



**P&E MINING  
CONSULTANTS INC.**

**Geologists and Mining Engineers**

2 County Court Blvd., Suite 478  
Brampton, Ontario, L6W 3W8

Tel: 905-595-0575  
www.peconsulting.ca

**UPDATED MINERAL RESOURCE ESTIMATE AND  
PRELIMINARY ECONOMIC ASSESSMENT  
OF THE  
LOS RICOS SOUTH PROJECT,  
JALISCO, MEXICO**

**LATITUDE 21° 02' 45" N and LONGITUDE 103° 56' 08" W  
UTM NAD83 ZONE 13Q 610,600 m E and 2,327,600 m N**

**FOR GOGOLD RESOURCES INC.**

**NI 43-101 & 43-101F1 TECHNICAL REPORT**

**Andrew Bradfield, P.Eng.  
Jarita Barry, P.Geo.  
Fred Brown, P.Geo.  
David Burga, P.Geo.  
D. Grant Feasby, P.Eng.  
Eugene Puritch, P.Eng., FEC, CET  
D. Gregory Robinson, P.Eng.  
William Stone, Ph.D., P.Geo.  
David Salari, P.Eng., D.E.N.M. Engineering Ltd.**

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 **GoGold**  
SILVER & GOLD

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## 1.0 SUMMARY

### 1.1 INTRODUCTION

This National Instrument (“NI”) 43-101 Technical Report was prepared by P&E Mining Consultants Inc. (“P&E”) for GoGold Resources Inc. (“GoGold” or “the Company”) to provide an updated Mineral Resource Estimate and Preliminary Economic Assessment (“PEA”) for the Los Ricos South Project (the “Project”), located in the State of Jalisco, Mexico. The Los Ricos South Property is 100% owned by GoGold.

Input to this updated PEA was also provided by D.E.N.M. Engineering Ltd. (“DENM”) and Consultores Interdisciplinario en Medio Ambiente S.C. (“CIMA”). This Technical Report has an effective date of September 12, 2023.

GoGold is a corporation trading on the Toronto Stock Exchange (“TSX”) under the symbol “GGD”. The Los Ricos South Property (the “Property”) is held by GoGold’s wholly-owned Mexican subsidiary Minera CM Jalisco, S.A. de C.V. (“MCMJ”), previously known as Minera Durango Dorado S.A. de C.V. (“MDD”). The Property comprises 14 concessions covering 10,643 hectares in the Hostotipaquillo region of Jalisco State, Mexico. GoGold executed an Option Agreement for 29 concessions, which include the Project’s 11 concessions (and 18 concessions in the Los Ricos North area) on March 26, 2019. Subsequently, on August 22, 2019, GoGold acquired 100% ownership of the 29 concessions, including the 11 concessions of the Project, and purchased a 2% NSR royalty through a Concession Agreement. Since then, GoGold acquired three more concessions: Siete Pozos, Cinco Minas (Eagle), and El Cofre.

Between 1914 and 1930, the Cinco Minas Mining Company produced 33.3 million ounces of silver (33.3 Moz Ag), 233.5 thousand ounces of gold (233.5 koz Au) from 2.45 million short tons (2.45 MT) from underground workings along the Los Ricos Vein. The vein system strikes northwest–southeast for a distance of 3,500 m on the Property, dips approximately 65° to the west, and varies from 5 m to 30 m in width. Historical mining operations on the vein extended for a length of 450 m along strike and from surface down-dip for a distance of 850 m. The operators worked only the richest sections of the vein in stopes 1 m to 5 m wide. Stopes were backfilled with development waste rock consisting of “low-grade quartz vein material”.

GoGold initiated a due diligence program at the Project site in January 2019, which included geological mapping, channel and trench sampling, diamond drilling to twin three, legacy, reverse circulation (“RC”) drill holes, bulk density measurements, and analyzing for precious metals (gold and silver).

Through the remainder of 2019 and to 2023, GoGold carried out an exploration program including: purchasing the 1 m topographic Digital Terrain Model (“DTM”) for the Los Ricos South Property; drilling 515 diamond drill holes for 87,736 m; collecting and assaying drill core, surface grab and underground channel samples; compiling the legacy mining data recovered from the University of Montana; geological mapping of the Property; and initiating an environmental study and social and community impact studies.

P&E completed an Initial Mineral Resource Estimate on the Los Ricos South Property for GoGold with an effective date of July 28, 2020, which formed the basis for an initial PEA with an effective date of January 20, 2021. GoGold's exploration program evaluated the potential for near surface and underground gold, silver and copper mineralization. Key outcomes of exploration work by GoGold on the Los Ricos South Property to date are:

- Diamond drilling continues to intersect the silver- and gold-bearing Los Ricos South Veins past the limits of the historical underground workings.
- Original drawings of the legacy mine workings recovered from the Mansfield Library at the University of Montana in Missoula, Montana were digitized and compiled into 3-D modelling software.
- Compilation of over 8,000 historical silver and gold assays of the underground stopes, cross-cuts, raises and drifts have identified the dimensions and plunge of the high-grade mineralized shoots and extensions of the vein along strike and down-dip.
- Compilation of the underground workings identified new target areas for drill testing extensions of the Eagle (Cinco Minas) Vein.
- Compilation of the original monthly reports by the Mine Manager of the Cinco Minas Mining Company has provided a wealth of information on the underground geology, development, mining methods, process plant operations, metal recoveries and bullion sales over the life of the mine from 1914 to 1930.

This PEA provides an update of the Los Ricos South Mineral Resource Estimate, and updates an underground and open pit mining study, with production of doré and copper concentrate from an on-site process plant.

## **1.2 LOCATION, CLIMATE, ACCESS AND INFRASTRUCTURE**

The Los Ricos South Project is situated near the village limits of Cinco Minas, in the State of Jalisco, Mexico (Figure 1.1). The village has a population of approximately 300 and can be easily accessed on a well-maintained paved highway from the City of Guadalajara by travelling 85 km northward on MEX 16D to Cuauhtémoc, then southward for 20 km on MEX 24. This is approximately a two-hour drive. There is an international airport in Guadalajara with daily flights to the US, Mexico City, and other Mexican destinations.

Historical underground workings at the Los Ricos Vein are located at approximately latitude 21° 02' 45" N and longitude 103° 56' 08" W. The UTM coordinates (NAD83 Zone 13Q) are 610,600 m E and 2,327,600 m N.

The Village of Cinco Minas is situated at an elevation of approximately 1,520 masl and has an altitude-moderated semi-temporal climate, with rainfall limited to heavy thunderstorms during the hot summer months. The dry season extends from October to May, the days range from mild to hot and nights from chilly to mild. Frost is common though not persistent in the winter.

**FIGURE 1.1 LOS RICOS SOUTH PROPERTY LOCATION MAP**



*Source: GoGold Resources (2019)*

*Note: "A" in the main map and Los Ricos in the inset map represent the location of the Los Ricos South Property.*

The warmest months are typically July to September and can be humid. Annual precipitation ranges from 800 mm to 1,200 mm, with much of it associated with thunderstorms during July to September.

The Hostotipaquillo District has a very long tradition of mining. There is an ample supply of skilled personnel, equipment suppliers and contractors sufficient for the Project. An electrical power line from the local grid crosses the Property, and water is available at a cost from the local

water commission. Telephone and cell phone coverage are excellent, as is access to high-speed internet.

To date, exploration crews stay in Cinco Minas and make the short trip to site as required.

### **1.3 MINERAL TENURE**

On August 22, 2019, GoGold announced it had entered into various agreements (“the Concession Agreements”) to accelerate the acquisition of the 29 concessions that comprised the Los Ricos area, including the Project’s 11 concessions, from a private Mexican owner.

With the signing of the Concession Agreements, GoGold was required to make payments as follows:

- US\$500,000 upon signing the agreements;
- US\$3,220,000 was paid in equal monthly cash payments over 24 months from the signing of the agreements; and
- 9,046,968 GoGold common shares were delivered in equal numbers over 24 months from the signing of the agreements.

The Company also acquired a 2% NSR royalty for the Los Ricos South Property for payments as follows:

- US\$1M in cash; paid in equal installments over 36 months; and
- 4,875,012 GoGold common shares delivered in equal numbers over 18 months.

There are now no royalties on the Property concessions.

In October 2022, the Company acquired the Eagle Concession, which connects the southern and northern parts of Los Ricos South into a single, contiguous property and overlies the northern continuation of the structure that hosts the main silver-gold mineralization. The terms of the acquisition agreement involve payment of US\$2.1M over four years to the vendor, Minera CM Jalisco, S.A. de C.V., the registered owner of the Eagle (Cinco Minas) Concession. The Siete Pozos and El Cofre Concessions were acquired in 2020 and 2023, respectively. GoGold, through its subsidiary (Minera CM Jalisco, S.A. de C.V.), legally holds 100% of 13 of the 14 mining concessions that make-up the Los Ricos South Property, however, is in full control of all 14 Titles. The 14 concessions comprise an area of 10,858 hectares (“ha”).

### **1.4 SURFACE RIGHTS**

The Ejido of Cinco Minas owns the surface rights over the majority of the Project’s concessions, and area covering the current Mineral Resource Estimate. On August 9, 2020, the Ejido of Cinco

Minas signed an Agreement with the Company for a period of 12 years with an additional 12-year renewal period. The Agreement gives access to enter and carry out exploration and exploitation on 1,280 hectares for an annual fee of 1,000,000 Mexican pesos. When the Project is constructed, the Company will pay a further annual fee of 500,000 Mexican pesos for use of up to 71 hectares with an additional annual fee of 7,000 Mexican pesos per hectare in excess of 71 hectares. For the years the Project is in production, there will be an additional annual fee of US\$100,000.

## **1.5 ENVIRONMENTAL**

According to the Concession Agreement, GoGold is not inheriting any environmental liabilities from the historical mining operations. All historical disturbances and environmental liabilities rest with the State of Jalisco.

GoGold has retained Mexican environmental firm CIMA to complete baseline environmental and socioeconomic studies of the Los Ricos South Project. CIMA carried out a baseline environmental study of water quality, dust, noise, soil sampling, vegetation and other environmental issues. This environmental assessment was required for submission to the authorities for permitting of a commercial development, such as a mine and process plant. The Mexican Federal government department responsible for environmental matters and permitting is SEMARNET (Secretary of the Environment, Natural Resources and Fisheries).

## **1.6 PERMITS**

According to Mexican mining law, a series of permits are required to support and approve exploration and mining activities. GoGold had a yearly permit from SEMARNET to allow drilling and exploration activities valid through to March 19, 2023. The permit will not be renewed until a future exploration program is planned.

Should the Project proceed to Feasibility Study level, a thorough examination of the permits and appropriate regulations is required to determine how best to accommodate any project development schedule.

## **1.7 GEOLOGY AND MINERALIZATION**

The Cinco Minas Vein system at Los Ricos is a classic epithermal precious metal deposit, which exhibits at least three phases of quartz and sulphide mineralization and deformation. The vein, which is up to 30 m in width and has been traced over 3.5 km on the concessions, occurs along a northwesterly trending structure that roughly marks the boundary between two calc-alkaline magmatic arcs: 1) the older Sierra Madre Occidental volcanic province to the north; and 2) the younger Trans-Mexican volcanic arc to the south. The Sierra Madre Occidental province is the largest accumulation of pyroclastic flows and ignimbrites in the world (Nebocat, 2002). The age of these volcanics ranges from Cretaceous (100 Ma) to Neogene (18 Ma) (previously Tertiary).



Mineralization consists of pyrite and chalcopyrite as the most abundant sulphides, with local concentrations of galena, sphalerite, argentite, native silver, miargyrite (AgSbS<sub>2</sub>), and other silver sulphosalts. Banded, milky, amethystine and brecciated quartz exhibit several periods of quartz emplacement and intra-mineral deformation (Nebocat, 2002).

## 1.8 EXPLORATION HISTORY

Silver and gold mining in the Hostotipaquillo area dates back to Spanish colonial times. Small family-owned mining operations during the 1800s produced high-grade silver and gold material from narrow underground workings at several locations on the Los Ricos South Property. From 1908 to 1930, the Cinco Minas Mining Company (“CMMC”) produced 33,333,369 ounces of silver and 233,495 ounces of gold from 2,446,040 short tons of mineralized material (Gerard, 1951).

Nebocat (2002, 2004) and Munroe (2006) provide an excellent summary of the historical exploration activities carried out on the Property after CMMC ceased operations in 1930. Nebocat reports on the exploration work carried out by TUMI Resources during 2002 to 2005. Munroe (2006) provides an excellent historical review of work completed during the 1970s to 1990s, and the program carried out by Bandera Gold in 2006 and 2007. No work was carried out on the Property from 2007 to late 2018 due to a protracted legal dispute.

GoGold commenced its exploration program in January 2019. The work has been undertaken by GoGold staff and reputable Mexican consultants and contractors. Activities on the Project include topographical surveying, satellite topographical mapping, geological mapping, sampling, trenching, diamond drilling and assaying, structural mapping, and compilation of the historical mining records of CMMC obtained from the Mansfield Library at the University of Montana, Missoula, Montana.

Following acquisition of the Eagle Concession in October, 2022, GoGold completed preliminary geological mapping, sampling, geophysical IP surveying and commenced a drill program. Mapping and geophysics indicate that the mineralized Eagle structure extends >2.5 km to the northwest. Significant geophysical anomalies were identified that formed targets for subsequent drill testing.

In addition to the exploration work completed, the Authors established that the Los Ricos South Abra and Eagle mineral deposits contain an additional Exploration Target as follows: 1.8 to 2.2 Mt at 375 to 425 g/t AgEq for 22 to 30 Moz AgEq. The Exploration Target is based on the estimated strike length, depth and thickness of the known mineralization. ***The potential quantities and grades of the Exploration Target are conceptual in nature. There has been insufficient work done by a Qualified Person to define this estimate as a Mineral Resource. The Company is not treating this estimate as Mineral Resources, and readers should not place undue reliance on this estimate. Even with additional work, there is no certainty that this estimate will be classified as Mineral Resources. In addition, there is no certainty that this estimate will ever prove to be economically recoverable.***

## **1.9 DRILLING**

GoGold's drilling program on the Los Ricos South Project began in February 2019. As of the effective date of this Technical Report, 515 drill holes totalling 87,736 m of HQ-size diamond drill core have been completed by GoGold and have been used to estimate Mineral Resources. As many as four drills operated on the programs. One additional drill hole LRGG-20-207 was a metallurgical test hole drilled in the Abra Vein. The drill core from this drill hole was used for grinding testwork at Lakefield and is not included in the Mineral Resource Estimate.

The drilling has mainly concentrated on the Abra and Eagle Veins in the area of the historical Cinco Minas underground mine. Drilling cross-sections are spaced at 50 m intervals along strike between 0 N and 1,150 N. The drill holes are inclined at dips between  $-45^{\circ}$  to  $-65^{\circ}$  to test the veins at 50 m intervals down-dip. All drill hole collars are surveyed with differential GPS and marked with concrete monuments. Downhole survey data are collected every 40 m to 50 m in order to measure deviations in the drill holes. Drill core is transferred from the drill rig to a secure drill core logging and storage facility. The drill core is logged using standard procedures and the information captured and recorded in digital GVMapper™ software. Standardized logging forms and geological legends have been developed for the Project. All drill core has been photographed with digital cameras. All field data are forwarded daily via satellite to the Servicios y Proyectos Mineros de México, S.A. de C.V. ("SPM") server in Hermosillo, where it is checked, verified, and incorporated into the main database. SPM is a geological consulting/contracting service company that undertakes all field work for GoGold.

Drill core recoveries are excellent, although some drill core is lost around the historical underground workings. Special attention is made to identify the backfill material placed in the historical stopes and to model the mined-out and backfilled voids created by the stopes.

## **1.10 SAMPLING AND ASSAYING**

Samples of the drill core typically average 1.0 m in length and are cut using a diamond saw. QA/QC protocols are followed, including insertion of certified reference materials (CRMs), blanks and duplicate pairs. Gold and silver assays are determined for high-grade samples with gravimetric methods and use normal fire assay/atomic absorption methods. All samples are prepared using the four acid digestion procedures to ensure sufficient digestion and accurate reporting of silver values.

Multi-element data is collected using the ICP procedure. The Authors are satisfied with GoGold's sampling and assaying protocols on the Los Ricos South Project.

## **1.11 DATA VERIFICATION**

The Authors completed data verification by undertaking a site visit to the Los Ricos South Project during GoGold's mapping, trenching and drilling programs. Drill core handling, logging and sampling procedures, QA/QC protocols, drill core recovery, and RQD and bulk density measurements were observed and reviewed.

The Project data are stored in a Microsoft Access™ database. All geological data are entered electronically in the field and forwarded via satellite communications to the SPM office in Hermosillo, Sonora. Assays are received electronically from the laboratory and imported into the database. Drill hole collar locations are manually entered into the database. Checks are routinely performed on the survey, drill hole collar coordinates and assay data. Digital and paper records are kept for all assay and QA/QC data.

Mr. Fred Brown, P.Geo., of P&E, a Qualified Person under the terms of NI 43-101, completed a site visit to the Los Ricos South Project on August 15 and 16, 2019. A data verification drill core sampling program was conducted as part of the on-site review. Mr. David Burga, P.Geo., of P&E, a Qualified Person under the terms of NI 43-101, completed a site visit to the Los Ricos South Property on May 16-17, 2023, and conducted a data verification drill core sampling program as part of the on-site review.

The Authors consider the due diligence results to be acceptable and results are suitable for verification use in the Mineral Resource Estimate.

## **1.12 METALLURGICAL TESTING**

Historical records from the Cinco Minas Mining Company (“CMMC”) indicate metallurgical recovery rates for both silver and gold in excess of 90% from the 500 tpd flotation and cyanidation processing operations between 1918 and 1930.

In 2020, a preliminary metallurgical test program was initiated at SGS Lakefield (Ontario, Canada) to evaluate grinding (comminution) and cyanide leaching of the Los Ricos South mineralization. The leach samples were a combination and composites of drill core rejects from selected various zones of the Los Ricos South Mineral Resource. Comminution samples were from HQ drill core completed at the site in 2020. The metallurgical test results were positive and illustrated that average gold and silver of extractions of ~93% and ~88%, respectively, could be achieved from two composites.

Modified ABA testing classified the LRS host material as potentially acid generating and while net acid generation (“NAG”) testing of the host material conversely reported no net acidity generated after aggressive oxidation of the sample, as it may not have completely oxidized the sulphide concentration present in the sample.

Commencing in March 2021, PFS level testwork was completed on the LRS Deposit to develop comminution data to evaluate the grindability of the material and metallurgical data to evaluate and optimize various processes for the recovery of gold and silver. Comminution testing performed on the Master Composite and variability samples were categorized as medium or moderately hard. Whole feed cyanidation testing on the Master Composite produced optimized conditions and the resulting relatively high gold and silver extractions for the tests under these conditions for Master Composite and the six variability samples ranged from 92% to 97% and 82% to 88%, respectively. Cyanidation testing using recycled SART barren solution produced gold and silver extractions of 95% and 85%, respectively, which were the same as the recoveries achieved with fresh NaCN. A preliminary environmental assessment on both a fresh feed sample and a leach tailing sample using ABA static technique showed that the solids are non-acid

generating and have net acid consumption potential. NAG testing results also indicated that the samples were non-acid generating and have net acid consumption potential.

In 2023 SGS conducted a testwork program on the Eagle samples with the objectives of developing comminution data to evaluate the grindability of the material and metallurgical data to evaluate various processes for the recovery of gold and silver. Mineralogical, environmental, and solid/liquid separation and rheology testing were also examined on various samples to support the testing program. Comminution testing of four composite samples fell in the medium to moderately hard categories for the SAG Mill Comminution tests (SMC) test when compared to the JK Tech database. The samples fell in the moderately hard to very hard categories for the Ball Mill grindability tests (BWI) test and in the moderately abrasive to very abrasive category for the Bond Abrasion tests (AI) when compared to the SGS database. Whole feed cyanidation testing determined the best leaching conditions to include a P<sub>80</sub> grind size of 75 µm, 40% pulp density, pH of 10.5-11.0 maintained with lime, four hours of pre-aeration with air sparging, an initial dosage of 3 g/L of sodium cyanide (NaCN) maintained for the first 24 hours of leaching and then allowed to naturally decay for the remaining 72 hours of the 96-hour retention time. These conditions produced gold and silver extractions ranging from 89% to 96% and 72% to 92%, respectively.

Merrill Crowe testing determined that gold and silver were efficiently extracted/precipitated out of the PLS solution with the percent precipitation ranging from 98% to 100% for gold and 99% to 100% for silver. SART testing determined that the CN<sub>free</sub> recovery ranged from 99% to 161%, performed at a sodium hydrosulphide (NaHS) stoichiometric addition ranging from 100% to 125% and pH 4. Gravity tailing cyanidation tests returned final gold extractions ranging from 85% to 95% and silver extractions ranging from 68% to 90%. The overall gold and silver recoveries achieved (gravity + cyanidation) for these tests ranged from 90% to 96% for gold and 69% to 92% for silver. Rougher flotation cyanidation after regrinding the flotation concentrates to less than 20 µm and intensively leaching combined with the leaching of the flotation tailings, returned overall gold and silver extractions from 94% to 97% and 85% to 94%, respectively.

Anticipated overall gold recovery is estimated at 95%, with silver recovery in Phase 1 (1,750 tpd processing capacity from the Eagle Veins) of 84% and at 86% for Phase 2 (4,000 tpd processing from the Abra Veins), with a copper leaching recovery of 77% and SART recovery of 95%.

### **1.13 MINERAL RESOURCES**

Highlights of the Los Ricos South Mineral Resource Estimate (“MRE”) include:

- Increase of 55% in Measured & Indicated Silver Equivalent (“AgEq”) ounces from initial January 2021 MRE, with a 39% increase in Measured and Indicated AgEq grade;
- Inclusion of 1.9 million tonnes Measured and Indicated Mineral Resources at a grade of 516 g/t AgEq in the underground Eagle Deposit;
- Measured and Indicated Mineral Resource of 98.6 million ounces AgEq grading 276 g/t AgEq contained in 11.1 million tonnes;

- Inferred Mineral Resource of 13.6 million ounces AgEq grading 185 g/t contained in 2.3 million tonnes;
- Los Ricos South Mineral Resource is amenable to both conventional open pit and underground mining methods.

The Mineral Resource Estimate is based on 591 drill holes totalling 94,690 m, of which 527 are diamond drill holes (totalling 89,876 m) completed by GoGold and 64 are historical reverse circulation holes (totalling 4,814 m). Mineralization models were developed by GoGold and reviewed and modified by the Authors. A total of eight individual mineralized domains were identified through drilling and surface sampling. The modelled mineralization domains are constrained by individual wireframes based on a nominal 0.30 g/t AuEq cut-off for low-grade domains and a nominal 3.00 g/t AuEq cut-off for high-grade sub-domains. The average true thickness of the modelled Los Ricos South Domain is 7.5 m. The average true thickness of the modelled Eagle Domain is 16.1 m with the high-grade sub domains, Eagle Plum FW and Eagle Plum HW, having an average true thickness of 5.4 and 6.1 m, respectively. Mineralization wireframes were used as hard constraining boundaries for the purposes for block coding, statistical analysis, compositing limits and grade estimation.

A three-dimensional sub-blocked model, with 3.0 m x 3.0 m x 3.0 m parent blocks and 1 m x 1 m x 1 m sub-blocks, was used for the Mineral Resource Estimate. The block model consists of estimated Au, Ag and Cu grades, bulk density, domain codes and classification criteria. AuEq and AgEq block grades were subsequently calculated from the estimated Au, Ag and Cu grades, and considered metal prices and metallurgical recoveries.

Assay samples were composited to a 1.00 m standard length. Au and Ag grades were estimated using Inverse Distance Cubed interpolation from between one and twelve composites, with a maximum of two composites per drill hole. Composites were capped by mineralization domain prior to grade estimation. Composite samples were selected within a search ellipse oriented down the plunge of identified high-grade trends. Individual bulk density values were applied to mineralized domains separately and were determined using 4,516 measurements taken from drill holes.

Classification criteria were determined from observed grade, geological continuity and variography. All blocks within 30 m of three or more drill holes were classified as Measured, blocks within 60 m of two or more drill holes were classified as Indicated, and all additional estimated blocks were classified as Inferred. For the purposes of classification, historical underground channel sampling was treated as drill holes for domain interpretation, however, underground channel sampling was not used for grade estimation.

Pit-constrained Mineral Resources reported have been reported within an optimized pit shell and include Measured, Indicated and Inferred Mineral classifications. Historical mining has been depleted from the Abra Main Vein. Pit-constrained Mineral Resources are reported using a cut-off of 38 g/t AgEq (0.48 g/t AuEq).

Out-of-pit Mineral Resources have been reported beneath the pit shell and are restricted to the Eagle and Abra mineralized veins, which exhibit historical mineralized continuity and reasonable

potential for extraction by cut and fill, and longhole mining methods. Out-of-pit Mineral Resources are reported using a cut-off of 130 g/t AgEq (1.66 g/t AuEq) and are summarized in Table 1.1.

**TABLE 1.1**  
**LOS RICOS SOUTH MINERAL RESOURCE ESTIMATE – PIT-CONSTRAINED AND OUT-OF-PIT <sup>(1-9)</sup>**

Mining Method	Classification	Tonnes (M)	Average Grade					Contained Metal				
			Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	AgEq (g/t)	Au (koz)	Ag (koz)	Cu (Mlb)	AuEq (koz)	AgEq (koz)
Pit- Constrained <sup>5</sup>	Measured	3.9	1.08	142	0.03	2.94	231	135.9	17,858	2.3	369.1	28,898
	Indicated	2.8	0.68	89	0.03	1.87	146	60.7	8,022	1.9	167.3	13,097
	<b>Meas &amp; Ind</b>	<b>6.7</b>	<b>0.91</b>	<b>120</b>	<b>0.03</b>	<b>2.49</b>	<b>195</b>	<b>196.6</b>	<b>25,880</b>	<b>4.2</b>	<b>536.4</b>	<b>41,995</b>
	Inferred	0.5	0.58	99	0.04	1.91	150	9.6	1,632	0.4	31.4	2,460
Pit - Cerro C. <sup>6</sup>	Inferred	0.9	0.72	31	0.01	1.12	88	20.9	905	0.2	32.8	2,568
Out-of-Pit <sup>7,8</sup> <i>Eagle</i>	Measured	0.7	3.60	298	0.35	7.94	621	80.7	6,679	5.4	178.1	13,940
	Indicated	1.2	3.13	164	0.37	5.79	453	117.5	6,176	9.5	217.5	17,028
	<b>Meas &amp; Ind</b>	<b>1.9</b>	<b>3.30</b>	<b>214</b>	<b>0.36</b>	<b>6.59</b>	<b>516</b>	<b>198.2</b>	<b>12,855</b>	<b>15.0</b>	<b>395.6</b>	<b>30,969</b>
	Inferred	0.1	3.63	122	0.54	6.00	470	7.8	261	0.8	12.9	1,006
Out-of-Pit <sup>7,8</sup> <i>Abra Main</i>	Measured	1.1	1.22	194	0.06	3.79	297	44.7	7,093	1.6	138.8	10,865
	Indicated	1.4	1.58	178	0.21	4.18	327	71.5	8,013	6.6	188.4	14,753
	<b>Meas &amp; Ind</b>	<b>2.5</b>	<b>1.42</b>	<b>185</b>	<b>0.15</b>	<b>4.00</b>	<b>313</b>	<b>116.2</b>	<b>15,106</b>	<b>8.1</b>	<b>327.2</b>	<b>25,618</b>
	Inferred	0.8	1.42	133	0.41	3.73	292	36.8	3,431	7.2	96.6	7,566
<b>Total</b>	<b>Measured</b>	<b>5.7</b>	<b>1.42</b>	<b>172</b>	<b>0.07</b>	<b>3.72</b>	<b>291</b>	<b>261.4</b>	<b>31,631</b>	<b>9.3</b>	<b>686.0</b>	<b>53,703</b>
	<b>Indicated</b>	<b>5.4</b>	<b>1.45</b>	<b>129</b>	<b>0.15</b>	<b>3.33</b>	<b>260</b>	<b>249.7</b>	<b>22,210</b>	<b>18.0</b>	<b>573.2</b>	<b>44,878</b>
	<b>Meas &amp; Ind</b>	<b>11.1</b>	<b>1.43</b>	<b>151</b>	<b>0.11</b>	<b>3.53</b>	<b>276</b>	<b>511.0</b>	<b>53,841</b>	<b>27.3</b>	<b>1,259.2</b>	<b>98,582</b>
	<b>Inferred</b>	<b>2.3</b>	<b>1.02</b>	<b>85</b>	<b>0.17</b>	<b>2.36</b>	<b>185</b>	<b>75.0</b>	<b>6,230</b>	<b>8.6</b>	<b>173.7</b>	<b>13,601</b>

Notes: Meas = Measured, Ind = Indicated.

1. 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, title, taxation, socio-political, marketing, or other relevant issues.
2. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.

3. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
4. *Historically mined areas were depleted from the Mineral Resource model.*
5. *The pit-constrained AgEq cut-off grade of 38 g/t AgEq was derived from US\$1,800/oz Au price, US\$23.00/oz Ag price, 85% Ag and 95% Au process recovery, US\$25/tonne process and G&A cost. The constraining pit optimization parameters were \$2.10/t mineralized material and waste mining cost, and 45-degree pit slopes.*
6. *Cerro Colorado Resource constrained to open pit mining methods only; out-of-pit Mineral Resources are restricted to the Eagle and Abra mineralized veins, which exhibit historical continuity and reasonable potential for extraction by cut and fill and longhole mining methods.*
7. *The out-of-pit AgEq cut-off grade of 130 g/t AgEq was derived from US\$1,800/oz Au price, US\$23.00/oz Ag price, 85% Ag and 95% Au process recovery, US\$33/tonne process and G&A cost, and a \$50/tonne mining cost. The out-of-pit Mineral Resource grade blocks were quantified above the 130 g/t AgEq cut-off, below the constraining pit shell and within the constraining mineralized wireframes. Out-of-Pit Mineral Resources are restricted to the Eagle and Abra Veins, which exhibit historical continuity and reasonable potential for extraction by cut-and-fill and longhole mining.*
8. *AgEq and AuEq were calculated at an Ag/Au ratio of 78.2:1 for pit constrained and out-of-pit Resources.*
9. *Totals may not sum due to rounding.*



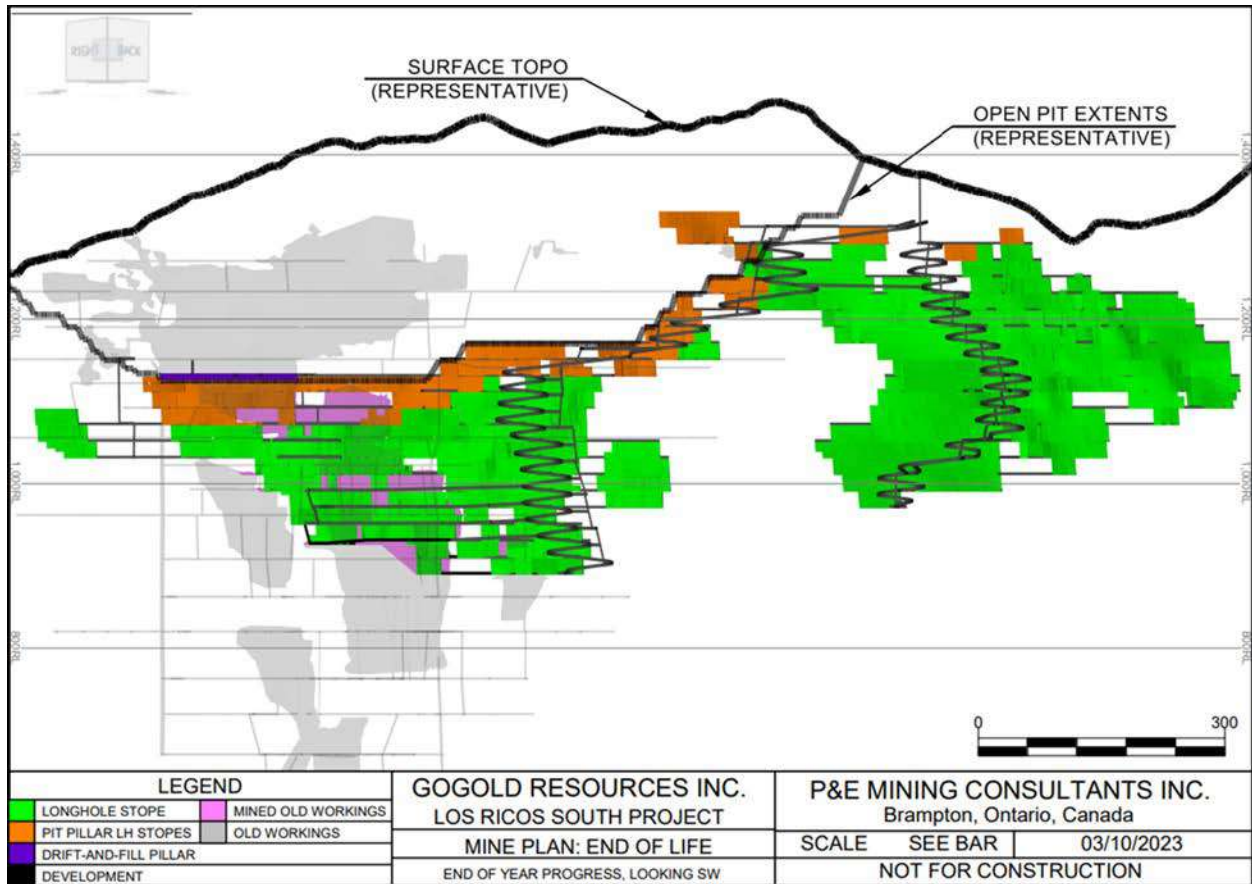
## 1.14 MINING METHODS

The Los Ricos South Project will consist of both underground and open pit mining operations. Underground mining will commence at the start of production. Open pit mining will be initiated in Year 3 and there will be an underground / open pit overlap period of five years. The duration of all mining activity will be 12 years after the start of commercial production. During the first three years of production when there is only underground mining, the processing rate is 1,750 tpd. This ramps up to 4,000 tpd when open pit mining is able to deliver feed to the process plant. The underground mine will continue to deliver 1,750 tpd with the open pit providing the remainder until it is depleted in Year 7.

The PEA mine production plan utilizes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them to be classified as Mineral Reserves. There is no certainty that the Inferred Mineral Resources will be upgraded to a higher Mineral Resource classification in the future.

The dominant underground mining method is longitudinal retreat sublevel longhole stoping with cemented paste backfill (Figure 1.2). In the Abra Vein the mining method is by transverse access instead of longitudinal access around historical workings. All underground mining will be completed by contractor. Overall mining dilution is estimated at 29% and mining recovery is estimated at 94%. Sublevels are spaced at a nominal interval of 20 m. Longitudinal stopes are a maximum of 25 m along strike, with width limited by vein thickness. Stope widths at Eagle average 11.1 m and at Abra average 6.4 m. Haulage trucks will typically be 30 t, with 7-t and 10-t load-haul-dump units. Steady-state production of 1,780 tpd (nominally 640 ktpa) will be reached midway through YR1 after a short ramp-up period, and full production will be maintained until the end of UG mine life at the end of YR7. Over the life-of-mine (“LOM”), a total of 4.33 Mt of mineralized material will be recovered from the underground mine at average grades of 1.95 g/t Au, 174 g/t Ag and 0.22% Cu, equivalent to 52.1 Moz AgEq.

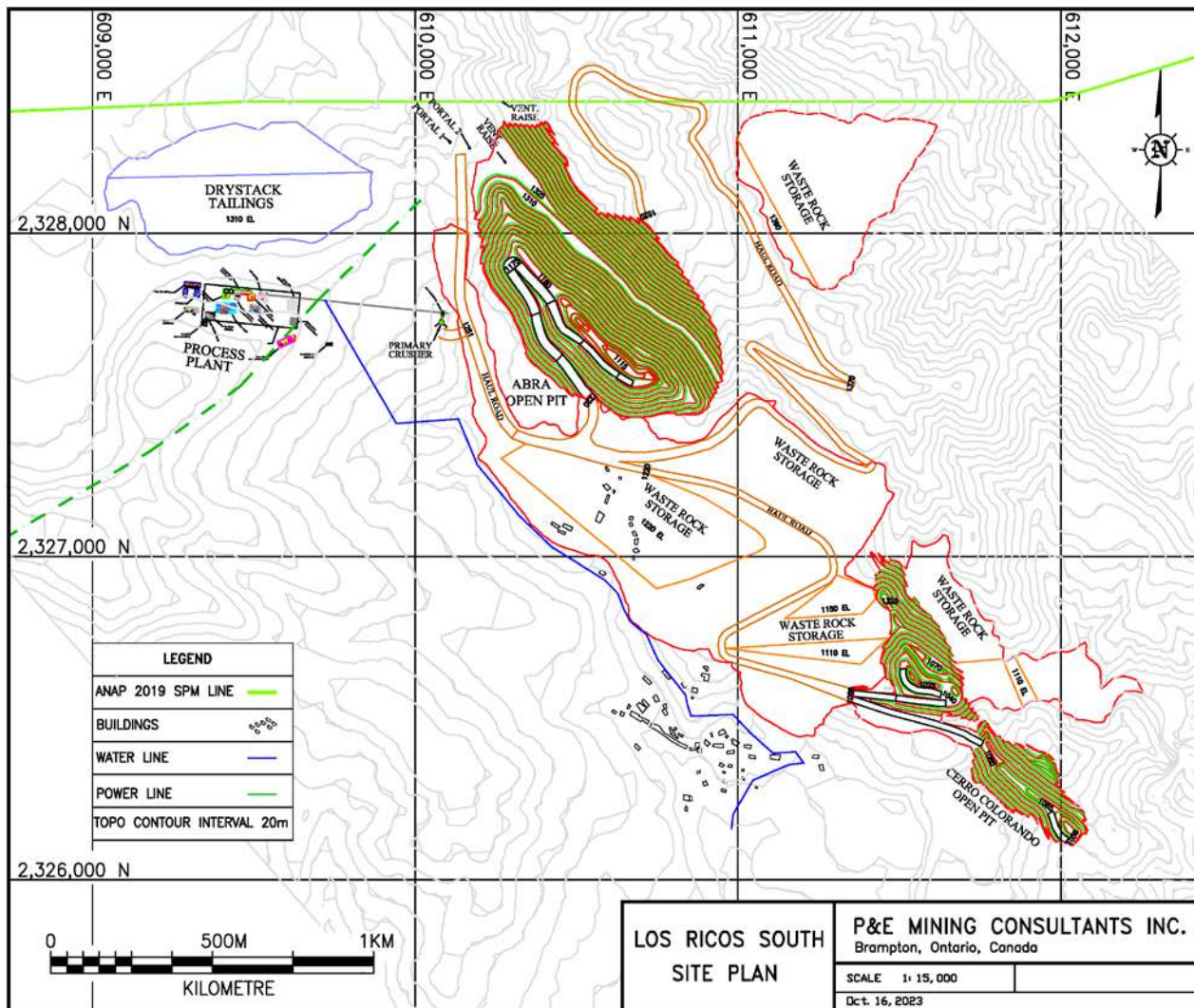
**FIGURE 1.2 UNDERGROUND MINE DESIGN**



Source: P&E (2023)

The Los Ricos South Deposits are near surface and lend themselves to conventional open pit mining methods. A contractor will be engaged to mine the Abra, Cerro Colorado North and Cerro Colorado South open pits. The contractor will undertake all drill and blast, loading, hauling, and mine site maintenance activities. The owner will provide overall mine management and technical services. Mining will typically be done on 5 m height benches, using conventional equipment such as hydraulic excavators, front-end loaders and 90 t haulage trucks. Dilution in mineralized material is estimated at 10% and mining losses are estimated at 3%. The overall strip ratio for open pit mining is 7.4:1. Over the LOM a total of 9.4 Mt of mineralized material will be mined from open pits, at average grades of 0.82 g/t Au, 102 g/t Ag, 0.03% Cu equivalent to 178.3 g/t AgEq. Waste rock will be transported to nearby storage facilities, and mineralized material will be hauled to the primary crusher or placed on temporary stockpiles (Figure 1.3).

**FIGURE 1.3 SURFACE INFRASTRUCTURE AT LOS RICOS SOUTH PROJECT**



Source: P&E (2023)

### 1.15 RECOVERY METHODS

The process plant design is based on a nominal 1,750 tpd (Years 1-3) and a nominal 4,000 tpd (Years 4-12) throughput of mineralized material with average grades of 1.18 g/t Au, 125 g/t Ag, and 0.09% Cu. The process plant flowsheet design includes conventional crushing, a semi-autogenous (“SAG”) mill with a pebble crusher, and a closed-circuit ball mill circuit with cyclones to ensure product (P<sub>80</sub>) size feed to the leaching circuit. The mineralized material is thickened in a pre-leach thickener to increase slurry density and decrease slurry volume. The thickener overflow water is recirculated to feed the grinding circuit.

Upon completing the required leaching retention time, the discharge slurry and loaded solution is fed to a post-leach thickener and then filtered in three dewatering filters to wash and recover pregnant solution for recovery within the Merrill Crowe and SART system, as well as to produce

“dry” stackable tailings with approximately 16% moisture. Water recovery and management at the LRS site is very important and the dry stack tailings will aid in the tailings deposition.

The gold-silver-copper-bearing solution is fed to a conventional Merrill Crowe plant for the recovery of the gold and silver precipitate and subsequent doré. Discharge from the Merrill Crowe plant feeds the SART process to recover a saleable  $\text{Cu}_2\text{S}$  precipitate and regenerate the soluble copper associated cyanide. The high cyanide solution from the SART is recycled to the process upstream. Process water recycled from the overall process plant including thickener, and dewatering filters, is used for the plant’s required process water. Make-up water is provided by a single surface dam and pumped to the process plant.

Process plant recoveries (based on whole feed cyanidation) are estimated at 95% Au, 84% Ag Phase 1, 86% Ag Phase 2, and 77% Cu for leaching with 95% Cu for SART. The process plant will contain a laboratory.

## **1.16 PROJECT INFRASTRUCTURE**

Employees and contractors will commute from nearby towns since the Company will not be supplying on-site housing. The Company will construct infrastructure for staff offices, warehousing, maintenance facilities, change rooms, cafeteria, diesel fuel tank farm and fueling station, explosives storage, and water and sewage treatment. The contractors will establish infrastructure for offices and warehousing. The buildings will be supplied by non-potable well water for showers, toilets, etc. Drinking water will be bottled. The Property has telephone and cell coverage, and access to high-speed internet.

A 20 ha site will be prepared for dry stack tailings with a water management system. The tailings will also be used for cemented paste backfill in the underground mine. The paste plant will be located at the process plant.

The Authors are of the opinion that there appears to be no obvious impediments to building a mine, processing or tailings facility within the area of the Los Ricos South Project Concessions.

## **1.17 MARKET STUDIES AND CONTRACTS**

Metal prices and the Mexican Peso:US Dollar exchange rate are based on approximate August 31, 2023 three-year monthly trailing averages, and are presented in Table 1.2. The metal prices and exchange rate are subject to spot market conditions. There are no metals streaming or hedging agreements in place.

<b>TABLE 1.2 METAL PRICES AND EXCHANGE RATE</b>	
<b>Item</b>	<b>Price</b>
Gold (US\$/oz)	1,850
Silver (US\$/oz)	23.75
Copper (US\$/lb)	4.00
Exchange Rate (MXN:US\$)	20

Currently there are no contracts in place that are material to the Los Ricos South Project.

### **1.18 ENVIRONMENTAL STUDIES, PERMITS, AND SOCIAL OR COMMUNITY IMPACTS**

Exploration activities have been conducted under annual permits from the Mexican government Secretary of the Environment and Natural Resources (“SEMARNAT”). An extensive list of Federal and State permits will be required before mining can commence, along with environmental impact studies. GoGold has engaged the Mexican firm CIMA to conduct an environmental baseline study. CIMA has completed a socio-economic baseline study that considers economic, cultural, social, demographic, and geographical aspects of the local communities. The mining Project is expected to represent minimal risk to the processes and structure of the local ecosystem, and to the roads, livestock and agricultural activities. The baseline study concluded that there are no archaeological zones within the environmental system.

### **1.19 CAPITAL AND OPERATING COSTS**

All costs are in Q3 2023 US dollars. No provision has been included in the cost estimates to offset future escalation. A contingency of 15% is added to all capital costs (“CAPEX”). No contingency is added to operating costs (“OPEX”).

The initial capital cost estimate addresses the engineering, procurement, construction and start-up of the Los Ricos South Project, with a construction period to develop an underground mine, build a process plant capable of processing 1,750 tpd, prepare a dry stack tailings management area, and install associated ancillary surface facilities. The total estimated cost to design, procure, construct and start-up the underground mine and process plant facilities described in this Technical Report is \$148M. The estimated cost includes a contingency allowance of 15% or \$19M. Table 1.3 summarizes the capital cost estimate.

Expansion capital costs estimated at \$68M are incurred in production years two and three to develop and pre-strip an open pit mine and increase the process plant capacity from 1,750 tpd to 4,000 tpd.

Sustaining capital represents capital expenses for additional costs that are not included in the normal operating costs, equipment purchases that will be necessary during the operating life of

the Project, tailings storage capacity increases, and all capital costs associated with underground mining. Life-of-mine (“LOM”) sustaining capital is estimated at \$72M.

Total capital costs over the LOM are estimated at \$288M (Table 1.3).

<b>TABLE 1.3 CAPITAL COST SUMMARY</b>				
<b>Item</b>	<b>Initial (\$M)</b>	<b>Expansion (\$M)</b>	<b>Sustaining (\$M)</b>	<b>Total (\$M)</b>
Process Plant	53.1	42.7		95.8
Tailings Facility	1.4		12.1	13.5
Underground Mine Development	60.7		48.5	109.2
Open Pit Pre-stripping		19.1	0.5	19.6
Infrastructure	10.0		1.2	11.2
Project Indirects	3.7			3.7
<b>Subtotal</b>	<b>128.9</b>	<b>61.8</b>	<b>62.3</b>	<b>253.0</b>
Contingencies @ 15%	19.3	6.7	9.4	35.4
<b>Total</b>	<b>148.2</b>	<b>68.5</b>	<b>71.7</b>	<b>288.4</b>

The LOM average operating costs for the Project during production years is summarized in Table 1.4. Labour positions and rates for the Los Rico South process plant are based on employee rates at the GoGold Parral operation in Chihuahua, Mexico.

<b>TABLE 1.4 OPERATING COST SUMMARY</b>		
<b>Area</b>	<b>Cost (\$/t processed)</b>	<b>Cost (\$/t mined)</b>
Open Pit Mining	12.13	1.64
Underground Mining	43.85	
<b>Average LOM Mining</b>	<b>22.15</b>	
Processing cost per tonne incl. tailings	27.10	
G&A per tonne processed	2.52	
<b>Total cost per tonne processed</b>	<b>51.78</b>	

Electrical power to the Los Ricos South site will be supplied by constructing a 14 km 35 kVA line off the existing 115 kVA line at Hostotipaquillo from the Yesca Dam power station. Based on the preliminary flowsheet and equipment list, electricity consumption for the process plant is estimated to be 29,367 MWh per year for Phase 1 and 52,862 MWh per year for Phase 2. An electrical rate cost supplied by Commission Federal de Electricidad (“CFE”) is stated as \$0.09/kWh.

The diesel price has been assumed to be \$1.20/litre.

The average operating cash cost over the LOM is estimated at US\$8.15/oz AgEq. The all-in sustaining cost (“AISC”) is estimated to average US\$9.02/oz AgEq over the LOM not including expansion capital costs.

## 1.20 ECONOMIC ANALYSIS

**Cautionary Statement** - The reader is advised that the PEA summarized in this Technical Report is intended to provide only an initial, high-level review of the Project potential and design options. The PEA mine plan and economic model include numerous assumptions and the use of Inferred Mineral Resources. Inferred Mineral Resources are considered to be too speculative to be used in an economic analysis except as allowed by NI 43-101 in a PEA. There is no guarantee the Project economics described herein will be achieved.

The Los Ricos South Project economic evaluation conclusions are summarized in Table 1.5. At base case metal prices of US\$1,850/oz Au, US\$23.75/oz Ag and US\$4.00/lb Cu, the Project has an estimated US\$458M after-tax net present value (“NPV”) at a 5% discount rate (“NPV5%”), and an after-tax internal rate of return (“IRR”) of 37%. The payback period on initial capital for underground mining is estimated to be 2.3 years, excluding expansion capital.

Item	Pre-Tax (\$M)	After-Tax (\$M)
NPV0% (\$M)	1,037	691
NPV5% (\$M)	708	458
NPV7% (\$M)	611	389
IRR (%)	49	37
Payback period (years)	2.3	

Table 1.6 provides further details on the Project cash flow.

Assumption / Result	Unit	Value	Assumption / Result	Unit	Value
Total UG Plant Feed Mined	kt	4,325	Net Revenue	US\$M	2,049
Total OP Plant Feed Mined	kt	9,367	Initial Capital Costs	US\$M	148
Total Plant Feed	kt	13,692	Expansion Capital Costs	US\$M	69
Open Pit Strip Ratio	ratio	7.4	Sustaining Capital Costs	US\$M	72
Silver Grade	g/t	124.7	OP Mining Costs	\$/t Feed	12.13
Gold Grade	g/t	1.18	UG Mining Costs	\$/t Feed	43.85

**TABLE 1.6  
PROJECT CASH FLOW SUMMARY**

<b>Assumption / Result</b>	<b>Unit</b>	<b>Value</b>		<b>Assumption / Result</b>	<b>Unit</b>	<b>Value</b>
AgEq Grade	g/t	216.6		LOM Operating Cost	\$/t Feed	51.78
Silver Recovery	%	86		Operating Cash Cost	US\$/oz AgEq	8.15
Gold Recovery	%	95		All-in Sustaining Cost	US\$/oz AgEq	9.02
Silver Price	US\$/oz	23.75		Mine Life	Yrs	11.2
Gold Price	US\$/oz	1,850		Average process rate	tpd	3,359
Copper Price	US\$/lb	4.00		Pre-Tax NPV (5% rate)	US\$M	708
Payable Silver Metal	Moz	46.8		After-Tax NPV (5% rate)	US\$M	458
Payable Gold Metal	koz	493.1		Pre-Tax IRR	%	49
Payable Copper	Mlb	13.6		After-Tax IRR	%	37
Payable AgEq	Moz	87.5		After-Tax Payback Period	Years	2.3

Table 1.7 presents a metal price sensitivity analysis and Table 1.8 presents an OPEX and CAPEX sensitivity analysis.

**TABLE 1.7  
SILVER AND GOLD PRICE SENSITIVITY NPV, IRR AND PAYBACK**

<b>Sensitivity</b>	<b>-28%</b>	<b>-20%</b>	<b>-12%</b>	<b>Base Case</b>	<b>+9%</b>	<b>+26%</b>	<b>+39%</b>
Silver Price (US\$/oz)	17	19	21	<b>23.75</b>	26	30	33
Gold Price (US\$/oz)	1,324	1,480	1,636	<b>1,850</b>	2,025	2,337	2,571
After-Tax NPV (5%) (US\$M)	185	266	346	<b>458</b>	548	710	831
After-Tax IRR (%)	20	25	30	<b>37</b>	42	50	56
After-Tax Payback (years)	3.6	3.0	2.6	<b>2.3</b>	2.1	1.7	1.6

**TABLE 1.8  
CAPITAL AND OPERATING COST SENSITIVITY OF NPV AND IRR**

<b>Sensitivity</b>	<b>-20%</b>	<b>-10%</b>	<b>Base Case</b>	<b>10%</b>	<b>20%</b>
Operating Costs – NPV <sub>5</sub> (US\$M)	526	492	<b>458</b>	423	389
Operating Costs – IRR (%)	41	39	<b>37</b>	35	33
Capital Costs – NPV <sub>5</sub> (US\$M)	495	476	<b>458</b>	439	420
Capital Costs – IRR (%)	45	41	<b>37</b>	33	30



The after-tax base case NPV's and IRR's are most sensitive to metal prices followed by operating costs and capital costs.

## 1.21 RISKS AND OPPORTUNITIES

A preliminary risk analysis was conducted on the Project by the Authors using a low-medium-high ranking system. The highest risk items were identified to be lack of underground mine geotechnical analysis, mining contractor cost assumptions, and metallurgical recoveries. The main opportunity is that the deposits remain open along strike to the northwest and down dip, and there is potential to increase the current Mineral Resource Estimate.

## 1.22 CONCLUSIONS

GoGold's diamond drilling program intersected wide zones of silver, gold and copper mineralization hosted by the Los Ricos quartz veins from surface to vertical depths of 300 m. The Abra-Eagle Deposit mineralization remains open to expansion by drilling along strike to the northwest and down-dip. The southern extension is offset by faulting. The silver and gold assays are restricted to the quartz vein; hence the assay model conforms to the geological model. High-grade portions of the veins have been mined out by the historical underground mining operations, however, wide intervals of the Abra Veins carrying potentially economic gold-silver-copper mineralization have been modelled in the Mineral Resource Estimate and are potentially amenable to underground and surface mining methods.

The Authors have completed an Updated Mineral Resource Estimate for the Los Ricos South Project. Measured plus Indicated Mineral Resources total 11.1 Mt at 1.43 g/t Au, 151 g/t Ag, and 0.11% Cu, or 3.53 g/t AuEq, or 276 g/t Ag Eq, for 511 koz Au, 53,841 koz Ag and 27.3 Mlb Cu, or 1,259 koz AuEq, or 98,582 koz AgEq. Inferred Mineral Resources total 2.3 Mt at 1.02 g/t Au, 85 g/t Ag, 0.17% Cu, or 2.36 g/t AuEq, or 185 g/t AgEq, for 75 koz Au, 6,230 koz Ag and 8.6 Mlb Cu, or 174 koz AuEq, or 13,601 koz AgEq. The classification of Measured, Indicated, and Inferred Mineral Resources conforms to CIM Definition Standards (2014) and Best Practices (2019).

The Los Ricos South Deposits extend to surface and lend themselves to mining by either underground or conventional open pit methods. It is planned that underground mining will commence at the start of production. Open pit mining will be initiated in Year 3 and there will be an underground / open pit overlap period of five years. The duration of all mining activity will be 12 years after the start of commercial production. During the first three years of production when there is only underground mining, the processing rate is planned at 1,750 tpd. This ramps up to 4,000 tpd when open pit mining is able to deliver feed to the process plant. Underground mining is planned to be longitudinal retreat sublevel longhole method with cemented paste backfill. Two contractors will be engaged to mine the Abra/Eagle underground workings, and the Abra and Cerro Colorado open pits.

The process plant design is based on a nominal Phase 1 of 1,750 tpd (Years 1-3) and a nominal Phase 2 of 4,000 tpd (Years 4-12) throughput of mineralized material with average grades of 1.18 g/t Au, 125 g/t Ag, and 0.09% Cu. The process plant will be constructed with conventional

crushing and grinding circuits, followed by cyanide tank leaching. A Merrill Crowe circuit will recover gold and silver for doré production, and a SART circuit will produce a copper concentrate. Process plant recoveries are estimated at 95% Au and 84% Ag Phase 1, 86% Ag Phase 2, with 77% Cu for leaching and 95% Cu for SART. Tailings will be stored by dry stack method. Electrical power to the Los Ricos South site will be supplied by constructing a 14 km 35 kVA line off the existing 115 kVA line at Hostotipaquillo from the Yesca Dam power station.

Underground mining costs have been estimated to average \$43.85/t processed over the LOM. Open pit mining costs have been estimated to average \$1.64/t material mined or \$12.13/t processed over the production years. The average LOM mining cost is estimated at \$22.15/t processed. Processing costs (\$27.10/t processed, including tailings handling) and site G&A (\$2.52/t processed) contribute to a total LOM average cost estimated at \$51.78/t processed. The average operating cash cost over the production years is estimated at \$8.15/oz AgEq, and the average all-in sustaining cost is estimated at \$9.02/oz AgEq (not including expansion capital costs).

Initial capital costs are estimated at \$148M and include a 15% contingency. Expansion capital costs to increase the process plant from 1,750 tpd to 4,000 tpd, and to conduct open pit pre-production stripping and development, are estimated at \$69M. Sustaining capital costs over the production years are estimated at \$72M mainly for underground mine development and increases to the dry stack tailings storage facility.

Using metal prices based on approximate August 31, 2023 three-year monthly trailing averages of US\$1,850/oz Au, US\$23.75/oz Ag and US\$4.00/lb Cu, the Project has an estimated pre-tax NPV at a 5% discount rate of \$708M and an IRR of 49%. After-tax NPV and IRR are estimated at \$458M and 37%, respectively. Simple payback of initial capital for underground mining is 2.3 years. Mexican corporate income tax is levied at a rate of 35% on the net taxable income, and the Project is subject to a 0.5% NSR mining tax payable to the Mexican government. Project economics are most sensitive to metal prices. Project economics are more sensitive to overall operating costs than capital costs.

## **1.23 RECOMMENDATIONS**

Based on the results of GoGold's exploration work from 2019 to 2023, and the positive results of this PEA, the Authors recommend that GoGold continue with Project development activities on the Los Ricos South Property and proceed with a Pre-Feasibility Study ("PFS"). To advance the Los Ricos South Project and initiate a PFS, additional drilling is recommended by the Authors for metallurgical testwork (including mineralogical studies and comminution, process recovery and gravity concentration tests), geotechnical studies (open pit and underground mines, process plant location) and hydrogeological studies. Further study of process plant and mine design, infrastructure requirements, environmental/permitting, and Project economics would be part of the PFS. In addition, a minimal program for initial drill testing the Exploration Target is also recommended.

A work program with an estimated budget of US\$3.7M is proposed, as presented in Table 1.9.

**TABLE 1.9**  
**RECOMMENDED WORK PROGRAM FOR THE**  
**LOS RICOS SOUTH PROJECT**

<b>Description</b>	<b>Amount (US\$)</b>
Metallurgical and Geotechnical Drilling	500,000
Sample Preparation and Assay	50,000
Metallurgical Variability Testwork	550,000
Geotechnical and Hydrology Study	200,000
Pre-Feasibility Study	1,500,000
Exploration Target Drill Testing	250,000
Camp Support and Wages	150,000
Capital Equipment	50,000
<b>Sub-total</b>	<b>3,250,000</b>
Contingency (15%)	488,000
<b>Total</b>	<b>3,738,000</b>

## **2.0 INTRODUCTION**

### **2.1 TERMS OF REFERENCE**

This NI 43-101 Preliminary Economic Assessment Technical Report of the Los Ricos South Project (the “Deposit” or the “Property”), located in the State of Jalisco, Mexico, was prepared by P&E Mining Consultants Inc. (“P&E”) at the request of GoGold Resources Inc. (“GoGold” or the “Company”). Input on the PEA was also provided by D.E.N.M. Engineering Ltd. (“D.E.N.M.”) and Consultores Interdisciplinario en Medio Ambiente S.C. (“CIMA”).

The Property is held by Minera CM Jalisco, S.A. de C.V. (“MCMJ”), a Mexican subsidiary company that is wholly-owned by GoGold. MCMJ has rights to 100% of the minerals ownership of the Property through a Concession Acquisition Agreement with a private Mexican vendor.

GoGold is a public, TSX-listed, mining company trading under the symbol “GGD”, with its head office located at:

Suite 1301, Cogswell Tower,  
2000 Barrington Street,  
Halifax, Nova Scotia  
Canada  
B3J 3K1

The Mineral Resource Estimate reported herein is based on current drilling results and appropriate metal pricing, and is conformable to the “CIM Standards on Mineral Resources and Reserves – Definitions (2014) and Best Practices Guidelines (2019)”, as referred to in National Instrument (“NI”) 43-101 and Form 43-101F, Standards of Disclosure for Mineral Projects.

The authors (“Authors”) of this Technical Report (“Technical Report”) understand that the Report will support the public disclosure requirements of GoGold and will be filed on SEDAR+ as required under NI 43-101 disclosure regulations.

This Technical Report has an effective date of September 12, 2023.

### **2.2 SITE VISITS**

Mr. Fred Brown, P.Geo., of P&E, a Qualified Person under the terms of NI 43-101, completed a site visit to the Los Ricos South Project on August 15-16, 2019. A data verification drill core sampling program was conducted as part of the on-site review.

Mr. César Villalobos, Eng., of CIMA, conducted site visits to the Los Ricos South Project on September 2-8, 2019, November 21-28, 2019, September 19-23, 2020, and August 8-11, 2020. A baseline environmental data program was reviewed when on site. Mr. Villalobos also visited the Property on January 11-14 and August 4-6 in 2023 during times when CIMA conducted environmental data collection.

Mr. Steve Hubbard, Senior Construction Manager of D.E.N.M., completed a site visit to the Los Ricos South Project on November 3-4, 2020. Infrastructure aspects were reviewed, such as water sources, electrical power, site access, and potential process plant locations. In a letter to P&E dated November 6, 2020, Mr. Hubbard stated that “I did not observe any modern site infrastructure, access road improvements, earthworks or mine development activities. The only activities that were apparent were those consistent with local inhabitant subsistence living or historical mine workings which in no way would have any material impact on the Project”.

Mr. David Salari, P.Eng., of D.E.N.M., a Qualified Person under the terms of NI 43-101, completed a site visit to the Los Ricos South Property on May 15-16, 2021. The purpose of the visit was to assess engineering aspects of the Project, including potential process plant locations.

Mr. David Burga, P.Geo., of P&E, a Qualified Person under the terms of NI 43-101, completed a site visit to the Los Ricos South Property on May 16-17, 2023, and conducted a data verification drill core sampling program as part of the on-site review.

## **2.3 PREVIOUS TECHNICAL REPORTS**

P&E prepared a previous Technical Report and Preliminary Economic Assessment on the Los Ricos South Project with an effective date of January 20, 2021. The PEA was based on the Initial Mineral Resource Estimate on the Project prepared by P&E with an effective date of July 28, 2020. P&E also prepared a Mineral Resource Technical Report of the Project with an effective date of August 20, 2019. The reports are referenced in the Reference section (Section 27) of this Technical Report.

In addition, there are four other prior Technical Reports on the Los Ricos South Property; Nebocat 2002, 2004(a) and 2004(b) and Munroe 2006. All are listed in the Reference section of this Technical Report.

## **2.4 SOURCES OF INFORMATION**

The Authors carried out a review of all relevant parts of the available literature and documented results concerning the Project and held discussions with technical personnel from the Company regarding all pertinent aspects of the Los Ricos South Project. This Technical Report is based, in part, on internal company Technical Reports, and maps, published government reports, Company letters, memoranda, public disclosure and public information. The reader is referred to the sources of data, citations for which are compiled in the Reference section of this Technical Report, for further detail on the Project.

The most recent NI 43-101 Technical Report on the Los Ricos South Project was completed by P&E with an effective date of January 20, 2021. This Report has been relied upon for the historical, geological, exploration and drilling sections of the current Technical Report.

Considerable historical exploration and mining activities were carried out in the area of the Los Ricos South Property, starting with the Spaniards in the early seventeenth century, various private landowners in the nineteenth and early twentieth centuries, the Cinco Minas Mining Company from 1908 to 1930, the Mexican Mining Co-Operative from 1931 to 1953, the Minera

San Jorge (“MSJ”) from 1990 to 2016, TUMI Resources Inc. (in Joint Venture with MSJ) from 2002 to 2005, and the Bandera Gold Ltd. (in Joint Venture with MSJ) from 2005 to 2007.

Table 2.1 presents the Authors and Co-authors of each section of the Technical Report, who acting as Qualified Persons as defined by NI 43-101, take responsibility for those sections of the Technical Report as outlined in Section 28 Certificates of Author. The Authors acknowledge the helpful cooperation of GoGold’s management and consultants, who quickly addressed all data and material requests, and responded openly and cooperatively to all questions.

<b>Qualified Person</b>	<b>Employer</b>	<b>Sections of Technical Report</b>
Mr. Andrew Bradfield, P.Eng.	P&E Mining Consultants Inc.	2, 3, 15, 19, 22, 24 and Co-author 1, 16, 18, 21, 25, 26
Ms. Jarita Barry, P.Geo.	P&E Mining Consultants Inc.	11 and Co-author 1, 12, 25, 26
Mr. Fred Brown, P.Geo.	P&E Mining Consultants Inc.	Co-author 1, 14, 25, 26
Mr. David Burga, P.Geo.	P&E Mining Consultants Inc.	10 and Co-author 1, 12, 25, 26
Mr. D. Grant Feasby, P.Eng.	P&E Mining Consultants Inc.	20 and Co-author 1, 25, 26
Mr. Eugene Puritch, P.Eng.	P&E Mining Consultants Inc.	Co-author 1, 14, 25, 26
Mr. D. Gregory Robinson, P.Eng.	P&E Mining Consultants Inc.	Co-author 1, 16, 21, 25, 26
Dr. William Stone, P.Geo.	P&E Mining Consultants Inc.	4-9, 23 and Co-author 1, 25, 26
Mr. David Salari, P.Eng.	D.E.N.M. Engineering Ltd.	13, 17 and Co-author 1, 18, 21, 25, 26

## 2.5 UNITS AND CURRENCY

US\$ are used throughout this Technical Report unless stated otherwise. Terminology and abbreviations used in this Technical Report are summarized in Table 2.2, metric conversions are listed in Table 2.3 and units are in Table 2.4.

<b>Abbreviation</b>	<b>Meaning</b>
\$	dollar(s)
\$M	dollars, millions
°	degree(s)
°C	degrees Celsius
%	percent
3-D	three-dimensional
AAS	atomic absorption spectroscopy
ABA	acid base accounting
Actlabs	Activation Laboratories Ltd.

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS**

Abbreviation	Meaning
Ag	silver
AgEq	silver equivalent
AI	abrasion index
AISC	all-in sustaining cost
ALS	ALS Chemex
ANFO	ammonium nitrate fuel oil (mixture)
ANP	Area for the Protection of Natural Resources
AP	acid potential (generation)
APF	Federal Public Administration
Au	gold
AuEq	gold equivalent
AuEq75	gold equivalent ratio at 75:1 Ag/Au ratio @ 100% process recovery
Author	author of section of Technical Report
Bandera	Bandera Gold Ltd.
BLS	barren leach solutions
BWI	bond work index, bond ball mill work index
C	carbon
CaO	calcium oxide
CaCO <sub>3</sub>	calcium carbonate
calc	calculated
CAPEX	capital costs
CC	Cerro Colorado
CC Pit	Cerro Colorado Pit
CCD	counter-current decantation
CENAPRED	National Center for Disaster Prevention
CFE	Commission Federal de Electricidad (Federal Electricity Commission)
CIM	Canadian Institute of Mining, Metallurgy, and Petroleum
CIMA	Consultores Interdisciplinario en Medio Ambiente S.C.
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
Cl	chlorine
CMMC	Cinco Minas Mining Company
CND	cyanide destruction test
CN <sub>free</sub> or CN <sub>free</sub>	free cyanide
CNO	cyanate
CNT or CN <sub>T</sub>	total cyanide
CNS	thiocyanate
CN <sub>WAD</sub> or CN <sub>WAD</sub>	weak acid dissociable cyanide
COG	cut-off grade
Company, the	GoGold Resources Inc.
CONAGUA	National Water Commission

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS**

<b>Abbreviation</b>	<b>Meaning</b>
Concession Agreements	agreements made to acquire 29 concessions comprising the Los Ricos area
CoV	coefficient of variation
CRM(s)	certified reference material control samples
Cu	copper
Cu <sub>2</sub> S	copper sulphide
CUSTF	change in forest land use
CWI	crushing work index
D&F	drift and fill
DDH	diamond drill hole
DENM	D.E.N.M. Engineering Ltd.
Deposit, the	Los Ricos South Project
DSO	Deswik Stope Optimizer
DTM	digital terrain model
DWT	drop-weight test
E	east
E-GRG	extended gravity recoverable gold
ECOG	economic cut-off grade
EL	elevation
ELOS	equivalent linear overbreak/slough
Eng.	Engineer
ER	environmental risk study
ETJ	Technical Justification Study
Fe	iron
FW	footwall
FWD	footwall drift
ft	foot, feet
g	gram
g/t	grams per tonne
G&A	general and administration
GIS	geographic information systems
GoGold	GoGold Resources Inc.
GPS	global positioning system
GRG	gravity recoverable gold
H	height
H	Shannon diversity index
H <sub>2</sub> SO <sub>4</sub>	sulphuric acid
ha	hectare(s)
HCl	hydrogen chloride
HCN	hydrogen cyanide
HDPE	high density polyethylene



**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS**

Abbreviation	Meaning
HW	hanging wall
ICP	inductively coupled plasma (test)
ID	identification
ID <sup>2</sup>	inverse distance squared
ID <sup>3</sup>	inverse distance cubed
in	inch(es)
INAH	Instituto Nacional de Antropología e Historia
IP	induced polarization
IRR	internal rate of return
ISO	International Organization for Standardization (ISO)
ISO/IEC	International Organization for Standardization (ISO) / International Electrotechnical Commission (IEC)
ITH	In-The-Hole
JB	Jalisco Block
k	thousand(s)
klb	thousands of pounds
kg	kilograms(s)
km	kilometre(s)
koz	thousand(s) ounces
kt	kilotonnes
ktpa	thousand tonnes per annum / year
kW	kilowatt(s)
kWh	kilowatt hour
kV	kilovolts
L	litre(s)
L/s	litres per second
LBA	environmental baseline
level	mine working level referring to the nominal elevation (m RL), e.g. 4285 level (mine workings at 4285 m RL)
LGDFS	Ley General de Silvicultura Sostenible (General Law of Sustainable Forest Development)
LGEEPA	Ley General Del Equilibrio Ecológico y la Protección al Ambiente (General Law of Ecological Balance and Environmental Protection)
LGPGIR	(Ley General para la Prevención y Gestión Integral de los Residuos) General Law for the Prevention and Integral Management of Waste
LH	longhole
LHD	load-haul-dump
HR	hydraulic radius
hr	hour(s)
LOM	life of mine
LR	Los Ricos
LR Pit	Los Ricos Pit

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS**

Abbreviation	Meaning
LRS	Los Ricos South
m	metre(s)
M	million(s)
m <sup>2</sup>	square metres
m <sup>3</sup>	cubic metres
m <sup>3</sup> /s	cubic metres per second
Ma	millions of annum
masl or m asl	metres above sea level
MCC	motor control centre
MCMJ	Minera CM Jalisco, S.A. de C.V.
MCOG	marginal cut-off grade
MDD	Minera Durango Dorado S.A. de C.V.
Metso Outotec	Metso Outotec Canada
MFP	membrane filter presses
mg	milligram(s)
mg/L	milligram(s) per litre
MIA	Mexican environmental impact statement
MIBC	methyl isobutyl carbinol
Mlb	millions of pounds
MLC	Cia. Minera Las Cuevas, S.A.
mm	millimetre
Mm <sup>3</sup>	millions of cubic metres
Moz	million ounces
MPR	Mexico Mining Public Registry
MRE	Mineral Resource Estimate
MSJ	Minera San Jorge, S. A. de C. V.
Mt	mega tonne or million tonnes
MT	million short tons
Mtpa	million tonnes per annum or year
MVB	Mexican Volcanic Belt
MW	megawatt
MWh	megawatt hour
N	north
NaCN	sodium cyanide
NaOH	sodium hydroxide
NAD83	North American Datum of 1983
NAG	net acid generation
NaHS	sodium hydrosulphide
Net NP	net neutralization potential
NI	National Instrument
NN	Nearest Neighbour

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS**

<b>Abbreviation</b>	<b>Meaning</b>
NOM	Norma Oficial Mexicana (Official Mexican Standards)
NP	neutralization potential
NPV	net present value
NSR	net smelter return
OEGT	ecological ordering of the territory
Old Workings	historic workings backfilled with lower-grade mineralized material
OP	open pit
OPEX	operating costs
OW	Old Workings on the Abra Vein
oz	ounce
oz/T	ounces per ton
P <sub>80</sub>	80% percent passing
P&E	P&E Mining Consultants Inc.
PAG	potentially acid generating
PAX	potassium amyl xanthate
Pb	lead
PDC	process design criteria
PEA	preliminary economic assessment
P.Eng.	Professional Engineer
PF	paste fill, paste backfill
PDF	process flow diagram
PFS	pre-feasibility study
P.Geo.	Professional Geoscientist
PLS	pregnant leach solution
PPA	accident prevention plan
ppb	parts per billion
ppm	parts per million
Property, the	the Los Ricos South Property that is the subject of this Technical Report
Project, the	the Los Ricos South Project that is the subject of this Technical Report
psi	pounds per square inch
Q1, Q2, Q3, Q4	first quarter, second quarter, third quarter, fourth quarter
QA	quality assurance
QA/QC	quality assurance/quality control
QC	quality control
RC	reverse circulation
RQD	rock quality designation
RWI	rod mill work index, bond rod mill work index
S	south
S	sulphur

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS**

Abbreviation	Meaning
S <sup>=</sup>	sulphide sulphur
SA	Environmental System
SAG (mill)	semi-autogenous grinding (mill)
SART	sulphidation, acidification, recycling, and thickening
scfm	standard cubic feet per minute
SD	standard deviation
SEDAR	System for Electronic Document Analysis and Retrieval
SEM	scanning electron microscope
SEMARNET	Secretary of the Environment, Natural Resources and Fisheries
SG	specific gravity
SGS or SGS Lakefield	part of SGS Canada Inc., SGS Mineral Services Laboratory at Lakefield, Ontario.
SIORE	Information Subsystem on Ecological Planning
SMC	SAG mill comminution
SMO	Sierra Madre Occidental
SMU	selective mining unit
SO <sub>4</sub> S	sulphate
SPM	Servicios y Proyectos Mineros de México, S.A. de C.V.
ST or S <sub>T</sub>	total sulphur
standards or CRMs	certified reference material control samples
std dev	standard deviation
t	metric tonne(s)
T	short ton(s)
t/m <sup>3</sup>	tonnes per cubic metre
Technical Report	this NI 43-101 Technical Report
TMF	tailings management facility
TMVA	Trans-Mexico Volcanic Arc
tpd	tonnes per day
Tpd	short tons per day
TSX	Toronto Stock Exchange
TUMI	TUMI Resources Inc.
UAB	Biophysical Environmental Units
UG	underground
UGA	Environmental Management Unit
US\$	United States dollar(s)
UTM	Universal Transverse Mercator grid system
V or v	volt(s)
v/v	volume/volume
W	west
W	width
WAD	weak acid dissociable

**TABLE 2.2**  
**TERMINOLOGY AND ABBREVIATIONS**

<b>Abbreviation</b>	<b>Meaning</b>
WGS84	World Geodetic System 1984
wt %	weight percent
XRD	X-ray diffraction
YR or yr	year
Zn	zinc

**TABLE 2.3**  
**METRIC CONVERSIONS**

<b>To Convert From</b>	<b>To</b>	<b>Multiply By</b>
feet	metres	0.3048
metres	feet	3.281
miles	kilometres	1.609
kilometres	miles	0.621
acres	hectares	0.405
hectares	acres	2.471
grams	ounces (Troy)	0.032
ounce (Troy)	grams	31.103
tonnes (t)	short tons	1.102
short tons (T)	tonnes	0.907
grams per tonne	ounces (Troy) per ton	0.029
ounces (Troy) per ton	grams per tonne	34.285

**TABLE 2.4**  
**UNIT MEASUREMENT ABBREVIATIONS**

<b>Abbreviation</b>	<b>Meaning</b>	<b>Abbreviation</b>	<b>Meaning</b>
µm	microns, micrometre	m <sup>3</sup> /s	cubic metre per second
\$	dollar	m <sup>3</sup> /y	cubic metre per year
\$/t	dollar per metric tonne	mØ	metre diameter
%	percent sign	m/h	metre per hour
% w/w	percent solid by weight	m/s	metre per second
¢/kWh	cent per kilowatt hour	Mt	million tonnes
°	degree	Mtpy	million tonnes per year
°C	degree Celsius	min	minute
cm	centimetre	min/h	minute per hour
d	day	mL	millilitre
ft	feet	mm	millimetre

**TABLE 2.4**  
**UNIT MEASUREMENT ABBREVIATIONS**

<b>Abbreviation</b>	<b>Meaning</b>	<b>Abbreviation</b>	<b>Meaning</b>
GWh	Gigawatt hours	MV	medium voltage
g/t	grams per tonne	MVA	mega volt-ampere
h	hour	MW	megawatts
ha	hectare	oz	ounce (troy)
hp	horsepower	Pa	Pascal
k	kilo, thousands	pH	Measure of acidity
kg	kilogram	ppb	part per billion
kg/t	kilogram per metric tonne	ppm	part per million
km	kilometre	s	second
kPa	kilopascal	t or tonne	metric tonne
kV	kilovolt	tpd	metric tonne per day
kW	kilowatt	t/h	metric tonne per hour
kWh	kilowatt-hour	t/h/m	metric tonne per hour per metre
kWh/t	kilowatt-hour per metric tonne	t/h/m <sup>2</sup>	metric tonne per hour per square metre
L	litre	t/m	metric tonne per month
L/s	litres per second	t/m <sup>2</sup>	metric tonne per square metre
lb	pound(s)	t/m <sup>3</sup>	metric tonne per cubic metre
M	million	T	short ton
m	metre	tpy	metric tonnes per year
m <sup>2</sup>	square metre	V	volt
m <sup>3</sup>	cubic metre	W	Watt
m <sup>3</sup> /d	cubic metre per day	wt%	weight percent
m <sup>3</sup> /h	cubic metre per hour	yr	year

### **3.0 RELIANCE ON OTHER EXPERTS**

The Authors have assumed, and relied on the fact, that all the information and existing technical documents listed in the References section of this Technical Report are accurate and complete in all material aspects. Whereas the Authors carefully reviewed all the available information presented, the Authors cannot guarantee its accuracy and completeness. The Authors reserve the right, however, will not be obligated, to revise the Technical Report and Conclusions, if additional information becomes known to the Authors subsequent to the effective date of this Technical Report.

Copies of the land tenure documents, operating licenses, permits, and work contracts were not reviewed. Information on land tenure was obtained from GoGold and included a legal due diligence title opinion dated September 11, 2023 supplied by GoGold's Mexican legal counsel, Mr. Pablo Méndez Alvérez, of the firm EC Legal Rubio Villegas, located in Chihuahua, Mexico. The Authors have relied on tenure information from GoGold and has not undertaken an independent detailed legal verification of title and ownership of the Los Ricos South Project. The Authors have not verified the legality of any underlying agreement(s) that may exist concerning the licenses, GoGold's Mexican subsidiary, or other agreement(s) between third parties, however, has relied on and considers it has a reasonable basis to rely upon GoGold to have conducted the proper legal due diligence.

Select technical data, as noted in the Technical Report, were provided by GoGold and the Authors have relied on the integrity of such data. A draft copy of the Technical Report has been reviewed for factual errors by the GoGold, and the Authors have relied on GoGold's knowledge of the Property in this regard. All statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the effective date of this Technical Report.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

The Los Ricos South Property is located in the State of Jalisco, Mexico (Figure 4.1), approximately 75 km northwest of the City of Guadalajara and 25 km east-southeast of the Company's Los Ricos North Property. Historical underground workings at the Los Ricos Vein are located on the Property at latitude 21° 02' 45" N and longitude 103° 56' 08" W (UTM coordinates in NAD83 Zone 13Q projection are 610,600 m E and 2,327,600 m N).

**FIGURE 4.1** PROPERTY LOCATION MAP, JALISCO, MEXICO



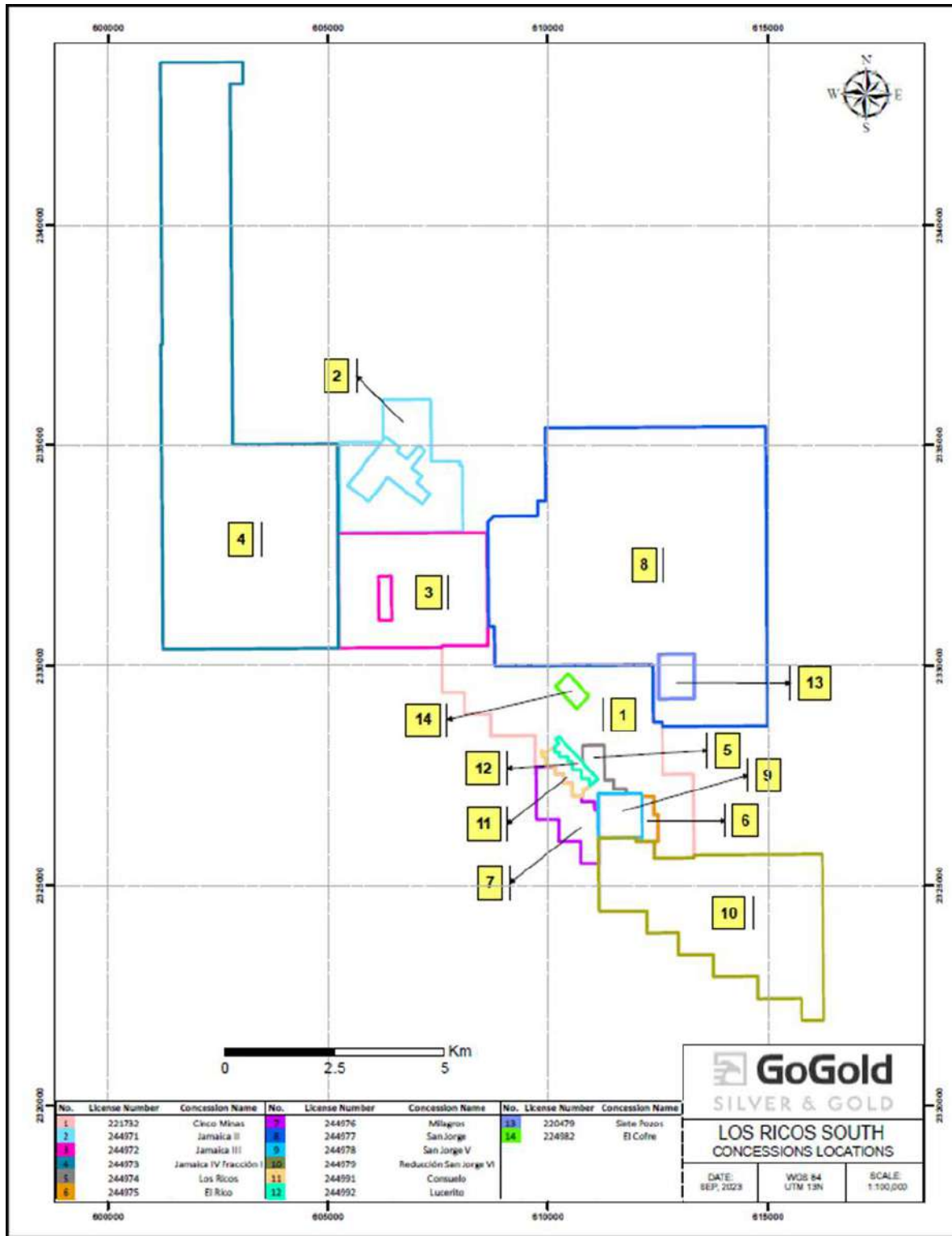
Source: GoGold Resources (2019)

Note: "A" in the main map and Los Ricos in the inset map represent the location of the Los Ricos South Property.



The 10,858 ha Property consists of 14 concessions as shown in Figure 4.2 and listed in Table 4.1. All of the concessions are in good standing as of the effective date of this Technical Report.

**FIGURE 4.2 LOS RICOS SOUTH PROPERTY CONCESSIONS**



Source: GoGold (2023)

**TABLE 4.1**  
**GOGOLD CONCESSIONS OF THE LOS RICOS SOUTH PROJECT**

<b>Concession Number<sup>1</sup></b>	<b>Concession Name</b>	<b>Location</b>	<b>Area (ha)</b>	<b>Title Holder (100%)</b>	<b>Start Date</b>	<b>End Date</b>	<b>Liens</b>	<b>Status</b>
244974	Los Ricos	Hostotipaquillo, Jalisco	62	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2055-05-19	free	active
244975	El Rico	Hostotipaquillo, Jalisco	34	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2055-06-06	free	active
244976	Milagros	Hostotipaquillo, Jalisco	177	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2055-06-06	free	active
244978	San Jorge V	Hostotipaquillo, Jalisco	100	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-02-12	free	active
244979	Reduccion San Jorge VI	Hostotipaquillo, Jalisco	1,280	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-03-18	free	active
244991	Consuelo	Hostotipaquillo, Jalisco	46	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-03-18	free	active
244992	Lucerito	Hostotipaquillo, Jalisco	27	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-03-18	free	active
244971	Jamaica II	Hostotipaquillo, Jalisco	510	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-04-05	free	active
244972	Jamaica III	Hostotipaquillo, Jalisco	850	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-04-05	free	active
244973	Jamaica IV Fraccion I	Hostotipaquillo, Jalisco	3,266	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-04-05	free	active
244977	San Jorge	Hostotipaquillo, Jalisco	3,291	Minera CM Jalisco, S.A. de C.V.	2016-07-08	2054-03-18	free	active
220479	Siete Pozos	Hostotipaquillo, Jalisco	80	José Jaimes Achutigui	2003-08-12	2053-08-11	free	active
221732	Cinco Minas	Hostotipaquillo, Jalisco	1,107	Minera CM Jalisco, S.A. de C.V.	2004-03-19	2054-03-18	free	active
224982	El Cofre	Hostotipaquillo, Jalisco	28	Minera CM Jalisco, S.A. de C.V.	2005-07-05	2055-07-04	free	active
<b>Total</b>			<b>10,858</b>					

<sup>1</sup> Concessions information effective as of the September 11, 2023 date of the Title Legal Opinion for the Los Ricos South Property by El Rubio.

## 4.1 OPTION AGREEMENT

GoGold began discussions with the private Mexican owner of the 29 concessions that were collectively named Los Ricos (A in Figure 4.1) and the parties subsequently entered into a 60-day due diligence agreement in January 2019. GoGold mobilized a field team and diamond drill to the properties and began confirmation drill holes in early February 2019.

On March 26, 2019, GoGold signed an option agreement to acquire the 29 Los Ricos area concessions from the private Mexican owner. As part of the option agreement, the Company was obligated to make the following payments:

- Initial upfront payment of \$70,000;
- Monthly payments of \$12,000 for the first 12 months;
- Monthly payments of \$20,000 for months 13 to 24;
- Monthly payments of \$30,000 for months 25 to 36;
- Monthly payments of \$31,500 for months 37 to 60;
- 2% net smelter return royalty on five of the concessions; and
- If the Company elects to exercise the option, a lump sum payment not to exceed \$11M can be made at any time within the option period.

During the five-year period, the Company would have exclusive exploration rights to the Los Ricos area concessions. The Option Agreement was terminated when GoGold entered into the Concession Agreements.

## 4.2 THE CONCESSION AGREEMENT

On August 22, 2019, GoGold announced it had entered into various agreements (“the Concession Agreements”) to accelerate the acquisition of the 29 concessions that comprise the Los Ricos area properties in Jalisco, Mexico from a private Mexican owner.

With the signing of the Concession Agreements, GoGold was required to make payments as follows:

- \$500,000 in cash upon signing;
- \$3,220,000 in cash paid in installments over 24 months; and
- 9,046,968 GoGold common shares to be delivered in equal numbers over 24 months.

In conjunction with the signing of the Concession Agreements, the option agreement previously entered into by the Company to acquire the 29 concessions in the Los Ricos area was terminated (refer to press release dated March 26, 2019). As of the date of this Technical Report, all payments have been completed in accordance with the Concession Agreements, and the Company holds title to the 29 concessions included in the Concession Agreements through a wholly-owned subsidiary.

In addition to the Concession Agreements, the Company entered into an agreement to acquire the existing 2% NSR royalty for the Los Ricos properties for payments as follows:

- \$1M in cash; paid in equal installments over 36 months; and
- 4,875,012 GoGold common shares to be delivered in equal numbers over an 18-month period.

As of the date of this Technical Report, all payments related to the NSR royalty were completed, and there are now no royalties on the Property concessions.

Since the previous Technical Report, three more concessions have been added to the Los Ricos South Property: 1) Siete Pozos Concession; 2) Cinco Minas Concession (Eagle); and 3) El Cofre Concession. The Siete Pozos Concession was added according to the Exploration and Exploitation Agreement with Assignment of Rights option by Minera CM Jalisco, S.A. de C.V. (“MCMJ”), a wholly-owned subsidiary of GoGold, previously known as Minera Durango Dorado S.A. de C.V. (“MDD”), that was executed on November 4, 2020. The Agreement stipulates that payments totalling \$2.8M pesos (plus VAT = 16%) be made by MCMJ to the concession owner (Mr. José Jaimés Achutigi) over a period of 24 months, as follows: \$800,000 pesos on the effective date of the Agreement; and \$83,333.50 pesos per month from the effective date for 24 months. As of the effective date of this Technical Report, all the payments have been made in full; however, MCMJ has yet to file the request to transfer ownership.

The Eagle Concession was acquired by MCMJ on October 18, 2022 (listed as Cinco Minas in Table 4.1). The rights to the Eagle Concession were acquired through an agreement to pay US\$2.1 million over four years to the previous titleholders. Eagle connects the Company’s concessions in the south portion of the Los Ricos Project (the area of the 2021 Preliminary Economic Assessment) to its northern concessions in Los Ricos South. As a result, all the Company-controlled concessions in Los Ricos South area are now contiguous (see Figure 4.2).

The El Cofre Concession was acquired by MCMJ via an Assignment Agreement with the previous titleholders on February 9, 2023. Payment of \$2.4M pesos was made on that date for 100% of the rights of ownership protected by the Title.

The Authors reviewed a legal title opinion on all GoGold’s Los Ricos South properties provided by Mr. Pablo Méndez Alvidrez of the firm EC Legal Rubio Villegas located in Chihuahua, Mexico, for GoGold dated September 11, 2023. The title opinion indicates that GoGold, through its subsidiary MCMJ, legally holds 100% of 13 of the 14 mining concessions that make-up the Los Ricos South Property, however, is in full control of all 14 Titles.

### **4.3 LOS RICOS SOUTH PROJECT**

The Los Ricos South Project, which is the subject of this Technical Report, was launched by GoGold in March 2019. GoGold has been exploring and drilling primarily in the Main Deposit area and on the adjacent Eagle Concession. According to Mexican mining law, permits are required to support and approve exploration and mining activities. GoGold had a permit from the Secretary of the Environment and Natural Resources (“SEMARNET”) that allowed for drilling and exploration activities, which was valid through to March 19, 2023. The permit was not renewed, because that phase of exploration was complete. New SEMARNET permits will be required to cover any upcoming drilling and exploration activities.

To the extent known and described above, the Authors are not aware of any other significant factors or risks that may affect access, title or right or ability to perform work on the Los Ricos South Property.

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

### 5.1 ACCESSIBILITY

The Los Ricos South Project is located near the Village of Cinco Minas, in the State of Jalisco, Mexico. The Project is located within the Municipality of Hostotipaquillo of the Valles Region of the State of Jalisco, approximately 85 km northwest of the City of Guadalajara. The nearest village, for provision of goods and services, is the Town of Hostotipaquillo, head of the Municipality, located approximately 15 km west of the Project.

Access to the site is by the Federal Road No. 15, from Guadalajara to Tepic. At km 88 a road leads north to the Town of Hostotipaquillo. From Hostotipaquillo, it is approximately 20 km southeast by a gravel road to the Village of Cinco Minas and the current drilling program on the historical workings. It is an approximate two-hour drive from Guadalajara to the Village of Cinco Minas and the Los Ricos South Project. There is an international airport in Guadalajara with daily flights to the US, Mexico City, and to other Mexican destinations.

### 5.2 CLIMATE

Cinco Minas is situated at an elevation of approximately 1,200 masl and has an altitude-moderated temporal climate with rainfall limited to heavy thunderstorms during the hot summer months. The dry season extends from October to May, day temperatures range from mild to hot, and night temperatures from chilly to mild. Annual precipitation ranges from 800 to 1,200 mm, much of it associated with thunderstorms during the warm months of June to August.

Temperature characteristics, maximum, average, minimum and precipitation, were taken from the National Weather Service's network of stations. The closest weather station to the Project is the number 14068 Hostotipaquillo, located in the Municipality of Hostotipaquillo, approximately 15 km from the Project at an elevation of 1,300 masl. The temperature fluctuates in a range of 10°C to 35°C, where the coldest month is presented in January and the warmest in June as can be seen in Table 5.1. It is expected that any future mining operations will be conducted year-round.

<b>Month</b>	<b>Minimum Temperature (°C)</b>	<b>Maximum Temperature (°C)</b>	<b>Average Temperature (°C)</b>
January	11.2	29.7	20.5
February	10.9	30.5	20.7
March	11.1	31.5	21.3
April	12.0	32.5	22.2
May	13.0	33.2	23.1
June	14.3	33.0	23.6
July	13.9	31.0	22.4

<b>Month</b>	<b>Minimum Temperature (°C)</b>	<b>Maximum Temperature (°C)</b>	<b>Average Temperature (°C)</b>
August	14.4	30.5	22.4
September	14.2	30.8	22.5
October	13.4	31.1	22.2
November	12.3	30.2	21.3
December	11.1	29.7	20.4

### **5.3 LOCAL RESOURCES AND INFRASTRUCTURE**

The Village of Cinco Minas has a population of approximately 300. There is an adequate labour source in the Village of Cinco Minas and in nearby Hostotipaquillo. The exploration and drilling crews stay in the Village of Cinco Minas and make the short trip to site as required. Telephone and cell phone coverage are good, as is access to high-speed internet.

The closest service center is the Town of Magdalena, approximately a one-hour drive from Cinco Minas. Magdalena lies 78 km northwest of Guadalajara. The municipality covers an area of 445.36 km<sup>2</sup>. It borders the State of Nayarit to the west and the Town of Tequila to the east. As of 2018, the municipality had a total population of 16,214.

The City of Guadalajara has a population of 7.5 million people and is the second largest city in Mexico. The area has a long tradition of underground mining and there is an ample supply of skilled personnel, equipment, suppliers and contractors sufficient for the Los Ricos South Project.

Electrical power is available from the local grid (Commission Federal de Electricity). A 220 kV transmission line crosses the Property just to the south of Cinco Minas. There is water flowing from the main adit of the Cinco Minas Mine and some streams flow with water all year. The Rio Santiago (Santiago River) is located a few kilometres to the north at an elevation of 1,000 masl.

The Authors are of the opinion that there are no obvious impediments to building a mine, processing or tailings facility within the area of the concessions.

### **5.4 PHYSIOGRAPHY, FLORA AND FAUNA**

The vegetation is variable across the Property and related to the topography and elevation. Larger trees tend to be found along the valley floors, where the roots can access ground water. Thorn bushes, cacti, grasses and various shrubs and vines are found on the hillsides.

### **5.4.1 Encino Forest**

The Oak Forest is the type of vegetation in the middle and lower parts of the locality, at altitudes between 1,800 and 1,500 masl, and is an important component of the environmental system. Various species of oak of the genus *Quercus* are located here, and in a smaller percentage, pines of the genus *Pinus*. Given the ecotonal conditions, there are also pines of higher altitudes and shrubs from the low jungle present in the area.

### **5.4.2 Secondary Vegetation of Low Deciduous Forest**

The area is in a state of ecological succession. There is indication that the original vegetation was removed or disturbed heavily and is in a state of recovery.

### **5.4.3 Induced Pasture**

Pasture vegetation is composed of grasses that arise when the original plant cover is removed. Grassland usually appears as a result of clearings in any type of vegetation. It can also be established in abandoned agricultural areas. This grassland is present in the upper parts of the sierra and some lower areas, occupying areas of original forest and vegetation. This condition is generally artificially maintained, and prevents the natural succession of vegetation that originally occupied those places.

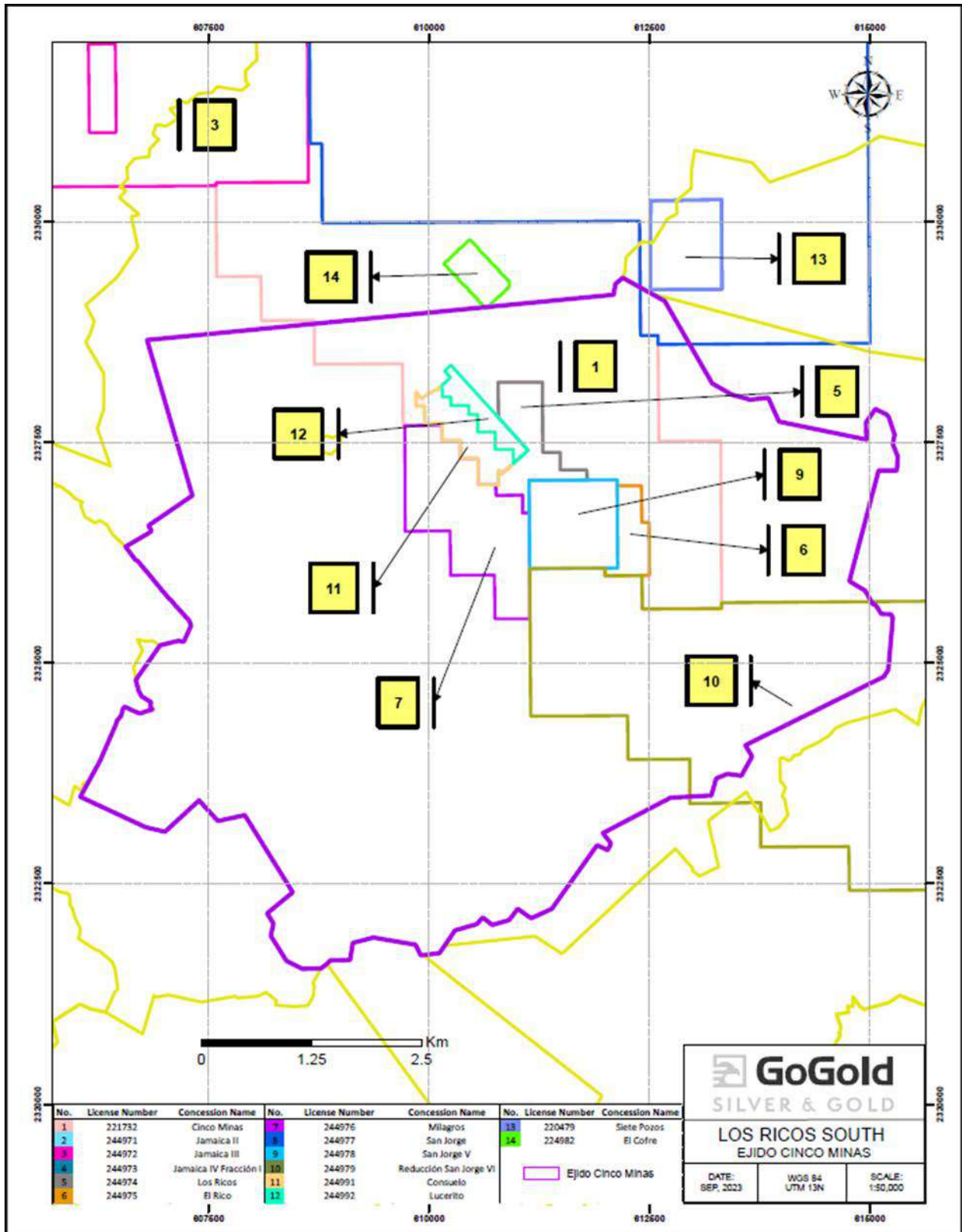
The animal sustaining capacity of these areas is low, due to the lack of management practices, such as: the establishment of the medium seed pasture, weed control, diseases and pests, fertilization, scheduled cuts or grazing, planting distance, irrigation, renewal of paddocks, etc. In addition, the areas that support induced grassland have varying degrees of deterioration, due to the management of the grass that replaced the original vegetation, in addition to the uncontrolled grazing practices that lead to soil loss (INEGI, 2003).

## **5.5 SURFACE RIGHTS**

The Ejido of Cinco Minas owns the surface rights over the majority of the Project's concessions, and covers the Mineral Resources. On August 9, 2020, the Ejido of Cinco Minas signed an Agreement with the Company for a period of 12 years with an additional 12-year renewal period. The Agreement gives access to enter and carry out the exploration and exploitation on 1,280 ha for an annual fee of 1.0M Mexican pesos (Figure 5.1). When the Project is constructed, the Company will pay a further annual fee of 0.5M Mexican pesos for use of up to 71 ha with an additional annual fee of 7,000 Mexican pesos per hectare beyond 71 ha. For the years the Project is in production, there will be an additional annual fee of US\$100,000.



**FIGURE 5.1 CINCO MINAS EJIDO LANDS**



Source: GoGold Resources (2023)

## **6.0 HISTORY**

Mineral exploration and mining for precious metals in the Hostotipaquillo area started in the early seventeenth century. The Town of Hostotipaquillo became the regional center for the mining camps at Monte del Favor, San Pedro Analco and Cinco Minas.

### **6.1 EARLY HISTORY**

Crawford (1908) states the Cinco Minas Property was known as an “Antigua” or ancient mine, having been opened up originally by the early Spaniards, and operated successfully by them until forced to leave the country. The workings on the Destajos, Famosa and Trinidad levels of the Cinco Minas Vein are associated with the early workers. The next documented record of exploitation in the area was in 1824, when a Coronel Schiaffino held the Property (Nebocat, 2004).

### **6.2 1860 TO 1907 - THE MARTINEZ AND MONTERO MINE**

From approximately 1860 to 1907, the Cinco Minas Property was owned by private Mexican owners Mr. Luis Martinez and Mr. Montero of Guadalajara. The Property was noted for having produced several bonanzas in its past production. Crawford (1908) reported the early production records of the mine was not kept with sufficient accuracy to use as data, however, from 1901 to 1907 complete reports were obtainable, as summarized in Table 6.1. Production was from narrow underground stopes on the Destajos, Famosa, Trinidad and Tunnel levels of the San Dimas and San Nicolas chutes.

From the Cinco Minas and San Dimas Chute, Crawford (1908) reports 7,559 tons (“T”) of mineralized material were treated on the “patio” (Figure 6.1) between 1901 and 1907, containing an average of approximately 48.5 ounces (“oz”) of silver (“Ag”) (returns from bullion and concentrates). Crawford (1908) also reports 1,070 tons of direct shipping mineralized material were mined between 1901 and 1907 and graded an average of approximately 166.5 oz/T Ag.

Crawford (1908) also reports 5,942 tons of mineralized material averaging 57.8 oz/T Ag (returns from bullion and concentrates) from the San Nicolas bonanza was processed on the patio between 1901 and 1907. He also reports the owners produced 1,696 tons of direct shipping material from the San Nicolas Bonanza averaging approximately 174.5 oz/T Ag.

Crawford (1908) states “of the 13,401 tons of ore treated on the patio, approximately 40% of the gold was recovered”. The gold value obtained from shipping mineralized material, bullion and concentrates was \$73,000. At a gold price of US\$20/oz of gold (“Au”), a total of 3,650 oz Au were produced at a head grade of 0.272 oz/T Au.

**FIGURE 6.1 PHOTOGRAPH OF THE CINCO MINAS PATIO BY H. E. CRAWFORD, 1907**



45(X):815

Cinco Minas Milling Plant

Patio - Showing tortas in course of treatment - Each torta or pile about 12 tons takes 10-12 days to complete chemical action which is same as pan amalgamation with the use of salt, copper sulphate and mercury, which amalgamates the silver sulphides now superseded by Cyanide process in most parts of Mexico.

The ore is washed after this process to recover mercury and amalgam and the coarse sands <sup>which are</sup> concentrated by hand.

This plant dates back to the Spanish Invasion and is the most interesting relic I have encountered in my experience in Mexico. Every process is conducted on most ancient lines. Modernism is absolutely prohibited.

Source: GoGold Resources (2019)

Mine	Method	Tons (T)	Ag Grade (oz/Ton)	Ounces (oz)
Cinco Minas	Patio	7,559	48.5	366,611.50
Cinco Minas	Direct	1,979	166.5	329,503.50
San Nicolas	Patio	5,842	51.8	302,615.60
San Nicolas	Direct	1,696	174.5	295,952.00
<b>Total Silver Ounces</b>				<b>1,294,682.60</b>

Source: Crawford (1908)

### 6.3 1908 TO 1930 - THE CINCO MINAS MINING COMPANY

The Cinco Minas Mining Company (“CMMC”) was a private firm formed in 1905 by three members of the Marcus Daly family; James Watson Gerard served as President, Marcus Daly Jr. served as Secretary and Gerard’s wife, the former Mary Daly, who was the daughter of copper magnate Marcus Daly, head of the Anaconda Copper Mining Company that developed the mines of Butte, Montana.

The firm hired a young mining engineer, Henry E. Crawford of Los Angeles, California to “find a property” for the company. In 1907, Crawford began his review and due diligence of the Martinez and Montero silver and gold mine at Cinco Minas in Jalisco, Mexico.

On Crawford’s recommendation, the CMMC purchased the Property from the Martinez and Montero families in 1908 and began a six-year program to modernize the mine, sink a shaft, outline mineralization, and build a modern flotation and cyanide process plant. In January 1914, CMMC began processing mineralized material from the mine at a rate of 300 Tpd (tons per day). The mine operated until March 1930, when it closed due to low silver prices related to the Great Depression and civil unrest in Mexico. The production data are summarized in Table 6.2.

The mine and process plant operated at a daily production rate between 300 Tpd to 400 Tpd through the First World War, however, shortages of manpower, equipment, power and supplies curtailed operations at times throughout this period. In 1918, CMMC purchased new grinding mills for the process plant and the production was raised to 550 Tpd.

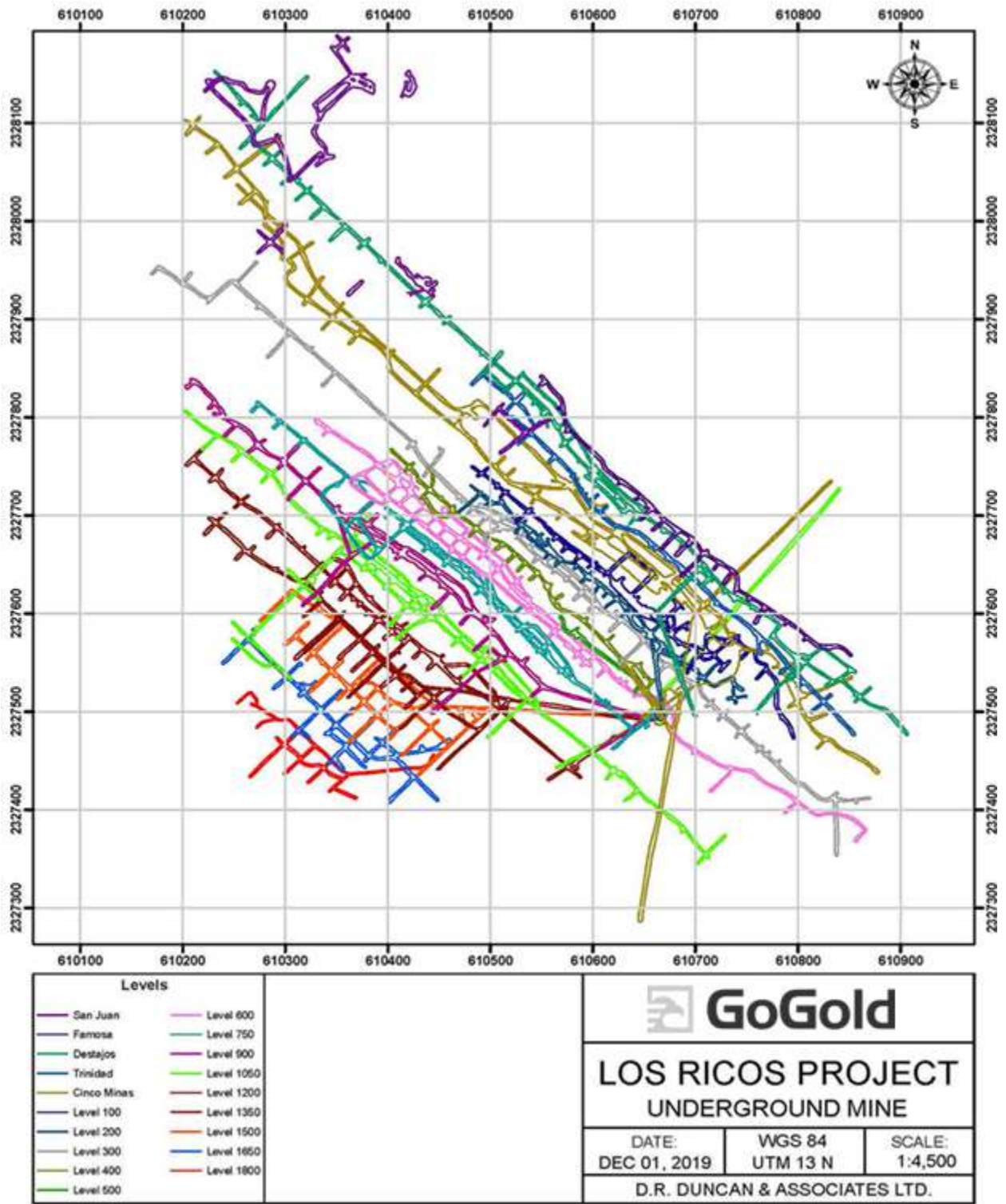
During the life of the mine, CMMC developed and mined Cinco Minas Vein at the El Abra mineralized shoot on nineteen levels (see Figure 6.2) down-dip for a distance of 840 m and horizontally over 450 m near surface and over 120 m horizontally at the deepest level.

From 1914 to 1930, CMMC produced 33,700,000 oz Ag and 234,500 oz Au from 2,446,000 tons of mineralized material (Gerard, 1951).

**TABLE 6.2  
PRODUCTION HISTORY OF THE CMMC COMPANY 1914 TO 1930**

<b>Year</b>	<b>Tonnes (t)</b>	<b>Tons Processed (T)</b>	<b>Silver (g/t)</b>	<b>Silver (oz/T)</b>	<b>Gold (g/t)</b>	<b>Gold (oz/T)</b>	<b>Contained Silver (kg)</b>	<b>Contained Gold (kg)</b>	<b>Contained Silver (oz)</b>	<b>Contained Gold (oz)</b>
1914	58,690	64,695	515.0	15.02	4.01	0.117	30,224.1	235.4	971,718.9	7,569.3
1915	56,190	61,939	464.9	13.56	3.46	0.101	26,123.8	194.6	839,892.8	6,255.8
1916	96,225	106,070	447.1	13.04	3.43	0.100	43,021.2	329.9	1,383,152.8	10,607.0
1917	131,131	144,547	502.6	14.66	4.05	0.118	65,910.7	530.5	2,119,059.0	17,056.5
1918	137,941	152,054	474.9	13.85	4.11	0.120	65,502.9	567.5	2,105,947.9	18,246.5
1919	192,811	212,538	347.7	10.14	2.85	0.083	67,032.8	549.4	2,155,135.3	17,661.9
1920	158,484	174,699	352.0	10.27	2.51	0.073	55,788.8	398.3	1,793,634.6	12,805.4
1921	153,467	169,168	479.1	13.97	3.26	0.095	73,523.6	499.9	2,363,818.3	16,071.0
1922	167,553	184,695	466.9	13.62	3.02	0.088	78,237.2	505.5	2,515,361.2	16,253.2
1923	153,407	169,102	519.9	15.16	3.23	0.094	79,751.9	495.5	2,564,059.8	15,929.4
1924	161,383	177,894	606.2	17.68	3.57	0.104	97,826.4	575.4	3,145,165.9	18,501.0
1925	148,755	163,974	518.9	15.14	3.09	0.090	77,191.6	459.0	2,481,746.5	14,757.7
1926	129,468	142,714	469.7	13.70	3.09	0.090	60,813.5	399.5	1,955,181.8	12,844.3
1927	180,045	198,466	462.5	13.49	3.09	0.090	83,274.3	555.6	2,677,306.3	17,861.9
1928	158,601	175,600	476.0	14.24	3.17	0.091	75,494.1	502.6	2,500,000.0	16,000.0
1929	114,856	126,607	412.8	14.04	3.14	0.107	52,261.0	397.0	1,778,023.7	13,506.7
1930	23,455	21,278	484.8	16.49	3.52	0.120	10,315.0	75.0	350,936.9	2,551.7
<b>Total</b>	<b>2,222,462</b>	<b>2,446,040</b>	<b>469.0</b>	<b>13.78</b>	<b>3.27</b>	<b>0.096</b>	<b>1,042,292.7</b>	<b>7,270.7</b>	<b>33,700,141.9</b>	<b>234,479.3</b>

**FIGURE 6.2 COMPOSITE LEVEL PLAN MAP OF THE CINCO MINAS MINING COMPANY UNDERGROUND LEVELS**



Source: GoGold Resources (2019)

## 6.4 JAMES WATSON GERARD PAPERS

The James Watson Gerard Papers is the collection of personal and professional papers, photographic materials, and scrapbooks generated and/or collected by James W. Gerard. These materials present a substantial documentation of Gerard's activities as Ambassador to Germany leading up to World War I, American Democratic Party activist, New York City philanthropist, and international mining industry investor. Gerard married Mary Daly, daughter of Marcus Daly, in 1901. During his lifetime he maintained an interest in the Montana properties and investments of the Daly family, and had a ranch of his own north of Hamilton, Montana.

After he died in 1951, his family donated his papers to the Archives and Special Collections of the Maureen and Mike Mansfield Library at the University of Montana located in Missoula, MT. The collection is divided into eleven series, and Series VIII is the Cinquo (*sic*) Minas Mining Company papers, 1897 to 1942, 13.0 linear feet and seven oversize volumes.

The series contains extensive records of mining operation at the Cinquo (*sic*) Minas site in Jalisco, Mexico. James Gerard was a major investor in the mining company, along with his brother-in-law, Marcus Daly Jr. Most of the material was created or collected by Henry E. Crawford, Cinquo (*sic*) Mina General Manager, to address Gerard's questions and concerns. Generally, these records exceed the standard range of investor reports and reflect the importance mine management placed on Gerard's investment.

The scope of the materials includes incoming and outgoing correspondence, auditor and tax records, production and profit reports, property maps and structural blueprints, legal depositions and real estate descriptions, capital inventories and financial volumes. Of particular note, two folders in Box 470 includes copies of documents issued by the State of Jalisco, Mexico detailing title descriptions and operation expansion applications for the Cinquo (*sic*) Minas Mining Company between 1901 and 1911.

David Duncan of GoGold visited the Maureen and Mike Mansfield Library in March 2019 and spent a week reviewing the correspondence, reports and maps in the James Watson Gerard Series: VIII Papers. The items available are listed in Table 6.3.

High-resolution digital images of the reports and maps were scanned by the staff from the Archives and Special Collections in the Maureen and Mike Mansfield Library. The scanned images were subsequently processed by staff of Servicios y Proyectos Mineros de México, S.A. de C.V. ("SPM") from April to September to geo-reference and digitize the historical mine workings, stopes and underground assay data. SPM is a geological consulting/contracting service company that does all of the field work for GoGold.

This information was then entered into SPM's Minesight 3-D modelling software, along with other data including surface topography, mapping and sampling, legacy drilling and underground sampling, and the current exploration mapping, sampling and drilling by GoGold. The channel sample information found is listed in Table 6.4 and high-grade mined areas in underground stopes are shown in Figure 6.3.

**TABLE 6.3**  
**REPORTS AND MAPS OF THE CINCO MINAS COMPANY 1908 TO 1930**

Information	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	
Monthly Reports					yes		yes	yes	yes		yes	yes		yes	yes	yes		yes	yes	yes		yes	yes	
Annual Report							yes	yes	yes		yes		yes	yes			yes		yes	yes				
Yearly Production	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Geological Report	yes	yes						yes							yes	yes						yes		
Metallurgical Reports			yes	yes																				
Mill Recoveries							yes	yes	yes		yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Report on Reserves	yes						yes	yes	yes				yes							yes	yes		yes	
Mine Plan Maps								yes				yes		yes					yes				yes	
Mine Longitudinal Map	yes						yes						yes	yes					yes				yes	

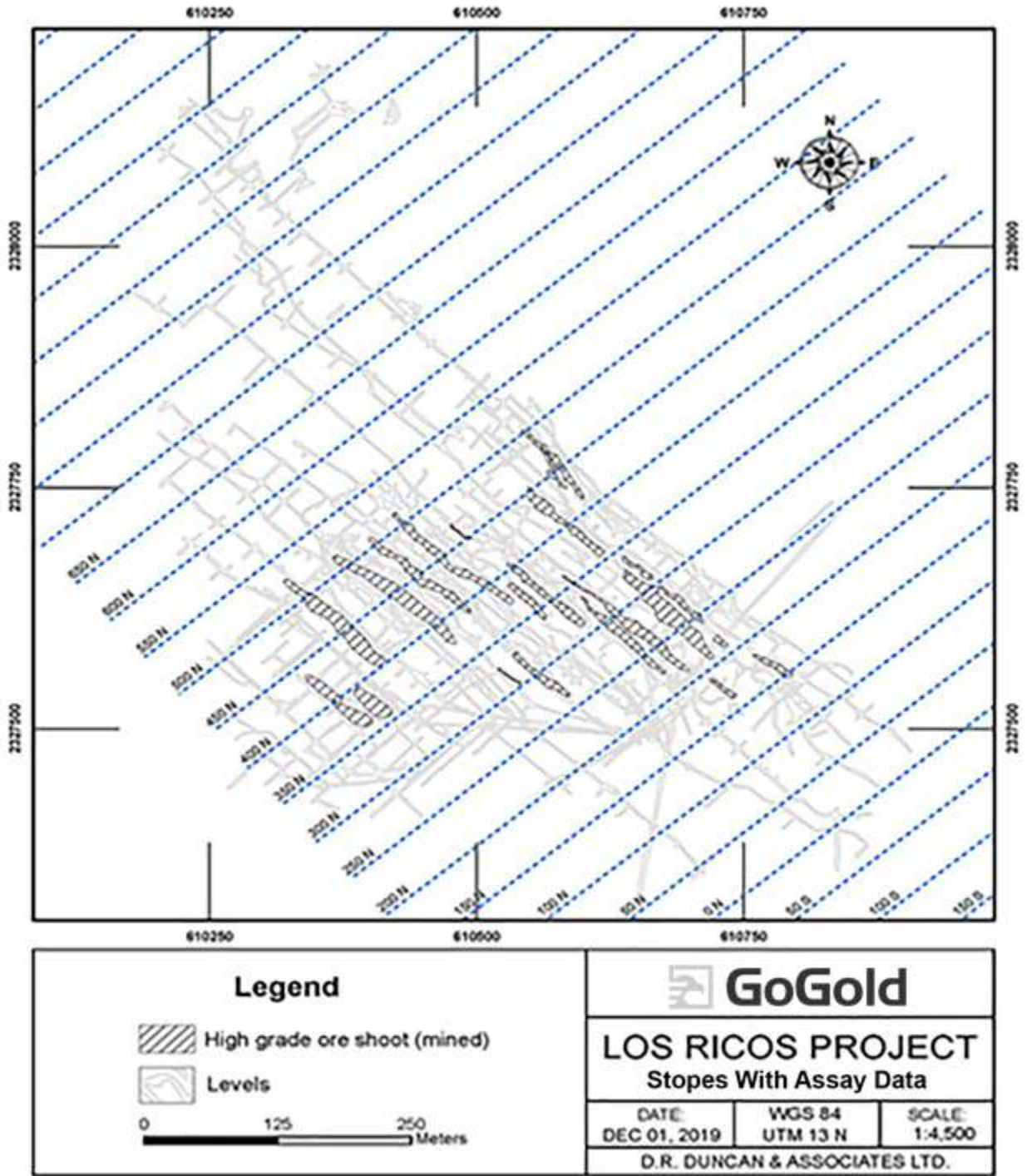
Source: Gerard (1951)



**TABLE 6.4**  
**CHANNEL SAMPLES WITH SILVER AND GOLD**  
**ASSAYS IN THE CINCO MINAS MINE 1908 TO 1930**

<b>CMMC Mine Level Name</b>	<b>Number of Samples</b>
Famosa (aka Lucerito)	121
San Juan	266
Destajos	641
Trinidad	139
Cinco Minas (aka Tunnel)	1,552
100	703
200	559
300	1,744
400	117
500	no data
600	1,100
750	921
900	327
1050	no data
1200	19
1350	1
1500	572
1650	no data
1800	no data
<b>Total</b>	<b>8,782</b>

**FIGURE 6.3 LOCATION OF STOPE ASSAY DATA FOUND IN THE GERARD PAPERS AT THE UNIVERSITY OF MONTANA**



Source: GoGold Resources (2019)

## **6.5 1931 TO 1980 - SEVERAL COMPANIES**

In late 1930, local Mexicans formed a mining co-operative and exploited the Deposit at a reduced scale until 1953, sending the hand sorted mineralized material to custom process plants (Nebocat, 2002).

During 1952-53, a successor company, Nueva Cinco Minas S.A. and Cia. El Aguila (the adjacent property on strike to the northwest) continued exploration in the area. They focused on the southern extension of the Cinco Minas Vein near the Cerro Colorado Prospect.

Munroe (2006) states that P. S. Friesen visited the Property in 1968 and concluded there “was substantial tonnage for the development on a large scale, low-grade, open pit operation”.

The Property was inactive for several years until Cia. Minera Las Cuevas, S.A. (“MLC”) operated an exploration program between 1981 and 1982. Nebocat (2002) reports that their work included surface and underground mapping, sampling and diamond drilling along an approximately 300 m long segment of the Cinco Minas Vein. Nebocat (2002) reports that J. R. Black visited the underground workings at El Troce in January 1981 and reported that MLC had been conducting a sampling program.

Nebocat (2002) reports MLC completed several drill holes on each of the El Aguila and Cinco Minas properties during 1981 and 1982. The Authors have not seen any of the reports to which Nebocat refers and they are not considered in this Technical Report.

## **6.6 1990 TO 2016 - MINERA SAN JORGE, S.A. DE C.V.**

Minera San Jorge S.A. de C.V. (“MSJ”) is a private Mexican-owned company that acquired the Cinco Minas properties during the 1990s. Munroe (2006) reports that MSJ retained an independent consulting geologist Craig Byington to visit the Property and review the work carried out by MLC.

Nebocat (2002) reports MSJ commissioned Henkle and Associates in April 1999 to compile statistics for samples collected in the El Abra area workings by the MLC staff in 1982. MSJ retained a Dr. Cuellar in 1998 to perform a Mineral Resource/Mineral Reserve Estimate of the El Abra, San Pedro, San Juan and Cerro Colorado zones. The San Juan Mine was sampled for MSJ by Rosas Haro in February 1997. Rosas Haro also sampled the cross-cuts along the Lucerito (Famosa) haulage-way, however, subsequently it was found that he sampled mainly footwall quartz-rhyolite, which is very low-grade. An examination of the haulage-way showed that the cross-cuts were mostly filled in with debris when the co-operative open pit mined the Cinco Minas Vein.

In 2001, MSJ approached FIFO, a Mexican government agency charged to help develop mining in the country. FIFO collected and forwarded some samples to the Geological Survey of Mexico for assays, metallurgical testing, and mineralogical studies (polished sections).

## 6.7 2002 TO 2005 - TUMI RESOURCES INC.

On October 15, 2002, TUMI Resources Inc. (“TUMI”) signed an option and option agreement with MSJ to earn up to 60% interest in the Cinco Minas Property. TUMI completed a thorough technical review and three separate drilling campaigns, which are summarized in Table 6.5 (Nebocat, 2004). TUMI terminated the Option Agreement with MSJ on May 18, 2005.

<b>Phase</b>	<b>Type</b>	<b>Holes</b>	<b>Metres</b>	<b>Samples</b>	<b>Standards</b>	<b>Duplicates</b>
Phase 1	RC	23	1,688	450	37	42
Phase 1	DD	7	253			
Phase 2	RC	14	1,411	216	20	14
Phase 3	RC	22	1,605	404	43	99
<b>Total</b>		<b>65</b>	<b>4,957</b>	<b>1,070</b>	<b>100</b>	<b>155</b>

## 6.8 2005 TO 2007 - BANDERA GOLD LTD.

On December 1, 2005, Bandera Gold Ltd. (“Bandera”) announced it had signed an Option Agreement with MSJ to acquire 60% interest in the Cinco Minas and Gran Cabrera properties by making option payments of \$300,000, issuing 2,800,000 common shares of Bandera to MSJ, and providing financing of \$7,600,000 to MSJ over a five-year period for the exploration and development of the properties.

Munroe (2006) provides an excellent historical review of the Cinco Minas Property from reports and maps provided by MSJ and the work carried out by Bandera on the properties.

On September 15, 2007, Bandera announced considerable advances in the exploration, mining and processing work on the Cinco Minas Property in the joint venture with MSJ. New roads were built to historical waste rock dumps at the Las Amarillas and Magdalena historical workings to provide material to process through the new 60 tpd “pilot” process plant. Exploration work continued to explore along the Cinco Minas Vein to the north of the CMMC mine and to the south near Cerro Colorado.

Williams (2007) reports MSJ initiated an underground mining program on the Destajos horizon of the El Abra workings and intersected the south-eastern extremes of the historical workings. Work involved clearing and supporting the workings where required and enlarging them for new equipment (Figure 6.4).

Williams (2007), states the pilot process plant is operational and states that adjusting “grind parameters to achieve 80% passing -200 mesh will enable us to reduce the retention time in the cyanide circuit as well as achieve higher recoveries. This could be achieved from a low-cost Cerro Colorado operation with an added grade sweetener from El Abra.”

Williams (2007) reports the first “metal” was poured on September 7, 2007 and the second pour was on September 22, 2007.

#### **FIGURE 6.4 PHOTOGRAPH OF THE EL ABRA WORKINGS**

**A.) LOOKING NORTHWEST ALONG  
EL ABRA WORKINGS**



**B.) LOOKING SOUTHWEST ALONG  
EL ABRA WORKINGS**



*Source: GoGold Resources (2019)*

### **6.9 2008 TO 2016 - LITIGATION BETWEEN BANDERA AND MSJ**

Williams (2008) reported on January 4, 2008 that Bandera received notification from MSJ that the Option Agreement had been terminated. Williams (2008) reported on January 7, 2008 that Bandera “has contributed approximately \$7M in project funding and issued share capital to secure title in the Properties and has fulfilled its obligation to earn a 60% interest in the Properties”.

Bandera’s Form 51-102F1 MD&A for the three months ended February 28, 2015, reported:

*“On February 26, 2008, the Company commenced legal action in Mexico with respect to its interests in Cinco Minas and Gran Cabrera (the “Assets”). Compensation being claimed by the Company includes enforcement of the Option Agreement and damages arising from non-compliance by MSJ. A court of law in Guadalajara, Mexico has awarded, as a preventative measure in favor of the Company, encumbrances which have been filed against the applicable assets and mining concessions with the Mexico Mining Public Registry (“MPR”). The outcome of the claims for remedies and damages is not determinable; therefore, no amounts have been recorded in the consolidated financial statements.”*

On March 7, 2008, the State Court, Commercial Division of Guadalajara, Mexico, issued preventive measures in favor of Bandera consisting of: (i) the encumbrance of assets of the defendants for an amount of US\$6M; (ii) the registration of the lawsuit on the files of each of the mining concessions subject to the Option Agreement before the MPR in Mexico City; and (iii) a prohibition for defendants, the legal representative of MSJ, to leave the Court’s jurisdiction (the

Mexican State of Jalisco) until this case is settled, unless having appointed an attorney to act on his behalf while he is away. In order for these preventive measures to be put in place and remain applicable, Bandera was required to deposit a refundable warranty bond of \$502,319 (6M Mexican Pesos), in order to respond to any damages and injury that the defendants may suffer as a result of the said preventive measures being emplaced.

On April 18, 2016, Bandera announced it terminated the litigation on its Cinco Minas and Gran Cabrera mining properties and stated, “Bandera has diligently defended its rights to enforce the original option agreement signed by the parties, only to be obstructed at every turn by procedural maneuvers common in the justice system in Mexico”. Bandera recorded an Impairment of the Cinco Minas and Gran Cabrera properties of \$4,815,055 on April 15, 2018. During the period from 2008 from 2016, MSJ was involved in additional litigation with employees.

The Los Ricos South Property has been well known to have strong geological potential, however, the development of the asset had been delayed by litigation. In 2016, the Mexican courts awarded title of the Property to a private Mexican owner that GoGold purchased the Property from in 2019. Title to the Property was subsequently transferred to GoGold.

## **6.10 PREVIOUS MINERAL RESOURCE ESTIMATE**

The previous Mineral Resource Estimate by P&E (2020) for the Los Ricos South Property includes Measured and Indicated Mineral Resources of 63.7 Moz AgEq grading 199 g/t AgEq contained in 10 Mt and Inferred Mineral Resources of 19.9 Moz AgEq grading 190 g/t AgEq contained in 3.3 Mt (Table 6.6). This Mineral Resource was considered to be amenable to conventional open pit and underground longhole mining methods. This previous Mineral Resource Estimate was a base for the 2021 Preliminary Economic Assessment of Los Ricos South Project (P&E, 2021). The effective date of this previous Mineral Resource Estimate is January 20, 2021.

This previous Mineral Resource Estimate is superseded by the current Mineral Resource Estimate reported in Section 14 of this Technical Report.

**TABLE 6.6**  
**2020 MINERAL RESOURCE ESTIMATE – PIT-CONSTRAINED AND OUT-OF-PIT<sup>(1-8)</sup>**

Mining Method	Classification	Tonnes (M)	Average Grade					Contained Metal				
			Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	AgEq (g/t)	Au (koz)	Ag (koz)	Cu (klb)	AuEq (koz)	AgEq (koz)
Pit-Constrained <sup>5</sup>	Measured	1.1	1.10	152	0.02	2.84	249	39	5,464	437	102	8,917
	Indicated	8.7	0.89	113	0.04	2.18	191	247	31,681	8,287	610	53,330
	<b>Measured &amp; Indicated</b>	<b>9.8</b>	<b>0.91</b>	<b>118</b>	<b>0.04</b>	<b>2.26</b>	<b>197</b>	<b>287</b>	<b>37,146</b>	<b>9,205</b>	<b>711</b>	<b>62,243</b>
	Inferred	2.3	0.75	73	0.05	1.58	138	56	5,421	2,460	118	10,296
Out-of-Pit <sup>6,7</sup>	Indicated	0.2	1.23	185	0.07	3.35	293	6	907	310	16	1,434
	Inferred	0.9	1.21	209	0.05	3.60	315	37	6,360	990	110	9,588
<b>Total</b>	<b>Measured</b>	<b>1.1</b>	<b>1.10</b>	<b>152</b>	<b>0.02</b>	<b>2.84</b>	<b>249</b>	<b>39</b>	<b>5,464</b>	<b>437</b>	<b>102</b>	<b>8,917</b>
	<b>Indicated</b>	<b>8.9</b>	<b>0.89</b>	<b>115</b>	<b>0.04</b>	<b>2.20</b>	<b>193</b>	<b>253</b>	<b>32,588</b>	<b>8,598</b>	<b>626</b>	<b>54,765</b>
	<b>Measured &amp; Indicated</b>	<b>10.0</b>	<b>0.91</b>	<b>119</b>	<b>0.04</b>	<b>2.27</b>	<b>199</b>	<b>293</b>	<b>38,053</b>	<b>9,034</b>	<b>728</b>	<b>63,677</b>
	<b>Inferred</b>	<b>3.3</b>	<b>0.88</b>	<b>112</b>	<b>0.05</b>	<b>2.17</b>	<b>190</b>	<b>93</b>	<b>11,781</b>	<b>3,450</b>	<b>227</b>	<b>19,884</b>

- 1) 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, title, taxation, socio-political, marketing, or other relevant issues.
- 2) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
- 3) The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
- 4) Historically mined areas were depleted from the Mineral Resource model.
- 5) The pit-constrained cut-off grade of 0.43 g/t AuEq was derived from US\$1,400/oz Au price, US\$16/oz Ag price, 93% process recovery, and US\$18/t process and G&A cost. The constraining pit optimization parameters were \$2.00/t mineralized mining cost, \$1.50/t waste rock mining cost and 50 degree pit slopes.
- 6) The out-of-pit cut-off grade of 1.80 g/t AuEq was derived from US\$1,400/oz Au price, US\$16/oz Ag price, 93% process recovery, \$57/t mining cost, and US\$18/t process and G&A cost. The out-of-pit Mineral Resource grade blocks were quantified above the 1.8 g/t AuEq cut-off, below the constraining pit shell and within the constraining mineralized wireframes. Out-of-Pit Mineral Resources are restricted to the Los Ricos and Rascadero Veins, which exhibit historical continuity and reasonable potential for extraction by cut and fill and/or longhole mining methods.
- 7) No out-of-pit Mineral Resources are classified as Measured.
- 8) Totals may not sum due to rounding.



## 7.0 GEOLOGICAL SETTING AND MINERALIZATION

### 7.1 REGIONAL GEOLOGY

The Hostotipaquillo – Cinco Minas mining districts (Figure 7.1) occur at the intersection of two extensive calc-alkaline magmatic arcs: 1) the older Sierra Madre Occidental (“SMO”) volcanic province; and 2) the younger Mexican Volcanic Belt (“MVB”) also known as the Trans-Mexico Volcanic Arc (“TMVA”) (Figure 7.2). The SMO volcanic province trends northwest along the Pacific margin of Mexico and parallels the western coastline. It extends for approximately 1,700 km from the USA border to the Mexican state of Guerrero. The MVB covers the boundary between the SMO and Cretaceous to Paleocene batholith and volcano-sedimentary sequences of the Jalisco Block (“JB”) (Ferrari et al., 1999).

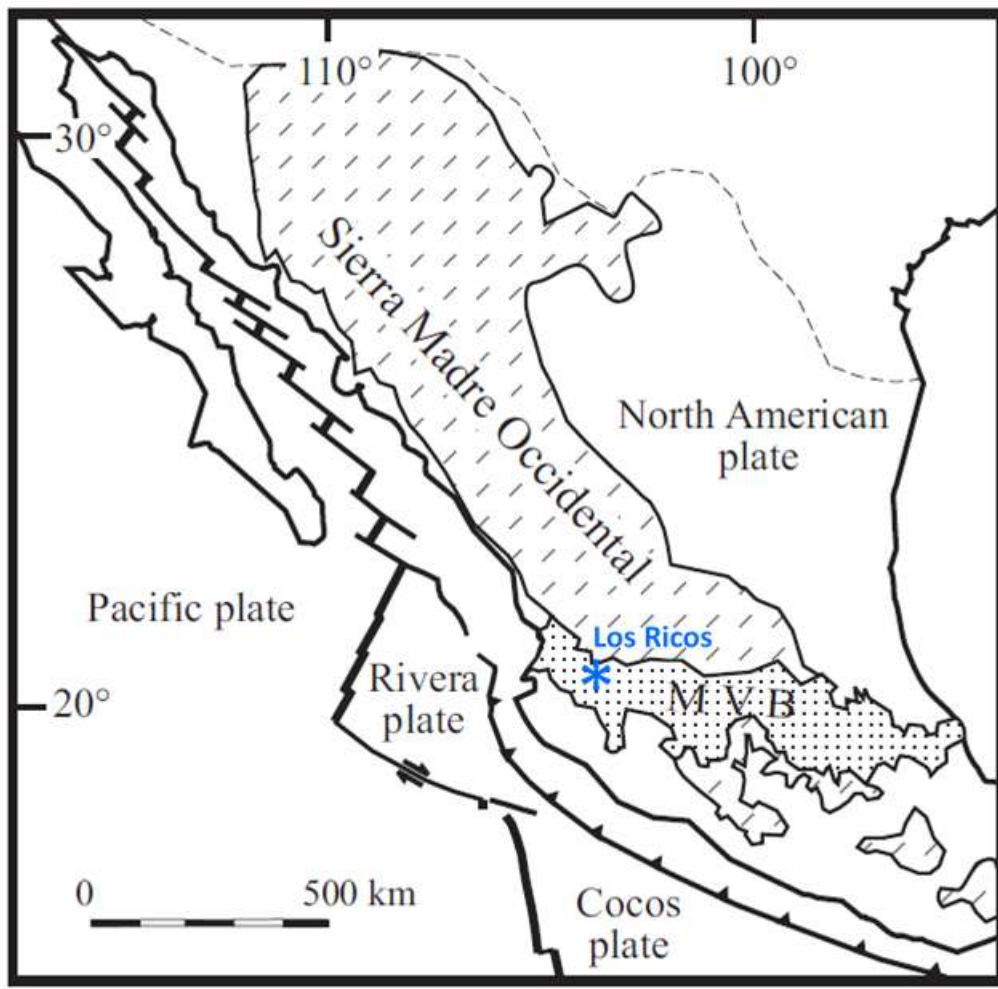
Two major volcanic sequences occur within the SMO volcanic province (Ferrari et al., 1999; Garcia, 2019). The older volcanic sequence ranges in age from 100 Ma to 42 Ma (late Cretaceous to Eocene), is 1.0 km to 1.5 km in thickness, and consists primarily of andesites and minor rhyolites. The younger sequence, referred to as the upper volcanic series, overlies the older andesite series. The age of the younger sequence is predominantly 37 Ma to 32 Ma, with the latest volcanism occurring approximately 18 Ma. The younger sequence is dominated by rhyodacite to rhyolitic ignimbrites with intercalated mafic lavas, suggesting bimodal volcanism. The volcanism in the western SMO represents the largest known concentration of pyroclastic flows and ignimbrites in the world. The SMO is related to the subduction of the Farallon plate. The TMVA is reportedly attributed to the subduction of the Rivera and Cocos Plates, which includes the Jalisco Block.

