MINERAL RESOURCE AND MINERAL RESERVE UPDATE

Los Gatos Joint Venture, Chihuahua, Mexico

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Signature Page

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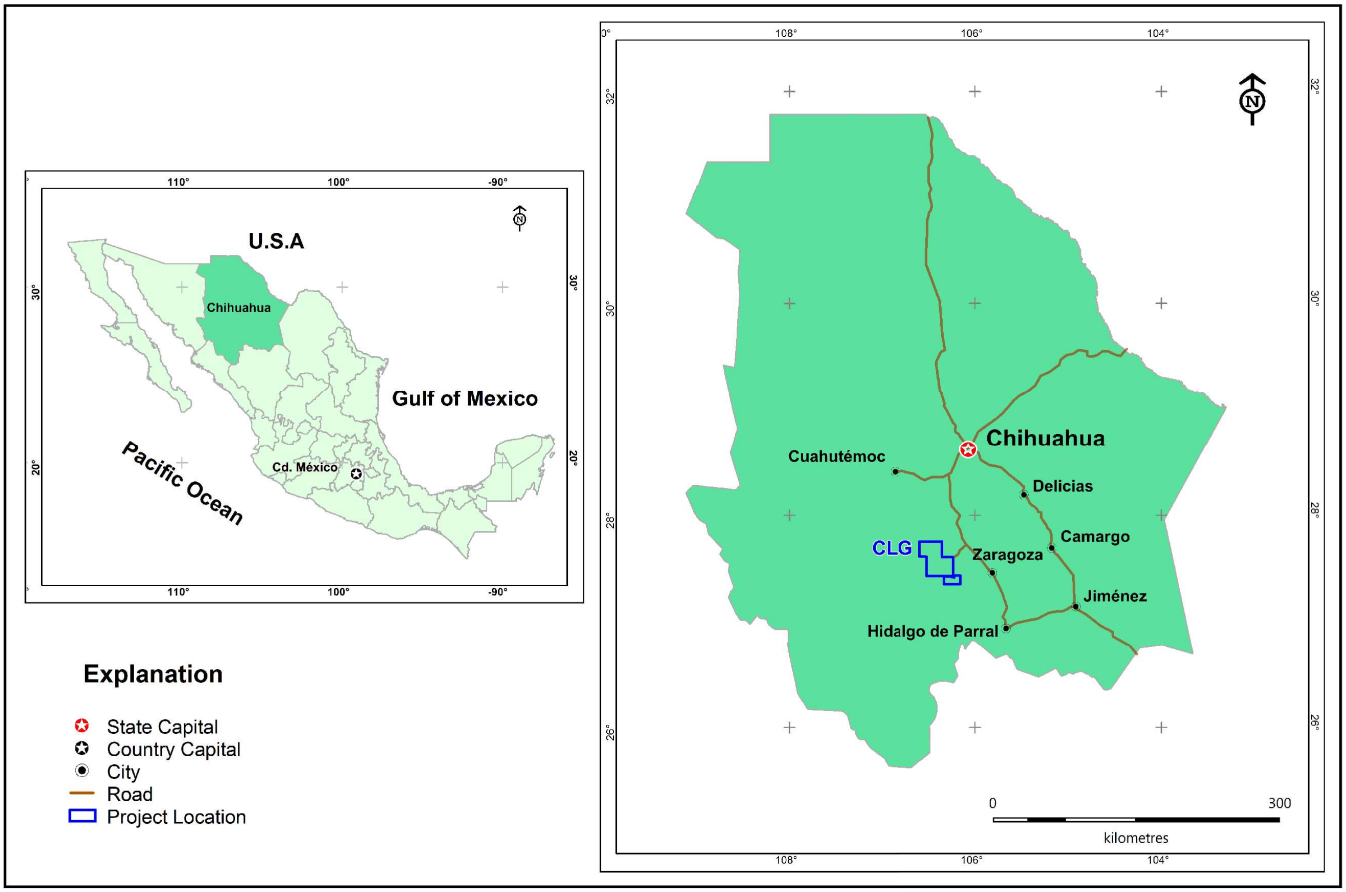
NOTE REGARDING FORWARD LOOKING INFORMATION

This Technical Report contains statements that constitute “forward looking information” and “forward-looking statements” within the meaning of U.S. and Canadian securities laws. All statements other than statements of historical facts contained in this Technical Report, including statements regarding Mineral Resource and Reserve estimates, potential cash flow and cash distributions, life of mine, net present value, operating costs, capital costs, economic analysis, production, cash flows, mill throughput rates, viability of modifications and projects to improve efficiency, and expected mining methods, are forward-looking statements. Forward-looking statements are based on beliefs, assumptions, current expectations about future events and on information currently available. Such statements are subject to risks, uncertainties, and other factors that could cause actual results to differ materially from those expressed or implied in the forward-looking statements including without limitation, commodity prices, foreign exchange rates, changes in laws or regulations, failure to obtain or retain permits and licenses, achievement of ramp development rates, requirements to alter mining methodologies, dewatering the mine in a cost-effective manner, opposition to mining that may arise, labor interruptions, uncertainties due to health and safety considerations, risks and uncertainties set out in this Technical Report, other general risks associated with mining operations, and such other risks and uncertainties described in the Gatos Siver, Inc.’s (Gatos Silver, Inc, is referred to herein as the “Company” or “GSI”) filings with the U.S. Securities and Exchange Commission and Canadian securities commissions including its 2023 annual report filed on form 10-K, as amended by Amendment No. 1, and subsequent 10-K reports, also available on the Company’s website on gatossilver.com. Further, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended that could cause actual actions, events or results to differ materially from those described in forward-looking statements.

The Company expressly disclaims any obligation or undertaking to update the forward-looking statements contained in this Technical Report to reflect any change in its expectations or any change in events, conditions, or circumstances on which such statements are based unless required to do so by applicable law. No assurance can be given that such future results will be achieved, and as such, readers should not place undue reliance on forward-looking statements. Forward-looking statements speak only as of the date of this Technical Report.

1.0 EXECUTIVE SUMMARY

The operating Cerro Los Gatos (CLG) underground mine and processing facilities are approximately centered on Latitude 27° 34’ 17” N, Longitude 106° 21’ 33” W, located approximately 7 kilometers (km) from the town of San José de Sitio, within the Municipality of Satevó in the State of Chihuahua, Mexico. The mine is approximately 120 kilometers (km) south of the state capital of Chihuahua City and approximately 100 km north/northwest of the historical mining city of Hidalgo del Parral (Figure 1.1). In this Technical Report (TR), Cerro Los Gatos (CLG) is defined as the underground mine, processing facilities, Tailings Storage Facility (TSF), and supporting onsite infrastructure as well as the known extents of the Cerro Los Gatos Mineral Reserve and Mineral Resource. The Esther deposit is an undeveloped Mineral Resource located approximately 4 km south-west of CLG.



Source: CLG

Figure 1.1: Cerro Los Gatos Location Map

The CLG life of mine (LOM) plan, which is based on the Mineral Reserves has:

- A current reserve mine life that continues to the end of 2032 at steady-state throughput rates of 3,500 tpd.
- Average annual production of 6.1 million (M) ounces of silver with average annual cash flow of $80 M (after-tax) through 2032 at $23 per ounce silver price.
- Average all-in sustaining costs (AISC) of $4.94 per ounce of payable silver, net of by-product credits and co-product AISC of $14.24 per ounce of payable silver equivalent. AISC is a non-GAAP (Generally Accepted Accounting Principles) measure. Please see Section 19.3 for further information.
- Average operating costs of $82.14 per tonne milled.
- A post-tax net present value (NPV) at a 5% discount rate of $538.8 M ($664.1 M pre-tax).
- Silver price sensitivities show average annual free cash flow of $111 M (after-tax), resulting in a post-tax NPV of $760 million, at a silver price of $30/oz, and average annual free cash flow of $136 M (after-tax), resulting in a post-tax NPV of $935 M, at a silver price of $35/oz.

The CLG life of mine plan (LOM Plan) described in this TR covers the period starting July 1, 2024, through to the end of the reserve life in 2032, with closure and reclamation activities expected to occur during 2033 through to the end of 2036.

Unless otherwise indicated, the currency in this TR is U.S. dollars.

1.1 Property Description and Ownership

The Los Gatos Joint Venture (LGJV) holds concessions through its Mexican subsidiary, Minera Plata Real, S. de R.L. de C.V. (MPR). MPR is 70% owned by Gatos Silver, Inc. and 30% owned by Dowa Metals & Mining Co., Ltd. MPR is the owner of mineral rights held in eighteen titled concessions, covering approximately 103,000 hectares (Ha). MPR has purchased surface lands covering the known extents of the CLG and Esther Resource areas, totalling approximately 5,189 hectares, and has negotiated and ratified an access agreement with the community of San José del Sitio for the use of the access road.

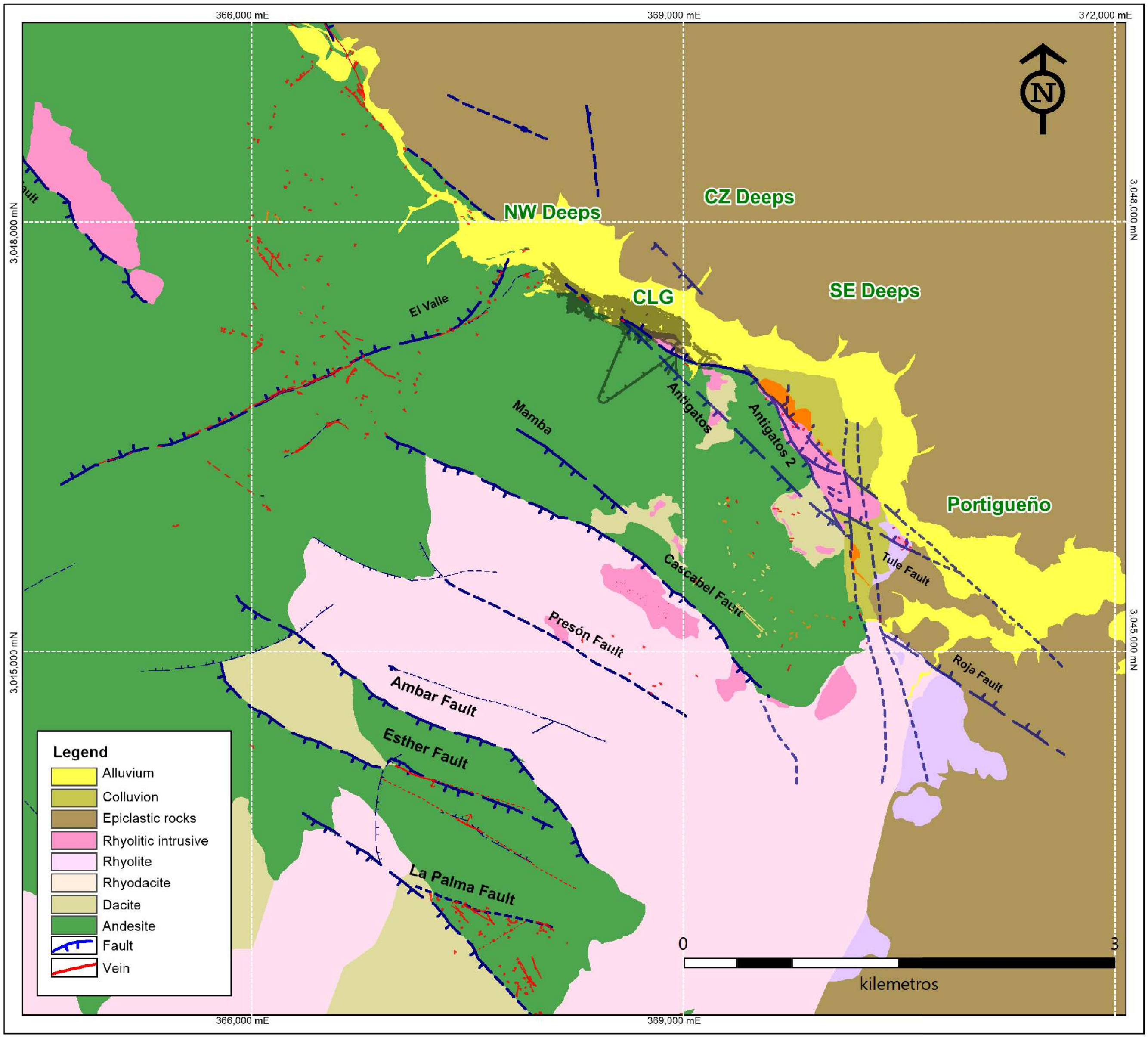
Environmental baseline data collection began in May 2010, to prepare for the development of future environmental studies (EIS) required for the project. The Environmental Impact Study (Manifestación de Impacto Ambiental) for the development of the Cerro Los Gatos project was filed with the Mexican Environmental Regulatory authorities (SEMARNAT) on December 12, 2016, and was approved in 2017. A positive Feasibility Study (FS) was completed on CLG in 2017 (Tetra Tech, 2017). The CLG mine was constructed in 2018 and commissioned in mid 2019. The CLG mine produces concentrates containing silver, lead, zinc, copper and gold, which are shipped to smelters for processing.

1.2 Geology and Mineralization

The CLG and Esther deposits are embedded within andesites of the Lower Volcanic Series (LVS) of the Sierra Madre Occidental (SMO) volcanic province. On the LGJV concessions, the LVS is exposed in a horst feature that stretches from the CLG deposit approximately 25 km to the northwest to the edge of the concession package.

CLG is an intermediate sulphidation epithermal vein developed within a listric fault zone. Mineralization at CLG is characterized by silver, lead, zinc, and copper sulphides and their corresponding oxides, along with fluorite, manganese, barite, and traces of gold associated with quartz and calcite veins. The veins vary in orientation from West-Northwest to North-Northwest and vary in thickness up to 25 meters (m).

A plan view of the local geology and location of mineralization is provided in Figure 1.2.

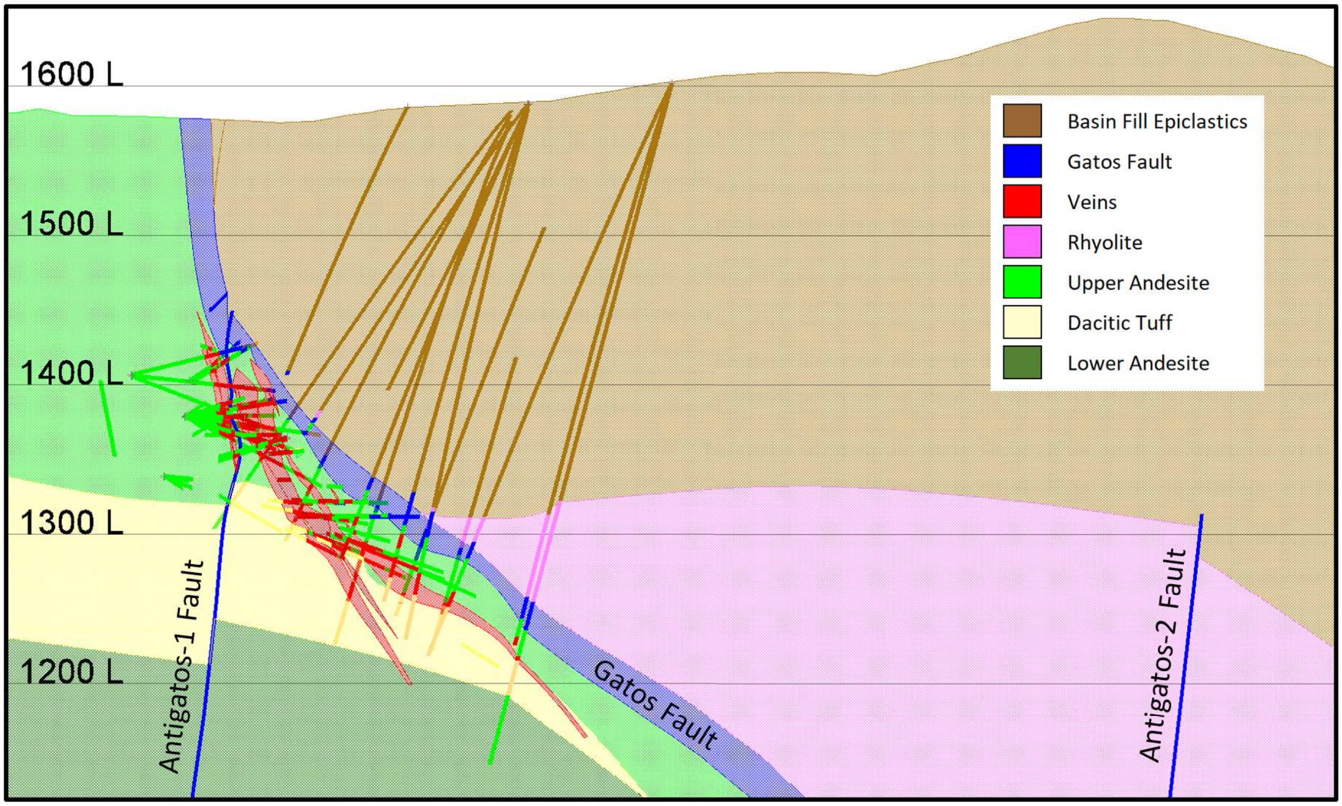


Source: CLG

Figure 1.2: Surface Geological Map of the Cerro Los Gatos Deposit Area

The Cerro Los Gatos deposit is a listric-shaped mineralized horizon hosting steeply to shallowly dipping mineralized-shoots at depth. Mineralization of interest occurs for approximately 1,800 m in length, between an elevation varying roughly between 700 masl and 1,400 masl. The top of the mineralized horizon at Cerro Los Gatos is generally located at an elevation of 1,400 masl. The natural topographic surface is in the order of 1,570 masl ± 50 masl.

Figure 1.3 provides a typical cross-section view of the CLG deposit.



Source: CLG

Figure 1.3: Geologic Model, Section Looking Northwest through the Central Zone Showing the Lithological Sequence at Los Gatos Deposit

The veins at Cerro Los Gatos contain silver, zinc, and lead. Lower concentrations of gold and copper are also associated with the veining.

Silver mineralization occurs dominantly as acanthite (argentite) and native silver.

Zinc mineralization occurs as sphalerite, zinc silicates and zinc carbonates of variable grain sizes disseminated in quartz vein material, as open-space filling in cavities, and as replacements in the andesitic and dacitic flow units. Sphalerite ranges from yellow to brown in color and is deposited in a similar style but is not always associated with the galena mineralization. Zinc oxides after sphalerite also exists down along fault structures through the deposit.

Lead mineralization occurs primarily as galena and lead oxide minerals of varying grain sizes that are disseminated in quartz vein material, as open-space filling in cavities, and as replacements in the andesitic and dacitic flow units.

Copper mineralization occurs dominantly as chalcopyrite disseminated within quartz veins. Various other copper minerals are present in trace amounts including azurite, malachite, covellite, chalcocite and native copper.

Gold mineral species have not been identified visually but are present in small quantities in assay results.

1.3 Exploration, Sampling, and Data

Exploration at CLG by MPR has been completed primarily by diamond drilling (DD) and limited non-drilling exploration activities, including surface geochemical assay, geophysics, surface mapping, and structural studies.

The Mineral Resource estimate uses geological and geochemical data that has been collected up until March 31, 2024, for CLG and July 31, 2022, for the Esther deposit. As of March 31, 2024, the global database available for the 2024 Mineral Resource estimation of the CLG deposit includes 654 (278,215 m) surface and 1,073 (98,056 m) underground core drill holes. The database includes regional exploration drilling that is outside the main area of interest of the CLG deposit, and therefore has no direct input in the 3D geological modeling or resource estimation for the CLG Mineral Resource calculations. The database within the area of interest of the CLG deposit and used in the Mineral Resource estimation of CLG includes 599 (249,091 m) surface and 1,067 (97,548 m) underground core drill holes. The CLG Mineral Resource incorporates an additional 53,689 meters of surface resource drilling in 75 holes and 12,354 meters of underground definition drilling from 118 holes since the 2023 Technical Report. The Mineral Resource for Esther is unchanged since 2022.

The sample collection and preparation, assaying and security procedures implemented by MPR use methodologies in accordance with internal and mining industry standards and were continuously monitored to ensure the integrity of the data collected.

1.4 Mineral Resource Estimate

Material factors that may cause actual results to materially vary from the conclusions, estimates, designs, forecasts, or projections, include any significant differences in any one, or more, of the material factors, or assumptions, set out in this subsection, this report, and as set out above in the note regarding forward looking information, including geological and grade interpretations and controls, as well as assumptions and forecasts associated with the establishment of the prospects for economic extraction.

Mineral Resources were estimated using surface exploration and underground drilling and associated sampling data available for CLG.

The estimation is based on a 3D geological model built using implicit modeling to characterize the structures and establish the geometry and continuity of the veins that form the estimation domains.

Exploratory Data Analysis (EDA) and geostatistical analysis were completed on the raw and composite datasets to help define the interpolation parameters and Mineral Resource classifications. Estimation was completed using Ordinary Kriging (OK) using nested passes with outlier capping, variography, and estimation plan defined per each estimation domain.

The Mineral Resource classification is based on drill hole spacing grids, the closeness to mine infrastructure (production drifts), and the level of geological confidence for the continuity and grade of each vein allowing for appropriate consideration of uncertainty and risk.

Mineral Resources were constrained based on a stope optimization that considered economic Net Smelter Return (NSR) cut-off value, price, mining costs, infrastructure constraints, and mining licenses. For the cut-off definition a NSR calculation was used for generation of the stope optimization shapes. The parameters applied to the calculation of NSR in the block model (including metal values, recovery factors, transportation costs, etc.) were provided by MPR and reviewed and considered reasonable by WSP.

The estimated Mineral Resources reported exclusive and inclusive of Mineral Reserves are summarized in Table 1.1 and Table 1.2, respectively, on a 100% LGJV basis and on a 70% GSI attributable basis. The effective date of the Mineral Resource estimate is July 1, 2024.

Table 1.1: CLG Mineral Resource Estimate Exclusive of Mineral Reserves

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	0.24	222	2.78	1.51	0.36	0.07	1.7	14.7	8.0	2.8	0.3
Indicated	0.55	75	3.71	2.00	0.21	0.25	1.3	44.8	24.1	3.7	3.1
Measured and Indicated	**0.79**	**120**	**3.43**	**1.85**	**0.26**	**0.20**	**3.0**	**59.5**	**32.0**	**6.5**	**3.4**
Inferred	1.51	80	4.22	2.01	0.22	0.29	3.9	140.2	66.9	10.5	9.5

70% GSI Attributable Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	0.17	222	2.78	1.51	0.36	0.07	1.2	10.3	5.6	2.0	0.2
Indicated	0.38	75	3.71	2.00	0.21	0.25	0.9	31.4	16.9	2.6	2.1
Measured and Indicated	**0.55**	**120**	**3.43**	**1.85**	**0.26**	**0.20**	**2.1**	41.6	22.4	4.6	2.4
Inferred	1.06	80	4.22	2.01	0.22	0.29	2.7	98.2	46.8	7.4	6.7

Table 1.2: CLG Mineral Resource Estimate Inclusive of Mineral Reserves

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	3.12	380	5.39	2.60	0.37	0.11	38.1	371.2	179.1	37.5	7.7
Indicated	5.87	131	4.65	2.62	0.23	0.33	24.7	601.6	339.2	43.1	42.9
Measured and Indicated	**8.99**	**217**	**4.91**	**2.61**	**0.28**	**0.25**	**62.8**	**972.8**	**518.3**	**80.5**	**50.5**
Inferred	1.52	81	4.22	2.02	0.22	0.29	4.0	141.7	67.7	10.6	9.7

70% GSI Attributable Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	2.18	380	5.39	2.60	0.37	0.11	26.7	259.8	125.4	26.2	5.4
Indicated	4.11	131	4.65	2.62	0.23	0.33	17.3	421.2	237.4	30.1	30.0
Measured and Indicated	**6.29**	**217**	**4.91**	**2.61**	**0.28**	**0.25**	**43.9**	**681.0**	**362.8**	**56.4**	**35.4**
Inferred	1.07	81	4.22	2.02	0.22	0.29	2.8	99.2	47.4	7.5	6.8

Notes:

1. Mineral Resources are reported on a 100% LGJV basis and 70% GSI attributable basis and exclusive and inclusive of Mineral Reserves.
2. Under SEC Regulation S-K 1300, a Mineral resource is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.
3. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
4. The SEC definitions for Mineral Resources in S-K 1300 were used for Mineral Resource classification which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions).
5. The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated or Measured Mineral Resource. It is uncertain if further exploration will result in upgrading Inferred Mineral Resources to an Indicated or Measured Mineral Resource category.
6. Specific gravity has been assumed on a dry basis.
7. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not sum exactly.
8. Mineral Resources exclude all Mineral Resource material mined prior to July 1, 2024.
9. Mineral Resources are reported within stope shapes using a $70.94/tonne net smelter return (“NSR”) cut-off calculated using an Ag price of US$23/oz, Zn price of US$1.25/lb, Pb price of US$0.95/lb, Au price of US$1,850/oz and Cu price of US$4.00/lb. The NSR cutoff includes mill recoveries and payable metal factors appropriate to the existing CLG processing circuit augmented with a pyrite leach circuit and copper separation circuit. The milling recoveries for these additional projects is based on existing metallurgical testwork. The metallurgical recoveries that are used as inputs to the resource NSR are 93.2% Ag, 63.4% Zn, 61.1% Au and range between 87.2%-89.4% Pb and between 66.5%-82.0% Cu.
10. No dilution was applied to the Mineral Resource which are reported on an insitu basis (point of reference).
11. Contained Metal (CM) is calculated as follows:
    a. Zn, Pb and Cu CM (Mlb) = Tonnage (Mt) * Grade (%) / 100 * 2204.6
    b. Ag and Au, CM (Moz) = Tonnage (Mt) * Grade (g/t) / 31.1035; multiply Au CM (Moz) by 1000 to obtain Au CM (koz)
12. The Mineral Resource estimates were prepared under the supervision of Ronald Turner, MAusIMM(CP) an employee of Golder Associates S.A. who is the independent Qualified Person for these Mineral Resource estimates.

The mineral resource estimate for the Esther deposit remains unchanged from that published in the 2022 and 2023 TR. It is summarized in Table 1.3.

Table 1.3: Esther Mineral Resource Estimate

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)
Indicated	0.28	122	4.30	2.17	0.14	1.1	26.8	13.6	1.2
Inferred	1.20	133	3.69	1.53	0.09	5.1	98.0	40.6	3.3

70% GSI Attributable Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)
Indicated	0.20	122	4.30	2.17	0.14	0.8	18.8	9.5	0.8
Inferred	0.84	133	3.69	1.53	0.09	3.6	68.6	28.4	2.3

Notes:
1. Mineral Resources are reported on a 100% LGJV basis and 70% GSI attributable basis and are exclusive of Mineral Reserves (there are no Mineral Reserves at Esther).
2. Under SEC Regulation S-K 1300, a Mineral resource is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.
3. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
4. The SEC definitions for Mineral Resources in S-K 1300 were used for Mineral Resource classification which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions).
5. The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated or Measured Mineral Resource. It is uncertain if further exploration will result in upgrading Inferred Mineral Resources to an Indicated or Measured Mineral Resource category.
6. Specific gravity has been assumed on a dry basis.
7. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not sum exactly.
8. Mineral Resources are reported within stope shapes using a $52/tonne net smelter return (“NSR”) cut-off assuming processing recoveries equivalent to CLG with a silver price of $22/oz, zinc price of $1.20/lb, lead price of $0.90/lb and gold price of $1,700/oz. The metallurgical recoveries that were used as inputs to the NSR were based on experience with similar mineralized material from CLG. The metallurgical recovery parameters used in the NSR were 87.8% Ag, 65.0% Zn, 87.2% Pb and 56.4% Au There is a portion of the Esther deposit that is oxidized and additional metallurgical test work is required to define processing recoveries.
9. No dilution was applied to the Mineral Resource which are reported on an insitu basis (point of reference).
10. Contained Metal (CM) is calculated as follows:
    a. Zn, Pb and Cu CM (Mlb) = Tonnage (Mt) * Grade (%) / 100 * 2204.6
    b. Ag and Au, CM (Moz) = Tonnage (Mt) * Grade (g/t) / 31.1035; multiply Au CM (Moz) by 1000 to obtain Au CM (koz)
11. The Mineral Resource estimates were prepared under the supervision of Ronald Turner, MAusIMM(CP) an employee of Golder Associates S.A. who is the independent Qualified Person for these Mineral Resource estimates.

1.5 Mineral Reserve Estimate

1.5.1 Introduction

The mine design, scheduling, and Mineral Reserve estimates were prepared by the CLG Technical Services Department under the supervision of the Qualified Person (QP) responsible for these estimates.

1.5.2 Methodology for Estimating Mineral Reserves

The methodology applied by CLG for the 2024 Mineral Reserve estimate follows industry-standard practices and remains consistent with the approach used for the 2023 update. It adheres to the requirements of S-K 1300 and NI 43-101, which mandate rigorous procedures to convert Measured and Indicated Resources into Proven and Probable Reserves by applying relevant Modifying Factors.

1.5.3 Metal Prices and Exchange Rate

The metal prices and exchange rates used in the Mineral Reserve estimate were based on the three-year trailing monthly averages from June 2021 to June 2024, supplemented by long-term analyst consensus estimates.

1.5.4 NSR Values

CLG assigned block Net Smelter Return (NSR) values to the resource block model for three processing recovery/revenue/cost outcomes, differentiated by the Pb/Cu ratio:

- Pb/Cu ratio of ROM ore > 15. Two concentrates, zinc (Zn) and lead (Pb), with Cu not recovered as a payable component.
- Pb/Cu ratio of ROM ore between 7 and 15. Two concentrates, Zn and Pb, with Cu as a payable component of the Pb concentrate.
- Pb/Cu ratio of ROM ore < 7. Three concentrates, Zn, Pb, and Cu.
- Note that final processing scenarios, recoveries and payabilities are determined based on the blended period grades fed to the processing plant and not on individual block values.

1.5.5 NSR Cut-Offs

CLG used net smelter return (NSR) cut-offs to estimate the Mineral Reserve. The NSR cut-off represents the minimum value that a tonne of mineralized material must generate, considering on-site costs related to mining and processing, to ensure economic viability. This value ensures that only material which can be mined profitably is included in the reserve estimate. For this analysis, six NSR cut-offs were applied, corresponding to three different mining methods and two cost allocation approaches.

1.5.6 Dilution and Mining Recovery

Mining recovery and unplanned dilution of host rock were estimated considering the selected mining method, the dip and width of the vein, and the influence of a significant hanging wall fault. In addition, dilution from backfill was evaluated based on the mining method employed and the type of backfill material used.

1.5.7 Stope Optimization

The Mineable Shape Optimizer (MSO) algorithm, integrated within Deswik mine design software, was employed to generate preliminary stope solids. This process identified the potentially mineable portions of the Mineral Resource that may qualify for inclusion in the Mineral Reserve.

1.5.8 Mineral Reserve Estimate

Table 1.4 presents the Mineral Reserve estimate for the CLG mine as of July 1, 2024. The estimates are reported on both a 100% and a 70% ownership basis, corresponding to the total Mineral Reserve and GSI's 70% interest in the Los Gatos Joint Venture (LGJV). The LGJV, through its Mexican subsidiary Minera Plata Real, S. de R.L. de C.V., owns the CLG mine.

Table 1.4: CLG Mineral Reserves as of July 1, 2024

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Proven	3.49	300	4.35	2.09	0.29	0.09	33.6	334.4	160.6	32.6	7.0
Probable	6.85	107	3.66	2.06	0.18	0.26	23.6	552.3	310.9	40.5	40.0
Proven and Probable	**10.33**	**172**	**3.89**	**2.07**	**0.22**	**0.21**	**57.3**	**886.7**	**471.4**	**73.1**	**46.9**
70% GSI Attributable Basis	**Mt**	**Ag (g/t)**	**Zn (%)**	**Pb (%)**	**Au (g/t)**	**Cu (%)**	**Ag (Moz)**	**Zn (Mlbs)**	**Pb (Mlbs)**	**Au (koz)**	**Cu (Mlbs)**
Proven	2.44	300	4.35	2.09	0.29	0.09	23.5	234.1	112.4	22.8	4.9
Probable	4.80	107	3.66	2.06	0.18	0.26	16.5	386.6	217.6	28.4	28.0
Proven and Probable	**7.23**	**172**	**3.89**	**2.07**	**0.22**	**0.21**	**40.1**	**620.7**	**330.0**	**51.2**	**32.8**

Notes:

1. Mineral Reserves are reported on a 100% basis and 70% GSI attributable basis and exclude all mineral reserve material mined prior to July 1, 2024.
2. Specific gravity has been assumed on a dry basis.
3. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not sum exactly.
4. Values are inclusive of mining recovery and dilution. Values are determined as of delivery to the mill (point of reference) and therefore not inclusive of milling recoveries.
5. Mineral Reserves are reported within stope shapes using a variable cut-off basis with a Ag price of US$23/oz, Zn price of US$1.25/lb, Pb price of US$0.95/lb, Au price of US$1850/oz and Cu price of US$4.00/lb. Metallurgical recoveries used in the NSR calculation for generation of the stope solids vary based on the block Pb:Cu ratio. For a Pb:Cu ratio >15 the NSR metallurgical recovery parameters were 88.2% Ag, 63.4% Zn, 89.4% Pb, 54.2% Au and 0% Cu, for Pb:Cu of >7 and <15, the NSR metallurgical recovery parameters were 88.2% Ag, 63.4% Zn, 89.4% Pb, 54.2% Au and 60% Cu and for Pb:Cu ratio of <7 the NSR metallurgical recovery parameters used were 88.2% Ag, 63.4% Zn, 87.2% Pb, 54.2% Au and 82% Cu. The metallurgical recovery parameters in the economic analysis, after plant production modeling, average 88.2% Ag, 63.1% Zn, 88.5% Pb, 54.2% Au and 71.5% Cu to concentrates where the metal is payable.
6. The Mineral Reserve is reported on a fully diluted basis defined by mining method, stope geometry and ground conditions.
7. Contained Metal (CM) is calculated as follows:
   - Zn, Pb and Cu, CM (Mlb) = Tonnage (Mt) * Grade (%) / 100 * 2204.6
   - Ag and Au, CM (Moz) = Tonnage (Mt) * Grade (g/t) / 31.1035; multiply Au CM (Moz) by 1000 to obtain Au CM (koz)
8. The SEC definitions for Mineral Reserves in Regulation S-K 1300 were used for Mineral Reserve classification and are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions).
9. Under SEC Regulation S-K 1300, a Mineral Reserve is defined as an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.
10. The Mineral Reserve estimates were prepared under the supervision of Mr. Stephan Blaho, P.Eng., an employee of WSP Canada Inc. who is the independent Qualified Person for these Mineral Reserve estimates.

1.6 Mining Methods

1.6.1 Description of the Mine and Deposit

CLG is an underground mine that produces Ag, Zn, and Pb, with gold (Au) and Cu as by-products. The orebody is characterized by high-grade polymetallic sulphide mineralization in an epithermal vein-style deposit. The deposit consists of four zones called the Northwest (NW), Central (CZ), Southeast Upper (SEU), and Southeast (SE) zones. CLG effectively addresses several challenges in developing and operating the underground mine, including groundwater management, temperature regulation, and ground control.

1.6.2 Geotechnical

The ground conditions in parts of the deposit are adversely affected by proximity to a major hanging wall fault called the Los Gatos fault. This major basin boundary fault ranges from centimeters to tens of meters in width. While the fault itself does not host mineralization, in areas where the mineralized veins are located adjacent to the structure, mining and ground support methods need to be adapted to limit mining dilution and increase mining recovery.

Geotechnical engineers at the CLG mine have developed a rock support system which is applied to development headings (ramps and drifts), cut-and-fill stopes, longhole stopes, and pillars. The WSP QP has engaged a highly experienced geotechnical engineer to review the rock support designs and who has visited the mine to observe installed rock support and the behaviour of the standing rock mass. Discussions have been held with CLG technical staff to investigate rock mechanics challenges, and identify and mitigate excavation risks.

Various combinations of rock bolts, welded-wire fabric (mesh), shotcrete and cable bolts are utilized in the mine (see Section 13.2.1). In addition, stope voids are backfilled with cemented backfill to provide support for remnant pillars and stope spans (see Section 13.2.1.2).

Rock support in the CLG Mine is complicated by major fault structures intersecting the mineralized veins at oblique and high angles. Engineers have applied specific mining methods and rock support techniques to provide secure and safe mine openings (see Section 13.2.1).

The unmined rock above the uppermost stopes is referred to as the crown pillar. At CLG the crown pillar has been evaluated for stability, probability of failure and likelihood of surface subsidence (Section 13.2.1.4). Since the mineralized veins peter out many tens of meters from the topographic surface and the stopes will be backfilled, there is very little to no likelihood of crown pillar failures, nor of surface subsidence, along the strike of the deposit.

The QP is of the opinion that the rock support designs and installation protocols employed by CLG are adequate to manage the natural and induced stresses in the rock mass and are consistent with observed rock support strategies in mines of similar mining techniques and rock conditions.

1.6.3 Hydrogeology

The CLG deposit is characterised by the Los Gatos Fault (LGF) and a number of cross faults, including the Falla Aportadora NW, which is a major water-bearing structure. Of the six identified hydrogeological units (HGUs) identified at CLG, the central gouge zone of the LGF and less-fractured rock masses distal to the fault zones are considered to be of relatively lower permeability. The fractured rock masses on either side of the LGF and areas where cross faults intersect the LGF are considered to be of relatively higher permeability and to be favorable conduits for groundwater flow.

Water flows into the mining area from two sources – rainwater through epiclastics and fracture zones, and upswelling thermal waters via the Lower Gatos Fault.

The strategy for managing water at CLG is to draw down the water table and thus minimize the rate of inflow of groundwater. The original topographic surface of the Cerro Los Gatos deposit ranges from 1571 to 1624 meters above sea level (masl). The natural water table was at 1400 masl and inflows occur below 1450 masl. A series of 18 wells were drilled from surface to establish dewatering wells and piezometer stations. Once underground development began, additional wells were drilled from underground bays to intercept groundwater within the rock mass before it flowed into the mine for the dual purpose of lowering the water table and reducing the temperature gradient in the mine. Wells have been drilled and pumps installed in the NW and CZ zones with more planned in the SE zones as the mine deepens (see Section 13.3).

The QP observes that mining productivity and mine development rates increase when the water table has been drawn down below the mining horizon in advance of excavations.

1.6.4 Groundwater Management

The CLG deposit is situated within a regional aquifer, which poses significant challenges for controlling groundwater inflows into the underground workings. CLG employs two dewatering systems to manage the groundwater:

- Conventional contact-water dewatering infrastructure
- A network of dewatering wells

1.6.5 Mine Design

The Mineral Reserve estimate is based on a detailed mine design and production schedule, both of which were developed using Deswik software. The design process began with the establishment of key criteria for stope production and mine development, ensuring that the mining methods and development sequence align with the overall project objectives and economic constraints.

1.6.6 Mining Methods

CLG employs two primary mining methods: cut-and-fill (CAF) and longhole stoping (LHS). The selection between these methods is determined by the geotechnical characteristics of the mineralization and surrounding host rock. These methods are implemented in either longitudinal or transverse orientations, depending on the vein width and geometry

1.6.7 Mine Infrastructure

- **Access and Underground Facilities:** Access to the underground workings is provided through a system of ramps. CLG has established an underground maintenance shop within a mined-out stope in the NW zone.
- **Ventilation System:** The mine utilizes a pull-type ventilation system. Exhaust fans, installed at the collars of three return-air raises, draw spent air from the underground workings. Fresh air enters the mine through the main ramp and two principal intake raises.
- **Air-Cooling Infrastructure:** CLG operates two dedicated air-cooling plants designed to regulate underground temperatures, maintaining safe and comfortable working conditions.
- **Dewatering Infrastructure:** The dewatering system at CLG consists of two components:
  - **Conventional Contact-Water Dewatering:** This system collects water that enters the mine workings and pumps it to surface.
  - **Dewatering Wells:** These wells extract groundwater from the aquifer, reducing the inflow into the underground workings.
- **Safety Infrastructure:** The safety infrastructure at CLG includes an escapeway raise to surface, a permanent refuge station, and three portable refuge chambers.
- **Electric Power:** The underground electrical power distribution system includes 19 mobile electrical substations (13,800/480 volts) and three fixed substations (13,800/4,160 volts).
- **Underground Communications:** The communication system includes a leaky feeder cable network, a fiber-optic backbone, a personnel location system, and video surveillance cameras.

1.6.8 Mine Equipment

CLG operates as a fully mechanized mine, utilizing rubber-tired, diesel-powered equipment for all phases of its mining operations. The current fleet includes the following:

- Six two-boom, electric-hydraulic development jumbos
- One cable bolter and seven mechanized rock bolters
- Nine LHDs (Load-Haul-Dump), most equipped for remote-control mucking
- Seven mine trucks with a 40-t payload capacity
- Three production drill rigs (one top-hammer and two down-the-hole)

1.6.9 Mine Personnel

As of July 1, 2024, the mine department employed a total of 483 individuals. The underground mine operates on a two-shift schedule, with each shift working 10-hours per day. The workforce is organized into three rotational crews, each working 14 days on followed by 7 days off. At any given time, two of the three crews are present on-site, ensuring continuous operation.

1.6.10 Life-of-Mine Plan

The Life-of-Mine (LOM) plan projects that the CLG mine will remain in operation for an additional 8.3 years from the July 1, 2024, effective date of this report, with production continuing until Q4 of 2032. Over this period, the mine’s average annual production is estimated at approximately 1.2 Mt. Notably, around 50% of the total LOM production will be sourced from the Mineral Reserves in the SE Zone.

1.7 Processing Plant

The CLG processing plant employs a conventional design and flotation technology typical of base metal operations. The processing flow sheet is comprised of a crushing and grinding circuit, including jaw crusher, semi-autogenous grinding (SAG) mill and ball mill, which feeds a flotation plant consisting of lead and zinc flotation circuits (including rougher, regrind and cleaner stages), lead and zinc concentrate thickening, and tailings thickening.

Since commencing operations, processing improvements, relative to the 2017 Feasibility Study design, have been achieved through equipment additions and optimized maintenance and operating practices. The actual plant performance from 2019 through to 2024 has been the primary basis for the processing rate and metallurgical predictions in this Mineral Reserves update study. During 2019 to 2024, the main sources of processed material were the Central and NW Zones. Over the remaining Reserve there will be increasing contributions from the SE Zone.

There is no indication that the characteristics of the material being mined will change and therefore the throughput and recovery assumptions applied for future processing are considered as reasonable for the LOM. The plant equipment sizing is robust for the throughput projected.

The plant operating practices are consistent with the design, metallurgical testwork described in Section 17.2, and performance predictions that have been used in developing the Mineral Reserve.

The construction design nominal throughput basis for the processing facility was 2,500 t/d, 365 days per year or 912,500 tonnes per year (t/y) of ROM on an operating basis of 92% utilization.

- From January 2024 to June 2024, the average processing rate was 3,225 tonnes per calendar day.
- The 2024 LOM Plan averages a processing rate 3,401 tonnes per calendar day with a nominal rate of 3,500 tonnes per calendar day.

The 2019 to 2024 processing recovery results have been better than the recoveries achieved in the 2016 Feasibility test program. The 2024 LOM Plan is based on average historical monthly metal recoveries after removal of outliers.

The 2024 LOM Plan contemplates the construction and operation of a processing circuit that separates a copper concentrate from high-copper lead concentrates. The CLG produces zinc concentrates with significant silver content, however due to the properties of the feed mineral (type of grain, mineral associations, grade of oxidation, etc.) fluorine bearing minerals are simultaneously recovered which incurs minor financial penalties on the sale to smelters. A fluorine leach circuit was constructed in early 2023 and started operation in June 2023. The fluorine leach circuit is designed to lower the content of the zinc concentrate to approximately 500 ppm fluorine. To date less than 500 ppm fluorine has been steadily achieved. There are minor losses of silver and zinc during the leaching processes that have been accounted for in the processing plant production calculations.

The key process parameters are outlined in Table 1.5.

Table 1.5: Process Plant Recovery Parameters

	44% of LOM tonnage		56% of LOM	Zinc Circuit		
	High Cu Stream (<15:1 Pb:Cu)		Low Cu Stream			
	Cu Conc	Pb Conc	Pb Conc	Zn Conc	Leach Rec	**After Leach**
Ag recovery, %	**6.80%**	**71.20%**	**78.00%**	10.20%	99.70%	**10.17%**
Au recovery, %	**3.25%**	**50.95%**	**54.20%**	6.30%	99.00%	6.24%
Pb recovery, %	2.50%	**86.90%**	**89.40%**	1.70%	97.00%	1.65%
Zn recovery, %	1.00%	8.90%	9.90%	63.40%	99.60%	**63.15%**
Cu recovery, %	**52.50%**	**27.50%**	**60.00%**	10.00%	95.00%	9.50%
F recovery, %	0.40%	0.63%	1.03%	0.24%	35.01%	0.08%

Table 1.6: Life of Mine Projected Processing and Production Summary

Plant Metrics	Units	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM
Processed Material	Mt	0.60	1.26	1.28	1.28	1.28	1.28	1.28	1.16	0.93	**10.33**
Process Rate	tpd	3,247	3,444	3,500	3,500	3,500	3,500	3,500	3,166	3,055	**3,401**
Ag Grade	g/t	260	221	193	167	154	153	153	146	141	**172**
Zn Grade	%	4.02	4.30	4.42	4.05	3.98	4.22	3.35	3.30	3.24	**3.89**
Pb Grade	%	1.89	2.04	2.13	2.10	2.12	2.13	1.99	2.05	2.09	**2.07**
Au Grade	g/t	0.26	0.23	0.25	0.20	0.22	0.24	0.21	0.19	0.18	**0.22**
Cu Grade	%	0.09	0.12	0.12	0.14	0.16	0.21	0.37	0.33	0.27	**0.21**
Ag Production	Moz	4.4	7.9	7.0	6.0	5.6	5.5	5.5	4.8	3.7	**50.5**
Zn Production	Mlbs	33.4	75.2	78.7	72.0	71.0	75.1	59.5	53.1	42.0	**559.9**
Pb Production	Mlbs	22.2	50.6	53.3	52.6	53.0	52.8	49.0	45.7	37.8	**417.0**
Au Production	koz	2.8	5.1	5.6	4.5	4.9	5.4	4.6	3.8	3.0	**39.6**
Cu Production	Mlbs	0.7	2.0	0.9	2.8	3.4	4.5	8.4	6.7	4.2	**33.5**
AgEq Production	Moz	7.5	14.8	14.1	13.0	12.6	13.0	12.6	11.0	8.6	**107.2**

Notes:
1. LOM begins on July 1, 2024. The 2024 Mineral Reserve excludes all mineral reserve material mined prior to July 1, 2024.
2. Ag production is silver contained in Pb and Zn concentrates, Zn production is zinc contained in Zn concentrate, Pb production is lead contained in Pb concentrate, Au production is gold contained in Pb concentrate and Cu production is copper contained in Pb concentrate when Cu is expected to be above the payable threshold.

Table 1.7: Process Plant Product Characteristics

		Zinc Concentrate	Lead Concentrate		Copper Concentrate
			Cu > 1.5%	Cu < 1.5%	
Concentrate Produced	t	450,860	297,272	45,731	33,895
Concentrate Grades					
Zinc	%	**56.3%**	11.0%	11.9%	4.5%
Lead	%	0.78%	**55.5%**	**52.9%**	6.0%
Silver	g/t	**402**	**3,923**	**4,131**	**1,004**
Gold	g/t	**0.31**	**3.48**	**3.12**	**0.83**
Copper	%	0.45%	**2.37%**	1.47%	**24.11%**

1.8 Infrastructure

CLG is an operating mine with significant existing infrastructure in place supporting the operation, including offsite and onsite components. Existing offsite infrastructure comprises grid power distribution to the mine and previously completed road upgrades to facilitate heavy equipment transport during construction, material deliveries and concentrate shipments, in addition to worker traffic. On site infrastructure is comprised of office and maintenance facilities, processing facilities, a TSF, backfill plants, a refrigeration plant, a mine ventilation system, and dewatering ponds for sediment settling and water cooling.

The underground mine operates three air extractive fans to exhaust spent air, with fresh air intake via the decline ramp and two downcast fresh air raises equipped with refrigeration plants and air coolers. The current installed capacity of the ventilation system is 1.3 M CFM and plans are in place for an expansion to provide fresh air to the SE Zone.

The mine dewatering system consists of both surface and underground infrastructure. None of the dewatering wells drilled from surface are currently active, as the water table is now beneath the effective depth of those wells. There are currently five main underground wells in the NW zone, with two more under development. Two underground wells are present in the Central Zone. As the mine expands, capital has been allocated for the anticipated additional dewatering infrastructure in the NW, Central and SE zones that will be required to manage the water underground.

Site infrastructure in addition to production-related installations are typical of a mining operation of this scale, located some distance from supporting populations, and include a concrete batch plant, maintenance shops, administration and engineering building, mine dry for underground personnel, warehouse facilities, security guard house and gates, residential camps and cafeterias.

1.8.1 Tailings Storage Facility

The CLG TSF has been constructed and tailings have been deposited in the facility since 2019. Regular dam raises have been constructed to increase the volume of the TSF.The material used in the dam construction is mostly rockfill with some screened filter material. All TSF stages are built using local borrow materials, primarily rockfill excavated and blasted from foundation material within the TSF. The TSF uses downstream construction methods.

The tailings dam has a composite liner consisting of geosynthetic clay liner (GCL) overlain by a 1.5 mm (60-mil), Linear Low-density Polyethylene (LLDPE) geomembrane. The liner extends along the base of the impoundment and the embankment’s upstream slope and anchored along the edges of each concurrent construction stage. The lining system is placed on a 0.15-m thick bedding fill.

The original permitted TSF design consists of four Stages (I to IV) with an ultimate crest elevation of 1638.0 m. However, due to a change in the tailings delivery rate to the TSF with the commissioning of the paste plant in the fourth quarter of 2022, the ultimate TSF will have a maximum crest elevation of 1636.0 m (Stage III) which is adequate for the revised and reduced volume of tailings to be stored based on the Mineral Reserve and LOM Plan.

To date, four dam raises have been constructed to the existing crest elevation of 1628.0 m. The LOM Plan requires two additional raises to be built during 2025 and 2028 to a final maximum crest elevation of 1636.0 m.

The 2023 TSF dam height assessment allowed for 10.3 Mt of material processed from July 2023 onwards. It is projected that 40% of the tailings produced by the Process Plant will be sent to the Paste Plant, for use as underground backfill, while the remaining 60% will be sent to the TSF. As a result, tailings accumulated in the TSF are estimated at 9.49 Mt (3.71 Mt stored until June 2024 and 5.78 Mt from July 2024 until mine closure).

The TSF design criteria were established based on the facility size and risk using applicable dam safety and water quality regulations and industry best practice for the TSF embankment on a standalone basis. The dam has a blanket drain in the foundation to control and reduce the water level in the dam due to any infiltration that could occur. Incorporating the blanket drain will improve the stability of the embankment in the event of liner failure.

The TSF has an Operations, Maintenance, and Surveillance (OMS) Manual that describes operating and monitoring procedures to confirm the condition of the embankment, foundation, and performance of the TSF dam and impoundment. Regular TSF inspections are completed, including annual inspections by the Engineer of Record.

1.9 Environmental Studies, Permitting, and Social Impacts

Mexico has established environmental laws and regulations that apply to the development, construction, operation and closure of mining projects, and the Company has management systems in place to ensure ongoing regulatory compliance. Of particular importance are the air, surface water and groundwater quality monitoring programs. An environmental compliance report is submitted annually to the Mexican environmental authority. There are no outstanding violations issued by the environmental authority against MPR.

Certain revisions were made in 2023 to Mexican laws affecting the mining sector. This TR reflects the Company's understanding of the laws that affect the Company in light of these revisions. It should be noted that the current and revised laws are subject to ongoing interpretation and that in many instances the revised laws require implementing regulations, which have not yet been promulgated, for their impact to be fully assessed.

The Company has all material permits for the current operations. The Company is waiting on final resolution documents for three permits: the modification of the environmental permit that added the fluorine leach plant to the metallurgical process; a permit for land occupied by the tailings facility (the permit was approved and permitting fees have been paid; however, the Company has not received the signed permit from the government agency); and a permit regarding the use of treated water from the personnel camp sewage treatment facilities. The QP notes that none of these final resolution permit documents are a high material risk for the current operations.

MPR has produced several social baseline studies that collected information from official statistical sources, as well as interviews and participatory workshops with stakeholders and the local communities in the area of direct influence. The social baseline study was updated in 2023, with consultations carried out in nine communities. A detailed analysis to identify and characterize stakeholders was prepared. The information obtained has been used to identify social impacts in the communities, as well as social risks for the mining operations. The Company has mitigation measures in place for the highest priority social risks.

The MPR community relations team has had a presence in the region since the mineral exploration phase and has established communication and collaboration channels based on transparency of information. The objective of the MPR Community Relations Policy is to establish the guidelines for institutional work with the neighboring communities and for MPR social interaction projects. Projects are to promote social development, either independently or through strategic alliances with various institutions (public or private), that are aimed at addressing health, education, culture, and basic infrastructure, based on respect for human rights, beliefs, and local characteristics. The Company carried out 50 social programs in 2023 and has entered into collaborative agreements with local and state governments on construction and agricultural programs that benefit the communities.

MPR has established a community relations office in the nearby town of San José del Sitio, which allows for a permanent point of contact between the communities and the mine. MPR has established various commitments for the hiring of local labor, as well as in the acquisition of services during the life of the project, through agreements with stakeholders. A total of 165 direct employees from the area of influence work for CLG. Of these employees, 40% are female and 60% are male.

A conceptual mine closure strategy was presented in the closure plan (Tetra Tech, 2018) that was submitted to the Mexican environmental authority. The closure cost estimate was updated at the end of 2023 based on disturbance areas and 2023 local rates for closure activities such as haulage, demolition and removal. The closure cost was estimated at $16.4 M.

1.10 Capital and Operating Costs

Operating cost estimates were developed based on recent actual costs with minor specific adjustments for business improvement initiatives that are currently being implemented. Operating costs are estimated in 2024 dollars with no inflation or escalation considered. They were prepared on an annual basis using a detailed build-up of individual cost centres and considering specific mine site activity levels and cost drivers. Operating costs at CLG have been reviewed by WSP and found to be reasonable for a mechanized mine utilizing the cut-and-fill and bulk longhole mining methods and for an associated processing plant producing saleable concentrates. The plant has demonstrated typical operating costs for a facility of its size.

Operating cost expenditures for the 2024 LOM are estimated at $848.6 M from July 1, 2024, to the planned end of the mine's life in 2032, equivalent to $82.14 per tonne milled. Table 1.8 summarizes the expected site operating expenses projected to the end of mine life to mine and process the defined Mineral Reserve, segmented by major cost centre of Mining, Processing, which includes TSF operations, and General and Administrative.

Table 1.8: 2024 LOM Operating Costs

Cost Center	LOM Cost, $M	Unit Cost, $/t milled
Mining	435.5	42.16
Processing	256.0	24.77
G&A	157.1	15.20
Total Operating Costs	**848.6**	**82.14**

Note: Numbers may not necessarily add up due to rounding.

There are no expansion plans requiring development capital in the LOM Plan.

CLG will require $186.9 M in sustaining capital for continuing underground mine development, installation of a copper-lead separation circuit, and two additional raises of the TSF dam, as well as other miscellaneous equipment and infrastructure projects.

Table 1.9 summarizes the capital expenditures in the 2024 LOM planned for the balance of the mine life. Sustaining capital is estimated in 2024 dollars with no inflation or escalation considered. The QPs have reviewed the planned annual expenditures and agree that they are reasonable.

Table 1.9: 2024 LOM Sustaining Capital

Item	Units	LOM Cost
Mine Development		
Lateral Development	m	17,583
Mine Development	**$M**	**96.1**
Infrastructure & Equipment		
Mine	$M	61.4
Process Plant	$M	26.2
Others	$M	3.2
Infrastructure & Equipment	**$M**	**90.8**
Total Sustaining Capital	**$M**	**186.9**

1.11 Economic Analysis

The economic analysis for this TR was performed by Gatos Silver, Inc. (GSI) using the GSI financial model. Key inputs to the financial model are described in the relevant sections of this Technical Report and are inclusive of the mine plan, processing and production schedule, operating and capital costs, commodity prices and exchange rate assumptions.

The economic analysis of the 2024 LOM Plan supports the declaration of Mineral Reserves. WSP reviewed the 2024 LOM Plan information and the financial model in detail.

Economic assumptions are based on an approximately equal weighting of three-year trailing averages and analyst long-term consensus forecasts as of June 30, 2024 (see Table 1.10).

Table 1.10: Economic Assumptions

Commodity Prices - 2024 LOM Plan		
Silver Price	$/oz	23.00
Gold Price	$/oz	1,850.00
Zinc Price	$/lb	1.25
Lead Price	$/lb	0.95
Copper Price	$/lb	4.00
Exchange Rate		
MXN per $1 USD	-	20.00

The LGJV mill currently produces two products, a lead concentrate and a zinc concentrate, and the economic analysis assumes investment in a new copper-lead separation circuit in 2025 to allow production of a third copper concentrate product starting in 2026. Payable metals are evaluated using the recovery parameters described in the metallurgical tables found in Section 14 of this report, as well as management's estimates of treatment and refining charges for each concentrate based on current and expected long-term concentrate market conditions.

The 2024 LOM in the financial model begins on July 1, 2024, with operations continuing through to the end of 2032 (8.33 years). The 2024 LOM includes closure costs totaling $16.4 M over the 2033-2036 period.

The financial model assumes a 5% discount rate for the economic analysis and an unlevered basis. Corporate administration, management fees, interest expense, and exploration costs are excluded from the economic analysis used to support the Mineral Reserves.

The 2024 LOM depicts a 3,401 t/d processing rate for a total of 10.33 Mt of mineralized material through the mill at average ROM grades of 172 g/t silver, 3.89% zinc, 2.07% lead, 0.21% copper, and 0.22 g/t gold over a 8.33-year period. The 2024 LOM Plan supports the Mineral Reserves as it demonstrates economic viability via projected revenues exceeding all projected operating, sustaining capital, and closure costs.

Table 1.11 summarizes the economic analysis of Cerro Los Gatos Mine based on the projected cash flow generated by the mining and processing of the material identified by the 2024 LOM Plan. The economic analysis considers applicable mining and corporate income taxes which have rates of 7.5% and 30%, respectively, and a government royalty on gold and silver production of 0.5%.

Table 1.11: LOM Financial Summary

Item	Unit	LOM Total / Avg.
End of Mine Life	-	Oct. 31, 2032
Total Mill Throughtput	Mt	10.33
Average Mill Throughput Rate	tpd	3,401
Total Silver Production	Moz	50.48
Total Silver Equivalent Production(1)	Moz	107.16
Average Silver Production	Moz / year	6.06
Average Zinc Production	Mlbs / year	67.19
Average Lead Production	Mlbs / year	50.04
Average Gold Production	koz / year	4.75
Average Copper Production	Mlbs / year	4.03
Average Silver Equivalent Production(1)	Moz AgEq. / year	12.9
Site Operating Costs	$/tonne milled	82.14
Sustaining Capital	$M	186.9
Closure Costs	$M	16.4
By-Product AISC(2)	$/oz Ag Pay.	4.94
Co-Product AISC(2)	$/oz AgEq Pay.	14.24
Total After-Tax Free Cash Flow	$M	650.4
Average Annual Free Cash Flow	$M	80.0
Pre-Tax NPV (5%)	$M	664.1
Post-Tax NPV (5%)	$M	538.8

Notes:

1. Silver equivalent production for the 2024 LOM Plan is calculated using 2024 reserve price assumptions to “convert” zinc, lead, gold and copper production contained in concentrates to “equivalent” silver ounces (contained metal, multiplied by price, divided by silver price).
2. See Section 19 for Non-GAAP financial measures and AISC and Cash Cost reconciliation.

The post-tax Net Present Value (NPV 5%) of the Cerro Los Gatos mine is $538.8 M using a discount rate of 5%. Annual after-tax cash flow is expected to average $80 M over the 8.33 years of operations. The Cerro Los Gatos mine remains economic under a wide range of commodity prices. The 2024 LOM Plan shows By-Product All-in Sustaining Costs (AISC) of $4.94 per ounce of silver payable and Co-Product AISC of $14.24 per ounce of silver equivalent payable.

1.12 Conclusions of Qualified Persons

Throughout the exploration, development, and mining of the deposit a sound knowledge and understanding of the geological controls on the mineralization has been acquired, which are adequately expressed in the Resource Model.

The deposit has logging data from subsurface workings and surface and underground drilling that has been adequately reviewed and validated which allows it to be used with sufficient confidence in the construction of a long-term resource model.

A new geological model has been constructed of the deposit that integrates the different sources of information through an implicit 3D model. Based on this geological model an estimation of the main grades of the deposit has been performed using Ordinary Kriging (OK) interpolators. The results have been validated in detail by visual and statistical review and against existing production data.

The Mineral Resource categorization uses methodologies and assumptions that allow for adequate consideration of uncertainty and risk.

The Mineral Resources reported in this TR are reported above a NSR cut-off value, supported by studies, and considers reasonable prospects for economic extraction by optimizing stopes using assumptions and reliable data.

It is the opinion of the QP that the Mineral Resources presented herein are appropriate for public disclosure and comply with the definitions of Mineral Resources as established by S-K 1300 and CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).

The Mineral Reserves for CLG have been re-estimated, and a Mine Plan developed, which is attuned to the deposit and the conditions under which the mineralized material can be mined and processed. The Mineral Reserves have been estimated with consideration for the modifying factors of mining dilution and mining recovery for each mining method, support service costs as well as reasonable assumptions regarding input costs and metal prices.

The Mine Plan will deliver mineralized material to the processing plant of contained metal value well in excess of the NSR cut-off value used to establish economic blocks of mineralized material. The Mine Plan is considered by the QP to be robust and achievable in the current operating environment.

Mine management has responded to challenges presented by each of the structurally controlled zones of the CLG deposit and invested in actions and techniques that will ensure safety of workers and reduce operating costs.

Other conclusions drawn by the Mining QP are:

- High ambient underground temperatures must continue to be well managed to maintain appropriate conditions for underground workers.
- The continuation of pumping to lower the water table will have a direct impact on mine development productivity.

Identified risks to the Mineral Reserves pertain to:

- Accessing and mining the Mineral Reserves per the LOM production schedule will depend on success in managing the groundwater. The challenges with mine dewatering and inflows may increase as the mine deepens.
- Since ground support will be used, the maximum recommended span will be the Stable limit of 9 m for an RMR of 60, bearing in mind that encountering rock of a lower RMR may result in ground problems, and ground support requirements may have to be increased.

- The hydrogeological data available for the SE zone is limited. Although sustaining capital has been allocated in the LOM Plan for installation of additional dewatering infrastructure, additional capital necessary for dewatering wells in this part of the mine is difficult to estimate accurately.
- The challenges with geothermal heat and controlling temperatures in the underground work environment could increase as the mine deepens. The assumed higher primary ramp development rates following the installation of additional dewatering infrastructure may not be achieved. Not achieving the planned development rates could impact mine sequencing. Failure to adequately manage geothermal conditions could impact production and development rates and schedules.
- The plan to increase the proportion of LHS depends on the SE zone having suitable conditions for employing the method; however, the geotechnical data available for that part of the mine is limited. If geotechnical conditions are unsuitable to LHS, the proportion of ore requiring the CAF mining method could be higher.

The following factors represent opportunities to enhance mining operations at CLG:

- The expanded diamond drilling program planned for Inferred Resources in the SE zone and South-East Deeps has the potential to add significantly to the CLG mine life.
- The exploration drilling program will also provide core which can be subjected to geotechnical test work to better understand rock mass characteristics and conditions at depth.

It is the opinion of the Mining QP that the Mineral Reserves presented herein are appropriate for public disclosure and comply with the definitions of Mineral Reserves, as established by S-K 1300 and CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).

The following conclusions were made regarding the mineral processing:

- The Cerro Los Gatos mine has conducted substantial metallurgical studies since 2012, including process optimization, mineralogical characterization and variability testing. The operation currently produces high-quality lead and zinc concentrates with significant silver content. The conventional flotation plant, originally designed for 2,500 t/d, now consistently processes over 3,400 t/d, including crushing, grinding, and separate lead-copper and zinc flotation circuits.
- Recent improvements include a fluorine leaching plant commissioned in 2023 to reduce fluorine levels in zinc concentrate to below 500 ppm, meeting buyer specifications. The mine faces challenges with increasing copper content in some areas, necessitating careful management and further testwork. Plans for 2025 include implementing a $5 M copper-lead separation circuit to produce separate copper and lead concentrates, in response to the projected increase in copper grades from about 0.1% Cu in 2024 to 0.35% Cu by end of mine life.
- Other projects include increasing plant capacity to 4,000 t/d, and improving flotation of fine particles. The plant is well-equipped with necessary instrumentation, maintenance facilities, and water management systems, ensuring efficient operation and environmental compliance. Ongoing geometallurgical studies continue to drive process improvements and risk mitigation, adapting to the evolving mineral characteristics of the deposit.

The following conclusions were made regarding the site infrastructure:

The mine dewatering system has achieved steady state status – that is, adequate drainage, wells and pumping installations have been installed to draw down the water table around active mining horizons. CLG has made plans and budgeted for additional underground wells to enable the continued removal of groundwaters as the mine is deepened to the SE.

The underground ventilation system requires expansion as the mine activity gravitates to the SE Zone and to depth. Plans, schedules, and budgets are in place to establish adequate air flow to the future mine development areas.

The TSF is a mature structure operating under steady-state conditions and monitored by permanent stations installed throughout the TSF dam structure. There are two more lifts scheduled for the dam to complete its construction for acceptance of the LOM tailings volumes. The TSF is managed by an independent Engineer of Record, Tierra Group International, Ltd., which conforms with Mexican and other industry accepted guidelines such as the International Committee on Large Dams and the Canadian Dam Association.

The following observations and conclusions have been developed based on the site visit and inquiries made by the environmental and permitting QP and review of available information.

- No material issues were noted.
- The Company has all material permits for the current operations. The company is waiting on final resolution documents for three permits: the modification of the environmental permit that added the fluorine leach plant to the metallurgical process; a permit for land occupied by the tailings facility; and a permit regarding the use of treated water from the personnel camp sewage treatment facilities. None of these final permit documents are a high material risk for the current operations.
- The environmental agency (SEMARNAT) has not issued any violations to Los Gatos Mine. It is noted that environmental monitoring practices could be improved at site to better align with global industry standards.
- The groundwater system, in particular the occurrence and quality of perched groundwater, is not well understood. The groundwater monitoring program does not meet international industry standards for the monitor well number, placement, design or sampling methods.
- Paste tailings were characterized as hazardous for toxicity and corrosivity and as potentially acid-generating based on Mexican environmental testing criteria. A composite waste rock sample was characterized as potentially acid-generating. The cemented tailings and cemented waste rock samples did not exhibit hazardous or potentially acid-generating characteristics after the cement solidified.
- The closure plan presents a five-year post-closure period, which is the timeframe in the authorized environmental impact assessment; however, the closure cost estimate updated in 2023 included a post-closure monitoring period of 15 years.
- Mine closure planning has not advanced since the original closure plan was prepared, and closure planning is at a preliminary stage. Closure costs could increase as closure planning advances.

The following observations and conclusions are drawn regarding community and social aspects:

- The CLG Mine is an operation located in the municipality of Satevó in the state of Chihuahua. The presence of the mine has contributed to the decrease in migration of community members, and the demographic increase in the communities of the area of influence. The generation of direct and indirect employment has been the main reason for the return of the inhabitants.

- The presence of a community relations facility in the town of San José del Sitio since the exploration work commenced has allowed a continued relationship with the stakeholders of the area of influence, generating various collaboration agreements and community investment and co-investment.
- The socioeconomic baseline was updated in 2023. A detailed identification and characterization of stakeholders was prepared and analyzed. The Company has identified the highest priority social risks and has developed mitigation measures.
- The ejidos and the unions are the interest groups with the greatest relevance to the operation, since there are agreements for the right of way, as well as transport services and machinery used in the operations. Periodic meetings for the follow-up of agreements between the parties are held in the Agrarian Prosecutor's Office, giving greater credibility and legality to the fulfillment of agreements between the parties.
- One of the main mechanisms for disseminating social and environmental actions is the quarterly bulletin of the CLG Mine, which is distributed in the communities of the area of influence, and among employees.
- LGJV has completed the construction of a lined landfill that is used jointly by the mine and the local community for solid waste disposal. Major social projects currently include a collaborative effort between local and state governments to test the viability of pomegranate production.
- Grievances received by the Company are managed effectively and the number of complaints received has decreased over time. In 2023 there were twenty-two complaints or suggestions received, with the most common related to preferential hiring of local labor and the adult education program.
- CLG Mine has formalized its commitment to sustainability and social responsibility issues through adherence to the United Nations Global Compact as a member and, at the national level, it has been awarded with the Socially Responsible Company Distinction granted by the Mexican Center for Philanthropy (CEMEFI).

1.13 Recommendations

The following recommendations are made by the Qualified Persons:

Geology and Mineral Resources:

- Continue with the surface and underground drilling campaigns to upgrade the Mineral Resource categorization (infill drilling) and increase Mineral Resources (step-out drilling).

Mining and Mineral Reserves:

- For future Mineral Reserve estimates, evaluate whether specific mine closure and sustaining capital expenditures for both the mine and the processing plant should be considered as relevant costs in determining the NSR cut-offs. CLG’s current methodology is consistent with prior Mineral Reserve estimates and standard practices at many other mines, where cut-off calculations are typically limited to operating costs.
- In future analyses of unplanned dilution for LHS, verify whether Equivalent Linear Overbreak Slough (ELOS) does in fact increase with vein width and if footwall ELOS is greater for shallower-dipping veins of the same width, as it is not clear what the underlying reasons are for these relationships.
- Continue to update the alteration and fault models as additional geotechnical data is collected.

- Conduct in-situ stress measurements to investigate the magnitude and orientation of the principal stresses. This data will be important for assessing the potential induced compressive stresses, particularly, in the lower portion of the SE zone.
- Base stope dimensions on the Stand-up Time Curve and the Span Design Curve for CAF and on the Stability Graph Empirical Method for LHS.
- Establish the maximum stope span as the Stable limit of 9 m for an RMR of 60, considering that ground support will be used. However, the ground support requirements may have to be increased should rock of a lower RMR be encountered.
- Utilize Class CS-1 to Class CS-3 ground support, considering a maximum span of 9 m, an ESR of 3.0, and a Q-value ranging from 0.4 to 10. Class CS-1 consists of no ground support or just spot bolting, while Class CS-3 includes systematic bolting with 5 to 6 cm of fiber-reinforced shotcrete.
- Use welded wire mesh instead of shotcrete for CAF due to the temporary nature of the openings.
- Continue employing systematic bolting to support temporary drill drifts, given the uncertainties associated with the behavior of the ore, rock mass deterioration due to blasting, and the mine-induced stress changes.
- Prefer welded wire mesh over shotcrete to support drill drifts, considering that these headings are relatively temporary.
- Install cable bolts at intersections considering the span dimensions.
- Prioritize the development of internal escapeway raises to enhance mine safety.
- Evaluate whether additional portable refuge chambers would be beneficial on a provisional basis until the internal escapeway system is fully developed.
- Assess the potential for a second escapeway raise to surface, considering the distance of the SE Zone from Escapeway Raise #1.
- Ensure that the design of the planned internal escapeways complies with Mexican mining regulations, particularly regarding ladderways and manways.

Metallurgy and Mineral Processing:

- Conduct additional geometallurgical studies in the Southeast zone to better characterize the high soluble copper material.
- Develop and implement a comprehensive sampling and testing program to control high soluble copper content in production.
- Optimize the mine plan to manage the blending of high soluble copper material with other ore types.
- Continue research and development efforts on ultrafine particle recovery technologies to improve overall metal recoveries.
- Execute plans for the copper-lead separation circuit.
- Conduct a thorough impact assessment of increasing plant throughput to 4,000 t/d on downstream processes and final product quality.

- Continue to investigate opportunities for debottlenecking the grinding and flotation circuits.
- Conduct a review of tailings management to maximize backfill and minimize TSF construction costs.

Infrastructure:

Pertaining to the paste fill plant:

- Cure CRF and paste test samples underground as a means to mimic the actual "as placed" conditions as recommended in the Minefill (2019) report.
- Review operational procedures and practice in terms of QA/QC; sampling and testing; data collection, analysis, and trending; and opportunities to optimize.
- Review performance records for paste based on logs over the past operation periods. Review the paste recipe in terms of solids content, binder content, slump, and water bleeding; pumping distance in terms of pipe length, horizontal and vertical distances; pressure drops along pipeline and pressure at discharge of PD pump (in comparison to pump pressure capacity); binder content and strength developed over different curing time periods (3, 7, 14, and 28 days).
- Review plant instrumentation design and control schemes in general. Consistent and optimal paste recipe is achieved via control of moisture addition to the filter cake. Moisture addition is either in the form of water or preferably in the form of filter feed slurry bypass (controlled based on cake tonnage and moisture) followed by slump water (controlled based on paste viscosity measured by mixer power).
- Review paste underground distribution system design and construction; and operation crew training and readiness to predict issues (like scaling, settlement, plugs, excessive wear) and recover from them should they occur.

Pertaining to the dewatering infrastructure:

- It is recommended that a documented dewatering plan be developed by the operator that adequately describes the conceptual hydrogeological model, summarizes groundwater conditions and dewatering progress to date, establishes dewatering pumping rate and drawdown performance targets and defines dewatering well and monitoring well or piezometer installation plans.
- Review dewatering system performance and revise the dewatering plan, as needed.
- Describe the conceptual hydrogeologic model.
- Summarize groundwater conditions and dewatering progress to date.
- Establish dewatering pumping rate and drawdown performance targets.
- Define dewatering well and monitoring well or piezometer installation plans for:
  - The following year in detail.
  - Longer term (2-3 years) in overview.
- Review dewatering system performance and revise the dewatering plan, as needed.

CLG is advancing work on several components of the dewatering plan to enable improved dewatering and water management in the operations and have included $14 M in capital projects relating to mine dewatering within the LOM Plan, including the installation of additional wells and pumping infrastructure.

Pertaining to the electrical power:

- Review future potential demands and the possibility to exceed the current feed capacity. Review options for upgrade ahead of time should the need materialize.

Tierra Group makes the following recommendations with respect to tailings storage:

- Develop a closure plan based on the current LOM schedule.
- Develop a detailed deposition plan to support the closure strategy.
- Continue quarterly bathymetric surveys to validate and update deposition plan and water balance.
- Monitor tailings tonnage sent to paste plant to confirm assumptions used in the design.
- Additional vibrating wire piezometers, inclinometers, and survey prisms are recommended for future expansions.
- Maintain a current tailings water and mass balance based bathymetric surveys and operational data to support TSF construction schedules.
- Continue monitoring and inspections activities in accordance with the OMS manual.

Environmental and Social:

- Although the environmental agency (SEMARNAT) has not issued any violations to Los Gatos Mine, there are opportunities for improvement to better align with international industry practices.
- A written environmental monitoring plan should be developed that includes a description of all media monitoring requirements based on Company and regulatory agency requirements, sampling procedures, protocol for the management of results and interpretation, action levels, corrective action plan and documentation procedures.
- Changes in the mine plan since the 2018 feasibility study trigger a need for evaluation of the potential changes in the geochemical characteristics of the mining wastes. Any new development areas and representative samples from those areas should be considered for characterization. The kinetic testing program should consider longer-term tests to ensure that results have stabilized and provide a high level of confidence for the prediction of long-term environmental conditions.
- Representative tailings and waste rock samples should be subject to kinetic geochemistry testing to evaluate the long-term environmental impacts.
- Incorporate surface water sampling at the surface waste rock storage facility and during storm events at ephemeral streams.
- Waste rock from the surface waste rock storage facility should be characterized and only used where problematic lithologies are properly managed to prevent long-term environmental impacts. Assuming that the

waste rock facility may remain after closure, an understanding of the physical as well as chemical stability is necessary.

- The existing conceptual closure plan is recommended to be updated and follow accepted international industry standards.
- Closure designs were based on 100-year storm water probability events. It is recommended that climate change be considered, as well as an updated analysis of the storm water events to determine whether a 100-year, 24-hour storm water event is practical for long-term stability.
- Additional technical studies to support the closure designs should be carried out, including erosion modeling to configure closure design slopes, tailings water quality predictions and a closure water balance to support a closure water management strategy and cost estimate. The closure costs should be updated to reflect changes in the mine plan and provide more details as closure planning advances.

2.0 INTRODUCTION

2.1 Registrant Information

Gatos Silver, Inc. ("Gatos Silver") is listed on the New York Stock Exchange and the Toronto Stock Exchange. The company's corporate office is located at 925 West Georgia Street, Vancouver, BC, Canada V6C 3L2.

2.2 Qualified Persons

This Technical Report was prepared for Gatos Silver by Qualified Persons (QPs) employed by WSP, Stantec USA, Transmin Metallurgical Consultants, Bara Consulting (Americas) Ltd., and Tierra Group International. The QPs responsible for the preparation of this Technical Report, as defined under NI 43-101 and in compliance with Form 43-101F1, as well as their areas of responsibility for the various items included in this Technical Report are provided in Table 2.1

Table 2.1: Responsibilities of Qualified Persons

Qualified Person	Professional Designation	Role	Employer	Report Items
Stephan Blaho	P.Eng., PEO	Mineral Reserves	WSP Canada Inc.	1.5, 1.6, 1.12, 1.13, 12.2, 15, 16, 24, 25.2 and 26.2
Matthew Fuller	P.Eng. APEGBC (199825)	Tailings Storage Facility Engineer of Record	Tierra Group International	1.8.1, 1.12, 1.13, 18.8, 25.4 (TSF), and 26.4.4
Dawn Garcia	CPG, AIPG 08313	Environmental & Social	Stantec USA	1.9, 1.12, 1.13, 20, 25.5, and 26.5
Adam Johnston	FAusIMM CP (Met)	Mineral Processing	Transmin Metallurgical Consultants	1.7, 1.12, 1.13, 12.3, 13, 17, 25.3, and 26.3
Ibrahim Karajeh	P.Eng. PEO	Infrastructure	WSP Canada Inc.	1.8 (excluding 1.8.1), 1.12, 1.13, 18.1 through 18.7, 25.4 (except TSF) and 26.4.1 through 26.4.3
William Richard McBride	P.Eng. PEO	Economic Analysis	WSP Canada Inc.	1.10, 1.11, 19, 21, 22, and 25.6
Mathew Oommen	Registered SME Member	Contributing Author	WSP USA Inc.	1.1, 2, 4, 5, and 6
Ronald Turner	P. Geo., MAusIMM CP (302538)	Mineral Resources	Golder Associates S.A.	1.2, 1.3, 1.4, 1.12, 1.13, 7, 8, 9, 10, 11, 12.1, 14, 23, 25.1, and 26.1

2.3 Terms of Reference and Purpose

This report has been prepared by WSP as a Technical Report to satisfy and National Instrument 43-101 requirements and for Gatos Silver as set out by the Canadian Securities Administrators. The quality of information, conclusions, and estimates contained herein are consistent with the level of effort involved in consultants' services, based on; i), information available at the time of preparation; ii), data supplied by outside sources; and iii), the assumptions, conditions, and qualifications set forth in this TR. The purpose of this TR is to report Mineral Resources and Mineral Reserves for the CLG Mine, 70% owned by Gatos Silver.

Key Acronyms and definitions for this Report include:

- Golder: Golder Associates Ltd.

- WSP: WSP Global and its subsidiary companies, including Golder, which was acquired by WSP in 2022.
- LOM: Life-of-Mine
- Mt: Million tonnes (Metric)
- FS: Feasibility Study
- QA/QC: Quality Assurance / Quality Control
- QP: Qualified Person
- ROM: Run-of-Mine
- S-K 1300: United States Security and Exchange Commission regulation subpart S-K 1300
- TR: Technical Report

2.4 Sources of Information

The compilation and estimation of Mineral Resources and Mineral Reserves used public and private data sources. The supply of the private data sources from Gatos Silver included a drill hole database, geological model, internal documentation and assumptions, laboratory certificates, mine designs, mine plans and other mine planning files.

A detailed list of cited reports is noted in Section 27.0 of this TR.

WSP has adopted certain provisions from previous Technical Reports authored by WSP Golder (2022 and 2023), Tetra Tech (2012, 2017, 2020) and Behre Dolbear, as appropriate. Where content from previous Technical Reports have been included, the authors have not relied upon previous authors and are taking responsibility for the sections indicated by the certificates of QPs of this TR.

2.5 Personal Inspection Summary

Site visits have been conducted by WSP, Golder Associates S.A., Stantec USA, Tierra Group International, and Transmin Metallurgical Consultants personnel as described on Table 2.1.

Table 2.2: Site Visits of Qualified Persons

Name	Role	Company	Site Visit Dates
Stephan Blaho, P. Eng.,	Mining Engineering	WSP Canada Inc.	May 14-16, 2024
Matt Fuller, P.Geo.	Tailings Storage Facility	Tierra Group International	August 6-8, 2024
Dawn Garcia, AIPG, CPG	Environmental & Social	Stantec	April 29-30, 2024
Adam Johnston, FAUSIMM (CP)	Mineral Processing	Transmin Metallurgical Consultants	May 21-24, 2024
Ibrahim Karajeh, P. Eng.	Infrastructure	WSP Canada Inc.	May 14 – 16, 2024
William Richard McBride, P.Eng.	Costs and Economic Analysis	WSP Canada Inc.	N/A
Mathew Oommen, Registered SME Member	Property, Accessibility, History	WSP USA Inc.	May 14-16, 2024
Ronald Turner, MAusIMM (CP)	Mineral Resources	Golder Associates S.A.	May 14-16, 2024

2.6 Previous Technical Reports

The following technical reports have been made publicly available previously:

- S-K 1300 Technical Report Summary October 2023 WSP Golder Mineral Reserves Report
- NI 43-101 Technical Report October 2023 WSP Golder Mineral Reserves Report
- S-K 1300 Technical Report Summary November 2022 WSP Golder Mineral Reserves Report
- NI 43-101 Technical Report November 2022 WSP Golder Mineral Reserves Report
- NI 43-101 Technical Report July 2020 Tetra Tech Mineral Reserves Report[1]
- NI 43-101 Technical Report January 2017 Tetra Tech Feasibility Study Report

[1] On January 25,2022, the Company issued a press release stating the Mineral Resource and Mineral Reserve estimates in the 2020 Technical Report should not be relied upon.

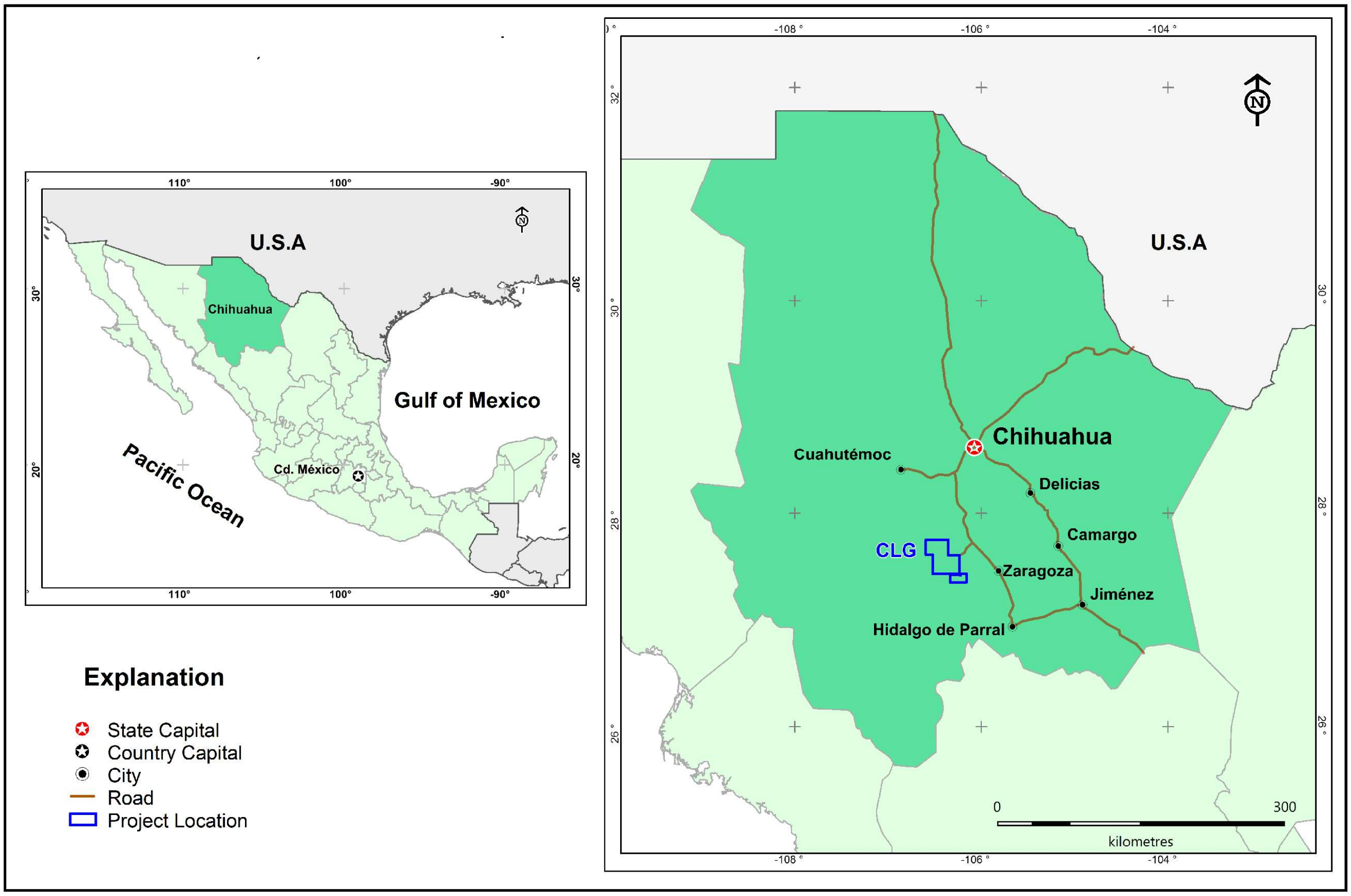
3.0 RELIANCE ON OTHER EXPERTS

Regarding the mining concessions, MPR's legal counsel has stated that all mineral concession claims are in full force and effect, and all the Los Gatos mining concessions are grouped, except for the Paula Adorada and Ampliación Oeste de San Luis concessions. The author has relied on the statements by MPR that the claims and agreements referenced in this TR are in good standing.

4.0 PROPERTY DESCRIPTION

4.1 Property Location

The operating Cerro Los Gatos (CLG) underground mine and processing facilities are approximately centered on Latitude 27° 34' 17" N, Longitude 106° 21' 33" W, near the town of San José de Sitio, within the Municipality of Satevó in the State of Chihuahua, Mexico. The mine is approximately 120 kilometers (km) south of the state capital of Chihuahua City and approximately 100 km north/northwest of the historical mining city of Hidalgo del Parral (Figure 4.1).



Source: CLG

Figure 4.1: Project Location Map

4.2 Mineral Rights

4.2.1 Name and Number of Mineral Rights

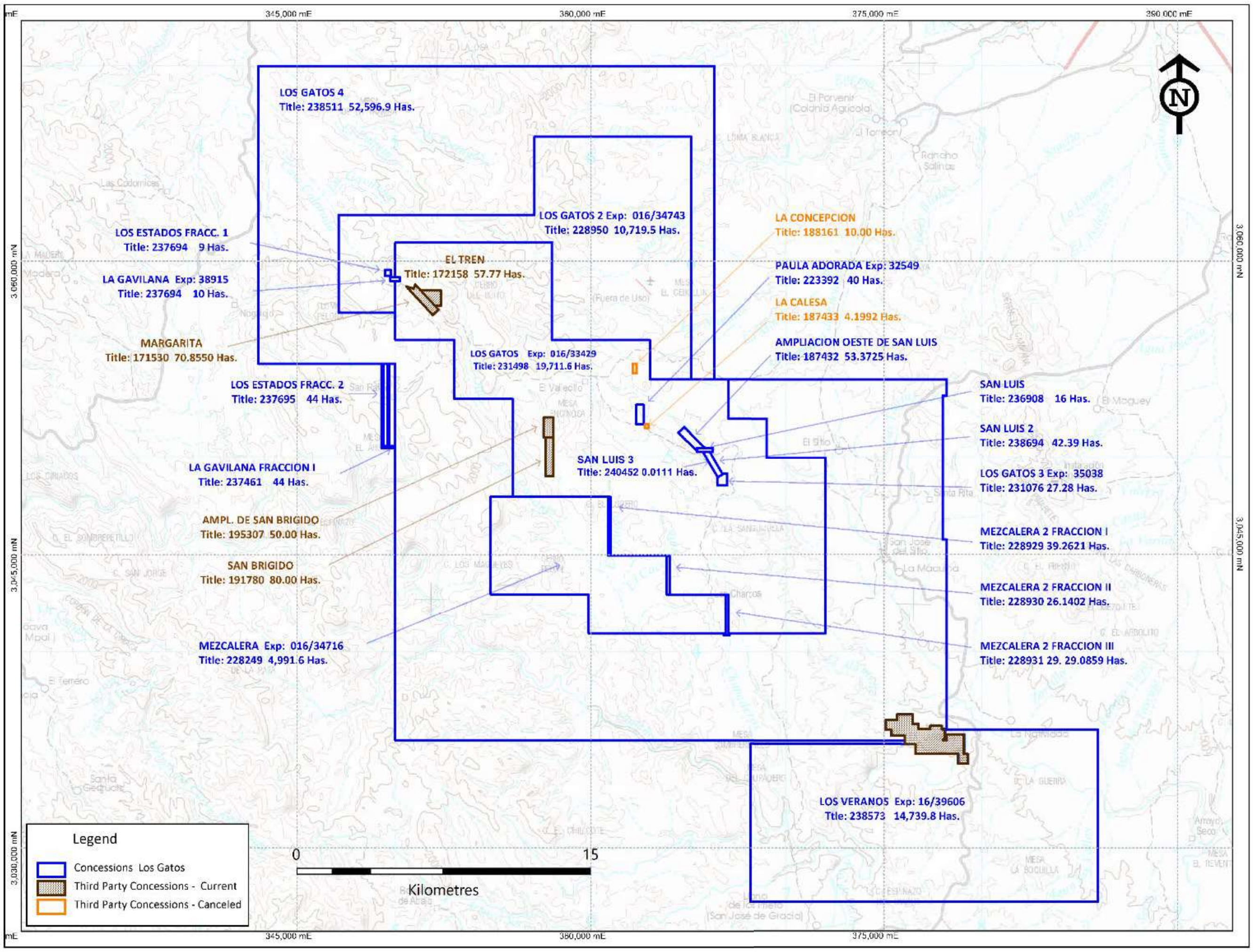
Gatos Silver is a Canadian-headquartered, Delaware-incorporated precious metals exploration, development and production company. Gatos Silver’s primary efforts are focused on the operation of the LGJV in Chihuahua, Mexico. The LGJV was formed on January 1, 2015, when Gatos Silver entered into the Unanimous Omnibus Partner Agreement with Dowa Metals and Mining Co., Ltd. (“Dowa”) to further explore, and potentially develop and operate mining properties within the LGD. The entities comprising the LGJV are Minera Plata Real S. de R.L. de C.V. (‘‘MPR’’) and Operaciones San Jose de Plata S. de R.L. de C.V (“OSJ”) (collectively, the ‘‘LGJV Entities’’). The LGJV ownership is currently 70% Gatos Silver and 30% Dowa. On September 1, 2019, the LGJV commenced commercial production at CLG, which produces silver-containing lead concentrate and zinc concentrate

MPR is the owner of mineral rights held by eighteen titled concessions, covering approximately 103,000 ha. Under applicable Mexican law, titled mining concessions grant holders exploration and exploitation rights, subject to certain conditions including minimum expenditure requirements. Titled mining concessions exclude surface rights, which are generally separately negotiated. Titled mining concessions are summarized in Table 4.1, collectively the “Project Area”.

Table 4.1: Los Gatos Project Titled Mining Concessions

No.	Lot	Holder	Surface (Ha)	Title	Type of Concession	Term	Location
1	Los Gatos	MPR	19,711.7	231498	Mining	March 3, 2058	**Satevó, Chihuahua**
2	Los Gatos 2	MPR	10,719.6	228950	Mining	February 21, 2057	**Satevó, Chihuahua**
3	Los Gatos 3	MPR	27.3	231076	Mining	January 15, 2058	**Satevó, Chihuahua**
4	Los Gatos 4	MPR	52,597.0	238511	Mining	September 22, 2061	**Satevó, Chihuahua**
5	Mezcalera	MPR	4,991.6	228249	Mining	October 16, 2056	**Satevó, Chihuahua**
6	Mezcalera 2 Fracción I	MPR	39.3	228929	Mining	February 20, 2057	**Satevó, Chihuahua**
7	Mezcalera 2 Fracción II	MPR	26.1	228930	Mining	February 20, 2057	**Satevó, Chihuahua**
8	Mezcalera 2 Fracción III	MPR	29.1	228931	Mining	February 20, 2057	**Satevó, Chihuahua**
9	La Gavilana	MPR	10.0	237137	Mining	November 18, 2060	**Satevó, Chihuahua**
10	La Gavilana Fracción I	MPR	44.0	237461	Mining	December 20, 2060	**Satevó, Chihuahua**
11	Paula Adorada	MPR	40.0	223392	Mining	December 8, 2054	**Satevó, Chihuahua**
12	San Luis	MPR	16.0	236908	Mining	October 4, 2060	**Satevó, Chihuahua**
13	Los Estados Fracc. 1	MPR	9.0	237694	Mining	April 24, 2061	**Satevó, Chihuahua**
14	Los Estados Fracc. 2	MPR	44.0	237695	Mining	April 24, 2061	**Satevó, Chihuahua**
15	San Luis 3	MPR	0.01	240452	Mining	May 22, 2062	**Satevó, Chihuahua**
16	San Luis 2	MPR	42.4	238694	Mining	October 17, 2061	**Satevó, Chihuahua**
17	Ampliación oeste de San Luis	MPR	53.3	187432	Mining	July 05,2040	**Satevó, Chihuahua**
18	Los Veranos	MPR	14,739.8	238573	Mining	September 22, 2061	Satevó, Chihuahua

Figure 4.2 depicts the Los Gatos concessions.

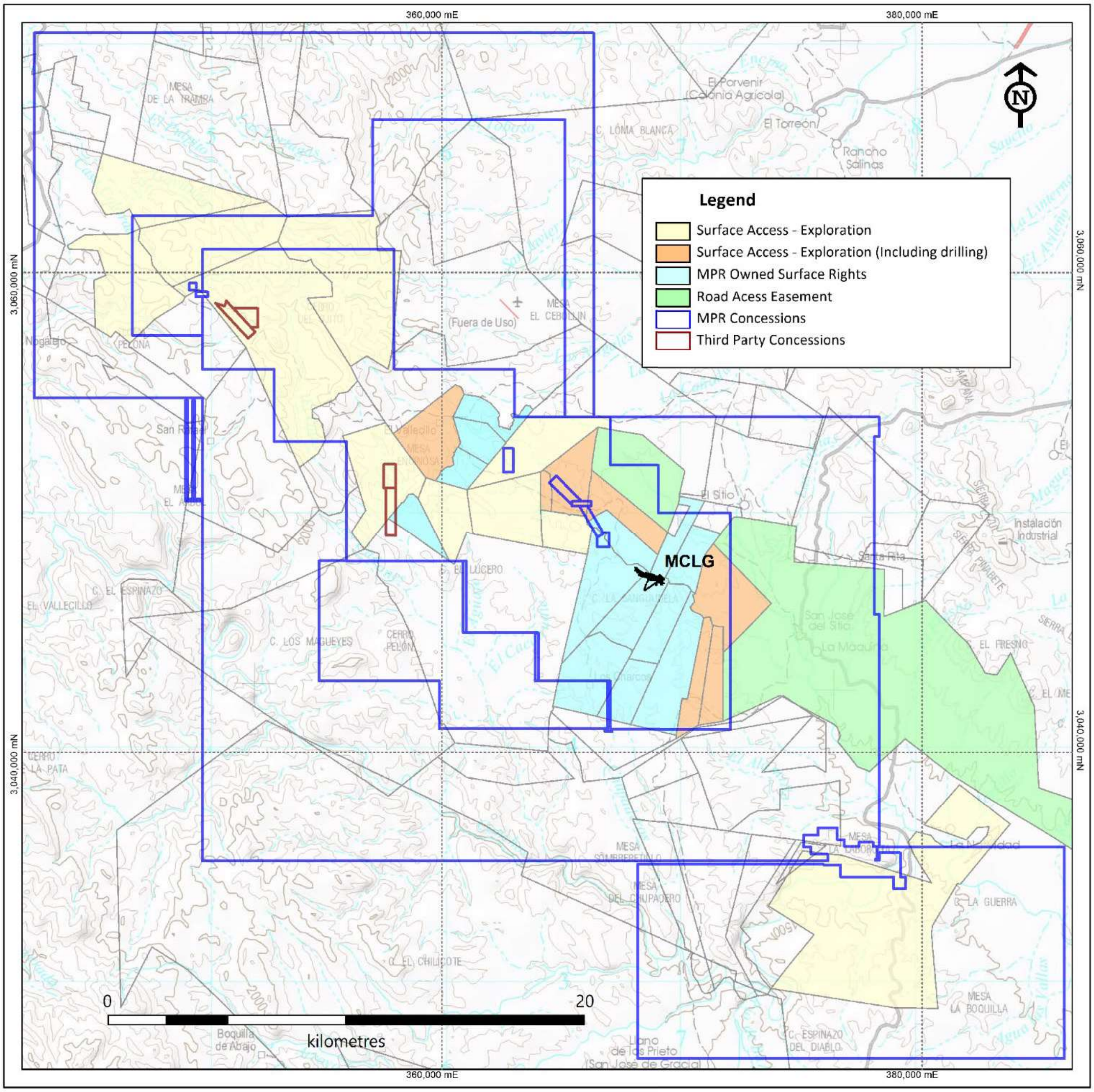


Source: Minera Plata Real S. de R.L. de C.V. (MPR)

Figure 4.2: Los Gatos Concessions Map

4.3 Surface Rights

MPR has arranged permissions to enter and perform exploration and mining activities on several land properties in the Project Area, including all surface rights necessary to access the CLG operating mine and processing and tailings facilities. Figure 4.3 shows the distribution of communal land and private property, where permissions have been obtained and the nature of such permissions. MPR has purchased surface lands covering the known extents of the CLG, and Esther Resource areas, totalling 5,188.6 ha, as shown in light blue in Figure 4.3.



Source: CLG

Figure 4.3: Surface Rights and Exploration Permissions

MPR has negotiated and ratified an access agreement with the community of San Jose del Sitio for use of the access road through communally owned land shown in light green fill on Figure 4.3. This agreement, the term of which extends to November 6, 2046, allows access through the surface land holdings of the community and is registered with the federal land registry. MPR has worked together with the community since the inception of the exploration project and has enjoyed strong support from the community leaders and Ejido assemblies.

MPR has established a multi-disciplinary team to maintain ongoing communications in the nine most proximate communities to CLG, including San José del Sitio and La Esperanza, as well as the municipality of Satevo.

4.4 Description on Acquisition of Mineral Rights

As noted above, the Los Gatos Joint Venture holds concessions through its Mexican subsidiary company, MPR. MPR is 70% owned by Gatos Silver, Inc. and 30% owned by Dowa Metals & Mining Co., Ltd. The Los Gatos concession (title 231498) is held subject to a royalty agreement, described below.

MPR also holds the rights to the concession of Paula Adorada through a Contract of Assignment of Rights duly recorded with the Public Registry of Mining.

4.5 Significant Encumbrances to the Property

Under Mexican mining law, titled concessions must have submitted the required Surveying and Assessment Works to define their precise location and rights against any pre-existing mining claim and concession owners have the obligation to submit annual Assessment of Work Reports by the end of May for each concession, or group of concessions, based on minimum investment amounts. All of MPR’s concessions are grouped for legal compliance with requirements by Mexican mining law, except for the Paula Adorada claim, which was acquired later. Non-compliance with these requirements is cause for cancellation only after the authority communicates in writing to the concessionaire advising of any such default and granting the concessionaire a specified time frame in which to remedy the default. As of the date of this report, MPR concessions are in good standing with respect to this obligation.

In Mexico, there are no limitations on the total amount of mining concessions or on the amount of land that may be held by an individual or a company.

Secondly, holders of mining concessions must make bi-annual payments of mining duties. As of the date of this report, MPR has timely made these payments in connection with its concessions. As result, MPR’s concessions are in good standing.

On May 8, 2023, a Decree was published in the Official Gazette of the Federation amending, adding to, and repealing several provisions of the Mining Law, the National Water Law, the General Law of Ecological Balance and Environmental Protection and the General Law for the Prevention and Integral Management of Waste, regarding mining and water concessions.

As a result of the Decree, with respect to concession tenors, the term of any new concession will be 30 years, with the option of a single 25-year term extension subject to certain conditions. At the end of such extension, the concession holder may participate on a priority-basis in the bidding of the concession for another 25 years. Under the Decree, all mining concessions granted prior to the entry into force of the Decree retain their existing durations as reflected in their title documentation. This applies to all concession currently held by MPR.

The Decree, which requires implementing regulations in some instances, also introduces the following new requirements upon full implementation: new concessions would only be granted through a public bidding process; new mining concessions would be granted in respect of specified minerals; the potential to expropriate private land would be discontinued; the approval of transferees of mining concessions would be required; minimum payments of 5% of profits to local communities would be imposed; social impact studies and community consultation would be required; restoration, closure and post closure programs would be required with financial guarantees; water availability would be a condition for granting new mining concessions; the concept of presumptive approval (afirmativa ficta) for approval matters properly and timely submitted to regulatory agencies would be removed; parastatal entities could be created and would enjoy preferential rights to exploration; environmental obligations and prohibitions would be increased; and water concessions could be significantly modified by governmental authorities in certain circumstances. Although it is not clear in all instances, the amendments under the Decree are generally stated to not have retroactive effect, and as such their most significant impact would be expected to be on new mining concessions rather than existing concessions and operations, including those of the LGJV and Gatos. Certain of the amendments may also apply to existing operations, such as the requirement for approval of any concession transferee, establishing a closure and post-closure program and additional environmental obligations.

In June 2023 MPR filed an Amparo against the decree, considering that it violates constitutional principles. On February 26, 2024, the Federal Court in charge of the trial granted a favorable judgment in first instance, ordering the suspension of the application of the entire decree in favor of MPR. In this regard, the House of Representatives and the Senate, respectively, filed appeals against this resolution, which are pending resolution. As of today, the suspension granted in favor of MPR remains in effect.

4.5.1 Royalty Payments

There are royalty contracts that apply to two concessions and one royalty contract that previously applied to a concession. The details of the contracts follow.

4.5.2 Royalty Agreements

A NSR royalty agreement was established in 2015 with the previous owner of the Los Gatos concession (title 231498) (the “La Cuesta Royalty Agreement”). The La Cuesta Royalty Agreement stipulated a 2% royalty on revenue until a threshold of $10 M in payments was reached. Thereafter, the royalty was reduced to 0.5% until $15 M has been paid. $12.95 M has been paid through July 26, 2024. The remaining 0.5% royalty will be retired upon the payment of $ 2.05 M after July 26, 2024. Under the La Cuesta Royalty Agreement there is also a production payment of 0.5% NSR on production from lands within a 1-km boundary of the Los Gatos concession which is also subject to the previously referenced $15 M maximum.

A royalty agreement in respect of the Paula Adorada concession (title 223392) was acquired from the Chihuahua-based company Grupo Factor through a Contract of Assignment of Rights effective December 3, 2014. There are no remaining obligations or royalties under this agreement.

A NSR royalty agreement in respect of the Ampliación Oeste De San Luis concession (title 187432) was acquired from Mr. Mario Humberto Ayub Touche through a Contract of Assignment of Rights, effective May 31, 2024. The agreement stipulates a 2% royalty on revenue from this concession until a threshold of $5 M in payments is reached. There are currently no defined Mineral Resources or Mineral Reserves on this concession.

4.6 Other Factors and Risks Affecting Access

Mining operations in Mexico have from time-to-time been subject to illicit community-led blockades. MPR works closely with local communities to mitigate this and other risks. Please see Section 20.0 for further information on social considerations. MPR is not aware of any other material risk factors which could limit or deny access to the CLG Mine.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Access to the Property

CLG Mine is accessible by automobile from Mexican Federal Highway 24 to km 81 and then turning west on a newly paved road for 40 km west to the community of San José de Sitio, situated near the southeast-end of the concession block. Travel time by automobile is approximately two hours, either from Chihuahua City from the north or Hidalgo del Parral from the south. The city of Valle de Zaragoza, located on Federal Highway 24, 35 km to the south of the turnoff to San José del Sitio is the nearest significant commercial center.

5.2 Climate Description

The climate of the Los Gatos project is typical of desert areas of Northwest Mexico; it is semi-arid, with a maximum temperature in the order of 41.7 degrees Celsius (°C) and a minimum recorded at minus 14°C; annual average temperature is 18.3°C. Annual rainfall averages 363.9 millimeters (mm) over an average of 61 days, mostly during the rainy season of June through September, and relative humidity is 50%, with a dominant northeastward wind. There is abundant sunshine and little cloud cover during most of the year. Snow is a rare occurrence in Southern Chihuahua but has been recorded on occasion. Exploration and mining activities are seldom interrupted by adverse weather conditions, except for short-lived storms producing floods and damage to access roads.

5.3 Physiography

Vegetation is characterized by a semi-desert landscape, with typical low brush vegetation in the slopes including lechuguilla, ocotillo, sotol, yucca, sage, bear grass, and other types of indigenous grasses. Larger brush and trees are common along the main watercourses, with the presence of oak, cypress, cottonwood, poplar, huizache, and mesquite, among others.

