# NI 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the Bolañitos Project, Guanajuato State, Mexico

**Report Date: December 14, 2022**
**Effective Date: November 9, 2022**

**Prepared by:**

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**Endorsed by QP(s):**
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# CERTIFICATE OF QUALIFIED PERSON

Dale Mah, P.Geo.
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I, Dale Mah, P,Geo, am currently employed as Vice President, Corporate Development with Endeavour Silver Corp. ("Endeavour Silver"), which has its head offices at #1130, 609 Granville Street, Vancouver, BC V7Y 1G5 Canada.

1. This certificate applies to the technical report titled "NI 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the Bolañitos Project, Guanajuato State, Mexico", that has an effective date of November 9, 2022 (the "technical report").
2. I am a member of the Engineers & Geoscientists, British Columbia. I graduated from the University of Alberta with a Bachelor of Science (Specialization) degree in Geology in 1996.
3. I have practiced my profession for over 25 years since graduation. In this time I have been directly involved in generating and managing exploration activities, and in the collection, supervision and review of geological, mineralization, exploration and drilling data; geological models; sampling, sample preparation, assaying and other resource-estimation related analyses; assessment of quality assurance-quality control data and databases; supervision of mineral resource estimates; project valuation and cash flow modeling.
4. As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects ("NI 43–101").
5. I visited the Bolañitos Project most recently from 20 September, 2022, and January 8-9, 2020 before that.
6. I am responsible for Sections 1.1 to 1.5, 1.8, 2.0 to 11.0; 19; 21 to 24; 25.3; 26.1, and 27 of the technical report.
7. I am not independent of Endeavour Silver as independence is described by Section 1.5 of NI 43–101.
8. I have been involved with the Bolañitos Project since my employment commenced with Endeavour Silver in June 2016.
9. I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.
10. As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 14th day of December, 2022.
"Signed and sealed" Dale Mah, P.Geo.

Signature of Qualified Person

# CERTIFICATE OF QUALIFIED PERSON

I, Donald P. Gray, do hereby certify that:

1. I am currently employed as Chief Operating Officer with Endeavour Silver Corp. (the "**Company**") with an office at 609 Granville St, Suite1130 Vancouver, British Columbia, Canada, V7Y 1G5.
2. This certificate applies to the technical report titled "NI 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the Bolañitos Project, Guanajuato State, Mexico", with an effective date of November 9, 2022 (the "**Technical Report**").
3. I am a Registered Member (No. 1217250) in good standing of The Society for Mining, Metallurgy and Exploration, Inc. (SME).
4. I graduated with a BS in Mining Engineering from University of Idaho in 1980, and with an MS in Civil Engineering of Massachusetts Institute of Technology in 1987.
5. I have been involved in mining operations in respect of gold and silver projects similar to the Bolañitos Project, including technical aspects of mineral resource and reserve estimation, mine planning, process design as well as economic analysis since 1980.
6. I have read the definition of "qualified person" set out in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("**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.
7. I visited the Bolañitos Project site on January 27, 2022; October 12, 2022; and November 8, 2022.
8. I am responsible for Sections 1.5; 1.7; 1.8; 13; 15; 16; 17; 18; 19; 20; 21; 22; 23; 24; 25.2; 25.3; 26.1; and 27 of the Technical Report.
9. I am not independent of the Company as independence is described by Section 1.5 of NI 43–101.
10. I have been involved with the Bolañitos Project since my employment commenced with the Company in September 2020.
11. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
12. As of the effective date of the 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.

Dated this 14th day of December, 2022

*"Signed and sealed" Donald P. Gray*

Signature of QP Donald P. Gray

# Certificate of Qualified Person

I, Richard A. Schwering, P.G., SME-RM, do hereby certify that:

1. I am currently employed as Principal Resource Geologist by:

   Hard Rock Consulting, LLC
   7114 W. Jefferson Ave., Ste. 313
   Lakewood, Colorado 80235 U.S.A.

2. This certificate applies to the technical report titled "NI 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the Bolañitos Project, Guanajuato State, Mexico", that has an effective date of November 9, 2022 (the "Technical Report") prepared for Endeavour Silver Corp. ("Endeavour Silver").
3. I am a graduate of the University of Colorado, Boulder with a Bachelor of Arts in Geology, in 2009 and have practiced my profession continuously since 2013.
4. I am a Registered member of the Society of Mining and Metallurgy and Exploration (No. 4223152RM) and a Licensed Professional Geologist in the State of Wyoming (PG-4086).
5. I have worked as a Geologist for 13 years and as a Resource Geologist for a total of 8 years since my graduation from university; as an employee of a junior exploration company, as an independent consultant, and as an employee of various consulting firms with experience in structurally controlled precious and base metal deposits.
6. I have read the definition of "qualified person" set out in National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("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.
7. I am responsible for the preparation of this Technical Report and I take specific responsibility for Sections 1.6, 1.8, 12, 14, 25.1, 25.3 and 26.2.
8. I personally inspected the Bolañitos Project on July 7th and 8th, 2022 and was previously involved in preparation of the technical report titled "*National Instrument 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for Bolañitos Project, Guanajuato State, Mexico*" with an effective date of December 31, 2015.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information required to be disclosed to make the Technical Report not misleading.
10. I am independent of Endeavour Silver, as independence is described by section 1.5 of NI 43-101.
11. I have read NI 43-101 and Form 43-101F1, and this Technical Report has been prepared in accordance with that instrument and form.

Dated this 14th day of December, 2022
*"signed and sealed" Richard A. Schwering*

Signature of Qualified Person

Richard A. Schwering; SME-RM
Printed name of Qualified Person

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# LIST OF ACRONYMS

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|---|---|
| AA | Atomic Absorption |
| HDPE | High Density Polyethylene |
| AES | Atomic Emission Spectrometry |
| HRC | Hard Rock Consulting |
| EDR | Endeavour Silver Corp. |
| NYSE | New York Stock Exchange |
| FSE | Frankfurt Stock Exchange |
| TSX | Toronto Stock Exchange |
| CIM | Canadian Institute of Mining, Metallurgy and Petroleum |
| QA/QC | Quality Assurance/Quality Control |
| CMC | Compañia Minera del Cubo S.A. de C.V. |
| SRM | Standard Reference Material |
| CL | Control Limit |
| LL | Lower Control Limit |
| UL | Upper Control Limit |
| ID | Inverse Distance |
| OK | Ordinary Kriging |
| NN | Nearest Neighbor |
| CV | Coefficient Variation |
| MSO | Mineable Shape Optimizer |
| CEMEFI | Mexican Center for Philanthropy |
| ESR | Socially Responsible Company |
| HP | Horsepower |

# 1. EXECUTIVE SUMMARY

## 1.1 Introduction

This report provides updated information on the operation of Endeavour Silver Corporation's (EDR) Bolañitos Project, including an updated Mineral Resource and Mineral Reserve estimate. The information will be used to support disclosures in Endeavour Silver's Annual Information Form (AIF). Units used in the report are metric units unless otherwise noted. Monetary units are in United States dollars (US$) unless otherwise stated. This report was prepared in accordance with the requirements and guidelines set forth in National Instrument 43-101 (NI43-101), Companion Policy 43-101CP and Form 43-101F1 (June 2011), and the mineral resources and reserves presented herein are classified according to Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards - For Mineral Resources and Mineral Reserves, prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014. The mineral resource and mineral reserve estimates reported here are based on all available technical data and information as of May 31, 2022.

## 1.2 Property Description and Ownership

In 2007, EDR acquired the Bolañitos mine from Industrias Peñoles S.A. de C.V. (Peñoles), the owner at the time, and Minas de la Luz, S.A. de C.V. (Minas de la Luz), the operator at the time. The acquisition included the Mina Cebada, Mina Bolañitos, Mina Golondrinas and Mina Asunción (as well as a few other currently closed mines). Minas de la Luz continued as the operator of the mines until June, 2007, when EDR assumed control. The Mina Asunción is very close to the Mina Bolañitos and the two are currently connected underground.

The Bolañitos Project is in the state of Guanajuato, Mexico. The mine consists of three operating mines: the Bolañitos, Lucero, and Asuncion mines, which are located near the town of La Luz, about 12 km to the northeast of Guanajuato. All the mines are readily accessed by paved and gravel roads. EDR also owns the inactive Cebada mine, located about 5 km north of the city of Guanajuato, and the inactive Golondrinas mine, which is 3.5 km to the southwest of Cebada.

## 1.3 Geology and Mineralization

The Bolañitos mine is in the eastern part of the Guanajuato mining district, in the southeastern portion of the Sierra de Guanajuato, which is an anticlinal structure about 100 km long and 20 km wide. Bolañitos is located on the northeast side of this structure where typical primary bedding textures dip 10° to 20° to the north-northeast. Economic mineralization at Bolañitos is known to extend as much as 250 m vertically from 2300 m to 2050 m elevation except for the La Luz vein that extends 400 m vertically from 2300 m to 1900 m.

The Guanajuato mining district is characterized by classic, high grade silver-gold, epithermal vein deposits with low sulfidation mineralization and adularia-sericite alteration. Veins in the Guanajuato district are typical of most epithermal silver-gold vein deposits in Mexico with respect to the volcanic or sedimentary host rocks and the paragenesis and tenor of mineralization. The Guanajuato mining district hosts three major mineralized fault systems, the La Luz, Veta Madre and Sierra systems.

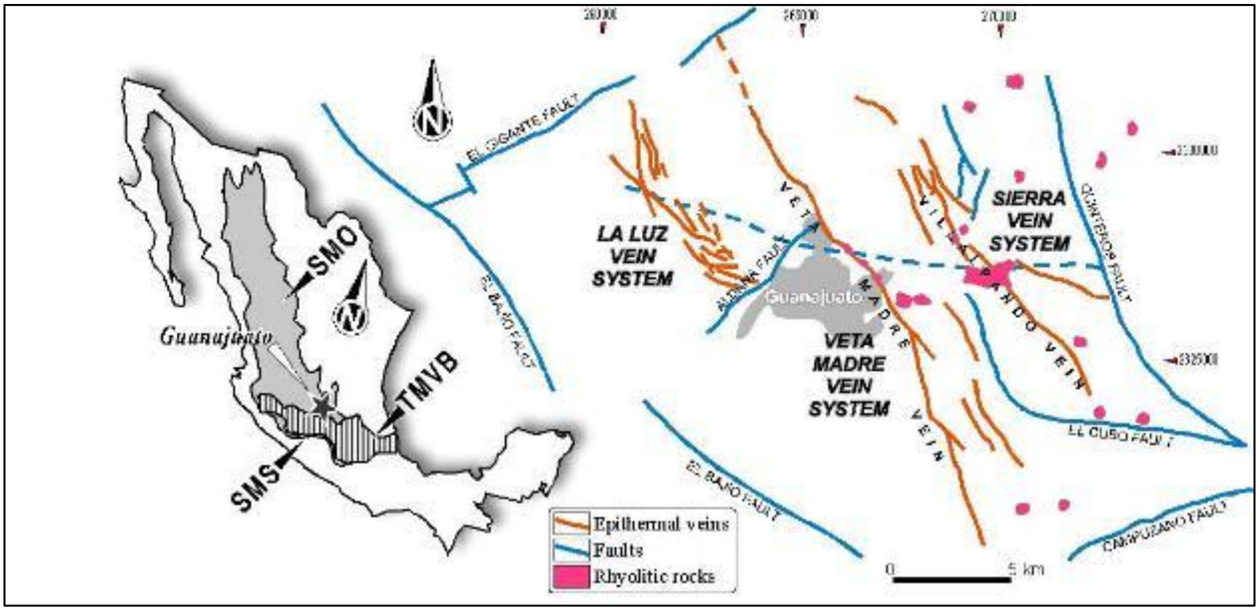



**Figure 1-1: Map of the Guanajuato mining district, with the main epithermal veins and other significant geological structures; modified from Randall et al. (1994). The La Luz and Sierra systems are basically constituted by low sulfidation mineralization whereas most of the Veta Madre system belongs to the intermediate sulfidation type. The rhyolitic rocks shown in the map are those that are most likely to have ages similar to those of epithermal deposits. Key: SMO = Sierra Madre Occidental, SMS = Sierra Madre del Sur, TMVB = Trans-Mexican Volcanic Belt. (Martinez-Reyes et al; 2015)**

Of the geological formations associated with the Guanajuato district, only the Esperanza and La Luz Formations occur in the Bolañitos mine area with mineralization residing primarily within the La Luz Formation. Mineralization is known to dissipate at the contact with the Esperanza Formation.

The Veta Madre historically was the most productive vein in the Guanajuato district, and is by far the most continuous, having been traced on the surface for nearly 25 km. The vein dips from 35° to 55° to the southwest with measured displacement of around 1,200m near the Las Torres mine and 1,700 m near La Valenciana mine. The most productive veins at Bolañitos strike parallel to the Veta Madre system.

Bolañitos mineralization is directly related to faulting. Mineralization occurs as open-space fillings in fracture zones or impregnations in locally porous wall rock. Veins which formed in relatively open spaces are the main targets for mining.

Mineralized veins at Bolañitos consist of the classic banded and brecciated epithermal variety. Silver occurs primarily in dark sulfide-rich bands within the veins, with little mineralization within the wall rocks. The major metallic minerals reported include pyrite, argentite, electrum and ruby silver, as well as some galena and sphalerite, generally deeper in the veins. Mineralization is generally associated with phyllic (sericite) and silicification alteration which forms haloes around the mineralizing structures. The vein textures are attributed to the brittle fracturing-healing cycle of the fault-hosted veins during and/or after faulting.

Economic concentrations of precious metals are present in “shoots” distributed vertically and laterally between non-mineralized segments of the veins. Overall, the style of mineralization is pinch-and-swell with some flexures resulting in closures and others generating wide sigmoidal breccia zones.

## 1.4 Development and Operations

Mining methods used at Bolañitos include long-hole stoping and conventional cut and fill mining. Cut and fill stopes are generally mined 15m along strike and in 1.5 - 1.8m high cuts, and long hole stopes are 15m long and 20m high (20m between levels floor to floor). Access to the stoping areas is provided by a series of primary and secondary ramps located in the footwalls of the target structures. In Bolañitos numerous veins are mined. The ramps have grades from minus 15% to plus 12%, with plus or minus 12% as standard. The ramps and crosscuts are generally 4 m by 4 m.

In 2021, the total ore mined by EDR was 412,295 metric tonnes from 3 different mines; La Luz (39%) Lucero (44%), San Miguel (25%).

As of November 9, 2022, the Bolañitos Mine had a roster of 490 employees and an additional 157 contractors. The mine operates on two 10-hour shifts, 7 days per week, whereas the mill operates on a 24/7 schedule.

## 1.5 Status of Exploration

In 2021, EDR spent US $1,268,877 on property holding costs and exploration activities such as drilling, geological mapping and sampling, at the Bolañitos Project. Field exploration mainly focused on the Bolañitos South area while the drilling campaign focused on exploring the Bolañitos North (Melladito and Bolañitos veins), Belén and Bolañitos South (Lourdes, Cabrera Carrica, Tepetateras-Lulú, La Cuesta North, La Cuesta South and Margaritas) areas. A total of 15,380 meters completed in 72 drill holes and 3,663 samples submitted for analysis.

## 1.6 Mineral Resource Estimate

Richard A. Schwering SME-RM with Hard Rock Consulting, LLC ("HRC"), is responsible for the estimation of the mineral resource herein. Mr. Schwering is a qualified person as defined by NI 43-101 and is independent of EDR. Mineral resources for the Bolañitos mine were estimated from drillhole and channel sample data, constrained by geologic vein boundaries using two methods. 3D block models were estimated using an ordinary kriging ("OK") algorithm using Leapfrog Geo® and Leapfrog EDGE® software version(s) 2021.2.4 and 2021.2.5 ("Leapfrog"). Veins converted to 2D Vertical Longitudinal Projections ("VLP") were estimated using polygonal methods. The metals of interest at Bolañitos are gold and silver.

The mineral resources contained within this Technical Report have been classified under the categories of Measured, Indicated, and Inferred in accordance with standards as defined by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (May 10, 2014) and Best Practices Guidelines (November 29, 2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

The Bolañitos mineral resource is comprised of 55 individual veins. The veins are further subdivided into vein sets and modeling method. The mineral resources have been estimated using either a Vertical Longitudinal Projection ("VLP") polygonal method (10 veins) or as 3-dimensional ("3D") block models (45 veins).

Mineral resources are reported using four silver equivalent ("AgEq") cut-off grades based on the area of production. Baseline assumptions for breakeven cut-off grades are presented on Table 14-11 and all prices are in $US. The gold price of $1,735.00/oz. and silver price of $21.80/oz are based on the 36-month moving average as of May 31, 2022. Metal recoveries, mining, processing, G&A, royalties and other costs associated with the calculation of break-even cut-offs are based on actual production costs provided by Endeavour Silver Corp. AgEq grade is calculated using a 79.6 silver to gold ratio. Mineral Resources for veins located within the Lucero production area were reported using a 151g/t AgEq cut-off. Mineral Resources within the Belen vein system are reported at a 157 g/t AgEq cut-off. A AgEq cut-off of 149 g/t was applied to remaining Mineral Resources for veins inside the La Luz and San Miguel production areas. Mineral Resources for veins modeled using the VLP estimation methodology were also reported using a AgEq cut-off of 149g/t.

Mineral Resource estimates using 3D block models are constrained to geologic vein solids that show continuous grade continuity and are within 60 meters of drilling or existing underground development. The maximum distance for reported Mineral Resources is based on the average maximum range defined by modeled variograms, 66 meters for silver and 64 meters for gold. After the block grade estimations were complete the AgEq grades for each vein were reviewed in long section by the QP, and the large majority of estimated blocks were found to show excellent grade continuity and tonnage meeting the criteria of a minable shape. All small isolated blocks not meeting the criteria of a reasonable mining shape (at least five contiguous blocks above cutoff) were removed from the estimate and excluded from the Mineral Resource statement.

Mineral Resources estimated using 2D VLP methods are classified entirely as Inferred. Mineral Resources are calculated using true thickness composites from drillhole intercepts identified as the vein. Polygonal methods assume grade continuity surrounding the composite. The smallest VLP volume is 328 tonnes, meeting the criteria for a minable shape.

**Table 1-1 Mineral Resource Estimate, Effective Date May 31st, 2022**

| Classification | *Cut-off* AgEq g/t | Mass kt | *Average Value* Ag Eq g/t | Silver g/t | Gold g/t | *Material Content* AgEq thousand t. oz | Silver thousand t. oz | Gold thousand t. oz |
|---|---|---|---|---|---|---|---|---|
| Measured | Variable | 42.0 | 322 | 97 | 3.0 | 435 | 131 | 4.0 |
| Indicated | Variable | 411.5 | 279 | 111 | 2.3 | 3,697 | 1,470 | 30.0 |
| Measured + Indicated | Variable | 453.5 | 283 | 110 | 2.3 | 4,132 | 1,601 | 34.0 |
| Inferred | Variable | 1,656.6 | 331 | 141 | 2.5 | 17,608 | 7,494 | 132.2 |

1. The effective date of the Mineral Resource estimate is May 31, 2022. The QP for the estimate, Mr. Richard A. Schwering, SME-RM of HRC, is independent of EDR.
2. Inferred Mineral Resources are that part of a mineral resource for which the grade or quality are estimated on the basis of limited geological evidence and sampling. Inferred Mineral Resources do not have demonstrated economic viability and may not be converted to a Mineral Reserve. It is reasonably expected, though not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
3. Measured, Indicated, and Inferred Mineral Resource silver equivalent cut-off grades were 149 g/t for veins located in the La Luz and San Miguel production areas and veins estimated using VLP methods at Bolañitos, 157 g/t for the Belen vein system, and 151 g/t for veins located in the Lucero production area.
4. Metallurgical recoveries were 85.7% for silver and 90.1% for gold.
5. Silver equivalents are based on a 79.6:1 silver to gold price ratio.
6. Price assumptions are $US21.80 per troy ounce for silver and $US1,735.00 per troy ounce for gold for resource cut-off calculations. These prices are based on the 36-month moving average as of the effective date.
7. Mineral Resources are reported exclusive of Mineral Reserves.
8. Rounding may result in apparent differences when summing tonnes, grade and contained metal content. Tonnage and grade measurements are in metric units. Grades are reported in grams per tonne (g/t). Contained metal is reported as troy ounces (t. oz).

## 1.7 Mineral Reserve Estimate

Mr. Don Gray, P.E., SME-RM, of EDR is responsible for the mineral reserve estimate presented in this report. Mr. Gray is Qualified Person as defined by NI 43-101 and is not independent of EDR. The reserve calculation for the Bolañitos Project was completed in accordance with NI 43-101 and has an effective date of May 31st, 2022. Stope designs for reporting the reserves were created utilizing the updated resources and cutoffs established for 2022 by Richard A. Schwering SME-RM with Hard Rock Consulting, LLC ("HRC"). All the stopes are within readily accessible areas of the active mining areas. Ore is milled and undergoes floatation at a rate of 1,100 tpd.

EDR utilized Vulcan program to generate the stopes for the reserve mine plan. The parameters used to create the stopes are listed below;

- Cut-Off Grades:
    - 149 g/t silver equivalent for San Miguel
    - 149 g/t silver equivalent for La Luz
    - 151 g/t silver equivalent for Lucero
    - 157 g/t silver equivalent for Belen
- Minimum Mining Width: 0.8 m.
- Cut and Fill Stope Size: 7m W x 4m H
- Long Hole Stope Size: 7m W x 20m H
- External Dilution Cut and Fill: 24%
- External Dilution Long Hole: 40%
- Silver Equivalent: 79.6:1 silver to gold
- Gold Price: US $1,735 /oz
- Silver Price: US $21.80 /oz
- Gold Recovery: 90.1%
- Silver Recovery: 85.7%
- Dilution factors averaged 37.14%. Dilution factors are calculated based on internal stope dilution calculations and external dilution factors of 24% for cutand fill and 40% for long hole.
- Silver equivalents are based on a 79.6:1 silver:gold ratio.

The stopes were design using only the updated Measured and Indicated resources above the calculated cutoff including internal stope dilution and were determined to be economically viable. The Measured and Indicated mineral resources within the stopes have been converted to Proven and Probable reserves as defined by NI 43-101. All inferred material has been classified as waste.

**Table 1-1 Mineral Reserve Estimate**

| Classification | AgEq Cut-off | Mass | Average Value | | | Material Content | | |
|---|---|---|---|---|---|---|---|---|
| | | | AgEq | Silver | Gold | AgEq | Silver | Gold |
| | g/t | kt | g/t | g/t | g/t | thousand t. oz | thousand t. oz | thousand t. oz |
| Proven | Variable | 158 | 266 | 57 | 2.63 | 1,357 | 290 | 13.4 |
| Probable | Variable | 376 | 265 | 73 | 2.41 | 3,199 | 878 | 29.2 |
| Proven + Probable | Variable | 534 | 326 | 101 | 2.8 | 4,556 | 1,168 | 42.6 |

1. Mineral resources are estimated exclusive of and in addition to mineral reserves.
2. Figures in table are rounded to reflect estimate precision; small differences generated by rounding are not material to estimates.

## 1.8 Conclusions and Recommendations

The QPs consider the Bolañitos mineral resource and reserve estimates presented herein to conform with the requirements and guidelines set forth in Companion Policy 43-101CP and Form 43-101F1 (June 2011), and the mineral resources and reserves presented herein are classified according to Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards - For Mineral Resources and Mineral Reserves, prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014. These mineral resources and reserves form the basis for EDR's ongoing mining operations at the Bolañitos Mines Project.

The QPs are unaware of any significant technical, legal, environmental, or political considerations which would have an adverse effect on the extraction and processing of the resources and reserves located at the Bolañitos Mines Project. Mineral resources which have not been converted to mineral reserves, and do not demonstrate economic viability shall remain mineral resources. There is no certainty that all or any part of the mineral resources estimated will be converted into mineral reserves.

The QPs consider that the mineral concessions in the Bolañitos mining district controlled by EDR continue to be highly prospective both along strike and down dip of the existing mineralization.

EDR's Bolañitos Mines Project has an extensive mining history with well-known silver and gold bearing vein systems. Ongoing exploration has continued to demonstrate the potential for the discovery of additional resources at the project and within the district surrounding the mine. Outside of the currently known reserve/resource areas, the mineral exploration potential for the Bolañitos Project is considered to be very good. Parts of the known vein splays beyond the historically mined areas also represent good exploration targets for additional resource tonnage

Since EDR took control of the Bolañitos Mines Project, new mining areas have enabled EDR to increase production by providing additional sources of mill feed. EDR's operation management teams continue to search for improvements in efficiency, lowering costs and researching and applying low-cost mining techniques.

In 2022, EDR plans to drill 10,000 meters of surface drilling in the Bolañitos Project, at an estimated cost of US$1,500,000. Drilling campaigns will be carried out mainly in the Bolañitos South and Virginia areas..

The QPs recommends that the process of converting mineral resources into reserves from 2D polygons to 3D block models be continued. During the last couple of years, considerable progress has been made on this process with only nine veins remaining to be converted to 3D. Additional modeling efforts should be made to define the mineralized brecciated areas as they have been an important source of economic material encountered in the current operation, and could provide additional tonnage to support the mine plan.

EDR currently utilizes the exploration drilling and chip and muck samples in their resource and reserve calculations. It is recommended that future efforts focus on constructing block models for resource and reserve reporting utilizing only the exploration and underground drilling results.

Although the reconciliations conducted by EDR show good comparison between planned versus actual values, the reconciliation process should be improved to include the estimated tonnes and grade from the resource models. Because the LOM plan is compared to the plant production monthly, the actual physical location of the material mined may be different than the planned location. Due to the many stopes that are mined during a day this can only be completed on an average monthly basis due to blending of stope material into the mill. The monthly surveyed as mined areas should be created into triangulation solids and saved monthly for reporting the modeled tonnes for each month. The combination of the 3D block models and 2D and polygonal reserves makes this process difficult but considerable progress has been made during the last year to get all resources and reserves into 3D block models. The model-predicted results versus actual can then be used to determine if dilution factors need to be adjusted, or perhaps the resource modeling parameters may require adjustment if there are large variances. The mill production should be reconciled to the final concentrate shipments on a yearly basis and resulting adjustment factors should be explained and reported.

# 2. INTRODUCTION

## 2.1 Issuer and Terms of Reference

Endeavour Silver Corp. ("EDR") is a Canadian based mining and exploration company actively engaged in the exploration, development, and production of mineral properties in Mexico. EDR is headquartered in Vancouver, British Columbia with management offices in Leon, Mexico, and is listed on the Toronto (TSX:EDR), New York (NYSE:EXK) and Frankfurt (FSE:EJD) stock exchanges. The company has three currently active mining properties in Mexico, the Guanaceví Property in northwest Durango State, the Bolañitos property in Guanajuato State, and the El Compas property in Zacatecas State. The El Compas property has ceased mining operations since the Effective Date of this Report.

This report was prepared for EDR in accordance with the requirements and guidelines set forth in NI 43-101, NI 43-101 Companion Policy 43-101CP and Form 43-101F1 (June 2011). The information will be used to support disclosures in EDR's Annual Information Form. The mineral resources and reserves presented herein are classified according to Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards - For Mineral Resources and Mineral Reserves, prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014. The mineral resource and mineral reserve estimates reported here are based on all available technical data and information as of December 31, 2020.

## 2.2 Sources of Information

A portion of the background information and technical data for this study was obtained from the following previously filed NI 43-101 Technical Reports:

Hard Rock Consulting LLC (2016) NI 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the Bolañitos Project, Guanajuato State, Mexico, effective date March 3, 2016.

Munroe, M.J. (2015). NI 43-101 Technical Report Resource and Reserve Estimates for the Bolañitos Mines Project, Guanajuato State, Mexico, effective date October 31, 2014.

Munroe, M.J. (2014). NI 43-101 Technical Report Resource and Reserve Estimates for the Bolañitos Mines Project, Guanajuato State, Mexico, effective date December 31, 2013.

Lewis, W.J., Murahwi, C. and San Martin, A.J., (2013), NI 43-101 Technical Report on the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico: unpublished NI 43-101 technical report prepared by Micon International for Endeavour Silver, effective date December 15, 2012.

Lewis, W.J., Murahwi, C. and San Martin, A.J., (2012), NI 43-101 Technical Report on the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico: unpublished NI 43-101 technical report prepared by Micon International for Endeavour Silver, effective date December 31, 2011.

Lewis, W. J., Murahwi, C., and Leader, R. J. (2011), NI 43-101 Technical Report, Audit of the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico: unpublished NI

43-101 technical report prepared by Micon International for Endeavour Silver, effective date December 31, 2010.

Lewis, W.J., Murahwi, C., Leader, R.J. and San Martin, A.J., (2010), NI 43-101 Technical Report, Audit of the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico: unpublished NI 43-101 technical report prepared by Micon International for Endeavour Silver, effective date December 31, 2009.

Lewis, W.J., Murahwi, C., Leader, R.J. and San Martin, A.J., (2009), NI 43-101 Technical Report, Audit of the Resource and Reserves for the Guanajuato Mines Project, Guanajuato State, Mexico: unpublished NI 43-101 technical report prepared by Micon International for Endeavour Silver, effective date December 31, 2008.

Beare, M., and Sostre, M., (2008), NI 43-101 Technical Report for the Guanajuato Mines Project, Guanajuato State Mexico: unpublished NI 43-101 technical report prepared by SRK Consulting for Endeavour Silver, effective date December 31, 2007.

## 2.3 Qualified Persons and Personal Inspection

This report is endorsed by the following Qualified Persons, as defined by NI 43-101: Mr. Dale Mah, P.Geo., VP Corporate Development of Endeavour Silver Corp., Richard Schwering, P.G., SME-RM, Resource Geologist with Hard Rock Consulting LLC., and Donald Gray, P.E., SME-RM, Chief Operating Officer of Endeavour Silver Corp.

As Qualified Persons and representative of EDR, Mr. Mah has visited the mining operations on numerous occasions. His most recent visit was conducted on September 20, 2022. During his visit, he viewed selected drill core, underground mining operations, visited waste rock storage facilities, toured mineral processing facilities, viewed infrastructure, and discussed aspects of mine planning, budgeting, geology, exploration and mining practices with site personnel.

Mr. Richard A. Schwering, P.G.,SME-RM with Hard Rock Consulting, LLC ("HRC"), is responsible for the estimation of the mineral resource herein. During his visit between July 7-8, 2022, he viewed selected drill core, visited the underground mining operations, viewed infrastructure, and discussed aspects of geology, resource modeling, and exploration with site personnel Mr. Schwering is a qualified person as defined by NI 43-101 and is independent of EDR.

Mr. Donald Gray, P.E., SME-RM., is employed as Chief Operating Officer for Endeavour Silver and responsible for the estimation of mineral reserves herein. His most recent visit was on January 27, 2022; October 12, 2022; and November 8, 2022. During his visit, he viewed selected drill core, underground mining operations, visited waste rock storage facilities, toured mineral processing facilities, viewed infrastructure, and discussed aspects of mine planning, budgeting, geology, exploration and mining practices with site personnel.

## 2.4 Units of Measure

Unless otherwise stated, all measurements reported here are in metric units, and currencies are expressed in constant 2022 U.S. dollars.

# 3. RELIANCE ON OTHER EXPERTS

This section is not relevant to this report.

# 4. PROPERTY DESCRIPTION AND LOCATION

## 4.1 Project Location

The Bolañitos Project is in the state of Guanajuato, Mexico, as shown in Figure 4-1. The mine consists of three operating mines: the Bolañitos, Lucero, San Miguel and Asuncion mines, which are located near the town of La Luz, about 12 km to the northeast of Guanajuato (Figure 4-1). The Bolañitos mine and the processing plant are situated approximately 5 km west of Cebada. All the mines are readily accessed by paved and gravel roads. EDR also owns the inactive Cebada mine, located about 5 km north of the city of Guanajuato, and the inactive Golondrinas mine, which is 3.5 km to the southwest of Cebada.


**Figure 4-1 Bolañitos Project Location**

EDR acquired the Bolañitos mine Project in 2007 from Industrias Peñoles S.A. de C.V. (Peñoles), the owner at the time, and Minas de la Luz, S.A. de C.V. (Minas de la Luz), the operator at the time. The acquisition included the Mina Cebada, Mina Bolañitos, Mina Golondrinas and Mina Asunción (as well as a few other currently closed mines). Minas de la Luz continued as the operator of the mines until June, 2007, when EDR assumed control. The Mina Asunción is very close to the Mina Bolañitos and the two are currently connected underground.

## 4.2 Mineral Tenure, Agreements and Encumbrances

The Bolañitos Project consists of 26 mining concessions totaling 2,537 hectares (ha), including four operating gold and silver mines (Bolañitos, Lucero, Asuncion and San Miguel), several past-producing gold and silver mines, and the 1,600 t/d Bolañitos processing plant. A map of the mineral concessions belonging to the Bolañitos Project is presented in Figure 4-2, and mineral concession details are summarized in Table 4-1.

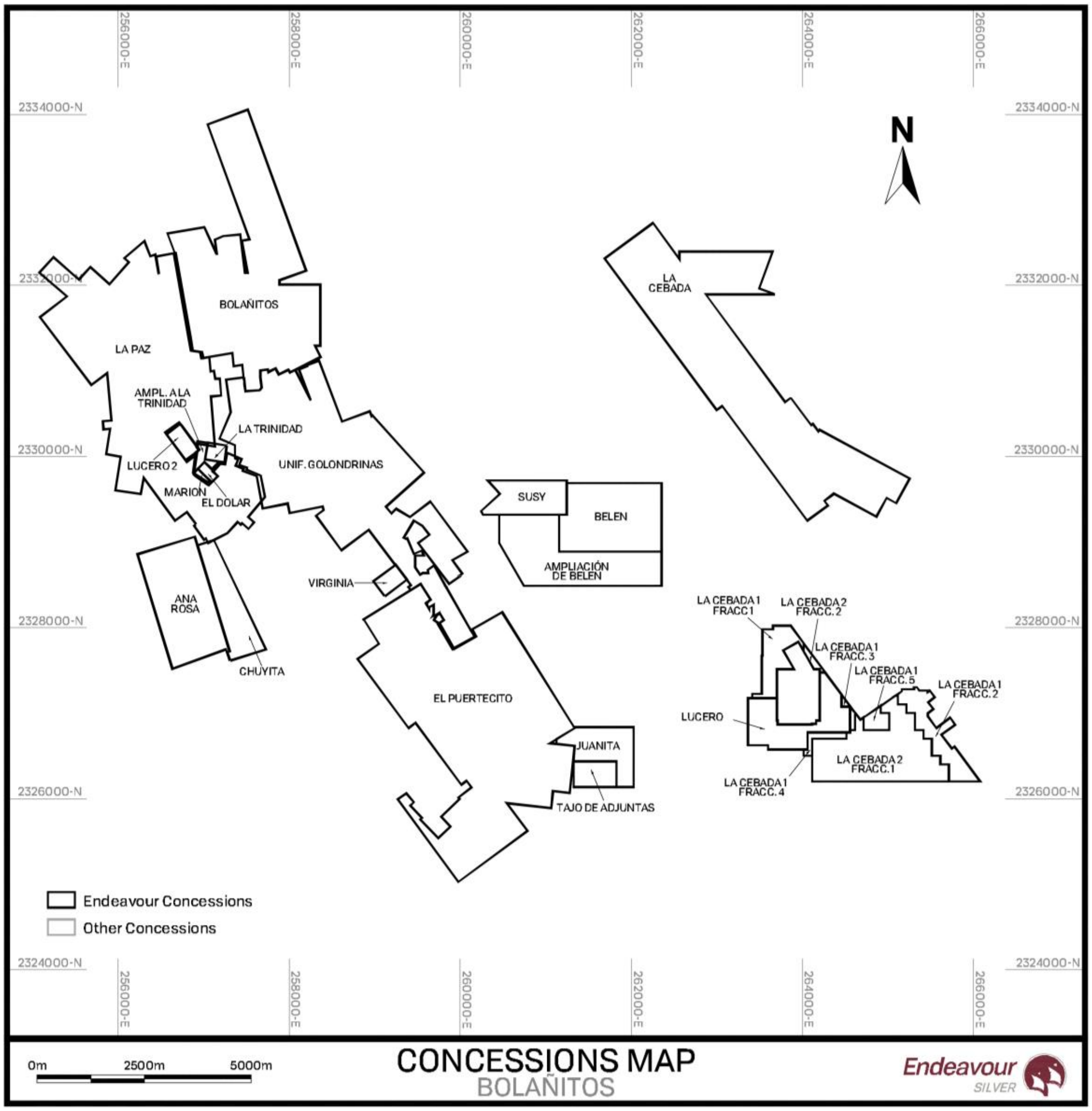



**Figure 4-2 Bolañitos Mine Claim Map**

**Table 4-1 Summary of the Mineral Concessions Owned by Endeavour Silver**

| Concession Name | Title Number | Term of Mineral Concession | | Hectares | 2022 Annual Taxes (pesos) | |
|---|---|---|---|---|---|---|
| | | From | To | | 1st Half | 2nd Half |
| La Cebada | 171340 | 20/09/1982 | 19/09/2032 | 353.0373 | 66,675 | 66,675 |
| El Puertecito | 171537 | 20/10/1982 | 19/10/2032 | 441.9481 | 83,466 | 83,466 |
| Bolañitos | 171538 | 20/10/1982 | 19/10/2032 | 305.4762 | 57,692 | 57,692 |
| La Paz | 172120 | 26/09/1983 | 25/09/2033 | 413.0599 | 78,010 | 78,010 |
| Unif. Golondrinas | 188680 | 29/11/1990 | 28/11/2040 | 361.6543 | 68,302 | 68,302 |
| Marion | 189037 | 05/12/1990 | 04/12/2040 | 1.0498 | 198 | 198 |
| Virginia | 189038 | 05/12/1990 | 04/12/2040 | 7.1339 | 1,347 | 1,347 |
| Ampl. a La Trinidad | 190961 | 29/04/1991 | 28/04/2041 | 4.6061 | 870 | 870 |
| Susy | 191487 | 19/12/1991 | 18/12/2041 | 35.4282 | 6,691 | 6,691 |
| Chuyita | 191489 | 19/12/1991 | 18/12/2041 | 43.3159 | 8,181 | 8,181 |
| Ana Rosa | 191492 | 19/12/1991 | 18/12/2041 | 96.7364 | 18,270 | 18,270 |
| La Trinidad | 195076 | 25/08/1992 | 24/08/2042 | 4.4800 | 846 | 846 |
| El Dolar | 212398 | 04/10/2000 | 03/10/2050 | 3.1979 | 604 | 604 |
| Lucero | 238265 | 23/08/2011 | 02/08/2061 | 49.5060 | 9,350 | 9,350 |
| Lucero 2 | 238024 | 12/07/2011 | 11/07/2061 | 8.0000 | 1,511 | 1,511 |
| La Cebada 2, Fracc. 1 | 238982 | 15/11/2011 | 14/11/2061 | 95.3713 | 18,012 | 18,012 |
| La Cebada 2, Fracc.2 | 238983 | 15/11/2011 | 14/11/2061 | 2.3183 | 438 | 438 |
| La Cebada 1, Fracc. 2 | 241519 | 19/12/2012 | 18/12/2062 | 30.8472 | 5,826 | 5,826 |
| La Cebada 1, Fracc. 1 | 241367 | 22/11/2012 | 21/11/2062 | 23.7041 | 4,477 | 4,477 |
| La Cebada 1, Fracc. 3 | 241368 | 22/11/2012 | 21/11/2062 | 2.0579 | 389 | 389 |
| La Cebada 1, Fracc. 5 | 241369 | 22/11/2012 | 21/11/2062 | 6.2726 | 1,185 | 1,185 |
| La Cebada 1, Fracc. 4 | 246742 | 16/11/2018 | 15/11/2068 | 4.7568 | 127 | 127 |
| Belén II | 218896 | 23/01/2003 | 22/01/2053 | 92.6934 | 17,506 | 17,506 |
| Ampliacion de Belén | 194930 | 30/07/1992 | 29/07/2042 | 99.1049 | 18,717 | 18,717 |
| Tajo de Adjuntas | 231210 | 25/01/2008 | 24/01/2058 | 15.0000 | 2833 | 2833 |
| Juanita | 217034 | 14/06/2002 | 13/06/2052 | 36.5196 | 6897 | 6897 |
| **TOTAL** | | | | **2537.2761** | **478,420** | **478,420** |

EDR controls 100% of all 26 concessions and two areas are subject to royalties summarized in Table 4-2.

**Table 4-2 Summary of the Endeavour Silver's Royalties**

| Area | Agreement | NSR | Concession Name | Title Number | Hectares |
|---|---|---|---|---|---|
| Belen | Sociedad Cooperativa de Producción Minera Metalurgica | 2% | Belen II | 218896 | 92.6934 |
| | | | Ampliación de Belen | 194930 | 99.1049 |
| Tajo de Adjuntas | Gilberto Rodriguez Martinez | 2% | Tajo de Adjuntas | 231210 | 15.0000 |
| | Hector Ezquivel Esparza | 2% | Juanita | 217034 | 36.5196 |

The annual 2022 concession tax for the Guanajuato properties is estimated to be approximately 956,840 Mexican pesos (pesos), which is equal to about US $47,842 at an exchange rate of 20.00 pesos to US $1.00.

In addition to the mineral rights, EDR has agreements with various private ranch owners that provide access for exploration and exploitation purposes. Table 4-3 summarizes the surface access rights as of November 9, 2022.

**Table 4-3 Summary of Endeavour Silver's Surface Access Rights**

| Owner | Area Name | Validity | Term |
|---|---|---|---|
| Florentino Ortega Camarillo | Cebada - Bolañitos | 15 Years | 01/12/2007 - 2022 |
| Benjamin Tapia Cruces | Cebada - Bolañitos | 15 Years | 01/12/2007 - 2022 |
| Alfredo Ortega Gonzalez | Cebada - Bolañitos | 15 Years | 01/12/2007 - 2022 |
| Cont. Y Addendum Ma. Concepción Ortega Camarillo (apoderado J. Isabel Camarillo Ortega) | Cebada - Bolañitos | 10 Years | 01/01/2013 - 2023 |
| Ma. Elena Morales Rivera | Melladito | 6 Months | 10/07/2020 - 10/01/2021 |

## 4.3 Permits and Environmental Liabilities

EDR holds all necessary environmental and mine permits to conduct planned exploration, development, and mining operations at the Bolañitos Project, and is in full compliance with applicable environmental and safety regulatory standards. The QP knows of no existing or potential future significant factors or risks that might affect access, title, or the right or ability to perform work on the property.

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

## 5.1 Access and Climate

Primary access to the Bolañitos Project is provided by a newly constructed (2013) paved road from the city of Guanajuato. The Leon/Guanajuato international airport provides international access to the area with daily service from Los Angeles, Dallas/Fort Worth and Houston, and national access to the area from Mexico City.

The regional climate is temperate, with cool winters and mild summers. Rainfall occurs primarily during the summer season, from June to September, and typical annual precipitation is about 50 cm per year. From mid-December through January, nighttime temperatures fall to 7° to 10 °C, and daytime high temperatures in low 20 °C range are typical. Snowfall is rare but has been known to occur at the higher elevations throughout the region. Weather conditions rarely, if ever, restrict mining activity at Bolañitos, and operations can be carried out year-round.

## 5.2 Local Resources and Infrastructure

The capital city of Guanajuato has a population of approximately 160,000 and hosts several universities and post-secondary schools, including a mining college. Tourism is a principal industry in the area, and numerous hotels and restaurants are available as a result. The area has a rich tradition of mining and there is an ample supply of skilled personnel sufficient for both the underground mining operations and the surface facilities. Most of the work force resides in local communities or in the city of Guanajuato. Supplies required for the exploration programs and mining operations are purchased in either the city of Guanajuato or Leon.

At each of the mine sites on the Bolañitos Project, the water required for operations is supplied from dewatering of the mines. The tailings facility at the Bolañitos mine is set up to recycle as much water as possible back into the processing plant.

Power supply to the Bolañitos Project is provided by the national grid CFE (Comisión Federal de Electricidad), and telephone communications are integrated into the national land-based telephone system which provides reliable national and international direct dial telephone communications. Satellite communications also provide phone and internet capabilities at the Bolañitos mine, though the satellite phone and internet services are slow and sometimes unreliable. There is no cell phone service at any of the mines.

Additional details regarding infrastructure specific to the Bolañitos Project are provided in Section 18 of this report.

## 5.3 Bolañitos Mine Physiography

The state of Guanajuato is situated along the southern edge of the Central Mexican Plateau and comprises portions of the Trans-Mexican Volcanic Belt, the Mexican Plateau, and the Sierra Madre Oriental. The Bolañitos Project is in the west central portion of the state, among a series of low mountains which are part of the Sierra Madre Occidental. Grass, small trees and shrubs along with several varieties of cacti make up most of the vegetation on the steeper hillsides, with larger trees found near springs and streams. The area is mainly devoid of trees except in the valleys and where reforestation has taken place.

Even though there is a reasonable amount of rainfall each year, most of the creeks in the area are usually dry, except for man-made reservoirs surrounding the city of Guanajuato. Some cattle and/or goat grazing is carried out in the area over the scrub land. Sections of more arable land have been deforested to support small plots for growing crops.

## 5.4 Surface Rights

EDR has negotiated access and the right to use surface lands sufficient for many years of operation. Sufficient area exists at the Bolañitos Project for all anticipated future surface infrastructure. Details regarding surface rights for mining operations, availability of power sources, potential tailings storage areas, potential waste disposal areas, and potential processing plant sites, are discussed in the relevant sections of this report on mining methods, recovery methods and project infrastructure.

# 6. HISTORY

The following paragraphs provide an abbreviated timeline of the history of Bolañitos Project:

- 1968 - Fresnillo Company acquired claims and incorporated Negociación Minera Santa Lucía (now Cebada) and the Peregrina mine.
- 1973 - The contracting company Tormex S.A. completed a photogeological study in the area of the Cebada mine holdings.
- 1976 – Production began at the Cebada mine; between 1976 and 1995, the Cebada mine produced 1,277,216 tonnes at an average grade of 4.04 g/t gold and 372 g/t silver.
- 2003 - Grupo Guanajuato closed the Torres, Sirena, Peregrina and Apolo mines. The Bolañitos, Golondrinas, Asunción and Cebada mines stayed in production on a break-even basis.
- 2007 - EDR acquired the Bolañitos Project, which included, Mina Cebada, Mina Bolañitos, Mina Golondrinas and Mina Asunción (as well as a few other currently closed mines), from Peñoles, the owner at the time, and Minas de la Luz, the operator at the time. Minas de la Luz was kept on as the operator of the mines until June, 2007, when EDR assumed control.

## 6.1 Historical Exploration

Records from mining operations provide survey information of historical workings, while channel sample data from stopes, raises and drifts excavated on the mineralized zones provide grade information. Prior to EDR's acquisition of the Bolanitos project, there was limited historical drilling. Several well mineralized and high-grade drill holes completed by Peñoles have not yet been followed-up, and these contribute to the remaining exploration potential for the property, which includes untested areas both along the strike of the veins and at depth below the old workings.

## 6.2 Historical Production

In 2006, previous operator Minas de la Luz reported production of 255,766 oz silver and 3,349 oz gold from 76,532 tonnes of ore grading 128 g/t silver and 1.62 g/t gold from the Bolañitos, Cebada and Golondrinas mines, with the Bolañitos plant operating at about 43% of its capacity.

# 7. GEOLOGICAL SETTING AND MINERALIZATION

The following description of the geological setting for the Bolañitos Project is largely excerpted and modified from the technical reports prepared by Hard Rock Consulting (2016) and Micon (2009, 2010, 2011 and 2012). The QP has reviewed the geologic data and information available, and finds the descriptions and interpretations provided in these documents acceptable for use in this report.

## 7.1 Regional Geology

The mining district of Guanajuato is situated along the southern and eastern flanks of the Sierra Madre Occidental geological province, a north-northwesterly trending linear volcanic belt of Tertiary age. It is approximately 1,200 km long and 200 to 300 km in width. Rocks within the belt comprise flows and tuffs of basaltic to rhyolitic composition with related intrusive bodies. The volcanic activity that produced the bulk of the upper volcanic group ended by the late Oligocene, though there was some eruptive activity as recently as 23 Ma (early Miocene). The volcanism was associated with subduction of the Farallon Plate and resulted in accumulations of lava and tuffs on the order of 1 km thick. Later Basin and Range extensional tectonism related to the opening of the Gulf of California resulted in block faulting, uplift, erosion and the present-day geomorphology of the belt. Strata within the belt occupy a broad antiform, longitudinally transected by regional scale faults. A regional geologic map of the Bolañitos Project area is presented as Figure 7-1.

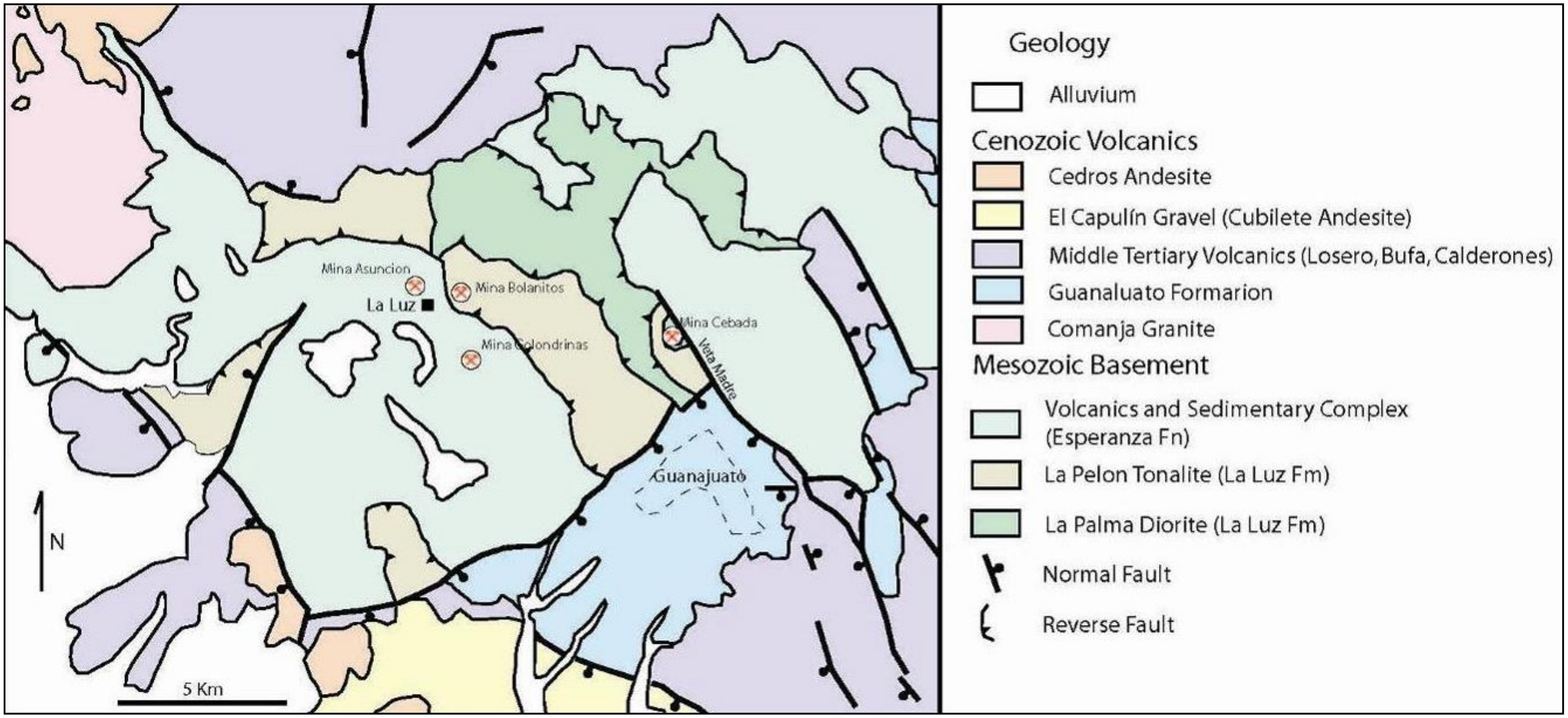



Figure 7-1 Regional Geology of the Bolañitos Project Area (EDR, 2016; Modified from Clark, 2009)

The Guanajuato district is underlain by a volcano-sedimentary sequence of Mesozoic to Cenozoic age rocks. There are three main northwest trending vein systems that cut these volcano-sedimentary sequences. The vein systems from west to east are known as the La Luz, Veta Madre and La Sierra systems. These systems are generally silver-rich with silver to gold ratios from 72:1 to 214:1. They are known along strike for 10 to 25 km.

The Bolañitos mine is in eastern part of the Guanajuato mining district, in the southeastern portion of the Sierra de Guanajuato, which is an anticlinal structure about 100 km long and 20 km wide. Bolañitos is located on the northeast side of this structure where typical primary bedding textures dip 10° to 20° to the north-northeast. Economic mineralization at Bolañitos is known to extend as much as 250 m vertically from 2300 m to 2050 m elevation except for the La Luz vein that extends 400 m vertically from 2300 m to 1900 m.

### 7.1.1 Stratigraphy

The stratigraphy of the Guanajuato mining district can be divided into a Mesozoic basement (Chiodi et al, 1988; Dávila and Martinez, 1987; Martinez-Reyes, 1992) and overlying Cenozoic units, as shown in Figure 7-2. The lower Mesozoic lithological units are the Esperanza and La Luz Formations which are composed of marine sedimentary rocks, weakly to moderately metamorphosed and intensely deformed by shortening. These rocks are unconformably overlain by the Tertiary Guanajuato Formation conglomerates, and the Loseros, Bufa, Calderones, Cedros and Chichíndaro Formations. The Tertiary rocks consist of continental sediments and sedimentary rocks, which generally occupy lower topographic zones, and subaerial volcanic rocks, which are principally exposed in the ranges and higher plateaus. The rocks of the Cenozoic cover have experienced only extensional deformation and in some places are gently tilted. Tertiary-aged rocks correspond to a period of tectonism accompanied by volcanism and intrusive magmatic activity.

Figure 7-2 does not depict the Peregrina intrusive, which is a floored body (laccolith) at the contact of the Bufa Formation rhyolite and the Guanajuato Formation conglomerate. The uppermost portion of the Peregrina intrusive extends into the Chichíndaro Formation rhyolite. The thickness of each unit presented graphically in the stratigraphic section represents the maximum thickness of that unit in the vicinity of the Bolañitos mine.

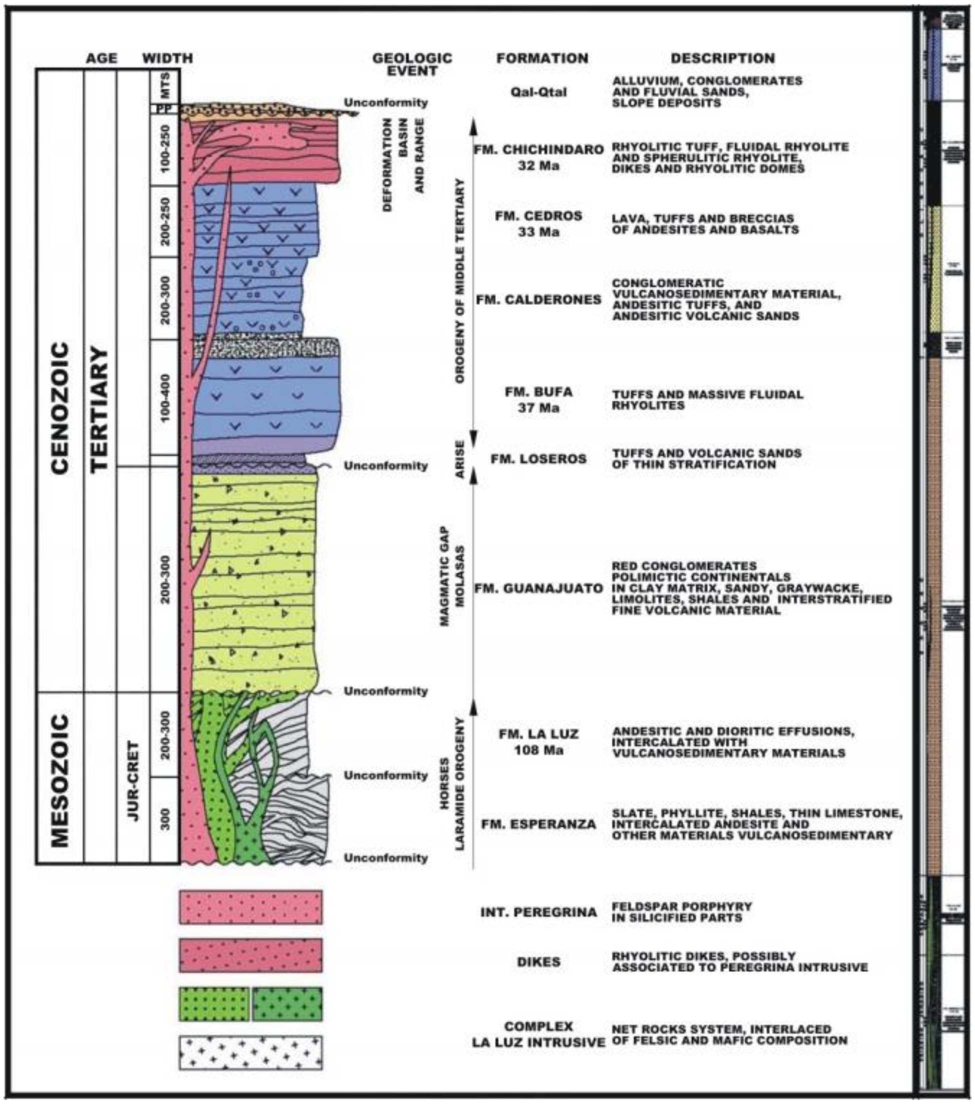



Figure 7-2 Stratigraphic Column, Eastern Guanajuato Mining District

### 7.1.2 Esperanza Formation

The Esperanza Formation is composed of carbonaceous and calcareous shale interbedded with arenite, limestone, and andesitic-to-basaltic lava flows, all weakly metamorphosed to phyllites, slates, and marble. The thickness of the formation exceeds 600m.

### 7.1.3 La Luz Formation

The La Luz Formation overlies the Esperanza Formation and consists mainly of interbedded clastic sedimentary rocks and massive and pillow tholeiitic basalts dated at 108.4 ±2 Ma. Locally, rhyolite tuffs and agglomerates are present, and some volcanogenic massive sulfide occurrences have been reported. A minimum thickness of at least 1,000 m is recognized, but the true thickness is unknown due to deformation and sub-greenschist metamorphism. Included with the La Luz Formation are the La Palma diorite and La Pelon tonalite, which form the upper part of the Guanajuato arc. Pervasive propylitic alteration is common.

### 7.1.4 Guanajuato Formation (Eocene to Oligocene)

The red conglomerate characteristic of the Guanajuato Formation lies in unconformable contact with the Esperanza Formation and less frequently with the La Luz Formation andesite (Edwards, 1955). The conglomerate consists of pebbles to boulders of quartz, limestone, granite and andesite belonging to older rock units, all cemented by a clay matrix, with some interlayers of sandstone. Beds of volcanic arenites and andesitic lavas occur at the base of the conglomerate. The Guanajuato conglomerate is estimated to be between 1,500 and 2,000 m thick. Contemporaneous vertebrate paleontology and andesitic lavas (49 Ma, Aranda-Gómez and McDowell, 1998) indicate that the unit is mid-Eocene to early Oligocene in age.

### 7.1.5 Loseros Formation (Cenozoic)

This overlying mid-Tertiary volcanic sequence is interpreted to be within, and adjacent to a caldera. The Loseros tuff is a well-bedded, green to cream-red volcanic arenite from 10 m to 52 m thick. It is interpreted to be a surge deposit at the base of the Cubo caldera filling and Oligocene in age.

### 7.1.6 Bufa Formation (Cenozoic)

The Bufa Formation rhyolite is a felsic ignimbrite that is approximately 360 m thick and lies above a sharp to gradational contact. It is a sanidine-bearing rhyolite-ignimbrite with biotite as a mafic phase, and is often massive, but locally bedded. Owing to moderate welding and extensive and pervasive silicification, it is a hard rock that forms prominent cliffs east of the city of Guanajuato. It occasionally contains large lithic clasts of various types, many of which were derived from the pre-volcanic basement. At Bolañitos, the Bufa rhyolite has three mappable units: a lower breccia overlain by dense, red rhyolite porphyry, in turn overlain by a massive to bedded ignimbrite. The cliff-forming Bufa rhyolite has been dated using the K-Ar dating technique to be 37 ±3 Ma, placing it in the middle Oligocene.

### 7.1.7 Calderones Formation (Cenozoic)

The Calderones Formation contains a wide variety of volcanic rocks, including low- to medium-grade ignimbrites, deposits of pyroclastic flows, pyroclastic surge layers related to phreatomagmatic activity, airfall ash-rich tuffs, minor Plinian pumice layers, lahars, debris flows, reworked tuffaceous layers deposited in water, tuff-breccias and mega-breccias. Ubiquitous and characteristic chlorite alteration imparts a green to greenish blue color to almost all outcrops of the Calderones. Propylitic alteration adjacent to veins and dikes is of local importance in many outcrops.

The Calderones Formation overlies the Bufa Formation at Bolañitos with a contact marked by a megabreccia composed of large (often 5 to 10 m) fragments of the Esperanza, La Luz and Guanajuato Formations. The Calderones Formation, which exceeds 300 m in thickness at Bolañitos, is the upper caldera-filling unit above the surge deposit and the Bufa ignimbrites.

### 7.1.8 Cedros Andesite (Cenozoic)

Overlying the Calderones Formation is the Cedros Formation andesite, a 100 to 640-m thick unit, which consists of grey to black andesitic lava flows with interlayered red beds and andesitic to dacitic tuffs.

The Cedros Formation is entirely post-caldera and is widespread.

### 7.1.9 Chichíndaro Formation (Cenozoic)

The Chichíndaro Formation rhyolite is a sequence of domes and lava flows interbedded with poorly sorted volcanic breccias and tuffs. Fluidal porphyritic textures are characteristic in the domes and flows.

This lithologic unit is closely related to the hypabyssal Peregrina intrusion, and it ranges in thickness from 100 to 250 m. In places, the rhyolite domes contain disseminated tin and vapor-phase cavity-filling topaz distributed along the flow foliation.

The Chichíndaro rhyolite is the youngest volcanic unit in the Guanajuato mining district. Three K-Ar ages obtained from this formation (Gross, 1975; Nieto- Samaniego et al, 1996) date the unit at 32 ±1 Ma, 30.8 ±0.8 Ma and 30.1 ±0.8 Ma.

### 7.1.10 Comanja Granite (Cenozoic)

The Comanja granite is a unit of batholithic size, apparently emplaced along the axis of the Sierra de Guanajuato. It is Eocene in age and has been radiometrically dated at 53 ±3 Ma and 51 ±1 Ma by K-Ar in biotite (Zimmermann et al, 1990). These dates establish the youngest relative age for the Bufa formation, the youngest unit cut by the granite.

### 7.1.11 El Capulin Formation

The unconsolidated El Capulin Formation consists of tuffaceous sandstone and conglomerate overlain by vesicular basalt, all Quaternary age.

## 7.2 Structure

The following paragraphs are modified from the summary of the structural setting of the Guanajuato mining district presented by Starling (2008), which focused on the Veta Madre but likely applies to the La Luz system that composes the Bolañitos mine.

Pre-mineralization deformation during the Laramide orogeny (~80-40 Ma) resulted in west-northwest trending pre-mineral folds and thrusts in the Esperanza Formation as observed in the Cebada mine on the Veta Madre. Early post-Laramide extension (~30 Ma) was oriented north-south to north-northeast, and controlled many vein deposits in the region (e.g., Fresnillo, Zacatecas, La Guitarra). Guanajuato appears to lie on a north-northwest-trending terrane boundary which was reactivated as a sinistral transtensional fault zone in conjunction with early-stage intermediate-sulfidation style mineralization. Subsequent (~28 Ma) regional extension to the east-northeast-west-northwest resulted in basin and range-type deformation and block faulting, and is associated with a second phase of mineralization in the Guanajuato district.

Along the Veta Madre vein system, ore shoots were controlled during early-stage mineralization by counter-clockwise jogs along the main structure and at intersections with west-northwest and northeast fault zones. These tended to generate relatively steep ore shoots plunging to the south along the Veta Madre.

During the second phase of mineralization, listric block faulting and tilting affected parts of the Veta Madre veins and new systems such as La Luz developed. The veins at La Luz appear to have formed as extensional arrays between reactivated west-northwest fault zones acting as dextral transtensional structures.

The second phase vein systems tend to have formed sub-horizontal ore zones either reflecting fluid mixing zones or structural controls due to changes in dip of the fault surface. The overprint of two events means that in some deposits, ore shoots have more than one orientation and that there are vertical gaps in ore grade.

Randall et al (1994) first proposed a caldera structure as a conceptual geologic model for the Guanajuato mining district, citing the presence of a mega-breccia in the Calderones Formation and the distribution of the Oligocene volcanic formations described above. The hypothesis states that the caldera collapse occurred in at least two stages and the collapse was a trap-door type. The presence of a peripheral three-quarter ring of rhyolite domes intruding along bounding faults, the location of the Oligocene volcanic formations ponded within this ring, mega-breccia and topographic rim, all provide supporting evidence for this hypothesis.

Following caldera formation, normal faulting combined with hydrothermal activity around 27 Ma (Buchanan, 1980) resulted in many of the silver-gold deposits found in the district. Within the Guanajuato mining district there are three major mineralized fault systems, the La Luz, Veta Madre, and Sierra systems. Veta Madre is a north-northwest trending fault system and the largest at 25 km long. The other systems are subparallel to it. Mineralization occurs within these systems principally on normal faults oriented parallel to the main trend.

## 7.3 Local Geology

Of the geological formations associated with the Guanajuato district only the Esperanza and La Luz Formations occur in the Bolañitos mine area with mineralization residing primarily within the La Luz Formation. Mineralization is known to dissipate at the contact with the Esperanza Formation (Figure 7-3).

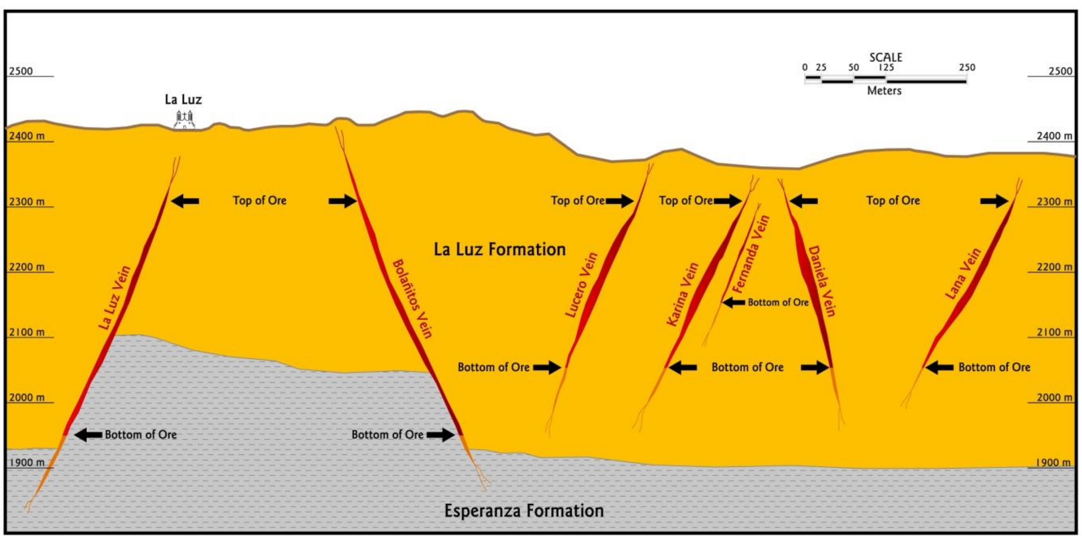



**Figure 7-3 Schematic Cross Section showing all known veins in the La Luz Sub-District**

The Veta Madre historically was the most productive vein in the Guanajuato district, and is by far the most continuous, having been traced on the surface for nearly 25 km. The vein dips from 35° to 55° to the southwest with measured displacement of around 1,200m near the Las Torres mine and 1,700 m near La Valenciana mine. The most productive veins at Bolañitos strike parallel to the Veta Madre system.