A volcanic plateau deformed by a series of horsts and grabens, forming prominent mesas and canyons, occurs at the area of intersection of the south end of the SMO (Western Sierra Madre physiographic province) and the MVB (Figure 7.2; Ferrari et al., 1999; Garcia, 2019). The dominant major structural features in this area are the north-south oriented Bolaños and Colima grabens, which are separated by the west-northwest trending, apparently left-laterally displaced Zacoalco Graben. The Hostotipaquillo-Cinco Minas District is located approximately at the intersection of the Bolaños and Zacoalco Grabens and is located along, and bisected by, the boundary of the SMO Block to the north and the Jalisco Block to the south.





**FIGURE 7.2 THE MAIN CENOZOIC VOLCANIC PROVINCES OF MEXICO**



*Note:* MVB = Mexican Volcanic Belt  
*Source:* Ferrari et al (1999) and P&E (2020)

## 7.2 LOCAL GEOLOGY

The geology of the Hostotipaquillo District is characterized by late Oligocene to Pliocene volcanic and sub-volcanic intrusive rocks deformed by a set of northwest and east-west trending, graben-forming normal faults (Figure 7.3; Garcia, 2019). Oligocene and Miocene volcanics are primarily andesite flows, rhyolite ash flow and air fall tuffs, and rhyolite and dacite flow-domes that are partially covered by Pliocene to Recent basalt flows. The northwest-trending graben that extends across most of the district is one of several late Miocene to Quaternary tectonic depressions formed in the area of the intersection of the south SMO and the TMVA, and is part of the larger regional west-northwest trending Zacoalco Graben system. The Property geology is shown in Figure 7.4.

The Rio Santiago River flows northwest through the district along the northeast margin of the Hostotipaquillo district graben structure, including, from northwest to southeast, the La Trini-Mololoa-Monte del Favor group of mines, Gran Cabrera group of mines,

Santo Domingo-La Española mine group, and Cinco Minas-El Aguila mines vein systems. These faults form prominent scarps that are the canyon walls on the southwest and south side of Rio Santiago River. The mineralized vein systems in these faults form dip slopes in the river canyon walls at several locations, such as Cabrera and Santo Domingo-La Española.

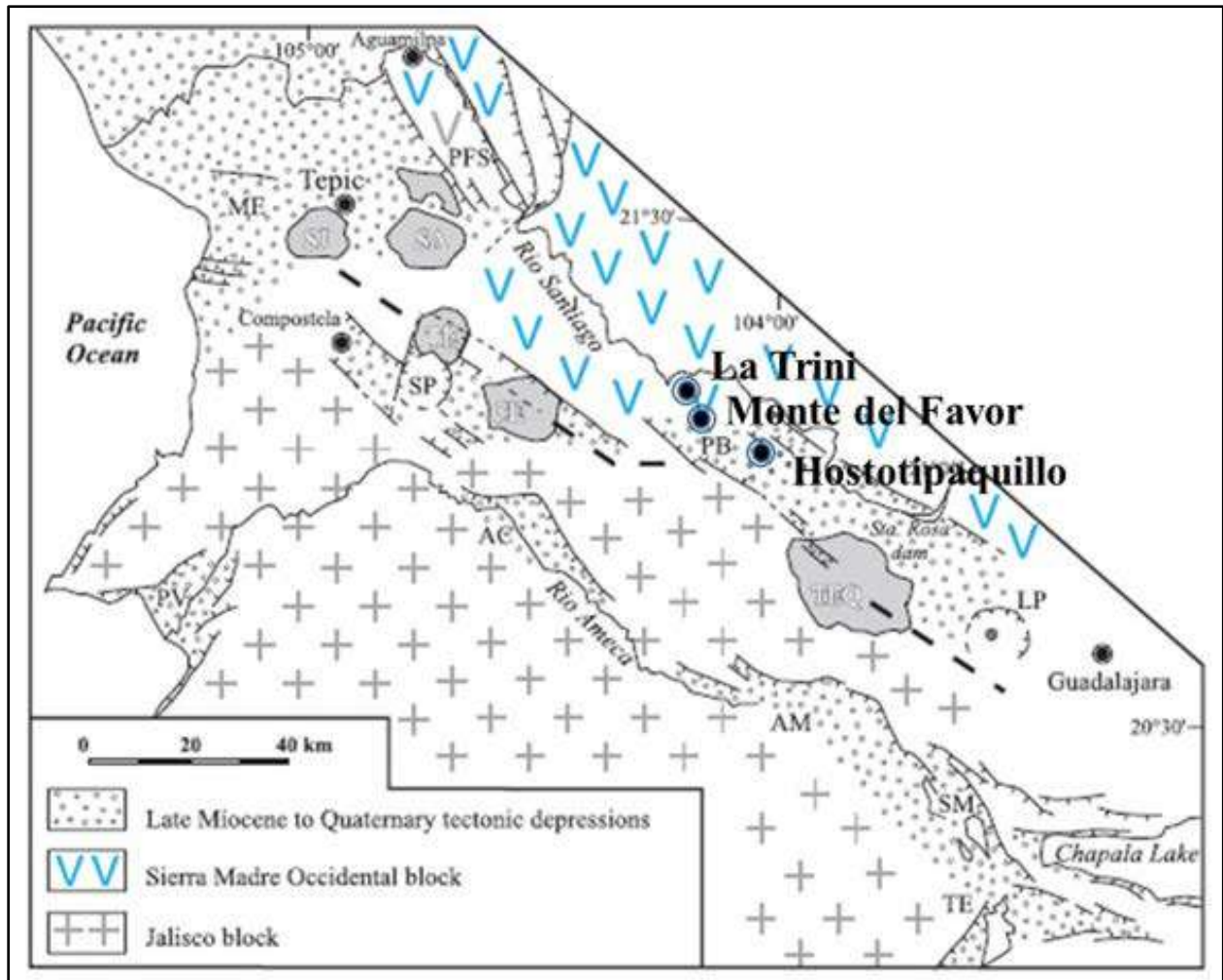
Andesite occurs in various colors and textures. Northwest of the El Aguila Mine, near the bottom of the vein and in San Miguel Creek and the mouth of La Calera Creek, the andesite is greenish grey in color and very fine-grained. It contains abundant quartz phenocrysts and previous investigators classified the rock as a quartz andesite.

At the Village of Cinco Minas, outcrops of the andesite form the hanging wall to the Cinco Minas Vein. They are of reddish-purple, porphyritic andesite and overlie andesitic tuffs (Rivera and Vazquez). These andesites have been observed in an open pit exposure at the El Abra workings (P&E, 2019). These volcanics have been down-dropped along the dip-slope of the Cinco Minas Vein by a large, post-mineralization fault, such that they appear to conformably overlie the vein/fault surface.

In the El Abra Mine, rhyolites occur overlying the andesite in the lower parts of the vein. On surface, the rhyolites are found principally in outcrops above the vein and underlie most of the higher hills found to the northeast of it. The rhyolites are pink and light green in colour and contain quartz phenocrysts. Quartz phenocrystic rhyolite was observed along cross-cuts connected to the La Famosa level haulage, located in the footwall of Cinco Minas Vein (P&E, 2019).

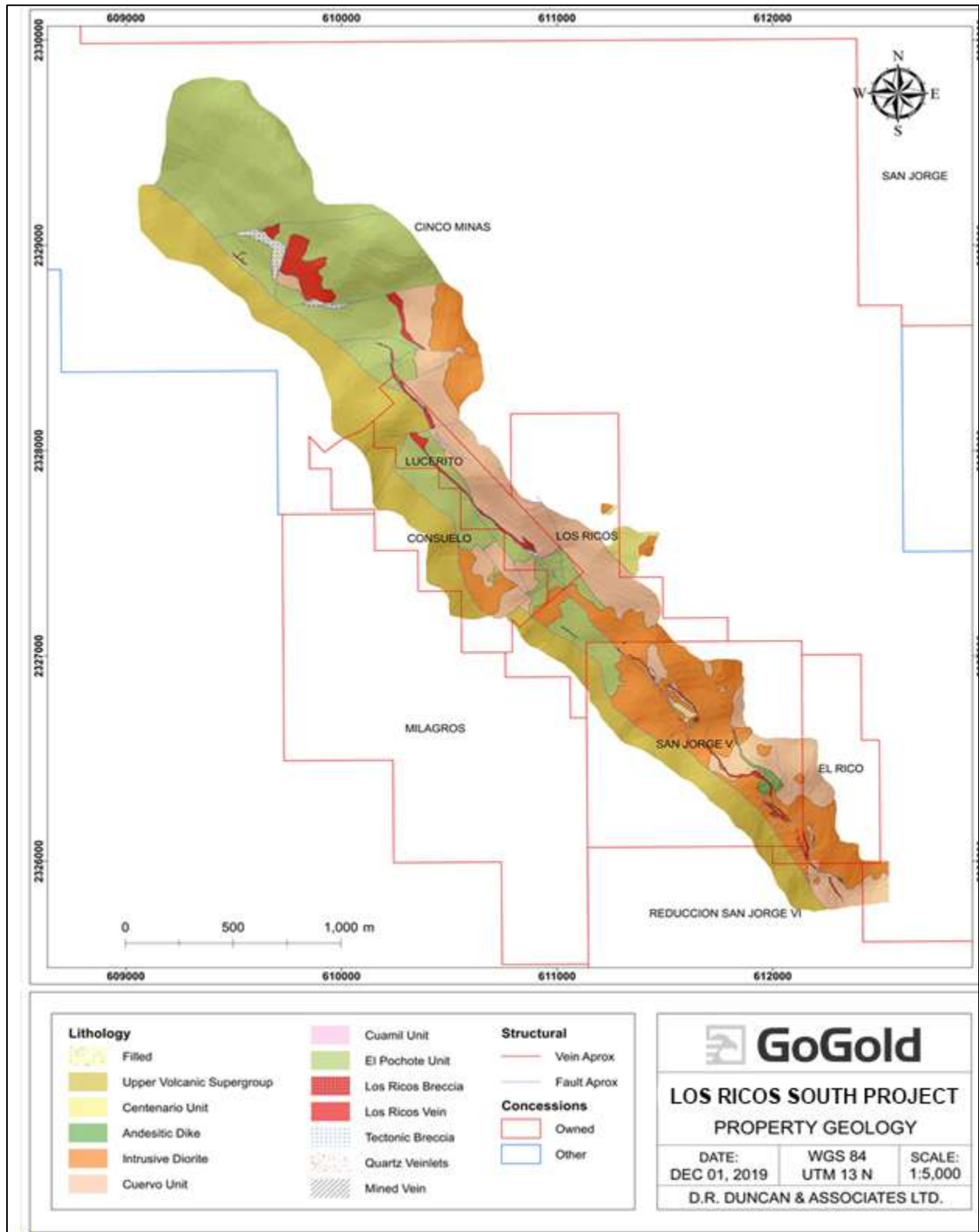
Andesite and rhyolite tuffs are present. The andesite tuffs outcrop in Cinco Minas Creek are light green in colour, fine-grained, and locally have purplish inter-bands and show indications of internal folding. The latter type outcrops in the higher parts of the hillside in the extreme northwest part of Cinco Minas Vein near the San Juan historical workings. Here they are pale pink in colour and contain abundant quartz and biotite phenocrysts and feldspars phenocrysts that are kaolinized.

**FIGURE 7.3 MAP SHOWING THE STRUCTURES AND VOLCANIC CENTRES IN THE HOSTOTIPIQUILLO DISTRICT, MEXICO**



*Note:* The dashed line marks the boundary between the SMO and the Jalisco Block.  
 Los Ricos is located approximately 10 km east of the Town of Hostotipaquillo.  
*Source:* Garcia (2019)

**FIGURE 7.4 PROPERTY GEOLOGY**



Source: GoGold Resources (2020)



Breccias occur above the rhyolite northeast of El Pitayo and form stratiform layers that strike northwesterly and dip 32° to the northeast. They consist of angular fragments of red and green volcanics 1 mm to 5 mm across. The matrix is rhyolite in composition. The orientation and distribution of fragments suggests a vent source to the west.

Younger basalt overlay all the units noted above. Two groups of basalt are distinguished, one of which occurs below the Cinco Minas Vein. They overlay the rhyolite northeast of El Capizayo and are fine-grained. Petrographic analysis indicates the basalt to be hornblende and enstatite porphyritic. Their stratigraphic position suggests that deposition early in the volcanic succession, possibly part of a bimodal suite.

### 7.3 STRUCTURAL GEOLOGY

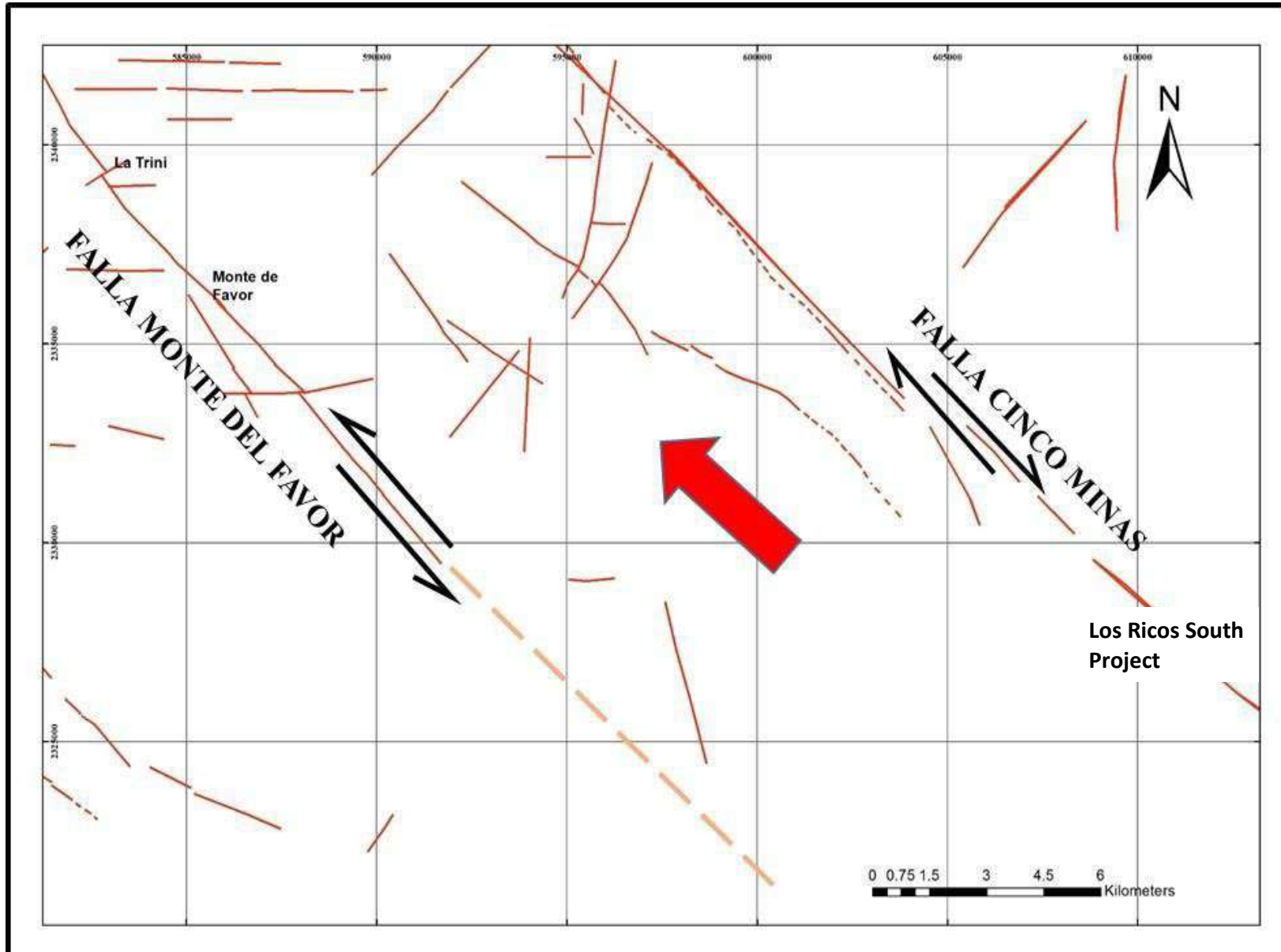
The structural geology of Los Ricos and the Monte del Favor Prospects, located 30 km northwest of the Cinco Minas area (Figure 7.5), have been studied by Garcia (2019). Accordingly, the La Trini – Monte Del Favor Prospects are genetically associated with the Monte del Favor Fault, which trends N 135°. The structural relationships associated with this fault zone comply with the geometric relationships of the system proposed by Riedel (1929), and indicate left-lateral sense of movement.

On the other hand, the Los Ricos South Project is spatially associated with the Cinco Minas Fault system, located approximately 11 km northeast from the Monte del Favor Fault. Kinematic indicators in the Cinco Minas area indicate right-lateral movement, which implies that the block contained between the two faults had a translational movement towards the northwest.

In the Los Ricos South area, a detailed study collected 863 measurements of fractures at 85 stations along the mineralized structure, which is approximately 3 km long with a general northwest-southeast trend. Analysis of all the fracture measurements indicated three phases of superimposed deformation:

- 1) **Phase 1.** Pre-mineralization deformation, characterized by right-lateral movement oriented northwest-southeast, in which local areas underwent brittle deformation to create the permeability that channelized flow of the mineralizing solutions;
- 2) **Phase 2.** Deformation characterized by normal failure and extension subparallel to Phase 1. Quartz textures and cross-cutting structural relationships indicate that Phase 2 deformation began after the start of mineralization, reactivated the right-lateral main fault and associated R, T, R', X and P Faults, and terminated prior to the end of mineralization; and
- 3) **Phase 3.** Weak post-mineralization deformation with an oblique or orthogonal orientation to Phases 1 and 2, characterized by right-lateral and left-lateral senses of movement. This phase of deformation dislocated mineralized structure.

**FIGURE 7.5 STRUCTURAL GEOLOGICAL SETTING OF THE LOS RICOS SOUTH PROJECT AREA**



Source: GoGold Resources (2019) and P&E (2020)

## 7.4 MINERALIZATION

The mineralized vein at Los Ricos South, which is as much as approximately 30 m wide, has had at least three quartz vein formation and metal precipitation events (Nebocat, 2004). The vein strikes across the Property for 3.5 km, following a northwest-southeast trending fault, and dips approximately 65° to 70° to the west.

In 1923, the Cinco Minas Company retained an independent consultant named George Garrey to carry out and deliver a report on his geological examinations of the underground workings (Garrey, 1923). Garrey (1923) examined the underground workings and reports the chief gangue mineral is quartz, whereas crystalline quartz is plentiful and colourless, cream colored, milky or occasionally even amethyst, the bulk of the quartz is a dense fine-grained grey, yellowish or greenish porcelain quartz intermixed with chalcedonic quartz of a slightly later origin. This quartz is associated with less grey, brown and white calcite. Some of the calcite was deposited contemporaneously with the quartz, however, most of it post-dates the latter. The contemporaneous calcite is more abundant in the vein near surface than at depth. Comb quartz and open vugs in the quartz vein were more abundant in the upper workings near surface. Siderite, rhodochrosite and adularia were also noted as rare occurrences, whereas kaolinite was also present near secondary enriched oxidized mineralized materials. Chlorite and possibly epidote were also in evident in association with the quartz, or in partially replaced rock fragments.

The chief sulphide minerals are galena, chalcopyrite, sphalerite, pyrite, covellite, bornite and silver sulphides (Figure 7.6). The higher-grade sulphide zones are generally associated with fine-grained galena and minute specks of chalcopyrite. Coarse-grained sulphides generally carry low metal values. Recognizable silver sulphides are rare. However, specks of pyrargyrite were observed in the high-grade sulphides that might have been tetrahedrite, argentite or other silver sulphide minerals. Native silver flakes and specks were observed coating fractures in high-grade sulphide mineralized zones.

There appear to have been either several periods of vein deposition or a long period of mineralization interrupted periodically by faulting and brecciation of the quartz. The mineralization appears to have formed relatively early. The location of the mineralized shoots, which appear to rake at 65° to 70° northwestwards, seems to have been controlled by:

- segregation of the minerals during deposition from the original primary solutions;
- periods of movement and brecciation that followed the first period of mineralization; and
- formation of the diagonal slips or cross-faults that confined or diverted the later primary mineralizing solutions into these breccia-filled channels.

The portions of the quartz vein between the various mineralized shoots show little evidence of brecciation of the original quartz. The richest mineralized shoots appear to have been associated with the greatest width of quartz and the portions of the veins showing the greatest number of periods of brecciation.



**FIGURE 7.6 PHOTOGRAPH OF DRILL CORE SHOWING SULPHIDE MINERALS**



*Source: GoGold Resources (2019)*

The Magdalena and the San Pedro-San Juan mineralized shoots, although of minor importance, appear to have a true shoot-like character and plunge approximately 65° to the northwest. On the Destajos Level and above, there was originally almost continuous mineralization from the southeast edge of the San Nicolas Stope to the northwest edge of the Main Destajos Stopes at approximately 320 m northwest of the main shaft.

Garrey (1923) reports that the San Nicolas, San Diego, Destajos, Cinco Minas and North Cinco Minas deposits were probably part of what appears to have been one large, mineralized shoot, subsequently broken-up along faults into smaller shoots. Drill hole LRGG-19-079 intersected the Los Ricos Vein from 128.2 m to 144.7 m (Figure 7.7), which displays typical gold and silver-bearing quartz veins in the area of the historical Cinco Minas underground mine.

**FIGURE 7.7**      **PHOTOGRAPHS OF THE LOS RICOS VEIN IN DRILL CORE, HOLE LRGG-19-079**



*Source: GoGold Resources (2019)*

## 8.0 DEPOSIT TYPES

Los Ricos (Cinco Minas) is a classic Neogene (previously Tertiary) age, volcanic-hosted and low-sulphidation epithermal precious metal deposit.

Epithermal deposits of Au ( $\pm$ Ag) are a type of lode gold deposit that comprises veins and disseminations formed at or near ( $\leq 1.5$  km) the Earth's surface (Hedenquist, 2000; Taylor, 2007; Figure 8.1). The deposits occur in association with hot springs and young volcanic centres. The host rocks are volcanic and volcanoclastic sedimentary, sedimentary and metamorphic rocks. The mineralization is dominated by Au and Ag, however, Cu, Pb and Zn may also be present in variable amounts.

Epithermal Au deposits are classified on the basis of the sulphidation state of the sulphide mineralogy as belonging to one of three sub-types (Hedenquist, 2000; Taylor, 2007):

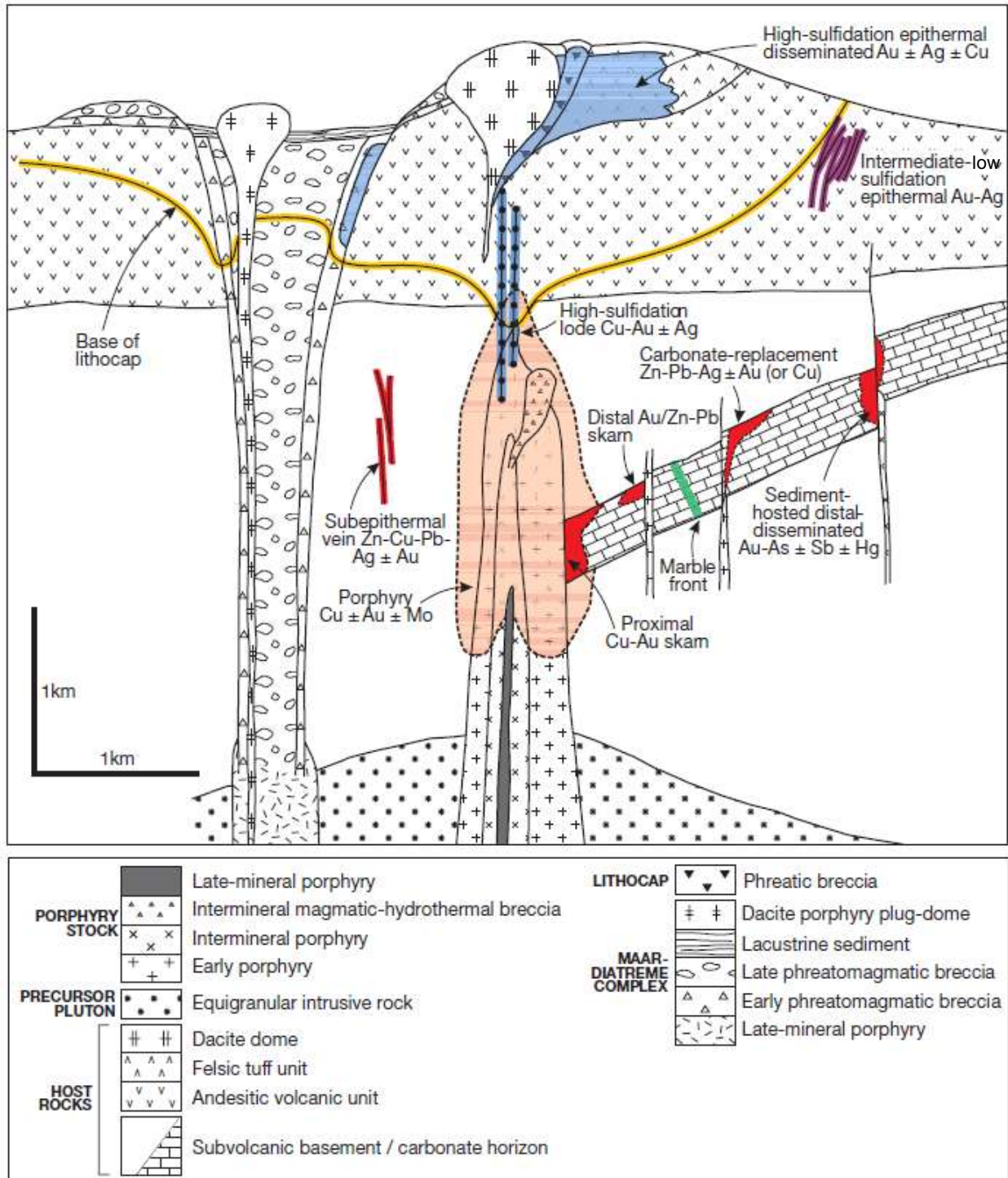
- **Low-Sulphidation:** previously called adularia-sericite, these low-sulphidation subtype deposits are considered to be formed by near-neutral pH fluids, as a result of being dominated by meteoric waters, however, containing some magmatic C and S.
- **High-Sulphidation:** previously called quartz-(kaolinite)-alunite, alunite-kaolinite, enargite-Au, or high-sulphur deposits, these highly acidic deposits generally occur proximal to magmatic sources of heat and volatiles and form from acidic hydrothermal fluids containing magmatic S, C and Cl.
- **Intermediate-Sulphidation:** some deposits with mostly low-sulphidation characteristics have sulphide mineralized assemblages that represent a sulphidation state between that of high-sulphidation and low-sulphidation deposits.

In high-sulphidation systems, native Au and electrum are typically associated with pyrite, enargite, covellite, bornite and chalcocite. In addition to sulphosalts and base metal sulphides, tellurides and bismuthinite are present in some deposits. Total sulphide contents are generally higher in high-sulphidation than low-sulphidation subtype deposits, however, high sulphide contents may also characterize transitional polymetallic low-sulphidation deposits. Where base metals are present in high-sulphidation deposits, the Cu abundance can vary significantly and typically dominate that of Zn. Principal gangue minerals are quartz ("vuggy silica"), alunite and barite (particularly associated with Au). High sulphidation deposits form proximal to shallowly emplaced magmatic intrusions.

In low-sulphidation systems, native Au and electrum occur in vein deposits that contain only up to a few percent sulphides. The principal gangue minerals are calcite, chlorite, adularia, barite, rhodochrosite, fluorite and sericite. Calcite is characteristic of low-sulphidation deposits, because of the low acidity of the hydrothermal mineralizing fluids. Low-sulphidation deposits form in fault zones, sedimentary rocks and vein complexes relatively more distal from magmatic intrusions (Taylor, 2007).



**FIGURE 8.1 HYDROTHERMAL FLUID SYSTEM MODEL SHOWING EPITHERMAL AND PORPHYRY RELATED MINERAL DEPOSIT TYPES**



Source: Sillitoe (2010)

## **9.0 EXPLORATION**

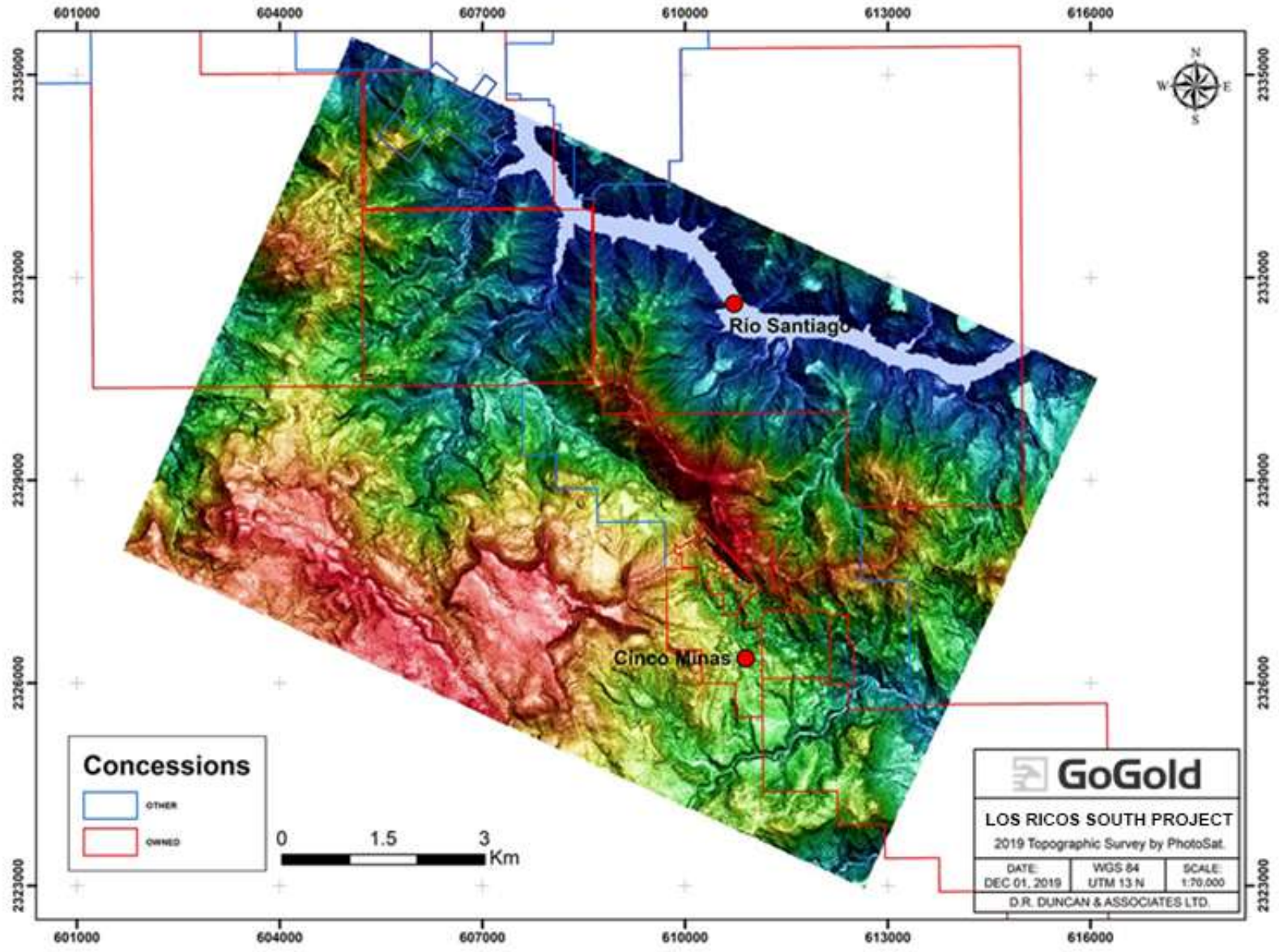
GoGold's 2019 exploration program consisted of mapping, sampling and diamond drilling along the Cinco Minas Vein system from the San Juan prospect located north of the historical Cinco Minas workings to south of the Cerro Colorado Deposit, an overall distance of 3.5 km. The objective of the program was to identify and test targets with potential to host near-surface precious metal mineralization. The program consisted of:

- Digital compilation studies of historical records and maps obtained from the Gerard Archives;
- Acquisition of new 1 m resolution topographic information across the Property;
- Geological mapping and prospecting;
- Trenching and sampling; and
- Diamond drilling at the Cinco Minas and Cerro Colorado Deposits.

### **9.1 DIGITAL TERRAIN MODEL**

GoGold commissioned PhotoSat of Vancouver, BC to produce a DTM for the Los Ricos South Property with 1 m contours (Figure 9.1). The coordinate system is WGS84 UTM Zone 13 and elevations are heights above the EGM2008 geoid. All historical records and current exploration and drilling work were recorded using this DTM, resulting in consistent, highly accurate base maps and datasets for the Property.

**FIGURE 9.1 AREA COVERED WITH THE 2019 1 M DIGITAL TERRAIN MODEL BY PHOTOSAT**



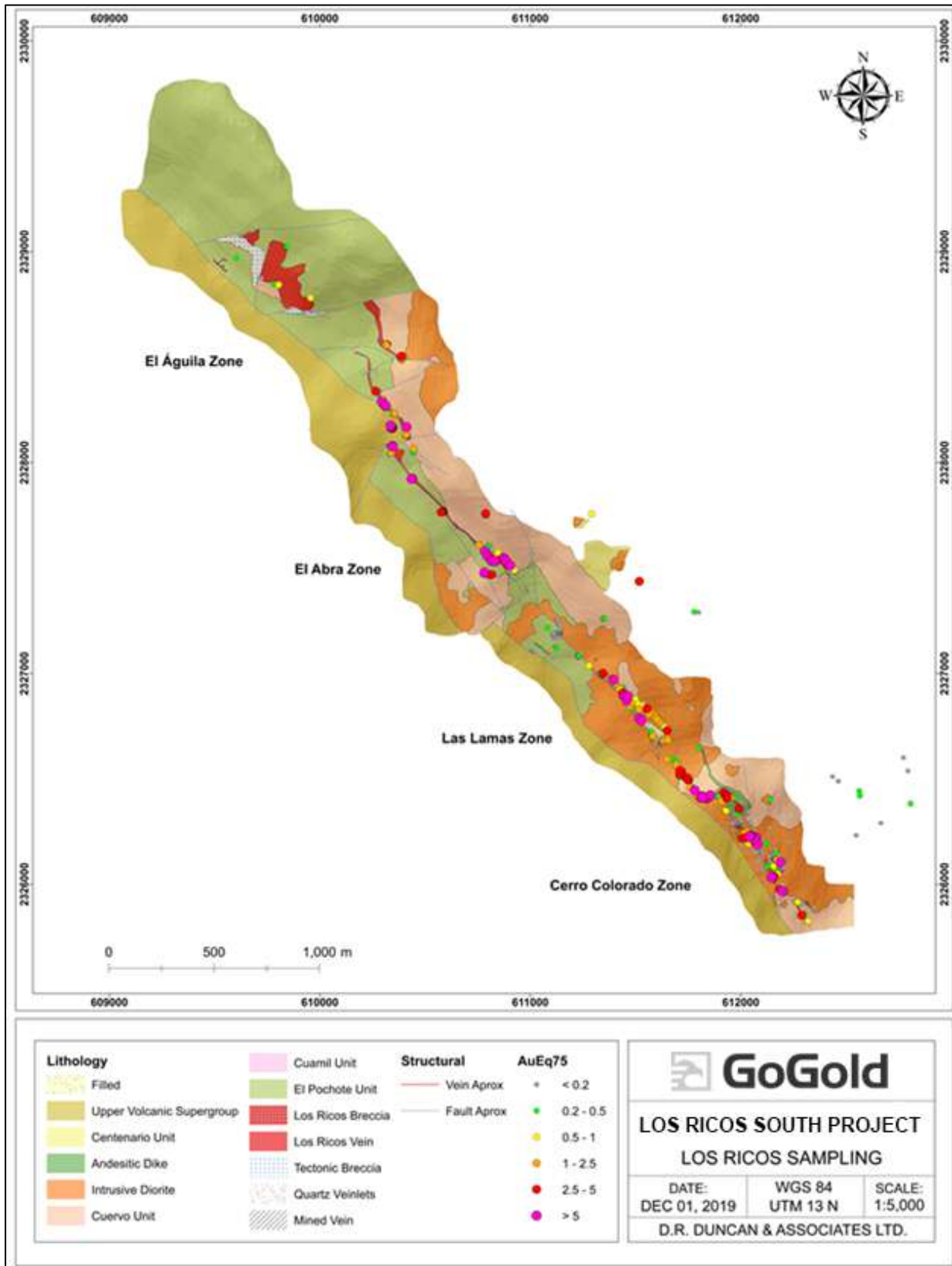
Source: GoGold Resources (2020)

## **9.2 GEOLOGICAL MAPPING AND PROSPECTING**

Geological mapping surveys were initiated in the spring of 2019 with the goal of locating and following the Cinco Minas Vein and alteration zone along strike to the north of the historical mine workings and to the south end of the Property. The work was completed at 1:1,000 scale. Outcrop exposures are abundant on the Property and many historical pits, shafts, adits and waste dumps were located. All the information was transferred to an ArcGIS database.

Figure 9.2 shows the local area geology, four zones of the Los Ricos South Vein systems, and the gold equivalent (“AuEq”) assay sample results from the sampling program and geological mapping survey. Figures 9.3 to 9.5 show the zones in greater detail.

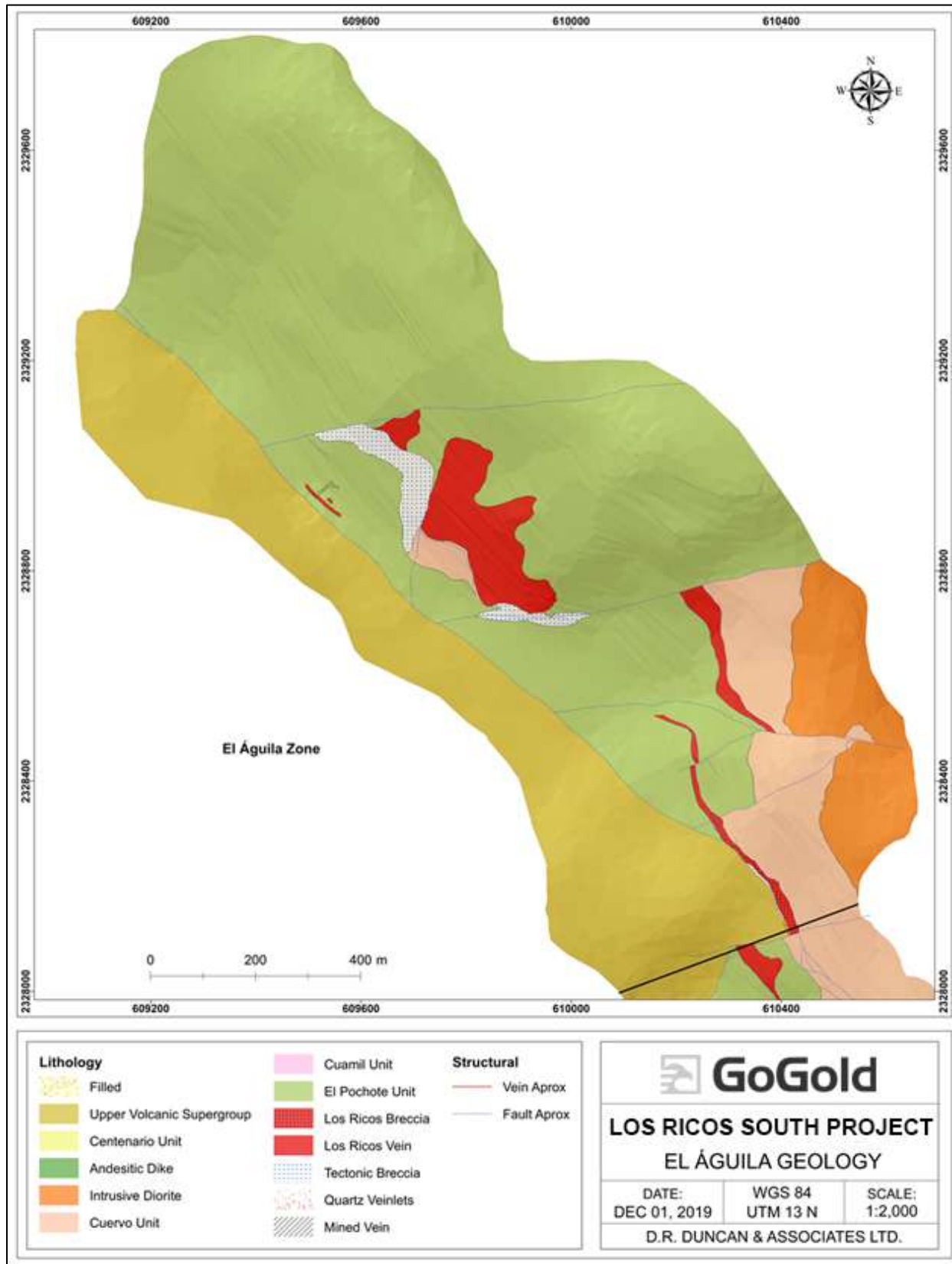
**FIGURE 9.2 LOCAL GEOLOGY MAP**



Source: GoGold Resources (2020)

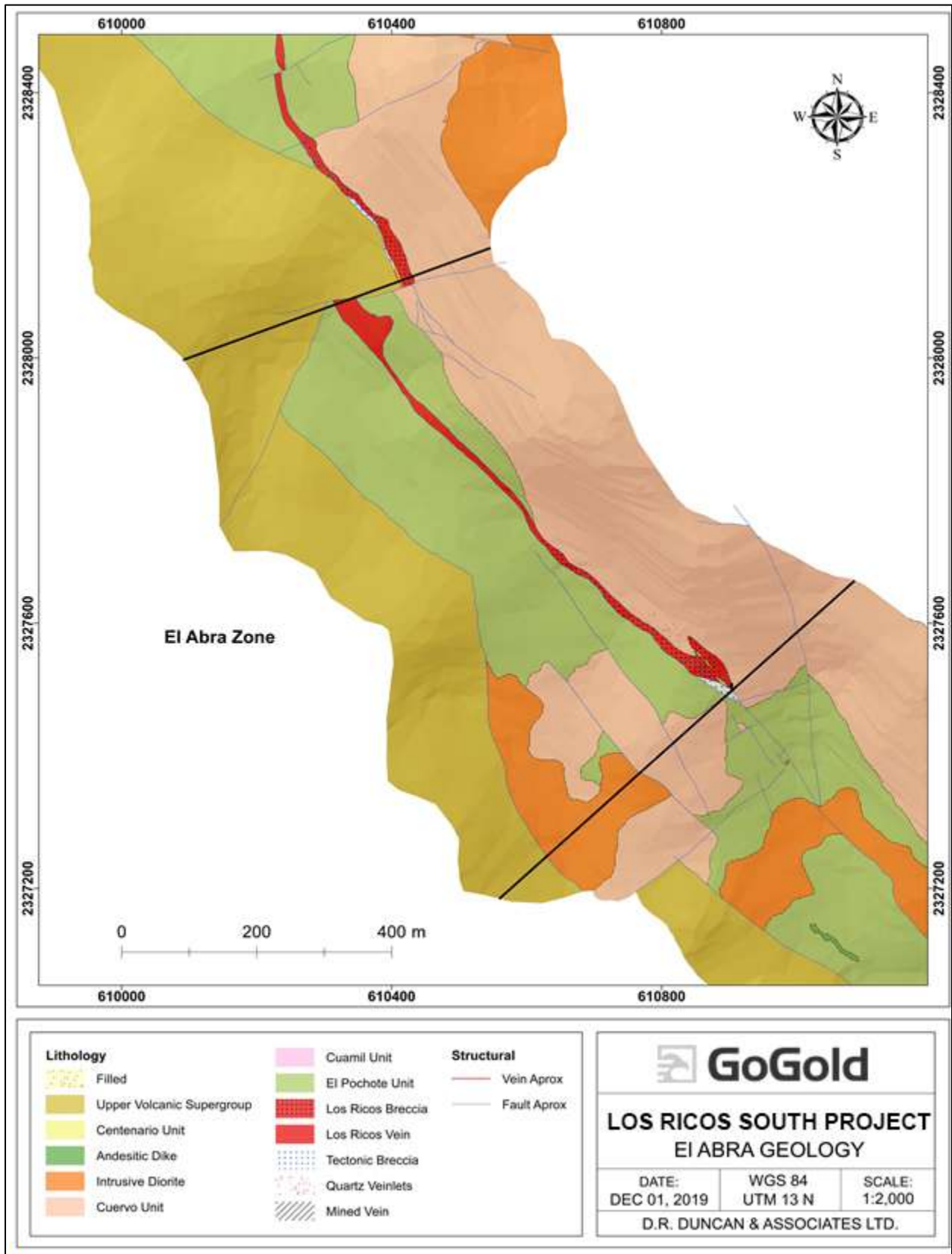


**FIGURE 9.3 NORTHERN GEOLOGY MAP EL AGUILA AREA**



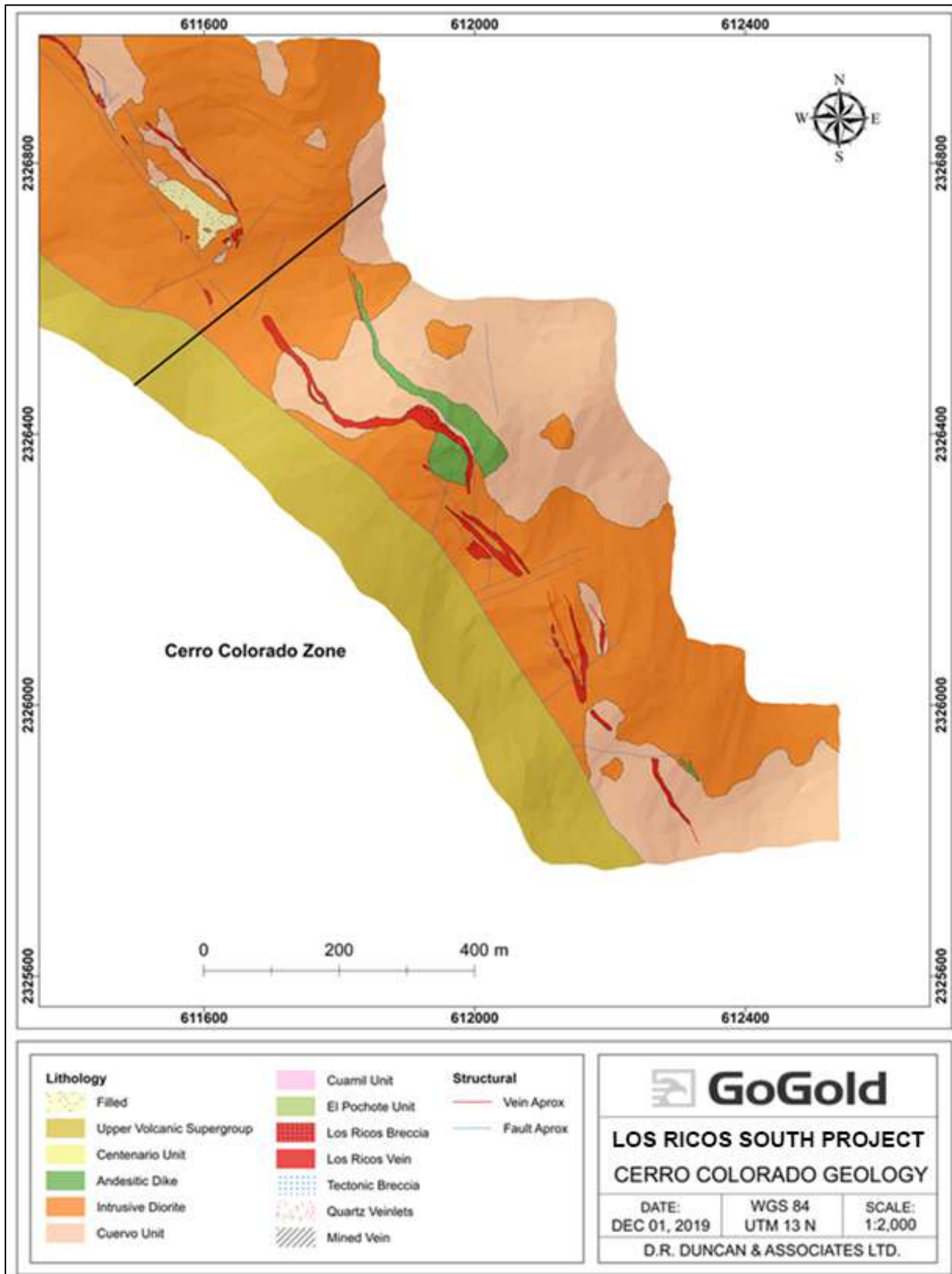
Source: GoGold Resources (2020)

**FIGURE 9.4 CENTRAL GEOLOGY MAP EL ABRA GEOLOGY**



Source: GoGold Resources (2020)

**FIGURE 9.5 SOUTHERN GEOLOGY MAP CERRO COLORADO AREA**

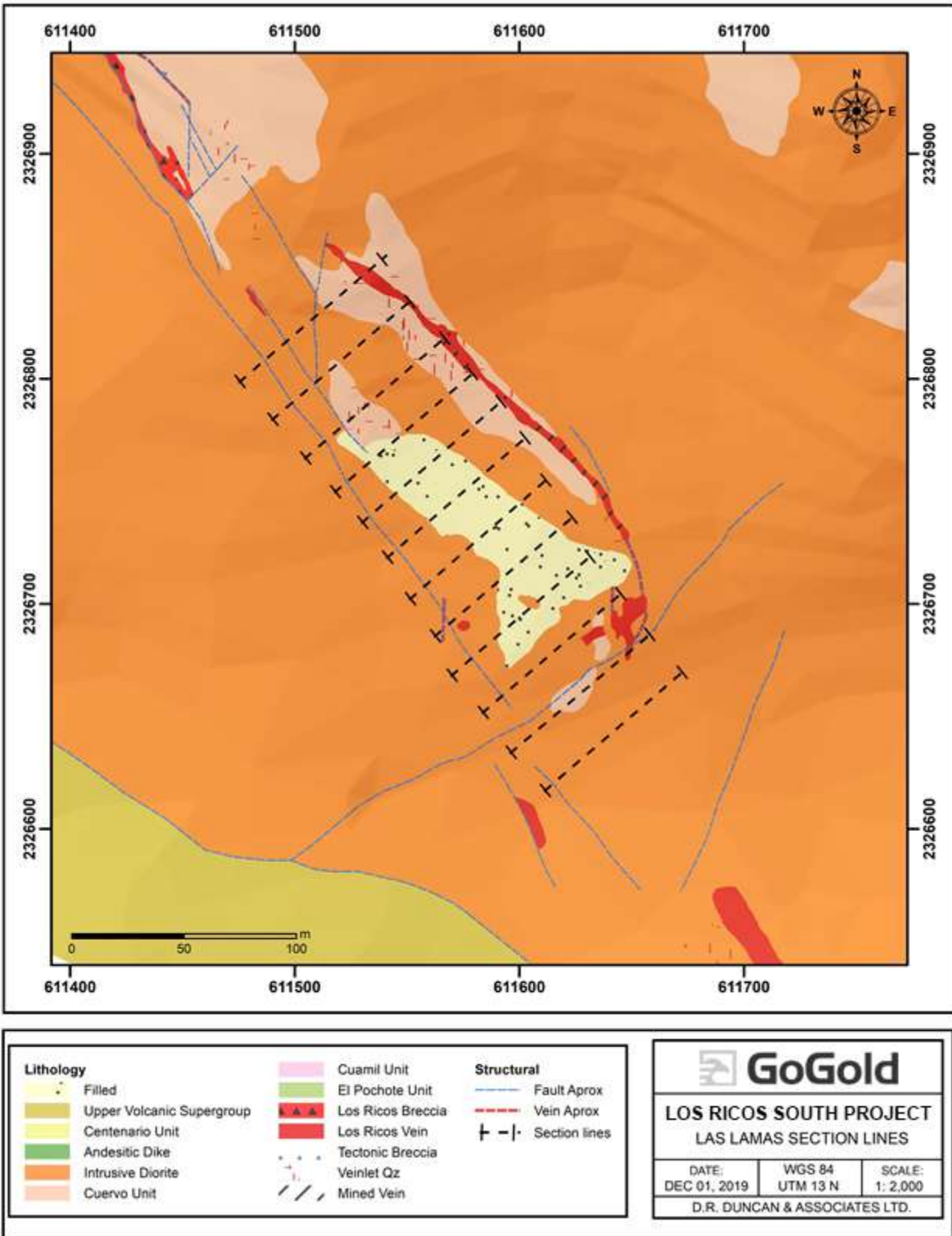


Source: GoGold Resources (2020)

### 9.3 TRENCHING AND CHANNEL SAMPLING

In order to evaluate the Los Ricos South Vein in the areas between the historical workings, a trenching program was carried out. Trenches were cut across the vein and alteration zone exposures at intervals of 20 m along the strike of the vein. A tractor mounted backhoe was used where access allowed, otherwise the trenches were dug by hand. All sample location information was recorded using the GPS and all the sample information was transferred to the ArcGIS database. See Figure 9.6 for a general trench location map in the Los Lamas area and Figures 9.7 and 9.8 for Trenches 10 and 11 at Los Lamas. Figures 9.9 to 9.12 are maps showing detailed geology with trench and channel sample locations and AuEq assay values for the trench channel samples.

**FIGURE 9.6 TRENCH LOCATION MAP OF THE LOS LAMAS AREA**



Source: GoGold Resources (2020)



**FIGURE 9.7 TRENCH NUMBER 10,  
LOS LAMAS**

Los Lamas Trench number 10 was advanced by pick and shovel.



*Source: GoGold Resources (2019)*

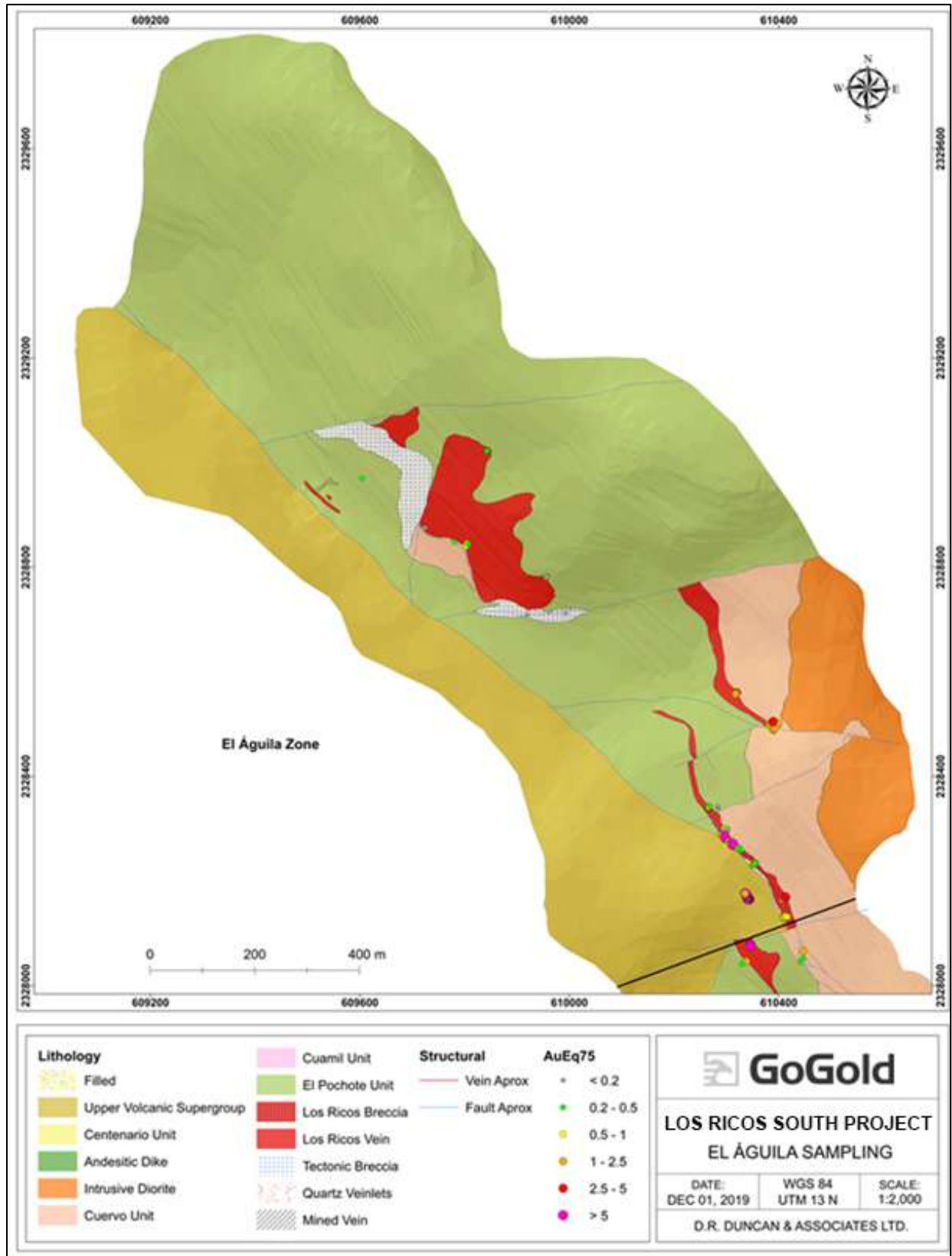
**FIGURE 9.8 TRENCH NUMBER 11,  
LOS LAMAS**

Los Lamas Trench number 11 was advanced by pick and shovel.



*Source: GoGold Resources (2019)*

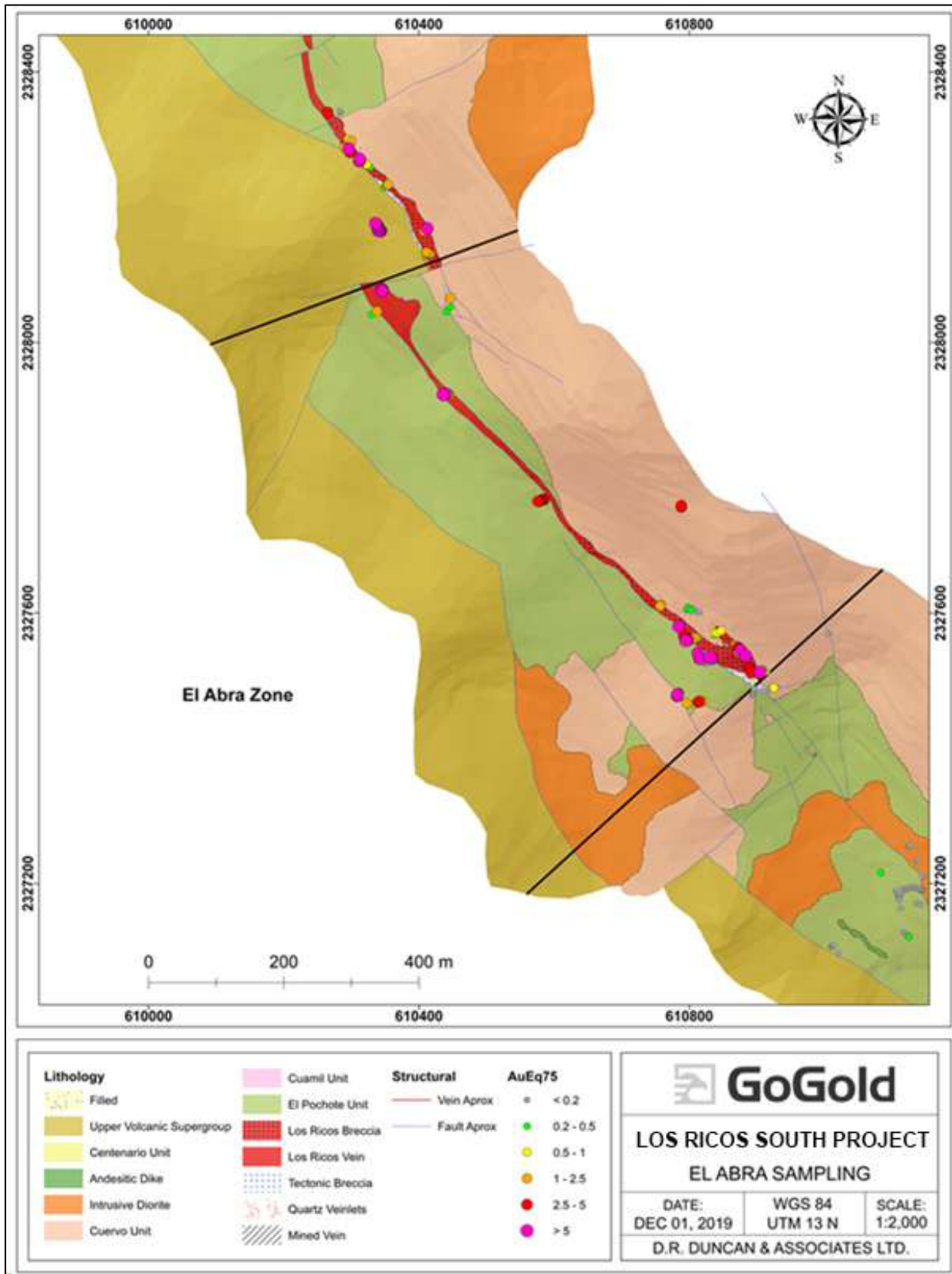
**FIGURE 9.9 NORTHERN TRENCH MAP EL AGUILA AREA**



Source: GoGold Resources (2020)



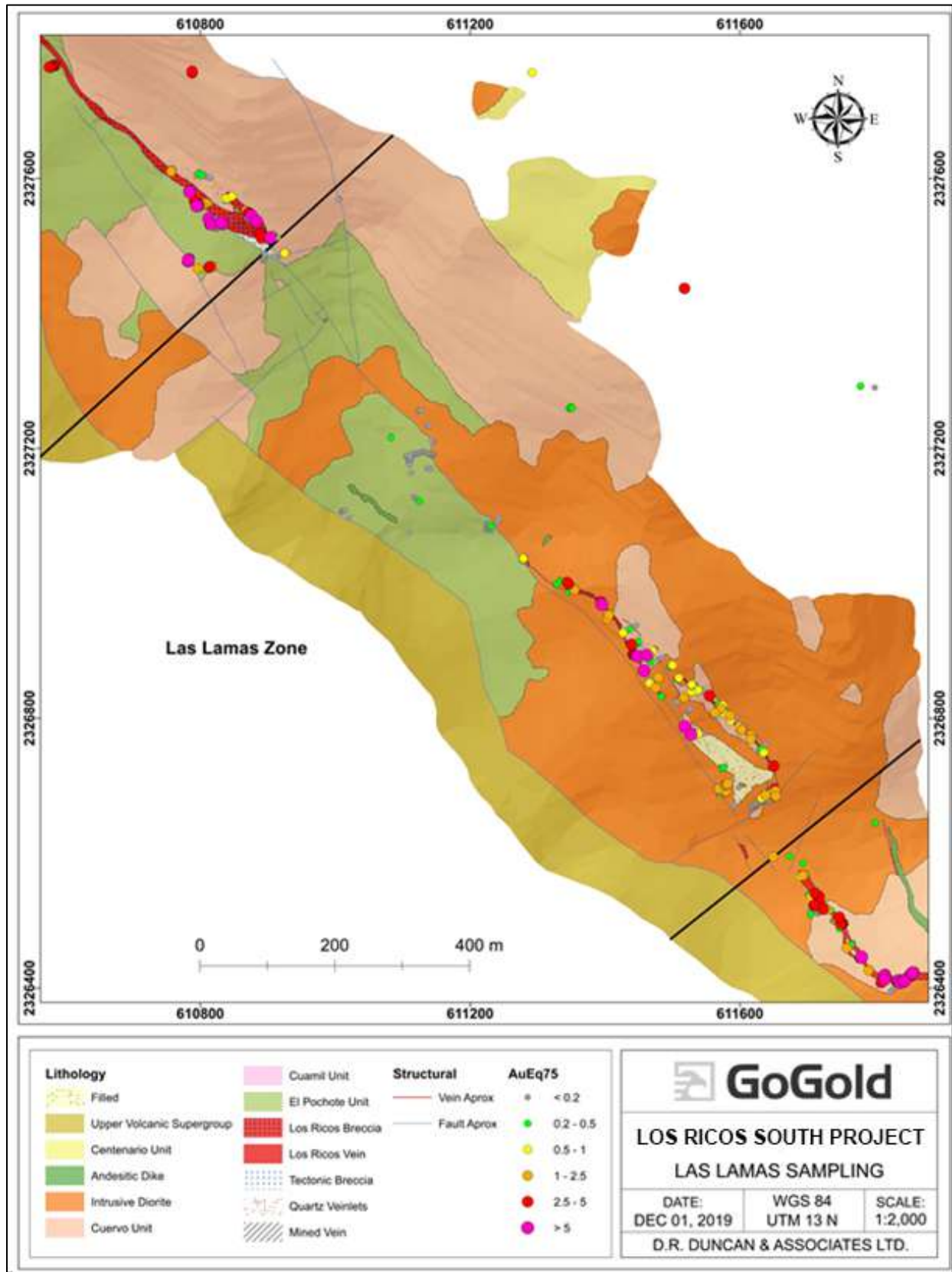
**FIGURE 9.10 CENTRAL TRENCH MAP EL ABRA**



Source: GoGold Resources (2020)

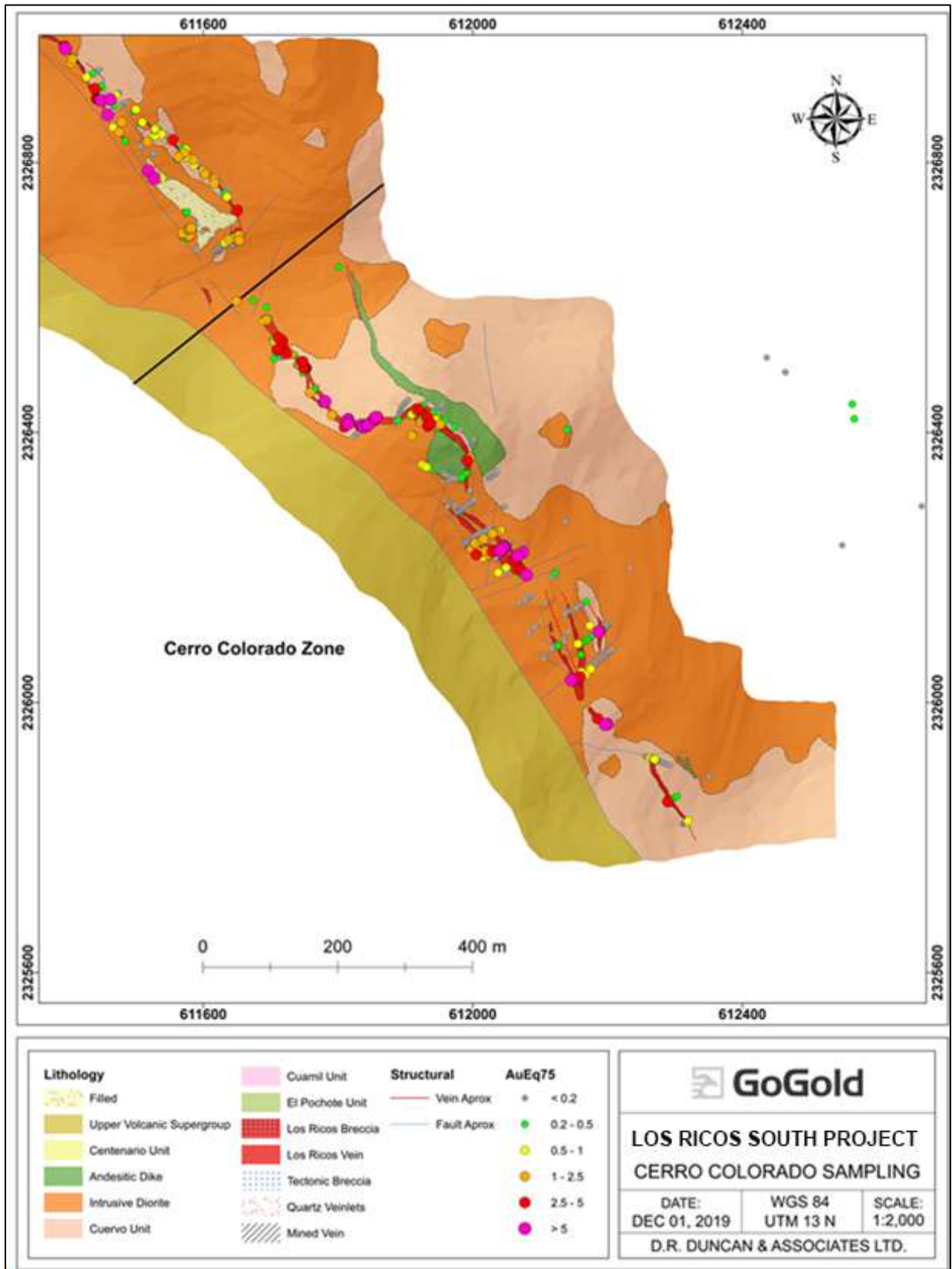


**FIGURE 9.11 SOUTHERN TRENCH MAP LAS LAMAS**



Source: GoGold Resources (2020)

**FIGURE 9.12 SOUTHERN TRENCH MAP CERRO COLORADO**

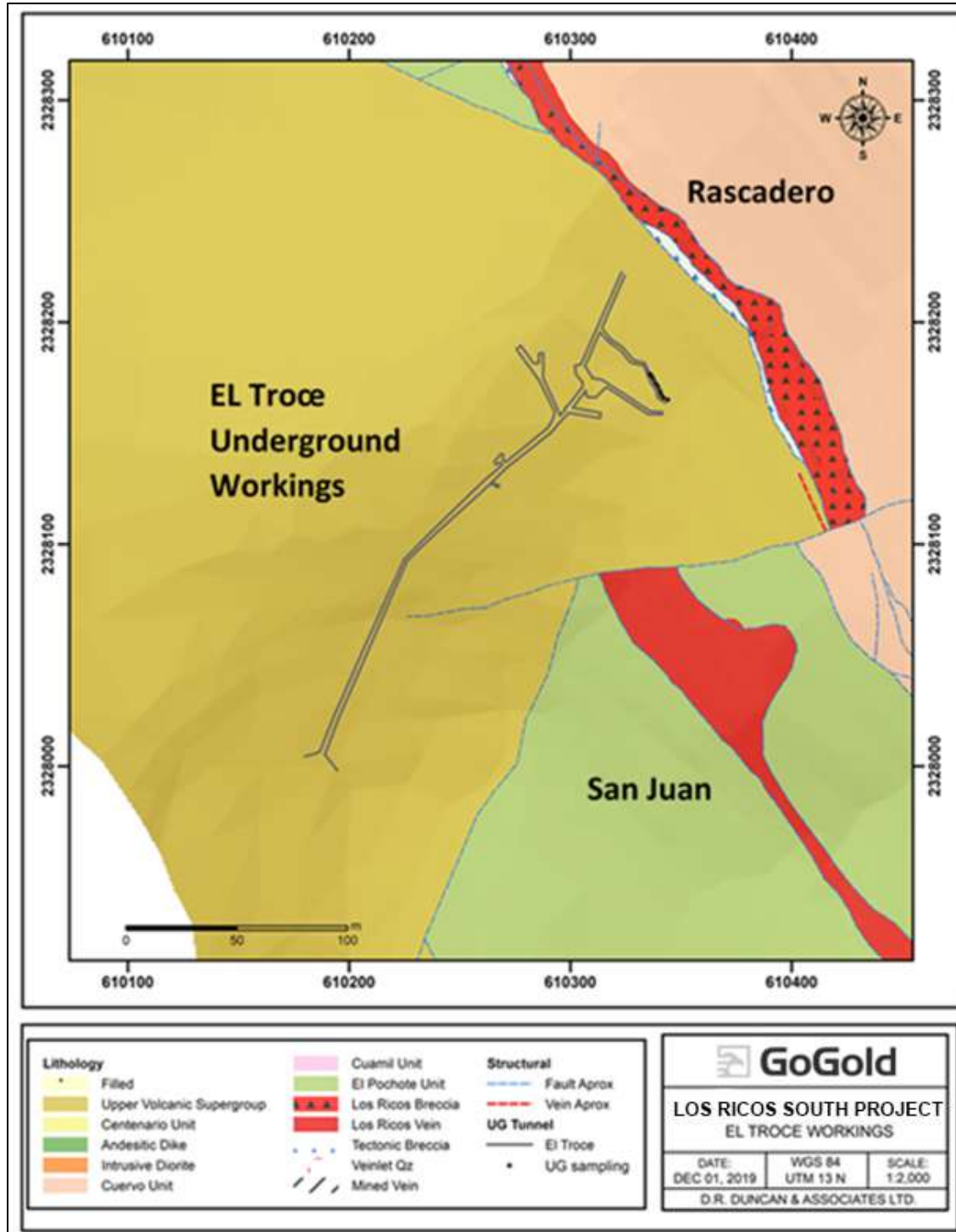


Source: GoGold Resources (2020)

## 9.4 UNDERGROUND MAPPING AND SAMPLING

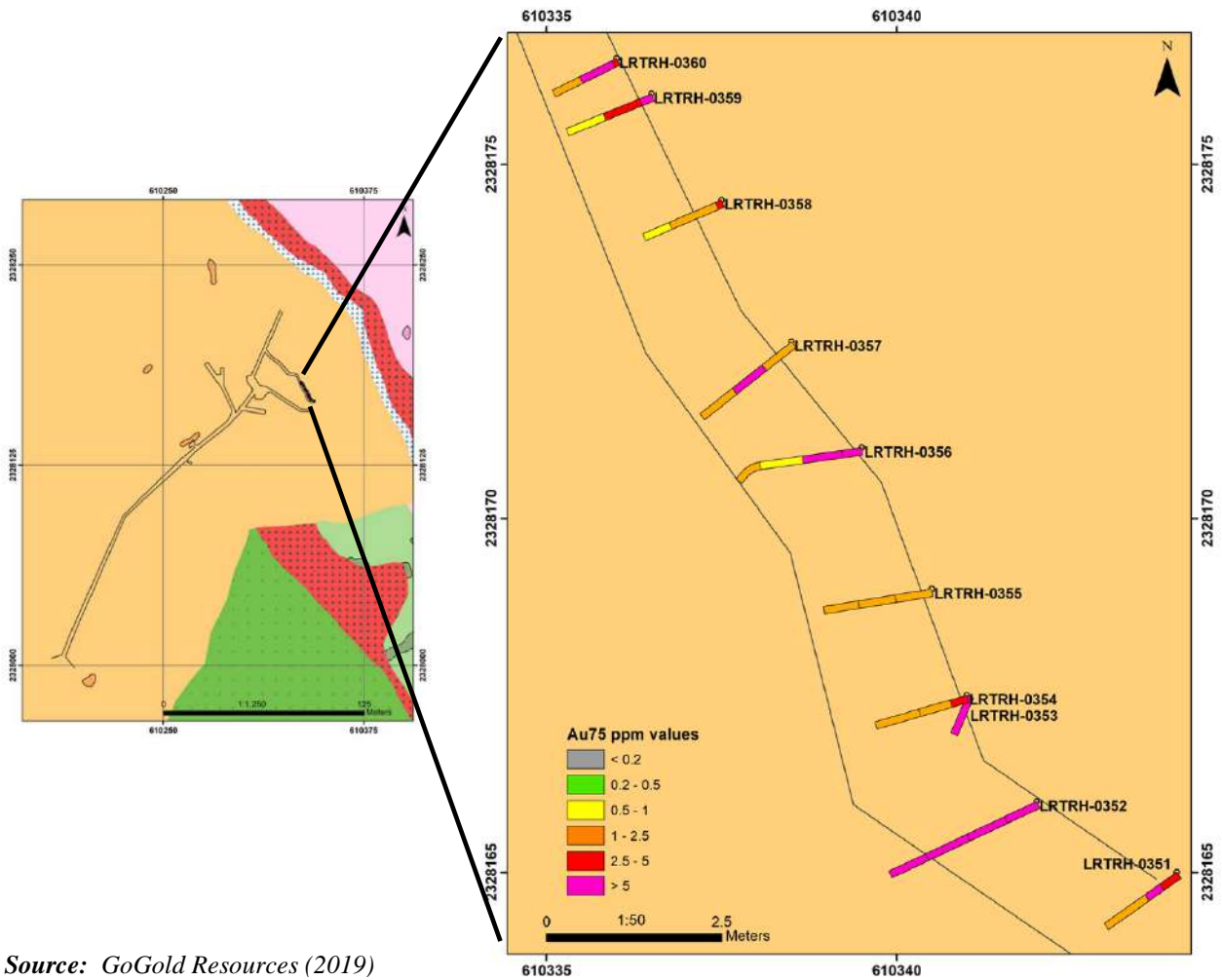
The northern extension of the San Juan Vein is known as the Rascadero Vein and is exposed in the El Troce workings. The El Troce workings were surveyed, mapped and sampled as shown in Figures 9.13 and 9.14 and the results summarized in Table 9.1.

**FIGURE 9.13 LOCATION OF EL TROCE WORKINGS**



Source: GoGold Resources (2020)

**FIGURE 9.14 SAMPLING EL TROCE WORKINGS**



Source: GoGold Resources (2019)

**TABLE 9.1  
ASSAY RESULTS EL TROCE SAMPLES**

Location	Channel ID	From (m)	To (m)	Length (m)	Gold (g/t)	Silver (g/t)	AuEq75 (g/t)
El Troce UG	LRTRH-0351	0.0	2.0	2.0	0.98	206.7	3.73
El Troce UG	LRTRH-0352	0.0	3.0	3.0	2.34	430.9	8.09
El Troce UG	LRTRH-0353	0.0	0.6	0.6	2.43	492.2	8.99
El Troce UG	LRTRH-0354	0.0	2.2	2.2	0.58	154.6	2.64
El Troce UG	LRTRH-0355	0.0	2.1	2.1	0.57	85.8	1.71
El Troce UG	LRTRH-0356	0.0	2.5	2.5	2.12	128.4	3.83
El Troce UG	LRTRH-0357	0.0	2.1	2.1	2.18	108.5	3.62
El Troce UG	LRTRH-0358	0.0	2.4	2.4	1.00	44.3	1.59
El Troce UG	LRTRH-0359	0.0	2.3	2.3	6.80	149.9	8.80
El Troce UG	LRTRH-0360	0.0	2.1	2.1	1.55	179.9	3.94

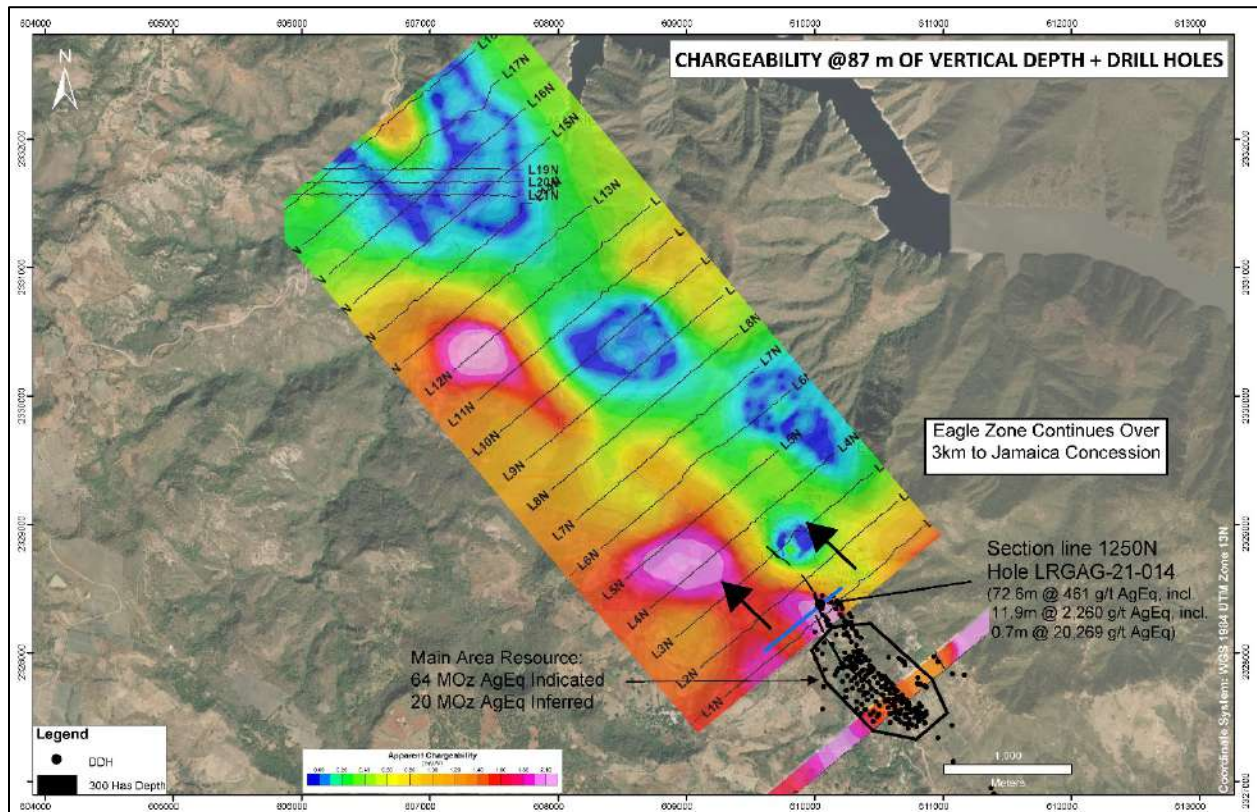
Note: AuEq75 = gold equivalent at 75/1 Ag/Au ratio @ 100% processing recovery.



## 9.5 EAGLE CONCESSION EXPLORATION

Following acquisition of the Eagle Concession in October, 2022, GoGold completed preliminary geological mapping, sampling, geophysical IP surveying and commenced a drill program. Mapping and geophysics indicate that the mineralized Eagle structure extends >2.5 km to the northwest. Significant geophysical anomalies were identified that formed targets for subsequent drill testing (Figure 9.15). The 2022 drill program results are described in Section 10 of this Technical Report.

**FIGURE 9.15 EAGLE AND MAIN AREA IP GEOPHYSICAL RESPONSE**



Source: GoGold press release dated October 18, 2022.

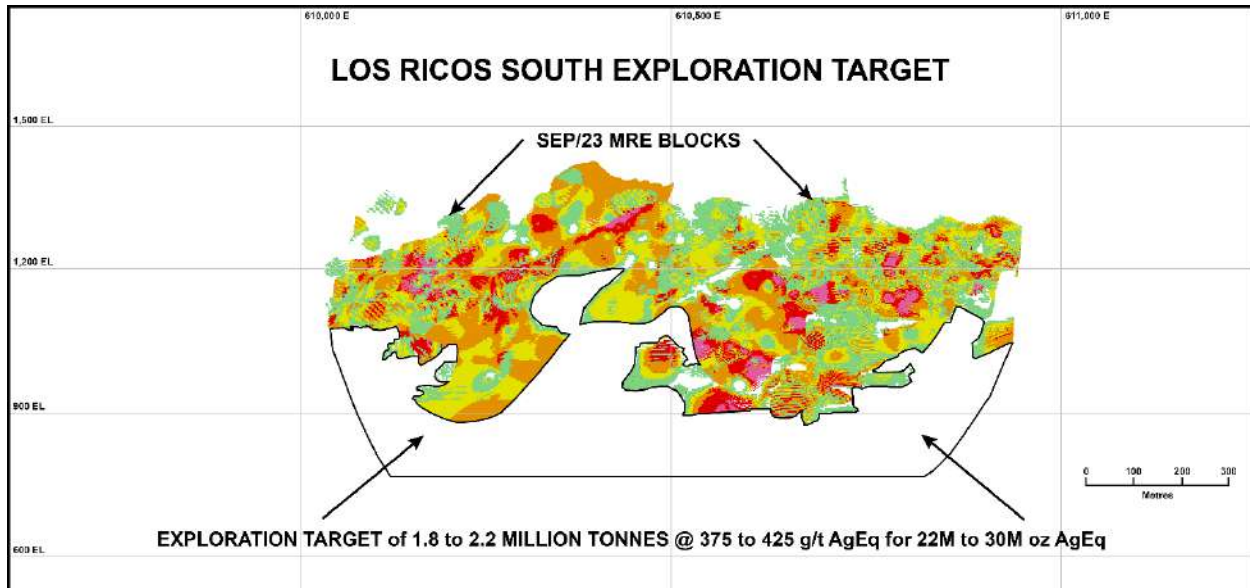
## 9.6 EXPLORATION POTENTIAL

In addition to the exploration work completed, the Authors established that the Los Ricos South Abra and Eagle mineral deposits contain an additional Exploration Target, as follows: 1.8 to 2.2 Mt at 375 to 425 g/t AgEq for 22 to 30 Moz AgEq. The Exploration Target is based on the estimated strike length, depth and thickness of the known mineralization. This Exploration Target is shown in Figure 9.16.

*The potential quantities and grades of the Exploration Target are conceptual in nature. There has been insufficient work done by a Qualified Person to define this estimate as a Mineral Resource. The Company is not treating this estimate as Mineral Resources, and readers should not place undue reliance on this estimate. Even with additional work, there is no*

*certainty that this estimate will be classified as Mineral Resources. In addition, there is no certainty that this estimate will ever prove to be economically recoverable.*

**FIGURE 9.16      LONGITUDINAL PROJECTION OF EXPLORATION TARGET**



*Source: P&E (October, 2023)*

## 10.0 DRILLING

As of the effective date of this Technical Report, GoGold completed 177 additional drill holes totalling 34,071.4 m at Los Ricos South since the 2021 PEA. For details on drilling campaigns prior to 2022, refer to P&E (2021). Due to the extensive amount of drilling done since 2020, the collar locations have been listed in Appendix H and significant intersection tables have been listed in Appendix I.

Highlights of the drill hole program at Los Ricos South are summarized below, based in part on information available on GoGold's website and press releases. A summary of the drill programs at the Los Ricos South Property is presented in Table 10.1.

<b>Year</b>	<b>Company</b>	<b>Number of Holes Drilled</b>	<b>Meters Drilled (m)</b>
2003	Tumi Resources	42	3,243
2004	Tumi Resources	22	1,571
2019	GoGold	112	16,918
2020	GoGold	123	19,654
2021	GoGold	12	2,473
2022	GoGold	231	42,776
2023	GoGold	37	5,915

### 10.1 EAGLE CONCESSION DRILLING

GoGold announced the acquisition of the Eagle Concession in October 2022, which covers the northern strike extension of the Main (Abra) Deposit on the Los Ricos South Property and represents an extension to the 2021 Mineral Resource Estimate at Los Ricos South.

During negotiations for the concession acquisition and securing legal ownership, GoGold completed due diligence drilling, including drill hole LRGAG-21-014, which intercepted 20,269 g/t silver equivalent (“AgEq”) over 0.7 m, contained within 11.9 m of 2,260 g/t AgEq which was contained within a wider intersection of 72.6 m of 461 g/t AgEq. This represents the highest values drilled in the district, with drill hole LRGAG-21-031 having comparable results of 428 g/t AgEq over 68 m. The mineralized intercepts were consistent with geophysical targets on the new concession.

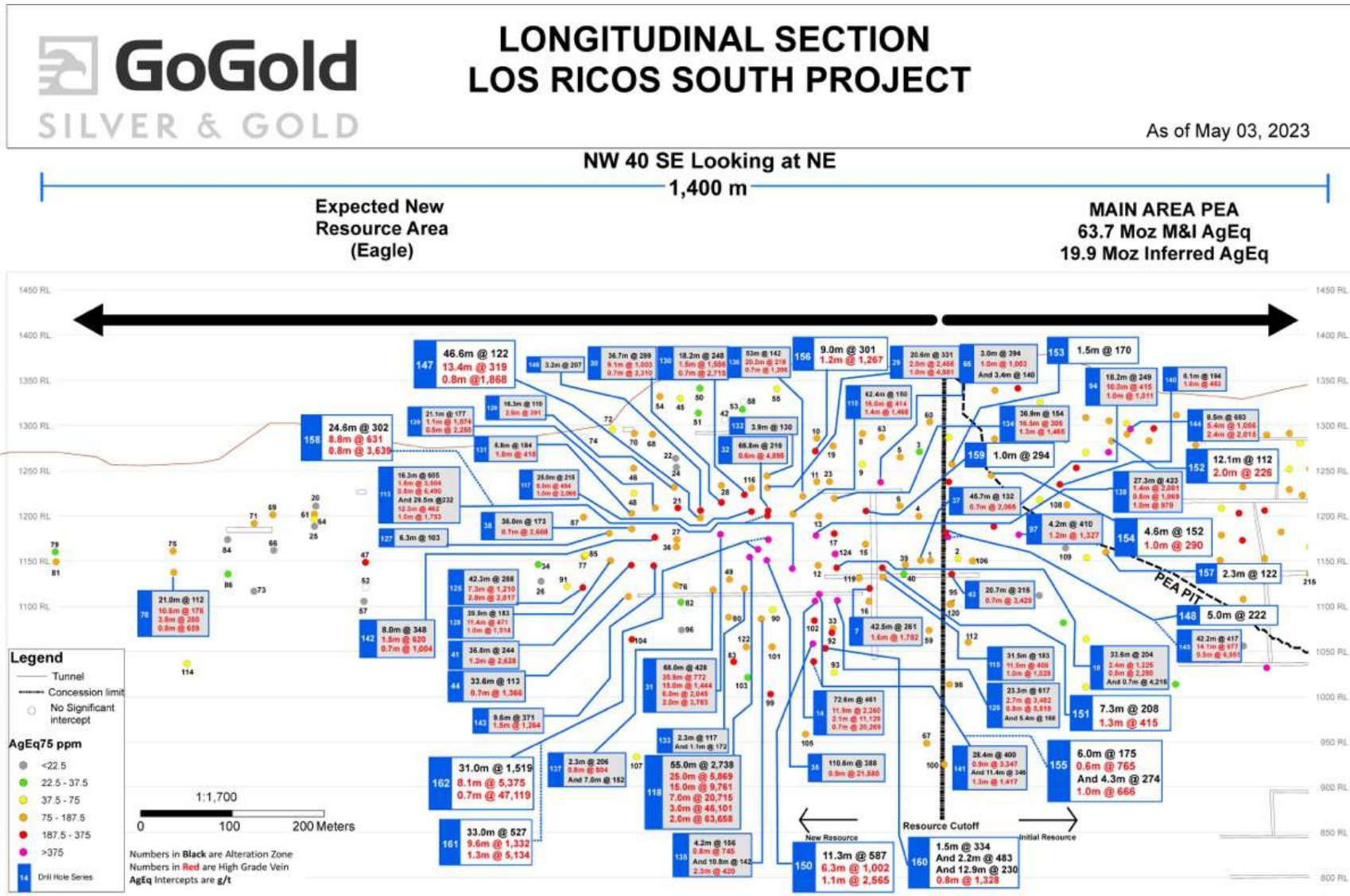
To date, GoGold drilled 206 holes totalling 38,915.45 m in the Eagle Concession area since the 2021 PEA. Figure 10.1 shows a longitudinal projection of the Eagle Concession and Main Area. Cross-section projections are presented in Figure 10.2 through Figure 10.5. Select assay intersections in the drilling are listed below:

- **LRGAG-21-014:** 2,260 g/t AgEq over 11.9 m within 72.6 m of 461 g/t AgEq.
- **LRGAG-21-032:** 4,895 g/t AgEq over 0.6 m within 65.8 m of 210 g/t AgEq.
- **LRGAG-21-035:** 21,580 g/t AgEq over 0.9 m within 110.6 m of 388 g/t AgEq.

- **LRGAG-22-043:** 3,420 g/t AgEq over 0.7 m within 20.7 m of 315 g/t AgEq.
- **LRGAG-22-063:** 1,565 g/t AgEq over 0.8 m within 15.7 m of 137 g/t AgEq.
- **LRGAG-22-118:** 55.0 m of 2,738 g/t AgEq, including 7.0 m of 20,715 g/t AgEq. Also includes 63,658 g/t AgEq over 2.0 m.
- **LRGAG-22-126:** 5,818 g/t AgEq over 0.8 m within 23.3 m of 617 g/t AgEq.
- **LRGAG-22-162:** 1,519 g/t AgEq over 31.0 m within 8.1 m of 5,375 g/t AgEq including 0.7 m of 47,119 g/t AgEq.
- **LRGAG-22-164:** 1,126 g/t AgEq over 50.0 m including 7.8 m of 6,334 g/t AgEq including 0.8 m of 46,822 g/t AgEq.
- **LRGAG-22-165:** 1,603 g/t AgEq over 3.2 m including 22.1 m of 273 g/t AgEq.

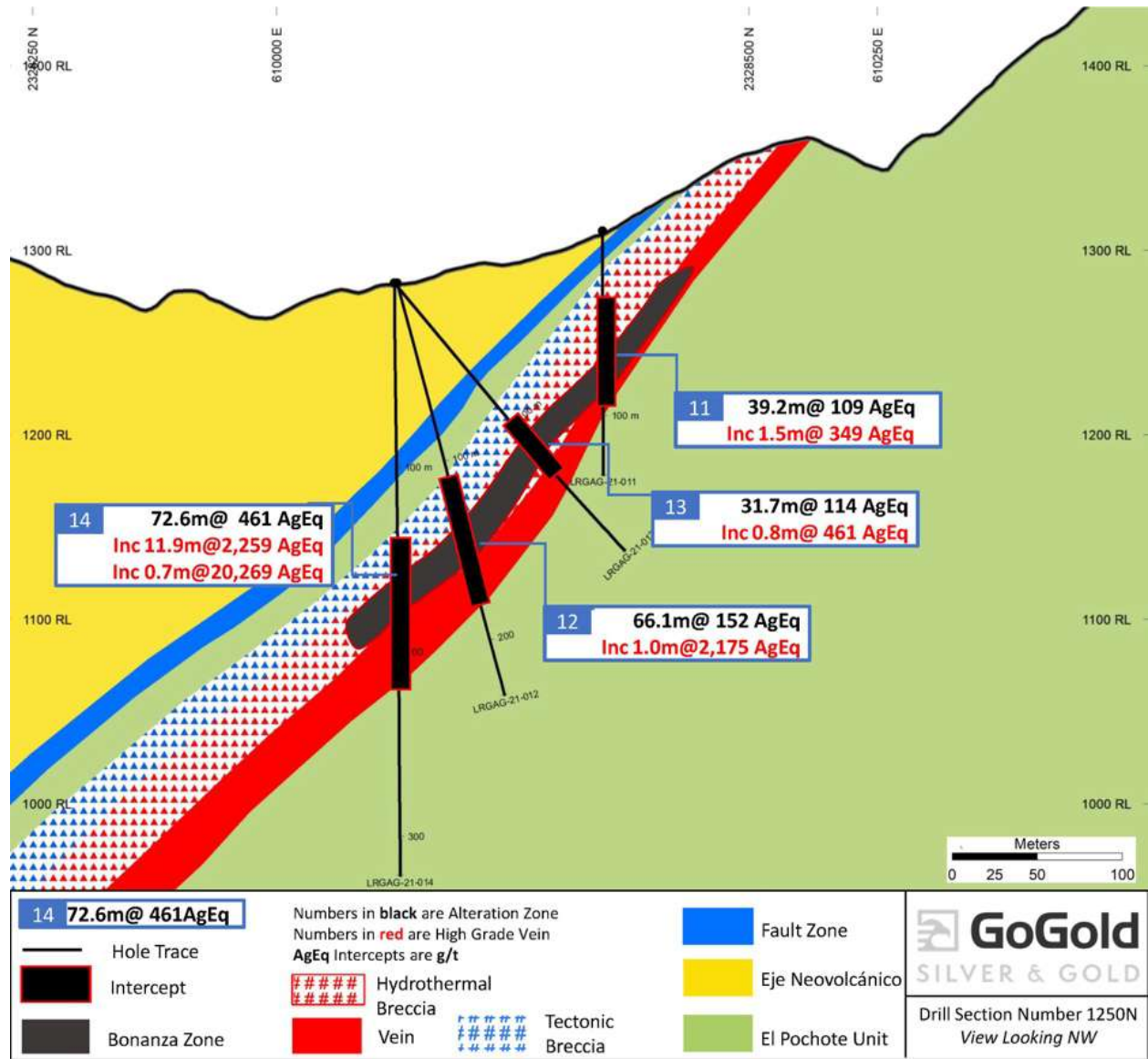


FIGURE 10.1 EAGLE LONGITUDINAL PROJECTION



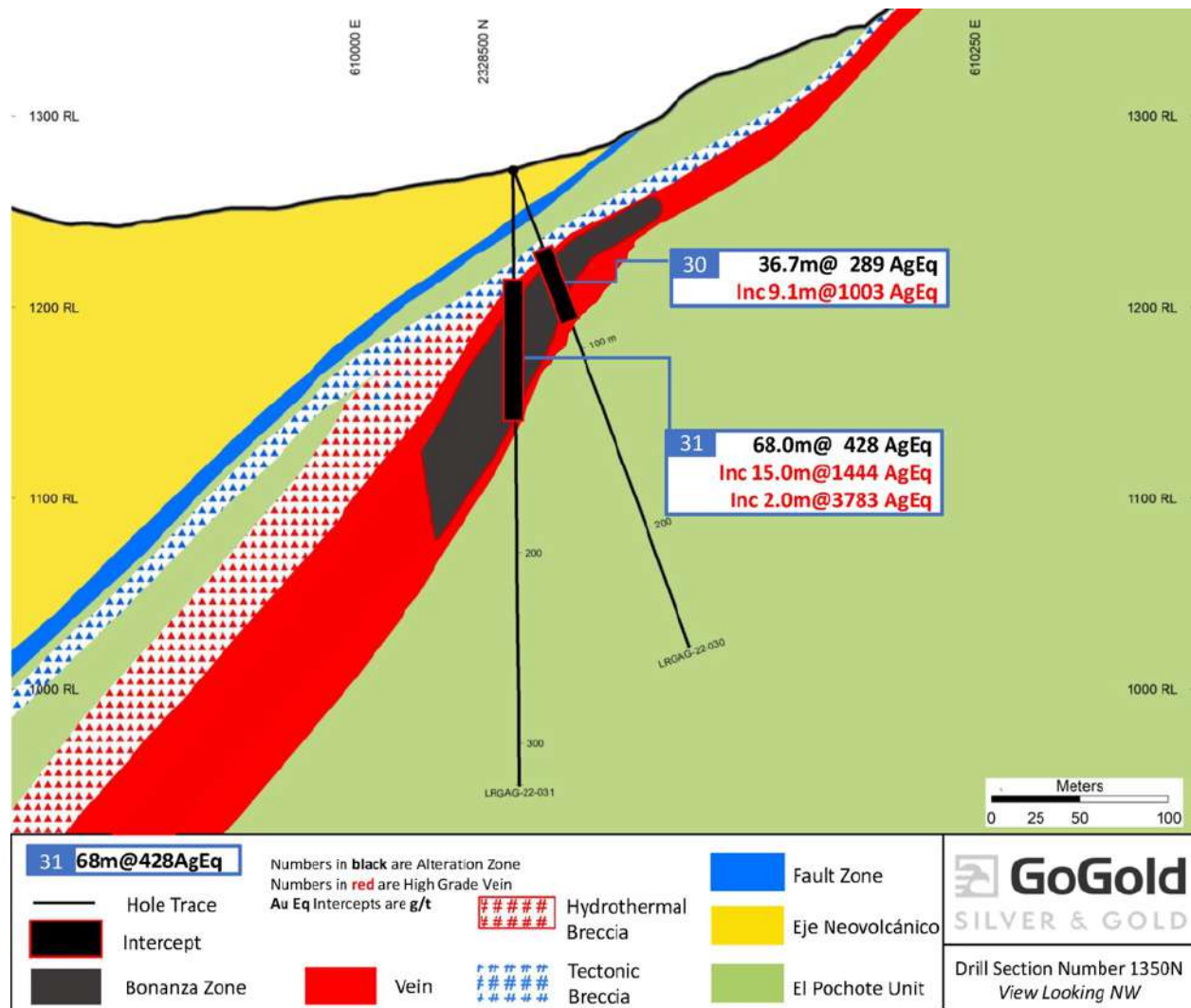
Source: GoGold (press release March 29, 2023)

**FIGURE 10.2 EAGLE CROSS-SECTION PROJECTION DRILL HOLES 11, 12, 13, 14**



Source: GoGold (press release October 18, 2022)

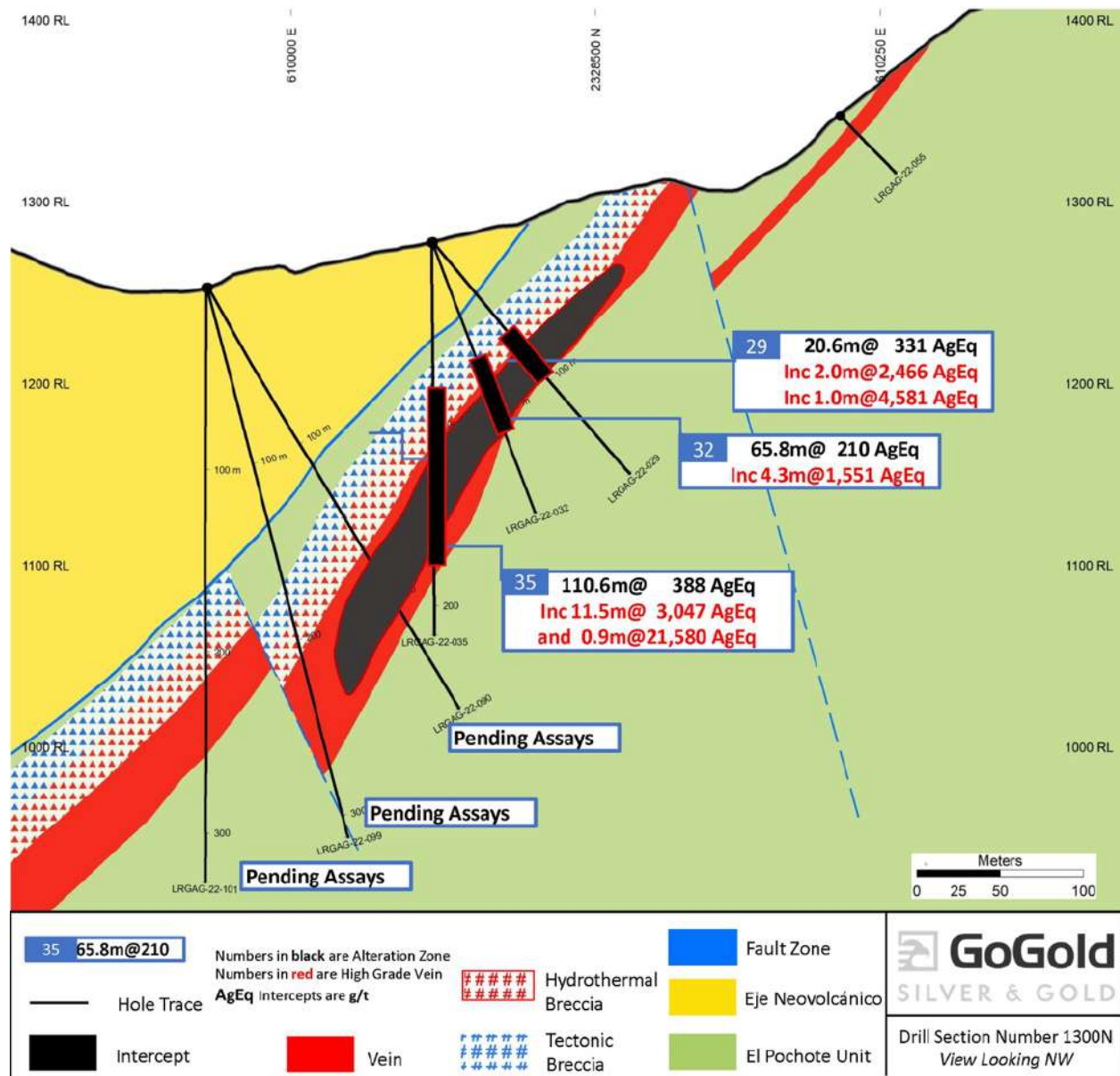
**FIGURE 10.3 EAGLE CROSS-SECTION PROJECTION DRILL HOLES 30, 31**



Source: GoGold (press release October 18, 2022)

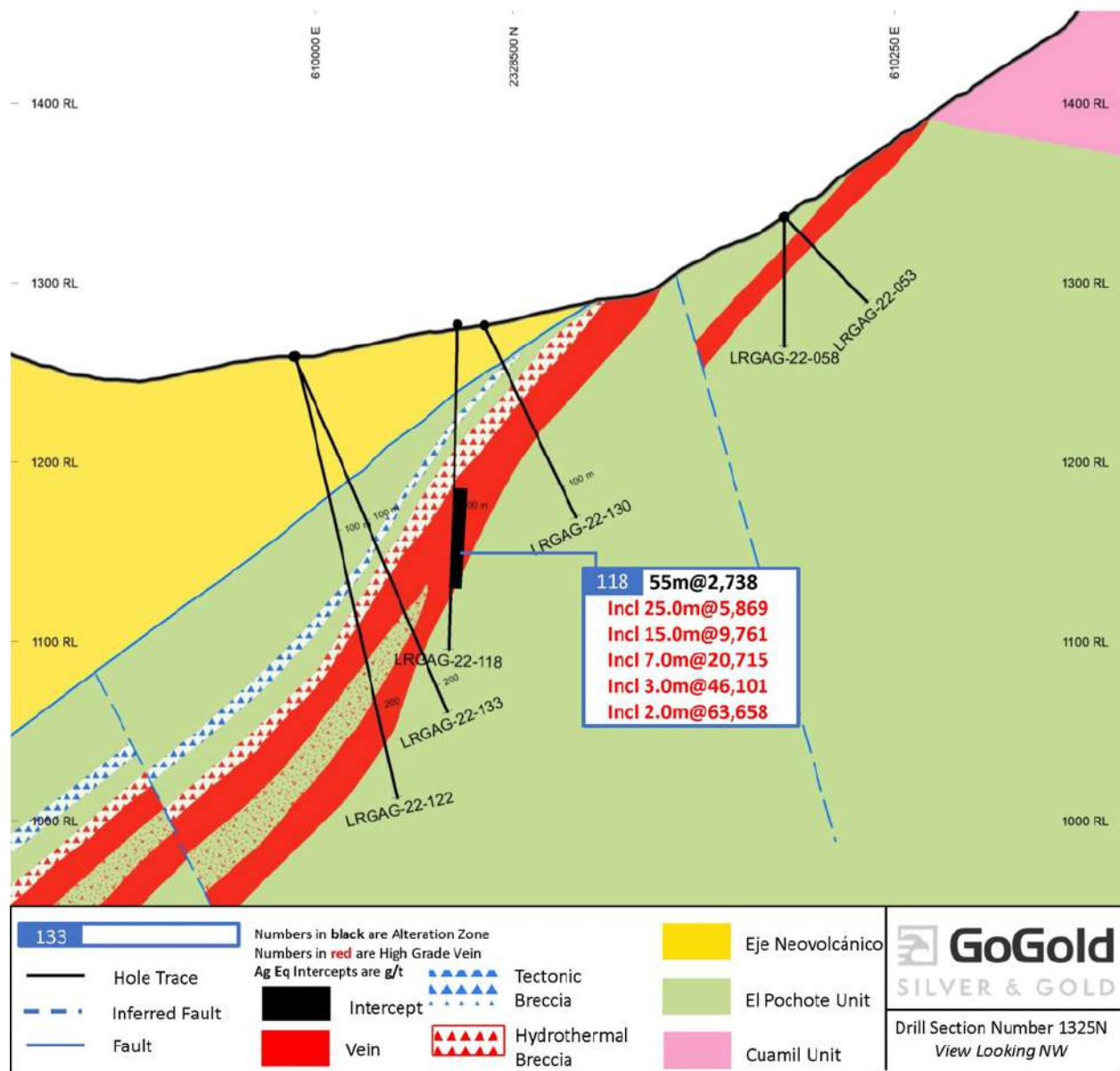


**FIGURE 10.4 EAGLE CROSS-SECTION PROJECTION HOLES 32, 35**



Source: GoGold (press release November 2, 2022)

**FIGURE 10.5 EAGLE CROSS-SECTION PROJECTION DRILL HOLE LRGAG-22-118**



Source: GoGold (press release January 23, 2023)

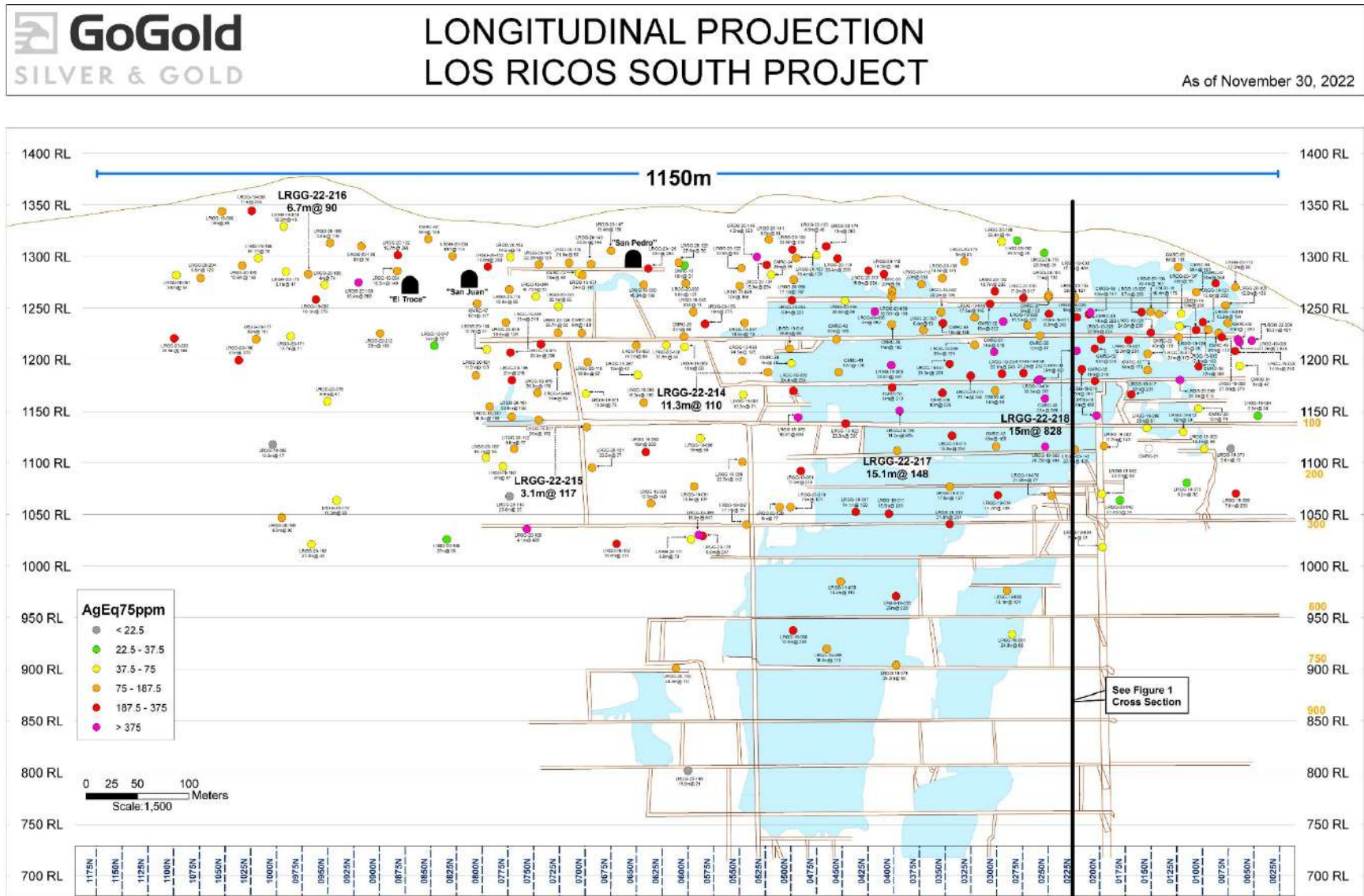
## 10.2 MAIN (ABRA) DEPOSIT DRILLING

Drilling on the Main (Abra) Deposit was designed to better define the high-grade portions that may be amenable to bulk underground mining. These drill holes are in addition to those completed in 2019 and 2020 which were the basis for the 2021 Los Ricos South PEA.

105 holes totalling 17,321.9 m have been drilled in the Main Deposit area by GoGold since the 2021 PEA. Figure 10.6 shows a longitudinal projection of Main area and Figure 10.7 shows the pierce points on the 2021 Mineral Resource Model. Cross-section projections are presented in Figure 10.8 and Figure 10.9. Selected intersections of silver and gold mineralization in the drilling are as follows:

- **LRGG-22-209:** 11,103 g/t AgEq over 1.0 m within 33.2 m of 513 g/t AgEq.
- **LRGG-22-218:** 2,558 g/t AgEq over 4.8 m within 15.0 m of 828 g/t AgEq.
- **LRGG-22-235:** 1,276 g/t AgEq over 3.5 m within 13.9 m of 417 g/t AgEq.
- **LRGAG-22-144:** 2,015 g/t AgEq over 0.5 m within 14.2 m of 977 g/t AgEq.
- **LRGAG-22-145:** 6,951 g/t AgEq over 2.4 m within 5.4 m of 1,056 g/t AgEq.
- **LRGG-22-246:** 2,646 g/t AgEq over 1.0 m within 14 m of 302 g/t.
- **LRGG-22-280:** 706 g/t AgEq over 14.0 m including 2.3 m of 4,081 g/t AgEq and 0.6 m of 9,283 g/t AgEq.
- **LRGG-22-254:** 2,360 g/t AgEq over 0.6 m within 11.9 m of 279 g/t AgEq.
- **LRGG-22-269:** 3,218 g/t AgEq over 0.9 m within 17.3 m of 350 g/t AgEq.
- **LRGF-23-281:** 3,183 g/t AgEq over 1.3 m within 11.7 m of 457 g/t AgEq.
- **LRGF-23-286:** 2,030 g/t AgEq over 1.7 m within 23.1 m of 203 g/t AgEq.
- **LRGF-23-291:** 3,382 g/t AgEq over 1.0 m within 34.8 m of 253 g/t AgEq.
- **LRGF-23-302:** 404 g/t AgEq over 30.2 m including 9.7 m of 1,110 g/t AgEq and 0.8 m of 5,468 g/t AgEq.
- **LRGG-23-306:** 5,838 g/t AgEq over 1.5 m within 11.7 m of 979 g/t AgEq.
- **LRGG-23-309:** 1,048 g/t AgEq over 0.6 m within 18.6 m of 202 g/t AgEq.
- **LRGG-23-316:** 491 g/t AgEq over 27.3 m including 7.6 m of 1,670 g/t AgEq including 0.9 m of 8,115 g/t AgEq.

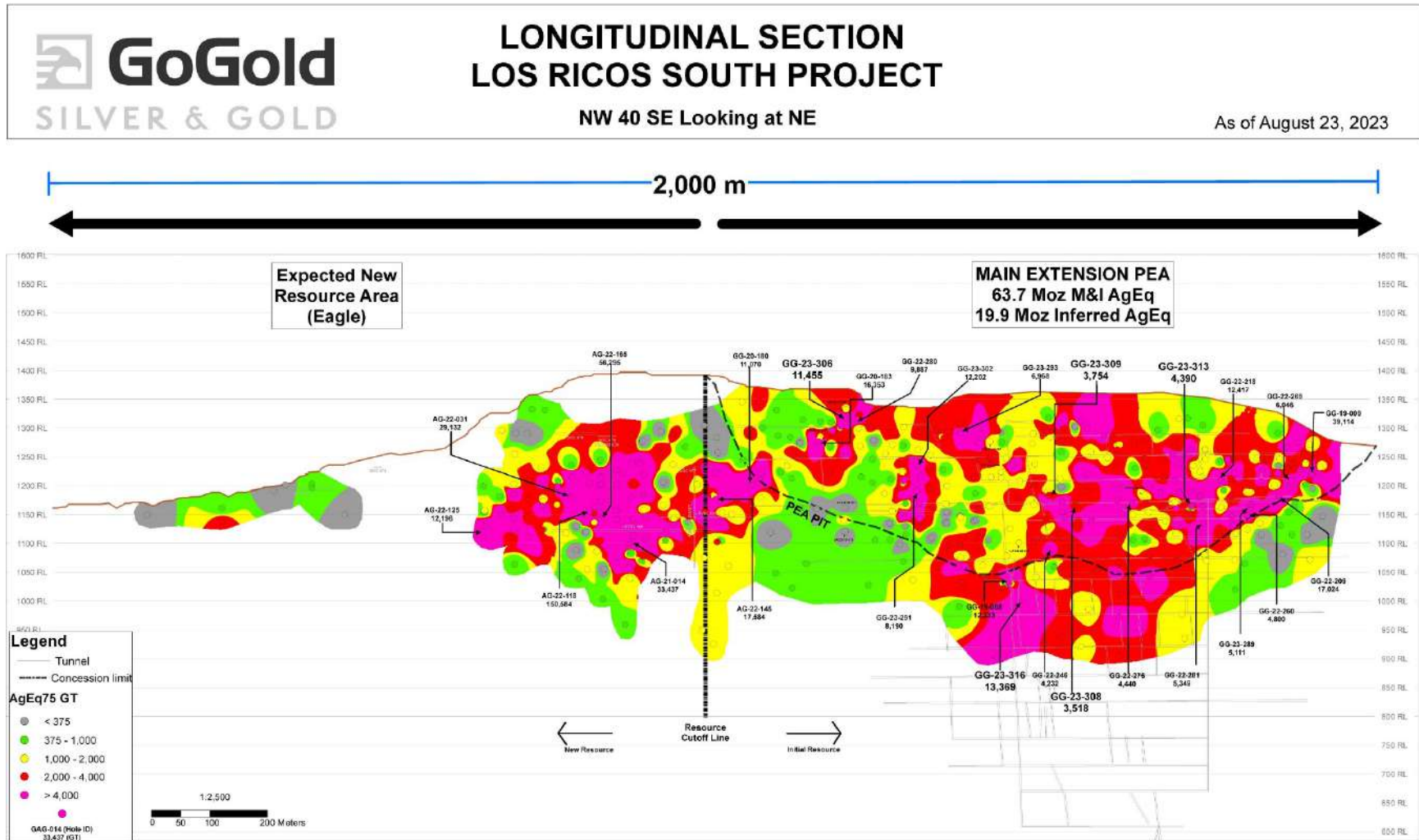
FIGURE 10.6 LONGITUDINAL PROJECTION – MAIN AREA



Source: GoGold (Press Release, November 30, 2022)



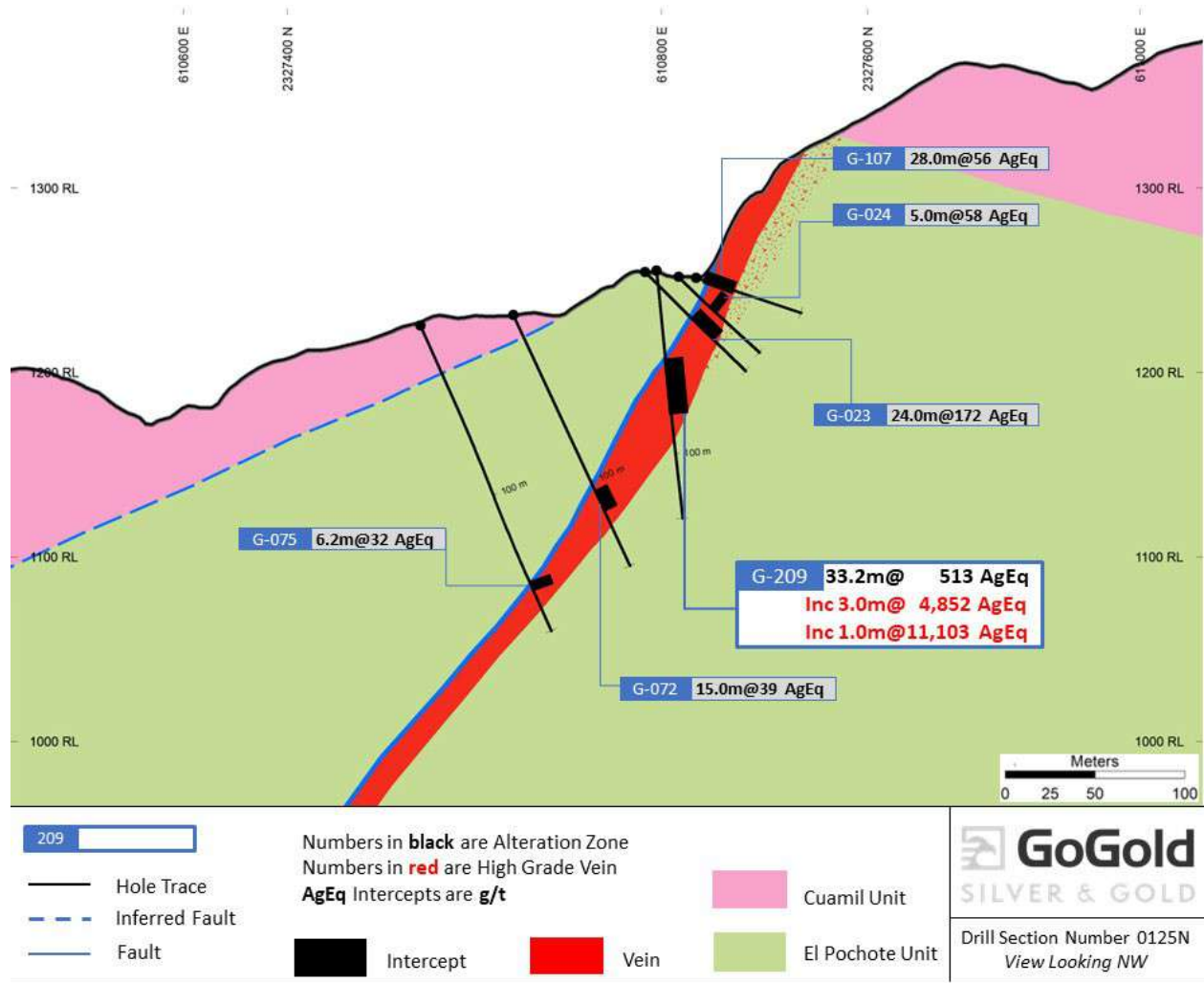
**FIGURE 10.7 LONGITUDINAL PROJECTION – LOS RICOS SOUTH RESOURCE AREA WITH PIERCE POINTS**



Source: GoGold (Press Release, August 23, 2023)

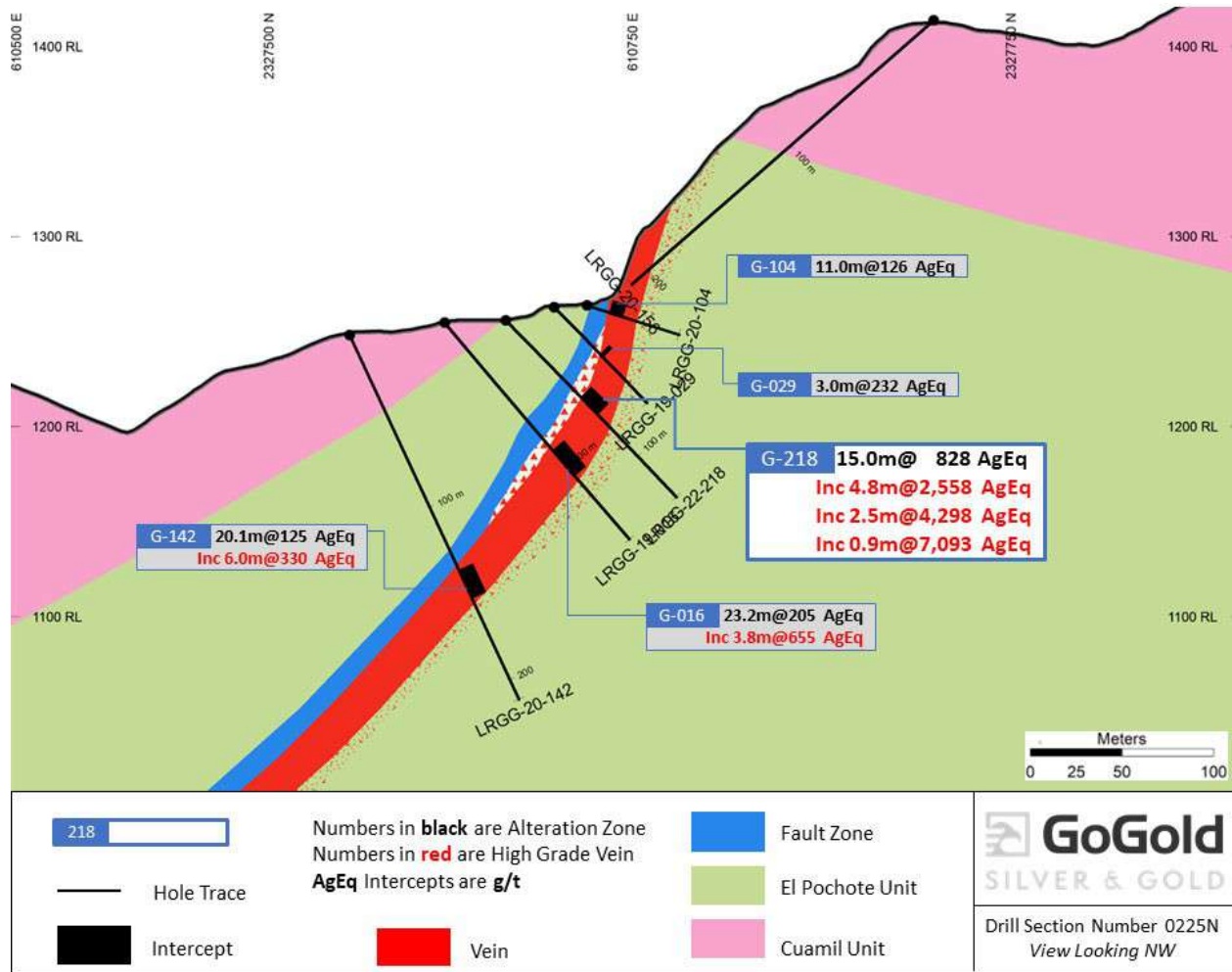


**FIGURE 10.8 MAIN AREA CROSS-SECTION PROJECTION DRILL HOLE LRGG-22-209**



Source: GoGold (November 16, 2022)

**FIGURE 10.9 MAIN AREA CROSS-SECTION PROJECTION DRILL HOLE LRGG-22-218**



Source: GoGold (November 30, 2022)

## **11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY**

The following section discusses sampling carried out by GoGold at the Los Ricos South Property between 2019 and 2023.

### **11.1 SAMPLE PREPARATION**

#### **11.1.1 Channel Sampling**

GoGold has carried out a general surface and underground sampling program on the Los Ricos South Property. Sampling included chip channel samples and grab samples following a protocol of sampling procedures including:

- Channel sampling controls including keeping records of the sample type, size, number and location using GPS;
- The sample locations were photographed;
- One in every 40 samples were duplicated and sent for analysis;
- Every 40 samples one blank sample was inserted; and
- Every 40 samples one control sample of commercial certified reference material (“CRM”) was inserted.

Identical procedures were used for sampling in the historical mine workings. Samples were taken by local crews under the supervision of a geologist from SPM. Chip samples were cut with a hammer and chisel, collected on a tarp and placed in a plastic bag to be labelled and sent to the laboratory for precious metal assay and ICP multi-element analysis.

#### **11.1.2 Drill Core Sampling**

The protocol for handling, sampling and assaying diamond drill core samples was developed in 2011 by David Duncan, P.Geo., for GoGold’s San Diego project in Durango State during 2012 – 2014 and GoGold’s Santa Gertrudis program in 2015 to 2017. These same protocols are used for the Los Ricos South drilling program and are described as follows:

- The drill core is placed in labelled drill core boxes by the drilling contractor with footage blocks inserted in the trays at the end of each run. The lids are placed on and subsequently fastened to the drill core boxes.
- GoGold’s geologists and geo-technicians are present at the drill rig to ensure that drill core handling, drill core accommodation, box number and depth recording was properly done by the drilling contractor.

- The drill core is transferred from the drill rig to GoGold's drill core logging, sampling and storage facilities at Cinco Minas, where the trays are placed in order on the logging tables and the first inspection is made prior to cleaning and washing the drill core of any drilling muds.
- All depth marker tags were checked for completeness and accuracy with special attention paid to possible mining voids.
- The SPM geo-technicians align the drill core pieces, assess and measure drill core recoveries and RQD and photograph the drill core.
- Bulk density measurements are reported for all drill holes by GoGold geo-technicians. The geo-technicians select an intact cylinder of drill core 10 cm to 20 cm in length, record the weight, coat the sample in paraffin wax, and dry and record the weight with wax, submerge the sample in a graduated cylinder filled with water, record the change in volume in water, divide the weight with paraffin by the volume displaced to determine the bulk density. Measurements for each box of drill core are made from the top to the bottom of the drill hole, thus providing excellent representative coverage through the hanging wall units, the Los Ricos quartz vein, and into the footwall units.
- The SPM geologists log the drill core and lay out the areas to be sampled by the geo-technicians.
- Boxes of drill core are transferred to the sampling room, where the drill core is sawn in half by a diamond saw.
- The half drill core samples are placed in plastic bags along with a sample tag ID and tied closed with zip locks under the supervision of the SPM geologists. Sample tags have three portions; one for the drill core tray, the sample bag and one left in the sample book.
- Up to 10 sample bags are placed in larger rice bags, which are tied closed with zip locks and labelled.
- The remainder of the sample is returned to the drill core box, the lids replaced, and the boxes are transferred to core racks at GoGold's secure drill core storage facility at Cinco Minas.
- All samples were collected by SPM personnel and delivered to the Actlabs laboratory in Zacatecas or ALS Chemex ("ALS") in Guadalajara. The drill core and samples are under GoGold's or SPM's supervision, from the time of pick-up of the drill core at the drill site until they are delivered to laboratory staff. All drill core and sample splits are kept in a secure storage facility at Cinco Minas. SPM use their own vehicles to transport the samples to the Actlabs sample preparation facility in Zacatecas, or the ALS facility in Guadalajara, for both sample preparation and analyses. The samples are generally received by the lab within two days.

- Assay data is reported electronically from Actlabs and ALS to GoGold and SPM.

ActLabs protocol crushes samples to a nominal minus 10 mesh (1.7 mm), mechanically split (riffle) to obtain a representative sample and then pulverized to at least 95% minus 150 mesh (106 microns). Samples were analyzed for gold and silver, as well as an array of other elements. Gold analysis was carried out by fire assay with atomic absorption spectroscopy (“AAS”) finish. Reporting limits for this test method were 0.005–10 ppm. Results exceeding 10 ppm Au were reanalyzed using fire assay with a gravimetric finish and reported in g/t. Silver analysis was carried out by total digestion with ICP finish. Reporting limits for this test method were 0.3–100 ppm. Results exceeding 100 ppb Ag were reanalyzed using fire assay with a gravimetric finish, and reported in g/t.

ALS crushes the samples and prepares 200–300 gram, pulp samples with 90% passing Tyler 150 mesh (106 µm). The pulps are assayed for gold using a 30-gram charge by fire assay (Code AA23) and over limits greater than 10 g/t are re-assayed using a gravimetric finish (Code ME-GRAV21). Silver and multi-element analysis is completed using total digestion (Code ME-ICP61 Total Digestion ICP). Over limits greater than 100 g/t silver are re-assayed using a gravimetric finish (ME-GRA21).

The Actlabs’ Quality System is accredited to international quality standards through the ISO/IEC 17025:2017 and ISO 9001:2015. The accreditation program includes ongoing audits, which verify the QA system and all applicable registered test methods. Actlabs is also accredited by Health Canada.

ALS has developed and implemented strategically designed processes and a global quality management system at each of its locations. The global quality program includes internal and external inter-laboratory test programs and regularly scheduled internal audits that meet all requirements of ISO/IEC 17025:2017 and ISO 9001:2015. All ALS geochemical hub laboratories are accredited to ISO/IEC 17025:2017 for specific analytical procedures. Both ALS and Actlabs are independent of GoGold and SPM.

It is the Author’s opinion that sample preparation, security and analytical procedures for the Los Ricos South Project 2019 to 2023 drilling were adequate for the purposes of this Mineral Resource Estimate.

## **11.2 BULK DENSITY**

Bulk density measurements were determined by GoGold using the water immersion method on diamond drill core samples. Samples were collected at 20 m intervals downhole and data from all the major units in the hanging wall, mineralized zones and footwall were logged. As described in section 14 of this PEA, the average bulk density is 2.53 tonnes per cubic metre (t/m<sup>3</sup>), with a slightly higher bulk density observed for the higher-grade domains (Table 11.1). A total of seven measurements were also taken for the Cerro Colorado Deposits, with the average bulk density calculated at 2.49 t/m<sup>3</sup>, and the median bulk density at 2.50 t/m<sup>3</sup>.

**TABLE 11.1**  
**SUMMARY OF BULK DENSITY STATISTICS**

<b>Item</b>	<b>Count</b>	<b>Avg Bulk Density (t/m<sup>3</sup>)</b>	<b>Median Bulk Density (t/m<sup>3</sup>)</b>
Waste	2,822	2.46	2.50
Abra Main	527	2.55	2.54
Abra Plum North	169	2.70	2.67
Abra Plum South	10	2.54	2.55
Eagle Main	384	2.57	2.57
Eagle Plum FW	199	2.71	2.65
Eagle Plum HW	404	2.79	2.69
<b>Total</b>	<b>4,515</b>	<b>2.53</b>	<b>2.54</b>

Independent verification sampling carried out in August 2019 and May 2023 has confirmed GoGold’s onsite measurements. A total of 22 due diligence samples were measured independently at Actlabs (10 determinations by pycnometer on pulps in 2019) and ALS (12 determinations by water displacement on core in 2023), returning a mean value of 2.64 t/m<sup>3</sup>, median value of 2.64 t/m<sup>3</sup>, minimum value of 2.49 t/m<sup>3</sup> and a maximum value of 2.77 t/m<sup>3</sup>.

### **11.3 2019 QUALITY ASSURANCE/QUALITY CONTROL REVIEW**

GoGold implemented and monitored a thorough quality assurance/quality control (“QA/QC” or “QC”) program for the diamond drilling undertaken at the Los Ricos South Project over the 2019 period. QC protocol included the insertion of QC samples into every batch sent off for analysis, including certified reference material (“CRMs”), blanks and field duplicates.

