the Geostatistical Software Library (GSLIB).

14.4.3 Data preparation

Collar, survey, lithology, and assay data exported from Datashed database were provided by Cuzcatlan in Access format and imported into Datamine RM to build 3D representations of the drill holes and channels. Assay values at the detection limit were adjusted to half the detection limit. Absent assay values were adjusted to a zero grade. In areas that were estimated (Trinidad deposit and Victoria mineralized zone), a total of 327 surface core drill holes and 995 underground core drill holes totaling 410,817.95 m and 35,093 channels totaling 150,322.16 m were available for Mineral Resource estimate support (Table 14.1). Only a portion of the 561,140 m of data have been assayed. Fortuna/Cuzcatlan have been responsible for collecting 99 % of the data.

Table 14.1 Data used in the 2023 Mineral Resource update of the Trinidad deposit and Victoria mineralized zone

Company	Sample Type	Count	Meters	Percent of Total
Fortuna/Cuzcatlan	Surface Core Drill holes	311	115,820.65	21
	Underground Core Drill holes	995	289,775.80	52
	Underground Channels	34,918	149,610.03	27
	Sub-total	**36,224**	**563,222.53**	**99**
Continuum	Surface Core Drill holes	13	4,370.00	1
	Underground Channels	175	712.13	0
	Sub-total	**188**	**5,082.13**	**1**
Pan American Silver	Surface Core Drill holes	3	851.50	0
TOTAL		**36,415**	**561,140.11**	**100**

14.4.4 Data validation

An extensive data validation process was conducted by Cuzcatlan and Fortuna prior to the Mineral Resource estimation with a more detailed description of this process provided in Section 12.

Validation checks were also performed upon data importation into Datamine mining software and included searches for overlaps or gaps in sample and geology intervals, inconsistent drill hole identifiers, and missing data. No significant discrepancies were identified.

14.5 Geological interpretation and domaining

Mineralization at the San Jose Mine is typical of a low-sulfidation epithermal-style deposit having formed in a relatively low temperature, shallow crustal environment. Silver–gold mineralization is hosted by hydrothermal breccias, crackle breccias, quartz/carbonate veins and zones of sheeted and stockworked quartz/carbonate veins emplaced along steeply-dipping north- and north–northwest-trending fault structures. The main silver–gold bearing species are acanthite (argentite) and electrum. Host rocks consist of andesitic to dacitic subaerial and subaqueous lava flows of presumed Paleogene age.

Major vein systems recognized in Trinidad and Victoria all have a general north to south strike orientation and near vertical dip. Veins were divided into two classes according to the extent of exploration and mineralization. Primary veins have extensive exploration from both drilling and underground extraction and are well-understood in terms of geological and grade continuity. Secondary domains have been subjected to very limited exploration and have not been estimated due to the low level of confidence in the geological continuity at this stage of exploration. Statistical analysis of intervals intersecting the interpreted secondary structures has been included for completeness, but no additional evaluation has been conducted.

Primary domains

- Bonanza (Bv), Trinidad (Tv), Stockwork (Swk), and Stockwork2 (Swk2), Fortuna (Fv), Paloma (Pv), Bonanza HW splay (Bhws), Trinidad FW splay (Tfw), Trinidad FW2 splay (Tfw2), Trinidad FW3 splay (Tfw3), Trinidad HW splay (Thws4), Stockwork3 (Swk3), Stockwork4 (Swk4), Victoria main structure (Vmz), and Victoria HW1 (Vhwz1).

Secondary domains

- Narrow vein1 (Nwv1), Sk vein2 (Sk02), Sk vein3 (Sk03), Sk vein6 (Sk06), Diedro (Dd2), Victoria HW2 (Vhwz2), and Victoria HW3 (Vhwz3).

Mineralized envelopes to define each vein were constructed in Leapfrog Geo software by the Cuzcatlan mine geology and exploration departments based on the interpretation of the deposit geology and refined using the drill hole, channel and underground mapping information. A three-dimensional perspective of the wireframes representing the veins is displayed in Figure 14.1. Oxide domains are not present.

Figure 14.1 3D perspective of Trinidad and Victoria deposits showing vein wireframes

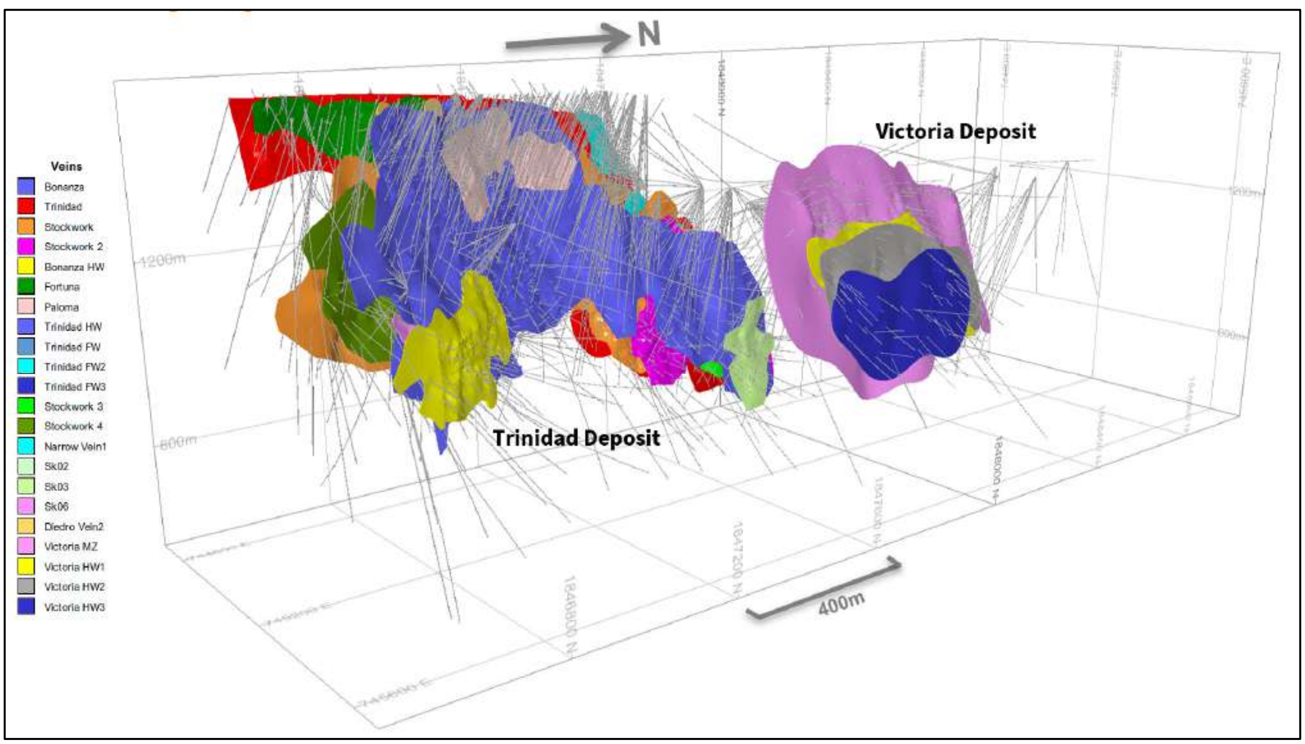


Figure prepared by Cuzcatlan, 2023

14.6 Exploratory data analysis

14.6.1 Compositing of assay intervals

Compositing of sample lengths was undertaken so that the samples used in statistical analyses and estimations have similar support (i.e., length). Cuzcatlan samples drill holes and channels at varying interval lengths depending on the length of intersected geological features and the true thickness of the vein structure. Sample lengths were examined for each vein. The majority of samples (>99 %) were sampled on lengths of 2 m or less as demonstrated in Figure 14.2.

Figure 14.2 Length of samples assayed

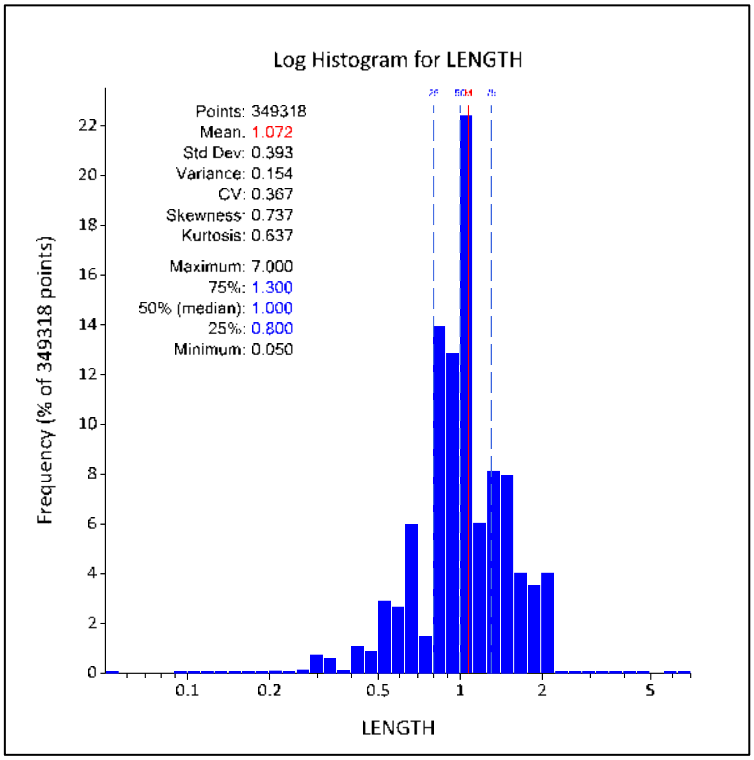


Figure prepared by Cuzcatlan, 2023

Based on the average sampling length and the selective mining unit a 2 m composite was chosen as suitable for all veins.

The Datamine COMPDH downhole compositing process was used to composite the samples within the estimation domains (i.e., composites do not cross over the mineralized domain boundaries). The COMPDH parameter MODE was set to a value of one to allow adjusting of the composite length while keeping it as close as possible to the composite interval, so as to minimize sample loss. The composited and raw sample data were compared to ensure no sample length loss or metal loss had occurred.

This methodology results in a variance in the composite length distributed around the 2 m composite interval. To ensure a bias is not present due to the variance in composite length, a comparison of silver and gold grades to composite length was conducted and no relationship was determined to be present.

14.6.2 Statistical analysis of composites

Exploratory data analysis was performed on composites identified in each geological vein (Table14.2). Statistical and graphical analysis (including histograms, probability plots, scatter plots) were investigated for each vein to assess if additional sub-domaining was required to achieve stationarity.

Table 14.2 Univariate statistics of undeclustered drill hole and channel composites by vein

Vein	Grade	Count	Minimum	Maximum	Mean	SD	CV
Bonanza	Ag (g/t)	16,243	0	11,710	**211**	446	2.11
	Au (g/t)	16,243	0	123.40	**1.89**	4.30	2.27
	Pb (ppm)	10,024	2	71,656	**479**	1,877	3.92
	Zn (ppm)	4,564	13	43,648	**393**	1,869	4.75
	Cu (ppm)	4,564	2	6,030	**55**	195	3.53
Trinidad	Ag (g/t)	9,282	0	10,200	**178**	427	2.40
	Au (g/t)	9,282	0	74.11	**1.01**	2.51	2.47
	Pb (ppm)	6,239	1	117,295	**594**	2,742	4.61
	Zn (ppm)	2,270	4	227,466	**996**	6,742	6.77
	Cu (ppm)	2,270	1	7,092	**74**	266	3.61
Stockwork	Ag (g/t)	33,598	0	20,320	**304**	727	2.39
	Au (g/t)	33,598	0	460.78	**2.22**	6.59	2.98
	Pb (ppm)	31,555	2	61,216	**758**	1,884	2.49
	Zn (ppm)	3,764	12	49,845	**1,018**	2,333	2.29
	Cu (ppm)	3,764	2	5,063	**100**	219	2.19
Fortuna	Ag (g/t)	964	0	2,630	**127**	204	1.60
	Au (g/t)	964	0	21.00	**0.98**	1.77	1.80
	Pb (ppm)	850	3	667	**31**	34	1.09
	Zn (ppm)	831	24	1,052	**79**	59	0.74
	Cu (ppm)	831	4	844	**30**	33	1.12
Paloma	Ag (g/t)	261	0	3,299	**165**	407	2.47
	Au (g/t)	261	0	19.95	**1.35**	2.77	2.06
	Pb (ppm)	224	3	427	**28**	47	1.67
	Zn (ppm)	212	7	461	**81**	49	0.60
	Cu (ppm)	212	1	483	**36**	47	1.29
Bonanza HW splay	Ag (g/t)	925	0	6,858	**261**	576	2.20
	Au (g/t)	925	0	39.34	**1.95**	4.32	2.21
	Pb (ppm)	884	6	109,664	**2,608**	5,839	2.24
	Zn (ppm)	121	71	39,509	**3,487**	6,684	1.92
	Cu (ppm)	123	9	13,603	**623**	1,617	2.59
Trinidad FW splay	Ag (g/t)	417	0	1,604	**104**	194	1.87
	Au (g/t)	417	0	28.00	**0.52**	1.58	3.07
	Pb (ppm)	195	6	4,310	**301**	520	1.73
	Zn (ppm)	69	73	5,810	**817**	1,226	1.50
	Cu (ppm)	69	7	351	**60**	69	1.14
Trinidad FW2 splay	Ag (g/t)	3,161	0.25	5,557	**123**	274	2.24
	Au (g/t)	3,161	0.01	30.89	**0.61**	1.41	2.31
	Pb (ppm)	3,090	8	18,351	**395**	895	2.27
	Zn (ppm)	307	2	16,172	**607**	1,212	2.00
	Cu (ppm)	307	1	1,818	**39**	108	2.77
Trinidad FW3 splay	Ag (g/t)	2,898	0	15,506	**234**	805	3.43
	Au (g/t)	2,898	0	40.06	**0.91**	2.22	2.44
	Pb (ppm)	2,796	4	14,028	**360**	801	2.23
	Zn (ppm)	288	39	8,537	**659**	969	1.47

Vein	Grade	Count	Minimum	Maximum	Mean	SD	CV
	Cu (ppm)	288	3	659	**50**	56	1.11
Trinidad HW splay	Ag (g/t)	227	0.25	904	**70**	127	1.83
	Au (g/t)	227	0.01	11.15	**0.67**	1.24	1.84
	Pb (ppm)	166	4	507	**43**	50	1.16
	Zn (ppm)	66	16	587	**95**	75	0.79
	Cu (ppm)	66	4	56	**22**	10	0.48
Stockwork2	Ag (g/t)	6,464	0	10,389	**230**	535	2.33
	Au (g/t)	6,464	0	124.78	**1.30**	3.45	2.65
	Pb (ppm)	6,325	5	62,390	**1,130**	2,550	2.26
	Zn (ppm)	780	32	62,063	**1,595**	3,721	2.33
	Cu (ppm)	780	4	4,520	**108**	279	2.58
Stockwork3	Ag (g/t)	1,565	1	8,289	**304**	662	2.17
	Au (g/t)	1,565	0	40.33	**1.50**	3.11	2.08
	Pb (ppm)	1,445	7	27,706	**1,103**	1,952	1.77
	Zn (ppm)	174	39	13,244	**1,213**	1,949	1.61
	Cu (ppm)	174	4	1,469	**80**	141	1.76
Stockwork4	Ag (g/t)	179	0	2,401	**102**	295	2.89
	Au (g/t)	179	0	8.71	**0.40**	1.04	2.59
	Pb (ppm)	117	2	1,934	**230**	372	1.62
	Zn (ppm)	74	57	3,532	**470**	671	1.43
	Cu (ppm)	74	6	342	**40**	49	1.21
Victoria (Vmz)	Ag (g/t)	713	0	1,879	**99**	185	1.87
	Au (g/t)	713	0	20.18	**0.85**	1.74	2.04
	Pb (ppm)	708	3	5,611	**118**	418	3.54
	Zn (ppm)	696	8	8,410	**272**	686	2.52
	Cu (ppm)	696	2	816	**41**	72	1.76

Note: SD = standard deviation, CV = coefficient of variation.

14.6.3 Sub-domaining

Exploratory data analysis of the composites indicates that sub-domaining is not required beyond the domaining described above. However, there are several east–west-oriented faults cross cutting the mineralized structures that result in some of the mineralized domains being downthrown to the north. The faults have caused significant movement on the main structures including the Trinidad, Bonanza and Stockwork veins and these structures have been sub-domained for topcutting, undergone variographic analysis and estimation.

14.6.4 Extreme value treatment

Top cuts of extreme grade values prevent over-estimation or smearing in domains due to disproportionately high-grade samples. Whenever the domain contains an extreme grade value, this extreme grade will overly influence the estimated grades local to it.

If the extreme values are supported by surrounding data, are a valid part of the sample population, and are not considered to pose a risk to estimation quality, then they can be left untreated. If the extreme values are considered a valid part of the population but are considered to pose a risk for estimation quality (e.g., because they are poorly supported by neighboring values), they should be top cut. Top cutting is the practice of resetting all values above a certain threshold value to the threshold value.

Fortuna examined the grades of all metals to be estimated including silver, gold, lead, zinc, and copper to identify the presence and nature of extreme grade values. This was done by examining the sample histogram, log histogram, log-probability plot, and by examining the spatial location of extreme values. Some of the veins have insufficient composites to allow a confident determination of top cut thresholds. In these cases, a threshold has been applied that relates to associated vein structures. Top cut thresholds were determined by examination of the same statistical plots and by examination of the effect of top cuts on the mean, variance, and coefficient of variation of the sample data. Top cut thresholds used for each vein are shown in Table 14.3.

Table 14.3 Top cut thresholds by vein

Vein	Grade	Top Cut Value	Original Mean	Top Cut Mean	Difference (%)
Bonanza	Ag (g/t)	3,750	212	209	2
	Au (g/t)	31	1.90	1.84	3
	Pb (ppm)	16,000	479	453	6
	Zn (ppm)	17,000	394	362	8
	Cu (ppm)	1,150	55	50	10
Bonanza Sur	Ag (g/t)	100	23	18	23
	Au (g/t)	0.95	0.17	0.15	13
	Pb (ppm)	195	148	65	56
	Zn (ppm)	525	310	189	39
	Cu (ppm)	80	53	31	41
Trinidad	Ag (g/t)	4,100	204	195	5
	Au (g/t)	22.5	1.16	1.10	6
	Pb (ppm)	25,000	708	633	11
	Zn (ppm)	23,400	1,099	834	24
	Cu (ppm)	1,670	81	74	10
Trinidad Norte	Ag (g/t)	1,390	79	71	10
	Au (g/t)	8.7	0.45	0.41	8
	Pb (ppm)	4,200	324	308	5
	Zn (ppm)	2,800	511	385	25
	Cu (ppm)	210	38	31	18
Stockwork	Ag (g/t)	4,500	267	260	3
	Au (g/t)	46	2.34	2.19	6
	Pb (ppm)	16,300	511	502	2
	Zn (ppm)	12,200	715	690	3
	Cu (ppm)	1,250	90	86	4
Stockwork Norte	Ag (g/t)	5,000	342	326	5
	Au (g/t)	31	2.09	2.00	4
	Pb (ppm)	20,100	985	966	2
	Zn (ppm)	17,300	1,346	1,306	3
	Cu (ppm)	1,550	112	109	3
Stockwork Sur	Ag (g/t)	840	137	127	8
	Au (g/t)	4.75	0.89	0.77	14
	Pb (ppm)	1,170	248	212	15
	Zn (ppm)	1,750	561	561	0
	Cu (ppm)	205	56	51	9
Fortuna	Ag (g/t)	1,000	127	124	3
	Au (g/t)	9.15	0.98	0.94	4
	Pb (ppm)	160	31	30	3
	Zn (ppm)	220	79	76	4
	Cu (ppm)	130	30	28	4
Paloma	Ag (g/t)	1,250	165	136	18
	Au (g/t)	8.9	1.35	1.18	12
	Pb (ppm)	160	28	25	11
	Zn (ppm)	228	81	79	3

Vein	Grade	Top Cut Value	Original Mean	Top Cut Mean	Difference (%)
	Cu (ppm)	200	36	35	5
Bonanza HW splay	Ag (g/t)	2,500	263	246	7
	Au (g/t)	19.5	1.97	1.86	6
	Pb (ppm)	24,000	2621	2448	7
	Zn (ppm)	14,000	3,541	2,804	21
	Cu (ppm)	3,515	646	493	24
Bonanza HW splay Sur	Ag (g/t)	43	24	12	48
	Au (g/t)	1	0.24	0.16	34
	Pb (ppm)	1,945	933	371	60
	Zn (ppm)	5,370	2,244	1,251	44
	Cu (ppm)	184	89	74	17
Trinidad FW splay	Ag (g/t)	675	103.67	93.02	10
	Au (g/t)	3.5	0.52	0.42	19
	Pb (ppm)	1,450	301	266	12
	Zn (ppm)	2,850	817	699	14
	Cu (ppm)	185	60	55	10
Trinidad FW2 splay	Ag (g/t)	2,250	123	119	3
	Au (g/t)	8.6	0.61	0.58	5
	Pb (ppm)	6,500	395	379	4
	Zn (ppm)	3,350	607	544	10
	Cu (ppm)	150	39	32	17
Trinidad FW3 splay	Ag (g/t)	3,725	234	205	13
	Au (g/t)	13.9	0.91	0.86	5
	Pb (ppm)	5,800	360	347	4
	Zn (ppm)	3,200	659	611	7
	Cu (ppm)	185	50	48	5
Trinidad HW splay	Ag (g/t)	355	70	60	15
	Au (g/t)	3.5	0.67	0.60	11
	Pb (ppm)	127	43	40	8
	Zn (ppm)	165	95	86	10
	Cu (ppm)	40	22	21	3
Stockwork2	Ag (g/t)	4,650	230	226	2
	Au (g/t)	27.5	1.30	1.26	3
	Pb (ppm)	21,200	1,130	1,106	2
	Zn (ppm)	17,750	1,595	1,504	6
	Cu (ppm)	1,600	108	101	6
Stockwork3	Ag (g/t)	4,600	304	298	2
	Au (g/t)	18	1.50	1.44	4
	Pb (ppm)	11,400	1,103	1,080	2
	Zn (ppm)	5,800	1,213	1,103	9
	Cu (ppm)	260	80	66	18
Stockwork4	Ag (g/t)	425	102	65	37
	Au (g/t)	2.6	0.40	0.32	21
	Pb (ppm)	1,050	230	211	8
	Zn (ppm)	2,200	470	451	4
	Cu (ppm)	145	40	37	8
Victoria (Vmz)	Ag (g/t)	770	99	93	6
	Au (g/t)	6.7	0.85	0.79	7
	Pb (ppm)	1,400	118	95	20
	Zn (ppm)	2,700	272	239	12
	Cu (ppm)	255	41	37	10

The application of the top cuts does not significantly alter the mean of the sample data in most of the domains with the exception of the Bonanza HW, Trinidad HW, Trinidad FW, Trinidad FW3, and Stockwork 4 veins. This is because these domains are defined by fewer composites with a small number (2 to 3) having extreme values far in excess of any other value. Once these composites are reset the effect on the mean is significant, but likely to be more representative of the domain as a whole.

The estimation process does not exclude these extreme values from the process completely. Instead, these composites are used, untreated, to estimate the blocks in a small halo around the identified extreme value. In the case of silver this area of influence is 6 m and for gold 4 m. This helps to maintain the nugget style of mineralization observed underground. The extreme values are top cut for the estimation of any blocks beyond these haloes.

14.6.5 Boundary conditions

Boundary conditions are known to be abrupt, with underground workings identifying a sharp contact between the mineralized vein structure and the host rock. Domain boundaries were treated as hard boundaries. Only samples coded within a vein were used to simulate or estimate grades within that vein, to prevent smearing of high-grade samples in the vein into the low-grade host rock, and vice versa.

14.6.6 Sample type comparison

A comparison between drill hole and channel sample types was conducted to assess if any bias exists between the two sampling techniques. Areas in the Trinidad and Bonanza veins were chosen that displayed a similar spatial coverage for both channel and drill hole samples.

Statistical results including probability-probability and quantile-quantile plots were examined. Results showed a bias with grades from channel samples reporting higher values than those from drill hole samples. However, the difference is likely to be partially due to the preferential sampling in the mineralized domain and was determined to be not significant enough to warrant the removal of the channel samples from the estimation process.

It was decided that both sample types were required to provide the best assessment of the deposit with reconciliation results supporting the usage of channels and drill holes.

14.6.7 Grade correlation

It is important that the relationship between constituents is maintained in each of the realizations produced during simulation. The correlation between gold and silver grades was investigated for each vein (Table 14.4).

Table 14.4 Correlation coefficients of gold and silver grades by vein

Vein	Correlation Coefficient
Bonanza	0.81
Bonanza South	0.96
Trinidad	0.92
Trinidad North	0.94
Stockwork	0.71
Stockwork South	0.79
Stockwork North	0.94
Fortuna	0.85
Paloma	0.94

Vein	Correlation Coefficient
Bonanza HW	0.90
Trinidad FW	0.62
Trinidad FW2	0.97
Trinidad FW3	0.92
Trinidad HW	0.95
Stockwork 2	0.86
Stockwork 3	0.98
Stockwork 4	0.97
Diedro	0.94
Narrow vein1	1.00
Sk vein 2	0.96
Sk vein 6	1.00
Victoria	0.90
Victoria HW1	0.96
Victoria HW2	0.95
Victoria HW3	0.98

A strong positive correlation exists between gold and silver composite grades in each of the domains. The correlation statistics are reinforced by examining scatterplots of silver and gold grades for the different veins where a strong positive relationship is displayed.

It is expected that similar correlation coefficients and positive grade relationships are present in the realizations to ensure reasonable silver equivalent grades are estimated. These correlations have been tested as part of the validation process as described in Section 14.9.

14.6.8 Continuity analysis

Continuity analysis refers to the analysis of the spatial correlation between sample pairs to determine the major axis of spatial continuity.

Horizontal, across strike, and down dip continuity maps were examined (and their underlying variograms) for silver and gold to determine the directions of greatest and least continuity. As each vein has a distinct strike and dip direction analysis was only required to ascertain if a plunge direction was present.

Continuity maps of the dip plane were examined to ascertain if a plunge was present in any of the veins. The presence of several faults cross cutting perpendicular to the mineralization down throwing blocks to the north can lead to a false plunge, but when this movement is accounted for the presence of a distinctive plunge in the grade continuity could not be established for any of the veins and therefore variograms are generally modeled along strike and down dip.

14.6.9 Variogram modeling

Variograms were modelled for the major, semi-major, and minor axes. This exercise creates a mathematical model of the spatial variance that can be used for kriging the grades into the block model. Grades were transformed to a normal distribution using polynomials (normal score) and the modeled variograms back-transformed to represent the variability of the actual grades.

The most important aspects of the variogram model are the nugget and the short-range characteristics. These aspects have the most influence on the simulation of grade. The nugget effect is the variance between sample pairs at the same location (zero distance). Nugget effect contains components of inherent variability, sampling error, and analytical error. A high nugget effect implies that there is a high degree of randomness in the sample grades (i.e., samples taken even at the same location can have very different grades). The best technique for determining the nugget effect is to examine the downhole variogram calculated with lags equal to the composite length.

After determining the nugget effect, the next step is to model directional variograms in the three principal directions based on the directions chosen from the continuity maps. It was not always possible to produce a variogram for the minor axes, and in these cases the ranges for the minor axes were taken from the downhole variograms, which have a similar orientation (perpendicular to the vein) as the minor axes.

Variogram parameters for each vein are detailed in Table 14.5. Continuity analysis and variogram modelling were conducted in Supervisor version 8. The parameters reported are back-transformed from normal scored modelled variograms and correspond with the heterogeneous nature of the mineralization.