Bolañitos mineralization is directly related to faulting. Mineralization occurs as open-space fillings in fracture zones or impregnations in locally porous wall rock. Veins which formed in relatively open spaces are the main targets for mining.

There are 21 veins within the Bolañitos mine area that are included in the mineral resource estimate. These mineralized veins are known to occur from an elevation of 2300 m down to an elevation of 1900 m (Figure 7-4).

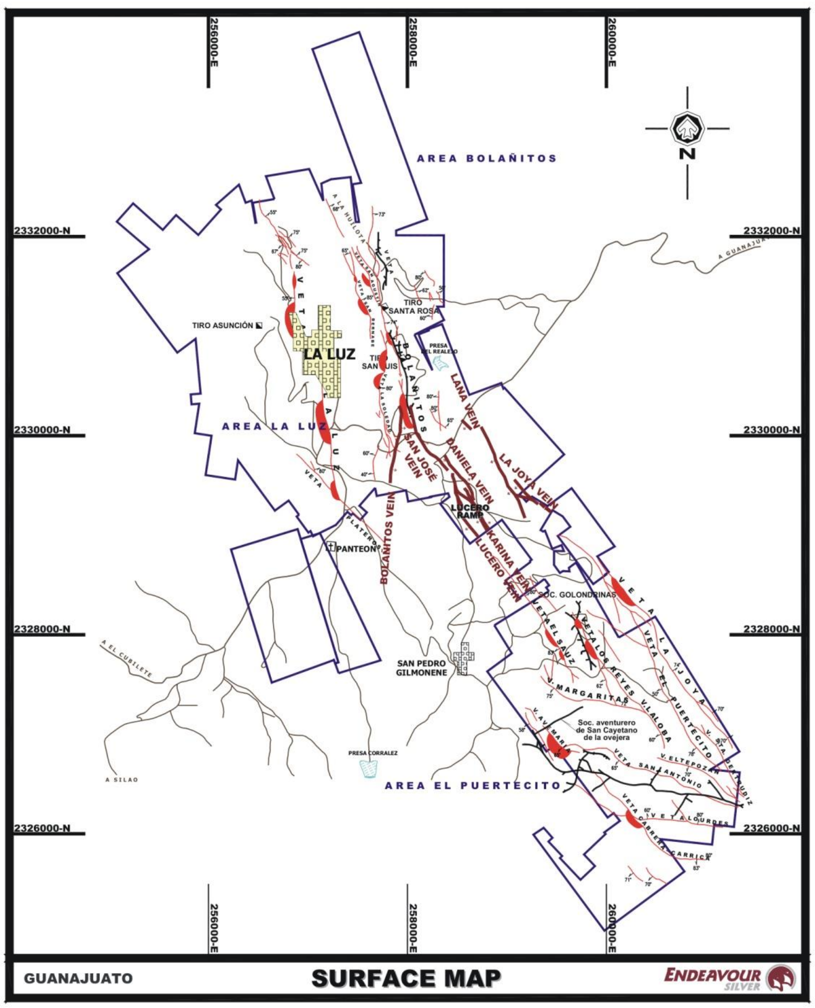



Figure 7-4 Surface Map Indicating the Location of the Veins and Mineral Concession Boundaries for the Bolañitos – Golondrinas (El Puertecito Area) Mines in the La Luz District, Guanajuato

### 7.3.1 Alteration

The hydrothermal alteration of the wall rock is prevalent in the Guanajuato District, and is an excellent guideline in the mining prospection of Bolañitos. Alteration within the district is closely related to fractures, veins and brecciated zones. Alteration halos surrounding these zones range from a few centimeters to meters and can be divided into 4 alteration types: 1) propyllitic, 2) argillic, 3) phyllic, and 4) silicification.

Wall rock alteration at Bolañitos in general is not significantly altered at the depths of mineralization; however, breccia zones within and near the primary structures do have the typical characteristics of low sulphidation epithermal vein type alteration. Alteration encountered within the structures forms halos of phyllic (sericite) and silicification alteration. Argillic and propyllitic alteration have been identified above the mineralized level of 2300 m.

Propyllitic alteration is the most widely distributed type and the strongest near fractures, especially in the intersections of veins. The propyllitic alteration consists of epidote, chlorite, clays and calcite. Phyllic (sericite) alteration is not as pervasive as the propyllitic alteration, and is generally encounter within or in immediate contact with the vein. The typical mineral assemblage of this type of alteration consists of pyrite, illite and sericite with occasional kaolinite and montmorillonite. Argillic alteration consists of kaolinite, montmorillonite, and halloysite. Silicification is restricted to vein and breccia zones, and typically extends only a few centimeters into the wall rock.

## 7.4 Mineralization

Mineralized veins at Bolañitos consist of the classic banded and brecciated epithermal variety. Silver occurs primarily in dark sulfide-rich bands within the veins, with little mineralization within the wall rocks. The major metallic minerals reported include pyrite, argentite, electrum and ruby silver, as well as some galena and sphalerite, generally deeper in the veins. Mineralization is generally associated with phyllic (sericite) and silicification alteration which forms haloes around the mineralizing structures. The vein textures are attributed to the brittle fracturing-healing cycle of the fault-hosted veins during and/or after faulting (Figure 7-5).

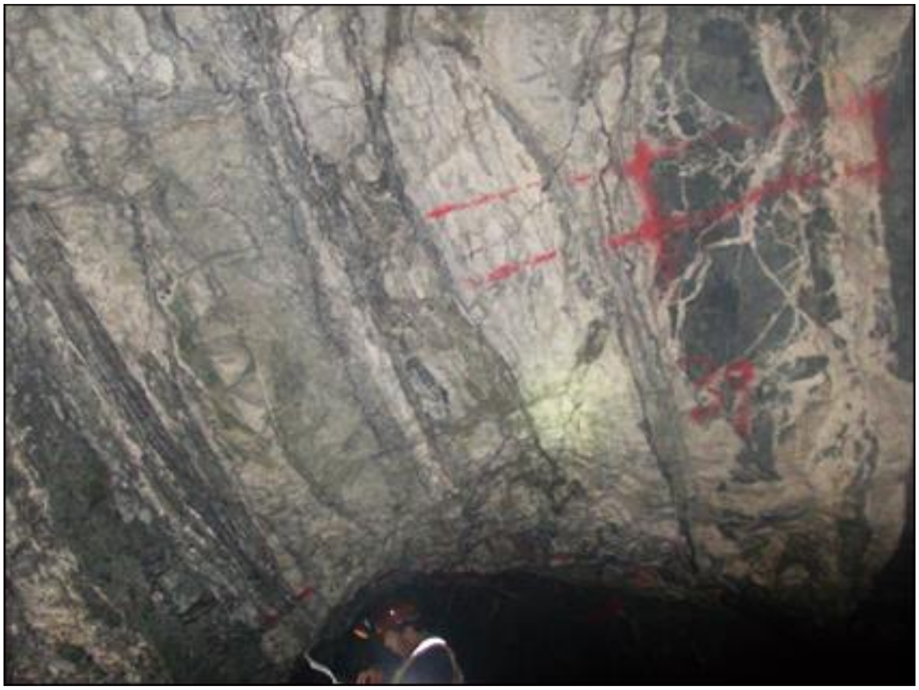


Figure 7-5 Lucero Vein in the Bolañitos Mine

Economic concentrations of precious metals are present in “shoots” distributed vertically and laterally between non-mineralized segments of the veins. Overall, the style of mineralization is pinch-and-swell with some flexures resulting in closures and others generating wide sigmoidal breccia zones.

The silver-rich veins of Bolañitos contain quartz, adularia, pyrite, acanthite, naumannite, arsenopyrite and native gold. Native silver is widespread in small amounts. Much of the native silver is assumed to be supergene. Silver sulfosalts (pyrargyrite and polybasite) are commonly found at depth.

# 8. DEPOSIT TYPES

The following description of the mineral deposit type associated with the Bolañitos mine property is excerpted from the technical report prepared by Cameron (2012). The QP has reviewed the geologic data and information available, and finds the descriptions and interpretations provided herein reasonably accurate and suitable for use in this report.

The Guanajuato silver-gold district is characterized by classic, high grade silver-gold, epithermal vein deposits with low sulfidation mineralization and adularia-sericite alteration. The Guanajuato veins are typical of most epithermal silver-gold vein deposits in Mexico with respect to the volcanic or sedimentary host rocks and the paragenesis and tenor of mineralization.

Epithermal systems form near the surface, usually in association with hot springs, and to depths on the order of a few hundred meters. Hydrothermal processes are driven by remnant heat from volcanic activity. Circulating thermal waters rising through fissures eventually reach a level where the hydrostatic pressure is low enough to allow boiling to occur. This can limit the vertical extent of the mineralization, as the boiling and deposition of minerals is confined to a relatively narrow range of thermal and hydrostatic conditions. In many cases, however, repeated healing and reopening of host structures can occur, imparting cyclical vertical movement of the boiling zone and resulting in mineralization that spans a much broader range of elevation.

As the mineralizing process is driven by filling of void spaces and fissures, mineralization geometry is affected by the permeability and orientation of the host structures. Mineralization tends to favor dilatant zones in areas where fractures branch or change orientation, which may be driven, in turn, by wall rock competency and/or relative hardness of individual strata.

Low-sulfidation epithermal veins in Mexico typically have a well-defined, sub-horizontal ore horizon about 300 m to 500 m in vertical extent, where high grade ore shoots have been deposited by boiling hydrothermal fluids. The minimum and maximum elevations of the mineralized horizons at the Bolañitos mine have not yet been established precisely, but historic and current production spans an elevation range from 1900 to 2300 m.

Low-sulfidation deposits are formed by the circulation of hydrothermal solutions that are near neutral in pH, resulting in very little acidic alteration with the host rock units. The characteristic alteration assemblages include illite, sericite and adularia that are typically hosted either by the veins themselves or in the vein wall rocks. The hydrothermal fluid can travel along discrete fractures creating vein deposits, or it can travel through permeable lithology such as poorly welded ignimbrite flows, where it may deposit its load of precious metals in a disseminated fashion. In general, disseminated mineralization is found some distance from the heat source. Figure 8-1 illustrates the spatial distribution of the alteration and veining found in a hypothetical low-sulphidation hydrothermal system.

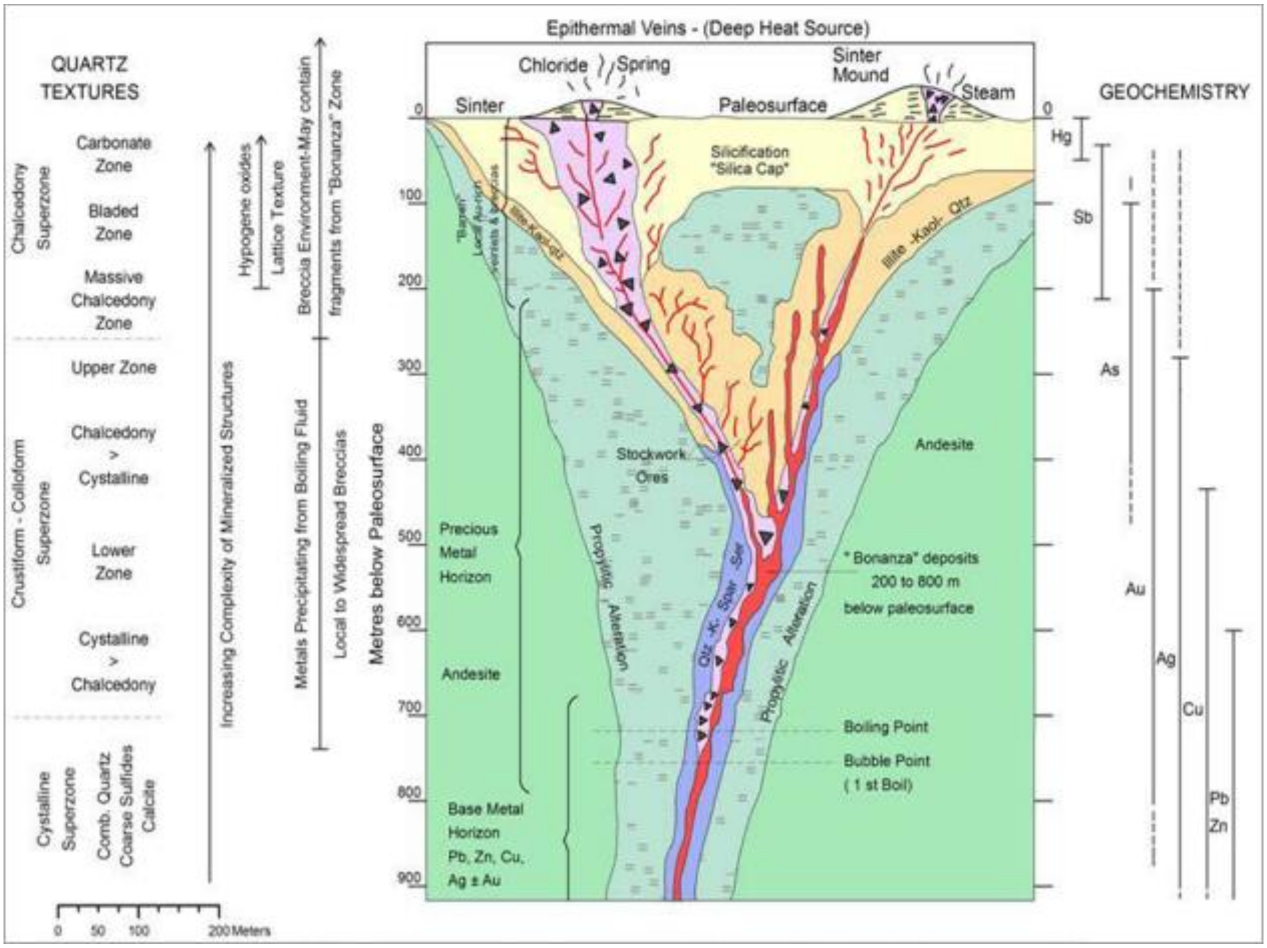



Figure 8-1 Alteration and Mineral Distributions within a Low Sulphidation Epithermal Vein System

# 9. EXPLORATION

## 9.1 EDR Exploration Prior to 2021

Exploration activities conducted by EDR in recent years prior to 2019 are summarized in the following paragraphs and are discussed in greater detail in the technical reports prepared by Munroe (2013, 2014) and HRC (2015, 2016). Exploration field activities carried out during 2017 to 2019, which have not been included in previous technical reports, are also summarized below.

During 2013, EDR completed 6,728 m of drilling in 47 underground diamond drill holes at the Bolañitos Project. A total of 2,638 samples were collected and submitted for assays. EDR completed 15,337 m of drilling in 51 surface diamond drill holes at the Bolañitos Project. A total of 4,379 samples were collected and submitted for assays. EDR also conducted geological mapping, trenching, soil geochemical and sampling programs in La Luz (San Antonio de los Tiros, La Paz and Plateros), Belen (Ericka and Ana) and Bolañitos South (San Cayetano and Emma) areas. A total of 1,233 samples were collected and submitted for assays.

In 2014, EDR did not conduct any underground exploration drilling at the Bolañitos Project, but completed 28,167 m of drilling in 87 surface diamond drill holes. A total of 7,949 samples were collected and submitted for assays. EDR also conducted geological mapping and sampling programs in Bolañitos South (San Antonio, Lourdes, Margaritas, La Cuesta, and Laura). A total of 685 samples were collected and submitted for assays.

In 2015, EDR spent US $1,453,473 (including property holding costs) on exploration activities, including drilling, at the Bolañitos Project. Geological mapping and sampling were conducted at Bolañitos North (Bolañitos, San Ignacio, San Miguel & Realejo Veins), Bolañitos South (San Antonio), and Ana Rosa and Belen (Erika, Ana, Edith and Perla). These activities were mainly conducted to complete the delineation of the Bolañitos North structures, and to investigate possible targets of interest in the South West part of Belen and in the Ana Rosa claim (located at SW of la Luz town).

In 2016, EDR conducted a drilling program with the objective to test the La Luz (San Antonio de los Tiros area), San Cayetano and Emma veins at the Bolañitos Project. A total of 2,528 meters completed in 9 holes. Geological mapping and sampling were conducted in the Bolañitos South (La Loba-Margaritas zone) area.

During 2017, the EDR drilling program included a total of 28 drill holes with 7,287 meters and 2,080 samples collected and submitted for assays. No exploration field activities carried out during the year.

In 2018, EDR did not conduct geological mapping in the Bolañitos Project, but completed 11,242m of drilling in 55 holes and 3,727 samples collected and submitted for assays.

In 2019, exploration field activities carried out by EDR in the Bolañitos Project, including drilling. Little geological mapping and sampling conducted in the Bolañitos South area, over the Lourdes and San Antonio veins, 40 rock samples collected in the area. The drilling program included a total of 8,670 meters in 54 holes and 3,145 samples collected and submitted for analysis.

In 2020, EDR spent US $770,512 (including property holding costs) on exploration activities at the Bolañitos Project. Most of the work consisted of diamond drilling focused on the Bolañitos South and Sangre de Cristo areas. In addition, a total of 45 drill holes completed in the Bolañitos North (Melladito and San Bernabé veins), Plateros, Sangre de Cristo and Bolañitos South (Ave María vein) areas, for a total of 10,458 meters. In addition, geological mapping and sampling was carried out in the Bolañitos South area and over the traces of the Ave Maria, Lourdes and La Cuesta veins. A total of 54 rock samples were collected and submitted for analysis

## 9.2 2021 Exploration Activities

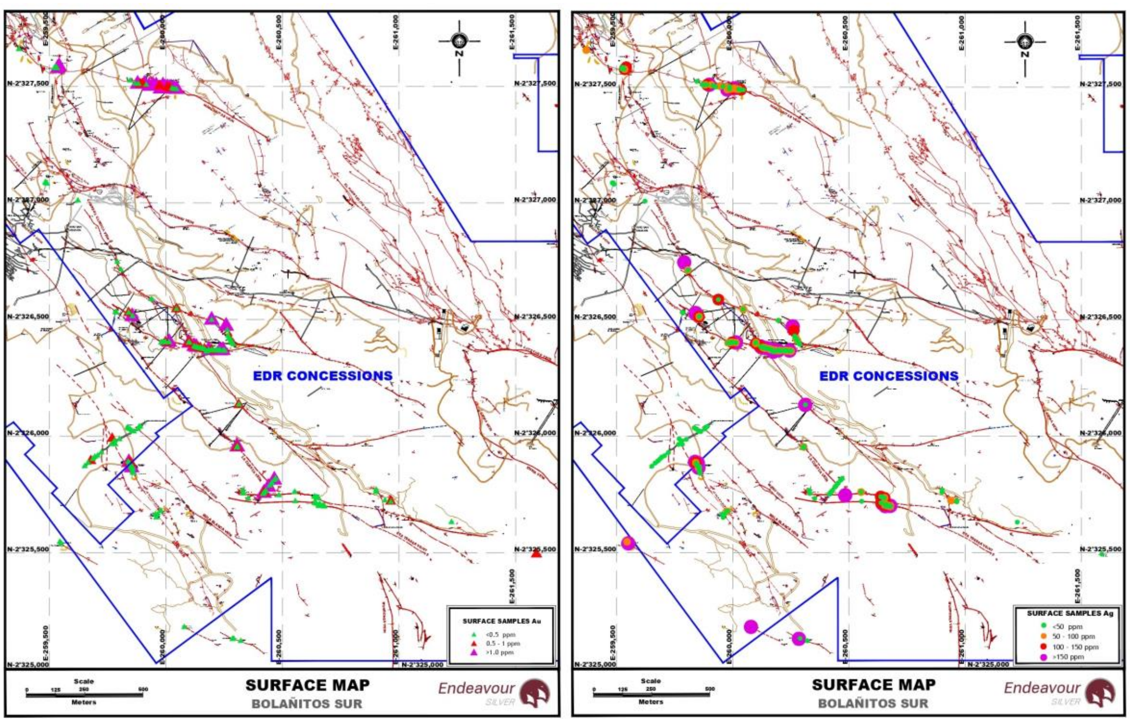
In 2021, EDR spent US $1,268,877 (including property holding costs) on exploration activities, primarily drilling, at the Bolañitos Project. During the year, field exploration focused on the Bolañitos South area.

The drilling campaign included a total of 15,380 meters from 72 drill holes, at Bolañitos North (Melladito and Bolañitos veins), Belén and Bolañitos South (Lourdes, Cabrera Carrica, Tepetateras-Lulú, La Cuesta North, La Cuesta South and Margaritas) areas.

### 9.2.1 Bolañitos South

During 2021, geological mapping and sampling was carried out by EDR in the Bolañitos South area with the goal of defining continuity of structures and establish drill targets. Exploration activities focused on the following areas: Lulú, Tepetateras, La Cuesta, Margaritas, Golondrinas and Maru-Gina.

A total of 401 rock samples were collected and submitted for analysis.




Figures 9-1 & 9-2 Silver and Gold results in rock samples collected in the Bolanitos South area.

### 9.2.2 Lulu Area

At Lulu, historic workings, including the Pedro Loco shaft, Third, Second and First level of Lourdes, were developed on a structure with a strike of N80°W with an average dip of 65-75°NE.

- **Third Level of Lourdes:** Historics mine workings are on a NW trend along two structures. The main structure trends N80°W (Lulu vein) and has an average dip of 65-70° to the NE. A second quartz bearing structure, possibly Cabrera Carrica, is observed with average widths ranging from 0.8 to 2.00 m, with a fault zone observed at the hanging wall. This adit is accessible up to 120m, but historical maps indicate and extension up to 280 m. Cabrera Carrica, has a general trend of NW30°SE, and is developed for approximately 150m, with dips between 60° to 80° to the NE.


Figures 9-3, 9-4 & 9-5 Photographs showing Third Level of Lourdes.

- **Second Level of Lourdes:** This historic mine working has an approximate length of 40 to 50 m and developed along a structure with a NW30°SE trend, with dips that vary between 65-70° to the NE. This structure has widths that vary between 0.70 to 1.20 m and corresponds to a vein that was also developed in the Third Level of Lourdes.



Figures 9-6, 9-7 & 9-8 Photographs showing Second Level of Lourdes.

- **First Level Lourdes:** Geological mapping, sampling and surveying historic workings were carried out on this level within the Lulu structure which strikes N80°W with average dip of 65°. The structure has an approximate length of 150m and is clearly defined due to a fault.


Figures 9-9 & 9-10 Photographs showing First Level of Lourdes.

- **Pedro Loco Shaft:** Located to the west of the junction between the Tepetateras and Lulú veins, this shaft occurs within a E-W trending structure with dips that vary between 60°- 65° to the north with an approximate width of 1.50 to 1.80m. Massive quartz, with minor narrow bands of sulphides and a fault zone are observed at the footwall.

Figures 9-11 & 9-12 Access to Pedro Loco Shaft.


Figures 9-13 & 9-14 Sampling Activities in the Pedro Loco Shaft.

- **Guadalupe de Abajo Adit:** Mapping within this historic adit encountered two small developments on a structure with a N65°W trend, possibly corresponding to the projection of La Cuesta vein. At the southeast end, the adit changes to strike N10°E and another small development is observed towards the east end which could correspond to the Lulu vein projection. Another developed area with a N60°W trend was observed and could correspond to the Lourdes vein projection.

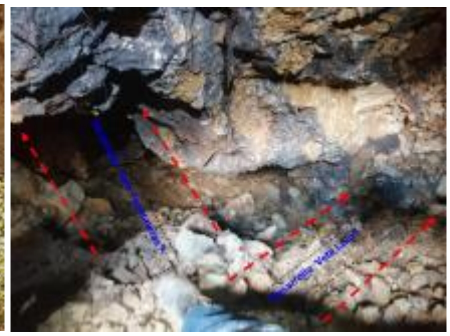
Figures 9-15 & 9-16 Guadalupe de Abajo Adit, projection of Lulu vein.

Figures 9-17 & 9-18 Access to stope of the Guadalupe de Abajo Adit.


Figures 9-19, 9-20 & 9-21 Development N35°W in Guadalupe de Abajo Adit.

### 9.2.3 Las Tepetateras Area

Reconnaissance mapping was carried out to define continuity of E-W and NW structures and to locate historic mine workings. Several were in the area, one of which may connect with the First Level of Lourdes from a development at the North end.

Figures 9-22 & 9-23 Images showing location of adit/rise (left); and developments within the mine working (right).



Figures 9-24, 9-25 & 9-26 Cleaning activities to reach the end of the First Level of Lourdes.

- **El Coyote Shaft:** The El Coyote shaft is in the northern part of the Tepetateras vein. It is vertical and measures 3 x 3 m but no further work was carried out as it was deemed unsafe.



Figures 9-27, 9-28 & 9-29 El Coyote Shaft.

### 9.2.4 Las Tepetateras SE Area

Exploration activities are carried out on the trace of the Tepetateras vein, towards the southeastern end and at the footwall of the Lulu vein. Outcrops of quartz were observed possibly confirming the continuity of the vein towards the southeast. Along the projection of this structure, a small well called Tres Parroquias was located.

Figure 9-30 Photograph showing outcrop.

- **Tres Parroquias Adit:** A small adit is located where a structure can be seen trending N50°W, and dipping 80° to the N, with a width of 0.40cm. This could correspond to the Tepetateras vein, however, was not accessible due to lack of ventilation. Mapping activities were conducted at the southern end.


Figures 9-31 9-32 & 9-33 Tres Parroquias Adit.

### 9.2.5 La Cuesta North Area

La Cuesta North hosts the La Cuesta vein where old workings are known to exist; these are known as Lupe, Granjerilla, Virginia and Cabrera Mines.

- **Lupe Mine:** Possibly the main historic mine covering the projection of the La Cuesta vein, however was not accessible.

Figure 9-34 Lupe Mine Access.

- **Granjerilla Mine:** Not accessible.
- **Virginia Mine:** Evidenced by a sunken and collapsed zone, with development of approximately 25m depth, on the projection of the La Cuesta vein.

Figure 9-35 Evidence in the Virginia mine yard.

- **Cabrera Mine:** Old sunken workings with small development approximately 7 m in length with a vein trending N50°W with a dip of 72° to the NE is observed. Towards the southern end of the Cabrera mine, another small buried mine working is located on a structure trending N50°W with a dip of 76° to the NE.

Figures 9-36 & 9-37 Sunken zone with small mine workings at north of the Cabrera mine (left); and Buried adit at south of the Cabrera mine.

### 9.2.6 La Cuesta South Area

Exploration activities carried out in the La Cuesta South area included prospecting of the La Cuesta and Santa Teresa vein projections. Continuiry was inferred towards the southeast for approximately 250 m and 170 m respectively.

A small NW trending historic mine working is located in an area of strong argillic alteration along trend of the Santa Teresa vein.

Figures 9-38, 9-39 & 9-40 Images of structural features on projections of the La Cuesta and Santa Teresa veins.

Figures 9-41 & 9-42 Images of structural features on projections of the La Cuesta and Santa Teresa veins.

In the southern part of the La Cuesta vein there are 3 main mine workings: El Cuervo Adit, San Ramón Mine and San Ramon II Mine.

- **El Cuervo Adit:** The adit was visited in order to review the possible interception of E-W trend structures, which could correspond to the San Ramón mine system including the Santa Teresa vein. Mapping was carried and numerous brecciated structures were identified that could correspond to known veins in the area.


Figures 9-43, 9-44 & 9-45 El Cuervo Adit.

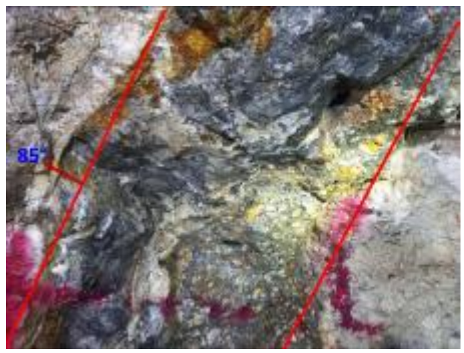
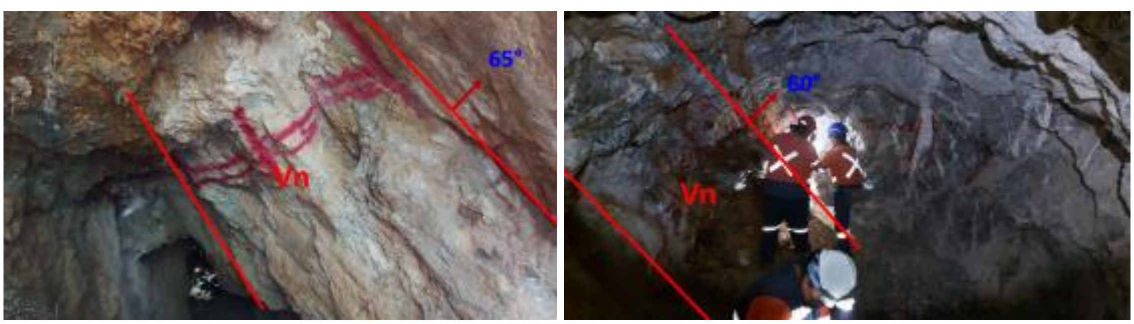



Figure 9-46 El Cuervo Adit.

- **San Ramon Adit:** This adit is approximately 60 m long and developed on an E-W trending structure with an average dip of 60° to the SW, with an average width of 1.80m. Sampling of waste dumps returned minor silver values.




Figures 9-47 & 9-48 San Ramon Adit.

- **San Ramon II Adit:** Sampling in surface outcrops and underground returned anomalous values of silver.


Figures 9-49, 9-50 & 9-51 San Ramon II Adit.

- **Adit:** This adit is in the southeast portion of the San Ramón mines. A structure trending N30°W, with an approximate width of 40 to 50 cm is observed with dips that vary between 50° to 70° to the SW. This adit was developed on a vein trending N20-30°W that has an average width of 50cm. There is evidence of small scale production and possibly corresponds to the extension of the Santa Teresa vein, although no clear sign of the structure was observed.

Figures 9-52 & 9-53 Access to Adit.

Figure 9-54 Access to Adit.



Figures 9-55, 9-56 & 9-57 Photographs showing the Adit.

### 9.2.7 Margaritas Area

Two adits are located on the Margaritas vein area, named San Roberto and Socavon II; in addition, the La Vaca mine is located towards the NW projection of the structure. Exploration was focused on the projection of the Periquitas vein.



Figures 9-58, 9-59 & 9-60 Visit to the San Roberto and Socavon II Adits.

- **San Roberto Adit:** Development of approximately 170 m along a structure trending N80°W, dipping 65° to the SW was observed. Approximately 33m into the adit, another structure, possibly the Reyes vein was mapped trending N50°W, dip of 55° to the SW.


Figure 9-61 San Roberto Adit.

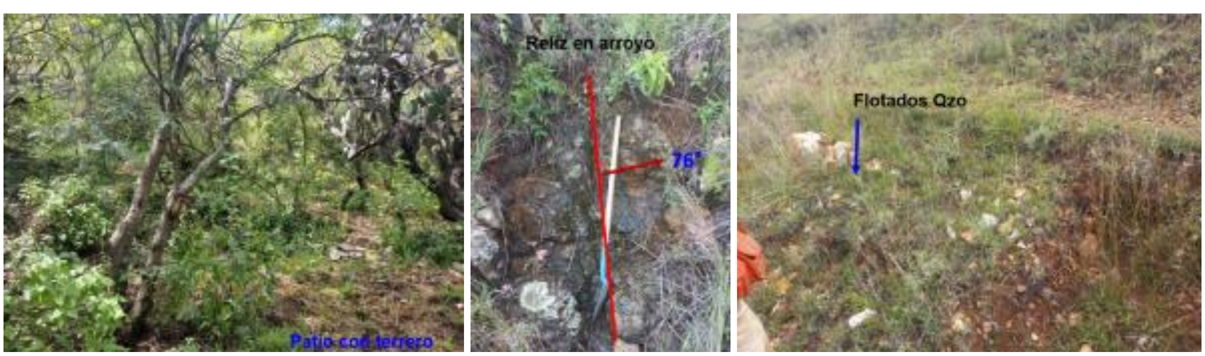
- **Socavon II Adit:** This adit is located approximately 20 m from the San Roberto adit and is accessible for 70m. Development trends N80°W, and dips range between 60-65° with thicknesses between 1.20 to 1.50m.

Figure 9-62 Socavon II Adit.

- **La Vaca Adit:** This 1.20 m adit was discovered while mapping the NW end of the Margaritas vein projection. Several N-S structures corresponding to the Laura vein were observed.


Figures 9-63 9-64 & 9-65 La Vaca Adit.

- **Periquitas vein:** Located at the West end of the San Roberto Adit, the Periquitas vein is marked by old dumps indicate possible buried mine workings. Towards the north lies an area of abundant quartz float.




Figures 9-66 9-67 & 9-68 Evidences in projection of the Periquitas vein.

### 9.2.8 Golondrinas Area

Geological mapping was carried out in the Golondrinas area which containsthe El Sauz vein. Several buried mine workings were noted in the area.

Figures 9-69 9-70 & 9-71 Outcrops over the projection of El Sauz vein.

Figures 9-72 & 9-73 Inclined mine working.

### 9.2.9 Maru-Gina Area

Geological mapping in the areas between the Gina and Maru veins identified the Jesus de Nazareno Adit.

- **Jesus de Nazareno Adit:** This adit has an approximate length of 50 m and is developed on structures with a trend N20-35°W and dips towards the SW. The narrow structures are interpreted to be part of the Maru vein system.

Figures 9-74 9-75 & 9-76 Jesus de Nazareno Adit.


Figures 9-77 9-78 & 9-79 Jesus de Nazareno Adit.

- **Adits:** Historic records of mine workings show development along a structure between the Gina and Maru veins, with a trend of N70°W and diping 70 degreed to the SW.



Figures 9-80 9-81 & 9-82 Photographs showing Adits.


Figures 9-83 & 9-84 Photographs showing Adits.

- **Bola Blanca Adit:** This adit has an approximate length of 37m and trends N50°W. This development contains narrow veinlets trending N20°E with a dip of 70° to the NW. A short, 18 m cross-cut on a N25°W trend structure with a dip of 55° to the SW, with an average width of 50 cm corresponds to the Gina vein.


Figure 9-85 Bola Blanca Adit.


Figures 9-86, 9-87, & 9-88 Development on N25°W trend (Gina vein).

# 10. DRILLING

Diamond drilling at the Bolañitos Project is conducted under two general modes of operation: one by the exploration staff (surface exploration drilling) and the other by the mine staff (production and underground exploration drilling). Production drilling is predominantly concerned with definition and extension of the known mineralized zones in order to guide development and mining. Exploration drilling is conducted further from the active mining area with the goal of expanding the resource base. Drilling results from both programs were used in the mineral resource and mineral reserve estimates presented in this report. To date, all drilling completed at the Bolañitos Project has been diamond core.

## 10.1 Drilling Procedures

Surface drillholes are generally oriented to intersect the veins as close to perpendicular as possible. The drillholes are typically drilled from the hanging wall, perpendicular to, and passing through the target structure into the footwall, and no drilling is designed for intercepts with angles less than about 30° to the target. Drillholes extend an average of 50 m beyond the target zone.

Underground drillholes are typically drilled from the hanging wall, and are ideally drilled perpendicular to structures, but oblique intersection is required in some instances due to limitations of the drill station. Underground positive angled holes (up holes) are generally drilled from the footwall using the same criteria. All holes are designed to pass through the target and into the hanging or footwalls. Both surface and underground drillholes are typically HQ to NQ in size.

On the drill site, the drill set-up is surveyed for azimuth, inclination and collar coordinates, with the drilling subject to daily scrutiny and coordination by EDR geologists. Since 2010, surface holes are surveyed using a Reflex multi-shot down-hole survey instrument normally at 50 m intervals from the bottom of the hole back up to the collar. At underground drill stations, azimuth orientation lines are surveyed in prior to drilling. Inclination of underground holes is collected using the Reflex EX-Shot® survey device prior to starting drilling.

The survey data obtained from the drillholes are transferred to databases in Vulcan® and AutoCAD®, and are corrected for local magnetic declination, as necessary. Information for each drillhole is stored in separate folders.

Drill core is collected daily and is transported to the core logging facility under EDR supervision. The core storage facilities at Bolañitos are well protected by high level security fences, and are under 24-hour surveillance by security personnel to minimize any possibility of tampering with the dill cores.

When assay results are received from the laboratory, they are merged into an Excel® spreadsheet for importation and interpretation in Vulcan and AutoCAD® software. The starting and ending point of each vein and/or vein/vein breccia intercept is determined from a combination of geology notes in the logs and assay results. Using approximate vein and drillhole orientation information a horizontal width is calculated for the intercept to be used as part of a Vertical Longitudinal Projection ("VLP").

The center point of the intercept, horizontal width, and gold and silver assay values are plotted on VLPs of each vein. These are used to guide further drilling, interpret mineralization shoots, and as the basis of polygonal resource estimation.

## 10.2 EDR Core Logging Procedures

As the core is received at the core facility, geotechnical data is logged manually on paper sheets and entered into Excel®. The core is then manually logged for geological data and marked for sampling. Geological data and sample information are entered directly into Excel® spreadsheets.

## 10.3 EDR Drilling Programs and Results (2007 to 2020)

Since acquisition of the Bolañitos Project in 2007, and prior to the 2021 exploration campaign, EDR had completed 751 diamond drill holes totaling 214,681 m (Table 10-1). Holes were drilled in both surface and underground drill stations, and 54,494 samples were collected and submitted for assay.

**Table 10-1 Drilling Summary at Bolañitos Project (as of December, 2020)**

| Project Area | Number of Holes | Total Metres | Number of Samples Taken |
|---|---|---|---|
| Cebada | 34 | 12,598 | 2,852 |
| Bolañitos System | 152 | 37,718 | 11,290 |
| Lucero System | 160 | 44,288 | 10,561 |
| La Joya/Lana | 85 | 26,977 | 5,606 |
| Belen | 55 | 14,544 | 3,719 |
| La Luz System | 178 | 53,299 | 13,365 |
| Bolañitos South (inc. Golondrinas) | 75 | 21,679 | 6,221 |
| Siglo XX | 12 | 3,577 | 880 |
| **Total** | **751** | **214,681** | **54,494** |

EDR's drilling exploration programs through 2016 are well described in previous technical reports (HRC 2015, 2016; Munroe 2013, 2014; Micon 2008, 2009, 2010, 2011, 2012; SRK 2007). To provide continuity, a brief description of the 2017, 2018 and 2019 exploration programs (which are not included in previous technical reports) is provided in the following paragraphs.

In 2017, surface and underground drilling carried out in the Bolañitos Project. Underground drilling focused on the La Luz (San Vicente area, between the elevations 1,900 to 2,150 masl) and Plateros (below level 2169) veins, totaling 3,845m in 16 drill holes and 1,214 samples collected. Surface drilling carried out in the Bolañitos South (to test the San Cayetano vein) and Siglo XX areas, a total of 12 drill holes completed with 3,442 m and 866 samples submitted for analysis.

During 2018, EDR carried out both surface and underground drilling programs at the Bolañitos Project. Surface drilling mainly focused to test the Bolañitos vein in La Herradura area, in addition, drilling carried out in the San Miguel vein and two infill drill holes in the Belén area, a combined of 4,196 m drilled in 16 drill holes and 1,270 samples sent for analysis. The underground drilling program included 39 holes drilled in the

Plateros (below level 2169), Bolañitos (Santa María, Bolañitos and San José veins), Lucero (Lucero and Cecilia veins) and La Luz (Refugio and Asunción areas), totaling 7,045 m and 2,457 samples submitted for analysis.

In 2019, surface and underground drilling carried out by EDR in the Bolañitos Project. Surface drilling conducted in the San Miguel area, to continue defining the San Miguel and San Ignacio (shallow part) veins, and in the Bolañitos North area, with the objective to determine the possible definition of a a mineralized body over the Melladito vein, between the San Pablo and San Ramón Shafts, totaling 3,855 m in 23 holes and 1,388 samples submitted. The underground drilling program included 4,815 m in 31 drill holes and 1,757 samples collected, the objective was to define the extension to depth of the Lana, Karina, Daniela, Bolañitos (south of Santa Rosa shaft, between levels 134 and 200 of the Bolañitos mine) and Plateros veins near the active mine workings, and to test the north projection of San Miguel vein in the Palomas adit area.

In 2020, EDR carried out surface and underground drilling programs in the Bolañitos North (Melladito and San Bernabé veins), Plateros, Sangre de Cristo and Bolañitos South (Ave María vein) areas at the Bolañitos Project and included a total of 10,458 m in 45 drill holes. Surface and underground diamond drilling was conducted using one DR Drilling México (DR Drilling) drill rig and one in-house VERSA Kmb-4 drill rig. DR Drilling is a contract drilling company and is independent of EDR.

## 10.4 EDR Drilling Programs and Results (2021)

Surface drilling mainly focused on Bolañitos South along with an infill drilling program in the Belén area. In addition, a few holes were drilled in the shallow part of Melladito at Bolañitos North.

Underground drilling tested the Bolañitos vein near current development and the Plateros vein at depth.

Table 10-2 sumarizes the drilling activities carried out by EDR in the Bolañitos Project. These programs included a total of 15,380.20m in 72 drill holes.

By the middle of June 2021, 1,875 samples were sent to SGS de México Laboratory (preparation and analysis) located in Durango, México. An additional 1,788 samples were submitted to ALS Laboratories for preparation in Zacatecas, Mexcico, which were then shipped for analysis in Vancouver, Canada

**Table 10-2 Bolañitos Project Exploration Drilling Activities in 2021**

| Project Area | Number of Holes | Total Metres | Number of Samples Taken |
|---|---|---|---|
| Melladito | 6 | 933.30 | 318 |
| Bolañitos-San Miguel | 3 | 408.90 | 112 |
| Plateros | 11 | 1,871.90 | 539 |
| Belén | 13 | 3,073.60 | 592 |
| Lourdes | 4 | 1,105.60 | 273 |
| Cabrera Carrica | 2 | 510.20 | 116 |
| Tepetateras-Lulú | 27 | 5,742.70 | 1,340 |
| La Cuesta North | 3 | 915.00 | 169 |
| La Cuesta South | 1 | 216.00 | 67 |
| Margaritas | 2 | 603.00 | 137 |

| | | | |
|---|---|---|---|
| **Total** | **72** | **15,380.20** | **3,663** |

Underground diamond drilling utilized one DR Drilling México (DR Drilling) drill rig, while surface drilling used an EDR owned Versa Kmb-4 drill rig and an additional drill rig supplied by Versa Perforaciones S.A. de C.V. (Versa).

### 10.4.1 Bolañitos North Diamond Drilling Program

Surface and underground drilling focused on the Bolañitos North area, with the objective to define economical mineralization within the Melladito and Bolañitos veins.

The program included a total of 1,342.20 m from 9 holes and with 430 samples collected and submitted for analysis. Details of the holes drilled in the Bolañitos North area are shown in Tables 10-3 & 10-4.

Figures 10-1 and 10-2 show photographs of the in-house drill rig placed in surface pad to test the Melladito vein; and DR Drilling rig placed in drill station to test the Bolañitos vein.

**Table 10-3 2022 Drilling Summary, Melladito**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **BN-66** | 215 º | -47 º | HQ-NQ | 113.50 | 10/01/2021 | 16/01/2021 |
| **BN-67** | 212 º | -43 º | HQ-NQ | 135.00 | 17/01/2021 | 22/01/2021 |
| **BN-68** | 244 º | -55 º | HQ-NQ | 234.80 | 24/01/2021 | 31/01/2021 |
| **BN-69** | 320 º | -45 º | HQ-NQ | 119.50 | 01/02/2021 | 06/02/2021 |
| **BN-70** | 315 º | -63 º | HQ-NQ | 132.90 | 07/02/2021 | 09/02/2021 |
| **BN-71** | 264 º | -66 º | HQ-NQ | 197.60 | 13/02/2021 | 16/02/2021 |
| **Total** | | | | **933.30** | | |

**Table 10-4 2022 Drilling Summary, San Bernabe**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **BNU-01** | 244 º | -21 º | NQ | 110.00 | 20/04/2021 | 24/04/2021 |
| **BNU-02** | 216 º | -50 º | NQ | 154.50 | 24/04/2021 | 29/04/2021 |
| **BNU-03** | 273 º | -67 º | NQ | 144.40 | 29/04/2021 | 02/05/2021 |
| **Total** | | | | **408.90** | | |

**Figures 10-1 & 10-2 DR Drilling drill rig in pad for drill hole BN-71 (Melladito) and in-house drill rig in pad for drill hole BN-02 (Bolanitos)**

At Melladito , the first two holes drilled targeted an area between the San Pablo and Santa Rosa Shafts, between the Levels 42 and 134. Four other drill holes targeted the higher elevations of the San Ramon shaft (between level 115 and Mina Grande adit). Some drill holes were successful in intersecting the Bolañitos and/or the San Ignacio veins.

Overall, results were positive with assays returning 53 gpt Ag & 2.16 gpt Au over 1.0m true width (tw) for Melladito vein in hole BN-66; 30 gpt Ag & 5.56 gpt Au over 1.01m tw for Bolañitos vein in hole BN-67; 20 gpt Ag & 2.09 gpt Au over 1.21m tw for Bolañitos vein in hole BN-68; 168 gpt Ag & 0.27 gpt Au over 1.24m tw for Melladito vein in hole BN-71; and 405 gpt Ag & 1.36 gpt Au over 2.46m tw for San Ignacio vein in hole BN-71.

Underground drilling focused on the Bolañitos vein extension between the elevations 2,050 and 2,100 masl, below the San Ramon shaft. Only BNU-01 contained significant values returning 12 gpt Ag & 5.86 gpt Au over 1.46m tw, while two other holes contained no significant values.

Drilling results are summarized in Tables 10-5 and 10-6; and the Melladito vein intercepts are shown on the longitudinal section in Figure 10-3.

Figures 10-4 & 10-5 depict typical cross-section showing some of the holes drilled to test the Melladito and Bolañitos veins in the Bolañitos North area.

**Table 10-5 2021 Drilling Results, Melladito**

| Drill Hole ID | Structure | Mineralized Interval | | | | Assay Results | |
|---|---|---|---|---|---|---|---|
| | | From (m) | To (m) | Core Length (m) | True Width (m) | Silver (g/t) | Gold (g/t) |
| **BN-66** | Hw Mell 1 Vein | 55.00 | 57.45 | 2.45 | 1.56 | 123 | 0.38 |
| | **Hw Mell 1 Composite** | **55.00** | **56.80** | **1.80** | **1.14** | **147** | **0.36** |
| | Including | 55.00 | 55.30 | 0.30 | 0.19 | 733 | 0.62 |
| | Melladito Vein | 64.00 | 76.80 | 12.80 | 7.52 | 29 | 1.02 |
| | **Melladito Composite** | **74.50** | **76.20** | **1.70** | **1.00** | **53** | **2.16** |
| | Including | 74.50 | 75.35 | 0.85 | 0.50 | 84 | 2.31 |
| **BN-67** | Old Working (Melladito) | 62.50 | 64.60 | 2.10 | 1.19 | Old Working | |
| | Bolañitos Vein | 85.10 | 85.50 | 0.40 | 0.17 | 164 | 32.95 |
| | **Bolañitos Composite** | **84.10** | **86.50** | **2.40** | **1.01** | **30** | **5.56** |
| | Including | 85.10 | 85.50 | 0.40 | 0.17 | 164 | 32.95 |
| **BN-68** | Old Working (Melladito?) | 53.05 | 54.30 | 1.25 | 1.00 | Old Working | |
| | Muck (Melladito?) | 54.30 | 59.90 | 5.60 | 4.47 | 169 | 2.53 |
| | **Muck Composite** | **54.30** | **59.45** | **5.15** | **4.11** | **176** | **2.74** |
| | Including | 56.80 | 58.30 | 1.50 | 1.20 | 199 | 6.34 |
| | Bolañitos Vein | 161.40 | 162.00 | 0.60 | 0.45 | 19 | 2.77 |
| | **Bolañitos Composite** | **161.40** | **163.00** | **1.60** | **1.21** | **20** | **2.09** |
| | Including | 161.40 | 162.00 | 0.60 | 0.45 | 19 | 2.77 |
| **BN-69** | Melladito Vein | 51.20 | 55.05 | 3.85 | 2.77 | 42 | 0.33 |
| | **Melladito Composite** | **53.65** | **55.05** | **1.40** | **1.01** | **98** | **0.52** |
| | Including | 53.65 | 54.10 | 0.45 | 0.32 | 182 | 0.59 |
| **BN-71** | Melladito Vein | 80.25 | 87.15 | 6.90 | 4.88 | 81 | 0.24 |
| | **Melladito Composite** | **80.25** | **82.00** | **1.75** | **1.24** | **168** | **0.27** |
| | Including | 81.00 | 81.35 | 0.35 | 0.25 | 468 | 0.28 |
| | **San Ignacio Vein** | **141.55** | **144.20** | **2.65** | **2.46** | **405** | **1.36** |
| | Including | 142.00 | 143.10 | 1.10 | 1.02 | 630 | 1.43 |

**Table 10-6 2022 Drilling Results, Bolanitos**

| Drill Hole ID | Structure | Mineralized Interval | | | | Assay Results | |
|---|---|---|---|---|---|---|---|
| | | From (m) | To (m) | Core Length (m) | True Width (m) | Silver (g/t) | Gold (g/t) |
| BNU-01 | Bolañitos Vein | 64.35 | 66.70 | 2.35 | 2.08 | 11 | 2.85 |
| | **Bolañitos Composite** | **66.10** | **67.75** | **1.65** | **1.46** | **12** | **5.86** |
| | Including | 66.10 | 66.70 | 0.60 | 0.53 | 19 | 6.90 |

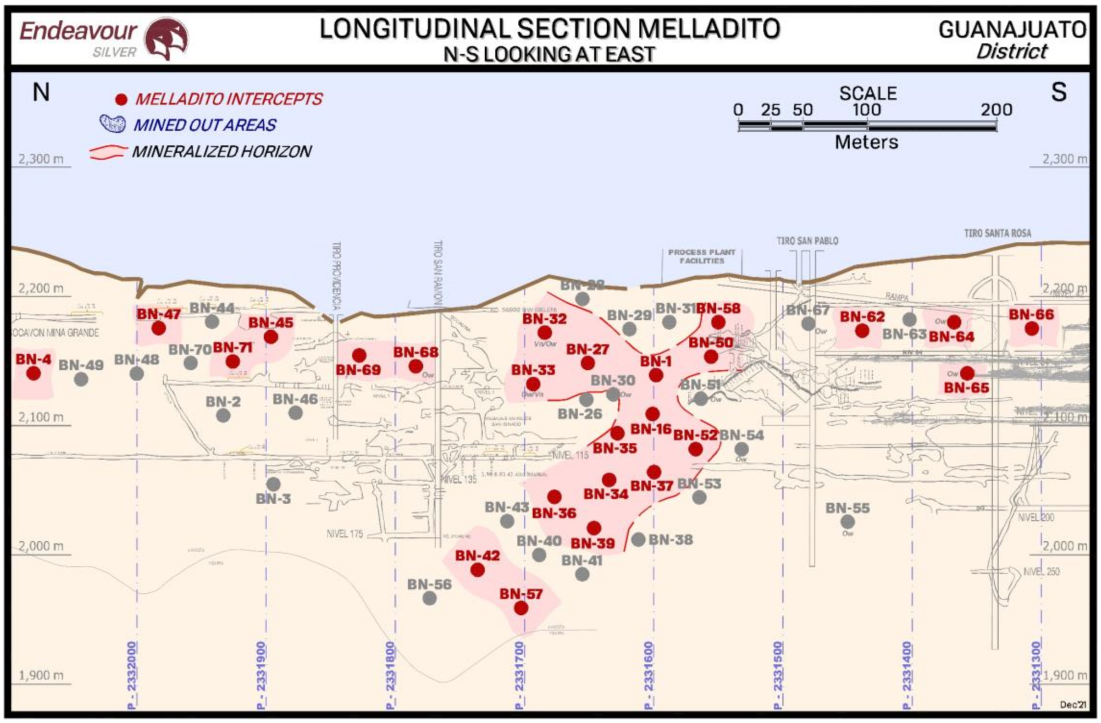



**Figure 10-3 Longitudinal Section (looking E) showing intersection points on Melladito vein.**

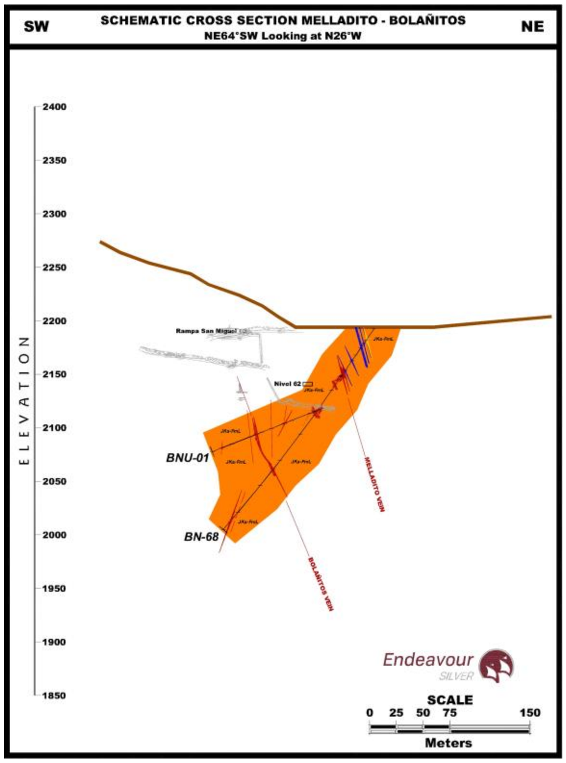



**Figure 10-4 Schematic Cross Section, Melladito-Bolañitos**

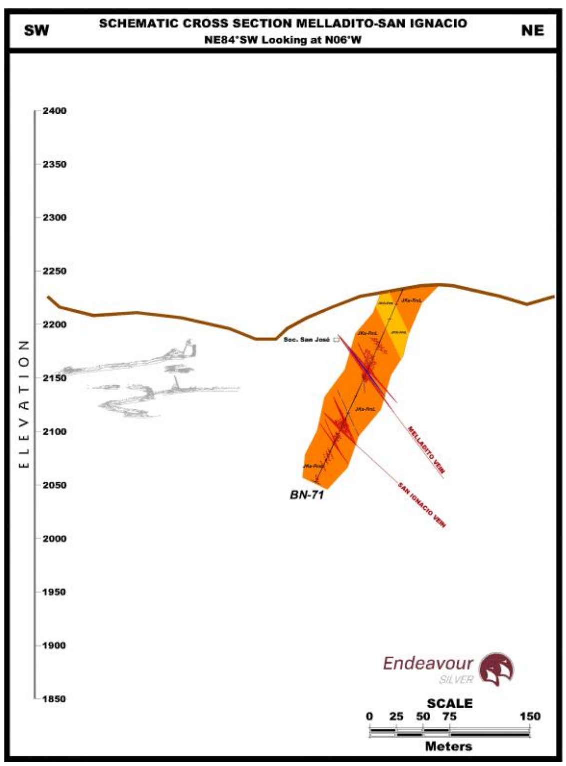



**Figure 10-5 Schematic Cross Section, Melladito- San Ignacio.**

### 10.4.0 Plateros Diamond Drilling Program

Underground drilling in the Plateros area utilized one DR Drilling drill rig (Figure 10-6). The program included a total of 1,871.90m in 11 drill holes and 539 samples submitted for analysis.

Table 10-7 show the details of the holes drilled in the Plateros area.

**Table 10-7 2021 Underground Drilling Summary, Plateros**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **PLU-33** | 115 º | -14 º | NQ | 136.40 | 09/01/2021 | 16/01/2021 |
| **PLU-34** | 108 º | -28 º | NQ | 239.00 | 21/01/2021 | 29/01/2021 |
| **PLU-35** | 123 º | -10 º | NQ | 171.50 | 29/01/2021 | 02/02/2021 |
| **PLU-36** | 94 º | -34 º | NQ | 200.00 | 04/02/2021 | 12/02/2021 |
| **PLU-37** | 134 º | -31 º | NQ | 139.50 | 13/02/2021 | 17/02/2021 |
| **PLU-38** | 8 º | -39 º | NQ | 105.00 | 02/03/2021 | 05/03/2021 |
| **PLU-39** | 240 º | -10 º | NQ | 281.00 | 06/03/2021 | 17/03/2021 |
| **PLU-40** | 101 º | -67 º | NQ | 145.50 | 18/03/2021 | 23/03/2021 |
| **PLU-41** | 20 º | -49 º | NQ | 150.00 | 24/03/2021 | 26/03/2021 |
| **PLU-42** | 54 º | -67 º | NQ | 131.00 | 08/04/2021 | 13/04/2021 |
| **PLU-43** | 123 º | -51 º | NQ | 173.00 | 14/04/2021 | 17/04/2021 |
| **Total** | | | | **1,871.90** | | |

**Figure 10-6 DR Drilling drill rig in station for drill hole PLU-39 (Plateros).**

The objective of the drilling program was to define the extent of the Plateros and Sangre de Cristo veins to the south and below the current mine workings, between the elevations 1,900 to 2,100 masl. Two drill stations were established in ramp 2075, level 2030.

Several structures were intercepted along the holes, but results were mixed with only one intercept over the Plateros PL2 vein with values of interest (8 gpt Ag & 2.99 gpt Au over 1.99m tw in hole PLU-38).

The Plateros vein is shown in the longitudinal section in Figure 10-7, as well as the typical cross section in Figure 10-8.

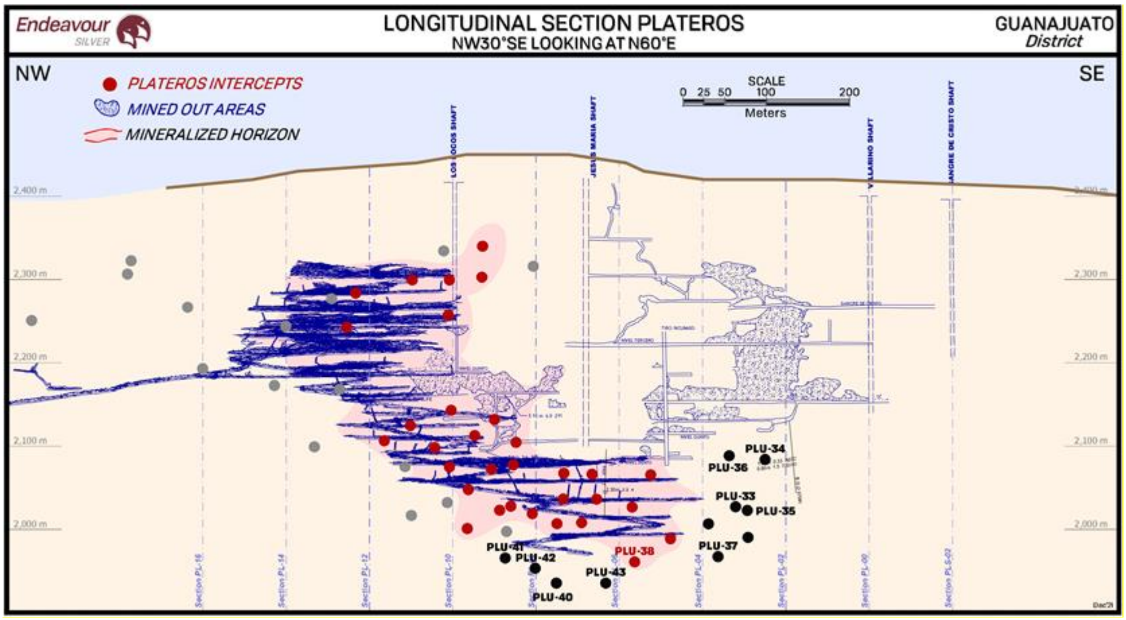



**Figure 10-7 Longitudinal Section (looking NE) showing intersection points on Plateros vein.**

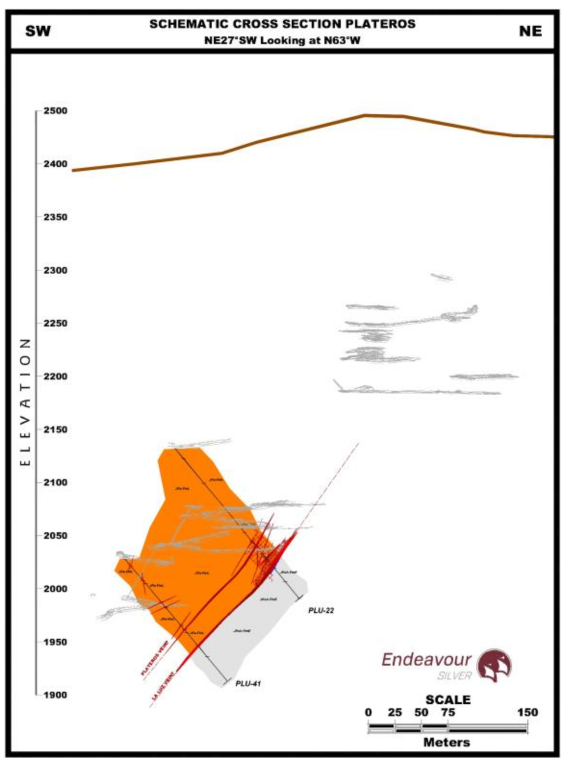



**Figure 10-8 Schematic Cross Section, Plateros.**

### 10.4.0 Belen Diamond Drilling Program

Infill surface drilling was focused on the hangingwall (HW) Belen vein.

The drilling program included 13 drill holes with 3,073.60 meters completed and 592 samples collected and sent for assays to the laboratory using one in-house drill rig in operation (Figure 10-9).

Details of the holes drilled in the Belen area are in Table 10-8.

**Table 10-8 2021 Surface Drilling Summary, Belen**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **BL2.5S-1** | 67 º | -55 º | HQ-NQ | 239.60 | 19/02/2021 | 26/02/2021 |
| **BL1.5S-4** | 23 º | -67 º | HQ-NQ | 233.40 | 27/02/2021 | 06/03/2021 |
| **BL2.5S-2** | 77 º | -78 º | HQ-NQ | 260.40 | 07/03/2021 | 14/03/2021 |
| **BL1.5S-5** | 348 º | -81 º | HQ-NQ | 280.00 | 21/03/2021 | 23/03/2021 |
| **BL0.5-1** | 353 º | -63 º | HQ-NQ | 241.00 | 24/03/2021 | 30/03/2021 |
| **BL0.5-2** | 337 º | -70 º | HQ-NQ | 255.90 | 31/03/2021 | 06/04/2021 |
| **BL0.5S-1** | 25 º | -68 º | HQ-NQ | 223.00 | 14/04/2021 | 22/04/2021 |
| **BL2.5S-3** | 11 º | -51 º | HQ-NQ | 189.90 | 07/04/2021 | 12/04/2021 |
| **BL4.5S-1** | 99 º | -50 º | HQ | 101.40 | 13/04/2021 | 16/04/2021 |
| **BL1.5-1** | 354 º | -61 º | HQ-NQ | 239.00 | 17/07/2021 | 24/07/2021 |
| **BL1.5-2** | 335 º | -69 º | HQ-NQ | 258.90 | 25/07/2021 | 08/08/2021 |
| **BL1S-6** | 68 º | -67 º | HQ-NQ | 268.00 | 09/08/2021 | 16/08/2021 |
| **BL0.5-3** | 342 º | -78 º | HQ-NQ | 283.10 | 17/08/2021 | 23/08/2021 |
| **Total** | | | | **3,073.60** | | |

**Figure 10-9 In-house drill rig in pad for drill hole BL1.5S-5 (Belen)**

The program was carried out and was successful in defining the extents of the HW Belen mineralized body over an area of 240m long by 200m vertical with 40 m drill spacing. Positive results were returned in majority of the drill holes.

Table 10-9 shows the summary of the results of the surface drilling carried out in the Belen area. Figures 10-10 and 10-11 show the outcome of the HW Belen and Belen veins in the longitudinal sections, and a typical cross section is shown in Figure 10-12.

**Table 10-9 2021 Surface Drilling Results, Belen**

| Drill Hole ID | Structure | Mineralized Interval | | | | Assay Results | |
|---|---|---|---|---|---|---|---|
| | | From (m) | To (m) | Core Length (m) | True Width (m) | Silver (g/t) | Gold (g/t) |
| **BL0.5-1** | **Hw Belén Vein** | **179.70** | **181.00** | **1.30** | **0.92** | **130** | **1.30** |
| | Including | 180.00 | 180.25 | 0.25 | 0.18 | 371 | 1.83 |
| **BL0.5-2** | Hw Belén Vein | 217.10 | 217.50 | 0.40 | 0.23 | 111 | 25.55 |
| | **Hw Belén Composite** | **217.10** | **219.00** | **1.90** | **1.09** | **25** | **5.40** |
| | Including | 217.10 | 217.50 | 0.40 | 0.23 | 111 | 25.55 |
| **BL0.5S-1** | **Hw Belén Vein** | **97.00** | **98.25** | **1.25** | **1.06** | **73** | **2.49** |
| | Including | 97.00 | 97.35 | 0.35 | 0.30 | 160 | 6.62 |
| **BL1S-6** | Hw Belén Vein | 176.55 | 177.60 | 1.05 | 0.86 | 18 | 1.09 |
| | **Hw Belén Composite** | **176.25** | **177.60** | **1.35** | **1.11** | **20** | **1.16** |
| | Including | 176.55 | 176.95 | 0.40 | 0.33 | 28 | 2.12 |
| | Belén Vein | 236.15 | 239.55 | 3.40 | 2.62 | 24 | 0.96 |
| | **Belén Composite** | **236.15** | **238.25** | **2.10** | **1.62** | **33** | **1.39** |
| | Including | 236.15 | 236.55 | 0.40 | 0.31 | 113 | 4.11 |
| **BL1.5S-4** | Hw Belén Vein | 155.60 | 159.20 | 3.60 | 2.76 | 136 | 3.80 |
| | **Hw Belén Composite** | **156.15** | **159.20** | **3.05** | **2.34** | **148** | **4.43** |
| | Including | 158.60 | 158.85 | 0.25 | 0.19 | 129 | 13.22 |
| **BL1.5S-5** | **Hw Belén Vein** | **194.70** | **196.15** | **1.45** | **0.95** | **27** | **0.86** |
| | Including | 195.75 | 196.15 | 0.40 | 0.26 | 40 | 1.67 |
| | Belén Vein | 251.50 | 252.00 | 0.50 | 0.32 | 20 | 2.04 |
| | **Belén Composite** | **250.55** | **252.00** | **1.45** | **0.93** | **15** | **1.94** |
| | Including | 251.50 | 252.00 | 0.50 | 0.32 | 20 | 2.04 |
| **BL2.5S-1** | Hw Belén Vein | 139.30 | 140.50 | 1.20 | 1.16 | 171 | 4.86 |
| | **Hw Belén Composite** | **139.55** | **140.50** | **0.95** | **0.92** | **206** | **6.11** |
| | Including | 140.10 | 140.50 | 0.40 | 0.39 | 218 | 8.44 |
| **BL2.5S-3** | Hw Belén Vein | 104.30 | 109.50 | 5.20 | 4.31 | 111 | 2.50 |
| | **Hw Belén Composite** | **104.75** | **109.15** | **4.40** | **3.65** | **129** | **2.91** |
| | Including | 104.75 | 105.05 | 0.30 | 0.25 | 155 | 4.26 |

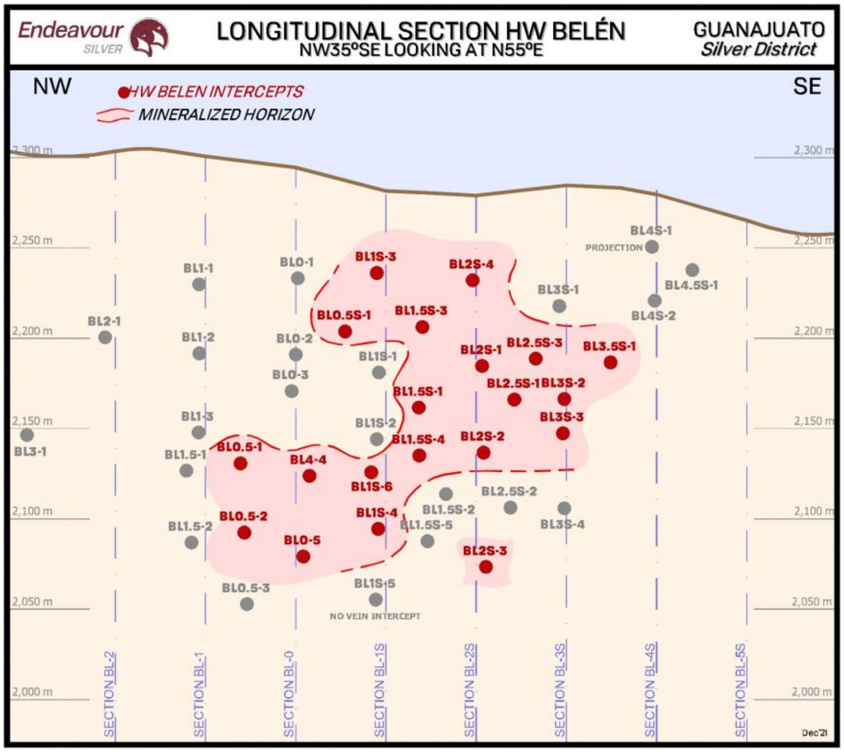



Figure 10-10 Longitudinal Section (looking NE) showing intersection points on Hw Belen vein.