CRMs and blanks were inserted approximately every 1 in 60 samples. In addition, field duplicates consisting of ¼ drill core were collected approximately every 70 samples.

#### **11.3.1 Performance of Certified Reference Materials**

CRMs were inserted into the sample stream approximately every 60 samples. Two CRMs were used during the 2019 drill program to monitor for gold performance only; the AR09002X and AR09003X CRMs. The former a low-grade gold CRM and the latter of higher grade.

Criteria for assessing CRM performance are based as follows. Data falling within ± 2 standard deviations from the accepted mean value pass. Data falling outside ± 3 standard deviations from the accepted mean value, or two consecutive data points falling between ± 2 and ± 3 standard deviations on the same side of the mean, fail.

Results are presented in Table 11.2.

**TABLE 11.2**  
**SUMMARY OF 2019 CERTIFIED REFERENCE MATERIALS USED AT LOS RICOS SOUTH**

Certified Reference Material	Certified Mean Value (ppm)	+/- 1SD (ppm)	+/- 2SD (ppm)	ActLabs Results			
				No. Results	No. (-) Failures	No. (+) Failures	Average Result (ppb)
AR09002X	0.151	0.02	0.04	54	0	0	0.15
AR09003X	1.231	0.08	0.16	35	0	0	1.23

*Source: P&E (2021)*

The AR09002X gold CRM was manufactured by Shea Clark Smith / Minerals Exploration & Environmental Geochemistry of Reno, Nevada for Animus Resources in 2009. The CRM was prepared from mineralized rock derived from the Santa Gertrudis Mine. It is certified for Au. There were 54 data points for this reference material and there were no recorded failures for this CRM.

The AR09003X gold CRM was also manufactured by Shea Clark Smith / Minerals Exploration & Environmental Geochemistry of Reno, Nevada for Animus Resources in 2009. The CRM was prepared from mineralized rock derived from the Santa Gertrudis Mine. It is certified for Au. There were 35 data points for this CRM and no failures were returned for the AR09003X CRM.

The Author considers that the CRM data demonstrate acceptable accuracy in the 2019 data.

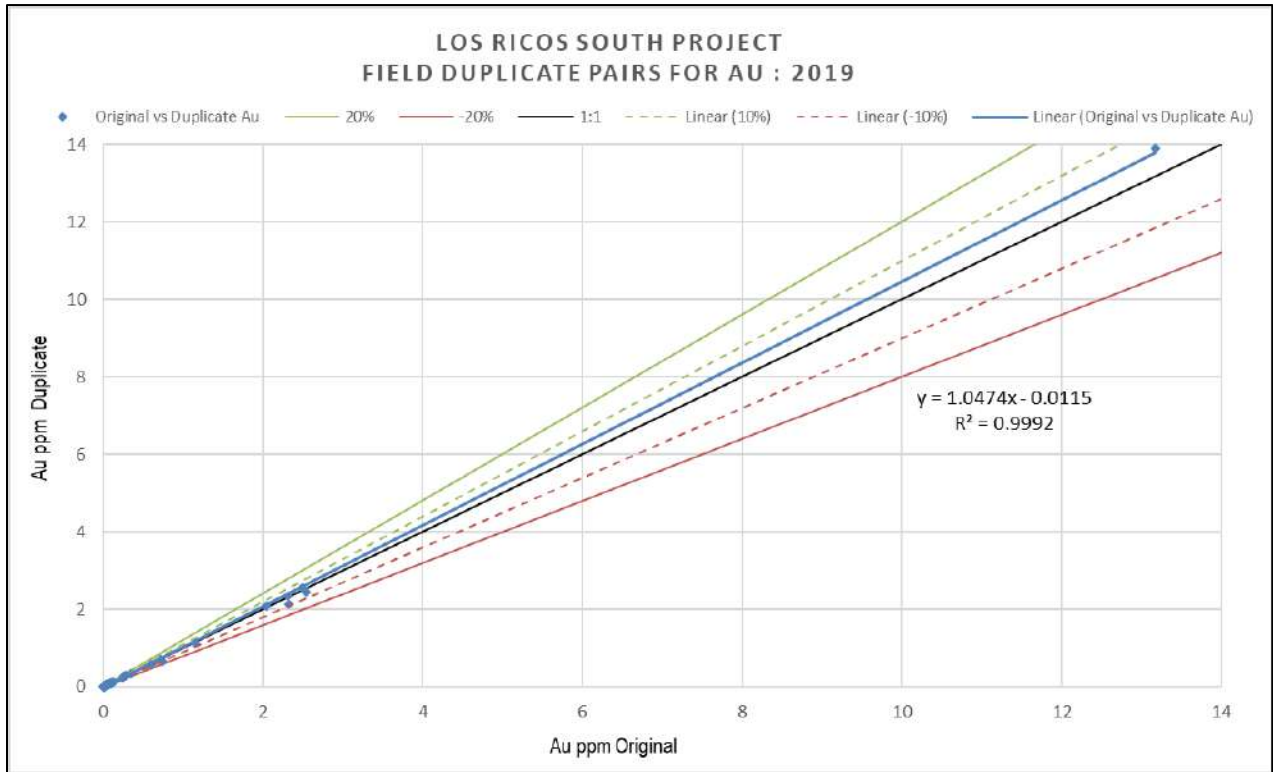
### 11.3.2 Performance of Blanks

All blank data for Au and Ag were graphed. If the assayed value in the certificate was indicated as being less than detection limit the value was assigned the value of half the detection limit for data treatment purposes. An upper tolerance limit of three times the detection limit was set. There was a total of 89 data points to examine. All data plotted at or below the set tolerance limits, except for a single Ag sample (LRC-002260 which returned a result of 0.9 ppm) that plots just above the set tolerance limit, and the Author does not consider contamination to be an issue for the 2019 drill data.

### 11.3.3 Performance of Field Duplicates

Field duplicate data were examined for the 2019 drill program for both gold and silver. There were a total of 77 duplicate pairs in the data set. Data were scatter graphed (Figures 11.1 and 11.2) and found to have acceptable precision for the field level for both gold and silver, with respective R-squared values of 0.999 and 0.997.

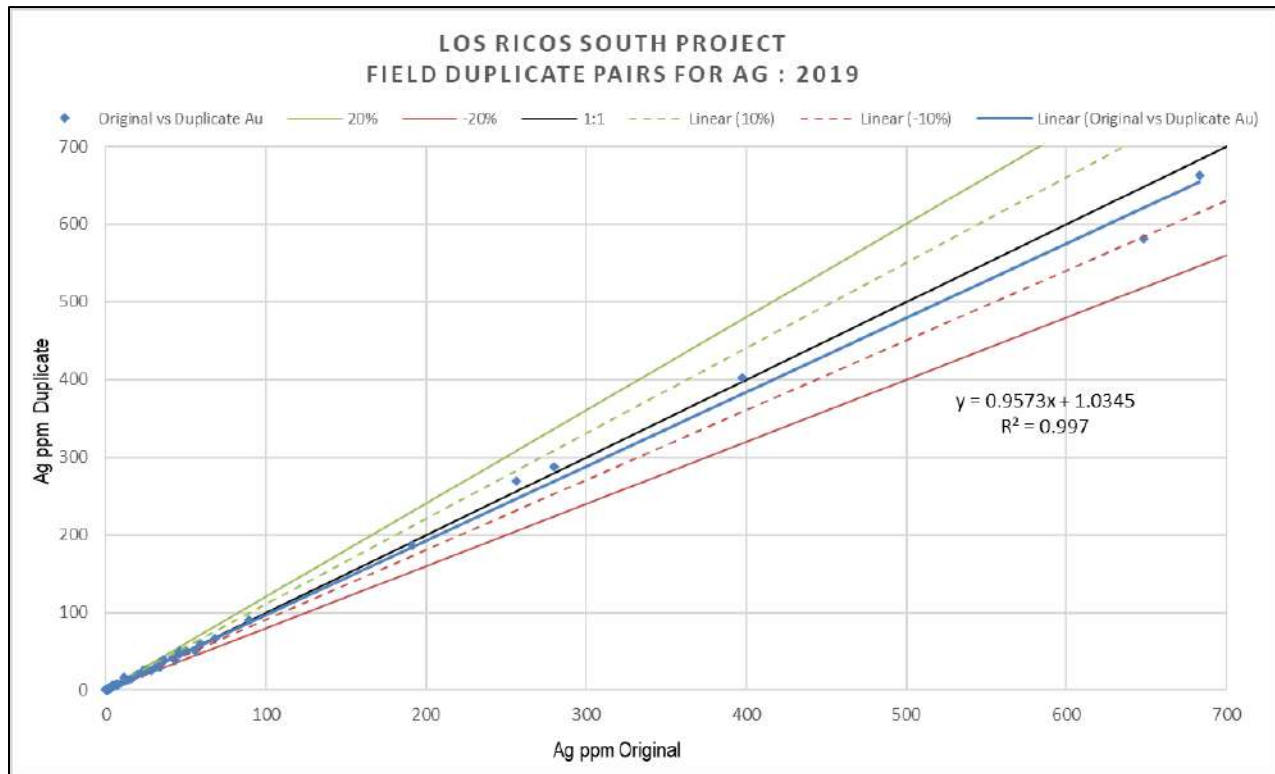
**FIGURE 11.1 PERFORMANCE OF AU FIELD DUPLICATES FOR 2019 DRILLING AT LOS RICOS SOUTH**



Source: P&E (2021)



**FIGURE 11.2 PERFORMANCE OF AG FIELD DUPLICATES FOR 2019 DRILLING AT LOS RICOS SOUTH**



Source: P&E (2021)

#### 11.4 2020 QUALITY ASSURANCE/QUALITY CONTROL REVIEW

GoGold continued to implement and monitor a thorough QC program for the diamond drilling undertaken at the Los Ricos South Project throughout 2020. The rate of QC sample insertion was increased from the 2019 program, however, again included the routine insertion of CRMs, blanks and field duplicates into the sample stream.

CRMs were inserted approximately every 1 in 10 samples and blanks at a rate of 1 in 25. In addition, field duplicates consisting of ¼ drill core were collected approximately every 25 samples.

##### 11.4.1 Performance of Certified Reference Materials

CRMs were inserted into the sample stream approximately every 10 samples. Five CRMs were used during the 2020 drill program; the AR09002X, AR09003X and OxB139 gold CRMs, as well as the SN104 and SQ88 CRMs, which are certified for both gold and silver. Criteria for assessing CRM performance remained as described in section 11.3.1 of this Technical Report.

A summary of the CRM performance results for the 2020 program is presented in Table 11.3.

<b>TABLE 11.3</b>							
<b>SUMMARY OF 2020 CERTIFIED REFERENCE MATERIALS USED AT LOS RICOS SOUTH</b>							
Certified Reference Material	Certified Mean Value (ppm)	+/- 1SD (ppm)	+/- 2SD (ppm)	ActLabs Results			
				No. Results	No. (-) Failures	No. (+) Failures	Average Result (ppb)
<b>Monitoring Gold</b>							
AR09002X	0.151	0.02	0.04	15	0	0	0.15
AR09003X	1.231	0.08	0.16	96	0	0	1.23
OxB130	0.125	0.006	0.012	35	0	0	0.13
SN104	9.182	0.184	0.368	142	0	0	9.20
SQ88	39.723	0.947	1.894	73	0	0	39.31
<b>Monitoring Silver</b>							
SN104	46.7	1.4	2.8	142	0	0	47.26
SQ88	160.8	5.1	10.2	73	0	0	158.35

*Source: P&E (2021)*

There were 15 data points for Au for the AR09002X CRM and 96 data points for Au for the AR09003X CRM. There were no recorded failures for either CRM.

The OxB130 gold CRM was supplied by Rocklabs Reference Materials of Auckland, New Zealand. The CRM was prepared from basalt and feldspar minerals with minor quantities of finely divided gold-containing minerals that have been screened to ensure there is no gold nugget effect. There were 35 data points for this CRM. No failures were returned for the OxB130 CRM. There was a slight high bias noted.

The SN104 and SQ88 CRMs were supplied by Rocklabs Reference Materials of Auckland, New Zealand. Both CRMs were prepared from feldspar minerals, basalt and iron pyrites with minor quantities of finely divided gold and silver-containing minerals that have been screened to ensure there is no gold nugget effect. The SN104 and SQ88 CRMs are certified for both gold and silver. There were 142 data points for the SN104 CRM and 73 data points for the SQ88 CRM. No failures were returned for either the SN104 or SQ88 CRM for either gold or silver. There was a slight high bias noted for silver in the SN104 data, earlier on in the program, and slight low biases noted for both gold and silver in the SQ88 data.

The Author considers that the CRMs demonstrate reasonable accuracy in the 2020 data.

#### **11.4.2 Performance of Blanks**

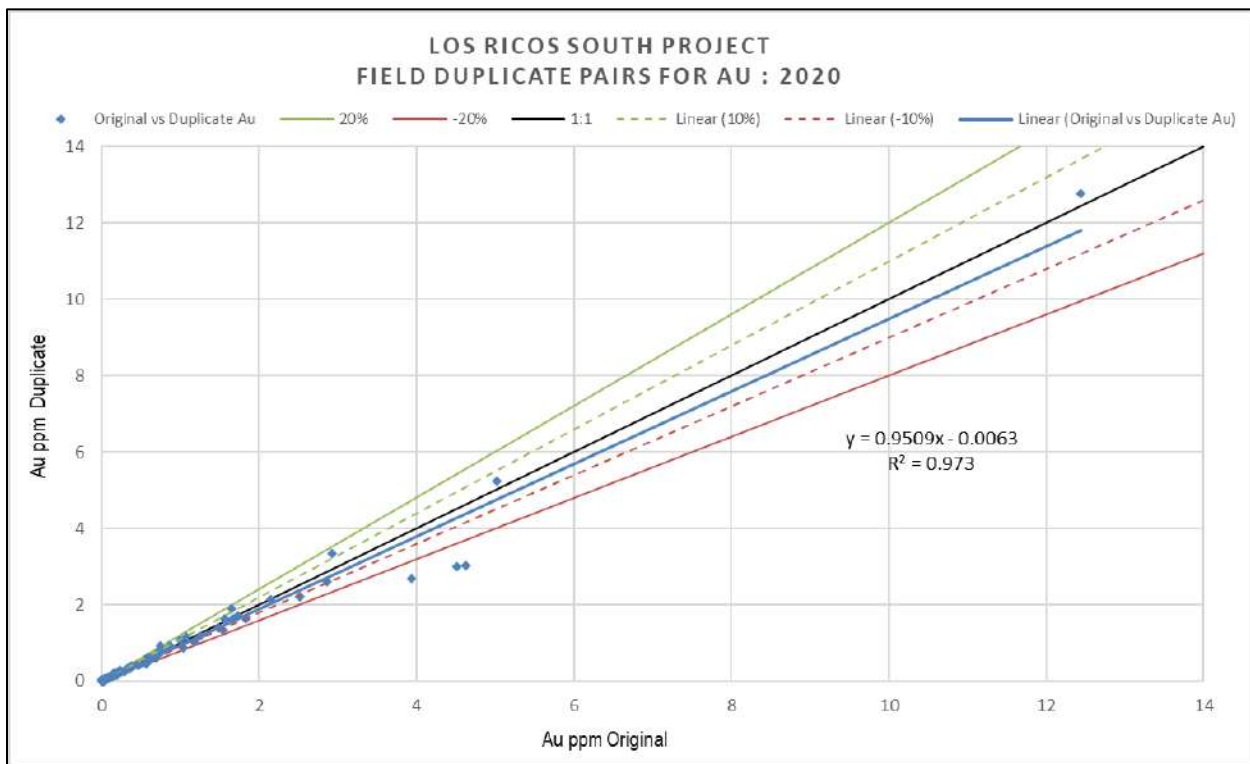
All blank data for Au and Ag were graphed. If the assayed value in the certificate was indicated as being less than detection limit the value was assigned the value of half the detection limit for data treatment purposes. An upper tolerance limit of three times the detection limit was set. There were a total of 146 data points to examine.

All data plotted at or below the set tolerance limits, except for three Ag samples (LRC-007757, LRC-011739 and LRC-012336, which returned results of 1.6 ppm, 6.1 ppm and 4.1 ppm respectively). The Author does not consider contamination to be an issue for the 2020 drill data.

### 11.4.3 Performance of Field Duplicates

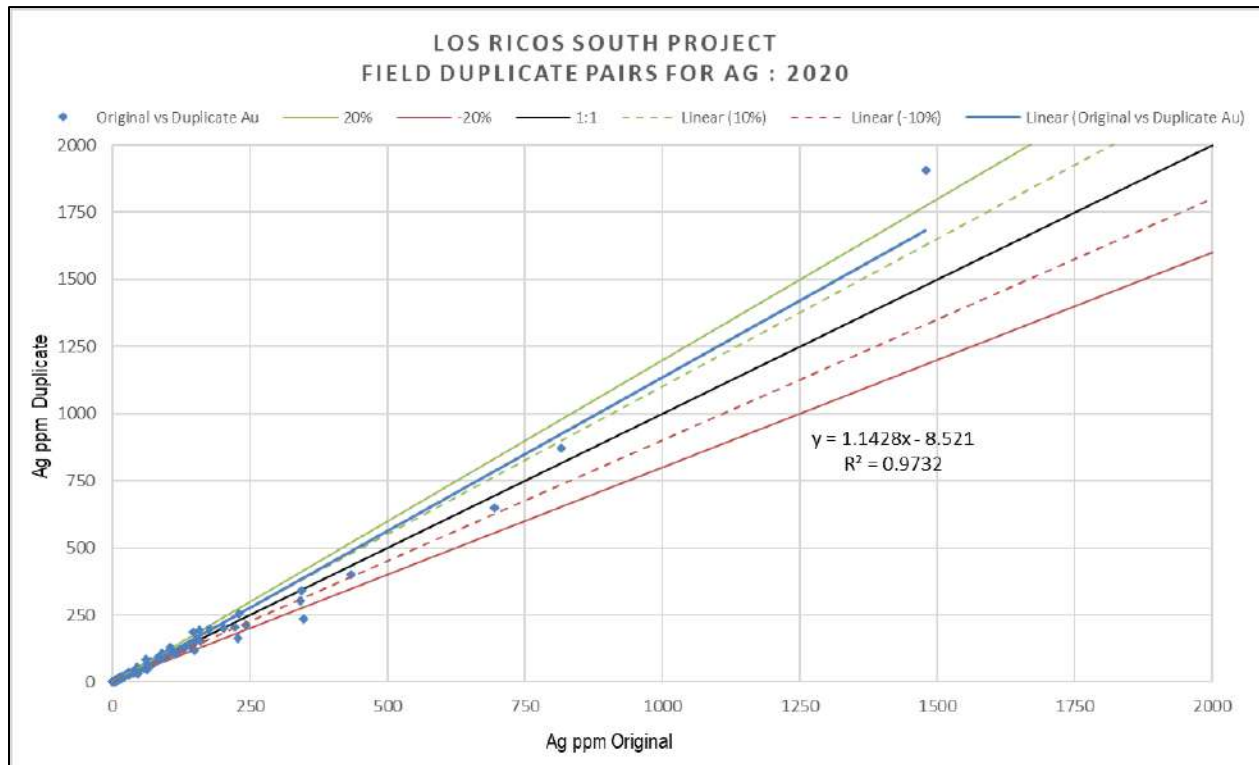
Field duplicate data were examined for the 2020 drill program for both gold and silver. There was a total of 146 duplicate pairs in the data set. Data were scatter graphed and found to have acceptable precision for the field level for both gold and silver, both with R-squared values of 0.973 (Figures 11.3 and 11.4).

**FIGURE 11.3 PERFORMANCE OF AU FIELD DUPLICATES FOR 2020 DRILLING AT LOS RICOS SOUTH**



Source: P&E (2021)

**FIGURE 11.4 PERFORMANCE OF AG FIELD DUPLICATES FOR 2020 DRILLING AT LOS RICOS SOUTH**



Source: P&E (2021)

### 11.5 2020 UMPIRE SAMPLING PROGRAM

GoGold carried out a comprehensive umpire sampling program of a selection of the 2019 and 2020 drill core samples to verify the primary lab (Actlabs) results. A total of ten drill holes from the 2019 program and eight from the 2020 program were chosen, ensuring that the selected drill holes were spread out along the length of the deposit, extended to depth and also temporally represented the 2019 and 2020 drill programs.

The entire sampled length of all 18 selected drill holes were re-assayed at an umpire laboratory, with samples starting in barren hanging wall material, transitioning to the mineralized zone and ending up in the low grade to barren footwall. Re-assaying entire drill hole lengths in this manner also gives a good representation of all ranges of grades within the deposit.

A total of 559 reject samples from the 2019 drill core were assayed at ALS and 317 reject samples from the 2020 drill core were assayed at Bureau Veritas, representing approximately 10% of the primary samples. Each batch assayed contained a range of QC samples, including three CRMs and one or two blanks and samples were assayed by the same method as the original primary laboratory analysis.

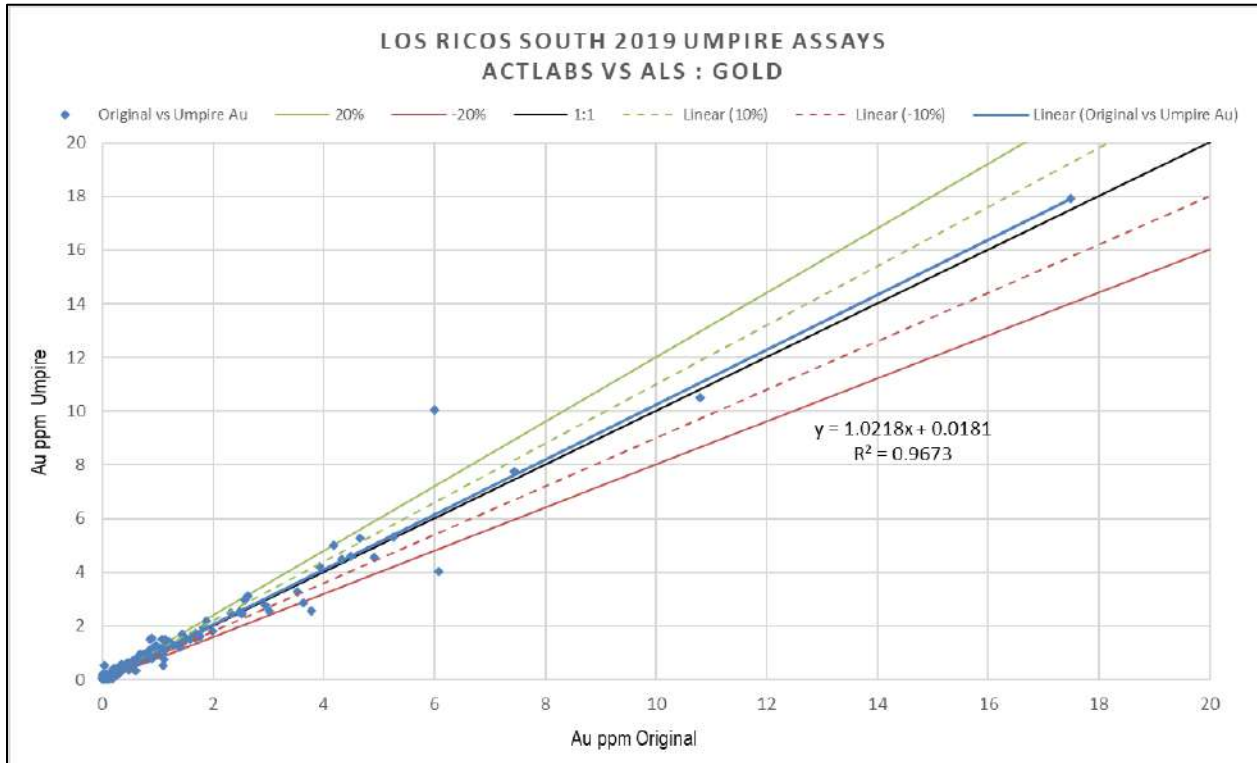
Table 11.4 outlines a summary of drill holes selected for umpire sampling and reject samples sent for assaying.

<b>TABLE 11.4</b>					
<b>UMPIRE SAMPLING PROGRAM DRILL HOLES</b>					
<b>Drill Hole ID</b>	<b>Umpire Lab</b>	<b>Sample From</b>	<b>Sample To</b>	<b>Reject Samples</b>	<b>QC Samples</b>
<b>2019 Drill Holes</b>					
LRGG-19-011	ALS Chemex	LRC-002053	LRC-002101	46	5
LRGG-19-017	ALS Chemex	LRC-002389	LRC-002455	64	5
LRGG-19-022	ALS Chemex	LRC-003268	LRC-003306	37	5
LRGG-19-039	ALS Chemex	LRC-003730	LRC-003794	62	5
LRGG-19-050	ALS Chemex	LRC-004291	LRC-004355	72	5
LRGG-19-054	ALS Chemex	LRC-004619	LRC-004656	36	5
LRGG-19-076	ALS Chemex	LRC-005458	LRC-005527	66	5
LRGG-19-085	ALS Chemex	LRC-006563	LRC-006632	67	5
LRGG-19-086	ALS Chemex	LRC-006042	LRC-006084	41	5
LRGG-19-092	ALS Chemex	LRC-006750	LRC-006821	68	5
<b>Total</b>				<b>559</b>	<b>50</b>
<b>2020 Drill Holes</b>					
LRGG-20-095	Bureau Veritas	LRC-006970	LRC-007062	76	5
LRGG-20-106	Bureau Veritas	LRC-007653	LRC-007700	39	5
LRGG-20-119	Bureau Veritas	LRC-007989	LRC-010019	26	5
LRGG-20-129	Bureau Veritas	LRC-010641	LRC-010667	22	5
LRGG-20-137	Bureau Veritas	LRC-010765	LRC-010810	37	5
LRGG-20-143	Bureau Veritas	LRC-011113	LRC-011162	41	5
LRGG-20-155	Bureau Veritas	LRC-011760	LRC-011819	50	5
LRGG-20-161	Bureau Veritas	LRC-011869	LRC-011899	26	5
<b>Total</b>				<b>317</b>	<b>40</b>

Source: P&E (2021)

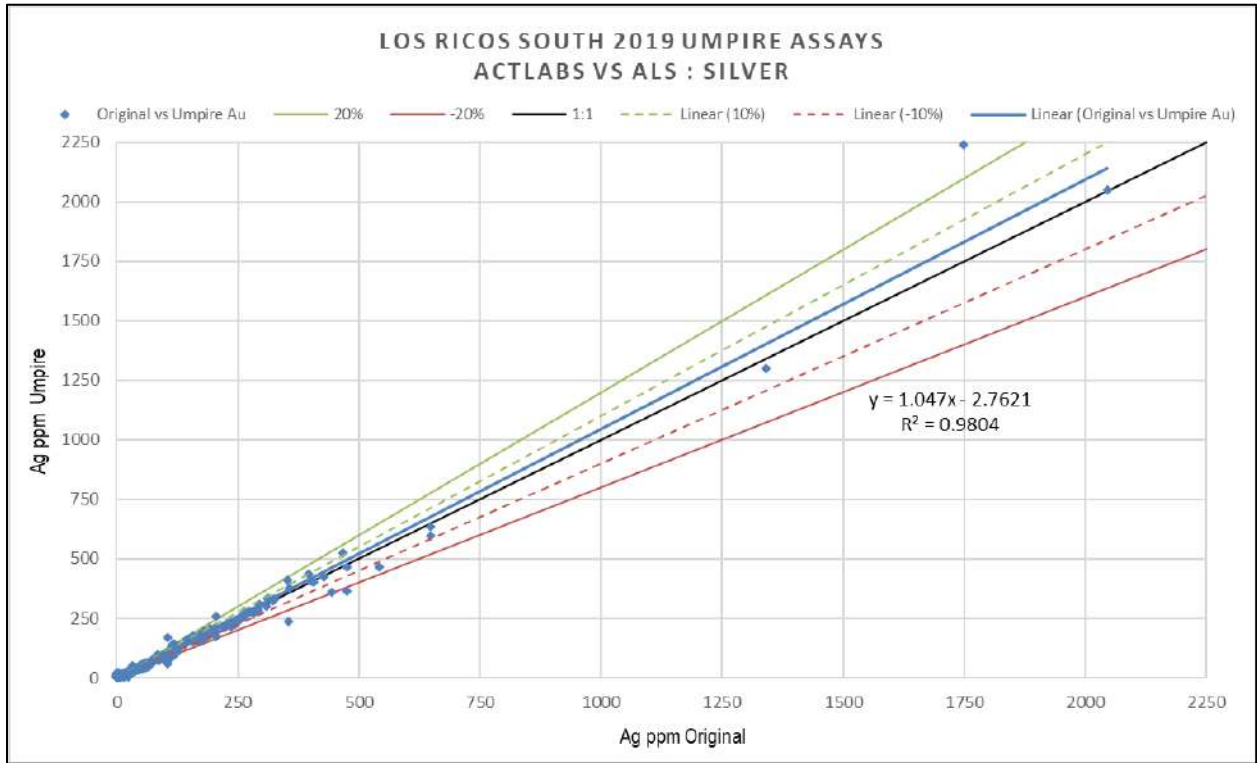
The Author has reviewed the umpire assay results for both the 2019 and 2020 programs and comparison was made between the primary lab results and the umpire lab results by way of line graph and scatter plots (Figures 11.5 to 11.8). The data for both ALS and Bureau Veritas indicate no material biases between the umpire laboratories and gold and silver assays from Actlabs, the primary laboratory.

**FIGURE 11.5 2019 UMPIRE SAMPLING ASSAYS FOR AU**



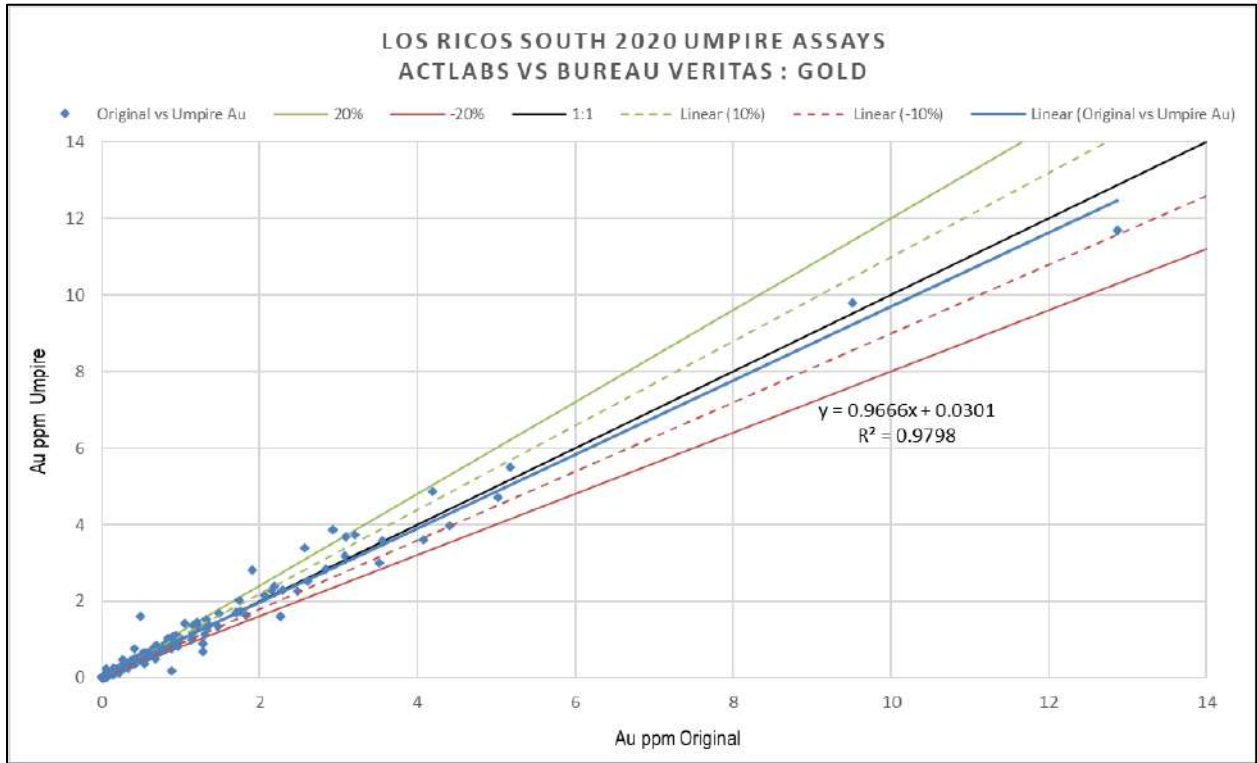
Source: P&E (2021)

**FIGURE 11.6 2019 UMPIRE SAMPLING ASSAYS FOR AG**



Source: P&E (2021)

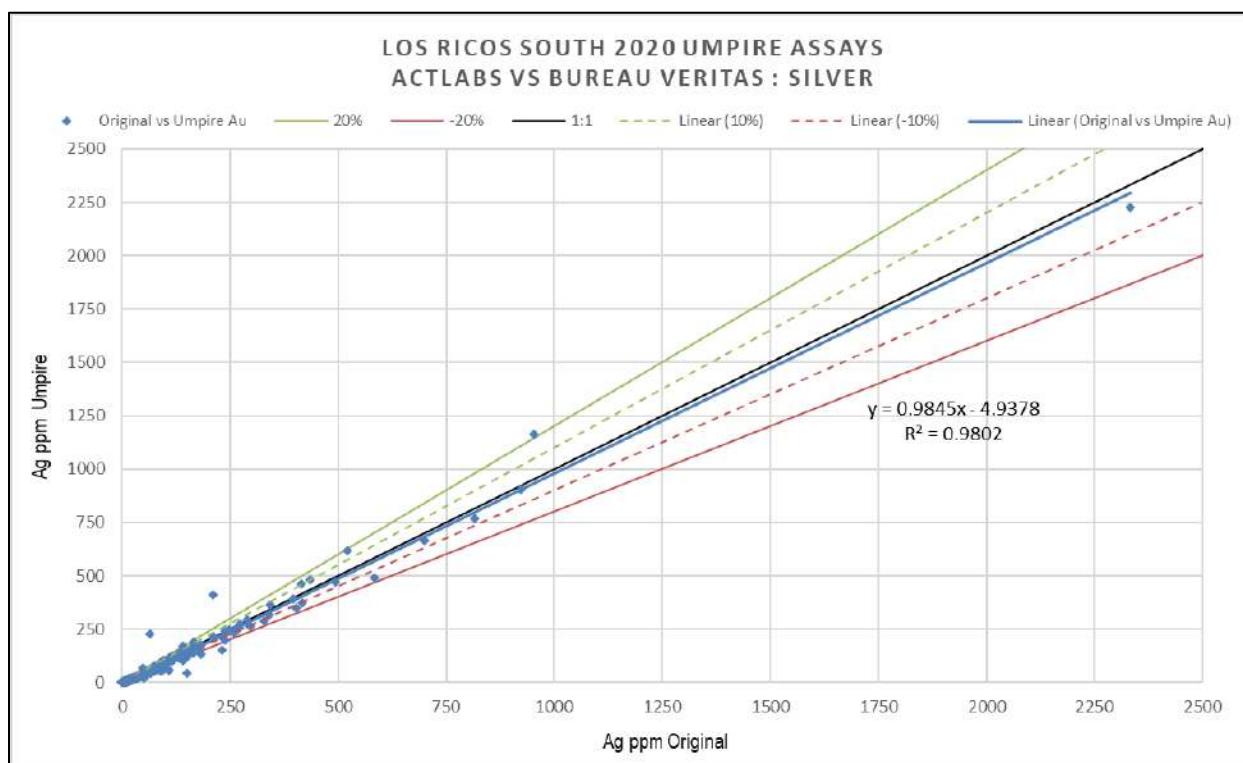
**FIGURE 11.7 2020 UMPIRE SAMPLING ASSAYS FOR AU**



Source: P&E (2021)



**FIGURE 11.8 2020 UMPIRE SAMPLING ASSAYS FOR AG**



Source: P&E (2021)

## 11.6 JUL 2020 - APR 2023 QUALITY ASSURANCE/QUALITY CONTROL REVIEW

GoGold continued implementing industry-standard QC protocol for the next phase of drilling at Los Ricos South from July 2020 to April 2023. CRMs were inserted approximately every 1 in 10 samples, blanks approximately every 1 in 20 samples, and field duplicates consisting of ¼ drill core were collected approximately every 20 samples.

### 11.6.1 Performance of Certified Reference Materials

CRMs were inserted into the analysis stream approximately every 10 samples. GoGold continued to utilize the AR09003X, OxB130, SN104, and SQ88 CRMs throughout July 2020 to April 2023 and also introduced two new CRMs, from Rocklabs: the Oxi164 (gold-only) and SN118 (silver and gold) CRMs. Criteria for assessing CRM performance remained as described in section 11.3.1 of this Technical Report.

The Oxi164 gold CRM was supplied by Rocklabs and was prepared from basalt and feldspar minerals with minor quantities of finely divided gold-containing minerals, which were screened to ensure that there is no gold nugget effect. The SN118 CRM was also supplied by Rocklabs and was prepared from feldspar minerals, basalt and iron pyrites with minor quantities of finely divided gold and silver-containing minerals, which were screened to ensure that there is no gold nugget effect.

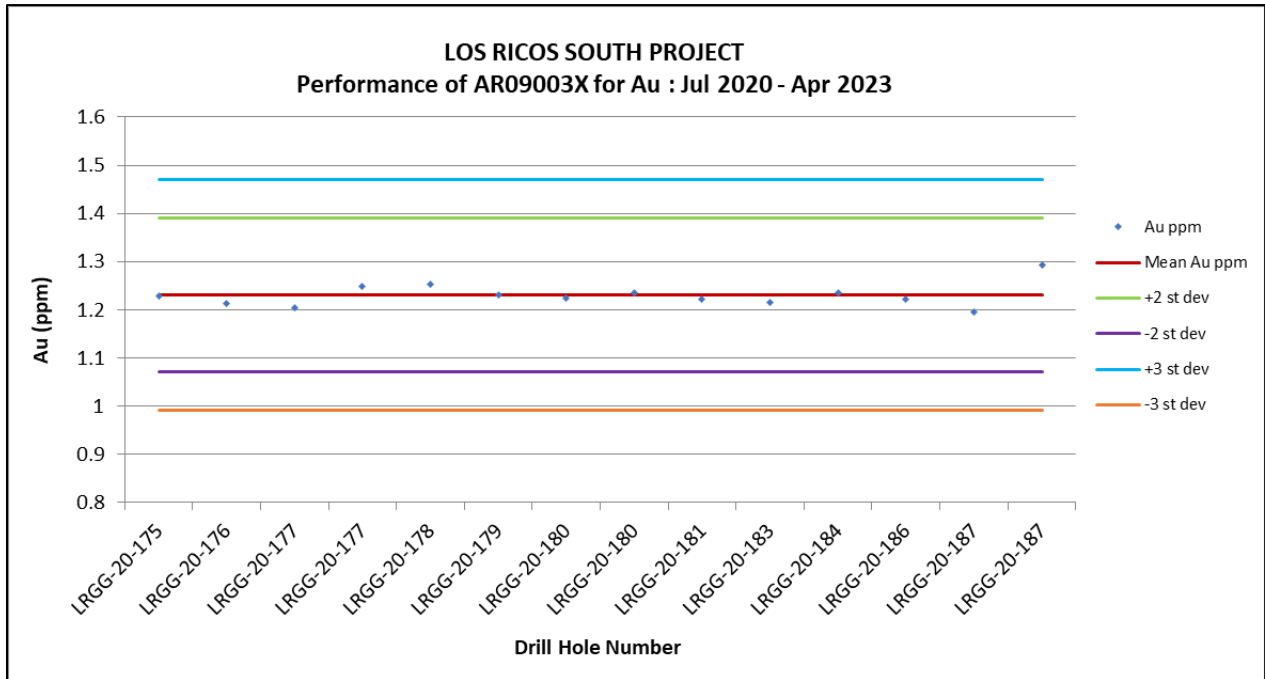
A summary of the CRM performance results for the July 2021 to April 2023 drilling at the Project is presented in Table 11.5 and performance charts for each CRM are displayed in Figures 11.9 to 11.17.

<b>TABLE 11.5</b>							
<b>SUMMARY OF CERTIFIED REFERENCE MATERIALS USED AT LOS RICOS SOUTH</b>							
<b>Certified Reference Material</b>	<b>Certified Mean Value (ppm)</b>	<b>+/- 1SD (ppm)</b>	<b>+/- 2SD (ppm)</b>	<b>Lab Results</b>			
				<b>No. Results</b>	<b>No. (-) Failures</b>	<b>No. (+) Failures</b>	<b>Average Result (ppb)</b>
<b>Monitoring Gold</b>							
AR09003X	1.231	0.08	0.16	14	0	0	1.230
OxB130	0.125	0.006	0.012	36	0	0	0.131
Oxi164	1.790	0.036	0.072	849	6	7	1.805
SN104	9.182	0.184	0.368	199	1	0	9.136
SN118	8.917	0.168	0.336	688	7	12	8.966
SQ88	39.723	0.947	1.894	296	1	0	39.53
<b>Monitoring Silver</b>							
SN104	46.7	1.4	2.8	199	0	6	47.62
SN118	49.9	2.1	4.2	688	0	0	50.79
SQ88	160.8	5.1	10.2	296	8	4	156.15

*Source: P&E (2023)*

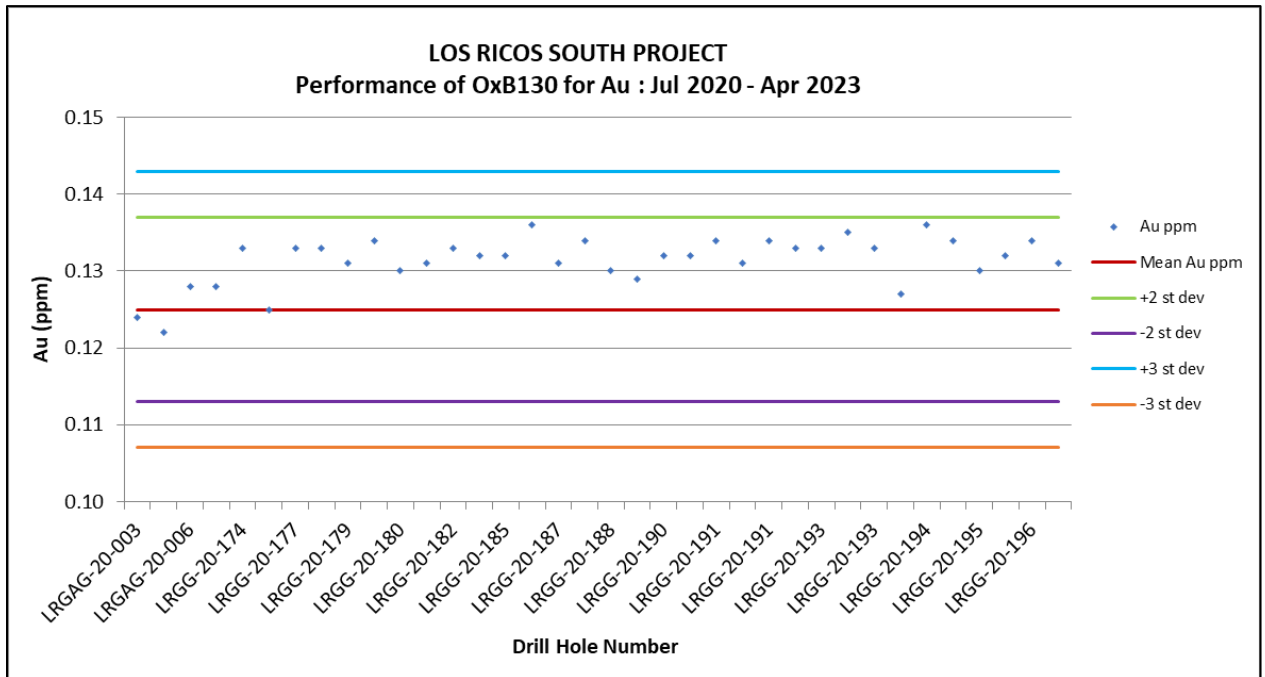
The Author considers that CRM performance was acceptable, with an overall failure rate of around 1.5% for both the gold and silver data. As indicated in Table 11.5, the majority of the CRMs performed well, with very few failures recorded. The SQ88 CRM showed the highest failure rate for silver, at 4.1%, followed by the SN104 CRM, with a failure rate of 3.0%. The SN118 CRM revealed the highest failure rate for gold, at 2.8%, followed by the Oxi164 CRM, with a failure rate of 1.5%. All other CRMs recorded failure rates below 0.5%. The Author reviewed all CRM failures and found all failures to be minority failures within a particular batch, with several other CRMs passing within each respective batch. The Author considers that the CRM data demonstrate acceptable accuracy in the July 2020 to April 2023 Los Ricos South data.

**FIGURE 11.9 PERFORMANCE OF AU AR09003X CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



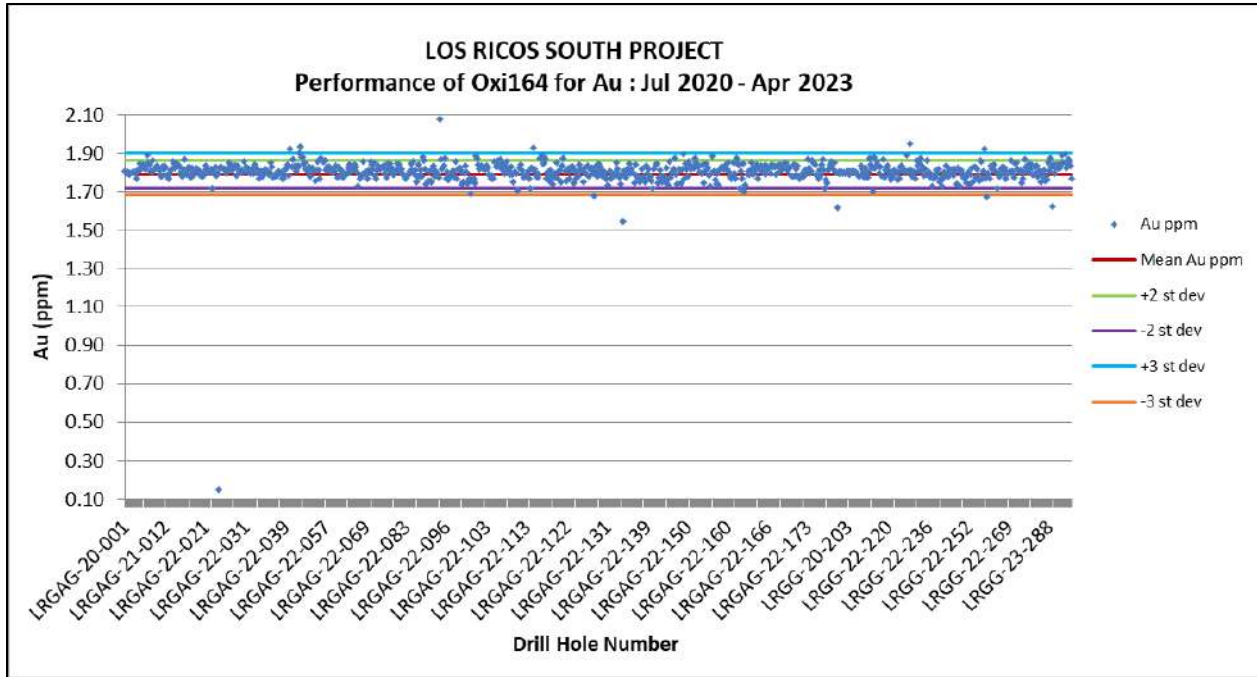
Source: P&E (2023)

**FIGURE 11.10 PERFORMANCE OF AU OxB130 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



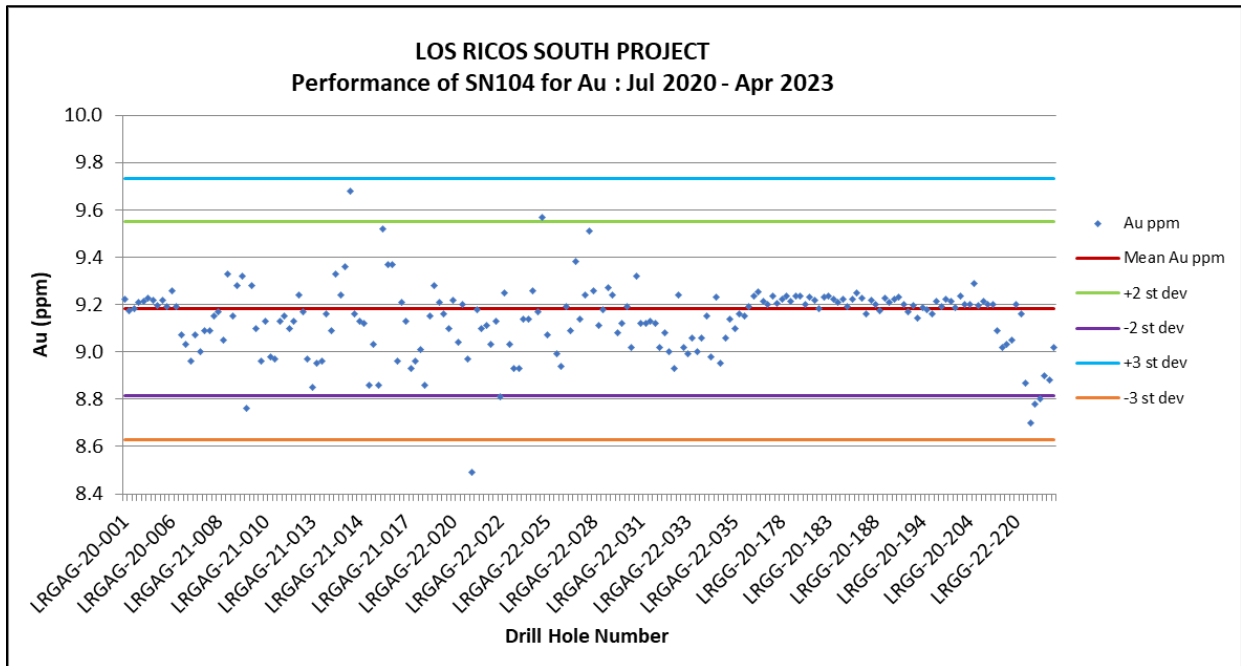
Source: P&E (2023)

**FIGURE 11.11 PERFORMANCE OF AU OXI164 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



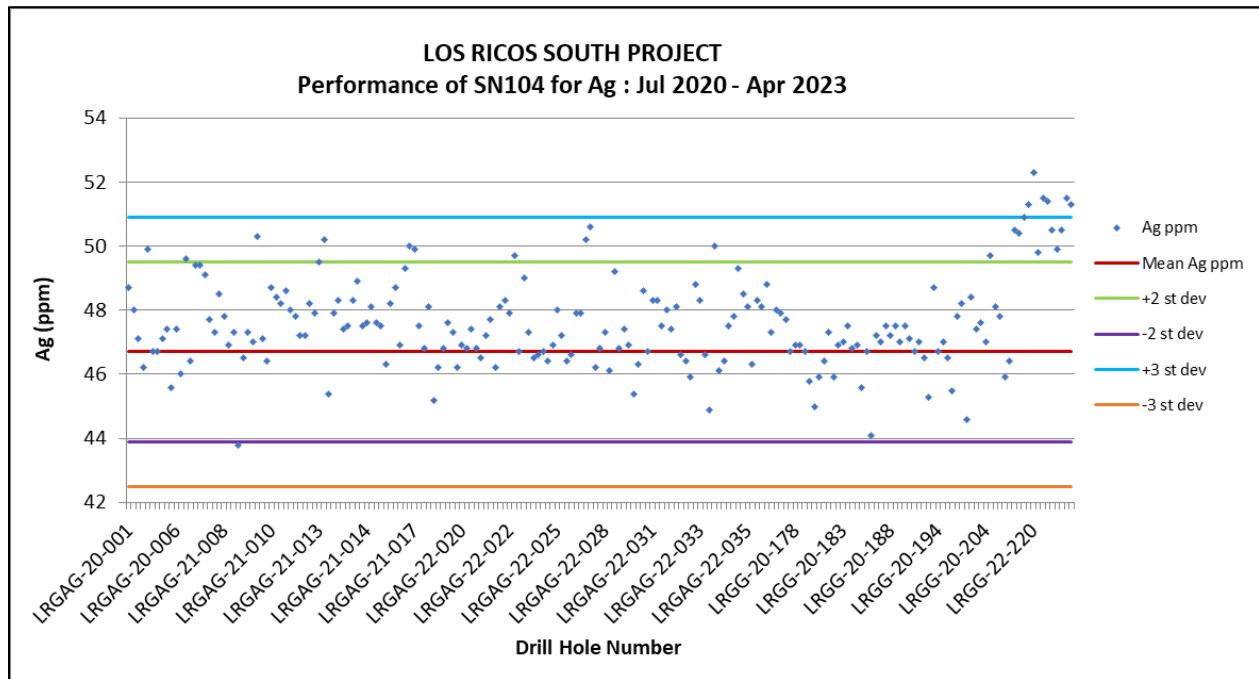
Source: P&E (2023)

**FIGURE 11.12 PERFORMANCE OF AU SN104 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



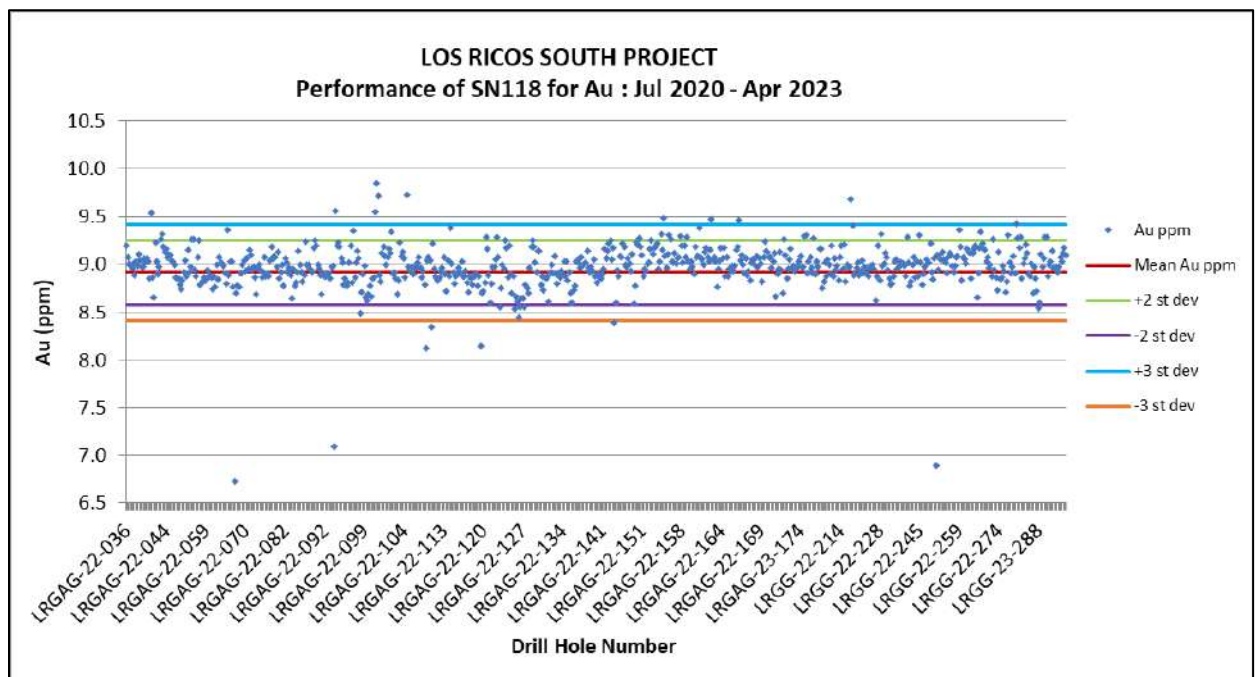
Source: P&E (2023)

**FIGURE 11.13 PERFORMANCE OF AG SN104 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



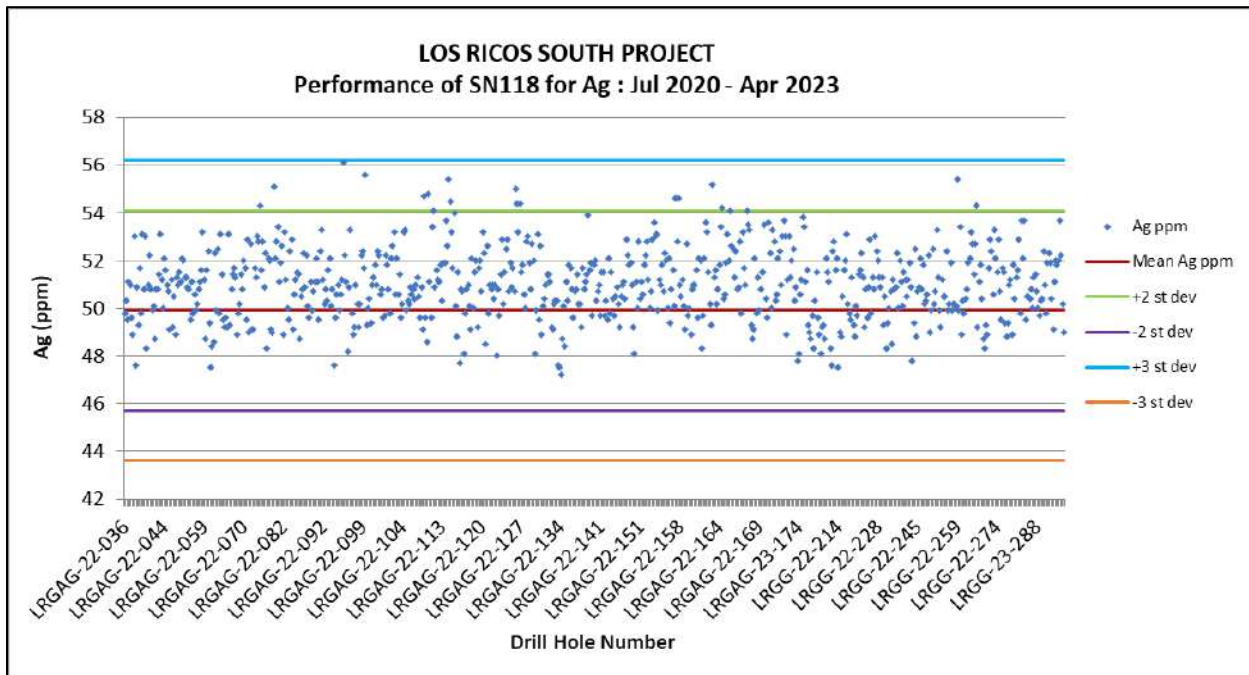
Source: P&E (2023)

**FIGURE 11.14 PERFORMANCE OF AU SN118 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



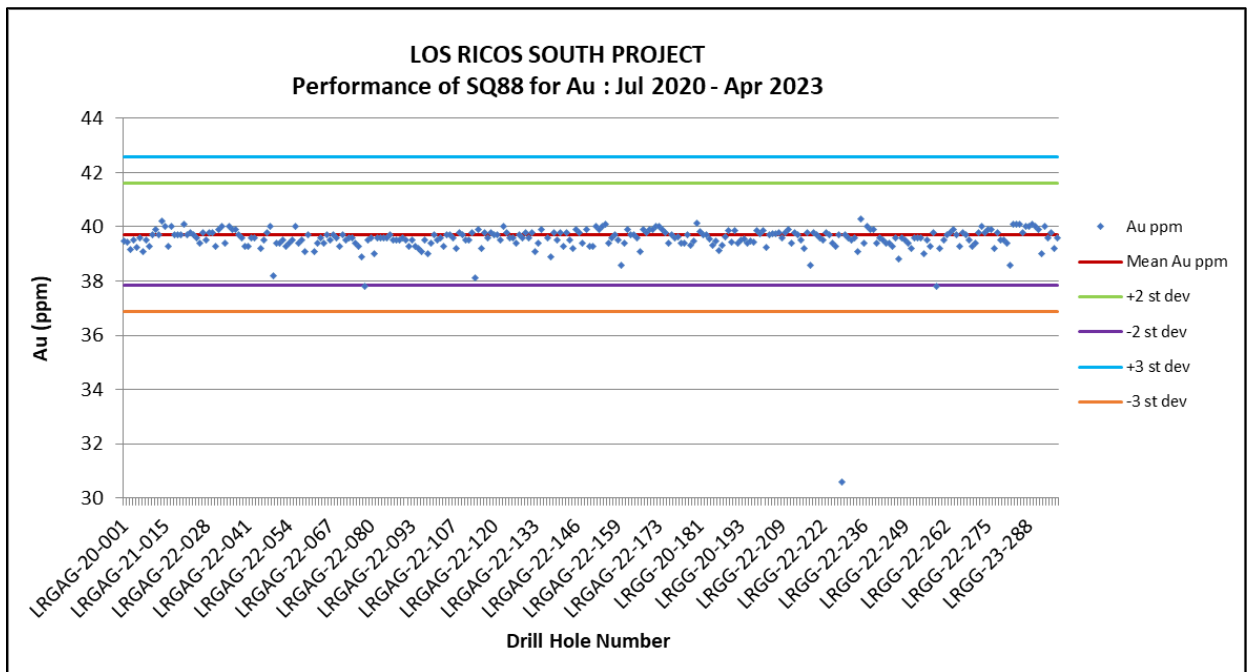
Source: P&E (2023)

**FIGURE 11.15 PERFORMANCE OF AG SN118 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



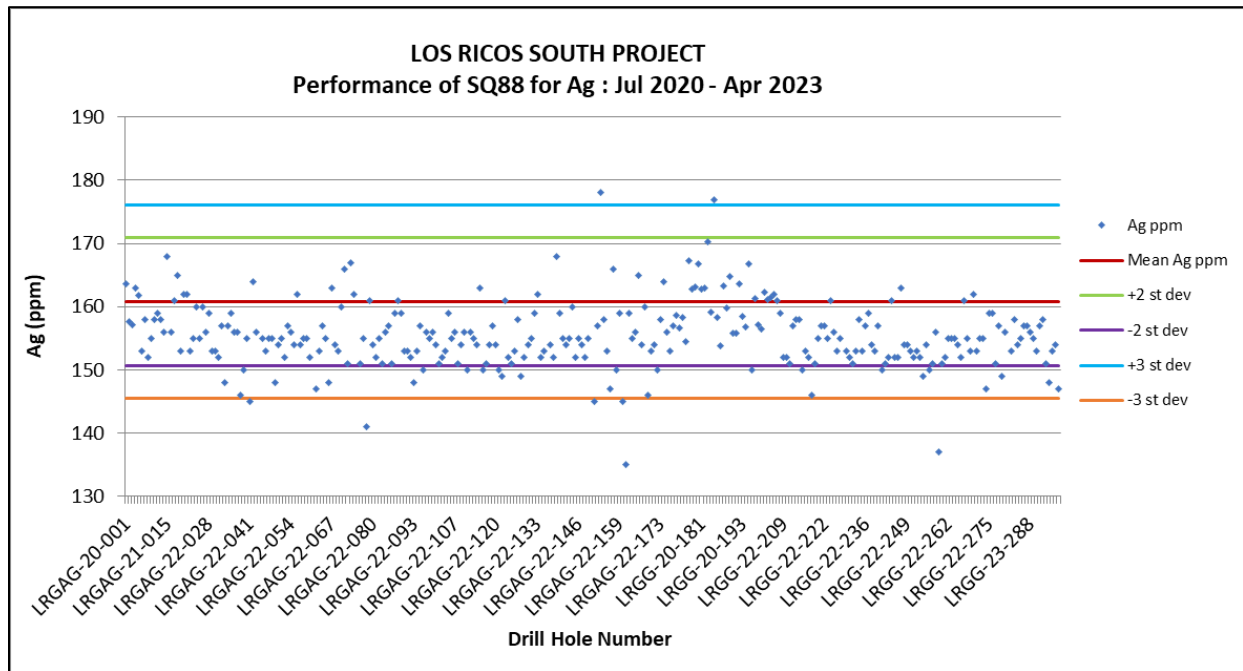
Source: P&E (2023)

**FIGURE 11.16 PERFORMANCE OF AU SQ88 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



Source: P&E (2023)

**FIGURE 11.17 PERFORMANCE OF AG SQ88 CRM FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



Source: P&E (2023)

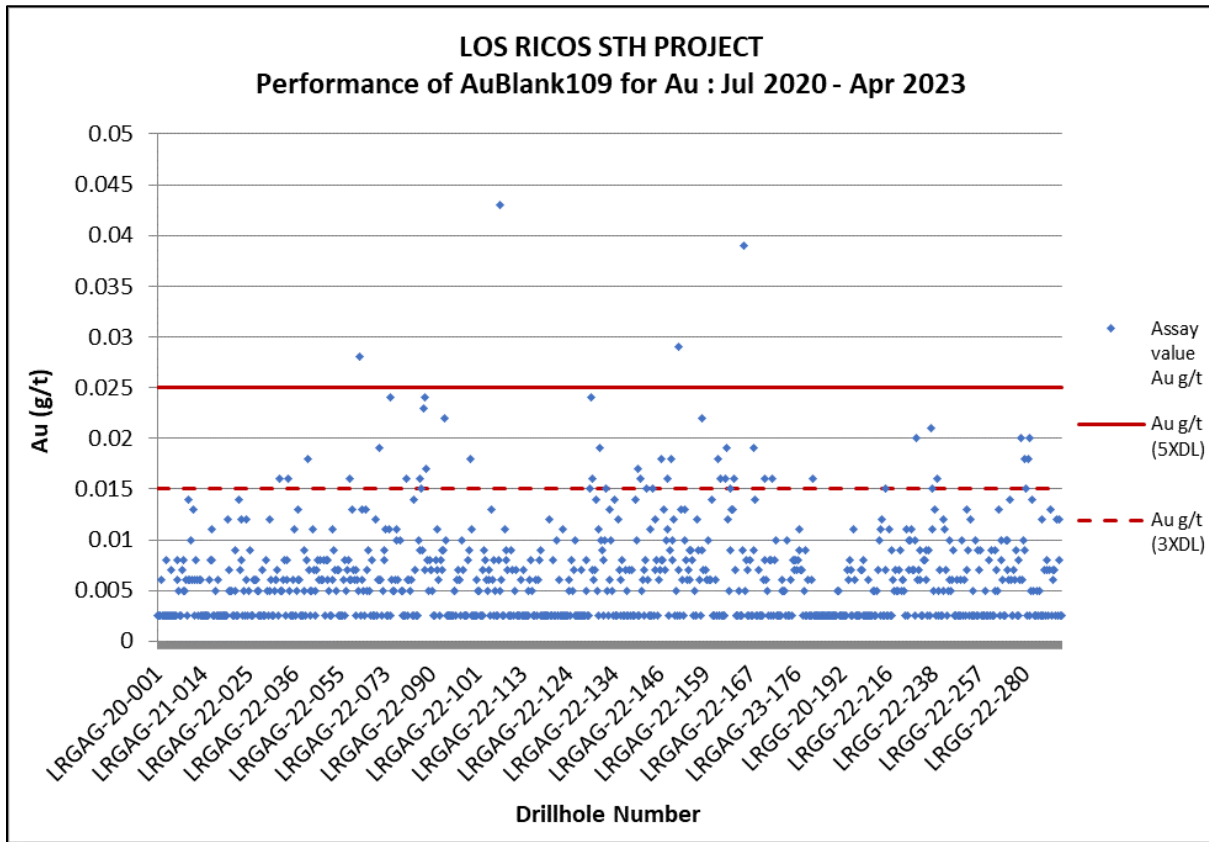
### 11.6.2 Performance of Blanks

All blank data for gold and silver were reviewed by the Author. If the assayed value in the certificate was indicated as being less than detection limit, the value was assigned the value of one-half the detection limit for data treatment purposes. An upper tolerance limit of five times the detection limit was set. There were 892 data points to examine.

All silver data and the vast majority of gold data plots at or below the set tolerance limits (Figures 11.18 and 11.19) and the Author does not consider the very few gold outliers to be significant to the integrity of the data.



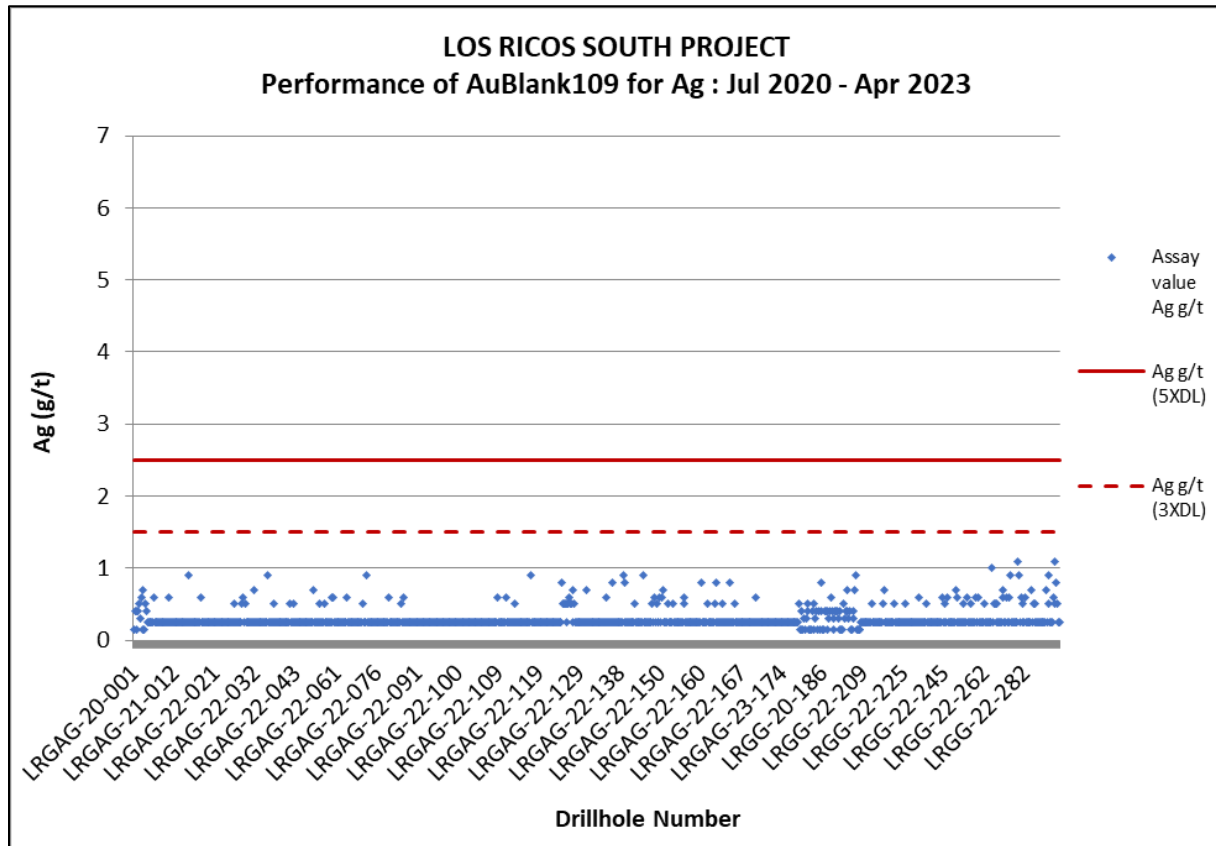
**FIGURE 11.18 PERFORMANCE OF AU BLANK FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



Source: P&E (2023)



**FIGURE 11.19 PERFORMANCE OF AG BLANK FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**

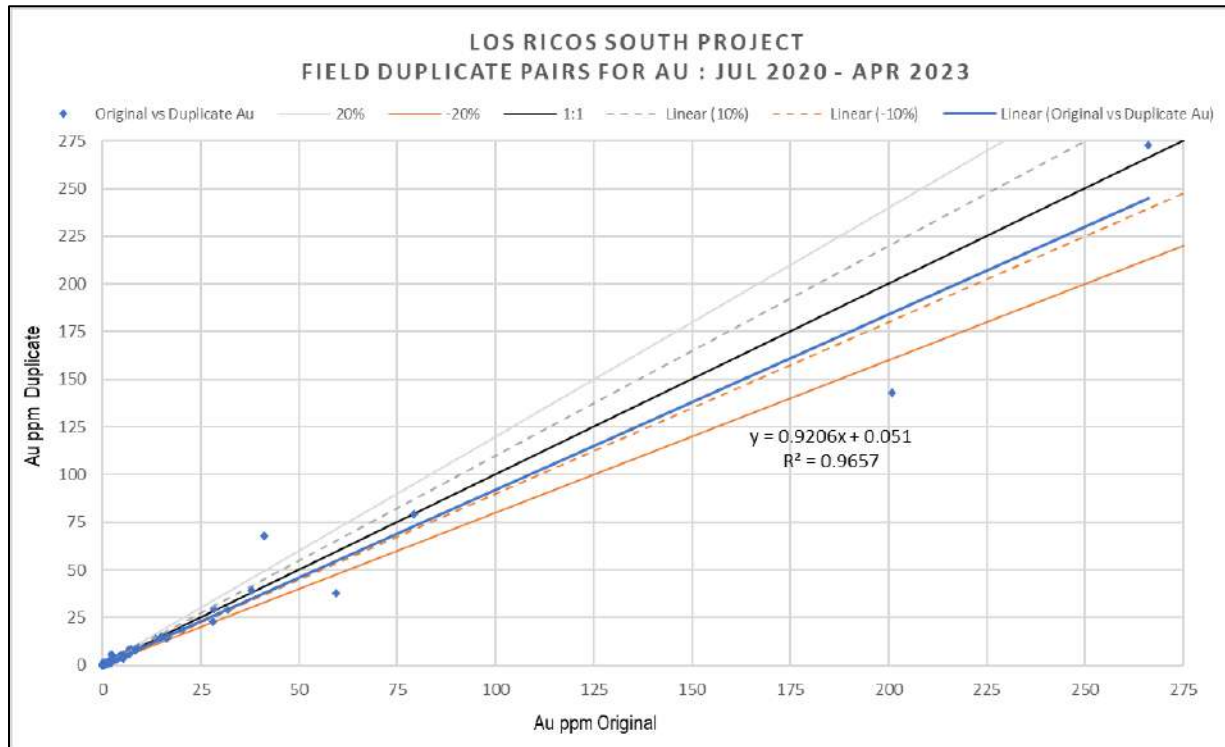


Source: P&E (2023)

### 11.6.3 Performance of Field Duplicates

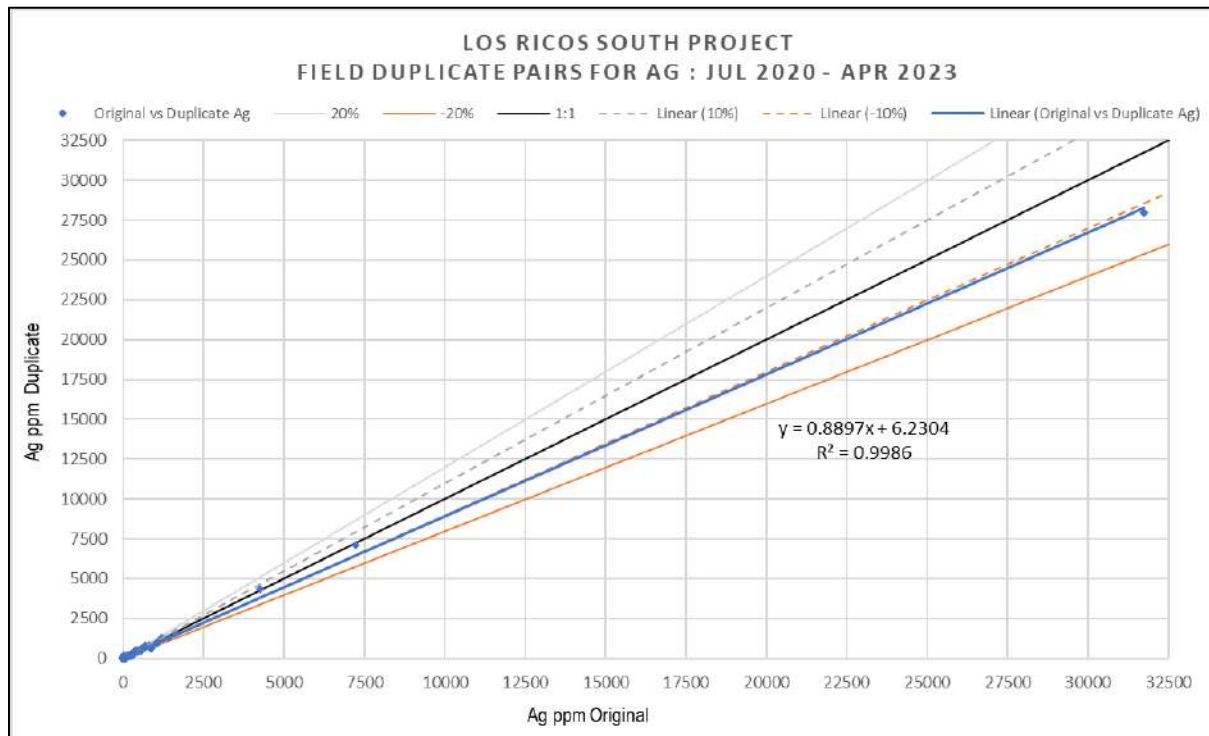
Field duplicate data for gold and silver were examined for the July 2020 to April 2023 drilling at Los Ricos South. There were 892 duplicate pairs in the dataset. Data were scatter graphed (Figures 11.20 and 11.21) and found to have acceptable precision at the field level for gold and silver, with R-squared values of 0.966 and 0.999, respectively, and the majority of the data plotting close to the 1:1 line.

**FIGURE 11.20 PERFORMANCE OF AU FIELD DUPLICATES FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



Source: P&E (2023)

**FIGURE 11.21 PERFORMANCE OF AG FIELD DUPLICATES FOR JUL 2020 – APR 2023 DRILLING AT PROJECT**



Source: P&E (2023)

## 11.7 2023 UMPIRE SAMPLING PROGRAM

GoGold carried out a comprehensive umpire sampling program of a selection of the 2020 to 2022 Los Ricos South drill core samples, to verify the primary labs' (Actlabs and ALS) results. A total of four drill holes from the 2020 program, two from the 2021 program and 23 from the 2022 program were chosen to verify, ensuring that the selected drill holes were spread out along the length of the deposit, extended to depth and also temporally represented the 2020 to 2022 drilling.

The entire sampled length of all 29 selected drill holes were re-assayed at an umpire laboratory, with samples starting in barren hanging wall material, transitioning to the mineralized zone and ending up in the low grade to barren footwall. Re-assaying entire drill hole lengths in this manner also gives a good representation of all ranges of grades within the deposit.

A total of 985 pulp samples from the original drill core samples were assayed at Bureau Veritas, representing approximately 5% of the primary samples. Each batch assayed contained a range of QC samples, including CRMs and blanks and samples were assayed by the same method as the original primary laboratory analysis.

Table 11.6 outlines a summary of drill holes selected for umpire sampling and pulp samples sent for assaying.

The Author has reviewed the umpire assay results for the 2020 to 2022 drilling at Los Ricos South, and comparison was made between the primary lab results and the umpire lab results with the aid of line graph and scatter plots (Figures 11.22 and 11.23). The data indicate no material biases in the gold and silver assays between the primary and umpire laboratories.

<b>Drill Hole ID</b>	<b>Area</b>	<b>Umpire Lab</b>	<b>Sample From</b>	<b>Sample To</b>	<b>Pulp Samples</b>
LRGG-20-177	El_Abra	Bureau Veritas	LRC-012559	LRC-012614	56
LRGG-20-185	El_Abra	Bureau Veritas	LRC-013010	LRC-013035	26
LRGG-20-193	El_Abra	Bureau Veritas	LRC-013752	LRC-013785	34
LRGG-20-203	El_Abra	Bureau Veritas	LRC-014089	LRC-014107	19
LRGG-22-216	El_Abra	Bureau Veritas	LRC-106130	LRC-106150	21
LRGG-22-228	El_Abra	Bureau Veritas	LRC-108117	LRC-108137	21
LRGG-22-232	El_Abra	Bureau Veritas	LRC-107446	LRC-107467	22
LRGG-22-241	El_Abra	Bureau Veritas	LRC-106601	LRC-106629	29
LRGG-22-256	El_Abra	Bureau Veritas	LRC-108412	LRC-108427	16
LRGG-22-262	El_Abra	Bureau Veritas	LRC-109041	LRC-109081	41
LRGG-22-271	El_Abra	Bureau Veritas	LRC-142126	LRC-142148	23
LRGAG-21-008	El_Aguila	Bureau Veritas	LRC-095435	LRC-095466	32

**TABLE 11.6**  
**UMPIRE SAMPLING PROGRAM DRILL HOLES**

<b>Drill Hole ID</b>	<b>Area</b>	<b>Umpire Lab</b>	<b>Sample From</b>	<b>Sample To</b>	<b>Pulp Samples</b>
LRGAG-21-016	El_Aguila	Bureau Veritas	LRC-096355	LRC-096382	28
LRGAG-22-027	El_Aguila	Bureau Veritas	LRC-097139	LRC-097170	32
LRGAG-22-030	El_Aguila	Bureau Veritas	LRC-099209	LRC-099248	40
LRGAG-22-044	El_Aguila	Bureau Veritas	LRC-097455	LRC-097510	56
LRGAG-22-054	El_Aguila	Bureau Veritas	LRC-097693	LRC-097718	26
LRGAG-22-063	El_Aguila	Bureau Veritas	LRC-097901	LRC-097929	29
LRGAG-22-072	El_Aguila	Bureau Veritas	LRC-102168	LRC-102188	21
LRGAG-22-085	El_Aguila	Bureau Veritas	LRC-102299	LRC-102317	19
LRGAG-22-095	El_Aguila	Bureau Veritas	LRC-103232	LRC-103263	32
LRGAG-22-106	El_Aguila	Bureau Veritas	LRC-103653	LRC-103688	36
LRGAG-22-112	El_Aguila	Bureau Veritas	LRC-103844	LRC-103868	25
LRGAG-22-120	El_Aguila	Bureau Veritas	LRC-106052	LRC-106086	35
LRGAG-22-134	El_Aguila	Bureau Veritas	LRC-140424	LRC-140476	53
LRGAG-22-144	El_Aguila	Bureau Veritas	LRC-142344	LRC-142366	23
LRGAG-22-156	El_Aguila	Bureau Veritas	LRC-142614	LRC-142664	51
LRGAG-22-161	El_Aguila	Bureau Veritas	LRC-143402	LRC-143464	63
LRGAG-22-173	El_Aguila	Bureau Veritas	LRC-147188	LRC-147263	76
<b>Total</b>					<b>985</b>

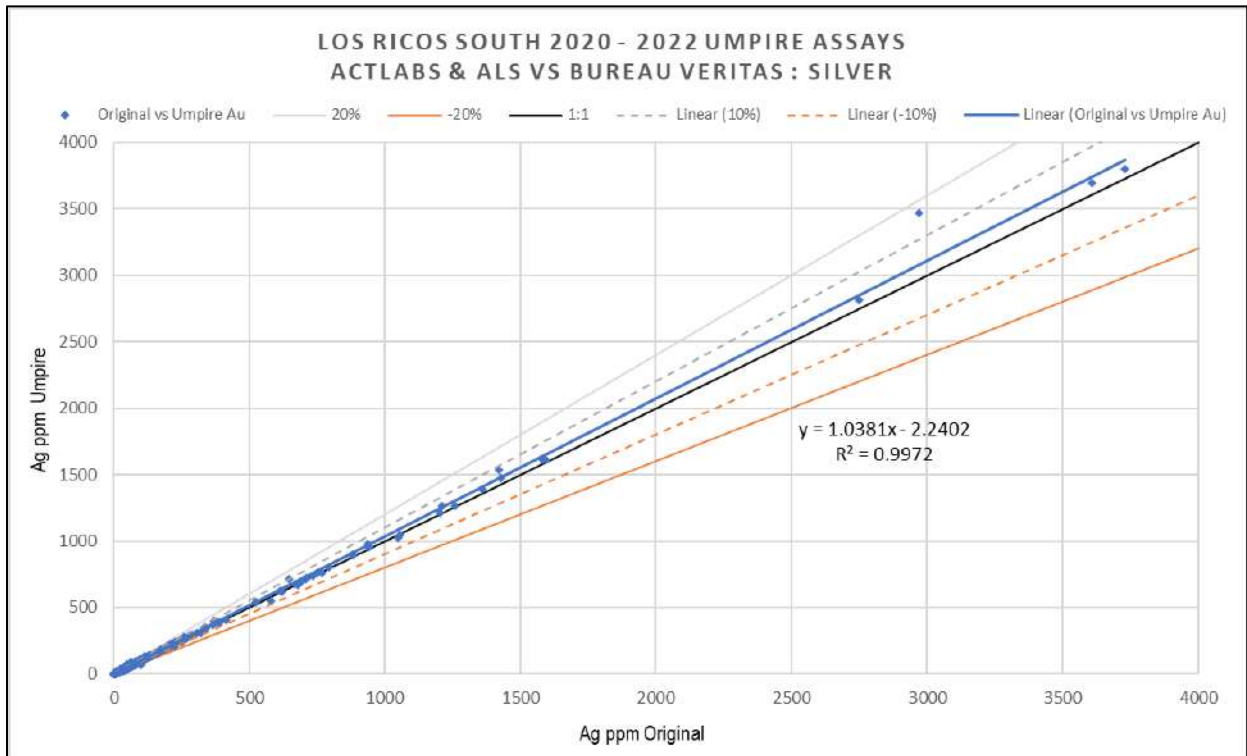
Source: P&E (2023)

**FIGURE 11.22 2023 UMPIRE SAMPLING ASSAYS FOR AU**



Source: P&E (2023)

**FIGURE 11.23 2023 UMPIRE SAMPLING ASSAYS FOR AG**



Source: P&E (2023)

## **11.8 CONCLUSIONS**

It is the Author's opinion that sample preparation, security and analytical procedures for the Los Ricos South Project drill programs were adequate, and that the data is of good quality and satisfactory for use in the current Mineral Resource Estimate. It is recommended that GoGold continue with the current sampling and data collection procedures as further drilling at the Project is undertaken to further define, increase confidence and expand on the current Mineral Resource.

## **12.0 DATA VERIFICATION**

### **12.1 DATABASE VERIFICATION**

The Project data is stored in the GVMapper database. This database is secure, operated by a single database administrator in the SPM office located in Hermosillo, Mexico and contains data checking routines designed to prevent common data entry errors.

Assay data for the legacy RC holes completed by TUMI Resources in 2003-2005 were checked by the Authors. The review consisted of checking the digital data against source documents to ensure proper data entry, as well as data integrity checks for overlapping intervals, data beyond total depth of hole. No errors were identified during the review. To date, none of the original assay certificates from the TUMI work have been viewed by the Authors.

Industry standard validation checks were carried out on the supplied databases, and minor corrections made where necessary. The Authors typically validate a Mineral Resource database by checking for inconsistencies in naming conventions or analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, and missing interval and coordinate fields.

The Authors also conducted verification of the Los Ricos South Project drill hole assay database for gold and silver in 2021, by comparison of the database entries with assay certificates, supplied to the Authors by Actlabs Guadalupe, Zacatecas, México, in comma-separated values (csv) format and Portable Document Format (pdf) format. Assay data ranging from 2019 through 2020 were verified for the Project. Approximately 87% (9,053 out of 10,435 samples) of the database was checked for gold and silver, and approximately 81% (3,019 out of 3,750 samples) of the constrained data were verified. Very few minor discrepancies were noted in the data, which were not material to the data.

The Authors again conducted verification of the Los Ricos South drill hole assay database for gold and silver in 2023, by comparison of the database entries with assay certificates, downloaded directly by the Authors from the ALS Webtrieve™ online portal in comma-separated values (csv) format and Portable Document Format (pdf) format. Assay data ranging from 2020 through 2023 were verified for the Project. Approximately 87% (17,219 out of 19,725 samples) of the updated data was verified for gold and silver. Very few minor discrepancies were noted in the data, which were not material to the data.

### **12.2 P&E SITE VISIT AND INDEPENDENT SAMPLING**

The Los Ricos South Project was visited by independent P&E Qualified Persons Mr. Fred Brown, P.Geo., August 15 and 16, 2019, and by Mr. David Burga, P.Geo., May 15 and 16, 2023, for the purpose of completing site visits that included review of the logging and drill core storage facilities, drilling sites, outcrops, GPS location verifications, discussions and due diligence sampling.

Mr. Brown collected ten samples from nine diamond drill holes during the August 15 and 16, 2019 site visit. All samples were selected from drill holes completed in 2019.

A selection of broad mineralized intervals was sent in advance by Mr. Burga to GoGold and these intervals were pulled from storage and brought to the drill core facility in advance of Mr. Burga's arrival. GoGold employees were not aware of specific samples to be taken ahead of the site visit. Mr. Burga collected 12 samples from 12 diamond drill holes completed in 2020, 2022 and 2023.

A range of high, medium, and low-grade samples were selected from the stored drill core. Samples were collected by taking a quarter of the remaining half drill core, with the other quarter drill core returned to the drill core box. Individual samples were placed in plastic bags with a uniquely numbered tag, after which all samples were collectively placed in a larger bag and delivered by Mr. Brown to the ALS Global laboratory in Guadalajara, Mexico (2019) or by Mr. Burga to the Activation Laboratories Ltd. facility in Ancaster, Ontario (2023) for analysis.

Samples at ALS and Actlabs were analyzed for gold and silver by fire assay with a gravimetric finish. Bulk density determinations were determined by pycnometer on all 2019 samples and by water displacement on all 2023 samples.

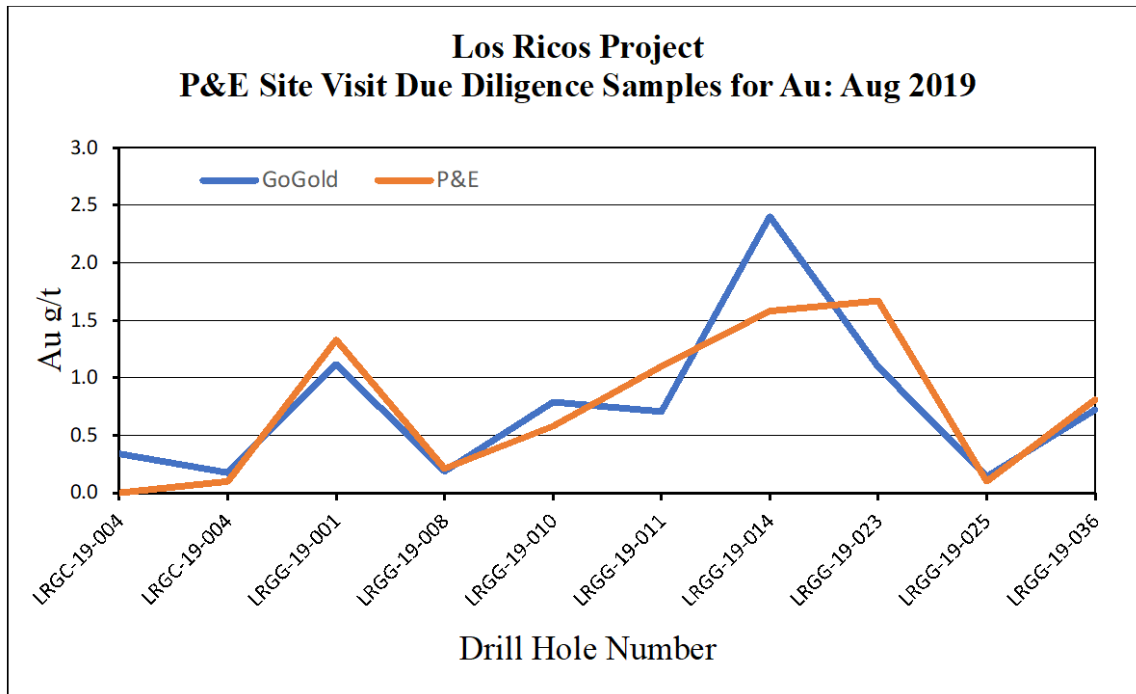
ALS has developed and implemented strategically designed processes and a global quality management system at each of its locations. The global quality program includes internal and external inter-laboratory test programs and regularly scheduled internal audits that meet all requirements of ISO/IEC 17025:2017 and ISO 9001:2015. All ALS geochemical hub laboratories are accredited to ISO/IEC 17025:2017 for specific analytical procedures.

The Actlabs' Quality System is accredited to international quality standards through ISO/IEC 17025:2017 and ISO 9001:2015. The accreditation program includes ongoing audits, which verify the QA system and all applicable registered test methods. Actlabs is also accredited by Health Canada. Both ALS and Actlabs are independent of GoGold and SPM.

Results of the Los Ricos South site visit verification samples for gold and silver are presented in Figures 12.1 through 12.4.

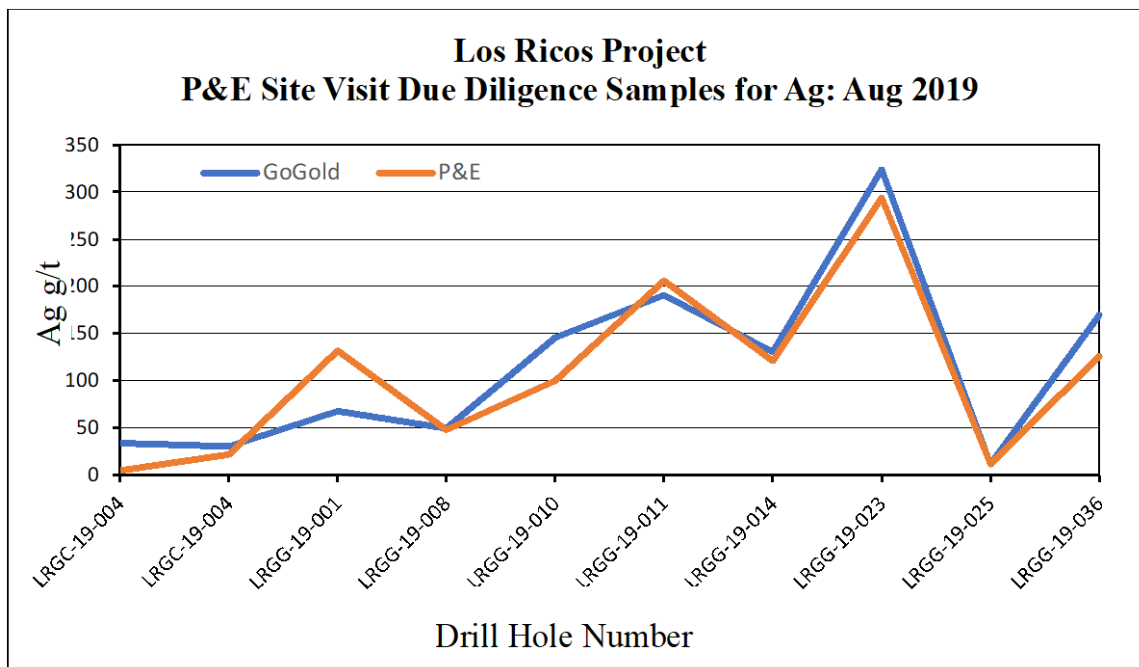


**FIGURE 12.1 RESULTS OF THE AUGUST 2019 AU VERIFICATION SAMPLES (ALS)**



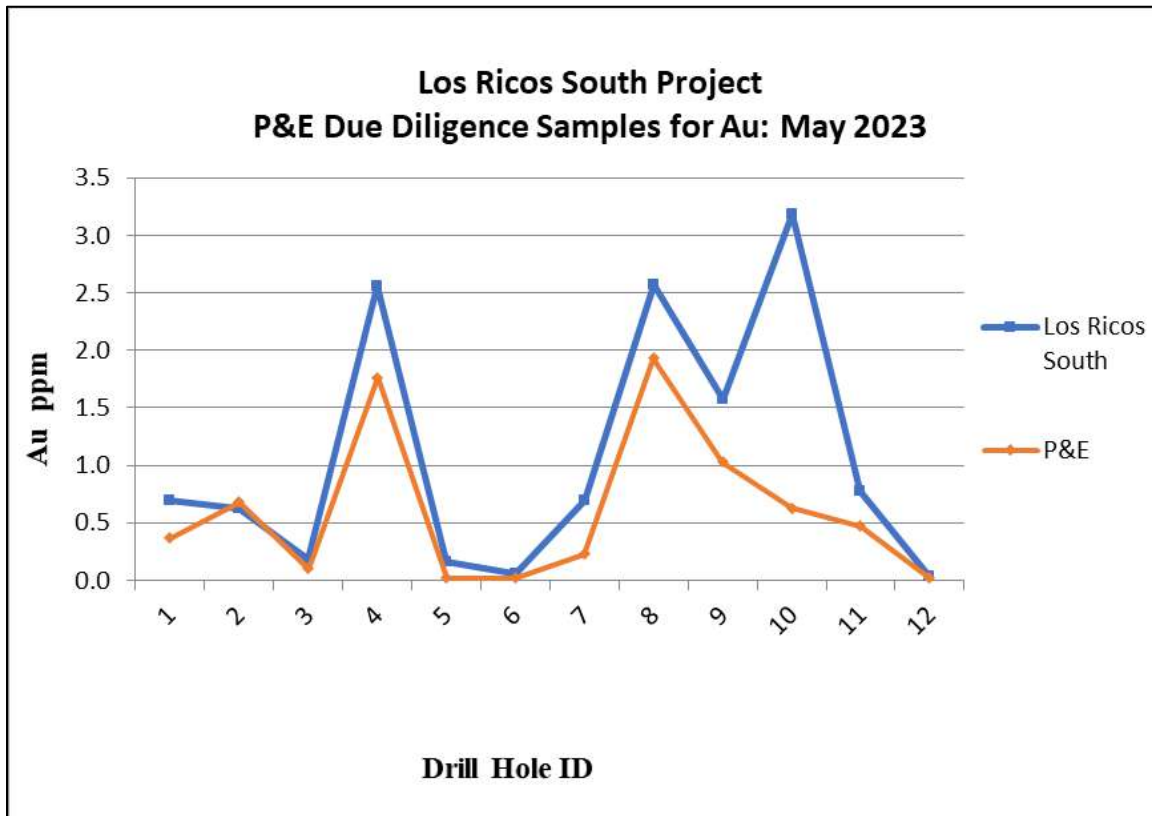
Source: P&E (2021)

**FIGURE 12.2 RESULTS OF THE AUGUST 2019 AG VERIFICATION SAMPLES (ALS)**



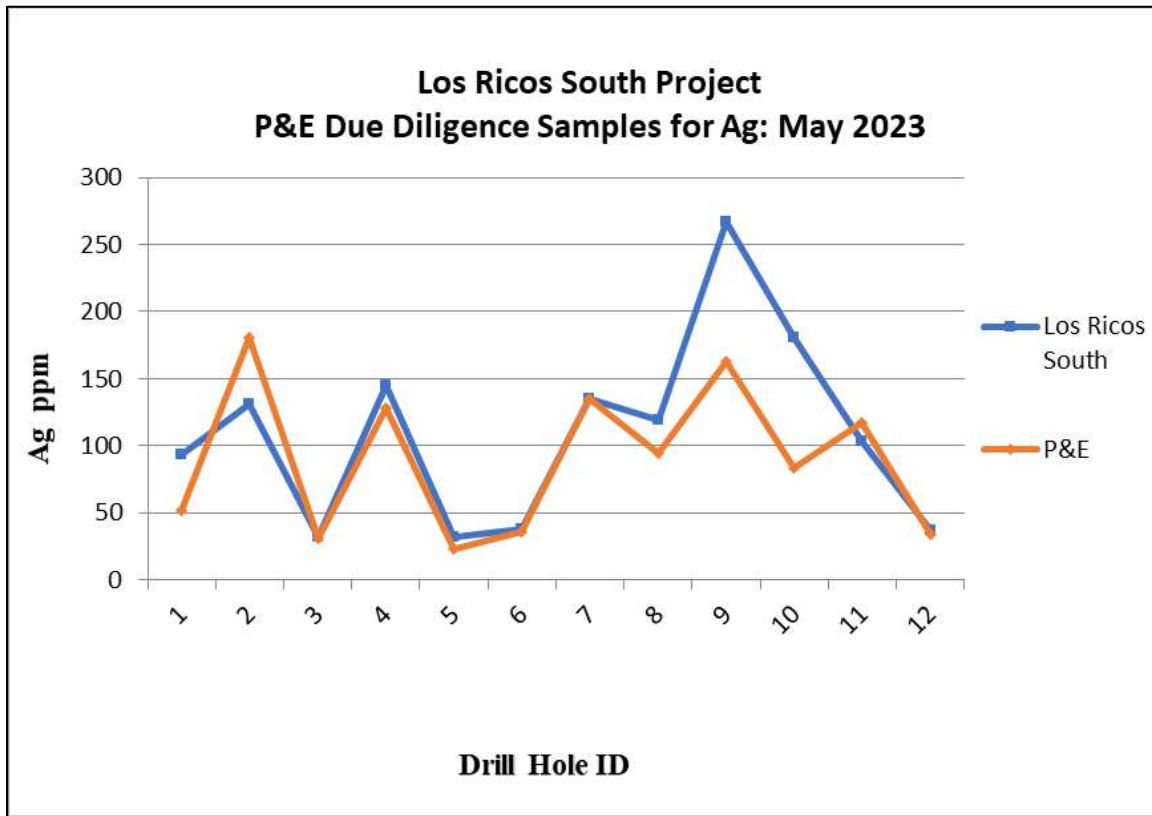
Source: P&E (2021)

**FIGURE 12.3 RESULTS OF THE MAY 2023 AU VERIFICATION SAMPLES (ACTLABS)**



Source: P&E (2023)

**FIGURE 12.4 RESULTS OF THE MAY 2023 AG VERIFICATION SAMPLES (ACTLABS)**



Source: P&E (2023)

### 12.3 CONCLUSION

The Authors consider that there is good correlation between the gold and silver assay values in GoGold’s database and the independent verification samples collected by the Authors and analyzed at ALS and Actlabs. The Authors are satisfied that sufficient verification of the drill hole data has been undertaken and that the supplied data are of good quality and appropriate for use in the current Mineral Resource Estimate.

## **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

### **13.1 METALLURGICAL TESTING SUMMARY**

Earliest metallurgical data on the Los Ricos South (“LRS”) Property comes from the Cinco Minas Mining Company (“CMMC”) which indicate the 500 tpd flotation and cyanidation processing operation had recovery rates for both silver and gold in excess of 90% between 1918 and 1930.

After GoGold acquired the LRS Concessions, preliminary testing for grinding (comminution) and cyanide leaching of the LRS mineralization was initiated at SGS Lakefield (“SGS”) located in Ontario, Canada. Samples were comprised of drill core rejects and HQ drill core from the LRS Mineral Resource. The testwork was as part of a PEA completed on the project titled “*Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico,*” filed February 22, 2021. Based on a 5,000 tpd process facility, Section 13 of the PEA report utilized a report prepared by SGS titled “*An Investigation into The Grindability and Leaching Characteristics of Samples from Los Ricos prepared for GOGOLD RESOURCES INC., Project 18113-01 – Final Report – Revision 1*” dated February 16, 2021. The samples tested in the SGS report were exclusively from the Abra Zone of the LRS site.

Commencing in 2021, Metso Outotec Canada (“Metso Outotec”) and SGS conducted advanced testwork as part of the Company’s initiative to complete an NI43-101 Pre-Feasibility Study (“PFS”) on the Project. The advanced studies were based on the preliminary process design criteria (“PDC”) and Process Flow Diagram (“PFD”) presented in the 2021 PEA with the objective to investigate the grindability and the gold and silver recovery potential. Again, the samples for this program were exclusively from the Abra (Open Pit) Zone of the LRS Project area. Results from this were summarized in a report prepared by SGS and titled “*An Investigation into the Los Ricos South Deposit prepared for GOGOLD, Project 18113-02 – Final Report*” dated March 8, 2022.

During 2023, SGS completed a new PEA level test program to investigate the gold and silver recovery potential and the grindability of the Eagle (Underground) Zone from the LRS site. Mineralogical, environmental, and solid/liquid separation and rheology testing were also completed to support the testing program. Results were summarized in a report prepared by SGS and titled “*An Investigation into the Los Ricos South Deposit prepared for GOGOLD, Project 18113-05*” dated October 13, 2023. The basis for the Project was a 1,750 tpd process facility with expansion to 4,000 tpd commencing in Year three with feed coming from both the Eagle and Abra Zones.

The results of the test programs conducted on the Abra and Eagle Zones are summarized in the following sections and referenced accordingly in Section 27 of this Report.

### **13.2 METALLURGY TESTWORK, CINCO MINAS MINING COMPANY: 1910–1911**

Two detailed reports completed on the Cinco Minas material indicate high metallurgical recoveries, greater than 90% for both gold and silver. This was done by pre-concentration (gravity) and cyanidation of tailings as well as whole feed cyanidation. Both reports conclude

that the “ore contains certain copper minerals deleterious to cyanide treatment.” At the time, pre-concentration of a saleable concentrate was recommended to reduce the upfront cyanide consumption followed by the tailings cyanidation to maximize recovery. Long retention times of greater than 48 hours and fine grinding (200 mesh – 74 microns) was indicated to give the best results. However, the reported cyanide consumptions were reported to be in range of 2 to 3 kg/tonne of feed (4.5–5.5 lb/ton) indicating a required SART (sulphidation, acidification, recycling and thickening of precipitate) into the Los Ricos process flow design. No indication and assays of copper were reported in this testwork.

Additional testing was completed post pre-concentration (gravity) of the feed followed by agitated leaching. Extraction rates were low (31.5% Ag and 16.6% Au) producing a “very fair grade” of concentrate and copper reported at 0.185%. Resultant leaching tests were poor after 72 hours of leaching, 200 mesh (74 microns) regrinding, and 10 lb (4.5 kg) of cyanide solution resulting in less than 50% recovery and cyanide consumption of over 15 lb (6.8 kg) per ton of concentrate.

Development Testing was completed as a total process, pre-concentration followed by leaching of the resultant tails, with very high feed grades as was Direct Testing with the same material and feed grade with a very rapid extraction rate. Silver was only tested during the leaching process with final gold assays on the tails.

Further testwork completed on the Cinco Minas mineralization is presented in the referenced report (Doveton, 1911) and included a description of the proposed process plant. Testwork indicates that the direct treatment of the whole mineralization feed was not recommended and impracticable due to high cyanide loss (i.e., consumption).

### **13.3 METALLURGICAL TESTWORK, GOGOLD RESOURCES INC: 2020**

Metallurgical testwork was commenced in early 2020 by SGS to determine preliminary comminution (grinding) and leaching parameters of the LRS Mineral Resource. SGS summarized results in a report titled, “*An Investigation into the Grindability and Leaching Characteristics of Samples from Losa Ricos, Project 18113-01,*” dated February 16, 2021.

Prior testwork completed by CMMC between 1910 to 1911 determined specific grinding and leaching parameters for the SGS campaign. Parameters included fine primary grinding to 200 mesh (74 microns) mesh and smaller, extended leaching residence time to ensure high silver recovery, and high cyanide addition rates (and resultant consumption). CMMC testwork also indicated a soluble copper issue and that maximum precious metal recovery is possible with high cyanide addition rates.

#### **13.3.1 Grindability Summary**

Two HQ drill core samples from the LRS site inclusive of vein and host samples, were submitted for comminution testing. The LRS Vein sample was classified as moderately soft with a Bond Crusher Work Index (“CWI”) of 7.4 kWh/t. The vein sample was shown to increase in hardness as the grind size decreased, from moderately soft at coarse size to very hard at fine size. The vein sample was also very abrasive.

Testwork indicated that the LRS host sample was significantly softer than the vein sample in terms of Bond Ball Mill Work Index (“BWI”) with results of 15.3 kWh/t and 19.7 kWh/t, respectively.

### **13.3.2 Leaching Summary**

Two composites of the drill core rejects were generated and submitted for leaching testing to determine the amenability of the composites to standard leaching conditions that focused on the extraction of both gold and silver. The 96-hour gold extractions for the composites were approximately 92% and 94% when using grind size P<sub>80s</sub> of 88 µm and 73 µm, respectively. Silver extractions for the two composites were approximately 85% and 91% and cyanide concentration was maintained at 2 g/L for the tests. The average cyanide and lime consumptions were 4.80 kg/t NaCN and 1.13 kg/t CaO.

Modified acid base accounting (“ABA”) test results classified the host material as potentially acid generating (“PAG”) and also indicated that a significant proportion of the total sulphur content reported (15%) was comprised of sulphate.

### **13.3.3 Conclusions**

The metallurgical test results were positive and illustrated that average gold and silver of extractions of approximately 93% and 88% from the two composites.

Modified ABA testing classified the LRS host material as potentially acid generating and while net acid generation (“NAG”) testing of the host material conversely reported no net acidity generated after aggressive oxidation of the sample, as it may not have completely oxidized the sulphide concentration present in the sample.

## **13.4 METALLURGICAL TESTWORK, GOGOLD RESOURCES INC: 2021**

Commencing in March 2021, PFS testwork was completed on the LRS Deposit to develop comminution data to evaluate the grindability of the material and metallurgical data to evaluate and optimize various processes for the recovery of gold and silver.

One composite and four variability samples were prepared by SGS for comminution evaluation including a full JK Drop-Weight Test (“DWT”), Bond Low-energy impact test (“CWI”), SAG Mill Comminution tests (“SMC”), Bond Rod Mill Work Index (“RWI”) and Ball Mill BWI grindability tests, and Bond Abrasion tests (“AI”). One composite and six variability samples were prepared by SGS for metallurgical evaluation including head analyses, whole feed cyanide leaching, Merrill Crowe precipitation, and cyanide recovery via SART.

Flotation was also briefly examined as was mineralogical and environmental examinations of both fresh material and leach tailing samples to support the testing program. SGS summarized results in a report titled, “*An Investigation into the Los Ricos South Deposit, Project 18113-02,*” dated March 8, 2022.

### **13.4.1 Mesto-Outotec Testwork Summary**

Separate samples were provided by SGS to Metso-Outotec for third party solid/liquid separation testing. Thickening testwork was conducted on the Pre-Leach sample to determine sizing criteria and information for dewatering as well as thickener overflow clarity, underflow density, underflow yield stress and flocculant testing and selection.

Mesto-Outotec also conducted filtration testwork on Pre-Leach and leaching tailings samples. Testwork included vacuum filtration on the Pre-Leach sample and pressure filtration for the Leach tails sample to determine filtering characteristics of each sample and the cake washing potential of the leach tails samples.

#### **13.4.1.1 Thickening Testwork**

Testwork utilized Metso Outotec's bench scale 99 mm diameter thickener test unit to determine the achievable operational parameters of a high-rate thickener when feeding the sample. Results demonstrated that the LRS material can be successfully thickened to high densities.

#### **13.4.1.2 Filtration Testwork**

Vacuum filtration testwork was conducted on a pre-leach sample using Metso Outotec's Pannevis Belt (Buchner) vacuum bench scale unit to mimic the characteristics of large-scale vacuum filters. Results indicated that filtrate quality improved with increasing tightness of filter cloths. While Maro S30 had the clearest filtrate, Maro S60 provided the best filter quality and cake forming time, and was therefore utilized for further testing.

Four cake thicknesses testwork was conducted with varying volumes of slurry to determine the impact on cake moisture and filtration rate. Four cake thicknesses testwork was also conducted with varying drying times to determine the impact on cake moisture and filtration rate. Vacuum belt filtration at approximately 55% feed solids resulted in cake moisture of 19-22wt% (w/w).

Pressure filtration was conducted on a leach tails sample using Metso Outotec's Labox 100 bench scale unit to mimic the characteristics of large-scale pressure filters and membrane filter presses ("MFP"). Testwork demonstrated that the filter cakes released off the filter cloth easily and no cloth blinding was noticed during testing. The filtrate had some ultra-fines pass through the cloth while the cake was forming however, became clear after a few seconds.

Testwork on the relationship between filtration rate and cake moisture during the air-drying time indicated filtration rate increased as drying time reduced.

The leach sample demonstrated sensitivity to compaction which impacted the flow of wash liquid through the cake. The wash assays focused on the removal of silver, gold, and copper for further downstream processing via Merrill Crowe and SART recovery. A wash ratio of 1.44 m<sup>3</sup>/t achieved a total filter efficiency of 99.9% for the removal of silver, 99.4% for copper and 91.6% for gold.

Leach tailings are required to be “dry enough” for stacking purposes and contain less than 2 ppm cyanide in the remaining pour water. Due to the small amount of liquid present in the cake and limited quantity available for analysis, a full-scale filter operation may result in higher cyanide content than the values presented in the testwork.

### **13.4.2 SGS Testwork Summary**

The SGS program involved one Master Composite and four variability composites for the comminution testing and one Master Composite and six variability samples for the metallurgical testing.

Samples were received from GoGold in three separate shipments. The first shipment on March 25, 2021 consisted of 28 boxes of drill core samples and were composited into four variability comminution samples. The second shipment on April 8, 2021 consisted of nine boxes of HQ drill core samples and were composited together to form a comminution Master Composite sample.

The third and final shipment on April 21, 2021 consisted of four pails and were composited to form a metallurgical Master Composite and six variability samples.

#### **13.4.2.1 Comminution Test Program**

The hardness of the material was measured through grindability testing and the objective of the program was to provide information for sizing grinding circuit. Testwork performed on the composite and variability samples categorized the samples as medium or moderately hard.

The single Master Composite sample was composited for the following:

- JK Drop-Weight test (DWT);
- Bond Low-Energy impact test (CWI);
- Bond Rod Mill grindability test (RWI);
- Bond Ball Mill grindability test (BWI); and
- Bond Abrasion test (AI).

The four variability samples were composited for the following:

- SAG Mill Comminution (SMC);
- JKSimMet Simulation;
- Bond Rod Mill grindability test (RWI);
- Bond Ball Mill grindability test (BWI); and
- Bond Abrasion test (AI).

The JK drop-weight test, which measures the appearance function of the material under a range of impact breakage conditions, categorized the hardness of the sample as medium with an abrasion characteristic of medium hardness. The Bond Low-Energy Impact test was performed to determine the Bond Impact Work Index (“CWI”), which can be used with Bond's Third Theory of comminution to calculate net power requirements for sizing crushers. Results categorized the hardness of the sample as medium.



The SAG Mill Comminution (“SMC”) testing was performed on the four variability samples with three samples categorized as medium and the fourth sample as moderately hard. The SMC test is an abbreviated drop-weight test, and the generated parameters are used in the JKSimMet simulation. SGS conducted the JKSimMet computer simulation to investigate the response to the parameters, including, mill dimension, mill throughput, ball sizes and charges, flowsheet configurations, SAG classification technique, SAG grate (and pebble port) configuration, material hardness, SAG feed particle size distribution, and mill speeds (mineralization hardness versus mill speed).

Bond rod mill grindability testing was performed on the Master Composite and the four variability samples. The Bond rod mill work index (“RWI”) is widely used for rod mill or primary ball mill sizing and results for the five samples categorized the hardness of the samples as moderate. Bond ball mill grindability testing was also performed on the Master Composite and the four variability samples. The Bond ball mill work index (“BWI”) is widely used for mill sizing and results categorized the hardness of the samples as hard.

Bond abrasion testing was performed on the Master Composite and the four variability samples. The Bond abrasion test measures the abrasion index (“AI”) to estimate steel media and liner consumption for crushers, rod mill, and ball mills. Results for the five samples categorized the samples as moderately hard to hard.

#### **13.4.2.2 Metallurgical Head Characterization**

Head sample analyses were completed on the composites to determine the precious metal concentration as well as the content of other elements. Assays included gold and silver in duplicate by fire assay, sulphur speciation for total sulphur and sulphide sulphur by Leco, copper by atomic absorption, and a semi-quantitative Inductively Coupled Plasma (“ICP”) scan analysis.

Duplicate sample cuts of the Master Composite and six variability samples were submitted for both gold and silver by fire assay. The Master Composite sample returned a gold head grade of 1.32 g/t and a silver head grade of 125 g/t. The gold head grades for the six variability samples ranged from 0.75 g/t to 2.65 g/t and the silver head grades ranged from 48.8 g/t to 436 g/t.

Representative pulverized subsamples of the Master Composite and six variability samples were submitted for sulphur speciation including total sulphur and sulphide sulphur by Leco analysis as well as copper analysis by atomic absorption. Total sulphur tests for all samples returned results ranging from 0.07% to 0.31% and sulphide sulphur tests returned 0.09% 0.30%. Copper analysis of the samples returned results ranging from 0.027% to 0.22%.

Representative pulverized subsamples of the Master Composite and the six variability samples were also submitted for a semi-quantitative ICP scan analysis and a subsample of the Master Composite was submitted for a semi-quantitative XRD analysis via the Rietveld method.

### **13.4.2.3 Metallurgical Testing**

Metallurgical testwork was conducted on the LRS Deposit to develop metallurgical data to evaluate and optimize various processes for the recovery of gold and silver, including whole feed cyanide leaching, Merrill Crowe precipitation and cyanide recovery.

The metallurgical testing included:

- Whole feed cyanidation testing;
- Bulk leach cyanidation testing;
- Merrill Crowe testing;
- SART testing;
- SART barren cyanidation testing;
- Rougher Kinetic Flotation; and
- Leach Tailing Diagnostic Testing.

Thirteen whole feed bottle roll cyanidation tests were conducted on the Master Composite sample to optimize the leach conditions, while maximizing the gold and silver extractions. Tests evaluated various leach parameters such as the effect of grind size, sodium cyanide (“NaCN”) addition, aeration, the addition of lead nitrate, leach retention time, as well as leaching with and without subsampling. A 14<sup>th</sup> test was later performed to extend the retention time to determine the maximum gold and silver extractions attainable under the optimized leach conditions established.

Utilizing test results and optimized conditions from the whole feed cyanidation testwork on the Master Composite, a single test was conducted on each of the six variability samples to determine the gold, silver, and copper extractions. Testwork produced very good final (96-hour) gold and silver extractions, ranging from 94% to 97% for gold and from 82% to 88% for silver. These extractions produced gold tailing grades ranging from 0.03 g/t to 0.15 g/t and silver tailing grades ranging from 10.0 g/t to 72.7 g/t. The average copper extraction was 80%, producing an average tailing grade of 0.041%.

#### **Bulk Cyanidation Testing**

Based on results from the cyanide leach testwork on the Master Composite, bulk leach testing was completed to provide leach solution for subsequent Merrill Crowe, SART and CND testing. Bulk testwork on the Master Composite sample produced gold, silver, and copper extractions of 94%, 80%, and 84%, respectively with tailing grades of 0.10 g/t for gold, 29.6 g/t for silver, and 0.037% for copper.

The pregnant leach solution (“PLS”) produced during the bulk leach testwork precipitated the gold and silver with zinc dust. The Merrill-Crowe process requires complete clarification and deaeration of the pregnant leach solution before the addition of zinc dust. The resulting precipitate was recovered via filtration and the whole operation was conducted under an inert atmosphere.

The results from the preliminary tests showed that the gold and silver were efficiently extracted/precipitated from the PLS solution at a zinc stoichiometric ratio of 5 or more. Copper

removal ranged from 12.8% to 24.7%. Utilizing these results, a bulk Merrill Crowe test was conducted using a 10 times stoichiometric zinc addition to precipitate the gold and silver and produce a feed solution for SART testing. Results showed gold and silver were efficiently extracted/precipitated out of the PLS solution at 98% for gold and 98.5% for silver. The copper removal was determined to be 12.8%. The barren solution was stored for subsequent SART testing.

The regeneration of free cyanide from the barren Merrill Crowe solution by the SART process was undertaken using bulk Merrill Crowe barren solution. The cyanide is liberated in the process as HCN gas in solution, which is then neutralized with lime to form calcium cyanide for recycle to the leach plant. SART testing determined that the WAD cyanide associated with copper and zinc in the Merrill Crowe barrens is fully converted to free cyanide at pH 4 with a sodium hydrosulphide (“NaHS”) stoichiometric addition ranging from 100% to 125%. Copper and zinc precipitation efficiencies were approximately 100%.

Cyanidation test on the Master Composite using the SART barren solution produced gold and silver extractions of 95% and 85%, respectively, with the final gold and silver tailing grades at 0.08 g/t and 21.2 g/t, respectively.

A kinetic rougher flotation test was conducted on ground sample of the metallurgical Master Composite and included the collection of five timed rougher concentrates and a rougher tailing, which were submitted for gold, silver, and sulphur assay. The rougher tailing was also submitted for a size analysis. Test results on the Master Composite showed that the combined five rougher concentrates had a mass pull was 12.9%, yielding gold, silver, and sulphur recoveries of 74%, 74% and 83%, respectively. These combined rougher concentrates produced gold, silver, and sulphur grades of 7.86 g/t, 771 g/t, and 0.96%, respectively. The final rougher tailing gold, silver, and sulphur grades were reported as 0.41 g/t, 40 g/t, and 0.03%, respectively.

A duplicate test was conducted without the separate collection of each individual rougher concentrate. Results showed the combined rougher concentrate had a mass pull of 18.3%, yielding gold, silver, and sulphur recoveries of 75%, 75%, and 83%, respectively. These combined rougher concentrates produced gold silver and sulphur grades of 7.77 g/t, 560 g/t, and 0.65%, respectively. The final rougher tailing gold, silver, and sulphur grades were reported as 0.59 g/t, 41 g/t, and 0.03%, respectively.

To improve the gold and silver extractions from the whole feed leaching of the Master Composite testing, a flotation test followed by fine grinding of the rougher concentrate and then proportionately recombining it with the rougher tailing was subjected to a cyanidation test. Results showed final 96-hour gold and silver extractions of 92% and 82%, and gold and silver tailing grades of 0.09 g/t and 23.6 g/t, respectively. This test produced NaCN and lime consumptions of 4.81 kg/t and 0.20 kg/t, respectively. Copper extraction was 83% giving a tailing grade of 0.034%.

Results were almost identical to those produced in the straight whole feed grind and cyanidation of the Master Composite sample. Therefore, no further flotation testing was pursued on the samples.

A leach tailing sample from the whole feed cyanidation testing completed on the metallurgical Master Composite samples was selected for a diagnostic leaching test program to identify the possible associations of the unrecovered gold and silver in the leach tailings. Results indicated that the remaining gold and silver was associated with acid soluble minerals such as pyrrhotite, calcite, dolomite, galena, calcium carbonate, hematite, ferrites and various sulfosalts (Ag-Cu-Sulfosalt, Ag-Cu-Pb-Sulfosalt, etc.) and associated with possible remaining sulphides such as pyrite, arsenopyrite, or marcasite or gold and silver assumed to be locked in silicates, very fine sulphides or various sulfosalts that are themselves locked within silicates.

In addition to investigating by diagnostic leaching, a leach tailing sample was submitted for a mineralogical evaluation including Quantitative Evaluation of Minerals by Scanning Electron Microscopy (“QEMSCAN”) for the bulk characterizations and further analysis of polished section by Tescan Scanning Electron Microscope (“SEM”). From the QEMSCAN testing, the data shows the Master Composite leach tailing sample is mainly comprised of quartz with minor amounts of feldspars sericite/muscovite and trace levels of chlorite, amphibole, clays, and Fe-Oxides.

From the SEM evaluation the remaining silver in the Master Composite leach tailing was not recovered during cyanidation due to an abundance of refractory sulfosalts and galena (low Ag), and very fine <5 µm grain sizes, and the coated/oxidized surfaces on the larger acanthite particles.

#### **13.4.2.4 Environmental Testing**

Environmental testing conducted on a head sample and two leach tailing samples of the Master Composite include modified acid base accounting (“ABA”) and net acid generation (“NAG”) testing.

ABA testing was completed on a head sample and two cyanide leach tailing samples of the Master Composite to help determine the propensity of the tailings/waste rock to generate acidic conditions and provide input parameters for the recommended kinetics tests. Test results showed that for the head sample, the cyanidation leach tailing and bulk cyanidation leach, the solids are non-acid generating and have net acid consumption potential.

NAG testing was completed on a head sample and two cyanide leach tailing samples of the Master Composite to determine the balance between the acid producing and acid consuming components of the tailings/waste rock samples. Test results indicated that on complete oxidation of the samples, acid is not detected as the net result and thus they are non-acid generating and have net acid consumption potential.

#### **13.4.2.5 Conclusions**

Comminution testing performed on the Master Composite and variability samples were categorized as medium or moderately hard after undergoing a full JK Drop-Weight Test (DWT), Bond Low-energy impact test (CWI), SAG Mill Comminution tests (SMC), Bond Rod Mill and Ball Mill grindability tests (RWI and BWI), and Bond Abrasion tests (AI).

The gold and silver concentrations in the Master Composite and the six variability samples ranged from 0.75 g/t to 2.65 g/t and 49 g/t to 436 g/t, respectively. Total sulphur grades ranged from 0.07% to 0.31%. While most of the sulphur present was as sulphide sulphur, the low sulphide sulphur range of 0.09% to 0.30% would indicate the samples are not overly refractory in nature.

Whole feed cyanidation testing on the Master Composite produced optimized conditions and the resulting relatively high gold and silver extractions for the tests under these conditions for Master Composite and the six variability samples ranged from 92% to 97% and 82% to 88%, respectively.

Merrill Crowe testing determined that gold and silver were efficiently extracted/precipitated out of the PLS solution at a 5X stoichiometric addition of zinc, with the percent precipitation >99% under optimum conditions. SART testing determined that the WAD cyanide associated with copper and zinc in the Merrill Crowe barrens is fully converted to free cyanide at pH 4 with a sodium hydrosulphide (NaHS) stoichiometric addition ranging from 100% to 125%. Copper and zinc precipitation efficiencies were approximately 100%.

Cyanidation testing using recycled SART barren solution produced gold and silver extractions of 95% and 85%, respectively, which were the same as the recoveries achieved with fresh NaCN.

Rougher kinetic flotation was able to produce a good rougher concentrate, however, after regrinding the flotation concentrate to 20 µm and recombining with the flotation tailing and cyanide leaching, no benefit was seen with the gold and silver extractions, as they were the same as found in the whole feed leaching testing.

A leach tailing sample was evaluated to determine the possible remaining gold and silver associations. The combined mineralogical and diagnostic results indicated that the remaining gold and silver was associated with acid soluble minerals such as pyrrhotite, calcite, dolomite, galena, calcium carbonate, hematite, ferrites and various sulfosalts and associated with possible remaining sulphides such as pyrite, arsenopyrite, or marcasite or gold and silver assumed to be locked in silicates, very fine sulphides or various sulfosalts that are themselves locked within silicates.

A preliminary environmental assessment on both a fresh feed sample and a leach tailing sample using ABA static technique showed that the solids are non-acid generating and have net acid consumption potential. NAG testing results also indicated that the samples were non-acid generating and have net acid consumption potential.

Summary of test results are presented in Table 13.1.

**TABLE 13.1**  
**MAJOR SUMMARY OF TEST RESULTS**

<b>Item</b>	<b>Unit</b>	<b>Value</b>	<b>Source</b>
Anticipated Overall Gold Recovery	%	95	SGS-18113-02- Rev 1
Anticipated Overall Silver Recovery	%	86	SGS-18113-02- Rev 1
Anticipated Overall Copper Recovery	%	60	SGS-18113-02- Rev 1
Leach Feed Grind Size	P <sub>80</sub> , microns	74	SGS-18113-02- Rev 1
NaCN Consumption	kg/t	1.25	SGS-18113-02- Rev 1
Lime Consumption	kg/t	0.80	SGS-18113-02- Rev 1
Pre-Aeration	hours	4	SGS-18113-02- Rev 1
Cyanide Leach	hours	96	SGS-18113-02- Rev 1
Pre-Leach Thickener Underflow	%	55	Metso - Outotec
Pre-Leach Filtration Cake Moisture	%	19-22	Metso - Outotec
Tailings Filtration – Cake Moisture	%	14.5-15	Metso - Outotec
Peak Wash Ratio	cu.mt/t	1.44	Metso - Outotec

*Source: D.E.N.M. (2022)*

### **13.5 METALLURGY TESTWORK, GOGOLD RESOURCES INC: 2023**

SGS conducted a testwork program on the Eagle samples with the objectives of developing comminution data to evaluate the grindability of the material and metallurgical data to evaluate various processes for the recovery of gold and silver. Mineralogical, environmental, and solid/liquid separation and rheology testing were also examined on various samples to support the testing program.

#### **13.5.1 Sample Receipt and Preparation**

Composite samples were subjected to comminution and metallurgical testwork for the grindability and gold and silver recovery potential of the LRS Eagle Deposit. Samples were provided by GoGold and delivered to SGS in three separate shipments.

##### **13.5.1.1 Comminution Sample**

One shipment of samples was received and composited into four comminution drill hole composite samples for SAG Mill Comminution tests (“SMC”), Bond Ball Mill grindability tests (“BWI”), and Bond Abrasion tests (“AI”). Drill Hole 023, Hole 027, Hole 037 and Hole 076 were comprised and prepared for comminution testing. Comminution rejects from these four composites were utilized for some metallurgical testing.

The samples were crushed to 1¼ inch and blended with 5 kg split out, crushed to ¾ inch and forwarded to AI testing. Another 10 kg was split out and crushed to -6 mesh and forwarded to BWI testing. From the remaining nominal 1¼ inch material, 100 rocks in the 27 to 32 mm range were selected and forwarded to SMC testing.

Comminution rejects from these four composites were utilized for some metallurgical testing.

### **13.5.1.2 Metallurgical Sample**

Two shipments of samples were received consisting of a total of three skids of pails with each pail containing several individual interval drill hole samples. These samples were used to form three drill hole composite samples for metallurgical testing, drill Hole 012, Hole 031 and Hole 014/035 (Interval sample from Hole 014 and Hole 035 were combined to form a single drill hole composite sample.)

Once intervals were removed and combined, the samples were screened at 10 mesh with any plus material crushed to -10 mesh.

All -10 mesh material for each drill hole composite was combined, blended, and then riffled/rotary split into various test charges to fulfill the metallurgical test requirements as well as subsamples for head analysis, mineralogy, and environmental characterization.

### **13.5.2 Comminution Test Program**

The hardness of the material is measured through grindability testing and testwork was conducted with the aim of providing the necessary information for sizing the grinding circuit.

#### **13.5.2.1 SAG Mill Comminution (SMC) Test**

For the SMC test, drill cores are cut into ¼ cylinders using a diamond saw and subsequently performed as per the standard drop-weight test procedure, except that only one size fraction is tested. The test generates the A and the b parameters, which are used in the JKSimMet simulations.

From the SMC tests performed on the four-hole composite samples, the A x b parameter values ranged from 35.2 to 43.0 for samples, resulting in a harness percentile ranging from 55 to 73, or medium to moderately hard, when these values are compared to the JK Tech database.

#### **13.5.2.2 Bond Ball Mill Grindability Test**

The Bond ball mill grindability test requires 10 kg of minus 3.35 mm (6 mesh) material and sample weight requirements may vary depending on the specific gravity of the material being tested. The Bond ball mill work index (BWI) has been widely used for mill sizing, however, is also utilized in computer simulation.

The Bond ball mill grindability work index results ranged from 16.2 kWh/t to 20.6 kWh/t, giving a hardness percentile range from 72 to 95, putting these samples in the moderately hard to very hard range when compared to the SGS database.

### **13.5.2.3 Bond Abrasion Test**

The Bond abrasion test measures the abrasion index, which can be used to estimate steel media and liner consumption for crushers, rod mill, and ball mills. The test requires 1.6 kg of material in the range 12.7 to 19 mm (1/2" to 3/4"), which can be generated from a 5 kg sample.

The Bond abrasion test results ranged from 0.468 g to 1.037 g, giving a percentile of abrasiveness ranging from 73 to 98, putting these samples in the moderately abrasive to very abrasive range when compared to the SGS database.

### **13.5.3 Mineralogy – XRD Rietveld Analysis**

Head samples of the three metallurgical and four comminution drill hole composites were submitted for a semi-quantitative XRD analysis via the Rietveld method. All minerals identified by X-ray diffraction were reported as a weight percent distribution and grouped into:

- Major (>30%);
- Moderate (10-30%);
- Minor (2-10%); and
- Trace (<2%).

For the three metallurgical composite samples, minerals identified as major included quartz, while minerals identified as moderate included orthoclase and calcite.

For the four comminution composite samples, minerals identified as major included quartz and for one composite hole, orthoclase. Minerals identified as moderate were orthoclase for three drill hole composites and calcite for one composite.

### **13.5.4 Sample Characterization**

Head sample analyses were completed on the metallurgical and comminution composites to determine the precious metal concentration as well as the content of other elements. Assays included gold (Au) and silver (Ag) in duplicate by fire assay, sulphur speciation for total sulphur (ST) and sulphide sulphur (S<sup>-</sup>) by Leco, copper (Cu) by atomic absorption, and a semi-quantitative Inductively Coupled Plasma (ICP) scan analysis.

#### **13.5.4.1 Gold and Silver Analysis**

Duplicate 30 g sample cuts of ~75 µm pulverized material for the samples were submitted for both gold (Au) and silver (Ag) by fire assay.

Seven Composite Samples:

- Gold Head Grades: 0.41 g/t to 5.02 g/t; and
- Silver Head Grades: 39 g/t to 203 g/t.



### 13.5.4.2 Sulphur Speciation

Representative pulverized (<75 µm) subsamples were submitted for sulphur speciation including total sulphur (S<sub>T</sub>), and sulphide sulphur (S<sup>=</sup>) by Leco analysis.

Seven Composite Samples:

- S<sub>T</sub> Results: 0.04% to 2.28%; and
- S<sup>=</sup> Results: 0.05% to 2.20%.

### 13.5.4.3 Individual Copper Analysis

Representative pulverized (<75 µm) subsamples were submitted for individual copper (Cu) analysis by atomic absorption.

Seven Composite Samples:

- Cu Results: 0.03% to 0.66%.

### 13.5.4.4 Semi-Quantitative ICP Scan Analysis

Representative pulverized (<75 µm) subsamples were submitted for a semi-quantitative ICP scan analysis. Results are presented in Table 13.2.

TABLE 13.2 ICP SCAN ANALYSIS SUMMARY								
Element	Unit	Composite						
		Drill Hole 012	Drill Hole 031	Drill Hole 014/035	Drill Hole 023	Drill Hole 027	Drill Hole 037	Drill Hole 076
Al	g/t	6,590	7,540	5,170	5,870	4,290	13,200	5,430
As	g/t	< 30	34	52	35	33	< 30	< 30
Ba	g/t	413	79	251	96	224	156	702
Be	g/t	0.30	0.49	0.86	0.20	0.35	0.34	0.32
Bi	g/t	34	104	63	153	13	172	< 10
Ca	g/t	83,100	4,580	72,100	5,340	765	1,640	29,300
Cd	g/t	119	74.1	54.8	97.2	9.1	164.0	6.4
Co	g/t	9	14	6	11	4	14	3
Cr	g/t	37	58	49	57	88	57	44
Fe	g/t	31,200	42,300	21,300	36,200	25,500	38,900	14,900
K	g/t	606	299	657	535	360	455	1,160
Li	g/t	< 20	< 20	< 20	< 20	< 20	28	< 20
Mg	g/t	3,850	4,090	3,070	3,940	2,450	8,530	3,030
Mn	g/t	2,420	1,400	2,000	1,120	730	2,190	1,120

**TABLE 13.2  
ICP SCAN ANALYSIS SUMMARY**

Element	Unit	Composite						
		Drill Hole 012	Drill Hole 031	Drill Hole 014/035	Drill Hole 023	Drill Hole 027	Drill Hole 037	Drill Hole 076
Mo	g/t	<6	<6	<6	7	<6	6	<6
Na	g/t	23	< 20	50	51	< 20	42	130
Ni	g/t	<6	<6	<6	7	<6	7	<6
p	g/t	136	135	119	258	132	330	95
Pb	g/t	9,310	5,210	5,320	5,570	887	5,430	356
Sb	g/t	< 10	< 10	<10	< 10	< 10	< 10	< 10
Se	g/t	< 30	< 30	< 30	< 30	< 30	58	< 30
Sn	g/t	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Sr	g/t	153.0	26.9	108.0	15.4	7.9	16.7	91.5
Ti	g/t	52	40.9	47.6	42.0	69.1	60.7	77.6
Tl	g/t	< 30	< 30	< 30	< 30	< 30	< 30	< 30
V	g/t	136	183	134	150	127	114	130
Y	g/t	2.4	1.4	2.2	3.3	2.1	2.6	5.1
Zn	g/t	12,400	8,900	5,600	9,230	1,370	17,900	615

Source: SGS (2023)

### 13.5.5 Metallurgical Testing

The metallurgical testwork included whole feed cyanidation optimization, bulk leach cyanidation testing, Merrill Crowe, SART testing, gravity separation, gravity tailing cyanidation, rougher flotation, rougher flotation cyanidation and selective flotation.