Table 14.5 Variogram model normal score parameters

Vein	Metal	Major Axis Orientation	C_0§	C_1§	Ranges (m)†	C_2§	Ranges (m)†	C_3§	Ranges (m)†
Bonanza	Ag	75° → 260°	0.10	0.62	9,9,4	0.20	33,29,35	0.08	289,232,52
	Au	75° → 260°	0.10	0.61	9,9,5	0.20	33,29,30	0.09	303,260,41
Trinidad	Ag	00° → 355°	0.25	0.50	14,7,5	0.15	49,42,14	0.10	351,92,17
	Au	00° → 355°	0.20	0.59	14,8,3	0.13	54,42,9	0.08	356,105,11
Stockwork	Ag	00° → 340°	0.17	0.53	8,4,5	0.20	35,29,9	0.12	161,58,12
	Au	00° → 340°	0.16	0.55	8,6,4	0.20	37,27,10	0.10	125,64,12
Stockwork 2	Ag	80° → 250°	0.15	0.68	15,8,8	0.14	36,36,14	0.03	131,124,17
	Au	80° → 250°	0.19	0.65	15,7,8	0.11	32,31,12	0.05	79,74,20
Fortuna	Ag	00° → 355°	0.27	0.48	9,13,5	0.24	95,20,10		
	Au	00° → 355°	0.12	0.50	31,13,5	0.38	138,44,23		
Paloma	Ag	10° → 344°	0.12	0.49	6,8,5	0.37	17,23,10	0.02	110,65,15
	Au	10° → 344°	0.21	0.36	4,31,5	0.12	43,51,10	0.10	94,65,15
Bonanza HW	Ag	00° → 325°	0.05	0.71	12,18,5	0.24	73,49,15		
	Au	00° → 325°	0.08	0.69	13,11,5	0.23	82,54,15		
Trinidad FW	Ag	80° → 260°	0.48	0.18	13,4,5	0.15	65,11,12	0.18	82,38,18
	Au	80° → 260°	0.55	0.26	30,5,5	0.13	50,14,10	0.06	61,37,16
Trinidad FW2	Ag	00° → 355°	0.29	0.48	10,7,10	0.20	32,43,30	0.03	75,86,36
	Au	00° → 355°	0.28	0.44	8,5,15	0.21	27,27,19	0.07	92,78,31
Trinidad FW3	Ag	75° → 245°	0.18	0.53	7,9,5	0.29	71,45,20		
	Au	75° → 245°	0.13	0.60	13,10,5	0.28	68,48,21		
Trinidad HW	Ag	00° → 350°	0.21	0.48	4,17,5	0.19	26,63,10	0.12	85,73,15
	Au	75° → 260°	0.18	0.39	13,5,5	0.25	47,21,8	0.18	57,26,12
Stockwork 3	Ag	80° → 250°	0.18	0.47	11,14,12	0.23	71,28,17	0.12	105,35,21
	Au	80° → 250°	0.16	0.35	5,7,9	0.18	28,20,12	0.31	78,32,19
Stockwork 4	Ag	00° → 340°	0.17	0.53	8,4,5	0.20	35,29,9	0.12	161,58,12
	Au	00° → 340°	0.16	0.55	8,6,4	0.20	37,27,10	0.10	125,64,12
Diedro Vein 2	Ag	00° → 330°	0.26	0.44	41,18,5	0.30	102,48,10		
	Au	00° → 330°	0.31	0.45	5,26,5	0.10	40,92,8	0.14	115,100,10
Victoria Mz	Ag	00° → 335°	0.22	0.42	37,34,5	0.26	287,115,10	0.10	329,219,15
	Au	00° → 335°	0.19	0.30	32,29,5	0.28	36,64,10	0.23	251,193,15
Victoria	Ag	20° → 164°	0.17	0.52	49,73,5	0.31	92,87,10		

Vein	Metal	Major Axis Orientation	C_0§	C_1§	Ranges (m)†	C_2§	Ranges (m)†	C_3§	Ranges (m)†
HW1/2/3	Au	20° → 164°	0.15	0.58	47,62,5	0.27	76,71,10		
Narrow Vein 1	Ag	40° → 160°	0.12	0.73	28,30,4	0.15	75,52,7		
	Au	40° → 160°	0.22	0.45	26,30,5	0.33	70,53,9		
SK 02	Ag	00° → 350°	0.29	0.39	12,17,5	0.32	40,30,10		
	Au	00° → 350°	0.13	0.54	16,18,5	0.33	36,35,10		
SK 03	Ag	75° → 260°	0.10	0.62	9,9,4	0.20	33,29,35	0.08	289,232,52
	Au	75° → 260°	0.10	0.61	9,9,5	0.20	33,29,30	0.09	303,260,41
SK 06	Ag	00° → 325°	0.05	0.71	12,18,5	0.24	73,49,15		
	Au	00° → 325°	0.08	0.69	13,11,5	0.23	82,54,15		
Note: § variances have been normalised to a total of one; † ranges for major, semi-major, and minor axes, respectively; structures are modelled with a spherical model									

14.6.10 Opinion on the quality of the modeled variograms

Modeling of variograms can be somewhat of a subjective process depending on the quality of the experimental variograms. Confidence in the modeled variograms for the Bonanza, Trinidad, Stockwork, and Stockwork2 domains is high due to the clearly-defined continuity displayed by the experimental variograms. Confidence in the modelled variograms for the Fortuna, Trinidad FW2, Trinidad FW3, Stockwork3 and Victoria Mz domains is moderate to low for all other veins due to the lower composite numbers, and this is reflected in their classification. The veins with low confidence do not represent a significant component of the San Jose Mineral Resource estimate.

14.6.11 Selective mining unit

An appropriate selective mining unit (SMU) was chosen based on reconciliation results and the equipment used for extraction underground. An appropriate SMU has been determined to be 2 m x 2 m x 2 m based on the application of new mining equipment to exploit areas of narrow mineralization.

Block model parameters used for compiling the San Jose deposit models containing all vein information are detailed in Table 14.6.

Table 14.6 Block model parameters

Deposit	Direction	Model Origin	SMU Block Size (m)	No. of Blocks
Trinidad	Easting	744960	2	280
	Northing	1846396	2	736
	Elevation	720	2	422
Victoria	Easting	744832	2	392
	Northing	1847400	2	750
	Elevation	696	2	348

Vein geometry was considered in the block modeling process. The narrow and undulating nature of the veins means that an entire block is often not spatially located within the vein wireframe. The model was subcelled so that the geometry of the vein was fully represented in the block model. A second model where only full block sizes are presented included a field that recorded the proportion of the block that was located inside the vein wireframe. To ensure the volumes were accurately represented a volume comparison between the wireframe, subcelled and parent block model proportions was conducted to validate the process.

14.7 Grade interpolation

The sample data and the blocks were categorized into their mineralized domains for estimation (Section 14.5). The sample data were composited (Section 14.6.1) and, where necessary, top cut prior to estimation (Section 14.6.4). All veins were estimated by ordinary kriging (OK). Block size selection corresponded to an SMU size of 2 m x 2 m x 2 m. Each block was discretized into three points along strike, by three points down dip, by three points across strike and grade interpolated into parent cells. The following search neighborhood was used for estimation of silver and gold based on 80 % of the grade variance as indicated by the variograms:

- Search range of approximately 25 to 30 m along strike and down dip and 10 m across the vein.
- Minimum of 4 composites per estimate.
- Maximum of 24 composites per estimate.
- Maximum of 2 composites per drill hole or channel.

To maintain the variability that is observed across the vein structures from hanging wall to footwall in wider veins, estimation was conducted using up to four bands where blocks and samples were identified, and estimation was restricted to within each individual band. This ensured estimation dynamically followed the orientation of the vein structure along strike and down dip. A multiple of the search neighborhood was employed, to ensure the estimation of all blocks, with a second pass that was twice the original search range size, and a third pass six times the original size. The number of composites and drill holes used in the estimate were taken into account during classification, as described in Section 14.11. The percentage of blocks estimated using the first or second passes represents more than 97 % of the total reported Mineral Resources and more than 99 % of those classified as Measured or Indicated.

14.8 Bulk density

There are a total of 5,602 drill core density measurements that were taken by Cuzcatlan of which 50 (<1%) were discarded as being outliers resulting in 5,552 values of which 2,231 are located in vein domains estimated as of June 30, 2023 (Table 14.7). A total of 1,105 density measurements were also taken from underground workings but the results differ significantly from those observed in the drill core and were discarded.

Table 14.7 Density statistics by vein

Vein	No. of samples	Mean (t/m^3)	Min. (t/m^3)	Max. (t/m^3)	Std. Dev.
Bonanza	453	**2.60**	2.32	2.77	0.07
Trinidad	388	**2.59**	2.33	2.78	0.08
Stockwork	686	**2.60**	2.39	2.84	0.06
Fortuna	68	**2.49**	2.31	2.67	0.09
Paloma	10	**2.58**	2.43	2.67	0.08
Bonanza HW	25	**2.64**	2.55	2.89	0.09
Trinidad FW	4	**2.68**	2.64	2.76	0.05
Trinidad FW2	87	**2.58**	2.46	2.70	0.05
Trinidad FW3	80	**2.59**	2.50	2.69	0.04
Trinidad HW	8	**2.63**	2.62	2.64	0.01
Stockwork2	151	**2.61**	2.48	2.77	0.06
Stockwork3	37	**2.58**	2.45	2.81	0.08
Stockwork4	9	**2.59**	2.55	2.63	0.03
SK2	17	**2.61**	2.54	2.71	0.05

Vein	No. of samples	Mean (t/m³)	Min. (t/m³)	Max. (t/m³)	Std. Dev.
SK3	10	**2.59**	2.52	2.67	0.05
Narrow vein 1	10	**2.60**	2.54	2.67	0.04
Diedro vein 2	39	**2.55**	2.38	2.73	0.08
Sub-total - Trinidad	**2,082**	**2.59**	**2.31**	**2.89**	**0.07**
Victoria (Vmz)	96	**2.55**	2.37	2.69	0.08
Victoria (Vhwz1)	22	**2.57**	2.47	2.70	0.06
Victoria (Vhwz2)	20	**2.55**	2.44	2.68	0.07
Victoria (Vhwz3)	11	**2.56**	2.50	2.64	0.05
Sub-total - Victoria	**149**	**2.59**	**2.37**	**2.70**	**0.08**
Non-vein	**3,172**	**2.58**	**2.18**	**3.19**	**0.08**

Samples of vein material are dominated by measurements taken from the Bonanza, Trinidad, Stockwork and Stockwork2 domains, comprising 1,678 of the 2,082 Trinidad deposit total measurements. The spatial coverage of density measurements in these four veins meant that bulk density values could be estimated into the block model using ordinary kriging.

For veins not estimated, if more than 30 density measurements had been collected the mean density for that vein was assigned (Fortuna, Stockwork 3, Trinidad FW2, Trinidad FW3, and Victoria main). If less than 30 measurements had been obtained a set density value equivalent of the global mean of 2.59 g/cm³ for Trinidad veins and 2.55 g/cm³ was assigned based on the above statistics and reconciliation results.

14.9 Estimation validation

Validation of the silver, gold, lead, zinc, and copper grade estimates was undertaken using the following methods:

- Global comparison of the estimated grades with an inverse distance weighting power of 2 (IDW) estimate.
- Local comparison of the estimated grades with the input data using swath plots.
- A visual comparison of the estimated models with the input data to ensure sensible orientations of continuity and sensible grade distributions.
- Reconciliation of block model estimates versus actual operational results.

14.9.1 Global validation

Global validation of the estimate involves comparing the mean OK grade for each vein against the mean declustered grade generated using the IDW estimation approach. Analysis was performed by classification to ensure low confidence areas do not distort the results from higher confidence regions (Table 14.8). The results are regarded as reasonable, with differences being less than 10 %.

Table 14.8 Global estimation validation

Classification	OK		IDW		Diff (OK v IDW)	
	Ag (g/t)	Au (g/t)	Ag (g/t)	Au (g/t)	Ag	Au
Measured	158	1.01	152	1.01	4%	4%
Indicated	96	0.65	90	0.60	7%	8%
Inferred	65	0.47	60	0.44	8%	6%
Global	**92**	**0.62**	**86**	**0.58**	**6%**	**7%**

14.9.2 Local validation

Slice validation plots of estimated block grades and declustered input sample grades were generated for each of the veins along strike and down dip to validate the estimates on a local scale. Validation of the local estimates assesses each model to ensure over-smoothing or conditional bias is not being introduced by the estimation process and an acceptable level of grade variation is present. An example slice (or swath) plot for Stockwork domain is displayed in Figure 14.3.

Figure 14.3 Swath plot for gold grades in the Stockwork vein

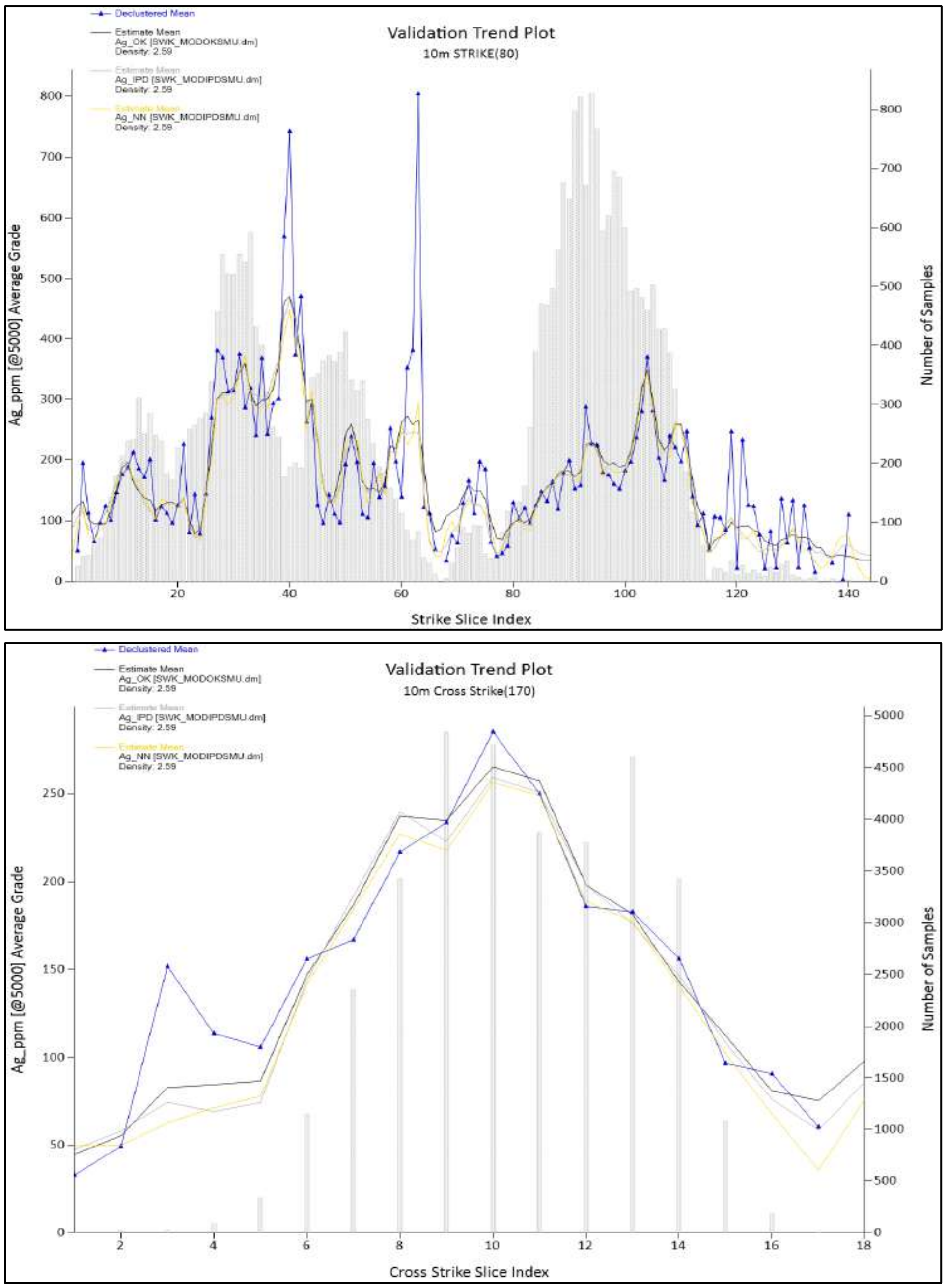


Figure prepared by Cuzcatlan, 2023

The slice plots display a good continuity between the OK, IDW, and nearest neighbor (NN) estimates, as well as the declustered composites indicating the OK estimates are not over-smoothed. Based on the results it was concluded that OK was a suitable interpolation method providing reasonable global and local estimates.

14.9.3 Visual validation

Validation of each of the metals was completed by comparing the estimated block model grades to the composite grades used in the estimation. Checks were performed by generating long sectional views (Figure 14.4) as well as checking cross sectional views along the full strike length of each vein.

Figure 14.4 Visual validation of estimated block grades versus composites – Stockwork vein

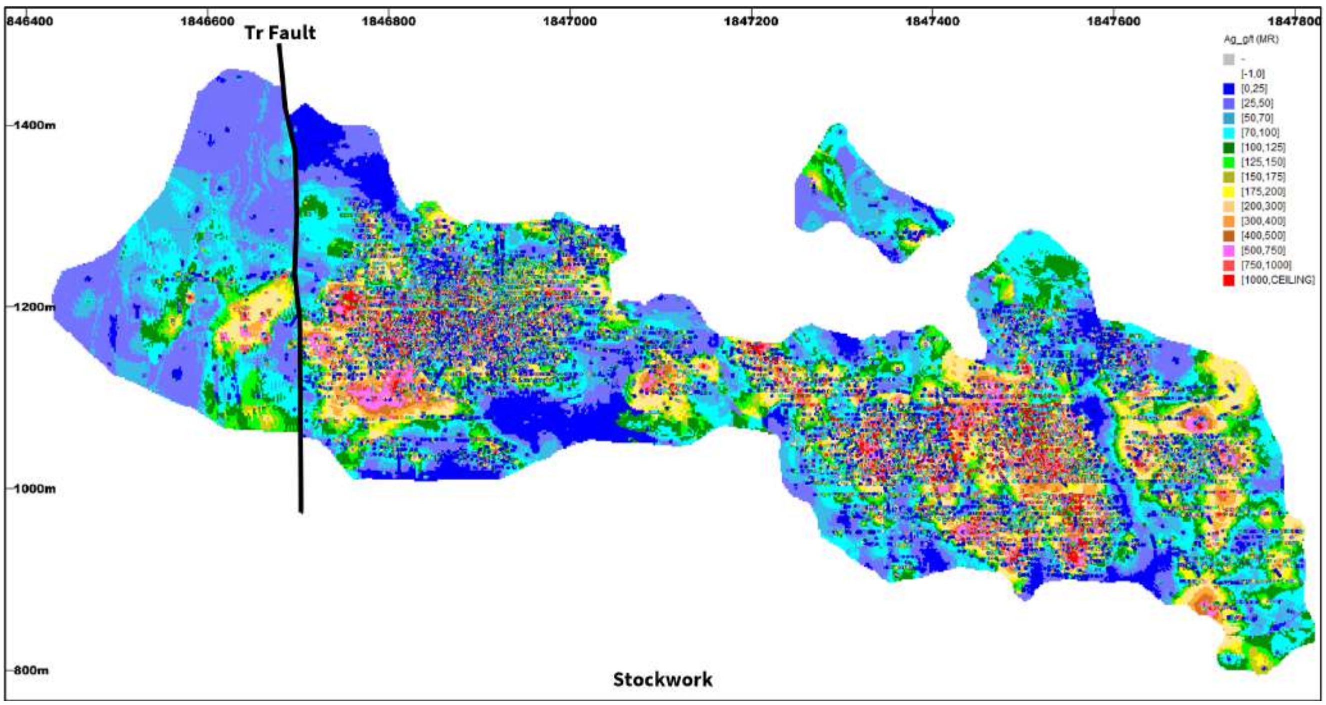


Figure prepared by Cuzcatlan, 2023

The sections displayed a good visual correlation between the input composite grades and the output block model grades accounting for the expected level of smoothing due to the volume: variance relationship.

14.9.4 Mine reconciliation

The ultimate validation of the block model is to compare actual grades to predicted grades using the established estimation parameters. A comparison of the estimation against mineral in-situ (SMU blocks estimated as being above cut-off grade during extraction) is conducted monthly as part of the ongoing reconciliation program and demonstrates a good level of correlation with tonnes and grade generally within 10 % on a quarterly basis. Gold grades tend to be more erratic than other metals and the operation reported lower than expected grades for the first half of 2023. Adjustments have been made in the estimation process to address this over-estimation issue.

14.10 Mineral Resource depletion

All underground development and stopes at the San Jose Mine are regularly surveyed using total station methods as a component of monitoring the underground workings. The survey information is imported into Datamine and used to generate 3D solids defining the extracted regions of the mine. Each wireframe is assigned a date corresponding to when the material was extracted, providing Cuzcatlan a detailed history of the progression of mining.

The 3D solids were used to identify resource blocks that have been extracted and assign a code that corresponded to the date of extraction in the resource block model.

Removal of extracted material often results in remnant resource blocks being left in the model that will likely never be exploited. These represent inevitable components of mining such as pillars and sills, or lower-grade peripheral material that was left behind. To take this into account, areas were identified by the mine planning department as being fully exploited, and any remnant blocks within these areas were identified in the block model using the code "RM = 1" and excluded from the reported Mineral Resources.

14.11 Mineral Resource classification

Resource confidence classification considers a number of aspects affecting confidence in the resource estimation, such as:

- Geological continuity (including geological understanding and complexity).
- Data density and orientation.
- Data accuracy and precision.
- Grade continuity (including spatial continuity of mineralization).
- Simulated grade variability.

14.11.1 Geological continuity

There is substantial geological information to support a good understanding of the geological continuity of the primary veins at the San Jose Mine. Exploration and definition drilling conducted on an approximate 25 m x 25 m grid has supported the geological continuity of the Bonanza, Trinidad, and Stockwork veins along strike and down dip. Three dimensional models of lithology, alteration, structures and mineralization have been generated to aid the estimation process.

Understanding of the vein systems is greatly increased by the presence of extensive underground workings allowing detailed mapping of the geology. Underground observations have increased the ability to accurately model mineralization. The proximity of resources to underground workings has been taken into account during resource classification.

Confidence in the geological continuity of the secondary veins is lower as there tends to be fewer intercepts. The uncertainty in the geology of the secondary veins has been taken into account during classification.

14.11.2 Data density and orientation

The estimation relies on two types of data, channel samples and drill holes. Cuzcatlan has explored and defined the primary veins using a drilling pattern spaced roughly 25 to 50 m apart along strike and down dip. Each hole attempts to intercept the vein perpendicular to the strike of mineralization but this is rarely the case, with the intercept angle being generally between 60 to 90 degrees.

In the primary veins, exploration drilling data is supported by underground information including channel samples taken at approximately 3 m intervals along the strike of the mineralization. Geological confidence and estimation quality are closely related to data density, and this is reflected in the classification.

14.11.3 Data accuracy and precision

Classification of resource confidence is also influenced by the accuracy and precision of the available data. The accuracy and the precision of the data is determined through QAQC programs and through an analysis of the methods used to measure the data.

All exploration drill core is sent to ALS Global for sample preparation and analysis. Channel and infill samples were sent to both the ALS Global and Cuzcatlan laboratories for preparation and analysis prior to February 24, 2012. After this date, underground channel samples have been sent to the Cuzcatlan Laboratory and ALS Global has been used as an umpire laboratory for duplicate assay purposes. The Cuzcatlan Laboratory has been ISO certified since March 3, 2018, for sample preparation and assaying of silver and gold.

Quality control results from the Cuzcatlan Laboratory and the ALS Global laboratory indicate reasonable levels of accuracy with no material issues of sample switching or contamination. Precision levels for field duplicates are lower than what would normally be regarded as acceptable and this is partially due to the variable 'nuggety' nature of the mineralization (particularly for gold), and partially due to poor selection of samples for evaluation. When a representative range of grades is assessed, the results are regarded as acceptable. The QC results indicate that grades reported from both laboratories are suitable for Mineral Resource estimation.

14.11.4 Spatial grade continuity

Spatial grade continuity, as indicated by the variogram, is an important consideration when assigning resource confidence classification. Confidence in the variogram characteristics, such as the nugget variance and ranges, strongly influence estimation quality parameters.

The variogram structures for the Bonanza, Bonanza HW, Trinidad, Trinidad FW2, Trinidad FW3, Fortuna, Stockwork, Stockwork2, Stockwork3 and Victoria main structure veins are well defined and there is a higher level of confidence in these modeled variograms. The structures are not as well defined in the other veins and some interpretation has been exercised during modeling.

The nugget effect and short-range variance characteristics of the variogram are the most important measures of continuity. In the primary veins the back-transformed variogram nugget effect for silver and gold is between 10 % and 30 % of the total variance. Caution should be exercised in relying on estimated grades representing small volumes due to the grade variability with results being more likely to be representative over larger volumes (e.g. monthly or quarterly estimates).

Ranges (the distance at which continuity between sample grades is no longer present) are approximately 30–40 m down dip and along strike. These distances are typical for epithermal style mineralization and suggest that a drilling grid of 25 m is reasonable for representative grade simulation in these veins.

14.11.5 Classification

The Mineral Resource confidence classification of the San Jose Mineral Resource models incorporate the confidence in the drill hole and channel data, the geological interpretation, geological continuity, data density and orientation, spatial grade continuity, and estimation quality. The Mineral Resource models were coded as Inferred, Indicated, and Measured in accordance with the 2014 CIM Definition Standards. Classification was based on the following steps:

- Blocks were considered as Measured Mineral Resources if on average a minimum of 12 composites, from at least three different channels/drill holes were used in the estimate with the nearest sample being within 20 % of the variogram range (Bonanza <10 m, Trinidad <12 m, Stockwork <12 m, and Fortuna <13 m).
- Blocks were considered as Indicated Mineral Resources if on average a minimum of 10 composites, from at least two different channels/drill holes were used in the estimate with the nearest sample being within 40 % of the variogram range (Bonanza <20 m, Trinidad <25 m, Stockwork <25 m, and Fortuna <26 m).
- Blocks were considered as Inferred Mineral Resources if a minimum of one composite was used in the estimate with the nearest sample being within 100 % of the variogram range (Bonanza <50 m, Trinidad <60 m, Stockwork <60 m, and Fortuna <65 m). Only interpolated blocks (between drill hole or channel intercepts) were classified as Inferred with extrapolated blocks removed from reporting meaning that the majority of Inferred Mineral Resources are informed from two or more drill holes.
- Perimeter strings were digitized in Studio RM and the block model coded as either CLASS=1 (Measured), CLASS=2 (Indicated) or CLASS =3 (Inferred) based on the above steps to ensure a gradational effect in the classification.

The above criteria ensure a gradation in confidence from Measured to Indicated to Inferred Mineral Resource blocks. It also ensures that blocks considered as Measured Mineral Resources are informed from at least three sides, blocks considered as Indicated Mineral Resources from two sides, and blocks considered as Inferred Mineral Resources from one side. Kriging efficiency and the slope of regression were also used to determine the reasonableness of the above criteria. An example of a classified vein is provided in Figure 14.5 with the selection criteria used in the categorization.