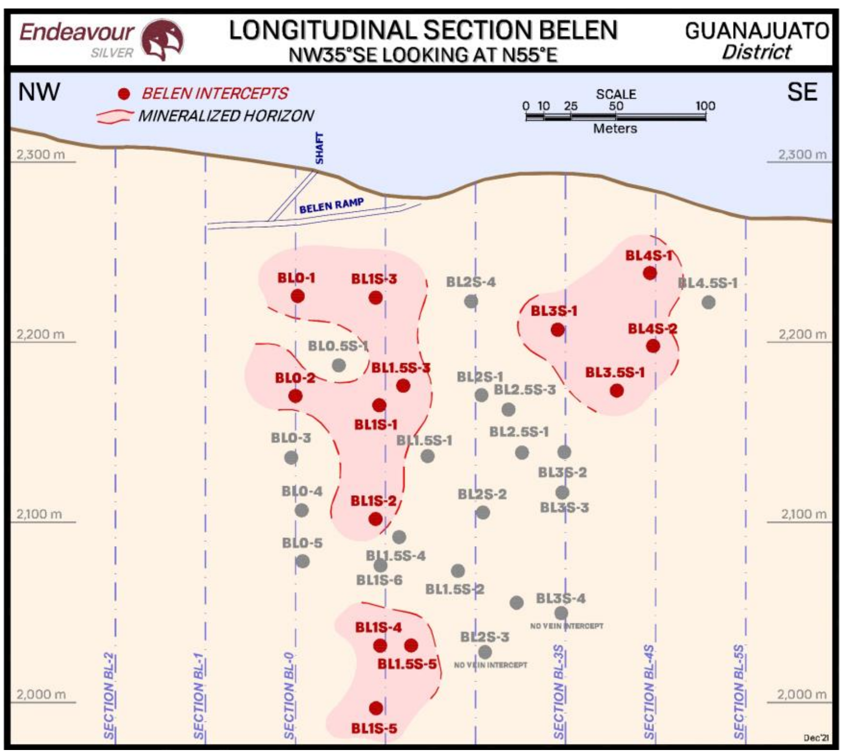



Figure 10-11 Longitudinal Section (looking NE) showing intersection points on Belen vein.

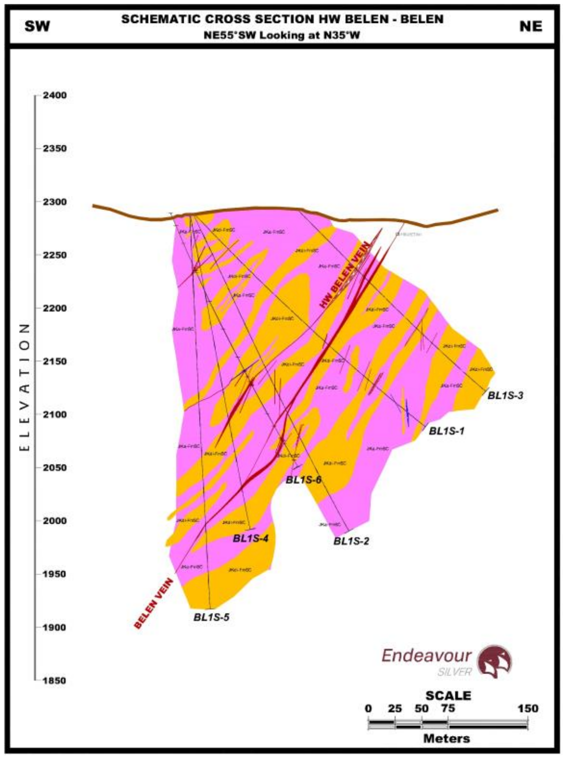



**Figure 10-12 Schematic Cross Section, Belen.**

### 10.4.0 Bolañitos South Diamond Drilling Program

Surface diamond drilling carried out in the Bolañitos South area focused within the El Puertecito claim, with the objective to test several structures in the areas of Lourdes, Cabrera Carrica, Tepetateras-Lulu, La Cuesta North, La Cuesta South and Margaritas.

A total of 9,092.50m drilled in 39 holes and 2,102 samples were collected and submitted for analysis using Endeavour's drill rig and one Versa drill rig (Figures 10-13 to 10-19).

Details of the holes drilled Bolañitos South area are shown in Tables 10-10 to 10-15

**Table 10-10 2021 Drilling Summary, Lourdes**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **LS-01** | 211 º | -64 º | HQ-NQ | 274.00 | 24/04/2021 | 01/05/2021 |
| **LS-02** | 231 º | -59 º | HQ-NQ | 288.60 | 01/05/2021 | 09/05/2021 |
| **LS-03** | 258 º | -64 º | HQ-NQ-BQ | 308.50 | 10/05/2021 | 18/05/2021 |
| **LS-04** | 182 º | -50 º | HQ-NQ | 234.50 | 19/05/2021 | 25/05/2021 |
| **Total** | | | | **1,105.60** | | |

**Table 10-11 2021 Drilling Summary, Cabrera Carrica**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| **BS-01** | 213 º | -59 º | HQ-NQ | 231.80 | 26/05/2021 | 31/05/2021 |
| **BS-02** | 245 º | -66 º | HQ-NQ | 278.40 | 01/06/2021 | 09/06/2021 |
| **Total** | | | | **510.20** | | |

**Table 10-2 2021 Drilling Summary, Tepetateras-Lulu**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **BS-03** | 82 º | -61 º | HQ-NQ | 125.50 | 11/06/2021 | 14/06/2021 |
| **BS-04** | 16 º | -47 º | HQ-NQ | 171.70 | 15/06/2021 | 19/06/2021 |
| **BS-05** | 123 º | -46 º | HQ-NQ | 193.90 | 20/06/2021 | 25/06/2021 |
| **BS-06** | 67 º | -44 º | HQ | 90.05 | 26/06/2021 | 28/06/2021 |
| **BS-07** | 247 º | -50 º | HQ-NQ | 135.50 | 29/06/2021 | 03/07/2021 |
| **BS-08** | 247 º | -67 º | HQ-NQ | 114.40 | 04/07/2021 | 08/07/2021 |
| **BS-09** | 247 º | -80 º | HQ-NQ | 225.30 | 08/07/2021 | 15/07/2021 |
| **BS-10** | 235 º | -72 º | HQ-NQ | 218.50 | 26/08/2021 | 31/08/2021 |
| **BS-11** | 294 º | -55 º | HQ-NQ | 304.10 | 01/09/2021 | 09/09/2021 |
| **BS-12** | 226 º | -63 º | HQ-NQ | 187.00 | 10/09/2021 | 14/09/2021 |
| **BS-13** | 211 º | -76 º | HQ-NQ | 265.20 | 15/09/2021 | 21/09/2021 |
| **BS-14** | 193 º | -57 º | HQ-NQ | 230.15 | 23/09/2021 | 27/09/2021 |
| **BS-15** | 208 º | -63 º | HQ-NQ | 213.90 | 28/09/2021 | 04/10/2021 |
| **BS-16** | 262 º | -66 º | HQ-NQ | 247.00 | 04/10/2021 | 11/10/2021 |
| **BS-17** | 240 º | -61 º | HQ-NQ | 145.00 | 12/10/2021 | 16/10/2021 |
| **BS-18** | 240 º | -72 º | HQ-NQ | 223.10 | 16/10/2021 | 21/10/2021 |
| **BS-19** | 224 º | -51 º | HQ | 150.00 | 19/10/2021 | 21/10/2021 |
| **BS-20** | 275 º | -66 º | HQ-NQ | 215.20 | 21/10/2021 | 26/10/2021 |
| **BS-21** | 180 º | -60 º | HQ | 147.00 | 22/10/2021 | 26/10/2021 |
| **BS-22** | 228 º | -66 º | HQ | 255.00 | 26/10/2021 & 12/11/2021 | 28/10/2021 & 14/11/2021 |
| **BS-23** | 279 º | -77 º | HQ-NQ | 241.00 | 27/10/2021 | 31/10/2021 |
| **BS-24** | 260 º | -61 º | HQ | 231.00 | 30/10/2021 | 03/11/2021 |
| **BS-25** | 306 º | -70 º | HQ-NQ | 280.00 | 01/11/2021 | 07/11/2021 |
| **BS-26** | 265 º | -82 º | HQ | 351.00 | 05/11/2021 | 12/11/2021 |
| **BS-27** | 301 º | -83 º | HQ-NQ | 311.60 | 07/11/2021 | 15/11/2021 |
| **BS-28** | 200 º | -60 º | HQ | 198.00 | 14/11/2021 | 18/11/2021 |
| **BS-29** | 260 º | -44 º | HQ-NQ | 272.60 | 16/11/2021 | 27/11/2021 |
| **Total** | | | | **5,742.70** | | |

**Table 10-3 2021 Drilling Summary, La Cuesta North**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **BS-30** | 220 º | -45 º | HQ | 333.00 | 18/11/2021 | 26/11/2021 |
| **BS-31** | 220 º | -58 º | HQ | 303.00 | 27/11/2021 | 03/12/2021 |
| **BS-32** | 255 º | -45 º | HQ | 279.00 | 03/12/2021 | 08/12/2021 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Total | | | | 915.00 | | |

**Table 10-4 2021 Drilling Summary, La Cuesta South**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **BS-33** | 192 º | -45 º | HQ | 216.00 | 10/12/2021 | 14/12/2021 |
| **Total** | | | | **216.00** | | |

**Table 10-5 2021 Drilling Summary, Margaritas**

| HOLE | AZIMUTH | DIP | DIAMETER | TOTAL DEPTH (m) | START DATE | FINISH DATE |
|---|---|---|---|---|---|---|
| **MV-02** | 46 º | -23 º | HQ-NQ | 292.00 | 29/11/2021 | 07/12/2021 |
| **MV-03** | 20 º | -37 º | HQ-NQ | 311.00 | 07/12/2021 | 14/12/2021 |
| **Total** | | | | **603.00** | | |


**Figures 10-13 & 10-14 In-house drill rig in pads for drill holes LS-03 (Lourdes) and BS-01 (Cabrera Carrica).**


**Figures 10-15 & 10-16 In-house drill rig in pad for drill hole BS-05 (Tepetateras-Lulú) and Versa drill rig in pad for drill hole BS-19 (Tepetateras-Lulu).**


**Figures 10-17 & 10-18 Versa drill rig in pads for drill holes BS-31 (La Cuesta North) and BS-33 (La Cuesta South).**

**Figure 10-19 In-house drill rig in pads for drill hole MV-03 (Margaritas).**

In the ***Lourdes*** area, drilling focused on the Guadalupe de Arriba adit, to test the structure between elevations 2,100 and 2,200 masl. In addition, some drill holes in the Tepetateras-Lulu area, extended to the Lourdes projection to define the lateral and vertical extent between the elevations 2,000 and 2,250 masl. No positive results were returned.

Two drill holes were completed in the north part of the ***Cabrera Carrica*** Vein to confirm a historic drill intercept, but the main structure did not return significant results.

The majority of the drilling program was designed to test the lateral and vertical extent of the ***Tepetateras*** vein between the elevations 2,050 to 2,300 masl. Some drill holes were targeted to define the intercept between the Tepetateras vein and the Lulu vein and to determine the continuity. Both veins were historically mined between the First and Third levels of Lourdes.

Results at the Tepetateras vein defined a main mineralized body of 200 m long by 140 m deep, below the elevation 2,200 masl and proved the existence of a mined zone between the First and Third levels of Lourdes. The Lulu vein was intercepted and defined over an area 60 m by 150 m from intercepts in drill holes BS-03, BS-05, BS-18, BS-19 and BS-22.

At the end of 2021, three drill holes were completed in the northern part of La Cuesta vein (***La Cuesta North*** area), below the Cabrera mine. One drill hole was completed in the ***La Cuesta South*** area (no significant results). Positive results returned for drill holes BS-30 and BS-32, drilled in La Cuesta North area.

The ***Margaritas*** vein was tested between the elevations 2,250 to 2,300 masl, below the adit of San Roberto and Socavon II. No significant results returned.

Table 10-16 summarizes significant results of drill holes completed in the Bolañitos South area and Figures 10-20 to 10-21 show Tepetateras and La Cuesta North intercepts on the longitudinal sections.

Figures 10-22 to 10-28 depict typical cross-sections showing some of the holes drilled to test the Lourdes, Cabrera Carrica, Tepetateras-Lulu, La Cuesta North, La Cuesta South and Margaritas veins in the Bolañitos South area.

**Table 10-6 2021 Significant Drilling Summary, Bolañitos South**

| Drill Hole ID | Structure | Mineralized Interval | | | | Assay Results | |
|---|---|---|---|---|---|---|---|
| | | From (m) | To (m) | Core Length (m) | True Width (m) | Silver (g/t) | Gold (g/t) |
| BS-01 | **Hw Cabrera Carrica Vein** | **154.20** | **155.90** | **1.70** | **1.36** | **169** | **0.41** |
| | Including | 155.30 | 155.90 | 0.60 | 0.48 | 213 | 0.24 |
| | Cabrera Carrica Vein | 180.20 | 180.75 | **0.55** | 0.39 | 141 | 0.23 |
| | **Cabrera Carrica Composite** | **179.10** | **180.75** | **1.65** | **1.17** | **68** | **0.18** |
| | Including | 180.20 | 180.75 | 0.55 | 0.39 | 141 | 0.23 |
| BS-02 | **Hw Cabrera Carrica Vein** | **190.25** | **192.15** | **1.90** | **1.17** | **52** | **0.77** |
| | Including | 190.25 | 190.75 | 0.50 | 0.31 | 165 | 1.86 |
| BS-03 | Lulú Vein | 73.50 | 90.95 | 17.45 | 3.63 | 77 | 0.42 |
| | **Lulú Composite** | **74.30** | **78.90** | **4.60** | **0.96** | **241** | **1.26** |
| | Including | 74.30 | 74.85 | 0.55 | 0.11 | 789 | 2.94 |
| BS-04 | Tepetateras Vein | 136.55 | 144.10 | 7.55 | 2.27 | 126 | 5.98 |
| | **Tepetateras Composite** | **137.70** | **143.25** | **5.55** | **1.67** | **151** | **8.08** |
| | Including | 140.25 | 140.50 | 0.25 | 0.08 | 880 | 89.58 |
| BS-05 | Lulú Vein | 20.80 | 22.50 | 1.70 | 0.44 | 190 | 0.58 |
| | **Lulú Composite** | **20.80** | **24.40** | **3.60** | **0.93** | **104** | **0.28** |
| | Including | 22.00 | 22.50 | 0.50 | 0.13 | 386 | 1.46 |
| BS-09 | Tepetateras Vein | 178.10 | 186.80 | 8.70 | 2.90 | 62 | 2.90 |
| | **Tepetateras Composite** | **178.10** | **188.25** | **10.15** | **3.39** | **82** | **2.63** |
| | Including | 186.50 | 186.80 | 0.30 | 0.10 | 95 | 16.65 |
| BS-10 | Tepetateras Vein | 180.80 | 184.50 | 3.70 | 1.96 | 27 | 0.51 |
| | **Tepetateras Composite** | **181.45** | **183.25** | **1.80** | **0.95** | **43** | **1.01** |
| | Including | 182.70 | 183.25 | 0.55 | 0.29 | 116 | 2.34 |
| BS-14 | Tepetateras Vein | 181.40 | 187.00 | 5.60 | 2.93 | 35 | 0.47 |
| | **Tepetateras Composite** | **184.80** | **186.60** | **1.80** | **0.94** | **78** | **0.54** |
| | Including | 185.40 | 185.75 | 0.35 | 0.18 | 229 | 0.37 |
| BS-15 | Tepetateras Vein | 150.60 | 153.90 | 3.30 | 1.92 | 116 | 0.94 |
| | **Tepetateras Composite** | **151.50** | **153.90** | **2.40** | **1.39** | **119** | **1.22** |
| | Including | 153.40 | 153.90 | 0.50 | 0.29 | 238 | 3.52 |
| BS-18 | Lulú Vein | 203.60 | 204.20 | 0.60 | 0.39 | 228 | 0.68 |
| | **Lulú Composite** | **203.60** | **205.20** | **1.60** | **1.03** | **87** | **0.29** |
| | Including | 203.60 | 204.20 | 0.60 | 0.39 | 228 | 0.68 |
| BS-19 | **Tepetateras Vein** | **99.60** | **101.50** | **1.90** | **1.39** | **217** | **1.43** |
| | Including | 99.60 | 101.10 | 1.50 | 1.10 | 258 | 1.80 |

| Drill Hole ID | Structure | Mineralized Interval | | | | Assay Results | |
|---|---|---|---|---|---|---|---|
| | | From (m) | To (m) | Core Length (m) | True Width (m) | Silver (g/t) | Gold (g/t) |
| | Lulú Vein | 107.50 | 109.25 | 1.75 | 1.34 | 257 | 0.11 |
| | **Lulú Composite** | **107.50** | **108.85** | **1.35** | **1.03** | **327** | **0.14** |
| | Including | 107.80 | 108.85 | 1.05 | 0.80 | 331 | 0.15 |
| **BS-20** | **Tepetateras Vein** | **168.80** | **170.25** | **1.45** | **1.09** | **97** | **2.78** |
| | Including | 168.80 | 169.60 | 0.80 | 0.60 | 141 | 4.82 |
| **BS-22** | Lulú VeinZone | 140.20 | 143.70 | 3.50 | 2.15 | 68 | 1.86 |
| | **Lulú Composite** | **140.20** | **142.25** | **2.05** | **1.26** | **88** | **3.05** |
| | Including | 141.55 | 142.25 | 0.70 | 0.43 | 215 | 6.02 |
| **BS-23** | Tepetateras Vein | 202.60 | 205.70 | 3.10 | 1.78 | 24 | 2.30 |
| | **Tepetateras Composite** | **202.60** | **205.20** | **2.60** | **1.49** | **22** | **2.69** |
| | Including | 204.20 | 205.20 | 1.00 | 0.57 | 22 | 3.47 |
| **BS-24** | Tepetateras Vein | 141.00 | 143.60 | 2.60 | 1.71 | 99 | 0.91 |
| | **Tepetateras Composite** | **141.00** | **144.00** | **3.00** | **1.97** | **97** | **0.99** |
| | Including | 143.10 | 143.60 | 0.50 | 0.33 | 180 | 1.17 |
| **BS-27** | Tepetateras Vein | 254.90 | 264.25 | 9.35 | 3.50 | 5 | 2.83 |
| | **Tepetateras Composite** | **256.30** | **264.25** | **7.95** | **2.98** | **5** | **3.26** |
| | Including | 259.50 | 259.90 | 0.40 | 0.15 | 3 | 9.69 |
| **BS-28** | Lulú VeinZone | 105.40 | 107.80 | 2.40 | 1.92 | 128 | 0.20 |
| | **Lulú Composite** | **105.90** | **107.80** | **1.90** | **1.52** | **145** | **0.20** |
| | Including | 107.10 | 107.80 | 0.70 | 0.56 | 226 | 0.31 |
| **BS-29** | Tepetateras Vein | 112.10 | 112.75 | 0.65 | 0.57 | 51 | 3.43 |
| | **Tepetateras Composite** | **111.75** | **112.75** | **1.00** | **0.87** | **109** | **3.05** |
| | Including | 111.75 | 112.10 | 0.35 | 0.30 | 218 | 2.34 |
| **BS-30** | La Cuesta Vein | 201.05 | 201.80 | 0.75 | 0.70 | 93 | 0.77 |
| | **La Cuesta Composite** | **200.70** | **201.80** | **1.10** | **1.03** | **64** | **0.55** |
| | Including | 201.05 | 201.50 | 0.45 | 0.42 | 119 | 0.55 |
| **BS-32** | **La Cuesta Vein** | **201.35** | **204.00** | **2.65** | **2.22** | **213** | **1.07** |
| | Including | 201.35 | 202.10 | 0.75 | 0.63 | 510 | 0.65 |

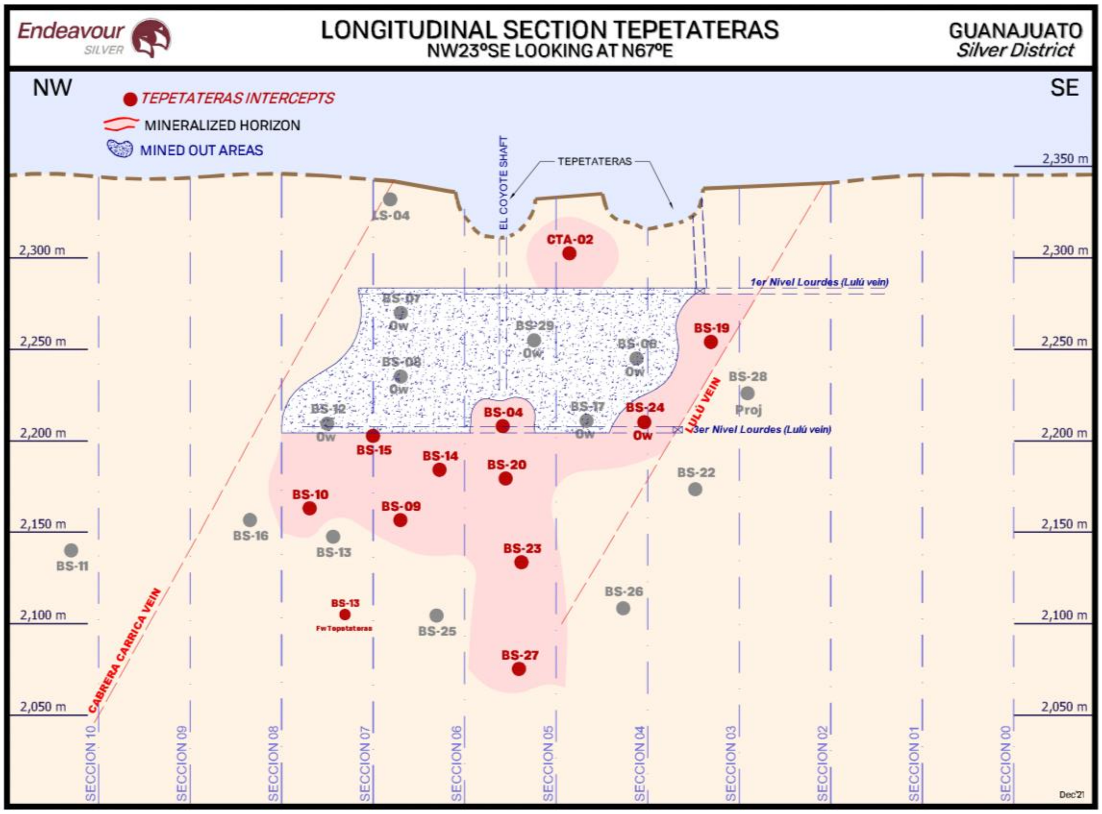



**Figure 10-20 Longitudinal Section (looking NE) showing intersection points on Tepetateras vein.**

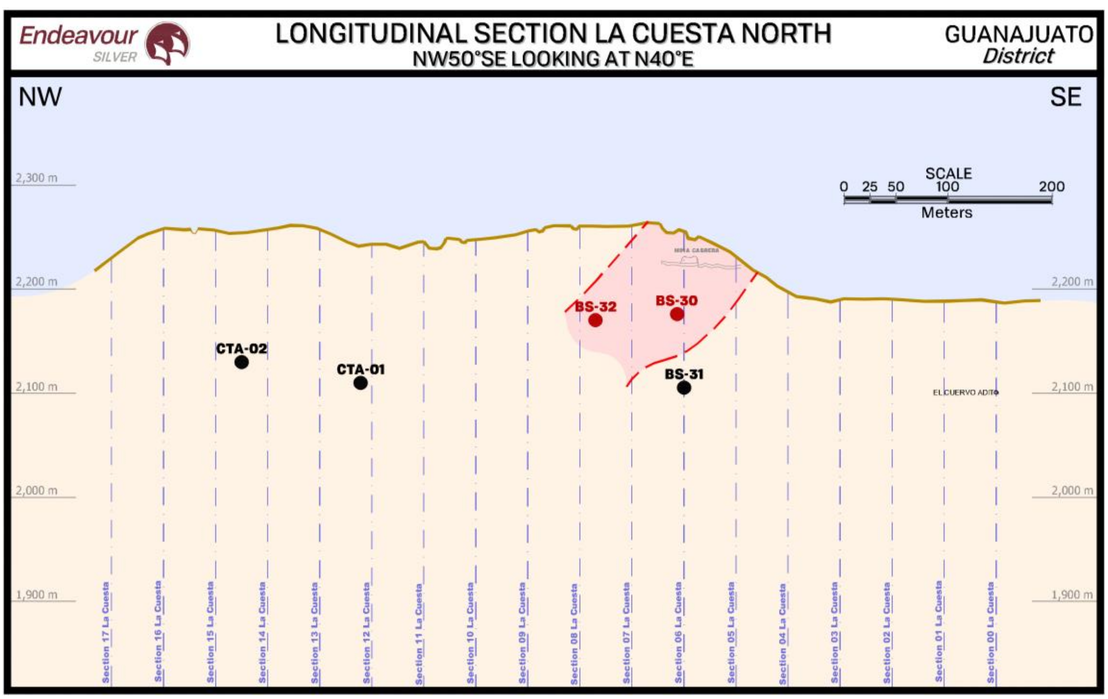



**Figure 10-21 Longitudinal Section (looking NE) showing intersection points on La Cuesta vein (La Cuesta North area).**

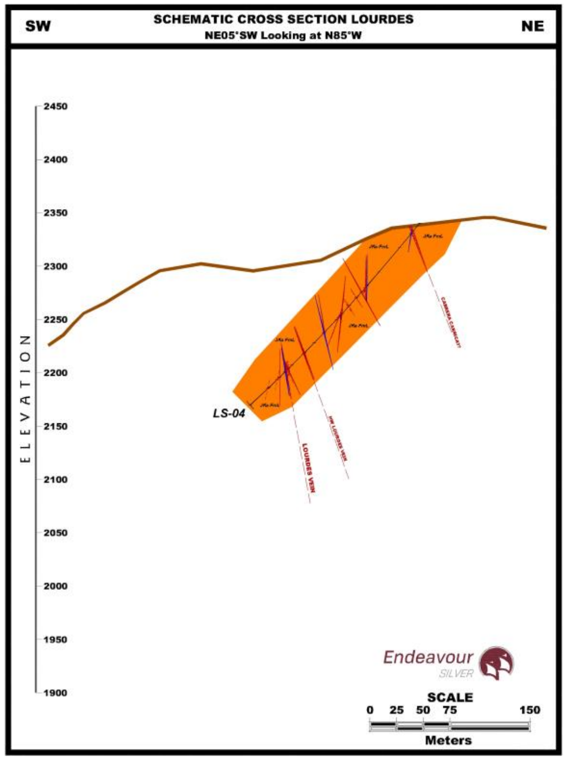



**Figure 10-22 Schematic Cross Section, Lourdes.**

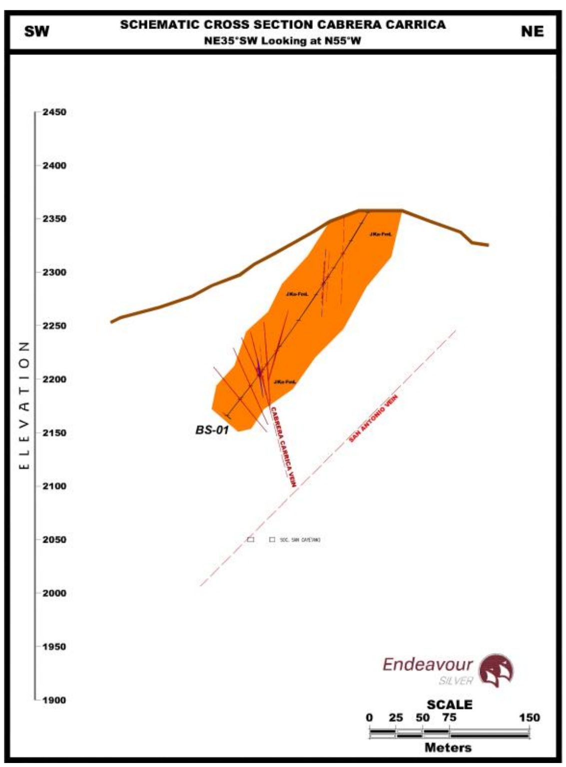
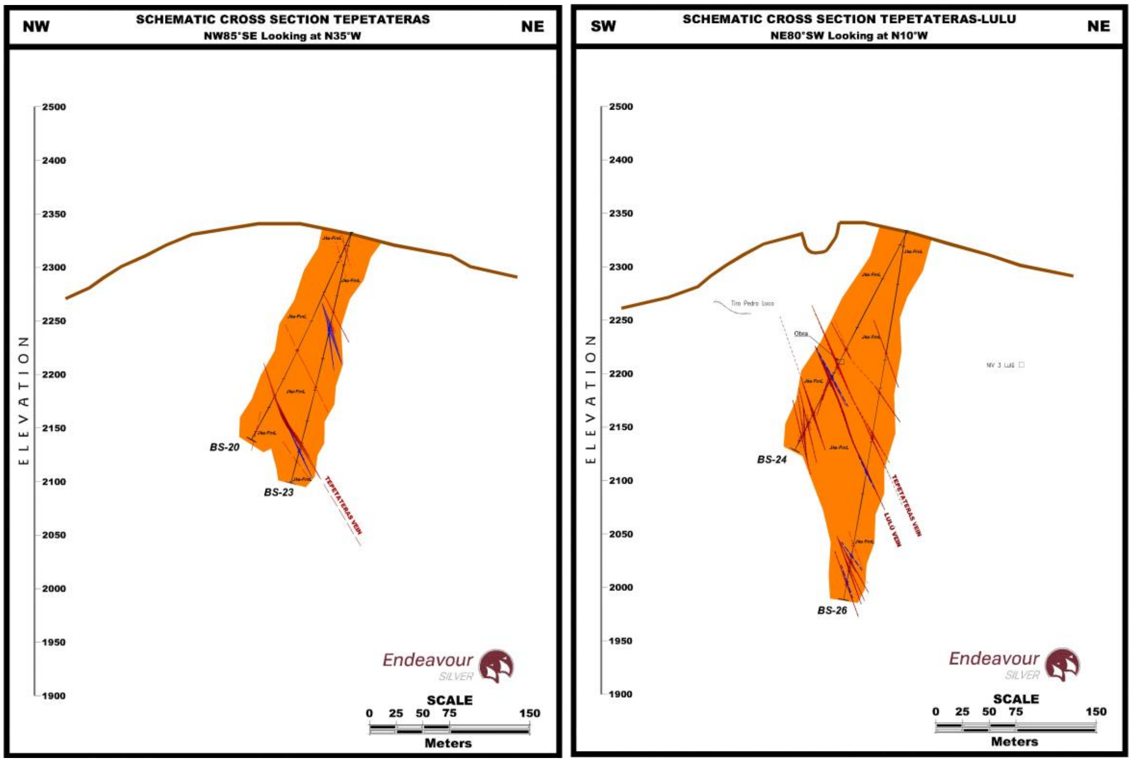
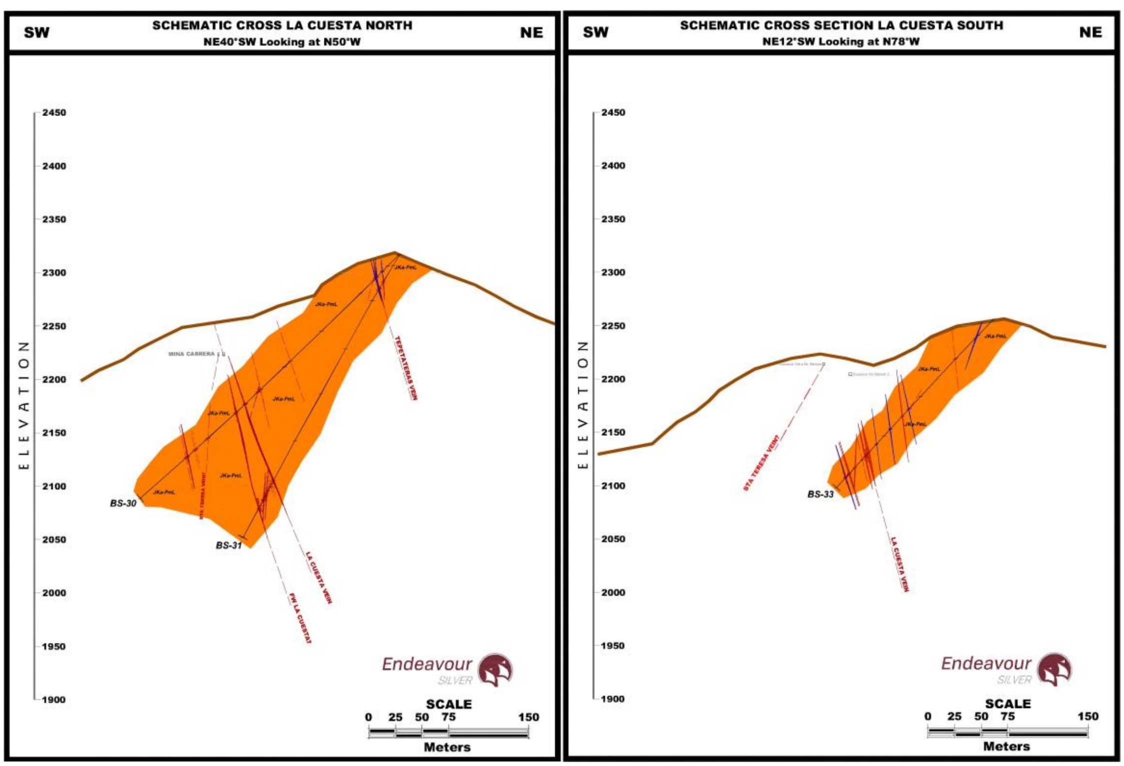



**Figure 10-23 Schematic Cross Section, Cabrera Carrica.**




Figures 10-24 & 10-25 Schematic Cross Sections, Tepetateras-Lulu.




Figures 10-26 & 10-27 Schematic Cross Sections, La Cuesta North and La Cuesta South.

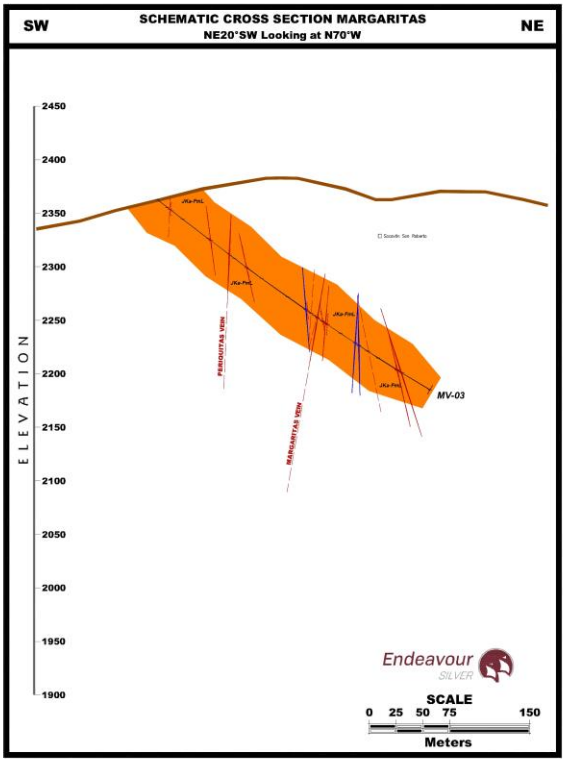



**Figure 10-28 Schematic Cross Section, Margaritas.**

# 11. SAMPLE PREPARATION, ANALYSES AND SECURITY

The sample data relied upon during completion of the mineral resource and reserve estimates presented in this report are from diamond drill core and underground chip channel samples.

## 11.1 Methods

### 11.1.1 Production Chip Channel Samples

Bolañitos employs standardized procedures for collecting underground grade control chip samples, and these procedures are documented in a detailed, illustrated manual. Chip channel sampling is carried out daily in accessible stopes and development headings by mine sampling technicians. Samples are located by measuring with a tape from known survey points. The samples are taken perpendicular to the veins at 3m to 5m intervals along drifts. Sample locations are cleaned and marked with two parallel, red spray paint lines to guide the sampling. Chip samples are collected on all vein faces in drifts, crosscuts, raises, and stopes. On faces and raises they are taken perpendicular to the dip of the vein to approximate true width. Stopes are sampled across the roof (back) following the profile of the working.

The entire chip sample is divided into several discrete samples based on the geology (lithology). The simplest configuration is a single vein where the chip sample would be divided based on one sample of the wall rock on each side of the vein, and one sample of the vein. In more complex configurations, if there is more than one vein present, or it is divided by waste rock, then each of the vein sections is sampled separately. The chip samples are cut approximately 10 cm wide and 2 cm deep using a hammer and chisel. The rock chips are collected in a net, placed on a canvas, and any fragments larger than 2.5 cm are broken with a hammer. The maximum sample length is generally 1.5 m and minimum sample length is generally 0.2 m, though a few samples are taken over as narrow a width as 0.1 m.

The samples are sealed in plastic bags with a string and sent to the laboratory at Bolañitos. Samples which tend to be large, representing long sample intervals, can be too large for the bags provided and are reduced in size at the sample site to 1-2kg by quartering. Care is taken to collect all of the fines for the selected quarters. The samples are sealed in plastic bags and transported to the geology storage facility on surface. From there the samples are taken to the laboratory at the Bolañitos mine site by contracted transporter. Sample locations are plotted on stope plans using CAD software. The sample numbers and location data are recorded in a spreadsheet database. Upon receipt of assays, technicians and geologists produce reports used for day-to-day monitoring and grade control.

### 11.1.2 Exploration Sampling

EDR's exploration staff are responsible for regional and mine exploration within the Bolañitos mining district, including the management, monitoring, surveying, and logging of surface and underground diamond drilling.

Regardless of which program the core comes from, the process is the same. Core from diamond drilling is placed in boxes which are sealed shut at the drill site. EDR personnel transport the core to the core facility. Sample handling at the core facility follows a standard general procedure, during which depth markers are checked and confirmed; the outside of the boxes are labeled with interval information; core is washed and photographed; and the recovery and modified rock quality designation (RQD) are logged for each drillhole.

All of EDR's surface and underground exploration drillholes are processed at the exploration core facility.

A cutting line is drawn on the core with a colored pencil, and sample tags are stapled in the boxes or denoted by writing the sample number with a felt tip pen.

The core is split using a diamond saw.

## 11.2 Sample Preparation and Analysis

Mine production sampling including plant feed samples, concentrate and doré, are sent to EDR's in-house, ISO-certified Bolañitos assay laboratory. The laboratory is set up in a single facility at the Bolañitos mine with separate enclosed sections for sample preparation, fire assay with gravimetric finish, and atomic absorption facilities. The facilities are located within the Bolañitos mine compound and operate 24 hours per day.

### 11.2.1 Exploration Drilling

During 2021, all rock and drill core samples prepared at the Guanajuato core facility. From January to Mid-June, samples were sent to the laboratory of SGS de México (preparation and analysis), located in Durango, México. At the End of June, EDR changed its main laboratory and samples were sent to the ALS preparation facility in Zacatecas, Mexico, and after preparation, the samples are shipped to the ALS laboratory in Vancouver, Canada, for analysis.

At the SGS laboratory, upon arrival, all the samples are logged into the laboratory's tracking system (LOG-02). The sample is dried at 105 +/-5°C, if received wet or if requested by client. Drying temperatures can vary based on client specific requests or when mercury determination is requested. Samples are then crushed to reduce the sample size to typically 2mm/10meshes (9 mesh Tyler). The sample is then split via a riffle splitter continuously to divide the sample into typically a 250g sub-sample for analysis and the remainder is stored as a reject. A rotary sample divider may also be used to split the sample. Pulverizing is done using pots made of either hardened chrome steel or mild steel material. Crushed material is transferred into a clean pot and the pot is placed into a vibratory mill. Samples are pulverized to typically 75 microns/200 mesh or otherwise specified by the client.

Upon arrival at the ALS preparation facility, all the samples are logged into the laboratory's tracking system (LOG-22). Then the entire sample is weighed, dried if necessary, and fine crushed to better than 70% passing 2 mm (-10 mesh). The sample is then split through a riffle splitter and a 250-g split is then taken and pulverized to 85% passing 75 microns (-200 mesh).

The analysis procedures are summarized in Tables 11-1 and 11-2.

**Table 11-1 SGS Summary of Analysis Procedures**

| Sample Type | Element | Description | Lower Detection Limit | Upper Detection Limit | SGS Code |
|---|---|---|---|---|---|
| Core / Rock | Au | Fire Assay and AAS finish | 0.005 ppm | 10 ppm | GE_FAA313 |
| | Multielements *(34 Elements)* | Aqua Regia and ICP-OES Finish | 2 ppm Ag / 1 ppm Cu / 4 ppm Pb/ 5 ppm Zn | 100 ppm Ag / 10,000 ppm Cu, Pb and Zn | GE_ICP14B |
| | Overlimits Au, Ag (Samples >10ppm Au GE_FAA313 & >100ppm Ag GE_ICP14B) | Fire Assays and Gravimentric Finish | 0.5 ppm Au/ | 1,000 ppm Au / | GO_FAG303 |
| | | | | | |
| | | | 10 ppm Ag | 10,000 ppm Ag | GO_FAG313 |
| | Overlimits Multielements | Sodium Peroxide Fusion and ICP-OES Finish | 0.01% Cu / 0.01% Pb / 0.01% Zn | 30% Cu / 30% Pb / 30% Zn | GO_ICP90Q |

**Table 11-2 ALS Summary of Analysis Procedures**

| Sample Type | Element | Description | Lower Detection Limit | Upper Detection Limit | ALS Code |
|---|---|---|---|---|---|
| Core / Rock | Au | Fire Assay and AA analysis | 0.005 ppm | 10 ppm | AUAA23 |
| | Multielements *(35 Elements)* | Aqua Regia and ICP-AES Finish | 0.2 ppm Ag / 1 ppm Cu / 2 ppm Pb/ 2 ppm Zn | 100 ppm Ag / 10,000 ppm Cu, Pb and Zn | ME-ICP41 |
| | Overlimits Au, Ag (Samples >10ppm Au AUAA23 & >100ppm Ag ME-ICP41) | Fire Assays and Gravimentric Finish | 0.05 ppm Au/<br>5 ppm Ag | 1,000 ppm Au /<br>10,000 ppm Ag | AU-GRA21<br>AG-GRA21 |
| | Overlimits Multielements | Aqua Regia and ICP-AES Finish | 0.001 % Cu / 0.001% Pb / 0.001% Zn | 40% Cu / 20% Pb / 30% Zn | OG46 |

SGS is an independent, ISO-certified, analytical laboratory company which services the mining industry around the world. SGS employs a rigorous quality control system in its laboratory methodology as well as a system of analytical blanks, standards and duplicates.

SGS Minerals Services in Durango is accredited by the Standards Council of Canada (SCC) for specific mineral tests listed on the scope of accreditations to the ISO/IEC 17025 standard. The methods FAA313, GE_ICP14B, FAG313, FAG303 and ICP90Q are currently listed on the scope. ISO/IEC addresses both the quality management system and the technical aspects of operating a testing laboratory. You can get a copy of our current scope in the SCC website www.scc.ca.

ALS is an independent analytical laboratory company which services the mining industry around the world. ALS is also an ISO-certified laboratory that employs a rigorous quality control system in its laboratory methodology as well as a system of analytical blanks, standards and duplicates. Details of its accreditation, analytical procedures and QA/QC program can be found at http://www.alsglobal.com.

## 11.3 Sample Quality Control and Quality Assurance

QA/QC processes are divided into two separate programs. One for in mine rock chip channel samples used for grade control within the operations and which have only a minor influence on the resource and reserve calculations at the end of each year as only the most recent samples at the margins of developed and mined areas influence the block model. The exploration drilling and sampling follows a separate QA/QC regime

### 11.3.1 Production Sampling

Sample quality assurance procedures for underground samples include careful marking of the sample lines across the faces or backs of the heading, recording measurements from known points to accurately locate the samples, and measuring each sample length with a tape. Samples are collected carefully onto a canvas, conserving all material. Oversize pieces are broken up, then the sample is rolled, coned, and quartered at the sample site to reduce sample volume. Samples remain in the custody of the technicians and geologists who collected them until they are delivered to designated sample storage areas on surface. Samples are collected from each storage area by a contracted transporter and delivered to the assay lab on site at the Bolañitos mine.

Field duplicate samples are inserted at the frequency of about 1 in 20 chip lines. The last sample taken is a duplicate sample. The sample interval to be duplicated is chosen at random from one of the vein intervals. Waste duplicates are not collected. The sample is collected from a point approximately 10cm above the original sample. Duplicate samples are sent with the rest of the samples from the chip line.

### 11.3.2 Production Grade Control Samples

The QA/QC protocol for production samples involves the insertion of seven (7) quality control samples per batch of thirty five (35) samples. These include certified blanks and reference standards (total 4 per batch) and an additional in-house prepared blank and 2 duplicates from the mine production samples. The duplicates are either suplus pulp material or coarse reject material from previous samples.

Duplicate analyses indicate analysis precision (as opposed to accuracy) as the repeat should be similar to the original assay. The sample duplicates are presented in Figures 11-1 to 11-4 on the following pages. These present the results of the original sample against the repeat analysis with the acceptable variance being 10% for pulp samples and 20% for coarse reject samples. Data points plotted in red are outside the acceptable variance range. As can be seen in the figures, the precision for silver (Ag) is very good with only 3 pulp samples and 5 coarse reject samples during 2021 plotting outside the acceptable variance ranges.

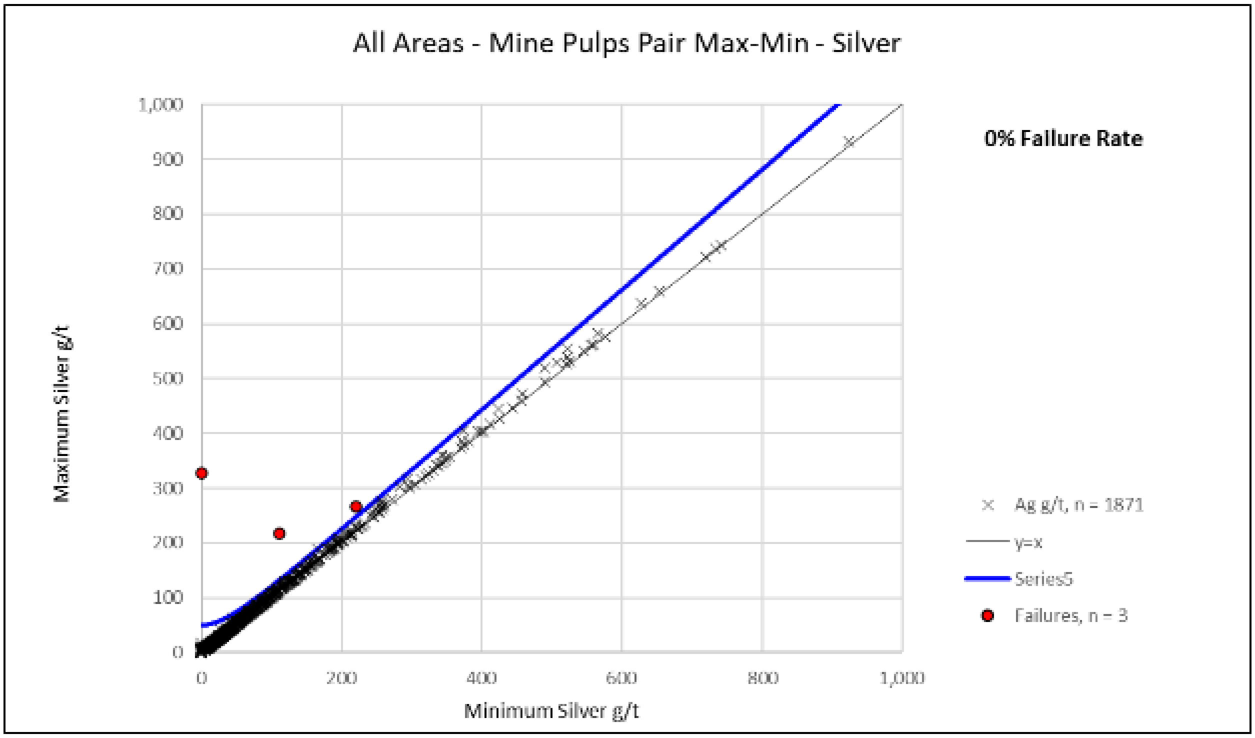



**Figure 11-1 Silver Pulp Duplicates**

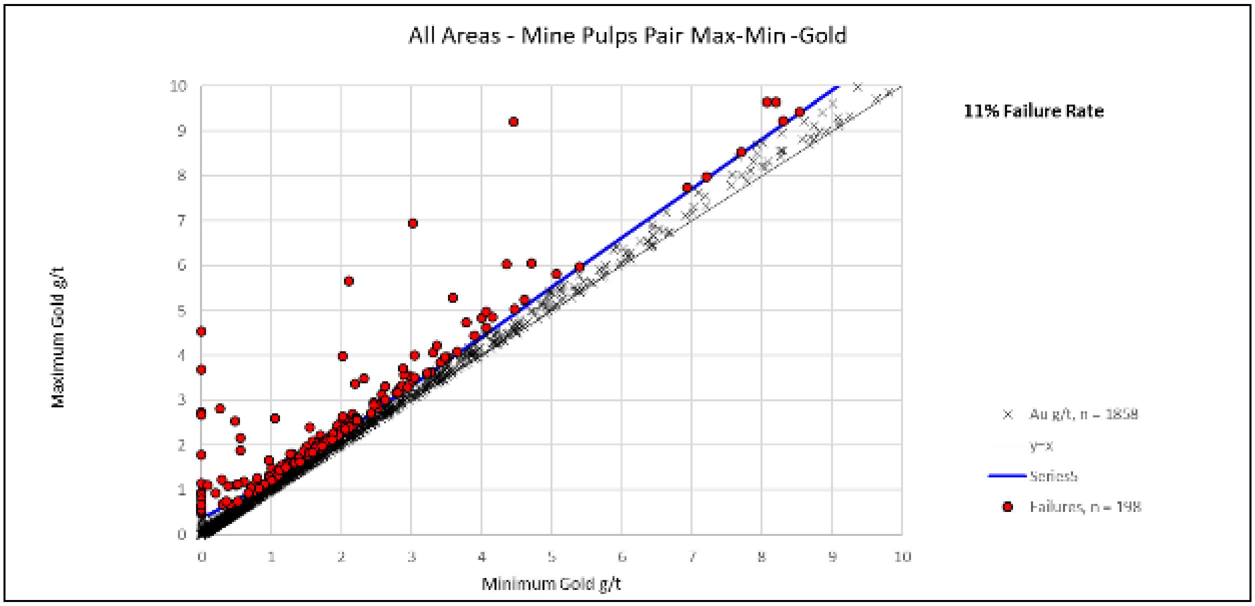



**Figure 11-2 Gold Pulp Duplicates**

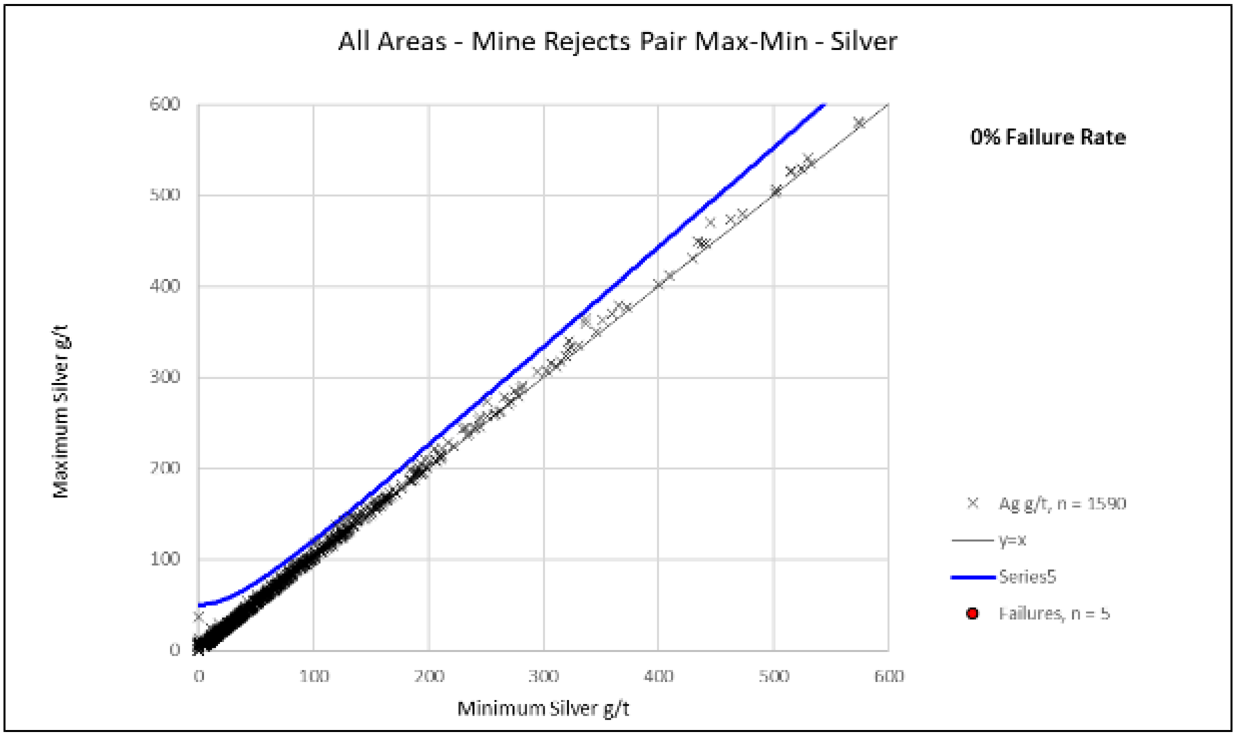



**Figure 11-3 Silver Reject Duplicates**

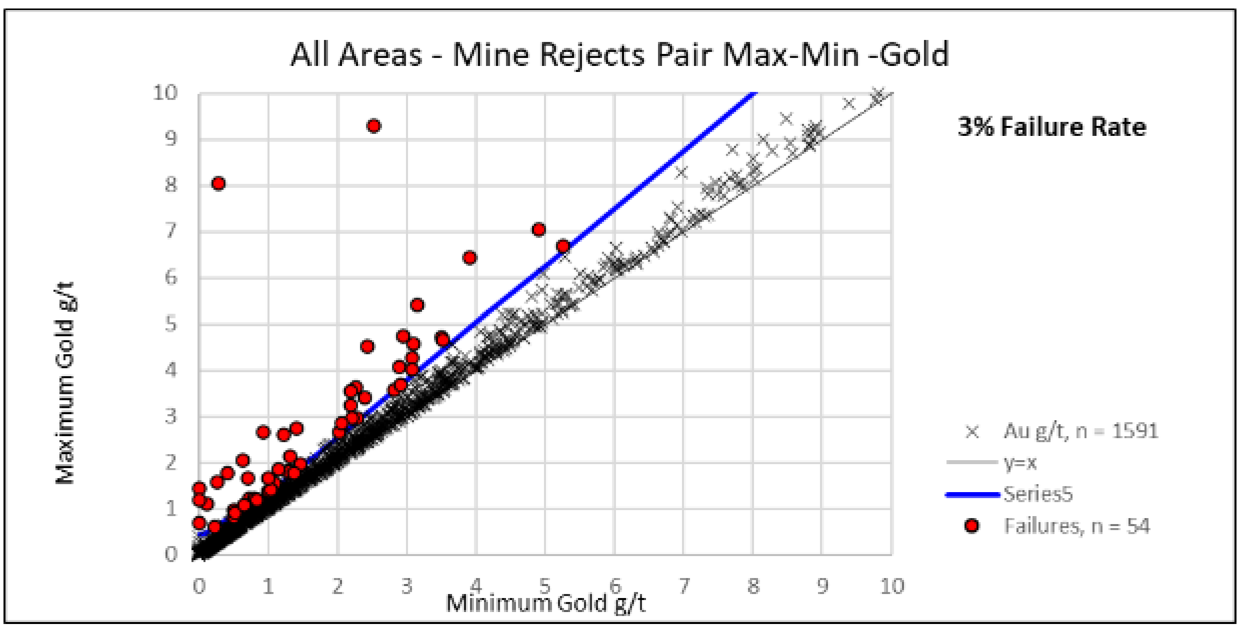



**Figure 11-4 Gold Reject Duplicates**

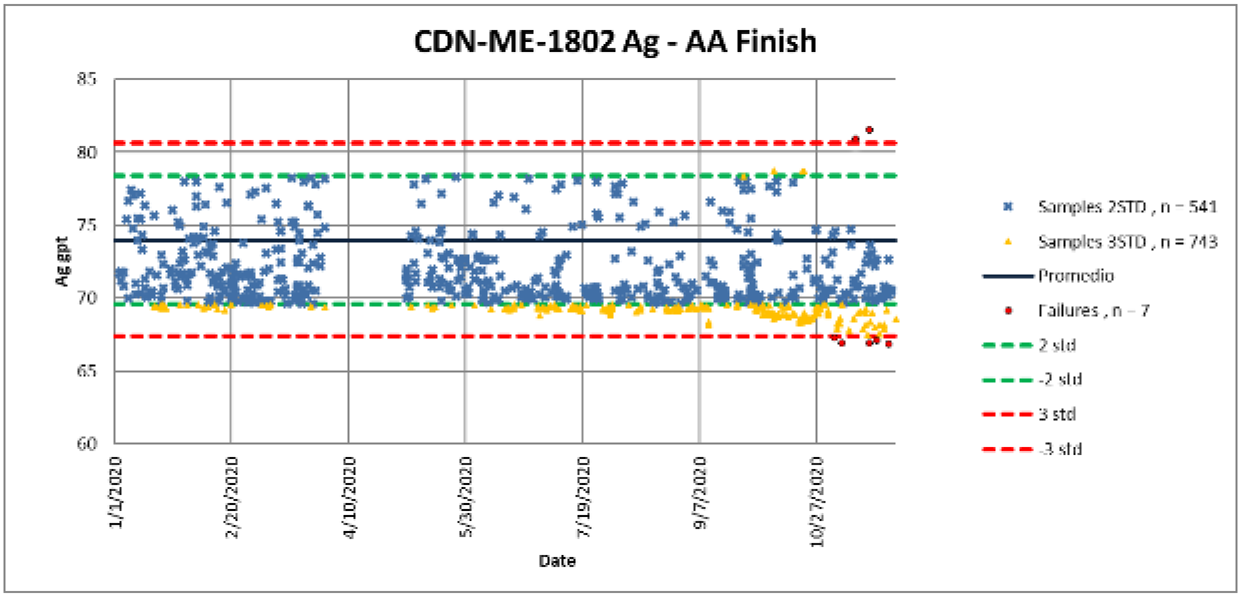



**Figure 11-5 Certified Standard 1312 Silver Results – Fire Assay AA Finish**

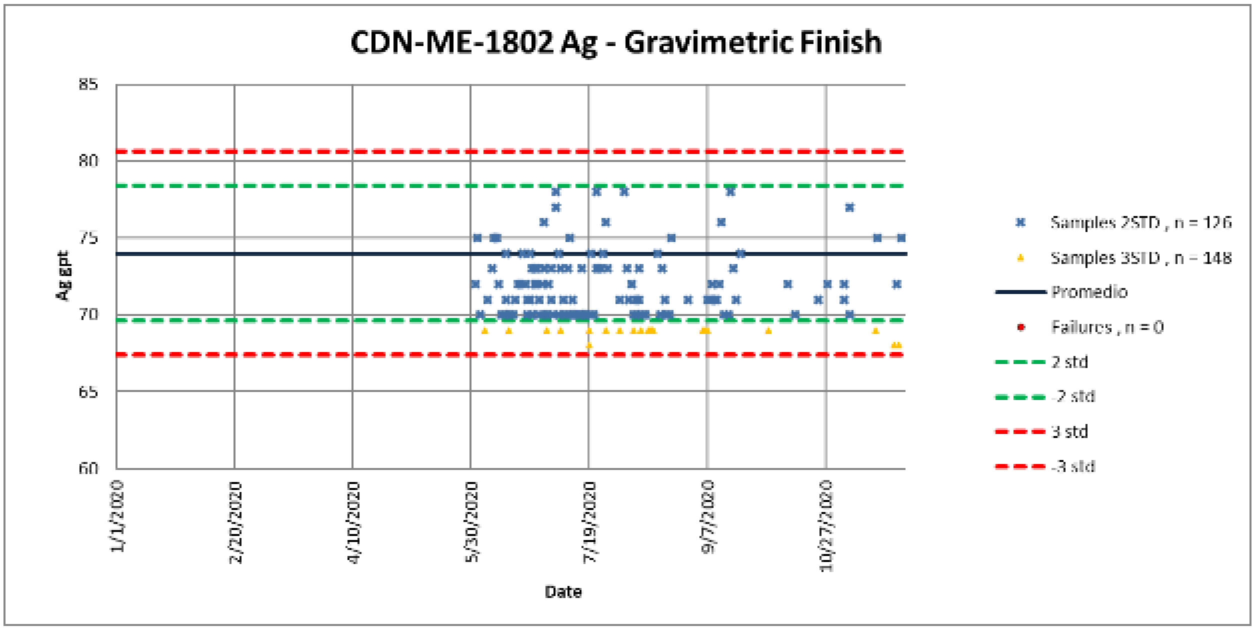



**Figure 11-6 Certified Standard 1802 Silver Results – Fire Assay Gravimetric Finish**

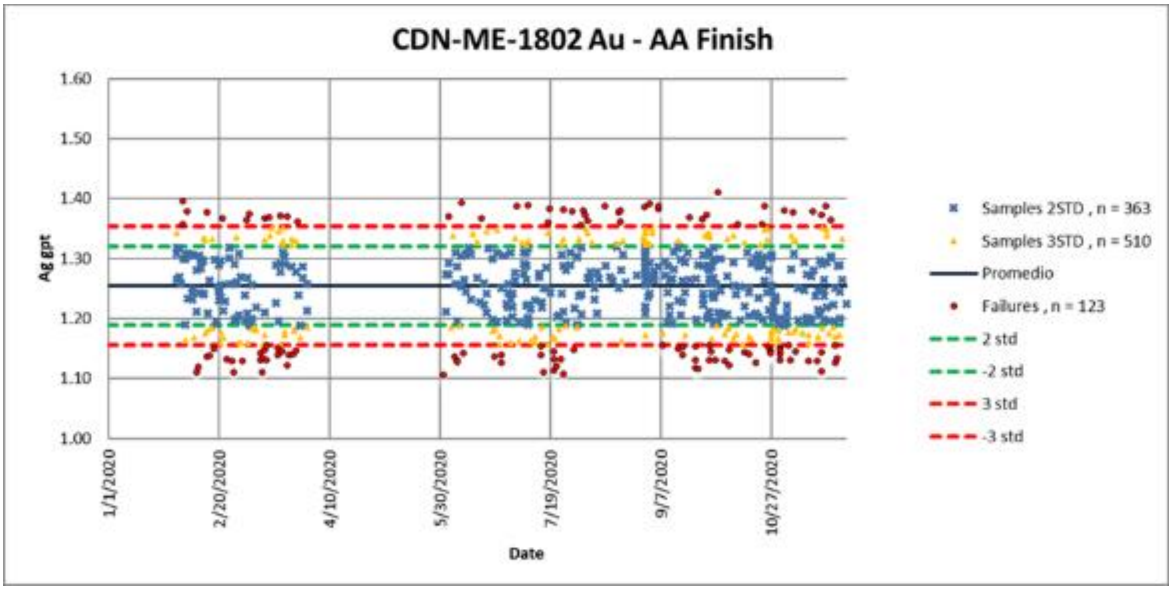



**Figure 11-7 Certified Standard 1802 Gold Results – Fire Assay AA Finish**

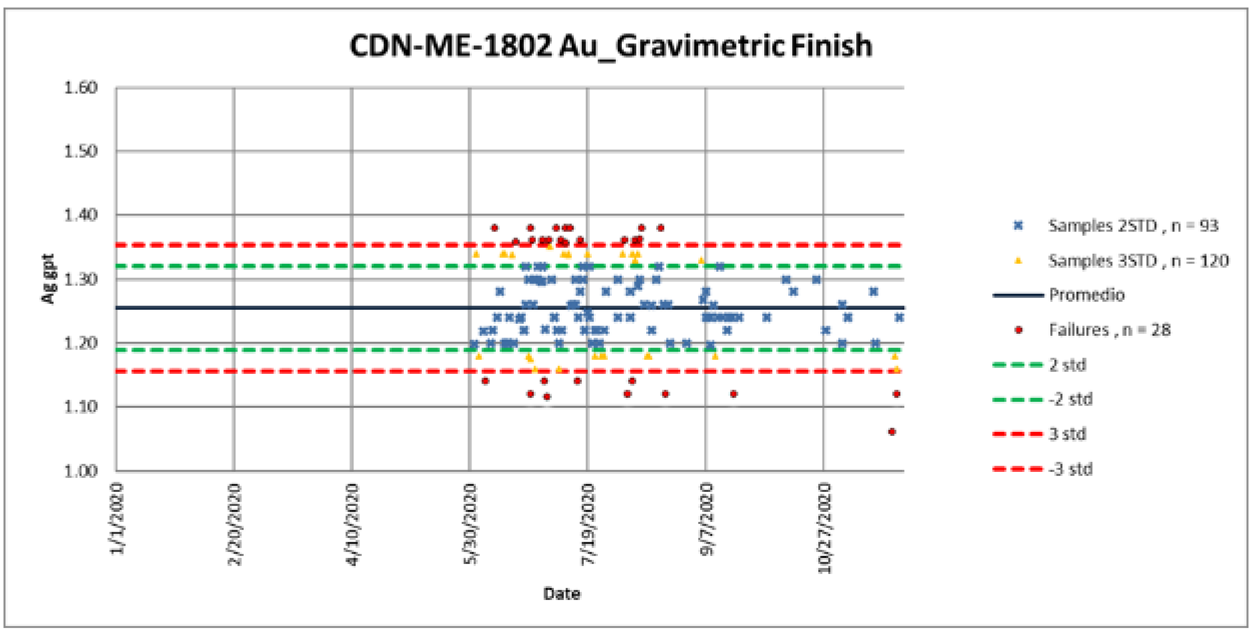



**Figure 11-8 Certified Standard 1802 Gold Results – Fire Assay Gravimetric Finish**

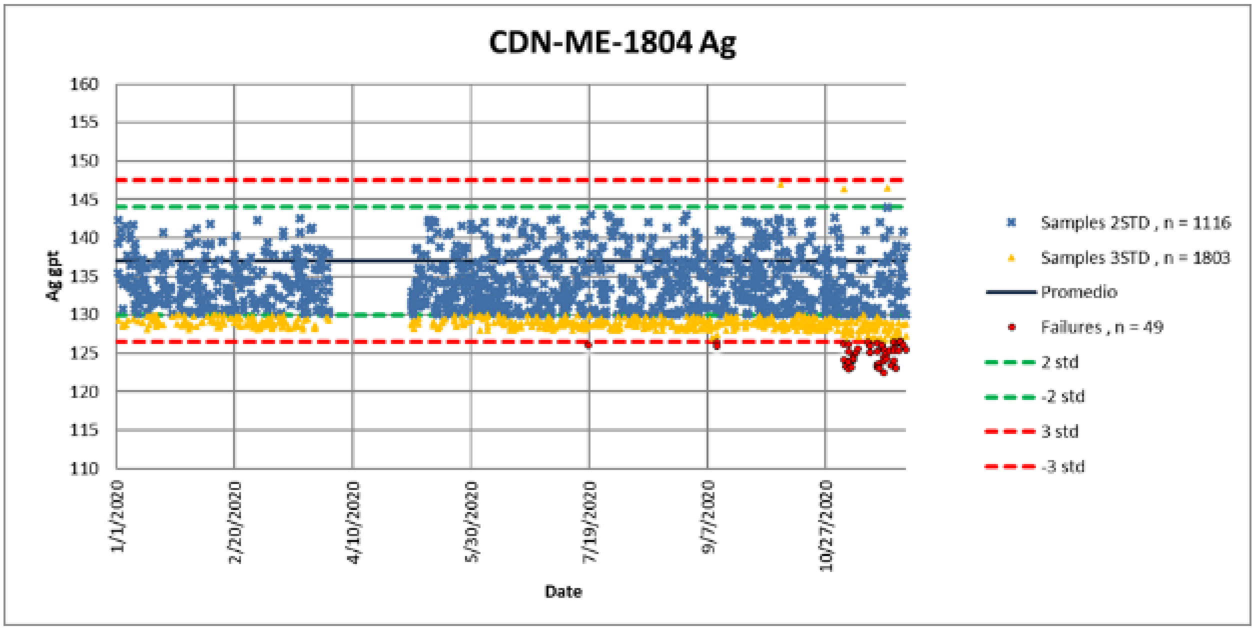



**Figure 11-9 Certified Standard 1804 Silver Results – Fire Assay Gravimetric and AA Finish Combined**

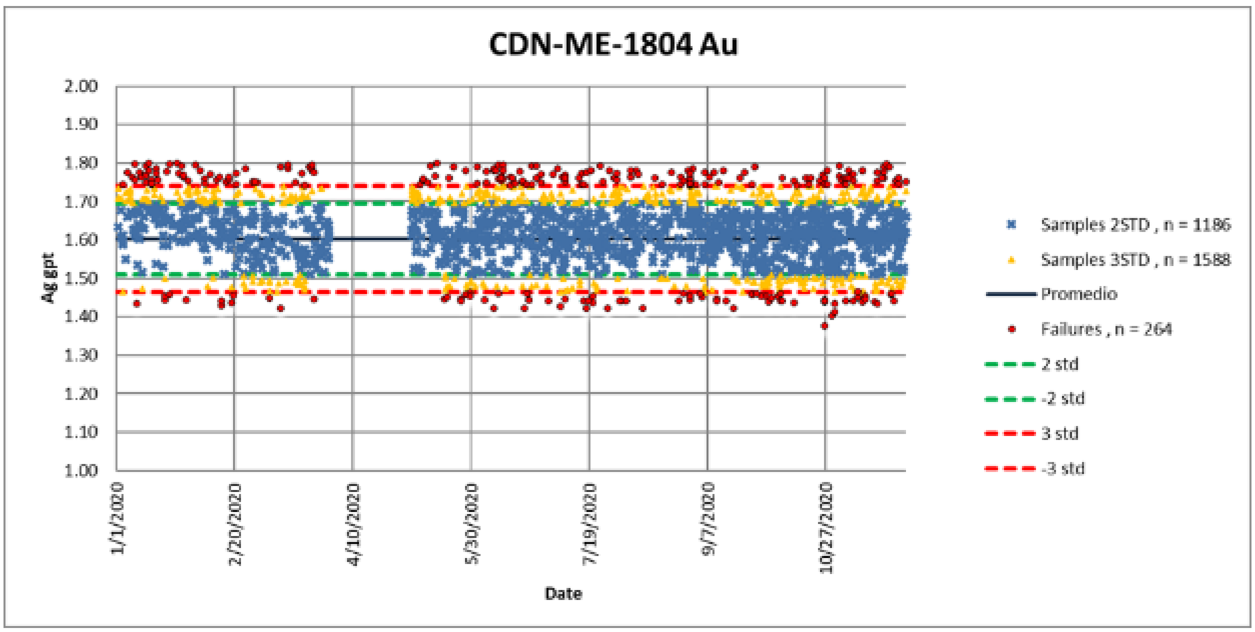



**Figure 11-10 Certified Standard 1804 Gold Results – Fire Assay Gravimetric and AA Finish Combined**

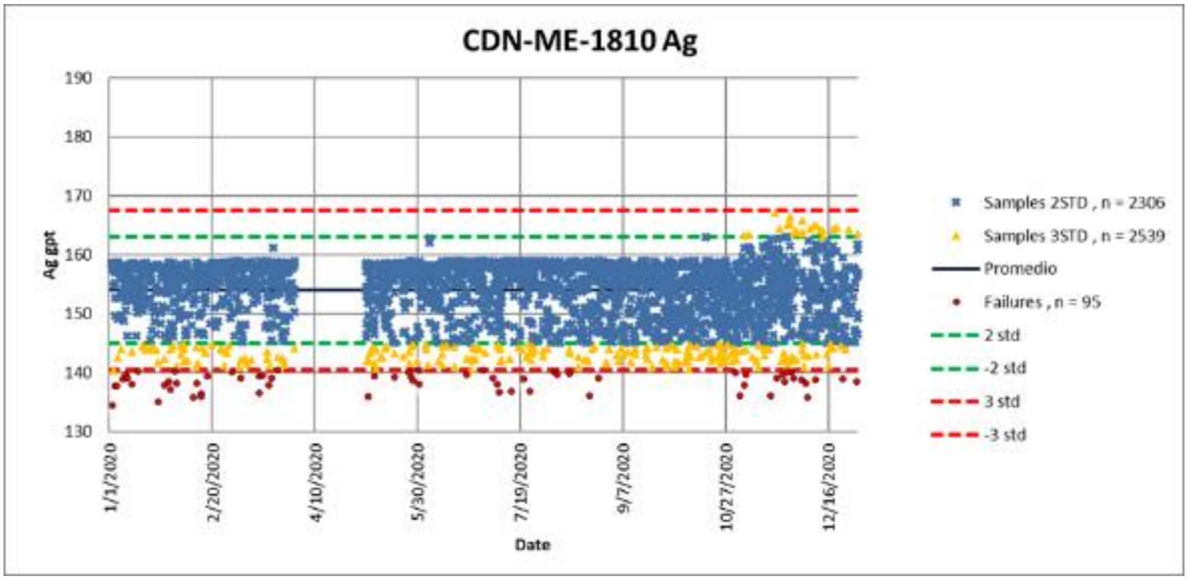



**Figure 11-11 Certified Standard 1810 Silver Results – Fire Assay Gravimetric and AA Finish Combined**

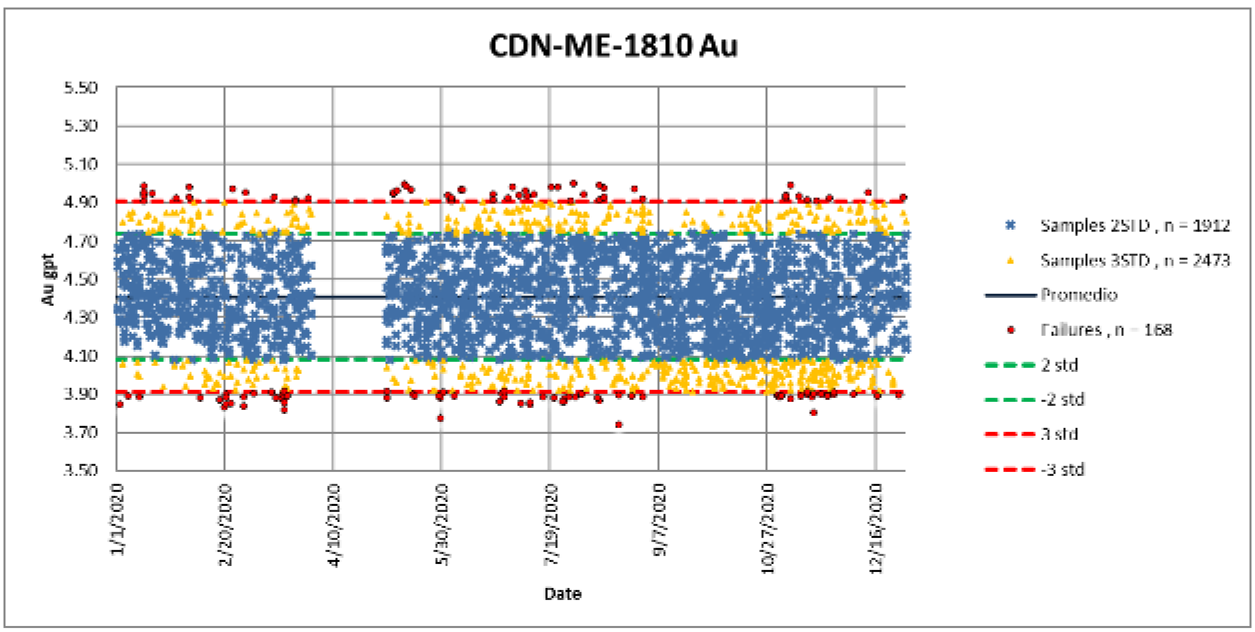



**Figure 11-12 Certified Standard 1810 Gold Results – Fire Assay Gravimetric and AA Finish Combined**

The certified reference standards are classified as failure when they are outside 3 standard deviations of the provided specifications of the commercial provider (the Upper Control Limit and Lower Control Limit). Between 2 and 3 standard deviations is classified as the Upper and Lower Warning Limits. Batches with certified standards outside the Upper and Lower Control Limits are required to be re-assayed in full, although for part of 2020 only 10 samples (5 samples below and 5 above the offending standard) were re-assayed. This was changed following the ISO Certification Audit for 2022 and now the entire batch is re-run.