#### 13.5.5.1 Whole Feed Cyanidation Testing

Whole feed cyanidation testing was conducted on three drill hole composite samples from drill Hole 012, Hole 031 and Hole 014/035. Upon completion of each test, the leach pulp was filtered and the final pregnant leach solution (“PLS”) filtrate was subsampled and submitted for analysis for gold, silver, copper, and total cyanide. The leach residues were dried, weighed, and assayed in duplicate for gold, silver, and copper. Each residue was also submitted for a confirmatory size analysis.

Initially, whole feed bottle roll cyanidation tests were conducted on three drill hole composites with the following parameters:

- P<sub>80</sub> 75 µm;
- 40% pulp density;
- 10.5-11.0 pH (maintained w/ lime);
- 4 hrs Pre-aeration w/ air sparging;

- 3 g/L NaCN; and
- 96 hr retention time.

Composite Sample Extraction Summary:

- Extractions:
  - 94% to 96% Au.
  - 76% to 92% Ag.
  - 80% to 88% Cu.
- Tailing Grades:
  - 0.16 g/t to 0.33 g/t Au.
  - 17.3 g/t to 33.8 g/t Ag.
  - 0.046% to 0.094% Cu.
- NaCN Addition 11.5 kg/t to 14.9 kg/t.
- NaCN Consumption: 6.12 kg/t to 11.5 kg/t.
- Lime Addition: 0.41 kg/t to 0.60 kg/t.
- Lime Consumption: 0.00 kg/t to 0.03 kg/t.

Later in the testing program, a pair of whole feed bottle roll cyanidation tests were conducted on the fourth drill hole composite with the following parameters:

- P<sub>80</sub> 75 µm;
- 40% pulp density;
- 10.5-11.0 pH (maintained w/ lime);
- 4 hrs Pre-aeration w/ air sparging;
- 3 g/L NaCN (24-hr 72-hr naturally decay); and
- 96 hr retention time.

Composite Sample Extraction Summary:

- Extractions:
  - 89% to 92% Au.
  - 72% to 88% Ag.
  - 82% Cu.
- Tailing Grades:
  - 0.13 g/t to 0.17 g/t Au.
  - 0.25 g/t to 54 g/t Ag.
  - 0.07% Cu.
- NaCN Addition 13.0 kg/t to 23.6 kg/t.
- NaCN Consumption: 9.06 kg/t to 11.0 kg/t.
- Lime Addition: 0.72 kg/t to 0.85 kg/t.
- Lime Consumption: 0.00 kg/t.

### 13.5.5.2 Bulk Cyanidation Testing

Based on the results from the initial whole feed cyanidation leach testing, a 30 kg bulk leach was completed on each composite sample to provide ample leach solution for subsequent Merrill Crowe/SART testing and leached pulp for solid/liquid separation testing.

### Bulk Leaching Parameters:

- P<sub>80</sub> 75 µm;
- 40% solids;
- 10.5-11.0 pH (maintained w/ lime);
- 4 hrs Pre-aeration w/ air sparging;
- 3 g/L NaCN (24-hr 72-hr naturally decay); and
- 96 hr retention time.

Solution subsamples were taken periodically throughout the tests to monitor the gold and silver dissolution rate. Upon completion of the tests, a subsample of the leach pulp was filtered. The final PLS filtrate was submitted for analysis for gold, silver, copper, iron, ICP scan analysis and cyanide speciation.

The solids from the subsample were split with one half dried, weighed, and sampled in duplicate for gold, silver, and copper, while the other half was wet bagged and submitted for environmental analysis including modified acid/base accounting (“ABA”) and net acid generation (“NAG”). The residue was also submitted for a confirmatory size analysis. The remaining leached pulp was split into two equal portions and stored in a walk-in refrigerator for future use for Merrill Crowe/SART testing and solid/liquid separation testing.

### Composite Sample Extraction Summary:

- Extractions:
  - 82% to 92% Au.
  - 77% to 86% Ag.
  - 77% to 79% Cu.
- Tailing Grades:
  - 0.21 g/t to 0.80 g/t Au.
  - 16.2 g/t to 46.8 g/t Ag.
  - 0.23% to 0.48% Cu.
- NaCN Addition 10.0 kg/t to 14.9 kg/t.
- NaCN Consumption: 95.87 kg/t to 12.1 kg/t.
- Lime Addition: 0.48 kg/t to 1.34 kg/t.
- Lime Consumption: 0.00 kg/t to 1.03 kg/t.

The final PLS solution produced the following cyanide speciation results:

- CN<sub>T</sub> 2,600 mg/L to 4,390 mg/L.
- CN<sub>WAD</sub> 2,200 mg/L to 4,190 mg/L.
- CN<sub>free</sub> 980 mg/L to 1,504 mg/L.
- CNS 950 mg/L to 1,300 mg/L.
- CNO 16 mg/L to 26 mg/L.

### 13.5.5.3 Merrill Crowe Testing

Gold and silver were precipitated with zinc dust from the pregnant leach solutions (“PLS”) produced in the bulk leach cyanidation testing completed on the composites. The Merrill-Crowe

process requires complete clarification and deaeration of the pregnant leach solution before the addition of zinc dust. The resulting precipitate was recovered via filtration. The whole operation was conducted under an inert atmosphere.

Preliminary tests MC-1A to MC-1C utilized PLS from bulk leach test, BL-1, and assayed 1.65 mg/L gold and 68.8 mg/L silver. Results showed that the gold and silver were efficiently extracted/precipitated from the PLS solution at a zinc stoichiometric ratio of 5 or more, 100% and greater than 99%, respectively.

Preliminary tests MC-2A to MC-2C utilized PLS from bulk leach test BL-2 and assayed 3.53 mg/L gold and 77.5 mg/L silver. Results showed that the gold and silver were efficiently extracted/precipitated from the PLS solution at a zinc stoichiometric ratio of 5 or less, producing greater than 95% and greater than 99%, respectively. Testwork on this sample at the 10 times zinc stoichiometric ratio demonstrated poor results, producing gold and silver extractions of 0% for gold and 71.4% for silver. Testing was repeated to confirm results and the subsequent testing produced similar extraction results of 0% for gold and 47.6% for silver.

Preliminary tests MC-3A to MC-3C utilized PLS from bulk leach test BL-3 and assayed 1.98 mg/L gold and 111 mg/L silver. Results showed that the gold and silver were efficiently extracted/precipitated from the PLS solution at a zinc stoichiometric ratio of 5 or more, 100% for both.

Based on preliminary Merrill Crowe testing results, a bulk Merrill Crowe test was conducted on six samples of PLS solution from the bulk leach cyanidation tests for each of the three drill hole composite samples:

- Hole 012 (BL-1);
- Hole 014/035 (BL-3); and
- Hole 031 (BL-2).

A bulk Merrill Crowe test was performed on each to remove the gold and silver and produce a Merrill Crowe barren or feed solution for SART testing. The tests were performed using the same procedure as the preliminary tests.

The bulk Merrill Crowe testing showed gold and silver were efficiently extracted/precipitated out of the leach PLS solution, with percent extractions ranging from 98% to 100% for gold and 99% to 100% for silver.

The final barren leach solutions (“BLS”) produced cyanide speciation results ranging from 3,390 mg/L to 4,590 mg/L for total cyanide (CN<sub>T</sub>), 2,400 mg/L to 3,990 mg/L for weak acid dissociable cyanide (CN<sub>WAD</sub>), 1,500 mg/L to 1,800 mg/L for free cyanide (CN<sub>free</sub>), 970 mg/L to 1400 mg/L for thiocyanate (CNS) and 23 mg/L to 29 mg/L for cyanate (CNO). The barren solution was stored for subsequent SART testing.

Results from the bulk Merrill Crowe tests and barren solution cyanide speciation assays are presented in Table 13.3 and Table 13.4.

**TABLE 13.3  
BULK MERRILL CROWE TEST SUMMARY**

Composite ID	Bulk CN Leach ID	Sample ID	Zinc Stoichiometric Addition Times	Test Volume (L)	Assay (mg/L)		Extraction	
					Au (mg/L)	Ag (mg/L)	Au (%)	Ag (%)
Drill Hole 012	BL-1	MC-BL1 Barren	10	6.0	<0.05	0.83	100.0	98.8
	-	Feed PLS	-	-	1.65	68.8	-	-
Drill Hole 031	BL-2	MC-BL2 Barren	5	6.0	0.09	0.36	97.5	99.5
	-	Feed PLS	-	-	3.53	77.5	-	-
Drill Hole 014/ 035	BL-3	MC-BL3 Barren	10	6.0	<0.05	0.2	100.0	99.8
	-	Feed PLS	-	-	1.98	111	-	-

Source: SGS (2023)

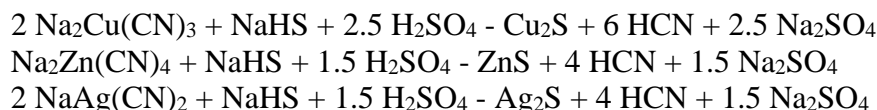
**TABLE 13.4  
BULK MERRILL CROWE CYANIDE SPECIATION SUMMARY**

Drill Hole Composite ID	Test ID	BLS Assays					
		CN <sub>T</sub> mg/L	CN <sub>WAD</sub> mg/L	CN <sub>free</sub> mg/L	CNS mg/L	CNO mg/L	Fe mg/L
012	MC-BL1	3,390	2,400	1,600	970	23	69
031	MC-BL2	4,590	3,990	1,500	1,400	29	192
014/ 035	MC-BL3	4,590	2,800	1,800	1,100	24	187

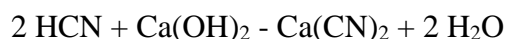
Source: SGS (2023)

#### 13.5.5.4 SART Testing

Using the Merrill Crowe barren solutions, the regeneration of free cyanide was undertaken by the SART process. In the process, the chemical reactions for the precipitation of copper, zinc and residual silver with NaHS as Cu<sub>2</sub>S, ZnS and Ag<sub>2</sub>S, are as follows:



The cyanide is liberated in the process as HCN gas in solution, which is then neutralized with lime to form calcium cyanide for recycle to the leach plant:



The optimum pH for the SART process is approximately a pH of 4.

A series of three small batch SART tests (1 L) were conducted on each sample to examine the effect of pH and NaSH addition. Upon completion, a SART barren solution subsample was removed and submitted for assay. The remaining pulp was filtered to recover the copper sulphide (Cu<sub>2</sub>S) precipitate and the remaining SART barren solution was re-neutralized to pH 10 with lime.

The barren solutions products were analyzed for Au, Ag, Cu, Zn, CNT, CN<sub>free</sub>, and CNWAD. Acid and lime (for re-neutralization) consumptions were also determined.

Results determined that the CN<sub>free</sub> recovery ranged from 99% to 161%, performed at a sodium hydrosulphide (NaHS) stoichiometric addition ranging from 100% to 125% and pH 4. Detailed results from the SART testwork for the three drill hole composites are presented in Table 13.5 through Table 13.7.

<b>TABLE 13.5</b>											
<b>HOLE 012 COMPOSITE SART TEST SUMMARY</b>											
<b>Sample</b>	<b>NaHS Stoichiometric Addition (%)</b>	<b>H<sub>2</sub>SO<sub>4</sub> Addition (g/L)</b>	<b>Re-neutralize Lime Addition (g/L)</b>	<b>Solution Analysis (mg/L)</b>					<b>CN<sub>free</sub> Recovery (%)</b>	<b>Extraction</b>	
				<b>CN<sub>T</sub></b>	<b>CN<sub>WAD</sub></b>	<b>CN<sub>free</sub></b>	<b>Zn</b>	<b>Cu</b>		<b>Zn</b>	<b>Cu</b>
SART-1 Barren	100	5.70	5.55	2,600	2,330	2,371	3.99	9.29	99	97.8	99.2
SART-2 Barren	110	3.40	4.39	3,190	2,800	2,530	11.7	8.99	105	93.6	99.3
SART-3 Barren	125	4.67	4.35	3,190	2,800	2,596	50.0	8.53	108	72.5	99.3
MC-BL1 Barren	-	-	-	3,390	2,400	1,800	182	1,230	-	-	-

Source: SGS (2023)

<b>TABLE 13.6</b>											
<b>HOLE 031 COMPOSITE SART TEST SUMMARY</b>											
<b>Sample</b>	<b>NaHS Stoichiometric Addition (%)</b>	<b>H<sub>2</sub>SO<sub>4</sub> Addition (g/L)</b>	<b>Re-neutralize Lime Addition (g/L)</b>	<b>Solution Analysis (mg/L)</b>					<b>CN<sub>free</sub> Recovery (%)</b>	<b>Extraction</b>	
				<b>CN<sub>T</sub></b>	<b>CN<sub>WAD</sub></b>	<b>CN<sub>free</sub></b>	<b>Zn</b>	<b>Cu</b>		<b>Zn</b>	<b>Cu</b>
SART-4 Barren	100	8.61	7.15	5,990	4,990	2,985	0.52	46.0	124	99.7	96.3
SART-5 Barren	110	6.94	6.04	4,190	3,590	3,663	0.89	4.20	153	99.5	99.7
SART-6 Barren	125	7.14	5.94	4,590	3,590	3,870	1.36	2.80	161	99.3	99.8
MC-BL2 Barren	-	-	-	4,590	3,990	1,500	110	2,500	-	-	-

Source: SGS (2023)



**TABLE 13.7**  
**HOLE 014/035 COMPOSITE SART TEST SUMMARY**

Sample	NaHS Stoichiometric Addition (%)	H <sub>2</sub> SO <sub>4</sub> Addition (g/L)	Re- neutralize Lime Addition (g/L)	Solution Analysis (mg/L)					CN <sub>free</sub> Recovery (%)	Extraction	
				CN <sub>T</sub>	CN <sub>WAD</sub>	CN <sub>free</sub>	Zn	Cu		Zn	Cu
SART-7 Barren	100	7.13	5.18	4,190	3,390	3,178	1.29	6.81	132	99.3	99.4
SART-8 Barren	110	5.68	5.16	4,190	3,390	2,955	10.0	22.8	123	94.5	98.1
SART-9 Barren	125	5.85	6.00	3,990	3,190	3,048	4.96	16.2	127	97.3	98.7
MC-BL3 Barren	-	-	-	4,590	2,800	1,800	227	1,650	-	-	-

Source: SGS (2023)

### 13.5.5.5 Extended Gravity Recoverable Gold (E-GRG) Separation

E-GRG testwork consisted of three sequential liberation and recovery stages, which determine the GRG values as a function of the size distribution. Progressive grinding is employed to determine the liberation of gravity recoverable gold as a function of feed particle size. Progressive grinding also minimizes smearing of coarse gold particles that may be present in the “as-crushed” sample.

The E-GRG test is based on the treatment of a sample mass of typically 20 kg using a laboratory Knelson Concentrator (KC-MD3). The procedure was followed for gold recovery on the three drill hole composites and products were also assayed to determine the associated silver recovery.

#### Hole 012 Composite E-GRG Results:

- 32.7% Au Value.
- 23.8% Ag Value.
- Gold Distributions:
  - 11.1% Stage 1 P<sub>80</sub> 518 µm.
  - 11.1% Stage 2 P<sub>80</sub> 205 µm.
  - 10.5% Stage 3 P<sub>80</sub> 75 µm.
- Silver Distributions:
  - 4.8% Stage 1 P<sub>80</sub> 518 µm.
  - 9.4% Stage 2 P<sub>80</sub> 205 µm.
  - 9.6% Stage 3 P<sub>80</sub> 75 µm.

#### Hole 031 Composite E-GRG Results:

- 5.72% Au Value.
- 24.1% Ag Value.
- Gold Distributions:
  - 24.6% Stage 1 P<sub>80</sub> 729 µm.
  - 22.6% Stage 2 P<sub>80</sub> 206 µm.
  - 10.0% Stage 3 P<sub>80</sub> 75 µm.
- Silver Distributions:
  - 5.7% Stage 1 P<sub>80</sub> 729 µm.
  - 9.9% Stage 2 P<sub>80</sub> 206 µm.
  - 8.5% Stage 3 P<sub>80</sub> 75 µm.

#### Hole 014/035 Composite E-GRG Results:

- 63.9% Au Value.
- 45.4% Ag Value.
- Gold Distributions:
  - 24.1% Stage 1 P<sub>80</sub> 593 µm.
  - 25.7% Stage 2 P<sub>80</sub> 195 µm.
  - 14.1% Stage 3 P<sub>80</sub> 78.
- Silver Distributions:
  - 5.9% Stage 1 P<sub>80</sub> 593 µm.
  - 25.2% Stage 2 P<sub>80</sub> 195 µm.
  - 14.2% Stage 3 P<sub>80</sub> 78 µm.

### **13.5.5.6 Gravity Separation**

The response of the three drill hole composites to standard Lakefield-type gravity separation was examined for the recovery of free gold and silver. Using a 10 kg charge of sample, testwork was performed at a target grind size P<sub>80</sub> of ~150 microns and utilized a Knelson MD-3 Concentrator.

The Knelson concentrates were recovered and further upgraded by treatment on a Mozley mineral separator to produce low-weight (<0.1%), high-grade concentrates. The Mozley and Knelson tailings were combined, split, and forwarded to gravity tailing cyanidation testing, with one charge submitted for assay and size analysis.

The head grades calculated by mass balancing and assaying of the gravity products compared very well with the direct head analysis. A summary of the gravity testing results is presented in Table 13.8.

**TABLE 13.8**  
**GRAVITY SEPARATION RESULTS**

Drill Hole ID	Test ID	Tailing (P <sub>80</sub> µm)	Concentrate			Recovery		Tailing		Head Grade			
			wt %	Au (g/t)	Ag (g/t)	Au (%)	Ag (%)	Au (g/t)	Ag (g/t)	Au		Ag	
										Calc (g/t)	Direct (g/t)	Calc (g/t)	Direct (g/t)
012	G-1	192	0.084	241	1,529	7.1	1.2	2.69	110	2.89	2.87	111	110
013	G-2	156	0.085	2,193	5,054	32.2	3.1	3.94	136	5.80	5.02	140	132
014/035	G-3	156	0.080	1,691	3,979	28.8	1.6	979	196	4.74	4.65	199	188

Source: SGS (2023)

### 13.5.5.7 Gravity Tailing Cyanidation

Twelve gravity tailing cyanidation tests were performed, four each on the three drill hole composites. Three of the four tests per composite examined the effect of grind size and the fourth test examined NaCN dosage. Upon completion of each test, the leach pulp was filtered and the final PLS filtrate was subsampled and submitted for analysis for gold, silver and copper. The leach residues were dried, weighed, and assayed in duplicate for gold and silver, as well as assayed for copper. Each residue was also submitted for a confirmatory size analysis.

Generally observed, the gold extractions were somewhat similar for the four tests on each of the three composites tested. A slight increase was observed for each as the grind size became finer and no significant change was observed with the tests having a reduced initial dosage of NaCN. The calculated gold head grades compared reasonably well with the direct head gold grades.

#### Gravity Tailing Cyanidation Gold Extraction:

- Hole 012 Composite.
  - Extraction 90% to 92%.
  - Grades 0.25 g/t to 0.30 g/t.
- Hole 031 Composite.
  - Extraction 85% to 92%.
  - Grades 0.38 g/t to 0.65 g/t.
- Hole 014/035 Composite.
  - Extraction 91% to 95%.
  - Grades 0.19 g/t to 0.34 g/t.

For silver extractions, a more distinct increase was observed for each as the grind size became finer, while for drill Hole 031 and Hole 014/035 composites there was a significant drop in silver extraction observed with the tests having a reduced initial dosage of NaCN. No significant change was observed in the reduced NaCN test for the Hole 012 Composite.

#### Gravity Tailing Cyanidation Silver Extraction:

- Hole 012 Composite.
  - Extraction 82% to 84%.
  - Grades 18.0 g/t to 19.6 g/t.
- Hole 031 Composite.
  - Extraction 68% to 79%.
  - Grades 28.6 g/t to 45.4 g/t.
- Hole 014/035 Composite.
  - Extraction 86% to 90%.
  - Grades 20.0 g/t to 28.8 g/t.

The copper extractions showed less dependence on grind size and NaCN dosage related to extraction.

#### Gravity Tailing Cyanidation Copper Extraction:

- Hole 012 Composite.
  - Extraction 73% to 80%.

- Grades 0.042% to 0.057%.
- Hole 031 Composite.
  - Extraction 75% to 79%.
  - Grades 0.097% to 0.120%.
- Hole 014/035 Composite.
  - Extraction 77% to 82%.
  - Grades 0.049% to 0.068%.

Sodium cyanide additions and consumptions ranged from 8.28 kg/t to 14.9 kg/t and 5.2 kg/t to 11.1 kg/t, while lime (CaO) additions and consumptions ranged from 0.45 kg/t to 0.70 kg/t and 0 kg/t to 0.20 kg/t.

### **13.5.5.8 Gravity/Gravity Tailing Cyanidation Overall Recovery**

The overall gold and silver recoveries achieved by gravity separation and cyanidation of the gravity tails:

Hole 012 Composite

- 91% to 93% Au.
- 82% to 88% Ag.

Hole 031 Composite

- 90% to 94% Au.
- 73% to 81% Ag.

Hole 014/035 Composite

- 93% to 96% Au.
- 78% to 88% Ag.

### **13.5.5.9 Kinetic Rougher Flotation**

Kinetic rougher flotation testing was conducted initially on ground samples of the three drill hole composites and later on the fourth hole (Hole 023) Composite. The rougher kinetics tests included the collection of five timed rougher concentrates and a rougher tailing, which were submitted for gold, silver, sulphur, copper, lead and zinc assay. The rougher tailing was also submitted for a size analysis. Test charges were ground to a P<sub>80</sub> target grind size of 106 µm prior to flotation. In the first two sets of tests on the composites, one set (F-1 to F-3) was done using potassium amyl xanthate (“PAX”) sulphide, and methyl isobutyl carbinol (“MIBC”) and the second set (F-4 to F-6) used PAX, MIBC, plus Aerophine 3418A promoter. Once it was determined which set of tests was the preferred, additional tests were performed on each composite with only PAX and MIBC (F-7 to F-12) to generate flotation concentrates and tailings for cyanidation testing. The tests were conducted at natural pH.

Drill Hole 012 Composite Kinetic Rougher Flotation Results:

- Mass pull 10.7% to 13.7%.
- Recoveries:
  - 78% to 79% Au.

- 83% to 86% Ag.
- 96% to 98% S.
- 92% to 96% Cu.
- 87% to 95% Pb.
- 82% Zn.
- Concentrate Grades:
  - 16.6 g/t to 22.5 g/t Au.
  - 647 g/t to 885 g/t Ag.
  - 6.4% to 8.5% S.
  - 1.5% to 1.9% Cu.
  - 5.9% to 8.4% Pb.
  - 7.0% to 9.0% Zn.
- Tailing Grades:
  - 0.73 g/t to 0.76 g/t Au.
  - 17.9 g/t to 21.2 g/t Ag.
  - 0.02% to 0.04% S.
  - 0.01% to 0.02% Cu.
  - 0.05% to 0.14% Pb.
  - 0.24% to 0.25% Zn.

Drill Hole 031 Composite Kinetic Rougher Flotation Results:

- Mass Pull 10.1% to 14.7%.
- Recoveries:
  - 84% to 87% Au.
  - 88% to 90% Ag.
  - 96% to 98% S.
  - 89% to 91% Cu.
  - 69% to 73% Pb.
  - 44% to 49% Zn.
- Concentrates Grades:
  - 32.2 g/t to 61.1 g/t Au.
  - 878 g/t to 1,300 g/t Ag.
  - 4.6% to 7.3% S.
  - 2.9% to 4.5% Cu.
  - 2.4% to 3.5% Pb.
  - 2.9% to 3.9% Zn.
- Tailing Grades:
  - 0.85 g/t to 1.08 g/t Au.
  - 15.4 g/t to 20.0 g/t Ag.
  - 0.02% to 0.03% S.
  - 0.05% to 0.06% Cu.
  - 0.15% to 0.18% Pb.
  - 0.52% to 0.55% Zn.

Drill Hole 014/035 Composite Kinetic Rougher Flotation Results:

- Mass Pull 7.4% to 11.8%.
- Recoveries:
  - 87% to 89% Au.

- 91% to 92% Ag.
- 95% to 97% S.
- 87% to 90% Cu.
- 79% to 84% Pb.
- 57% to 61% Zn.
- Concentrates Grades:
  - 37.5 g/t to 52.9 g/t Au.
  - 1,636 g/t to 2,710 g/t Ag.
  - 4.4% to 7.6% S.
  - 2.2% to 3.7% Cu.
  - 3.8% to 5.7% Pb.
  - 3.1% to 4.6% Zn.
- Tailing Grades:
  - 0.58 g/t to 0.67 g/t Au.
  - 17.9 g/t to 21.2 g/t Ag.
  - 0.02% to 0.03% S.
  - 0.03% to 0.04% Cu.
  - 0.09% to 0.12% Pb.
  - 0.26% to 0.27% Zn.

Testing performed on the fourth hole composite (Hole 023) followed the same procedure as with the other hole composites, a set of two tests were initially performed, one using Aerophine 3418A and one without. Then one of the tests was selected, as with the other testing, the test with only PAX and MIBC was chosen, and a test was performed to generate flotation concentrate and tailing for cyanidation testing.

#### Drill Hole 023 Composite Kinetic Rougher Flotation Results:

- Mass Pull 12.8% to 16.3%.
- Recoveries:
  - 84% to 85% Au.
  - 91% to 92% Ag.
  - 97% to 98% S.
  - 90% to 91% Cu.
  - 81% to 84% Pb.
  - 69% to 72% Zn.
- Concentrates Grades:
  - 7.7 g/t to 10.5 g/t Au.
  - 1,159 g/t to 1,456 g/t Ag.
  - 13.2% to 17.2% S.
  - 2.4% to 2.8% Cu.
  - 2.8% to 3.2% Pb.
  - 4.1% to 4.7% Zn.
- Tailing Grades:
  - 0.27 g/t to 0.28 g/t Au.
  - 19.1 g/t to 21.5 g/t Ag.
  - 0.05% to 0.07% S.
  - 0.04% to 0.05% Cu.
  - 0.11% Pb.



- 0.31% to 0.32% Zn.

### **13.5.5.10 Rougher Flotation Cyanidation**

To improve the gold and silver extractions seen in whole feed leaching, flotation testing followed by cyanidation of the flotation products was performed.

#### **Rougher Concentrate Cyanidation**

Four tests were carried out per composite, one set of tests with no grind and three sets of tests with regrinding to a P<sub>80</sub> grind size of less than 20 µm. Other parameters varied during testing include, pulp density, NaCN dosage and maintained/decay time, pre-aeration with air or oxygen, aeration during the leach and lead nitrate addition. All tests were conducted at a pH of 10.5 to 11.0 and for a total leach retention time of 96 hours.

Testing on the three drill hole composites without regrinding produced very poor gold and silver extractions from 16% to 48% and 0.1% to 1.4%, respectively.

Testing on the composite reground to a P<sub>80</sub> size range of 13 µm to 18 µm and intensively leached, produced very high gold and silver extractions:

- 96% to 99% Au.
- 87% to 96% Ag.
- 0.14 g/t to 0.51 g/t Au.
- 31.7 g/t to 170 g/t Ag.

#### **Rougher Tailing Cyanidation**

Two tests were carried out on the three drill hole composites, with one set reground. A single test was performed on the fourth drill hole composite (Hole 023), which was reground. The test without regrinding had no lead nitrate addition, whereas the tests reground to a P<sub>80</sub> target of 75 µm had a lead nitrate addition of 1,000 g/t. All tests were conducted at 40% solids, a pH of 10.5 to 11.0, an initial NaCN dosage of 3.0 g/L maintained for the first 24 hours and then allowed to naturally decay for the remaining 72 hours of the leach, 4 hours of pre-aeration, no aeration during the leach and for a total leach retention time of 96 hours.

Upon completion of each test, the leach pulp was filtered and the pregnant leach solution (“PLS”) filtrate was subsampled and submitted for analysis. The leach residues were dried, weighed, and assayed with each residue submitted for a confirmatory size analysis.

Testing on the rougher tailing samples returned the following:

- Extractions:
  - 75% to 83% Au.
  - 48% to 72% Ag.
- Tailing Grades:
  - 0.06 g/t to 0.27 g/t Au.
  - 5.9 g/t to 11.0 g/t Ag.

The rougher tailing cyanidations had NaCN and lime additions ranging from 4.92 kg/t to 5.54 kg/t and 0.47 kg/t to 0.88 kg/t, respectively, while producing NaCN and lime consumptions of 0.57 kg/t to 1.39 kg/t and 0.46 kg/t to 0.88 kg/t, respectively.

### **Rougher Flotation/Cyanidation Overall Gold and Silver Recovery**

When combining the rougher flotation and cyanidation recoveries for testwork which saw the rougher flotation concentrate reground and intensively leached for the four drill hole composites, the overall gold recoveries ranged from 94% to 97%, while the silver recoveries ranged from 85% to 94%.

As expected, the test without regrinding of the flotation concentrates showed poor results, with gold and silver recoveries ranging from 24% to 54% and 4% to 9%, respectively.

#### **13.5.5.11 Selective Flotation**

To selectively float saleable Cu/Pb and Zn concentrates, three batch flotation tests were conducted on one of the drill hole composites (Hole 014/035). The results reported copper recoveries of ~80% and Pb recoveries of ~67%. The copper and lead floated very fast, within the first 3 minutes of froth time.

Gold and silver recoveries to the copper/lead concentrates were good, up to 89% and 90%, respectively. However, the zinc reporting to the copper/lead concentrates was high 52-55%, showing poor selectivity under the flotation conditions tested. Sulphur recoveries were 93-94%.

The results of the tests showed poor selectivity, however, there appears to be some potential indicated by the higher ratio of copper to zinc recovery.

### **13.5.6 Environmental Testing**

The environmental testing conducted includes modified acid base accounting (“ABA”) and net acid generation (“NAG”) testing.

#### **13.5.6.1 Modified Acid Base Accounting**

ABA testing was completed on head samples and leach tailing samples for the Hole 012, Hole 031 and Hole 014/035 composites, to assist in determining the propensity of the tailings/waste rock to generate acidic conditions and provide input parameters for the recommended kinetics tests.

ABA testwork provides quantification of the total sulphur, sulphide sulphur, and sulphate concentrations present, and the potential acid generation (“AP”) related to the oxidation of the sulphide sulphur concentration. The test method determines the neutralization potential (“NP”) of the sample by initiating a reaction with excess acid, then back titrating to pH 8.3 with NaOH.

Carbonate concentrations were also be analyzed, and carbonate NP values were determined. The balance between the AP and NP assists in defining the potential of the sample to generate acid drainage.

The modified ABA static test results for the three head samples showed that the solids from drill Hole 012 and Hole 014/035 composites are non-acid generating and have net acid consumption potential as evidenced by the AP/NP ratios of greater than one, 6.16 for drill Hole 012 and 8.94 for Hole 014/035.

For the head sample from drill Hole 031 composite, the solids were found to be acid generating and have no net acid consumption potential as evidenced by the AP/NP ratio of less than one, reported at 0.40.

The net neutralization potential (“Net NP”) results were calculated to be 169 t CaCO<sub>3</sub> /1,000 tonnes of material for drill Hole 012 and 159 t CaCO<sub>3</sub>/1,000 tonnes of material for Hole 014/035, while Hole 031 returned a Net NP result of -15.4 t CaCO<sub>3</sub>/1,000 tonnes of material.

Similar results were determined for the leach tailing sample examined for each composite. Solids from drill Hole 012 and Hole 014/035 composites are non-acid generating and have net acid consumption potential as evidenced by the AP/NP ratios of greater than one, 6.21 for Hole 012 and 14.0 for Hole 014/035.

For the leach tailing sample from drill Hole 031 composite, the solids were found to be acid generating and have no net acid consumption potential as evidenced by the AP/NP ratio of less than one, reported at 0.47. The net neutralization potential (Net NP) results were calculated to be 138 t CaCO<sub>3</sub> /1,000 tonnes of material for Hole 012 and 134 t CaCO<sub>3</sub> /1,000 tonnes of material for Hole 014/035, while Hole 031 returned a Net NP result of -11.4 t CaCO<sub>3</sub> /1,000 tonnes of material.

The full ABA summary of results for the head and leach tailing samples for the composites are presented in Table 13.9.

<b>TABLE 13.9</b>							
<b>MODIFIED ACID BASE ACCOUNTING SUMMARY No.1</b>							
<b>Measurements ID</b>	<b>Unit</b>	<b>Drill Hole 012 Head</b>	<b>Drill Hole 012 (BL-1) Tailing</b>	<b>Drill Hole 031 Head</b>	<b>Drill Hole 031 (BL-2) Tailing</b>	<b>Drill Hole 014/035 Head</b>	<b>Drill Hole 014/035 (BL-3) Tailing</b>
Paste pH	no unit	8.98	9.32	7.32	9.69	7.82	9.78
Fizz Rate	no unit	4	4	4	3	4	4
Sample Weight	g	2.08	2.11	2.07	1.95	2.06	1.97
HCl Added	mL	95.00	100.00	40.00	20.00	101.00	80.00
HCl	Normality	0.10	0.10	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3	ml	10.94	30.43	35.78	16.14	27.34	22.96

**TABLE 13.9**  
**MODIFIED ACID BASE ACCOUNTING SUMMARY NO.1**

Measurements ID	Unit	Drill Hole 012 Head	Drill Hole 012 (BL-1) Tailing	Drill Hole 031 Head	Drill Hole 031 (BL-2) Tailing	Drill Hole 014/035 Head	Drill Hole 014/035 (BL-3) Tailing
Final pH	no unit	1.94	1.53	1.03	1.18	1.52	1.58
NP	t CaCO <sub>3</sub> /1,000 t	202	165	10.2	9.9	179	145
AP	t CaCO <sub>3</sub> /1,000 t	32.8	26.6	25.6	21.2	20.0	10.3
Net NP	t CaCO <sub>3</sub> /1,000 t	169	138	-15.4	-11.4	159	134
NP/AP	ratio	6.16	6.21	0.40	0.47	8.94	14.0
Sulphur (total)	%	1.28	0.88	0.90	0.66	0.69	0.36
Acid Leachable SO <sub>4</sub> -S	%	0.24	< 0.04	0.08	< 0.04	0.05	< 0.04
Sulphide	%	1.05	0.85	0.82	0.68	0.64	0.33
Carbon (total)	%	3.04	2.24	0.23	0.15	2.86	2.31
Carbonate (HCl)	%	15.0	11.1	0.96	0.61	14.1	11.4

*Source: SGS (2023)*

Modified ABA static testing was also performed for the four head samples from the drill Hole 023, Hole 027, Hole 037, and Hole 076 composites. Results showed that the solids from composites are non-acid generating and have net acid consumption potential as evidenced by the AP/NP ratios of greater than one, 4.95 for drill Hole 023, 53.5 for Hole 037 and 1.644 for Hole 076.

For the head sample from drill Hole 027 composite, the solids were found to be acid generating and have no net acid consumption potential as evidenced by the AP/NP ratio of less than one, reported at 0.38.

The net neutralization potential (Net NP) results were calculated to be 24.3 t CaCO<sub>3</sub> /1,000 tonnes of material for drill Hole 023 and 65.6 t CaCO<sub>3</sub> /1,000 tonnes of material for Hole 037, and 22.5 t CaCO<sub>3</sub> /1,000 tonnes of material for Hole 076, while Hole 027 returned a Net NP result of -4.3 t CaCO<sub>3</sub> /1,000 tonnes of material. The full ABA summary of results for the head samples for drill Hole 023, Hole 027, Hole 037, and Hole 076 composites are presented in Table 13.10.

**TABLE 13.10  
MODIFIED ACID BASE ACCOUNTING SUMMARY NO.2**

<b>Measurements ID</b>	<b>Unit</b>	<b>Drill Hole 023 Head</b>	<b>Drill Hole 027 Head</b>	<b>Drill Hole 037 Head</b>	<b>Drill Hole 076 Head</b>
Paste pH	no unit	8.01	8.35	8.21	8.64
Fizz Rate	no unit	2	2	2	4
Sample Weight	g	2.06	1.97	2.03	2.14
HCl Added	mL	20.00	20.00	40.00	50.00
HCl	Normality	0.10	0.10	0.10	0.10
NaOH	Normality	0.10	0.10	0.10	0.10
NaOH to pH=8.3	ml	7.48	18.95	16.54	21.37
Final pH	no unit	1.70	1.28	1.87	1.62
NP	t CaCO <sub>3</sub> /1,000 t	30.4	2.6	57.8	66.9
AP	t CaCO <sub>3</sub> /1,000 t	6.14	6.88	1.25	35.3
Net NP	t CaCO <sub>3</sub> /1,000 t	24.3	-4.3	65.6	22.50
NP/AP	ratio	4.95	0.38	53.50	1.64
Sulphur (total)	%	2.33	0.26	0.04	1.29
Acid Leachable SO <sub>4</sub> -S	%	2.14	< 0.04	< 0.04	0.16
Sulphide	%	0.20	0.22	< 0.04	1.13
Carbon (total)	%	0.17	0.02	0.86	0.10
Carbonate (HCl)	%	0.42	< 0.04	3.93	< 0.04

*Source: SGS (2023)*

### 13.5.6.2 Net Acid Generation Testing

Net acid generation (“NAG”) testing was completed on head samples and leach tailing samples for drill Hole 012, Hole 031 and Hole 014/035 composites to determine the balance between the acid producing and acid consuming components of the samples. Results provide a confirmation of the acid rock drainage characteristics of each sample based on the complete oxidation of the samples sulphide content (as well as ferrous iron from siderite dissolution). Testwork uses hydrogen peroxide to react with the sulphides contained in the sample, and acid that is produced by oxidation is consumed by carbonates and/or other acid consuming components of the material. The pH of the solution is measured (NAG pH), and the acid remaining is titrated with standardized NaOH to determine the net acid generated by the reaction.

The NAG test results for the samples shows the net acid production potential (NAG) at both pH 4.5 and pH 7 is 0.00 kg H<sub>2</sub>SO<sub>4</sub>/t indicating that on complete oxidation of the samples, acid is not detected as the net result and thus are non-acid generating. The full NAG summary of results is presented in Table 13.11.

**TABLE 13.11  
NET ACID GENERATION TESTING SUMMARY NO.1**

<b>Measurements ID</b>	<b>Unit</b>	<b>Drill Hole 012 Head</b>	<b>Drill Hole 012 (BL-1) Tailing</b>	<b>Drill Hole 031 Head</b>	<b>Drill Hole 031 (BL-2) Tailing</b>	<b>Drill Hole 014/035 Head</b>	<b>Drill Hole 014/035 (BL-3) Tailing</b>
Sample Weight	g	1.54	1.54	1.55	1.49	1.53	1.53
Vol H <sub>2</sub> O <sub>2</sub>	mL	150	150	150	150	150	150
Final pH	no unit	9.45	9.71	9.39	9.53	9.43	9.67
NaOH	Normality	0.10	0.10	0.10	0.10	0.10	0.10
Vol NaOH to pH 4.5	mL	0.00	0.00	0.00	0.00	0.00	0.00
Vol NaOH to pH 7.0	mL	0.00	0.00	0.00	0.00	0.00	0.00
NAG (pH 4.5)	kg H <sub>2</sub> SO <sub>4</sub> /tonne	0.0	0.0	0.0	0.0	0.0	0.0
NAG (pH 7.0)	kg H <sub>2</sub> SO <sub>4</sub> /tonne	0.0	0.0	0.0	0.0	0.0	0.0

*Source: SGS (2023)*

### **13.5.7 Solid/Liquid Separation and Rheology Testing**

As part of the program, solid-liquid separation testing was performed on bulk cyanide leached tailing samples for drill Hole 012 (BL-1), Hole 031 (BL-2), and Hole 014/035 (BL-3).

#### **13.5.7.1 Sample Preparation and Characterization**

Samples were received in the form of representative process pulp, and process water was prepared for pulp dilution as required. Particle size analysis was conducted on all samples, and subsamples were collected from each sample for solid content analysis. The dried samples were submitted for specific gravity (“SG”) determination.

#### **13.5.7.2 Static Settling**

Flocculant scoping tests were performed and results indicated that all samples responded well to Magnafloc 333, which is a very high molecular weight, nonionic polyacrylamide flocculant. Static settling test results were used as preliminary starting conditions for the subsequent dynamic (continuous) thickening test.

#### **13.5.7.3 Dynamic Thickening**

Dynamic thickening tests were conducted at ambient temperature using a customized 100 mm benchtop dynamic thickener. However, the tests were not completed due to constant plugging in the underflow discharge point of the thickener. Two stages of static settling tests were conducted in lieu of the dynamic thickening tests.

#### **13.5.7.4 Pressure Filtration – on Thickened Underflow**

Pressure filtration was conducted using a Bokela Filtratest unit with a 50 mm diameter single cloth surface. Tests were conducted at 5.5 bar (80 psi) and 6.9 bar (100 psi) pressure levels. The estimated full cycle time includes filtration time plus an additional 10 minutes of miscellaneous time which includes time required for filter loading, cake discharge, cloth washing, and filter assembly.

Testwork of all three samples indicated that a relatively moderate filtered solids throughput and relatively high residual cake moisture was achieved.

#### **13.5.7.5 Filtration-Cake Washing**

Cake washing tests were conducted on all underflow samples using a pressure filter. Deionized water was used as wash solution at room temperature. Each wash was added at equal volumes to the formed cake and filtered until most of the wash had passed the surface of the cake. Each wash filtrate was collected individually and submitted for cyanide total (CN<sub>T</sub>) and silver (Ag) analysis.

Testwork indicated that target species recovery plateaued at a wash ratio of 3.0 v/v. Additional washing only marginally increased the recovery.

#### **13.5.8 SGS Conclusions and Recommendations – 2023**

Head assaying of eight drill hole composites indicated gold head grades ranging from 0.41 g/t to 5.02 g/t and silver head grades ranging from 39 g/t to 203 g/t. The total sulphur and sulphide sulphur values ranged from 0.04% to 2.28% and less than 0.05% to 2.20%, respectively, indicating that the samples are unlikely to be very refractory in nature and should respond well to cyanide leaching.

Comminution testing of four composite samples fell in the medium to moderately hard categories for the SAG Mill Comminution tests (SMC) test when compared to the JK Tech database. The samples fell in the moderately hard to very hard categories for the Ball Mill grindability tests (BWI) test and in the moderately abrasive to very abrasive category for the Bond Abrasion tests (AI) when compared to the SGS database.

Semi-quantitative X-ray diffraction analysis (XRD) reported in weight distribution identified quartz as a major mineral (>30%). Minerals identified as moderate for various samples included orthoclase and calcite.

Whole feed cyanidation testing determined the best leaching conditions to include a P<sub>80</sub> grind size of 75 µm, 40% pulp density, pH of 10.5-11.0 maintained with lime, 4 hours of pre-aeration with air sparging, an initial dosage of 3 g/L of sodium cyanide (NaCN) maintained for the first 24 hours of leaching and then allowed to naturally decay for the remaining 72 hours of the 96-hour retention time. These conditions produced gold and silver extractions ranging from 89% to 96% and 72% to 92%, respectively.

Merrill Crowe testing determined gold and silver were efficiently extracted/precipitated out of the PLS solution with the percent precipitation ranging from 98% to 100% for gold and 99% to 100% for silver.

SART testing determined that the  $CN_{\text{free}}$  recovery ranged from 99% to 161%, performed at a sodium hydrosulphide (NaHS) stoichiometric addition ranging from 100% to 125% and pH 4.

Extended gravity recoverable gold (E-GRG) separation testing on three of the drill hole composites for the recovery of gold and associated silver determined the final GRG values to be high, ranging from 32.7% to 63.9% and 23.8% to 45.4%, respectively. The response to standard Lakefield-type gravity separation for the recovery of free gold and silver resulted in gold and silver recoveries ranging from 7.1% to 32.3% and 1.2% to 3.1%, respectively. It is recommended to include a gravity circuit in the process plant design (Authors Note – not included in this PEA process flow diagram, albeit further PFS testwork is pending).

Gravity tailing cyanidation tests returned final gold extractions ranging from 85% to 95% and silver extractions ranging from 68% to 90%. The overall gold and silver recoveries achieved (gravity + cyanidation) for these tests ranged from 90% to 96% for gold and 69% to 92% for silver.

Rougher kinetic flotation process was able to produce rougher concentrates with recoveries ranging from 78% to 89% gold, 83% to 92% silver, 95% to 98% sulphur, 87% to 96% copper, 69% to 95% lead, and 44% to 82% zinc.

Rougher flotation cyanidation after regrinding the flotation concentrates to less than 20  $\mu\text{m}$  and intensively leaching combined with the leaching of the flotation tailings, returned overall gold and silver extractions from 94% to 97% and 85% to 94%, respectively.

Selective flotation on drill Hole 014/035 composite reported copper recoveries of ~80% and Pb recoveries of ~67%. Gold and silver recoveries to the copper/lead concentrates were good, up to 89% and 90%, respectively. Zinc reporting to the copper/lead concentrates was high 52 to 55%, showing poor selectivity. Sulphur recoveries were 93 to 94%. The results of the tests showed poor selectivity however, there appears to be some potential indicated by the higher ratio of copper to zinc recovery.

Preliminary environmental assessment including modified acid/base accounting (ABA) static test results showed that Hole 031 and Hole 027 composites are acid generating and have no net acid consumption potential, while drill Hole 012, Hole 014/035, Hole 023, Hole 037 and Hole 076 composites showed that the solids are non-acid generating and have net acid consumption potential. Net acid generation (NAG) testing results indicate that on complete oxidation of the samples, acid is not detected as the net result.

Thickening test results indicated that all samples responded well to BASF Magnafloc 333 flocculant, a very high molecular weight, nonionic polyacrylamide flocculant.

Constant plugging of the thickener underflow discharge occurred during dynamic thickening testing. It is recommended to consult with thickener equipment vendors regarding the potential



requirement for additional testing of these samples as well as the design of the industrial scale equipment to mitigate operational risks during large scale operation.

Slurry rheology tests are recommended to study the flow response of the thickener underflows at a range of densities.

Pressure filtration testing indicated a relatively moderate filtered solids throughput and relatively high residual cake moisture. A membrane squeezing cycle was not included in these tests. Reduced cake moisture content may be achievable if a membrane squeezing cycle is incorporated in the filtration. This should be considered in future testing.

Pressure filtration testing indicated that the higher tested pressure at 6.9 bar (100 psi) achieved lower cake moisture than the lower tested pressure at 5.5 bar (80 psi). Filtered solids throughput was similar for both tested pressures.

Pressure filtration-cake washing tests on all three samples indicated that target species recovery plateaued at a wash ratio of 3.0 v/v. Additional washing only marginally increased the recovery. Silver recovery was greater than 100% which indicated that potential solids redissolving may have occurred during washing.

Summary of test results are presented in Table 13.12.

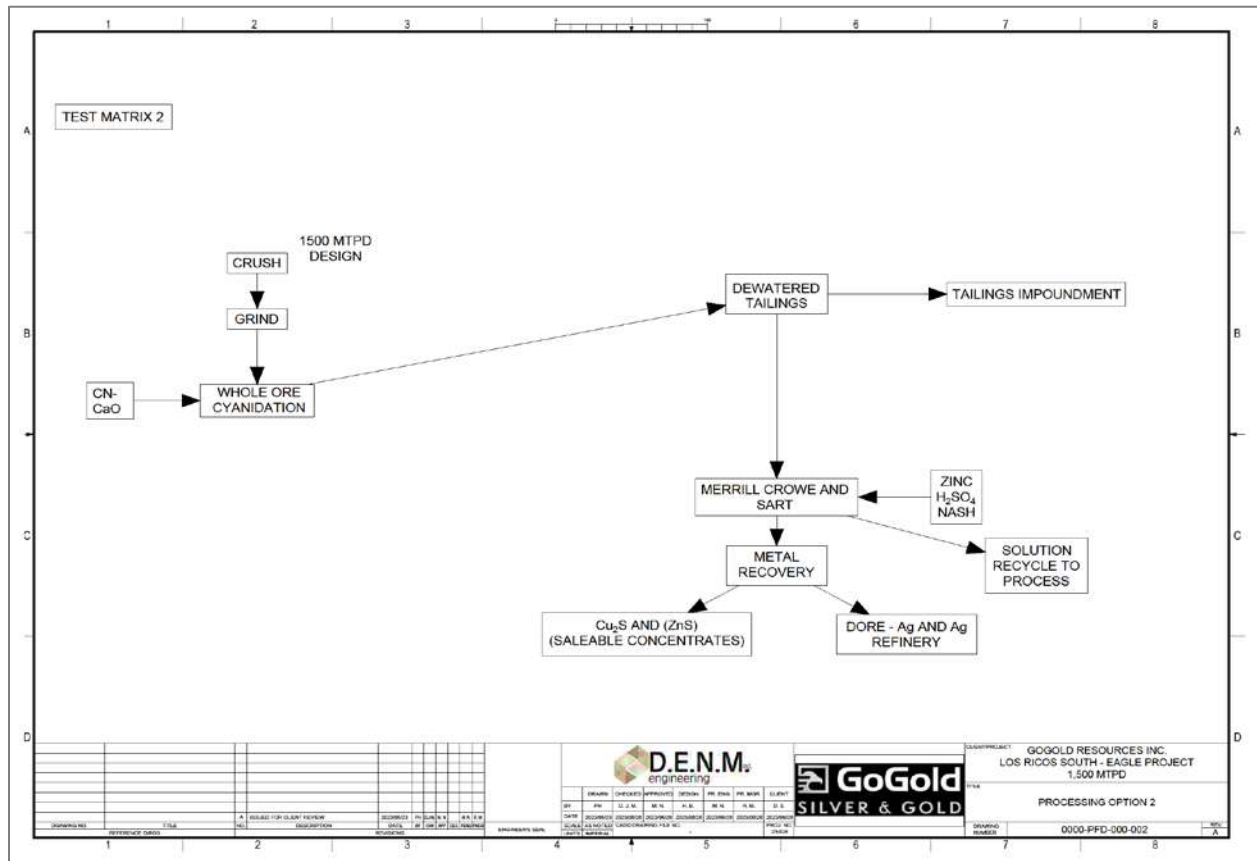
<b>TABLE 13.12</b>			
<b>MAJOR SUMMARY OF TEST RESULTS – EAGLE ZONE</b>			
<b>Item</b>	<b>Unit</b>	<b>Value</b>	<b>Source</b>
Anticipated Overall Gold Recovery *	%	95	SGS-18113-05
Anticipated Overall Silver Recovery *	%	84	SGS-18113-05
Anticipated Overall Copper Recovery *	%	82	SGS-18113-05
Leach Feed Grind Size	P <sub>80</sub> , microns	74	SGS-18113-05
NaCN Consumption **	kg/t	1.25	SGS-18113-05
Lime Consumption	kg/t	0.80	SGS-18113-05
Pre-Aeration	hours	4	SGS-18113-05
Cyanide Leach	hours	96	SGS-18113-05
Pre-Leach Thickener Underflow	%	50	SGS-18113-05
Tailings Filtration – Cake Moisture	%	16	SGS-18113-05
Peak Wash Ratio	volumes	3:1	SGS-18113-05

*Source: D.E.N.M. (2023)*

\* *Based on Whole Feed Cyanidation Process and Matrix as per Figure 13.1*

\*\* *Discounted for Au/Ag Leaching Only*

**FIGURE 13.1 WHOLE FEED CYANIDATION PROCESS AND MATRIX**



Source: D.E.N.M. (2023)

The process design criteria discussed in Section 17 of this Report as well as the economic analysis outlined in Section 22 are based on the metallurgical testwork programs completed to date. A summary of testing results is presented in Table 13.13.

Item	Unit	Value	Source
Eagle Underground: Whole Feed CN- Gold Recovery	%	95	DENM
Eagle Underground: Whole Feed CN- Silver Recovery	%	84	DENM
Abra Open Pit: Whole Feed CN- Gold Recovery	%	95	DENM
Abra Open Pit: Whole Feed CN- Silver Recovery	%	86	DENM
Abra/Eagle: Whole Feed CN- Copper Recovery	%	77	DENM
SART Process Recovery: Copper	%	95	DENM

Source: D.E.N.M. (2023)

Drilling and sampling completed by GoGold as well as metallurgical testwork by SGS for the LRS Project are considered sufficiently representative and complete to support this PEA level of assessment. The results and process design criteria shown in Table 13.13 and Figure 13.1 are reasonable and appropriate for this study’s process design and analysis of the Project economics.

## 14.0 MINERAL RESOURCES ESTIMATE

The Mineral Resource Estimate presented herein for the Los Ricos South Project has been prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted "CIM Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral Resources have been classified in accordance with the "CIM Standards on Mineral Resources and Reserves: Definition (2014) and Best Practices (2019)" as adopted by CIM Council. The effective date of this Mineral Resource Estimate is September 12, 2023.

*A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.*

*An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.*

*An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply, however, not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.*

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the Mineral Resource will be converted into a Mineral Reserve. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

The Authors are not aware of any known permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource Estimate. The Authors consider that the block model Mineral Resource Estimates and Mineral Resource classification represent a reasonable estimation of the global Mineral Resources for the Los Ricos South Property with regard to compliance with generally accepted industry standards and guidelines, the methodology used for grade estimation, the classification criteria used and the actual implementation of the methodology in terms of Mineral Resource estimation and reporting.

All the Mineral Resource estimation work reported herein was carried out or reviewed by Fred Brown, P.Geo., or Eugene Puritch, P.Eng., FEC, CET., each independent Qualified Persons as defined by National Instrument 43-101 by reason of education, affiliation with a professional association, and past relevant work experience.

Wireframe modelling utilized Seequent Leapfrog Geo™ software. Mineral Resource estimation and variography was performed using the commercially available Seequent Leapfrog Edge™ software. Open-pit optimization was performed using the NPV Scheduler™ software program.

#### 14.1 DATA SUPPLIED

GoGold supplied drill hole data as csv format tables for the Abra, Eagle and Cerro Colorado Veins. The supplied drill hole tables included collar, survey, assay, lithology and bulk density data. Assay data included Au g/t, Ag g/t and Cu % grades, as well as ICP assay grades for the recent drill programs. A total of 591 drill holes were available for Mineral Resource modelling (Table 14.1). The drilling extends approximately 3 km along strike (Figure 14.1 and Appendix A).

<b>TABLE 14.1 DRILL HOLE SUMMARY</b>		
<b>Type</b>	<b>Count</b>	<b>Total (m)</b>
Diamond Drill Hole	527	89,875.7
Reverse Circulation	64	4,814.1
<b>Total</b>	<b>591</b>	<b>94,689.8</b>

The coordinate system used is WGS84 UTM Zone 13N and elevations are reported as height above the EGM2008 geoid. GoGold supplied a 1.0 m resolution Digital Terrain Model for the Los Ricos South Project, and AutoCAD™ format wireframes of the historical workings. GoGold geologists also supplied interpreted wireframes of the identified mineralized structures at Los Ricos South.

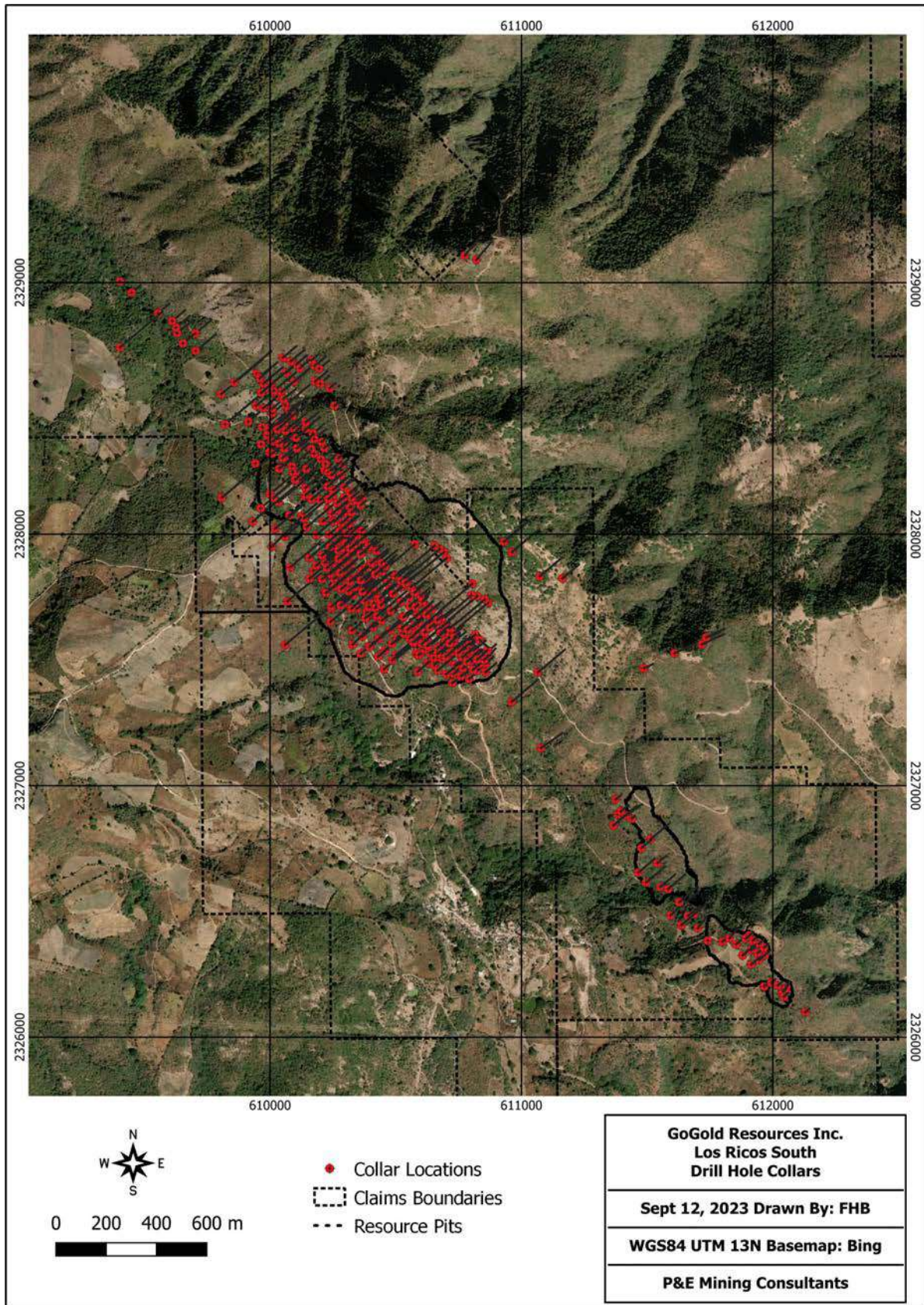
Industry standard validation checks were carried out on the supplied databases, and minor corrections made where necessary. The Authors typically validate a Mineral Resource database by checking for inconsistencies in naming conventions or analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results,

out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, and missing interval and coordinate fields.

Two historical drill holes (CMRC-64 and CMRC-65) are oriented parallel to the strike of the mineralization and proved problematic in terms of modelling. These two holes were therefore excluded from domain modelling and grade estimation. No significant errors were noted with the supplied databases. The Authors consider that the drill hole database is suitable for Mineral Resource estimation.



**FIGURE 14.1 DRILL HOLE PLAN VIEW**



## 14.2 ECONOMIC CONSIDERATIONS

For the Mineral Resource model, the Authors selected the economic parameters listed in Table 14.2.

<b>Item</b>	<b>Unit</b>	<b>Pit</b>	<b>Out-of-Pit</b>
Au	US\$/oz	1,800	1,800
Ag	US\$/oz	23	23
Au Process Plant Recovery	%	95	95
Ag Process Plant Recovery	%	86	83
Mining Cost	US\$/t	2.00	50.00
Process + G&A Cost	US\$/t	24.72	31.58
Calculated Cut-off Grade	AuEq g/t	0.45	1.48
Calculated Cut-off Grade	AgEq g/t	39	133
Equivalent Factor	AgEq/AuEq	0.012	0.11
Equivalent Factor	AuEq/AgEq	86.5	89.6

## 14.3 MINERALIZATION DOMAINS

Interpreted mineralization wireframes were developed by GoGold geologists for the Eagle and Abra Veins based on logged drill hole lithology, assay grades and historical records. GoGold identified continuous zones of mineralization from assay grades equal to or greater than 0.30 g/t AuEq with observed continuity along strike and down-dip, using a Ag:Au equivalent factor of 75:1. High grade domains (e.g., Abra and Eagle Plums) were developed from assay grades equal to or greater than 3.0 g/t AuEq with observed continuity along strike and down-dip, using a Ag:Au equivalent factor of 75:1. The selected intervals include lower grade material where necessary to maintain continuity between drill holes. Three-dimensional wireframes linking drill hole vertical cross-sections were subsequently constructed using the Leapfrog™ Radial Basis Function, with hanging wall and footwall surfaces snapped directly to the selected drill hole intercepts.

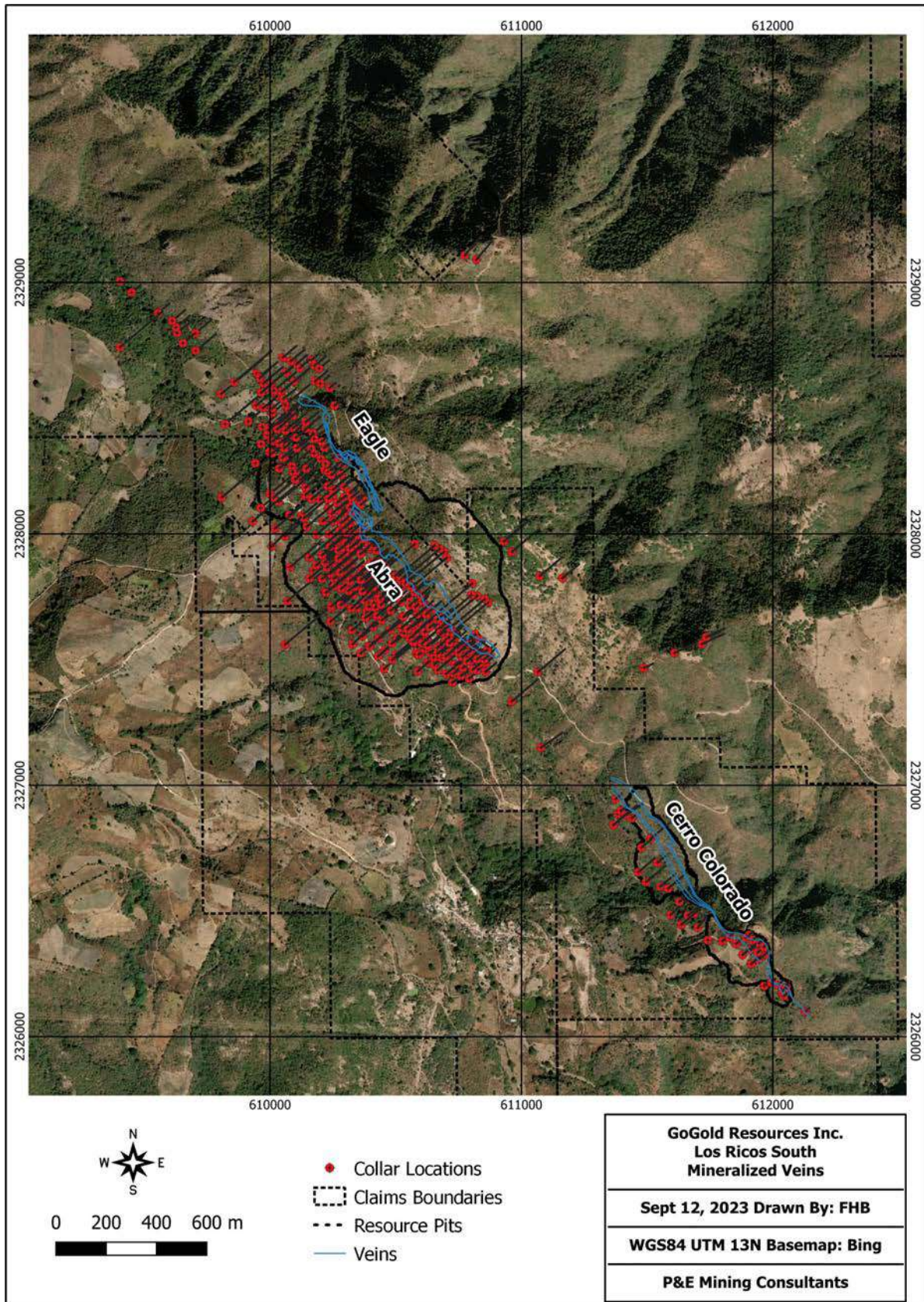
A total of eight individual mineralized veins were defined (Figure 14.2 and Appendix B). The mineralized vein wireframes were used to back-tag the assay, bulk density and composite tables with unique rock codes (Table 14.3).

**TABLE 14.3**  
**MINERALIZED VEINS**

Vein	Rock Code	Strike Length (m)	Average True Width (m)
Abra Main	100	1,200	15.3
Abra Plum North	110	900	3.6
Abra Plum South	120	200	3.3
Eagle Main	200	725	16.1
Eagle Plum FW	210	325	5.4
Eagle Plum HW	220	550	6.1
Cerro Colorado 1	400	1,250	4.7
Cerro Colorado 2	500	650	5.7
<b>Average</b>		<b>725</b>	<b>7.5</b>



**FIGURE 14.2 MINERALIZED VEINS**



## 14.4 EXPLORATORY DATA ANALYSIS

The average nearest neighbour drill hole collar distance for the Los Ricos South Project drilling is 15.4 m. The average length of the diamond drill holes is 158.7 m, and the average length of the reverse circulation drill holes is 79.5 m. Summary statistics for the drill hole assay data are listed in Table 14.4.

<b>Au g/t</b>	<b>N</b>	<b>Mean</b>	<b>StDev</b>	<b>CoV</b>	<b>Minimum</b>	<b>Maximum</b>
Waste	18302	0.05	0.24	5.29	0.0025	10.75
Abra Main	5938	0.55	2.23	4.04	0.0025	73.10
Abra Plum North	552	2.56	4.10	1.60	0.0060	30.10
Abra Plum South	82	2.15	2.15	1.00	0.0030	11.28
Eagle Main	4422	0.28	1.04	3.75	0.0025	36.20
Eagle Plum FW	530	3.96	14.42	3.64	0.0100	266.00
Eagle Plum HW	790	4.66	14.09	3.02	0.0030	201.00
<b>Total</b>	<b>30616</b>	<b>0.42</b>	<b>3.32</b>	<b>8.00</b>	<b>0.0025</b>	<b>266.00</b>
<b>Ag g/t</b>	<b>N</b>	<b>Mean</b>	<b>StDev</b>	<b>CoV</b>	<b>Minimum</b>	<b>Maximum</b>
Waste	18302	6.31	20.65	3.27	0.1500	1189.08
Abra Main	5938	80.80	280.60	3.47	0.1500	12006.00
Abra Plum North	552	310.20	663.10	2.14	2.9000	7580.00
Abra Plum South	82	221.20	210.90	0.95	10.1000	1080.00
Eagle Main	4422	28.69	71.40	2.49	0.2500	3550.00
Eagle Plum FW	530	143.00	232.10	1.62	2.4000	2030.00
Eagle Plum HW	790	509.00	3261.00	6.40	1.0000	55684.00
<b>Total</b>	<b>30616</b>	<b>45.40</b>	<b>554.60</b>	<b>12.22</b>	<b>0.1500</b>	<b>55684.00</b>
<b>Cu %</b>	<b>N</b>	<b>Mean</b>	<b>StDev</b>	<b>CoV</b>	<b>Minimum</b>	<b>Maximum</b>
Waste	17859	0.01	0.07	4.54	0.00005	5.57
Abra Main	5357	0.05	0.14	2.79	0.0001	2.60
Abra Plum North	547	0.19	0.50	2.58	0.0016	4.81
Abra Plum South	76	0.04	0.06	1.36	0.0065	0.36
Eagle Main	4406	0.08	0.16	2.13	0.0001	3.22
Eagle Plum FW	530	0.48	0.64	1.35	0.0042	7.87
Eagle Plum HW	786	0.36	0.47	1.33	0.0012	3.30
<b>Total</b>	<b>29561</b>	<b>0.05</b>	<b>0.19</b>	<b>3.67</b>	<b>0.00005</b>	<b>7.87</b>

Bulk density measurements were determined by using the water immersion method on diamond drill core samples. Samples were collected at 20 m intervals downhole and data from all the major units in the hanging wall, mineralized zones and footwall were logged. The average bulk

density is 2.53 t/m<sup>3</sup>, with a slightly higher bulk density observed for the higher grade domains (Table 14.5).

Item	Count	Avg Bulk Density (t/m <sup>3</sup> )	Median Bulk Density (t/m <sup>3</sup> )
Waste Rock	2,822	2.46	2.50
Abra Main	527	2.55	2.54
Abra Plum North	169	2.70	2.67
Abra Plum South	10	2.54	2.55
Eagle Main	384	2.57	2.57
Eagle Plum FW	199	2.71	2.65
Eagle Plum HW	404	2.79	2.69
<b>Total</b>	<b>4,515</b>	<b>2.53</b>	<b>2.54</b>

The GoGold exploration program includes ICP assay results for 203 diamond drill holes. Average ICP values for selected metals are listed in Table 14.6. ICP values plotted against elevation for the Abra mineralized veins indicate little or no observed change with depth (Figure 14.3). ICP values for the Eagle mineralized veins suggest a narrow zone of anomalous values centred around 1,200 masl (Figure 14.4).

Sample Location	Au (g/t)	Ag (g/t)	As (ppm)	Bi (ppm)
Abra	0.73	100	20	3.68
Eagle	1.20	103	44	16.25
Waste Rock	0.04	6	29	1.48
<b>Total</b>	<b>0.41</b>	<b>44</b>	<b>30</b>	<b>4.90</b>
Sample Location	Cu (%)	Fe (%)	Mg (%)	Mn (%)
Abra	0.06	2.07	0.58	0.14
Eagle	0.14	2.77	0.53	0.16
Waste Rock	0.01	3.27	1.03	0.16
<b>Total</b>	<b>0.05</b>	<b>2.93</b>	<b>0.84</b>	<b>0.15</b>
Sample Location	S (%)	Ni (ppm)	Pb (%)	Zn (%)
Abra	0.19	5.08	0.10	0.19

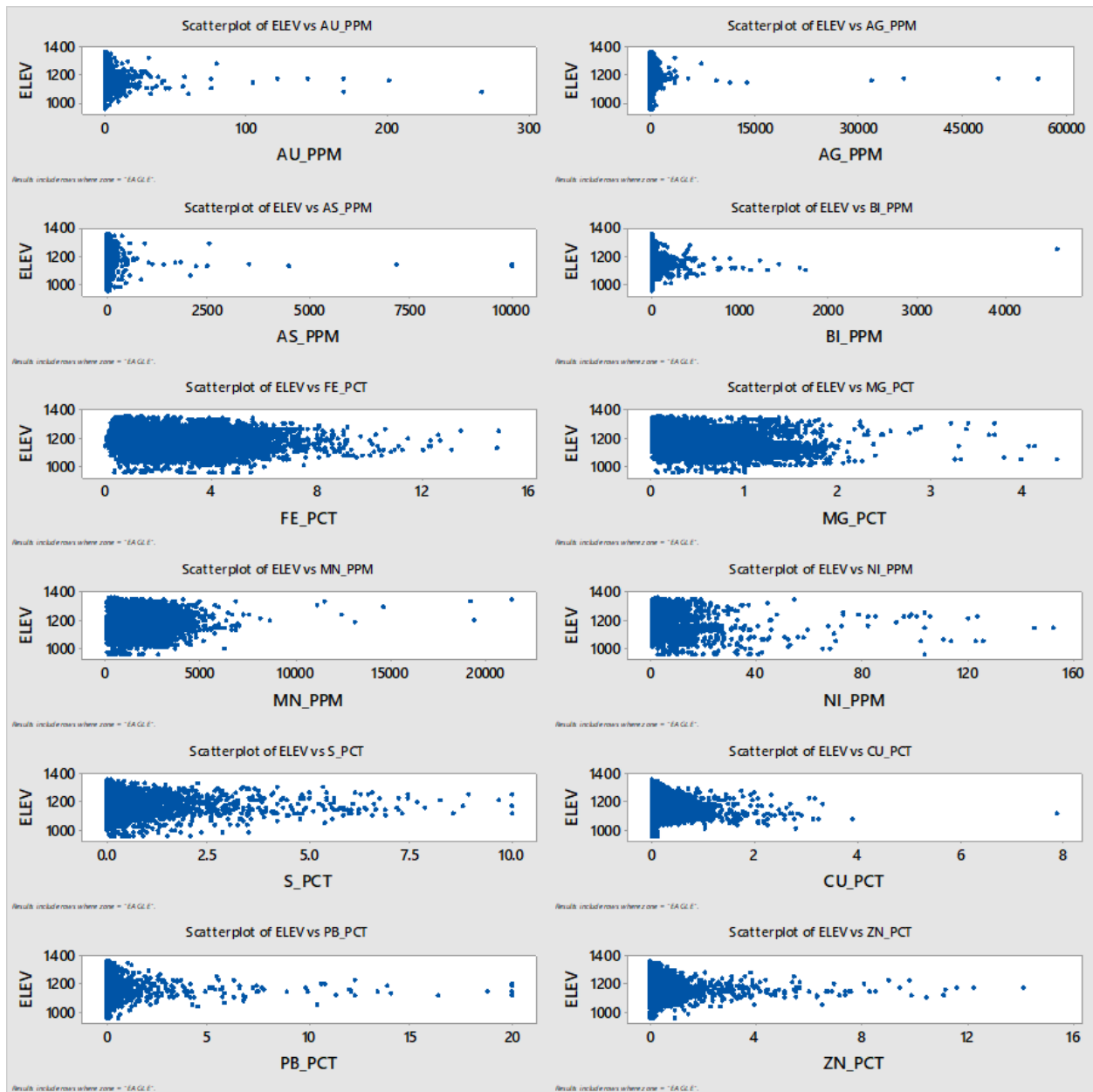
TABLE 14.6 ICP AVERAGE SAMPLE VALUES				
Eagle	0.39	5.08	0.22	0.32
Waste Rock	0.33	11.16	0.02	0.06
<b>Total</b>	<b>0.31</b>	<b>8.71</b>	<b>0.07</b>	<b>0.14</b>

FIGURE 14.3 ICP ASSAY VALUES BY DEPTH FOR ABRA





**FIGURE 14.4 ICP ASSAY VALUES BY DEPTH FOR EAGLE**

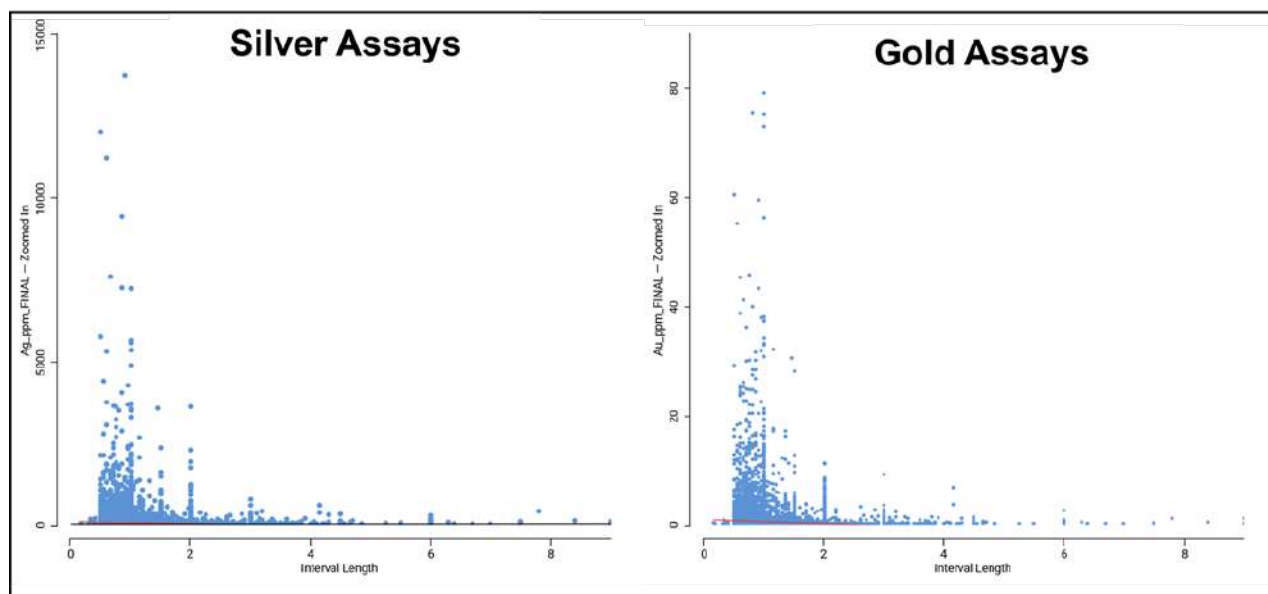


## 14.5 COMPOSITING

Constrained assay sample lengths within the defined mineralized veins range from 0.15 to 9.0 m, with an average sample length of 1.07 m and a mode of 1.00 m. A total of 28% of the constrained assay sample lengths equal 1.00 m.

No correlation was observed between sample grade and sample length for the constrained assay samples (Figure 14.5).

**FIGURE 14.5 PLOT OF SAMPLE GRADE VERSUS SAMPLE LENGTH**



Based on the predominance of 1.0 m sample lengths, all constrained assay samples were composited to this length in order to ensure equal sample support. Length-weighted composites were calculated within the defined mineralized veins. A small number of un-sampled intervals in the data were treated as null intervals due to the presence of mining voids, backfill and surface rock piles. Backfill and surface rock assays were not included in the compositing process.

The compositing process started at the first point of intersection between the drill hole and the mineralized vein intersected, and halted upon exit from the vein. Downhole residual composites that were less than half the compositing length were discarded so as to not introduce a short sample bias into the composite sample population. The wireframes that represent the mineralized veins were used to back-tag a rock code variable into the composite workspace. The composite data were visually validated against the mineralization wireframes, and extracted for analysis and grade estimation. Summary composite statistics are listed in Table 14.7.

**TABLE 14.7  
SUMMARY COMPOSITE STATISTICS**

<b>Statistic</b>	<b>Abra Main</b>	<b>Eagle Main</b>	<b>Abra Plum North</b>	<b>Abra Plum South</b>	<b>Eagle Plum FW</b>	<b>Eagle Plum HW</b>
Sample Count	5,795	4,060	506	82	449	662
Minimum Ag g/t	0.15	0.25	3.30	23.80	3.82	2.00
Maximum Ag g/t	7,352.34	3,027.01	6,203.25	1,080.00	1,515.20	51,012.80
Average Ag g/t	87.44	29.91	300.20	206.03	135.66	520.68
Std Dev Ag	239.41	75.12	521.08	199.85	190.23	2998.54
CoV Ag	2.74	2.51	1.74	0.97	1.40	5.76
Minimum Au g/t	0.00	0.00	0.02	0.08	0.02	0.00
Maximum Au g/t	66.40	28.15	24.72	9.08	110.14	159.50

**TABLE 14.7**  
**SUMMARY COMPOSITE STATISTICS**

<b>Statistic</b>	<b>Abra Main</b>	<b>Eagle Main</b>	<b>Abra Plum North</b>	<b>Abra Plum South</b>	<b>Eagle Plum FW</b>	<b>Eagle Plum HW</b>
Average Au g/t	0.60	0.30	2.43	2.14	3.75	4.47
Std Dev Au	1.88	1.16	3.16	2.05	9.04	12.10
CoV Au	3.15	3.79	1.30	0.96	2.41	2.70
Minimum Cu %	0.00	0.00	0.00	0.01	0.01	0.00
Maximum Cu %	2.36	2.83	4.03	0.28	3.78	2.74
Average Cu %	0.05	0.07	0.18	0.04	0.47	0.33
Std Dev Cu	0.12	0.12	0.44	0.05	0.54	0.40
CoV Cu	2.54	1.72	2.50	1.15	1.15	1.21

*Note: FW = footwall, HW = hanging wall, Std Dev = standard deviation, CoV = coefficient of variation.*

#### **14.6 TREATMENT OF EXTREME VALUES**

Capping thresholds were determined by the analysis of individual composite log-probability distributions (Figures 14.6 and 14.7). Composites were capped to the defined threshold prior to estimation (Table 14.8 to 14.10).

**TABLE 14.8**  
**SILVER COMPOSITE CAPPING THRESHOLDS**

<b>Veins</b>	<b>Threshold (g/t)</b>	<b>Average Uncapped Value (g/t)</b>	<b>Number Capped</b>	<b>Average Capped Value (g/t)</b>
Abra Main	10,000	87	0	87
Eagle Main	500	30	6	28
Abra Plum North	2,500	300	6	283
Abra Plum South	900	206	2	202
Eagle Plum FW	1,200	136	3	134
Eagle Plum HW	7,000	521	9	332

**TABLE 14.9**  
**GOLD COMPOSITE CAPPING THRESHOLDS**

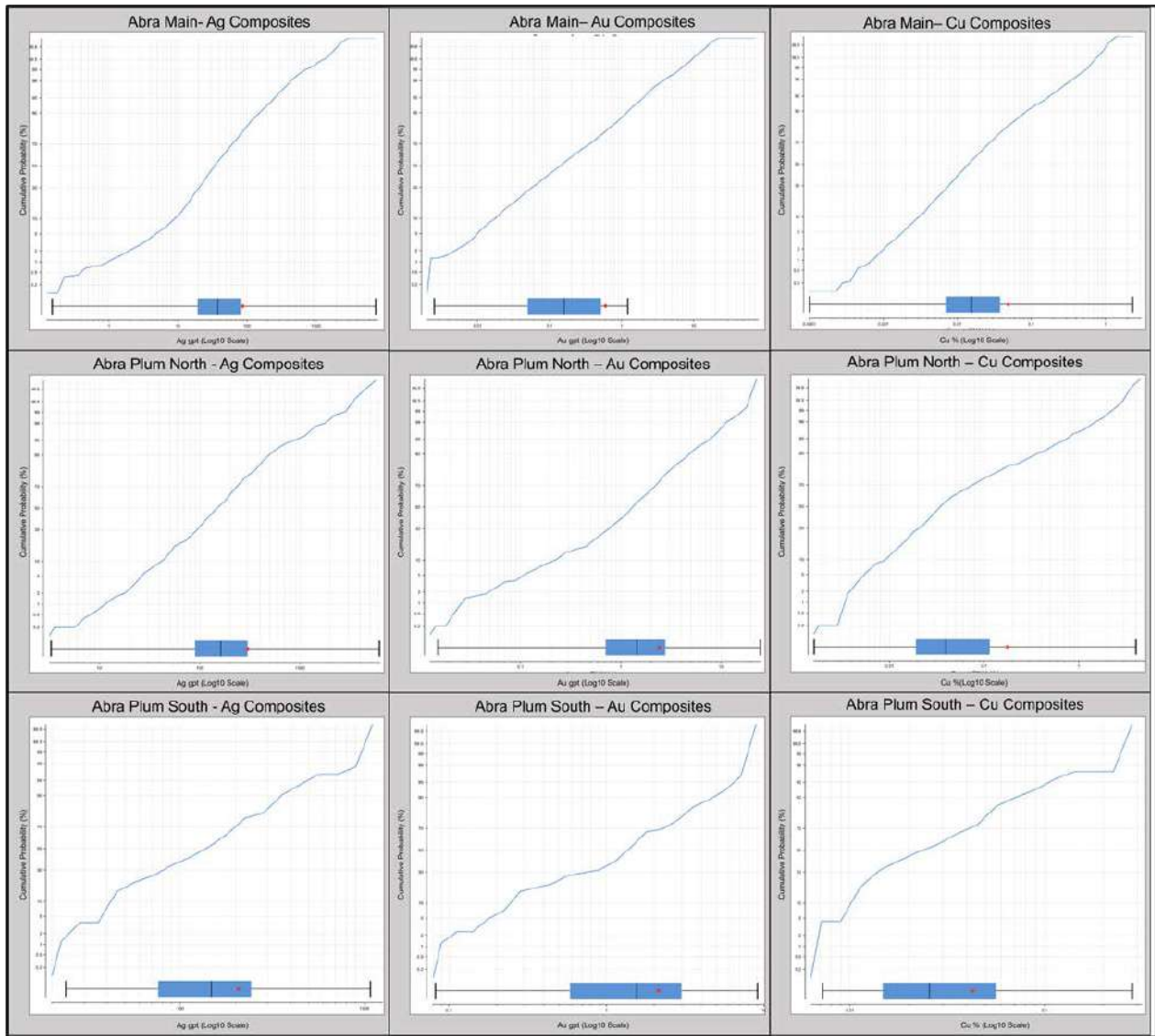
<b>Veins</b>	<b>Threshold (g/t)</b>	<b>Average Uncapped Value (g/t)</b>	<b>Number Capped</b>	<b>Average Capped Value (g/t)</b>
Abra Main	90.00	0.60	0	0.60
Eagle Main	6.00	0.30	16	0.27
Abra Plum North	14.00	2.43	9	2.33
Abra Plum South	16.00	2.14	0	2.14
Eagle Plum FW	30.00	3.75	5	3.25
Eagle Plum HW	40.00	4.47	11	3.74

**TABLE 14.10**  
**COPPER COMPOSITE CAPPING THRESHOLDS**

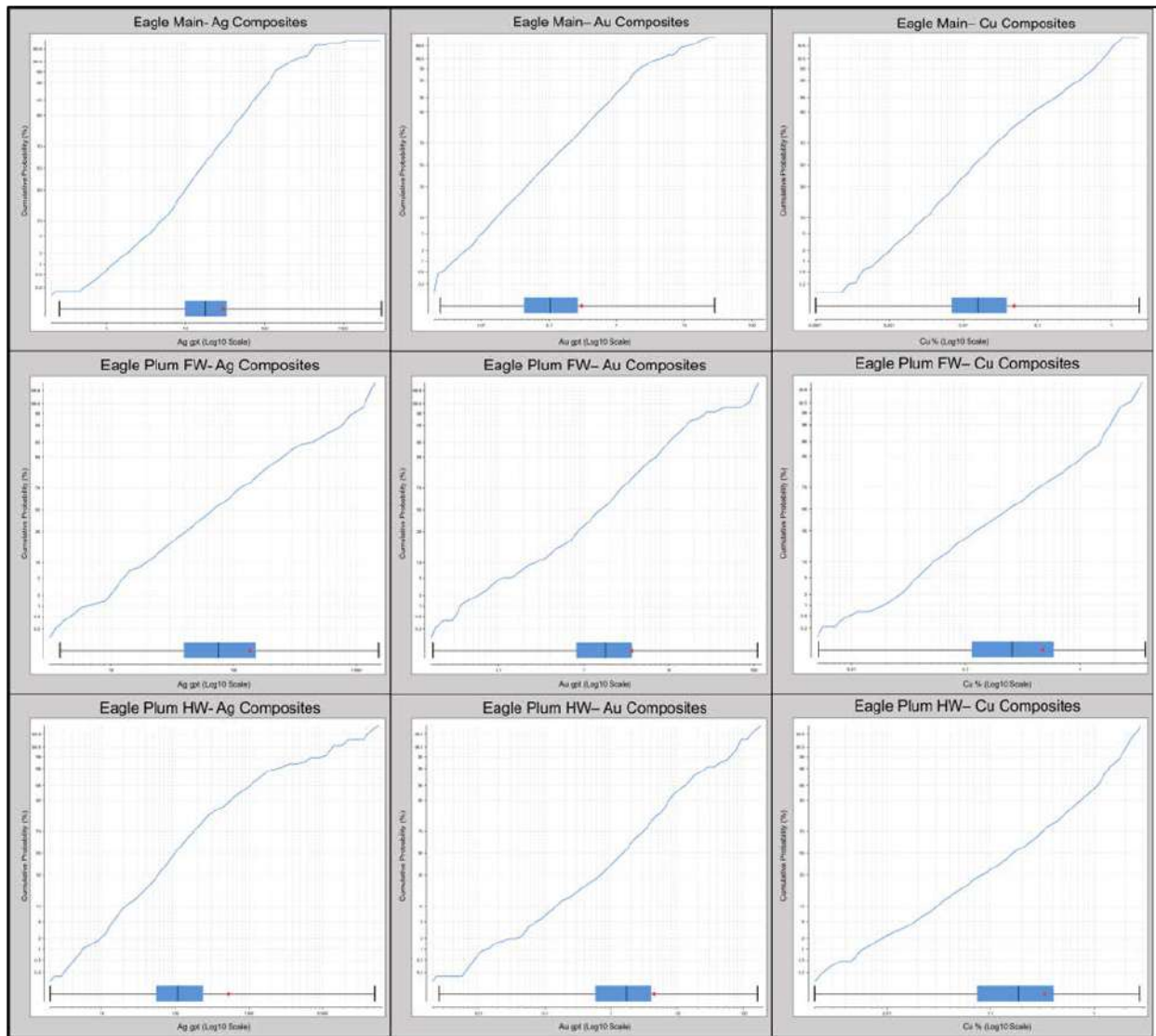
<b>Veins</b>	<b>Threshold (%)</b>	<b>Average Uncapped Value (%)</b>	<b>Number Capped</b>	<b>Average Capped Value (%)</b>
Abra Main	2.0	0.05	1	0.05
Eagle Main	1.2	0.07	4	0.07
Abra Plum North	3.0	0.18	3	0.17
Abra Plum South	1.0	0.04	0	0.04
Eagle Plum FW	2.5	0.47	4	0.47
Eagle Plum HW	2.5	0.33	2	0.33



**FIGURE 14.6 LOG-PROBABILITY GRAPHS FOR ABRA DOMAIN COMPOSITES**



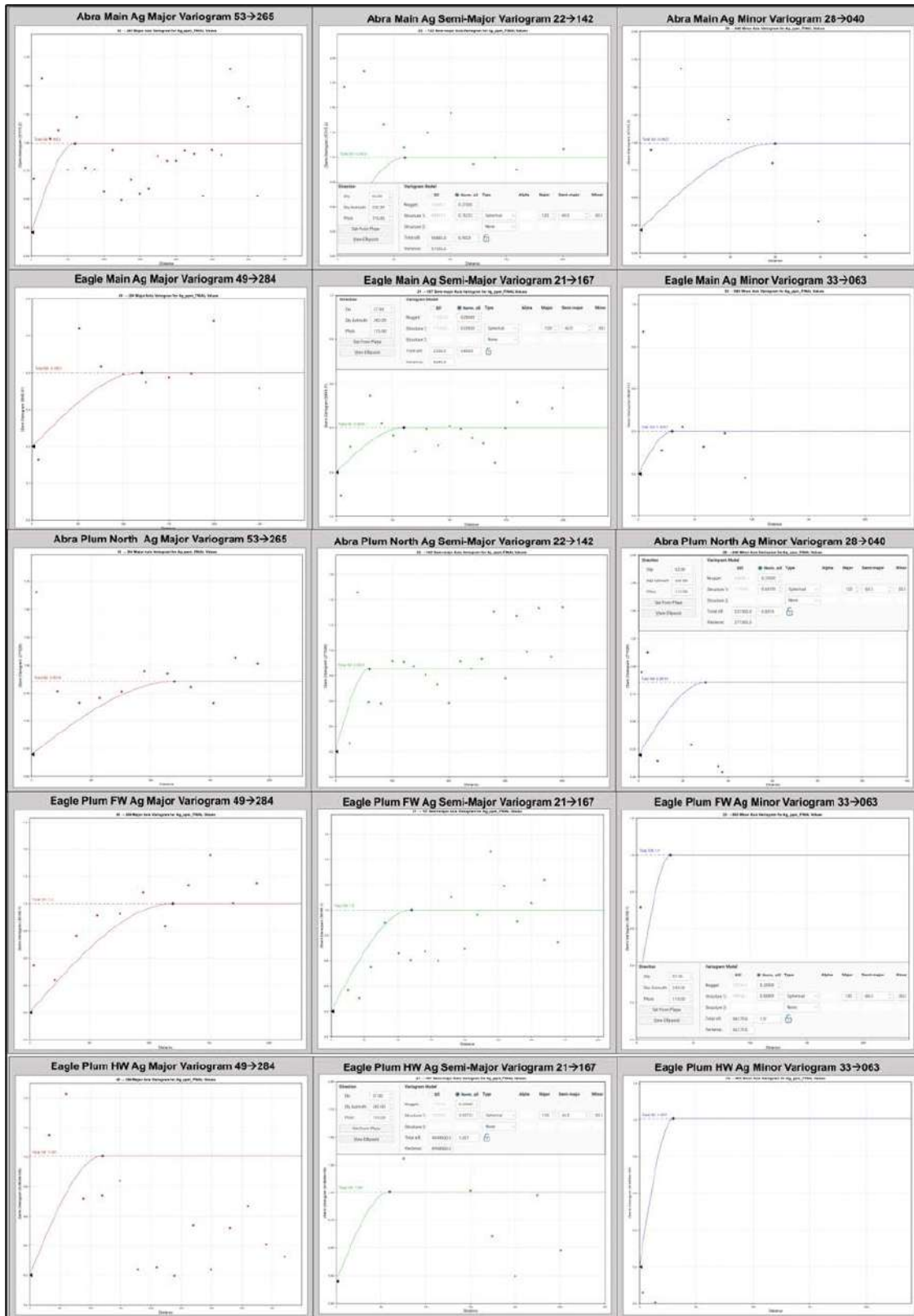
**FIGURE 14.7 LOG-PROBABILITY GRAPHS FOR EAGLE DOMAIN COMPOSITES**



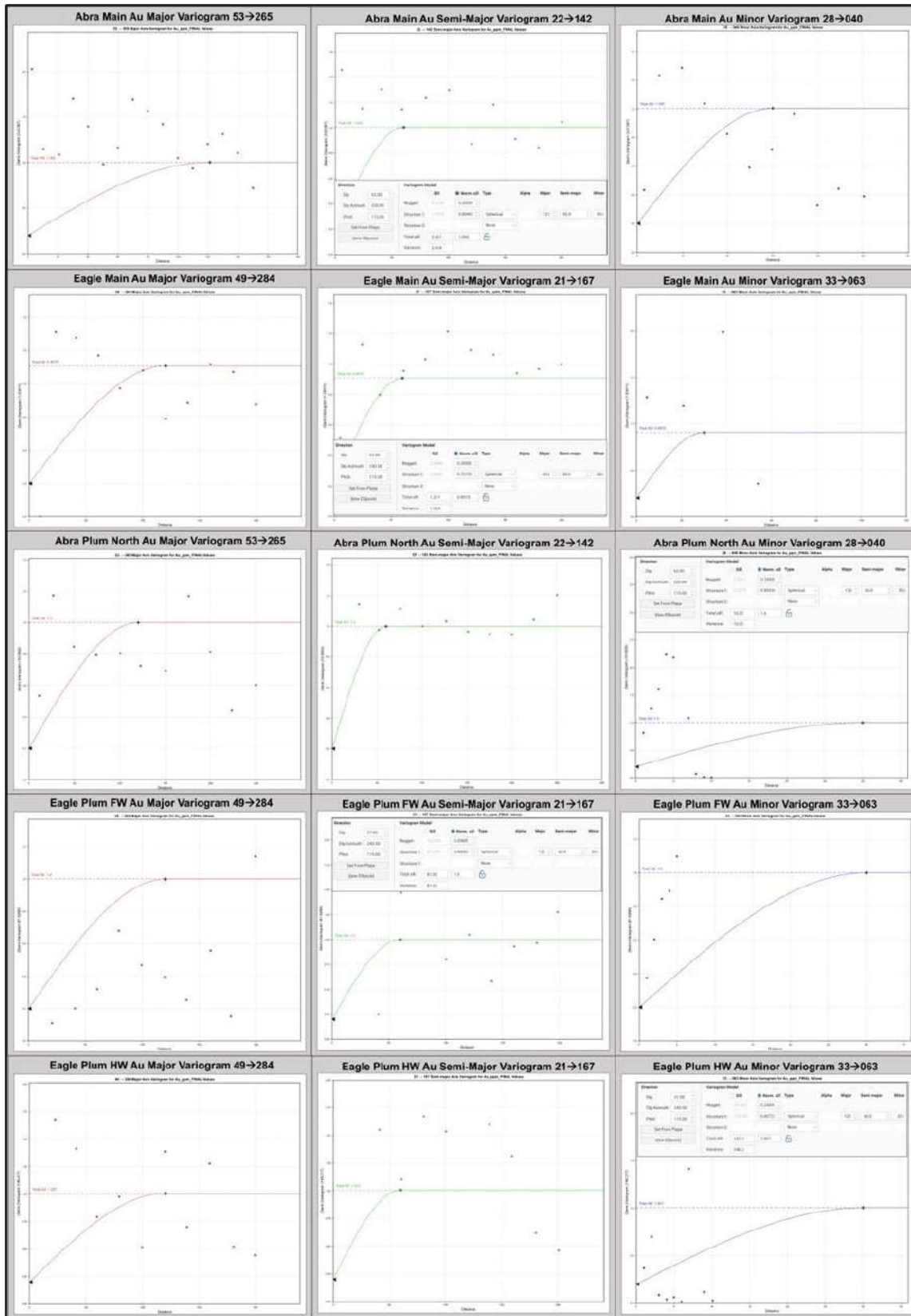
## 14.7 CONTINUITY ANALYSIS

Three-dimensional continuity analyses (variography) were conducted on the domain-coded uncapped composite data. In general, an acceptable semi-variogram could only be developed for the Abra, Eagle and associated high-grade domains, primarily due to the small number of data points available for the other domains (i.e., Cerro Colorado 1 and 2, and Abra Plum South). The downhole variogram was viewed at a 1.0 m lag spacing (equivalent to the composite length) to assess the nugget variance contribution. Standardized spherical models were used to model the experimental semi-variograms (Figures 14.8 and 14.9). The search ellipsoid orientation can be seen in Figure 14.10.

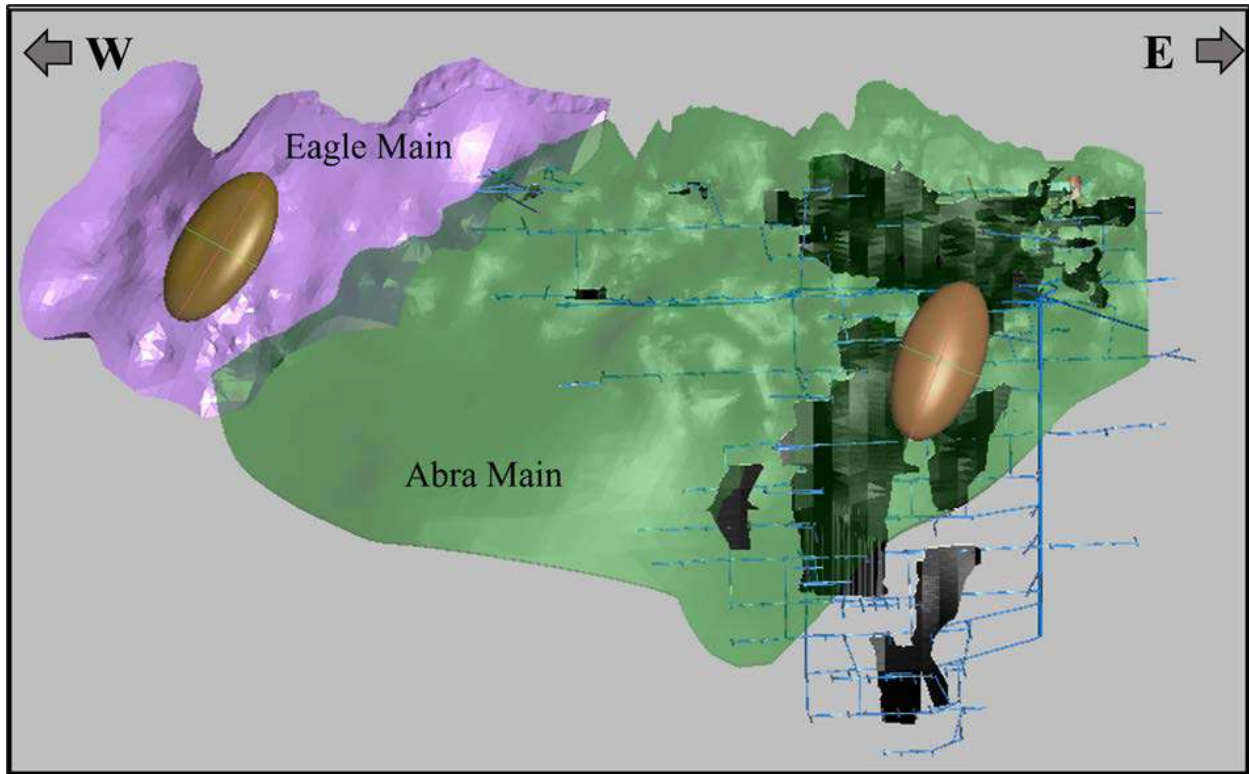
**FIGURE 14.8 SEMI-VARIOGRAMS FOR AG COMPOSITES**



**FIGURE 14.9 SEMI-VARIOGRAMS FOR AU COMPOSITES**



**FIGURE 14.10 LONGITUDINAL PROJECTION SHOWING THE ABRA AND EAGLE VEINS WITH HISTORICAL WORKINGS AND SEARCH ELLIPSOID ORIENTATION**



### 14.8 BLOCK MODEL

A rotated block model was developed with the block model limits selected to cover the extent of the mineralized structures, the potential open pit dimensions, and to reflect the general nature of the mineralized zones (Table 14.11). A three-dimensional sub-blocked model, with 3 m x 3 m x 3 m parent and 1 m x 1 m x 1 m sub-blocks, was utilized to respect the narrow vein nature of high-grade domains. The block model consists of estimated Au, Ag and Cu grades, bulk density, and classification criteria. AuEq and AgEq block grades were subsequently calculated from the estimated Au, Ag and Cu grades.

<b>TABLE 14.11 BLOCK MODEL SETUP</b>				
<b>Direction</b>	<b>Origin</b>	<b>Number of Blocks</b>	<b>Parent Block Size (m)</b>	<b>Sub-Block Size (m)</b>
Minimum X	611,600	768	3	1
Minimum Y	2,325,200	1,380	3	1
Maximum Z	1,670	346	3	1
Rotation	40° counter-clockwise			



## 14.9 GRADE ESTIMATION AND MINERAL RESOURCE CLASSIFICATION

Mineralized domain bulk density values were assigned for the Abra and Eagle Veins based on the median value. A bulk density of 2.54 t/m<sup>3</sup> used for Abra Main, 2.67 t/m<sup>3</sup> for Abra Plum North, 2.55 t/m<sup>3</sup> for Abra Plum South, 2.57 t/m<sup>3</sup> used for Eagle Main, 2.65 t/m<sup>3</sup> for Eagle Plum FW, and 2.69 t/m<sup>3</sup> for Eagle Plum HW.

Block grades for gold and silver were estimated by Inverse Distance Cubed (“ID<sup>3</sup>”) anisotropic estimation of capped composites using a minimum of one and a maximum of 12 composites.

The orientation of the search ellipsoid was defined by the modeled variography, observed grade trends and historical mining. Composite samples were selected within a 120 m x 60 m x 30 m ellipsoid either plunging -53 > 265° for Abra domains or -49 > 284° for Eagle domains.

Sample selection was restricted to a maximum of two composite samples from a single drill hole. Search and grade estimation were constrained by the individual mineralized veins, which define hard boundaries for grade estimation. Due to insufficient points to generate acceptable semi-variograms for the Abra Plum South, the Abra Main Vein semi-variogram was used. Au, Ag, and AgEq block model vertical cross-sections and plans can be seen in Appendices C to E. Block grades for copper were estimated by Inverse Distance Squared (“ID<sup>2</sup>”) isotropic estimation of uncapped composites using a minimum of one and a maximum of 12 composites.

The parameters used to define the classification limits included spatial analysis, drill hole spacing, and the observed continuity of the mineralization. Mineral Resources were classified algorithmically based on the local drill hole spacing within each individual mineralization domain. For the purposes of classification, historical underground channel sampling was treated as drill holes; however, underground channel sampling was not used for the grade estimation process. All blocks within 30 m of three or more drill holes/channel samples were classified as Measured, blocks within 60 m of two or more drill holes were classified as Indicated, and all additional estimated blocks were classified as Inferred. Classification block model vertical cross-sections and plans can be seen in Appendix F.

## 14.10 MINERAL RESOURCE ESTIMATE

Pit-constrained Mineral Resources herein have been reported within an optimized pit shell (Figures 14.11 and 14.12). The results from the optimized pit shell are used solely for the purpose of reporting Mineral Resources and include Measured, Indicated and Inferred Mineral Resources. Historical mining has been depleted from the Abra Vein. Pit-constrained Mineral Resources are reported using a cut-off of 38 g/t AgEq (0.48 g/t AuEq). The optimized pit shell is shown in Appendix G.

Out-of-pit Mineral Resources have been reported beneath the pit shell, however, are restricted to the Eagle and Abra mineralized veins, which exhibit historical mineralized continuity and reasonable potential for extraction by cut and fill and longhole mining methods. Out-of-pit Mineral Resources are reported using a cut-off of 130 g/t AgEq (1.66 g/t AuEq).

Highlights of the Los Ricos South Mineral Resource Estimate include:

- Increase of 55% in Measured and Indicated Silver Equivalent (“AgEq”) ounces from initial January 2021 MRE, with a 39% increase in Measured & Indicated AgEq grade;
- Inclusion of 1.9 million tonnes Measured and Indicated Mineral Resources at a grade of 516 g/t AgEq in the underground Eagle Deposit;
- Measured and Indicated Mineral Resource of 98.6 million ounces AgEq grading 276 g/t AgEq contained in 11.1 million tonnes;
- Inferred Mineral Resources of 13.6 million ounces AgEq grading 185 g/t contained in 2.3 million tonnes;
- Los Ricos South Mineral Resource is amenable to both conventional open pit and underground longhole mining methods.

The Mineral Resource has an effective date of September 12, 2023 (Table 14.12).

The sensitivity of the Mineral Resource to changes in cut-off grade was also calculated across a range of potentially economic AgEq cut-offs (Tables 14.13 and 14.14).

**FIGURE 14.11 ISOMETRIC VIEW OF THE OPTIMIZED PIT SHELL**

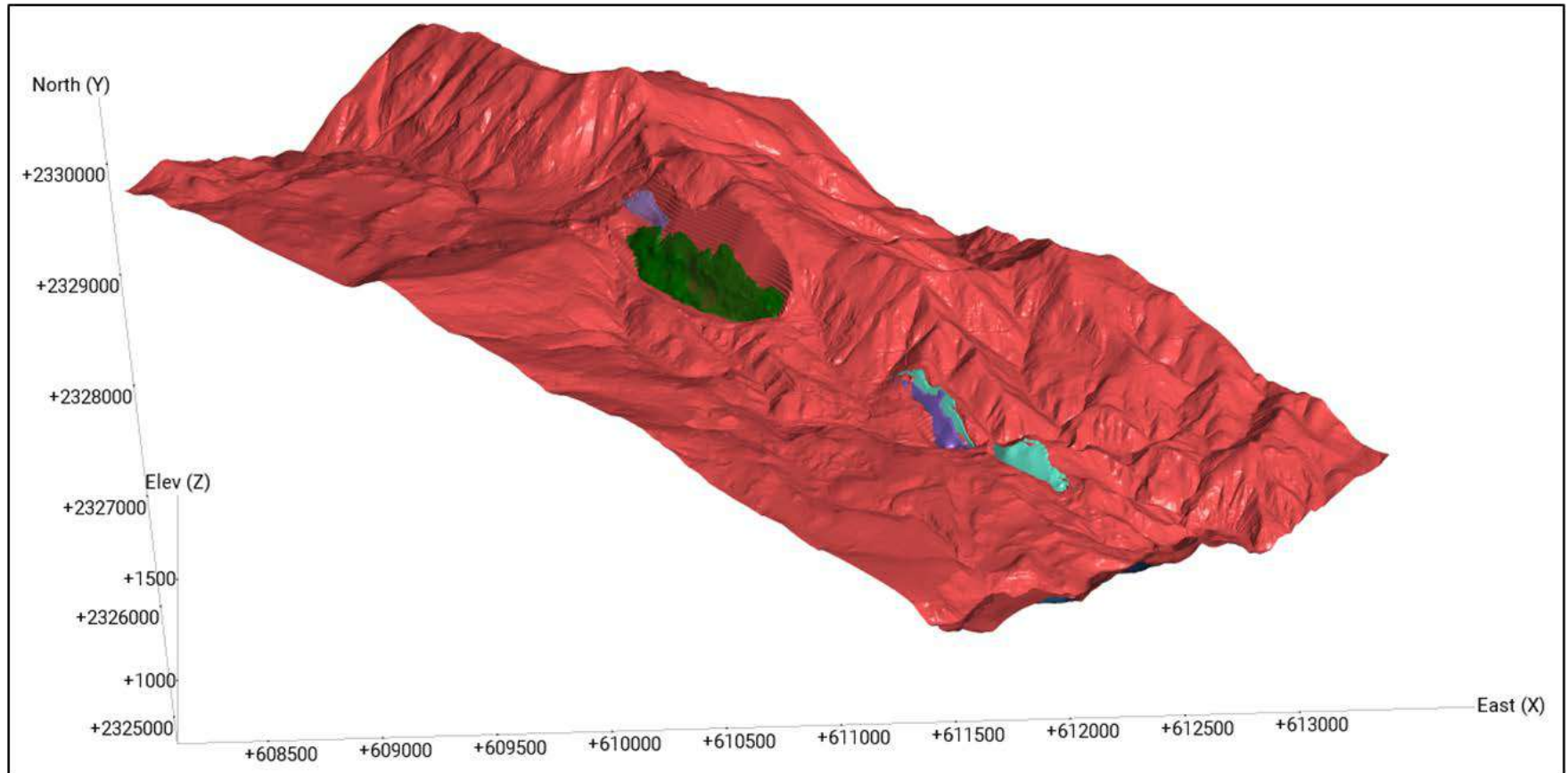
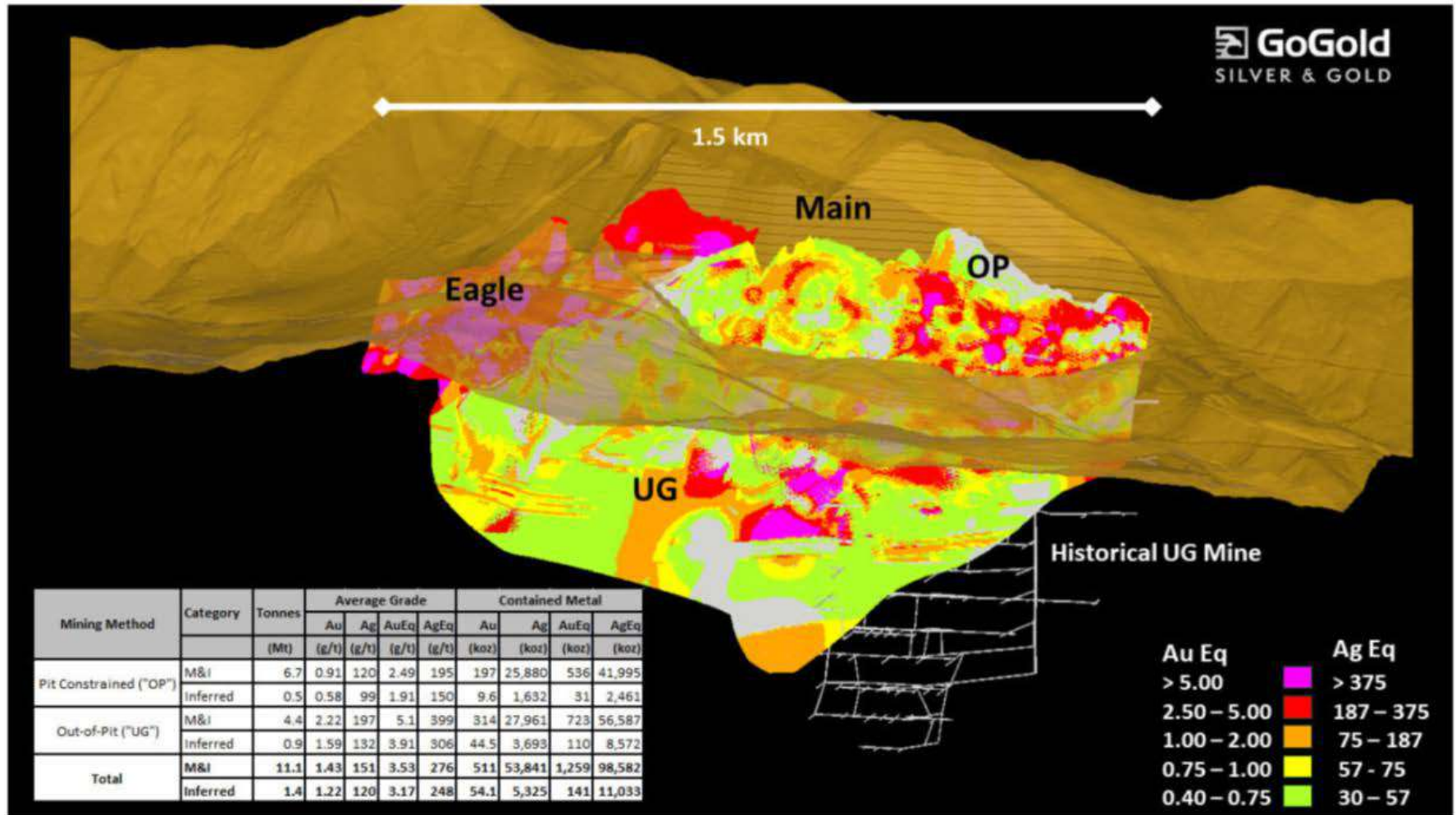




FIGURE 14.12 ISOMETRIC VIEW OF MINERAL RESOURCE BLOCK MODEL, ABRA AND EAGLE



**TABLE 14.12**  
**LOS RICOS SOUTH MINERAL RESOURCE ESTIMATE – BOTH PIT-CONSTRAINED AND OUT-OF-PIT CLASSIFICATIONS <sup>(1-9)</sup>**

Mining Method	Classification	Tonnes (M)	Average Grade					Contained Metal				
			Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	AgEq (g/t)	Au (koz)	Ag (koz)	Cu (Mlb)	AuEq (koz)	AgEq (koz)
Pit- Constrained <sup>5</sup>	Measured	3.9	1.08	142	0.03	2.94	231	135.9	17,858	2.3	369.1	28,898
	Indicated	2.8	0.68	89	0.03	1.87	146	60.7	8,022	1.9	167.3	13,097
	<b>Meas &amp; Ind</b>	<b>6.7</b>	<b>0.91</b>	<b>120</b>	<b>0.03</b>	<b>2.49</b>	<b>195</b>	<b>196.6</b>	<b>25,880</b>	<b>4.2</b>	<b>536.4</b>	<b>41,995</b>
	Inferred	0.5	0.58	99	0.04	1.91	150	9.6	1,632	0.4	31.4	2,460
Pit - Cerro C. <sup>6</sup>	Inferred	0.9	0.72	31	0.01	1.12	88	20.9	905	0.2	32.8	2,568
Out-of-Pit <sup>7,8</sup> <i>Eagle</i>	Measured	0.7	3.60	298	0.35	7.94	621	80.7	6,679	5.4	178.1	13,940
	Indicated	1.2	3.13	164	0.37	5.79	453	117.5	6,176	9.5	217.5	17,028
	<b>Meas &amp; Ind</b>	<b>1.9</b>	<b>3.30</b>	<b>214</b>	<b>0.36</b>	<b>6.59</b>	<b>516</b>	<b>198.2</b>	<b>12,855</b>	<b>15.0</b>	<b>395.6</b>	<b>30,969</b>
	Inferred	0.1	3.63	122	0.54	6.00	470	7.8	261	0.8	12.9	1,006
Out-of-Pit <sup>7,8</sup> <i>Abra Main</i>	Measured	1.1	1.22	194	0.06	3.79	297	44.7	7,093	1.6	138.8	10,865
	Indicated	1.4	1.58	178	0.21	4.18	327	71.5	8,013	6.6	188.4	14,753
	<b>Meas &amp; Ind</b>	<b>2.5</b>	<b>1.42</b>	<b>185</b>	<b>0.15</b>	<b>4.00</b>	<b>313</b>	<b>116.2</b>	<b>15,106</b>	<b>8.1</b>	<b>327.2</b>	<b>25,618</b>
	Inferred	0.8	1.42	133	0.41	3.73	292	36.8	3,431	7.2	96.6	7,566
<b>Total</b>	<b>Measured</b>	<b>5.7</b>	<b>1.42</b>	<b>172</b>	<b>0.07</b>	<b>3.72</b>	<b>291</b>	<b>261.4</b>	<b>31,631</b>	<b>9.3</b>	<b>686.0</b>	<b>53,703</b>
	<b>Indicated</b>	<b>5.4</b>	<b>1.45</b>	<b>129</b>	<b>0.15</b>	<b>3.33</b>	<b>260</b>	<b>249.7</b>	<b>22,210</b>	<b>18.0</b>	<b>573.2</b>	<b>44,878</b>
	<b>Meas &amp; Ind</b>	<b>11.1</b>	<b>1.43</b>	<b>151</b>	<b>0.11</b>	<b>3.53</b>	<b>276</b>	<b>511.0</b>	<b>53,841</b>	<b>27.3</b>	<b>1,259.2</b>	<b>98,582</b>
	<b>Inferred</b>	<b>2.3</b>	<b>1.02</b>	<b>85</b>	<b>0.17</b>	<b>2.36</b>	<b>185</b>	<b>75.0</b>	<b>6,230</b>	<b>8.6</b>	<b>173.7</b>	<b>13,601</b>

*Notes: Meas = Measured, Ind = Indicated.*

- 1. 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, title, taxation, socio-political, marketing, or other relevant issues.*
- 2. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.*
- 3. The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*

4. *Historically mined areas were depleted from the Mineral Resource model.*
5. *The pit-constrained AgEq cut-off grade of 38 g/t AgEq was derived from US\$1,800/oz Au price, US\$23.00/oz Ag price, 85% Ag and 95% Au process recovery, US\$25/tonne process and G&A cost. The constraining pit optimization parameters were \$2.10/t mineralized material and waste mining cost, and 45-degree pit slopes.*
6. *Cerro Colorado Resource constrained to open pit mining methods only; out-of-pit Mineral Resources are restricted to the Eagle and Abra mineralized veins, which exhibit historical continuity and reasonable potential for extraction by cut and fill and longhole mining methods.*
7. *The out-of-pit AgEq cut-off grade of 130 g/t AgEq was derived from US\$1,800/oz Au price, US\$23.00/oz Ag price, 85% Ag and 95% Au process recovery, US\$33/tonne process and G&A cost, and a \$50/tonne mining cost. The out-of-pit Mineral Resource grade blocks were quantified above the 130 g/t AgEq cut-off, below the constraining pit shell and within the constraining mineralized wireframes. Out-of-Pit Mineral Resources are restricted to the Eagle and Abra Veins, which exhibit historical continuity and reasonable potential for extraction by cut-and-fill and longhole mining.*
8. *AgEq and AuEq were calculated at an Ag/Au ratio of 78.2:1 for pit constrained and out-of-pit Resources.*
9. *Totals may not sum due to rounding.*

**TABLE 14.13**  
**CUT-OFF SENSITIVITIES: PIT-CONSTRAINED MINERAL RESOURCE** <sup>(1-2)</sup>

Pit-Constrained	Cut-off (AgEq) (g/t)	Tonnes (M)	Average Grade					Contained Metal				
			Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	AgEq (g/t)	Au (koz)	Ag (koz)	Cu (Mlb)	AuEq (koz)	AgEq (koz)
Measured	250	1.06	2.71	336	0.04	7.07	553	92	11,437	0.9	240	18,808
	150	1.76	2.00	250	0.03	5.24	410	113	14,121	1.3	296	23,195
	80	2.76	1.44	185	0.03	3.85	301	128	16,417	1.8	342	26,777
	60	3.26	1.26	164	0.03	3.40	266	133	17,167	2.0	356	27,892
	<b>38</b>	<b>3.90</b>	<b>1.08</b>	<b>142</b>	<b>0.03</b>	<b>2.94</b>	<b>231</b>	<b>136</b>	<b>17,858</b>	<b>2.3</b>	<b>369</b>	<b>28,898</b>
	30	4.11	1.03	137	0.03	2.82	221	137	18,019	2.4	372	29,124
Indicated	250	0.39	2.34	257	0.07	5.74	449	29	3,188	0.6	71	5,559
	150	0.74	1.67	188	0.05	4.15	325	40	4,496	0.9	99	7,783
	80	1.67	1.00	123	0.04	2.62	205	54	6,586	1.4	141	11,027
	60	2.15	0.83	106	0.03	2.23	175	58	7,314	1.6	155	12,098
	<b>38</b>	<b>2.79</b>	<b>0.68</b>	<b>89</b>	<b>0.03</b>	<b>1.87</b>	<b>146</b>	<b>61</b>	<b>8,022</b>	<b>1.9</b>	<b>167</b>	<b>13,097</b>
	30	2.99	0.64	85	0.03	1.77	138	61	8,188	1.9	170	13,323
Inferred	250	0.10	1.41	252	0.06	4.71	369	5	822	0.1	15	1,203
	150	0.13	1.29	217	0.07	4.16	326	6	939	0.2	18	1,408
	80	0.34	0.77	127	0.05	2.47	194	8	1,394	0.4	27	2,119
	60	0.45	0.64	108	0.04	2.08	163	9	1,572	0.4	30	2,374
	<b>38</b>	<b>0.51</b>	<b>0.58</b>	<b>99</b>	<b>0.04</b>	<b>1.91</b>	<b>150</b>	<b>10</b>	<b>1,632</b>	<b>0.4</b>	<b>31</b>	<b>2,460</b>
	30	0.54	0.56	96	0.04	1.84	144	10	1,652	0.5	32	2,490

Notes: 1) See previous table for assumptions.

2) Cerro Colorado not included due to lower grade than Eagle and Abra domains.

**TABLE 14.14**  
**CUT-OFF SENSITIVITIES: OUT-OF-PIT MINERAL RESOURCE <sup>(1-2)</sup>**

Out-of-Pit	Cut-off (AgEq) (g/t)	Tonnes (M)	Average Grade					Contained Metal				
			Au (g/t)	Ag (g/t)	Cu (%)	AuEq (g/t)	AgEq (g/t)	Au (koz)	Ag (koz)	Cu (Mlb)	AuEq (koz)	AgEq (koz)
Measured	250	1.03	3.12	337	0.24	7.79	610	103	11,141	5.3	257	20,142
	200	1.26	2.76	297	0.21	6.88	539	112	12,045	5.9	279	21,819
	150	1.63	2.31	252	0.19	5.81	455	122	13,220	6.7	305	23,891
	140	1.73	2.22	243	0.18	5.60	438	123	13,477	6.8	311	24,323
	<b>130</b>	<b>1.84</b>	<b>2.12</b>	<b>233</b>	<b>0.17</b>	<b>5.37</b>	<b>420</b>	<b>125</b>	<b>13,773</b>	<b>7.0</b>	<b>317</b>	<b>24,805</b>
	120	1.99	2.00	221	0.16	5.08	397	128	14,165	7.2	325	25,417
Indicated	250	1.59	3.13	224	0.35	6.52	510	160	11,425	12.2	333	26,052
	200	1.92	2.80	203	0.33	5.89	461	173	12,529	13.8	363	28,444
	150	2.31	2.47	183	0.30	5.26	412	183	13,607	15.2	391	30,610
	140	2.43	2.38	178	0.29	5.10	399	186	13,885	15.6	398	31,165
	<b>130</b>	<b>2.57</b>	<b>2.29</b>	<b>172</b>	<b>0.28</b>	<b>4.91</b>	<b>384</b>	<b>189</b>	<b>14,189</b>	<b>16.1</b>	<b>406</b>	<b>31,781</b>
	120	2.74	2.18	165	0.28	4.71	369	192	14,520	16.7	414	32,445
Inferred	250	0.47	2.26	185	0.49	5.37	421	34	2,789	5.1	81	6,346
	200	0.57	2.07	168	0.47	4.93	386	38	3,073	5.9	90	7,064
	150	0.72	1.81	148	0.44	4.37	342	42	3,413	6.9	101	7,882
	140	0.77	1.73	142	0.43	4.19	328	43	3,514	7.3	104	8,139
	<b>130</b>	<b>0.87</b>	<b>1.59</b>	<b>132</b>	<b>0.42</b>	<b>3.91</b>	<b>306</b>	<b>45</b>	<b>3,693</b>	<b>8.0</b>	<b>109</b>	<b>8,572</b>
	120	1.00	1.44	121	0.40	3.60	282	47	3,897	8.9	116	9,098

Notes: 1) See previous table for assumptions.

2) Cerro Colorado not included as it was deemed too low grade for extraction via underground mining methods.

## 14.11 VALIDATION

The block model was validated visually by the inspection of successive vertical cross-section lines in order to confirm that the block models correctly reflect the distribution of high-grade and low-grade values (see Appendices C to E).

The average estimated block grades were compared to the average Nearest Neighbour block estimate at a 0.001 cut-off (Table 14.15). The results fall within acceptable limits for grade estimation.

<b>TABLE 14.15</b>			
<b>COMPARISON OF ID<sup>3</sup> AND NN AVERAGE BLOCK GRADES</b>			
<b>Rock Code</b>	<b>Ag ID<sup>3</sup> (g/t)</b>	<b>Ag NN (g/t)</b>	<b>Ratio ID/NN (%)</b>
100	63	54	116
110	226	196	115
120	172	157	109
200	28	29	95
210	128	117	110
220	243	205	119
400	25	25	100
500	15	14	107
<b>Average</b>	<b>112</b>	<b>100</b>	<b>109</b>
<b>Rock Code</b>	<b>Au ID<sup>3</sup> (g/t)</b>	<b>Au NN (g/t)</b>	<b>Ratio ID/NN (%)</b>
100	0.40	0.33	121
110	1.97	1.74	113
120	1.76	1.55	114
200	0.26	0.29	90
210	3.06	2.74	112
220	3.04	3.05	100
400	0.46	0.46	100
500	0.41	0.43	95
<b>Average</b>	<b>1.42</b>	<b>1.32</b>	<b>106</b>

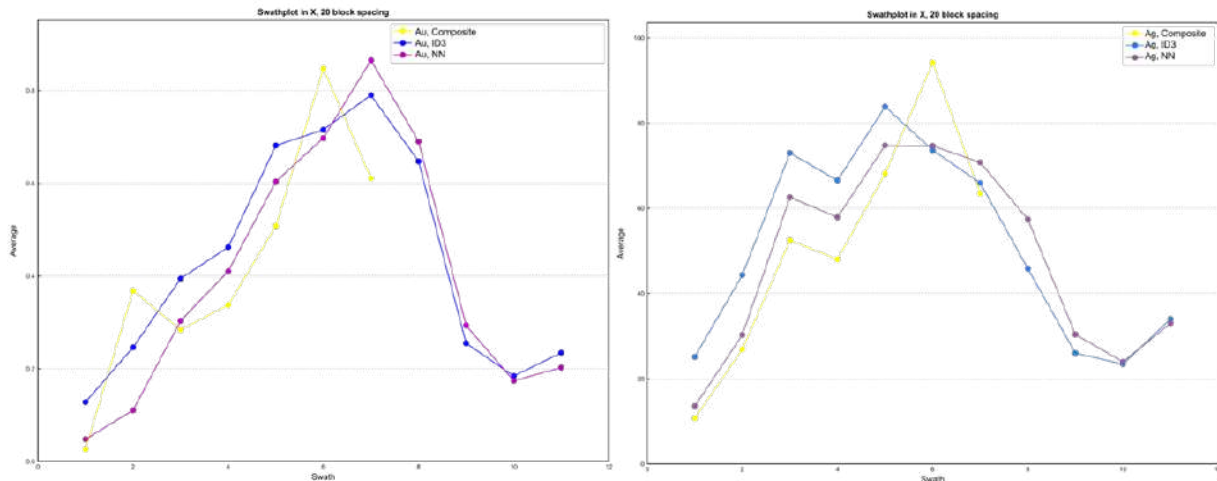
The volume estimated was also checked against the reported volume of the individual mineralized veins. Estimated volumes are based partial block volumes at 0.001 cut-off (Table 14.16). The results fall within acceptable limits for grade estimation.

<b>TABLE 14.16</b>			
<b>VOLUME COMPARISON</b>			
<b>Vein</b>	<b>Rock Code</b>	<b>Wireframe Volume (k m<sup>3</sup>)</b>	<b>Estimated Volume (k m<sup>3</sup>)</b>
Abra Main	100	8,836.0	8,363.5
Abra Plum North	110	657.2	657.0
Abra Plum South	120	59.8	59.8
Eagle Main	200	4,557.1	4,557.5
Eagle Plum FW	210	276.1	275.9
Eagle Plum HW	220	538.1	537.9

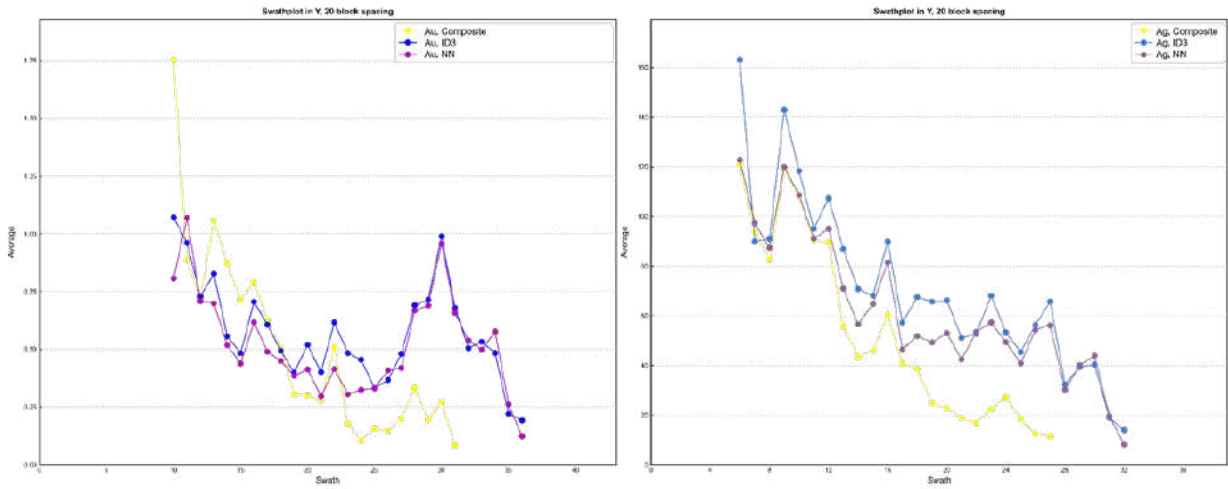
A check for local grade estimation bias was completed by plotting swath plots of the estimated ID<sup>3</sup> block grade and the Nearest Neighbour grade. The results demonstrate a reasonable level of smoothing for the ID<sup>3</sup> grade estimate. The results fall within acceptable limits for linear grade estimation (Figures 14.13 to 14.15).

An additional validation check was completed by comparing the average grade of the composites in a block to the associated model block grade estimate within the aforementioned swath plots. The results fall within acceptable limits for grade estimation.

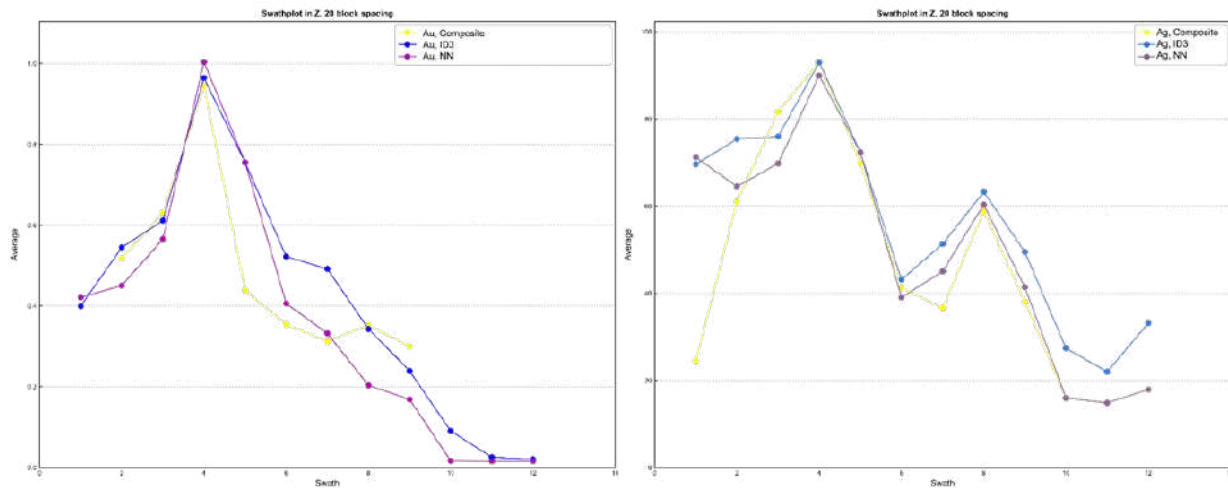
**FIGURE 14.13 SWATH PLOTS - EASTING**



**FIGURE 14.14 SWATH PLOTS – NORTHING**



**FIGURE 14.15 SWATH PLOTS – ELEVATION**



**14.12 CERRO COLORADO**

The Mineral Resource Estimate presented herein for the Cerro Colorado Deposit has been prepared following the guidelines of the Canadian Securities Administrators’ National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted “CIM Estimation of Mineral Resource and Mineral Reserves Best Practices” guidelines. Mineral Resources have been classified in accordance with the “CIM Standards on Mineral Resources and Reserves: Definition (2014) and Best Practices (2019)” as adopted by CIM Council. The effective date of this Mineral Resource Estimate is September 12, 2023.

Wireframe modelling utilized Sequent Leapfrog Geo™ software. Mineral Resource estimation was performed using the commercially available GEOVIA GEMS™ software program.



Variography was performed using Snowden Supervisor™. Open-pit optimization was performed using the NPV Scheduler™ software program.

### 14.12.1 Data Supplied

The Authors developed the Cerro Colorado Mineral Resource model from information supplied by GoGold. The supplied drill hole tables included collar, survey, assay, lithology and bulk density data. Assay data included Au g/t, Ag g/t and Cu % grades. A total of 40 drill holes were available for Mineral Resource modelling for Cerro Colorado (Table 14.17). The drilling extends approximately 1,200 m along strike.

<b>TABLE 14.17 DRILL HOLE SUMMARY</b>		
<b>Type</b>	<b>Count</b>	<b>Total (m)</b>
Diamond Drill Hole	33	2,389.0
Reverse Circulation	7	465.0
<b>Total</b>	<b>40</b>	<b>2,854.0</b>

The coordinate system used is WGS84 UTM Zone 13N and elevations are reported as height above the EGM2008 geoid.

GoGold supplied a 1.0 m resolution Digital Terrain Model for the Los Ricos South Project, and AutoCAD™ format wireframes of the historical workings. GoGold geologists also supplied interpreted wireframes of the identified mineralized structures.

Industry standard validation checks were carried out on the supplied databases, and minor corrections made where necessary. The Authors typically validate a Mineral Resource database by checking for inconsistencies in naming conventions or analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, and missing interval and coordinate fields.

No significant errors were noted with the supplied databases. The Authors consider that the Cerro Colorado drill hole database is suitable for Mineral Resource estimation. The drill hole data were imported into a GEMS™ format Access database.

### 14.12.2 Economic Considerations

Based on knowledge of similar projects, review of available historical data, and consideration of potential mining scenarios, the economic parameters listed in Table 14.18 were deemed appropriate for the Cerro Colorado Mineral Resource Estimate.