The soils of the area are sandy to rocky and are composed of detrital material from the local volcanic and sedimentary rocks classified as lithosols and yermosols. The lack of flat areas with regular water sources and good soils results in only small areas useful for crops, but there is sufficient growth of native grasses and desert plant life to support the principal economic activity of the region, cattle grazing. Land tenure in the municipality of Satevó is 25% communal (Ejido); and 52% private property, with predominantly cattle grazing and other agricultural use.

The Project Area is in the Sierras y Llanuras del Norte Physiographic Province near the boundaries between the Gran Meseta, Cañones, Sierras, and Llanura Tarahumara Sub Provinces. The general physiography of the Los Gatos area is characterized by low rolling volcanic hills with local escarpments and flat valley floors. Altitudes vary between 1,550 meters above sea level (masl) at the base of the Santo Toribio Creek and 1,780 masl at the top of the Los Gatos Hill, one of the highest peaks of the Project Area. The mine portal elevation is 1,585 masl.

Locally, the surface lands are mostly owned by private individuals as small cattle ranches, with average sizes of 1,000 to 2,000 hectares. Many of these ranches are unimproved grazing lands with no structures; however, a few ranch houses exist in the scattered areas. Some landowners live locally in the community of San José del Sitio or surrounding communities, while others live in the surrounding cities of Zaragoza, Parral, and Chihuahua.

Two communities hold parcels of surface lands as agrarian communes or "Ejidos." These are the communities of La Esperanza and San José del Sitio, which have collective ownership of their respective surface lands.

5.4 Availability of Required Infrastructure

CLG is an operating mine. All required infrastructure for the current operation is in place, with some additions required for the LOM Plan as described in Section 15.0.

Infrastructure constructed to support the mining and processing operations at CLG Mine include offsite and onsite components. Offsite infrastructure comprises grid power distribution to the mine and a main access road.

Electrical power to the CLG site is supplied via a 115-kilovolt (kV) utility transmission line which originates from the San Francisco de Borja' substation in Satevó (Chihuahua).

CLG mine is accessible by existing road, which is used to transport personnel, materials and supplies to the mine and concentrates from the mine. That existing road is owned and maintained by the State and is paved up to the local San Jose del Sitio community and beyond that is a 11km gravel access road through an easement over ejido lands that is maintained by MPR. Railway transport infrastructure does not exist in the vicinity of the mine, nor is there nearby rail access to seaports. Lead and zinc concentrate products are trucked to Manzanillo. The nearest commercial airport is in Chihuahua City.

Water resources in the region are mostly related to the Conchos River Basin, which includes the San Pedro, San Francisco de Borja, and Satevó River sub-basins. A larger supply of surface water is associated with the Conchos River, located 7 km to the South of the main operation areas. The Conchos River is dammed in several locations, including La Boquilla, a major hydro power plant in the region. Scattered ranch houses near and within the Project Area are normally serviced by generators and small wells or capture ponds from surface runoff waters. Make-up water for the operation is sourced from water generated by the underground mining operations.

Onsite infrastructure is comprised of camp facilities, office and maintenance facilities, a processing plant, a tailings storage facility, backfill plants, refrigeration plants, a mine ventilation system, and dewatering ponds for sediment settling and water cooling. An accommodation camp with supporting facilities is operated onsite for workers and contractors. Since the mining industry is well-established in Mexico, and the local population density is relatively low, the vast majority of mine personnel travel to site from across Mexico with most coming from within Chihuahua State. Mine personnel who are not locally resident are required to stay on on-site accommodation.

Section 18.0 discusses infrastructure in more detail.

6.0 HISTORY

The Los Gatos area is considered a region with extensive veining but only limited showings of precious and base metals mineralization. It has been the subject of very limited historical prospecting and mineral exploration. There are small prospect pits and minor historic workings in the Esther, San Luis, Tren/Margarita, and Paula zones. There is no known record keeping from this small-scale production. Surface work by MPR has not uncovered any evidence of modern prospecting activities in the area such as drill hole collars, survey points, or earlier sample locations.

Los Gatos was initially recognized by reconnaissance activities by La Cuesta International Inc. (La Cuesta) and La Cuesta applied for the original Los Gatos concession in 2005.

An initial letter of agreement for exploration work on the project was negotiated between La Cuesta and Los Gatos Ltd., (a former parent company to MPR) in early 2006, and a final contract was ratified in April 2006 between MPR and La Cuesta.

Exploration activities increased from 2008 onwards with drilling during 2008 and 2009 focused on the Amapola area approximately 12km north-west of the CLG deposit. During 2009 and 2010 the Esther and CLG deposits were recognized as significant mineralized zones and exploration activities were advanced at both zones. Recognizing the size and scale of CLG, drilling activities were focused on advancing this deposit.

There are no records of historical Mineral Resource and Mineral Reserve estimates before the involvement of MPR. Any silver, lead, and zinc production that might have been carried out from the Esther and Gavilana (Paula) prospects was probably limited to a few hundreds of tonnes with irregular silver and lead-zinc concentrations. A Feasibility Study (FS) was completed on Los Gatos in 2017 (Tetra Tech, 2017) and the project secured financing for construction, commissioning, and start up with first concentrate produced in the second half of 2019.

Table 6.1 depicts CLG Mine production from 2019 through the first half (H1) of 2024.

Table 6.1: CLG Mine Production (2019 – H1 2024)

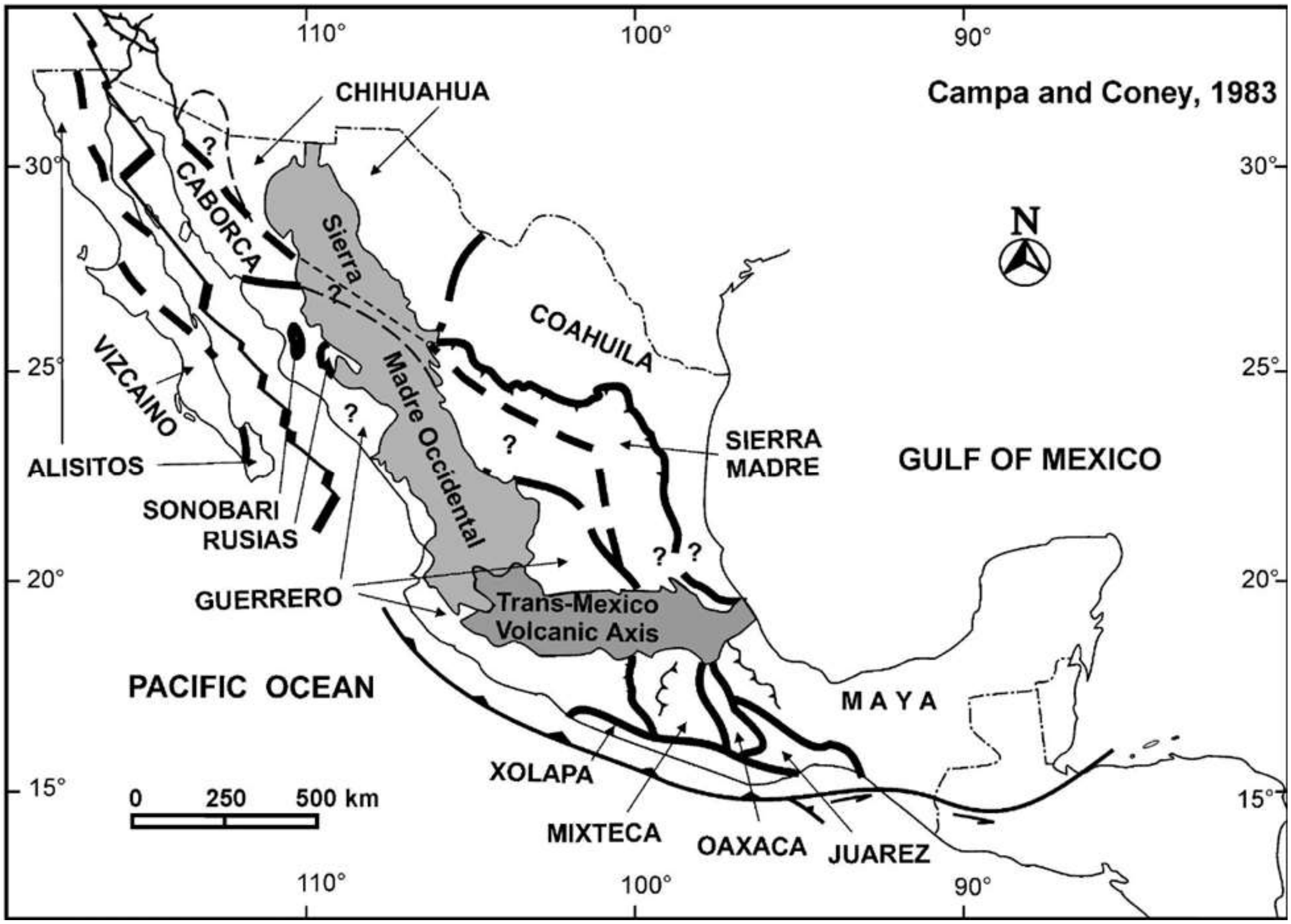
		2019	2020	2021	2022	2023	H1 - 2024	To Date
Tonnes milled	000s tonnes	274.2	667.4	909.6	971.6	1,071.4	587.0	4,481.2
Tonnes milled per day	tonnes	2,247	1,829	2,492	2,662	2,935	3,225	
Silver Grade	g/t	232	229	295	368	299	279	296
Zinc Grade	%	3.09	3.64	3.94	4.37	3.90	4.27	3.97
Lead Grade	%	2.00	2.27	2.27	2.31	1.85	1.92	2.12
Gold Grade	g/t	0.52	0.42	0.32	0.33	0.29	0.29	0.34
Metal Production contained in concentrates								
Ag in Pb and Zn Concentrate	Moz	1.7	4.2	7.6	10.3	9.2	4.7	37.7
Zn in Zn Concentrate	Mlbs	11.6	34.2	49.6	60.7	57.4	34.9	248.3
Pb in Pb Concentrate	Mlbs	9.1	27.4	39.8	43.9	38.9	22.2	181.4
Au in Pb Concentrate	koz	2.5	4.9	5.2	5.3	5.3	2.7	26.0

Source: CLG

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geological Setting

North-western Mexico geologically consists of a series of accreted arc terranes that are overlain in the area of the Cerro Los Gatos deposit by the thick volcanic sequence of the Sierra Madre Occidental (SMO) volcanic province. Figure 7.1 shows the location of the SMO over the older arc terranes (Campa and Coney 1983).



Source: Campa and Coney 1983

Figure 7.1: Location of the Sierra Madre Occidental Volcanic Province

The SMO is a middle tertiary volcanic province which extends from the southwestern United States to central Mexico. The average thickness of the flows exceeds 1 km (McDowell and Clabaugh, 1979).

The SMO sequence of volcanic rocks is subdivided into two major units, the Lower Volcanic Series (LVS), and the Upper Volcanic Series (UVS):

- The LVS is characterized by a predominant pile of andesitic volcanoclastic rocks. The group is generally massive in nature. While predominantly andesitic, the upper parts, toward the contact with the UVS, tend to become more felsic, and thick beds of rhyodacite and rhyolite are found intercalated with andesite and dacite.

- The UVS is characterized by a thick sequence of felsic volcanoclastic rocks, predominantly ignimbrites, that shows well-defined bedding and tuffaceous horizons. These rocks form most of the high scarps and cliffs that characterize this province.

The Cerro Los Gatos (CLG) and Esther deposits are embedded within andesitic rocks that are considered to be part of the LVS. The exposed area of andesite that contains the CLG and Esther deposits is considered an uplifted horst feature. These andesites are exposed at surface for approximately 30km to the north-west of the CLG deposit and there are multiple vein outcrops throughout this exposure.

The rhyolites around the andesite horst are considered to be an early (lower) part of the UVS.

The CLG deposit sits on a range front fault of a tertiary extensional basin known as the Rio Conchos graben that is filled with unconsolidated or partially consolidated sediments. The basin formation and filling likely occurred both contemporaneously and after the mineral deposition of the CLG deposit. The extensional faulting that formed the basin influences the local dip and fault segmentation of the mineralization.

Both the sediments that fill the tertiary extensional basin and the rhyolites that surround the andesites at surface are considered to overlay the andesite.

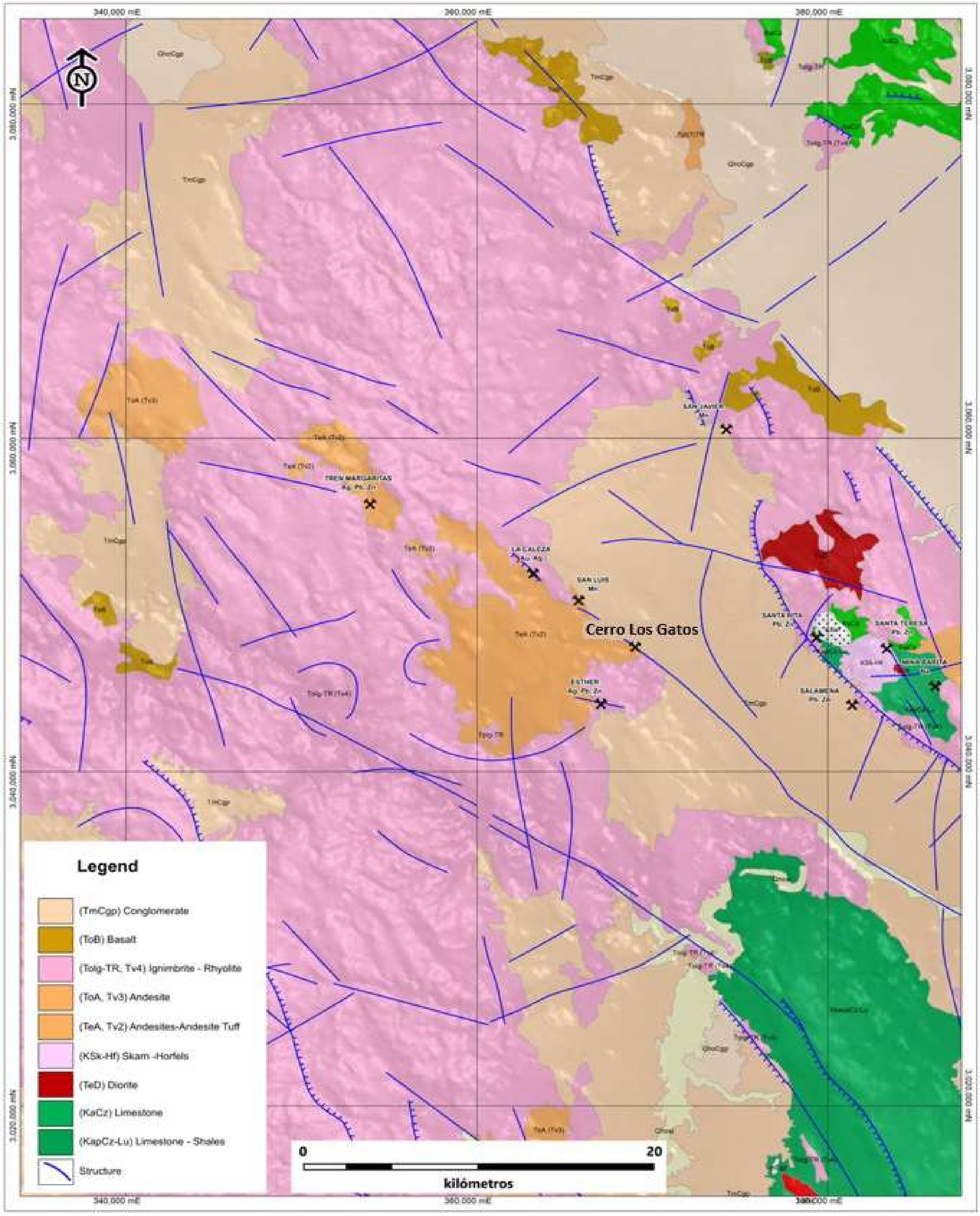
The regional geology in the area of the CLG deposit is shown in Source: CLG internal report

Figure 7.2.

7.1.1 Regional Structures

On a regional scale, both West-Northwest and North-Northwest trending large scale structures are observed. The North-Northwest trending faults in the deposit area are extensional and associated with the edges of the graben basin. The West-Northwest trending fault and fracture zones possibly reflect reactivated basement structures.

In the region, epithermal mineralization is associated with both West-Northwest and North-Northwest trending structures.



Source: CLG internal report

Figure 7.2: Regional Geological Map of the Los Gatos Area based on Servicio Geologico Mexico Data

7.2 Local Geology

A stratigraphic column representing the regional geology is shown in Figure 7.3.

The LVS hosting the CLG deposit, is likely correlative to the Tv2 and Tv3 units of McDowell 2007. Intruding and deposited on the entire section are locally important rhyolite flows, flow domes, and dikes that are likely correlative with unit Tv4 of McDowell 2007. Each of the rocks in the section contains observable hydrothermal alteration, suggesting that mineralization in the area probably occurred late in the history of the development of the volcanic section.

Figure 7.4 shows a geological map of the Cerro Los Gatos deposit area and Figure 7.5 depicts a cross-section through the deposit, looking Northwest.

7.2.1 Local Structural Framework

In the area between the Esther and CLG deposits there are NW-striking faults with major normal (extensional) displacements. These faults tend to be marked by strongly reddened (hematitic) rocks and soils. From SW to NE the principal faults comprise the Esther, Ambar, Cascabel and Los Gatos faults.

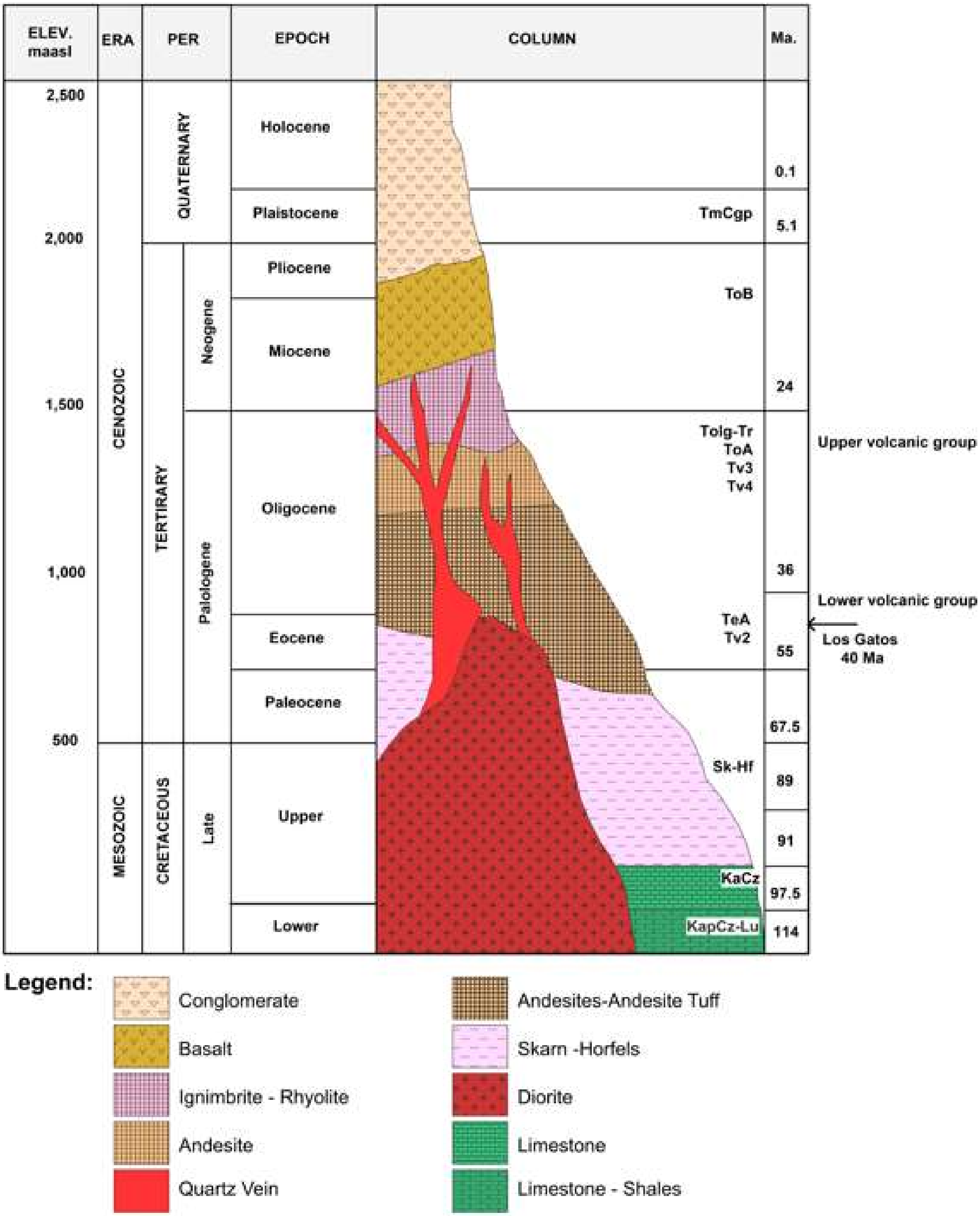
The Los Gatos fault is a major North-West trending listric fault zone, generally ranging from 5 to 30m wide that forms the edge of the graben basin. This fault frequently contains fine gouge. The mineralized veins that form the Cerro Los Gatos deposit sit in the footwall of the fault, ranging from immediately adjacent to up to 100m from the fault.

A fault parallel to the Los Gatos fault, known as the Lower Gatos fault, sits within the mineralized veins and is postulated to be an earlier plane of movement for the graben boundary before the primary movement shifted to the Los Gatos fault.

The Los Gatos fault and mineralized zones are cross-cut by two sub-vertical major North-West to North-North-West trending faults known as the Anti-Gatos-1 and Anti-Gatos-2 faults. Anti-Gatos-1 separates the North-West zone from the Central Zone and the Anti-Gatos-2 separates the Central and South-East Upper blocks from the South-East main block.

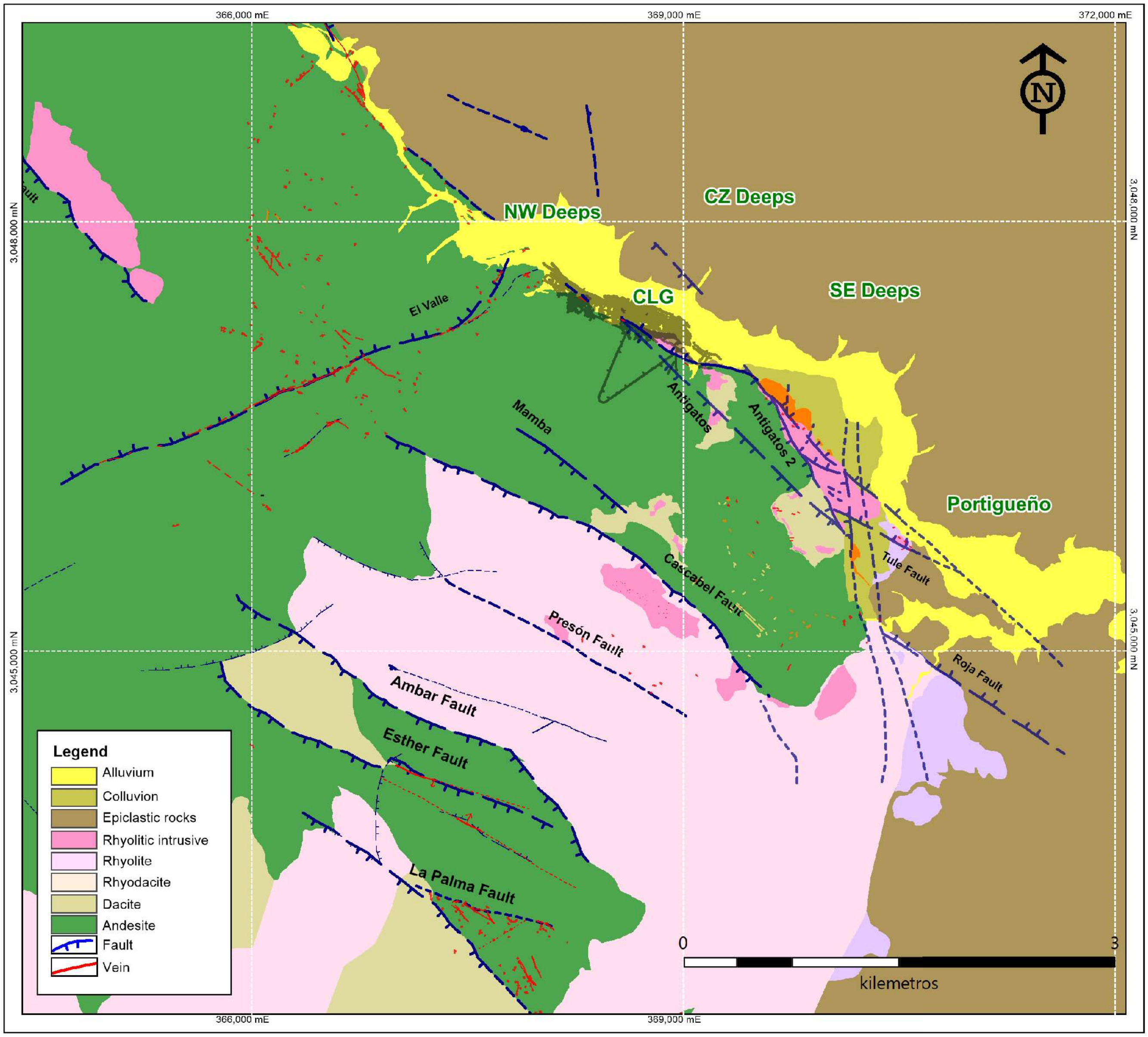
There are multiple late cross cutting faults trending North-East. Most of these do not have significant movement. The North-East trending Ramp fault does offset the mineralized veins and separates the Central block of mineralization from the South-East Upper block.

Figure 7.6 (WP 243) shows a typical siliceous fault plane, with slickensides, beside non-exposed ground (presumably clay-altered rock).



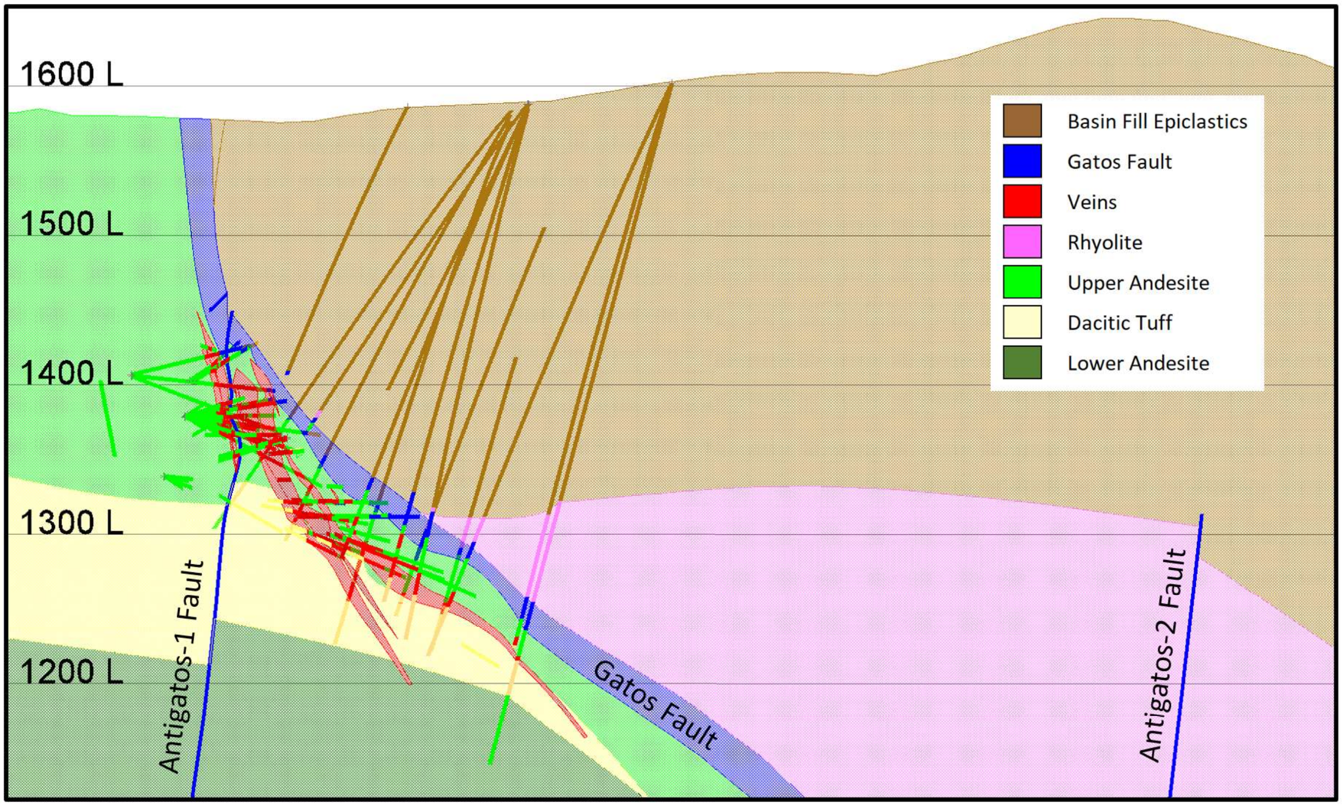
Source: CLG internal report

Figure 7.3: Stratigraphic Column of Regional Geology of Los Gatos



Source: CLG internal report

Figure 7.4: Geological Map of the Cerro Los Gatos Deposit Area



Source: CLG

Figure 7.5: Geologic Model, Section Looking Northwest through the Central Zone Showing the Lithological Sequence at Los Gatos Deposit

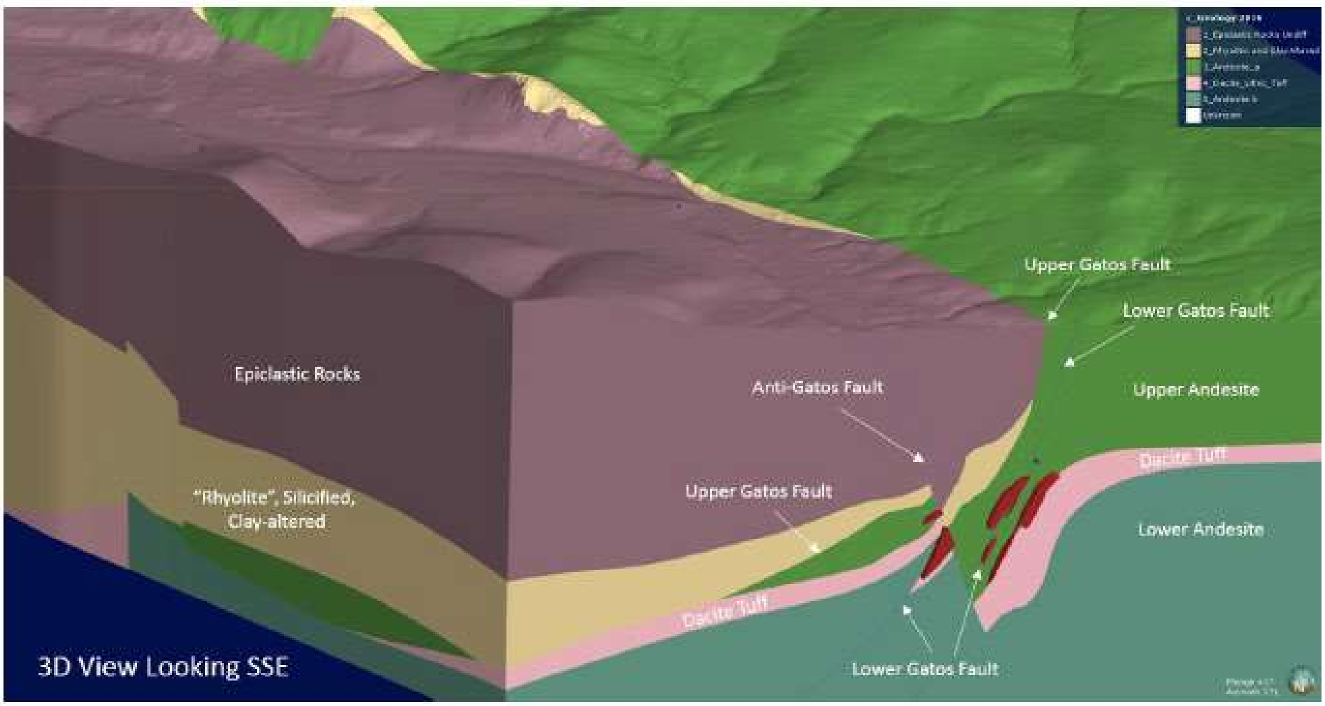
Source: CLG

Figure 7.6: Typical Los Gatos Fault with Reddened Slickensided Fault Plane Cutting Siliceous Rhyolite

7.3 Mineralized Zones

The Los Gatos District hosts a series of quartz, quartz-calcite, and calcite veins in at least fifteen separate vein systems that are exposed along a strike length of approximately 30 km and an outcrop belt width of approximately five km.

The veins containing silver, lead and zinc at CLG are hosted primarily by the andesite rocks immediately above the contact with the dacitic lithic tuff. Vein thickness is variable. Figure 7.7 shows an isometric view of the dacite lithic tuff unit (pink) which marks the position of a NE facing monoclinic fold that is disrupted by brittle deformation along the Lower Gatos and the antithetic Anti-gatos faults (In red: Ag, Pb, Zn Mineralization).



Source: CLG

Figure 7.7: Geological Model 3D View Looking South Southeast

Economic mineralized grades are not present at surface; however, epithermal alteration textures are present. The general northwest trending, northeast dipping CLG vein system is persistent with a mapped extension of 10 km, with true widths of as much as 25 m at depth as demonstrated by diamond drilling. Banded quartz veins and breccias are cemented by quartz, calcite, and abundant manganese oxides.

The CLG deposit is a listric-shaped mineralized horizon hosting steeply to shallowly dipping mineralized-shoots at depth. Mineralization of economic interest occurs for approximately 1,800 m in length, between an elevation varying roughly between 700 masl and 1,400 masl. The top of the mineralized horizon at Cerro Los Gatos is generally located at an elevation of 1,400 masl. The natural topographic surface is in the order of 1,570 masl ± 50 masl.

The veins at CLG contain silver, zinc and lead. Lower concentrations of gold and copper are also associated with the veining.

Silver mineralization occurs as acanthite (argentite) and native silver and has been detected in thin sections as proustite as small inclusions within galena grains.

Zinc mineralization occurs as sphalerite, zinc silicates and zinc carbonates of variable grain sizes disseminated in quartz vein material, as open-space filling in cavities, and as replacements in the andesitic and dacitic flow units. Sphalerite ranges from yellow to brown in color and is deposited in a similar style but is not always associated with the galena mineralization. Zinc oxides after sphalerite also exist down along fault structures through the deposit.

Lead mineralization occurs primarily as galena and lead oxide minerals of varying grain sizes that are disseminated in quartz vein material, as open-space filling in cavities, and as replacements in the andesitic and dacitic flow units.

Copper mineralization generally occurs as chalcopyrite disseminated within quartz veins. Azurite and malachite have been observed in oxidized areas of the South-East zone.

Gold mineral species have not been identified visually but are present in small quantities in assay results.

The veins themselves display variable gangue mineralization, depending on the depth of exposure within the epithermal environment. It is common to observe calcite or manganese oxide mineralization at high levels within the epithermal system which transitions to barite, fluorite, and quartz at lower levels.

Within the mineralized portions of the veins, it is common to see quartz and fluorite and occasional minor calcite associated with lead, zinc, silver, copper, and gold mineralization. Fluorite is a significant component of the mineralized zones. The veins are typically rhythmically banded on a scale of 1 mm to 10 mm per band, with repeated pulses of quartz carrying the metals and other gangue minerals.

It is common to see multiple pulses of mineralization where small veins crosscut each other. It is also common to see various coloration of quartz in the multiple pulses, ranging from milky white to vitreous gray to amethystine purple.

It is apparent that most of the economic mineral values are associated with sulfide mineralization. Oxide mineralization is limited but present at depth, and is commonly related to fracture, breccia zones, and open spaces within the veins.

7.3.1 Alteration

The Los Gatos vein mineralization has a halo of hydrothermal alteration. The distribution of alteration is complex because the halo was subsequently offset by the major listric fault movement.

The Los Gatos footwall rocks are mostly unoxidized. Unaltered mafics and feldspar are common, even as close as 20 m from the fault zone. Approaching the Los Gatos vein(s), magnetite is destroyed and the andesites become pale green. The illite alteration is typical argillic alteration found around epithermal veins. The dacitic tuffs are less affected; they remain siliceous and contain only a minor percentage of illite + pyrite. Illite alteration is seen at depth and at surface. At deeper levels, epidote + chlorite + pyrite alteration is widespread (propylitic) as far as 200 m into the footwall of the South-East zone.

High elevations within the hanging wall, particularly within rhyolite, are affected by massive chalcedony replacement and veinlets of chalcedony. Kaolinite + silica alteration occurs preferentially within the acidic volcanic rocks.

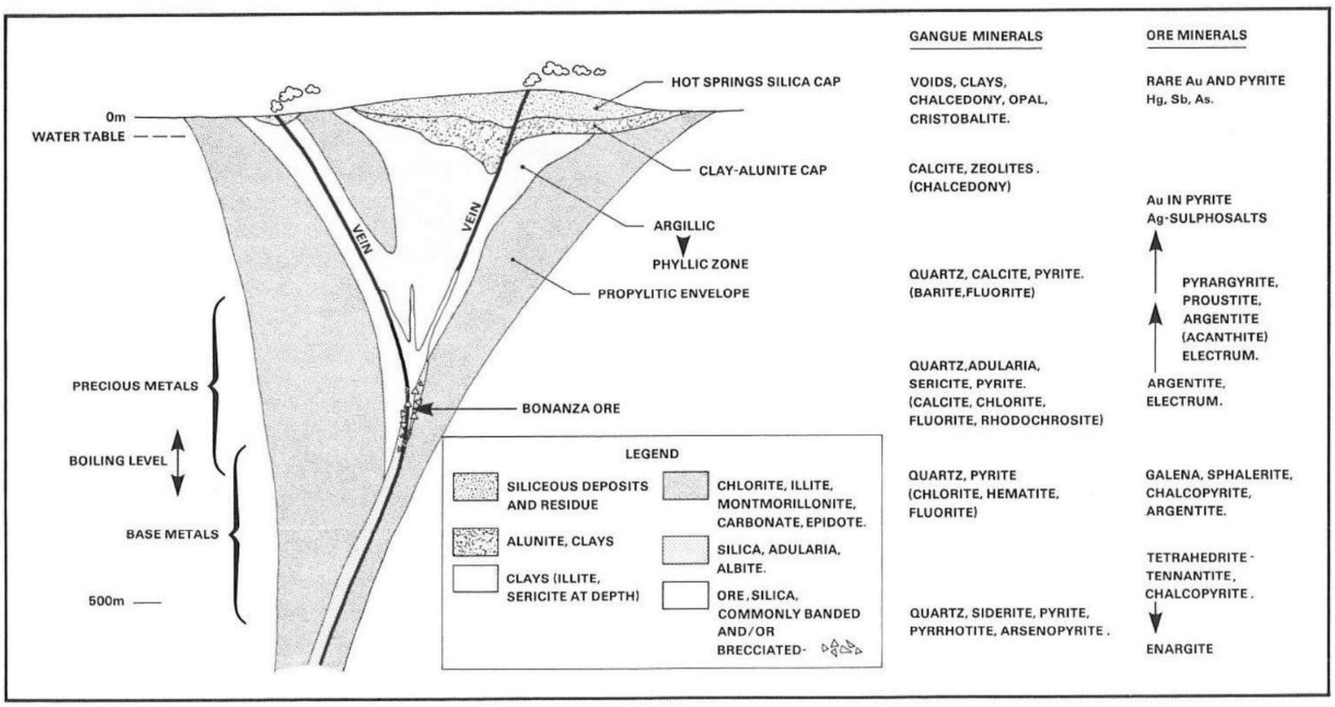
8.0 DEPOSIT TYPES

Los Gatos is interpreted as an intermediate sulfidation epithermal vein system. Veins in the CLG deposit show textures and gangue mineralogy (local chalcedony and calcite, and quartz-replaced lattice texture calcite) that indicate a relatively high-level hydrothermal system in the boiling environment. Breccia with clasts of vein quartz indicates a protracted hydrothermal system during multiple faulting events.

Mineralization at CLG is characterized by silver, lead, zinc, and copper sulfides and their corresponding oxides, along with fluorite, manganese, barite, and traces of gold associated with quartz and calcite veins.

The veins vary in orientation from West-Northwest to Northwest to North-Northwest and vary in thickness from 20 cm to 30 m in the mine operation. Study of the veins in hand specimens and thin sections suggest they are epithermal in origin and are likely of intermediate sulfidation composition.

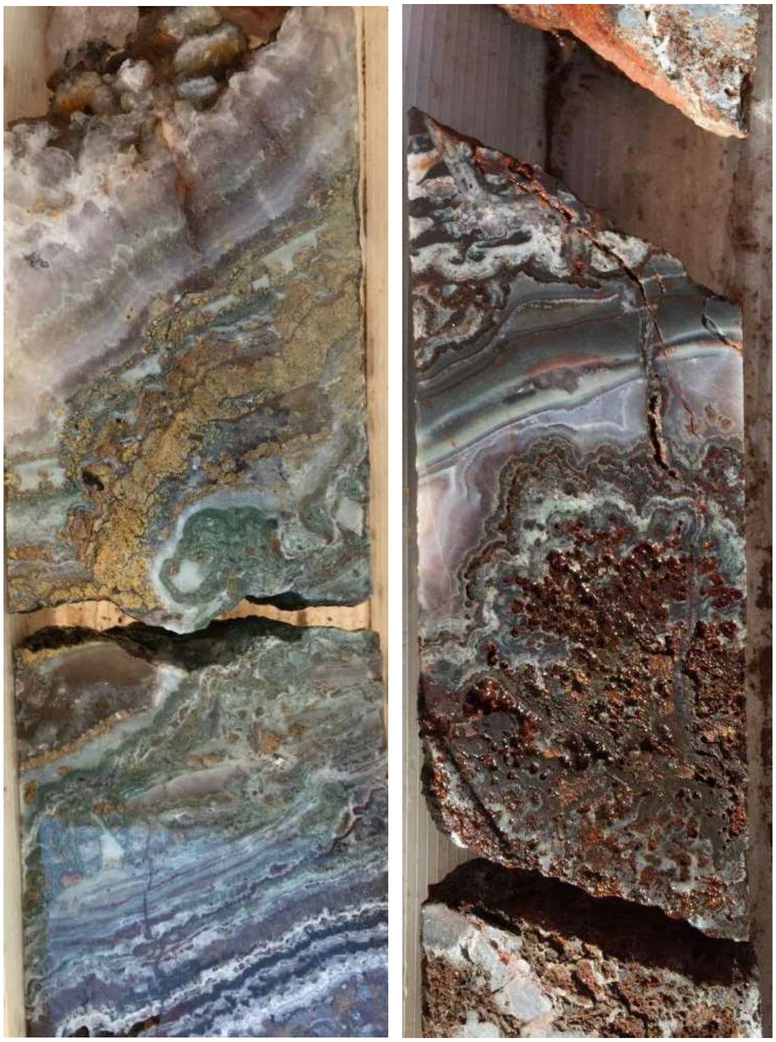
The exploration model for these types of veins was put forward in a paper by Dr. Larry J. Buchanan (1981) that set the basis for the understanding and interpretation of epithermal deposits that has been widely used in exploration; see Figure 8.1.



Source: Buchanan L.J., 1981

Figure 8.1: Idealized Section of an Epithermal Deposit

Figure 8.2 shows epithermal textures encountered in CLG drill holes GA-132 at 392 m down the hole on the left, and GA-175 at 273 m down the hole on the right.



Source: CLG

Figure 8.2: Epithermal Textures in Drill Core

9.0 EXPLORATION

Exploration on the LGJV concessions by MPR has been completed primarily by core drilling and limited non-drilling exploration activities including surface geochemical assay, geophysics, surface mapping and structural studies.

Results of recent and ongoing drilling programs are intended to define new discoveries and better delineate known deposits to increase confidence of the Mineral Resource and Mineral Reserve estimates as the basis for future organic growth of the business.

The non-drilling exploration work is currently ongoing to identify new mineralization beyond what is being reported in this TR.

9.1 Exploration Work (Non-Drilling)

9.1.1 Geochemistry

Detailed mapping and rock geochemistry has been completed during 2022, 2023 and 2024 on various exploration targets on the LGJV concession package outside the CLG and Esther zones.

9.1.2 Geophysics

During 2023, the first phase of a Magneto-Telluric study was completed over CLG and the Los Gatos fault to the northwest and southeast. The intent of this survey was to attempt to identify structures within the basin that may indicate accumulations of mineralization similar to South-East Deeps.

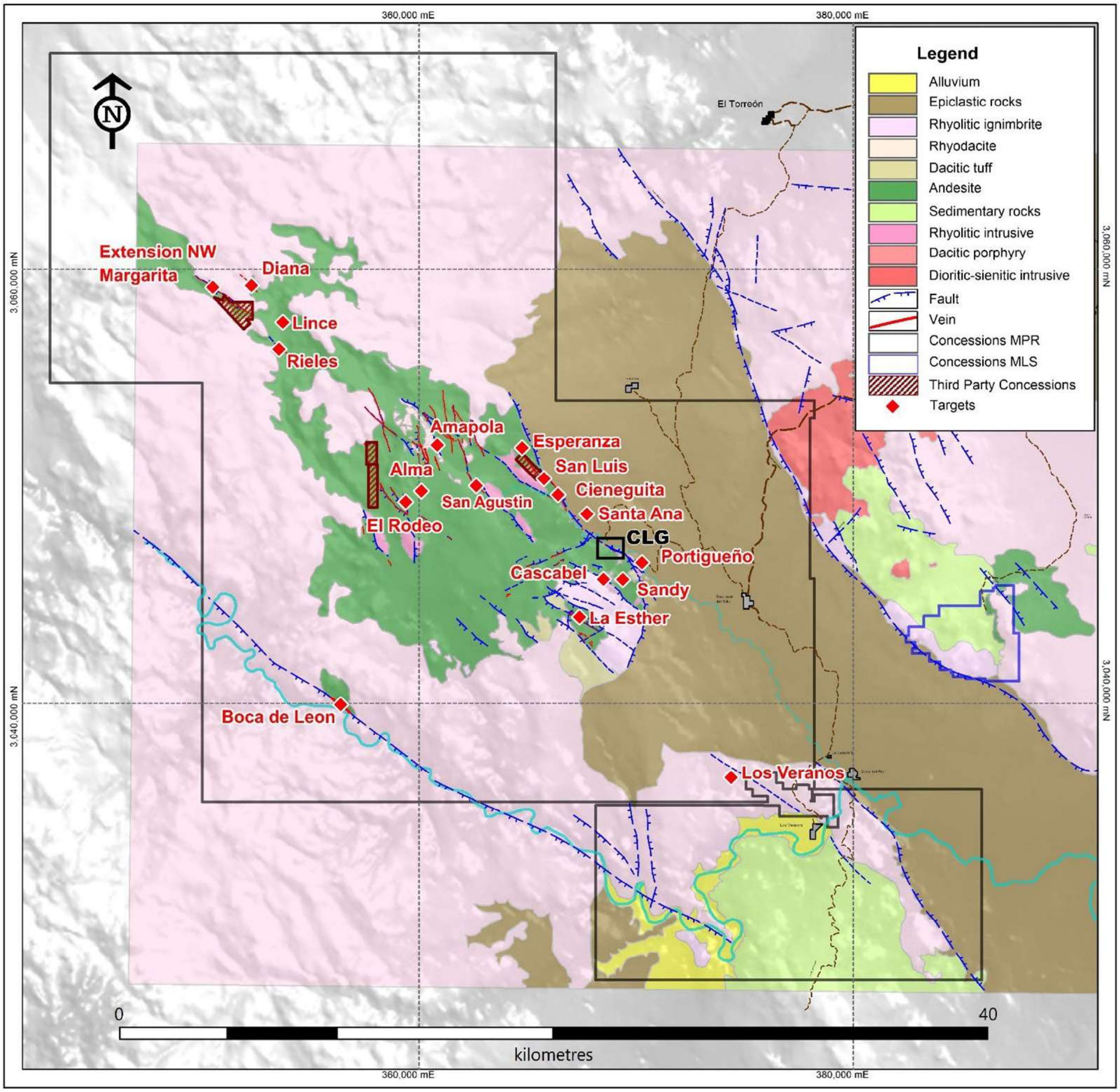
9.1.3 Surface Mapping

Regional scale geologic mapping has been conducted over areas of the Los Gatos concession where the LGJV controls the surface rights utilizing both local staff from MPR and independent contractors (Figure 9.1 outlines the LGJV concessions and target areas). Limited areas of detailed surface mapping exist in the immediate vicinity of the Esther and CLG deposits.

During 2022, MPR commenced detailed mapping programs over the central area of the concessions from Los Torunos to Wall-e and the area between CLG and Esther.

During 2023 a drone LiDAR and airphoto survey was completed over the Ojito ranch approximately 20 km northwest of the CLG operation. The intent of this survey was to prioritize geological mapping targets. During 2024, drone surveys were carried out along the Los Gatos fault area between CLG and San Luis and in the Los Veranos area.

Detailed mapping was completed during 2023 over Cieneguita, Santa Ana, El Valle, La Palma, San Luis, Los Rieles, Lince, Diana, and Portigueno targets.



Source: CLG

Figure 9.1: Regional Geology Map of Los Gatos Concessions, Showing Individual Target Areas

10.0 DRILLING

Since the acquisition of Los Gatos by MPR, several drilling campaigns have been carried out with different objectives. As of March 31, 2024, 2,188 drill holes relevant to the LGJV concessions had been completed by MPR, for a total of 542,502 m drilled. The project database contains surface exploration drilling on other prospects that are not applicable to this report. Table 10.1 shows all drilling campaigns on the LGJV property, tabulated by drilling objective and Figure 10.1 shows a map with spatial distribution of the CLG deposit drilling.

Table 10.1: Drill Hole Count by Purpose

Purpose	Meters	N° Drill Holes
Definition	99,256.70	1,101
Exploration and metallurgical testing	1,733.10	6
Geotechnical	6,770.20	28
Metallurgical testing	1,693.50	5
Pumping wells	5,269.30	13
Surface Exploration	417,609.50	953
Underground Bulk Sample Targeting	419.8	4
Underground Exploration	9,749.65	78
Total	**542,501.75**	**2,188**

10.1 Exploration Drilling

10.1.1 Cerro Los Gatos

Mineral exploration drilling was initiated at the CLG Project in October 2008 and continued until 2012. Drilling restarted in 2015, following the joint venture agreement with DOWA, with four rigs simultaneously operating until February 2016. Drilling began with a Mexican contractor, Minera Gavilán, but most of the drilling was completed by Major Drilling with Major 5000 rigs. Drilling was conducted using a wire line rig with diamond core capabilities. Holes begin with HQ size and are reduced, if necessary, to NQ and very rarely to BQ, where difficult drilling conditions are encountered. Drilling from the 2015-2016 program were pre-collared with tri-cone bits.

Drilling resumed in connection with underground development in August-December 2018 from designed and excavated chambers within underground workings. The drilling was conducted by Major Drilling to retrieve NQ size core drilled from the footwall side of the mineralized zone.

Surface drilling has continued since 2019. The surface efforts until early 2024 were dominantly focused on infill drilling to improve geologic confidence, and then switching to resource conversion drilling to infill the SE inferred resource to a drill density sufficient to support an indicated resource classification. Until mid-2022, holes were pre-collared with a tri-cone bit and core collected using HQ size, reduced to NQ size if poor drilling conditions were encountered. From mid-2022, the epiclastics have been drilled starting with PQ to control drill hole deviation.

Underground definition drilling commenced in 2019. The underground drilling utilized small MPR owned “Termite” rigs drilling LTK48 (35mm) diamond core and Boart-Longyear LM-75 rigs drilling NQ core. In late 2022, the termite drilling changed to 42mm diamond core. An Ingetrol drill rig, model H300 was added to the underground drilling fleet in 2024. The drill rig was mobilized to site in Q1-2024 and commenced drilling on April 15^{th} with NQ core. The rig supplemented the LM 75 rig, to allow for additional drilling capacity of infill / extension drilling.

Exploration drilling has been undertaken almost yearly at CLG. Drilling specific to the CLG Mineral Resource estimation is 1,666 holes, totalling 346,639 m of core.

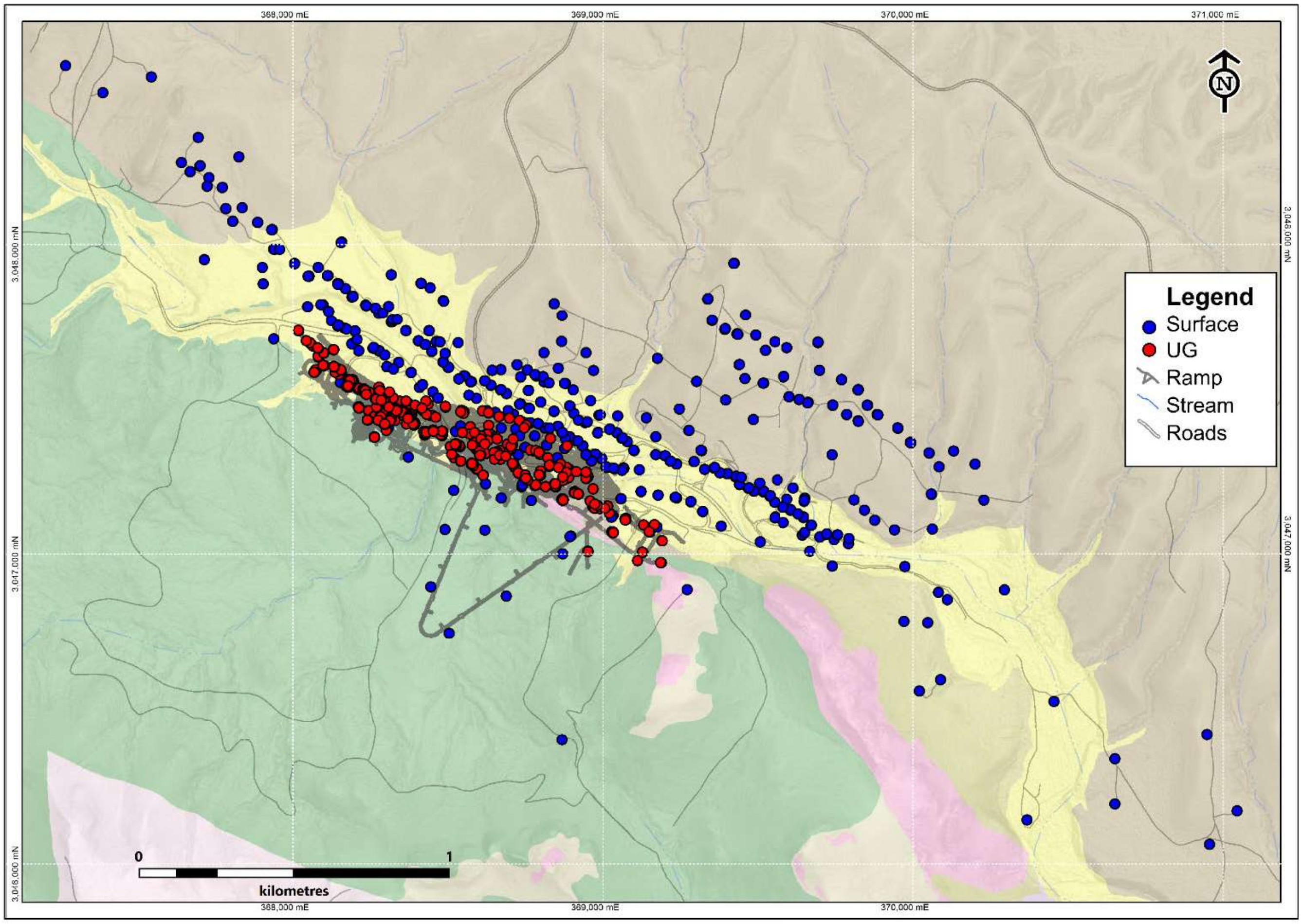
Table 10.2 shows the summary of the different campaigns throughout the mineral exploration work on the Cerro Los Gatos deposit, by year as of the database cutoff date of March 31, 2024. Figure 10.2 illustrates the drill hole locations.

During 2022 there was a backlog of underground diamond drill core that had been drilled but not logged or sampled. This backlog was resolved during 2022. There are some drill holes shown in Table 10.2 that were drilled during 2021 but not finalized until after the 2022 mineral resource database cutoff date.

Table 10.2: Total of Drill Holes and Meters per Campaign at Los Gatos

Year	Data	Meters	N° Drill Holes
2009	Surface	12,067.48	30
2010	Surface	12,373.5	22
2011	Surface	557.78	1
2012	Surface	12,255.09	38
2014	Surface	1,733.1	6
2015	Surface	61,788.8	184
2016	Surface	8,442.04	25
	UG	419.75	4
2018	Surface	401.3	1
	UG	3,564.5	32
2019	Surface	19,272.4	66
	UG	4,500.28	93
2020	Surface	679	2
	UG	18,550.29	236
2021	Surface	35,398.62	94
	UG	30,494.15	311
2022	Surface	23,831	42
	UG	24,204.11	241
2023	Surface	47,765.75	72
	UG	12,736.5	124
2024	Surface	12,524.9	16
	UG	3,078.85	26
Total		**346,639.19**	**1,666.00**

Figure 10.1 presents a plan view of drill holes, segmented by surface and underground collar locations.



Source: CLG

Figure 10.1: Distribution of Drill Holes by Type Used for Resource Estimation at CLG

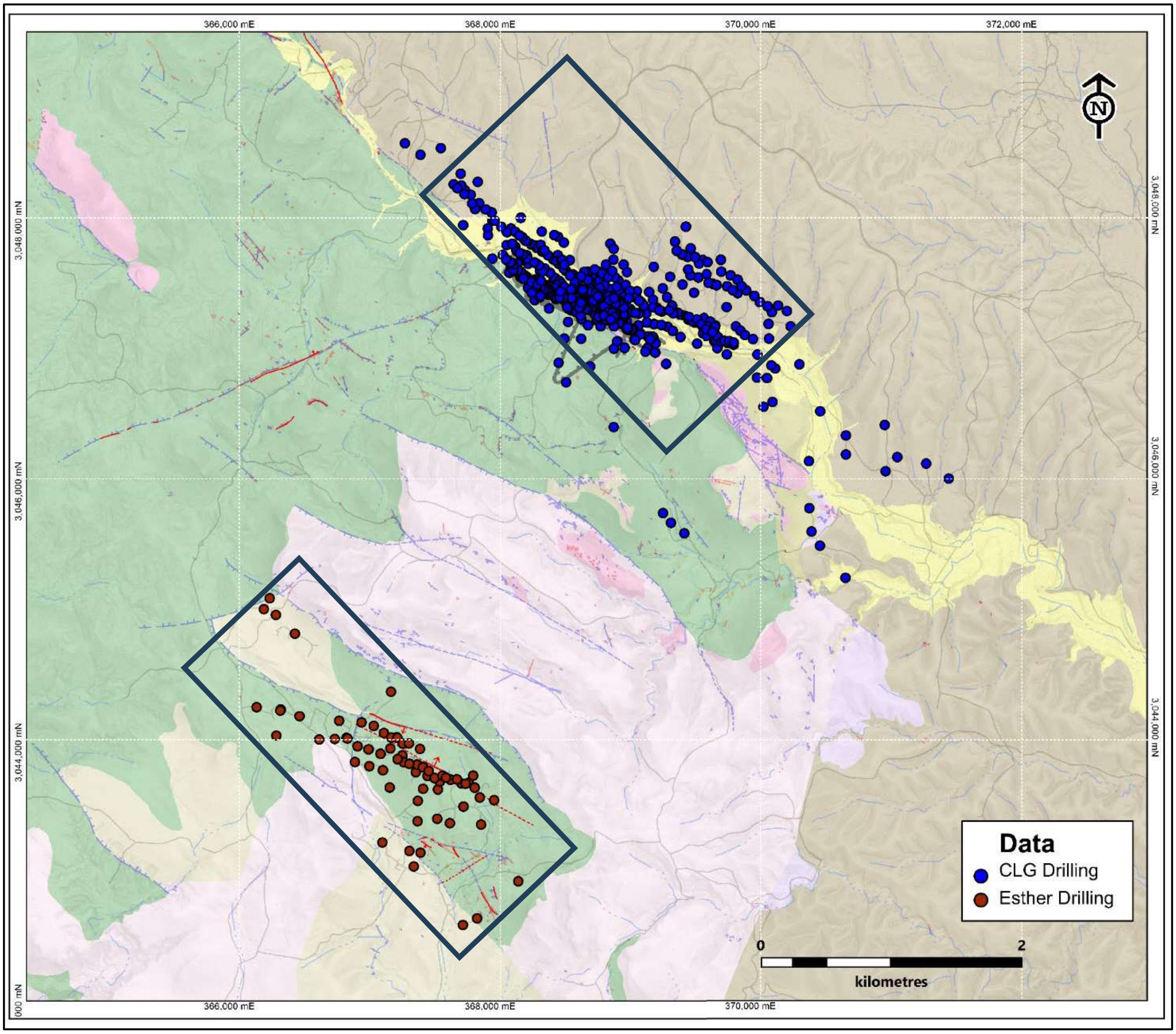
10.1.2 Esther

As at July 1, 2023, a total of 108 drill holes for 42,374 m have been completed in the Esther area. After the 2022 Mineral Resource model was completed in 2022, 5 drill holes, totalling 1,467 meters were completed outside of the reported mineral resource solid.

Table 10.3 shows the summary of the different campaigns at the Esther area, by year. This table contains drill holes including some beyond the area encompassing the mineral resource block model. Figure 10.2 illustrates the drill hole locations.

Table 10.3: Drill Holes by Campaign at Esther until July 1, 2023

	N° Drill Holes	Meters
Year	Surface	
2009	18	6,872
2010	16	8,519
2011	6	2,950
2021	28	10,067
2022	40	13,966
Total	**108**	**42,374**



Source: CLG

Figure 10.2: Drill Hole Distribution Used for Mineral Resource Estimation at Esther

10.1.3 Logging

Drill hole logging was conducted by geologists at the Los Gatos core logging and storage facility, supervised by the senior geologist. The process included a detailed description of the lithology of the different rock units found in the deposit, as well as the identification of alteration, structures, and mineral zones. Based on the geological description, codes were assigned to each geological unit. The process was conducted manually on paper log sheets, which were then entered into a Microsoft (MS) Excel spreadsheet. Once the transcription was completed, the geologists reviewed the Excel files for consistency. An example of a paper logging sheet is shown in Figure 10.3.

Minera Plata Real S de RL de CV

PLANILLA:

LOG FORMAT

Project: LOS GATOS	Drill Hole: GA-SE-586	Inclination: -51°	UTM Northing: 3047365.27
Prospect: ZONA SE	Date Started: 24-ENE-2024	Depth (m): 798 m	UTM Easting: 369991.096
Date: 29-ENE-2024	Date Completed: 19-FEB-2024	Azimuth: N 223°	Elevation (msnm): 1593.433
Logged By: ATS/JAPS	RQD: 37.0%	Recuperation: 84%	Cambio HQ/NQ: 732 m
revised by:		RIG No: 03APDRILLING	Water Table:

Interval		OXIDATION			GRAPH	LITHO	texture							color	ALTERATION			OTHERS MINS			MINERALIZATION							STRUCTURE						
FROM	TO	Hem	Mn	Lim			PO	BX	FLU	AR	LIT	BAN	AF		PROP	ARG	SIL	Ca	Sil	FL	Py	Cpy	Gn	Sp	MN	BA	Mt	VN	Bx Hy	STW	Banded	Fract	Fault	Bx
0	273					EPIC				✓																								
273	275					EPIC				✓																								
275	277					EPIC				✓																								
277	279	2		2		RYO			✓					CREMA		2																2		
279	281	2		2		RYO			✓					CREMA		2																2		
281	283	2		2		RYO			✓					CREMA		2																2		
283	285	2		2		RYO			✓					CREMA		2																2		
285	287	2		2		RYO			✓					CREMA		2																2		
287	289	2		2		RYO			✓					CREMA		2																2		
289	291	2		2		RYO			✓					CREMA		2																2		
291	293	2		2		RYO			✓					CREMA		2																2		
293	295	2		2		RYO			✓					CREMA		2																2		
295	297	2		2		RYO			✓					CREMA		2																2		
297	299	3		3		RYO			✓					CREMA		3																2		
299	301	3		3		RYO			✓					CREMA		3																2		
301	303	3		3		RYO			✓					CREMA		3																2		
303	305	3		3		RYO			✓					CREMA		3																2		
305	307	3		3		RYO			✓					CREMA		3																2		
307	309	3		3		RYO			✓					CREMA		3																2		
309	311	3		3		RYO			✓					CREMA		3																2		
311	313	3		3		RYO			✓					CREMA		3																2		
313	315	3		3		RYO			✓					CREMA		3																3		
315	317	3		3		RYO			✓					CREMA		3																3		
317	319	3		3		RYO			✓					CREMA		3																3		
319	321	3		3		RYO			✓					CREMA		3																3		
321	323	3		3		RYO			✓					CREMA		3																2		
323	325	3		3		RYO			✓					CREMA		3																2		
325	327	3		3		RYO			✓					CREMA		3																2		
327	329	3		3		RYO			✓					CREMA		3																2		

NOTES

0.0 – 277.00 EPICLASTOS
TOBAS ARENOSAS, COLOR CAFÉ A ROJIZO. FUERTE OXIDACIÓN DE HEM Y LIM.
NO RECUPERÓ MUESTRA

277.00 – 355.0 m RIOLITA COLOR CREMA CON TEXTURA FLUIDAL.
ARGILIZACIÓN MODERADA Y OXIDACIÓN MODERADA.
FRACTURAMIENTO REGULAR

Source: CLG

Figure 10.3: Example Core Logging Sheet for Los Gatos

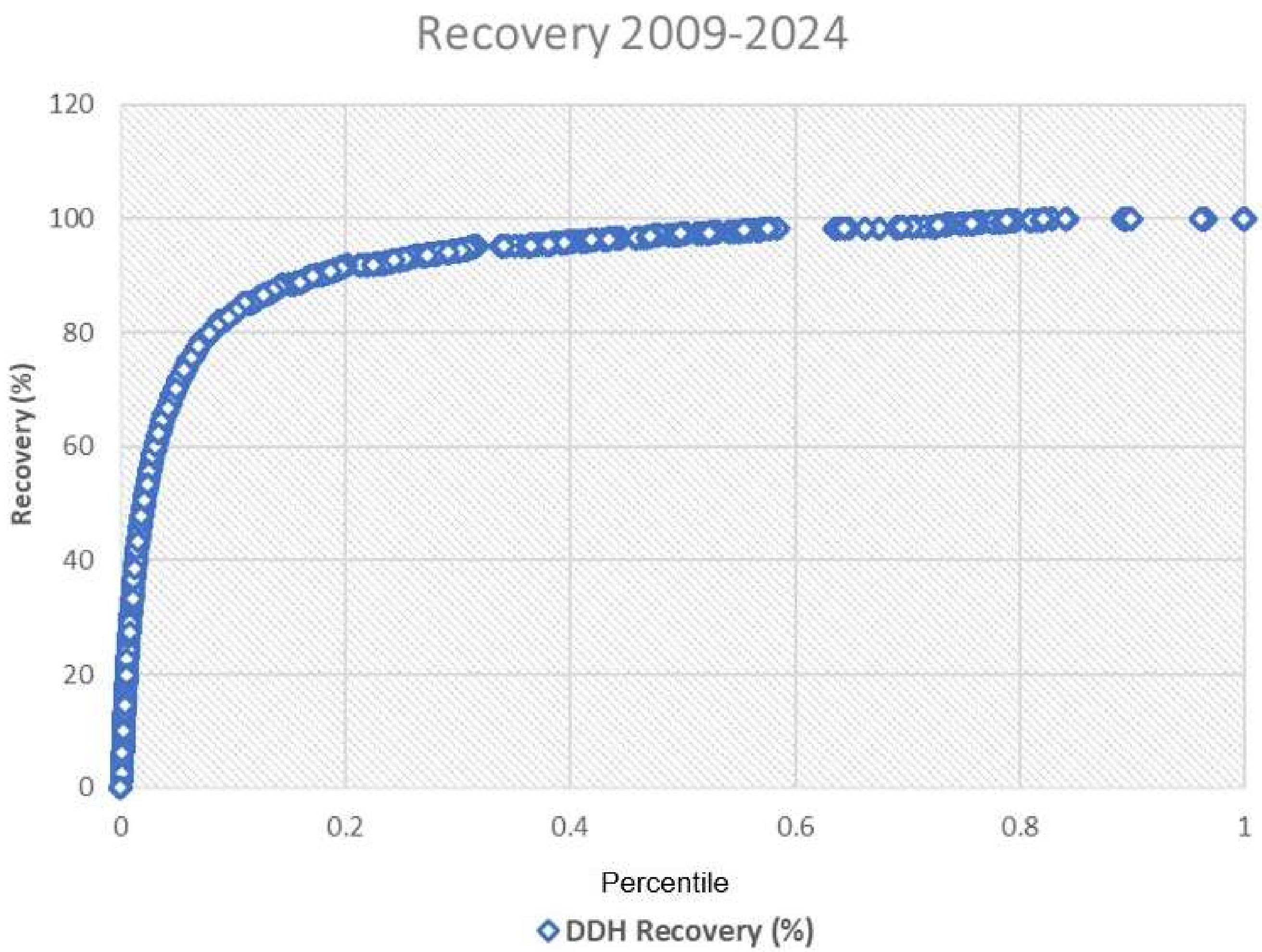
10.1.4 Drill Core, Sampling, and Recovery factors

10.1.4.1 Topographic Survey

Detailed topographic mapping was acquired using Photosat (Canada). The topography was created at 1-m, 5-m, 10-m, and 50-m contours from Geoeye® satellite coverage. Survey control points were established on surface, with coordinates assessed by total station for survey accuracy.

10.1.4.2 Core Recovery

The percentage of core recovery for diamond drill holes (DDH) was calculated as the ratio of the length of the recovered pieces by the length of the drilled interval. In some cases, recovery was less than 100 percent due to washout of fines, compaction of soft units, or inability of the bit to break and recover rock core. Occasionally, recovery exceeded 100 percent due to borehole collapse (redrilling), clay expansion, or core breakout to the bottom of the borehole during barrel recovery. The measurement is recorded to the nearest centimeter (cm) and as a number, not a percentage. A final core recovery percentage is calculated within the database. Figure 10.4 shows the core recovery of DDH drilling between 2009 and 2024 to the time of data cutoff.



Source: CLG

Figure 10.4: Diamond Drill Hole Recovery - All Data

10.1.5 Surveying - Drill Collar Survey

10.1.5.1 Surface Drill Holes

Surveys of drill collar locations have been completed by a local contract surveyor using a Topcon Total Station GTS-236W and Leica Total Station. All collar and survey information were previously stored in a master database in Microsoft Access® and transferred to the new acQuire database system in late 2022. Most surface collars have been cemented and labelled with the drill hole name; Figure 10.5 shows typical collars on the Los Gatos area.

Source: WSP

Figure 10.5: Example of a Completed Drill Hole Site

10.1.5.2 Underground Drill Holes

Underground collars have been surveyed by conventional mine survey (measuring offsets from control points). To ensure accuracy, collar location and hole dip/azimuth were measured twice by the mine survey department. One measure is completed while the machine is still drilling, and a second measurement taken after the machine is off the drill hole, using a tube inserted into the drill hole for hole inclination measurement.

10.1.6 Downhole Survey

10.1.6.1 Surface Drill Holes

Up until 2022, surface drill holes were surveyed down the hole with a Flexit EZ Trac device on 50-m intervals, as the holes were completed and with a magnetic tool, Wireless Multishot (Devico Devishot). The accuracy of the Flexit EZ Trac is reported by its manufacturer to be 0.25 degrees (°) in calculation of both the azimuth and inclination.

The measurements were made in areas without extreme fracturing or faulting in the rock that could affect the measuring instrument. Once the measurement is obtained, it is reviewed by MPR geologists to evaluate if it is within the allowed parameters of azimuth and inclination deviation.

If the result was not satisfactory the measurement was performed again and if the result was still not satisfactory, the reason is evaluated (fracture zone, magnetism in the rock or instrument failure). All the measurements that are accepted by the geology department are noted in the daily drilling reports of the AP DRILLING company and incorporated in the database.

Since April 2022, Los Gatos has used Reflex Gyrocompass and DeviAligner tools for rig alignment and conducted a post-completion 3m interval gyro downhole survey program for holes drilled from surface using Reflex Gyro Sprint-IQ and DevyGyro tools.

10.1.6.2 Underground Drill Holes

During late 2022, Los Gatos implemented a downhole survey program for holes drilled from underground. The GyroRigALigner and GyroScout tools are used for rig alignment and post drill hole surveying respectively. Previously, downhole dips/azimuths were not measured for underground drill holes.

10.1.7 Drilling Results and Interpretation

Based on the geological understanding of the deposit, the reconciliation and the QA/QC program, it is the opinion of this QP that the drill hole spacing, extents and continuities, drilling methods and sample quality at Los Gatos are acceptable for the purpose of modeling and estimating mineralization content of the deposit.

10.2 Hydrogeological Investigations

Hydrogeological characterization of the site has been conducted by MPR and consultants (Hernández-Bedolla, 2015; Tetra Tech, 2015, 2019, 2020, and Hydro Ressources, 2020a-e, 2021). Hydrogeologic characterization consisted of the installation of wells and monitoring of water levels. Aquifer testing at the site was conducted between 2010 and 2016 and consisted of numerous short duration slug tests and pumping tests in boreholes and dewatering wells and one long-term (93-day) constant rate pumping test (Tetra Tech, 2019, 2020). Data acquired during these investigations was used to develop a conceptual hydrogeological model of the site, which formed the framework for the development of a numerical groundwater flow model (summarized in Tetra Tech, 2019). This flow model was used to simulate drawdown effects of pumping from dewatering wells and to produce a dewatering plan for the development of the underground mine.

Mine development below the water table after 2019 demonstrated that the initial numerical groundwater flow model significantly underestimated the groundwater inflow rates to the underground mine. This indicated that the conceptual model in use was inadequate and needed revision. Noting the strong influence of fault structures on groundwater inflow to the underground workings, in 2020, MPR retained consultants that specialized in the analysis of structurally complex, fractured rock groundwater systems. As appropriate for these types of hydrogeological systems, the groundwater characterization effort since 2020 has been focused on defining the degree of compartmentalization of the groundwater system at CLG and on the location of the principal water bearing structures (Hydro Ressources, 2020a-e, 2021) using targeted drilling and flow monitoring. These studies have allowed the estimated peak dewatering rate required to meet target drawdown rates for the current mine plan in the Northwest (NW) and Central zones to be better constrained.

Since mid-2022, CLG has employed a staff hydrogeologist to collect and evaluate hydrogeological data and analyse the results of mine dewatering programs. As of July 2023, the company has a total of seven piezometers to measure static water levels, four collared in underground monitoring wells and three piezometers collared from surface. These piezometers are used to evaluate the water level and impact of dewatering. Pumping volumes are monitored on a real-time, minute-by-minute, basis. During 2023 and 2024, CLG engaged ITASCA to create a hydrogeological framework and numerical model incorporating the various data sources and current understanding of hydrogeology.

Section 16.3 describes the conceptual hydrogeological setting in more detail.

10.3 Geotechnical Drilling and Sampling

For all diamond drilling that has been completed on the deposit, basic geotechnical information, including core recovery, rock hardness and RQD was collected from the core simultaneously with geological logging.

From 2012 to 2015, point load testing was introduced as well as the logging of joint form and frequency for estimation of RMR values. From 2015 onwards, point load testing was continued, and the format of joint evaluation was modified to include the estimation of a Barton Q parameter. For the period of 2023-2024 the geotechnical team implemented an extensive point load testing and joint form and frequency mapping program specific to the SE Deeps zone.

The mine employs geotechnical engineers who conduct detailed geotechnical rock quality logging of individual areas for specific projects. Examples of these are vent raise locations or the trial of a new stope methodology, such as the implementation of transverse longhole mining in the Central zone. This detailed geotechnical analysis is completed on diamond drill core on an as-needed basis.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Data summarized in this Section and utilized for Mineral Resource estimation has been collected by MPR. The sample collection and preparation, assaying and security procedures implemented by MPR use methods in accordance with internal and mining industry standards and were continuously monitored to ensure the integrity of the data collected.

No historic sampling by previous operators has been utilized by MPR nor has it been described in this section. Descriptions and quantities of samples are limited to drilling within the immediate CLG deposit mineral resource area (project ID “GA” in the database); various surface sampling and drilling outside of the deposit area are not considered relevant to this section.

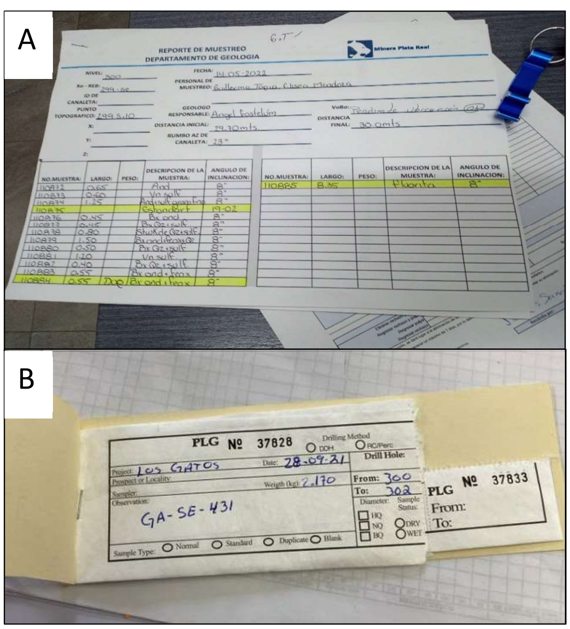
11.1 Sample Preparation Methods and Quality Control Measures

11.1.1 Methods

At Los Gatos only DDH core samples have been used for resource estimation purposes. DDH cores are labeled and secured in wooden cases before daily transport from the rig to the core shack by truck. Once at the core shack, they undergo geotechnical logging by field assistants, while geologists conduct geological logging and the selection of the intervals to be sampled.

Sample intervals are selected only where the geologist recognizes mineralization. In practice, the core is extensively sampled above the hanging wall and below the footwall on either side of the mineralized zone. Samples are constrained to a minimum length of 80 cm and a maximum of 10 m. Surface drilling is dominantly assayed at 2.0m intervals with underground (UG) drill core dominantly sampled on 1.5m intervals.

Geologists are responsible for selecting the intervals to be sampled and entering records on a sampling sheet (Figure 11.1). When cores are sawed in half along the longitudinal axis, an identifier is assigned by using a sample identification notebook.



Source: WSP

Figure 11.1: A) Sampling Sheet I B) Sample ID Booklet

Prior to core sawing the geologist marks a cut line along the core to ensure adequate representation of the style of mineralization. A sample sheet is provided to the core cutter containing sample numbers and the “from – to” intervals. NQ and HQ core is sawn in half along its long axis with an electric diamond saw. One half is bagged while the remaining half of the core is stored at the Geological core shack for further geological characterization and storage. The smaller 42mm diameter core from the UG Termite drill rigs is whole core sampled.

Figure 11.2 shows the core shack, geological logging, the diamond saw core cutter, and half core placed in a core box.

Samples of holes drilled from surface are then sent for mechanical preparation at an independent laboratory in Chihuahua (ALS Chemex). Core samples from the underground drilling programs undergo mechanical preparation at an onsite Mine Laboratory.

11.1.2 Sample Security

Cores are collected and placed in plastic boxes that are labeled by the drillers on the rig with drill hole number, box number and a mark that indicates the beginning hole depth of the box. Plastic or wooden plugs are inserted, marking the drilling advance meterage with the help of a marker at the end of each drilling run. Plastic plugs are marked with the depth and highlighted with a marker for better visualization in core photographs.

Core preparation is completed in the core shack, which is secured by fence gates, monitored by security personnel and securely locked at night. In the warehouse the samples are received and then processed for geological logging, density sample selection, photography and saw cutting.

Prior to the core sawing process, paper labels are used to identify the samples. One label is stapled to the corrugated plastic core box while the second is placed in the sample bag along with the sample, keeping a receipt in the original sample tag booklet (Figure 11.1B). Sample identification is also transcribed on the plastic core box using a red marker. Sample numbering begins with the numbering of the previous batch of samples. The core remaining after sampling is stored in a secure core storage facility located in the local community of San Jose del Sitio, or in a core storage area on site (Figure 11.3).

Prior to transport to Chihuahua City, samples are stored in a secure building adjacent to the core logging area. Prior to, and during transportation, actions are taken to guarantee the integrity of the samples. Plastic trays with cores are closed to avoid displacement or loss of samples, shipments are checked to ensure the integrity of the samples, and a document detailing the contents, and the work order is generated. Only project personnel are involved in the selection, preparation, and delivery of samples to the laboratory.

Samples are transported by MPR employees to Chihuahua City approximately three times a week. The samples are received at the ALS Chemex preparation facility in Chihuahua City (ALS Chihuahua) using a Chain of Custody form that allows traceability of the samples during transit. Once mechanical preparation is completed, pulp samples are shipped to Vancouver, Canada for chemical assay. Once pulp samples are returned from Vancouver, they are stored in the core storage facility in San José del Sitio in conditions that guarantee their integrity over time (Figure 11.3).

Source: WSP

Figure 11.2: A) Geological Core-Shack; B), Geological Logging on Site; C), Electrical Diamond Saw; D), Half Core Placed in a Labelled Core Box

Source: WSP

Figure 11.3: A) Storage Conditions in the Core Warehouse at San José El Sitio; and B), Rejects Storage

11.2 Sample Preparation, Assaying, and Analytical Procedures

11.2.1 Density

MPR measures density of DDH cores using the Archimedes method. Samples are selected by the geologist as representative for each lithology; however, in the presence of hydrothermal veins and hydrothermal breccias, samples are taken every two meters, unlike the country rock where only representative samples are taken.

The length of the samples is standardized to 10 cm. They are cut to samples of uniform size to facilitate the weighing and kerosene wax coating process (Figure 11.4). The data obtained are entered into a Microsoft Excel spreadsheet, which is then added to the geological database.

Source: WSP

Figure 11.4: Density Samples

11.2.2 Sample Preparation

11.2.2.1 Surface Samples

The sample mechanical preparation steps are summarized below:

1. Drying in an electric oven at 105°C for approximately 10 hours.
2. Primary crushing to #3 (3 screen openings per linear inch) Tyler (Ty).
3. Secondary crushing, 90% passes #10 Ty.
4. Sample splitting to two kilograms using a rotary splitter.
5. Pulverizing, 95% passes #150 Ty.
6. Three samples are created.

11.2.2.2 Underground Samples

Core samples are received at the mine site laboratory and registered in LIMS before the mechanical preparation.

The mechanical preparation steps are summarized below:

1. Weighing of samples and entry in LIMS.

2. Drying in an electric oven at 221°F ±9°F for approximately three to four hours.

3. Primary crushing in a Terminator Crusher to 75% (P_{75}) passing #10 mesh (PO-LA-02-07), if not the opening of the slats should be adjusted. This test is completed every 20 samples.

5. Homogenization and splitting in a Jones splitter is repeated until a sample size of approximately 300 g is achieved.

6. Pulverization to 85% passing #200 mesh is then conducted on the 300 g samples. One out of 20 samples is subjected to a particle size test.

7. Pulp samples are placed in a box labeled with the lot number and are transferred to the temporary storage area (Figure 11.5).

Source: WSP

Figure 11.5: Samples After Crushing (Left) and Pulp Samples Labelled (Right)

11.2.3 Analysis

11.2.3.1 Surface Samples

After mechanical preparation in the ALS Chemex lab in Chihuahua City (ALS Chihuahua) samples are sent to ALS Vancouver for chemical assay.

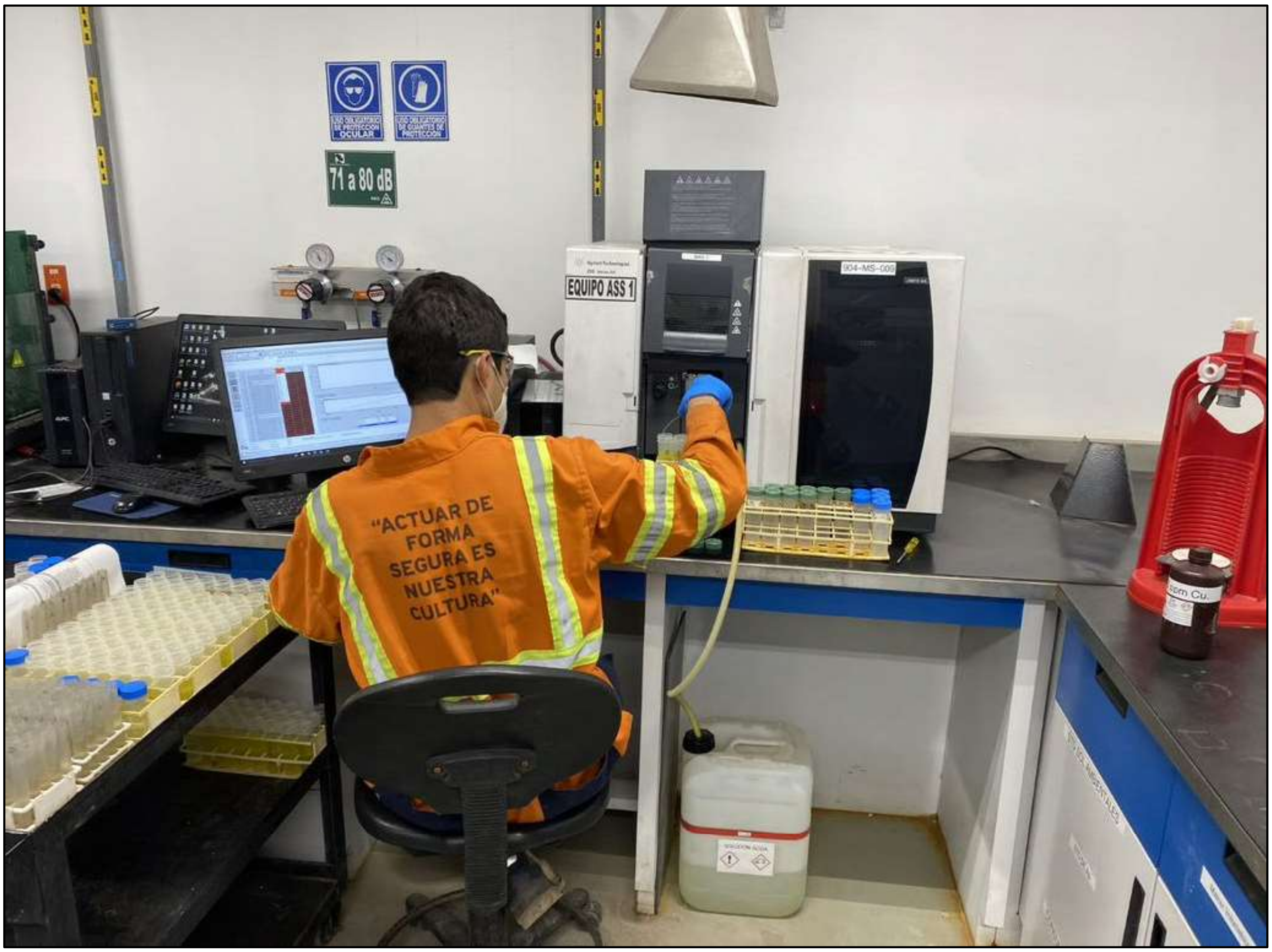
From 2008 to June 2009 samples were analyzed for Ag, Pb, Zn, Cu and 31 additional elements by aqua regia digestion with inductively coupled plasma - atomic emission spectroscopy (ALS-Chemex code ICP41). Reanalysis was considered for values above 100 g/t Ag, and 1% Pb. Zn and Cu were analyzed by inductively coupled plasma aqua regia - atomic emission spectroscopy (ALS-Chemex code OG46).

After June 2009, the samples have been analyzed for Ag, Pb, Zn, Cu and 29 additional elements by four-acid digestion, inductively coupled plasma - atomic emission spectroscopy (ALS-Chemex code ICP61). An overlimit reanalysis is conducted for values above 100 g/t Ag, and 1% Pb. Zn and Cu were analyzed by four-acid digestion, inductively coupled plasma - atomic emission spectroscopy (OG62). Values exceeding 1,500 g/t Ag are reanalyzed by fire assay with gravimetric finish (GRA21). Samples are analyzed for Au using fire assay with atomic absorption spectroscopy finish (AA23) with a re-run for values exceeding 10 g/t Au, using fire assay with gravimetric finish (GRA21).

The results of the analyzed samples are reported to Los Gatos via an Excel file in .csv format and pdf format sent by email and are imported directly into the database, avoiding any type of manipulation of the results.

11.2.3.2 Underground Samples

The Mine Lab uses Fire Assay for Ag and Au with AAS assay and for Pb, Zn, Cu, and Fe digestion with nitric acid and hydrochloric acid digestion with atomic absorption finish. Fluorine is analyzed on Pb and Zn head samples and concentrates, using ion selective electrode (Figure 11.6). The analysis flow is further shown in Figure 11.7.



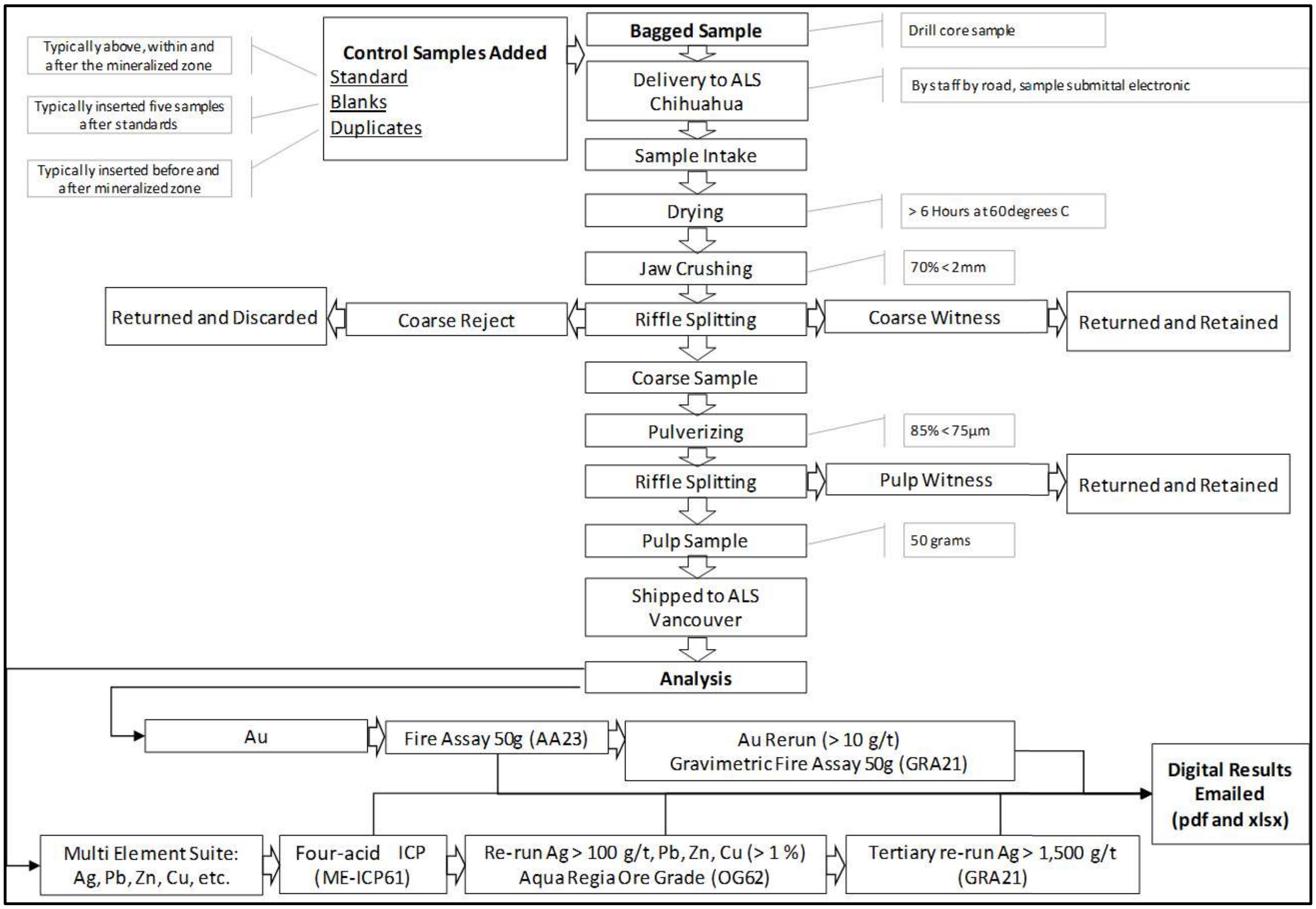
Source: WSP

Figure 11.6: Internal Mine Laboratory

11.2.4 Laboratory Certification

The ALS Chihuahua laboratory is responsible for mechanical preparation and the ALS Vancouver laboratory for assaying of surface samples. ALS Chemex is independent of MPR and is ISO 17025 accredited. The accreditation of ALS Vancouver encompasses preparation processes completed at ALS Chihuahua. There is no relationship, or conflict of interest between MPR and the ALS Chemex S.A. group.

Underground samples are sent to the Internal MPR Laboratory, which is not certified. While the onsite laboratory is not certified, in 2023 MPR has instituted an umpire check assay program, whereby 3% of pulps are shipped to ALS Chemex Vancouver each quarter for an independent check assay. Results are then compared to the original assay result from the onsite laboratory to confirm validity. 132 umpire samples were analyzed during the period of April 1 2023, through to March 31 2024. The results show good reproducibility of the results with no inter-laboratory biases observed.



Source: CLG

Figure 11.7: Diagram of Sample Preparation and Analyses of CLG DDH Samples by ALS-Chemex

11.3 Quality Control Procedures/Quality Assurance

11.3.1 Control Samples

MPR sample assays are subject to a comprehensive Quality Assurance and Quality Control (QA/QC) program for monitoring Ag, Au, Pb and Zn. Table 11.1 details the QA/QC procedure, which includes insertion of control samples to monitor precision, accuracy and contamination for the sampling, mechanical preparation, and assaying stages.

The drilling campaigns from April 2022 onwards included the insertion of Pulp Duplicates. These pulp duplicates were obtained after the crushing and homogenization of the samples with a frequency of one in 20 samples. since

October 2022, coarse blanks are inserted for samples obtained by underground and surface drilling and fine blanks are no longer inserted.

Each batch of samples includes 30 samples, comprising 24 routine samples and six control samples. The Database Administrator controls the analytical quality of each batch, monitoring annual and monthly behaviours. Irregular, or suspect, analysis results are reviewed directly upon import of assay certificates into the acQuire database and addressed in a timely manner to ensure the integrity of the database.

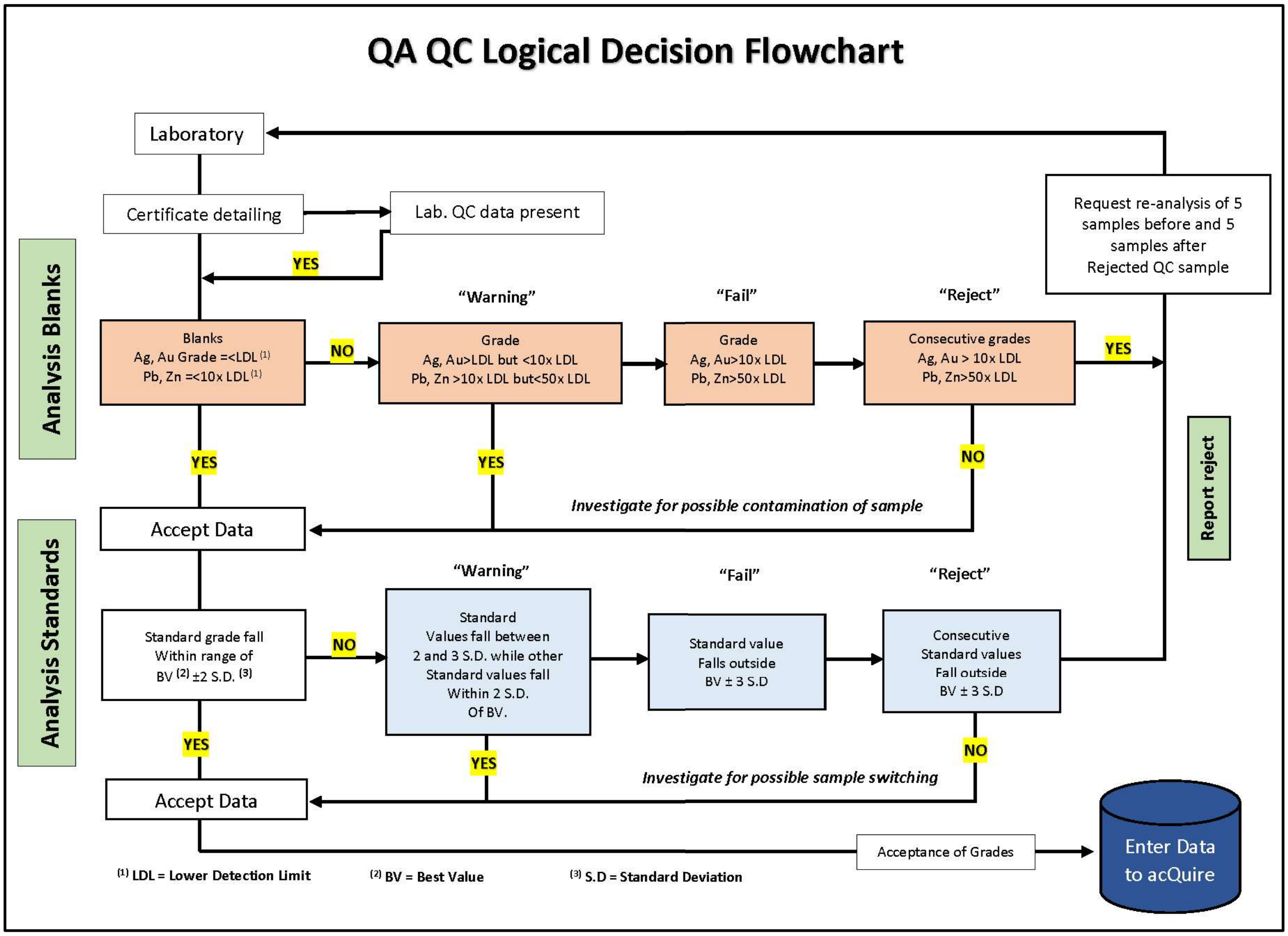
The ALS Chemex and CLG Mine laboratories have an independent QA/QC program that includes field duplicates, pulp duplicates, coarse analytical blanks, and Certified Reference Material (CRM), commonly called 'standards.' The target frequency for these QA/QC samples are shown in Table 11.1.

Separately, a subset of pulp samples from the underground drilling that were originally assayed at the CLG Mine laboratory were sent to ALS Chemex for an umpire check assay program.

Table 11.1: QA/QC Controls for Sample Preparation and Assaying

Control Sample	Description	Frequency (%)	Observations	Threshold	Campaigns
Fine Blank	Silica sand (previously analyzed by a certified external laboratory)	1 in 20 samples	Contamination in assaying	10 times detection limit with a 95% confidence	2008 to 2024
Standard	Commercial Reference Material	1 in 20 samples	Accuracy in chemical analysis	Results are within ±2 and ±3 standard deviations of the certified value	2008 to 2024
Field Duplicate	Obtained from the second split of the original sample	1 in 20 samples	Precision in DDH samples	20% Relative Error	2008 to 2024
Pulp Duplicate	Obtained after crushing and homogenization	1 in 20 samples	Precision in DDH samples	10% Relative Error	2022 to 2024
Coarse Blanks	Marble stone (Previously analyzed)	1 in 20 samples	Contamination in mechanical Preparation	10 times detection limit with a 95% confidence	2022 to 2024

Results outside the acceptance range require re-preparation and re-analysis of the complete batch (Figure 11.8).



Source: CLG

Figure 11.8: Quality Control Decision Flow Diagram

11.3.2 Quality Control

11.3.2.1 Surface Samples

The control samples include the insertion of blind QA/QC control samples (coarse blanks, ¼ core field duplicates, pulp duplicates and Certified Reference Materials (CRM)) with all batches sent to the laboratory.

11.3.2.1.1 Certified Reference Materials (CRM)

For the 2024 period, the results of the CRM analyses for silver, lead, zinc and gold of samples from surface drilling campaigns show an acceptable precision with results within acceptable tolerance limits (2σ), and a low bias.

The results are shown in Table 11.2 through Table 11.5.

Table 11.2: Standard Control Sample Results for Silver- 2024 Campaigns

Element	CRM ID	CRM Value	CRM Std. Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std. Dev.	N° of Analyses	Bias	Outliers	% Outliers
Ag	CDN-ME-1902	356	19	318	394	354.6	5.939	112	-0.41	0	0
	CDN-ME-2003	106	9	88	124	108.5	2.505	85	2.38	0	0

Table 11.3 Standard Control Sample Results for Lead - 2024 Campaigns

Element	CRM ID	CRM Value	CRM Std. Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std Dev	N° of Analyses	Bias	Outliers	% Outliers
Pb	CDN-ME-1902	22,000	1,000	20,000	24,000	21,893	273.77	112	-0.49	0	0
	CDN-ME-2003	4,750	160	4,430	5,070	4,746	110.96	85	-0.08	0	0

Table 11.4: Standard Control Sample Results for Zinc Standard - 2024 Campaigns

Element	CRM ID	CRM Value	CRM Std. Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std Dev	N° of Analyses	Bias	Outliers	% Outliers
Zn	CDN-ME-1902	36,660	2,300	32,060	41,260	36,179	445.24	112	-1.15	0	0
	CDN-ME-2003	10,500	500	9,500	11,500	10,633	197.82	85	1.26	0	0

Table 11.5: Standard Control Sample Results for Gold Standard - 2024 Campaigns

Element	CRM ID	CRM Value	CRM Std. Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std Dev	N° of Analyses	Bias	Outliers	% Outliers
Au	CDN-ME-1902	5.38	0.42	4.54	6.22	5.337	0.207	112	-0.8	0	0
	CDN-ME-2003	1.301	0.135	1.031	1.571	1.315	0.083	85	1.05	0	0

11.3.2.1.2 Blanks

Table 11.6 summarize the blanks result for gold, silver, lead and zinc in the 2024 Campaigns.The limited zinc results analysis out of tolerance limit, most were located immediately before high-grade samples previously identified by CLG personnel.

Table 11.6: Blank Results - 2024 Campaign

Element	Outliers	Std. Dev.	Accept Max	N° of Analyses	Mean
Ag	0	0.09	5	278	0.26
Au	0	0.004	0.1	275	0.004
Pb	0	13.65	100	278	7.9
Zn	10	34.36	100	275	19.8

11.3.2.1.3 Field Duplicates

Table 11.7 summarize the field duplicates result for the 2024 campaigns; the silver and gold analysis values exhibited an acceptable to regular precision.

Table 11.7: Field Duplicates Results - 2024 Campaign

Element	N° of Analyses	% Average HRD (%)	Average HARD (%)
Ag ppm	229	-0.25	4.51
Au ppm	229	-1.57	4.74
Pb ppm	229	-0.06	1.61
Zn ppm	229	0.31	1.11

11.3.2.1.4 Pulp Duplicates

The QAQC program included pulp duplicates in the 2024 campaign. Table 11.8 summarizes the pulp duplicate results for the 2024 Campaigns. In general, no significant biases in pulp duplicates were observed for silver, gold, lead and zinc, and the accuracy was within acceptable ranges for silver, lead and zinc. Gold values from pulp duplicates have fair precision.

Table 11.8: Pulp Duplicates Results - 2024 Campaign

Element	N° of Analyses	% Average HRD (%)	Average HARD (%)
Ag ppm	63	0.47	3.07
Au ppm	63	-1.45	7.31
Pb ppm	63	0.07	1.83
Zn ppm	61	0.31	1.23

11.3.2.2 Underground Data

The control samples include the insertion of blind QA/QC control samples (coarse blanks, ¼ core field duplicates and Certified Reference Materials (CRM)) with all batches sent to the laboratory.

11.3.2.2.1 Certified Reference Materials (CRM)

For the 2024 period, the results of the CRM analyses for silver, lead, zinc and gold of samples from underground drilling campaigns show an acceptable precision with results within acceptable tolerance limits (2σ), and a low bias.

The results of the CRM analyses are shown in Table 11.9, Table 11.10, Table 11.11, and Table 11.12.

Table 11.9: Silver Results for Standard Control Samples - 2024 Campaign

Element	CRM ID	CRM Value	CRM Std Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std Dev	N° of Analyses	Bias	Outliers	% Outliers
Ag	CDN-ME-1811	87	7	73	101	87.518	2.57	85	0.59	0	0
	CDN-ME-2003	106	9	97	115	110.115	2.625	61	3.88	0	0
	CDN-ME-1902	356	19	318	394	346.703	6.52	74	-2.61	0	0

Table 11.10 shows the results for lead in the 2024 period. There is no evidence of bias, and all the samples were within the acceptable limits.

Table 11.10: Lead Results for Standard Control Samples - 2024 Campaign

Element	CRM ID	CRM Value	CRM Std Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std Dev	N° of Analyses	Bias	Outliers	% Outliers
Pb	CDN-ME-1811	0.304	0.016	0.272	0.336	0.31	0.005	85	2.2	0	0
	CDN-ME-2003	0.475	0.016	0.443	0.507	0.48	0.007	61	1	0	0
	CDN-ME-1902	2.200	0.100	2.000	2.400	2.208	0.047	74	0.38	0	0

Table 11.12 shows the results for zinc. For the 2024 period there are no samples outside the confidence limits, and no bias is present.