Failure rates for silver (Ag) analyses were very low and ranged from 0% to 3.6% of samples which plot outside the upper or lower control limits. The results for gold reference standards varies depending on the gold content of the standard with low gold standards (CDM-ME-1802 with 1.25 g/t Au average) having failure rates of 19% and higher gold reference standards (CDM-ME-1810 with 4.4g/t Au average) performing better with only 6.4% failure rates. Given the enormous density of sampling for grade control in lateral sill developments compared to the exploration and underground drilling results the results of the Bolañitos lab are considered sufficent for inclusion in the resource calculation. However, it is noted where low levels of gold are detected, a higher failure rate occurs resulting in a higher number of re-assays.

**Figure 11-13 Certified Reference Standards – Average Grade and Failure Rates for Bolañitos in-house Laboratory**

| Standard # | Average Grade | | Failure Rates | |
|---|---|---|---|---|
| | Ag (g/t) | Au (g/t) | Ag (g/t) | Au (g/t) |
| CDM-CE-1802 (AA Finish) | 74 | 1.255 | 0.90% | 19.40% |
| CDM-CE-1802 (GRAV Finish) | 74 | 1.255 | 0% | 18.90% |
| CDM-CE-1804 | 137 | 1.6 | 2.60% | 14.30% |
| CDM-CE-1810 | 154 | 4.4 | 3.60% | 6.40% |
| | | | | |

No check assays from mine production were sent to secondary labs for analysis in 2021.

Coarse blanks monitor the integrity of sample preparation and are used to detect contamination during crushing and grinding of samples. Blank failures can also occur during laboratory analysis or as the result of mislabelling by the geology technicians (samplers). Blank performance suggests some minor cross contamination in the samples in the preparation area which should be addressed and justifies the decision to prepare and analyse exploration and drilling samples at a commercial laboratory and not the onsite lab which processes samples which are predominantly ore grade or high-grade samples.

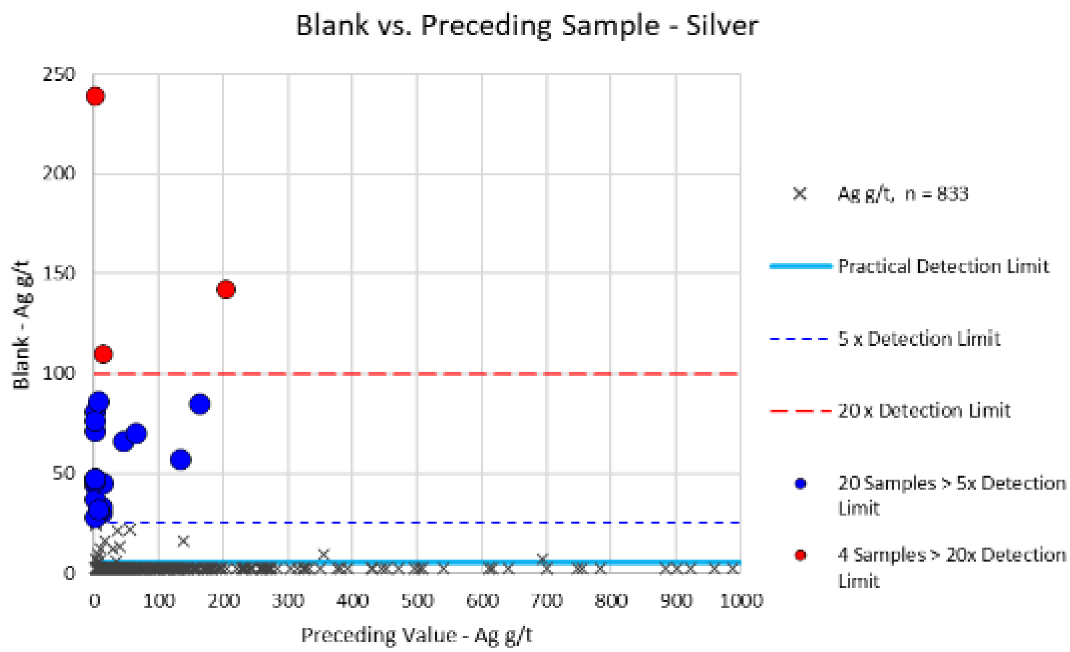



**Figure 11-13 Gold Field Duplicates**

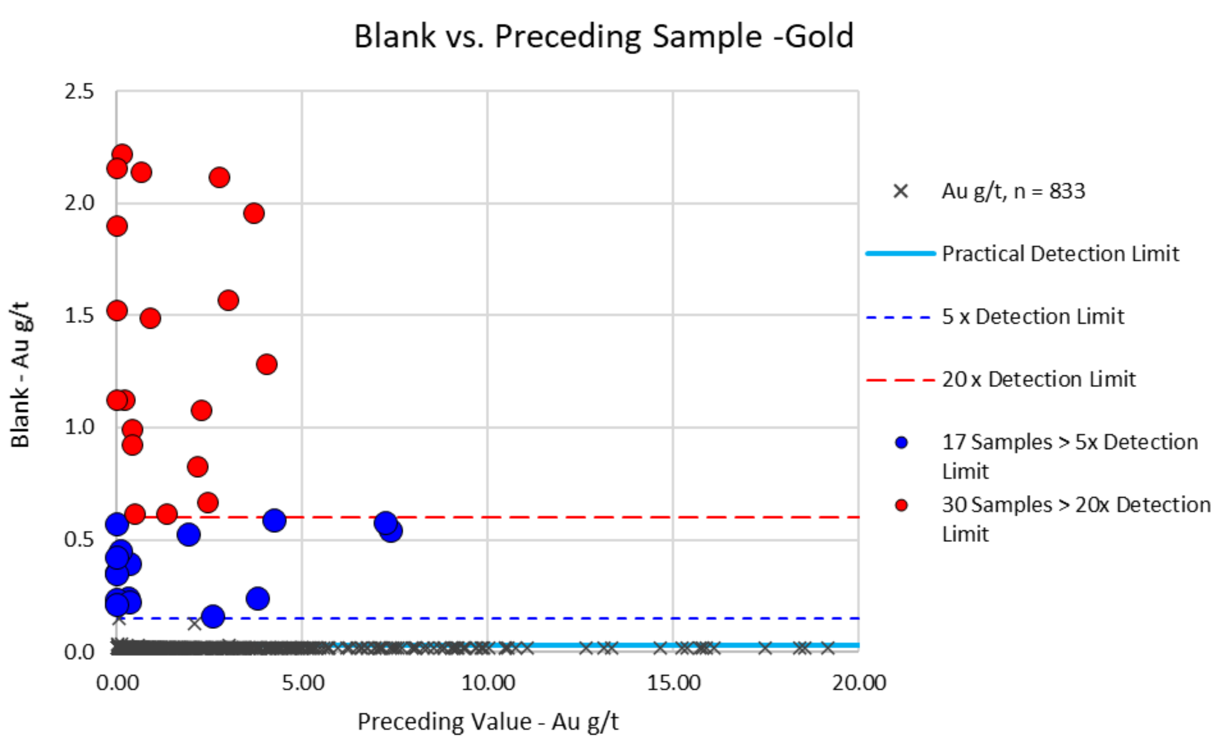



**Figure 11-14 Gold Field Duplicates**

### 11.3.3 Summary of the 2017 to 2020 QA/QC Surface and Underground Exploration Programs

To provide continuity to the QA/QC programs since the last published report (HRC, 2016), a summary of the surface and underground drilling programs carried out during 2017 to 2020 is described below.

The protocols and procedures are the same as those used by EDR to date and are shown in chapter 11.3.3.

From 2017 to 2019, the primary laboratory used in the drilling programs was ALS Minerals (ALS). In 2020, from January to October, samples were sent to ALS, but as of November, EDR changed its main laboratory to SGS de México laboratory (SGS).

For check analyses, in 2017, EDR used the Bureau Veritas (Inspectorate) Laboratory; for the 2018 and 2019 programs it was used the SGS Laboratory; and for the 2020 program, most of the year it was used the SGS laboratory and changed in November to ALS laboratory. Correlation coefficients in all the programs are high for both gold and silver, showing excellent overall agreement between the original ALS/SGS assay and the Inspectorate/SGS/ALS check assay.

The summary of the control samples used during these programs is shown in Table 11-3.

**Table 11-3 Summary of Control Samples Used for Exploration Programs from 2017 to 2020**

| Samples | 2017 | | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|---|---|
| | No. of Samples | Percentage (%) | No. of Samples | Percentage (%) | No. of Samples | Percentage (%) | No. of Samples | Percentage (%) |
| Duplicate | 97 | 4.7% | 105 | 6.4% | 105 | 4.8% | 100 | 4.2% |
| Blank | 103 | 4.9% | 122 | 7.4% | 189 | 8.6% | 134 | 5.6% |
| Standard | 109 | 5.2% | 115 | 7.0% | 174 | 7.9% | 126 | 5.2% |
| Normal | 1771 | 84.9% | 2042 | 123.8% | 2,700 | 123.0% | 2,044 | 85.0% |
| **Total** | **2086** | **100%** | **1649** | **100%** | **2,195** | **100%** | **2,404** | **100%** |
| Cross Check | 102 | 4.9% | 123 | 7.5% | 164 | 7.5% | 87 | 3.6% |

In general, results of the QA/QC programs are acceptable, and a summary of the blanks, duplicate and standard reference material is described below:

During 2017, no blank samples returned assay values above the tolerance limit for both gold and silver. In 2018, only one blank sample returned values above the tolerance limit, located in mineralized zone. The entire batch was re-analyzed, and subsequent results show excellent correlation coefficient (>0.99) which indicates that the original values are validated. During the 2019 program, only three samples were outside the tolerance limits for gold and/or silver. These were not consecutive and not located in mineralized zones, hence no actions required. In 2020, for gold only three samples were outside the tolerance limit, and four for silver. Samples were not consecutive and most were not located within mineralized zones; only one batch was re-analyzed as it occurred near the end of a mineralized zone. The results of the original compared to the re-assays show excellent correlation coefficient (>0.99) for both silver and gold, and the original values were validated.

Graphical analysis of the duplicate samples during the 2017 and 2018 programs, showed high correlation coefficients for gold (0.97 & 0.84) and good to moderate correlation coefficients for silver (0.82 0.63) mainly due to the values of silver are in the lower part of the method and it is possible to have variations in those ranges. For the 2019 program, graphical analysis shows high correlation coefficient for both gold and silver (>0.89).

The standard reference materials used during EDR's drilling programs (2017 to 2020) are described in Table 11-4.

**Table 11-4 Summary of the Standard Reference Material Samples Used During the EDR's Drilling Programs (2017 to 2020) at Bolañitos**

| Year | Reference Standard | Reference Number | Reference Source | Control Limits | | | |
|---|---|---|---|---|---|---|---|
| | | | | Certified Mean Value Au (g/t) | Certified Mean Value Ag (g/t) | Re-calculated Mean Value Au (g/t) | Re-calculated Mean Value Ag (g/t) |
| 2017 | edr-41 | CDN-GS-2Q | Cdn Resource Lab | 2.37 | 73 | 2.43 | 74 |
| | edr-45 | CDN-ME-1505 | Cdn Resource Lab | 1.29 | 360 | 1.29 | 354 |
| 2018 | edr-41 | CDN-GS-2Q | Cdn Resource Lab | 2.37 | 73 | 2.40 | 73 |
| | edr-47 | CDN-ME-1604 | Cdn Resource Lab | 2.51 | 299 | 2.50 | 294 |
| 2019 | edr-39 | CDN-ME-1305 | Cdn Resource Lab | 1.92 | 231 | NA | NA |
| | edr-41 | CDN-GS-2Q | Cdn Resource Lab | 2.37 | 73.2 | NA | NA |
| | edr-46 | CDN-ME-1413 | Cdn Resource Lab | 1.01 | 52.2 | 1.00 | 52 |
| | edr-47 | CDN-ME-1604 | Cdn Resource Lab | 2.51 | 299 | NA | NA |
| | edr-48 | CDN ME-1405 | Cdn Resource Lab | 1.30 | 88.8 | NA | NA |
| | edr-49 | CDN ME-1605 | Cdn Resource Lab | 2.85 | 269 | 2.85 | 263 |
| 2020 | edr-39 | CDN-ME-1305 | Cdn Resource Lab | 1.92 | 231 | 1.93 | 230 |
| | edr-41 | CDN-GS-2Q | Cdn Resource Lab | 2.37 | 73.2 | 2.44 | 74 |

NA= Not Applicable

EDR's general rules for the Standard Samples and the required actions are described in Table 11-5.

**Table 11-5 General Rules for Standard Samples**

| Value | Status | Mineralized Zone | Action |
|---|---|---|---|
| **< 2 SD** | Acceptable | N/A | No action required |
| **< 2 - 3 SD from CL (Single result; not consecutive)** | Acceptable | N/A | No action required |
| **< 2 - 3 SD (Two or more consecutive samples)** | Warning | YES | Re-Analyse samples |
| | | NO | No action required |
| **> 3 SD (Single result; not consecutive)** | Warning | YES | Re-Analyse samples |
| | | NO | No action required |
| **> 3 SD (Consecutive Samples)** | Failure | N/A | Re-Analyse samples |

N/A Not Applicable

Results of each standard are reviewed separately and the analysis of the behavior of these materials and the taken actions are summarized in Table 11-6.

**Table 11-6 Summary of Analysis of Standard Reference Materials (2017 to 2020)**

| Year | Reference Standard | Element | Observations | Comments |
|---|---|---|---|---|
| 2017 | EDR-41 | Au | Two samples: BDH40507 (1.92 ppm Au) & BDH40649 (1.92 ppm Au) with value >3 standard deviations, not mineralized zone, not consecutive. | No action required |

| Year | Reference Standard | Element | Observations | Comments |
|---|---|---|---|---|
| | | Ag | One sample: BDH40412 (81.7 ppm Ag) with balues between 2-3 standard deviations, not consecutive. | No action required |
| | EDR-45 | Au | One sample: BDH40316 (1.49 ppm Au) with values between 2-3 standard deviations, not consecutive | No action required |
| | | Ag | One sample: BDH40693 (338 ppm Ag) with values between 2-3 standard deviations, not consecutive. | No action required |
| 2018 | EDR-41 | Au | 1 sample: BDH41398 with values >3 standard deviations, not consecutive, no mineralized zone. | No action required |
| | | Ag | 1 sample: BDH41348 with values between 2-3 standard deviations, not consecutive. | No action required |
| | EDR-47 | Au | Within established limits. | No action required |
| | | Ag | 2 samples: BDH41862 & BDH42599 with values between 2-3 standard deviations, not consecutive. | No action required |
| | | | 2 samples: BDH42382 & BDH42516 with values >3 standard deviations, not consecutive, mineralized zone. | Batchs Re-Assayed |
| 2019 | EDR-39 | Au | One sample (BDH47721) between plus two to three standard deviations from CL, not consecutive. | No action required |
| | | Ag | One sample (BDH47455) between plus two to three standard deviations, not consecutive. | No action required |
| | | | Two samples (BDH47819 & BDH48030) greater than 3 standard deviations, not consecutive, no mineralized zone | No action required |
| | EDR-41 | Au | Two samples (BDH47659 & BDH47998) greater than 3 standard deviations, not consecutive, no mineralized zone | No action required |
| | | | One sample (BDH47323) greater than 3 standard deviations, not consecutive, mineralized zone | Batch Re-Assayed |
| | | | One sample (BDH47915) between plus two to three standard deviations, not consecutive. | No action required |
| | | Ag | Within established limits. | No action required |
| | EDR-46 | Au | Within established limits. | No action required |
| | | Ag | One sample (BDH46810) between plus two to three standard deviations, not consecutive. | No action required |
| | EDR-47 | Au | Two samples (BDH46097 & BDH46260) between plus two to three standard deviations, not consecutive. | No action required |
| | | Ag | Within established limits. | No action required |
| | EDR-48 | Au | Within established limits. | No action required |
| | | Ag | Within established limits. | No action required |
| | EDR-49 | Au | One sample (BDH45455) between plus two to three standard deviations, not consecutive. | No action required |
| | | Ag | Within established limits. | No action required |
| 2020 | EDR-39 | Au | Within established limits. | No action required |
| | | Ag | One sample (BDH48612) between plus two to three standard deviations, not consecutive. | No action required |
| | | | Two samples (BDH50013 and BDH50051) between plus two to three standard deviations, consecutive but no mineralized zone. | No action required |
| | | | One sample (BDH50173) greater than 3 standard deviations, not consecutive, no mineralized zone | No action required |
| | EDR-41 | Au | One sample (BDH50064) between plus two to three standard deviations, not consecutive. | No action required |
| | | Ag | Two samples (BDH49913 and BDH50105) between plus two to three standard deviations, not consecutive. | No action required |

During 2017, all standard samples were found to be within established limits.

In 2018, only two standard samples returned values outside the tolerance limits and the batches were sent for re-analysis. Graphical analysis showed excellent correlation coefficients (>0.97) for both gold and silver, validating the original values.

In 2019, only one gold value was outside the tolerance limits, thus, one batch was re-analyzed; graphical analysis showed a high correlation coefficient (>0.99), validating the original values.

During 2020, all standard samples were found to be within established limits.

### 11.3.4 Surface and Underground Exploration Samples

During 2021, drilling was supported by a QA/QC program of blanks, duplicates, reference standards and check assays to monitor the integrity of assay results.

For each batch of approximately 20 samples, control samples are inserted into the sample stream. Each batch of 20 samples includes one blank, one duplicate and one standard reference control sample. Check assaying is also conducted on the samples at a frequency of approximately 5%. Discrepancies and inconsistencies in the blank and duplicate data are resolved by re-assaying either the pulp or reject or both.

A total of 3,663 samples, including control samples, were submitted during Endeavour Silver's surface and underground drilling program at Bolañitos from January to December 2021, as shown in Table 11-7.

Until Mid-June 2021, samples were sent to SGS de México Laboratory (preparation and analysis) located in Durango, México. A total of 1,875 samples submitted to SGS. At the End of June, Endeavour changed its main laboratory to ALS Minerals in Zacatecas, México. After preparation, samples are shipped to the ALS Laboratory in Vancouver, Canada, for analysis. A total of 1,788 samples submitted to ALS.

A total of 93 pulps were also submitted for check assaying to ALS (preparation facility in Zacatecas, México and analysis at ALS Vancouver), and 87 pulps submitted for check assaying to ACTLABS México Laboratory (preparation and analysis) located in Zacatecas, Mexico.

**Table 11-7 Summary of Control Samples Used for the 2021 Exploration Program**

| Samples | No. of Samples | Percentage (%) |
|---|---|---|
| Duplicate | 150 | 4.1% |
| Blank | 208 | 5.7% |
| Standard | 180 | 4.9% |
| Normal | 3,125 | 85.3% |
| **Total** | **3,663** | **100%** |
| Cross Check | 180 | 4.9% |

The sampling process, including handling of samples, preparation and analysis, is shown in the quality control flow sheet, Figure 11-7.

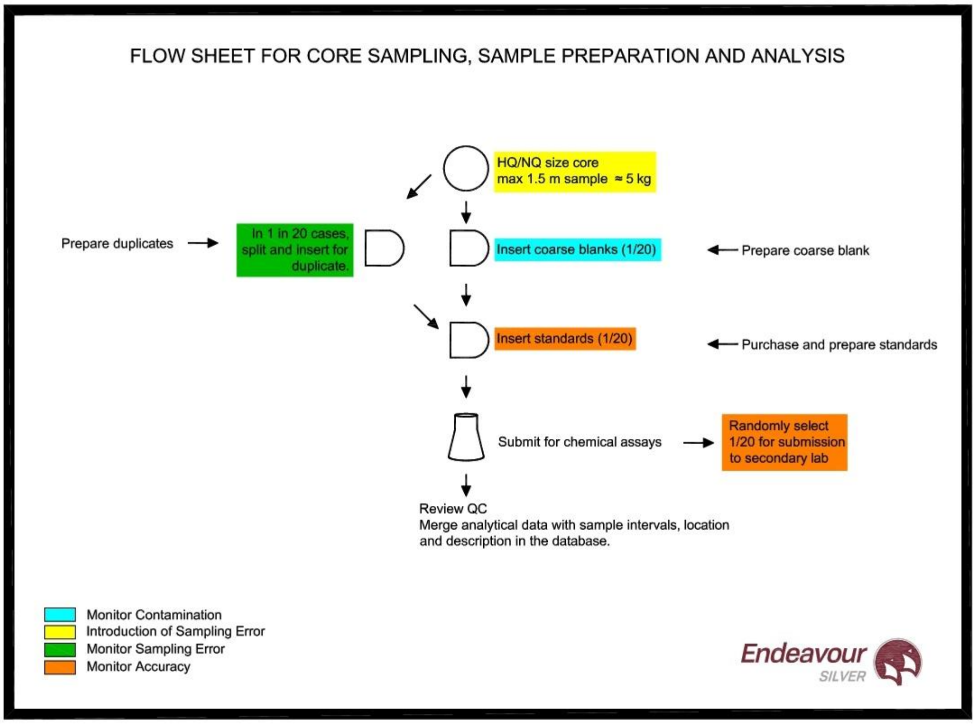



**Figure 11-7 Flow Sheet for Core Sampling, Sample Preparation and Analysis**

#### *11.3.4.1 Exploration Blank Performance*

Blank samples were inserted to monitor possible contamination during the preparation process and analysis of the samples in the laboratory. The blank material used for the Endeavour Silver's drilling program at the Bolañitos Project come from a non-mineralized core material. Blank samples are inserted randomly into the sample batch and given unique sample numbers in sequence with the other samples before being shipped to the laboratory.

Blank samples were inserted at an average rate of approximately 1 for each 20 original samples, with a total of 208 blank samples (5.7%) submitted.

The tolerance limit for the blank samples is 10 times the lower detection limit for the corresponding assay method (for gold is 0.05 ppm (SGS & ALS) and for silver 20 ppm (SGS) and 2 ppm (ALS), graphically showed 10 ppm.).

EDR's general rules for the Blank Samples and the required actions are described in Table 11-8.

Results for the blank samples are presented in Figures 11-8 and 11-9.

**Table 11-8 General Rules for Blank Samples**

| Value | Status | Mineralized Zone | Action |
|---|---|---|---|
| **Blanks <10 times detection limit** | Acceptable | N/A | No action required |
| **Blanks >10 times detection limit** | Warning | YES | Re-Analyze samples |
| | | NO | No action required |

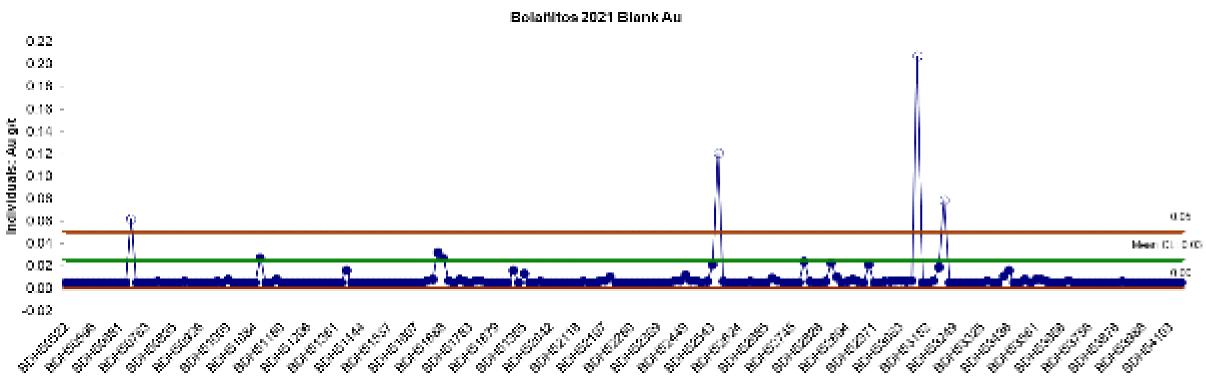



**Figure 11-8 Control Chart for Gold Assay from the Blank Samples Inserted into the Sample Stream**

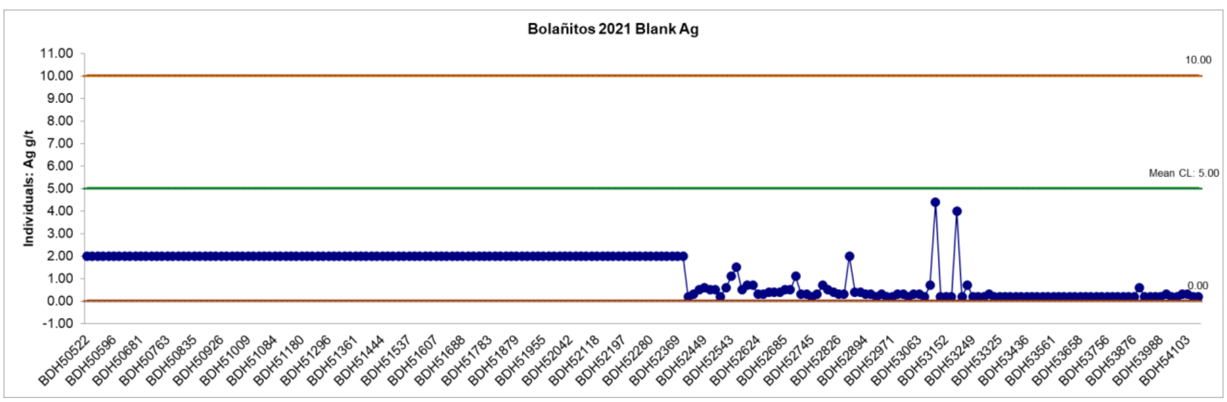



**Figure 11-9 Control Chart for Silver Assay from the Blank Samples Inserted into the Sample Stream**

Although the source of blank material is believed to be from non mineralized core, there is a possibility to have incipient mineralization in some samples; for gold only four samples (BDH50732, BDH52556, BDH53119 and BDH53212) were outside the tolerance limit, and none for silver. Samples are not consecutive and not located within mineralized zones, so no further action was required.

Based on the results, it is considered that the assay results for the drilling program are, for the most part, free of any significant contamination.

#### *11.3.4.0 Exploration Duplicate Samples*

Duplicate samples were used to monitor potential mixing up of samples and variability of the data due to laboratory error or the lack of homogeneity of the samples.

Duplicate core samples were prepared by Endeavour Silver personnel at the core storage facility at the Bolañitos Project. Preparation involved the random selection of a sample interval to be duplicated. This required first splitting the core in half and cut again in half and then select the opposite quarters to be sent to the laboratory separately.

The original and duplicate samples were tagged with consecutive sample numbers and sent to the laboratory as separate samples. Duplicate samples were collected at a rate of 1 in 20 samples.

A total of 150 duplicate samples were taken, representing 4.1% of the total samples.

For the duplicate samples, graphical analysis shows moderate to good correlation coefficient for both gold and silver (>0.81). The results of the duplicate sampling are shown graphically in Figures 11-10 and 11-11.

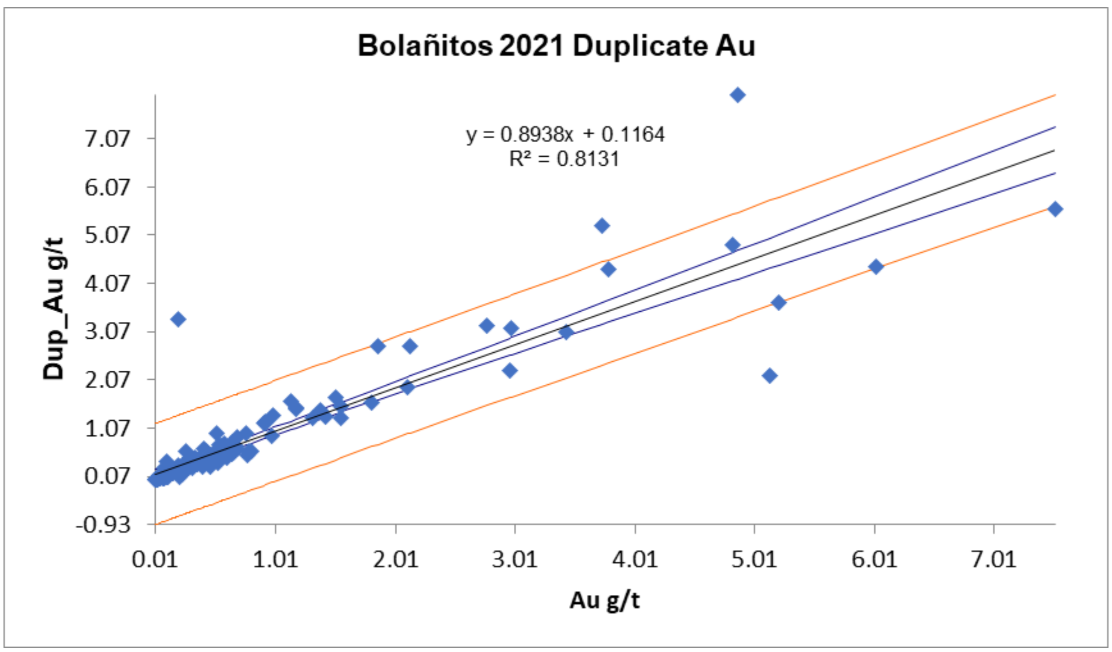



**Figure 11-10 Performance of Field Duplicates for Gold from Endeavour Silver's Bolañitos Drilling Program**

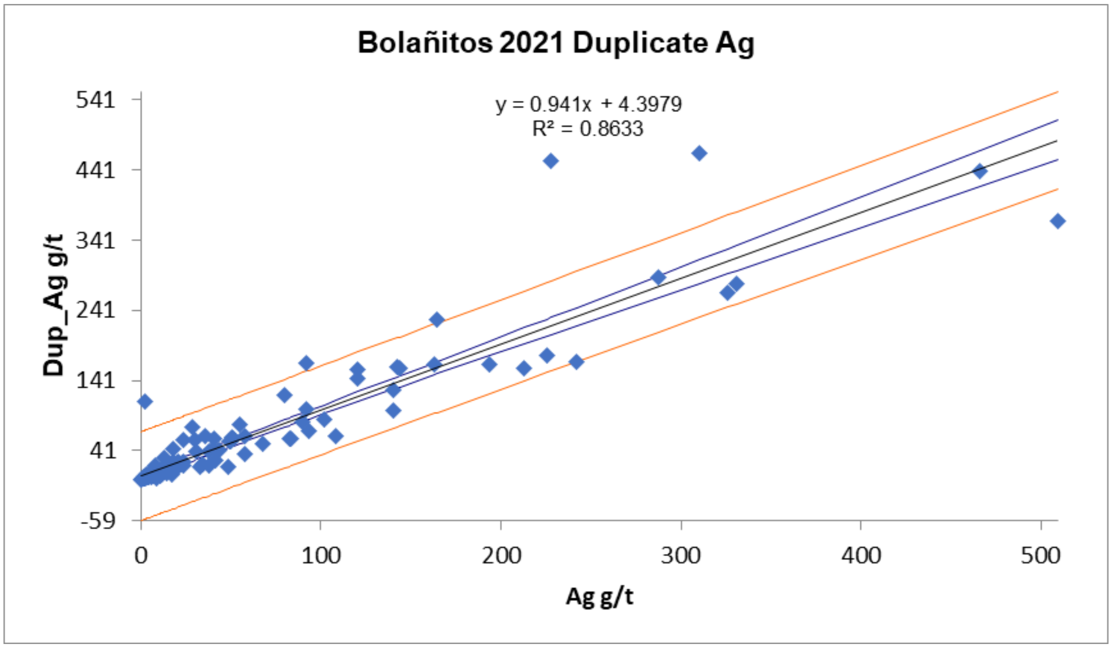



**Figure 11-11 Scatter Diagram of the Silver Re-Assayed ALS Samples**

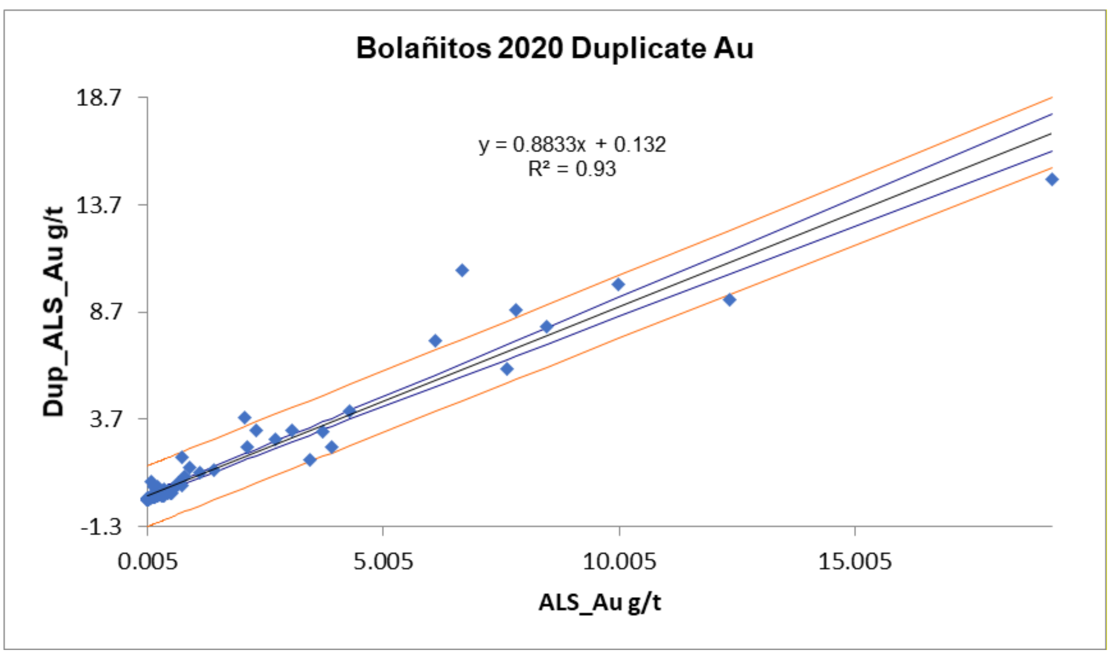



**Figure 11-12 Performance of Field Duplicates for Silver from Endeavour Silver's Bolañitos Drilling Program**

### *11.3.4.0 Exploration Standard Reference Samples*

In 2021, a total of 180 standard reference samples were submitted at an average frequency of 1 for each batch of 20 samples. The standard reference samples were ticketed with pre-assigned numbers to avoid inadvertently using numbers that were being used during logging.

Five different standards were submitted and analyzed for gold and silver. Table 11-9 shows a summary of the Certified Standard Reference Material Samples used during the Bolañitos surface and underground drilling program.

**Table 11-9 Reference Standards Used for Endeavour Silver's Surface & Underground Drilling Programs**

| Reference Standard | Reference Number | Reference Source | Control Limits | | | |
|---|---|---|---|---|---|---|
| | | | Certified Mean Value Au (g/t) | Certified Mean Value Ag (g/t) | Re-calculated Mean Value Au (g/t) | Re-calculated Mean Value Ag (g/t) |
| **edr-39** | CDN-ME-1305 | Cdn Resource Lab | 1.92 | 231 | 1.94 | 233.50 |
| **edr-41** | CDN-GS-2Q | Cdn Resource Lab | 2.37 | 73.2 | 2.42 | 73.98 |
| **edr-45** | CDN-ME-1505 | Cdn Resource Lab | 1.29 | 360 | 1.27 | 358.66 |
| **edr-47** | CDN-ME-1604 | Cdn Resource Lab | 2.51 | 299 | NA | NA |
| **edr-53** | CDN-ME-1501 | Cdn Resource Lab | 1.38 | 35 | 1.40 | 34.59 |

NA= Not Applicable

For each of the five standards used with greater than 25 sample results from the primary lab (SGS/ALS), mean and standard deviation was recalibrated using available data. This is an acceptable practice implementedto strengthen the control limits (CL) utilized in an ongoing QC program since a larger dataset being more reliable than the smaller number of round robin results used to calculate certified values.

For graphical analysis, results for the standards were scrutinized relative to the mean or control limit (CL), and a lower control limit (LL) and an upper control limit (UL), as shown in Table 11-10.

**Table 11-10 Performance Limits for Standards Used at the Bolañitos Project**

| Limit | Value |
|---|---|
| UL | Plus 2 standard deviations from the mean |
| CL | Recommended or Calculated value (mean) of standard reference material |
| LL | Minus 2 standard deviations from the mean |

EDR's general rules for the Standard Samples and the required actions are described in Table 11-11.

**Table 11-11 Company Protocol for Monitoring SRM Performance**

| Value | Status | Mineralized Zone | Action |
|---|---|---|---|
| **< 2 SD** | Acceptable | N/A | No action required |

| | | | |
|---|---|---|---|
| **< 2 - 3 SD (Single result; not consecutive)** | Acceptable | N/A | No action required |
| **> 3 SD (Single result; not consecutive)** | Warning | YES | Re-Analyze samples |
| | | NO | No action required |
| **> 2 SD (Two or more consecutive samples)** | Warning | YES | Re-Analyze samples |
| | | NO | No action required |

N/A Not Applicable

Results of each standard are reviewed separately and the analysis of the behavior of these materials and the taken actions are summarized in Table 11-12.

Except for the cases mentioned in Table 11-12, most values for gold and silver were found to be within the control limits, and the results are considered satisfactory. The mean of the SGS/ALS assays agrees well with the mean value of the standard.

Examples of control charts generated by EDR are shown in Figures 11-12 to 11-21 for the standard reference materials.

**Table 11-12 Summary of Analysis of Standard Reference Material**

| Reference Standard | Element | Observations | Comments |
|---|---|---|---|
| **EDR-39** | Au | Within established limits. | No action required |
| | Ag | One sample (BDH51244) greater than 3 standard deviations, not consecutive, no mineralized zone | No action required |
| **EDR-41** | Au | Two samples (BDH50970 and BDH51016) between plus two to three standard deviations, consecutive, no mineralized zone. | No action required |
| | Ag | Three samples (BDH52016, BDH52049 and BDH52074) between plus two to three standard deviations, consecutive, no mineralized zone. | No action required |
| **EDR-45** | Au | Within established limits. | No action required |
| | Ag | Two samples (BDH52365 and BDH52469) between plus two to three standard deviations, not consecutive. | No action required |
| **EDR-47** | Au | Two samples (BDH52350 and BDH52679) between plus two to three standard deviations, not consecutive. | No action required |
| | | Two samples (BDH52561 and BDH52599) between plus two to three standard deviations, consecutive, no mineralized zone. | No action required |
| | Ag | Within established limits. | No action required |
| **EDR-53** | Au | Within established limits. | No action required |
| | Ag | One sample (BDH52984) between plus two to three standard deviations, not consecutive. | No action required |
| | | One sample (BDH52798) greater than 3 standard deviations, not consecutive, no mineralized zone | No action required |

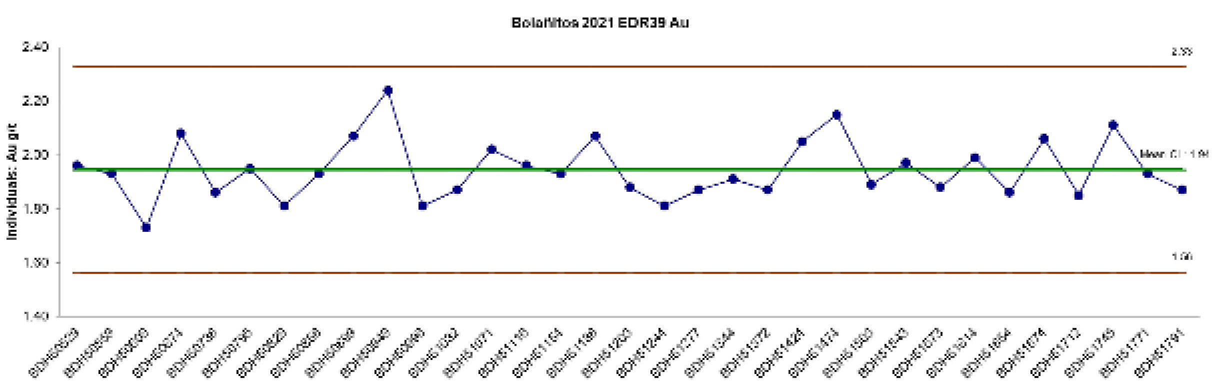



**Figure 11-13 Control Chart for Gold Assays from the Standard Reference Sample EDR-39**

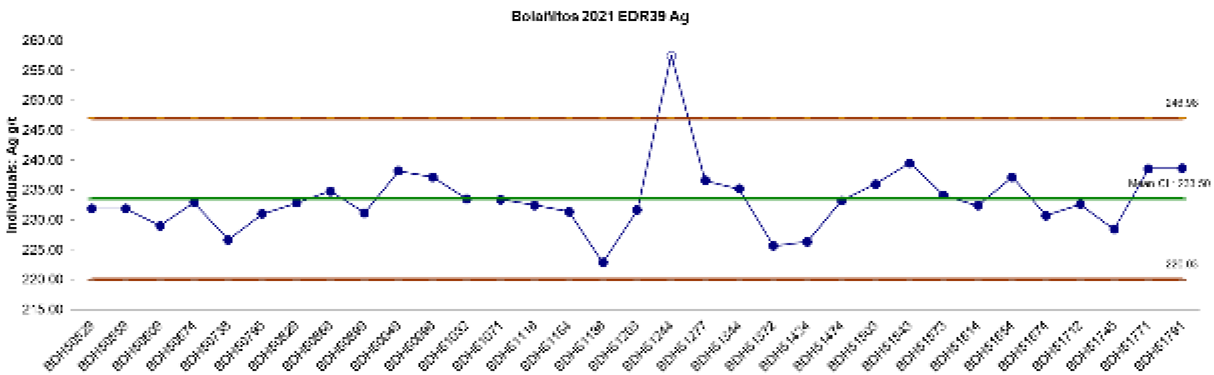



**Figure 11-14 Control Chart for Silver Assays from the Standard Reference Sample EDR-39**

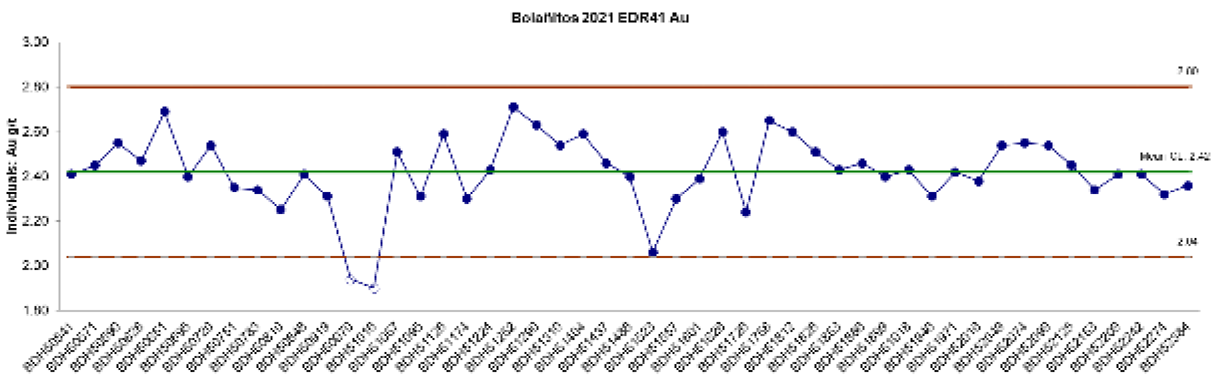



**Figure 11-15 Control Chart for Gold Assays from the Standard Reference Sample EDR-41**

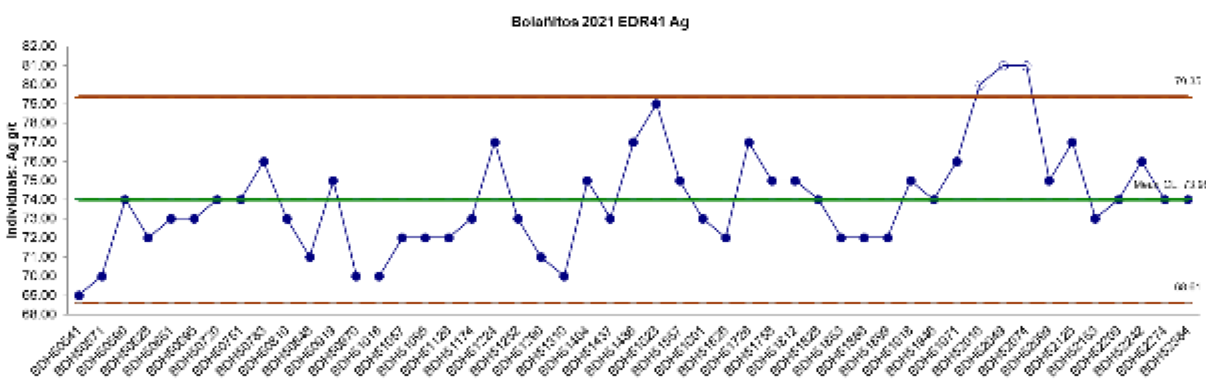



**Figure 11-16 Control Chart for Silver Assays from the Standard Reference Sample EDR-41**

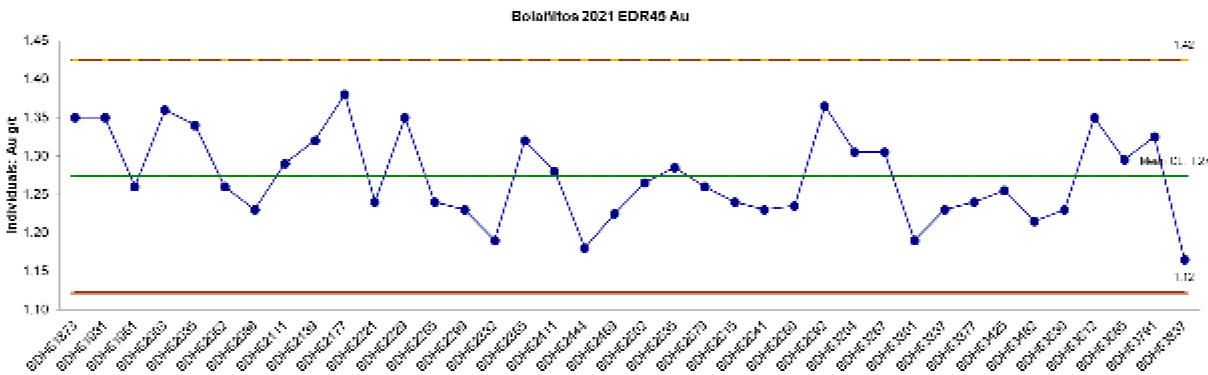



**Figure 11-17 Control Chart for Gold Assays from the Standard Reference Sample EDR-45**

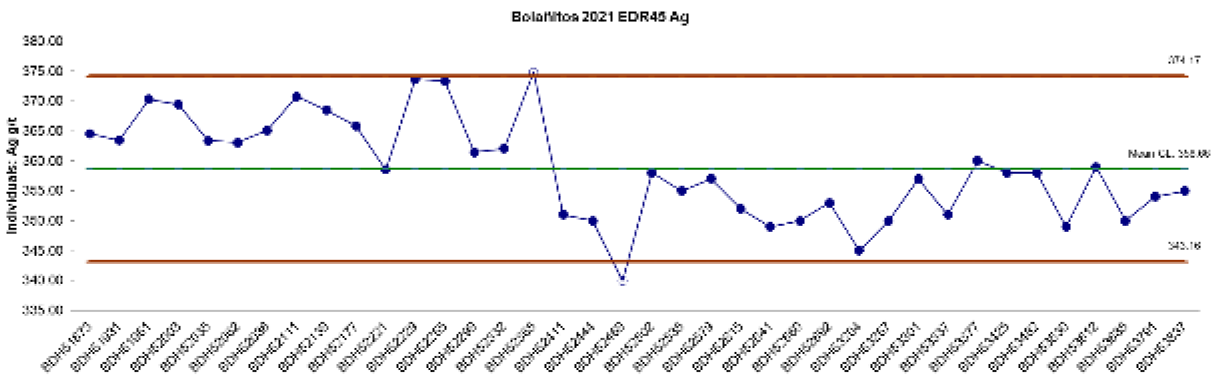



**Figure 11-18 Control Chart for Silver Assays from the Standard Reference Sample EDR-45**

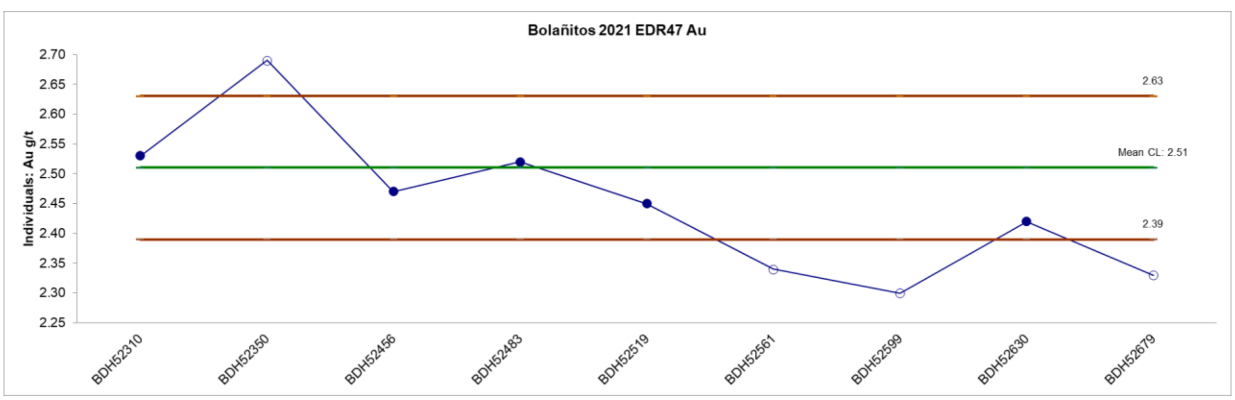



**Figure 11-19 Control Chart for Gold Assays from the Standard Reference Sample EDR-47**

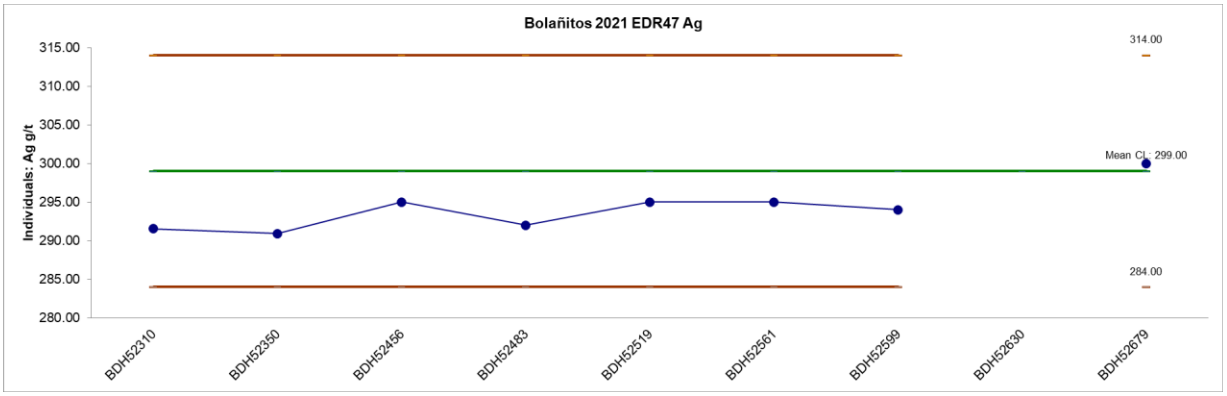



**Figure 11-20 Control Chart for Silver Assays from the Standard Reference Sample EDR-47**

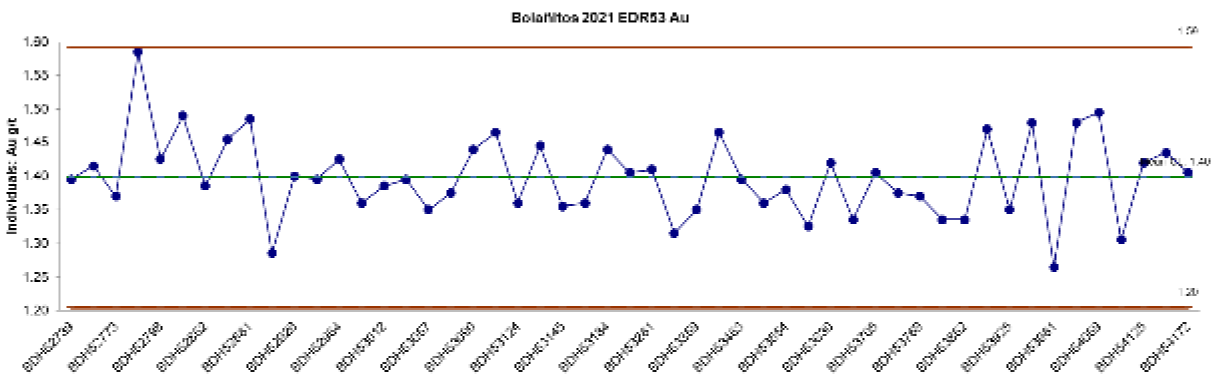



**Figure 11-21 Control Chart for Gold Assays from the Standard Reference Sample EDR-53**

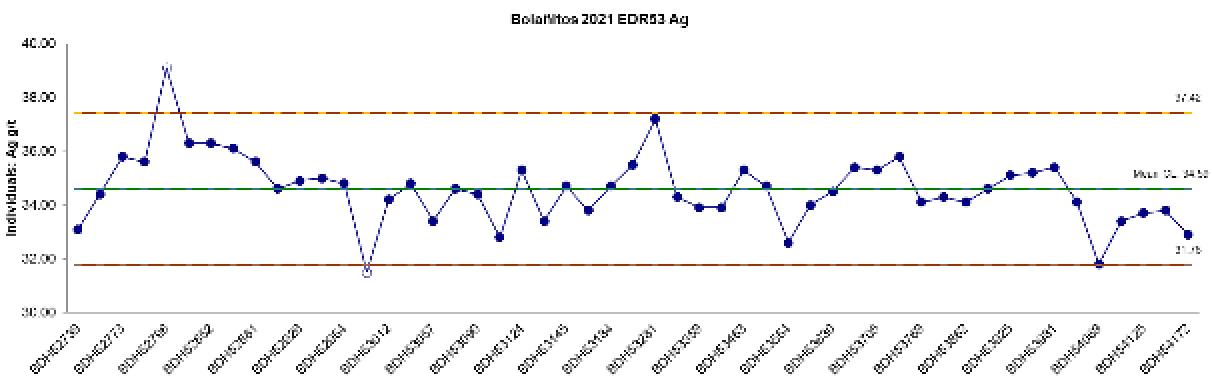



**Figure 11-22 Control Chart for Silver Assays from the Standard Reference Sample EDR-53**

### *11.3.4.0 Exploration Check Assaying*

Endeavour Silver routinely conducts check analyses at a secondary laboratory to evaluate the accuracy of the primary laboratory.

Random pulps were selected from original core samples and sent to a second laboratory to verify the original assays and monitor any possible deviation due to sample handling and laboratory procedures.

From January to Mid-June 2021, Endeavour Silver used the ALS Laboratory for check analyses; and from the End of June 2021, started using the ACTLABS laboratory.

A total of 180 pulps were sent to the third-party laboratory (93 samples to ALS and 87 samples to ACTLABS) for check analysis equating to approximately 4.9% of the total samples taken during the drilling program.

Correlation coefficients are high, at >0.96 for both gold and silver, showing excellent overall agreement between the original (SGS or ALS) assay and the check assay (ALS or ACTLABS).

The results of the check sampling program are shown by way of scatter diagrams in Figures 11-22 to 11-25.