Figure 14.5 Long section of Stockwork vein displaying Mineral Resource categorization criteria

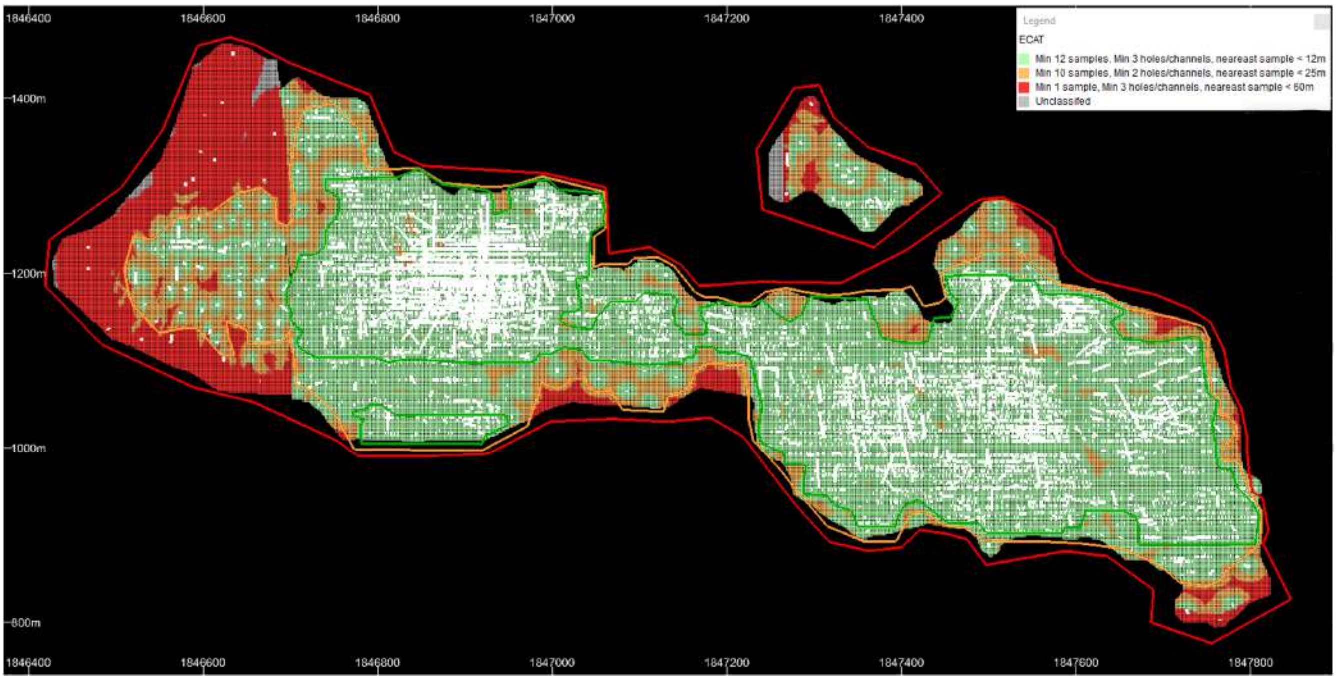


Figure prepared by Cuzcatlan, 2023

Notes:

- Blocks inside green perimeter classified as Measured Mineral Resources
- Blocks inside orange perimeter classified as Indicated Mineral Resources
- Blocks inside red perimeter classified as Inferred Mineral Resources
- White markers represent composites intersecting the Bonanza vein

14.12 Mineral Resource reporting

14.12.1 Reasonable prospects for eventual economic extraction

Mineral Resources are reported based on underground mining within mineable stope shapes based on actual operational costs and mining equipment sizes using silver equivalent grades in the block model calculated based on the projected long-term metal prices and actual metallurgical recoveries experienced in the plant using the following formula:

Ag Eq (g/t) = Ag (g/t) + (Au (g/t)*((1,880/23.90)*(91/90)).

Mineral Resources are reported above a cut-off grade of 130 g/t Ag Eq based on operating costs of US$ 84.94/t comprised of US$ 38.31/t for mining, US$ 20.71/t for plant, and US$ 25.92 for all other costs including general services and administration, distribution, community and social relations.

Mineral Resources identified as being isolated or economically unviable using the floating stope optimizer are excluded from being reported.

14.12.2 Mineral Resource statement

Eric Chapman P. Geo. is the QP for the Mineral Resource estimate for the San Jose Mine. Mineral Resources are reported insitu and have an effective date of December 31, 2023. Mineral Resources are summarized in Table 14.9. Mineral Resources are estimated by ordinary kriging and reported within mineable stope shapes accounting for operational dilution at the SMU size using a 130 g/t Ag Eq cut-off grade in areas identified as accessible for underground mining. The Measured and Indicated Mineral Resources are exclusive of those Mineral Resources modified to produce the Mineral Reserves through the process described in Section 15. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Table 14.9 Mineral Resources exclusive of Mineral Reserves reported as of December 31, 2023

Category	Tonnes (000)	Ag (g/t)	Au (g/t)	Ag Eq (g/t)	Contained Metal		
					Ag (Moz)	Au (koz)	Ag Eq (Moz)
Measured	45	141	1.09	222	0.2	2	0.3
Indicated	1,001	148	1.11	234	4.7	36	7.5
Measured + Indicated	1,046	147	1.11	234	5.0	37	7.9
Inferred	1,029	147	1.04	229	4.9	35	7.6

Notes on Mineral Resources

- Mineral Resources are reported insitu, as defined by the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves.
- Mineral Resources are reported as of December 31, 2023.
- Mr. Eric Chapman P. Geo., a Fortuna employee, is the Qualified Person for the estimate.
- Mineral Resources are reported exclusive of Mineral Reserves.
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- Mineral Resources are reported based on underground mining within optimized stope designs using a cut-off grade of 130 g/t Ag Eq based on assumed metal prices of US$ 23.90/oz Ag and US$ 1,880/oz Au, estimated metallurgical recovery rates of 91 % for Ag and 90 % for Au (Ag Eq (g/t) = Ag (g/t) + (Au (g/t)*((1,880/23.90)*(91/90)), and an operating cost of US$ 84.94/t.
- Mineral Resource tonnes are rounded to the nearest thousand.
- Totals may not add due to rounding.
- Mineral Resources in this table are not additive to the Mineral Resources reported in Table 14.10 and Table 14.11.

Factors that may affect the estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the 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; variations in density and domain assignments; geometallurgical assumptions; changes to geotechnical, mining, dilution, and metallurgical recovery assumptions; change to the input and design parameter assumptions that pertain to the conceptual stope designs 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.

14.12.3 Mineral Resources by key geologic attributes

The following section provides a breakdown of the resource estimates based on various key geological attributes. The Mineral Resources presented in this subsection are not additive to the Mineral Resources presented in Table 14.9. A cornerstone of this analysis involves the evaluation of the Mineral Resources inclusive of Mineral Reserves for the San Jose Mine, as summarized in Table 14.10. Mineral Resources are reported within mineable stope shapes and therefore include operational dilution using a 130 g/t Ag Eq cut-off grade as described above.

Table 14.10 Mineral Resources inclusive of Mineral Reserves reported as of December 31, 2023

Category	Tonnes (000)	Ag (g/t)	Au (g/t)	Ag Eq (g/t)	Contained Metal		
					Ag (Moz)	Au (koz)	Ag Eq (Moz)
Measured	154	191	1.41	301	0.9	7	1.5
Indicated	1,828	168	1.16	258	9.9	68	15.2
Measured + Indicated	1,982	170	1.18	262	10.8	75	16.7
Inferred	1,029	147	1.04	229	4.9	35	7.6

Notes on Mineral Resources

- Mineral Resources are reported insitu as defined by the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves.
- Mineral Resources are reported as of December 31, 2023.
- Mr. Eric Chapman P. Geo., a Fortuna employee, is the Qualified Person for the estimate.
- Mineral Resources are reported inclusive of Mineral Reserves.
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- Mineral Resources are reported based on underground mining within optimized stope designs using a cut-off grade of 130 g/t Ag Eq based on assumed metal prices of US$ 23.90/oz Ag and US$ 1,880/oz Au, estimated metallurgical recovery rates of 91 % for Ag and 90 % for Au (Ag Eq (g/t) = Ag (g/t) + (Au (g/t)*((1,840/24.15)*(91/90)), and an operating cost of US$ 84.94/t.
- Mineral Resource tonnes are rounded to the nearest thousand.
- Totals may not add due to rounding.
- This table is not additive to Table 14.9 or Table 14.11.

The Mineral Resources can be further assessed by examining the tonnes and grade associated with each vein at the reported cut-off grade (Table 14.11).

Table 14.11 Mineral Resources inclusive of Mineral Reserves by vein reported as of December 31, 2023

Category	Vein	Tonnes (000)	Ag (g/t)	Au (g/t)	Ag Eq (g/t)	Contained Metal			Average Thickness (m)*
						Ag (koz)	Au (koz)	Ag Eq (koz)	
Measured	Bonanza	50	196	1.38	303	315	2.2	488	9.1
	Trinidad	16	163	1.19	256	86	0.6	135	5.5
	Fortuna	46	147	1.42	258	218	2.1	381	10.6
	Stockwork	29	248	1.71	381	228	1.6	351	12.2
	Stockwork2	13	231	1.12	318	95	0.5	131	9.0
	Total	**154**	**191**	**1.41**	**301**	**941**	**7.0**	**1,486**	**9.7**
Indicated	Bonanza	265	175	1.26	273	1,488	10.7	2,326	5.9
	Bonanza HW	34	226	1.77	363	243	1.9	392	4.2
	Trinidad	361	132	0.81	196	1,539	9.4	2,272	8.0
	Trinidad FW	2	118	0.60	165	9	0.0	12	3.0
	Trinidad FW2	55	118	0.60	165	241	1.2	334	8.9
	Trinidad FW3	137	206	0.92	278	904	4.1	1,221	5.8
	Paloma	6	174	1.47	289	36	0.3	60	2.8
	Fortuna	161	138	0.85	204	714	4.4	1,056	7.5
	Stockwork	214	198	1.47	313	1,362	10.1	2,148	8.6
	Stockwork2	28	244	1.30	346	217	1.2	307	5.8
	Stockwork3	22	231	1.02	311	167	0.7	224	5.3
	Victoria (Vmz)	543	169	1.38	277	2,956	24.1	4,837	5.6
	Total	**1,828**	**168**	**1.16**	**258**	**9,874**	**68.1**	**15,189**	**6.7**
Inferred	Bonanza	59	277	1.54	397	526	2.9	754	2.6
	Bonanza HW	25	100	1.10	186	79	0.9	147	4.2
	Trinidad	108	105	0.73	162	363	2.5	561	10.6
	Trinidad FW	4	111	0.46	147	16	0.1	21	3.7
	Trinidad FW2	21	121	0.58	165	80	0.4	110	7.0
	Paloma	4	108	1.29	209	15	0.2	28	2.3

Category	Vein	Tonnes (000)	Ag (g/t)	Au (g/t)	Ag Eq (g/t)	Contained Metal			Average Thickness (m)*
						Ag (koz)	Au (koz)	Ag Eq (koz)	
	Fortuna	23	141	0.43	174	106	0.3	131	3.4
	Stockwork	103	125	0.75	183	413	2.5	606	6.3
	Stockwork 2	63	215	1.14	304	435	2.3	614	4.4
	Stockwork 3	10	409	1.77	547	133	0.6	178	3.0
	Stockwork 4	27	114	0.64	164	101	0.6	145	3.1
	Diedro Vein 2	26	103	0.96	178	87	0.8	150	5.3
	Victoria (Vmz)	440	143	1.16	233	2,019	16.5	3,304	4.0
	Victoria HW1	115	135	1.08	219	500	4.0	813	5.3
	Total	**1,029**	**147**	**1.04**	**229**	**4,873**	**34.5**	**7,563**	**5.0**

Refer to notes on Mineral Resources below Table 14.10
Mineral Resources in Table 14.11 are not additive to the Mineral Resources reported in Table 14.9 or Table 14.10
*Average thickness calculated by spearing the block model at 2 m intervals in an east to west direction

An important addition to the Indicated and Inferred Mineral Resources has been attributed to the exploration and infill drilling programs focused on the Victoria main structure, part of the Victoria mineralized zone, located approximately 350 m east of the Trinidad deposit.

Due to the presence of high-grade regions in the Trinidad deposit there is the potential to selectively mine higher-grade material if weaker metal prices dictated that this was necessary.

14.12.4 Comparison to previous estimates

The primary reasons for changes in the reported Mineral Resources compared to the previous estimate are due to:

- Exploration and infill drilling of the Trinidad deposit and Victoria mineralized vein.
- Production related depletion and sterilization of material mined out since the previous estimate.
- Updates in geological reinterpretation.
- Exploration and infill drilling of the Victoria mineralized zone.
- Change in cut-off grades in relation to increases in operating costs.

14.13 Sequential Gaussian Simulation

Simulation has been employed to estimate the variable nature of the silver and gold grades in the veins of the Trinidad deposit for risk analysis purposes.

Simulation, as stated by Sinclair and Blackwell (2002), 'involves an attempt to create an array of values that has the same statistical and spatial characteristics as the true grades; however, values are generated on a much more local scale than that for which true grade information is available. If the simulated data, which reproduces the variance of the input data, both in a univariate sense (histogram models) and spatially (variogram models), honors the known sample points the technique is conditional simulation, as first described by Journel (1974). The simulation is not an estimate but a set of values that have the same general statistical character as the original data. A simulation approach will reflect local grade variations, as simulated arrays of values are constructed to vary on the same scale as the true variations of sample grades, whereas most estimation methods, such as kriging, will smooth the spatial distribution of grade and lower the variance compared to the true block values (Ravenscroft, 1992).

The simulation produces values (i.e. grades) at the nodes of an extremely fine grid such that the character of the simulated deposit or domain is almost perfectly known by a large set of punctual values. The geostatistical simulation generates an equal probable image of reality. Simulation is then repeated, (e.g. 50 times) resulting in a different set of values (realizations) for the grid nodes each time. The sequence of nodes to be simulated is random, incorporating the samples within a specified search ellipse and the input model, to generate the new grid. The random sequence of points ensures that each realization is unique while adhering to the same input models. Accuracy of the realizations is dependent on the methodology used and quality of data provided. Kriging will only provide an average estimation whereas the realizations of the simulation when combined will approximate the kriged estimate.

Sequential Gaussian simulation was chosen for simulating the silver and gold grades for veins in the Trinidad deposit. By simulating grades into a fine grid of nodes and re-blocking to the SMU, conditional bias is eliminated, and recoverable resources can be reported at the SMU scale. This methodology is designed to reduce the effect of localized over-smoothing of grades and provide a superior comparison between the resource model and what is recovered underground during grade control.

Sequential Gaussian simulation was run using the SGSIM process of GSLIB. Sequential Gaussian simulation is performed using the following steps: -

1) The node grid, normal score sample data and variography are input into the SGSIM process. Search neighborhoods were set to match the orientation and distances as modeled in the variograms (Table 14.5).
2) A random path is set up so each node is visited once.
3) The first node is kriged using simple kriging based on the sample data within the specified search ellipse.
4) A cumulative distribution frequency (CDF) is generated for the node using the estimated mean and kriging variance. Sequential Gaussian simulation kriges using Gaussian data, which has a symmetrical distribution, subsequently the estimated mean approximates the mean of the normal distribution, and the kriging variance approximates the variance of the normal distribution.
5) A value is randomly sampled from the CDF using a Monte Carlo simulation and assigned to the node.
6) The process then moves to the next node and is repeated, using the original sample data and the previously simulated nodes.
7) This is repeated until all nodes have been simulated.
8) Once all nodes are simulated the process begins again with a new random path to produce successive realizations. All are different and all are equi-probable.

The variability that is incorporated in the simulations depends on the spread of the CDF (step 4). In sequential Gaussian simulation this is a factor of the kriging variance and hence is a factor of the variogram and the data spacing. Sequential Gaussian simulation assumes strict stationarity in the data as it uses simple kriging. This means that the mean and variance should be consistent across a domain.

Upon completion of the sequential Gaussian simulation process the simulated node values are back-transformed from a Gaussian distribution to the original grade distribution using the BACKTR program from GSLIB.

The simulations are re-blocked to the SMU size of interest (2 x 2 x 2 m) therefore creating 50 potential realizations of the deposit.

The simulated models are used for risk analysis to assess the potential effect of grade variability on the mine plan.

14.14 Comment on Section 14

The QP is of the opinion that the Mineral Resources for the San Jose Mine, which have been estimated using core drill and channel data, have been performed to industry best practices, and conform to the requirements of CIM (2014). The Mineral Resources are acceptable to support declaration of Mineral Reserves.

It is the opinion of the QP that through the application of a silver-equivalent value taking into consideration the average metallurgical recovery and long term metal prices for each metal, and the determination of a reasonable cut-off grade using agreed upon commercial terms, average grade in concentrate, actual operating costs, as well as the exclusion of Mineral Resources identified as being isolated or economically unviable using a floating stope optimizer, the Mineral Resources have reasonable prospects for eventual economic extraction.

There are no other environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors known to the QP that would materially affect the estimation of Mineral Resources that are not discussed in this Report.

15 Mineral Reserve Estimates

15.1 Mineral Resources handover

The Mineral Resources reported in Table 14.10 contain mineralization that has been classified into the Measured, Indicated and Inferred Mineral Resource categories.

Upon receipt of the block model, a review was conducted to confirm that the Mineral Resources were reported correctly and to validate the various fields in the model.

For estimating Mineral Reserves, only Measured and Indicated Mineral Resources that are considered accessible in Trinidad and Victoria have been considered. Inferred Mineral Resources were treated as waste material.

The Mineral Reserve estimation process considered the Mineral Resources above a 115 g/t Ag Eq cut-off grade.

15.2 Mineral Reserve methodology

The Mineral Reserve estimation procedure for the Trinidad deposit and Victoria mineralized zone are defined as follows:

- Review of Mineral Resources in longitudinal sections and grade–tonnage curves.
- Identification and removal of inaccessible Mineral Resources based on current mining practices - such as crown pillars and isolated areas.
- Dilution of tonnes and grades based on factors estimated by the Cuzcatlan mine planning department based on dilution levels encountered during the previous 12 months of production preceding Mineral Reserve estimation.
- After obtaining the resources with diluted tonnages and grades, the value per tonne of each SMU is determined based on metal prices and metallurgical recoveries for each metal.
- A breakeven cut-off grade is determined based on operational costs of production, processing, general expenses and administrative, and distribution costs (total operating cost in US$/t) and converted into a silver equivalent grade. If the silver equivalent grade of an SMU is higher than the breakeven cut-off grade, the SMU is considered as part of the Mineral Reserve; otherwise, the SMU is regarded as part of the Mineral Resource. This evaluation is conducted in Datamine’s Mineable Stope Optimizer software (MSO).
- Evaluate location and dimensions of potential pillars based on the proposed mining methodology.
- Removal of inaccessible areas and material identified as pillars or crown pillars to account for mining recovery based on current mining practices and mine architecture.
- Depletion of Mineral Reserves and Mineral Resources exclusive of reserves relating to operational extraction between July 1 and December 31, 2023.
- Reconciliation of the reserve block model against mine production between July 1 and December 31, 2023, to confirm estimation parameters.

- Mineral Reserve tabulation and reporting as of December 31, 2023.

15.3 Key Mining Parameters

15.3.1 Mining Recovery

Mining recovery levels vary due to the geometry of the vein and geotechnical characteristics of the material being mined. Some mineralized material cannot be economically extracted due to its isolated location, thickness being below the minimum mineable width, or due to other technical or economic considerations.

In overhand cut and fill (OCF), if the vein width is greater than 12 m, mining recovery averages 84 %; between 5 and 12 m, it averages 92 %; whereas if the vein width is 5 m or less mining recovery averages 98 %. In sublevel stoping (SLS), mining recovery averages 92%. In addition, there is a necessity for leaving crown pillars for each main mine level or sublevel to allow access to the mineralization.

The overall mining recovery is approximately 92 % which takes into account the presence of pillars in wide veins and crown pillars for each main level of the mine.

15.3.2 Dilution

Dilution refers to the waste material (below breakeven cut-off grade) that is not separated from the ore (above breakeven cut-off grade) during mining. Dilution increases ore tonnage while decreasing its grade. It can be defined as the ratio of the tonnage of waste against the total tonnage of ore sent to the mill and is usually expressed as a percentage (William et al, 2001) equation number 1.

$$\text{Dilution} = \frac{\text{Waste Tonnes}}{\text{Ore Tonnes}} \text{ X } 100$$

Two sources of dilution have been considered for estimating Mineral Reserves, operational dilution and mucking dilution.

Operational dilution

Operational dilution was calculated based on mine production data from June 2022 to July 2023 by the Planning Department of Cuzcatlan and their effect in determining the Stope dimension that includes planned and unplanned dilution. The process is based on making a comparison of the actual material extracted during mining (mineral extracted) against the planned ore predicted by the reserve block model (Figure 15.1).

Operational dilution was assessed by comparing the geologic structure of the vein (as modeled by the Geology Department) and what was planned for extraction (Planning Department). Waste material is considered to contain no precious metals with silver and gold grades set at a zero gram per tonne value. The data is evaluated in Datamine using macros.

The results of this evaluation, taken in conjunction with operational experience, indicate that operational dilution for OCF averages 13.4 % if a zero grade for the waste material is applied. In case of SLS the operation dilution averages 16.7%

Figure 15.1 Idealized diagram demonstrating the methodology for determining operating dilution

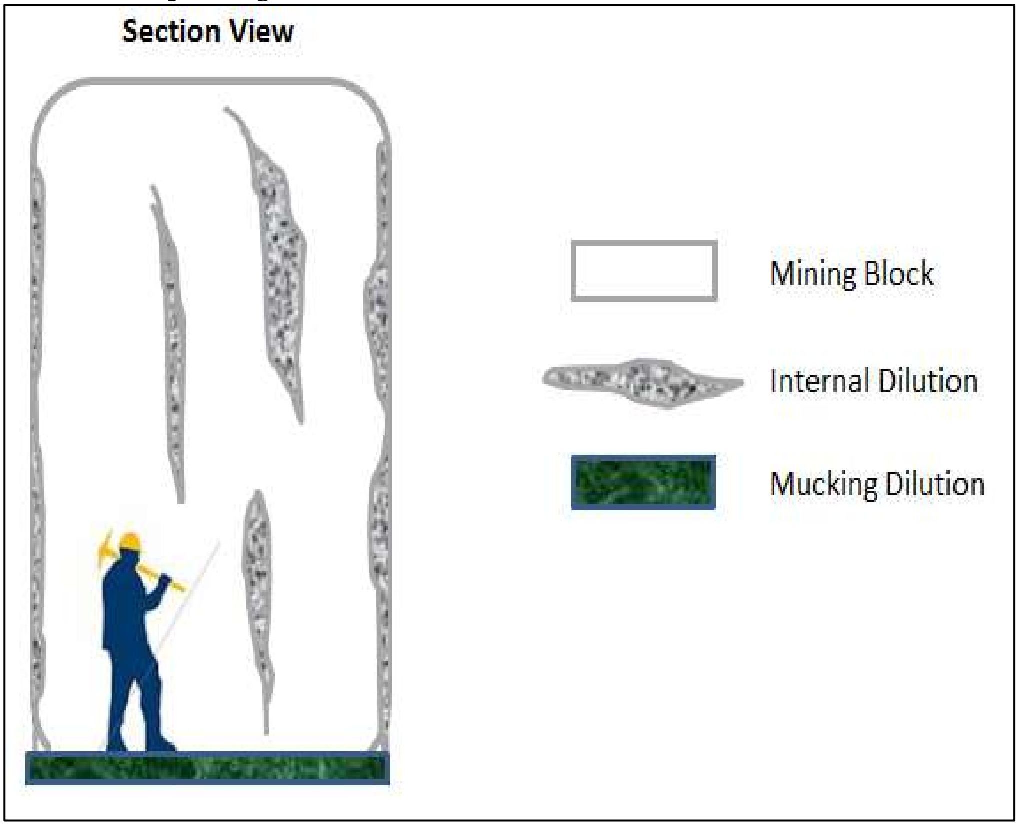


Figure sourced from William et al (2001)

Mucking dilution

Mucking dilution is based on the underground surveys of the stopes and calculates the percentage of back fill extracted during mucking in OCF mining method. Based on this criterion and the 12 months of production preceding the Mineral Reserve estimation this factor has been estimated at 1.05% applied in both mining methods. Back fill is considered to contain no mineralization with silver and gold grades set at a zero gram per tonne value.

Based on the estimated operational and mucking dilution factors related to reserves as of June 2023, the total dilution for the mine in OCF is as follows:

Total dilution = 13.4 % operational dilution + 1.05 % mucking dilution = 14.5 %.

The total dilution for the mine in SLS is as follows:

Total dilution = 16.7 % operational dilution + 1.05 % mucking dilution = 17.8 %.

15.3.3 Metal prices, metallurgical recovery, and NSR values

Metal prices used for Mineral Reserve estimation were determined as of June 2023 by the corporate financial department of Fortuna from market consensus.

Metallurgical recoveries were based on metallurgical test work and operational results at the plant from July 2022 to June 2023.

NSR values were dependent on various parameters including metal prices, metallurgical recovery, price deductions, refining charges and penalties as detailed in Table 15.1.

Table 15.1 Parameters used for NSR determination

Item	Unit	Silver	Gold
Metal Price (a)	US$/oz	23.90	1,880
Metallurgical recovery (b)	%	90.5	89.8
Value after Met. Recovery (c)	US$/oz	21.64	1,688.66
Deduction (d)	%	95.88	95.41
Refining Charges (e)	US$/oz	-0.68	-12.50
Loss in process (f)	US$/oz	-0.06	-4.43
Penalty for Zn+Pb (k)	US$/oz	-0.06	0
Premium (g)	US$/oz	0.22	0
Payable metal (h)	US$/oz	20.18	1,594.14
Extraordinary mining fee (i)	%	0.5	0.5
Value – (j)	**US$/oz**	**20.08**	**1,586.16**

Notes:
c = (a x b)/100
h = (c x d-(e + f + g + k))
j = (h x i)/100

The results presented correspond to the Progreso II BIS concession. The Reduccion Taviche Oeste concession is subject to an additional 2.5 % royalty which when applied results in NSR values of US$ 19.57/oz for silver and US$ 1,546.31/oz for gold.

The Progreso concession is subject to an additional 3 % royalty which when applied results in NSR values of US$ 19.47/oz for silver and US$ 1,538.34/oz for gold.

15.4 Cut-off grade determination

A breakeven cut-off grade was determined based on all variable and fixed costs applicable to the operation. These include exploitation and treatment costs, general expenses and administrative and commercialization costs (including concentrate transportation). Operating costs used to calculate the breakeven cut-off grade for Mineral Reserve estimation are detailed in Table 15.2.

Table 15.2 Operating cost by area and mining method

Area	Cost (US$/t) OCF	Cost (US$/t) SLS
Mine	49.83	38.31
Plant	20.79	20.79
General services	11.87	11.87
Administrative services	7.42	7.42
Distribution	6.63	6.63
Total operating cost	**96.54**	**85.02**

Based on the above operating costs per mining method, metal prices, metallurgical recoveries, and refining charges, the breakeven cut-off grade was determined for the three separate concessions where Mineral Reserves are present as follows:

- Progreso II BIS concession - 150 g/t Ag Eq for OCF and 132 g/t Ag Eq for SLS.
- Reduccion Taviche Oeste concession - 153 g/t Ag Eq cut-off grade for OCF and 135 g/t Ag Eq for SLS.
- Progreso concession - 154 g/t Ag Eq in OCF and 136 g/t Ag Eq for SLS.

SLS mining is planned for 82 % of the Mineral Reserves with OCF comprising the remainder.

The cut-off grade determination does not include costs associated with management fees, community support activities, institutional relations, capital expenditures, SG&A expenses, Brownfields exploration or closure costs.

15.5 Mineral Reserves

Mineral Reserves reported by vein at the point of delivery to the process plant are summarized in Table 15.3 based on the cut-off grades detailed above as of December 31, 2023. Measured Resources have been converted to Proven Reserves and Indicated Resources have been converted to Probable Reserves. The Qualified Person for the estimate is Raul Espinoza, FAusIMM (CP), a Fortuna employee.