Table 11.11: Zinc Results for Standard Control Samples - 2024 Campaign

Element	CRM ID	CRM Value	CRM Std Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std Dev	N° of Analyses	Bias	Outliers	% Outliers
Zn	CDN-ME-1811	1.54	0.06	1.42	1.66	1.529	0.023	85	-0.7	0	0
	CDN-ME-2003	1.05	0.05	0.95	1.15	1.052	0.022	61	0.15	0	0
	CDN-ME-1902	3.666	0.23	3.206	4.126	3.603	0.062	74	-1.71	0	0

The results for gold CRM are shown in Table 11.12, they indicate that the accuracy is good with no evidence of bias for all the samples.

Table 11.12: Gold Results for Standard Control Samples-2024 Campaign

Element	CRM ID	CRM Value	CRM Std Dev	Accept Min (2σ)	Accept Max (2σ)	Mean	Std Dev	N° of Analyses	Bias	Outliers	% Outliers
Au	CDN-ME-1811	2.05	0.24	1.57	2.53	2.039	0.141	85	-0.54	0	0
	CDN-ME-2003	1.301	0.135	1.031	1.571	1.294	0.072	61	-56	0	0
	CDN-ME-1902	5.38	0.42	4.54	6.22	5.337	0.23	74	-0.8	0	0

11.3.2.2.2 Blanks

Table 11.13 summarizes the field duplicates result for the 2024 Campaigns show the results of the blanks for gold, silver, lead, and zinc. There was no evidence of contamination during the mechanical preparation of samples with no samples exceeding the acceptance thresholds.

Table 11.13: Blank results - 2024 Campaign

Element	Outliers	Std. Dev.	Accept Max	N° of Analyses	Mean
Ag ppm	0	0.00	5.00	260	2.5
Au ppm	0	0.00	0.05	260	0.005
Pb %	0	0.001	0.10	260	0.0051
Zn %	0	0.00	0.05	20	0.005

11.3.2.2.3 Field Duplicates

Table 11.14 summarizes the field duplicate results for the 2024 Campaigns for Ag, Au, Pb, and Zn field duplicates. The precision is within the acceptance threshold for Pb and Zn. Ag and Au have regular precision with 90% of the samples exhibiting a half absolute relative difference (HARD) value below 40%.

Table 11.14: Field Duplicates - 2024 Campaign

Element	N° of Analyses	% Average HRD (%)	Average HARD (%)
Ag ppm	208	0.09	0.98
Au ppm	208	-0.11	1.55
Pb %	208	0.05	0.54
Zn %	208	0.01	0.56

11.4 Opinion on Adequacy

In the opinion of the Qualified Person, both the mechanical preparation protocols and the procedures that regulate the chemical analysis methodologies, traceability and custody of the samples that support the Mineral Resource estimate at CLG are adequate and correspond to those commonly used in the mining industry for the processing of samples from this type of deposit.

The QA/QC results established for the monitoring of contamination, accuracy, and precision demonstrate that the sample assay data is acceptable for use for Mineral Resource and Mineral Reserve estimation.

12.0 DATA VERIFICATION

Field data is collected and analysed for all mineral projects. The greatest volume of data is geological which informs geologists and mineral resource estimators. Rock property information is also collected for purposes of design and monitoring of the TSF foundation and dam, building foundations, rock mechanics analyses, ground control determinations for rock support, crown pillar assessment, tunnel dimensions, and stope dimensions. Mineral processing monitoring and control systems and procedures have also been reviewed.

CLG is now an operating mine which produces operating data on a daily basis. The mine technical services department monitors and measures the conditions in the mine, including air flow, volume and quality, water ingress, pumping systems, personnel health status and safety systems. The processing plant technical team continuously monitors the technical and performance aspects of the plant as standard operating procedures for supervision of the comminution system, flotation, filtration, metal recovery and plant discharge with particular attention to flow rates (i.e., plant throughput) and system performance.

The respective QPs have reviewed the data collection records and systems used to supervise and manage the functions of the mine and plant, and verify the systems and protocols employed by CLG as adequate for purpose.

The data used for the Mineral Resource estimate were directly exported from the database. The export was carried out according to established procedures for exporting data from the geological information management system.

Geological data validation and review was performed by Mr. Ronald Turner. The procedures used meet industry standards.

Metallurgical accounting balances are closed and reconciled with mine production reports, and concentrate sold on a monthly basis, in order to ensure accuracy and accountability. Facilities conducting plant sampling, flow measurements, sample preparation, concentrate dispatch, and assay laboratory functions were visited in order to assess their conditions and compliance with best practices. Plant supervisory staff were interviewed, and documentation was reviewed in order to gain a better understanding of compliance, procedures and policies.

12.1 Geology

12.1.1 Data Management

All the aspects that could materially impact the integrity of the data informing the estimation of Mineral Resources (core logging, sampling, analytical results, and database management) are supported by protocols, procedures, and process mapping implemented on site which follows industry practice. The information system is supported by security protocols administrated internally by MPR that allow the capture and administration of data.

Up until late 2022, the database software used was MS Access for the surface drilling database and MS Excel for the underground definition drilling database. In late 2022, an acQuire database system was implemented, and the data storage and management was transferred to this system.

12.1.1.1 Database

All the data is entered and administrated in acQuire where the validation process is made before data exportation for geological modeling and resource estimation purposes. Validations are implemented throughout the data capture chain. Access permissions to the platform are managed in a manner that ensures security and integrity.

A single data management system, which guarantees that all data complies with the same quality assurance protocols, is fully implemented on site.

12.1.1.2 Drilling and Sampling

For quality assurance of data captured in the chain of sampling and assaying, individual sample labels were, and are, used. For DDH drill core, trays are labelled and include “from-to” information.

A registry of blanks, duplicates and standards insertion for QC is performed for every batch of samples sent for mechanical preparation and chemical analysis. Each batch name identifies the destination, type of preparation and analysis, laboratory name, dates of delivery and return, analytical suite name, etc.

The shipping list is generated internally on site prior to delivery of the samples to the preparation laboratory.

12.1.2 Logging

Geologists log directly onto paper. These paper records are entered into acQuire by a data entry technician and verified after entry by both the database manager and the responsible geologist. The process is undertaken, or supervised, by suitably qualified geologists. For a group of representative drill holes of the deposit, the QP verifies that the existing records in the original backups match those in the database. This verification included the geological logging and assaying.

12.1.3 Sample Preparation and Chemical Analysis

All samples received in the laboratory are carefully recorded in the Laboratory Information Management System (LIMS) before proceeding with sample preparation. Once mechanical preparation is completed, batches are sent to the Vancouver assay lab for chemical analysis and assays. Assay samples are collected by appropriately qualified staff at the laboratories. The insertion of control samples of pulp duplicates has improved confidence in the precision of the analytical results.

12.1.4 Geological Modeling

The geological modeling included all the main geological variables that control the mineralization and was carried out using data that are considered adequate and properly reviewed and validated. The methodology used in the modeling follows industry best practices and allows proper modeling of the continuity of the mineralization existing at Cerro Los Gatos. The geological model was statistically validated and reviewed by the QP together with the mine personnel.

12.1.5 Internal Reviews

During March and April 2022, Gatos Silver completed a detailed internal review of all drilling, surface and underground, that was to be used in the Mineral Resource estimate. This review entailed validating the database geochemical analysis values for Ag, Zn, Pb, Cu, and Au back to the .csv assay certificate from the relevant laboratory, CLG or ALS-Chemex. The complete UG assay database was validated against original assay certificates. All except 64 samples, of 44,031 total samples (99.85% validation), of the surface database were verified against original assay certificates.

As part of the process of verifying the data added to the 2024 model, the surface and underground geochemical analysis database values for Ag, Zn, Pb, Cu, and Au were checked against the original certificates and no inconsistencies were identified.

12.1.6 Limitations

The QP for Geology and Mineral Resource estimation is not aware of any additional limitations or any failure to perform adequate data verification.

The process of data validation includes several iterations to fix and resolve possible differences that may be identified during the data collection processes. No limitations that may affect the data are considered, the data capture processes ensure the integrity of the information among the different procedures and protocols of the data flow.

As a result of the data verification and validation process, the differences that were identified have been corrected in the database in coordination with the Geology Department at CLG. The final data extraction for the mineral resource modeling process considers all the corrections made in the database resulting from verification work.

12.1.7 Opinion on Data Adequacy

A reasonable level of verification has been completed at CLG, and no material issues have been identified. The data verification programs for the data used for the Resource Model adequately support the geological interpretations, and the analytical and database quality; and therefore, support the use of the data in Mineral Resource estimation.

The validation results of the data that were exported for the 2024 Mineral Resource Model have been conducted in accordance with the established export and validation procedures. The QP considers the information to be suitable for use in the Mineral Resource model and considers the historical data to be of acceptable quality.

12.2 Mineral Reserves

The QP responsible for the Mineral Reserves and Mining Methods took the following steps to verify the data forming the basis of the estimate:

- **Site Visit:** The QP conducted a site visit to the CLG mine from May 13 to 16, 2024. The QP toured the underground operations, observing active stopes and development headings to assess current mining activities.
- **Mine Design Review:** During the visit, the QP met with the CLG engineering team to review the mine design work in progress for the Mineral Reserve estimate.
- **NSR Cut-off Discussions:** The QP engaged in detailed discussions regarding Net Smelter Return (NSR) cut-off calculations, verifying their appropriateness for the Mineral Reserve estimate.
- **Dilution, Recovery and Stope Dimensions:** The QP and the WSP Senior Principal Rock Mechanics Engineer discussed dilution factors, mining recovery rates, and proposed stope dimensions with CLG engineers.
- **Geotechnical Review:** The WSP Senior Principal Rock Mechanics Engineer reviewed the geotechnical parameters in collaboration with the QP to ensure they were accurate and appropriate for the reserve estimation.
- **Mining Assumptions Verification:** The QP verified the reasonableness of key mining assumptions, including productivity, development rates, stope optimization parameters, and mine design criteria. This verification was based on a review of recent operating experience at CLG and the QP's extensive professional experience.
- **Hydrogeological Review:** A WSP Senior Hydrogeologist, in consultation with the QP, reviewed the hydrogeological parameters and piezometer data to confirm their accuracy and relevance for estimating LOM groundwater conditions.

- **Software Review:** A WSP Mining Engineer, under the supervision of the QP, reviewed the inputs for the mine design and the scheduling software.
- **Internal Controls Assessment:** The QP reviewed internal controls at CLG Mine and procedures for verification of input data as they apply to the preparation of the Mineral Reserve estimation.

The QP is of the opinion that the data and verification procedures used at CLG comply with industry standards and are adequate for the purposes of Mineral Reserve estimation.

12.3 Metallurgy

Mineral processing data is constantly monitored and analyzed as a management control mechanism. Typical data management tests have been reviewed by the QP and are summarized below:

- Metallurgical accounting balances are closed and reconciled with mine production reports and concentrate sold on a monthly basis in order to ensure accuracy and accountability.
- The plant sampling, flow measurements, sample preparation, concentrate dispatch, and assay laboratory facilities were visited in order to assess their conditions and compliance with best practices.
- Supervising staff were interviewed, and documentation was reviewed in order to gain a better understanding of their compliance, procedures and policies.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Previous Disclosures

Since 2012, Mina Cerro Los Gatos has been conducting metallurgical studies for the processing of its ore. The following reports detail the studies up to 2023:

1. Tetra Tech Mineral Resources Report (December 21, 2012):
   - Phase I and Phase II studies by RDi (May and July 2012, respectively) focused on metallurgical follow-up studies for Minera Plata Real Los Gatos.
2. SGS Canada Inc., Burnaby, British Columbia (September 1, 2016):
   - Metallurgical feasibility study for the Los Gatos PJ project, Project 14392-003 – Final report.
3. SGS Canada Inc., Lakefield, Ontario (March 24, 2017):
   - Pilot plant flotation tests on a mineral sample from Los Gatos, Project 14392-0005 – Final report.
4. Base Met Labs, Canada (February 2020 - April 2022):
   - Mineralogical assessment of concentrator performance at Mina Cerro Los Gatos.
5. Gatos Silver Internal Report (February 2023):
   - Fluorine leaching of zinc concentrate.
6. SGS Canada (August 2022):
   - Mineralogical assessment of Mina Cerro Los Gatos for 38 variability samples.
7. Gatos Silver Internal Reports (August 2023):
   - Update on fluorine leaching of zinc concentrate, recovery of Au-Ag in tails, and recovery of Pb-Cu.
8. Gatos Silver Internal Report (December 2023):
   - Throughput debottlenecking study.

13.2 New Metallurgical Testwork Programmes

Mina Cerro Los Gatos continues to advance its studies in 2024, as detailed below:

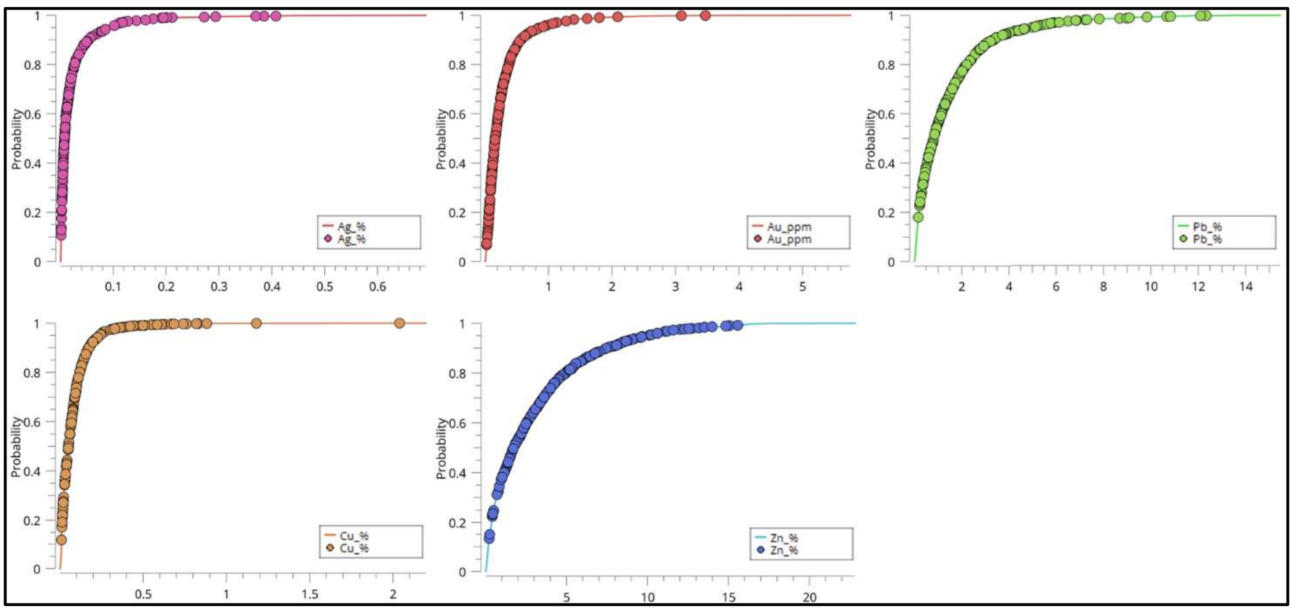
1. Gatos Silver Internal Report (February 2024):
   - Study on ultrafine recovery.
2. SGS Canada (May 2024):
   - Mineralogical assessment of Mina Cerro Los Gatos for 7 plant samples and 71 variability samples.
3. Frisco Research and Development (June 2024):
   - Mineralogical characterization of Mina Cerro Los Gatos for 8 variability samples.
4. Current Metallurgical Program:
   - Gatos Silver Internal Report (July 2024): Brownfield 3 Variability Samples (W-30 2024) program focused on the separation of lead (Pb) and copper (Cu) for 18 samples from the SE zone of the deposit, where high copper contents have been identified. The mineralogical characterization of these samples is currently underway.

13.3 Samples

From 2021 to 2024, the geometallurgy team at Los Gatos studied the resource using samples from two sources. First, 118 samples were taken from drill core for flotation tests, and 109 of these were further analyzed for their mineralogy. Second, 683 samples from underground channel samples were taken for additional flotation tests. The goal was to improve the short-term block model with new data on metallurgical performance.

13.3.1 Sample representativity

Currently, 801 samples have been registered and processed at the plant between June 2021 and April 2024. For the evaluation of representativeness, 248 are analyzed, which are samples that have not yet been processed. According to Figure 13.1, the representativeness of the samples was evaluated by comparing their chemical characteristics and spatial distribution with the information obtained from the drill cores. The samples were found to be reasonably representative of the resource and reserves, covering the range of grades for the main elements (Ag, Zn, Pb, Cu, Au) and rock types.



Source: CLG

Figure 13.1:Sample Representativity

13.3.2 Resource Table

Table 13.1 presents the distribution of the block model by zones, it is highlighted that:

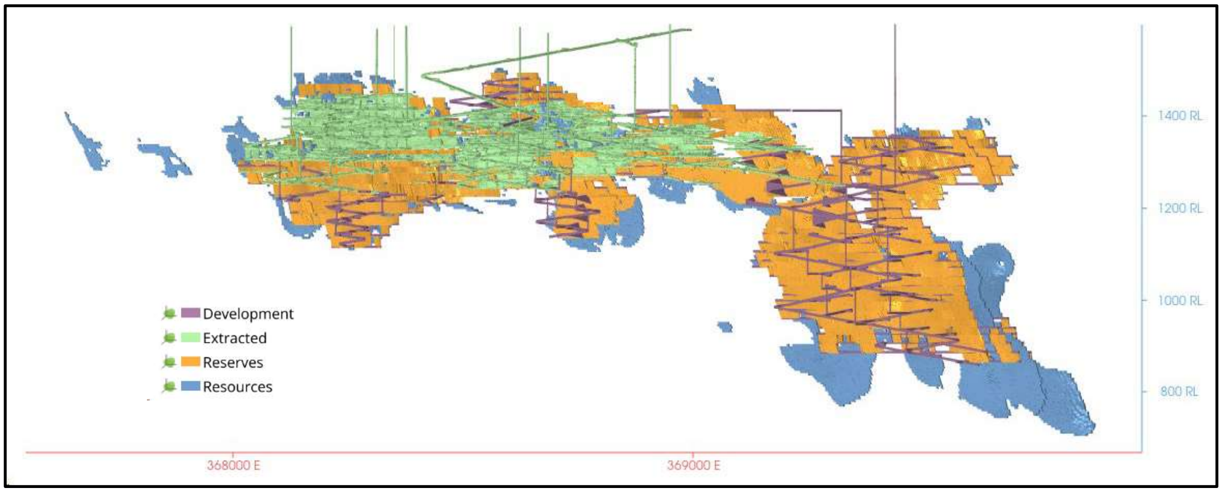
- The SE zone has a lower intensity of sampling than the CZ zone.
- The SEU zone is an extension of the CZ zone reserves.
- More sampling from the SE Zone is recommended before entering production.

Table 13.1: Summary of Sample Population and Domains Distribution

Zone	Reserve		Metallurgical Samples		
	%	Average Ag, g/t	Total	%	Samples /Mt
SE	50	93	67	27	36
SEU	6	118	21	8	8
CZ	27	224	121	49	210
NW	18	331	39	16	8

13.3.3 Historical Production

Figure 13.2 illustrates the material that fed the production plant between 2019 to June 30, 2024, and the block model by zones. The Southeast (SE) reserve has increased with the 2024 update.

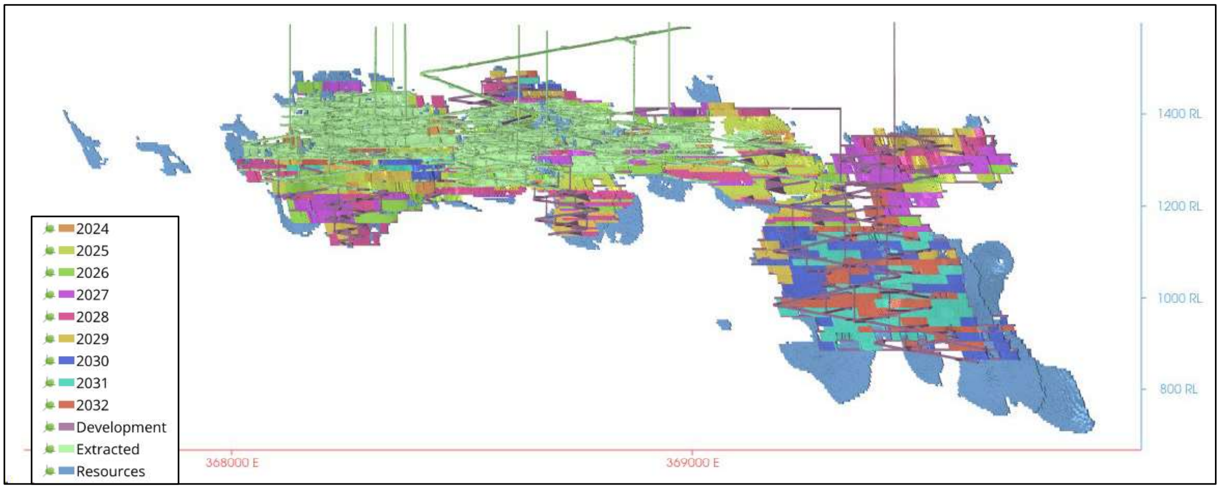


Source: CLG

Figure 13.2: Production 2019-2024

13.3.4 Mining Plan

Figure 13.3 presents the life of mine per year for the period from 2024 to 2032.

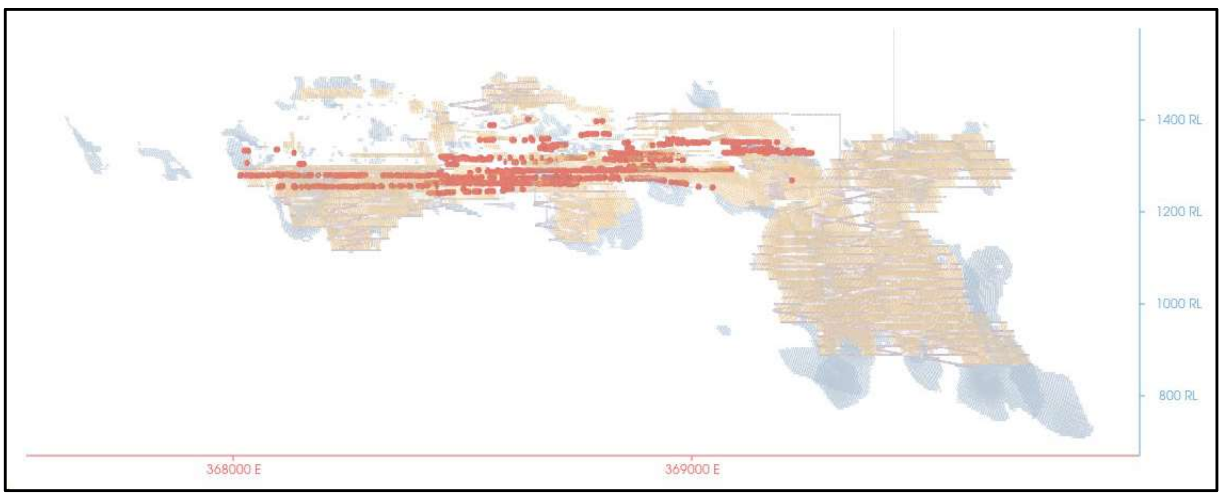


Source: CLG

Figure 13.3: Life-of-Mine 2024-2032

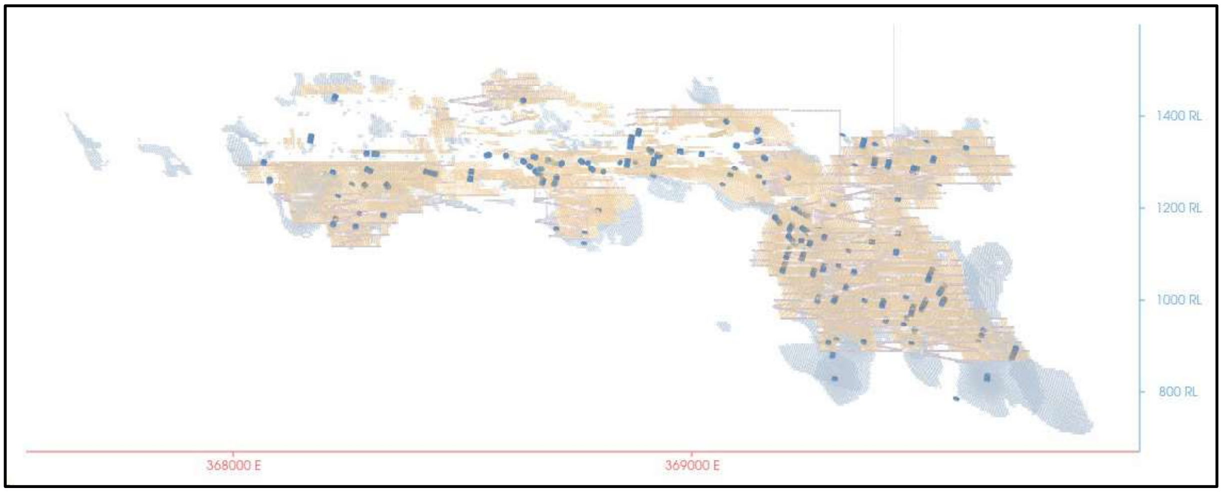
13.3.5 Spatial Distribution

Figure 13.4 and Figure 13.5 present the geometallurgical variability sample spatial distribution by sample sources, channel samples and phase variability samples from drillholes.



Source: CLG

Figure 13.4: Spatial Distribution of Samples from Channels



Source: CLG

Figure 13.5: Spatial Distribution of Variability Samples from Cores

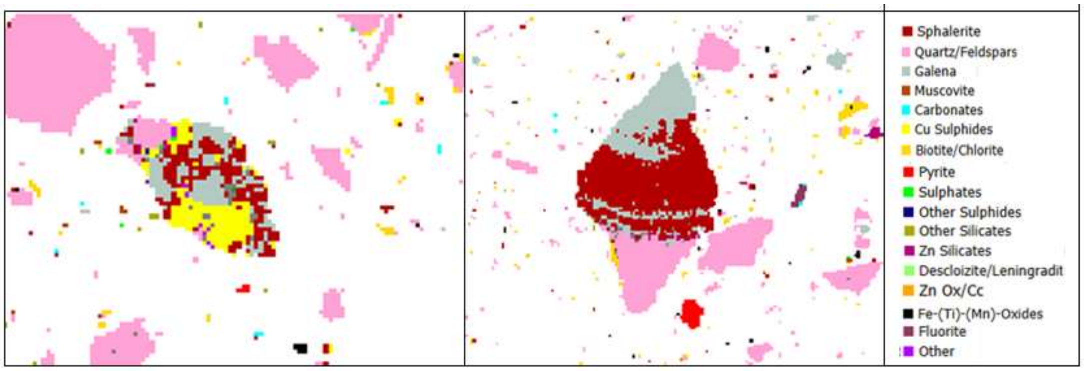
13.4 Mineralogical Characterization

The Los Gatos metallurgy team has conducted mineralogical studies of variability samples since 2022. In 2024, a comprehensive mineralogical characterization of 71 geometallurgical samples was performed at the SGS Canada laboratory.

The primary objective of these studies was to assess the effects of mineralogical assemblages and overhead textures on individual flotation samples. The key minerals identified for the primary metals of interest are as follows:

- Silver: Enargite (Ag), Diaphorite, and Mckinstryite
- Lead: Galena and Leningradite
- Zinc: Sphalerite, Zincite, Descloizite, Hemimorphite, and Genthelvite

Figure 13.6 illustrates on the left side the pseudocolor image of a complex particle intermediate between galena, chalcopyrite, sphalerite, and quartz and on the right side of the image a complex sphalerite particle associated with galena and quartz.



Source: CLG

Figure 13.6: Pseudo-Color Map of a Sphalerite, Galena, Quartz

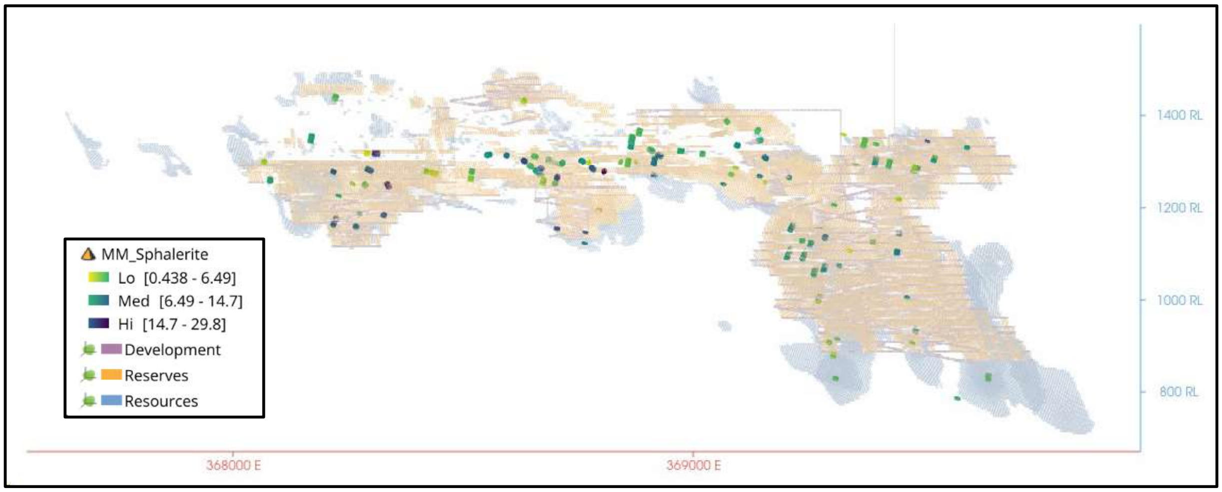
From the results, it was concluded that, for most of the samples, zinc is found as sphalerite, hemimorphite, and chlorite. Sphalerite presents as >80% liberated in most samples and the rest is associated with non-sulfide gangue minerals. The galena is 79% free; while the rest is associated with sphalerite, pyrite and gangue minerals.

Table 13.2 presents the statistical analysis of the main lead, zinc, and copper minerals reported in modal mineralogy.

Table 13.2: Zinc Mineralogical Assemblage

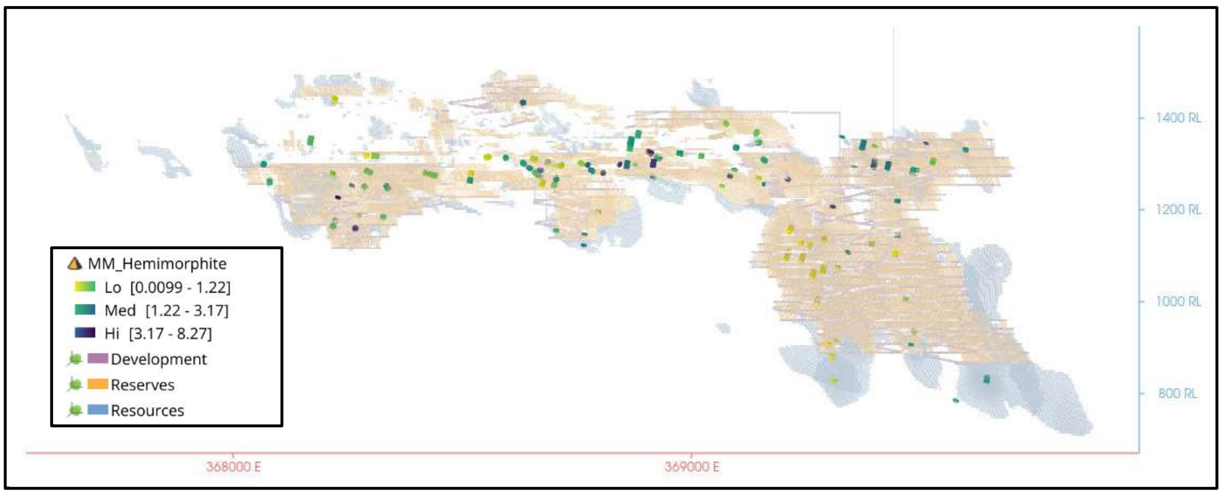
Mineral	Min	Max	Average
Galena	0.36	52.7	4.75
Sphalerite	0.44	29.8	8.22
Hemimorphite	0.01	8.27	1.43
Chalcopyrite	0.05	3.79	0.72

Figure 13.7 and Figure 13.8 present the spatial distribution of the mineralogically characterized samples. It is observed that the hemimorphite content is higher in the Central zone and SE zone, and lower in the NW zone. The sphalerite content varies throughout the deposit.



Source: CLG

Figure 13.7: Spatial Distribution of Sphalerite in LAS Samples



Source: CLG

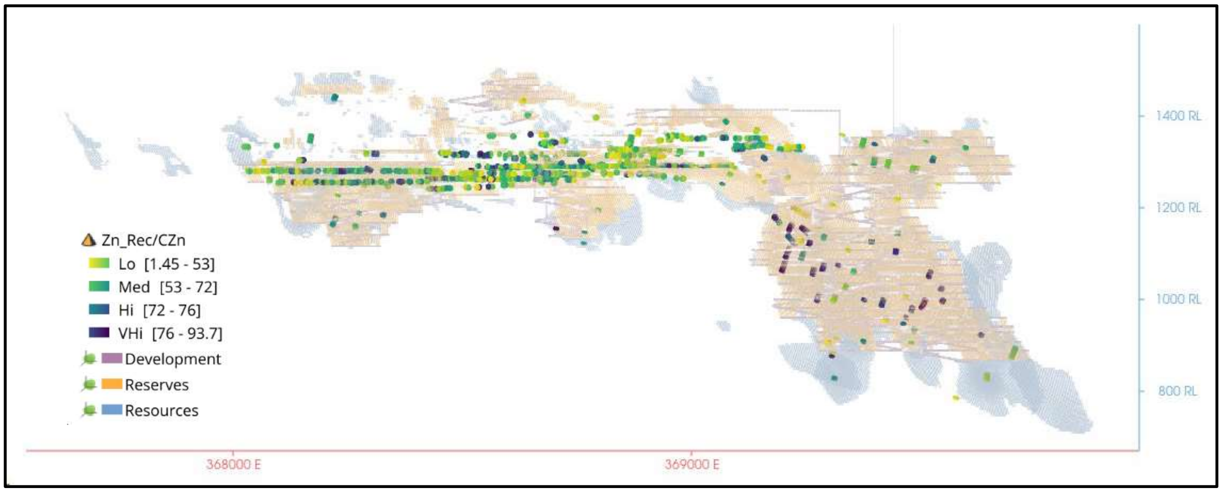
Figure 13.8: Spatial Distribution of Hemimorphite in LAS Samples

It was concluded that:

- Zinc present as oxide, silicate and carbonate minerals would not be recovered by flotation.
- The reduction of pyrite from bulk Cu/Pb concentrates could potentially obtain a cleaner bulk concentrate.

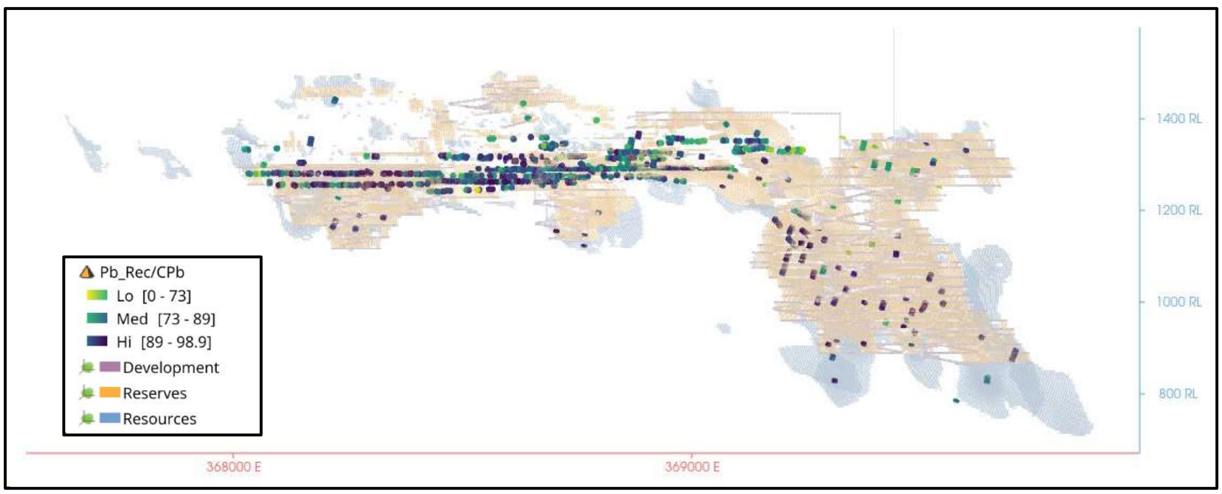
13.4.1 Recovery Results

Figure 13.9 to Figure 13.12 illustrate the geometallurgical variability sample spatial distribution by recovery results for zinc, lead, silver, and copper.



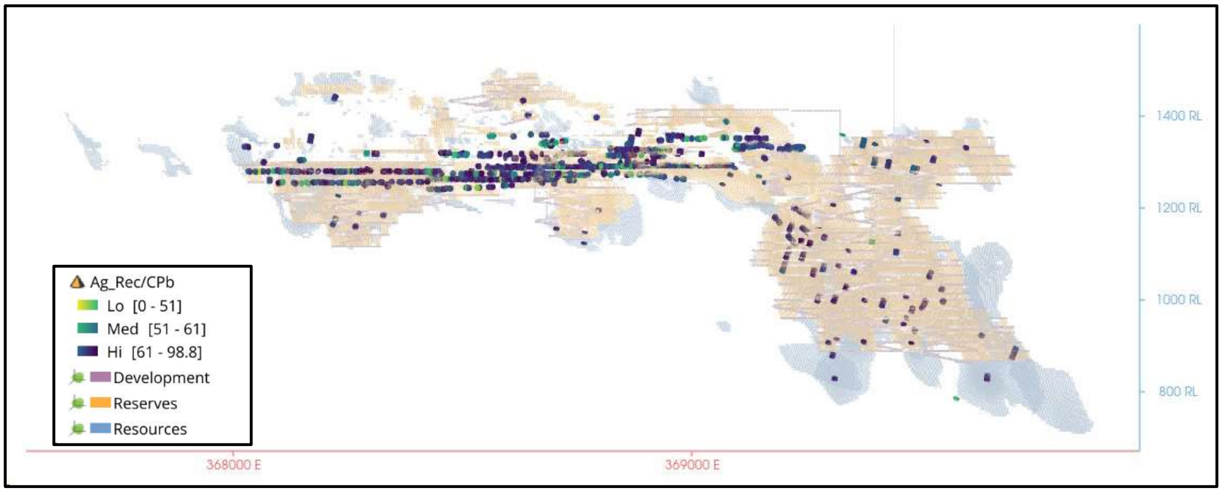
Source: CLG

Figure 13.9: Spatial Distribution of Zinc Recovery Results



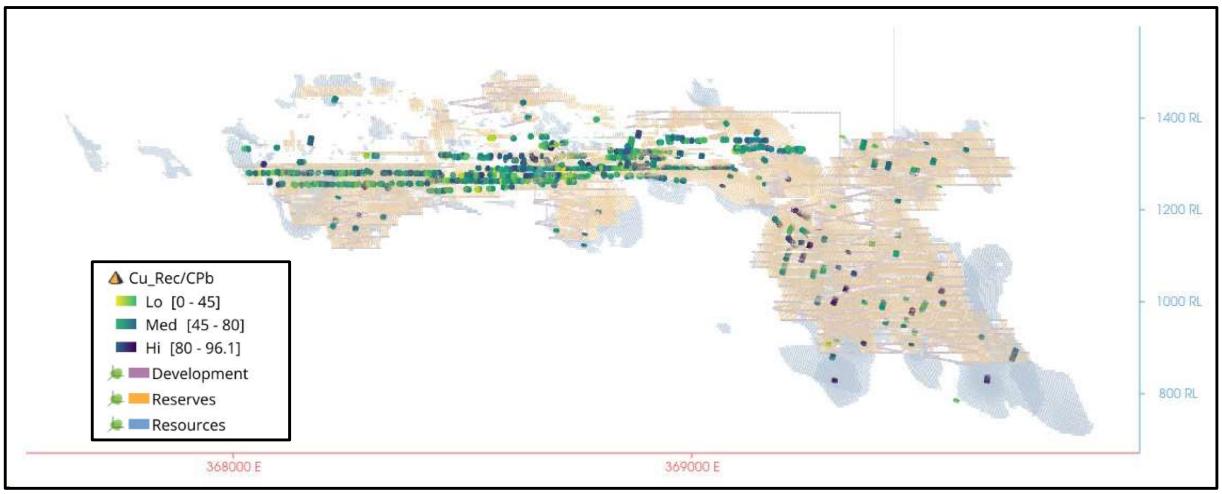
Source: CLG

Figure 13.10: Spatial Distribution of Lead Recovery Results



Source: CLG

Figure 13.11: Spatial Distribution of Silver Recovery to Lead Concentrate Results



Source: CLG

Figure 13.12: Spatial Distribution of Copper Recovery to Lead Concentrate Results

Table 13.3 presents the statistical analysis of the results of the Pb-Zn flotation tests for the variability samples and channels representing mineralization that has not yet been processed. The analysis of recoveries of Ag, Pb, Cu, and Zn by deposit origin is presented.

Table 13.3: Summary Statistics of Recovery

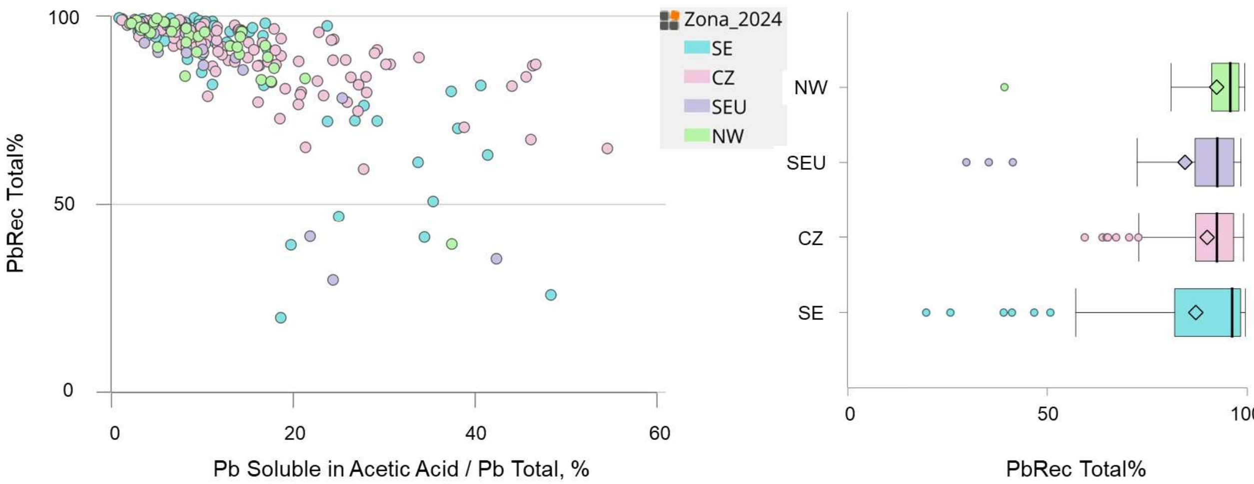
Stage	Ag Rec CPb%		Pb Rec CPb%		Cu Rec CPb%		Zn Rec CZn%	
	Channels	Ph-Var	Channels	Ph-Var	Channels	Ph-Var	Channels	Ph-Var
N	153	93	153	93	153	93	153	93
Minimum	15.3	27.0	17.3	17.9	8.12	13.2	3.43	1.45
Maximum	98.3	98.8	98.8	98.9	93.8	96.1	85.9	93.7
Mean	72.8	78.9	86.1	85.7	55.8	65.4	48.5	50.5
Median	74.3	81.6	89.4	93.6	57.6	67.4	51.2	59.0
SD	15.4	12.7	12.8	18.0	18.8	19.0	20.5	28.9

An examination of global lead recovery results reveals significant variability in the Southeast region of the deposit, as evidenced by zone mapping. This observation suggests the need for a more comprehensive assessment of recovery patterns in relation to other geological events or parameters within this part of the deposit.

Similarly, the analysis of global zinc, silver, and copper recovery results indicates that zone mapping alone is insufficient to explain the variability observed across the deposit. As with lead, it is recommended to continue to investigate potential associations between these metal recoveries and additional geological factors or parameters present in the deposit.

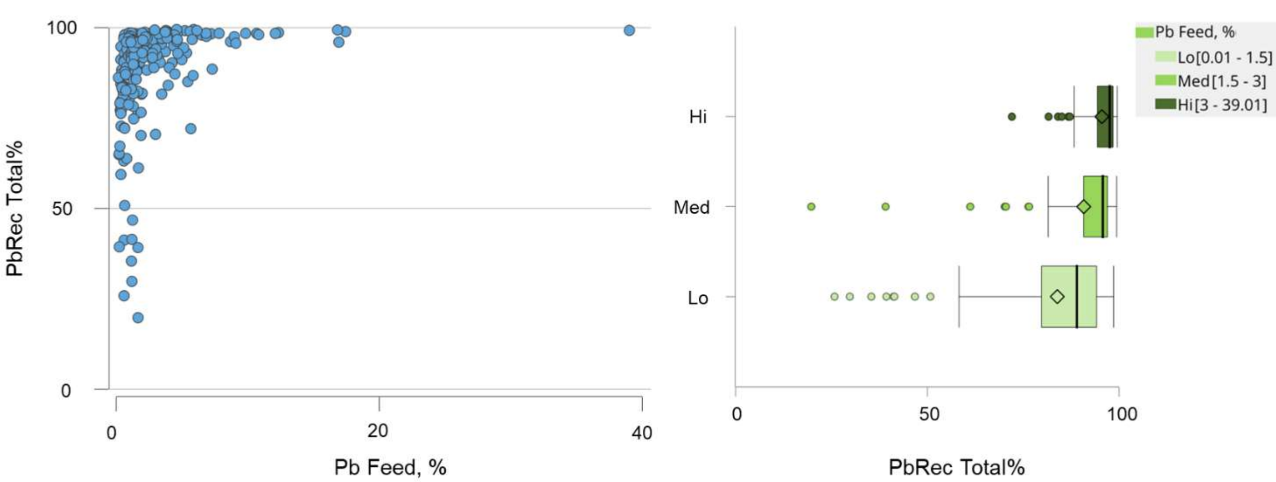
13.4.1.1 Lead

Figure 13.13 presents the metallurgical performance of lead in the geometallurgical variability tests by mining zone, and Figure 13.14 illustrates it in relation to the lead head grade.



Source: CLG

Figure 13.13: Pb Total Recovery by Zone

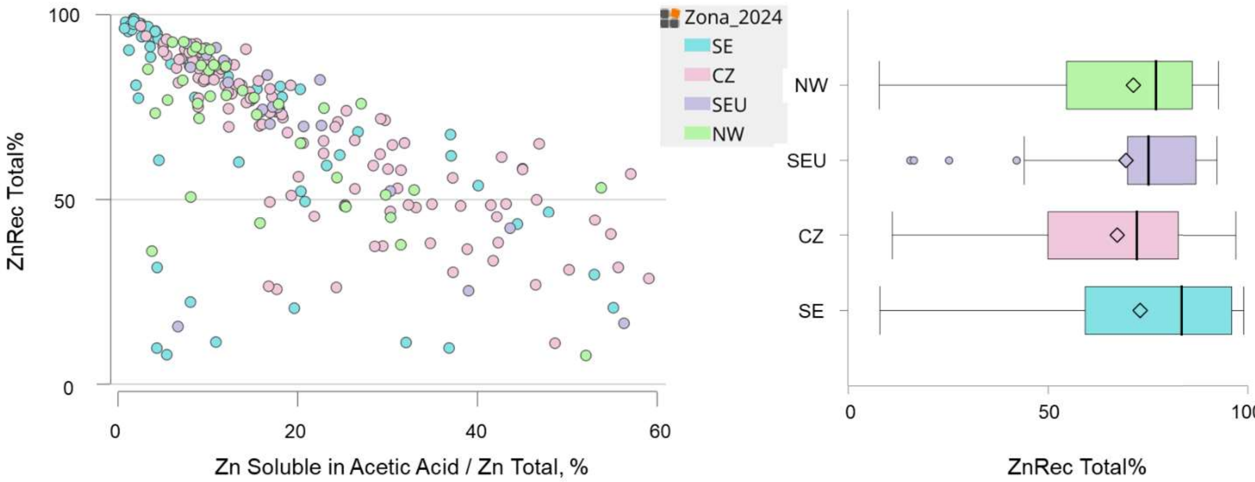


Source: CLG

Figure 13.14: Pb Total Recovery by Head Grade

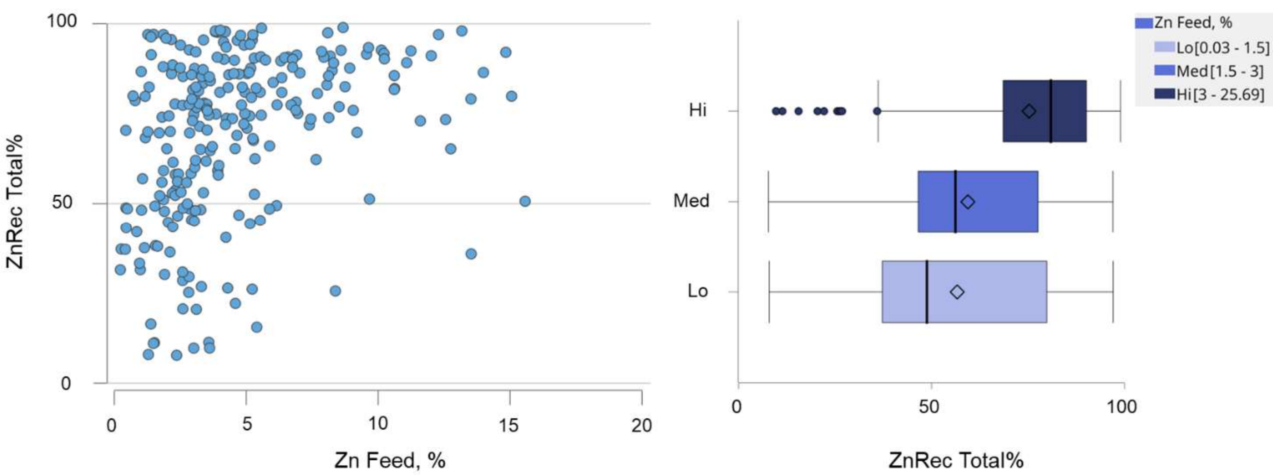
13.4.1.2 Zinc

Figure 13.15 presents the metallurgical performance of zinc in the geometallurgical variability tests by mining zone, and Figure 13.16 illustrates it in relation to the zinc head grade.



Source: CLG

Figure 13.15: Zn Total Recovery by Zone

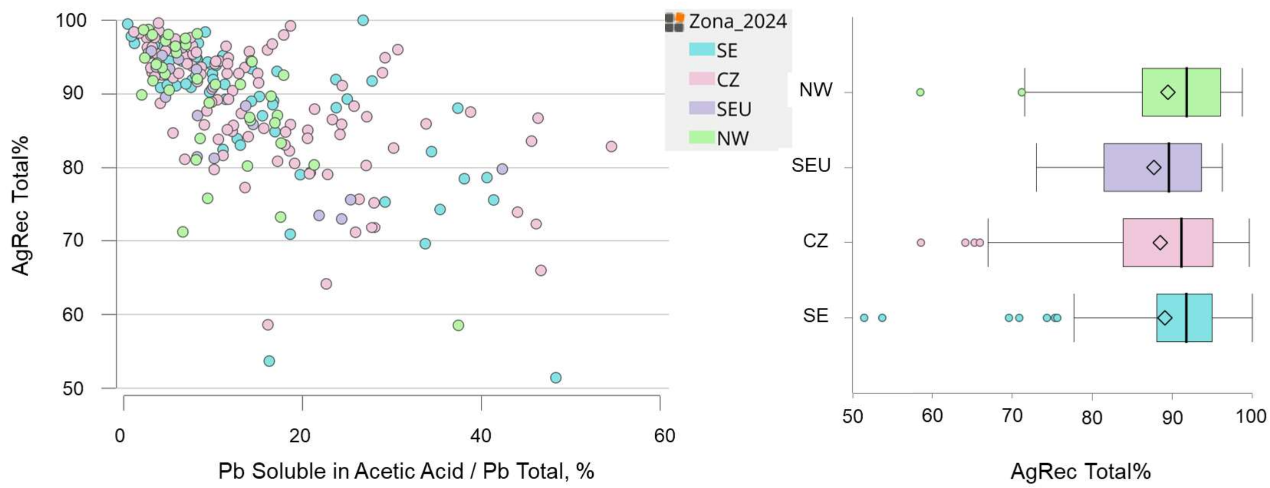


Source: CLG

Figure 13.16: Zn Total Recovery by Head Grade

13.4.1.3 Silver

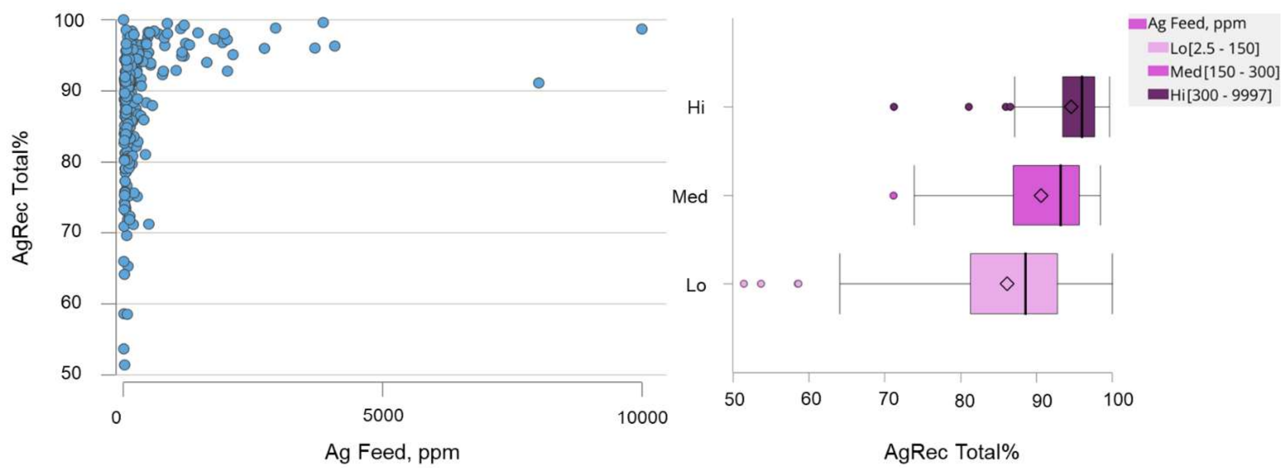
Figure 13.17 presents the metallurgical performance of silver in the geometallurgical variability tests by mining zone.



Source: CLG

Figure 13.17: Ag Total Recovery by Zone

Figure 13.18 illustrates the metallurgical performance of silver in geometallurgical variability tests based on the Ag feed grade.

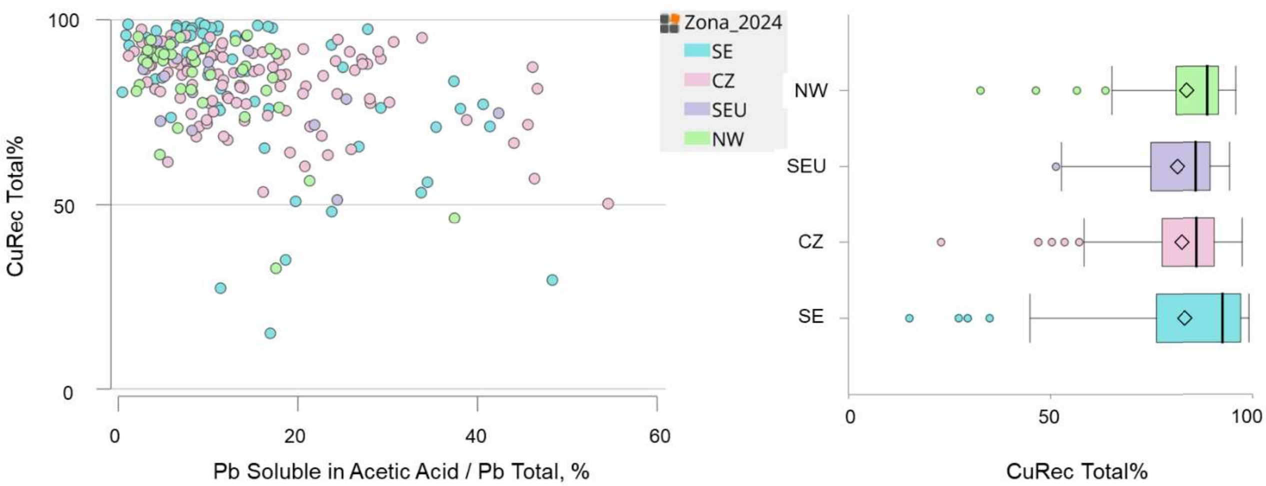


Source: CLG

Figure 13.18: Ag Total Recovery by Head Grade

13.4.1.4 Copper

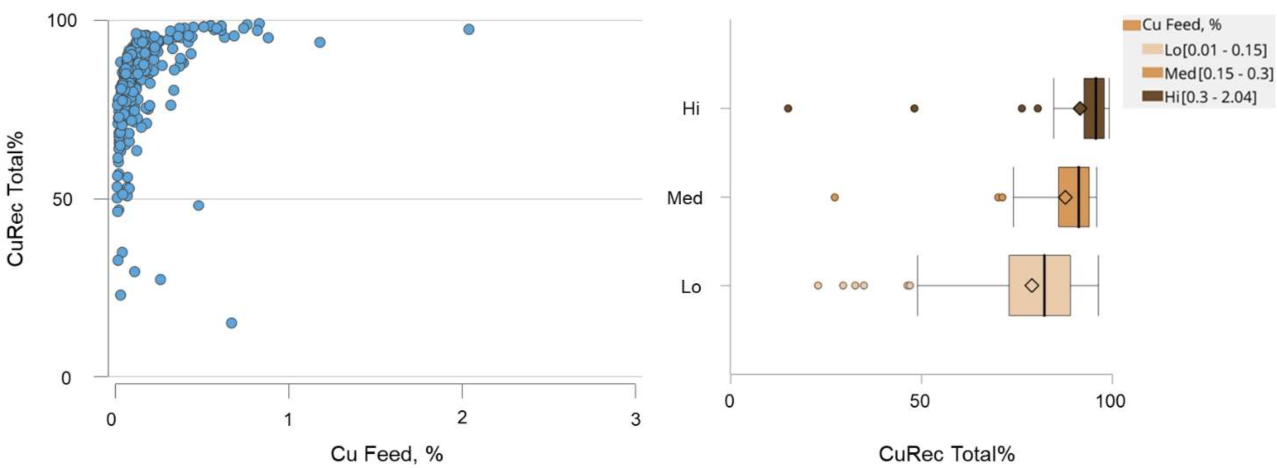
Figure 13.19 presents the metallurgical performance of copper in the geometallurgical variability tests by mining zone.



Source: CLG

Figure 13.19: Cu Total Recovery by Zone

Figure 13.20 illustrates the metallurgical performance of copper in geometallurgical variability tests based on the Cu feed grade.



Source: CLG

Figure 13.20: Cu Total Recovery by Head Grade

Recovery results do not show a strong correlation with observable geological events or parameters. Therefore, historical plant information was used to predict metallurgical performance. Furthermore, past plant data is thought to be a better predictor of industrial scale performance than laboratory testwork. The past plant feed is representative of the future feed in the short and mid-term. Additional testing and scale-up efforts are necessary to mitigate risks associated with long-term predictions in the NW and Southeast regions, ensuring smoother transitions into production and minimizing unexpected outcomes.

13.5 Mineralogy Performance Plant

The mineralogical characterization was carried out on composite samples taken from the Los Gatos process. Base Metal Labs in Canada performed characterization of samples from February and August 2020, January and June 2021, and April 2022; while SGS Canada carried out sample characterization on the June 2023 sample.

Table 13.4 presents the results of modal analysis for samples taken from the plant feed. The June 2023 sample shows the highest content of sphalerite, iron oxides, and chlorite. Sphalerite is the primary mineral contributing zinc, which decreased from 2021 to 2022; however, it increased notably in the June 2023 sample compared to previous periods. Table 13.5 illustrates the zinc distribution. Galena content remains similar to that of the April 2022 sample, while fluorite content is lower compared to previous samples.

Table 13.4: Modal Mineralogy – Feed

Mineral	Feb-20	Aug-20	Jan-21	Jun-21	Apr-22	Jun-23
Pyrite	1.98	1.72	0.85	1.18	2.3	0.89
Galena	2.07	2.57	2.28	2.25	3.13	3.07
Sphalerite	4.12	5.02	4.39	5.48	5.53	7.4
Cu Sulfides	0.12	0.14	0.18	0.16	0.31	0.2
Zn Silicates	-	-	-	-	-	0.82
Zincite	-	-	-	-	-	0.02
Quartz/Feldspars	67.9	63.3	67	63.7	68.5	64.5
Muscovite	1.85	3.37	2.71	3.71	3.56	3.55
Fluorite	6.18	8.04	9.08	7.66	5.63	4.05
Silver Minerals	0.04	0.07	0.07	0.07	0.13	0.04
Iron Oxides	2.74	2.65	2.18	3.41	1.93	3.81
Chlorite	3.74	4.21	2.74	3.75	1.49	4.74
Biotite/Phlogopite	1.47	1.56	1.07	1.52	1.03	1.99

Table 13.5: Deportment Zn - Feed

Mineral	Feb-20	Aug-20	Jan-21	Jun-21	Apr-22	Jun-23
Sphalerite	85.4	82.3	81.3	76.3	75	91.4
Hemimorphite	-	-	-	-	-	4.00
Chlorite	-	-	-	-	-	3.11
Smithsonite	2.6	4.5	6.9	8.5	3.9	-
Willemite	2.6	4	2.4	3.9	16.2	-
Baileychlore	8.3	7.8	7.7	9.4	4.2	-
Fe Oxides	0.9	1.3	1.2	1.7	0.6	0.01

Table 13.6 presents the modal mineralogy of the lead concentrate. The main diluent in lead concentrate is sphalerite, however, there has been a steady increase in the copper content of the bulk concentrate.

Table 13.6: Modal Mineralogy - Conc Pb

Mineral	Feb-20	Aug-20	Jan-21	Jun-21	Apr-22	Jun-23
Pyrite	4.06	4.43	0.97	3.4	7.08	1.94
Galena	68.8	67.8	62.5	60.1	59.7	63.7
Sphalerite	13.3	14.4	21.1	17.3	16.6	13.5
Cu Sulfides	1.93	2.01	1.95	1.91	2.42	4.07
Ag-Sulfosalts	-	-	-	-	-	0.53
Quartz/Feldspars	3.77	3.01	4.26	4.86	5.48	2.99
Fluorite	0.69	1.82	1.1	0.92	0.9	0.43
Silver Minerals	1.1	0.89	0.84	1.62	2.12	-
Iron Oxides	1.77	2.03	3.37	3.85	2.72	7.5

Table 13.7 presents the modal mineralogy of the zinc concentrate. The implementation of the fluorite leaching plant in 2023 has increased the quality of the concentrate. There has also been continued reduction in lead losses to the zinc concentrate over the years.

Table 13.7: Modal Mineralogy - Conc Zn

Mineral	Feb-20	Aug-20	Jan-21	Jun-21	Apr-22	Jun-23
Pyrite	1.69	0.88	1.35	0.84	1.54	0.29
Galena	4.45	1.97	2.32	1.84	1.76	0.50
Sphalerite	87.5	90.3	86.6	89.9	89.2	93.7
Cu Sulfides	0.92	1.03	1.01	0.96	0.72	0.92
Zn Silicates	-	-	-	-	-	0.15
Quartz/Feldspars	1.58	1.49	2.63	1.98	2.69	1.03
Fluorite	0.19	0.32	0.48	0.26	0.30	0.07
Iron Oxides	1.71	1.08	1.68	1.30	2.09	1.88

13.6 Historical Plant Performance

The Los Gatos mill has been operating since 2019 at an increasing production rate from 2,700 tonnes per operating day (t/d) to an average of 3086 t/d in 2023, and 3,542 t/d in Q1 2024. The main source of material was mined from the Central Zone and NW zone. This is expected to continue, with increasing contributions from the Southeast Zone.

The historical plant performance has been the primary basis for the metallurgical predictions in this resource update.

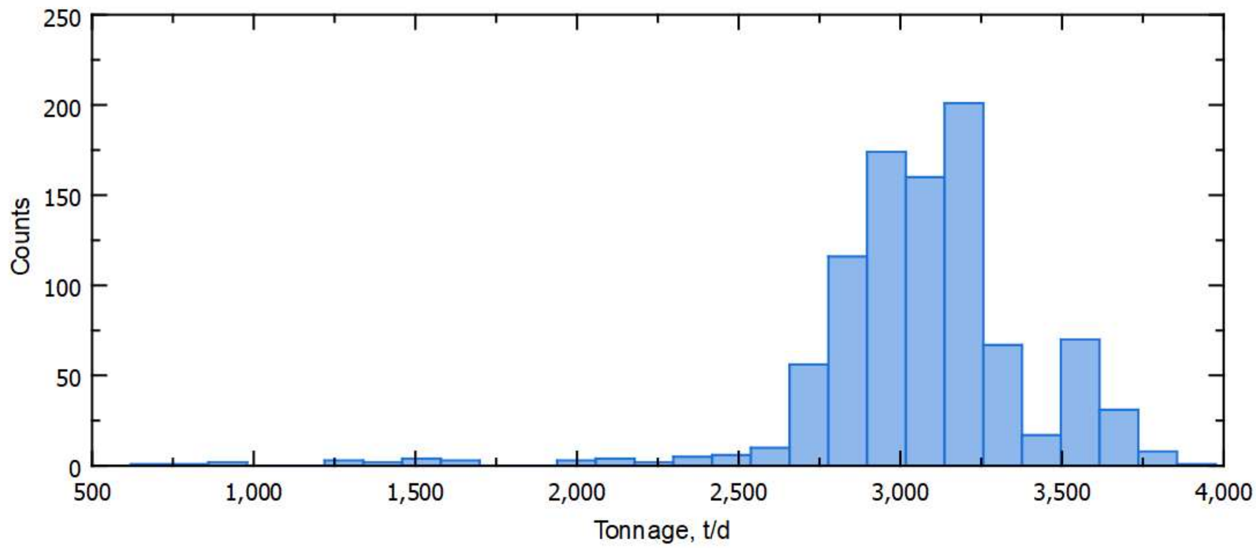
13.6.1 Throughput

The plant was originally designed for 2,500 t/d throughput capacity, but through good maintenance, operating, and optimization processes, the plant can reliably achieve over 3,300 t/d.

- The 2024 LOM Plan is based on an nominal processing rate of 3,500 tonnes per calendar day which equates to 3,746 tonnes per operating day assuming two days per month non-operating.
- From June 2021 to August 2022, the average throughput was 2,872 t/d.
- From January 2022 to August 2022, the average throughput was 2,902 t/d.

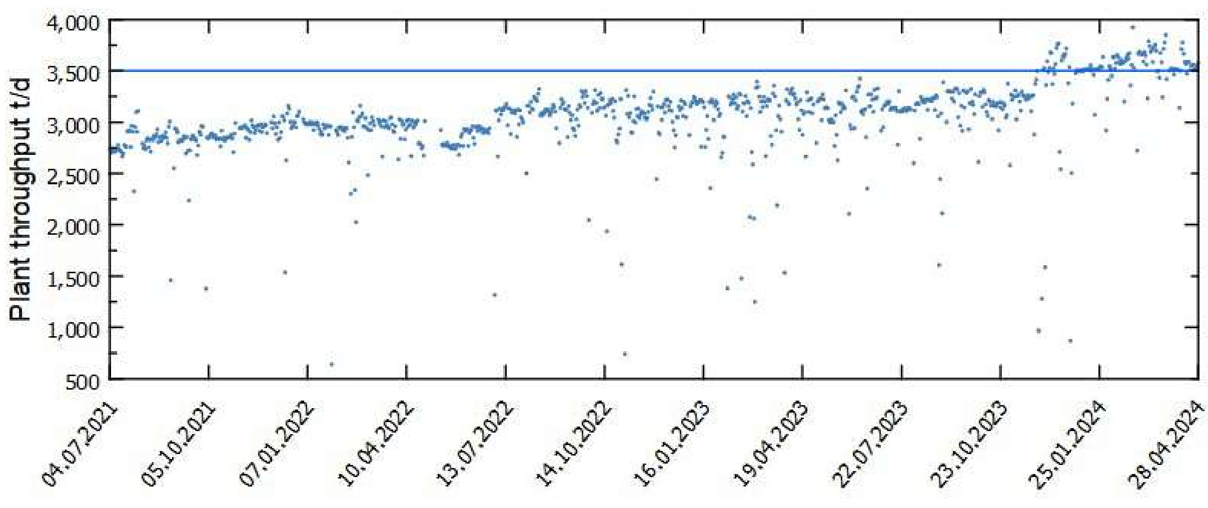
- From September 2022 to June 2023, the average throughput was 3,086 t/d.
- From July 2023 to April 2024, the average throughput was 3,303 t/d.

The mine production and therefore availability of material for the processing plant continues to be the limiting constraint on throughput. Figure 13.21 and Figure 13.22 provide the distribution of plant throughput performance and time plot of plant throughput performance, respectively.



Source: CLG

Figure 13.21: Distribution of Plant Throughput Performance

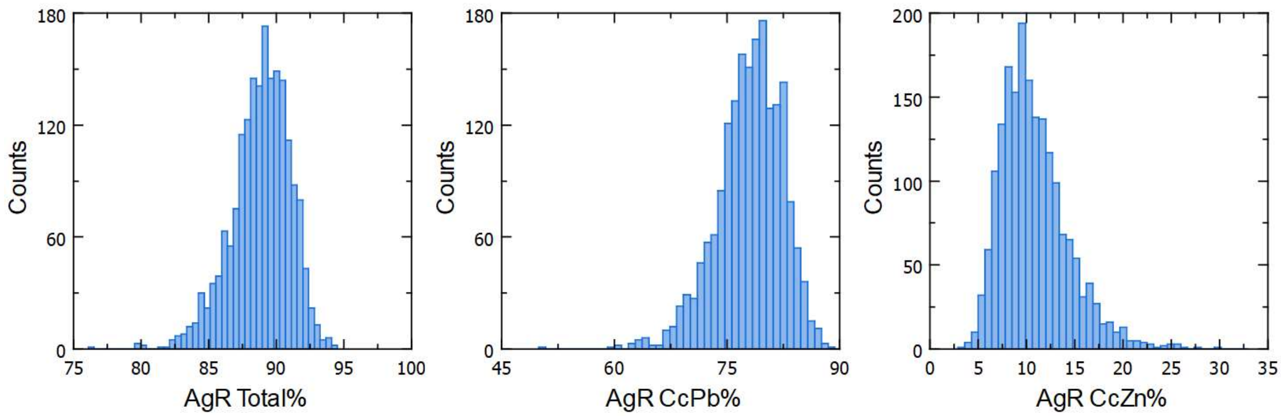


Source: CLG

Figure 13.22: Time Plot of Plant Throughput Performance

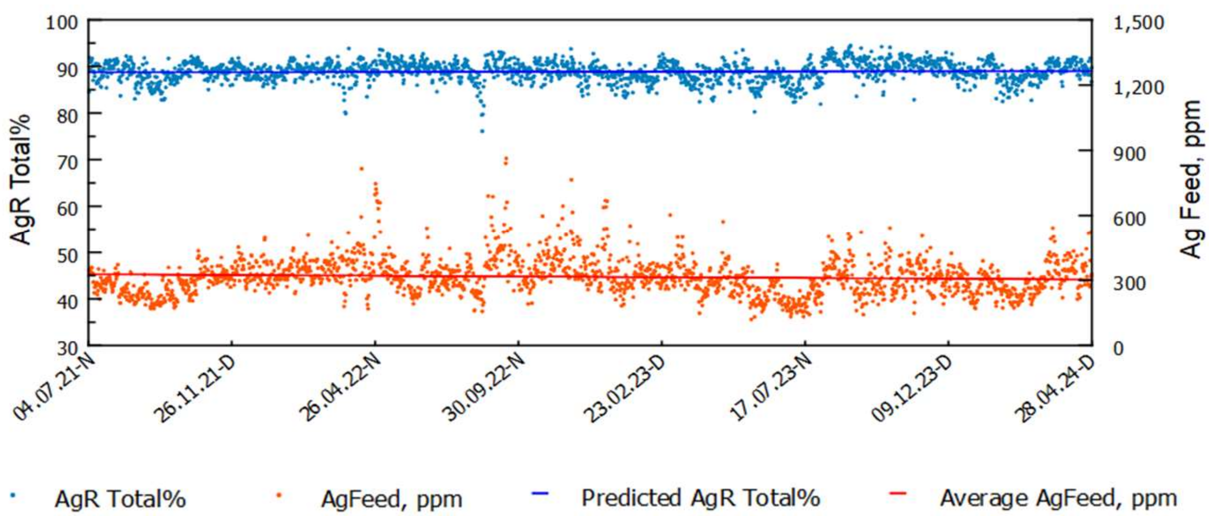
13.6.2 Silver

Figure 13.23 provides distributions of the historical total Ag recovery in plant (AgR Total%), which is the sum of Ag recovered in the Pb concentrate (AgR CcPb%) and Zn concentrate (AgR CcZn). Figure 13.24 shows a time graph of the plant's total silver recovery for the 34-month period from July 2021 to April 2024. Silver metallurgical performance has been stable.



Source: CLG

Figure 13.23: Distributions of Historical Silver Recovery (Total, to Pb Concentrate, to Zn Concentrate)



Source: CLG

Figure 13.24: Time Plot of Plant Total Silver Recovery

Table 13.8 includes summary statistics of silver recovery performance for the period of July 2021 to April 2024.

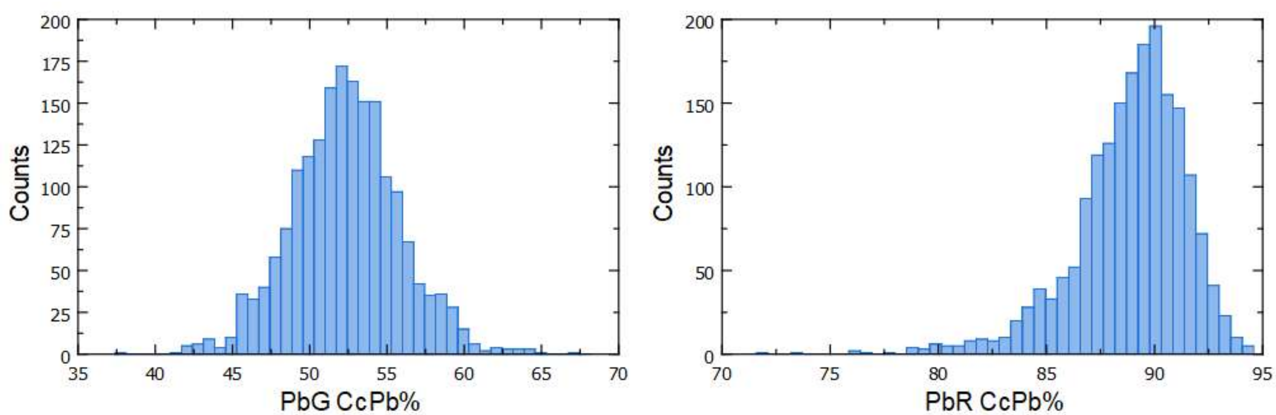
Table 13.8: Summary Statistics of Silver Recovery

	AgG CcPb, ppm	AgR CcPb%	AgR CcZn%	AgR Total%
Median	6,962	78.4	10.3	89.1
Mean	7,200	78.0	10.9	88.9
Std. Deviation	2,268	4.38	3.53	2.17
Minimum	2,635	49.9	2.91	76.1
Maximum	19,437	89.4	33.0	94.5
25th percentile	5,611	75.5	8.31	87.6
50th percentile	6,962	78.4	10.3	89.1
75th percentile	8,433	81.2	12.7	90.4

After analysis of the historical plant production database, the total silver recovery was estimated to be 88.9%.

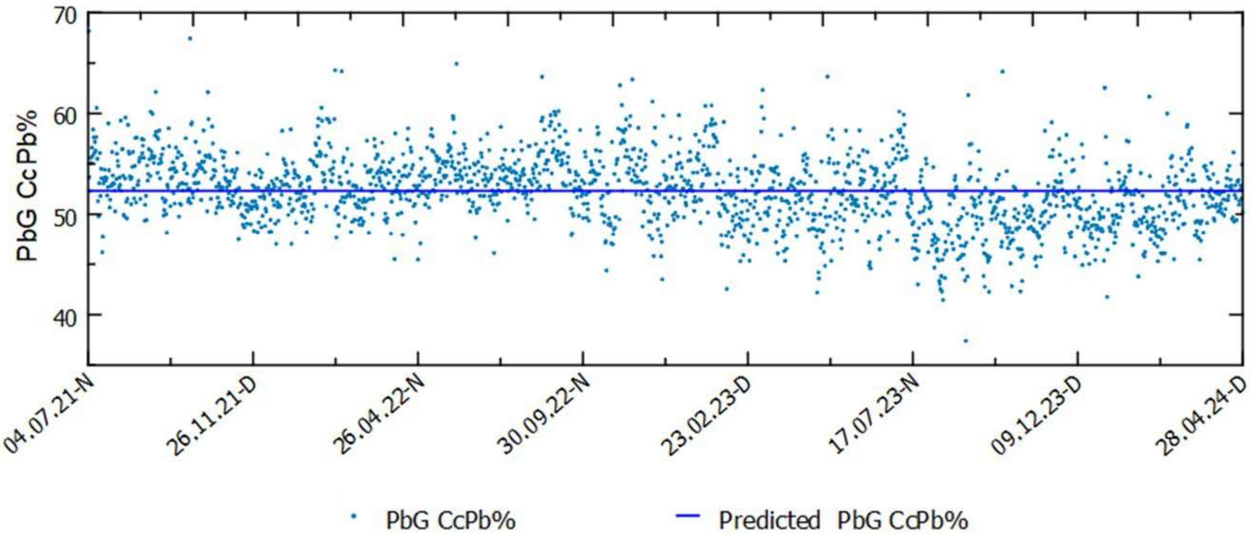
13.6.3 Lead

Figure 13.25 presents distributions of historical lead recovery and lead concentrate grade. **Figure** 13.26 and **Figure** 13.27 provide time plot of plant lead concentrate grade and time plot of plant lead recovery, respectively. The lead metallurgical performance has been stable.



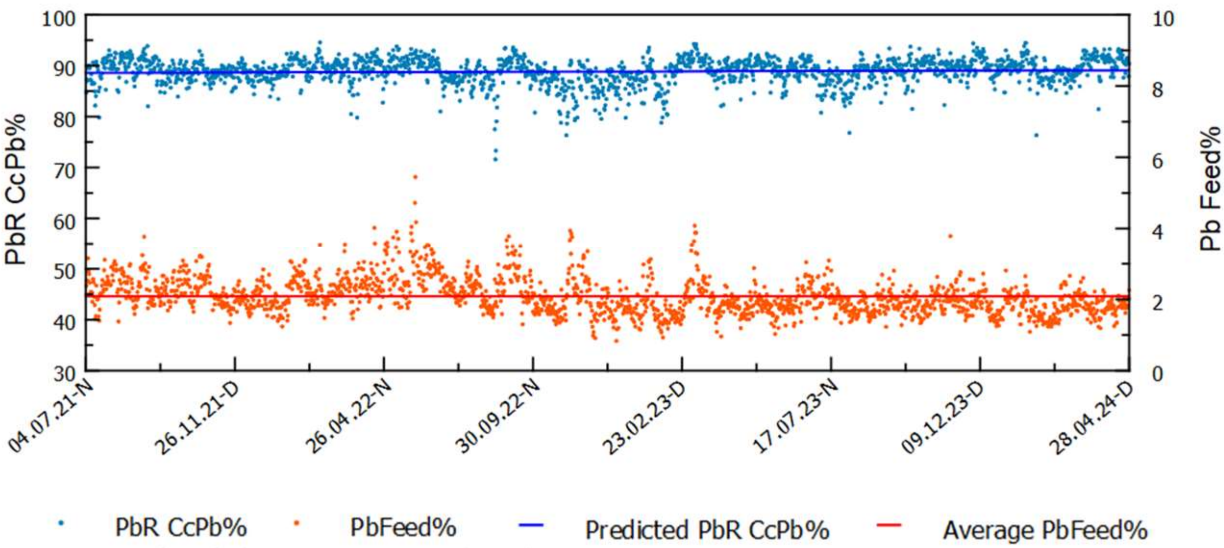
Source: CLG

Figure 13.25: Distributions of Historical Lead Recovery and Lead Concentrate Grade



Source: CLG

Figure 13.26: Time Plot of Plant Lead Concentrate Grade



Source: CLG

Figure 13.27: Time Plot of Plant Lead Recovery

Table 13.9 provides summary statistics of lead recovery and lead concentrate grade for the period of July 2021 to April 2024.

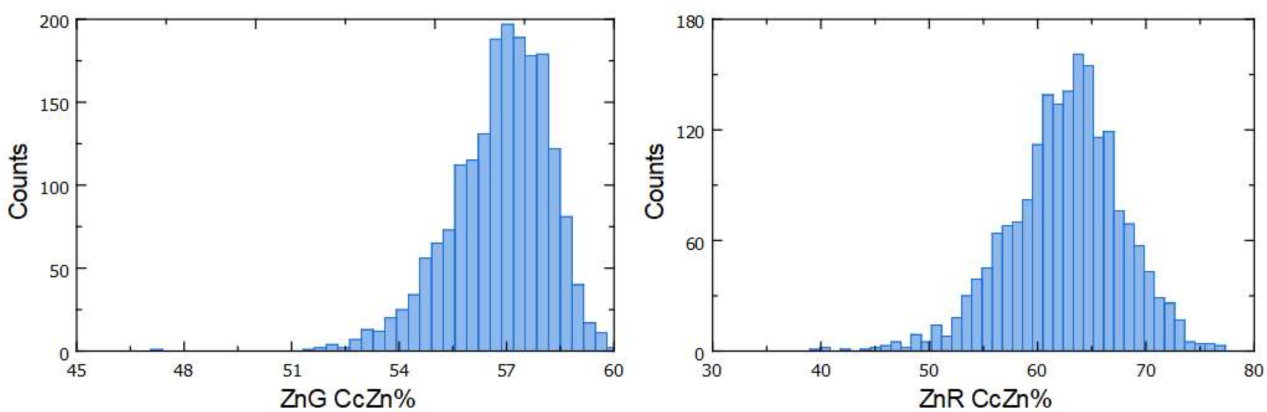
Table 13.9: Summary Statistics of Lead Recovery and Lead Concentrate Grade

	PbG CcPb%	PbR CcPb%
Median	52.3	89.2
Mean	52.3	88.9
Std. Deviation	3.52	2.62
Minimum	37.4	71.6
Maximum	68.2	94.6
25th percentile	50.1	87.6
50th percentile	52.3	89.2
75th percentile	54.5	90.6

After analysis of the historical plant production database, it was estimated that the recovery of lead in the lead concentrate would be 88.9% in the LOM plan.

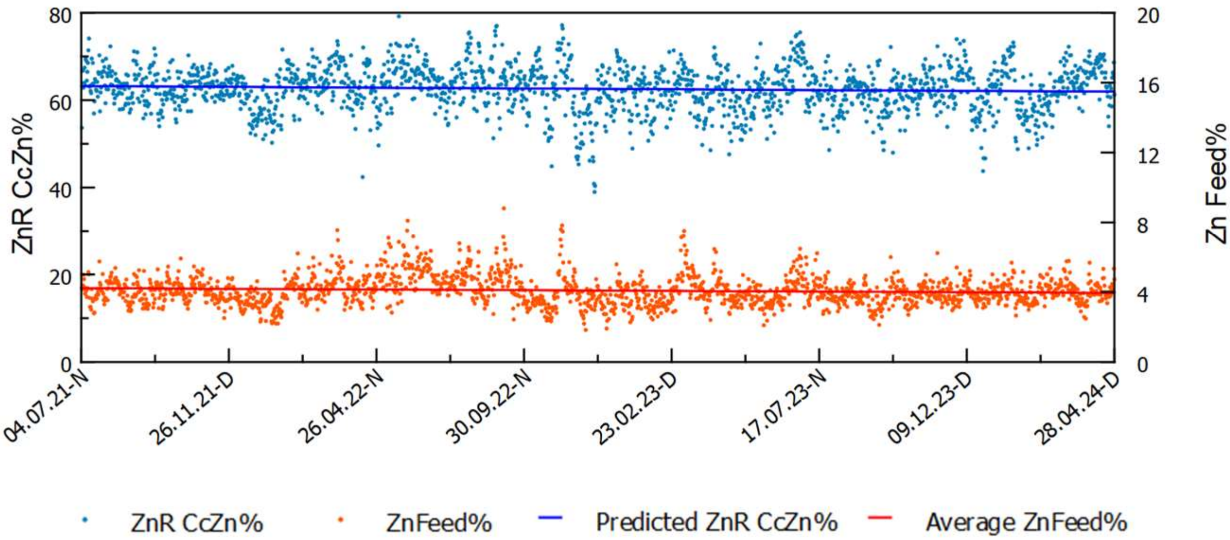
13.6.4 Zinc

Figure 13.28 provides distributions of historical zinc recovery and zinc concentrate grade. Figure 13.29 provides a time plot of plant zinc recovery and zinc concentrate grade for the period of July 2021 to April 2024. Results have varied and is thought to be due to variable non-sphalerite zinc proportion in the plant feed.



Source: CLG

Figure 13.28: Distributions of Historical Zinc Recovery And Zinc Concentrate Grade



Source: CLG

Figure 13.29: Time Plot of Plant Zinc Recovery

Table 13.10 provides summary statistics of zinc recovery and zinc concentrate grade for the period of July 2021 to April 2024.

Table 13.10: Summary Statistics of Zinc Recovery and Zinc Concentrate Grade

	ZnG CcZn%	ZnR CcZn%
Median	57.0	63.0
Mean	56.8	62.6
Std. Deviation	1.38	5.19
Minimum	47.1	39.0
Maximum	61.1	79.2
25th percentile	56.0	59.6
50th percentile	57.0	63.0
75th percentile	57.8	65.9

After analysis of the historical plant production database, it was estimated that the recovery of zinc in the zinc concentrate would be 62.6%.

13.6.5 Gold and Copper

Analysis of the historical plant production database has yielded estimates for the recovery of gold and copper in the lead concentrate. The predicted recovery rates are as follows:

- Gold recovery in lead concentrate: 52%
- Copper recovery in lead concentrate: 61.8%

Although gold and copper are minor contributors to overall revenue, it is important to note that the current lead concentrate purchase contracts include payable terms for these metals.

Conversely, the current zinc concentrate purchase contract does not include payable terms for gold or copper. As a result, displacement of these metals to the zinc concentrate is not considered to be recovery.

13.7 Copper - Lead Recovery

The Cerro Los Gatos mine produces bulk concentrates, which are primarily lead with silver and copper credits, and a zinc concentrate. However, starting in 2025, it is anticipated that the SE zone, which contains high levels of copper, will begin contributing to the processing plant feed. This development presents an opportunity to generate a separate copper concentrate with more favorable copper payment terms than the bulk concentrate.

The initial evaluation focused on a flotation circuit where copper was floated, and lead was depressed. For this study, two master composites were created:

- Composite 4: High copper grade (0.38%)
- Composite 5: Low copper grade (0.23%)

This approach resulted in a high silver content in the copper concentrate, which was slightly less beneficial economically than having the silver in the lead concentrate.

Consequently, the flotation circuit was modified to float lead and depress copper. This adjustment demonstrated improved copper grade and better silver recovery in the lead concentrate.

The results of the first study are presented in Table 13.11 and Table 13.12, while the results for the second study are shown in Table 13.13.

Table 13.11: Summary of Results - LCT 25 (First Study) - Composite 4

Product	Mass, %	Grade					Recovery, %				
		Ag, g/t	Pb, %	Zn, %	Cu, %	Fe, %	Ag	Pb	Zn	Cu	Fe
Cu Conc	1.11	6,652	4.32	6.27	20.2	20.6	55.1	2.47	1.68	66.5	7.43
Pb Conc	2.86	1,124	58.9	5.61	1.62	3.20	23.9	86.5	3.87	13.7	2.97
Feed Calc	100	135	1.95	4.15	0.34	3.09	100	100	100	100	100

Table 13.12: Summary of Results - LCT 29 (First Study) - Composite 5

Product	Mass, %	Grade					Recovery, %				
		Ag, g/t	Pb, %	Zn, %	Cu, %	Fe, %	Ag	Pb	Zn	Cu	Fe
Cu Conc	0.70	7,272	6.69	7.76	18.8	18.5	40.6	1.98	1.44	58.1	4.75
Pb Conc	3.14	1,460	64.9	6.87	1.75	3.30	36.4	85.7	5.69	24.2	3.79
Feed Calc	100	126	2.38	3.79	0.23	2.74	100	100	100	100	100

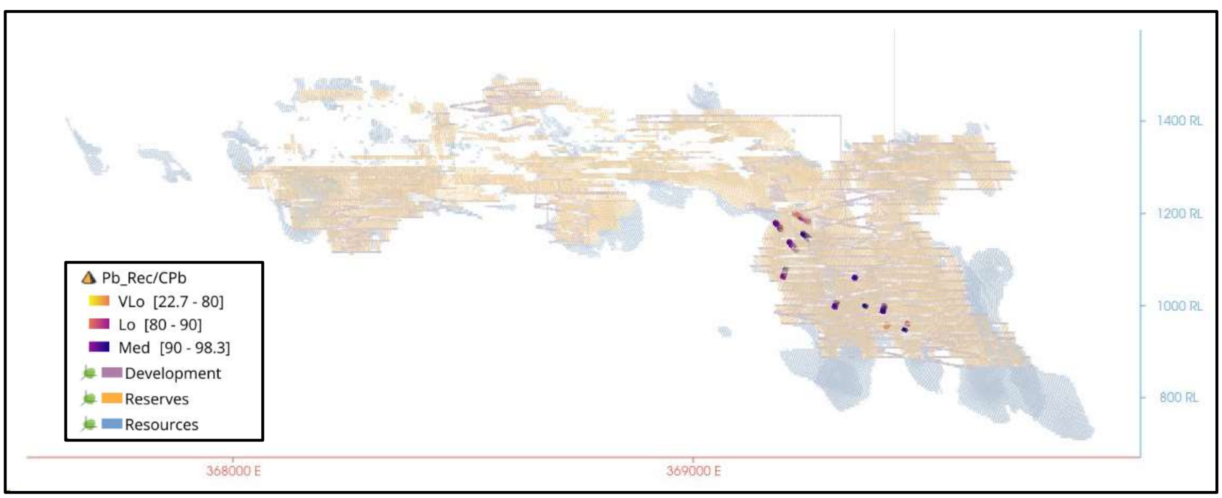
Table 13.13: Summary of Results - LCT 37 (Second Study) - Composite 4

Product	Mass, %	Grade					Recovery, %				
		Ag, g/t	Pb, %	Zn, %	Cu, %	Fe, %	Ag	Pb	Zn	Cu	Fe
Cu Conc	0.55	2,040	12.6	1.60	27.3	23.8	6.77	2.53	0.20	51.3	4.84
Pb Conc	3.74	3,144	65.5	5.27	1.99	3.00	67.4	85.0	4.26	24.2	3.94
Feed Calc	100	187	3.09	4.96	0.33	3.05	100	100	100	100	100

13.7.1 Variability

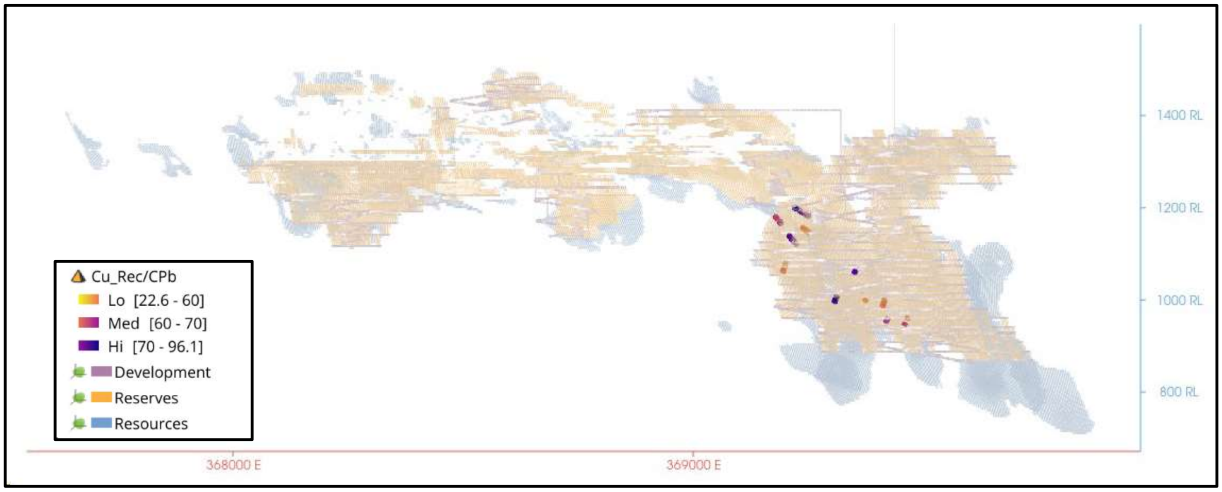
18 samples taken from the Southeast zone were selected in order to evaluate their metallurgical performance against the differential flotation scheme selected. Testing showed promising results with initial samples and these results are expected to be replicated.

The location of the selected samples are presented in the following 3D figures (Figure 13.30 to Figure 13.32) of the Los Gatos block model.



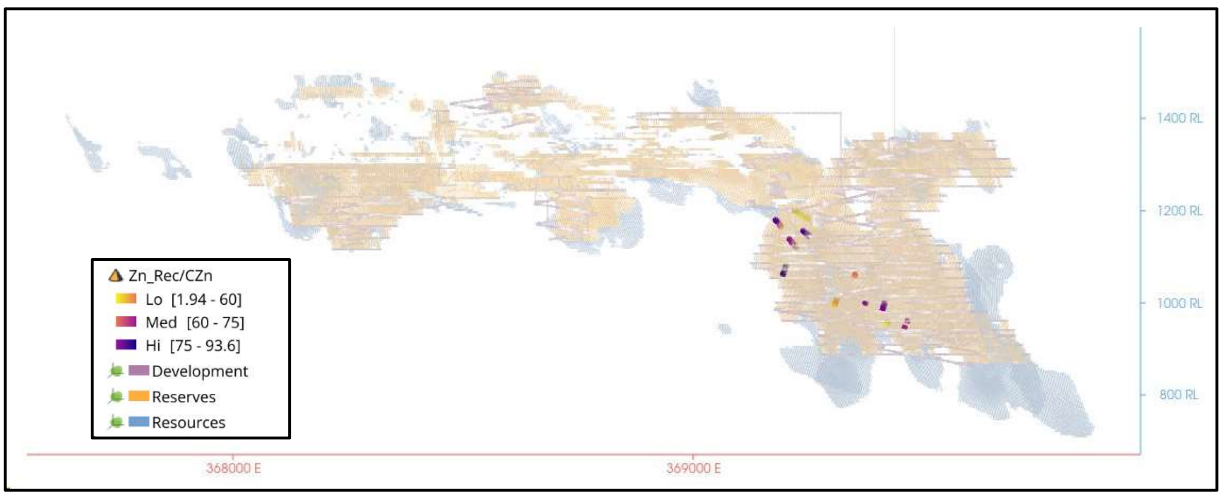
Source: CLG

Figure 13.30: CuPb Separation - Pb Recovery in Pb Concentrate



Source: CLG

Figure 13.31: CuPb Separation - Cu Recovery in Pb Concentrate



Source: CLG

Figure 13.32: CuPb Separation - Zn Recovery in Zn Concentrate

Figure 13.37 presents the statistical analysis of the recoveries in the lead, zinc and copper concentrate.

Table 13.14: Cu-Pb Separation - Variability - Statistics Analysis

Stream	Element	Average	Min	Max	SD	P25	P75
Feed	Ag, g/t	57.2	21.5	94.7	26.4	36.8	78.8
	Pb, %	1.9	0.3	4.9	1.3	1.1	2.6
	Zn, %	3.5	0.4	8.7	2.0	2.2	4.1
	Cu, %	0.4	0.1	1.7	0.4	0.2	0.4
	Fe, %	4.0	2.7	5.7	0.8	3.5	4.4
Recovery to Bulk conc, %	Ag	69.8	21.2	85.1	15.4	67.5	78.8
	Pb	81.3	18.8	95.3	19.4	82.3	90.7
	Zn	23.8	3.1	52.9	13.9	12.2	34.0
	Cu	65.6	19.2	92.0	19.0	55.2	77.8
	Fe	17.0	4.1	50.9	11.6	9.0	22.4
Recovery to Pb conc, %	Ag	76.3	27.0	90.5	15.0	75.4	85.8
	Pb	87.4	22.7	98.3	19.4	89.7	97.4
	Zn	28.6	3.7	60.9	17.0	14.5	36.9
	Cu	71.5	22.6	96.1	19.4	59.7	86.2
	Fe	19.8	5.1	54.5	11.9	12.6	25.4
Recovery to Zn conc, %	Ag	12.4	2.0	24.4	6.3	7.8	16.4
	Pb	2.1	0.5	4.9	1.1	1.3	2.8
	Zn	53.0	1.9	86.6	32.3	24.4	79.0
	Cu	16.7	1.4	42.6	13.1	7.4	25.5
	Fe	36.0	3.5	53.2	15.7	27.0	49.8
Recovery to Cu conc %	Ag	18.3	3.4	43.8	11.6	9.5	24.0
	Pb	16.6	0.9	49.6	14.5	4.5	27.9
	Zn	6.6	0.1	36.4	11.8	0.6	3.2
	Cu	39.8	14.5	59.2	15.1	31.5	52.4
	Fe	3.7	0.8	9.7	2.9	1.3	5.4

Table 13.14 shows the variability test work results for the Cu-Pb separation circuit. Ongoing research is looking to explain the three samples that exhibit high zinc displacement to the bulk concentrate. The current hypothesis, yet to be confirmed by mineralogical analysis, suggests the presence of soluble copper, possibly in the form of chalcocite or bornite.

Mineralogical studies have identified native copper in the ore, which is not expected to contribute to zinc activation and native copper is expected to report to the copper concentrate. However, soluble copper in copper-zinc flotation can be problematic, as it tends to activate zinc minerals.

The activation of zinc by soluble copper can potentially be managed through careful reagent selection and dosage, up to a certain threshold.

If reagent control proves ineffective, it may be necessary to separate high soluble copper ore from high zinc ore. These different ore types would then be processed in separate campaigns.

Further studies will include detailed testwork to confirm the behaviour of soluble copper and its impact on zinc activation in the flotation process. Geological investigation will include examination of the spatial distribution and characteristics of ore types containing soluble copper and high zinc content. The presence and nature of copper minerals throughout the resource will be investigated through mineralogy and soluble copper assays.

To implement this flotation circuit in the current Los Gatos processing plant, an engineering study will be required.

13.7.2 Mineralogy

The mineralogical characterization of 8 variability samples was carried out (LGSE-043 to LGSE-050), Table 13.15 presents a statistical summary of the main minerals reported in the modal analysis. The samples have a high content of carbonates and pyroxenes, on average 40%. Minerals of lead, zinc and copper were reported.

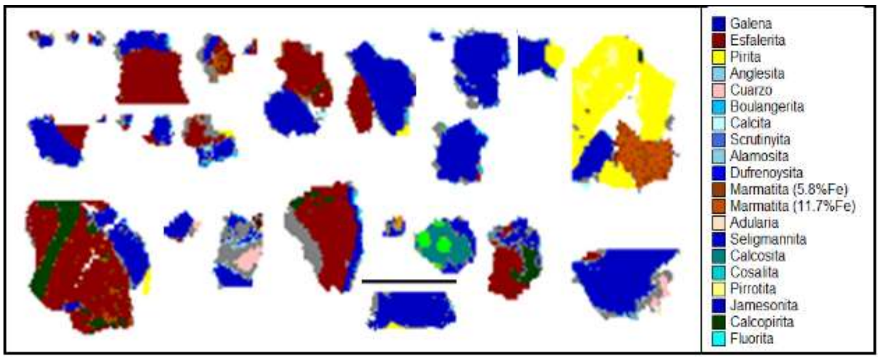
Table 13.15: Cu-Pb Separation - Summary Statistics - Mineralogy Modal

Mineral	Min	Max	Average	SD
Hematite	0.03	0.64	0.30	0.18
Pyrrhotite	0.01	0.31	0.13	0.09
Pyrite	1.32	6.46	3.31	1.66
Chalcopyrite	0.70	2.30	1.28	0.54
Hemimorphite	0.00	0.26	0.04	0.09
Marmatite	0.34	5.11	1.11	1.63
Sphalerite	2.07	22.4	6.27	6.81
Scrutinyite	0.04	0.62	0.29	0.22
Galena	0.14	3.70	1.26	1.10

Table 13.16 summarizes the lead mineral distribution, with galena as the primary mineral (>75%), followed by scrutinyite and anglesite (each >3%). Figure 13.33 shows a pseudocolor image of galena particles associated with pyrite, sphalerite, and chalcopyrite.

Table 13.16: Cu-Pb Separation - Summary Statistics - Mineralogy Deportment Pb

Mineral	Min	Max	Average	SD
Litharge	0.37	1.30	0.61	0.29
Alamosite	2.05	5.66	3.84	1.46
Scrutinyite	3.08	5.72	4.30	0.89
Anglesite	3.16	7.93	4.72	1.82
Seligmannite	0.36	0.94	0.58	0.20
Dufrenoysite	0.60	2.08	1.06	0.50
Boulangerite	1.90	2.94	2.18	0.34
Galena	77.7	86.5	81.6	2.74



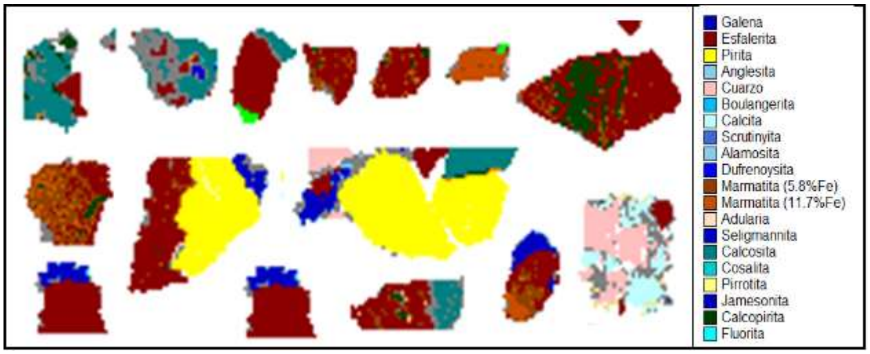
Source: CLG

Figure 13.33: Pseudocolor Image of Lead Concentrate Mineralogy

Table 13.17 presents a statistical summary of the Zn minerals, with sphalerite being the main contributor above 80% and marmatite above 8%. Figure 13.34 illustrates the pseudocolor image of sphalerite particles associated with pyrite, chalcocite, galena, and chalcopyrite.

Table 13.17: Cu-Pb Separation - Summary Statistics - Mineralogy Deportment Zn

Mineral	Min	Max	Average	SD
Hemimorphite	0.00	4.20	0.67	1.46
Willemite	0.00	5.99	0.91	2.09
Marmatite	8.29	17.6	12.3	3.18
Sphalerite	80.8	90.5	85.9	3.44



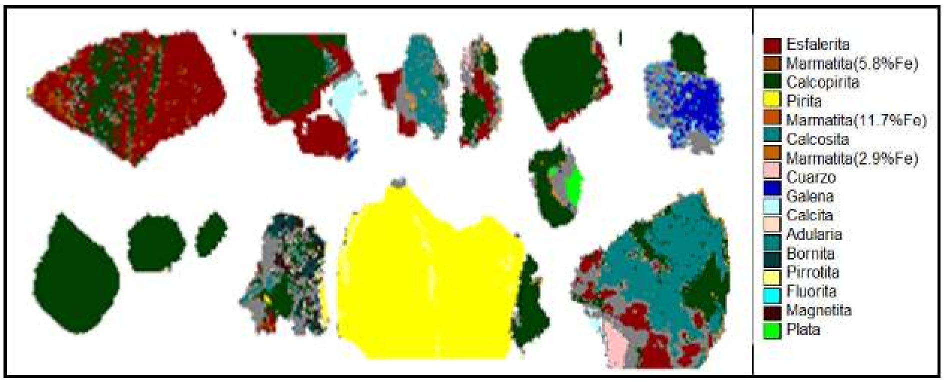
Source: CLG

Figure 13.34: Pseudocolor Image of Zinc Concentrate Mineralogy

Table 13.18 presents a statistical summary of the Cu minerals, with chalcopyrite being the main contributor above 70%.Figure 13.35 illustrates the pseudocolor image of chalcopyrite particles associated with pyrite, sphalerite, and galena.