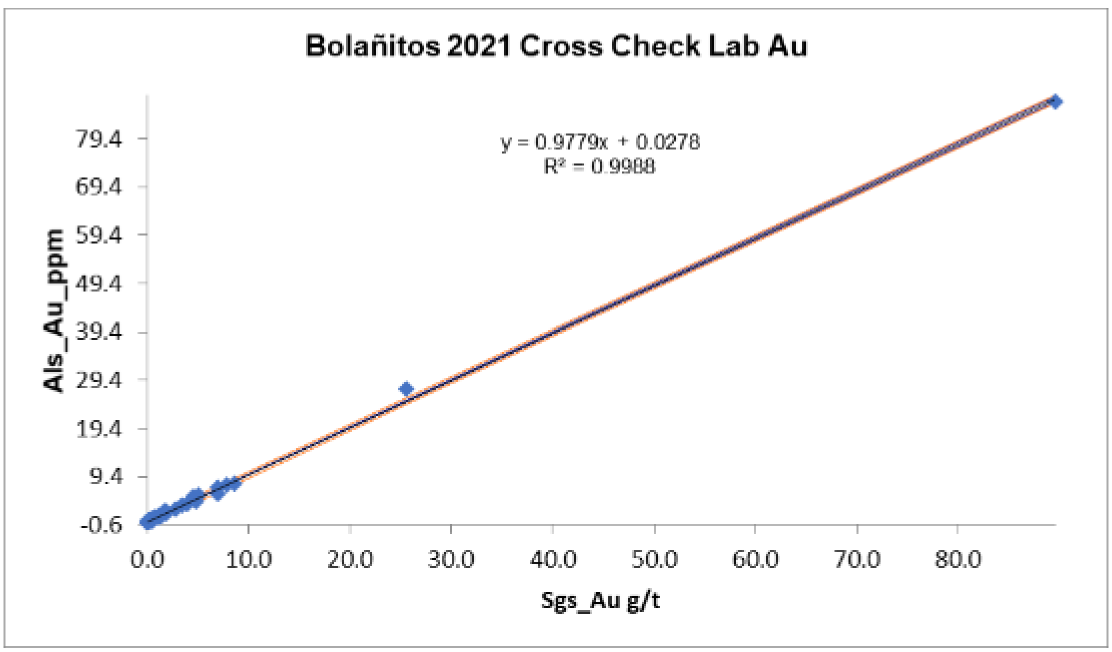



**Figure 11-22 Scatter Plot of Check Assays for Gold (SGS vs ALS)**

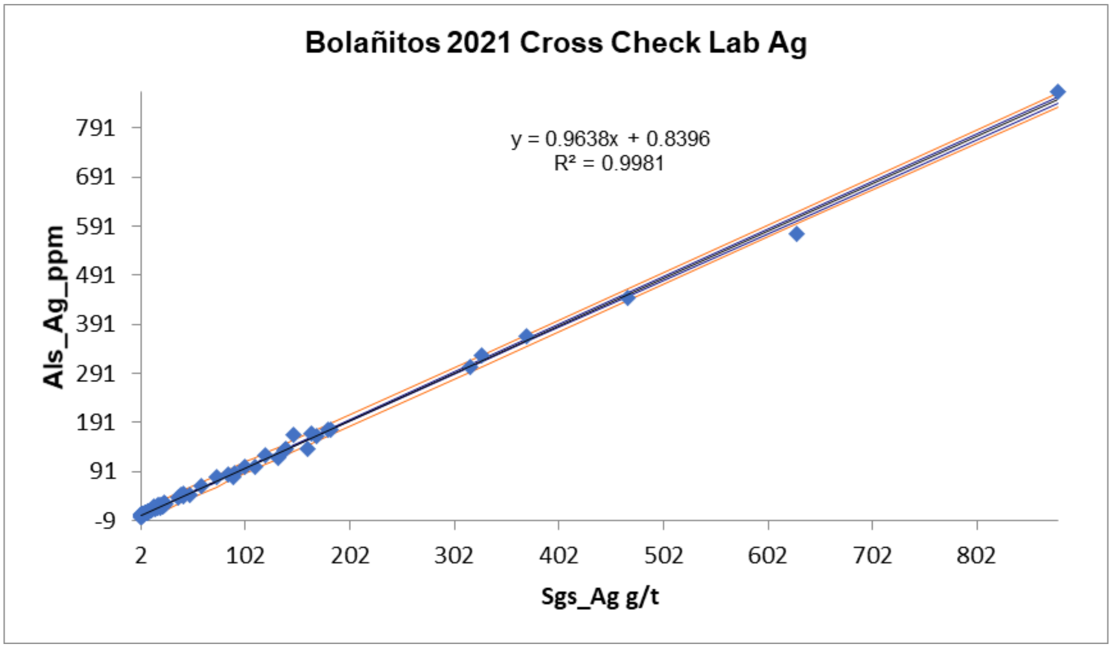



**Figure 11-23 Scatter Plot of Check Assays for Silver (ALS vs SGS)**

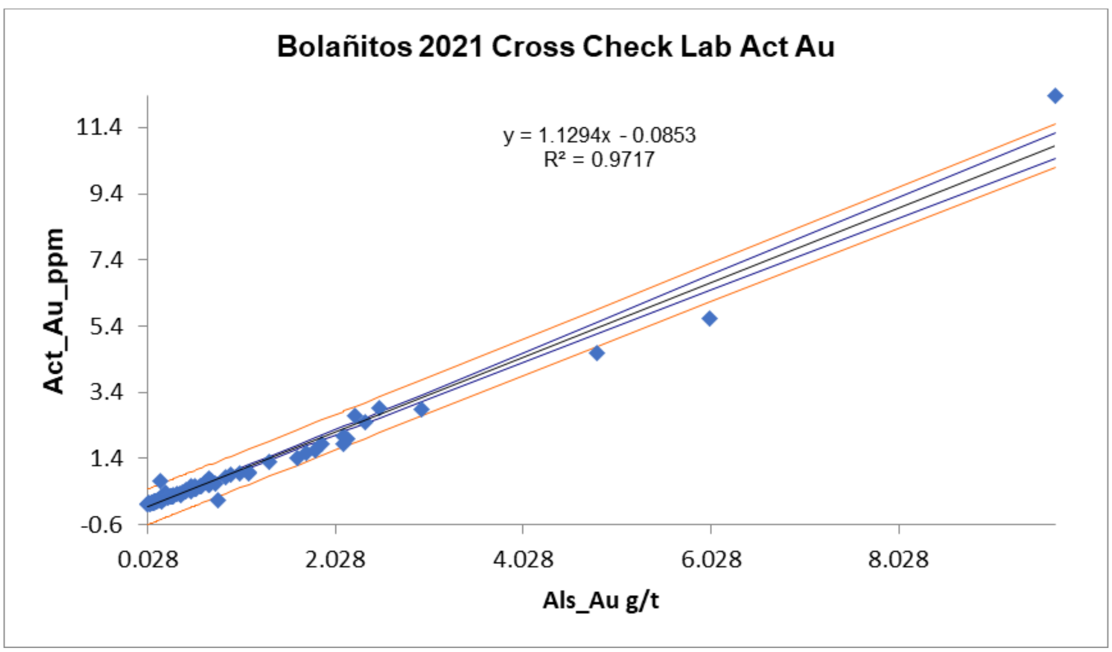



**Figure 11-24 Scatter Plot of Check Assays for Gold (SGS vs ALS)**

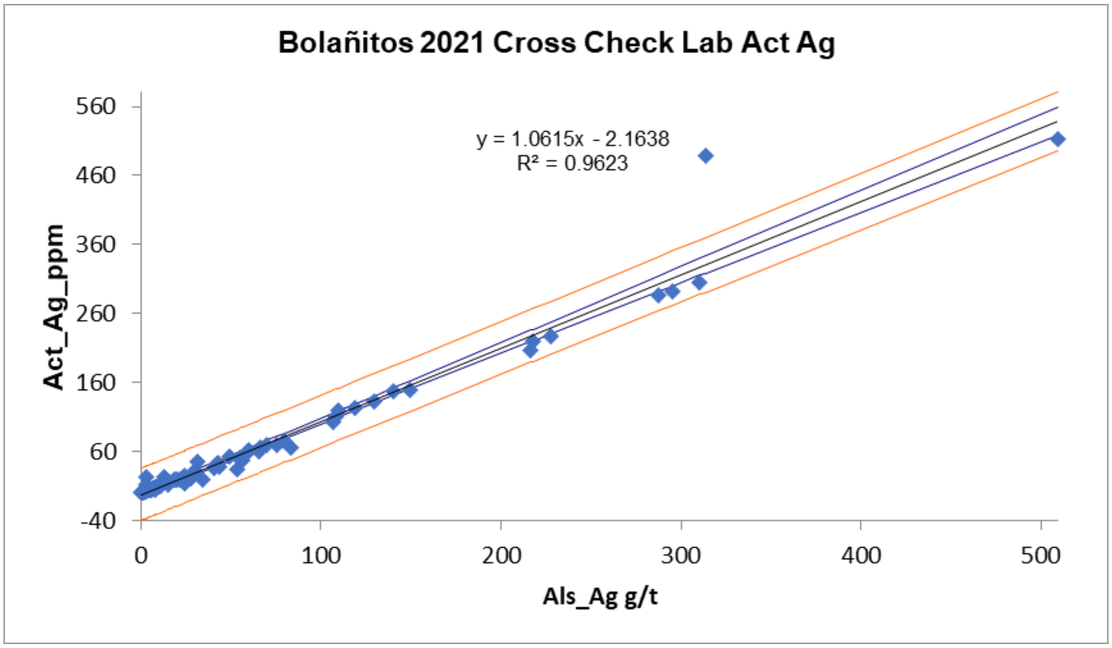



**Figure 11-25 Scatter Plot of Check Assays for Silver (SGS vs ALS)**

## 11.4 Adequacy of Data

### 11.4.1 Adequacy of Mine Sampling Procedures

Mr. Mah concludes that the exploration and production sample preparation, security and analytical procedures are correct and adequate for the purpose of this Technical Report. The sample methods and density are appropriate, and the samples are of sufficient quality to comprise a representative, unbiased database.

# 12. DATA VERIFICATION

The mineral resource estimate presented in report Section 14 is based on the following information with an effective date of May 31, 2022:

- Discussions with EDR personnel;
- Personal investigation of the Bolañitos Project mine site;
- A surface exploration and underground drilling database received as csv files;
- Production channel sample database received as csv files;
- Forty-Five 3D wireframed vein models;
- Production and reconciliation data;
- Polygonal 2D vein models for 10 veins, with resource calculations.

## 12.1 Site Investigation

Mr. Schwering conducted a site investigation along with EDR personnel at the Bolañitos mine camp on July 7th and July 8th of 2022.

Mr. Schwering reviewed core from four drillholes (Table 12-1). The primary purpose for reviewing the core was to verify the location of the vein intercepts compared to logs and assay data. All requested core intervals were available for review. The vein intercepts were easily identifiable, and Mr. Schwering concurred with the vein intercepts as logged by EDR geologists.

**Table 12-1 Drillhole Intervals Reviewed During Site Visit**

| Hole ID | From (m) | To (m) | Veins |
|---|---|---|---|
| CCU-05 | 50 | 249 | Cecilia Veins 1,2, & 3 |
| BVU-11 | 180 | 211 | Cecilia Vein 3 |
| LCU-38 | 166 | 180 | Lucero Vein 7 |
| BVU-48 | 100 | 125 | Bolañitos Veins 1 & 4 |

A tour of the underground mines included several stops at working faces where veins were exposed. The underground tour included stops at the Bolañitos, Lana, San Miguel, and Melladito vein systems. The veins, while narrow, are identifiable and match the orientations described by EDR staff geologists.

Mr. Schwering reviewed and observed the procedure for how data collected from underground channel sampling is managed by EDR. Hand drawn maps are made of the area being sampled by geologists with sample ID's, QA/QC samples, geologic information and locations being written on the log form. The samples are delivered to the Bolañitos assay laboratory, and the logs are delivered to the Geology office where the information contained in the log form are digitized into a master Excel spreadsheet. The assay laboratory provides the Geologic departments with an Excel spreadsheet with the assay results and sample numbers. A macro is then run to match the assay results from the laboratory to the samples entered into the master Excel spreadsheet. The use of the macro eliminates two potential database issues including:

- Translational errors (assay values accidently shifted by one or more samples) are eliminated because the sample ID's from the laboratory and the geologic office must match.
- Data entry errors are eliminated because both the laboratory and geology staff enter the sample ID's independently. Additionally, there is no opportunity to accidently enter the incorrect assay value for the sample.

After the macro is run successfully, the master Excel spreadsheet is delivered to the database manager where the information is converted to 3D space using a series of scripts to create collar, survey, assay, and lithology files. These files are then imported into Vulcan software and mechanically validated by the software. The procedure for drillhole data handling is similar to the procedure outlined above with the major difference being that assays for drillholes are analyzed at independent laboratories.

## 12.2 Database Audit

The surface drilling, underground drilling, and underground channel samples were combined into a single database for mineral resource estimation. Mr. Schwering conducted the following database audit procedures:

- A mechanical audit of the database;
- Spot checked the assay values contained in the exploration database with assay certificates from the EDR Bolañitos mine laboratory as well as certificates from SGS and Platinum;
- Validated the assay values contained in the 2D polygonal long sections by comparing with select, relevant historical assays and the original drawings.

## 12.3 Mechanical Audit

The mechanical audit of the combined database was completed using Leapfrog Geo® software version(s) 2021.2.4 and 2021.2.5. The database was checked for overlaps, gaps, duplicate channel samples, total drillhole length inconsistencies, non-numeric assay values, and negative numbers. All inconsistencies identified in the mechanical audit were resolved prior to estimation of mineral resources. Additionally, Mr. Schwering found that the value 987g/t Ag and 15g/t Au was repeated frequently in the database. It was determined that these assays were inadvertently capped in the database. A list of capped samples materially impacting the mineral resource estimate was submitted to EDR, and the uncapped assays were returned to Mr. Schwering prior to mineral resource estimation.

## 12.4 Manual Audit

Mr. Schwering spot checked 44 silver and gold assays from 2021 drillholes against original assay certificates from SGS or Platinum and found no errors. Additionally, 84 silver and gold assays from underground channel samples collected between 2012 and 2022 were spot checked against the Bolañitos laboratory results and no discrepancies were identified within the gold values. Three silver values in the database differed from the Bolañitos laboratory results but were found to be related to the capping issue described in the mechanical audit. The spot check in conjunction with the observed practice of data management and the advanced state of the project provided Mr. Schwering with confidence in the accuracy of the data used for mineral resource estimation.

## 12.5 Adequacy of Data

Mr. Schwering considers the database maintained by EDR to be suitable for mineral resource and mineral reserve estimation and can be used to support mine planning. The staff at EDR consistently enforce a rigorous QA/QC methodology for both drillholes and channel sampling as described in Section 11. All drill cores and cuttings from EDR's drilling have been photographed and the split core is securely stored and readily available for further checks.

The checks performed by Mr. Mah and Mr. Gray, including the continuous QA/QC checks conducted by the database administrator and Project geologists on the assay data and geological data are in line with or above industry standards for data verification. These checks have identified no material issues with the data or the project database. No material issues with the data or the Project database were identified at that time.

As part of site visits in 2022, Mr. Gray have personally verified data supporting the mineral reserve estimates (refer to Section 15). As a result of the data verification, the Mr. Gray concludes that the Project data and database are acceptable for use in mineral reserve estimation, and can be used to support mine planning.

# 13. MINERAL PROCESSING AND METALLURGICAL TESTING

Bolanitos has a long operating history and metallurgical recoveries are well documented. No recent external testing was undertaken and recent internal testwork has been focused on reducing arsenic recovery in the gold rich veins. Historical testwork is summarized in the following section.

## 13.1 Mineralogical Analysis

A mineralogical analysis of the concentrate samples at the University of San Luis Potosi determined that:

- 60-80% of silver is in Aguilarite $Ag_2(S,Se)$ (grains of size 10-60 µm, 40% liberated),
- 15-45% of silver is in Pirargirite $Ag_3SbS_3$ (grains of size 10-40 µm)
- Up to 5% of silver is in Freibergite $Cu_{12}Sb_4S_{12}/Ag$ (grains of size 10-40 µm),
- Up to 5% of silver may be in Argentite $Ag_2S$,
- Up to 0.5% of silver may be in Cerargirite AgCl, and
- Up to 10% of silver is in Electrum (3-90 µm) associated with Aguilarite, Pyrite, and Calcite.

## 13.2 Gravity Concentration

In January 2013, preliminary gravity concentration tests were performed using a lab scale Falcon concentrator. The samples were taken from flotation tailings, cyclone underflow, and ball mill discharge. The tests were carried out at 60 to 300 earth gravity accelerations and water pressure 2 psi. Electrum was visibly observed in gravity concentrates in all tests. The best results were obtained at 60 gravity accelerations recovering 20% of silver and 36% of gold into a concentrate; however, the concentrate grade (3.4% of feed weight) was low (209 g/t Ag and 8 g/t Au).

In 2014, tests on a larger scale were performed under the same conditions. In April 2014, Falcon staff conducted a test at the Bolañitos plant on approximately 70 kg (100%) of flotation tails and obtained 274 g of primary concentrate (0.39%). The primary concentrate was cleaned in the same Falcon concentrator and obtained 60 g (0.085%) of 2° clean concentrate. This concentrate was cleaned by a tentadura hand and obtained a concentrated final of 10.3 g (0.015%) with 258 g/t Ag and 20.8 g/t Au. The recovery of silver concentrate ultimately was 0.19% and gold was 1.1%. Based on these results, gravity concentration was found to be uneconomic. The estimated operating costs were three times the estimated increase in revenue. If lower operating costs, higher metal prices and a change in mineral with coarser gold materializes than the study should be reinvestigated.

## 13.3 Concentrate Sale vs. Cyanide Leaching

In 2008, EDR started processing the Bolañitos concentrate by cyanide leaching at the Guanaceví plant. The average recoveries were 88% of silver and 90% of gold. By the end of 2012, EDR determined that selling the concentrate sale more economic than cyanide leach and began selling to the concentrate traders.

## 13.4 Comments on Section 13

The Bolañitos mines have a long history of successful operation and processing and have plans to continue. The QP is of the opinion that the level of metallurgical testing is appropriate for the duration of the life of the mine plan.

# 14. MINERAL RESOURCE ESTIMATES

Richard A. Schwering SME-RM with Hard Rock Consulting, LLC ("HRC"), is responsible for the estimation of the mineral resource herein. Mr. Schwering is a qualified person as defined by NI 43-101 and is independent of EDR. Mineral resources for the Bolañitos mine were estimated from drillhole and channel sample data, constrained by geologic vein boundaries using two methods. 3D block models were estimated using an ordinary kriging ("OK") algorithm using Leapfrog Geo® and Leapfrog EDGE® software version(s) 2021.2.4 and 2021.2.5 ("Leapfrog"). Veins converted to 2D vertical longitudinal projections ("VLP") were estimated using polygonal methods. The metals of interest at Bolañitos are gold and silver.

The mineral resources contained within this Technical Report have been classified under the categories of Measured, Indicated and Inferred in accordance with standards as defined by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (May 10, 2014) and Best Practices Guidelines (November 29, 2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

## 14.1 Methodology

The Bolañitos mineral resource is comprised of 55 individual veins. The veins are further subdivided into vein sets and modeling method. The mineral resources have been estimated using either a Vertical Longitudinal Projection ("VLP") polygonal method (10 veins) or as 3-dimensional ("3D") block models (45 veins). Table 14-1 describes the veins estimated with 3D block models. Table 14-2 describes veins modeled using the VLP methodology.

**Table 14-1 Veins Modeled using 3D Block Modeling Methods**

| Vein Set | Block Model | Vein Code | Modeled By | Dip | Dip Azi. | Wireframe Volume (m³) |
|---|---|---|---|---|---|---|
| Belen | BEL1 | BEL3 | HRC | 50 | 232 | 75,284 |
| | | BEL4 | HRC | 50 | 234 | 98,645 |
| | | BEL5 | HRC | 52 | 233 | 25,482 |
| | | BEL6 | HRC | 55 | 233 | 48,742 |
| | | BEL7 | HRC | 48 | 231 | 27,167 |
| | | BEL8 | HRC | 45 | 257 | 30,145 |
| Bolañitos | BOL1 | BOL1 | EDR | 60 | 73 | 219,230 |
| | | BOL4 | EDR | 70 | 80 | 94,077 |
| | | BOL11 | EDR | 66 | 68 | 35,895 |
| | | BOL12 | EDR | 70 | 72 | 107,180 |
| | | BOL13 | EDR | 60 | 84 | 4,639 |
| | BOL2 | BOL9 | EDR | 79 | 243 | 7,853 |
| | | BOL15 | EDR | 80 | 253 | 10,353 |
| | | BOL16 | EDR | 80 | 243 | 4,636 |
| | | BOL18 | EDR | 80 | 250 | 11,719 |
| | | BOL19 | EDR | 80 | 240 | 4,976 |
| Cecilia | CEC1 | CEC1 | EDR | 42 | 257 | 60,315 |
| | | CEC2 | EDR | 40 | 230 | 20,767 |
| | | CEC3 | EDR | 45 | 267 | 23,927 |
| | | CEC4 | EDR | 31 | 270 | 8,534 |
| Herradura | HER1 | HER1 | EDR | 69 | 95 | 137,430 |
| | | HER2 | EDR | 80 | 90 | 26,587 |
| Karina | KAR1 | KAR1 | EDR | 63 | 220 | 225,120 |
| Lana | LAN1 | LAN1 | HRC | 60 | 240 | 288,100 |
| | | LAN3 | EDR | 61 | 238 | 17,899 |
| | | LAN4 | EDR | 67 | 244 | 16,297 |
| | LAN2 | LAN5 | EDR | 65 | 234 | 38,743 |
| | | LAN6 | EDR | 76 | 241 | 15,682 |

| Vein Set | Block Model | Vein Code | Modeled By | Dip | Dip Azi. | Wireframe Volume (m³) |
|---|---|---|---|---|---|---|
| La Luz | LLN1 | LLN1 | HRC | 64 | 268 | 246,140 |
| Lucero | LUC1 | LUC1 | EDR | 60 | 240 | 70,563 |
| | | LUC4 | EDR | 65 | 234 | 12,218 |
| | LUC6 | LUC6 | EDR | 82 | 270 | 8,960 |
| | LUC7 | LUC7 | EDR | 65 | 219 | 27,675 |
| Melladito | MEL | MEL1 | EDR | 59 | 87 | 691,600 |
| | | MEL2 | EDR | 63 | 83 | 135,010 |
| | | MEL3 | EDR | 56 | 93 | 28,100 |
| | | MEL4 | EDR | 71 | 76 | 56,130 |
| Plateros | PLT1 | PLT1 | EDR | 60 | 242 | 134,930 |
| | | PLT11 | EDR | 60 | 245 | 224,470 |
| San Ignacio | SIG4 | SIG4 | EDR | 73 | 49 | 71,210 |
| San Miguel | SIG1 | SMI1 | HRC | 75 | 70 | 129,380 |
| | SIG2 | SMI2 | EDR | 87 | 235 | 17,313 |
| | | SMI3 | EDR | 79 | 247 | 4,331 |
| San Bernabe | SNB1 | SNB1 | EDR | 85 | 91 | 20,042 |
| | SNB2 | SNB2 | EDR | 79 | 263 | 24,134 |

**Table 14-2 Veins Modeled using VLP Methods**

| Model Area | Vein | Modeled By | Dip | Strike | Mean True Thickness (m) |
|---|---|---|---|---|---|
| Golandrinas | Canarios | EDR | - | N30W | 0.9 |
| | Candelaria | EDR | - | N48W | 1.2 |
| | Los Reyes | EDR | - | N10W | 1.9 |
| | San Francisco | EDR | - | N45W | 1.5 |
| | Block/sfv/sfv-3 | | | | 1.6 |
| | Sierra Mojada | EDR | - | N45W | 0.6 |
| La Joya | La Joya | EDR | 55 | N52W | 4.8 |
| | La Joya Sur | EDR | 78 | N52W | 2.0 |
| La Luz San Bernabe | La Luz-San Bernabe | EDR | 58 | N00S | 1.5 |
| Cebada | Veta Madre | EDR | 55 | N45W | 2.3 |

## 14.2 Vertical Longitudinal Projection

The resources based on the 2D polygonal methods are estimated by using a fixed distance Vertical Longitudinal Projection (VLP) from sample points. The VLPs are created by projecting vein geology and underground workings onto a vertical 2D long section. Figure 14-1 displays the VLP for the La Joya veins. Resource blocks are constructed on the VLP based on the sample locations in the plane of the projection. EDR geologists review the data for sample trends and delineate areas with similar characteristics along the sample lines. The areas are then grouped based on mining requirements and the average grades and thicknesses of the samples are tabulated for each block. Resource volumes are calculated from the delineated area and the horizontal thickness of the vein, as recorded in the sample database. The volume and density are used to determine the overall resource tonnage for each area, and the grades are reported as a length weighted average of the samples inside each resource block.

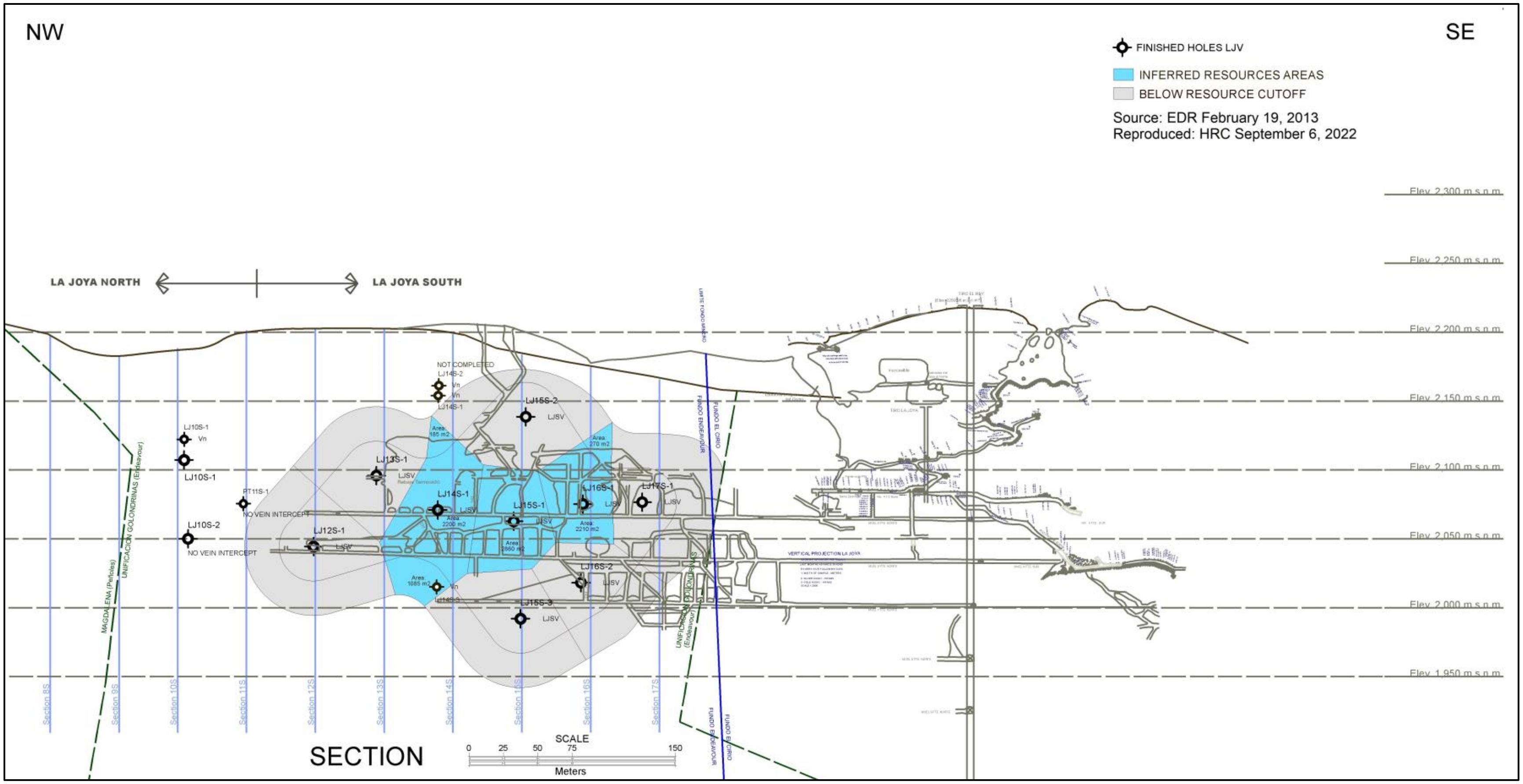



**Figure 14-1 VLP Showing the La Joya Veins with Inferred, and Low-Grade Resource Blocks**

### 14.2.1 Composite Calculations

Composites for 2D estimates are calculated from underground channel samples and drillhole intercepts. Underground channel samples taken perpendicular to the vein approximately every 3m along strike of the vein to determine variability in grade and thickness. The samples are grouped into a uniform composite length by using a length weighted average to determine the grade. Drillhole intercepts of the vein are composited to a single interval with true thickness calculated using the angle of the drillhole and the angle of the vein. A single or multiple composites are then used to determine the average grade of a resource block.

### 14.2.2 Area and Volume Calculations

The dip of the vein and true thickness are known variables. Volume is calculated by multiplying the area of the resource block by the horizontal thickness. The horizontal thickness is used for volume calculations to compensate for the reduction in area when translating the vein to a VLP (Figure 14-2).

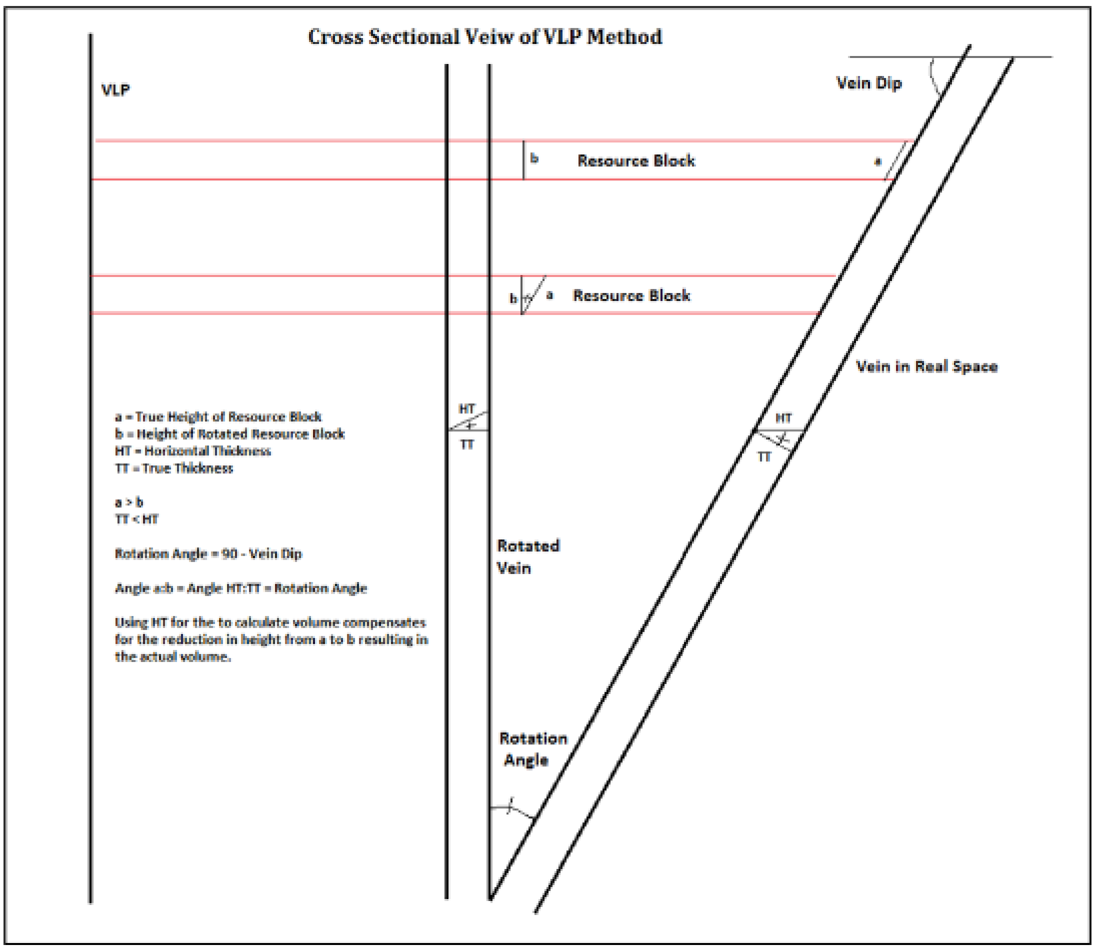



**Figure 14-2 Cross Section Diagram of VLP Method**

### 14.2.3 Validation

Mr. Schwering validated the mineral resource estimates using VLP methods by completing the following steps:

- The VLP files were sent to Mr. Schwering as AutoCad .dwg files. These were loaded into ArcGIS® version 10.3.1. The scale of the .dwg file was confirmed and the area of the mineral resource blocks above cut-off were measured and confirmed.
- Excel spreadsheets containing the composite, grade, thickness, volume, and contained metal calculations for the VLP method were reviewed and confirmed. If errors were found, the corrected values were re-calculated.

### 14.2.4 Density

Volumes were converted into tonnes using a constant density of 2.5 g/cm$^3$. The density is consistent with measurements described in Table 14-10.

### 14.2.5 VLP Mineral Resource Classification

All mineral resources estimated using the VLP method were assigned a classification of Inferred reflecting Mr. Schwering's assessment of the higher risk associated with this type of method compared to more modern techniques.

## 14.3 3D Block Model Method

### 14.3.1 Geologic Model

Forty-five veins were modeled by EDR staff using a series of cross-sectional interpretations. The sectional interpretations are based primarily on composite intercepts and are used to construct 3D vein solids in Vulcan. Cross-sections orthogonal to the strike of the vein and level plan sections were used to ensure the modeled vein location was within close proximity to vein intercepts. The surfaces were evaluated in 3D to ensure that both the down dip and along strike continuity was maintained throughout the model.

Mr. Schwering validated the vein model by loading the Vulcan wireframes into Leapfrog. The veins were reviewed to ensure the volumes were valid, had no open holes, were properly terminating against crossing veins and topography. In some cases, errors identified were corrected using simple boolean techniques for the EDR wireframes. In other cases, Mr. Schwering opted to remodel the veins in Leapfrog using the vein modeling method which constructs a footwall and hanging wall surface from vein intercepts to create a vein volume. Ten veins were re-modeled by Mr. Schwering and are denoted in Table 14-1 with the identifier "HRC" in the Modeled By column.

In addition to the validation described above, Mr. Schwering reviewed the drillholes intersecting the vein to ensure all drillholes intersecting the vein included a vein intercept. If this was not true, Mr. Schwering added the vein intercept to the drillhole using drillhole logs in conjunction with gold and silver grade. If the drillhole lacked both lithology and grade intervals, the vein intercept was assigned a value of 0.001 g/t for both silver and gold at the intersection of the vein.

As a final step in validation, the true thickness statistics from composites were compared to the thickness statistics of the veins from the block models. The comparisons are presented in Table 14-4, in most cases the average difference is within 0.5 meters. Seven veins had a difference in average thickness between 0.5 and 1.0 meters. No vein had a difference of average thickness exceeding 1.0 meters.

Figure 14-3 and Figure 14-4 are 20-meter-thick cross sections of the Bolañitos vein set and Belen vein set with the drillholes and channel samples displayed. Figure 14-5 shows the location of the 3D modeled veins for the entire Bolañitos Vein complex in plan view.

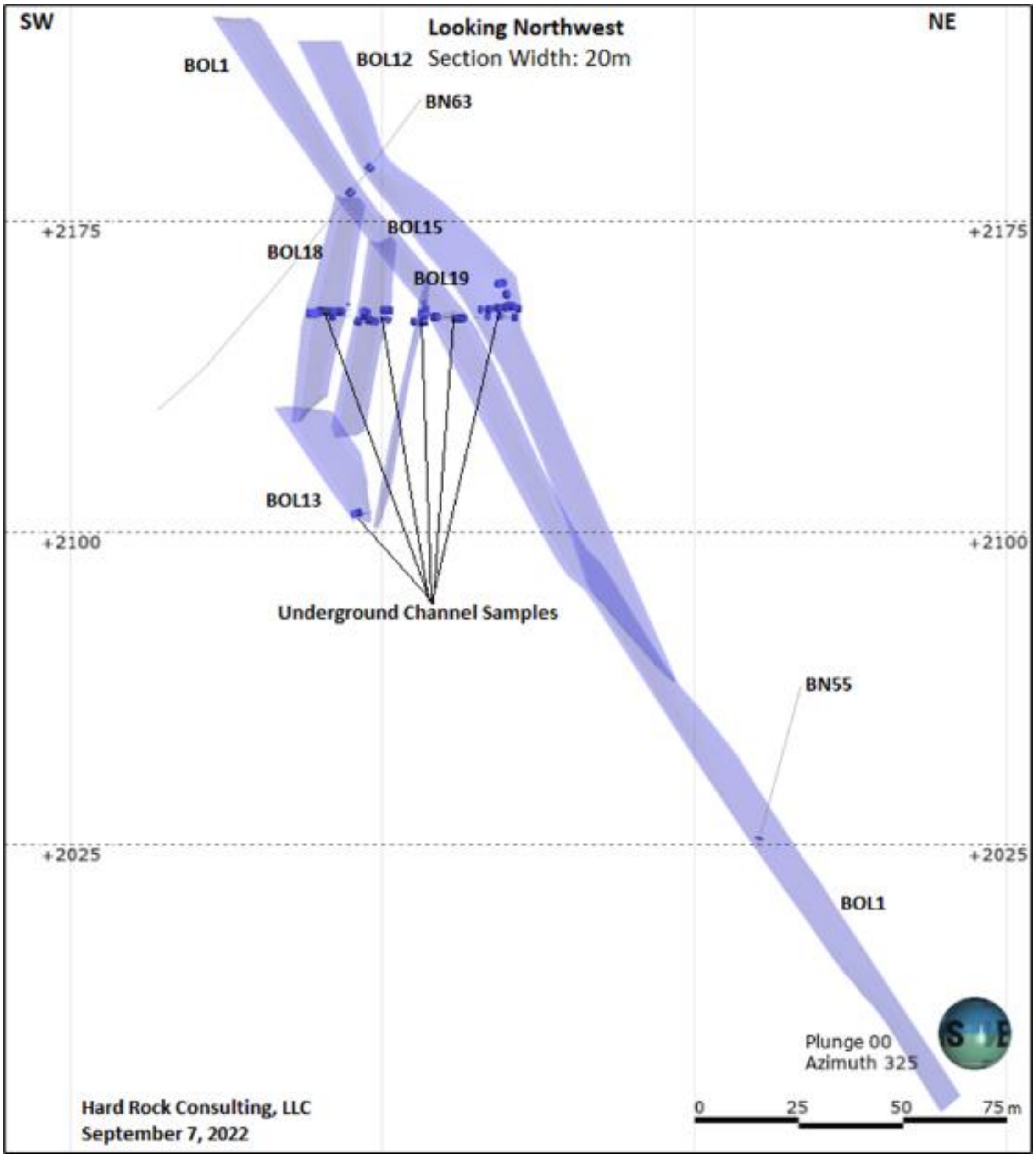



**Figure 14-3 Cross Section of Bolañitos Veins Set showing Drillhole and Channel Sample Selections.**

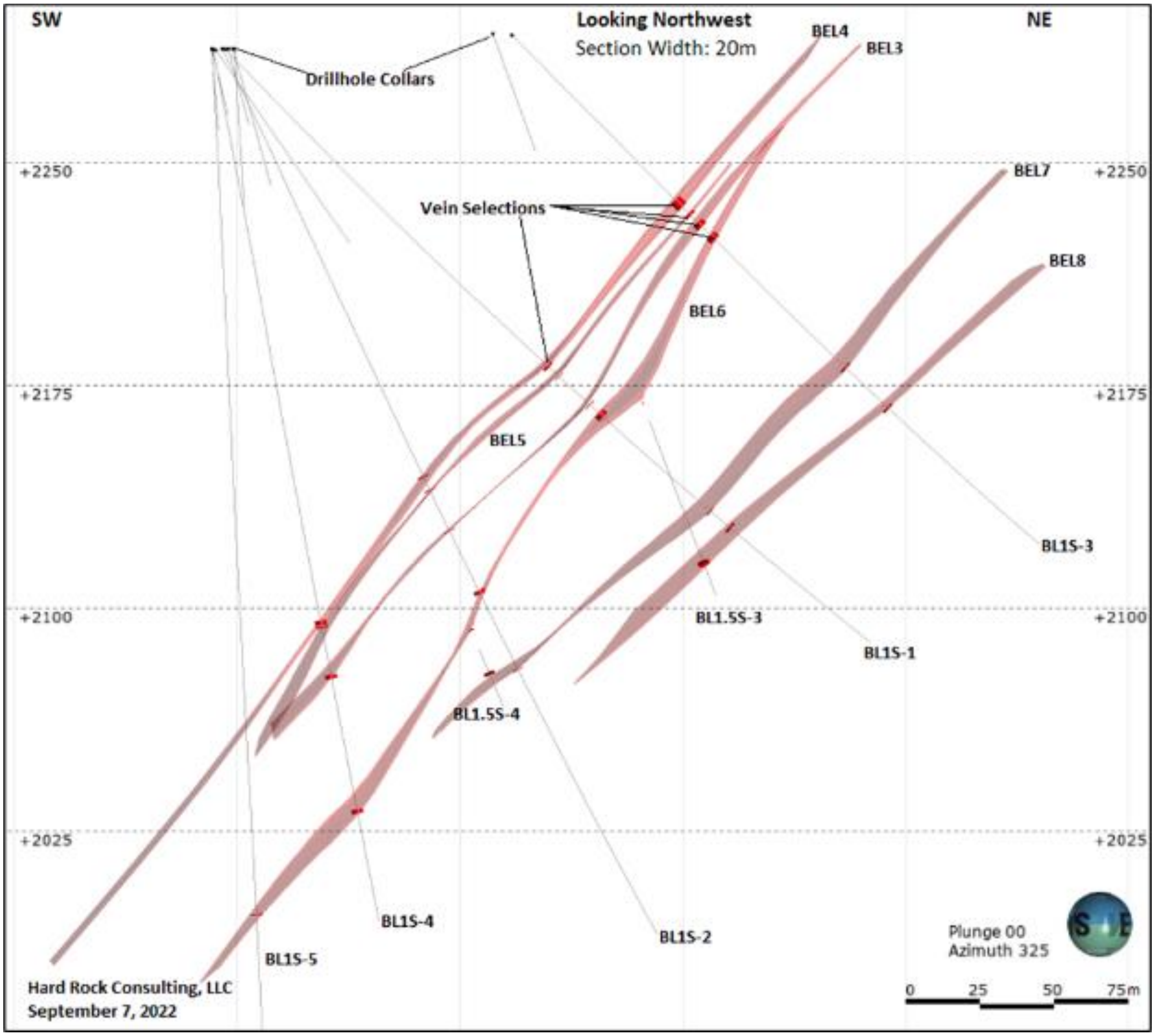



**Figure 14-4 Cross Section of the Belen Vein Set showing Drillhole Selections**

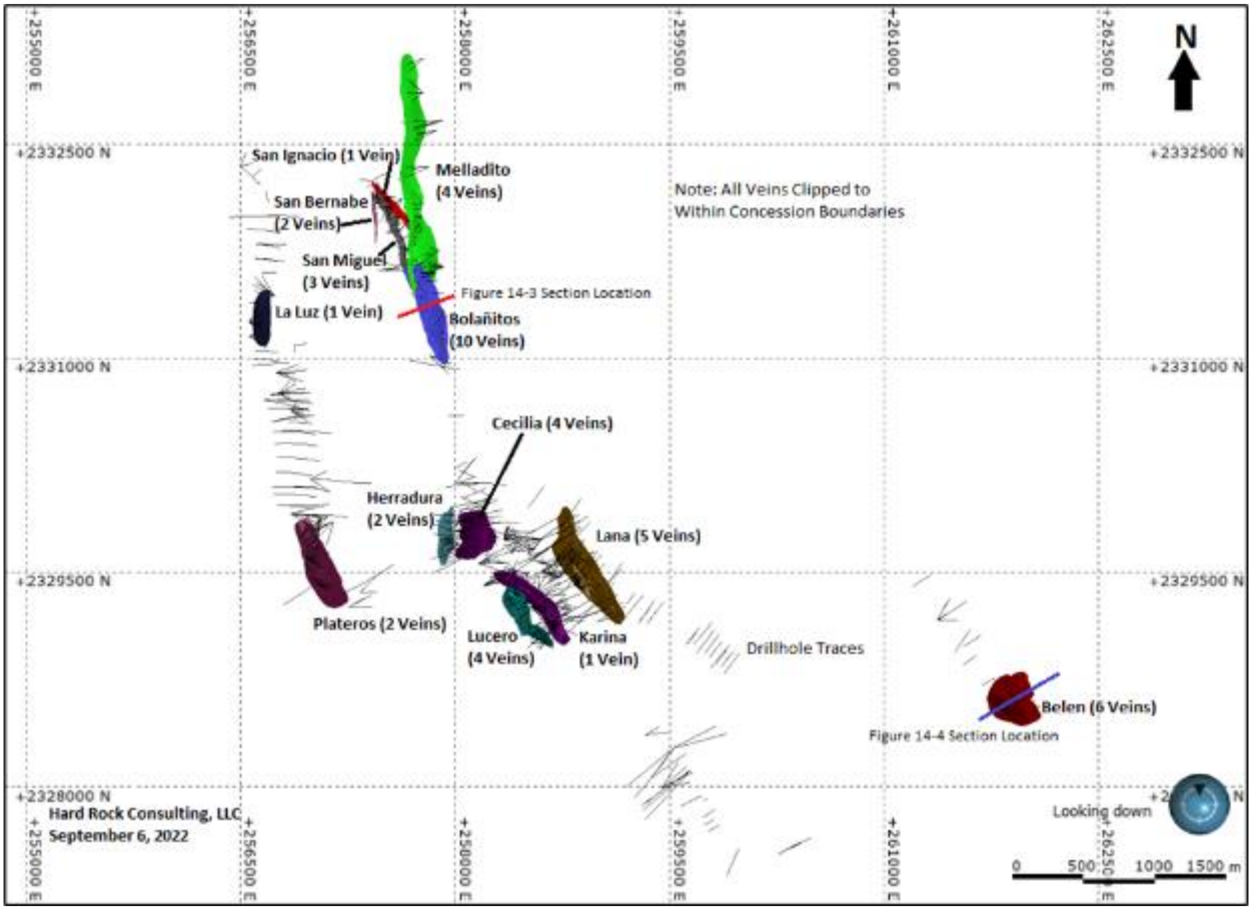



**Figure 14-5 Plan View of Bolañitos Wireframe Veins grouped by Vein Set.**

### 14.3.2 Block Model

The 3D geologic solids were converted to block models using Leapfrog. The model prototypes are rotated along strike and down dip and encompass the entire vein. Various block sizes were used along strike and down dip. The blocks for thickness were sub-blocked to the thickness of the vein wireframe. A summary of the block model parameters is shown in Table 14-3. As a validation, the veins wireframe volume was compared to the volume of the coded vein in the block model. The differences in volume never exceed +/-0.6%. Table 14-4 shows the volume comparison by vein as well as the comparison between block model average thickness and average true thickness from composites.

**Table 14-3 Bolañitos Block Model Parameters**

| Block Model | Origin (Upper Right Corner) | | | Rotation | | Block Size (m) | | | Number of Blocks | | | Sub Blocking | | | Minimum Block Size (m) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | X | Y | Z | Z (1st) | X (2nd) | X (Along Strike) | Y (Down Dip) | Z (Thickness) | X | Y | Z | X | Y | Z | X | Y | Z |
| BEL1 | 262,100.0 | 2,328,470.0 | 2,340.0 | 235.0 | 50.0 | 5.0 | 5.0 | 175.0 | 89 | 90 | 1 | 1 | 1 | Variable | 5.0 | 5.0 | 0.10 |
| BOL1 | 257,710.0 | 2,331,670.0 | 2,300.0 | 75.0 | 60.0 | 3.0 | 3.0 | 150.0 | 255 | 122 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| BOL2 | 257,915.0 | 2,331,045.0 | 2,203.8 | 245.0 | 80.0 | 3.0 | 3.0 | 50.0 | 167 | 39 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| CEC1 | 258,245.0 | 2,329,615.0 | 2,340.0 | 255.0 | 40.0 | 3.0 | 3.0 | 150.0 | 118 | 113 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| HER1 | 257,940.0 | 2,329,970.0 | 2,375.0 | 95.0 | 70.0 | 3.0 | 3.0 | 75.0 | 142 | 120 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| KAR1 | 258,840.0 | 2,329,050.0 | 2,405.0 | 220.0 | 65.0 | 3.0 | 3.0 | 150.0 | 245 | 113 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| LAN1 | 259,190.0 | 2,329,145.0 | 2,325.0 | 240.0 | 60.0 | 3.0 | 3.0 | 100.0 | 311 | 157 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| LAN2 | 259,070.0 | 2,329,170.0 | 2,265.0 | 235.0 | 70.0 | 3.0 | 3.0 | 100.0 | 154 | 80 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| LLN1 | 256,700.0 | 2,331,075.0 | 2,095.0 | 270.0 | 65.0 | 3.0 | 3.0 | 50.0 | 135 | 104 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| LUC1 | 258,560.0 | 2,329,075.0 | 2,365.0 | 240.0 | 60.0 | 3.0 | 3.0 | 100.0 | 128 | 105 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| LUC6 | 258,455.0 | 2,329,035.0 | 2,295.0 | 270.0 | 80.0 | 3.0 | 3.0 | 50.0 | 72 | 50 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| LUC7 | 258,710.0 | 2,329,005.0 | 2,350.0 | 220.0 | 65.0 | 3.0 | 3.0 | 50.0 | 91 | 83 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| MEL1 | 257,605.0 | 2,333,130.0 | 2,280.0 | 85.0 | 60.0 | 3.0 | 3.0 | 150.0 | 602 | 143 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| PLT1 | 257,255.0 | 2,329,280.0 | 2,265.0 | 245.0 | 60.0 | 3.0 | 3.0 | 100.0 | 229 | 162 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| SIG4 | 257,410.0 | 2,332,230.0 | 2,255.0 | 50.0 | 75.0 | 3.0 | 3.0 | 50.0 | 172 | 71 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| SMI1 | 257,475.0 | 2,332,165.0 | 2,235.0 | 70.0 | 75.0 | 3.0 | 3.0 | 75.0 | 222 | 103 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| SMI2 | 257,580.0 | 2,331,890.0 | 2,210.0 | 235.0 | 85.0 | 3.0 | 3.0 | 75.0 | 235 | 85 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.05 |
| SNB1 | 257,465.0 | 2,332,030.0 | 2,230.0 | 90.0 | 85.0 | 3.0 | 3.0 | 50.0 | 78 | 49 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |
| SNB2 | 257,433.2 | 2,331,923.5 | 2,209.0 | 265.0 | 80.0 | 3.0 | 3.0 | 50.0 | 85 | 39 | 1 | 1 | 1 | Variable | 3.0 | 3.0 | 0.10 |

**Table 14-4 Volume and Thickness Comparisons**

| Block Model | Vein | Volume (m³) | | | Average Thickness (m) | | |
|---|---|---|---|---|---|---|---|
| | | Wireframe | Block Model | % Difference | Block Model | Composites | Difference |
| BEL1 | BEL3 | 75,284.0 | 75,176.3 | -0.14% | 1.5 | 2.5 | 1.0 |
| | BEL4 | 98,645.0 | 98,372.4 | -0.28% | 1.3 | 1.7 | 0.4 |
| | BEL5 | 25,482.0 | 25,487.0 | 0.02% | 0.8 | 0.9 | 0.1 |
| | BEL6 | 48,742.0 | 48,727.6 | -0.03% | 1.0 | 1.2 | 0.2 |
| | BEL7 | 27,167.0 | 27,141.2 | -0.09% | 0.6 | 0.8 | 0.2 |
| | BEL8 | 30,145.0 | 30,126.6 | -0.06% | 0.6 | 0.7 | 0.0 |
| BOL1 | BOL1 | 219,230.0 | 219,295.1 | 0.03% | 1.7 | 2.3 | 0.5 |
| | BOL4 | 94,077.0 | 94,032.1 | -0.05% | 1.5 | 2.0 | 0.5 |
| | BOL11 | 35,895.0 | 35,834.8 | -0.17% | 1.3 | 2.0 | 0.8 |
| | BOL12 | 107,180.0 | 107,230.2 | 0.05% | 1.8 | 1.8 | 0.0 |
| | BOL13 | 4,638.5 | 4,664.0 | 0.55% | 1.5 | 1.6 | 0.1 |
| | BOL9 | 7,852.5 | 7,867.7 | 0.19% | 1.7 | 2.0 | 0.3 |
| BOL2 | BOL15 | 10,353.0 | 10,394.0 | 0.40% | 1.4 | 1.7 | 0.3 |
| | BOL16 | 4,636.3 | 4,642.7 | 0.14% | 0.6 | 0.9 | 0.3 |
| | BOL18 | 11,719.0 | 11,687.0 | -0.27% | 2.0 | 1.8 | -0.2 |
| | BOL19 | 4,976.4 | 4,961.6 | -0.30% | 1.2 | 1.4 | 0.2 |
| CEC1 | CEC1 | 60,315.0 | 60,261.8 | -0.09% | 1.1 | 1.2 | 0.1 |
| | CEC2 | 20,767.0 | 20,775.1 | 0.04% | 0.8 | 0.9 | 0.1 |
| | CEC3 | 23,927.0 | 23,928.5 | 0.01% | 0.6 | 0.8 | 0.2 |
| | CEC4 | 8,533.7 | 8,541.9 | 0.10% | 0.3 | 0.4 | 0.0 |
| HER1 | HER1 | 137,430.0 | 137,449.8 | 0.01% | 2.0 | 2.2 | 0.2 |
| | HER2 | 26,587.0 | 26,579.3 | -0.03% | 1.5 | 1.2 | -0.3 |
| KAR1 | KAR1 | 225,120.0 | 225,172.5 | 0.02% | 1.8 | 2.0 | 0.2 |
| LAN1 | LAN1 | 288,100.0 | 287,922.8 | -0.06% | 1.4 | 1.8 | 0.5 |
| | LAN3 | 17,899.0 | 17,917.9 | 0.11% | 0.8 | 0.8 | 0.0 |
| | LAN4 | 16,297.0 | 16,280.8 | -0.10% | 1.0 | 1.1 | 0.2 |
| LAN2 | LAN5 | 38,743.0 | 38,746.5 | 0.01% | 0.9 | 1.3 | 0.4 |

| Block Model | Vein | Volume ($m^3$) | | | Average Thickness (m) | | |
|---|---|---|---|---|---|---|---|
| | | Wireframe | Block Model | % Difference | Block Model | Composites | Difference |
| | LAN6 | 15,682.0 | 15,692.4 | 0.07% | 0.5 | 0.6 | 0.1 |
| LLN1 | LLN1 | 246,140.0 | 246,199.1 | 0.02% | 2.7 | 3.1 | 0.4 |
| LUC1 | LUC1 | 70,563.0 | 70,582.5 | 0.03% | 1.1 | 1.7 | 0.6 |
| | LUC4 | 12,218.0 | 12,248.4 | 0.25% | 0.5 | 0.5 | 0.0 |
| LUC6 | LUC6 | 8,959.6 | 8,962.0 | 0.03% | 0.6 | 0.7 | 0.2 |
| LUC7 | LUC7 | 27,675.0 | 27,664.0 | -0.04% | 0.8 | 0.7 | -0.1 |
| MEL1 | MEL1 | 691,600.0 | 691,622.7 | 0.00% | 2.0 | 2.2 | 0.3 |
| | MEL2 | 135,010.0 | 135,060.8 | 0.04% | 1.4 | 2.0 | 0.6 |
| | MEL3 | 28,100.0 | 28,124.6 | 0.09% | 0.9 | 0.9 | 0.1 |
| | MEL4 | 56,130.0 | 56,128.9 | 0.00% | 1.2 | 1.4 | 0.2 |
| PLT1 | PLT1 | 134,930.0 | 134,852.4 | -0.06% | 1.1 | 1.8 | 0.7 |
| | PLT11 | 224,470.0 | 224,514.7 | 0.02% | 1.4 | 2.3 | 0.9 |
| SIG4 | SIG4 | 71,210.0 | 71,083.0 | -0.18% | 1.2 | 1.8 | 0.6 |
| SMI1 | SMI1 | 129,380.0 | 129,432.8 | 0.04% | 1.4 | 1.8 | 0.4 |
| SMI2 | SMI2 | 17,313.0 | 17,262.0 | -0.29% | 0.7 | 1.1 | 0.4 |
| | SMI3 | 4,330.9 | 4,316.4 | -0.34% | 0.3 | 0.5 | 0.2 |
| SNB1 | SNB1 | 20,042.0 | 19,985.5 | -0.28% | 1.0 | 1.0 | 0.0 |
| SNB2 | SNB2 | 24,134.0 | 24,144.6 | 0.04% | 1.3 | 1.5 | 0.2 |

### 14.3.3 Compositing

The assay intervals used to define the hanging wall and footwall intercepts within each vein were composited into a single intercept. Length weighted descriptive statistics for composites by vein and by metal are presented in Table 14.-5.

**Table 14-5 True Thickness Composite Statistics by Vein Weighted by Length**

| Vein | Metal | Count | Length (m) | Mean | Std. Dev. | CV | Minimum | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| BEL3 | Ag (g/t) | 25 | 26.7 | 62.9 | 45.7 | 0.73 | 2.000 | 70.9 | 209.0 |
| | Au (g/t) | 25 | 26.7 | 1.339 | 0.933 | 0.70 | 0.006 | 1.945 | 5.590 |
| BEL4 | Ag (g/t) | 37 | 48.0 | 99.4 | 89.4 | 0.90 | 0.001 | 73.4 | 435.0 |
| | Au (g/t) | 37 | 48.0 | 2.337 | 2.770 | 1.19 | 0.001 | 1.800 | 25.550 |

| Vein | Metal | Count | Length (m) | Mean | Std. Dev. | CV | Minimum | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| BEL5 | Ag (g/t) | 23 | 18.2 | 58.3 | 65.0 | 1.12 | 0.200 | 28.0 | 200.8 |
| | Au (g/t) | 23 | 18.2 | 1.461 | 1.900 | 1.30 | 0.005 | 1.080 | 9.520 |
| BEL6 | Ag (g/t) | 20 | 21.3 | 69.2 | 116.8 | 1.69 | 2.000 | 25.7 | 714.0 |
| | Au (g/t) | 20 | 21.3 | 1.746 | 2.266 | 1.30 | 0.054 | 0.982 | 8.332 |
| BEL7 | Ag (g/t) | 14 | 9.0 | 123.3 | 185.9 | 1.51 | 0.001 | 30.0 | 447.4 |
| | Au (g/t) | 14 | 9.0 | 1.537 | 1.777 | 1.16 | 0.001 | 0.500 | 4.421 |
| BEL8 | Ag (g/t) | 10 | 6.9 | 127.4 | 183.7 | 1.44 | 0.200 | 52.1 | 640.0 |
| | Au (g/t) | 10 | 6.9 | 1.069 | 1.098 | 1.03 | 0.005 | 0.759 | 3.400 |
| BOL1 | Ag (g/t) | 262 | 555.8 | 46.5 | 90.7 | 1.95 | 0.001 | 19.9 | 831.6 |
| | Au (g/t) | 262 | 555.8 | 2.522 | 2.279 | 0.90 | 0.001 | 1.890 | 11.337 |
| BOL4 | Ag (g/t) | 147 | 281.0 | 79.9 | 96.5 | 1.21 | 0.001 | 46.1 | 787.0 |
| | Au (g/t) | 147 | 281.0 | 5.549 | 5.699 | 1.03 | 0.001 | 3.828 | 33.692 |
| BOL11 | Ag (g/t) | 28 | 39.4 | 70.5 | 309.7 | 4.39 | 0.001 | 30.4 | 3,460.0 |
| | Au (g/t) | 28 | 39.4 | 8.009 | 8.603 | 1.07 | 0.001 | 7.730 | 76.150 |
| BOL12 | Ag (g/t) | 245 | 405.3 | 60.0 | 173.5 | 2.89 | 0.001 | 22.8 | 1,899.3 |
| | Au (g/t) | 245 | 405.3 | 3.338 | 2.899 | 0.87 | 0.001 | 2.565 | 19.217 |
| BOL13 | Ag (g/t) | 10 | 16.3 | 275.2 | 373.4 | 1.36 | 2.500 | 31.3 | 1,076.5 |
| | Au (g/t) | 10 | 16.3 | 0.352 | 0.285 | 0.81 | 0.015 | 0.212 | 0.926 |
| BOL9 | Ag (g/t) | 27 | 46.9 | 26.0 | 20.2 | 0.77 | 2.500 | 18.8 | 86.0 |
| | Au (g/t) | 27 | 46.9 | 3.231 | 3.259 | 1.01 | 0.044 | 3.011 | 21.730 |
| BOL15 | Ag (g/t) | 48 | 74.1 | 108.3 | 111.7 | 1.03 | 5.417 | 66.5 | 486.3 |
| | Au (g/t) | 48 | 74.1 | 5.688 | 4.403 | 0.77 | 0.278 | 4.749 | 17.263 |
| BOL16 | Ag (g/t) | 26 | 18.8 | 78.7 | 143.4 | 1.82 | 2.500 | 37.0 | 816.7 |
| | Au (g/t) | 26 | 18.8 | 3.427 | 3.211 | 0.94 | 0.015 | 2.655 | 14.948 |
| BOL18 | Ag (g/t) | 27 | 45.7 | 45.9 | 112.0 | 2.44 | 2.500 | 14.0 | 494.8 |
| | Au (g/t) | 27 | 45.7 | 2.311 | 3.829 | 1.66 | 0.131 | 1.198 | 22.122 |
| BOL19 | Ag (g/t) | 18 | 23.1 | 289.6 | 273.5 | 0.94 | 7.000 | 208.6 | 859.6 |
| | Au (g/t) | 18 | 23.1 | 3.448 | 3.046 | 0.88 | 0.313 | 1.969 | 13.170 |
| CEC1 | Ag (g/t) | 176 | 223.1 | 123.6 | 125.2 | 1.01 | 0.001 | 78.7 | 542.9 |
| | Au (g/t) | 176 | 223.1 | 1.612 | 1.340 | 0.83 | 0.001 | 1.303 | 11.560 |
| CEC2 | Ag (g/t) | 84 | 75.1 | 153.7 | 173.4 | 1.13 | 0.500 | 86.1 | 1,072.3 |

| Vein | Metal | Count | Length (m) | Mean | Std. Dev. | CV | Minimum | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| | Au (g/t) | 84 | 75.1 | 1.603 | 2.553 | 1.59 | 0.015 | 1.040 | 31.860 |
| CEC3 | Ag (g/t) | 21 | 16.7 | 81.7 | 82.8 | 1.01 | 0.001 | 62.7 | 240.4 |
| | Au (g/t) | 21 | 16.7 | 1.927 | 1.979 | 1.03 | 0.001 | 1.201 | 5.890 |
| CEC4 | Ag (g/t) | 17 | 9.5 | 45.8 | 71.8 | 1.57 | 0.001 | 14.0 | 189.0 |
| | Au (g/t) | 17 | 9.5 | 0.478 | 0.739 | 1.55 | 0.001 | 0.200 | 2.540 |
| HER1 | Ag (g/t) | 969 | 1,800.9 | 111.0 | 90.3 | 0.81 | 0.001 | 90.4 | 2,009.0 |
| | Au (g/t) | 969 | 1,800.9 | 1.359 | 1.680 | 1.24 | 0.001 | 0.875 | 28.730 |
| HER2 | Ag (g/t) | 78 | 78.4 | 35.8 | 38.9 | 1.09 | 0.001 | 24.1 | 218.0 |
| | Au (g/t) | 78 | 78.4 | 1.983 | 1.561 | 0.79 | 0.001 | 1.860 | 7.904 |
| KAR1 | Ag (g/t) | 1,892 | 3,402.0 | 154.4 | 145.2 | 0.94 | 0.001 | 124.7 | 2,443.8 |
| | Au (g/t) | 1,892 | 3,402.0 | 2.370 | 2.617 | 1.10 | 0.001 | 2.011 | 46.000 |
| LAN1 | Ag (g/t) | 2,010 | 3,189.8 | 164.1 | 282.6 | 1.72 | 0.001 | 100.7 | 7,098.4 |
| | Au (g/t) | 2,010 | 3,189.8 | 3.091 | 6.905 | 2.23 | 0.001 | 1.205 | 219.600 |
| LAN3 | Ag (g/t) | 4 | 3.0 | 255.3 | 437.8 | 1.71 | 2.809 | 22.0 | 878.0 |
| | Au (g/t) | 4 | 3.0 | 0.701 | 1.113 | 1.59 | 0.090 | 0.260 | 2.320 |
| LAN4 | Ag (g/t) | 6 | 7.9 | 10.5 | 23.6 | 2.24 | 0.001 | 0.0 | 88.0 |
| | Au (g/t) | 6 | 7.9 | 0.509 | 1.998 | 3.93 | 0.001 | 0.001 | 7.450 |
| LAN5 | Ag (g/t) | 59 | 61.6 | 75.8 | 100.9 | 1.33 | 0.001 | 50.9 | 678.8 |
| | Au (g/t) | 59 | 61.6 | 4.393 | 7.933 | 1.81 | 0.001 | 0.925 | 54.196 |
| LAN6 | Ag (g/t) | 26 | 16.4 | 110.1 | 153.9 | 1.40 | 0.001 | 45.0 | 549.0 |
| | Au (g/t) | 26 | 16.4 | 0.672 | 1.290 | 1.92 | 0.001 | 0.230 | 6.600 |
| LLN1 | Ag (g/t) | 484 | 1,544.1 | 52.8 | 93.2 | 1.76 | 0.001 | 16.4 | 685.5 |
| | Au (g/t) | 484 | 1,544.1 | 2.813 | 2.721 | 0.97 | 0.001 | 2.026 | 14.664 |
| LUC1 | Ag (g/t) | 869 | 1,269.3 | 234.1 | 429.9 | 1.84 | 0.001 | 149.0 | 15,340.0 |
| | Au (g/t) | 869 | 1,269.3 | 3.928 | 5.770 | 1.47 | 0.001 | 2.629 | 104.000 |
| LUC4 | Ag (g/t) | 184 | 96.7 | 264.8 | 296.8 | 1.12 | 0.001 | 196.0 | 2,196.1 |
| | Au (g/t) | 184 | 96.7 | 8.882 | 11.874 | 1.34 | 0.001 | 4.846 | 76.736 |
| LUC6 | Ag (g/t) | 78 | 48.9 | 169.9 | 214.3 | 1.26 | 2.000 | 110.0 | 1,733.0 |
| | Au (g/t) | 78 | 48.9 | 3.776 | 9.744 | 2.58 | 0.001 | 2.286 | 82.400 |
| LUC7 | Ag (g/t) | 138 | 85.4 | 154.9 | 166.7 | 1.08 | 0.001 | 113.0 | 1,393.6 |
| | Au (g/t) | 138 | 85.4 | 2.454 | 4.424 | 1.80 | 0.001 | 1.230 | 41.266 |

| Vein | Metal | Count | Length (m) | Mean | Std. Dev. | CV | Minimum | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| MEL1 | Ag (g/t) | 171 | 300.6 | 91.6 | 137.6 | 1.50 | 1.800 | 32.4 | 828.3 |
| | Au (g/t) | 171 | 300.6 | 2.197 | 2.900 | 1.32 | 0.015 | 1.365 | 25.806 |
| MEL2 | Ag (g/t) | 60 | 108.9 | 247.5 | 385.4 | 1.56 | 0.001 | 38.8 | 1,955.8 |
| | Au (g/t) | 60 | 108.9 | 2.264 | 2.439 | 1.08 | 0.001 | 1.272 | 9.739 |
| MEL3 | Ag (g/t) | 23 | 21.8 | 248.6 | 707.9 | 2.85 | 0.001 | 7.2 | 2,588.2 |
| | Au (g/t) | 23 | 21.8 | 3.566 | 5.175 | 1.45 | 0.001 | 0.963 | 15.266 |
| MEL4 | Ag (g/t) | 115 | 124.0 | 90.6 | 216.5 | 2.39 | 2.200 | 23.9 | 1,289.5 |
| | Au (g/t) | 115 | 124.0 | 4.036 | 7.670 | 1.90 | 0.015 | 1.574 | 48.835 |
| PLT1 | Ag (g/t) | 398 | 622.6 | 69.1 | 100.0 | 1.45 | 0.001 | 28.0 | 790.9 |
| | Au (g/t) | 398 | 622.6 | 2.503 | 2.838 | 1.13 | 0.001 | 1.781 | 23.582 |
| PLT11 | Ag (g/t) | 586 | 1,269.0 | 33.6 | 44.8 | 1.33 | 0.001 | 13.8 | 391.9 |
| | Au (g/t) | 586 | 1,269.0 | 3.142 | 2.698 | 0.86 | 0.001 | 2.491 | 21.258 |
| SIG4 | Ag (g/t) | 143 | 201.9 | 221.6 | 287.1 | 1.30 | 1.000 | 125.9 | 1,715.4 |
| | Au (g/t) | 143 | 201.9 | 1.283 | 1.228 | 0.96 | 0.015 | 1.006 | 8.572 |
| SMI1 | Ag (g/t) | 400 | 567.8 | 25.4 | 56.2 | 2.21 | 0.001 | 14.8 | 760.6 |
| | Au (g/t) | 400 | 567.8 | 8.115 | 47.590 | 5.86 | 0.001 | 4.017 | 1,013.569 |
| SMI2 | Ag (g/t) | 67 | 72.6 | 30.4 | 40.2 | 1.32 | 0.001 | 13.2 | 166.5 |
| | Au (g/t) | 67 | 72.6 | 2.356 | 2.835 | 1.20 | 0.001 | 1.925 | 21.358 |
| SMI3 | Ag (g/t) | 12 | 7.9 | 5.0 | 5.8 | 1.16 | 0.001 | 3.8 | 15.0 |
| | Au (g/t) | 12 | 7.9 | 0.582 | 0.637 | 1.10 | 0.001 | 0.521 | 2.280 |
| SNB1 | Ag (g/t) | 32 | 24.9 | 40.8 | 64.9 | 1.59 | 2.500 | 13.0 | 310.0 |
| | Au (g/t) | 32 | 24.9 | 3.416 | 2.595 | 0.76 | 0.015 | 3.272 | 14.430 |
| SNB2 | Ag (g/t) | 94 | 106.5 | 24.7 | 19.7 | 0.80 | 1.627 | 18.0 | 104.0 |
| | Au (g/t) | 94 | 106.5 | 8.817 | 5.993 | 0.68 | 0.015 | 7.618 | 33.20 |

### 14.3.4 Capping

Estimation of gold and silver grade distributions can be sensitive to the presence of even a few extreme values resulting in an overestimation of the mean. To better estimate the true mean of the deposit, a detailed capping study was performed on a vein-by-vein basis after compositing. Histograms, log histograms, cumulative frequency plots, the coefficient of variation ("CV") and visual inspection of composite grades were used in conjunction to identify high grade outlier populations and appropriate capping limits for silver and gold. Outlier populations were not always identified in the vein and in those situations, no cap was applied. The statistics for those veins usually show a CV less than 1.5 or a small population of samples. A CV of less than

2.0 was the target for veins with capping applied which was achieved for all veins except silver in MEL4. Table 14-6 shows capping limits, number of composites capped, and length weighted descriptive statistics by vein and by metal.