Table 15.3 Mineral Reserves as of December 31, 2023

Category	Vein	Tonnes (000)	NSR (US$/t)	Ag (g/t)	Au (g/t)	Ag Eq (g/t)
Proven	Bonanza	18	191	207	1.26	305
	Trinidad	1	135	145	0.91	216
	Fortuna	15	140	126	1.24	223
	Stockwork Norte	0	154	155	1.08	239
	Stockwork 2	2	194	222	1.11	309
	Total	**37**	**168**	**172**	**1.23**	**267**
Probable	Bonanza	144	145	146	1.10	232
	Bonanza - Trinidad Norte	25	218	248	1.25	346
	Bonanza Hanging Wall Splay	8	296	313	2.04	473
	Trinidad	235	120	131	0.77	191
	Trinidad Foot Wall 2	29	114	129	0.66	181
	Trinidad Foot Wall 3	81	153	181	0.80	244
	Paloma	5	121	113	0.96	187
	Fortuna	47	126	122	1.00	201
	Stockwork	81	162	163	1.23	259
	Stockwork Norte	27	186	204	1.17	295
	Stockwork 2	8	310	344	1.91	493
	Stockwork 3	6	174	208	0.87	276
	Total	**695**	**145**	**155**	**0.97**	**231**
Total Proven + Probable Reserves		**733**	**146**	**156**	**0.98**	**233**

Notes:

1. Mineral Reserves are reported at the point of delivery to the process plant using the 2014 CIM Definition Standards.
2. Mineral Reserves are reported as of December 31, 2023.
3. Raul Espinoza, FAusIMM (CP), a Fortuna employee, is the Qualified Person for estimate.
4. Mineral Reserves are reported based on underground mining within optimized stope designs using an NSR breakeven cut-off for cut and fill mining methods of US$ 96.54/t, equivalent to 150 g/t Ag Eq and an NSR breakeven cut-off for sublevel stoping mining methods of US$ 85.02/t, equivalent to 132 g/t Ag Eq. An additional 2.5 % royalty is applied to the cut-off for Mineral Reserves mined from the Reduccion Taviche Oeste concession and a 3.0 % royalty is applied to the cut-off for Mineral Reserves mined from the Progreso concession.
5. Metal prices used in the NSR evaluation are US$ 23.9/oz for silver and US$ 1,880/oz for gold.
6. Metallurgical recovery values used in the NSR evaluation are 90.5 % for silver and 89.8 % for gold based on actual plant recoveries.
7. NSR values taking into account refining charges used in the estimation are US$ 20.08/oz for silver and US$ 1,586.16/oz for gold with the exception of material located in the Reduccion Taviche Oeste

concession where NSR values are US$ 19.57/oz for silver and US$ 1,546.31/oz for gold and Progreso concession where NSR values are US$ 19.47/oz for silver and US$ 1,538.34/oz for gold.

8. Costs used in NSR breakeven cut-off determination are US$ 49.83/t for cut and fill mining method; US$ 38.31/t for sublevel stoping mining method; US$ 20.79/t for processing; and US$ 25.92/t for other costs including distribution, general service and administration.
9. Mining recovery is estimated to average 92 % and mining dilution is estimated at 17 %.
10. Mineral Reserve tonnes are rounded to the nearest thousand.
11. Totals may not add due to rounding.

Factors that may affect the estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the 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; variations in density and domain assignments; geometallurgical assumptions; changes to geotechnical, mining, dilution, and metallurgical recovery assumptions; change to the input and design parameter assumptions that pertain to the conceptual stope designs 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.

There are no other known environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors that would materially affect the estimation of Mineral Reserves that are not discussed in this Report.

15.6 Comment on Section 15

Mineral Reserves are to be extracted using OCF and SLS underground mining methods. In the opinion of the QP, Mineral Reserves appropriately estimated with the application of reasonable mining recovery and dilution factors based on operational observations and a silver equivalent breakeven cut-off that is based on actual mining, processing and smelting costs; actual metallurgical recoveries achieved in the plant; and reasonable long-term metal prices that are based on market consensus.

The QP is of the opinion that the Proven and Probable Mineral Reserves estimate has been undertaken with reasonable care and has been classified using the 2014 CIM Definition Standards.

There are no other environmental, legal, title, taxation, socioeconomic, marketing, political or other relevant factors known to the QP that would materially affect the estimation of Mineral Reserves that are not discussed in this Report.

16 Mining Methods

16.1 Introduction

Mining method selection is critical as it impacts dilution, productivity, product consistency, production capacity, development, backfill and ventilation requirements. The mining method applied at the San Jose Mine is OCF and SLS using a mechanized extraction methodology. Production capacity has been 3,000 tpd since 2016.

All mine planning, hydrogeology, geotechnical assessment, mine services, ventilation, and electric power supply evaluations are undertaken by the Mine Planning & Engineering department of Cuzcatlan.

16.2 Hydrogeology

A study conducted by Cardona Benavides & Asociados S.C. in 2022, indicates that the groundwater balance shows inflow rates ranging from 12.57 l/s to 10.02 l/s and outflow rates ranging from 10.02 l/s to 3.28 l/s. The inflow rates account for the required storage works for drainage, such as ponds or pumping pools used for water extraction to the surface. The outflow rates identify the volumes of groundwater reintegrated daily into the mine system.

Based on the hydrogeological knowledge derived from the study, it was found that the water table associated with wells, and springs supplying the different communities in the area of interest does not have a direct connection with the saturated zone identified at depth within the mine. As a preliminary approximation, the elevation of the saturation zone is considered to be at 980 meters above sea level, with the deepest mine level located at 830 meters above sea level.

Considering the volumetric water flow extracted from the mine to the surface, which averages 10 l/s monthly, and taking into account the estimated inflow of water into tunnels beneath the water column, along with the projected monthly progress within the mine, there could be a potential increase in groundwater flow to the mine, estimated at around 6 l/s or roughly 16,400 m^3/month, with a possible maximum of approximately 13 l/s, equivalent to 33,400 m^3/month. The pumping equipment capacity ranges from 28 to 30 l/s and operates for less than 24 hours per day, so it may be necessary to extend its operational hours when the maximum drainage flows from the deepest mine area to the ground surface are reached. The mine dewatering system is discussed in Section 16.7.8.

16.3 Mine geotechnical

Cuzcatlan's geomechanics department evaluates the rock mass classification for the active areas in the mine based on the following systems:

- Geological strength index (GSI) as described by Marinos et al (2007).
- Rock mass rating (RMR) that uses the Bieniawski (1989) classification system.

RMR and GSI are used as the main systems for ranking the rock mass at the San Jose Mine from very bad (RMR less than 20), to good (RMR greater than 61) as detailed in Table 16.1.

Table 16.1 Geomechanical classification used at the San Jose Mine

Classification	RMR
Good	61–80
Regular - A	51–60
Regular - B	41–50
Bad - A	31–40
Bad - B	21–30
Very Bad	0–20

The maximum stable opening dimensions have been estimated based on this rock mass classification and the hydraulic radius for each mineralized structure. For OCF, the maximum stable size approved for underground mining is 6 to 8 m in width and 6 m in height, while for SLS, openings are 4 m in width and 4 m in height, with stope dimensions from 15 to 20 m in height.

The average RMR of the rock for the Bonanza and Trinidad vein systems is 40 to 55, supporting the type of openings indicated for the OCF mining methodology (using paste backfill or waste rock fill). The ground support designed for the OCF stope openings is 2.4 m (8-foot) long bolts and a 5.1–7.6 cm (2 to 3-inch) thickness of shotcrete. To ensure appropriate support is achieved in a timely manner, three robot shotcrete machines and four bolters have been incorporated into the mining fleet. For SLS, the rock support consists of cable bolting of length from 8 to 14m.

When the mineralized structure is greater than 8 m in width, such as in the Stockwork Zone areas, exploitation is performed with a combination of OCF and room-and-pillar methods for ground support stability. Pillars of either 6 by 4 m (24 m^2 area) or 5 by 5 m (25 m^2 area) were recommended by third-party consultants SVS (2015). For SLS, the use of rib pillars from 3 to 6 m in thickness is recommended, with thicknesses based on the width of the mineral structure.

16.4 Mining method

The methods chosen for underground mining are:

1. **Overhand cut-and-fill**

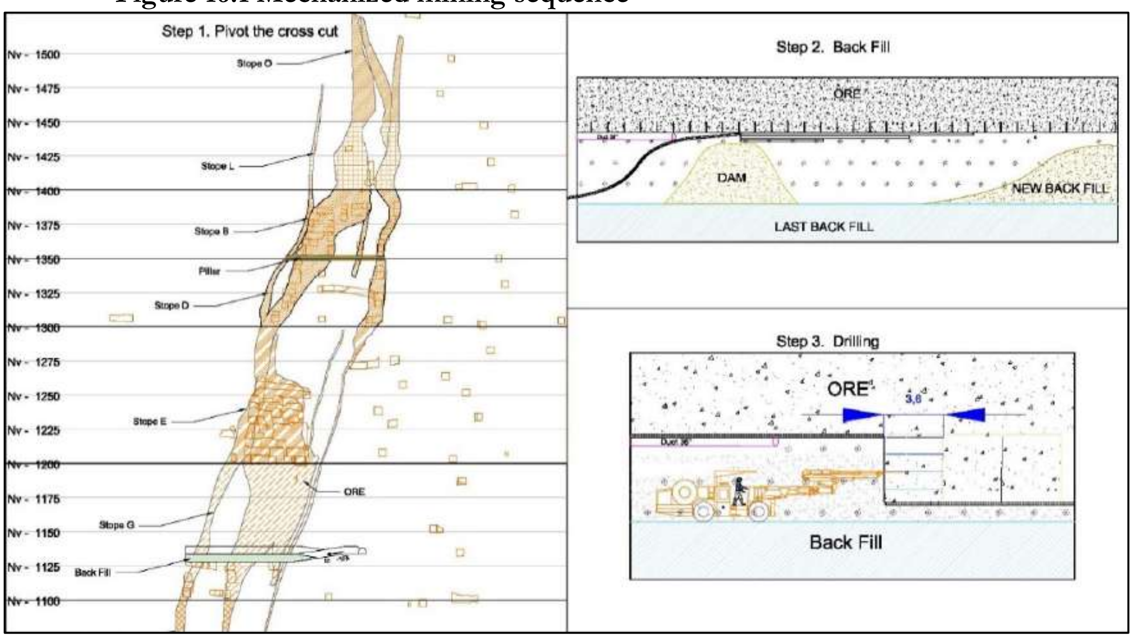
OCF removes ore in horizontal slices, starting from the bottom undercut and advancing upwards. When ore widths are greater than 8 m, a combination of OCF and room-and-pillar methods were selected as the most appropriate for the conditions encountered.

Mechanized mining uses a Jumbo drill rig to drill blast holes, scoop trams for loading and trucks for ore haulage. Rock support is provided through rock bolts and shotcrete. The deposit width ranges from 4.5 m to 17 m for the Bonanza and Trinidad vein systems and can be more than 30 m in the Stockwork Zone. Mechanized mining is regarded as the only methodology suitable for all veins based on the geological structure and geotechnical studies to date (Section 16.3). The mechanized mining sequence is demonstrated in Figure 16.1 and includes: drilling (with a Jumbo drill rig), blasting, support, loading (by scoop tram) and haulage:

1. Economic minerals are extracted from the stope in horizontal slices that open the entire width and length of the stope using pivot ramps that goes from up to ±15 % gradient.

2. After the stope has been mined out, voids are backfilled with paste or waste rock. The key performance indicators for this activity are set at 85 t/h production rates for rock waste and 100 to 150 t/h for paste fill.
3. Drilling of horizontal slices is conducted in sections of 6 m by 6 m by mechanized jumbos which have a boom length of 5 m.
4. The blast pattern is charged with an explosive made up of emulsion and ammonium nitrate fuel oil (ANFO). The average power factor applied in the blasting is 0.45 kg/t for stopes. After the mine face has been blasted and ventilated, scaling of loose rock is conducted. This is an important phase of the mining cycle in terms of safety due to the risk of falling rock.
5. Mucking is done by scoop trams (6 yd^3 capacity) from the face to an underground stockpile in the stope. Trucks with 14 m^3 capacity transport the broken ore from the stopes to the surface stockpiles using a paved ramp which allows speeds of up to 25 km/h.
6. Required support is defined by the geomechanics department.

Figure 16.1 Mechanized mining sequence



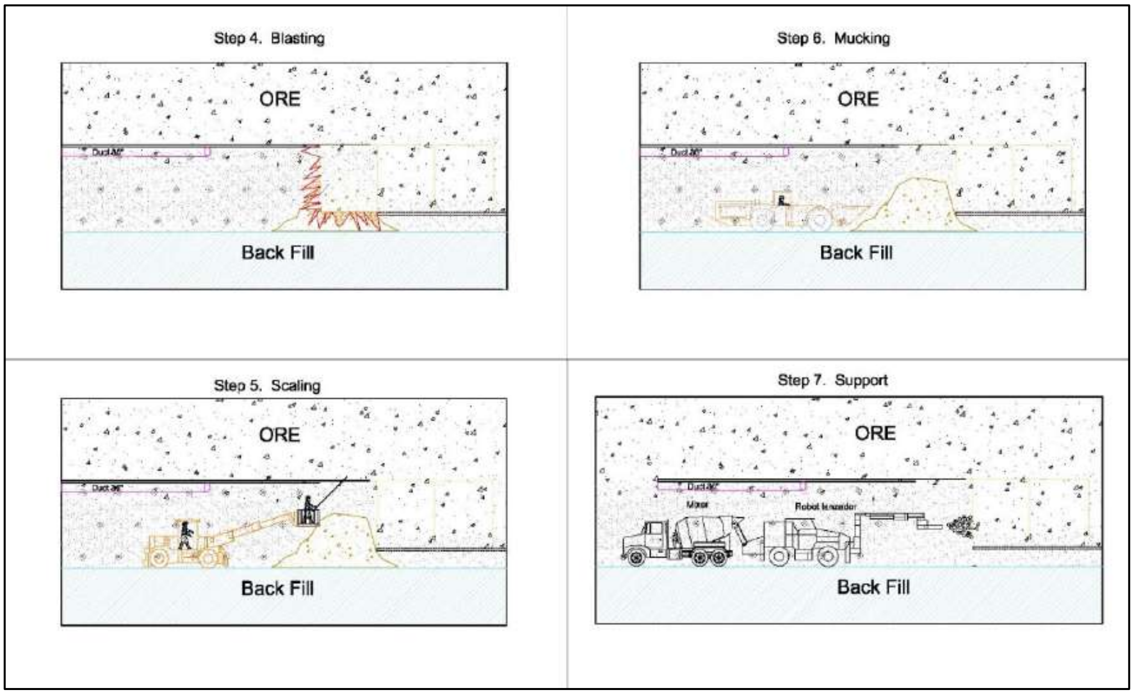


Figure prepared by Cuzcatlan 2023.

2. **Sublevel stoping**

Mineralization is removed by preparing two levels that create blocks to extract. The extraction is from the bottom level. The blocks of SLS have rib pillars depending on the rock type and general ground conditions.

Mechanized mining uses a Jumbo drill rig to support the rock, Stopemaster, Stinger and Raptor rigs to drill blast holes, scooptrams for loading and trucks for haulage. Rock support is provided through rock bolts and shotcrete. These areas have width ranges from 2 m to 6 m. The mechanized mining sequence includes: ground support, drilling (with long hole drilling equipment), blasting, loading (by scooptram), haulage and filling:

1. In the sublevel the required support is defined by the geomechanics department.
2. Drilling of vertical slices is conducted in width depending on the width of the vein by equipment such as a Stopemaster or Stinger and Raptor which have a length of 10 to 20 m.
3. The blast pattern is charged with an explosive made up of emulsion and ANFO. The average power factor applied in blasting is 0.39 kg/t.
4. After the sections have been blasted and ventilated, mucking is done by scoop trams (6 yd^3 capacity) from the mining face to an underground stockpile near the stope. Trucks with 14 m^3 capacity transport the broken material from the stopes to the surface stockpiles using a paved ramp which allows speeds of up to 25 km/h.
5. After the stope has been mined out, voids are backfilled with paste fill or waste rock fill. The key performance indicators for this activity set 85 t/h production rates for rock waste and 100 to 150 t/h for paste fill.

16.5 Mine production schedule

Mineral Reserves will sustain a 12-month LOMP consisting of 350 production days a year. Table 16.2 presents the LOMP for a mill throughput of 2,100 tpd. Based on the evaluation using MSO, the LOMP production will be approximately 3.2 Moz of silver and 20 koz of gold based on an average head grade of 156 g/t Ag and 0.98 g/t Au. Inferred Mineral Resources totaling 1.0 Mt averaging 147 g/t Ag and 1.04 g/t Au are not taken into consideration in the LOMP evaluation.

Table 16.2 San Jose Mine life-of-mine production plan 2024

Item	Q1	Q2	Q3	Q4	Total*
Ore milled (kt)	161	169	200	203	733
Ore grade Ag (g/t)	185	139	150	139	156
Ore grade Au (g/t)	1.10	0.83	0.98	0.93	0.98
Metal recovery Ag (%)	91	90	90	90	91
Metal recovery Au (%)	90	89	89	89	89
Concentrate production (t)	5,172	5,287	6,283	6,340	23,082
Concentrate grade Ag (g/t)	5,236	4,024	4,306	4,015	4,370
Concentrate grade Au (g/t)	31	24	28	26	27
Ag metal production (koz)	871	684	870	818	3,243
Au metal production (koz)	5	4	6	5	20

Note: Totals may not add due to rounding

The SMU has been determined to be 2 m by 2 m by 2 m, however, the mining unit is determined by the mining block or envelopes generated in Datamine's MSO software based on the width of the mineralized vein and the minimum mining width that depend on the mining method to be applied. This is 4 m width by 5.5 m height for OCF methods, and 2 m width by 20 m height for SLS. One blast rounds of 3.5 m are used in both mining methods.

Dilution factors are estimated to be approximately 17% for all veins based on the proposed mining methodology. Waste material is considered to contain no mineralization with silver and gold grades set at a zero gram per tonne value.

16.5.1 Mineable stope optimization

Datamine's MSO was used to develop the indicative mineable envelopes at the given cut-off grades. MSO utilizes key inputs to generate an optimized stope shape whereby the mined metal in relation to tonnage is optimized. The optimization is driven by the following inputs:

- Cut-off grade.
- Mining extents.
- Minimum and maximum stope widths.
- Level spacing.
- Minimum and maximum dip angles.

The stope design is optimized by performing the following steps:

1. Generation of mineable areas. This process requires the following inputs:

a. Height of the operational slice; 5.5 m high has been considered for the optimization in OCF; then 10–20 m high has been considered for SLS.

b. Width of the operational slice; a minimal operational width of 4 m was applied.

c. A breakeven NSR cut-off equivalent to US$ 96.54 /t for OCF and US$ 85.02 /t for SLS (see Table 15.2).

d. Dip and strike of the vein.

e. The resource block model.

2. MSO outputs were imported into Datamine's UG planner to evaluate and remove extraneous satellite stopes that are not conducive to practical and/or economic extraction. Mineralized material identified inside the MSO three-dimensional wireframes represents the Mineral Reserves. Figure 16.2 shows the longitudinal section of the optimized stopes. The result is used as an input for production and related development infrastructure planning and sequencing.

Figure 16.2 Optimized mineable areas for the San Jose Mine

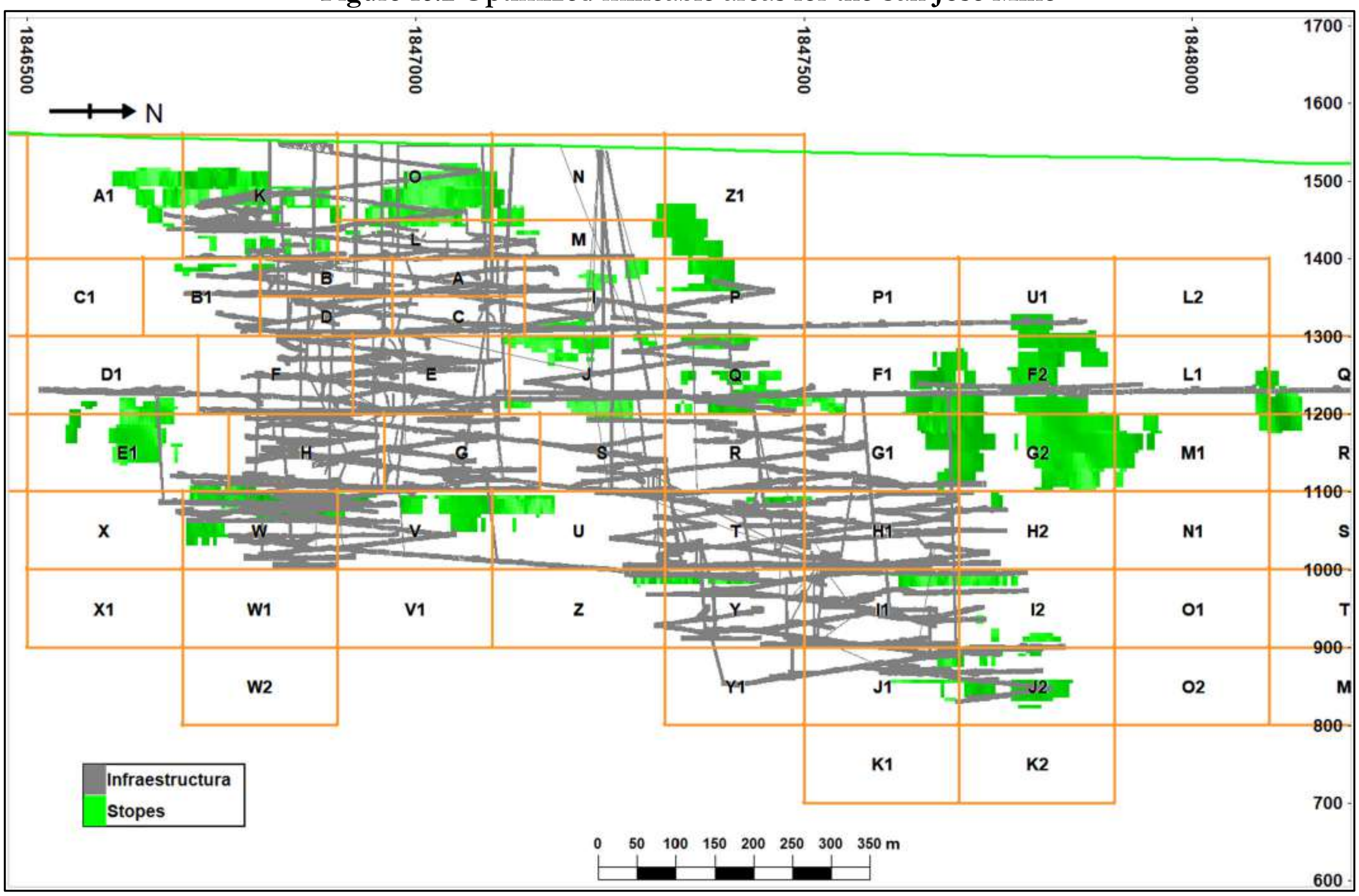


Figure prepared by Cuzcatlan, 2023

16.6 Underground mine model

16.6.1 Mine layout

Access to the San Jose Mine is from surface through a main ramp with a total average gradient of 10 % and dimensions of 4.5 m width by 4.5 m height. A longitudinal section of the mine layout is displayed in Figure 16.3.

Figure 16.3 Mine layout

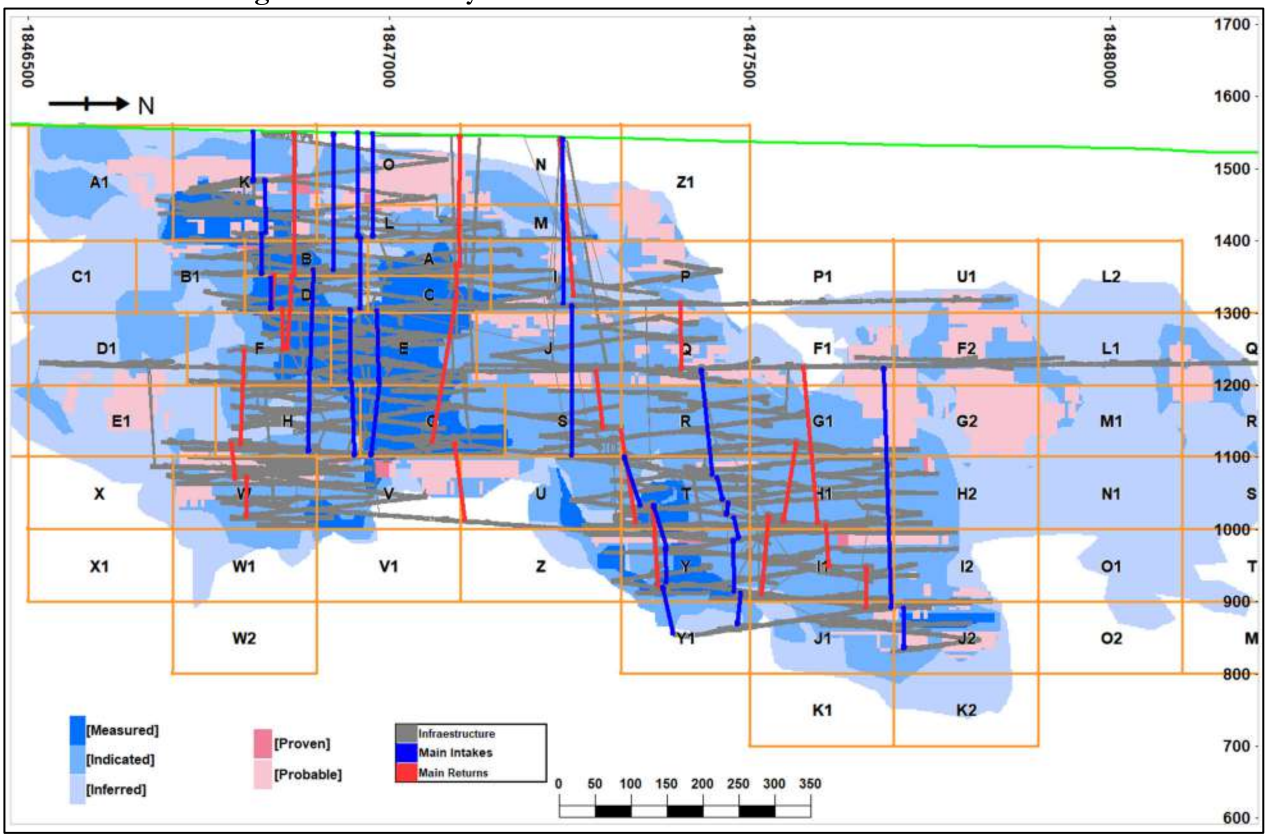


Figure prepared by Cuzcatlan, 2023

The San Jose Mine has been designed with a separation of 100 m between levels primarily to limit blast vibration but also to assist with hanging wall and footwall stability.

The ventilation requirements for the mine to produce 2,100 t/d is 615,593 cfm. The ventilation system brings all the intake air through the main ramp and three main airway networks. Exhaust air is forced to the surface from inside the mine by three principal fans, two operating at 250,000 cfm and one at 120,000 cfm.

16.6.2 Lateral development

The San Jose Mine requires approximately 7,691 m of lateral development of which 90 % is for preparation and lateral advance requirements, 10 % for development (Table 16.3).

Table 16.3 Lateral development for the San Jose in 2024

Activity	Q1	Q2	Q3	Q4	Total
Preparation (m)	1,870	1,938	2,024	1,098	6,929
Development (m)	198	279	249	35	762
Total (m)	2,068	2,217	2,272	1,133	7,691

16.6.3 Raising requirements

A total of 273 m of vertical development is required for the LOMP as detailed in Table 16.4.

Table 16.4 Vertical development for the San Jose in 2024

Activity	Q1	Q2	Q3	Q4	Total
Development (m)	178	0	0	95	273
Total (m)	178	0	0	95	273

16.7 Equipment, manpower, services, and infrastructure

16.7.1 Contractor development

The San Jose Mine is operated by a combination of Cuzcatlan employees and mining contractors selected by Cuzcatlan based on a competitive bidding process.

The mining contractor will generally include activities such as drift development, stope preparation, exploitation, rock bolting support, and backfilling of waste rock fill.

16.7.2 Mining equipment

The current mining fleet is sufficient for the LOMP and consists of the following equipment:

- Seven Scooptrams of 6 yd^3 capacity.
- Four electric hydraulic Jumbo drill rigs with two arms.
- One electric hydraulic Jumbo drill rig.
- Seven electric hydraulic bolter Jumbo drill rigs.
- Six scalers.
- Twelve trucks of 14 m^3 capacity.
- Seven trucks of 7 m^3 capacity.
- Five concrete mixer trucks.
- Two shotcrete robots.
- Five telehandlers (telescopic).
- One backhoe loader.
- Two utility trucks (diesel-oil).
- Four long hole drilling machines.

16.7.3 Mine manpower

San Jose Mine management estimates that a total of 1,162 employees, consisting of 465 contractors and 697 Cuzcatlan staff, are required for operation related activities in 2023 with similar numbers maintained over the LOMP.