<b>TABLE 14.18 ECONOMIC PARAMETERS</b>		
<b>Item</b>	<b>Unit</b>	<b>Parameter</b>
Au	US\$/oz	1,800
Ag	US\$/oz	23
Au Process Plant Recovery	%	95
Ag Process Plant Recovery	%	86
Mining Cost Pit (mineralization)	US\$/t	2.00
Process + G&A Cost	US\$/t	24.72
Open Pit Cut-off Grade	AuEq g/t	0.45
Open Pit Cut-off Grade	AgEq g/t	38
Equivalent Factor	AgEq/AuEq	0.012
Equivalent Factor	AuEq/AgEq	86.5

### 14.12.3 Mineralization Domains

Interpreted mineralization wireframes were developed by GoGold geologists based on logged drill hole lithology, assay grades and historical records. The Authors identified continuous zones of mineralization within the GoGold-supplied wireframes from assay grades equal to or greater than 0.45 g/t AuEq with observed continuity along strike and down-dip. The selected intervals include lower grade material where necessary to maintain continuity between drill holes. Three-dimensional wireframes linking drill hole sections were subsequently constructed using the Leapfrog™ Radial Basis Function, with hanging wall and footwall surfaces snapped directly to the selected drill hole intercepts.

A total of two individual mineralized veins were defined for the Cerro Colorado. The mineralized vein wireframes were used to back-tag the assay, bulk density and composite tables with unique rock codes (Table 14.19).

<b>TABLE 14.19 MINERALIZED VEINS</b>			
<b>Vein</b>	<b>Rock Code</b>	<b>Strike Length (m)</b>	<b>Average True Width (m)</b>
Cerro Colorado 1	400	1,250	4.7
Cerro Colorado 2	500	650	5.7

#### 14.12.4 Exploratory Data Analysis

The average nearest neighbor collar distance for Cerro Colorado drilling is 27.6 m. The average length of the diamond drill holes is 72.4 m, and the average length of the reverse circulation drill holes is 66.4 m. Summary statistics for the assay data are listed in Table 14.20.

<b>Assay</b>	<b>Count</b>	<b>Average</b>	<b>Std Dev</b>	<b>CoV</b>	<b>Minimum</b>	<b>Maximum</b>
Ag g/t	1,263	10.6	52.5	4.95	0.15	1,189.0
Au g/t	1,263	0.14	0.55	3.79	0.0025	7.37
Cu %	1,330	0.006	0.01	1.96	0.0002	0.236

Bulk density measurements were determined using the water immersion method on diamond drill core samples. A total of seven measurements were taken for the Cerro Colorado deposits. The average bulk density is 2.49 t/m<sup>3</sup>, and the median bulk density is 2.50 t/m<sup>3</sup>.

#### 14.12.5 Compositing

Constrained assay sample lengths within the defined mineralized veins range from 0.15 to 4.85 m, with an average sample length of 1.26 m and a mode of 1.50 m. A total of 20% of the constrained assay sample lengths equal 1.00 m and 85% are between 0.50 m and 1.50 m. All constrained assay samples were composited to 1.00 m in order to ensure equal sample support. Length-weighted composites were calculated within the defined mineralized veins. A small number of un-sampled intervals in the data were treated as null intervals due to the presence of mining voids, backfill and surface rock piles. Backfill and surface rock assays were not included in the compositing process.

The compositing process started at the first point of intersection between the drill hole and the mineralized vein intersected, and halted upon exit from the vein. Downhole residual composites that were less than half the compositing length were discarded to not introduce a short sample bias into the composite sample population. The wireframes that represent the mineralized veins were used to back-tag a rock code variable into the composite workspace. The composite data were visually validated against the mineralization wireframes, and extracted for analysis and grade estimation. Composite summary statistics are listed in Table 14.21.

<b>Assay</b>	<b>Count</b>	<b>Average</b>	<b>Std Dev</b>	<b>CoV</b>	<b>Minimum</b>	<b>Maximum</b>
Ag g/t	296	34.3	72.3	2.11	0.001	688.9
Au g/t	296	0.57	0.99	1.73	0.0001	7.36
Cu %	237	0.011	0.014	1.26	0.0006	0.085

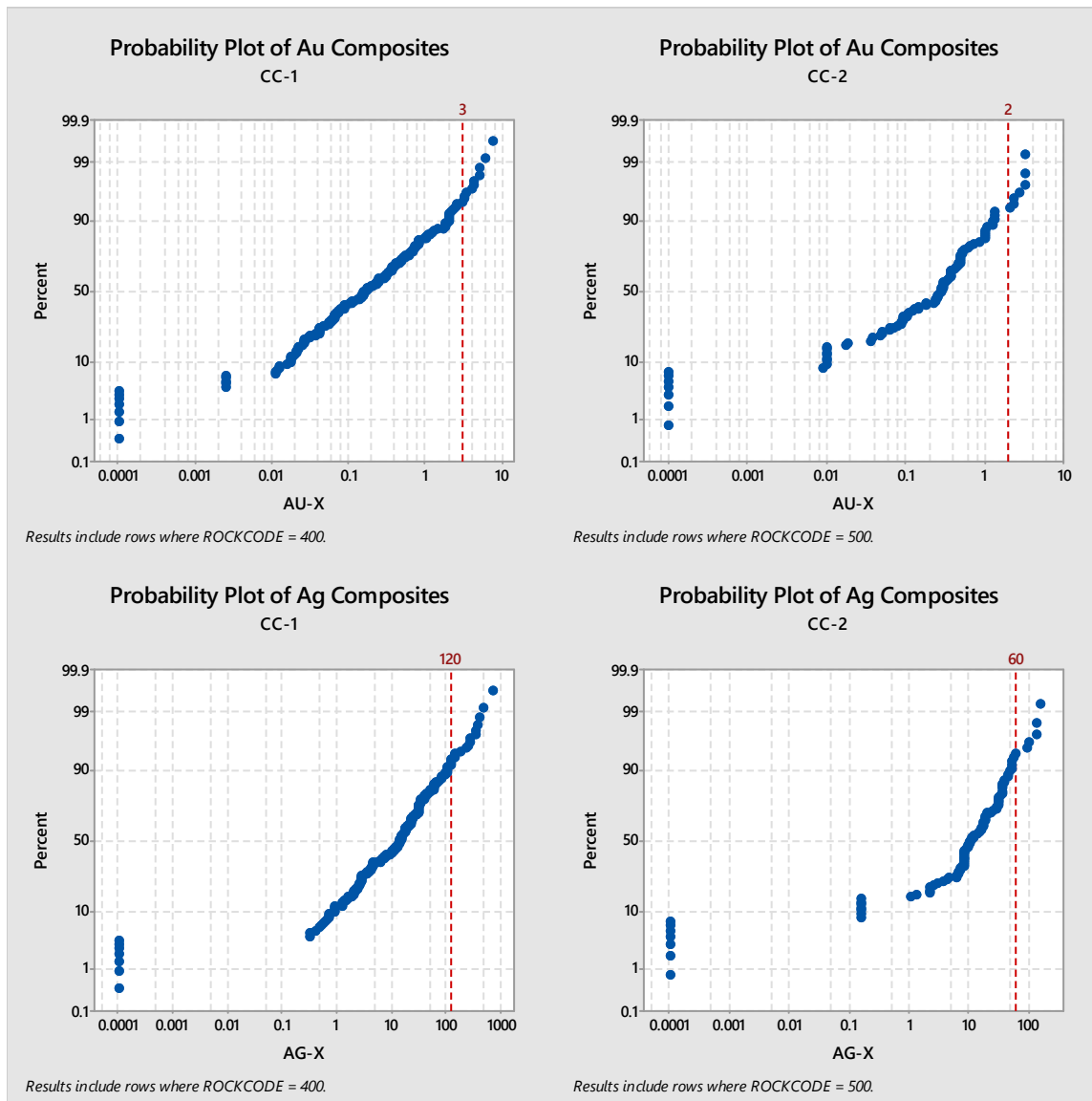
#### 14.12.6 Treatment of Extreme Values

Capping thresholds were determined by the analysis of individual composite log-probability distributions (Figure 14.16). Composites are capped to the defined threshold prior to estimation (Tables 14.22 and 14.23), and capped composites are further restricted to a maximum range of influence of 40.0 m. No capping was applied to copper composites.

<b>TABLE 14.22</b>				
<b>SILVER COMPOSITE CAPPING THRESHOLDS</b>				
<b>Veins</b>	<b>Threshold (g/t)</b>	<b>Average Uncapped Value (g/t)</b>	<b>Number Capped</b>	<b>Average Capped Value (g/t)</b>
Cerro Colorado 1	120	43	14	29
Cerro Colorado 2	60	23	5	19

<b>TABLE 14.23</b>				
<b>GOLD COMPOSITE CAPPING THRESHOLDS</b>				
<b>Veins</b>	<b>Threshold (g/t)</b>	<b>Average Uncapped Value (g/t)</b>	<b>Number Capped</b>	<b>Average Capped Value (g/t)</b>
Cerro Colorado 1	3.00	0.64	10	0.56
Cerro Colorado 2	2.00	0.53	6	0.48

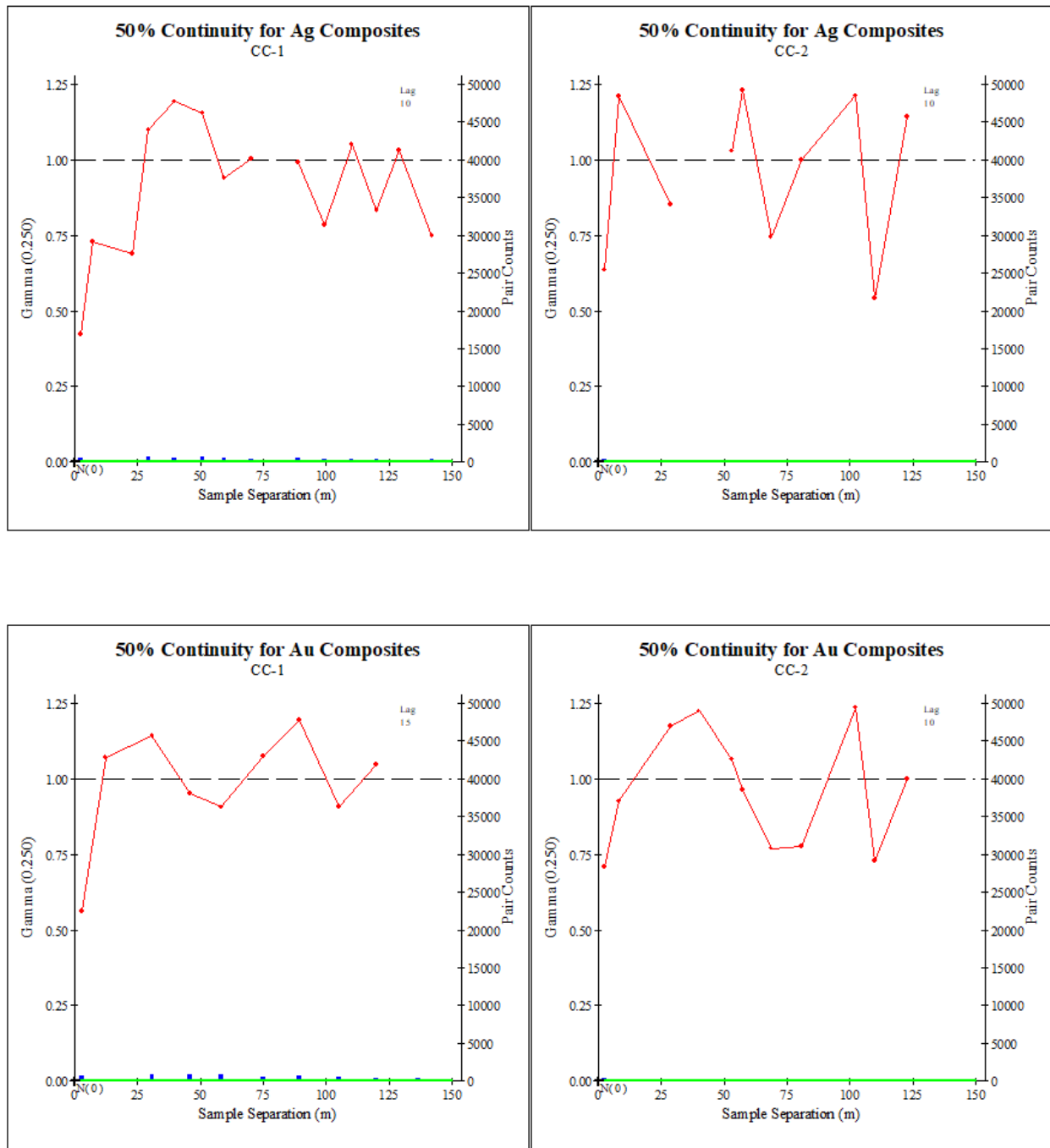
**FIGURE 14.16 LOG-PROBABILITY GRAPHS FOR COMPOSITES**



### 14.12.7 Continuity Analyses

Three-dimensional continuity analysis (variography) was conducted on the domain-coded uncapped Ag and Au composite data using isotropic median indicator semi-variograms. Standardized spherical models were used to model the experimental semi-variograms in order to establish a reasonable classification range (Figure 14.17), with observed ranges of approximately 20 to 30 m.

**FIGURE 14.17 CERRO COLORADO SEMI-VARIOGRAMS**



**14.12.8 Block Model**

A rotated block model was established with the block model limits selected to cover the extent of the mineralized structures, the potential open pit dimensions, and to reflect the general nature of the mineralized zones (Table 14.24). The block model consists of separate variables for estimated grades, volume percent wireframe block inclusion, rock codes, bulk density and

classification attributes. A volume percent block inclusion attribute was used in order to ensure that volumes are accurately reported.

<b>TABLE 14.24 BLOCK MODEL SETUP</b>			
<b>Direction</b>	<b>Origin</b>	<b>Number of Blocks</b>	<b>Block Size</b>
Minimum X	611,600	460	5 m
Minimum Y	2,325,200	800	5 m
Maximum Z	1,700	250	5 m
Rotation	40° counter-clockwise		

### **14.12.9 Grade Estimation and Classification**

Bulk density was estimated by ID<sup>2</sup> estimation using the nearest 12 bulk density samples. Sample selection was restricted to a maximum of three bulk density samples from a single drill hole.

Block grades for gold and silver were estimated by ID<sup>3</sup> anisotropic estimation of capped composites using a minimum of four and a maximum of 12 composites. The orientation of the search ellipsoid was defined by the modeled variography, observed grade trends and historical mining. Composite samples were selected within a 240 m x 120 m x 40 m ellipsoid plunging -65 > 225°, maintaining an anisotropy ratio of 6:1 to 3:1. Sample selection was restricted to a maximum of three composite samples from a single drill hole. Search and grade estimation were constrained by the individual mineralized veins, which define hard boundaries for grade estimation.

Block grades for copper were estimated by ID<sup>2</sup> isotropic estimation of uncapped composites using a minimum of four and a maximum of 12 composites.

The parameters used to define the classification limits included spatial analysis, drill hole spacing, and the observed continuity of the mineralization. Cerro Colorado has been classified in its entirety as an Inferred Mineral Resource.

### **14.12.10 Cerro Colorado Mineral Resource Estimate**

Open pit Mineral Resources reported herein have been constrained within an optimized pit shell. The results from the optimized pit shell are used solely for the purpose of reporting Mineral Resources. Pit-constrained Mineral Resources are reported using a cut-off of 38 g/t AgEq. The optimized pit shell is shown in Appendix G.

The Mineral Resource has an effective date of September 12, 2023 (Table 14.25).

<b>TABLE 14.25</b>		
<b>CERRO COLORADO INFERRED MINERAL RESOURCE <sup>(1-8)</sup></b>		
<b>Parameter</b>	<b>Units</b>	<b>Amount</b>
Tonnes	M	0.9
<b>Average Grade</b>		
Au	g/t	0.72
Ag	g/t	31
Cu	%	0.01
AuEq	g/t	1.12
AgEq	g/t	88
<b>Contained Metal</b>		
Au	koz	20.9
Ag	koz	905
Cu	Mlb	0.2
AuEq	koz	32.8
AgEq	koz	2,568

1. *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, title, taxation, socio-political, marketing, or other relevant issues.*
2. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.*
3. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*
4. *Historically mined areas were depleted from the Mineral Resource model.*
5. *The pit constrained AgEq cut-off grade of 38 g/t AgEq was derived from US\$1,800/oz Au price, US\$23.00/oz Ag price, 85% Ag and 95% Au process recovery, US\$25/tonne process and G&A cost. The constraining pit optimization parameters were \$2.10/t mineralized material and waste mining cost, and 45-degree pit slopes.*
6. *The Cerro Colorado Mineral Resource is constrained to open pit mining methods only.*
7. *AgEq and AuEq were calculated at an Ag/Au ratio of 78.2:1 for pit constrained Mineral Resources.*
8. *Totals may not sum due to rounding.*

### **14.12.11 Validation**

The block model was validated visually by the inspection of successive vertical cross-section lines in order to confirm that the block models correctly reflect the distribution of high-grade and low-grade values (see Appendices C to E).

The average estimated block grades were compared to the average Nearest Neighbor (“NN”) block estimate at a 0.001 cut-off for Inferred Mineral Resources (Table 14.26). The results fall within acceptable limits for grade estimation.



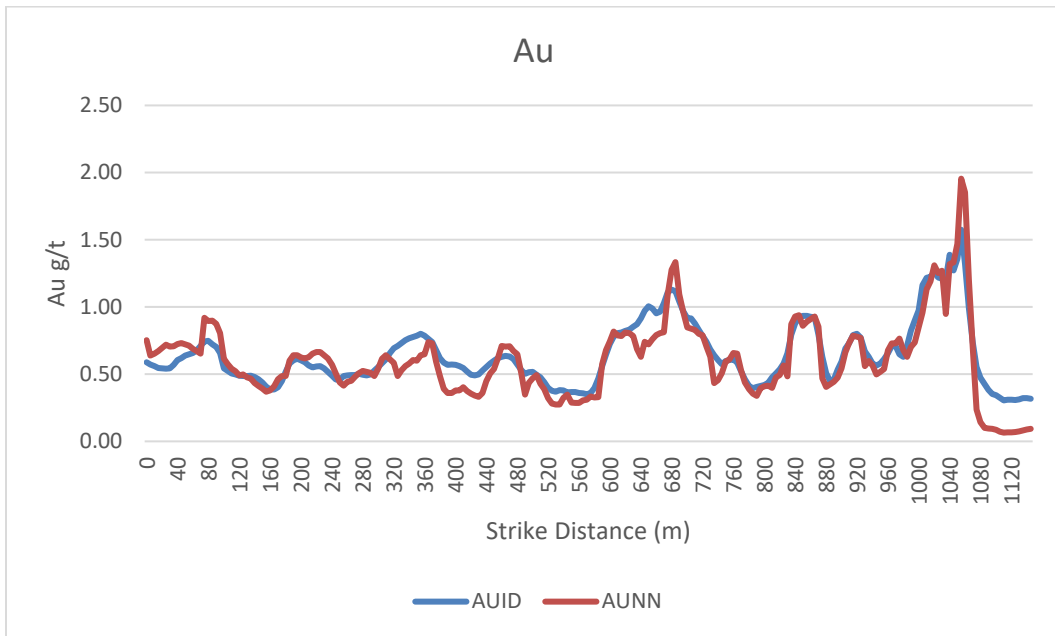
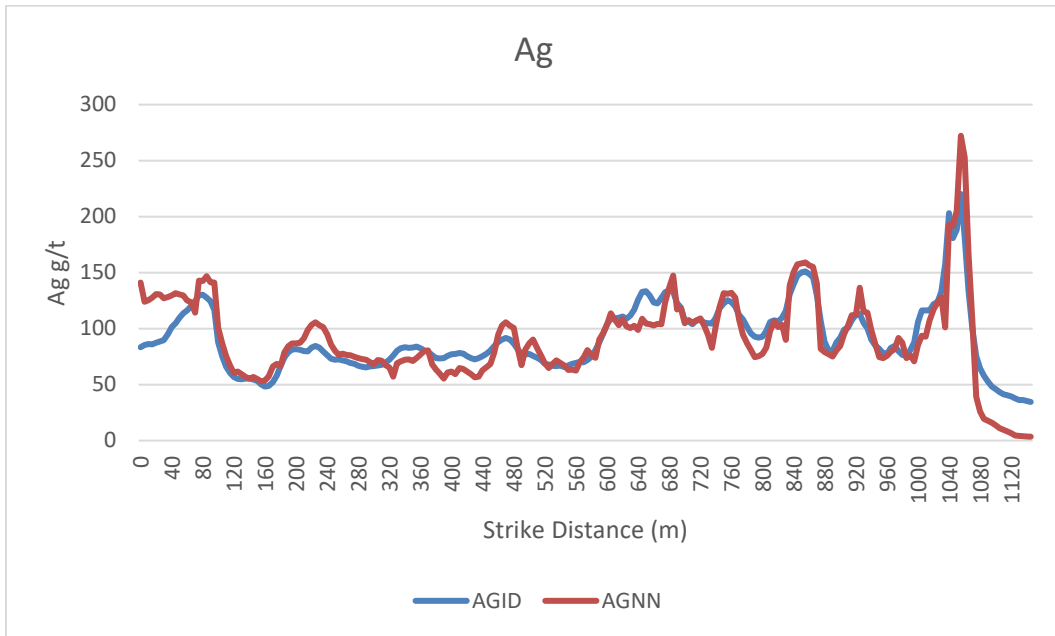
<b>TABLE 14.26 GRADE COMPARISON</b>		
<b>Vein</b>	<b>Estimated</b>	<b>NN</b>
Cerro Colorado 1 Ag	25	25
Cerro Colorado 2 Ag	15	14
Cerro Colorado 1 Au	0.46	0.41
Cerro Colorado 2 Au	0.41	0.43

The volume estimated was also checked against the reported volume of the individual mineralized veins. Estimated volumes are based partial block volumes (Table 14.27). The results fall within acceptable limits for grade estimation.

<b>TABLE 14.27 VOLUME COMPARISON</b>		
<b>Vein</b>	<b>Wireframe Volume (k m<sup>3</sup>)</b>	<b>Estimated Volume (k m<sup>3</sup>)</b>
Cerro Colorado 1	1,095.5	1,096.0
Cerro Colorado 2	543.8	542.9
<b>Total</b>	<b>1,639.3</b>	<b>1,638.9</b>

A check for local grade estimation bias was completed by plotting vertical swath plots of the estimated ID<sup>3</sup> block grade and the NN grade. The results demonstrate a reasonable level of smoothing for the ID<sup>3</sup> estimate and are within acceptable limits for linear estimation (Figure 14.18).

**FIGURE 14.18 SWATH PLOTS**



## **15.0 MINERAL RESERVE ESTIMATE**

No National Instrument 43-101 Mineral Reserve currently exists for the Los Ricos South Project. Any reference to historical non-compliant Mineral Reserve Estimates is summarized in Section 6 of this Technical Report. This section is not applicable to this Technical Report.

## 16.0 MINING METHODS

The Los Ricos South Project will consist of both underground and open pit mining operations. Production will commence with underground mining. Open pit mining will be initiated in Year 3 and there will be an underground / open pit overlap period of five years. The duration of all mining activity will be 12 years after the start of commercial production.

During the first three years of production when there is only underground mining, the processing rate is 1,750 tpd. This ramps up to 4,000 tpd when open pit mining is able to deliver feed to the process plant. The underground will continue to deliver 1,750 tpd with the open pit providing the remainder until the underground mine is depleted in Year 7.

Underground mining is described in Section 16.1 and open pit mining is discussed in Section 16.2. The combined underground and open pit production schedules are described in Section 16.3.

### 16.1 UNDERGROUND MINING

Extraction of mineralized material from the underground (“UG”) portion of the Los Ricos South Project will be through longhole (“LH”) sublevel mining with cemented paste backfill (“PF”). The majority (approximately 83%) of tonnes are extracted from virgin mining areas on the Eagle and Abra Veins through retreat mining, with a minority of tonnes (approximately 17%) coming from transverse stoping areas adjacent to historical workings (“Old Workings”, or “OW”) on the Abra Vein. The Cerro Colorado Vein was evaluated and determined to have insufficient tonnes above cut-off grade (“COG”) to support underground mining under present conditions. The entirety of all mineralized areas on the veins was evaluated, with the mine plan eventually being truncated to areas outside of potential open pit mining. Significant mineralization of sufficient grade to support underground methods exists within the open pit shell. The few UG stopes that intersect the pit boundary will be extracted and filled with high-strength PF. It is expected that the open pit will eventually expose this backfill in localized portions of the walls and floor.

In the absence of detailed geotechnical analysis, a 30 m pillar from surface topography has been utilized as a crown pillar, and no underground operations other than access development will be located in the pillar. Additionally, a 30 m offset from active open pit mining has been maintained during scheduling to prevent interaction between surface and UG mining.

In virgin mining areas, the stopes will be split into a series of mining “blocks”, with mining progressing bottom-up from the bottom of each block. An artificial pillar of high-strength PF will be constructed in the bottom level of each block to allow eventual undermining by the top level of the block below (all other areas of each block requiring backfill will utilize low-strength PF). In the OW areas, due to the unconsolidated nature of the backfill in the OW stopes, transverse-access mining will progress top-down after the installation of an artificial sill pillar at the 1,130 m EL level. The sill pillar will segregate eventual open pit mining of OW stopes from the portion extracted by UG methods. Each level will be extracted in sequence progressing downward utilizing high-strength PF in all stopes to provide a stable back for the level below (see Section 16.1.4 for further details). Uncemented backfill material from historical stopes will

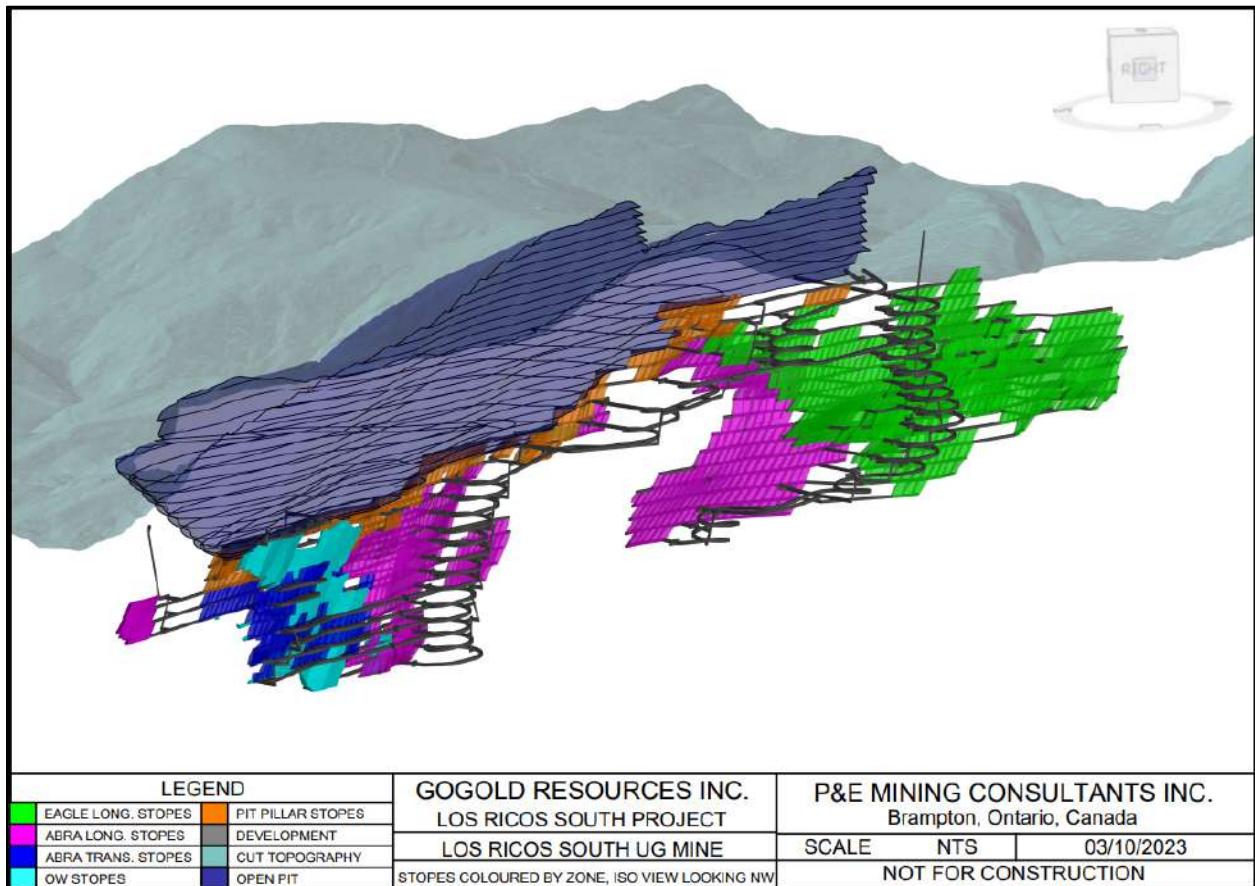
be extracted with adjacent mineralized material. Where possible, the void from this extraction will be utilized as the slot for the stope to minimize drilling costs.

Initial mine development will primarily target the Eagle Vein, with a subset of stopes taken on the Abra Vein where the economic portions of the two veins are in close proximity. Two adits are used to access the upper areas of the UG mine near the northwest extent, allowing increased mining faces early in mine life, and also optimizing access to the southeast portion of the Abra Vein later in mine life. Initial adit locations were selected to prevent interaction with eventual surface mining, and to minimize adit length. To provide sufficient faces to maintain steady-state production, two years of pre-production development are required. Steady-state production of 1,780 tpd (nominally 640 ktpa) will be reached midway through YR1 after a short ramp-up period, and full production will be maintained until the end of UG mine life at the end of YR7. Over the life-of-mine (“LOM”), a total of 4.33 Mt of material will be recovered from the UG, containing 24.1 Moz Ag, 272 koz Au and 9.5 kt Cu, equivalent to 52.1 Moz AgEq (see Section 16.12 for further details).

Mined tonnage in UG is derived from two sources: in-situ stopes (virgin rock), and excavation of historical workings that have been backfilled with lower-grade mineralized material (“Old Workings”). Voids from the historical workings are located entirely within the Abra Vein, have a thickness that varies from 3 m to 5 m depending on location, and have mineralization extending into either, or both, of the FW and HW of the Old Workings. Sampling by GoGold indicates that the grade of the material is insufficient to cover costs required to excavate and process the material; however, extracting it is unavoidable due to mine design and sequencing. Based on 201 samples from drill holes intersecting the voids, and assigning a zero metal grade to all samples classified as “VOID”, a blanket grade of 60 g/t AgEq has been assigned to all Old Workings material. It is assumed that backfill material only exists in historical stope voids, and that historical development voids are empty. A bulk density of 1.88 t/m<sup>3</sup> has been assigned to the backfill material. A total of 258 kt of OW material is included in the mine plan.

All UG mining will be performed using contract labour and equipment, with Company technical services and management. Figure 16.1 shows a view of the underground mine.

**FIGURE 16.1 LOS RICOS SOUTH UNDERGROUND MINE**



### 16.1.1 Design Methodology

The initial design parameters of the UG mine were driven by a modified “Hill of Value” NPV and IRR analysis for the following parameters:

- Level spacings of 20, 25 and 30 m;
- Economic COGs of 135, 200, 220, 230, 240, 250 and 275 g/t AgEq
  - 135 g/t AgEq was estimated to be the Marginal COG of the dominant mining method and was used to evaluate the inclusion of the Mineral Resource in generated stopes;
- Production rates varying from 1,200 to 1,800 tpd;
- Longitudinal mining with cemented paste backfill; and
- Contractor mining.

This analysis resulted in the selection of a base case of 1,500 tpd, 20 m level spacings, and 240 g/t AgEq Economic COG. Supporting analysis of numerous factors influencing the above decision were evaluated and included in the design process, as detailed by the following sub-sections.

After final generation of stopes, a re-evaluation of the mine production rate was performed using Long’s modification of Taylor’s Rule, and the production rate was modified from 540 ktpa to 640 ktpa due to the additional tonnes recovered from stopes infilling gaps in the 240 g/t AgEq set. A final revision to Marginal COG calculations resulted in a slight decrease to 130 g/t AgEq.

### 16.1.1.1 Contractor Versus Owner

Contractor mining was selected to reduce initial capital costs of acquiring a mining fleet, and to allow a continuous reduction in yearly development requirements after the peak of 6,000 m/yr in the pre-production period without needing to retrain or lay off Company personnel.

### 16.1.1.2 Stope Design

Deswik Stope Optimizer (“DSO”) was utilized to generate stope sets for various combinations of initial parameters, as per Table 16.1.

TABLE 16.1 UG STOPE SET DSO PARAMETERS					
Item	Units	Modified Hill-of-Value Analysis			Final Mine Plan
Height	m	20	25	30	20
Blast Shape Length	m	10	10	10	10
ELOS <sup>1</sup> (total HW + FW)	m	1	1.2	1.4	1
Minimum Mining Width	m	2	2.2	2.4	2
Minimum Waste Pillar	m	6			Same as Modified Hill-of-Value
FW Angle	degrees	45-135°			
HW Angle	degrees	30 to 150°			
Allowable Azimuth Change	degrees	25° change per stope, ±45° strike variance from model rotation			
Dip and Strike Source	-	Vein wireframe			
Points per Ring	No.	6			
Sub-Shapes	-	1/2 height uphole stopes and partial strike stopes			
Cut-off Grades for Analysis	g/t AgEq	135, 200, 220, 230, 240, 250, 275			

Notes: <sup>1</sup> ELOS = Equivalent Linear Overbreak or Slough, or estimated overbreak of stope walls.

For this PEA a single level spacing for the entire Project was selected for simplicity. Trade-off studies of drill deviation (with corresponding changes to dilution) versus level spacing and heading size versus drill productivity (for uphole drilling and development) were performed, and associated impacts included in the modified Hill-of-Value analysis. The Authors recommend evaluating different spacings for different areas (virgin rock versus historical workings, and Abra versus Eagle Veins) in subsequent studies.

As the DSO analysis was designed for longitudinal stopes, the transverse areas are set up on 10 m spacings (equivalent to one blast length). While this increases the number of available faces

and allows for more even draw-down of OW stopes, the Authors recommend evaluating a wider spacing in subsequent studies.

### 16.1.1.3 Preliminary Cut-Off Grades

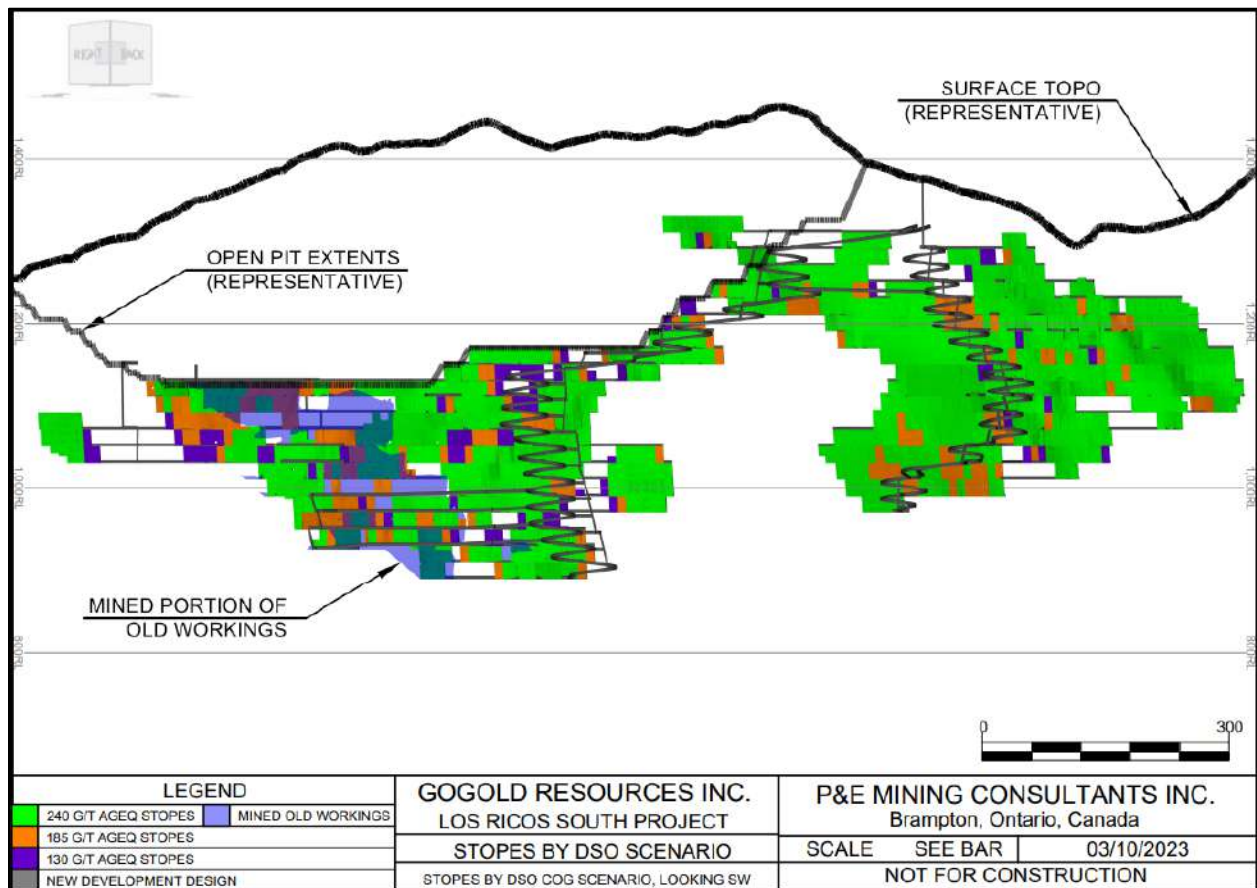
While 240 g/t AgEq was selected as the optimal Economic COG (“ECOG”) for the Project, economic mineralization along strike was discontinuous at this grade. At lower COGs, infilling of the gaps with material between the Marginal COG (“MCOG”) of 130 g/t AgEq without requiring additional development allows significant additional mineral extraction at a profit. For simplicity, a 185 g/t AgEq nominal mid-point COG between the MCOG and ECOG values was utilized for infilling gaps in stopes in addition to the 130 g/t AgEq MCOG value. Where multiple stope sets overlapped, the highest COG stope was selected, with minor exceptions around the OW areas due to thickness and geometry. Table 16.2 shows the breakdown of stopes by COG, with Figure 16.2 showing the stope locations in the underground.

<b>COG (g/t AgEq)</b>	<b>% of Mine Plan Tonnes</b>
240	76
185	13
130	5
No COG (Old Workings)	6

Note that OW shapes are not generated by DSO and are controlled by angle of repose flowing into future extraction points in transverse stopes. As such, they do not have a COG, since their limits are not controlled by drilling and blasting.



**FIGURE 16.2 STOPE LOCATIONS BY CUT-OFF GRADE**



**16.1.1.4 Mine Production Rate**

The production rate for the mine was set using Long’s modification to Taylor’s Rule, allowing the UG mine to set the process plant rate. An additional evaluation using a predefined process plant throughput of 1,500 tpd was also performed to determine the impact on the various cases. After further evaluation, it was determined that a throughput of 640 ktpa was feasible through dual ramp access to the longitudinal mining areas, and through an increase in active faces in transverse mining areas. To optimize production, the mine was divided into multiple mining “blocks”, segregated by artificial sill pillars of high-strength PF, allowing an increased number of mining faces in the longitudinal retreat mining areas versus a continuous bottom-to-top mining sequence.

Stope productivity estimates are shown in Table 16.3. Productivity is calculated by taking the total recovered tonnes from a stope and dividing by the total time for all required processes to extract the stope (development, drilling, loading, blasting, loading, backfilling, curing).

<b>TABLE 16.3</b>		
<b>STOPE PRODUCTIVITY BY SPAN</b>		
<b>Stope Span (m)</b>	<b>Longitudinal Retreat Mining Productivity<sup>1</sup> (tpd)</b>	<b>Transverse Access Mining Productivity<sup>2</sup> (tpd)</b>
2	100	175
4	150	200
6	225	300
8	300	400
12	325	425
15	350	425
18	375	425

*Notes: 1. Longitudinal Retreat includes a 14 day backfill cure time between adjacent stopes.*

*2. Transverse access uses an average of 7 day backfill cure time between stopes, as curing of one stope allows mining in both adjacent stopes.*

#### **16.1.1.5 Historical Workings**

Exploration drilling in the underground has recorded 201 intersections of the Old Workings. Details of the intersections are shown in Table 16.4. The Authors recommend additional investigation of the backfill material at a later stage of study to better determine applicable metal grades.

<b>TABLE 16.4</b>		
<b>OLD WORKINGS INTERCEPT DATA AND METAL GRADE CALCULATIONS</b>		
<b>Intercept Type</b>	<b>Void</b>	<b>Backfill</b>
No. of Intercepts	73	128
Length of Intercepts (m)	166.1	234.6
Au g/t – Minimum	Null <sup>1</sup>	0.003
Au g/t – Maximum		2.721
Au g/t – Weighted Average		0.399
Ag g/t – Minimum	Null <sup>1</sup>	0.8
Ag g/t – Maximum		380.7
Ag g/t – Weighted Average		67.4
Cu g/t – Minimum	Null <sup>1</sup>	5
Cu g/t – Maximum		2490
Cu g/t – Weighted Average		93
Blanket Au g/t for Historical Workings backfill		0.23

**TABLE 16.4**  
**OLD WORKINGS INTERCEPT DATA AND METAL GRADE**  
**CALCULATIONS**

Intercept Type	Void	Backfill
Blanket Ag g/t for Historical Workings backfill		39.4
Blanket Cu g/t for Historical Workings backfill		55
Blanket AgEq g/t for Historical Workings backfill		60

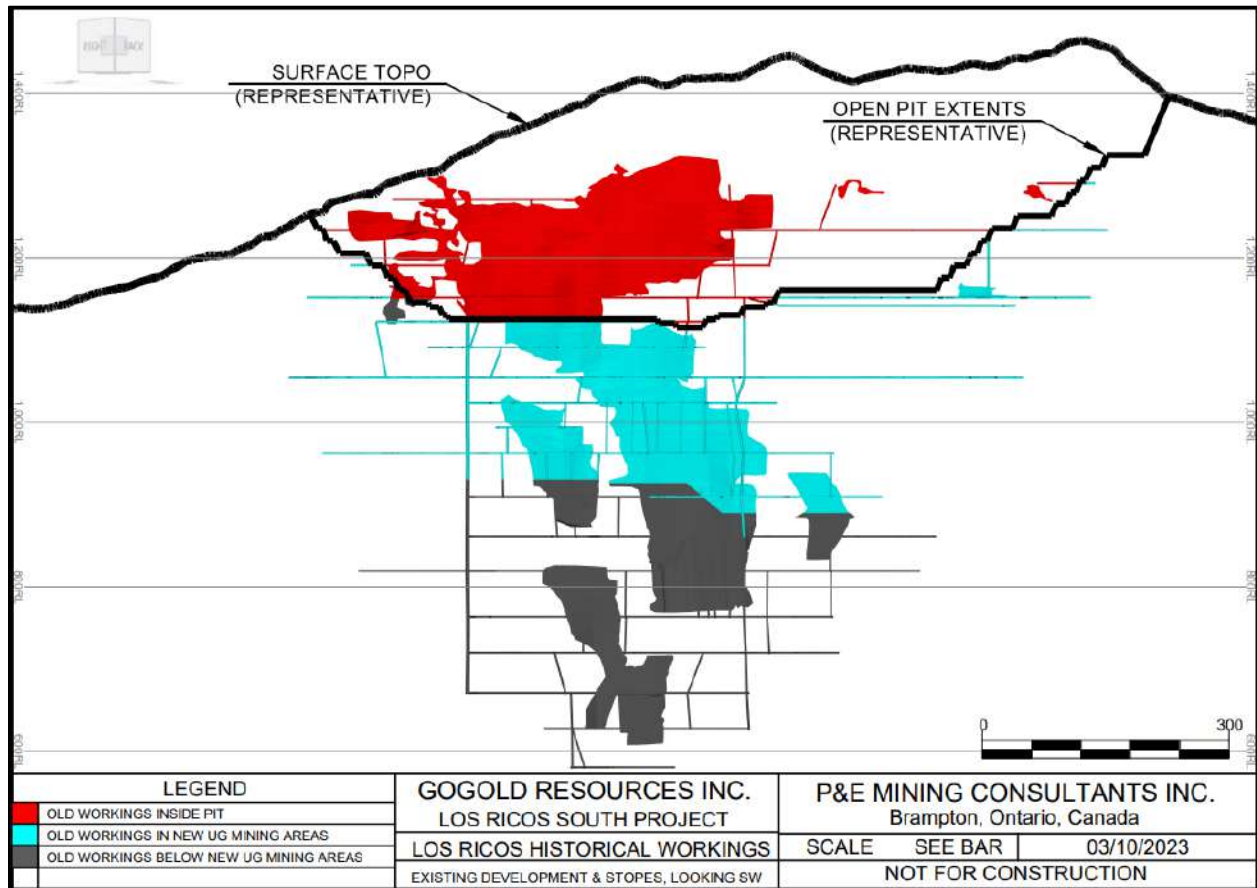
<sup>1</sup> All VOID intercept grades were assigned as zero when determining average grades.

The Authors have estimated the cost to load, haul and process the Old Workings backfill material, and then backfill the excavated void with high-strength PF, at approximately \$55.80/t. This equates to an AgEq COG of approximately 95 g/t AgEq, which is above the average grade of the backfill material, making it an uneconomic mining target. As its extraction and intermixture with other economic material is unavoidable, however, it will be included in the mine plan.

As the historical backfill material was sourced from the site and is mineralized, the material has been assigned a bulk density of 1.88 t/m<sup>3</sup> based on 35% swell and an average density of in-situ mineralized material of 2.54 t/m<sup>3</sup>. It is assumed to have an angle of repose of 40 degrees. It is assumed that the material is free-flowing, and that any local consolidation can be freed via concussion blasting or localized drilling.

Figure 16.3 shows the extent of the OW areas, and which portions intersect the UG and OP portions of the Project.

**FIGURE 16.3 HISTORICAL WORKINGS AREAS**



**16.1.1.6 Backfill**

PF was selected for underground backfill as longitudinal retreat mining results in poor geometries for filling utilizing trackless equipment. There is no turn-around or re-muck infrastructure within the access drift, as it is driven in mineralized material along strike of the vein. Long hauls for load-haul-dump (“LHD”) units along drifts that follow changes in vein azimuth result in poor productivities for rock or aggregate fill, with a pumpable fill being a better choice. Additionally, pumpable fill will better seal any connections between historical development workings and stopes, limiting water inflow into stopes below and reducing ventilation short-circuiting. Based on availability of suitable fill components (water, tailings, waste rock material source), PF was selected as the optimal fill for the underground.

Two different PF recipes will be in common use in the UG. A 5% binder content was selected for areas requiring eventual undermining (artificial sill pillars), while a 3% binder content was used for areas that will only be exposed laterally. The Authors recommend further studies on the properties and contents of fit-for-purpose backfill be performed as the Project advances.

### **16.1.1.7 Mining Fleet Sizing and Selection**

Due to the significant amount of remote uphole drilling expected when mining beneath cemented PF, top-hammer drills were selected for production use due to their increased productivity and accuracy versus In-The-Hole (“ITH”) hammer drills for this application. Based on the mining rate, 7-tonne class LHDs were indicated, requiring a nominal 3 m x 3 m drift size. Development and support drills for this size opening require less clearance than the production drill. As such, all efforts to minimize the size of the production drill without sacrificing performance were undertaken, resulting in the selection of 1.22 m (4 ft) rods to limit required production drift height to 3.3 m. As a result, maximum hole length is ~25 m, which is acceptable for a 20 m level interval.

### **16.1.2 Geotechnical and Geological Considerations**

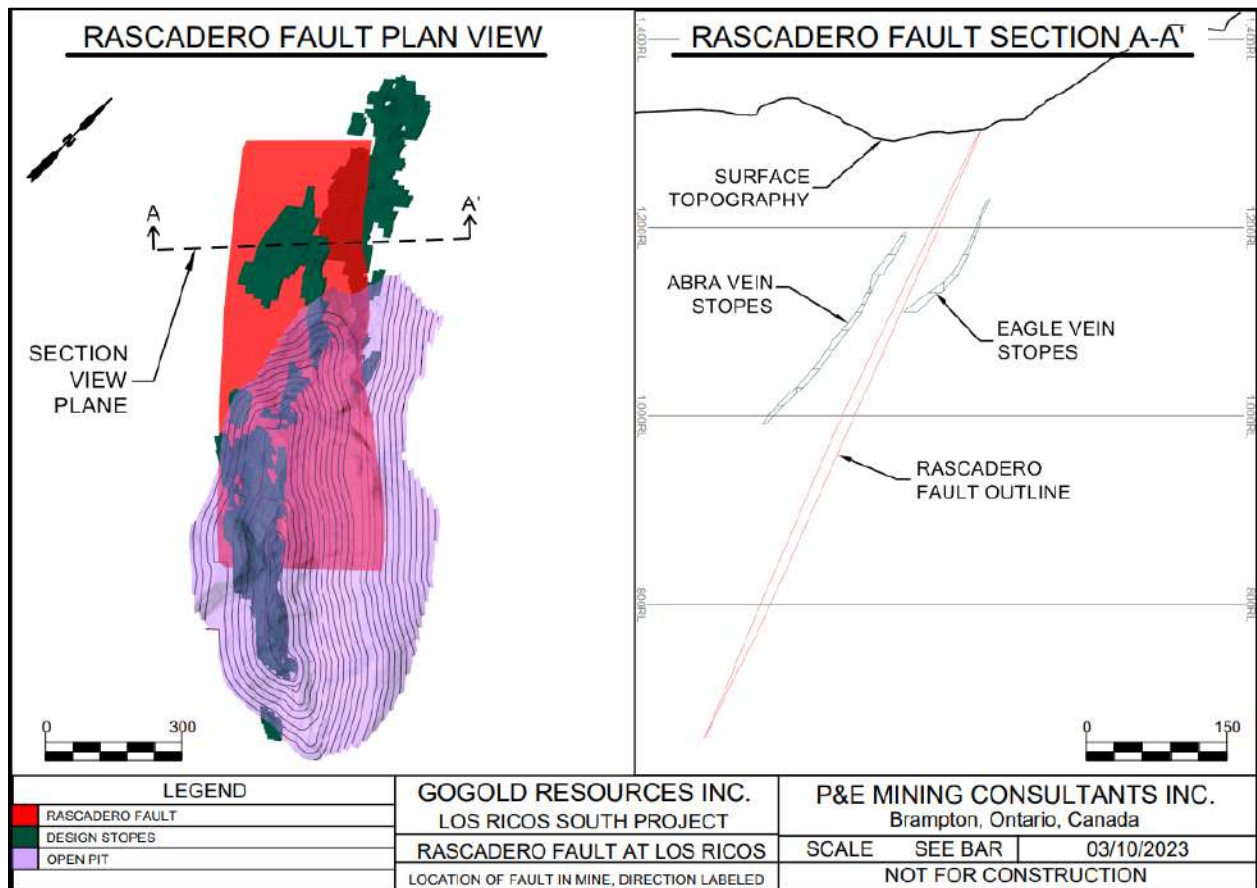
No underground-specific geotechnical work has been performed on the Deposits. All geotechnical estimates use “rules-of-thumb” and the Authors experience at similar projects.

No ground support recommendations exist for the underground mines; however, other similar sites use rebar in the back and split sets in the walls, with wire mesh to within 2 m of the floor, which is the support regime expected here. Stopes are not expected to require additional long support (cable bolts).

#### **16.1.2.1 Faults**

The Rascadero Fault, located between the Abra and Eagle Veins, is the only major structure that influences the UG mining area, and (for the purposes of this PEA) is relatively well defined by drilling. Wherever possible, development is situated outside a 5 m exclusion zone around the fault. Where intersection of the fault is necessary (above 1,010 EL in areas targeting both the Eagle and Abra Veins from a shared access), development is designed to cross the fault as close to perpendicular as possible. A total of 22 intersections of the fault are planned. Stopes do not cross the fault, and only contact the exclusion zone at the extreme ends of the 1,290 EL and 1,310 EL levels at the top of the UG mine. Figure 16.4 shows the position of the fault relative to the OP and UG mining areas.

**FIGURE 16.4 RASCADERO FAULT LOCATION**



**16.1.2.2 Historical Workings**

Historical mine workings in the Abra Vein present additional challenges to the underground portion of the Project. While significant effort has gone into mapping the previous excavations, true locations and dimensions of the openings are not well known. The historical workings are generally flooded, and may have filled in or expanded due to ground failures since last worked. Exploration of historical workings is likely to be dangerous and difficult, even if water levels were reduced. The Authors believe that the best approach is to avoid the historical workings where possible; however, the recovery of mineralized backfill material from historical stopes will occur with the extraction of adjacent new stopes, and therefore complete avoidance of the Old Workings is not feasible. Potential issues with unknown stability of Old Workings are mitigated by: a top-down mining sequence when mining out backfilled Old Workings; operating underneath engineered backfill; and only exposing the walls of historical workings stopes for short vertical extents and a short period of time.

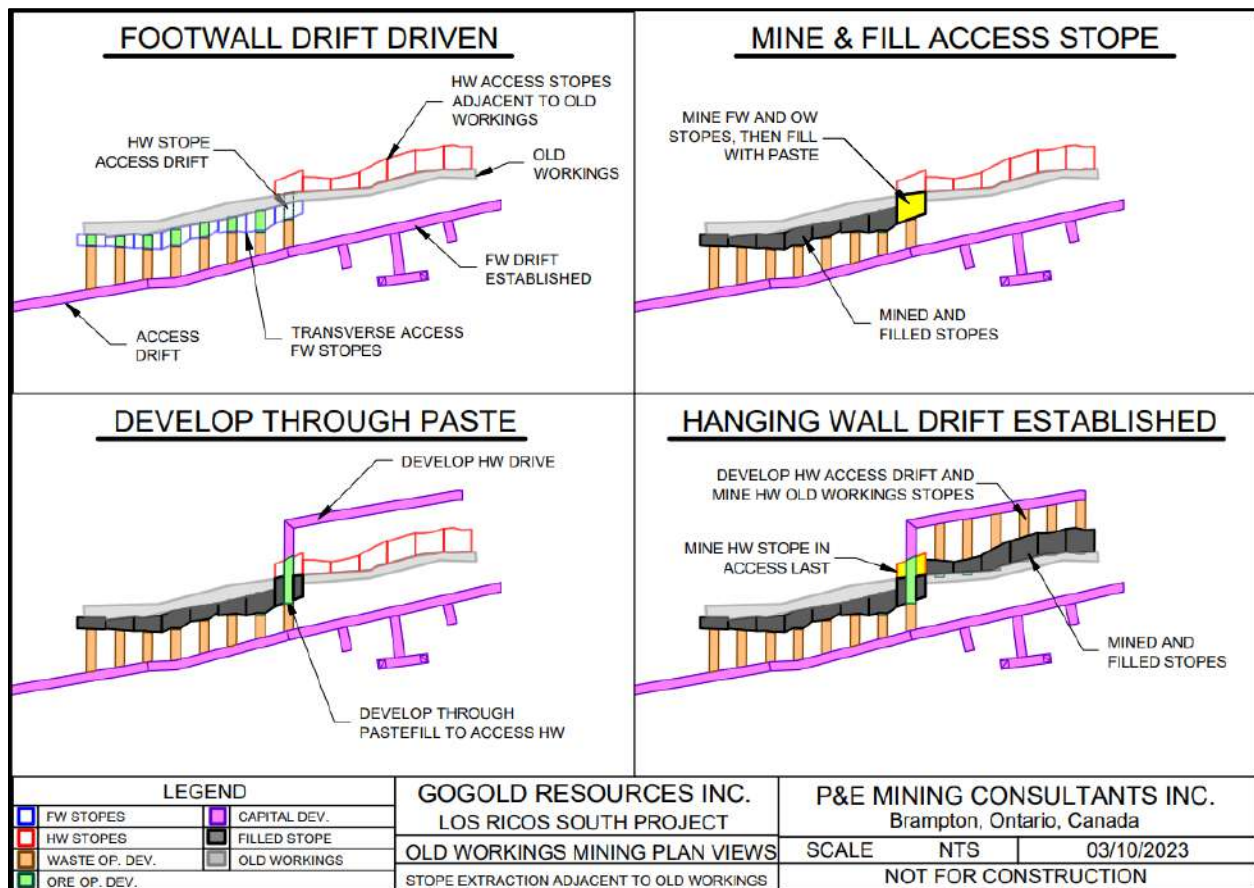
As the UG mine will be operating prior to the commencement of open pit mining, it will be necessary to permanently segregate the portion of the OW areas that is extracted from the UG from the area that will be extracted by the open pit. To ensure this, drift-and-fill (“D&F”) mining on the 1,130 EL level will be used to excavate OW material and replace it with an



artificial sill pillar of high-strength PF. This pillar will prevent unconsolidated material from the OW areas in the eventual open pit from flowing into the UG and leaving voids in the pit floor.

Due to the high number of unknowns regarding the Old Workings, and the expected free-flowing nature of the backfill, a top-down mining sequence has been adopted to minimize the exposure of open Old Workings in the mine. Access to mining areas adjacent to the OW areas will be via an offset access drift located on either the HW or the FW, depending on the location of majority of targeted stopes on the level. Where stopes exist on both sides of the Old Workings, the first stope in the cross-cut (nearest the access drift) will be extracted, then backfilled and cured, prior to new development being driven through the PF and a new access drift driven on the opposite side of the OW area. After all stopes accessed from the opposite side are extracted and filled, the remaining stope on the initial access cross-cut will be extracted on retreat. Figure 16.5 provides further detail.

**FIGURE 16.5 TRANSVERSE MINING AROUND OLD WORKINGS**



### 16.1.2.3 Pillars

Four forms of pillars exist in the UG mine:

- The Crown pillar, segregating UG production operations from surface topography;
- The Pit pillar, segregating open pit (“OP”) operations from UG operations;

- The Old Workings pillar, preventing free-flowing material from OW stopes in the OP from flowing into the UG; and
- Artificial sill pillars, segregating mining blocks and allowing undermining of filled stopes.

### **Crown Pillar**

To maintain sufficient integrity of the topography above the UG mine, a crown pillar of a nominal 30 m thickness is maintained between UG production operations and the topographic surface. A significant amount of economic mineralization exists within this pillar above the 1,310 EL level and will be extracted via OP methods where possible.

### **Pit Pillar**

To limit the interaction between OP operations and UG operations, a minimum 30 m offset to the active pit bench will be maintained at all times. UG stopes and development that intersect this pillar will be mined out and backfilled in the year prior to the pit reaching the relevant depth. During the life of the UG mine (prior to YR 8), the deepest intersection of the pit pillar and a UG mining area is at the 1,210 EL level.

### **Drift-and-Fill (Old Workings) Pillar**

The open pit bottom intersects UG production areas at the 1,130 EL mining level. Above this point, backfilled Old Workings exist, and are connected to the underground mining areas. To prevent this material from flowing into the underground, and both diluting the underground stopes and creating hazards in the pit floor above, an artificial pillar segregating the in-pit areas from the UG areas will be created through the use of D&F mining and PF backfill.

An initial FW drift will be developed with multiple cross-cuts driven into the OW areas. Lateral drifts will then be driven the length of the OW stope following the HW contact of the stope, using extensive ground support including spiling and in-cycle shotcrete, at a significantly reduced advance rate to allow for probing for voids or unstable floor conditions. Blasting will generally not be necessary since the drifts are being driven through unconsolidated backfill. Once the drift is complete, it will be backfilled with high-strength PF, and after curing is complete the adjacent drift will be driven along the contact of the fill, with the cycle repeating until the FW contact of the OW stope is exposed and then filled. The access cross-cuts will then have their floors benched, and the process will be repeated in an underhand fashion to double the thickness of the pillar and provide a minimum 2:1 height:span pillar of high-strength PF segregating the OW backfill in the pit from the UG. The OW stope width in the area is expected to be less than 4 m wide. D&F mining is expected to use a nominal 4 m x 4 m heading size, and the OW Pillar is expected to be ~8 m thick to provide the 2:1 ratio. If necessary, additional undercuts may be used to increase the pillar thickness.

### **Artificial Sill Pillars**

The bottom level of each mining block, with the exception of the lowest mining blocks in the mine, will be backfilled with high-strength PF to create a 20 m thick pillar that can be



undermined by the level below, using remote drilling and excavation. The Authors recommend that this thickness be evaluated at a further level of study to determine the optimum balance of PF thickness and strength for this application.

#### 16.1.2.4 High-Grade Domains

Narrow higher-grade domains within larger lower-grade domains provide the majority of mining targets in the UG mine plan. Overbreak from these targets is largely contained within the lower-grade domains, meaning that diluting material generally contains mineralization. While the Old Workings shapes do not completely overlap these high-grade domains in the Abra area, they are relatively contiguous along strike and dip, and it is likely that these domains and the OW shapes largely coincide. As a result, it is probable that the surveyed location of the OW shapes are slightly different from their actual location.

#### 16.1.3 Cut-Off Grades

Initial COG calculations are shown in Table 16.5.

Item	All-In Cost (\$/t)	Portion Attributable to MCOG	Marginal Cost (\$/t)	Portion Attributable to OW Mining	OW Cost (\$/t)
Mining (Mineralized development, production and backfilling)	40.00	100%	40.00	60%	24.00
OPEX Waste Development	3.00	50%	1.50	7%	0.11
Processing	30.00	100%	30.00	100%	30.00
Services & Power	6.50	50%	3.25	50%	1.63
Mining G&A	6.00	15%	0.90	7%	0.06
CAPEX Waste Development	12.50	0%	-	0%	-
Infrastructure and Other CAPEX	20.00	0%	-	0%	-
<b>Cut-off Value (\$/t)</b>	<b>118.00</b>	<b>64%</b>	<b>75.65</b>	<b>74%</b>	<b>55.79</b>
Include 5% Contingency	123.90	64%	79.43	74%	58.58
Initial Cut-off Grade <sup>1</sup> (g/t AgEq)	203	64%	130	74%	96
<b>Final Cut-off Grade<sup>2</sup> (g/t AgEq)</b>	<b>205</b>	<b>63%</b>	<b>130</b>	<b>73%</b>	<b>95</b>

Notes: <sup>1</sup> Uses \$0.6101 value per in-situ gram AgEq.

<sup>2</sup> Rounded to nearest 5 g/t AgEq increment.

### **16.1.3.1 Economic**

The ECOG for the Project was calculated at 205 g/t AgEq. At this COG, stopes would be expected to generate a profit after covering all costs for the underground, both operating and capital. During trade-off studies, it was determined that a higher ECOG, while generating lower total cash flow, would improve Project NPV, IRR, and payback period. As such, a 240 g/t AgEq ECOG was eventually used to generate the initial underground stopes.

### **16.1.3.2 Marginal**

The MCOG for the Project was initially estimated at 135 g/t AgEq, prior to being revised to 130 g/t AgEq after an initial set of stopes was generated. At this grade, a stope will cover all directly attributable costs of production (OPEX development, drill and blast, excavate and fill, and applicable salaries/G&A costs). Stopes generated at the marginal COG were used to add adjacent and contiguous stopes to the stope set generated at ECOG.

An arbitrary mid-point COG between ECOG and MCOG of 185 g/t AgEq was used to generate a third set of stopes to replace overlapped MCOG stopes with stopes generating an improved margin.

### **16.1.3.3 Historical Workings**

The COG for the OW areas was estimated at 95 g/t AgEq, which would cover all the items in the MCOG, with the removal of drill and blast processes and their associated services and electrical power costs, all OPEX mineralized development, and the vast majority of OPEX waste development and mining G&A. It is possible that the material will also be slightly less expensive to process, given its particle sizes; however, no change to processing costs has been included for it.

Given that the material is expected to be free-flowing and is expected to be completely recovered to its full extents without the need for demarcation, delineation, or any other ancillary operations other than excavation, processing, and filling, the OW COG is not applied for the generation of any stopes: historical survey voids are used as stope limits instead. Since OW stope grades are below the OW COG value, they are classified as diluting material.

## **16.1.4 Other Considerations**

### **16.1.4.1 Cerro Colorado**

The Cerro Colorado Vein was evaluated for suitability of underground mining. A minimal quantity of stopes was generated, and when treated as a stand-alone project with a higher ECOG due to additional access requirements, it was determined to be uneconomical to mine via UG methods.

#### 16.1.4.2 Water Inflow Rates and Historical Workings Dewatering

As the Project is located in a dry climate, average groundwater inflows are estimated at 2.5 L/s. Even at this low inflow rate it is expected that the Old Workings will be flooded up to just below the Abra portal at the 1,150 EL. These historical workings will need to be dewatered prior to developing adjacent mining areas, which begins in YR 4. The historical shaft is collared at 1,150 EL and extends to a depth greater than 200 m below the planned mining horizons. As such, a borehole pump will be used to dewater from the shaft area down to 20 m below the lowest mining level (890 EL) and maintain sufficient clearance such that any significant future inflows can be routed to the shaft through historical development, and away from active mining areas.

It is estimated that 185,000 m<sup>3</sup> of Old Workings will be dewatered for the mine plan.

#### 16.1.5 Development

A total of 38,388 m of lateral development and 1,162 m of vertical development is expected over the LOM. Approximately 53% of lateral development is operating development (both mineralized and waste).

While efforts have been made to avoid them, historical mine development workings unavoidably intersect certain lateral portions of the new underground workings (new vertical development avoids them entirely), particularly at the 1,150 EL and 1,090 EL. These areas may be open or may be collapsed. No contingency has been added to development quantities to account for these areas.

##### 16.1.5.1 Lateral Development

Lateral development is sized to accommodate the largest piece of equipment expected to operate within the mining area. It is expected that production LHDs will haul to a re-muck bay near the ramp, where material will be rehandled into trucks by a larger LHD. As such, operating development (development in production areas) has a smaller face area than capital development (development in ramps and level accesses).

Table 16.6 shows lateral development totals by size and category.

<b>TABLE 16.6 LATERAL DEVELOPMENT METRES SUMMARY</b>			
<b>Development Type</b>	<b>Nominal Size (W x H m)</b>	<b>Capital / Operating</b>	<b>Quantity (m)<sup>1</sup></b>
Ramp	4.0 x 4.0	Capital	6,417
Level Access	4.0 x 4.0	Capital	2,146
FW Drift	4.0 x 4.0	Capital	3,662
Electrical and Dewatering	3.3 x 4.0	Capital	1,663
Vent Access	3.3 x 4.0	Capital	2,161
Re-muck	4.0 x 5.0	Capital	1,094

<b>TABLE 16.6</b>			
<b>LATERAL DEVELOPMENT METRES SUMMARY</b>			
<b>Development Type</b>	<b>Nominal Size (W x H m)</b>	<b>Capital / Operating</b>	<b>Quantity (m)<sup>1</sup></b>
Drift and Fill	4.0 x 4.0	Capital	910
Longitudinal Sills	3.3 x 3.3	Operating	17,390
Transverse Cross-cuts	3.3 x 3.3	Operating	2,946
<b>Subtotal</b>	<b>Capital</b>		<b>18,052</b>
<b>Subtotal</b>	<b>Operating</b>		<b>20,336</b>
<b>Total</b>	<b>Capital + Operating</b>		<b>38,388</b>

<sup>1</sup> Totals may not sum due to rounding.

### 16.1.5.2 Vertical Development

Vertical development is limited to ventilation raises, which are driven either via raisebore or drop raising methods, with drop raising being used for slightly more than half of vertical development. Raiseboring is used where raise segments are longer than 40 m. Due to the relatively short level interval, raiseboring is utilized to drive a single raise segment connecting three consecutive levels with minimal lateral offset (raisebored raises are designed to have a dip of 70° or higher), whereas drop raises are used to connect two consecutive levels where lateral offsets between levels make raiseboring inefficient.

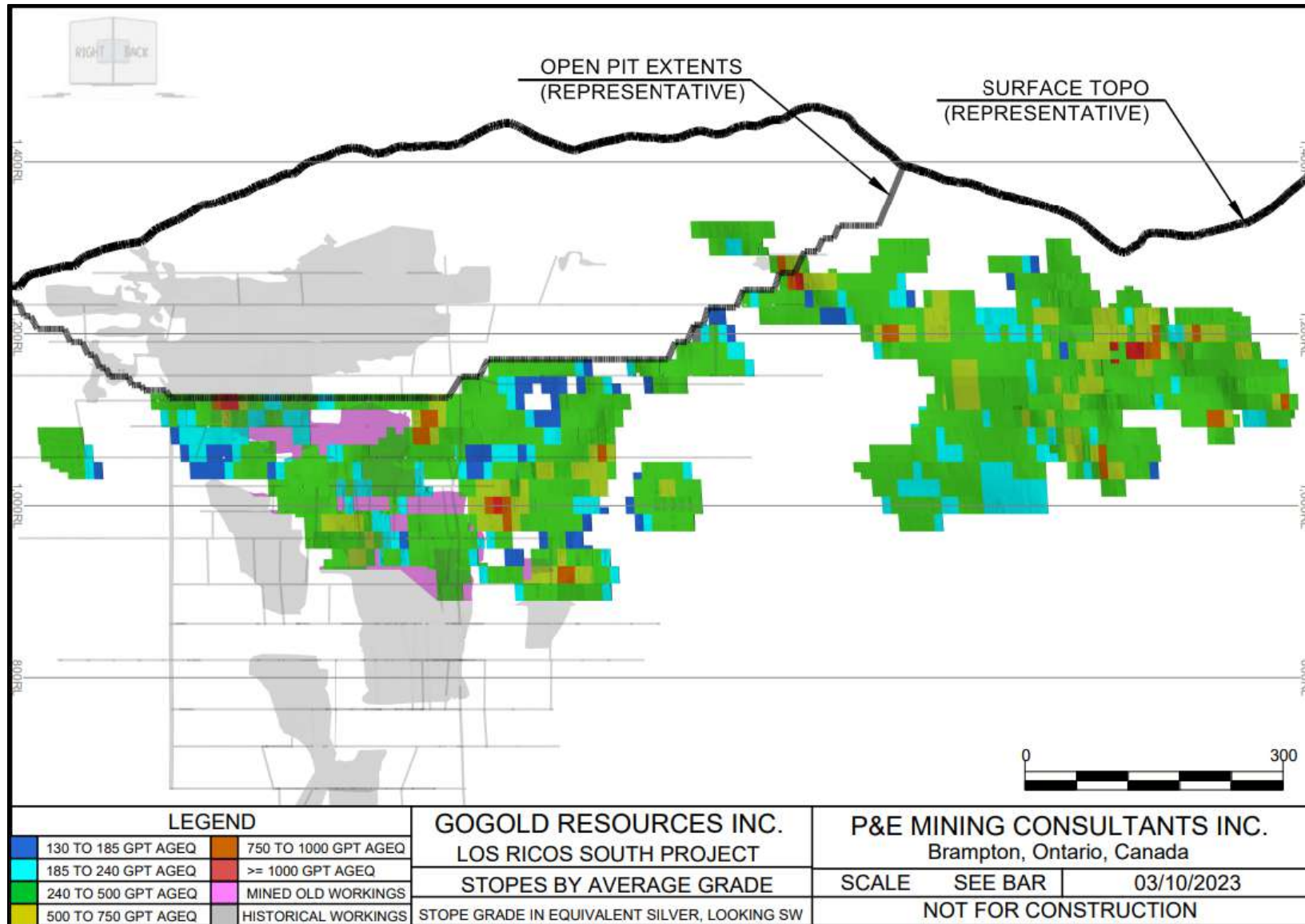
Table 16.7 shows vertical development totals by size and category.

<b>TABLE 16.7</b>			
<b>VERTICAL DEVELOPMENT METRES SUMMARY</b>			
<b>Development Type</b>	<b>Nominal Size</b>	<b>Capital / Operating</b>	<b>Quantity (m)</b>
Raisebore	3.0 m diameter	Capital	557
Drop Raise	3.0 m W x 3.0 m H	Capital	605
<b>Total</b>	<b>Capital</b>		<b>1,162</b>

### 16.1.6 Production

Total potentially economic material mined from the UG portion of the Los Ricos South Project is estimated at 4,325 kt, comprised of 4,068 kt of mineralized material from in-situ stopes, and 258 kt of mineralized material from backfilled Old Workings. Figure 16.6 shows the stoping areas by grade.

**FIGURE 16.6 STOPING AREAS BY GRADE**



### **16.1.6.1 Mining Methods**

Production uses LH mining and cemented PF, with stopes accessed by a combination of longitudinal retreat mining and transverse access mining. The dominant mining method is longitudinal retreat, which comprises approximately 80% of the recovered tonnes.

#### **Longitudinal Retreat**

Longitudinal retreat mining involves driving an access through mineralized material along the strike of the vein to the end of a group of stopes. The stope is drilled using downholes (or upholes where no top access exists), loaded and blasted, and mineralized material is recovered from the bottom access using an LHD. Once the blasted material is excavated and survey is complete, a wall is built to seal the bottom access of the stope and the stope is filled with PF. After a curing period (nominally 14 days), the cycle repeats on the next stope in the sequence (drilling and loading operations can commence prior to complete curing, however, not blasting). Longitudinal retreat mining progresses from the bottom of a mining block to the top, working on top of PF. Backfilling will normally be from the sill drift above, however, for the last level in each block it will be done through boreholes from nearby development, as there will not be an open sill drift above. Longitudinal retreat mining minimizes waste development by avoiding offset drives and cross-cuts, at the cost of reduced mining faces on a level.

#### **Transverse Access Mining**

Transverse access mining involves driving an access drift offset from the vein (in this case, nominally 12 m from the contact) parallel to strike, and then driving perpendicular cross-cuts across the vein on a set spacing (in this case, nominally 10 m centres). For the Los Ricos South Project, transverse stopes are drilled using only upholes due to access limitations (the overcut level will be completely backfilled prior to mining). Mining of individual stopes progresses similarly to longitudinal retreat mining. Transverse mining progresses from the top of a mining block to the bottom, working underneath a high-strength PF back and only opening a single 20 m level at a time. Significant portions of the drilling process will be drilled on remote (for rings near the OW areas), and all excavating will be carried out on remote. Backfilling will generally be from the cross-cuts on the level above, or through boreholes drilled from nearby development. Transverse mining maximizes productivity at the cost of additional development. For the Los Ricos South Project it is utilized only in areas adjacent to Old Workings backfilled stopes.

#### **Extraction of Historical Workings**

Approximately 6% of the mine plan tonnes come from excavating backfill material from historical Old Workings stopes. An additional 13% of tonnes are excavated from transverse access stopes mined adjacent to these areas. To safely and economically extract these tonnes, the following process is used after the OW Pillar (see Section 16.2.3.3) is completed.

1. Drive a drift parallel to the vein, offset by 12 m, on either the FW or the HW of vein, depending on the location of the majority of the stopes on the level.

2. Drive cross-cuts perpendicular from the vein on 10 m spacings to just before the Old Workings contact, using probe drilling to determine the breakthrough location.
3. Prior to breakthrough, drill the stope rings in virgin ground adjacent to the OW stope. This prevents drilling near open brows.
4. Break through development to the Old Workings stope and draw down the backfill until the brow cracks. Ram the brow closed with an LHD using a “rammer-jammer”.
5. Load and prime the drilled holes, pushing the primers into the collars and temporarily plugging them with bottle brushes or cones.
6. On remote, excavate the brow until backfill reaches the floor level. In some instances, drawing down the backfill may be done from the level below if desired.
7. Blast the stope, using the OW stope as a slot. If void is insufficient to fire the entire stope, excavate the blasted material until the brow cracks, and ram the brow closed. Repeat from Step 5 until the entire stope is blasted.
8. Backfill stope with high-strength PF from the level above and allow to cure.

PF can be introduced to the transverse stopes either through blasting a development stub into cured PF from the transverse access above, or by drilling two holes from the access into the top of the stope (one for fill, one to vent the air and assist tight filling).

For certain areas (1,050 EL, 1,030 EL, and 930 EL levels), it will be necessary to excavate through the cured PF stope and through the far vein contact to create an offset access drift on the opposite side of the vein from the primary access drift. The process of extracting stopes from the opposite side of the vein is the same; however, the final stope in the area will be extracted on retreat, as it will be located on the cross-cutting access. For areas where stopes exist on both sides of the OW void, the first stope extracted will use the OW void as a slot, whereas the second stope will require a raise as the OW void will be backfilled prior to excavation.

### **Uphole Versus Downhole Mining**

Significant quantities of uphole drilling will be necessary for production at the Los Ricos South Project. Longitudinal retreat mining at the Project uses predominately downhole drilling; however, the top-most level in each mining block (along with some isolated stopes in pillar areas) will require uphole drilling as there will be no open overcut to drill from. Transverse mining operations at the Project are entirely done using uphole drilling. Downhole drilling is generally preferable to uphole drilling as it allows simple survey of breakthrough positions, improved QA/QC of drilling, and allows explosive loading through gravity instead of pumping; however, proven processes exist for drilling and loading upholes efficiently and effectively. As previously discussed, top-hammer drills have been selected for their improved productivity versus ITH drills for the relatively close level interval of 20 m, particularly for uphole drilling. Approximately 40% of all drilling will be upholes, with the majority in the transverse mining areas adjacent to Old Workings stopes on the Abra Vein.

### **16.1.6.2 Stope Sizing**

Levels are spaced at a nominal interval of 20 m. Longitudinal stopes are generally less than 15 m wide. Wider areas are experienced in localized portions of the Eagle Vein, and where stope width would exceed 15 m, parallel longitudinal extraction drifts are included for the wider extent.

Stope widths vary by location in the mine, with the Eagle longitudinal areas averaging 11.1 m, the Abra longitudinal areas averaging 6.4 m, and the Abra transverse areas on 10 m spacings, artificially constraining the width. The transverse stopes are generally fairly short, averaging 11.2 m long. This length is comprised of (on average) 7.5 m of virgin material and 3.7 m of OW material. Longitudinal stope lengths can be limited by drill and blast design and are nominally 25 m long.

For longitudinal stopes, the maximum Hydraulic Radius (“HR”) is estimated at less than 5.5 and no additional long support requirements will be necessary; however, the Authors recommend that further studies include a determination of the Modified Stability Number to support this estimate.

### **16.1.6.3 Backfill**

Two different PF recipes are planned for use in the UG: a high-strength recipe containing 5% binder by mass, and a low-strength recipe containing 3% cement by mass. As mentioned in Section 16.1.6, PF was selected for:

- Improved productivity in longitudinal retreat areas;
- Its ability to be pumped into, and seal off, intersections of OW areas and new mining areas (an allowance of 2% of planned volume has been provided for this to account for slump or deliberate filling of intersected development areas in the floor/walls); and
- Its ability to provide an engineered sill pillar with sufficient quality control that can be safely mined underneath (on remote) in the future.

Approximately 44% of backfill in the UG mine is high-strength PF, with the remainder being low-strength PF. Approximately half of the high-strength PF will be used to backfill transverse access stopes around the OW areas of the Abra Vein. Approximately 60% of PF can be placed from overcuts, based on the mine design and schedule, with the remaining 40% either being placed via short boreholes, or from stub drifts in cured PF intersecting open stopes at the overcut level.

A small portion of stopes will be left empty when there are no further adjacent mining areas to be extracted and the stope will not be intersected by the open pit. Opportunities exist to fill these stopes with uncemented rock fill from development operations; however, for the purposes of this PEA this has not been investigated. Additionally, for areas being filled with low-strength PF, opportunities exist to comingle development waste and PF within the stopes; however, the logistics of transporting this material to the stopes is sub-optimal, as longitudinal sills are not sized for truck haulage, and due to their length and azimuth changes, LHDs rehandling rockfill



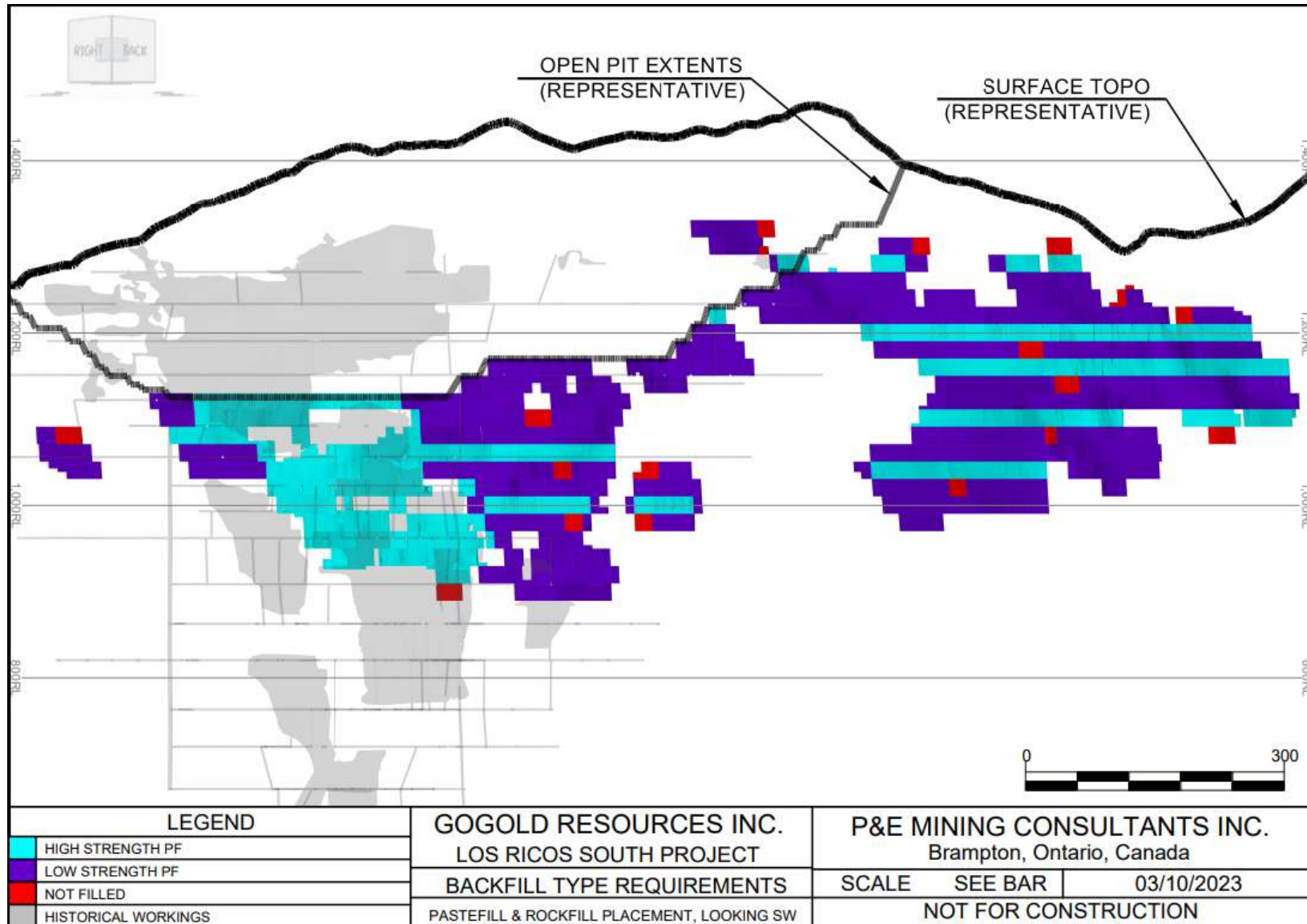
from the level access to the stopes will be slow. Trade-off studies at a higher level of study should be performed to determine the efficacy of comingling or placing pure unconsolidated rock backfill in a subset of stopes. Figure 16.7 shows backfill usage by type and location.

### **16.1.7 Mining Recovery**

Mining recovery is the portion of overall blasted material that is recovered from a mining area. For new mining areas on the Eagle and Abra Veins, recovery is set at 95%. For stopes adjacent to OW mining areas in the Abra Vein, recovery is set at 85% to account for more difficult mining conditions in these areas, particularly due to mining under PF and drawing down OW backfill material from transverse access drawpoints. OW backfill material recovery is set at 100% as a conservative estimate to account for the diluting effects of this material on adjacent stopes.

The average recovery for all mined tonnes in the underground is estimated at 93.8%.

**FIGURE 16.7 BACKFILL TYPE BY LOCATION**



## 16.1.8 Dilution and Overbreak

Dilution is the planned or unplanned extraction of non-economic material along with economic material during mining. Internal dilution is the planned inclusion of non-economic material in a mining area to maximize recovered value from the area. External dilution is the unplanned inclusion of additional uneconomic material due to causes such as poor drilling, overbreak, poor geological definition, backfill inflow, or other sources. Overbreak, while unintentionally included with blasting targets, may include material that exceeds MCOG and is economic. Due to the nature of the interactions between stopes generated at various COGs and the low-grade domains surrounding the high-grade domains, overbreak (ELOS) on stopes generated at COGs above MCOG can include material grading above MCOG, which is technically not dilution, as its value exceeds the cost of mining and processing.

For the underground portion of the Deposits, any in-situ material with a grade below 130 g/t AgEq is considered to be dilution, while any backfill material with a grade below 95 g/t AgEq is considered to be dilution.

A summary of dilution and overbreak by source, along with calculations supporting the following subsections, is shown in Table 16.8.

<b>TABLE 16.8</b>				
<b>DILUTION AND OVERBREAK SUMMARY AND CALCULATIONS</b>				
<b>Item</b>	<b>Entry</b>	<b>Grade Versus MCOG<sup>1</sup></b>	<b>Mass (kt)<sup>2</sup></b>	<b>Metal Content (Moz AgEq)</b>
Planned Stopes	A	Above	2,749	46.8
	B	Below	288	0.7
Overbreak	C	Above	320	3.0
	D	Below	592	1.1
Old Workings	E	Below	258	0.5
Backfill	F	Below	118	-
<b>Item</b>	<b>Calculation</b>	<b>% by Mass</b>	<b>Grade (AgEq g/t)</b>	<b>Metal Content (Moz AgEq)</b>
Internal Dilution	B / A	10.5%	72.6	0.7
Overbreak	(C + D) / (A + B)	30.0%	140.7	4.1
External Dilution	(D + E + F) / (A + B + C)	28.8%	52.1	1.6
Overbreak Dilution	D / (A + B + C)	17.6%	59.1	1.1
Old Workings Dilution	E / (A + B + C)	7.7%	60.0	0.5
Avg. Backfill Dilution	F / (A + B + C)	3.3%	0.0	-

<sup>1</sup> MCOG, as stated in Section 16.3.2, is 130 g/t AgEq.

<sup>2</sup> Totals may not sum due to rounding.

#### **16.1.8.1 Internal Dilution**

Internal dilution on mineralized stopes is estimated at 10.5% by mass at an average grade of 73 g/t AgEq.

#### **16.1.8.2 Overbreak on Planned Stopes**

Overbreak on stopes, defined as tonnes of overbreak material divided by tonnes of planned material, is estimated at 30.0%. Approximately 35% of this overbreak material intersects a grade above 130 g/t AgEq and is classified as economic material. The average grade of stope overbreak is estimated at 140.7 g/t AgEq, with the economic portion grading 291.5 g/t AgEq and the uneconomic portion grading 59.1 g/t AgEq.

#### **16.1.8.3 Backfill and Historical Workings Dilution**

Backfill dilution on stopes, is calculated at 3% on the overbroken volume of new stopes, and 0% on OW areas. Backfill dilution contains no appreciable grade, as it is expected to be comprised entirely of PF. Any residual grade from tailings is ignored. Average backfill dilution for the Project is estimated at 3.3%.

Old Workings dilution, while technically a form of backfill dilution, is calculated separately, as the material does contain metal that will be recovered during processing. Old Workings dilution is calculated at 7.7% and grades 60.0 g/t AgEq.

#### **16.1.8.4 External Dilution**

External dilution, inclusive of backfill dilution, Old Workings dilution, and overbreak on planned stopes, is estimated at 28.8%. This average grade of this material is 52.1 g/t AgEq.

#### **16.1.9 Equipment**

All equipment is provided by the contractor. Table 16.9 shows the expected number of units required by type for development and production operations based on the Authors' estimates. It is assumed that the contractor will re-estimate the number of units of each type required to achieve the mining schedule based on its own expectations of availability and productivity. As machine rental is included in per-tonne costs, this will not impact the overall cost of the underground portion of the Project. All fleet estimates are based on 16 effective operating hours per day.

**TABLE 16.9**  
**MOBILE EQUIPMENT FLEET**

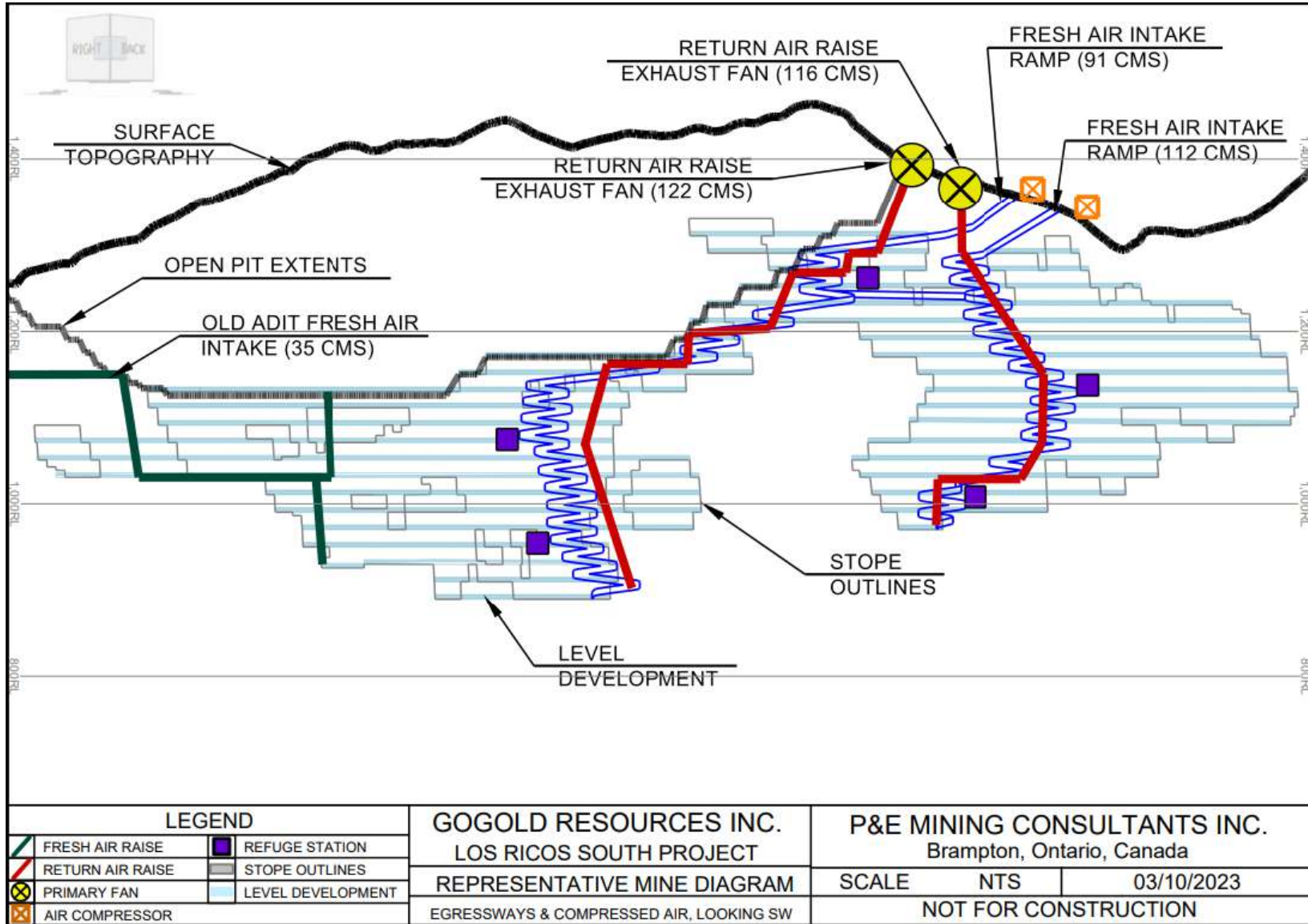
Machine Type	Similar To	Max Quantity Required
Truck – 30 tonne	Sandvik TH430	6
Development LHD – 10 tonne	Sandvik LH410	2
Development Drill – 2-Boom	Sandvik DD321	4
Development Ground Support	Sandvik DS311	4
Development Services	MineCat MC100	2
Development Explosive Loading	MineCat MC100	2
Production LHD – 7 tonne	Sandvik LH307	4
Production LH Drill – Top Hammer	Sandvik DU311	3
Production Explosive Loading	MineCat MC100	2
Auxiliary LH Drill – ITH	Sandvik DL311	1
General Utility – Carrier with Module	MineCat MC100	5

All other ancillary equipment will be provided at the contractor's discretion.

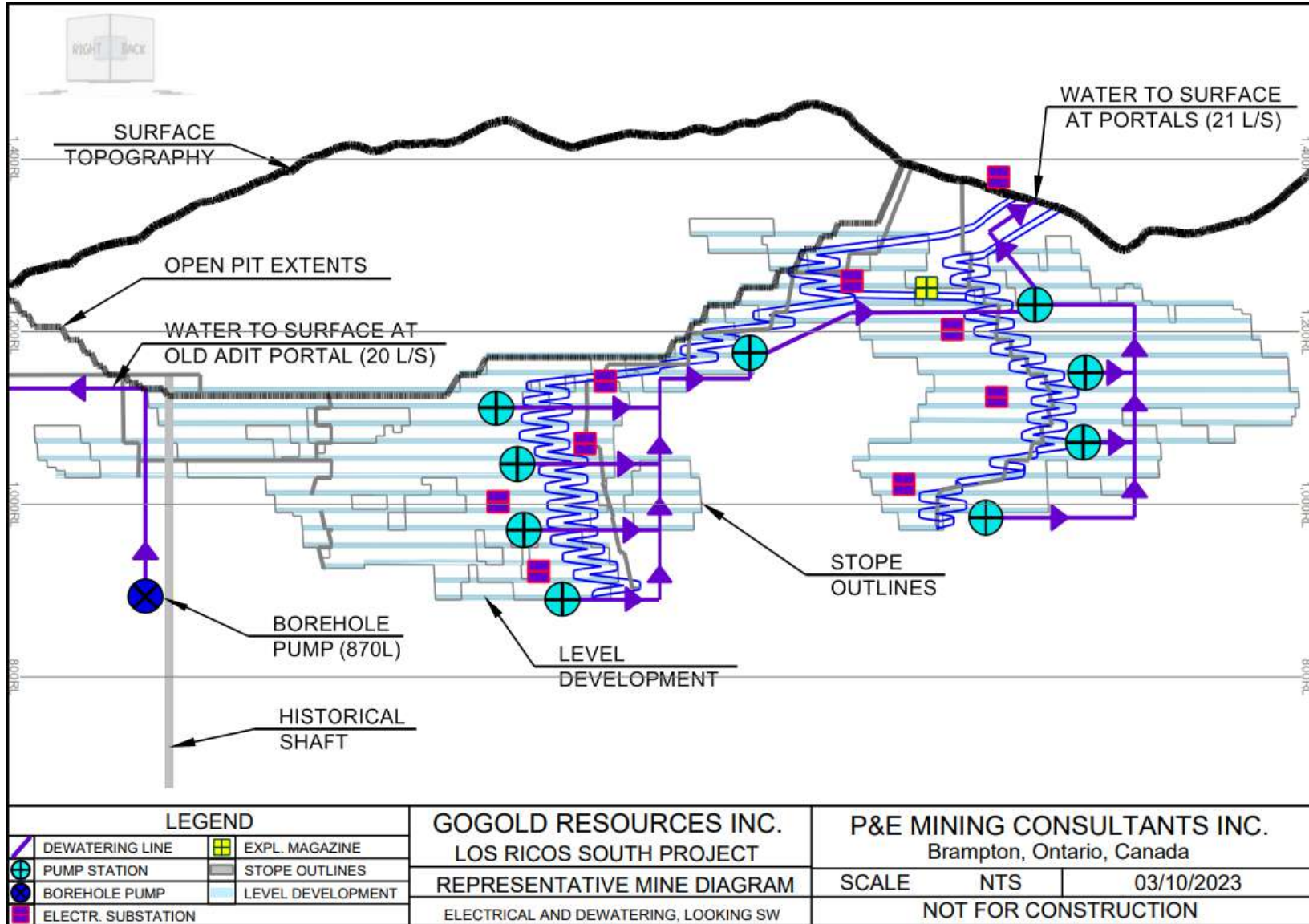
#### **16.1.10 Services and Infrastructure**

Mine services include electrical supply and distribution, ventilation, dewatering, compressed air and communications systems. Major underground infrastructure items include dewatering pump stations, refuge stations, and small maintenance bays equipped to handle general preventative maintenance. The main maintenance shop (heavy work and overhauls) will be located on surface. Figures 16.8 and 16.9 provide general schematics of major UG services and infrastructure.

**FIGURE 16.8 VENTILATION AND EMERGENCY EGRESS LINE DIAGRAM**



**FIGURE 16.9 ELECTRICAL AND DEWATERING LINE DIAGRAM**





### **16.1.10.1 Ventilation**

Initial development of the mine uses auxiliary ventilation through the two adits to ventilate the mine. Once the adits cross from the HW to the FW of the vein, primary ventilation supply drifts and raises are installed (one ventilation adit on the Abra ramp and a raisebored ventilation raise on the Eagle ramp), with exhaust 325 kW fans (similar to Hurley AMF84-58-1200) located on surface exhausting a nominal 120 m<sup>3</sup>/s of air each. As development progresses, raises continue with the ramp, connecting opposite or near level accesses, drawing fresh air down the ramp. Auxiliary ventilation will be used to move air from the lowest connection to the working face of the ramp. Longitudinal retreat mining levels will be ventilated in a similar manner, with fresh air taken from the ramp and fans located in bulkheads drawing exhaust air from the levels.

Mining levels using transverse access are additionally ventilated through a series of drop raises connecting to the OW drifts via new HW or FW drifts. These raises are not powered, however, will supply additional fresh air via the historical Abra portal on the 1,150 EL level to the majority of the transverse access levels and reduce the load on the surface exhaust fans.

Ventilation doors are expected to be used on each of the transverse mining areas with low-power (~5 kW) fans located above the doors to regulate the quantity of fresh air provided to each level. An additional door will be located in the Eagle/Abra connector drift at 1,240 EL. Bulkheads with regulators and fan inserts will be installed at each ventilation access adjacent to the ramp.

### **16.1.10.2 Dewatering**

The majority of water inflow into the UG mine will come from drilling operations, with a total of approximately 7.5 L/s of inflow combined from drilling, diesel condensate, and groundwater inflows. Small level sumps are used to capture water on-level, and small electric submersible pumps will be used to transfer water to ramp sumps which cascade to pump stations located every 100 to 120 vertical metres in the mine (100 m in Eagle, 120 m in Abra). In the pump stations, settling sumps will be used to segregate solids and clean water, and clean water will be returned to the service water system, with excess pumped to surface sequentially through each pump station above. Pump stations will be equipped with ~150 kW pumps operating on a 33% duty cycle with a maximum 20 L/s capacity.

Dewatering of the Old Workings will be completed through the use of a borehole pump located in a borehole intersecting the 870 EL in the historical shaft, pumping to the 1,150 EL. This pump will dewater the OW areas from 1,150 EL to 870 EL over a period of three years, and functions as an emergency dewatering system in the event of a 100-yr flood situation; water can be diverted from the new levels into the Old Workings below the new levels for immediate containment prior to eventual pumping to surface.

### **16.1.10.3 Compressed Air**

The majority of underground machinery is expected to be electro-hydraulic in nature, with minimal compressed air requirements. Two 150 kW centrifugal screw compressors will be utilized to provide ~1,000 scfm of flow to each of the ramp areas. It is expected that compressed



air will be used primarily for explosive loading, and for ancillary construction work (drilling with jacklegs).

An ethyl mercaptan (“Stench Gas”) injection system will be installed at each compressor for emergency use. In addition to Stench Gas, methyl salicate (“Wintergreen”) injection systems will be installed for line flushing after a Stench Gas injection.

#### **16.1.10.4 Electrical**

Electrical power will be provided to the portal of each mine, and transmitted underground at a nominal voltage of 13.8 kV. Modular transformers will be installed every two to three levels to step down the primary voltage to a nominal usage voltage of 600 V. The transformers will be relocated necessary as levels are mined out. Maximum load for the UG portion of the Project is estimated at 5.0 MW in YR5, with an average load of 4.4 MW.

#### **16.1.10.5 Refuges/Egress/Other Infrastructure**

Emergency egress from the UG mine will be via ladderway in the ventilation raises. Underground lunchrooms configured to serve as refuge stations will be installed according to applicable laws. An underground explosives magazine will be installed on the Abra-Eagle connector drift at 1,240 EL. Maintenance bays will be created by repurposing re-mucks as levels are exhausted. These bays will include a concrete work platform and simple chain block hoists and are intended for basic preventative and light maintenance work only. A surface shop will be used for major work and overhauls.

#### **16.1.10.6 Material Handling**

Material is hauled to a re-muck bay and then re-handled into a truck. Contractor quotes for haulage are based on distance travelled, therefore moving material to lower levels to centralize loading results in both increased development costs, and increased OPEX costs, hence the choice of on-level loading. All truck loading is done with the larger development LHDs to provide three-pass loading of 30 t capacity haul trucks, and to allow better geometries for loading due to the higher dump point of the 10 t-class development LHDs versus smaller 7 t-class production LHDs.

#### **16.1.10.7 Backfill Reticulation**

PF for the UG mine will be generated at a surface plant adjacent to the process plant to acquire a direct feed of tailings and eliminate the need for re-slurrying. The plant will be located approximately 400 m from the portals, and approximately 50 m below them, necessitating the use of a positive displacement pump to transfer the PF to the underground initially via an in-ramp steel pipe reticulation system, and eventually through more direct paths via piping in boreholes. On active levels, HDPE piping will be used to transport the PF from the main supply lines to the active stopes. For the mining on the Abra Vein below the 1,110 EL, it may be possible to drill a supply borehole for PF from surface to the mining area and case the hole: however, this is not possible for mining elsewhere as the backfill plant is located on the HW side of the Deposit, and supply lines would need to pass through the vein at a minimum, and through

both the vein and the Rascadero Fault in the worst case. For the purposes of this PEA, it has been assumed that all PF is supplied via the portals, and through the internal reticulation system. The Authors recommend performing a trade-off study for positioning the backfill plant closer to, or above, the portals versus the need to re-slurry tails during future studies of the Project.

### 16.1.11 Mine Plan Portion of the Mineral Resource

Table 16.10 shows the mine plan portion of the Mineral Resource for the UG mine. Over the LOM a total of 4.33 Mt of mineralized material will be recovered from the UG at average grades of 173.9 g/t Ag, 1.95 g/t Au and 0.22% Cu.

<b>Item</b>	<b>Mineral Resource Type</b>	<b>Mass (kt)</b>	<b>Ag Grade (g/t)</b>	<b>Au Grade (g/t)</b>	<b>Cu Grade (%)</b>	<b>AgEq Grade (g/t)</b>
<b>In-Situ</b>	Measured	1,489	248	2.19	0.18	466
	Indicated	2,091	167	2.26	0.28	403
	<b>Subtotal M&amp;I</b>	<b>3,580</b>	<b>201</b>	<b>2.23</b>	<b>0.24</b>	<b>429</b>
	Inferred <sup>1</sup>	781	113	1.25	0.21	250
	Waste / PF	248	-	-	-	-
<b>Diluted<sup>2</sup></b>	Measured	1,576	235	2.07	0.17	440
	Indicated	2,213	158	2.14	0.26	380
	<b>Subtotal M&amp;I</b>	<b>3,790</b>	<b>190</b>	<b>2.11</b>	<b>0.22</b>	<b>405</b>
	Inferred	819	108	1.20	0.20	238
<b>Mining Losses</b>	Measured	(134)	233	1.68	0.11	397
	Indicated	(116)	160	2.09	0.25	377
	<b>Subtotal M&amp;I</b>	<b>(250)</b>	<b>199</b>	<b>1.87</b>	<b>0.18</b>	<b>387</b>
	Inferred	(33)	175	1.73	0.25	360
<b>Mined<sup>3</sup></b>	Measured	1,442	235	2.11	0.17	444
	Indicated	2,097	158	2.14	0.26	380
	<b>Subtotal M&amp;I</b>	<b>3,540</b>	<b>189</b>	<b>2.13</b>	<b>0.23</b>	<b>406</b>
	Inferred	786	105	1.17	0.20	233

*Notes: M = Measured, I = Indicated, PF = paste backfill.*

*1 Material from Old Workings backfill is classified as Inferred Mineral Resource.*

*2 Dilution distributes waste and PF tonnes to MI&I classifications via tonne-weighting.*

*3 Totals may not sum due to rounding.*

### 16.1.12 Mining Schedule

Table 16.11 shows a summary of the mining schedule. Figures 16.10 to 16.19 show the progression of development and production in the underground mine by year.

**TABLE 16.11  
MINING PHYSICALS BY YEAR**

Area	Item	Unit	Year									Total <sup>1</sup>
			-2	-1	1	2	3	4	5	6	7	
Feed Grades	Ag Grade	g/t	-	-	185.5	178.7	193.8	176.6	167.9	165.7	151.8	173.9
	Au Grade	g/t	-	-	2.50	2.62	2.63	2.22	1.67	1.24	0.93	1.95
	Cu Grade	%	-	-	0.32	0.30	0.29	0.27	0.14	0.08	0.17	0.22
	<b>AgEq Grade</b>	<b>g/t</b>	<b>-</b>	<b>-</b>	<b>447.6</b>	<b>448.2</b>	<b>463.6</b>	<b>406.5</b>	<b>333.9</b>	<b>286.5</b>	<b>254.9</b>	<b>374.8</b>
Feed Totals	Ag Mass	Moz	-	-	2.9	3.7	4.0	3.6	3.5	3.4	3.1	24.2
	Au Mass	Moz	-	-	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.3
	Cu Mass	kt	-	-	1.6	1.9	1.9	1.7	0.9	0.5	1.1	9.5
	AgEq Mass	Moz	-	-	7.0	9.2	9.5	8.4	6.9	5.9	5.2	52.1
	<b>Feed Tonnes</b>	<b>kt</b>	<b>-</b>	<b>-</b>	<b>485.4</b>	<b>640.0</b>	<b>640.0</b>	<b>640.0</b>	<b>640.0</b>	<b>640.0</b>	<b>640.0</b>	<b>4,325.4</b>
Mining Physicals	Mineralized Development Mass	kt	49.6	133.7	80.0	72.1	93.5	26.4	47.8	52.2	0.0	555.4
	Mineralized Production Mass	kt	-	-	302.1	560.0	567.9	539.9	608.4	473.7	460.3	3,512.3
	Old Workings Backfill Mass	kt	-	-	-	-	-	6.6	5.2	118.4	127.5	257.7
	Development Waste	kt	234.2	102.2	118.7	135.4	86.4	187.1	130.4	91.7	0.0	1,086.1
	PF Volume <sup>2</sup>	k m <sup>3</sup>	0.0	0.0	199.1	253.0	246.6	255.3	258.5	282.7	275.8	1,771.0
	Tailings in PF	kt	0.0	0.0	334.7	425.5	414.6	429.3	434.7	475.4	463.7	2,978.0
Development Physicals	CAPEX Lateral Development	m	4,390	1,619	2,001	2,403	1,402	3,305	2,253	680	0	18,052
	OPEX Mineralized Lateral Development	m	1,424	3,837	2,296	2,069	2,684	757	1,372	1,498	0	15,937
	OPEX Waste Lateral Development	m	186	544	503	328	414	438	376	1,610	0	4,399

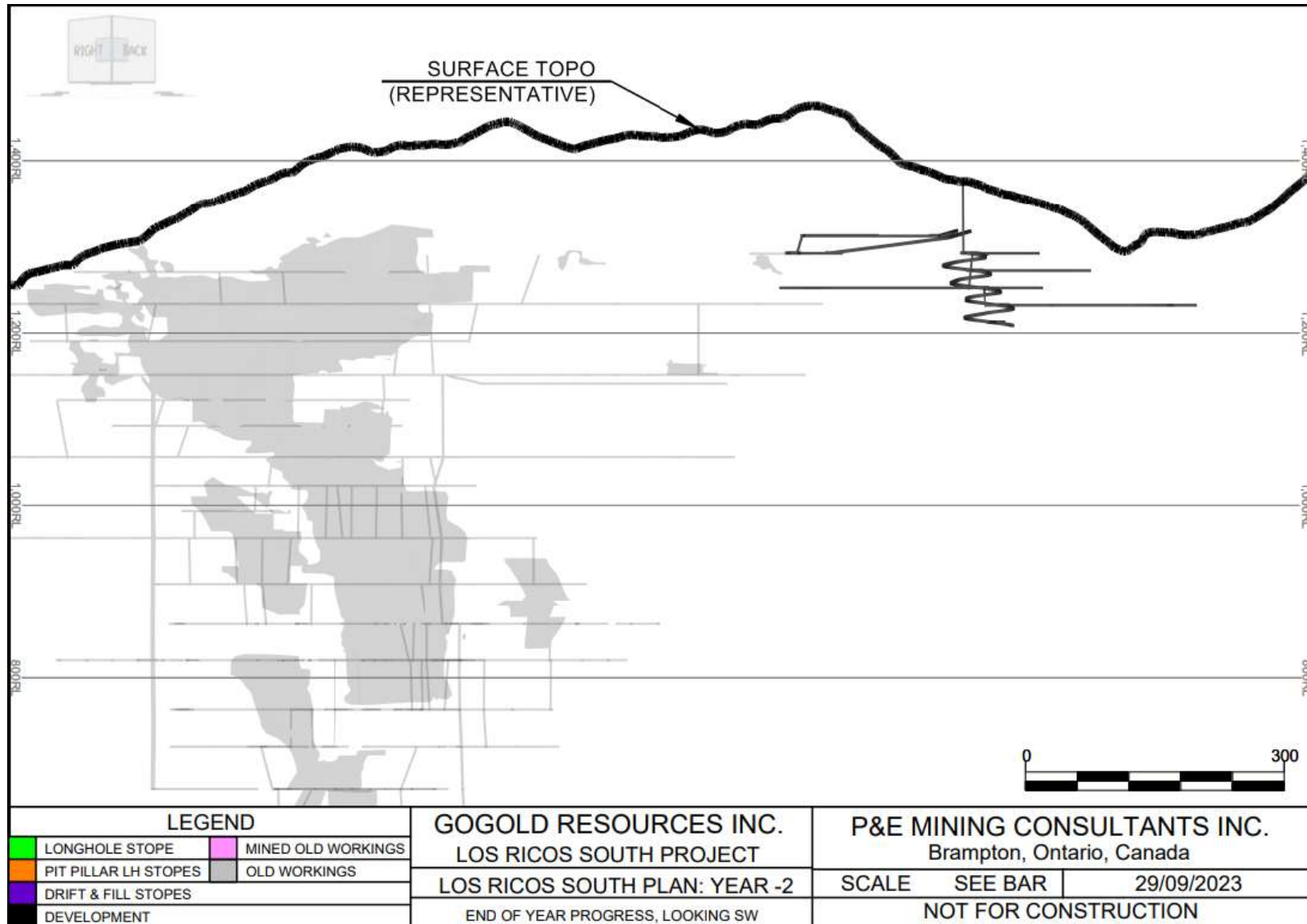
**TABLE 16.11  
MINING PHYSICALS BY YEAR**

Area	Item	Unit	Year									Total <sup>1</sup>
			-2	-1	1	2	3	4	5	6	7	
	Total Lateral Development	m	6,000	6,000	4,800	4,800	4,500	4,500	4,000	3,788	0	38,388
	CAPEX Vertical Development	m	355	105	59	178	62	228	150	25	0	1,162

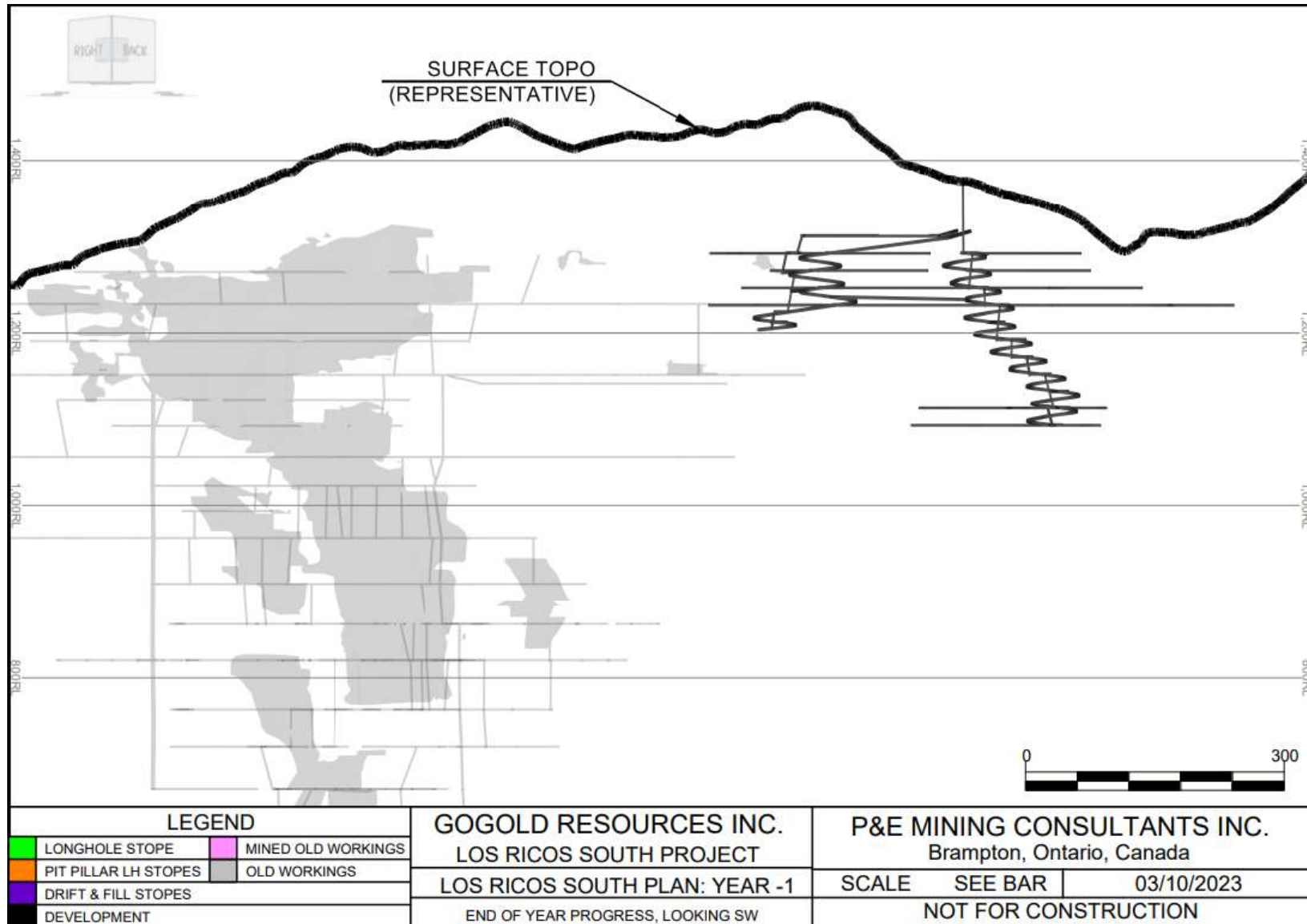
*1 Totals may not sum due to rounding*

*2 Unit is thousands of cubic metres.*

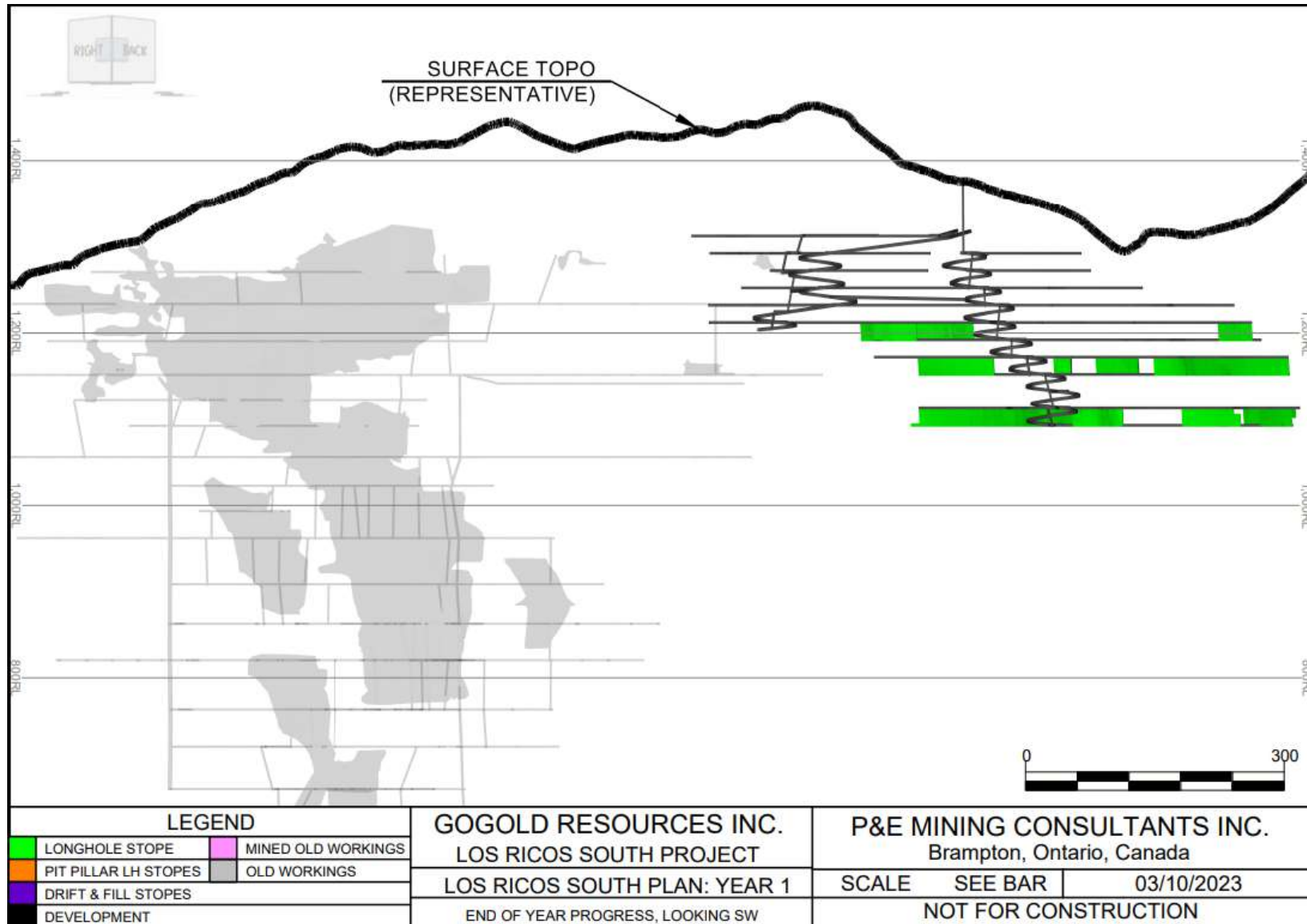
**FIGURE 16.10 MINE PLAN, EOM YR -2**



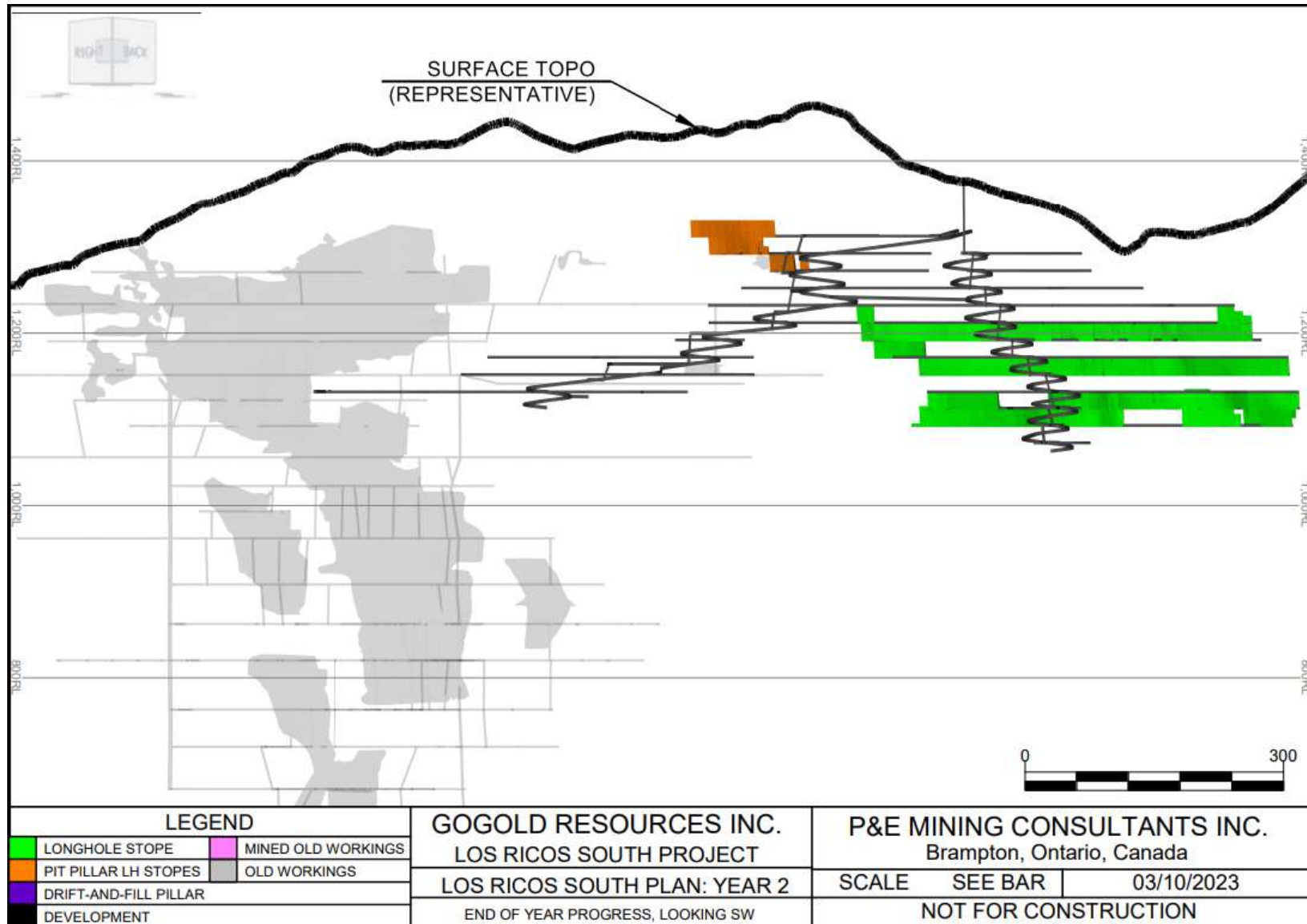
**FIGURE 16.11 MINE PLAN, EOM YR -1**



**FIGURE 16.12 MINE PLAN, EOM YR 1**

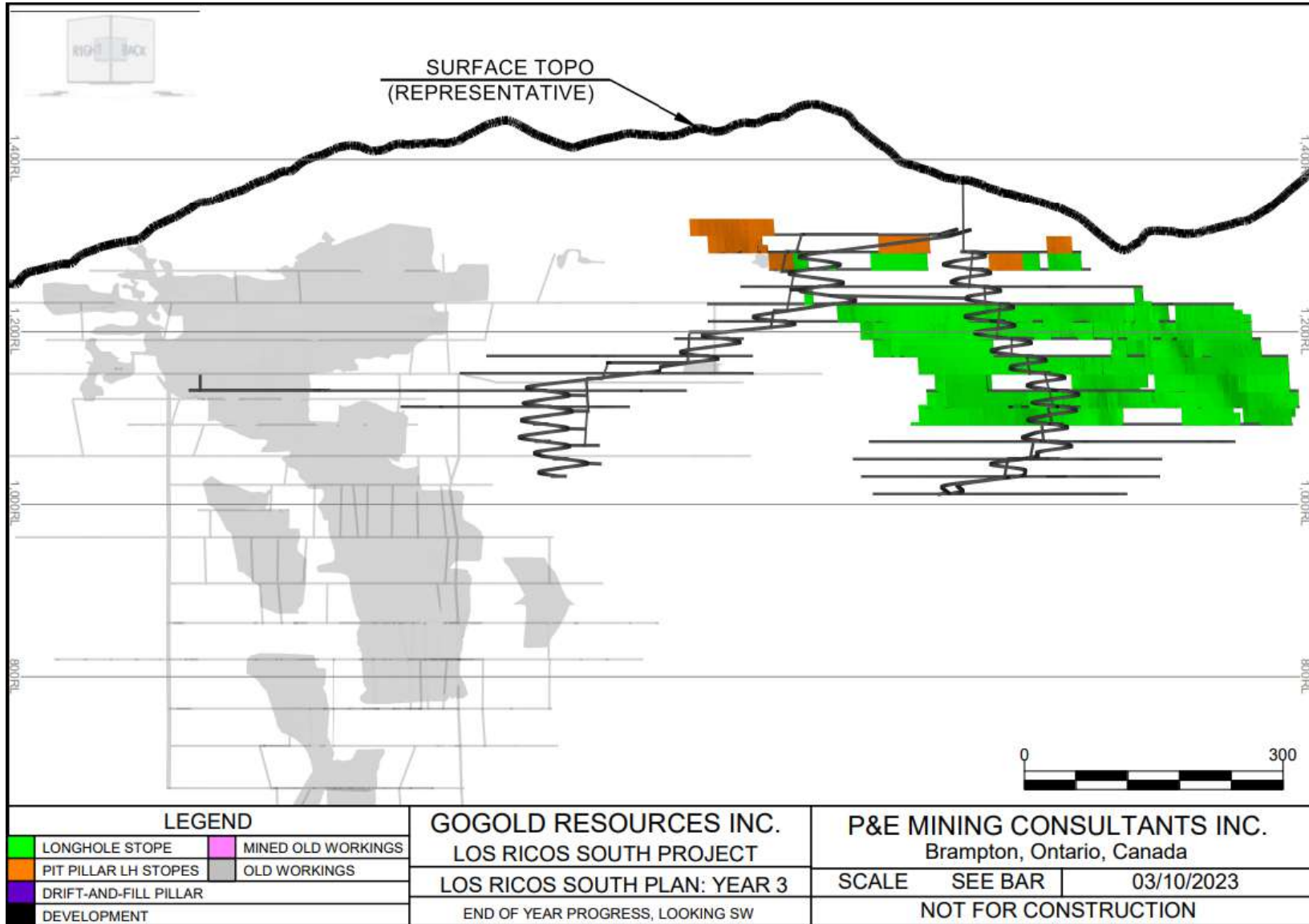


**FIGURE 16.13 MINE PLAN, EOM YR 2**

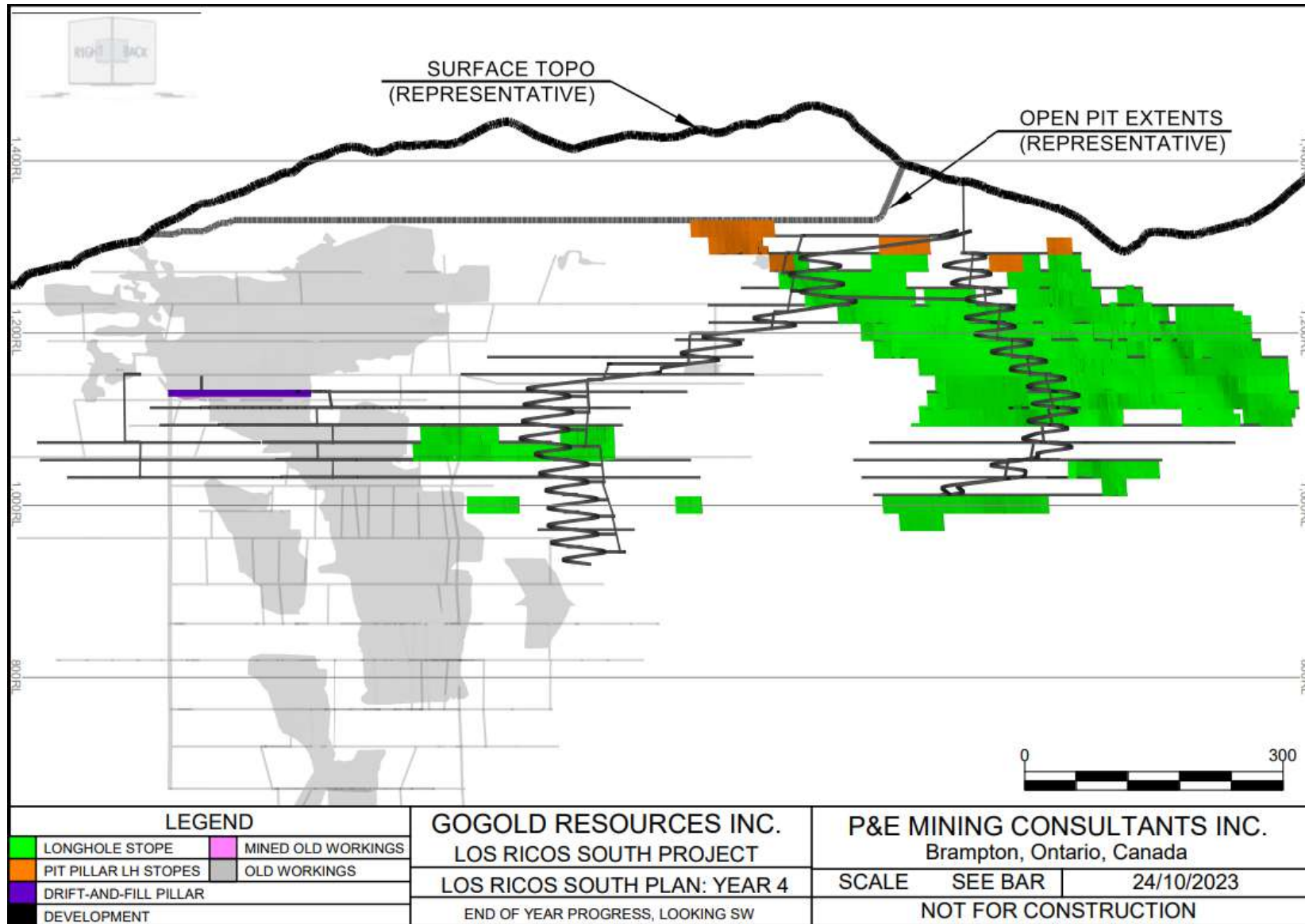




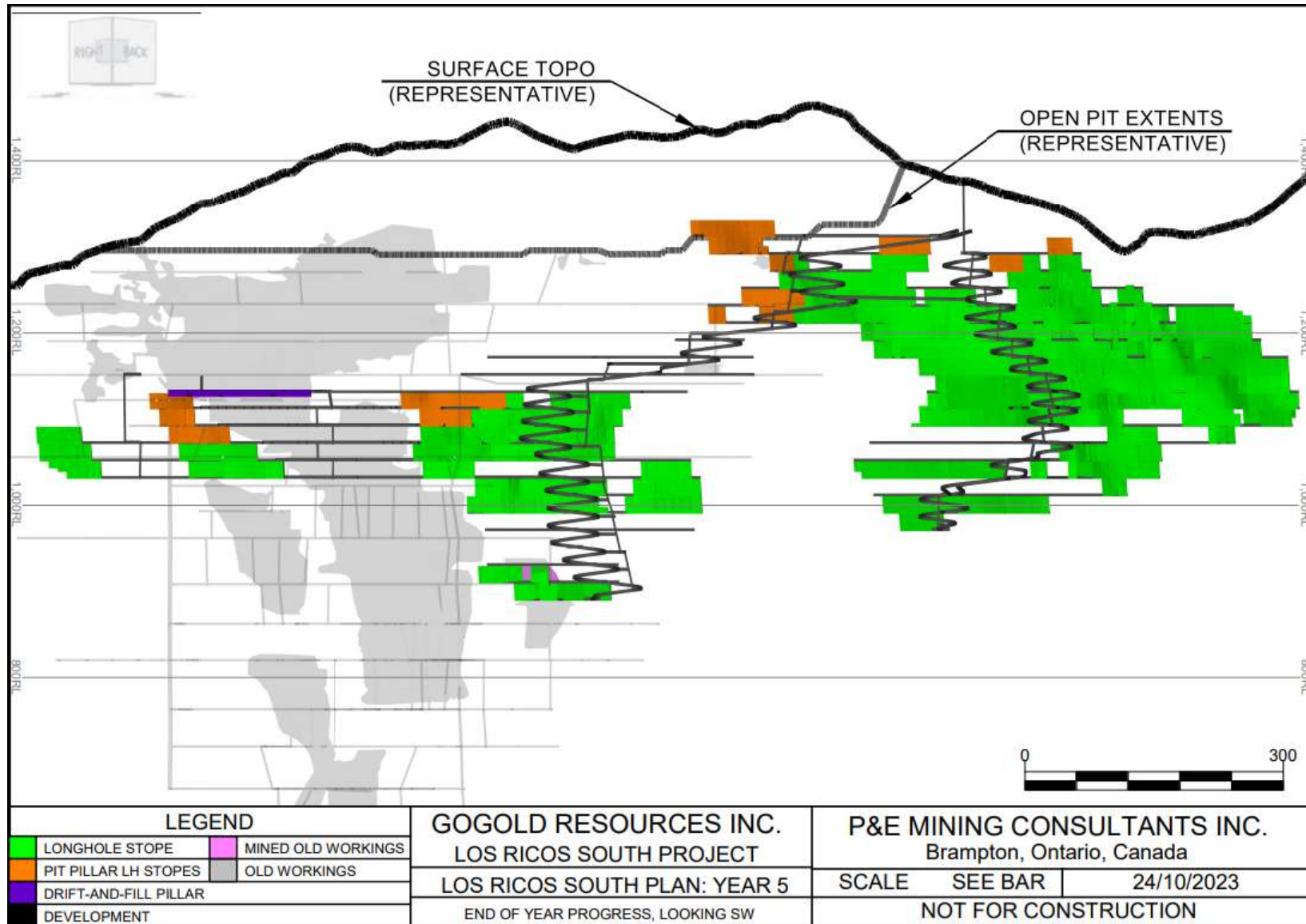
**FIGURE 16.14 MINE PLAN, EOM YR 3**



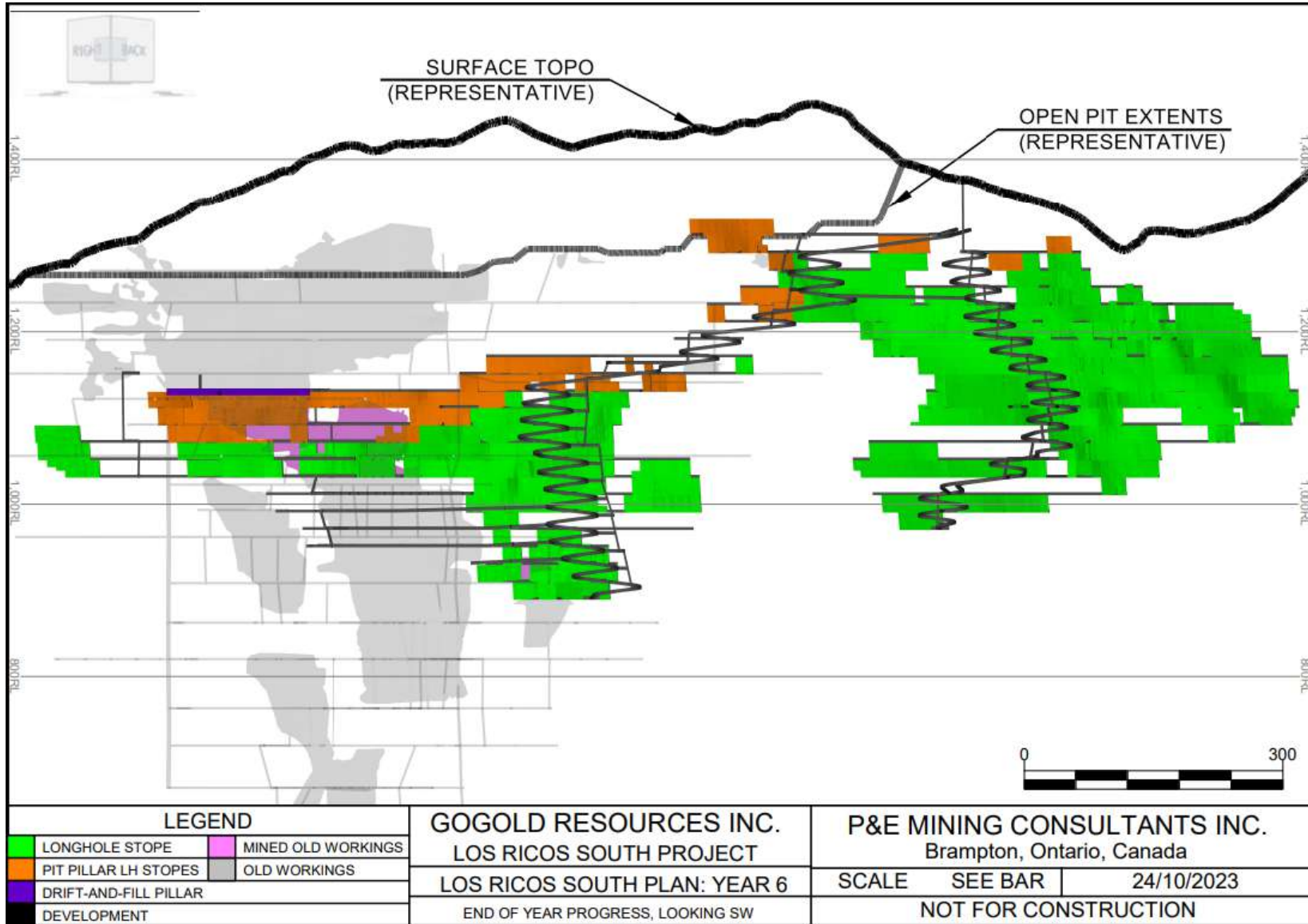
**FIGURE 16.15 MINE PLAN, EOM YR 4**



**FIGURE 16.16 MINE PLAN, EOM YR 5**

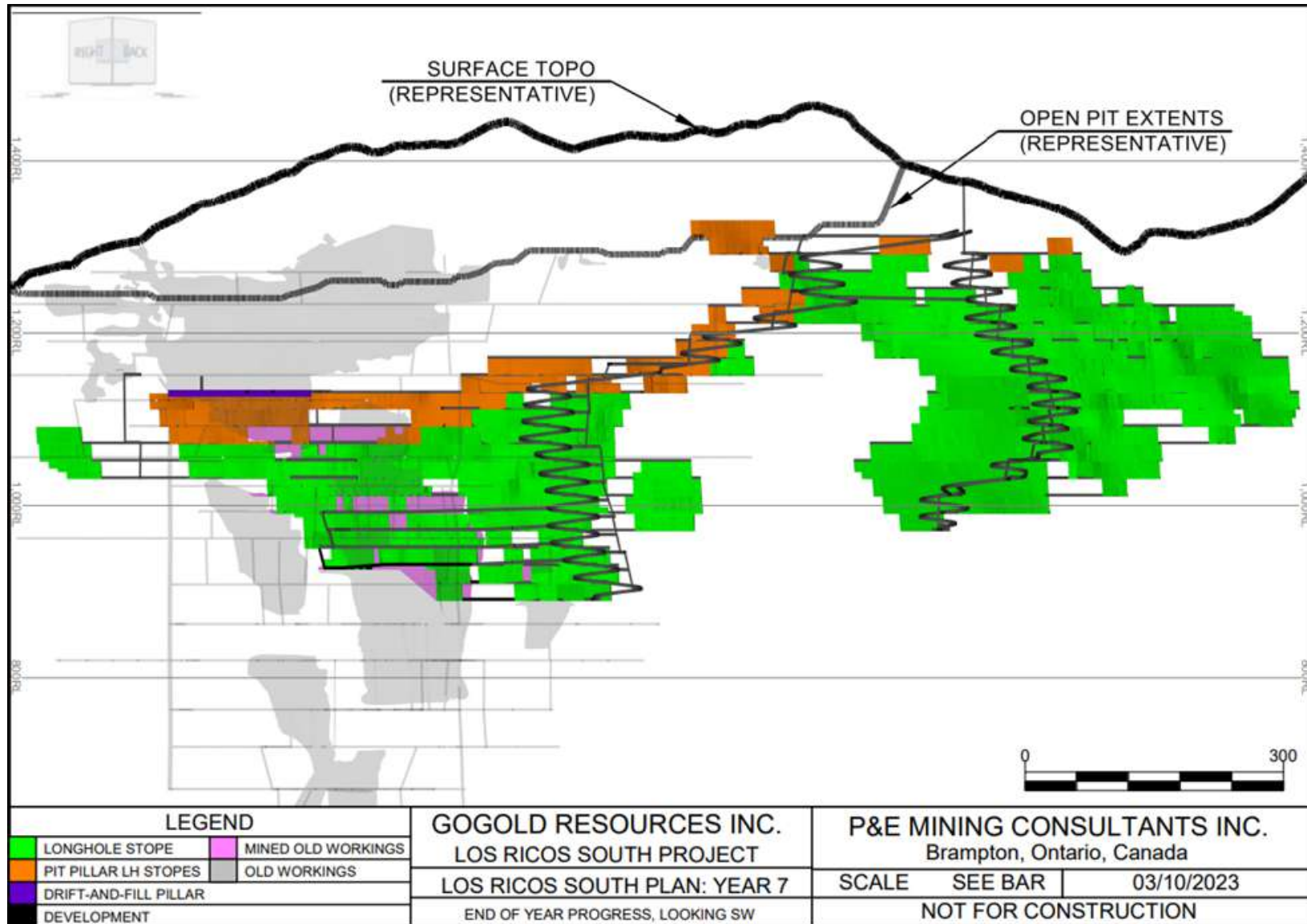


**FIGURE 16.17 MINE PLAN, EOM YR 6**

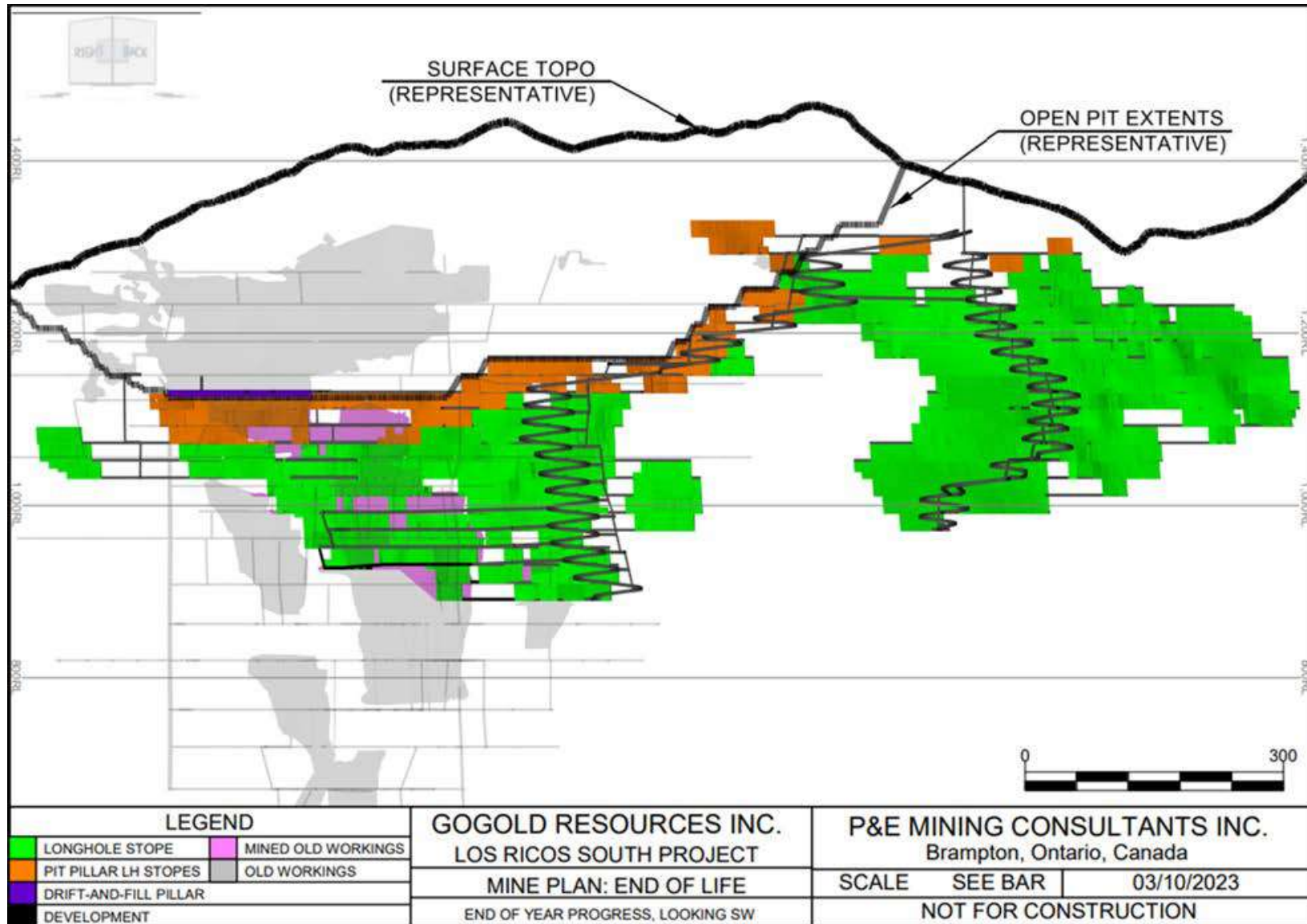




**FIGURE 16.18 MINE PLAN, EOM YR 7**



**FIGURE 16.19 MINE PLAN, END OF LOM**



## 16.2 OPEN PIT MINING

The Los Ricos South Property contains several gold vein systems, some of which were partially mined in the past. The upper portions of the deposits are near surface and lend themselves to conventional open pit mining methods. For this PEA production plan, two open pits (Abra Pit, Cerro Colorado Pit) will be developed.