Table 13.18: Cu-Pb Separation - Summary Statistics - Mineralogy Deportment Cu

Mineral	Min	Max	Average	SD
Bournonite	0.01	0.15	0.06	0.05
Covellite	0.00	0.19	0.06	0.07
Idaite	0.00	0.43	0.21	0.18
Native Copper	0.00	0.27	0.03	0.10
Bornite	0.00	1.50	0.40	0.48
Seligmannite	0.06	2.56	0.81	0.89
Tenorite	0.00	0.47	0.07	0.17
Cubanite	0.30	1.65	0.65	0.46
Chalcosite	0.00	23.9	5.70	8.26
Chalcopyrite	73.0	97.8	91.6	8.75



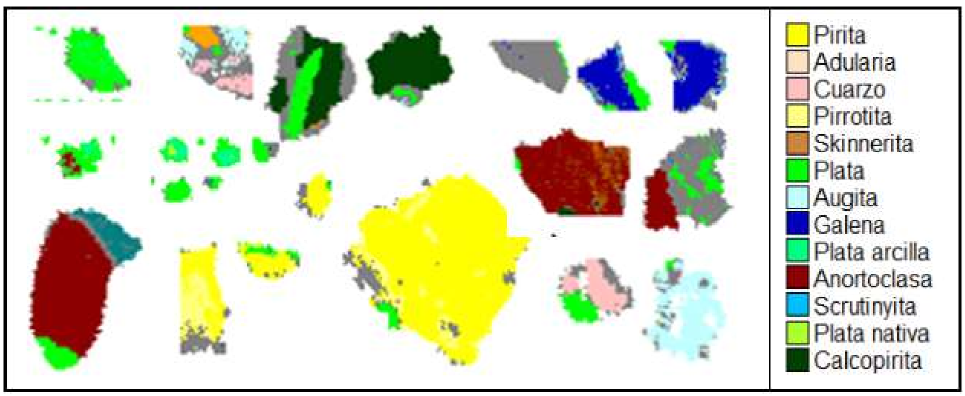
Source: CLG

Figure 13.35: Pseudocolor Image of Copper Concentrate Mineralogy

Table 13.19 presents a statistical summary of the Ag minerals, with argentite and silver being the main contributors with an average of 27% and 60% respectively. Figure 13.36 illustrates the pseudocolor image of silver particles associated with pyrite, chalcopyrite, and galena.

Table 13.19: CuPb Separation - Summary Statistics - Mineralogy Deportment Ag

Mineral	Min	Max	Average	SD
Argentopyrite	0.00	4.14	0.57	1.44
Balkanite	0.00	0.64	0.14	0.23
Eucairite	0.00	1.17	0.26	0.43
Stromeyerite	0.00	7.09	2.79	2.82
Kustelite	0.00	2.56	0.35	0.90
Stephanita	0.00	3.73	0.64	1.28
Hessite	0.00	1.66	0.74	0.60
Jalpaite	0.00	25.21	6.78	9.06
Argentite	2.64	89.2	26.9	27.3
Native silver	0.00	87.1	60.8	29.4



Source: CLG

Figure 13.36: Pseudocolor Image of Silver Mineralogy

The results of the mineralogical analysis show a varied composition of sulfides and gangue minerals. Among the sulfides present, the following were found:

- Galena, with a liberation range between 18% and 69%.
- Sphalerite and marmatite (with 6.4% to 7.7% Fe), showing liberation from 19% to 70%.
- Chalcopyrite and chalcocite, with liberation ranging between 46% and 91%.

It is important to note that in rare cases, chalcopyrite occurs as disseminated occlusions in sphalerite, a phenomenon known as "chalcopyrite disease", in percentages varying from 6% to 55%.

The main gangue minerals are quartz and calcite.

This mineralogical composition suggests a complex polymetallic ore, with potential for lead, zinc, and copper extraction, but which could require flexible separation processes due to the variability in liberation degrees and the presence of interlocked minerals, as in the case of chalcopyrite in sphalerite.

13.8 Fluorine Leaching

In June 2023, the Cerro Los Gatos mine commissioned a fluoride leaching plant to reduce the fluorine content in the zinc concentrate, meeting the primary customer's specifications.

Table 13.20 presents the operating inputs of the fluorine leaching process during June 2023 to April 2024.

Table 13.20: Fluorine Leaching Plant Consumptions

Conditions	
H_2SO_4, kg/t	29.6
Al_2O_3, kg/t	6.82

Table 13.21 summarizes the results obtained in June 2023 to April 2024.

Table 13.21: Fluorine Leaching Results

	Conc Zn, t	Ag, g/t	Au, g/t	Pb, %	Zn, %	Cu, %	Fe,%	F, g/t
Conc Zn Feed	35,008	809	0.42	0.63	55.3	0.46	5.75	1,499
Conc Zn Leached	34,400	822	0.43	0.64	56.1	0.47	5.21	458

According to these results, >70% of the fluorine was removed in the plant, complying with the specification. Minor losses of zinc and silver through the leach circuit have been accounted for in the recovery assumptions used for financial modeling.

13.9 Ultrafine Particle Flotation

The Cerro Los Gatos mine produces lead and zinc concentrates with significant silver content, achieving an 89% total silver recovery. The 11% loss is primarily due to silver associations with hydrophilic, non-sulfide gangue minerals that report to the final tailings.

In February 2024, tailings flotation tests were conducted to recover gold and silver for subsequent extraction via cyanidation leaching. However, due to high variability and generally low silver recovery (< 40%), alternative approaches were explored.

Current focus is on ultrafine particle recovery technologies, as mineralogical characterization from June 2023 identified ultrafine particles as the primary source of sphalerite and liberated silver losses. Technologies under consideration include the various brands of pneumatic flotation technology.

Recovery efforts are centered on flotation techniques to maximize concentrate recovery of these fine particles to the bulk and lead concentrates.

13.10 Ongoing Testwork

A geometallurgical testing program is progressing as a continuous improvement initiative. Samples that are representative of future production continue to be selected and are tested for laboratory flotation performance, and detailed mineralogy.

The current focus of test work is on the new resource that has been discovered.

13.11 Factors Affecting Economic Extraction

The 2023 period obtained slightly lower recoveries of lead and silver compared to the 2022 period, while the 2024 period is presenting recoveries similar to those of 2022, it is estimated that this could be due to the head grades of the mill feed. Projected future grades are expected to continue rising, facilitating higher recoveries.

The “zinc oxide” risk was identified as hemimorphite by mineralogy. Geological controls on the origin of the hemimorphite and its spatial distribution in the deposit have not advanced. There is sufficient evidence through laboratory variability flotation testing that future production will not be materially different from past production in terms of long-term hemimorphite content.

13.12 High Soluble Copper Material

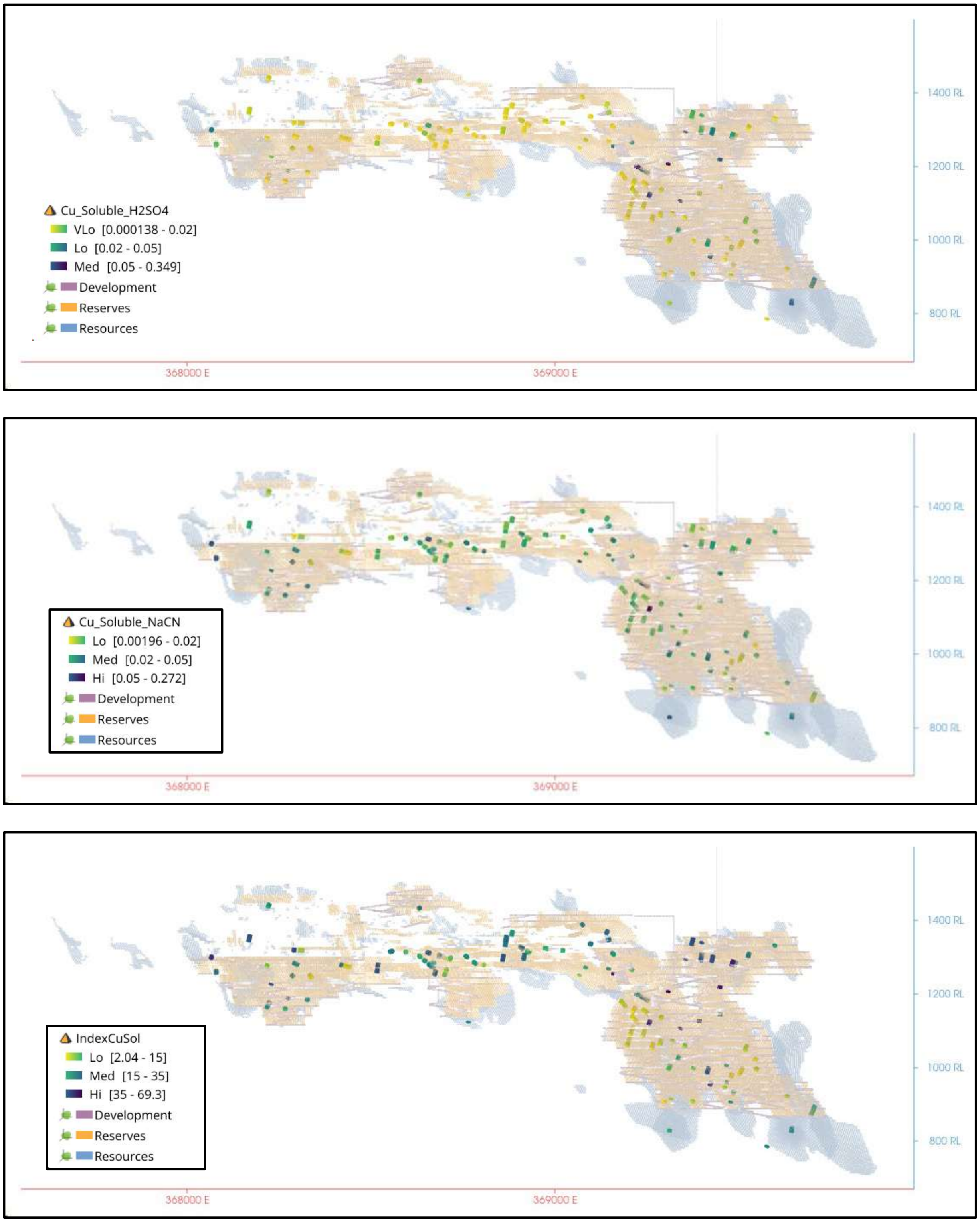
During metallurgical testing and analysis, a small amount of material with high soluble copper content was identified in the SE zone of the deposit. This material possibly contains chalcocite or bornite, but native copper has also been identified. The presence of high soluble copper reduces the selectivity of copper-lead over zinc in the bulk flotation circuit, potentially impacting overall process efficiency.

The project geologists determined that the high soluble copper zones are likely to be small and restricted in both volume and location within the deposit. While this limits the overall impact on the project, it necessitates careful management and further investigation to ensure optimal processing outcomes.

To address this issue in the short term, a two-pronged approach will be implemented. Firstly, each mining area will be characterized for soluble copper content prior to processing. This will allow for early identification of problematic zones and enable proactive management. Secondly, any identified high soluble copper material will be separated and campaigned. This selective processing approach will minimize the impact of high soluble copper content on the overall flotation circuit performance.

For the mid-term, it is recommended that geometallurgical variability characterization be conducted to map out the distribution of high soluble copper material within the deposit. This mapping will provide a more detailed understanding of the extent and location of the high soluble copper zones. Additionally, geochemistry and geological modeling should be used to better control and predict this risk. These tools will enable more accurate forecasting of potential processing challenges and allow for more effective long-term planning.

Additional metallurgical testwork is recommended. Mineralogical characterization of the high soluble copper material should be undertaken to better understand its composition and behaviour in the flotation circuit and guide process optimization testwork. This may involve adjustments to reagent schemes, or other process variables, but is unlikely to require changes in plant design. Also, strategies for optimizing mine planning around areas with high soluble copper content should be developed. This could involve selective mining techniques or blending strategies to manage the feed to the processing plant.



Source: CLG

Figure 13.37: Soluble Cu – 3D View

13.13 Metallurgical Recoveries Used in Plant Production Estimates

The estimation of recoveries in the plant is carried out based on the mine plan, where a segmentation of the mineral is proposed based on the Pb/Cu grade relationship:

- When the Pb/Cu ratio is higher than 15, the mineral would be processed same as current operation, producing only Pb and Zn concentrates.
- For material with a Pb/Cu ratio of 15 or lower, Cu, Pb and Zn concentrates would be obtained, requiring the flotation of a Pb-Cu bulk concentrate and then a separation with Cu flotation/Pb depression.

Table 13.22 presents the estimated recoveries made based on historical reconciled production data, as well as the metallurgical tests realized with drill core samples from the mine. These tests are divided between rougher flotation of Pb (Bulk Pb-Cu) concentrate and Zn concentrate for the individual samples of the cores, and also, Locked Cycle Tests (LCT) to determine the Pb-Cu separation efficiency were performed with composites of the same samples. This process is expected to be commissioned in January 2026.

Table 13.22: Estimated Recoveries Based on Historical Reconciled Production Data

	44% of LOM tonnage		56% of LOM			
	High Cu Stream (<15:1 Pb:Cu)		Low Cu Stream	Zinc Circuit		
	Cu Conc	Pb Conc	Pb Conc	Zn Conc	Leach Rec	After Leach
Ag recovery, %	**6.80%**	**71.20%**	**78.00%**	10.20%	99.70%	**10.17%**
Au recovery, %	**3.25%**	**50.95%**	**54.20%**	6.30%	99.00%	6.24%
Pb recovery, %	2.50%	**86.90%**	**89.40%**	1.70%	97.00%	1.65%
Zn recovery, %	1.00%	8.90%	9.90%	63.40%	99.60%	**63.15%**
Cu recovery, %	**52.50%**	**27.50%**	**60.00%**	10.00%	95.00%	9.50%
F recovery, %	0.40%	0.63%	1.03%	0.24%	35.01%	0.08%

Table 13.23 shows the recoveries obtained during the historical work compared to that estimated in the LOM.

Table 13.23: Historical Recoveries Compared to Estimated LOM

Element	Historical	LOM
Ag recovery, %	88.9	88.2
Pb recovery, %	88.9	89.4
Zn recovery, %	65.6	63.2
Au recovery, %	52.0	54.2
Cu recovery, %	61.8	60.0

14.0 MINERAL RESOURCE ESTIMATION

This TR provides a Mineral Resource estimate and classification of resources reported in accordance with the Guidelines and Definition Standards for Mineral Resources and Mineral Reserves (CIM 2014). From information entered into the Los Gatos geological database, MPR geologists constructed 3D wireframes for structural blocks, veins and lithology using Leapfrog™ Geo software. Estimation of occurrences of silver, zinc, lead, gold, and copper in a 3D block model was completed with Maptek Vulcan software.

The methods and results of resource estimation are reported below and correspond to the final version of the 3D block model, “Block Model 2024.bmf”

The estimate of Mineral Resources may be materially affected if mining, metallurgical, or infrastructure factors change from those currently assumed at CLG. Estimates of Inferred Mineral Resources have significant geological uncertainty, and it should not be assumed that all or any part of an Inferred Mineral Resource will be converted to the Measured or Indicated categories. Mineral Resources reported in the TR are stated exclusive and inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves have not met the threshold for reserve modifying factors, such as estimated economic viability, that would allow for conversion to Mineral Reserves. The Resource estimate is consistent with both S-K 1300 and the Guidelines and Definition Standards for Mineral Resources and Mineral Reserves (CIM 2014).

14.1 Estimation Assumptions, Parameters, and Methods (Cerro Los Gatos)

14.1.1 Software

CLG geologists used Leapfrog Geo software for solids model generation and Vulcan software for block model estimation, reporting, statistics review, geostatistics, and swath plots.

14.1.2 Database

The acQuire exploration database containing both surface and underground drilling was exported to a comma separated value (.CSV) file, which is a standard format for the software used. When data is moved between different programs it is checked to verify that the data is spatially correct. Additionally, a running summation to verify values and visual spot checks were conducted.

14.1.3 Drilling Data Los Gatos

The global database available for the 2024 Mineral Resource estimation of the CLG deposit includes 654 (278,214.96 m) surface and 1,073 (98,055.93 m) underground core drill holes. Table 14.1 summarizes the data included in the global database. The database includes regional exploration drilling that is outside the main area of interest of the CLG deposit, and therefore had no direct input in the 3D geological modeling or resource estimation for the CLG Mineral Resource calculations. See Table 10.2 in Section 9.0 for a representation of drill holes within the CLG deposit.

Data sets used in the Mineral Resource estimation included DDH, topographic data, and density data.

Summary information on the CLG drill programs is provided in Table 14.1. The drill hole file was reviewed in plan and section to validate the accuracy of the collar locations, hole orientations and down hole trace, and the assay data was analyzed for out-of-range values. The drill hole database was determined to be suitable to support the 2024 Mineral Resource estimate.

Table 14.1: Summary of Los Gatos Global Drill Hole Database

Table	N° Drill Holes	Core length (m)
Collar	1,727	376,270.89
Survey	1,727	NA
Lithology	1,705	370,511.81
Assay	1,684	81,740.926

14.1.4 Geological Interpretation

The Los Gatos geological model considers fault blocks, veins, and lithologies. Construction of the models considered the following:

- Database tables in csv format: collar, survey, lithology, and assay.
- Database validation for each of the variables
- Display of information in Leapfrog Geo.
- Cross sectional interpretation (2D).
- Topography.
- Chronology of the Lithology Units (.xls format).
- Description of rock codes (.pdf format).

The geological models were built in Leapfrog Geo v.2023.2 by CLG geologists using implicit modeling for all geological units. Implicit modeling refers to the creation of wireframes defined by mathematical functions, geology, and stratigraphic relationship. Traditional explicit control points and / or polylines were utilized in areas of low data density to assist, and control the implicit interpolation procedures, to generate geologically plausible and valid volumes. Additionally, all underground development mapping was georeferenced in Leapfrog Geo and used to insert control points / polylines where required, ensuring the final implicit wireframe contacts corresponded correctly to the mapping.

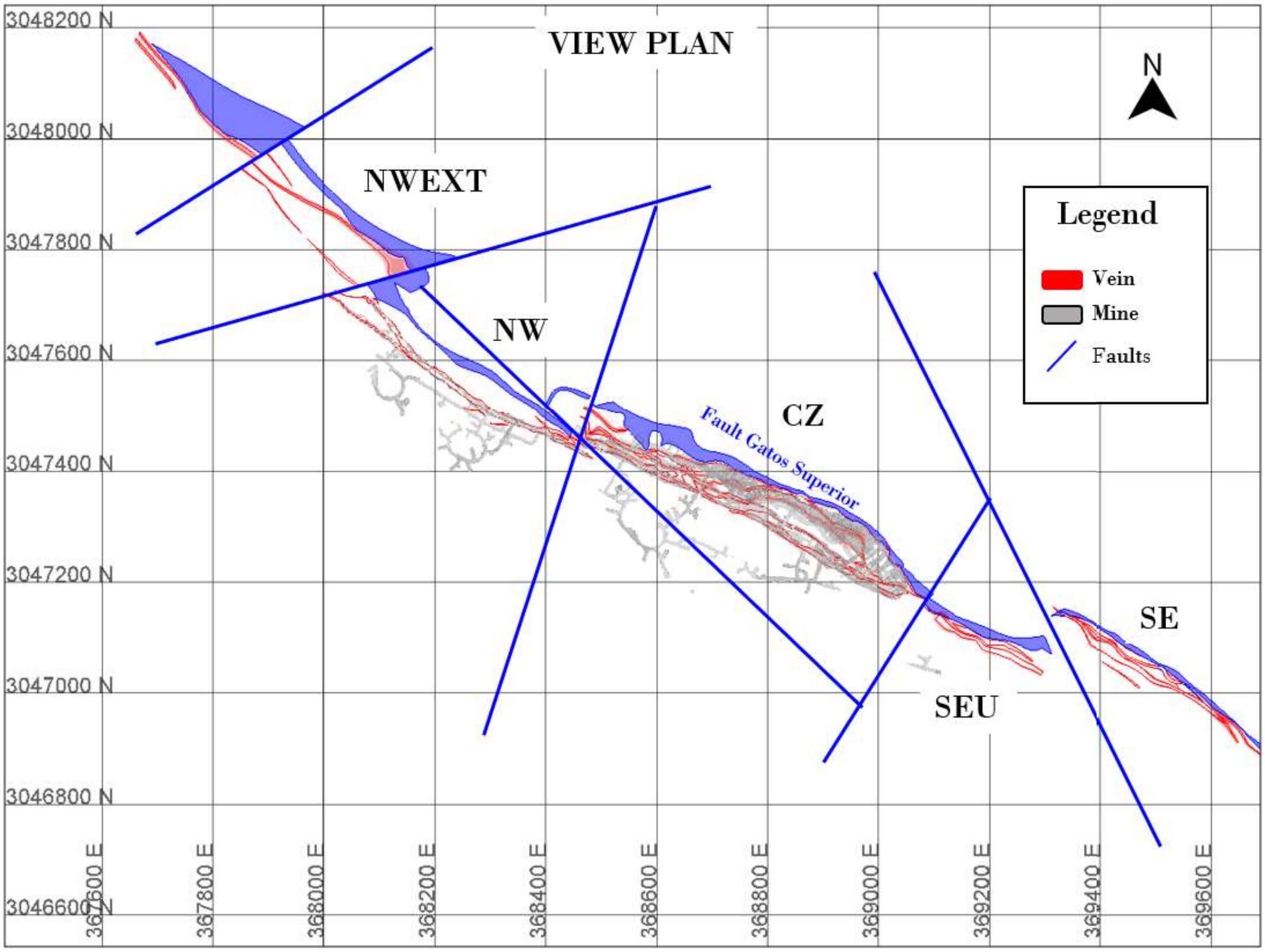
The final Leapfrog Geo wireframes were exported and then imported into Maptek Vulcan software to code model blocks for use in estimation processes.

14.1.5 Structural Model

The structural framework defines the size, shape, and continuity of the CLG deposit. The oldest faults are the Lower Los Gatos and Upper Los Gatos faults, which served as conduits for mineralizing fluids. The Upper Los Gatos fault has a listric shape with a NW strike and NE dip. Several different studies were completed to reveal the primary faults cutting the system including a photo lineament analysis, and a study of the elevation changes that occur across the upper contact of the dacitic lithic tuff. All the primary faults, except for the Gatos Fault, were used to define the structural domains or fault blocks used in the associated geologic model.

Main fault blocks, from the northwest to the southeast, include the Northwest (NW), Central (CZ), and Southeast 2 (SE) (Source: WSP

Figure 14.1).



Source: WSP

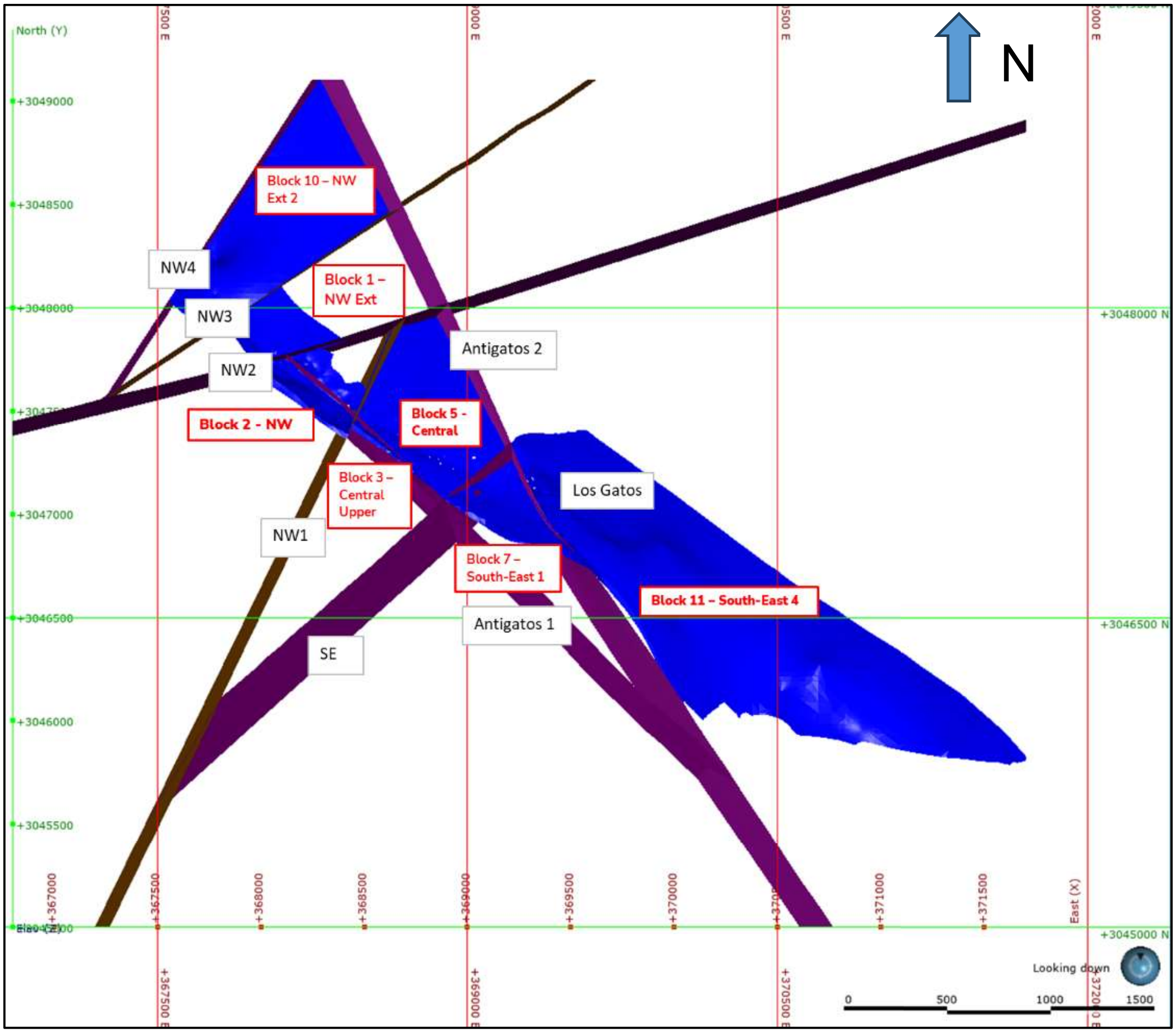
Figure 14.1: Main Fault Blocks at Los Gatos Deposit

Seven cross-faults were used to divide the geologic model into eight fault blocks within the final geologic model (Source: CLG internal report

Figure 14.2).

- Block 1 – NW Ext – No significant mineralization
- Block 2 – NW – Major mineralized zone
- Block 3 – Central Upper – Minor mineralization
- Block 4 – NW Offset – Deeper zone
- Block 5 – Central – Major mineralized zone
- Block 7 – South-East 1 – Minor mineralization

- Block 10 – NW Ext 2 – No significant mineralization
- Block 11 – South-East 4 - Major mineralized zone



Source: CLG internal report

Figure 14.2: Plan View of the Structural Fault Blocks at CLG

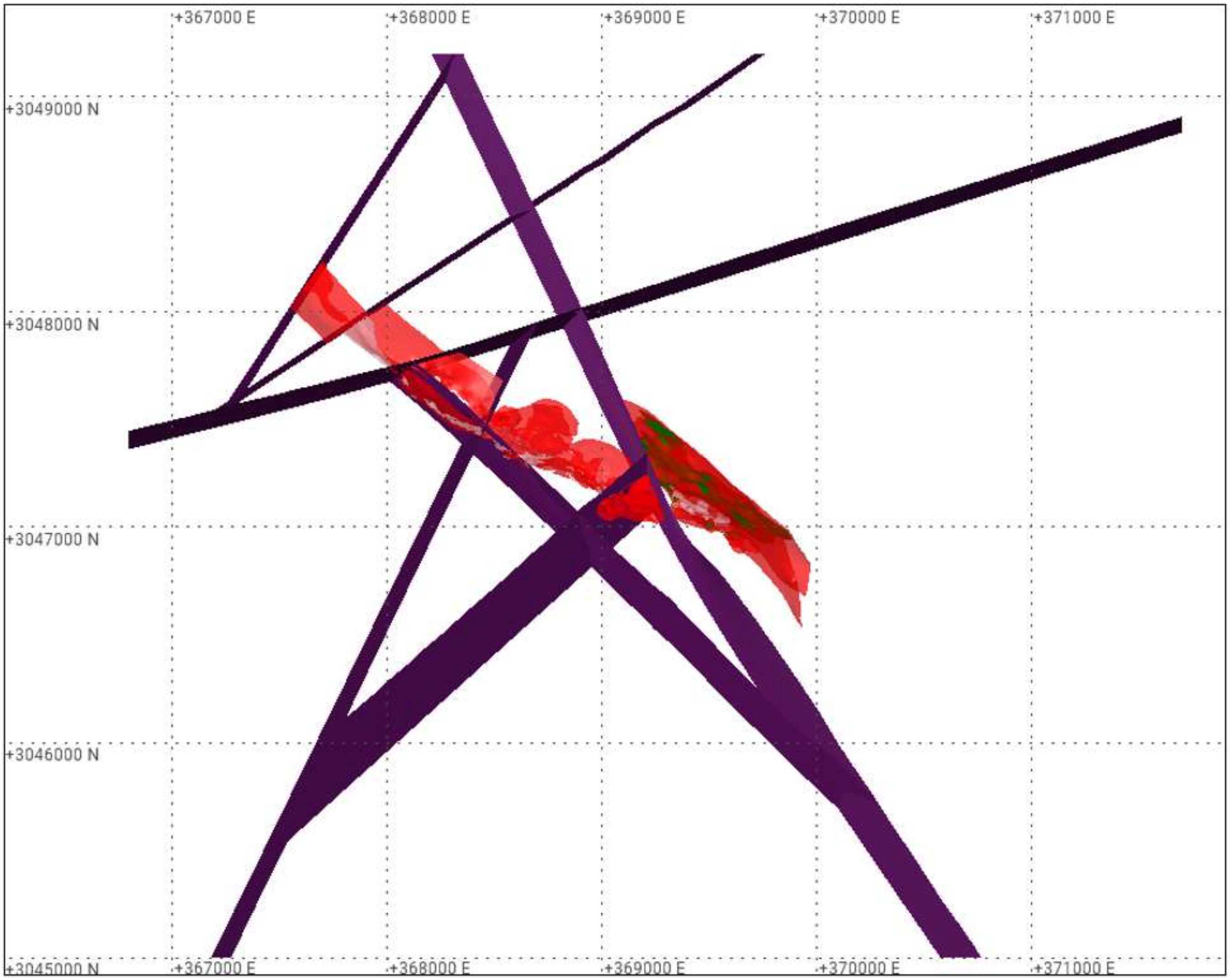
14.1.6 Lithology and Vein Model

The Los Gatos deposit is hosted in a series of andesitic lava flows and pyroclastic breccias that are interbedded and overlaid by flows and tuffs of dacitic composition. Silver mineralization at Los Gatos is predominantly hosted in a series of quartz, quartz-calcite, and calcite veins. These vein systems vary locally but predominantly have northwest strikes and mostly steep dips.

All available assay, lithology and structural data from the drill hole logs and geological mapping of underground exposures were used for geological interpretation of the veins. Each interval interpreted to be within the vein model was coded with a vein and fault block code.

The post-mineral low-grade or waste Veta Rosa vein was modeled separately and was assigned estimation domains prefixed by RV separately from the mineralized veins.

Eight different veins were interpreted on fault blocks, totalling 28 body veins, as can be seen in Figure 14.3.



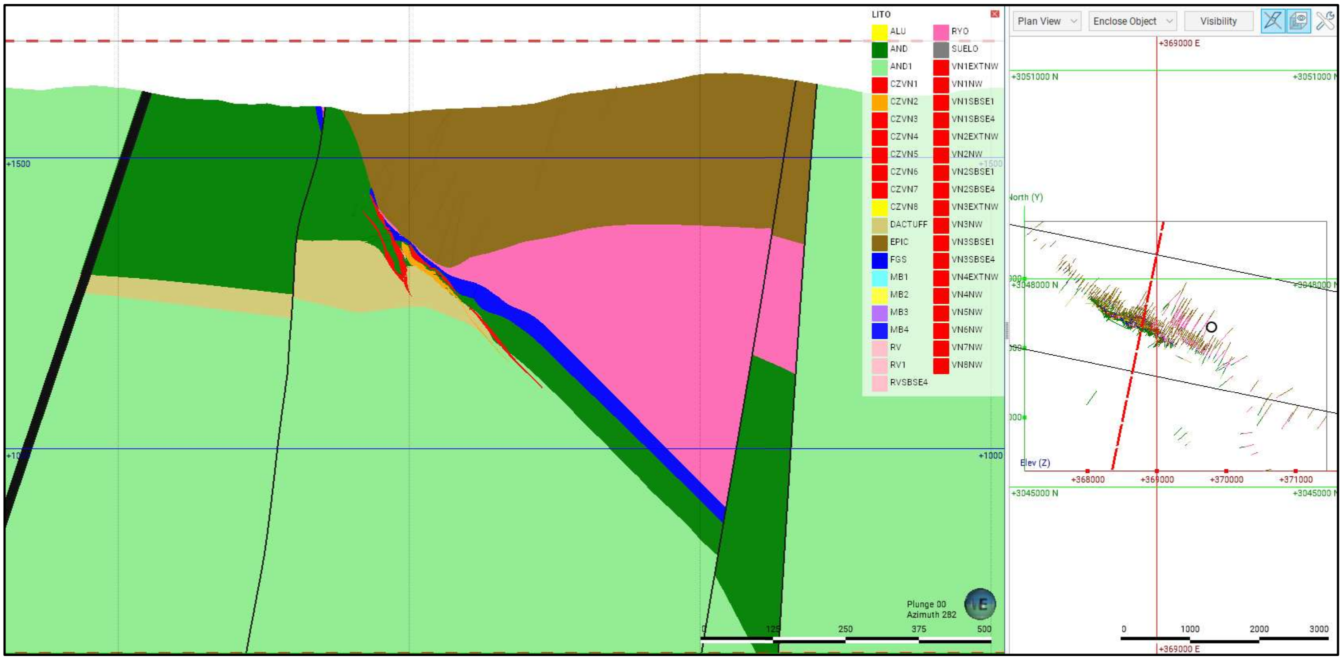
Source: CLG

Figure 14.3: Plan View of Los Gatos Veins on each Fault Block

The model also includes the following lithological units:

- Epiclastic erosional volcanic sediments above the rhyolite and andesite
- Rhyolite overlaying the andesite and underlying the epiclastics.
- Undifferentiated andesitic volcanics, the primary vein host, situated in the footwall of Los Gatos fault.
- Dacite/volcanic tuff within the andesite, which comprises the immediate footwall of the mineralization and occasional host.

A cross-section showing the relationship of veins, and the lithological units is shown for the Central Zone (CZ) (Figure 14.4).



Source: CLG

Figure 14.4: Cross-section of the Los Gatos Lithology Model. Looking NWE

14.1.7 Exploration Data Analysis

14.1.7.1 Detection Limit

Samples with assays equal to detection limits or zero were adjusted to half of the minimum detection limit. In general, for each element, less than 0.5 % of the samples inside the mineralized veins were adjusted. Samples from underground had a different detection limit; all samples with a value of 5.0 ppm silver were adjusted to 2.5 ppm.

14.1.7.2 Sample Length and Assay Compositing

There are a variety of sample lengths in the drill core database, though the most common sample lengths were 1.0 m, 1.5 m, and 2.0 m. The surface database had a majority of 2.0 m samples while the most common sample length in the underground database was 1.5 m. Considering the general width of the veins and that the majority of samples inside the modeled veins are of 1.5 m in length, it was decided that the composite length should be 1.5 m. The methodology used breaks in the compositing process when there was a change in the underlying estimation domain. Therefore, only samples from the same estimation domain are composited together, while any remaining sample lengths are merged into the last composite.

14.1.7.3 Estimation Domain Definition

Estimation Domains (EDs) have been defined based on the modeled veins with each vein defining an independent estimation domain. For veins VN2SBSE4 and VN3SBSE4 a differentiation between high and low grade was made using geological and grade criteria. Material lying outside veins define a single low-grade domain (ED 99), as shown in Table 14.2.

In terms of the economic value of each vein, the most important veins are from the central zone (from ED 301 to ED 310), vein VN1NW (ED 201), vein VN6NW (ED 206), and VN7NW (ED 207). Table 14.3 summarizes the composite statistics for selected key domain for Ag, Pb, and Zn, respectively.

Table 14.2: Estimation Domain Definition

Estimation Domain	Vein	Estimation Domain	Vein	Estimation Domain	Vein
101	VN1EXTNW	301	CZVN1	501	RVSBSE4
102	VN2EXTNW	302	CZVN2	502	VN1SBSE4
103	VN3EXTNW	303	CZVN3	503	VN2SBSE4_LG
104	VN4EXTNW	304	CZVN4	504	VN2SBSE4_HG
201	VN1NW	305	CZVN5	505	VN3SBSE4_LG
202	VN2NW	306	CZVN6	506	VN3SBSE4_HG
203	VN3NW	307	CZVN7	99	Waste Rock
204	VN4NW	308	CZVN8		
205	VN5NW	309	RV		
206	VN6NW	310	RV1		
207	VN7NW	401	VN1SBSE1		
208	VN8NW	402	VN2SBSE1		

14.1.7.4 Contact Analysis

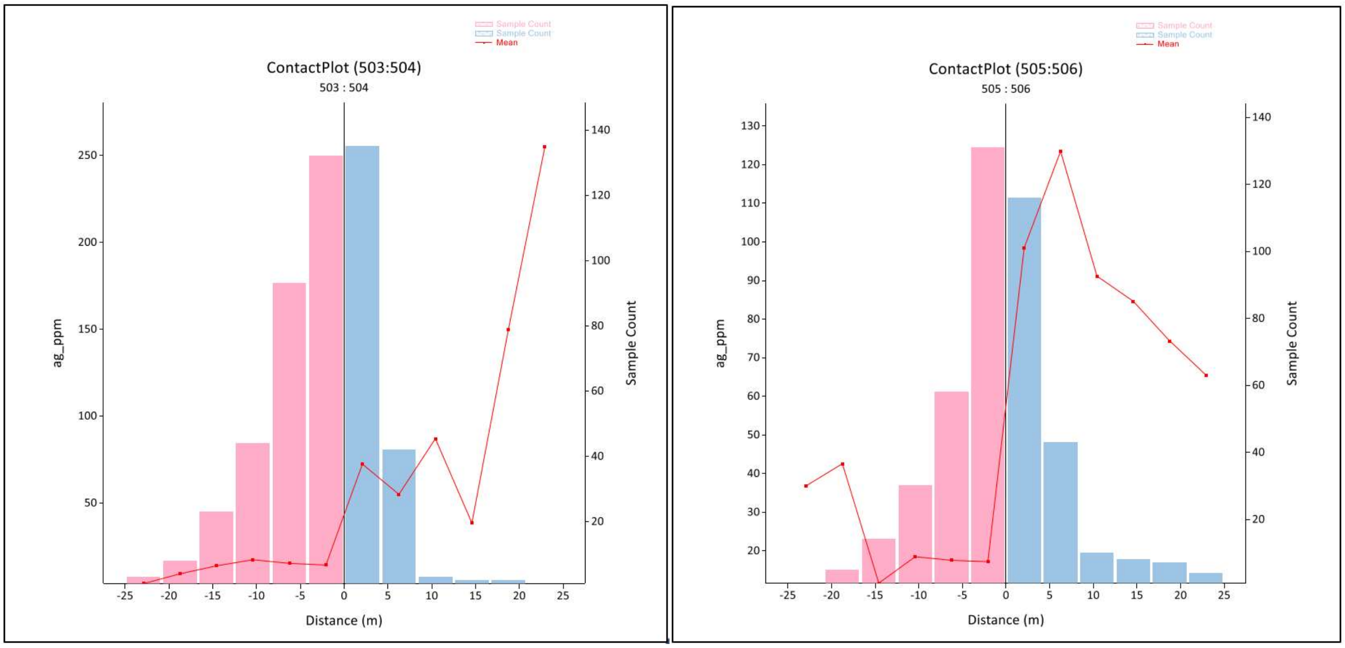
To determine the type of contact (soft or hard) between different EDs, a contact analysis was conducted. Contact analysis is a mathematical method to define the grade behavior among composites from different EDs as they approach a contact. The type of contact is important during the process of grade estimation.

In general, the results show abrupt changes in the grade at the contact between the modeled veins and the waste rock, therefore, it was decided to use hard boundaries between all EDs and variables to avoid sharing composites between veins. Even for the high and low grade domains defined in Table 14.2 the change in grade is sharp at the contact. Source: CLG

Figure 14.5 shows the contact analyses for ED 503 vs ED 504 (left) and ED 505 vs ED 506 (right) for Ag.

Table 14.3: Composite Statistics for Ag (g/t), Pb (%) and Zn (%) for the Main Estimation Domains

Element	ED	# Data	Min. (g/t)	Max. (g/t)	Mean(g/t)	Median(g/t)	Q1(g/t)	Q3(g/t)	Std. Dev.	CV
Ag	301	2,050	0.1	25,373.00	438.5	117.6	42.8	348.1	1,290.70	2.9
	302	2,279	1.4	23,804.90	346.9	87.2	38.5	240	1,048.30	3
	303	2,522	2	23,362.00	249.1	71.2	29.5	220.7	759.9	3.1
	304	95	18	9,136.00	475.2	104	60	185.8	1,344.30	2.8
	305	190	2.5	3,907.00	224.1	53.5	24.8	167	528.8	2.4
	306	639	2.5	3,600.00	287.1	94	30.5	288.4	520	1.8
	307	25	5	372	99.9	73	21.6	136.6	97.2	1
	308	359	5	3,733.00	307.5	142.8	47.1	378.8	482.7	1.6
	309	2,195	0.3	1,935.00	27.1	14.1	5.9	29.5	77	2.8
	310	13	0.1	138	35.8	40	5.7	46.8	35.5	1
	201	3,728	0.6	32,329.00	435.9	61.5	25	241.7	1,411.20	3.2
	206	338	2.5	18,635.00	514.6	81	18	355.3	1,446.40	2.8
	207	165	2.5	3,955.20	171.3	56.5	19.4	131.6	464.8	2.7
Pb	301	2,050	0.01	54.6	2.14	1.02	0.33	2.72	3.13	1.46
	302	2,279	0.0047	37.36	1.75	0.7	0.24	2.03	2.81	1.6
	303	2,522	0.0025	28.69	2.37	1.08	0.35	3.07	3.28	1.39
	304	95	0.07	42.32	2.3	0.39	0.14	1.09	7.28	3.16
	305	190	0.0307	13.73	0.99	0.19	0.11	1.06	2.04	2.06
	306	639	0.0177	33	1.7	0.37	0.15	1.29	3.58	2.11
	307	25	0.0631	1.39	0.33	0.21	0.13	0.43	0.31	0.93
	308	359	0.03	44.01	4.52	2.46	0.7	6.79	5.59	1.24
	309	2,195	0.0004	3.78	0.14	0.05	0.03	0.13	0.28	2.05
	310	13	0.004	0.07	0.03	0.03	0.01	0.04	0.02	0.66
	201	3,728	0.01	31.14	2.53	1.22	0.43	3.16	3.49	1.38
	206	338	2.5	18,635.00	514.6	81	18	355.3	1,446.40	2.8
	207	165	0.005	11.19	0.68	0.17	0.06	0.62	1.51	2.21
Zn	301	2,050	0.0175	30	4.46	2.73	0.83	6.37	4.89	1.1
	302	2,279	0.0063	36.85	3.97	2.09	0.56	5.8	4.76	1.2
	303	2,522	0.0117	30.65	4.27	2.53	0.96	5.9	4.71	1.1
	304	95	0.0116	11.58	1.31	0.51	0.28	1.24	2.01	1.53
	305	190	0.03	13.31	1.26	0.44	0.21	1.28	2.1	1.66
	306	639	0.013	25.89	3.07	1.04	0.42	3.47	4.78	1.56
	307	25	0.0618	0.72	0.24	0.18	0.14	0.31	0.16	0.67
	308	359	0.04	31.24	7.36	4.93	1.89	10.74	7.04	0.96
	309	2,195	0.0006	18.47	0.28	0.1	0.04	0.25	0.74	2.64
	310	13	0.0017	0.19	0.03	0.01	0.01	0.02	0.05	1.81
	201	3,728	0.01	31.14	2.53	1.22	0.43	3.16	3.49	1.38
	206	338	0.0073	18	2.58	1.61	0.65	3.31	2.97	1.15
	207	165	0.005	20.07	1.03	0.22	0.08	0.73	2.77	2.68



Source: CLG

Figure 14.5: Contact Analysis for ED 503 vs ED 504 (left) and ED 505 vs ED 506 (right) for Ag

14.1.7.5 Evaluation of Outlier Grades, Cut-offs, and Grade Capping

Definition and control of outliers is a common industry practice that is necessary and useful to prevent potential overestimation of volumes and grades. Values defined as outliers have been controlled in the estimation using capping. The use of capping is a change from the previous year when the high grade restriction methodology had been used. Outliers were defined according to probability distribution curves, depending on population, or continuity breaks, reconciliation with the short-term block model (channel samples) and the production information from the plant.

Table 14.4 shows the selected values and the number of composites affected by ED.

The values and methodology selected produced a decrease in metal content of 1.63% for Ag, 0.95% for Pb and 0.46% for Zn, when compared to an alternative model where capping was not used.

14.1.7.6 Variography

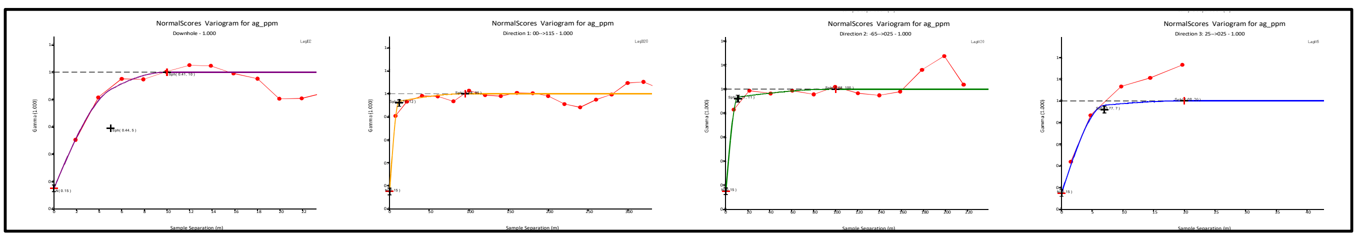
Down-the-Hole (DTH), directional (3D), and omnidirectional variograms were calculated and modeled to define the spatial continuity for each variable. Variograms were calculated for each variable using the 1.5 m composite database. The variography was completed using the following procedure:

- Derivation of nugget effect from DTH variograms
- Adjustment of variogram models to the main continuity directions

Due to some EDs possessing a lower number of composites, it was not possible to model a robust variogram for some EDs. As a result, a global variogram was used for some veins. In general, the calculated nugget effect varies between 20% to 30% of the total sill, which is considered appropriate for the variability of these types of deposits. The total ranges are around 120 m to 200 m in the main direction, which is considered adequate. Figure 14.6, Figure 14.7 and Figure 14.8 illustrates a few examples of the modeled variograms for Ag, Pb and Zn in selected estimation domains. Due to the variable nature of the orebody, variogram analysis was performed on normal score transformed data, and the resulting variogram models were back transformed for use in the estimation process.

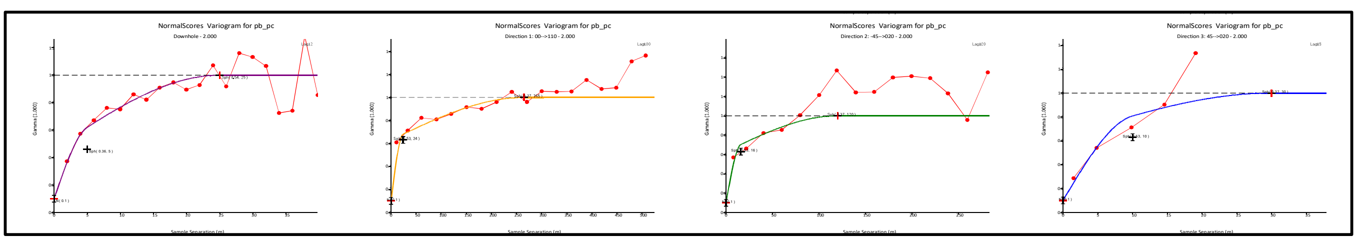
Table 14.4: Outliers Treatment by ED and Variable

ED	Ag (ppm)		Pb (%)		Zn (%)	
	Capping Value	Restricted Samples	Capping Value	Restricted Samples	Capping Value	Restricted Samples
301	11,000	4	19.0	6	25.0	5
302	10,500	3	21.0	4	29.0	5
303	5,500	4	23.0	5	27.0	5
304	-	-	-	-	-	-
305	-	-	-	-	-	-
306	3,200	3	21.0	2	25.0	2
307	-	-	-	-	-	-
308	2,750		23.0	4	28.0	5
309	-	-	-	-	-	-
310	-	-	-	-	-	-



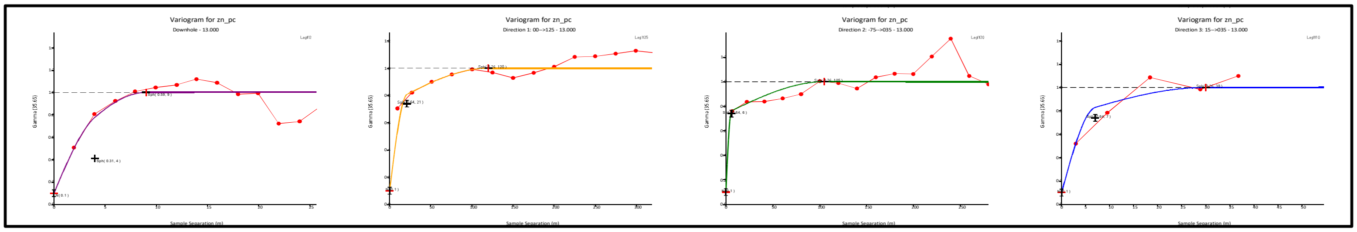
Source: CLG

Figure 14.6: Experimental and Modeled Variograms for Ag, ED 301



Source: CLG

Figure 14.7: Experimental and Modeled Variograms for Pb, ED 302



Source: CLG

Figure 14.8: Experimental and Modeled Variograms for Zn, ED 201

14.1.8 Block Model Parameters, Specific Gravity, and Grade Estimation

14.1.8.1 Block Model Parameters and Domaining

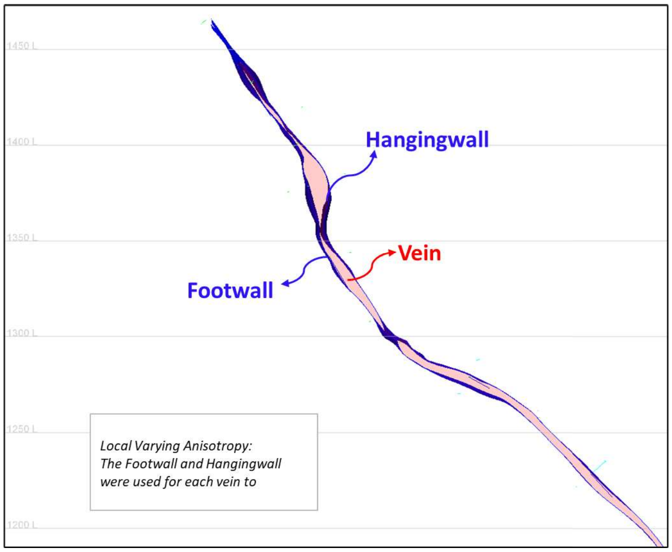
Table 14.5 shows the definition for the block model built in Maptek Vulcan®, using the local coordinate system.

Table 14.5: Block Model Dimensions

Orientation	East	North	Elevation
Origin	367,300	3,047,900	600
Rotation (°)	120	-	-
Parent Block Size (m)	5.0	5.0	5.0
Sub-Block Size (m)	1.25	1.25	1.25
No. of Blocks	620	150	210
Range (m)	3,100	750	1,050

14.1.8.2 Interpolation and Extrapolation Parameters

The estimation of Ag, Pb, and Zn grades for CLG has been conducted using Ordinary Kriging (OK) with four nested passes for each ED. Local varying anisotropy methodology was used to handle the geological variability of the dip and azimuth of each vein. This method defines a local orientation for the search ellipsoid for each block using the footwall and hanging wall surfaces. The result is that all the veins have an independent set of variables for azimuth, dip and plunge, as shown in Figure 14.9.



Source: CLG

Figure 14.9: Example of Local Varying Anisotropy for Two Different Veins in the CLG Model

For the CLG deposit a set of schemes defining different search radii, sample selection strategies, octant usage and outlier control were implemented and analyzed to apply an appropriate estimate plan.

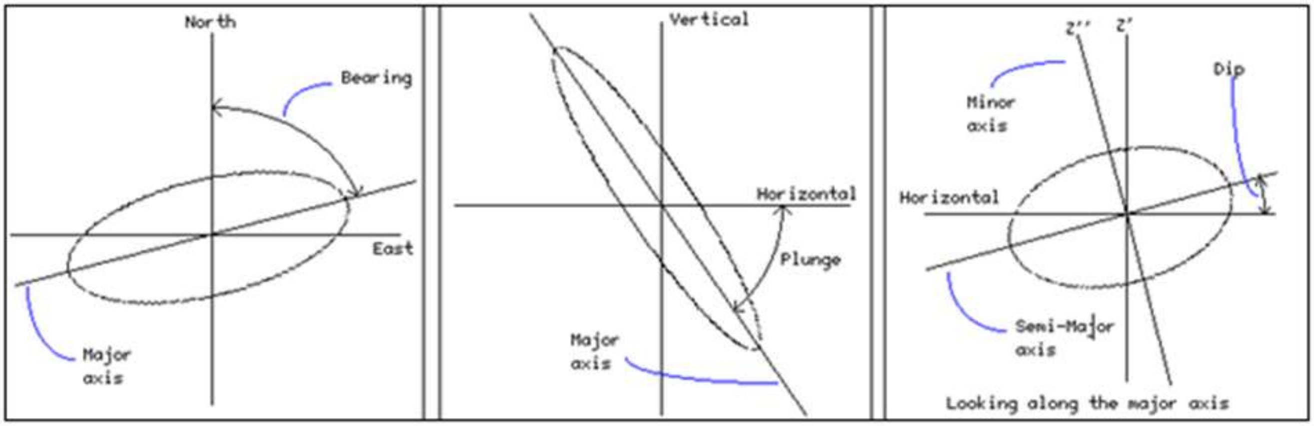
The OK plan included the following criteria and restrictions:

- Discretization of 4 x 4 x 3
- Parent cell estimation
- For outlier control, restriction of high grades was achieved using capping for all passes (see Section 14.1.7.5).
- Hard boundaries have been implemented in all estimation passes and between all EDs.

Search radii were defined based on data distribution in the model as well as the variogram model. Table 14.6 summarizes the radii of searches implemented and the scheme of samples selection, for all variables according to Vulcan® convention (see Figure 14.10).

Table 14.6: Sample Selection and Radii of the Search Ellipsoid

Pass	Search Radii (m)			Samples			
	Major	Semi	Minor	Min	Max	Max per Drill Hole	Max per Octant.
1	40.0	70.0	10.0	7	12	3	5
2	90.0	120.0	22.5	6	12	3	5
3	190.0	220.0	47.5	8	20	3	3
4	380.0	410.0	380.0	6	20	-	-



Bearing, plunge, and dip are the values ((ϴ1, ϴ2, ϴ3, respectively) and angles are measured in degrees. Initially, the X axis is heading north; the Y axis is heading east and the Z axis is heading up. Bearing is measured clockwise from the north towards the bearing line (rotation around the Z axis). Plunge is measured counter-clockwise around the Y' axis and dip is measured counter-clockwise around the X' axis. The major axis is the X' axis radius, the semi-major axis is the Y' axis and the minor axis is the Z' axis (X',Y' and Z' are the axes modified by rotation).

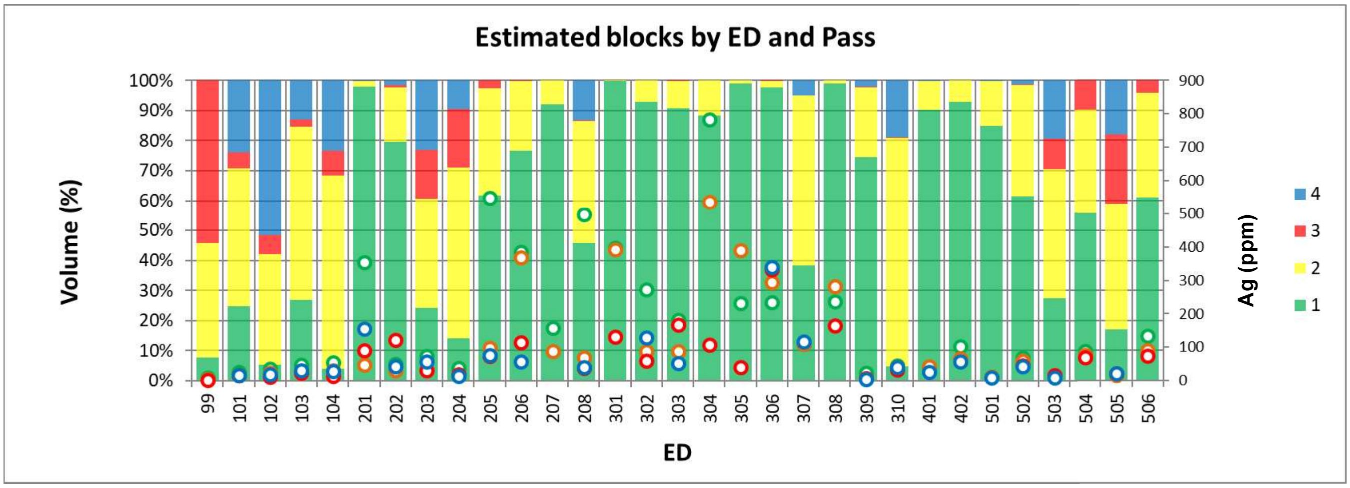
Source: CLG

Figure 14.10: Angle and Axis Convention in Vulcan

For the selected sample selection scheme, a detailed analysis was performed for the block model pass, the number of samples and the drill holes used for estimation. The objective of this analysis was to evaluate the implementation of the OK estimation plan and, specifically, determine how the estimation plan accounted for the number of samples and number of drill holes in each estimation pass. This analysis also allowed the evaluation of the spatial coverage of every block by determining whether the estimation was performed by an interpolation or extrapolation process.

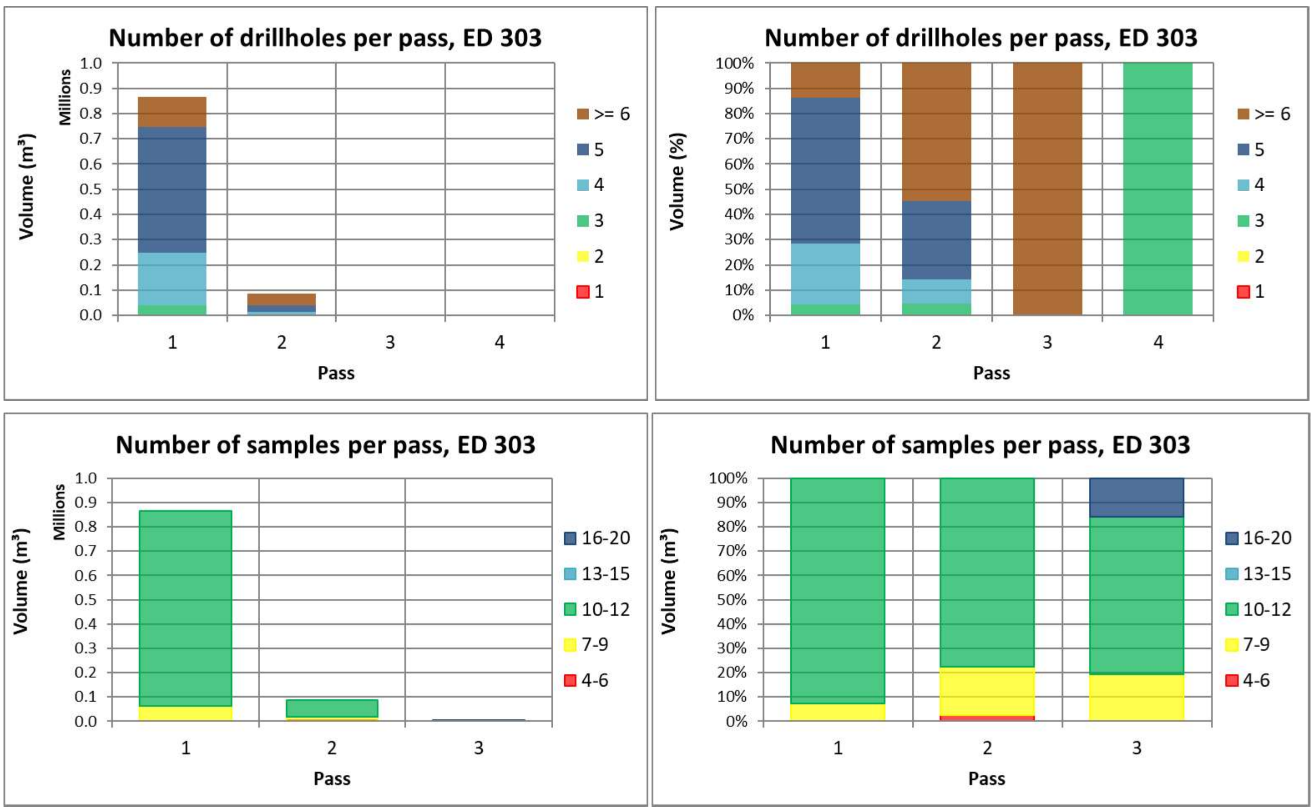
Figure 14.11 provides a summary of estimated block percentage (bars), and mean grade (circle) per estimation pass for each ED for silver. Figure 14.12 and Figure 14.13 show the number of samples and drill holes by estimation pass for silver for ED 303 and 309, respectively. The following observations can be made from the figures:

- The first pass is a local track, evidenced in the representation in terms of estimated volume, with a mean estimated distance of approximately 20-30 m. The second pass estimated a mean distance closer to 60 m.
- The majority of veins were estimated in the first two passes.
- In general, it is observed that all EDs included an adequate number of samples and drill holes for grade interpolation. For both examples, more than three drill holes were used in the first estimation pass, and only in the third and fourth passes was the kriging plan allowed to estimate with two drill holes. This sample selection strategy ensures adequate grade interpolation with correct three-dimensional spatial coverage.



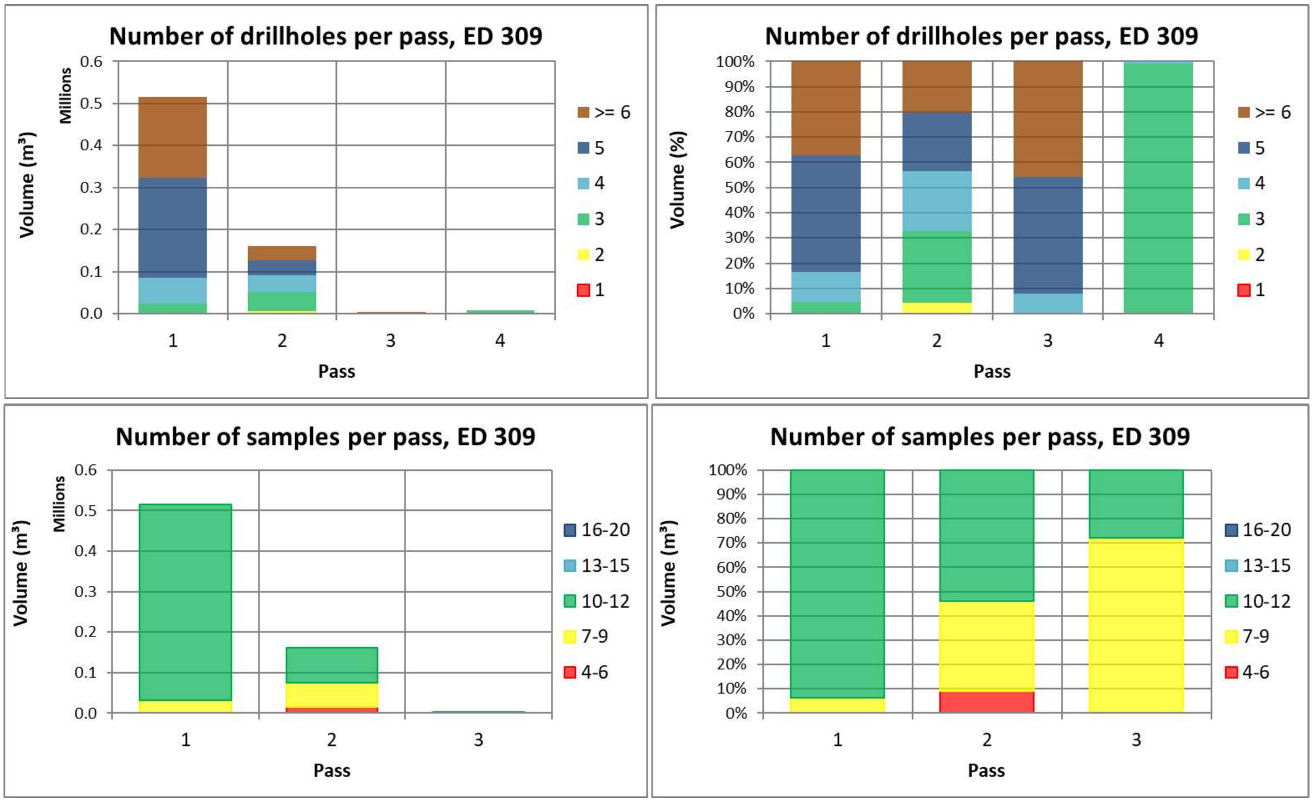
Source: WSP

Figure 14.11: Percentage of Estimated Blocks and Mean Grades (upper) and Mean Distance (lower) per Pass by ED for Ag



Source: WSP

Figure 14.12: Number of Samples and Drill Holes per Estimation Pass for Ag ED 303



Source: WSP

Figure 14.13: Number of Samples and Drill Holes per Estimation Pass for Ag ED 309

14.1.8.3 Specific Gravity

Specific gravity was estimated using a similar approach to that of metal grade estimation. Four kriging passes were defined for each ED with a hard boundary between all EDs. For the outlier treatment, a global capping was used with a value of 2.0 (t/m^3) and 3.5 for the lower and the upper tail of the distribution, respectively. The results show a wide variation in specific gravity between veins. There were 9,901 specific gravity measurements in the database used for estimation.

In the QP's opinion, the estimation of specific gravity with OK is an improvement to assess the local variability of specific gravity between veins.

14.1.9 Model Validation

In order to validate the Los Gatos Resource estimation, validation of the block model was carried out to assess the performance of the OK technique and the conformity of input values. The validation was carried out on estimated blocks up to the third pass, considering composites used in the estimates.

14.1.9.1 Global Statistics

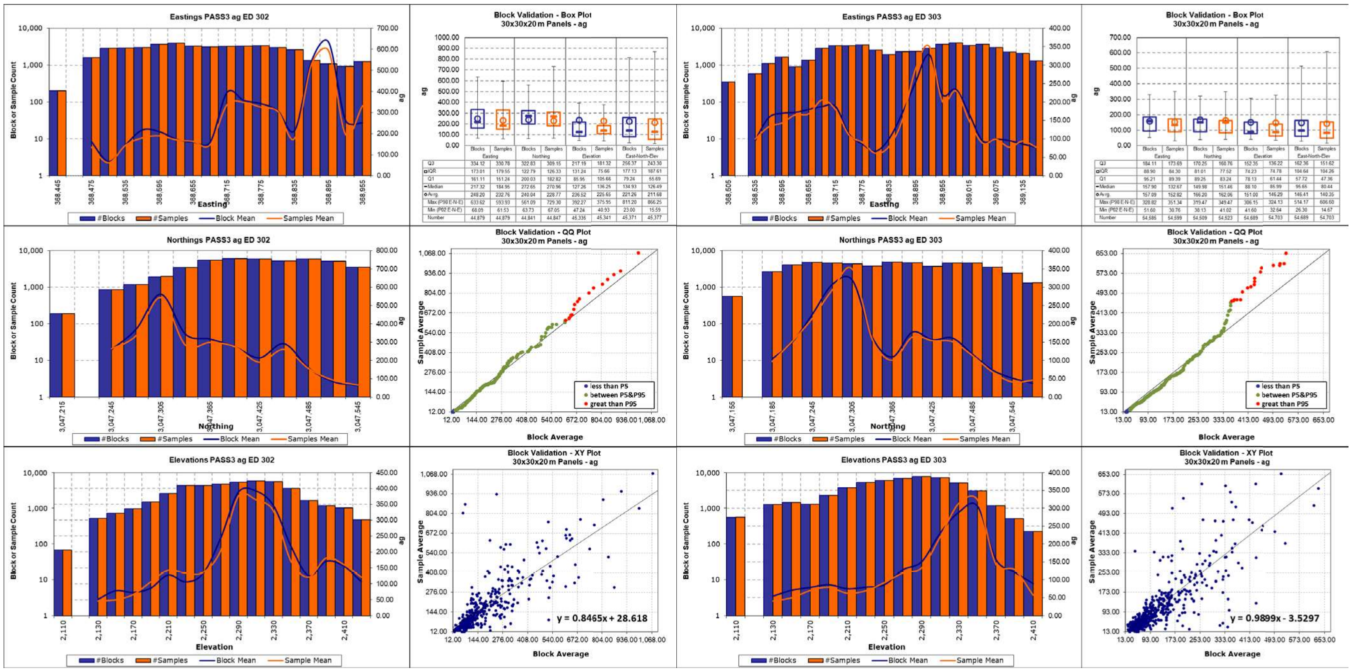
A statistical validation between declustered composite grades and estimated blocks was completed. Global statistics of mean grades for composites can be influenced by several factors, such as sample density, grouping, and, to a greater extent, the presence of high grades that have been restricted in the estimation plan. Consequently, global statistics of declustered composites were calculated using the nearest-neighbor (NN) method with search ranges as used in the OK estimation technique. A summary of this comparison is shown for key domains in Table 14.7 for Ag, Pb, and Zn, respectively, where negative values indicate a negative difference between block mean grades in relation to composite mean grades, and vice-versa. In general, differences under 10% are satisfactory, and differences above 10% require attention. The result of the analyses shows that relative differences for the main ED were found to be within acceptable limits. Only EDs with few samples and poor geological continuity showed results above the expected threshold.

Table 14.7: Statistics Comparison for Ag, Pb and Zn for the main ED, Pass 2

Element	ED	Number of data		Minimum (g/t)		Maximum (g/t)		Mean (g/t)		
		Blocks	NN	Blocks	NN	Blocks	NN	Blocks	NN	%Diff
Ag	301	32,192	32,192	1.8	3.8	7,301.8	8,158.2	361.3	362.8	**-0.40%**
	302	45,361	45,361	0.4	6.1	7,137.9	6,690.1	223.9	214.9	**4.20%**
	303	54,665	54,665	0.6	5.3	3,537	3,464.5	138.6	137.2	**1.00%**
	304	1,758	1,758	53.4	49.1	3,891.7	3,916.5	608.1	634.6	**-4.20%**
	305	3,502	3,502	8.3	4.5	2,155.9	1,853.5	238.7	271.7	**-12.20%**
	306	13,289	13,289	2.6	5.5	1,991.4	2,021.7	214.9	201.1	**6.80%**
	307	2,579	2,579	35.5	19.8	262.8	201	112.6	113.1	**-0.50%**
	308	5,165	5,165	13.5	10.7	1,511.9	1,765.5	245.7	248.6	**-1.20%**
	309	45,842	45,842	1.1	1.7	250.5	216.4	18.6	18.7	**-0.70%**
	310	783	783	8.3	15.1	73	62	40.2	35.2	**14.10%**
	201	44,965	44,965	1	2.4	11,459.4	12,324.9	304.9	299.6	**1.80%**
	206	8,778	8,778	0.1	5.9	4,222.3	3,151.5	382.7	356.8	**7.30%**
	207	3,852	3,852	3.1	2.5	2,850.6	2,271.4	139.3	159.6	**-12.70%**
Pb	301	32,190	32,190	0	0.02	15.39	13.17	2.04	2.09	**-2.40%**
	302	45,360	45,360	0.03	0.02	16.95	13.38	1.58	1.63	**-3.40%**
	303	54,282	54,282	0	0.04	15.5	14.74	1.85	1.85	**-0.50%**
	304	1,758	1,758	0.06	0.09	28.31	20.51	2.33	2.7	**-13.90%**
	305	3,503	3,503	0.05	0.04	9.09	6.26	1.06	1.2	**-11.70%**
	306	13,285	13,285	0	0.06	15.46	15.16	1.1	1.14	**-3.80%**
	307	2,579	2,579	0.08	0.11	0.93	0.86	0.26	0.25	**3.90%**
	308	5,163	5,163	0.05	0.15	14.19	15.85	3.68	3.92	**-6.20%**
	309	44,511	44,511	0	0.01	1.64	1.4	0.11	0.11	**-1.50%**
	310	783	783	0.01	0.01	0.06	0.04	0.03	0.02	**10.60%**
	201	44,983	44,983	0	0.03	16.08	15.81	2.17	2.11	**3.30%**
	206	8,783	8,783	0.03	0.02	8.06	6.39	0.99	0.97	**2.00%**
	207	3,849	3,849	0	0.01	5.87	6.33	0.49	0.47	**2.30%**
Zn	301	32,188	32,188	0	0.06	22.77	23.23	4.13	4.21	**-1.70%**
	302	45,361	45,361	0.06	0.03	22.08	25.76	3.63	3.67	**-0.90%**
	303	54,672	54,672	0.01	0.06	19.94	20.42	3.85	3.84	**0.20%**
	304	1,758	1,758	0.16	0.19	7.77	5.65	1.6	1.73	**-7.90%**
	305	3,504	3,504	0.07	0.07	9.91	8.16	1.31	1.46	**-10.20%**
	306	13,290	13,290	0.12	0.14	20.63	21.81	2.25	2.24	**0.70%**
	307	2,579	2,579	0.1	0.11	0.63	0.54	0.29	0.27	**7.70%**
	308	5,159	5,159	0.03	0.47	22.8	24.88	6.27	6.41	**-2.10%**
	309	45,839	45,839	0.01	0.01	3.79	2.81	0.21	0.21	**-0.20%**
	310	783	783	0.01	0.01	0.11	0.06	0.03	0.03	**12.40%**
	201	44,984	44,984	0.05	0.06	25.91	26.9	4.79	4.7	**2.00%**
	206	8,784	8,784	0.08	0.04	10.06	9.05	2.06	2.04	**0.80%**
	207	3,848	3,848	0.01	0.02	11.79	15.63	0.87	0.82	**5.80%**

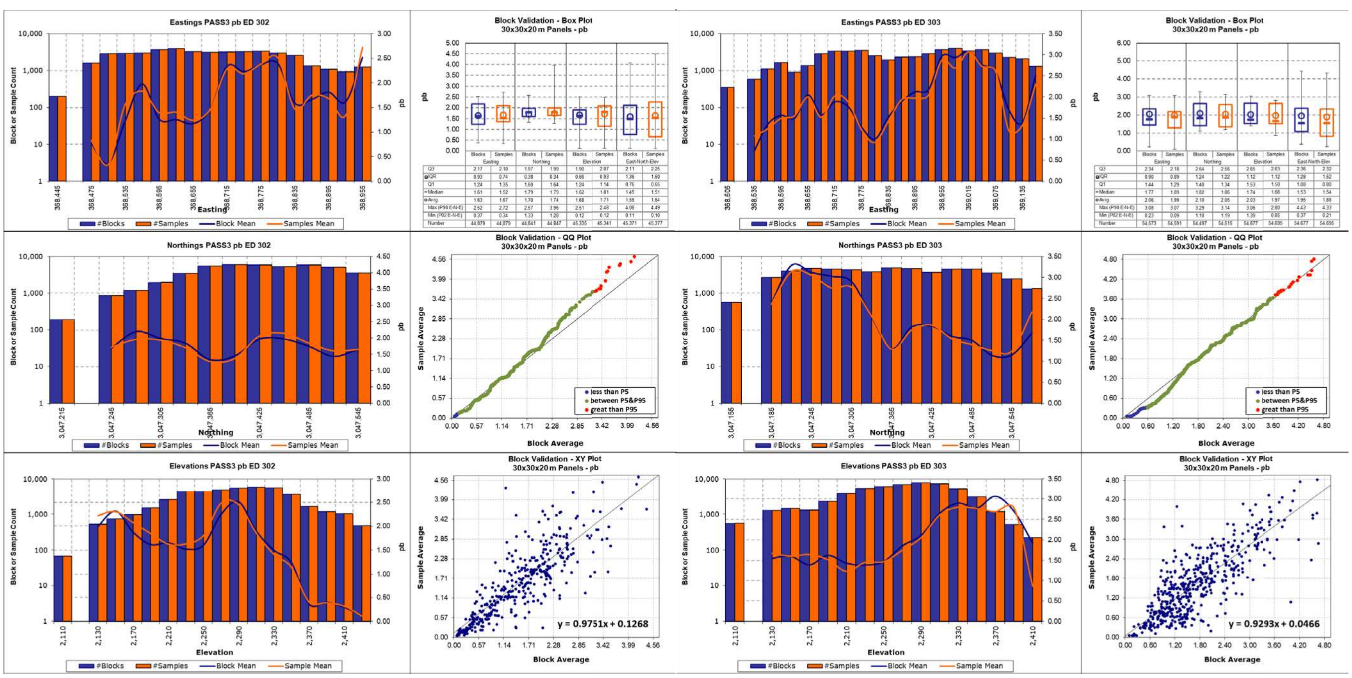
14.1.9.2 Swath Plots

In order to evaluate block grade robustness in relation to data, a semi-local comparison using swath plots was completed. Generating swath plots entails averaging blocks and samples separately in regular 30 m (east) x 30 m (north) x 20 m (elevation) panels and then comparing the mean grade in each sample and block panel through each axis. Figure 14.14 to Figure 14.16 provide a summary of swath plots for each variable for ED 302 and ED 303. The review was conducted considering the block estimation up to the third pass. In general, results indicate that grade estimates for the deposit reasonably follow trends found at the local and global scale without observing an excessive degree of smoothing.



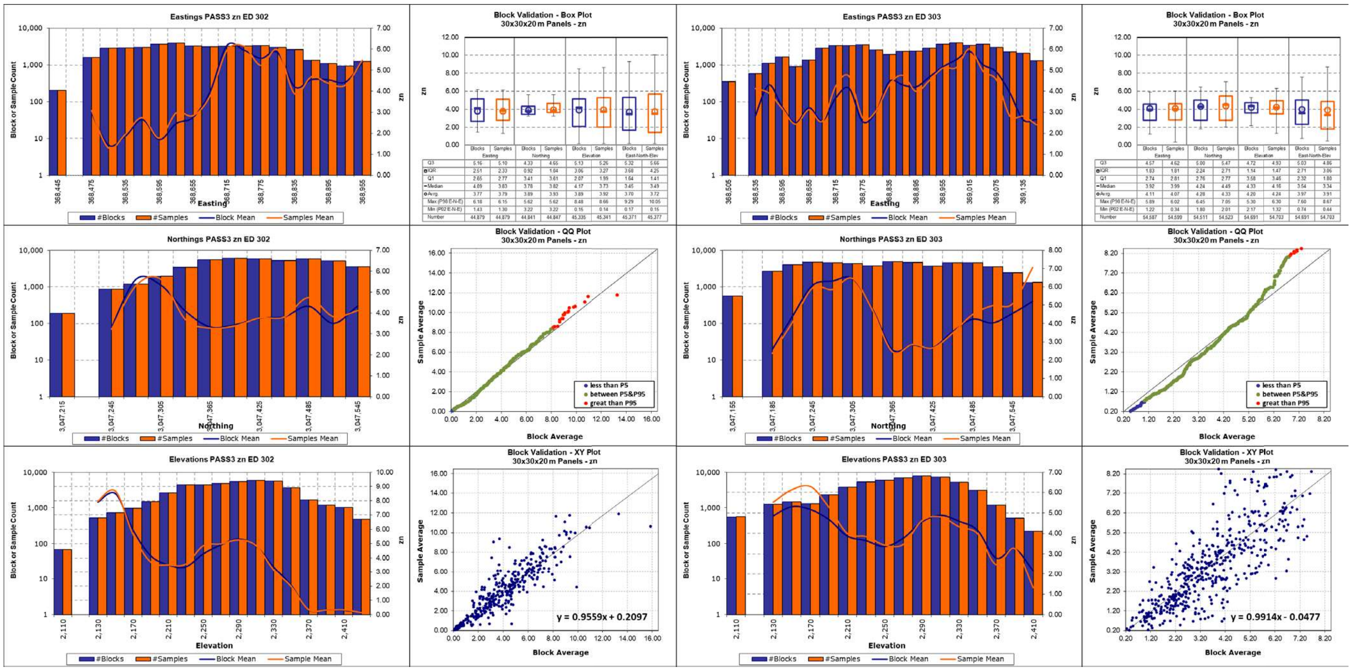
Source: WSP

Figure 14.14: Swath Plots for Ag for ED 302 and ED 303



Source: WSP

Figure 14.15: Swath Plots for Pb for ED 302 and ED 303



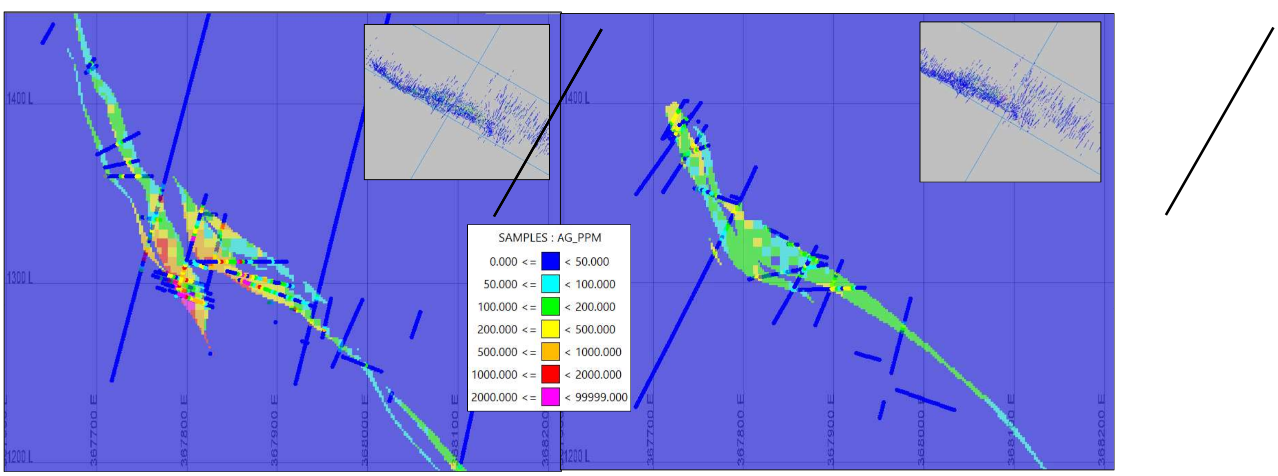
Source: WSP

Figure 14.16: Swath Plots for Zn for ED 302 and ED 303

14.1.9.3 Visual Validation

To visually validate the estimation, the QP completed a review of a set of cross sectional and plan views. The validation shows a suitable representation of samples in blocks. Locally, the blocks match the estimation composites both in cross section and plan. In general, there is an adequate match between composite data and block model data for Ag, Pb and Zn grades. High grade areas are suitably represented, and high-grade samples exhibit suitable control, which validates the treatment of outliers used. Smoothing increases in boundary and deep areas of the deposit, due to the reduction in the number of available composites.

Figure 14.17 presents an example of vertical sections from the estimate model for Ag.

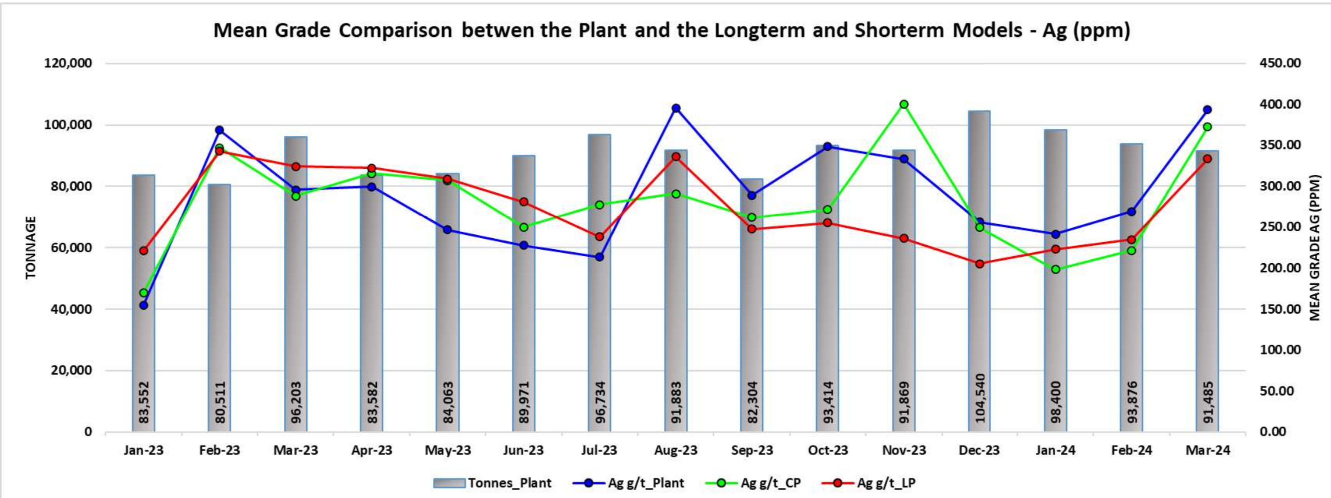


Source: WSP

Figure 14.17: Visual Validation of Ag Estimation

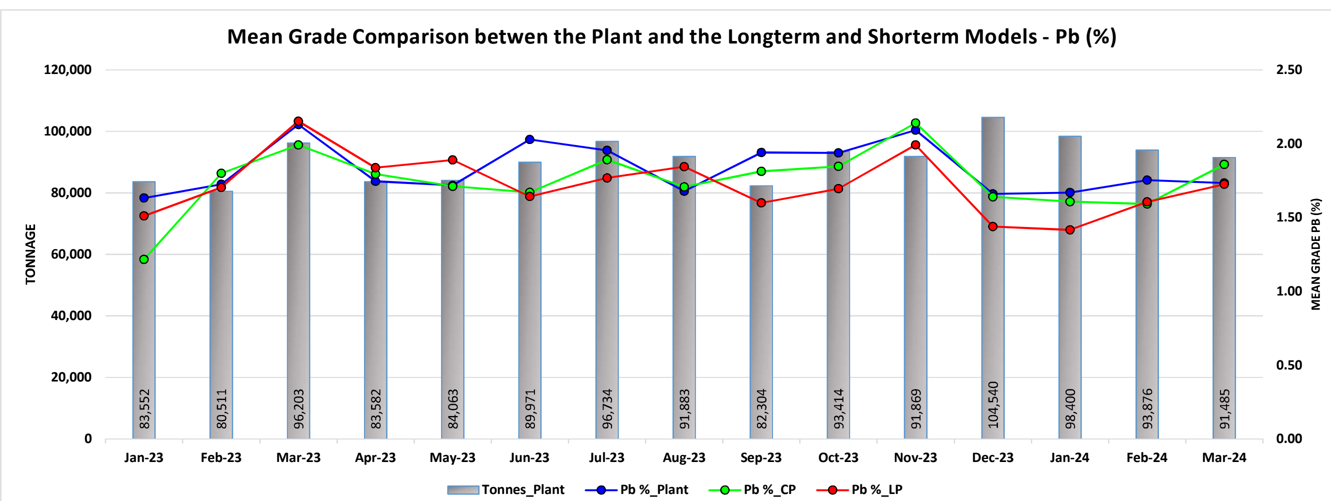
14.1.9.4 Block Model Reconciliation

Based on channel sample data from production drifts, a short-term model was developed by the geology team from Los Gatos. Figure 14.18, Figure 14.19, and Figure 14.20 show the comparison between the plant feed (blue), the long-term model (red) and the short-term model (green) for Ag, Pb, and Zn for the period between January 2023 and March 2024. In general, the differences between the plant feed and the long- and short-term model are lower for Pb and Zn. The variability is greater for Ag, but both the long-term and short-term models follow the general trend of the plant feed. In the opinion of the QP the difference in metal content between these two models is acceptable and the long-term model based on the drill holes should be considered a good approximation of expected grades.



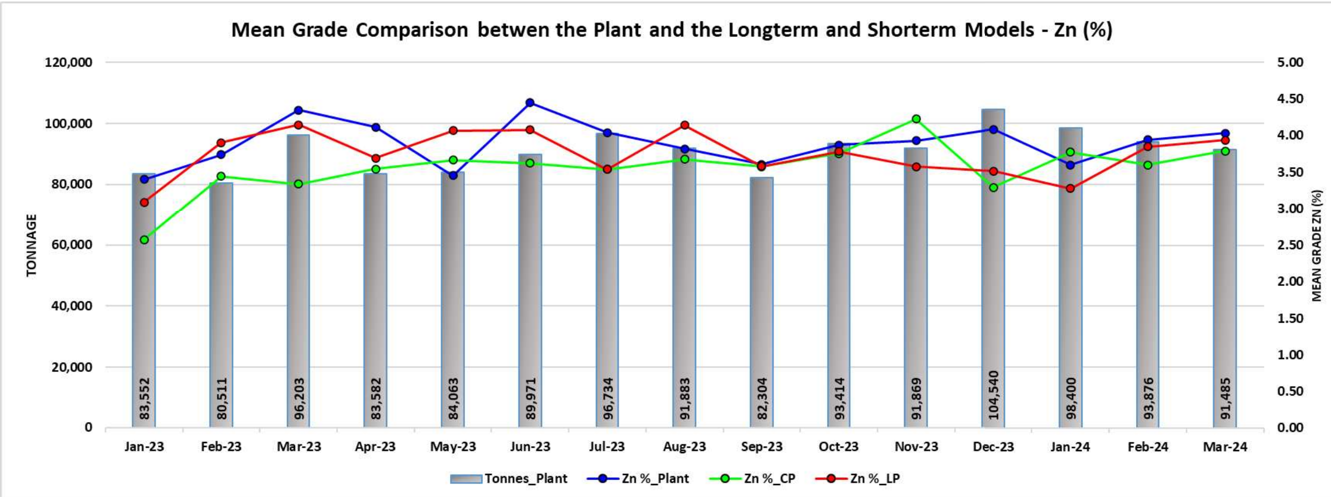
Source: CLG

Figure 14.18: Grade comparison for Ag between the plant feed (blue), the long-term model (red LP), and the short-term model (green CP), between January 2023 and March 2024



Source: CLG

Figure 14.19: Grade comparison for Pb between the plant feed (blue), the long-term model (red LP), and the short-term model (green CP), between January 2023 and March 2024



Source: CLG

Figure 14.20: Grade comparison for Zn between the plant feed (blue), the long-term model (red LP), and the short-term model (green CP), between January 2023 and March 2024

14.2 Estimation, Assumptions, Parameters and Methods (Esther)

The Mineral Resource estimate for the Esther deposit remains unchanged from that reported in 2022.

14.2.1 Software

In the Esther zone the Leapfrog™ Geo software was used for solids model generation and Vulcan software for block model estimation, reporting, statistics review, geostatistics, and swath plots.

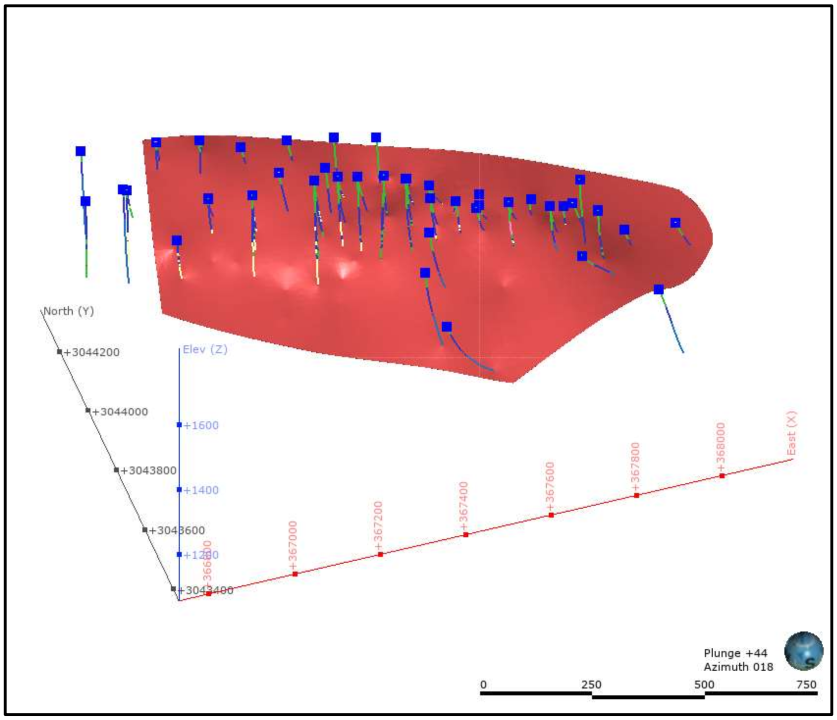
14.2.2 Drilling Data Esther

The database available for the 2022 Mineral Resource estimation of Esther included included DDH data, topographic surface data, and density data, with 82 drill holes totalling 10,246 mm and was reviewed in plan and section to validate the accuracy of the collar locations, hole orientations and down hole trace, and assay data were analyzed for out-of-range values. The drill hole database was determined to be of suitable quality to support the 2022 Mineral Resource estimate.

14.2.3 Geological Interpretation

For the 3D geological modeling at the Esther zone, the Leapfrog EDGE version 2021.2 program was used, using only the geological information from the surface diamond drill holes and the surface geological mapping conducted by the MPR team. Figure 14.21 is a 3D view of the Esther Vein.

The vein was modeled as a vein cutting into pre-existing rocks, which were modeled as deposit surfaces.



Source: CLG

Figure 14.21: 3D View of Esther Modeled Vein and the Drill Holes Used for Geological Interpretation

14.2.4 Exploratory Data Analysis

14.2.4.1 Detection Limit

Samples with assays equal to the detection limit or zero were adjusted to half of the minimum detection limit.

14.2.4.2 Sample Length and Assay Compositing

Considering that the sample database shows a majority of 2.0 m samples, the block size and the average vein width, it was decided that the composite length should be 2.0 m.

The database was composited at 2.0 m, and the methodology used breaks in the compositing process where there was a change in the underlying estimation domain. Therefore, only samples from the same estimation domain are composited together, while the lengths of remaining samples are merged into the last composite.

14.2.4.3 Estimation Domain Definition

Estimation Domains (EDs) have been defined based on the current geology - the vein defines an independent estimation domain (ED 1) and the material lying outside the vein defines the low-grade domain (ED 2).

14.2.4.4 Contact Analysis

The results of the contact analysis show abrupt changes in the grade at the contact between the modeled veins. Therefore, it was decided to use hard boundaries between all ED and variables to avoid sharing composites between veins.

14.2.4.5 Evaluation of Outlier Grades, Cut-offs, and Grade Capping

Values defined as outliers have been controlled in the estimation using High Yield Restriction (HYR) within a block distance (10.0 m x 5.0 m x 5.0 m). Outliers were defined according to probability distribution curves, depending on population, or continuity breaks.

14.2.4.6 Variography

Due to the number of samples available it was not possible to model a robust variogram for the majority of the EDs. For this reason, the variograms modeled for Los Gatos were used in the estimation process of Esther.

14.2.5 Block Model Parameters, Specific Gravity, and Grade Estimation

14.2.5.1 Block Model Parameters and Domaining

Table 14.8 shows the definition for the block model built in Vulcan using the local coordinate system.

Table 14.8: Block Model Dimensions (Esther)

Orientation	East	North	Elevation
Origin	366,600	3,043,900	1,000
Rotation (°)	110	-	-
Parent Block Size (m)	10.0	5.0	5.0
Sub-Block Size (m)	5.0	1.0	1.0
No. of Blocks	340	600	800
Range (m)	1,700	600	800

14.2.5.2 Interpolation and Extrapolation Parameters

The estimation of Ag, Pb, and Zn grades for Esther was conducted using OK with three nested passes for each ED. Local varying anisotropy methodology was used to handle the geological variability of the dip and azimuth of each vein.

14.2.5.3 Specific Gravity

Specific gravity was estimated using a similar approach to that employed for the estimation of metal grades. Three kriging passes were defined for each ED with hard contacts between all EDs.

14.2.6 Model Validation

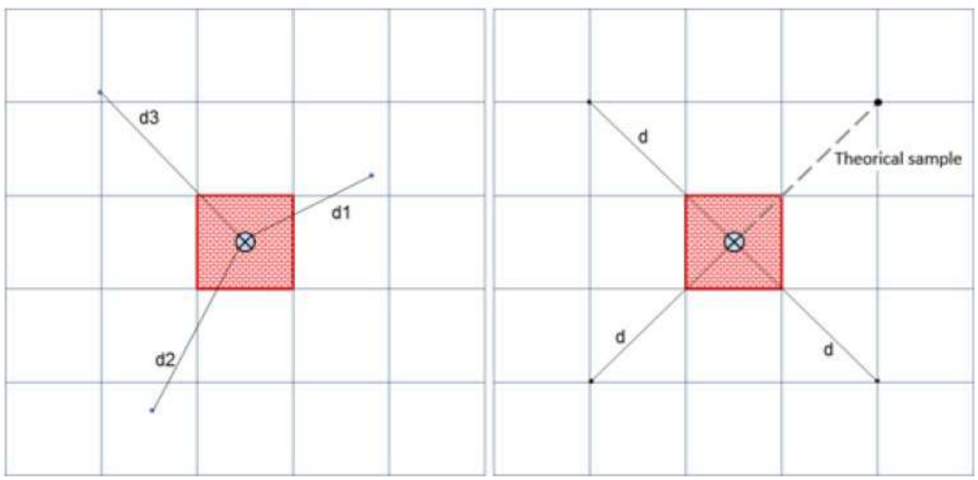
The model was subjected to a detailed and comprehensive validation process to assess the performance of the OK and the conformity of input values. The validation included local and global statistical validations as well as visual validations. The validation of the model indicates that the model is consistent with the geological controls on mineralization and has a concordance with the data used in its model construction.

14.3 Mineral Resource Classification

This sub-section contains forward-looking information related to Mineral Resource classification for the CLG deposit. Material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts, or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including geological and grade continuity analysis and assumptions.

The Mineral Resource classification in this disclosure is based on several factors including drill hole spacing grids, proximity to mine infrastructure (production drifts) and the level of geological confidence for the continuity and grade of each vein.

In order to apply the resource classification criteria an equivalent grid definition methodology was used. This methodology was based on the distance of the drill holes relative to an estimated block. Based on the distance, an equivalent (theoretical) grid was calculated assuming that the distances of the drill hole to the center of the evaluated block are equidistant (see Figure 14.22). Figure 14.23 illustrates the final resource classification in a 3D view for blocks inside veins.

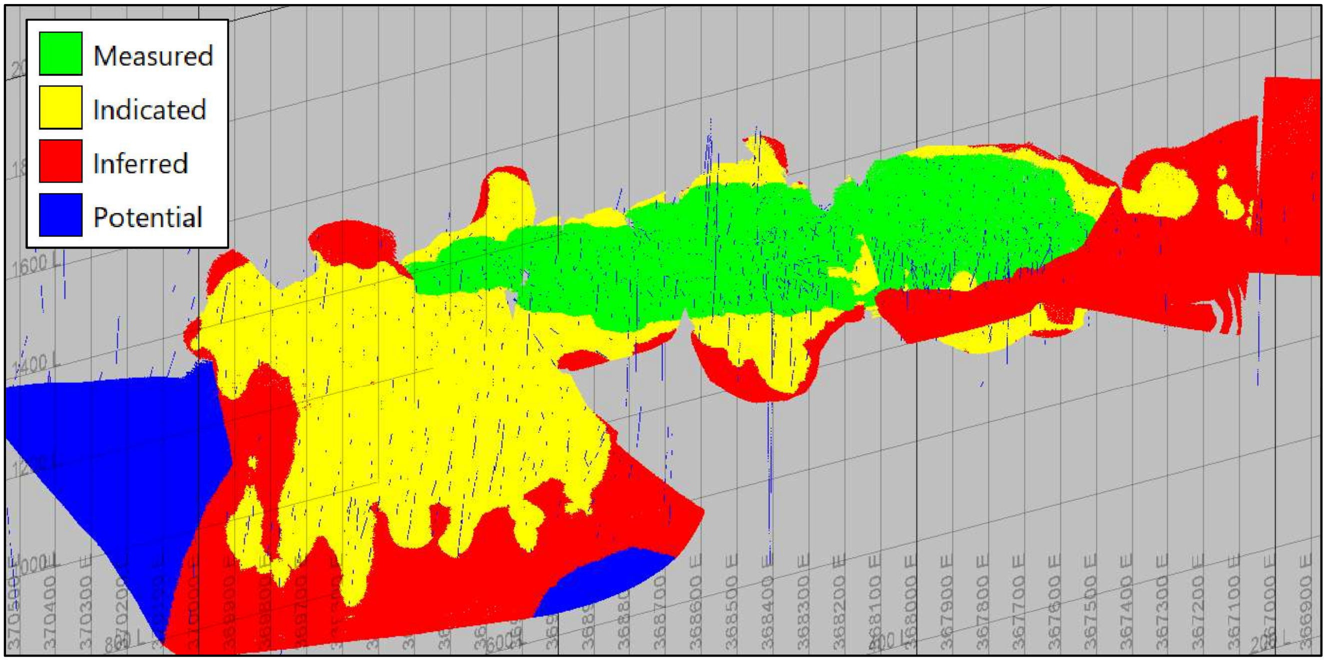


$$Equivalent\ Distance = \frac{(d_1 + d_2 + d_3)}{3}$$

$$Equivalent\ Grid = \sqrt{2} * Equivalent\ Distance$$

Source: WSP

Figure 14.22: Formula for Theoretical Grid Definition



Source: WSP

Figure 14.23: Resource Classification, Showing Blocks Inside Veins, 3D View

The Mineral Resource Classification for Los Gatos is as follows:

- Measured Resources: Material lying inside a buffer of 30 m from mine development and limited to veins already in production (ED 301 to 309, 201, 202, 205, 206, 207, 208, 401, and 402), and veins where the level of geological knowledge and confidence is high and there is a low uncertainty of grade and vein continuity.
- Indicated Resources: Blocks with a theoretical grid between 0 and 50 m. Material lying outside veins and with an equivalent distance between 0-25 m was also defined as Indicated. This condition only applied to the Central zone of the deposit where there is a known stockwork mineralization style present, between the main veins.
- Inferred Resources: Blocks with a theoretical grid greater than 50 m, and specific veins where the geological knowledge is low (ED 101, 102, 103, 104, 203, and 204). The Inferred category was further limited by an external polygon of geological confidence, interpreted in long section. Mineralized material estimated within the vein but outside this polygon is not reported.

14.4 Basis for Establishing the Prospects of Economic Extraction for Mineral Resources

This subsection contains forward-looking information related to establishing Reasonable Prospects for Economic Extraction (RPEE) of Mineral Resources. Factors that may cause actual results to differ materially from the conclusions, estimates, designs, forecasts, or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions set forth in this subsection, including NSR cut-off assumptions, metallurgical recovery, cost forecasts, and product price forecasts. The Mineral Resource estimate was reported from within a constrained stope optimization developed using criteria to establish RPEE.

The CLG deposit is polymetallic. Therefore, a NSR calculation was used to determine a NSR cut-off value to define Mineral Resources. The parameters used in the calculation of NSR in the block model (including metal values, recovery factors, transportation costs, etc.) were provided by CLG and reviewed by WSP. For cut-off estimation purposes, the NSR value of the mineralized material that MPR expects to receive at the mine gate must first be established and expressed in terms of value per tonne mined and processed, commonly referred to as ROM tonnes.

Table 14.9 lists key parameters used to calculate the NSR value to establish RPEE. Commodity price assumptions were supplied by MPR based on long-term prices and, in the opinion of the QP, the prices are reasonable and consistent with market research provided by MPR. See Section 15.3 for basis of metal price assumptions. Concentrate sales terms were provided by MPR and consider standard industry terms, consistent with those experienced to date, for payable values and treatment and refining charges.

Table 14.9: Parameters for Calculating Block Net Smelter Return for Values for CLG Mineral Resource Reporting

			Silver	Zinc	Lead	Gold	Copper
Metal Prices			**$23.00/oz**	**$1/25/lb**	**$0.95/lb**	**$1850/oz**	**$4.00/lb**
Plant Recovery (%)	Pb/Cu >7	to Zn CCT	10.20%	63.40%			
		to Pb CCT	78.00%		89.40%	54.20%	82.00%
		Pyrite Leach	4.96%			6.92%	
	Pb/Cu <7	to Zn CCT	10.20%	63.40%			
		to Pb CCT	23.00%		87.20%	11.20%	15.50%
		to Cu CCT	55.00%			43.00%	66.50%
		Pyrite Leach	4.96%			6.92%	
Concentrate Grades (%)	Pb/Cu >7			56.28%	53.42%		
	Pb/Cu <7			56.28%	71.52%		23.02%
Concentrate Moisture (%)				8.00%	7.50%		7.50%
Concentrate Transport ($/wmt)				$197.80	$112.80		$112.80

Table 14.10 summarizes operating costs used to establish the NSR cut-off to establish reasonable prospects for economic extraction. Operating costs were provided by MPR based on historical operating data and were considered reasonable based on QP experience from other operations. Costs include estimates of general and administration costs.

Table 14.10: Costs Used for Resource NSR Cut-Offs

Item	Cost Type	Unit	Cost
Mining Underground	Fixed / Indirect	US$/t	27.83
Processing	Fixed / Indirect	US$/t	9.35
Processing	Variable / Direct	US$/t	17.86
General & Admin.	Fixed / Indirect	US$/t	15.91
Total Cost (NSR Cut-off)		**US$/t**	**70.94**

14.5 Mineral Resource Uncertainty Discussion

Mineral Resources are not Mineral Reserves and do not necessarily demonstrate economic viability. There is no certainty that all or any part of this Mineral Resource will be converted into a Mineral Reserve.