| Vein | Metal | Count | Cap | No. Capped | Mean | Std. Dev. | CV | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| BEL3 | Ag (g/t) | 25 | n/a | 0 | 62.9 | 45.7 | 0.73 | 70.9 | 209.0 |
| | Au (g/t) | 25 | n/a | 0 | 1.339 | 0.933 | 0.70 | 1.945 | 5.590 |
| BEL4 | Ag (g/t) | 37 | n/a | 0 | 99.4 | 89.4 | 0.90 | 73.4 | 435.0 |
| | Au (g/t) | 37 | 5.72 | 1 | 2.172 | 1.751 | 0.81 | 1.800 | 5.720 |
| BEL5 | Ag (g/t) | 23 | n/a | 0 | 58.3 | 65.0 | 1.12 | 28.0 | 200.8 |
| | Au (g/t) | 23 | n/a | 0 | 1.413 | 1.712 | 1.21 | 1.080 | 6.600 |
| BEL6 | Ag (g/t) | 20 | 142.0 | 1 | 55.8 | 56.0 | 1.00 | 25.7 | 142.0 |
| | Au (g/t) | 20 | n/a | 0 | 1.746 | 2.266 | 1.30 | 0.982 | 8.332 |
| BEL7 | Ag (g/t) | 14 | 223.0 | 1 | 74.5 | 92.8 | 1.25 | 30.0 | 223.0 |
| | Au (g/t) | 14 | n/a | 0 | 1.537 | 1.777 | 1.16 | 0.500 | 4.421 |
| BEL8 | Ag (g/t) | 10 | n/a | 0 | 97.4 | 103.6 | 1.06 | 52.1 | 267.0 |
| | Au (g/t) | 10 | n/a | 0 | 1.069 | 1.098 | 1.03 | 0.759 | 3.400 |
| BOL1 | Ag (g/t) | 262 | 341.0 | 3 | 41.7 | 56.6 | 1.36 | 19.9 | 341.0 |
| | Au (g/t) | 262 | n/a | 0 | 2.522 | 2.279 | 0.90 | 1.890 | 11.337 |
| BOL4 | Ag (g/t) | 147 | 310.0 | 2 | 76.1 | 77.0 | 1.01 | 46.1 | 310.0 |
| | Au (g/t) | 147 | n/a | 0 | 5.549 | 5.699 | 1.03 | 3.828 | 33.692 |
| BOL11 | Ag (g/t) | 28 | 226.0 | 1 | 45.9 | 46.2 | 1.01 | 30.4 | 226.0 |
| | Au (g/t) | 28 | 24.8 | 1 | 7.618 | 6.199 | 0.81 | 7.730 | 24.800 |
| BOL12 | Ag (g/t) | 245 | 551.0 | 3 | 50.0 | 85.9 | 1.72 | 22.8 | 551.0 |
| | Au (g/t) | 245 | n/a | 0 | 3.338 | 2.899 | 0.87 | 2.565 | 19.217 |
| BOL13 | Ag (g/t) | 10 | n/a | 0 | 275.2 | 373.4 | 1.36 | 31.3 | 1,076.5 |
| | Au (g/t) | 10 | n/a | 0 | 0.352 | 0.285 | 0.81 | 0.212 | 0.926 |
| BOL9 | Ag (g/t) | 27 | n/a | 0 | 26.0 | 20.2 | 0.77 | 18.8 | 86.0 |
| | Au (g/t) | 27 | n/a | 0 | 3.231 | 3.259 | 1.01 | 3.011 | 21.730 |
| BOL15 | Ag (g/t) | 48 | n/a | 0 | 108.3 | 111.7 | 1.03 | 66.5 | 486.3 |
| | Au (g/t) | 48 | n/a | 0 | 5.688 | 4.403 | 0.77 | 4.749 | 17.263 |
| BOL16 | Ag (g/t) | 26 | 181.0 | 1 | 58.4 | 46.8 | 0.80 | 37.0 | 181.0 |
| | Au (g/t) | 26 | n/a | 0 | 3.427 | 3.211 | 0.94 | 2.655 | 14.948 |

| Vein | Metal | Count | Cap | No. Capped | Mean | Std. Dev. | CV | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| BOL18 | Ag (g/t) | 27 | 182.0 | 1 | 29.4 | 47.1 | 1.60 | 14.0 | 182.0 |
| | Au (g/t) | 27 | n/a | 0 | 2.311 | 3.829 | 1.66 | 1.198 | 22.122 |
| BOL19 | Ag (g/t) | 18 | n/a | 0 | 289.6 | 273.5 | 0.94 | 208.6 | 859.6 |
| | Au (g/t) | 18 | n/a | 0 | 3.448 | 3.046 | 0.88 | 1.969 | 13.170 |
| CEC1 | Ag (g/t) | 176 | n/a | 0 | 123.6 | 125.2 | 1.01 | 78.7 | 542.9 |
| | Au (g/t) | 176 | n/a | 0 | 1.612 | 1.340 | 0.83 | 1.303 | 11.560 |
| CEC2 | Ag (g/t) | 84 | 629.0 | 2 | 148.6 | 154.5 | 1.04 | 86.1 | 629.0 |
| | Au (g/t) | 84 | 9.1 | 1 | 1.512 | 1.737 | 1.15 | 1.040 | 9.100 |
| CEC3 | Ag (g/t) | 21 | n/a | 0 | 81.7 | 82.8 | 1.01 | 62.7 | 240.4 |
| | Au (g/t) | 21 | n/a | 0 | 1.927 | 1.979 | 1.03 | 1.201 | 5.890 |
| CEC4 | Ag (g/t) | 17 | n/a | 0 | 45.8 | 71.8 | 1.57 | 14.0 | 189.0 |
| | Au (g/t) | 17 | n/a | 0 | 0.478 | 0.739 | 1.55 | 0.200 | 2.540 |
| HER1 | Ag (g/t) | 969 | 571.0 | 1 | 110.8 | 87.1 | 0.79 | 90.4 | 571.0 |
| | Au (g/t) | 969 | 16.0 | 3 | 1.345 | 1.507 | 1.12 | 0.875 | 16.000 |
| HER2 | Ag (g/t) | 78 | n/a | 0 | 35.8 | 38.9 | 1.09 | 24.1 | 218.0 |
| | Au (g/t) | 78 | n/a | 0 | 1.983 | 1.561 | 0.79 | 1.860 | 7.904 |
| KAR1 | Ag (g/t) | 1,892 | 1,895.0 | 1 | 154.2 | 143.0 | 0.93 | 124.7 | 1,895.0 |
| | Au (g/t) | 1,892 | 34.9 | 4 | 2.364 | 2.530 | 1.07 | 2.011 | 34.900 |
| LAN1 | Ag (g/t) | 2,010 | 1,660.0 | 26 | 159.2 | 235.0 | 1.48 | 100.7 | 1,660.0 |
| | Au (g/t) | 2,010 | 44.0 | 15 | 2.981 | 5.439 | 1.82 | 1.205 | 44.000 |
| LAN3 | Ag (g/t) | 4 | n/a | 0 | 255.3 | 437.8 | 1.71 | 22.0 | 878.0 |
| | Au (g/t) | 4 | n/a | 0 | 0.701 | 1.113 | 1.59 | 0.260 | 2.320 |
| LAN4 | Ag (g/t) | 6 | n/a | 0 | 10.5 | 23.6 | 2.24 | 0.0 | 88.0 |
| | Au (g/t) | 6 | n/a | 0 | 0.509 | 1.998 | 3.93 | 0.001 | 7.450 |
| LAN5 | Ag (g/t) | 59 | n/a | 0 | 75.8 | 100.9 | 1.33 | 50.9 | 678.8 |
| | Au (g/t) | 59 | 23.2 | 1 | 4.040 | 6.167 | 1.53 | 0.925 | 23.200 |
| LAN6 | Ag (g/t) | 26 | n/a | 0 | 110.1 | 153.9 | 1.40 | 45.0 | 549.0 |
| | Au (g/t) | 26 | 1.78 | 2 | 0.481 | 0.586 | 1.22 | 0.230 | 1.780 |
| LLN1 | Ag (g/t) | 484 | 530.0 | 7 | 55.2 | 99.9 | 1.81 | 16.4 | 530.0 |
| | Au (g/t) | 484 | 23.8 | 3 | 3.624 | 4.498 | 1.24 | 2.026 | 23.800 |

| Vein | Metal | Count | Cap | No. Capped | Mean | Std. Dev. | CV | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| LUC1 | Ag (g/t) | 869 | 1,989.0 | 9 | 225.3 | 280.2 | 1.24 | 149.0 | 1,989.0 |
| | Au (g/t) | 869 | 49.4 | 2 | 3.873 | 5.078 | 1.31 | 2.629 | 49.400 |
| LUC4 | Ag (g/t) | 184 | 1,273.0 | 3 | 254.7 | 243.2 | 0.95 | 196.0 | 1,273.0 |
| | Au (g/t) | 184 | 25.1 | 7 | 7.656 | 7.393 | 0.97 | 4.846 | 25.100 |
| LUC6 | Ag (g/t) | 78 | 643.0 | 1 | 156.6 | 134.5 | 0.86 | 110.0 | 643.0 |
| | Au (g/t) | 78 | 12.3 | 1 | 2.773 | 2.262 | 0.82 | 2.286 | 12.300 |
| LUC7 | Ag (g/t) | 138 | n/a | 0 | 154.9 | 166.7 | 1.08 | 113.0 | 1,393.6 |
| | Au (g/t) | 138 | 18.9 | 1 | 2.297 | 3.282 | 1.43 | 1.230 | 18.900 |
| MEL1 | Ag (g/t) | 171 | n/a | 0 | 91.6 | 137.6 | 1.50 | 32.4 | 828.3 |
| | Au (g/t) | 171 | n/a | 0 | 2.197 | 2.900 | 1.32 | 1.365 | 25.806 |
| MEL2 | Ag (g/t) | 60 | 1,262.0 | 2 | 240.5 | 361.1 | 1.50 | 38.8 | 1,262.0 |
| | Au (g/t) | 60 | n/a | 0 | 2.264 | 2.439 | 1.08 | 1.272 | 9.739 |
| MEL3 | Ag (g/t) | 23 | 293.0 | 2 | 62.9 | 109.5 | 1.74 | 7.2 | 293.0 |
| | Au (g/t) | 23 | 11.8 | 2 | 3.195 | 4.363 | 1.37 | 0.963 | 11.800 |
| MEL4 | Ag (g/t) | 115 | 947.0 | 3 | 84.9 | 188.0 | 2.21 | 23.9 | 947.0 |
| | Au (g/t) | 115 | 17.5 | 1 | 3.405 | 4.599 | 1.35 | 1.574 | 17.500 |
| PLT1 | Ag (g/t) | 398 | 473.0 | 3 | 67.7 | 92.4 | 1.37 | 28.0 | 473.0 |
| | Au (g/t) | 398 | 17.2 | 3 | 2.477 | 2.673 | 1.08 | 1.781 | 17.200 |
| PLT11 | Ag (g/t) | 586 | n/a | 0 | 33.6 | 44.8 | 1.33 | 13.8 | 391.9 |
| | Au (g/t) | 586 | n/a | 0 | 3.142 | 2.698 | 0.86 | 2.491 | 21.258 |
| SIG4 | Ag (g/t) | 143 | 836.0 | 1 | 204.2 | 212.1 | 1.04 | 125.9 | 836.0 |
| | Au (g/t) | 143 | n/a | 0 | 1.283 | 1.228 | 0.96 | 1.006 | 8.572 |
| SMI1 | Ag (g/t) | 400 | 191.0 | 3 | 22.4 | 27.7 | 1.24 | 14.8 | 191.0 |
| | Au (g/t) | 400 | 43.6 | 2 | 5.637 | 6.099 | 1.08 | 4.017 | 43.600 |
| SMI2 | Ag (g/t) | 67 | n/a | 0 | 30.4 | 40.2 | 1.32 | 13.2 | 166.5 |
| | Au (g/t) | 67 | 8.2 | 1 | 2.174 | 1.848 | 0.85 | 1.925 | 8.200 |
| SMI3 | Ag (g/t) | 12 | n/a | 0 | 5.0 | 5.8 | 1.16 | 3.8 | 15.0 |
| | Au (g/t) | 12 | n/a | 0 | 0.582 | 0.637 | 1.10 | 0.521 | 2.280 |
| SNB1 | Ag (g/t) | 32 | 194.0 | 1 | 38.5 | 56.4 | 1.47 | 13.0 | 194.0 |
| | Au (g/t) | 32 | n/a | 0 | 3.416 | 2.595 | 0.76 | 3.272 | 14.430 |

| Vein | Metal | Count | Cap | No. Capped | Mean | Std. Dev. | CV | Median | Maximum |
|---|---|---|---|---|---|---|---|---|---|
| SNB2 | Ag (g/t) | 94 | n/a | 0 | 24.7 | 19.7 | 0.80 | 18.0 | 104.0 |
| | Au (g/t) | 94 | n/a | 0 | 8.817 | 5.993 | 0.68 | 7.618 | 33.200 |

### 14.3.5 Variography

A variography analysis was completed to establish the continuity of silver and gold within the modeled veins. Variography establishes the appropriate contribution that any specific composite should have when estimating a block volume value within a model. This is performed by comparing the orientation and distance used in the estimation to the variability of other samples of similar relative direction and distance.

Variography was completed by vein and for silver and gold separately using Leapfrog. The variogram was oriented along strike and down dip of the vein. The pitch was determined using radial plots and visual observations of the grade distribution in 3D. The variance was normalized so the total sill would always equal 1.0. The nugget was determined using the minor axis variogram plot (thickness) as a proxy for a traditional downhole variogram. Information from the other variogram plots could also be used to inform the nugget. Ranges were determined from the variograms along the major (down-dip) and semi-major (along strike) axis. Because the veins are narrow and composites are reduced to a single midpoint, the range of the minor axis was set to approximately twice the maximum composite length and no smaller than 10 meters. Modeled variogram parameters are presented in Table 14-7. Some veins with low composite numbers, or limited spatial distribution, incorporated the variogram from a similar vein assuming similar metal distributions.

**Table 14-7 Summary of Variogram Parameters**

| Vein | Variogram ID | Applied to | Model Type | Orientation | | | Nugget ($C_o$) | Structure 1 | Range$_1$ (m) | | Structure 2 | Range$_2$ (m) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Dip | Dip Azi. | Pitch | | $C_1$ | Major | Semi-Major | $C_2$ | Major | Semi-Major |
| BEL4 | BEL4_AG | BEL3, BEL5, BEL6, BEL7, BEL8 | SPHERICAL | 50 | 234 | 135 | 0.25 | 0.40 | 40 | 40 | 0.35 | 80 | 65 |
| BEL4 | BEL4_AU | BEL3, BEL5, BEL6, BEL7, BEL8 | SPHERICAL | 50 | 234 | 135 | 0.25 | 0.26 | 85 | 45 | 0.49 | 170 | 150 |
| BOL1 | BOL1_AU | BOL11, BOL13 | SPHERICAL | 60 | 73 | 150 | 0.30 | 0.24 | 10 | 10 | 0.46 | 75 | 45 |
| BOL1 | BOL1_AG | BOL11, BOL13 | SPHERICAL | 60 | 73 | 135 | 0.23 | 0.37 | 8 | 47 | 0.40 | 115 | 90 |
| BOL4 | BOL4_AU | | SPHERICAL | 70 | 80 | 65 | 0.16 | 0.36 | 18 | 15 | 0.48 | 85 | 28 |
| BOL4 | BOL4_AG | | SPHERICAL | 70 | 80 | 65 | 0.20 | 0.54 | 6 | 6 | 0.26 | 32 | 17 |
| BOL12 | BOL12_au | | SPHERICAL | 70 | 72 | 110 | 0.40 | 0.26 | 54 | 9 | 0.34 | 85 | 65 |
| BOL12 | BOL12_ag | | SPHERICAL | 70 | 72 | 115 | 0.17 | 0.32 | 28 | 9 | 0.51 | 62 | 54 |
| BOL15 | BOL15_au | BOL9, BOL16, BOL18, BOL19 | SPHERICAL | 80 | 253 | 110 | 0.20 | 0.80 | 35 | 9 | | | |
| BOL15 | BOL15_ag | BOL9, BOL16, BOL18, BOL19 | SPHERICAL | 80 | 253 | 110 | 0.15 | 0.85 | 20 | 9 | | | |
| CEC1 | cec1_au | CEC2, CEC3, CEC4 | SPHERICAL | 42 | 257 | 45 | 0.32 | 0.22 | 16 | 10 | 0.46 | 75 | 70 |
| CEC1 | cec1_ag | CEC2, CEC3, CEC4 | SPHERICAL | 42 | 257 | 45 | 0.27 | 0.37 | 7 | 11 | 0.36 | 63 | 39 |
| HER1 | her1_au | | SPHERICAL | 69 | 95 | 110 | 0.40 | 0.23 | 11 | 6 | 0.37 | 38 | 50 |
| HER1 | her1_ag | | SPHERICAL | 69 | 95 | 110 | 0.50 | 0.23 | 13 | 7 | 0.31 | 65 | 30 |
| HER2 | her2_au | | SPHERICAL | 80 | 90 | 105 | 0.30 | 0.27 | 6 | 5 | 0.43 | 23 | 16 |
| HER2 | her2_ag | | SPHERICAL | 80 | 90 | 100 | 0.30 | 0.13 | 30 | 8 | 0.57 | 48 | 37 |
| KAR1 | kar_au | | EXPONENTIAL | 63 | 220 | 45 | 0.25 | 0.29 | 6 | 9 | 0.46 | 27 | 30 |
| KAR1 | kar_ag | | EXPONENTIAL | 63 | 220 | 45 | 0.38 | 0.21 | 19 | 10 | 0.41 | 45 | 31 |

| Vein | Variogram ID | Applied to | Model Type | Orientation | | | Nugget ($C_0$) | Structure 1 | Range$_1$ (m) | | Structure 2 | Range$_2$ (m) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Dip | Dip Azi. | Pitch | | $C_1$ | Major | Semi-Major | $C_2$ | Major | Semi-Major |
| LAN1 | lan1_au | LAN3, LAN4, LAN5, LAN6 | SPHERICAL | 60 | 240 | 90 | 0.30 | 0.38 | 7 | 17 | 0.32 | 49 | 38 |
| LAN1 | lan1_ag | LAN3, LAN4, LAN5, LAN6 | SPHERICAL | 60 | 240 | 90 | 0.25 | 0.40 | 20 | 5 | 0.35 | 60 | 64 |
| LUC1 | luc1_au | | SPHERICAL | 60 | 240 | 135 | 0.40 | 0.37 | 11 | 15 | 0.23 | 35 | 22 |
| LUC1 | luc1_ag | | SPHERICAL | 60 | 240 | 135 | 0.36 | 0.27 | 7 | 6 | 0.37 | 75 | 50 |
| LUC4 | luc1_au | | SPHERICAL | 65 | 234 | 135 | 0.10 | 0.90 | 43 | 28 | | | |
| LUC4 | luc4_ag | | SPHERICAL | 65 | 234 | 135 | 0.15 | 0.85 | 73 | 28 | | | |
| LUC6 | luc6_au | | SPHERICAL | 82 | 270 | 105 | 0.10 | 0.60 | 8 | 15 | 0.30 | 27 | 21 |
| LUC6 | luc6_ag | | SPHERICAL | 82 | 270 | 70 | 0.23 | 0.77 | 32 | 24 | | | |
| LUC7 | luc7_au | | SPHERICAL | 65 | 219 | 115 | 0.25 | 0.75 | 28 | 16 | | | |
| LUC7 | luc7_ag | | SPHERICAL | 65 | 219 | 105 | 0.10 | 0.90 | 42 | 16 | | | |
| LLN1 | lln_au | | SPHERICAL | 64 | 268 | 110 | 0.29 | 0.45 | 13 | 17 | 0.26 | 49 | 32 |
| LLN1 | lln1_ag | | SPHERICAL | 64 | 268 | 45 | 0.40 | 0.27 | 5 | 4 | 0.33 | 40 | 32 |
| MEL1 | mel1_au | MEL2, MEL3 | SPHERICAL | 59 | 87 | 75 | 0.35 | 0.30 | 14 | 15 | 0.35 | 75 | 50 |
| MEL1 | mel1_ag | MEL2, MEL3 | SPHERICAL | 59 | 87 | 75 | 0.40 | 0.28 | 10 | 8 | 0.32 | 40 | 40 |
| MEL4 | mel4_au | | SPHERICAL | 71 | 76 | 115 | 0.40 | 0.19 | 30 | 7 | 0.41 | 120 | 85 |
| MEL4 | mel4_ag | | SPHERICAL | 71 | 76 | 90 | 0.40 | 0.23 | 10 | 7 | 0.37 | 66 | 27 |
| PLT1 | plt1_au | | SPHERICAL | 60 | 242 | 65 | 0.24 | 0.33 | 22 | 20 | 0.43 | 75 | 32 |
| PLT1 | plt1_ag | | SPHERICAL | 60 | 242 | 105 | 0.25 | 0.23 | 13 | 5 | 0.52 | 65 | 33 |
| PLT11 | plt11_au | | SPHERICAL | 60 | 245 | 70 | 0.22 | 0.25 | 11 | 22 | 0.53 | 50 | 97 |

| Vein | Variogram ID | Applied to | Model Type | Orientation | | | Nugget ($C_0$) | Structure 1 | Range$_1$ (m) | | Structure 2 | Range$_2$ (m) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Dip | Dip Azi. | Pitch | | $C_1$ | Major | Semi-Major | $C_2$ | Major | Semi-Major |
| PLT11 | plt11_ag | | SPHERICAL | 60 | 245 | 90 | 0.15 | 0.16 | 9 | 14 | 0.69 | 53 | 120 |
| SIG4 | sig4_au | | SPHERICAL | 73 | 49 | 135 | 0.24 | 0.29 | 5 | 5 | 0.47 | 75 | 35 |
| SIG4 | sig4_ag | | SPHERICAL | 73 | 49 | 135 | 0.15 | 0.35 | 17 | 11 | 0.50 | 52 | 36 |
| SMI1 | smi1_au | SNB1, SNB2 | SPHERICAL | 75 | 70 | 75 | 0.25 | 0.42 | 8 | 8 | 0.33 | 33 | 22 |
| SMI1 | smi1_ag | SNB1, SNB2 | SPHERICAL | 75 | 70 | 45 | 0.10 | 0.36 | 18 | 13 | 0.54 | 60 | 26 |
| SMI2 | smi2_au | SMI3 | SPHERICAL | 87 | 235 | 70 | 0.20 | 0.80 | 23 | 32 | | | |
| SMI2 | smi2_ag | SMI3 | SPHERICAL | 87 | 235 | 75 | 0.20 | 0.80 | 32 | 36 | | | |

The average nugget for all the veins is 25% and 27% for silver and gold respectively. The average range for the variograms in the major axis direction is 55 meters and 61 meters for silver and gold respectively. The average range in the semi-major axis direction is 41 meters and 45 meters for silver and gold respectively. The average ranges in the major and semi-major direction show a low anisotropy for most veins.

Figures 14-6 through 14-8 show the radial, major axis, and semi-major axis gold variogram plots for the SMI1 vein as an example. The orange line in the major and semi-major axis plots is 1.5x the moving average of the gamma (variance).

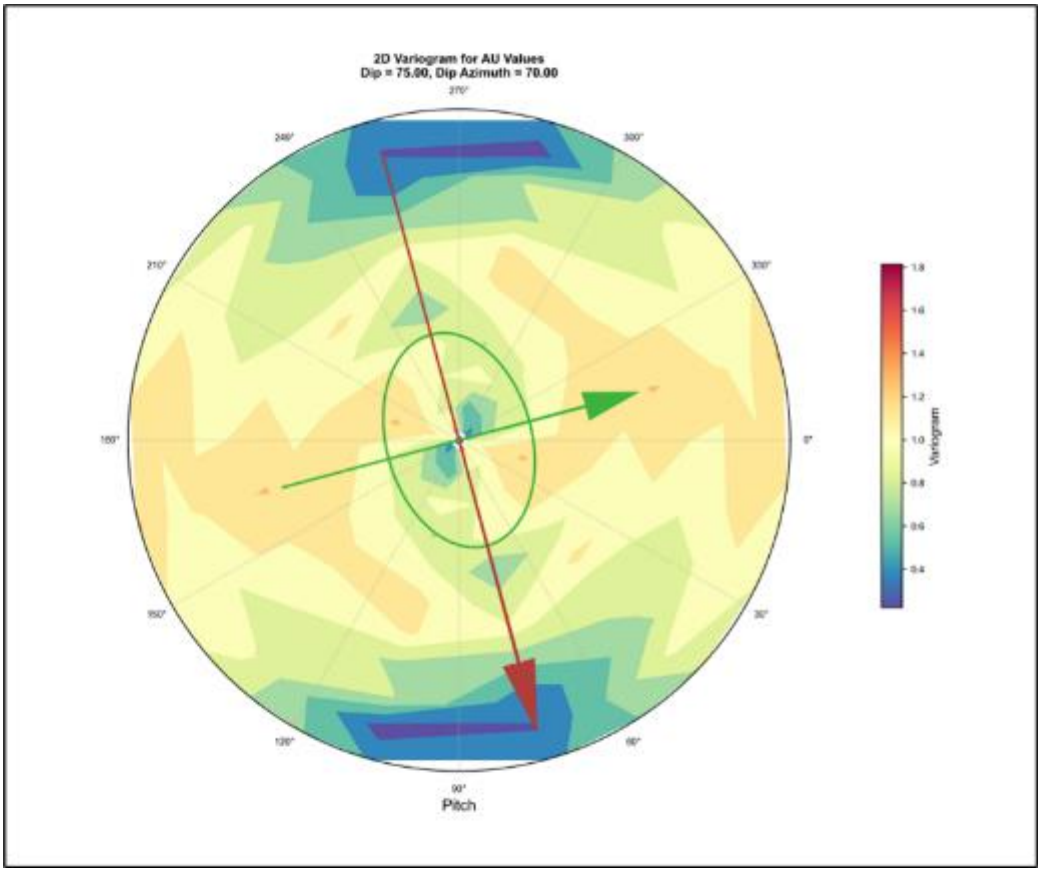



**Figure 14-6 Radial Plot of the Gold Variogram in SMI1**

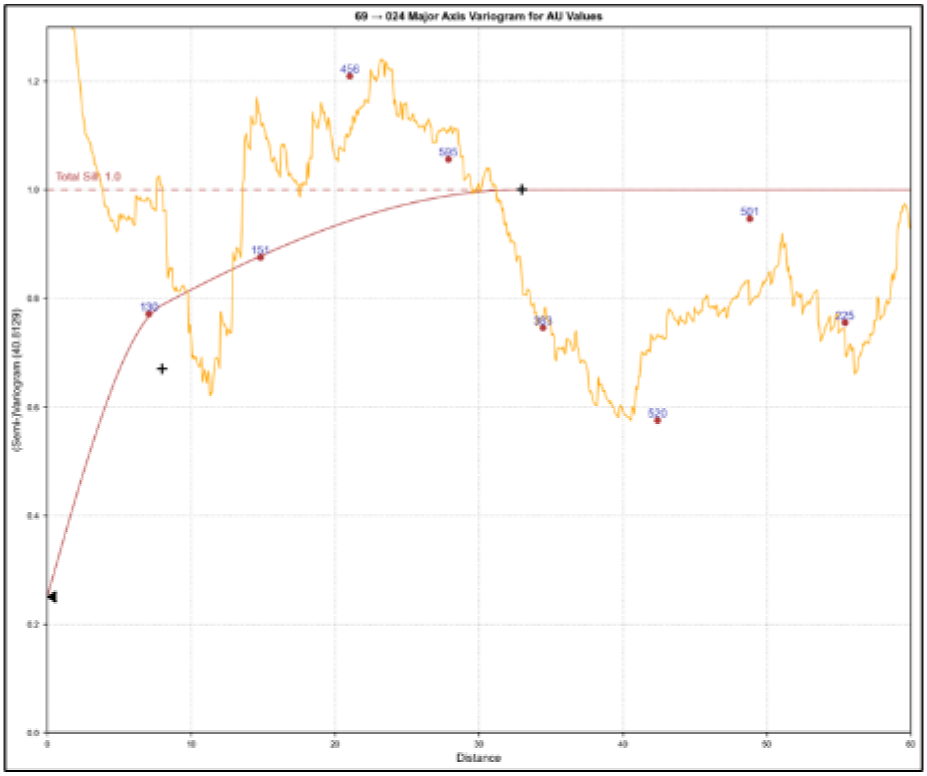



**Figure 14-7 Major Axis Plot of the Gold Variogram in SMI1**

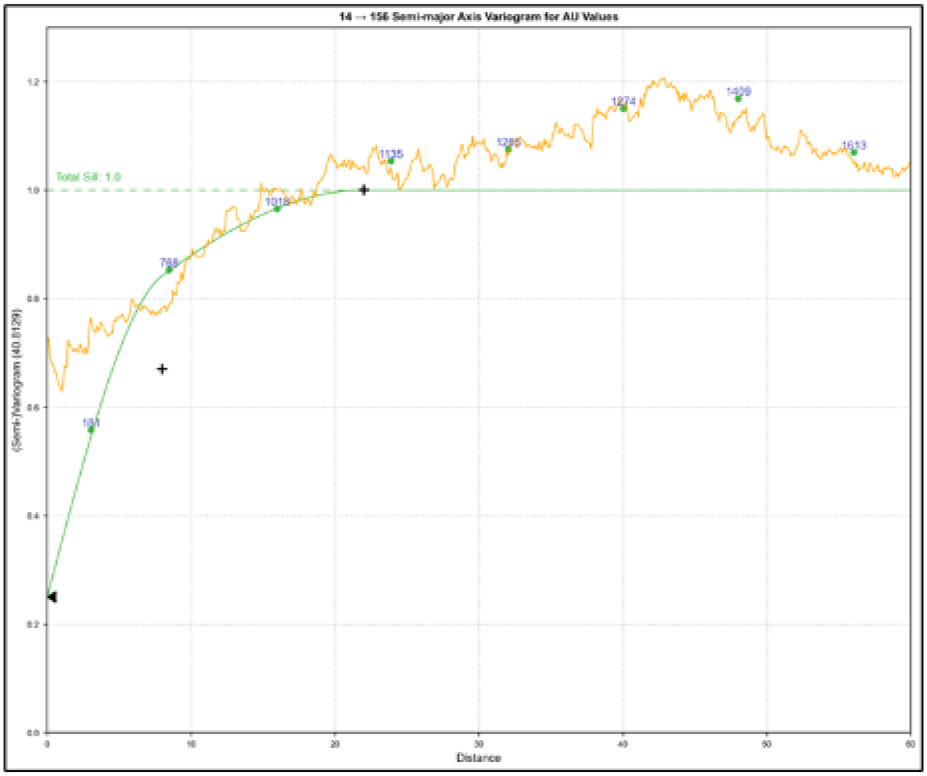



**Figure 14-8 Semi-Major Axis Plot of the Gold Variogram in SMI1**

### 14.3.6 Estimation Parameters

An ordinary kriging ("OK") interpolant was selected to estimate the block models. The parameters used for estimation are shown in Table 14-8.

Silver and gold grades were estimated in each vein by using a single search ellipse that was the same for both metals. The size, direction, and anisotropy of the search ellipse were influenced by variography. Composite selection was chosen based on the presence and quantity of channel samples. If the estimate included channel samples, an octant search was incorporated requiring the search ellipse to include samples from all directions. Two of the modeled veins (KAR1 and LAN1) were observed to curve along strike more significantly than the others, and a variable orientation was selected for the search ellipse.

**Table 14-8 Estimation Parameters**

| Vein | Range (m) | | | Orientation | | | Composite Selection | | Octant Search | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Major | Semi-Major | Minor | Dip | Dip Azi. | Pitch | Minimum | Maximum | Max Samples/ Sector | Max Empty Sectors |
| BEL3 | 90 | 60 | 15 | 50 | 232 | 135 | 1 | 6 | | |
| BEL4 | 90 | 60 | 15 | 50 | 234 | 135 | 1 | 6 | | |
| BEL5 | 60 | 40 | 15 | 52 | 233 | 135 | 1 | 6 | | |
| BEL6 | 60 | 40 | 15 | 55 | 233 | 135 | 1 | 6 | | |
| BEL7 | 60 | 40 | 15 | 48 | 231 | 135 | 1 | 6 | | |
| BEL8 | 70 | 50 | 15 | 45 | 257 | 135 | 1 | 6 | | |
| BOL1 | 60 | 45 | 15 | 60 | 73 | 150 | 1 | 24 | 3 | 7 |
| BOL4 | 60 | 20 | 15 | 70 | 80 | 65 | 1 | 24 | 3 | 7 |
| BOL11 | 60 | 36 | 15 | 66 | 68 | 150 | 1 | 16 | 2 | 7 |
| BOL12 | 80 | 60 | 15 | 70 | 72 | 110 | 1 | 16 | 2 | 7 |
| BOL13 | 60 | 45 | 10 | 60 | 84 | 150 | 1 | 8 | 1 | 7 |
| BOL9 | 40 | 10 | 10 | 79 | 243 | 110 | 1 | 8 | 1 | 7 |
| BOL15 | 40 | 10 | 10 | 80 | 253 | 110 | 1 | 8 | 1 | 7 |
| BOL16 | 40 | 10 | 10 | 80 | 243 | 110 | 1 | 8 | 1 | 7 |
| BOL18 | 40 | 10 | 10 | 80 | 250 | 110 | 1 | 8 | 1 | 7 |
| BOL19 | 40 | 10 | 10 | 80 | 240 | 110 | 1 | 8 | 1 | 7 |
| CEC1 | 70 | 50 | 10 | 42 | 257 | 45 | 1 | 24 | 3 | 7 |
| CEC2 | 70 | 50 | 10 | 40 | 230 | 45 | 1 | 16 | 2 | 7 |
| CEC3 | 70 | 50 | 10 | 45 | 267 | 45 | 1 | 8 | 1 | 7 |

| Vein | Range (m) | | | Orientation | | | Composite Selection | | Octant Search | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Major | Semi-Major | Minor | Dip | Dip Azi. | Pitch | Minimum | Maximum | Max Samples/ Sector | Max Empty Sectors |
| CEC4 | 70 | 50 | 10 | 31 | 270 | 45 | 1 | 6 | | |
| HER1 | 60 | 40 | 10 | 69 | 95 | 110 | 1 | 24 | 3 | 7 |
| HER2 | 40 | 30 | 10 | 80 | 90 | 105 | 1 | 24 | 3 | 7 |
| KAR1 | 50 | 50 | 15 | variable orientation | | | 1 | 24 | 3 | 7 |
| LAN1 | 60 | 60 | 10 | variable orientation | | | 1 | 24 | 3 | 7 |
| LAN3 | 60 | 60 | 10 | 61 | 238 | 90 | 1 | 6 | | |
| LAN4 | 50 | 50 | 10 | 67 | 244 | 90 | 1 | 6 | | |
| LAN5 | 70 | 70 | 10 | 65 | 234 | 90 | 1 | 8 | 1 | 7 |
| LAN6 | 40 | 40 | 10 | 76 | 241 | 90 | 1 | 6 | | |
| LLN1 | 45 | 30 | 10 | 64 | 268 | 110 | 1 | 24 | 3 | 7 |
| LUC1 | 35 | 25 | 15 | 60 | 240 | 135 | 1 | 24 | 3 | 7 |
| LUC4 | 40 | 27 | 30 | 65 | 234 | 135 | 1 | 16 | 2 | 7 |
| LUC6 | 30 | 25 | 10 | 82 | 270 | 70 | 1 | 16 | 2 | 7 |
| LUC7 | 40 | 20 | 10 | 65 | 219 | 110 | 1 | 16 | 2 | 7 |
| MEL1 | 60 | 40 | 20 | 59 | 87 | 75 | 1 | 24 | 3 | 7 |
| MEL2 | 60 | 40 | 10 | 63 | 83 | 75 | 1 | 8 | 1 | 7 |
| MEL3 | 60 | 40 | 10 | 56 | 93 | 75 | 1 | 16 | 2 | 7 |
| MEL4 | 60 | 40 | 10 | 71 | 76 | 115 | 1 | 8 | 1 | 7 |
| PLT1 | 70 | 30 | 20 | 60 | 242 | 65 | 1 | 24 | 3 | 7 |
| PLT11 | 60 | 60 | 10 | 60 | 245 | 70 | 1 | 24 | 3 | 7 |
| SIG4 | 60 | 35 | 15 | 73 | 49 | 135 | 1 | 24 | 3 | 7 |
| SMI1 | 40 | 35 | 10 | 75 | 70 | 75 | 1 | 8 | 1 | 7 |
| SMI2 | 35 | 35 | 15 | 87 | 235 | 75 | 1 | 8 | 1 | 7 |
| SMI3 | 35 | 35 | 15 | 79 | 247 | 75 | 1 | 6 | | |
| SNB1 | 40 | 40 | 10 | 85 | 91 | 75 | 1 | 8 | 1 | 7 |
| SNB2 | 60 | 40 | 10 | 79 | 263 | 75 | 1 | 16 | 2 | 7 |

### 14.3.7 Model Validation

The Bolañitos OK models were validated by the following methods:

- Comparison of the volume weighted descriptive statistics from the OK, nearest neighbor ("NN"), and inverse distance to the 2.5 power ("ID") interpolants,
- Reviewing Quantile-Quantile ("QQ") Plots of the OK and NN for each vein
- Reviewing Swath plots comparing the NN, ID, OK and Capped Composites by vein
- Inspection of the OK block model in long section in comparison to the composite grades.

*14.3.7.1 Comparison with Ordinary Krige and Nearest Neighbor and Inverse Distance Models*

The NN and ID interpolants were run to serve as comparison with the estimated results from the OK interpolant. Descriptive statistics weighted by volume for the OK interpolant along with those for NN and ID for gold and silver are presented in Table 14-9. Additionally, the difference in mean between the NN and OK and ID interpolants was calculated as a check. Ideally, the difference should be within +/- 6.0%.

**Table 14-9 Interpolant Descriptive Statistical Comparison by Vein Weighted by Volume**

| Vein | Metal | Interpolant | Block Count | Volume ($m^3$) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEL3 | Ag (g/t) | NN | 3,256 | 69,725 | 53.3 | 44.5 | 0.83 | 2.000 | 209.0 | | |
| | | ID | 3,256 | 69,725 | 54.3 | 36.1 | 0.66 | 2.000 | 208.4 | 1.9% | 1.0 |
| | | **OK** | **3,256** | **69,725** | **54.1** | **32.1** | **0.59** | **2.000** | **168.0** | **1.5%** | **0.8** |
| | Au (g/t) | NN | 3,256 | 69,725 | 1.18 | 0.87 | 0.74 | 0.006 | 5.59 | | |
| | | ID | 3,256 | 69,725 | 1.15 | 0.60 | 0.53 | 0.006 | 5.57 | -2.7% | -0.03 |
| | | **OK** | **3,256** | **69,725** | **1.13** | **0.46** | **0.41** | **0.006** | **3.83** | **-4.3%** | **-0.05** |
| BEL4 | Ag (g/t) | NN | 4,401 | 93,708 | 81.7 | 78.7 | 0.96 | 0.001 | 435.0 | | |
| | | ID | 4,401 | 93,708 | 80.1 | 59.3 | 0.74 | 0.001 | 431.1 | -1.9% | -1.5 |
| | | **OK** | **4,401** | **93,708** | **81.0** | **51.1** | **0.63** | **0.001** | **382.0** | **-0.9%** | **-0.7** |
| | Au (g/t) | NN | 4,401 | 93,708 | 1.83 | 1.67 | 0.91 | 0.001 | 5.72 | | |
| | | ID | 4,401 | 93,708 | 1.76 | 1.28 | 0.73 | 0.001 | 5.72 | -3.8% | -0.07 |
| | | **OK** | **4,401** | **93,708** | **1.80** | **1.13** | **0.63** | **0.001** | **5.72** | **-1.5%** | **-0.03** |
| BEL5 | Ag (g/t) | NN | 1,601 | 25,467 | 52.7 | 61.6 | 1.17 | 0.200 | 200.8 | | |
| | | ID | 1,601 | 25,467 | 51.0 | 47.1 | 0.92 | 0.200 | 200.8 | -3.2% | -1.7 |
| | | **OK** | **1,601** | **25,467** | **54.8** | **40.5** | **0.74** | **0.200** | **200.8** | **4.0%** | **2.1** |
| | Au (g/t) | NN | 1,601 | 25,467 | 1.43 | 1.66 | 1.16 | 0.005 | 6.60 | | |
| | | ID | 1,601 | 25,467 | 1.43 | 1.24 | 0.87 | 0.005 | 6.57 | -0.1% | 0.00 |
| | | **OK** | **1,601** | **25,467** | **1.51** | **1.08** | **0.71** | **0.005** | **4.72** | **5.9%** | **0.08** |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BEL6 | Ag (g/t) | NN | 2,128 | 45,170 | 45.7 | 48.6 | 1.06 | 2.000 | 142.0 | | |
| | | ID | 2,128 | 45,170 | 45.4 | 43.8 | 0.96 | 2.030 | 142.0 | -0.7% | -0.3 |
| | | **OK** | **2,128** | **45,170** | **45.7** | **42.6** | **0.93** | **4.430** | **142.0** | **0.0%** | **0.0** |
| | Au (g/t) | NN | 2,128 | 45,170 | 1.79 | 2.30 | 1.28 | 0.054 | 8.33 | | |
| | | ID | 2,128 | 45,170 | 1.75 | 1.94 | 1.11 | 0.057 | 8.33 | -2.4% | -0.04 |
| | | **OK** | **2,128** | **45,170** | **1.83** | **1.96** | **1.08** | **0.157** | **8.33** | **1.8%** | **0.03** |
| BEL7 | Ag (g/t) | NN | 1,575 | 22,555 | 63.4 | 75.3 | 1.19 | 0.001 | 223.0 | | |
| | | ID | 1,575 | 22,555 | 64.6 | 63.0 | 0.97 | 0.001 | 223.0 | 2.0% | 1.2 |
| | | **OK** | **1,575** | **22,555** | **63.2** | **55.9** | **0.88** | **0.001** | **223.0** | **-0.2%** | **-0.2** |
| | Au (g/t) | NN | 1,575 | 22,555 | 1.37 | 1.42 | 1.04 | 0.001 | 4.42 | | |
| | | ID | 1,575 | 22,555 | 1.38 | 1.23 | 0.89 | 0.001 | 4.42 | 1.1% | 0.02 |
| | | **OK** | **1,575** | **22,555** | **1.38** | **1.09** | **0.79** | **0.001** | **4.42** | **0.6%** | **0.01** |
| BEL8 | Ag (g/t) | NN | 1,692 | 25,481 | 128.3 | 99.4 | 0.77 | 0.200 | 267.0 | | |
| | | ID | 1,692 | 25,481 | 127.2 | 84.1 | 0.66 | 0.307 | 267.0 | -0.9% | -1.1 |
| | | **OK** | **1,692** | **25,481** | **124.9** | **75.4** | **0.60** | **1.730** | **267.0** | **-2.6%** | **-3.4** |
| | Au (g/t) | NN | 1,692 | 25,481 | 1.16 | 0.95 | 0.81 | 0.005 | 3.40 | | |
| | | ID | 1,692 | 25,481 | 1.12 | 0.75 | 0.66 | 0.006 | 3.40 | -3.7% | -0.04 |
| | | **OK** | **1,692** | **25,481** | **1.08** | **0.60** | **0.55** | **0.123** | **3.40** | -7.4% | **-0.09** |
| BOL1 | Ag (g/t) | NN | 14,162 | 162,803 | 33.6 | 50.1 | 1.49 | 0.001 | 341.0 | | |
| | | ID | 14,162 | 162,803 | 34.6 | 41.2 | 1.19 | 0.001 | 341.0 | 2.9% | 1.0 |
| | | **OK** | **14,162** | **162,803** | **34.2** | **37.2** | **1.09** | **0.001** | **341.0** | **1.8%** | **0.6** |
| | Au (g/t) | NN | 14,162 | 162,803 | 1.85 | 2.15 | 1.16 | 0.001 | 11.34 | | |
| | | ID | 14,162 | 162,803 | 1.73 | 1.52 | 0.88 | 0.001 | 10.51 | -6.7% | -0.12 |
| | | **OK** | **14,162** | **162,803** | **1.78** | **1.47** | **0.83** | **0.001** | **9.10** | **-3.8%** | **-0.07** |
| BOL4 | Ag (g/t) | NN | 4,630 | 58,911 | 54.0 | 69.9 | 1.29 | 0.001 | 310.0 | | |
| | | ID | 4,630 | 58,911 | 56.0 | 48.9 | 0.87 | 0.001 | 310.0 | 3.7% | 2.0 |
| | | **OK** | **4,630** | **58,911** | **56.9** | **42.1** | **0.74** | **0.001** | **310.0** | **5.2%** | **2.8** |
| | Au (g/t) | NN | 4,630 | 58,911 | 4.62 | 5.90 | 1.28 | 0.001 | 33.69 | | |
| | | ID | 4,630 | 58,911 | 4.57 | 4.81 | 1.05 | 0.001 | 30.53 | -1.1% | -0.05 |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **OK** | **4,630** | **58,911** | **4.52** | **4.45** | **0.98** | **0.001** | **30.67** | **-2.0%** | **-0.09** |
| BOL11 | Ag (g/t) | NN | 3,022 | 30,487 | 34.4 | 56.6 | 1.65 | 0.001 | 226.0 | | |
| | | ID | 3,022 | 30,487 | 32.0 | 36.7 | 1.15 | 0.001 | 226.0 | -7.0% | -2.4 |
| | | **OK** | **3,022** | **30,487** | **33.0** | **36.0** | **1.09** | **0.001** | **226.0** | **-4.2%** | **-1.4** |
| | Au (g/t) | NN | 3,022 | 30,487 | 4.12 | 5.73 | 1.39 | 0.001 | 24.80 | | |
| | | ID | 3,022 | 30,487 | 4.19 | 4.52 | 1.08 | 0.001 | 24.08 | 1.7% | 0.07 |
| | | **OK** | **3,022** | **30,487** | **4.28** | **4.39** | **1.02** | **0.001** | **18.52** | **4.0%** | **0.17** |
| BOL12 | Ag (g/t) | NN | 7,519 | 105,376 | 83.5 | 138.5 | 1.66 | 0.001 | 551.0 | | |
| | | ID | 7,519 | 105,376 | 77.1 | 102.4 | 1.33 | 0.048 | 550.9 | -7.7% | -6.4 |
| | | **OK** | **7,519** | **105,376** | **77.4** | **90.2** | **1.16** | **4.455** | **502.7** | -7.3% | **-6.1** |
| | Au (g/t) | NN | 7,519 | 105,376 | 3.73 | 3.51 | 0.94 | 0.001 | 19.22 | | |
| | | ID | 7,519 | 105,376 | 3.40 | 2.23 | 0.66 | 0.001 | 12.64 | -8.7% | -0.33 |
| | | **OK** | **7,519** | **105,376** | **3.65** | **1.78** | **0.49** | **0.042** | **11.49** | **-2.2%** | **-0.08** |
| BOL13 | Ag (g/t) | NN | 369 | 4,664 | 233.9 | 382.4 | 1.64 | 2.500 | 1076.5 | | |
| | | ID | 369 | 4,664 | 181.6 | 164.2 | 0.90 | 4.565 | 774.5 | -22.4% | -52.3 |
| | | **OK** | **369** | **4,664** | **240.9** | **155.5** | **0.65** | **12.077** | **733.2** | **3.0%** | **7.0** |
| | Au (g/t) | NN | 369 | 4,664 | 0.26 | 0.27 | 1.05 | 0.015 | 0.93 | | |
| | | ID | 369 | 4,664 | 0.21 | 0.15 | 0.72 | 0.016 | 0.88 | -19.9% | -0.05 |
| | | **OK** | **369** | **4,664** | **0.25** | **0.12** | **0.50** | **0.090** | **0.63** | **-4.3%** | **-0.01** |
| BOL9 | Ag (g/t) | NN | 353 | 4,414 | 29.8 | 21.9 | 0.74 | 2.500 | 86.0 | | |
| | | ID | 353 | 4,414 | 29.5 | 18.8 | 0.64 | 2.500 | 85.7 | -1.0% | -0.3 |
| | | **OK** | **353** | **4,414** | **29.8** | **17.2** | **0.58** | **2.500** | **71.0** | **-0.2%** | **-0.1** |
| | Au (g/t) | NN | 353 | 4,414 | 3.68 | 3.83 | 1.04 | 0.044 | 21.73 | | |
| | | ID | 353 | 4,414 | 3.60 | 2.96 | 0.82 | 0.078 | 20.02 | -2.1% | -0.08 |
| | | **OK** | **353** | **4,414** | **3.68** | **2.75** | **0.75** | **0.078** | **15.61** | **-0.1%** | **0.00** |
| BOL15 | Ag (g/t) | NN | 503 | 6,352 | 96.8 | 99.4 | 1.03 | 5.417 | 486.3 | | |
| | | ID | 503 | 6,352 | 98.7 | 83.4 | 0.84 | 8.385 | 408.6 | 2.0% | 1.9 |
| | | **OK** | **503** | **6,352** | **99.6** | **76.6** | **0.77** | **8.385** | **359.2** | **2.9%** | **2.8** |
| | | NN | 503 | 6,352 | 5.41 | 4.62 | 0.85 | 0.278 | 17.26 | | |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Au (g/t) | ID | 503 | 6,352 | 5.34 | 3.85 | 0.72 | 0.278 | 16.45 | -1.2% | -0.06 |
| | | **OK** | **503** | **6,352** | **5.37** | **3.54** | **0.66** | **0.278** | **14.10** | **-0.7%** | **-0.04** |
| BOL16 | Ag (g/t) | NN | 357 | 2,008 | 48.7 | 50.0 | 1.03 | 2.500 | 181.0 | | |
| | | ID | 357 | 2,008 | 46.9 | 36.3 | 0.77 | 2.500 | 181.0 | -3.7% | -1.8 |
| | | **OK** | **357** | **2,008** | **47.0** | **32.4** | **0.69** | **2.500** | **181.0** | **-3.5%** | **-1.7** |
| | Au (g/t) | NN | 357 | 2,008 | 3.51 | 4.00 | 1.14 | 0.015 | 14.95 | | |
| | | ID | 357 | 2,008 | 3.59 | 2.28 | 0.64 | 0.015 | 14.95 | 2.2% | 0.08 |
| | | **OK** | **357** | **2,008** | **3.52** | **2.00** | **0.57** | **0.015** | **14.95** | **0.4%** | **0.02** |
| BOL18 | Ag (g/t) | NN | 459 | 6,507 | 27.6 | 45.5 | 1.65 | 2.500 | 182.0 | | |
| | | ID | 459 | 6,507 | 26.4 | 29.2 | 1.11 | 2.500 | 165.7 | -4.6% | -1.3 |
| | | **OK** | **459** | **6,507** | **25.9** | **24.3** | **0.94** | **2.500** | **116.3** | -6.3% | **-1.7** |
| | Au (g/t) | NN | 459 | 6,507 | 2.41 | 4.58 | 1.90 | 0.131 | 22.12 | | |
| | | ID | 459 | 6,507 | 2.38 | 2.83 | 1.19 | 0.131 | 16.52 | -1.2% | -0.03 |
| | | **OK** | **459** | **6,507** | **2.41** | **2.61** | **1.08** | **0.131** | **12.60** | **-0.2%** | **0.00** |
| BOL19 | Ag (g/t) | NN | 233 | 2,308 | 269.6 | 275.2 | 1.02 | 7.000 | 859.6 | | |
| | | ID | 233 | 2,308 | 279.9 | 216.2 | 0.77 | 7.000 | 719.5 | 3.8% | 10.2 |
| | | **OK** | **233** | **2,308** | **295.4** | **192.9** | **0.65** | **7.000** | **709.7** | 9.5% | **25.7** |
| | Au (g/t) | NN | 233 | 2,308 | 2.88 | 3.11 | 1.08 | 0.313 | 13.17 | | |
| | | ID | 233 | 2,308 | 3.13 | 2.10 | 0.67 | 0.313 | 13.17 | 8.8% | 0.25 |
| | | **OK** | **233** | **2,308** | **3.52** | **2.04** | **0.58** | **0.313** | **13.17** | **22.5%** | **0.65** |
| CEC1 | Ag (g/t) | NN | 7,565 | 58,373 | 99.8 | 142.3 | 1.43 | 0.001 | 542.9 | | |
| | | ID | 7,565 | 58,373 | 97.1 | 109.6 | 1.13 | 0.001 | 542.5 | -2.7% | -2.7 |
| | | **OK** | **7,565** | **58,373** | **96.2** | **84.4** | **0.88** | **0.001** | **539.0** | **-3.6%** | **-3.6** |
| | Au (g/t) | NN | 7,565 | 58,373 | 1.47 | 1.85 | 1.26 | 0.001 | 11.56 | | |
| | | ID | 7,565 | 58,373 | 1.38 | 1.40 | 1.01 | 0.001 | 9.99 | -6.1% | -0.09 |
| | | **OK** | **7,565** | **58,373** | **1.43** | **1.18** | **0.82** | **0.001** | **6.43** | **-2.9%** | **-0.04** |
| CEC2 | Ag (g/t) | NN | 3,326 | 20,113 | 142.8 | 141.7 | 0.99 | 0.500 | 629.0 | | |
| | | ID | 3,326 | 20,113 | 136.8 | 96.1 | 0.70 | 1.087 | 541.6 | -4.2% | -5.9 |
| | | **OK** | **3,326** | **20,113** | **141.3** | **80.4** | **0.57** | **2.500** | **516.4** | **-1.0%** | **-1.5** |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Au (g/t) | NN | 3,326 | 20,113 | 2.17 | 2.87 | 1.32 | 0.015 | 9.10 | | |
| | | ID | 3,326 | 20,113 | 2.31 | 2.73 | 1.18 | 0.015 | 8.51 | 6.1% | 0.13 |
| | | **OK** | **3,326** | **20,113** | **2.23** | **2.57** | **1.15** | **0.015** | **8.51** | **2.8%** | **0.06** |
| CEC3 | Ag (g/t) | NN | 4,869 | 22,582 | 76.7 | 85.6 | 1.12 | 0.001 | 240.4 | | |
| | | ID | 4,869 | 22,582 | 76.0 | 72.8 | 0.96 | 0.001 | 240.1 | -0.9% | -0.7 |
| | | **OK** | **4,869** | **22,582** | **78.7** | **68.1** | **0.87** | **0.001** | **222.4** | **2.5%** | **1.9** |
| | Au (g/t) | NN | 4,869 | 22,582 | 1.51 | 1.81 | 1.20 | 0.001 | 5.89 | | |
| | | ID | 4,869 | 22,582 | 1.53 | 1.52 | 0.99 | 0.001 | 5.89 | 1.2% | 0.02 |
| | | **OK** | **4,869** | **22,582** | **1.60** | **1.48** | **0.92** | **0.001** | **5.84** | **5.5%** | **0.08** |
| CEC4 | Ag (g/t) | NN | 3,411 | 8,516 | 53.7 | 67.8 | 1.26 | 0.001 | 176.1 | | |
| | | ID | 3,411 | 8,516 | 49.3 | 45.1 | 0.91 | 0.001 | 176.1 | -8.2% | -4.4 |
| | | **OK** | **3,411** | **8,516** | **48.7** | **33.8** | **0.69** | **0.171** | **176.1** | -9.3% | **-5.0** |
| | Au (g/t) | NN | 3,411 | 8,516 | 0.40 | 0.53 | 1.34 | 0.001 | 2.54 | | |
| | | ID | 3,411 | 8,516 | 0.40 | 0.35 | 0.87 | 0.001 | 1.86 | 1.0% | 0.00 |
| | | **OK** | **3,411** | **8,516** | **0.43** | **0.32** | **0.74** | **0.007** | **1.52** | 7.9% | **0.03** |
| HER1 | Ag (g/t) | NN | 10,233 | 130,440 | 95.1 | 91.4 | 0.96 | 0.001 | 571.0 | | |
| | | ID | 10,233 | 130,440 | 90.7 | 71.6 | 0.79 | 0.001 | 514.5 | -4.6% | -4.4 |
| | | **OK** | **10,233** | **130,440** | **91.8** | **54.7** | **0.60** | **0.001** | **514.5** | **-3.4%** | **-3.3** |
| | Au (g/t) | NN | 10,233 | 130,440 | 1.53 | 2.02 | 1.32 | 0.001 | 16.00 | | |
| | | ID | 10,233 | 130,440 | 1.36 | 1.48 | 1.09 | 0.001 | 15.57 | -11.2% | -0.17 |
| | | **OK** | **10,233** | **130,440** | **1.48** | **1.37** | **0.93** | **0.001** | **9.09** | **-3.7%** | **-0.06** |
| HER2 | Ag (g/t) | NN | 2,186 | 21,076 | 25.9 | 20.6 | 0.80 | 0.001 | 218.0 | | |
| | | ID | 2,186 | 21,076 | 24.5 | 17.0 | 0.69 | 0.001 | 158.3 | -5.1% | -1.3 |
| | | **OK** | **2,186** | **21,076** | **26.2** | **15.5** | **0.59** | **0.001** | **84.5** | **1.3%** | **0.3** |
| | Au (g/t) | NN | 2,186 | 21,076 | 1.98 | 1.55 | 0.78 | 0.001 | 5.00 | | |
| | | ID | 2,186 | 21,076 | 1.87 | 1.30 | 0.69 | 0.001 | 4.59 | -5.8% | -0.12 |
| | | **OK** | **2,186** | **21,076** | **2.01** | **1.16** | **0.58** | **0.001** | **4.59** | **1.3%** | **0.03** |
| KAR1 | Ag (g/t) | NN | 17,861 | 216,908 | 132.6 | 158.8 | 1.20 | 0.001 | 1895.0 | | |
| | | ID | 17,968 | 218,294 | 130.7 | 100.6 | 0.77 | 0.001 | 1434.9 | -1.4% | -1.9 |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **OK** | **17,968** | **218,294** | **137.3** | **90.3** | **0.66** | **0.001** | **1087.9** | **3.6%** | **4.7** |
| | Au (g/t) | NN | 17,861 | 216,908 | 1.98 | 2.78 | 1.40 | 0.001 | 34.90 | | |
| | | ID | 17,968 | 218,294 | 2.00 | 1.86 | 0.93 | 0.001 | 33.83 | 0.9% | 0.02 |
| | | **OK** | **17,968** | **218,294** | **2.08** | **1.70** | **0.82** | **0.001** | **17.88** | **5.0%** | **0.10** |
| LAN1 | Ag (g/t) | NN | 26,766 | 263,544 | 140.6 | 237.2 | 1.69 | 0.001 | 1660.0 | | |
| | | ID | 28,240 | 271,330 | 135.9 | 157.0 | 1.15 | 0.200 | 1627.8 | -3.3% | -4.6 |
| | | **OK** | **28,240** | **271,330** | **141.9** | **155.7** | **1.10** | **0.200** | **1295.8** | **0.9%** | **1.3** |
| | Au (g/t) | NN | 26,766 | 263,544 | 2.13 | 4.76 | 2.24 | 0.001 | 44.00 | | |
| | | ID | 28,240 | 271,330 | 2.05 | 2.89 | 1.41 | 0.005 | 37.63 | -3.9% | -0.08 |
| | | **OK** | **28,240** | **271,330** | **2.20** | **2.79** | **1.27** | **-0.255** | **34.63** | **3.4%** | **0.07** |
| LAN3 | Ag (g/t) | NN | 2,575 | 16,331 | 206.1 | 330.7 | 1.60 | 2.809 | 878.0 | | |
| | | ID | 2,575 | 16,331 | 207.6 | 292.5 | 1.41 | 2.809 | 878.0 | 0.8% | 1.6 |
| | | **OK** | **2,575** | **16,331** | **212.1** | **273.5** | **1.29** | **2.809** | **878.0** | **2.9%** | **6.0** |
| | Au (g/t) | NN | 2,576 | 16,356 | 0.55 | 0.83 | 1.51 | 0.090 | 2.32 | | |
| | | ID | 2,575 | 16,331 | 0.56 | 0.73 | 1.32 | 0.090 | 2.32 | 1.3% | 0.01 |
| | | **OK** | **2,575** | **16,331** | **0.57** | **0.69** | **1.21** | **0.090** | **2.32** | **3.4%** | **0.02** |
| LAN4 | Ag (g/t) | NN | 1,875 | 15,271 | 24.1 | 31.1 | 1.29 | 0.001 | 88.0 | | |
| | | ID | 1,875 | 15,271 | 24.0 | 27.3 | 1.14 | 0.001 | 88.0 | -0.3% | -0.1 |
| | | **OK** | **1,875** | **15,271** | **24.1** | **25.0** | **1.03** | **0.001** | **88.0** | **0.2%** | **0.1** |
| | Au (g/t) | NN | 1,875 | 15,271 | 1.39 | 2.84 | 2.04 | 0.001 | 7.45 | | |
| | | ID | 1,875 | 15,271 | 1.40 | 2.49 | 1.78 | 0.001 | 7.45 | 0.2% | 0.00 |
| | | **OK** | **1,875** | **15,271** | **1.41** | **2.28** | **1.62** | **0.001** | **7.45** | **1.0%** | **0.01** |
| LAN5 | Ag (g/t) | NN | 6,018 | 38,617 | 61.7 | 71.5 | 1.16 | 0.001 | 678.8 | | |
| | | ID | 6,018 | 38,617 | 55.9 | 45.1 | 0.81 | 0.001 | 448.4 | -9.4% | -5.8 |
| | | **OK** | **6,018** | **38,617** | **62.4** | **41.8** | **0.67** | **0.001** | **333.8** | **1.2%** | **0.7** |
| | Au (g/t) | NN | 6,018 | 38,617 | 2.88 | 6.04 | 2.10 | 0.001 | 23.20 | | |
| | | ID | 6,018 | 38,617 | 2.61 | 5.15 | 1.97 | 0.001 | 19.35 | -9.4% | -0.27 |
| | | **OK** | **6,018** | **38,617** | **2.96** | **4.92** | **1.66** | **0.001** | **19.00** | **2.8%** | **0.08** |
| LAN6 | | NN | 3,499 | 14,527 | 90.7 | 140.4 | 1.55 | 0.001 | 549.0 | | |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ag (g/t) | ID | 3,499 | 14,527 | 89.8 | 100.8 | 1.12 | 0.001 | 547.0 | -0.9% | -0.8 |
| | | **OK** | **3,499** | **14,527** | **98.0** | **84.2** | **0.86** | **0.001** | **414.2** | 8.1% | **7.3** |
| | Au (g/t) | NN | 3,499 | 14,527 | 0.42 | 0.57 | 1.36 | 0.001 | 1.78 | | |
| | | ID | 3,499 | 14,527 | 0.42 | 0.41 | 0.97 | 0.001 | 1.78 | -0.2% | 0.00 |
| | | **OK** | **3,499** | **14,527** | **0.45** | **0.33** | **0.74** | **0.001** | **1.78** | 7.9% | **0.03** |
| LLN1 | Ag (g/t) | NN | 7,506 | 175,342 | 49.8 | 77.9 | 1.57 | 0.001 | 530.0 | | |
| | | ID | 7,506 | 175,342 | 51.6 | 65.6 | 1.27 | 0.047 | 520.7 | 3.7% | 1.9 |
| | | **OK** | **7,506** | **175,342** | **52.0** | **59.5** | **1.14** | **0.834** | **345.9** | **4.4%** | **2.2** |
| | Au (g/t) | NN | 7,506 | 175,342 | 1.92 | 2.74 | 1.43 | 0.001 | 23.80 | | |
| | | ID | 7,506 | 175,342 | 2.02 | 2.02 | 1.00 | 0.001 | 19.12 | 5.1% | 0.10 |
| | | **OK** | **7,506** | **175,342** | **2.06** | **1.89** | **0.91** | **-0.012** | **15.12** | 7.5% | **0.14** |
| LUC1 | Ag (g/t) | NN | 6,944 | 56,403 | 268.4 | 392.3 | 1.46 | 0.001 | 1989.0 | | |
| | | ID | 6,944 | 56,403 | 266.0 | 296.3 | 1.11 | 0.001 | 1953.4 | -0.9% | -2.4 |
| | | **OK** | **6,944** | **56,403** | **277.7** | **275.6** | **0.99** | **0.001** | **1636.6** | **3.5%** | **9.3** |
| | Au (g/t) | NN | 6,944 | 56,403 | 3.88 | 6.79 | 1.75 | 0.001 | 49.40 | | |
| | | ID | 6,944 | 56,403 | 3.85 | 4.00 | 1.04 | 0.001 | 46.85 | -0.8% | -0.03 |
| | | **OK** | **6,944** | **56,403** | **4.07** | **3.63** | **0.89** | **0.001** | **28.37** | **5.0%** | **0.19** |
| LUC4 | Ag (g/t) | NN | 2,028 | 9,004 | 238.2 | 314.2 | 1.32 | 0.001 | 1273.0 | | |
| | | ID | 2,028 | 9,004 | 232.8 | 218.3 | 0.94 | 0.001 | 1189.5 | -2.3% | -5.5 |
| | | **OK** | **2,028** | **9,004** | **245.7** | **211.8** | **0.86** | **0.001** | **1170.9** | **3.2%** | **7.5** |
| | Au (g/t) | NN | 2,028 | 9,004 | 5.02 | 6.94 | 1.38 | 0.001 | 25.10 | | |
| | | ID | 2,028 | 9,004 | 5.03 | 5.02 | 1.00 | 0.001 | 25.04 | 0.3% | 0.02 |
| | | **OK** | **2,028** | **9,004** | **4.99** | **4.58** | **0.92** | **-0.147** | **21.60** | **-0.5%** | **-0.03** |
| LUC6 | Ag (g/t) | NN | 1,149 | 5,821 | 158.5 | 120.2 | 0.76 | 2.000 | 643.0 | | |
| | | ID | 1,149 | 5,821 | 158.3 | 78.9 | 0.50 | 2.000 | 572.4 | -0.1% | -0.2 |
| | | **OK** | **1,149** | **5,821** | **158.8** | **71.5** | **0.45** | **2.000** | **422.8** | **0.2%** | **0.3** |
| | Au (g/t) | NN | 1,149 | 5,821 | 2.43 | 2.08 | 0.86 | 0.001 | 12.30 | | |
| | | ID | 1,149 | 5,821 | 2.52 | 1.35 | 0.53 | 0.001 | 12.30 | 3.5% | 0.09 |
| | | **OK** | **1,149** | **5,821** | **2.59** | **1.26** | **0.49** | **0.001** | **12.30** | 6.6% | **0.16** |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LUC7 | Ag (g/t) | NN | 3,003 | 18,237 | 114.0 | 137.6 | 1.21 | 0.001 | 1393.6 | | |
| | | ID | 3,003 | 18,237 | 110.3 | 110.4 | 1.00 | 0.001 | 883.4 | -3.2% | -3.7 |
| | | **OK** | **3,003** | **18,237** | **118.1** | **103.7** | **0.88** | **0.001** | **572.2** | **3.6%** | **4.1** |
| | Au (g/t) | NN | 3,003 | 18,237 | 1.97 | 4.03 | 2.05 | 0.001 | 18.90 | | |
| | | ID | 3,003 | 18,237 | 1.90 | 3.54 | 1.86 | 0.001 | 18.87 | -3.2% | -0.06 |
| | | **OK** | **3,003** | **18,237** | **1.91** | **3.17** | **1.67** | **0.001** | **18.87** | **-3.2%** | **-0.06** |
| MEL1 | Ag (g/t) | NN | 25,996 | 381,517 | 81.8 | 136.4 | 1.67 | 1.800 | 828.3 | | |
| | | ID | 25,996 | 381,517 | 82.9 | 105.4 | 1.27 | 2.157 | 828.0 | 1.3% | 1.0 |
| | | **OK** | **25,996** | **381,517** | **82.6** | **90.2** | **1.09** | **2.189** | **806.9** | **0.9%** | **0.8** |
| | Au (g/t) | NN | 25,996 | 381,517 | 0.91 | 1.25 | 1.36 | 0.033 | 25.81 | | |
| | | ID | 25,996 | 381,517 | 0.94 | 1.07 | 1.14 | 0.033 | 14.89 | 2.5% | 0.02 |
| | | **OK** | **25,996** | **381,517** | **0.92** | **1.01** | **1.09** | **0.033** | **7.99** | **0.7%** | **0.01** |
| MEL2 | Ag (g/t) | NN | 8,945 | 102,080 | 113.9 | 310.7 | 2.73 | 0.001 | 1262.0 | | |
| | | ID | 8,945 | 102,080 | 106.8 | 280.8 | 2.63 | 0.001 | 1262.0 | -6.2% | -7.1 |
| | | **OK** | **8,945** | **102,080** | **105.0** | **275.2** | **2.62** | **0.001** | **1262.0** | -7.9% | **-8.9** |
| | Au (g/t) | NN | 8,945 | 102,080 | 1.54 | 1.86 | 1.21 | 0.001 | 9.74 | | |
| | | ID | 8,945 | 102,080 | 1.53 | 1.57 | 1.03 | 0.001 | 7.46 | -0.5% | -0.01 |
| | | **OK** | **8,945** | **102,080** | **1.51** | **1.33** | **0.88** | **0.001** | **7.37** | **-2.1%** | **-0.03** |
| MEL3 | Ag (g/t) | NN | 4,247 | 26,392 | 30.6 | 69.5 | 2.28 | 0.001 | 293.0 | | |
| | | ID | 4,247 | 26,392 | 27.2 | 45.0 | 1.65 | 0.002 | 292.2 | -10.9% | -3.3 |
| | | **OK** | **4,247** | **26,392** | **32.2** | **41.5** | **1.29** | **1.775** | **236.1** | **5.4%** | **1.7** |
| | Au (g/t) | NN | 4,247 | 26,392 | 2.59 | 4.00 | 1.55 | 0.001 | 11.80 | | |
| | | ID | 4,247 | 26,392 | 2.68 | 3.16 | 1.18 | 0.015 | 11.80 | 3.6% | 0.09 |
| | | **OK** | **4,247** | **26,392** | **2.73** | **2.72** | **1.00** | **0.069** | **11.80** | **5.6%** | **0.14** |
| MEL4 | Ag (g/t) | NN | 5,544 | 48,779 | 52.7 | 98.5 | 1.87 | 2.200 | 947.0 | | |
| | | ID | 5,544 | 48,779 | 49.9 | 68.9 | 1.38 | 2.200 | 946.7 | -5.2% | -2.7 |
| | | **OK** | **5,544** | **48,779** | **51.3** | **66.8** | **1.30** | **2.200** | **946.7** | **-2.6%** | **-1.4** |
| | Au (g/t) | NN | 5,544 | 48,779 | 2.22 | 3.23 | 1.46 | 0.015 | 17.50 | | |
| | | ID | 5,544 | 48,779 | 2.18 | 2.43 | 1.11 | 0.049 | 17.50 | -1.6% | -0.04 |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **OK** | **5,544** | **48,779** | **2.18** | **2.31** | **1.06** | **0.050** | **17.50** | **-1.5%** | **-0.03** |
| PLT1 | Ag (g/t) | NN | 13,248 | 109,785 | 50.1 | 80.8 | 1.61 | 0.001 | 473.0 | | |
| | | ID | 13,248 | 109,785 | 48.3 | 57.5 | 1.19 | 0.001 | 458.3 | -3.5% | -1.8 |
| | | **OK** | **13,248** | **109,785** | **50.9** | **53.5** | **1.05** | **0.001** | **335.7** | **1.7%** | **0.8** |
| | Au (g/t) | NN | 13,248 | 109,785 | 2.04 | 3.21 | 1.58 | 0.001 | 17.20 | | |
| | | ID | 13,248 | 109,785 | 1.87 | 2.02 | 1.08 | 0.001 | 16.96 | -8.2% | -0.17 |
| | | **OK** | **13,248** | **109,785** | **1.97** | **1.76** | **0.90** | **0.001** | **15.35** | **-3.3%** | **-0.07** |
| PLT11 | Ag (g/t) | NN | 17,148 | 175,792 | 34.6 | 69.9 | 2.02 | 0.001 | 391.9 | | |
| | | ID | 17,148 | 175,792 | 32.8 | 55.9 | 1.71 | 0.001 | 391.9 | -5.4% | -1.9 |
| | | **OK** | **17,148** | **175,792** | **33.0** | **50.4** | **1.53** | **0.001** | **391.9** | **-4.7%** | **-1.6** |
| | Au (g/t) | NN | 17,148 | 175,792 | 2.18 | 2.75 | 1.26 | 0.001 | 18.23 | | |
| | | ID | 17,148 | 175,792 | 2.13 | 2.00 | 0.94 | 0.001 | 18.23 | -2.0% | -0.04 |
| | | **OK** | **17,148** | **175,792** | **2.21** | **1.86** | **0.84** | **0.001** | **18.23** | **1.7%** | **0.04** |
| SIG4 | Ag (g/t) | NN | 7,303 | 64,578 | 139.1 | 177.7 | 1.28 | 1.000 | 836.0 | | |
| | | ID | 7,303 | 64,578 | 132.7 | 128.0 | 0.96 | 1.000 | 776.7 | -4.6% | -6.4 |
| | | **OK** | **7,303** | **64,578** | **132.9** | **118.3** | **0.89** | **0.494** | **647.4** | **-4.4%** | **-6.2** |
| | Au (g/t) | NN | 7,303 | 64,578 | 1.07 | 1.36 | 1.27 | 0.015 | 8.57 | | |
| | | ID | 7,303 | 64,578 | 1.07 | 0.92 | 0.86 | 0.015 | 8.56 | 0.0% | 0.00 |
| | | **OK** | **7,303** | **64,578** | **1.11** | **0.85** | **0.77** | **0.015** | **6.01** | **3.8%** | **0.04** |
| SMI1 | Ag (g/t) | NN | 10,000 | 93,544 | 25.0 | 29.1 | 1.17 | 0.001 | 191.0 | -2.0% | -0.5 |
| | | ID | 10,000 | 93,544 | 25.5 | 34.5 | 1.36 | 0.001 | 191.0 | | |
| | | **OK** | **10,000** | **93,544** | **24.7** | **27.3** | **1.11** | **0.001** | **191.0** | **-3.2%** | **-0.8** |
| | Au (g/t) | NN | 10,000 | 93,544 | 3.27 | 3.92 | 1.20 | 0.001 | 43.60 | -3.8% | -0.13 |
| | | ID | 10,000 | 93,544 | 3.40 | 5.28 | 1.55 | 0.001 | 43.60 | | |
| | | **OK** | **10,000** | **93,544** | **3.37** | **3.47** | **1.03** | **0.001** | **43.60** | **-0.8%** | **-0.03** |
| SMI2 | Ag (g/t) | NN | 2,941 | 14,556 | 13.5 | 27.9 | 2.06 | 0.001 | 166.5 | | |
| | | ID | 2,941 | 14,556 | 12.5 | 21.3 | 1.71 | 0.001 | 149.9 | -8.0% | -1.1 |
| | | **OK** | **2,941** | **14,556** | **13.8** | **21.1** | **1.53** | **0.001** | **130.5** | **1.8%** | **0.2** |
| | | NN | 2,941 | 14,556 | 1.37 | 1.81 | 1.32 | 0.001 | 8.20 | | |

| Vein | Metal | Interpolant | Block Count | Volume (m³) | Mean | Std. Dev. | CV | Min. | Max. | Mean Diff % | Mean Diff |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Au (g/t) | ID | 2,941 | 14,556 | 1.25 | 1.41 | 1.13 | 0.001 | 8.12 | -8.8% | -0.12 |
| | | **OK** | **2,941** | **14,556** | **1.37** | **1.33** | **0.97** | **0.001** | **7.15** | **0.4%** | **0.01** |
| SMI3 | Ag (g/t) | NN | 1,318 | 3,487 | 3.7 | 4.3 | 1.17 | 0.001 | 15.0 | | |
| | | ID | 1,318 | 3,487 | 3.5 | 3.4 | 0.98 | 0.001 | 15.0 | -6.1% | -0.2 |
| | | **OK** | **1,318** | **3,487** | **3.4** | **3.1** | **0.91** | **0.001** | **15.0** | -6.4% | **-0.2** |
| | Au (g/t) | NN | 1,318 | 3,487 | 0.40 | 0.48 | 1.20 | 0.001 | 2.28 | | |
| | | ID | 1,318 | 3,487 | 0.41 | 0.35 | 0.84 | 0.001 | 2.11 | 4.0% | 0.02 |
| | | **OK** | **1,318** | **3,487** | **0.39** | **0.30** | **0.77** | **0.001** | **1.52** | **-2.5%** | **-0.01** |
| SNB1 | Ag (g/t) | NN | 1,534 | 11,498 | 44.1 | 60.0 | 1.36 | 2.500 | 194.0 | | |
| | | ID | 1,534 | 11,498 | 40.1 | 45.8 | 1.14 | 2.500 | 194.0 | -9.2% | -4.1 |
| | | **OK** | **1,534** | **11,498** | **42.2** | **44.6** | **1.06** | **2.500** | **194.0** | **-4.5%** | -2.0 |
| | Au (g/t) | NN | 1,534 | 11,498 | 5.58 | 4.61 | 0.83 | 0.506 | 14.43 | | |
| | | ID | 1,534 | 11,498 | 5.47 | 3.34 | 0.61 | 0.843 | 14.43 | -2.1% | -0.12 |
| | | **OK** | **1,534** | **11,498** | **5.40** | **3.11** | **0.58** | **0.845** | **14.43** | **-3.3%** | -0.19 |
| SNB2 | Ag (g/t) | NN | 1,886 | 20,923 | 29.2 | 25.3 | 0.87 | 1.627 | 89.0 | | |
| | | ID | 1,886 | 20,923 | 27.7 | 17.9 | 0.65 | 1.627 | 89.0 | -5.3% | -1.5 |
| | | **OK** | **1,886** | **20,923** | **28.5** | **15.8** | **0.55** | **1.627** | **89.0** | **-2.4%** | -0.7 |
| | Au (g/t) | NN | 1,886 | 20,923 | 8.19 | 6.73 | 0.82 | 0.071 | 33.20 | | |
| | | ID | 1,886 | 20,923 | 7.59 | 4.16 | 0.55 | 0.071 | 21.38 | -7.3% | -0.60 |
| | | **OK** | **1,886** | **20,923** | **8.08** | **3.37** | **0.42** | **0.071** | **21.38** | **-1.3%** | -0.10 |