16.7.4 Underground drilling

The underground mine uses several different drilling techniques and equipment including:

- Mechanized drilling for horizontal and decline drifts using electro-hydraulic Jumbo drill rigs.
- Mechanized long hole drilling equipment such as Stopemaster or Stinger and Raptor.

16.7.5 Ore and waste handling

Transportation of ore and waste is done via trucks with a 14 m^3 and 7m^3 of capacity through the main and secondary ramps. The main ramp has been designed with two different gradients, the first is associated with straight sections being 12 %, and the second is associated with curved sections being 6 % with a curvature radius of 17 m. To optimize the transportation velocity, the mine has paved the ramp wheel pathways with a compression resistance of 210 kg/cm^2. This construction allows the trucks to increase speeds from 8 km/h to a maximum of 25 km/h.

16.7.6 Mine ventilation

Air requirements at the mine have been analyzed in accordance with the Mexican Regulation NOM-023-STPS-2012.

Ventilation at the mine considers:

- The main ventilation system.
- Auxiliary ventilation system (for stopes and blind developments).

For optimal performance of the operation, and to provide adequate ventilation to the working faces, the required air flow is 615,593 cfm taking into account the total number of people working inside the mine and the total amount of equipment required to accomplish daily tasks (Table 16.5).

Table 16.5 Mine air flow requirements

Item	Diesel Equipment	Equipment Power (hp)	Simultaneous Use (%)	Quantity	Requirement (75 cfm / hp)
1	DDH rig	80	60	3	8,665
2	Supervisor light vehicles	174-383	24	24	45,557
3	Truck	230-361	44	25	264,047
4	Scooptram (6 yd^3)	250-343	66	10	117,067
5	Jumbo	78-147	26	5	11,481
6	Bolter	75-160	47	8	21,484
7	Scissor	75-110	58	8	23,245
8	Mixer	160	62	5	22,524
9	Scaler	94-160	40	5	8,506
10	Small Mixer	160	57	2	10,560
11	Shotcrete Robot	146	40	5	15,725
12	Backhoe loader	94	40	2	4,381
13	Underground personnel			257	13,614
14	Requirement for high temperatures				19,423
15	Loss detected by old work (5%)				29,314
Total					**615,593**

Planned airways into and out of the mine are listed in Table 16.6. Air intake is through the main access ramp. Exhaust is through two 3 m diameter raise bores.

The ventilation network as of September 2023 comprises 95 % of the total design. Ongoing work to support the 3,000 tpd ventilation design is presently related to the construction of two 3 m diameter raises.

Table 16.6 Air flow in-out balance

Airways	LOMP (cfm)
Fresh air	429,566 (*)
Exhaust air	445,117
Requirements (**)	615,593
Coverage (%)	70%

* Projected by Ventsim Simulator
** Mexican regulation (75 cfm/hp)

16.7.7 Backfill method

The mine uses two kinds of backfill; waste rock backfill generated during underground mining and paste fill. The paste fill is comprised of a mixture of fine particles from the tailings, cement, and water. It has a solid content of between 70 % and 80 % that ensures consistency and allows the material to be pumped through a pipe network. Cement is added to help dry the mixture and ensure the fill sets to a specified minimum level of strength within a reasonable timeframe. Tailings enter the mixture as a main component of the blend with the process described as follows:

- Thickened tailings come from the concentrator plant and are stored in a continuously agitated tank. The pulp has an average density of 1500 g/l, equivalent to a solids content of 55 %.
- Filtered tailings come from the filter plant and have a solids content of 86 %.
- Portland cement is supplied via a 190 t silo and represents 3 % of the dry solids of the tailings.
- Water is supplied from the pulp.

Paste design resistance is 4 kg/cm^2 or 400 kPa with this being achieved after seven days. It is advisable to wait a minimum of seven days before mucking to ensure the paste fill can handle the weight of the scoop trams.

16.7.8 Mine dewatering system

The drainage system of the mine removes any excess water that is encountered underground or produced during drilling activities. To pump water from underground to surface, five pumping stations have been installed at different levels of the mine, as part of the main drainage system. Once the water is pumped to surface, a sedimentation process is performed in a 1,000 m^3 pond with the cleaner water stored in a 9,000 m^3 pond where it is recycled for reuse in the mine.

The five pumping stations have settling ponds to allow suspended solids to settle from the water. This water is then poured into a tank of decanted water where a 150 hp pump moves the clean water with low solids to the upper pumping stations.

The pumping system in the mine is comprised of four stages, from the bottom of the mine to the surface. The stages include:

- Pumping station 5, located at level 950, pumps water to the 1100 level.
- Pumping station 4, located at level 1100, pumps water to the 1200 level.

- Pumping station 3, located at level 1200, pumps water to the 1300 level.
- Pumping station 2, located at level 1300, pumps water to the 1400 level.
- Pumping station 1, located at level 1400, pumps the water to the surface.

One future pumping station is planned for construction in 2024, in accordance with the LOMP requirements and will include the following:

- Pumping station 6, to be located at level 800, to pump water to the 950 level.

Each pumping station will have two 150 hp pumps (one as a standby), a settling pond, and a pumping chamber.

There are 8 pneumatic pumps, carrying water from the development faces to the aforementioned settling ponds. These pumps can force a flow rate of 232 gallons per minute allowing a maximum of 10 mm particle size of solids on a static height of 25 m.

The industrial water required by the mine operation is recovered from the water pumped to the surface via the underground dewatering system. The water returns to the mine through a 4-inch pipeline network to supply the various drilling requirements.

16.7.9 Maintenance facilities

A workshop has been constructed on the 1100 level where the contractor performs maintenance of the load-haul-dump (LHD) equipment. The workshop is for major, minor and preventive maintenance. The workshop area is approximately 1,500 m^2 in area and includes the following:

- Maintenance office.
- Washing area for mechanical equipment.
- Maintenance area for jumbos and scoops.
- Spare parts warehouse.
- Oil and lubricants store.
- Tire store.
- Welding area including a ventilation raise.
- Utility area.
- Electric board.
- Grease trap.
- Sanitary facilities.

To increase productivity in the Victoria zone, a workshop will be built in 2024 on the 1200 level where the contractor will perform maintenance of the LHD equipment.

16.7.10 Power distribution

The mining unit is connected to the national electric network managed by the Federal Electricity Commission (CFE) through a main feed of 115,000 volts and a secondary line available to supply power to critical equipment in case of power failure or electrical maintenance of the main line.

The main power line supplies two secondary transformers with transform ratios as detailed in Table 16.7. Both transformers work independently, and for safety purposes, are separated by a concrete wall. Independence of the transformers provides the operation with flexibility to deal with power failures and to carry out preventative maintenance.

Table 16.7 Transformer capacities

Equipment	Transformation relation	Capacity
Power transformer 1	115 kV / 13800 volts	6.7 – 8.4 MVA
Power transformer 2	115 kV / 13800 volts	7.5 – 9.37 MVA

The mining unit has two main distribution circuits that can support a 3,000 tpd operation.

- Circuit 1 - Transformer 1 (13,800 kV, 6.7-8.4 MVA) supplies the following areas:
    - Crusher plant.
    - Mills M1 and M2.
    - Flotation.
    - Thickeners.
    - Underground mine – Central main circuit.
    - Underground mine – North main circuit.
    - Mine's surface facilities.
    - Capacitor battery.
- Circuit 2 - Transformer 2 (13,800 kV, 7.5-9.37 MVA) supplies the following areas:
    - Filtration plant.
    - Paste fill plant.
    - Mill - M3.
    - Flotation (new circuit).
    - Chemical laboratory.
    - General offices.
    - Underground mine – North main circuit 13,800 kV.
    - Underground mine compressors area.
    - Mechanical/electrical workshop.
    - Water treatment plant.
    - Warehouse.
    - Clinic.
    - Dining room.

The power supply for the underground mine consists of four main circuits with the following provisions:

- Circuit 1 - Transformer 1.1, located at surface with a transformer ratio of 13,800 to 4,160 volts and a capacity of 2 MVA. This main transformer feeds the northern portion of the mine with the following distribution:
    - Substations #9, #23 and #24 at 1225 level with a transformer ratio of 4,160 volts to 480 volts all of them are 1000 kVA which feeds the construction activities for the exploration drifts at this level (BP084N, Stope Q and CX5G1).
    - Substation #19 at 1100 level with a transformer ratio of 4,160 volts to 480 volts of 1000 kVA which feeds all the operations power needs for the 1100 level (Stope R, Workshop 30).
    - Substation #5 at 1100 level, with a transformer ratio of 4,160 volts to 480 volts of 500 kVA which supplies power to a pumping station and drilling activities.
- Circuit 2, comprises a high voltage cable of 13,800 volts connected to a cell with protection relay and fed from surface to the 900 level in the northern sector of the mine with the following distribution:
    - Substation at 1350 level with a transformer ratio of 13,800 volts to 480 volts of 1,000 kVA which feeds all the operational power needs for the main 250,000 cfm fan and Stope P.
    - Substation # 18 at level 1000, with a transformer ratio of 13,800 volts at 480 volts of 1,000 kVA which feeds all the operational power requirements for the 1000 level station pump #5.
    - Substations #21 and #22 at level 900 and 850 respectively both with a transformer ratio of 13,800 volts at 480 volts of 1,000 kVA which feeds all the operational power requirements for the deepest place of the mine.
- Circuit 3, located at surface with a transformer ratio of 13,800 to 4,160 volts with a capacity of 1.5 MVA. This main transformer feeds the central side of the mine with the following distribution:
    - Substation # 4 at 1300 level, with a transformer ratio of 4,160 volts to 480 volts of 750 kVA which feeds the main 120,000 cfm fan and pumping system 2.
    - Substation #6 and #16 at 1200 level, with a transformer ratio of 4,160 volts to 480 volts of 750 kVA and 1000 KVA respectively which feeds the operational demands of the 1200 level and the second 250,000 CFM fan.
    - Substation # 10 at 1100 level, with a transformer ratio of 4,160 volts to 480 volts of 1,000 kVA which feeds the operational demands of the 1100 level as well as the ventilation for the exploration drift. (Stope W, Stope V and BP777).
- Circuit 4, transformer 1.3 13,800 v / 440 v 750 kVA (2 pieces), these transformers feed the compressors at surface, contractor offices and the training area of the mine safety brigade.

16.7.11 Other services and infrastructure

Additional complementary services and infrastructure have been constructed inside the mine and include a compressed air supply; an underground explosive storage facility; and refuge stations and mine rescue facilities.

Compressed air supply

Currently Cuzcatlan has two Atlas Copco GA 250 compressors located at surface with a maximum operating pressure of 8.85 bar and air flow of 1,200 cfm.

The compressed air network is comprised of a tank after the main compressors with a 7,400-liter capacity. Compressed air is pumped along a 15 cm (6-inch) main pipeline of 1,450 m length from the surface to the 900 level, with connections between the 1200, 1100, and 1000 levels. A secondary pipeline network takes the compressed air from the main pipeline to the working areas through a series of pipes. To support the network two compressed air tanks have been installed at the 1200 and 1100 levels.

Underground explosive storage

The explosive storage is comprised of two separate areas that meet the safety and security requirements established by Mexican Federal Regulations. The facilities are designed to store explosives and blasting accessories separately.

Refuge station and mine rescue facilities

Safety is of paramount importance to Cuzcatlan. A network of vertical manway exits has been built to ensure that if a major incident occurs the workforce has the ability to escape. Additionally, a refuge station has been constructed adjacent to the ramp to provide shelter.

16.8 Comment on Section 16

The QP is of the opinion that:

- The mining method being used and planned is appropriate for the Trinidad deposit. The underground mine design, dry stack tailings facility design, and equipment fleet selection are appropriate to reach production targets and sufficient for the LOMP.
- The mine life is estimated at just under 12 months.
- The mine plan is based on successful mining philosophy and planning, and presents low risk.
- Inferred Mineral Resources are not included in the mine plan.
- Mining equipment requirements are based on actual operational conditions experienced at the San Jose Mine producing 2,100 tpd.
- All mine infrastructure and supporting facilities meet the needs of the current mine plan and production rate.

17 Recovery Methods

The following section provides a description of the current process plant design, including the equipment characteristics and specifications at each step of the process.

The plant was designed based on the metallurgical testwork in Section 13 and has been operating for 12 years.

17.1 Crushing and milling circuits

The concentrate plant has a maximum throughput capacity of 3,000 dry tpd. The principal stages are as follows:

- Crushing.
- Milling.
- Flotation.
- Thickening, filtering and shipping.

17.1.1 Crushing

Crushing at the San Jose Mine is a dry process, where ore extracted from the mine is reduced in size from 406 mm to 12.7 mm to be fed to the mill.

The crushing process begins at the reception hopper, where ore from the mine is deposited. The ore is fed from the bottom of the hopper via a plate feeder into a jaw crusher that crushes the ore to a 102 mm product size prior to it being transported via conveyors to one 2.44 m by 6.1 m primary screen deck. The screen deck operates with one mesh of 35 mm opening. Material that does not pass through the 35 mm mesh is sent to a secondary crusher via a chute, where it is reduced to 25 mm and the product returned to the primary screen deck. The material that passes the 35 mm mesh is sent via a conveyor to one 3 m by 7.3 m secondary screen deck. The screen deck operates with one mesh of 12.7 mm opening. Material that does not pass through the 12.7 mm mesh is sent to a tertiary crusher where it is reduced to 12 mm size before being sent back to the jig to close the circuit. The fine ore that passes through 12.7 mm mesh is sent to fine ore storage, achieving a final product of 12.7 mm that is stockpiled before being fed into the milling circuit.

17.1.2 Milling and classification

The fine ore stock is sent via conveyor belts to either a 3.96 m by 5.94 m or 4.57 m by 6.6 m ball mill with 25 to 30 % of their volume filled with three-inch wrought steel balls used to further reduce (grind) the ore size. The product of the mills is pumped to the classification process comprised of hydro-cyclones, where two products are generated; 1) a fine ore, which is expulsed thorough the top of the cyclones, and 2) a coarse ore that exits through the bottom and is recycled back into the mills for further grinding. The fine ore must comply with the metallurgical conditions for metal recovery, which indicates 80 % of the product must be under the 150-mesh size (equivalent to 105 μm), before being sent to the flotation process.

17.1.3 Flotation

The pulp (water + mineral) received from the fine ore of the hydro-cyclone, is first sent to a flotation stage performed in ten mechanic cells, six 14.2 m^3 and four 17 m^3 in size, which generate agitation through a propeller and diffuser that distributes the pulp and injects air. The agitated pulp allows reagents to act on the elements of value and adhere to the bubbles formed by the injected air, freely spilling over the edges of the cells into a collection trough. The resulting product is known as the primary concentrate. Upon conclusion of this first stage, the pulp is sent by gravity to a second stage.

The second flotation stage is similar to the first, utilizing an additional four 17m^3 mechanic cells to generate the same conditions, from this process a secondary scavenger concentrate is obtained. This secondary scavenger concentrate is returned to the beginning of the 17m^3 cells settle. Mineral that did not float in the second flotation stage is regarded as tailings and passes to the thickening process.

The primary concentrate from the first two 14.2 m^3 cells is sent directly to the third cleaning stage, the rest of the primary concentrate is sent to a first cleaning stage that is carried out in twelve 2.8 m^3 mechanical cells, whose function is to eliminate impurities and increase the grade of the concentrate. The product obtained is a first clean concentrate and the residue is returned to the first of the 17 m^3 cells to settle. The first clean concentrate is sent to a second cleaning stage performed in three 2.8 m^3 mechanic cells having a similar function to the first where impurities continue to be removed to obtain a second clean concentrate and the residue is returned to the first cleaning stage. The second clean concentrate is sent to a third cleaning stage performed in two 2.8 m^3 mechanic cells to obtain a final concentrate that passes to the thickening stage and a residue that returns to the second cleaning stage.

17.1.4 Thickening, filtering, and shipping

The third cleaning concentrate is sent to a thickening tank where, using a flocculating reagent, the particles are agglomerated, and sediment generated. Solids and liquids are separated so as to recover water to put back into the process (recovered water) while the thickened solid is pumped to a two press-type pressure filter of twelve tarpaulin covered plates, where part of the water is eliminated and then re-circulated to the process. The concentrate cake is discharged from the filters to the concentrate storage for transportation.

The underflow of the final bank of the second flotation (exhaustion) is sent to a thickening tank where a solid-liquid separation is performed through the application of a flocculating reagent that agglomerates fine particles into sediment. Recovered water is returned to the process while the rest of the pulp is pumped to a three press-type pressure filter of one hundred and forty-five tarpaulin covered plates, where most of the water is eliminated and then re-circulated back into the process. The tailings cake is discharged from the filters to the tailings stock for transportation to the dry stack disposal area.

Part of the pulp pumped to the pressure filter is deviated to the paste fill plant for backfilling purposes with 30 % of the backfilling requirements of the mine being supplied by the paste fill plant.

Figure 17.1 displays the principal components of the processing plant.

Figure 17.1 Crushing and milling circuits at the San Jose processing plant

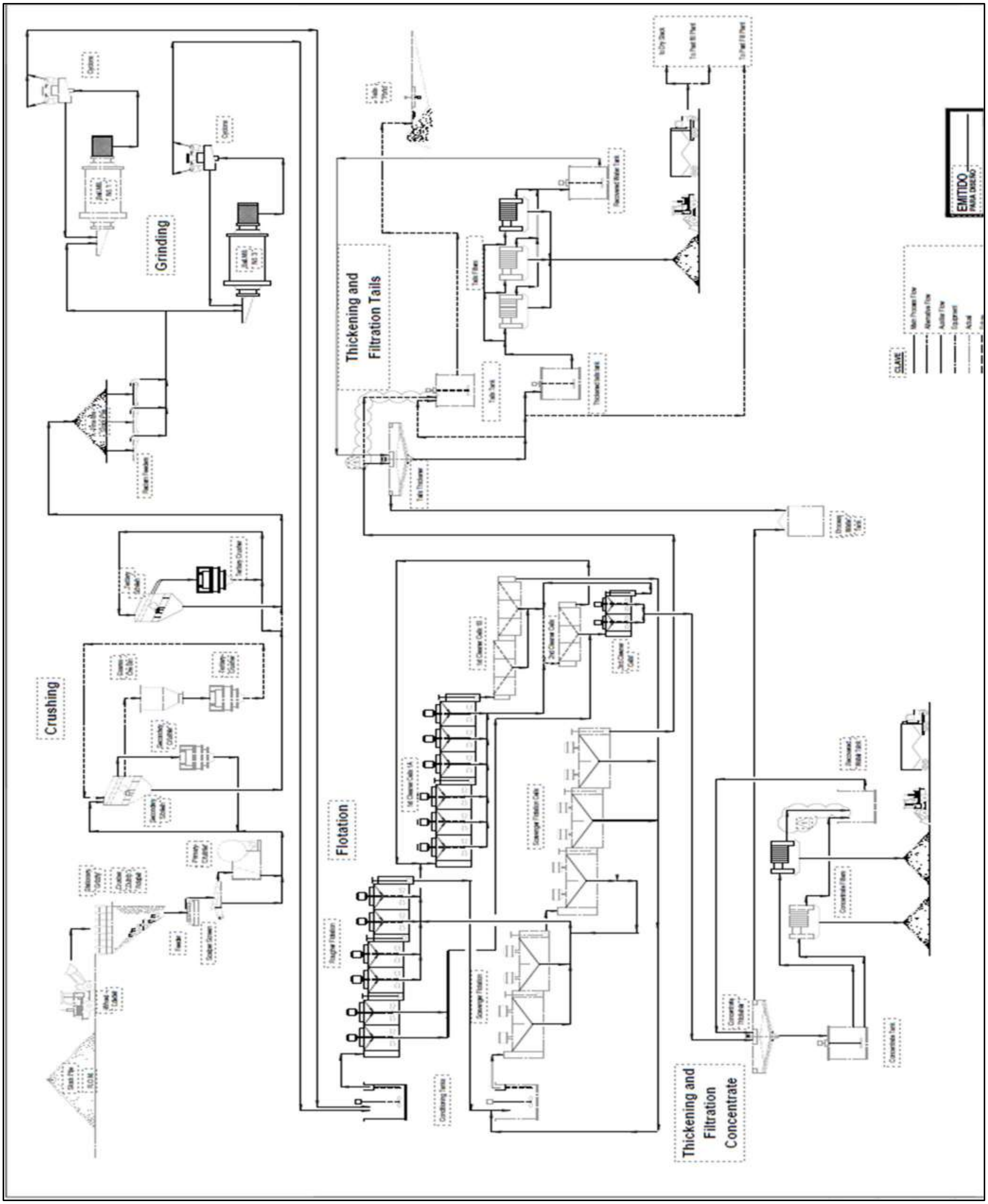


Figure prepared by Cuzcatlan, 2023

17.2 Requirements for energy, water, and process materials

Energy requirements at the operation are provided by a State power line of 115 kV which supplies two power transformers of 7 to 8 MVA capacity. The transformers cover the necessities of the underground mine (see Section 16.6.10), the mill plant, and facilities based on the present 3,000 tpd production rate (8 MVA).

The plant requires 2.7 m^3 of water to process one tonne of ore, of which 92 % comes from the recirculation process, and the remaining 8 % from the waste-water treatment plant in Ocotlan.

Reagent consumption in the processing plant is detailed in Table 17.1.

Table 17.1 Reagent consumption of the San Jose processing plant

Reagent		Consumption (g/t)
Frother	Ore Prep 507	1
Collectors	Xantato Amilico de Potasio	4
	Aeropromotor 404	10
	Aerophine 3418	31
	Pennfloat-3	2
	Max Gold	5
Flocculant	Floculant Magnafloc 336	33
Depressor	Citric Acid	90
	Aluminum sulfate	100

A difference between the plant design and functionality has been in the amount of sodium silicate required for the cleaning stages of the flotation process. The CAM (2010) prefeasibility study had recommended the usage of 100 g/t of sodium silicate reagent, whereas Cuzcatlan has identified that the use of this reagent is not necessary to obtain the desired product. The plant has made significant cost savings by reducing the quantity of reagents used. Two reagents were also added to reduce the fluorine concentration in the final concentrate (citric acid and aluminum sulfate).

17.3 Comment on Section 17

The QP considers processing requirements to be well understood, and consistent based on the actual observed conditions in the operating plant. There is no indication that the characteristics of the material being mined will change and therefore the recovery assumptions applied for future mining are considered as reasonable for the LOMP.

The plant is of a conventional design, is based on conventional equipment, and uses conventional consumables.

18 Project Infrastructure

18.1 Introduction

The mine has a relatively small surface footprint with the operational property boundary split into two parts, a north area (mine property) covering the mine offices and surface infrastructure footprint (50.15 ha), and a south area (tailings property) covering the area of the tailings storage facility (69.69 ha). The major surface facilities of the north area where the mine is located are displayed in Figure 18.1.

Figure 18.1 Plan view of mine and processing plant area

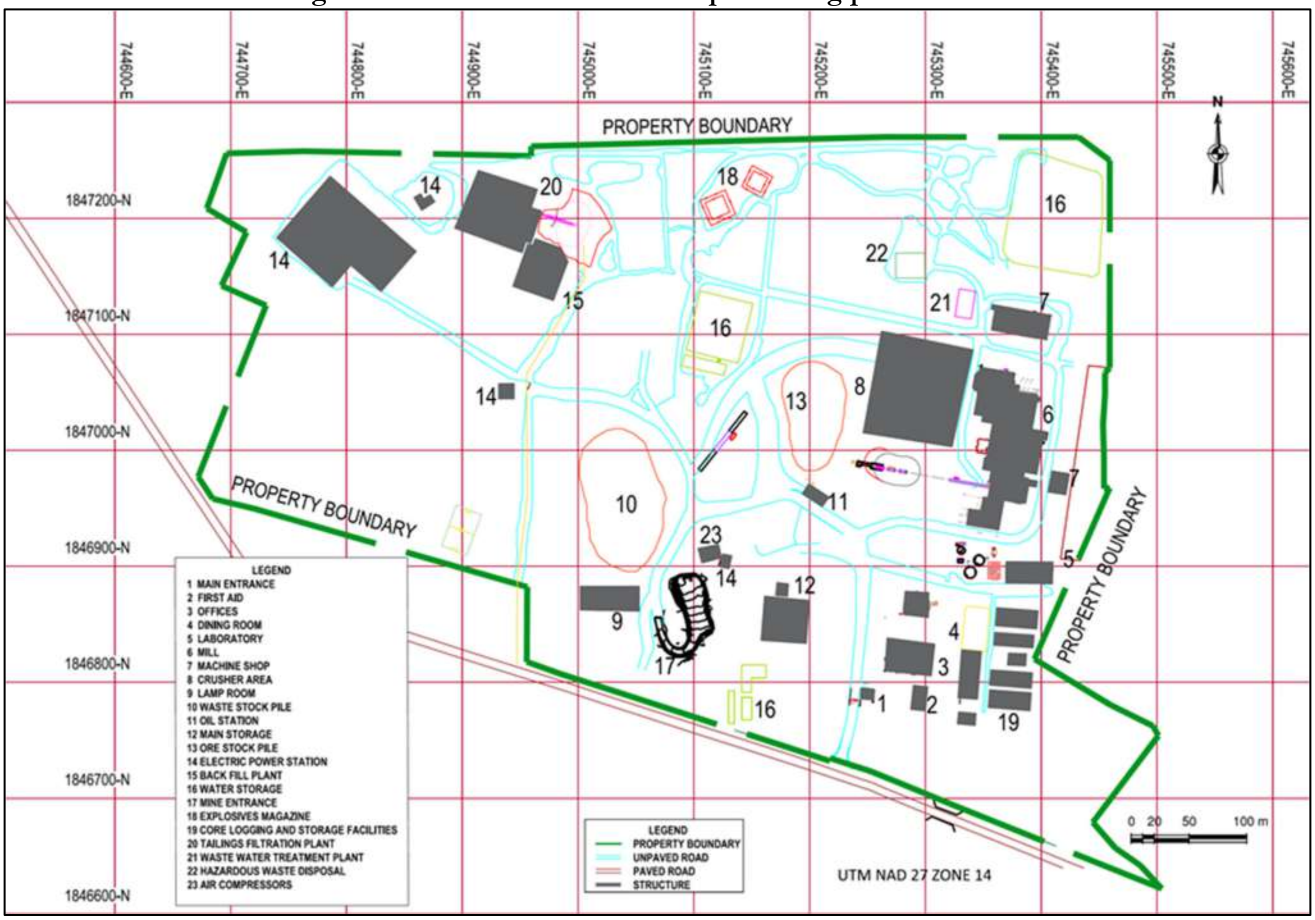


Figure prepared by Cuzcatlan, 2023

18.2 Roads

Facilities at the San Jose Mine are connected via unpaved roads that are maintained by the operation (Figure 18.1). Water is applied to the roads during the dry season to reduce dust pollution.

18.3 Tailing disposal facilities

The tailings disposal facility is located approximately 1.5 km to the southwest of the mining operation (Figure 18.2). There are two types of tailings disposal: the tailings dam and the dry stack tailings.