Mineral resource estimates can be materially impacted by data quality, natural geological variability of mineralization and/or metallurgical recovery and the adequacy of economic assumptions supporting reasonable prospects for economic extraction, including metal prices and mining and processing costs. Mineral resources may also be affected by the estimation methodology and the parameters and assumptions used in the grade estimate, including data limitations or search and estimation strategies, although, in the opinion of the QP, this is unlikely to have a significant impact on the mineral resource estimate.

Mineral Resources are reported within stope shapes using a $70.94/tonne net smelter return ("NSR") cut-off calculated using an Ag price of $23/oz, Zn price of $1.25/lb, Pb price of $0.95/lb, Au price of $1,850/oz, and Cu price of $4.00/lb.

Most of the Inferred Mineral Resource is in the SE zone and extends approximately 550 meters below the current level of development. The Inferred Mineral Resource in the SE zone is based on drill spacing of approximately 100 m by 200 m and, therefore, information is currently limited with respect to the geological continuity of mineralization and geotechnical and hydrogeological conditions.

Further infill drilling may confirm the continuity of mineralization and upgrade the mineral resource categories and associated quantities.

14.6 Qualified Person's Opinion on Factors that are Likely to Influence the Prospect of Economic Extraction

In the opinion of the QP, the relative accuracy and, consequently, the confidence of the Mineral Resource estimates are deemed to be appropriate for their intended purpose of reporting Mineral Resources.

The 2024 Mineral Resource estimate may be materially impacted by any future changes in the breakeven NSR cut-off, potentially resulting from changes in mining costs, processing recoveries, metal prices or from changes in geological knowledge as a result of new exploration data.

14.7 Mineral Resource Estimate

This sub-section contains forward-looking information related to Mineral Resource estimates for the Mine. Material factors that could cause actual results to differ materially from the conclusions, estimates, designs, forecasts, or projections in the forward-looking information include any significant differences from one or more of the material factors or assumptions that were set forth in this sub-section including geological and grade interpretations and the controls, assumptions and forecasts associated with establishing the prospects for economic extraction.

The Mineral Resource estimate for the project is reported here in accordance with NI 43-101 regulations. For estimating the Mineral Resources of Los Gatos, the following definition, as set forth in the Guidelines and Definition Standards for Mineral Resources and Mineral Reserves (CIM 2014), was applied.

As per CIM 2014, a Mineral Resource is defined as:

> "… a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled."

Note to readers: The Mineral Resources presented in this section are not Mineral Reserves and do not reflect demonstrated economic viability. The reported Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that all or any part of this Mineral Resource will be converted into Mineral Reserve. All figures are rounded to reflect the relative accuracy of the estimates and totals may not sum precisely.

The estimated Mineral Resources reported exclusive of Mineral Reserves are summarized in Table 14.11 on a 100% LGJV basis and on a 70% GSI attributable basis.

Mineral Resources presented in the tables are in accordance with the definitions adopted by NI 43-101. The effective date of the Mineral Resource estimate is July 1, 2024.

Table 14.11: CLG Mineral Resource Estimate Exclusive of Mineral Reserves

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	0.24	222	2.78	1.51	0.36	0.07	1.7	14.7	8.0	2.8	0.3
Indicated	0.55	75	3.71	2.00	0.21	0.25	1.3	44.8	24.1	3.7	3.1
Measured and Indicated	**0.79**	**120**	**3.43**	**1.85**	**0.26**	**0.20**	**3.0**	**59.5**	**32.0**	**6.5**	**3.4**
Inferred	1.51	80	4.22	2.01	0.22	0.29	3.9	140.2	66.9	10.5	9.5

70% GSI Attributable Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	0.17	222	2.78	1.51	0.36	0.07	1.2	10.3	5.6	2.0	0.2
Indicated	0.38	75	3.71	2.00	0.21	0.25	0.9	31.4	16.9	2.6	2.1
Measured and Indicated	**0.55**	**120**	**3.43**	**1.85**	**0.26**	**0.20**	**2.1**	41.6	22.4	4.6	2.4
Inferred	1.06	80	4.22	2.01	0.22	0.29	2.7	98.2	46.8	7.4	6.7

Table 14.12: CLG Mineral Resource Estimate Inclusive of Mineral Reserves

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	3.12	380	5.39	2.60	0.37	0.11	38.1	371.2	179.1	37.5	7.7
Indicated	5.87	131	4.65	2.62	0.23	0.33	24.7	601.6	339.2	43.1	42.9
Measured and Indicated	**8.99**	**217**	**4.91**	**2.61**	**0.28**	**0.25**	**62.8**	**972.8**	**518.3**	**80.5**	**50.5**
Inferred	1.52	81	4.22	2.02	0.22	0.29	4.0	141.7	67.7	10.6	9.7

70% GSI Attributable Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Measured	2.18	380	5.39	2.60	0.37	0.11	26.7	259.8	125.4	26.2	5.4
Indicated	4.11	131	4.65	2.62	0.23	0.33	17.3	421.2	237.4	30.1	30.0
Measured and Indicated	**6.29**	**217**	**4.91**	**2.61**	**0.28**	**0.25**	**43.9**	**681.0**	**362.8**	**56.4**	**35.4**
Inferred	1.07	81	4.22	2.02	0.22	0.29	2.8	99.2	47.4	7.5	6.8

Notes:

1. Mineral Resources are reported on a 100% LGJV basis and 70% GSI attributable basis and exclusive and inclusive of Mineral Reserves.
2. Under SEC Regulation S-K 1300, a Mineral resource is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.
3. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
4. The SEC definitions for Mineral Resources in S-K 1300 were used for Mineral Resource classification which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions).
5. The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated or Measured Mineral Resource. It is uncertain if further exploration will result in upgrading Inferred Mineral Resources to an Indicated or Measured Mineral Resource category.
6. Specific gravity has been assumed on a dry basis.
7. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not sum exactly.
8. Mineral Resources exclude all Mineral Resource material mined prior to July 1, 2024.
9. Mineral Resources are reported within stope shapes using a $70.94/tonne net smelter return (“NSR”) cut-off calculated using an Ag price of US$23/oz, Zn price of US$1.25/lb, Pb price of US$0.95/lb, Au price of US$1,850/oz and Cu price of US$4.00/lb. The NSR cutoff includes mill recoveries and payable metal factors appropriate to the existing CLG processing circuit augmented with a pyrite leach circuit and copper separation circuit. The milling recoveries for these additional projects is based on existing metallurgical testwork. The metallurgical recoveries that are used as inputs to the resource NSR are 93.2% Ag, 63.4% Zn, 61.1% Au and range between 87.2%-89.4% Pb and between 66.5%-82.0% Cu.
10. No dilution was applied to the Mineral Resource which are reported on an in-situ basis (point of reference).
11. Contained Metal (CM) is calculated as follows:
    a. Zn, Pb and Cu CM (Mlb) = Tonnage (Mt) * Grade (%) / 100 * 2204.6
    b. Ag and Au, CM (Moz) = Tonnage (Mt) * Grade (g/t) / 31.1035; multiply Au CM (Moz) by 1000 to obtain Au CM (koz)
12. The Mineral Resource estimates were prepared under the supervision of Ronald Turner, MAusIMM(CP) an employee of WSP who is the independent Qualified Person for these Mineral Resource estimates.

The mineral resource estimate for the Esther deposit remains unchanged from that published in the 2022 and 2023 TR. It is re-produced in Table 1.3.

Table 14.13: Esther Mineral Resource Estimate

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)
Indicated	0.28	122	4.30	2.17	0.14	1.1	26.8	13.6	1.2
Inferred	1.20	133	3.69	1.53	0.09	5.1	98.0	40.6	3.3

70% GSI Attributable Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)
Indicated	0.20	122	4.30	2.17	0.14	0.8	18.8	9.5	0.8
Inferred	0.84	133	3.69	1.53	0.09	3.6	68.6	28.4	2.3

Notes:

1. Mineral Resources are reported on a 100% LGJV basis and 70% GSI attributable basis and are exclusive of Mineral Reserves (there are no Mineral Reserves at Esther).
2. Under SEC Regulation S-K 1300, a Mineral resource is a concentration or occurrence of material of economic interest in or on the Earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.
3. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues.
4. The SEC definitions for Mineral Resources in S-K 1300 were used for Mineral Resource classification which are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions).
5. The quantity and grade of reported Inferred Mineral Resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred Mineral Resources as an Indicated or Measured Mineral Resource. It is uncertain if further exploration will result in upgrading Inferred Mineral Resources to an Indicated or Measured Mineral Resource category.
6. Specific gravity has been assumed on a dry basis.
7. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not sum exactly.
8. Mineral Resources are reported within stope shapes using a $52/tonne net smelter return (“NSR”) cut-off assuming processing recoveries equivalent to CLG with a silver price of $22/oz, zinc price of $1.20/lb, lead price of $0.90/lb and gold price of $1,700/oz. There is a portion of the Esther deposit that is oxidized and additional metallurgical test work is required to define processing recoveries.
9. No dilution was applied to the Mineral Resource which are reported on an insitu basis (point of reference).
10. Contained Metal (CM) is calculated as follows:
    a. Zn, Pb and Cu CM (Mlb) = Tonnage (Mt) * Grade (%) / 100 * 2204.6
    b. Ag and Au, CM (Moz) = Tonnage (Mt) * Grade (g/t) / 31.1035; multiply Au CM (Moz) by 1000 to obtain Au CM (koz)
11. The Mineral Resource estimates were prepared under the supervision of Ronald Turner, MAusIMM(CP) an employee of Golder Associates S.A. who is the independent Qualified Person for these Mineral Resource estimates.

15.0 MINERAL RESERVE ESTIMATES

15.1 Introduction

This section presents the Mineral Reserve estimate for the Cerro Los Gatos Mine (CLG), effective July 1, 2024, and outlines the key assumptions, parameters, and methods employed in the estimation process.

A Mineral Reserve is an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted. A Probable mineral reserve is the economically mineable part of an indicated and, in some cases, measured mineral resource. A Proven mineral reserve is the economically mineable part of a measured mineral resource and can only result from the conversion of a measured mineral resource.

The conversion of Measured and Indicated Mineral Resources to Proven and Probable Mineral Reserves involves applying modifying factors while adhering to geometrical constraints dictated by the selected mining method. These factors include, but are not restricted to, mining; processing; metallurgical; infrastructure; economic; marketing; legal; environmental compliance; plans, negotiations, or agreements with local individuals or groups; and governmental factors.

15.2 Methodology for Estimating Mineral Reserves

The methodology applied by CLG for the 2024 Mineral Reserve estimate follows industry-standard practices and remains consistent with the approach used for the 2023 update. It adheres industry best practices for converting Measured and Indicated Resources into Proven and Probable Reserves by applying relevant Modifying Factors. These Modifying Factors encompass economic, mining, metallurgical, legal, environmental, and social considerations.

The reserve estimation process includes the following key steps:

- Review the geological block model of the resource received from geology.
- Review the long-term metal price assumptions to ensure they are reasonable.
- Estimate the on-site production costs according to the mining method and mining situation.
- Estimate the economic modifying factors: NSR cut-offs and the parameters for NSR values.
- Apply economic modifying factors to the block model and exclude Inferred Mineral Resources.
- Analyze resource characteristics to select viable mining methods for each geological domain.
- Estimate mining modifying factors: dilution and mining recovery.
- Determine mine design parameters, such as stope dimensions, minimum mining width, and minimum footwall angle for LHS.
- Outline potentially mineable shapes in the block model based on the resource value exceeding the NSR cut-off.
- Screen potentially mineable shapes with the Mineable Shape Optimizer application in Deswik software.
- Refine potentially mineable shapes by removing un-mineable resource material.

- Design mine development and mine infrastructure in mine design software.
- Carry out economic analysis of the mineable shapes, removing areas that are not viable.
- Determine production sequencing with Scheduler software.
- Prepare a life-of-mine plan for development and production.
- Estimate capital, operating, and sustaining capital costs associated with the LOM plan.
- Verify the economic viability of the proposed reserve.
- Prepare the Mineral Reserve statement.

15.3 Metal Prices and Exchange Rate

Table 15.1 presents the metal prices and exchange rate that CLG used in estimating the Mineral Reserve, including the data utilized to determine these values. They were established based on the three-year trailing monthly averages from June 2021 to June 2024 and long-term consensus estimates from industry analysts.

The QP has reviewed the long-term metal prices and exchange rate and is of the opinion that they are reasonable and appropriate for the estimating of the Mineral Reserve.

Table 15.1: Metal Prices and Exchange Rate Used in the Mineral Reserve Estimate

	Silver	Zinc	Lead	Gold	Copper	MXN
	US$/oz	US$/lb	US$/lb	US$/oz	US$/lb	MXN/ $1 USD
3-Year Trailing Average	23.37	1.37	0.98	1,915	4.03	18.87
Long-term Consensus	24.00	1.20	0.94	1,875	4.00	21.59
2024 R&R Assumptions	**23.00**	**1.25**	**0.95**	**1,850**	**4.00**	**20.00**

Source: CLG, 2024

15.4 NSR Values

CLG is a polymetallic deposit, and the viability of mining the resource is assessed in terms of monetary unit values rather than grades or equivalent grades, as is typically the case at mines with a single predominant metal. This value is estimated as the Net Smelter Return (NSR) CLG expects to receive at the mine gate for each tonne of run-of-mine (ROM) ore mined and processed. The NSR value relates to the expected net value received for metal in saleable concentrate, net of costs for transportation, and associated smelting and refining charges. This establishes a common metric for the economic threshold required to be exceeded by material designated as mineralized material (or ore) as well as for an assignment of value of the tonnes to be mined from any one block and the entirety of the deposit.

Table 15.2 presents key parameters used to calculate the NSR value of a tonne of potentially mineable material. The NSR for each block in the resource block model was calculated based on the block head grade, plant recoveries for each metal, concentrate grades, moisture and transportation costs, concentrate sales terms, and metal prices.

Economic assumptions for the determination of the NSR for each block used for stope optimization and the generation of stope solids vary based on the ratio of Pb:Cu in each block. For a Pb:Cu ratio of greater than 15, zinc and lead concentrates are considered, and copper is assumed to not be payable in the lead concentrate. For a Pb:Cu ratio of less than 15 but greater than 7, zinc and lead concentrates are considered, and copper is assumed to be payable in the lead concentrate. Lastly, for a Pb:Cu ratio of less than 7, zinc, lead and copper concentrates are considered. For concentrate sales terms, standard industry terms, consistent with those experienced to date, were considered for payable values, with management's expectations for long-term rates considered for treatment and refining charges.

For clarity, these economic assumptions applied on a block basis are not the final metallurgical and cost parameters that were used for the economic analysis of the Mineral Reserve. Specifically, the plant production profile is calculated based on the blended plant feed grades after mine scheduling. Material that has an NSR calculated as not receiving payable copper can still receive payable copper in the economic analysis if the average Pb Concentrate grade is above the payable threshold. See Section14 for the metallurgical assumptions and chapter 19 for the economic analysis that present the payable concentrate quantities.

Table 15.2: Parameters for Calculating NSR Values

			Silver	Zinc	Lead	Gold	Copper
Metal Prices			**$23.00/oz**	**$1/25/lb**	**$0.95/lb**	**$1850/oz**	**$4.00/lb**
Plant Recovery (%)	Pb/Cu >15	to Zn CCT	10.20%	63.40%			
		to Pb CCT	78.00%		89.40%	54.20%	
	Pb/Cu >7,<15	to Zn CCT	10.20%	63.40%			
		to Pb CCT	78.00%		89.40%	54.20%	82.00%
	Pb/Cu <7	to Zn CCT	10.20%	63.40%			
		to Pb CCT	23.00%		87.20%	11.20%	15.50%
		to Cu CCT	55.00%			43.00%	66.50%
Concentrate Grades (%)	Pb/Cu >15			56.28%	53.42%		
	Pb/Cu >7, <15			56.28%	53.42%		
	Pb/Cu <7			56.28%	71.52%		23.02%
Concentrate Moisture (%)				8.00%	7.50%		7.50%
Concentrate Transport ($/wmt)				$197.80	$112.80		$112.80

15.5 NSR Cut-Offs

CLG utilized NSR cut-offs in the process of estimating the Mineral Reserve. The viability of mining a tonne of diluted measured or indicated resource material (mineralized material) is determined by comparing its NSR value to its NSR cut-off. An NSR cut-off represents the onsite costs to mine and process a tonne of the mineralized material, including general and administration costs. If the material's NSR value exceeds the NSR cut-off threshold, it may be profitable to mine and process it, and it can be considered as a candidate for inclusion in the Mineral Reserve.

Table 15.3 presents the calculations for the NSR cut-offs used in the Mineral Reserve estimate. The estimates of NSR cut-offs are based on actual costs, with certain adjustments to ensure they are representative of expected life-of-mine costs. The NSR cut-offs include mining, processing, and G&A costs, which are divided into variable/direct and fixed/indirect categories. Six NSR cut-offs were applied, based on three mining methods and two cost allocation approaches

Mining Methods

1. **Cut-and-Fill (CAF):** Includes both the longitudinal and transverse approaches for mining with this method.
2. **Sill:** Refers to the drift(s) driven through the mineralized material of a longhole stope.
3. **Longhole Stoping (LHS):** Includes both the longitudinal and transverse approaches. Applies to the mineralized material within the LHS stope shape but excludes the material accounted for as Sill.

Although both Sill and LHS apply to longhole stopes, Sill is more expensive as it involves drift development.

Cost Allocation Approaches

1. **Full-Cost NSR Cut-Off:** Applies to mineralized material with sufficient value to fully support its on-site production cost.
2. **Incremental NSR Cut-Off:** Applies to mineralized material grading below the full-cost NSR cut-off that could still be considered for inclusion in the Mineral Reserve if certain costs to mine and process it can be assumed to be zero.

CLG's methodology for estimating NSR cut-offs aligns with the 2023 Mineral Reserve estimate and is consistent with the practices of many other mines, where the calculation is typically limited to operating costs. For future Mineral Reserve estimates, WSP recommends investigating whether specific mine closure and sustaining capital expenditures related to both the mine and the processing plant should be incorporated as relevant costs in determining the NSR cut-offs. It is noted, however, that sustaining capital, including essential mine development and infrastructure, is already considered during mine planning evaluations to assess the economic viability of developing new areas.

Table 15.3: Calculations of NSR Cut-Offs

Cost	Cost	Unit	Full Cost			Incremental Cost		
Center	Type		Cut-and-fill	Sill	Longhole	Cut-and-fill	Sill	Longhole
Mining	Fixed / Indirect	$US/t	29.97	29.97	19.72	0.00	0.00	0.00
	Variable / Direct	$US/t	27.83	28.89	16.28	27.83	28.89	16.28
Processing	Fixed / Indirect	$US/t	9.35	9.35	9.35	9.35	9.35	9.35
	Variable / Direct	$US/t	15.89	15.89	15.89	15.89	15.89	15.89
General & Admin.	Fixed / Indirect	$US/t	15.91	15.91	15.91	15.91	15.91	15.91
Total Operating Cost (NSR Cut-off)		**$US/t**	**98.94**	**100.01**	**77.14**	**68.97**	**70.04**	**57.43**

Source: CLG, 2024

15.6 Mining Recovery and Dilution

Estimates for mining recovery and unplanned dilution are derived from recent operational data, validated through cavity monitoring system (CMS) surveys, production data reconciliation, and geotechnical evaluations. These assumptions are applied based on the mining method, stope width, zone inclination and proximity to hanging-wall faults.

Mining recovery represents the proportion of stope material that is extracted and delivered to the processing plant, accounting for losses caused by various factors, including under-excavation of stope boundaries and incomplete extraction of broken ore within stopes.

Unplanned dilution occurs when material below the cut-off grade is unintentionally extracted alongside the targeted mineralized material within stope boundaries. The two main sources of unplanned dilution are: (1) overbreak, where host rock is excavated beyond the designed stope limits, and (2) the inadvertent extraction of backfill material, consisting of either cemented rockfill or paste backfill. In the estimation of Mineral Reserves, all unplanned dilution is treated as waste material, with an assumed metal grade of zero.

CLG estimates mining recovery and host-rock dilution by considering several factors, including mining method, stoping approach, zone, vein dip, vein width, and geotechnical conditions, including whether the stope is influenced by the Los Gatos fault.

Mining recovery is expressed as a percentage of the diluted stope material, while host-rock dilution is estimated as a percentage of the undiluted stope material. For LHS, dilution percentages are converted to Equivalent Linear Overbreak Slough (ELOS), which measures overbreak in meters beyond the footwall (FW) and hanging wall (HW) of the undiluted stope boundaries. The ELOS increases with vein width and is higher in stopes dipping less than 70° in the NW and SE zones. Table 15.4 and Table 15.5 present the factors for mining recovery and unplanned host-rock dilution for LHS and CAF, respectively.

In addition to host-rock dilution, CLG estimates backfill dilution as a percentage of the undiluted stope shape (see Table 15.6). This estimate takes into account backfill type, mining method, stoping approach, and stope type (primary and secondary stopes).

ELOS dilution factors for LHS are utilized as input parameters in the stope optimization analysis using the Mineable Shape Optimizer. On the other hand, the percentage factors for mining recovery, CAF host-rock dilution, and backfill dilution are applied during the scheduling phase of the Mineral Reserve estimation.

For future analyses of host-rock dilution with LHS, WSP recommends verifying whether ELOS increases with vein width and whether footwall ELOS is indeed greater for shallower-dipping veins of the same width. The underlying reasons for these relationships are unclear and warrant further investigation.

Table 15.4: Mining Recovery and Host-Rock Dilution – Longhole Stoping

Width	Dilution	ELOS Dilution	Recovery
Longitudinal Longhole Stoping			
Dip > 70˚			
2 m	40%	0.40 m HW + 0.40 m FW	95%
2 to 3 m	30%	0.45 m HW + 0.45 m FW	95%
3 to 5 m	30%	0.75 m HW + 0.75 m FW	95%
5 to 8 m	20%	0.80 m HW + 0.80 m FW	95%
> 8 m	20%	1.20 m HW + 1.20 m FW	95%
NW and SE Zones - Dip 55˚ to 70˚			
2 m	45%	0.45 m HW + 0.45 m FW	95%
2 to 3 m	35%	0.525 m HW + 0.525 m FW	95%
3 to 5 m	35%	0.875 m HW + 0.875 m FW	95%
5 to 8 m	25%	1.00 m HW + 1.00 m FW	93%
> 8 m	25%	1.50 m HW + 1.50 m FW	93%
CZ Zone - Dip 55˚ to 70˚			
2 m	40%	0.40 m HW + 0.40 m FW	95%
2 to 3 m	30%	0.45 m HW + 0.45 m FW	95%
3 to 5 m	30%	0.75 m HW + 0.75 m FW	95%
5 to 8 m	20%	0.80 m HW + 0.80 m FW	95%
> 8 m	20%	1.20 m HW + 1.20 m FW	95%
Transverse Longhole Stoping			
NW Zone	15%	0.6 m HW + 0.6 m FW	91%
CZ Zone	15%	0.6 m HW + 0.6 m FW	85%

Source: CLG, 2024

Table 15.5: Mining Recovery and Host-Rock Dilution– Cut-and-Fill Stopes

Width	Los Gatos Fault	Dilution	Recovery
Longitudinal cut-and-fill			
Min. 4 m	No influence of the fault	7%	95%
Min. 4 m	Under influence of the fault	12%	93%
Transverse cut-and-fill			
Max. 8 m	No influence of the fault	5%	97%
Max. 8 m	Under influence of the fault	7%	95%

Source: CLG, 2024

Table 15.6: Backfill Dilution

Backfill Type and Mining Method	Dilution
Cemented Rockfill	
Transverse longhole stoping - Primaries	0%
Transverse longhole stoping - Secondaries	6%
Primaries & secondaries together	3%
Longitudinal longhole stoping	3%
Paste Backfill	
Transverse longhole stoping - Primaries	0%
Transverse longhole stoping - Secondaries	10%
Primaries & secondaries together	5%
Longitudinal longhole stoping	3%
Cut-and-fill mining	3%

Source: CLG, 2024

15.7 Stope Optimization

The Mineable Shape Optimizer (MSO) algorithm, integrated into the Deswik mine design software, was used to determine the preliminary stope solids. This stope optimization analysis identifies the potentially mineable portions of the Mineral Resource that can be considered for inclusion in the Mineral Reserve. MSO works through an iterative process, generating and evaluating potentially mineable shapes within the geological block model to define optimal stope designs that maximize the economic value of the orebody.

This process considers several factors, including, deposit geometry, mining methods, geological and geotechnical constraints, modifying factors and mine design parameters.

15.8 Mineral Reserve Estimate

Table 15.7 presents the Mineral Reserve estimate for the CLG mine as of July 1, 2024, reported on both a 100% LGJV basis and 70% GSI attributable basis.

The estimate consists of Proven and Probable in-situ ore plus 5 kt of Proven ore stockpiled on surface as of the effective date of the estimate. Approximately 89.4% of the Mineral Reserve was determined using full-cost NSR cut-offs, while the remaining 10.6% was estimated with incremental-cost NSR cut-offs.

The Mineral Reserves are disclosed with a “mill feed” reference point; consequently, they are reported as ROM ore delivered to the processing plant and do not include reductions attributed to anticipated plant recovery and losses. The Mineral Reserves are inclusive of mining recovery and dilution, as described in Section 15.6.

Figure 15.1 illustrates the Mineral Reserves in a long section view.

The mine design, mine plan, and Mineral Reserve estimate were prepared by the CLG Technical Services Department under the supervision of the QP responsible for the estimate. The QP is of the opinion that the Mineral Reserve estimate for the CLG Mine has been prepared in accordance with the following guidelines and standards:

- The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” (November 29, 2019)

- CIM Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014)
- National Instrument 43-101 Disclosure Standards (June 24, 2011)
- Securities and Exchange Commission (SEC) Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations (December 26, 2018)

The QP is not aware of any mining, metallurgical, infrastructure, permitting, or other relevant factors that could materially affect the Mineral Reserve estimate.

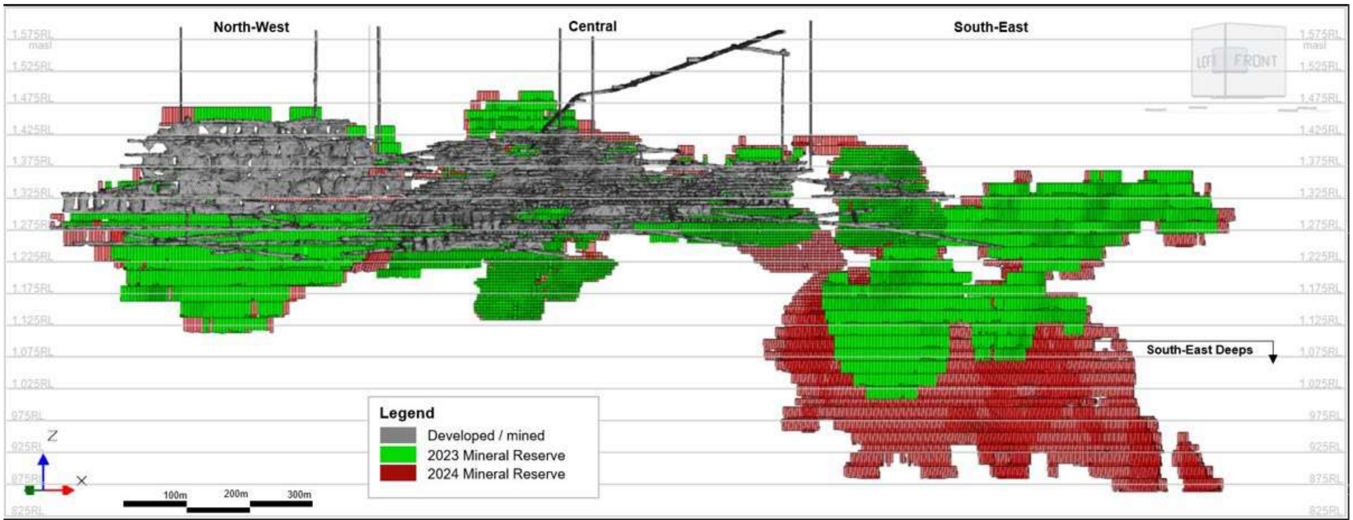
Table 15.7: CLG Mineral Reserves as of July 1, 2024, Reported on a 100% and 70% Basis

100% LGJV Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Proven	3.49	300	4.35	2.09	0.29	0.09	33.6	334.4	160.6	32.6	7.0
Probable	6.85	107	3.66	2.06	0.18	0.26	23.6	552.3	310.9	40.5	40.0
Proven and Probable	**10.33**	**172**	**3.89**	**2.07**	**0.22**	**0.21**	**57.3**	**886.7**	**471.4**	**73.1**	**46.9**

70% GSI Attributable Basis	Mt	Ag (g/t)	Zn (%)	Pb (%)	Au (g/t)	Cu (%)	Ag (Moz)	Zn (Mlbs)	Pb (Mlbs)	Au (koz)	Cu (Mlbs)
Proven	2.44	300	4.35	2.09	0.29	0.09	23.5	234.1	112.4	22.8	4.9
Probable	4.80	107	3.66	2.06	0.18	0.26	16.5	386.6	217.6	28.4	28.0
Proven and Probable	**7.23**	**172**	**3.89**	**2.07**	**0.22**	**0.21**	**40.1**	**620.7**	**330.0**	**51.2**	**32.8**

Notes:

1. Mineral Reserves are reported on a 100% basis and 70% GSI attributable basis and exclude all mineral reserve material mined prior to July 1, 2024.
2. Specific gravity has been assumed on a dry basis.
3. Tonnage and contained metal have been rounded to reflect the accuracy of the estimate and numbers may not sum exactly.
4. Values are inclusive of mining recovery and dilution. Values are determined as of delivery to the mill (point of reference) and therefore not inclusive of milling recoveries.
5. Mineral Reserves are reported within stope shapes using a variable cut-off basis with a Ag price of US$23/oz, Zn price of US$1.25/lb, Pb price of US$0.95/lb, Au price of US$1,850/oz and Cu price of US$4.00/lb. Metallurgical recoveries used in the NSR calculation for generation of the stope solids vary based on the block Pb:Cu ratio. For a Pb:Cu ratio >15 the NSR metallurgical recovery parameters were 88.2% Ag, 63.4% Zn, 89.4% Pb, 54.2% Au and 0% Cu, for Pb:Cu of >7 and <15, the NSR metallurgical recovery parameters were 88.2% Ag, 63.4% Zn, 89.4% Pb, 54.2% Au and 60% Cu and for Pb:Cu ratio of <7 the NSR metallurgical recovery parameters used were 88.2% Ag, 63.4% Zn, 87.2% Pb, 54.2% Au and 82% Cu. The metallurgical recovery parameters in the economic analysis, after plant production modeling, average 88.2% Ag, 63.1% Zn, 88.5% Pb, 54.2% Au and 71.5% Cu to concentrates where the metal is payable.
6. The Mineral Reserve is reported on a fully diluted basis defined by mining method, stope geometry and ground conditions.
7. Contained Metal (CM) is calculated as follows:
   - Zn, Pb and Cu, CM (Mlb) = Tonnage (Mt) * Grade (%) / 100 * 2204.6
   - Ag and Au, CM (Moz) = Tonnage (Mt) * Grade (g/t) / 31.1035; multiply Au CM (Moz) by 1000 to obtain Au CM (koz)
8. The SEC definitions for Mineral Reserves in Regulation S-K 1300 were used for Mineral Reserve classification and are consistent with Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions).
9. Under SEC Regulation S-K 1300, a Mineral Reserve is defined as an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted. The Mineral Reserve estimates were prepared under the supervision of Mr. Stephan Blaho, P.Eng., an employee of WSP Canada Inc. who is the independent Qualified Person for these Mineral Reserve estimates.



Source: CLG

Figure 15.1: Long Section of Mine Illustrating 2024 Mineral Reserves and 2023 Mineral Reserves

15.9 Factors Potentially Affecting the Mineral Reserve Estimate

The Mineral Reserve estimate could be materially affected by the following risk factors:

- Elevated temperatures in the underground work environment affecting productivity
- Geotechnical conditions, especially in proximity to the Los Gatos Fault
- Dewatering capacity to manage groundwater inflows as the mine deepens
- Dilution exceeding estimates
- Mining recovery falling short of estimates
- Metal grades falling short of estimates.
- Currency exchange rates
- Metal prices
- Equipment productivities
- Metallurgical recoveries
- Mill throughput capacity
- Operating costs exceeding estimates
- Capital costs exceeding estimates
- Changes to the permitting and regulatory environment
- Changes in the taxation conditions
- Ability to maintain mining concessions and/or surface rights

16.0 MINING METHODS

16.1 Description of the Mine and Deposit

CLG is an underground mine producing about 2,900 tonnes per day of ore. The orebody is an epithermal vein-type deposit containing polymetallic mineralization. The portion of the deposit of economic interest occurs roughly 170 m to 900 m below the surface elevation at the portal and extends approximately 1,800 m along strike. The exploited veins vary in thickness, ranging from 1 m to 30 m and averaging 5 m to 12 m in true width.

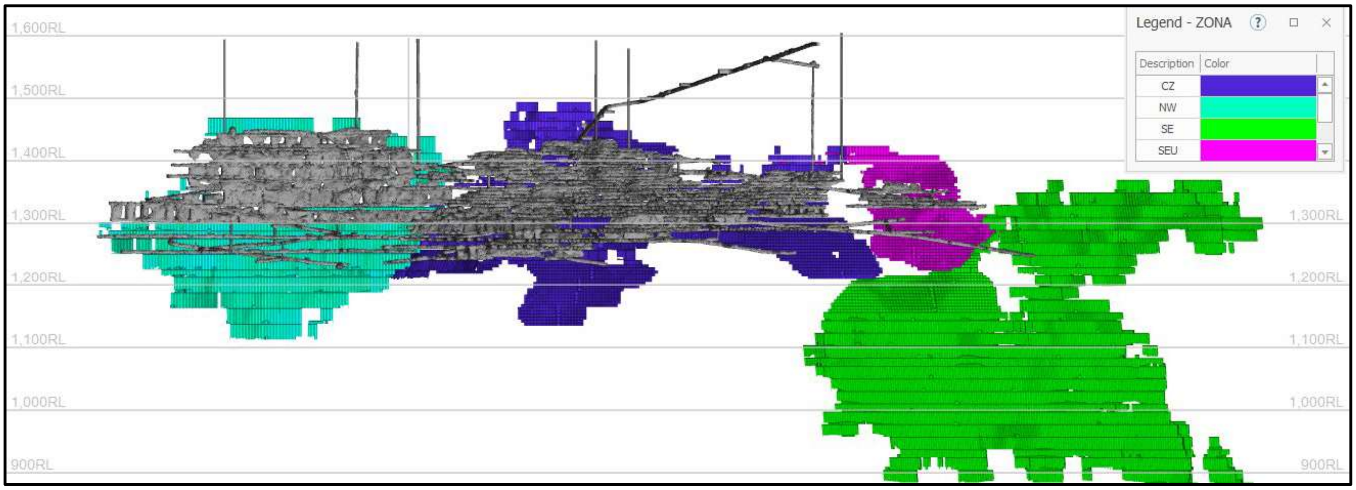
The ground conditions in parts of the deposit are adversely affected by a major fault in the hanging wall called the Los Gatos Fault. It extends sub-parallel to the deposit and ranges in thickness from 5 m to 30 m. Its distance from the veins varies from immediately adjacent to their contacts to up to 100 meters. The Los Gatos fault and the mineralized zones are offset by two crosscutting sub-vertical faults called Antigatos-1 and Antigatos-2.

As illustrated in Figure 16.1, the deposit consists of four zones called the Northwest (NW), Central (CZ), Southeast Upper (SEU), and Southeast (SE) zones. Figure 16.2 illustrates the four zones in cross-section, and Table 16.1 summarizes their key characteristics that determine the mining method or methods that CLG has selected for each zone.

CLG effectively addresses challenges with groundwater, elevated temperatures, and ground conditions in developing and operating the underground mine:

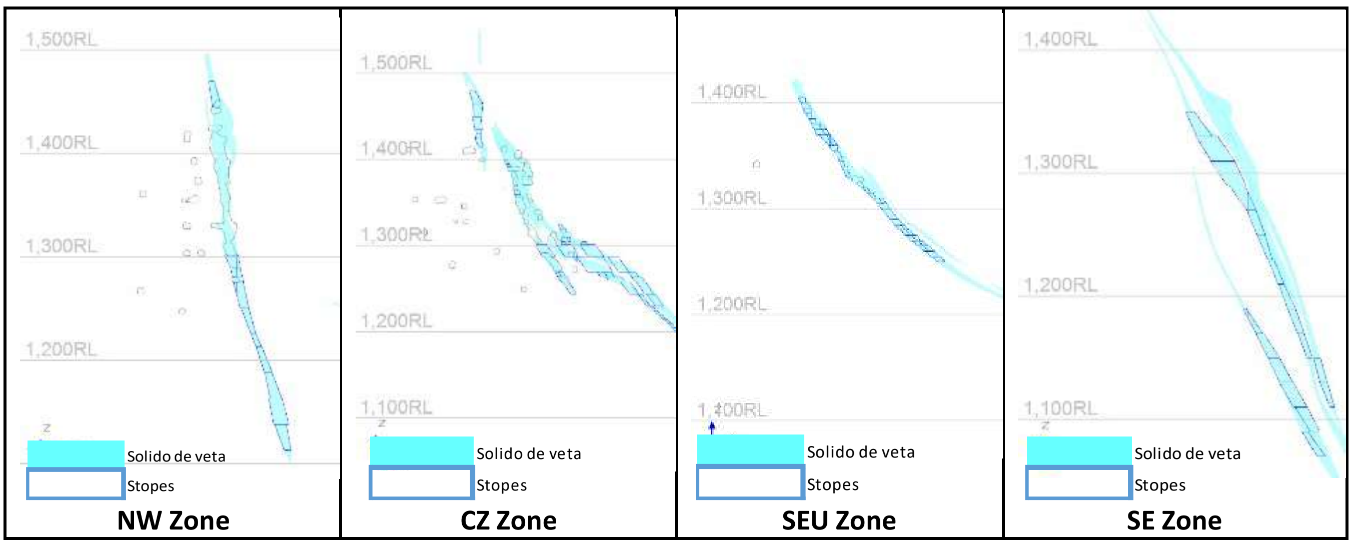
- Groundwater Management: CLG controls groundwater conditions with a system of dewatering wells collared underground. CLG has allocated capital for establishing additional underground wells as the mine deepens. The mine has an independent dewatering system to pump the non-contact water from the wells out of the mine.
- Temperature Control: CLG has two cooling plants to manages the temperatures of the underground work environment. The capacity of the ventilation system exceeds the diesel equipment requirement to improve the underground working environment. The dewatering wells collared on surface and underground manage groundwater inflows, which are the principal source of heat in the mine.
- Ground Conditions: Cable bolts are installed in longhole stopes as required to enhance ground stability. Mined-out stopes are generally backfilled with cemented paste fill or cemented rockfill. The mining approach is adapted to the specific geotechnical conditions encountered in each area of the deposit. Additional ground support will be installed in areas with the potential for high compressive stresses.

The QP is of the opinion that CLG has implemented effective measures and provided appropriate equipment and infrastructure to manage ground conditions, groundwater inflows, and underground temperatures. However, it is anticipated that dewatering and temperature control challenges may increase as mining operations advance deeper.



Source: CLG, 2024

Figure 16.1: Long Section of the CLG Deposit Showing the Four Zones



Source: CLG, 2024

Figure 16.2: Typical Cross-Sections of the Zones at CLG

Table 16.1: Characteristics of the Zones at CLG

Zone	Dip	True Thickness	Ground Conditions	Configuration of Mineralization
NW Zone	75˚ to 90˚	5 to 12 m	The top of zone (previously mined) was affected by the Los Gatos fault, but current reserves are distant from this structure.	Single vein
CZ Zone	Hanging wall 80˚ flattening to 55˚ at depth, footwall vein is steeper	Up to 30 m	Ground conditions in parts of the zone are affected by proximity to the Los Gatos Fault.	Two or three veins of varying thickness and dip
SEU Zone	60˚-70˚ flattening to 55˚ at lower levels	3.5 to 8 m	Ground conditions in parts of the zone are affected by the Los Gatos Fault.	Single vein
SE Zone	About 70˚	4 to 12 m	Fair to good ground conditions as the hanging wall is situated 10 to 20 m from Los Gatos fault.	Two veins but generally only one has sufficient grade to mine.

Source: CLG, 2024

16.2 Geotechnical

The rock mass strength, quality and behaviour are controlled by the major faults, the hydrothermal alteration and in particular the argillic alteration and groundwater inflows.

The rock mass quality is blocky to very blocky and generally characterized as fair to poor, with the RMR_{89} (Bieniawski, 1989) in the range of 60 to 30, with an average of 50. Proximity to the major faults, including their intersections, tend to present poor ground conditions.

The host rhyolite, dacite tuff and andesite rock mass strengths are moderately strong to strong. These rock mass strengths reduce to weak to very weak in the hanging wall of the stopes and when in close proximity to the Los Gatos Fault or other faults, as shown in Table 16.2, which contains the laboratory test results carried out by Stantec for Tetra Tech, 2020.

Table 16.2: Rock Strength Laboratory Test Results (MPa)

Laboratory testing	Hanging Wall Andesite (Los Gatos Fault)	Host Andesite (between ore vein)	Mineralization	Footwall Andesite	Tuff Dacite
Average UCS	14.7	68.4	74.6	101	50

The rock strength is also impacted by the hydrothermal alteration, in particular, the argillic alteration, which is associated with the epithermal mineralization of the deposit. Argillic alteration is prominent in the vein contacts and in the proximity of faults.

Groundwater seepage occurs from basically two sources: one related to precipitation and recharge from the alluvium and epiclastic rock mass located in the hanging wall, producing water of normal temperature. The other source is heat-driven upward flow that produces water with relatively high groundwater temperatures (e.g., up to 70° C). Areas with high groundwater flow, primarily in the lower levels of the primary ramps, exhibit reduced rock mass quality causing significant delays in advancing the ramp or other excavations and, due to heat introduced by the groundwater inflow, creates a challenging environment for mine workers. To counteract that, the mine has installed deep dewatering wells inside the mine and plans to add deeper wells as mining progresses to depth.

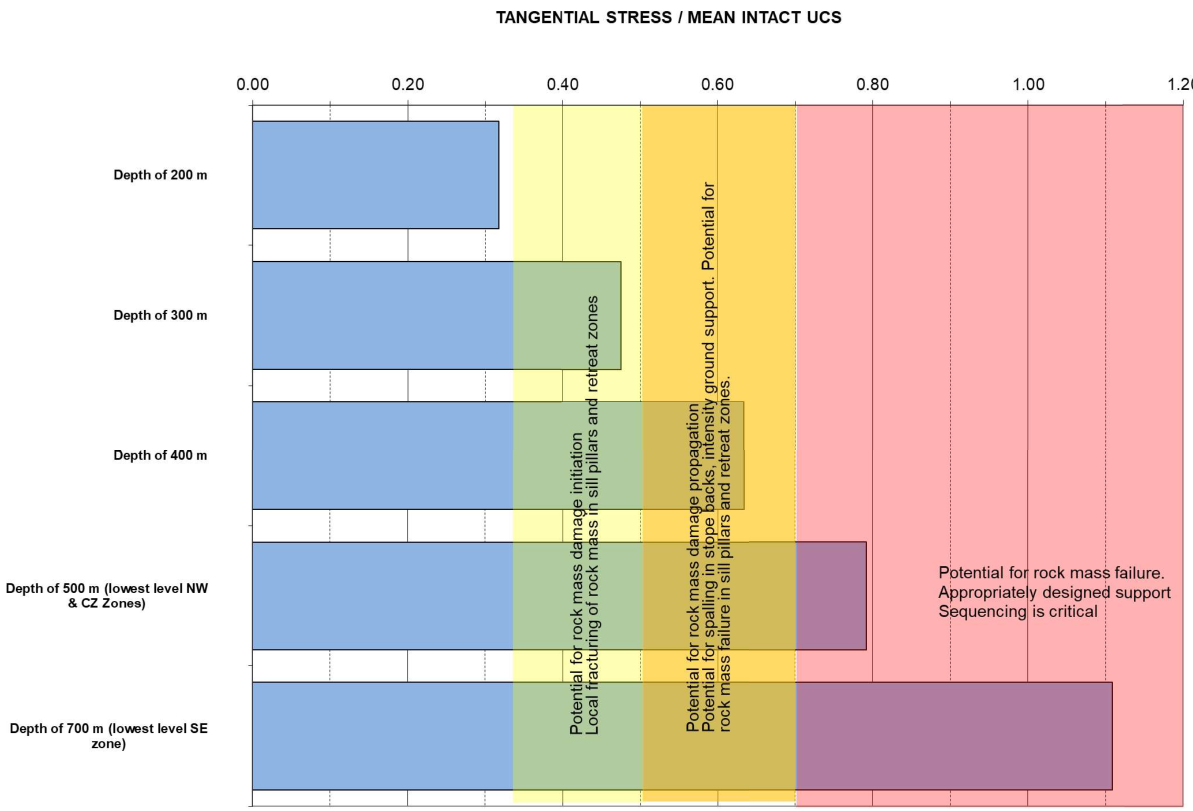
The typical potential mode of failure for the rock mass is associated with gravity failure (unravelling) due to a loss of confinement, which allows blocks or wedges to move freely along existing weakness planes such as joints and faults. In weak, very blocky and poor rock masses, where the blocks of rock are less than about 10 cm in size, the back of the drift or ramp may collapse within a short stand-up time, requiring the use of shotcrete and installation of light frame metal arches.

With the deepening of the mineralized zones, the magnitude of the induced stresses will increase which could bring rock mass damage initiation to potentially rock mass failure due to the high compressive induced stresses. In-situ stress tensors obtained from the Acoustic Emission Method (Villaescusa and Hogan, 2016) indicate the principal stress orientations, shown on Table 16.3 (from Tetra Tech, 2020).

Table 16.3: In-situ Stress Tensors

Stress Tensor Component	Value (MPa)	Orientation	Plunge
Major Principal Stress	3 + 0.0532*D	116°	9°
Intermediate Principal Stress	1 + 0.0422*D	25.5°	1°
Minor Principal Stress	0.0273*D	298°	82°

For illustration purposes, assuming an average intact rock strength (UCS) of 75 MPa, surface elevation of 1,590 m, the planned lowest levels of 1,113 m (NW zone), 1,135 m (CZ zone) and 865 m (SE zone), an in situ major horizontal stress of 1.8 times the vertical stress, Figure 16.3 indicates potential for rock mass failure caused by high compressive induced stresses to occur for depths greater than about 500 m. This figure also indicates the current operating 1,225 level might only have seen rock mass damage initiation (or fracturing). The observed excavations on this level confirm that the compressive stresses are still not high at this elevation (depth of 365 m). In-situ stress measurement tests are recommended to investigate the magnitude and orientation of these principal stresses to anticipate the magnitude of induced stresses for the SE zone.



Source: CLG

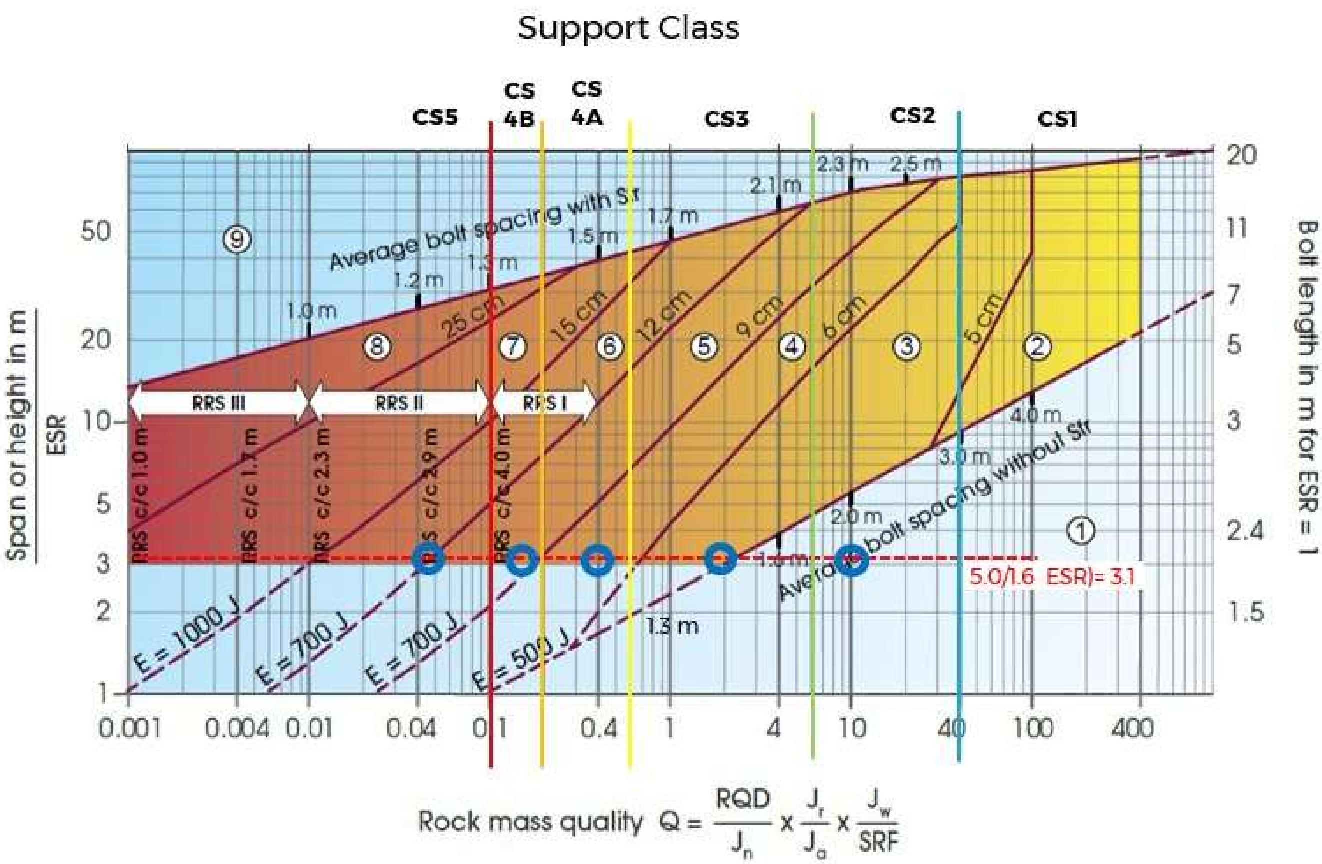
Figure 16.3: Illustration of Possible Rock Mass Damage and Failure Due to High Compressive Induced Stresses for Different Mining Depths

16.2.1 Ground Support

16.2.1.1 Ground Support - Tunnels

The ground support designs are based on a commonly used empirical Ground Support Design Graph (Grimstad and Barton, 1993 and revised NGI, 2015), kinematic analyses using the major and minor discontinuities sets, and numerical analysis. The Ground Support Design Graph relates the rock mass quality obtained by the Q-system (Barton et al., 1974) and the span of the proposed excavation to ground support requirements, using an equivalent dimension, which is defined as the width of the underground opening, divided by the Excavation Support Ratio (ESR), as depicted on Figure 16.4.

For the CLG mine, a ground support specification was developed by CLG geotechnical engineers to provide guidance for a total of six support classes (CS1 to CS5) which are correlated with the rock mass quality varying from Very Good to Extremely Poor (Figure 16.4).



Source: NGI, 2015

Figure 16.4: Ground Support Design Graph, based on Rock Mass Quality, Q

Based on Figure 16.4 and the kinematic and numerical analysis results (Stantec for Tetra Tech, 2020), Table 16.4 and Table 16.5 provide, for example, the Ground Support Specification in tabular format for temporary and permanent 5.0 m x 5.5 m excavation, respectively.

For tunnel intersections, the effective span equates to the diameter of the largest circle that can be inscribed within the open intersection area (i.e., mined dimensions, not planned dimensions). Cable bolts will be installed at intersections as a secondary ground support, as described in Table 16.6, These cables will be installed using a cable bolter equipment.

16.2.1.2 Ground Support – Stopes

For the cut-and-fill method, stope dimensions are based on the Stand-up Time Curve and the Span Design Curve. The Stability Graph Empirical Method was used to determine longhole stope dimensions. The stope design dimension will describe the methodology used, the results obtained, and the recommendations for stope dimensions from a geotechnical perspective.

Table 16.4: Ground Support Specification for Temporary 5 m x 5.5 m Excavation

Support Class	Ground Condition	GSI (Q)	Bolt Type	Bolting	Bolt Spacing	Mesh	Poly fiber Shotcrete - compressive strength of 250 kg/cm^2	Steel Arches
CS1	Very Good	80 – 100 (Q > 40)	Split Set: 2.4 m L x 39 mm Φ	Spot bolting of back	As required			
CS2	Good	61 - 80 (6 < Q < 40)	Split Set: 2.4 m L x 39 mm Φ	Pattern bolting of back + walls to 2.8m above floor	1.5 m x 1.0 m Rhombic distribution	As required		
CS3	Fair	41 – 60 (0.6 < Q < 6)	Split Set: 2.4 m L x 39 mm Φ	Pattern bolting of back + walls to 2.8 m above floor	1.5 m x 1.0 m Rhombic distribution	Mesh back and to 2.8 m above floor		
CS4A	Poor	31 – 40 (0.2 < Q < 0.6)	Super Swellex: 2.4m L x 39 mm Φ	Pattern bolting of back + walls to 1.7 m above floor	1.5 m x 1.0 m Rhombic distribution		50 mm on back and walls	
CS4B	Poor	21 – 30 (0.1 < Q < 0.2)	Super Swellex: 2.4m L x 39 mm Φ	Pattern bolting of back + walls to 1.5 m above floor	1.2 m x 1.2 m		75 mm on back; 100 mm on walls;	Light frame arches at 1.5 m spacing
CS5	Very to Extremely Poor	< 20 (Q<0.1)	Super Swellex: 2.4m L x 39 mm Φ	Pattern bolting of back + walls to 1.5 m of floor	1.2 m x 1.2 m		100 mm (50 mm + 50 mm) on back; 150 mm on walls, encapsulating steel frames;	Light frame arches at 1.0 m spacing

Table 16.5: Ground Support Specification for Permanent 5 m x 5.5 m Excavation

Support Class	Ground Condition	GSI (Q)	Bolt Type	Bolting	Bolt Spacing	Mesh	Poly fiber Shotcrete - compressive strength of 250 kg/cm^2	Steel Arches
CS1	Very Good	80 – 100 (Q > 40)	Super Swellex: 2.4 m L x 39 mm Φ	Spot bolting of back	As required	If required		
CS2	Good	61 - 80 (6 < Q < 40)	Super Swellex: 2.4 m L x 39 mm Φ	Pattern bolting of back + walls to 3.8m above floor	1.5 m x 1.5 m Rhombic distribution		50 mm on back and walls	
CS3	Fair	41 – 60 (0.6 < Q < 6)	Super Swellex: 2.4 m L x 39 mm Φ	Pattern bolting of back + walls to 2.8 m above floor	1.5 m x 1.0 m Rhombic distribution		50 mm on back and walls	
CS4A	Poor	31 – 40 (0.2 < Q < 0.6	Super Swellex: 2.4m L x 39 mm Φ	Pattern bolting of back + walls to 1.5 m above floor	1.5 m x 1.0 m Rhombic distribution	Mesh back and 1.5 m above floor	75 mm on back and walls	
CS4B	Poor	21 – 30 (0.1 < Q < 0.2)	Super Swellex: 2.4m L x 39 mm Φ	Pattern bolting of back + walls to 1.5 m above floor (invert)	1.2 m x 1.2 m	Mesh back and 1.5 m above floor	75 mm on back; 150 mm on walls, encapsulating steel frames;	Light frame arches at 1.5 m spacing
CS5	Very to Extremely Poor	< 20 (Q<0.1)	Super Swellex: 2.4m L x 39 mm Φ	Pattern bolting of back + walls to 1.5 m of floor (invert);	1.0 m x 1.0 m		100 mm (50 mm + 50 mm) on back; 200 mm on walls, encapsulating steel frames;	Light frame arches at 0.75 m spacing

Table 16.6: Ground Support Specification at Intersections

Excavation type	Span (m)	Primary Support (m)	Secondary Support with Cables (m)	Quantity of Secondary Support	Type of Cable bolt
Temporary	6 - 7	2.4	3.4	6	Cable Bolt
	7 - 8	2.4	3.6	9	
	8 - 9	2.4	6.0	13	
	9 - 12	2.4	10.0	24	
Permanent	6 - 7	2.4	6.0	6	Bulbed Cable Bolt
	7 - 8	2.4	6.0	11	
	8 - 9	2.4	6.0	15	
	9 - 10	2.4	10.0	28	

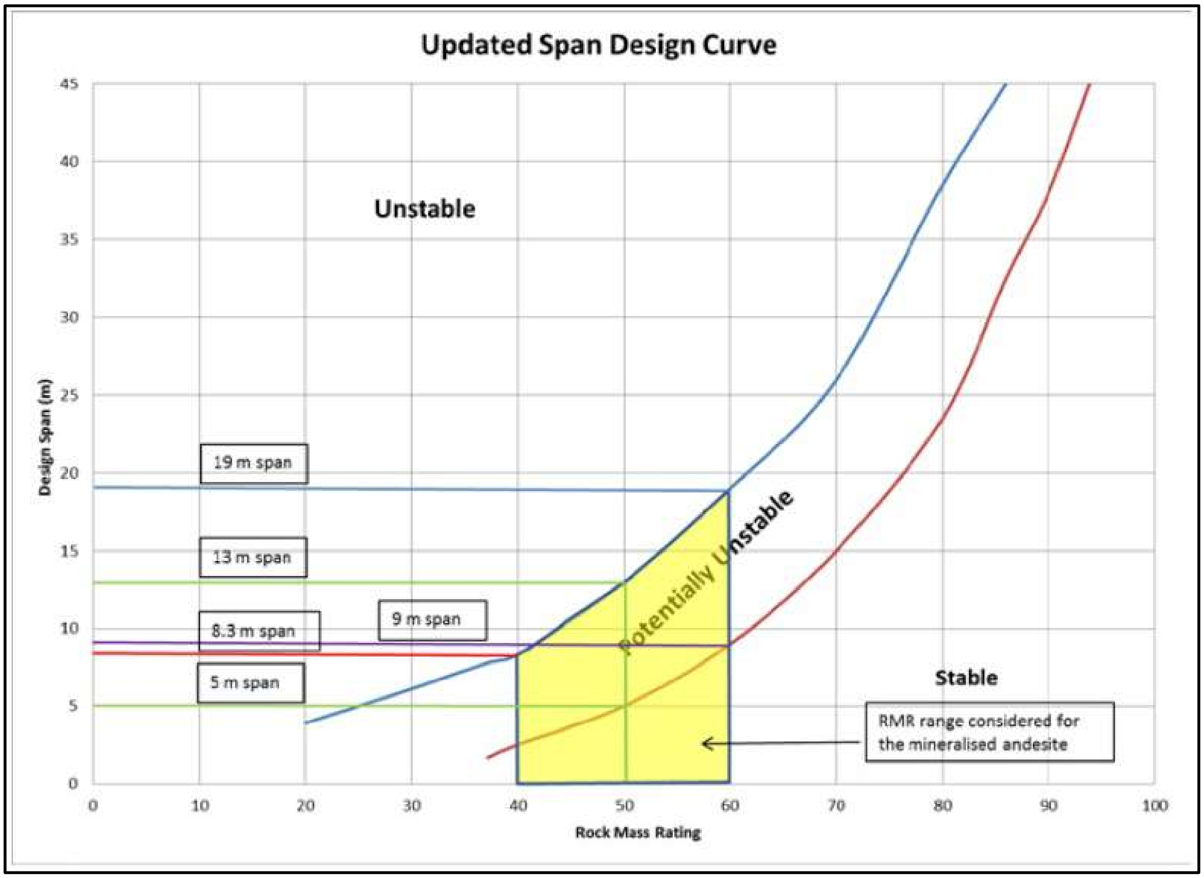
16.2.1.3 Cut-and-fill Rock Assessment and Ground Support

From the rock mass classifications using RMR_{89} (Bieniawski, 1989), the empirical unsupported Span Design Curve was used to determine the span of excavations per domains (Unstable, Potentially Unstable, or Stable) with respect to the RMR range of 40 to 60 (Figure 16.5).

For the host rock mass at CLG, an RMR of 40 to 60 was used, which is one standard deviation (10) above and below the average RMR value of 50 for the mineralized andesite. As graphically demonstrated, the figures show the following.

- At a minimum RMR of 40, only spans up to 8.3-m fall within the Potentially Unstable domain (below the Unstable domain).
- For the average RMR of 50, spans of less than 13-m fall within the Potentially Unstable domain, and spans of less than 5-m fall within the Stable domain.
- For an RMR of 60, spans less than 19-m fall within the Potentially Unstable domain, and spans less than 9-m fall within the Stable domain.

The values illustrated in Figure 16.5 are for unsupported spans. Since ground support will be used, the maximum recommended span will be the Stable limit of 9 m for an RMR of 60, bearing in mind that encountering rock of a lower RMR may result in ground problems, and ground support requirements may have to be increased.



Source: CLG

Figure 16.5: Design Span for CLG Cut-and-Fill Stopes

Considering the maximum span of 9 m with an ESR of 3.0 and Q varying from 0.4 to 10, Figure 16.4 recommends the support Class CS-1 to Class CS-3. Class CS-1 consists of no ground support or just spot bolting, while Class CS-3 includes systematic bolting with five to six cm of fiber-reinforced shotcrete. Due to the temporary nature of the cut-and-fill openings, welded wire mesh is recommended instead of shotcrete.

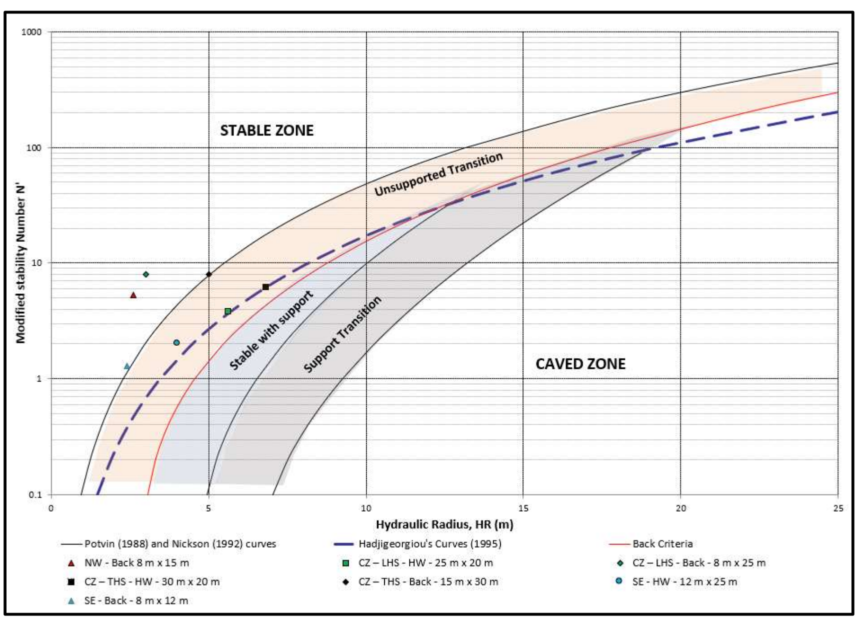
16.2.1.3.1 Longhole Stopes

The empirical Stability Graph Method (Potvin, 1988) was used to evaluate long-hole stope dimensions. This method consists of comparing the hydraulic radius (HR) of a stope surface (back, end wall, footwall, or hanging wall) to a stability number (N’). Table 16.7 lists the values used to determine N and HR.

Table 16.7: Parameters Used to Establish HR and N

Surface	Stope Width or Strike Length (m)	Strike Length or Height (m)	Hydraulic Radius (m)	Q' Average	A	B	C	N’
NW – HW	15	30	5.0	1.3	0.6	0.5	8.0	3.0
NW – Back	8	15	2.6	7.4	0.4	0.9	2.0	5.3
CZ – LHS - HW	25	20	5.6	2.2	0.7	0.5	5	3.85
CZ – LHS - Back	8	25	3.0	7.4	0.6	0.9	2.0	8.0
CZ – THS - HW	30	20	6.8	2.2	0.7	0.5	8	6.2
CZ – THS - Back	15	30	5.0	7.4	0.6	0.9	2.0	8.0
SE – HW	12	25	4.0	1.4	0.6	0.5	5.0	2.0
SE – Back	8	12	2.4	7.4	0.1	0.9	2.0	1.3

Figure 16.6 illustrates the results obtained for the three mineralized zones. Stope backs fall within the Stable Zone. The hanging wall stopes fall approximately in the middle of the Unsupported Transition Zone to the Hadjigeorgious’ curve, which is considered acceptable.



Source: CLG

Figure 16.6: Stability Graph for Transverse and Longitudinal Stopes

Top and bottom drill drifts for bulk mining techniques are subjected to blast damage and large mine-induced stress change. Therefore, the ground support must be able to sustain the additional stresses caused by the mining method. Furthermore, the drill drifts are usually open for more than six months, especially with a bottom-up sequence where the drill drift on the upper sublevel will eventually become a mucking drift on the next lift. A stiff support will be used, such as fully grouted cable bolts.

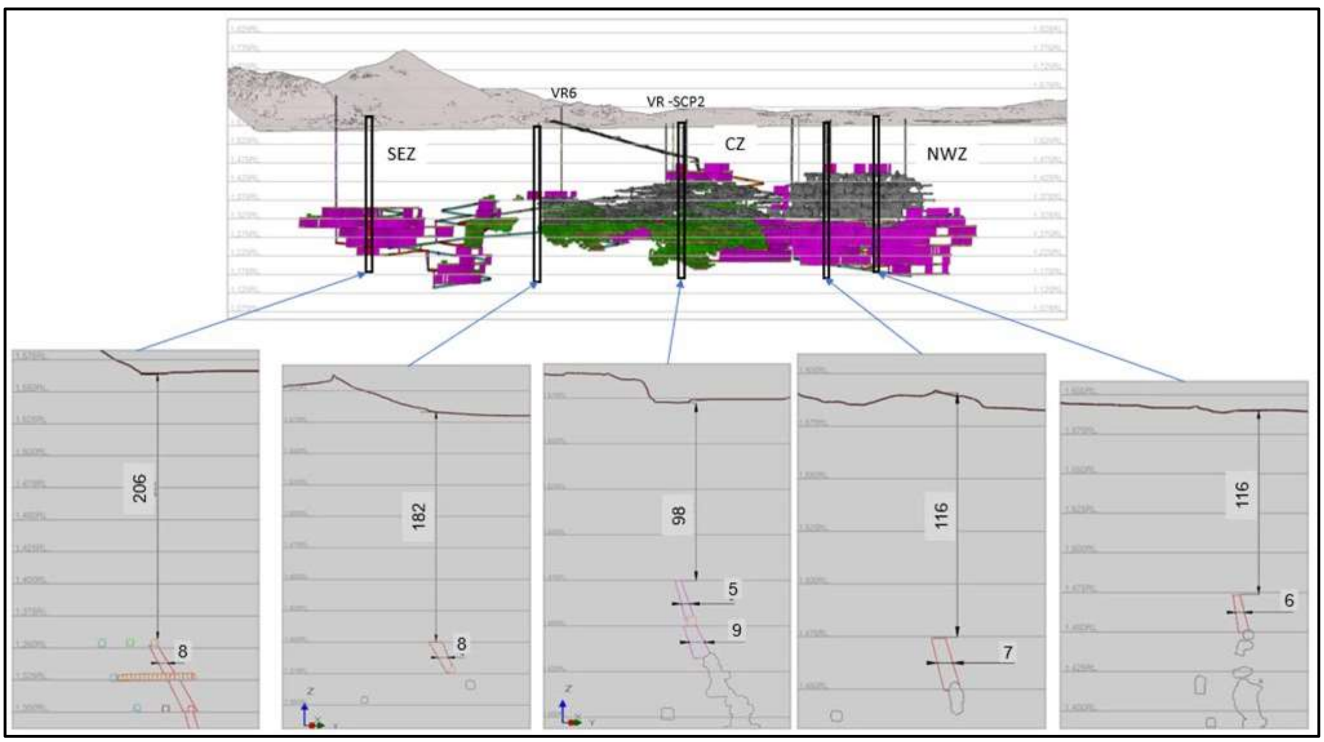
Table 16.4 provides the reference for the ground support for the top drill drift, assuming 5 m span with an ESR of 1.6 to consider vibration and CS-3 fair rock mass quality (Q in the range of 0.6 to 6). Given the uncertainties with respect to the behavior of the ore, the rock mass deterioration due to blasting, and the mine-induced stress change, systematic bolting has been recommended and is used. The drill drifts are relatively temporary, so welded wire mesh is the recommended support, rather than shotcrete.

16.2.1.4 Crown Pillar

The crown pillar constitutes the rock mass not mined at the top of the underground mine. The pillar is left to avoid creating a permanent void between the mine workings and surface. To determine the height of the pillar, which must remain undisturbed, the geotechnical engineer considers the topography, geology, rock mass quality, hydrogeology, mining method, and consequences of pillar failure.

A stability assessment of the Los Gatos crown pillar has been undertaken by Dr. Luiz Castro and reported to Gatos Silver in a Technical Memorandum (L. Castro, 2022). Both a Scaled Span Analysis and long-term void migration assessment were completed.

The rugged topography at CLG results in crown pillar thicknesses ranging from 98 m to 206 m, shown in Figure 16.7, for stope spans between 5 m and 9 m.



Source: CLG

Figure 16.7: Crown Pillar Thickness Along Deposit Strike (2022 Reserve Analysis)

Details of the locations noted in the above figure are provided on Table 16.8.

Table 16.8: Estimation of Crown Pillar Thickness and Stope Dimensions

Mining Area	Crown Thickness (m)	Stope span (m)	Stope Inclination (°)	Stope Height (m)
SEZ	206	8	60	25 + 25
SEZ to CZ	182	8	65	25
CZ	98	5 to 9	65	25 + 25
NWZ	116	7	75	27
NWZ	116	6	75	25

For the planned stope spans, described in Table 16.8, the crown pillar is considered stable in the short and long term for all the geometries and rock mass conditions evaluated. In addition, void migration to surface is unlikely to occur for the planned upper stope dimensions for the different mineralized zones. This means that the volume of the bulked rock will tend to fill the available underlying voids, and the upwards progression of failure will be halted for the planned 25 m high stopes. It must be noted that all of the stopes will be backfilled, which will further preclude any failure propagation to surface.

16.3 Hydrogeology

16.3.1 Regional Hydrogeological Setting

The mine area is located entirely within the area defined by CONAGUA (2020) as the San Felipe de Jesus Aquifer. The closest adjacent aquifer areas are the Upper Rio San Pedro to the north and the Valley de Zaragoza to the east. The San Felipe de Jesus Aquifer as defined by CONAGUA is a groundwater basin or management area rather than an aquifer in the strict sense. Within its boundaries the San Felipe de Jesus Aquifer area contains multiple aquifer and aquitard units within several hydrographic basins along the upper part of the Rio Conchos, an important river of northern Mexico and a major tributary of the Rio Grande. The Cerro Los Gatos mine itself is located in the upper drainage of Arroyo de Santo Toribio, an ephemeral tributary of the Rio Conchos.

16.3.2 Hydrogeologic Units

The principal water-bearing formations (Hydrogeologic Units - HGUs) present at surface and in the underground mine are:

- Alluvium (restricted to Arroyo Santo Toribio)
- Partially consolidated sandstone and conglomerate epiclastics (restricted to the NE side of the Los Gatos Fault)
- Volcanic formations (fractured and brecciated dacite, rhyolite, andesite)
- Los Gatos Fault gouge zones
- Los Gatos Fault damage zones
- NNW-striking and ENE-striking faults damage zones

These HGUs are cut by several sets of faults that further compartmentalize the groundwater system and commonly produce zones of increased or reduced hydraulic conductivity compared to adjacent un-faulted rock.

The process of fault displacement forms zones of closely spaced fracturing or brecciation (damage zones) which, with increasing displacement, can develop a zone of fine-grained fault rock or gouge (the fault core) flanked by damage zones. Fault damage zones can form areas of higher fracture porosity and permeability immediately adjacent to low permeability fault cores and lower permeability undamaged rock. This close association of different hydraulic properties means that large displacement fault zones can have complex hydraulic behavior and can variously behave as barriers to flow, flow conduits or combined barrier-conduits, dependent on scale of displacement and displacement history.

The Los Gatos Fault has up to several meters thickness of fault gouge over long distances along strike and up and down dip. This low-permeability material is interpreted to act as an aquitard (groundwater flow barrier) based on the observed low inflow rates in stopes where thick clay zones are found on the footwall side of the Los Gatos Fault. The Los Gatos Fault gouge HGU is an important control on groundwater movement at the mine.

The low-K gouge zone of the Los Gatos Fault HGU is flanked by damage zones of variably heavily fractured rock, formed in the Sandstone and Conglomerate epiclastics HGU on the NE side and the Volcanic HGU on the SW side. These have higher groundwater storage and hydraulic conductivity parallel to the Gatos fault than the relatively less fractured rock at a greater distance from the fault and form distinct HGUs that are interpreted as allowing local groundwater movement parallel to the Los Gatos Fault gouge HGU, where infiltration of groundwater from surface or inflow across the Los Gatos Fault occurs.

Fault damage zones are associated with some of the NNW-striking and ENE-striking cross-faults that cut the Los Gatos Fault. Some structures of these orientations, such as the “Falla Aportadora NW” which cuts the Los Gatos Fault in the NWZ are major water-bearing structures in the underground mine at Cerro Los Gatos and are interpreted as distinct HGUs that have the potential to allow groundwater flow across the Los Gatos and associated parallel faults.

Packer testing is currently in progress to quantify the hydraulic properties of the hydrogeologic units in the mine, focusing on characterization of the deeper SE zones.

16.3.3 Water Table

Within the Los Gatos Mine, the water table was first encountered in 2018 at an elevation of approximately 1,400 masl. The water table appears to have been essentially flat at this time, which is consistent with good lateral hydraulic connectivity within the higher K volcanic formations that host the ore body where the stopes were mined.

The subdued water table topography within the underground workings has been sustained during drawdown caused by dewatering pumping at progressively higher rates since 2019. In May 2022 (MCLG, 2020b) the water table surface within the mine dipped towards the NW, declining from the SE end of the Central Zone (at about 1,310 masl) to the NW end of the Northwest Zone (at 1,290 masl), indicating a gradient of about 0.02. This gradient towards the NW is towards the area of highest dewatering pumping rates and the lowest elevation workings.

In June 2024, the water table surface within the mine dipped towards the NW, declining from approximately 1,260 masl in the SE zone to approximately 1,200 masl at the northwest end of the NW zone. In the NW zone, the water table had been lowered from 1,247 masl to approximately 1,200 masl, representing a maximum localized reduction of approximately 47 meters over the preceding 11-month period in the NW zone and 50 to 90 meters drawdown throughout the mine since May 2022.

Static water levels are currently measured at a total of eight piezometers, five collared in underground monitoring wells and three piezometers collared from surface. An additional two underground piezometers are being installed in the NW zone to expand this monitoring network. Deep wells that allow monitoring of groundwater levels and gradients are currently restricted to the immediate area of the underground mine. The lack of deep monitoring wells in the area to the NE and SW of the mine away from the Gatos Fault prevents the general shape of the water table or phreatic surfaces from being mapped and the radial extent of drawdown impacts from being assessed.

The relatively impermeable Los Gatos Fault Gouge HGU in the core of the Gatos Fault is interpreted as having greatly restricted groundwater inflow from the saturated sandstone HGU, which is presumed to have a much higher elevation water table (comparable to pre-mining elevation).

16.3.4 Recharge

Recharge to the groundwater system is from infiltration of rainfall, infiltration of flow in the Arroyo Santo Toribio and groundwater inflow from the upgradient area of the Rio Conchos Graben and adjacent mountains. In the mine area, flow in the Arroyo Santo Toribio includes intermittent response to precipitation events and perennial flow over a short distance downstream of the discharge of underground dewatering water from the sedimentation and cooling pond. Infiltration of precipitation is expected to preferentially recharge the epiclastic HGU with lower rates of recharge reaching the volcanic HGU.

Geothermal water inflow to the underground workings occurs at elevations below 1,450 masl. The water temperature of the inflow ranges from 41° C to 72.1° C, with the highest temperatures found at greatest depth in the Central zone. The highest temperature groundwater inflow is associated with the Gatos Inferior fault. The geothermal inflow is inferred to represent upwelling of buoyant water from depth along conductive fault and fracture zones. Elevated groundwater temperatures were noted in early field mapping (Geologic Mapping, 2013) to the SE of the underground mine, so further areas of geothermal inflow may be encountered associated with Anti-Gatos Fault parallel structures in currently undeveloped areas.

16.3.5 Discharge

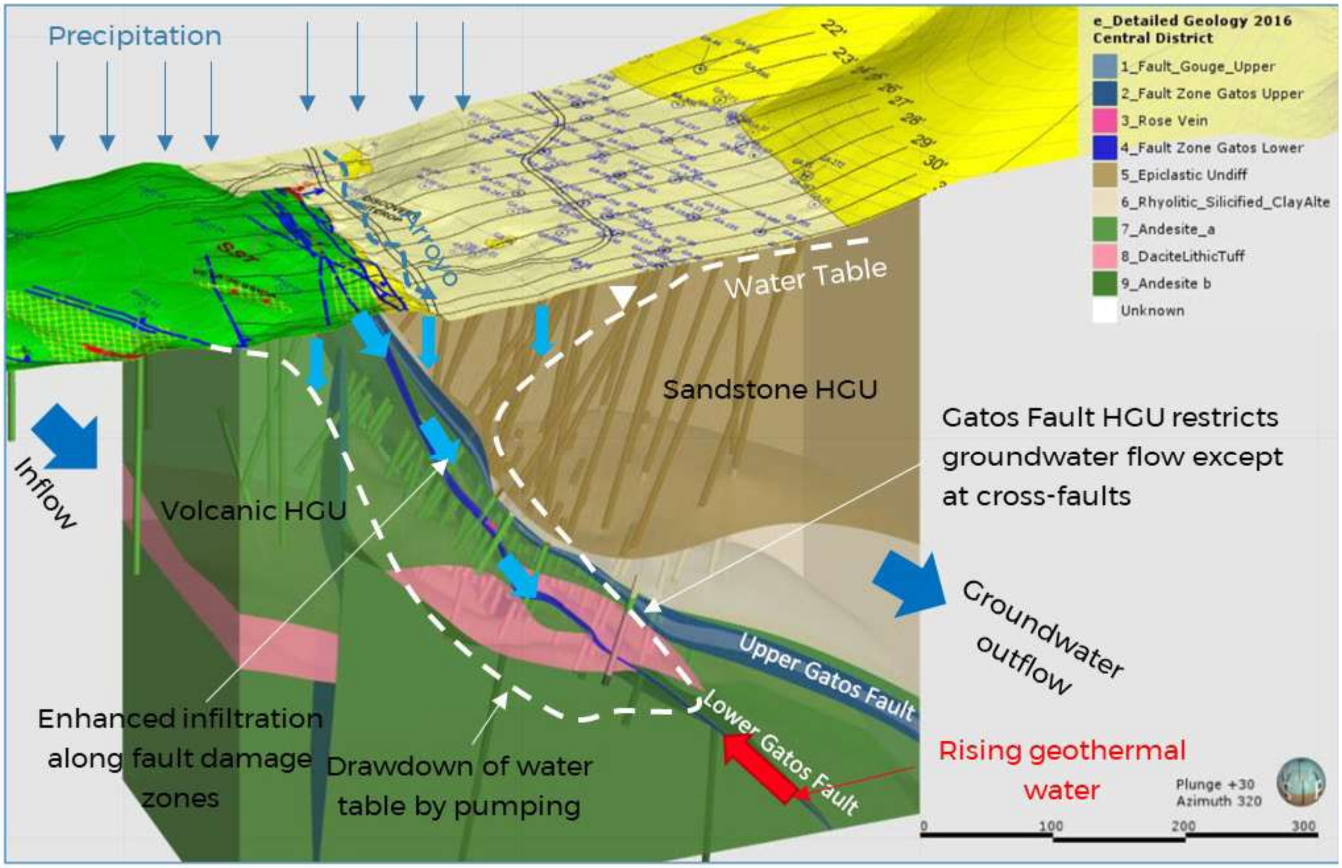
Under pre-mining conditions, groundwater discharge is likely to have occurred through evapotranspiration from the alluvial aquifer along Arroyo Santo Toribio and through outflow SE toward the Rio Concho. At present, the major groundwater discharge is through pumping from dewatering wells and underground sumps. A water balance was developed before the start of mining; however, a new model is required to incorporate the current understanding of water flows gained through mine development and monitoring activities.

16.3.6 Conceptual Hydrogeologic Model

The key elements of the conceptual hydrogeologic model are summarized in Figure 16.8.

During the initial years of mine operations, all non-contact water dewatering was accomplished through surface wells. In total, 18 wells have been drilled from surface locations at the mine site, with 11 operating simultaneously in 2020. These wells have depths ranging from 350 to 530 m, with hole-bottom elevations ranging from 1,118.0 masl to 1,246.5 masl.

However, as the mine deepened, surface wells became less effective at controlling groundwater inflows and drawing down the phreatic surface. In response, CLG began establishing wells drilled from underground locations in 2021.



Source: adapted from Rowearth, 2016

Figure 16.8: Conceptual Hydrogeologic Model

16.4 Groundwater Management

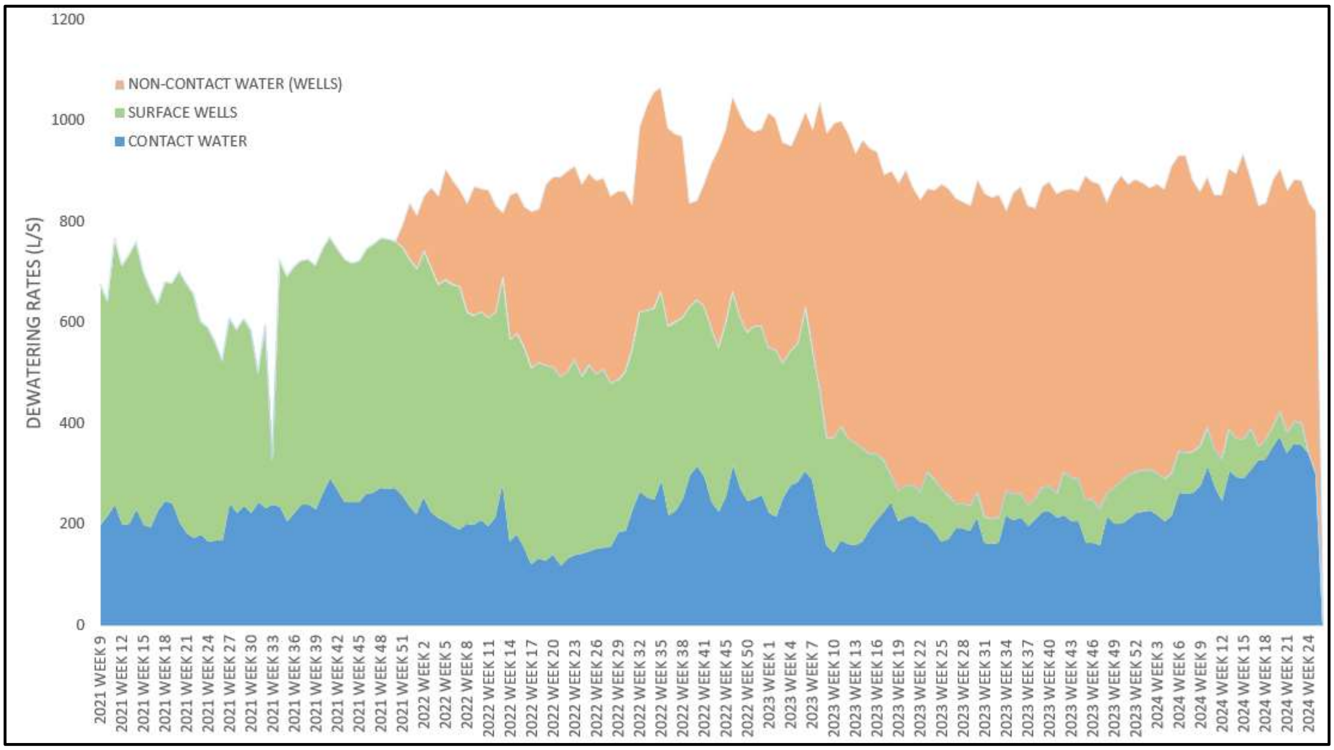
The CLG deposit is situated in the San Felipe de Jesus Aquifer, presenting challenges for controlling groundwater inflows into the underground workings. Additionally, some of the groundwater is affected by geothermal heating, resulting in hot water inflows in certain areas of the that complicate temperature control in some of the underground work environment. (Refer to the Mine Infrastructure section of this chapter for a detailed description of the infrastructure associated with the mine air cooling system.)

Since the initiation of underground development in 2018 and commercial production in 2019, CLG has employed two dewatering approaches to manage the groundwater:

1. **Contact water dewatering infrastructure**: This system pumps groundwater that has entered the underground workings out of the mine, discharging it at surface. Due to its exposure to the underground workings, contact water must be treated to remove suspended solids before being released into the environment.
2. **Non-contact water dewatering wells**: These wells pump non-contact water from the aquifer to draw down the phreatic surface below the pre-mining water-table elevation of about 1,400 masl, reducing the

volume of groundwater inflows to the mine. As non-contact water has not been exposed to mine workings, it does not require treatment before being discharged on the surface.

While functioning separately, the dewatering systems are interdependent in that extracting more non-contact water from the aquifer results in lower groundwater inflows to the mine and, hence, less contact water. As illustrated in Figure 16.9, the pumping rates for contact and non-contact water have remained stable at approximately 200-300 L/s and 600-700 L/s, respectively, since the initiation of mining operations. As the mine has deepened, the surface dewatering wells have been decommissioned and replaced by more effective underground dewatering well.



Source: CLG, 2024

Figure 16.9: Dewatering Rates from March 2021 to June 2024

The highest capacity underground wells have been established in the NW zone in the area surrounding the main ramp, where they intersect and draw water from a transmissive water-bearing structure called Falla Aportadora NW. This fault, striking approximately SW-NE and cutting across the Los Gatos fault, is the predominant conduit for groundwater inflow to the rock mass in the NW. Drawdown of the groundwater level in this structure through well dewatering significantly reduces potential inflows to the mine workings of the lower levels of the NW zone.

Mining the NW zone will require drawing down the groundwater to its lowest elevation for the zone in the life of mine (LOM) plan, the 1075 level. Therefore, the groundwater in the NW must be drawn down approximately 325 m relative to the pre-mining water-table elevation and 125 m below the current water level in the zone. As the principal source of groundwater inflow occurs through cross-faults cutting the Los Gatos Fault in the NW, CLG expects that dewatering of the NW will also reduce potential groundwater inflows to the CZ and SE. The SE zone has the deepest Mineral Reserve, extending to the 865 level.

The surface wells were gradually phased out from 2022 to 2024 as their effectiveness in reducing groundwater inflows to the mine diminished. The last surface well was removed from operation in June 2024. Now, all non-contact water dewatering is accomplished with underground wells, a practice that will continue for the mine's remaining life.

Figure 16.10 lists the underground dewatering wells in operation as of June 2024. Currently, four high-capacity wells are active in the NW zone, with two located on the 1370 level and two on the 1277 level. These wells extract groundwater from the Falla Aportadora NW water-bearing structure. Additionally, two new wells are under construction on the 1230 level of the NW zone, also targeting extraction from this structure. A high capacity well in the NW zone (well #3 NWZ 1277) and four smaller wells in the NW and CZ zones, which were operational as of the previous year's Mineral Reserve update, have been decommissioned as mining has progressed and water levels have been lowered.

CLG anticipates total dewatering flows, including both contact and non-contact water, to range between 800 and 900 L/s until 2026. The flow is projected to increase to approximately 1,000 L/s in 2027 and remain at this rate until the end of the mine's life. The increasing rate is primarily attributed to the deepening of the SE Zone, contributing an additional 300 to 500 L/s to the total dewatering volume, while inflows in the NW and Central zones decrease. To support this additional inflow, CLG has allocated budgetary provisions for upgrading and maintaining the dewatering systems for contact and non-contact water in the NW and SE zones, ensuring sustainable operations as mining progresses to the SE and greater depths.

The mine’s strategy for groundwater management aims to attain an optimal balance between contact water and non-contact water dewatering. CLG continues to shift its focus towards non-contact water dewatering in the NW and away from contact water. Monitoring and experience have shown that the deep underground wells targeting the main water-bearing structure in the NW are an effective way of dewatering the lower levels of the mine and reducing contact water inflows in the primary ramps, including in the CZ.

The groundwater management strategy depends on the capacity of the pumping infrastructure to discharge contact and non-contact water from the mine. The non-contact water pumping station on the 1390 level has a 700 L/s capacity and currently pumps approximately 500-550 L/s to the surface. The contact water pumping station on the 1384 level has a 375 L/s capacity and currently pumps 275 to 325 L/s to the surface, of which approximately 90% comes from the deepest parts of the primary ramps.

For a description of the infrastructure associated with the contact and non-contact dewatering systems, refer to the Mine Infrastructure subsection of this Section 16.0.

Table 16.9: Underground Dewatering Wells (June 2024)

Location	Water level (masl)	Flow (L/s)
UG Well #1 NWZ 1370	1,230.00	171
UG Well #2 NWZ 1370	1,231.00	153
UG Well #3 NWZ 1277	1,203.00	Inactive
UG Well #4 NWZ 1277	1,199.00	56.5
UG Well #5 NWZ 1277	1,217.00	108
UG Well #6 NWZ 1230	n/a	Under construction
UG Well #7 NWZ 1230	n/a	Under construction

Source: CLG, 2024

The QP is of the opinion that the dewatering strategy employed by CLG, combining conventional contact-water dewatering infrastructure with dewatering wells, is an effective approach for managing groundwater inflows into the mine.

16.5 Mine Design

The CLG Mineral Reserve estimate was derived from a detailed mine design and LOM schedule, developed using Deswik software. A key initial step in this process was establishing the specific criteria for stope production and mine development.

Table 16.10 and Table 16.11 summarize the development and stope production criteria utilized in the mine design and scheduling process. The development criteria address critical design elements such as the cross-sectional dimensions of drifts and ramps, ventilation-raise diameters, and advance rates for various development headings. The production criteria include mining method selection, stope dimensions, and production rates.

The application of these criteria was guided by the following priorities, ranked by importance:

1. Maximizing grade
2. Maximizing productivity
3. Minimizing mining costs

Table 16.10: Mine Design Criteria - Development

Item	Description
Ramps	
Dimensions	5.0 x 5.5 m
Grade	-15%, -13% in turns, -7% at intersections
Curves	Minimum 25 m radius
Footwall drifts	5.0 x 5.0 m
Crosscuts and ore drives	5.0 x 5.0 m
Future surface ventilation raises	2.4 and 4.1 m diameter
Interior ventilation raises	3.1 and 4.1 m diameter
Development advance rates	
Lateral single heading in ore	3.4 d/day
Lateral multi-headings in ore	6.8 m/day
Lateral single heading in waste	3.4 m/day
Lateral multi-headings in waste	13.6 m/day
Vertical in waste	0.83 m/day

Source: CLG, 2024

Table 16.11: Mine Design Criteria – Stope Production

Item	Description
Longitudinal longhole stoping	
Unplanned dilution – host rock	Table 12.4
Backfill dilution	Table 12.6
Mining recovery	Table 12.4
Deposit dip	≥ 55˚
Drill/mucking drift width	3.5 to 5.0 m
Minimum mining width	2.0 m
Maximum mining width	8.0 m
Production rate	2,800 t/day
Transverse longhole stoping	
Unplanned dilution – host rock	Table 12.4
Backfill dilution	Table 12.6
Mining recovery	Table 12.4
Deposit dip	Not applicable
Minimum mining width	8.0 m
Stope width	9.0-15.0 m parallel to strike
Production rate	2,800 t/day
Cut-and-fill mining	
Unplanned dilution – host rock	Table 12.5
Backfill dilution	Table 12.6
Mining Recovery	Table 12.5
Deposit dip	< 55˚
Minimum mining width	3.5 m (FW to HW)
Maximum mining width	8.0 m
Cut height	5.0 m
Production rate	700 t/day
Longhole stope dimensions - NW Zone	
Height	25 m
Length	15 m
Longhole stope dimensions - CZ Zone	
Height	15 m
Length	25 m
Longhole stope dimensions - SE Zone	
Height	20 m
Length	12 m
Pillar between veins	5.0 m

Source: CLG, 2024

The estimated production productivities were based on typical stope cycle times. For longhole stoping, the cycle components include cable bolting, slot raising, longhole drilling, production blasting, remote-control mucking, fill fence construction, backfilling, and backfill curing time. Stope sequencing and the overall production schedule are heavily influenced by the progress of primary ramp development. The estimated advance rates for these headings range from 20 m/month to 75 m/month, depending on several factors, including ramp location, geotechnical conditions, and expected requirements for groundwater control.

16.6 Mining Methods

16.6.1 Description of Mining Methods

CLG employs two primary mining methods to extract ore from the deposit: cut-and-fill (CAF) and longhole stoping (LHS). Each method is used in two variations, longitudinal or transverse, depending on the orientation of the principal mining direction relative to the strike of the vein

Table 16.12 provides an overview on the methods and versions used in different zones at CLG.

Table 16.12: Mining Methods by Zone

Zone	Cut-and-Fill	Longitudinal Longhole	Transverse Longhole
NW Zone	-	✓	✓
Central Zone	✓	✓	✓
SE Upper Zone	✓	-	-
SE Zone	✓	✓	-

Source: CLG, 2024

16.6.2 Criteria for Mining Method Selection

Table 16.13 summarizes the criteria that CLG evaluates when selecting a mining method for a vein.

The QP is of the opinion that CLG’s mining methods are well-suited to the specific zones and prevailing mining conditions where they are applied. During the site visit, the QP inspected active CAF and LHS stopes, confirming the appropriate application of these methods.

Table 16.13: Criteria for Mining Method Selection

Criteria	Description
Cost and Productivity	CLG prioritizes LHS over CAF wherever possible due to its higher productivity and lower cost.
Width of Vein	Veins up to 8 m wide are mined longitudinally, whereas veins wider than 8 m are mined transversely to limit the span of the stope opening.
Dip of vein	CLG prefers longitudinal CAF over longitudinal LHS for those sections of the deposit with dips less than 55°. However, for wider sections of the CZ dipping at less than 55°, transverse LHS is used successfully.
Ground Conditions	CLG prefers transverse CAF over transverse LHS in areas with unfavorable ground conditions, such as stopes influenced by the Los Gatos fault.

Source: CLG, 2024

16.6.3 Mining Methods Used in the Zones

Table 16.14 provides an overview of the mining methods employed at the zones of CLG.

Table 16.14: Overview of Mining Methods by Zone

Zone	Description
NW	Longitudinal LHS is the predominant mining method due to the vein being steeply dipping and reasonably narrow. Transverse LHS is used in wider parts of the vein. Ground conditions influenced by the Los Gatos fault in higher parts do not necessitate CAF.
CZ	All mining methods are employed in the CZ. It is the widest zone and most affected by the Los Gatos fault. The strategy involves using CAF to stabilize ground at the hangingwall where required, with cemented backfill providing a shield for adjacent stopes. Most remaining mineralization is mined with transverse LHS. Each transverse stope mines two veins together; consequently, the rib of waste separating the veins contributes some dilution to the ore. Longitudinal LHS is used for a thin, steeply dipping vein at the footwall and other narrow deposits.
SEU	The zone is mined with longitudinal CAF due to unfavorable ground conditions from the Los Gatos fault and the shallow dip at the lower levels. The narrow vein is mined longitudinally, taking the full width of mineralization in a single pass.
SE	The zone is primarily mined using longitudinal LHS, with CAF applied to a limited portion of the reserve. The vein is generally steeply dipping and relatively narrow, with the Los Gatos fault located approximately 10 to 20 meters from the hanging wall."

Source: CLG, 2024

16.6.4 Cut-and-Fill Method

The CAF mining method involves extracting ore in a series of ascending horizontal slices, known as cuts, starting from the bottom of the vein and progressing upwards. Each mined cut is replaced with backfill, which provides a floor for mining the next cut and supports the footwall and hangingwall by filling the void left by the removed ore.

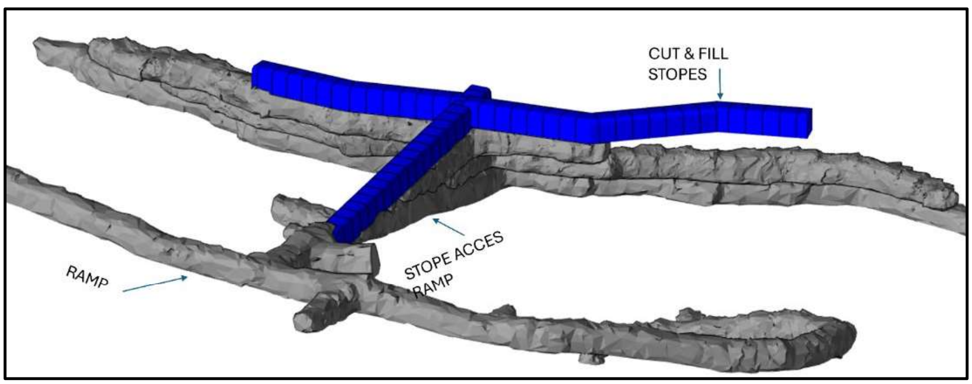
At CLG, the CAF method is employed in two variations depending on the vein width. For veins less than 8 m wide, longitudinal CAF is used, while transverse CAF is applied for mining veins wider than 8 m.

Each cut has a height of 5 m, and typically four or five cuts can be mined from each sublevel, depending on the sublevel interval. Access to the stoping area is provided by an attack ramp located in the footwall of the sublevel. The ramp’s inclination varies to accommodate the cut being mined. To access the lowest cut, the ramp is initially driven at a -15% grade. As mining progresses to higher cuts, the ramp’s grade increases, reaching a maximum of +15% to access the uppermost cut. Once the highest cut is completed, a new negatively inclined attack ramp is driven from the next sublevel to access the next sequence of cuts.

The attack ramp's inclination from one cut to the next is increased by slashing its back with a jumbo and leaving a sufficient amount of blasted waste on the floor to achieve the required grade for accessing the targeted cut. From the entry point of the ramp in the vein, the ore in the cut is mined by advancing left and right using a jumbo.

16.6.5 Longitudinal Cut-and-Fill

At CLG, when the vein width is 8 m or less, the ore is mined using longitudinal CAF. In this approach, the ore in the cut is mined by advancing jumbo rounds and slashes parallel to the strike of the vein, taking the full face from footwall to hanging wall. Once the lift is fully mined out, it is backfilled with paste fill, cemented rockfill (CRF), or uncemented rockfill (URF). Figure 16.10 illustrates the longitudinal CAF method at CLG.



Source: CLG, 2024

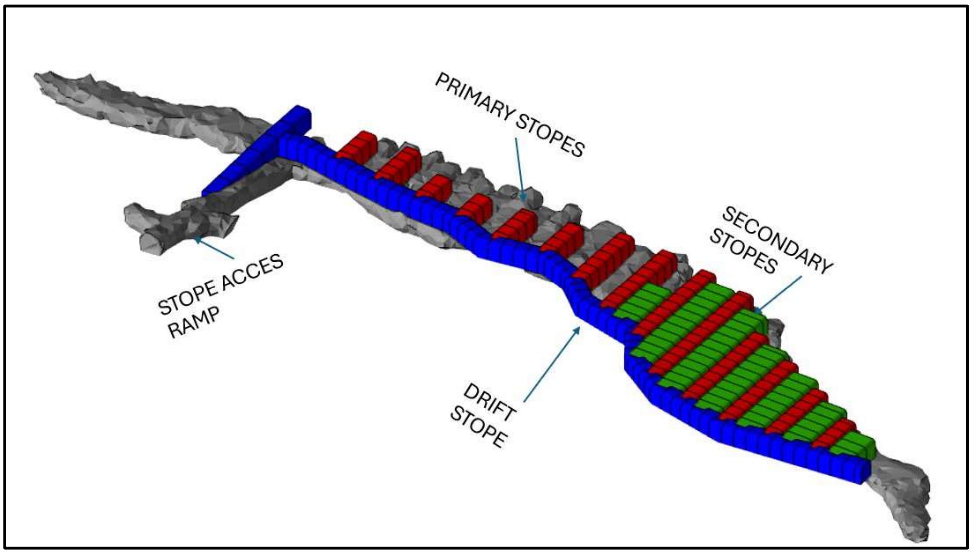
Figure 16.10: As-Built Isometric View of Longitudinal Cut-and-fill Mining at CLG

16.6.6 Transverse Cut-and-Fill

Figure 16.11 illustrates transverse CAF mining at CLG. The method is employed for mining veins exceeding 8 m in width, where longitudinal mining would produce stope openings with excessive spans. The method involves advancing a drift through the ore adjacent to the footwall contact and, from that heading, driving parallel drifts toward the hanging-wall contact called primary drifts. The primary drifts are spaced on 10-m centers, leaving 5-m-wide ribs of ore between them, which are later mined as secondary drifts.

After the primary drifts are mined out and backfilled with paste fill or CRF, the secondary drifts can be mined. The backfilled primary drifts serve as engineered pillars for mining the secondary drifts between or adjacent to them.

The mined-out secondary stopes can be backfilled with uncemented rockfill (URF), although paste fill is often used instead. The backfilled primary and secondary drifts provide a floor for mining the next cut above. This method limits the span of the stope openings to the width of a drift and, additionally, minimizes the exposure of the hangingwall at any given time. Once all primary and secondary drifts in a cut are mined and backfilled, mining progresses to the next cut in the ascending sequence.



Source: CLG, 2024

Figure 16.11: As-built Isometric View of Transverse Cut-and-fill Mining at CLG

16.6.7 Longhole Stoping (LHS) Method

LHS involves extracting ore between two sublevels by drilling and blasting longholes. At CLG, two approaches are used depending on the vein width. Longitudinal LHS is used for veins 8 meters or less in width, whereas transverse LHS is employed for wider veins. Stope heights at CLG range from 20 to 25 meters, depending on the sublevel interval of the zone.

This method requires developing ore drives on the upper and lower sublevels of each stope. The upper ore drive serves as a drilling drift, while the lower one acts as an extraction drift. These drifts are driven to dimensions of 5 m wide by 5 m high with arched backs. Longholes, with a diameter of 89 mm, are generally drilled as downhole rings from the ore drive of the upper sublevel. Production in each stope begins by blasting longholes into a slot created as a drop raise between the two sublevels.

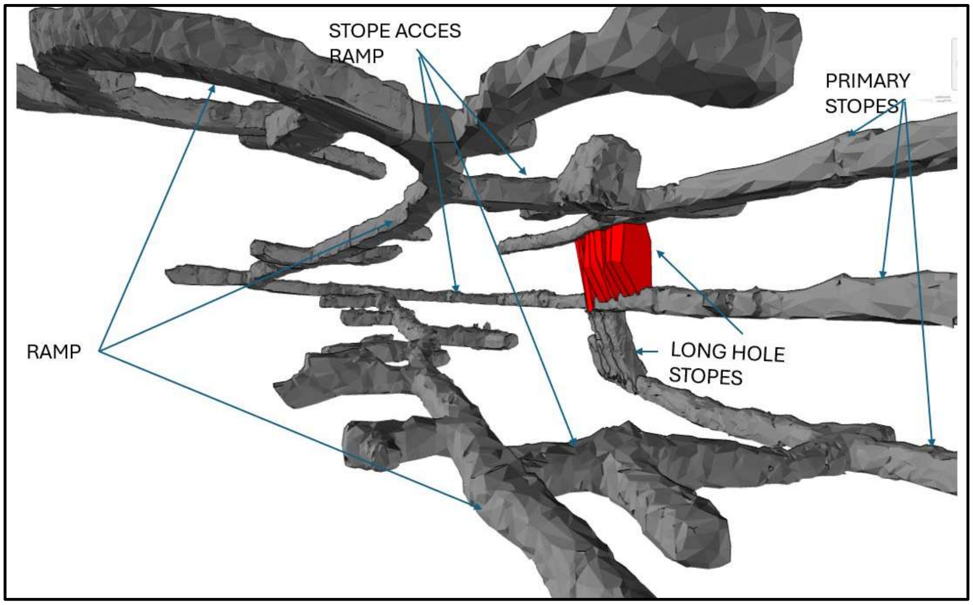
Following a longhole blast, an LHD mucks the broken ore from the lower sublevel. Although some broken ore can be mucked with the operator seated on the machine, most of it must be extracted using radio remote control, with the operator controlling the LHD from a safe position in the extraction drift. The broken ore is hauled out of the stope and either stockpiled in a muck bay on the sublevel or loaded directly into mine trucks for haulage to the ROM (Run-of-Mine) pad on the surface.

After the stope is mined out and backfilled, production mining can proceed to the next higher stope in the sequence. The ore drive that served as the drilling drift in the lower stope now becomes the extraction drift of the upper stope.

16.6.8 Longitudinal Longhole Stoping

CLG employs longitudinal LHS when the vein width is 8 m or less. In this method, the deposit between two sublevels is mined along the strike of the vein. At CLG, the lengths of longitudinal LHS stopes vary but are typically limited to approximately 20 to 30 meters due to geotechnical constraints on the dimensions of underground openings.

Figure 16.12 illustrates the application of this mining method at CLG. The stopes are aligned in series along the vein and are generally sequenced in a retreating fashion, advancing one after another towards the central crosscut access. Once mined out, a stope is usually backfilled with paste fill, although CRF may also be used.