The topography across the Project site is quite hilly and mining will generally occur in pits located along various hillsides.

The design of the open pit layouts and the mining schedule requires several steps. These are:

1. Run pit optimizations to select the optimal pit shell to be used for mine design;
2. Design an operational pit (with ramps and benches) based on the optimal pit shell; and
3. Develop a life-of-mine (“LOM”) open pit production schedule, based on supplying up to 4,000 tonnes per day (1.46 million tonnes per year) of mineralized feed to the process plant.

### 16.2.1 Open Pit Optimizations

A series of pit optimizations were completed on the Mineral Resource block model using the Datamine NPV Scheduler™ software package. This optimization process produces a series of nested pit shells each containing mineralized material that is economically mineable according to a given set of physical and economic parameters.

Pit optimizations were run separately for the Abra Vein systems and the Cerro Colorado Vein system.

The pit optimizations were run using the parameters shown in Table 16.12. It is assumed that waste rock materials would be hauled 1 km to a nearby waste rock storage facility near each pit. For grade control purposes, it is assumed that process plant feed material would be mined on 5 m benches.

For pit optimization, a base case gold price of \$US1,800/oz and a silver price of US\$23.00/oz were used. The optimization analysis included Measured, Indicated, and Inferred Mineral Resources. Revenue factors from 1% to 120% were applied in the optimization, with the base case being 100%.

<b>TABLE 16.12 PIT OPTIMIZATION PARAMETERS</b>		
<b>Parameter</b>	<b>Units</b>	<b>Abra and Cerro Colorado</b>
<b>Resource Classification</b>		Measured & Indicated & Inferred
Gold Price	US\$/oz	1,800
Silver Price	US\$/oz	23.00
Copper Price	US\$/lb	4.00
Royalty	%	0.5
<b>Operating Costs</b>		
Mining & Haulage	\$/t	2.10
Processing + Tailings	\$/t	22.05
G&A	\$/t	1.92
<b>Process Recovery</b>		
Gold recovery	%	95
Silver recovery	%	86
Copper recovery	%	60
<b>Cut-off Grades</b>		
Incremental Oper Cost	\$/t	23.97
Cut-off Grade (AgEq)	g/t	37.9
Optimization Slope Angle	degrees	45

### 16.2.1.1 Abra Pit Optimization Result

The results of Abra Pit optimization are shown in Figure 16.20. The NPV curve flattens off above a revenue factor of ~60%.

Since underground mining was expected to occur beneath this pit, any mineralization not mined within the open pit could potentially be recovered from underground. In order to limit waste stripping and waste rock volumes, Revenue Factor 58% (Pit 54) was selected as the basis for the open pit design.

The optimization of the Abra pit did not include the Eagle Deposit (along the north side) since underground mining was planned for there. However, the pit design would ultimately be expanded to recover material in the Eagle crown pillar that would not be recovered via underground.

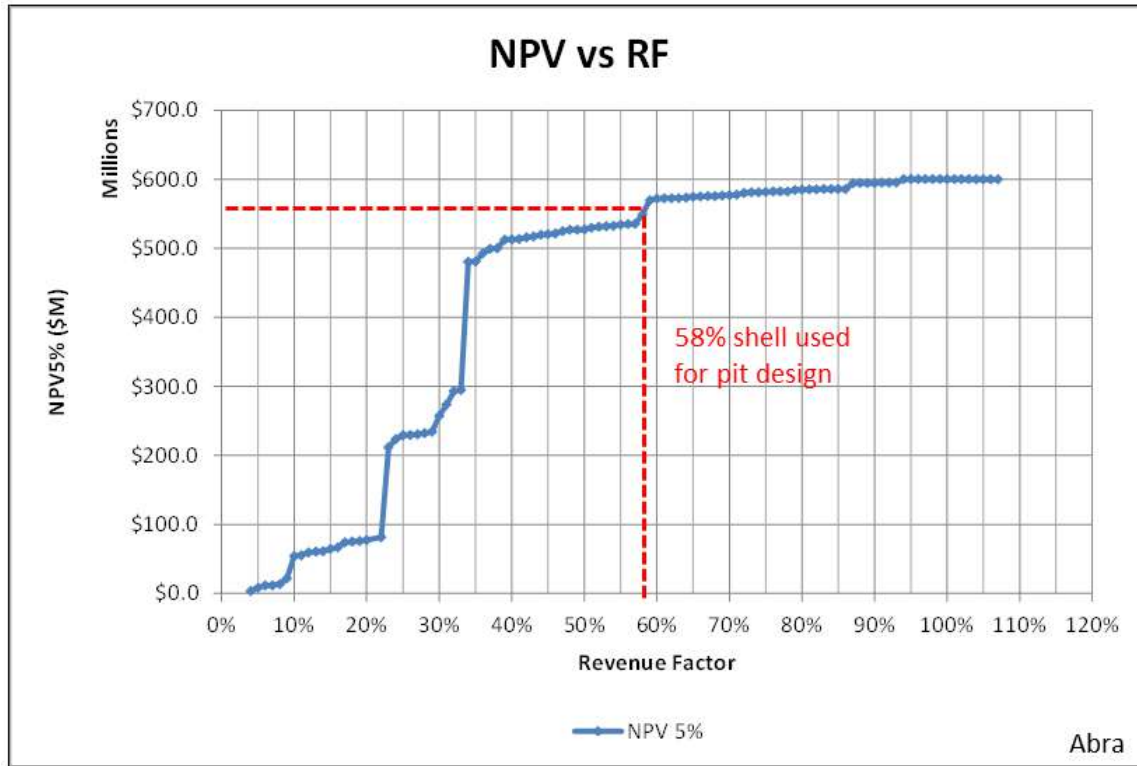
### 16.2.1.2 Cerro Colorado Pit Optimization Result

The results of CC Pit optimization are shown in Figure 16.21. The NPV curve flattens off above a revenue factor of 90%.

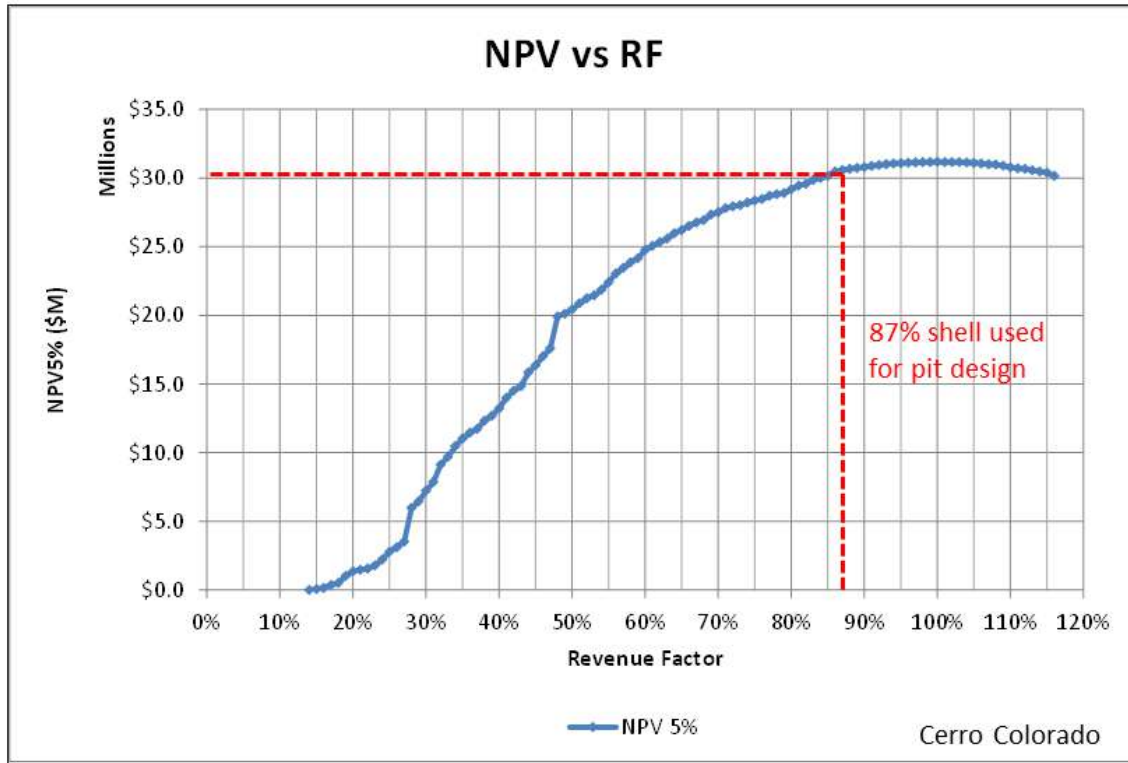


Since it was likely that no underground mining would occur beneath this pit, the objective was to maximize process plant feed within the open pit. Pit 74 (87% revenue factor) was selected as the basis for the mine design. Waste rock storage space is limited at site and hence minimizing waste volumes was a consideration.

**FIGURE 16.20 ABRA PIT OPTIMIZATION RESULTS**



**FIGURE 16.21 CERRO COLORADO PIT OPTIMIZATION RESULTS**



**16.2.2 Pit Designs**

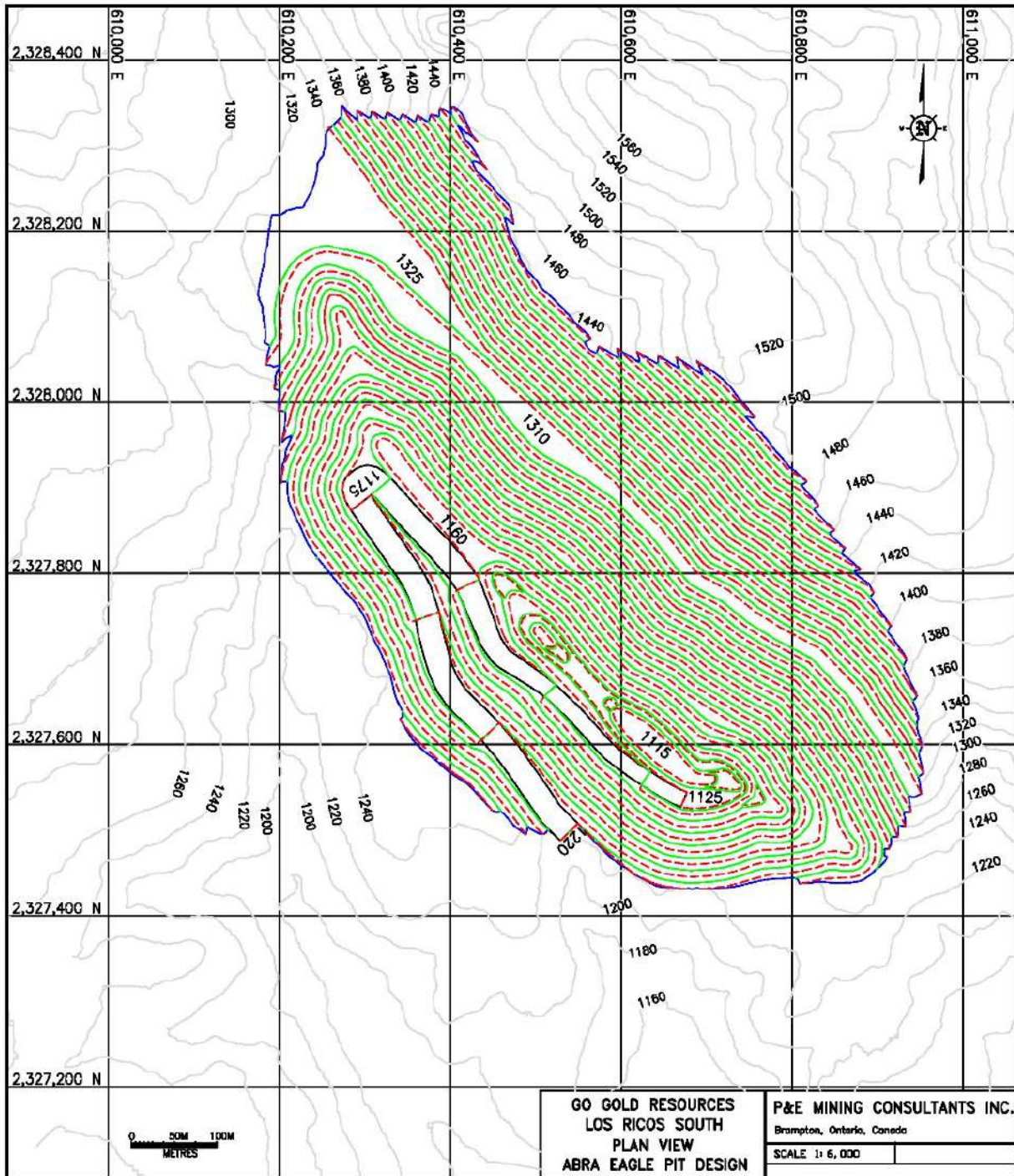
The pit designs were developed using the optimized shells as a guide.

Engineering of the pit design examined preferred access points along the pit periphery, and then added benches, ramps and haul roads according to the parameters shown in Table 16.13. Single lane haul roads and ramps were used in the bottom benches of the pits to minimize the addition of excess waste rock from expanding the pit walls outwards more than required.

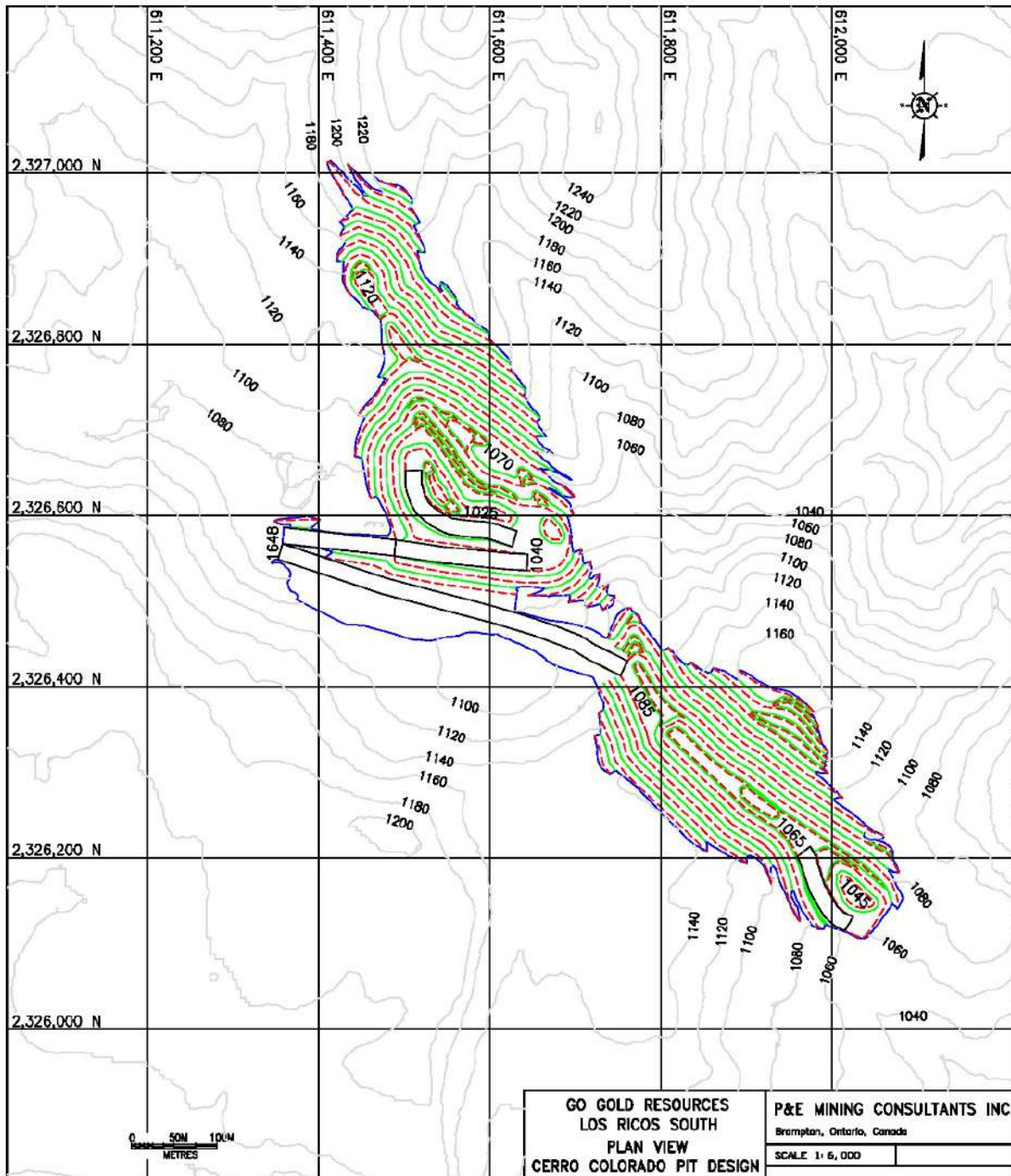
<b>TABLE 16.13 PIT DESIGN PARAMETERS</b>	
<b>Parameter</b>	<b>Specifications</b>
Inter-Ramp Angle	46° to 49°. See Table 16.14
Haul Road Width (Double / Single)	29 m / 19 m
Haul Road Gradient	10%

The Abra Pit design is shown in Figure 16.22 and the Cerro Colorado Pit is shown in Figure 16.23.

**FIGURE 16.22 ABRA PIT DESIGN**



**FIGURE 16.23 CERRO COLORADO PIT DESIGN**



**16.2.2.1 Geotechnical Studies**

A pit slope geotechnical study has been completed by Golder Associates. The report is dated Oct 8, 2020 and titled “Phase 1 Conceptual Pit Slope Recommendations and Phase 2 Work



Plan”. The design pit slopes are summarized in Table 16.14. A geotechnical berm width of 15 m would be incorporated if the wall height exceeded 180 m without a haul road in place.

<b>Criteria</b>	<b>Inter-Ramp Angle</b>	<b>Bench Face Angle</b>	<b>Bench Height (5 m bench)</b>	<b>Catch Bench Width</b>
Abra Pit				
Hanging wall	46°	65°	15 m triple	7.5 m
Footwall	49°	69°	15 m triple	7.5 m
CC Pit				
Hanging wall	46°	65°	15 m triple	7.5 m
Footwall	46°	65°	15 m triple	7.5 m

#### **16.2.2.2 Hydrogeological Studies**

No hydrogeological studies have been completed for the PEA to assess groundwater conditions.

#### **16.2.2.3 Mining Dilution and Losses**

Dilution and losses will occur during mining. It is assumed that waste rock surrounding the mineralized zones would be mixed with the process plant feed during mining, thereby causing dilution.

To address dilution, the block model was converted from a sub-block model to a 5 m x 5 m x 5 m whole block selective mining unit (“SMU”) model. This results in waste and feed being combined into a single block along the deposit edges.

In some case, the resulting block grade may be below cut-off grade, in which case that block would be considered a feed loss. In other cases, the block grade may decrease, however, remain above cut-off grade. That would result in an increase in feed tonnage albeit at a lower grade. Hence the SMU model is considered a diluted model and was used for open pit production scheduling.

The amount of dilution would vary depending on the block size and the vein width. For the narrower vein widths at Cerro Colorado, the block size was reduced from 5.0 m to 2.5 m to represent selective mining. Table 16.15 summarizes the net dilution in each Deposit, with the overall average at 9.9%.

<b>TABLE 16.15 NET DILUTION (COMBINES DILUTION AND FEED LOSS)</b>			
<b>Pit</b>	<b>Block Size (m)</b>	<b>Tonnage (Mt)</b>	<b>Dilution (%)</b>
Abra	5.0 m	7.77	7.3
CC	2.5 m	1.01	17.6
Eagle	5.0 m	0.58	31.0
<b>Average</b>		<b>9.37</b>	<b>9.9</b>

### 16.2.3 Process Plant Feed (Open Pit)

After the pit designs are completed, the process plant feed and waste rock tonnages are reported inside each pit. These are summarized in Table 16.16. These diluted tonnages are used as the planning basis for the PEA open pit production schedule.

The total quantity of open pit material sent to the process plant is estimated at 9.37 Mt. The average strip ratio is 7.4:1.

<b>TABLE 16.16 OPEN PIT TONNAGES</b>			
<b>Item</b>	<b>Abra Pit</b>	<b>Cerro Colorado Pit</b>	<b>Total</b>
Total Material (Mt)	70.62	8.47	79.09
Waste (Mt)	62.27	7.46	69.73
Strip Ratio	7.5	7.4	7.4
Feed (Mt)	8.35	1.01	9.37
Au (g/t)	0.83	0.76	0.82
Ag (g/t)	110	34	102
Cu (%)	0.03	0.01	0.03
AgEq (g/t)	187	103	178

The total open pit process plant feed of 9.37 Mt consists of 45% Measured Mineral Resource, 41% Indicated Mineral Resource, and 14% Inferred Mineral Resource. Table 16.17 summarizes the breakdown of the Mineral Resource classification by open pit.

**TABLE 16.17  
OPEN PIT FEED CLASSIFICATION**

<b>Mineral Resource</b>	<b>Feed (Mt)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>Cu (%)</b>	<b>AgEq (g/t)</b>
<b>Measured</b>					
Abra/Eagle	4.22	1.00	128	0.03	219
Cerro Colorado	0	0	0	0	0
<b>Measured Total</b>	<b>4.22</b>	<b>1.00</b>	<b>128</b>	<b>0.03</b>	<b>219</b>
<b>Indicated</b>					
Abra/Eagle	3.52	0.65	96	0.03	157
Cerro Colorado	0.29	0.78	43	0.01	114
<b>Indicated Total</b>	<b>3.81</b>	<b>0.66</b>	<b>89</b>	<b>0.03</b>	<b>153</b>
<b>Total M &amp; I</b>	<b>8.03</b>	<b>0.84</b>	<b>110</b>	<b>0.03</b>	<b>188</b>
<b>Inferred</b>					
Abra/Eagle	0.61	0.70	87	0.04	148
Cerro Colorado	0.73	0.75	31	0.01	98
<b>Inferred Total</b>	<b>1.34</b>	<b>0.73</b>	<b>56</b>	<b>0.03</b>	<b>121</b>

The PEA mine production plan utilizes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them to be classified as Mineral Reserves. There is no certainty that the Inferred Mineral Resources will be upgraded to a higher Mineral Resource classification in the future.

#### **16.2.4 Open Pit Mining Schedule**

The open pit mine production schedule consists of one year of pre-stripping (Year 3) and nine years of mine production (Year 4 to Year 12).

The target processing rate is approximately 1.46 million tonnes per year (Mtpa), or 4,000 tpd.

Table 16.18 presents the production schedule and mining sequence.

**TABLE 16.18  
ANNUAL OPEN PIT PRODUCTION SCHEDULE**

<b>Item</b>	<b>Total</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Yr 11</b>	<b>Yr 12</b>
<b>Open Pit (Total)</b>											
Total Material (Mt)	79.09	10.00	8.00	8.00	8.00	8.00	10.00	10.00	8.00	8.62	0.47
Total Waste Rock (Mt)	69.73	9.72	7.21	6.83	6.87	7.24	9.05	8.75	6.27	7.40	0.39
Strip Ratio	7.4	35.2	9.1	5.8	6.1	9.5	9.5	7.0	3.6	6.1	4.5
Total Process Plant Feed (Mt)	9.37	0.28	0.79	1.17	1.13	0.76	0.95	1.25	1.73	1.22	0.09
Au (g/t)	0.82	0.50	0.48	0.68	0.76	0.70	0.83	1.05	1.04	0.83	0.89
Ag (g/t)	102	83	78	98	92	101	124	120	129	68	27
Cu (%)	0.03	0.02	0.03	0.05	0.03	0.02	0.02	0.02	0.03	0.02	0.01
AgEq (g/t)	178	130	123	164	163	165	200	216	225	143	108
<b>Abra - Open Pit</b>											
Total Material (Mt)	70.62	10.00	8.00	8.00	8.00	8.00	10.00	10.00	8.00	0.62	
Total Waste Rock (Mt)	62.27	9.72	7.21	6.83	6.87	7.24	9.05	8.75	6.27	0.33	
Strip Ratio	7.5	35.2	9.1	5.8	6.1	9.5	9.5	7.0	3.6	1.2	
Total Process Plant Feed (Mt)	8.35	0.28	0.79	1.17	1.13	0.76	0.95	1.25	1.73	0.29	
Au (g/t)	0.83	0.50	0.48	0.68	0.76	0.70	0.83	1.05	1.04	1.10	
Ag (g/t)	110	83	78	98	92	101	124	120	129	175	
Cu (%)	0.03	0.02	0.03	0.05	0.03	0.02	0.02	0.02	0.03	0.03	
AgEq (g/t)	188	130	123	164	163	165	200	216	225	276	
<b>Cerro Colorado - Open Pit</b>											
Total Material (Mt)	8.47									8.00	0.47
Total Waste Rock (Mt)	7.46									7.07	0.39
Strip Ratio	7.4									7.6	4.5
Total Process Plant Feed (Mt)	1.01									0.93	0.09
Au (g/t)	0.76									0.75	0.89
Ag (g/t)	34									34.5	27



**TABLE 16.18**  
**ANNUAL OPEN PIT PRODUCTION SCHEDULE**

Item	Total	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12
Cu (%)	0.01									0.01	0.01
AgEq (g/t)	103									102.1	108

*Note: the potential process plant feed tonnages utilized in the PEA contain Measured, Indicated and Inferred Mineral Resources. The reader is cautioned that Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be classified as Mineral Reserves, and there is no certainty that value from such Mineral Resources will be realized either in whole or in part.*

## **16.2.5 Open Pit Mining Practices**

It is assumed that the Los Ricos South mine will be operated as a contracted conventional open pit mining operation. While owner-operated mining may be an option, this was not considered in this PEA. Numerous other mines in Mexico rely on the use of contract mining, with many experienced contractors being available at competitive rates. Contractor budgetary quotations for mining the Los Ricos South Deposits were obtained for this PEA.

The mining contractor will undertake all drill and blast, loading, hauling, and mine site maintenance activities. The owner will provide overall mine management and technical services, such as mine planning, grade control, geotechnical, and surveying services.

### **16.2.5.1 Contract Mining**

It is anticipated that the mining operations would be conducted 24 hours per day and 7 days per week throughout the entire year.

It is assumed that most of the materials mined will require drilling and blasting to some degree, except for the gravel overburden that will be free digging. The mining contractor will provide the blasting services and it is anticipated that blasting of the rock will be carried out using an ammonium nitrate fuel oil mixture (“ANFO”).

The exact equipment fleet to be used by the mining contractor has not yet been defined in detail at the PEA stage. This will depend on the final production rates and the types of equipment the contractor has in its fleet once mining commences. However, it is expected that hydraulic excavators and diesel-powered front-end loaders (CAT 992 size) will be used to excavate the blasted rock. The anticipated truck size is 90 t, similar to the CAT 777, although alternate truck sizes may be used depending on pit configuration and haulage distances.

The primary mining operation will be supported by the contractor’s fleet of equipment consisting of dozers, road graders, watering trucks, maintenance vehicles, and service vehicles.

Portions of the deeper pits will likely experience groundwater seepage. No quantitative information was available to adequately predict the expected water inflow into the open pits however, the mining contractor will be responsible to supply and operate pit dewatering pumps and pipelines to keep the open pits dry and operable. There is the potential that some of the pit water could be piped to the process plant to be used as a source of process water.

### **16.2.5.2 Owner’s Mining Team**

The mine owner will be responsible for providing contract management and overall supervision of the mining contractor. The owner will also provide technical services, such as mine planning and scheduling, geotechnical engineering, grade control, and surveying. Table 16.19 lists the personnel on the owner’s mining team.

<b>TABLE 16.19 OWNER'S MINING TEAM</b>	
<b>Position</b>	<b>No.</b>
Mine Superintendent	1
Foreman	2
Chief Engineer	1
Mine Clerk	1
Mine Engineer	2
Tailings Engineer	1
Geologists	2
Grade Control Technicians	2
Surveyor	1
Survey Technician	1
<b>Total</b>	<b>14</b>

### **16.2.5.3 Waste Rock Storage Facilities**

Each of the open pits will require the development of one or more waste rock storage facilities. Some of the waste rock will be placed into hill side facilities adjacent to the open pits.

At this stage of the PEA, the waste rock storage facilities were not designed in detail, however, potential sites were identified, and field reconnaissance will be done at the next stage of study to confirm the preferred locations.

The tailings dry stack storage facility will be located just north of the process plant site.

### **16.2.5.4 Feed Stockpile**

The annual open pit mining tonnage rate is kept fixed over the high production tonnage years. Hence during some periods, the ratios of waste rock to feed may change. If excess feed is mined, it is placed into a stockpile. When there is a shortage of feed, material will be withdrawn from the stockpile. The stockpiling concept is not considered low-grade stockpiling; it is simply used as a surge pile to accommodate pit sequencing.

The stockpile is estimated to reach a peak size of 900,000 tonnes in Year 7.

### **16.2.5.5 Mine Support Facilities**

The Los Ricos South open pits will require mine offices, maintenance facilities, warehousing, and storage areas. Some of these will already in place for the underground mining start-up.

A truck maintenance shop area will be provided for the mining contractor. A fuel and lube station will also be provided for fuelling the mining fleet.

### **16.3 LIFE-OF-MINE PRODUCTION SCHEDULE**

The processing rate is 1,750 tpd during the first three years of production when there is only underground mining. Processing increases to 4,000 tpd when open pit mining commences production in Year 4 (after one year of pre-production). The underground will continue to deliver 1,750 tpd with the open pit providing the remainder until the underground mine is depleted in Year 7.

Table 16.20 summarizes the life of mine processing schedule.

**TABLE 16.20  
PROCESSING SCHEDULE (LIFE OF MINE)**

Feed Type	Unit	Total	Year											
			1	2	3	4	5	6	7	8	9	10	11	12
<b>UG Feed</b>	<b>t</b>	<b>4,325,421</b>	485,421	640,000	640,000	640,000	640,000	640,000	640,000					
Au	g/t	<b>1.95</b>	2.50	2.62	2.63	2.22	1.67	1.24	0.93					
Ag	g/t	<b>174</b>	186	179	194	177	168	166	152					
Cu	%	<b>0.22</b>	0.32	0.30	0.29	0.27	0.14	0.08	0.17					
<b>OP Feed</b>	<b>t</b>	<b>9,367,187</b>				819,981	820,140	820,137	820,070	1,459,999	1,459,998	1,459,965	1,459,987	246,910
Au	g/t	<b>0.82</b>				0.54	0.73	0.83	0.68	0.71	0.97	1.12	0.81	0.56
Ag	g/t	<b>102</b>				87	108	99	98	105	112	136	78	22
Cu	%	<b>0.03</b>				0.03	0.06	0.03	0.02	0.02	0.02	0.03	0.02	0.01
<b>Total Feed</b>	<b>t</b>	<b>13,692,608</b>	<b>485,421</b>	<b>640,000</b>	<b>640,000</b>	<b>1,459,981</b>	<b>1,460,140</b>	<b>1,460,137</b>	<b>1,460,070</b>	<b>1,459,999</b>	<b>1,459,998</b>	<b>1,459,965</b>	<b>1,459,987</b>	<b>246,910</b>
<b>Au</b>	<b>g/t</b>	<b>1.18</b>	<b>2.50</b>	<b>2.62</b>	<b>2.63</b>	<b>1.27</b>	<b>1.14</b>	<b>1.01</b>	<b>0.79</b>	<b>0.71</b>	<b>0.97</b>	<b>1.12</b>	<b>0.81</b>	<b>0.56</b>
<b>Ag</b>	<b>g/t</b>	<b>125</b>	<b>186</b>	<b>179</b>	<b>194</b>	<b>126</b>	<b>134</b>	<b>129</b>	<b>122</b>	<b>105</b>	<b>112</b>	<b>136</b>	<b>78</b>	<b>22</b>
<b>Cu</b>	<b>%</b>	<b>0.09</b>	<b>0.32</b>	<b>0.30</b>	<b>0.29</b>	<b>0.13</b>	<b>0.09</b>	<b>0.06</b>	<b>0.09</b>	<b>0.02</b>	<b>0.02</b>	<b>0.03</b>	<b>0.02</b>	<b>0.01</b>
<b>AuEq</b>	<b>g/t</b>	<b>2.78</b>	<b>4.89</b>	<b>4.91</b>	<b>5.12</b>	<b>2.89</b>	<b>2.87</b>	<b>2.66</b>	<b>2.35</b>	<b>2.06</b>	<b>2.42</b>	<b>2.86</b>	<b>1.81</b>	<b>0.84</b>
<b>AgEq</b>	<b>g/t</b>	<b>217</b>	<b>381</b>	<b>383</b>	<b>398</b>	<b>225</b>	<b>223</b>	<b>207</b>	<b>183</b>	<b>160</b>	<b>188</b>	<b>223</b>	<b>141</b>	<b>65</b>

## 17.0 RECOVERY METHODS

### 17.1 SUMMARY

The recovery methods utilized for both the Abra and Eagle crushing and process facilities design reflect optimized testwork detailed in Section 13. Testwork results support an upgraded flowsheet development and design criteria from the previous PEA report. The updated process plant design is based on a nominal 1,750 tpd (Years 1-3) and a nominal 4,000 tpd (Years 4-12) throughput of mineralized material with average grades of 1.18 g/t Au, 125 g/t Ag, and 0.09% Cu.

The process plant flowsheet design includes conventional crushing, a semi-autogenous (“SAG”) mill with a pebble crusher, and a closed-circuit ball mill circuit with cyclones to ensure product (P<sub>80</sub>) size feed to the leaching circuit. The mineralized material is thickened in a pre-leach thickener to increase slurry density and decrease slurry volume. The thickener overflow water is recirculated to feed the grinding circuit.

Upon completing the required leaching retention time, the discharge slurry and loaded solution is fed to a post-leach thickener and then filtered in three dewatering filters to wash and recover pregnant solution for recovery within the Merrill Crowe and SART system, as well as to produce “dry” stackable tailings with approximately 16% moisture. Water recovery and management at the LRS site is very important and the dry stack tailings will aid in the tailings deposition.

The gold-silver-copper-bearing solution is fed to a conventional Merrill Crowe plant for the recovery of the gold and silver precipitate and subsequent doré. Discharge from the Merrill Crowe plant feeds the SART process to recover a saleable Cu<sub>2</sub>S precipitate and regenerate the soluble copper associated cyanide. The high cyanide solution from the SART is recycled to the process upstream. Process water recycled from the overall process plant including thickener, and dewatering filters, is used for the plant’s required process water. Make-up water is provided by a single surface dam and pumped to the process plant.

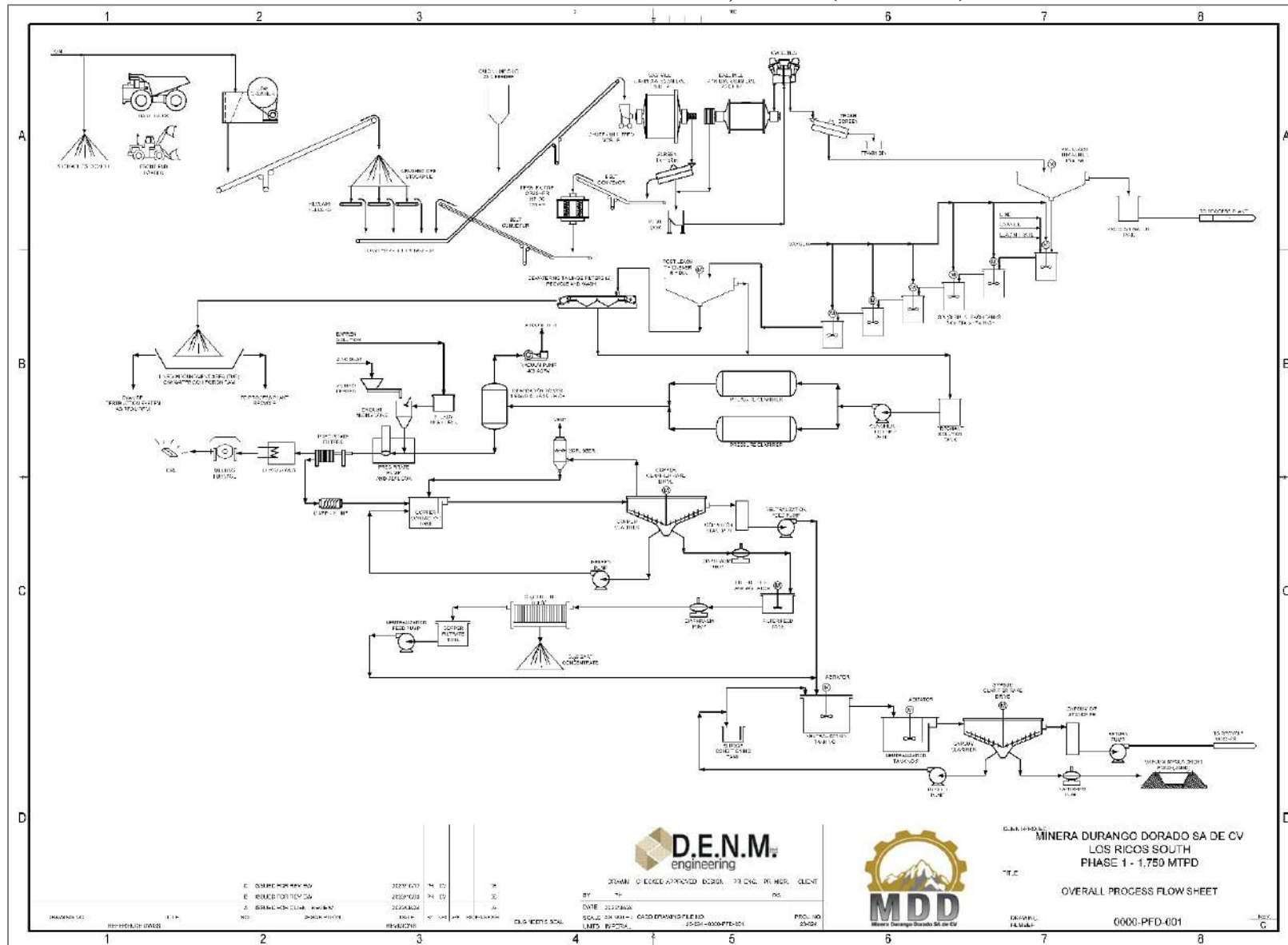
Unit operations and support facilities include the following:

- ROM material receiving and primary jaw crushing;
- Transfer conveyors;
- Crushed feed stockpile and reclaim;
- SAG mill, pebble crusher, closed circuit ball mill with associated cyclones;
- Pre-leach thickening;
- Cyanide leaching tank farm including pre-aeration stage;
- Post-Leach counter-current decantation (“CCD”) thickeners in combination with dewatering filter(s) and solution recovery;
- Merrill Crowe (silver and gold) with refinery;
- SART recovery facility;
- Process water recovery and recirculation;

- Reagent preparation facilities (main plant and SART); and
- Utilities.

The LRS Phase 1 updated simplified process plant flowsheet is shown in Figure 17.1.

**FIGURE 17.1 SIMPLIFIED PROCESS PLANT FLOWSHEET FOR 1,750 TPD (YEARS 1-3)**



Source: D.E.N.M. (2023)



## 17.2 PLANT DESIGN

### 17.2.1 Key Process Design Criteria

The LRS process plant is designed to treat silver-gold-copper-bearing mineralized material from the associated zones at a nominal rate of 1,750 tpd (639,000 tpa Years 1-3) and 4,000 tpd (1,460,000 tpa Years 4-12). The preliminary key process criteria for Phase 1 are shown in Table 17.1.

<b>TABLE 17.1 PROCESS DESIGN CRITERIA</b>		
<b>Criteria</b>	<b>Units</b>	<b>Value</b>
<b>Feed Characteristics</b>		
Specific Gravity	g/cm <sup>3</sup>	2.60
Bulk Density	t/m <sup>3</sup>	1.65
Moisture Content	%	3.0
SMC Axb -design	kWh/t	35.2
Bond Ball Mill Work Index – design (hard)	kWh/t	20.8
Bond Abrasion Index (very abrasive)	g	0.72
JKSimMet Simulation (SAG) – overall circuit	mw	1.04
JKSimMet Simulation (Ball) – overall circuit	mw	1.64
Milling Circuit Feed Size – F <sub>80</sub>	mm	150
Milling Circuit Product Size – P <sub>80</sub>	um	74
Leach Feed Slurry Density	%	55
Pre-Aeration Residence Time (minimal)	h	4
Bulk Leach Residence Time	h	96
Total Cyanide Leach Consumption Rate	kg/t	1.25
Total Lime Leach Consumption Rate	kg/t	0.8
Au and Ag Metal Recovery System		Merrill Crowe
Cu <sub>2</sub> S Recovery System and CN- Regeneration		SART
Dewatered Tailings Moisture – Pressure Filtration	%	16
Peak Wash Ratio	cu.mt./t	1.44
<b>Plant Availability/Utilization</b>		
Overall Process Plant Feed – Nominal (Years 1-3)	tpa	639,000
Process Plant Feed - Nominal (Years 1-3)	tpd	1,750
Crushing Plant Feed (Years 1-3)	tpd	1,750
Crusher Plant - Plant Utilization	%	75.0
Grinding, Leach and Refinery Utilization	%	92.0
Primary Crushing Circuit Throughout Rate	t/h	98

<b>TABLE 17.1 PROCESS DESIGN CRITERIA</b>		
<b>Criteria</b>	<b>Units</b>	<b>Value</b>
Grinding and Leach Process Rate	t/h	80
<b>Process Plant Production</b>		
<b>Process Plant Feed Characteristics</b>		
Gold Head Grade – Nominal	g/t	1.18
Silver Head Grade – Nominal	g/t	125
Copper Head Grade - Nominal	%	0.09
<b>Metal Recoveries (LOM – Abra and Eagle)</b>		
Overall Gold Recovery - design	%	95.0
Overall Silver Recovery - design	%	86.0
Overall Copper Recovery - design	%	77.0

*Source: D.E.N.M. (2023)*

### **17.2.2 Operating Schedule and Availability**

The LRS process plant is designed to operate for two 12-hour shifts per day, 365 days per year. Utilization expected for the specific circuits is 75% for the primary crusher and 92% for the milling, leaching, Merrill Crowe, and SART. The factors applied allow for sufficient downtime for maintenance, scheduled and unscheduled, within the crushing and processing areas.

## **17.3 PROCESS PLANT DESCRIPTION (PHASE 1)**

### **17.3.1 Primary Crushing**

The proposed crushing circuit reduces the run-of-mine mineralized feed from a nominal top size of 300 mm to a product of 80% passing (P<sub>80</sub>) 150 mm for the SAG mill feed material.

The front-end crushing circuit includes the following:

- ROM feed hopper;
- Rock breaker for oversize feed;
- Vibrating grizzly apron feeder;
- Jaw crusher;
- Associated conveyor transfer belts to process plant location; and
- Belt scale and belt magnet.

The feed material is hauled from the underground mine and open pits and dumped at the ROM delivery area adjacent to the crusher. The ROM surge bin has a capacity of 100 t with a vibrating grizzly feeder to feed the primary jaw crusher.

The 75 kW jaw crusher 762 mm x 1219 mm (30 in x 48 in) processes a nominal 100 t/h of material based on the utilization factor noted in Table 17.1. The jaw crusher discharge is conveyed to the crushed feed stockpile.

### **17.3.2 Crushed Feed Stockpile and Reclaim**

The stockpile provides production surge capacity to ensure a steady rate to the SAG mill and process facility. The equipment in this area includes:

- Crushed Feed Stockpile: 1,750 t live capacity;
- Reclaim Apron Feeders (3): variable speed; and
- Associated conveyor belt feed system with belt scale, self-cleaning magnet.

The apron feeders discharge onto the SAG mill feed conveyor to feed crushed material to the primary grinding SAG mill unit. The apron feeders reclaim the material from the 1,750 t stockpile and ensure a controlled feed rate to the SAG mill of 80 t/h. Feed control to the feeders is ensured by the inline belt scale.

### **17.3.3 Grinding Circuit**

Based on recent testwork, simulation modelling and recovery rates, the grinding circuit final product size has a design  $P_{80}$  of 74  $\mu\text{m}$ . The feed rate to the primary SAG mill is a nominal 80 t/h. The grinding circuit is a two-stage process with the SAG mill / screen / pebble crusher and the ball mill in closed circuit with classifying cyclones.

The equipment in this area includes:

- SAG mill: 5.65 m diameter x 2.5 m EGL (18.0 ft x 8.0 ft) VFD, 1,400 Hp installed power;
- Pebble crusher: 125 Hp installed power;
- Ball mill: 4.1 m diameter x 6.4 EGL m long (13 ft x 20.5 ft), 2,200 Hp installed power;
- Mill discharge pumpbox with associated cyclone feed pumps;
- Cyclone classification: three operating 6gMAX20 units;
- Grinding circuit control: flow meters, density meters, variable speed pumps;
- Grinding area sump pump(s); and
- Sampling system: raw feed and leach feed.

Recycled process water is added to the SAG mill feed to ensure a 74% slurry density in the mill. Any oversize material from the classifying screen is sent to the pebble crusher via conveyors and recirculated to the SAG mill feed belt. The screen undersize feeds the ball mill pump box to allow material to be pumped and classified at the cyclone cluster. The cyclone overflow,  $P_{80} = 74 \mu\text{m}$ , will flow to the pre-leach thickener.

Grinding media added to the mills are required to maintain power draw and grinding of the material to the desired size.

#### **17.3.4 Pre-Leach Thickener**

As noted, the ball mill cyclone overflow feeds the pre-leach thickener, and the cyclone overflow density is anticipated at 35% solids and enters the high-rate thickener unit prior to the pre-leach filter(s).

The equipment in this area includes:

- Pre-Leach thickener: 18 m dia., high-capacity unit, 7.5 kW; and
- Thickener overflow and underflow pumps.

The cyclone overflow is thickened to a minimum pulp density of 50% solids and is recycled to the process water system for use in the milling circuit. The thickener underflow feeds the whole feed cyanidation leaching circuit.

#### **17.3.5 Cyanide Leaching Circuit**

The thickened slurry is pumped to the leach tank farm under optimized leach conditions to maximize dissolution of silver, gold and copper in the slurry.

The equipment in this area includes:

- One Pre-Leach, pre-aeration tank: 8 m dia x 10 m high, complete with 25 kW drive agitator;
- Six leach tanks: 13 m dia x 17 m high, stepped on tank farm pad and complete with solution upcomers;
- Six agitators: 40 kW connected power;
- Air (oxygen) induced blower system(s); and
- Tank farm spillage control sumps.

The cyanide leach circuit consists of one pre-leach aeration and six mechanically agitated tanks having flow by gravity between tanks with bypass options. Leach residence time per tank is 16 hours for an approximate total of 96 hours. Lime addition maintains leach pH between 10.5 to 11.0. Cyanide addition with a feed concentration of 1,200 ppm cyanide is accomplished within the leaching circuit.

Air spargers (complete with air blower) are integral to the leach tanks to optimize overall leach kinetics.

#### **17.3.6 Post-Leach Thickener and Tailings Dewatering Circuit**

As water management, a tailings dewatering circuit is inserted to recover and recycle water and solution, taking advantage of the dry stack tailings. It also aids in the overall water balance with the SART circuit.

Slurry from the last leach tank feeds an 18 m diameter post-leach thickener as the initial solution recovery of the pregnant solution, The thickener underflow will feed the three tailings filters for

solution washing and dewatering. The post-thickening slurry density to the filters is approximately 50% solids with a resultant filter discharge density of 84% solids. The filters are inclusive of a washing system to recover the pregnant metal-bearing solution. The dry stack tailings are conveyed from the process plant to a contained storage area. The dry stack tailings storage area will have a collection system to reclaim any residual process water and will also have the ability to treat via a cyanide destruction system process water for discharge.

Collected solution from the pressure filtration is pumped and stored in tanks for advancement to the Merrill Crowe recovery area.

The equipment in this area includes:

- Post-Leach thickener: 18 m dia., high-capacity unit, 7.5 kW;
- Thickener overflow and underflow pumps;
- Three Tailing Dewatering Filters units: complete with feed, discharge and hydraulic system with receivers and filtrate pumps;
- Discharge conveyors to Phase 1 tailings stockpile; and
- Solution PLS tankage and pumps.

### **17.3.7 Merrill Crowe Circuit and Refinery**

The resultant pregnant solution from the leach circuit containing silver, gold, and copper complexes is pumped to a conventional Merrill Crowe zinc precipitation circuit. The design flowrate is 125 m<sup>3</sup>/hr and is based on the water balance and washing rates in the tailings dewatering filters. Controlled zinc addition at a stoichiometric ratio of three to the clarified and de-aerated solution precipitates the gold and silver in solution.

The equipment in this area includes:

- Two Clarification Filters: 140 m<sup>2</sup> (1,500 ft<sup>2</sup>) Rotating Disc Units;
- Deaeration Tower: 1.56 m diameter x 6.25 m high complete with tower packing;
- High vacuum pump: 400 acfm with seal separator, 24 in. Hg rating;
- Zinc addition Skid: complete with zinc cone, feeder, lead nitrate system;
- Two Precipitation Feed Pumps: double mechanical seal, 50 kW drive;
- Two Precipitate Filters: 92 m<sup>2</sup> (1,000 ft<sup>2</sup>) recessed plates units;
- Precoat and Body feed Skid: tanks, mixers, pumps;
- Induction Furnace: 400 kW, water cooled complete; and
- Associated controls: level, flow, O<sub>2</sub> probes, controllers.

Incoming pregnant solution is estimated at 125 ppm suspended solids pre-clarification, and less than 5 ppm post-clarification. The oxygen level after deaeration is estimated at less than 0.5 ppm.

The resultant sludge (gold and silver) is dried, fluxed, and smelted in an induction furnace to produce a saleable doré. The Merrill Crowe facility is located in a secure building in the presses and furnace area. Subsequent doré is to be stored and shipping accordingly to the Company-selected refinery. The BLS (barren solution) is pumped to the SART copper recovery circuit.

### 17.3.8 SART (Sulphidization, Acidification, Recycling and Thickening) Circuit

The SART feed solution is pumped at a rate of 125 m<sup>3</sup>/hr with a copper concentration of 800 mg/L. The gold and silver concentration at this stage will be minimal. The cyanide in solution is in the range of 1,680 mg/L and is to be confirmed with future optimization PFS testwork. The SART technology is well known and commercially utilized on multiple mine sites throughout Mexico, South America, and China. Presently, GoGold operates a SART circuit at its Parral Heap Leach mine in Parral, CH, Mexico.

The solution feed enters the circuit where sodium hydrosulphide (NaHS) is injected prior to the copper contactor. The solution next enters the copper contactor and acidified with sulphuric acid (H<sub>2</sub>SO<sub>4</sub>) to a controlled pH of 4.5. This allows for:

- Effective precipitation of copper sulphide (Cu<sub>2</sub>S); and
- Regeneration of cyanide associated with soluble copper.

The resultant copper precipitate (65% Cu) overflows to the copper clarifier to allow for solid / liquid clarification. The underflow is pumped to the copper filter press and dewatered to 30% moisture, impounded, and shipped as a saleable product to a smelter.

The clarifier overflow acidified solution is pumped to the neutralization circuit where lime solution is added to raise the pH to 10.5. During this process, some gypsum is produced and removed in the downstream gypsum clarifier. The resultant gypsum produced is pumped to a lined impoundment area located next to the SART facility. The overflow solution from gypsum clarifier is pumped back to the process and used in the repulping of the pre-leach filtered material.

The equipment in this area includes:

- 3.5 m diameter x 4.0 m high copper 304 SS contactor, 12 kW agitator;
- 7.5 m diameter copper clarifier 304 SS and covered;
- Copper concentrate (Cu<sub>2</sub>S) filter press, recessed plates;
- Two 5.0 m dia. x 5.5 m high Neutralization tanks, 20 kW agitators;
- 7.5 m diameter gypsum clarifier, mild steel;
- HCN gas scrubber complete with caustic addition system to monitor and control HCN and H<sub>2</sub>S outlet concentration to 1 ppm;
- Reagent Mixing and storage areas: Day lime tank, Acid tank, NaHS tank for liquid NaHS, flocculant and caustic mixing; and
- PLC control of the circuit with instrumentation and controls.

### 17.3.9 Reagent Handling and Storage

Water supply for the LRS Project is a collection dam, called the Martin Dam, located approximately 6.5 km from the proposed processing site. The water facilitates all reagent mixing within the main process plant and the SART circuit. The SART facility also has its own dedicated reagent mixing areas and containment for safety, and ease of operation. The main process plant will have mixing area containment as well.

Main plant required reagents include:

- Lime (hydrated), bulk dry;
- Sodium cyanide (NaCN), dry super sacs;
- Flocculant, bagged and dry;
- Diatomaceous Earth (Pre-coat), bagged and dry;
- Zinc Dust, dry in containers;
- Lead Nitrate, liquid supply; and
- Fluxes (for smelting area), bagged and dry.

SART required reagents include:

- Lime slurry from main plant mixing system;
- Sodium hydrosulphide (NaHS), liquid supply;
- Sulphuric Acid (H<sub>2</sub>SO<sub>4</sub>), liquid supply;
- Anionic Flocculant, bagged and dry;
- Caustic Soda, bagged and dry; and
- Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>), liquid supply.

### **17.3.10 Assay and Metallurgical Laboratory**

A fully equipped laboratory is an integral part of the LRS Project and is located close to the main process plant facility. It is equipped with the necessary analytics to provide all required data for the mining operation, main process facility, SART, and environmental.

The laboratory also plays an instrumental role in providing on-time monitoring of processes, daily production reporting, blast hole sampling, and exploration samples.

### **17.3.11 Water Supply**

Make-up water for the LRS Project is supplied from the Martin Dam, a single collection dam that collects rain and run-off water during the rainy season and is located 3.5 km from the proposed processing site. A proposed route of a 200 mm (8 in) diameter HDPE feed line avoids high static head due to the high change in elevations and multiple high head pumps to be barge-mounted at the water dam location.

Proposed work at the Martin Dam to increase volume includes an overall site clearing, excavation, raising of the dam banks as well as the existing concrete structure.

To support water demand for the Project, dry stack tailings is incorporated to recycle water back to the process and minimize pour water in the tailings designed at 16% moisture. The impoundment area is also to be lined and incorporate a polishing and water recovery system. The SART facility will have its own water distribution system and will feed off the main in-coming line.

All process water collected from the filters and thickeners will be collected and stored within the main plant water distribution system such as tanks, high pressure pumps, filters, and associated control. The reservoir is to supply water to all facets of the Project including make-up water from the process (loss from dry stacked tailings, SART), reagent mixing, emergency water.

There is no camp facility planned for this site.

### **17.3.12 Air Supply**

An air / oxygen distribution system is included to supply required process air to the main plant, primarily the leach tanks. Instrument air is also included for required instrumentation and controls. Air requirements for the SART plant are fed from the main compressor/dyer system.

## **17.4 PROCESS PLANT DESCRIPTION (PHASE 2)**

In Year 4, the Los Ricos South Project will expand to treat 4,000 tpd of process feed. The recovery methods utilized will be the same as those detailed for both the Abra and Eagle and noted in the process design criteria (Table 17.1). These will include, however, are not limited to, crushing, grinding, whole feed cyanidation, dewatering and dry stack tailings followed by Merrill Crowe and SART recovery. The overall nominal plant throughput will be rated at 225 t/h (crushing) and 181 t/h (milling and leaching). The process equipment will be similar to those outlined in the Phase 1 section subject to further detailed engineering.

As part of the Phase 1 design and construction, allowances for the Phase 2 expansion will be incorporated to allow strategic expansion and expedited construction of Phase 2 and commissioning of the same. These will include site infrastructure, electrical power, water, metallurgical laboratory, and civil footprint. The details of these will be part of the ongoing studies as the Project advances. The capital costs for the expansion and the updated operating costs for the phase 2 have been detailed in Section 21 of this Technical Report.



## 18.0 PROJECT INFRASTRUCTURE

Current infrastructure at the Los Ricos South Project consists of a nearby powerline, access roads and historical underground mining workings. There is a gravel access road from the Village of Cinco Minas. The access road is linked to roads from the Town of Hostotipaquillo and the City of the Guadalajara. A 220 kV transmission line crosses the Property just to the south of Cinco Minas and belongs to Commission Federal de Electricidad. However, the likely source of electricity is by constructing a 14 km 35 kVA line off the existing 115 kVA line at Hostotipaquillo from the Yesca Dam power station.

The historical mining infrastructure consists of shafts, adits, extensive underground level development, building foundations, small open pits and waste rock storage areas.

In addition, the Property has telephone and cell coverage, and access to high-speed internet. Water flows along the main haulage way from the Cinco Minas Mine and in some streams all year-round. The Rio Santiago (River) is located a few km to the north at an elevation of 1,000 masl.

The Authors are of the opinion that there appear to be no obvious impediments to building a mine, processing or tailings facility within the area of the Los Ricos South Project Concessions.

### 18.1 PLANNED INFRASTRUCTURE

Figure 18.1 shows the major surface infrastructure proposed at the Los Ricos South Project, which consists of:

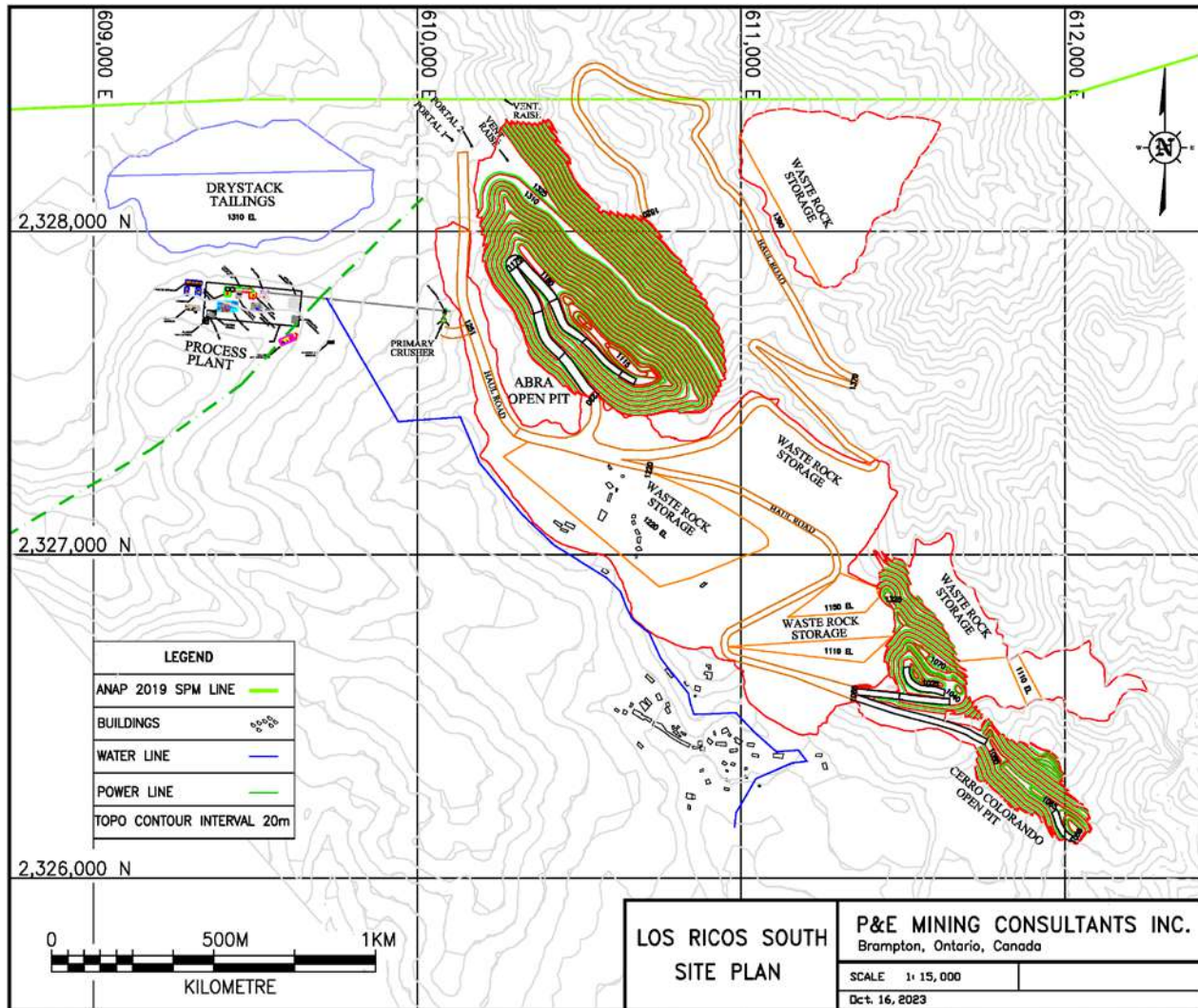
- Underground mining portals and ventilation raises at the Abra/Eagle Deposits;
- Two open pit mining areas, Abra and Cerro Colorado, and associated haul roads;
- Process plant facility, with water and electrical power feeds;
- Dry stack tailings storage facility; and
- Waste rock storage facilities.

Items to be installed by the Company during the pre-production period will be:

- Gatehouse at main access road;
- Administration building for senior management and technical staff;
- Warehouse for mechanical parts;
- Warehouse for process plant supplies;
- Maintenance building with overhead crane for Company equipment;
- Personnel change rooms and showers plus Safety and Human Resources offices;
- Separate building for site cafeteria;
- Diesel fuel storage and fuelling station;
- Paste backfill plant;
- Water and sewage treatment plants; and
- Secure explosives storage facility.

The buildings will be supplied by well water for showers, toilets, etc. Drinking water will be bottled. The Company will not be supplying on-site housing. Employees and contractors will commute from nearby towns. The contractors will supply their own office and warehouse facilities.

**FIGURE 18.1 PROPOSED INFRASTRUCTURE AT LOS RICOS SOUTH PROJECT**



Source: P&E (2023)

## 18.2 DRY STACK TAILINGS MANAGEMENT

Leached tailings will be thickened and filtered with dewatering filters to produce a moist filter cake. The filter cake will be thoroughly washed during filtration with cyanide-barren water. The filter cake will be discharged by conveyor to a stockpile near the process plant. The justifications for the selection of dry stacking of tailings are:

- Water conservation;
- Location of the tailings facility on sloping terrain; and

- Readiness for progressive closure.

The moist tailings (approximately 10% moisture) will be transported by conveyor or truck to the dry stack tailings storage facility, spread with a bulldozer and compacted in place. It will be possible to locate the tailings facility among mine waste rock embankments.

The approximately 20 ha tailings site will be prepared for operation in the following method:

- Excavate and stockpile surface soil;
- Install rock-lined peripheral diversion channels for storm events;
- Install internal “French” drains (to collect seepage and prevent water accumulation and tailings instability); and
- Construct a lined seepage collection pond, with pumping system and sediment trap to remove accumulated water following confirmation of reaching water quality objectives.

A paste backfill plant will be constructed at the process plant during the pre-production period. The paste backfill plant will mix Portland cement and possibly fly ash and bring the moisture content to a level that produces a targeted paste consistency. The paste will be distributed to underground mine openings by pumps and pipes, at a rate of approximately 50 m<sup>3</sup>/hr.

### **18.3 WATER MANAGEMENT**

Los Ricos will be an essentially zero water discharge operation during the early years of operation. Fresh water requirements will be dependent on water reclaimed from the dry stack tailings. Additional fresh water use will be for sanitary domestic purposes, reagent mixing, slurry pump gland water, and dust suppression.

While the site is generally dry, the average annual precipitation exceeds 800 mm, the bulk of which is received in summer storms. Therefore storm-water management is an important aspect of the Project and could periodically impact operations.

Water treatment requirements will be limited during the initial years. Significant site run-off is anticipated during summer storms, and other than the construction of sediment collection basins, no water treatment will be needed. Drainage will be more or less continuous from the waste rock storage locations and will be directed to sediment removal basins. Subject to test confirmation, the waste rock is not expected to be either metal leaching or acid generating. Residual nitrates from blasting compounds are expected to naturally degrade in these basins. It is likely that the open pit drainage water will report to historical underground mine workings.

Seepage from the dry stack tailings facility (following summer storm event inputs) will be collected in a lined basin which will be equipped with a submersible pump. Water quality in the basin will be monitored and the basin will be pumped to low levels when water quality objectives are met. Trace amounts of cyanide may infrequently emerge in the tailings seepage.

However, natural degradation of this cyanide, driven largely by sunlight, is a proven passive treatment method for the local climate conditions.

Water from the underground mine is expected to be mildly contaminated and will be treated with lime and flocculant in a simple treatment plant consisting of a series of mix tanks with settlement in a multi-stage lined basin.

## 19.0 MARKET STUDIES AND CONTRACTS

Metal prices and the Mexican Peso:US Dollar exchange rate are based on approximate August 31, 2023, three-year monthly trailing averages, and are presented in Table 19.1. The metal prices and exchange rate are subject to spot market conditions. There are no metals streaming or hedging agreements in place.

<b>TABLE 19.1 METAL PRICES AND EXCHANGE RATE</b>	
<b>Item</b>	<b>Price</b>
Gold (US\$/oz)	1,850
Silver (US\$/oz)	23.75
Copper (US\$/lb)	4.00
Exchange Rate (MXN:US\$)	20

Currently there are no contracts in place that are material to the Los Ricos South Project.

## **20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT**

The following section characterizes the baseline data for the Project, makes suggestions for additional studies that would provide a basis for the mine's permitting efforts, describes the main environmental permits that would likely be required for the Project, and identifies potentially significant social or community impacts.

### **20.1 MINE PERMITS IN MEXICO**

Environmental permits for the mining industry in Mexico are administered primarily by the federal government, through SEMARNAT (Secretaria de Medio Ambiente y Recursos Naturales, Secretary of the Environment and Natural Resources). This is the federal regulatory agency that sets minimum standards for environmental compliance. Guidance for federal environmental requirements is largely conducted within the General Law of Ecological Balance and Environmental Protection (Ley General Del Equilibrio Ecológico y la Protección al Ambiente, or LGEEPA). Article 28 of the LGEEPA specifies that SEMARNAT must issue prior approval to parties that intend to develop Mineral Resources that are reserved for the federation. An environmental impact statement (according to Mexican regulations called MIA), must be submitted to SEMARNAT for evaluation and, where appropriate, subsequent approval by SEMARNAT through the issuance of an Impact Authorization; the document specifies the approval conditions where works or activities have the potential to cause an ecological imbalance or have adverse effects on the environment.

Article 5, Section X of the LGEEPA authorizes SEMARNAT to grant approvals for the works specified in Article 28. The LGEEPA also contains articles for the protection of soil, water quality, flora and fauna, noise emissions, water quality, air and hazardous waste management.

The requirements for compliance with Mexican environmental laws and regulations are supported by Article 27 Section IV of the Mining Law and Articles 23 and 57 of the Mining Law Regulations.

The Political Constitution of the United Mexican States of 1917 is the magna carta and fundamental norm established to legally govern the country, which sets the limits and defines the relations between the powers of the federation: legislative, executive and judicial power, between the three differentiated orders of government, the federal, state and municipal, and between all those and citizens. It also establishes the basis for government and for the organization of the institutions on which power is based and establishes, as the supreme social pact of Mexican society, the rights and duties of the Mexican people. This Constitution has been updated several times since its creation.

LGEEPA and its regulations is the regulatory law of the provisions of the Political Constitution of the United Mexican States that refer to the preservation and restoration of the ecological balance, as well as the protection of the environment, in the national territory and the areas over which the nation exercises its sovereignty and jurisdiction. LGEEPA was published in the Official Gazette of the Federation on January 28, 1988, and entered into force on March 1 of the

same year, has undergone on several occasions' reforms, additions, and repeal of the provisions of the same.

The National Water Law grants authority to the National Water Commission (CONAGUA), an agency within SEMARNAT, to issue water extraction concessions and specifies certain requirements that applicants must meet. Another important piece of environmental legislation is the Ley General de Silvicultura Sostenible (General Law of Sustainable Forest Development, or LGDFS). Article 117 of the LGDFS indicates that authorizations must be granted by SEMARNAT for changes in land use for industrial purposes. A request for a change in forest land use (CUSTF) must be accompanied by a technical study that supports the Technical Justification Study (ETJ). In cases that require a CUSTF, an MIA is also required for forest land use change. Mining projects must also include a Risk Study (ER) and an Accident Prevention Plan (PPA) from SEMARNAT.

The General Law of Prevention and Integral Management of Waste (Ley General para la Prevención y Gestión Integral de los Residuos, or LGPGIR) also regulates the generation and management of hazardous waste from the mining industry. The LGPGIR also regulates the generation and handling of hazardous substances and waste from the mining industry. Guidance for environmental legislation is provided in a series of Official Mexican Standards (Norma Oficial Mexicana, or NOMs). These regulations provide procedures, limits and guidelines and have the force of law.

## 20.2 PERMISSIONS FOR THE PROJECT

### 20.2.1 Federal Permits

Currently, the execution of mining projects has regulations necessary for the approval of the establishment of a mine (Table 20.1). If a mining company does not have any of these permits, documents, etc., the corresponding authority will notify the company of the missing items as soon as possible to expedite this process.

<b>TABLE 20.1 PROCEDURES AND PERMITS REQUIRED FOR MINING PROJECTS</b>	
<b>Permits and Procedures</b>	<b>Federal Government Agency</b>
Registration of Hazardous Waste Management	SEMARNAT
Use of Federal Channels (Riverbeds)	CONAGUA
Operating Authorization for Steam Generators, Pressure Vessels and Boilers.	STPS
Annual Operating Certificate	SEMARNAT - ASEA
Environmental Risk Study	SEMARNAT
Technical Justification Study for Land Use Change in Forest Lands	SEMARNAT
Electricity Feasibility (Electricity Contract)	CFE
Preventive Environmental Impact Report	SEMARNAT

**TABLE 20.1**  
**PROCEDURES AND PERMITS REQUIRED FOR MINING PROJECTS**

<b>Permits and Procedures</b>	<b>Federal Government Agency</b>
Registration as a Special Handling Waste Generating Company	SEMARNAT
Registration as a Hazardous Waste Generating Company	SEMARNAT
Unique Environmental License	SEMARNAT
Operating License for Fixed Sources of State Jurisdiction	SEMARNAT
Mitigation of Environmental Impact – Particular Individual	SEMARNAT
Mitigation of Environmental Impact - Individual with Risk	SEMARNAT
Manifestation of Environmental Impact - Regional	SEMARNAT
Manifestation of Environmental Impact - Regional with Risk	SEMARNAT
Access Permit and other Facilities on Free Federal Highways	SCT
Wastewater Discharge Permit	CONAGUA
Explosives Use Permit	SEDENA
Permit to Build Hydraulic Works	CONAGUA
Special Handling Waste Management Plan	SEMARNAT
Mining Waste Management Plan	SEMARNAT
Hazardous Waste Plan	SEMARNAT
Accident Prevention Program	SEMARNAT
Registry with the Joint Commission for Training	STPS
Company Registration with the Ministry of Health (SS) and Municipal Administrations of the Sanitary License, and Sanitary Control Card	SS
Registration of Lists of Certificates of Training Labor Skills and Development	STPS
Register of Training Plans and Programs	STPS
Registration in the Mexican Business Information System (SIEM)	SE
Title of Concession or Assignment of National Water Use (Surface and Groundwater)	CONAGUA
Concession Title for Extraction of Materials	CONAGUA
Unified Procedure for Land Use Change. Mode B	SEMARNAT
Registration of the Business Registry with the IMSS	IMSS
Procedures in CNA for the Installation of a Company not Connected to the Municipal Network	CNA

### **20.2.2 State-Municipal Permits**

The individual states of the Mexican Republic have territorial regulations for the different ecosystems and economic activities used in the region. It is necessary to verify the guidelines in the section of interest to correctly prepare the corresponding procedures and thus obtain the



permit for the establishment of mines. The procedures for the state of Jalisco and the Municipality of Hostotipaquillo, where the Los Ricos South Project is located, are indicated in Table 20.2.

<b>TABLE 20.2</b>	
<b>PERMITS AND PROCEDURES REQUIRED FROM STATE AND MUNICIPAL GOVERNMENTS</b>	
<b>Permits and Procedures</b>	<b>Agency</b>
Zoning Certificate	Municipality
Environmental Risk Study	State
Environmental Mitigation Report	State
Safety Inspection for Explosives	General Directorate of Civil Protection
Municipal Building License	Municipality
Operating License	Municipality, if there is no procedure, State
Land Use License	Municipality
Environment Impact manifestation	State
Land Use Permit	Municipality, if there is no procedure, State
Internal Civil Protection Program	State / Municipality Civil Protection
Special Waste Generator Registration	State

### **20.2.3 Regulations Relevant to the Procedures and Permits Required by Government Agencies**

The exploration, exploitation and beneficiation of the materials are subject to the regulation of rules (Table 20.3) on which they must be based for the corresponding procedures to obtain mining permits. A mining company cannot overlook the methodologies and specifications of any standard since this would be a cause for the denial of permits and delay the development of the Project.

<b>TABLE 20.3</b>	
<b>APPLICABLE REGULATIONS IN OBTAINING MINING PERMITS</b>	
<b>Permit Regulation</b>	<b>Regulation Information</b>
<b>Exploration (Environmental Impact)</b>	
NOM-120-SEMARNAT-2020	Environmental protection for direct mining exploration activities
<b>Exploitation and benefit of minerals</b>	
NOM-155-SEMARNAT-2007	Environmental protection requirements for gold and silver mineral leaching systems
NOM-159-SEMARNAT-2011	Environmental protection of copper leaching systems
NOM-141-SEMARNAT-2003	Procedure for characterizing tailings and preparation of the tailings dam site

**TABLE 20.3**  
**APPLICABLE REGULATIONS IN OBTAINING MINING PERMITS**

Permit Regulation	Regulation Information
<b>Mining waste</b>	
NOM-157-SEMARNAT-2009	Elements and procedures to implement management plans for mining waste
<b>Water</b>	
NOM-001-SEMARNAT-1996	Establishes the maximum permissible limits for pollutants in wastewater discharge into national waters and natural resources
NOM-127-SSA1-1994	Environmental Health; water for human consumption – specifications and treatment
<b>Air</b>	
NOM-035-SEMARNAT-1993	Establishes the measurement methods for determining the concentration of PST in ambient air, and the procedures for calibrating the measurement equipment
NOM-025-SSA1-2014	Establishes the permissible limit values for the concentration of suspended particles PM10 in ambient air and criteria for their evaluation
<b>Fixed sources</b>	
NOM-043-SEMARNAT-1993	Establishes the maximum permissible levels of emission into the atmosphere of solid particles from fixed sources
<b>Closure and remediation</b>	
NOM-133-SEMARNAT-2000	Environmental Protection- Polychlorinated Biphenyls (PCB's) Handling Specifications
NOM-138-SEMARNAT/SSA1-2012	Maximum permissible limits of hydrocarbons in soils and guidelines for sampling in characterization and specifications for remediation
NOM-147-SEMARNAT/SSA1-2004	Criteria to determine the remediation concentrations of contaminated soils
<b>Flora and fauna</b>	
NOM-059-SEMARNAT-2010	Criteria of environmental protection for species and subspecies of wild terrestrial and aquatic flora and fauna in danger of extinction, threatened, rare and subject to special protection, and establishes specifications for their protection
<b>Noise</b>	
NOM-081-SEMARNAT-1994	Establishes the maximum permissible noise emission limits from fixed sources and their measurement method
NOM-080-SEMARNAT-1994	Establishes the maximum permissible noise emission limits from the exhaust of motor vehicles, motorcycles, motorized tricycles

**TABLE 20.3**  
**APPLICABLE REGULATIONS IN OBTAINING MINING PERMITS**

Permit Regulation	Regulation Information
<b>Others</b>	
NOM-041-SEMARNAT-2015	Establishes the maximum permissible emission limits for polluting gases from the exhaust of motor vehicles in circulation that use gasoline as fuel
NOM-047-SEMARNAT-1999	Establishes the characteristics of the equipment and the measurement procedure for the verification of the emission limits of pollutants from motor vehicles in circulation that use gasoline, liquefied petroleum gas, natural gas, or other alternative fuels
NOM-052-SEMARNAT-2005	Establishes the characteristics, the procedure for identification, classification and lists of hazardous waste

### 20.3 REFERENCE STUDIES

A baseline study allows the generation of quantitative information on the current state of a social, economic, environmental, and/or institutional aspect in a specific population or geographic area. Generally, baseline studies are used to guide targeting and choice of interventions or to measure performance.

A benchmark study for performance measurement is a descriptive data set that provides quantitative data as well as qualitative information on status. A baseline study describes the initial conditions using the appropriate indicators before the start of an activity to assess progress or to make a comparison after completion.

#### 20.3.1 Environmental Baseline Study

The environmental baseline study (“LBA”) is a specialized technical study that is required by SEMARNAT to determine the environmental conditions and components of the Environmental System (“SA”) or contractual area, as well as the identification and registration of pre-existing environmental damage.

The main objectives for conducting the LBA studies are to identify and describe the existing infrastructure in the area. The content focuses on covering three basic aspects; the environmental characterization of the SA or contractual area through field sampling and the analysis of bibliographic information; publicize the environmental conditions in which the habitats, ecosystems, elements and natural resources are found; and the interaction relationships and the environmental services existing in the SA at the time of carrying out the environmental baseline study and prior to the start of activities. It is essential that the period of time is sufficient in which the environmental characterization will be carried out to identify, record and manifest pre-existing damage within the SA.

To publicize the environmental conditions in which the habitats, ecosystems, elements and natural resources are found, the interaction relationships and the environmental services existing in the SA at the time the study is prepared, the results obtained are compared, and analyze specialized bibliographic information on the different environmental components.

For the Los Ricos South Project, there is an environmental baseline study where different points and variants to be evaluated were considered, and a summary of the evaluated environmental attributes is presented.

The SA that has been studied applies to a total area of 24,570 ha that is within the Project area of 34,220 ha. The surface of the SA is composed of acidic extrusive igneous rock (80%), basic extrusive igneous rock (14%) and alluvial soil. The ES is located in the physiographic provinces of the Sierra Madre Occidental and the Neovolcanic Axis. Different topofom systems exist, with the predominant one in the area being a typical canyon with 12,200 ha and lacking the presence of faults and/or fractures.

Approximately 53% of the surface is represented by the soil type Leptosol, followed by Phaeozem at 31% and Luvisol at 16%. Considering the three types of soil, the SA shows slight water erosion in almost 50% of the surface, however, a considerable degree of severe erosion has been observed in specific locations.

The results obtained through the USLE methodology for the calculation of water erosion for the SA show how the rates of natural soil loss behave in the gradient. This loss is concentrated mostly in the range of 0 to 10 t/ha per year embracing 58% of the SA, which indicates that the natural erosion of the area is low and behaves according to the reliefs, types of soil and vegetation present in the area, since most of the surface has lower slopes that do not encourage water erosion even when there are areas of cultivation or other activities. The estimated erosion that currently occurs under the conditions in which the Project area is located yields a rate of 66 t/ha per year, which is equivalent to 2,260 t per year.

The local seismic system is considered to be in three categories of the Mercalli scale: destructive, very destructive and disastrous according to CENAPRED (National Center for Disaster Prevention). The CFE (Federal Electricity Commission) mentions that it is in the high and very high categories. Likewise, CENAPRED mentions that it is not in a region with potential for landslides or volcanic activity, and only a portion of the system is in an area with potential for medium flooding.

Within the system, the warm sub-humid climate predominates at 71%, with an average temperature that varies in a range of 9.2 - 25.9°C, having an annual precipitation of 845 mm and wind speeds of 5 to 19 km/h, with gusts of up to 28 km/h.

For the disturbance index, the agricultural frontier has not increased greatly since 2013 and there are no other activities that significantly disturb the landscape of the area. In the SA no major changes are detected in the activities that could disturb the landscape of the area, such as mining activities or intensive livestock, only opening of livestock land to agriculture. As observed, there are variations between the different years, in general the ground cover conditions have remained stable during the period 2013 to 2019, therefore it can be interpreted as a stable SA, capable of sustaining new activities including agriculture and mining.

The SA is occupied by the Santiago - Guadalajara river basin, as well as by the P. Santa Rosa - R. Bolaños RH12Ed sub-basin according to the SIATL (Simulator of Watershed Water Flows). The surface of the system is located above the Tequila aquifer with code 1437, which, according to the Official Gazette of the Federation, for 2018 there was a volume of 9.47 Mm<sup>3</sup> of water per year to grant new concessions.

Sampling was carried out to determine the condition of the water in the Los Ricos Concessions. The parameters outlined in NOM-127-SSA1-1994 and NOM-001-ECOL-1996 were analyzed. Of the 34 parameters analyzed, only three exceeded the maximum permissible limits; these values occur naturally in the ground and are not the result of past or recent mining exploration activities (Table 20.4).

Parameters	LMP	Nacimiento Limón	El Tizate	Rio Bombeo	Ojo de Agua Los Chivos
Iron (mg/L)	0.3	<b>0.456</b>	0.174	<b>0.358</b>	<b>0.428</b>
Sodium (mg/L)	200	<b>205</b>	<b>220</b>	190	195
Aluminum (mg/L)	0.2	<0.020	<b>0.246</b>	<0.020	<0.020

*Note: LMP = maximum permissible limit.*

### **20.3.1.1 Characterization of the Biotic Environment**

The biotic community of the Regional Environmental System and area of the Los Ricos South Project involves the living elements that coexist in this specific area. The community is directly related to biodiversity. In addition, the community is important because it contains the biological organisms that represent the dynamic part of the ecosystem, and that affects the interactions that the same living elements have, and the flows of matter and energy, which regulate environmental systems. Therefore, the biotic elements expressed in this section are mainly flora and fauna. The biological variety documented in conjunction with the results of sampling within the Regional Environmental System yields 106 species of flora and 48 species of fauna.

Local biodiversity implies an acceptable amount of plants and animals, which allow the various ecosystems to be maintained and balanced, as well as the type of vegetation present. Secondary shrubby vegetation of low deciduous forest stands out, occupying 30% of the area followed by oak forest occupying 23% and induced grassland at 16%.

The number of species from the different strata present in the Project area is presented in Table 20.5.

<b>TABLE 20.5 PLANT SPECIES IN LOS RICOS SOUTH AREA</b>		
<b>Vegetation Strata</b>	<b>Number of Plant Species per Stratum</b>	<b>% in Relation to Total</b>
Trees	34	44
Shrubbery	23	29
Herbs	21	27
<b>Total</b>	<b>78</b>	<b>100%</b>

Likewise, the Shannon diversity index (H) was analyzed. This index relates the number of species present in the sample to the proportion of individuals belonging to each of them. It also measures the uniformity of the distribution of individuals between species and is commonly used to characterize the diversity of species in a community. The values obtained show a good to very good diversity index trend since they exceed a value of 3 for the three strata. Table 20.6 indicates the resulting values.

<b>TABLE 20.6 INDEX SHANNON H</b>	
Stratum, Trees	3.57
Stratum, Shrubbery	3.33
Stratum, Herbs	3.28

Of the species of flora detected in the area of the Regional Environmental System, two are included in some category of NOM-059-SEMARNAT-2010. Regarding the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), six species are considered within Appendix II of the convention,

An analysis was made of the fauna composition found in the Environmental System using camera traps, finding the number of families, genera, number of species and percentages with respect to the total area as presented in Table 20.7.

<b>TABLE 20.7 FAUNA COMPOSITION</b>				
<b>Classes</b>	<b>Families</b>	<b>Genera</b>	<b>Species</b>	<b>Percentage (%) in Relation to the Total</b>
Mammals	10	14	14	34
Birds	15	24	25	46
Amphibians	2	2	2	6
Reptiles	5	6	7	14
<b>Total</b>	<b>32</b>	<b>46</b>	<b>48</b>	<b>100</b>

Of the fauna defined for the study area of the Environmental System, no species were recognized as being under threat according to NOM-059-SEMARNAT-2010. Three species were detected that are mentioned in CITES (Table 20.8). These species are in this locality, however, they extend their distribution within the region, encompassing the environmental system.

<b>TABLE 20.8 LOCAL SPECIES AT RISK</b>			
<b>Number</b>	<b>Common Name</b>	<b>CITES Appendix</b>	<b>Conservation Agreement of Priorities Species</b>
1	White-tailed deer		Yes
2	Wildcat	AP II	
3	Red-tailed hawk	AP II	
4	White-winged pigeon		Yes
5	Pigeon huilota, dove habanera		Yes
6	Beryl hummingbird	AP II	

### **20.3.1.2 Areas of Ecological Interest and Fragility**

The general ecological ordering of the territory (OEGT) is intended to give coherence to the policies of the Federal Public Administration (APF). This is achieved through a concerted cross-sectional and comprehensive planning scheme of the national territory that identifies the areas with the greatest aptitude for carrying out the actions and programs of the different sectors, as well as the priority attention areas. It has been determined that the environmental system falls into the Jalisco R04 State Regional Ecological Ordinance Program.

Ecological Regionalization comprises synthetic territorial units that are integrated from the main factors of the biophysical environment: climate, relief, vegetation, and soil. Integration of the factors results in 145 units called Biophysical Environmental Units (UAB), with UAB 49 being the most important for the Los Ricos environmental system.

The Los Ricos South Project is located within an Environmental Management Unit (UGA) Ff2115 C, in which incompatible uses do not apply, as it appears in the Information Subsystem on Ecological Planning (SIOR). In this same concept of land use planning, it has been determined that the Area for the Protection of Natural Resources (ANP) C.A.D.N.R. 043 State of Nayarit, is within the SA, a Protected Area. Mining promoters have complied with the original decree, dated 1949, which was intended to establish a ban on the use of forest resources, so that by establishing a Project whose purpose is other than forestry, it would make the proposed Project compatible with the intent of the Natural Resources Protection Area. Currently, the ANP lacks a Management Plan which establishes the activities, actions and basic guidelines for the operation and administration of the area. Therefore, in the absence of such a planning and regulation instrument, it is assumed that there are no aspects that limit the development of the Project. For the other sensitive areas, the SA is not located within an area of importance.

It is worth mentioning that the area where the Project is to be developed is located in areas where the development of traditional human activities that currently exist in the region have little chance of being expanded. According to the present analysis, the Project area presents low visibility with complicated topographic conditions, therefore the access roads are of low quality, as dictated by the physiographic conditions of the area, and limit human activities.

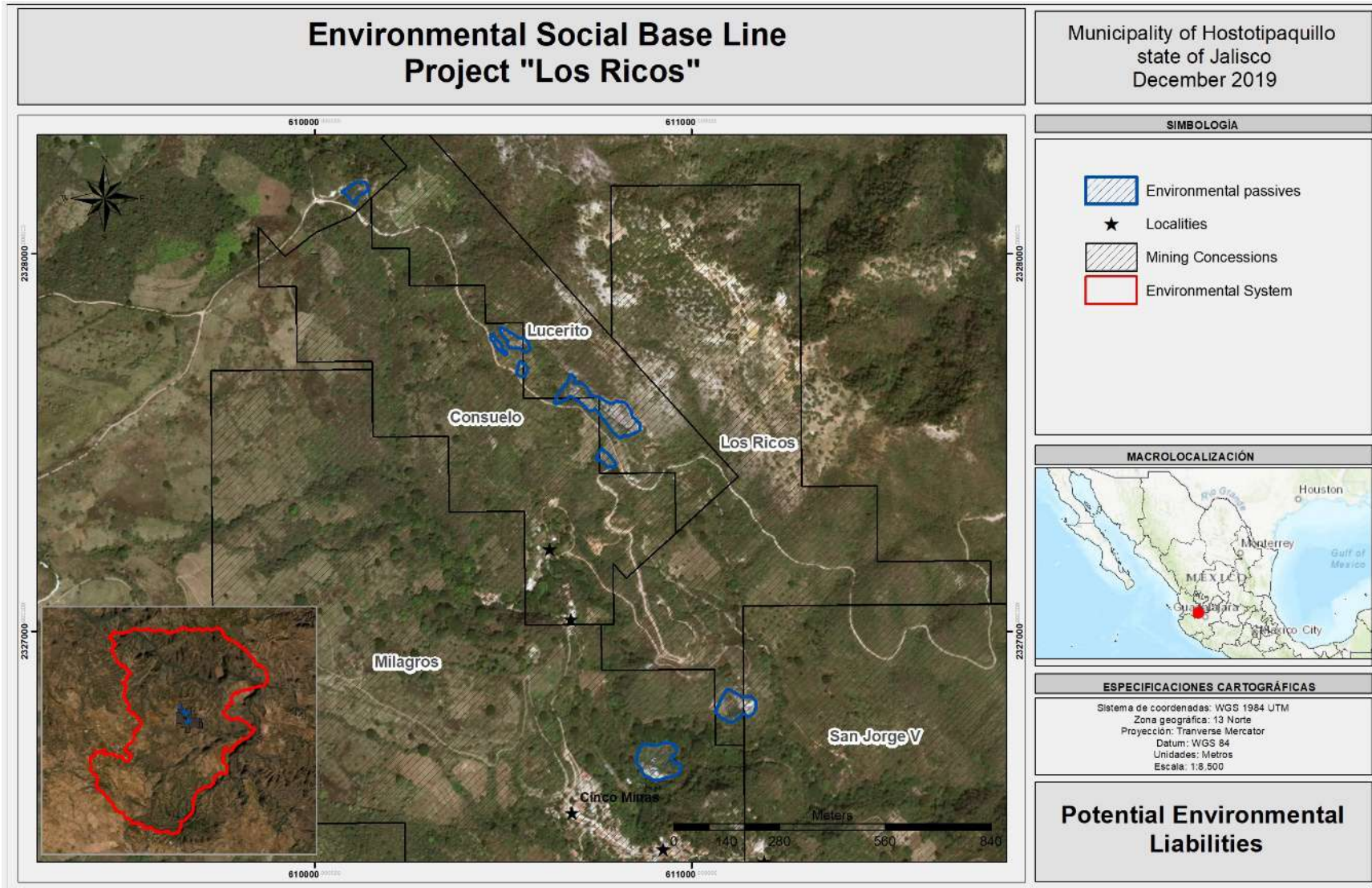
Environmental liabilities were identified in the concession areas, as defined through retrospective analysis with satellite images, taking into account previous mining facilities, such as a beneficiation plant that did not operate and was removed. Most of the former environmental liabilities have been covered with vegetation or have been washed away by rain.

The Project has environmental permits for the original authorization of 81 worksheets, with an authorized expansion of 101 worksheets, totaling 182. The same areas are affected by agriculture, livestock, electrical transmission lines, roads and gaps used by the local population. The baseline study area for the Los Ricos South Project area is shown in Figure 20.1.

For environmental damage in the system, there is a low to moderate potential for loss of soil, modification of hydrological surface flows, loss of plant cover, loss of plant individuals and with some risk categories of NOM-059-SEMARNAT-2010. The mining Project is expected to represent minimal risk to the processes and structure of the local ecosystem, and to the roads, livestock and agricultural activities.



**FIGURE 20.1 BASELINE STUDY AREA FOR THE LOS RICOS PROJECT**



Source: CIMA (2020)

### 20.3.2 Socio-Economic Baseline Study

A baseline study has been completed and it considers economic, cultural, social, demographic, and geographical aspects of the local communities. It involves measuring the state of individuals, households, and institutions at time zero; describing the initial conditions through appropriate indicators, before the start of a program or project to evaluate progress or to make a comparison once it is in operation.

Recording the data at the beginning of a project allows:

- a) to gain insight into key social, economic and cultural issues;
- b) reduce future risks and support management decision-making;
- c) establish a credible foundation to measure the changes derived from the implementation of a Project;
- d) provide integrated information to identify the possible social impacts (including the restoration of livelihoods, work, health and safety), allowing the mitigation of possible negative impacts and improving the positive impacts on the Project design process;
- e) identifying the expectations and concerns of local communities;
- f) anticipating the expectations and concerns of local communities; and
- g) supporting the identification of sites of cultural value.

The establishment of a social baseline of the SA allows an assessment of the real impacts of projects or programs that are implemented in the area. It represents a specific measure of social indicators that can be considered in the design of a project and will allow determination of the value of the indicators as a starting point for their subsequent monitoring and evaluation.

For this Project, the SA covers part of the territory of the municipality of Hostotipaquillo, Tequila and Magdalena in different proportions. The municipality of Hostotipaquillo has the largest surface area in the SA and is the location where the current exploration works are underway.

To obtain data at the local level within the SA, a Survey Plan was designed to obtain variables that would allow generating the main socioeconomic indicators of the community. A socio-economic survey considered six sections, A: Location, B: Characteristics of the inhabitants of the home, C: Health, D: Home, E: Economy, and F: Migration; with a total of 31 simple questions presented.

Within the SA, 18 localities were identified which considered only those that according to INEGI 2010 had inhabited dwellings. The localities of San Simón, Santa María, El llano de Vela, Cinco Minas, Huajacatlan, Santo Domingo de Guzmán, La Mesa and the municipal seat of

Hostotipaquillo were identified. Although Hostotipaquillo does not enter the SA, it is an important location since part of the supply and services arise from there.

The sampling considered 210 family households (out of a total population of 460 people), a representative size that ensured a statistical reliability of 95% in the estimates and less than 5.0% in precision error (also considering the assumption of maximum variance in the responses).

The investigation of possible archaeological zones was also included, with information available in the GIS (Geographic Information Systems). The study concluded that there are no archaeological zones within the environmental system, however, it is necessary to consult the Instituto Nacional de Antropología e Historia (“INAH”) to rule out the existence of an archaeological site.

## 21.0 CAPITAL AND OPERATING COSTS

All costs are in Q3 2023 US dollars. No provision has been included in the cost estimates to offset future escalation. A contingency of 15% is added to all capital costs (“CAPEX”). No contingency is added to operating costs (“OPEX”).

The total initial CAPEX of the Los Ricos South Project is estimated at \$148M. Expansion and sustaining capital costs incurred during the 12 production years are estimated to total \$140M. Total OPEX over the life-of-mine (“LOM”) are estimated at \$709M which average \$51.78/t processed. The following subsections provide details of these costs.

### 21.1 CAPITAL COSTS

The Los Ricos South Project has been planned as a combined underground and open pit mining operation, with contract underground mining in production years one to seven of the mine plan, and contract open pit mining starting in year three and ending in year twelve.

The process plant is comprised of conventional crushing and grinding followed by cyanide tank leaching. Back-end filtration is required to maximize water recycling (for dry stack tailings) as well as a SART (sulphidation, acidification, recycling and thickening) circuit to re-generate cyanide back to the process and to produce a saleable Cu<sub>2</sub>S copper sulphide product. Water supply to the process plant is provided by a nearby seasonally re-charged water dam and high voltage grid power is provided by the local utility.

The initial capital cost estimate addresses the engineering, procurement, construction and start-up of the Los Ricos South Project, with a construction period to develop an underground mine, build a process plant capable of treating 1,750 tpd, prepare a dry stack tailings management area, and install associated ancillary surface facilities.

The capital cost estimate was developed to a level commensurate of that of a Preliminary Economic Assessment in order to evaluate the Los Ricos South Project overall potential viability. After inclusion of the contingency, the capital cost estimate is considered to have an accuracy of ±30%, as of Q2, 2023. Where applicable, the exchange rate used is 20.0 Mexican pesos per US\$1.

The total estimated cost to design, procure, construct and start-up the underground mine and process plant facilities described in this Technical Report is \$148M. Table 21.1 summarizes the capital cost estimate. The estimated cost includes a contingency allowance of 15% or \$19M.

Expansion capital costs estimated at \$68M are incurred in production years two and three to develop and pre-strip an open pit mine and increase the process plant capacity from 1,750 tpd to 4,000 tpd.

Sustaining capital represents capital expenses for additional costs that are not included in the normal operating costs, equipment purchases that will be necessary during the operating life of the Project, tailings storage capacity increases, and all capital costs associated with underground mining. Life-of-mine (“LOM”) sustaining capital is estimated at \$72M.

Total capital costs over the LOM are estimated at \$288M. Items not included in the capital cost estimate are:

- Sunk costs and costs prior to the start of basic engineering phase.
- Escalation.
- Insurance.
- Working capital.
- Interest and financing costs.
- Taxes.
- Reclamation and associated bonding requirements.

<b>TABLE 21.1 CAPITAL COST SUMMARY</b>				
<b>Item</b>	<b>Initial (\$M)</b>	<b>Expansion (\$M)</b>	<b>Sustaining (\$M)</b>	<b>Total (\$M)</b>
Process Plant	53.1	42.7		95.8
Tailings Facility	1.4		12.1	13.5
Underground Mine Development	60.7		48.5	109.2
Open Pit Pre-stripping		19.1	0.5	19.6
Infrastructure	10.0		1.2	11.2
Project Indirects	3.7			3.7
<b>Subtotal</b>	<b>128.9</b>	<b>61.8</b>	<b>62.3</b>	<b>253.0</b>
Contingencies @ 15%	19.3	6.7	9.4	35.4
<b>Total</b>	<b>148.2</b>	<b>68.5</b>	<b>71.7</b>	<b>288.4</b>

### **21.1.1 Initial Capital Costs**

#### **21.1.1.1 Process Plant Capital Cost**

The initial capital cost estimate for the 1,750 tpd Los Ricos South process plant was derived from a combination of the items described in the following subsections.

#### **Process Plant Direct Equipment Costs**

Major mechanical equipment costs are based on budget quotations from major vendors as well as updated costs provided for the previous PEA. The specifications provided to the vendor were based on the preliminary process design criteria generated in Sections 13 and 17 of this Technical Report. This included crushing and screening, SAG and ball mill, thickener, cyanide leach agitators, tails dewatering belt filters, lime system, the Merrill Crowe, SART and refinery circuit.

Certain direct capital costs were provided by a database, including the proposed SART circuit for a similar size system similar that was designed and constructed in 2019-2020. The SART plant

capital cost, including equipment directs, capital directs, and indirects, are based on the GoGold process plant in Parral, Mexico.

Minor mechanical equipment costs were based on a database and familiarity with costs of the equipment. Bulk material costs (bins, tanks, structures) were based on some built-up rates, factored costs and allowances.

### Process Plant Direct Construction Costs

Direct construction costs were based on factoring and direct input of costs including process plant area site development, concrete, steel work, mechanical, piping, sub-station, MCC electrical and instrumentation.

### Process Plant Indirect Costs

Process plant indirect costs are based on factored costs and are presented in Table 21.2.

<b>TABLE 21.2 PROCESS PLANT INDIRECT CAPITAL FACTORS</b>		
<b>Commodity</b>	<b>Factor (%)</b>	<b>Factored Basis</b>
Freight	7	% of Direct Process Equipment Capital
Start-up and Commissioning	3	% of Direct Process Equipment Capital
Capital Spares	6	% of Direct Process Equipment Capital
First Fills	1.5	% of Direct Process Equipment Capital
EP Section (Engineering and Procurement)	4	% of Total Capital Costs: Equipment and Construction
CM & PM Section (Construction and Project Management)	6	% of Total Capital Costs: Equipment and Construction

*Source: D.E.N.M. (2023)*

### Initial Process Plant Cost Estimate

The Phase 1 (1,750 tpd) process plant was described in Section 17 of this Technical Report and a summary of the estimated capital costs for the process plant are presented in Table 21.3.

<b>TABLE 21.3 PROCESS PLANT CAPITAL COST ESTIMATE</b>		
<b>Section</b>	<b>Description</b>	<b>Cost US\$M<sup>1</sup></b>
100	Primary Crushing Circuit	2.3
200	Grinding Circuit	8.1
300	Leaching Circuit	22.3
400	Merrill Crowe Circuit	4.5
500	SART Circuit	4.6
600	Reagent Circuit	0.5
700	Plant Support and Water System	0.7
800	Assay Laboratory and Sample Preparation	1.5
<b>Sub-total</b>	<b>Total Equipment And Construction Directs (Includes \$23M Direct Costs)</b>	<b>44.5</b>
900	Factored Indirects (less PM)	
	Freight	1.6
	Start-up and Commissioning	0.7
	Capital Spares	1.5
	First Fills	0.3
	EP Section	1.8
	CM & PM Section	2.7
	<b>Plant Capex Total (without contingency)</b>	<b>53.1</b>

<sup>1</sup> US\$ in millions, rounded.

Source: D.E.N.M. (2023)

### 21.1.1.2 Tailings Storage

CAPEX to construct an initial dry stack tailings area for storage over the first three years of production are estimated at \$1.4M plus a 15% contingency. The storage area is planned to be located just north of the process plant on land with a gradient of approximately 10%.

### 21.1.1.3 Underground Mine Development

This subsection addresses the capital cost estimate for engineering, procurement and start-up costs of the UG portion of the Los Ricos South Project. The UG portion is expected to be mined with contractors, reducing the overall capital costs versus owner operation. Costs for development, production and haulage were based on an active contract for a similar operation in Mexico. All costs used for UG development and production are sourced directed, or pro-rated, from these costs.

Total CAPEX cost for the underground, including both initial and sustaining CAPEX, is estimated at \$109.2M before contingency, \$125.6M after, as shown in Table 21.4.

Area	Initial CAPEX (\$M)	Sustaining CAPEX (\$M)	Total CAPEX (\$M) <sup>1</sup>
Lateral Development	19.0	39.8	58.8
Vertical Development	0.8	1.1	1.9
Capitalized Development	15.5	-	15.5
Services	6.3	5.2	11.5
Backfill Plant & Delivery System	8.5	0.5	9.0
Other CAPEX	2.7	1.8	4.5
Other Capitalized OPEX	8.0	-	8.0
Subtotal	60.7	48.5	109.2
Contingency (15%)	9.1	7.3	16.4
<b>Total</b>	<b>69.9</b>	<b>55.7</b>	<b>125.6</b>

<sup>1</sup> Totals may not sum due to rounding.

Major initial capital expenditures for the UG, prior to production, include: the construction of a PF plant and overland backfill reticulation system; 12 km of underground development; three portals (two access, one ventilation); and the installation of supporting services (electrical power, ventilation, compressed air and dewatering). Initial capital costs for the UG portion of the Project are estimated at a total of \$60.7M before contingency, \$69.9M after.

### Development

A total of 12 km of lateral development and approximately 0.5 km of vertical development will be driven during the pre-production period spanning YR -2 and YR -1. Of this, approximately 6 km of lateral development would normally be classified as OPEX, however, is reclassified as CAPEX due the costs being incurred during the pre-production period. Table 21.5 provides a summary of development quantities, cost per heading size, and total costs incurred during the pre-production period for development.

Heading Type	Heading Profile (m W x m H)	Required Development (m)	Development Cost (\$/m)	Total CAPEX (\$M) <sup>1</sup>
Vent Raise (Drop Raise) <sup>2</sup>	3.0 x 3.0	197	1,500	0.3
Vent Raise (Raisebore)	3.0 dia.	264	1,750	0.5
Subtotal – Vertical Development		<b>460</b>	<b>1,643</b>	<b>0.8</b>
Ramps, FWDs, and Level Accesses	4.0 x 4.0	4,063	3,221	13.1
Re-mucks and Loadouts	4.0 x 5.0	445	3,029	1.3
Infrastructure and Vent Accesses	3.3 x 4.0	1,501	3,018	4.5



**TABLE 21.5**  
**INITIAL DEVELOPMENT CAPITAL COSTS**

Heading Type	Heading Profile (m W x m H)	Required Development (m)	Development Cost (\$/m)	Total CAPEX (\$M) <sup>1</sup>
Capitalized Development      Operating	3.3 x 3.3	5,992	2,593	15.5
<b>Subtotal – Lateral Development</b>		<b>12,000</b>	<b>2,875</b>	<b>34.5</b>
<b>Total (Pre-contingency)</b>		<b>12,460</b>	<b>2,829</b>	<b>35.3</b>

<sup>1</sup> Totals may not sum due to rounding.

<sup>2</sup> Drop raise profile dimensions are in mW x mL.

Total initial development CAPEX, pre-contingency, is estimated at \$35.3M. Of this total, approximately \$15.5M would normally be categorized as OPEX, however, this amount is reclassified as CAPEX due to the costs being incurred during the pre-production period.

### **Backfill**

The backfill plant for the Los Ricos South UG mine is planned to be located near the process plant, and will be designed to produce an average volume of 52 m<sup>3</sup> of cement PF per hour, assuming 14 hours of operation per day. The plant is located slightly below the entry to the mine, necessitating the use of a positive displacement pump to move the PF into the mine, prior to utilizing reticulation by gravity to fill the stopes. The backfill plant will be operational prior to initial stoping, and will utilize tailings from processing mineralized development material for initial fills.

Total initial CAPEX for the backfill plant and reticulation system, pre-contingency, is estimated at \$8.5M.

### **Services**

Underground services initial CAPEX includes:

- Ventilation fans and doors;
- Electrical transformers and substations;
- Dewatering pumps;
- Compressors and accumulators; and
- Communications systems.

Total initial CAPEX for services infrastructure, pre-contingency, is estimated at \$6.3M.

### **Other CAPEX**

Other initial CAPEX includes:

- Fitment of magazines, refuge stations, PM bays, pump stations, and escapeways;

- Construction of UG/surface interfaces (portals and ventilation raise collars);
- Contractor mobilization; and
- Technical services software purchases.

Total initial CAPEX for infrastructure and fitment, pre-contingency is estimated at \$2.7M.

### **Other Capitalized Operating Costs**

Outside of capitalized OPEX development, other capitalized OPEX costs include:

- Owner's costs, including:
  - Technical services and Company mine supervision staff salaries;
  - Consultants;
  - UG Dayworks and sundries; and
- Electrical power.

Items included in this category (power, owner's costs) would normally be classified as OPEX, however, are categorized as CAPEX since costs are incurred prior to the start of production. The total cost of these items is estimated at \$8.0M, pre-contingency, during the pre-production period.

#### **21.1.1.4 Site Infrastructure Capital Costs**

The site infrastructure capital cost is estimated at \$10.0M and includes items such as the main access road, gatehouse, warehouse, office and service buildings, mine dry, electric powerline to site, backup generator, maintenance facility, diesel storage and fueling station, water supply from a nearby dam, and sewage treatment.

#### **21.1.1.5 Project Indirect Costs**

Owner's costs are estimated at \$3.5M and relocation costs for a few nearby village houses are estimated at \$0.2M, for a total of \$3.7M.

#### **21.1.1.6 Contingency**

An overall contingency of 15% was applied to all aspects of the capital cost estimate. The total contingency on initial capital costs is \$19.3M.

### **21.1.2 Expansion Capital Costs**

Expansion capital costs estimated at \$61.8M plus contingency are for improvements to the operation that will result in a benefit of more than 10% in the Project LOM or NPV. Three items have been classified at expansion capital costs:

1. Contractor mobilization and pre-stripping of the Abra Pit in order that open pit production can commence in the following year;

2. Open pit infrastructure such as haul road construction costs, increased size of the maintenance facility; and
3. Increase in process plant capacity from 1,750 tpd to 4,000 tpd.

Open pit mining contractor mobilization is estimated at \$0.5M. Pre-stripping requirements are estimated at 9.7 Mt waste rock at a unit cost of \$1.69/t for a total of \$16.4M. An additional \$2.2M is estimated for haul road construction, explosives storage and Owner's costs. Total expansion CAPEX for open pit items are estimated at \$19.1M.

Expansion of the process plant to 4,000 tpd is estimated at \$42.7M and includes direct and indirect costs and EPCM. In the initial Phase 1, preparation for expansion in the capital has been allotted for in the construction allowing for a reduced Phase 2 capital cost. Expansion costs for the process plant are presented in Table 21.6.

<b>TABLE 21.6</b>		
<b>PROCESS PLANT EXPANSION CAPITAL COST ESTIMATE – PHASE 2</b>		
<b>Section</b>	<b>Description</b>	<b>Cost US\$M<sup>1</sup></b>
100	Primary Crushing Circuit	1.8
200	Grinding Circuit	7.1
300	Leaching Circuit	18.3
400	Merrill Crowe Circuit	3.6
500	SART Circuit	3.9
600	Reagent Circuit	0.4
700	Process Plant Support and Water System	0.6
800	Assay Laboratory and Sample Preparation	0.5
<b>Sub-total</b>	<b>Total Equipment and Construction Directs (Includes \$18M Direct Costs)</b>	<b>36.2</b>
900	Factored Indirects (less PM)	
	Freight	1.2
	Start-up and Commissioning	0.6
	Capital Spares	1.1
	First Fills	N/A
	EP Section	1.4
	CM & PM Section	2.2
	<b>Process Plant Capex Total (without contingency)</b>	<b>42.7</b>

<sup>1</sup> US\$ in millions, rounded.

Source: D.E.N.M. (2023)

A 15% contingency has been applied to the expansion costs, and is estimated at \$6.7M.

### 21.1.4 Sustaining Capital Costs

Sustaining capital costs are estimated to total \$71.7M including contingency as presented in Table 21.1 above. Sustaining items include incremental increases of the dry stack tailings area in years 3, 6 and 10 to store the remaining tailings material over the LOM and are estimated at \$12.1M before contingency.

Underground mine development sustaining costs are estimated at \$48.5M over the UG LOM, production years 1 to 7, as presented in Table 21.4 above. Development costs account for \$40.9M of the total sustaining cost.

Open pit mining contractor demobilization is estimated at \$0.5M. Infrastructure costs are for relocation of additional village houses from the waste rock storage area at an estimated \$1.2M.

A 15% contingency on sustaining CAPEX is estimated at \$9.4M.

## 21.2 OPERATING COSTS

The operating costs estimate includes the cost of mining, processing, and General and Administration (“G&A”) services. The LOM average operating costs for the Project during production years is summarized in Table 21.7.

<b>Area</b>	<b>Cost (\$/t processed)</b>	<b>Cost (\$/t mined)</b>
Open Pit Mining	12.13	1.64
Underground Mining	43.85	
<b>Average LOM Mining</b>	<b>22.15</b>	
Processing cost per tonne incl. tailings	27.10	
G&A per tonne processed	2.52	
<b>Total cost per tonne processed</b>	<b>51.78</b>	

### 21.2.1 Underground Mining Operating Costs

The operating cost estimate addresses the costs of all: development (excluding sustaining CAPEX development); production; backfilling; services and power usage; technical services auxiliary staff roles; and other dayworks and sundry costs associated with operating the underground mine. The underground portion of the Los Ricos South Project is expected to be mined with contractors: costs for development, production and haulage were based on an active contract for a similar operation in Mexico. All costs used for underground development and production are sourced directly, or pro-rated, from these costs.

Total OPEX for the underground over the LOM is estimated at \$189.7M, as shown in Table 21.8. The average OPEX per UG tonne processed is \$43.85/t.

Area	Cost (\$M)	Cost per Tonne (\$/t) <sup>1</sup>
Operating Development	37.2	8.60
Production	89.0	20.59
Backfilling	22.3	5.17
Power Consumption	23.4	5.42
Other Operating Costs	17.6	4.07
<b>Total</b>	<b>189.7</b>	<b>43.85</b>

<sup>1</sup> Totals may not sum due to rounding.

No contingency has been applied to underground operating costs.

#### **21.2.1.1 Development**

A total of 14.3 km of operating development is planned during the production years. Total OPEX development cost over the LOM is estimated at \$37.2M. Table 21.9 provides a summary of development quantities, cost per heading size, and total costs incurred for the portion developed after the start of production.

Heading Type	Heading Profile (m W x m H)	Required Development (m)	Development Cost (\$/m)	Total OPEX Cost (\$M) <sup>1</sup>
Mineralized Development	3.3 x 3.3	10,676	2,593	27.7
Waste Development		3,669		9.5
<b>Total (Pre-contingency)</b>		<b>14,345</b>	<b>2,593</b>	<b>37.2</b>

<sup>1</sup> Totals may not sum due to rounding.

#### **21.2.1.2 Production**

Production costs include all costs associated with the delineation, drilling, blasting, excavating, and material handling of stopes in the underground mine. Total OPEX production cost over LOM is estimated at \$89.0M. Table 21.10 provides a summary of these costs.

<b>Area</b>	<b>Cost (\$M)<sup>1</sup></b>
Production from New Stopes (Drill, Blast, Excavate and Haul)	79.5
Historical Workings Production (Excavate and Haul Only)	4.3
Delineation Drilling	5.3
<b>Total</b>	<b>89.0</b>

<sup>1</sup> Totals may not sum due to rounding.

### **21.2.1.3 Backfill**

Backfill costs for the filling of new excavations, excavated historical stopes, and minor filling of other historical workings totals \$22.3M over LOM. High-strength PF for artificial pillars accounts for 54% of these costs, totalling \$12.1M.

### **21.2.1.4 Power**

Electrical power consumption during the operating life of the UG mine is estimated at \$23.4M, with over half of consumption from ventilation fans (both primary and auxiliary). The Authors recommend the investigation of the use of larger ventilation openings, or a reduction in the use of diesel equipment and resulting required airflow, at a later stage of study.

### **21.2.1.5 Other Operating Costs**

Other operating costs include indirect salaries associated with the Owner's technical services team, G&A salaries associated with direct UG mine supervision and management, and costs for dayworks and sundries. Over the operating LOM, these OPEX costs are estimated at \$17.6M.

## **21.2.2 Open Pit Mining**

The Los Ricos South open pit mine operating cost consists of a contract mining cost, a stockpile rehandling cost, and Owner's costs for supervision and technical services.

The average LOM unit mining operating cost is estimated at \$1.64/t, as shown in Table 21.11. This is the average over the mining production years 4 to 12 and does not include costs from the pre-production period.

<b>TABLE 21.11</b>			
<b>MINING OPERATING COST SUMMARY</b>			
<b>Operating Cost</b>	<b>LOM (\$M)</b>	<b>Years 4 to 12</b>	
		<b>Unit Cost (\$/t material)</b>	<b>Unit Cost (\$/t processed)</b>
Contract Mining	116.8	1.48	12.47
Stockpiling	1.9	0.02	0.21
Technical Services	11.4	0.14	1.22
<b>Total Mining Cost</b>	<b>130.1</b>	<b>1.64</b>	<b>13.89</b>

### 21.2.2.1 Contract mining

A local Mexican mining contractor familiar with the region and the mine site was contacted to provide a budgetary quotation. The quotation included all open pit mining costs, including equipment, personnel, diesel fuel, explosives and maintenance. The cost was based on a mining unit rate of \$1.30/t, with a variable haulage cost of \$0.30/t.km based on haul distance. Most of the hauls averaged between one and two kilometres to either the process plant or waste rock storage area. Waste rock haulage is relatively short to a nearby storage facility associated with each pit.

A mining cost model applies the haulage rate to the haul distances appropriate for each year. The resulting average LOM mining cost for contractor services is \$1.64/t of material.

### 21.2.2.2 Stockpiling

Each year mineralized material will either be placed in the process plant feed surge stockpile or withdrawn from it to feed the process plant. The cost to haul material to the stockpile is captured in the mining cost. However, the cost to withdraw material from the stockpile is considered an extra rehandling cost. The unit rate for this activity was assumed to be a blended rate of \$1.00/t of mineralized material, which could be a combination of direct tramming with a front-end loader, or reloading trucks for haul to the crusher.

### 21.2.2.3 Supervision and Technical Services

The mine supervision and technical services includes salaries for the 14-person mine Owner's team, and annual costs for office equipment, vehicle maintenance, outside consultants, and other mine management costs. This annual fixed cost is estimated to be \$1.5M per year.

## 21.2.3 Process Plant Operating Costs

Process plant operating costs include all costs from receipt of mineralized feed through to doré and copper SART (Cu<sub>2</sub>S) production. A summary of estimated process plant operating costs for Phase 1 (1,750 tpd) and Phase 2 (4,000 tpd) are presented in Table 21.12 and Table 21.13.

<b>TABLE 21.12</b>			
<b>PROCESS PLANT OPERATING COSTS – PHASE 1</b>			
<b>Item</b>	<b>\$M/Year</b>	<b>\$US/t Processed</b>	<b>% of Total</b>
Labour	2.0	3.11	9
Power & Fuel	2.8	4.35	13
Maintenance & Operating Consumables	15.3	24.01	73
Support Equipment	0.1	0.11	0.3
Tailings	1.0	1.50	5
<b>Total</b>	<b>21.2</b>	<b>33.08</b>	<b>100</b>

Source: D.E.N.M. (2023)

<b>TABLE 21.13</b>			
<b>PROCESS PLANT OPERATING COSTS – PHASE 2</b>			
<b>Item</b>	<b>\$M/Year</b>	<b>\$US/t Processed</b>	<b>% of Total</b>
Labour	2.7	1.88	7
Power & Fuel	5.0	3.44	13
Maintenance & Operating Consumables	28.3	19.35	74
Support Equipment	0.1	0.05	0.2
Tailings	2.2	1.50	6
<b>Total</b>	<b>38.3</b>	<b>26.22</b>	<b>100</b>

Source: D.E.N.M. (2023)

### 21.2.3.1 Labour

Labour positions and rates for the Los Rico South process plant are based on employee rates at the GoGold Parral operation in Chihuahua, Mexico. Estimates include senior process management, operating personnel, and specific support personal as well as maintenance (mechanical, electrical, instrumentation) and assay laboratory. To accommodate a 24-hour operation, employees and staff total 90 for Phase1 and 128 for Phase 2. A salary burden rate for each position is applied utilizing information supplied by Human Resources at GoGold’s wholly owned Mexican subsidiary, Grupo Coanzamex.

The preliminary schedule for positions and rotations are presented in Table 21.14 for Phase 1 and Table 21.15 for Phase 2.



**TABLE 21.14  
PROCESS PLANT OPERATIONS LABOUR SCHEDULE – PHASE 1**

<b>Position</b>	<b>Number of Personnel</b>	<b>Rotation</b>	<b>Staff or Hourly</b>
<b>Operations</b>			
Process Plant Operations Superintendent	1	4&3	Staff
Operations Shift Foreman	4	7&7	Staff
Process Plant Admin Assistant	2	7&7	Staff
Leach Operator	4	7&7	Hourly
Control Room Operator	4	7&7	Hourly
Crusher Operator	4	7&7	Hourly
Grinding Operator	4	7&7	Hourly
Merrill Crowe Operator	4	7&7	Hourly
Dewatering Tailings/Tailings TMF Operator	4	7&7	Hourly
SART Plant Operators	4	7&7	Hourly
Reagent Helpers/Operator	4	7&7	Hourly
Gold Room Staff and Security	4	7&7	Hourly
Process Plant Labourer	6	7&7	Hourly
<b>Subtotal</b>	<b>49</b>		
<b>Maintenance</b>			
Maintenance Superintendant	1	4&3	Staff
Process Plant Maintenance Foreman	2	7&7	Staff
Maintenance Planner	2	7&7	Staff
Electrical Supervisor	1	7&7	Staff
Electrician Apprentice	2	7&7	Hourly
Electrician	4	7&7	Hourly
Instrumentation Technician	2	7&7	Hourly
Millwright	6	7&7	Hourly
Pipefitter	2	7&7	Hourly
Welder	2	7&7	Hourly
<b>Subtotal</b>	<b>24</b>		
<b>Technical Services</b>			
Sr. Metallurgical Engineer	1	4&3	Staff
Metallurgical Engineer (Process Control)	1	7&7	Staff
Metallurgical Technician	1	7&7	Staff
Chief Assayer	1	7&7	Staff
QC Manager	1	7&7	Staff

<b>TABLE 21.14</b>			
<b>PROCESS PLANT OPERATIONS LABOUR SCHEDULE – PHASE 1</b>			
<b>Position</b>	<b>Number of Personnel</b>	<b>Rotation</b>	<b>Staff or Hourly</b>
Assay Technician (Fire Assay)	6	7&7	Hourly
Laboratory Technician	6	7&7	Hourly
<b>Subtotal</b>	<b>17</b>		
<b>Total Labour</b>	<b>90</b>		

*Source: D.E.N.M. (2023)*

<b>TABLE 21.15</b>			
<b>PROCESS PLANT OPERATIONS LABOUR SCHEDULE – PHASE 2</b>			
<b>Position</b>	<b>Number of Personnel</b>	<b>Rotation</b>	<b>Staff or Hourly</b>
<b>Operations</b>			
Process Plant Operations Superintendent	1	4&3	Staff
Operations Shift Foreman	4	7&7	Staff
Process Plant Admin Assistant	4	7&7	Staff
Leach Operator	6	7&7	Hourly
Control Room Operator	6	7&7	Hourly
Crusher Operator	6	7&7	Hourly
Grinding Operator	6	7&7	Hourly
Merrill Crowe Operator	6	7&7	Hourly
Dewatering Tailings/Tailings TMF Operator	6	7&7	Hourly
SART Plant Operators	6	7&7	Hourly
Reagent Helpers/Operator	6	7&7	Hourly
Gold Room Staff and Security	4	7&7	Hourly
Process Plant Labourer	10	7&7	Hourly
<b>Subtotal</b>	<b>71</b>		
<b>Maintenance</b>			
Maintenance Superintendant	1	4&3	Staff
Process Plant Maintenance Foreman	2	7&7	Staff
Maintenance Planner	2	7&7	Staff
Electrical Supervisor	1	7&7	Staff
Electrician Apprentice	4	7&7	Hourly
Electrician	6	7&7	Hourly

<b>TABLE 21.15</b>			
<b>PROCESS PLANT OPERATIONS LABOUR SCHEDULE – PHASE 2</b>			
<b>Position</b>	<b>Number of Personnel</b>	<b>Rotation</b>	<b>Staff or Hourly</b>
Instrumentation Technician	4	7&7	Hourly
Millwright	8	7&7	Hourly
Pipefitter	4	7&7	Hourly
Welder	4	7&7	Hourly
<b>Subtotal</b>	<b>36</b>		
<b>Technical Services</b>			
Sr. Metallurgical Engineer	1	4&3	Staff
Metallurgical Engineer (Process Control)	2	7&7	Staff
Metallurgical Technician	2	7&7	Staff
Chief Assayer	2	7&7	Staff
QC Manager	2	7&7	Staff
Assay Technician (Fire Assay)	6	7&7	Hourly
Laboratory Technician	6	7&7	Hourly
<b>Subtotal</b>	<b>21</b>		
<b>Total Labour</b>	<b>128</b>		

*Source: D.E.N.M. (2023)*

### 21.2.3.2 Reagent and Grinding Media

Reagent costing was supplied by quotations from Grupo Coanzamex operations. Costing includes lime (hydrated), sodium cyanide (NaCN), grinding media (balls for SAG and ball mill), zinc dust, precoat, flocculant, and SART required chemicals. As noted, SART reagents are sulphuric acid (H<sub>2</sub>SO<sub>4</sub>), sodium hydrosulphide (NaHS), anionic flocculant, caustic soda, and hydrogen peroxide.

Consumption calculations are based on the Project testwork for both Abra and Eagle as well as operating details from the Parral facility. Consumptions are calculated on an annual basis with \$US/t based on a 0.64 Mtpa (Phase 1) and 1.46 Mtpa (Phase 2) process plant feed rate.

Special notes pertaining to the consumption rates used are as follows:

- NaCN consumption leaching rates from the SGS testwork is stated as 4.8 kg/t to 12.0 kg/t for the Eagle mineralized material. This rate reflects total consumption for dissolution of silver, gold, and copper (SGS). After further review, it was determined that over 75% to 90% was consumed for the soluble copper. As this cyanide is regenerated during the SART process, an actual base consumption rate of 1.25 kg/t

was used in the operating cost. Further optimized and variability testwork in this area is planned in the next phase of the Project development.

- The Los Ricos South mineralized material showed a high abrasive index – 0.72 g (SGS, 2020-2023) resulting in higher than average consumption rates of grinding media.

### 21.2.3.3 Electrical Power and Fuel

Electrical power to the Los Ricos South site will be supplied by constructing a 14 km 35 kVA line from an existing 115 kVA line at Hostotipaquillo. Based on the preliminary flowsheet and equipment list, electricity consumption for the process plant is estimated to be 29,367 MWh per year for Phase 1 and 52,862 MWh per year for Phase 2.

An electrical rate cost supplied by Commission Federal de Electricidad (“CFE”) is stated as \$0.09/kWh.

The diesel price has been assumed to be \$1.20/litre.

### 21.2.4 General and Administrative Costs

General and Administration (“G&A”) costs are estimated at \$3.0M annually, as summarized in Table 21.16. The costs have been estimated to a PEA level and are based on GoGold costs incurred at its Parral operation.

Item	Number	Annual Cost (\$)
General Manager	1	180,000
Public Relation / Sustainability	2	135,000
Administration Manager	1	75,000
Human Resources	2	135,000
Safety & Security Officer	1	45,000
Warehouse Supervisor	1	45,000
Purchasing	3	112,500
Parts/Logistics	2	60,000
Security (4 crews)	16	240,000
Receptionist	1	30,000
Environmental Officer	1	60,000
Environmental Technician	2	60,000
Accountants	4	150,000
IT	2	75,000
Clerks/Staff	6	135,000

<b>TABLE 21.16 GENERAL AND ADMINISTRATION COSTS</b>		
<b>Item</b>	<b>Number</b>	<b>Annual Cost (\$)</b>
General office expenses	Lump sum	200,000
Insurance	Lump sum	300,000
Ejido	Lump sum	180,000
Community support	Lump sum	150,000
Other	Lump sum	240,000
Allowance	15%	392,500
<b>Total<sup>1</sup></b>		<b>3,000,000</b>

<sup>1</sup> Totals may not sum due to rounding.

### 21.3 MINING TAX

The Project is subject to a 0.5% NSR mining tax payable to the Mexican government. Total costs associated with this NSR royalty tax over the LOM are estimated at \$10.2M.

### 21.4 CLOSURE COSTS

Costs to be incurred after the LOM plan in this PEA were estimated by the Authors with assistance from CIMA to be \$13M to close and rehabilitate the Project site, as presented in Table 21.17.

<b>TABLE 21.17 CLOSURE COSTS</b>	
<b>Activity</b>	<b>Closure Cost (\$M)</b>
Engineering	0.52
Infrastructure demolition	1.55
Road rehabilitation	1.19
Forestry/environmental activities	2.39
Rehabilitation/stabilization	2.69
Open pit rehabilitation	1.45
Closure studies	0.89
Tailings restoration	1.32
Social costs	1.00
<b>Total</b>	<b>13.00</b>

## **21.5 CASH COSTS AND ALL-IN SUSTAINING COSTS**

Cash costs over the LOM, including Mexican mining taxes, are estimated to average US\$8.15/oz AgEq. All-In Sustaining Costs (“AISC”) over the LOM are estimated to average US\$9.02/oz AgEq and include closure costs, however, do not include expansion capital costs.