The statistical validation shows similar means and reductions in the maximum grade between the OK and NN interpolants. Of the 90 gold and silver estimates, 77 had a difference in the mean within +/- 6% between the OK and NN interpolants. Twelve estimates had an OK and NN difference in the mean between +/- 6% and 10%. Only one estimate had a difference in the mean between the OK and NN interpolants exceeding +/- 10%. In many cases where the difference in the mean between the OK and NN interpolants exceed +/- 6%, the difference in grade was low or the volume was small in comparison to other veins. Additionally, the statistical comparison shows the OK gold interpolant in three veins resulted in blocks being assigned negative grades. Negative grades are usually the result of very low and very high-grade composites being in close proximity to one another resulting in an overall negative weight being assigned to the block. While effort was made to reduce or eliminate negative blocks from the estimate, the final tally of negative blocks are 2 in LAN1, 1 in LLN1, and 1 in LUC4. Comparing these negative blocks to the NN interpolant suggest these blocks are lower gold grade material and do not materially impact the mineral resource estimate.

*14.3.7.2 Quantile-Quantile Plots*

QQ plots comparing the NN and OK interpolants for silver and gold by vein were reviewed to visualize the degree of smoothing. The closer the plotted points are to the normal line (black) where X=Y, the lower the degree of smoothing within the estimate. Points plotted above the normal line represent a higher OK estimate of the grade compared to the NN, and points plotted below the normal line represent a lower OK estimate compared to the NN. All estimates generally overestimate lower grades and underestimate higher grades; however, the mean should be close to the normal line. The degree to which the amount of smoothing is desirable depends on the deposit type and mining methods. Mr. Schwering attempted to keep the degree of smoothing low for the Bolañitos mine grade estimates. Figures 14-9 and 14-10 show QQ plots for silver and gold respectively for the MEL1 vein where the degree of smoothing is low.

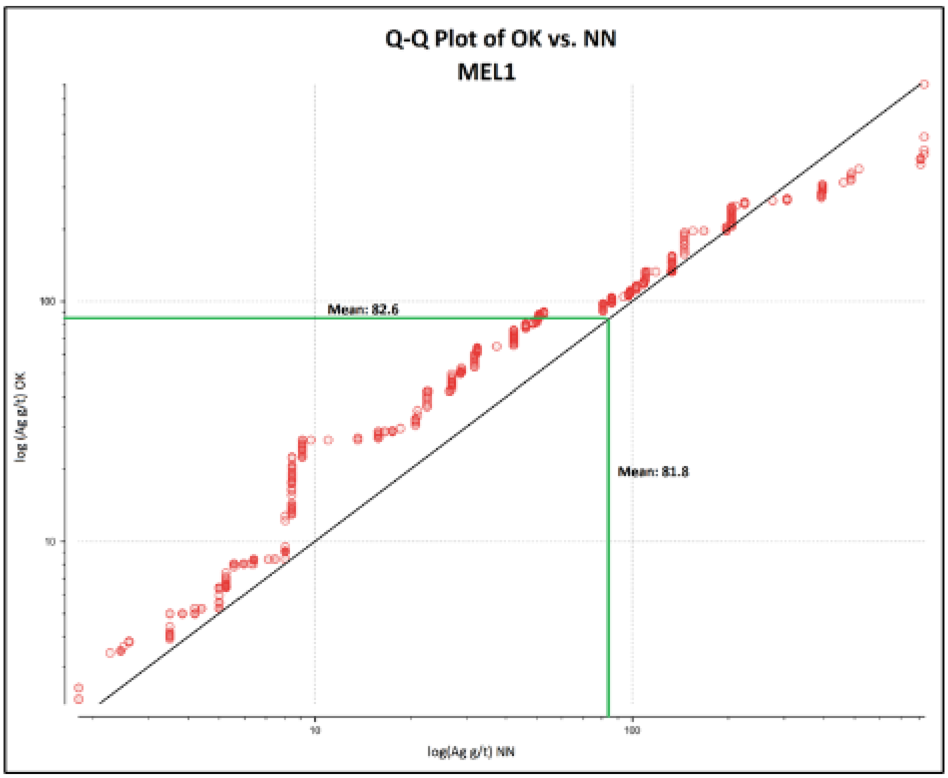



**Figure 14-9 Silver QQ Plot for MEL1**

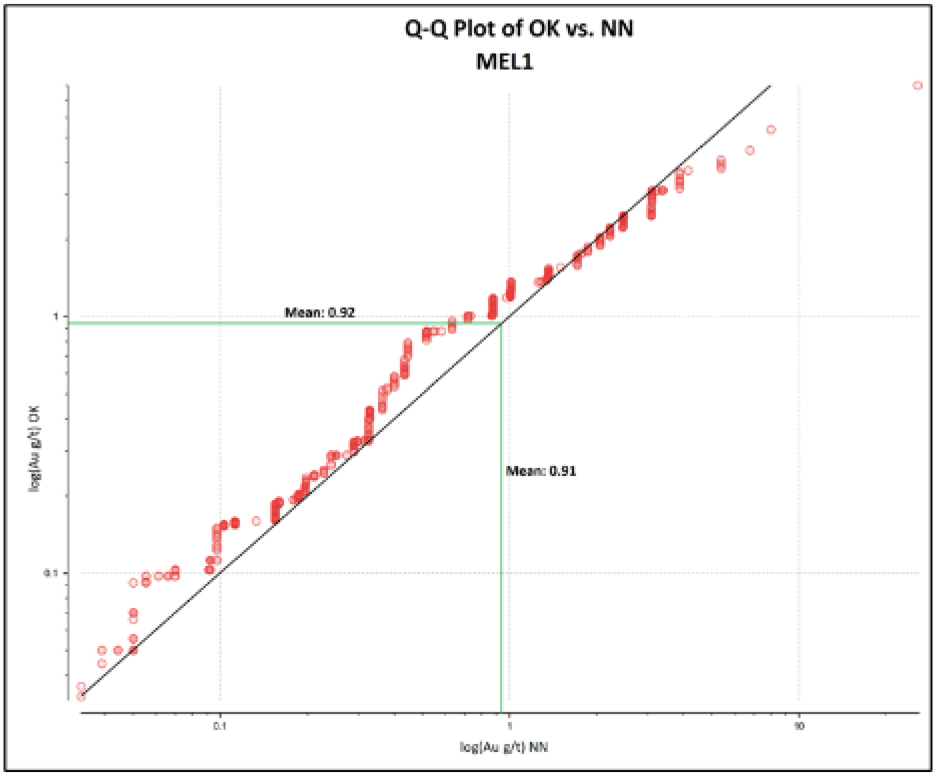



**Figure 14-10 Gold QQ Plot for MEL1**

### *14.3.7.3 Swath Plots*

Swath plots were generated to compare average estimated gold and silver grade from the OK interpolant to the two validation model interpolants (ID and NN) and capped composites. The results from the OK interpolant, plus those for the validation ID interpolant method are compared using the swath plot to the distribution derived from the NN interpolant and composites.

Two swath plots of gold and silver grades were generated and reviewed for each vein along strike and down dip. Figure 14-11 shows average silver grade from southeast to northwest along strike and down dip from higher to lower elevations for LAN1 vein; Figure 14-12 shows average gold grade from southeast to northwest along strike and down dip from higher to lower elevations for the LAN1 vein.

On a local scale, the nearest neighbor model does not provide a reliable estimate of grades. On a much larger scale, it represents an unbiased estimation of the grade distribution based on the total data set. Therefore, if the OK model is unbiased, the grade trends may show local fluctuations on a swath plot, but the overall trend should be similar to the distribution of grade from the nearest neighbor.

Review of swath plots for all veins suggest correlation between the grade estimation methods appear reasonable. Variation between model estimates increases near model edges and is a result of lower drilling density.

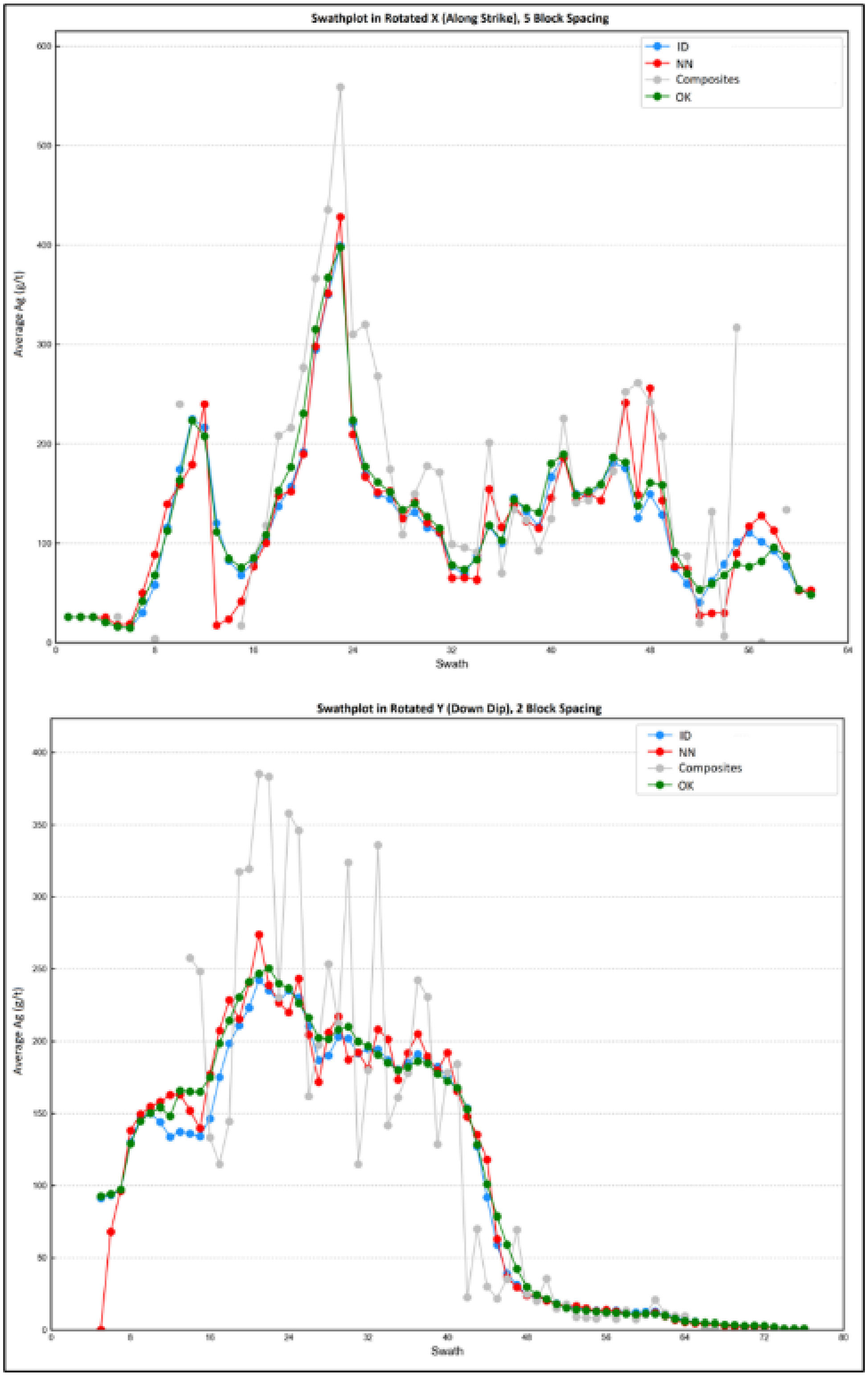



**Figure 14-11 Silver Swath Plots for the LAN1 Vein**

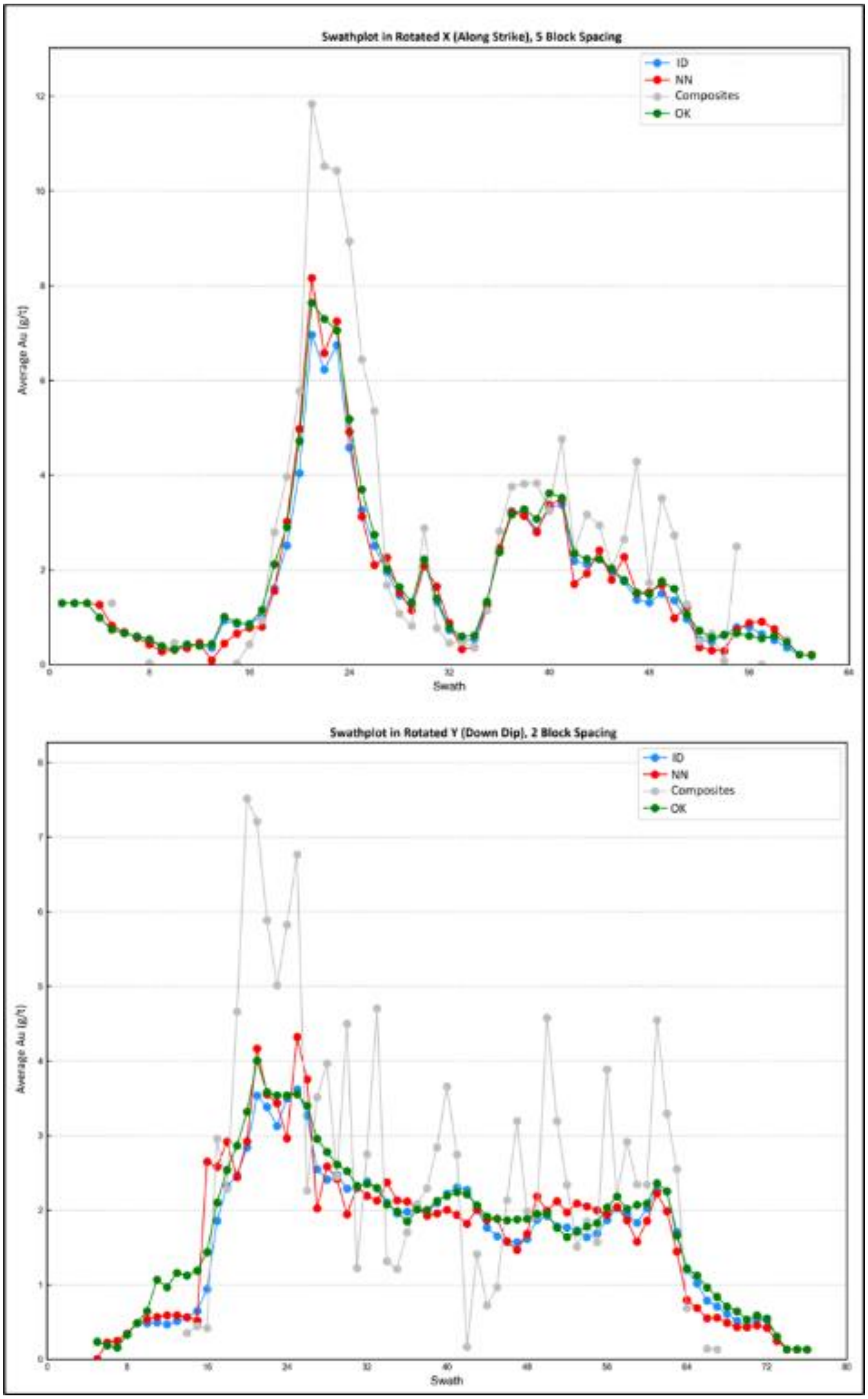



**Figure 14-12 Gold Swath Plots for the LAN1 Vein**

#### *14.3.7.4 Sectional Inspection*

Composite grades were compared against the OK model grades in long section for silver and gold by vein. Overall, the grade distribution trends observed in the OK models were matched by the composites. Figures 14-13 and Figure 14-14 show the silver and gold long sections respectively for the PLT1 vein.

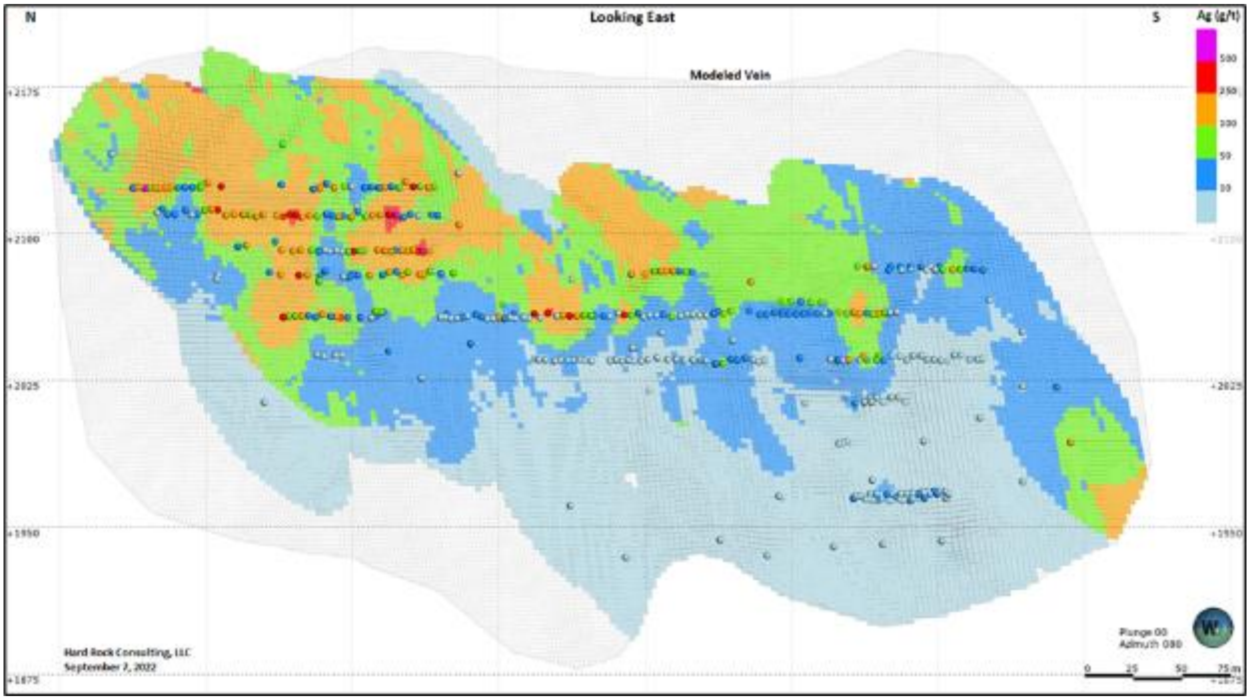



**Figure 14-13 Long Section view of PLT1 Vein Block Model showing the Estimated Silver Grades and Composites**

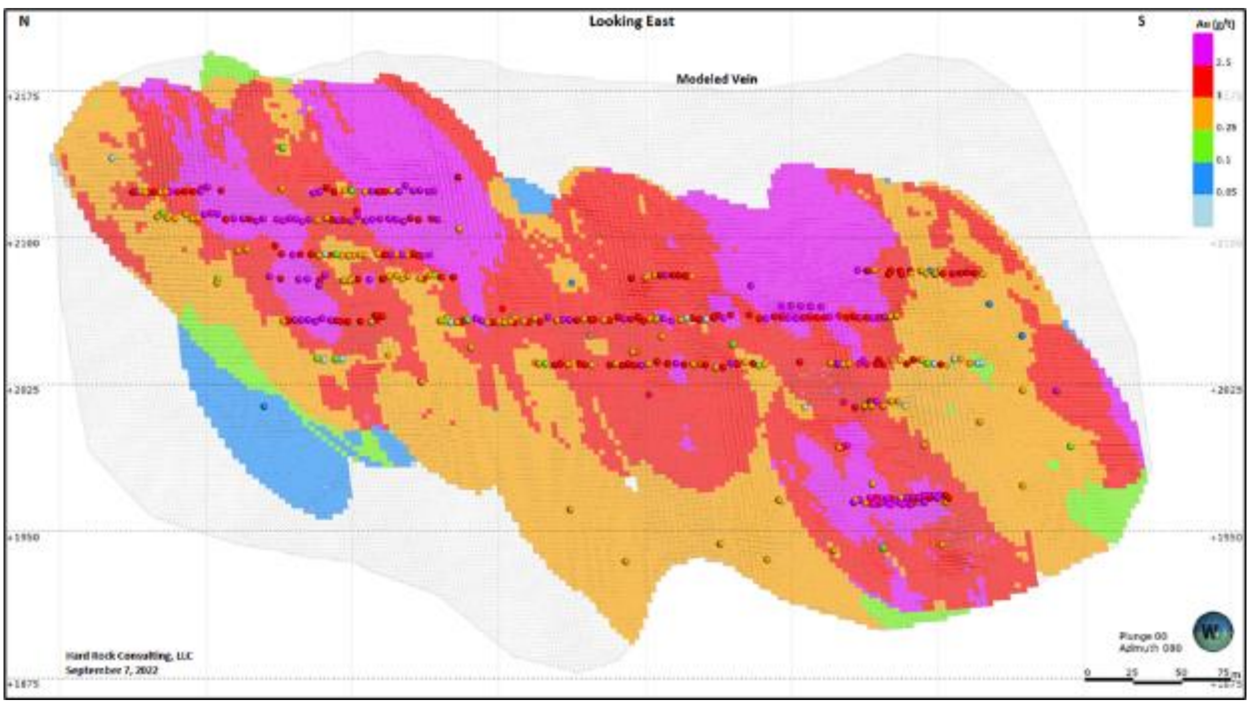



**Figure 14-14 Long Section view of PLT1 Vein Block Model showing the Estimated Gold Grades and Composites**

### 14.3.8 Mineral Resource Classification

A classification estimate was run for each vein using a 60m x 60m search ellipse in the X and Y directions and using a minimum composite selection of 1 and a maximum composite selection of 24. No octant searches were applied and the range in the Z direction matched what was stated in the estimation parameters (Table 14-8). The purpose of this estimate was to establish the composite support for each block within 60 meters, the approximate average variogram range for gold. Blocks were initially classified Measured, Indicated, and Inferred based on the number and minimum distance from the composites from the classification estimate, and the kriging variance ("KV") from the gold OK model using the following criteria:

- Blocks were initially assigned a category of Measured if the block was estimated with at least 16 composites, was within 15 meters of underground channel sampling, and had a KV less than 0.40.
- Blocks were initially assigned a category of Indicated if the block was estimated with at least 4 composites, was within 40 meters of composites, and had a KV less than 0.6.
- Blocks were initially assigned a category of Inferred if it was within 60 meters of a composite and had a KV less than 1.0.

Extruded wireframes from polylines were then used to assign blocks their final classification. The purpose of using polylines was to remove stranded blocks and smooth out the classification to aid in reserve calculation and mine planning. To ensure the polylines were not excessively adding blocks in a lower classification to a higher classification, block statistics were reviewed to ensure the minimum number and distance to composites were not violated for each category and the average KV of the blocks had to be lower than what was stated in the initial classification. Figure 14-15 shows the final classification for the BOL12 vein.

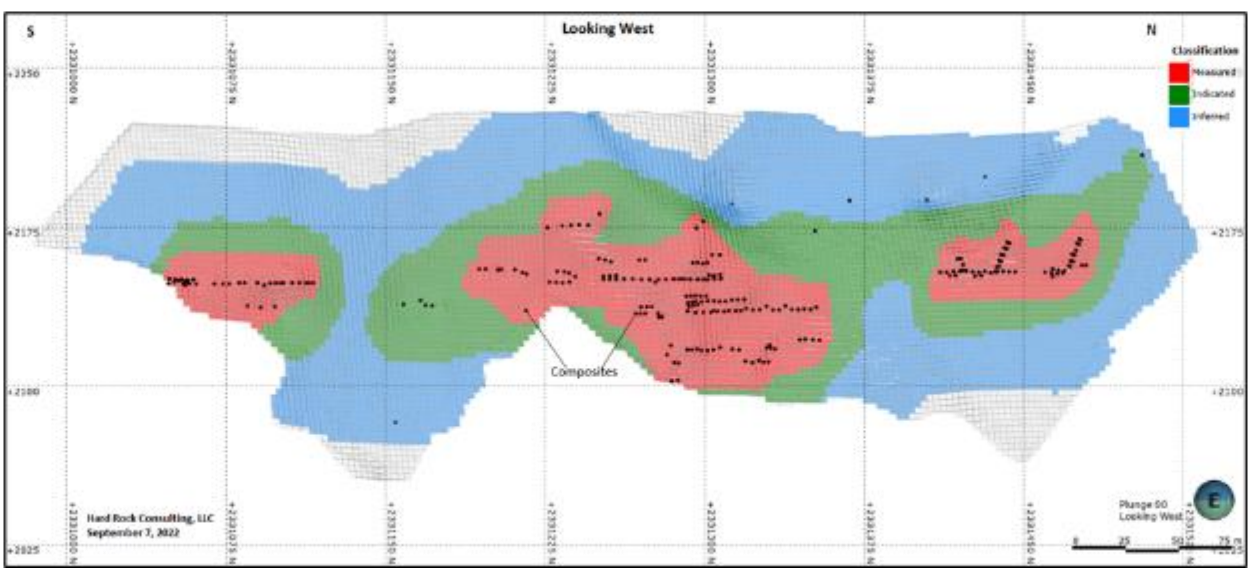



**Figure 14-15 Final Mineral Resource Classification for BOL12 Vein**

### 14.3.9 Depletion

Blocks were categorized as mined out, not accessible, not economic, or available using extruded wireframes from polylines based on information supplied by EDR. Figure 14-16 shows the CEC1 vein with depletion categories coded into the block model.

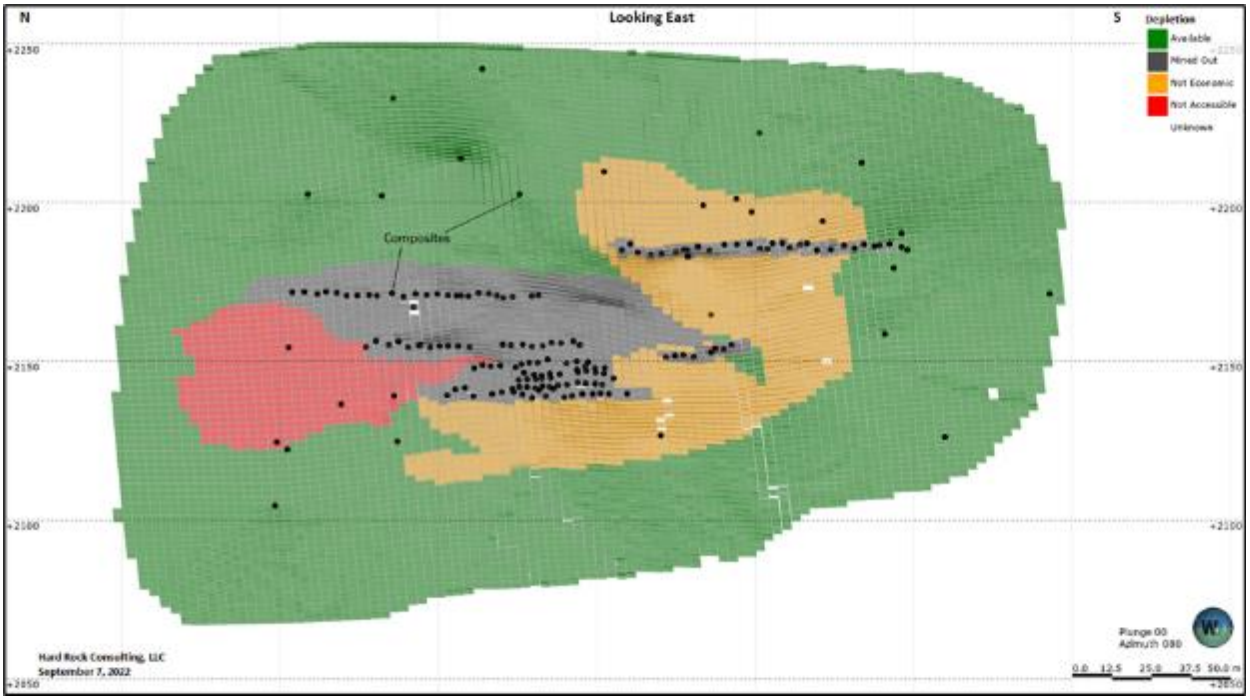



**Figure 14-16 Depletion Codes for the CEC1 Vein**

### 14.3.10 Density

A density of 2.55 g/cm³ was applied to blocks to convert volume into tonnage. EDR has completed 64 bulk sample density measurements (Table 14-10). A specific gravity value of 2.55 based on past production data was used for converting volumes to tonnes. This value is within the acceptable range based on the results to date.

**Table 14-10 Statistical Summary of Density Data**

| Statistics | Bolañitos |
|---|---|
| Number of Data | 64 |
| Mean | 2.58 |
| Median | 2.57 |
| Standard Deviation | 0.07 |
| Sample Variance | 0.004 |
| C.V. | 0.027 |
| Minimum | 2.22 |
| Maximum | 2.70 |
| Range | 0.38 |

## 14.4 Bolañitos Mineral Resource Statement

The Mineral Resources contained within this Technical Report have been classified under the categories of Measured, Indicated, and Inferred in accordance with standards as defined by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (May 10, 2014) and Best Practices Guidelines (November 29, 2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

The results reported in the undiluted Bolañitos mine Mineral Resource have been rounded to reflect the approximation of grade and quantity which can be achieved at this level of resource estimation. Rounding may result in apparent differences when summing tonnes, grade and contained metal content. Tonnage and grade measurements are reported in metric units, contained metal is reported as troy ounces (t. oz). Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability and may be materially affected by modifying factors including but not restricted to mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors. Inferred Mineral Resources are that part of a Mineral Resource for which the grade or quality are estimated on the basis of limited geological evidence and sampling. Inferred Mineral Resources do not have demonstrated economic viability and may not be converted to a Mineral Reserve. It is reasonably expected, though not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. The test for reasonable prospects for economic extraction is satisfied using the criteria described in the following paragraphs.

Mineral resources are reported using four silver equivalent ("AgEq") cut-off grades based on the area of production. Baseline assumptions for breakeven cut-off grades are presented on Table 14-11 and all prices are in $US. The gold price of $1,735.00/oz. and silver price of $21.80/oz are based on the 36-month moving average as of May 31, 2022. Metal recoveries, mining, processing, G&A, royalties and other costs associated with the calculation of break-even cut-offs are based on actual production costs provided by Endeavour Silver Corp. AgEq grade is calculated using a 79.6 silver to gold ratio. Mineral Resources for veins located within the Lucero production area were reported using a 151g/t AgEq cut-off. Mineral Resources within the Belen vein system are reported at a 157 g/t AgEq cut-off. A AgEq cut-off of 149 g/t was applied to remaining Mineral Resources for veins inside the La Luz and San Miguel production areas. Mineral Resources for veins modeled using the VLP estimation methodology were also reported using a AgEq cut-off of 149g/t.

Mineral Resource estimates using 3D block models are constrained to geologic vein solids that show continuous grade continuity and are within 60 meters of drilling or existing underground development. The maximum distance for reported Mineral Resources is based on the average maximum range defined by modeled variograms, 66 meters for silver and 64 meters for gold. After the block grade estimations were complete the AgEq grades for each vein were reviewed in long section by the QP, and the large majority of estimated blocks were found to show excellent grade continuity and tonnage meeting the criteria of a minable shape. All small isolated blocks not meeting the criteria of a reasonable mining shape (at least five contiguous blocks above cutoff) were removed from the estimate and excluded from the Mineral Resource statement.

Mineral Resources estimated using 2D VLP methods are classified entirely as Inferred. Mineral Resources are calculated using true thickness composites from drillhole intercepts identified as the vein. Polygonal methods assume grade continuity surrounding the composite. The smallest VLP volume is 328 tonnes, meeting the criteria for a minable shape.

**Table 14-11 Cut-off Grade Assumptions**

| *Mine* | Lucero | La Luz | S. Miguel | Belen |
|---|---|---|---|---|
| Ag $US/oz | $21.80 | $21.80 | $21.80 | $21.80 |
| Au $US/oz | $1,735.00 | $1,735.00 | $1,735.00 | $1,735.00 |
| Recovery Ag | 85.7% | 85.7% | 85.7% | 85.7% |
| Recovery Au | 90.1% | 90.1% | 90.1% | 90.1% |
| Payable Ag | 97.0% | 97.0% | 97.0% | 97.0% |
| Payable Au | 97.0% | 97.0% | 97.0% | 97.0% |
| Mining Cost $/t | $ 45.12 | $ 43.81 | $ 43.81 | $ 46.93 |
| Process Cost $/t | $19.53 | $19.53 | $19.53 | $19.53 |
| Mine G&A Cost $/t | $ 13.01 | $ 13.01 | $ 13.01 | $ 13.01 |
| Leon/Vanc | $ 9.90 | $ 9.90 | $ 9.90 | $ 9.90 |
| Property NSR Royalty | 0.0% | 0.0% | 0.0% | 2% |
| Government NSR Right | 0.5% | 0.5% | 0.5% | 0.5% |
| NSR Ag $/g | $0.58 | $0.58 | $0.58 | $0.57 |
| NSR Au $/g | $48.51 | $48.51 | $48.51 | $47.53 |
| Ag:Au | 79.6 | 79.6 | 79.6 | 79.6 |
| Mine Cutoff $ | $87.56 | $86.25 | $86.25 | $89.37 |
| Mill Cutoff $ | $42.44 | $42.44 | $42.44 | $42.44 |
| **Cut-off AgEq** | **151** | **149** | **149** | **157** |

### 14.4.1 Bolañitos Mineral Resource Statement

The undiluted Mineral Resources for the Bolañitos mine as of May 31st, 2022, are summarized in Table 14-12 and are exclusive of the Mineral Reserves.

**Table 14-12 Mineral Resource Estimate, Effective Date May 31st, 2022**

| Classification | *Cut-off* AgEq g/t | Mass kt | *Average Value* AgEq g/t | Silver g/t | Gold g/t | *Material Content* AgEq thousand t. oz | Silver thousand t. oz | Gold thousand t. oz |
|---|---|---|---|---|---|---|---|---|
| Measured | Variable | 42.0 | 322 | 97 | 3.0 | 435 | 131 | 4.0 |
| Indicated | Variable | 411.5 | 279 | 111 | 2.3 | 3,697 | 1,470 | 30.0 |
| Measured + Indicated | Variable | 453.5 | 283 | 110 | 2.3 | 4,132 | 1,601 | 34.0 |
| Inferred | Variable | 1,656.6 | 331 | 141 | 2.5 | 17,608 | 7,494 | 132.2 |

1. The effective date of the Mineral Resource estimate is May 31, 2022. The QP for the estimate, Mr. Richard A. Schwering, SME-RM of HRC, is independent of EDR.
2. Inferred Mineral Resources are that part of a mineral resource for which the grade or quality are estimated on the basis of limited geological evidence and sampling. Inferred Mineral Resources do not have demonstrated economic viability and may not be converted to a Mineral Reserve. It is reasonably expected, though not guaranteed, that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.
3. Measured, Indicated, and Inferred Mineral Resource silver equivalent cut-off grades were 149 g/t for veins located in the La Luz and San Miguel production areas and veins estimated using VLP methods at Bolañitos, 157 g/t for the Belen vein system, and 151 g/t for veins located in the Lucero production area.
4. Metallurgical recoveries were 85.7% for silver and 90.1% for gold.
5. Silver equivalents are based on a 79.6:1 silver to gold price ratio.
6. Price assumptions are $US21.80 per troy ounce for silver and $US1,735.00 per troy ounce for gold for resource cut-off calculations. These prices are based on the 36-month moving average as of the effective date.
7. Mineral Resources are reported exclusive of Mineral Reserves.
8. Rounding may result in apparent differences when summing tonnes, grade and contained metal content. Tonnage and grade measurements are in metric units. Grades are reported in grams per tonne (g/t). Contained metal is reported as troy ounces (t. oz).

### 14.4.2 VLP Mineral Resource Estimate

The VLP mineral resource is presented in Table 14-13.

**Table 14-13 Polygonal Resource at the Bolañitos, Effective Date of May 31, 2022**

| Classification | Vein | Cut-off AgEq g/t | Mass kt | Average Value AgEq g/t | Average Value Silver g/t | Average Value Gold g/t | Material Content AgEq thousand t. oz | Material Content Silver thousand t. oz | Material Content Gold thousand t. oz |
|---|---|---|---|---|---|---|---|---|---|
| Inferred | Block/sfv/sfv-3 | 149 | 32.2 | 373 | 93 | 3.5 | 386 | 97 | 3.6 |
| | Canarios | 149 | 23.6 | 278 | 142 | 1.7 | 211 | 108 | 1.3 |
| | Candelaria | 149 | 5.6 | 469 | 182 | 3.6 | 85 | 33 | 0.7 |
| | La Joya | 149 | 170.2 | 163 | 96 | 0.8 | 895 | 525 | 4.6 |
| | La Joya Sur | 149 | 44.2 | 296 | 214 | 1.0 | 422 | 304 | 1.5 |
| | La Luz-San Bernabe | 149 | 57.7 | 336 | 96 | 3.0 | 623 | 178 | 5.6 |
| | Rreyes | 149 | 9.9 | 289 | 141 | 1.9 | 92 | 45 | 0.6 |
| | San Francisco | 149 | 4.7 | 235 | 100 | 1.7 | 35 | 15 | 0.3 |
| | Veta Madre | 149 | 330.9 | 376 | 228 | 1.9 | 4,000 | 2,421 | 19.8 |
| | Sierra Mojada | 149 | 2.8 | 272 | 116 | 2.0 | 24 | 10 | 0.2 |
| | **Total Inferred** | **149** | **682.0** | **309** | **376** | **1.7** | **6,774** | **3,737** | **38.2** |

### 14.4.3 3D Block Model Mineral Resource Estimate

The mineral resource presented in Tables 14-14 for 3D block models is exclusive of the mineral reserves.

**Table 14-14 3D Block Model Resource at the Bolañitos Mine, Effective Date of May 31, 2022**

| Classification | Vein Set | Cut-off AgEq g/t | Mass kt | Average Value AgEq g/t | Average Value Silver g/t | Average Value Gold g/t | Material Content AgEq thousand t. oz | Material Content Silver thousand t. oz | Material Content Gold thousand t. oz |
|---|---|---|---|---|---|---|---|---|---|
| Measured | Belen | 157 | 0.0 | - | - | - | 0 | 0 | 0.0 |
| | Bolañitos | 149 | 5.4 | 334 | 72 | 3.5 | 58 | 13 | 0.6 |
| | Cecilia | 149 | 0.9 | 340 | 227 | 1.5 | 9 | 6 | 0.0 |
| | Herradura | 149 | 0.7 | 181 | 94 | 1.2 | 4 | 2 | 0.0 |
| | Karina | 149 | 6.1 | 198 | 103 | 1.3 | 39 | 20 | 0.2 |
| | La Luz | 149 | 1.6 | 263 | 76 | 2.5 | 13 | 4 | 0.1 |
| | Lana | 149 | 1.3 | 349 | 149 | 2.7 | 15 | 6 | 0.1 |
| | Lucero | 151 | 5.4 | 507 | 209 | 4.0 | 89 | 37 | 0.7 |
| | Melladito | 149 | 5.6 | 325 | 75 | 3.2 | 59 | 14 | 0.6 |
| | Plateros | 149 | 4.8 | 214 | 55 | 2.1 | 33 | 8 | 0.3 |
| | San Bernabe | 149 | 0.0 | - | - | - | 0 | 0 | 0.0 |
| | San Ignacio | 149 | 3.5 | 195 | 135 | 0.8 | 22 | 15 | 0.1 |
| | San Miguel | 149 | 6.7 | 435 | 27 | 5.4 | 94 | 6 | 1.2 |
| | **Total** | **Variable** | **42.0** | **322** | **97** | **3.0** | **435** | **131** | **4.0** |
| Indicated | Belen | 157 | 200.7 | 273 | 102 | 2.3 | 1,764 | 656 | 14.8 |
| | Bolañitos | 149 | 29.7 | 336 | 113 | 3.0 | 320 | 108 | 2.8 |

| Classification | Vein Set | *Cut-off* AgEq g/t | Mass kt | *Average Value* AgEq g/t | Silver g/t | Gold g/t | *Material Content* AgEq thousand t. oz | Silver thousand t. oz | Gold thousand t. oz |
|---|---|---|---|---|---|---|---|---|---|
| | Cecilia | 149 | 17.1 | 269 | 149 | 1.6 | 148 | 82 | 0.9 |
| | Herradura | 149 | 3.9 | 238 | 114 | 1.6 | 29 | 14 | 0.2 |
| | Karina | 149 | 3.6 | 201 | 117 | 1.1 | 23 | 14 | 0.1 |
| | La Luz | 149 | 12.9 | 234 | 66 | 2.2 | 97 | 27 | 0.9 |
| | Lana | 149 | 28.7 | 253 | 96 | 2.1 | 233 | 89 | 1.9 |
| | Lucero | 151 | 8.2 | 510 | 234 | 3.7 | 135 | 62 | 1.0 |
| | Melladito | 149 | 69.0 | 283 | 137 | 2.1 | 628 | 304 | 4.6 |
| | Plateros | 149 | 14.4 | 241 | 57 | 2.5 | 112 | 26 | 1.1 |
| | San Bernabe | 149 | 0.0 | - | - | - | 0 | 0 | 0.0 |
| | San Ignacio | 149 | 18.7 | 270 | 140 | 1.7 | 162 | 84 | 1.0 |
| | San Miguel | 149 | 4.6 | 305 | 21 | 3.8 | 45 | 3 | 0.6 |
| | **Total** | **Variable** | **411.5** | **279** | **111** | **2.3** | **3,697** | **1,470** | **30.0** |
| Measured + Indicated | Belen | 157 | 200.7 | 273 | 102 | 2.3 | 1,764 | 656 | 14.8 |
| | Bolañitos | 149 | 35.1 | 335 | 107 | 3.0 | 379 | 121 | 3.4 |
| | Cecilia | 149 | 18.0 | 272 | 153 | 1.6 | 157 | 88 | 0.9 |
| | Herradura | 149 | 4.5 | 229 | 111 | 1.6 | 33 | 16 | 0.2 |
| | Karina | 149 | 9.7 | 199 | 109 | 1.2 | 62 | 34 | 0.4 |
| | La Luz | 149 | 14.5 | 237 | 67 | 2.3 | 110 | 31 | 1.1 |
| | Lana | 149 | 30.0 | 257 | 99 | 2.1 | 247 | 95 | 2.0 |
| | Lucero | 151 | 13.6 | 509 | 224 | 3.8 | 223 | 98 | 1.7 |
| | Melladito | 149 | 74.6 | 286 | 132 | 2.2 | 686 | 317 | 5.2 |
| | Plateros | 149 | 19.2 | 235 | 56 | 2.4 | 145 | 35 | 1.5 |
| | San Bernabe | 149 | 0.0 | - | - | - | 0 | 0 | 0.0 |
| | San Ignacio | 149 | 22.2 | 258 | 139 | 1.6 | 185 | 100 | 1.1 |
| | San Miguel | 149 | 11.3 | 382 | 25 | 4.8 | 139 | 9 | 1.7 |
| | **Total** | **Variable** | **453.5** | **283** | **110** | **2.3** | **4,132** | **1,601** | **34.0** |
| Inferred | Belen | 157 | 145.6 | 273 | 101 | 2.3 | 1,276 | 473 | 10.7 |
| | Bolañitos | 149 | 192.7 | 412 | 91 | 4.3 | 2,555 | 566 | 26.5 |
| | Cecilia | 149 | 66.4 | 314 | 153 | 2.1 | 671 | 327 | 4.6 |
| | Herradura | 149 | 53.6 | 297 | 106 | 2.5 | 511 | 182 | 4.4 |
| | Karina | 149 | 7.3 | 197 | 102 | 1.3 | 46 | 24 | 0.3 |
| | La Luz | 149 | 19.4 | 269 | 51 | 2.9 | 168 | 32 | 1.8 |
| | Lana | 149 | 90.6 | 307 | 154 | 2.0 | 893 | 448 | 5.9 |
| | Lucero | 151 | 28.0 | 478 | 201 | 3.7 | 430 | 181 | 3.3 |
| | Melladito | 149 | 224.7 | 333 | 168 | 2.2 | 2,404 | 1,216 | 16.0 |
| | Plateros | 149 | 36.2 | 275 | 46 | 3.0 | 320 | 54 | 3.5 |
| | San Bernabe | 149 | 40.5 | 573 | 38 | 6.8 | 747 | 50 | 8.9 |
| | San Ignacio | 149 | 28.6 | 303 | 174 | 1.7 | 278 | 160 | 1.6 |
| | San Miguel | 149 | 41.0 | 405 | 34 | 4.9 | 534 | 45 | 6.5 |
| | **Total** | **Variable** | **974.6** | **346** | **120** | **3.0** | **10,834** | **3,757** | **94.1** |

# 15. MINERAL RESERVE ESTIMATES

Mr. Don Gray, SME-RM, Chief Operating Officer for Endeavour Silver is responsible for the mineral reserve estimate presented here. Mr. Gray is a Qualified Person as defined by NI43-101 and in not independent of EDR. The mineral reserve estimate was prepared in accordance with NI 43-101 and has an effective date of May 31st, 2022. Stope designs for reserve reporting were prepared using the updated resources and cutoffs established for 2022 by Richard A. Schwering SME-RM with Hard Rock Consulting, LLC ("HRC"). All the stopes are within readily accessible areas of the active mining areas. Ore is milled and undergoes flotation on-site at a rate of 1,100 tpd.

## 15.1 CALCULATION PARAMETERS

EDR used Vulcan software to prepare the stope designs for the reserve mine plan. The critieria used to design the stopes include:

- Cut-Off Grades:
    - 149 g/t for San Miguel
    - 149 g/t for La Luz
    - 151 g/t silver equivalent for Lucero
    - 157 g/t silver equivalent for Belen
- Minimum Mining Width: 0.8 m.
- Cut and Fill Stope Size: 7m W x 4m H
- Long Hole Stope Size: 7m W x 20m H
- External Dilution Cut and Fill: 24%
- External Dilution Long Hole: 40%
- Silver Equivalent: 79.6:1 silver to gold
- Gold Price: US $1,735 /oz
- Silver Price: US $21.80 /oz
- Gold Recovery: 90.1%
- Silver Recovery: 85.7%

The stopes were design using only the updated Measured and Indicated resources above the calculated cutoff including internal stope dilution and were determined to be economically viable. The Measured and Indicated mineral resources within the stopes have been converted to Proven and Probable reserves as defined by NI 43-101. All inferred material has been classified as waste.

Also classified as the mineral reserve are ore-grade stockpiles from current and past mining areas, which are classified as part of the overall mineral reserve. These stockpiles are blended as feed to the mill.

### 15.1.1 Dilution

Dilution is applied to Measured and Indicated resource blocks depending on the mining method chosen. For blocks to be exploited using conventional cut-and-fill methods, 24% dilution was applied For blocks to be exploited using long hole methods, 40% dilution was applied. Internal dilution is also applied using any blocks that fall inside the stope shape but are below cutoff. A mining recovery is estimated at 95%. The overall combined dilution factor is 36.5%.

Dilution and mining recoveries are functions of many factors including workmanship, design, vein width, mining method, extraction, and transport. The majority ore extraction is now performed using longhole methods. Because operational changes affect these factors, the global dilution and mining recovery factors have been adjusted over time as mine production is reconciled with mill sampling and production results. In 2018, the Bolañitos operations started using a Cavity Measuring System to monitor the effectiveness of planned extraction in longhole mining, which constituted the majority of mined mineral in 2021 and 2022. The average measured dilution for 2021 and 2022 validated the 35% estimated longhole stope dilution.

### 15.1.2 Cutoff Grade

EDR used the same cutoff grades for the resource blocks and for the mine plan according to assigned an extraction method (longhole or cut and fill) along with the appropriate dilution. The diluted grade was then compared to the resource cutoff grade and assigned to Reserve if above this cutoff grade. These mining solids developed for Mine Plan were converted from Resource to Reserves. The cutoff grade criteria used to determine both the resources and reserves are shown in table 15-1.

**Table 14-11 Cut-off Grade Criteria**

| ***Mine*** | **Lucero** | **La Luz** | **S. Miguel** | **Belen** |
|---|---|---|---|---|
| Ag $US/oz | $21.80 | $21.80 | $21.80 | $21.80 |
| Au $US/oz | $1,735.00 | $1,735.00 | $1,735.00 | $1,735.00 |
| Recovery Ag | 85.7% | 85.7% | 85.7% | 85.7% |
| Recovery Au | 90.1% | 90.1% | 90.1% | 90.1% |
| Payable Ag | 97.0% | 97.0% | 97.0% | 97.0% |
| Payable Au | 97.0% | 97.0% | 97.0% | 97.0% |
| Mining Cost $/t | $45.12 | $43.81 | $43.81 | $46.93 |
| Process Cost $/t | $19.53 | $19.53 | $19.53 | $19.53 |
| Mine G&A Cost $/t | $ 13.01 | $ 13.01 | $ 13.01 | $ 13.01 |
| Leon/Vanc | $ 9.90 | $ 9.90 | $ 9.90 | $ 9.90 |
| Property NSR Royalty | 0.0% | 0.0% | 0.0% | 2% |
| Government NSR Right | 0.5% | 0.5% | 0.5% | 0.5% |
| NSR Ag $/g | $0.58 | $0.58 | $0.58 | $0.57 |
| NSR Au $/g | $48.51 | $48.51 | $48.51 | $47.53 |
| Ag:Au | 79.6 | 79.6 | 79.6 | 79.6 |
| Mine Cutoff $ | $87.56 | $86.25 | $86.25 | $89.37 |

| | | | | |
|---|---|---|---|---|
| Mill Cutoff $ | $42.44 | $42.44 | $42.44 | $42.44 |
| **Cut-off AgEq** | **151** | **149** | **149** | **157** |

### 15.1.3 Reconciliation of Mineral Reserves to Production

Reconciliation Reconciliation is required to validate the Mineral Reserve estimates and to check the effectiveness of both estimating and operating procedures. As the reconciliations identify variances, changes can be made to the mine/processing operating practices and/or to the estimation procedure. Reconciliation procedures involve activities such as production monitoring, reconciling the mineral reserves among the resource model, mine production and mill results.

The staff at Bolanitos reconciles Mineral Reserve estimates with actual production each month using key indicators: Budget, long-term production plan, in-situ mineral resources, short-term plan, ore extracted from the resource model, mined material to surface, milled material including third-party purchases, and mill throughput.

Table 15-xx below shows monthly reconciliation between mineral production comparing Long Term Model to Ore Extraction and Plant Production. Generally, there is good correlation between ore extracted and plant production. However, reconciliation of ore extracted and plant production compared to the Long Term Model shows some variation in both tonnes and grade. Idenfied factors include:

- Many stopes from past mining were backfilled with material that is sufficiently mineralized to be extracted at a profit under current economic conditions; mining these areas increases ore extracted and afftects the Ore Extraction grade compared to the Long Term Model.

There is limited drill information in the historic mining areas. At times, parallel veins and remaint pillars have been identified during development; often these areas are unmodeled but are included in the extraction plan after determined to be economically mineable.

**Table 15-2 Budget to Production Reconciliation**

| BOLAÑITOS - Mining Operation - Global Results Reconciliations | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ag/Au RATIO 2021 | 80 | ONZ | 31.1035 | | | | | | | | | | | | |
| Ag/Au RATIO 2022 | 75 | | | | | | | | | | | | | | |
| | LTM = LONG TERM MODEL | | | | | ORE = ORE EXTRACTION | | | | | PRO = PLANT PROODUCTION | | | | |
| MONTH | Tonnes [kt] | Ag [g/t] | Au [g/t] | AgEq [g/t] | AgEq [oz] | Tonnes [kt] | Ag [g/t] | Au [g/t] | AgEq [g/t] | AgEq [koz] | Tonnes [kt] | Ag [g/t] | Au [g/t] | AgEq [g/t] | AgEq [koz] |
| Jan-21 | 11.3 | 46.9 | 2.6 | 257.2 | 93.8 | 33.4 | 32.2 | 2.3 | 220.1 | 234.2 | 32.5 | 34.2 | 2.3 | 220.6 | 230.7 |
| Feb-21 | 14.7 | 37.1 | 2.9 | 269.1 | 126.9 | 28.5 | 34.5 | 2.0 | 198.5 | 180.0 | 30.7 | 39.1 | 2.0 | 196.7 | 194.4 |
| Mar-21 | 17.2 | 49.8 | 3.4 | 323.0 | 178.3 | 35.2 | 34.7 | 2.2 | 209.3 | 234.8 | 34.4 | 39.9 | 2.2 | 211.9 | 234.5 |
| Apr-21 | 15.2 | 67.5 | 2.6 | 276.6 | 135.1 | 35.0 | 39.4 | 2.0 | 203.2 | 226.8 | 35.2 | 40.9 | 2.1 | 206.5 | 233.9 |
| May-21 | 12.5 | 50.0 | 3.2 | 309.5 | 124.1 | 37.1 | 37.4 | 2.2 | 213.9 | 253.2 | 36.0 | 37.6 | 2.3 | 218.4 | 252.7 |
| Jun-21 | 15.1 | 42.4 | 3.2 | 296.0 | 143.7 | 36.1 | 40.9 | 2.2 | 219.5 | 252.3 | 36.7 | 39.2 | 2.1 | 207.2 | 244.4 |
| Jul-21 | 12.1 | 46.7 | 3.0 | 290.5 | 113.2 | 34.4 | 46.8 | 2.0 | 206.6 | 226.5 | 36.4 | 41.6 | 2.0 | 202.4 | 236.8 |
| Aug-21 | 14.9 | 46.5 | 3.1 | 294.0 | 140.6 | 36.1 | 40.6 | 2.1 | 209.7 | 241.3 | 36.3 | 39.4 | 2.2 | 211.4 | 246.8 |
| Sep-21 | 15.2 | 67.9 | 2.7 | 282.2 | 137.9 | 34.0 | 40.7 | 2.1 | 208.9 | 226.2 | 36.5 | 41.8 | 1.8 | 182.7 | 214.5 |
| Oct-21 | 9.2 | 71.0 | 2.4 | 259.9 | 77.0 | 35.0 | 51.4 | 2.0 | 211.1 | 235.6 | 35.8 | 47.3 | 2.1 | 215.3 | 247.6 |
| Nov-21 | 8.8 | 92.4 | 2.6 | 303.0 | 85.3 | 34.4 | 64.9 | 1.7 | 204.2 | 224.0 | 35.0 | 50.5 | 1.9 | 199.7 | 224.4 |
| Dec-21 | 5.4 | 97.2 | 2.4 | 286.7 | 49.9 | 33.3 | 56.1 | 1.7 | 189.3 | 201.2 | 34.4 | 46.6 | 1.5 | 168.1 | 186.1 |
| **SUMMARY 2021** | **151.5** | **56.1** | **2.9** | **288.6** | **1,405.8** | **412.3** | **43.3** | **2.1** | **208.1** | **2,735.9** | **420.0** | **41.5** | **2.0** | **203.4** | **2,746.8** |
| Jan-22 | 8.1 | 109.8 | 2.0 | 258.1 | 67.0 | 36.4 | 67.8 | 1.7 | 197.6 | 231.4 | 35.9 | 63.7 | 1.6 | 184.1 | 212.3 |
| Feb-22 | 9.3 | 107.2 | 2.6 | 299.2 | 89.3 | 32.8 | 57.5 | 1.8 | 192.6 | 203.0 | 33.3 | 59.9 | 1.8 | 193.3 | 207.0 |
| Mar-22 | 9.3 | 114.6 | 3.0 | 337.3 | 100.8 | 37.0 | 58.0 | 1.7 | 189.1 | 224.8 | 35.7 | 57.7 | 1.8 | 193.0 | 221.6 |
| Apr-22 | 7.4 | 96.0 | 3.0 | 324.4 | 77.2 | 34.2 | 44.3 | 2.0 | 196.5 | 216.0 | 36.6 | 47.3 | 1.8 | 178.6 | 210.0 |
| May-22 | 8.9 | 78.5 | 3.2 | 318.0 | 91.5 | 36.2 | 49.9 | 1.8 | 185.4 | 215.8 | 35.7 | 62.4 | 1.6 | 180.9 | 207.8 |
| **SUMMARY 2022 (YTD)** | **43.0** | **101.4** | **2.8** | **308.0** | **425.7** | **176.6** | **55.6** | **1.8** | **192.2** | **1,091.0** | **177.2** | **58.1** | **1.7** | **185.8** | **1,058.6** |

## 15.2 Reserve Classification

As previously described, mineral reserves are prepared using Measured and Indicated resources after applying modifying factors such as commodity prices, royalties, dilution, mining recovery, and plant recovery. For the reserve mine plan, the Vulcan software is used to prepared stope designs, which are then used to design the required development. The Guanaceví Project mineral reserves have been prepared and classified according to the following criteria:

- Proven Mineral Reserves are the portions of the Measured resource for which mining, and processing / metallurgy information and other relevant factors demonstrate that extraction is profitable. For Guanaceví Project, the Proven Mineral Reserve classification applies to blocks included in the mine plan within approximately 10m of existing development.
- Probable Mineral Reserves are the portions of the Measured or Indicated Resource for which mining, and processing / metallurgy information and other relevant factors demonstrate that extraction is profitable. For the Guanaceví mine project, Probable Mineral Reserve classification applies to blocks located a maximum of 45m either vertically or horizontally from development.

Figure 15-1, 15-2 and 15-3 shows reserve blocks for several longitudinal sections. Proven reserve blocks are shown in red, and Probable reserve blocks are shown in green. The Measured and Indicated resource areas shown are those blocks not included in the Proven and Proabable reserves.