Source: CLG, 2024

Figure 16.12: As-Built Isometric View of Longitudinal Longhole Stoping at CLG

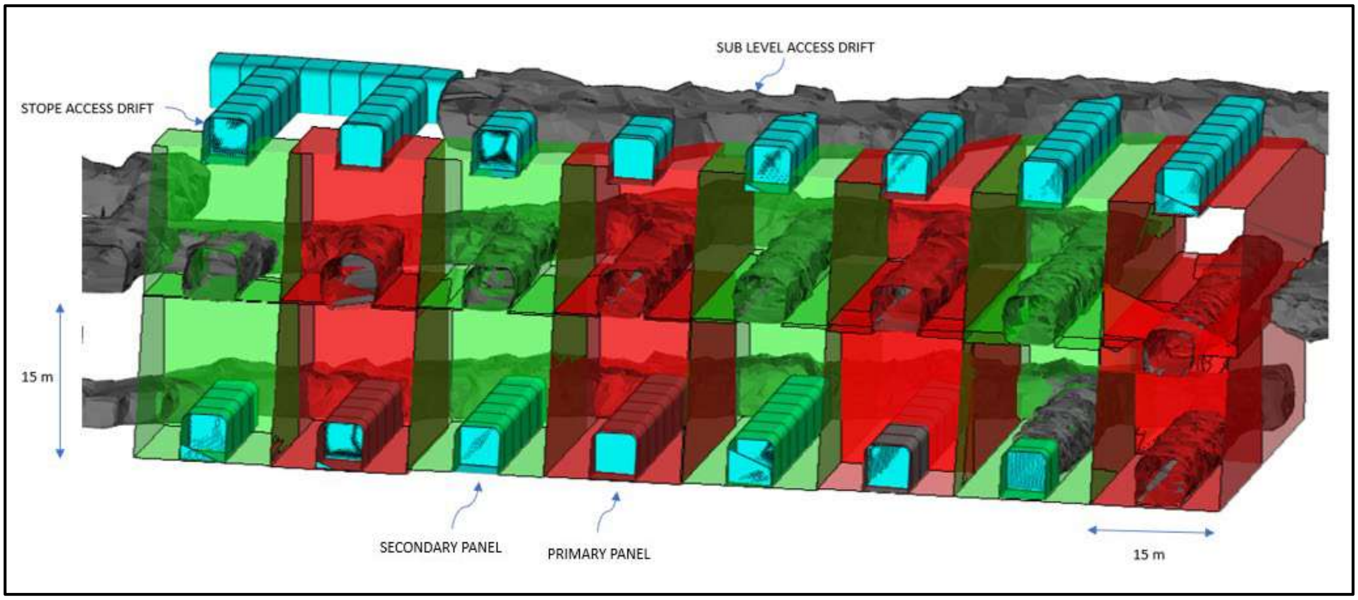
16.6.9 Transverse Longhole Stoping

When the width of the vein is greater than 8 m, CLG employs transverse LHS as the span of the stope opening would be excessive if the vein were mined longitudinally. This approach involves dividing the ore between two sublevels into alternating primary and secondary stopes extending from the footwall to the hanging wall at a right angle to the strike. The width of these stopes ranges from 12 m to 15 m wide, measured parallel to the strike.

Figure 16.13 illustrates the application of this mining method at CLG. The stopes are accessed by driving crosscuts to the orebody from footwall drives on the upper and lower sublevels. These crosscuts extend across the vein to the hanging wall, providing a drilling drift on the upper sublevel and an extraction drift on the lower sublevel. Production in each stope is initiated by blasting into a slot raise situated adjacent to the hanging wall, with longhole blasting then proceeding in a retreating fashion towards the footwall.

The primary stopes are mined first and then backfilled with paste fill. The backfilled primaries serve as pillars that permit mining the secondary stopes situated between or adjacent to them. The mined-out secondaries can be backfilled with paste fill, CRF, or URF.

The lengths of the stope openings between the footwall and hanging wall vary with vein widths but are generally limited to approximately 21 meters due to geotechnical constraints. If the transverse stope length exceeds this limit, the stope will be mined with two separate blasting and backfilling sequences.

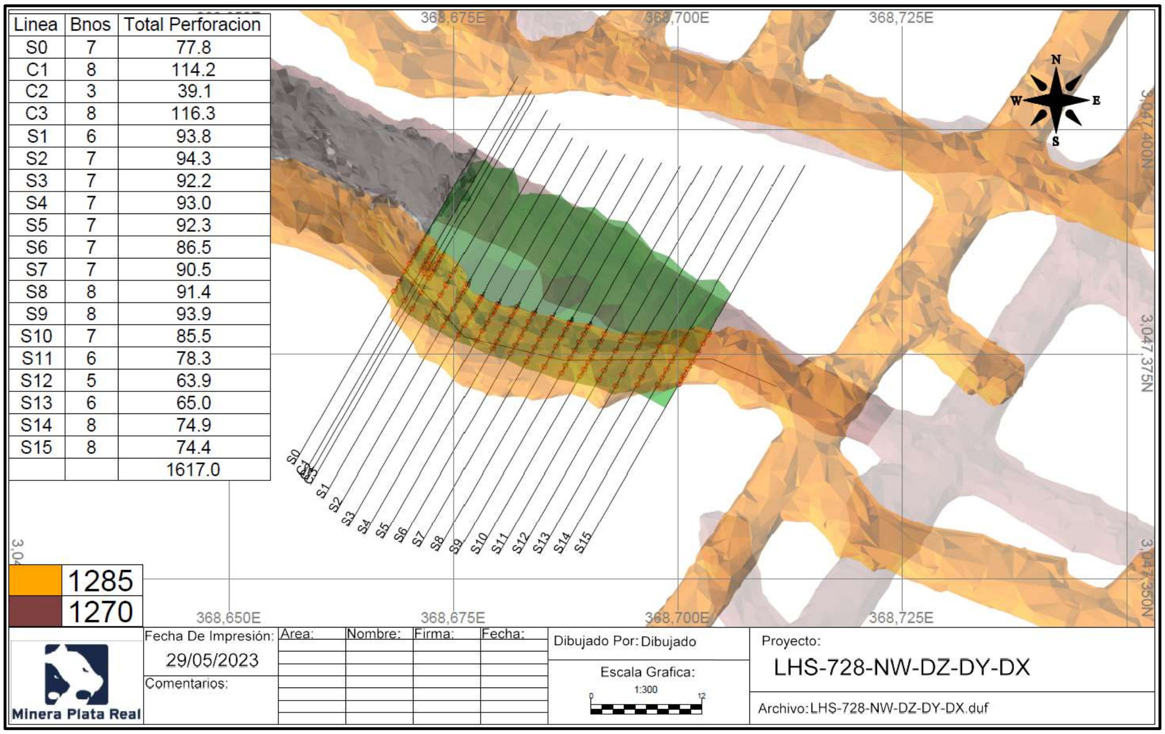


Source: CLG, 2024

Figure 16.13: Schematic of the Transverse Longhole Stoping Design at CLG

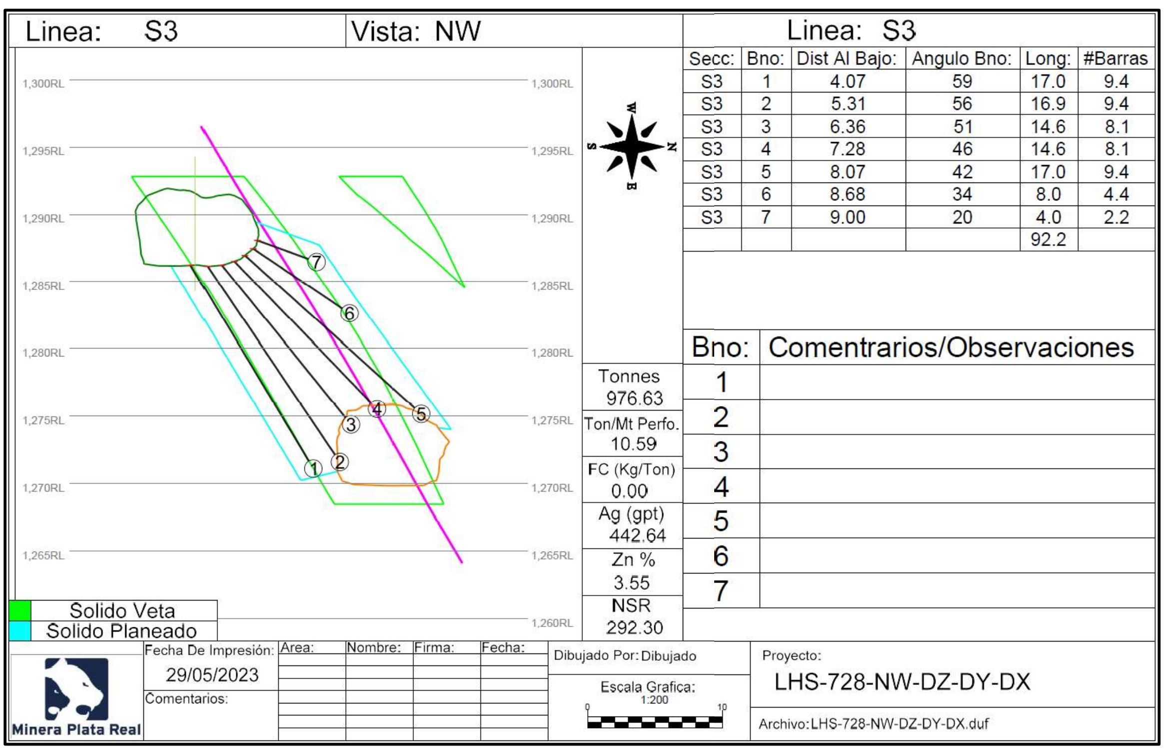
16.6.10 Drilling

Drilling in CAF stopes consists of rounds and slashes drilled with development jumbos, whereas LHS stopes require longholes drilled as downhole rings. Figure 16.14 and Figure 16.15 illustrate a typical drilling layout for a longitudinal stope in plan and section views. The hole diameter is 89 mm, and the burden between rings is 1.8 m. CLG utilizes two types of production rigs for longhole drilling: a top hammer drill and a down-the-hole drill (DTH).



Source: CLG, 2024

Figure 16.14: Drilling Layout for a Longitudinal Longhole Stope – Plan View



Source: CLG, 2024

Figure 16.15: Drilling Layout for a Longitudinal Longhole Stope – Section View

16.6.11 Explosives

The types of explosives employed at CLG are determined by factors such as excavation type, the presence of water, and rock temperature. Table 16.15 provides an overview of the different explosives used under various conditions at the mine.

Table 16.15: Explosives Used at CLG

Mining Method	Without Water Present		With Water Present	
	T° < 50°C	T° > 50°C	T° < 50°C	T° > 50°C
Longhole Stoping				
Bulk Emulsion				
Cartridge Explosive	✓	✓	✓	✓
ANFO	✓			
Cut & Fill Mining				
Bulk Emulsion	✓			
Cartridge Explosive	✓	✓	✓	✓
ANFO	✓			
Mine Development				
Bulk Emulsion	✓			
Cartridge Explosive		✓	✓	✓
ANFO	✓			

Source: CLG, 2024

ANFO is the primary explosive utilized at CLG due to its cost-effectiveness, particularly under dry conditions. However, when water or high humidity is present, bulk emulsion and emulsion-based cartridge explosives are employed due to their superior water resistance. ANFO is transported underground in 25 kg bags, while bulk emulsion is delivered from the on-site storage facility to the stopes or headings by an emulsion container truck. CLG operates three Charmec explosive chargers: two for loading ANFO and one for bulk emulsion.

Longhole stopes can be charged with either ANFO or emulsion cartridges. Downholes are primed with a 10 g Stinger cast booster or a 1” x 8” emulsion cartridge placed at the toe end and loaded full column with ANFO. Upholes may be loaded with ANFO or emulsion cartridges. In the latter case, the complete hole is charged with a pneumatic cartridge loader.

Drift rounds are generally loaded with ANFO when conditions are dry, which is typically the case in cut-and-fill stopes. However, bulk emulsion and emulsion cartridges are used to load drift rounds when water is present, as often occurs in ramp development and deeper development headings.

Geothermal heating causes elevated temperatures in certain parts of the mine. When rock temperatures exceed 50°C, CLG utilizes an emulsion-based cartridge explosive designed to resist deterioration due to the heat.

Loaded longholes are initiated with i-Kon-II™ electronic detonators, while Nonel™ non-electric blasting caps are employed for blasting rounds in development headings and cut-and-fill stopes. Blasts are initiated from a central blasting system between shifts when no personnel are present underground. Following a blast, approximately 30 minutes are required to clear blasting fumes from the mine.

16.6.12 Backfill

CLG utilizes three types of backfill materials to fill stope voids:

- Paste fill (PF)
- Cemented rockfill (CRF)
- Uncemented rockfill (URF)

Following the commissioning of the paste plant in Q4 2022, the use of PF has steadily increased as a proportion of the total backfill material placed underground. PF is composed of filtered mill tailings blended with cement or another binder. The material is pumped from the paste plant on surface to the paste bay, located adjacent to the Central Ventilation Raise at the 1390 Level. From this location, the PF is distributed to various underground areas of the mine through a network of 150-mm diameter pipes.

Before backfilling a longhole stope with PF, the stope entrance of the mucking drift on the lower sublevel must be sealed off with a bulkhead. The PF is then poured into the open stope from the drill drift on the upper sublevel. Once backfilling is completed, a 14-day curing period is required for the PF to set sufficiently before an adjacent longitudinal or secondary stope can be blasted. In the adjacent stopes, other activities, such as development and drilling, may continue during backfilling and curing. Initially, PF usage was limited to LHS, but since 2023, CLG has also been using it in CAF stopes. The LOM plan projects a high cement content of PF at 10% for stopes and sills situated above mineralization planned for future mining. The high-strength PF creates a stable back for future mining of the sill. For all other backfilling requirements, the cement content of the PF will be 4%.

CRF consists of development waste that has been crushed and blended with cement and water. The material is prepared at a CRF facility located underground. The plant utilizes development waste from underground development. The CRF is hauled to underground stopes by the same mine trucks that transport ore to the surface. These trucks are equipped with ejector boxes, which facilitate dumping in the stopes where the back height would impede tipping a standard box. When backfilling a CAF stope, the trucks deliver the CRF as close as possible to the required location, and an LHD equipped with a rammer-jammer attachment then pushes it into place, tight to the back of the drift opening.

URF consists of blasted waste from mine development. It is hauled underground from the waste stockpile on the surface or transported directly to the stopes being backfilled from the active development headings. URF is suitable in situations where the backfill is not required to provide structural support, such as secondary drifts in CAF and secondary stopes in LHS. In this case, the backfill serves as a floor for the next cut or lift above but does not provide geotechnical support. When backfilling CAF stopes with URF, the procedure is the same as with CRF, whereby an LHD jams the material into place. Additionally, a layer (approximately 1 m) of URF material is placed on top of PF pours to provide a suitable surface for operating rubber-tired equipment in the next higher cut or lift.

16.6.13 Ore and Waste Handling

The ore and waste handling system at CLG consists of ramp haulage. The mine has a single access to the surface via the main ramp and the portal. The mine operates seven trucks, each with a 40-t payload capacity. These trucks haul ore and waste to the surface and, additionally, transport CRF and URF underground.

The mine also employs nine LHDs for mucking operations. Two of these LHDs have a 7-t tramming capacity, while the remaining seven have a 14-t tramming capacity. These LHDs muck ore from the stopes and waste from the development headings. The larger LHDs are also used for loading the mine trucks.

In stope production, LHDs muck the blasted ore from the CAF and longhole stopes and tram the material out of the stoping area. They either load the material directly into mine trucks or dump it in muck bays on the sublevels for temporary storage. In the latter case, the stockpiled ore will later be rehandled by the LHDs and loaded onto trucks.

The loaded trucks haul the ore up the ramp to the surface and dump it at the ROM pad stockpile. A wheeled loader rehandles the material, transferring it from the ROM pad stockpile to the chute of the ROM bin. The primary jaw crusher reduces the ore to minus 125 mm, and a conveyor transports the material to the coarse ore stockpile in the dome.

Mine development generates both ore and waste. After a drift round is blasted, an LHD mucks the blasted material from the face and either loads it into mine trucks or dumps it in a muck bay for temporary storage. If the blasted material is ore, the trucks haul it to the surface just like production ore. If it is waste, they haul it either to the waste stockpile on the surface or directly to stopes in the process of being backfilled.

16.7 Mine Infrastructure

This subsection provides an overview of the infrastructure located within or directly connected to the underground mine. For details on surface infrastructure, including the paste fill plant, CRF plant, compressor house, and main maintenance shop, please refer to Section 15 of this report.

The QP is of the opinion that the underground infrastructure, mine services, and fixed equipment are well-suited to the scale and conditions of the underground operations. During the site visit, the QP observed that these installations are of high quality, fully operational, and functioning as intended. CLG has constructed or installed most of the infrastructure necessary to sustain operations throughout the remaining LOM.

16.7.1 Mine Access and Underground Facilities

Table 16.16 presents the infrastructure for mine access and underground facilities. CLG is a trackless mine and access to the underground workings is provided via a system of ramps. The ramps allow access to the sublevels and stopes and provide the means for hauling ore and waste to surface.

The portal, situated at an elevation of 1,585 meters above sea level (masl), serves as the sole access point to the underground mine for both equipment and personnel. The main ramp descends from the portal to the 1,420 level, where it bifurcates into two separate ramps: one providing access to the NW Zone, and the other to the CZ. CLG has commenced development of a new ramp system extending from the CZ ramp to provide access to the SE Zone.

As best possible, the ramps are designed to maximize straight runs for safety and mining efficiency and minimize wear on mobile equipment. Headings have a 5.0 x 5.5 m cross-section and are driven at a maximum grade of -15%. The grade is reduced to -13% on curves and -7% at main intersections. Curves are designed with a minimum 25 m radius. Passing bays are established where required, and safety bays are excavated at 30 m intervals.

CLG has established an underground maintenance shop within a mined-out stope in the NW zone. It has four service bays and an office. It is utilized for performing light maintenance work, while pieces of equipment requiring more intensive repairs are transported to the maintenance shop on surface. The LOM Plan includes the construction of an underground fuel station, a lubrication bay, and an underground explosive magazine.

Table 16.16: Mine Infrastructure – Mine Access and Underground Facilities

Infrastructure Item	Characteristics	Location
Portal		CZ Zone, 1,585 masl
Main access decline	5.0 x 5.5 m, -15% grade	CZ Zone
NW Ramp	5.0 x 5.5 m, -15% grade	NW Zone
CZ Ramp	5.0 x 5.5 m, -15% grade	CZ Zone
SE Ramp	5.0 x 5.5 m, -15% grade	SE Zone
Underground maintenance shop	4 service bays, 1 office	NW Zone

Source: CLG, 2024

16.7.2 Ventilation Infrastructure

The ventilation infrastructure operates on a pull-type system. Three return-air raises equipped with exhaust fans at their collars draw spent air from the mine, while fresh air enters the mine through the main ramp and two principal intake raises. Additionally, Escape Raise #1 also lightly downcasts fresh air.

Fresh air is distributed throughout the underground mine via ramps, sublevels, and internal raises. Each ramp is equipped with both a fresh-air raise and a return-air raise, which are progressively extended downward as ramp development advances. Where feasible, exhaust and intake raises are strategically positioned at the ends of the sublevels to facilitate flow-through ventilation. Booster fans and regulators are employed to direct and control airflow to active mining areas, ensuring adequate ventilation for ongoing operations.

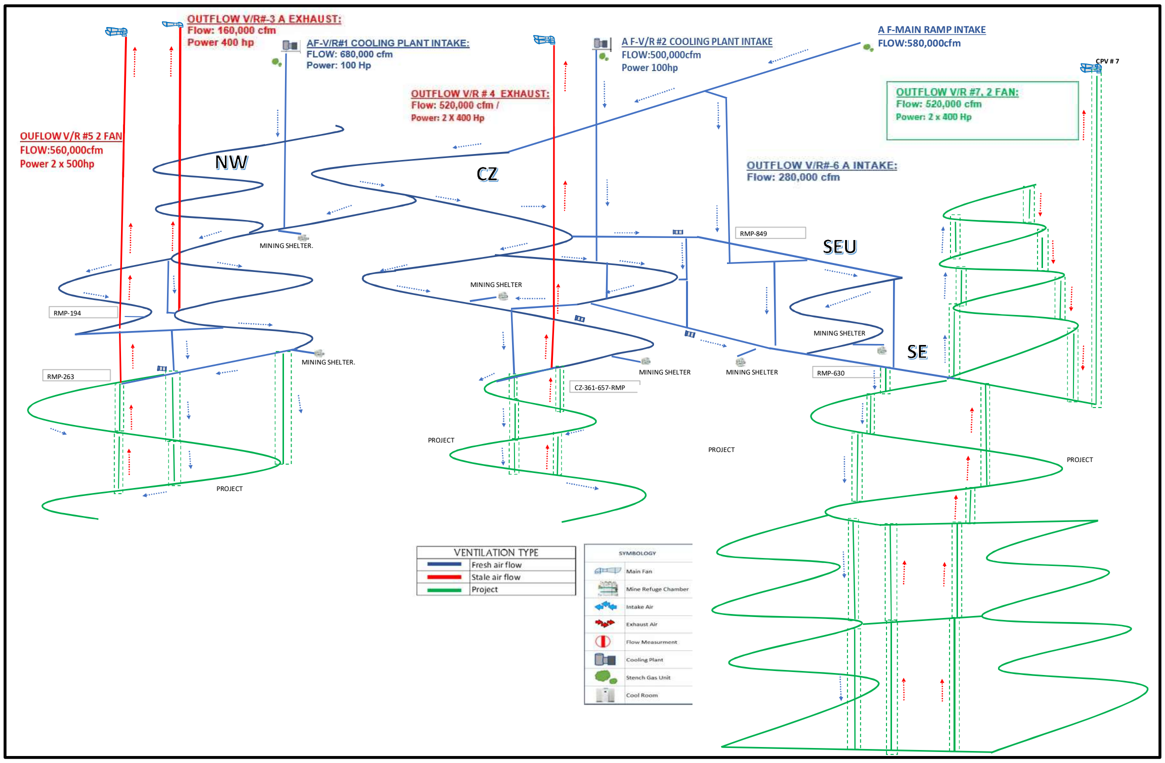
Figure 16.16 illustrates the ventilation system at CLG. The ventilation raises are raisebore raises. The main ventilation raises connecting to the surface have diameters ranging from 4.1 m to 5.1 m. The internal raises are also raisebore raises, generally 2.1 m in diameter.

Table 16.17 provides detailed information about the principal ventilation raises and the main ramp, including their airflow capacities. The NW zone intakes fresh air via the main ramp and Ventilation Raise (VR) #1. It exhausts spent air via VR #3A and VR #5. The CZ zone intakes fresh air via the main ramp and VR #2, and exhausts spent air via VR #4. The SEU and SE ventilation is currently drawn from the CZ system.

Table 16.18 presents estimates of the minimum permissible ventilation flow based on the diesel equipment operating underground. According to Mexican regulations for underground mining, 2.13 cubic meters per minute per horsepower is required for machinery powered by diesel engines (Article 8.4.4-a.2, NORMA Oficial Mexicana NOM-023-STPS-2012). As shown by comparing the two tables, the ventilation system at CLG delivers significantly more airflow than required by legislation. This excess airflow is beneficial for moderating temperatures in the underground work environment.

As of the effective date of this report, CLG has commenced the development of the ventilation system required for mining activities in the SE Zone. A raisebore raise has been completed, extending from the Main Ramp to Ramp-849, which will serve as part of the fresh-air intake system. A second raise is planned to connect Ramp-849 with Ramp-630, directing the intake airflow to the SE Zone.

Additionally, a return-air raise will be bored between the surface and the SE Zone. Two 400-hp exhaust fans will be installed at the collar of this return-air raise to facilitate the extraction of spent air from the mine. The ramp system within the SE Zone will be ventilated through a network of internal fresh-air and return-air raises. The ramps will downcast fresh air, maintaining adequate ventilation for mining operations.



Source: CLG, 2024

Figure 16.16: Schematic Illustrating the Current and Planned Mine Ventilation System at CLG

Table 16.17: Mine Infrastructure - Current and Planned Ventilation System

Ventilation Raise	Zone	Diameter (m)	Ventilation Fans	Upcast Volume, (CFM)	Downcast Volume (CFM)	Direction
Vent Raise #1	CZ	5.1	1 ea. x 100 hp		680,000	Downcast
A/F R/E Emerg. #1	CZ	2.4			4,102	Downcast
Vent Raise #2	CZ	4.1	1 ea. x 100 hp		500,000	Downcast
Vent Raise #3A	NW	4.1	1 ea. x 400 hp	160,000		Upcast
Vent Raise #4	CZ	4.1	2 ea. x 400 hp	520,000		Upcast
Vent Raise #5	NW	4.1	2 ea. x 500 hp	560,000		Upcast
Main Ramp Intake	CZ				580,000	Downcast
Current Ventilation System				**1,240,000**	**1,764,102**	
Planned additions						
Vent Raise #7	SE	4.1	2 ea. x 400 hp	520,000		Upcast
Ultimate Ventilation Capacity				**1,760,000**	**1,764,102**	

Source: CLG, 2024

Table 16.18: Estimates of Ventilation Requirement

Mobile Equipment	Units	Unit Power		Unit Air Flow	Fleet Air Flow	Utilization	Req'd Air Flow
Make, Model		kW	Hp	CFM	CFM	%	CFM
Electric/hydraulic jumbo, DD321	6	110	148	11,100	66,600	20%	13,320
Cable Bolter	1	110	148	11,100	11,100	20%	2,220
Electric/hydraulic bolter DD421	7	110	148	11,100	77,700	25%	19,425
Sandvik LHD LH307	2	160	215	16,125	32,250	75%	24,188
Sandvik LHD LH514	7	256	343	25,725	180,075	75%	135,056
Sandvik Toro Truck, TH540	7	405	543	40,725	285,075	70%	199,553
Spraymec MF050 NORMET	2	120	161	12,075	24,150	50%	12,075
Normet Transmixer LF600	3	104	139	10,425	31,275	40%	12,510
Normet LF540	2	110	148	11,100	22,200	60%	13,320
Normet Charmec SF Emulsion charger	3	121	162	12,150	36,450	50%	18,225
Sandvik Cubex ITH Production drill	2	130	174	13,050	26,100	20%	5,220
Sandvik Solo DL421 Production drill	1	110	147	11,025	11,025	30%	3,308
Multimec NORMET material handler	4	121	161	12,075	48,300	50%	24,150
Scamec 2000s Normet	2	120	161	12,075	24,150	60%	14,490
Scamec Lake Shore Cannon SV11	1	69	93	6,975	6,975	60%	4,185
Telehandler	9	75	101	7,575	68,175	50%	34,088
Caterpillar 416E	2	58	78	5,850	11,700	60%	7,020
John Deere 310L Backhoe	1	87	117	8,775	8,775	60%	5,265
Caterpillar 120K Grader	1	93	123	9,225	9,225	50%	4,613
Utility vehicles/tractors	35	100	134	10,050	351,750	40%	140,700
Subtotal	**98**				**1,333,050**		**692,929**
Personnel	150				53		7,950
Airflow for explosives volume							129,500
Airflow to cool rock & water temp.							180,100
Total Ventilation Requirement							**1,010,479**

Source: CLG, 2024

16.7.3 Air-Cooling Infrastructure

CLG operates two air-cooling plants to regulate underground temperatures. The principal sources of heat are the rock mass and groundwater affected by geothermal heating. Groundwater inflows, for example, can reach temperatures of up to 70°C. Additional heat sources include the operation of diesel equipment and the increasing auto-compression of air as the mine deepens.

One air-cooling plant is located near the collar of intake raise AF-V/R #1, which cools the fresh air supplied to the NW zone, while the other is situated adjacent to the collar of intake raise AF-V/R #2, which cools the fresh air for the CZ zone. CLG plans to extend the piping system of the cooling plant at AF-V/R #2 to also provide cooling for the fresh air of the intake raise serving the SE zone.

As indicated in Table 16.19, each plant has a capacity of 4.5 MW and is designed to achieve an average stope and development reject wet bulb temperature of 28.5°C. This is based on a surface intake air temperature of the high monthly average of 24.5°C wet bulb and 33°C dry bulb. The cooling plants chill water and send it to bulk air coolers at the collars of the intake ventilation raises.

Table 16.19: Air Cooling Infrastructure

Infrastructure Item	Characteristics	Location
Cooling plant - vent raise #1	4.5 MW capacity + 1 Fan 100 Hp	NW Zone
Cooling plant - vent raise #2	4.5 MW capacity + 1 Fan 100 Hp	CZ Zone

Source: CLG, 2024

Air cooling is required during the part of the year when high outdoor temperatures are experienced at the site. The cooling plants operate automatically 24 hours a day from June to September and during the day only in April, May, and October.

16.7.4 Mine Dewatering Infrastructure

As detailed in the Groundwater Management subsection, the dewatering infrastructure at CLG comprises two systems:

- Contact water
- Non-contact water

The contact water dewatering system employs sumps and pumps to collect groundwater that enters the underground workings of the mine and discharge it on surface. The non-contact water dewatering system utilizes dewatering wells to extract groundwater directly from the aquifer, which is then discharged at the surface.

While these two systems operate independently, they are interdependent. Increasing the extraction of non-contact water from the aquifer reduces the inflow of groundwater into the mine, subsequently decreasing the volume of contact water. Contact water refers to water which has come into contact with any mine site components. At CLG, non-contact water comprises groundwater that is drawn directly from the aquifer by dewatering wells and discharged at the surface without any exposure to the mining operations.

16.7.4.1 Contact Water Dewatering Infrastructure

Main Pumping Station: Table 16.20 provides details on the contact water dewatering infrastructure at CLG. Except for small amounts discharged directly to the surface from two sumps in the main ramp, all contact water is pumped out of the mine through the main pumping station located at the 1384 level via three borehole pipes. The main pumping station is equipped with three 500-hp pumps and two 600-hp pumps, providing a combined capacity of 375 L/s. Currently, the system operates at 180 to 200 L/s. The main pumping station receives contact water from two intermediate pumping stations, one serving the NW Zone and the other serving the CZ.

NW Zone Dewatering System: Contact water from the NW Zone is pumped to the main pumping station by the NW 1325 level pumping station. It is equipped with three 200-hp pumps with a total capacity of 210 L/s. This pumping station receives water from three sublevel sumps within the NW Zone, including two located along NW Ramp-263. As mine development progresses throughout the LOM, a new pumping station will be installed at the 1225 level to pump water to the NW 1325 pumping station. Additionally, new sublevel sumps will be established at 25 m vertical intervals as NW Ramp-263 deepens, with the lowest sump planned for the 1075 level and sublevel sumps from higher levels decommissioned as mine development progresses to depth.

CZ Dewatering System: Contact water from the CZ is pumped to the main pumping station by the CZ 1330 level pumping station. It is equipped with three 200-hp pumps and has a total capacity of 210 L/s. The CZ 1330 station currently receives water from two sublevel sumps along CZ Ramp-361 and two more along CZ Ramp-406. As mine development advances during the LOM, the dewatering infrastructure in the CZ will extend to lower levels. Three additional sublevel sumps will be added at 20 m vertical intervals along CZ Ramp-361. Furthermore, a new pumping station will be constructed at the 1250 level of CZ Ramp-406, with five additional sublevel sumps installed at 20 m vertical intervals as the ramp extends deeper and sublevel sumps from higher levels decommissioned as mine development progresses to depth.

SE Zone Dewatering System: The development of the SE Zone will require establishing a dedicated contact water dewatering system. For this part of the mine, this infrastructure will include an intermediate pumping station that will discharge water directly to the dirty water sump of the main pumping station on the 1384 level. As the ramp system of this zone progresses to lower levels, four additional sub-level pumping stations are planned, along with various sublevel sumps. Sublevel sumps are typically only required on the lower levels of the mine so are decommissioned from higher levels as mine development progresses to depth.

Table 16.20: Mine Infrastructure – Mine Dewatering System for Contact Water

Infrastructure	Characteristics	Capacity (L/s)	Actual (L/s)
Main pumping station 1384 level	Pumps: 3 X 500 hp & 2 X 600 hp	375	~275-325
Pumping station 1325 level	Pumps: 3 x 200 hp	210	200
Sump NW Ramp 1300 level	N/A	N/A	N/A
Sump NW Ramp 263 (400-304) 1225 level	Pumps: 4 x 60 HP	240	200
Sump NW Ramp 263 154 1260 level	Pumps: 3 x 150 HP +150 backup	210	200
Pumping station 1330 level	Pumps: 3 X 200 hp	210	100
Sump CZ Ramp-361 1310 level	Pumps: 2 x 60 HP	120	50
Sump CZ Ramp-361 1290 level	Pumps: 2 x 60 HP	120	50
Sump CZ Ramp-361 1270 level	N/A	N/A	N/A
Sump CZ Ramp-361 1250 level	N/A	N/A	N/A
Sump CZ Ramp-406 1310 level	Pumps: 2 x 60 HP	120	50
Sump CZ Ramp-406 1290 level	Pumps: 2 x 60 HP	120	50
Sump CZ Ramp-406 1270 level	N/A	N/A	N/A

Source: CLG, 2024

16.7.4.2 Non-Contact Water Dewatering Infrastructure

Main Non-Contact Water Pumping Station: Table 16.21 details the underground infrastructure for dewatering non-contact water. The water drawn from underground dewatering wells is pumped to surface via three borehole pipes by the main pumping station located at the 1390 level. This pumping station is equipped with three 500-hp pumps and three 600-hp pumps, with a combined capacity of 700 L/s. The current discharge rate of non-contact water from the mine is approximately 500-550 L/s.

NW 1370 Level Dewatering Wells: As described in the Groundwater Management subsection, non-contact water dewatering operations target a water-bearing structure within the NW Zone. The 1390-level pumping station receives non-contact water from two sources within this zone. A portion comes from two dewatering wells located at the 1370 level. Each well extends to a depth of 180 m and has a pumping capacity of 170 L/s with current flow rates of approximately 310 L/s combined. The remaining water comes from a pumping station situated at the 1330 level.

NW 1277 Level Dewatering Wells: The NW 1330-level pumping station is equipped with four 200-hp pumps, providing a total pumping capacity of 320 L/s. This pumping station receives water from two dewatering wells located on the 1277 level in the NW Zone. The first well has a depth of 80 m and a current flow of 50 L/s, while the second well is 180 m deep with a current flow of approximately 145 L/s.

NW 1230 Level Dewatering Wells: As of the effective date of this report, CLG is in the process of constructing a new non-contact water pumping station on the 1272 level in the NW Zone, as well as two new dewatering wells at the 1230 level. The new wells will have depths of 100 m and 120 m, respectively, and each will have a capacity of 80 L/s. The new pumping station will transfer water from these wells to the NW 1330-level pumping station.

Table 16.21: Mine Infrastructure – Mine Dewatering System for Non-Contact Water

Infrastructure Item	Characteristics	Water Level (masl)	Capacity (L/s)	Flow (L/s)
Pumping station 1390 level	Pumps: 3 ea. X 600 hp & 3 ea. X 600 hp		700	525
Pumping station 1330 level	Pumps: 4 ea. X 200 hp		320	150
UG Well #1 NWZ 1370	180 m deep	1,239.26	170	170
UG Well #2 NWZ 1370	180 m deep	1,238.00	170	140
UG Well #3 NWZ 1277	80 m deep	1,209.41	OFF	N/A
UG Well #4 NWZ 1277	80 m deep	1,208.40	100	50
UG Well #5 NWZ 1277	180 m deep	1,097.00	150-170	145
UG Well #6 NWZ 1230	100 m deep (Under construction)	1,130.00	80	N/A
UG Well #7 NWZ 1230	120 m deep (Under construction)	1,110.00	80	N/A

Source: CLG, 2024

16.7.5 Mine Safety Infrastructure

Table 16.22 lists the safety infrastructure at the mine, which includes an escapeway raise to surface, a permanent refuge station, and three portable refuge chambers.

Table 16.22: Mine Infrastructure – Mine Safety

Infrastructure Item	Characteristics	Location
Refuge Station	50-person, 96-hour capacity	1390 level
Portable refuge chamber	Dräger, 12-person, 96-hour capacity	1275 level
Portable refuge chamber	Dräger, 16-person, 96-hour capacity	1320 level - Ramp 630
Portable refuge chamber	Dräger, 12-person, 96-hour capacity	1320 level - Ramp 657
Escapeway raise #1	Truck-mounted mine rescue hoist	CZ Zone: 1390 level to surface

Source: CLG, 2024

Mexican mining legislation requires an operating underground mine to have at least two independent exits to the surface (Articles 8.2.10-a and 17.3 page 56/122 NORMA Oficial Mexicana NOM-023-STPS-2012). In compliance with this legislation, CLG has Escapeway Raise #1, which is a 2.4-m diameter open borehole providing an alternate means of egress from the mine should the main ramp be impassable. In an emergency, personnel would be hoisted to surface via this raise in a torpedo-type man cage by a truck-mounted portable mine rescue hoist system (Timberland PMRH45). This unit is parked at all times adjacent to the raise collar. The ventilation of the escapeway raise is downcasting; consequently, it is designed to remain in fresh air during a mine fire.

The bottom of Escapeway Raise #1 connects directly to the permanent refuge station on the 1390 level of the CZ Zone. This refuge station is designed and built to high standards and is equipped with the supplies and equipment required for this type of installation. Its entrance has double doors to prevent contaminated air from entering during a mine fire. It also serves as a lunchroom and meeting room for underground personnel. In addition, three container-type portable refuge chambers are located at strategic points in the mine.

The mine currently lacks a fully developed internal system of escapeways connecting the sublevels; consequently, parts of the mine are not provided with two independent exits to the surface. However, CLG has a program underway to develop an internal system of escapeways, consisting of raises equipped with ladderways, in the CZ and NW zones. CLG is presently constructing a new permanent mine rescue station with a capacity of 50 persons, providing coverage for the CZ and SE zones.

WSP offers the following recommendations concerning escapeways:

- Prioritize the development of internal escapeway raises to enhance mine safety.
- Evaluate whether additional portable refuge chambers would be beneficial on a provisional basis until the internal escapeway system can be fully developed.
- Assess the potential for a second escapeway raise to surface, considering the distance of the SE Zone from Escapeway Raise #1.
- Ensure that the design of the planned internal escapeways complies with Mexican mining regulations, particularly regarding ladderways and manways (Articles 8.3.1-s and 17.3 pages 59&60/122 NORMA Oficial Mexicana NOM-023-STPS-2012).

16.7.6 Electric Power

Electrical power is distributed at 13,800 V, 3-phase, 60 Hz. The mine is supplied by three feeder circuits:

- **NW Zone:** The zone is supplied by a 350-KCM power feeder cable.
- **CZ Zone:** The zone is supplied by a 250-KCM power feeder cable.
- **Main Pumping Stations:** 350-KCM power feeder cables supply the main pumping stations at levels 1370 and 1390.

There are three fixed substations, each with a capacity of 2,500 kVA. These substations operate at a primary voltage of 13,800 volts and supply a secondary voltage of 4,160 volts, 3-phase, 60 Hz. They provide power to the stationary pumping and ventilation systems.

The site utilizes 25 mobile electrical substations, with varying capacities. These substations operate at a primary voltage of 13,800 volts and provide a secondary voltage of 480 volts, 3-phase, 60 Hz. These mobile units deliver power to operational and development areas (refer to Table 16.23 for details).

The mine is equipped with an emergency generation system comprising six synchronized standby generators. These generators provide backup power in the event of an external power supply interruption and are capable of maintaining a constant load of 7.5 MW. This capacity is sufficient to keep the critical pumping and ventilation systems operational (refer to Table 16.24 for details).

Table 16.23: Electrical Substations in the Underground Mine

Mobile Substations			
Quantity	**Capacity kVA**	**Primary Voltage**	**Secondary Voltage**
12	2,000	13.8 kV	480 V
6	1,500	13.8 kV	480 V
4	1,000	13.8 kV	480 V
3	500	13.8 kV	480 V
Fixed Substations			
Quantity	**Capacity kVA**	**Primary Voltage**	**Secondary Voltage**
3	2,500	13.8 kV	4,160 V

Source: CLG, 2024

Table 16.24: Standby Generators at the Mine Site

Quantity	Capacity kVA	Primary Voltage	Secondary Voltage
2	1,000	480 V	13.8 kV
1	1,250	480 V	13.8 kV
3	2,000	480 V	13.8 kV

Source: CLG, 2024

16.7.7 Underground Communications

The underground mine has the following systems and equipment for communication and monitoring:

Voice Communication:

- A leaky feeder cable network operating in the UHF band, extending over 10 km.
- NEXEDGE digital radios in the UHF band, with over 100 radios installed in various production equipment.

Data Communication:

- A fiber-optic backbone supports data communication throughout the mine.
- The mine is equipped with two fiber optic entry points to form a redundancy ring, ensuring continuous operation.
- Internet coverage is available at 24 locations via Ethernet and/or Wi-Fi.

Personnel Location:

- A location tracking system utilizing Wi-Fi-based antennas and tracking tags.
- Currently, 35 location points are in operation, with an ongoing system upgrade to increase the detection points to 45.

Video Surveillance Cameras:

- 16 IP cameras are installed throughout the mine.
- Camera feeds are accessible at the surface Comm. Center, with a recording capacity exceeding 30 days.

Gas Monitoring System:

- 8 gas monitors for O_2, CO, and NO_2.
- 4 additional gas monitors for O_2 and CO.
- Real-time gas readings are displayed at the Communication Center for continuous monitoring.

16.7.8 Mine Services

Table 16.25 lists the mine-service materials that are used underground at CLG.

Table 16.25: Mine Services at CLG

Mine Service Item	Characteristics	Diameters
Compressed Air Pipe	HDPE RD 11	8”, 6”, 3” and 2”
Service Water Pipe	HDPE RD 11	6”, 3” and 2”
Dewatering Pipe	HDPE RD11 (85%) and Steel Schedule 40 (15%)	8”, 10”, 12” and 14”
Paste Fill Pipe	Steel, Schedule 80, HDPE RD 11	5”and 6”
Vent tubing	Rip Stop Oval 540 gm/m^2	54”, 42”, 36” and 20”

Source: CLG, 2024

16.8 Mine Equipment

The CLG mine is a fully mechanized operation that utilizes rubber-tired diesel equipment across all phases of its mining activities. The mobile equipment currently in operation is detailed in Table 16.26. The fixed equipment installed underground is discussed in the Mine Infrastructure subsection.

CLG’s LOM plan includes a comprehensive program for overhauling the existing fleet, with capital allocated for this purpose from H2 2024 to 2029. The mine also plans to acquire additional equipment, as outlined in Table 16.27.

Further details regarding the equipment fleet are as follows:

- **Load-Haul-Dump (LHD) Units:** Most LHDs are equipped with radio-remote-control systems, enabling safe mucking operations within open stopes. An operator using the system is positioned at a secure location in the stope access behind the brow. Certain units can also be fitted with a rammer-jammer attachment for jamming CRF or URF in CAF stopes.
- **Jumbos:** The mine utilizes two-boom electric-hydraulic development jumbos. One of the jumbos is equipped with an adapter for cable bolting.
- **Bolters:** The bolters are equipped for installing mesh and 2.4-meter Super Swellex bolts.
- **Mine Trucks:** The Sandvik mine trucks are equipped with ejector boxes, facilitating the dumping of CRF and URF into stopes where limited back heights would impede discharging with standard rear-tipping boxes.
- **Production Drill Rigs:** CLG operates three production drill rigs for drilling longholes. One of these rigs is a top-hammer unit, while the other two are in-the-hole (ITH) rigs. The ITH rigs drill holes with less deviation than the top-hammer rig, so they are ideal for steeply dipping and wider veins, as well as for drilling holes greater than 20 m in length. The top-hammer rig is typically used in shallow-dipping stopes (less than 60°) and for radial drilling in more irregular geometries.

Table 16.26: Mobile Mine Equipment

Equipment Type	Make & Model	Capacity	kW Diesel	Units
Jumbo	Sandvik DD321	Two boom	110	6
Cable Bolter	Sandvik DS421	Cable bolt length up to 25 m	110	1
Bolter	Sandvik DS411	135 kW power pack	110	5
Bolter	Sandvik DS311	135 kW power pack	110	2
Underground loader (LHD)	Sandvik LH307	7 t tramming capacity	160	2
Underground loader (LHD)	Sandvik LH514	14 t tramming capacity	256	7
Mine truck with ejector box	Sandvik TH540	40 t payload	405	7
Transmixer	Normet Utimec LF600	5.6 m3	104	3
Shotcrete sprayer	Normet Spraymec LF050	19 m3/h	120	2
Emulsion charger	Normet Charmec SF		121	3
ITH longhole drill rig	Sandvik DU311	33 kW percussion	130	2
Top hammer longhole drill rig	Sandvik DL421	33 kW percussion	110	1
Scaler	Normet Scamec 2000S		120	2
Scaler	Lake Shore Cannon SV11		69	1
Telehandler	Manitou MTX1440	4000 kg load capacity	75	3
Telehandler	Caterpillar TL943D	4082 kg load capacity	75	4
Grader	Caterpillar 120K		93	1
Fuel lube truck	Normet Multimec LF100	140 L	205	1
Personnel carrier	Normet Multimec LF100	12 passengers	205	1
Multi-functional carrier	Normet Multimec LF100	N/A	205	2
Wheel loader	Komatsu WA470	4.1 m^3	203	1
Scissor lift	Normet LF540	4.5 t	110	2
Pickup trucks	Toyota Hilux / Mitsu			79
Wheel loader	LUIGONG 890H	5.4 m^3	262	1
Backhoe loader	Caterpillar 416E	.76 m^3	58	2

Source: CLG, 2024

Table 16.27: Planned Equipment Acquisitions

Equipment	2025	2026	2027	2028
Production drill rig Sandvik DL 431	✓			
Telehandler		✓		
Scissor lift				✓
Backhoe			✓	
Multi-functional carrier Multimec		✓		
Shotcrete sprayer Spraymec			✓	
ANFO Charger				✓

Source: CLG, 2024

The QP is of the opinion that the size and composition of the mining fleet, including equipment types, makes, and models, are appropriate for the production rate, mining methods, and development requirements at CLG. The QP reviewed the underground equipment fleet during the site visit and observed several machines in active operation.

16.9 Mine Personnel

As indicated in Table 16.28, the mine department employed a total of 483 individuals as of July 1, 2024. The underground mine operates on a two-shift schedule, with each shift working 10-hours per day. The workforce is organized into three rotational crews, each working 14 days on followed by 7 days off. At any given time, two of the three crews are present on-site, ensuring continuous operation. The majority of the mine personnel reside in the city of Chihuahua; however, some commute from other communities in the state of Chihuahua or other parts of Mexico. CLG previously used a mining contractor in the underground mine but currently performs all development and production with its own employees.

Table 16.28: Mine Personnel

Mine Labor	Positions
Training	12
Mine Geology	24
Engineering and Construction	8
Maintenance - Fixed Equipment	47
Maintenance - Mobile Equipment	54
Mine Supervision	9
Mine Operations	290
Productivity	9
Technical Services	30
Total	**483**

Source: CLG, 2024

The QP reviewed the organizational structure of the personnel and is of the opinion that it is well-suited to the scale and characteristics of the underground mining operation.

16.10 Life-of-Mine Plan

The LOM plan for the 2024 Mineral Reserve incorporates the following trends and plans for the CLG Mine:

- Resource conversion drilling resulting in an increase in Mineral Reserves.
- A shift in mining focus as the stope production progressively shifts toward the southeast part of the deposit.
- Increase in the mine and mill production targets to 3,500 tpd from mid-2025 onward
- Prioritization of transverse longhole stoping, where its application is feasible.

16.10.1 Production

Table 16.29 presents the LOM underground mine production schedule and Table 16.30 presents the LOM mill production schedule developed in the reserve estimation process. Key trends in the schedule are as follows:

- The mine maintains a steady production output of approximately 1.3 Mtpa throughout the LOM.
- With 10.33 Mt of Mineral Reserves, CLG has sufficient ore to sustain operations at the planned production rate until the end of 2032.
- The 8.3-year mine life, extending to Q4 of 2032, represents a two-year extension compared to the 2023 LOM plan, which had projected mining operations to continue until Q4 2030.
- The average annual NSR values of the ore mined decrease progressively over the LOM, primarily due to lower silver and zinc grades but remain well above the NSR cut-offs.

Table 16.31 outlines the LOM production plan, broken down by zone and mining method. The notable trends in this schedule include:

- Approximately 50% of the LOM production is derived from reserves in the SE zone.
- Production from the CZ and NW zones peaks in 2026, contributing about 80% of that year's output but progressively declines in subsequent years.
- The reduction in output from the CZ and NW zones is offset by increased production from the SE zone, which accounts for 88% of the total mine output in the final three years of the LOM.
- The SEU zone accounts for only 6% of the Mineral Reserves, and its reserves will be fully depleted in 2029.

Table 16.32 presents the LOM Plan broken down by mining method. The following trends are observed in this schedule:

- Stope production transitions from a roughly equal emphasis on CAF and LHS during the first 1.5 years of the LOM, to approximately 94% reliance on LHS in the final three years. Across the entire LOM, approximately 65% of the ore is mined using LHS.
- The reduced focus on CAF in the latter part of the LOM is primarily due to the depletion of reserves of the SEU and CZ zones.
- The NW zone will be mined exclusively with LHS.

Table 16.33 and Table 16.34 present LOM backfill placement and longhole drilling, respectively. Key trends observed in these tables include:

- Paste fill is by far the predominant backfill material, comprising approximately 96% of the total backfill volume placed over the LOM. The remaining backfill consists of CRF and URF.
- The number of drilled meters for LHS and cable bolting increases progressively each year, in line with the growing reliance on the LHS mining method.

Table 16.29: Life of Underground Mine Production Schedule, Excluding Stockpile Material (100% LGJV Basis)

	Units	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM
Proven & Probable	Mt	0.60	1.26	1.28	1.28	1.28	1.28	1.27	1.15	0.93	**10.33**
NSR Value	$/t	225	208	194	173	167	174	168	163	157	**179**
Ag Grade	g/t	260	221	193	166	154	156	150	146	141	**172**
Pb Grade	%	1.89	2.05	2.13	2.11	2.12	2.12	2.00	2.04	2.09	**2.07**
Zn Grade	%	4.02	4.30	4.42	4.05	3.97	4.23	3.34	3.30	3.24	**3.89**
Cu Grade	%	0.09	0.12	0.12	0.14	0.16	0.21	0.38	0.34	0.27	**0.21**
Au Grade	g/t	0.27	0.23	0.25	0.20	0.22	0.25	0.20	0.19	0.18	**0.22**

Table 16.30: Life-of-Mine Mill Production Schedule, Including Stockpile Material (100% LGJV Basis)

	Units	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM
Proven & Probable	Mt	0.60	1.26	1.28	1.28	1.28	1.28	1.27	1.15	0.93	**10.33**
Ag Grade	g/t	260	221	193	167	154	153	153	146	141	**172**
Pb Grade	%	1.89	2.04	2.13	2.10	2.12	2.13	1.99	2.05	2.09	**2.07**
Zn Grade	%	4.02	4.30	4.42	4.05	3.98	4.22	3.35	3.30	3.24	**3.89**
Cu Grade	%	0.09	0.12	0.12	0.14	0.16	0.21	0.37	0.33	0.27	**0.21**
Au Grade	g/t	0.26	0.23	0.25	0.20	0.22	0.24	0.21	0.19	0.18	**0.22**

Source: CLG, 2024

Table 16.31: Life-of-Mine Production Schedule by Zone - Mt (100% LGJV Basis)

Zone	Method	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM Total
CZ	Cut-and-fill	0.29	0.06	0.32	0.19	0.38	0.32			0.03	1.60
	Longhole Stoping	0.08	0.27	0.30	0.23	0.10	0.04	0.04	0.01	0.00	1.06
	Development	0.03	0.00	0.01	0.02	0.01	0.01				0.08
	Total CZ	**0.39**	**0.33**	**0.63**	**0.44**	**0.49**	**0.36**	**0.04**	**0.01**	**0.04**	**2.74**
NW	LHS	0.09	0.28	0.36	0.25	0.23	0.21	0.12	0.10	0.08	1.72
	Development	0.02	0.07	0.04	0.02	0.01					0.17
	Total NW	**0.11**	**0.35**	**0.40**	**0.28**	**0.23**	**0.21**	**0.12**	**0.10**	**0.08**	**1.89**
SE	Cut-and-fill	0.00	0.09	0.07	0.02	0.06	0.12	0.02			0.38
	Longhole Stoping	0.00	0.05	0.07	0.39	0.25	0.36	0.96	1.04	0.81	3.92
	Development	0.02	0.07	0.09	0.12	0.21	0.18	0.14			0.82
	Total SE	**0.02**	**0.21**	**0.22**	**0.53**	**0.52**	**0.66**	**1.12**	**1.04**	**0.81**	**5.13**
SEU	Cut-and-fill	0.06	0.35	0.03	0.02	0.03	0.01				0.51
	Longhole Stoping					0.02	0.03				0.05
	Development	0.01	0.01	0.00	0.00	0.00					0.02
	Total SEU	**0.07**	**0.36**	**0.03**	**0.03**	**0.05**	**0.04**				**0.57**
	Total All Zones	**0.59**	**1.26**	**1.28**	**1.28**	**1.28**	**1.28**	**1.27**	**1.15**	**0.93**	**10.33**

Source: CLG, 2024

Table 16.32: Life-of-Mine Production Schedule by Mining Method - Mt (100% LGJV Basis)

Mining Method	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM Total
Cut-and-fill	0.35	0.50	0.42	0.24	0.46	0.45	0.02		0.03	2.49
Longhole Stoping	0.16	0.60	0.72	0.87	0.59	0.64	1.11	1.15	0.90	6.75
Development	0.07	0.16	0.14	0.17	0.23	0.18	0.14			1.09
Total Production	**0.59**	**1.26**	**1.28**	**1.28**	**1.28**	**1.28**	**1.27**	**1.15**	**0.93**	**10.33**

Source: CLG, 2024

Table 16.33: Life-of-Mine Backfill Placement, Cubic Meters

Backfill Type	Mining Method	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM Total
Pastefill	Cut-and-fill	69,866	174,471	69,377	71,923	126,883	193,527	7,543		27,719	741,309
	Longhole stoping	62,990	193,387	250,880	295,387	203,089	208,971	376,872	407,600	386,537	2,385,713
	Total Pastefill	**132,856**	**367,858**	**320,257**	**367,310**	**329,972**	**402,498**	**384,414**	**407,600**	**414,256**	**3,127,022**
Cemented Rockfill	Cut-and-fill	18,766	4,007	21,716	4,326	11,149	13,076				73,040
Rockfill	Cut-and-fill	9,511		20,161	16,067	13,764	14,151				73,654
	Total Backfill	**161,133**	**371,865**	**362,134**	**387,703**	**354,885**	**429,725**	**384,414**	**407,600**	**414,256**	**3,273,716**

Source: CLG, 2024

Table 16.34: Life-of-Mine Longhole Drilling, Meters Drilled

Meters Drilled	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM Total
Longhole Drilling	61,541	219,246	254,061	306,013	202,482	220,396	380,773	393,621	308,725	2,346,859
Cable Bolting	5,685	20,830	24,970	30,109	20,140	22,128	38,377	39,517	30,826	232,582
Total	**67,226**	**240,076**	**279,032**	**336,122**	**222,622**	**242,524**	**419,150**	**433,138**	**339,551**	**2,579,441**

Source: CLG, 2024

16.10.2 Development

Table 16.35 outlines the LOM schedule for lateral development, including both ramps and drifts. Table 16.36 presents the schedule for vertical development, comprising raises for ventilation and escapeways. LOM mining rates are similar to current operational performance. It is anticipated that underground development for mining the current Mineral Reserve will be materially complete by 2030.

Table 16.35: Life-of-Mine Schedule for Lateral Development (meters)

Meters of Advance		H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM Total
CZ	Sublevel development	130	192	670	371	2					1,366
	Crosscut	118	174	196	208	63	40				799
	Ramp	82	204	619	500						1,405
	Ore drive	702	195	185	437	218	68				1,805
	Total CZ	**1,031**	**766**	**1,670**	**1,517**	**283**	**108**				**5,375**
NW	Sublevel development	4	357	214	54						628
	Crosscut	153	385	158	29						725
	Ramp	177	442	326	71						1,016
	Ore drive	563	1,264	731	559	153					3,269
	Total NW	**897**	**2,448**	**1,429**	**713**	**153**					**5,639**
SE	Sublevel development	401	970	1,030	1,288	918	388	28			5,022
	Crosscut	399	397	428	337	514	181				2,256
	Ramp	448	898	718	714	757	156				3,691
	Ore drive	425	2,090	2,472	2,425	3,787	4,179	3,309			18,687
	Total SE	**1,673**	**4,355**	**4,647**	**4,764**	**5,977**	**4,904**	**3,337**			**29,657**
SEU	Sublevel development	419	69								488
	Crosscut	13	47			20					79
	Ramp	85	22								107
	Ore drive	204		231	105	81	5				625
	Total SEU	**721**	**138**	**231**	**105**	**100**	**5**				**1,300**
	Total All Zones	**4,321**	**7,706**	**7,977**	**7,100**	**6,514**	**5,017**	**3,337**			**41,970**

Source: CLG, 2024

Table 16.36: Life-of-Mine Schedule for Vertical Development (meters)

Zone	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	LOM Total
CZ	52	97	74	68	37					327
NW	34	171	27							232
SE		695	248	113	331	112				1,498
Total	**86**	**963**	**349**	**181**	**368**	**112**				**2,058**

Source: CLG, 2024

16.11 Mining Risks and Opportunities

The following are key challenges and risks associated with mining the CLG orebody for the remaining LOM:

- **Groundwater Management:** Extraction of the Mineral Reserves in accordance with the LOM production schedule is dependent on effective groundwater control. The challenges with mine dewatering and inflows may increase as the mine deepens.
- **Ground Conditions:** Certain areas of the mine, particularly those influenced by the Los Gatos fault, exhibit unfavorable ground conditions. These conditions could adversely affect production and development schedules, necessitating greater usage than planned of the higher-cost transverse CAF mining method.
- **Geothermal Heat:** Managing geothermal heat and controlling underground temperatures may become increasingly difficult as the mine progresses to greater depths. Inadequate temperature control could cause production delays and disrupt development timelines.
- **Mine Development:** The ability to adhere to the LOM plan is reliant on maintaining scheduled development rates, particularly in ramp development. Any delays in development will likely have a direct impact on stope production and overall mine output.
- **Longhole Stoping (LHS):** The plan to increase the proportion of ore mined using LHS depends on geotechnical conditions being suitable for employing this mining method. Adverse ground stability could limit the effectiveness of this approach, potentially affecting production targets.
- **Mineral Reserve Classification:** Approximately 66% of the 2024 Mineral Reserve is classified as Probable, which has a lower level of confidence compared to Proven reserves.

The following factors represent opportunities to enhance mining operations at CLG:

- **Diamond Drilling:** Ongoing diamond drilling in the SE zone and South-East Deeps offers potential for extending the mine’s life.
- **Geotechnical Data Collection:** Continued exploration drilling will provide core samples for geotechnical testing, offering improved insights into rock mass characteristics at greater depths.
- **Conditions in the SE Zone:** The anticipated drier conditions in the SE Zone would alleviate challenges related to temperature control and groundwater management. Additionally, it could enable the increased use of more cost-effective ANFO explosives.
- **Production Rate:** Future initiatives focused on increasing mill throughput and mine production have the potential to boost revenues and improve profit margins for CLG.

17.0 PROCESSING AND RECOVERY METHODS

17.1 Overview

This section summarizes the process plant facilities treating lead, zinc and silver ores at the Los Gatos mine in Chihuahua, Mexico. The plant was designed for 2,500 t/d (912,500 t/y) based on 365 operating days at 92% utilization. Since start-up, throughput has increased, with the plant consistently processing over 3,400 t/d in 2024.

Plant operations align with the design, metallurgical testwork in Section 10, and performance predictions. Lead, silver, and zinc metallurgy are expected to remain consistent with current performance. However, copper feed grade is projected to increase from about 0.1% Cu in 2024 to 0.35% Cu by end of mine life. Geometallurgical studies are underway to characterize this change, with plans to implement copper-lead separation in 2025. Current copper grades have not negatively impacted separation or concentrate quality.

Recovery assumptions for future mining are considered reasonable. The plant uses conventional flotation technology, with equipment sized appropriately for projected throughput.

17.2 Plant Parameters

The key process parameters are outlined in Table 17.1 and predicted process performance is shown in Table 17.2.

Table 17.1: Process Parameters

Parameter	Units	Value
Plant Nominal Throughput	t/d	3,500
Plant Throughput Average	t/d	3,401
Crushing Availability	%	75
Concentrator Availability	%	93.4
Crushing Plant Product Size (P100)	mm	125
Flotation Feed Size (F80)	µm	45
Pb Rougher Regrind Product Size (P80)	µm	20
Zn Rougher Regrind Product Size (P80)	µm	20

Table 17.2: Predicted Process Performance

Parameter	Units	Value
Pb Recovery in Pb Concentrate	%	89.4
Ag Recovery in Pb Concentrate	%	78.0
Au Recovery in Pb Concentrate	%	54.2
Cu Recovery in Pb Concentrate	%	60.0
Zn Recovery in Zn Concentrate	%	62.77
Ag Recovery in Zn Concentrate	%	10.2
Pb Concentrate Grade	% Pb	53
Zn Concentrate Grade	% Zn	56

17.3 Major Equipment

Table 17.3 shows a list of major equipment installed in the plant.

Table 17.3: Major Equipment List

Equipment	Size
Primary jaw crusher	870 mm x 1200 mm, 150 kW
SAG mill	6.1 m DIA x 2.8 m EGL, 1,750 kW
Ball mill	5.0 m DIA x 7.32 m EGL, 3,100 kW
Pb rougher flotation	5 x 70 m³ tank cells
Pb cleaner flotation	5 x 10 m³ tank cells
Pb Scalper flotation on column	1 column cell 2.5 m Ø
Zn rougher flotation	5 x 10 m³ tank cells
Zn cleaner flotation	16 x 10 m³ tank cells
Zn Scalper flotation	2 column cells 2.5 m Ø
Pb regrind mill	150 kW vertical mill
Zn regrind mill	225 kW vertical mill
Pb concentrate thickener	10 m DIA, high rate
Zn concentrate thickener	10 m DIA, high rate
Pb concentrate filter	41 m² pressure filter
Zn concentrate filter	93 m² pressure filter
Tailing thickener	20 m DIA, high rate

17.4 Performance Predictions

The plant is anticipated to treat approximately 3,400 t/d ore in the current plan, which is still limited to mine capacity rather than plant capacity.

The concentrate that will be produced in each period depends on the relative grades of the metals, zinc, lead, copper, and silver, and the metallurgical process that is being used to produce two or three concentrates. Therefore, there are no fixed predictions, but Table 17.4 shows the range of concentrate grades that have been projected for the life of mine.

Table 17.4: Projected Concentrate Grades

Concentrate	Grade			
	Pb, %	Zn, %	Cu, %	Ag, g/t
Bulk Cu-Pb			1 to 3	3,000 to 9,000
Zn		54 to 58		300 to 800
Cu			21 to 25	800 to 1,900
Pb	50 to 54		2 to 4	2,300 to 3,700

Table 17.5 shows the recoveries obtained during the historical work compared to that estimated in the LOM.

Table 17.5: Projected Recoveries

Element	Historical	LOM
Ag recovery, %	88.9	88.2
Pb recovery, %	88.9	89.4
Zn recovery, %	65.6	63.2
Au recovery, %	52.0	54.2
Cu recovery, %	61.8	60.0

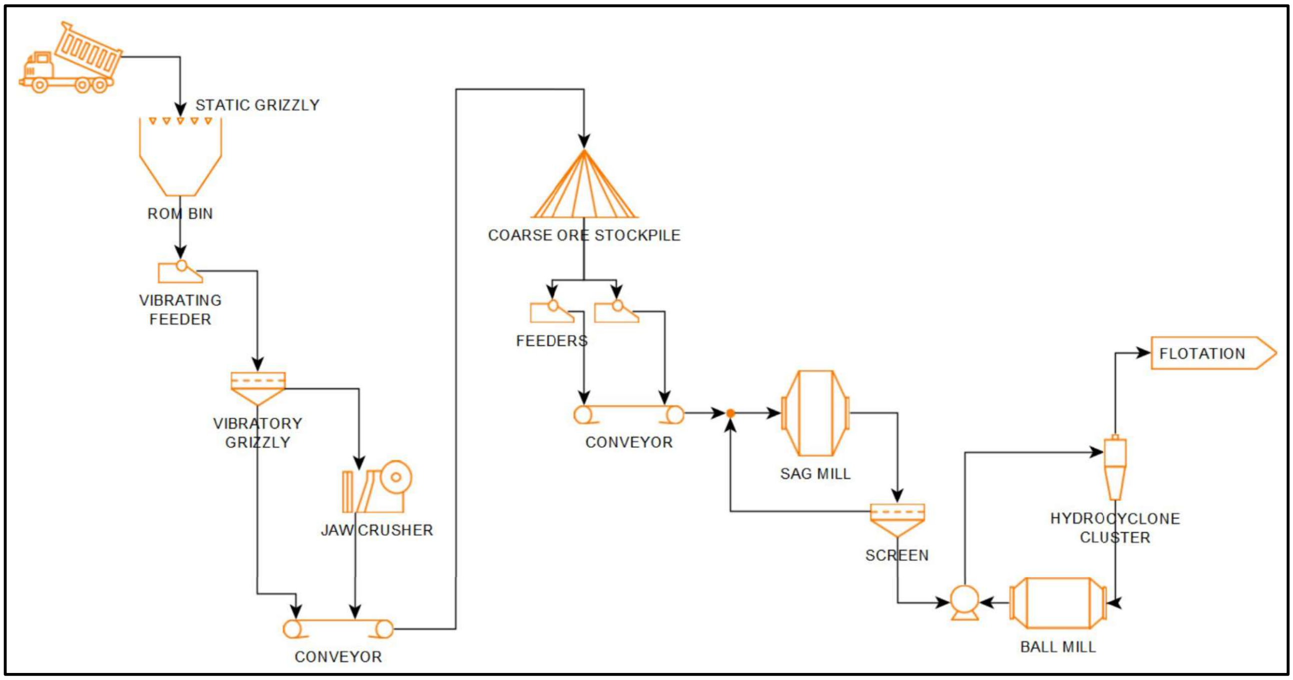
17.5 Comminution

The crushing plant is processing the run-of-mine (ROM) ore by using a primary jaw crusher to reduce the ore to a P100 of minus 125 mm.

Crusher product is fed to a coarse ore stockpile with about 3,000 t live capacity.

Material reclaimed from the coarse ore stockpile is fed to a semi-autogenous (SAG) mill-ball-mill grinding circuit to liberate the economic minerals from gangue. The SAG mill operates in closed circuit with a vibrating screen. The ball mill operates in closed circuit with hydrocyclones.

Figure 17.1 shows a simplified process diagram for the crushing and grinding area.



Source: CLG

Figure 17.1: Crushing and Grinding Simplified Process Flowsheet

17.6 Beneficiation

Cyclone overflow, the grinding circuit product, is fed to the flotation plant. The flotation plant consists of lead-copper and zinc flotation circuits. The lead-copper flotation circuit consists of bulk rougher flotation, regrind, bulk cleaner flotation, and a Cu-Pb separation circuit.

The planned Cu-Pb separation circuit will process the bulk concentrate to produce separate lead and copper concentrates, as discussed in the projects section at the end of this chapter.

Figure 17.2 shows a simplified process diagram for the lead area.

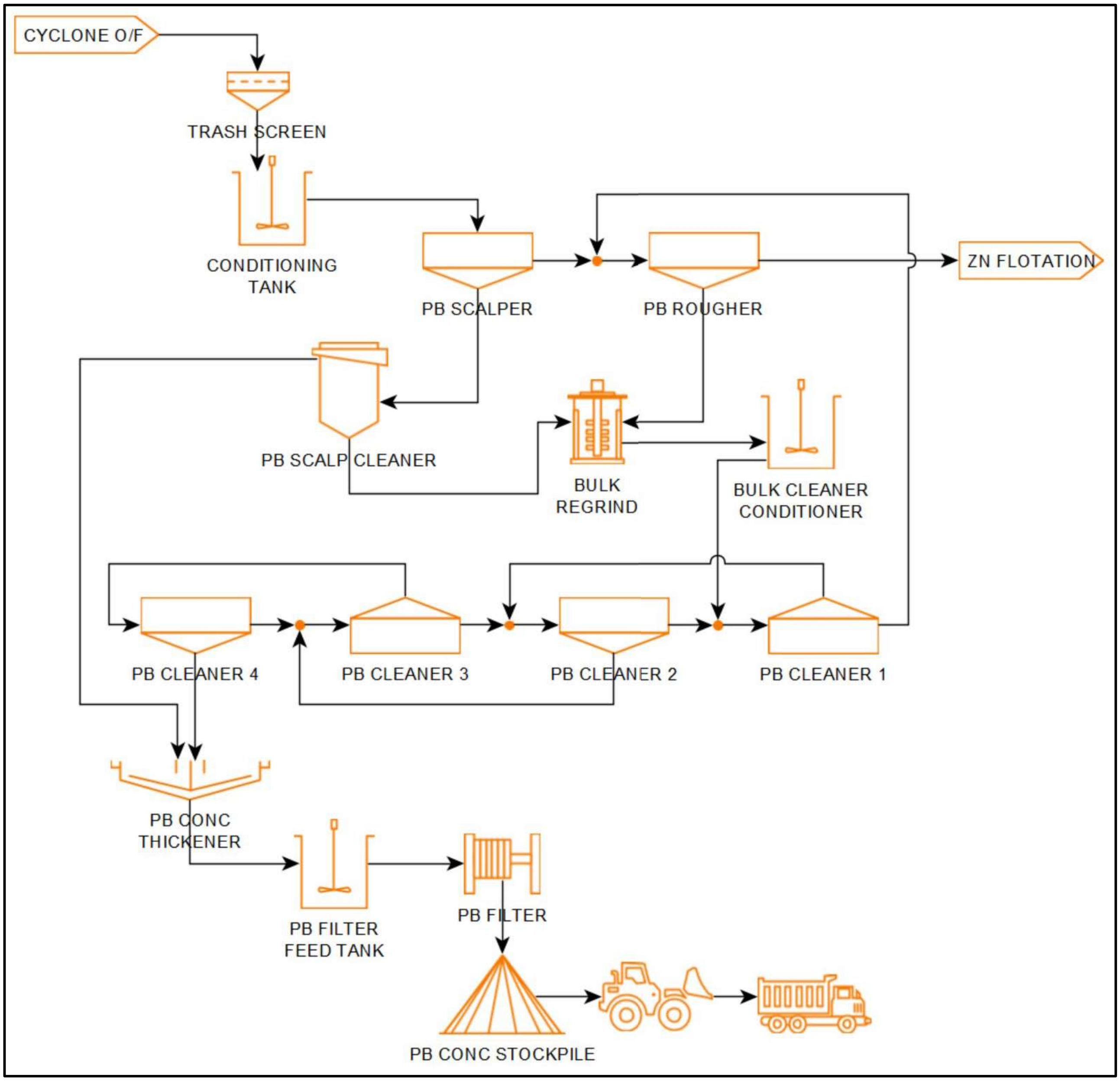
The zinc flotation circuit consists of rougher flotation, regrind, and five-stage cleaner flotation. Zinc cleaner stages 1 to 4 use mechanical tank cells, whereas the final stages of cleaning use column flotation technology.

Figure 17.3 shows a simplified process diagram for the zinc area.

17.7 Fluorine Leaching Plant

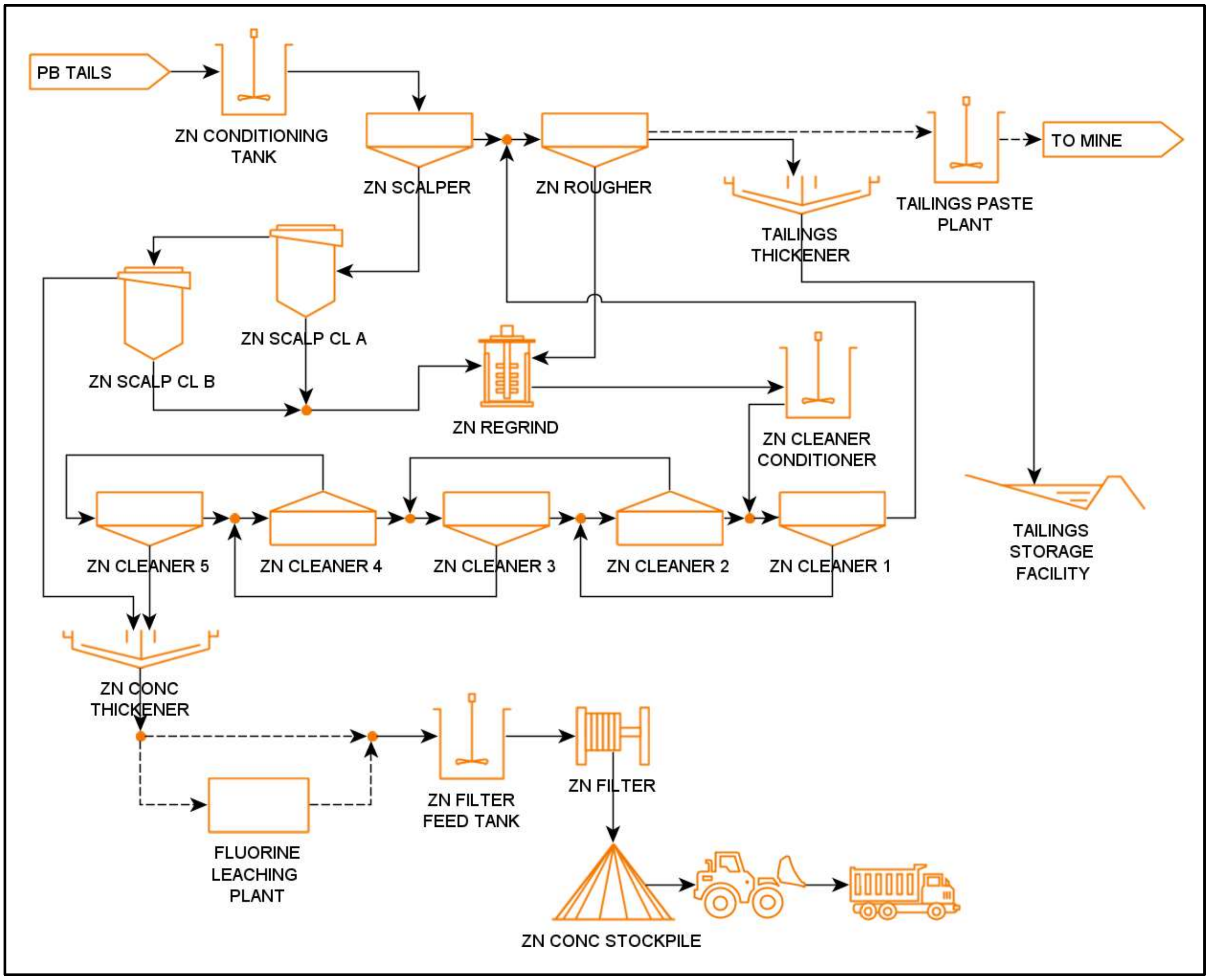
High levels of fluorine (>1,300 ppm) had been encountered in the zinc concentrate produced up to 2023. While this grade of fluorine has not inhibited concentrate sale, a principal concentrate buyer has requested that Los Gatos reduce the fluorine level to below 500 ppm. A plant has been successfully commissioned in 2023 based on a hot sulfuric acid and aluminum sulfate leaching process that reduces the fluorine grade in the zinc concentrate to within the buyer’s target.

Figure 17.4 shows a simplified process diagram for the fluorine leaching area.



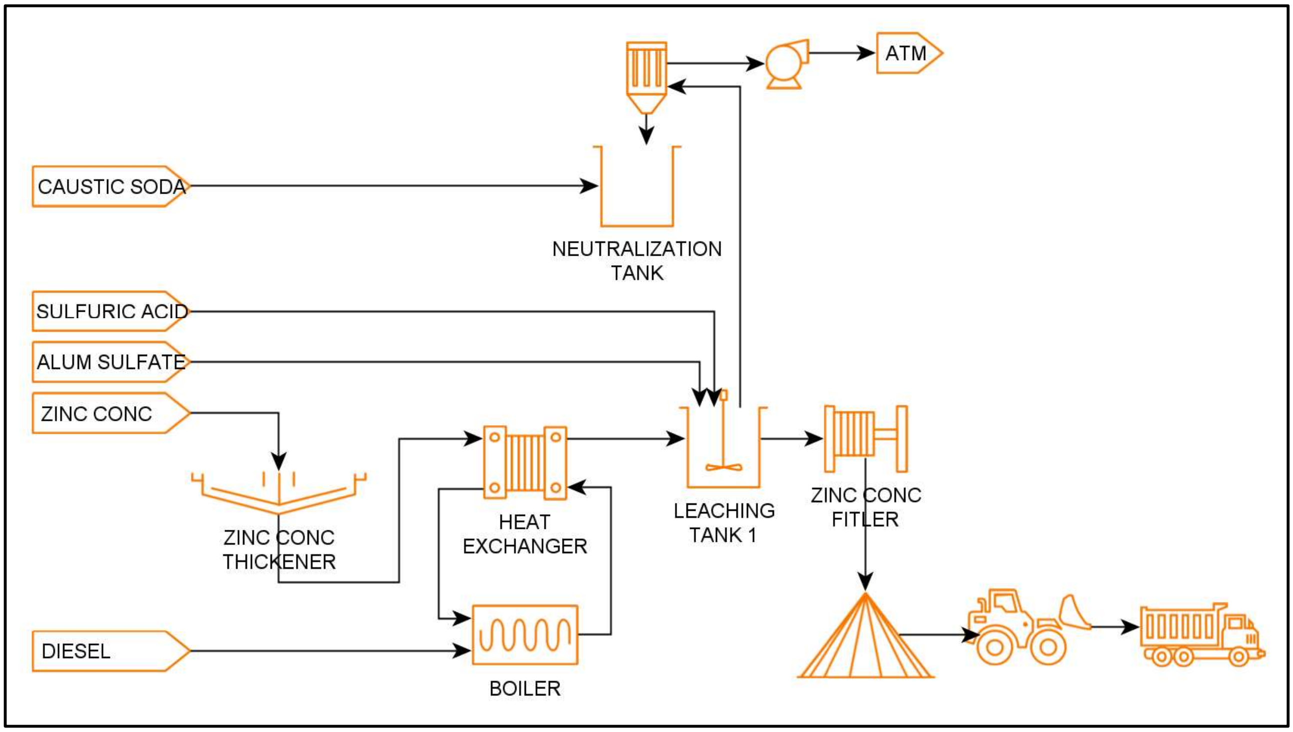
Source: CLG

Figure 17.2: Lead Flotation Simplified Process Flowsheet



Source: CLG

Figure 17.3: Zinc Flotation and Tailings Simplified Process Flowsheet



Source: CLG

Figure 17.4: Fluorine Leaching Plant Process Flowsheet

17.8 Concentrates

Final lead, copper, and zinc concentrates are thickened, filtered, and stored in concentrate storage facilities prior to loading in trucks for shipment. All three concentrates have low levels of deleterious elements and are considered high-quality concentrates.

The existing bulk and zinc concentrates have low levels of deleterious elements and are considered high quality concentrates. It is expected that the copper and lead concentrates will be similarly low in deleterious elements, and high in silver credits.

17.9 Tailings

Zinc flotation tailings become the final tailing stream. Tailings are thickened, and thickener underflow is pumped to the lined tailings storage facility. A paste backfill was commissioned in early 2023 and a portion of the sands fraction of the plant tailings are converted to paste for use as backfill in the underground mine. There is ample surface tailings storage capacity demonstrated for the projected production.

17.10 Reagents

The reagents area includes the flotation reagents and flocculants to support the processes, including:

- Aerophine collector
- Modified thionocarbamate collector
- Sodium isopropyl xanthate collector
- MIBC frother

- Copper sulfate activator
- Zinc sulfate depressant
- Sodium cyanide depressant
- Anionic flocculant
- Lime pH regulator
- Aluminum sulfate
- Sulfuric acid
- Sodium hydroxide
- Orion 99 for oxidizing galena
- Saponified starch for lead depression)
- Activated carbon for improved reagent selectivity

Each reagent has suitable mixing, storage and dosing equipment

17.11 Instrumentation

The plant is fitted with the appropriate instrumentation, sampling equipment, and online analyzers required for operation, historical data keeping, metal accounting, and process optimization.

17.12 Maintenance

The plant has an appropriate maintenance plan in place to keep the facility running smoothly. The plan includes regular cleaning and inspection of all equipment, systems, and structures. In addition, plant management follows a preventive maintenance program which helps to identify and correct potential problems before they cause disruptions. The maintenance staff is trained and experienced, and work closely with the production team to ensure that the plant runs efficiently.

Bridge cranes are installed for maintenance over the equipment installations of the primary crusher, grinding, flotation, and filtration circuits.

17.13 Water

There is ample water supply on site for the plant operation. No plant effluents are discharged to the environment.

About 0.66 cubic meters per tonne (m^3/t) of raw water is supplied from the mine dewatering operation to compensate for the water reporting to tailings, concentrates, and evaporation.

The lead process water tank receives overflow from the lead concentrate thickener, tailings thickener and water reclaimed from the tailings dam. The lead process water is used as makeup water in the primary cyclone feed sump. Fresh water can be added to the lead process water tank, if necessary.

Overflow from the zinc concentrate thickener and lead process water excess overflow is recycled to the zinc process water tank and used as makeup water in the zinc flotation circuit. Fresh water can be added to the zinc process water tank.

Additional water is also recovered from the surface tailings storage facility. Water is reclaimed from the tailings dam using reclaim water pumps.

The plant area is also equipped with a gland water system, and a fire water tank and pumps.

17.14 Plant Utilities and Services

Plant utilities and support services facilities include:

- Grinding media receiving and storage.
- Spares and consumables warehouse.
- Reagent mixing and storage facilities.
- Raw and process water storage and distribution systems.
- Maintenance workshop.
- Crusher and reclaim dust collection systems.
- Air blowers and compressors and air supply.
- Assay and metallurgical laboratories.
- Standby power generator.
- Cranes and mobile equipment.
- On stream analysers and sampling systems.
- Process control room and systems.
- Electrical distribution systems.
- Concentrate storage and dispatch systems.
- Plant offices, ablution facilities, and meeting rooms.

17.15 Process Labor

Process plant labor includes plant management, technical staff, operations, and maintenance personnel, and administrative staff.

Process plant staffing:

- 1 x Process Plant Sub-Manager
- 1 x Plant Operation Superintendent
- 68 x Maintenance
- 43 x Plant Operation
- 18 x Leaching and Paste Backfilling
- 2 x Training
- 23 x Assay laboratory staff
- 8 x Metallurgists
- 1 x Tailings storage facility operator

- 165 Total

17.16 Projects

17.16.1 Tonnage Increase

Mina Cerro Los Gatos is currently evaluating an expansion of the grinding circuit capacity to 4,000 tonnes per day. A study conducted by Metso has provided recommendations to achieve this increase, which include:

1. Increasing the T80 of the SAG to ball grinding
2. Enlarging the openings of the SAG grates and sieve panels
3. Adding a VTM-1250 (HP) as a tertiary grinding stage

A comprehensive process study is expected to be completed to advance this project. Evaluation of potential impacts on downstream processes and final product characteristics is necessary before implementing these changes.

17.16.2 Cu-Pb Separation Circuit

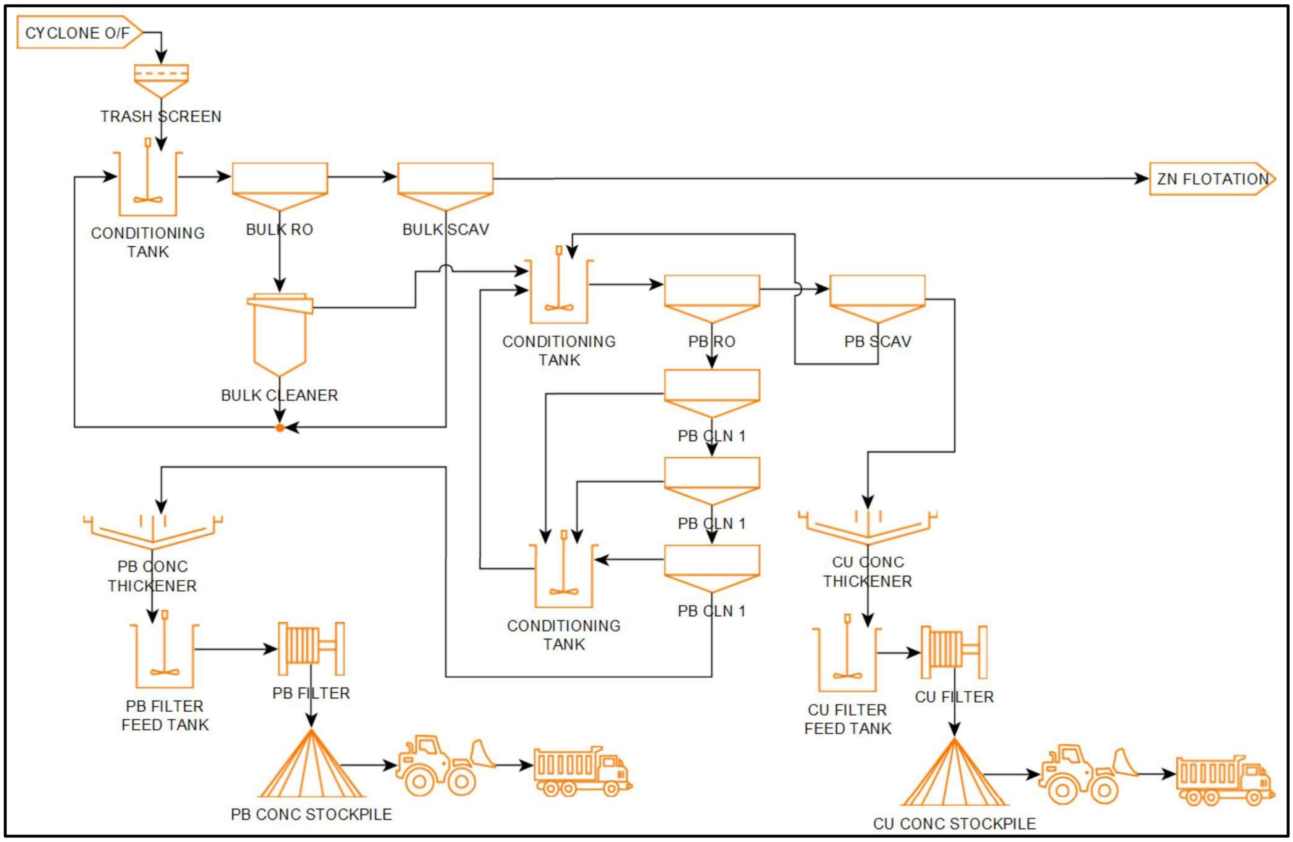
Mina Cerro Los Gatos is implementing a Cu-Pb Separation Circuit project to produce separate copper and lead concentrates. The project includes:

- Utilization of existing equipment where possible
- Installation of new flotation cells and a copper thickener
- Modifications to the existing flotation circuit

The Cu-Pb separation process involves sequential selective flotation to produce lead and copper concentrates. The process includes use of pH control, and selective depression of lead to maximize copper recovery. The circuit is designed to process material with a Pb/Cu ratio of 7.5 or lower, which is accumulated on the ROM pad for campaigns of at least 7 days.

The project has been studied to the PFS level and has an estimated capital cost for the project is $5 M, with a commissioning period of 310 days. The project is expected to increase copper recovery to 80% and produce a marketable copper concentrate.

Figure 17.5 shows a simplified process flowsheet for the proposed copper-lead separation circuit.



Source: CLG

Figure 17.5: Proposed Cu-Pb separation plant process flowsheet

The circuit will include the following key components:

1. Bulk Rougher Flotation:

- One Bulk Rougher Conditioning Tank (existing)
- Two Bulk Rougher Flotation Cells of 70 m³ each (existing)
- Three Bulk Scavenger Flotation Cells of 70 m³ each (existing)

2. Bulk Cleaner Column Cell:

- One Bulk Cleaner Column Cell (existing)

3. Pb Flotation:

- One Pb Cleaner Conditioning Tank (existing)
- Three Pb Rougher Flotation Cells of 10 m³ each (existing)
- Two Pb Scavenger Flotation Cells of 10 m³ each (existing)

4. Pb Cleaner Flotation and Cu Thickener:

- Two Pb 1st Cleaner Flotation Cells of 3 m³ each (new)

- Two Pb 2nd Cleaner Flotation Cells of 3 m^3 each (new)
- One Pb 3rd Cleaner Flotation Cell of 3 m^3 (new)
- One Pb Tailings Cleaner Conditioning Tank (new)

One Cu Thickener, 6 m diameter (new)

Key long-lead items include:

- Thickener: 20 weeks
- Flotation Cells: 42 weeks
- CCM (Control Center Motor): 42 weeks

The implementation of this project will enhance the mine's ability to process ore with varying copper content and improve overall metal recovery.

18.0 INFRASTRUCTURE

18.1 Introduction

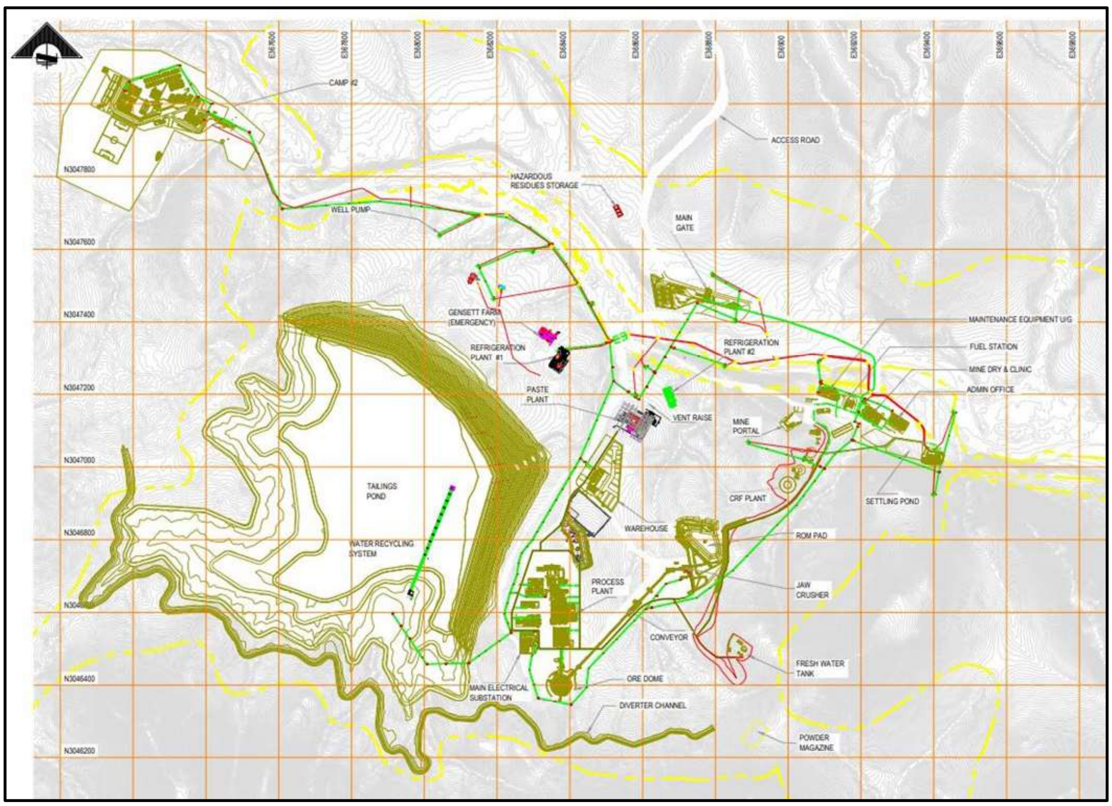
CLG is an operating mine. All required infrastructure for the current operation is in place, with some additions required for the LOM Plan as described in this section.

Infrastructure constructed to support the mining and processing operations at CLG Mine include offsite and onsite components. Offsite infrastructure comprises grid power distribution to the mine and a main access road which was upgraded to facilitate heavy equipment transport during construction, material deliveries and concentrate shipments, in addition to worker traffic. Onsite infrastructure is comprised of two camp facilities, office and general maintenance facilities, truck maintenance shops, warehouses, a processing plant, a tailings storage facility, a backfill plant, two refrigeration plants, a mine ventilation system, and dewatering ponds for sediment settling and water evaporative cooling.

A site visit was completed in May 2024 to examine the surface infrastructure at the CLG mine.

18.2 General Site Layout

Figure 18.1 depicts the general layout of the CLG site, in plan view, showing major infrastructure and operating facilities. Figure 18.2 through Figure 18.4 show aerial views of the overall site and major infrastructure areas in their as-built condition.



Source: CLG

Figure 18.1: Infrastructure Layout

Figure 18.2: Aerial View of Overall Site with Infrastructure in As-Built Conditions

Note: North is at the 11-o'clock position

Figure 18.3: Aerial View of Refrigeration Plant 1 (middle to bottom right), Emergency Power Genset (middle), Mine Rescue (middle to bottom right), and Vent Raise (top left)

Note: North is at the 1-o'clock position

Figure 18.4: Aerial View of Paste Backfill Plant (left), Refrigeration Plant 2 (right), and Vent Raise (middle)

18.3 Ventilation and Refrigeration Systems

The underground mine operates three air extractive fans, totaling approximately 1.09 M CFM of capacity. As the mine experiences hot conditions, primarily due to geothermal water inflows, refrigeration is required. Air intake for the mine is approximately 1.12 M CFM (MPR, 2024) and is provided through two refrigeration plants providing cooled air to downcast fresh air raises, and the downcast decline ramp. The current installed capacity of the ventilation system is 1.30 M CFM and plans are in place for an expansion to provide fresh air to the SE Zone.

The refrigeration plants process a combined 890k CFM of air, cooling the surface ambient air by 10°C to 15°C (depending on season and ambient temperature). Major sources of heat are (Tetra Tech, 2020):

- The native rock
- Water from the rock fissures which could be as high as 70°C (experienced under current conditions)
- Mobile mining equipment
- Auxiliary mining equipment, such as auxiliary fans and pumps
- Other loads such as backfilling, lighting, personnel activities
- Auto-compression of air from surface to shaft bottom

Actual air flow and temperature data collected during the month of June 2024 are 929,656 CFM air injection through the mine portal and forced air fans at refrigeration plants 1 and 2 at wet bulb temperatures averaging approximately 15° C from refrigeration plants and approximately 21° C at the portal. Extracted air volumes were 985,730 CFM at an average wet bulb temperature of 29° C (CLG, 2024).

Figure 18.5 shows Refrigeration Plant 2. Each of the refrigeration plants consist of a two-stage refrigeration system: an evaporative cooling tower located outdoors (Figure 18.6A) followed by chillers located indoors

(Figure 18.6B). Cooled fluid is then delivered to heat exchangers (bulk air coolers) located upstream of the injection air fans (Figure 18.7A and Figure 18.7B).

Air intake is through bulk air cooler fins, with air delivered to the underground after being cooled through heat exchange with chilled water. Water is chilled (second stage of cooling) by mechanical refrigeration which rejects the heat extracted from chilled water return to water cooled by evaporative cooling towers (first stage of cooling).

Figure 18.5: Refrigeration Plant 2

Figure 18.6: (A) Evaporative Cooling Towers as the First Stage of Cooling (B) Mechanical Refrigeration Units at Refrigeration Plant 1 as Second Stage of Cooling

Figure 18.7: (A) Air Intake through Bulk Air Cooler and Delivery to Underground by Injection Fan (B) Injection Air Fan at Refrigeration Plant 1

18.4 Mine Dewatering System

Accomplishing the LOM Plan for mining the Mineral Reserve depends to a significant extent on CLG's ability to control groundwater inflows to the mine. Mine dewatering is largely managed by two different systems (MPR, 2022):

- Pumping through borehole/well pumps installed on the 1370, 1277 and 1230 levels, which ultimately deliver to the 1390 pumping station which has a capacity of 700 L/s and an average pumping rate of approximately 500-550 L/s.
- Underground water collection system where water from different levels is channeled to a central pumping station on the 1384 level with capacity for 375 L/s and is transported to the surface at a combined rate of approximately 275-325 L/s.

In total, there are eleven surface boreholes located across the length of the deposit which previously operated as surface well pumps. None of the eleven dewatering wells drilled from surface are currently active, as the water table is now generally beneath the bottom of the effective well range. There are currently five main underground wells in the NW zone, with a sixth and seventh under development. As the mine expands, capital has been allocated for the anticipated additional dewatering infrastructure that will be required to manage the water underground.

The LOM Plan has made allowance for the installation of additional wells, sumps and pumping infrastructure with sustaining capital included in the cash flow model.

A detailed discussion of the mine dewatering system is provided in Section 18.4.

The underground pumping stations are designed to deliver water to the surface and the discharge header delivers water to surface cooling ponds, shown in Figure 18.8.

Figure 18.8: Underground Wellhead Pumps and Surface Discharge Header

Water classified as contact water is pumped to the surface Settlement Pond where flocculants are added to assist with settlement and then to the evaporative Cooling Tower for tempering prior to discharge to the environment. Water classified as non-contact is pumped to the Cascade System where natural evaporation resulting from overflow in a wide and shallow channel pattern is sufficient to temper the water. Actual water flow values reported during the site visit were 328 and 561 litres per second (lps) for contact and non-contact water, respectively.

18.5 Cemented Backfill

18.5.1 Cemented Rockfill Plant

Prior to 2023, CLG employed Cemented Rock Fill (CRF) as the primary backfill material. With the transition to primarily paste backfill, CRF is now produced at an underground mixing facility; the previously operating surface CRF plan has been de-commissioned Longhole stopes are filled via end dumping from the drill drift access at the top of the stope, while the CRF backfill for cut-and-fill stopes is jammed in place at the mining horizon.

18.5.2 CRF Underground Placement

As a part of the general underground visit, locations of CRF placement were reviewed. Care was taken by the backfill team to place fill tight to the back in the cut-and-fill stope using a “rammer-jammer,” a push plate bolted to an LHD in place of its bucket. A close-up view of the CRF shows a well set up, homogeneous CRF.

As demonstrated in laboratory results, April 17 to May 22, 2022 (MPR, 2022), the CRF mix design consists of 65% coarse aggregate, 35% fines (although only one aggregate stockpile was observed on surface), 5% cement and 10 mL of retarder per kilogram of cement. Test samples are taken at 3-day, 7-day, 14-day, and 28-day curing ages for break strength targets of 1 MPa, 2 MPa, 3 MPa, and 4 MPa, respectively. Of a total of 214 CRF test results, there were 18 failures, where the tested CRF strength did not meet the targeted strength for the break period. The test results exceed a 90% pass rate, which is well within the industry standard.

It was observed that CRF test samples are cast into steel molds in duplicate. After a period of time, the steel molds are released and the CRF sample continues to cure on surface, adjacent to the CRF plant. Previously, Minefill (2019) indicated that the CRF samples were cured underground. The author observes that this practice be continued to allow the CRF to cure under the “as-placed” condition. Allowing the samples to cure on the surface will result in premature drying and samples will be subjected to cyclical temperature swings during the curing period, which is unlike the conditions underground.

18.5.3 Paste Backfill

Paste backfill was introduced late in 2022 with the completion of the paste backfill plant on surface. Towards the end of mine life, up to 95% of ore mining will be LHS for which paste backfill is ideal.

A pipeline system has been installed for delivery of paste backfill to underground stopes, described in Section 18.5.4. Paste fill has replaced CRF as the primary backfill method.

18.5.4 Paste Fill Plant Overview

The paste fill (PF) plant has been operating since late 2022. The PF plant is designed to process classified full mill tailings from the mill. A new cyclone was installed at the mill to remove ultrafine material and only deliver the cyclone underflow (UF) to the existing cyanide destruction circuit before transport to the PF plant, located remotely from the mill. Cyclone overflow is sent to the existing tailings thickener and pumped to the TSF. The thickener underflow can also be diverted to the existing cyanide destruction circuit.

The PF plant is designed to capture as much of the cyclone underflow as possible with two installed agitated filter feed tanks (Figure 18.9). As paste backfill plants operate intermittently, the filter feed tanks allow for the storage of cyclone underflow during periods when paste is not poured. The filter feed tanks therefore, in effect, de-couple the downstream paste backfill process from the upstream process. Downstream of the filter feed tanks, paste backfill can be poured at a higher rate (85 t/h tailings solids) than cyclone UF tailings is produced (65.6 t/h tailings solids). Figure 18.10 (left) shows the disc filter where thickened tailings pumped from the filter feed tanks is dewatered to cake consistency prior to addition of binder and water for slump control in the paste mixer while Figure 18.10 (right) shows the positive displacement pump where cemented paste is delivered to the paste reticulation system.

Source: CLG

Figure 18.9: Filter Feed Tanks (left), Vacuum Pump, and Binder Silo (right) at the Paste Fill Plant

Table 18.1 provides a summary of the key PF plant design parameters. With the PF plant taking only a portion of the mill tailings, as cyclone UF, it is important to understand the quantity of cyclone UF that needs to be captured to meet backfill demand. In this case, it is calculated that approximately 58% of all the cyclone UF tailings is needed to meet backfill demand. This value is primarily driven by paste backfill characteristics, where to achieve a 170-mm slump a paste content of 71% by weight (wt%) solids is needed and of that, 65 wt% is cyclone UF tailings.

Table 18.1: Paste Backfill Plant Key Design Parameters

Parameter	Units	Design Values	Operating Values
Plant throughput	tonnes/day	2,500	3,500
ROM Specific Gravity		2.78	2.78
Stope volume excavated	m^3/day	899	1,259
Fraction of mine voids requiring paste backfill	%	75%	75%
Paste backfill required (volume)	m^3/day	674	944
Paste backfill plant operational throughput	m^3/day	1,738	1,738
Paste solids content	%	71 wt%	71 wt%
Paste Specific Gravity		1.80	1.80
Paste required (mass)	tonnes/day	1,213	1,698
Cyclone UF tailings mass required	tonnes/day	790	1,106
Cyclone UF available	tonnes/day	1,361	1,905
Cyclone UF tailings available	%	58%	58%
Total mill tailings required	%	55%	55%

Table 18.1 illustrates that a sufficient quantity of cyclone UF is available for paste backfill production purposes, as it is significantly greater than the cyclone UF tailings mass required, 1,579 tonnes/day compared to 915 tonnes/day. This means that approximately 58% of the cyclone UF must be captured to fulfill paste backfill demand. It is important to monitor the cyclone UF produced to ensure that the backfill operation remains unconstrained by the feed stock. Provisions for a third filter feed tank are already in place should the paste backfill plant consistently fall short on the pour cycles, as piping changes underground may necessitate paste backfill plant stoppages.

Source: CLG

Figure 18.10: Tailings Dewatering Disc Filter (left) and Positive Displacement Pumps for Paste Fill (right)

18.5.5 Paste Backfill Performance

Paste strength requirements are described in Minefill (2021) for the aforementioned mining methods (Section 18.5.3). Table 18.2, summarizes the UCS requirements for both the longitudinal and transverse longhole stopes based on a factor of safety of 1.5 and 28-day cure time. In addition to the UCS strengths defined, a plug pour will be required at the bottom of longhole stopes.

Table 18.2. Paste Backfill Fill Strength Requirements for Longhole Stopes (Longitudinal and Transverse)

Max Stope Width	UCS: 0 to 10m Lift (kPa)	UCS: 10m to 20m lift (kPa)
9 m	180	140
15 m	240	170
21 m	290	190
Secondary Stopes	100	100

UCS tests for cut-and-fill applications have also been summarized in Minefill (2021). It is understood that cut-and-fill stopes will occur in panels, where a group of four to five drifts will be mined. The orebody is no more than four drifts wide with a maximum drift width of nine meters (Tetra Tech, 2020). Across the width of the mineable veins, primary and secondary drifts are also established. The subsequent panel is mined underneath the initial panel, therefore, for cut-and-fill applications, paste backfill will need to act as:

- A wall to the adjacent drift
- A working floor when mining bottom up within a panel
- The back to the panel above

Each of the above scenarios require different backfill strength considerations and these are summarized in Table 18.3. Minefill (2021) recommended that for the wall and working floor scenarios a 200-kPa paste UCS is suitable, allowing for a factor of safety of 3 and 2, respectively. A UCS of 200 kPa is the minimum strength to reach prior to the resumption of mining activity on top of the paste backfill or adjacent to it.

Table 18.3: Paste Backfill Strength Requirements for Cut-and-fill Applications

Max Drift Width	UCS (kPa)
5 m	200
5 m, Lower Drift in Panel (Back for Panel Above)	870

18.6 Power Distribution

Electrical power is supplied to the CLG site via a 62 km, 115 kV overhead utility transmission line which originates from the San Francisco de Borja substation in Satevo (Chihuahua). The San Francisco de Borja substation is owned by the Federal Electricity Commission (CFE) and is connected into the national electrical grid.

The transmission line running to CLG is a dedicated line owned by MPR which was installed during mine construction. The capacity of the transmission line connection to the San Francisco de Borja substation is approximately 23.5 MW, which exceeds the current power requirement of approximately 20 MW.

The 115 kV transmission line connects into an onsite substation at CLG located adjacent to the processing plant. The CLG substation consists of two transformers, each 24/32 MVA, which reduce the voltage from 115 kV to 13.8 kV. Electricity is distributed from the CLG substation to various surface and underground facilities, generally at 13.8 kV with local substations installed across the operation to step down the electricity further as required.

A system of backup diesel generators is installed at CLG to maintain power in the event of an interruption to power supply from the national electrical grid. Total installed backup generator capacity is approximately 12.5 MW which is designed to provide emergency power to critical equipment both on surface and underground.

In March 2022, MPR signed a contract for the supply of 18 MW of renewable energy, with the transition to the renewable energy source occurring in September 2022. Energy consumption in excess of the contracted amount is purchased from the national electrical grid.