## 22.0 ECONOMIC ANALYSIS

### 22.1 SUMMARY

**Cautionary Statement** - The reader is advised that the PEA summarized in this Technical Report is intended to provide only an initial, high-level review of the Project potential and design options. The PEA mine plan and economic model include numerous assumptions and the use of Inferred Mineral Resources. Inferred Mineral Resources are considered to be too speculative to be used in an economic analysis except as allowed by NI 43-101 in PEA studies. There is no guarantee the Project economics described herein will be achieved.

A discounted cash flow model was prepared using the production schedule described in Section 16 and the cost estimates described in Section 21 of this Technical Report. The PEA cash flow model was developed on a pre-tax and after-tax basis. The cash flow model is assumed to commence from the time a production decision is made and does not include time or costs for a Pre-Feasibility or Feasibility Study.

The Los Ricos South Project economic evaluation conclusions are summarized in Table 22.1. At base case metal prices of US\$1,850/oz Au, US\$23.75/oz Ag and US\$4.00/lb Cu, the Project has an estimated US\$458M after-tax net present value (“NPV”) at a 5% discount rate (“NPV5%”), and an after-tax internal rate of return (“IRR”) of 37%. The payback period is estimated to be 2.3 years for initial underground mining without expansion costs for open pit development.

<b>Item</b>	<b>Pre-Tax</b>	<b>After-Tax</b>
NPV0% (\$M)	1,037	691
NPV5% (\$M)	708	458
NPV7% (\$M)	611	389
IRR (%)	49	37
Payback period (years)	2.3	

### 22.2 BASIC ASSUMPTIONS

A discounted cash flow analysis of the Los Ricos South was prepared based on technical and cost inputs developed by the Authors.

The discounted cash flow analysis was performed on a stand-alone project basis with annual cash flows discounted. The financial evaluation uses a discount rate of 5%, discounting back to the commencement of construction (Year -2) of the Project.

All currency values are expressed in US dollars unless otherwise noted.

## **Metal Price Assumptions**

All metal prices remain constant throughout the LOM of the Project.

**Ag:** \$US23.75/oz. The sensitivity of the Project return to variations in the actual silver price received was also examined.

**Au:** \$US1,850/oz. The sensitivity of the Project return to variations in the actual gold price received was also examined.

**Cu:** \$US4.00/lb.

## **Metallurgical Recoveries**

The Los Ricos South Project's process plant metallurgical recovery assumptions are:

- Ag: 84% for mineralized material mined underground, 86% for mineralized material mined by open pit.
- Au: 95%
- Cu: 73% (combined leach and SART).

## **Capital Costs**

Total capital costs during the LOM are estimated to be \$288.4M as outlined in the Capital and Operating Cost Section 21. The initial capital costs are incurred over a two-year construction period and are estimated to be \$148.2M. Expansion capital costs for open pit mining are estimated at \$68.5M and sustaining costs are approximately \$71.7M.

## **Previous Expenses Provision**

An amount of \$2.85M was considered as a prior expense pool and these monies were deducted from income in Years 1 and 2 when determining the taxable income.

## **Income Tax Rate**

The Mexican income tax is levied at a rate of 35% on the net taxable income.

## **Additional Mining Tax Rate**

A Mexican government 0.5% gross revenue tax was applied in the cash flow economics and is deductible when determining taxable income.



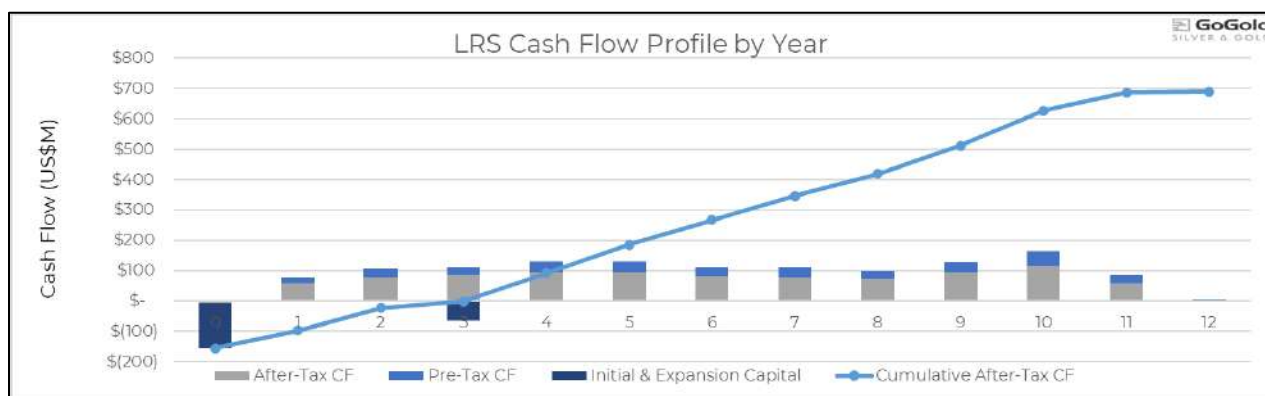
## 22.3 CASH FLOW SUMMARY

Based on the assumed metal prices the Project has an after-tax IRR of 37% and a 2.3 year payback of initial pre-production capital costs for underground mining. The Project is estimated to realize an after-tax NPV of US\$458M at a discount rate of 5%.

The estimated annual production and LOM cash flows for the Los Ricos South Project are summarized in Table 22.2 and annual cash flows are presented in Figure 22.1. An annual summary of the cash flow model is provided in Table 22.5.

<b>Assumption / Result</b>	<b>Unit</b>	<b>Value</b>	<b>Assumption / Result</b>	<b>Unit</b>	<b>Value</b>
Total UG Process Plant Feed Mined	kt	4,325	Net Revenue	US\$M	2,049
Total OP Process Plant Feed Mined	kt	9,367	Initial Capital Costs	US\$M	148
Total Process Plant Feed	kt	13,692	Expansion Capital Costs	US\$M	69
Open Pit Strip Ratio	ratio	7.4	Sustaining Capital Costs	US\$M	72
Silver Grade	g/t	125	OP Mining Costs	\$/t Feed	12.13
Gold Grade	g/t	1.18	UG Mining Costs	\$/t Feed	43.85
AgEq Grade	g/t	217	LOM Operating Cost	\$/t Feed	51.78
Silver Recovery	%	86	Operating Cash Cost	US\$/oz AgEq	8.15
Gold Recovery	%	95	All-in Sustaining Cost	US\$/oz AgEq	9.02
Silver Price	US\$/oz	23.75	Mine Life	Yrs	11.2
Gold Price	US\$/oz	1,850	Average Process Plant Rate	tpd	3,359
Copper Price	US\$/lb	4.00	Pre-Tax NPV (5% rate)	US\$M	708
Payable Silver Metal	Moz	46.8	After-Tax NPV (5% rate)	US\$M	458
Payable Gold Metal	koz	493.1	Pre-Tax IRR	%	49
Payable Copper	Mlb	13.6	After-Tax IRR	%	37
Payable AgEq	Moz	87.5	After-Tax Payback Period	Years	2.3

**FIGURE 22.1 ANNUAL CASH FLOW PROFILE**



## 22.4 SENSITIVITIES

The Los Ricos South Project economics were examined with a sensitivity analysis for several key variables. The results of the sensitivity analyses on the after-tax NPV with a 5% discount rate are shown in Tables 22.3 and 22.4.

**TABLE 22.3  
SILVER AND GOLD PRICE SENSITIVITY NPV, IRR AND PAYBACK**

Sensitivity	-28%	-20%	-12%	Base Case	+9%	+26%	+39%
Silver Price (US\$/oz)	17	19	21	<b>23.75</b>	26	30	33
Gold Price (US\$/oz)	1,324	1,480	1,636	<b>1,850</b>	2,025	2,337	2,571
After-Tax NPV (5%) (US\$M)	185	266	346	<b>458</b>	548	710	831
After-Tax IRR (%)	20	25	30	<b>37</b>	42	50	56
After-Tax Payback (years)	3.6	3.0	2.6	<b>2.3</b>	2.1	1.7	1.6

**TABLE 22.4  
CAPITAL AND OPERATING COST SENSITIVITY OF NPV AND IRR**

Sensitivity	-20%	-10%	Base Case	10%	20%
Operating Costs – NPV <sub>5</sub> (US\$M)	526	492	<b>458</b>	423	389
Operating Costs – IRR (%)	41	39	<b>37</b>	35	33
Capital Costs – NPV <sub>5</sub> (US\$M)	495	476	<b>458</b>	439	420
Capital Costs – IRR (%)	45	41	<b>37</b>	33	30

The after-tax base case NPV's and IRR's are most sensitive to metal prices followed by operating costs and capital costs.

**TABLE 22.5**  
**CASH FLOW MODEL SUMMARY**

Item	Units	Totals	Year													
			-2	-1	1	2	3	4	5	6	7	8	9	10	11	12
<b>Revenue</b>	\$M	<b>2,049.4</b>	-	-	<b>131.9</b>	<b>174.7</b>	<b>180.9</b>	<b>230.2</b>	<b>224.6</b>	<b>205.9</b>	<b>183.1</b>	<b>158.1</b>	<b>186.9</b>	<b>220.8</b>	<b>141.0</b>	<b>11.3</b>
(-) Operating Cost	\$M	<b>(708.9)</b>	-	-	(43.1)	(54.4)	(57.8)	(84.0)	(84.0)	(83.7)	(72.8)	(57.6)	(57.3)	(52.4)	(53.1)	(8.8)
(-) Mining Tax	\$M	<b>(10.2)</b>	-	-	(0.7)	(0.9)	(0.9)	(1.2)	(1.1)	(1.0)	(0.9)	(0.8)	(0.9)	(1.1)	(0.7)	(0.1)
(-) Capital Spending	\$M	<b>(288.5)</b>	(60.7)	(87.5)	(10.3)	(14.5)	(77.9)	(15.2)	(9.3)	(9.6)	(0.2)	-	-	(2.6)	-	(0.6)
(+) Salvage Value	\$M	<b>8.0</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	8.0
(-) Closure	\$M	<b>(13.0)</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	(13.0)
<b>Pre-Tax Cash Flow</b>	<b>\$M</b>	<b>1,036.7</b>	<b>(60.7)</b>	<b>(94.7)</b>	<b>77.8</b>	<b>104.9</b>	<b>44.3</b>	<b>129.9</b>	<b>130.1</b>	<b>111.6</b>	<b>109.3</b>	<b>99.7</b>	<b>128.6</b>	<b>164.6</b>	<b>87.2</b>	<b>4.1</b>
(-) Income Tax	\$M	<b>(346.0)</b>	-	-	(19.4)	(29.8)	(23.2)	(36.8)	(36.8)	(30.4)	(29.6)	(26.3)	(36.4)	(48.9)	(27.7)	(0.7)
<b>After-Tax Cash Flow</b>	<b>\$M</b>	<b>690.7</b>	<b>(60.7)</b>	<b>(94.7)</b>	<b>58.4</b>	<b>75.1</b>	<b>21.1</b>	<b>93.1</b>	<b>93.3</b>	<b>81.2</b>	<b>79.7</b>	<b>73.4</b>	<b>92.3</b>	<b>115.7</b>	<b>59.5</b>	<b>3.5</b>
Cumul After-Tax Cash Flow	\$M	-	(60.7)	(155.4)	(97.0)	(21.9)	(0.8)	92.3	185.6	266.8	346.5	419.8	512.1	627.7	687.2	690.7
<b>Disc After-Tax Cash Flow (5%)</b>	<b>\$M</b>	<b>457.5</b>	<b>(60.7)</b>	<b>(92.4)</b>	<b>54.3</b>	<b>66.5</b>	<b>17.8</b>	<b>74.8</b>	<b>71.3</b>	<b>59.1</b>	<b>55.2</b>	<b>48.5</b>	<b>58.0</b>	<b>69.3</b>	<b>33.9</b>	<b>1.9</b>
Disc Cumul After-Tax Cash Flow	\$M	-	(60.7)	(153.1)	(98.8)	(32.4)	(14.6)	60.2	131.5	190.6	245.9	294.4	352.4	421.7	455.6	457.5

## **23.0 ADJACENT PROPERTIES**

The Hostotipaquillo region hosts a number of low-sulphidation epithermal precious metal prospects and deposits.

The Santo Domingo silver-gold deposit of Stroud Resources Ltd. is located approximately 10 km to the north of Los Ricos South. Stroud has owned and explored the Santo Domingo Property since 1989 and carried out five drilling campaigns between 1999 and 2012 that totalled 45 diamond drill holes (McBride, 2017). The Santo Domingo Deposit was exploited in the early seventeenth century as part of the San Pedro Anasco mining area. McBride (2017) estimates a Measured and Indicated Mineral Resource to be 6.01 Mt averaging 0.47 g/t gold and 101 g/t silver containing 25.7 Moz of AgEq and an Inferred Mineral Resource of 3.48 Mt containing 13.4 Moz of AgEq.

**The Authors note that mineralization located on adjacent properties is not indicative of mineralization present on the Los Ricos South Property.**

## **24.0 OTHER RELEVANT DATA AND INFORMATION**

### **24.1 PROJECT RISKS AND OPPORTUNITIES**

Risks and opportunities have been identified for the Project. The anticipated impact on the Project is listed in brackets after each item, using low-medium-high categories.

#### **24.1.1 Risks**

##### **24.1.1.1 Mineral Resource Estimate**

- Future metal prices could cause a revision of the Mineral Resource Estimate. (low)

##### **24.1.1.2 Open Pit Mining**

- More detailed preparation of a contractor mining cost could result in higher unit costs. (low to medium)
- Mining around historical underground workings may create additional productivity and safety impacts. The historical workings stope voids that are located within the Abra open pit could present a slope stability risk. Geotechnical analysis of the open pit design is recommended. (low)
- Pit slope geotechnical studies could impact favorably or negatively on the pit designs. Flattening of slopes could have a significant impact on the Abra open pit waste quantity. (low)

##### **24.1.1.3 Underground Mining**

- Further geotechnical analysis is required to determine the safe stand-off distance from historical workings drifts, and the support regime. (medium)
- Cost quotations from mining contractors could result in higher unit costs. (low to medium)
- Grade estimation of the backfill material in the mined-out historical workings stopes is based on limited data and requires systematic analysis before advancing the Project to the next level of engineering study. (low)
- Current 3-D void mapping shows some issues: veins and historical workings stope voids don't match exactly in some areas. (low)
- Current 3-D drifts are just a representation of the strings of previous designs and are all perfectly shaped. Stand-off distances for new development will require flexibility. (low)

- The amount of caving in the historical workings is unknown. The historical workings voids may have expanded or may be filled in. The solubility of the material is also unknown. (low)
- Hydrogeology is not well understood. Water re-charge rates are likely low, however, are currently unknown. Initial dewatering assumes a minimal refill rate, and it may actually take longer to draw down the water if the re-charge rate is higher. (low)
- Sequencing around historical workings void areas is complex, and special attention needs to be paid to the mining schedule to ensure access to mining areas is not cut off by mining stopes out of sequence. Additionally, higher costs will be incurred to drive bypass drifts around historical workings or to drift through areas filled with cemented paste backfill. (low)
- Historical workings void backfill material may not flow as well as desired, and may require blasting. (low)

#### **24.1.1.4 Process Plant and Tailings**

- Metallurgical recoveries. The preliminary testwork has indicated high recovery and production from the Los Ricos South mineralization. Existing assumptions could change and process flow alternatives could lead to reduced metal production, higher OPEX, and circuit changes. Test work optimization should be conducted in all areas. (medium)
- There is a possibility that fines in filtered tailings may need to be removed to achieve desirable rheology for paste backfill. (low to medium)
- Water inflow to storage dam. Presently there is only one main water source to serve the overall site. Secondary sources are the collection pond at the dry stack tailings facility and from the historical underground mine workings. The volume reported on a yearly basis is just sufficient to serve the make-up water demands. An unexpected decrease in surface water collection to this dam would affect the Project and may require reduction in processing ability. Confirmation of actual surface dam volumes and hydrology characteristics is required, with possible review of access to ground water via wells. (low)
- Suitable process plant site location. The proposed site location is located on a hillside and has large variations in elevations and could pose potential construction issues. This could have an effect on construction direct costs. Detailed review of the proposed site location with associated costing related to the area is required and should be addressed in the next phase of engineering study. (low)

#### **24.1.1.5 Financial Aspects**

- Lower metal prices would decrease the Project economics. However, sensitivity analysis indicates that a 20% decrease in metal prices would still result in a financially attractive Project. (low)

#### **24.1.2 Opportunities**

##### **24.1.2.1 Mineral Resource Estimate**

- The Eagle Veins remain open along strike to the northwest and down dip. The historical Abra pay shoot remains open down plunge. Historical workings are situated below the bottom of the current Mineral Resource. There is an opportunity to extend the veins with additional drilling. (medium)
- The Cerro Colorado Veins remain open along strike to the northwest and down dip. There is an opportunity to improve the classification with infill drilling and extend the Mineral Resource. (medium)

##### **24.1.2.2 Open Pit Mining**

- There is an opportunity to increase the size of the open pit designs, especially using higher metal prices than those used for pit optimizations. (low)

##### **24.1.2.3 Underground Mining**

- It may be possible to slash out some of the historical workings levels at less cost than driving new levels. (low)
- The grade of the historical workings void backfill material may be higher than what has been applied. (low)
- Investigation into re-use of the historical workings shaft may provide less expensive haulage costs. Currently the shaft is planned to be used as a dewatering sump, however, if it could be used as a shaft there might be financial benefit. (low)
- The pastefill cement content required may be lower than currently estimated. Geotechnical testwork is needed. (low)
- A secondary portal and ramp access from the Abra open pit, sized for surface haul trucks, may result in a reduction of haulage costs. (low)

##### **24.1.2.4 Process Plant and Tailings**

- The preliminary testwork has indicated high metallurgical recovery and production for the Los Ricos South mineralized material. Existing assumptions and process flow alternatives could change with metallurgical optimization that would lead to higher

metal production, lower OPEX, and improved circuit changes. This will have a definite positive effect to Project overall cash flow. Test work optimization should be conducted in all areas. (low)

- Refurbished equipment available on the market could be inserted into specific areas – i.e. mills, crushers. Capital cost reduction and a decrease in the Project construction timeframe could result. (low)

#### **24.1.2.5 Financial Aspects**

- A 9% improvement in the metal prices would provide a \$100M increase in After-Tax NPV (using a discount rate of 5%) to \$548M with an IRR of 42%. (low)



## 25.0 INTERPRETATION AND CONCLUSIONS

GoGold Resources Inc.'s 100% owned Los Ricos South Silver-Gold Property, in northern Jalisco State, Mexico, is situated in the Hostotipaquillo mining district. The Property contains several former operating underground gold and silver mines that produced 33.3 Moz Ag and 233,495 oz Au between 1914 and 1930 from approximately 2.4M tons of mineralized material.

The Los Ricos South Property comprises 14 concessions covering 10,858 hectares around the historical underground Cinco Minas silver and gold mine. The Property is not subject to royalties. The Project is situated 75 km northwest of the City of Guadalajara, Mexico at latitude 21° 02' N and longitude 103° 56' W.

The Los Ricos South mining district contains approximately seven gold-silver deposits located along a 4 km portion of the Cinco Minas epithermal quartz vein system. The Cinco Minas quartz vein strikes northwest-southeast and dips approximately 65° to the west. The vein varies in width from 5 to 30 m, outcrops on surface and has been mined down-dip for 850 m. Late cross-cutting faults have brecciated, cut and displaced the vein laterally and vertically. The Ag-Au mineralization is classified as a low-sulphidation epithermal deposit.

GoGold acquired the Property in 2019 and carried out an exploration program to evaluate the potential for near surface mineralization amenable to bulk mining. In August, 2020, the Company signed an agreement with the Ejido of Cinco Minas, which owns the surface rights over all of the concessions included in this PEA. The agreement allows GoGold to mine and explore the 1,280 hectares of land that is owned by the local Ejido for a period of 12 years with an option to renew for a further 12 years.

As of the effective date of this Technical Report, GoGold completed 493 HQ size drill holes on the Los Ricos South Property over a strike length of 1,050 m, from the El Abra workings at the south end to the Eagle outcrops at the northern end of the vein. An additional 22 drill holes were completed on the Cerro Colorado area.

In addition to the exploration work completed, the Authors established that the Los Ricos South Abra and Eagle mineral deposits contain an additional Exploration Target as follows: 1.8 to 2.2 Mt at 375 to 425 g/t AgEq for 22 to 30 Moz AgEq. The Exploration Target is based on the estimated strike length, depth and thickness of the known mineralization.

The Authors have evaluated drilling procedures, sample preparation, analyses and security and are of the opinion that the drill core logging procedures employed, and the sampling methods used were thorough and have provided assay and geological data of good quality and satisfactory for use in the current Mineral Resource Estimate.

The Authors completed an Updated Mineral Resource Estimate for the Los Ricos South Project. Measured plus Indicated Mineral Resources total 11.1 Mt at 1.43 g/t Au, 151 g/t Ag, and 0.11% Cu, or 3.53 g/t AuEq, or 276 g/t Ag Eq, for 511 koz Au, 53,841 koz Ag and 27.3 Mlb Cu, or 1,259 koz AuEq, or 98,582 koz AgEq. Inferred Mineral Resources total 2.3 Mt at 1.02 g/t Au, 85 g/t Ag, 0.17% Cu, or 2.36 g/t AuEq, or 185 g/t AgEq, for 75 koz Au, 6,230 koz Ag and 8.6 Mlb Cu, or 174 koz AuEq, or 13,601 koz AgEq. The classification of Measured, Indicated, and

Inferred Mineral Resources conforms to CIM (2014) Definition Standards and Best Practices Guidelines (2019).

The Updated Mineral Resource Estimate reported in this Technical Report is based on drilling and assay data provided by GoGold and compiled, verified and validated by the Authors. The drilling database consists of 591 drill holes totalling 94,690 m, which were used to create the constraining wireframes employed for the Mineral Resource Estimate. The Authors consider that the current drill hole database, methodologies, and analytical procedures are appropriate for the estimation of a Mineral Resource.

The Eagle and Cerro Colorado Veins remain open along strike to the northwest and down dip, and the Abra Veins remain open down dip. Further drilling may provide additional Mineral Resources.

The Los Ricos South Project will consist of both underground and open pit mining operations. Underground mining will commence at the start of production. Open pit mining will be initiated in Year 3 and there will be an underground / open pit overlap period of five years. The duration of all mining activity will be 12 years after the start of commercial production. During the first three years of production when there is only underground mining, the processing rate is 1,750 tpd. This ramps up to 4,000 tpd when open pit mining is able to deliver feed to the process plant. The underground will continue to deliver 1,750 tpd with the open pit providing the remainder until the underground mine is depleted in Year 7.

The dominant underground mining method is longitudinal retreat sublevel longhole stoping with cemented paste backfill. In the Abra Veins the mining method is by transverse access instead of longitudinal access around historical workings. All underground mining will be completed by contractor. Overall dilution is estimated at 29% and mining recovery is estimated at 94%. Levels are spaced at a nominal sublevel interval of 20 m. Longitudinal stopes are a maximum of 25 m along strike, with a width limited by vein thickness. Stope widths at Eagle average 11.1 m and at Abra average 6.4 m. Haulage trucks will typically be 30 t, with 7 t and 10 t load-haul-dump units. Steady-state production of 1,780 tpd (nominally 640 ktpa) will be reached midway through YR1 after a short ramp-up period, and full production will be maintained until the end of UG mine life at the end of YR7. Over the life-of-mine (“LOM”), a total of 4.33 Mt of mineralized material will be recovered from the UG, containing 24.1 Moz Ag, 272 koz Au and 9.5 kt Cu, equivalent to 52.1 Moz AgEq.

The Los Ricos South Deposits are near surface and lend themselves to conventional open pit mining methods. A contractor will be engaged to mine the Abra, Cerro Colorado North and Cerro Colorado South open pits. The contractor will undertake all drill and blast, loading, hauling, and mine site maintenance activities. The owner will provide overall mine management and technical services. Mining will typically be accomplished on 5 m high benches, using conventional equipment such as hydraulic excavators, front-end loaders and 90 t haulage trucks. Dilution in mineralized material is estimated at 10% and mining losses are estimated at 3%. The overall strip ratio for open pit mining is 7.4:1. Over the LOM a total of 9.4 Mt of mineralized material will be mined from open pits, at average grades of 0.82 g/t Au, 102 g/t Ag, 0.03% Cu equivalent to 178.3 g/t AgEq. Waste rock will be transported to nearby storage facilities, and mineralized material will be hauled to the primary crusher or placed on temporary stockpiles.

The process plant design is based on a nominal 1,750 tpd (Years 1-3) and a nominal 4,000 tpd (Years 4-12) throughput of mineralized material with average grades of 1.18 g/t Au, 125 g/t Ag, and 0.09% Cu. The process plant flowsheet design includes conventional crushing, a semi-autogenous (“SAG”) mill with a pebble crusher, and a closed-circuit ball mill circuit with cyclones to ensure product (P<sub>80</sub>) size feed to the leaching circuit. The mineralized material is thickened in a pre-leach thickener to increase slurry density and decrease slurry volume. The thickener overflow water is recirculated to feed the grinding circuit.

Upon completing the required leaching retention time, the discharge slurry and loaded solution is fed to a post-leach thickener and then filtered in three dewatering filters to wash and recover pregnant solution for recovery within the Merrill Crowe and SART system, as well as to produce “dry” stackable tailings with approximately 16% moisture. Water recovery and management at the LRS site is very important and the dry stack tailings will aid in the tailings deposition.

The gold-silver-copper-bearing solution is fed to a conventional Merrill Crowe plant for the recovery of the gold and silver precipitate and subsequent doré. Discharge from the Merrill Crowe plant feeds the SART process to recover a saleable Cu<sub>2</sub>S precipitate and regenerate the soluble copper associated cyanide. The high cyanide solution from the SART is recycled for repulping prior to leaching. Process water recycled from the overall plant, including thickeners and dewatering pressure filters, is used for the plant’s required process water. Make-up water is provided by a single surface dam and pumped to the process plant.

Process plant recoveries are estimated at 95% Au and 84% Ag Phase 1, 86% Ag Phase 2, with 77% Cu for leaching and 95% Cu for SART. The process plant will contain a laboratory. Electrical power to the Los Ricos South site will be supplied by constructing a 14 km 35 kVA line off the existing 115 kVA line at Hostotipaquillo from the Yesca Dam power station.

The Company will not be supplying on-site housing. Employees and contractors will commute from nearby towns. The Company will construct infrastructure for staff offices, warehousing, maintenance facilities, change rooms, cafeteria, diesel fuel tank farm and fueling station, explosives storage, and water and sewage treatment. The contractors will establish infrastructure for offices and warehousing.

A 20 ha site will be prepared for dry stack tailings with a water management system. The tailings will also be used for cemented paste backfill in the underground mine. The paste backfill plant will be located at the process plant.

Exploration activities are currently being conducted under a permit from the Mexican government Secretary of the Environment and Natural Resources (SEMARNAT). An extensive list of Federal and State permits will be required before mining can commence, along with environmental impact studies. GoGold has engaged the Mexican firm CIMA to conduct an environmental baseline study. CIMA has completed a socio-economic baseline study that considers economic, cultural, social, demographic, and geographical aspects of the local communities.

Underground OPEX mining costs have been estimated to average \$43.85/t processed over the LOM. Open pit mining costs have been estimated to average \$1.64/t material mined or \$12.13/t processed during the open pit production years. The average LOM mining cost is estimated at

\$22.15/t processed. Processing costs (\$27.10/t processed, including tailings handling) and site G&A (\$2.52/t processed) contribute to a total LOM average cost estimated at \$51.78/t processed. The average operating cash cost over the production years is estimated at \$8.15/oz AgEq, and the average all-in sustaining cost is estimated at \$9.02/oz AgEq (not including expansion capital costs).

Initial capital costs are estimated at \$148M and include a 15% contingency. Expansion capital costs to increase the process plant from 1,750 tpd to 4,000 tpd, and to conduct open pit pre-production stripping and development, are estimated at \$69M. Sustaining capital costs over the production years are estimated at \$72M mainly for underground mine development and increases to the dry stack tailings storage facility.

Using metal prices based on approximate August 31, 2023 three-year monthly trailing averages of US\$1,850/oz Au, US\$23.75/oz Ag and US\$4.00/lb Cu, the Project has an estimated pre-tax NPV at a 5% discount rate of \$708M and an IRR of 49%. After-tax NPV and IRR are estimated at \$458M and 37%, respectively. Simple payback of initial capital for underground mining is 2.3 years. Mexican corporate income tax is levied at a rate of 35% on the net taxable income, and the Project is subject to a 0.5% NSR mining tax payable to the Mexican government. Project economics are most sensitive to metal prices. Project economics are more sensitive to overall operating costs than capital costs.

## 26.0 RECOMMENDATIONS

Based on the results of GoGold’s exploration work from 2019 to 2023, and the positive results of this PEA, the Authors recommend that GoGold continue with Project development activities on the Los Ricos South Property and proceed with a Pre-Feasibility Study (“PFS”). To advance the Los Ricos South Project and initiate a PFS, additional drilling is recommended by the Authors for metallurgical testwork (including mineralogical studies and comminution, process recovery and gravity concentration tests), geotechnical studies (open pit and underground mines, process plant location) and hydrogeological studies. Further study of process plant and mine design, infrastructure requirements, environmental/permitting, and Project economics would be part of the PFS. In addition, a minimal program for initial drill testing the Exploration Target is also recommended.

A work program with an estimated budget of US\$3.7 M is proposed, as presented in Table 26.1.

<b>Description</b>	<b>Amount (US\$)</b>
Metallurgical and Geotechnical Drilling	500,000
Sample Preparation and Assay	50,000
Metallurgical Variability Testwork	550,000
Geotechnical and Hydrology Study	200,000
Pre-Feasibility Study	1,500,000
Exploration Target Drill Testing	250,000
Camp Support and Wages	150,000
Capital Equipment	50,000
<b>Sub-total</b>	<b>3,250,000</b>
Contingency (15%)	488,000
<b>Total</b>	<b>3,738,000</b>

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Zoffman, G. F. 1926. Annual Report for the Year 1926, Cinco Minas Company.

Zoffman, G. F. 1927. Report on Ore Reserves in the Mine as of January 1<sup>st</sup>, 1927.  
Internal Company Report prepared for the Cinco Minas Company.

## 28.0 CERTIFICATES

### CERTIFICATE OF QUALIFIED PERSON

#### ANDREW BRADFIELD, P. ENG.

I, Andrew Bradfield, P. Eng., residing at 5 Patrick Drive, Erin, Ontario, Canada, N0B 1T0, do hereby certify that:

1. I am an independent mining engineer contracted by P&E Mining Consultants.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I am a graduate of Queen’s University, with an honours B.Sc. degree in Mining Engineering in 1982. I have practiced my profession continuously since 1982. I am a Professional Engineer of Ontario (License No.4894507). I am also a member of the National CIM.

I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.

My summarized career experience is as follows:

- Various Engineering Positions – Palabora Mining Company, 1982-1986
- Mines Project Engineer – Falconbridge Limited, 1986-1987
- Senior Mining Engineer – William Hill Mining Consultants Limited, 1987-1990
- Independent Mining Engineer, 1990-1991
- GM Toronto – Bharti Engineering Associates Inc, 1991-1996
- VP Technical Services, GM of Australian Operations – William Resources Inc, 1996-1999
- Independent Mining Engineer, 1999-2001
- Principal Mining Engineer – SRK Consulting, 2001-2003
- COO – China Diamond Corp, 2003-2006
- VP Operations – TVI Pacific Inc, 2006-2008
- COO – Avion Gold Corporation, 2008-2012
- Independent Mining Engineer, 2012-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 2, 3, 15, 19, 22 and 24 and co-authoring Sections 1, 16, 18, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

**{SIGNED AND SEALED}**

**[Andrew Bradfield]**

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Andrew Bradfield, P.Eng.

## CERTIFICATE OF QUALIFIED PERSON

### JARITA BARRY, P.GEO.

I, Jarita Barry, P.Geo., residing at 9052 Mortlake-Ararat Road, Ararat, Victoria, Australia, 3377, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I am a graduate of RMIT University of Melbourne, Victoria, Australia, with a B.Sc. in Applied Geology. I have worked as a geologist for over 18 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by Engineers and Geoscientists British Columbia (License No. 40875) and Professional Engineers and Geoscientists Newfoundland & Labrador (License No. 08399), and I am registered as a Temporary Registrant with Professional Geoscientists Ontario (Registration No. 3888). I am also a member of the Australasian Institute of Mining and Metallurgy of Australia (Member No. 305397).

I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.

My relevant experience for the purpose of the Technical Report is:

- Geologist, Foran Mining Corp. 2004
- Geologist, Aurelian Resources Inc. 2004
- Geologist, Linear Gold Corp. 2005-2006
- Geologist, Búscore Consulting 2006-2007
- Consulting Geologist (AusIMM) 2008-2014
- Consulting Geologist, P.Geo. (APEGBC/AusIMM) 2014-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 11 and co-authoring Sections 1, 12, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Initial Mineral Resource Estimate of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of July 28, 2020, and a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

**{SIGNED AND SEALED}**

**[Jarita Barry]**

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Jarita Barry, P.Geo.

## CERTIFICATE OF QUALIFIED PERSON

### FRED BROWN, P.GEO.

I, Fred Brown, of PO Box 332, Lynden, WA, USA, do hereby certify that:

1. I am an independent geological consultant and have worked as a geologist continuously since my graduation from university in 1987.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I graduated with a Bachelor of Science degree in Geology from New Mexico State University in 1987. I obtained a Graduate Diploma in Engineering (Mining) in 1997 from the University of the Witwatersrand and a Master of Science in Engineering (Civil) from the University of the Witwatersrand in 2005. I am registered with the Association of Professional Engineers and Geoscientists of British Columbia as a Professional Geoscientist (171602) and the Society for Mining, Metallurgy and Exploration as a Registered Member (#4152172).

I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.

My relevant experience for the purpose of the Technical Report is:

- Underground Mine Geologist, Freegold Mine, AAC 1987-1995
- Mineral Resource Manager, Vaal Reefs Mine, AngloGold 1995-1997
- Resident Geologist, Venetia Mine, De Beers 1997-2000
- Chief Geologist, De Beers Consolidated Mines 2000-2004
- Consulting Geologist 2004-2008
- P&E Mining Consultants Inc. – Sr. Associate Geologist 2008-Present

4. I have visited the Property that is the subject of this Technical Report on August 15-16, 2019.
5. I am responsible for co-authoring Sections 1, 14, 25, and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Initial Mineral Resource Estimate of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of July 28, 2020, and a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

***{SIGNED AND SEALED}***

***[Fred Brown]***

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Fred Brown, P.Geo.

## CERTIFICATE OF QUALIFIED PERSON

### DAVID BURGA, P.GEO.

I, David Burga, P. Geo., residing at 3884 Freeman Terrace, Mississauga, Ontario, Canada, L5M 6P6 do hereby certify that:

1. I am an independent geological consultant contracted by P & E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I am a graduate of the University of Toronto with a Bachelor of Science degree in Geological Sciences (1997). I have worked as a geologist for over 20 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Association of Professional Geoscientists of Ontario (License No 1836).

I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.

My relevant experience for the purpose of the Technical Report is:

- Exploration Geologist, Cameco Gold 1997-1998
- Field Geophysicist, Quantec Geoscience 1998-1999
- Geological Consultant, Andeburg Consulting Ltd. 1999-2003
- Geologist, Aeon Egmond Ltd. 2003-2005
- Project Manager, Jacques Whitford 2005-2008
- Exploration Manager – Chile, Red Metal Resources 2008-2009
- Consulting Geologist 2009-Present

4. I have visited the Property that is the subject of this Technical Report on May 16-17, 2023.
5. I am responsible for authoring Section 10, and co-authoring Sections 1, 12, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the Property that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Initial Mineral Resource Estimate of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of July 28, 2020, and a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

***{SIGNED AND SEALED}***

***[David Burga]***

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David Burga, P.Geo.

## CERTIFICATE OF QUALIFIED PERSON

### D. GRANT FEASBY, P.ENG.

I, D. Grant Feasby, P. Eng., residing at 12,209 Hwy 38, Tichborne, Ontario, Canada, K0H 2V0, do hereby certify that:

1. I am currently the Owner and President of:  
FEAS - Feasby Environmental Advantage Services  
38 Gwynne Ave, Ottawa, Ontario, Canada, K1Y1W9
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I graduated from Queens University in Kingston Ontario, in 1964 with a Bachelor of Applied Science in Metallurgical Engineering, and a Master of Applied Science in Metallurgical Engineering in 1966. I am a Professional Engineer registered with Professional Engineers Ontario. I have worked as a metallurgical engineer for over 50 years since my graduation from university.

I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.

My relevant experience for the purpose of the Technical Report has been acquired by the following activities:

- Metallurgist, Base Metal Processing Plant.
- Research Engineer and Lab Manager, Industrial Minerals Laboratories in USA and Canada.
- Research Engineer, Metallurgist and Plant Manager in the Canadian Uranium Industry.
- Manager of Canadian National Programs on Uranium and Acid Generating Mine Tailings.
- Director, Environment, Canadian Mineral Research Laboratory.
- Senior Technical Manager, for large gold and bauxite mining operations in South America.
- Expert Independent Consultant associated with several companies, including P&E Mining Consultants, on mineral processing, environmental management, and mineral-based radiation assessment.

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Section 20 and co-authoring Sections 1, 25 and 26 of this Technical Report.
6. I am independent of the issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Initial Mineral Resource Estimate of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of July 28, 2020, and a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

**{SIGNED AND SEALED}**

**[D. Grant Feasby]**

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D. Grant Feasby, P.Eng.

## CERTIFICATE OF QUALIFIED PERSON

### EUGENE PURITCH, P.ENG., FEC, CET

I, Eugene Puritch, P. Eng., FEC, CET, residing at 44 Turtlecreek Blvd., Brampton, Ontario, Canada, L6W 3X7, do hereby certify that:

1. I am an independent mining consultant and President of P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen’s University. In addition, I have also met the Professional Engineers of Ontario Academic Requirement Committee’s Examination requirement for Bachelor’s Degree in Engineering Equivalency. I am a mining consultant currently licensed by the: Professional Engineers and Geoscientists New Brunswick (License No. 4778); Professional Engineers, Geoscientists Newfoundland and Labrador (License No. 5998); Association of Professional Engineers and Geoscientists Saskatchewan (License No. 16216); Ontario Association of Certified Engineering Technicians and Technologists (License No. 45252); Professional Engineers of Ontario (License No. 100014010); Association of Professional Engineers and Geoscientists of British Columbia (License No. 42912); and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (No. L3877). I am also a member of the National Canadian Institute of Mining and Metallurgy.

I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.

I have practiced my profession continuously since 1978. My summarized career experience is as follows:

- Mining Technologist - H.B.M. & S. and Inco Ltd., 1978-1980
- Open Pit Mine Engineer – Cassiar Asbestos/Brinco Ltd., 1981-1983
- Pit Engineer/Drill & Blast Supervisor – Detour Lake Mine, 1984-1986
- Self-Employed Mining Consultant – Timmins Area, 1987-1988
- Mine Designer/Resource Estimator – Dynatec/CMD/Bharti, 1989-1995
- Self-Employed Mining Consultant/Resource-Reserve Estimator, 1995-2004
- President – P&E Mining Consultants Inc, 2004-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Sections 1, 14, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the Project that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Initial Mineral Resource Estimate of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of July 28, 2020, and a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

**{SIGNED AND SEALED}**

**[Eugene Puritch]**

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Eugene Puritch, P.Eng., FEC, CET

## CERTIFICATE OF QUALIFIED PERSON

### D. GREGORY ROBINSON, P. ENG.

I, David Gregory (Greg) Robinson, P. Eng. (ON), residing at 1236 Sandy Bay Road, Minden, Ontario, Canada, K0M 2K0, do hereby certify that:

1. I am an independent engineering consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I am a graduate of Dalhousie University, Queens University and Cornell University, and Professional Engineer of Ontario (License No. 100216726).

I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.

I have practiced my profession continuously since 2008. My summarized career experience is as follows:

- Associate Engineer, P&E Mining Consultants Aug 2017 - Present
- Mine Engineer, Lac des Iles Mine, North American Palladium May 2016 – Jun 2017
- Senior Underground Engineer, Phoenix Gold, Rubicon Minerals Sep 14 – Jan 2016
- Mine Engineer, Diavik Diamond Mine, Rio Tinto Diamonds Sep 2011 – Sep 2014
- Mine Engineer, Bengalla Mine, Rio Tinto Coal and Allied Dec 2008 – Sep 2011
- EIT, Creighton Mine, Vale-Inco May 2008 – Dec 2008

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Sections 1, 16, 21, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.
7. I have had prior involvement with the Property that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

***{SIGNED AND SEALED}***

***[D. Gregory Robinson]***

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D. Gregory Robinson, P.Eng.



## CERTIFICATE OF QUALIFIED PERSON

### WILLIAM STONE, PH.D., P.GEO.

I, William Stone, Ph.D., P.Geo, residing at 4361 Latimer Crescent, Burlington, Ontario, Canada, do hereby certify that:

1. I am an independent geological consultant contracted by P & E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I am a graduate of Dalhousie University with a Bachelor of Science (Honours) degree in Geology (1983). In addition, I have a Master of Science in Geology (1985) and a Ph.D. in Geology (1988) from the University of Western Ontario. I have worked as a geologist for a total of 35 years since obtaining my M.Sc. degree. I am a geological consultant currently licensed by the Professional Geoscientists of Ontario (License No 1569).

I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.

My relevant experience for the purpose of the Technical Report is:

- Contract Senior Geologist, LAC Minerals Exploration Ltd. 1985-1988
- Post-Doctoral Fellow, McMaster University 1988-1992
- Contract Senior Geologist, Outokumpu Mines and Metals Ltd. 1993-1996
- Senior Research Geologist, WMC Resources Ltd. 1996-2001
- Senior Lecturer, University of Western Australia 2001-2003
- Principal Geologist, Geoinformatics Exploration Ltd. 2003-2004
- Vice President Exploration, Nevada Star Resources Inc. 2005-2006
- Vice President Exploration, Goldbrook Ventures Inc. 2006-2008
- Vice President Exploration, North American Palladium Ltd. 2008-2009
- Vice President Exploration, Magma Metals Ltd. 2010-2011
- President & COO, Pacific North West Capital Corp. 2011-2014
- Consulting Geologist 2013-2017
- Senior Project Geologist, Anglo American 2017-2019
- Consulting Geoscientist 2020-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for authoring Sections 4-9, 23 and co-authoring Sections 1, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the Property that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Technical Report and Initial Mineral Resource Estimate of the Los Ricos South Project, Jalisco State, Mexico” with an effective date of July 28, 2020, and a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

***{SIGNED AND SEALED}***

***[William Stone]***

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Dr. William Stone, P.Geo.

## **CERTIFICATE OF QUALIFIED PERSON**

### **DAVID SALARI, P.ENG.**

I, David Salari, P.Eng., of 125 Bronte Road, Unit 503, Oakville, Ontario, Canada, L6L 0H1, do hereby certify that:

1. I am an independent metallurgical engineer with an office at Suite 300-10, 1100 Burloak Drive, Burlington, Ontario, Canada, L6L 2Y8.
2. This certificate applies to the Technical Report titled “Updated Mineral Resource Estimate and Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, (The “Technical Report”) with an effective date of September 12, 2023.
3. I am a graduate University of Toronto with a Bachelor's of Applied Science (BASc) – Metallurgy and Material Science. I have been actively involved in mining and mineral processing since 1980 with extensive experience in metallurgical and mill testing and design, mill capital and operating costs, construction, commissioning, and mill operations.

I am a member in good standing of the Professional Engineers Ontario - #40416505 and I am the designated P.Eng. for D.E.N.M. Engineering Ltd. – Certificate of Authorization – Professional Engineers Ontario - #100102038 and Designation as a Consulting Engineer – Professional Engineers Ontario - # 4012.

I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.

4. I have visited the Property that is the subject of this Technical Report on May 15-16, 2021.
5. I am responsible for authoring Sections 13 and 17 and co-authoring Sections 1, 18, 21, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the Property that is the subject of this Technical Report. I was a “Qualified Person” for a Technical Report titled “Preliminary Economic Assessment of the Los Ricos South Project, Jalisco, Mexico”, with an effective date of January 20, 2021.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: September 12, 2023

Signing Date: October 27, 2023

***{SIGNED AND SEALED}***

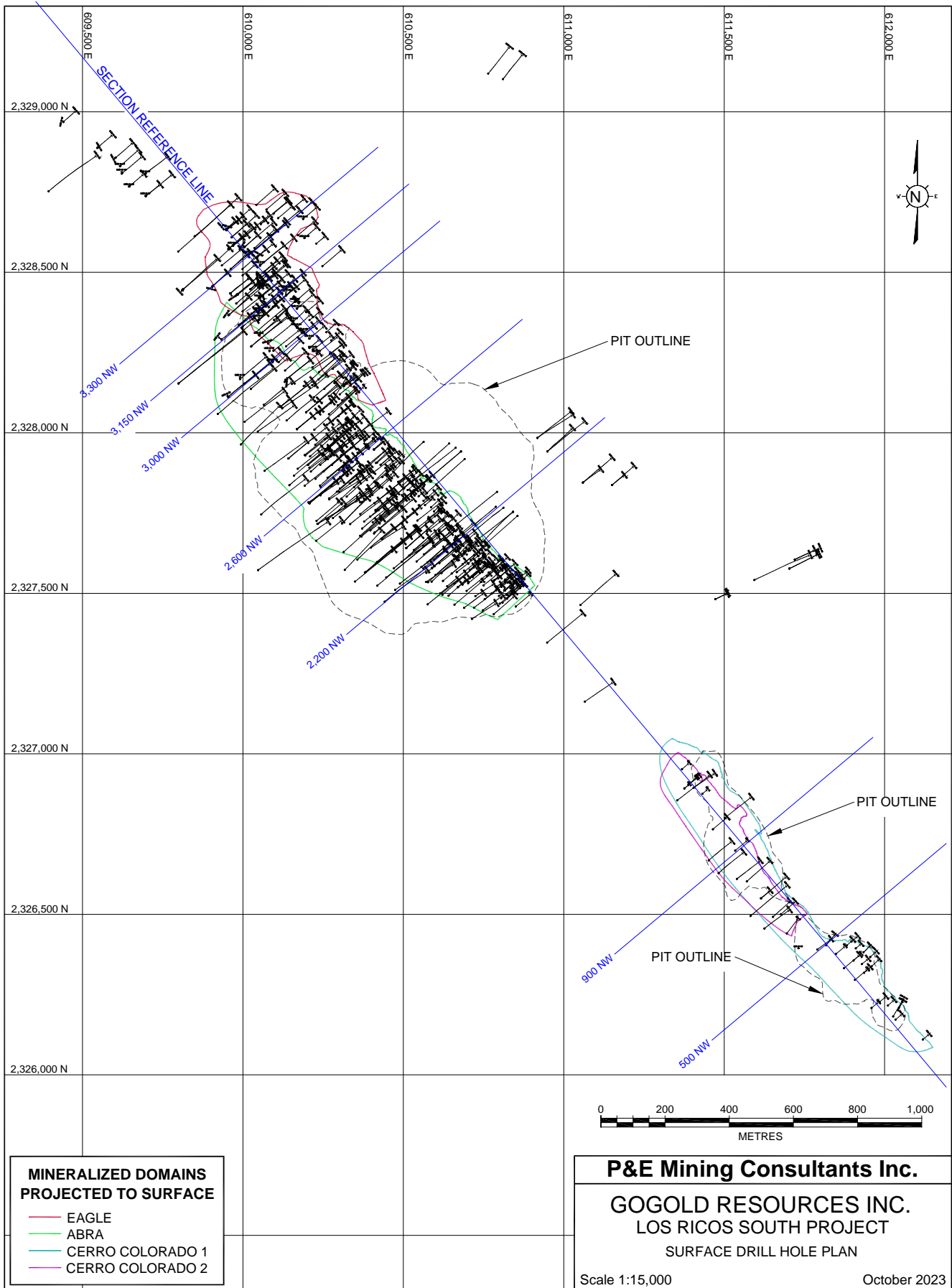
***[David Salari]***

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David Salari, P.Eng.

*DRAFT*

**APPENDIX A SURFACE DRILL HOLE PLAN**



**MINERALIZED DOMAINS  
PROJECTED TO SURFACE**

- EAGLE
- ABRA
- CERRO COLORADO 1
- CERRO COLORADO 2

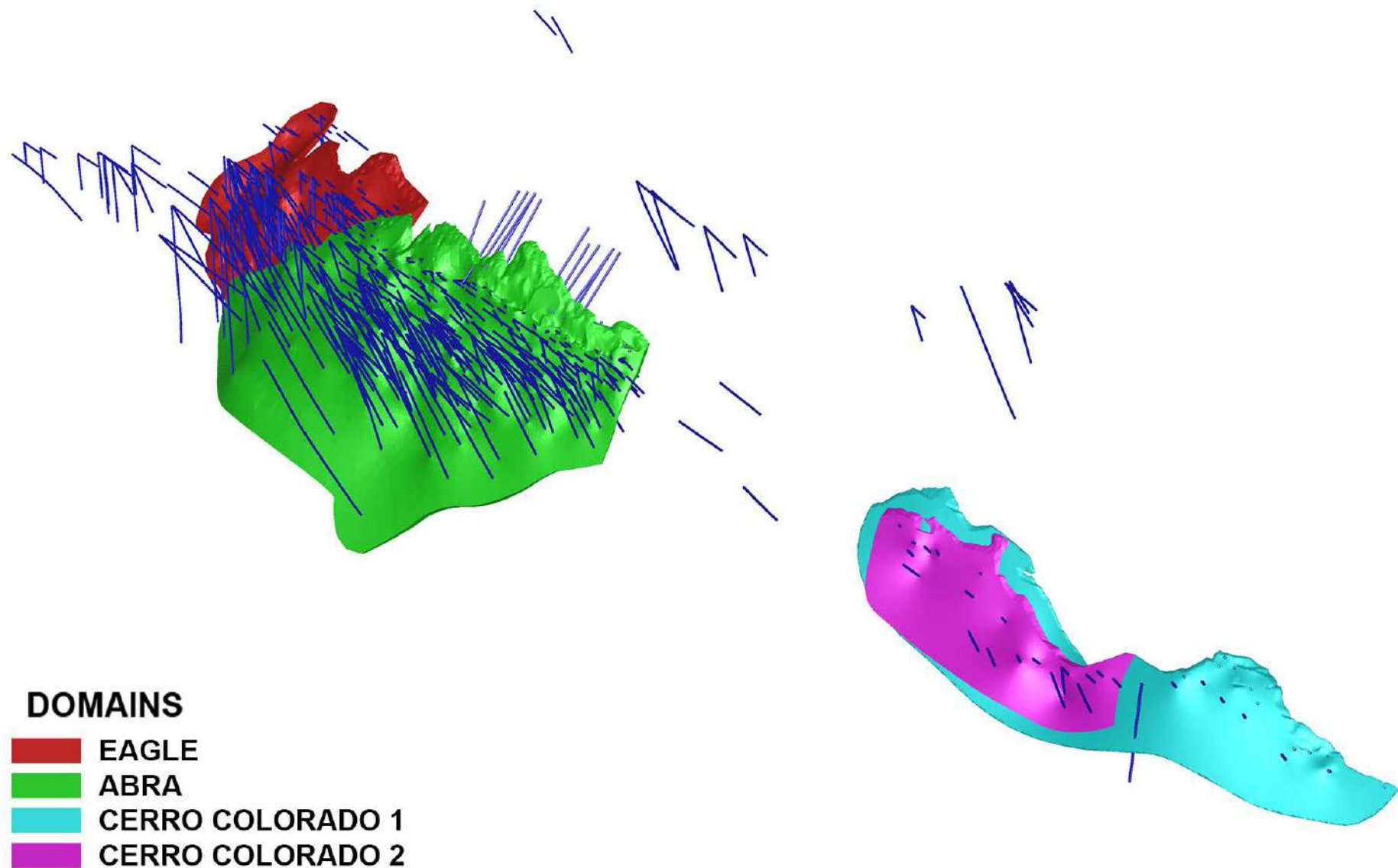
**P&E Mining Consultants Inc.**

**GOGOLD RESOURCES INC.**  
**LOS RICOS SOUTH PROJECT**  
**SURFACE DRILL HOLE PLAN**

Scale 1:15,000 October 2023

**APPENDIX B 3-D DOMAINS**

# LOS RICOS SOUTH PROJECT - 3D DOMAINS

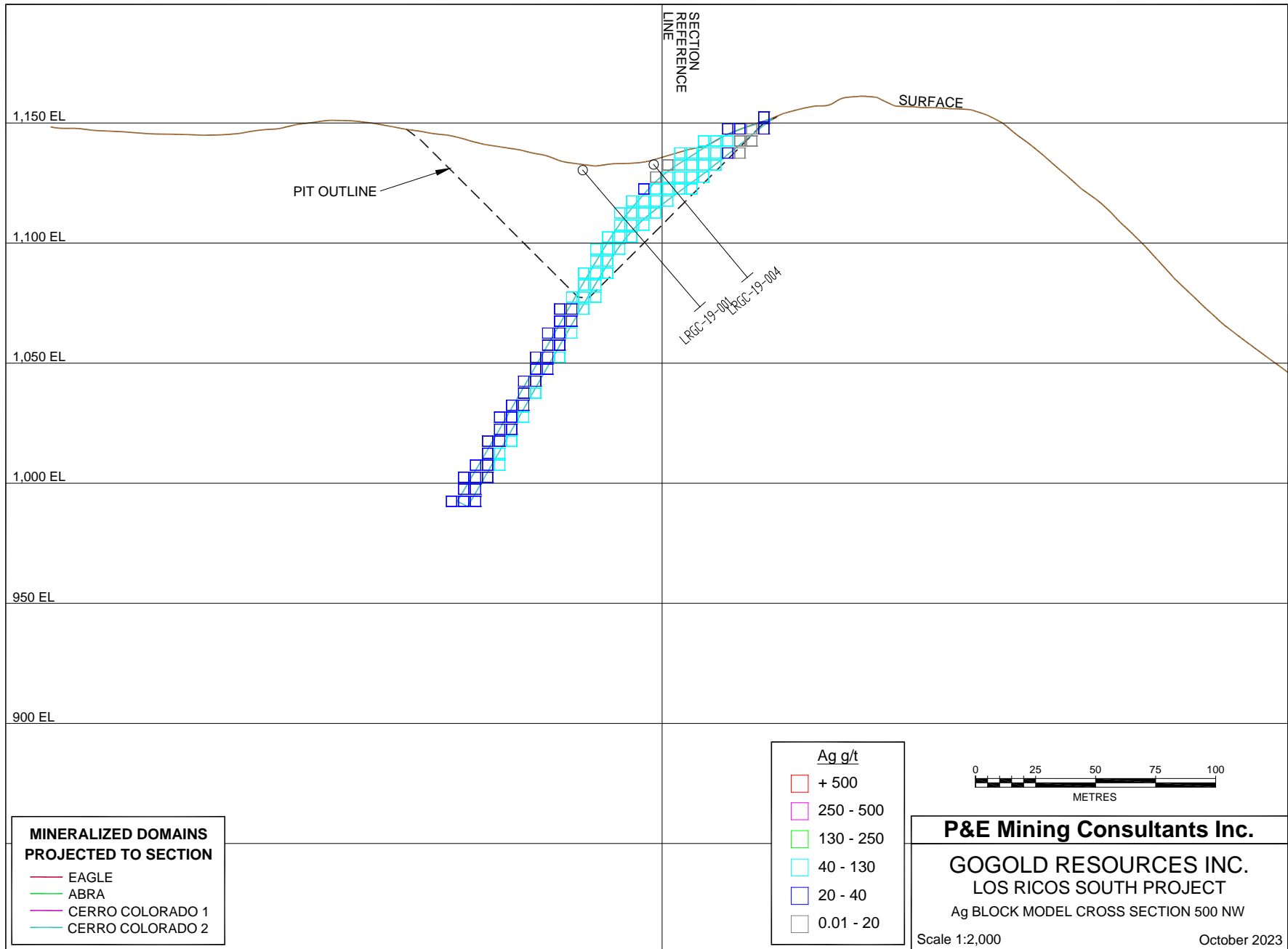


## DOMAINS

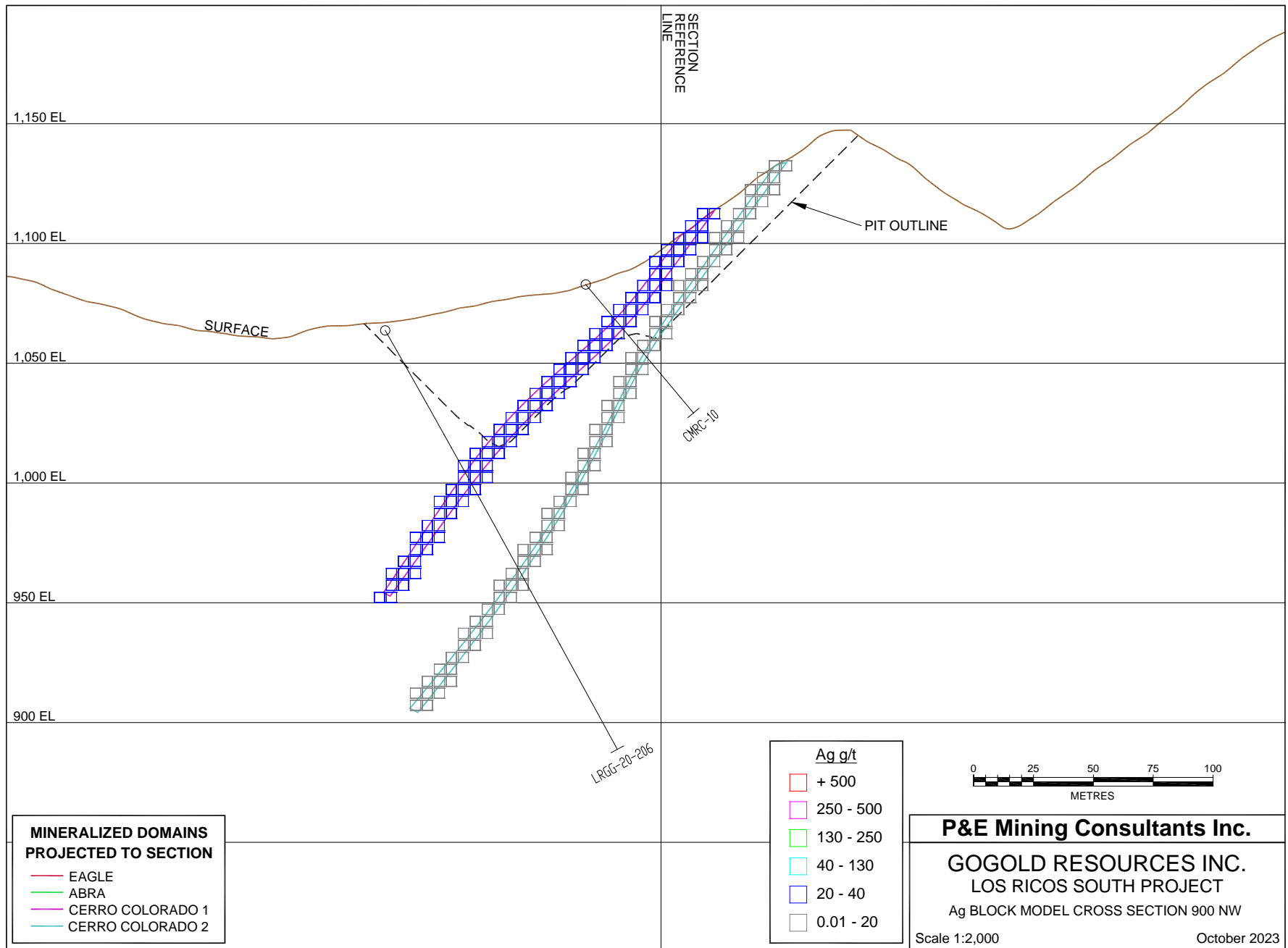
- EAGLE
- ABRA
- CERRO COLORADO 1
- CERRO COLORADO 2

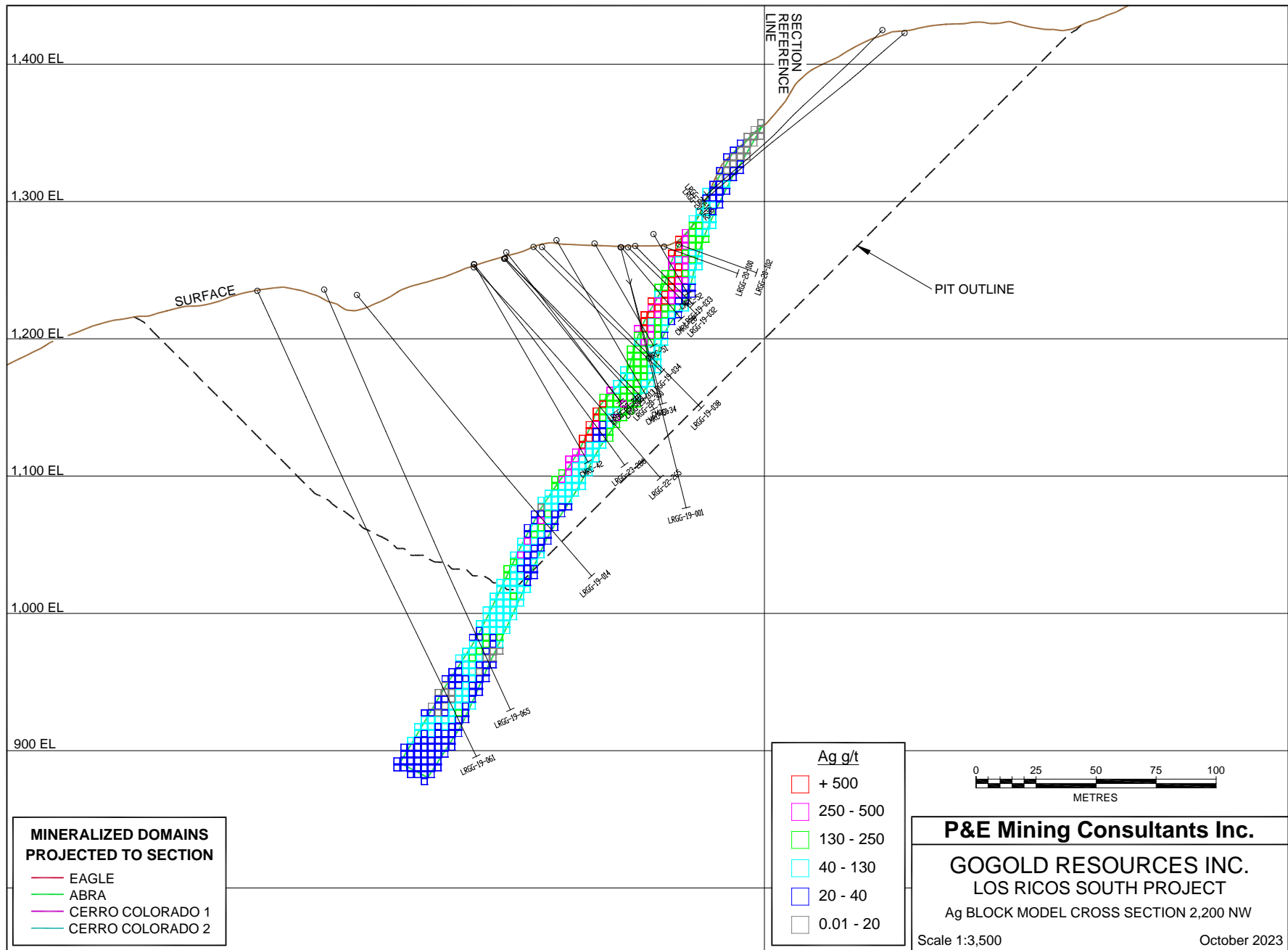
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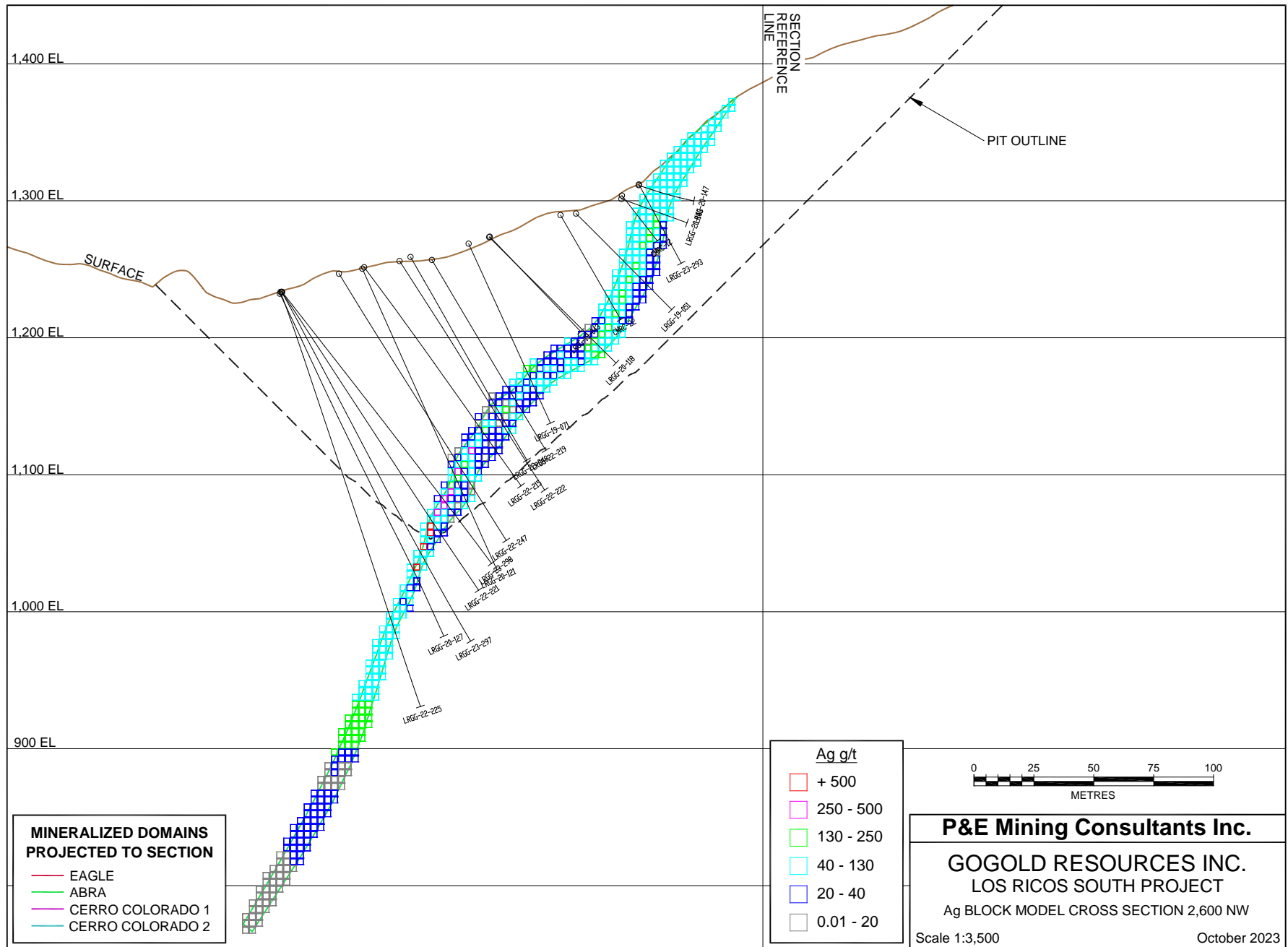
**APPENDIX C AG BLOCK MODEL CROSS-SECTIONS AND PLANS**

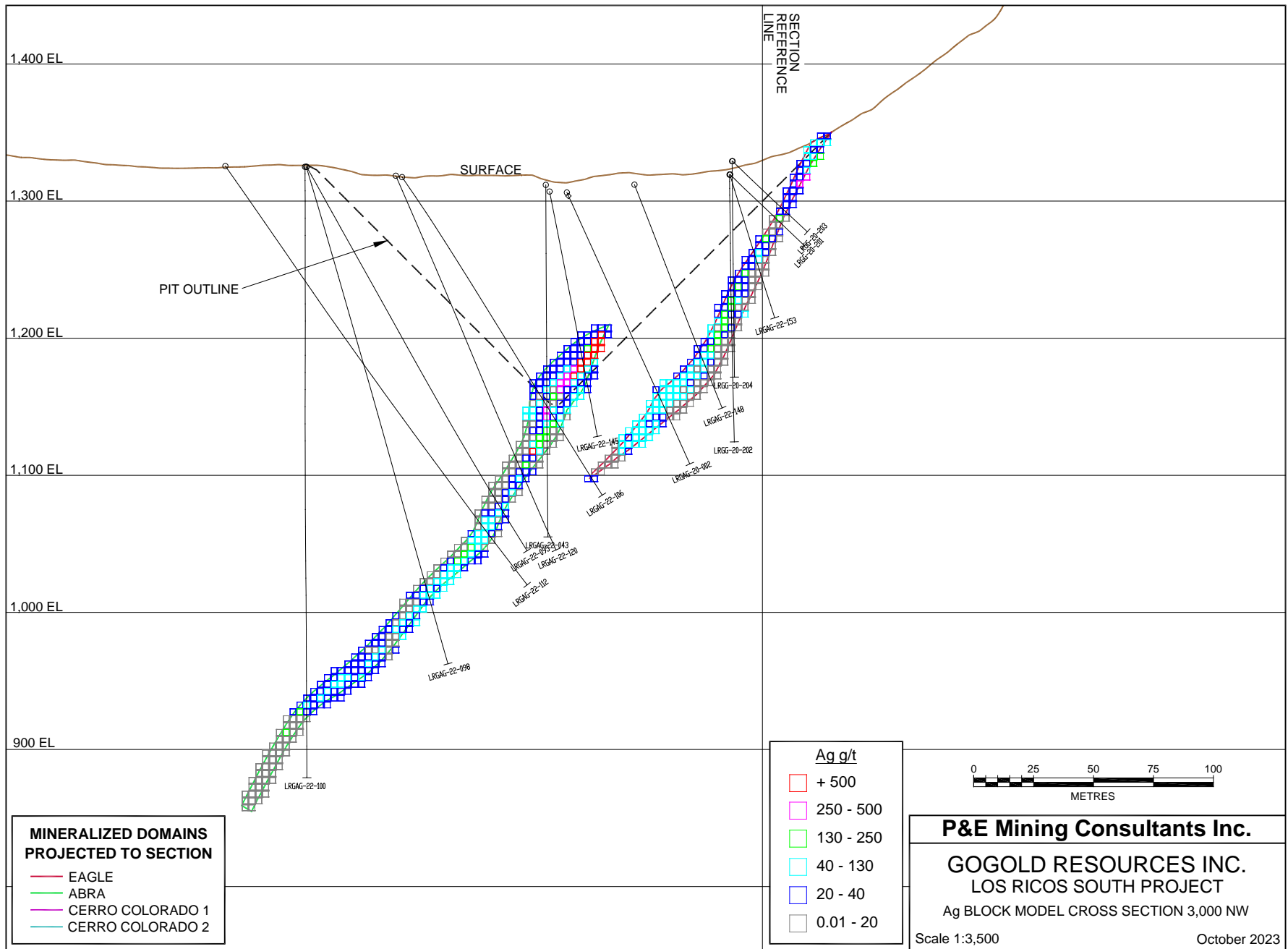


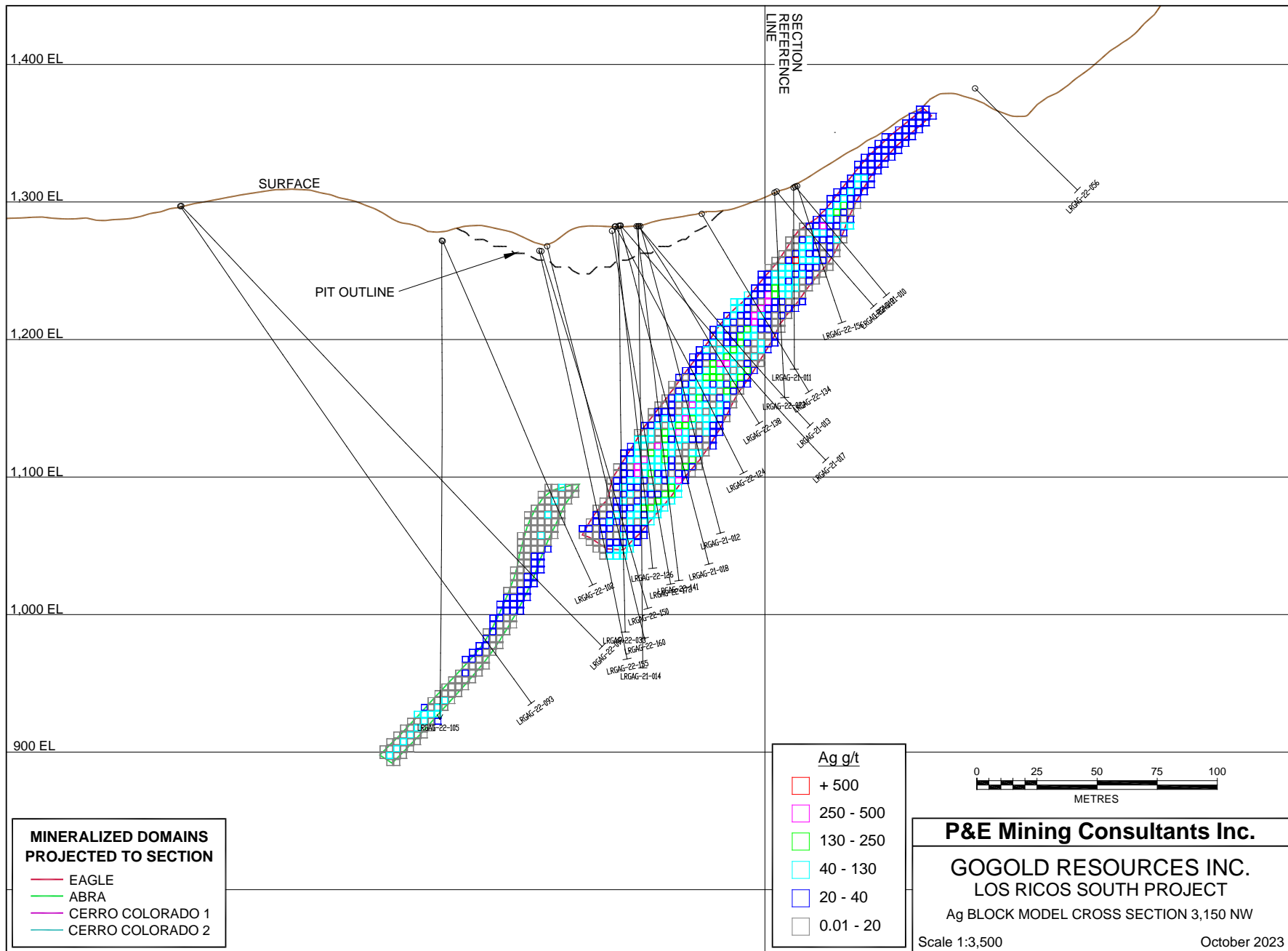


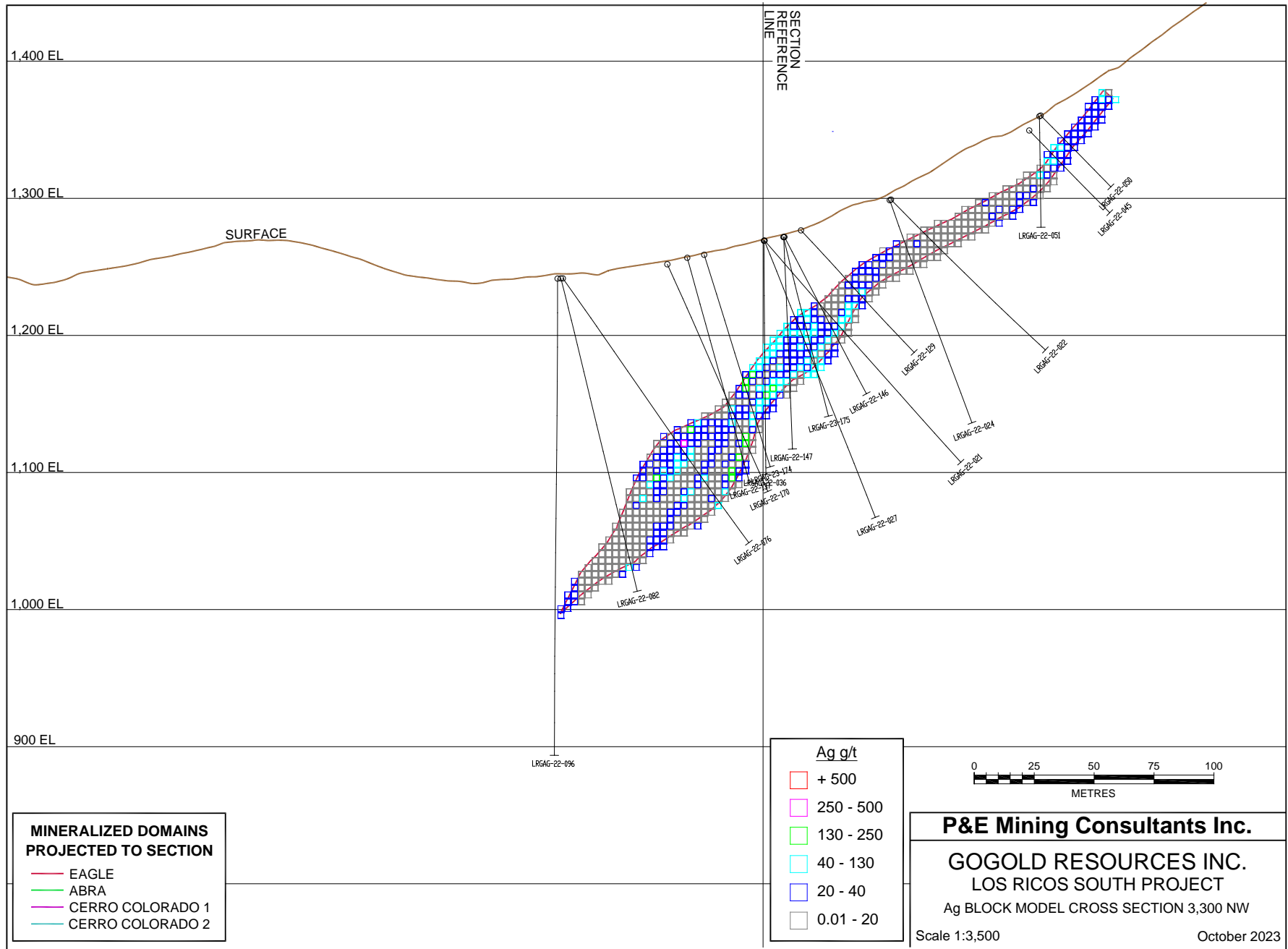


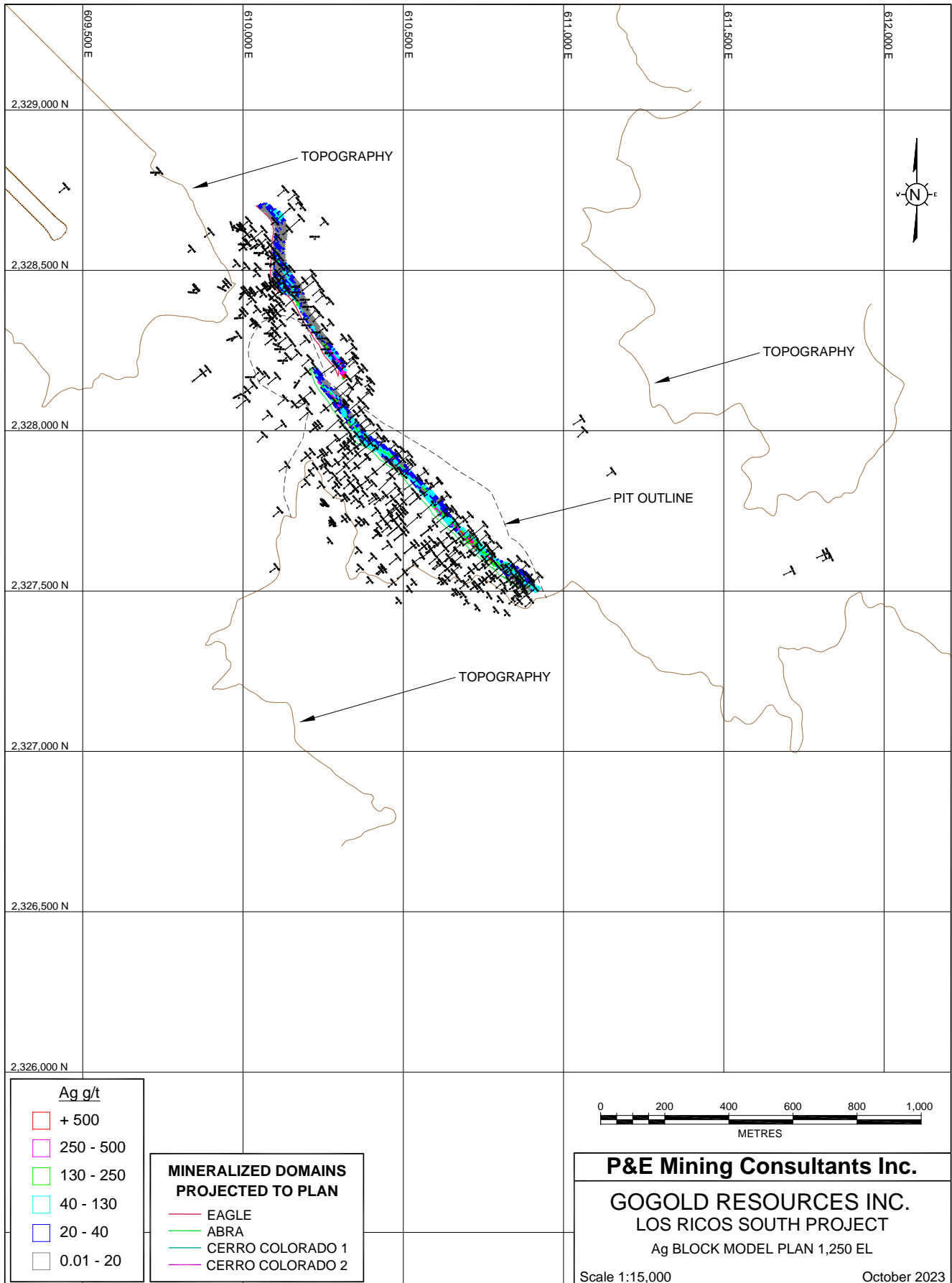


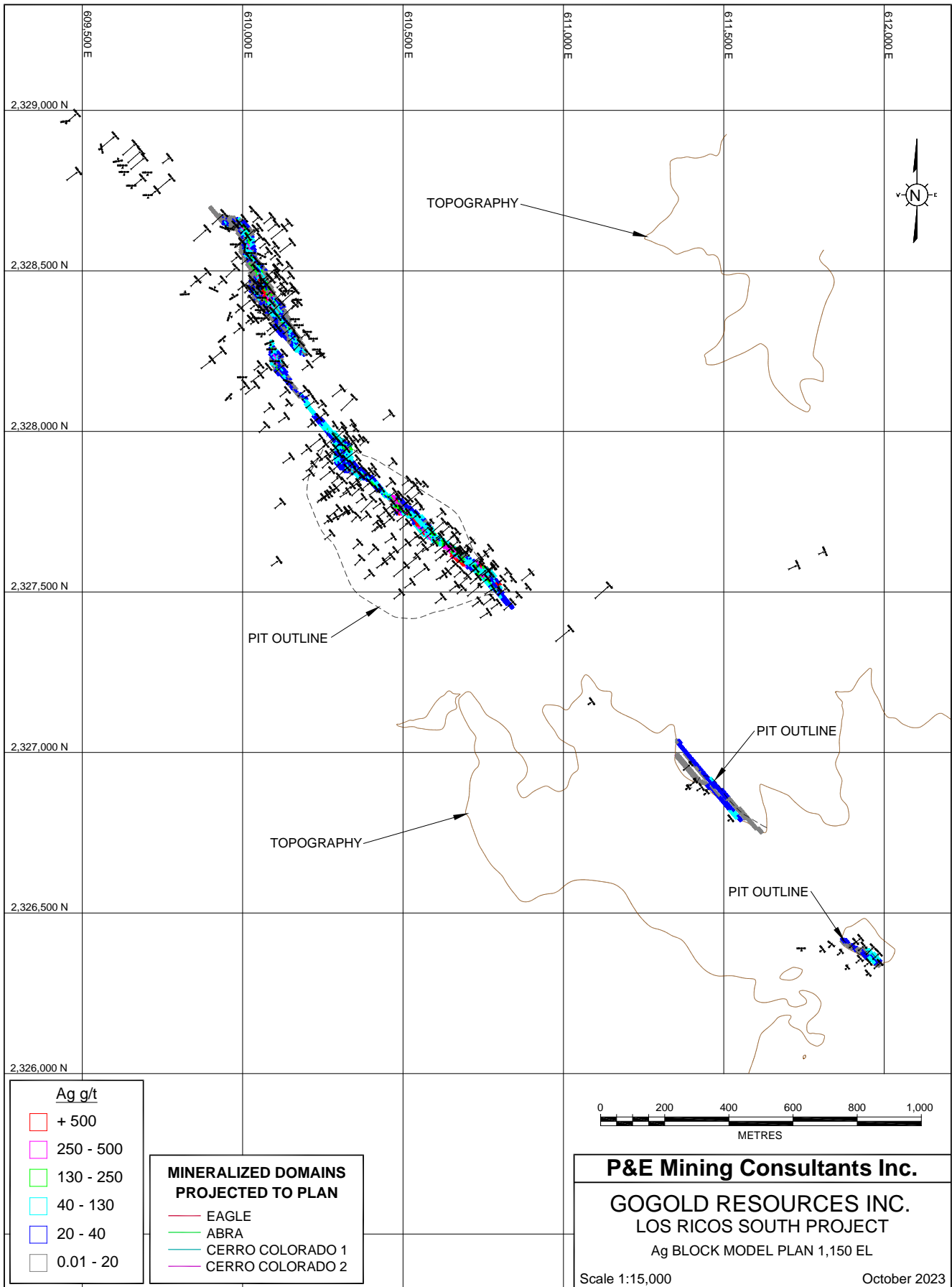




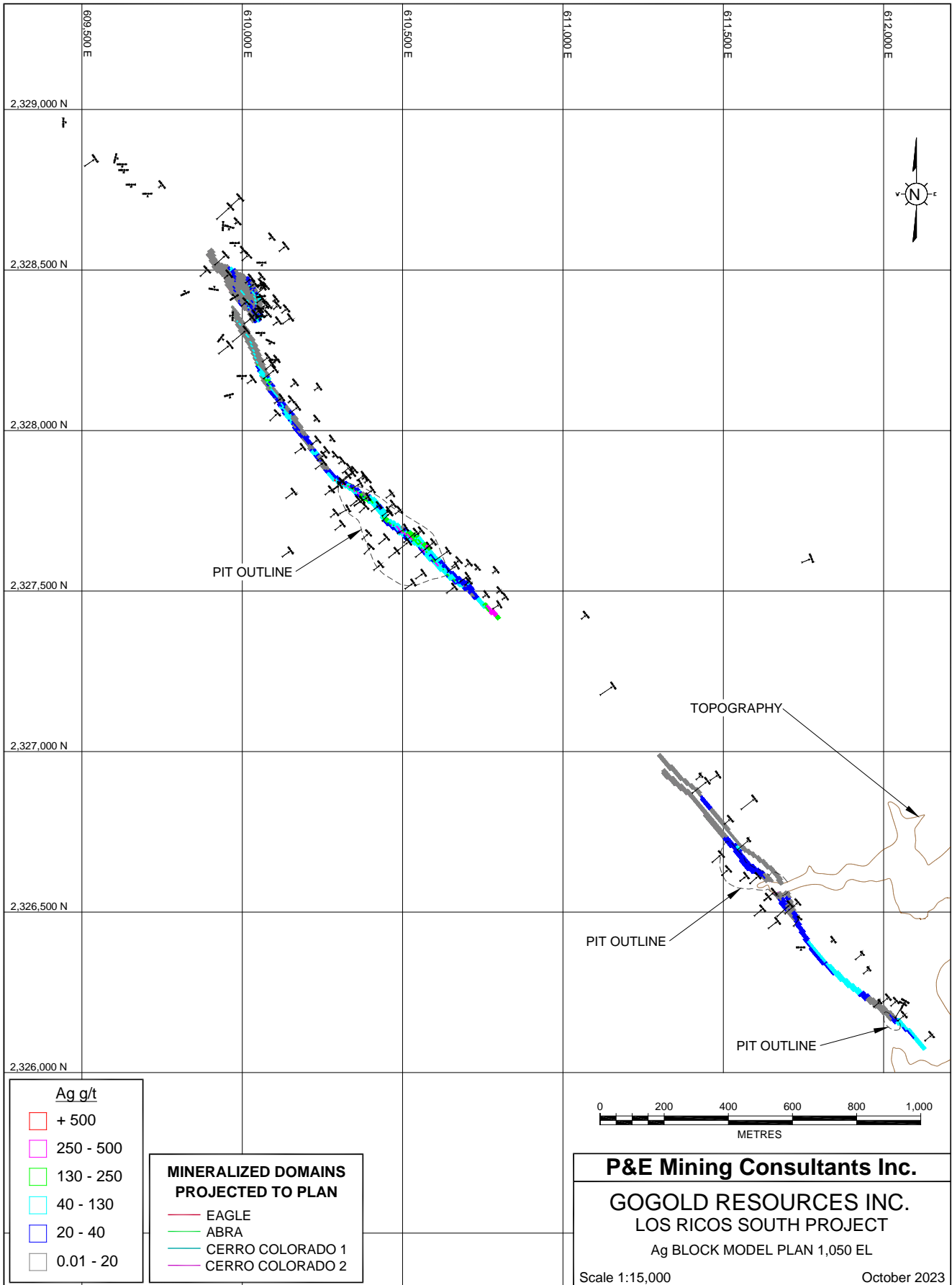




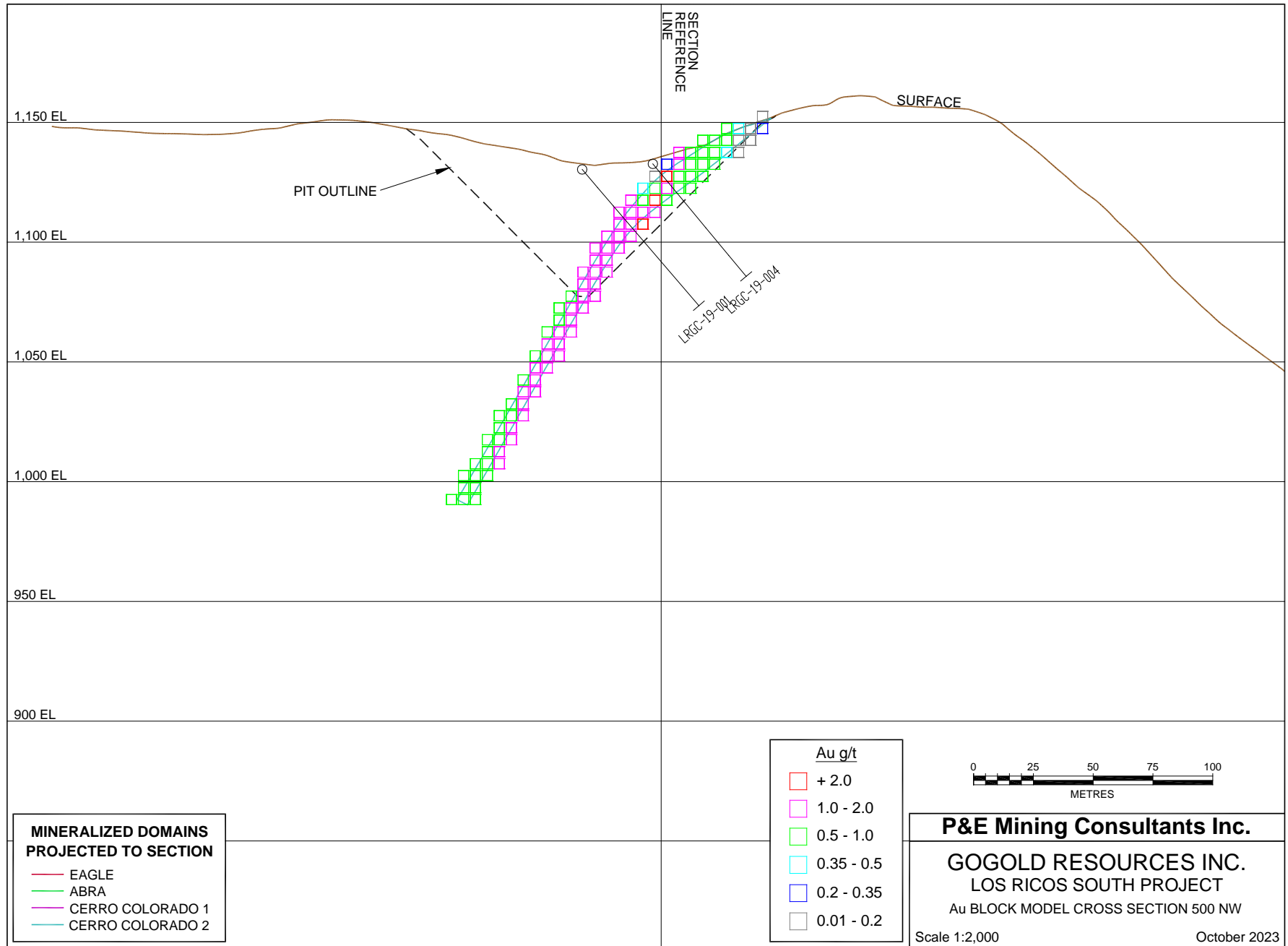


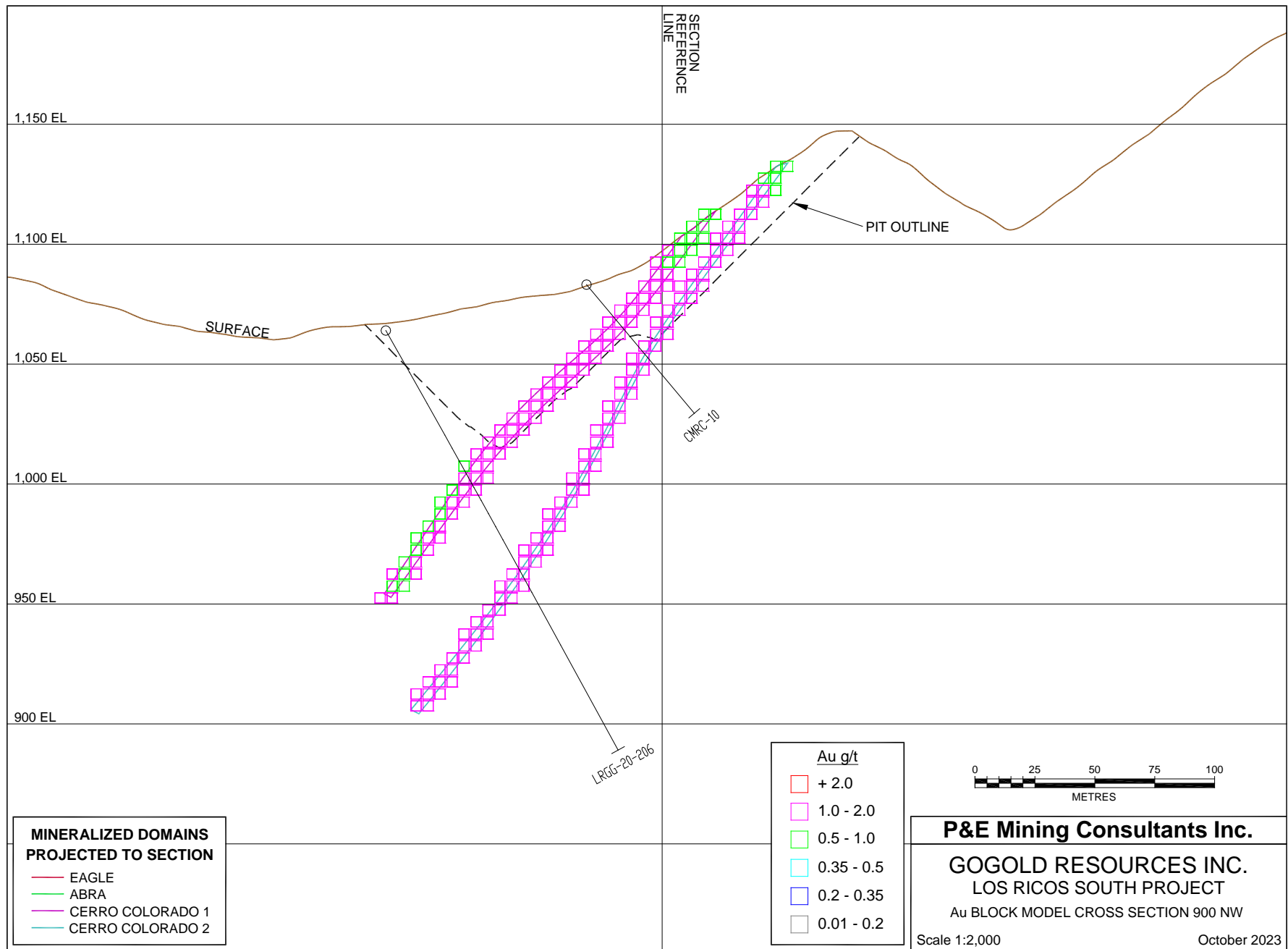


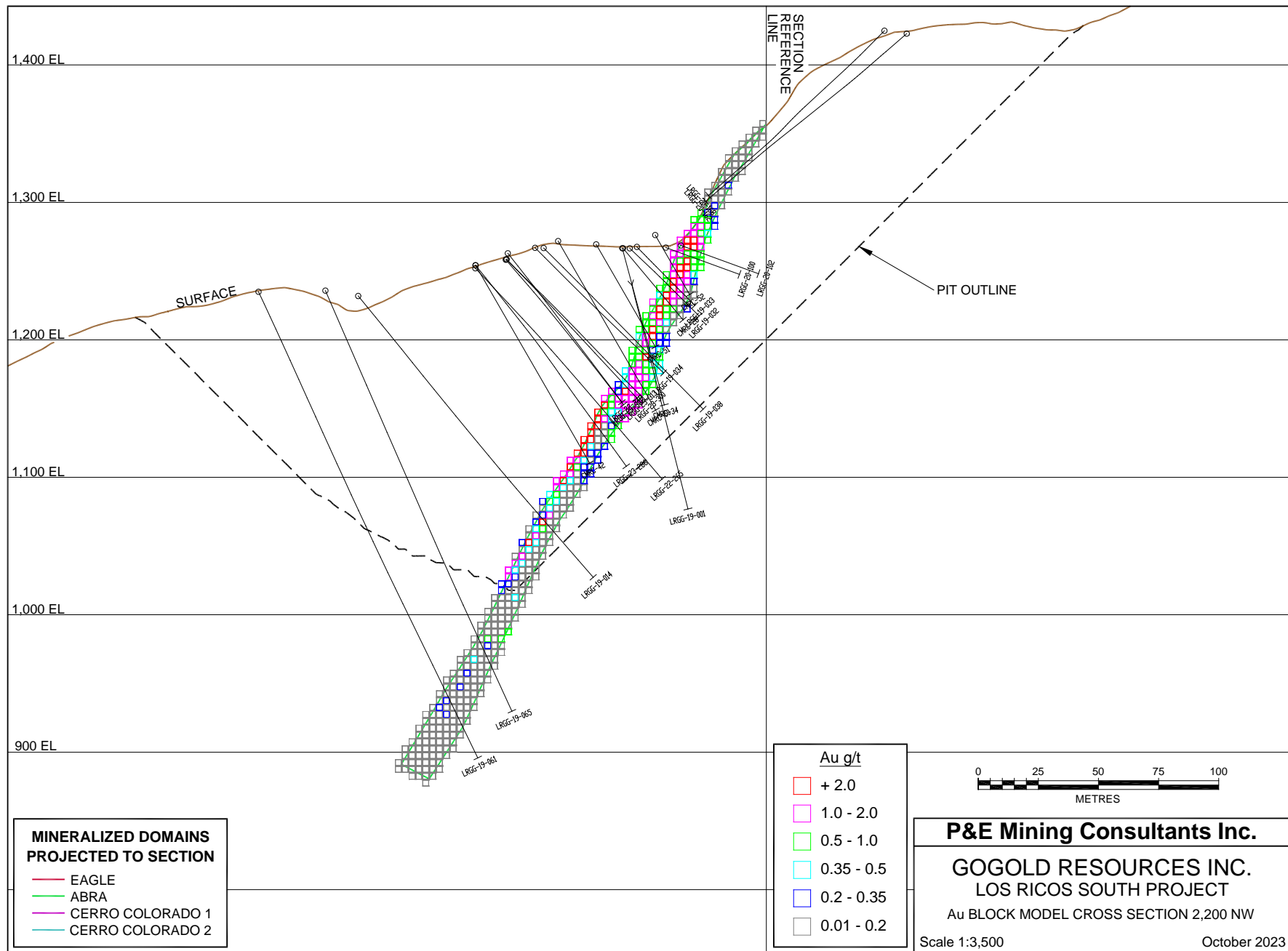


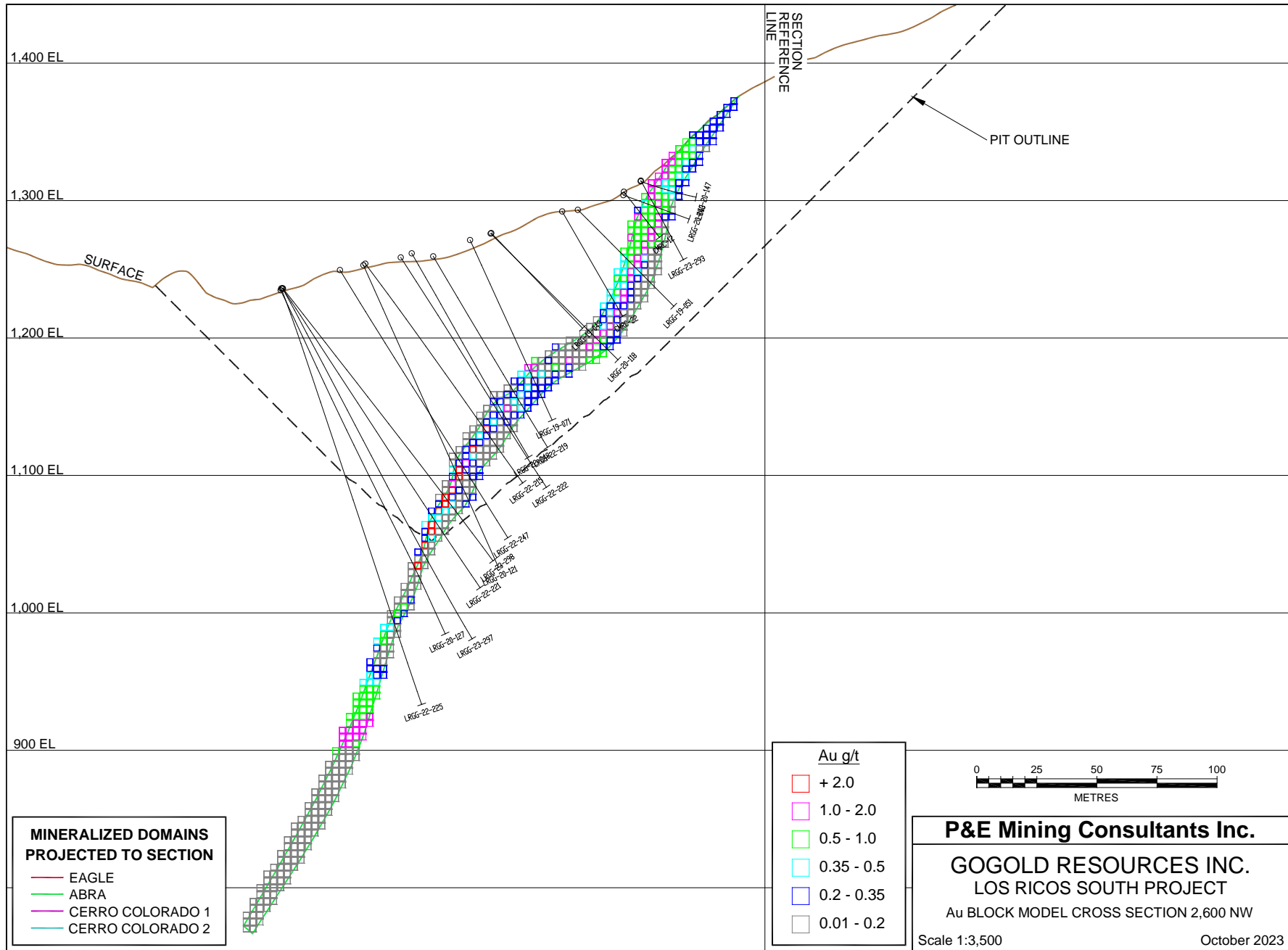


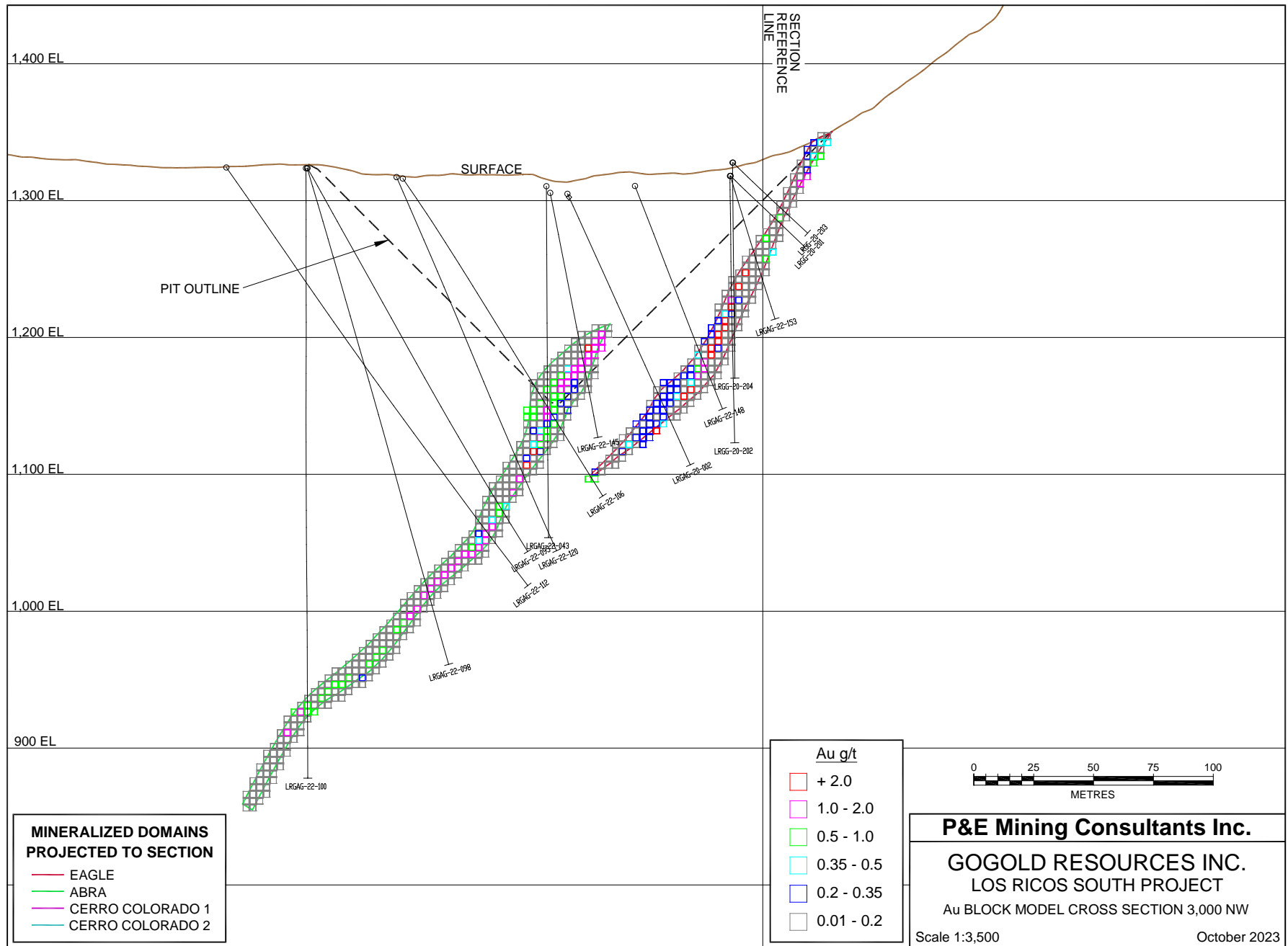
**APPENDIX D AU BLOCK MODEL CROSS-SECTIONS AND PLANS**

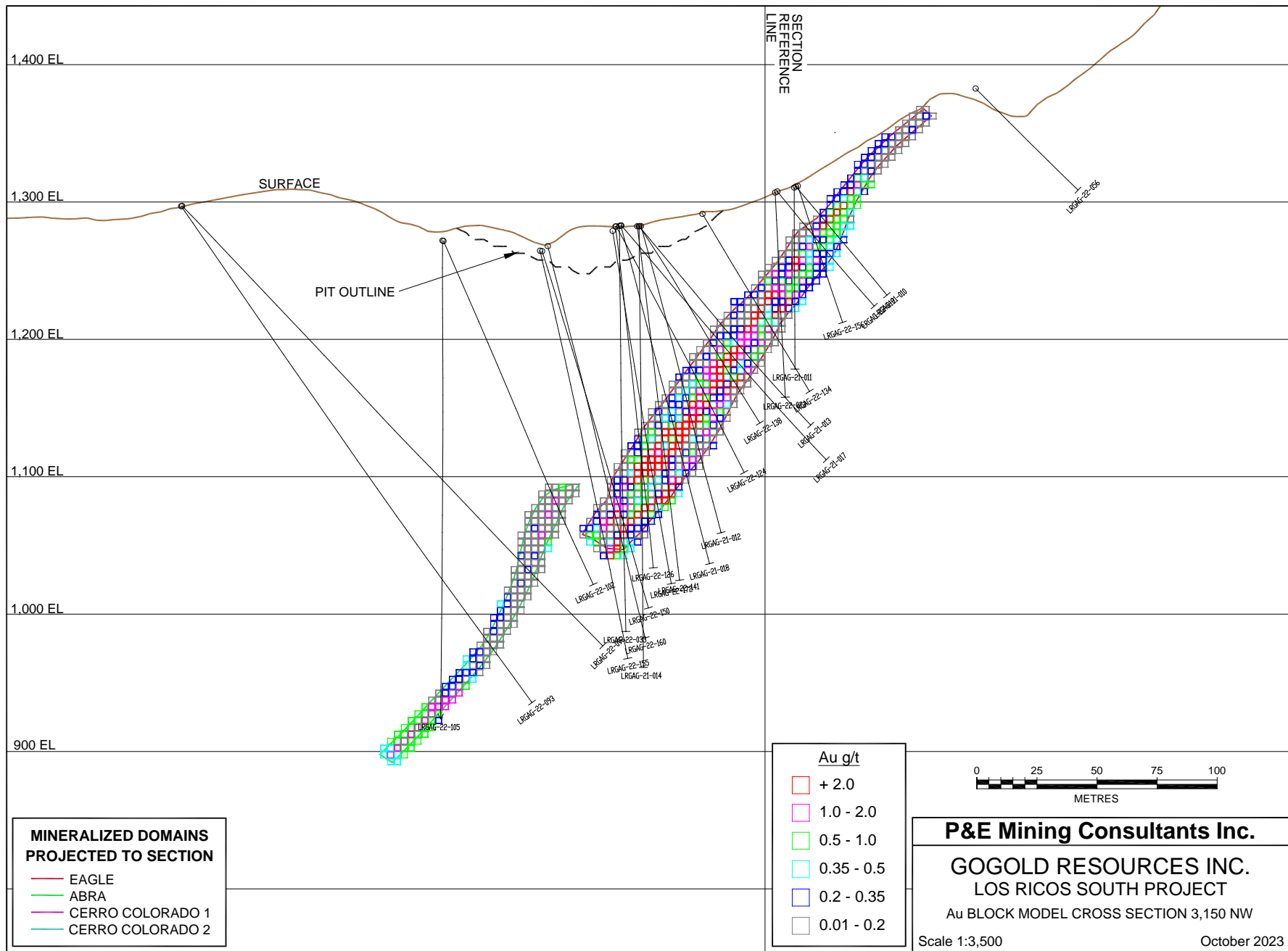




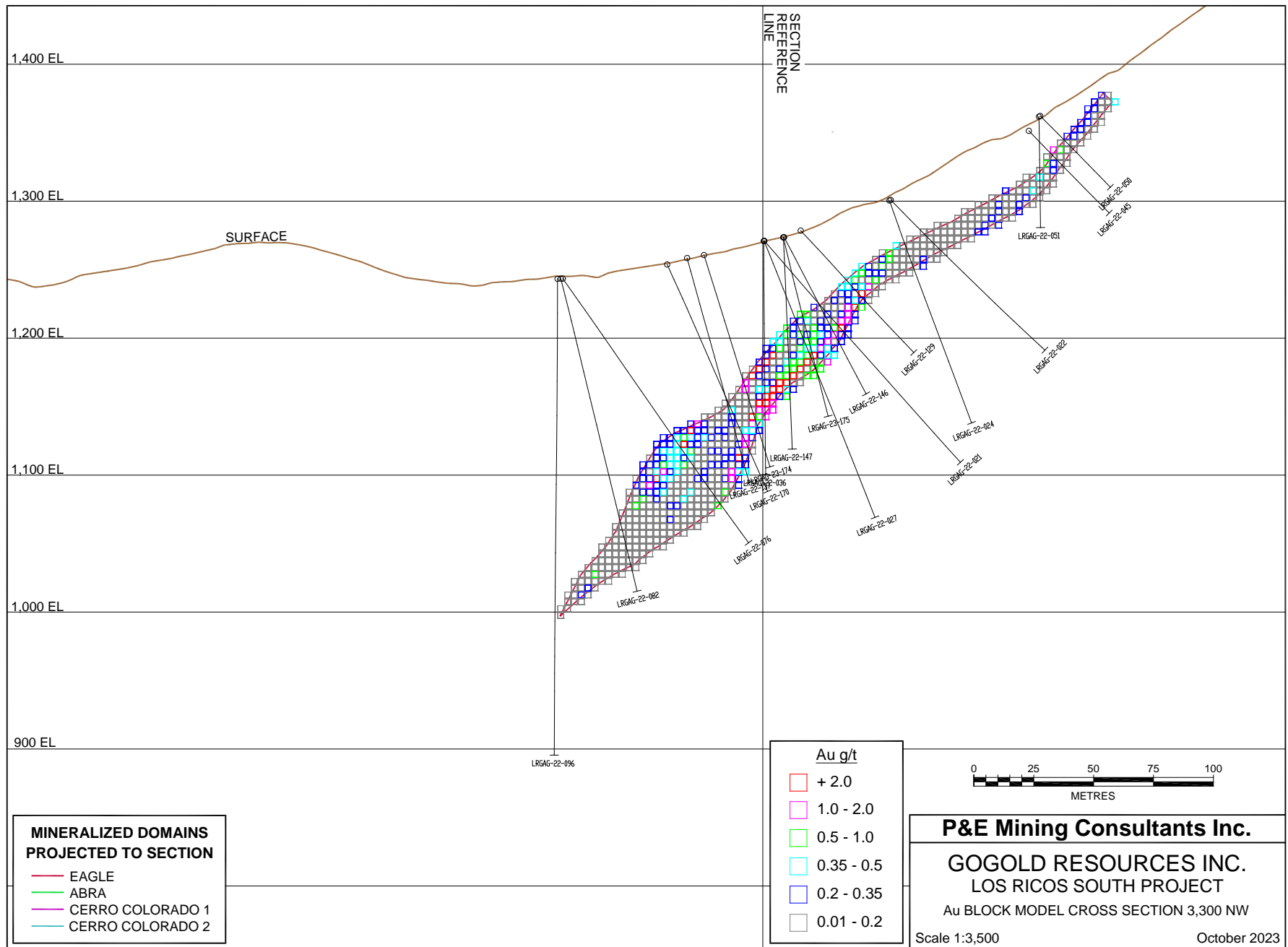


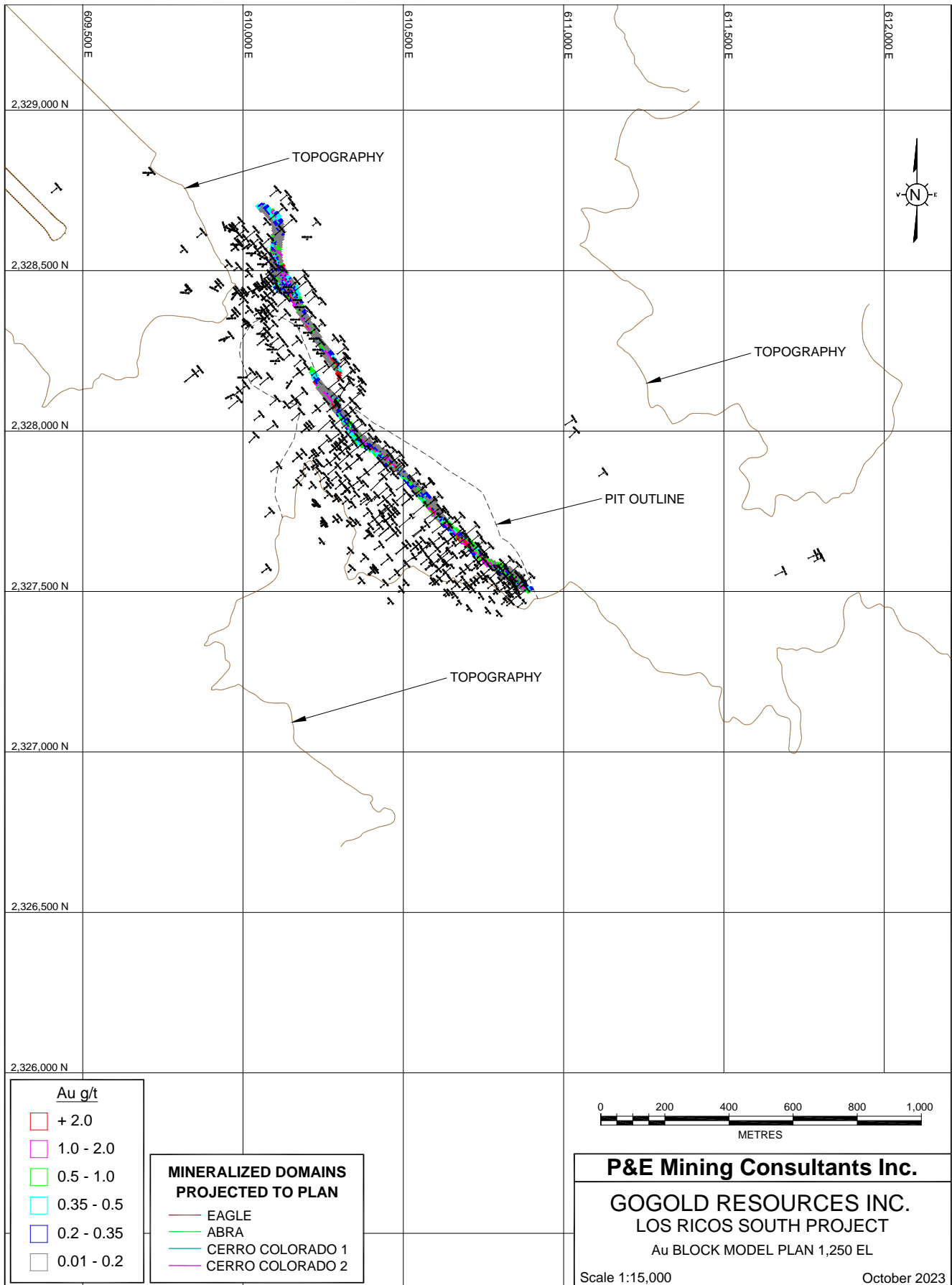


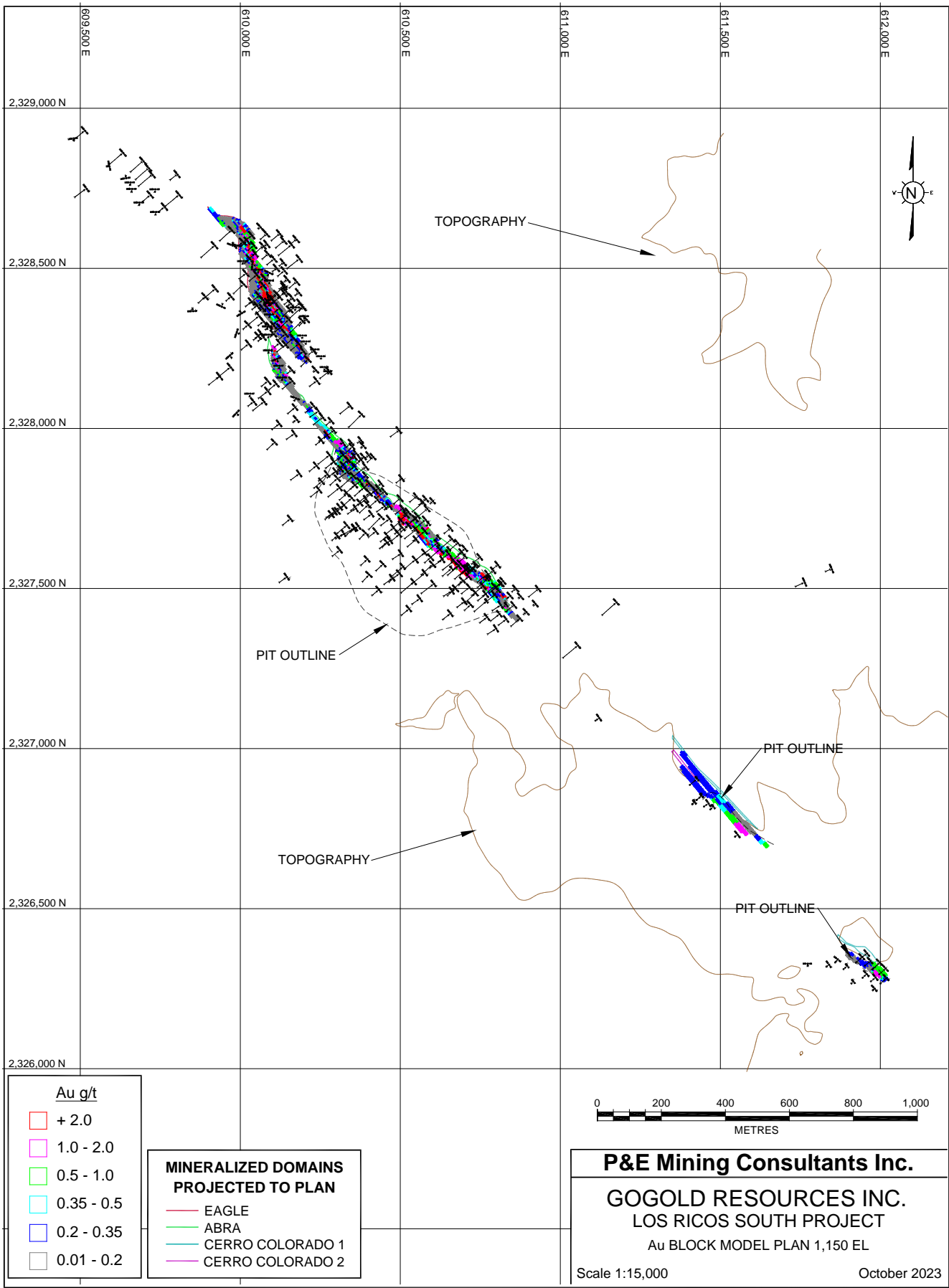


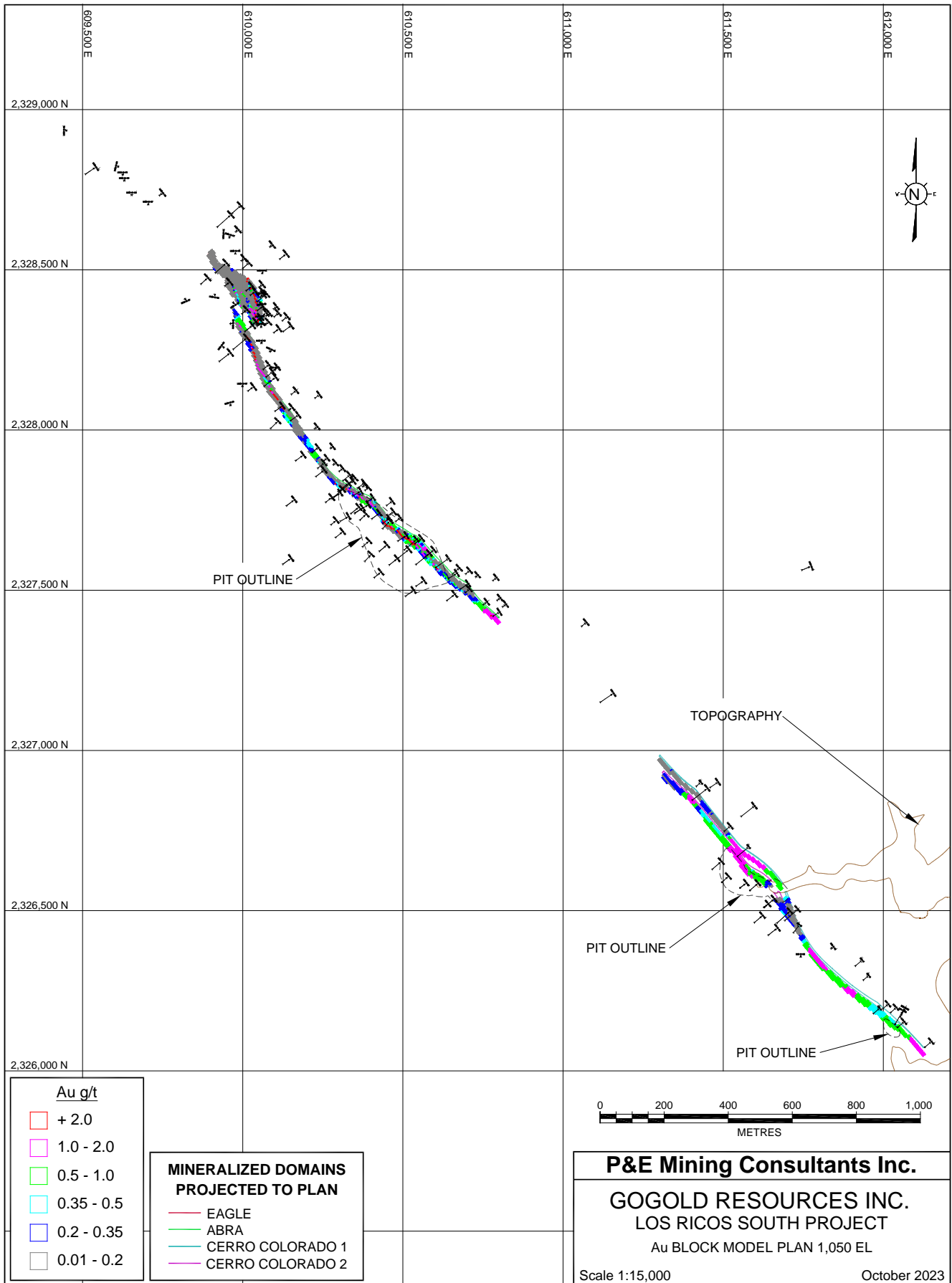




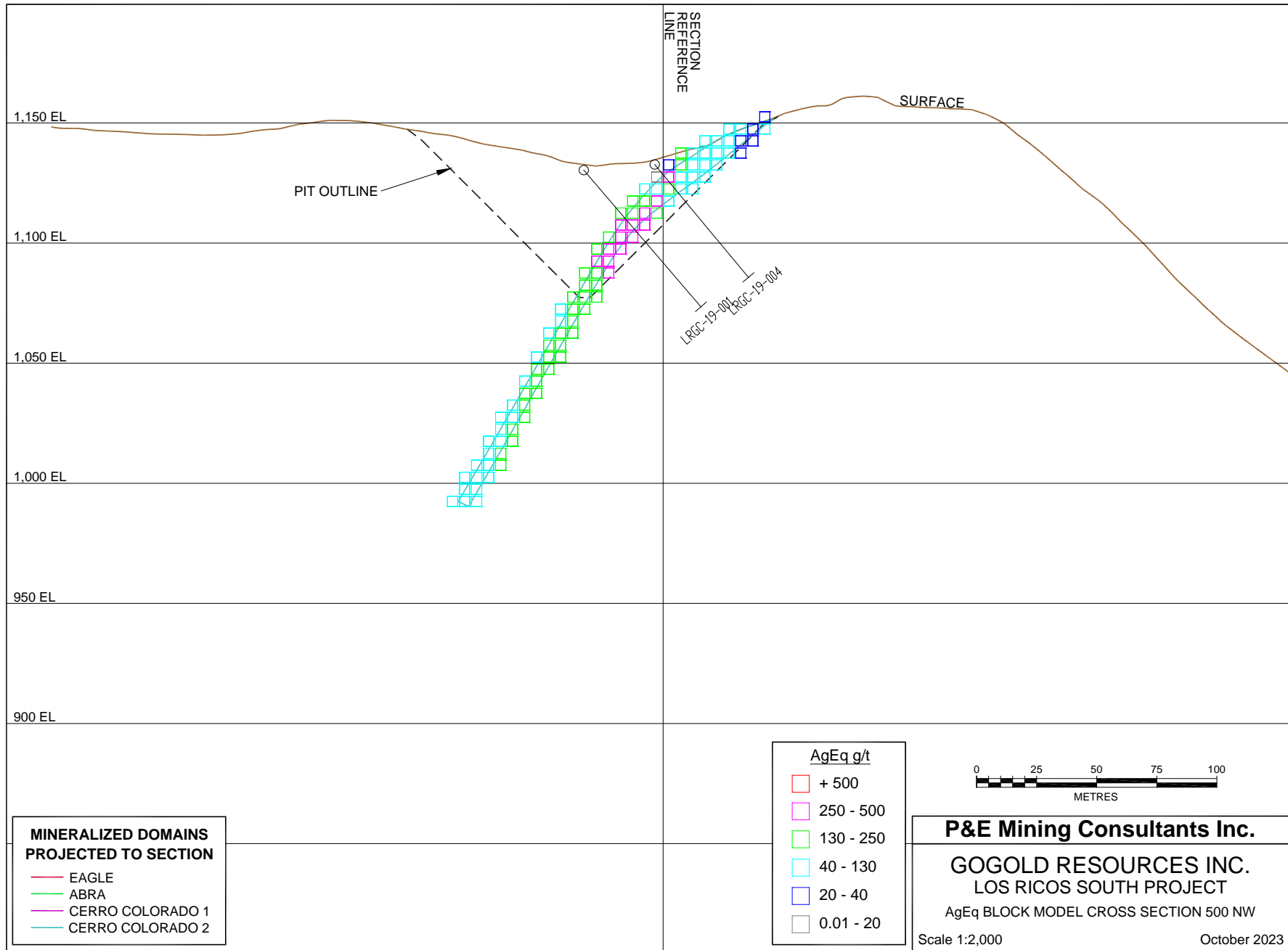


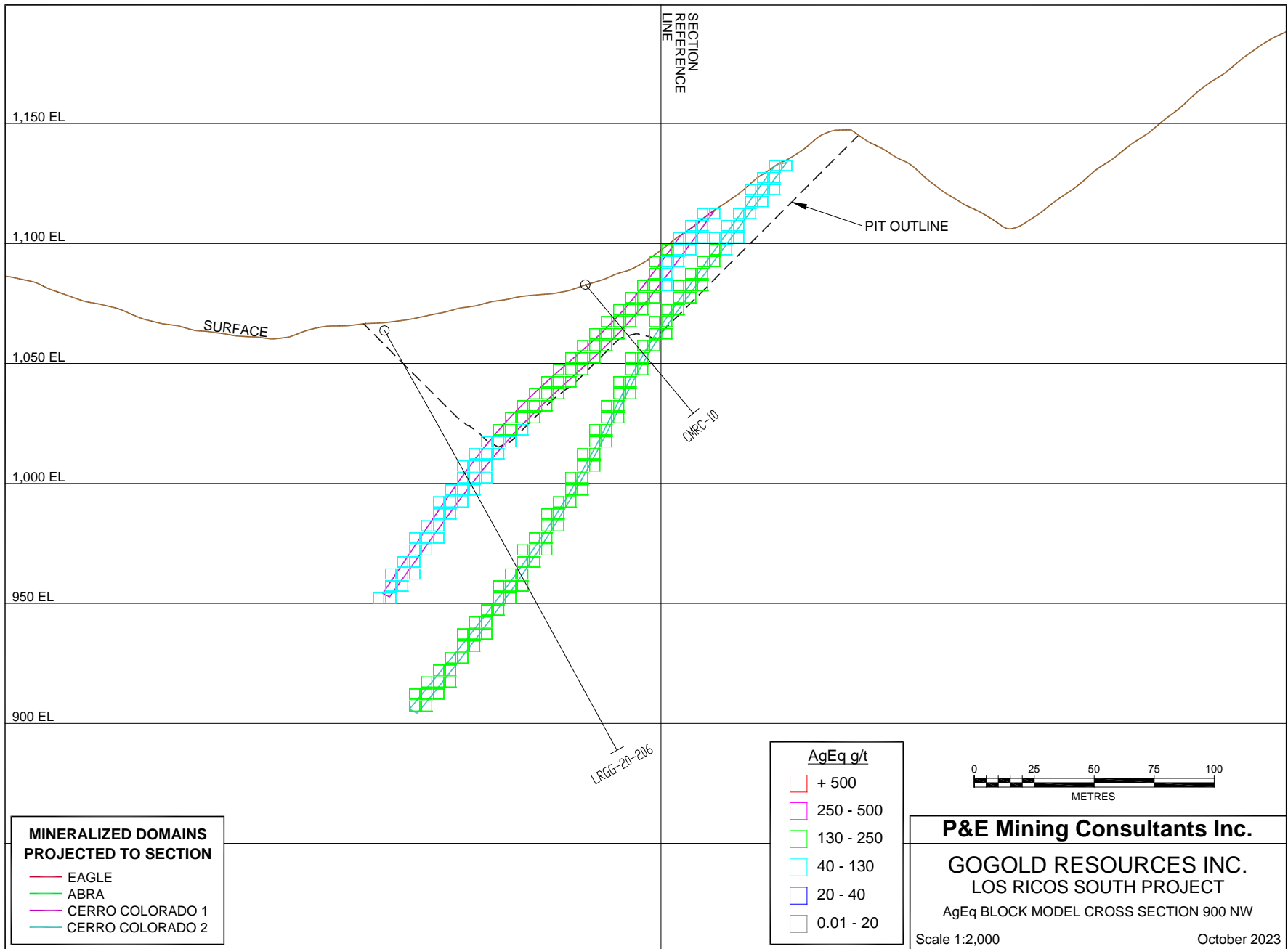


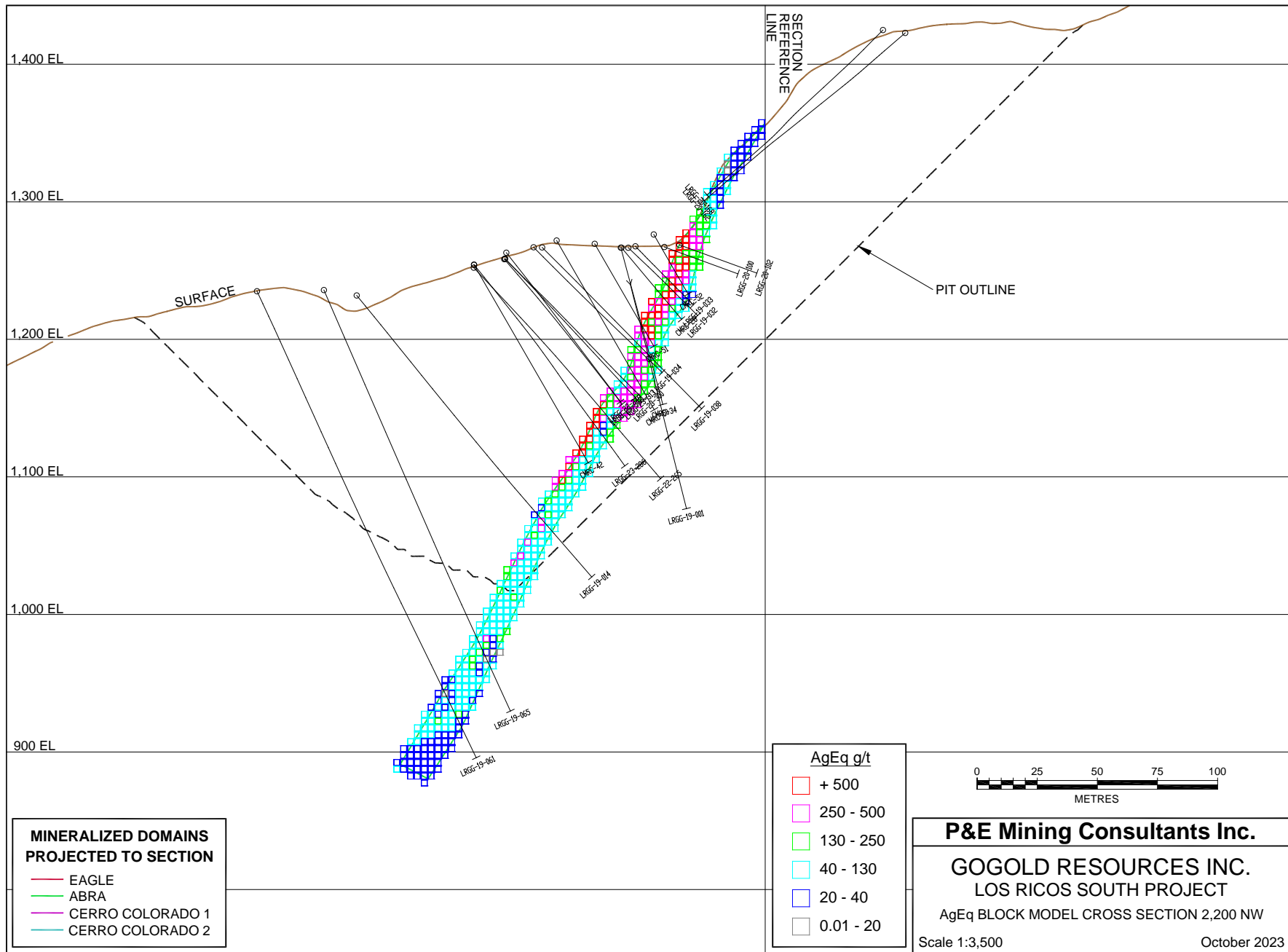




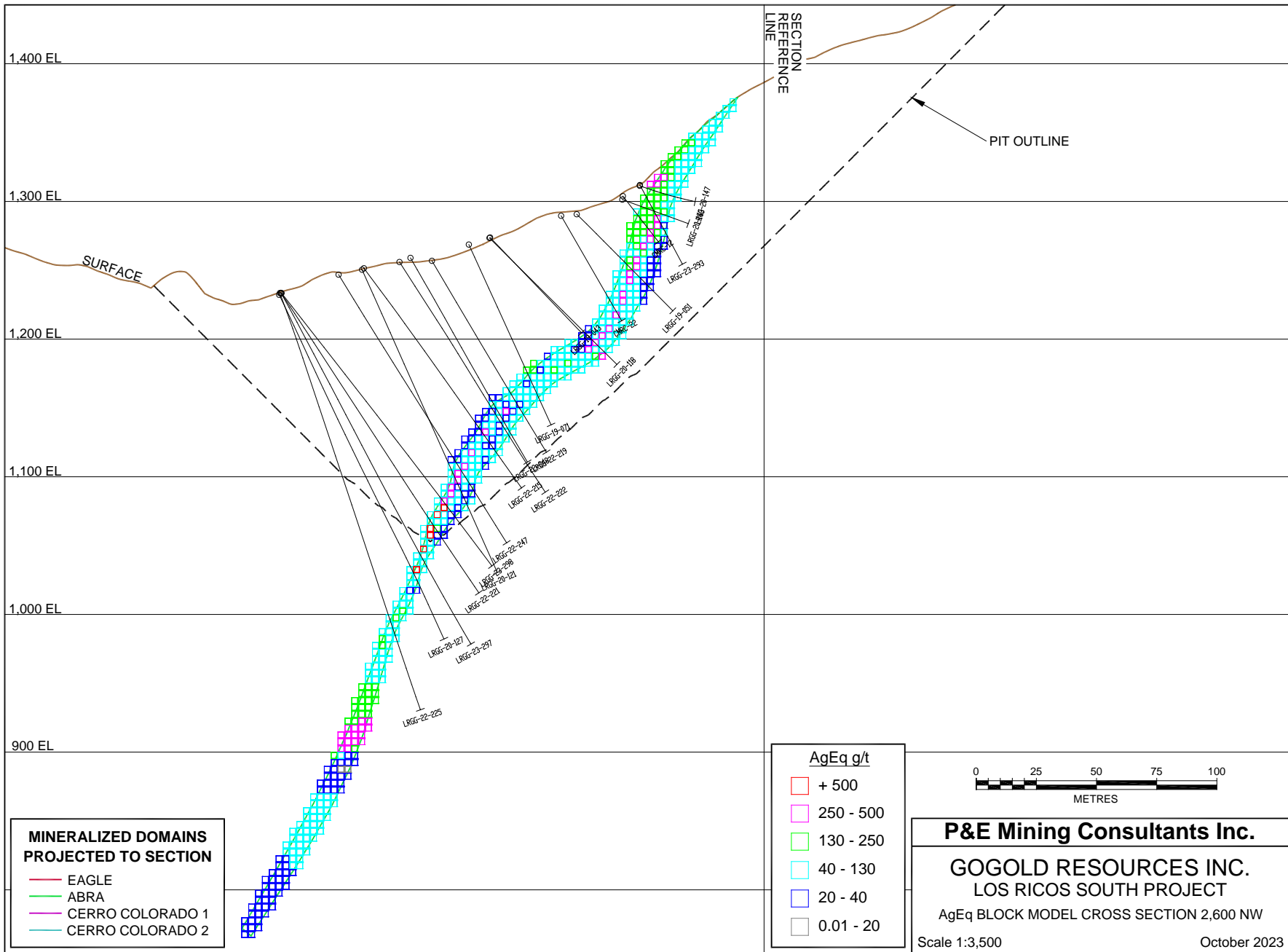
**APPENDIX E    AGEQ BLOCK MODEL CROSS-SECTIONS AND PLANS**