Figure 18.2 Location map of tailings storage facilities

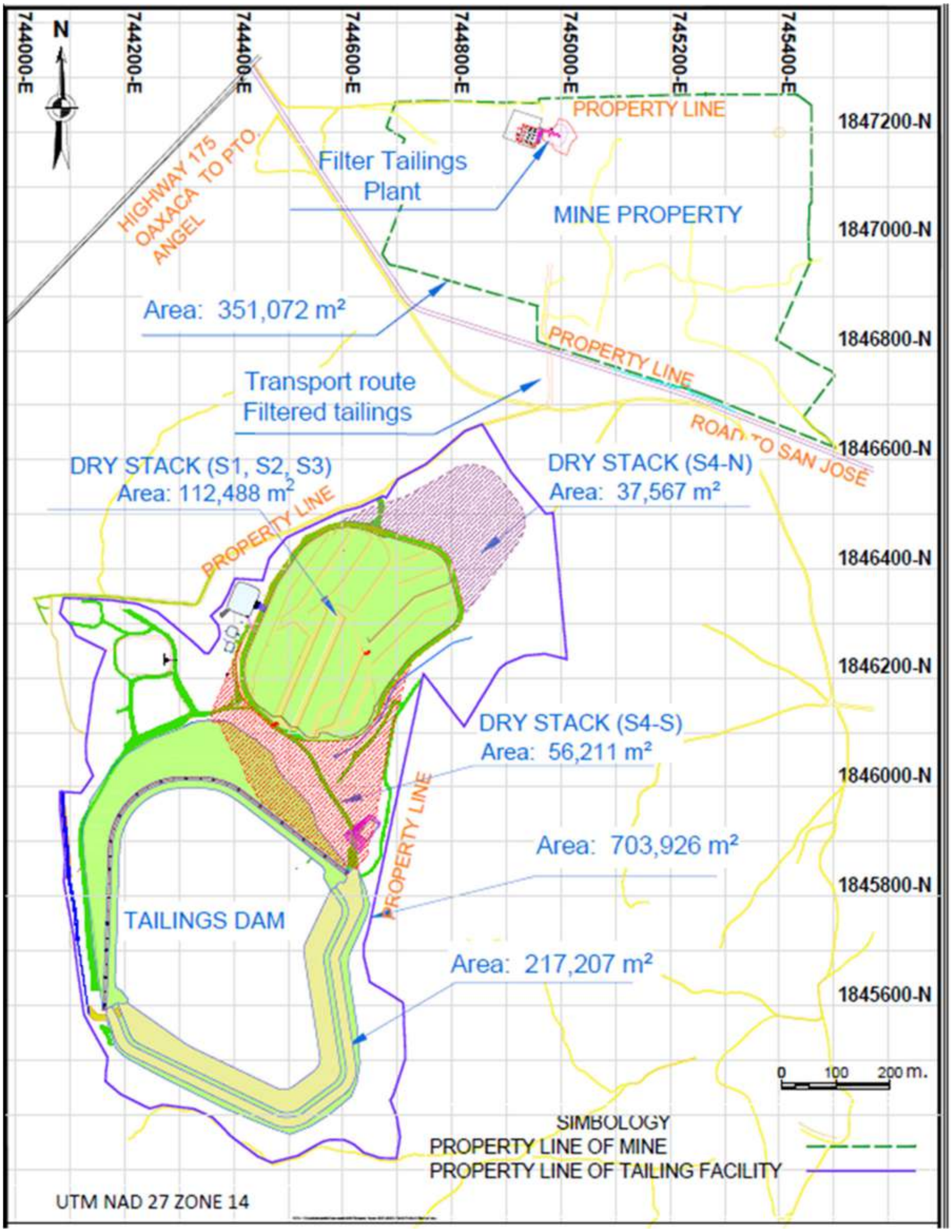
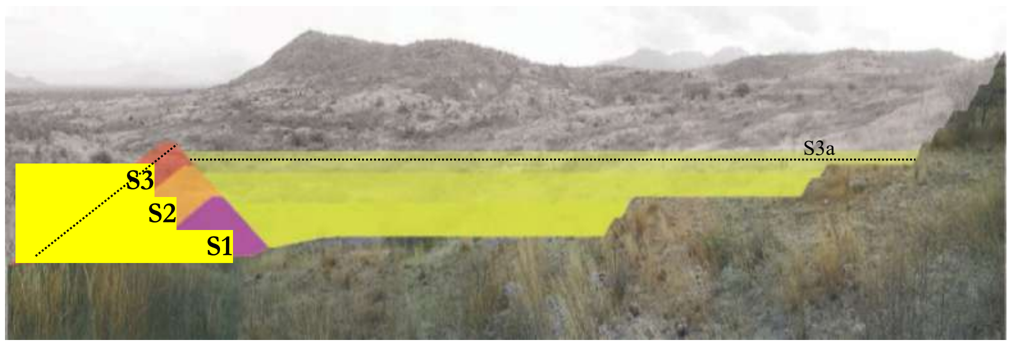


Figure prepared by Cuzcatlan, 2023

18.3.1 Tailings dam

The tailings dam was designed in three downstream construction phases or stages (Figure 18.3). Phase 3 (S3) was originally divided into two stages; stage-3a (S3a) and stage-3b (S3b). The S3a raised the crest elevation of the dam from 1,589.8 masl to 1,595 masl, which resulted in a cumulative storage capacity of 2,300,000 m³ of tailings. The S3a phase was completed in 2014. The plan for stage 3b was to reach the elevation of 1,598.3 masl extending the storage capacity to 3,000,000 m³ but this stage is no longer required as all tailings are now filtered and compacted in-situ into dry stack facility.

Figure 18.3 Schematic drawing showing phase 1, phase 2 and phase 3 tailings dam



The dam is 43.0 m high at the center, providing a storage capacity of approximately 2,300,000 m³ (S3a). The base of the impoundment has been adapted with the installation of a 300 g/m² non-woven geo-textile lining to protect the 1.5 mm thick geo-membrane that covers the entire basin of the dam. The dam received the overflow of the tailings thickener, which was pumped and discharged into the dam through nine, 6-inch discharge pipes distributed around the tailings impoundment and were opened and closed depending on the need to distribute the tailings uniformly. Overflow (coarse tailings) was sent to the underground mine for backfilling stopes.

Currently the dam is used as a contingency for disposal of tailings if a mechanical failure were to occur in the tailings filter plant. The dam is also used to store excess water from underground workings as supplemental process water storage during the wet season to be later used in the dry season.

18.3.2 Dry stack

In 2015, Cuzcatlan built a series of platforms at different levels, for stacking, placing, and compacting of dry tailings. The dry tailings are transported by trucks from the tailings filter plant which is located at the mine processing area (Figure 18.1). Approximately two thirds of the production tailings are sent to the dry stack (finer portion of tailings), while the other one third (coarse tailings) are treated in the paste backfill plant and sent back underground to the extracted mine workings as backfill.

A 300 g/m² non-woven geo-textile lining was installed in the base of each platform to protect the 1.5 mm thick geo-membrane that covers the entire basin. The design of the dry stack includes four construction phases (Table 18.1).

Table 18.1 Volumes and life of the dry stack tailings facility

Stage	Storage Volume (m^3)		Dry Stack life (years)	
	Partial	Accumulated	Partial	Accumulated
Stage 1	431,000	431,000	1.17	1.17
Stage 2	655,000	1,086,000	1.77	2.94
Stage 3	500,000	1,586,000	1.37	4.30
Stage 4-N	825,000	2,411,000	2.06	6.36
Stage 4-S	1,622,000	4,033,000	4.56	10.92

The present set of platforms provides a storage capacity of 4,033,000 m^3 (Stages 1 to 4-S) with an elevation of 1,605 masl. Stage 4 construction was completed in 2021 and the total capacity remaining is sufficient to cover the overall LOMP.

18.4 Mine waste stockpiles

The mine as of the effective date of this Report has one waste stockpile used for storing waste material that could not be effectively disposed of underground. This waste material does not generate acid water. The waste is generated mainly from mine development activities and is not expected to increase significantly over the LOMP, unless some additional infrastructure or new mine areas are incorporated into the Mineral Reserves. The stockpile stores 110,000 m^3 of waste as of December 31, 2023, with a total capacity of 120,000 m^3. Cuzcatlan has the authorization to construct an additional waste stockpile, if required, that would increase total capacity to 200,000 m^3, sufficient for the LOMP.

18.5 Ore stockpiles

The mine currently has two ore stockpiles which store low-grade silver ore, or material pending evaluation (due to mixing of different ore types). Once stockpile material of unknown grade has been sampled and results obtained, the geology department in coordination with the mine and planning departments, takes the decision on whether to transport this material to the plant or to the waste stockpile.

18.6 Concentrate transportation

Tractor trailers that can transport two 25 t containers each are used to transport concentrate. The containers must be made of stainless steel. Each container is registered and weighed at the mine scales before the loading, sampling and weighing process is performed of the concentrate prior to the unit being sealed and registered. The concentrate is then transported by road to the port of Veracruz in the State of Veracruz for subsequent shipping to purchasers in 400 to 600 t lots.

18.7 Power generation

The main power supply to the mine is provided via a 115,000-volt circuit managed by the CFE, which has an operations switchboard next to the mine's principal substation.

The mine also has a secondary reserve power supply in a 13,200-volt circuit, also managed by the CFE. This circuit is available to supply power to critical equipment in case of power failure in the main circuit.

18.7.1 Principal substation

The principal substation of the mine consists of a 7 to 8 MVA transformer with a transformation ratio of 115 to 13.8 kV, connection-disconnection elements, and protection relays.

18.7.2 Distribution

Power distribution is primarily through the use of overhead transmission lines on concrete posts. The basic distribution scheme is a 13,800-volt circuit via substations.

18.7.3 Mine distribution

Power supply for the underground portion of the mine consists of two circuits with the following arrangements:

- Overhead network that feeds three transformers at surface with a transformation ratio of 13,800 to 440 volts with capacities of 750 kVA (2 pieces).
- Overhead network that feeds two transformers at surface with a transformation ratio of 13,200 to 4,160 volts with capacities of 1,500 kVA and 2,000 kVA. This is the principal network and has a three-circuit distribution to the underground mine:
    - Circuit 1 - Transformer 1.1, located at surface with a transformer ratio of 13,800 to 4,160 volts and a capacity of 2 MVA. This main transformer feeds the northern portion of the mine with the following distribution:
        - Substations #9, #23 and #24 at 1225 level with a transformer ratio of 4,160 volts to 480 volts all of them are 1000 kVA which feeds the construction activities for the exploration drifts at this level (BP084N, Stope Q and CX5G1).
        - Substation #19 at 1100 level with a transformer ratio of 4,160 volts to 480 volts of 1000 kVA which feeds all the operations power needs for the 1100 level (Stope R, Workshop 30).
        - Substation #5 at 1100 level, with a transformer ratio of 4,160 volts to 480 volts of 500 kVA which supplies power to a pumping station and drilling activities.
    - Circuit 2, comprises a high voltage cable of 13,800 volts connected to a cell with protection relay and fed from surface to the 850 level in the northern sector of the mine with the following distribution:
        - Substation at 1350 level with a transformer ratio of 13,800 volts to 480 volts of 1,000 kVA which feeds all the operational power needs for the main 250,000 cfm fan and Stope P
        - Substation # 18 at level 1000, with a transformer ratio of 13,800 volts at 480 volts of 1,000 kVA which feeds all the operational power requirements for the 1000 level station pump #5
        - Substations #21 and #22 at level 900 and 850 respectively both with a transformer ratio of 13,800 volts at 480 volts of 1,000 kVA which feeds all the operational power requirements for the deepest place of the mine.

- Circuit 3, located at surface with a transformer ratio of 13,800 to 4,160 volts with a capacity of 1.5 MVA. This main transformer feeds the central side of the mine with the following distribution:
  - Substation # 4 at 1300 level, with a transformer ratio of 4,160 volts to 480 volts of 750 kVA which feeds the main 120,000 cfm fan and pumping system 2.
  - Substation #6 and #16 at 1200 level, with a transformer ratio of 4,160 volts to 480 volts of 750 kVA and 1000 KVA respectively which feeds the operational demands of the 1200 level and the second 250,000 CFM fan.
  - Substation # 10 at 1100 level, with a transformer ratio of 4,160 volts to 480 volts of 1,000 kVA which feeds the operational demands of the 1100 level as well as the ventilation for the exploration drift. (Stope W, Stope V, BP777).
- Circuit 4, transformer 1.3 13,800 v / 440 v 750 kVA (2 pieces), these transformers feed the compressors at surface, contractor offices and the training area of the mine safety brigade.

18.8 Communications systems

Communications services are supplied by Teléfonos de México S.A.B. de C.V. (Telemex). The communication infrastructure is based on an optical fiber link to the mine's data center providing internet bandwidth at a synchronous link of 70 Mbps. The San Jose Mine has an air-conditioned data center, with controlled access and close circuit television. The structures cabling network is Category 6.

Phone communications are provided by Telemex via an E1 connection with 10 digital phone lines enabled. The telephone switching equipment uses internet protocol (IP) connectivity with 90 extensions.

The underground mine communication network is operated using an optical radio backbone. Based in this backbone, there is an array of very high frequency (VHF) radio repeaters to provide radio communications. Underground facilities have three VHF channels, one for operators, another for traffic in the main ramp, and the last for rescue services. The coverage is approximately 11 km.

In addition, the mine operates a personal detection system, based on radio frequency identification technology. This has seven detection points on the surface and thirty detection points underground, with coverage of the major workings of the mine. The purpose of this system is to identify and monitor personnel movement inside the mine in real time for safety purposes.

Cuzcatlan has implemented a video surveillance system at the mine, which consists of 124 cameras with the purpose of monitoring both surface and underground facilities including the main pump stations, power stations and meeting points.

Some areas of the underground mine have access to voice and data services which include nine IP phone lines as well as local networks with internet service to two meeting areas located on level 1200 and 1000, the maintenance workshop, and the explosive warehouse.

18.9 Comment on Section 18

The QP considers that the infrastructure required to support the LOMP is in place and is operational.

19 Market Studies and Contracts

19.1 Market studies

The San Jose Mine is an operating mine with concentrate sales contracts in place for 2024. As a result, market studies are not relevant to the operation.

Since the operation commenced commercial production in September 2011 a corporate decision was made to sell the concentrate on the open market. In order to get the best commercial terms for the concentrates, it is Fortuna's policy to sign contracts for periods no longer than one year. In 2023 Cuzcatlan agreed to a short-term contract to sell concentrate to Trafigura PTE LTD (15,000 t) and Arrow Metals (15,000t) for 12 months. Once this contract expires in 2024 a new contract will be negotiated.

Silver and gold payment terms are typical within the industry. Concentrate that contains fluorine in excess of the specification range is subject to a penalty that is negotiated with the buyer dependent on the delivered fluorine level.

All commercial terms entered between the buyer and Cuzcatlan are regarded as confidential but are considered to be within standard industry norms.

19.2 Commodity price projections

The Fortuna financial department provides Cuzcatlan with metal price projections to be used in their analysis and as used in the Report. Fortuna established the pricing using a consensus approach based on analyst and bank forecasts prepared in May 2023.

The QPs have reviewed the key input information and consider that the data reflect a range of analyst predictions that are consistent with those used by industry peers. Based on these sources, price projections are considered acceptable as consensus prices for use in mine planning and financial analyses for the San Jose Mine in the context of this Report.

A long-term price estimate of US$23.90/oz for silver and US$1,880/oz for gold has been applied, based on mean consensus prices for 2024.

Cuzcatlan has used a Mexican peso exchange rate of 19 pesos to the US dollar for financial analysis purposes, which conforms with general industry-consensus.

19.3 Contracts

19.3.1 Silver–gold concentrate

Trafigura and Arrow Metals have stipulated the specifications for silver-gold concentrate delivered from Cuzcatlan for 2023 and 2024, which are regarded to be within standard industry norms.

Fluorine, zinc, and lead are deleterious elements that needs management at the San Jose Mine.

19.3.2 Operations

Cuzcatlan has 14 major contracts for services relating to operations at the mine regarding: mining activities, ground support, raise boring, drilling, transportation, electrical installations, plant and mine maintenance, explosives and civil works. The costs of such contracts are accounted for in the capital and operating expenditure depending on work performed. Contracts are negotiated and renewed as needed. Contract terms are typical of similar contracts in Mexico that Fortuna is familiar with.

19.4 Comment on Section 19

The QPs have reviewed the information provided by Fortuna on marketing, contracts, metal price projections and exchange rate forecasts, and note that the information provided is consistent with the source documents used, and that the information is consistent with what is publicly available on industry norms. The information can be used in mine planning and financial analyses for the San Jose Mine in the context of this Report.

Long-term metal price assumptions used in the Report are based on a consensus of price forecasts for those metals estimated by numerous analysts and major banks. The analyst and bank forecasts are based on many factors that include historical experience, current spot prices, expectations of future market supply, and perceived demand. Over a number of years, the actual metal prices can change, either positively or negatively, from what was earlier predicted. If the assumed long-term metal prices are not realized, this could have a negative impact on the operation's financial outcome. At the same time, higher than predicted metal prices could have a positive impact.

20 Environmental Studies, Permitting and Social or Community Impact

20.1 Introduction

The environmental information presented in this Report is derived from Cuzcatlan's environmental impact studies, land use changes, permits, licenses and environmental studies.

20.2 Regulation and permitting

In 2006, Cuzcatlan began exploration activities using drilling and underground exploration of the Trinidad and Bonanza veins. Studies and reports were submitted to the Ministry of Environment and Natural Resources, and authorizations SEMARNAT-SGPA-DIRA-179-2007, SEMARNAT-SGPADIRA-366-2007 and SEMARNAT-SGPA-DIRA-896-2008 were granted.

During 2008, an Environmental Impact Statement was submitted to the SEMARNAT Delegation in the State covering the underground ramp and initial mine development. This was approved in 2009 through SEMARNAT-SGPA-DIRA-1731-2009.

20.2.1 Environmental legislation

The key environmental legislation applicable to the San Jose Mine is as follows:

- General Law of Ecological Equilibrium and Environmental Protection and its regulations.
- General Law for the Prevention and Integral Management of Waste and its Regulations.
- General Law on Climate Change and its Regulations.
- General Law of Wildlife and its Regulations.
- National Water Law and its Regulations.
- Mexican Official Standards.

20.2.2 Environmental obligations

Cuzcatlan must comply with the terms and conditions of the authorizations it has acquired in the different project phases in terms of environmental impact, change of land use, licenses and permits, as well as compliance with the prevention and mitigation measures established in each of the environmental studies.

20.2.3 Other obligations

Cuzcatlan has adhered to the Global Industry Standard on Tailings Management as of December 2022, and is committed to work on its implementation. The company also became ISO 14001 certified in May 2021.

20.2.4 Permitting

The key permits that have been granted to Cuzcatlan and which support its establishment and operation are as follows:

- Environmental Impact Authorization, issued under official communication No. SEMARNAT-SGPA-DIRA-1731/2009, through which SEMARNAT authorized the construction, execution and maintenance of the San José mining unit, for a period of 12 years, effective until October 23, 2021, over a surface area of 92.00 ha. In 2021 SEMARNAT authorized the term extension for 12 additional years. (EIA Extension). Information on the dispute with SEMARNAT over the permit duration is provided in Section 4.4.
- Despite the above, on January 28, 2022, the Company received a notice (the Resolution SEMARNAT-SGPA-DIRA-367/ 2011, through which SEMARNAT issued an environmental impact authorization for the modernization, operation and maintenance of the wastewater treatment plant in Ocotlán de Morelos, Oaxaca (PTAR Ocotlán), effective until May 13, 2031. Cuzcatlan is the manager of this permit in accordance with the agreement with the municipality of Ocotlan de Morelos.
- Resolution SEMARNAT-SGPA-DIRA-173-2010, through which SEMARNAT authorized project "Construction and installation of a water intake and conduction work for Industrial Use, effective until March 2030.
- Resolution SEMARNAT-SGPA-UGA-1067-2015, authorized the project "Construction dry stack of the tailing, in San José del Progreso, Oaxaca", effective until March 2026.
- Resolution SEMARNAT-SGPA-UGA-0901/2017, through which SEMARNAT authorized project "Expansion Dry stack tailing" effective until September 2031.
- Resolution SGPA/DGIRA/DG/01115, through which DGIRA authorized project "Third expansion dry stack tailing", effective until February 2028.
- Resolution SGPA/DGIRA/DG-06101-21, through which DGIRA authorized project "Actualización de Obras y Actividades" effective until December 2033.
- Resolution 20-PMG-I-1876-2015, through which DGGIMAR, in which the hazardous waste management plan set out.
- General permit No. 4184, issued by National Defense for the use of explosives in the mine's activities. This permit must be renewed annually.
- Agreement between the municipality of Ocotlán de Morelos and Cuzcatlan, permitting Cuzcatlan to operate the wastewater treatment plant located in Ocotlán de Morelos, Oaxaca, effective until January 1, 2025.

20.3 Environmental baseline

20.3.1 Climate

The San Jose Mine has a semi-arid or semi-warm climate with summer rains, which, based on the climate classification developed by W. Köeppen, modified by Enriqueta García (García, 2004), has the climatic formula BS1hw (w). The average annual temperature varies between 18 and 22 °C and rains in summer. Total annual precipitation ranges from 400 to 800 mm. There are two high rainfall periods, one in June and a second in September.

20.3.2 Air quality

Cuzcatlan monitors air quality by measuring total suspended particulate matter, particles smaller than 10 µm and smaller than 2.5 µm, on a quarterly basis by an external laboratory accredited by the Mexican Accreditation Entity and approved by the Federal Environmental Protection Agency.

20.3.3 Water quality

Cuzcatlan monitors surface and groundwater quality on a quarterly basis through an external laboratory accredited by the Mexican Accreditation Entity and approved by the National Water Commission. The results obtained for surface and groundwater quality indicate that the water is of good quality; no impact from mining activity has been identified.

20.3.4 Hydrology

Surface

The San Jose Mine is located within Hydrological Region Number 20 (HR 20) Costa Chica de Guerrero. This hydrological region is an irregular pentagon in shape, elongated in the east–west direction. The hydrological region covers approximately 24.4 km^2. HR 20 is divided into three watersheds: Atoyac River, Arena River and others, and Ometepec or Grade River. The mining operations are located within the Atoyac River watershed (INEGI, 2004).

Groundwater

The Mine area is located within the Valles Centrales Aquifer, located in the central portion of the state of Oaxaca.

20.3.5 Soil

The dominant and most important soil types for the San José Mining Unit are Feozem, Leptosol and Luvisol.

20.3.6 Fauna and flora

The fauna identified in baseline studies include opossums, armadillo, rabbit, squirrel, lynx, yaguarundi (wild cat), gray fox, coyote, weasel, skunk, cacomixtle, tejon, and racoon. Only three species are listed in some category of protection under the Mexican Official Standard NOM-050-SEMARNAT-2010, the yaguarundi and cacomixtle are listed as endangered and the species *Herpailurus yaguarundi* and lynx are listed as CITESM endangered.

Vegetation is made up of a mosaic of scrub and some scattered trees. The most dominant thickets consist of *Acacia farnesiana* and *Heliocarpus terebinthinaceus* followed sporadically by *Ipomoea murucoidesm bursera glabrifolia* and *Bursera bipinnata*. Of the 68 flora species found in the study area, only one is listed in NOM-059-SEMARNAT-2010 (*Echinocactus platyacanthus*), for which there is a special protection and management program.

The site is degraded due to the severe pressure on the soil from goat ranching and rain-fed agriculture. Vegetation originally covered less than 20 % of the surface area.

20.3.7 Ecosystem characterization

The environmental impact and land use change studies for the San Jose Mine include a description of the ecosystem at the site, and the description includes the different stages of the project, such as exploration, construction, operation, closure and post-closure.

The characterization of the local ecosystem has been described in each of the environmental impact and land use change studies that have been carried out during the different stages of the San Jose Mine development.

20.3.8 Protected areas and archaeology

There are no protected natural areas declared by the country's environmental regulations in the San Jose Mine area. No archaeological sites were identified during the preparation of the baseline environmental studies in the San Jose Mine area.

20.3.9 Environmental risks and management plan

No significant environmental risks were identified in the environmental baseline studies. During the operation stage, environmental risks and mitigation measures for the operation stage are determined on an annual basis.

Cuzcatlan has an environmental management and monitoring plan that includes follow-up on environmental programs for flora and fauna management, management of urban solid waste, special waste, hazardous waste, and mining waste, as well as a surface and groundwater monitoring plans, environmental noise monitoring, monitoring of the survival rate of flora included in reforestation programs, and a wildlife monitoring plan.

Sustainability indicators have also been defined and their performance monitored monthly. The sustainability indicators defined at the San Jose Mine are as follows:

- Fresh water consumption rate (m^3/t).
- Energy consumption rate (Gj/t).
- Dry lime deposition rate in dry Stack (t of dry lime/t of ore processed).
- GHG generation rate (tCO_2eq/kt).

20.3.10 Environmental areas of focus

The most important areas of environmental interest for Cuzcatlan are compliance with the following:

- Environmental policy.
- Compliance with national and international regulatory requirements.
- Compliance with environmental monitoring programs.
- Compliance with the environmental training plan.
- Maintaining the certification of the environmental management system based on ISO 14001:2015.
- Compliance with corporate environmental requirements.

20.3.11 Operations and management

The protection of the environment is a priority for Cuzcatlan in each of its activities and processes. The Company has identified environmental aspects that could be impacted by its activities in the areas of exploration, mineral beneficiation, maintenance, mining and support. For each of the areas, appropriate controls have been established to prevent and mitigate significant environmental risks and impacts associated with these activities.

In 2022, Cuzcatlan obtained certification in environmental and safety management systems aligned with ISO 14001:2015 and ISO 45000:2018.

20.4 Community relations

20.4.1 Socioeconomic and cultural aspects

The mining area occupies a total area of 92.01 ha, divided into two polygons (north and south) within which an area of 16.88 ha is occupied for industrial operations.

To better understand the environment around the mine and establish priorities for social attention, the areas of direct and indirect influence were identified within an approximate radius of 5 km.

Within the area of direct influence, as of 2020 there were 11,215 inhabitants in the localities of the following municipalities.

- **Municipality San Jose del Progreso**: Arroyo Salado, El Cuajilote, El Jaguey, El Porvenir, La Alianza, Los Cedros, Los Díaz, Los Patino, Maguey Largo, Minerales de Oaxaca y San Jose del Progreso.
- **Municipality Ejutla**: La Noria de Ortiz y Monte del Toro
- **Municipality San Martín de los Cansecos**: Colonia Benito Juarez y Barrio Emiliano Zapata
- **Municipality Magdalena de Ocotlan**: Magdalena de Ocotlan.

An area of indirect influence has also been identified with 8 localities where Cuzcatlan maintains a positive relationship. These localities are as follows:

- M**unicipality of San Pedro Apostol**: Colonia Guadalupe, Los Tres Hermanos and San Pedro Apostol.
- **Municipality of San Jose del Progreso**: Rancho Los Vásquez, La Chilana, San Jose La Garzona, El Mogote and La Labor Grande.

This area of influence of the San Jose Mine coincides with the "Central Valleys indigenous region", according to the National Commission for the Development of Indigenous Peoples. The towns in the area of influence comprise a total of 1,924 people that are considered indigenous.

The political organization of these localities is diverse. The town halls have a municipal president as a political-administrative figure, who, in turn, relies on figures considered auxiliary authorities, in this case Municipal Agents and Police Agents.

In addition, the “ejido” is constituted by a legally registered assembly, who are represented by the “ejido” commissioner. It is important to mention that the municipality of San Jose del Progreso has “ejido” or communal lands, but they do not have an “ejido” commissioner that represents them.

The main economic activities in the area of influence are primary agriculture and livestock. There are also other activities such as crafts and textile maquiladora. Secondary activities include mining, construction and power generation and supply. Tertiary activities include tourism, commerce, and some basic services such as domestic services.

Festivities that commemorate patron saints are major cultural events. Community members and groups participate in this activity to annually celebrate township foundation.

The most basic educational levels are found in the towns of Barrio Emiliano Zapata, Colonia Benito Juárez, Los Díaz and San José La Garzona, where education does not exceed fifth and sixth grade elementary school level.

Only 63 people in the area were classified as unemployed.

There is easy access to transportation routes such as highways and roads. Schools and non-specialized medical centers are also available.

20.4.2 Stakeholder engagement

Since the beginning of the first exploration activities at San Jose, there has been interaction and engagement activities with the main stakeholder groups.

The main stakeholders of interest were initially identified as the municipalities and the auxiliary and agrarian authorities. Social and political organizations, as well as State and Federal officials, also play an important role.

Cuzcatlan has been identifying and collaborating with various community groups and stakeholders.

Due to the history of social issues in the Oaxaca region, it has been essential for Cuzcatlan to accurately identify the main leadership groups, and to consistently work with them to establish and maintain a healthy relationship between Cuzcatlan and the communities.

The current key stakeholder groups are presented in Table 20.1.