18.7 Other Surface Infrastructure

The CLG mine site is also serviced by facilities of a level of function typical for mining operations. The QP observed the following during the site visit:

- Processing plant for grinding, regrinding, flotation, thickening, filtration, zinc concentrate leaching, reagent storage, concentrate storage, and loading
- Assay and metallurgical lab
- Mine rescue system
- Heavy mobile vehicle maintenance shop
- Small vehicle maintenance shop
- TSF
- Concrete batch plant
- Administration and engineering building and medical clinic
- Dry for underground personnel
- Warehouse
- Security guard house, fencing and gates
- Employee and contractor camps and cafeterias

18.8 Tailings Storage

18.8.1 Background

The CLG TSF has been constructed and tailings have been deposited in the facility since 2019. Regular downstream dam raises have been constructed to increase the volume of the TSF. This Section summarizes the design premise of the facility and any changes in the design, particularly since the decision to divert a large portion of tailings to the paste fill plant for use as mine backfill. The TSF design has been updated by the EOR, Tierra Group, to accommodate the increase in Mineral Reserves reported in this TR. Tierra Group produced a Technical Memorandum (TM) for MPR (August 30, 2024) documenting 2024 revisions to the TSF. Excerpts from the TM provide a summary description of the facility for this TR. Table 18.4 identifies parameters applied to the design of the TSF at CLG.

Table 18.4: Key Parameters of CLG TSF

Description	2023 Parameters	2024 Parameters
Subaerial Tailings Beach Slope	0.5 %	0.5 %
Subaqueous Tailings Surface Slope	4% [1]	2.5% [2]
Tailings processed through June 2023	2.94 Mt	--
Total Reserves (July 2023 through LOM)	8.2 Mt	--
Tailings deposited through June 2024	--	3.71 Mt
Total Reserves (July 2024 through LOM)	--	10.3 Mt
Projected Total Tailings to TSF (from beginning of operations through LOM)	7.47 Mt	9.49 Mt
Tailings Dam crest elevation	1633.0 m	1636.0 m
Facility Life	Q1 - 2031	Q3 - 2032

Notes: [1] Estimated based on May 2023 bathymetry.

[2] Estimated based on May 2024 bathymetry.

18.8.2 Topography

Per NOM-141-SEMARNAT-2003, Table 2, any slope grade steeper than approximately 18% is considered Mountainous Land. Therefore, the site topography can be classified as "Mountainous Land" as some of the topographic slopes at the location of the TSF are between 18% and 23%.

18.8.3 Site Seismicity

The Mexican Seismological Service has divided the republic into four seismic zones based on:

- The catalog of earthquakes that occurred during the last century
- Great earthquakes mentioned in historical records
- Ground motion records of some of the larger events of this century

Mexico's seismic hazard map places the Project site within Zone B. In this intermediate zone, infrequent earthquakes have been recorded, and peak ground accelerations do not exceed 70% of the acceleration of the soil. Zone B is called the "Penesísmica" region, with a peak ground acceleration (PGA) range of 0.8 to 1.6 m/s^2 (approximately 0.08g to 0.16g) for 10% probability of exceedance in 50 years (equivalent to a return period of 475 years). The site is on the border of Seismic Zones A and B; in order to be conservative, the TSF design assumes that the site is in Seismic Zone B.

For structures, such as the TSF, which present a significant hazard for damage to the environment, should be capable of tolerating displacements from a maximum credible earthquake (MCE) without catastrophic loss of tailings or supernatant; however, limited damage to the structure may take place. This approach is consistent with current International Commission of Large Dams (ICOLD) (Wieland, 2005) and Federal Emergency Management Agency (FEMA) (2005) guidelines for seismic stability, which indicate that "significant structural damage is accepted" for maximum earthquake ground motions; however, no uncontrolled release from the reservoir shall occur. The deterministic seismic hazard evaluation for the Project (Tierra Group, 2018a) indicates a maximum site PGA of 0.18 g for stiff soil/soft rock conditions at the site for the assumed background event MCE of moment magnitude (Mw) 6.5 at a source-to-site distance of 12 km. Relative to published results of probabilistic ground motion estimates, this represents a conservative level of ground motion with a recurrence interval much greater than 10,000 years, which was calculated to be 0.087g (Tierra Group, 2018a).

18.8.4 Surface Water Hydrology

Based on NOM-141-SEMARNAT-2003, the Project site is situated in the Humid Hydrologic Zone and exhibits mountainous topography. For the design, the TSF area's hydrology was evaluated using the Soil Conservation Service (SCS) curve number method to model soil losses and specify unit hydrograph transformation. The SCS method relies on basin characteristics, design storm rainfall depths, and temporal distribution to calculate volumetric flow rates.

18.8.5 Site Investigation and Site Conditions

Two geotechnical investigation programs were previously completed. The first geotechnical investigation began in December 2015 and was completed by Tetra Tech for the feasibility study. The second geotechnical investigation was performed by Tierra Group between 13 – 18 August, and 30 October and 7 December, 2017 (Tierra Group, 2018b).

18.8.5.1 Surface and Subsurface Conditions

In general, the soil profile underlying the TSF is described as shallow, with weathered and/or fractured bedrock generally encountered within 2.0 meters (m) below ground surface. In areas where soil is present, it typically consists of 0.5 to 2.0 m of silty sand (SM) and clayey sand with gravel (SC). Upstream of the TSF, silty gravel with sand (GM) and sand with clayey sand (SP-SC and SW-SP) were encountered. At the north end of the TSF, approximately 100 m from the embankment toe, silty sand (SM) with gravel was encountered up to 19 m in depth. This deeper soil deposit may be attributed to the proximity of the Los Gatos fault line. In areas along the TSF foundation, areas of exposed, slightly weathered bedrock were visible with little or no topsoil. Below the soil horizon, slightly weathered and highly fractured rock is encountered. Typically, this layer is approximately 1 m to 10 m thick, depending on the area. Below this layer, fresh bedrock was encountered. Bedrock is andesite and rhyolite. Per Tierra Group's investigation (Tierra Group, 2018b), the permeability of the bedrock ranged from 1.24×10^{-6} to 6.67×10^{-8} cm/s. In addition, some boreholes northwest and southeast of the TSF encountered a potential shear zone consisting of moderately weathered rock with clay infill.

18.8.6 Borrow Material

MPR identified the borrow areas for investigation. They are located north of the TSF embankment across the Santo Toribio River in areas of epiclastic sedimentary deposits. Test pits in the potential borrow areas encountered silty gravel to clayey gravel to clayey sand with gravel (GC-GM & SC-GM). The typical soil depth in the test pits was approximately 2 m. Weathered bedrock was encountered below the soil.

These borrow areas were used for Stage I Phase 1 (Tetra Tech, 2017). Since then, all borrow material has come from excavating and blasting foundation material within the TSF footprint (Tetra Tech, 2017).

18.8.7 Design Criteria

Design criteria were established based on the facility size and risk using applicable dam safety and water quality regulations and industry best practice for the TSF embankment on a standalone basis. Table 18.5 lists the design criteria for the TSF.

Table 18.5: TSF Design Criteria

	Parameter	Criteria	Source	Comments
TSF				
Dam Slope Stability	Static Factor of Safety (FOS)	≥ 1.5	CDA, 2014	The dam must provide sufficient strength to withstand anticipated static loading conditions (i.e., no additional external forces).
	Pseudo static (Earthquake) FOS	≥ 1.0	CDA, 2014	If the pseudo-static FOS is less than 1.0, a deformation analysis is required to guarantee that the possible deformations are less than the parameters specified in the project.
	Design Earthquake	Operating Basis Earthquake (OBE) with a 475-year return period = 0.027g	ICOLD Bulletin 98 (1995)	Earthquake with 10% exceedance in 50 years during normal operations. Calculated with PRODISIS v4.1 software. (Tierra Group, 2018a)
		Maximum Design Earthquake (MDE) with a 10,000-year return period =0.087g or Maximum Credible Earthquake (MCE)= 0.18g	ICOLD Bulletin 98 (1995) CDA, 2014	ICOLD B98 (1995) and CDA (2014) establish a maximum earthquake with a return period of 10,000 years or the MCE that does not have an associated return period. The 10,000-year earthquake was calculated with the PRODISIS v4.1 software. (Tierra Group, 2018a)
Impoundment and Surface Water Management				
Hydrologic	Design Storm Event- TSF Operations	24-hour PMP	CDA, 2014	The TSF was designed to store the Inflow Design Flood (IDF), in addition to a normal operating pool, without overflowing and maintaining the required freeboard. SEMARNAT (2003) recommends rain with a return period of 50 years. CONAGUA (2011) recommends rain with a return period of 10,000 years for the spillway.
	Freeboard	2 m	SEMARNAT (2003)	Freeboard is defined as the difference between the minimum dam crest and the maximum extraordinary water level.
	Spillway	24-hour PMP	CDA, 2014 CONAGUA, 2011	CONAGUA (2011) recommends designing the spillway for rainfall with a return period of 10,000 years or the PMP.
	Diversion Channel	10,000-year 24-hour Event	SEMARNAT (2003) IFC, 2007; ICOLD 1996a; ICOLD 1996b	Diversion channels are designed to convey certain storm events avoiding failure (erosion or bank overflow). Antecedents of average humidity conditions are assumed.

Notes: CDA – Canadian Dam Association
CONAGUA - Comisión Nacional del Agua
IFC – International Finance Corporation
PMP – Probable Maximum Precipitation

Table 18.6 summarizes the design storm events.

Table 18.6: Design Storm Events

Design Storm Event	Value (mm)
10,000-year 24-hour	194.3
24-hour PMP	375.4

18.8.8 Tailings Storage Facility Description

All TSF dam stages are built using local borrow materials, primarily rockfill initially excavated and blasted from foundation material within the TSF. The ultimate updated TSF will be constructed in three stages using downstream construction methods (Figure 18.13). These stages will be constructed with upstream slopes of 2H:1V (horizontal to vertical) and downstream of 2.5H:1V, a maximum crest width of 15 m with a maximum crest elevation of 1,636.0 m (Stage III). The materials used in the dam construction are rockfill (Zone C), 1.5-m thick transition zone (Zone B), and a 3-m thick filter zone (Zone A). The tailings dam has a composite liner consisting of geosynthetic clay liner (GCL) overlain by a 60-mil LLDPE geomembrane (Figure 18.13).

This lining system also covers the entire impoundment. The lining system is placed on a 0.15-m thick bedding fill.

The original permitted TSF design consists of four Stages (I to IV). The TSF has been permitted to an ultimate crest elevation of 1638.0 m (Stage IV), however, due to a change in the tailings delivered to the TSF (paste plant commissioned in December 2022), the ultimate TSF will have a maximum crest elevation of 1636.0 m (Stage III) adequate for the revised and reduced volume of tailings to be stored.

To date, four raises have been constructed and one more is anticipated as follows:

- Stage I Phase 1 was built to a minimum crest elevation of 1618.6 m
- Stage I Phase 2 was built to a minimum crest elevation of 1621.6 m
- Stage II Phase 1 was built to a minimum crest elevation of 1625.0 m
- Stage II Phase 2 was built to a minimum crest elevation of 1628.0 m (current stage built)
- Stage II Phase 3 to be built to a minimum crest elevation of 1631.0 m
- Stage III (Ultimate Stage) to be built to a maximum crest elevation of 1636.0 m

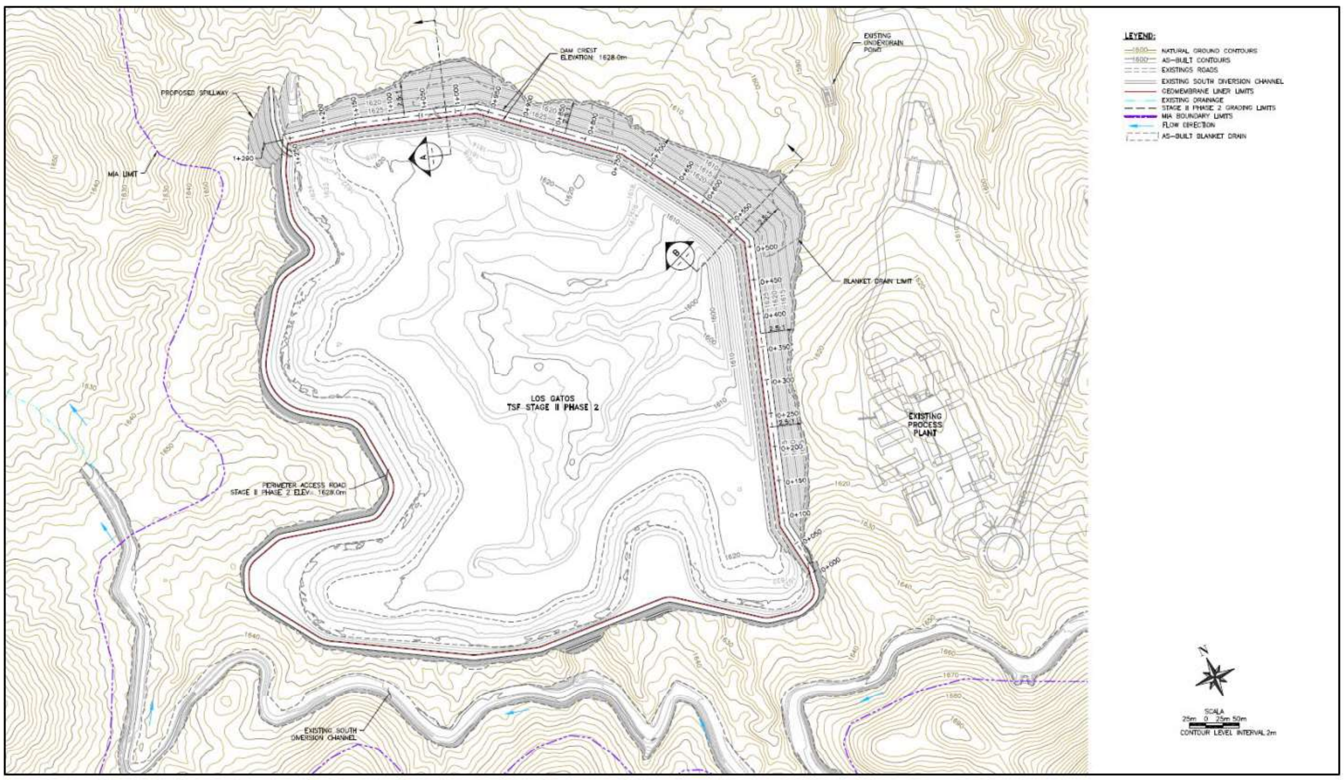
Table 18.7 summarizes the TSF construction stages.

Table 18.7: TSF Construction Stages

Stage/Phase	Crest Elevation (m)	Start Of Construction	End Of Construction
Stage I Phase 1	1618.6	April 2018	August 2019
Stage I Phase 2	1621.6	June 2020	February 2021
Stage II Phase 1	1625.0	February 2021	April 2022
Stage II Phase 2	1628.0	April 2022	September 2022
Stage II Phase 3	1631.0	January 2025[1]	September 2025
Stage III	1636.0	May 2027[1]	February 2028

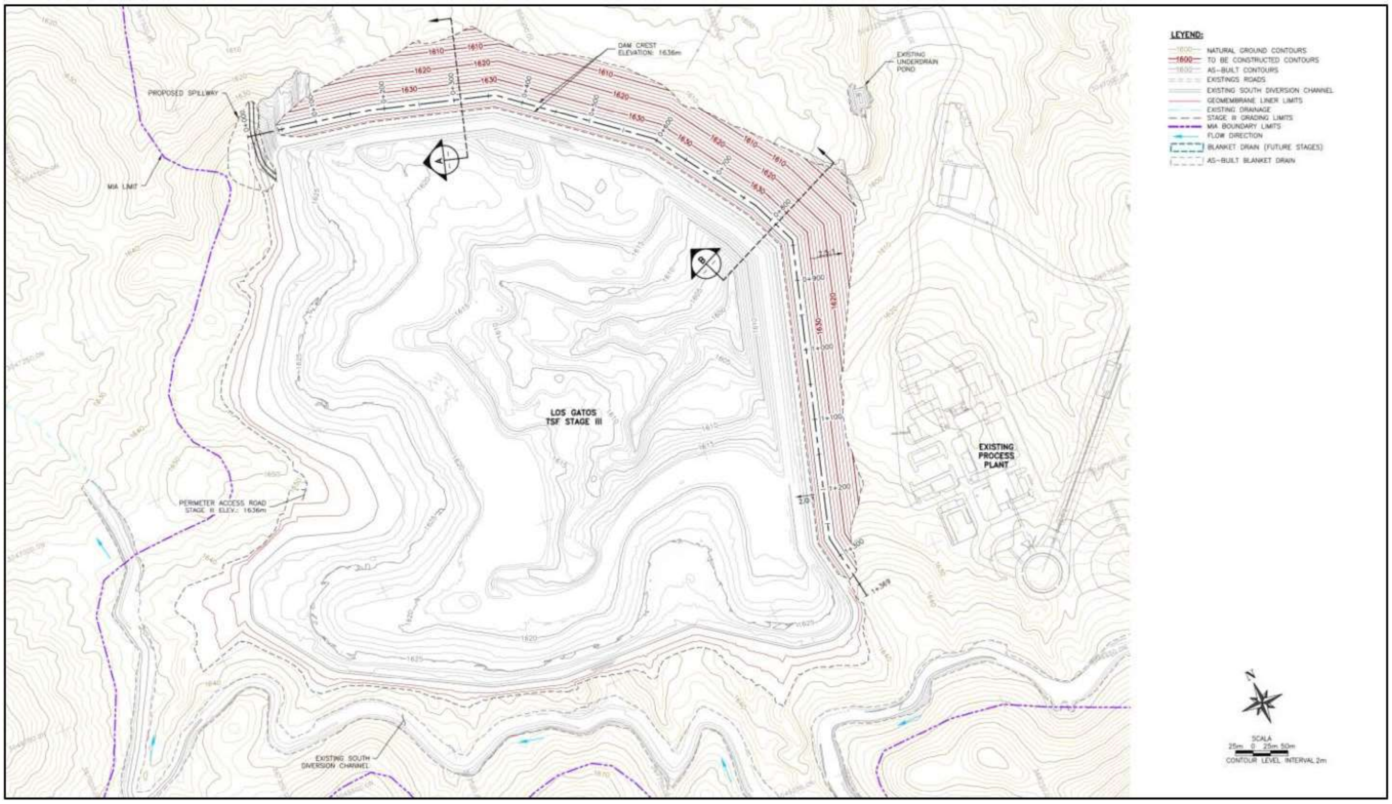
Notes:
1. Estimate based on construction time of previous stages

Figure 18.11 shows the plan view for the current TSF stage (Stage II Phase 2), Figure 18.12 shows the plan view of the ultimate TSF stage construction, and Figure 18.13 presents a section view with the TSF As-Built Stages and future expansions.



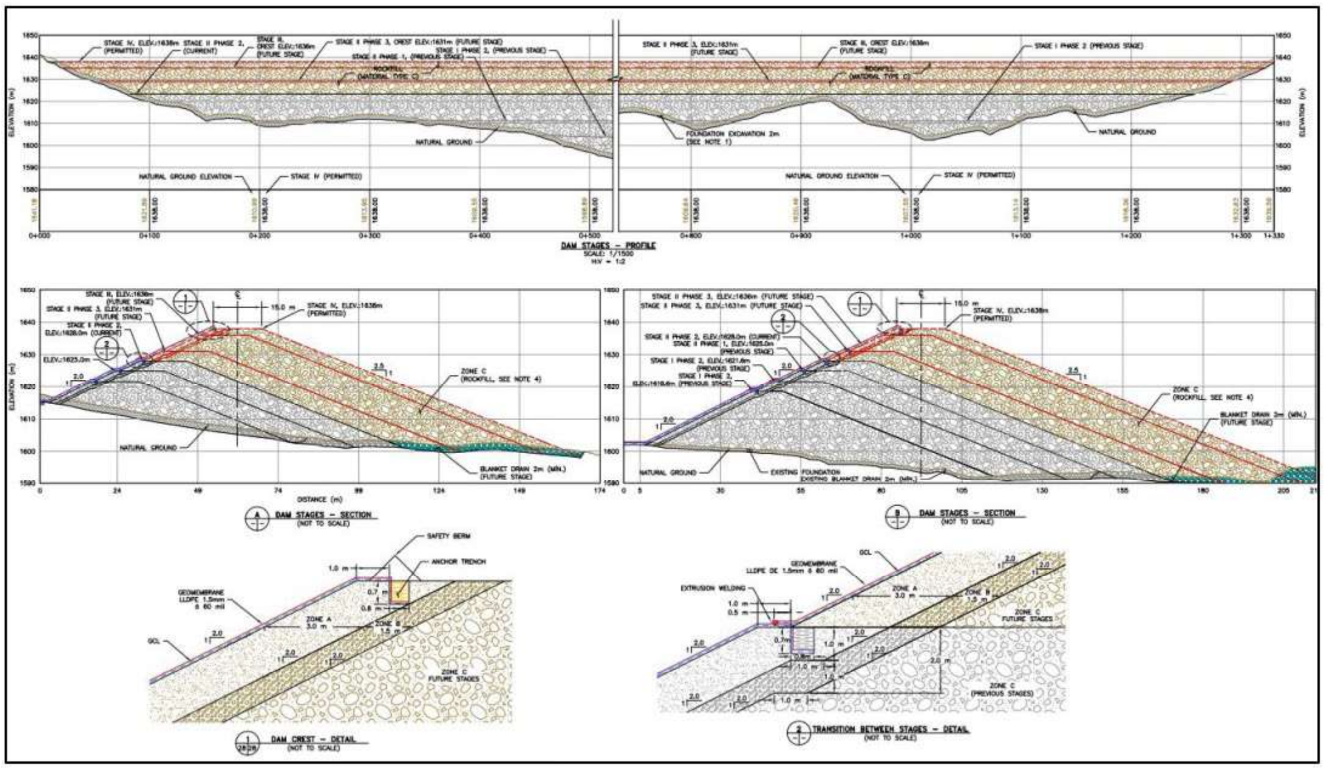
Source: CLG

Figure 18.11: Stage II, Phase 2 Plan View (current elevation)



Source: CLG

Figure 18.12: TSF Stage III Plan View (ultimate elevation)



Source: CLG

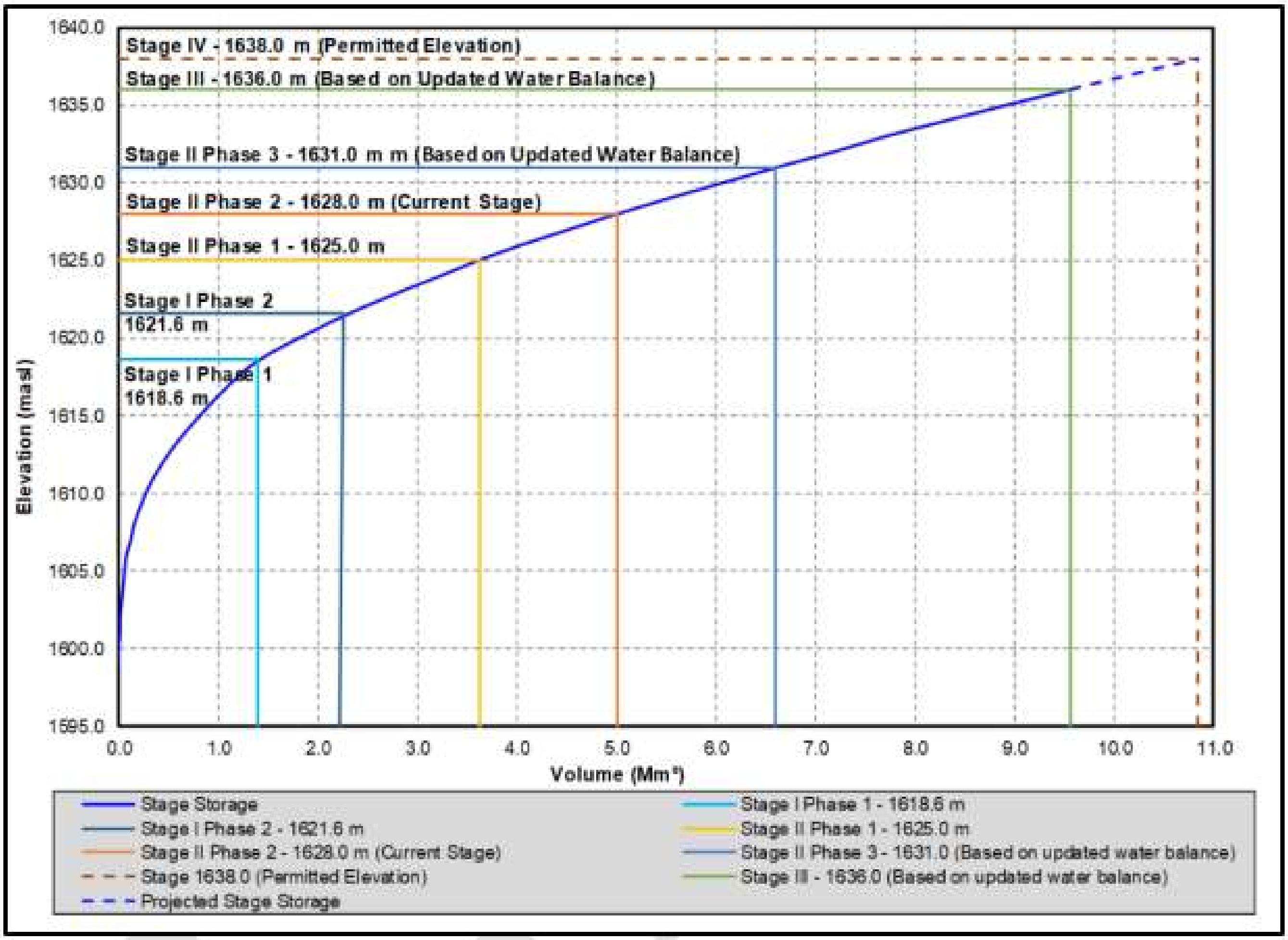
Figure 18.13: TSF As-Built and Future Stages Section View

18.8.9 Tailings Dam Design

The TSF is designed to accommodate tailings, mine water, IDF, with a 2-m residual freeboard incorporated to ensure operational safety. Figure 18.4 illustrates the TSF's volumetric storage capacity throughout each stage and Table 18.8 presents the TSF Stage III storage capacity.

Table 18.8: TSF Capacity

Description	Crest Elevation (m)	Total Capacity (Mm^3)
TSF	1,636.0	9.56



Source: CLG

Figure 18.14: TSF Capacity Curve

18.8.9.1 *Water Balance Update*

The TSF water balance was updated based on PF Plant operations starting in October 2022, and the new LOM operating plan. The LOM TSF height assessment was projected using 10.3 Mt LOM reserves as of July 2024, which includes 0.72 Mt of concentrate and 9.58 Mt of tailings. It is projected that 40% of the tailings produced by the Process Plant will be sent to the Paste Plant, for use as underground backfill, while the remaining 60% will be sent to the TSF. As a result, tailings accumulated in the TSF are estimated at 9.49 Mt (3.71 Mt stored through June 2024 and 5.78 Mt from July 2024 until exhaustion of current mineral reserves).

The water balance update includes a volumetric calculation of deposited tailings, minimum operating pond, the Inflow Design Flood (IDF) storage volumes, and freeboard that must be maintained within the TSF. Based on the evaluation, the TSF will provide the required storage through the end of the current LOM.

The water balance results estimate that the dam's elevation required to store 9.49 Mt (7.26 Mm^3) is 1636.0 masl (Stage III), with a maximum operating water surface elevation of 1633.5 m. Table 18.9 details the volumes stored within the TSF for Stage III (1636.0 m).

Table 18.9: Stage III Storage Volume

Description	Accumulated dry tailings (Mm^3)	Tailings Pond (Mm^3)	IDF (Mm^3)	Freeboard min. 2 m (Mm^3)	Total Capacity Mm^3	Crest Elev. masl
TSF	7.26	0.24	0.28	1.77	9.56	1,636.0

18.8.10 Liner Design

The TSF impoundment has been designed with a 1.5-mm (60-mil) LLDPE geomembrane liner. The liner extends along the base of the impoundment and the embankment's upstream slope and anchored along the edges of each concurrent construction stage. GCL underlies the LLDPE geomembrane. See Figure 18.13 for details.

18.8.11 Tailings Delivery System

Tailings from the Process Plant are pumped to a tailings distribution pipeline along the TSF crest through pressure-rated HDPE pipelines ranging in diameter from 15 to 20 cm, at a nominal solids content of 50% by weight. The tailings distribution system consists of a header and manifold system with the controlled tailings discharge through multiple spigots connected to a peripheral tailings distribution header pipeline. The supernatant pond's extent and location within the impoundment will be controlled by selective operation of the spigots (rotating operating spigot locations) such that the pond location is constrained to the impoundment's south-central area away from the embankment at all times during operation.

18.8.12 Underdrain System

A network of drains was installed underneath the geomembrane liner to collect and convey groundwater emanating from seeps and springs within the TSF footprint. The underdrains were installed along predetermined channels generated during the subgrade grading of the TSF footprint. The drainage network consists of 8-inch (200-mm) nominal diameter solid and/or perforated pipe with drain gravel and geotextile wrap. Flows are collected in the underdrain collection pond located on the TSF's east side. The flow's water quality, collected in the underdrain collection pond, is monitored regularly, and the water is discharged directly to natural drainages.

18.8.13 Blanket Drain System

The dam has a blanket drain in the foundation to control and reduce the water level in the dam due to any infiltration that could occur. Incorporating the blanket drain improves the stability of the embankment in the event of liner failure. The blanket drain consists of a 1.0 m thick layer of drain material.

18.8.14 Surface Water Management

The surface water management system consists of the South Diversion Channel and an Emergency Spillway.

18.8.14.1 South Diversion Channel

The South Diversion Channel was designed in four discrete segments; three of the four segments have an unlined trapezoidal cross-section with 2H:1V side slopes, and an average longitudinal slope of 0.5%. The diversion channel's fourth (downstream-most) segment has rockfill lining at the bottom of the channel. There are 5-m transition structures between the segments, which is lined with rockfill and concrete. The channel intersections with existing watercourses have catchment structures. These auxiliary structures prevent erosion on the projected channel.

18.8.14.2 Emergency Spillway (Stage III)

The Emergency Spillway has been designed as a trapezoidal channel with 2H:1V slopes and 0.3 m thick riprap lining, with an average slope of 1%, a bottom width of 6 m, and a depth of 1.8 m. The spillway will be able to convey a flow of approximately 5.2 m^3/s.

18.8.15 Monitoring

The TSF has an OMS Manual that describes operating and monitoring procedures to confirm the condition of the embankment, foundation, and performance of the TSF dam and impoundment .

In order to monitor TSF performance during operations, 18 vibrating wire piezometers (VWPs) two seismic accelerographs, three standpipe piezometers, and five inclinometers were installed to monitor phreatic levels and displacements in and around the TSF. Additional VWPs, inclinometers, survey prisms, and accelerographs are recommended for future TSF expansion stages.

Figure 18.15 shows the monitoring instrumentation locations TSF Stage II Phase 3.

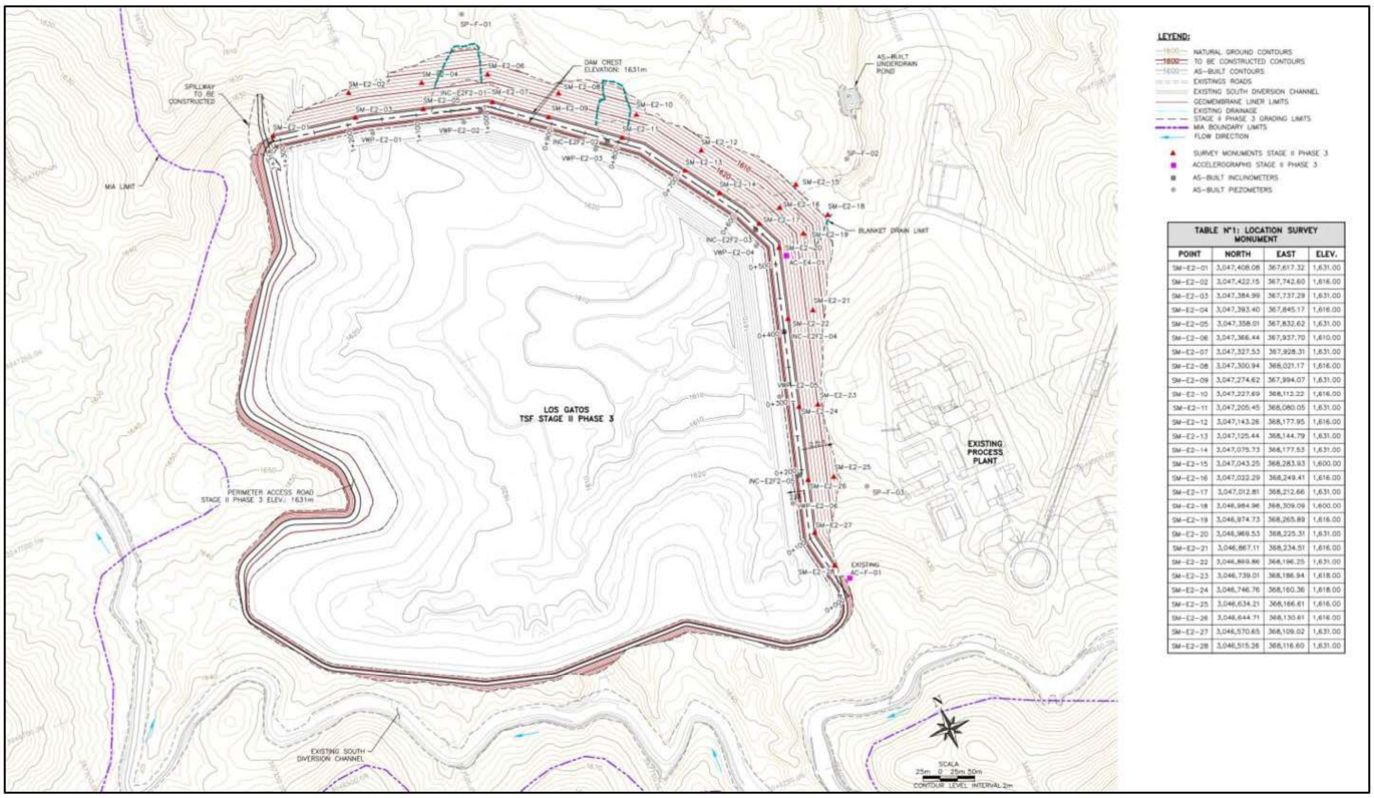


TABLE N°1: LOCATION SURVEY MONUMENT			
POINT	NORTH	EAST	ELEV.
SM-E2-01	3,047,408.08	367,617.32	1,631.00
SM-E2-02	3,047,422.15	367,742.60	1,616.00
SM-E2-03	3,047,384.99	367,737.29	1,631.00
SM-E2-04	3,047,393.40	367,845.17	1,616.00
SM-E2-05	3,047,358.01	367,832.62	1,631.00
SM-E2-06	3,047,366.44	367,937.70	1,610.00
SM-E2-07	3,047,327.53	367,928.31	1,631.00
SM-E2-08	3,047,300.94	368,021.17	1,616.00
SM-E2-09	3,047,274.62	367,994.07	1,631.00
SM-E2-10	3,047,227.69	368,112.22	1,616.00
SM-E2-11	3,047,205.45	368,080.05	1,631.00
SM-E2-12	3,047,143.26	368,177.95	1,616.00
SM-E2-13	3,047,125.44	368,144.79	1,631.00
SM-E2-14	3,047,075.73	368,177.53	1,631.00
SM-E2-15	3,047,043.25	368,283.93	1,600.00
SM-E2-16	3,047,022.29	368,249.41	1,616.00
SM-E2-17	3,047,012.81	368,212.66	1,631.00
SM-E2-18	3,046,984.96	368,309.09	1,600.00
SM-E2-19	3,046,974.73	368,265.89	1,616.00
SM-E2-20	3,046,969.53	368,225.31	1,631.00
SM-E2-21	3,046,867.11	368,234.51	1,616.00
SM-E2-22	3,046,869.86	368,196.25	1,631.00
SM-E2-23	3,046,739.01	368,186.94	1,618.00
SM-E2-24	3,046,746.76	368,160.36	1,618.00
SM-E2-25	3,046,634.21	368,166.61	1,616.00
SM-E2-26	3,046,644.71	368,130.61	1,616.00
SM-E2-27	3,046,570.65	368,109.02	1,631.00
SM-E2-28	3,046,515.26	368,116.60	1,631.00

Source: CLG

Figure 18.15: Proposed Stage II Phase 3 Monitoring Plan (Preliminary)

19.0 MARKET STUDIES

The CLG mine produces high quality lead and zinc concentrates with low levels of deleterious products that can be processed by several different smelters around the world. The lead and zinc concentrates produced by the CLG mine are transported by truck from the mine site to the port of Manzanillo. The CLG mine expects to install a copper-lead separation circuit to produce a separate copper concentrate from higher copper grade mill feeds, which is expected to be operational in 2026.

The CLG mine currently has a short-term lead concentrate sales agreements and a long-term zinc concentrate sales agreement in place. The concentrate terms used for the CLG reserve design inputs and the GSI financial model are informed by existing agreements, together with historical, current, and expected future market terms.

19.1 Lead Concentrate

In the LOM Plan, the CLG mine lead concentrate is expected to contain between 3,200 and 8,800 grams per tonne of silver, which is considered a high silver bearing lead concentrate. Payable metals in CLG lead concentrate include lead, silver, gold, and copper.

Sales of lead concentrate are currently tendered on a periodic basis under contract terms of approximately six to twelve months, although this may change with future contracts. Based on the volume of lead concentrate production, it is assumed that lead concentrate sales will continue to be tendered on a periodic basis. Consequently, CLG sales of lead concentrates are expected to be influenced by the spot treatment charge for high silver lead concentrate more than by benchmark terms. The economic analysis assumes a treatment charge of $60 per tonne, which reflects management expectation of long-term spot treatment charges for CLG's high silver lead concentrate considering long-term historical averages along with current and expected market terms.

Other assumptions for terms lead concentrate are generally aligned with current industry norms.

19.2 Zinc Concentrate

The Company has an agreement in place to sell all its zinc concentrate to a joint venture partner at market-based prices and benchmark terms. The CLG operation leaches its zinc concentrate to reduce fluorine to below an agreed level. The LOM Plan assumption is that all zinc concentrate will continue to meet the agreed upon quality specifications and will, therefore, be sold to the joint venture partner at market terms.

Payable metals in CLG zinc concentrate include zinc and silver.

The economic analysis assumes a treatment charge of $220 per tonne of zinc concentrate, which reflects management expectation of long-term zinc benchmark treatment charges considering long-term historical averages along with current and expected zinc concentrate market dynamics.

Other assumptions for terms for zinc concentrate are aligned with current industry norms.

19.3 Copper Concentrate

The CLG mine expects to start producing a separate copper concentrate product beginning in 2026. Payable metals in CLG copper concentrate include copper, silver, and gold.

The economic analysis assumes a copper concentrate treatment charge of $80 per tonne and a refining charge of $0.08 per pound of payable copper, which reflects management expectation of long-term copper treatment charges considering long-term historical averages along with current and expected copper concentrate market dynamics.

Other assumptions for terms for copper concentrate are aligned with current industry norms.

19.4 Contracts

The CLG mine has the required contracts in place to support ongoing operations, which include contracts for the supply of power, key consumables, explosives, camp and catering services, security services, personnel transportation, and concentrate transportation and handling. The individual contracts and agreements vary in duration and commercial terms and are negotiated and renewed periodically to ensure their terms are competitive. Based on management experience, contracts are aligned with typical industry terms.

The LGJV has an offtake agreement with its 30% shareholder, Dowa. Under that agreement Dowa has the right to purchase 100% of the zinc concentrate produced by the CLG mine, at rates reflecting the then prevailing market price based and industry benchmark terms. The LGJV also has a substantially fixed rate power supply agreement with a renewable power supplier with a term ending in September 2025.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Introduction

The following subsections outline the key environmental and social aspects of the Cerro Los Gatos Mine operations. As per Mexican environmental impact regulations, baseline studies were carried out to characterize the environmental and social impacts related to the mine operations. An overview of the environmental and social components is presented herein. Key laws and regulations applicable to the operations are summarized in Section 20.2, including the key environmental permits secured to date and pending permits required for the LOM Plan, as described in this TR.

Highlights of the environmental, permitting and social or community impact components are as follows:

- Mexico has established environmental laws and regulations that apply to the development, construction, operation and closure of mining projects, and the Company has management systems in place to ensure ongoing regulatory compliance. Of particular importance are the air, surface water and groundwater quality monitoring programs. An environmental compliance report is submitted annually to the Mexican environmental authority.
- Certain revisions have been made in 2023 to Mexican laws affecting the mining sector (see Section 3.0). This TR reflects the Company's understanding of the laws that affect the Company in light of these revisions, including environmental permitting and compliance. It should be noted that the current and revised laws are subject to ongoing interpretation and that in many instances the revised laws require implementing regulations, which have not yet been promulgated, for their impact to be assessed.
- The Company believes that it has, or has duly applied for, all material permits. The company further believes it is in material compliance with all key obligations required by such permits. No material violations have been identified or fines have been received.
- The Company has developed strong social programs and liaises with the communities and government. The Company has teamed with government agencies on construction projects that support the health and welfare of the local population, such as the construction of a lined solid waste landfill, multiple water treatment facilities for wastewater and drinking water, and pilot programs to introduce more productive agricultural crops. There were 50 social programs conducted in 2023.
- A conceptual closure strategy was presented in the closure plan (Tetra Tech, 2018) that was submitted to the Mexican environmental authority. The closure cost estimate was revised at the end of 2023 based on updated disturbance areas and rates and was estimated at $16.4 M.

It is noted that information provided in the 2019 Technical Report (Tetra Tech, 2019) and original supporting documents for the environmental permitting were used by the QP as a primary sources of environmental baseline information. The QP also reviewed of 2023 environmental monitoring data, social information from 2023 and 2024, and the most recent closure cost estimate.

20.2 Regulatory, Legal and Policy Framework

The Mexican Constitution contains provisions for the regulation of natural resources in Article 27, which is regulated by the Mexican Mining Law for mining activities, including exploration, mining, and processing activities. The interpretation of the law, updated in 2023, into a regulation is pending.

The primary environmental law is the General Law on Ecological Equilibrium and Environmental Protection (*Ley General de Equilibrio Ecológico y Protección al Ambiente*, “LGEEPA”), which provides a general legal framework for environmental legislation. Key related Federal statutes include:

- General Law on Sustainable Forest Development (*Ley General de Desarrollo Forestal Sustentable*)
- General Law on Wildlife (*Ley General de Vida Silvestre*)
- National Waters Law (*Ley de Aguas Nacionales*)
- General Law on Climate Change (*Ley General de Cambio Climático)*
- General Law on the Prevention and Comprehensive Management of Waste (*Ley General para la Prevención y Gestión Integral de los Residuos*)
- General Law of Environmental Responsibility (*Ley General de Responsabilidad Ambiental*)

The Secretariat of Environment and Natural Resources (*Secretaría de Medio Ambiente y Recursos Naturales*, “SEMARNAT”) is the main regulatory body in charge of enacting and enforcing environmental regulations throughout Mexico, including the issuance of environmental permits. SEMARNAT is comprised of multiple autonomous agencies with administrative, technical, and advisory functions, which are summarized in Table 20.1.

Table 20.1: Overview of SEMARNAT Agencies

SEMARNAT Unit	Function
National Water Commission (*Comisión Nacional del Agua*, "CONAGUA")	Responsible for the management of national water, including issuing water concessions, water extraction permits (both surface water and groundwater), and wastewater discharge permits.
National Forestry Commission (*Comisión Nacional Forestal*, "CONAFOR")	Mandate is to develop, support, and promote the conservation and restoration of Mexico's forests.
Attorney General for Environmental Protection (*Procuraduría Federal de Protección al Ambiente*, "PROFEPA")	Monitors compliance with environmental regulations and responsible for the enforcement of environmental law.
National Commission for Natural Protected Areas (*Comisión Nacional de Areas Naturales Protegidas*, "CONANP")	Oversees the management and protection of 192 protected areas throughout Mexico.
The Safety, Energy and Environment Agency (*Agencia de Seguridad, Energía y Ambiental*, "ASEA")	Regulates and oversees industrial safety and environmental protection, and integrated waste management specifically with respect to hydrocarbon-related activities.
General Directorate of Environmental Impact and Risk (Subsecretaría de Gestión para la Protección Ambiental con la Dirección General de Impacto y Riesgo Ambiental, "DGIRA")	Responsible for issuing environmental permits and authorizations.

SEMARNAT oversees the Official Mexican Standards (*Normas Oficiales Mexicanas*, "NOMs"), which are mandatory technical regulations that establish the rules, specifications, and/or requirements. Key NOMs relevant to the mining operations are listed in Table 20.2.

Table 20.2: List of Official Mexican Standards Applicable to the Company's Mining Operations

NOM	Description
NOM-001-SEMARNAT-2021	Wastewater discharge into national waters and national lands
NOM-003-CONAGUA-1996	Water extraction and well construction
NOM-011-CNA-2000	Water conservation and evaluation of water availability
NOM-035-SEMARNAT-1993	Methodology to measure total suspended particles in air
NOM-043-SEMARNAT-1993	Maximum permissible limits of solid particles from fixed source emissions
NOM-045- SEMARNAT-1996	Maximum permissible limits for opacity of exhaust from vehicles
NOM-052-SEMARNAT-2005	Identification, classification and lists of hazardous waste
NOM-054-SEMARNAT-1993	Procedure to determine hazardous waste segregation
NOM-059-SEMARNAT-2010	Flora and fauna protection, including at-risk species
NOM-080-SEMARNAT-1994	Maximum permissible limits for noise from vehicle emissions
NOM-081-SEMARNAT-1996	Noise emissions
NOM-083-SEMARNAT-2003	Urban solid waste management
NOM-087-SEMARNAT-1995	Medical (biological and infectious) hazardous waste management requirements
NOM-120-SEMARNAT-2011	Environmental protection specifications for mining exploration activities
NOM-138-SEMARNAT/SS-2003	Hazardous waste management requirements
NOM-141-SEMARNAT-2003	Project, construction, operation, and post-operation of tailings dams
NOM-147-SEMARNAT/SSA-2004	Soil metal contamination management and remediation
NOM-157-SEMARNAT-2009	Mine waste management plans
NOM-161-SEMARNAT-2011	Special handling waste and management plans

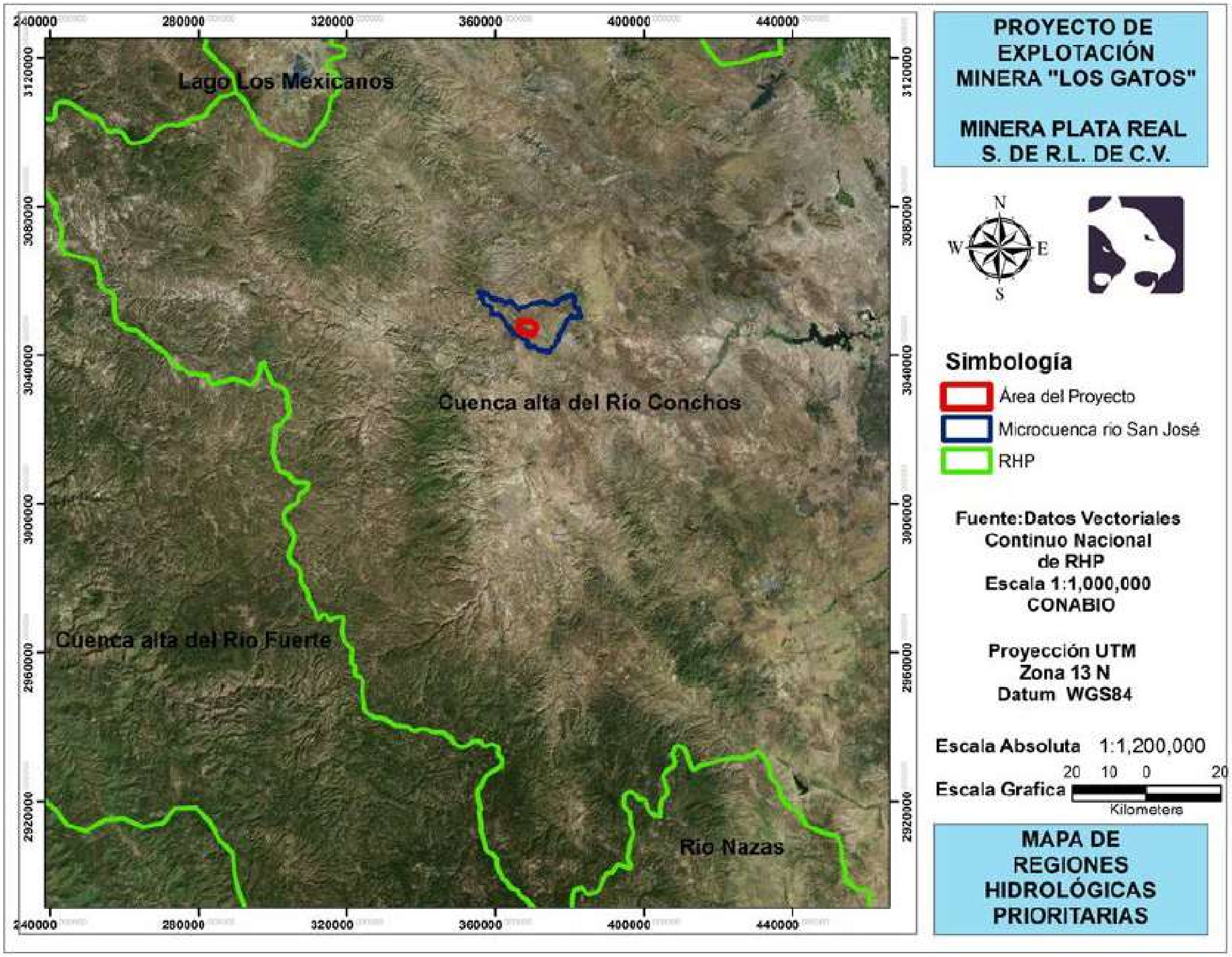
The mining operations of CLG Mine are also regulated by the following regulations and legal orders:

- Political Constitution of the Mexican United States
- National Development Plan 2018-2024
- State Development Plan 2022-2027
- Satevó Municipality Development Plan 2021-2024
- General Territorial Ecology Program
- Important Hydrological Regions designated by CONAGUA

20.3 Environmental Studies

The environmental studies for CLG were based on a combination of publicly accessible data from the Mexican government and from new baseline studies carried out by a consultant contracted by the Company. The government data were primarily obtained from the National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía [INEGI]), which is responsible for collecting and disseminating information characterizing the nation's territory, resources, population and economy.

Environmental Impact and Safety Advisors (Asesores en Impacto Ambiental y Seguridad, S.C. [ASI]), carried out the baseline studies to comply with the Mexican requirements to submit an Environmental Impact Statement (Manifestación de Impacto Ambiental [MIA]) and to prepare a Risk Study to obtain environmental authorization of the proposed project. The purpose of baseline analyses was to characterize the components, environmental impacts and mitigation measures, as well as to predict future scenarios within the area of environmental influence (the Environmental System or ES). The ES was defined as the San José River hydrologic microbasin, which covers an area of 20,225.98 ha (202.3 km^2). The mine is located within the Sierra Madre Occidental Physiographic Province, particularly within the Sub-provinces of the Great Plateau and Canyons of Chihuahua, and Sierras and the Plains of Durango, which cover the greater part of the ES. The ES and the Project Area (PA) are shown in Figure 20.1. The hydrologic region is shown in the green outline, the San José River microbasin in blue and the PA in red.



Source: Minera Plata Real, 2017, NI 43-101 Technical Report Feasibility Study of the Cerro Los Gatos Silver-Zinc-Lead Deposit, Los Gatos Project – Chihuahua, Mexico, Volume 8: Environmental and Permitting: Document prepared by Tetra Tech, Document 114-910117-REP-R0008-00, January 6, 1191 p.

Figure 20.1: Mina Cerro Los Gatos and the San José River Hydrologic Microbasin

20.3.1 Climate and Precipitation

Within the ES, the climate is classified as dry climate "B" and semi-dry climate "BS1", and the climatic subtypes "semi-arid semi-warm and mild semidry." The area has an average temperature of 17.5°C and an average rainfall of 433.2 millimeters (mm), according to the nearby climatological stations.

The first weather station onsite was installed in 2013 and was operated non-continuously through 2018, when it was replaced with a new weather station, which has operated continuously.

20.3.2 Geology

Geologically, the ES exhibits seven surficial lithological units plus soils, with 92.05% of the total surface area covered by acidic rhyolite-tuff, conglomerates, andesite, and granodiorite; alluvial cover of 7.06%; and two lithological units that cover 0.89% (marble and latite).

20.3.3 Soils

A variety of soil types are present in the ES, including Leptosols, Chernozem, Luvisol, Fluvisol, Kastañozem and Regosol; however, the baseline studies indicated that the natural grassland has been affected by the establishment of introduced grass for the extensive cattle raising industry.

Cattle grazing generates soil compaction and eventually soil erosion. According to estimates, the ES has an average erosion of 10.06 t/ha/year, which is considered light, although there are areas with moderate erosion. The PA has an estimated average soil erosion of 7 t/ha/year, which is considered light erosion.

20.3.4 Regional and Site Hydrology

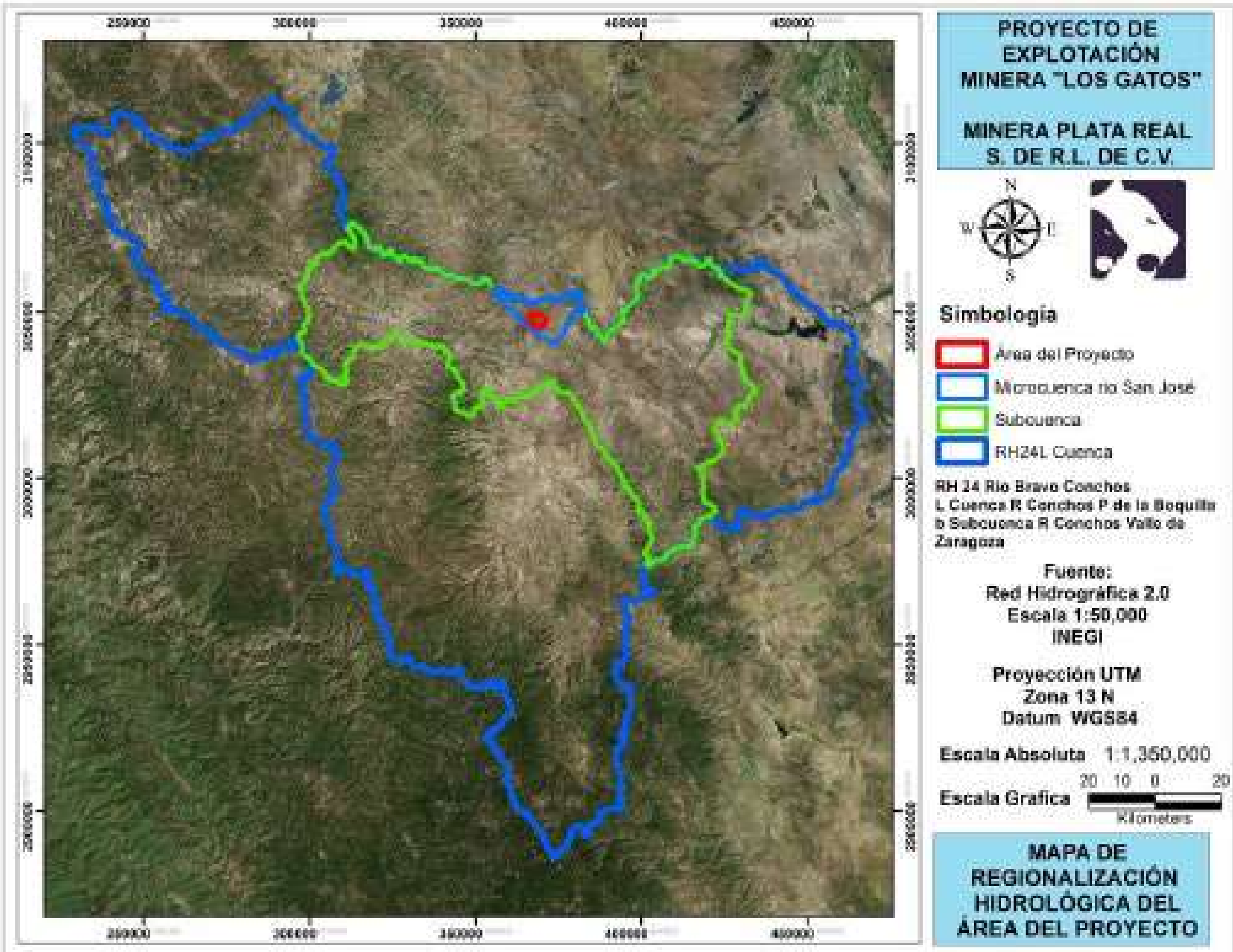
20.3.4.1 Surface Hydrology

The Los Gatos mine is located in the hydrologic region 24 Rio Bravo Conchos, with headwaters in the mountains west of the PA and has a discharge to the Atlantic Ocean (Figure 20.2). The hydrologic region is shown in the blue outline and the basin in green.

Source: Minera Plata Real, undated pdf file, filename, Apendice A_CONAGUAG_Hidrologia.

Figure 20.2: Hydrologic Region Boundaries

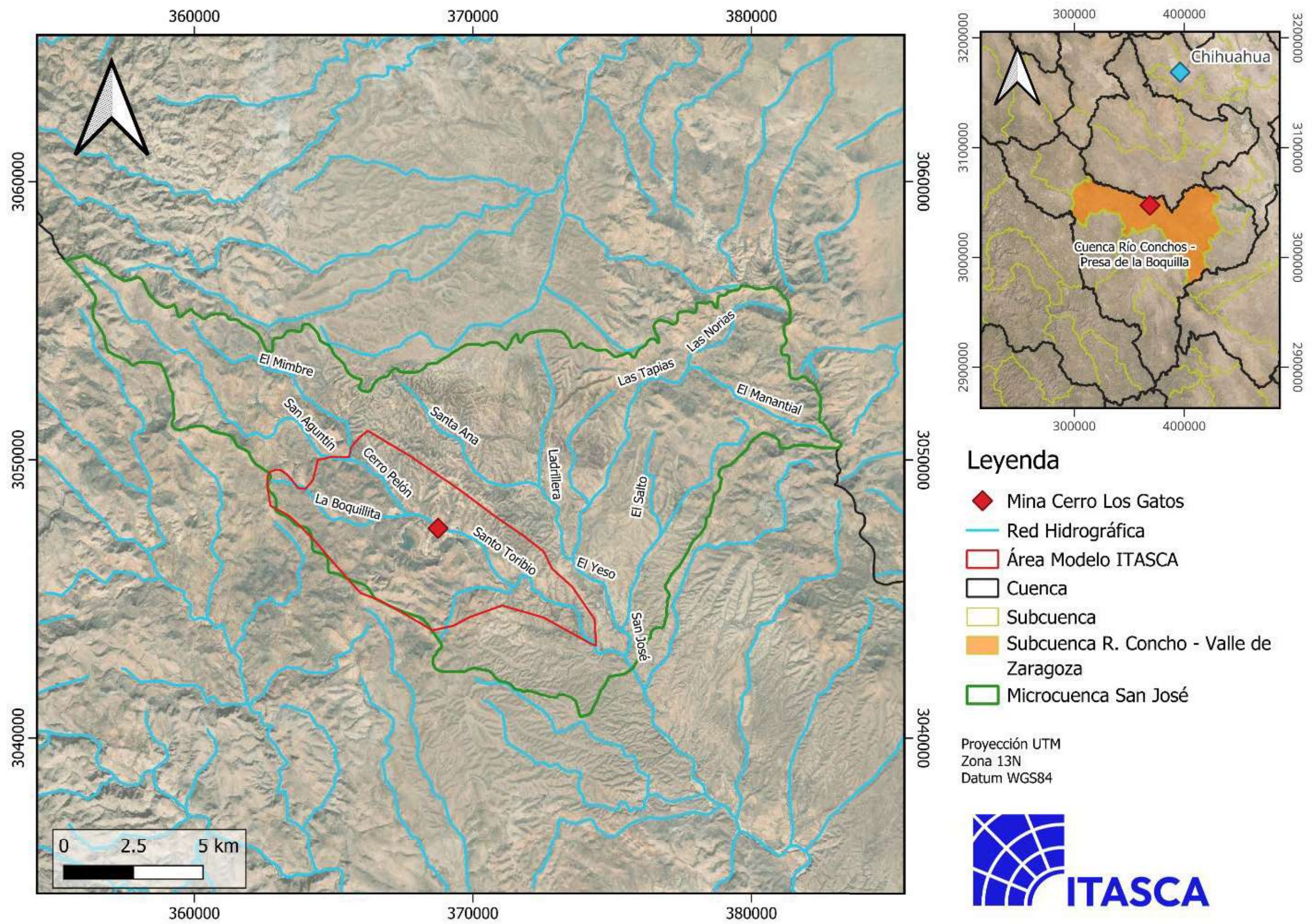
The hydrologic basin boundaries are closely tied to the area of influence of the mining operations. The hydrologic limits include the Bravo-Conchos region, the Rio Conchos-Presa de la Boquilla basin, the Río Conchos-Valle de Zaragoza subbasin, and the San Jose River microbasin (Figure 20.3). The hydrologic region is shown in the blue outline, the basin in green, microbasin in light blue and the PA in red.



Source: MPR, 2017

Figure 20.3: Hydrologic Regional Map

The mine is within the sub-basin of Santo Toribio, which is within the San Jose River microbasin. There is intermittent surface water that is associated with the Santo Toribio, El Yeso and El Salto arroyos, which are indicated as permanent streams in the INEGI cartography; however, these arroyos are typically dry due to low precipitation rates in the area and high infiltration rates of arroyo sediments, except during the rainy season of June to October. The evapotranspiration rates exceed the precipitation rates. As shown in Figure 20.4, the Santo Toribio arroyo passes through the mine site with the direction of surface water drainage is to the southeast. This arroyo receives only stormwater runoff in its reaches upgradient of the mine water discharge point.



Source: MPR, 2024, pdf file: *ITASCA-PPT-4022.019.16-Modelo conceptual hidrogeológico-R1.pdf*

Figure 20.4: Santo Toribio Sub-basin

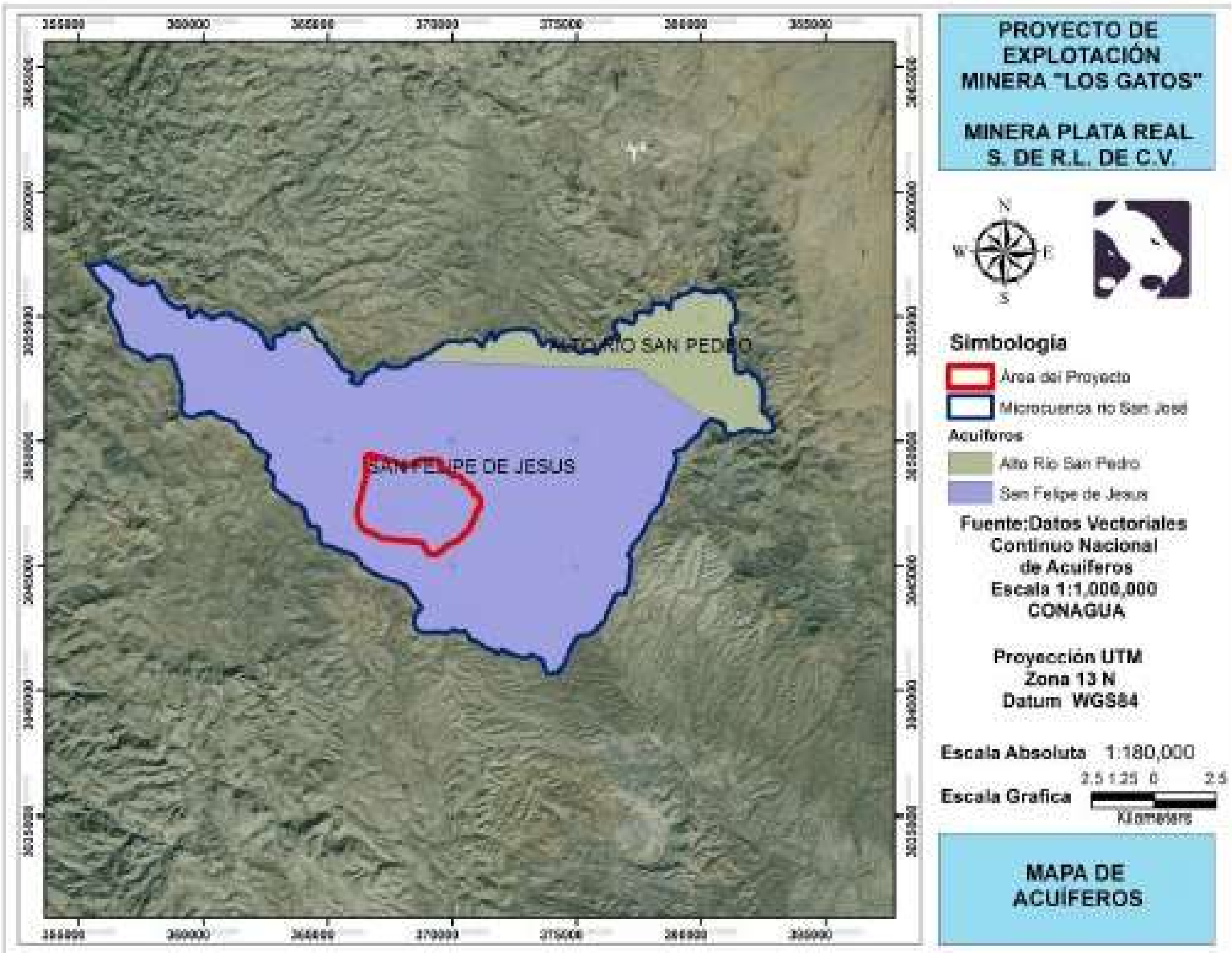
The hydrologic parameters within the ES were estimated to be a precipitation volume of 100.651 cubic hectometers per year (hm^3/year, which is the equivalent of 1 M cubic meters per year), with an evapotranspiration of 81.551 cubic hm^3/year, and a drained volume of 13.531 hm^3/year, which means an infiltration of 5.564 hm^3/year.

No existing discharges of industrial effluents that could contribute to high levels of contaminants to surface water were identified within the ES. The ES is a rural area where irrigation agriculture is very limited, and the discharge of municipal wastewater is limited to discharge from the town of San José del Sitio, located near the limits of the San José River microbasin and downstream from Los Gatos mine operations.

The impacts of the mining operations to the surface hydrology were identified as the TSF construction and alteration of runoff and infiltration patterns due to the TSF and other mining infrastructure. Applicable mitigation measures were included in the mine design and approved by the environmental agency.

20.3.5 Hydrogeology

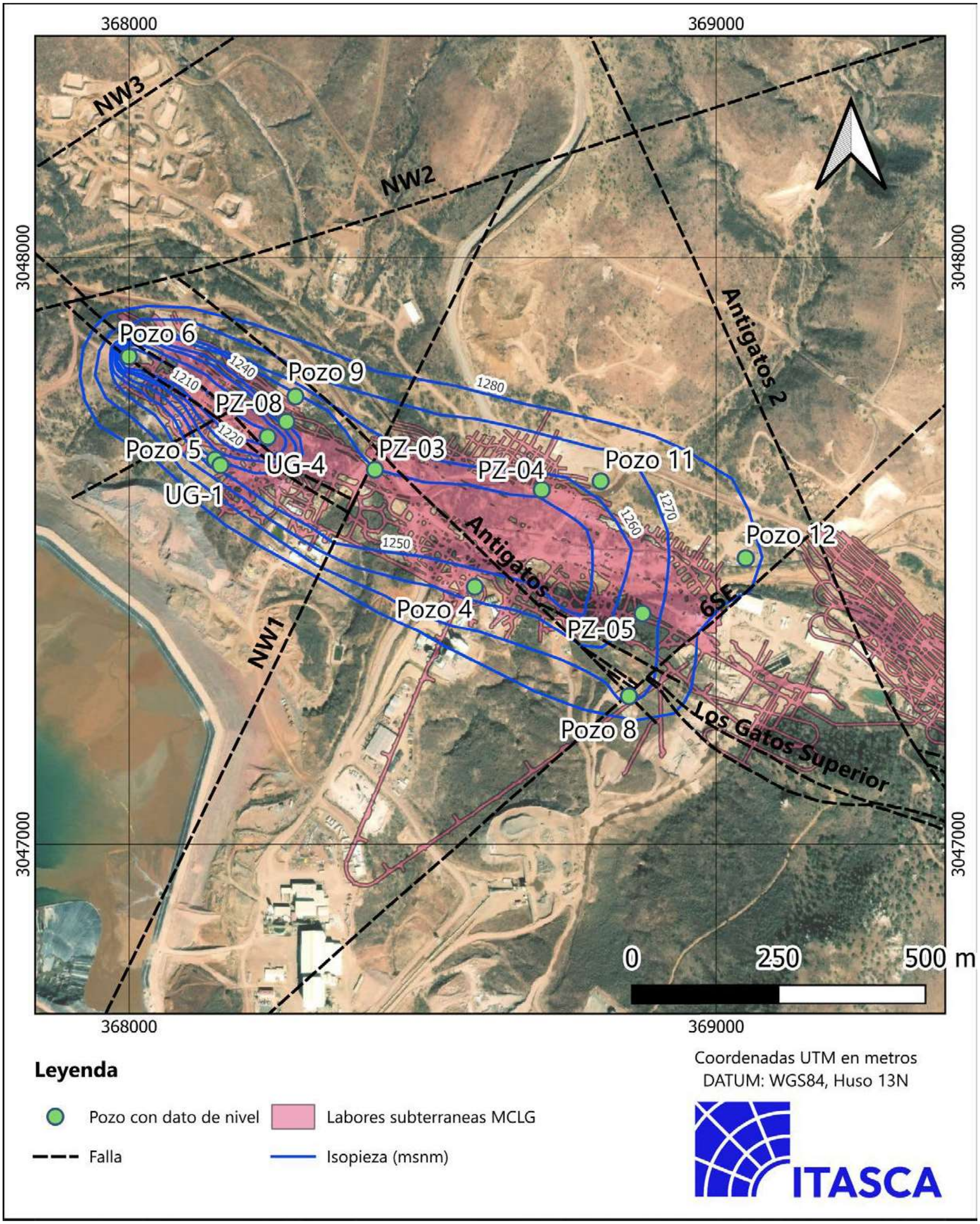
The ES is underlain by the Upper San Pedro River and San Felipe de Jesús aquifers, as shown in Figure 20.5. The Upper San Pedro River aquifer has a deficit (that is, overdraft) of 14,391,280 m^3/year (CONAGUA, 2020a). The San Felipe de Jesús aquifer has an availability of 16,695,276 m^3/year of groundwater (CONAGUA, 2020b).



Source: MPR, 2017

Figure 20.5: Aquifer Designations Delineated by CONAGUA within the Rio San Jose Microbasin

According to studies conducted on site, groundwater occurs in perched zones, which are isolated and disconnected from the main aquifer, encountered 3 m below ground surface. In the area of the TSF, the alluvium thickness ranges from 0 to 12.5 m, with thickness increasing to the north and southeast. In the deeper aquifer (the "San Felipe de Jesús" aquifer) groundwater occurs at depths between 67 and 245 m. Part of the reasoning that the shallow and deeper groundwater zones are disconnected hydraulically is that the deeper groundwater has a higher temperature than the shallow groundwater. The pre-mining groundwater flow direction was northwest to southeast at a gradient of 0.025. The current groundwater gradient has been impacted by the mine dewatering system, and with a depression along the Los Gatos Fault (Figure 20.6).



Source: MPR, 2024, pdf file: *ITASCA-PPT-4022.019.16-Modelo conceptual hidrogeológico-R1.pdf*

Figure 20.6: Groundwater Contour Map, March 2024

The San Felipe de Jesús aquifer is not classified as vulnerable to contamination, based on Annex 2 of NOM-141-SEMARNAT-2003, which describes the method used to evaluate the vulnerability of an aquifer to pollution.

According to the "Public Register of Water Rights" (REPDA) database of the National Water Commission (CONAGUA 2016), the nearest water source users identified within the microbasin are one groundwater user located approximately 3 km from the PA and one surface water user located just upstream of the PA.

The mining operations include groundwater extraction (dewatering). About 2% of total groundwater extracted is recirculated in a closed circuit and is used in the mine camps and offices. Approximately 12% of the excess water released to the environment goes through a sediment recovery process that removes sediments by settling and reduces the temperature of the water to meet discharge standards.

A more detailed discussion of the hydrogeology of the underground mine is provided in the Mining section of this report.

20.3.6 Flora

The biotic environment of the ES, based on INEGI data, consists of three regimes: 93.93% of the area is covered by a primary natural pasture and secondary shrub vegetation; 4.48% is covered by agricultural and livestock activities; and 1.59% of the total area is covered by a secondary shrub vegetation of oak forest.

According to the baseline studies, the presence of a microphytic (small-sized plants) desert scrubland was found within the PA. The field surveys identified 95 species of flora within the ES and 84 species in the PA. The microphyllous desert scrubland was similar in the ES and the PA. Only one species found in both areas was listed in the NOM-059-SEMARNAT-2010. The species is a walnut tree (Juglans major), which is categorized as threatened.

Modifications to the vegetation is one of the environmental impacts from the mining operations. An area of 390.37 hectares currently covered by microphyllous desert shrubs has, or will be, affected by mining infrastructure, mining, mineral processing and/or other activities.

Within the PA, the vegetation generally does not correspond to pristine ecosystems due to extensive livestock activity and the establishment of introduced grasses to support cattle production.

20.3.7 Fauna

Baseline surveys of fauna within the ES indicated the presence of 14 species of herpetofauna; 99 species of avifauna; 36 species of mammal fauna; and 9 species of ichthyofauna. Twenty-one of these species are listed under the Mexican regulation NOM-059-SEMARNAT-2010 as protected species, while in the PA 88 species were identified to include 10 of herpetofauna, 46 of avifauna, 26 of mammal fauna, and 6 of ichthyofauna. Although the protected species were not specifically identified in the PA description of the environmental permit submission, it is assumed that protected species found in the ES are, or could, be present in the PA.

The wildlife is another component of the ES that has some environmental impacts. The surface disturbances by mining activities could cause loss of habitat and result in migration of fauna to outside of the PA. To minimize this potential impact, mitigation efforts are part of the environmental activities carried out by the mine personnel.

20.3.8 Biodiversity

The ES does not have a high biodiversity rating, nor are there protected areas. The region has been impacted by overgrazing and by agricultural activities.

20.4 Waste Management

Mining wastes generated by the operations include tailings, sediments removed from the dewatering system and waste rock, are managed under a plan approved by the Mexican environmental agency. The operations also produce hazardous and regulated wastes that are managed in accordance with the applicable waste regulations. The Company is certified as a large hazardous waste generator. The Company has updated its waste generator registration.

Analytical testing and characterization of wastes were carried out by a laboratory certified by the Mexican authority.

20.4.1 Hazardous and Regulated Wastes

The mining operations generate hazardous wastes such as oily water, used oils, grease and lubricants, batteries, aerosol cans, fluorescent and mercury vapor lights, and contaminated soils. A hazardous waste management plan authorized by SEMARNAT is in place. There is a storage facility for the temporary storage of hazardous wastes pending pickup and off-site disposal by a third-party. Quantities generated annually are reported to SEMARNAT.

Additional regulated, non-hazardous wastes generated by the mining operations include wood, scrap metal, used tires, construction debris and organic domestic waste. The mining operations contract with a recycling company for wood, plastics and scrap metal debris, and organic food wastes are composted onsite. There is no onsite landfill, so any additional debris or trash is handled by a third party for off-site disposal.

20.4.2 Sediment Removed from the Dewatering System

The sediment removed from the mine dewatering system includes sediment from mine water that has been in contact with the underground workings and is captured in the underground ponds. The mine water is conveyed to the sedimentation pond at the surface where a flocculate is added to remove the sediments, which are subsequently pumped to the TSF.

The sediments are characterized annually per NOM-157-SEMARNAT-2009 as a mining waste and have been determined to be nonhazardous and not acid-generating.

20.4.3 Tailings

The metallurgical process produces tailings that are subsequently neutralized to adjust the pH; to oxidize cyanide to a non-toxic form; and to precipitate metals. This process results in non-hazardous tailings water. Neutralized tailings are stored in the TSF or diverted underground as cemented paste backfill.

The tailings have been characterized as hazardous per the Mexican environmental authority classification system (NOM-141-SEMARNAT-2003). The tailings are acid-generating. None of the regulated metals were indicated to exceed the static leach test. The Company also carried out a preliminary kinetic testing program that was not required by Mexican regulations but would be considered an international industry standard practice. The kinetic testing results indicated that the tailings had a low possibility of acid leaching or metals leaching.

In 2023, the paste tailings were characterized using Mexican regulatory criteria. Paste tailings were characterized as hazardous for toxicity and corrosivity and as potentially acid-generating based on Mexican environmental testing criteria. The cemented tailings samples did not exhibit hazardous or potentially acid-generating characteristics after the cement solidified.

The tailings water was also tested in 2023. The water in the TSF exceeded the permissible limit for copper for surface water discharge but as such water remains contained within the TSF and is not discharged, the mine is in compliance with environmental discharge regulations.

20.4.4 Waste Rock

The majority of waste rock generated from the mining operations is used for CRF and placed in the underground mine. About 80% of the waste rock is used as fill, whereas the other 20% is placed in a surface waste rock facility.

The waste rock was characterized as nonhazardous per NOM-157-SEMARNAT-2009. The waste rock is non-acid-generating and the static leach test did not show any leached metals above the regulatory standard. The Company also carried out a preliminary kinetic testing program that was not required by Mexican regulations but would be considered an industry standard practice. The kinetic testing results indicated that some of the lithologies had the capacity for acid leaching, but the lithologies were estimated to be of low proportion within the entire volume of waste rock to be generated over the LOM. The acid generation potential appeared to be of limited duration. Thus, for closure the long-term production of acid was believed to be manageable and should be monitored further to evaluate the need for special management. In particular, waste rock stored at the surface would require monitoring to detect potential future acid drainage production.

In 2023 a composite waste rock sample was characterized as potentially acid-generating. After the addition of cement, the CRF did not exhibit hazardous or potentially acid-generating characteristics after the cement solidified.

20.5 Environmental Monitoring

Environmental monitoring and reporting to the environmental agency are required in Mexico. Monitoring is conducted on a routine basis for the key environmental media: air, surface water, groundwater, noise and wastes. Table 20.3 lists the various monitoring stations where the Company routinely collects samples. The frequency of sampling is established in environmental permits (see Section 20.7). In addition to the monitoring of environmental media listed above, the site personnel are trained to alert the environmental department for the presence of wildlife. During 2023, there were about 60 rescue and relocations with the majority of the species being rattlesnakes.

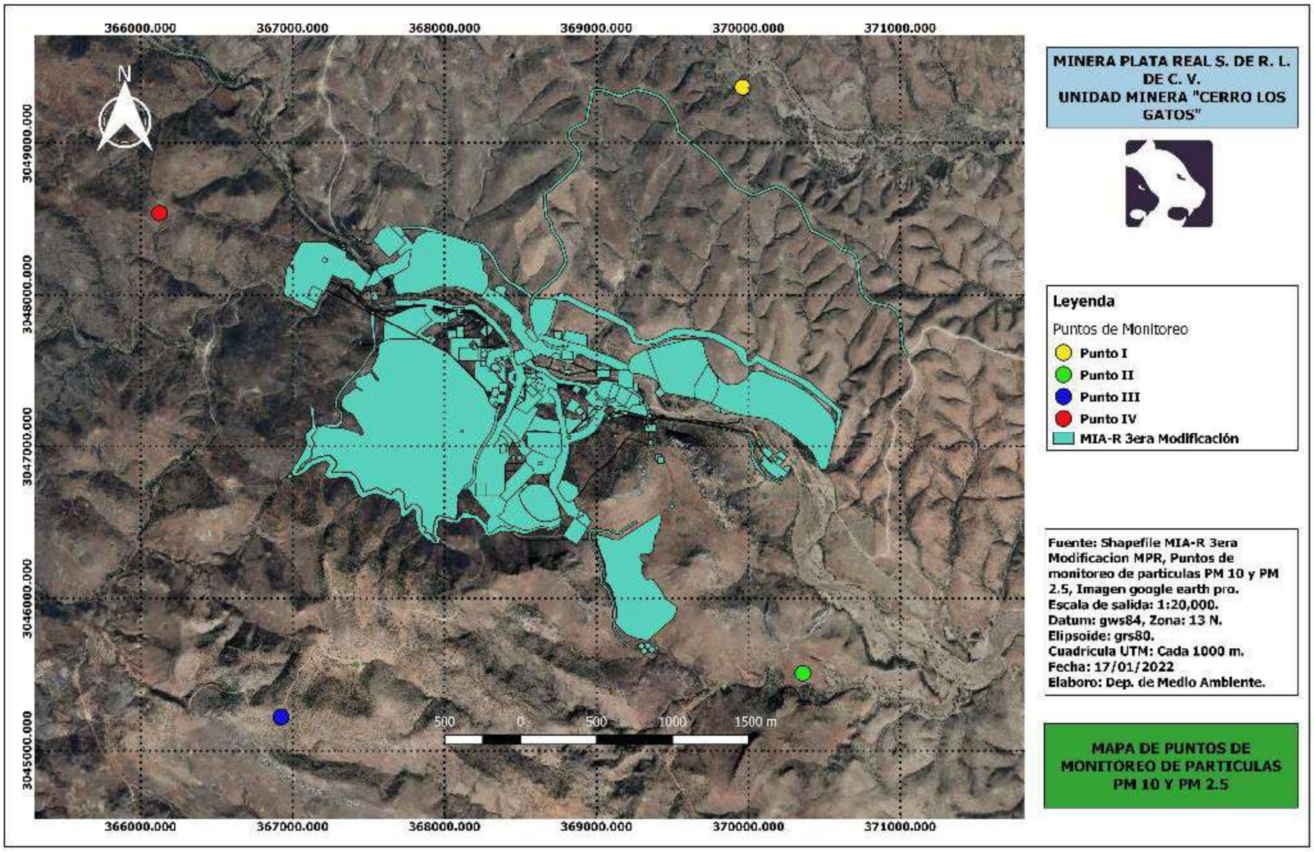
Table 20.3: Monitoring Requirements at Cerro Los Gatos

Item	Applicable Regulation	Number of Monitoring Locations	Frequency per Year	Comments
Groundwater	NOM-127-SSA1-1994	5	4	Grab samples from continuously pumping wells. Wells El Tule and La Cueva are upgradient of the mining operations and monitoring points Well San Jose, Arroyo Santo Toribio, La Laborcita, Boca del Rio and Los Veranos are downgradient. Analytical results from wells El Tule and San Jose are the only monitoring results that are required to be sent to SEMARNAT; all other results are for internal control
Wastewater	NOM-001-SEMARNAT-1996	11	4	Grab samples
SIRALAB pond	NOM-001-SEMARNAT-1996	2	4	24-hour samples
Waste treatment plant ponds	NOM-001-SEMARNAT-1996	1	12	Ponds associated with the four domestic wastewater treatment plants
Groundwater	NOM-001-SEMARNAT-1996	3	4	Wells 1, 2, and 3, which monitor upgradient and downgradient shallow groundwater around the TSF
Wastewater	NOM-003-CONAGUA-1996	4	4	Treatment plants 1, 2, 3 and 4 (domestic wastewater)
Perimeter noise	NOM-081-SEMARNAT-1994	4	1	Daytime and nighttime monitoring
Sludge from waste treatment plants	NOM-004-SEMARNAT-2022	4	1	Sludge associated with the four domestic wastewater treatment plants
Perimeter air quality	NOM-035-SEMARNAT-1993	4	4	PM-10 and PM-2.5 size total suspended solids in air
Mining wastes	NOM-052-SEMARNAT-2005; NOM-141-SEMARNAT-2003; NOM-157-SEMARNAT-2009	3	1	Sediments from dewatering system, tailings, and waste rock
Emissions from fixed sources	NOM-043-SEMARNAT-1993	5	1	Solid particulates in air emissions from fixed sources (laboratory)

In addition to the reporting requirements for specific media, MPR submits an annual summary of the volumes of fuel consumed and wastes generated, such as air emissions, hazardous wastes and contaminated soils.

20.5.1 Air Quality Monitoring

Air quality monitoring services are contracted by the Company and are performed by a certified laboratory to help maintain compliance with Mexican regulations. There are four perimeter stations in the PA where total suspended particles, PM10, and PM2.5 are sampled on a quarterly basis by the contractor (Figure 20.7). The second quarter 2023 test results for PM2.5 total suspended particles at all four monitoring stations around the TSF and the Punto 4 second quarter 2023 PM10 result exceeded Mexican environmental standards The third and fourth quarter monitoring events were cancelled, resulting in the PM2.5 annual average exceeding the permissible limit and one station exceeding the PM10 permissible limit in 2023. The exceedances are likely related to the precipitation patterns, and the second quarter is the driest period of the year. The first quarter 2024 results had one exceedance for PM2.5 at Punto 3; no other sampling event data were available for 2024 at the time of QPs review.



Source: Minera Plata Real, 2022, filename PLANO MONIT_PM10_PM2.5.pdf

Figure 20.7: Perimeter Air Quality Monitoring Locations

Only the onsite laboratory has fixed source emissions. The emissions generated by the laboratory include dust and gases, which are controlled by dust collectors and gas scrubbers. Emissions are monitored in five locations (Figure 20.8). The 2023 and 2024 test results complied with Mexican environmental standards.

Source: Minera Plata Real, 2022, filename PLANO EMISIONES ATMOEFERA.

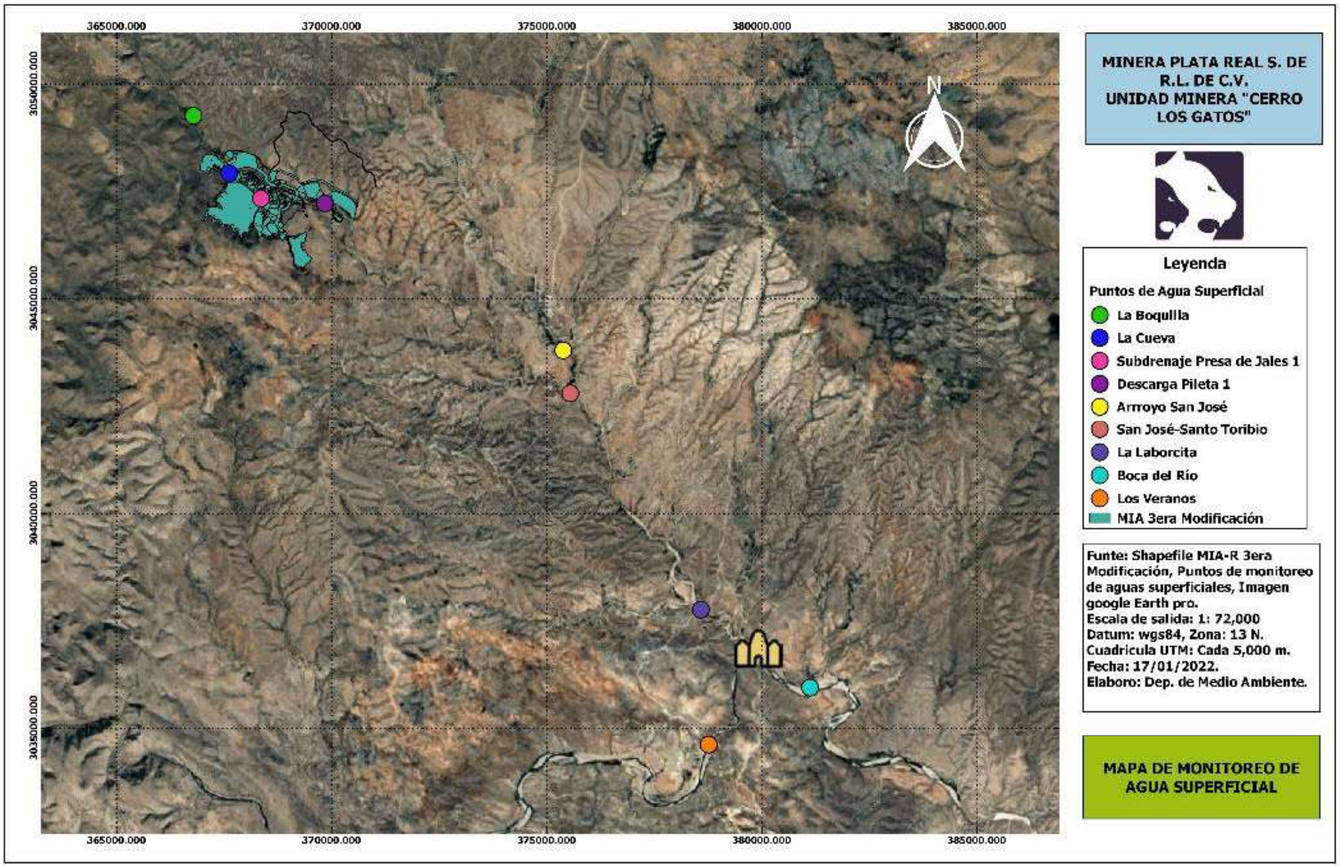
Figure 20.8: Locations of Fixed Emission Sources

20.5.2 Water Monitoring

Baseline studies were carried out to characterize the water quality in the region prior to operations and additional sampling is carried out to monitor whether the mining operations have impacted surface water or groundwater.

20.5.2.1 Surface Water Quality Monitoring

Surface water quality is monitored at upstream and downstream locations to the mining operations (see Figure 20.9). Regional surface water flow is from the northwest to the southeast; however, within the PA the surface water flow direction is determined by the local topography and can vary widely from the regional direction. At the mine site there are no permanent surface water bodies; stream flows are only temporary during the rainy season. The 2023 and 2024 test results available at the time of this report were in compliance with Mexican surface water discharge standards except for one sample collected at Boca del Rio that exceeded the standard for total suspended solids.



Source: MPR, 2022, filename, Mon_Agua_Superficial.pdf.

Figure 20.9: Surface Water Monitoring Locations

Additional sampling points, such as the TSF subdrain, are included in the monitoring program for internal control purposes but are not surface water bodies subject to Mexican surface water discharge standards. Additional sampling results are included as appendices in the annual report submitted to SEMARNAT.

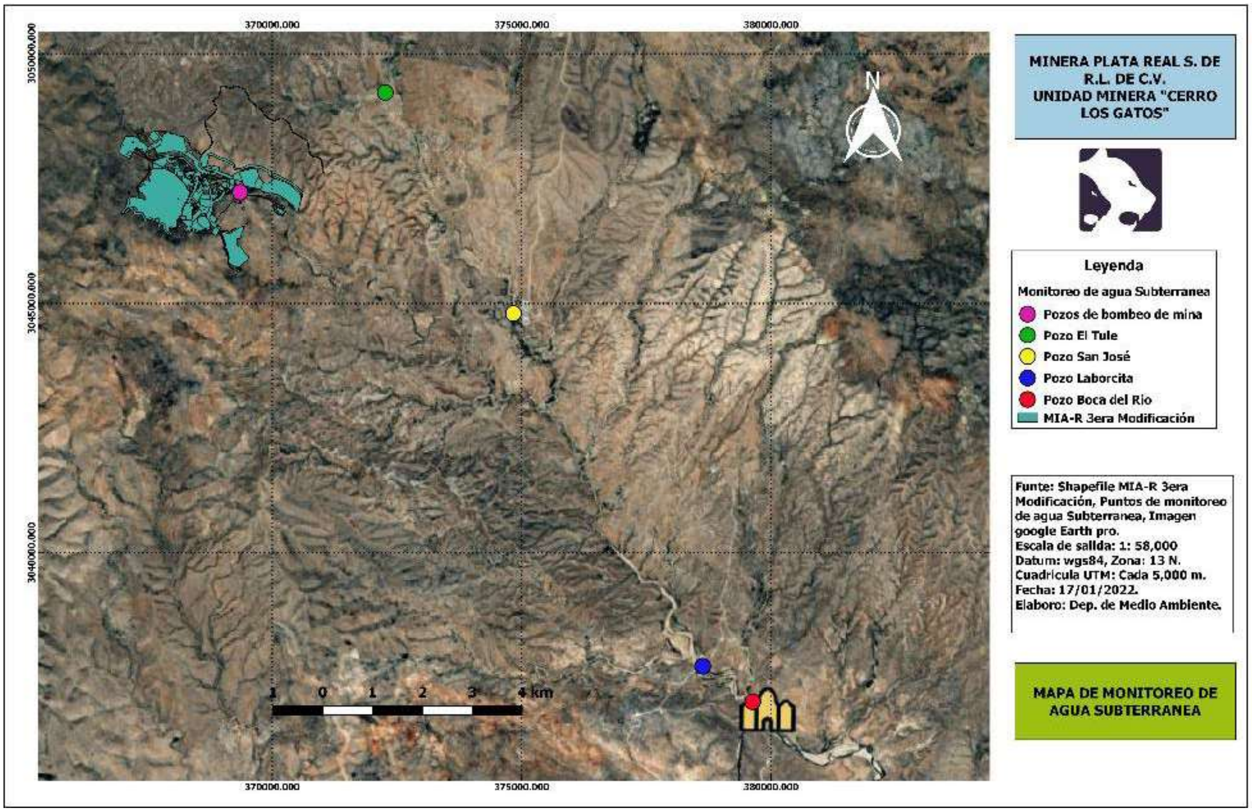
20.5.2.2 Groundwater Quality Monitoring

The groundwater quality described in the 2019 Technical Report (Tetra Tech, 2019), indicated that water samples from dewatering and monitoring wells in the area did not exceed any of the standards established for water use or water discharge, with the exception of exceedances of total coliforms in samples from most wells, fecal coliforms in samples from two wells, and total trihalomethanes in samples from three wells. The QP notes that total coliforms are not typically found in groundwater and could be indicative of a migration of contamination due to a poor well seal at surface. Trihalomethanes are likely related to water treatment, and, thus, are not a significant concern. The water was reported to have a neutral pH, low-to-moderate total dissolved solids, and did not exceed any of the other regulated compounds.

Three groundwater monitor wells (Pozo 1 Aguas Abajo, Pozo 2 Aguas Abajo and Pozo 3 Aguas Arriba) are used to monitor shallow groundwater around the TSF. The shallow groundwater monitor well results comply with Mexican standards for surface water (NOM-001-SEMARNAT-2021) except multiple samples from all of the monitor wells had exceedances of total suspended solids.

The Company currently monitors groundwater quality at the cooling tower that receives mine water combined from the dewatering wells (wells 1 to 17); and supports the communities by monitoring the El Tule well, the San

José well, the Laborcita well and the Boca del Rio well. The well locations are shown in Figure 20.10. The 2023 results for the dewatering wells indicated exceedances of nitrates, arsenic, iron, lead, zinc, fluoride, total and fecal coliform and pH based on the Mexican standards for drinking water (NOM-127-SSA1-2021). The 2023 groundwater quality test results for the community wells indicated exceedances for total and fecal coliform, fluoride, and nitrates based on Mexican standards for drinking water (NOM-127-SSA1-2021). The results have been communicated it to the ejido leaders so that appropriate mitigations may be undertaken. No monitoring results were available for 2024 at the time of the QP's review.



Source: Minera Plata Real, 2022, filename Mon_Agua_Subterranea.pdf.

Figure 20.10: Groundwater Monitoring Well Locations

Mine water was sampled in 2023 from the 263 and 361 ramps in the underground mine. One sample at the 361 ramp exceeded the permissible discharge limit for lead. The mine water is managed via the sedimentation pond prior to discharge.

20.5.3 Wastewater Treatment and Monitoring

Four wastewater treatment plants are operated to treat domestic wastewater. All of the treatment plants have had exceedances in 2023 samples compared to regulatory discharge standards. One or more samples showed exceedances for arsenic, cyanide, fecal coliform, biological oxygen demand, chromium, oils and grease, lead, and total suspended solids. The treated wastewater is used to irrigate green areas at the mine.The arsenic concentrations are related to naturally-occurring arsenic in groundwater used as supply water for the mine camps. For the other constituents, mitigation measures have been taken to meet discharges standards. Cyanide and lead were detected in the wastewater treatment plant at the process plant, which includes wash water from work overalls and clothing. Steps are being taken to redirect the wastewater to the TSF. The dosage of chemicals added to treat fecal coliforms has been increased to reduce the fecal coliform levels. Biological oxygen demand analysis has been updated to chemical oxygen demand. Oil and grease traps were installed to mitigate those constituents associated with the dining facilities. Total suspended solids, which are linked to the presence of oil and grease, will be mitigated with the traps.

The QP notes that mitigation measures have been implemented to avoid future exceedances associated with the wastewater treatment plants.

20.5.4 Noise Monitoring

A noise monitoring program is conducted quarterly, and the mine site perimeter noise complies with the Mexican regulation (NOM-081-SEMARNAT-1994).

20.6 Water Management

Aspects of the site water management include the following:

- The mine dewatering system provides a water supply for the water demands, such as process makeup water, dust control, drill supply and potable water.
- Contact water includes groundwater recovered in the underground mine. The contact water is collected and treated in sedimentation basins. Mine water temperature varies between 50 and 70°C. A cooling pond and lined channel with energy dissipators are used to lower the water temperature prior to discharge to the environment. MPR has contracted with a specialist to evaluate the efficiency of the cooling system and to develop options as needed to meet MPR’s internal water temperature surface water discharge standards. Mexican has not established an applicable standard for the mine water temperature.
- 12% of total excess water from the mine dewatering system is discharged to the environment after removing excess sediment and lowering the temperature.
- Process water is recovered and returned to the system with some losses to evaporation associated with the process water recirculation.
- Impacted water from contact water and the process is captured and returned to the process after treatment.
- Diversion channels are used to reduce the amount of contact water that requires management. Diverted non-contact water is conveyed around the mining operations and discharged into the Santo Toribio arroyo.
- Most wastewater from the mine site is treated in the four wastewater treatment plants and then used to irrigate green areas at the mine site with the exception of wastewater from the laundry and the dining room of the processing plant discharged directly into the TSF.
- Water quality is documented through monitoring programs.

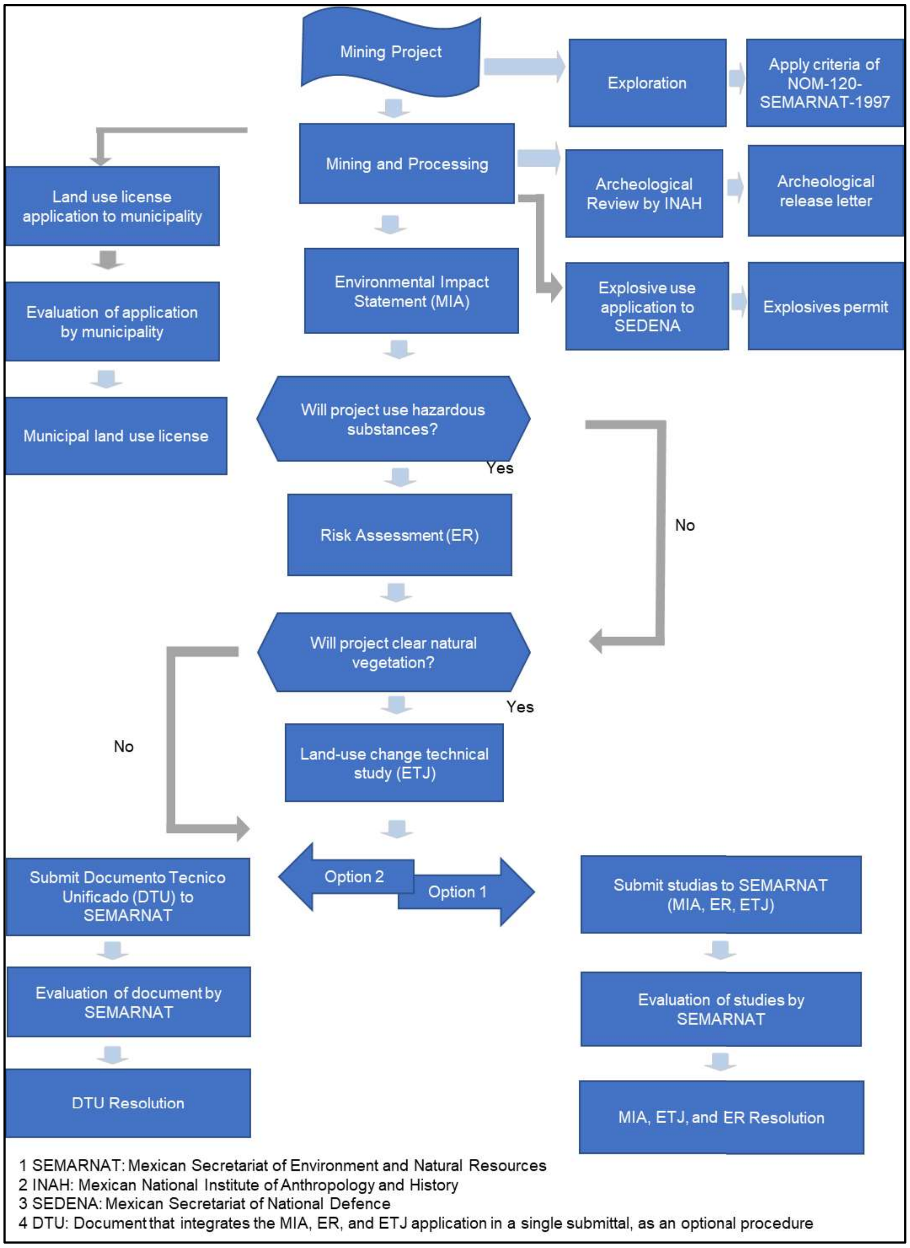
20.7 Permitting

The main environmental permits required in Mexico for mining and exploration are the *Resolución de Impacto Ambiental* for Construction and Operation (“RIA”) and the Change in Land Use Permit (“CUS”) that are issued by SEMARNAT. Four primary documents must be submitted for the approval and issuance of these permits by SEMARNAT:

- Manifestación de Impacto Ambiental (“MIA”): Mexican Environmental Impact Assessment, including MIA Modifications for any changes to project planning and operations. MIAs describe potential environmental and social impacts that may occur in all stages of the operation as well as the measures to prevent, control, mitigate or compensate for these impacts
- Estudio Técnico Justificativo (“ETJ”): Technical Justification Study for the Change in Land Use
- Estudio de Riesgo Ambiental: Environmental Risk Assessment
- Programa para la Prevención de Accidentes (“PPA”): Program to prevent accidents

Federal environmental licenses (Licencia Ambiental Unica, “LAUs”) are issued, which set out the acceptable limits for air emissions, hazardous waste, and water impacts, as well as the environmental impact and risk of the proposed operation.

Figure 20.11 summarizes the environmental permitting process for the authorization of mining operations in Mexico.



Source: CLG

Figure 20.11: Overview of Environmental Permitting Process for Mining Operations in Mexico

The mine has authorization for its current operations with the exception of the operation of the fluorine leach project and operation for the personnel camp sewage treatment plant.

The Company has submitted a modification of the environmental license based on the addition of the fluorine leach process. The environmental agency requested that the Company submit additional information to resolve discrepancies in the digital files related to the disturbance footprints. All required documentation in respect of the modification was submitted in May 2024. While there is no certainty on when or if the amendment will be successful, the rejection of this project would not be expected to materially impact economics of the CLG operation. This issue is not considered by the QP to be a material risk to the operation of CLG Mine.

Los Gatos submitted a permit application in 2019 for a sewage treatment plant that treats sewage from the personnel campsite. CONAGUA has acknowledged receipt of the application but has yet to respond with actions regarding the permit. MPR filed a legal action (Juicio de Amparo) before a Federal Court requesting the Court to order CONAGUA to resolve MPR's request, based on the time that has passed since the application was filed and the lack of response from CONAGUA. CONAGUA acknowledged the facts with the Court and subsequently the Court ordered CONAGUA to issue a resolution on MPR's application. A resolution is expected to be issued in the near future. There remains some risk that Los Gatos could face a fine related to the operation of the sewage treatment plant without an approved permit. CONAGUA has indicated that depending on whether the water quality of the treated water meets permissible limits, the mine could be fined or the treated water may be disallowed from use for irrigation. In this case, Los Gatos has the mitigation option of diverting treated water to the TSF, which is a permitted option for the treated water. This issue is not considered by the QP to be a material risk to the operation of CLG Mine.

CLG also awaits issuance of the permit associated with the use of the CONAGUA federal zone within the TSF footprint area. The Los Gatos Joint Venture owns the surface lands for the TSF and the mining concessions cover the TSF location. The TSF Federal land use application was submitted on time to CONAGUA and approved pending payment by CLG. The payment was submitted on time by CLG in October 2022. It is typical for the permit document to be issued two to three months following payment but the final, signed authorization has not yet been issued by CONAGUA. CLG legal personnel have indicated that their interpretation is that the permit approval will not be subject to any new criteria given CONAGUA has accepted the application and appropriate fees have been paid. The QP notes that there is a low risk associated with the authorization. If the regulator does not ultimately issue the final permit documentation, this could be considered material to the TSF operation.

In 2023 the Company submitted updates to the hazardous waste and the special waste plans to reflect increases in wastes generated by the mining operations.

The key existing permits are provided in Table 20.4.