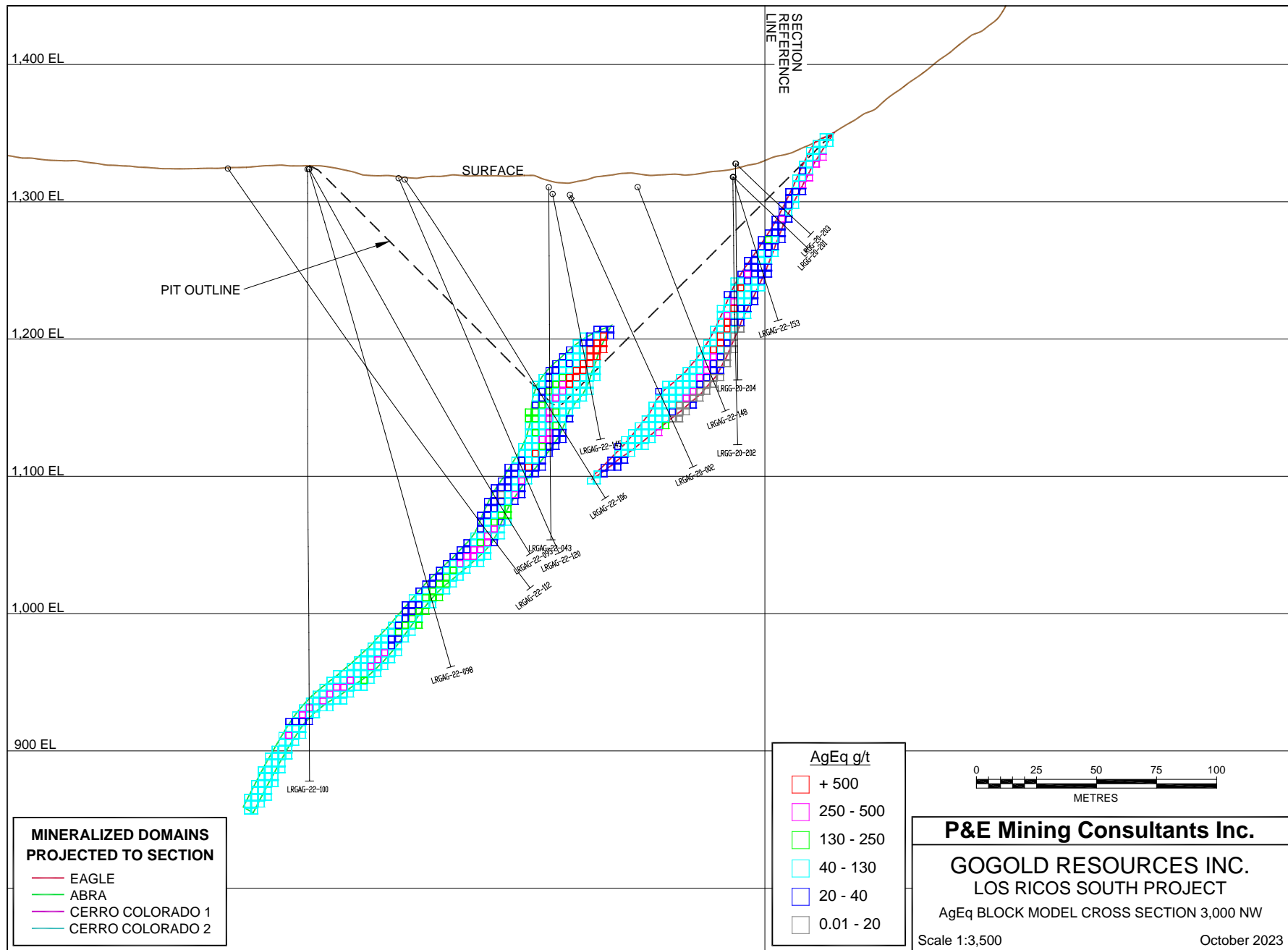


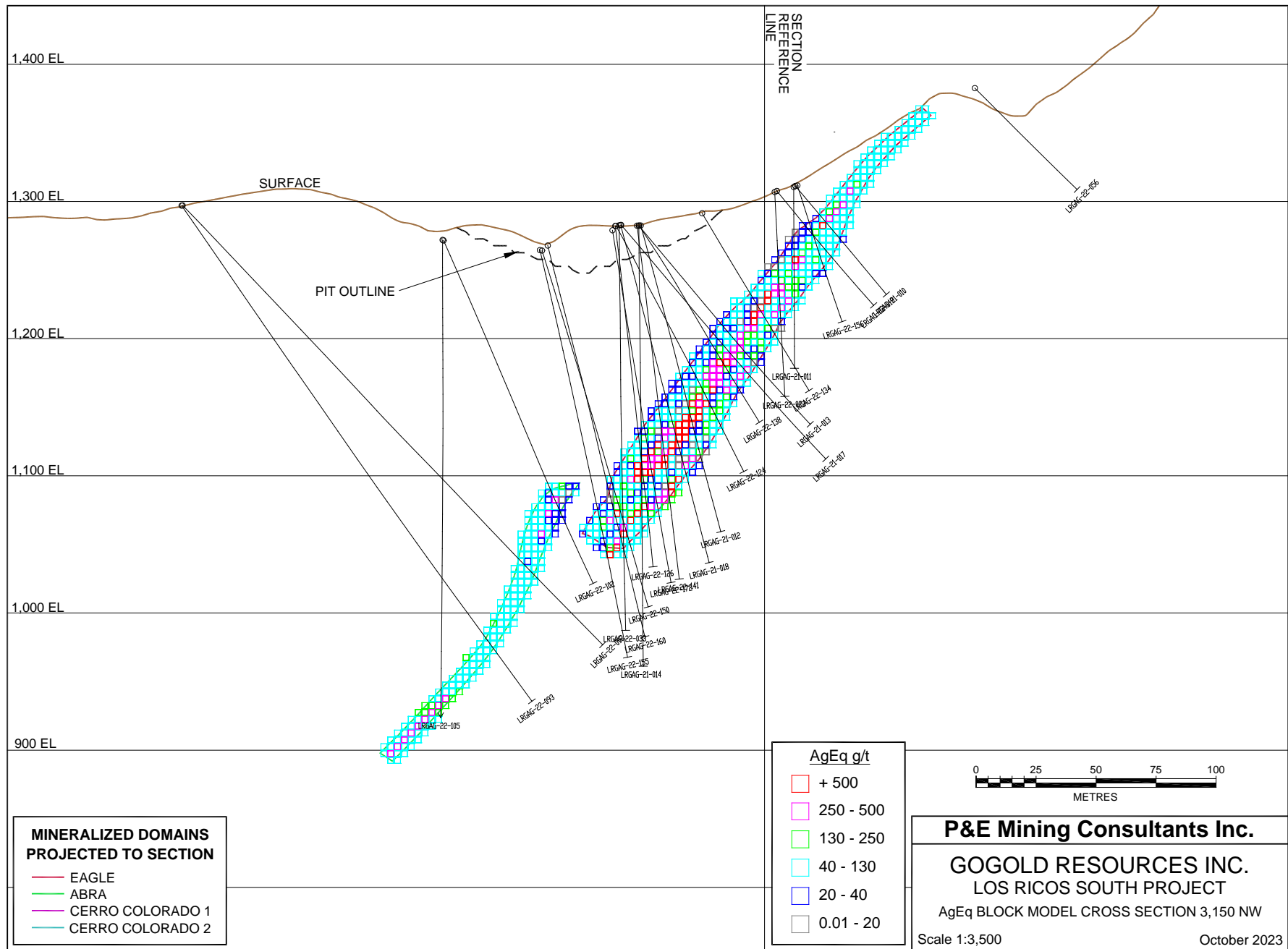


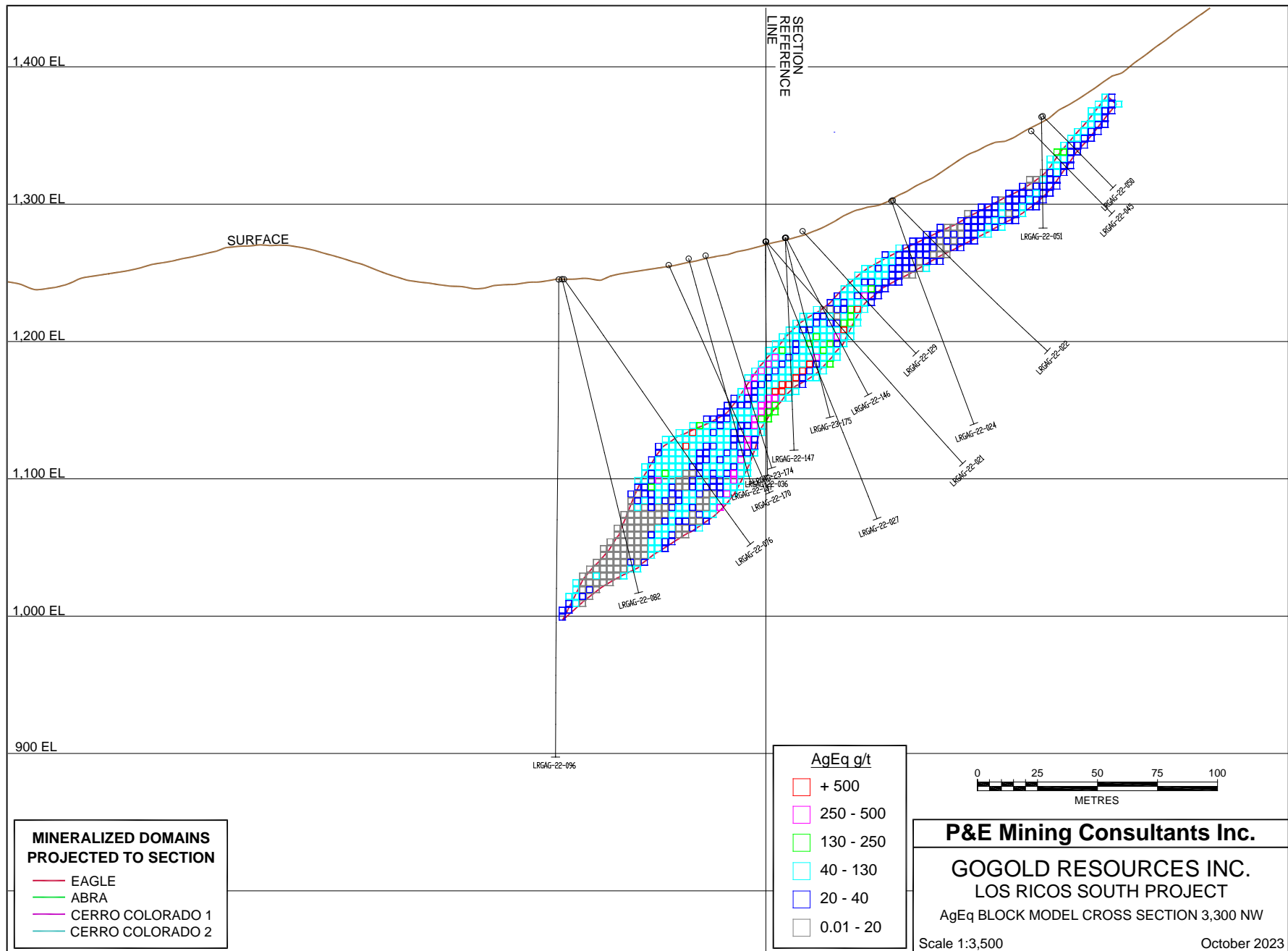


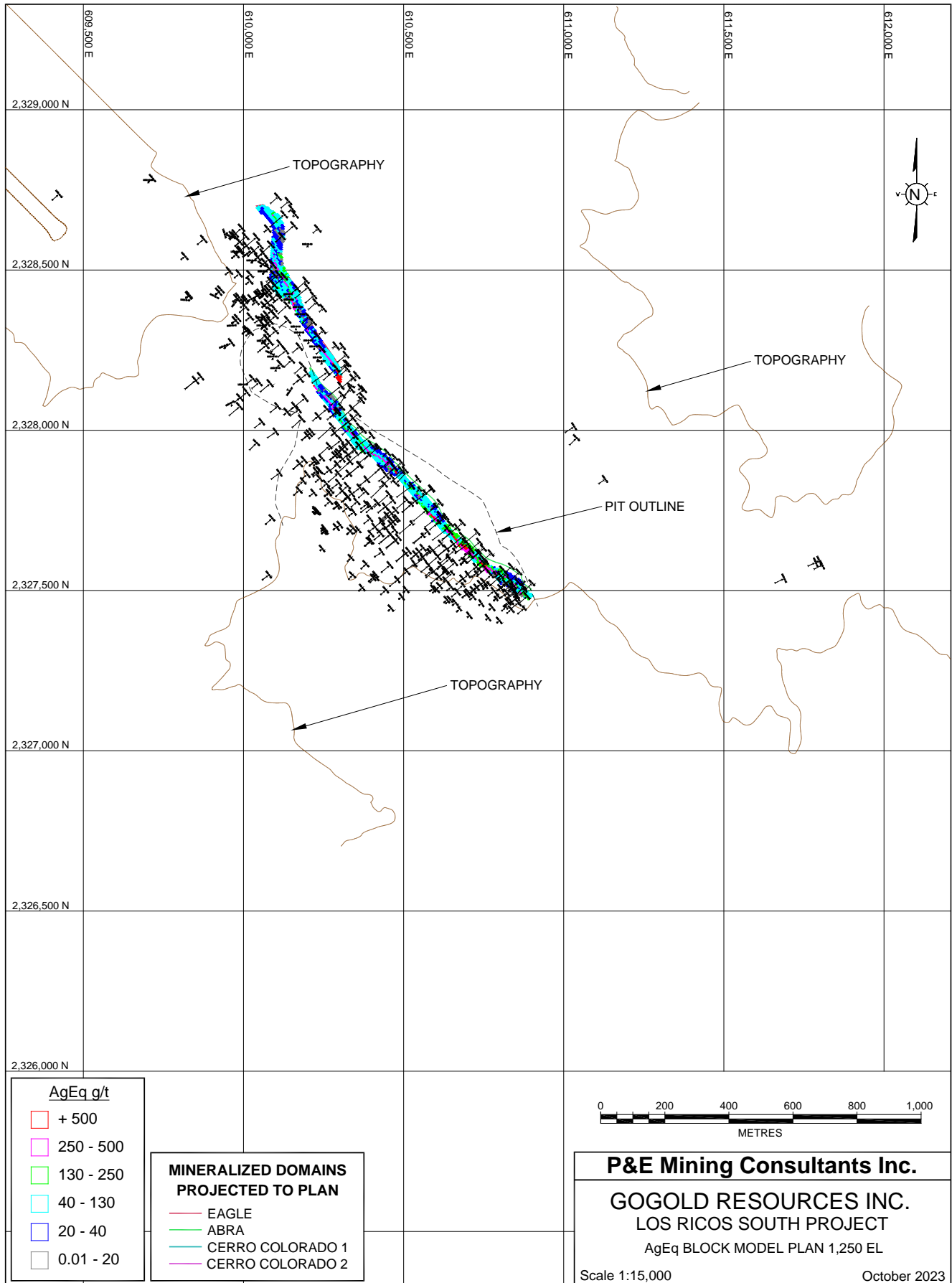


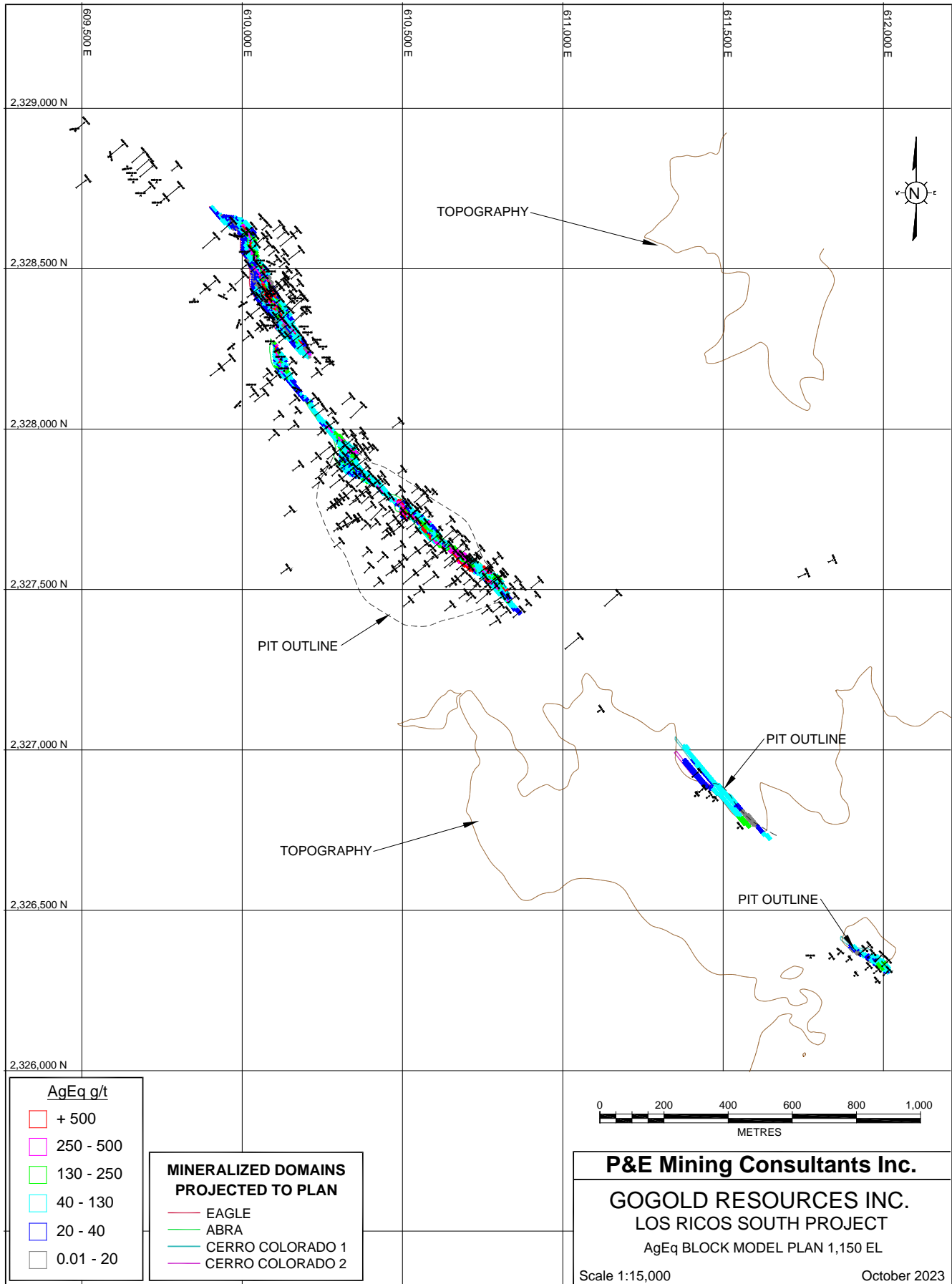


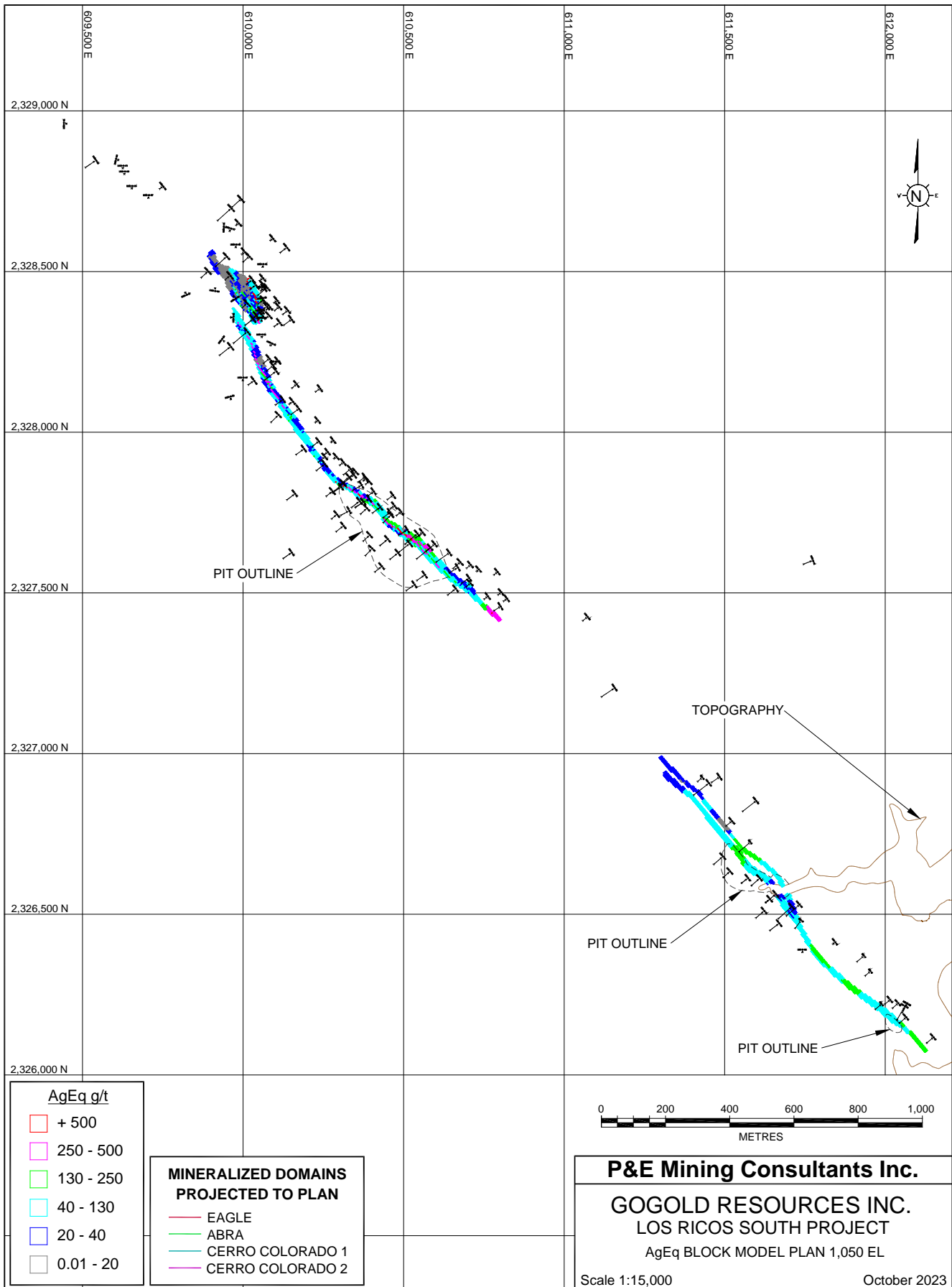






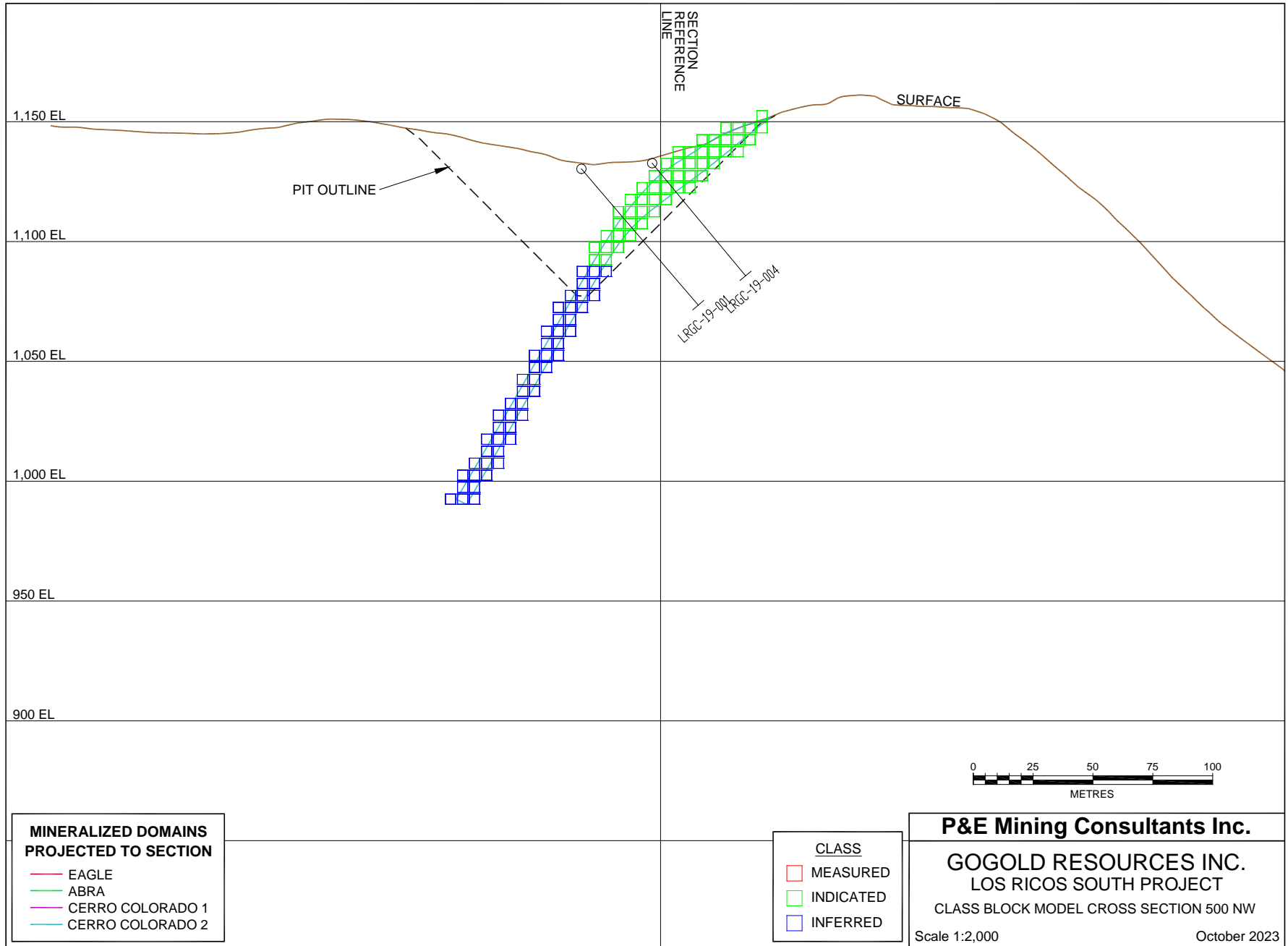


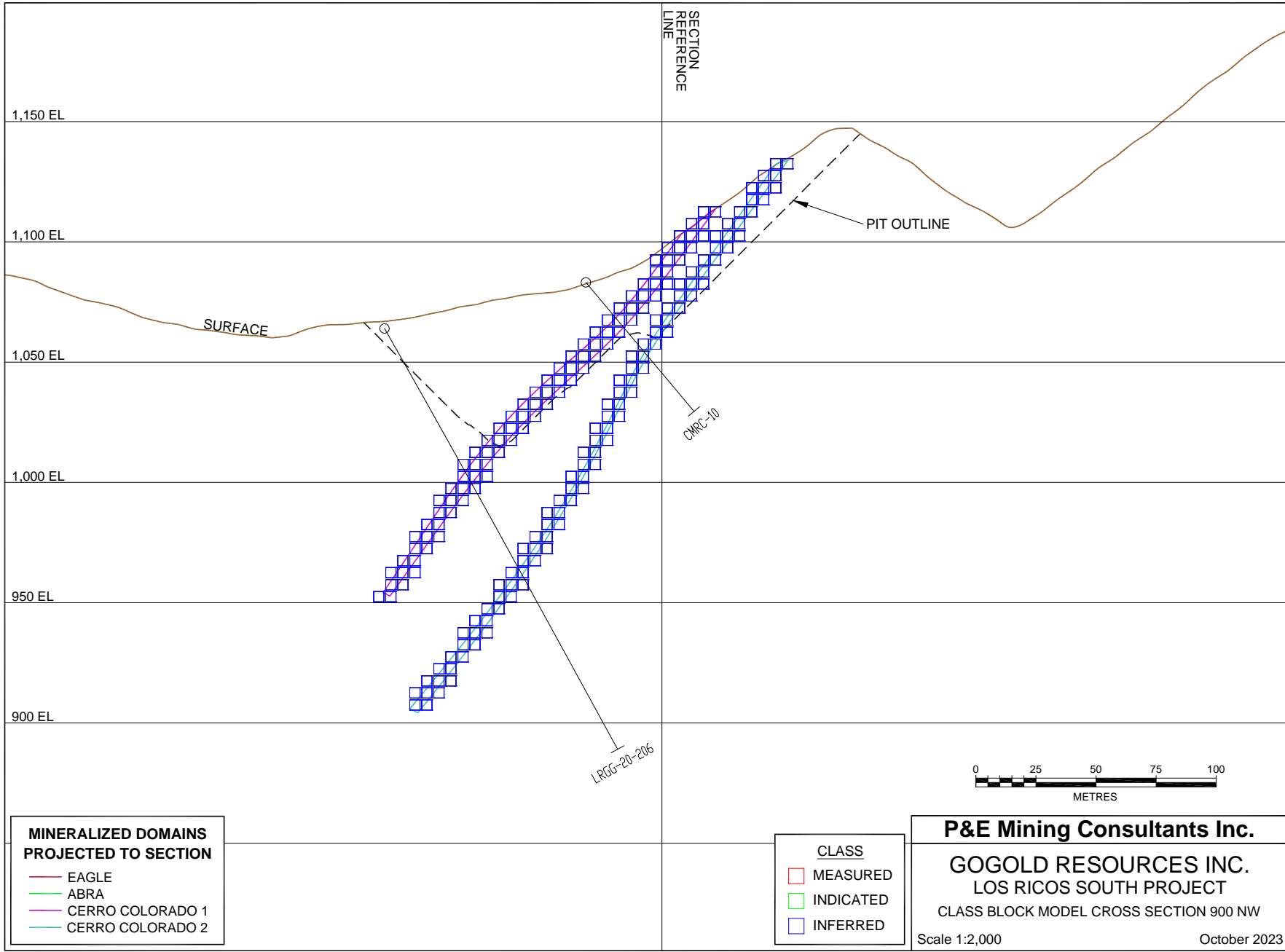




**APPENDIX F CLASSIFICATION BLOCK MODEL CROSS-SECTIONS AND PLANS**







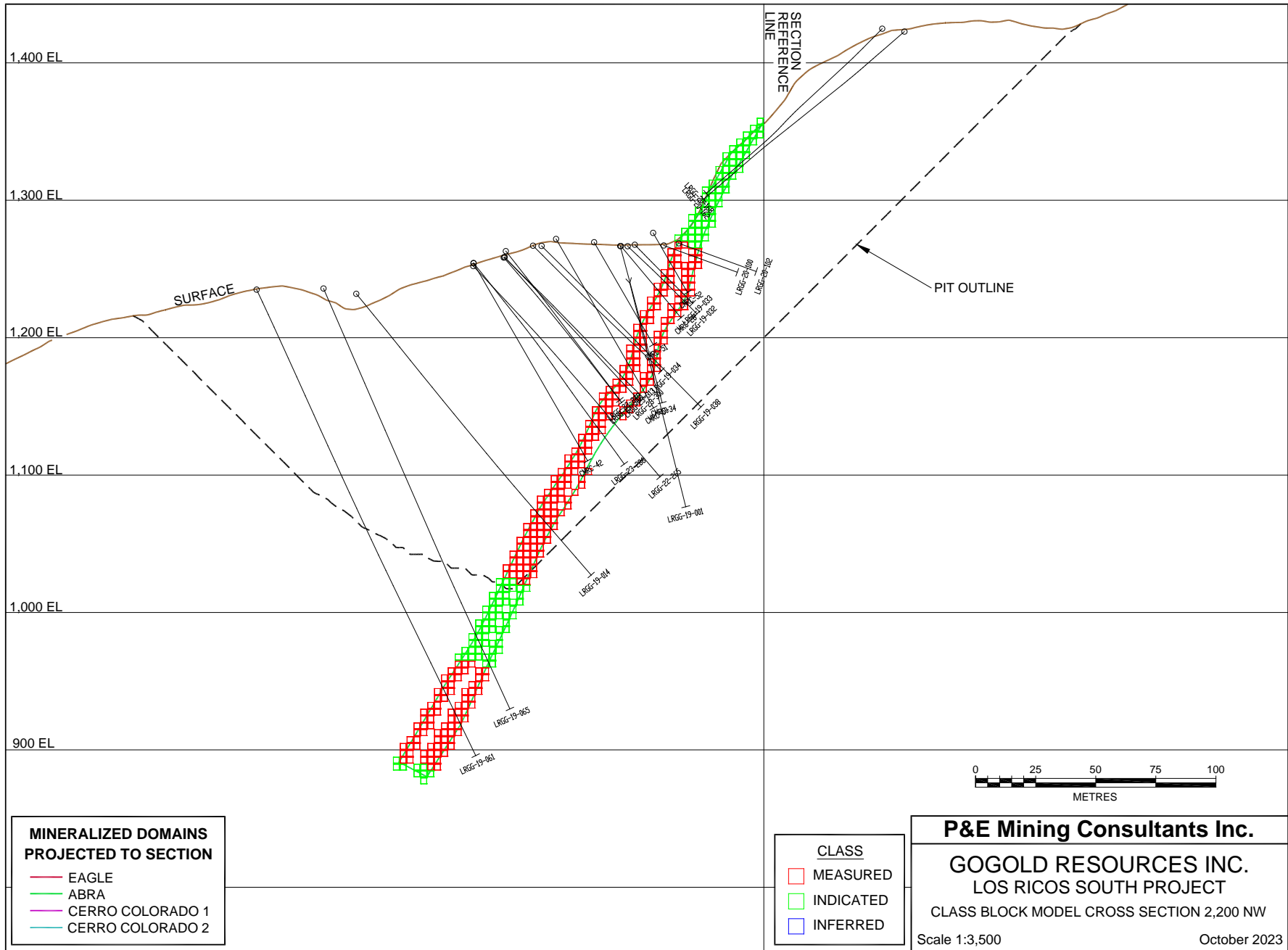
**MINERALIZED DOMAINS  
PROJECTED TO SECTION**

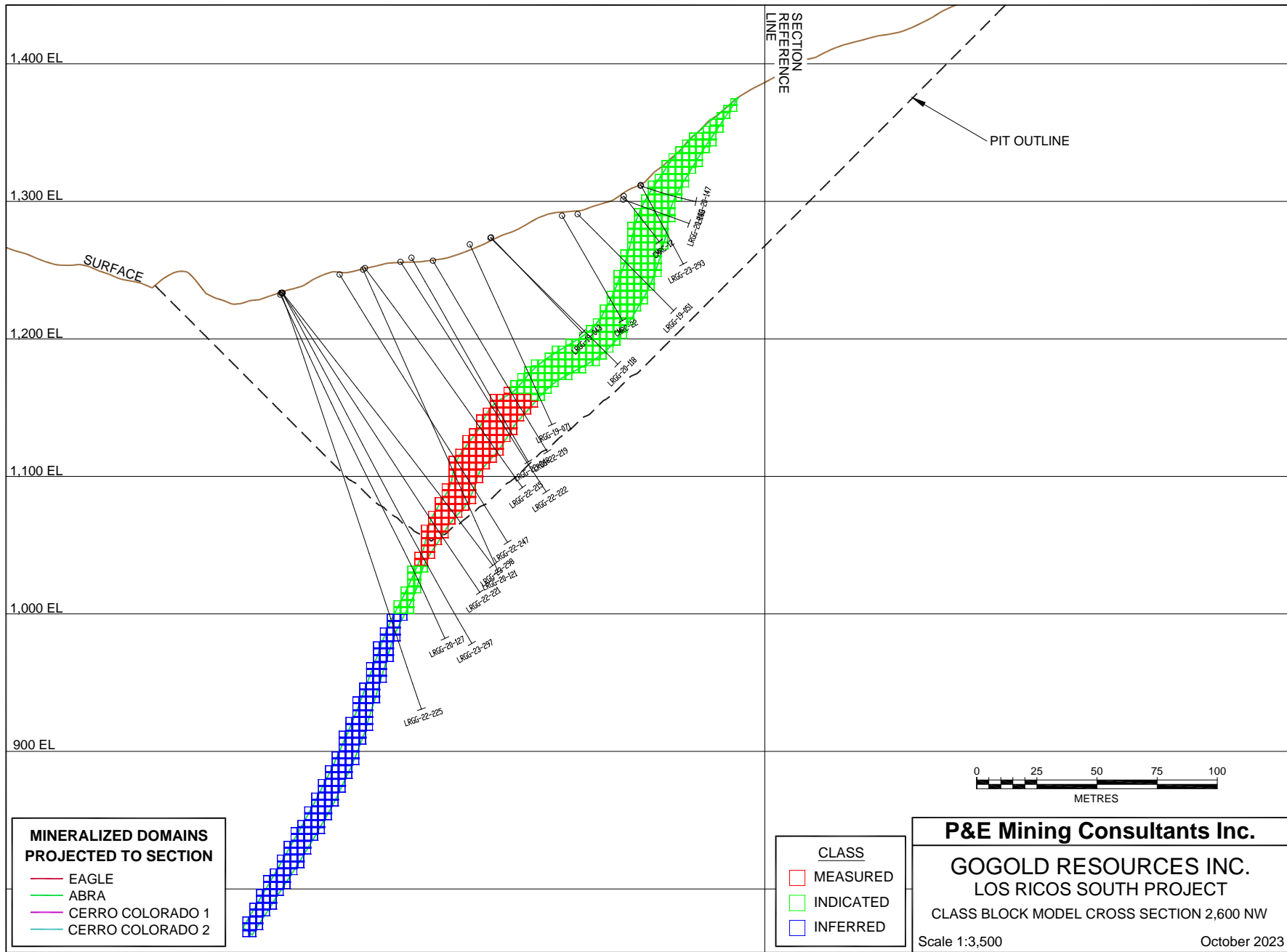
- EAGLE
- ABRA
- CERRO COLORADO 1
- CERRO COLORADO 2

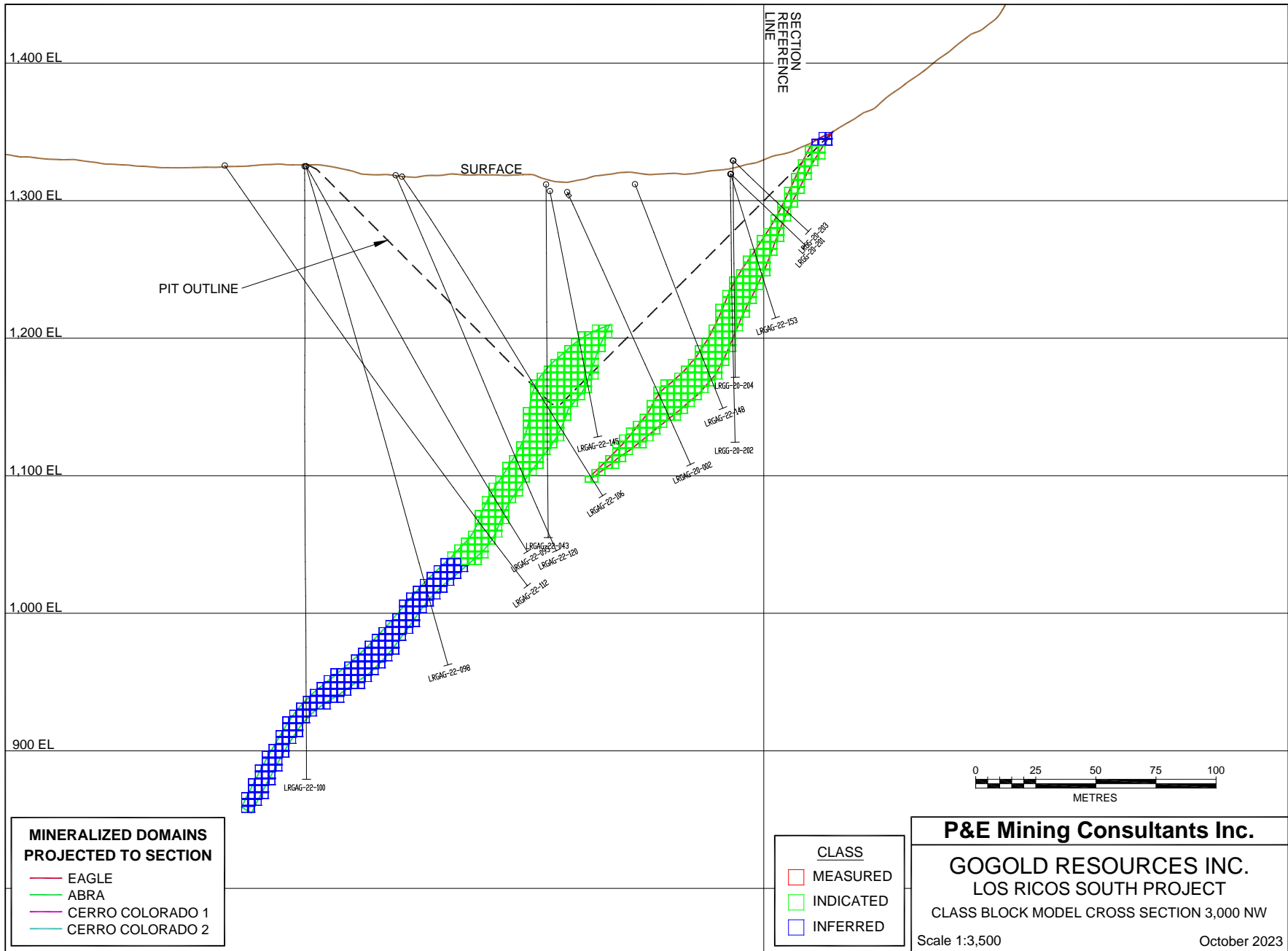
**CLASS**

- MEASURED
- INDICATED
- INFERRED

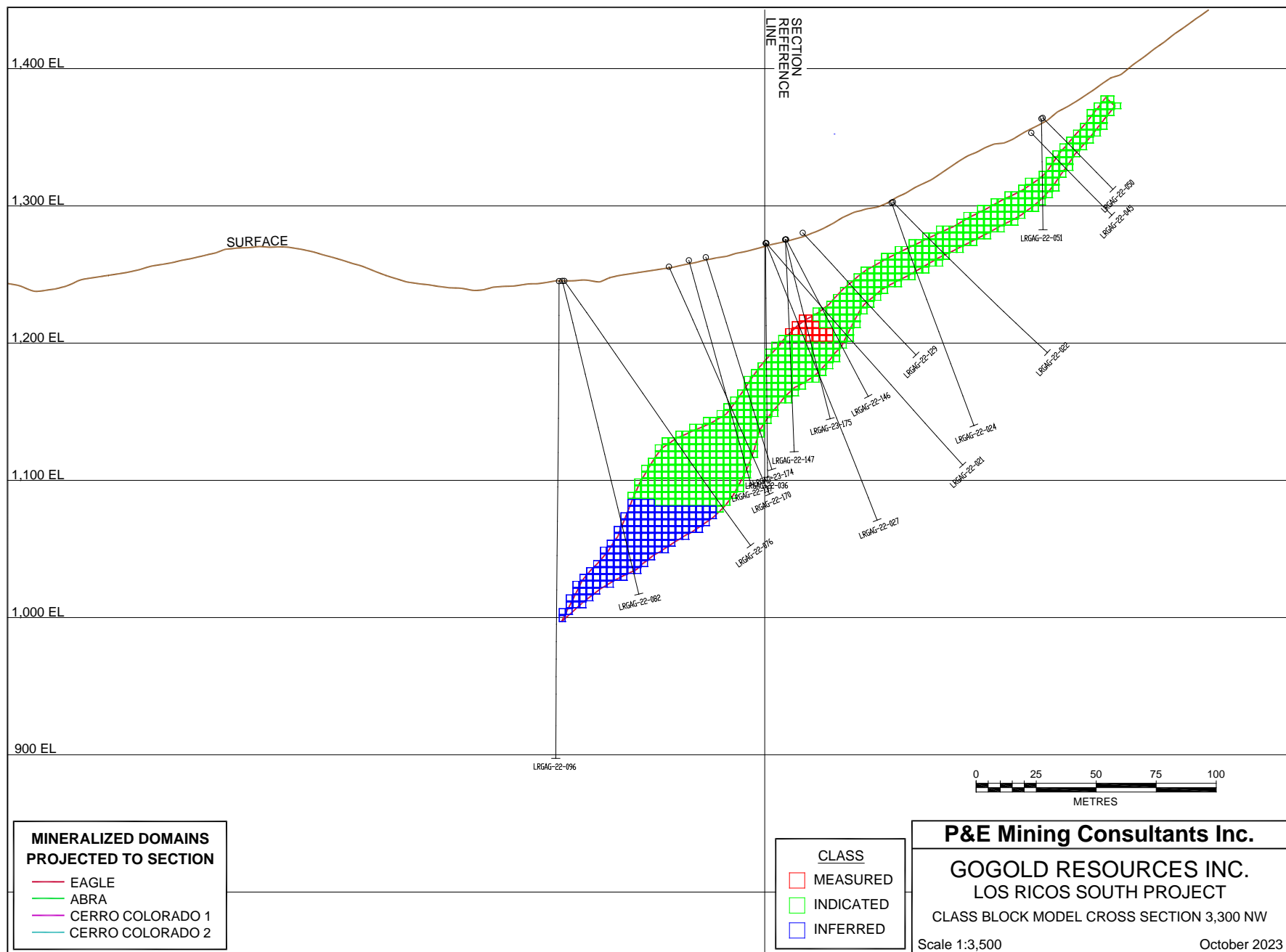
**P&E Mining Consultants Inc.**  
**GOGOLD RESOURCES INC.**  
 LOS RICOS SOUTH PROJECT  
 CLASS BLOCK MODEL CROSS SECTION 900 NW  
 Scale 1:2,000  
 October 2023

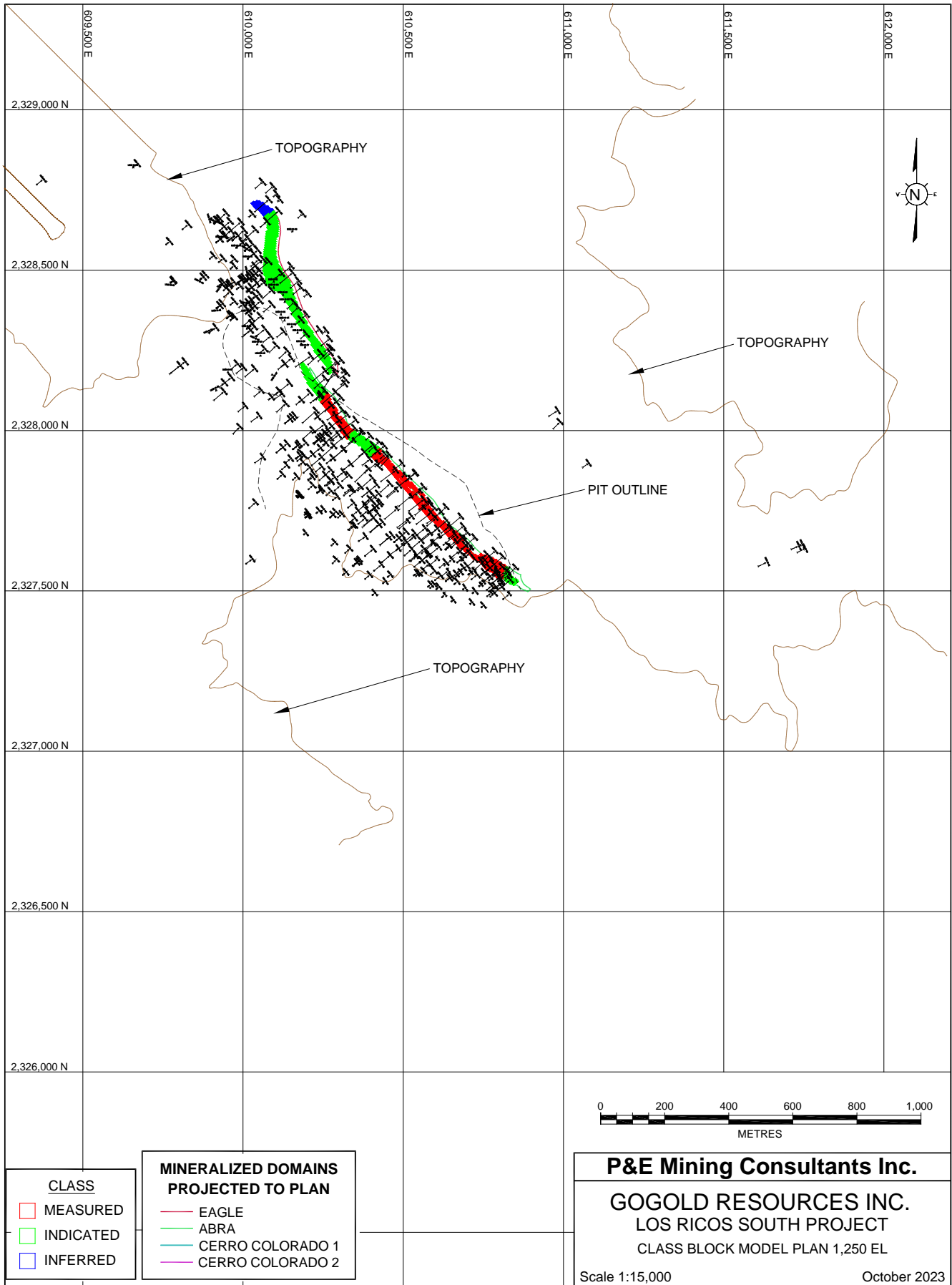




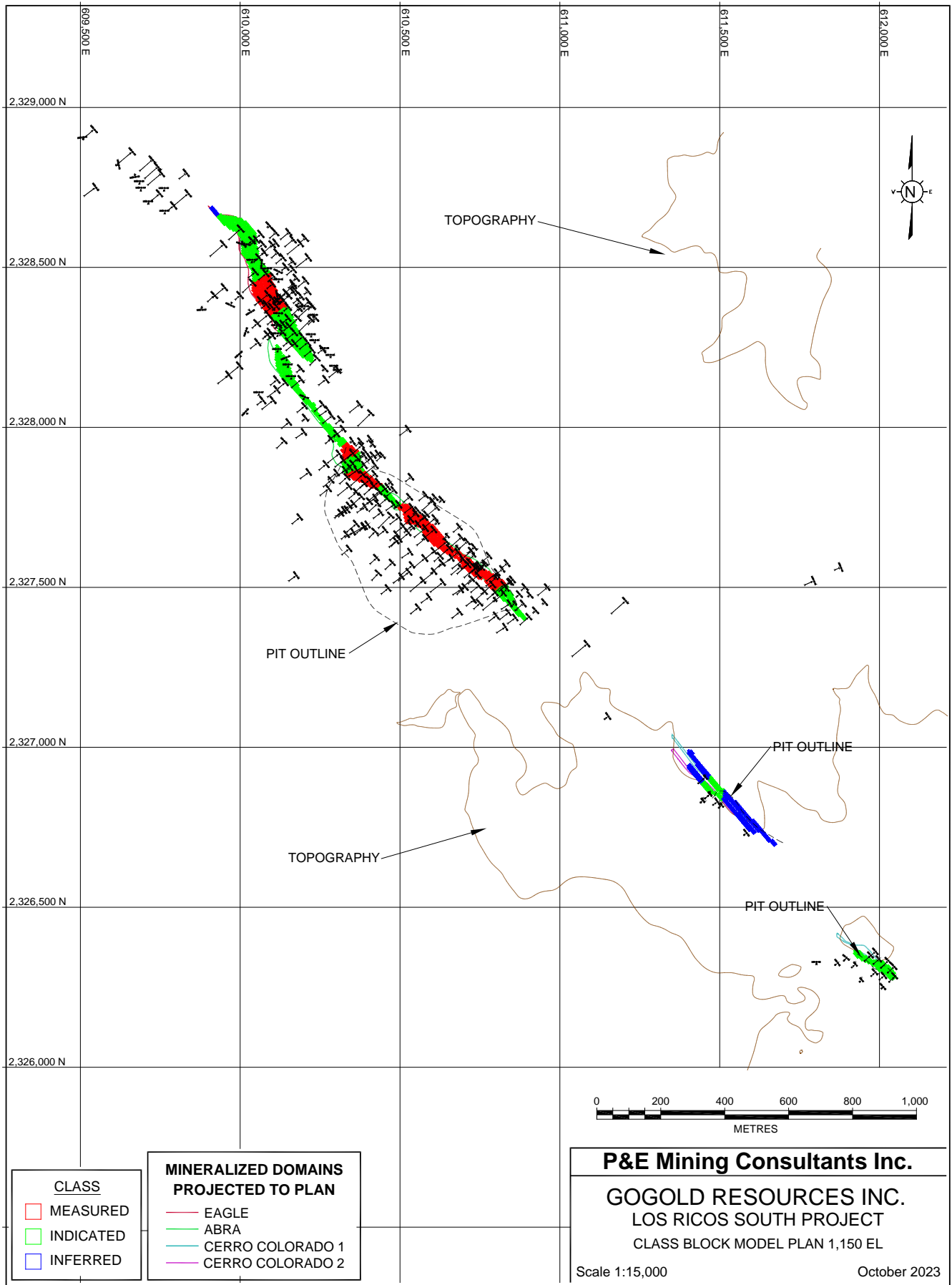






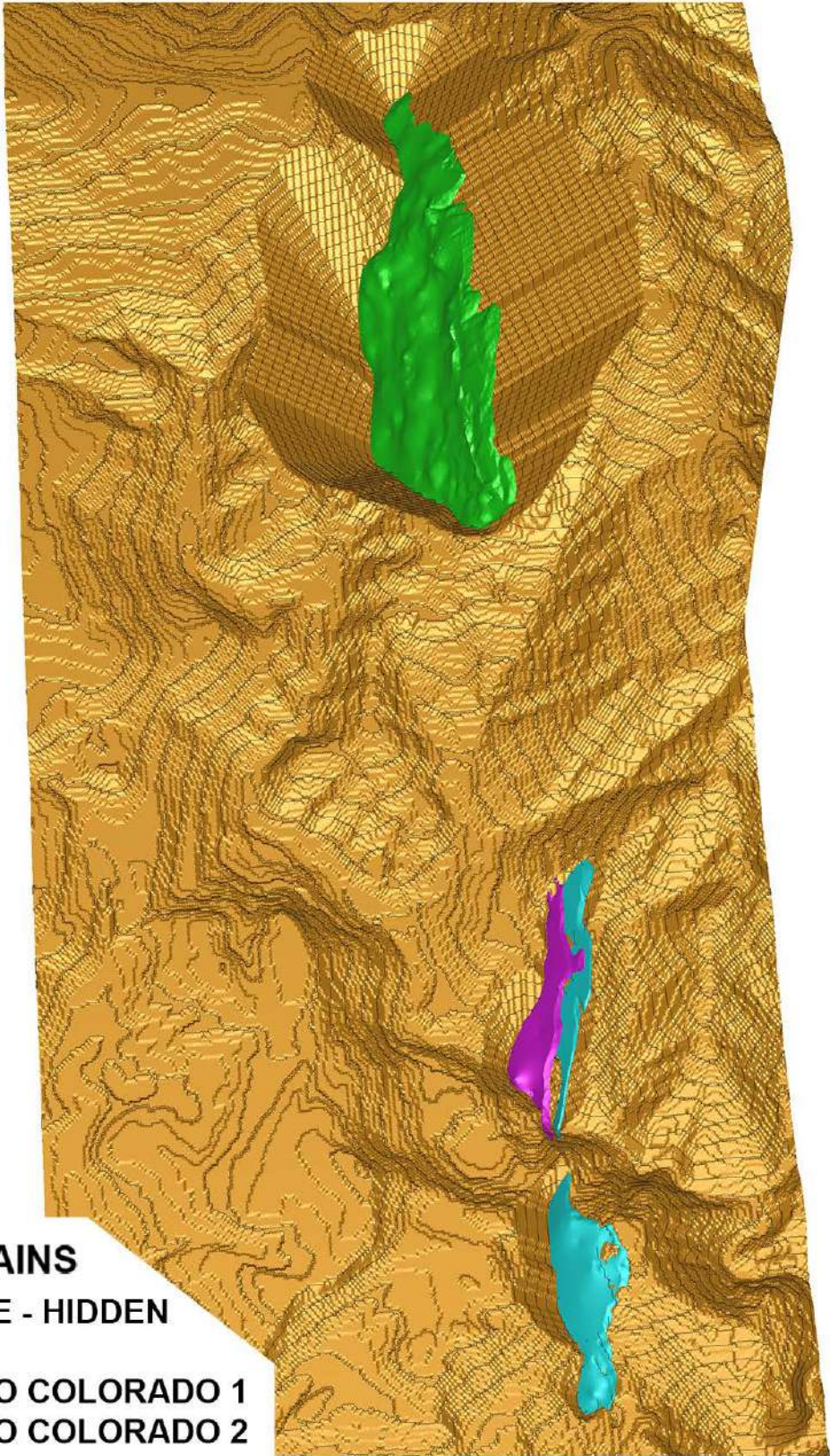






## APPENDIX G OPTIMIZED PIT SHELL

# LOS RICOS SOUTH PROJECT OPTIMIZED PIT SHELLS



**APPENDIX H DRILL HOLE LOCATION DATA**

<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGAG-20-001	610102	2328248	1295	50	-65	237
LRGAG-20-002	610102	2328219	1306	50	-65	218
LRGAG-20-003	610176	2328321	1306	50	-45	76
LRGAG-20-004	610175	2328321	1306	0	-90	143
LRGAG-20-005	610165	2328340	1304	50	-45	70
LRGAG-20-006	610164	2328339	1303	0	-90	140
LRGAG-21-007	610058	2328297	1284	50	-75	292
LRGAG-21-008	610172	2328402	1313	50	-50	89
LRGAG-21-009	610170	2328401	1312	0	-90	140
LRGAG-21-010	610142	2328443	1311	50	-50	103
LRGAG-21-011	610141	2328442	1311	0	-90	132
LRGAG-21-012	610056	2328370	1282	50	-75	231
LRGAG-21-013	610055	2328369	1282	50	-50	191
LRGAG-21-014	610055	2328369	1282	0	-90	321
LRGAG-21-015	610059	2328297	1284	50	-50	235
LRGAG-21-016	610058	2328296	1284	0	-90	257
LRGAG-21-017	610058	2328345	1283	50	-50	227
LRGAG-21-018	610058	2328344	1283	50	-75	254
LRGAG-22-019	610143	2328421	1308	50	-50	109
LRGAG-22-020	609704	2328800	1235	50	-45	114
LRGAG-22-021	610026	2328548	1271	50	-50	216
LRGAG-22-022	610096	2328608	1301	50	-45	157
LRGAG-22-023	610142	2328420	1307	50	-85	150
LRGAG-22-024	610096	2328607	1300	50	-70	173
LRGAG-22-025	609703	2328799	1234	50	-90	141
LRGAG-22-026	609806	2328557	1234	50	-45	306
LRGAG-22-027	610026	2328548	1271	50	-70	218
LRGAG-22-028	610062	2328514	1272	50	-53	210
LRGAG-22-029	610058	2328443	1278	50	-50	167
LRGAG-22-030	610061	2328513	1272	50	-70	266
LRGAG-22-031	610061	2328513	1272	0	-90	322
LRGAG-22-032	610059	2328444	1278	50	-70	159

<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGAG-22-033	610057	2328344	1283	0	-90	295
LRGAG-22-034	609857	2328604	1244	50	-45	271
LRGAG-22-035	610058	2328443	1278	0	-90	216
LRGAG-22-036	610026	2328548	1271	0	-90	171
LRGAG-22-037	610090	2328247	1295	0	-90	213
LRGAG-22-038	609977	2328575	1265	50	-50	139
LRGAG-22-039	610087	2328271	1289	50	-65	219
LRGAG-22-040	610086	2328270	1289	0	-90	227
LRGAG-22-041	609977	2328575	1265	50	-72	164
LRGAG-22-042	610179	2328608	1338	50	-50	99
LRGAG-22-043	610100	2328212	1312	0	-90	257
LRGAG-22-044	609977	2328575	1265	0	-90	249
LRGAG-22-045	610177	2328669	1351	50	-45	84
LRGAG-22-046	610065	2328643	1302	50	-45	144
LRGAG-22-047	609706	2328729	1218	50	-45	145
LRGAG-22-048	610064	2328642	1302	50	-80	102
LRGAG-22-049	609970	2328427	1252	50	-60	144
LRGAG-22-050	610196	2328659	1362	50	-45	73
LRGAG-22-051	610195	2328658	1362	0	-90	81
LRGAG-22-052	609705	2328729	1218	50	-70	167
LRGAG-22-053	610200	2328599	1337	50	-45	66
LRGAG-22-054	610165	2328692	1353	50	-45	56
LRGAG-22-055	610237	2328581	1347	50	-45	44
LRGAG-22-056	610256	2328511	1383	50	-45	105
LRGAG-22-057	609705	2328729	1218	0	-90	197
LRGAG-22-058	610200	2328598	1337	0	-90	72
LRGAG-22-059	610000	2328160	1318	50	-70	303
LRGAG-22-060	610216	2328343	1320	50	-45	51
LRGAG-22-061	609655	2328760	1210	50	-65	126
LRGAG-22-062	610205	2328368	1318	50	-45	72
LRGAG-22-063	610177	2328379	1311	50	-45	86
LRGAG-22-064	609653	2328759	1210	0	-90	175
LRGAG-22-065	610176	2328378	1311	0	-90	113
LRGAG-22-066	609632	2328800	1204	50	-45	110
LRGAG-22-067	609999	2328159	1318	0	-90	427
LRGAG-22-068	610118	2328660	1325	50	-45	72
LRGAG-22-069	609630	2328799	1204	0	-90	141
LRGAG-22-070	610104	2328675	1326	50	-45	80
LRGAG-22-071	609627	2328823	1199	50	-45	100

<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGAG-22-072	610082	2328687	1325	50	-45	102
LRGAG-22-073	609625	2328822	1199	0	-90	170
LRGAG-22-074	610050	2328702	1325	50	-45	102
LRGAG-22-075	609555	2328880	1180	50	-45	80
LRGAG-22-076	609916	2328450	1243	50	-55	236
LRGAG-22-077	609957	2328623	1268	0	-90	231
LRGAG-22-078	609554	2328879	1179	0	-90	104
LRGAG-22-079	609449	2328961	1164	50	-45	65
LRGAG-22-080	609969	2328426	1252	50	-75	239
LRGAG-22-081	609449	2328960	1164	0	-90	103
LRGAG-22-082	609915	2328449	1243	50	-75	235
LRGAG-22-083	609969	2328426	1252	0	-90	297
LRGAG-22-084	609612	2328849	1196	50	-45	93
LRGAG-22-085	609958	2328623	1268	50	-70	167
LRGAG-22-086	609611	2328848	1195	0	-90	131
LRGAG-22-087	609958	2328624	1268	50	-45	132
LRGAG-22-088	609404	2329006	1160	50	-45	61
LRGAG-22-089	609403	2329005	1160	0	-90	68
LRGAG-22-090	609966	2328360	1252	50	-60	270
LRGAG-22-091	609947	2328639	1268	0	-90	218
LRGAG-22-092	609808	2328145	1297	50	-45	443
LRGAG-22-093	609808	2328145	1297	50	-55	443
LRGAG-22-094	610142	2328156	1330	50	-70	255
LRGAG-22-095	609963	2328104	1325	50	-60	323
LRGAG-22-096	609913	2328448	1243	0	-90	348
LRGAG-22-097	610139	2328150	1329	0	-90	246
LRGAG-22-098	609963	2328103	1325	50	-75	377
LRGAG-22-099	609965	2328359	1252	50	-75	312
LRGAG-22-100	609962	2328103	1325	0	-90	446
LRGAG-22-101	609964	2328357	1252	0	-90	327
LRGAG-22-102	609942	2328282	1272	50	-67	273
LRGAG-22-103	609823	2328439	1231	50	-50	306
LRGAG-22-104	609822	2328438	1231	50	-65	351
LRGAG-22-105	609942	2328282	1272	0	-90	386
LRGAG-22-106	610034	2328128	1317	50	-55	274
LRGAG-22-107	609820	2328437	1231	0	-90	386
LRGAG-22-108	610126	2328072	1310	50	-45	184
LRGAG-22-109	610126	2328072	1310	50	-65	239
LRGAG-22-110	610062	2328411	1283	50	-60	170



<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGAG-22-111	610126	2328072	1310	50	-85	296
LRGAG-22-112	609931	2328050	1326	50	-55	377
LRGAG-22-113	610060	2328410	1282	0	-90	266
LRGAG-22-114	609404	2328744	1247	50	-45	310
LRGAG-22-115	610035	2328259	1306	50	-63	308
LRGAG-22-116	610068	2328476	1277	50	-45	127
LRGAG-22-117	610067	2328475	1277	50	-70	146
LRGAG-22-118	610066	2328475	1277	0	-90	181
LRGAG-22-119	610050	2328304	1283	50	-63	256
LRGAG-22-120	610014	2328144	1319	50	-68	297
LRGAG-22-121	610141	2328156	1329	50	-56	234
LRGAG-22-122	609993	2328421	1259	50	-77	253
LRGAG-22-123	610141	2328185	1325	50	-60	173
LRGAG-22-124	610057	2328341	1282	50	-61	202
LRGAG-22-125	609956	2328624	1267	50	-78	210
LRGAG-22-126	610056	2328341	1282	50	-82	250
LRGAG-22-127	609975	2328600	1268	50	-48	149
LRGAG-22-128	609974	2328600	1268	50	-72	191
LRGAG-22-129	610045	2328566	1279	50	-46	122
LRGAG-22-130	610073	2328489	1276	50	-64	119
LRGAG-22-131	610005	2328596	1275	50	-49	169
LRGAG-22-132	610090	2328471	1286	50	-54	105
LRGAG-22-133	609991	2328422	1259	50	-65	216
LRGAG-22-134	610103	2328383	1291	50	-59	151
LRGAG-22-135	609989	2328393	1263	50	-64	234
LRGAG-22-136	610091	2328421	1291	50	-71	132
LRGAG-22-137	610009	2328481	1258	50	-74	170
LRGAG-22-138	610055	2328369	1282	50	-59	168
LRGAG-22-139	610015	2328570	1273	50	-48	169
LRGAG-22-140	610199	2328136	1353	50	-46	194
LRGAG-22-141	610055	2328367	1282	50	-82	260
LRGAG-22-142	610015	2328569	1273	50	-68	150
LRGAG-22-143	610014	2328569	1273	50	-89	194
LRGAG-22-144	610278	2328104	1323	50	-45	101
LRGAG-22-145	610099	2328217	1307	50	-79	182
LRGAG-22-146	610054	2328537	1274	50	-62	129
LRGAG-22-147	610054	2328536	1274	50	-87	155
LRGAG-22-148	610144	2328260	1312	50	-69	175
LRGAG-22-149	610231	2328101	1334	50	-50	160

<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGAG-22-150	609998	2328327	1264	50	-72	271
LRGAG-22-151	610036	2328260	1305	50	-53	258
LRGAG-22-152	610295	2328146	1344	50	-51	115
LRGAG-22-153	610202	2328299	1319	50	-72	110
LRGAG-22-154	610217	2328254	1331	50	-72	128
LRGAG-22-155	609997	2328326	1265	50	-76	304
LRGAG-22-156	610142	2328445	1312	50	-71	105
LRGAG-22-157	610146	2328029	1291	50	-56	193
LRGAG-22-158	610058	2328444	1278	50	-60	126
LRGAG-22-159	610107	2328342	1293	50	-61	177
LRGAG-22-160	610009	2328321	1268	50	-75	294
LRGAG-22-161	610058	2328443	1278	50	-74	156
LRGAG-22-162	610034	2328438	1270	50	-67	162
LRGAG-22-163	609965	2328563	1261	50	-52	165
LRGAG-22-164	610009	2328368	1269	50	-75	279
LRGAG-22-165	610058	2328443	1278	50	-84	187
LRGAG-22-166	610033	2328438	1269	50	-74	176
LRGAG-22-167	609964	2328562	1260	50	-72	187
LRGAG-22-168	610033	2328437	1269	50	-80	195
LRGAG-22-169	610061	2328412	1282	50	-45	159
LRGAG-22-170	609973	2328501	1254	50	-66	181
LRGAG-22-171	610029	2328417	1270	50	-78	227
LRGAG-22-172	610037	2328361	1279	50	-80	260
LRGAG-22-173	610060	2328411	1282	50	-76	199
LRGAG-22-174	610009	2328500	1261	50	-73	162
LRGAG-22-175	610053	2328537	1274	50	-76	135
LRGAG-22-176	609958	2328621	1268	50	-75	187
LRGAG-22-177	609945	2328511	1250	50	-68	199
LRGG-22-208	610837	2327470	1252	50	-50	101
LRGG-22-209	610797	2327528	1255	50	-85	135
LRGG-22-210	610379	2327666	1261	50	-65	260
LRGG-22-211	610607	2327635	1278	50	-61	158
LRGG-22-212	610211	2328051	1311	50	-56	220
LRGG-22-213	610210	2328051	1312	50	-75	187
LRGG-22-214	610473	2327777	1293	50	-56	177
LRGG-22-215	610254	2327822	1251	50	-54	197
LRGG-22-216	610251	2328176	1362	50	-50	132
LRGG-22-217	610478	2327617	1279	50	-58	224
LRGG-22-218	610698	2327577	1256	50	-45	130



<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGG-22-219	610307	2327836	1257	50	-58	162
LRGG-22-220	610401	2327885	1293	50	-46	125
LRGG-22-221	610220	2327768	1234	50	-56	261
LRGG-22-222	610289	2327820	1256	50	-57	198
LRGG-22-224	610410	2327788	1276	50	-45	138
LRGG-22-225	610220	2327768	1233	50	-70	320
LRGG-22-226	610306	2327803	1254	50	-56	185
LRGG-22-227	610440	2327718	1270	50	-56	177
LRGG-22-228	610432	2327584	1263	50	-53	270
LRGG-22-229	610243	2327712	1236	50	-56	164
LRGG-22-230	610337	2327788	1256	50	-60	190
LRGG-22-231	610312	2328038	1299	50	-44	77
LRGG-22-232	610384	2327771	1264	50	-45	150
LRGG-22-233	610396	2327552	1251	50	-55	305
LRGG-22-235	610427	2327746	1271	50	-52	137
LRGG-22-236	610327	2328009	1294	50	-45	57
LRGG-22-237	610218	2327887	1250	50	-54	184
LRGG-22-238	610311	2327773	1250	50	-60	212
LRGG-22-239	610360	2327817	1264	50	-59	142
LRGG-22-241	610277	2328012	1285	50	-45	87
LRGG-22-242	610266	2327866	1265	50	-45	180
LRGG-22-243	610484	2327564	1261	50	-51	228
LRGG-22-244	610240	2327843	1249	50	-50	175
LRGG-22-245	610276	2328011	1285	50	-85	112
LRGG-22-246	610392	2327710	1263	50	-63	226
LRGG-22-247	610256	2327791	1247	50	-57	230
LRGG-22-248	610278	2327846	1259	50	-59	171
LRGG-22-249	610589	2327583	1263	50	-51	137
LRGG-22-250	610411	2327725	1266	50	-61	201
LRGG-22-251	610207	2327821	1239	50	-52	216
LRGG-22-252	610578	2327607	1268	50	-53	175
LRGG-22-253	610156	2327906	1274	50	-50	247
LRGG-22-254	610419	2327707	1273	50	-65	213
LRGG-22-255	610283	2327782	1247	50	-59	237
LRGG-22-256	610533	2327604	1260	50	-49	164
LRGG-22-257	610730	2327536	1246	50	-46	77
LRGG-22-258	610556	2327585	1257	50	-53	185
LRGG-22-259	610156	2327906	1275	50	-68	260
LRGG-22-260	610684	2327505	1247	50	-50	167

<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGG-22-261	610812	2327478	1246	50	-56	85
LRGG-22-262	610684	2327505	1247	50	-63	189
LRGG-22-263	610183	2327997	1279	50	-66	198
LRGG-22-264	610651	2327508	1245	50	-50	182
LRGG-22-265	610586	2327550	1252	50	-46	205
LRGG-22-266	610316	2328106	1328	50	-45	101
LRGG-22-267	610250	2328049	1306	50	-45	101
LRGG-22-268	610310	2328071	1312	50	-44	99
LRGG-22-269	610806	2327506	1252	50	-59	90
LRGG-22-270	610823	2327456	1243	50	-56	86
LRGG-22-271	610859	2327485	1264	50	-51	65
LRGG-22-272	610768	2327467	1232	50	-54	112
LRGG-22-273	610282	2328044	1300	50	-45	111
LRGG-22-274	610764	2327510	1242	50	-48	107
LRGG-22-275	610246	2328081	1318	50	-45	114
LRGG-22-276	610524	2327627	1270	50	-44	193
LRGG-22-277	610524	2327627	1270	50	-57	171
LRGG-22-278	610523	2327626	1270	50	-71	179
LRGG-22-279	610591	2327520	1242	50	-61	237
LRGG-22-280	610324	2328087	1321	50	-45	84
LRGG-22-281	610614	2327542	1253	50	-53	177
LRGG-22-282	610423	2327672	1280	50	-53	191
LRGG-22-283	610665	2327547	1251	50	-53	156
LRGG-23-284	610272	2327935	1278	50	-51	129
LRGG-23-285	610722	2327532	1245	50	-49	125
LRGG-23-286	610571	2327568	1254	50	-52	183
LRGG-23-287	610300	2327962	1281	50	-59	104
LRGG-23-288	610272	2327935	1278	50	-67	164
LRGG-23-289	610699	2327512	1246	50	-49	153
LRGG-23-290	610248	2328048	1306	50	-55	104
LRGG-23-291	610300	2327928	1284	50	-64	149
LRGG-23-292	610428	2327742	1270	50	-64	160
LRGG-23-293	610422	2327934	1312	50	-60	65
LRGG-23-294	610272	2327902	1278	50	-66	186
LRGG-23-295	610317	2327812	1256	50	-56	170
LRGG-23-296	610207	2327916	1251	50	-52	186
LRGG-23-297	610223	2327766	1233	50	-61	290
LRGG-23-298	610223	2327766	1233	50	-50	250
LRGG-23-299	610281	2327717	1237	50	-65	302

<b>DRILL HOLE LOCATION DATA</b>						
<b>Drill Hole ID</b>	<b>Easting</b>	<b>Northing</b>	<b>Elevation (m)</b>	<b>Azimuth (°)</b>	<b>Dip (°)</b>	<b>Length (m)</b>
LRGG-23-300	610604	2327563	1258	50	-45	144
LRGG-23-301	610604	2327563	1258	50	-49	136
LRGG-23-302	610318	2327943	1286	50	-51	116
LRGG-23-303	610444	2327886	1303	50	-45	82
LRGG-23-304	610444	2327885	1303	50	-67	110
LRGG-23-305	610367	2328148	1350	50	-45	59
LRGG-23-306	610350	2328133	1345	50	-45	78
LRGG-23-307	610255	2328050	1306	50	-42	59
LRGG-23-308	610426	2327675	1282	50	-45	216
LRGG-23-309	610437	2327744	1274	50	-47	188
LRGG-23-310	610329	2328131	1339	55	-57	77
LRGG-23-311	610183	2327997	1280	50	-59	179
LRGG-23-312	610183	2327997	1280	50	-74	221
LRGG-23-313	610604	2327564	1259	50	-46	139
LRGG-23-314	610548	2327620	1268	50	-41	169
LRGG-23-315	610324	2327703	1246	45	-47	234
LRGG-23-316	610324	2327703	1246	45	-70	306

**APPENDIX I DRILL HOLE SIGNIFICANT INTERSECTIONS, VEINS AND ASSAYS DATA**

<b>DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS</b>								
<b>Drill Hole ID</b>	<b>Area / Vein</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length<sup>1</sup> (m)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>AuEq<sup>2</sup> (g/t)</b>	<b>AgEq<sup>2</sup> (g/t)</b>
LRGAG-20-001	Eagle	138.2	170.9	32.7	1.11	35.1	1.58	118.7
	including	167.3	168.9	1.6	19.09	122.6	20.72	1,554.0
LRGAG-20-002	Eagle	160.5	177.2	16.7	0.24	51.4	0.93	69.4
LRGAG-20-003	Eagle	47.9	51.3	3.4	0.08	21.3	0.360	27.0
LRGAG-20-004	Eagle	94.8	113.8	19.0	0.45	57.0	1.21	90.7
	including	97.8	100.0	2.2	1.66	186.4	4.14	310.6
LRGAG-20-005	Eagle	49.6	54.9	5.4	0.68	51.9	1.37	102.6
LRGAG-20-006	Eagle	74.7	107.6	26.9	0.49	57.0	1.25	93.8
	including	83.6	85.6	2.0	1.60	197.6	4.23	317.5
LRGAG-21-007	Eagle	148.5	191.0	42.5	1.64	137.5	3.47	260.6
	including	155.5	156.5	1.0	7.42	493.0	13.99	1,049.5
	including	188.6	190.2	1.6	6.83	1,269.5	23.76	1,781.8
LRGAG-21-008	Eagle	24.7	26.7	2.0	0.58	93.4	1.82	136.7
LRGAG-21-009	Eagle	35.6	73.8	38.2	0.43	34.6	0.89	66.7
	including	42.8	49.8	7.1	1.30	123.8	2.95	221.3
LRGAG-21-010	Eagle	16.8	51.5	34.7	0.56	47.9	1.20	90.1
	including	38.0	39.0	1.0	7.88	263.0	11.39	854.0
LRGAG-21-011	Eagle	52.1	91.3	39.2	0.68	58.1	1.45	108.9
	including	64.7	66.2	1.5	2.87	133.7	4.65	348.7
LRGAG-21-012	Eagle	111.3	179.7	66.1	1.29	55.4	2.03	152.0
	including	140.0	141.0	1.0	14.60	1,080.0	29.00	2,175.0
	including	146.8	147.5	0.8	14.95	87.0	16.11	1,208.3
	including	150.5	154.5	4.1	7.36	80.8	8.44	632.8
	including	172.9	174.5	1.7	1.84	127.7	3.54	265.5
LRGAG-21-013	Eagle	90.0	121.7	31.7	0.65	64.5	1.51	113.5
	including	108.6	109.5	0.9	1.30	301.0	5.31	398.5
	including	114.2	115.0	0.8	2.49	274.0	6.14	460.8
LRGAG-21-014	Eagle	144.3	216.9	72.6	5.13	76.0	6.14	460.6
	including	173.1	176.2	3.1	4.86	659.6	13.66	1,024.1
	including	198.8	210.7	11.9	28.58	115.9	30.13	2,259.8
	including	208.6	210.7	2.1	146.03	176.8	148.39	11,128.9

**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

<b>Drill Hole ID</b>	<b>Area / Vein</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length<sup>1</sup> (m)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>AuEq<sup>2</sup> (g/t)</b>	<b>AgEq<sup>2</sup> (g/t)</b>
	including	208.6	209.3	0.7	266.00	319.0	270.25	20,269.0
	including	210.0	210.7	0.7	168.50	140.0	170.37	12,777.5
LRGAG-21-015	Eagle	146.5	163.9	17.4	1.02	36.6	1.51	113.1
	including	146.5	147.2	0.7	11.75	284.0	15.54	1,165.2
	and	177.8	179.3	1.4	0.99	69.1	1.92	143.7
LRGAG-21-016	Eagle	175.8	182.6	6.8	0.88	82.4	1.98	148.1
	including	180.3	181.3	0.9	3.42	308.0	7.53	564.5
LRGAG-21-017	Eagle	121.7	145.1	23.4	2.25	133.0	4.02	301.7
	including	125.7	126.3	0.6	25.40	437.0	31.23	2,342.0
LRGAG-21-018	Eagle	127.6	163.0	33.6	1.57	85.5	2.71	203.5
	including	156.9	159.3	2.4	10.51	436.5	16.33	1,225.0
	including	156.9	157.6	0.8	15.00	1,155.0	30.40	2,280.0
	and	177.9	178.6	0.7	36.20	1,500.0	56.20	4,215.0
LRGAG-22-019	Eagle	40.2	41.3	1.1	1.17	28.5	1.55	116.5
	and	50.6	53.2	2.6	1.19	35.9	1.67	125.3
LRGAG-22-020	Eagle	33.9	35.3	1.4	0.07	26.6	0.42	31.7
LRGAG-22-021	Eagle	72.0	94.5	22.5	2.38	24.4	2.70	202.7
	including	88.4	90.0	1.6	24.60	49.0	25.25	1,894.0
	including	88.4	89.2	0.8	27.40	40.8	27.94	2,095.8
LRGAG-22-022	Eagle	40.0	59.5	19.5	0.09	9.8	0.22	16.8
LRGAG-22-023	Eagle	41.5	96.6	55.1	0.82	99.8	2.15	161.2
	including	57.5	65.6	8.1	2.12	519.9	9.06	679.3
	including	60.3	62.6	2.3	4.76	1,471.5	24.39	1,828.9
	including	60.3	61.5	1.2	4.89	2,650.0	40.22	3,016.7
LRGAG-22-024	Eagle	85.5	86.1	0.6	3.48	6.0	3.56	267.0
LRGAG-22-025	Eagle	45.0	51.0	6.0	0.10	13.1	0.28	20.7
LRGAG-22-026	Eagle	187.2	188.2	1.0	0.39	111.0	1.87	140.3
LRGAG-22-027	Eagle	101.7	110.7	9.0	1.54	62.5	2.37	177.7
	including	108.7	109.7	1.0	5.79	33.2	6.23	467.5
LRGAG-22-028	Eagle	44.8	48.8	4.0	0.66	63.7	1.51	112.9
LRGAG-22-029	Eagle	59.0	63.5	4.5	1.20	60.3	2.01	150.6
	and	74.0	94.6	20.6	1.52	217.5	4.42	331.3
	including	75.5	77.5	2.0	8.00	1,865.5	32.87	2,465.5
	including	75.5	76.5	1.0	14.15	3,520.0	61.08	4,581.3
LRGAG-22-030	Eagle	42.9	79.5	36.7	1.77	156.2	3.85	289.0
	including	51.9	61.0	9.1	6.00	553.3	13.38	1,003.2
	including	54.1	54.8	0.7	14.00	1,260.0	30.80	2,310.0
LRGAG-22-031	Eagle	58.0	126.0	68.0	4.25	109.4	5.71	428.4
	including	78.0	113.9	35.9	7.83	184.9	10.29	771.8

DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS								
Drill Hole ID	Area / Vein	From (m)	To (m)	Length <sup>1</sup> (m)	Au (g/t)	Ag (g/t)	AuEq <sup>2</sup> (g/t)	AgEq <sup>2</sup> (g/t)
	including	80.0	95.0	15.0	15.61	273.3	19.26	1,444.4
	including	80.0	86.0	6.0	20.96	472.8	27.26	2,044.5
	including	84.0	86.0	2.0	46.80	272.5	50.43	3,782.5
LRGAG-22-032	Eagle	48.1	113.8	65.8	1.36	107.7	2.79	209.6
	including	85.8	113.8	28.1	2.96	216.6	5.85	439.0
	including	88.5	92.9	4.3	7.17	1,012.8	20.68	1,550.7
	including	88.5	89.1	0.6	25.00	3,020.0	65.27	4,895.0
LRGAG-22-033	Eagle	190.9	222.0	31.1	0.66	64.6	1.53	114.4
	including	215.5	219.3	3.8	1.92	170.6	4.19	314.5
LRGAG-22-034	Eagle	130.5	134.0	3.5	0.57	9.6	0.70	52.2
LRGAG-22-035	Eagle	69.0	179.6	110.6	1.64	264.6	5.17	387.5
	including	129.0	140.5	11.5	11.31	2,198.3	40.62	3,046.7
	including	130.4	133.8	3.5	30.24	6,392.5	115.48	8,660.8
	including	130.4	131.9	1.5	63.24	12,729.3	232.96	17,472.0
	including	131.0	131.9	0.9	104.50	13,742.5	287.73	21,580.0
LRGAG-22-036	Eagle	87.0	128.0	41.0	1.26	83.9	2.38	178.5
	including	109.0	128.0	19.0	2.11	143.8	4.02	301.8
	including	119.5	120.9	1.5	9.00	509.3	15.79	1,184.3
	including	119.5	120.3	0.8	12.55	782.0	22.98	1,723.3
LRGAG-22-037	Eagle	122.2	167.8	45.7	0.82	69.9	1.76	131.7
	including	146.4	155.0	8.7	3.44	200.5	6.11	458.3
	including	149.9	151.6	1.7	12.95	181.7	15.37	1,152.6
	including	150.9	151.6	0.7	26.00	115.0	27.53	2,065.0
LRGAG-22-038	Eagle	88.0	124.0	36.0	1.30	75.7	2.31	173.0
	including	106.9	116.0	9.2	4.81	256.1	8.23	616.9
	including	108.4	109.6	1.3	6.76	1,271.6	23.72	1,778.9
	including	108.4	109.0	0.7	7.70	2,030.0	34.77	2,607.5
	also including	112.6	115.0	2.4	12.64	163.6	14.82	1,111.7
	including	114.2	115.0	0.8	31.60	70.0	32.53	2,440.0
LRGAG-22-039	Eagle	149.7	169.0	19.4	0.93	65.8	1.81	135.7
	including	156.8	164.4	7.6	1.87	145.0	3.81	285.6
	including	158.0	163.4	5.4	2.37	168.9	4.62	346.6
LRGAG-22-040	Eagle	152.6	154.4	1.8	0.39	65.8	1.27	95.1
LRGAG-22-041	Eagle	109.5	145.5	36.0	1.46	134.5	3.26	244.3
	including	134.0	143.5	9.5	4.55	389.9	9.75	731.1
	including	134.0	134.8	0.8	6.01	577.0	13.70	1,027.7
	also including	137.0	143.5	6.6	5.62	453.6	11.67	875.3

DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS								
Drill Hole ID	Area / Vein	From (m)	To (m)	Length <sup>1</sup> (m)	Au (g/t)	Ag (g/t)	AuEq <sup>2</sup> (g/t)	AgEq <sup>2</sup> (g/t)
	including	141.0	142.2	1.2	17.10	1,345.0	35.03	2,627.5
LRGAG-22-042	Eagle	No significant mineralization						
LRGAG-22-043	Eagle	146.0	154.2	8.2	0.67	78.4	1.72	129.0
	and	166.0	186.7	20.7	1.32	215.8	4.20	315.1
	including	176.5	185.8	9.3	2.73	428.2	8.44	633.1
	including	182.0	184.5	2.5	7.89	999.1	21.21	1,591.1
	including	182.0	182.7	0.7	17.20	2,130.0	45.60	3,420.0
LRGAG-22-044	Eagle	138.0	171.6	33.6	0.63	65.6	1.50	112.8
	including	138.8	147.0	8.3	1.78	160.2	3.92	293.8
	including	142.2	142.8	0.7	9.30	668.0	18.21	1,365.5
LRGAG-22-045	Eagle	22.0	37.0	15.0	0.31	42.8	0.88	65.7
	including	28.0	29.0	1.0	2.94	196.0	5.55	416.5
LRGAG-22-046	Eagle	64.0	70.4	6.3	1.15	77.9	2.19	164.3
	including	67.0	69.8	2.8	1.85	106.3	3.27	245.4
LRGAG-22-047	Eagle	94.9	96.4	1.4	1.37	90.8	2.58	193.7
LRGAG-22-048	Eagle	72.0	84.0	12.0	0.21	30.4	0.62	46.4
LRGAG-22-049	Eagle	139.5	141.0	1.5	0.31	77.7	1.34	100.7
LRGAG-22-050	Eagle	26.0	28.0	2.0	0.33	42.8	0.90	67.4
LRGAG-22-051	Eagle	42.0	43.1	1.1	0.34	50.6	1.01	75.7
LRGAG-22-052	Eagle	No significant mineralization						
LRGAG-22-053	Eagle	26.2	27.0	0.9	0.06	19.1	0.31	23.5
LRGAG-22-054	Eagle	24.5	31.5	7.1	0.34	60.2	1.14	85.8
	including	24.5	26.5	2.0	0.96	145.3	2.90	217.2
LRGAG-22-055	Eagle	10.8	15.7	4.9	0.19	39.7	0.72	53.8
LRGAG-22-056	Eagle	No significant mineralization						
LRGAG-22-057	Eagle	101.0	102.5	1.5	0.04	24.7	0.37	27.4
LRGAG-22-058	Eagle	No significant mineralization						
LRGAG-22-059	Eagle	249.5	269.5	20.0	0.72	41.9	1.28	96.0
	including	250.5	259.7	9.1	1.57	85.7	2.71	203.1
	including	254.5	255.5	1.0	5.33	94.3	6.59	494.1
LRGAG-22-060	Eagle	22.7	23.6	1.0	0.40	56.2	1.15	86.4
LRGAG-22-061	Eagle	6.8	12.0	5.3	0.66	41.7	1.22	91.2
	including	10.5	12.0	1.5	1.18	74.6	2.17	162.7
LRGAG-22-062	Eagle	17.5	20.3	2.8	1.09	40.5	1.63	122.0
	including	18.5	19.3	0.8	3.56	106.0	4.97	373.0
	and	44.7	49.9	5.2	0.87	20.0	1.14	85.3
LRGAG-22-063	Eagle	26.0	41.7	15.7	1.21	46.7	1.83	137.4
	including	28.3	33.7	5.4	2.99	108.5	4.43	332.5
	including	30.8	31.6	0.8	16.35	339.0	20.87	1,565.3

**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

<b>Drill Hole ID</b>	<b>Area / Vein</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length<sup>1</sup> (m)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>AuEq<sup>2</sup> (g/t)</b>	<b>AgEq<sup>2</sup> (g/t)</b>
LRGAG-22-064	Eagle	11.0	17.0	6.0	0.28	41.4	0.83	62.5
LRGAG-22-065	Eagle	73.0	76.0	3.0	5.00	19.7	5.26	394.4
	including	75.0	76.0	1.0	13.15	17.0	13.38	1,003.3
	Eagle	83.0	86.4	3.4	1.02	63.9	1.87	140.3
LRGAG-22-066	Eagle	58.8	61.6	2.8	0.06	14.2	0.24	18.3
LRGAG-22-067	Eagle	363.5	377.0	13.5	0.15	67.8	1.06	79.2
	including	364.4	366.6	2.2	0.53	127.5	2.23	167.3
	and	375.7	377.0	1.4	0.30	204.6	3.03	227.0
LRGAG-22-068	Eagle	50.0	51.0	1.0	0.61	55.4	1.35	101.2
LRGAG-22-069	Eagle	1.5	4.5	3.0	0.55	50.4	1.22	91.4
LRGAG-22-070	Eagle	49.5	51.0	1.5	0.47	54.7	1.20	90.0
LRGAG-22-071	Eagle	11.1	12.6	1.5	1.11	95.0	2.38	178.3
LRGAG-22-072	Eagle	33.0	51.0	18.0	0.33	48.2	0.98	73.1
	including	35.4	40.7	5.4	0.97	118.3	2.54	190.8
LRGAG-22-073	Eagle	No significant mineralization						
LRGAG-22-074	Eagle	No significant mineralization						
LRGAG-22-075	Eagle	26.3	29.5	3.3	0.34	90.1	1.54	115.6
LRGAG-22-076	Eagle	130.2	164.0	33.8	0.76	45.5	1.37	102.5
	including	149.0	164.0	15.0	1.30	79.5	2.36	176.8
	including	151.9	152.7	0.8	14.70	640.0	23.23	1,742.5
LRGAG-22-077	Eagle	111.3	115.3	4.0	0.78	65.7	1.66	124.2
	and	147.0	168.5	21.5	0.66	67.7	1.56	117.1
	including	163.5	164.5	1.0	4.95	460.0	11.08	831.3
LRGAG-22-078	Eagle	31.7	52.7	21.0	0.43	79.4	1.49	111.6
	including	38.6	49.2	10.6	0.70	122.8	2.34	175.6
	including	41.6	45.3	3.8	1.12	196.1	3.73	279.8
	including	44.6	45.3	0.8	1.96	512.0	8.79	659.0
LRGAG-22-079	Eagle	10.8	13.9	3.2	0.47	78.6	1.52	113.8
LRGAG-22-080	Eagle	172.2	173.2	1.0	1.30	36.4	1.78	133.5
	and	206.7	213.5	6.8	2.43	23.6	2.74	205.6
	including	207.9	209.4	1.5	10.60	25.0	10.93	820.0
LRGAG-22-081	Eagle	15.2	16.7	1.5	0.69	59.2	1.48	111.2
LRGAG-22-082	Eagle	132.0	154.9	22.9	0.27	16.8	0.50	37.4
LRGAG-22-083	Eagle	212.5	215.4	2.8	1.94	42.1	2.51	187.9
LRGAG-22-084	Eagle	14.0	48.5	34.5	0.06	17.0	0.29	21.6
LRGAG-22-085	Eagle	111.0	128.5	17.5	0.54	29.8	0.94	70.5
	including	120.0	121.5	1.5	4.77	92.0	6.00	449.8
LRGAG-22-086	Eagle	1.5	5.8	4.3	0.19	44.2	0.78	58.7
LRGAG-22-087	Eagle	94.5	103.5	9.0	0.87	38.5	1.39	103.9



DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS								
Drill Hole ID	Area / Vein	From (m)	To (m)	Length <sup>1</sup> (m)	Au (g/t)	Ag (g/t)	AuEq <sup>2</sup> (g/t)	AgEq <sup>2</sup> (g/t)
	including	94.5	97.5	3.0	1.77	24.7	2.10	157.2
LRGAG-22-088	Eagle	No significant mineralization						
LRGAG-22-089	Eagle	28.8	33.8	5.0	0.23	32.0	0.66	49.6
LRGAG-22-090	Eagle	148.5	216.1	66.8	0.54	33.3	0.98	73.5
	including	203.0	212.1	9.1	1.89	96.3	3.17	237.7
LRGAG-22-091	Eagle	114.9	124.5	9.7	0.37	55.3	1.11	83.2
	and	163.1	165.9	2.8	0.57	50.2	1.24	92.8
LRGAG-22-092	Eagle	312.0	313.4	1.4	4.42	12.7	4.59	344.2
LRGAG-22-093	Eagle	383.9	388.2	4.3	0.38	27.4	0.74	55.8
LRGAG-22-094	Eagle	116.8	135.0	18.2	1.37	146.0	3.32	248.9
	including	118.5	128.5	10.0	2.39	235.0	5.53	414.5
	including	122.6	123.6	1.0	7.51	448.0	13.48	1,011.3
LRGAG-22-095	Eagle	254.3	257.3	3.1	0.52	58.6	1.30	97.8
LRGAG-22-096	Eagle	No significant mineralization						
LRGAG-22-097	Eagle	148.9	153.0	4.2	3.20	169.4	5.46	409.6
	including	148.9	150.0	1.2	10.75	521.0	17.70	1,327.2
LRGAG-22-098	Eagle	318.6	329.6	11.0	0.69	73.2	1.67	125.3
	including	324.2	326.6	2.4	2.88	224.8	5.87	440.6
LRGAG-22-099	Eagle	256.0	259.4	3.4	2.05	54.7	2.78	208.6
	including	256.0	257.3	1.3	5.23	129.8	6.96	522.1
	and	272.6	275.0	2.4	1.11	30.7	1.52	113.8
LRGAG-22-100	Eagle	393.8	406.3	12.5	0.52	59.5	1.32	98.8
	including	394.8	398.8	4.0	1.35	148.3	3.33	249.7
	including	396.8	397.8	1.0	2.95	349.0	7.60	570.3
LRGAG-22-101	Eagle	196.1	198.0	1.9	1.00	11.3	1.15	86.6
LRGAG-22-102	Eagle	203.6	205.2	1.6	2.39	67.9	3.29	247.0
	and	218.4	219.4	1.0	2.36	3.4	2.41	180.4
LRGAG-22-103	Eagle	233.0	236.0	2.9	0.38	40.4	0.92	68.9
LRGAG-22-104	Eagle	182.0	184.0	2.0	4.71	12.6	4.87	365.5
	including	182.0	183.0	1.0	9.04	18.0	9.28	696.0
LRGAG-22-105	Eagle	309.0	318.5	9.5	0.46	55.7	1.20	90.3
	including	313.0	315.5	2.5	1.12	117.5	2.69	201.7
	and	335.4	349.4	14.0	0.91	35.7	1.38	103.8
LRGAG-22-106	Eagle	192.2	205.2	13.0	0.69	71.8	1.65	123.4
	including	189.2	192.2	3.0	0.93	162.1	3.09	231.8
LRGAG-22-107	Eagle	313.9	315.4	1.5	0.34	61.5	1.16	86.7
LRGAG-22-108	Eagle	130.5	138.0	7.5	0.44	78.7	1.49	111.8
	including	132.0	133.0	1.0	1.35	179.0	3.74	280.3
LRGAG-22-109	Eagle	No significant mineralization						

**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

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LRGAG-22-110	Eagle	62.0	124.4	62.4	1.43	42.8	2.00	149.7
	including	98.7	114.7	16.0	4.57	70.7	5.52	413.6
	including	102.6	103.9	1.4	17.05	189.0	19.57	1,467.7
LRGAG-22-111	Eagle	231.8	235.0	3.1	0.12	42.6	0.69	51.9
LRGAG-22-112	Eagle	322.6	331.1	8.5	0.80	114.5	2.33	174.8
	including	323.6	324.6	1.0	1.64	365.0	6.51	488.0
LRGAG-22-113	Eagle	132.8	149.0	16.3	3.29	357.7	8.06	604.8
	including	133.8	135.6	1.8	20.05	2,000.0	46.72	3,503.7
	including	134.8	135.6	0.8	40.00	3,490.0	86.53	6,490.0
	and	160.5	190.0	29.5	2.32	57.8	3.09	231.7
	including	165.1	177.4	12.3	5.20	72.1	6.16	462.4
	including	169.0	170.0	1.0	21.10	170.0	23.37	1,752.5
LRGAG-22-114	Eagle	No significant mineralization						
LRGAG-22-115	Eagle	180.1	211.6	31.5	1.44	75.1	2.45	183.4
	including	191.6	202.6	11.0	3.38	147.2	5.34	400.4
	including	200.6	201.6	1.0	12.85	64.0	13.70	1,027.8
LRGAG-22-116	Eagle	57.6	72.3	14.7	1.45	68.9	2.37	177.6
	including	57.6	62.6	5.0	2.56	162.0	4.72	353.9
	including	58.6	59.6	1.0	5.18	257.0	8.61	645.5
LRGAG-22-117	Eagle	64.5	89.5	25.0	1.09	133.1	2.87	214.9
	including	65.5	74.5	9.0	1.96	306.8	6.06	454.1
	including	65.5	66.5	1.0	8.08	1,460.0	27.55	2,066.0
LRGAG-22-118	Eagle	95.6	150.6	55.0	7.80	2,152.7	36.51	2,737.9
	including	95.6	120.6	25.0	16.07	4,664.2	78.26	5,869.3
	including	104.6	119.6	15.0	26.74	7,755.8	130.15	9,761.3
	including	107.6	114.6	7.0	55.87	16,524.6	276.19	20,714.5
	including	107.6	110.6	3.0	121.97	36,953.0	614.67	46,100.5
	including	108.6	110.6	2.0	145.25	52,764.5	848.78	63,658.3
LRGAG-22-119	Eagle	162.0	174.5	12.5	0.89	81.5	1.98	148.3
	including	186.0	187.4	1.4	2.77	321.0	7.05	529.1
LRGAG-22-120	Eagle	229.0	242.3	13.4	1.44	44.9	2.04	152.7
	including	239.2	240.3	1.2	9.92	119.7	11.52	863.9
LRGAG-22-121	Eagle	No significant mineralization						
LRGAG-22-122	Eagle	203.7	216.0	12.4	1.54	28.2	1.91	143.6
	including	205.1	207.3	2.2	6.05	45.6	6.65	499.0
LRGAG-22-123	Eagle	Abandoned due to technical difficulties						
LRGAG-22-124	Eagle	128.7	130.7	2.0	2.07	95.1	3.33	250.1
	and	140.2	142.6	2.4	7.05	56.3	7.80	584.9
	including	141.0	141.9	0.8	14.35	66.0	15.23	1,142.3

**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

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LRGAG-22-125	Eagle	127.9	170.2	42.3	2.14	127.9	3.84	288.3
	including	153.9	161.3	7.3	9.66	485.8	16.13	1,210.0
	including	153.9	156.7	2.8	15.35	865.7	26.89	2,016.8
LRGAG-22-126	Eagle	165.7	189.0	23.3	7.07	86.2	8.22	616.5
	including	181.5	184.2	2.7	45.01	106.2	46.42	3,481.6
	including	182.5	183.3	0.8	75.60	148.0	77.57	5,818.0
	and	205.2	210.6	5.4	0.64	120.1	2.24	168.1
LRGAG-22-127	Eagle	112.8	119.0	6.3	0.65	54.9	1.38	103.4
LRGAG-22-128	Eagle	103.5	143.4	39.9	1.28	86.6	2.43	182.5
	including	125.0	136.4	11.4	3.48	209.7	6.28	470.7
	including	125.0	126.0	1.0	11.40	659.0	20.19	1,514.0
LRGAG-22-129	Eagle	56.6	72.9	16.3	1.09	28.0	1.46	109.8
	including	68.5	71.0	2.5	4.59	47.4	5.22	391.4
LRGAG-22-130	Eagle	50.5	68.7	18.2	1.72	118.4	3.30	247.5
	including	50.5	52.0	1.5	10.28	785.2	20.75	1,556.4
	including	51.3	52.0	0.7	19.20	1,275.0	36.20	2,715.0
LRGAG-22-131	including	91.5	97.2	5.8	0.75	127.9	2.46	184.2
	including	93.3	95.0	1.8	1.34	318.0	5.58	418.4
LRGAG-22-132	Eagle	50.8	54.7	3.9	0.99	55.5	1.73	129.5
LRGAG-22-133	Eagle	151.4	153.7	2.3	0.34	91.2	1.56	117.0
	and	173.6	174.7	1.1	0.89	104.5	2.29	171.6
LRGAG-22-134	Eagle	66.6	103.5	36.9	1.13	69.2	2.05	153.8
	including	78.9	95.3	16.5	2.28	134.0	4.06	304.6
	including	80.7	81.9	1.3	8.55	823.9	19.53	1,465.1
LRGAG-22-135	Eagle	133.9	138.0	4.2	0.80	96.3	2.08	156.2
	including	151.8	152.6	0.8	3.96	448.0	9.93	745.0
	and	188.4	199.2	10.8	1.32	42.5	1.89	141.7
	including	195.8	198.1	2.3	5.10	37.2	5.60	419.8
LRGAG-22-136	Eagle	47.0	100.0	53.0	1.03	64.8	1.90	142.2
	including	78.1	98.2	20.2	2.16	55.6	2.90	217.6
	including	78.1	78.8	0.7	9.54	490.0	16.07	1,205.5
LRGAG-22-137	Eagle	120.6	122.8	2.3	0.64	157.5	2.74	205.5
	including	121.2	122.0	0.8	1.52	390.0	6.72	504.0
	and	142.8	149.8	7.0	0.99	77.8	2.03	152.1
LRGAG-22-138	Eagle	109.0	136.3	27.3	3.06	193.4	5.64	423.1
	including	110.8	112.2	1.4	15.64	907.7	27.74	2,080.6
	also including	121.9	122.7	0.8	14.00	19.0	14.25	1,069.0
	also	124.3	125.3	1.0	5.43	563.0	12.94	970.3

**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

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	including							
LRGAG-22-139	Eagle	76.3	97.4	21.1	1.77	43.7	2.35	176.6
	including	93.0	94.0	1.1	20.04	71.2	20.99	1,574.0
	including	93.5	94.0	0.5	29.10	67.0	29.99	2,249.5
LRGAG-22-140	Eagle	157.6	163.7	6.1	0.77	135.8	2.58	193.7
	including	159.2	160.8	1.6	2.32	309.3	6.44	483.2
LRGAG-22-141	Eagle	156.6	185.0	28.4	3.82	113.9	5.34	400.1
	including	177.1	178.0	0.9	43.30	99.0	44.62	3,346.5
	and	192.0	203.4	11.4	2.10	188.6	4.61	345.7
	including	196.4	197.7	1.3	9.43	709.8	18.89	1,416.7
LRGAG-22-142	Eagle	99.0	107.0	8.0	2.79	138.9	4.64	348.2
	including	99.6	101.1	1.5	3.01	393.5	8.26	619.5
	including	99.6	100.2	0.7	4.00	704.0	13.39	1,004.0
LRGAG-22-143	Eagle	123.9	133.4	9.6	2.29	198.9	4.94	370.8
	including	126.7	128.2	1.5	7.41	708.0	16.85	1,263.8
LRGAG-22-144	Eagle	35.1	43.5	8.5	2.80	472.7	9.11	682.9
	including	35.1	40.4	5.4	4.38	727.3	14.07	1,055.6
	including	37.4	39.7	2.4	8.19	1,400.5	26.87	2,015.1
LRGAG-22-145	Eagle	112.5	154.6	42.2	1.94	271.7	5.56	417.2
	including	128.4	142.5	14.1	3.70	699.7	13.03	977.2
	including	132.9	133.4	0.5	16.15	5,740.0	92.68	6,951.3
LRGAG-22-146	Eagle	75.5	78.7	3.2	1.99	57.8	2.76	206.7
LRGAG-22-147	Eagle	53.2	99.8	46.6	1.08	40.8	1.63	122.0
	including	85.6	99.0	13.4	3.24	76.0	4.25	319.1
	including	96.0	96.8	0.8	24.30	45.0	24.90	1,867.5
LRGAG-22-148	Eagle	138.3	143.3	5.0	1.13	137.1	2.96	221.7
LRGAG-22-150	Eagle	209.4	220.7	11.3	6.96	64.9	7.83	587.0
	including	211.1	217.4	6.3	12.02	100.0	13.35	1,001.6
	including	215.1	216.2	1.1	32.10	157.0	34.19	2,564.5
LRGAG-22-151	Eagle	194.4	201.7	7.3	1.77	74.9	2.77	207.8
	including	195.0	196.3	1.3	3.48	154.2	5.54	415.3
LRGAG-22-152	Eagle	73.2	85.3	12.1	0.55	70.6	1.49	111.8
	including	83.3	85.3	2.0	1.35	124.3	3.01	225.5
LRGAG-22-153	Eagle	65.1	66.6	1.5	0.35	143.5	2.26	169.8
LRGAG-22-154	Eagle	88.2	92.8	4.6	0.52	113.2	2.03	152.2
	including	88.9	89.9	1.0	1.16	202.5	3.86	289.5
LRGAG-22-155	Eagle	205.0	211.0	6.0	1.93	30.4	2.34	175.3
	including	205.0	205.6	0.6	9.20	74.7	10.20	764.7
	and	229.3	233.6	4.3	2.79	64.8	3.65	273.8

**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

<b>Drill Hole ID</b>	<b>Area / Vein</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length<sup>1</sup> (m)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>AuEq<sup>2</sup> (g/t)</b>	<b>AgEq<sup>2</sup> (g/t)</b>
	including	231.6	232.6	1.0	8.19	52.1	8.88	666.4
LRGAG-22-156	Eagle	38.4	47.3	9.0	1.86	161.0	4.01	300.9
	including	43.9	45.1	1.2	7.59	697.9	16.89	1,266.8
LRGAG-22-157	Eagle	153.1	155.4	2.3	0.46	86.9	1.62	121.6
LRGAG-22-158	Eagle	78.2	102.8	24.6	2.19	137.9	4.03	302.0
	including	79.2	88.0	8.8	3.87	340.5	8.41	630.9
	including	80.0	80.7	0.8	13.05	2,660.0	48.52	3,638.8
LRGAG-22-159	including	99.1	100.1	1.0	2.71	91.0	3.92	294.3
LRGAG-22-160	Eagle	173.9	175.4	1.5	2.09	176.9	4.45	334.0
	and	200.4	202.5	2.2	5.77	50.1	6.44	483.0
	and	214.9	227.7	12.9	2.13	70.2	3.07	230.3
	including	219.7	220.5	0.8	14.30	255.0	17.70	1,327.5
LRGAG-22-161	Eagle	91.4	124.4	33.0	2.51	338.9	7.03	527.0
	including	93.4	103.0	9.6	5.16	945.4	17.76	1,332.0
	including	94.8	96.1	1.3	19.58	3,665.4	68.46	5,134.2
LRGAG-22-162	Eagle	100.7	131.7	31.0	6.07	1,063.9	20.26	1,519.2
	including	105.7	113.8	8.1	19.38	3,921.7	71.67	5,375.2
	including	107.7	108.4	0.7	144.00	36,319.0	628.25	47,119.0
LRGAG-22-163	Eagle	117.5	132.5	15.0	0.78	92.3	2.01	150.5
	including	125.9	129.7	3.8	1.40	200.3	4.07	305.5
LRGAG-22-164	Eagle	199.0	221.1	22.1	3.21	32.6	3.64	273.0
	including	214.3	217.5	3.2	20.21	86.8	21.37	1,602.9
LRGAG-22-165	Eagle	110.9	160.9	50.0	4.61	780.2	15.01	1,125.9
	including	117.7	125.5	7.8	22.90	4,616.9	84.45	6,334.1
	including	119.6	122.5	2.9	59.98	11,858.2	218.09	16,357.0
	including	121.8	122.5	0.8	201.00	31,747.0	624.29	46,822.0
LRGAG-22-166	Eagle	118.7	127.8	9.1	3.08	199.5	5.75	430.9
	including	119.2	120.6	1.3	8.12	609.9	16.25	1,219.1
	and	141.5	151.6	10.1	2.32	114.6	3.85	288.9
LRGAG-22-167	Eagle	135.3	150.8	15.5	2.16	102.3	3.53	264.6
	including	139.0	139.8	0.8	18.60	76.0	19.61	1,471.0
LRGAG-22-168	Eagle	99.8	102.0	2.3	2.56	75.8	3.57	267.6
	and	132.9	138.0	5.1	2.12	226.3	5.14	385.3
LRGAG-22-169	Eagle	55.4	99.9	44.5	1.51	52.3	2.21	165.5
	including	84.7	99.2	14.5	3.78	47.3	4.41	331.1
	including	85.9	87.1	1.3	18.38	105.9	19.80	1,484.7
LRGAG-22-170	Eagle	139.7	145.1	5.4	0.87	99.3	2.19	164.2
	including	142.2	144.1	1.9	2.23	230.1	5.29	397.1
LRGAG-22-171	Eagle	172.6	182.5	9.9	2.00	78.5	3.04	228.1

**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

<b>Drill Hole ID</b>	<b>Area / Vein</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length<sup>1</sup> (m)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>AuEq<sup>2</sup> (g/t)</b>	<b>AgEq<sup>2</sup> (g/t)</b>
	including	180.4	182.5	2.2	5.43	107.0	6.86	514.6
LRGAG-22-172	Eagle	155.3	209.1	53.8	3.27	123.8	4.92	369.3
	including	165.6	185.0	19.4	8.09	193.1	10.67	800.1
	including	166.1	171.3	5.2	13.72	288.8	17.57	1,317.7
LRGAG-22-173	Eagle	107.8	148.2	40.5	3.67	281.6	7.43	556.9
	including	108.7	112.7	4.1	5.35	1,267.0	22.24	1,668.0
	including	108.7	110.1	1.4	8.90	1,878.9	33.95	2,546.5
	including	142.6	143.6	1.0	11.80	1,430.0	30.87	2,315.0
LRGAG-22-174	Eagle	95.9	102.8	6.9	1.23	197.3	3.86	289.9
	including	99.3	100.3	1.0	3.45	454.0	9.50	712.8
LRGAG-22-175	Eagle	72.5	83.7	11.2	1.55	50.2	2.22	166.6
	including	75.2	76.4	1.2	4.11	55.4	4.85	363.6
LRGAG-22-176	Eagle	131.5	147.3	15.9	2.54	119.8	4.14	310.5
	including	141.9	143.5	1.6	9.03	627.5	17.40	1,304.8
LRGAG-22-177	Eagle	133.7	165.3	31.7	1.21	145.3	3.15	236.0
	including	154.8	164.6	9.8	3.03	392.8	8.27	619.9
	including	160.7	163.0	2.3	10.15	1,357.2	28.25	2,118.4
LRGG-22-208	Main area	37.5	47.7	10.3	1.17	313.0	5.35	401.0
	including	43.2	45.0	1.9	3.50	976.2	16.52	1,238.7
LRGG-22-209	Main area	58.3	91.5	33.2	3.15	276.5	6.84	512.8
	including	86.0	89.0	3.0	30.19	2,587.7	64.69	4,851.7
	including	87.0	88.0	1.0	73.10	5,620.0	148.03	11,102.5
LRGG-22-210	Main area	216.0	229.0	13.0	0.95	99.5	2.28	171.1
	including	222.1	225.0	2.9	2.69	184.9	5.15	386.6
LRGG-22-211	Main area	94.4	118.5	21.7	1.77	117.1	3.33	249.5
	including	98.3	101.9	3.7	7.54	348.1	12.18	913.5
	including	100.1	101.9	1.8	10.02	391.0	15.23	1,142.5
LRGG-22-212	Main area	91.8	114.8	23.0	0.38	71.2	1.33	100.0
	including	110.5	114.8	4.3	1.72	289.4	5.58	418.3
LRGG-22-213	Main area	125.3	131.5	6.3	0.14	20.8	0.42	31.2
LRGG-22-214	Main area	117.5	128.8	11.3	0.54	69.4	1.47	110.0
LRGG-22-215	Main area	141.9	145.0	3.1	0.55	76.2	1.56	117.0
LRGG-22-216	Main area	99.0	105.7	6.7	0.36	62.9	1.20	90.1
	including	102.1	102.8	0.7	1.58	267.0	5.14	385.5
LRGG-22-217	Main area	179.8	198.9	15.1	0.52	109.6	1.98	148.3
LRGG-22-218	Main area	57.0	74.1	15.0	3.98	529.2	11.04	827.8
	including	57.0	63.9	4.8	12.43	1,625.6	34.10	2,557.6
	including	60.5	63.0	2.5	20.32	2,774.1	57.31	4,298.2
	including	61.2	62.2	0.9	37.90	4,250.0	94.57	7,092.5

DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS								
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LRGG-22-219	Main Area	126.3	128.8	2.5	0.65	66.6	1.54	115.6
LRGG-22-220	Main Area	63.8	79.4	15.6	0.50	98.9	1.82	136.2
	including	70.7	74.1	3.4	1.34	156.5	3.42	256.8
LRGG-22-221	Main Area	194.9	224.2	29.4	0.85	138.3	2.69	202.1
	including	202.0	206.4	4.4	4.98	748.7	14.97	1,122.5
	including	203.9	204.9	0.9	12.70	2,370.0	44.30	3,322.5
LRGG-22-222	Main Area	127.7	136.3	8.7	0.94	104.8	2.34	175.6
	including	134.3	134.9	0.6	7.60	592.0	15.49	1,162.0
LRGG-22-224	Main area	97.6	102.8	5.2	1.51	145.0	3.44	258.3
	including	99.8	102.8	3.0	2.32	193.0	4.89	366.8
LRGG-22-225	Main area	254.4	260.2	5.8	0.50	91.0	1.71	128.2
LRGG-22-226	Main area	136.5	137.9	1.4	1.10	153.1	3.14	235.8
LRGG-22-227	Main area	124.0	153.0	29.0	1.28	105.2	2.68	200.9
	including	130.6	137.0	6.3	4.84	352.0	9.54	715.2
	including	132.0	132.7	0.7	24.00	335.0	28.47	2,135.0
LRGG-22-228	Main Area	235.7	251.5	11.9	1.30	120.1	2.90	217.5
LRGG-22-229	Main Area	Pending assays						
LRGG-22-230	Main Area	No significant mineralization						
LRGG-22-231	Main Area	30.0	32.0	2.0	0.59	95.3	1.86	139.8
LRGG-22-232	Main Area	112.6	122.8	10.2	2.60	60.9	3.41	255.7
	including	113.4	114.2	0.8	24.60	238.0	27.77	2,083.0
LRGG-22-233	Main Area	280.2	299.0	18.9	0.51	78.2	1.56	116.7
	including	281.1	282.0	0.9	1.84	400.0	7.17	538.0
LRGG-22-234	Main Area	34.3	50.3	16.0	0.18	44.2	0.77	57.8
LRGG-22-235	Main Area	112.5	126.4	13.9	3.63	144.6	5.56	417.0
	including	118.5	122.0	3.5	12.34	350.7	17.01	1,275.9
LRGG-22-236	Main Area	27.8	38.7	10.9	0.50	94.4	1.76	132.2
	including	31.7	32.7	1.0	3.83	686.0	12.98	973.2
LRGG-22-237	Main	148.0	149.8	1.8	0.87	139.8	2.73	204.7

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	Area							
	including	148.0	148.7	0.7	1.15	264.0	4.67	350.2
LRGG-22-238	Main Area	164.3	166.3	2.1	1.08	102.0	2.44	182.7
LRGG-22-239	Main Area	112.7	118.0	5.3	0.77	163.0	2.94	220.6
	including	112.7	114.2	1.5	2.28	374.0	7.27	545.0
LRGG-22-241	Main area	53.2	59.6	6.3	0.59	86.0	1.74	130.5
	including	54.5	55.5	1.0	1.93	321.0	6.21	465.7
LRGG-22-242	Main area	128.4	144.6	16.2	0.70	72.0	1.66	124.7
	including	133.8	136.2	2.4	2.29	94.9	3.56	266.7
LRGG-22-243	Main area	195.4	199.8	4.5	0.76	142.9	2.67	199.9
LRGG-22-245	Main area	79.2	81.8	2.6	0.90	239.8	4.10	307.4
LRGG-22-246	Main area	185.0	199.0	14.0	2.90	84.6	4.03	302.3
	including	193.6	194.6	1.0	31.80	261.0	35.28	2,646.0
LRGG-22-247	Main area	167.6	185.0	17.5	0.60	93.1	1.84	138.1
	including	175.0	180.0	5.0	1.28	160.0	3.41	255.9
LRGG-22-248	Main area	120.8	122.2	1.4	0.66	78.3	1.70	127.8
LRGG-22-249	Main area	125.4	135.3	9.9	0.95	333.9	5.40	404.9
LRGG-22-250	Main area	151.2	157.5	6.3	1.54	101.5	2.89	217.1
	including	152.3	154.1	1.8	3.12	213.0	5.96	447.0
LRGG-22-251	Main area	161.0	162.6	1.6	1.09	128.5	2.80	210.2
LRGG-22-252	Main area	123.6	133.2	7.4	1.39	167.6	3.62	271.6
	including	126.1	126.8	0.7	4.81	429.0	10.53	789.7
LRGG-22-253	Main area	210.4	212.4	2.0	0.94	146.2	2.88	216.3
LRGG-22-254	Main area	167.7	179.6	11.9	1.28	183.1	3.72	279.2
	including	170.5	171.1	0.6	7.06	1,830.0	31.46	2,359.5
	and	189.4	192.9	3.4	0.45	166.1	2.67	200.1
LRGG-22-255	Main area	174.8	184.3	9.5	1.08	185.8	3.55	266.6
	including	183.0	184.3	1.3	4.50	727.8	14.20	1,065.3
LRGG-22-256	Main area	135.3	142.0	5.4	1.97	136.1	3.79	284.0
	including	138.0	139.0	1.1	5.28	336.0	9.76	732.0
LRGG-22-257	Main area	60.5	72.0	11.6	1.50	164.7	3.69	277.0
	including	71.4	72.0	0.7	8.64	261.0	12.12	909.0
LRGG-22-258	Main area	144.8	151.0	6.2	1.14	162.5	3.31	248.3
LRGG-22-260	Main area	115.3	137.7	22.5	1.20	124.1	2.85	213.8
	including	119.6	120.1	0.5	11.50	427.0	17.19	1,289.5
LRGG-22-261	Main area	50.6	56.2	5.6	0.67	58.1	1.45	108.6
LRGG-22-262	Main area	135.0	140.9	5.8	2.27	41.6	2.82	211.8



**DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS**

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	including	135.0	136.0	1.0	7.91	28.2	8.29	621.5
LRGG-22-263	Main area	150.2	155.6	5.4	1.50	85.7	2.64	198.3
	including	153.0	153.5	0.5	0.87	472.0	7.16	537.3
LRGG-22-264	Main area	131.6	159.0	24.9	1.01	104.5	2.40	180.3
	including	149.5	156.5	7.0	2.46	247.5	5.76	431.8
	including	153.0	154.7	1.7	8.78	746.8	18.74	1,405.5
LRGG-22-265	Main area	134.7	141.8	7.1	1.25	416.6	6.81	510.7
	including	136.0	139.0	3.0	2.69	905.0	14.76	1,106.7
	including	137.1	138.0	0.9	5.70	2,300.0	36.37	2,727.5
	and	151.9	156.2	4.3	0.86	215.8	3.73	280.0
LRGG-22-267	Main area	57.0	73.5	16.5	1.32	153.2	3.36	251.9
	including	66.0	68.5	2.5	6.44	571.5	14.06	1,054.5
LRGG-22-268	Main area	17.7	20.6	2.9	3.54	264.6	7.07	530.1
LRGG-22-269	Main area	42.1	59.4	17.3	2.53	159.8	4.66	349.5
	including	50.2	51.0	0.9	26.70	1,215.0	42.90	3,217.5
LRGG-22-271	Main area	39.5	43.3	3.8	2.19	197.0	4.82	361.5
LRGG-22-272	Main area	79.9	84.4	4.5	1.54	73.5	2.52	188.7
LRGG-22-273	Main area	40.2	49.5	9.3	0.74	92.7	1.98	148.3
LRGG-22-274	Main area	55.6	66.0	8.3	0.63	100.6	1.97	148.1
LRGG-22-275	Main area	67.5	71.8	4.3	0.51	170.4	2.78	208.7
LRGG-22-276	Main area	135.0	148.7	13.7	1.48	213.4	4.32	324.1
	including	137.5	140.0	2.5	4.26	439.7	10.13	759.5
LRGG-22-277	Main area	138.0	142.2	4.2	1.45	254.4	4.85	363.4
LRGG-22-278	Main area	170.2	176.3	6.1	1.02	76.7	2.04	153.2
LRGG-22-279	Main area	179.5	185.5	6.0	1.44	199.2	4.09	306.9
LRGG-22-280	Main area	1.2	16.7	14.0	1.77	573.7	9.42	706.2
	including	10.1	12.4	2.3	10.30	3,308.2	54.41	4,080.8
	including	10.1	10.7	0.6	22.70	7,580.0	123.77	9,282.5
LRGG-22-281	Main area	135.8	147.5	11.7	0.93	387.3	6.10	457.2
	including	136.6	138.0	1.4	5.36	2,780.4	42.43	3,182.6
LRGG-22-282	Main area	175.1	190.8	13.0	0.99	216.0	3.87	290.0
	including	186.8	188.8	1.9	2.59	474.0	8.91	668.3
LRGG-22-283	Main area	106.1	118.0	12.0	0.67	80.2	1.74	130.7
	including	106.1	107.1	1.1	5.06	169.0	7.31	548.5
LRGG-23-284	Main area	91.1	96.3	5.3	1.62	144.6	3.55	265.9
	including	94.6	96.3	1.7	2.98	180.9	5.39	404.3
LRGG-23-285	Main area	68.7	74.8	6.1	1.01	173.4	3.32	249.3
	and	90.2	92.6	2.4	1.84	366.0	6.72	503.9
LRGG-23-286	Main area	142.4	165.5	23.1	0.80	143.3	2.71	203.0

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	including	144.4	146.0	1.7	9.03	1,352.8	27.07	2,030.0
LRGG-23-287	Main area	62.5	72.6	10.1	1.48	81.9	2.58	193.3
	including	62.5	69.3	6.8	2.02	97.3	3.31	248.6
	and	79.2	80.2	1.1	1.55	459.0	7.67	575.3
LRGG-23-288	Main area	114.6	121.3	6.7	0.45	111.1	1.93	144.8
	including	120.2	121.3	1.1	0.36	222.0	3.32	249.0
LRGG-23-289	Main area	101.3	129.4	28.1	0.71	128.7	2.42	181.9
	including	111.5	112.5	1.1	3.38	1,080.0	17.78	1,333.5
LRGG-23-291	Main area	87.0	121.8	34.8	1.37	132.4	3.14	235.3
	including	113.8	120.8	7.0	4.68	440.4	10.55	791.1
	including	116.7	117.7	1.0	19.30	1,935.0	45.10	3,382.5
LRGG-23-292	Main area	141.0	152.8	11.8	0.91	224.1	3.89	292.1
	including	141.0	145.3	4.3	2.33	563.1	9.84	737.7
	including	144.2	145.3	1.1	3.24	1,295.0	20.51	1,538.0
LRGG-23-293	Main area	8.1	40.7	32.7	1.19	124.4	2.85	213.4
	including	26.2	27.3	1.1	3.33	518.0	10.24	767.7
LRGG-23-294	Main area	145.2	161.4	16.3	1.02	69.8	1.95	146.6
	including	145.2	146.3	1.1	5.53	125.0	7.20	539.8
LRGG-23-295	Main area	121.9	123.1	1.2	1.30	91.0	2.51	188.1
	and	137.3	140.5	3.1	0.43	85.7	1.57	117.7
LRGG-23-296	Main area	147.6	150.2	2.6	0.75	62.4	1.58	118.6
LRGG-23-297	Main area	221.6	232.2	10.6	1.15	189.9	3.68	276.4
	including	228.5	230.0	1.6	3.06	414.4	8.59	644.2
LRGG-23-298	Main area	196.2	204.5	8.3	0.83	121.7	2.45	183.6
	including	199.1	201.8	2.7	1.71	222.2	4.68	350.7
LRGG-23-299	Main area	233.5	244.8	11.3	1.36	223.7	4.35	325.9
	including	242.4	243.4	1.0	3.92	662.0	12.75	956.0
LRGG-23-300	Main area	135.4	138.4	3.1	1.23	112.5	2.73	204.5
LRGG-23-302	Main area	52.8	83.0	30.2	1.68	277.7	5.39	404.0
	including	67.0	76.7	9.7	4.54	769.1	14.79	1,109.5
	including	72.0	73.8	1.8	18.99	3,484.3	65.44	4,908.2
	including	73.0	73.8	0.8	30.10	3,210.0	72.90	5,467.5
LRGG-23-303	Main area	33.3	43.4	10.1	0.53	91.7	1.75	131.3
	including	40.5	42.0	1.5	0.99	150.0	2.99	224.3
LRGG-23-304	Main area	53.9	63.8	10.0	1.82	181.2	4.24	318.1
	including	59.0	60.5	1.5	4.34	633.0	12.78	958.5
LRGG-23-305	Main area	20.3	33.0	12.7	0.51	111.8	2.00	150.2
	including	27.7	28.9	1.2	1.69	487.0	8.18	613.8
LRGG-23-306	Main area	36.1	47.8	11.7	4.99	604.8	13.05	979.0

DRILL HOLE SIGNIFICANT INTERSECTIONS AND ASSAYS								
Drill Hole ID	Area / Vein	From (m)	To (m)	Length <sup>1</sup> (m)	Au (g/t)	Ag (g/t)	AuEq <sup>2</sup> (g/t)	AgEq <sup>2</sup> (g/t)
	including	37.7	39.2	1.5	30.50	3,550.0	77.83	5,837.5
LRGG-23-308	Main area	159.7	173.2	13.6	1.36	157.9	3.46	259.6
	including	164.0	169.0	5.0	2.78	246.9	6.08	455.8
LRGG-23-309	Main area	115.3	133.9	18.6	1.50	89.4	2.69	201.8
	including	122.3	122.9	0.6	12.05	144.0	13.97	1,047.8
LRGG-23-310	Main area	39.8	55.0	15.3	0.50	74.4	1.49	112.0
	including	47.0	49.8	2.8	1.53	249.4	4.85	364.0
LRGG-23-311	Main area	137.4	139.1	1.7	0.42	97.6	1.72	129.0
LRGG-23-312	Main area	157.0	158.0	1.0	0.80	204.0	3.52	264.0
	and	165.5	166.5	1.0	2.14	158.0	4.25	318.5
LRGG-23-313	Main area	125.4	134.6	9.2	3.23	234.8	6.36	477.2
	including	131.4	134.6	3.2	4.64	460.8	10.79	808.9
LRGG-23-314	Main area	123.0	131.2	8.2	0.58	98.9	1.90	142.6
	including	130.0	131.2	1.2	0.78	291.0	4.66	349.5
LRGG-23-315	Main area	193.3	206.7	13.4	0.66	56.6	1.42	106.2
	including	196.3	197.6	1.3	4.87	172.5	7.18	538.1
LRGG-23-316	Main area	249.0	276.3	27.3	1.27	395.6	6.54	490.6
	including	255.0	262.7	7.6	4.43	1,337.6	22.26	1,669.5
	including	261.0	261.9	0.9	11.80	7,230.0	108.20	8,115.0

Notes: <sup>1</sup> Not true width.

<sup>2</sup> Converted using a silver to gold ratio of 75:1 at recoveries of 100%.