Table 20.1 Main stakeholder groups at the San Jose Mine

Group	Description	Relationship
Local Governments	Members of the current governments in the municipalities of the area of influence.	Each municipality within the area of influence have different interests and collaboration agreements.
Owners of land under occupation	Owners of properties where the company has temporary occupation for operating activities.	Formal agreements are maintained with these people to guarantee the legal and proper use of each property.
Citizens Committee	Group of people, who since the beginning of mining activities, have facilitated communication with neighboring communities.	With this group, productive projects are carried out through social investment, infrastructure support and social development channels.
Peasant Group	People dedicated to the primary activities of the land.	With this group, productive projects are carried out through social investment, support is channeled for the development of agricultural activities.
Local Suppliers	People who supply local services to the operation.	Local products and services are used to guarantee what is necessary for the operation and contribute to the economic development of the area.
COPUVO	Social organization created to manage social support in the region. Anti-mining group.	Cuzcatlan are currently collaborating with CUPOVO to channel social investment support, mainly in housing. This new collaboration means a great advance of relationship because historically they have pronounced themselves as an anti-mining group.

The radio program "Hablando en Plata" is important as part of the Cuzcatlan's social relations, as this is where information on the culture of San José del Progreso and the Valles Centrales region is shared.

20.4.3 Community development

Important investments have been made by Cuzcatlan to contribute to the sustainable development of the neighboring communities.

At each stage of the operation, various social development strategies have been implemented based on the key areas of education, health, economy, culture, housing and social infrastructure.

The main objective of the education initiative is to contribute to reducing the educational gap through the following programs and activities:

- Strengthening workshops through the collaboration of education professionals on topics such as: life planning, emotional control and youth leadership.
- The Cuzcatlan scholarships program that has been active since 2014 and allows students from San Jose del Progreso and its agencies to continue their studies in upper secondary and higher education. Currently there are 145 beneficiaries.
- Agreement with the State Institute of Adult Education (IEFA) of the State of Oaxaca, has allowed the education coverage for the adult population to be expanded and that they continue with their life plan to complete their basic studies. Education is standardized at the primary, secondary and high school levels.
- Contribution of equipment for schools including materials and supplies to improve the conditions of the educational institutions of the municipality.

Cuzcatlan has implemented actions to directly contribute to the areas of prevention, care and community health infrastructure through the following programs or activities:

- Medical materials for homes and community health centers.
- Payment of medical fees for the expansion of medical care in the clinic of the municipal of San Jose del Progreso.
- Setting up of an emergency fund for the COVID-19 pandemic in conjunction with the San Jose del Progreso city council and the Oaxaca State Health Secretariat.
- Maintenance of ambulances for municipal transfers.
- Delivery of medicines for basic medical conditions to homes and community health centers.
- Basic food package endowments twice a year.
- Mental health care for the local applicable population.
- Healthy home program to benefit the population that has deficiencies in essential housing facilities (bedroom, kitchen) with construction materials and follow-up to improve housing spaces.
- Donations for medical expenses, surgeries and medications for special health cases and situations.
- Prevention workshops and talks through collaboration with experts in health issues.
- Funeral service programs that support donations in kind for funeral expenses.

Investments are made to grow productive activities in the operational area of influence. Cuzcatlan's main programs include:

- Contributions for the promotion of agricultural and productive investments with "ejidatario" peasants. Since the establishment of this agreement, the group has contributed to the development of its agricultural activities.
- Equipment for businesses or local ventures.
- Contribution to artisan ventures (production of textile garments and embroidery).
- Construction of greenhouses for tomato production.
- Local supplier support with training and partnerships considered for the supply of products and services. All opportunities that Cuzcatlan offer for local businesses are constantly reviewed.
- Job creation: Currently, more than 70 % of the jobs generated at the operation are for people from the mine's area of influence.

Cuzcatlan has been a leader in the investment and management of social infrastructure projects, contributing to numerous investments in roads, schools, streets, public spaces, public lighting, among others. Key activities include:

- Roofs for civic squares.
- Purchase and installation of public lighting.
- Construction of paved streets.
- Construction and repair of schools.
- Construction of civic squares.
- Construction of rain channels.
- Rehabilitation of roads.
- Extensions of community drainage.
- Construction of retaining walls.
- Construction of perimeter fences.
- Donation of pipes for water distribution.
- Contribution for rehabilitation of dump.
- Construction of infrastructure for water collection.

20.5 Mine closure

20.5.1 Legal requirements and other obligations

The main applicable national standards for mine closure and the safeguarding of mining works and operations correspond to the following Mexican Official Standards and Regulations:

- General Law of Ecological Equilibrium and Environmental Protection (LGEEPA)

  - LGEEPA defines restoration as the "set of activities aimed at recovering and reestablishing the conditions that favor the evolution and continuity of natural processes".
- Federal Law of Environmental Responsibility (LFRA)
  - Article 13 of the LFRA states that "The reparation of damages caused to the environment will consist of restoring habitats, ecosystems, natural elements and resources, their chemical, physical or biological conditions and the interaction relationships between them, as well as the environmental services they provide, by means of restoration, reestablishment, treatment, recovery or remediation".
- Mining Law Article 27.- The holders of mining concessions, regardless of the date of their granting, are obliged to:
  - IV. Subject themselves to the general provisions and to the Mexican official standards applicable to the mining-metallurgical industry regarding safety in mines and ecological balance and protection of the environment.
  - Article 39.- In the activities of exploration, exploitation and benefit of minerals or substances, the mining concession holders must take care of the environment and ecological protection, in accordance with the legislation and regulations of the matter.

Other general regulations applicable to mine closure, referring to Mexican Official Standards of reference for mine restoration and closure are as follows.

- NOM-120-SEMARNAT-2020, which establishes environmental protection specifications for direct mining exploration activities.
- NOM-138-SEMARNAT-2012, which establishes the maximum permissible limits of hydrocarbons in soils and guidelines for sampling in the characterization and specifications for remediation.
- NOM-147-SEMARNAT/SSA1-2004, which establishes the criteria for determining remediation concentrations of soils contaminated by arsenic, barium, beryllium, cadmium, chromium, hexavalent, mercury, nickel, silver, lead, selenium, thallium and/or vanadium.
- NOM-001-SEMARNAT-1996, which establishes the maximum permissible limits for contaminants in water discharges into national waters and property.
- NOM-141-SEMARNAT-2003, which establishes the procedure for characterizing tailings, as well as the specifications and criteria for the characterization and preparation of the site, project, construction, operation and post-operation of tailings dams.

20.5.2 Mine closure management

Cuzcatlan's restitution and closure plan contemplates the following zones:

- Industrial zone, in the north polygon, which includes the stockpile, crushing, grinding, flotation, tailings thickening, maintenance shop, minor workshops, concentrates, roads and parking areas.

- Mine zone, in the north polygon, which includes the mine access ramp, shafts, pits, hydraulic backfill, tailings filtering plant, ore stockpiles, roads, parking areas, mine services, and scales.
- Auxiliary and complementary work zone, in the north polygon, separated into four areas that include administrative offices, warehouses, services, recreational area, soil storage, pools, powder magazines, contractors' yard, CFE substation, roads and road surfaces.
- Territorial reserve zone, in the north polygon, consists of areas with secondary vegetation, relicts of primary vegetation, mine farm, rainwater control lagoon, mine nursery, and reforestation areas.
- Tailings zone, in the south polygon, comprising tailings dam, dry tailings deposit, soil stockpile, water recovery ponds, diversion channel, parking and contractor areas, roads and land with secondary and primary vegetation, as well as portions degraded by previous agricultural activities.
- Private land closure zone, consisting of Cuzcatlan's social commitment to close the existing mine shafts and mine entrances related to old mining activities.

The final stage of the San Jose Mine, assuming the timely implementation of progressive closure actions on land surrounding the operations and works that have fulfilled their useful life or design capacity (such as dams), will focus on the following:

- Final inventory of equipment, materials and resources, considering not only industrial aspects but also a detailed balance of fill material and conformation of the tailings dam, anticipating the possibility of using dry tailings (non-hazardous and inert) as a supply of fill material or by using the dry tailings deposit as a bank of material for filling the dam pond.
- Prepare a closure priority plan to eliminate expendable facilities and conserve those that will serve as support during reclamation and closure activities (utilities, control house, electricity, water, adequately sized parking for machinery, offices and temporary warehouses, etc.).
- Carry out the dismantling of machinery to be reused (relocation) or auctioned, including the stockpiling of usable materials for closure purposes (construction of grids, mine support materials, foundations for backfill, sign supports, posts, etc.). Dismantling should be based on a study that considers the appraisal of equipment and materials, as well as the execution procedure for safeguarding the value and estimation of the recovered value.
- Execute salvage of recyclable, saleable materials or with potential to be used by the local communities (beams, scrap metal, pipes, sheets, warehouses, etc.).
- Demolition of cement and concrete structures, preferably with crushing that provides adequate characteristics for usage in the stabilization of other works (mine backfill and construction of mine cap or mine seal/shafts/ramps).
- If required by final inspections and surveys, carry out complementary stabilization of tailings dams and, in the case of mine accesses, ensure their stability (elimination or management of subsidence risk, if applicable).

- Application of salvaged organic soil and soil decompaction in embankments, yards and parking lots by scarification.
- Execute reforestation works based on nursery plants.
- Installation of temporary restriction zones to encourage natural restitution, as well as to protect the restored areas during the monitoring and maintenance period.
- Installation of permanent restriction zones for conservation purposes and as an additional security measure.
- Return or restitution of basic conditions of the land to sustain flora, fauna, restitution of environmental services and in general, carry out an ecological restoration to a self-sustainable space in the medium and long term.
- Achieve final approval and/or social license to exit, so that both the community and Cuzcatlan comply with the closure objectives and local development expectations.

20.5.3 Reclamation and closure of affected areas

The 2022 updated Cuzcatlan reclamation and closure plan used the zone grouping, structures and buildings as a starting point for reclamation and closure plan budgeting.

The steps applicable to restoration are presented in sequential order as follows:

- Dismantling of all salvageable equipment, machinery and structures for salvage, relocation, sale, reuse or recycling as scrap.
- Demolition of both buildings and foundations, including patio and parking lot siding slabs not proposed to remain in place at the abandonment stage.
- Scarification of compacted layers of soils on land used as yards, material deposits, buildings and as physical preparation of the land for the execution of reforestation works.
- Filling and sealing of mines.
- Covering of tailings dam and dry tailings facility and land stabilization.
- Reforestation.
- Completion of additional studies and surveys for closure purposes (geotechnical, geochemical, future land use.
- Maintenance to carry out repair or improvement in the first years immediately following land and site closure.
- Monitoring.

20.5.4 Monitoring during closure

The San Jose Mine 2022 updated restitution and closure plan will require constant monitoring to ensure the closure plan objectives are met.

Monitoring will include:

- Inspections and evaluations.

- Monitoring of environmental conditions with respect to quantitative and semi-quantitative variables through annual or semiannual sampling as required.
- Reporting of sampling and monitoring results.

Meetings or assemblies with the community and local authorities will be scheduled on a regular basis to:

- Provide a space where they can freely express their perspectives and opinions on the end of operation and mine closure.
- Report on restoration performance and partial results of the monitoring stage.
- Ensure land use for conservation purposes and detect any possible deviation/interest in the land.

20.5.5 Monitoring post closure

It is estimated that the zones will be monitored for a period of five years after the abandonment of the works, depending on the conditions in which the site is abandoned. The monitoring period may vary depending on the findings of the relevant regulator completing closure evaluations.

20.5.6 Closure costs

The mine plan anticipates closure of the operation in late 2024. The Company has assigned a dedicated team to review and update a multiyear progressive mine closure and monitoring plan with a current estimated budget of US$ 27 million, which will begin its implementation during 2024. Multiple considerations are being included such as closure-related technical studies and designs, remediation of affected areas, decommissioning and removal of infrastructure, landform reshaping, revegetation, and value-added activities for the communities associated with progressive closure, repurposing, and where appropriate, long-term monitoring and maintenance, whilst adhering to strict compliance with mine closure governmental regulations and high international standards.

20.6 Greenhouse gas (GHG) emissions

In 2022, Cuzcatlan had a GHG emission estimate of 43,516 tCO_2eq. In the same year Cuzcatlan began installing solar cells in offices, a dining room, laboratory and general warehouse to generate clean energy and contribute to initiatives to mitigate climate change.

In 2023, Cuzcatlan continued to carry out activities to mitigate climate change, such as changing fluorescent lamps for light-emitting diode lamps in general offices and the underground mine and working on the classification of urban solid waste and special handling waste so that they can be used in industrial processes as part of their raw material.

Cuzcatlan is also working to find alternatives for saving energy, water and minimizing waste generation.

20.7 Comment on Section 20

It is the opinion of the QPs that the appropriate environmental, social and community impact studies have been conducted to date for the San Jose Mine. Cuzcatlan has maintained all necessary environmental permits that are prerequisites for the operation of the mine infrastructure and the maintenance of mining activities. Closure costs have been estimated at US$ 27 million and a five-year post closure monitoring period is envisaged.

21 Capital and Operating Costs

The San Jose Mine is a producing operation managed by Cuzcatlan and has been mined as an underground operation continuously since September 2011. Capital and operating cost estimates are based on the established cost experience gained from the operation, projected budgets, and quotes from manufacturers and suppliers. Overall, the cost estimation is of sufficient detail that, with the current experience at Cuzcatlan, Mineral Reserves can be declared.

21.1 Sustaining capital costs

As the mine has entered its last planned year of operation, sustaining capital expenses such as mine development meters, infill drilling, mine equipment and other necessary expenses have been considered as part of operating costs and covered by the projected cash flow generation in 2024.

21.2 Operating costs

Projected operating costs for the LOMP are detailed in Table 21.1.

Table 21.1 Summary of projected operating costs in 2024

Area	Units	Q1	Q2	Q3	Q4	Total
Mine	US$/t	60	56	43	39	48
Plant	US$/t	29	29	20	19	23
Indirect	US$/t	31	31	21	19	24
Distribution	US$/t	8	9	7	7	8
Community Relations	US$/t	5	6	4	3	4
Sustaining Capital expenses	US$/t	15	24	10	6	12
Total	**US$/t**	**148**	**155**	**104**	**93**	**120**

The projected operating costs are based on the current mining and processing requirements for 2024, as well as historical information regarding performance, operational and administrative support demands.

Operating costs include site costs and operating expenses to maintain the operation. These operating costs are analyzed on a functional basis and the cost structure can differ from the operating costs reported by the financial statements published by Fortuna.

Site cost activities performed at the property include mine, plant, indirect and distribution of the commercial products. Community relations and capital expenditure costs are projected to be covered by Cuzcatlan's cash flows in 2024. Brownfields exploration costs executed at the site are planned to be paid by Fortuna's cash flows from its four other operating mines.

The Company has assigned a dedicated team to review and update a multiyear progressive mine closure and monitoring plan with a current estimated budget of US$ 27 million, which will begin its implementation during 2024. Multiple considerations are being included such as closure-related technical studies and designs, remediation of affected areas, decommissioning and removal of infrastructure, landform reshaping, revegetation, and value-added activities for the communities associated with progressive closure, repurposing, and where appropriate, long-term monitoring and maintenance, whilst adhering to strict compliance with mine closure governmental regulations and high international standards.

21.3 Comment on Section 21

The capital and operating cost provisions for the LOMP that supports Mineral Reserves have been reviewed. The basis for the estimates is appropriate for the known mineralization, mining and production schedules, marketing plans, and equipment replacement and maintenance requirements.

The QP considers the costs estimated for the San Jose Mine as reasonable based on industry-standard practices and actual costs observed for 2023 and the production for the projected year 2024.

22 Economic Analysis

22.1 Economic analysis

Fortuna is using the provision for producing issuers, whereby producing issuers may exclude the information required under Item 22 for technical reports on properties currently in production and where no material production expansion is planned.

The global after-tax financial results exhibit a negative outcome when factoring in exploration costs and the total mine closure cost. However, the projected financial outcome for 2024, considering only operational costs, shows a positive result. Fortuna expresses its commitment to covering Brownfields exploration costs for 2024 and the subsequent expenses upon cessation of mining operations using funds derived from corporate profits. Given this, the QP believes it is reasonable to continue mining operations throughout the planned operational period in 2024 to alleviate the negative financial and social results of mine closure and support the current Mineral Reserve declaration under two assumptions:

- Fortuna will cover the mines Brownfields exploration and closure costs at the corporate level.
- Adequate financial support is secured from Fortuna's other mining units, which, as per plans, will be operational until 2035 and are expected to generate sufficient proceeds to cover closure costs at San Jose.

22.2 Comments on Section 22

An economic analysis was performed in support of the estimation of the Mineral Reserves; this indicated a positive cashflow for the period set out in the LOMP using the assumptions detailed in this Report excluding closure costs and brownfields explorations that will be covered by Fortuna.

23 Adjacent Properties

This section is not relevant to this Report.

24 Other Relevant Data and Information

This section is not relevant to this Report.

25 Interpretation and Conclusions

25.1 Mineral tenure, surface rights, water rights, royalties and agreements

Fortuna was provided with a legal opinion that supports that the mining tenure held by Cuzcatlan for the San Jose Mine is valid and that Fortuna has a legal right to mine the deposit.

Tenure is held in the name of Cuzcatlan with all mining concessions having an expiry date beyond the expected mine life.

The San Jose Mine is not subject to any back-in rights, liens, payments or encumbrances. Mineral Reserves have the following royalties payable:

- There is a 1.5 % royalty to Maverix on the Reduccion Taviche Oeste concession.
- There is a 3 % royalty on the Progreso concession and a 1 % royalty the Reduccion Taviche Oeste concession payable to SGM.

Cuzcatlan has signed 45 usufruct contracts with landowners to cover the surface area needed for the operation and tailings facilities, which have been registered before the National Agrarian Registry. Surface rights are granted for between 10 and 30 years with the ability to extend the contracts if required. These agreements provide sufficient rights for the remaining LOMP.

25.2 Geology and mineralization

The San Jose Mine area is underlain by a thick sequence of sub-horizontal andesitic to dacitic volcanic and volcaniclastic rocks of presumed Paleogene age. These units have been significantly displaced along major north and northwest-trending extensional fault systems with the precious metal mineralization being hosted in hydrothermal breccias, crackle breccias, and sheeted stockwork-like zones of quartz/carbonate veins emplaced within zones of high paleo permeability associated with the extensional structures.

The mineralized structural corridor extends for more than 3 km in a north-south direction and has been subdivided into the Trinidad deposit and San Ignacio areas.

The major mineralized structure in the Trinidad deposit area is composed of a sheeted and stockworked quartz-carbonate vein system referred to as the Stockwork Zone located between the primary Trinidad and Bonanza structures. In addition, several secondary vein systems are present locally in the hanging wall and footwall of the Trinidad and Bonanza structures.

The Victoria mineralized zone is located approximately 350 m east of the Trinidad vein and north of the current underground operations of the San Jose Mine. It is structurally related to the same extensional behavior that dominates the Trinidad deposit with a similar style of mineralization, corresponding to a low sulfidation epithermal deposit formed in a shallow crustal environment with a relatively low temperature resulting in the precipitation of silver and gold mineralization.

In the opinion of the QPs, the knowledge of the Trinidad and Victoria deposits, the settings, lithologies, and structural and alteration controls on mineralization is sufficient to support the Mineral Resources and Mineral Reserves estimation.

25.3 Exploration, drilling and analytical data collection in support of Mineral Resource estimation

Drill holes drilled under Cuzcatlan management in the period 2005 to 2023 have data collected using industry-standard practices. Drill orientations are appropriate to the orientation of the mineralization and core logging meets industry standards for exploration of an epithermal-style deposit.

Geotechnical logging is sufficient to support Mineral Resource estimation with the data for the Trinidad deposit being used to support detailed mine planning for the underground mine for the last 12 years of operation.

Collar and downhole surveys have been performed using industry-standard instrumentation. Any uncertainties in survey information have been incorporated into subsequent resource confidence category classification.

All collection, splitting, and bagging of channel and core samples were carried out by Cuzcatlan personnel since 2005 representing 98 % of all information collected at the mine. No material factors were identified with the drilling programs that could affect Mineral Resource or Mineral Reserve estimation.

Sample preparation and assaying for samples that support Mineral Resource estimation has followed approximately similar procedures for most drill programs since 2005. The preparation and assay procedures are adequate for the type of deposit and follow industry standard practices.

Sample security procedures met industry standards at the time the samples were collected. Current core and pulp sample storage procedures and storage areas are consistent with industry standards.

25.3.1 Data verification

Paul Weedon

Mr. Weedon has visited the San Jose Mine on multiple occasions and during these visits has reviewed the geological interpretations and drill core. He is of the opinion that the data verification programs performed on the data collected from exploration are adequate to support the geological interpretations, the analytical and database quality, and Mineral Resource estimation at the San Jose Mine.

Eric Chapman

Mr. Chapman has personally verified data used in the Mineral Resource estimation, including the database, collars and downhole surveys, geological logs and assays, estimation parameters, and mine reconciliation.

Mr. Chapman is of the opinion that the geological and assay data stored in the database is representative of that reported from the laboratories and is suitable for usage in Mineral Resource estimation.

Monthly and quarterly QC reports detailing results for exploration drilling, infill drilling and channel sampling are received and reviewed by Mr. Chapman on an ongoing basis. Any discrepancies identified are immediately followed up with site staff for further investigation.

To further verify the assay data, Mr. Chapman has randomly selected assay data from the database and compared the assay results stored to that of the original assay certificates. Mr.

Chapman is of the opinion that the geological and assay data stored in the database is representative of that reported from the laboratories and is suitable for usage in Mineral Resource estimation.

Raul Espinoza

Mr. Espinoza has reviewed on site the current mining methods and verified the Mineral Reserve estimation methodology including review of documents and discussions with relevant Cuzcatlan personnel regarding permitting, metallurgical testwork and processing, operating and capital expenditure requirements.

Mr. Espinoza is of the opinion that the parameters used for the estimation of Mineral Reserves based on the proposed mining method, geotechnical studies, operational, processing and cost estimates are reasonable and representative for the San Jose Mine.

Mathieu Veillette

Mr. Veillette has been providing technical support with respect to tailings and water management since September 2022. Mr. Veillette has assisted SRK consulting, the Engineer of Record (EoR), in the management of the tailings facilities and reviewed all technical documents related to tailings and water management. The San Jose Mine has a water balance with a closed circuit where effluent is not discharged and only water treatment water from the nearby community is used as required. As of the effective date of this Report, it is the opinion of Mr. Veillette that the partially closed tailings dam is well managed with about 2 m of freeboard below the spillway invert and the dry stack is also well managed.

Patricia Gonzalez

Ms. Gonzalez has reviewed the extensive body of metallurgical investigation comprising several phases of testwork and, in addition, has been personally involved as the plant superintendent with the extensive history of treating ore at the operation since 2011. In the opinion of the Ms. Gonzalez, the San Jose Mine metallurgical samples tested, and the ore that is presently treated in the plant is representative of the orebody as a whole in respect to grade and metallurgical response. Differences between vein systems are minimal with regard to recovery.

Ms. Gonzalez also works closely with the relevant departments to execute the necessary environmental and community programs as part of Fortuna's Environmental, Social, and Governance (ESG) criteria.

25.4 Metallurgical testwork

Metallurgical test work included the following evaluations:

- Whole rock analysis.
- Bond ball mill work index.
- Grind calibration.
- Rougher flotation test work with three stages of cleaning.
- Locked cycle flotation test work.
- Rougher kinetics flotation.

A total of 25 samples have been tested to establish the metallurgical characteristics of the Victoria mineralized zone. Metallurgical recoveries obtained from samples with silver head grades ranging from 120 to 160 g/t were 87.74 to 90.11 % for gold and 88.13 to 89.71 % for silver. Based on the results it was concluded that the Victoria mineralized zone mineralization follows the same metallurgical recovery trend as the current operation experiences. Additionally, mineralogical studies did not detect mineral types different from what is currently being processed from the Trinidad deposit.

There is no indication that the characteristics of the material being mined will change, and therefore the recovery assumptions applied for future mining are considered as reasonable for the LOMP.

Deleterious elements, such as fluorine, base metals and iron-oxide, detected in ore located in certain parts of the deposit have the potential to affect metallurgical recovery or economics due to penalties that could be applied during smelting. Mine scheduling and appropriate treatment in the processing facility are designed to minimize any impact from deleterious elements.

25.5 Mineral Resource estimation

Mineral Resource estimation used drill core and channel samples in conjunction with underground mapping to construct three-dimensional wireframes to define individual vein structures. Samples were selected inside these wireframes, coded, composited and top cuts applied if applicable. Boundaries were treated as hard with statistical and geostatistical analysis conducted on composites identified in individual veins. Silver and gold grades were estimated into a geological block model consisting of 2 m x 2 m x 2 m SMU representing each vein. All veins in the Trinidad deposit and the Victoria main structure were estimated by OK. Estimated grades were validated globally, locally, visually, and (where possible) through production reconciliation prior to tabulation of the Mineral Resources.

Resource confidence classification considers a number of aspects affecting confidence in the resource estimation including; geological continuity and complexity; data density and orientation; data accuracy and precision; grade continuity; and simulated grade variability.

The QP is of the opinion that the Mineral Resources have been estimated using standard industry practices, and conform to the requirements of CIM (2014).

It is the opinion of the QP that by the application of a silver equivalent value taking into consideration the average metallurgical recovery and long term metal prices for each metal, and the determination of a reasonable cut-off grade using actual operating costs, as well as the exclusion of Mineral Resources identified as being isolated or economically unviable using a floating stope optimizer, the Mineral Resources have 'reasonable prospects for eventual economic extraction'.

Factors that may affect the estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the 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; variations in density and domain assignments; geometallurgical assumptions; changes to geotechnical, mining, dilution, and metallurgical recovery assumptions; change to the input and design parameter assumptions that pertain to the conceptual stope designs 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.

25.6 Mineral Reserve estimation

Mineral Reserves have been converted from Measured and Indicated Mineral Resources.

The Mineral Reserve estimation procedure for the Trinidad deposit is defined as follows:

- Review of Mineral Resources in longitudinal sections and grade–tonnage curves.
- Identification and removal of inaccessible Mineral Resources based on current mining practices - such as crown pillars and isolated areas.
- Dilution of tonnes and grades based on dilution levels encountered during the previous 12 months of production preceding Mineral Reserve estimation.
- After obtaining the resources with diluted tonnages and grades, the value per tonne of each SMU is determined based on metal prices and metallurgical recoveries for each metal.
- A breakeven cut-off grade is determined based on operational costs of production, processing, general expenses and administrative, and distribution costs (total operating cost in US$/t) and converted into a silver equivalent grade. If the silver equivalent grade of an SMU is higher than the breakeven cut-off grade, the SMU is considered as part of the Mineral Reserve otherwise the SMU is regarded as part of the Mineral Resource. This evaluation is conducted in MSO.
- Evaluate location and dimensions of potential pillars based on the proposed mining methodology.
- Removal of inaccessible areas and material identified as pillars or crown pillars to account for mining recovery based on current mining practices and mine architecture.
- Depletion of Mineral Reserves relating to operational extraction between July 1 and December 31, 2023.
- Reconciliation of the reserve block model against mine production between July 1 and December 31, 2023, to confirm estimation parameters.
- Mineral Reserve tabulation and reporting as of December 31, 2023.

Mineral Reserves will support just a one-year LOMP considering 350 days in the year for production and a capacity rate of 2,100 tpd. The expectation based on an optimized production schedule is for an annual average production of approximately 3.2 Moz of silver and 20 koz of gold. The remaining mine life is from the year 2024.

The conversion of Mineral Resources to Mineral Reserves was undertaken using industry recognized methods, actual operational costs, capital costs, and plant performance data. Thus, it is considered to be representative of future operational conditions. This Report has been prepared with the latest information regarding environmental and closure cost requirements.

The QP is of the opinion that the Proven and Probable Mineral Reserves estimate has been undertaken with reasonable care and has been classified using the 2014 CIM Definition Standards.

Factors that may affect the estimates include: metal price and exchange rate assumptions; changes to the assumptions used to generate the 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; variations in density and domain assignments; geometallurgical assumptions; changes to geotechnical, mining, dilution, and metallurgical recovery assumptions; change to the input and design parameter assumptions that pertain to the conceptual stope designs 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.