Table 20.4: Environmental Permit Registry and Required Reports

Consecutive Number	Permit Type and Identification Number	Authorized Activity	Active From - To/ Validity	Reporting Requirements	Report Due Dates
ENVIRONMENTAL IMPACT ASSESSMENT AUTHORIZATIONS ISSUED BY SEMARNAT					
1	Regional Permit, Environmental Impact Statement (MIA-R) SGPA/DGIRA/DG/05121-2017	Implementation of site preparation activities, construction works, project management and exploitation activities, among others, on a surface of 211.084 Ha.	July 17, 2017, to July 17, 2041 (24 years)	Annual compliance and progress report; Environmental management program results	Due July 17 annually until 2041
2	First modification to authorized project	Expanded surface disturbance to permitted 268.84 Ha (increase: 57.76 Ha.) Five new infrastructure works.	March 15, 2018, to July 17, 2041	Included in reporting requirements for the MIA-R	
3	Second modification to authorized project	Increased surface disturbance of 325.84 (increase of 56.2408 Ha.) 34 new infrastructure works and extension of the surface disturbance.	November 28, 2018, to July 17, 2041	Included in reporting requirements for the MIA-R	
4	Third modification to authorized project	Increased surface disturbance of permitted 334.028 Ha. (increase of 8.942 Ha.) Five new infrastructure and extension of the surface disturbance.	June 01, 2021, to July 17, 2041	Included in reporting requirements for the MIA-R	
5	Fourth modification to the authorized project	Increase of surface disturbance and activities from 334.028 to 235.2178 Ha. To include the fluorine leach plant	March 17, 2017 (authorization from SEMARNAT is pending)	Included in reporting requirements for the MIA-R	

Consecutive Number	Permit Type and Identification Number	Authorized Activity	Active From - To/ Validity	Reporting Requirements	Report Due Dates
6	Environmental Impact Assessment, Individual Permit Mode (MIA-P) No. SG.IR.08-2017/251	Implementation of the surface disturbance and activities for construction, maintenance, and operation of the project named “Línea Eléctrica 115 KV Los Gatos”	September 04, 2017, to September 04, 2037 (20 years).	Activities reports	Report at the start of construction activities (2018) and at the end of activities (2020)
7	Environmental Impact Statement, Individual Mode (MIA-P) SG.IR.08-2018/097	Exemption from the submittal of the Environmental Impact Statement (MIA) for the expansion of the road from “San José del Sitio to Mina Los Gatos”	No expiration date, starting on May 04, 2018	None	
		FORESTRY PERMITS ISSUED BY SEMARNAT			
1	Technical Justification Study to change land use designation of Forestry Lands, surface area of 390.6972 ha No. SG.CU.08-2017/310	Removal of forest vegetation and organic soil from the specified surface area.	November 1, 2017, to November 1, 2020 (3 years) Extended to June 2022	Biannual advances and at mine closure	November and May annually from 2017 to 2022
2	Forest Germplasm Collection Permit No. SG.SF.08-2020/060	Permit to collect seeds of forest species in the region for restoration and reforestation purposes on degraded land areas.	No expiration date, starting March 11, 2020	None	
		WATER PERMITS ISSUED BY CONAGUA			
1	Concession No. 06CHI141265/24FADL16 for the discharge of impacted water from the ramp, speed bumps and deepening works from the “Cerro Los Gatos" mine	Discharge of mine water coming from the mine ramps for a volume of 8.0 l/s (note: discharge is based on a volume per time)	August 31, 2018, to August 31, 2028. Termination of the concession was requested in 2020. The concession is not needed because the water is not classified as wastewater.	Quarterly water quality report (SIRALAB)	Quarterly since 2018 until concession expires
2	Construction Permit No. 4494, Tailings Dam	Activities related to the construction and operation of the tailings dam No.1, to be built in four stages	January 18, 2019, to January 18, 2028 (9 years)	Notification for start and end of each stage. Monthly reports for the construction	From 2019 until the end of construction of the tailings dam (2028)

Consecutive Number	Permit Type and Identification Number	Authorized Activity	Active From - To/ Validity	Reporting Requirements	Report Due Dates
		with a total capacity of 7.47 Mm^3		advances of the dam	
3	Application for the permit for discharge of wastewater from three treatment plants that have been installed.	Permit to discharge treated water for irrigation of gardens and green areas.	The application was submitted to CONAGUA on September 7, 2019. To date the authority has not replied. It is possible that CONAGUA will be ordered to respond via legal proceedings.	None	Reporting requirements will be established in the approved concession document
AIR AND WASTE					
1	Approval of Individual Environmental License (LAU), No. LAU-CHIH-001-2019, which authorizes the installation and operation of the mining operations.	Installation and operation of mining operations and mineral processing plant	No expiration date, starting May 27, 2019, unless production is increased or beneficiation process changes or due to social reason	Annual Operations Report (COA)	Between April and July annually, starting 2019
1.1	Update of Individual Environmental License No. SG.CA.OB-2023/100.	Updated the Individual Environmental License because there were changes in the process, and increases in the equipment, wastes and emissions.	No expiration date, starting July 13, 2019, unless production is increased or beneficiation process changes or due to social reason.	Annual Operations Report (COA)	Between April and July annually
2	Registry of Hazardous Waste Management Plan No. 08-PMG-I-3405-2019	Registration with the General Direction of Integrated Management of Hazardous Materials and Activities (DGGIMAR-SEMARNAT). Updated in 2023 due to increased quantities of wastes.	From March 26, 2019, no expiration. Permit updated on September 18, 2023.	Annual Operations Report (COA)	Between April and July annually, starting 2019
3	Environmental Risk Study (ERA), No. 08-PMG-I-3405-2019	Submitted simultaneously with the MIA-R, and approved simultaneously.	From July 17, 2017. Updated August 4, 2023. No expiration however if there	None	

Consecutive Number	Permit Type and Identification Number	Authorized Activity	Active From - To/ Validity	Reporting Requirements	Report Due Dates
		Updated in 2023 due to the increased consumption of sodium cyanide in the mineral processing.	are changes a modification to the study is required.		
4	Registry as generator and notification of Management Plan of Special Waste Handling (RME) No. MPR-2273-19;	Registration as waste generator and authorization of the Special Waste Handling Management Plan (PRME) under the Department of Urban Development and Ecology (SEDUE) in the State of Chihuahua. Plan was updated	From April 09, 2019, no expiration	Annual waste generation report using the Emission Report Format (FRE)	Annually each April starting in 2019
5	Mining Waste Management Plan Registration No. 08-PMM-20223-2021	The Mining Waste Management Plan includes the management of waste rock, mine water sedimentation sludge and mining tailings.	"From June 21, 2021. No expiration.	None	
		MUNICIPAL PERMITS			
1	Soil Use License, official document No. 607	Municipal permit for the construction and installation of mining infrastructure for industrial use	Active from July 23, 2018, to July 23, 2023 (Five years). Expired.	None	Permit is expired; no additional construction is required at this time.
2	Authorization of the start of construction, official document No. 237/2018	Authorization from municipality for mining infrastructure construction	No expiration starting May 3, 2018	None	
3	Consent and official document No. 603	Consent related to mining infrastructure construction	No expiration, starting June 23, 2018	None	
4	Start of operations, official document No. 606	Approval of facilities by Municipal Civil Security and approval of start of operations.	No expiration, starting July 23, 2018	None	

20.8 Social Considerations

The following subsections include the relevant social and community aspects of the area of influence of the CLG Mine, located in the municipality of Satevó, Chihuahua. Various documents were reviewed, including the preliminary and baseline studies conducted in 2016 and 2018, and follow up studies conducted in 2021 and 2023. The review also included information regarding the identification of social risks, the mitigation measures that are part of the community relations plan, and the main agreements with the local stakeholders.

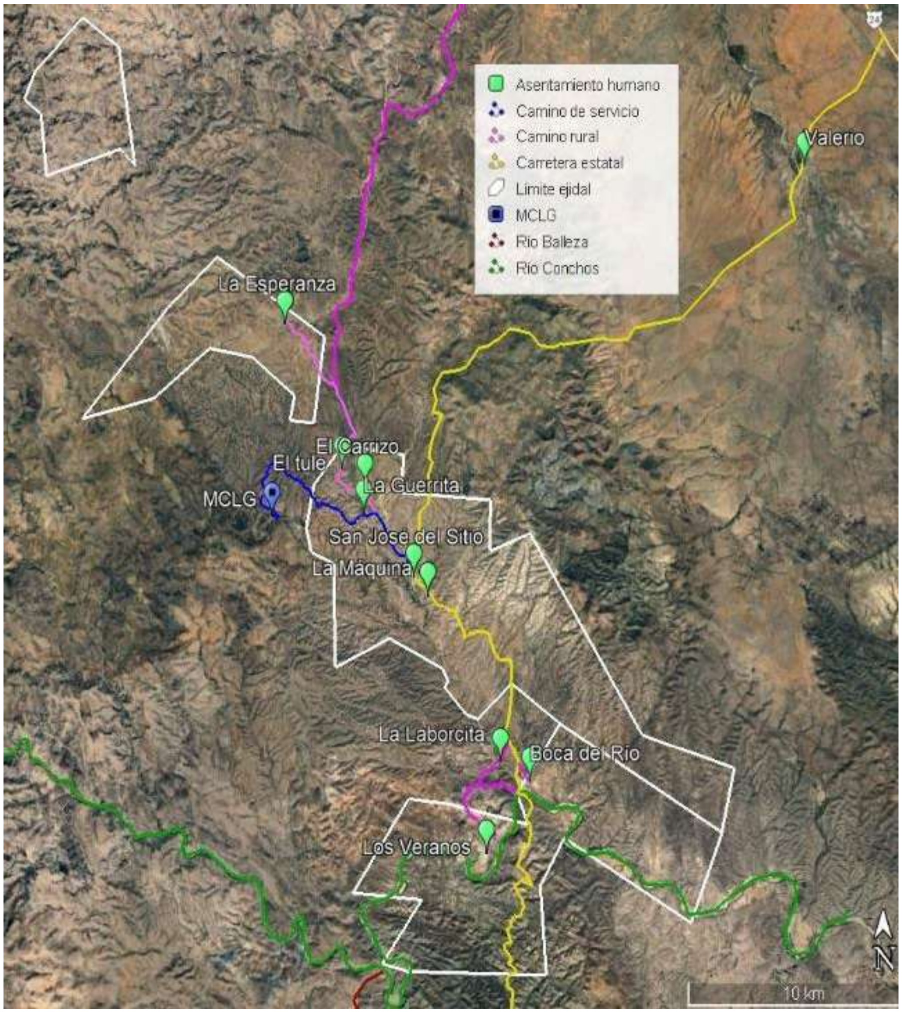
20.8.1 Social Setting

MPR carried out studies in 2016, 2018, 2021 and 2023. The baseline studies collected information from official statistical sources, as well as interviews and participatory workshops with stakeholders and the nine local communities in the area of direct influence. The estimated population by community based on data collected in October and November 2023 is presented in Table 20.5. The information obtained has been used to identify social impacts in the communities, as well as social risks for the mining operations. Prevention and mitigation plans were developed for the Community Social Management Plan.

Table 20.5: Estimated Population in the Area of Influence of Cerro Los Gatos Mine, 2023

<table>
<tr><td colspan="4">Within the Regional Environmental System (Area of Direct Influence)</td></tr>
<tr><th>Locality</th><th>Municipality</th><th>Distance to the project (meters)</th><th>Population</th></tr>
<tr><td>La Esperanza</td><td rowspan="6">Satevó</td><td>7,280</td><td>49</td></tr>
<tr><td>El Tule</td><td>4,655</td><td>75</td></tr>
<tr><td>El Carrizo</td><td>4,735</td><td>47</td></tr>
<tr><td>La Guerrita</td><td>4,728</td><td>8</td></tr>
<tr><td>San José del Sitio</td><td>7,190</td><td>312</td></tr>
<tr><td>La Máquina</td><td>8,046</td><td>32</td></tr>
<tr><td colspan="4">Outside the Regional Environmental System (Area of Indirect Influence)</td></tr>
<tr><th>Locality</th><th>Municipality</th><th colspan="2">Population</th></tr>
<tr><td>Los Veranos</td><td rowspan="3">Satevó</td><td colspan="2">97</td></tr>
<tr><td>La Laborcita</td><td colspan="2">10</td></tr>
<tr><td>Boca del Río</td><td colspan="2">88</td></tr>
</table>

San José del Sitio is the municipal capital. The communities in the San Jose hydrologic microbasin that are within the area of direct influence are shown in Figure 20.12.



Source: CLG

Figure 20.12: Location of Communities and Project

The area surrounding Cerro Los Gatos mine is predominantly rural, with livestock and agriculture being the main activities. Livestock is an activity that has economic and cultural significance for the municipality. However, since the opening of the Cerro Los Gatos mine, mining has become the predominant economic driver in the area. The 2023 social survey indicated that the infrastructure improvements and increase in employment in the recent past are attributed primarily to MPR.

The level of education in the area of influence has increased since the Company started operations.

Medical services in the region are concentrated in San José del Sitio, which has a community health center that is administered by the Mexican Social Security Institute (IMSS). Almost half of the population in the area of direct influence (44.6%) is not affiliated with any medical service and the other half has access to IMSS. About 20% of the population has access to private health services, primarily due to employment at the mine.

There is a significant water shortage in the towns of La Esperanza, El Carrizo, and El Tule. According to social perception derived from a survey of the populace, some of the main reasons for the shortage are the drought that prevails in the region, as well as the consumption of water by mine operations, which the community perceives as responsible for decreased flows in rivers and streams in the hydrologic micro-basin. Even though hydrologic studies have shown that the mining operations and the towns are in separate hydrologic microbasins and use different aquifers, this social perception has a reputational impact on operations.

San José del Sitio is the largest community and has the most community infrastructure, such as basic and upper secondary schools, health centers, and businesses for goods and services. In this sense, MPR, as part of its agreements with the ejido as well as initiatives of the Social Management Plan, has contributed to the maintenance of roads and streets of the town; construction of a potable water retention basin and expansion of the water system; maintenance of schools; and co-investment in the construction and renovation of the health center and the basic rehabilitation unit.

Social perception surveys were carried out in 2018, 2021 and 2023. In all surveys most localities perceive the presence of the mine as a benefit due to the generation of jobs, and the social co-investment that has been made in the community infrastructure within the area of influence. In the 2018 and 2021 surveys, the perception of impacts by MPR operations on water and air quality remained an issue, especially the perception that mining operations impact water availability in other hydrologic basins. The 2023 survey showed significant improvement in the community perception of water access and water quality.

At the time of the 2023 survey, the results indicated that no opposition that poses a risk to operations exists. Cattle-raising was found to be a traditional economic activity that is in risk due to poor practices such as overgrazing and impacts from climate change. The 2023 survey identified risks associated with the perception of mining activities causing damages to homes and the presence of anti-mining organizations. MPR has collaborated with local and state governments in a program that promotes agricultural products that have a higher land productivity value than cattle ranching, such as initiatives for production of pomegranates and prickly pear cacti. MPR also collaborates on environmental awareness events for students, provides a community plastics recycling program and organizes an event as part of World Water Day. The company actively seeks social programs that will be collaborative efforts with government entities that will share responsibility for the success of the project.

20.8.2 Social Management Plan

The MPR community relations team has had a presence in the region since the mineral exploration phase and has established communication and collaboration channels based on transparency of information dissemination. The Community Social Management Plan was developed as part of the 2018 social baseline study, and subsequently implemented in 2019 and 2020. In 2021, the socioeconomic indicators survey was updated to include components of human rights, gender perspective, and United Nations Sustainable Development Goals (SDGs). Comparison of the baseline 2018, 2021 and 2023 results identified the main risks and perceived impacts of the mine and were used to prepare the Community Relationship Model.

The objective of the MPR Community Relations Policy is to establish the guidelines for institutional work with the neighboring communities and for MPR social interaction projects. Projects are to promote social development, either independently or through strategic alliances with various institutions (public or private), that are aimed at addressing health, education, culture, and basic infrastructure, based on respect for human rights, beliefs, and local characteristics.

The Community Relations Model is based on methods to prevent and reduce risks and socio-environmental impacts and is used to develop the social and environmental investment portfolio. The main social impact risks and the mitigation measures that were in process in 2023 are presented in Table 20.6. It is noted that the table refers to two trade unions that work at CLG; one union is local (Satevó) and the other (Durán Mier-San Jose del Sitio) is a national union with a local section at CLG.

Table 20.6: Potential Social Impacts and Mitigation Measures, 2023

Interest / Potential Concern	Priority	Summary of Actions and/or Mitigation Measure
Conflict with the Durán Mier union that cannot be resolved with dialog and could affect operations	Very High	Project implemented to strengthen the union organizations. Monitor and update the stakeholders and risks quarterly.
Conflict with the Satevó union that cannot be resolved with dialog and could affect operations	High	Create dialog to communicate benefits for the union and communities due to mining. Demonstrate that the project to strengthen the union has organization tools that allow business improvements. Seek to emphasize the social investment for the community is not in conflict or affects union. Have accounting information on rates and payments to union. Create internal collaboration between areas in the mine for negotiations, and use it for rate negotiations to make positive impacts visible in the communities. Have sustainability reports, international standards compliance, etc. are available to stakeholders.
Critical water scarcity in the area generates the misperception that the decrease in the water level is due to consumption of water by the operations, and results in discontent on the part of the population.	High	Integrated water management project and reclamation in the recharge zone. Environmental Promoters Project. Prepare sustainability reports and communication strategies that demonstrate impact management and successful management. Communication to communities so that the results of the hydrogeologic study are understood, including putting it in the mine magazine.
The increased presence of criminal groups in the area has an influence on young people and causes security concerns.	Very High	Environmental Promoters Project. Entrepreneurship Project. Addiction Prevention Program, Youth Integration Centers (CIJ). Education projects. Community support project.
Direct and indirect economic impacts due to migration of workers and insufficient work opportunities for all of the population.	Low	Entrepreneurship Project. Education projects.
Dependency of livestock production on mine employment to supplement income could lead to impacts on livestock production and community relations.	High	Entrepreneurship Project. Integrated water management project. Environmental Promoters Project.
Social investment is impacted by weak ejido and trade union organizations that are apathic to collective projects.	High	Project of organizational strengthening of the unions and the community.
9Future incidents with the community of Valerio that will require the mine to negotiate compensation or agreements.	High	Community support project. Infrastructure projects. Health programs. Entrepreneurship Project. Monitor legal issues, bring the new governor to the mine and present the social management plan and compliance.
Failure of revegetation and cultivation projects due to weakness of livestock organizations (particularly in El Tule and La Esperanza) that are	High	No specific mitigation actions have been implemented.

Interest / Potential Concern	Priority	Summary of Actions and/or Mitigation Measure
apathic to collective projects and do not follow project requirements.		
Direct and indirect economic impacts due to community members moving out of area when geologic resources are reduced and the direct and indirect employment at the mine is insufficient for all of the population.	Very High	Entrepreneurship Project. Education projects.

In addition to the measures listed above, common action and mitigation measure across multiple risks cited above was in process during 2023:

- Create a communication strategy for periodic information about community relations management and achievements, seeking to integrate stakeholders in the leadership of these communications.
- Ensure due diligence for human rights and performance standards for social and environmental management.

MPR carries out continuous monitoring of identified social risks, as well as stakeholder mapping. The projects in the social and environmental investment portfolio have quantitative indicators of compliance for project controls. It will be necessary to develop qualitative or mixed indicators for the social impact of each project to monitor investment success.

The social and environmental investment portfolio is made up of programs such as nature (environment), health, education, organization (human rights), community activities, infrastructure, economic support of external programs, and union relations. Projects have included the construction of a lined landfill, a physical therapy center, a medical center, a wastewater treatment facility, childcare facility, solar energy for a water supply system, water storage facility and distribution improvement, drinking water treatment plant, and community center.

MPR seeks opportunities to share the financial investment and projects are carried out in conjunction with government and community entities. For 2023, a budget of US$833,558 was allocated by MPR for social programs.

MPR has established strategic alliances with stakeholders at the state, municipal and local levels for the execution of its projects. The infrastructure projects, for example, have been carried out collaboratively, using investments from government, communities, and MPR. Another area of collaboration is water management. Community committees have been formed to monitor wells, rivers, and streams in the area of influence, and those results are shared with the authorities.

MPR has established a community relations office in San José del Sitio, which allows for a permanent point of contact between the communities and the mine. A quarterly newsletter is distributed in the area of influence and with collaborators to report on MPR social, environmental, and governance projects.

20.8.2.1 Grievance Management

MPR has developed a mechanism for dealing with questions, complaints, and grievances for internal and external stakeholders using physical mailboxes and email. Information received is input into a database, including request type, the issuer, case description, the actions carried out and status.

In 2023 there were twenty-two complaints or suggestions received, with the most common related to preferential hiring of local labor and the adult education program. The community relations office has been responsible for resolving problems related to suppliers, in particular the two trade unions. The office provides a link between the Company's Human Resources department and is responsible for registering complaints and reporting on progress of results. Of the twenty-two submissions, 82 percent were resolved, and 18 percent were still open. In 2023 there were no problems with the community that would put the mine operations at risk. There were no security incidents or accidents that made the zone a security risk.

MPR has an internal grievance mechanism that is managed by a third party, and submittals can be made anonymously through a website and by telephone. The Human Resources office is in charge of internal issues.

20.8.2.1.1 Memberships

As part of the Company's commitment to sustainability and social responsibility, MPR has a Social Responsibility Committee with subcommittees of Business Ethics, Quality of Life of the Company, Connection with the Community, and Care and Preservation of the Environment. Among the main achievements are the following:

- Member of United Nations Global Compact since 2018, committing to disseminate and enforce 10 principles that focus on human rights, labor standards, the environment, and fighting corruption. The compact also promotes the Sustainable Development Goals in their operations, as well as in their community projects.
- Socially Responsible Company Distinction, medium-sized company category, awarded by the Mexican Center for Philanthropy (CEMEFI) in 2019.
- Socially Responsible Company Distinction, large company category, awarded by the Mexican Center for Philanthropy (CEMEFI) in 2020 and 2021.
- In 2024 the State Human Rights Commission awarded MPR the distinction of "Corporation Committed to Human Rights" for the first time.

20.8.2.1.2 Worker Safety

There is a worker job safety campaign that applies to all areas of the mine. All personnel entering the site must wear personal protective equipment required by the work area. The occupational safety area is responsible for providing inductions to all new personnel, as well as visitors. Two emergency drills are held annually.

The underground mining operations have a rigorous worker safety program with first aid stations and mine refuge stations. One of the stations has a ventilation shaft with a rescue capsule that can fit four persons and serves as a second means of emergency egress from the underground mine. Each station has capacity for 50 persons, including food and oxygen tanks.

The underground mine has hydration points and a cold room for relief from the high temperatures in the area as preventive measures from dehydration,

20.8.2.1.3 Security

In the mine vicinity, there is a permanent presence of organized crime; however, there have been no incidents within the operation. As part of the security measures, MPR has schedules for the transit of personnel and services, as well as a surveillance system provided by a third party.

The property is fenced, so access is restricted to employees, suppliers, licensed neighboring ranch owners and authorized visitors. The access point has rigorous screening protocols for vehicles entering or leaving the site, a video surveillance system, and continuous surveillance rounds are conducted in all site areas.

There is a military barrack inside the property which houses members of the Secretary of National Defense (SEDENA). MPR has an agreement with SEDENA to safeguard explosives products stored for use in the underground mine. The explosives are stored at surface in a fenced area that is patrolled 24 hours a day. MPR has donated the housing for SEDENA members and considers the SEDENA presence on the mine site as a strategic security measure.

20.8.3 Agreements with Stakeholders

MPR has a detailed and organized stakeholder relationships program. The mapping and analysis of stakeholders is continuously monitored and updated to identify and address possible social risks in a timely fashion. MPR has identified 67 stakeholders that are classified into eight groups: state and national authorities; local authorities; communities; institutions; government institutions; NGOs; trade unions, and other companies in the area of direct influence. MPR has carried out a number of construction projects in alliance with government agencies as part of the Company's social program.

The Cerro Los Gatos Mine is near the town of San José del Sitio, municipality of Satevó. Most of the region is ejido lands, which are communally held lands that combine communal ownership with individual use. Due to the proximity of the mine site with the San José del Sitio ejido, communication and collaboration channels were established with local authorities and key stakeholders in the region starting with the exploration phase. Agreements established with the local stakeholders are related to access to land associated with the 155 kV electrical transmission line, exploration areas and the access road to the mine. No issues associated with the agreements were noted by the QP.

To guarantee legal certainty and compliance with the agreements with the ejido of San José del Sitio, periodic meetings are held with the Agrarian Prosecutor's Office of the State of Chihuahua, in which MPR reports the fulfillment or progress of its agreements with the ejido, and the ejido can make any request or externalize any disagreement. The agreements are recorded in officially validated minutes by the Mexican authority and are shared with the ejido leadership boards as a means of transparency.

20.8.4 Commitments for Local Procurement and Hiring

MPR has established various commitments for the hiring of local labor, as well as in the acquisition of services during the life of the project, through agreements with stakeholders such as the ejidos San José del Sitio and La Esperanza, as well as with the Durán Mier-San José del Sitio and Satevó trade unions.

MPR has agreed with the parties that priority will be given to hiring non-specialized labor and services from the San José del Sitio and La Esperanza ejidos. Staff must be of legal working age and fulfill the job profile requirements. Contracting is subject to the requirements of the project stage. Local procurement employees are working in the underground mine, laundry, dining room, and offices.

The July 2024 employment statistics reported 951 direct employees. There are 165 employees who live in local communities; 527 employees live elsewhere within the state of Chihuahua; 248 reside elsewhere in Mexico; and 11 live outside of Mexico. Of the 165 local direct employees, 100 are male and 65 are female.

There have been participatory agreements since 2015 with the Durán Mier-San José del Sitio and Satevó unions to provide services such as personnel transport services, non-specialized machinery, and transport of aggregate materials. These agreements provide a source of employment for approximately 200 people. The community relations office is the link between the unions and the MPR, and it manages applications, agreements, and payments.

20.9 Mine Closure

A mine closure plan was prepared in 2017 as part of the environmental impact assessment and subsequently updated by Tetra Tech in 2018 as part of the feasibility plan. The last update of the mine closure cost estimate was at the end of 2023. The updated closure cost estimate shows that permanent closure activities will be completed by 2034 and that post-closure monitoring will be conducted starting in 2031 and ending in 2045 (15 years).

Mexican regulations require that a detailed closure plan be developed prior to the closure period for submittal to the environmental agency. The most recent closure plan update was submitted to the Mexican environmental authority in 2019 and the authority requires that an update of the plan be submitted one year prior to closure for review and approval.

20.9.1 Objectives

The closure objectives established for the Los Gatos mine include the following:

- Return the land to a stable condition that allows for beneficial reuse
- Comply with applicable environmental rules and regulations
- Ensure geochemical and physical stability of mining wastes that remain after closure
- Reduce potential impacts to surface water and groundwater
- Re-establish vegetation
- Reduce long-term maintenance requirements

20.9.2 Mexican Closure and Reclamation Regulatory Framework

Mine reclamation is addressed in Article 27 of the Mexican Constitution, which sets two broad standards for reclamation:

- The Nation retains ownership of the mineral rights at all times and concession holders only have rights to mined materials. As such, the Nation may establish the conditions of reclamation; and
- The Nation has an obligation to take mitigation measures to protect natural resources and restore the ecological balance.

Key regulations that apply to closure conditions are NOM-001-SEMARNAT-1996, NOM-138-SEMARNAT/SS-2003, NOM-141-SEMARNAT-2003, NOM-147-SEMARNAT/SSA1-2004, NOM-155-SEMARNAT-2007 and NOM-157-SEMARNAT-2009. The focus of each regulation is listed below.

- NOM-001-SEMARNAT-1996 establishes the maximum permissible limits of contaminants in wastewater discharges to surface water. This regulation is currently under review by SEMARNAT for possible modification.
- NOM-059-SEMARNAT-2001 establishes the criteria for inclusion, exclusion or change of risk category for species or populations of flora and fauna, through a method of evaluating their extinction risk.
- NOM-138-SEMARNAT/SS-2003 establishes maximum permissible limits for hydrocarbons in soil. Should limits be exceeded, an environmental and human health risk assessment may be conducted to determine remediation options.

- NOM-141-SEMARNAT-2003 establishes the procedures to characterize the tailings materials, as well as the specifications and criteria for characterization and preparation of the site, design, construction, operation and closure of the tailings facilities. The closed facility should not generate dust or impact runoff, and physical stability must be ensured.
- NOM-147-SEMARNAT/SSA1-2004 establishes soil remediation levels for concentrations of arsenic, barium, beryllium, cadmium, hexavalent chromium, mercury, nickel, silver, lead, selenium, thallium and vanadium. The regulation includes specifications for site characterization (such as the number of samples), a conceptual site model, and an alternative method to determine remediation levels based on a risk assessment.
- NOM-157-SEMARNAT-2009 establishes the requirements for mine waste management plans. Section 5.6 of the regulation describes the criteria for storage and final deposition of wastes. The criteria include identification of the site environment that could be impacted by operations; the engineering and maintenance specifications to maintain physical stability; control measures to avoid wind and water erosion; and measures to prevent acid drainage, leaching and runoff. Post-closure criteria include monitoring of water bodies that could be impacted and reforestation using stockpiled soil and native species of the area.

20.9.3 Land Use

It is expected that the land use post-closure will be natural habitat for wild flora and fauna, land for livestock grazing and areas of restricted access. The areas of restricted access will be the access to the underground mine workings and the reclaimed TSF. The waste rock storage facility will also remain after closure. Almost all other facilities and infrastructure are to be removed.

The plant nursery and the road improvements that would be useful to the community are expected to remain after closure.

20.9.4 Closure Activities

Closure activities described in the closure plan (TetraTech, 2018) include the following:

- Closure, decontamination and demolition of the mine facilities, metallurgical plant, infrastructure, and ancillary facilities
- Disposal of demolition materials
- Soil remediation
- Construction of storm water conveyances
- Placement of closure covers
- Revegetation
- Post-closure monitoring and maintenance

Conceptual closure activities are presented in the closure plan (Tetra Tech 2018) and key closure components are described below. The post-closure surface water runoff will be directed to the San Toribio arroyo.

20.9.4.1 Tailings Storage Facility

The TSF was designed based on the classification of the tailings as potentially acid-generating, but with the probability of metals leaching being low. The slopes are designed to require no change for closure. The tailings will be covered with compacted fill of one meter thickness, then revegetated. A system of surface water conveyances will be installed to promote drainage off the TSF. Channels will be protected with 15 cm of riprap.

20.9.4.2 Waste Rock Storage Facility

The waste rock storage facility is anticipated to be constructed with a slope of 2H:1V, and will need to be reconfigured for a more stable overall slope of 3H:1V. The final configuration will include surface water conveyances and a 0.3 m organic soil cover. The entire surface will be revegetated.

20.9.4.3 Buildings

Buildings and installations contaminated with cyanide and other chemicals will be decontaminated by rinsing. The rinseate will be sent to the TSF for evaporation.

The electrical infrastructure will be removed, and dewatering wells will be decommissioned and permanently closed.

Pond sediments will be placed in the TSF or an offsite solid waste landfill, depending on management requirements. Lined ponds will be perforated and filled, then regraded, covered and revegetated.

20.9.4.4 Underground Mine

Equipment, combustibles, and other chemical products stored underground will be removed prior to closure. Inert demolition debris will be used to fill the ramp for a distance of about 1080 m to 5 m above the predicted final water level elevation. The ramp will be sealed at the portal using a minimum of 3 m thickness of expanding foam that solidifies after emplacement. The portal will be reclaimed using organic soil and revegetation.

The ventilation shafts will be closed with reinforced concrete 0.45 m thick and a cap of at least three meters of fill. An organic soil cover of 0.15 m will be placed and revegetated.

20.9.4.5 Revegetation

It is anticipated that the seed mixes to be used will be composed of native plants. Native seeds are collected and used in the production of rootstock. The plant nursery currently can produce about 14,000 rootstock in a three-year period. As of April 2024, there were about 10,700 plants composed of 15 species available at the nursery. No areas have been reclaimed, but concurrent reclamation is an objective during operations.

20.9.4.6 Water Management at Closure

The mine water and/or a water supply well will be operated to provide for rinse water to decontaminate equipment for up to one year. Domestic wastewater from the mine camp will be treated and discharged. Forced evaporation will be used for two years at the TSF to reduce the volume of tailings water.

The subdrain tailings water and infiltration from the TSF will be recirculated for evaporation and subdrain piping eventually sealed if possible. If water quality discharge standards are met, then the tailings water can be discharged to the environment.

20.9.5 Post-Closure Monitoring and Maintenance

Post-closure monitoring and maintenance will be conducted for fifteen years. Restriction of livestock will be critical, and it is anticipated that the reclaimed area will be fenced. Physical inspections will be conducted to monitor reclamation success and stability of the closure designs. Success criteria will be developed for erosion, slope stability, water quality, and vegetation.

20.9.6 Closure Costs

The closure cost estimate is approximately MXN$328,300,000 or US$16.4 M (Table 20.7). The closure costs were updated in late 2023 based on rates provided by on-site contractors and inflation rates published by the Mexican federal government. The closure cost estimate update was based on the same closure methods as the 2017 closure plan, but the disturbance areas were updated based on new site photos, the quantities of demolition materials such as steel and concrete were updated based on as-built designs, and the unit rates for demolition and remediation were based on 2023 construction pricing. The unit rates were updated based on the haulage, demolition and removal rates in 2023 local contracts for construction projects.

Table 20.7: Closure Cost Estimate (December 2023)

WBS	Closure Item Description	Cost (MXN)
100	ROM Pad & Waste Dump	1,502,171
110	Warehouse (operation, scrap, hazard residues)	3,245,328
120	Top Soil Storage & Nursery	3,246,030
130	Access Road & Training Area	6,011,548
140	Camp (#1 and #2)	12,841,419
150	Main Gate & Core Shack Building	567,320
160	Refrigeration System Underground (CV1 & CV2), Escape Station & Cooling Tower- Surface Infrastructures	2,343,820
165	Underground Equipment (pumps, transformers and piping)	11,545,000
170	Fuel Station	430,994
180	Surface Infrastructures (parking area, gym, admin office, workshop for equipment and services, mine dry)	5,592,257
190	Power Grid (San Francisco de Borja-Mine Site and Internal)	2,269,433
200	Sediment Pond (liner and concrete)	2,178,565
210	Sewage Water Treatment Plant & Sludge Drying	244,080
220	Process Plant	92,369,890
230	Paste Plant & CRF Plant	28,369,982
240	Explosive Storage & Mine Portal	1,006,716
250	Surface Well Pumps	977,437
260	Tailings Storage Facility	46,037,766
270	Water Pipeline & Water Tanks	555,567
280	Exhaust Fan Underground - Surface Installation	3,939,243
290	Engineering, QA/QC, Management, Camp & Food	72,416,643
300	Monitoring Post-Operation (15 years)	30,600,000
	Total Estimate Cost Mining Closure (MXN)	**328,291,208**
	Total Estimate Cost Mining Closure (USD)	**USD16,414,560**

Source: MPR, excel file: *Estimate Cost Mining Closure - Cerro Los Gatos Mine_Rev F 2023 (1).xlsx*

The closure cost was prepared in Mexican pesos and converted to US dollars. The Mexican authority does not require a closure cost financial mechanism.

The QP notes that the closure cost includes nine months of water treatment for TSF pond water after the mill operations cease; however, a closure water balance has not been developed to support the estimated time or volume of water that requires treatment. The closure costs are based on closure activities that are conceptual.

20.10 Adequacy of Response to Environmental and Social Issues

The QP observes that there are well established processes and procedures for recording, acting upon and resolving environmental and social issues as they arise. Like any process, success lies in attention to issues as they arise, accurate record keeping with assigned responsibilities and commitments to resolution dates wherever possible throughout the life of any issue until appropriately addressed to the satisfaction of regulators and/or stakeholders. Although some issues were observed with the sewage treatment plants 2023 monitoring data, MPR has implemented mitigation measures and has indicated that improvements will be noted in 2024 data.

The social programs include initiatives that are collaborative efforts between local and state government. Initiatives were developed to have significant improvements in long-term environmental management in the nearby communities, such as changes in domestic waste management and agricultural practices. The QP observes that the collaborative efforts were developed for stakeholders to share responsibility for the projects, which will support sustainability of the initiatives.

21.0 CAPITAL AND OPERATING COSTS

21.1 Operating Costs

Operating cost estimates were developed based on recent actual costs with minor specific adjustments for business improvement initiatives that are currently being implemented. Operating costs are estimated in 2024 dollars with no inflation or escalation considered. Estimates were prepared on an annual basis using a detailed build-up of individual cost centers and considering specific mine site activity levels and cost drivers. The estimates consider current and expected labor headcount and salaries, major consumables and unit prices, power costs, fixed and mobile equipment costs, and maintenance costs. The total operating cost estimate includes all site costs related to mining, processing, and general and administrative activities, as well as regional office costs and excludes joint venture management fees and administration costs as well as Gatos Silver corporate general and administration cost allocations. Site operating costs exclude concentrate transportation costs, smelter and refining charges, royalties and mining and income taxes; however, these are included in the economic analysis presented in Section 22.0.

The LOM Plan operating costs consider estimated costs to fully deplete the Mineral Reserve. Therefore, operating costs exclude any exploration and drilling costs related to potential future mine life extensions which are not required to mine and process the Mineral Reserve.

Mining costs were developed separately for the LHS and CAF mining methods, with the resulting unit cost estimates applied to the tonnages extracted using each mining method as defined in the LOM Plan. Mining costs cover expected direct costs for the mining process including drilling, blasting, mucking, hauling, backfilling, mine dewatering and ground support.

Processing costs include expected direct costs for ore processing: crushing and conveying, grinding, flotation, tailings thickening and deposition, zinc concentrate leaching, and on-site concentrate handling.

General and administrative costs include costs associated with support of the operation: administrative personnel and functions, administrative facilities, site services, accommodations, security, and other support costs.

Operating costs at the CLG Mine have been reviewed by the mining QP and found to be reasonable for a mechanized mine utilizing the longhole and cut-and-fill mining methods. The plant has demonstrated typical operating costs for a facility of its size. The following tables summarize operating costs, segmented by major cost center: Mine, Processing Plant (includes TSF operations), and General and Administrative (G&A).

Table 21.1 summarizes the total expected operating costs to mine and process the defined Mineral Reserve. Numbers in tables may not necessarily add up due to rounding.

Table 21.1: Projected Operating Costs

Cost Center	LOM Cost, $M	Unit Cost, $/t milled
Mining	435.6	42.16
Processing	256.0	24.77
G&A	157.1	15.20
Total Operating Costs	**848.6**	**82.14**

Operating costs of the underground mine are estimated to be $42.16/tonne of processed material, itemized in Table 21.2.

Table 21.2: Mine Operating Cost Projection

Cost Center	LOM Cost $M	Unit Cost $/tonne milled
Mine Support Area	131.3	12.71
Operation Direct Costs	151.7	14.68
Operation Indirect Costs	152.6	14.77
Total Mining Costs	**435.6**	**42.16**

Operating costs of the processing plant are estimated to be $24.77/tonne of processed material, with major cost elements provided on Table 21.3.

Table 21.3: Processing Plant Operating Cost Projection

Cost Center	LOM Cost $M	Unit Cost $/tonne milled
Plant Support Area	42.1	4.08
Operation Direct Costs	161.8	15.66
Operation Indirect Costs	52.0	5.04
Total Plant Costs	**256.0**	**24.77**

General and Administrative costs are comprised of general site and regional office costs, safety and security, accommodations and camp operations, site services, environmental and social expenditures, community relations, and other site administrative and support costs, as depicted on Table 21.4.

Table 21.4: General and Administrative Cost Projection

Cost Center	LOM Cost $M	Unit Cost $/tonne milled
Site and Local Administration and Services	91.2	8.83
Human Resources and Information Technology	8.7	0.84
Supply Chain	11.3	1.10
Community and Environment, Health and Safety	32.7	3.17
Security and Legal	13.1	1.27
Total G&A Costs	**157.1**	**15.20**

21.2 Capital Costs

21.2.1 Development Capital

There are no expansion plans requiring development capital in the LOM Plan.

21.2.2 Sustaining Capital

CLG will require sustaining capital for continuing underground mine development, installation of a copper-lead separation circuit, and two additional raises of the TSF dam, as well as other miscellaneous equipment and infrastructure projects.

Table 21.5 summarizes the capital expenditures planned for the balance of the mine life. Sustaining capital is estimated in 2024 dollars with no inflation or escalation considered. The QPs have reviewed the planned annual expenditures and agree that they are reasonable.

Underground development costs are directly correlated with development meters and are estimated based on expected unit rates per meter, applied to the number of meters of mine development required each year. Development capital is expected to be substantially complete by 2029 and totals $96.1 M for 17,583 meters of lateral development over the LOM. Ventilation development and installations for mining the SE zone are included in the mine infrastructure totals.

Mine infrastructure and equipment includes ongoing equipment rebuilds and replacements, investment in facilities and assets, and the installation of dewatering wells and pump stations as mine development advances deeper and the SE zone is developed. Included are extension of the power infrastructure, ventilation installations, and facilities to provide services across the mining areas.

The Process Plant infrastructure and equipment includes ongoing replacement of plant assets and two tailings dam raises. The first dam raise begins in the 4th quarter of 2024 and carries through to mid-2025, while the second is expected to be started in 2027 and completed in 2028. The Process Plant line of Table 21.5 also includes the addition of a copper-lead separation circuit for $5.0 M with expected production of copper concentrate in 2026.

The Others line in Table 21.5 includes replacements and investments in the mine's general equipment assets, human resources, information technology, supply chain, environmental, health and safety, and security.

Table 21.5: LOM Sustaining Capital, $M

Item	Units	2024 H2	2025	2026	2027	2028	2029	2030	2031	Total
Mine Development										
Lateral Development	m	2,427	4,157	4,359	3,573	2,274	765	28	0	17,583
Mine Development	**$M**	**11.8**	**21.8**	**22.9**	**21.2**	**13.5**	**4.7**	**0.1**	**0.0**	**96.1**
Infrastructure & Equipment										
Mine	$M	14.5	14.3	11.4	9.0	7.0	3.3	1.3	0.7	61.4
Process Plant	$M	2.3	12.3	0.3	4.5	6.5	0.2	0.2	0.1	26.2
Others	$M	1.8	0.8	0.6	0.6	0.5	0.5	0.1	0.0	3.2
Infrastructure & Equipment	**$M**	**17.6**	**27.0**	**12.1**	**13.9**	**13.9**	**3.8**	**1.7**	**0.8**	**90.8**
Sustaining Capital	**$M**	**29.4**	**48.8**	**35.0**	**35.2**	**27.5**	**8.6**	**1.7**	**0.8**	**186.9**

21.3 Level Of Accuracy in the Estimates

Operating costs are sensitive to several factors, primarily mining method, backfill type, ventilation, refrigeration, mine dewatering, and labor in addition to fluctuations in the cost of consumables, including diesel fuel, electrical power, ground support, and explosives, amongst others. Operating costs will also be impacted by fluctuations in the USD/Mexican peso exchange rate and inflation of input costs including labor, consumables and contracts.

Mining costs have been based on actual costs realized to date, with consideration for business improvement initiatives underway and established supply contracts.

Processing plant costs consist primarily of electrical power, labor, grinding media (including crusher and grinding mill wear components), reagents, spares, and maintenance. The operation is in a steady state and future cost estimates are considered reasonable and expected.

General and Administrative costs are based on historical costs projected to the end of the mine life, with consideration for site activity levels and headcount over the remaining mine life.

Sustaining capital cost estimates have been developed from experience with underground mine development over the past number of years. The cost to add a copper-lead separation circuit has been included in the plant capital based on preliminary engineering estimates. The costs to raise the TSF dam have been established from past practice.

21.4 Risks Associated with the Specific Engineering Estimation Methods Used to Arrive at The Estimates

Volume and cost estimates are of a high level of confidence. Operating volumes are well defined and understood, as are mining and processing productivities. Unit cost estimates are based on supply contracts and operating history.

Actual capital and operating costs at the CLG Mine will nonetheless depend upon changes in the availability and prices of labor, equipment, consumables and contractors, variances in mining rates and ore recovery from those assumed in the LOM Plan, operational risks, exchange rates being adverse to those assumed (including the USD/Mexican Peso exchange rate), changes in governmental regulation, including taxation, environmental permitting and other regulations (including recent changes to the laws affecting the mining industry described herein) and other factors, many of which are beyond the control of GSI. Due to any of these or other factors, the capital and operating costs at the CLG Mine may be higher than those set forth herein.

22.0 ECONOMIC ANALYSIS

For the purposes of this report, an economic analysis was performed by GSI using the GSI financial model and the 2024 LOM Plan information for the CLG mine. The economic analysis supports the declaration of Mineral Reserves. WSP reviewed in detail the 2024 LOM Plan and the GSI financial model components relevant to the 2024 LOM Plan. For certainty, the economic analysis herein excludes stated Resources (which are stated exclusive of Reserves).

22.1 Principal Assumptions

Commodity prices and exchange rate assumptions used in the economic analysis are summarized in Table 22.1. The commodity price and exchange rate assumptions were based on an approximately equal weighting of three-year trailing averages and analyst long-term consensus and rounded down or up as appropriate.

Table 22.1: Commodity Prices and Exchange Rate Assumptions

Commodity Prices - 2024 LOM Plan		
Silver Price	$/oz	23.00
Gold Price	$/oz	1,850.00
Zinc Price	$/lb	1.25
Lead Price	$/lb	0.95
Copper Price	$/lb	4.00
Exchange Rate		
MXN per $1 USD	-	20.00

The 2024 LOM Plan considers periods from July 1, 2024, forward, with operations continuing for 8.33 years through the end of October 2032 based on fully depleting the Mineral Reserve. Total ore processed based on the 2024 LOM is 10.33 M tonnes at an average processing rate of 3,401 tonnes per calendar day.

The CLG processing plant produces a lead concentrate and a zinc concentrate. Plans are underway to install a copper-lead separation circuit to produce a separate copper concentrate from higher copper grade mill feeds, which is expected to be operational in 2026. Payable metals are evaluated using the recovery parameters described in Section 15.3 as well as estimates of smelter charges which are based on current and expected long-term concentrate market conditions, as described in Section 19.0.

Operating and capital cost estimates are described in Section 18. Operating costs are projected to average $82.14 per tonne milled over the LOM, with total planned sustaining capital expenditures of $186.9 M. Closure costs of $16.4 M are forecasted for the period 2033-2036 and are described in Section 20.0.

The 2024 LOM Plan used in the financial model is in real 2024 dollars, with no allowances made for future inflation. The financial model is on an unlevered basis. Corporate administration expenses, management fees, exploration costs and working capital changes are excluded from the 2024 LOM Plan operating costs used to support the Mineral Reserve.

The differential between the undiscounted pre-tax and post-tax cash flows is $155.0 M, representing the estimated cash taxes payable (mining taxes and income taxes) from July 1, 2024, onward. The economic analysis applies current mining and corporate income tax rates of 7.5% and 30%, respectively.

22.2 Demonstration of Economic Viability

The 2024 LOM Plan and corresponding financial model includes the processing of 10.33 Mt of ore at an average throughput rate of 3,401 tonnes per calendar day and average feed grades of 172 g/t silver, 3.89% zinc, 2.07% lead, 0.22 g/t gold, and 0.21% copper over an 8.33-year period. The 2024 LOM Plan supports the Mineral Reserves as it demonstrates economic viability via projected revenues exceeding projected operating, sustaining capital, and closure costs.

Figure 22.1 presents annual silver production, cash costs and all-in sustaining costs on a by-product basis, while Figure 19.2 presents annual silver equivalent production, cash costs and all-in sustaining costs on a co-product basis. Table 22.2 summarizes key LOM production metrics. Annual cash flow and unit cost details are presented in Table 22.3 through Table 22.7.

Key highlights of the LOM Plan are:

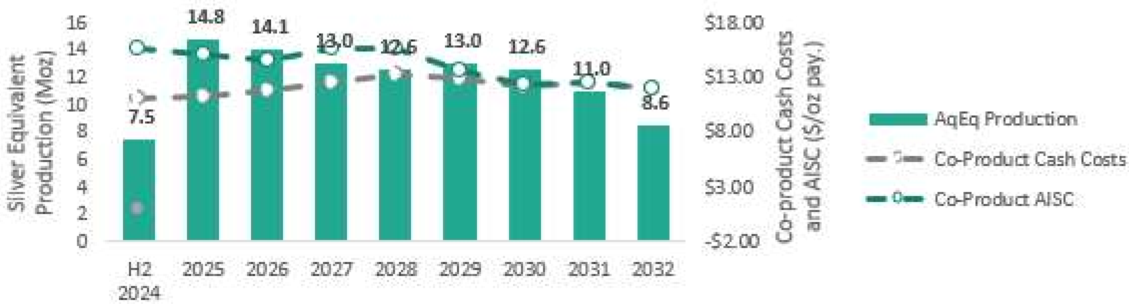
- Mine life through to the end of October 2032 at steady-state mill throughput rates of 3,500 tonnes per day
- Average annual production over the LOM of 6.1 M ounces of silver, 67 M pounds of zinc, and 50 M pounds of lead, or 12.9 M ounces of silver equivalent production
- Average operating costs (mine, mill, G&A) of $82.14 per tonne milled and total sustaining capital costs of $186.9 M
- Average by-product cash costs of $0.83 per ounce of payable silver[2]
- Average by-product all-in sustaining costs ("AISC") of $4.94 per ounce of payable silver[1]
- Average annual after-tax free cash flow of $80 M
- After-tax net present value ("NPV") at a 5% discount rate of $538.8 M

[2] See Non-GAAP Financial Measures following Table 19.7

Figure 22.1 shows the annual silver production, cash costs, and all-in sustaining costs (by-product basis). Figure 22.2 shows the annual silver equivalent production, cash costs, and all-in sustaining costs (co-product basis).

Source: CLG

Figure 22.1: Annual Silver Production, Cash Costs and All-in Sustaining Costs (By-Product Basis)



Source: CLG

Figure 22.2: Annual Silver Equivalent Production, Cash Costs and All-in Sustaining Costs (Co-Product Basis)

Table 22.2 shows key production statistics for the 2024 LOM Plan.

Table 22.2: LOM Production Summary

LOM Operations Metrics	Unit	Value
Mine life (Operations)[1]	Years	8.33
Property life (to closure)	Years	12.33
Total mill feed tonnage	Mt	10.33
Average Mill Feed Grade		
Silver	g/t	172
Zinc	%	3.89%
Lead	%	2.07%
Copper	%	0.21%
Gold	g/t	0.22
Mill Recoveries[3]		
Zinc Concentrate		
Zn Recovery in Zn Conc	%	63.1%
Ag Recovery in Zn Conc	%	10.2%
Lead Concentrate		
Pb Recovery in Pb Conc	%	88.5%
Cu Recovery in Pb Conc	%	33.1%
Ag Recovery in Pb Conc	%	76.1%
Au Recovery in Pb Conc	%	53.0%
Copper Concentrate		
Cu Recovery in Cu Conc	%	38.4%
Ag Recovery in Cu Conc	%	1.9%
Au Recovery in Cu Conc	%	1.2%
Production (contained in concentrates)[3]		
LOM Silver Production	Moz	50.5
LOM Zinc Production	Mlbs	559.9
LOM Lead Production	Mlbs	417.0
LOM Copper Production	Mlbs	33.5
LOM Gold Production	koz	39.6
LOM Average Annual Silver Production	Moz/year	6.1
LOM Average Annual Zinc Production	Mlbs/year	67.2
LOM Average Annual Lead Production	Mlbs/year	50.0
LOM Silver Equivalent Production[2]	Moz	107.2
LOM Average Silver Equivalent Production[2]	Moz/year	12.9
Concentrate Production and Sales		
Zinc Concentrate Produced and Sold	t	450,860
Lead Concentrate Produced and Sold	t	343,003
Copper Concentrate Produced and Sold	t	33,895
LOM Payable Silver in Concentrate Sold	Moz	45.5
LOM Payable Silver Equivalent in Concentrate Sold	Moz	93.8

Notes:

1. Mine Life includes the last 6 months of 2024 through the end of October 2032 (8.33 years).
2. Silver equivalent production is calculated using base case price assumptions to "convert" zinc, lead, copper, and gold production contained in concentrate to "equivalent" silver ounces (contained metal, multiplied by price, divided by silver price). Copper contained in lead concentrate is included in silver equivalent production when the copper grade in the lead concentrate is above the payable threshold.

3. Metal recoveries and metal production is based on metals recovered into concentrates when grades are expected to be above payable thresholds.

Table 22.3 through Table 22.7 tabulate the annual and total cashflow information.

Table 22.3: Commodity Prices and Production

	Units	LOM	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	2033+
COMMODITY PRICES & EXCHANGE RATES												
Ag Price - Spot (Period Average)	USD/oz	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00
Au Price - Spot (Period Average)	USD/oz	1,850.00	1,850.00	1,850.00	1,850.00	1,850.00	1,850.00	1,850.00	1,850.00	1,850.00	1,850.00	1,850.00
Zn Price - Spot (Period Average)	USD/lb	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Pb Price - Spot (Period Average)	USD/lb	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Cu Price - Spot (Period Average)	USD/lb	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
MXN per $1 US	-	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
PRODUCTION												
Ore Milled - Weight	t	10,331,904	597,174	1,256,576	1,277,500	1,277,500	1,281,000	1,277,500	1,277,500	1,155,482	931,673	0
Ag Contained in Zn, Pb, & Cu Concentrate	oz	50,483,577	4,393,117	7,880,521	6,989,162	6,040,065	5,589,159	5,539,549	5,535,485	4,787,778	3,728,743	0
Au Contained in Pb & Cu Concentrate	oz	39,613	2,757	5,133	5,556	4,518	4,894	5,438	4,574	3,762	2,980	0
Zn Contained in Zn Concentrate	M lbs	559.9	33.4	75.2	78.7	72.0	71.0	75.1	59.5	53.1	42.0	0.0
Pb Contained in Pb Concentrate	M lbs	417.0	22.2	50.6	53.3	52.6	53.0	52.8	49.0	45.7	37.8	0.0
Cu Contained in Pb & Cu Concentrate	M lbs	33.5	0.7	2.0	0.9	2.8	3.4	4.5	8.4	6.7	4.2	0.0
Contained Silver Equivalent	oz	107,159,369	7,474,804	14,823,963	14,062,429	12,970,070	12,616,154	13,024,522	12,612,529	11,024,173	8,550,725	0
PAYABLE METALS												
Ag Payable in Zn, Pb, & Cu Concentrate	oz	45,502,223	3,990,751	7,134,221	6,302,492	5,436,963	5,022,919	4,970,410	4,981,718	4,307,386	3,355,364	0
Au Payable in Pb & Cu Concentrate	oz	28,549	2,111	3,680	4,082	3,091	3,481	4,042	3,388	2,640	2,034	0
Zn Payable in Zn Concentrate	M lbs	476.0	28.4	63.9	66.9	61.2	60.3	63.8	50.6	45.1	35.7	0.0
Pb Payable in Pb Concentrate	M lbs	394.3	20.9	47.6	50.3	49.7	50.1	50.0	46.5	43.4	35.8	0.0
Cu Payable in Pb & Cu Concentrate	M lbs	21.9	0.2	0.6	0.8	1.6	2.1	3.0	6.0	4.7	2.9	0.0

Table 22.4: Annual Revenue Forecast

	Units	LOM	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	2033+
Gross Revenues (Based on Payable Metals)												
Silver	$k	1,046,551	91,787	164,087	144,957	125,050	115,527	114,319	114,580	99,070	77,173	0
Gold	$k	52,816	3,906	6,807	7,552	5,717	6,440	7,477	6,268	4,884	3,764	0
Zinc	$k	594,940	35,513	79,922	83,576	76,490	75,388	79,784	63,215	56,401	44,651	0
Lead	$k	374,565	19,821	45,256	47,789	47,177	47,558	47,459	44,191	41,268	34,046	0
Copper	$k	87,585	754	2,424	3,260	6,382	8,472	11,961	24,035	18,773	11,523	0
Total Gross Revenues	**$k**	**2,156,457**	**151,781**	**298,497**	**287,134**	**260,817**	**253,386**	**261,000**	**252,290**	**220,396**	**171,157**	**0**
Treatment & Refining Charges, Penalties												
Third Party Smelting and Refining - Zn CCT	$k	(99,189)	(5,870)	(13,099)	(13,644)	(12,653)	(12,515)	(13,140)	(10,858)	(9,708)	(7,701)	0
Third Party Smelting and Refining - Pb CCT	$k	(41,690)	(3,083)	(6,079)	(5,689)	(5,183)	(4,969)	(4,915)	(4,442)	(4,033)	(3,297)	0
Third Party Smelting and Refining - Cu CCT	$k	(4,589)	0	0	(259)	(331)	(449)	(644)	(1,309)	(1,001)	(597)	0
Total TC/RC/PP	**$k**	**(145,468)**	**(8,954)**	**(19,179)**	**(19,592)**	**(18,168)**	**(17,933)**	**(18,699)**	**(16,608)**	**(14,742)**	**(11,594)**	**0**
Net Revenues	**$k**	**2,010,989**	**142,828**	**279,318**	**267,542**	**242,649**	**235,453**	**242,301**	**235,681**	**205,654**	**159,563**	**0**

Table 22.5: Annual Operating and Capital Cost Forecast

	Units	LOM	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	2033+
Operating Costs												
Site Costs												
Mining Costs	$k	(435,585)	(28,742)	(54,878)	(53,931)	(52,951)	(57,041)	(56,776)	(51,850)	(45,072)	(34,344)	0
Plant Costs	$k	(255,959)	(16,077)	(32,005)	(32,351)	(32,116)	(31,838)	(31,925)	(30,690)	(28,313)	(20,646)	0
G&A	$k	(157,088)	(10,569)	(20,324)	(20,324)	(20,324)	(20,324)	(20,324)	(18,292)	(16,259)	(10,347)	0
Total Site Costs	**$k**	**(848,632)**	**(55,387)**	**(107,207)**	**(106,605)**	**(105,391)**	**(109,204)**	**(109,025)**	**(100,831)**	**(89,645)**	**(65,337)**	**0**
Other Offsite Costs												
Royalties & Duties	$k	(5,040)	(907)	(1,713)	(764)	(316)	(301)	(298)	(297)	(253)	(190)	0
Freight and Handling	$k	(148,659)	(8,532)	(19,012)	(19,829)	(18,739)	(18,658)	(19,399)	(16,923)	(15,279)	(12,288)	0
Total Other Offsite Costs	**$k**	**(153,699)**	**(9,439)**	**(20,725)**	**(20,593)**	**(19,055)**	**(18,960)**	**(19,697)**	**(17,220)**	**(15,532)**	**(12,478)**	**0**
Capital Expenditures												
Mine Development	$k	(96,086)	(11,828)	(21,835)	(22,861)	(21,204)	(13,537)	(4,745)	(76)	0	0	0
Infrastructure & Equipment	$k	(90,834)	(17,574)	(27,001)	(12,117)	(13,946)	(13,928)	(3,834)	(1,669)	(765)	0	0
Total Capital Expenditures	**$k**	**(186,920)**	**(29,402)**	**(48,836)**	**(34,978)**	**(35,150)**	**(27,465)**	**(8,578)**	**(1,745)**	**(765)**	**0**	**0**
Closure Costs												
ARO Liability - Total Cash Expenditures	$k	(16,415)	0	0	0	0	0	0	0	0	0	(16,415)
Resources and Income Taxes												
Mining Taxes	$k	(23,105)	0	(3,621)	(2,967)	(2,351)	(2,387)	(3,051)	(3,472)	(2,926)	(2,330)	0
Income Taxes	$k	(131,848)	0	(10,314)	(30,164)	(15,296)	(11,155)	(11,245)	(16,950)	(19,364)	(17,359)	0
Total Resources and Income Taxes	**$k**	**(154,953)**	**0**	**(13,935)**	**(33,132)**	**(17,647)**	**(13,542)**	**(14,296)**	**(20,423)**	**(22,290)**	**(19,688)**	**0**

Table 22.6: Annual Cash Flow Summary

	Units	LOM	H2 2024	2025	2026	2027	2028	2029	2030	2031	2032	2033+
Cash Flows & Net Present Value												
Pre-Tax Cash Flow	**$k**	**805,324**	**48,600**	**102,551**	**105,365**	**83,052**	**79,825**	**105,001**	**115,885**	**99,712**	**81,748**	**(16,415)**
Cumulative Pre-Tax Cash Flow	**$k**		**48,600**	**151,151**	**256,516**	**339,568**	**419,393**	**524,393**	**640,279**	**739,991**	**821,739**	
Post-Tax Cash Flow	**$k**	**650,372**	**48,600**	**88,616**	**72,233**	**65,405**	**66,283**	**90,705**	**95,463**	**77,422**	**62,059**	**(16,415)**
Cumulative Post-Tax Cash Flow	**$k**		**48,600**	**137,216**	**209,449**	**274,854**	**341,137**	**431,842**	**527,305**	**604,727**	**666,786**	
Pre-Tax NPV (5%)	**$k**	5.00%	**664,109**									
Post Tax NPV (5%)	**$k**	5.00%	**538,793**									

Table 22.7: LOM Unit Cost Details

Cash Cost and All-In Sustaining Costs (AISC)		
Mining Costs	$k	435,585
Plant Costs	$k	255,959
G&A	$k	157,088
Royalties and Duties	$k	5,040
Freight and Handling	$k	148,659
Third Party Smelting and Refining	$k	145,468
Cash Costs	**$k**	**1,147,799**
Total Capital Expenditures	$k	186,920
AISC	**$k**	**1,334,718**
By-Product Credits		
Zn Payable in Zn CCT	$k	594,940
Pb Payable in Pb CCT	$k	374,495
Cu Payable in Pb & Cu CCT	$k	87,585
Au Payable in Pb & Cu CCT	$k	52,816
Total By-Product Credits	**$k**	**1,109,906**
Payable Silver		
Payable Silver in Zn CCT	oz	3,129,113
Payable Silver in Pb CCT	oz	41,388,824
Payable Silver in Cu CCT	oz	984,287
Total Payable Silver	**oz**	**45,502,223**
By-Product Cash Costs		
Cash Costs before By-Product Credits	$/oz Ag Pay.	25.23
By-Product Credits	$/oz Ag Pay.	24.39
Cash Costs Net of By-Product Credits	**$/oz Ag Pay.**	**0.83**
By-Product AISC		
AISC before By-Product Credits	$/oz Ag Pay.	29.33
By-Product Credits	$/oz Ag Pay.	24.39
AISC Net of By-Product Credits	**$/oz Ag Pay.**	**4.94**
Payable Silver Equivalent		
Total Value of Payables - Zn CCT	$k	666,909
Total Value of Payables - Pb CCT	$k	1,396,232
Total Value of Payables - Cu CCT	$k	93,315
Total Value of Payables	**$k**	**2,156,457**
Ag Price	$/oz	23.00
Payable Silver Equivalent	**oz**	**93,759,006**
Co-Product Cash Costs		
Cash Costs	$k	1,147,799
Payable Silver Equivalent	oz	93,759,006
Co-Product Cash Costs	**$/oz AgEq Pay.**	**12.24**
Co-Product AISC		
AISC	$k	1,334,718
Payable Silver Equivalent	oz	93,759,006
Co-Product AISC	**$/oz AgEq Pay.**	**14.24**

Note: Please refer to Section 22.3 for additional details on cash costs and AISC, including non-GAAP measures and reconciliations.

The post-tax NPV of the 2024 LOM Plan based on the Mineral Reserve is $ 538.8 M at a discount rate of 5.0%. Payback and IRR estimates are not relevant for an operating mine as all previous costs are considered sunk; they are not required to support reserve declaration. Average post-tax annual cash flows through 2032 for the LOM Plan are $80 M. Figure 22.3 shows the annual and cumulative after-tax free cash flow over the LOM.

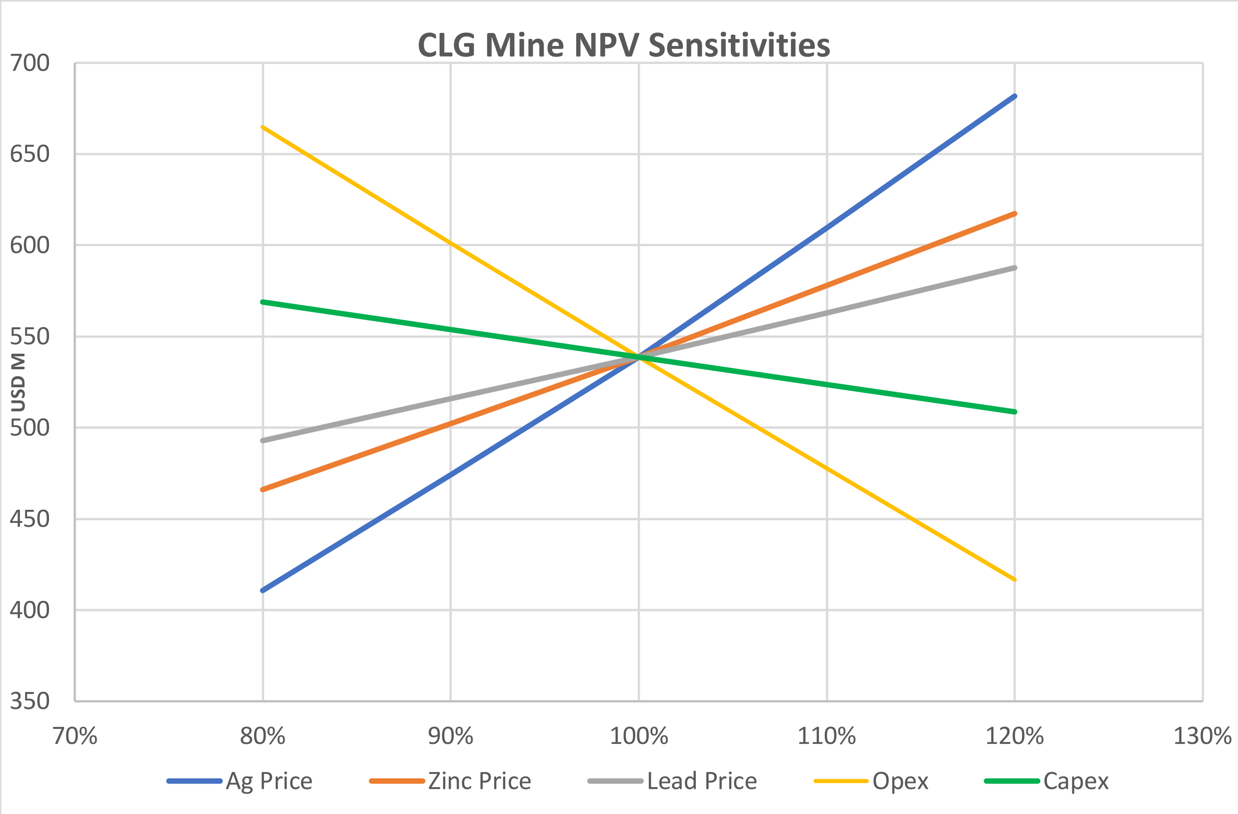
Source: CLG

Figure 22.3: Annual and Cumulative After-Tax Free Cash Flow

Grade declines in the later years of the mine life are offset by declining unit costs and sustaining capital costs, resulting in annual after-tax free cash flows ranging from $65 to $95 M per year throughout the LOM.

22.2.1 Sensitivity Analysis

Figure 22.4 illustrates the sensitivity of the post-tax NPV at a discount rate of 5.0% to changes in key inputs to the economic analysis. Positive and negative variations were applied independently to each of the following parameters: silver price, zinc price, lead price, operating costs, and capital costs. The operation is most sensitive to variations in the price of silver followed closely by variations in the overall operating cost of CLG Mine.



Source: CLG

Figure 22.4: Sensitivity of Post-tax NPV at a 5% Discount Rate to Changes in Key Inputs

Table 22.8 shows the sensitivity of CLG mine free cash flow (before and after-tax) on a discounted (5%) and undiscounted basis and demonstrates the robust cash flow generation of the CLG mine over a range of silver prices.

Table 22.8: Sensitivity of Undiscounted LOM Free Cash Flow and NPV at a 5% Discount Rate to Changes in Silver Prices

		$21/oz	2024 LOM $23/oz	$25/oz	$30/oz	$35/oz
Total LOM Free Cash Flow (undiscounted)	$M pre-tax	714.4	**805.3**	896.2	1,123.5	1,350.8
	$M post-tax	584.2	**650.4**	722.5	911.3	1,118.9
Net Present Value (5% Discount Rate)	$M pre-tax	587.7	**664.1**	740.6	931.7	1,123.0
	$M post-tax	482.5	**538.8**	600.2	760.2	935.3

22.3 Cash Cost and AISC Reconciliation

22.3.1 Non-GAAP Financial Measures

The Company uses certain measures that are not defined by GAAP to evaluate various aspects of their business. These non-GAAP financial measures are intended to provide additional information only and do not have any standardized meaning prescribed by GAAP and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with GAAP. The measures are not necessarily indicative of operating profit or cash flow from operations as determined under GAAP.

22.3.2 Cash Costs and All-In Sustaining Costs

Cash costs and all-in sustaining costs ("AISC") are non-GAAP measures. AISC was calculated based on guidance provided by the World Gold Council ("WGC"). WGC is not a regulatory industry organization and does not have the authority to develop accounting standards for disclosure requirements. Other mining companies may calculate AISC differently as a result of differences in underlying accounting principles and policies applied, as well as definitional differences of sustaining versus expansionary (i.e., non-sustaining) capital expenditures based upon each company's internal policies. Current GAAP measures used in the mining industry, such as cost of sales, do not capture all of the expenditures incurred to discover, develop and sustain production. Therefore, the Company believes that cash costs and AISC are non-GAAP measures that provide additional information to management, investors and analysts that aid in the understanding of the economics of the Company's operations and performance compared to other producers and provides investors visibility by better defining the total costs associated with production.

Cash costs include all direct and indirect operating cash costs related directly to the physical activities of producing metals, including mining, processing and other plant costs, treatment and refining costs, general and administrative costs, and royalties. AISC includes total production cash costs incurred at the LGJV's mining operations plus sustaining capital expenditures. The Company believes this measure represents the total sustainable costs of producing silver from current operations and provides additional information of the LGJV's operational performance and ability to generate cash flows. As the measure seeks to reflect the full cost of silver production from current operations, new project and expansionary capital at current operations are not included. Certain cash expenditures such as new project spending, tax payments, dividends, and financing costs are not included.

22.3.3 Reconciliation of GAAP to Non-GAAP Measures

Table 22.9 presents a reconciliation between the most comparable GAAP measure of the LGJV's expenses to the non-GAAP measures of (i) cash costs, (ii) cash costs, net of by-product credits, (iii) co-product AISC, and (iv) by-product AISC for the Company's operations. The Company is unable to provide without unreasonable efforts a reconciliation of forward-looking AISC and related measures on a per-year basis to cost of sales due to the inherent difficulty in forecasting and quantifying certain amounts, some of which may be material, that are necessary for such reconciliation.

Table 22.9: Reconciliation of Cash Costs and AISC to Cost of Sales (as defined under US GAAP)

Cash Costs and All-in Sustaining Costs	Units	2024 LOM
Mining Costs	$M	$435.6
Milling Costs	$M	$256.0
Transportation Costs	$M	$148.7
Cost of Sales	**$M**	**$840.2**
Royalties	$M	$5.0
General and Administrative	$M	$157.1
Expenses	**$M**	**$1,002.3**
Treatment and Refining	$M	$145.5
Cash Costs	**$M**	**$1,147.8**
Sustaining Capital	$M	$186.9
All-in Sustaining Costs (AISC)[1][2]	**$M**	**$1,334.7**
By-product Credits[3]	$M	($1,109.9)
Payable Silver	oz	45.5
Cash Costs before By-Product Credits	**$/oz Ag Payable**	**$25.23**
AISC before By-Product Credits	**$/oz Ag Payable**	**$29.33**
By-product Credits[3]	$/oz Ag Payable	($24.39)
Cash Cost Net of By-product	**$/oz Ag Payable**	**$0.83**
By-product AISC[1]	**$/oz Ag Payable**	**$4.94**
Payable Silver Equivalent[3][4]	Moz	93.8
Co-product Cash Cost	**$/oz AgEq Payable**	**$12.24**
Co-product AISC[1]	**$/oz AgEq Payable**	**$14.24**
Management Fee and Admin. Costs	**$M**	**$61.2**
By-Product AISC[5]	**$/oz Ag Payable**	**$6.29**
Co-product AISC[5]	**$/oz AgEq Payable**	**$14.89**

Notes:

1. Excludes LGJV management fee and administration costs of approximately $7 million per year, equivalent to $1.35 / oz Ag payable and $0.65 / oz AgEq payable, respectively in the 2024 LOM Plan and $1.13 / oz Ag payable and $0.60 / oz AgEq payable, respectively, in the 2023 LOM Plan.
2. Excludes any exploration costs related to future resource expansion and conversion.
3. Assumes prices of $23.00/oz silver, $1.25/lb zinc, and $0.95/lb lead, $1,850/oz gold and $4.00/lb copper.
4. Payable silver equivalent ounces include payable copper aligned to current payable terms for copper in lead concentrate and expected payable terms for copper concentrates.
5. Includes LGJV management fee and administration costs of approximately $7 million per year.

23.0 ADJACENT PROPERTIES

There are no properties adjacent to the land holdings of MPR.

24.0 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data pertaining to the Mineral Reserves of CLG Mine.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Mineral Resources

Throughout the exploration, development, and mining of the deposit there has been acquired a sound knowledge and understanding of the geological controls on the mineralization, which are adequately expressed in the Resource Model.

The deposit has logging data from subsurface workings and surface and underground drilling that has been adequately reviewed and validated which allows it to be used with sufficient confidence in the construction of a resource model.

Grade estimation is based on data that have been carefully validated and have undergone a rigorous QA/QC program to assess their adequacy in terms of accuracy, precision and contamination.

The geological model of the deposit has been updated with new information related to the 2024 drilling campaigns and an implicit 3D model. Based on this geological model an estimation of the main grades and density of the deposit has been performed using OK interpolators. The results have been validated in detail by visual and statistical review and against existing production data.

The Mineral Resource categorization uses methodologies and assumptions that allow for adequate consideration of uncertainty and risk. The Mineral Resources reported in this TR are reported above a NSR cut-off value, supported by studies and considering the RPEE by optimizing stopes using assumptions and reliable data.

It is the opinion of the QP that the Mineral Resources presented herein are appropriate for public disclosure and comply with the definitions of Mineral Resources as established by S-K 1300 and CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).

The estimate of Mineral Resources may be materially affected if mining, metallurgical, or infrastructure factors change from those currently assumed at Los Gatos. Estimates of Inferred Mineral Resources have significant geological uncertainty, and it should not be assumed that all or any part of an Inferred Mineral Resource will be converted to the Measured or Indicated categories. Except where indicated, Mineral Resources reported in the TR are stated exclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves have not met the threshold for reserve modifying factors, such as estimated economic viability, that would allow for conversion to Mineral Reserves. The Resource estimate is consistent with S-K 1300 Guidelines and Definition Standards for Mineral Resources and Mineral Reserves (CIM 2014).

25.2 Mineral Reserves and Mining Methods

- The data used for estimating the CLG Mineral Reserve is considered adequate for this purpose, having undergone the verification processes detailed in Section 12.0 of this TR. The QP has identified no limitations on the data used for the Mineral Reserve estimate, nor any failure to perform adequate data verification procedures.
- The methodology applied by CLG for estimating the 2024 Mineral Reserve aligns with industry-standard practices and is consistent with the approach used for the 2023 update. It complies with the requirements of both S-K 1300 and NI 43-101, which stipulate strict procedures for converting Measured and Indicated Resources into Proven and Probable Reserves, using applicable Modifying Factors.
- The long-term metal prices and exchange rates applied in estimating the Mineral Reserve are considered reasonable and appropriate. These values were determined using the three-year trailing monthly averages

from June 2021 to June 2024, combined with long-term consensus forecasts from reputable industry analysts.

- No mining, metallurgical, infrastructure, permitting, or other relevant factors have been identified that could materially affect the Mineral Reserve estimate.
- CLG has implemented effective measures and provided appropriate equipment and infrastructure to manage ground conditions, groundwater inflows, and underground temperatures. However, it is anticipated that dewatering and temperature control challenges may increase as mining operations advance to greater depths.
- The dewatering strategy employed by CLG, which combines conventional contact-water dewatering infrastructure with dewatering wells, is an effective approach for managing groundwater inflows into the mine.
- CLG's selected mining methods are well-suited to the specific zones and prevailing mining conditions where they are applied. During the site visit, the QP inspected active CAF and LHS stopes, confirming the appropriate use of these methods.
- The underground infrastructure, mine services, and fixed equipment are well-suited to the scale and conditions of the underground operations. During the site visit, the QP observed that these installations are of high quality, fully operational, and functioning as intended. CLG has constructed or installed most of the infrastructure required to sustain operations throughout the remaining life of mine.
- The size and composition of the mining fleet, including equipment types, makes, and models, are appropriate for the production rate, mining methods, and development requirements at CLG. The QP reviewed the underground equipment fleet during the site visit and observed several machines in active operation.
- The organizational structure of the personnel is well-suited to the scale and characteristics of the underground mining operation.

25.3 Mineral Processing

The Cerro Los Gatos mine has conducted substantial metallurgical studies since 2012, including process optimization, mineralogical characterization and variability testing. The operation currently produces high-quality lead and zinc concentrates with significant silver content. The conventional flotation plant, originally designed for 2,500 t/d, now consistently processes over 3,400 t/d, including crushing, grinding, and separate lead-copper and zinc flotation circuits.

Recent improvements include a fluorine leaching plant commissioned in 2023 to reduce fluorine levels in zinc concentrate to below 500 ppm, meeting buyer specifications. The mine faces challenges with increasing copper content in some areas, necessitating careful management and further testwork. Plans for 2025 include implementing a $5 M copper-lead separation circuit to produce separate copper and lead concentrates, in response to the projected increase in copper grades from about 0.1% Cu in 2024 to 0.35% Cu by end of mine life.

Other projects include increasing plant capacity to 4,000 t/d, and improving flotation of fine particles. The plant is well-equipped with necessary instrumentation, maintenance facilities, and water management systems, ensuring efficient operation and environmental compliance. Ongoing geometallurgical studies continue to drive process improvements and risk mitigation, adapting to the evolving mineral characteristics of the deposit.

25.4 Infrastructure

The site is equipped with adequate onsite and offsite infrastructure to support its operations. This includes grid electrical power and access to road networks in addition to camp facilities, offices, general maintenance facilities, truck maintenance shops, warehouses, a processing plant, a TSF, a backfill plant, two refrigeration plants, a mine ventilation system, and mine dewatering system.

The mine dewatering system has achieved steady state status – that is, adequate drainage, wells, pumping, sediment settling, and water tempering installations have been installed to draw down the water table around active mining horizons. CLG has made plans and budgeted for additional underground wells to enable the continued removal of groundwaters as the mine is deepened to the SE.

The underground ventilation system requires expansion as the mine activity gravitates to the SE Zone and to depth. Plans, schedules, and budgets are in place to establish adequate air flow to the future mine development areas. The paste backfill plant has been in operation since 2022 satisfying the demands for stope backfill in a manner that meets the mining schedule and plan.

Grid electrical power supply has been reliable and meeting the site demands. On-site electrical distribution system is built in compliance with local codes and to international quality standards. The system is configured to meet the site functional needs in terms of flexibility, expandability and protection. On-site electrical power infrastructure includes adequate emergency generation capacity.

The TSF is a mature structure operating under steady-state conditions and monitored by permanent stations installed throughout the TSF dam structure. There are two more lifts scheduled for the dam to complete its construction for acceptance of the LOM tailings volumes. The TSF is managed by an independent Engineer of Record, Tierra Group International, Ltd., which conforms with Mexican and other industry accepted guidelines such as the International Committee on Large Dams and the Canadian Dam Association.

25.5 Environmental and Social

The following observations and conclusions have been developed based on the site visit and inquiries made by the environmental and permitting QP and review of available information.

- No material issues were noted.
- The Company has all material permits for the current operations. The company is waiting on final resolution documents for three permits: the modification of the environmental permit that added the fluorine leach plant to the metallurgical process; a permit for land occupied by the tailings facility (permitting fees have been established with the regulator and have been paid); and a permit regarding the use of treated water from the personnel camp sewage treatment facilities. The QP notes that none of these final resolution permit documents are a high material risk for the current operations.
- The environmental agency (SEMARNAT) has not issued any violations to Los Gatos Mine; It is noted that practices could be improved at site to better align with international industry standards. In particular, the groundwater monitoring program does not meet international industry standards for the monitor well number, placement, design or sampling methods.
- The groundwater system, in particular the occurrence and quality of perched groundwater, is not well understood.

- Paste tailings were characterized as hazardous for toxicity and corrosivity and as potentially acid-generating based on Mexican environmental testing criteria. A composite waste rock sample was characterized as potentially acid-generating. The cemented tailings and cemented waste rock samples did not exhibit hazardous or potentially acid-generating characteristics after the cement solidified.
- The closure plan presents a five-year post-closure period, which is the timeframe in the authorized environmental impact assessment; however, the closure cost estimate update in 2023 included an updated post-closure monitoring period of 15 years.
- Mine closure planning has not advanced since the original closure plan was prepared, and closure planning is at a preliminary stage. Closure costs could increase as closure planning advances.

The following conclusions are drawn regarding community and social aspects:

- Cerro Los Gatos Mine is an operation located in the municipality of Satevó in the state of Chihuahua. The presence of the mine has contributed to a decrease in migration of community members, and a demographic increase in the communities of the area of influence. The generation of direct and indirect employment has been the main reason for the return of the inhabitants.
- The presence of a community relations facility in the town of San José del Sitio since the exploration work commenced has allowed a continued relationship with the stakeholders of the area of influence, generating various collaboration agreements and community co-investment.
- The socioeconomic baseline was updated in 2023. A detailed identification and characterization of stakeholders was prepared and analyzed. The Company has identified the highest priority social risks and has developed mitigation measures.
- The ejidos and the unions are the interest groups with the greatest relevance to the operation, since there are agreements for the right of way, as well as transport services and machinery used in the operations. Periodic meetings for the follow-up of agreements between the parties are held in the Agrarian Prosecutor's Office, giving greater credibility and legality to the fulfillment of agreements between the parties.
- One of the main mechanisms for disseminating social and environmental actions is the quarterly bulletin of Cerro Los Gatos Mine, which is distributed in the communities of the area of influence, and among employees.
- LGJV has completed the construction of a lined landfill that is used jointly by the mine and the local community for solid waste disposal. Major social projects currently include a collaborative effort between local and state governments to test the viability of pomegranate production.
- Grievances received by the Company are managed effectively and the number of complaints received has decreased over time. In 2023, there were twenty-two complaints or suggestions received, with the most common related to preferential hiring of local labor and the adult education program.
- CLG Mine has formalized its commitment to sustainability and social responsibility issues through adherence to the United Nations Global Compact as a member and, at the national level, it has been awarded with the Socially Responsible Company Distinction granted by the Mexican Center for Philanthropy (CEMEFI).

25.6 Costs and Economic Analysis

The cash flow model for the CLG Mine has been updated to include depletion of mineral reserves to July 2024, the addition of mineral reserves from the successful exploration program and the higher throughput rate of the processing plant. The LOM Plan has been developed to consume 10.33 Mt of Mineral Reserves over 8.33 years at an average throughput rate of 1.22 Mt per year to the end of 2032, a 2-year extension compared to the 2023 Report.

From H2 2024 to the end of mine life, CLG Mine will produce concentrates that contains 50.5 Moz silver, 559.9 Mlbs zinc, 417.0 Mlbs lead, 33.6 Mlbs copper and 39,600 ounces gold. Metal price estimations are based on a combination of three-year trailing averages and consensus analyst forecasts with consideration for market developments: silver $23.00/oz, zinc $1.25/lb, lead $0.95/lb, copper $4.00/lb and gold $1,850/oz. An average exchange rate of 20 Mexican Pesos to the US Dollar has been maintained for the LOM.

The operation is at steady state with predictable costs for operations and sustaining capital. Mining costs are trending lower with the higher proportion of LHS vs CAF mining method and are expected to average $42.16/tonne milled. Processing costs have decreased slightly in comparison to the 2023 report, and are now estimated at $24.77/tonne. General and Administrative costs also demonstrate a downward trend compared to the 2023 report and are now estimated at $15.20/tonne processed. Total operating costs are estimated at $82.14/tonne, -7.4% versus the 2023 Report.

Capital spending is planned to sustain the operation. Underground mine development will require $96.1 M of investment and an additional $90.8 M, including $5.0 M for a new copper circuit, will be invested in equipment and infrastructure. Sustaining capital investments have been scheduled in the cash flow model.

Revenue has been estimated by calculating payable volumes of each metal, less royalties, transportation costs exclusive of marketing and concentrate logistics, treatment and refining costs. Net Revenue is expressed in terms of Net Smelting Return, the average LOM value of which is $180.27/tonne processed, generating an operating margin of 54%. LOM Net Revenue is expected to be $1,862.5 M after the La Cuesta Royalty payment.

The GSI cash flow model indicates an average annual pre-tax cash flow of $98.6 M for a LOM total of $805.3 M and a discounted $NPV_{5\%}$ of $664.1 M. Post-tax average annual cash flow will be $80 M for a LOM total of $650.4 M generating a discounted $NPV_{5\%}$ of $538.8 M.

The QP has reviewed the price and cost assumptions, contracts and cash flow model in detail and is satisfied that the estimates of operating revenues and costs are within expectations.

26.0 RECOMMENDATIONS

Recommendations of Qualified Persons have been presented to Gatos Silver and, where deemed beneficial, the costs of implementing the recommendations will be worked into operational budgets.

26.1 Mineral Resources

The following recommendations are made by the Geology QP:

- Continue with the surface and underground drilling campaigns to improve the Mineral Resource categorization (infill drilling) and increase Mineral Resources (step-out drilling).
- Further investigation on the impacts of alternative grade interpolation methods (i.e., surface normal, dynamic anisotropy).
- Consider further interpretive controls on the Leapfrog lithological domain modeling to improve geological reasonableness of the domain modeling.
- Exploration drilling is recommended for the Esther deposit towards graduation of Mineral Resources to classifications of higher confidence.

26.2 Mineral Reserves and Mining Methods

The QP for Mineral Reserves and Mining Methods recommends the following action:

- For future Mineral Reserve estimates, evaluate whether specific mine closure and sustaining capital expenditures for both the mine and the processing plant should be considered as relevant costs in determining the NSR cut-offs. CLG's current methodology is consistent with prior Mineral Reserve estimates and standard practices at many other mines, where cut-off calculations are typically limited to operating costs.
- In future analyses of unplanned dilution for LHS, verify whether ELOS does in fact increase with vein width and if footwall ELOS is greater for shallower-dipping veins of the same width, as it is not clear what the underlying reasons are for these relationships.
- Continue to update the alteration and fault models as additional geotechnical data is collected.
- Conduct in-situ stress measurements to investigate the magnitude and orientation of the principal stresses. This data will be important for assessing the potential induced compressive stresses, particularly, in the lower portion of the SE zone.
- Base stope dimensions on the Stand-up Time Curve and the Span Design Curve for CAF and on the Stability Graph Empirical Method for LHS.
- Establish the maximum stope span as the Stable limit of 9 m for an RMR of 60, considering that ground support will be used. However, the ground support requirements may have to be increased should rock of a lower RMR be encountered.
- Utilize Class CS-1 to Class CS-3 ground support, considering a maximum span of 9 m, an ESR of 3.0, and a Q-value ranging from 0.4 to 10. Class CS-1 consists of no ground support or just spot bolting, while Class CS-3 includes systematic bolting with 5 to 6 cm of fiber-reinforced shotcrete.
- Use welded wire mesh instead of shotcrete for CAF due to the temporary nature of the openings.

- Continue employing systematic bolting to support temporary drill drifts, given the uncertainties associated with the behavior of the ore, rock mass deterioration due to blasting, and the mine-induced stress changes.
- Prefer welded wire mesh over shotcrete to support drill drifts, considering that these headings are relatively temporary.
- Install cable bolts at intersections considering the span dimensions.
- Prioritize the development of internal escapeway raises to enhance mine safety.
- Evaluate whether additional portable refuge chambers would be beneficial on a provisional basis until the internal escapeway system is fully developed.
- Assess the potential for a second escapeway raise to surface, considering the distance of the SE Zone from Escapeway Raise #1.
- Ensure that the design of the planned internal escapeways complies with Mexican mining regulations, particularly regarding ladderways and manways.

26.3 Mineral Processing

The following recommendations are made by the Mineral Processing QP:

- Conduct additional geometallurgical studies in the Southeast zone to better characterize the high soluble copper material.
- Develop and implement a comprehensive sampling and testing program to control high soluble copper content in production.
- Optimize the mine plan to manage the blending of high soluble copper material with other ore types.
- Continue research and development efforts on ultrafine particle recovery technologies to improve overall metal recoveries.
- Execute plans for the copper-lead separation circuit.
- Conduct a thorough impact assessment of increasing plant throughput to 4,000 t/d on downstream processes and final product quality.
- Continue to investigate opportunities for debottlenecking the grinding and flotation circuits.
- Conduct a review of tailings management to maximize backfill and minimize TSF construction costs.

26.4 Infrastructure

The following recommendations are made by the Infrastructure QP.

26.4.1 Underground Backfill

Pertaining to the paste fill plant:

- Cure paste test samples underground to mimic actual “as placed” conditions as recommended in the Minefill (2019) report.
- Review operational procedures and practice in terms of QA/QC; sampling and testing; data collection, analysis, and trending; and opportunities to optimize.

- Review performance records for paste based on logs over the past operation periods. Review the paste recipe in terms of solids content, binder content, slump, and water bleeding; pumping distance in terms of pipe length, horizontal and vertical distances; pressure drops along pipeline and pressure at discharge of PD pump (in comparison to pump pressure capacity); binder content and strength developed over different curing time periods (3, 7, 14, and 28 days).
- Review plant instrumentation design and control schemes in general. Consistent and optimal paste recipe is achieved via control of moisture addition to the filter cake. Moisture addition is either in the form of water or preferably in the form of filter feed slurry bypass (controlled based on cake tonnage and moisture) followed by slump water (controlled based on paste viscosity measured by mixer power).
- Review paste underground distribution system design and construction; and operation crew training and readiness to predict issues (like scaling, settlement, plugs, excessive wear) and recovery from them should they occur.

26.4.2 Electrical Power

Pertaining to the electrical power:

- Review future potential demands and the possibility to exceed the current feed capacity. Review options for upgrade ahead of time should the need materialize.

26.4.3 Dewatering

The QP recommends that a documented dewatering plan be developed by the operator that:

- Describes the conceptual hydrogeologic model
- Summarizes groundwater conditions and dewatering progress to date
- Establishes dewatering pumping rate and drawdown performance targets
- Defines dewatering well and monitoring well or piezometer installation plans for:
  - The following year in detail
  - Longer term (2-3 years) in overview
- Reviews dewatering system performance and revises the dewatering plan, as needed

CLG is advancing work on several components of the dewatering plan to enable improved dewatering and water management in the operations and have included $14.0 M for capital projects relating to mine dewatering within the LOM Plan, including the installation of additional wells, sumps and pumping infrastructure.

26.4.4 Tailings Storage

Tierra Group makes the following recommendations:

- Develop a closure plan based on current LOM.
- Develop a detailed deposition plan to support closure strategy.
- Continue quarterly bathymetric surveys to validate and update deposition plan and water balance.
- Monitor tailings tonnage sent to paste plant to confirm assumptions used in the design.

- Additional vibrating wire piezometers, inclinometers, and survey prisms are recommended for future expansions.
- Maintain a current tailings water and mass balance based bathymetric surveys and operational data to support TSF construction schedules.
- Continue monitoring and inspections activities in accordance with the OMS manual.

26.5 Environmental and Social

Based on the observations and conclusions, the Environmental and Social QP makes the following recommendations:

- Although the environmental agency (SEMARNAT) has not issued any violations to Los Gatos Mine, there are opportunities for improvement to better align with industry practices.
- A written environmental monitoring plan should be developed that includes a description of all media monitoring requirements based on Company and regulatory agency requirements, sampling procedures, protocol for the management of results and interpretation, action levels, corrective action plan and documentation procedures.
- Changes in the mine plan since the 2018 feasibility study trigger a need for evaluation of the potential changes in the geochemical characteristics of the mining wastes. Any new development areas and representative samples from those areas should be considered. The kinetic testing program should consider longer-term tests to ensure that results have stabilized and provide a high level of confidence for the prediction of long-term environmental conditions.
- Paste tailings, cemented paste tailings, waste rock and CRF should be characterized using kinetic geochemistry testing to evaluate the long-term environmental impacts.
- Incorporate surface water sampling at the surface waste rock storage facility and during storm events at ephemeral streams.
- Water quality analysis should include sulfate and the major cations and anions, with an ion balance calculated for each sampling event.
- Waste rock from the surface waste rock storage facility should be characterized and only used where problematic lithologies are properly managed to prevent long-term environmental impacts. Assuming that the waste rock facility may remain after closure, an understanding of the physical and chemical stability is necessary.
- The existing conceptual closure plan is recommended to be updated and follow accepted industry standards.
- Closure designs were based on 100-year storm water probability events. It is recommended that climate change be considered, as well as an analysis of the storm water events to determine whether a 100-year, 24-hour storm water event is practical for long-term stability.
- Additional technical studies to support the closure designs should be carried out, such as erosion, tailings water quality and closure water balance models. The closure costs should be updated to provide more details as closure planning advances.

27.0 REFERENCES

General

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2014, CIM Definition Standards for Mineral Resources and Mineral Reserves, adopted by the CIM Council on May 10, 2014.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2019, CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines, adopted by CIM Council November 29, 2019.

Canadian Securities Administrators, Form 43-101F1, Technical Report.

Canadian Securities Administrators, Rules and Policies, National Instrument 43-101, Standards of Disclosure for Mineral Projects, Form 43-101F1 and Related Consequential Amendments, June 24, 2011.

Canadian Securities Administrators, Form 43-101F1, Technical Report, CSA Staff Notice 43-307 – Mining Technical Reports – Preliminary Economic Assessments, August 16, 2012.

Committee for Mineral Reserves International Reporting Standards (CRIRSCO), International Reporting Template for the Public Reporting of Exploration Results, Mineral Resources and Mineral Reserves, International Council on Mining & Metals (ICMM), November 2013.

Securities and Exchange Commission (SEC) Subpart 229.1300 of Regulation S-K, Disclosure by Registrants Engaged in Mining Operations, December 26, 2018.

Geology and Mineral Resources

Aguirre-Díaz, G. J., McDowell, F. W., 1991, The volcanic section at Nazas, Durango, Mexico, and the possibility of widespread Eocene volcanism within the Sierra Madre Occidental: Journal of Geophysical Research, 96, 13373-13388.

Atwater, T., Stock, J. M., 1998, Pacific-North America plate tectonics of the Neogene southwestern United States: an update: International Geology Review, 40, 375-402

Buchanan, L. J., 1981, Precious metal deposits associated with volcanic environments in the Southwest: Arizona Geological Society Digest, v. 14, 237- 262.

Campa, M. F., Coney, P. J., 1983, Tectono-stratigraphic terranes and mineral resource distribution in Mexico: Canadian Journal of Earth Sciences 20, 1040–1051.

Ferrari L, Valencia-Moreno M, Bryan SE, 2007. Magmatism and tectonics of the Sierra Madre Occidental and their relation to the evolution of the western margin of North America, Geological Society of America, Special Papers, v. 442 (1-39)

McDowell, F. W., Clabaugh, S. E., 1979, Ignimbrites of the Sierra Madre Occidental and their relation to the tectonic history of western Mexico: Geological Society of America Special Paper, 180, 113- 124.

Pratt, W., Paulsen, H., 2013, Structural Studies at Los Gatos Chihuahua, México, Minera del Plata Real.

Telluris, 2010. Structural review of the Etna, Gatos and Zaragoza districts, Chihuahua, Mexico. Unpublished report for Minera Plata Real S de RL de CV.

Mineral Processing and Metallurgy

Tetra Tech Mineral Resources Report, 2012. Phase I and Phase II studies by RDi (May and July 2012, respectively) focused on metallurgical follow-up studies for Minera Plata Real Los Gatos.

SGS Canada Inc., Burnaby, British Columbia, 2016. Metallurgical feasibility study for the Los Gatos PJ project, Project 14392-003 – Final report.

SGS Canada Inc., Lakefield, Ontario, 2017. Pilot plant flotation tests on a mineral sample from Los Gatos, Project 14392-0005 – Final report.

Base Met Labs, Canada, February 2020 - April 2022. Mineralogical assessment of concentrator performance at Mina Cerro Los Gatos.

Gatos Silver Internal Report, 2023. Fluorine leaching of zinc concentrate.

SGS Canada, 2022. Mineralogical assessment of Mina Cerro Los Gatos for 38 variability samples.

Gatos Silver Internal Reports, 2023. Update on fluorine leaching of zinc concentrate, recovery of Au-Ag in tails, and recovery of Pb-Cu.

Gatos Silver Internal Report, 2023. Throughput debottlenecking study.

Mineral Reserves, Geotechnical and Mining

Carter, T.G., 1992. A New Approach to Surface Crown Pillar Design. Proc. 16th Can. Rock Mechanics Symposium, Sudbury, pp. 75-83.

Carter, T.G., Cottrell, B.E., Carvalho, J.L. and Steed, C.M., 2008. Logistic Regression improvements to the Scaled Span Method for dimensioning Surface Crown Pillars over civil or mining opening. 42nd US Rock Mechanics Symposium and 2nd US Canada Rock Mechanics Symposium, Sao Francisco, paper ARM 08-282.

Carter, T.G., 2014. Guidelines for use of the Scaled Span Method for Surface Crown Pillar Stability Assessment. Int. Conference on Applied Empirical Design Methods in Mining held in Peru.

Castro, L. A. M., 2022. Crown pillar stability assessment for the Los Gatos mine. Internal report submitted to CLG in September 2022.

Piggott, R.J. and P. Eynon, 1978. Ground movement arising from the presence of shallow abandoned mine workings. In Large ground movements and structures. J.D. Geddes (ed.) 749-80. London. Pentech.

Q451-02-010 Los Gatos Design Criteria

Definition of contact water. Decision Statement – Issued under Section 54 of the Canadian Environmental Assessment Act, 2012 to Prodigy Gold Incorporated, Magino Gold Project, Impact Assessment Agency of Canada, May 31, 2019.

Mexican Mining Legislation, NORMA Oficial Mexicana NOM-023-STPS-2012, Minas subterráneas y minas a cielo abierto, Condiciones de seguridad y salud en el trabajo. Gobierno de México, October 11, 2012.

Infrastructure

Minefill Services Inc. (Minefill), “Los Gatos Cemented Rockfill Audit Report”. Project No.: SSM-03. November 5, 2019.

Minera Plata Real (MPR), "Resumen CRF Produccion". Ensaye 8642 A 8664, 17 de abril de 2022 – 22 de mayo de 2022.

Minera Cerro Los Gatos (Gatos), "2022 Resource and Reserve Mine Engineering Kickoff". April 2, 2022.

Minefill Services Inc. (Minefill, 2021a), "Cerro Los Gatos Laboratory Report and Mix Design". Report No.: 21013-RPT-0003-rA. November 12, 2021.

Tetra Tech, "Los Gatos Project Chihuahua, Mexico". Project No.: 117-8302008. July 1, 2020.

Tailings Storage

Canadian Dam Association (CDA), 2014. *Technical Bulletin: Application of Dam Safety Guidelines to Mining Dams*. Edmonton, Alberta, Canada.

CONAGUA, 2011. Manual para el control de inundaciones, Febrero 2011.

Federal Emergency Management Agency (FEMA), 2005. *Federal Guidelines for Dam Safety – Earthquake Analysis and Design of Dams*. U.S. Department of Homeland Security, May 2005.

International Committee on Large Dams (ICOLD), 1995. *Tailings Dams and Seismicity – Review and Recommendations*, Bulletin 98. Paris, France.

International Committee on Large Dams (ICOLD), 1996a. *Tailings Dams and Environment – Review and Recommendations*. Bulletin 103. Paris, France.

International Committee on Large Dams (ICOLD), 1996b. *A Guide to Tailings Dams and Impoundments*. Bulletin 106. Paris, France.

International Committee on Large Dams (ICOLD), 2005.

International Finance Corporation (IFC), 2007. *Environmental, Health, and Safety Guidelines for Mining*. Technical reference document, 10 December 2007.

SEMARNAT, 2003. NOM-141-SEMARNAT-2003.

Tetra Tech, 2017. NI 43-101 Feasibility Study of the Cerro Los Gatos Silver-Zinc-Lead Deposit Technical Report. Los Gatos Project – Chihuahua, Mexico. Volume 05: Tailings Storage Facility, Appendix C.

Tierra Group International, Ltd., 2018a. Evaluacion de Sismicidad y Parametros de Diseno Sísmico, Memorando Tecnico, Enero 2018.

Tierra Group International, Ltd., 2018b. Reporte de Investigación Geotécnica Depósito de Jales Minas Los Gatos, Preparado para Minera Plata Real, Enero 2018.

Wieland, Martin, 2005. Review of Seismic Design Criteria of Large Concrete and Embankment Dams." Presented at the 73rd Annual Meeting of ICOLD, Tehran, Iran, May 1-6, Paper No. 012-W4.

Environmental

Comisión Nacional del Agua, 2020a, Actualización de la disponibilidad media anual de agua en el acuífero Alto Rio San Pedro (0838) estado de Chihuahua, December, 29 p.

Comisión Nacional del Agua, 2020b, Actualización de la disponibilidad media anual de agua en el acuífero San Felipe de Jesus (0845) estado de Chihuahua, December, 13 p.

Minera Plata Real, 2017, NI 43-101 Technical Report Feasibility Study of the Cerro Los Gatos Silver-Zinc-Lead Deposit, Los Gatos Project – Chihuahua, Mexico, Volume 8: Environmental and Permitting: Document prepared by Tetra Tech, Document 114-910117-REP-R0008-00, January 6, 1191 p.

Tetra Tech, 2018, Actualizacion del plan de cierre y restauración ambiental Minera Plata Real, Proyecto Los Gatos – estado de Chihuahua: Report prepared for Minera Plata Real, March 15, 85 p.

Tetra Tech, 2019, NI 43-101 Technical Report, Cerro Los Gatos Deposit Feasibility Study, December, 366 p.

Social

Aluna Sustainability. (2021). Actualización de Línea Base Socioeconómica del área de influencia de Gatos Silver Inc. Chihuahua, México.

Aluna Sustainability. (2021). Fundamnetos de nuestro plan de gestión social a corto, mediano y largo plazo. MINERA PLATA REAL , Chihuahua.

Aluna Sustainability. (2021). Modelo de Relaciones Comunitarias. Chihuahua.

Aluna Sustainability. (2021). Plan de Gestión Social . Minera Plata Real, Chihuahua.

Aluna Sustainability. (2022). Proceso del Sistema de PQRs- Mecanismo de Quejas (Preguntas, Quejas y Reclamos). Chihuahua.

Asesores en Impacto Ambiental y Seguridad, S.C. (2016). Diagnóstico socioeconómico de la Localidad de San José del Sitio. San José del Sitio, Satevó, Chihuahua.

ASI S.C. Asesores en Impacto Ambiental y Seguridad S.C. (2016). MIA-R Minera Plata Real S. de R.L. de C.V. Proyecto de Explotació Minera "Los Gatos". Satevó, Chihuahua, México.

ASI S.C. Asesores en Impacto Ambiental y Seguridad, S.C. (2016). Programa de Manejo Ambiental, Minera Plata Real S. de R.L de C.V. Proyecto de Explotación Minera "Los Gatos", Satevó, Chihuahua.

Instituto Nacional de Estadística y Geografía (INEGI). (2020). *Censo de Población y Vivienda 2020. ITER Chihuahua.* México.

Minera Plata Real. (Octubre de 2021). PUNTO DE ENCUENTRO. *Boletín trimestral de Minera Plata Real- Mina Cerro Los Gatos, 1, Año 1, Número 0*. (M. P. Real, Ed.) Mina Cerro Los Gatos, Chihuahua, México.

Minera Plata Real. (2022). Presentación Ejecutiva Gestión de Relaciones Comunitarias. Cerro Los Gatos Mine, Chihuahua, México.

Minera Plata Real. (Marzo de 2022). Revista Cerro Los Gatos. *Publicación Trimestral de Minera Plata Real, 1. Año 1, Número 1*. (M. P. Real, Ed.) Mina Cerro Los Gatos, Chihuahua, México.

Minera Plata Real, S. de R.L. de C.V. (2021). Política de Derechos Humanos y Mecanismo de Quejas. Cerro Los Gatos Mine.

Sincronía. (Marzo de 2018). Estudio de línea base social. Caracterización de comunidades del área de influencia del proyecto "Los Gatos" de Minera Plata Real. Chihuahua.

United Nations Global Compact. (2022). *Company information*. Obtenido de https://unglobalcompact.org/what-is-gc/participants/133920

Mineral Processing

Tetra Tech Mineral Resources Report (December 21, 2012) Phase I and Phase II studies by RDi (May and July 2012, respectively) focused on metallurgical follow-up studies for Minera Plata Real Los Gatos

SGS Canada Inc., Burnaby, British Columbia (September 1, 2016): Metallurgical feasibility study for the Los Gatos PJ project, Project 14392-003 – Final report

SGS Canada Inc., Lakefield, Ontario (March 24, 2017): Pilot plant flotation tests on a mineral sample from Los Gatos, Project 14392-0005 – Final report

Base Met Labs, Canada (February 2020 - April 2022): Mineralogical assessment of concentrator performance at Mina Cerro Los Gatos

Gatos Silver Internal Report (February 2023): Fluorine leaching of zinc concentrate

SGS Canada (August 2022): Mineralogical assessment of Mina Cerro Los Gatos for 38 variability samples

Gatos Silver Internal Reports (August 2023): Update on fluorine leaching of zinc concentrate, recovery of Au-Ag in tails, and recovery of Pb-Cu

Gatos Silver Internal Report (December 2023)

Gatos Silver Internal Report (February 2024)

SGS Canada (May 2024)

Frisco Research and Development (June 2024)

Gatos Silver Internal Report (July 2024): Brownfield 3 Variability Samples (W-30 2024) program focused on the separation of lead (Pb) and copper (Cu) for 18 samples from the SE zone of the deposit, where high copper contents have been identified. The mineralogical characterization of these samples is currently underway.