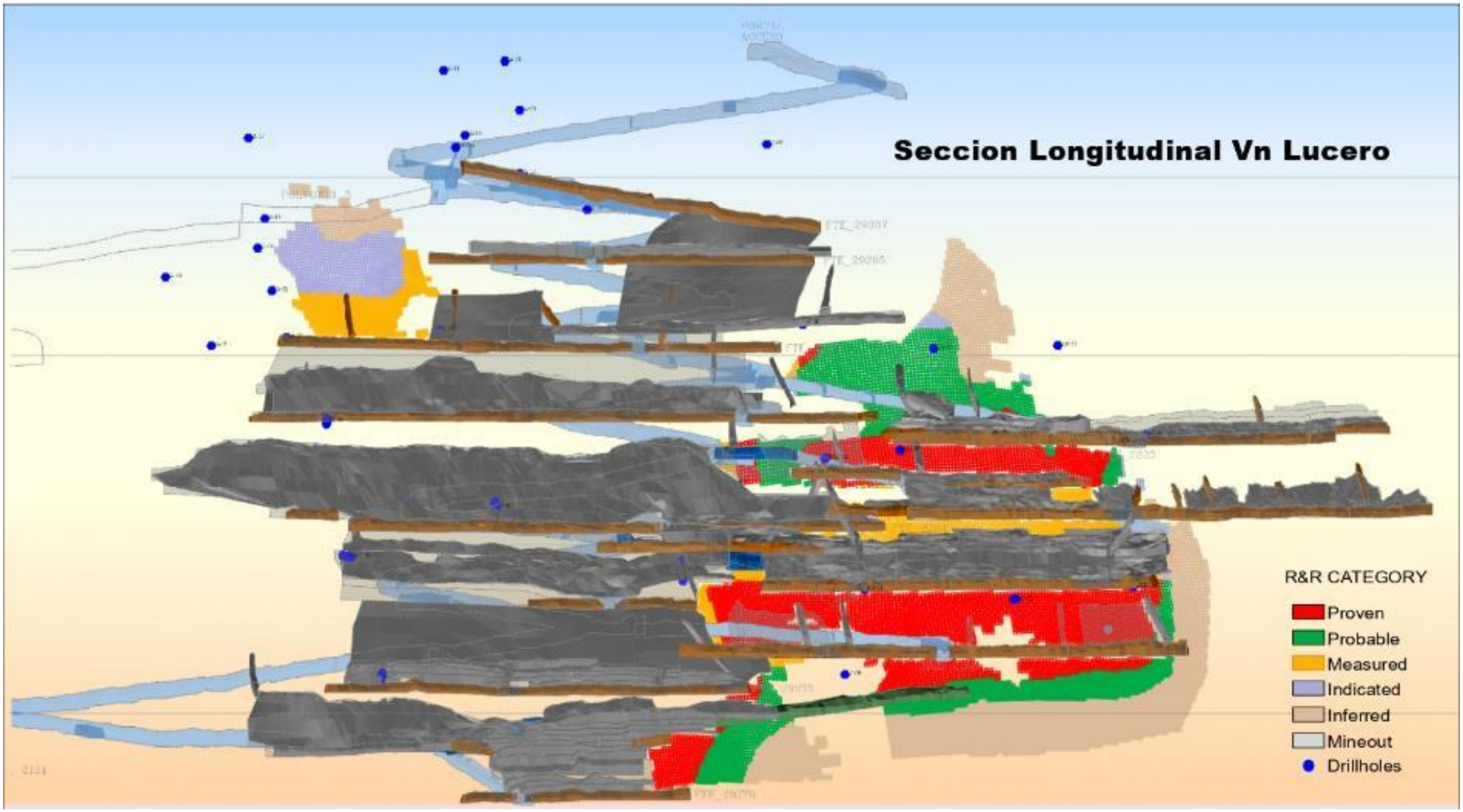



**Figure -15-1 Lucerol Vein Resource and Reserve Section**

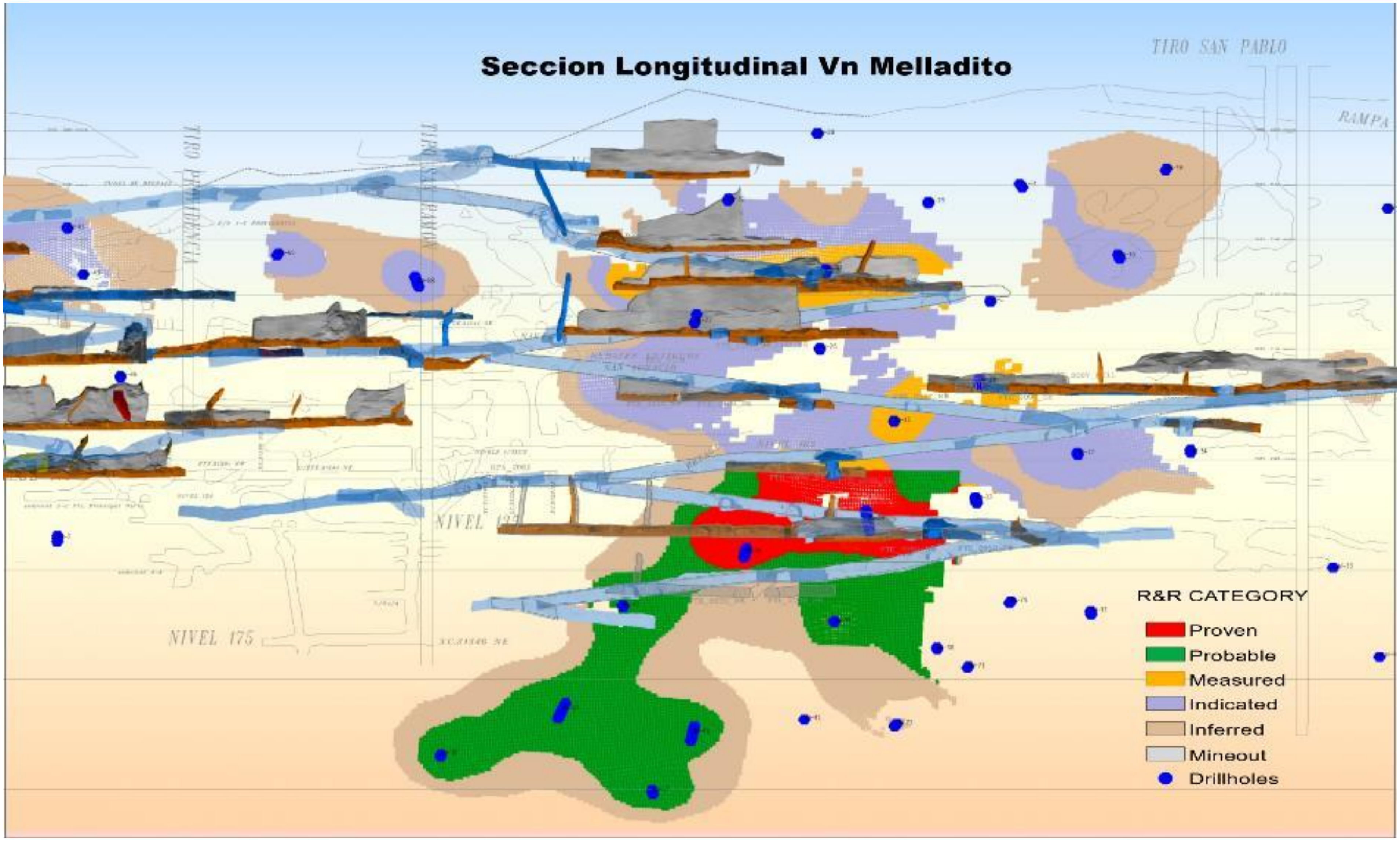



**Figure 15-2 Melladito Vein Resource and Reserve Section**

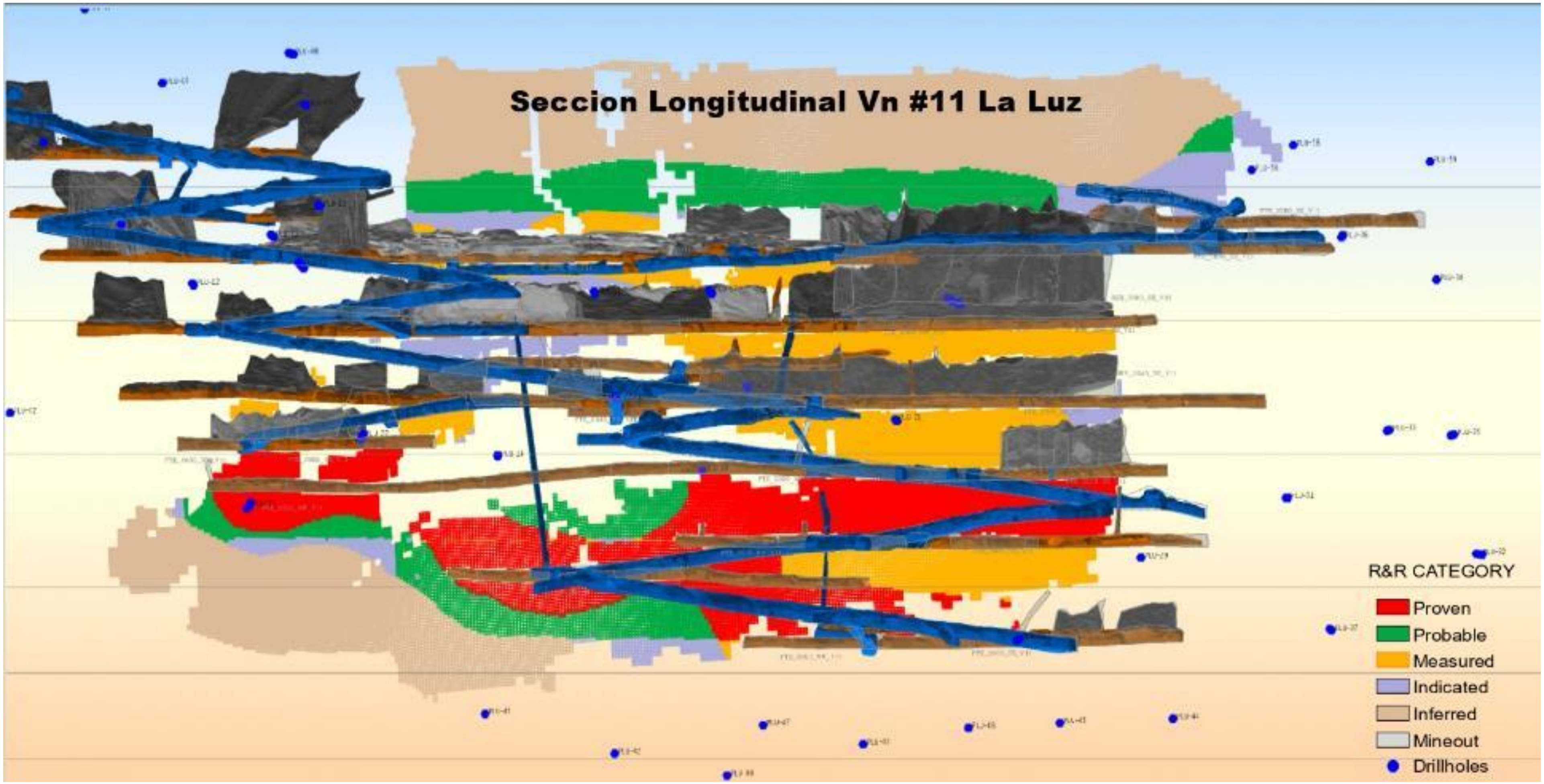



**Figure 15-3 La Luz Vein Resource and Reserve Section**

## 15.3 Mineral Reserves

The Proven and Probable mineral reserves for the Bolañitos mine as of May 31, 2022 are summarized in Table 15-3. The reserves are exclusive of the mineral resources reported in Section 14 of this report.

Table 15-1 Proven and Probable Mineral Reserves, Effective Date May 31, 2022

| | | | *Average Value* | | | *Material Content* | | |
|---|---|---|---|---|---|---|---|---|
| **Classification** | **Vein** | **Mass kt** | **AgEq g/t** | **Silver g/t** | **Gold g/t** | **AgEq thousand t. oz** | **Silver thousand t. oz** | **Gold thousand t. oz** |
| Proven | bolañitos | 43 | 297 | 46 | 3.16 | 414 | 64 | 4.4 |
| | cecilia | 4 | 227 | 123 | 1.31 | 28 | 15 | 0.2 |
| | herradura | 7 | 199 | 82 | 1.48 | 45 | 19 | 0.3 |
| | karina | 1 | 154 | 79 | 0.95 | 6 | 3 | 0.0 |
| | la luz | 30 | 248 | 9 | 3.00 | 241 | 9 | 2.9 |
| | laluz norte | 2 | 168 | 50 | 1.48 | 8 | 2 | 0.1 |
| | lana | 4 | 333 | 71 | 3.29 | 45 | 10 | 0.4 |
| | lucero | 10 | 273 | 113 | 2.01 | 88 | 37 | 0.6 |
| | melladito | 2 | 486 | 339 | 1.84 | 32 | 22 | 0.1 |
| | plateros | 13 | 160 | 23 | 1.73 | 67 | 10 | 0.7 |
| | san bernabe | 2 | 521 | 21 | 6.29 | 32 | 1 | 0.4 |
| | san ignacio | 15 | 252 | 168 | 1.06 | 121 | 81 | 0.5 |
| | san miguel | 19 | 320 | 19 | 3.77 | 195 | 12 | 2.3 |
| | stock piles | 6 | 175 | 33 | 1.78 | 34 | 6 | 0.3 |
| **Total Proven** | | **158** | **266** | **57** | **2.63** | **1,357** | **290** | **13.4** |
| Probable | bolañitos | 77 | 319 | 55 | 3.31 | 792 | 137 | 8.2 |
| | cecilia | 19 | 275 | 128 | 1.84 | 166 | 77 | 1.1 |
| | herradura | 21 | 211 | 69 | 1.79 | 143 | 47 | 1.2 |
| | karina | 7 | 146 | 72 | 0.93 | 32 | 16 | 0.2 |
| | la luz | 24 | 208 | 20 | 2.36 | 161 | 16 | 1.8 |
| | laluz norte | 16 | 203 | 51 | 1.92 | 105 | 26 | 1.0 |
| | lana | 8 | 249 | 59 | 2.38 | 60 | 14 | 0.6 |
| | lucero | 18 | 315 | 123 | 2.40 | 187 | 73 | 1.4 |
| | melladito | 132 | 241 | 87 | 1.93 | 1,022 | 370 | 8.2 |
| | plateros | 10 | 163 | 6 | 1.98 | 54 | 2 | 0.7 |
| | san bernabe | 10 | 506 | 29 | 5.99 | 159 | 9 | 1.9 |
| | san ignacio | 14 | 276 | 184 | 1.16 | 121 | 80 | 0.5 |
| | san miguel | 20 | 306 | 16 | 3.64 | 197 | 10 | 2.3 |
| **Total Probable** | | **376** | **265** | **73** | **2.41** | **3,199** | **878** | **29** |
| **Total Proven & Probable** | | **534** | **265** | **68** | **2.48** | **4,556** | **1,168** | **42.6** |

1. Cutoff grades in silver equivalent:
    - 149 g/t for San Miguel
    - 149 g/t for La Luz
    - 151 g/t silver equivalent for Lucero
    - 157 g/t silver equivalent for Belen
2. Minimum Mining Width: 0.8 m.
3. Cut and Fill Stope Size: 7m W x 4m H
4. Long Hole Stope Size: 7m W x 20m H
5. External Dilution Cut and Fill: 24%
6. External Dilution Long Hole: 40%
7. Silver Equivalent: 80:1 silver to gold
8. Gold Price: US $1,735 /oz
9. Silver Price: US $21.80 /oz
10. Gold Recovery: 90.1%
11. Silver Recovery: 85.7%
12. Dilution factors averaged 37.2%. Dilution factors are calculated based on internal stope dilution calculations and external dilution factors of 24% for cut and fill and 40% for long hole.
13. Silver equivalents are based on a 79.6:1 silver:gold ratio.
14. Figures in table are rounded to reflect estimate precision; small differences generated by rounding are not material to estimates.

### 15.3.1 Factors that may affect the Mineral Reserve Estimate

The Bolañitos operation is an operating mine with a relatively long history of production. The mine staff has considerable experience and knowledge regarding the nature of the orebodies at the Bolañitos property. Efforts in mine planning and operations focus on ensureing that the waste development rates are sufficient to maintain the required production.

A major change in ore metallurgy during the life of the current reserves is unlikely, as nearly all the ore to be mined will come from veins with historic, recent, or current production.

The process of mineral reserve estimation includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. The QP does not consider these errors to be material to the reserve estimate.

Uncertainty areas that may materially impact the mineral reserves presented in this report include:

- Mining assumptions,
- Dilution assumptions,
- Exchange rates,

- Changes in taxation or royalties,
- Variations in commodity price,
- Metallurgical recovery, and
- Processing assumptions.

# 16. MINING METHODS

## 16.1 Mining Operations

Starting in June 2007, EDR began managing day-to-day mining operations at the Bolañitos Project to allow for more flexibility in the operations and to continue optimizing the costs. As of November 9, 2022, the Bolañitos Mine employed 490 personnel and an additional 157 contractors. The mine operates on two 10-hour shifts, 7 days per week, whereas the mill operates on a 24/7 schedule, two 10-hour shifts per day.

The miners are skilled and experienced in vein mining. Workers are currently unionized. There is an incentive system in place rewarding personnel for safety and production. Technical services and overall supervision are EDR employees including geology, planning and surveying personnel to prepared comprehensive production plans and schedules. All the mining activities are conducted under the direct supervision and guidance of the mine manager.

## 16.2 Ground Conditions

The ground conditions at the San Miguel, La Luz and Lucero mines are considered good. The rocks are competent and require no special measures for support other than occasional rock bolting, meshing and regular scaling. Cable bolting is sometimes required during stope preparation for longhole blasting. The cable bolts are installed by drilling holes in the hanging wall and fixing the bolts in place with cement pumped into the hole.

## 16.3 Mining Method

Conventional drill and blast methods are used to extract the ore at Bolañitos, and access to the mining areas is provided by ramps and audits. Mine development headings are drilled by jumbo and by jackleg. Traditionally a conventional bottom-up cut and fill mining method was employed with waste rock brought in using diesel loaders. The rock used to backfill the stopes is generated from the waste development underground.

Over the past eight years a transition to a long hole method has taken place wherever the width and dip of the vein is applicable to this method.

Once sill development is completed and the limits of the ore have been defined, stope production can begin. For conventional cut and fill stoping, ore is mined upward in horizontal slices using jackleg drills. Cut and fill mining involved upholes usually less than 2m. For long hole mining, the holes are typically vary from 6 to 16m depending on the stope.

For cut-and-fill, the production cycle starts by drilling upper holes using a jackleg. Geologists mark the vein, and the stope is drilled and blasted accordingly. For narrower veins, drillholes in ore are blasted first, and after mucking, the holes drilled in waste are blasted to achieve the required width for the next production lift. Cut and fill methods stopes are filled with development or surface waste rock.

For longhole open-stoping, holes are drilled upwards from the sill level. Longhole methods are typically 6 to 16m in length and are more productive and lower cost than cut and fill methods. As with cut and fill methods, longhole stopes are filled with development or surface waste rock.

The long-hole method is used for pillar recovery. Some stopes are mined without an upper access (i.e., blind) by drilling uppers and blasting a slot at the far end of the stope to enable the ore to break in the subsequent larger stope blasts. Uppers are drilled to a 10-15m height on vein projections in rows across the vein width. The rows closest to the slot are blasted first. The stope is mucked clean, or at least sufficiently to allow the next blast. The ore is extracted using remote-controlled scoops.

In areas of historic mining in which high-grade vein sections were extracted or selectively mined, the open stope areas over time have filled with collapsed vein and wallrock material. This fill material often has economic grades and can be removed through cross cuts that act as draw points. This material is locally known as ¨chorros¨. Table 16-1 below summarises the “Chorros” recovered and processed as part of the mining operations at Bolañitos.

Chorros have been a consistent part of the recovered processed mineral at Bolañitos for over 15 years but separate data on Chorros has only been recorded separately since late 2019. Since that time the recovery of Chorros has represented around 10% of annual plant throughput at grades averaging well above plant and transport cost cutoff grades.

**Table 16-1: Details of Chorros recovery and processing 2020 to 31 May 2022.**

| YEAR | Tonnes (Dry) | Ag (g/t) | Au (g/t) | Ag Eq (g/t) | OZ Ag | Oz Au | % Total Ore Processed |
|---|---|---|---|---|---|---|---|
| 2020 | 35,186 | 55 | 0.78 | 117 | 62,222 | 882 | 10.6% |
| 2021 | 40,636 | 49 | 1.45 | 165 | 64,020 | 1,894 | 9.7% |
| 2022 (ytd May 31) | 16,586 | 49 | 1.20 | 145 | 26,131 | 640 | 9.4% |

Chorros are not budgeted nor include in the resource.

## 16.4 Mine equipment

The mine includes a fleet of scoops, trucks, and drills summarized in Table 16-2. Contractors operation their own equipment include scoop trams, trucks, jumbos, and bolters.

**Table 16-2 Bolañitos Owned Mine Equipment**

| Loaders | Capacity | Model | Qty |
|---|---|---|---|
| Scoop Tram | 1.5 yds | MUCKMASTER 150D (RDH) | 2 |
| Scoop Tram | 2 yds | LH-203 (SANDVIK) | 5 |
| Scoop Tram | 3.5 yds | LH-307 (SANDVIK) | 3 |
| Scoop Tram | 3.5 yds | LT-650 | 3 |

| | | | |
|---|---|---|---|
| Scoop Tram | 6 yds | LH-410 | 2 |
| **Trucks** | **Capacity** | **Model** | **Qty** |
| Truck | 3 ton | 600-30P (RDH) | 1 |
| Truck | 4 ton | D-5 | 1 |
| Truck | 7 ton | DT 704 | 1 |
| Truck | 10 ton | D-10 | 2 |
| Truck | 15 ton | TH-315 | 1 |
| Truck | 20 ton | TH-320 | 1 |
| Truck | 30 ton | TH-430 | 2 |
| Truck | 30 ton | CAT 730 | 1 |
| Truck | | LIFTMASTER 500N | 1 |
| Truck | | CASSETTEMASTER 600 R | 1 |
| **Drills** | **Capacity** | **Model** | **Qty** |
| Jumbo | 16 ft | DD-311 | 2 |
| Anclador | 10 ft | DS-311 | 2 |
| Raptor | 4 ft | MINI-DH | 1 |
| Raptor | 4 ft | 44 | 1 |
| Mucki | 4 ft | LHBP | 1 |

## 16.5 Mine Production

Table 16-3 summarizes mine production for 2021 by month. A total of 371,659 mined tonnes were reported in 2022 plus a further 40,636 tonnes of recovered “Chorros”. The Bolañitos Plant processed 418,514 tonnes and an accumulated inventory of 4,790 tonnes at close of 2021. A total of 483,507 Ag ounces and 24,730 Au ounces.

| | Mine: Actual | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| COMPARACION CON PRESUPUESTO | Actual | Actual | Actual | Actual | Actual | Actual | Actual | Actual | Actual | Actual | Actual | Actual | |
| MINA | Enero | Febrero | Marzo | Abril | Mayo | Junio | Julio | Agosto | Septiembre | Octubre | Noviembre | Diciembre | 2021 |
| TOTAL UNIDAD | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | 365 |
| N° de Días | 30 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 30 | 363 |
| Tons. Mineral (Con Chorros) | 33,385 | 28,458 | 35,206 | 35,018 | 37,135 | 35,999 | 34,383 | 36,098 | 33,973 | 34,981 | 34,354 | 33,306 | 412,295 |
| Ley Ag | 32 | 34 | 35 | 39 | 37 | 41 | 47 | 41 | 41 | 52 | 65 | 56 | 43 |
| Ley Au | 2.35 | 2.05 | 2.18 | 2.05 | 2.21 | 2.23 | 2.00 | 2.11 | 2.10 | 2.01 | 1.74 | 1.66 | 2.1 |
| Ley AgEq | 218 | 197 | 207 | 201 | 212 | 218 | 205 | 208 | 207 | 211 | 203 | 188 | 207 |
| Ley Ag in Situ | 51 | 43 | 50 | 55 | 51 | 63 | 81 | 60 | 61 | 75 | 87 | 82 | 63 |
| Ley Au in Situ | 3.48 | 3.29 | 3.33 | 2.91 | 3.13 | 3.37 | 2.71 | 3.00 | 2.99 | 2.96 | 2.84 | 2.59 | 3.0 |
| Ley AgEq In Situ | 327 | 304 | 313 | 285 | 299 | 329 | 296 | 298 | 297 | 309 | 311 | 287 | 305 |
| % Dilución | 49.9% | 53.4% | 47.3% | 39.9% | 37.4% | 48.3% | 39.4% | 39.1% | 41.2% | 44.0% | 49.1% | 44.3% | 47.6% |
| Mts. Totales Tepetate | 818.2 | 644 | 890 | 578 | 802 | 761 | 735 | 709 | 733 | 881 | 677 | 765 | 8,993 |
| Mts. Totales Mineral o Estructura | 704 | 504 | 496 | 889 | 532 | 571 | 703 | 727 | 707 | 585 | 773 | 585 | 7,774 |
| Toneladas Tepetate | 25,158 | 20,966 | 29,037 | 28,325 | 23,661 | 22,111 | 22,527 | 21,070 | 22,642 | 27,135 | 21,295 | 23,767 | 287,695 |
| Razon Tepetate / Mineral | 0.75 | 0.74 | 0.82 | 0.81 | 0.64 | 0.61 | 0.66 | 0.58 | 0.67 | 0.78 | 0.62 | 0.71 | 0.70 |

**Table 16-3 Summary of 2021 Bolañitos Production**

Total development for 2021 was 15,945 meters of advancement, of which 7,786 meters were in mineral development and 8,159 meters were in waste development. Waste development includes bypasses, ventilation raises and ore passes, ramps, areas of waste vein, and cross-cuts to vein.

The remaining reserve life-of-mine plan is based on an approximate production rate of 1,100 tonnes per day of ore mined from underground. This plan is based on parameters as shown in Table 15-1. The plan is solely based on the active mining areas and the reserves are derived from this plan. Therefore, the reserves are more based on the plan rather than the plan being based on the reserves. The life of mine reserves could not and should not be assumed to be limited based on the mine plan developed for 2021/22 alone.

# 17. RECOVERY METHODS

## 17.1 Production

For 2021 the Bolañitos plant milled 418,514t of ore grading 42 g/t silver and 2.02 g/t gold from which 483,507 oz silver and 24,730 oz gold were recovered. Silver and gold recoveries averaged 87% and 90.7%, respectively.

## 17.2 Bolañitos Plant

The plant processing rate is a planned 1,100 t/d. Average throughput in 2021 was 1,163 tonnes per operating day with 4 days total of maintenance down time. Recoveries improved from 2020 to 2021 and have averaged 90.7% for Au and 87% for Ag. Previously, the plant operated at 1600 tpd from 1,200 t/d after the addition in 2012 of a 6'x14' vibration screen, four additional flotation cells 500 ft3 each, six 1st cleaner cells 100 ft3 each, six 2nd cleaner cells 50 ft3 each, conveyor belts and a flocculent mixing system. A general view of the Bolañitos processing plant is shown in Figure 17-1 and a process flow sheet is illustrated in Figure 17-2.

Figure 17-1 General View of the Bolañitos Processing Plant

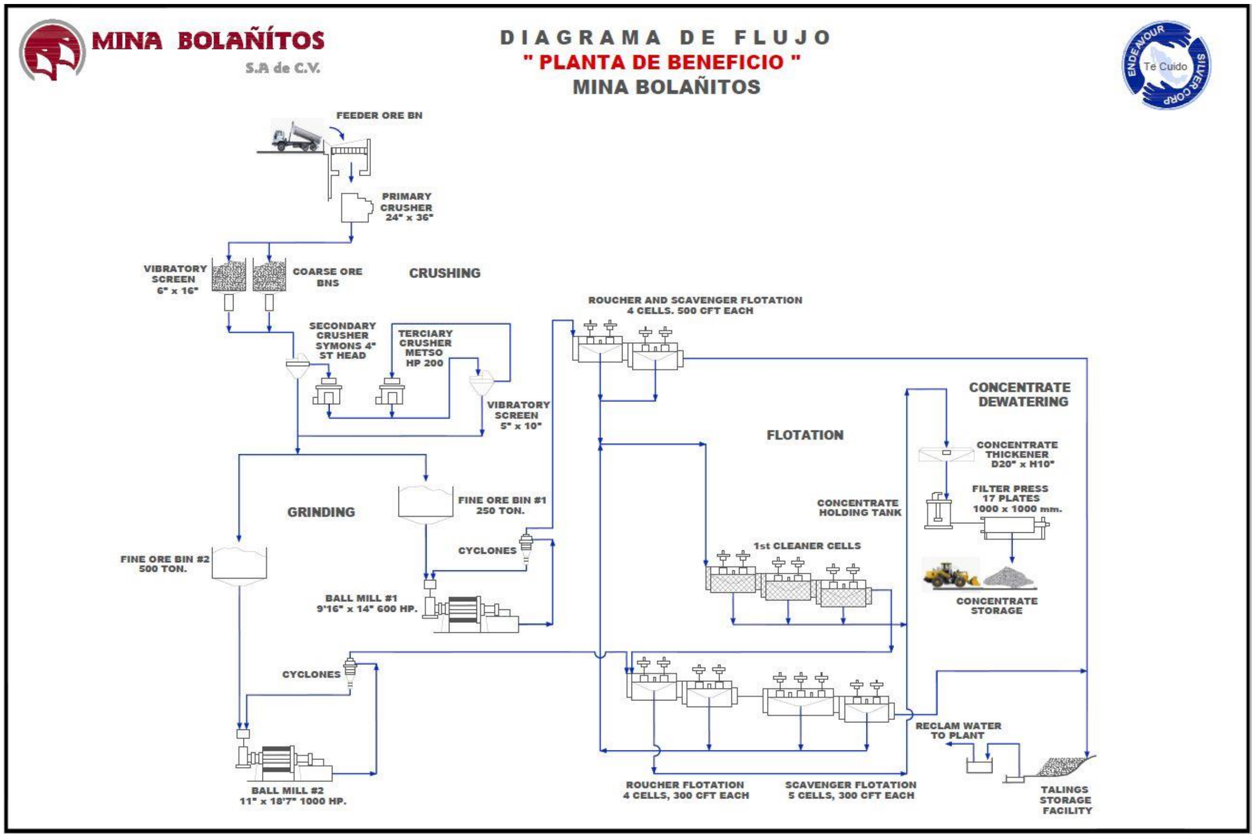



**Figure 17-2 Process Flow Sheet of the Bolañitos Plant**

Run-of-mine ore is hauled by 10 and 20 tonne trucks for discharge on a patio where a front-end loader feeds a grizzly with opening 14". A backhoe hyrdualic hammer is use to break oversize rock (>14 inches). The undersize material passes into a feed bin for curshing in a primary jaw crusher of size 24"x36". After the primary crusher, the ore is held in one of two coarse ore bins of 350 and 450-t capacity. Figure 17-3 shows the primary crushing circuit.

**Figure 17-3 View of the Primary Crusher Circuit (left); Crushed Ore Bins (right)**

From the coarse ore bins, the material is conveyed to a 6'x14' vibratory screen with openings 3/8", and the undersize product is conveyed to the fine ore bins. The oversize material is fed to a 4.25' standard head Symons secondary cone crusher where the ore size is crushed down to 1". The secondary crusher product is screened by a 5'x10' vibratory screen with openings 3/8". The screen undersize product is conveyed to fine ore bins and the oversize material is crushed by a tertiary cone crusher (Metso, HP200). Figure 17-4 shows the secondary crushing circuit.

**Figure 17-4 Vibration Screen, Single 6'x16'Deck (left); Fine Crushing Circuit (right)**

The fine crushed ore (approximately 85-90% passing 3/8") is stored in two ore bins. The storage capacity of the first fine ore bin is 250 tonnes and the second ore bin is 350 tonnes.

The grinding circuit includes two ball mills: No. 1 is 9'6" x 14' with a 600 HP motor, and No. 2 mill is 11'x18'7" with a 1000 HP motor. The mills are fed independently from respective ore bins. Figure 17-5 shows the two ball mills.

**Figure 17-5 Original Ball Mill #1, size 9'6"x14' (left), Ball Mill #2, size 11'x18'7", 1000 HP Motor, and Fine Ore Bin on the back, Both Installed in 2011 (right)**

The pulp passes from grinding as the cyclone overflow with 80-85% passing 74 microns to the flotation circuit. There is a separate line including rougher and scavenger flotation cells for each ball mill. The ball mill No. 1 line consists of four (4) flotation cells with capacity 500 ft3 each. The ball mill No. 2 line consists of nine (9) flotation cells with capacity 300 ft3 each. The rougher and scavenger concentrates from both lines had previously been combined and fed to the column flotation cell, which is no longer being used since 2020.

Although the flotation layout includes two cleaning stages, the 2nd cleaning stage was discontinued in December 2013 because the column cell was meeting the target silver grade between 7 and 9 kg/t. Since 2020, the column cell has not been used due to high Arsenic recovery to the final concentrate. Target concentrate grades are now 3 to 4 kg/t while maintaining the Arsenic grade below 1.0%. Figure 17-6 shows the cleaner cells and flocculent mixing system.

**Figure 17-6 1st Cleaner Cells (left); Flocculent Mixing System (right)**

The final concentrate flows by gravity to a thickener, designed to produce 60% solids before being pumped the filter press to dewater to 13-17% moisture. The filtered concentrate is stored, then loaded into 35 t trucks and shipped to concentrate traders. Figure 17-7 shows the filter press and concentrate storage and shipment loading area.

**Figure 17-7  Filter Press (left); Concentrate Storage and Shipment Loading Area (right)**

# 18. PROJECT INFRASTRUCTURE

EDR has all the necessary mine and mill infrastructure to operate the Guanaceví mines to comply with all the regulatory requirements.

## 18.1 Mine Pumping

At the Bolañitos Project, very low groundwater inflows are encountered. Each mine has a principal sump for pumping mine water to the surface. Underground sumps are used to settle solids to ensure water pumped to surface is largely free of solids. During development, dewatering facilities are provided to pump any groundwater and mine service water to the water treatment facility for additional solids removal. Dewatering lines are advanced with the main ramp development.

## 18.2 Mine Ventilation

At the Bolañitos mine, eight raise boreholes have been developed to provide ventilation as mine development has advanced. Five raises were developed for the Bolañitos vein and the others were developed for the Lucero vein areas.

The primary ventilation for the Bolañitos vein areas is provided by a 70,000-cfm exhaust fan that was installed in borehole number one, with the fresh air drawn down the ramp and the other four boreholes of the area. For the Daniela Sur and Daniela Norte ramps at Lucero, four exhaust fans are installed in boreholes #8 (120k), #10 (80k), #12 (160k) and a conventional raise (80k), with the fresh air intake through the ramps. This system sufficient airflow for diesel equipment operating at any time.

Auxiliary ventilation is provided using conventional axial-vane mine fans varying from 24 to 42 inches in diameter and 20 to 150 hp. These fans blow the required air volume into the working areas through tubing.

Fresh air for the La Luz Mine is provided through the access from the Los Angeles Shaft where enters on 310 level and then most of the air flows to the 220 level through a series of ramps and conventional raises. On the 310 and 220 levels, auxiliary ventilation fans ventilate the stopes. Air from the La Luz mine is exhausted to surface through the Asuncion Shaft.

## 18.3 Mine Electrical

The electrical power for the mine is distributed by a series of substations connected to the public power grid. Electric power arrives at the mine sites via 13.2 kV overhead transmission lines. Table 18-1 summarizes the location and capacity of the installed transformers.

**Table 18-1 Summary of the Electric Installations at the Bolañitos Project**

| Area | Location | Transformer Capacity (kVA) | Power input (V) | Power Output (V) |
|---|---|---|---|---|
| Plant | Surface | 750 | 13,200 | 440 |
| | Surface | 1,000 | 13,200 | 440 |
| | Surface | 500 | 13,200 | 440 |
| Lucero Ramp | Surface | 1,000 | 13,200 | 2,300 |
| | Surface | 750 | 13,200 | 440 |
| | Surface | 500 | 2,300 | 440 |
| | Surface | 750 | 13,200 | 2300 |
| | underground | 750 | 2,300 | 440 |
| | Underground | 500 | 2,300 | 440 |
| | underground | 300 | 2,300 | 440 |
| | Underground | 300 | 2,300 | 440 |
| Bolañitos mine | Surface | 750 | 13,200 | 440 |
| Cebada Mine | Surface | 1,000 | 13,200 | 2,300 |
| | Surface | 300 | 2,300 | 440 |
| | Underground | 200 | 2,300 | 440 |
| | Underground | 150 | 2,300 | 440 |
| | Underground | 300 | 2,300 | 440 |
| | Underground | 150 | 2,300 | 440 |
| | Underground | 225 | 2,300 | 440 |
| San Elias | Surface | 500 | 13,200 | 2,300 |
| | Surface | 225 | 13,200 | 440 |
| | Underground | 200 | 2,300 | 440 |
| Santa Rosa | Surface | 500 | 13,200 | 440 |
| Asunción | Surface | 300 | 13,200 | 440 |
| | Surface | 500 | 13200 | 2,300 |

# 19. MARKET STUDIES AND CONTRACTS

EDR has neither a hedging nor forward selling contract for any of its products. As of the issue date of this report, EDR has not conducted any market studies, as gold and silver are commodities widely traded in the world markets. Due to the size of the bullion market, which in 2021 saw a demand for silver of 1,049 million ounces, EDR's estimated total annual production of approximately 3.5 million ounces is less than 0.4% of world demand

EDR's Bolanitos mine produces a silver concentrate which is then shipped for refining. The concentrate produced by EDR at its mines is refined by third parties before being sold. To a large extent, silver concentrate is sold at the spot price.

Table 19-1 summarizes the high and low average annual COMEX gold and silver price per ounce from 2000 to 2021.

**Table 19-1 Average Annual High and Low London PM Fix for Gold and Silver from 2000 to 2016 (prices expressed in US$/oz)**

| Year | Gold Price (US$/oz) | | | Silver Price (US$/oz) | | |
|---|---|---|---|---|---|---|
| | High | Low | Average | High | Low | Average |
| 2000 | 368.60 | 270.50 | 310.46 | 5.55 | 4.56 | 4.97 |
| 2001 | 310.00 | 256.60 | 273.30 | 5.10 | 4.03 | 4.40 |
| 2002 | 349.70 | 278.40 | 311.33 | 5.29 | 4.22 | 4.61 |
| 2003 | 417.20 | 322.20 | 364.13 | 5.99 | 4.35 | 4.89 |
| 2004 | 522.20 | 374.90 | 410.54 | 8.47 | 5.52 | 6.88 |
| 2005 | 634.80 | 491.40 | 532.94 | 9.88 | 6.89 | 7.86 |
| 2006 | 873.90 | 629.80 | 720.60 | 15.35 | 9.79 | 12.11 |
| 2007 | 910.40 | 701.20 | 782.30 | 16.65 | 12.50 | 14.52 |
| 2008 | 1038.80 | 715.20 | 904.68 | 21.32 | 8.85 | 15.37 |
| 2009 | 1218.30 | 814.30 | 977.90 | 19.33 | 10.47 | 14.72 |
| 2010 | 1553.40 | 1052.20 | 1248.46 | 30.92 | 14.83 | 20.29 |
| 2011 | 1899.50 | 1333.70 | 1582.70 | 48.59 | 26.80 | 35.29 |
| 2012 | 1798.60 | 1538.70 | 1672.34 | 37.31 | 26.29 | 31.23 |
| 2013 | 1693.20 | 1194.30 | 1409.57 | 32.44 | 18.55 | 23.86 |
| 2014 | 1379.20 | 1145.60 | 1268.52 | 22.28 | 15.53 | 19.25 |
| 2015 | 1303.60 | 1056.90 | 1162.09 | 18.45 | 13.79 | 15.75 |
| 2016 | 1380.20 | 1078.20 | 1260.33 | 20.92 | 13.74 | 17.29 |
| 2017 | 1370.40 | 1163.20 | 1266.59 | 18.55 | 15.40 | 17.11 |
| 2018 | 1365.20 | 1177.10 | 1269.97 | 17.68 | 13.95 | 15.79 |
| 2019 | 1571.80 | 1281.00 | 1418.60 | 19.68 | 14.62 | 16.43 |
| 2020 | 2058.40 | 1477.90 | 1778.70 | 29.26 | 11.77 | 20.70 |
| 2021 | 1946.69 | 1681.84 | 1798.57 | 29.59 | 21.53 | 25.11 |

Over the period from 2000 to 2011, world silver and gold prices have increased significantly. This had a favorable impact on revenue from production of most of the world's silver mines, including the Bolañitos Project. Between 2011 and 2014 there has been a consistent reduction in the silver and gold prices, followed by 4 years of relatively flat prices. Beginning in 2019 and to the end of 2021, precious metals prices have recovered as gold reached all-time highs.

EDR has no contracts or agreements for mining, smelting, refining, transportation, handling or sales, that are outside normal or generally accepted practices within the mining industry. EDR has a policy of not hedging or forward selling any of its products.

In addition to its own workforce, EDR has several contract mining companies working on the Bolañitos property.

## 19.1 Contracts

Bolañitos has signed several contracts or agreements with domestic companies and legal persons in order to cover its production and interest's goals. Table 19-2 is a summary of the main contracts that EDR has in place at the Bolañitos Mines Project.

**Table 19-2 Contracts Held by the Bolañitos Project**

| Contract Description | Contracting Organization | Date-Expiry/ Renewal |
|---|---|---|
| Mining Contractor | Campos Hernandez Contratistas Mineros SA de CV | Valid & Updating |
| Freight Concentrate | SETRAMEX Transportes | Valid & Updating |
| Concentrate Transport Insurance | Seguros El Potosi | Valid & Updating |
| Security and Surveillance Services | "SERVIAX" Alineacion Estratégica de Capital Humano y Seguridad Privada SA de CV | Valid & Updating |
| Personnel Transportation Equipment Contracting | Jose Dolores Olmos | Valid & Updating |
| Equipment Contracting | Jose Vicente Morales Zarate | Valid & Updating |
| Ore Haulage Contract | J. Isabel Camarillo | Valid & Updating |
| Ore Haulage Contract | Jose Vicente Morales Zarate | Valid & Updating |
| Water Haulage Contract | J. Guadalupe Huerta Ortega | Valid & Updating |
| Road watering and water for Plant. | J. Guadalupe Huerta Ortega | Valid & Updating |

The Bolañitos Mining Unit is under a Collective Bargaining Agreement with the National Mining Workers Union. This agreement is for an indefinite term and has a yearly general salaries revision each April.

# 20. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

## 20.1 Environmental Sustainability

The Bolañitos plant operates under the policy of zero industrial discharges into the environment and monitors all effluents and the air quality on the site. Regular monitoring and laboratory testing are outsourced to qualified contractors. Regular meetings are held with the local ejido and President of the Municipality of Guanajuato to discuss areas of mutual concern.

The mill and mine recycle batteries, oils, greases, steel and aluminum.

The following aspects are treated with special care by the company as they represent potential risks to the operation. To reduce the possibility of an incident regarding any of these issues, Bolañitos has established strict procedures of operation and monitoring in accordance to accepted standards.

- The tailing dams require strict environmental and operation control.
- Testing for water pollutants into rivers near the tailings impoundments.
- Testing of discharge sewage pollutants.
- Water recovery from tailings impoundments is to be returned to the plant for processing.
- Testing of the combustion gases from laboratory's chimneys and foundry, and lead exposure for lab workers.

Additionally EDR carries out several initiatives which bridge both environmental and social sustainability including:

- annual reforestation programs where we carry out reforestation of specific species of oak covering 1 hectare of surface.
- Soil and water conservation works. Soil conservation works are carried out in the reforestation areas: such as trenches and stone barriers, with the aim of increasing soil productivity and controlling erosion.
- Environmental campaigns aligned to specific celebratory days such as:
  - World Water Day: We clean rivers or water courses.
  - World Earth Day: We donate fruit trees.
  - World Environment Day: Training is given on the theme of the year.
  - Let's Clean Our Mexico Campaign: We organize a cleaning campaign in the community.
  - Electronics Collection Campaign: We organize a campaign in the different communities where we collect electronics that are no longer useful in exchange for an incentive, so that the electronics are not thrown into the river or into landfills that could generate contamination.
  - HP Toner Recycling: HP toners are collected for recycling.

- Environmental education in communities: Recycling campaigns are carried out, environmental topics are taught, contests for posters, models, etc. are developed. In the schools of the communities near the company.
- Nursery. The unit has a nursery which helps us germinate plant species for tree donations to workers and we are currently germinating oak seeds, which is the species that we will be using for reforestation.

## 20.2 Closure Plan

The Bolañitos closure budget includes funds for covering the tailings ponds and securing and cleaning up the other surface and underground mine facilities, as summarized in Table 20-1.

**Table 20-1 Closure Budget**

| Facilities | Item | US$ |
|---|---|---|
| Underground Mines | Stockpiles/shafts | 63,996 |
| | Offices/shops/roads | 34,040 |
| | Subsidence | 12,254 |
| | Mine surface areas | 107,566 |
| **Sub-Total** | | **217,856** |
| Milling & Flotation Plant | Crushing Area | 57,187 |
| | Grinding & Flotation | 58,549 |
| | Related Facilities | 213,771 |
| **Sub-Total** | | **329,507** |
| Tailings Dams | Central Area | 597,742 |
| **Sub-Total** | | **597,742** |
| Administrative Personnel | | 439,797 |
| **Sub-Total** | | **439,797** |
| Support Services | Post Closure Costs | 392,141 |
| **Sub-Total** | | **392,141** |
| **Grand Total** | | **1,977,043** |

## 20.3 Permitting

EDR holds all necessary environmental and mine permits to conduct planned exploration, development and mining operations on the Bolañitos Project.

Table 20-2 lists the existing permits governing the mining and milling operations.

**Table 20-2 Summary of Environmental and Mining Permits for the Bolañitos Project**

| Project | Permit Type | Permit | Issuing Agency | Status | Date-Expiry/Renewal |
|---|---|---|---|---|---|
| Bolañitos Mining Complex | Hazardous Waste Management Plan | 11-PMG-I-3629-2019 | SEMARNAT | Approved | Mine closure |

| | | | | | |
|---|---|---|---|---|---|
| Bolañitos Mining Complex | Mining Waste Management Plan | 11-PMM-I-0215-2019 | SEMARNAT | Approved | Mine closure |
| Bolañitos Mining Complex | Registration as a generator of hazardous waste | 11/HR-0031/07/16/11 | SEMARNAT | Approved | Mine closure |
| Bolañitos Mining Complex | Environmental License | LAU-11/0068-2009 | SEMARNAT | Approved | Mine closure |
| Bolañitos Mining Complex | Regional Environmental Impact Statement (Integrates all past permits in a single permit and extends the validity of the project in 25 years) | SGPA/DGIRA/DG/03957 | SEMARNAT | Approved | 05/29/2044 |

## 20.4 Considerations of Social and Community Impacts

Bolañitos considers nearby communities as important stakeholders and, as such, the company pays special attention to their problems and requests for support. A good neighbor and open-door policy characterize the relations with the seven communities inside and around the area of operations. A company representative interacts with the local authorities frequently.

There are four communities that are in our Direct Area of Influence and thus we work closely with them. There are five communities that are in the Indirect Area of Influence and our relationship is less active. The relationship with a community is indirect whenever it has a direct relationship with another mining company (Table 20-3).

**Table 20-3 Direct and Indirect Area of Influence**

| **Direct Influence** | |
|---|---|
| Mineral de la Luz | 1,422 |
| Melladito | 49 |
| San Ignacio del Puertecito | 56 |
| Sangre de Cristo | 248 |
| **TOTAL** | **1,775** |

| **Indirect Influence** | |
|---|---|
| Llanos de Santa Ana | 510 |
| Mesa Cuata | 389 |
| Mineral de Mexiamora | 123 |
| Santa Ana | 674 |
| San Pedro Gilmonene | 110 |
| **TOTAL** | **1,806** |

Bolañitos has developed a Community Engagement System that aims to manage the relationships and interactions with the community. The system establishes clear procedures for:

- Managing our impacts
- Promoting development through community investment and partnerships
- Building trust with our neighbours through ongoing and open communication
- Following-up on commitments

We have a Grievance Mechanism in place to ensure local communities have a voice. It is designed to be objective, accessible, and transparent, and is aligned with the standards of the International Finance Corporation and the United Nations Guiding Principles on Business and Human Rights

Every year, since 2013 has received the annual distinction of "Empresa Socialmente Responsable" (Socially Responsible Company), from the Mexican Center for Philanthropy (CEMEFI).

EDR has a Community Investment policy based on community development focused on the following key areas of need:

- Education (Scholarships, school facilities, teaching material, etc.)
- Employability (trades workshops, material to start small businesses, assessment to establish small businesses, etc.)

And in collaboration with the government, community or indigenous group, we support:

- Health and Infrastructure for public services (such as drinking water, sewage, waste management, street lighting, road maintenance, recreational spaces, police or fireman services or any other that is the government´s responsibility). Endeavour will aim to contribute up to 50% of the total investment with the government, community or indigenous group leading the initiative.
- Cultural or community events that promote traditions and integration of the community.

In the development of our 2021 Community engagement plan, we seek to make social investments through the design and execution of different social programs, together with the alliances of public and private sectors or civil associations that can be generated together, we can list the following:

- "I take care of my street, I take care of my community" program. A program to support the maintenance and improvement of roads.
- Community scholarship program and scholarship with the University of Guanajuato. The program aims to provide financial support to students from high school and university to continue their studies.
- "Silver Tablets" Program. As a result of the pandemic, the education in Mexico has become online and this is really difficult in rural communities. The program provides tablets for school age children to be able to attend online classes.
- Teaching program in waste management. The program aims to control the pollution that is generated from the mismanagement of urban solid waste.
- Teaching program in the elaboration of biofilters. The program aims to support treatment and discharges of domestic wastewater, to avoid health and pollution issues.
- Trades and skills training program: The program aims to provide adults with skills and training to develop an alternative source of income.

- Home improvement. The program aims to support people in doing basic maintenance and improvement things at their homes.

We also have a support request assistance program, in which the company Mina Bolañitos allocates an economic amount for investment in projects or requests for support that the inhabitants of the communities enter the organization, for example: donation of teaching materials or sports to educational institutions, loan of machinery for road rehabilitation, sports or recreational spaces, sports uniforms for the promotion of sports. EDR has loaned the use of a local facility to function as a Cultural House that hosts arts, music, painting and handcrafts workshops for community members. However, due to the COVID-19 pandemic, many of these activities have been on hold but is expected to recommence once it is safe to do so.

# 21. CAPITAL AND OPERATING COSTS

## 21.1 Capital Costs

In 2021, EDR's Bolañitos Project consisted of a modest size underground mining operation based at Bolañitos. The 2021 budget capital costs and planned 2022 capital costs for the Bolañitos Project are summarized in Table 21-1. The exploration drilling capital is not included as part of the 2021 actuals and budget in Table 21-1.

**Table 21-1 Actual 2020 and Planned 2021 Capital Costs for the Bolañitos Project**

| Description | Actual 2021 Cost (US$) | Planned 2022 Cost (US$) |
|---|---|---|
| Mine Development | 9,714,199 | 8,443,082 |
| Mine Equipment | 5,656,557 | 3,423,000 |
| Plant Equipment/Infrastructure | 2,247,134 | 4,834,200 |
| Vehicles | 361,505 | 418,000 |
| Office and IT | 352,229 | 313,100 |
| Buildings | 1,082,528 | 1,109,449 |
| **Total** | **19,414,152** | **18,540,831** |

## 21.2 Operating Costs

The cash cost of silver produced at the Bolañitos Project in fiscal year 2021 was negative US$19.77/oz, compared to negative US$32.11/oz in 2020. Cash operating cost per ounce of silver is calculated net of gold credits and royalties. On a per tonne of ore processed basis, the cash operating costs in 2021 averaged US $79.37 per tonne, compared to US $70.11 in 2020. Table 21-2 also summarizes the 2022 estimated operating cost for the Bolañitos Project, which is budgeted at US $87.34/t processed.

**Table 21-2 Operating Costs for the Bolañitos Mines Project**

| Department | Actual 2020 (US$/t) | Actual 2021 (US$/t) | Planned 2022 (US$/t) |
|---|---|---|---|
| Mining | $37.00 | $40.94 | $47.53 |
| Processing | $18.38 | $21.25 | $20.80 |
| G&A | $14.73 | $17.18 | $19.01 |
| **Total** | **$70.11** | **$79.37** | **$87.34** |

# 22. ECONOMIC ANALYSIS

EDR is a producing issuer as defined by NI 43-101. An economic analysis has been excluded from this technical report as the Bolañitos Project is currently in production and this technical report does not include a material expansion of current production

# 23. ADJACENT PROPERTIES

The Bolañitos Project is located within the Guanajuato mining district, which hosts several historically productive mines and in which mining has been carried out for more than 450 years. While a majority of the past producers in the district are located on quartz veins similar or related to those located on the Bolañitos property, there are no immediately adjacent properties which might materially affect the interpretation or evaluation of the mineralization or exploration targets of the Bolañitos Project.

# 24. OTHER RELEVANT DATA AND INFORMATION

This report summarizes all data and information material to the Bolañitos Project as of November 9, 2022 and mineral resources and mineral reserves as of May 31, 2022. The QPs are not aware of any other relevant technical or other data or information that might materially impact the interpretations and conclusions presented herein, nor of any additional information necessary to make the report more understandable or not misleading.

# 25. INTERPRETATION AND CONCLUSIONS

EDR's Bolañitos Mines Project has an extensive mining history with well-known silver and gold bearing vein systems. Ongoing exploration has continued to demonstrate the potential for the discovery of additional resources at the project and within the district surrounding the mine. Outside of the currently known reserve/resource areas, the mineral exploration potential for the Bolañitos Project is very good. Parts of the known vein splays beyond the historically mined areas also represent good exploration targets for additional resource tonnage.

Since EDR took control of the Bolañitos Mines Project, new mining areas have enabled EDR to increase production by providing additional sources of mill feed. EDR's operation management teams continue to search for improvements in efficiency, lowering costs and researching and applying low-cost mining techniques.

## 25.1 May 31, 2022 Mineral Resource Estimate

Overall, the mineral resources estimated by Mr. Schwering showed some difference compared to those estimated by EDR. When comparing mineral resources classified as Measured and Indicated, the tonnes and silver equivalent metal were within 5% of each other. Mr. Schwering's estimate contains more tonnes and silver equivalent metal classified as Inferred.

Mineral resources calculated using vertical longitudinal projection ("VLP") and 2D polygonal methods are riskier than those calculated using modern 3D block modeling techniques. Mr. Schwering classified all mineral resources calculated with this method as Inferred to reflect the assessment of their risk. Currently mineral resources from VLP methodologies constitute approximately 36% of Inferred tonnes and 32% of Inferred silver equivalent metal.

Ten veins had a difference in mean gold and/or silver grade greater than +/-6% between the ordinary kriging and nearest neighbor models. The grade estimates in these veins have a slightly higher risk than those estimates where the mean differences are with +/- 6%. The slight risk is mitigated by the fact that those veins account for approximately 18% of the total estimated tonnes and the majority of those blocks were classified as Inferred there the discrepancies are expected to be the highest.

Additionally, the OK gold interpolant in three veins resulted in blocks being assigned negative grades. Negative grades are usually the result of very low and very high-grade composites being in close proximity to one another resulting in an overall negative weight being assigned to the block. While effort was made to reduce or eliminate negative blocks from the estimate, the final tally of negative blocks are 2 in LAN1, 1 in LLN1, and 1 in LUC4. Comparing these negative blocks to the NN interpolant suggest these blocks are lower gold grade material and do not materially impact the mineral resource estimate

## 25.2 May 31, 2022 Mineral Reserve Estimate

The mineral reserves for the Bolañitos mine as of May 31, 2022, are summarized in Table 25-1. The reserves are exclusive of the mineral resources.

The stopes were only created with the updated Measured and Indicated resources including internal stope dilution above the calculated cutoff and have demonstrated to be economically viable, therefore Measured and Indicated mineral resources within the stopes have been converted to Proven and Probable reserves as defined by NI 43-101.

**Table 25-1 Mineral Reserve Estimate**

| Classification | AgEq Cut-off g/t | Mass kt | Average Value AgEq g/t | Silver g/t | Gold g/t | Material Content AgEq thousand t. oz | Silver thousand t. oz | Gold thousand t. oz |
|---|---|---|---|---|---|---|---|---|
| Proven | Variable | 158 | 266 | 57 | 2.63 | 1,357 | 290 | 13.4 |
| Probable | Variable | 376 | 265 | 73 | 2.41 | 3,199 | 878 | 29.2 |
| Proven + Probable | Variable | 534 | 326 | 101 | 2.8 | 4,556 | 1,168 | 42.6 |

1. Grades: 149 g/t for San Miguel, 149 g/t for La Luz, 151g/t silver equivalent for Lucero and 157 g/t silver equivalent for Belen
2. Minimum Mining Width: 0.8 m.
3. Cut and Fill Stope Size: 7m W x 4m H
4. Long Hole Stope Size: 7m W x 20m H
5. External Dilution Cut and Fill: 24%
6. External Dilution Long Hole: 40%
7. Silver Equivalent: 80:1 silver to gold
8. Gold Price: US $1,735 /oz
9. Silver Price: US $21.80 /oz
10. Gold Recovery: 90.1%
11. Silver Recovery: 85.7%
12. Dilution factors averaged 37.14%. Dilution factors are calculated based on internal stope dilution calculations and external dilution factors of 24% for cutand fill and 40% for long hole.
13. Silver equivalents are based on a 79.6:1 silver:gold ratio.
14. Figures in table are rounded to reflect estimate precision; small differences generated by rounding are not material to estimates.

## 25.3 Conclusions

The mine staff possess considerable experience and knowledge about the nature of the orebodies in and around the Bolañitos property. Mine planning and operations need to continue to assure that the rate of waste development is sufficient to maintain the production rates included in the mine plan.

A major change in ore metallurgy during the life of the current reserves is very unlikely, as nearly all the ore to be mined will come from veins with historic, recent, or current production.

Areas of uncertainty that may materially impact the mineral resources and reserves and subsequent mine life presented in this report include the following:

- Mining assumptions

- Dilution assumptions
- Exchange rates
- Changes in taxation or royalties
- Variations in commodity price
- Metallurgical recovery
- Processing assumptions

The QP considers the Bolañitos resource and reserve estimates presented here to conform with the requirements and guidelines set forth in Companion Policy 43-101CP and Form 43-101F1 (June 2011), and the mineral resources and reserves presented herein are classified according to Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards - For Mineral Resources and Mineral Reserves, prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council on May 10, 2014. These resources and reserves form the basis for EDR's ongoing mining operations at the Bolañitos Mines Project.

The QP is unaware of any significant technical, legal, environmental or political considerations which would have an adverse effect on the extraction and processing of the resources and reserves located at the Bolañitos Mines Project. Mineral resources which have not been converted to mineral reserves, and do not demonstrate economic viability shall remain mineral resources. There is no certainty that all or any part of the mineral resources estimated will be converted into mineral reserves.

The QP considers that the mineral concessions in the Bolañitos mining district controlled by EDR continue to be highly prospective both along strike and down dip of the existing mineralization.

# 26. RECOMMENDATIONS

Outside of the currently known reserve/resource areas, the mineral exploration potential for the Bolañitos mines is very good. Parts of the known vein splays beyond the historically mined areas also represent good exploration targets for additional resource tonnage. The concession areas contain many veins and the QP considers there to be reasonable potential of discovering new veins and splays besides those that are currently mapped.

An exploration budget has been developed for 2022and discussed in the following section.

## 26.1 Exploration Program

In 2022, EDR plans to drill 10,000 meters, mainly from surface, in the Bolañitos Project. Drilling campaigns mainly focused on the definition of structures of interest located in the Bolañitos South area and to test the continuity to the southeast of the Karina, Fernanda and Daniela veins within the Virginia claim.

Table 26-1 summarizes the planned 2022 exploration budget.

**Table 26-1 2022 Bolañitos Exploration Budget**

| Project Area | 2022 Program | Budget |
|---|---|---|
| | Metres | US $ |
| **Surface & Underground Exploration Drilling** | | |
| Surface & Under Drilling | 10,000 | 1,500,000 |
| **Subtotal** | **10,000** | **1,500,000** |
| | | |
| **Total** | **10,000** | **1,500,000** |

## 26.2 Geology, Block Modeling, Mineral Resources and Reserves

Mr. Schwering recommends all resources from 2D polygons should be converted to 3D block models.

Although the reconciliations conducted by EDR show good comparison between planned versus actual values, the reconciliation process should be improved to include the estimated tonnes and grade from the resource models. Because the LOM plan is compared to the plant production on a monthly basis, the actual physical location of the material mined may be different than the planned location. Due to the many stopes that are mined during a day this can only be completed on an average monthly basis due to blending of stope material into the mill. The monthly surveyed as mined areas should be created into triangulation solids and saved monthly for reporting the modeled tonnes for each month. The model-predicted results versus actual can then be used to determine if dilution factors need to be adjusted, or perhaps the resource modeling parameters may require adjustment if there are large variances. The mill production should be reconciled to the final concentrate shipments on a yearly basis and resulting adjustment factors should be explained and reported.

# 27. REFERENCES

Aranda-Gómez, J.J., & McDowell, F.W. (1998). Paleogene extension in the southern Basin and Range province of Mexico: Syndepositional tilting of Eocene red beds and Oligocene volcanic rocks in the Guanajuato mining district. International Geology Review, 40(2), 116-134.

Berger, B.R., and P.I. Emmons, (1983). Conceptual models of epithermal precious metal deposits, in Shank, W.C., ed., Cameron Volume on Unconventional Mineral Deposits, New York, American Institute of Mining, Metallurgy and Petroleum Engineering, and Society of Mining Engineers, 191-205.

Buchanan, L.J. (1980). Ore controls of vertically stacked deposits, Guanajuato, Mexico. American Institute of Mining Engineers, 80-82.

Buchanan, L.J. (1981). Precious metal deposits associated with volcanic environments in the southwest. Arizona Geological Society Digest, 14, 237-262.

Cameron, Donald E. (2012). Technical Report and Updated Resource and Reserve Estimate for the El Cubo Mine Guanajuato, Mexico: unpublished NI 43-101 technical report prepared by Cameron, Donald E., for Endeavor Silver, effective date June 01, 2012.

Cárdenas, V.J., & Consejo de Recursos Minerales (Mexico). (1992). Geological-mining monograph of the state of Guanajuato. Pachuca, Hdgo., México: Consejo de Recursos Minerales., p.186

Cerca Martínez, L.M., Aguirre Díaz, G. D. J., & Lopez Martínez, M. (2000). The geologic evolution of the southern Sierra de Guanajuato, Mexico: a documented example of the transition from the Sierra Madre Occidental to the Mexican Volcanic Belt. International Geology Review, 42(2), 131-151.

Chiodi, M., Monod, O., Busnardo, R., Gaspard, D., Sánchez, A., & Yta, M. (1988). Une discordance ante albienne datée par une fauned'Ammonites et de Brachiopodes de type téthysien au Mexique central. Geobios, 21(2), 125-135.

Clark, K.F., (1990). Ore Deposits of the Guanajuato District, Mexico, Mexico Silver Deposits, Society of Economic Geologists, Guidebook Series Volume 6, pp 201 to 211.

Corbett, G.J., Leach, T.M. (1996). Southwest Pacific Rim gold - copper systems: structure, alteration and mineralization. Workshop manual, 185 p.

Dávila-Alcocer, V. M., & Martínez-Reyes, J. (1987). Una edad cretácica para las rocas basales de la Sierra de Guanajuato. In Simposio sobre la Geología de la Sierra de Guanajuato, Programa y Resúmenes: México, DF, Universidad Nacional Autónoma de México, Instituto de Geología (pp. 19-20).

Edwards, D.J., (1955). Studies of some early Tertiary red conglomerates of central Mexico: U.S. Geological Survey, Professional Paper 264-H, p. 153-185.

Gross, W.H., (1975). New ore discovery and source of silver-gold veins, Guanajuato, Mexico: Economic Geology, v. 70, p. 1 175-1 189.

Hard Rock Consulting LLC (2016) NI 43-101 Technical Report: Updated Mineral Resource and Reserve Estimates for the Bolañitos Project, Guanajuato State, Mexico, effective date March 3, 2016.

Hollister, F.V. (1985). Discoveries of epithermal precious metal deposits: AIME, Case histories of mineral discoveries, V. 1, pp. 168

Lewis, W.J., Murahwi, C., Leader, R.J. and San Martin, A.J., (2009). NI 43-101 Technical Report, Audit of the Resource and Reserves for the Guanajuato Mines Project, Guanajuato State, Mexico, 163 p.

Lewis, W.J., Murahwi, C., Leader, R.J. and San Martin, A.J., (2010). NI 43-101 Technical Report, Audit of the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico, 162 p.

Lewis, W. J., Murahwi, C., and Leader, R. J. (2011). NI 43-101 Technical Report, Audit of the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico, 160 p.

Lewis, W.J., Murahwi, C. and San Martin, A.J., (2012). NI 43-101 Technical Report on the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico, 216 p.

Lewis, W.J., Murahwi, C. and San Martin, A.J., (2013). NI 43-101 Technical Report on the Resource and Reserve Estimates for the Guanajuato Mines Project, Guanajuato State, Mexico.

Martin, P.F., (1906). Mexico's Treasure-House (Guanajuato); An Illustrated and Descriptive Account of the Mines and Their Operations in 1906, 259 p.

Martínez-Reyes, J.J, Camprubí, A, Uysal, I.T, Iriondo, A, González-Partida, E, (2015): SHORT NOTE: Geochronology of Mexican mineral deposits. II: Veta Madre and Sierra epithermal vein systems, Guanajuato district; Boletín de la Sociedad Geológica Mexicana. Volumen 67, núm. 2, 2015, p.349-355

Munroe, M.J. (2014). NI 43-101 Technical Report Resource and Reserve Estimates for the Bolañitos Mines Project, Guanajuato State, Mexico.

Moncada, D. and Bodnar, R.J. (2012a). Fluid Inclusions and Mineral Textures in Samples from the Cebada Project Area, Guanajuato, Mexico, Private Company Report, p. 29.

Moncada, D. and Bodnar, R.J. (2012b). Identification of Target Areas for Exploration in the La Luz area, Guanajuato, Mexico, Based on Fluid Inclusions and Mineral Textures, Private Company Report, p. 30.

Moncada, D., Bodnar, R.J., Reynolds, T.J., Nieto, A., Vanderwall, W., & Brown, R. (2008). Fluid inclusion and mineralogical evidence for boiling in the epithermal silver deposits at Guanajuato, Mexico., Ninth Pan American Conference on Research on Fluid Inclusions, Reston, Virginia, USA, H. E. Belkin, ed., p. 41.

Morley, C and Moller, R, 2005. Iron ore mine reconciliation – A case study from Sishen Iron Ore Mine, South Africa, in Proceedings Iron Ore 2005, pp 311-318 (The Australasian Institute of Mining and Metallurgy: Melbourne).

Nieto-Samaniego, A.F., Macías-Romo, Consuelo, and Alaniz-Alvarez, S.A., (1996). Nuevas edades isotópicas de la cubierta volcánica cenozoica de la parte meridional de la Mesa Central, México: Revista Mexicana de Ciencias Geológicas, v. 13, no. 1, p. 117–122.

Parrish, I.S. (1997). Geologist's Gordian Knot: To cut or not to cut. Mining Engineering, 49(4), 45-49.

Randall, J.A., Saldaña, A. E., & Clark, K.F. (1994). Exploration in a volcano-plutonic center at Guanajuato, Mexico. Economic Geology and the Bulletin of the Society of Economic Geologists, 89(8), 1722-1751.

Reyes, J.M., & Nieto-Samaniego, A.F. (1990). Efectos geológicos de la tectónica reciente en la parte central de México. Revista mexicana de ciencias geológicas, 9(1), 33-50.

Salas, G.P. (1991). Economic Geology, Mexico, Volume P-3 of the Geology of North America. The Decade of North American Geology Project series by The Geological Society of America, Inc., 438 p.

Sinclair, A.J., & Blackwell, G.H. (2002). Applied mineral inventory estimation. Cambridge University Press.

Schofield, N. A. (2001). The myth of mine reconciliation. Mineral Resource and Ore Reserve Estimation – The AusIMM Guide to Good Practice (ed: A C Edwards) (pp. 601-610). Melbourne: The Australasian Institute of Mining and Metallurgy.

Southworth, J. R. (1905). Las minas de México (edición ilustrada): Historia, geologia, antigua mineria y descripción general de los estados mineros de la República mexicana. En español é inglés. Tomo IX., octubre, 1905. Pub. bajo la autorización del gobierno, por J.R. Southworth. Liverpool, Eng: Printed for the author by Blake & Mackenzie. 260 p.

SRK Consulting, (2008). NI 43-101 Technical Report for the Guanajuato Mines Project, Guanajuato State Mexico, Prepared for Endeavour Silver Corp, 75 p.

Telluris Consulting (2008). Structural Review of the Deposits of the Northern Guanajuato District, Mexico, Field Visit Conclusions 03-08 prepared for Endeavour Silver Corp. 23 p.

Thompson, J.E., (2007). Grade & Dilution Control (with commentary on Development, Mining Methods and Backfill), private company report on Guanajuato Mines Project for Endeavour Corp.

Williams, A., (1905). The Romance of Mining: Containing Interesting Descriptions of the Methods of Mining for Minerals in All Parts of the World. CA Pearson, Limited, 400p.