25.7 Mine plan

Mining at San Jose is conducted by contractors based on conventional OCF and SLS, using a mechanized extraction methodology.

Since September 2011 Cuzcatlan has successfully managed the underground operation of the San Jose Mine, processing over 10.36 Mt of ore and producing 66.8 Moz of silver and 457.8 koz of gold as of December 31, 2023.

The QP is of the opinion that:

- The mining methods OCF and SLS being used are appropriate for the deposit being mined. The underground mine design, stockpiles, tailings facilities, and equipment fleet selection are appropriate for the operation.
- The mine plan is based on historical mining and planning methods practiced at the operation for the previous seven years and presents low risk.
- The mobile equipment fleet presented is based on the actual present-day mining operations, which are known to achieve the production targets set out in the LOMP.
- All mine infrastructure and supporting facilities meet the needs of the current mine plan and production rate.

25.8 Recovery

The current process plant design is split into four principal stages including: crushing; milling; flotation; and thickening; filtering and shipping.

The QP considers the process requirements to be well understood, and consistent based on the actual observed conditions in the operating plant.

25.9 Infrastructure

The QP considers that all mine and process infrastructure and supporting facilities are included in the present general layout to ensure that they meet the needs of the mine plan and production rate and notes that:

- The San Jose Mine is located 47 km, or one hour by road from the city of Oaxaca, the main service center for the operation, with good year-round access.
- The mine site infrastructure has a compact layout footprint of 50.15 ha, with an additional 69.69 ha for the tailings storage facilities.
- The dry stack tailings construction of the final stage was completed in 2021 increasing total capacity to 4,033,000 m^3.
- Power is provided to the mine from the main grid via a 115,000-volt circuit, as well as a secondary reserve power supply line, all managed by CFE.
- Water requirements are 2.7 m^3 to process one tonne of ore being primarily sourced from recirculation activities, and where top up is required, from the tailings storage facility.
- All process buildings and offices for operating the mine have been constructed, with camp facilities not required due to the proximity of the site to urban centers.

25.10 Markets and contracts

Since the operation commenced commercial production in September 2011, a corporate decision was made to sell the concentrate on the open market. In order to get the best commercial terms for the concentrates, it is Fortuna's policy to sign contracts for periods no longer than one year. All commercial terms entered between the buyer and Cuzcatlan are regarded confidential but are considered to be within standard industry norms.

The QP has reviewed the information provided by Fortuna on marketing, contracts, metal price projections and exchange rate forecasts and notes that the information provided support the assumptions used in this Report and are consistent with the source documents, and that the information is consistent with what is publicly available within industry norms.

25.11 Environmental, permitting and social considerations

The mining operation has been developed in strict compliance with the regulations and permits required by the government agencies involved in the mining sector. In addition, all work follows the international quality and safety standards set forth under standards ISO 14001 and OHSAS 18000.

To the extent known, all permits that are required by Mexican law for the mining operation have been obtained. The tailings facility has sufficient storage capacity to support the LOMP.

Cuzcatlan continues with developing sustainable annual programs for the benefit of local communities, including educational, nutritional and economic programs. There is a good relationship between the company and local communities. This will aid the development and continuity of the mining operation and improve the standard of living and economies of local communities.

The mine plan anticipates closure of the operation at the end of 2024. The Company has assigned a dedicated team to review and update a multiyear progressive mine closure and monitoring plan with a current estimated budget of US$ 27 million, which will begin its implementation during 2024.

25.12 Capital and operating costs

Capital and operating cost estimates are based on established cost experience gained from current operations, projected budget data and quotes from manufacturers and suppliers.

Sustaining capital cost has been considered as part of the operating costs and covered by the projected cash flow generation in 2024.

Operating cost includes site costs and operating expenses to maintain the operation. These operating costs are analyzed on a functional basis and the cost structure can differ from the operating costs reported by the financial statements published by Fortuna.

Costs were not allocated to the operation for Brownfields exploration, with this activity being assigned to Fortuna as an opportunity cost to extend the LOMP beyond 2024.

The QP considers that costs estimated for the San Jose Mine as reasonable based on industry-standard practices and actual costs observed for 2023 and production projected for 2024.

25.13 Economic analysis

Fortuna is using the provision for producing issuers, whereby producing issuers may exclude the information required under Item 22 for technical reports on properties currently in production and where no material production expansion is planned.

The global after-tax financial results exhibit a negative outcome when factoring in exploration costs and the total mine closure cost. However, the projected financial outcome for 2024, considering only operational costs, shows a positive result. Fortuna expresses its commitment to covering Brownfields exploration costs for 2024 and the subsequent expenses upon cessation of mining operations using funds derived from corporate profits. Given this, the QP believes it is reasonable to continue mining operations throughout the planned operational period in 2024 to alleviate the negative financial and social results of mine closure and support the current Mineral Reserve declaration.

25.14 Risks and opportunities

A number of opportunities and risks were identified by the QPs during the evaluation of the San Jose Mine.

Opportunities include:

- Improvements in mining productivity through optimizing the mining cycle. As shotcreting comprises a significant component of the mining cycle, tests are being done to reduce the curing time from three to two hours which would improve the mining cycle.
- Completing the raise bore initiatives currently underway in the central and northern zones of the Trinidad deposit. This will ensure 100 % air coverage throughout the remainder of the mine life.
- Definition of Mineral Reserves associated with higher-grade mineralization identified in the Victoria mineralized structure.
- Exploration potential exists for the Yessi vein, a new blind zone of alteration and brecciation that has been interpreted as striking northwest to southeast and

intersecting the Victoria mineralized zone, where drilling has intercepted some high-grade gold and silver mineralization.

Risks include:

- On January 2, 2023, SEMARNAT served Cuzcatlan a resolution confirming the nullity of the previously granted 12-year EIA extension. Cuzcatlan challenged the annulment of the EIA via a nullity trial presented before the Federal Administrative Court in Mexico City on January 10, 2023. On October 30, 2023, the Mexican Federal Administrative Court ruled in favor of Cuzcatlan and re-instated the 12-year EIA. The decision of the Mexican Federal Administrative Court has been appealed and was admitted by the Collegiate Court in January 2024. Cuzcatlan filed a response with the Collegiate Court in February 2024. A decision of the Collegiate Court is expected within the next six to 12 months. The permanent injunction that Cuzcatlan already has remains in effect.
- Metallurgical recovery could be lower than estimated in ore that is estimated to have an elevated iron oxide content, which represents approximately 30 % of the plant feed in the LOMP.

26 Recommendations

26.1 Introduction

The information set forth in this Report continues to demonstrate that the San Jose Mine is a technically and economically viable operation.

Recommendations for the next phase of work have been broken into those related to ongoing exploration activities and those related to additional technical studies focused on operational improvements. Recommended work programs are independent of each other and can be conducted concurrently unless otherwise stated. The exploration-related programs are estimated at a total cost of US$ 4.3 million. The operational improvement studies are recommended to be conducted in-house and therefore do not involve a direct cost.

26.2 Exploration

26.2.1 Trinidad deposit

It is recommended that Cuzcatlan continue to explore the Trinidad central sector and exploration of the behavior of the Trinidad system at depth to investigate the potential for mineralization being hosted by the Mesoproterozoic basement. The program would involve the core drilling of 3,300 m at an estimated cost of US$ 450,000.

26.2.2 Victoria mineralized zone

It is recommended that Cuzcatlan continue to explore the Yessi vein discovered in August 2023 to better define the geometry of the structures and establish the continuity in mineralization. Recommended drilling includes 4,000 m of core at an estimated cost of US$ 690,000.

26.2.3 Taviche corridor

An extensive and systematic field exploration program has been carried out since 2020 including a drone magnetometric assessment, structural analysis, fluid inclusion studies and detailed field work activities resulting in the definition of a first stage drilling program proposal including 4,600 m in 17 core holes in six structures with geological potential, including the San Juan, San Juan 2, Pastal, San Francisco, Consuelos and San Nicolas; at an estimated cost of US$1,500,000. The execution of this exploration program is dependent on obtaining the necessary permits from the government and may not be executed if such permits are denied.

26.2.4 Maria vein

This vein was first explored in 2017 with 3 holes, defining the presence of a dilational region in the convergence of the Maria vein and the footwall of the Trinidad vein. It is recommended that Cuzcatlan continue to explore the possible kinematic indicators related to extension in the footwall of the Trinidad trend south of the current operations with the drilling of 1,500 m of core at an estimated cost of US$290,000.

26.2.5 Other

The Guila prospect located on the Reduccion Tlacolula 2 concession has been identified as an area that has high potential for the discovery of epithermal veins based on detailed surface mapping. It is recommended that permits be obtained to allow targets to be drilled on this concession. If permits are obtained a drill program consisting of 9,000 m of core holes at an estimated cost of US$ 1,400,000 is recommended.

26.3 Technical and Operational

The following technical studies are recommended to improve the understanding of the San Jose Mine Mineral Reserves and Mineral Resources. With the exception of the delineation drilling, the studies recommended to be conducted in-house and therefore do not involve a direct cost.

26.3.1 Mineral Resources and Reserves

- **Delineation (infill) drilling.** It is recommended that Cuzcatlan continue the delineation drilling from underground of the Trinidad deposit and Victoria mineralized zone. A total of 20,600 m of core drilling is recommended at a budgeted cost of US$ 2,500,000.
- **Assess the mining potential of the Victoria mineralized zone**. A detailed evaluation is recommended to determine the economic viability of accessing and mining the higher-grade zones of the Victoria mineralized structure. This will be completed utilizing the operations resources and part of normal operating cost.
- **Bulk density measurements**. It is recommended that the number of bulk density measurements be increased in secondary veins. If sufficient measurements are obtained, bulk density can be estimated rather than the presently used density assignment methodology.

26.3.2 Mining and Processing

The following are studies recommended to improve operational decision making and mining costs.

- **Mining method.** As part of continuous improvement initiatives to reduce mining cost and to increase mine productivity, it is recommended to continue with the mining evaluation and geomechanical conditions for each stope, considering the possibility of increasing the mining height using SLS from 20 to 25 m where possible.
- **Mining dilution**. It is advisable for the mine to continue enhancing its blasting practices to minimize excessive host rock over breaking, which can lead to increased unplanned dilution.
- **Optimization of plant based on metallurgical testwork results for mineralization located in the upper levels of the mine**. The operation has identified a decrease in metallurgical recovery by approximately 5 % associated with mineralization from the upper levels of the mine, which recent mineralogical analysis indicates is related to the presence of hematite (iron-oxide). Additional metallurgical testwork has been initiated with results expected by the end of March 2024. Based on these results, it is recommended that the processing methodology is optimized to maximize metallurgical recovery by processing this mineralized material in batches. The budgeted cost of these tests is US$ 10,000.

27 References

Albinson, T., 2018. Fluid Inclusion and Petrographic Study of veins in the San Jose del Progreso District, Oaxaca, Mexico for Compañía Minera Cuzcatlán S.A. de C.V., October 2018.

Alvarez, L.R., 2009. Historia operativa de la Mina San José y de la Planta Concentradora de San Jerónimo Taviche durante la operación de Minerales de Oaxaca previa a l compra por parte de Compañía Minera Cuzcatlán: Internal report for Compañía Minera Cuzcatlán S.A. de C.V., 14p.

Bieniawski, Z.T., 1989. Engineering Rock Mass Classification. New York: John Wiley, pp 51

Brandt Engineering & Microanalysis, 2022. Reporte petrográfico descriptivo para la Compañía Minera. Cuzcatlan. January 29, 2022.

Cardona Benavides y Asociados SC, 2022. Actualización de Estudio de Hidrología superficial e Hidrogeología para la Compañía Minera. Cuzcatlan, Informe Técnico, 355 p., July 15, 2022.

Carranza Alvarado, M., Gómez Caballero, J. A., y Pérez León, C., ed., 1996. Monografía geológico-minera del Estado de Oaxaca: Consejo de Recursos Minerales, Secretaria de Comercio y Fomento Industrial, Coordinación General de Minería, Publicación M-17e, 298 p.

Chapman, E.N., and Kelly, T., 2013a. Technical Report: San Jose Property, Oaxaca, Mexico. Prepared for Fortuna Silver Mines Inc., March 22, 2013.

Chapman, E.N., and Kelly, T., 2013b. Technical Report: San Jose Property, Oaxaca, Mexico. Prepared for Fortuna Silver Mines Inc., November 22, 2013.

Chapman, E.N., and Gutierrez, E., 2017. Amended Technical Report: San Jose Property, Oaxaca, Mexico. Prepared for Fortuna Silver Mines Inc., August 20, 2016.

Chapman, E.N., and Sinuhaji, A., 2019. Technical Report: San Jose Mine, Oaxaca, Mexico. Prepared for Fortuna Silver Mines Inc., February 22, 2019.

Chlumsky, Armbrust, and Meyer, 2010. NI 43-101 Technical Report: San Jose Silver Project, Oaxaca, Mexico. Prepared for Fortuna Silver Mines Inc., June 9, 2010.

CIM, 2014. CIM Definition Standards on Mineral Resources and Mineral Reserves. Prepared by the CIM Standing Committee on Reserve Definitions. Adopted by the CIM Council, May 10, 2014.

CIM, 2019. CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines. Adopted by the CIM Council on November 29, 2019.

Consejo de Recursos Minerales, 1982. Informe geológico preliminar del prospecto minero San Ignacio, municipio de Ejutla de Crespo Oaxaca, Distrito Minero de Taviche.

Consejo de Recursos Minerales, 1996. Monografía Geológico-Minera del Estado de Oaxaca, Secretaría de Comercio y Fomento Industrial, Coordinación General de Minería, pp 37, 58.

Corbett, G., 2002. Epithermal Gold for Explorationists. *AIG Journal-Applied geoscientific practice and research in Australia*, 26p.

Corbett, G., 2006. Controls to Low Sulfidation Epithermal Au-Ag. Presentation by G. Corbett, 92p.

Dickinson, W.R., and Lawton, T.F., 2001. Carboniferous to Cretaceous assembly and fragmentation of Mexico. *Geological Society of America Bulletin,* v. 113, p. 1142-1160.

Fortuna, 2011. Press Release Titled "*Fortuna Begins Commercial Production at San Jose Mine, Mexico*". Vancouver, Canada, September 1, 2011.

Fortuna, 2023. Press Release Titled "*Fortuna updates Mineral Reserves and Mineral Resources*". Vancouver, Canada, March 21, 2023.

García, E. 2004. Carta de climas Jalisco. Climatología de la República Mexicana. Proyecto CONABIO-Estadigrafía. México, DF. 90 p

Hester, M.G., and Ray, G.E., 2007. Geology, epithermal silver-gold mineralization and mineral resource estimate at the San Jose Mine property, Oaxaca, Mexico: NI43-101 Technical Report prepared for Fortuna Silver Mines Inc., 58p.

Journel, A.G., 1974. Geostatistics for conditional simulation of ore bodies. *Econ. Geol.*, V.69, pp673-687.

Lechner, M.J., and Earnest, D.F., 2009. Mineral Resource Estimate, Trinidad Deposit, San Jose Project, Oaxaca, Mexico. Prepared for Fortuna Silver Mines Inc., December 10, 2009.

Marinos P., Marinos V., Hoek, E., 2007. The Geological Strength Index (GSI): A Characterization tool for Assessing Engineering Properties for Rock Masses in *Proceedings of the International Workshop on Rock Mass Classification in Underground Mining*., pp87–94.

Martinez-Serrano, R.G., Solis-Pichardo, G., Flores-Marquez, E.L., Macias-Romo, C, Delgado-Duran, J., 2008. Geochemical and Sr-Nd isotropic characterization of the Miocene volcanic events in the Sierra Madre del Sur, central and southeastern Oaxaca, Mexico. *Revista Mexicana de Ciencias Geologicas* v.25, no.1, pp1-20.

Mora. C., J. Valley W., Ortega- Gutiérrez F., 1986. The temperature and Pressure Conditions of Grenvilleage granulite facies metamorphism of the Oaxacan Complex. Southern Mexico. Rev. Inst. Geología, UNAM, V. 6, No. 2, p. 222-242.

Ortega-Gutierrez F., 1988. North American Ocean Continent Transect Corridor H 3 from the Acapulco Trench to the Gulf of Mexico across Southern Mexico, in speed, RC ed, North America Ocean Continent Transect Program A, Decade of North America Geology SP.

Ortega-Gutiérrez, F., Mitre-Salazar, L. M., Roldán-Quintana, J., Aranda-Gómez, J. J., Morán-Zenteno, D. J., Alaniz-Álvarez, S. A., Nieto-Samaniego, Á. F., 1992. Carta geológica de la República Mexicana, quinta edición escala 1:2.000,000: México, D. F., Universidad Nacional Autónoma de México, Instituto de Geología; Secretaría de Energía, Minas e Industria Paraestatal, Consejo de Recursos Minerales, 1 mapa.

Osterman, C., 2004. Geology and silver-gold mineralization at the San Jose Mine and the Taviche Mining District, Oaxaca, Mexico. A NI 43-101 Technical Report prepared for Continuum Resources.

Ravenscroft, P.J., 1992. Recoverable reserve estimation by conditional simulation, in *Case Histories and Methods in Mineral Resource Estimation, Geological Special Publication*, No.63. (Ed. Annels, A.E.) pp.289-298.

Ray, G.E., 2006. Geology and epithermal silver-gold mineralization at the San Jose and Taviche properties, Oaxaca, Mexico: A NI 43-101 Technical Report prepared for Fortuna Silver Mines Inc.

Sánchez Rojas, L. E., Castro Rodríguez, M.G., Ney Aranda Osorio, J., Zarate Lopez, J., Zarate Barradas, R., y Salinas Rodríguez, J.M., 2003. Carta geológico-minera Zaachila E14-12, Escala 1:250,000, 81p.

Sinclair, A.J. and Blackwell, G.H., 2002. Applied Mineral Inventory Estimation. (1st Edition) Cambridge University Press, 381pp.

SVS, **2015**. Conceptual study of the extension to 3000 tpd of San Jose Mine, Oaxaca, Mexico, March 2015.

William, A., Hustrulid, W. A., Hustrulid, R. C., 2001. SME Underground Mining methods, Mining Dilution in moderate-to-narrow width deposits. pp 615.

Certificates

CERTIFICATE of QUALIFIED PERSON

(a) I, Eric Chapman, Senior Vice President of Technical Services for Fortuna Silver Mines Inc., 650-200 Burrard St, Vancouver, BC, V6C 3L6 Canada; do hereby certify that:

(b) I am the co-author of the technical report titled "Fortuna Silver Mines Inc. San Jose Mine, Oaxaca, Mexico" that has an effective date of December 31, 2023 (the "Technical Report").

(c) I graduated with a Bachelor of Science (Honors) Degree in Geology from the University of Southampton (UK) in 1996 and a Master of Science (Distinction) Degree in Mining Geology from the Camborne School of Mines (UK) in 2003. I am a Professional Geologist of the Engineers and Geoscientists of the Province of British Columbia (Registration No. 36328) and a Chartered Geologist of the Geological Society of London (Membership No. 1007330). I have been practicing as a geoscientist and preparing resource estimates for approximately twenty years and have completed more than thirty resource estimates for a variety of deposit types such as epithermal gold/silver veins, porphyry gold deposits, and volcanogenic massive sulfide deposits. I have completed at least fifteen Mineral Resource estimates for precious metal projects over the past five years.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* ("NI 43–101").

(d) I last visited the mine on November 14th to 15th, 2023.

(e) I am responsible for the preparation of Sections 1.1 to 1.4, Sections 1.6 and 1.7, Section 1.9, Section 1.19, Sections 2 to 7, Section 11, Sections 12.1 to 12.4, Section 12.7, Sections 12.9 to 12.11, Section 14, Sections 25.1 to 25.3, Section 25.5, Section 25.14, Section 26.1, Section 26.3, and Section 27.

(f) I am not independent of Fortuna Silver Mines Inc ("Fortuna") as independence is described by Section 1.5 of NI 43–101. I am a Fortuna employee.

(g) I have been an employee of Fortuna and involved with the property that is the subject of the Technical Report since May 2011.

(h) I have read NI 43–101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument and Form.

(i) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Vancouver, BC, Canada, March 8, 2024.

[signed]

Eric Chapman, P. Geo.

CERTIFICATE of QUALIFIED PERSON

(a) I, Paul Weedon, Senior Vice President, Exploration of Fortuna Silver Mines Inc. ("Fortuna"), 200 Burrard Street, Suite 650, Vancouver, BC V6C 3L6, Canada, do hereby certify that:

(b) I am the co-author of the technical report titled "Fortuna Silver Mines Inc. San Jose Mine, Oaxaca, Mexico" that has an effective date of December 31, 2023 (the "Technical Report").

(c) I graduated from Curtin University, Western Australia in December 1991 with a Bachelor of Science (Geology), and a Post Graduate Diploma of Economic Geology (Distinction) and have practiced my profession continuously since 1991. I am a professional Geologist and a Member of the Australian Institute of Geoscientists (MAIG #6001). I have worked across all roles of exploration and mining geology, covering open-pit and underground gold mining in production roles up to Technical Services Manager for large scale complex operations. My exploration experience extends from project generation through to project development and corporate roles. These roles have been conducted across Australasia, Africa and Latin America. I have held my current position of Senior Vice President – Exploration for Fortuna Silver Mines Inc since October 2021.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* ("NI 43–101").

(d) I last visited the mine from August 11th to 13th, 2023.

(e) I am responsible for the preparation of Section 1.5, Section 1.20.1, Sections 8 to 10, Section 12.11, Section 25.3.1, Section 26.2, and Section 27.

(f) I am not independent of Fortuna Silver Mines Inc ("Fortuna") as independence is described by Section 1.5 of NI 43–101. I am a Fortuna employee.

(g) I have been an employee of Fortuna and involved with the property that is the subject of the Technical Report since August 2021.

(h) I have read NI 43–101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument and Form.

(i) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Perth, WA, Australia, March 8, 2024.

[signed]

Paul Weedon, MAIG.

CERTIFICATE of QUALIFIED PERSON

(a) I, Raul Espinoza, Technical Services Director of Fortuna Silver Mines Inc., 650-200 Burrard St, Vancouver, BC, V6C 3L6 Canada; do hereby certify that:

(b) I am the co-author of the technical report titled “Fortuna Silver Mines Inc. San Jose Mine, Oaxaca, Mexico” that has an effective date of December 31, 2023 (the “Technical Report”).

(c) I graduated with a Bachelor of Science Degree in Mining Engineering from Pontificia Universidad Catolica del Peru in 2001 and a Master of Engineering Science in Mining from Curtin University, Australia, in 2014. I am a Fellow member of the Australasian Institute of Mining and Metallurgy and registered as a Chartered Professional in Mining - FAusIMM (CP) with Membership No. 309581. I have practiced my profession for 22 years and been preparing reserve estimates for approximately 11 years. My experience has covered operational, technical, managerial and consultancy functions for open pit and underground mines, from early-stage projects through to producing mines in Argentina, Peru, Australia, Canada and Mexico.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (“NI 43–101”).

(d) I last visited the mine on December 4th and 6th, 2023.

(e) I am responsible for the preparation of Section 1.7, Sections 1.10 and 1.11, Sections 1.13 and 1.14, Sections 1.16 to 1.20, Section 12.8, Section 12.11, Section 15, Section 16.1, Sections 16.3 to 16.8, Sections 18.1 and 18.2, Sections 18.5 to 18.9, Section 19, Sections 21 to 24, Section 25.3.1, Sections 25.6 and 25.7, Sections 25.9 and 25.10, Sections 25.12 to 25.14, Section 26.3, and Section 27.

(f) I am not independent of Fortuna Silver Mines Inc (“Fortuna”) as independence is described by Section 1.5 of NI 43–101. I am a Fortuna employee.

(g) I have been an employee of Fortuna and involved with the property that is the subject of the Technical Report since June2022.

(h) I have read NI 43–101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument and Form.

(i) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Vancouver, BC, Canada, March 8, 2024.

[signed]

Raul Espinoza, FAusIMM (CP)

CERTIFICATE of QUALIFIED PERSON

(a) I, Mathieu F. Veillette, Director, Geotechnical, Tailings and Waterfor Fortuna Silver Mines Inc., 650-200 Burrard St, Vancouver, BC, V6C 3L6 Canada; do hereby certify that:

(b) I am the co-author of the technical report titled "Fortuna Silver Mines Inc. San Jose Mine, Oaxaca, Mexico" that has an effective date of December 31, 2023 (the "Technical Report").

(c) I graduated with a Bachelor of Science Degree in Civil Engineering in 1997 from Queen's University and a Graduate Diploma Business Administration from Simon Fraser University in 2018. I am a Professional Engineer of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (Registration No. 28397), also a Professional Engineer from Colorado (Registration No. 36639) and Alaska (Registration No. 10914). I have practiced my profession continuously for 25 years in geotechnical and water management related fields. The majority of my experience has been in the mining industry including international projects on all stages of the mining process from advanced exploration through decommissioning and reclamation. My relevant work experience includes analysis, site investigations, design, construction, dewatering and operation of open pits, waste dumps, heap leach pads, tailings storage facilities, process ponds, water dams, diversion structures and other mining facilities in Canada (BC, QC), USA (CO, UT, NM, AZ, MT, AK, SC), México, Panamá, Venezuela, Guyana, Peru, Chile, Argentina, Bolivia, Australia, New Zealand and New Caledonia.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* ("NI 43–101").

(d) I last visited the mine from October 31st to November 2nd, 2023.

(e) I am responsible for the preparation of Section 2.3, Sections12.5 and 12.11, Section 16.2, Sections 18.3 and 18.4, Sections 20.3.3, and 20.3.4, Section 25.3.1, and Section 27.

(f) I am not independent of Fortuna Silver Mines Inc ("Fortuna") as independence is described by Section 1.5 of NI 43–101. I am a Fortuna employee.

(g) I have been an employee of Fortuna since August 2022 and involved with the property that is the subject of the Technical Report since September 2022.

(h) I have read NI 43–101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument and Form.

(i) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Vancouver, BC, Canada, March 8, 2024.

[signed]

Mathieu F. Veillette, P. Eng.

CERTIFICATE of QUALIFIED PERSON

(a) I, Patricia Gonzalez, Director of Operations for Minera Cuzcatlan, Carretera Oaxaca-Huatulco km 48 San Jose del Progreso, Oaxaca CP 71550, Oaxaca - Mexico; do hereby certify that:

(b) I am the co-author of the technical report titled "Fortuna Silver Mines Inc. San Jose Mine, Oaxaca, Mexico" that has an effective date of December 31, 2023 (the "Technical Report").

(c) I graduated with a Bachelor of Science Degree in Chemical Engineering from Universidad Autónoma de Nuevo León, México in 2000 and a Master of Business Administration from Instituto Tecnologico y de Estudios Superiores de Monterrey, México in 2023. I have practiced my profession for 23 years and covered research and metallurgical technical functions for 11 years for various mines and metals such as silver, gold, lead, zinc, and copper. My experience has covered operational, technical managerial and consultancy functions in mines in México. I am a qualified professional member registered in Mining and Metallurgical Society of America #1586QP.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* ("NI 43–101").

(d) I am employed at the mining operation and therefore visit the mine every weekday throughout the year.

(e) I am responsible for the preparation of Section 1.8, Section 1.12, Section 1.15, Section 12.6, Section 12.11, Section 13, Section 15, Section 17, Sections 20.1 and 20.2, Sections 20.3.1 and 20.3.2, Sections 20.3.5 to 20.3.11, Sections 20.4 to 20.7, Section 25.3.1, Section 25.4, Section 25.8, Section 25.11, Section 25.14, and Section 27.

(f) I am not independent of Fortuna Silver Mines Inc ("Fortuna") as independence is described by Section 1.5 of NI 43–101. I am a Minera Cuzcatlan employee.

(g) I have been an employee of Minera Cuzcatlan since April 2011 and involved with the property that is the subject of the Technical Report since that date.

(h) I have read NI 43–101 and Form 43-101F1, and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument and Form.

(i) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated at Oaxaca, Mexico, March 8, 2024.

[signed]

Patricia Gonzalez, MMSA QP